Sensor/Actuator Cabling and Industrial Connectors

4

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PHOENIX CONTACT
INSPIRING INNOVATIONS

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Sensor/actuator cabling and industrial connectors



Terminal blocks

- Terminal blocks



Marking systems, tools, and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



Surge protection and power supplies

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Control technology, I/O systems, and automation infrastructure

- Lighting and signaling
- Fieldbus components and systems
- Functional Safety
- HMIs and industrial PCs
- I/O systems
- Industrial Ethernet
- Industrial communication technology
- Software
- Controllers
- Wireless data communication



PCB connection technology and electronics housing 2013/14

- PCB terminal blocks and PCB connectors
- Electronics housing

Connection technology for field devices 2013/14

- Connectors
- Cables and lines

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Screw connection

The screw connection is the most universal and globally accepted conductor connection technology. An important characteristic is the maintenance-free conductor contact. It is not necessary to tighten the terminal screw again. All kinds of copper cables can be clamped without pretreatment, thereby making gas-tight and reliable contact. The wire protector, which protects the individual litz wires from damage, is located between the screw and the conductor. It also performs a screw locking function to prevent release due to vibrations and temperature fluctuations. Splicing protection can be implemented in the form of ferrules. With a screw connection, several wires may also be clamped under one screw. The current-carrying parts of the screw connections are made of high-grade, strain-crack, and corrosion-proof copper alloys.



Axial screw connection

With this method, the wire end to be contacted is guided into the connection area of the pin or socket contact. A cone-shaped prong (part of the contact) is then screwed into the stranded wire from the front. The strands of the wire are radially pressed against the contact wall. This results in a gas-tight connection with long-term stability between the wire and contact. It is important that the specified tightening torque is observed. The prong is pressed in using a hexagon key which is applied to the front of the contact. This connection technology combines the advantages of screw and crimp connection. It requires very little space, is easy to execute, and only requires a standard Allen key.



Crimp connection

The crimp connection impresses with its small space requirements and its cost-effective creation in series production. For a reliable connection, it is essential that the conductor cross section, the crimp contact, and the crimping tool are compatible. Furthermore, the crimping process must be monitored during large-scale production as the crimping tools are subject to a certain degree of wear.

Crimp connections can be established with the aid of crimping pliers or crimp machines through specific deformation of the crimping ranges of the contact. The requirements for crimp connections are defined in DIN EN 60352-2. Proof of the quality of a crimp connection can be seen in the tensile strength of the connection and crack-free deformation of the crimp contact. Crimping must not result in impermissible elongation of crimp contacts, as this would prevent them from latching correctly in the contact carrier. The contact is released using an unlocking tool. Assembly tools are also available for very thin conductors.



Spring connection

The spring connection contains a steel spring which pushes the stripped conductor against a busbar. The terminal point is opened with a standard screwdriver. After the conductor has been inserted into the clamping space, the screwdriver is removed and the conductor automatically makes contact. The contact force is independent of the user and a vibration-proof, gas-tight connection with long-term stability is established. The front connection provides an additional advantage. The conductor and screwdriver come in parallel from the same direction and are always within the user's field of vision. Contact inserts can thereby also be connected or re-wired even when mounted. All kinds of copper cables can be clamped without pretreatment, thereby making gas-tight and reliable contact. Splicing protection can also be implemented in the form of a ferrule.



Push-in connection

Stranded conductors with ferrules or solid conductors can be quickly and easily inserted directly into the connection without tools. The contact spring is formed in such a way that it opens automatically when the conductor is pushed in and thereby provides the required pressure force against the current bar for a gas-tight, vibration and shock-proof connection. With the aid of the orange pusher, the terminal block can be opened manually so that conductors with smaller cross sections can also be securely connected. To release the conductor, the orange pusher features a confusion-free and defined operating element. The conductive metals are made from high-grade copper alloys. All metal parts of the connection are made of corrosion-resistant materials.



QUICKON fast connection for single wires

The QUICKON connection is equipped with an IDC insulation displacement contact. The term “IDC” stands for Insulation Displacement Connection. With this connection method, a non-stripped wire with insulation is positioned in front of the gap of the insulation displacement contact and then pushed into the blade gap through insulation displacement. In so doing, the wire insulation is severed and a gas-tight contact is made between the wire and the contact. This can save at least 60% of connection time.

The connection force is independent of the user and completely reliable provided the permitted conductor cross sections and connection conditions are observed. Solid and stranded conductors can be rewired up to 10 times. However, the wire end should be cut off before connecting again.

QUICKON connections have proven themselves in numerous applications for Phoenix Contact over recent years, such as connectors, for COMBICON, and modular terminal blocks to CEE plug-in equipment from 0.14 to 6.0 mm².

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Connectors

PLUSCON circular is the range of circular connectors for use in industrial automation. The sizes available range from M5, M8, and M12 through M17 and M23 to M40 and M58 connectors. The latter are used exclusively to transmit electrical power up to 150 A at 630 V per contact feed-through. The complete range covers the entire scope of circular connectors for industrial applications.

Sensor/actuator connectors

Safe and efficient assembly is of utmost importance in field wiring. You can choose from all connection technologies, enabling you to precisely adapt to the relevant application or requirements in the field. The connectors for assembly are available in various versions, unshielded and EMC-compliant.

Sensor/actuator device connectors

A comprehensive range of device connectors and panel feed-throughs has emerged as a result of the various requirements for device connection technology in industrial environments. Customer-specific developments enable optimum adaptation to individual device concepts.

Signal, feedback, hybrid, and power connectors

The product portfolio for M17 to M58 connectors covers all common applications in industrial environments for signal, hybrid, and power plug-in connections up to 630 V/150 A. This also includes requirements relating to tightness of seal, vibration resistance, and shielding against EMI. The circular connector range is rounded off with a complete portfolio of plastic molded connectors.

Sensor/actuator connectors

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M8, solder connection



Unshielded, 3-, 4-pos.



Shielded, 3-, 4-pos.

Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm²]	0.08 mm² ... 0.25 mm²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuZn / Au	
Contact carrier material	PA	
Inflammability class according to UL 94	HB	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm²]	0.08 mm² ... 0.25 mm²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuZn / Au	
Contact carrier material	PA	
Inflammability class according to UL 94	HB	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, angled	1529399	1	1513444	1
Plug, angled	1699902	1	1554209	1
Socket, straight	1681172	1	1681185	1
Plug, straight	1681156	1	1681169	1

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, angled	1436479	1	1436482	1
Plug, angled	1436453	1	1436466	1
Socket, straight	1506927	1	1506930	1
Plug, straight	1506901	1	1506914	1

Accessories

Pressure screw and seal, for cable diameters:			
2.5 mm ... 3.5 mm	**SACC-M 8-SET/2,2-3,5**	1436945	5

Accessories

Pressure screw and seal, for cable diameters:			
2.5 mm ... 3.5 mm			

M8, insulation displacement connection



0.08 mm² - 0.25 mm², 3-, 4-pos.



0.25 mm² - 0.5 mm², 3-, 4-pos.

		Technical data		Technical data	
		3-pos.	4-pos.	3-pos.	4-pos.
General data					
M8 circular connector according to:		IEC 61076-2-104		IEC 61076-2-104	
Pollution degree		3		3	
Degree of protection		IP65/IP67		IP65/IP67	
Connection method		Insulation displacement connection		Insulation displacement connection	
Cable diameter		2.5 mm ... 5 mm ±0.2 mm		2.5 mm ... 5 mm ±0.2 mm	
Electrical data					
Rated voltage		60 V	30 V	60 V	30 V
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Material contact/contact surface		CuSn / Ni/Au		CuSn / Ni/Au	
Contact carrier material		TPU GF		TPU GF	
Inflammability class according to UL 94		HB		HB	
Temperature data					
Plug/socket	[°C]	-25 ... 80		-25 ... 80	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		3-pos.		4-pos.	
Connectors								
Socket, straight	1441040	1	1441053	1	1441066	1	1441079	1
Plug, straight	1441008	1	1441011	1	1441024	1	1441037	1

M8, screw connection



Unshielded, 3-, 4-pos.



Shielded, 3-, 4-pos.

Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Screw connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm²]	0.14 mm² ... 0.5 mm²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuZn / Au	
Contact carrier material	PA	
Inflammability class according to UL 94	HB	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Screw connection	
Cable diameter	3.5 mm ... 5.5 mm	
Connection cross section [mm²]	0.14 mm² ... 0.5 mm²	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuZn / Au	
Contact carrier material	PA	
Inflammability class according to UL 94	HB	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, straight	1506888	1	1506891	1
Plug, straight	1501252	1	1501265	1
Socket, angled	1407582	1	1407584	1
Plug, angled	1407583	1	1407585	1

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Connectors				
Socket, straight	1542907	1	1542910	1
Plug, straight	1542884	1	1542897	1

Accessories

Pressure screw and seal, for cable diameters:			
2.5 mm ... 3.5 mm	**SACC-M 8-SET/2,2-3,5**	1436945	5

Accessories

Pressure screw and seal, for cable diameters:			
2.5 mm ... 3.5 mm	**SACC-M 8-SET/2,2-3,5**	1436945	5

M12, solder and Piercecon® connection



Solder connection, 12-pos.



Piercecon® connection, 12, 17-pos.

		Technical data		Technical data	
		Unshielded	Shielded	12-pos.	17-pos.
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Pollution degree		3		3	
Degree of protection		IP67		IP67	
Connection method		Solder connection		Piercecon® fast connection	
Cable diameter		6 mm ... 8 mm		5.4 mm ... 8.2 mm	
Connection cross section [mm²]		0.08 mm² ... 0.25 mm²		0.14 mm²	
Electrical data					
Rated voltage		30 V		30 V	
Rated current		1 A		1.5 A	
Insulation resistance		> 10 GΩ		≥ 100 MΩ	
Material data					
Material contact/contact surface		CuZn / Au		CuZn / Ni/Au	
Contact carrier material		PA		PA	
Inflammability class according to UL 94		HB		V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-25 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		Unshielded		shielded		12-pos.		17-pos.	
Connectors									
Socket, straight	A - standard	1404420	1	1404411	1	1559631	1	1559644	1
Plug, straight	A - standard	1404419	1	1404410	1	1559592	1	1559602	1
Socket, angled	A - standard	1404423	1	1404413	1				
Plug, angled	A - standard	1404421	1	1404412	1				

M12, insulation displacement connection

new

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 319



unshielded, 4-pos.



shielded, 0.14 mm² ... 0.75 mm², 4, 5-pos.

		Technical data		Technical data	
		0.14 mm² ... 0.34 mm²	**0.34 mm² ... 0.75 mm²**	**4-pos.**	**5-pos.**
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Pollution degree		3		3	
Degree of protection		IP65/IP67		IP65/IP67	
Connection method		Insulation displacement connection		Insulation displacement connection	
Cable diameter		3.5 mm ... 6 mm	4 mm ... 8 mm	5 mm ... 9.7 mm	
Electrical data					
Rated voltage		125 V	250 V	250 V AC/DC	60 V AC/DC
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Material contact/contact surface		CuSn / Ni/Au		CuSn / Ni/Au	
Contact carrier material		TPU		PA	
Inflammability class according to UL 94		V0		V0	
Temperature data					
Plug/socket	[°C]	-25 ... 80		-40 ... 85	

		Ordering data				Ordering data			
Description	Coding	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		0.14 mm² ... 0.34 mm²		**0.34 mm² ... 0.75 mm²**		**4-pos.**		**5-pos.**	
Connector, with plastic knurl									
Socket, straight	A - standard	1641701	1	1641756	1				
Plug, straight	A - standard	1641714	1	1641769	1				
Connector, with metal knurl, SPEEDCON									
Socket, straight	A - standard	1521588	1	1521601	1	1413994	1	1413992	1
Plug, straight	A - standard	1521575	1	1521591	1	1413993	1	1413991	1
Connector, with metal knurl									
Socket, straight	A - standard	1641688	1	1641772	1				
Plug, straight	A - standard	1641691	1	1641785	1				
Connector, with stainless steel knurl									
Socket, straight	A - standard	1440766	1	1440782	1				
Plug, straight	A - standard	1440753	1	1440779	1				
Cable connector, shielded, color-coded terminal blocks, cable diameter: 5.0 mm ... 10.0 mm						1414418	1	1414417	1

M12, spring connection

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 319



Unshielded, 4-, 5-pos.



Shielded, 4-, 5-pos.

Technical data

	4-pos.	5-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	
Pollution degree	3	
Degree of protection	IP65/IP67	
Connection method	Spring connection	
Cable diameter	4 mm ... 8 mm	
Connection cross section [mm²]	0.14 mm² ... 0.5 mm²	
Electrical data		
Rated voltage	250 V	60 V
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuSn / Ni/Au	
Contact carrier material	TPU	
Inflammability class according to UL 94	V0	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Technical data

	4-pos.	5-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	
Pollution degree	3	
Degree of protection	IP65/IP67	
Connection method	Spring connection	
Cable diameter	4 mm ... 8 mm	
Connection cross section [mm²]	0.14 mm² ... 0.5 mm²	
Electrical data		
Rated voltage	60 V DC	
Rated current	4 A	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact/contact surface	CuSn / Ni/Au	
Contact carrier material	TPU	
Inflammability class according to UL 94	V0	
Temperature data		
Plug/socket [°C]	-40 ... 85	

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.	
Connector, terminal marking: standard color coding and numbering					
Socket, angled	A - standard	1432622	1	1432596	1
Plug, angled	A - standard	1432606	1	1432570	1
Socket, straight	A - standard	1432619	1	1432583	1
Plug, straight	A - standard	1432635	1	1432567	1

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.	
Connector, terminal marking: standard color coding and numbering					
Socket, angled	A - standard	1432758	1	1432677	1
Plug, angled	A - standard	1432732	1	1432651	1
Socket, straight	A - standard	1432745	1	1432664	1
Plug, straight	A - standard	1432729	1	1432648	1

M12, screw connection

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 319



Plastic knurl, 4, 5-pos.



Metal knurl, SPEEDCON, 4, 5-pos.

Technical data

		4-pos.	5-pos.	4-pos.	5-pos.
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Pollution degree		3		3	
Degree of protection		IP67		IP67	
Connection method		Screw connection		Screw connection	
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.75 mm²	
Electrical data					
Rated voltage		250 V	60 V	250 V	60 V
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Material contact/contact surface		CuZn / CuSnZn		CuZn / CuSnZn	
Contact carrier material		PA		PA	
Inflammability class according to UL 94		HB		HB	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-40 ... 85	

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.				4-pos.		5-pos.			
Connector, cable diameter: **4 mm ... 6 mm**													
Socket, angled	A - standard	1681130	1	1662308	1			1543058	1	1543061	1		
Plug, angled	A - standard	1681091	1	1662269	1			1542981	1	1542994	1		
Socket, straight	A - standard	1681114	1	1662298	1			1543029	1	1543032	1		
Plug, straight	A - standard	1681088	1	1662256	1			1542952	1	1542965	1		
Connector, cable diameter: **6 mm ... 8 mm**													
Socket, angled	A - standard			1500790	1					1543414	1		
Plug, angled	A - standard			1513431	1					1543003	1		
Socket, straight	A - standard			1500787	1					1543045	1		
Plug, straight	A - standard			1500774	1					1542978	1		
Connector, cable diameter: **8 mm ... 10 mm**													
Socket, straight	A - standard												
Plug, straight	A - standard												
Power connector, cable diameter: **8 mm ... 10 mm, rated current:** up to 8 A (5th pos. max. 2 A) with 1.5 mm² wires/litz wires													
Socket, angled	A - standard												
Plug, angled	A - standard												
Socket, straight	A - standard												
Plug, straight	A - standard												

Accessories

Pressure screw and seal, for cable diameters:					
2.5 mm ... 3.5 mm	SACC-M12-SET/2,5-3,5	1436505	5	SACC-M12-SET/2,5-3,5	1436505	5



**Metal knurl,
4, 5, 8-pos.**



**Metal knurl,
4, 5-pos.,
with SKINTOP® screw connection**



**Stainless steel knurl,
4, 5-pos.**

Technical data

4-pos.	5-pos.	8-pos.
	IEC 61076-2-101	
	3	
	IP67	
	Screw connection	
0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.5 mm²
250 V	60 V	30 V
	4 A	2 A
	≥ 100 MΩ	
	CuZn / CuSnZn	CuZn / Au
	PA	
	HB	
	-40 ... 85	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.		8-pos.	
1681143	1	1662984	1		
1681101	1	1663129	1		
1681127	1	1662968	1		
1662528	1	1663116	1		
		1681499	1		
		1681473	1		
1696439	1	1681486	1	1513347	1
1523230	1	1681460	1	1513334	1
				1410665	1
				1410666	1
1408991	1	1408993	1		
1408990	1	1408992	1		
1404416	1	1404418	1		
1404415	1	1404417	1		

Accessories

SACC-M12-SET/2,5-3,5	1436505	5

Technical data

4-pos.	5-pos.
	IEC 61076-2-101
	3
	IP67
	Screw connection
0.25 mm² ... 0.75 mm²	
250 V	60 V
	4 A
	≥ 100 MΩ
	CuZn / CuSnZn
	PA
	HB
	-20 ... 80

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1430381	1	1559000	1		
1556870	1	1456466	1		
		1556812	1		
		1561742	1		
		1556838	1		
		1556825	1		

Accessories

Technical data

4-pos.	5-pos.
	IEC 61076-2-101
	3
	IP65/IP67/IP69K
	Screw connection
0.25 mm² ... 0.75 mm²	
250 V	60 V
	4 A
	≥ 100 MΩ
	CuZn / Au
	PA
	V0
	-40 ... 85

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1553284	1	1553297	1		
1553200	1	1553213	1		
1553242	1	1553255	1		
1553161	1	1553187	1		
		1553307	1		
1553226	1	1553239	1		
1553268	1	1553271	1		
1553174	1	1553190	1		

Accessories

SACC-M12-SET/2,5-3,5	1436505	5

M12, screw connection, shielded



Cast zinc housing,
4, 5, 8-pos.



Stainless steel housing,
5-pos.

		Technical data			Technical data
		4-pos.	5-pos.	8-pos.	5-pos.
General data					
M12 circular connector according to:			IEC 61076-2-101		IEC 61076-2-101
Pollution degree			3		3
Degree of protection			IP67		IP65/IP67/IP69K
Connection method			Screw connection		Screw connection
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.5 mm²	0.25 mm² ... 0.75 mm²
Electrical data					
Rated voltage		60 V DC		30 V	60 V DC
Rated current		4 A		2 A	4 A
Insulation resistance			≥ 100 MΩ		≥ 100 MΩ
Material data					
Material contact/contact surface			CuZn / Au		CuZn / Au
Contact carrier material			PA		PA
Inflammability class according to UL 94			HB		V0
Temperature data					
Plug/socket	[°C]		-40 ... 85		-40 ... 85

		Ordering data						Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		5-pos.			
Connector, cable diameter: **4 mm ... 6 mm**											
Plug, angled	A - standard	1694279	1	1693429	1						
Socket, straight	A - standard	1694295	1	1694305	1						
Plug, straight	A - standard	1693830	1	1693416	1						
Connector, cable diameter: **6 mm ... 8 mm**											
Socket, angled	A - standard			1430433	1						
Plug, angled	A - standard			1694282	1						
Socket, straight	A - standard	1515170	1	1694318	1	1511860	1				
Plug, straight	A - standard	1501540	1	1694266	1	1511857	1				
Connector, cable diameter: **6 mm ... 8.5 mm**											
Socket, straight	A - standard			1508365	1						
Plug, straight	A - standard			1508352	1						
Connector, cable diameter: **3 mm ... 5.5 mm**											
Socket, straight	A - standard							1440038	1		
Plug, straight	A - standard							1440012	1		
Connector, cable diameter: **5.5 mm ... 8.6 mm**											
Socket, straight	A - standard							1440041	1		
Plug, straight	A - standard							1440025	1		

M12, DUO connector, screw connection

Notes:

SPEEDCON and plastic knurls without key areas.



Metal knurl, 4-, 5-pos.



Plastic and stainless steel knurl, 5-pos.

		Technical data		Technical data	
		4-pos.	5-pos.	Plastic knurl	Stainless steel knurl
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	-
Pollution degree		3		3	
Degree of protection		IP67		IP67	
Connection method		Screw connection		Screw connection	
Cable diameter		2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)		2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)	
Cable diameter		2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)		2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)	
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.75 mm²	
Electrical data					
Rated voltage		250 V	60 V	60 V	
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Material contact/contact surface		CuZn / CuSnZn		CuZn / CuSnZn	CuZn / Au
Contact carrier material		PA		PA	
Inflammability class according to UL 94		V0		V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-40 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		Plastic knurl		Stainless steel knurl	
Connector, with metal knurl, for connecting two cables									
Plug, straight	A - standard	1507052	1	1662748	1				
Connector, with metal knurl, SPEEDCON, for connecting two cables									
Plug, straight	A - standard			1543016	1				
Connector, with plastic knurl, for connecting two cables									
Socket, straight	A - standard					1694596	1		
Plug, straight	A - standard					1662285	1		
Plug, angled	A - standard					1531044	1		
Connector, with stainless steel knurl, for connecting two cables									
Socket, straight	A - standard							1403372	1
Plug, straight	A - standard							1403371	1

7/8", screw connection



Connection cross section:
1.5 mm², 3-, 4-, 5-pos.



Connection cross section:
2.5 mm², 5-pos.

	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	5-pos.		
General data						
Pollution degree		3		3		
Degree of protection		IP67		IP67		
Connection method		Screw connection		Screw connection		
Connection cross section		0.34 mm² ... 1.5 mm²		0.34 mm² ... 2.5 mm²		
Connection cross section AWG		22 ... 16		22 ... 14		
Electrical data						
Rated voltage		300 V		300 V		
Rated current	12 A	9 A		9 A		
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ		
Material data						
Material contact/contact surface		CuZn / Au		CuZn / Au		
Contact carrier material		PUR / PA66		PUR / PA66		
Inflammability class according to UL 94		HB		HB		
Temperature data						
Plug/socket [°C]		-25 ... 85		-25 ... 85		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		5-pos.		5-pos.					
Connector, cable diameter: **6 mm ... 8 mm**												
Socket, angled	1521478	1	1521494	1	1521517	1						
Plug, angled	1521465	1	1521481	1	1521504	1						
Socket, straight	1521300	1	1521342	1	1521384	1						
Plug, straight	1521287	1	1521326	1	1521668	1						
Connector, cable diameter: **8 mm ... 10 mm**												
Socket, angled							1456297	1				
Plug, angled							1456242	1				
Socket, straight							1456271	1				
Plug, straight							1456226	1				
Connector, cable diameter: **10 mm ... 12 mm**												
Socket, angled							1456307	1				
Plug, angled							1456255	1				
Socket, straight	1521313	1	1521355	1	1521397	1	1456284	1				
Plug, straight	1521290	1	1521339	1	1521371	1	1456213	1				
Connector, cable diameter: **12 mm ... 14 mm**												
Socket, straight					1559071	1	1456268	1				
Plug, straight					1559039	1	1456239	1				

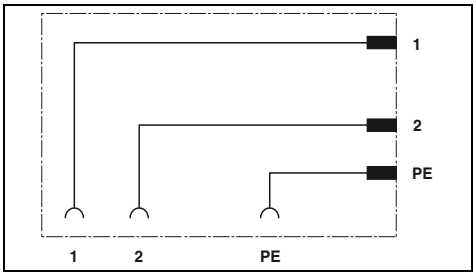
Valve connectors, type A, screw connection

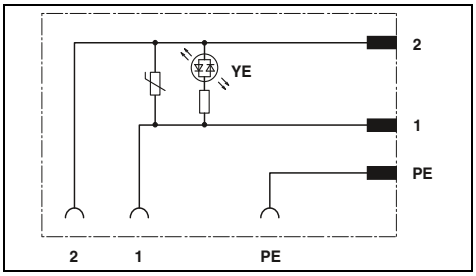


Without protective circuit



Protective circuit: varistor





	Technical data	Technical data
General data		
Valve connector according to:	EN 175301-803	EN 175301-803
Pollution degree	3	3
Degree of protection	IP65	IP65
Connection method	Screw connection	Screw connection
Electrical data		
Rated current	10 A	1.5 A
Insulation resistance	> 2 GΩ	> 2 GΩ
Material data		
Material contact valve connector	CuZn	CuZn
Material contact surface valve connector	CuSn	CuSn
Inflammability class according to UL 94	HB	HB
Temperature data		
Valve connectors [°C]	-25 ... 60	-25 ... 60

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Valve connector, without protective circuit, rated voltage: 230 V						
3-pos.	**SACC-VB-3CON-M16/A**	1452123	1			
4-pos.	**SACC-VB-4CON-M16/A**	1452136	1			
Valve connector, with protective circuit, rated voltage:						
24 V				**SACC-VB-3CON-M16/A-1L-SV 24V**	1452149	1
110 V				**SACC-VB-3CON-M16/A-1L-SV 110V**	1452152	1
230 V				**SACC-VB-3CON-M16/A-1L-SV 230V**	1452165	1
Valve connector, 5-pos., type A, for pressure switch, 2 LEDs, without protective circuit, M16 cable gland, rated voltage: 24 V						
Valve connector, with protective circuit, rated voltage: 24 V, cable gland:						
Pg9						
M16						



Protective circuit: varistor and rectifier

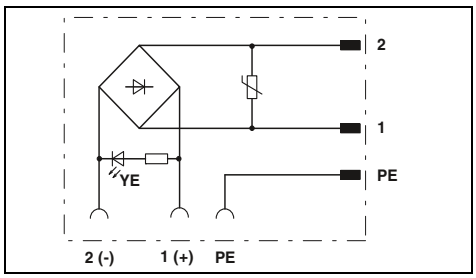


Pressure switch

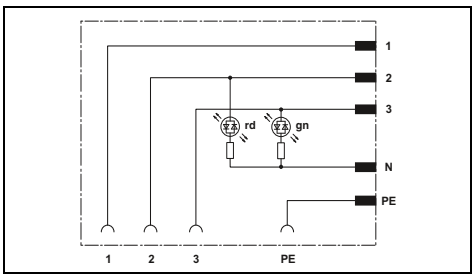


Protective circuit: Z diode

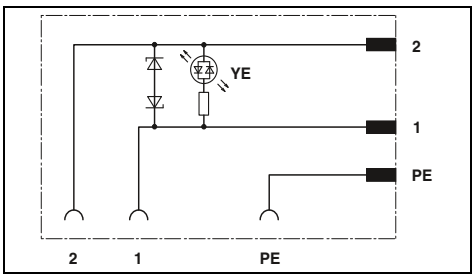
EAC



EAC



EAC



Technical data

EN 175301-803	
3	
IP65	
Screw connection	
1.5 A	
> 2 GΩ	
CuZn	
CuSn	
HB	
-25 ... 60	

Technical data

EN 175301-803	
3	
IP65	
Screw connection	
1.5 A	
> 2 GΩ	
CuZn	
CuSn	
HB	
-25 ... 60	

Technical data

EN 175301-803	
3	
IP65	
Screw connection	
4 A	
> 2 GΩ	
CuSn	
Ag	
HB	
-25 ... 60	

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-3CON-M16/A-GVL 12/24V	**1452178**	1
SACC-VB-3CON-M16/A-GVL 110V	**1452181**	1
SACC-VB-3CON-M16/A-GVL 230V	**1452194**	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-5CON-M16/AD-2L 24V	**1457908**	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-V-3CON-PG9/A-1L-S	**1671137**	1
SACC-V-3CON-M16/A-1L-S	**1544714**	1

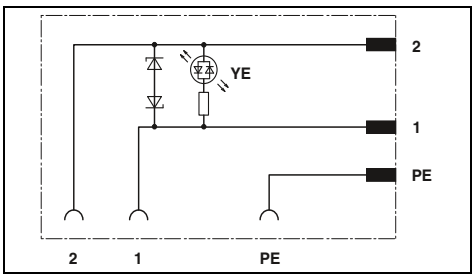
Valve connectors, types B and BI, screw connection

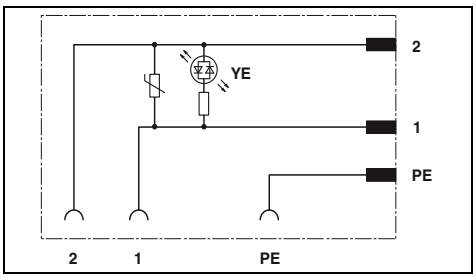


Protective circuit: Z diode



Protective circuit: varistor





Technical data

	Type B	Type BI	Type B	Type BI
General data				
Valve connector according to:	EN 175301-803	-	EN 175301-803	-
Pollution degree	3		3	
Degree of protection	IP65		IP65	
Connection method	Screw connection		Screw connection	
Electrical data				
Rated voltage	24 V		24 V	
Rated current	4 A		1.5 A	
Insulation resistance	> 2 GΩ		> 2 GΩ	
Material data				
Material contact surface valve connector	Ag		CuSn	
Material housing valve connector	PA		PA	
Inflammability class according to UL 94	HB		HB	
Temperature data				
Valve connectors [°C]	-25 ... 60		-25 ... 60	

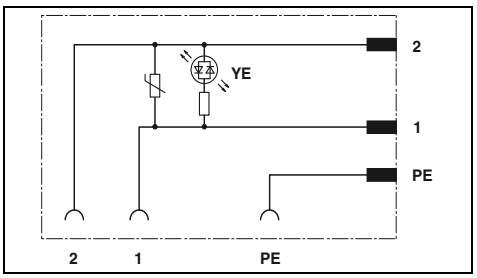
Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Type B		Type BI		Type B		Type BI	
Valve plug, 3-pos., with protective circuit, Pg9 cable gland	1671153	1	1671140	1				
Valve plug, with protective circuit, yellow LED, rated voltage:								
24 V					1452204	1	1452233	1
110 V					1452217	1	1452246	1
230 V					1452220	1	1452259	1

Valve connectors, type C and CI, screw connection



Protective circuit: varistor



Technical data

		Type C	Type CI
General data			
Valve connector according to:		EN 175301-803	-
Pollution degree		3	
Degree of protection		IP65	
Connection method		Screw connection	
Electrical data			
Rated current		1.5 A	
Insulation resistance		> 2 GΩ	
Material data			
Material contact valve connector		CuZn	
Material contact surface valve connector		CuSn	
Inflammability class according to UL 94		HB	
Temperature data			
Valve connectors	[°C]	-25 ... 60	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Type C		Type CI	
Valve plug, with protective circuit, yellow LED, rated voltage:				
24 V	1452262	1	1452291	1
110 V	1452275	1	1452301	1
230 V	1452288	1	1452314	1

M5 sensor/actuator device connectors, front mounting

M5, with 0.5 m long litz wires

Notes:
Flat nut recommended for housing wall thicknesses < 2.5 mm.



M5, 3, 5-pos.

EAC

Technical data

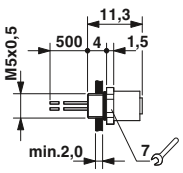
		3-pos.	4-pos.
General data			
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
Pollution degree		3	3
Degree of protection		IP67	IP67
Connection method		Individual wires	Individual wires
Electrical data			
Rated voltage		60 V	60 V
Rated current		1 A	1 A
Material data			
Material contact/contact surface		CuSn / Au	CuSn / Au
Contact carrier material		PA 66	PA 66
Inflammability class according to UL 94		HB	HB
Cable type		TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	[°C]	-25 ... 85	-25 ... 85

Ordering data

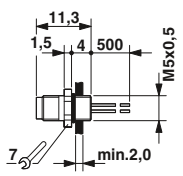
Description	Coding	Order No. (3-pos.)	Pcs. / Pkt.	Order No. (4-pos.)	Pcs. / Pkt.
Device connectors					
Socket	A - standard	1530605	1	1530618	1
Plug	A - standard	1530582	1	1530595	1

Accessories

Flat nut, with: M5 thread	SACC-E-MU-M 5	1535901	100



Dimensions: socket



Dimensions: plug

M8, with 0.5 m long litz wires



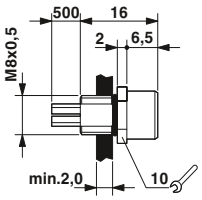
M8, 3, 4, 5-pos.



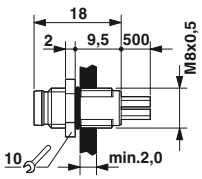
M8, 6, 8-pos.

		Technical data			Technical data		
		3-pos.	4-pos.	5-pos.	6-pos.	8-pos.	
General data							
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	
Pollution degree		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		60 V	30 V	30 V	30 V	30 V	
Rated current		4 A	4 A	3 A	2 A	1.5 A	
Material data							
Material contact/contact surface		Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94		HB	HB	HB	HB	HB	
Cable type		TPE litz wire	TPE litz wire	PVC litz wire	TPE litz wire	PVC litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.		5-pos.		6-pos.		8-pos.			
Device connectors													
Socket	A - standard	1500350	1	1500363	1			1542677	1	1424231	1		
Plug	A - standard	1500334	1	1500347	1			1542664	1	1424232	1		
Socket	B - inverse					1424233	1						
Plug	B - inverse					1424234	1						
Flat nut, with:													
M8 thread		1504071	100	1504071	100			1504071	100				



Dimensions: socket, 3, 4, 6-pos.



Dimensions: plug, 3, 4, 6-pos.

M8 sensor/actuator device connectors, rear mounting

M8, with 0.5 m long litz wires



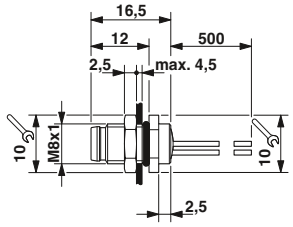
3-, 4-pos.



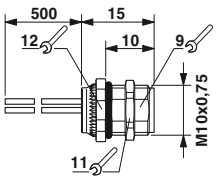
6, 8-pos.

		Technical data		Technical data	
		3-pos.	4-pos.	6-pos.	8-pos.
General data					
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Pollution degree		3	3	3	3
Degree of protection		IP67	IP67	IP67	IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires
Electrical data					
Rated voltage		60 V	30 V	30 V	30 V
Rated current		4 A	4 A	2 A	1.5 A
Material data					
Material contact/contact surface		Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au
Contact carrier material		PUR / PA66	PUR / PA66	PUR / PA66	PUR / PA66
Inflammability class according to UL 94		HB	HB	HB	HB
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	PVC litz wire
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

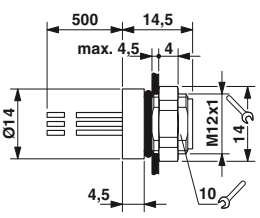
		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.		6-pos.		8-pos.	
Device connector, M8 fastening thread									
Plug	A - standard	1453478	1	1453481	1	1453494	1	1424230	1
Device connector, M10 fastening thread									
Socket	A - standard	1456080	1	1456093	1	1456103	1	1424229	1
Device connector, M12 fastening thread									
Socket	A - standard	1453449	1	1453452	1	1453465	1		



Dimensions: connector, M8 fastening thread



Dimensions: socket, M10 fastening thread



Dimensions: socket, M12 fastening thread

Pg9 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.

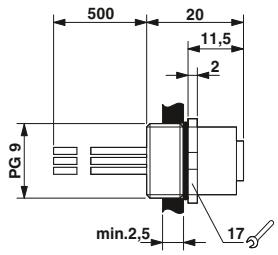


can be positioned, 4-, 5-, 8-pos.

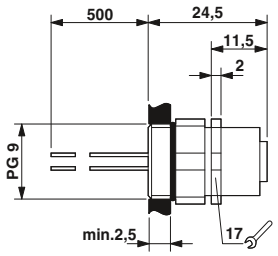
		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		3	3	3	3	3	3
Degree of protection		IP67	IP67	IP67	IP67	IP67	IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data							
Rated voltage		250 V	60 V	30 V	250 V	60 V	30 V
Rated current		4 A	4 A	2 A	4 A	4 A	2 A
Material data							
Material contact/contact surface		CuZn / NiAu	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material		PA66	PA66	PA66	PA66	PA66	PA66
Inflammability class according to UL 94		V0	V0	V0	V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		4-pos.		5-pos.		8-pos.	
Device connectors													
Socket	A - standard	1693788	1	1671098	1	1513758	1	1693791	1	1671108	1	1513761	1
Plug	A - standard	1693762	1	1671111	1	1513774	1	1693775	1	1671124	1	1513787	1
Socket	B - inverse									1515044	1		
Plug	B - inverse									1515057	1		

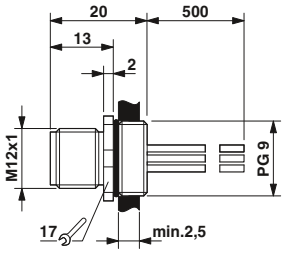
	Accessories			Accessories		
Flat nut, with: Pg9 thread	SACC-E-MU-PG9	1504084	100			



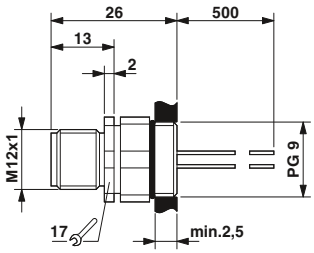
Dimensions: socket



Dimensions: socket, can be positioned



Dimensions: plug



Dimensions: plug, can be positioned

M12 sensor/actuator device connectors, front mounting

M16 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.

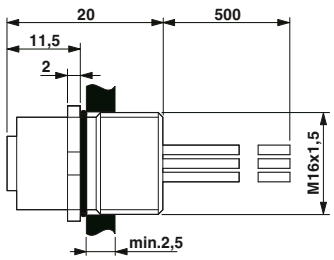


12-, 17-pos.

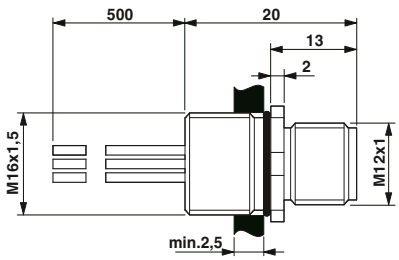
		Technical data			Technical data	
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.
General data						
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		3	3	3	3	3
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data						
Rated voltage		250 V	60 V	30 V	30 V	30 V
Rated current		4 A	4 A	2 A	1.5 A	1.5 A
Material data						
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data						
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data				
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1523434	1	1520039	1	1523476	1	1556252	1	1556294	1		
Plug	A - standard	1523450	1	1520055	1	1523492	1	1556265	1	1556304	1		
Socket	D - data	1535202	1										
Plug	D - data	1551558	1										
Socket	B - inverse			1520000	1								
Plug	B - inverse			1520013	1								

	Accessories			Accessories		
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	SACC-E-MU-M16	1504097	100



Dimensions: socket



Dimensions: plug

M16 fastening thread, with 0.5 m long litz wires, can be positioned



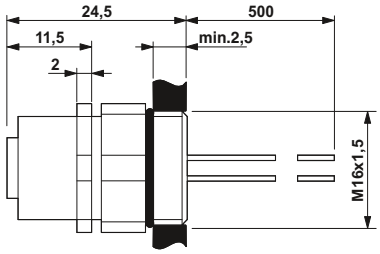
can be positioned, 4-, 5-pos.



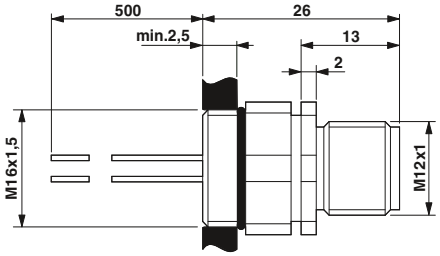
can be positioned, 8-pos.

		Technical data		Technical data	
		4-pos.	5-pos.	8-pos.	
General data					
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	
Degree of protection		IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	
Electrical data					
Rated voltage		250 V	60 V	30 V	
Rated current		4 A	4 A	2 A	
Material data					
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.			
Device connectors									
Socket	A - standard	1523447	1	1520042	1	1523489	1		
Plug	A - standard	1523463	1	1520068	1	1523502	1		
Socket	D - data	1535215	1						
Plug	D - data	1552256	1						
Socket	B - inverse			1519998	1				
Plug	B - inverse			1520026	1				



Dimensions: socket, can be positioned



Dimensions: plug, can be positioned

M12 sensor/actuator device connectors, front mounting

M12 XL device connector, M16 fastening thread, with 0.5 m long litz wires

– Tightening limitation
– Wrench size 19



4-, 5-, 8-pos.

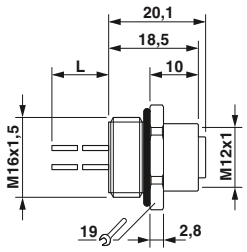


12-, 17-pos.

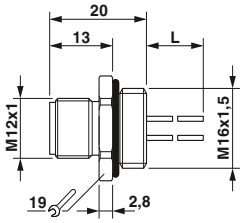
	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data						
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree	3	3	3	3	3	
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	
Material data						
Material contact/contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94	V0	V0	V0	V0	V0	
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data						
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.	
Device connectors											
Socket	A - standard	1411568	1	1411571	1	1411573	1	1411574	1	1411576	1
Plug	A - standard	1411577	1	1411579	1	1411581	1	1411582	1	1411583	1
Socket	D - data	1411569	1								
Plug	D - data	1411578	1								
Socket	B - inverse			1411572	1						
Plug	B - inverse			1411580	1						

	Accessories			Accessories		
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	SACC-E-MU-M16	1504097	100



Dimensions: socket



Dimensions: plug

M20 fastening thread, with 0.5 m long litz wires

– Housing material: brass, nickel-plated



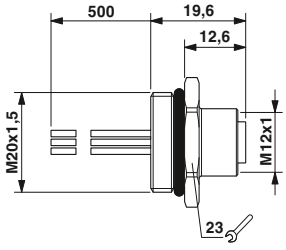
4-, 5-, 8-pos.

Technical data

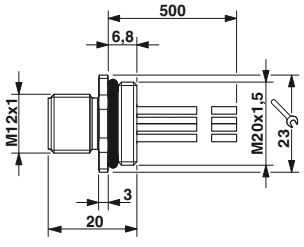
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67/IP69K	IP67/IP69K	IP67/IP69K
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Material contact/contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	4-pos. Order No.	4-pos. Pcs. / Pkt.	5-pos. Order No.	5-pos. Pcs. / Pkt.	8-pos. Order No.	8-pos. Pcs. / Pkt.
Device connectors							
Socket	A - standard	1408436	1	1408454	1	1408453	1
Plug	A - standard	1408451	1	1408446	1	1408442	1



Dimensions: socket



Dimensions: plug

M12 sensor/actuator device connectors, front mounting

One-piece, 20 mm square flange, with 0.5 m long litz wires

– 4x fixing hole, 3.2 mm
– With form seal for M3 screws



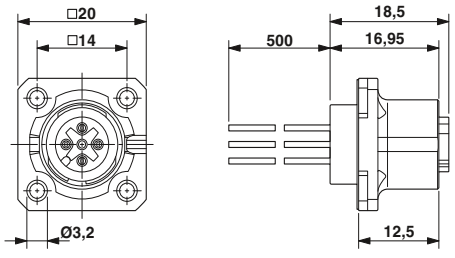
4-, 5-, 8-pos.



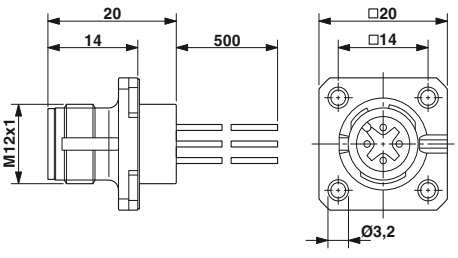
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data										Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.							
Device connectors																	
Socket	A - standard	1419797	1	1441655	1	1441697	1	1441710	1	1441736	1						
Plug	A - standard	1419784	1	1441642	1	1441684	1	1441707	1	1441723	1						
Socket	D - data	1441639	1														
Plug	D - data	1441626	1														
Socket	B - inverse			1441671	1												
Plug	B - inverse			1441668	1												



Dimensions: socket



Dimensions: plug

One-piece, 25 mm square flange, with 0.5 m long litz wires

– 4 x fixing hole, 2.7 mm
– with form seal for M2.5 screws



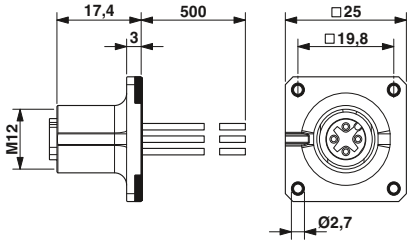
4-, 5-, 8-pos.



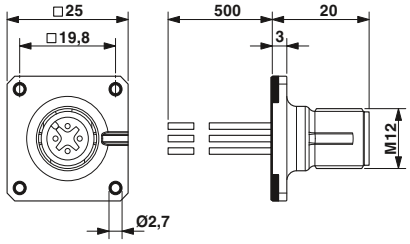
12-, 17-pos.

		Technical data			Technical data	
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.
General data						
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		3	3	3	3	3
Degree of protection		IP67	IP67	IP67	IP67	IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data						
Rated voltage		250 V	60 V	30 V	30 V	30 V
Rated current		4 A	4 A	2 A	1.5 A	1.5 A
Material data						
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data						
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data		Ordering data			Ordering data		Ordering data		Ordering data	
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1420003	1	1440986	1	1441574	1	1441590	1	1441613	1		
Plug	A - standard	1419991	1	1440973	1	1441561	1	1441587	1	1441600	1		
Socket	D - data	1440960	1										
Plug	D - data	1440957	1										
Socket	B - inverse			1441558	1								
Plug	B - inverse			1440999	1								



Dimensions: socket



Dimensions: plug

Modular, 25 mm square flange, pre-assembled



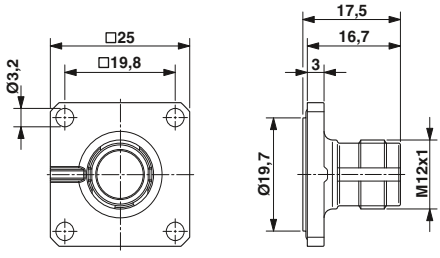
Flange housing, housing bore holes 3.2 mm



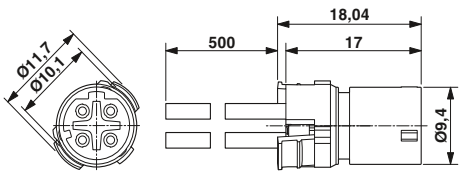
with 0.5 m long litz wires, assembled contact carrier and insulating body

		Technical data			Technical data		
					4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101			IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		-			3	3	3
Degree of protection		-			IP67	IP67	IP67
Connection method		-			Crimp contacts	Crimp contacts	Crimp contacts
Electrical data							
Rated voltage		-			250 V	60 V	30 V
Rated current		-			4 A	4 A	2 A
Material data							
Material contact/contact surface		- / -			CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material		-			PA 66	PA 66	PA 66
Cable gland material		Zinc die-cast, nickel-plated			-	-	-
Inflammability class according to UL 94		-			V0	V0	V0
Cable type		-			TPE litz wire	TPE litz wire	TPE litz wire
Temperature data							
Plug/socket	[°C]	-25 ... 85			-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								4-pos.		5-pos.		8-pos.	
Square flange housing, with O-ring		1419959	10										
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts													
Plug	A - standard							1440805	1	1440818	1	1457827	1
Plug	D - data							1440821	1				
Plug	B - inverse									1440759	1		



M12 square flange housing



M12 contact carrier, with litz wires

Modular, 25 mm square flange, for free assembly

SPEEDCON LOCKING



Flange housing, housing bore holes 3.2 mm

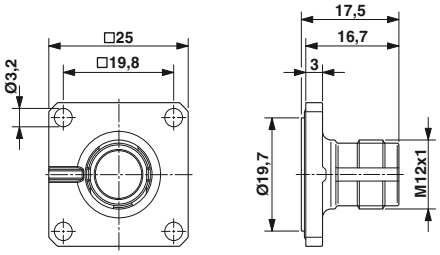


Contact carriers and insulating bodies for assembly

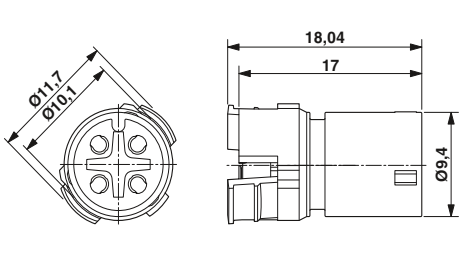
		Technical data			Technical data		
					4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101			IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		-			3	3	3
Degree of protection		-			IP67	IP67	IP67
Connection method		-			Crimp contacts	Crimp contacts	Crimp contacts
Electrical data							
Rated voltage		-			250 V	60 V	30 V
Rated current		-			4 A	4 A	2 A
Material data							
Contact carrier material		-			PA 66	PA 66	PA 66
Cable gland material		Zinc die-cast, nickel-plated			-	-	-
Inflammability class according to UL 94		-			V0	V0	V0
Temperature data							
Plug/socket	[°C]	-25 ... 85			-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								4-pos.		5-pos.		8-pos.	
Square flange housing, with O-ring		1419959	10										
Contact carriers and insulating bodies													
Plug	A - standard							1440931	10	1419988	10	1440928	10
Plug	D - data							1440944	10				
Plug	B - inverse									1440915	10		
Crimp contacts, for 4- and 5-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... 0.34 mm²													
Contact Ø: 1.0 mm								1452356	100	1452356	100		
Crimp contacts, for 8-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... ... 0.34 mm²													
Contact Ø: 0.8 mm												1452372	100

	Accessories			Accessories		
Crimping pliers						
CRIMPFOX-TC MP					1212510	1



M12 square flange housing



M12 contact carrier

M12 sensor/actuator device connectors, rear mounting

Pg9 fastening thread, with 0.5 m long litz wires



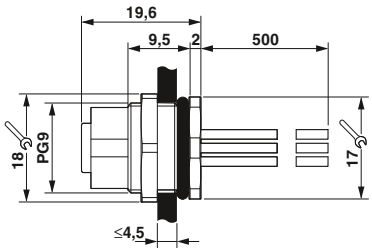
4-, 5-, 8-pos.



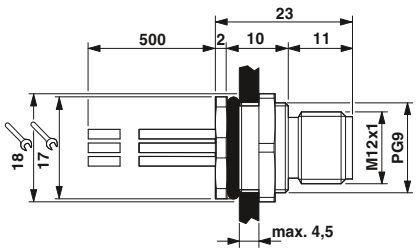
12-, 17-pos.

	Technical data			Technical data	
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.
General data					
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data					
Rated voltage	250 V	60 V	30 V	30 V	30 V
Rated current	4 A	4 A	2 A	1.5 A	1.5 A
Material data					
Material contact/contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data					
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data		Ordering data			Ordering data		Ordering data			Ordering data	
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1556621	1	1542729	1	1542732	1	1430446	1	1430462	1		
Plug	A - standard	1556618	1	1542703	1	1542716	1	1430459	1	1430475	1		
Socket	D - data	1551529	1										
Plug	D - data	1551532	1										
Socket	B - inverse			1543676	1								
Plug	B - inverse			1543663	1								



Dimensions: socket



Dimensions: plug

M12 fastening thread, with 0.5 m long litz wires



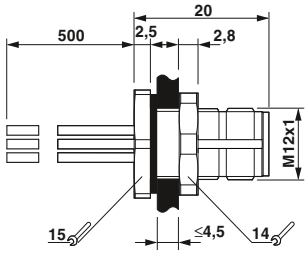
4-, 5-, 8-pos.



12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data							
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Plug	A - standard	1551875	1	1551888	1	1551914	1	1437122	1	1437135	1		
Plug	D - data	1551901	1										
Plug	B - inverse			1551891	1								



Dimensions: plug

M12 sensor/actuator device connectors, rear mounting

M16 fastening thread, with 0.5 m long litz wires



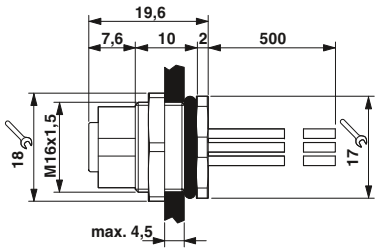
4-, 5-, 8-pos.



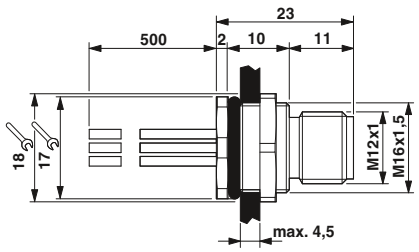
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	3	3	
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data									
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1419632	1	1419658	1	1419690	1	1419713	1	1419739	1		
Plug	A - standard	1419629	1	1419645	1	1419687	1	1419700	1	1419726	1		
Socket	D - data	1419616	1										
Plug	D - data	1419603	1										
Socket	B - inverse			1419674	1								
Plug	B - inverse			1419661	1								



Dimensions: socket



Dimensions: plug

M12 XL device connector, M16 fastening thread, with 0.5 m long litz wires

– Tightening limitation
– Wrench size 19



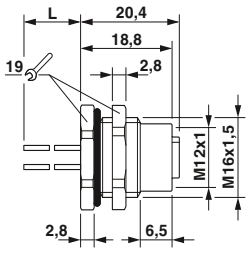
4-, 5-, 8-pos.



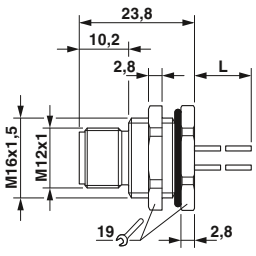
12-, 17-pos.

	Technical data			Technical data	
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.
General data					
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data					
Rated voltage	250 V	60 V	30 V	30 V	30 V
Rated current	4 A	4 A	2 A	1.5 A	1.5 A
Material data					
Material contact/contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data					
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data		Ordering data			Ordering data				
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1411584	1	1411586	1	1411588	1	1411589	1	1411590	1		
Plug	A - standard	1411591	1	1411593	1	1411595	1	1411596	1	1411597	1		
Socket	D - data	1411585	1										
Plug	D - data	1411592	1										
Socket	B - inverse			1411587	1								
Plug	B - inverse			1411594	1								



Dimensions: socket



Dimensions: plug

M16 fastening thread, with assembled cable, shielded



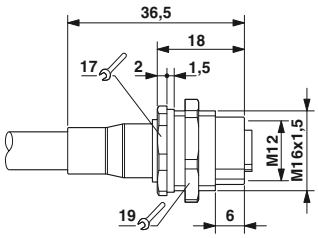
PUR cable,
4-, 5-, 8-pos., shielded



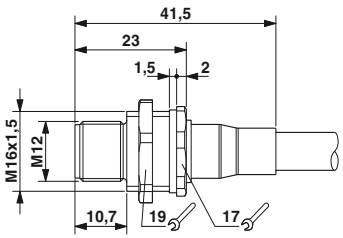
PVC cable,
12-, 17-pos., shielded

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	V0	V0	
Cable type		PUR halogen-free, black	PUR halogen-free, black	PUR halogen-free, black	PVC black	PVC black	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data			
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.	
Device connector, A-coded											
Socket	1 m	1419302	1	1419328	1	1419357	1	1442188	1	1442269	1
Plug	1 m	1419399	1	1419409	1	1419425	1	1442227	1	1442308	1
Socket	2 m	1419315	1	1419331	1	1419344	1	1442191	1	1442272	1
Plug	2 m	1419386	1	1419412	1	1419438	1	1442230	1	1442311	1



Dimensions: socket



Dimensions: plug

Pg9 fastening thread, plastic, with 0.5 m long litz wires



5-, 8-pos.

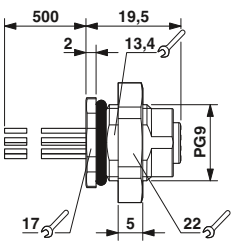
EAC

Technical data

		5-pos.	8-pos.
General data			
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Pollution degree		3	3
Degree of protection		IP67	IP67
Electrical data			
Rated voltage		60 V	30 V
Rated current		4 A	2 A
Material data			
Material contact/contact surface		CuZn / Au	CuZn / Au
Contact carrier material		PA 66	PA 66
Inflammability class according to UL 94		HB	HB
Temperature data			
Plug/socket	[°C]	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5-pos.		8-pos.	
Device connectors					
Socket	A - standard	1436356	1	1436369	1



Dimensions: socket

Control cabinet feed-through



4-, 5-, 8-pos.

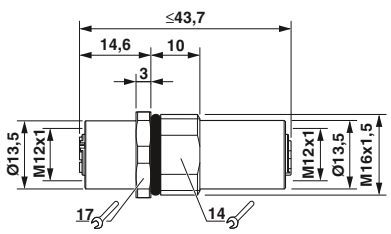
EAC

Technical data

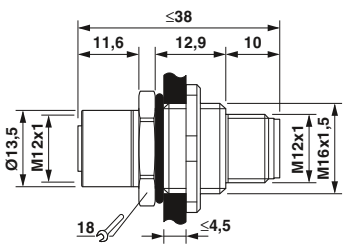
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact material	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	HB	HB	HB
Temperature data			
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Control cabinet feed-through, M16 fastening thread							
Pin to socket	A - standard			1551671	1	1551697	1
Pin to socket	B - inverse			1551684	1		
Socket to socket	D - data	1424326	1				



Control cabinet feed-through, socket to socket on both sides



Control cabinet feed-through, socket to pin on both sides

Pg13.5 fastening thread, with 0.5 m long litz wires

Notes:

Flat nut recommended for housing wall thicknesses < 2.5 mm.



3-, 4-pos.

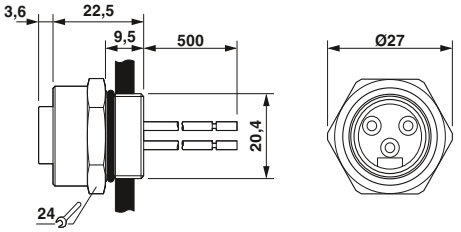


5-pos.

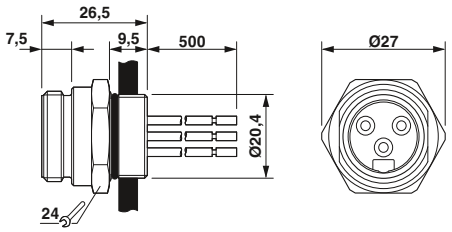
		Technical data		Technical data	
		3-pos.	4-pos.	5-pos.	
General data					
Pollution degree		3	3	3	
Degree of protection		IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	
Electrical data					
Rated voltage		250 V	250 V	250 V	
Rated current		12 A	9 A	9 A	
Surge voltage category		II	II	II	
Material data					
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PUR	PUR	PUR	
Inflammability class according to UL 94		HB	HB	HB	
Cable type		PVC litz wire	PVC litz wire	PVC litz wire	
Temperature data					
Plug/socket	[°C]	-40 ... 85	-40 ... 85	-40 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.		5-pos.			
Device connectors									
Socket	A - standard	1521407	1	1521423	1	1521449	1		
Plug	A - standard	1521410	1	1521436	1	1521452	1		

	Accessories			Accessories		
Flat nut, with: Pg13.5 thread	SACC-E-MU-PG13,5	1539143	100	SACC-E-MU-PG13,5	1539143	100



Dimensions: socket



Dimensions: plug

7/8" sensor/actuator device connectors, rear mounting

7/8", with 1.0 m long litz wires



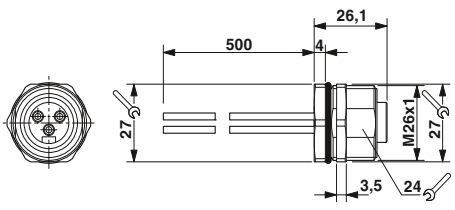
3-, 4-, 5-position



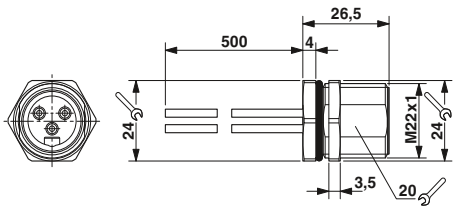
3-, 4-, 5-position

	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	3-pos.	4-pos.	5-pos.
General data						
Pollution degree	3	3	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data						
Rated voltage	250 V	250 V	250 V	250 V	250 V	250 V
Rated current	12 A	9 A	9 A	12 A	9 A	9 A
Surge voltage category	II	II	II	II	II	II
Material data						
Contact material	CuZn	CuZn	CuZn	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au	Au	Au	Au
Contact carrier material	PUR	PUR	PUR	PUR	PUR	PUR
Inflammability class according to UL 94	HB	HB	HB	HB	HB	HB
Temperature data						
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		5-pos.		3-pos.		4-pos.		5-pos.	
Device connector, M26 fastening thread												
Socket	1453782	1	1453795	1	1453805	1						
Device connector, 7/8" fastening thread												
Plug							1453753	1	1453766	1	1453799	1



Dimensions: socket



Dimensions: plug

Sealing elements

During transport or in the field, unoccupied plug-in connections must be protected or closed. The screw plugs, sealing caps and closing caps made of plastic or metal are suitable for this purpose. These achieve the IP65/IP67 as well as IP69K degrees of protection.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
M5 screw plug for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	①	**PROT-M5**	1533288	10
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-M8**	1682540	5
M12 screw plug for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	③	**PROT-M12**	1680539	5
M12 screw plug with SPEEDCON quick locking for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	④	**PROT-MS SCO**	1553129	5
M12 sealing cap for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑤	**PROT-M12 FS**	1560251	5
Screw plug M12, made of metal for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	⑥	**PROT-M12 SH**	1503302	5
Metal M12 sealing cap for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑦	**PROT-M12 FS-M**	1430488	10
for unused M12 sockets		**PROT-M12 MS-M**	1414148	10
M12 screw plug made of stainless steel for unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	⑧	**PROT-M12 FB**	1555538	5
Closing cap for Pg9/ Pg11, to close unoccupied connections	⑨	**Q-PROT 9/11**	1670235	10
M16 locking screw With flat nut for oval housing cutouts	⑩	**SACC-M16-SEALING PLUG SET**	1453368	10

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12, and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Screw plug made from **plastic** with retaining strap, for sealing unused **sockets**	①			
M8 for SAC cables		**PROT-M 8 MS-PA-CHAIN**	1430860	10
M8 with 3 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE-DM3**	1441105	10
M8 with 12 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE**	1441095	10
M12 for SAC cables		**PROT-M12 MS-PA-CHAIN**	1430899	5
M12 with 15 mm fastening eye		**PROT-M12 MS-PA-CHAIN-EYE-DM14**	1456200	5
7/8" for SAC cables		**PROT-MINMS-PA-CHAIN**	1430925	10
Plastic sealing cap with holding band, for closing unoccupied **connectors**	②			
M8 for SAC cables		**PROT-M 8 FS-PA-CHAIN**	1430857	10
M8 with 8 mm fastening eye		**PROT-M 8 FS-PA-CHAIN-EYE**	1441082	10
M12 for SAC cables		**PROT-M12 FS-PA-CHAIN**	1430873	5
M12 with 12 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM12**	1456187	5
M12 with 15 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM14**	1456190	5
7/8" for SAC cables		**PROT-MINFS-PA-CHAIN**	1430912	10
Sealing cap made of **metal** with fixing chain and 16 mm fastening eye, for sealing:	③			
unused M12 connectors		**PROT-M12 FS-M-CHAIN**	1430491	10
unused M12 sockets		**PROT-M12 MS-M-CHAIN**	1414147	1

Accessories for device connectors

Special fixing nuts are available for EMC-compliant installation of M12 device connectors for coated or painted housing surfaces. When tightened they cut through the surface coating and establish contact between the housing and the connector.

Flat seals can be used as an alternative option between the housing wall and the device connector. Flat seals are to be preferred for thin walls, as the housing cutouts do not have to be chamfered.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
EMC hexagonal nut with fine toothing, for all device connectors with:	①			
M12 fastening thread		SACC-M12-KD-NUT-SH	1440151	10
EMC hexagonal nut with fine toothing, for all device connectors with:	②			
M16 fastening thread		SACC-M16-KD-NUT-SH	1440164	10
Pg9 fastening thread		SACC-PG9-KD-NUT-SH	1440177	10
Flat gasket for all device connectors with:	③			
M16 fastening thread		SACC-M16-SEAL CLM	1430394	10
Pg9 fastening thread		SACC-PG9-SEAL CLM	1556320	10

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

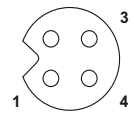
The version for M12 connectors with hexagonal stainless steel knurl is also made from stainless steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are also available. When used in conjunction with the adapter insert, they can also be used to accommodate the available plug attachments.

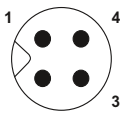


Description	Type	Order No.	Pcs. / Pkt.
	Ordering data		
Torque screwdriver ① With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	**TSD 08 SAC**	1212597	1
Nut ② For assembling 7/8" connectors, with 4 mm hexagonal drive	**SAC BIT MIN-D25**	1212512	1
Torque screwdriver ③ With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ④ For mounting M12 connectors with hexagonal stainless steel knurl, wrench size 14, with 4 mm hexagonal drive	**SAC BIT M12-W14**	1212513	1
Torque screwdriver, accuracy according to standard EN ISO 6789 ⑤			
Adjustable from 0.3 - 1.2 Nm	**TSD-M 1,2NM**	1212224	1
Adjustable from 1.2 - 3 Nm	**TSD-M 3NM**	1212225	1
Adjustable from 3 - 6 Nm	**TSD-M 6NM**	1212226	1
Adapter insert ⑥ For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	**TSD-M SAC-BIT ADAPTER**	1212600	1

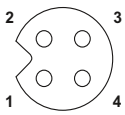
M5 device connectors



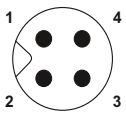
Socket, 3-pos.



Pin, 3-pos.



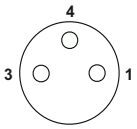
Socket, 4-pos.



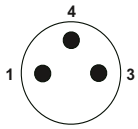
Pin, 4-pos.

Pin	3-pos.	4-pos.
1	BN	BN
2	–	WH
3	BU	BU
4	BK	BK

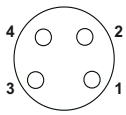
M8 device connectors



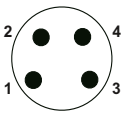
Socket, 3-pos.



Pin, 3-pos.

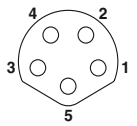


Socket, 4-pos.

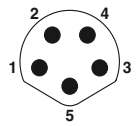


Pin, 4-pos.

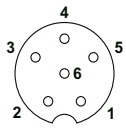
Pin	3-pos., A-coded	4-pos., A-coded
1	BN	BN
2	–	WH
3	BU	BU
4	BK	BK



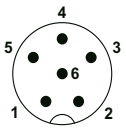
Socket, 5-pos., B-coded



Pin, 5-pos., B-coded

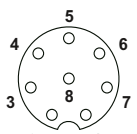


Socket, 6-pos.

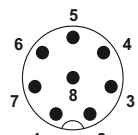


Pin, 6-pos.

Pin	5-pos. B-coded	6-pos., A-coded
1	GY	BN
2	RD	WH
3	WH	BU
4	BK	BK
5	BU	GY
6		PK



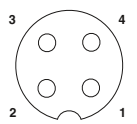
Socket, 8-pos.



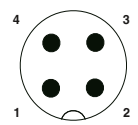
Pin, 8-pos.

Pin	8-pos., A-coded
1	WH
2	BN
3	GN
4	YE
5	GY
6	PK
7	BU
8	RD

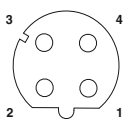
M12 device connectors



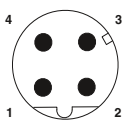
Socket, 4-pos., A-coded



Pin, 4-pos., A-coded

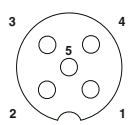


Socket, 4-pos., D-coded

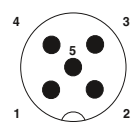


Pin, 4-pos., D-coded

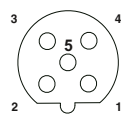
Pin	4-pos., A-coded	4-pos., D-coded
1	BN	YE
2	WH	WH
3	BU	OG
4	BK	BU



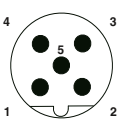
Socket, 5-pos., A-coded



Pin, 5-pos., A-coded

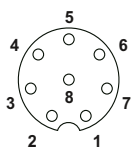


Socket, 5-pos., B-coded

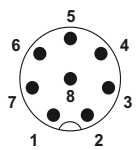


Pin, 5-pos., B-coded

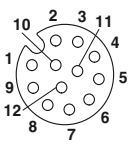
Pin	5-pos., A-coded	5-pos., B-coded
1	BN	BN
2	WH	WH
3	BU	BU
4	BK	BK
5	GY	GY



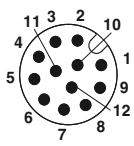
Socket, 8-pos.



Pin, 8-pos.



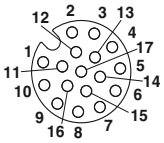
Socket, 12-pos.



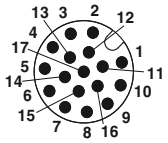
Pin, 12-pos.

Pin	8-pos.	12-pos.
1	WH	BN
2	BN	BU
3	GN	WH
4	YE	GN
5	GY	PK
6	PK	YE
7	BU	BK
8	RD	GY
9	–	RD
10	–	VT
11	–	GYPK
12	–	RDBU

M12 device connectors



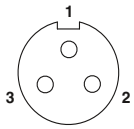
Socket, 17-pos.



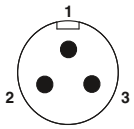
Pin, 17-pos.

Pin	17-pos.	Pin	17-pos.
1	BN	9	RD
2	BU	10	VT
3	WH	11	GYPK
4	GN	12	RDBU
5	PK	13	WHGN
6	YE	14	BNGN
7	BK	15	WHYE
8	GY	16	YEBN
		17	WHGY

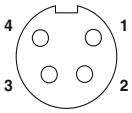
7/8" device connectors



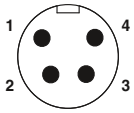
Socket, 3-pos.



Pin, 3-pos.

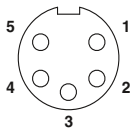


Socket, 4-pos.

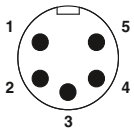


Pin, 4-pos.

Pin	3-pos.	4-pos.
1	BK	BK
2	BN	BU
3	BU	BN
4	–	WH



Socket, 5-pos.



Pin, 5-pos.

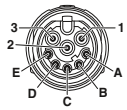
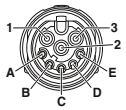
Pin	5-pos.
1	BK
2	BU
3	GNYE
4	BN
5	WH

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for a cable outside diameter of 3.5 - 11 mm, shielded (M17 Compact) 5 - 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector with M17 x 1 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data			
Number of positions		**8**	**17**
Contacts		8	17
Contact Ø	[mm]	1	0.6
Litz wire cross section, crimp contacts Turned	[mm²]	0.06 ... 1.0	0.06 ... 0.5
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm²]	0.06 ... 0.56	–
Nominal current per contact at 25°C [1]		9.0	3.6
Specifications according to DIN EN 61984:2009			
Rated voltage	[V AC/DC]	60	60
Test/surge voltage	[kV AC]	1.5	1.5
Surge voltage category		III	III
Pollution degree [2]		3	3
Installation height	[m]	Up to 3000	Up to 3000
Cable clamping area [3]	Max. Ø [mm]	12.5	12.5

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Number of positions	Contact chamber numbering (view of plug-in side)	
	Pin	Socket
8-pos. Crimp		
17-pos. Crimp		

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only socket contacts may be used in the live part of the connector.

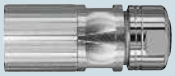
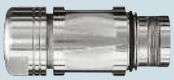
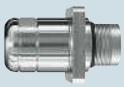
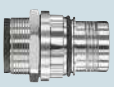
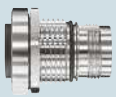
Selection guide

M17 signal connectors, 8 and 17-pos., crimp ranges: 0.06 mm² to 1.0 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are supplied fully assembled and are complemented by the respective crimp contacts.

Each housing type can be fitted with pin or socket contacts.
Connectors with knurled nuts can be equipped with SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread as an option. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

	Connector type	
Shielded	**Cable connectors**	
	SPEEDCON fast locking system, M17 Compact, see page 62. 	
	M17, see page 66. 	Square mounting flange for M17 cable and coupler connectors for wall mounting, see page 162. 
	M17 x 1 standard interlocking, M17, see page 67. 	
Shielded	**Coupler connectors/panel feed-through**	
	Coupler connector M17 Compact, see page 63. 	M17, see page 68. 
	Panel feed-through M17 Compact, see page 64. 	
Shielded	**Device connectors**	
	Straight, M17 Compact, see page 65. 	Straight, M17, see page 69. 
	Straight, with central fastening thread, front mounting, M17, see page 71. 	Straight, with central fastening thread, rear mounting, M17, see page 71. 
	Angled, rotatable, M17, see page 70. 	

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 73.



Punched-rolled, taped,
see page 72.



Pin contacts

Turned, see page 73.



Punched-rolled, taped,
see page 72.



Note:
For reasons of safety, only socket contacts may be used in the live part of the plug.

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 158.



Crimping pliers with digital display for turned crimp contacts,
see page 159.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 162.



Color rings for individually marking the connectors,
see page 164.



M17 Compact cable connector

– High packing density in a compact product
– Individual marking of connectors with color rings

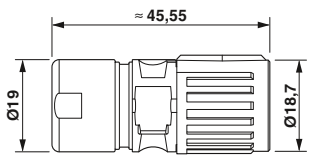


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	3.5 mm ... 5.5 mm	1613370	1	1613288	1	1618641	1	1618682	1
	5 mm ... 9.2 mm	1613371	1	1613324	1	1618648	1	1618683	1
	9 mm ... 11.2 mm	1613372	1	1613325	1	1618649	1	1618684	1
		Accessories				Accessories			
Crimp contacts		**For socket contacts, see page 72 onwards**				**For pin contacts, see page 72 onwards**			
Color rings, 50 pcs. in set (to be ordered separately)		**See page 164**				**See page 164**			



M17 Compact coupler connector

– Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
– Individual marking of connectors with color rings



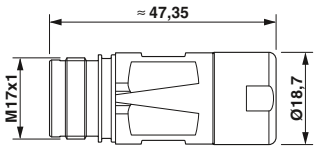
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data: Order No. (8-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.	Ordering data: Order No. (8-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.
Coupler connector, with contact carrier, **without** contacts									
	3.5 mm ... 5.5 mm	1618724	1	1618756	1	1617799	1	1613497	1
	5 mm ... 9.2 mm	1618725	1	1618757	1	1617813	1	1613896	1
	9 mm ... 11.2 mm	1618726	1	1618758	1	1617830	1	1614532	1

Accessories	Accessories
Crimp contacts	**For socket contacts, see page 72 onwards**	**For pin contacts, see page 72 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



M17 Compact panel feed-through

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 25.7 mm x 25.7 mm**

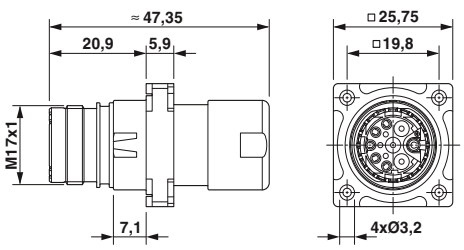


Panel feed-through, socket assembly



Panel feed-through, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Panel feed-through, with contact carrier, **without contacts**									
	3.5 mm ... 5.5 mm	1618801	1	1618834	1	1617925	1	1617863	1
	5 mm ... 9 mm	1618802	1	1618835	1	1617929	1	1617872	1
	9 mm ... 11 mm	1618805	1	1618836	1	1617932	1	1617873	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 72 onwards				For pin contacts, see page 72 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 164				See page 164			



Installation dimensions

M17 Compact device connector, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 21.6 mm x 21.6 mm**

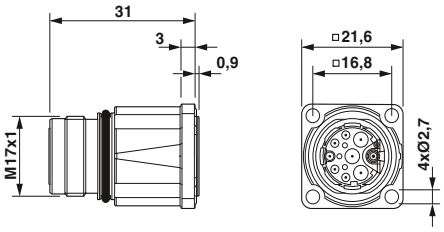


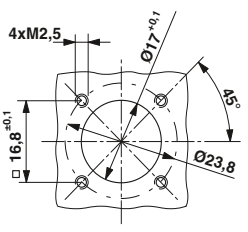
Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, with contact carrier, **without** contacts, contact insert **for support** on the device	1619039	1	1607654	1	1613286	1	1607636	1
Device connector, with contact carrier, **without** contacts, contact insert **can be snapped in**	1619038	1	1607653	1	1619037	1	1607634	1
	Accessories				Accessories			
Crimp contacts	**For socket contacts, see page 72 onwards**				**For pin contacts, see page 72 onwards**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**				**See page 164**			





Installation dimensions

Cable connector, SPEEDCON fast locking system

– Individual marking of connectors with color rings

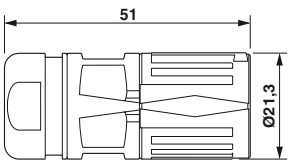


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619007	1	1607642	1	1618999	1	1607625	1
	8 mm ... 10 mm	1619008	1	1607644	1	1619000	1	1607627	1
	10 mm ... 12.5 mm	1619009	1	1624532	1	1619001	1	1624529	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 72 onwards				For pin contacts, see page 72 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 164				See page 164			



Cable connector, M17 standard interlocking

- Standard knurled nuts compatible with mating plugs with SPEEDCON or M17 standard external thread
- Individual marking of connectors with color rings



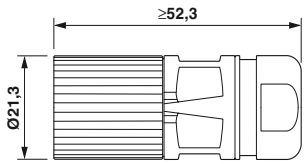
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619003	1	1607641	1	1618995	1	1607624	1
	8 mm ... 10 mm	1619004	1	1607643	1	1618996	1	1607626	1
	10 mm ... 12.5 mm	1619005	1	1624531	1	1618997	1	1624528	1

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 72 onwards**	**For pin contacts, see page 72 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Coupling connector

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings

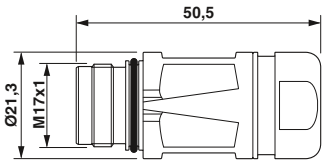


Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Coupler connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619015	1	1607647	1	1619011	1	1607630	1
	8 mm ... 10 mm	1619016	1	1607649	1	1619012	1	1607631	1
	10 mm ... 12.5 mm	1619017	1	1624533	1	1619013	1	1624530	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 72 onwards				For pin contacts, see page 72 onwards			
Color rings, 50 pcs. in set (to be ordered separately)		See page 164				See page 164			



Device connector, straight, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings

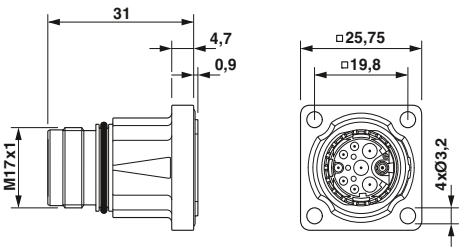


Device connector, straight, socket assembly

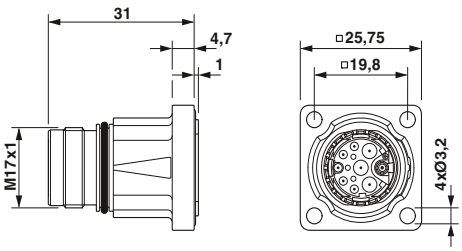


Device connector, straight, pin assembly

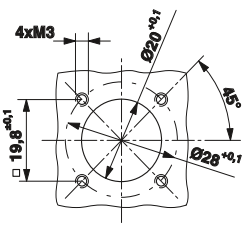
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, with contact carrier, **without** contacts, contact insert **for support** on the device								
Flange dimensions: 25.75 mm x 25.75 mm	1619197	1	1619206	1	1619196	1	1619202	1
Device connector, with contact carrier, **without** contacts, contact insert **can be snapped in**								
Flange dimensions: 25.75 mm x 25.75 mm	1619220	1	1619226	1	1619219	1	1619225	1
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 72 onwards				For pin contacts, see page 72 onwards			
Color rings, 50 pcs. in set (to be ordered separately)	See page 164				See page 164			



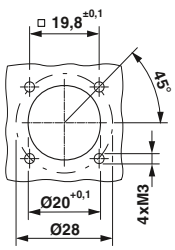
Contact insert for support on the device



Contact insert can be snapped in



Installation dimensions



Installation dimensions

Device connector, angled, rotatable, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Housing can be freely rotated up to 308°
- Individual marking of connectors with color rings
- Flange versions for M2.5/M3 attachment



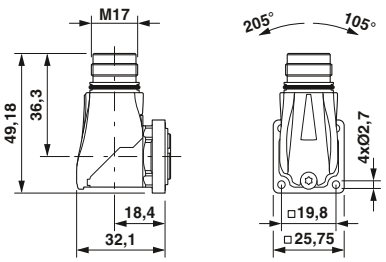
Device connector, angled, rotatable, for socket contacts



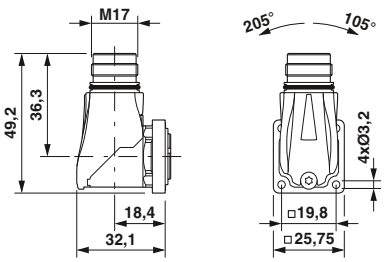
Device connector, angled, rotatable, for pin contacts

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts								
Fixing with M2.5	1620440	1	1620442	1	1620439	1	1620441	1
Device connector, angled, rotatable, with contact carrier, **without** contacts								
Fixing with M3	1620455	1	1620457	1	1620456	1	1620458	1

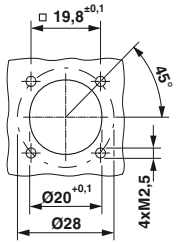
	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 72 onwards**	**For pin contacts, see page 72 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



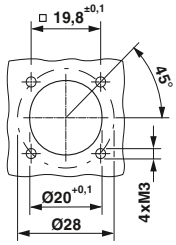
Fixing with M2.5



Fixing with M3



Installation dimensions



Installation dimensions

Device connector, central fastening thread, front/rear mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



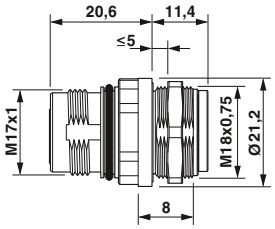
Device connector, central fixing, socket assembly



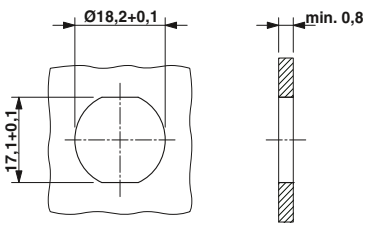
Device connector, central fixing, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, **front mounting**, M18 x 0.75 fastening thread, with contact carrier, without contacts	1619036	1	1613542	1	1618584	1	1613540	1
Device connector, **rear mounting**, M20 x 1.5 fastening thread, with contact carrier, without contacts	1619035	1	1613543	1	1619034	1	1613541	1

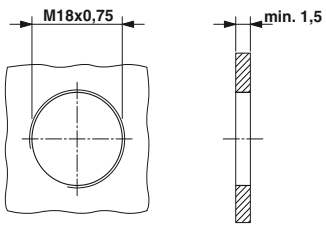
Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M18 x 0.75	ST-E2015151	1613831	10	ST-E2015151	1613831	10
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
Crimp contacts	For socket contacts, see page 72 onwards			For pin contacts, see page 72 onwards		
Color rings, 50 pcs. in set (to be ordered separately)	See page 164			See page 164		



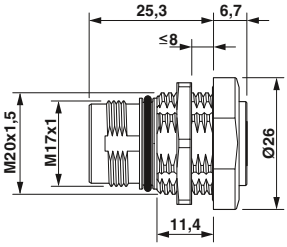
Front mounting, M18 x 0.75, order locking nut separately



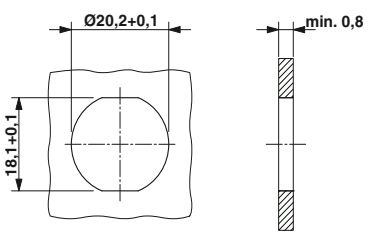
Installation dimensions: mounting with anti-rotation protection and locking nut



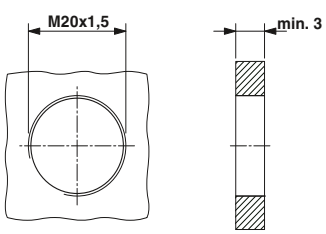
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For reasons of safety, only socket contacts may be used in the live part of the connector.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 mm² ... 0.56 mm²	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 mm² ... 0.56 mm²	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1
		Accessories			Accessories		
Crimping tools		Order separately, see page 158			Order separately, see page 158		

Crimp contacts, turned

M17 signal connectors are fitted with contacts with Ø 1.0 mm or Ø 0.6 mm depending on the number of positions.
– 8-pos. versions: contacts with Ø 1.0 mm
– 17-pos. versions: contacts with Ø 0.6 mm

Note:
Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contact socket Ø 0.6 mm							
	0.06 mm² ... 0.25 mm²	**ST-06KS010**	1607580	100			
	0.14 mm² ... 0.34 mm²	**ST-06KS020**	1607581	100			
	0.34 mm² ... 0.50 mm²	**ST-06KS030**	1607582	100			
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²	**ST-10KS010**	1618239	100			
	0.34 mm² ... 0.5 mm²	**ST-10KS020**	1618251	100			
	0.5 mm² ... 1.0 mm²	**ST-10KS030**	1618254	100			
Contact pin Ø 0.6 mm							
	0.06 mm² ... 0.25 mm²				**ST-06KP010**	1607577	100
	0.14 mm² ... 0.34 mm²				**ST-06KP020**	1607578	100
	0.34 mm² ... 0.50 mm²				**ST-06KP030**	1607579	100
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²				**ST-10KP010**	1618255	100
	0.34 mm² ... 0.5 mm²				**ST-10KP020**	1618256	100
	0.5 mm² ... 1.0 mm²				**ST-10KP030**	1618261	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 159			Order separately, see page 159		

Notes:
Every connector housing type can be equipped with pin or socket contacts.

For reasons pertaining to safety, only socket contacts may be used in the live part of the connector.

Mechanical and electrical data

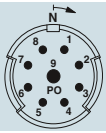
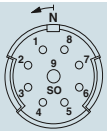
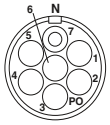
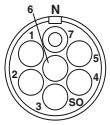
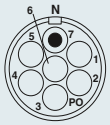
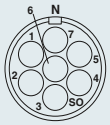
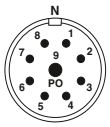
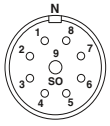
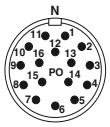
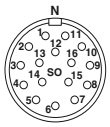
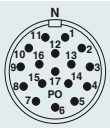
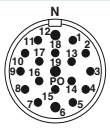
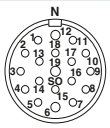
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Thermoplastic polyester (PBT), polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Solder cup, crimp, solder-in pin
Sealing and O-ring:	NBR
Flat gasket:	NBR, fiber-reinforced NBR
Temperature range:	-40°C ... +125°C
Cable entry:	Cable and coupler connectors for a cable outside diameter of 3 - 14.5 mm, shielded
Type of locking:	M23 SPEEDCON fast locking system, cable connector with M23 x 1 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data

Number of positions	6	7	9 (8+1)	12	16	17	19 (16+3)
Contacts	6	7	8 + 1	12	12	17	16 + 3
Contact Ø [mm]	2	2	1 2	1	1	1	1 1.5
Litz wire cross section							
Solder connection: contacts x [mm²] max.	6 x 2.5	7 x 2.5	8 x 1.0 + 1 x 2.5	12 x 1.0	16 x 1.0	17 x 1.0	16 x 1.0 + 3 x 1.0
Crimp connection: contacts x [mm²] max.	6 x 2.5	7 x 2.5	8 x 0.56 + 1 x 2.5	12 x 0.56	16 x 0.56	17 x 0.56	16 x 1.0 + 3 x 1.0
Nominal current per contact at 25°C[1]	20	20	8 20	8	8	8	8 10
Specifications according to DIN EN 61984:2009							
Rated voltage [V AC/DC]	300	300	300	150	150	150	150
Test/surge voltage [kV AC]	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Surge voltage category	II	II	II	II	II	II	II
Pollution degree [2]	3	3	3	3	3	3	3
Installation height [m]	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000
Cable clamping area [3] Max. Ø [mm]	14.5	14.5	14.5	14.5	14.5	14.5	14.5

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Note:
Unlike plug-in devices, connectors may only be inserted or removed when disconnected from the power.

	Contact chamber numbering (view of plug-in side)	
Direction of rotation for contact chamber numbering (view of plug-in side)		
	Forward running (standard)	**Reverse running** (standard)
Number of positions	**Pin**	**Socket**
6-pos. Solder/crimp/solder-in		
7-pos. Solder/crimp/solder-in		
9-pos. (8+1) Solder/crimp/solder-in		
12-pos. Solder/crimp/solder-in		
16-pos. Solder/crimp/solder-in		
17-pos. Solder/crimp/solder-in		
19-pos. (16+3) Solder/crimp		

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only socket contacts may be used in the live part of the connector.

Selection guide

M23 signal connectors
6- to 19-pos., up to 20 A/300 V, solder, crimp, and solder-in connection.

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

In the case of crimp connection, the respective crimp contacts must be added depending on the connection cross section.

Each housing type can be fitted with pin or socket contacts. The product chart provides an overview of the available components.

	Connector type
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 78.  M23 x 1 standard interlocking, see page 79. 
Shielded	**Coupler connectors** See page 80. 
Shielded	**Device connectors** Front mounting, Pg13.5 fastening thread, see page 81.  Front mounting, M20 fastening thread, see phoenixcontact.net/products  Front mounting, flange dimensions: 25 mm x 25 mm, see page 83.  Front mounting, solder-in connection, flange dimensions: 25 mm x 25 mm, see phoenixcontact.net/products  Front mounting, angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 84.  Rear mounting, central fastening nut, see page 85. 

All housings can be fitted with pin or socket crimp contacts

For crimp connection:

Socket contacts

Turned, see page 86.



Rolled, taped,
see page 86.



Pin contacts

Turned, see page 86.



Rolled, taped,
see page 86.



Note:
For safety reasons, only socket contacts may be used in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for rolled crimp contacts,
see page 156.



Crimping pliers with digital display for turned crimp contacts,
see page 156.



Tools/accessories

Unlocking tool for device connectors for releasing the contact carriers from the plug-in side,
see page 162.



Color rings for individually marking the connectors,
see page 164.



Cable connector, SPEEDCON fast locking system

– 6 to 19-pos. versions, solder/crimp connection
– Individual marking of connectors with color rings



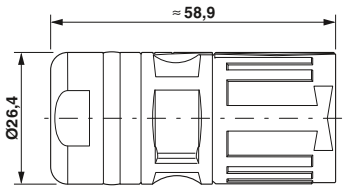
6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Cable connector, with contact carrier, with **socket contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1619605	1	1619601	1	1619597	1	1619593	1	1619585	1	1619581	1
	4 mm ... 6 mm	1619579	1	1619575	1	1619571	1	1619567	1	1619541	1	1619537	1
	6 mm ... 10 mm	1619534	1	1619530	1	1619526	1	1619522	1	1619514	1	1619510	1
	10 mm ... 14.5 mm	1619508	1	1619504	1	1619500	1	1619496	1	1619483	1	1619479	1
Cable connector, with contact carrier, with **pin contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1619604	1	1619600	1	1619596	1	1619592	1	1619584	1	1619580	1
	4 mm ... 6 mm	1619578	1	1619574	1	1619570	1	1619548	1	1619540	1	1619536	1
	6 mm ... 10 mm	1619533	1	1619529	1	1619525	1	1619521	1	1619513	1	1619509	1
	10 mm ... 14.5 mm	1619507	1	1619503	1	1619499	1	1619495	1	1619482	1	1619478	1
Cable connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1619603	1	1619599	1	1619595	1	1619591	1	1619583	1		
	4 mm ... 6 mm	1619577	1	1619573	1	1619569	1	1619547	1	1619539	1		
	6 mm ... 10 mm	1619532	1	1619528	1	1619524	1	1619520	1	1619512	1		
	10 mm ... 14.5 mm	1619506	1	1619502	1	1619498	1	1619489	1	1619481	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1619602	1	1619598	1	1619594	1	1619590	1	1619582	1		
	4 mm ... 6 mm	1619576	1	1619572	1	1619568	1	1619546	1	1619538	1		
	6 mm ... 10 mm	1619531	1	1619527	1	1619523	1	1619519	1	1619511	1		
	10 mm ... 14.5 mm	1619505	1	1619501	1	1619497	1	1619488	1	1619480	1		

Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Cable connector, M23 standard interlocking

- Standard knurled nuts compatible with mating plugs with SPEEDCON or M23 standard external thread
- 6 to 19-pos. versions, solder/crimp connection
- Individual marking of connectors with color rings



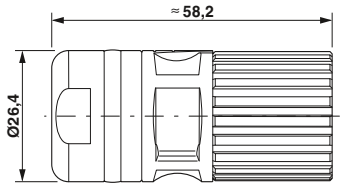
6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Cable connector, with contact carrier, with **socket contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1619776	1	1619772	1	1619768	1	1619764	1	1619756	1	1619752	1
	4 mm ... 6 mm	1619750	1	1619746	1	1619742	1	1619738	1	1619730	1	1619726	1
	6 mm ... 10 mm	1619724	1	1619720	1	1619716	1	1619710	1	1619702	1	1619661	1
	10 mm ... 14.5 mm	1619659	1	1619655	1	1619651	1	1619647	1	1619639	1	1619635	1
Cable connector, with contact carrier, with **pin contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1619775	1	1619771	1	1619767	1	1619763	1	1619755	1	1619751	1
	4 mm ... 6 mm	1619749	1	1619745	1	1619741	1	1619737	1	1619729	1	1619725	1
	6 mm ... 10 mm	1619723	1	1619719	1	1619715	1	1619709	1	1619701	1	1619660	1
	10 mm ... 14.5 mm	1619658	1	1619654	1	1619650	1	1619646	1	1619638	1	1619634	1
Cable connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1619774	1	1619770	1	1619766	1	1619762	1	1619754	1		
	4 mm ... 6 mm	1619748	1	1619744	1	1619740	1	1619736	1	1619728	1		
	6 mm ... 10 mm	1619722	1	1619718	1	1619714	1	1619708	1	1619700	1		
	10 mm ... 14.5 mm	1619657	1	1619653	1	1619649	1	1619645	1	1619637	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1619773	1	1619769	1	1619765	1	1619761	1	1619753	1		
	4 mm ... 6 mm	1619747	1	1619743	1	1619739	1	1619735	1	1619727	1		
	6 mm ... 10 mm	1619721	1	1619717	1	1619711	1	1619707	1	1619699	1		
	10 mm ... 14.5 mm	1619656	1	1619652	1	1619648	1	1619644	1	1619636	1		

Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



M23 - signal connectors

Coupling connector

- Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
- 6 to 19-pos. versions, solder/crimp connection
- Individual marking of connectors with color rings



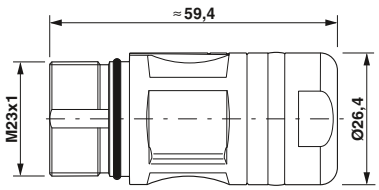
6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Coupler connector, with contact carrier, with **socket contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1620172	1	1620168	1	1620164	1	1620160	1	1620151	1	1620147	1
	4 mm ... 6 mm	1620145	1	1620141	1	1620137	1	1620133	1	1620125	1	1620121	1
	6 mm ... 10 mm	1620119	1	1620115	1	1620079	1	1620075	1	1620052	1	1620048	1
	10 mm ... 14.5 mm	1620046	1	1620042	1	1620036	1	1620032	1	1620024	1	1620020	1
Coupler connector, with contact carrier, with **pin contacts**, **solder connection**													
Universal gasket	3 mm ... 14.5 mm	1620171	1	1620167	1	1620163	1	1620159	1	1620150	1	1620146	1
	4 mm ... 6 mm	1620144	1	1620140	1	1620136	1	1620132	1	1620124	1	1620120	1
	6 mm ... 10 mm	1620118	1	1620114	1	1620078	1	1620074	1	1620051	1	1620047	1
	10 mm ... 14.5 mm	1620045	1	1620041	1	1620035	1	1620031	1	1620023	1	1620019	1
Coupler connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1620170	1	1620166	1	1620162	1	1620158	1	1620149	1		
	4 mm ... 6 mm	1620143	1	1620139	1	1620135	1	1620131	1	1620123	1		
	6 mm ... 10 mm	1620117	1	1620081	1	1620077	1	1620073	1	1620050	1		
	10 mm ... 14.5 mm	1620044	1	1620038	1	1620034	1	1620030	1	1620022	1		
Coupler connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**													
Universal gasket	3 mm ... 14.5 mm	1620169	1	1620165	1	1620161	1	1620157	1	1620148	1		
	4 mm ... 6 mm	1620142	1	1620138	1	1620134	1	1620130	1	1620122	1		
	6 mm ... 10 mm	1620116	1	1620080	1	1620076	1	1620072	1	1620049	1		
	10 mm ... 14.5 mm	1620043	1	1620037	1	1620033	1	1620029	1	1620021	1		

Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Device connector, front mounting

– Pg13.5 fastening thread

– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– 6 to 19-pos. versions, solder/crimp connection
– Individual marking of connectors with color rings

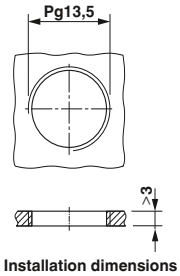


6, 7, 8+1-pos.

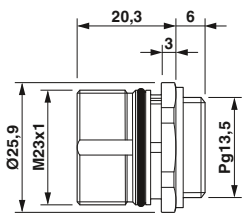


12, 17, 16+3-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, Pg13.5 central fastening thread,** axial seal	1619903	1	1619899	1	1619895	1	1619891	1	1619883	1	1619879	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, Pg13.5 central fastening thread,** axial seal	1619902	1	1619898	1	1619894	1	1619890	1	1619882	1	1619878	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, Pg13.5 central fastening thread,** axial seal	1619901	1	1619897	1	1619893	1	1619889	1	1619881	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, Pg13.5 central fastening thread,** axial seal	1619900	1	1619896	1	1619892	1	1619888	1	1619880	1		
	Accessories						Accessories					
For crimp connection: crimp contacts	Order separately, see page 86 onwards						Order separately, see page 86 onwards					
Color rings, 50 pcs. in set (to be ordered separately)	See page 164						See page 164					



Installation dimensions



Device connector, front mounting

– M20 fastening thread
– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– 6 to 19-pos. versions, solder/crimp connection
– Individual marking of connectors with color rings



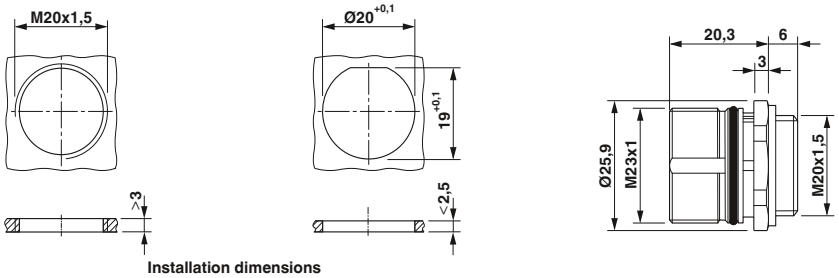
6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, M20 central fastening thread,** axial seal	1619877	1	1619873	1	1619869	1	1619865	1	1619857	1	1619853	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, M20 central fastening thread,** axial seal	1619876	1	1619872	1	1619868	1	1619864	1	1619856	1	1619852	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, M20 central fastening thread,** axial seal	1619875	1	1619871	1	1619867	1	1619863	1	1619855	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, M20 central fastening thread,** axial seal	1619874	1	1619870	1	1619866	1	1619862	1	1619854	1		

Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**			**Order separately, see page 86 onwards**		
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**			**See page 164**		



Installation dimensions

Device connector, front mounting

- **Flange dimensions: 25 mm x 25 mm**
- Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
- 6 to 19-pos. versions, solder/crimp connection
- Individual marking of connectors with color rings

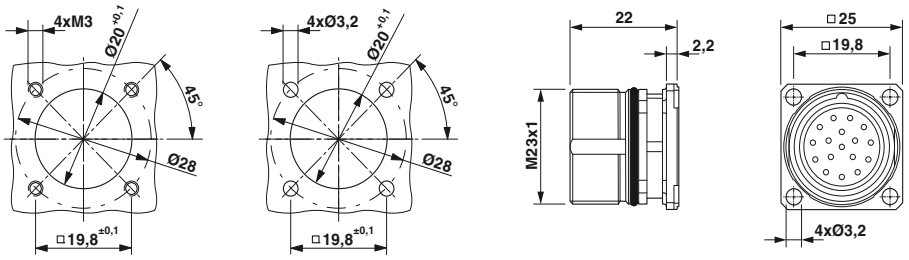


6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection,** flat gasket	1619993	1	1619989	1	1619973	1	1619969	1	1619961	1	1619957	1
Device connector, with contact carrier, with **pin contacts**, **solder connection,** flat gasket	1619992	1	1619988	1	1619972	1	1619968	1	1619960	1	1619956	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection,** flat gasket	1619991	1	1619987	1	1619971	1	1619967	1	1619959	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection,** flat gasket	1619990	1	1619986	1	1619970	1	1619966	1	1619958	1		
	Accessories						Accessories					
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**						**Order separately, see page 86 onwards**					
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**						**See page 164**					



Installation dimensions

Device connector, angled, rotatable, front mounting

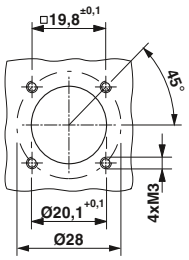
– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– Flange dimensions: 26 mm x 26 mm



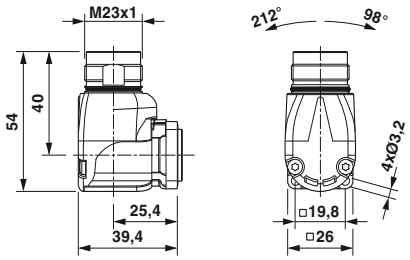
8+1, 12, 17-pos.

Description	Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8+1-pos.		12-pos.		17-pos.	
Device connector, with contact carrier, with **pin contacts**, **solder connection, central fixing nut,** axial seal	1621746	1	1621741	1	1621745	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, central fixing nut,** axial seal	1621735	1	1621738	1	1621744	1

Accessories	
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Installation dimensions



Flange dimensions 26 mm x 26 mm

Device connector, rear mounting

- Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
- 6 to 19-pos. versions, solder/crimp connection
- Individual marking of connectors with color rings

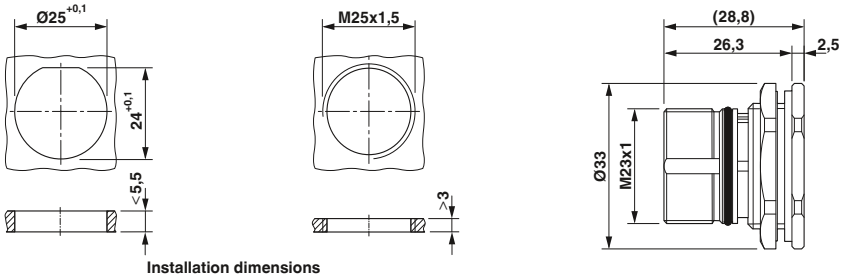


6, 7, 8+1-pos.



12, 17, 16+3-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.		17-pos.		16+3-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, central fixing nut,** axial seal	1619851	1	1619847	1	1619843	1	1619790	1	1619782	1	1619778	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, central fixing nut,** axial seal	1619850	1	1619846	1	1619842	1	1619789	1	1619781	1	1619777	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, central fixing nut,** axial seal	1619849	1	1619845	1	1619841	1	1619788	1	1619780	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, central fixing nut,** axial seal	1619848	1	1619844	1	1619791	1	1619787	1	1619779	1		
	Accessories						Accessories					
For crimp connection: crimp contacts	**Order separately, see page 86 onwards**						**Order separately, see page 86 onwards**					
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**						**See page 164**					



Installation dimensions

Crimp contacts

Pin and socket crimp contacts with various connection cross sections can be ordered for each crimp contact carrier.



Rolled crimp contacts



Turned crimp contacts

Description	Contacts / connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Crimp contacts for contact carriers, 6-pos., 6 x Ø2.0 mm							
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	**1603513**	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	**1603517**	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	**1603505**	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	**1603509**	50
Crimp contacts for contact carriers, 7-pos., 7 x Ø2.0 mm							
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	**1603513**	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	**1603517**	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	**1603505**	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	**1603509**	50
Crimp contacts for contact carriers, 9-pos. (8+1), 8 x Ø1.0 mm, 1 x Ø2.0 mm							
	Pin Ø1.0 mm / 0.14 ... 0,56				**RC-12P2000**	**1597862**	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	**1599600**	100
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	**1603505**	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	**1603509**	50
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	**1603513**	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	**1603517**	50
Crimp contacts for contact carriers, 12-pos., 12 x Ø1.0 mm							
	Pin Ø1.0 mm / 0.22 ... 0.56	**RC-22P2000**	**1603321**	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	**RC-22S2000**	**1603327**	100			
	Pin Ø1.0 mm / 0.14 ... 0.56				**RC-12P2000**	**1597862**	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	**1599600**	100
Crimp contacts for contact carriers, 16-pos., 16 x Ø1.0 mm							
	Pin Ø1.0 mm / 0.22 ... 0.56	**RC-22P2000**	**1603321**	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	**RC-22S2000**	**1603327**	100			
	Pin Ø1.0 mm / 0.14 ... 0.56				**RC-12P2000**	**1597862**	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	**1599600**	100

Accessories	Accessories
Crimping tools	**See page 156**	**See page 156**

Mechanical and electrical data

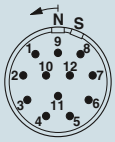
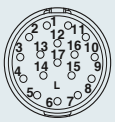
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for a cable outside diameter of 3 ... 14.5 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector with M23 x 1 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data				
Number of positions		**12**		**17**
Contacts		12		17
Contact Ø	[mm]	1		1
Litz wire cross section, crimp contacts turned	[mm²]	0.08 ... 1.0		0.08 ... 1.0
Litz wire cross section, C-HC crimp contacts punched-rolled	[mm²]	0.06 ... 0.56		0.06 ... 0.56
Cable clamping area	Max. Ø [mm]	14.5		14.5
Nominal current per contact at 25°C [1]	[A]	8		8
Specifications according to DIN EN 61984:2009				
Rated voltage	[V AC/DC]	150		100
Test/surge voltage	[kV]	2.5		1.5
Surge voltage category		III		III
Pollution degree [2]		3		3
Installation height	[m]	Up to 3000		Up to 3000
Cable clamping area [3]	Max. Ø [mm]	14.5		14.5

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Note:
Unlike plug-in devices, connectors may only be inserted or removed when disconnected from the power.

Pin assignments and coding

	Contact chamber numbering (view of plug-in side)			
Direction of rotation for contact chamber numbering (view of plug-in side)				
	Forward running (standard) **R** marked	**Reverse running** (standard) **L** marked	**Reverse running** (counter direction) **L marked**	**Forward running** (counter direction) **R marked**
Number of positions	**Pin**	**Socket**	**Pin**	**Socket**
12-pos. **N-coding** Crimp				
17-pos. **N-coding** Crimp				

Note:
Standard coding is “N”. Other codings and numbers of positions available on request.

The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only socket contacts may be used in the live part of the connector.

Selection guide

M23 signal connectors
12/17-pos., N-coding, up to 8 A/150 V, crimp ranges up to 1 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

Crimp contacts must be ordered separately depending on the connection cross section.

Each housing type can be fitted with pin or socket contacts.

The connectors can be supplied with clockwise or counter-clockwise contact chamber numbering.

N (0°) and S (20°, on request) coding positions are possible.

The product chart provides an overview of the available components.

	Connector type		
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 92. 	M23 x 1 standard interlocking, see page 93. 	 Square mounting flange for cable and coupler connectors for wall mounting, see page 162.
Shielded	**Coupler connectors** See page 94. 		 Square mounting flange for cable and coupler connectors for wall mounting, see page 162.
Shielded	**Device connectors** Straight, 4-hole mounting Ø 3.2, see page 96. 		
	Contact carrier for snapping in from the device side, straight, 4-hole mounting Ø 3.2, see page 96. 		
	Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 97. 		
	Angled, rotatable, flange dimensions: 28 mm x 28 mm, see page 97. 		

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 99.



Punched-rolled, taped,
see page 98.



Pin contacts

Turned, see page 99.



Punched-rolled, taped,
see page 98.



Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 158.



Crimping pliers with digital display for turned crimp contacts,
see page 159.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 162.



Color rings for individually marking the connectors,
see page 164.



Note:
For safety reasons, only socket contacts may be used in the live part of the connector.

Cable connector, SPEEDCON fast locking system

– 12 or 17-pos. versions
– Individual marking of connectors with color rings



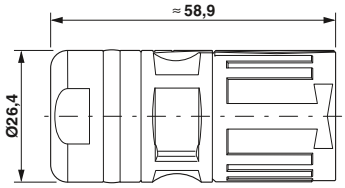
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data: Order No. (12-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.	Ordering data: Order No. (12-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.
Cable connector, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619472	1	1619470	1	1619471	1	1619469	1
	4 mm ... 6 mm	1619466	1	1619464	1	1619465	1	1619463	1
	6 mm ... 10 mm	1619460	1	1619458	1	1619459	1	1619457	1
	10 mm ... 14.5 mm	1619454	1	1619452	1	1619453	1	1619451	1
Cable connector, with contact carrier, **without** contacts, **reverse** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619474	1			1619473	1		
	4 mm ... 6 mm	1619468	1			1619467	1		
	6 mm ... 10 mm	1619462	1			1619461	1		
	10 mm ... 14.5 mm	1619456	1			1619455	1		

Accessories	Accessories
Crimp contacts	**For socket contacts, see page 98 onwards**	**For pin contacts, see page 98 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Cable connector, M23 standard interlocking

– M23 standard knurled nut
– 12 or 17-pos. versions
– Individual marking of connectors with color rings



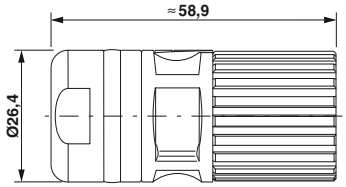
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data: Order No. (12-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.	Ordering data: Order No. (12-pos.)	Pcs. / Pkt.	Ordering data: Order No. (17-pos.)	Pcs. / Pkt.
Cable connector housing, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619631	1	1619629	1	1619630	1	1619628	1
	4 mm ... 6 mm	1619625	1	1619623	1	1619624	1	1619619	1
	6 mm ... 10 mm	1619616	1	1619614	1	1619615	1	1619613	1
	10 mm ... 14.5 mm	1619610	1	1619608	1	1619609	1	1619607	1
Cable connector housing, with contact carrier, **without** contacts, **reverse** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619633	1			1619632	1		
	4 mm ... 6 mm	1619627	1			1619626	1		
	6 mm ... 10 mm	1619618	1			1619617	1		
	10 mm ... 14.5 mm	1619612	1			1619611	1		

Accessories	Accessories
Crimp contacts	**For socket contacts, see page 98 onwards**	**For pin contacts, see page 98 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Coupling connector

- Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
- 12 or 17-pos. versions
- Individual marking of connectors with color rings



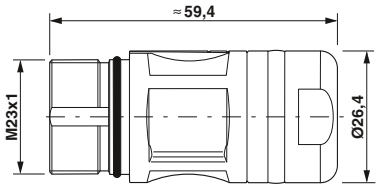
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		12-pos.		17-pos.	
Coupler connector housing, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620016	1	1620014	1	1620015	1	1620013	1
	4 mm ... 6 mm	1620009	1	1620007	1	1620008	1	1620006	1
	6 mm ... 10 mm	1620003	1	1620001	1	1620002	1	1620000	1
	10 mm ... 14.5 mm	1619997	1	1619995	1	1619996	1	1619994	1
Coupler connector housing, with contact carrier, **without** contacts, **reverse** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620018	1			1620017	1		
	4 mm ... 6 mm	1620011	1			1620010	1		
	6 mm ... 10 mm	1620005	1			1620004	1		
	10 mm ... 14.5 mm	1619999	1			1619998	1		

Accessories	Accessories
Crimp contacts	**For socket contacts, see page 98 onwards**	**For pin contacts, see page 98 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Device connector, straight, front mounting

– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– Contact insert for support on the device or can be snapped in

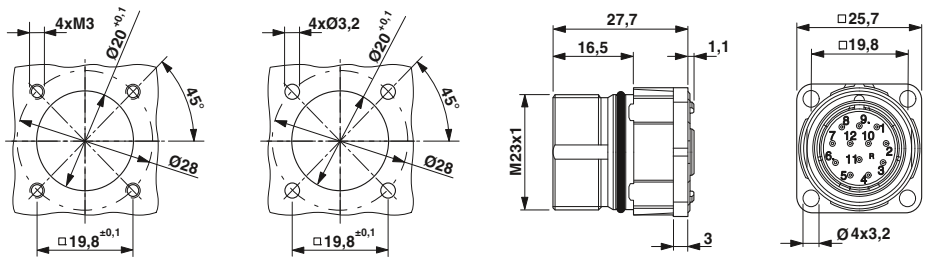


Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.		12-pos.		17-pos.	
Device connector, straight, with contact carrier, **without** contacts, 4-hole fastening with **Ø 3.2 mm**								
Standard direction of rotation	1607283	1	1607892	1	1607236	1	1607860	1
Reverse direction of rotation	1607307	1			1607260	1		
Device connector, straight, with contact carrier, **without** contacts, 4-hole fastening with **Ø 3.2 mm**, contact insert **can be snapped in**								
Standard direction of rotation	1607830	1	1607893	1	1607804	1	1607863	1
Reverse direction of rotation	1607844	1			1607817	1		
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 98 onwards				For pin contacts, see page 98 onwards			
Color rings, 50 pcs. in set (to be ordered separately)	See page 164				See page 164			



Installation dimensions

Device connector, angled, rotatable, front mounting

– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– **Flange dimensions: 26 mm x 26 mm or 28 mm x 28 mm**



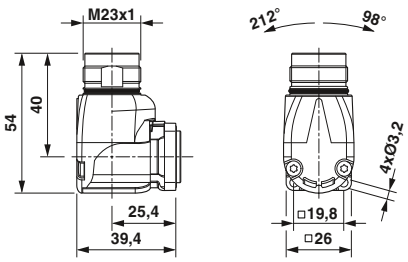
Device connector, angled, rotatable, for socket contacts



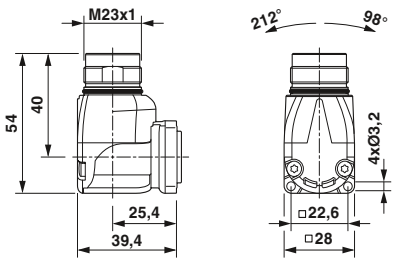
Device connector, angled, rotatable, for pin contacts

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.		12-pos.		17-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts, flange dimensions: **26 mm x 26 mm**								
Standard direction of rotation	1607280	1	1607345	1	1607233	16	1607328	1
Reverse direction of rotation	1607304	1			1607257	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, flange dimensions: **28 mm x 28 mm**								
Standard direction of rotation	1607827	1	1607887	1	1607802	1	1607852	1
Reverse direction of rotation	1607842	1			1607814	1		

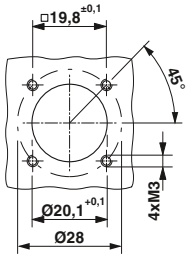
	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 98 onwards**	**For pin contacts, see page 98 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



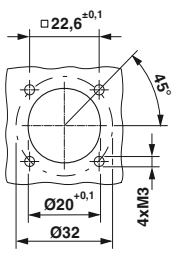
Flange dimensions 26 mm x 26 mm



Flange dimensions 28 mm x 28 mm



Installation dimensions



Installation dimensions

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For reasons of safety, only socket contacts may be used in the live part of the connector.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 mm² ... 0.56 mm²	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 mm² ... 0.56 mm²	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1

Accessories	Accessories
Crimping tools	**Order separately, see page 158 onwards**	**Order separately, see page 158 onwards**

Crimp contacts, turned

M23 feedback connectors are fitted with 12 or 17 SF series signal contacts with Ø 1 mm depending on the number of positions.

These contacts are also used with M23 power connectors as signal contacts. This simplifies handling and warehousing considerably.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts socket



Crimp contacts pin

Description	Connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Contact socket Ø 1.0 mm							
	0.06 ... 0.2	**SF-6CS2000**	1605562	100			
	0.14 ... 0.5	**SF-10KS004**	1607356	100			
	0.5 ... 1.0	**SF-6AS2000**	1605557	100			
Contact pin Ø 1.0 mm							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 159			Order separately, see page 159		

Notes:
Every connector housing type can be equipped with pin or socket contacts.

For reasons pertaining to safety, only socket contacts may be used in the live part of the connector.

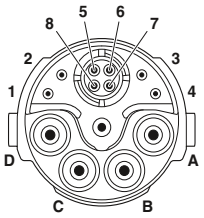
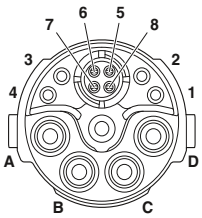
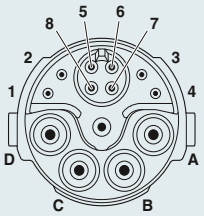
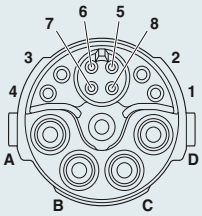
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 7.5 - 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking
Mech. insertion/withdrawal cycles:	Default: 100
Protection class:	IP67 when locked

Electrical data

Number of positions		**13 (4+4+4+PE), CAT5**							**13 (8++4+PE)**				
Contacts		4	+	4	+	4	+	PE	8	+	4	+	PE
Contact Ø	[mm]	0.8		1.0		2.0		2.0	1.0		2.0		2.0
Litz wire cross sections													
Cable and coupler connectors:													
Max. cable Ø of 18 mm	[mm²]	0.08 ... 0.5		0.06 … 1.0		0.25 … 4.0		0.25 … 4.0	0.06 … 1.0		0.25 … 4.0		0.25 … 4.0
Device connectors:													
	[mm²]	0.08 ... 0.5		0.06 … 1.0		0.25 … 4.0		0.25 … 4.0	0.06 … 1.0		0.25 … 4.0		0.25 … 4.0
Nominal current per contact at 25°C [1]		3.6		8		30		-	8		30		–
Specifications according to DIN EN 61984:2009													–
Rated voltage	[V AC/DC]	50		50		630/850		-	50		630/850		–
Test/surge voltage	[kV AC]	1.5		1.5		6		-	1.5		6		–
Surge voltage category		III							III				
Pollution degree [2]		3							3				
Installation height	[m]	Up to 3000							Up to 3000				
Cable clamping area [3]	Max. Ø [mm]	18							18				

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

	Contact chamber numbering (view of plug-in side)			
Number of positions	**Pin**		**Socket**	
13-pos., CAT5 (4 + 4 + 4 + PE) Crimp				
13-pos. (8 + 4 + PE) Crimp				

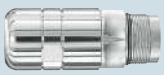
Selection guide

M23 hybrid connectors up to 30 A/630 V AC/850 V DC, crimp ranges up to 4 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are supplied pre-assembled and are complemented by the respective crimp contacts.

The product chart provides an overview of the available components.

	Connector type
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 104. M23 x 1 standard interlocking, see page 105. 
Shielded	**Coupler connectors** See page 106. 
Shielded	**Device connectors** Straight, see page 107.  Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 108.  Angled, rotatable, flange dimensions: 28 mm x 28 mm see page 108. 

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 109.



Pin contacts

Turned, see page 109.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts,
see page 159.



Accessories

Color rings for individually marking the connectors, see page 164.



Note:
For reasons of safety, only socket contacts may be used in the live part of the connector.

M23 cable connector, hybrid, SPEEDCON fast locking system

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal



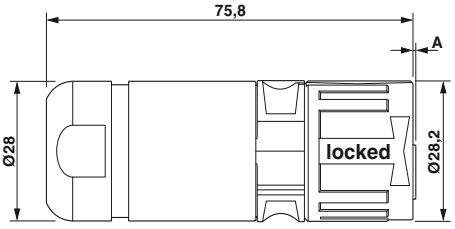
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Cable connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621517	1	1621524	1	1621529	1	1621534	1
	7.5 mm ... 9 mm	1621520	1	1621525	1	1621530	1	1621535	1
	9 mm ... 12 mm	1621521	1	1621526	1	1621531	1	1621536	1
	12 mm ... 15 mm	1621522	1	1621527	1	1621532	1	1621537	1
	15 mm ... 18 mm	1621523	1	1621528	1	1621533	1	1621538	1

	Accessories	Accessories
Crimp contacts	**See page 109**	**See page 109**
Color rings, 50 pcs. in set (to be ordered separately)	**See Catalog 2, page 367**	**See Catalog 2, page 367**



Pin version: dimension A = 0.2 mm, socket version: dimension A = 0 mm

M23 cable connector, hybrid, standard interlocking

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal

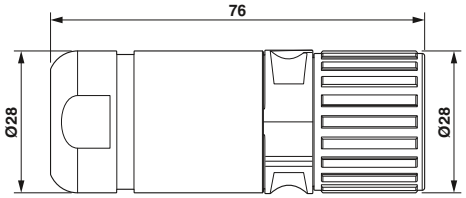


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Cable connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621997	1	1622002	1	1622007	1	1622012	1
	7.5 mm ... 9 mm	1621998	1	1622003	1	1622008	1	1622013	1
	9 mm ... 12 mm	1621999	1	1622004	1	1622009	1	1622014	1
	12 mm ... 15 mm	1622000	1	1622005	1	1622010	1	1622015	1
	15 mm ... 18 mm	1622001	1	1622006	1	1622011	1	1622016	1
		Accessories				Accessories			
Crimp contacts		See page 109				See page 109			
Color rings, 50 pcs. in set (to be ordered separately)		See Catalog 2, page 367				See Catalog 2, page 367			



M23 coupler connector, hybrid

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal



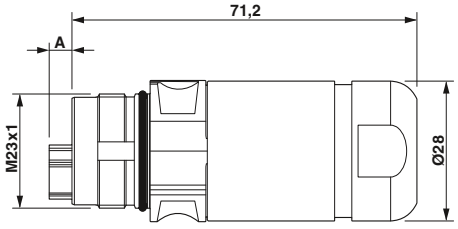
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Coupler connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621539	1	1621544	1	1621549	1	1621554	1
	7.5 mm ... 9 mm	1621540	1	1621545	1	1621550	1	1621555	1
	9 mm ... 12 mm	1621541	1	1621546	1	1621551	1	1621556	1
	12 mm ... 15 mm	1621542	1	1621547	1	1621552	1	1621557	1
	15 mm ... 18 mm	1621543	1	1621548	1	1621553	1	1621558	1

	Accessories	Accessories
Crimp contacts	**See page 109**	**See page 109**
Color rings, 50 pcs. in set (to be ordered separately)	**See Catalog 2, page 367**	**See Catalog 2, page 367**



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm

M23 device connector, hybrid, straight

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal

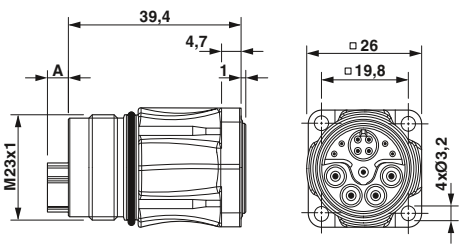


Device connector, straight, socket assembly

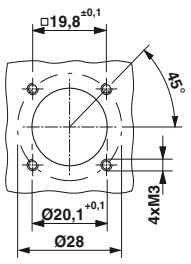


Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1621567	1	1621568	1	1621569	1	1621570	1
	Accessories				Accessories			
Crimp contacts	See page 109				See page 109			
Color rings, 50 pcs. in set (to be ordered separately)	See Catalog 2, page 367				See Catalog 2, page 367			



Pin version: dimension A = 4.75 mm, socket version: dimension A = 0 mm



Installation dimensions

M23 device connector, hybrid, angled, rotatable

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal
– Housing can be freely rotated by 310°

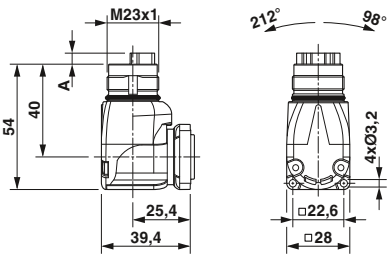


Device connector, angled, rotatable, socket assembly

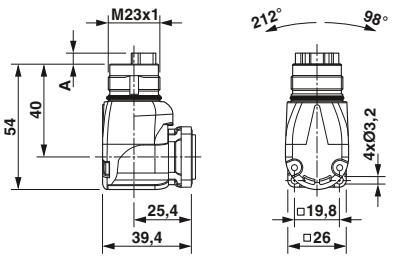


Device connector, angled, rotatable, pin assembly

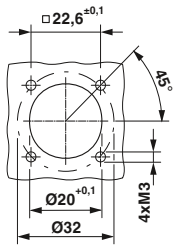
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1621563	1	1621564	1	1621565	1	1621566	1
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 28 mm x 28 mm	1621559	1	1621560	1	1621561	1	1621562	1
	Accessories				Accessories			
Crimp contacts	See page 109				See page 109			
Color rings, 50 pcs. in set (to be ordered separately)	See Catalog 2, page 367				See Catalog 2, page 367			



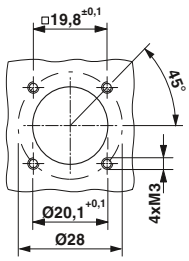
Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Installation dimensions



Installation dimensions

Crimp contacts



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm							
	0.08 mm² ... 0.25 mm²	**SF-08KS010**	1621571	100	**SF-08KP010**	1621574	100
	0.34 mm² ... 0.5 mm²	**SF-08KS020**	1621573	100	**SF-08KP020**	1621575	100
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²	**ST-10KS010**	1618239	100	**ST-10KP010**	1618255	100
	0.34 mm² ... 0.5 mm²	**ST-10KS020**	1618251	100	**ST-10KP020**	1618256	100
	0.5 mm² ... 1.0 mm²	**ST-10KS030**	1618254	100	**ST-10KP030**	1618261	100
Contacts, Ø 2.0 mm							
	0.25 mm²... 1.0 mm²	**SF-20KS021**	1621576	50	**SF-20KP021**	1621579	50
	1.0 mm² ... 2.5 mm²	**SF-20KS022**	1621577	50	**SF-20KP022**	1621580	50
	2.5 mm² ... 4.0 mm²	**SF-20KS023**	1621578	50	**SF-20KP023**	1621581	50

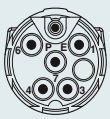
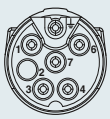
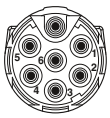
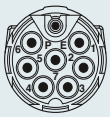
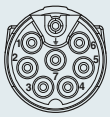
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for a cable outside diameter of 3.5 - 11 mm, shielded (M17 Compact) 5 - 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector With M17 x 1 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data

Number of positions		**4 (3+PE)**	**6 (5+PE)**	**7 (6+PE)**	**8 (7+PE)**	**9 (5+3+PE)**
Contacts		3 + PE	5 + PE	6 + PE	7 + PE	5 + 3 + PE
Contact Ø	[mm]	2	1	1	1	0.6 / 1 / 1
Litz wire cross section, crimp contacts Turned	[mm²]	0.25 ... 2.5	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 0.5 / 0.06 ... 1.0 / 0.06 ... 1.0
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm²]	–	0.08 ... 0.56	0.06 ... 0.56	0.06 ... 0.56	– / – / –
Nominal current per contact at 25°C [1]		20 (25)[2]	14	14	14	3.6 / 14 / –
Specifications according to DIN EN 61984:2009						–
Rated voltage	[V AC/DC]	630	630	630	630	60 / 630 / –
Test/surge voltage	[kV AC]	6	6	6	6	1.5 / 6 / –
Surge voltage category		III	III	III	III	III
Pollution degree [3]		3	3	3	3	3
Installation height	[m]	Up to 3000	Up to 3000	Up to 3000	Up to 3000	Up to 3000
Cable clamping area [4]	Max. Ø [mm]	12.5	12.5	12.5	12.5	12.5

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] 25 A in the case of assignment with 3 x 2.5 mm²
[3] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[4] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Number of positions	Contact chamber numbering (view of plug-in side) Pin	Socket
4-pos. (3+PE) Crimp		
6-pos. (5+PE) (contact chambers 2+5 closed) Crimp		
7-pos. (6+PE) Crimp		
8-pos. (7+PE) Crimp		
9-pos. (5+3+PE) Crimp		
	* with grounding spring **PE leading**	* with grounding spring **PE leading**

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only socket contacts may be used in the live part of the connector.

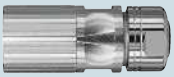
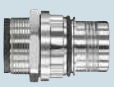
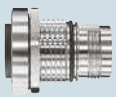
Selection guide

M17 power connectors, 4/6/7/8/9-pos., up to 20 A/630 V, crimp ranges: 0.06 mm² to 2.5 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are supplied fully assembled and are complemented by the respective crimp contacts.

Each housing type can be fitted with pin or socket contacts.
Cable connectors can be equipped with SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread as an option. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

	Connector type	
Shielded	**Cable connectors**	
	SPEEDCON fast locking system, M17 Compact, see page 114. 	
	M17, see page 118. 	Square mounting flange for cable and coupler connectors for wall mounting, see page 162. 
	M17 x 1 standard interlocking, M17, see page 119. 	
Shielded	**Coupler connectors/panel feed-through**	
	Coupler connector M17 Compact, see page 115. 	M17, see page 120. 
	Panel feed-through M17 Compact, see page 116. 	
Shielded	**Device connectors**	
	Straight, M17 Compact, see page 117. 	Straight, M17, see page 121. 
	Straight, with central fastening thread, front mounting, M17, see page 123. 	Straight, with central fastening thread, rear mounting, M17, see page 123. 
	Angled, rotatable, M17, see page 122. 	

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 125.



Punched-rolled, taped,
see page 124.



Pin contacts

Turned, see page 125.



Punched-rolled, taped,
see page 124.



Note:
For reasons of safety, only socket contacts may be used in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 158.



Crimping pliers with digital display for turned crimp contacts,
see page 159.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 162.



Color rings for individually marking the connectors,
see page 164.



M17 Compact cable connector

– High packing density in a compact product
– Individual marking of connectors with color rings



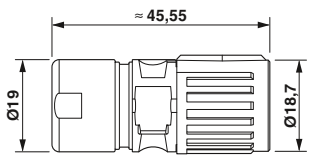
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, without contacts, for socket assembly													
	3.5 mm ... 5.5 mm	1618312	1	1618621	1	1618632	1	1618633	1	1618674	1		
	5 mm ... 9.2 mm	1618408	1	1618620	1	1618631	1	1618634	1	1618675	1		
	9 mm ... 11.2 mm	1618603	1	1618619	1	1618630	1	1618635	1	1618676	1		
Cable connector, with contact carrier, without contacts, for pin assembly													
	3.5 mm ... 5.5 mm	1618602	1	1618614	1	1618622	1	1618640	1	1618681	1		
	5 mm ... 9.2 mm	1618574	1	1618615	1	1618623	1	1618639	1	1618680	1		
	9 mm ... 11.2 mm	1618575	1	1618616	1	1618624	1	1618638	1	1618679	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



M17 Compact coupler connector

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



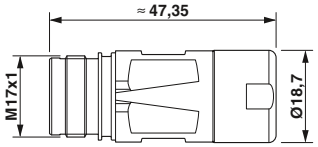
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Coupler connector, with contact carrier, **without** contacts, for **socket assembly**													
	3.5 mm ... 5.5 mm	1618695	1	1618696	1	1618708	1	1618716	1	1618748	1		
	5 mm ... 9.2 mm	1618694	1	1618697	1	1618709	1	1618717	1	1618749	1		
	9 mm ... 11.2 mm	1618693	1	1618698	1	1618710	1	1618718	1	1618750	1		
Coupler connector, with contact carrier, **without** contacts, for **pin assembly**													
	3.5 mm ... 5.5 mm	1620614	1	1618703	1	1618704	1	1618712	1	1618740	1		
	5 mm ... 9.2 mm	1618406	1	1618702	1	1618705	1	1618713	1	1618741	1		
	9 mm ... 11.2 mm	1618690	1	1618701	1	1618706	1	1618714	1	1618742	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



M17 Compact panel feed-through

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 25.7 mm x 25.7 mm**



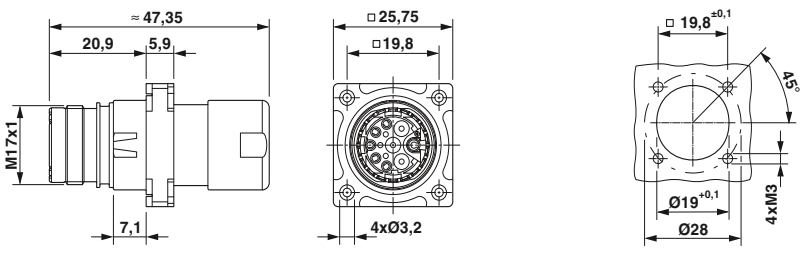
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Panel feed-through, with contact carrier, **without** contacts, for **socket assembly**													
	3.5 mm ... 5.5 mm	1618762	1	1618772	1	1618780	1	1618787	1	1618825	1		
	5 mm ... 9 mm	1618763	1	1618773	1	1618781	1	1618786	1	1618824	1		
	9 mm ... 11 mm	1618764	1	1618774	1	1618782	1	1618785	1	1618823	1		
Panel feed-through, with contact carrier, **without** contacts, for **pin assembly**													
	3.5 mm ... 5.5 mm	1618402	1	1618767	1	1618776	1	1618788	1	1618818	1		
	5 mm ... 9 mm	1618407	1	1618768	1	1618777	1	1618790	1	1618819	1		
	9 mm ... 11 mm	1618760	1	1618769	1	1618778	1	1618791	1	1618820	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Installation dimensions

M17 Compact device connector, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 21.6 mm x 21.6 mm**

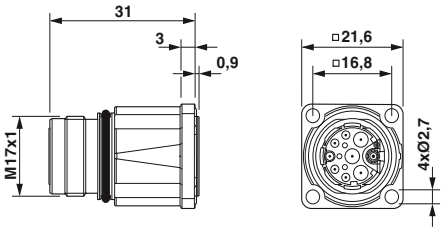


3+PE, 5+PE, 6+PE-pos.

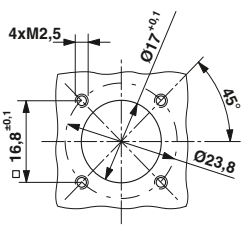


7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert for support on the device	1607694	1	1607728	1	1613589	1	1607769	1	1613631	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert for support on the device	1607675	1	1607711	1	1613570	1	1607747	1	1613612	1		
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert can be snapped in	1607692	1	1607727	1	1613588	1	1607768	1	1613630	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert can be snapped in	1607674	1	1607710	1	1613569	1	1607746	1	1613611	1		
	Accessories						Accessories					
Crimp contacts	Order separately, see page 124 onwards						Order separately, see page 124 onwards					
Color rings, 50 pcs. in set (to be ordered separately)	See page 164						See page 164					



Flange dimensions 21.6 mm x 21.6 mm



Installation dimensions

Cable connector, SPEEDCON fast locking system

- SPEEDCON fast locking system or M17 standard interlocking
- Standard knurled nuts compatible with mating plugs with SPEEDCON or M17 standard external thread
- Individual marking of connectors with color rings



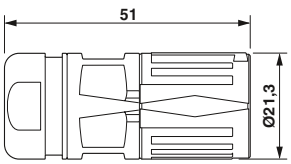
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607683	1	1607718	1	1613578	1	1607756	1	1613620	1		
	8 mm ... 10 mm	1607685	1	1607720	1	1613580	1	1607759	1	1613622	1		
	10 mm ... 12.5 mm	1624538	1	1624544	1	1624550	1	1624556	1	1624639	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607665	1	1607700	1	1613559	1	1607736	1	1613601	1		
	8 mm ... 10 mm	1607667	1	1607702	1	1613561	1	1607738	1	1613603	1		
	10 mm ... 12.5 mm	1624535	1	1624541	1	1624547	1	1624553	1	1624637	1		

Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Cable connector, M17 standard interlocking

- Standard knurled nuts compatible with mating plugs with SPEEDCON or M17 standard external thread
- Individual marking of connectors with color rings



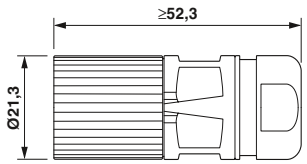
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607682	1	1607717	1	1613577	1	1607755	1	1613619	1		
	8 mm ... 10 mm	1607684	1	1607719	1	1613579	1	1607758	1	1613621	1		
	10 mm ... 12.5 mm	1624537	1	1624534	1	1624549	1	1624555	1	1624638	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607663	1	1607699	1	1613558	1	1607735	1	1613600	1		
	8 mm ... 10 mm	1607666	1	1607701	1	1613560	1	1607737	1	1613602	1		
	10 mm ... 12.5 mm	1624534	1	1624540	1	1624546	1	1624552	1	1624636	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Coupling connector

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



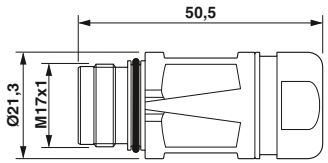
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Coupler connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607688	1	1607723	1	1613583	1	1607764	1	1613625	1		
	8 mm ... 10 mm	1607689	1	1607724	1	1613584	1	1607765	1	1613626	1		
	10 mm ... 12.5 mm	1624539	1	1624545	1	1624551	1	1624557	1	1624654	1		
Coupler connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607670	1	1607706	1	1613564	1	1607741	1	1613606	1		
	8 mm ... 10 mm	1607671	1	1607707	1	1613565	1	1607742	1	1613607	1		
	10 mm ... 12.5 mm	1624536	1	1624542	1	1624548	1	1624554	1	1624653	1		

Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Device connector, straight, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings
- **Flange dimensions: 25.7 mm x 25.7 mm**

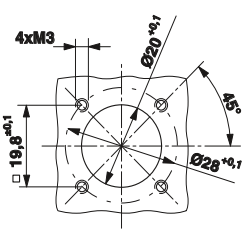


3+PE, 5+PE, 6+PE-pos.

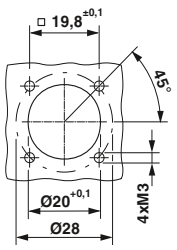


7+PE, 5+3+PE-pos.

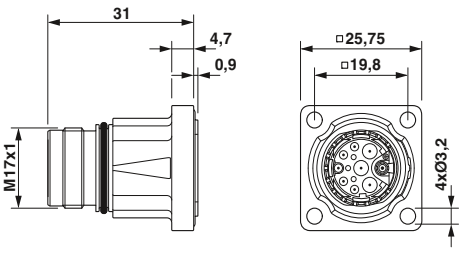
Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert for support on the device	1619189	1	1619191	1	1619193	1	1619195	1	1620459	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert for support on the device	1619186	1	1619190	1	1619192	1	1619194	1	1620460	1		
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert can be snapped in	1619212	1	1619214	1	1619216	1	1619218	1	1620461	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert can be snapped in	1619209	1	1619213	1	1619215	1	1619217	1	1620462	1		
	Accessories						Accessories					
Crimp contacts	Order separately, see page 124 onwards						Order separately, see page 124 onwards					
Color rings, 50 pcs. in set (to be ordered separately)	See page 164						See page 164					



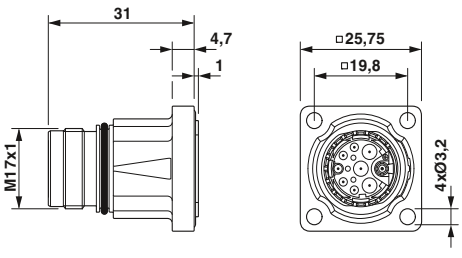
Installation dimensions



Installation dimensions



Contact insert for support on the device



Contact insert can be snapped in

Device connector, angled, rotatable, front mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Housing can be freely rotated up to 308°
- Individual marking of connectors with color rings
- Flange versions for M2.5/M3 attachment
- **Flange dimensions: 25.7 mm x 25.7 mm**



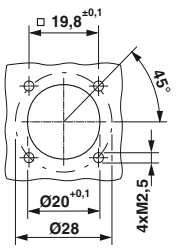
3+PE, 5+PE, 6+PE-pos.



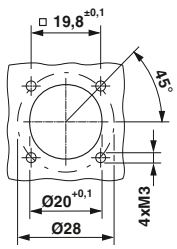
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **socket contacts**												
Fixing with M2.5	1620428	1	1620432	1	1620434	1	1620436	1	1620438	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **pin contacts**												
Fixing with M2.5	1620427	1	1620431	1	1620433	1	1620435	1	1620437	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **socket contacts**												
Fixing with M3	1620443	1	1620447	1	1620449	1	1620451	1	1620453	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **pin contacts**												
Fixing with M3	1620444	1	1620448	1	1620450	1	1620452	1	1620454	1		

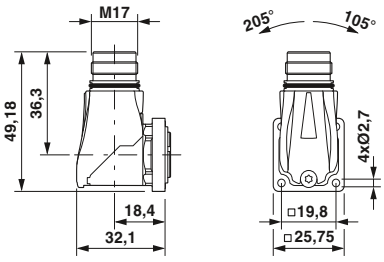
Accessories	Accessories
Crimp contacts	**Order separately, see page 124 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



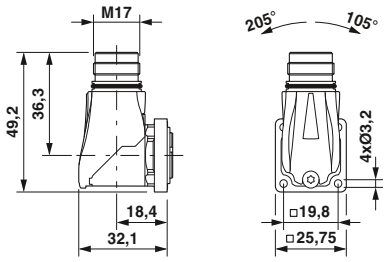
Installation dimensions



Installation dimensions



Fixing with M2.5



Fixing with M3

Device connector, central fastening thread, front/rear mounting

- Compatible with mating plugs with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



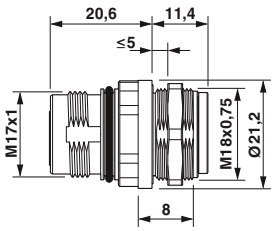
3+PE, 5+PE, 6+PE-pos.



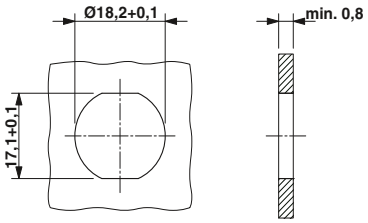
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, **front mounting**, M18 x 0.75 fastening thread, with contact carrier, without contacts, **for socket assembly**	1613546	1	1613550	1	1613572	1	1613592	1	1613614	1		
Device connector, **front mounting**, M18 x 0.75 fastening thread, with contact carrier, without contacts, **for pin contacts**	1613544	1	1613548	1	1613553	1	1613590	1	1613595	1		
Device connector, **rear mounting**, M20 x 1.5 fastening thread, with contact carrier, without contacts, **for socket contacts**	1613547	1	1613551	1	1613587	1	1613593	1	1613629	1		
Device connector, **rear mounting**, M20 x 1.5 fastening thread, with contact carrier, without contacts, **for pin contacts**	1613545	1	1613549	1	1613568	1	1613591	1	1613610	1		

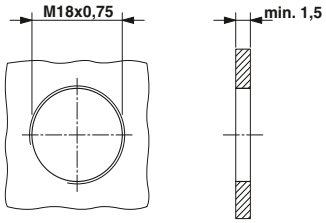
Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M18 x 0.75	ST-E2015151	1613831	10	ST-E2015151	1613831	10
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
Crimp contacts	Order separately, see page 124 onwards			Order separately, see page 124 onwards		
Color rings, 50 pcs. in set (to be ordered separately)	See page 164			See page 164		



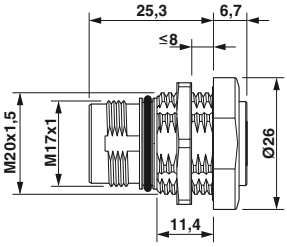
Front mounting, M18 x 0.75, order locking nut separately



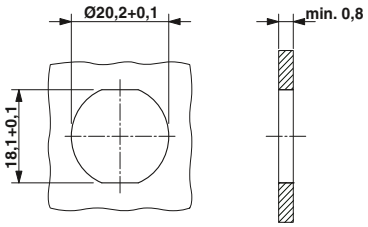
Installation dimensions: mounting with anti-rotation protection and locking nut



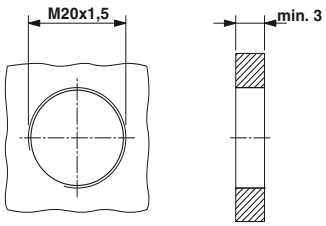
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For reasons of safety, only socket contacts may be used in the live part of the connector.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 mm² ... 0.56 mm²	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 mm² ... 0.25 mm²	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 mm² ... 0.56 mm²	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1
		Accessories			Accessories		
Crimping tools		Order separately, see page 158 onwards			Order separately, see page 158 onwards		

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Crimp contacts, turned

M17 power connectors are fitted with contacts with Ø 2 mm, Ø 1 mm or Ø 0.6 mm depending on the number of positions (see table below).

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For reasons of safety, only socket contacts may be used in the live part of the connector.



Crimp contacts socket



Crimp contacts pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contact socket Ø 2.0 mm							
	0.25 ... 1.0	**ST-20KS010**	1607657	50			
	1.0 ... 2.5	**ST-20KS020**	1607658	50			
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²	**ST-10KS010**	1618239	100			
	0.34 mm² ... 0.5 mm²	**ST-10KS020**	1618251	100			
	0.5 mm² ... 1.0 mm²	**ST-10KS030**	1618254	100			
Contact socket Ø 0.6 mm							
	0.06 mm² ... 0.25 mm²	**ST-06KS010**	1607580	100			
	0.14 mm² ... 0.34 mm²	**ST-06KS020**	1607581	100			
	0.34 mm² ... 0.50 mm²	**ST-06KS030**	1607582	100			
Contact pin Ø 2.0 mm							
	0.25 ... 1.0				**ST-20KP010**	1607655	50
	1.0 ... 2.5				**ST-20KP020**	1607656	50
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²				**ST-10KP010**	1618255	100
	0.34 mm² ... 0.5 mm²				**ST-10KP020**	1618256	100
	0.5 mm² ... 1.0 mm²				**ST-10KP030**	1618261	100
Contact pin Ø 0.6 mm							
	0.06 mm² ... 0.25 mm²				**ST-06KP010**	1607577	100
	0.14 mm² ... 0.34 mm²				**ST-06KP020**	1607578	100
	0.34 mm² ... 0.50 mm²				**ST-06KP030**	1607579	100
		Accessories			**Accessories**		
Crimping tools		**Order separately, see page 159**			**Order separately, see page 159**		

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Mechanical and electrical data

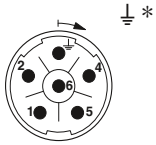
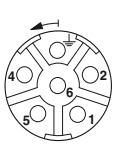
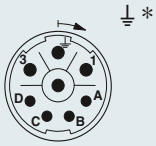
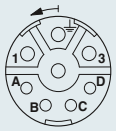
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for cable outside diameter of 7.5 - 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector M23 x 1 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 in the locked state

Electrical data

Number of positions		**6 (5+PE)**	**8 (4+3+PE)**				
Contacts		5 + PE	4	+	3	+	PE
Contact Ø	[mm]	2	1		2		2
Litz wire cross sections							
Short version, cable Ø max. 14 mm	[mm²]	0.25 ... 2.5	0.06 ... 1.0		0.25 ... 2.5		0.25 ... 2.5
Long version, cable Ø max. 18 mm	[mm²]	0.25 ... 4.0	0.06 ... 1.0		0.25 ... 4.0		0.25 ... 4.0
Device connectors	[mm²]	0.25 ... 4.0	0.06 ... 1.0		0.25 ... 4.0		0.25 ... 4.0
Nominal current per contact at 25°C [1]		30	9		30		–
Specifications according to DIN EN 61984:2009							–
Rated voltage	[V AC/DC]	630[2]	250		630[2]		–
Test/surge voltage	[kV AC]	6	4		6		–
Surge voltage category		III			III		
Pollution degree [3]		3			3		
Installation height	[m]	Up to 3000			Up to 3000		
Cable clamping area [4]	Max. Ø [mm]	18			18		

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] 400 V when fitted with punched-rolled C-HC contacts
[3] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, the connector must be sealed using a protective cap ≥ IP54.
[4] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Pin assignments and coding

	Contact chamber numbering (view of plug-in side)			
Number of positions	**Pin**		**Socket**	
6-pos. **(5 + PE)** Crimp		* with grounding spring, **pos. 3 leading**		* with grounding spring, pos. 3
8-pos. **(4 + 3 + PE)** Crimp		* with grounding spring, pos. 2		* with grounding spring, **pos. 2 leading**

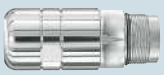
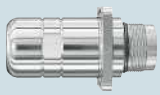
Selection guide

M23 power connectors up to 30 A/630 V, crimp ranges up to 4 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)
– Feed-throughs/panel feed-throughs

The connectors are supplied fully assembled and are complemented by the respective crimp contacts.

The product chart provides an overview of the available components.

Connector type		
Shielded	**Cable connectors** Short, SPEEDCON fast locking system, see page 130. M23 x 1 standard interlocking, see page 130. 	Long, SPEEDCON fast locking system, see page 130. M23 x 1 standard interlocking, see page 130. 
	Device connectors with knurled nut Straight, see page 133. 	Angled, see page 133. 
Shielded	**Coupler connectors** Short, see page 131.  With mounting flange Short, see page 134. 	Long, see page 131.  With mounting flange Long, see page 134. 
Shielded	**Device connectors** Straight, see page 132.  Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 132. 	Angled, rotatable, flange dimensions: 28 mm x 28 mm see page 132. 
	Panel feed-through External socket - internal pin, see page 135. 	Panel feed-throughs are supplied fully wired

Socket contacts

Pin contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 136.



Pin contacts

Turned, see page 136.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts,
see page 159.



Accessories

Color rings for individually marking the connectors, see page 164.



Note:
For reasons of safety, only socket contacts may be used in the live part of the connector.

Cable connector, long and short design

- SPEEDCON fast locking system or M23 standard interlocking
- Standard knurled nuts compatible with mating plugs with SPEEDCON or M23 standard external thread
- Individual marking of connectors with color rings

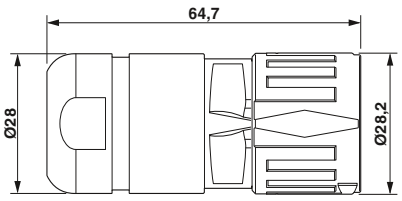


Cable connector, SPEEDCON

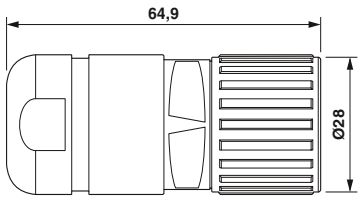


Cable connector, M23 standard interlocking

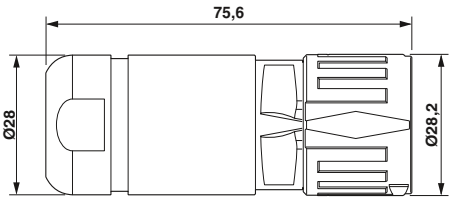
Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Cable connector, **short**, with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 14 mm,** connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1618197	1	1618207	1	1605532	1	1605602	1
	7.5 mm ... 9 mm	1618194	1	1618204	1	1605524	1	1605595	1
	9 mm ... 11 mm	1618195	1	1618205	1	1605526	1	1605596	1
	11 mm ... 14 mm	1618196	1	1618206	1	1605529	1	1605597	1
Cable connector, **long,** with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 18 mm,** connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm	1618202	1	1618212	1	1605549	1	1605617	1
	7.5 mm ... 9 mm	1618201	1	1618211	1	1605548	1	1605614	1
	9 mm ... 12 mm	1618200	1	1618210	1	1605546	1	1605610	1
	12 mm ... 15 mm	1618199	1	1618209	1	1605545	1	1605607	1
	15 mm ... 18 mm	1618198	1	1618208	1	1605543	1	1605605	1
		Accessories				Accessories			
Crimp contacts		**For socket contacts, see page 136**				**For socket contacts, see page 136**			
Color rings, 50 pcs. in set (to be ordered separately)		**See page 164**				**See page 164**			



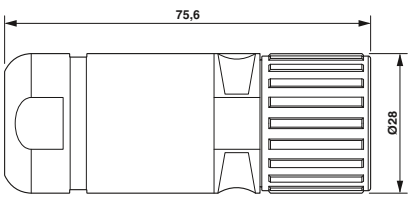
Short design



Short design



Long design



Long design

Coupler connector, long and short design

– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts
– Individual marking of connectors with color rings



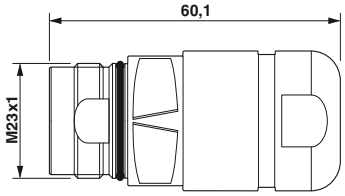
Coupler connector, short



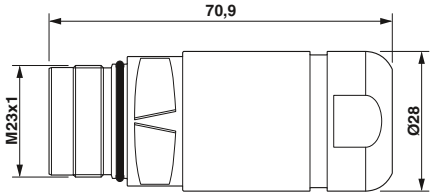
Coupler connector, long

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Coupler connector, **short**, with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 14 mm,** connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1605499	1	1605575	1				
	7.5 mm ... 9 mm	1605494	1	1605568	1				
	9 mm ... 11 mm	1605496	1	1605570	1				
	11 mm ... 14 mm	1605498	1	1605571	1				
Coupler connector, **long,** with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 18 mm,** connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm					1605510	1	1605583	1
	7.5 mm ... 9 mm					1605509	1	1605582	1
	9 mm ... 12 mm					1605508	1	1605581	1
	12 mm ... 15 mm					1605507	1	1605580	1
	15 mm ... 18 mm					1605505	1	1605578	1

	Accessories	Accessories
Crimp contacts	**For pin contacts, see page 136**	**For pin contacts, see page 136**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



Short design



Long design

Device connector, straight and angled, rotatable

– Compatible with mating plugs with SPEEDCON or M23 standard knurled nuts

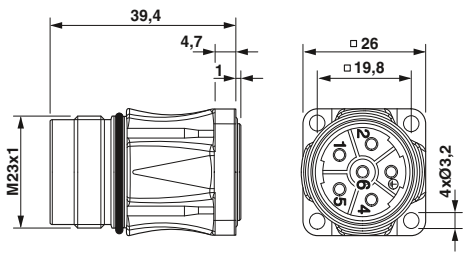


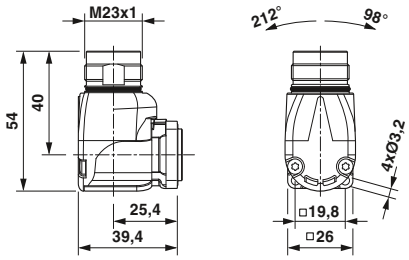
Device connector, straight



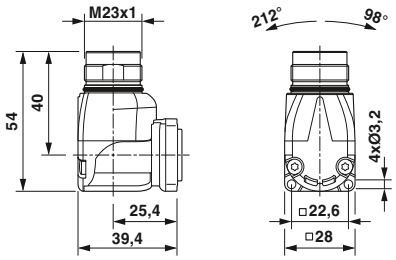
Device connector, angled rotatable

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Device connector with contact carrier **without** contacts								
Flange dimensions: 26 mm x 26 mm	1605520	1	1605589	1	1620657	1	1620660	1
Device connector, with **reinforced contact carrier** (black) for angled mating plugs, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1620619	1	1620620	1				
Device connector with contact carrier **without** contacts								
Flange dimensions: 28 mm x 28 mm					1620661	1	1620662	1
	Accessories				Accessories			
Crimp contacts	For pin contacts, see page 136				For pin contacts, see page 136			
Color rings, 50 pcs. in set (to be ordered separately)	See page 164				See page 164			

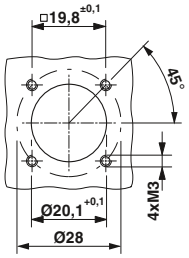




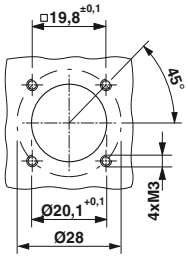
Flange dimensions 26 mm x 26 mm



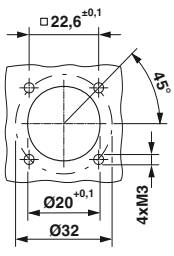
Flange dimensions 28 mm x 28 mm



Installation dimensions



Installation dimensions



Installation dimensions

Device connector with knurled nut

Device connectors with knurled nuts must be equipped with socket contacts.
– Standard knurled nuts compatible with mating plugs with SPEEDCON or M23 standard external thread

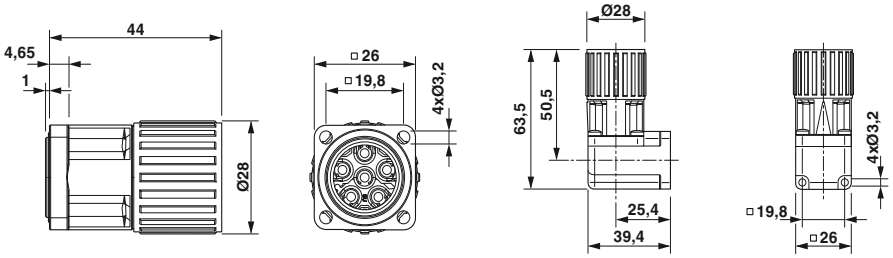


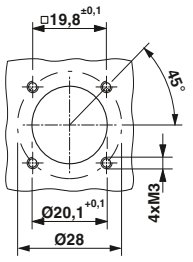
Device connector with knurled nut, straight



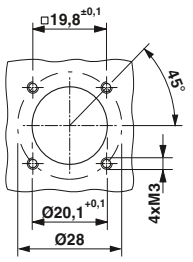
Device connector with knurled nut, angled fixed

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Device connector with knurled nut, **straight**, with contact carrier, without contacts	1607082	1	1605622	1				
Device connector with knurled nut, **angled, fixed**, with contact carrier, without contacts					1607405	1	1607429	1
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 136				For socket contacts, see page 136			





Installation dimensions



Installation dimensions

Panel feed-through, long and short design

– Rear mounting
– Compatible with mating plugs with M23 standard knurled nuts



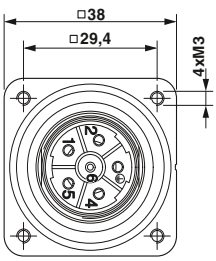
Panel feed-through, short



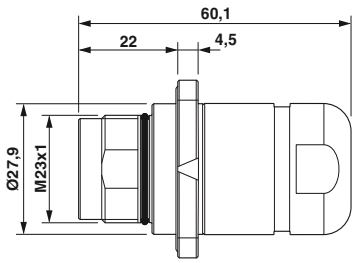
Panel feed-through, long

Description	Cable clamping area	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Panel feed-through, short with contact carrier, without contacts, for cable Ø 7.5 to 14 mm, connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1605517	1	1607051	1				
	7.5 mm ... 9 mm	1605516	1	1607048	1				
	9 mm ... 11 mm	1607037	1	1607049	1				
	11 mm ... 14 mm	1607038	1	1607050	1				
Panel feed-through, long with contact carrier, without contacts, for cable Ø 7.5 to 18 mm, connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm					1605518	1	1607056	1
	7.5 mm ... 9 mm					1607042	1	1607055	1
	9 mm ... 12 mm					1607041	1	1607054	1
	12 mm ... 15 mm					1607040	1	1607053	1
	15 mm ... 18 mm					1607039	1	1607052	1

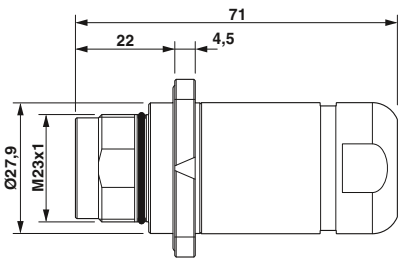
	Accessories	Accessories
Crimp contacts	**For pin contacts, see page 136**	**For pin contacts, see page 136**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**	**See page 164**



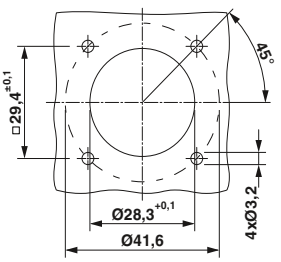
Flange dimensions for short and long design



Short design



Long design



Installation dimensions for short and long design

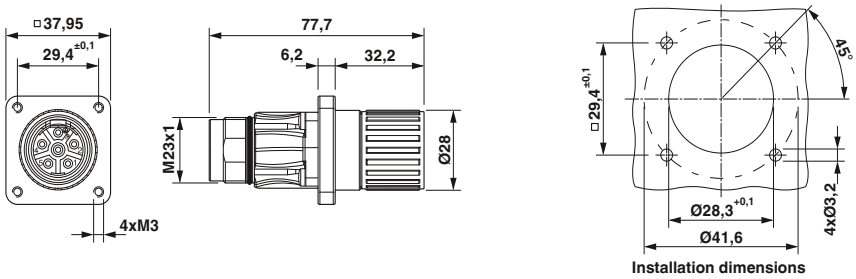
Panel feed-through, fully wired

– Front mounting
– Internally fully wired and fitted with contacts
– Compatible with mating plugs with M23 standard knurled nuts



Panel feed-through, pin/socket

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.	
Panel feed-through, pin inside - socket outside, fully wired				
	1605492	1	1605567	1



Installation dimensions

Crimp contacts, turned

The 6-pos. (5+PE) versions are assembled with 2 mm Ø contacts. The 8-pos. (4+3+PE) versions are equipped with four 1 mm Ø signal contacts and four 2 mm Ø contacts.

Note: observe the crimp ranges for cable and coupler connectors.

– Short version: connection cross sections up to 2.5 mm², max. cable diameter of 14 mm
– Long version: connection cross sections up to 4 mm², max. cable diameter of 18 mm



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 2.0 mm for cable and device connectors with knurled nuts, power and PE contacts							
	0.25 ... 1.0	**SF-7PS2000**	1605636	50			
	0.75 ... 1.5	**SF-7NS2000**	1605631	50			
	1.0 ... 2.5	**SF-7QS2000**	1605643	50			
	4.0	**SF-7MS2000**	1605628	50			
Contacts, socket Ø 1.0 mm for cable and device connectors with knurled nuts, signal contacts							
	0.06 ... 0.2	**SF-6CS2000**	1605562	100			
	0.14 ... 0.5	**SF-10KS004**	1607356	100			
	0.5 ... 1.0	**SF-6AS2000**	1605557	100			
Contacts, pin Ø 2.0 mm for coupler connectors, power and PE contacts							
	0.14 ... 0.25				**SF-7RP2000**	1605646	50
	0.25 ... 1.0				**SF-7PP2000**	1605634	50
	0.75 ... 1.5				**SF-20KP004**	1607376	50
	1.0 ... 2.5				**SF-7QP2000**	1605639	50
	4.0				**SF-7MP2000**	1605626	50
Contacts, pin Ø 1.0 mm for coupler connectors, signal contacts							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
Contacts, pin Ø 2.0 mm for device connectors, power and PE contacts							
	0.14 ... 0.25				**SF-7RP2000**	1605646	50
	0.25 ... 1.0				**SF-7PP2000**	1605634	50
	0.75 ... 1.5				**SF-20KP004**	1607376	50
	1.0 ... 2.5				**SF-7QP2000**	1605639	50
	4.0				**SF-7MP2000**	1605626	50
Contacts, pin Ø 1.0 mm for device connectors, signal contacts							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
		Accessories			**Accessories**		
Crimping tools		Order separately, see page 159 onwards			Order separately, see page 159 onwards		

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
6(5+PE)	5+PE	2+2
8(4+3+PE)	4+3+PE	1+2+2

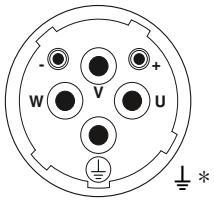
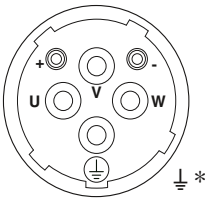
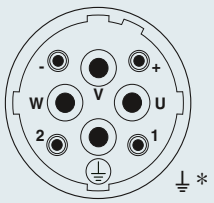
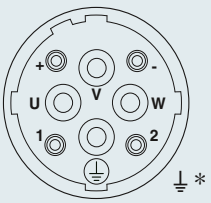
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable outside diameter of 9.0 - 26.5 mm, shielded
Type of locking:	M40 SPEEDCON fast locking system, cable connector with M40 x 1.5 coarse-pitch thread as an option
Mech. insertion/withdrawal cycles:	Standard: 50
Protection class	IP67 in the locked state

Electrical data

Number of positions		6 (2+3+PE)					8 (4+3+PE)				
Contacts		2	+	3	+	PE	4	+	3	+	PE
Contact Ø	[mm]	2.0		3.6		3.6	2.0		3.6		3.6
Litz wire cross sections											
Cable and coupler connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Device connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Nominal current per contact at 25°C [1]	[A]	30		70		–	30		70		–
Specifications according to DIN EN 61984:2009											
Rated voltage	[V AC/DC]	250		630		–	250		630		–
Test/surge voltage	[kV]	4		6		–	4		6		–
Surge voltage category				III					III		
Pollution degree				3					3		
Installation height	[m]			Up to 3000					Up to 3000		
Cable clamping area [2]	Max. Ø [mm]			26.5					26.5		

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Number of positions	Contact chamber numbering (view of plug-in side) Pin	Socket
6-pos. (2 + 3 + PE) Crimp	 *	 *
8-pos. (4 + 3 + PE) Crimp	 *	 *

* with grounding spring

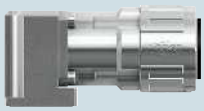
Selection guide

M40 power connectors up to 70 A/630 V, crimp ranges up to 16 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)
– Feed-throughs/panel feed-throughs

The connectors are supplied fully assembled and are complemented by the respective crimp contacts.

M40 connectors with knurled nuts can be supplied with SPEEDCON fast locking system or with M40 x 1.5 coarse-pitch thread as an option.

The product chart provides an overview of the available components.

	Connector type	
Shielded	Cable connectors	SPEEDCON fast locking system, see page 142.  M40 x 1.5 standard interlocking, see page 142. 
		Mounting flange for wall mounting, see page 162. 
Shielded	Device connectors with knurled nut	Straight, see page 144.  Angled, see page 145. 
Shielded	Coupler connectors	See page 142. 
Shielded	Device connectors	Angled, rotatable, see page 146. 
		Straight, see page 143. 

Socket contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 147.



Pin contacts

Turned, see page 147.



Tools/accessories

Crimping tools

Crimping pliers, see page 159.



Crimping pliers with digital display for turned crimp contacts,
see page 159.



Accessories

Color rings for individually marking the connectors, see page 164.



Note:
For reasons of safety, only socket contacts may be used in the live part of the connector.

Cable connector

- SPEEDCON fast locking system or M40 standard interlocking
- Standard knurled nuts compatible with mating plugs with SPEEDCON or M40 standard external thread
- Individual marking of connectors with color rings

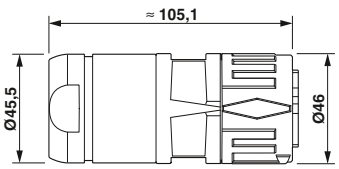


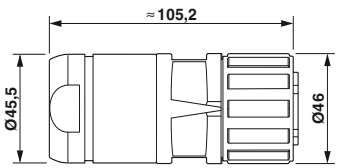
Cable connector, SPEEDCON



Cable connector

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Cable connector housing, with contact carrier, **without** contacts, connection cross section up to 16 mm²									
	9 mm ... 14 mm	1613428	1	1613434	1	1613518	1	1613528	1
	14 mm ... 20.5 mm	1613429	1	1613435	1	1613519	1	1613529	1
	20.5 mm ... 26.5 mm	1613430	1	1613436	1	1613520	1	1613530	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 147				For socket contacts, see page 147			
Color rings, 50 pcs. in set (to be ordered separately)		See page 164				See page 164			





Coupler and device connector

- Compatible with mating plugs with SPEEDCON or M40 standard knurled nuts
- Individual marking of connectors with color rings



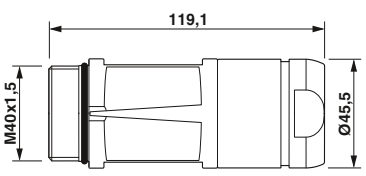
Coupling connector

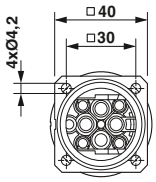


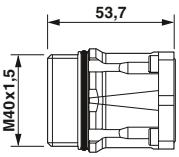
Device connector, straight

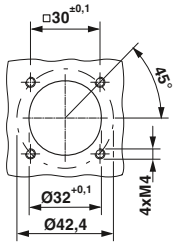
Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Coupler connector, with contact carrier, **without** contacts, connection cross section up to 16 mm²									
	9 mm ... 14 mm	1613425	1	1613431	1				
	14 mm ... 20.5 mm	1613426	1	1613432	1				
	20.5 mm ... 26.5 mm	1613427	1	1613433	1				
Device connector, straight, with contact carrier, **without** contacts Connection cross section up to 10 mm²						1613517	1	1613527	1

Accessories	Accessories
Crimp contacts	**For pin contacts, see page 147**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**









Installation dimensions

Device connector with knurled nut

– SPEEDCON fast locking system or M40 standard interlocking
– Standard knurled nuts compatible with mating plugs with SPEEDCON or M40 standard external thread
– Device connectors with knurled nuts must be fitted with socket contacts.

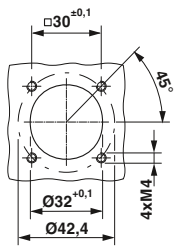


Device connector with knurled nut, straight, SPEEDCON

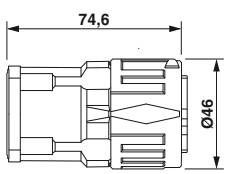


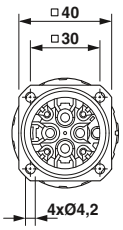
Device connector with knurled nut, straight

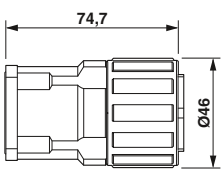
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Device connector with SPEEDCON knurled nut, **straight,** with contact carrier, **without** contacts Connection cross section up to 16 mm²	1613524	1	1613534	1				
Device connector with standard knurled nut, **straight,** with contact carrier, **without** contacts Connection cross section up to 16 mm²					1605823	1	1605865	1
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 147				For socket contacts, see page 147			
Color rings, 50 pcs. in set (to be ordered separately)	See page 164				See page 164			

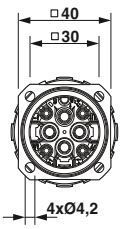


Installation dimensions









Device connector with knurled nut

Device connectors with knurled nuts must be equipped with socket contacts.

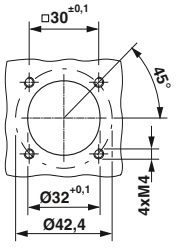


Device connector with knurled nut, angled, SPEEDCON

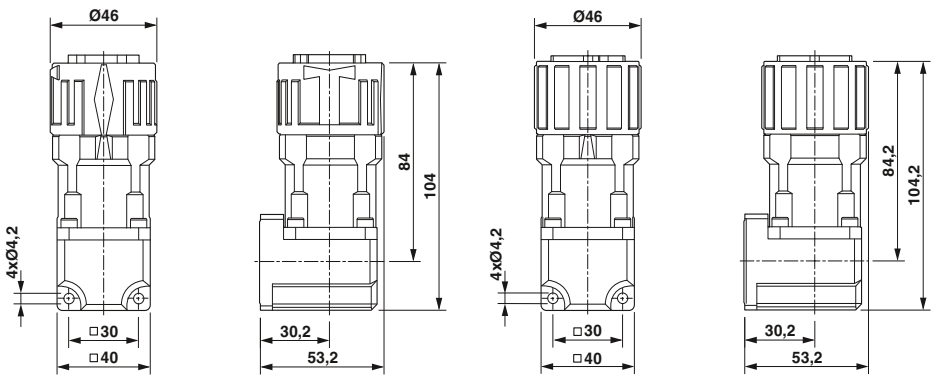


Device connector with knurled nut, angled

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Device connector with SPEEDCON knurled nut, **angled,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²	1613525	1	1613535	1				
Device connector with knurled nut, **angled,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²					1607532	1	1607543	1
	Accessories				**Accessories**			
Crimp contacts	**For socket contacts, see page 147**				**For socket contacts, see page 147**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**				**See page 164**			



Installation dimensions



Device connector, angled, rotatable

- Compatible with mating plugs with SPEEDCON or M40 standard knurled nuts
- The rotatable angled housing can be rotated freely through 310°.
- Individual marking of connectors with color rings



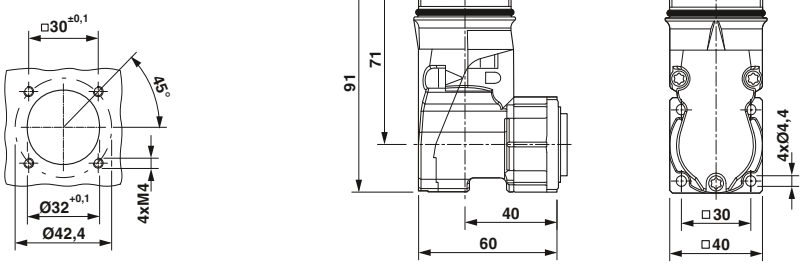
Device connector, angled rotatable

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts				
Connection cross section up to 10 mm²	1620663	1	1620664	1

Accessories

Crimp contacts	**For pin contacts, see page 147**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 164**



Installation dimensions

Crimp contacts, turned

The 6-pos. (2+3+PE) versions are equipped with two Ø 2 mm signal contacts and four 3.6 mm contacts (three power, 1 PE contact).

The 8-pos. (4+3+PE) versions are equipped with four 2 mm signal contacts and four 3.6 mm contacts (three power, 1 PE contact).

Note: depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Contacts, socket Ø 3.6 mm, for cable and device connectors with knurled nuts, power and PE contacts							
	1.0 ... 2.5	SM-36KS001	1605756	20			
	2.5 ... 4.0	SM-36KS002	1605758	20			
	4.0 ... 6.0	SM-36KS003	1605760	20			
	6.0 ... 10.0	SM-36KS004	1605762	20			
Contacts, socket Ø 2.0 mm, for cable and device connectors with knurled nuts, signal contacts							
	0.25 ... 1.0	SF-7PS2000	1605636	50			
	0.75 ... 1.5	SF-7NS2000	1605631	50			
	1.0 ... 2.5	SF-7QS2000	1605643	50			
	4.0	SF-7MS2000	1605628	50			
Contacts, pin Ø 3.6 mm, for coupler connectors, power and PE contacts							
	1.0 ... 2.5				SM-36KP005	1605749	20
	2.5 ... 4.0				SM-36KP006	1605750	20
	4.0 ... 6.0				SM-36KP008	1605754	20
	6.0 ... 10.0				SM-36KP007	1605752	20
Contacts, pin Ø 2.0 mm, for coupler connectors, signal contacts							
	0.25 ... 1.0				SM-20KP006	1605738	50
	0.75 ... 1.5				SM-20KP005	1605736	50
	1.0 ... 2.5				SM-20KP007	1605739	50
	4.0				SM-20KP008	1605741	50
Contacts, pin Ø 3.6 mm, for device connectors, power and PE contacts							
	0.75 ... 1.5				SM-36KP001	1605743	20
	1.0 ... 2.5				SM-36KP009	1607057	20
	1.0 ... 4.0				SM-36KP002	1605744	20
	4.0 ... 6.0				SM-36KP003	1605745	20
	6.0 ... 10.0				SM-36KP004	1605747	20
Contacts, pin Ø 2.0 mm, for device connectors, signal contacts							
	0.14 ... 0.25				SF-7RP2000	1605646	50
	0.25 ... 1.0				SF-7PP2000	1605634	50
	0.75 ... 1.5				SF-20KP004	1607376	50
	1.0 ... 2.5				SF-7QP2000	1605639	50
	4.0				SF-7MP2000	1605626	50

Crimping tools	Accessories	Accessories
	Order separately, see page 159	Order separately, see page 159

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	2+3.6+3.6
8(4+3+PE)	4+3+PE	2+3.6+3.6

Mechanical and electrical data

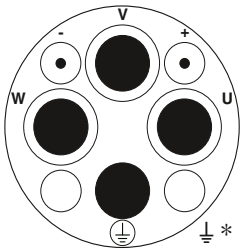
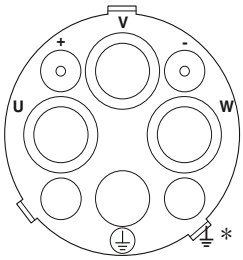
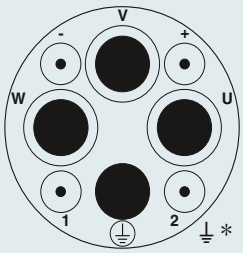
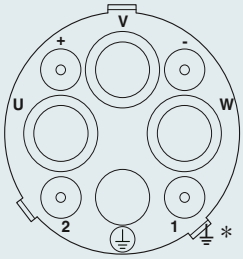
Mechanical data	
Housing material:	Aluminum
Housing surface:	Aluminum, anodized
Insulating body:	Polyamide (PA 66)
Contact surface:	Power and PE contacts: silver-plated (Ag), signal contacts: gold-plated (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FPM)
Ambient temperature:	-40°C ... 120°C
Cable entry:	Cable and coupler connectors for cable outside diameter of 17 - 36 mm, shielded
Type of locking:	M58 x 2 screw locking
Mech. insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 in the locked state

Electrical data

Number of positions		**6 (2+3+PE)**					**8 (4+3+PE)**				
Contacts		2	+	3	+	PE	4	+	3	+	PE
Contact Ø	[mm]	1.6		10		10	1.6		10		10
Litz wire cross section											
Crimp contacts, turned	[mm^2]	0.75 ... 1.5		10 ... 50		10 ... 50	0.75 ... 1.5		10 ... 50		10 ... 50
Nominal current per contact at 25°C [1]	[A]	12		150		–	12		150		–
Specifications according to DIN EN 61984:2009											
Rated voltage	[V AC/DC]	250		630		–	250		630		–
Test/surge voltage	[kV AC]	4		6		–	4		6		–
Surge voltage category				III					III		
Pollution degree				3					3		
Installation height	[m]			Up to 2000					Up to 2000		
Cable clamping area [2]	Max. Ø [mm]			36					36		

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Note:
Unlike plug-in devices, connectors may only be inserted or removed when disconnected from the power.

Number of positions	Contact chamber numbering (view of plug-in side) Pin	Socket
6-pos. **(2 + 3 + PE)** Crimp		
8-pos. **(4 + 3 + PE)** Crimp		

*** with grounding spring, PE leading**

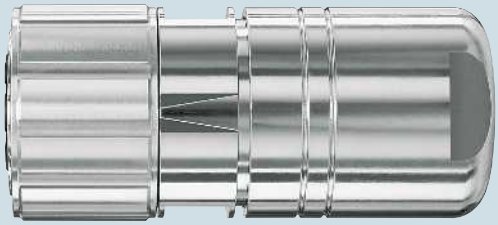
Selection guide

M58 power connectors up to 150 A/630 V, crimp ranges up to 50 mm²

– Cable connectors
– Coupler connectors
– Device connectors, straight

The power connectors are supplied fully assembled and are complemented by the respective crimp contacts.

The product chart provides an overview of the available components.

Connector type	
Shielded	**Cable connectors**  See page 152.
Shielded	**Coupler connectors**  See page 152.
Shielded	**Device connectors**  See page 153.

Socket contacts

Pin contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 154.



Pin contacts

Turned, see page 154.



Note:
For reasons of safety, only socket contacts may be used in the live part of the connector.

Tools/accessories

Crimping tools

Crimping device for power and PE contacts Ø 10 mm,
see page 160.



Crimping pliers for signal contacts Ø 1.6 mm,
see page 160.



Cable and coupler connector

- High transmission capacities of up to 630 V and 150 A
- Connection cross sections up to 50 mm²
- Cable clamping area from 17 mm to 36 mm

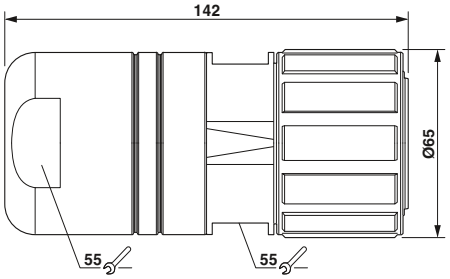


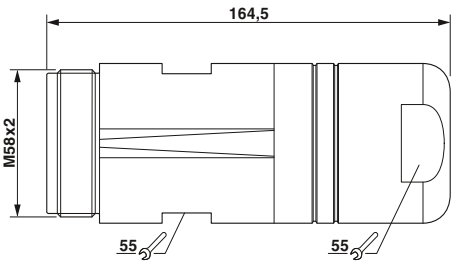
Cable connector



Coupling connector

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Connector housing, with contact carrier, **without** contacts, for cable diameter:									
	17 mm ... 25 mm	1607503	1	1607508	1	1607500	1	1607506	1
	25 mm ... 36 mm	1607501	1	1607507	1	1607499	1	1607505	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 154				For pin contacts, see page 154			





Device connector for front mounting

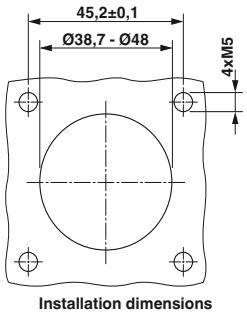
Coupler and device connectors must be fitted with pin contacts, cable connectors must be fitted with socket contacts.



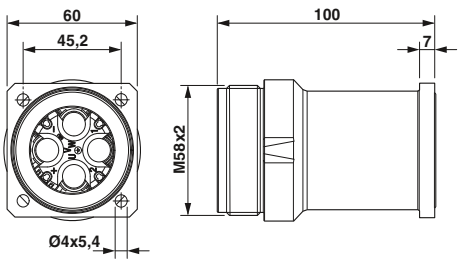
Device connector, straight

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.	
Device connector, straight, with contact carrier, **without** contacts	1615686	1	1615687	1

Accessories	
Crimp contacts	For pin contacts, see page 154



Installation dimensions



Crimp contacts, turned

The 6-pos. (2+3+PE) versions are equipped with two Ø 1.6 mm signal contacts and four 10 mm contacts (three power, 1 PE contact).

The 8-pos. (4+3+PE) versions are equipped with four 1.6 mm signal contacts and four 10 mm contacts (three power, 1 PE contact).

Note: depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Contacts, socket Ø 10.0 mm for cable connectors, power and PE contacts							
	10.0	**SL-1CKS010**	1607916	4			
	16.0	**SL-1CKS020**	1607917	4			
	25.0	**SL-1CKS030**	1607918	4			
	35.0	**SL-1CKS040**	1607919	4			
	50.0	**SL-1CKS050**	1607920	4			
Contacts, socket Ø 1.6 mm for cable connectors, signal contacts							
	0.75 ... 1.5	**SL-16KS010**	1607956	4			
Contacts, pin Ø 10.0 mm for coupler and device connectors, power and PE contacts							
	10.0				**SL-1CKP010**	1607911	4
	16.0				**SL-1CKP020**	1607912	4
	25.0				**SL-1CKP030**	1607913	4
	35.0				**SL-1CKP040**	1607914	4
	50.0				**SL-1CKP050**	1607915	4
Contacts, pin Ø 1.6 mm for coupler and device connectors, signal contacts							
	0.75 ... 1.5				**SL-16KP010**	1607909	4
		Accessories			**Accessories**		
Crimping tools		Order separately, see page 160 onwards			Order separately, see page 160 onwards		

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	1.6+10+10
8(4+3+PE)	4+3+PE	1.6+10+10

Tools and accessories for M23 signal connectors

For RC crimp contacts, RC-Z2130 and RC-Z2514 crimping pliers are used for rolled or turned crimp contacts.

RC-Z2514 crimping pliers with 4-arbor pressing are suitable for crimping turned RC contacts. Detailed operating instructions are included in the packaging.



Crimping tools for rolled/turned contacts



Contact insertion/unlocking tool

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Crimping pliers for rolled RC crimp contacts Ø 1 mm						
Litz wire cross section 0.08 ... 0.56 mm²	**RC-Z2130**	1604267	1			
Crimping pliers for turned RC crimp contacts Ø 1 mm / Ø 1.5 mm / Ø 2 mm						
Litz wire cross section of 0.08 ... 2.5 mm²	**RC-Z2514**	1614590	1			
Insertion and unlocking tool for RC crimp contacts						
Socket/pin Ø 1 mm				**RC-Z2494**	1614123	1
Socket/pin Ø 1.5 mm				**RC-Z2274**	1604409	1
Socket/pin Ø 2 mm				**RC-Z2490**	1611803	1

Crimping tools for punched-rolled C-HC crimp contacts

The manual crimping pliers are suitable for single processing. For processing taped products, a bench-mounted electric crimping device with integrated feed mechanism is available.

– The SF-Z0041 adapter enables tools for the manual crimping pliers for single processing to be used with the electric crimping device.



Hand crimping tools for punched-rolled C-HC crimp contacts



Electrical crimp device for punched-rolled C-HC crimp contacts

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Hand crimping pliers, basic tool for individual processing						
for C-HC crimp contacts	**SF-Z0029**	1607458	1			
Tool head for crimping pliers SF-Z0029, for C-HC crimp contacts						
Contacts **Ø 2 mm**	**SF-Z0030**	1607459	1			
Contacts **Ø 1 mm**	**SF-Z0031**	1607461	1			
Electric crimping device, for processing taped products						
for C-HC crimp contacts				**SF-Z0032**	1607462	1
Tool head for electrical crimp device SF-Z0032, for C-HC crimp contacts, processing for taped articles						
Contacts **Ø 2.0 mm** / connection **1.0 mm²**				**SF-Z0033**	1607463	1
Contacts **Ø 2.0 mm** / connection **1.5 mm²**				**SF-Z0047**	1614689	1
Contacts **Ø 2.0 mm** / connection **2.5 mm²**				**SF-Z0035**	1607465	1
Contacts **Ø 1.0 mm** / connection **0.08 ... 0.2 mm²**				**SF-Z0039**	1607470	1
Contacts **Ø 1.0 mm** / connection **0.2 ... 0.56 mm²**				**SF-Z0040**	1607471	1
Media hub for elec. crimping device SF-Z0032 for accommodating rolls up to Ø 60 cm				**SF-Z0052**	1615413	1
Adapter for electrical crimp device SF-Z0032, for accommodating tool heads **for single processing**				**SF-Z0041**	1607472	1

Crimping tools for turned contacts

The crimping pliers are suitable for crimping turned contacts with Ø 0.6 mm, Ø 1 mm, Ø 2 mm, and Ø 3.6 mm (excl. M23 signal connectors). For large litz wire cross sections, a pneumatic crimping tool is available.

Notes:

For crimping tools for M23 signal connectors, see page 156



Manual crimping pliers



Crimping tool, pneumatic

Description	Litz wire cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Manual crimping pliers with digital display for turned crimp contacts with Ø 1 mm, Ø 2 mm, Ø 3.6 mm	0.06 ... 6	SF-Z0025	1607452	1			
Positioners for crimping the SF-6FS2000 / SF-6DP2000 contacts with a connection cross section of 1.5 mm²		SF-Z0042	1613666	1			
Manual crimping pliers with digital display for turned crimp contacts with Ø 2 mm, Ø 3.6 mm	1.5 ... 10	SF-Z0026	1607454	1			
Manual crimping pliers with digital display for turned crimp contacts with Ø 0.6 mm, Ø 1 mm, Ø 2 mm	0.06 ... 2.5	SF-Z0054	1615585	1			
Crimping tool, pneumatic for turned crimp contacts Ø 3.6 mm	6.0 ... 16				SF-Z0014	1607446	1
Crimp head for crimping tool, pneumatic					SF-Z0003	1605657	1
Positioner for crimp head **SF-Z0003**, for device connectors	**Marking "D"**				SF-Z0011	1605675	1
Positioner for crimp head **SF-Z0003**, for cable and coupler connectors	**"F" marking**				SF-Z0013	1605681	1

Crimping tools for turned contacts for M58 power connectors

For turned crimp contacts with Ø 1.6 mm for M58 power connectors, SF-Z0025 manual crimping pliers are used.
For user-friendly crimping of contacts with Ø 10 mm, the SL-Z0007 electric crimping tool is available.

Crimping stamps for processing contacts with Ø 10 mm are used in pairs. The stamps are tailored to the connection cross sections and marked.



Electro-hydraulic crimping device



Manual crimping pliers

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Electro-hydraulic crimping device incl. charger and rechargeable battery, for Litz wire cross section 10 ... 50 mm² (power and PE contacts Ø 10 mm)		**SL-Z0007**	1613484	1			
Crimping stamp for crimping device SL-Z0007	10	**SL-Z0011**	1613488	1			
Crimping stamp for crimping device SL-Z0007	16	**SL-Z0012**	1613489	1			
Crimping stamp for crimping device SL-Z0007	25	**SL-Z0013**	1613490	1			
Crimping stamp for crimping device SL-Z0007	35	**SL-Z0014**	1613491	1			
Crimping stamp for crimping device SL-Z0007	50	**SL-Z0015**	1613492	1			
Crimping tool with digital display	0.06 ... 6				**SF-Z0025**	1607452	1
Accessories for electro-hydraulic crimping device SL-Z0007							
	Replacement battery	**SL-Z0008**	1613485	1			
	Table holder incl. foot actuation switch	**SL-Z0010**	1613487	1			

Notes:
The manual SF-Z0025 crimping pliers with digital display are also suitable for crimping turned ST/SF/SM crimp contacts.

Special wrench

The torque screwdriver is specially adapted to the M23 circular connectors and simplifies the process of tightening and loosening the knurled nut safely even in places where space is restricted.

The tool consists of a hook spanner as well as a torque screwdriver with a set torque of 2.5 Nm.



Torque screwdriver for M23 connectors with knurled nuts



Special screw key for screwing the adapter

Description	Wrench size [mm]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Torque screwdriver incl. hook wrench							
For M23 connectors with knurled nuts		**SF-Z0028**	1607456	1			
Replacement hook spanner for torque screwdriver		**SF-Z0027**	1607455	1			
Special wrench for cable/coupler connectors for screwing the adapter. Connection dimensions for torque wrench: 8.9 mm x 11.9 mm							
for M17 connectors, WAF 19					**ST-Z0012**	1613667	1
for M23 connectors, WAF 24					**RF-Z0007**	1614347	1
for M40 connectors, WAF 41					**SM-Z0012**	1614349	1
for M58 connectors, WAF 55					**SL-Z0016**	1614348	1

Unlocking tool, square mounting flange

The unlocking tool is used for those contact carriers which are snapped into the housing without rear support. They are removed from the plug-in side using the unlocking tool.

The square mounting flange is used for cable and coupling connectors. In this way, the product range is easily expanded with connectors as panel feed-throughs.



Unlocking tool for snap-in contact carriers



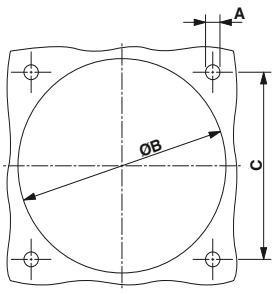
Square mounting flange for cable/coupling connector for wall mounting

Description	Wall mounting	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Unlocking tool for contact carriers, device connectors							
	For M17 signal/power connectors	**ST-Z0001**	1607770	1			
	For M23 feedback connectors	**RF-Z0001**	1607904	1			
	For M23 signal connectors	**CA-Z0001**	1620699	1			
Square mounting flange, metal, with O-ring seal, for M17 (excl. M17 Compact) cable and coupler connectors for wall mounting							
	4 x Ø 2.7 mm				**ST-Z0002**	1607771	1
	4 x M3				**ST-Z0003**	1607772	1
Square mounting flange, metal, without seal, for M17 (excl. M17 Compact) cable and coupler connectors for wall mounting							
	4 x Ø 2.7 mm				**ST-Z0004**	1607773	1
	4 x M3				**ST-Z0005**	1607775	1
Square mounting flange, metal, with O-ring seal, for M23 feedback, cable, and coupler connectors for wall mounting							
	4 x M3				**RF-Z0003**	1607905	1
Square mounting flange, metal, with O-ring seal, for M40 cable and coupler connectors for wall mounting							
	4 x Ø 4.3 mm				**SM-Z0003**	1607935	1
Square mounting flange, metal, without seal, for M40 cable and coupler connectors for wall mounting							
	4 x Ø 4.3 mm				**SM-Z0004**	1607937	1

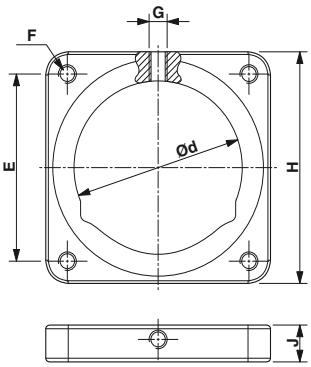
Installation dimensions for square mounting flanges

Type	Installation dimensions			Flange dimensions					
	A	B	C	D	E	F	G	H	J
ST-Z0002 ST-Z0003 ST-Z0004 ST-Z0005	4 x M2.5/∅ 3.2	∅ 22.9 + 0.2	□ 22.6 ±0.1	∅ 21.6	□ 22.6 ±0.1	4 x M3/∅ 2.7	M2.5	□ 28.0 ±0.1	5
RF-Z0003	4 x ∅ 3.2	∅ 27.9 ±0.1	□ 28.3 ±0.1	∅ 26.2	□ 28.3 ±0.1	4 x M3	M3	□ 35.0	6
SM-Z0003 SM-Z0004	4 x M4/∅ 4.2	∅ 46.1 ±0.1	□ 42.4 ±0.1	∅ 45.0	□ 42.4 ±0.1	4 x ∅ 4.3	M3	□ 55.0 ±0.1	5.5

Installation dimensions



Flange dimensions



Note:
For insulating wall mounting, plastic mounting flanges are available on request.

Color rings

The color rings are used for individually marking the connectors



Color rings for marking connectors with cable entry



Color rings for marking device connectors

Description	Color	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Color rings for M17 connectors, 50 pcs. in set							
	Green	**ST-Z0016**	1617993	50	**ST-Z0019**	1620621	50
	Orange	**ST-Z0017**	1618049	50	**ST-Z0020**	1620622	50
	Black	**ST-Z0018**	1618050	50	**ST-Z0021**	1620623	50
Color rings for M23 signal connectors, 50 pcs. in set							
	Green	**RF-Z0014**	1620588	50			
	Orange	**RF-Z0015**	1620592	50			
	Black	**RF-Z0016**	1620593	50			
Color rings for M23 signal device connectors, front mounting, Pg13.5 and M20 fastening thread/rear mounting, central fastening thread, 50 pcs. in set							
	Green				**CA-Z0110**	1620700	50
	Orange				**CA-Z0111**	1620701	50
	Black				**CA-Z0112**	1620702	50
Color rings for M23 signal device connectors, front mounting, flange dimensions: 25 mm x 25 mm, 50 pcs. in set							
	Green				**CA-Z0120**	1620704	50
	Orange				**CA-Z0121**	1620705	50
	Black				**CA-Z0122**	1620706	50
Color rings for M23 feedback connectors and M23 signal device connectors, angled, rotatable, 50 pcs. in set							
	Green	**RF-Z0014**	1620588	50	**RF-Z0017**	1620624	50
	Orange	**RF-Z0015**	1620592	50	**RF-Z0018**	1620625	50
	Black	**RF-Z0016**	1620593	50	**RF-Z0019**	1620626	50
Color rings for M23 hybrid and power connectors, 50 pcs. in set							
	Green	**SF-Z0064**	1620585	50	**RF-Z0017**	1620624	50
	Orange	**SF-Z0065**	1620586	50	**RF-Z0018**	1620625	50
	Black	**SF-Z0066**	1620587	50	**RF-Z0019**	1620626	50
Color rings for M40 connectors, 50 pcs. in set							
	Green	**SM-Z0025**	1620558	50	**SM-Z0028**	1620627	50
	Orange	**SM-Z0026**	1620559	50	**SM-Z0029**	1620628	50
	Black	**SM-Z0027**	1620560	50	**SM-Z0030**	1620629	50

Dust protection caps, plastic

A range of protective caps is available for signal connectors and power connectors to protect the contact elements in the case of a separate plug connection.

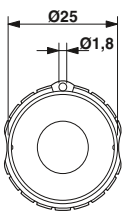
These prevent penetration of dust and humidity.

Plastic protective caps enable IP40 degree of protection when locked.



Plastic dust protection caps

Description	Degree of protection when locked	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Plastic dust protection cap, for signal connector/power connector, with M17 external thread	IP40	**ST-Z0006**	1607776	25
Plastic dust protection cap, for signal connector/power connector, with M17 knurled nut (SPEEDCON and standard)	IP40	**ST-Z0007**	1607777	25
Plastic dust protection cap with lug for signal/power connectors with M23 external thread	IP40	**SF-Z0019**	1607449	25
Plastic dust protection cap, for signal connector/power connector, with M23 knurled nut	IP40	**RC-Z2058**	1604223	25
Plastic dust protection cap, for signal connector/power connector, with M23 external thread	IP40	**RC-Z2059**	1604225	25
Plastic dust protection cap, anti-static, black, for signal connector/power connector, with M23 knurled nut	IP40	**RC-Z2468**	1611796	25
Plastic dust protection cap, anti-static, black, for signal/power connectors with M23 external thread	IP40	**RC-Z2469**	1611797	25
Plastic dust protection cap for power connectors with M40 external thread	IP40	**SM-Z0001**	1605866	25
Plastic dust protection cap for power connectors with M58 external thread	IP40	**SL-Z0005**	1607926	25



SF-Z0019, eye for fixing rope

Dust protection caps, metal

Metal protective caps are available for higher demands as regards the degree of protection. These enable IP67 when locked.

The wire is fixed to the housing panel and prevents the metal protective caps from being lost.



Metal dust protection caps

Description	Degree of protection when locked	Ordering data: Type	Order No.	Pcs. / Pkt.
Metal dust protection cap, for power connectors with M23 external thread	IP67	SC-Z2319	1605456	10
Metal dust protection cap with steel wire, for power connectors with M23 external thread	IP67	SC-Z2320	1605457	10
Metal dust protection cap with steel wire, for power connectors with M23 knurled nut	IP67	SC-Z2322	1605459	10
Metal dust protection cap, for signal connector, with M23 external thread	IP67	RC-Z2104	1604260	10
Metal dust protection cap with steel wire, for signal connectors with M23 external thread	IP67	RC-Z2068	1604236	10
Metal dust protection cap with steel wire, for signal connector, with M23 knurled nut	IP67	RC-Z2062	1604228	10


-A90

Sensor/actuator cabling

A one-stop-shop for the entire range of solutions for field installation

With distributed connection technology, passive distributor systems connect the I/O devices to the PLC controller.
Phoenix Contact offers the most comprehensive range of sensor/actuator cabling on the market. Passive M5, M8, M12, and 7/8" components consisting of distributor boxes, cables, and connectors for assembly are available from stock. A comprehensive range of valve connectors rounds off the entire range.

The 1/2" and 7/8" range for the North American market can be found on our website.

Customer/sector-specific solutions

In order to be able to respond flexibly to your needs, cables and boxes can be manufactured to suit with specific cable lengths and types (e.g., a different sheath color).

For increased requirements, such as the railway or food industry, the long-term use of products outdoors and cables for flexible use in drag chains or robot applications, Phoenix Contact offers a range of suitable product series.

Faster assembly with the SPEEDCON fast locking system

SPEEDCON is the logical development of the M12 connector system that has been established and accepted for many years. Following the principle of "Plug & Turn", the connection time for M12 connectors is reduced by 90%.

Due to the 100% compatibility, redundant warehousing is eliminated.

Assembled cables

3-pos. cables with connectors	**170**
4-pos. cables with connectors	**180**
5-pos. cables with connectors	**186**
6-pos. cables with connectors	**191**
8-pos. cables with connectors	**193**
12/17-pos. cables with connectors	**198**
Assembled M17 to M40 cables	**202**
Cables with valve connectors	**214**
Distributors and adapters	**234**
Distributor boxes	**246**
Cabling for the railway industry	**256**
Cabling for the food industry	**258**
Cabling for outdoor applications	**260**
Cabling for robots and drag chains	**262**
Cabling for power applications	**264**
By the meter - cable rings, cable drums	**282**
Accessories	**286**
Cable range	**298**

M5 SAC cable, 3 and 4-pos., cable type: PUR/PVC

Notes:

For information about the cable qualities, see page 298

Free end			M5 connector, 3-pos.			M5 connector, 4-pos.		
			 			 		
Ordering data			**Ordering data**			**Ordering data**		
Free end		**Order No.**		**Order No.**			**Order No.**	
			1.5 m	1530265	1.5 m	1530346	1.5 m	1530304	1.5 m	1530388
			3 m	1530278	3 m	1530359	3 m	1530317	3 m	1530391
			5 m	1530281	5 m	1530362	5 m	1530320	5 m	1530401
			10 m	1530294	10 m	1530375	10 m	1530333	10 m	1530414
Socket M5, 3-pos., straight										
		1.5 m	1530427							
		3 m	1530430							
		5 m	1530443							
		10 m	1530456							
Socket M5, 3-pos., angled										
		1.5 m	1530508							
		3 m	1530511							
		5 m	1530524							
		10 m	1530537							
Socket M5, 4-pos., straight										
		1.5 m	1530469							
		3 m	1530472							
		5 m	1530485							
		10 m	1530498							
Socket M5, 4-pos., angled										
		1.5 m	1530540							
		3 m	1530553							
		5 m	1530566							
		10 m	1530579							

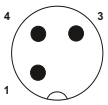
Cable description	Cable type	Color coding	Pin assignment 3-pos.	Color coding	Pin assignment 4-pos.
PUR/PVC - black	PUR M5	BN	1	BN	1
		BK	4	WH	2
		BU	3	BK	4
				BU	3

		Technical data	Technical data
		M5 3-pos.	M5 4-pos.
Rated voltage	[V]	125	125
Rated current	[A]	1	1
Contact material		CuZn	CuZn
Contact surface material		Au	Au
Material of grip body		PUR	PUR
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 80	-25 ... 80

M8 SAC cable, snap-in, 3 and 4-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 298

	Free end	M12 connector, 3-pos.
		 
	Ordering data	Ordering data
M8 socket, snap-in, 3-pos., straight	Order No.	Order No.
 	5 m 1519875 Variable 1697593	Variable 1696853
M8 socket, snap-in, 3-pos., angled		
 	5 m 1519891 Variable 1697629	Variable 1696882
M8 socket, snap-in, 3-pos., with LEDs, angled		
 	Variable 1513402	Variable 1515675
M8 socket, snap-in, 4-pos., straight		
 	Variable 1513389	
M8 socket, snap-in, 4-pos., angled		
 	Variable 1513392	
M8 socket, snap-in, 4-pos., with LEDs, angled		
 	Variable 1511954	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 3-pos. M12 connector and a straight M8 snap-in socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1696853	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

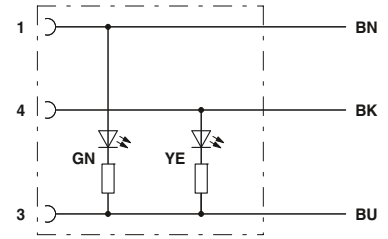
Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	3/4-pos.
PUR, halogen-free - gray E221474	280	3-pos.
TPE-U highly flexible - gray E221474	800	3/4-pos.

Color coding	Pin assignment 3-pos.
BN	1
BK	4
BU	3

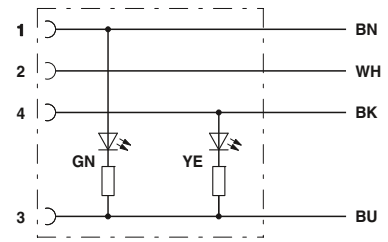
Color coding	Pin assignment 4-pos.
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	M8 3-pos., with LEDs	M8 4-pos.	M8 4-pos., with LED
Rated voltage	[V]	60	24	30	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of the M8 socket with LED, 3-pos.

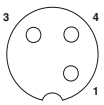
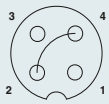
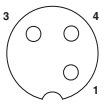
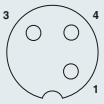
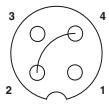
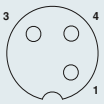
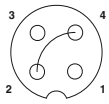


Contact assignment of the M8 socket with LED, 4-pos.

M8 and M12 SAC cable, 3-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end			M8 connector				M12 connector			
			Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1681664	1.5 m	1681693	1.5 m	1668014	1.5 m	1668137
			3 m	1681677	3 m	1681703	3 m	1668027	3 m	1668140
			5 m	1681680	5 m	1681716	5 m	1668030	5 m	1668153
			10 m	1693584	10 m	1694114	10 m	1682566	10 m	1694444
			Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 socket, straight										
			1.5 m	1669712	0.3 m	1681907	0.3 m	1682029	0.3 m	1668797	0.3 m	1668878
			3 m	1669725	0.6 m	1681910	0.6 m	1682032	0.6 m	1668807	0.6 m	1668881
			5 m	1669628	1.5 m	1681923	1.5 m	1682045	1.5 m	1668810	1.5 m	1668894
			10 m	1694101	3 m	1681936	3 m	1682058	3 m	1668823	3 m	1668904
			Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840	Variable	1696895
M8 socket, angled										
			1.5 m	1669738	0.3 m	1681949	0.3 m	1682061	0.3 m	1668836	0.3 m	1668917
			3 m	1669741	0.6 m	1681952	0.6 m	1682074	0.6 m	1668849	0.6 m	1668920
			5 m	1669631	1.5 m	1681965	1.5 m	1682087	1.5 m	1668852	1.5 m	1668933
			10 m	1694169	3 m	1681978	3 m	1682090	3 m	1668865	3 m	1668946
			Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866	Variable	1696905
M8 socket, angled, with 2 LEDs										
			1.5 m	1671069	0.3 m	1681981	0.3 m	1682100	0.3 m	1694884		
			3 m	1671072	0.6 m	1681994	0.6 m	1682113	0.6 m	1694897		
			5 m	1671085	1.5 m	1682003	1.5 m	1682126	1.5 m	1694907		
			10 m	1683594	3 m	1682016	3 m	1682139	3 m	1694910		
			Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879	Variable	1696918
M12 socket, straight										
			1.5 m	1694486	0.3 m	1682304	0.3 m	1682388	0.3 m	1681509		
			3 m	1694499	0.6 m	1682317	0.6 m	1682391	0.6 m	1681512		
			5 m	1683510	1.5 m	1682320	1.5 m	1682401	1.5 m	1681525		
			10 m	1693034	3 m	1682333	3 m	1682414	3 m	1681538		
			Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756		
M12 socket, straight, pin 2- 4 bridged										
			1.5 m	1668072					0.3 m	1668315	0.3 m	1668551
			3 m	1668085					0.6 m	1668328	0.6 m	1668564
			5 m	1668098					1.5 m	1668331	1.5 m	1668577
			10 m	1694208					3 m	1668344	3 m	1668580
			Variable	1696691					Variable	1696769	Variable	1696811
M12 socket, straight, with LED										
			1.5 m	1694185								
			3 m	1694198								
			5 m	1694787								
			10 m	1694790								
			Variable	1696701	Variable	1514197			Variable	1511802	Variable	1524763
M12 socket, angled										
			1.5 m	1694509	0.3 m	1682346	0.3 m	1682427	0.3 m	1681541		
			3 m	1694512	0.6 m	1682359	0.6 m	1682430	0.6 m	1681554		
			5 m	1694525	1.5 m	1682362	1.5 m	1682443	1.5 m	1681567		
			10 m	1694538	3 m	1682375	3 m	1682456	3 m	1681570		
			Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772		
M12 socket, angled, pin 2 - 4 bridged										
			1.5 m	1668195					0.3 m	1668399	0.3 m	1668632
			3 m	1668205					0.6 m	1668409	0.6 m	1668645
			5 m	1668218					1.5 m	1668412	1.5 m	1668658
			10 m	1681017					3 m	1668425	3 m	1668661
			Variable	1696727					Variable	1696785	Variable	1696824
M12 socket, angled with LED										
			1.5 m	1694392	0.3 m	1693351	0.3 m	1682469	0.3 m	1694554		
			3 m	1694402	0.6 m	1693364	0.6 m	1682472	0.6 m	1694567		
			5 m	1694415	1.5 m	1693380	1.5 m	1682485	1.5 m	1694570		
			10 m	1694428	3 m	1693403	3 m	1682498	3 m	1694583		
			Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798		
M12 socket, angled, with LED, pin 2 - 4 bridged										
			1.5 m	1668250					0.3 m	1668438		
			3 m	1668263					0.6 m	1668441		
			5 m	1668276					1.5 m	1668454		
			10 m	1681059					3 m	1668467		
			Variable	1696743					Variable	1696808	Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1696756	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

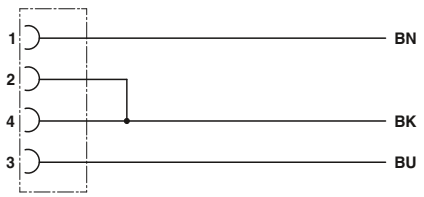
Minimum order amount = 25

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

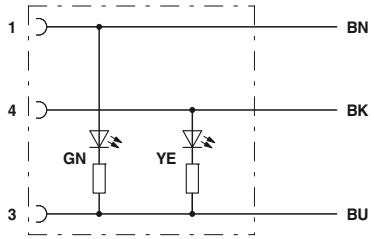
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

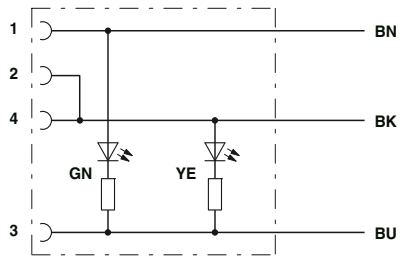
		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs

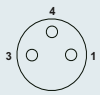
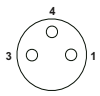
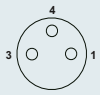
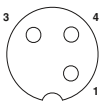
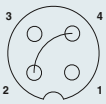
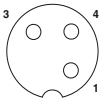
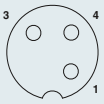
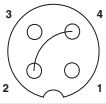
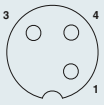
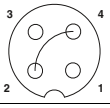


Contact assignment of M12 sockets with 2 LEDs, bridged

M8 and M12 SAC cable, 3-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 298

Free end		Ordering data		M8 connector		Ordering data		M12 connector		Ordering data	
			Order No.				Order No.				Order No.
					1.5 m		1415861		1.5 m		1415865		1.5 m		1414434		1.5 m		1414447
					3 m		1415862		3 m		1415866		3 m		1414435		3 m		1414448
					5 m		1415863		5 m		1415867		5 m		1693173		5 m		1414449
					10 m		1447280		10 m		1415869		10 m		1414437		10 m		1414450
					Variable		1697548		Variable		1697551		Variable		1696662		Variable		1696675
M8 socket, straight																			
		1.5 m	1415870		0.3 m		1415877		0.3 m		1415881		0.3 m		1415525		0.3 m		1415534
		3 m	1415871		0.6 m		1415878		0.6 m		1415882		0.6 m		1415527		0.6 m		1415535
		5 m	1510748		1.5 m		1415879		1.5 m		1415883		1.5 m		1415528		1.5 m		1415536
		10 m	1506532		3 m		1415880		3 m		1415884		3 m		1415529		3 m		1415537
		Variable	1697580		Variable		1697632		Variable		1697661		Variable		1696840		Variable		1696895
M8 socket, angled																			
		1.5 m	1415872		0.3 m		1415886		0.3 m		1415891		0.3 m		1415530		0.3 m		1415538
		3 m	1446320		0.6 m		1415888		0.6 m		1415892		0.6 m		1415531		0.6 m		1415539
		5 m	1403253		1.5 m		1415889		1.5 m		1415893		1.5 m		1415532		1.5 m		1415540
		10 m	1403773		3 m		1415890		3 m		1415894		3 m		1415533		3 m		1415541
		Variable	1697603		Variable		1697645		Variable		1697674		Variable		1696866		Variable		1696905
M8 socket, angled, with 2 LEDs																			
		1.5 m	1415874		0.3 m		1415896		0.3 m		1415901								
		3 m	1415875		0.6 m		1415897		0.6 m		1415902								
		5 m	1508174		1.5 m		1415898		1.5 m		1415903								
		10 m	1415876		3 m		1415899		3 m		1415904								
		Variable	1697616		Variable		1697658		Variable		1697687		Variable		1696879		Variable		1696918
M12 socket, straight																			
		1.5 m	1414451										0.3 m		1414576				
		3 m	1414452										0.6 m		1414577				
		5 m	1400505										1.5 m		1414578				
		10 m	1403486										3 m		1414579				
		Variable	1696688		Variable		1697690		Variable		1697726		Variable		1696756				
M12 socket, straight, pin 2- 4 bridged																			
		Variable	1696691										Variable		1696769		Variable		1696811
M12 socket, straight, with 2 LEDs																			
		1.5 m	1414556																
		3 m	1414561																
		5 m	1508459																
		10 m	1414565																
		Variable	1696701		Variable		1514197						Variable		1511802		Variable		1524763
M12 socket, angled																			
		1.5 m	1414552										0.3 m		1414580				
		3 m	1414553										0.6 m		1414581				
		5 m	1579051										1.5 m		1415519				
		10 m	1453821										3 m		1415520				
		Variable	1696714		Variable		1697700		Variable		1697739		Variable		1696772				
M12 socket, angled, pin 2 - 4 bridged																			
		Variable	1696727										Variable		1696785		Variable		1696824
M12 socket, angled, with 2 LEDs																			
		1.5 m	1414571										0.3 m		1415521				
		3 m	1414573										0.6 m		1415522				
		5 m	1505326										1.5 m		1415523				
		10 m	1414575										3 m		1415524				
		Variable	1696730		Variable		1697713		Variable		1697742		Variable		1696798				
M12 socket, angled, with LED, pin 2 - 4 bridged																			
		Variable	1696743										Variable		1696808		Variable		1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1696756	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

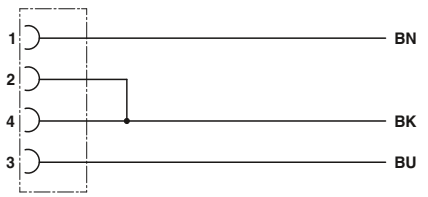
Minimum order amount = 25

Cable description	Cable type	Suitable for:
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12
PUR, halogen-free - black E221474	PUR	M8/M12
PUR irradiated - orange E221474	150	M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12

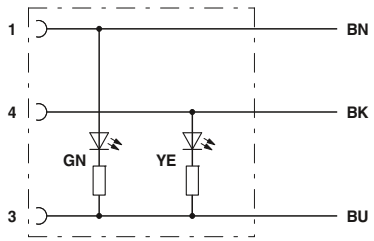
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

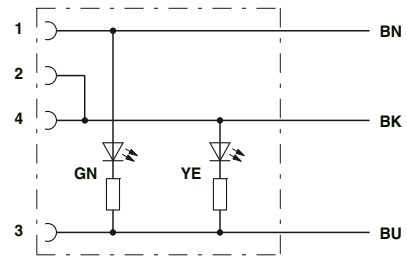
		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs

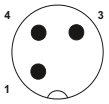
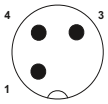


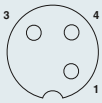
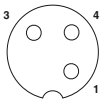
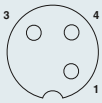
Contact assignment of M12 sockets with 2 LEDs, bridged

M12 SAC cable, 3-pos., cable type: 800

Notes:

For information about the cable qualities, see page 302

Free end		M12 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1456734	1.5 m	1456899
				3 m	1456747	3 m	1456909
				5 m	1456750	5 m	1456912
				10 m	1456763	10 m	1456925
				Variable	1696662	Variable	1696675
M12 socket, straight							
		1.5 m	1456679	0.3 m	1456776		
		3 m	1456682	0.6 m	1456789		
		5 m	1456695	1.5 m	1456792		
		10 m	1456705	3 m	1456802		
		Variable	1696688	Variable	1696756		
M12 socket, angled							
		1.5 m	1454260	0.3 m	1456815		
		3 m	1456718	0.6 m	1456828		
		5 m	1454273	1.5 m	1456831		
		10 m	1454299	3 m	1456844		
		Variable	1696714	Variable	1696772		
M12 socket, angled, with 2 LEDs							
		1.5 m	1454312	0.3 m	1456857		
		3 m	1456721	0.6 m	1456860		
		5 m	1454325	1.5 m	1456873		
		10 m	1454341	3 m	1456886		
		Variable	1696730	Variable	1696798		

Ordering data for products with variable cables:

For a sensor/actuator cable, TPE-U 800, 4.5 m long, with a straight 3-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1696662	800	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	800

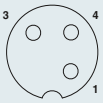
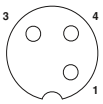
Color coding		Pin assignment
BN		1
BK		4
BU		3

		Technical data	Technical data
		M12 3-pos.	**M12 3-pos., with LEDs**
Rated voltage	[V]	250	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 3-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end			M8 connector, 360° shielded				M12 connector, 360° shielded			
			Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1521614	1.5 m	1521669	1.5 m	1682650	1.5 m	1682689
			3 m	1521527	3 m	1521672	3 m	1682663	3 m	1682692
			5 m	1521630	5 m	1521685	5 m	1682676	5 m	1682702
			10 m	1521643	10 m	1521698	10 m	1500664	10 m	1500677
			Variable	1521656	Variable	1521708	Variable	1697425	Variable	1697438
M8 socket, straight, 360° shielded										
		1.5 m	1521711	0.3 m	1456310					
		3 m	1521724	0.6 m	1456323					
		5 m	1521737	1.5 m	1455285					
		10 m	1521740	3 m	1455298					
		Variable	1521753	Variable	1552052	Variable	1552078			
M8 socket, angled, 360° shielded										
		1.5 m	1521766							
		3 m	1521779							
		5 m	1521782							
		10 m	1521795							
		Variable	1521805	Variable	1552065	Variable	1552081			
M12 socket, straight, 360° shielded										
		1.5 m	1682786					0.3 m	1500800	
		3 m	1682799					0.6 m	1500813	
		5 m	1682809					1.5 m	1500826	
		10 m	1500680					3 m	1500839	
		Variable	1697441					Variable	1536049	Variable 1536065
M12 socket, angled, 360° shielded										
		1.5 m	1682812					0.3 m	1500923	
		3 m	1682825					0.6 m	1500936	
		5 m	1682838					1.5 m	1500949	
		10 m	1500693					3 m	1500952	
		Variable	1697454					Variable	1536052	Variable 1536078

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PVC - black E221474	PVC	M12
PVC - gray E221474	500	M12

Color coding	Pin assignment
BN	1
BK	4
BU	3

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1536049	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

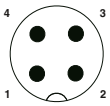
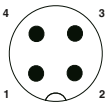
With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

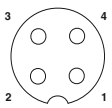
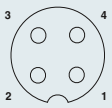
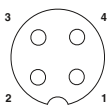
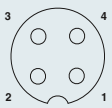
		Technical data	Technical data
		M8 3-pos., shielded	M12 3-pos., shielded
Rated voltage	[V]	60	250
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	-
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end			M8 connector		M12 connector	
						
						

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
				1.5 m	1681787	1.5 m	1681813	1.5 m	1668043	1.5 m	1668166
				3 m	1681790	3 m	1681826	3 m	1668056	3 m	1668179
				5 m	1681800	5 m	1681839	5 m	1668069	5 m	1668182
				10 m	1694143	10 m	1694156	10 m	1682993	10 m	1694457
				Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950
M8 socket, straight											
		1.5 m	1681842	0.3 m	1682142	0.3 m	1682223	0.3 m	1694923		
		3 m	1681855	0.6 m	1682155	0.6 m	1682236	0.6 m	1693076		
		5 m	1681868	1.5 m	1682168	1.5 m	1682249	1.5 m	1693089		
		10 m	1683484	3 m	1682171	3 m	1682252	3 m	1694936		
		Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable	1507874
M8 socket, angled											
		1.5 m	1681871	0.3 m	1682184	0.3 m	1682265			0.3 m	1671551
		3 m	1681884	0.6 m	1682197	0.6 m	1682278			0.6 m	1671564
		5 m	1681897	1.5 m	1682207	1.5 m	1682281			1.5 m	1671577
		10 m	1694172	3 m	1682210	3 m	1682294			3 m	1671580
		Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 socket, angled, with 2 LEDs											
		Variable	1517673					Variable	1515031		
M12 socket, straight											
		1.5 m	1668108					0.3 m	1668357	0.3 m	1668593
		3 m	1668111					0.6 m	1668360	0.6 m	1668603
		5 m	1668124					1.5 m	1668373	1.5 m	1668616
		10 m	1683002					3 m	1668386	3 m	1668629
		Variable	1696963	Variable	1506697			Variable	1697001	Variable	1697030
M12 socket, straight, with 2 LEDs											
		1.5 m	1694800								
		3 m	1694813								
		5 m	1694826								
		10 m	1694839								
		Variable	1696976								
M12 socket, angled											
		1.5 m	1668221					0.3 m	1668470	0.3 m	1668713
		3 m	1668234					0.6 m	1668483	0.6 m	1668726
		5 m	1668247					1.5 m	1668496	1.5 m	1668739
		10 m	1681389					3 m	1668506	3 m	1668742
		Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 socket, angled, with 3 LEDs											
		1.5 m	1668289					0.3 m	1668519	0.3 m	1668755
		3 m	1668292					0.6 m	1668522	0.6 m	1668768
		5 m	1668302					1.5 m	1668535	1.5 m	1668771
		10 m	1681020					3 m	1668548	3 m	1668784
		Variable	1696992					Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1697001	PUR	4.5

Minimum order amount = 25

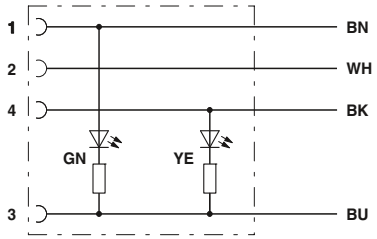
Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - yellow E221474	240	M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PUR irradiated - yellow E221474	160	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

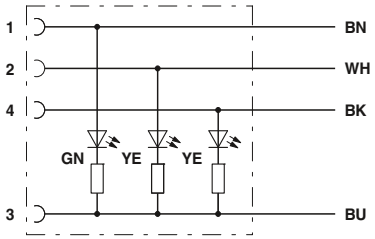
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 4-pos.	M8 4-pos., with LED	M12 4-pos.	M12 4-pos., with LED
Rated voltage	[V]	30	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED

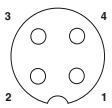
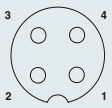
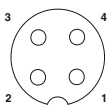
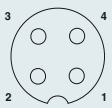


Contact assignment of M12 sockets with LED

M8 and M12 SAC cable, 4-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 298

Free end			M8 connector				M12 connector			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1415542	1.5 m	1415546	1.5 m	1415585	1.5 m	1415591
			3 m	1415543	3 m	1415547	3 m	1415588	3 m	1415592
			5 m	1415544	5 m	1415548	5 m	1415589	5 m	1415593
			10 m	1415545	10 m	1415549	10 m	1415590	10 m	1415594
			Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950
M8 socket, straight										
		1.5 m	1415550	0.3 m	1415556	0.3 m	1415576	0.3 m	1415671	
		3 m	1415551	0.6 m	1415557	0.6 m	1415577	0.6 m	1415672	
		5 m	1403252	1.5 m	1415558	1.5 m	1415578	1.5 m	1415673	
		10 m	1401062	3 m	1415560	3 m	1415579	3 m	1415674	
		Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable 1507874
M8 socket, angled										
		1.5 m	1415552	0.3 m	1415562	0.3 m	1415580			0.3 m 1415667
		3 m	1415554	0.6 m	1415572	0.6 m	1415581			0.6 m 1415668
		5 m	1403254	1.5 m	1415573	1.5 m	1415582			1.5 m 1415669
		10 m	1401064	3 m	1415574	3 m	1415583			3 m 1415670
		Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085	
M8 socket, angled, with 2 LEDs										
		Variable	1517673					Variable	1515031	
M12 socket, straight										
		1.5 m	1544976					0.3 m	1415611	0.3 m 1415627
		3 m	1404407					0.6 m	1415612	0.6 m 1415628
		5 m	1404408					1.5 m	1415613	1.5 m 1415635
		10 m	1446333					3 m	1415614	3 m 1415636
		Variable	1696963	Variable	1506697			Variable	1697001	Variable 1697030
M12 socket, straight, with 2 LEDs										
		1.5 m	1415596							
		3 m	1415597							
		5 m	1415602							
		10 m	1415605							
		Variable	1696976							
M12 socket, angled										
		1.5 m	1415606					0.3 m	1415617	0.3 m 1415642
		3 m	1693526					0.6 m	1454817	0.6 m 1415643
		5 m	1693539					1.5 m	1415618	1.5 m 1415644
		10 m	1415608					3 m	1415619	3 m 1415645
		Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable 1697043
M12 socket, angled, with 3 LEDs										
		1.5 m	1415609					0.3 m	1415620	0.3 m 1415646
		3 m	1415610					0.6 m	1415623	0.6 m 1415647
		5 m	1404961					1.5 m	1415624	1.5 m 1415648
		10 m	1401063					3 m	1415625	3 m 1415650
		Variable	1696992					Variable	1697027	Variable 1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1697001	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

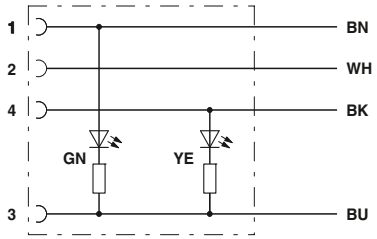
Minimum order amount = 25

Cable description	Cable type	Suitable for:
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - yellow E221474	240	M12
PUR, halogen-free - gray E221474	280	M8/M12
PUR irradiated - orange E221474	150	M12
PUR irradiated - yellow E221474	160	M12
TPE-U highly flexible - gray E221474	800	M8/M12

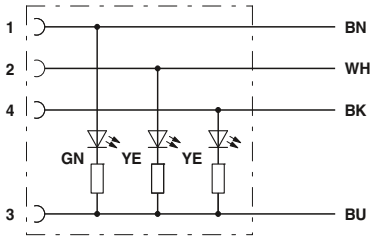
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 4-pos.	**M8 4-pos., with LED**	**M12 4-pos.**	**M12 4-pos., with LED**
Rated voltage	[V]	30	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED



Contact assignment of M12 sockets with LED

Assembled cables

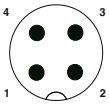
M12 SAC cable, 4-pos., cable type: 800

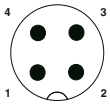
Notes:
For information about the cable qualities, see page 302

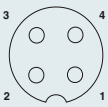
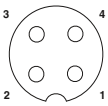
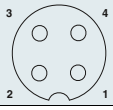










Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1457018	1.5 m	1457128
				3 m	1457021	3 m	1457131
				5 m	1457034	5 m	1457144
				10 m	1457047	10 m	1457157
				Variable	1696947	Variable	1696950
M12 socket, straight							
		1.5 m	1456938	0.3 m	1457050		
		3 m	1456941	0.6 m	1457063		
		5 m	1567322	1.5 m	1567270		
		10 m	1567335	3 m	1457076		
		Variable	1696963	Variable	1697001		
M12 socket, angled							
		1.5 m	1456954	0.3 m	1457089		
		3 m	1456967	0.6 m	1567225		
		5 m	1456970	1.5 m	1567238		
		10 m	1456983	3 m	1457092		
		Variable	1696989	Variable	1697014		
M12 socket, angled, with 3 LEDs							
		1.5 m	1456996	0.3 m	1457102		
		3 m	1457005	0.6 m	1567173		
		5 m	1567351	1.5 m	1567199		
		10 m	1567364	3 m	1457115		
		Variable	1696992	Variable	1697027		

Ordering data for products with variable cables:

For a sensor/actuator cable, TPE-U 800, 4.5 m long, with a straight 4-pos. M12 connector and free cable end, the ordering data is as follows:

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	800

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3

Order No.	Cable type	Length [m] Max. 40 m
1696947	800	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

		Technical data M12 4-pos.	Technical data M12 4-pos., with LED
Rated voltage	[V]	250	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end			M8 connector, 360° shielded				M12 connector, 360° shielded			
			Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1521818	1.5 m	1521863	1.5 m	1682715	1.5 m	1682870
			3 m	1521821	3 m	1521876	3 m	1682618	3 m	1682883
			5 m	1521834	5 m	1521889	5 m	1682647	5 m	1682896
			10 m	1521847	10 m	1521892	10 m	1694389	10 m	1500703
			Variable	1521850	Variable	1521902	Variable	1697467	Variable	1697470
M8 socket, straight, 360° shielded										
		1.5 m	1521915	0.3 m	1574580					
		3 m	1521928	0.6 m	1455722					
		5 m	1521931	1.5 m	1455735					
		10 m	1521944	3 m	1574603					
		Variable	1521957	Variable	1552094	Variable	1552104			
M8 socket, angled, 360° shielded										
		1.5 m	1521960							
		3 m	1521973							
		5 m	1521986							
		10 m	1521999							
		Variable	1522008	Variable	1552065	Variable	1552120			
M12 socket, straight, 360° shielded										
		1.5 m	1682841					0.3 m	1500842		
		3 m	1682854					0.6 m	1500855		
		5 m	1682867					1.5 m	1500868		
		10 m	1500716					3 m	1500871		
		Variable	1697483					Variable	1536081	Variable	1536104
M12 socket, angled, 360° shielded										
		1.5 m	1682906					0.3 m	1500965		
		3 m	1682919					0.6 m	1500978		
		5 m	1682922					1.5 m	1500981		
		10 m	1500729					3 m	1500994		
		Variable	1697496					Variable	1536094	Variable	1536117

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PVC - black E221474	PVC	M12
PVC - gray E221474	500	M12

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1536081	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data
		M8 4-pos., shielded	M12 4-pos., shielded
Rated voltage	[V]	30	250
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	-
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M8 SAC cable, 5-pos., B-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end	M8 connector
	 
	 

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m 3 m 5 m 10 m	**1404461** **1404462** **1404463** **1404464**	1.5 m 3 m 5 m 10 m	**1404465** **1404466** **1404467** **1404468**
M8 socket, straight							
		1.5 m 3 m 5 m 10 m	**1404470** **1404471** **1404473** **1404474**	0.3 m 0.6 m 1.5 m 3 m	**1404479** **1404480** **1404481** **1404482**		
M8 socket, angled							
		1.5 m 3 m 5 m 10 m	**1404475** **1404476** **1404477** **1404478**				

Cable description	Cable type
PUR, halogen free - black	**115**

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3
GY		5

		Technical data
		M85-pos.
Rated voltage	[V]	30
Rated current	[A]	3
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Connector/socket	[°C]	-25 ... 90

M12 SAC cable, 5-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 298

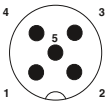
Free end

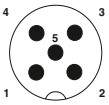


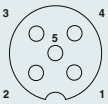
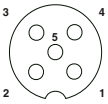
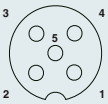
M12 connector









Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1669767	1.5 m	1669796
				3 m	1669770	3 m	1669806
				5 m	1669783	5 m	1669819
				10 m	1683361	10 m	1694460
				Variable	1697098	Variable	1697108
M12 socket, straight							
		1.5 m	1669822	0.3 m	1681583		
		3 m	1669835	0.6 m	1681596		
		5 m	1669848	1.5 m	1681606		
		10 m	1683374	3 m	1681619		
		Variable	1697111	Variable	1697140	Variable	1508734
M12 socket, angled							
		1.5 m	1669851	0.3 m	1681622		
		3 m	1669864	0.6 m	1681635		
		5 m	1669877	1.5 m	1681648		
		10 m	1694541	3 m	1681651		
		Variable	1697124	Variable	1697153	Variable	1529506
M12 socket, angled, with 3 LEDs							
		1.5 m	1669880	0.3 m	1694635		
		3 m	1669893	0.6 m	1694648		
		5 m	1669903	1.5 m	1694651		
		10 m	1694431				
		Variable	1697137	Variable	1697166	Variable	1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1697140	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - black, 5th wire gray E221474	115
TPE-U highly flexible - gray, 5th wire gray E221474	800
PUR irradiated - orange E221474	150
PVC - black E221474	PVC
PVC - black, 5th wire gray E221474	515
PVC - gray E221474	500
PVC 105° - yellow E221474	540
PVC 105° - yellow, 5th wire gray E221474	542

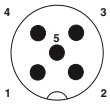
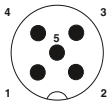
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

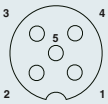
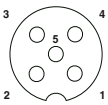
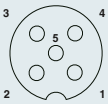
		Technical data M12 5-pos.	Technical data M12 5-pos., with LED
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 298

Free end		M12 connector	
			
			

Free end		Ordering data Order No.		Ordering data M12 connector Order No.		Ordering data M12 connector Order No.	
				1.5 m	1415675	1.5 m	1415679
				3 m	1415676	3 m	1415680
				5 m	1415677	5 m	1415681
				10 m	1415678	10 m	1415682
				Variable	1697098	Variable	1697108
M12 socket, straight							
		1.5 m	1415683	0.3 m	1415695		
		3 m	1415684	0.6 m	1415696		
		5 m	1453889	1.5 m	1415697		
		10 m	1415685	3 m	1415698		
		Variable	1697111	Variable	1697140	Variable	1508734
M12 socket, angled							
		1.5 m	1415686	0.3 m	1415699		
		3 m	1415687	0.6 m	1415700		
		5 m	1415688	1.5 m	1415701		
		10 m	1415689	3 m	1415702		
		Variable	1697124	Variable	1697153	Variable	1529506
M12 socket, angled, with 3 LEDs							
		1.5 m	1415690	0.3 m	1415703		
		3 m	1415691	0.6 m	1415704		
		5 m	1415693	1.5 m	1415705		
		10 m	1415694	3 m	1415706		
		Variable	1697137	Variable	1697166	Variable	1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1697140	PVC	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

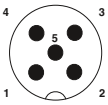
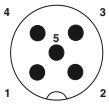
Cable description	Cable type
PVC - black E221474	PVC
PVC - black, 5th wire gray E221474	515
PVC - gray E221474	500
PVC 105° - yellow E221474	540
PVC 105° - yellow, 5th wire gray E221474	542
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - black, 5th wire gray E221474	115
PUR irradiated - orange E221474	150
TPE-U highly flexible - gray, 5th wire gray E221474	800

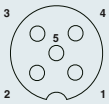
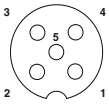
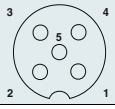
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

		Technical data M12 5-pos.	Technical data M12 5-pos., with LED
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., cable type: 802

Notes:
For information about the cable qualities, see page 302

	Free end	M12 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1457225	1.5 m	1457322
				3 m	1457238	3 m	1457335
				5 m	1457241	5 m	1457348
				10 m	1457254	10 m	1457351
				Variable	1697098	Variable	1697108
M12 socket, straight							
		1.5 m	1454419	0.3 m	1457267		
		3 m	1457160	0.6 m	1457561		
		5 m	1454422	1.5 m	1454587		
		10 m	1454448	3 m	1457270		
		Variable	1697111	Variable	1697140		
M12 socket, angled							
		1.5 m	1457173	0.3 m	1457283		
		3 m	1457186	0.6 m	1454516		
		5 m	1457199	1.5 m	1454532		
		10 m	1457209	3 m	1457296		
		Variable	1697124	Variable	1697153		
M12 socket, angled, with 3 LEDs							
		1.5 m	1454367	0.3 m	1457306		
		3 m	1457212	0.6 m	1454464		
		5 m	1454370	1.5 m	1454480		
		10 m	1454396	3 m	1457319		
		Variable	1697137	Variable	1697166		

Ordering data for products with variable cables:

For a sensor/actuator cable, TPE-U 802, 4.5 m long, with a straight 5-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1697098	802	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	802

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

		Technical data	Technical data
		M12 5-pos.	**M12 5-pos., with LED**
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 298

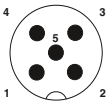


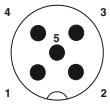
Free end

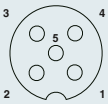
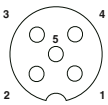




M12 connector, 360° shielded





Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1682728	1.5 m	1682757
				3 m	1682744	3 m	1682760
				5 m	1682731	5 m	1682773
				10 m	1500732	10 m	1500745
				Variable	1697506	Variable	1697519
M12 socket, straight, 360° shielded							
		1.5 m	1682935	0.3 m	1500884		
		3 m	1682948	0.6 m	1500897		
		5 m	1682951	1.5 m	1500907		
		10 m	1500758	3 m	1500910		
		Variable	1697522	Variable	1536120	Variable	1536146
M12 socket, angled, 360° shielded							
		1.5 m	1682964	0.3 m	1501003		
		3 m	1682977	0.6 m	1501029		
		5 m	1682980	1.5 m	1501045		
		10 m	1500761	3 m	1501058		
		Variable	1697535	Variable	1536133	Variable	1536159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1536120	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PVC - black E221474	PVC
PVC - gray E221474	500

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3
GY		5

		Technical data M12 5-pos., shielded
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90

M8 SAC cable, 6-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 298

Free end



M8 connector









Free end		Ordering data		Ordering data		Ordering data	
			Order No.		Order No.		Order No.
				1.5 m	1522095	1.5 m	1522147
				3 m	1522105	3 m	1522150
				5 m	1522118	5 m	1522163
				10 m	1522121	10 m	1522176
				Variable	1522134	Variable	1522189
M8 socket, straight							
		1.5 m	1522192				
		3 m	1522202				
		5 m	1522215				
		10 m	1522228				
		Variable	1522231	Variable	1551927	Variable	1551943
M8 socket, angled							
		1.5 m	1522244				
		3 m	1522257				
		5 m	1522260				
		10 m	1522273				
		Variable	1522286	Variable	1551930	Variable	1551956

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black E221474	PUR	BN	1
		WH	2
		BU	3
		BK	4
		GY	5
		PK	6

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 6-pos. M8 connector and open cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1522134	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

		Technical data
		M8 6-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Connector/socket	[°C]	-25 ... 90

Assembled cables

M8 SAC cable, 6-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 298

Free end	M8 connector, 360° shielded	
		
		

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1522299	1.5 m	1522341
			3 m	1522309	3 m	1522354
			5 m	1522312	5 m	1522367
			10 m	1522325	5 m	1522370
			Variable	1522338	Variable	1522383
M8 socket, straight, 360° shielded						
 		1.5 m 1522396 3 m 1522406 5 m 1522419 10 m 1522422				
		Variable 1522435	Variable	1552010	Variable	1552036
M8 socket, angled, 360° shielded						
 		1.5 m 1522448 3 m 1522451 5 m 1522464 10 m 1522477				
		Variable 1522480	Variable	1552023	Variable	1552049

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR

Color coding		Pin assignment
BN		1
WH		2
BU		3
BK		4
GY		5
PK		6

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 6-pos. M8 connector and a straight M8 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1552010	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

		Technical data
		M8 6-pos., shielded
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90

M8 SAC cable, 8-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 298

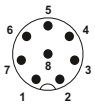
Free end

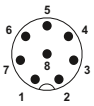


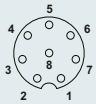
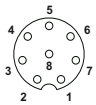
M8 connector









		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1404178	1.5 m	1404182
				3 m	1404180	3 m	1404186
				5 m	1404181	5 m	1404185
				10 m	1404179	10 m	1404183
M8 socket, straight							
		1.5 m	1404187	0.3 m	1404196		
		3 m	1404188	0.6 m	1404198		
		5 m	1404189	1.5 m	1404199		
		10 m	1404190	3 m	1404200		
M8 socket, angled							
		1.5 m	1404191	0.3 m	1404201		
		3 m	1404192	0.6 m	1404202		
		5 m	1404193	1.5 m	1404203		
		10 m	1404194	3 m	1404204		

Cable description	Cable type
PUR, halogen free - black	**PUR**

Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

		Technical data
		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Connector/socket	[°C]	-25 ... 85

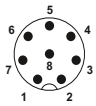
M12 SAC cable, 8-pos., cable type: PUR

Notes:

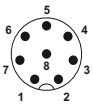
For information about the cable qualities, see page 298

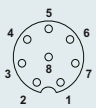
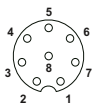










Free end		Ordering data		Ordering data		Ordering data	
			Order No.		Order No.		Order No.
				1.5 m	1522493	1.5 m	1522545
				3 m	1522503	3 m	1522558
				5 m	1522516	5 m	1522561
				10 m	1522529	10 m	1522574
				Variable	1522532	Variable	1522587
M12 socket, straight							
		1.5 m	1522590	0.3 m	1522671		
		3 m	1522600	0.6 m	1522684		
		5 m	1520369	1.5 m	1522697		
		10 m	1520372	3 m	1522707		
		Variable	1522613	Variable	1522710	Variable	1551969
M12 socket, angled							
		1.5 m	1522626	0.3 m	1522723		
		3 m	1522639	0.6 m	1522736		
		5 m	1522642	1.5 m	1522749		
		10 m	1522655	3 m	1522752		
		Variable	1522668	Variable	1522765	Variable	1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1522710	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

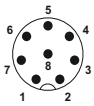
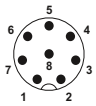
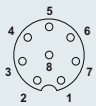
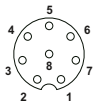
Cable description	Cable type
PUR, halogen-free - black E221474	PUR
TPE-U highly flexible - gray E221474	800
PVC - black E221474	PVC
PVC - gray E221474	500

Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

		Technical data
		M12 8-pos.
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Connector/socket	[°C]	-25 ... 90

M12 SAC cable, 8-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 298

	Free end		M12 connector			
			 		 	
	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1415716	1.5 m	1415720
			3 m	1415717	3 m	1415721
			5 m	1415718	5 m	1415722
			10 m	1415719	10 m	1415723
			Variable	1522532	Variable	1522587
M12 socket, straight						
		1.5 m	1415724	0.3 m	1415737	
		3 m	1415725	0.6 m	1415738	
		5 m	1415726	1.5 m	1415739	
		10 m	1415727	3 m	1415740	
		Variable	1522613	Variable	1522710	Variable 1551969
M12 socket, angled						
		1.5 m	1415732	0.3 m	1415745	
		3 m	1415734	0.6 m	1415746	
		5 m	1415735	1.5 m	1415747	
		10 m	1415736	3 m	1415748	
		Variable	1522668	Variable	1522765	Variable 1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1522710	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

Cable description	Cable type
PVC - black E221474	PVC
PVC - gray E221474	500
PUR, halogen-free - black E221474	PUR
TPE-U highly flexible - gray E221474	800

Color coding	Pin assignment
WH	1
BN	2
GN	3
YE	4
GY	5
PK	6
BU	7
RD	8

		Technical data
		M12 8-pos.
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Connector/socket	[°C]	-25 ... 90

M8 SAC cable, 8-pos., shielded, cable type: PUR

Notes:

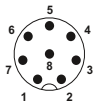
For information about the cable qualities, see page 298

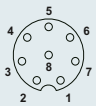
Free end



M8 connector, 360° shielded





	Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**	**Order No.**
			1.5 m	1404137	
			3 m	1404140	
			5 m	1404141	
			10 m	1404138	
M8 socket, straight, 360° shielded					
 	1.5 m	1404147	0.3 m	1404133	
	3 m	1404148	0.6 m	1404134	
	5 m	1404149	1.5 m	1404135	
	10 m	1404150	3 m	1404136	

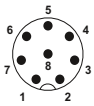
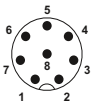
Cable description	Cable type
PUR, halogen free - black	**PUR**

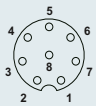
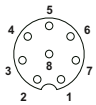
Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

		Technical data
		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 85

M12 SAC cable, 8-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 298

Free end	M12 connector, 360° shielded	
		
		

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1522778	1.5 m	1522817
			3 m	1522781	3 m	1522820
			5 m	1526981	5 m	1522833
			10 m	1522794	10 m	1522846
			Variable	1522804	Variable	1522859
M12 socket, straight, 360° shielded						
 	1.5 m	1522862	0.3 m	1522969		
	3 m	1522875	0.6 m	1522972		
	5 m	1522888	1.5 m	1522985		
	10 m	1522891	3 m	1522998		
	Variable	1522901	Variable	1523007	Variable	1551998
M12 socket, angled, 360° shielded						
 	1.5 m	1522914	0.3 m	1523010		
	3 m	1522927	0.6 m	1523023		
	5 m	1522930	1.5 m	1523036		
	10 m	1522943	3 m	1523049		
	Variable	1522956	Variable	1523052	Variable	1552007

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a shielded sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1523007	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - gray E221474	280
PVC - black E221474	PVC

Color coding	Pin assignment
WH	1
BN	2
GN	3
YE	4
GY	5
PK	6
BU	7
RD	8

		Technical data
		M12 8-pos., shielded
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90

M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end		M12 connector, SPEEDCON, 12-pos.				M12 connector, SPEEDCON, 17-pos.			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.			Order No.		Order No.		Order No.		Order No.
			1.5 m	1430530	1.5 m	1430572	1.5 m	1430695	1.5 m	1430734
			3 m	1430543	3 m	1430585	3 m	1430705	3 m	1430747
			5 m	1430556	5 m	1430598	5 m	1430718	5 m	1430750
			10 m	1430569	10 m	1430608	10 m	1430721	10 m	1430763
M12 socket, SPEEDCON, 12-pos., straight										
		1.5 m	1430611							
		3 m	1430624							
		5 m	1430637							
		10 m	1430640							
M12 socket, SPEEDCON, 12-pos., angled										
		1.5 m	1430653							
		3 m	1430666							
		5 m	1430679							
		10 m	1430682							
M12 socket, SPEEDCON, 17-pos., straight										
		1.5 m	1430776							
		3 m	1430789							
		5 m	1430792							
		10 m	1430802							
M12 socket, SPEEDCON, 17-pos., angled										
		1.5 m	1430815							
		3 m	1430828							
		5 m	1430831							
		10 m	1430844							

Cable description	Cable type
PUR halogen-free - black	PUR

Color coding	Pin assignment, 12-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12

Color coding	Pin assignment, 17-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12
WHGN	13
BNGN	14
WHYE	15
YEBN	16
WHGY	17

		Technical data	Technical data
		M12 12-pos.	M12 17-pos.
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end		M12 connector, SPEEDCON, 12-pos.		M12 connector, SPEEDCON, 17-pos.	
	Ordering data		Ordering data	Ordering data	Ordering data	Ordering data
	Order No.		Order No.	Order No.	Order No.	Order No.
		1.5 m	1554775	1554814	1555266	1555305
		3 m	1554788	1554827	1555279	1555318
		5 m	1554791	1554830	1555282	1555321
		10 m	1554801	1554843	1555295	1555334
M12 socket, SPEEDCON, 12-pos., straight						
	1.5 m	1554856				
	3 m	1554869				
	5 m	1554872				
	10 m	1554885				
M12 socket, SPEEDCON, 12-pos., angled						
	1.5 m	1554898				
	3 m	1554908				
	5 m	1554924				
	10 m	1554937				
M12 socket, SPEEDCON, 17-pos., straight						
	1.5 m	1555347				
	3 m	1555350				
	5 m	1555363				
	10 m	1555376				
M12 socket, SPEEDCON, 17-pos., angled						
	1.5 m	1555389				
	3 m	1555392				
	5 m	1555402				
	10 m	1555415				

Cable description	Cable type
PVC - black	PVC

Color coding	Pin assignment, 12-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12

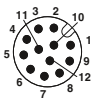
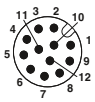
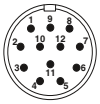
Color coding	Pin assignment, 17-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12
WHGN	13
BNGN	14
WHYE	15
YEBN	16
WHGY	17

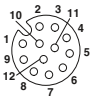
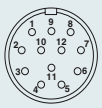
		Technical data	Technical data
		M12 12-pos.	M12 17-pos.
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

M12-SPEEDCON and M23 SAC cable, 12-pos., shielded

Notes:

For information about the cable qualities, see page 298

Free end	M12 connector, SPEEDCON, 360° shielded		M23 connector, 360° shielded
			
			

Ordering data	Ordering data		Ordering data		Ordering data		Ordering data	
Free end	**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
		1.5 m	1430048	1.5 m	1430080			
		3 m	1430051	3 m	1430093			
		5 m	1430064	5 m	1430103			
		10 m	1430077	10 m	1430116			
M12 socket, SPEEDCON, straight, 360° shielded								
 		0.5 m	1437083				0.5 m	1437287
		1 m	1434730				1 m	1437290
		1.5 m	1430129					
							2 m	1437300
		3 m	1430132	3 m	1402551			
		5 m	1430145				5 m	1437313
		10 m	1430158					
M12 socket, SPEEDCON, angled, 360° shielded								
 		1.5 m	1430161					
		3 m	1430174					
		5 m	1430187					
		10 m	1430190					
M23 socket, straight, 360° shielded								
 				0.5 m	1437326			
				1 m	1437339			
				2 m	1437342			
				5 m	1437355			

Cable description	Cable type
PUR/PVC - black, twisted pair	35T

Color coding		Pin assignment M12	Pin assignment M23
BN		1	1
BU		2	2
WH		3	3
GN		4	4
PK		5	5
YE		6	6
BK		7	7
GY		8	8
RD		9	9
VT		10	10
GYPK		11	11
RDBU		12	12

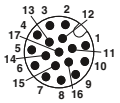
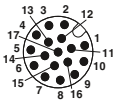
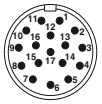
		Technical data	Technical data
		M12 12-pos.	**M23 12-pos.**
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	PUR
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Connector/socket	[°C]	-25 ... 90	-40 -25 ... 125 90

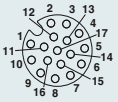
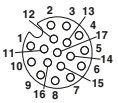
M12-SPEEDCON and M23 SAC cable, 17-pos., shielded

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON, 360° shielded		M23 connector, 360° shielded
				
				

	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		**Order No.**				**Order No.**		**Order No.**	**Order No.**
			1.5 m	1430200	1.5 m	1430242			
			3 m	1430213	3 m	1430255			
			5 m	1430226	5 m	1430268			
			10 m	1430239	10 m	1430271			
M12 socket, SPEEDCON, straight, 360° shielded									
 							0.5 m	1437368	
							1 m	1437371	
							2 m	1437384	
	1.5 m	1430284							
	3 m	1430297							
	5 m	1430307	5 m	1402421			5 m	1437397	
	10 m	1430310	10 m	1402422					
M12 socket, SPEEDCON, angled, 360° shielded									
 	1.5 m	1430323							
	3 m	1430336							
	5 m	1430349							
	10 m	1430352							
M23 socket, straight, 360° shielded									
 			0.5 m	1437407					
			1 m	1437410					
			2 m	1437423					
			5 m	1437436					

Cable description	Cable type
PUR/PVC - black, twisted pair	35T

Color coding		Pin assignment M12	Pin assignment M23
BN		1	1
BU		2	2
WH		3	3
GN		4	4
PK		5	5
YE		6	6
BK		7	7
GY		8	8
RD		9	9
VT		10	10
GYPK		11	11
RDBU		12	12
WHGN		13	13
BNGN		14	14
WHYE		15	15
YEBN		16	16
WHGY		17	17

		Technical data	Technical data
		M12 17-pos.	**M23 17-pos.**
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	PUR
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Connector/socket	[°C]	-25 ... 90	-40 -25 ... 125 90

Assembled cables

M17 and M23 plastic molded signal connectors

- Feedback connectors
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- Standard and counter direction contact numbering
- M17 and M23 standard thread - SPEEDCON fast locking system on request
- Angled versions rotatable

	M17, 17-position, socket, standard, 60 V, 3.6 A		M23, 12-position, socket, counter direction, 150 V, 9 A		M23, 12-position, socket, counter direction, 150 V, 9 A	
						
	E01		E00		E00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1624780 1624781 1624782	2 m 5 m 10 m	1619247 1619248 1619249	2 m 5 m 10 m	1619280 1619281 1619282
M17, 17-pos., pin 	2 m 5 m 10 m	1624778 1624783 1624784				
M23, 12-pos., pin 			2 m 5 m 10 m	1619289 1619290 1619291		
M23, 12-pos., pin 						
M23, 17-pos., pin 						

Cable information:

Type/ application	Color	Structure	Sheath/core material	Assignment		Temperature range
E00 Feedback	Orange	Shielded, 4 x 2 x 0.25 + 2 x 0.5	TPU/PP	1 - pink 2 - red 3 - black 4 - blue 5 - brown 6 - green	7 - violet 8 - gray 9 - exterior shield 10 - white 11 - n.c. 12 - brown	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
E01 Feedback	Green	Shielded, 3 x 2 x 0.14 + 2 x 0.5 + 4 x 0.14 + 4 x 0.22	TPU/TPM	1 - yellow 2 - green 3 - red 4 - n.c. 5 - blue 6 - n.c. 7 - brown-blue (encoder) 8 - green-black (+temp.) 9 - green-red (-temp.)	10 - brown-red (P encoder) 11 - black 12 - brown 13 - orange 14 - white-black 15 - brown-gray (OV sense) 16 - brown-yellow (sense) 17 - n.c. Inner shield on housing	**Mobile:** -30°C ... 60°C **Fixed:** -30°C ... 80°C

M23, 12-position, socket, standard, 150 V, 9 A	M23, 12-position, socket, standard, 150 V, 9 A	M23, 17-position, socket, standard, 100 V, 9 A	M23, 17-position, socket, standard, 100 V, 9 A
			
E00	E00	E01	E01
Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.
2 m 1619250 5 m 1619273 10 m 1619274	2 m 1619285 5 m 1619283 10 m 1619284	2 m 1619277 5 m 1619278 10 m 1619279	2 m 1619286 5 m 1619287 10 m 1619288
2 m 1619292 5 m 1619293 10 m 1619294			
		2 m 1619295 5 m 1619296 10 m 1619297	

Assembled cables

M17 plastic molded power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M17 standard thread - SPEEDCON fast locking system on request

	M17, 3+PE-position, socket, standard, 630 V, 18 A		M17, 3+PE-position, socket, standard, 630 V, 26 A		M17, 5+PE-position, socket, standard, 630 V, 12 A	
						
	B00		B01		C00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1619298 1619299 1619300	2 m 5 m 10 m	1619301 1619302 1619303	2 m 5 m 10 m	1619307 1619308 1619309
M17, 3+PE-pos., pin 	2 m 5 m 10 m	1619304 1619305 1619306	2 m 5 m 10 m	1619326 1619327 1619328		
M17, 5+PE-pos., pin 					2 m 5 m 10 m	1619316 1619317 1619318
M17, 7+PE-pos., pin 						

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
B00 Servo	Orange	Shielded, 4 x 1.50	PUR/TPM	1 - black U 2 - black V 3 - black W PE - green/yellow"		**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
B01 Servo	Orange	Shielded, 4 x 2.50	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 0.5	PUR/TPM	1 - black U 6 - black V 7 - black W PE - green/yellow	3 - black, 5 (brake) 4 - black, 6 (brake)	**Mobile:** -30°C ... 70°C **Fixed:** -40°C ... 80°C
C01 Servo	Orange	Shielded, 4G1 + 2 x 0.5	PUR/TPE			**Mobile:** -5°C ... 70°C **Fixed:** -30°C ... 70°C
D00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 2 x 0.34	PUR/TPM	1 - black U 2 - black V 3 - black W PE - green/yellow	4 - black 5 (brake) 5 - black 6 (brake) 6 - black 7 (temp. +) 7 - black 8 (temp. -)	**Mobile:** -30°C ... 90°C **Fixed:** -40°C ... 90°C
D01 Servo	Orange	Shielded, 4 x 1.0 + 2 x 2 x 0.75	PUR/TPM			**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C

M17, 5+PE-position, socket, standard, 630 V, 15 A	M17, 4+3+PE-position, socket, standard, 630 V, 12 A	M17, 4+3+PE-position, socket, standard, 630 V, 15 A
		
C01	D00	D01
Ordering data	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**
2 m 1619310	2 m 1624785	2 m 1619313
5 m 1619311	5 m 1624786	5 m 1619314
10 m 1619312	10 m 1624792	10 m 1619315
2 m 1619319		
5 m 1619321		
10 m 1619322		
	2 m 1624787	2 m 1619323
	5 m 1624788	5 m 1619324
	10 m 1624789	10 m 1619325

M23 plastic molded power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread - SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector 1620619)

	M23, 3+PE-position, socket, standard, 630 V, 34 A		M23, 4+PE-position, socket, standard, 630 V, 34 A		M23, 5+PE-position, socket, standard, 630 V, 18 A	
						
	A00		A01		C02	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1624771 1619622 1624772	2 m 5 m 10 m	1625776 1625777 1625775	2 m 5 m 10 m	1618957 1618958 1618959
M23, 3+PE-pos., pin 	2 m 5 m 10 m	1624773 1619606 1624774				
M23, 4+PE-pos., pin 			2 m 5 m 10 m	1625779 1625781 1625780		
M23, 5+PE-pos., pin 					2 m 5 m 10 m	1618964 1618965 1618966

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
A00 Energy	Gray	Shielded, 4 x 4.0	PVC/PVC	1 - nc 2 - black 3 PE - green/yellow	4 - black 1 5 - black 2 6 - nc	**Fixed:** -40°C ... 90°C
A01 Energy	Gray	5 x 4.0	PVC/PVC	1 - black 4 2 - black 3 PE - green/yellow	4 - black 1 5 - black 2 6 - nc	**Fixed:** -40°C ... 90°C
C02 Servo	Orange	Shielded, 4 x 1.50 + 2 x 1.5	PUR/TPM	1 - black U 2 - black V 6 - black W PE - green/yellow	4 - black, (BR1 brake) 5 - white, (BR2 brake)	**Flexible:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
C03 Servo	Orange	Shielded, 4 x 2.50 + 2 x 1.5	TPU/TPM			**Flexible:** -20°C ... 70°C **Fixed:** -50°C ... 80°C

M23, 5+PE-position, socket, standard, 630 V, 18 A	M23, 5+PE-position, socket, standard, 630 V, 26 A	M23, 5+PE-position, socket, standard, 630 V, 26 A
		
C02	C03	C03
Ordering data	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**
2 m 1620415	2 m 1620396	2 m 1620418
5 m 1620416	5 m 1620397	5 m 1620419
10 m 1620417	10 m 1620398	10 m 1620420
	2 m 1620406	
	5 m 1620407	
	10 m 1620408	

Assembled cables

M23 plastic molded power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread - SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector 1620620)

	M23, 4+3+PE-position, socket, standard, 250 V/630 V, 18 A		M23, 4+3+PE-position, socket, standard, 250 V/630 V, 18 A		M23, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A	
						
	D02		D02		D03	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1620399 1620400 1620401	2 m 5 m 10 m	1620421 1620422 1620423	2 m 5 m 10 m	1620402 1620404 1620405
M23, 4+3+PE-pos., pin 	2 m 5 m 10 m	1620409 1620410 1620411			2 m 5 m 10 m	1620412 1620413 1620414

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
D02 Servo	Orange	Shielded, 4 x 1.5 + 2 x 2 x 0.75	PUR/TPM	1 - black U 3 - black V 4 - black W PE - green/yellow	A - black 5 (brake) B - black 6 (brake) C - black 7 (motor temp. +) D - black 8 (motor temp. -)	**Flexible:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
D03 Servo	Orange	Shielded, 4 x 2.5 + 2 x 2 x 0.75	PUR/TPM			**Flexible:** -20°C ... 60°C **Fixed:** -40°C ... 80°C

M23, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A



D03

Ordering data

	Order No.
2 m	1620424
5 m	1620425
10 m	1620426

M40 plastic molded power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M40 standard thread - SPEEDCON fast locking system on request

	M40, 2+3+PE-position, socket, standard, 250 V/630 V, 26 A		M40, 2+3+PE-position, socket, standard, 250 V/630 V, 34 A		M40, 2+3+PE-position, socket, standard, 250 V/630 V, 44 A	
						
	C03		C04		C05	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1619329 1620309 1620310	2 m 5 m 10 m	1620311 1620313 1620314	2 m 5 m 10 m	1620316 1620317 1620318
M40, 2+3+PE-pos., pin 	2 m 5 m 10 m	1620345 1620346 1620347	2 m 5 m 10 m	1620348 1620349 1620375	2 m 5 m 10 m	1620376 1620377 1620378
M40, 4+3+PE-pos., pin 						

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
C03 Servo	Orange	Shielded, 4 x 2.50 + 2 x 1.5	TPU/TPM	U - black U V - black V W - black W PE - green/yellow	+ - black, (BR1) - - white, (BR2)	**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C04 Servo	Orange	Shielded, 4 x 4.00 + 2 x 1.5	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C05 Servo	Orange	Shielded, 4 x 6.00 + 2 x 1.5	PUR/TPE			**Mobile:** -40°C ... 80°C **Fixed:** -50°C ... 90°C
C06 Servo	Orange	Shielded, 4 x 10.0 + 2 x 1.5	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
D03 Servo	Orange	Shielded, 4 x 2.5 + 2 x 2 x 0.75	PUR/TPM	U - black 1 V - black 2 W - black 3 PE - green/yellow	+ - black 5 (brake) - - black 6 (brake) 1 - black 7 (motor temp. +) 2 - black 8 (motor temp. -)	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
D04 Servo	Orange	Shielded, 4 x 4.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -30°C ... 80°C **Fixed:** -45°C ... 80°C
D05 Servo	Orange	Shielded, 4 x 6.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -30°C ... 60°C **Fixed:** -30°C ... 80°C
D06 Servo	Orange	Shielded, 4 x 10 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C

M40, 2+3+PE-position, socket, standard, 250 V/630 V, 61 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 34 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 44 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 61 A
				
C06	D03	D04	D05	D06
Ordering data	**Ordering data**	**Ordering data**	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**	**Order No.**	**Order No.**
2 m 1620319	2 m 1620322	2 m 1620325	2 m 1620339	2 m 1620342
5 m 1620320	5 m 1620323	5 m 1620337	5 m 1620340	5 m 1620343
10 m 1620321	10 m 1620324	10 m 1620338	10 m 1620341	10 m 1620344
2 m 1620379				
5 m 1620380				
10 m 1620381				
	2 m 1620382	2 m 1620385	2 m 1620390	2 m 1620393
	5 m 1620383	5 m 1620386	5 m 1620391	5 m 1620394
	10 m 1620384	10 m 1620387	10 m 1620392	10 m 1620395

Plastic molded M23 hybrid connectors

- Transmission of signals, data (CAT5), and power
- Rated voltage: 630 V AC/850 V DC
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- Knurl CuZn/Gd-Zn, nickel-plated
- IP67 protection
- Plug head temperature range -40°C to +105°C
- SPEEDCON fast locking system, M23 standard thread on request
- Angled version can be rotated

	M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A		M23, 4+4+4+PE-position, pin, standard, 50 V/630 V, 26 A		M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A	
						
	H00		H00		H00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1622224 1622225 1622226	2 m 5 m 10 m	1622227 1622228 1622229	2 m 5 m 10 m	1622230 1622231 1622232
M23, 4+4+4+PE-pos., pin 	2 m 5 m 10 m	1622244 1622245 1622246				
M23, 4+4+4+PE-pos., pin 	2 m 5 m 10 m	1622247 1622248 1622249				
M23, 4+4+4+PE-pos., pin 					2 m 5 m 10 m	1622250 1622251 1622252

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
H00 Hybrid	Orange	Shielded, 5 x 2.5 + 4 x 22 AWG/C + 4 x 0.5	PUR/TPE, polyolefin	A - black BK1 (2.5 mm²) B - black BK2 (2.5 mm²) C - black BK3 (2.5 mm²) D - black BK4 (2.5 mm²) PE - green/yellow (2.5 mm²)	1 - brown BN (0.5 mm²) 2 - violet VT (0.5 mm²) 3 - black BK (0.5 mm²) 4 - green GN (0.5 mm²) 5 - blue BU (0.34 mm²) 6 - yellow YE (0.34 mm²) 7 - white WH (0.34 mm²) 8 - orange OG (0.34 mm²)	**Mobile:** -30°C ... 60°C **Fixed:** -40°C ... 80°C

M23, 4+4+4+PE-position, pin, standard, 50 V/630 V, 26 A



H00

Ordering data

	Order No.
2 m	1622233
5 m	1622234
10 m	1622243

Valve connector with Zener diode, cable type: PUR

Notes:

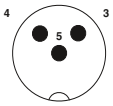
For information about the cable qualities, see page 298

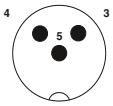






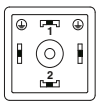
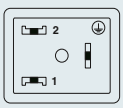
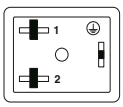
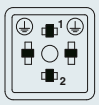
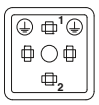








SPEEDCON LOCKING

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Type A			**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
		1.5 m	1434989	0.3 m	1434882	0.3 m	1434934			
		3 m	1434992	0.6 m	1434895	0.6 m	1434947			
		5 m	1435001	1.5 m	1434905	1.5 m	1434950			
		10 m	1435014	3 m	1434918	3 m	1434963			
		Variable	1435027	Variable	1434921	Variable	1434976	Variable	1405650	
Type B										
		1.5 m	1435386	0.3 m	1435289	0.3 m	1435331			
		3 m	1435399	0.6 m	1435292	0.6 m	1435344			
		5 m	1435409	1.5 m	1435302	1.5 m	1435357			
		10 m	1435412	3 m	1435315	3 m	1435360			
		Variable	1435425	Variable	1435328	Variable	1435373	Variable	1405651	
Type BI										
		1.5 m	1435234	0.3 m	1435137	0.3 m	1435182			
		3 m	1435247	0.6 m	1435140	0.6 m	1435195			
		5 m	1435250	1.5 m	1435153	1.5 m	1435205			
		10 m	1435263	3 m	1435166	3 m	1435218			
		Variable	1435276	Variable	1435179	Variable	1435221	Variable	1405652	
Type C										
		1.5 m	1435535	0.3 m	1435438	0.3 m	1435483			
		3 m	1435548	0.6 m	1435441	0.6 m	1435496			
		5 m	1435551	1.5 m	1435454	1.5 m	1435506			
		10 m	1435564	3 m	1435467	3 m	1435519			
		Variable	1435726	Variable	1435629	Variable	1435674	Variable	1405653	
Type CI										
		1.5 m	1435687	0.3 m	1435580	0.3 m	1435632			
		3 m	1435690	0.6 m	1435593	0.6 m	1435645			
		5 m	1435700	1.5 m	1435603	1.5 m	1435658			
		10 m	1435713	3 m	1435616	3 m	1435661			
		Variable	1435577	Variable	1435470	Variable	1435522	Variable	1405654	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, type A valve connector with Zener diode and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1434921	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

Cable description	Cable type	M8	M12	A	B(I)	C(I)
PUR, halogen-free - black, 0.5 mm²	PUR	x	x	x	x	x
PUR, halogen-free - black, 1.0 mm²	121		x	x		
PUR, halogen-free - yellow, 0.5 mm²	240		x	x	x	x
PUR, halogen-free - gray, 0.5 mm²	280		x	x	x	x
PUR irradiated - orange, 0.5 mm²	150		x	x	x	x
PUR, highly flexible - gray, 0.5 mm²	800		x	x	x	x
PVC - black, 0.5 mm²	PVC	x	x	x	x	x
PVC - black, 0.75 mm²	534		x	x	x	x
PVC - gray, 0.5 mm²	500		x	x	x	x

Color coding		Pin assignment M12
BK1	1	3
BK2	2	4
GNYE		5

Color coding M8		Pin assignment M8
BU		3
BN		4

Technical data		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with Zener diode, cable type: PVC

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON		M8 connector	
	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Type A	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m 1438684 3 m 1415905 5 m 1439502 10 m 1439492 Variable 1435027	Variable 1434921	Variable 1434976	Variable 1405650	
Type B					
	1.5 m 1415922 3 m 1415923 5 m 1415924 10 m 1400610 Variable 1435425	Variable 1435328	Variable 1435373	Variable 1405651	
Type BI					
	1.5 m 1415929 3 m 1400609 5 m 1415930 10 m 1400607 Variable 1435276	Variable 1435179	Variable 1435221	Variable 1405652	
Type C					
	1.5 m 1439162 3 m 1439515 5 m 1439528 10 m 1439531 Variable 1435726	Variable 1435629	Variable 1435674	Variable 1405653	
Type CI					
	1.5 m 1439175 3 m 1415939 5 m 1415940 10 m 1400605 Variable 1435577	Variable 1435470	Variable 1435522	Variable 1405654	

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, type A valve connector with Zener diode and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1434921	PVC	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type	M8	M12	A	B(I)	C(I)
PVC - black, 0.5 mm²	PVC	x	x	x	x	x
PVC - black, 0.75 mm²	534		x	x	x	x
PVC - gray, 0.5 mm²	500		x	x	x	x
PUR, halogen-free - black, 0.5 mm²	PUR	x	x	x	x	x
PUR, halogen-free - black, 1.0 mm²	121		x	x		
PUR, halogen-free - yellow, 0.5 mm²	240		x	x	x	x
PUR, halogen-free - gray, 0.5 mm²	280		x	x	x	x
PUR irradiated - orange, 0.5 mm²	150		x	x	x	x
PUR, highly flexible - gray, 0.5 mm²	800		x	x	x	x

Color coding	Pin assignment M12
BK1	3
BK2	4
GNYE	5

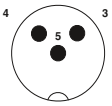
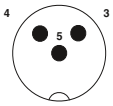
Color coding M8	Pin assignment M8
BU	3
BN	4

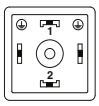
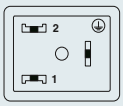
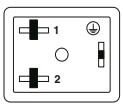
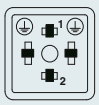
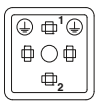
Technical data		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with 24 V varistor, cable type: PUR

Notes:

For information about the cable qualities, see page 298

	Free end	M12 connector, SPEEDCON	
			
			

		Ordering data		Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1443103				
		3 m	1443116				
		5 m	1443129				
		10 m	1443132				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B							
		1.5 m	1443145				
		3 m	1443158				
		5 m	1443161				
		10 m	1443174				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI							
		1.5 m	1443187				
		3 m	1443190				
		5 m	1443200				
		10 m	1443213				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C							
		1.5 m	1443226				
		3 m	1443239				
		5 m	1443242				
		10 m	1443255				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI							
		1.5 m	1443268				
		3 m	1443271				
		5 m	1443284				
		10 m	1443297				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, type B valve connector with 24 V varistor and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400880	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

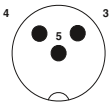
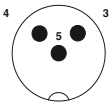
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

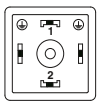
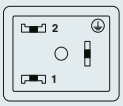
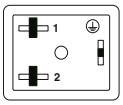
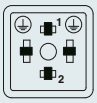
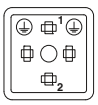
		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with 24 V varistor, cable type: PVC

Notes:
For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON	
			
			

		Ordering data		Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**		**Order No.**
		10 m	1415908				
		10 m	1415909				
		10 m	1415910				
		10 m	1415911				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B							
		1.5 m	1415925				
		3 m	1415926				
		5 m	1415927				
		10 m	1415928				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI							
		1.5 m	1415931				
		3 m	1415932				
		5 m	1415933				
		10 m	1415934				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C							
		1.5 m	1415935				
		3 m	1415936				
		5 m	1415937				
		10 m	1415938				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI							
		1.5 m	1415941				
		3 m	1415942				
		5 m	1415943				
		10 m	1415944				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, type B valve connector with 24 V varistor and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400880	/ PVC	/ 4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800

Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

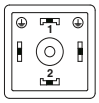
Valve connector with 230 V varistor, cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end



Type A		Ordering data	
			Order No.
		1.5 m	1402985
		3 m	1400694
		5 m	1400648
		10 m	1402986

		Technical data
		Connector
Rated voltage	[V]	230
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

Valve connector with 230 V varistor, cable type: PVC

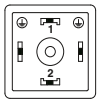
Notes:

For information about the cable qualities, see page 298

Free end



Ordering data

Type A			Order No.
		1.5 m	1415912
		3 m	1415913
		5 m	1415914
		10 m	1415915

Technical data

		Connector
Rated voltage	[V]	230
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

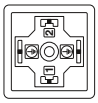
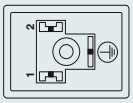
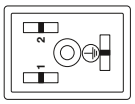
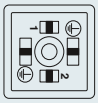
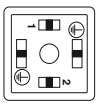
Valve connector with energy-reducing function, 1 A

Notes:

For information about the cable qualities, see page 298

Free end 1 A



		Ordering data	
Type A			**Order No.**
		1.5 m 3 m 5 m 10 m	1413115 1413114 1413116 1413118
Type B			
		1.5 m 3 m 5 m 10 m	1401294 1401295 1401338 1401339
Type BI			
		1.5 m 3 m 5 m 10 m	1401340 1401350 1401358 1401359
Type C			
		1.5 m 3 m 5 m 10 m	1401434 1401435 1401448 1401465
Type CI			
		1.5 m 3 m 5 m 10 m	1401466 1401542 1401544 1401617

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	1
Material contact surface valve connector		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

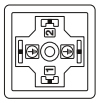
Valve connector with energy-reducing function, 4 A

Notes:

For information about the cable qualities, see page 298

Free end 4 A



Ordering data			
Type A			**Order No.**
		1.5 m	1400827
		3 m	1401131
		5 m	1401136
		10 m	1401168

Technical data		
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Material contact surface valve connector		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

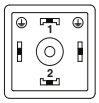
Valve connector with freewheeling diode, cable type: PUR

Notes:

For information about the cable qualities, see page 298

Free end



Type A		Ordering data	
			Order No.
		1.5 m	1400589
		3 m	1400588
		5 m	1400798
		10 m	1400799

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	2
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

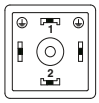
Valve connector with freewheeling diode, cable type: PVC

Notes:

For information about the cable qualities, see page 298

Free end



Ordering data			
Type A			**Order No.**
		1.5 m	1415916
		3 m	1415917
		5 m	1415918
		10 m	1415919

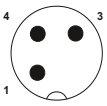
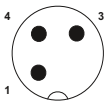
Technical data		
		Connector
Rated voltage	[V]	24
Rated current	[A]	2
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

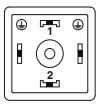
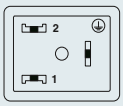
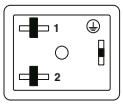
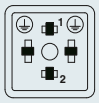
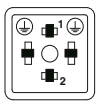
Valve connector without wiring, cable type: PUR

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON	
			
			

		Ordering data		Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1402983				
		3 m	1439544				
		5 m	1402984				
		10 m	1400732				
		Variable	1400897	Variable	1400895	Variable	1400896
Type B							
		Variable	1400909	Variable	1400903	Variable	1400905
Type BI							
		5 m	1439065				
		10 m	1438862				
		Variable	1400902	Variable	1400900	Variable	1400901
Type C							
		5 m	1400814				
		10 m	1400641				
		Variable	1400921	Variable	1400919	Variable	1400920
Type CI							
		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, unwired type C valve connector and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400919	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector without wiring, cable type: PVC

Notes:
For information about the cable qualities, see page 298

SPEEDCON LOCKING

		Free end	M12 connector, SPEEDCON				
		Ordering data	Ordering data		Ordering data		
Type A			Order No.			Order No.	
		1.5 m	1415920				
		3 m	1415921				
		5 m	1402977				
		10 m	1402978				
		Variable	1400897	Variable	1400895	Variable	1400896
Type B							
		Variable	1400909	Variable	1400903	Variable	1400905
Type BI							
		5 m	1439065				
		10 m	1438862				
		Variable	1400902	Variable	1400900	Variable	1400901
Type C							
		5 m	1400814				
		10 m	1400641				
		Variable	1400921	Variable	1400919	Variable	1400920
Type CI							
		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, unwired type C valve connector and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400919	PVC	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800

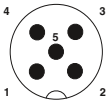
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

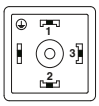
		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch with 2 LEDs, cable type: PUR

Notes:
For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON
		
		

Type AD		Ordering data		Ordering data		Ordering data
			Order No.		Order No.	Order No.
		1.5 m	1435085	0.3 m	1435030	
		3 m	1435098	0.6 m	1435043	
		5 m	1435108	1.5 m	1435056	
		10 m	1435111	3 m	1435069	
		Variable	1435124	Variable	1435072	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, type AD valve connector with 2 LEDs and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1435072	PUR	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK2	4	3
GNYE		5

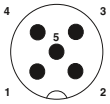
Technical data

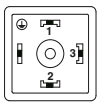
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch with 2 LEDs, cable type: PVC

Notes:
For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON
		
		

Type AD		Ordering data		Ordering data		Ordering data
			Order No.		Order No.	Order No.
		1.5 m	1415945			
		3 m	1415946			
		5 m	1438639			
		10 m	1438671			
		Variable	1435124	Variable	1435072	

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a sensor/actuator cable, PVC, black, 4.5 m long, type AD valve connector with 2 LEDs and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1435072	PVC	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR, highly flexible - gray, 0.5 mm²	800

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK2	4	3
GNYE		5

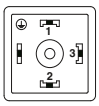
Technical data		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch without wiring

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	Free end	M12 connector, SPEEDCON
		
		
	Ordering data	Ordering data
Type AD	Order No.	Order No.
 	3 m 1438956	
	Variable 1400899	Variable 1400898

Ordering data for unwired type AD valve connector cables with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, unwired type AD valve connector and a 4-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400898 /	PUR /	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534

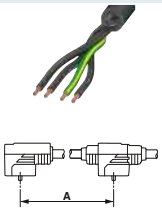
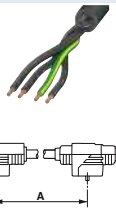
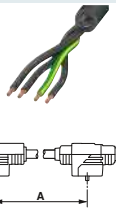
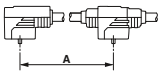
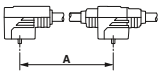
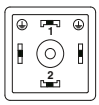
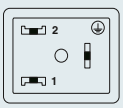
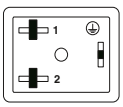
Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material of grip body		TPU
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Double valve connector with Zener diode

Notes:

For information about the cable qualities, see page 298

	Free end A = 10 cm	Free end A = 15 cm	Free end A = 20 cm
			
			
Ordering data			
Type A	Order No.	Order No.	Order No.
 	1.5 m 1457982 3 m 1457995 5 m 1458004 10 m 1458017	1.5 m 1458020 3 m 1458033 5 m 1458046 10 m 1458059	1.5 m 1458062 3 m 1458075 5 m 1458088 10 m 1458091
Type B			
 	1.5 m 1458169 3 m 1458172 5 m 1458185 10 m 1458198	1.5 m 1458208 3 m 1458211 5 m 1458224 10 m 1458237	1.5 m 1458240 3 m 1458253 5 m 1458266 10 m 1458279
Type BI			
 	1.5 m 1458347 3 m 1458350 5 m 1458363 10 m 1458376	1.5 m 1458389 3 m 1458392 5 m 1458402 10 m 1458415	1.5 m 1458428 3 m 1458431 5 m 1458444 10 m 1458457

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-25 ... 85

Valve connector, Deutsch DT06 and DT04, without wiring

Notes:

For information about the cable qualities, see page 298





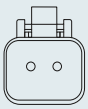
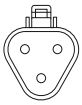
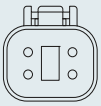










Free end		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
			Order No.		Order No.		Order No.		Order No.		Order No.
						1.5 m 3 m 5 m 10 m	1414999 1415000 1415001 1415002	1.5 m 3 m 5 m 10 m	1415012 1415013 1415014 1415015	1.5 m 3 m 5 m 10 m	1415030 1415031 1415032 1415033
Socket, 2-pos.											
		1.5 m 3 m 5 m 10 m	1410723 1410724 1410726 1410727	0.3 m 0.6 m 1.5 m 3 m	1414991 1414992 1414993 1414994						
Socket, 3-pos.											
		1.5 m 3 m 5 m 10 m	1414995 1414996 1414997 1414998			0.3 m 0.6 m 1.5 m 3 m	1415003 1415004 1415005 1415006				
Socket, 4-pos.											
		1.5 m 3 m 5 m 10 m	1415007 1415008 1415010 1415011					0.3 m 0.6 m 1.5 m 3 m	1415016 1415017 1415019 1415025		
Socket, 6-pos.											
		1.5 m 3 m 5 m 10 m	1415026 1415027 1415028 1415029							0.3 m 0.6 m 1.5 m 3 m	1415035 1415036 1415037 1415038

		Technical data
		Connector
Rated voltage	[V]	48
Rated current	[A]	8
Contact material		Cu alloy
Material contact surface M12		Nickel-plated
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Connector/socket	[°C]	-20 ... 85

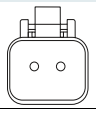
Valve connector, Deutsch DT06-2S with LED

Notes:

For information about the cable qualities, see page 298

Free end



Ordering data		
Socket, 2-pos.		**Order No.**
 	1.5 m	1410728
	3 m	1410729
	5 m	1410730
	10 m	1410731

Technical data		
		Connector
Rated voltage	[V]	24
Rated current	[A]	8
Contact material		Cu alloy
Material contact surface M12		Nickel-plated
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Connector/socket	[°C]	-20 ... 85

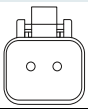
Valve connector, Deutsch DT06-2S with freewheeling diode

Notes:

For information about the cable qualities, see page 298

Free end



		Ordering data	
Socket, 2-pos.			**Order No.**
		1.5 m	1410732
		3 m	1410733
		5 m	1410734
		10 m	1410735

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	3
Contact material		Cu alloy
Material contact surface M12		Nickel-plated
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Connector/socket	[°C]	-20 ... 85

Valve connector, Superseal

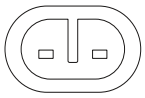
Notes:
For information about the cable qualities, see page 298

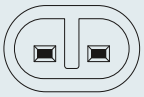
Free end



Connector





	Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**	**Order No.**
			1.5 m	1410752	
			3 m	1410753	
			5 m	1410755	
			10 m	1410756	
Socket, straight					
 	1.5 m	1410748	0.3 m	1410757	
	3 m	1410749	0.6 m	1410759	
	5 m	1410750	1.5 m	1410760	
	10 m	1410751	3 m	1410761	

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	8
Contact material		CuZn
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Connector/socket	[°C]	-20 ... 85

M8 Y cable, 3-pos., two cable outlets

Notes:

For information about the cable qualities, see page 298

M8 Y connector

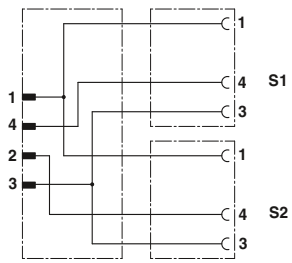




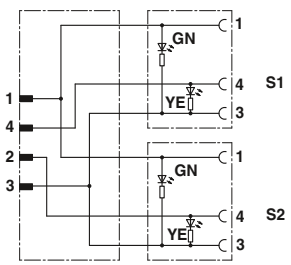
		Ordering data	
Free end			**Order No.**
		1.5 m	1458622
		3 m	1458635
		5 m	1458648
		10 m	1458651
M8 socket, straight			
		0.3 m	1458664
		0.6 m	1458677
		1.5 m	1458680
		3 m	1458693
M8 socket, angled			
		0.3 m	1458703
		0.6 m	1458716
		1.5 m	1458729
		3 m	1458732
M8 socket, angled, with 2 LEDs			
		0.3 m	1458745
		0.6 m	1458758
		1.5 m	1458761
		3 m	1458774

Cable description	Cable type
PUR, halogen free - black	PUR

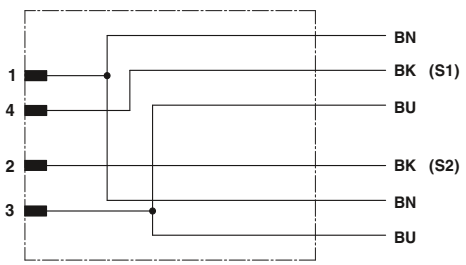
Color coding		Pin assignment, 3-pos.	
		Connector	Socket
BN		1	1
BK		2 + 4	4
BU		3	3



Contact assignment of the M8 connector and the M8 sockets



Contact assignment of the M8 connector and the M8 sockets, with LEDs



Contact assignment of the M8 Y connector

		Technical data	Technical data
		Y-M8	Y-M8 with LEDs
Rated voltage	[V]	30	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Connector/socket	[°C]	-25 ... 90	-25 ... 90

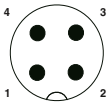
M12 Y-cable, 4-pos., one cable outlet

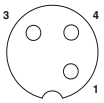
Free end	Connector, M12-SPEEDCON
	

Notes:

For information about the cable qualities, see page 298

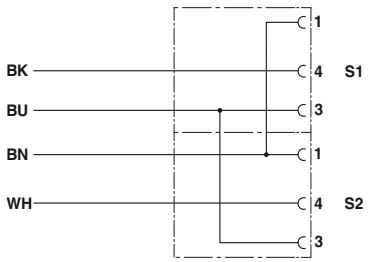
Further combinations on request.



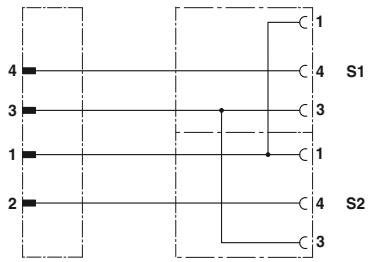
Y-connector with 2 x M12-SPEEDCON socket		Ordering data		Ordering data		Ordering data
			Order No.		Order No.	Order No.
		1.5 m	1436165	0.3 m	1436204	
		3 m	1436178	0.6 m	1436217	
		5 m	1436181	1.5 m	1436220	
		10 m	1436194	3 m	1436233	

Cable description	Cable type	Suitable for:
PUR, halogen-free - black	PUR	M12 4-pos.

Color coding		Pin assignment		
		M12 4-pos.	M12-Y S1	M12-Y S2
BN		1	1	1
BK		4	4	–
WH		2	–	4
BU		3	3	3



Contact assignment: Y-distributor to free end



Contact assignment: Y-distributor to M12-SPEEDCON

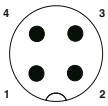
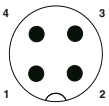
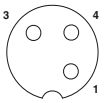
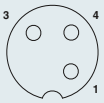
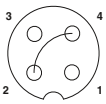
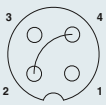
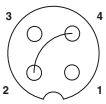
Technical data		
		Y-M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Contact surface material		Ni/Au
Contact carrier material		TPU GF
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Connector/socket	[°C]	-25 ... 90

M12 Y-cable, 4-pos., two cable outlets

Notes:

For information about the cable qualities, see page 298

SPEEDCON LOCKING

	M12 Y connector		M12 Y connector, SPEEDCON	
				
				
	Ordering data		Ordering data	Ordering data
Free end		**Order No.**		**Order No.**
	1.5 m	1669686	1.5 m	1524200
	3 m	1669699	3 m	1524213
	5 m	1669754	5 m	1524226
	10 m	1694473	10 m	1524239
	Variable	1697357	Variable	1524242
M8 socket, straight				
 	0.3 m	1671331		
	0.6 m	1671344		
	1.5 m	1671357		
	3 m	1671360		
	Variable	1697399	Variable	1541885
M8 socket, angled				
 	0.3 m	1671373		
	0.6 m	1671386		
	1.5 m	1671399		
	3 m	1671409		
	Variable	1697409	Variable	1541898
M8 socket, angled, with 2 LEDs				
 	0.3 m	1671412		
	0.6 m	1671425		
	1.5 m	1671438		
	3 m	1671441		
	Variable	1697412	Variable	1541908
M12 socket, straight (2nd column M12-SPEEDCON socket)				
 	Variable	1699766	Variable	1542198
M12 socket, angled (2nd column M12-SPEEDCON socket)				
 	Variable	1506419	Variable	1542004
M12 socket, straight, pin 2 - 4 bridged (2nd column M12-SPEEDCON socket)				
 	0.3 m	1668959		
	0.6 m	1668962		
	1.5 m	1668975		
	3 m	1668988		
	Variable	1697360	Variable	1542169
M12 socket, angled, pin 2 - 4 bridged (2nd column M12-SPEEDCON socket)				
 	0.3 m	1668991		
	0.6 m	1669000		
	1.5 m	1669013		
	3 m	1669026		
	Variable	1697373	Variable	1542172
M12 socket, angled, with LED, pins 2 - 4 bridged (2nd column socket M12-SPEEDCON socket)				
 	0.3 m	1669039		
	0.6 m	1669042		
	1.5 m	1669055		
	3 m	1669068		
	Variable	1697386	Variable	1542185

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a sensor/actuator cable, PUR, halogen-free, black, 4.5 m long, with a straight 4-pos. M12 Y-connector and two straight M12 sockets, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1699766	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

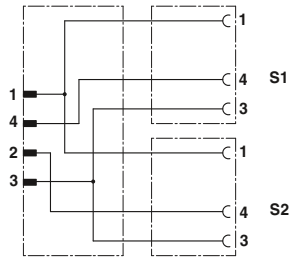
Minimum order amount = 25

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

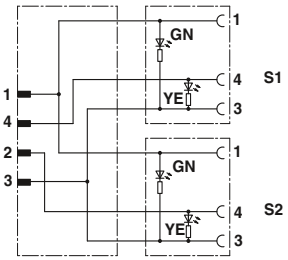
Color coding	Pin assignment, 3-pos. Connector	Socket
BN	1	1
BK	2 + 4	4
BU	3	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

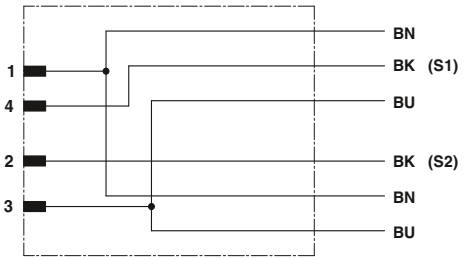
		Technical data Y-M8	Technical data Y-M8 with LEDs	Technical data Y-M12	Technical data Y-M12 with LEDs
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Connector/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



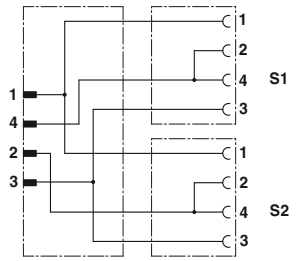
Contact assignment of the M12 connector and the M8/M12 sockets



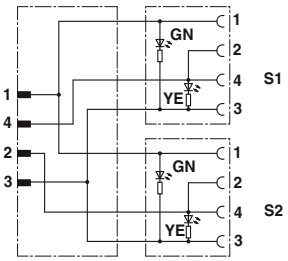
Contact assignment of the M12 connector and the M8 sockets, with LEDs



Contact assignment of the M12 Y connector



Contact assignment of the M12 connector and the M12 socket, bridged



Contact assignment of the M12 connector and the M12 socket, with LEDs, bridged

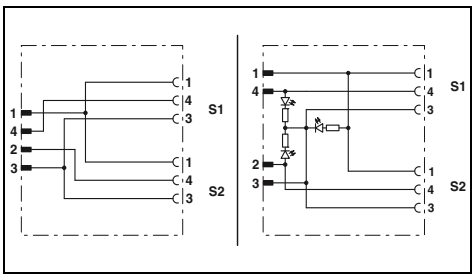
M8/M12 Y-distributors, M12 T-distributors

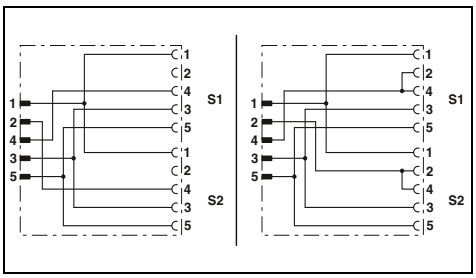


3-pos.



3+PE-pos.





	Technical data		Technical data	
	Without LED	With 3 LEDs	Not bridged	Pins 2 and 4 bridged
General data				
M8 circular connector according to:	IEC 61076-2-104	-	-	
M12 circular connector according to:	IEC 61076-2-101		IEC 61076-2-101	
Pollution degree	3		3	
Degree of protection	IP65/IP67		IP65/IP67	
Electrical data				
Rated voltage	60 V	24 V	60 V	
Rated current	4 A		4 A	
Material data				
Contact material	CuZn		CuZn	
Contact surface material	Ni/Au		Ni/Au	
Inflammability class according to UL 94	HB		HB	
Temperature data				
Connector/socket [°C]	-25 ... 90		-25 ... 90	

		Ordering data				Ordering data			
Description	Center distance	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		Without LED		With 3 LEDs		Not bridged		Pins 2 and 4 bridged	
M8/M12 Y-distributor									
M8 connector to 2x M8 sockets	12 mm	1696183	5						
M12 connector to 2x M8 sockets	12 mm	1683471	5						
M8/M12 SPEEDCON Y-distributor									
M12 connector to 2x M8 sockets	12 mm	1523984	5						
M12 Y-distributor									
M12 connector to 2x M12 sockets	18 mm					1683455	5	1683413	5
M12 connector to 2x M12 sockets	21 mm					1511789	5	1514016	5
M12 SPEEDCON Y-distributor									
M12 connector to 2x M12 sockets	18 mm					1523971	5	1523968	5
M12 connector to 2x M12 sockets	21 mm			1403627	5				
T-distributor									
M12 connector to 2x M12 sockets								1519723	1

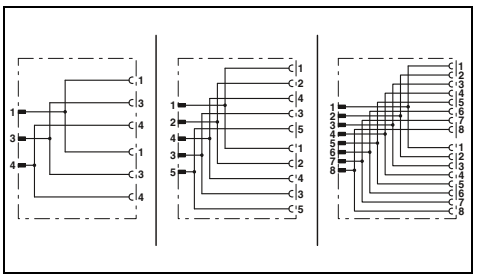
M8/M12 Y-distributors, parallel, M12 T-distributors, parallel

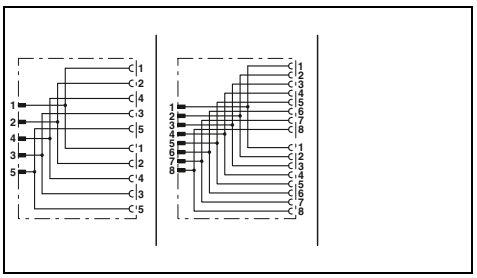


3-, 5-, 8-pos.



5-, 8-pos., shielded





		Technical data			Technical data	
		3-pos.	5-pos.	8-pos.	5-pos.	8-pos.
General data						
M8 circular connector according to:		IEC 61076-2-104	-		-	
M12 circular connector according to:			IEC 61076-2-101		IEC 61076-2-101	
Pollution degree			3		3	
Degree of protection			IP65/IP67		IP65/IP67	
Electrical data						
Rated voltage		60 V		30 V	60 V	30 V
Rated current		4 A		2 A	4 A	2 A
Material data						
Contact material			CuZn		CuZn	
Contact surface material			Ni/Au		Ni/Au	
Inflammability class according to UL 94			HB		HB	
Temperature data						
Connector/socket	[°C]		-25 ... 90		-25 ... 90	

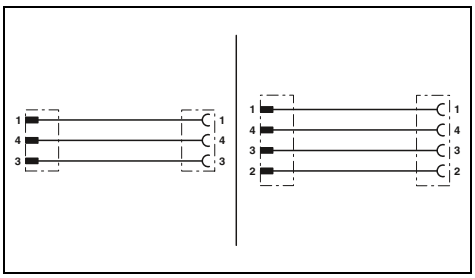
		Ordering data						Ordering data					
Description	Center distance	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		5-pos.		8-pos.		5-pos.		8-pos.			
M8/M12 Y-distributor													
M8 connector to 2x M8 sockets	12 mm	1696222	5										
M12 connector to 2x M8 sockets	12 mm	1683549	5										
M12 Y-distributor													
M12 connector to 2x M12 sockets	18 mm			1683468	5								
M12 connector to 2x M12 sockets	21 mm			1514029	5								
M12 SPEEDCON Y-distributor													
M12 connector to 2x M12 sockets	18 mm			1546068	5								
M12 connector to 2x M12 sockets	21 mm					1454972	5	1419920	5	1454969	5		
M12 connector to M12 connector/M12 socket	21 mm							1438079	5				
M12 socket to 2x M12 connectors	21 mm							1419946	5				
M12 socket to M12 connector/M12 socket	21 mm							1419933	5				
T-distributor													
Green				1541186	1								

M8/M12 adapters



3-, 4-pos.

EAC



Technical data

		3-pos.	4-pos.
General data			
M8 circular connector according to:		IEC 61076-2-104	
M12 circular connector according to:		IEC 61076-2-101	
Pollution degree		3	
Degree of protection		IP65/IP67	
Electrical data			
Rated voltage		60 V	30 V
Rated current		4 A	
Material data			
Contact material		CuSn	
Contact surface material		Ni/Au	
Inflammability class according to UL 94		HB	
Temperature data			
Connector/socket	[°C]	-25 ... 90	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Adapter				
M8 connector to M12 socket	1519749	5	1519736	5
M12 connector to M8 socket	1519752	5	1519765	5
M12 connector to M8 snap-in socket	1519781	5	1519778	5

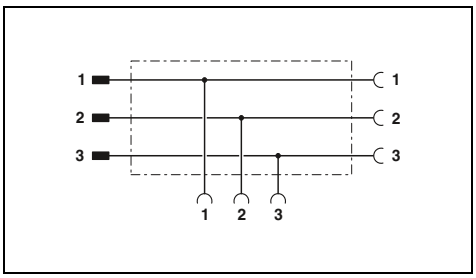
7/8" T-distributors, parallel

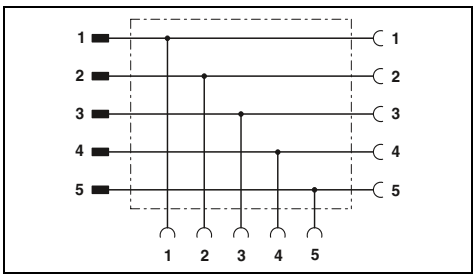


3-pos.



5-pos.





		Technical data	Technical data
General data			
Pollution degree		3	3
Degree of protection		IP65/IP67	IP65/IP67
Electrical data			
Rated voltage		600 V	250 V
Rated current		13 A (at 25 °C)	10 A (at 25 °C)
Material data			
Contact material		CuZn	CuZn
Contact surface material		AU	AU
Inflammability class according to UL 94		HB	HB
Temperature data			
Connector/socket	[°C]	-40 ... 80	-40 ... 80

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
7/8" T-distributor, 7/8"-16UNF socket to 7/8"-16UNF socket and 7/8"-16UNF connector						
3-pos.	**SAC-3P-MINT/2XMIN VP**	1412393	1			
5-pos.				**SAC-5P-MINT/2XMIN VP**	1543977	1

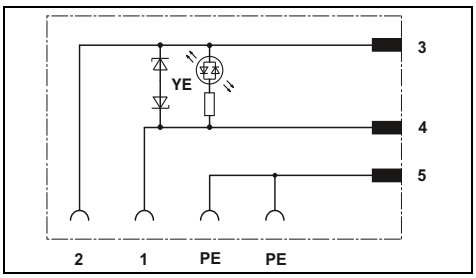
Valve connector adapter with M12 SPEEDCON connector

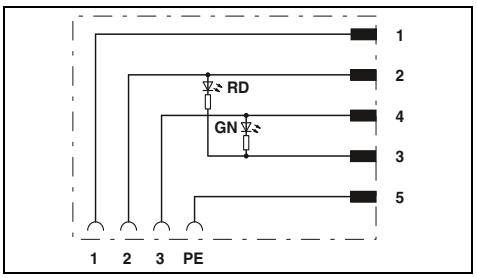


Valve connector type A



Valve connector, AD design, Pressure switch





Technical data

General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Valve connector according to:	EN 175301-803	EN 175301-803
Electrical data in acc. with IEC 61076-2-101		
Rated voltage	24 V AC/DC	24 V AC/DC
Rated current	4 A	4 A
Cut-off peak	≤ 55 V	-
Status display	Yellow LED	2 LEDs
Material data		
Contact material valve connectors	CuSn	CuSn
Contact surface material valve connectors	Sn	Sn
Contact material M12 connector	CuSn	CuSn
Contact surface material M12 connector	Ni/Au	Ni/Au
Material housing valve connector	TPU	TPU
Inflammability class according to UL 94	HB	HB
Temperature data		
Ambient temperature (operation)	-25 °C ... 85 °C (valve connector)	-25 °C ... 85 °C (valve connector)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Valve connector type A, PE bridged, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector	**SAC-3P-MS/A-1L-Z SCO**	1458525	1			
- Horizontal M12 SPEEDCON connector	**SAC-3P-MR/A-1L-Z SCO**	1458538	1			
Valve connector type AD, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector				**SAC-5P-MS/AD-2L SCO**	1458596	1
- Horizontal M12 SPEEDCON connector				**SAC-5P-MR/AD-2L SCO**	1458606	1
Valve connector type B, 10 mm contact spacing						
- Vertical M12 SPEEDCON connector						
- Horizontal M12 SPEEDCON connector						
Valve connector type BI, 11 mm contact spacing						
- Vertical M12 SPEEDCON connector						
- Horizontal M12 SPEEDCON connector						
DESINA valve connector type A, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector						



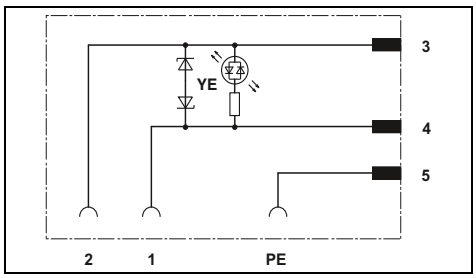
Valve connector type B

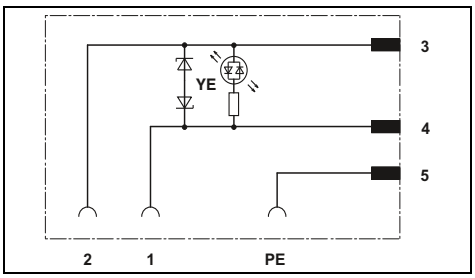


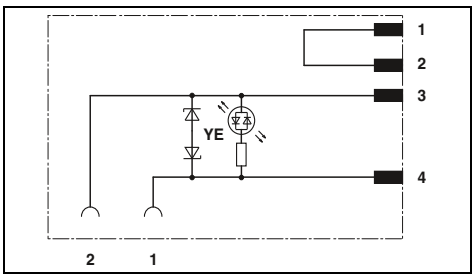
Valve connector type BI



DESINA valve connector type A







Technical data

IEC 61076-2-101 EN 175301-803	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25 °C ... 85 °C (valve connector)	

Technical data

IEC 61076-2-101 -	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25 °C ... 85 °C (valve connector)	

Technical data

IEC 61076-2-101 EN 175301-803	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25 °C ... 85 °C (valve connector)	

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/B-1L-Z SCO	1458541	1
SAC-3P-MR/B-1L-Z SCO	1458554	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/BI-1L-Z SCO	1458567	1
SAC-3P-MR/BI-1L-Z SCO	1458570	1

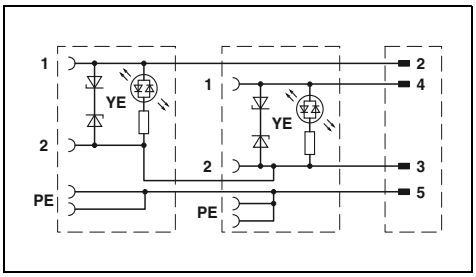
Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-4P-MS/A-1L-Z D SCO	1458583	1

Double valve connector adapter with M12-SPEEDCON connector, type A



Type A



Technical data

General data		
M12 circular connector according to:		IEC 61076-2-101
Valve connector according to:		EN 175301-803
Degree of protection		IP65/IP67
Electrical data		
Rated voltage		24 V AC/DC
Rated current		4 A
Material data		
Material contact M12		CuSn
Material contact valve connector		CuSn
Material contact surface M12		Ni/Au
Material contact surface valve connector		Sn
Material housing valve connector		TPU
Temperature data		
Valve connectors	[°C]	-25 ... 85

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Double valve connector, connector distance: 10 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,1-116/2XA-1L-Z SCO**	**1458101**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,1-116/2XA-1L-Z SCO**	**1458130**	1
Double valve connector, connector distance: 15 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,15-116/2XA-1L-Z SCO**	**1458114**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,15-116/2XA-1L-Z SCO**	**1458143**	1
Double valve connector, connector distance: 20 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,2-116/2XA-1L-Z SCO**	**1458127**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,2-116/2XA-1L-Z SCO**	**1458156**	1

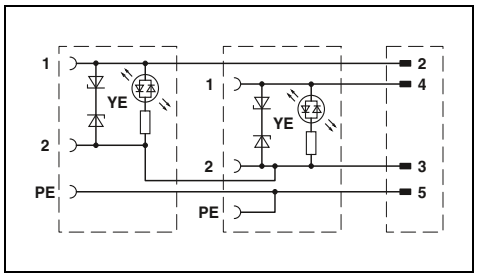
Double valve connector adapter with M12-SPEEDCON connector, type B and BI

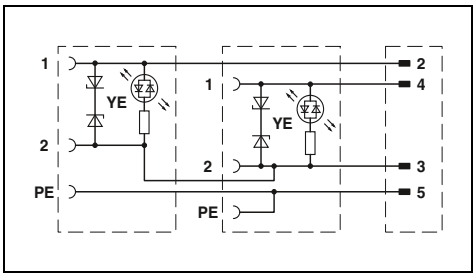


Type B



Type BI





	Technical data	Technical data
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Valve connector according to:	EN 175301-803	-
Degree of protection	IP65/IP67	IP65/IP67
Electrical data		
Rated voltage	24 V AC/DC	24 V AC/DC
Rated current	4 A	4 A
Material data		
Material contact M12	CuSn	CuSn
Material contact valve connector	CuSn	CuSn
Material contact surface M12	Ni/Au	Ni/Au
Material contact surface valve connector	Sn	Sn
Material housing valve connector	TPU	TPU
Temperature data		
Valve connectors [°C]	-25 ... 85	-25 ... 85

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Double valve connector, connector distance: 10 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,1-116/2XB-1L-Z SCO**	1458282	1	**SAC-MS/0,1-116/2XBI-1L-Z SCO**	1458460	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,1-116/2XB-1L-Z SCO**	1458318	1	**SAC-MR/0,1-116/2XBI-1L-Z SCO**	1458499	1
Double valve connector, connector distance: 15 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,15-116/2XB-1L-Z SCO**	1458295	1	**SAC-MS/0,15-116/2XBI-1L-Z SCO**	1458473	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,15-116/2XB-1L-Z SCO**	1458321	1	**SAC-MR/0,15-116/2XBI-1L-Z SCO**	1458509	1
Double valve connector, connector distance: 20 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,2-116/2XB-1L-Z SCO**	1458305	1	**SAC-MS/0,2-116/2XBI-1L-Z SCO**	1458486	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,2-116/2XB-1L-Z SCO**	1458334	1	**SAC-MR/0,2-116/2XBI-1L-Z SCO**	1458512	1

M8 distributor with metal thread



With a master cable



M12 plug-in connection, vertical



M12 plug-in connection, vertical

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67	IP65 / IP67
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
M12 circular connector according to:		-	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	1.5
Rated current per slot	[A]	2	2	1.5
Rated current, total	[A]	6	4	1.5
Dimensions				
Width x height	[mm]	30 x 22	30 x 27	30 x 27
Length (4 / 6 / 8 / 10 slots)	[mm]	102 / 122 / 141 / 161	93 / 113 / - / -	- / - / 133 / 152
Temperature data				
Distributor box	[°C]	-30 ... 80	-30 ... 80	-30 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-	-
Master cable, flexible installation	[°C]	-5 ... 80	-	-

					Ordering data		Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
With LED	PNP	24 V DC	4	-	-	-	1516234	-	-	-
With LED	PNP	24 V DC	4	5 m	1516014	-	-	-	-	-
With LED	PNP	24 V DC	4	10 m	1516027	-	-	-	-	-
With LED	PNP	24 V DC	4	Variable	1516137	-	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1516247	-	-	-
With LED	PNP	24 V DC	6	5 m	1516030	-	-	-	-	-
With LED	PNP	24 V DC	6	10 m	1516043	-	-	-	-	-
With LED	PNP	24 V DC	6	Variable	1516140	-	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	-	-	1434840	-
With LED	PNP	24 V DC	8	5 m	1516056	1516111	-	-	-	-
With LED	PNP	24 V DC	8	10 m	1516069	1516124	-	-	-	-
With LED	PNP	24 V DC	8	Variable	1516153	1516179	-	-	-	-
With LED	PNP	24 V DC	10	-	-	-	-	-	1434853	-
With LED	PNP	24 V DC	10	5 m	1516072	-	-	-	-	-
With LED	PNP	24 V DC	10	10 m	1516085	-	-	-	-	-
With LED	PNP	24 V DC	10	Variable	1516166	-	-	-	-	-

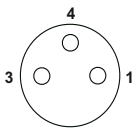
	Notes:	Notes:	Notes:
For accessories, refer to page	**291**	**291**	**291**
For master cable rings, see page		**285**	**285**
For master cable data, see page	**312**		

Ordering example for products with variable master cable:

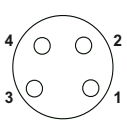
For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1516137	/	34.5

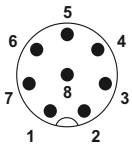
Increment: 0.5 m;
Length min.: 0.5 m
Length max.: 50 m



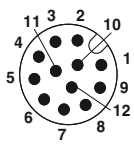
Pin assignment M8 socket, 3-pos.



Pin assignment M8 socket, 4-pos.



Connector pin assignment for M12 plug-in connection, 8-pos.



Pin assignment for M12 plug-in connection, 12-pos.



M16 plug-in connection, vertical



Spring connection, horizontal



Plug-in screw connection, horizontal



Header for plug-in screw connection

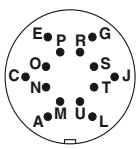


Connector hood, with a master cable



Connector hood, without master cable

Technical data											
IP65 / IP67		IP65 / IP67		IP65 / IP67		IP65 / IP67		IP65 / IP67		IP65 / IP67	
IEC 61076-2-104		IEC 61076-2-104		IEC 61076-2-104		IEC 61076-2-104		-		-	
-		-		-		-		-		-	
2		2		2		2		2		2	
2		2		2		2		-		-	
6		6		8		8		8		-	
30 x 26		30 x 44		30 x 44		30 x 20		30 x 24		30 x 24	
93 / 113 / 132 / 152		122 / 142 / 176 / 196		122 / 142 / 176 / 196		122 / 142 / 176 / 196		- / - / - / -		- / - / - / -	
-30 ... 80		-30 ... 80		-30 ... 80		-30 ... 80		-30 ... 80		-30 ... 80	
-		-		-		-		-40 ... 90		-	
-		-		-		-		-5 ... 80		-	
Ordering data											
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
1516182	-	1503386	-	1503412	-	1516250	-	-	-	1521229	-
-	-	-	-	-	-	-	-	1516292	-	-	-
-	-	-	-	-	-	-	-	1516302	-	-	-
-	-	-	-	-	-	-	-	1516373	-	-	-
1516195	-	1503399	-	1503425	-	1516263	-	-	-	1521216	-
-	-	-	-	-	-	-	-	1516315	-	-	-
-	-	-	-	-	-	-	-	1516328	-	-	-
-	-	-	-	-	-	-	-	1516386	-	-	-
1516205	-	1511747	1503454	1511750	1503467	1516276	-	-	-	1516425	-
-	-	-	-	-	-	-	-	1516331	-	-	-
-	-	-	-	-	-	-	-	1516344	-	-	-
-	-	-	-	-	-	-	-	1516399	-	-	-
1516218	-	1503409	-	1503438	-	1516289	-	-	-	1516412	-
-	-	-	-	-	-	-	-	1516357	-	-	-
-	-	-	-	-	-	-	-	1516360	-	-	-
-	-	-	-	-	-	-	-	1516409	-	-	-
Notes:		**Notes:**		**Notes:**		**Notes:**		**Notes:**		**Notes:**	
290 285		290 285		290 285		290		290 312			



Connector pin assignment for M16 plug-in connection, 14-pos.

M12 distributor with plastic thread, middle duty



With a master cable



Spring connection, horizontal



Push-in spring connection, horizontal

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67	IP65 / IP67
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	2
Rated current per slot	[A]	4	4	4
Rated current, total	[A]	12	12	-
Dimensions				
Width x height	[mm]	54 x 23	54 x 42	54 x 43
Length (4 / 6 / 8 / 10 slots)	[mm]	117 / 123 / 149 / -	117 / 123 / 149 / -	117 / 123 / 149 / -
Temperature data				
Distributor box	[°C]	-25 ... 80	-25 ... 80	-25 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-	-
Master cable, flexible installation	[°C]	-5 ... 80	-	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
Without LED	Universal	120 V	4	-	-	-	1452929	1452932	-	-
Without LED	Universal	120 V	4	5 m	1452398	1452424	-	-	-	-
Without LED	Universal	120 V	4	10 m	1452408	1452437	-	-	-	-
Without LED	Universal	120 V	6	-	-	-	1452945	1452958	-	-
Without LED	Universal	120 V	6	5 m	1452453	1452482	-	-	-	-
Without LED	Universal	120 V	6	10 m	1452466	1452495	-	-	-	-
Without LED	Universal	120 V	8	-	-	-	1452961	1452974	-	-
Without LED	Universal	120 V	8	5 m	1452518	1452547	-	-	-	-
Without LED	Universal	120 V	8	10 m	1452521	1452550	-	-	-	-
With LED	PNP	24 V DC	4	-	-	-	1452987	1452990	-	1412058
With LED	PNP	24 V DC	4	5 m	1452576	1452602	-	-	-	-
With LED	PNP	24 V DC	4	10 m	1452589	1452615	-	-	-	-
With LED	PNP	24 V DC	4	Variable	1401376	1401419	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1453009	1453012	-	1412059
With LED	PNP	24 V DC	6	5 m	1452631	1452660	-	-	-	-
With LED	PNP	24 V DC	6	10 m	1452644	1452673	-	-	-	-
With LED	PNP	24 V DC	6	Variable	1401379	1401380	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	1453025	1453038	-	1412060
With LED	PNP	24 V DC	8	5 m	1452699	1452725	-	-	-	-
With LED	PNP	24 V DC	8	10 m	1452709	1452738	-	-	-	-
With LED	PNP	24 V DC	8	Variable	1401382	1401383	-	-	-	-
With LED	NPN	24 V DC	4	5 m	1405678	1405713	-	-	-	-
With LED	NPN	24 V DC	4	10 m	1405687	1405732	-	-	-	-
With LED	NPN	24 V DC	6	5 m	1405733	1405735	-	-	-	-
With LED	NPN	24 V DC	6	10 m	1405734	1405736	-	-	-	-
With LED	NPN	24 V DC	8	5 m	1405737	1405739	-	-	-	-
With LED	NPN	24 V DC	8	10 m	1405738	1405740	-	-	-	-

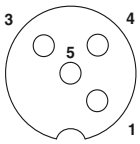
	Notes:	Notes:	Notes:
For accessories, refer to page	**292**	**292**	**292**
For master cable rings, see page		**285**	**285**
For master cable data, see page	**313**		

Ordering example for products with variable master cable:

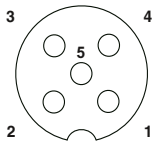
For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1401376	/	34.5

Increment: 0.5 m;
Length min.: 0.5 m
Length max.: 50 m



Pin assignment M12 socket, 4-pos.



Pin assignment M12 socket, 5-pos.



Plug-in screw connection, horizontal



Header for plug-in screw connection



Connector hood, with a master cable



Connector hood, without master cable

Technical data							
IP65 / IP67 IEC 61076-2-101		IP65 / IP67 IEC 61076-2-101		IP65 / IP67 -		IP65 / IP67 -	
2 4 10		2 4 10		2 - 10		2 - -	
54 x 43 117 / 123 / 149 / -		54 x 19 117 / 123 / 149 / -		54 x 23 - / - / - / -		54 x 23 - / - / - / -	
-25 ... 80 - -		-25 ... 80 - -		-25 ... 80 -40 ... 90 -5 ... 80		-25 ... 80 - -	
Ordering data							
Single occupancy	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
1452741	1452754	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452767	1452770	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452783	1452796	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452806	1452819	1452864	1452877	-	-	1453229	1453229
-	-	-	-	1453054	1453083	-	-
-	-	-	-	1453067	1453096	-	-
-	-	-	-	1401391	1401393	-	-
1452822	1452835	1452880	1452893	-	-	1453229	1453229
-	-	-	-	1453119	1453148	-	-
-	-	-	-	1453122	1453151	-	-
-	-	-	-	1401411	1401413	-	-
1452848	1452851	1452903	1452916	-	-	1453229	1453229
-	-	-	-	1453177	1453203	-	-
-	-	-	-	1453180	1453216	-	-
-	-	-	-	1401416	1401418	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
Notes:		**Notes:**		**Notes:**		**Notes:**	
292 285		292		292 313		292	

M12 distributor with metal thread, heavy-duty



With a master cable



With halogen-free master line



Plug-in screw connection, horizontal

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67 / IP69K	IP65 / IP67 / IP69K	IP65 / IP67 / IP69K
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	2
Rated current per slot	[A]	4	4	4
Rated current, total	[A]	12	12	10
Total rated current for electrical isolation	[A]	-	-	2x 8
Dimensions				
Width x height	[mm]	58 x 26	58 x 26	58 x 45
Length (4 / 6 / 8 / 10 slots)	[mm]	117 / 126 / 153 / -	116 / 126 / 153 / -	117 / 126 / 153 / -
Temperature data				
Distributor box	[°C]	-30 ... 90	-30 ... 90	-30 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-5 ... 80	-

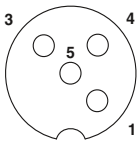
					Ordering data		Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
Without LED	Universal	120 V	4	-	-	-	-	-	1516849	1516852
Without LED	Universal	120 V	4	5 m	1516962	1516988	-	1517204	-	-
Without LED	Universal	120 V	4	10 m	1516975	1516991	-	1517217	-	-
Without LED	Universal	120 V	6	-	-	-	-	-	1516865	1516878
Without LED	Universal	120 V	6	5 m	1517000	1517026	-	1517220	-	-
Without LED	Universal	120 V	6	10 m	1517013	1517039	-	1517233	-	-
Without LED	Universal	120 V	8	-	-	-	-	-	1516881	1516894
Without LED	Universal	120 V	8	5 m	1517042	1517068	-	1517246	-	-
Without LED	Universal	120 V	8	10 m	1517055	1517071	-	1517259	-	-
With LED	PNP	24 V DC	4	-	-	-	-	-	1516784	1516797
With LED	PNP	24 V DC	4	5 m	1517084	1517107	-	1517262	-	-
With LED	PNP	24 V DC	4	10 m	1517097	1517110	-	1517275	-	-
With LED	PNP	24 V DC	4	Variable	1516904	1516917	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	-	-	1516807	1516810
With LED	PNP	24 V DC	6	5 m	1517123	1517149	-	1517288	-	-
With LED	PNP	24 V DC	6	10 m	1517136	1517152	-	1517291	-	-
With LED	PNP	24 V DC	6	Variable	1516920	1516933	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	-	-	1516823	1516836
With LED	PNP	24 V DC	8	1.5 m	-	-	-	-	-	-
With LED	PNP	24 V DC	8	5 m	1517165	1517181	-	1517301	-	-
With LED	PNP	24 V DC	8	10 m	1517178	1517194	-	1517314	-	-
With LED	PNP	24 V DC	8	Variable	1516946	1516959	-	-	-	-
With LED	NPN	24 V DC	4	-	-	-	-	-	1537077	1537103
With LED	NPN	24 V DC	4	Variable	1537019	1537048	-	-	-	-
With LED	NPN	24 V DC	6	-	-	-	-	-	1537080	1537116
With LED	NPN	24 V DC	6	Variable	1537022	1537051	-	-	-	-
With LED	NPN	24 V DC	8	-	-	-	-	-	1537093	1537129
With LED	NPN	24 V DC	8	Variable	1537035	1537064	-	-	-	-

	Notes:	Notes:	Notes:
For accessories, refer to page	293	293	293
For master cable rings, see page			285
For master cable data, see page	313	315	

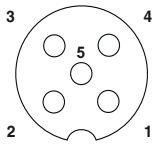
Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1516904	/	34.5
		Increment: 0.5 m; **Length min.:** 0.5 m **Length max.:** 50 m



Pin assignment for M12 socket, 4-pos.



Pin assignment M12 socket, 5-pos.



Header for plug-in screw connection



Connector hood, with a master cable



Connector hood, without master cable



with master cable connection, rear



plug-in spring connection, rear



with FLK pin strip, rear

Technical data	Technical data	Technical data	Technical data	Technical data	Technical data
IP65 / IP67 / IP69K IEC 61076-2-101	IP65 / IP67 / IP69K -	IP65 / IP67 / IP69K -	IP54 IEC 61076-2-101	IP54 IEC 61076-2-101	IP54 IEC 61076-2-101
2 4 10 2x 8	2 - 10 -	2 - - -	2 4 12 -	2 4 8 -	0.5 0.5 4 8
58 x 26 117 / 126 / 153 / -	58 x 21 - / - / - / -	58 x 21 - / - / - / -	58 x 28 - / - / 159 / -	58 x 28 - / - / 159 / -	58 x 28 - / - / 159 / -
-30 ... 80 - -	-30 ... 80 -40 ... 90 -5 ... 80	-30 ... 80 - -	-30 ... 80 - -	-30 ... 80 - -	-30 ... 80 - -

Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
1516726	1516739	-	-	1516713	1516713	-	-	-	-	-	-
-	-	1516353	1516593	-	-	-	-	-	-	-	-
-	-	1516548	1516603	-	-	-	-	-	-	-	-
-	-	1516658	1516661	-	-	-	-	-	-	-	-
1516742	1516755	-	-	1516713	1516713	-	-	-	-	-	-
-	-	1516551	1516616	-	-	-	-	-	-	-	-
-	-	1516564	1516629	-	-	-	-	-	-	-	-
-	-	1516674	1516687	-	-	-	-	-	-	-	-
1516768	1516771	-	-	1516713	1516713	-	-	-	1437232	1547928	-
-	-	-	-	-	-	1437245	-	-	-	-	-
-	-	1516577	1516632	-	-	-	-	-	-	-	-
-	-	1516580	1516645	-	-	-	-	-	-	-	-
-	-	1516690	1516700	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

Notes:	Notes:	Notes:	Notes:	Notes:	Notes:
293	293 313	293	293	293 313	293

QUICKON distributor, connection cross section: 0.14 mm² ... 0.34 mm²



With a master cable



Plug-in screw connection, horizontal

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67 / IP69K	IP65 / IP67 / IP69K
Electrical data			
Rated current for each I/O signal	[A]	2	2
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	10
Total rated current for electrical isolation	[A]	-	2x 8
Dimensions			
Width x height	[mm]	58 x 45	58 x 45
Length (4 / 6 / 8 / 10 slots)	[mm]	116 / 126 / 153 / -	117 / 126 / 153 / -
Temperature data			
Distributor box	[°C]	-30 ... 80	-30 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
Without LED	Universal	48 V	4	-	-	-	1548354	1548419
Without LED	Universal	48 V	4	Variable	1548642	1548671	-	-
Without LED	Universal	48 V	6	-	-	-	1548367	1548422
Without LED	Universal	48 V	8	-	-	-	1548370	1548435
Without LED	Universal	48 V	8	Variable	1548668	1548697	-	-
With LED	PNP	24 V DC	4	-	-	-	1548325	1548383
With LED	PNP	24 V DC	4	5 m	1548448	1548532	-	-
With LED	PNP	24 V DC	4	10 m	1548451	1548545	-	-
With LED	PNP	24 V DC	4	Variable	1548503	1548590	-	-
With LED	PNP	24 V DC	6	-	-	-	1548338	1548396
With LED	PNP	24 V DC	8	-	-	-	1548341	1548406
With LED	PNP	24 V DC	8	5 m	1548480	1548574	-	-
With LED	PNP	24 V DC	8	10 m	1548493	1548587	-	-
With LED	PNP	24 V DC	8	Variable	1548529	1548613	-	-

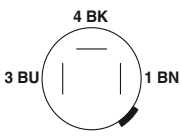
	Notes:	Notes:
For accessories, refer to page	295	295
For master cable rings, see page		285
For master cable data, see page	312	

Ordering example for products with variable master cable:

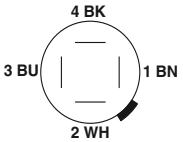
For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1548503	/	34.5

Increment: 0.5 m;
Length min.: 0.5 m
Length max.: 50 m



Pin assignment for QUICKON connection, 3-pos.



Pin assignment for QUICKON connection, 4-pos.

QUICKON distributor, connection cross section: 0.34 mm² ... 0.75 mm²



With a master cable



Spring connection, horizontal

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67
Electrical data			
Rated current for each I/O signal	[A]	4	4
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	12
Dimensions			
Width x height	[mm]	60 x 44	60 x 44
Length (4 / 6 / 8 / 10 slots)	[mm]	97 / 134 / 170 / -	132 / 168 / 205 / -
Temperature data			
Distributor box	[°C]	-25 ... 60	-25 ... 60
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

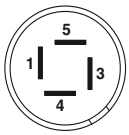
					Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
Without LED	Universal	120 V	4	-	-	-	1683633	-
Without LED	Universal	120 V	4	5 m	1683662	-	-	-
Without LED	Universal	120 V	4	10 m	1683675	-	-	-
Without LED	Universal	120 V	6	-	-	-	1683646	-
Without LED	Universal	120 V	6	5 m	1683688	-	-	-
Without LED	Universal	120 V	6	10 m	1683691	-	-	-
Without LED	Universal	120 V	8	-	-	-	1683659	-
Without LED	Universal	120 V	8	5 m	1683701	-	-	-
Without LED	Universal	120 V	8	10 m	1683714	-	-	-
With LED	PNP	24 V DC	4	-	-	-	1662939	-
With LED	PNP	24 V DC	4	5 m	1695223	-	-	-
With LED	PNP	24 V DC	4	10 m	1695236	-	-	-
With LED	PNP	24 V DC	4	Variable	1695249	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1662942	-
With LED	PNP	24 V DC	6	5 m	1695252	-	-	-
With LED	PNP	24 V DC	6	10 m	1695265	-	-	-
With LED	PNP	24 V DC	6	Variable	1695278	-	-	-
With LED	PNP	24 V DC	8	-	-	-	1662955	-
With LED	PNP	24 V DC	8	5 m	1695281	-	-	-
With LED	PNP	24 V DC	8	10 m	1695294	-	-	-
With LED	PNP	24 V DC	8	Variable	1695304	-	-	-
With LED	NPN	24 V DC	4	-	-	-	1680856	-
With LED	NPN	24 V DC	6	-	-	-	1680869	-
With LED	NPN	24 V DC	8	-	-	-	1680872	-

	Notes:	Notes:
For accessories, refer to page	**296**	**296**
Master cable rings, refer to page		**285**
For master cable data, see page	**313**	

Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1695249	/	**34.5** **Increment:** 0.5 m; **Length min.:** 0.5 m **Length max.:** 50 m



Pin assignment for QUICKON connection, 4-pos.

M12 distributor, shielded, with metal housing



With a master cable

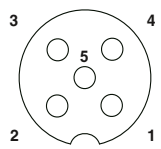


M23 plug-in connection, vertical

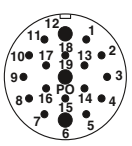
		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Electrical data			
Rated current for each I/O signal	[A]	2	2
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	12
Dimensions			
Width x height	[mm]	61 x 24	61 x 31
Length (4 / 6 / 8 / 10 slots)	[mm]	116 / 129 / 156 / -	117 / 130 / 157 / -
Temperature data			
Distributor box	[°C]	-25 ... 70	-25 ... 70
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
Without LED	Universal	48 V	4	-	-	-	-	1695757
Without LED	Universal	48 V	4	5 m	-	1695786	-	-
Without LED	Universal	48 V	4	10 m	-	1695799	-	-
Without LED	Universal	48 V	6	-	-	-	-	1695760
Without LED	Universal	48 V	6	5 m	-	1695809	-	-
Without LED	Universal	48 V	6	10 m	-	1695812	-	-
Without LED	Universal	48 V	8	-	-	-	-	1695773
Without LED	Universal	48 V	8	5 m	-	1695825	-	-
Without LED	Universal	48 V	8	10 m	-	1695838	-	-

	Notes:	Notes:
For accessories, refer to page	294	294
For master cable rings, see page		285
For master cable data, see page	314	



Pin assignment M12 socket, 5-pos.



Pin assignment M23 connector, 19-pos.

M5 distributor with metal thread



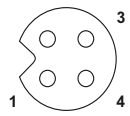
With a master cable



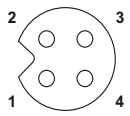
M12 plug-in connection, vertical

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP67	IP67
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
M12 circular connector according to:		-	IEC 61076-2-101
Electrical data			
Rated current for each I/O signal	[A]	1	1
Rated current per slot	[A]	1	1
Rated current, total	[A]	3	3
Dimensions			
Width x height	[mm]	20 x 14	20 x 28
Length (4 / 6 / 8 / 10 slots)	[mm]	76 / - / 116 / -	76 / - / 116 / -
Temperature data			
Distributor box	[°C]	-25 ... 80	-25 ... 80
Master cable, fixed installation	[°C]	-30 ... 70	-
Master cable, flexible installation	[°C]	-5 ... 70	-

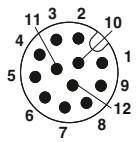
					Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
With LED	PNP	24 V DC	4	-	-	-	1530760	-
With LED	PNP	24 V DC	4	5 m	1530663	1530702	-	-
With LED	PNP	24 V DC	4	10 m	1530676	1530715	-	-
With LED	PNP	24 V DC	8	-	-	-	1530773	-
With LED	PNP	24 V DC	8	5 m	1530689	1530744	-	-
With LED	PNP	24 V DC	8	10 m	1530692	1530757	-	-



Pin assignment for M5 socket, 3-pos.



Pin assignment for M5 socket, 4-pos.



Pin assignment for M12 plug-in connection, 12-pos.





Versatile

Whether in the railway station, for control tasks or within rolling stock - our cables for the railway industry support flexible use.



Comprehensive portfolio

In addition to crimp and spring-cage connectors suitable for the rail industry, the product range includes assembled sensor/actuator cables with A-coding and data cables with D and X-coding for communication networks and passenger information systems.



Safe transmission

With 360° shielded connectors and cables, you can transmit signals reliably even in critical EMI applications.



Material selection

One of the most important aspects when choosing the right components for use in railway applications is material selection. We only use PA 6.6 as molding material which satisfies the stringent requirements regarding behavior in fire.



Securely locked

The vibration brake in the form of a wave shape with counterpart prevents the unintentional loosening of the plug-in connection in the event of vibrations.

The connectors are tested according to EN 50155 for resistance to shock and vibrations.



Temperature testing

Our products are intensively tested for an extended temperature range and for resistance to temperature shocks.

IRIS Certification

Certified according to IRIS

The Phoenix Contact Group is currently IRIS-certified. IRIS is an international rail industry standard for quality management systems.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.









Resistance to cleaning agents

The connectors in hygienic and washdown design are tested for resistance to cleaning agents commonly used in the food industry in accordance with Diversey and ECOLAB standards.



Product-contacting area

The components and devices used here must meet the highest hygienic requirements. Our cabling in hygienic design is suitable for use in this area.



Splash zone

The products in washdown design are suitable for the splash zone. Cost-effective features include resistance to cleaning agents and cleaning methods.



Connectors for the splash zone

For the special requirements of the food industry, we offer flush-type connectors and connectors with stainless steel components for assembly.



Assembled cables for all areas

Molded cables are available with connectors in sizes M8 and M12 in hygienic or washdown design.



Distributor boxes for the splash zone

Distributor boxes with stainless steel housing and permanently connected PVC master cable in washdown design are available for the splash zone.



Mechanical resistance

All components for the food industry are IP69K tested. This means guaranteed sealing for applications with steam jets, even after repeated temperature shocks.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.









Adapted to the relevant requirements

Through the selection of special materials, the components are designed for use outdoors. The materials are resistant to UV, ozone, corrosion, and temperatures.



For a variety of applications

Outdoor components are particularly suitable for use in traffic management systems, snow cats and snow cannons, photovoltaic systems or wind power plants.



UV and ozone test

Testing with special climate cabinets ensures that the connectors and cables are suitable for the control of solar plants, for example, without any restrictions.



Connectors for assembly

The connector knurls are made from stainless steel and the plastics are resistant to atmospheric influences. The connectors are available with insulation displacement connection and screw connection.



Assembled cables

In addition to 4, 5, and 8-pos. shielded and unshielded versions, PROFINET and Ethernet cables for data applications are also available.



Distributor boxes

Robust, fully molded sensor/actuator distributor boxes with 8 slots are available with fixed master cable or plug-in screw connection.



IP69K protection

For outdoor applications, a high IP protection class is essential because products are exposed to direct atmospheric influences.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



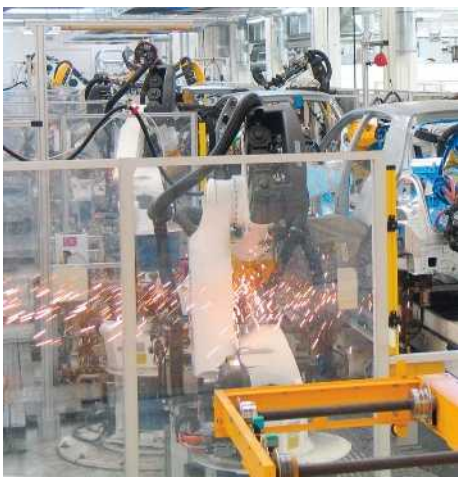






High level of durability

With their special design, our cables provide a high level of durability under alternating bending stress, e.g., in drag chains.



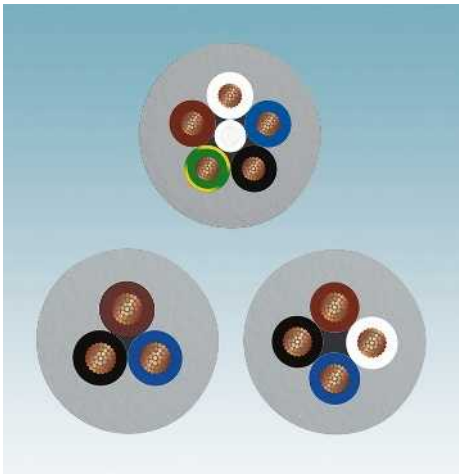
High level of resistance to welding sparks

The robust TPE-U outer sheath of the highly flexible cables is resistant to welding sparks and is particularly suitable for use in the field of resistance welding processes.



High level of durability under torsional stress

Our cables achieve a high level of durability - even with large angles of torsion and simultaneous bending stress.



Large selection of number of positions

Our sensor/actuator cables for robots and drag chains are available in 3, 4, and 5-pos. versions.



Large selection of connectors

Sensor/actuator cables with molded connectors are available both as plugs and sockets and with a straight or angled cable outlet.



Highly flexible master cable

For the distribution or grouping of signals at industrial robots, we offer a corresponding sensor/actuator box with special master cable.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.









Compact size with maximum current carrying capacity

With the M12 power connectors, the M12 design opens up new areas of application for energy supply.



DC application

The M12 power T and L DC codings are particularly suitable for the supply connection for I/O modules or for DC motors.



AC application

The M12 power S, K, and M AC codings are particularly suitable for the supply connection for AC motors.



Connectors for assembly

M12 connectors in straight and angled version with screw connection are available for power transmission.



Safe transmission

With 360° shielded connectors and cables, you can transmit signals reliably even in critical EMI applications.



Power distributors

An M12 box with and without diagnostics function plus a Y-distributor with T-coding are available for power distribution.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.





M12, power connector, screw connection



Metal knurl, 3-pos. + PE, S-coded



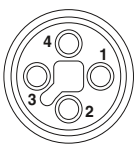
Metal knurl, 4-pos., T-coded

Technical data	3-pos. + PE	Technical data	4-pos.
General data			
Pollution degree	3		3
Degree of protection	IP67		IP67
Connection method	Screw connection		Screw connection
Connection cross section [mm²]	0.75 mm² ... 1.5 mm²		0.75 mm² ... 1.5 mm²
Electrical data			
Rated voltage	630 V AC		63 V DC
Rated current	12 A		12 A
Insulation resistance	> 10 GΩ		> 10 GΩ
Material data			
Material contact/contact surface	CuZn / Au		CuZn / Au
Contact carrier material	PA		PA
Inflammability class according to UL 94	V0		V0
Temperature data			
Plug/socket [°C]	-40 ... 85		-40 ... 85

Description	Ordering data Type	Order No.	Pcs. / Pkt.	Ordering data Type	Order No.	Pcs. / Pkt.
Connector, cable diameter: **8 mm ... 10 mm**						
Socket, straight	**SACC-M12FSS-3PECON-PG11-M**	1404642	1	**SACC-M12FST-3PECON-PG11-M**	1404644	1
Plug, straight	**SACC-M12MSS-3PECON-PG11-M**	1404641	1	**SACC-M12MST-3PECON-PG11-M**	1404643	1
Socket, angled	**SACC-M12FRS-3PECON-PG11-M**	1408987	1	**SACC-M12FRT-4CON-PG11-M**	1408989	1
Plug, angled	**SACC-M12MRS-3PECON-PG11-M**	1408985	1	**SACC-M12MRT-4CON-PG11-M**	1408988	1



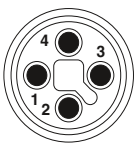
Connector pin assignment of M12 socket, 4-pos., S-coded, view of socket side



Connector pin assignment of M12 socket, 4-pos., T-coded, view of socket side



Connector pin assignment of M12 connector, 4-pos., S-coded, view of pin side



Connector pin assignment of M12 connector, 4-pos., T-coded, view of pin side

M12 power device connector, modular, 25 mm square flange, pre-assembled



Flange housing, 2.7 mm housing bore holes



Preassembled contact carrier and insulating body with 0.5 m long litz wires

		Technical data		Technical data	
				S-coded, 3-pos. + PE	T-coded, 4-pos.
General data					
Pollution degree		-		3	3
Degree of protection		-		IP67	IP67
Connection method		-		Individual wires	Individual wires
Electrical data					
Rated voltage		-		630 V	60 V
Rated current		-		12 A	12 A
Surge voltage category		-		III	III
Material data					
Material contact/contact surface		- / -		CuZn / Au	CuZn / Au
Contact carrier material		-		PA6	PA6
Cable gland material		Zinc die-cast, nickel-plated		-	-
Cable type		-		PP litz wire	PP litz wire
Temperature data					
Plug/socket	[°C]	-40 ... 85		-25 ... 85	-25 ... 85
Cable, fixed installation	[°C]	-		-40 ... 90	-40 ... 90

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
					S-coded, 3-pos. + PE		T-coded, 4-pos.	
Square flange housing, with flat gasket	1424131	10						
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts								
Plug					1424129	1	1424130	1

M12 power device connector, 2-pos. + PE

– M16 fastening thread
– With 0.5 m long litz wires
– S-coded



S-coded, 2-pos. + PE

Technical data

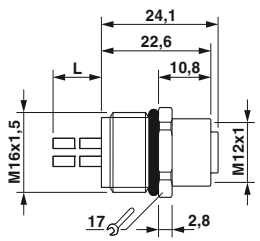
		Front mounting	Rear mounting
General data			
Pollution degree		3	3
Degree of protection		IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires
Electrical data			
Rated voltage		630 V	630 V
Rated current		16 A	16 A
Material data			
Material contact/contact surface		CuZn / Au	CuZn / Au
Contact carrier material		PA	PA
Inflammability class according to UL 94		V0	V0
Cable type		PP litz wire	PP litz wire
Temperature data			
Plug/socket	[°C]	-25 ... 105	-25 ... 105

Ordering data

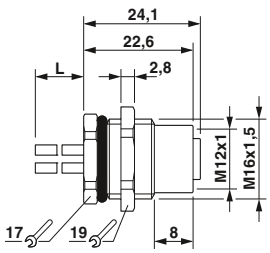
Description	Coding	Order No. (Front mounting)	Pcs. / Pkt.	Order No. (Rear mounting)	Pcs. / Pkt.
Power device connectors					
Socket	S power	1411654	1	1411652	1
Plug	S power	1411655	1	1411653	1

Accessories

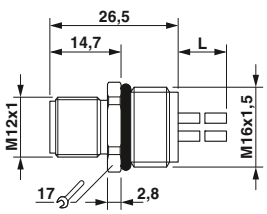
Flat nut, with: M16 thread	**SACC-E-MU-M16**	1504097	100



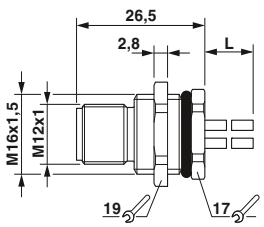
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: plug, front mounting



Dimensions: plug, rear mounting

M12 power device connector, 3-pos. + PE and 4-pos.

– M16 fastening thread
– With 0.5 m long litz wires



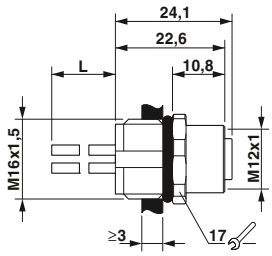
S-coded, 3-pos. + PE



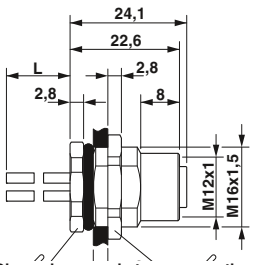
T-coded, 4-pos.

		Technical data		Technical data	
		Front mounting	Rear mounting	Front mounting	Rear mounting
General data					
Pollution degree		3	3	3	3
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires
Electrical data					
Rated voltage		630 V	630 V	60 V	60 V
Rated current		12 A	12 A	12 A	12 A
Material data					
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material		PA	PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0
Cable type		PP litz wire	PP litz wire	PP litz wire	PP litz wire
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85
Cable, fixed installation	[°C]	-40 ... 90	-40 ... 90	-40 ... 90	-40 ... 90

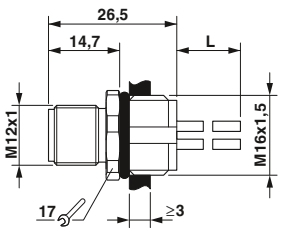
	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Socket	1424137	1	1424133	1	1424138	1	1424134	1
Plug	1424139	1	1424132	1	1424140	1	1424136	1
	Accessories				**Accessories**			
Flat nut, with: M16 thread	SACC-E-MU-M16		1504097	100	SACC-E-MU-M16		1504097	100



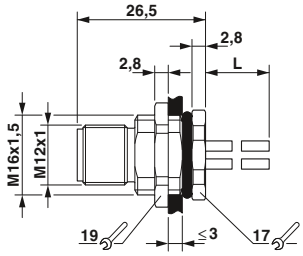
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: plug, front mounting



Dimensions: plug, rear mounting

M12 power XL device connector, 3-pos. + PE and 4-pos.

– M16 fastening thread
– With 0.5 m long litz wires
– Tightening limitation
– Wrench size 19



S-coded, 3-pos. + PE

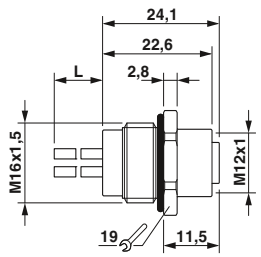


T-coded, 4-pos.

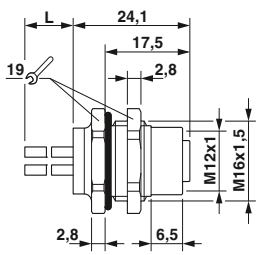
		Technical data		Technical data	
		Front mounting	Rear mounting	Front mounting	Rear mounting
General data					
Pollution degree		3	3	3	3
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires
Electrical data					
Rated voltage		630 V	630 V	60 V	60 V
Rated current		12 A	12 A	12 A	12 A
Material data					
Material contact/contact surface		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material		PA	PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0
Cable type		PP litz wire	PP litz wire	PP litz wire	PP litz wire
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Socket	1411605	1	1411598	1	1411606	1	1411599	1
Plug	1411607	1	1411603	1	1411608	1	1411604	1

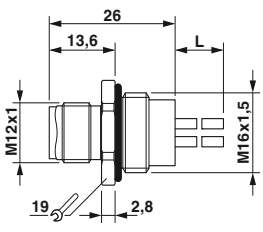
	Accessories			Accessories		
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	SACC-E-MU-M16	1504097	100



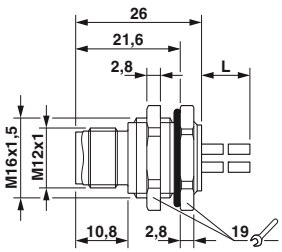
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: plug, front mounting



Dimensions: plug, rear mounting

M12-SPEEDCON power cable, 2-pos.+PE, unshielded

Notes:
For information about the cable qualities, see page 298

Free end		M12 connector, SPEEDCON	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1 m	1411636	1 m	1411640
			2 m	1411637	2 m	1411641
			5 m	1411638	5 m	1411642
			10 m	1411639	10 m	1411643
M12 socket, SPEEDCON, straight						
 	1 m	1411644				
	2 m	1411645				
	5 m	1411646				
	10 m	1411647				
M12 socket, SPEEDCON, angled						
 	1 m	1411648				
	2 m	1411649				
	5 m	1411650				
	10 m	1411651				

Cable description	Cable type	Color coding		Pin assignment
PVC - black	PVC	BK1	1	1
		BK2	2	3
		GNYE		PE

		Technical data
		M12
Rated voltage	[V]	230
Rated current	[A]	16
Inflammability class in acc. with UL 94		V0
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-25 ... 105

M12-SPEEDCON power cable, 3-pos.+PE, S-coded, unshielded

Notes:

For information about the cable qualities, see page 298

Free end			M12 connector, SPEEDCON			M12 connector, SPEEDCON		
	Ordering data		Ordering data			Ordering data		
Free end		Order No.			Order No.			Order No.
			1 m		1408835	1 m		1408839
			2 m		1408836	2 m		1408840
			5 m		1408837	5 m		1408841
			10 m		1408838	10 m		1408842
M12 socket, SPEEDCON, straight								
	1 m	1408843						
	2 m	1408844						
	5 m	1408845						
	10 m	1408846						
M12 socket, SPEEDCON, angled								
	1 m	1408848						
	2 m	1408852						
	5 m	1408853						
	10 m	1408854						

Cable description	Cable type
PUR, halogen-free - black	PUR

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	3
GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	12
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 3-pos.+PE, S-coded, shielded

Notes:
For information about the cable qualities, see page 298

Free end		M12 connector, SPEEDCON, 360° shielded	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1424104	1.5 m	1424108
			3 m	1424105	3 m	1424109
			5 m	1424245	5 m	1424110
			10 m	1424107	10 m	1424111
M12 socket, SPEEDCON, straight, 360° shielded						
 	1.5 m	1424096				
	3 m	1424097				
	5 m	1424098				
	10 m	1424099				
M12 socket, SPEEDCON, angled, 360° shielded						
 	1.5 m	1424100				
	3 m	1424101				
	5 m	1424102				
	10 m	1424103				

Cable description	Cable type
PUR, halogen-free - orange	PUR

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	3
GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	12
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos., T-coded, unshielded

Notes:

For information about the cable qualities, see page 298

	Free end	M12 connector, SPEEDCON	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1 m	1408812	1 m	1408816
			2 m	1408813	2 m	1408819
			5 m	1408814	5 m	1408820
			10 m	1408815	10 m	1408822
M12 socket, SPEEDCON, straight						
 	1 m	1408823	1 m	1408808		
	2 m	1408824	2 m	1408809		
	5 m	1408825	5 m	1408810		
	10 m	1408826	10 m	1408811		
M12 socket, SPEEDCON, angled						
 	1 m	1408827			1 m	1415196
	2 m	1408828			2 m	1415197
	5 m	1408829			5 m	1415198
	10 m	1408830			10 m	1415199

Cable description	Cable type
PUR, halogen-free - black	**PUR**

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	12
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos., T-coded, shielded

Notes:

For information about the cable qualities, see page 298

Free end		Ordering data		M12 connector, SPEEDCON, 360° shielded	Ordering data		Ordering data
			Order No.			Order No.		Order No.
					1.5 m	1424120	1.5 m	1424124
					3 m	1424121	3 m	1424125
					5 m	1424122	5 m	1424126
					10 m	1424123	10 m	1424127
M12 socket, SPEEDCON, straight, 360° shielded								
		1.5 m	1424112					
		3 m	1424113					
		5 m	1424114					
		10 m	1424115					
M12 socket, SPEEDCON, angled, 360° shielded								
		1.5 m	1424116				1.5 m	1415202
		3 m	1424117				3 m	1415203
		5 m	1424118				5 m	1415204
		10 m	1424128				10 m	1415205

Cable description	Cable type
PUR, halogen-free - black	PUR

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	12
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

7/8" power cable, 4-pos. + PE, PUR cable, 1.5 mm²

Notes:

For information about the cable qualities, see page 304

	Free end	7/8" connector	
			
			

		Ordering data		Ordering data		Ordering data	
7/8" socket, straight			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1443705	0.3 m	1443802		
				0.6 m	1443815		
				1 m	1443828		
				1.5 m	1443831		
				2 m	1443844		
		3 m	1443718				
		5 m	1443721				
		7.5 m	1443734				
		10 m	1443747				
7/8" socket, angled							
						0.3 m	1443857
						0.6 m	1443860
						1 m	1443873
		1.5 m	1443750			1.5 m	1443886
						2 m	1443899
		3 m	1443763				
		5 m	1443776				
		7.5 m	1443789				
		10 m	1443792				

Cable description	Cable type
PUR/PVC 1.5 mm² - gray	440

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK4	4	5
GNYE		3

		Technical data
		7/8", 1.5 mm²
Rated voltage	[V]	600
Rated current	[A]	10
Contact material		CuZn
Contact surface material		AU
Material of grip body		TPU
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-40 ... 90

7/8" power cable, 4-pos. + PE, PUR cable, 2.5 mm²

Notes:
For information about the cable qualities, see page 304

	Free end	7/8" connector	
			
			

		Ordering data		Ordering data		Ordering data	
7/8" socket, straight			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1443909	0.3 m 0.6 m 1 m 1.5 m 2 m	1419823 1419836 1419849 1419852 1419865		
		3 m	1443912				
		5 m	1443925				
		7.5 m	1443938				
		10 m	1443941				
7/8" socket, angled							
		1.5 m	1443954			0.3 m 0.6 m 1 m 1.5 m 2 m	1419878 1419881 1419894 1419904 1419917
		3 m	1443967				
		5 m	1443970				
		7.5 m	1419807				
		10 m	1419810				

Cable description	Cable type
PUR/PVC 2.5 mm² - gray	441

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK4	4	5
GNYE		3

		Technical data
		7/8", 2.5 mm²
Rated voltage	[V]	600
Rated current	[A]	13
Contact material		CuZn
Contact surface material		AU
Material of grip body		TPU
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-40 ... 90

7/8" power cable, 4-pos. + PE, PVC cable, 1.5 mm²

Notes:

For information about the cable qualities, see page 304

	Free end	7/8" connector	
			
			

	Ordering data		Ordering data		Ordering data	
7/8" socket, straight		**Order No.**		**Order No.**		**Order No.**
 	1.5 m	1443307	0.3 m 0.6 m 1 m 1.5 m 2 m	1443404 1443417 1443420 1443433 1443446		
	3 m	1443310				
	5 m	1443323				
	7.5 m	1443336				
	10 m	1443349				
7/8" socket, angled						
 	1.5 m	1443352			0.3 m 0.6 m 1 m 1.5 m 2 m	1443459 1443462 1443475 1443488 1443491
	3 m	1443365				
	5 m	1443378				
	7.5 m	1443381				
	10 m	1443394				

Cable description	Cable type
PVC 1.5 mm² - gray	430

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK4	4	5
GNYE		3

		Technical data
		7/8", 1.5 mm²
Rated voltage	[V]	600
Rated current	[A]	10
Contact material		CuZn
Contact surface material		AU
Material of grip body		TPU
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-40 ... 90

7/8" power cable, 4-pos. + PE, PVC cable, 2.5 mm²

Notes:
For information about the cable qualities, see page 304

Free end



7/8" connector









		Ordering data		Ordering data		Ordering data	
7/8" socket, straight			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1443501	0.3 m 0.6 m 1 m 1.5 m 2 m	1443608 1443611 1443624 1443637 1443640		
		3 m	1443514				
		5 m	1443527				
		7.5 m	1443530				
		10 m	1443543				
7/8" socket, angled							
		1.5 m	1443556			0.3 m 0.6 m 1 m 1.5 m 2 m	1443653 1443666 1443679 1443682 1443695
		3 m	1443569				
		5 m	1443572				
		7.5 m	1443585				
		10 m	1443598				

Cable description	Cable type
PVC 2.5 mm² - gray	431

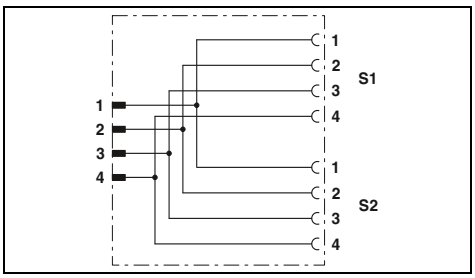
Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK4	4	5
GNYE		3

		Technical data
		7/8", 2.5 mm²
Rated voltage	[V]	600
Rated current	[A]	13
Contact material		CuZn
Contact surface material		AU
Material of grip body		TPU
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-40 ... 90

M12 Y-distributor for power connectors



Y-distributor, T-coded, 4-pos.



Technical data

General data		
Pollution degree		3
Degree of protection		IP65 / IP67
Electrical data		
Rated voltage		60 V
Rated current		2x 12 A (at 40 °C)
Material data		
Contact material		CuZn
Contact surface material		Ni/Au
Inflammability class according to UL 94		HB
Temperature data		
Plug/socket	[°C]	-25 ... 80

Ordering data

Description	Center distance	Type	Order No.	Pcs. / Pkt.
Y-distributor, M12-SPEEDCON, unshielded, M12 connector (T-coded) to 2 x M12 socket (T-coded)	21 mm	**SAC-4PY-MT/2XFT VP**	1410632	5

M12 distributor for power connectors

new



Power distributor with plug-in crimp connection, horizontal

Technical data

General data		
Degree of protection		IP66 / IP67
Electrical data		
Rated voltage		24 V DC
Perm. operating voltage		30.5 V DC
Rated current for each I/O signal		10 A (M12 diagnostic socket for each channel max. 50 mA)
Rated current per slot		2x 9.25 A (at 40 °C)
Total rated current		-
Housing material		PBT
Dimensions		
Width x height x length	[mm]	60 x 52 x 234
Temperature data		
Distributor box		-25 °C ... 60 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Power distributor, M12-SPEEDCON socket, 4 slots, 4-pos., unshielded, status indicator: yes			
- with diagnostics port	**SACB-4/T-L-8FUSE DIAG CT AXL**	1411048	1
- without diagnostics port	**SACB-4/T-L-8FUSE CT AXL**	1413929	1

Accessories

M12 screw plug with SPEEDCON quick locking For unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-MS SCO**	1553129	5
UniCard, for marking Phoenix Contact devices, Axioline Lettering field size: 7 x 10 mm, 30 individual labels	**UCT-EM (7X10)**	0830765	10
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut For assembling sensor/actuator cables with M12 connectors and for M12 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	**SAC BIT M12-D15**	1208432	1
Nut For assembling SACC M12 connectors, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	**SACC BIT M12-D20**	1208445	1

Cable rings for sensor cables

The special SAC cables are also available in 100 m cable rings for connecting the M8/M12 connectors that can be assembled.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 298



Cable ring, 100 m, unshielded

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
PUR, halogen-free - black, cable type: PUR			
3 x 0.25 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PUR/0,25**	1501689	1
3 x 0.34 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PUR/0,34**	1501650	1
4 x 0.25 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PUR/0,25**	1501692	1
4 x 0.34 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PUR/0,34**	1501663	1
5 x 0.34 mm², conductor colors: BN/WH/BU/BK/GNYE	**SAC-5P-100,0-PUR/0,34**	1501676	1
6 x 0.25 mm², conductor colors: BN/WH/BU/BK/GY/PK	**SAC-6P-100,0-PUR/0,25**	1550614	1
8 x 0.25 mm², conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	**SAC-8P-100,0-PUR/0,25**	1550630	1
PVC - black, cable type: PVC			
3 x 0.25 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PVC/0,25**	1501854	1
3 x 0.34 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PVC/0,34**	1501825	1
4 x 0.25 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PVC/0,25**	1501867	1
4 x 0.34 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PVC/0,34**	1501838	1
5 x 0.34 mm², conductor colors: BN/WH/BU/BK/GNYE	**SAC-5P-100,0-PVC/0,34**	1501841	1
8 x 0.25 mm², conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	**SAC-8P-100,0-PVC/0,25**	1550698	1
12 x 0.14 mm², conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU	**SAC-12P-100,0-PVC/0,14**	1441532	1
17 x 0.14 mm², conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU/WHGN/BNGN/WHYE/YEBN/WHGY	**SAC-17P-100,0-PVC/0,14**	1441545	1
PUR/PVC - black, twisted pair, cable type: 35T			
12 x 0.14 mm², conductor colors: (BN/BU)/(WH/GN)/(PK/YE)/(BK/GY)/(RD/VT)/(GYPK/RDBU)			

Ordering example for cable drums with variable cable length:

For **cable type: PVC - black, 5 x 0.34 mm², shielded,** and **340 m** in length, the ordering data is as follows:

Order No.		Length [m]
1408527	/	**340** **Increment:** 10 m; **Min. length:** 110 m **Max. length:** 500 m



Cable drum, 110 m to 500 m, unshielded



Cable ring, 100 m, shielded



Cable drum, 110 m to 500 m, shielded

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-PUR-0,25/...	1408505	1
SAC-3P-PUR-0,34/...	1408506	1
SAC-4P-PUR-0,25/...	1408507	1
SAC-4P-PUR-0,34/...	1408508	1
SAC-5P-PUR-0,34/...	1408509	1
SAC-8P-PUR-0,25/...	1408510	1
SAC-3P-PVC-0,25/...	1408518	1
SAC-3P-PVC-0,34/...	1408519	1
SAC-4P-PVC-0,25/...	1408521	1
SAC-4P-PVC-0,34/...	1408522	1
SAC-5P-PVC-0,34/...	1408523	1
SAC-8P-PVC-0,25/...	1408524	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-100,0-PUR/SH-0,25	1526525	1
SAC-3P-100,0-PUR/SH-0,34	1501702	1
SAC-4P-100,0-PUR/SH-0,25	1535794	1
SAC-4P-100,0-PUR/SH-0,34	1501715	1
SAC-5P-100,0-PUR/SH-0,34	1501728	1
SAC-6P-100,0-PUR/SH-0,14	1550627	1
SAC-8P-100,0-PUR/SH-0,25	1550643	1
SAC-3P-100,0-PVC/SH-0,34	1550656	1
SAC-4P-100,0-PVC/SH-0,34	1550669	1
SAC-5P-100,0-PVC/SH-0,34	1550672	1
SAC-8P-100,0-PVC/SH-0,25	1550708	1
SAC-12P-100,0-35T/SH-0,14	1405789	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-PUR-0,25-SH/...	1408511	1
SAC-3P-PUR-0,34-SH/...	1408512	1
SAC-4P-PUR-0,25-SH/...	1408513	1
SAC-4P-PUR-0,34-SH/...	1408514	1
SAC-5P-PUR-0,34-SH/...	1408515	1
SAC-8P-PUR-0,25-SH/...	1408516	1
SAC-3P-PVC-0,34-SH/...	1408525	1
SAC-4P-PVC-0,34-SH/...	1408526	1
SAC-5P-PVC-0,34-SH/...	1408527	1
SAC-8P-PVC-0,25-SH/...	1408528	1

Cable rings for valve connector cables

The special SAC cables are also available in 100 m cable rings for connecting the valve connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 298



Cable ring, 100 m, unshielded



Cable drum, 110 m to 500 m, unshielded

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR, halogen-free - black, cable type: PUR						
3 x 0.5 mm², conductor colors: BK 1/BK 2/GNYE	**SAC-3P-100,0-PUR/0,5**	1457393	1	**SAC-3P-PUR-0,5/...**	1408529	1
5 x 0.5 mm², conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	**SAC-5P-100,0-PUR/0,5**	1457403	1	**SAC-5P-PUR-0,5/...**	1408530	1
PVC - black, cable type: 534						
3 x 0.75 mm², conductor colors: BK 1/BK 2/GNYE	**SAC-3P-100,0-534/0,75**	1457432	1			
5 x 0.75 mm², conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	**SAC-5P-100,0-534/0,75**	1457445	1			

Ordering example for cable drums with variable cable length:

For **cable type: PUR, halogen-free - black, 5 x 0.5 mm², unshielded,** and **340 m** in length, the ordering data is as follows:

Order No.		Length [m]
1408530	/	340
		Increment: 10 m; **Min. length:** 110 m **Max. length:** 500 m

Master cable rings for sensor/actuator boxes

Master cable rings are available for distributor boxes with spring connection or plug-in screw connection. Similarly, master cables can also be connected to covers and M23 sockets for assembly.

Notes:

For information about the cable qualities, see page 312



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 4X0,34/ 3X0,75-50,0 PUR**	1503328	1
6 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 6X0,34/ 3X0,75-50,0 PUR**	1503331	1
8 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 8X0,34/ 3X0,75-50,0 PUR**	1503344	1
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB- 8X0,5/ 3X1,0-50,0 PUR**	1503357	1
12 x 0.5 mm² / 3 x 1.0 mm²	**SACB-12X0,5/ 3X1,0-50,0 PUR**	1503360	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 PUR**	1503373	1
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 200 m			
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-200,0 PUR**	1559893	1
Master cable ring with PE conductor, PUR/PVC, shielded, length: 50 m			
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB-8X0,5/3X1,0-50 PUR SH**	1401240	1
12 x 0.5 mm² / 3 x 1.0 mm²	**SACB-12X0,5/3X1,0-50 PUR SH**	1401239	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/3X1,0-50 PUR SH**	1539156	1
Master cable ring with PE conductor, PUR/PP halogen-free, unshielded, length: 50 m			
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB-8X0,5/3X1,0-50,0 HPUR**	1401690	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 VPUR**	1430938	1
Master cable ring with PE conductor, PUR/PP, halogen-free, highly flexible, unshielded, length: 50 m			
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 80MC**	1402304	1
Master cable ring without PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 4X0,34/2X0,75-50 PUR**	1517576	1
6 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 6X0,34/2X0,75-50 PUR**	1517589	1
8 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 8X0,34/2X0,75-50 PUR**	1517592	1
10 x 0.34 mm² / 2 x 0.75 mm²	**SACB-10X0,34/2X0,75-50 PUR**	1517602	1
16 x 0.34 mm² / 2 x 0.75 mm²	**SACB-16X0,34/2X0,75-50 PUR**	1539350	1

Assembly tools for sensor/actuator cables

The screwdriver with preset torque is the ideal tool for screwing in all M12 and M8 circular connectors with lengthwise knurl. The advantage of this tool becomes particularly evident when connecting distributor boxes. The tight arrangement and the large number of slots rarely makes it possible to install them correctly by hand. Thanks to the open design of the top unit, tracking is especially easy when screwing in.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Torque screwdriver ① With preset torque of 0.2 Nm and 4 mm hexagonal drive	**TSD 02 SAC**	1208487	1
Nut ② For assembling sensor/actuator cables with M8 connectors and for M8 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	**SAC BIT M8-D10**	1208461	1
Nut ③ For assembling SACC M8 connectors with longitudinal knurl, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	**SACC BIT M8-D12**	1208474	1
Torque screwdriver ④ With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ⑤ For assembling sensor/actuator cables with M12 connectors and for M12 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	**SAC BIT M12-D15**	1208432	1
Nut ⑥ For assembling SACC M12 connectors, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	**SACC BIT M12-D20**	1208445	1

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal stainless steel knurl is also made from stainless steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are also available. When used in conjunction with the adapter insert, they can also be used to accommodate the available plug attachments.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Torque screwdriver ① With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	**TSD 08 SAC**	1212597	1
Nut ② For assembling 7/8" connectors, with 4 mm hexagonal drive	**SAC BIT MIN-D25**	1212512	1
Torque screwdriver ③ With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ④ For mounting M12 connectors with hexagonal stainless steel knurl, wrench size 14, with 4 mm hexagonal drive	**SAC BIT M12-W14**	1212513	1
Torque screwdriver, accuracy according to standard EN ISO 6789 ⑤			
Adjustable from 0.3 - 1.2 Nm	**TSD-M 1,2NM**	1212224	1
Adjustable from 1.2 - 3 Nm	**TSD-M 3NM**	1212225	1
Adjustable from 3 - 6 Nm	**TSD-M 6NM**	1212226	1
Adapter insert ⑥ For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	**TSD-M SAC-BIT ADAPTER**	1212600	1

Sealing elements

During transport or in the field, unoccupied plug-in connections must be protected or closed. Screw plugs, sealing caps and closing caps made of plastic or metal are suitable for this purpose. These achieve the IP65/IP67 as well as IP69K degrees of protection.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
M5 screw plug For unused M5 sockets of sensor/actuator cables, boxes, and device connectors	①	**PROT-M5**	1533288	10
M8 screw plug For unused M8 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-M8**	1682540	5
M12 screw plug For unused M12 sockets of sensor/actuator cables, boxes, and device connectors	③	**PROT-M12**	1680539	5
M12 screw plug with SPEEDCON quick locking For unused M12 sockets of sensor/actuator cables, boxes, and device connectors	④	**PROT-MS SCO**	1553129	5
M12 sealing cap For unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑤	**PROT-M12 FS**	1560251	5
Screw plug M12, made of metal For unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	⑥	**PROT-M12 SH**	1503302	5
Metal M12 sealing cap For unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	⑦	**PROT-M12 FS-M**	1430488	10
M12 screw plug made of stainless steel For unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	⑧	**PROT-M12 FB**	1555538	5
Closing cap For Pg9/Pg11, to close unoccupied connections	⑨	**Q-PROT 9/11**	1670235	10
M16 locking screw With flat nut for oval housing cutouts	⑩	**SACC-M16-SEALING PLUG SET**	1453368	10

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12, and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Screw plug made from **plastic** with retaining strap, for sealing unused **sockets**	①			
M8 for SAC cables		**PROT-M 8 MS-PA-CHAIN**	1430860	10
M8 with 3 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE-DM3**	1441105	10
M8 with 12 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE**	1441095	10
M12 for SAC cables		**PROT-M12 MS-PA-CHAIN**	1430899	5
M12 with 15 mm fastening eye		**PROT-M12 MS-PA-CHAIN-EYE-DM14**	1456200	5
7/8" for SAC cables		**PROT-MINMS-PA-CHAIN**	1430925	10
Plastic sealing cap with holding band, for closing unoccupied **connectors**	②			
M8 for SAC cables		**PROT-M 8 FS-PA-CHAIN**	1430857	10
M8 with 8 mm fastening eye		**PROT-M 8 FS-PA-CHAIN-EYE**	1441082	10
M12 for SAC cables		**PROT-M12 FS-PA-CHAIN**	1430873	5
M12 with 12 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM12**	1456187	5
M12 with 15 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM14**	1456190	5
7/8" for SAC cables		**PROT-MINFS-PA-CHAIN**	1430912	10
Sealing cap made of **metal** with fixing chain and 16 mm fastening eye, for sealing:	③			
Unused M12 connectors		**PROT-M12 FS-M-CHAIN**	1430491	10

Accessories for M8 distributor boxes with plug-in master cable connection

The torque screwdriver with an M8 nut is the ideal tool for screwing in all M8 connectors with lengthwise knurl.

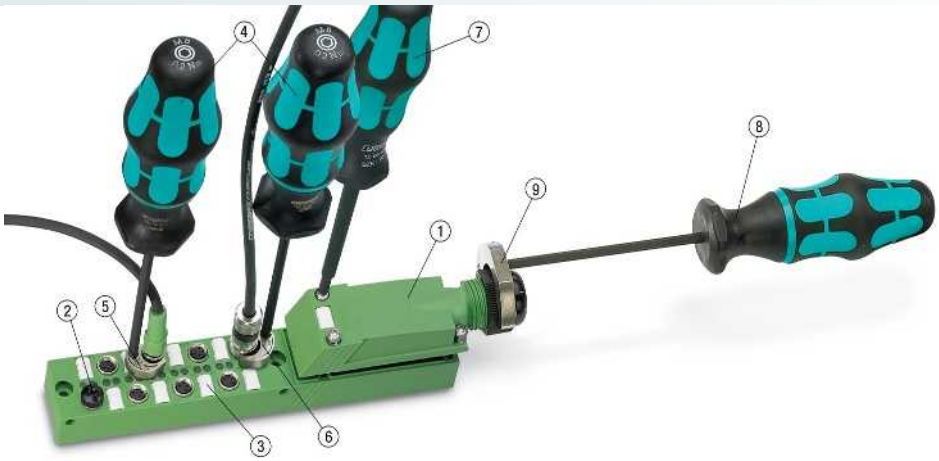
For distributors with 4 to 10 slots, we offer a suitable hood as replacement, a relevant screwdriver for fastening the hood as well as a torque screwdriver with a W24 nut for tightening the pressure nuts to a defined value.

The PROT M8 screw plug – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 5.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Sensor/actuator connector hood, with marking label, for sensor/actuator box with:	①			
4 single-occupancy M8 slots		**SACB-C-H180- 4/3-M8**	1521229	1
6 single-occupancy M8 slots		**SACB-C-H180- 6/3-M8**	1521216	1
8 single-occupancy M8 slots		**SACB-C-H180- 8/3-M8**	1516425	1
Ten single-occupancy M8 slots		**SACB-C-H180-10/3-M8**	1516412	1
M8 screw plug For unused M8 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-M8**	1682540	5
Marking material, 10-section	③			
- Unprinted		**ZBF10:UNBEDRUCKT**	0809997	10
- Configurable		**ZBF10 CUS**	0825031	1
Torque screwdriver With preset torque of 0.2 Nm and 4 mm hexagonal drive	④	**TSD 02 SAC**	1208487	1
Nut For assembling sensor/actuator cables with M8 connectors and for M8 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	⑤	**SAC BIT M8-D10**	1208461	1
Nut For assembling SACC M8 connectors with longitudinal knurl, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	⑥	**SACC BIT M8-D12**	1208474	1
Screwdriver Size: PZ2 x 100 mm, length: 205 mm	⑦	**SZK PZ2 VDE**	1206463	10
Torque screwdriver With a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut For reliable tightening of the pressure nuts with a wrench size of 24 mm, for 4 mm hexagonal screwdriver	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for M8 distributor boxes with M12/M16 plug-in connection

Suitable sockets in an angled design with a 5 and 10 meter master cable are available for distributors with 4 to 10 slots. In order to use a master cable as per the specific requirements, sockets are available in straight and angled designs for free assembly.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M8 connectors with lengthwise knurl.

The PROT M8 screw plug – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

Notes:

Additional marking material and tools can be found in Catalog 5.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
M16 socket, angled, with a master cable, for sensor/actuator box with:	①			
4 slots, cable length: 5 m		**SAC-8P- 5,0-PUR/M16FR**	**1693681**	1
4 slots, cable length: 10 m		**SAC-8P-10,0-PUR/M16FR**	**1693694**	1
6 slots, cable length: 5 m		**SAC-10P- 5,0-PUR/M16FR**	**1693704**	1
6 slots, cable length: 10 m		**SAC-10P-10,0-PUR/M16FR**	**1693717**	1
8 slots, cable length: 5 m		**SAC-12P- 5,0-PUR/M16FR**	**1693720**	1
8 slots, cable length: 10 m		**SAC-12P-10,0-PUR/M16FR**	**1693733**	1
10 slots, cable length: 5 m		**SAC-14P- 5,0-PUR/M16FR**	**1693746**	1
10 slots, cable length: 10 m		**SAC-14P-10,0-PUR/M16FR**	**1693759**	1
M12 socket, angled, with connected master cable, for sensor/actuator box with:	②			
4 slots, cable length: 5 m		**SAC-6P- 5,0-PURMC/M12FR**	**1407820**	1
4 slots, cable length: 10 m		**SAC-6P-10,0-PURMC/M12FR**	**1407821**	1
4 slots, cable length: variable		**SAC-6P-M12FR-PURMC/**	**1520987**	1
6 slots, cable length: 5 m		**SAC-8P- 5,0-PURMC/M12FR**	**1407822**	1
6 slots, cable length: 10 m		**SAC-8P-10,0-PURMC/M12FR**	**1407823**	1
6 slots, cable length: variable		**SAC-8P-M12FR-PURMC/**	**1520990**	1
M16 socket, 14-pos., straight, freely configurable, with solder connection, for an external cable diameter of 6.0 mm ... 8.0 mm	③	**SACC-M16FS-14CON-M**	**1500554**	1
M16 socket, 14-pos., angled, freely configurable, with solder connection, for an external cable diameter of 6.0 mm ... 8.0 mm	④	**SACC-M16FR-14CON-M**	**1500253**	1
M8 screw plug For unused M8 sockets of sensor/actuator cables, boxes, and device connectors	⑤	**PROT-M8**	**1682540**	5
Marking material, 10-section	⑥			
- Unprinted		**ZBF10:UNBEDRUCKT**	**0809997**	10
- Configurable		**ZBF10 CUS**	**0825031**	1
Torque screwdriver With preset torque of 0.2 Nm and 4 mm hexagonal drive	⑦	**TSD 02 SAC**	**1208487**	1
Nut For assembling sensor/actuator cables with M8 connectors and for M8 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	⑧	**SAC BIT M8-D10**	**1208461**	1
Nut For assembling SACC M8 connectors with longitudinal knurl, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	⑨	**SACC BIT M8-D12**	**1208474**	1

Ordering example for socket with variable master cable:

For an M12 socket for 4 slots and a master cable length of 15 m, the ordering data is as follows:

Order No.	Length [m] Max. 40 m
1520987 /	15.0
	Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Accessories for M12 distributor boxes with plastic thread and connector hood

The torque screwdriver with an M12 nut is the ideal tool for screwing in all M12 connectors with lengthwise knurl.

For the distributors, we offer a suitable hood as replacement, a matching screwdriver for fastening the hood as well as a torque screwdriver with a W24 nut for tightening the pressure nuts to a defined value.

The PROT-MS SCO screw plug – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 5.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Connector hood with integrated connector, for M12 sensor/actuator boxes with plastic thread and plug-in screw connection, for 4, 6 or 8 slots	①	**SACB-C-H180-8/16 SCO P**	1453229	1
M12 screw plug with SPEEDCON quick locking For unused M12 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-MS SCO**	1553129	5
Marking material, 5-section	③			
- Unprinted, white		**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow		**SS-ZB 17,5 YE**	0804976	50
- Configurable, white		**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow		**SS-ZB 17,5 YE CUS**	0824469	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	④	**TSD 04 SAC**	1208429	1
Nut For assembling sensor/actuator cables with M12 connectors and for M12 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	⑤	**SAC BIT M12-D15**	1208432	1
Nut For assembling SACC M12 connectors, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	⑥	**SACC BIT M12-D20**	1208445	1
Screwdriver Size: PZ2 x 100 mm, length: 205 mm	⑦	**SZK PZ2 VDE**	1206463	10
Torque screwdriver With a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut For reliable tightening of the pressure nuts with a wrench size of 24 mm, for 4 mm hexagonal screwdriver	⑨	**SAC BIT HOOD-W 24**	1212486	1
Screwdriver, suitable for all screw terminal blocks up to 1.5 mm² connection cross section, without VDE approval Blade: 0.4 x 2.0 x 60 mm, length: 157 mm	⑩	**SZS 0,4X2,0**	1205202	10
Ferrules, without plastic sleeves, CSA-certified	⑪			
0.5 mm²		**A 0,5 - 6**	3200218	1000
0.75 mm²		**A 0,75-10**	3200234	1000
1.0 mm²		**A 1 -10**	3200250	1000
1.5 mm²		**A 1,5 -10**	3200276	1000

Accessories for M12 distributor boxes with metal thread and plug-in screw connection

The torque screwdriver with an M12 nut is the ideal tool for screwing in all M12 connectors with lengthwise knurl.

For the distributors, we offer a suitable hood as replacement, a matching screwdriver for fastening the hood as well as a torque screwdriver with a W24 nut for tightening the pressure nuts to a defined value.

The PROT-MS SCO screw plug – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 5.



Description		Type	Order No.	Pcs. / Pkt.
		Ordering data		
Connector hood with integrated connector, for M12 sensor/actuator boxes with metal thread and plug-in screw connection, for 4, 6 or 8 slots	①	**SACB-C-H180 8/16 SCO**	1516713	10
M12 screw plug with SPEEDCON quick locking For unused M12 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-MS SCO**	1553129	5
Marking material, 5-section	③			
- Unprinted, white		**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow		**SS-ZB 17,5 YE**	0804976	50
- Configurable, white		**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow		**SS-ZB 17,5 YE CUS**	0824469	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	④	**TSD 04 SAC**	1208429	1
Nut For assembling sensor/actuator cables with M12 connectors and for M12 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	⑤	**SAC BIT M12-D15**	1208432	1
Nut For assembling SACC M12 connectors, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	⑥	**SACC BIT M12-D20**	1208445	1
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑦	**SZK PZ1 VDE**	1206450	10
Torque screwdriver With a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut For reliable tightening of the pressure nuts with a wrench size of 24 mm, for 4 mm hexagonal screwdriver	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for shielded M12 distributor boxes

For the distributors, suitable shielded sockets are available in angled design with a pre-assembled master cable. Further accessories include straight and angled M23 sockets for free assembly.

The PROT M12 SH screw plug – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M12 connectors with lengthwise knurl.

Notes:

Additional marking material and tools can be found in Catalog 5.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Socket M23, 19-pos., angled, shielded, with connected master cable	①			
Conductor length: 5 m		**RCK-TWGM/BL16+3/ 5,0PUR SH**	1519529	1
Conductor length: 10 m		**RCK-TWGM/BL16+3/10,0PUR SH**	1511828	1
M23 socket, 19-pos., angled, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm	②	**RC/TGGM/KVD/LBL 16+3**	1685505	1
M23 socket, 19-pos., angled, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm	③	**RC/TWGM/KVD/LBL 16+3**	1685518	1
Special pipe spanner Auxiliary tool for mounting the M23 connector housing that can be assembled	④	**PLUSCON-RCS**	1665062	1
Screw plug M12, made of metal for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	⑤	**PROT-M12 SH**	1503302	5
M23 sealing cap made of metal, for unoccupied M23 connectors	⑥			
- without steel wire		**MSK 1**	1665897	10
- with steel wire		**MSK 2**	1665907	1
Sealing cap made of plastic, for unoccupied M23 connectors	⑦	**KSK 1**	1685013	10
Marking material	⑧			
- Unprinted, white		**ZBN 18:UNBEDRUCKT**	2809128	10
- Unprinted, yellow		**UC-TMF 16 YE**	0819259	10
- Configurable, white		**ZBN 18 CUS**	0825059	1
- Configurable, yellow		**ZBN 18 YE CUS**	0825058	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	⑨	**TSD 04 SAC**	1208429	1
Nut For assembling sensor/actuator cables with M12 connectors and for M12 connectors with insulation displacement connection, for 4 mm hexagonal screwdriver	⑩	**SAC BIT M12-D15**	1208432	1
Nut For assembling SACC M12 connectors, excluding those with insulation displacement connection, for 4 mm hexagonal screwdriver	⑪	**SACC BIT M12-D20**	1208445	1

Accessories for QUICKON distributor boxes with a connection cross section of 0.14 mm² ... 0.34 mm²

The Q-PROT 9/11 closing cap – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

A torque screwdriver with a W13 nut, already familiar from M8 or M12 screw connections, is now also available for the fast connection pressure nuts. The handling of the tools is self-explanatory and easy.

For the distributors, we offer a replacement plug hood, a relevant screwdriver for fastening the hood as well as a torque screwdriver with a W24 nut for tightening the pressure nuts to a defined value.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

The QUICKON set comprising a splice ring, a pressure nut, and a line seal serves for replacement purposes if necessary.

Notes:

Additional marking material and tools can be found in Catalog 5.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Connector hood with an integrated connector, for sensor/actuator boxes with QUICKON fast connection technology and plug-in screw connection, for 4, 6 or 8 slots	①	**SACB-C-H180 8/4 QO-0,34**	1560235	1
Closing cap for Pg9/Pg11, to close unoccupied connections	②	**Q-PROT 9/11**	1670235	10
Marking material, 5-section	③			
- Unprinted, white		**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow		**SS-ZB 17,5 YE**	0804976	50
- Configurable, white		**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow		**SS-ZB 17,5 YE CUS**	0824469	1
QUICKON set for replacement purposes, consisting of splice ring, pressure nut, and conductor seal	④	**QO-SET**	1548626	20
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑤	**SZK PZ1 VDE**	1206450	10
Torque screwdriver With a preset torque of 2.0 Nm and 4 mm hexagonal drive	⑥	**TSD 20 SAC**	1212020	1
Nut For the reliable tightening of the pressure nuts with a wrench size of 13 mm, for 4 mm hexagonal screwdriver	⑦	**SAC BIT QUICKON-W13**	1212033	1
Torque screwdriver With a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut For reliable tightening of the pressure nuts with a wrench size of 24 mm, for 4 mm hexagonal screwdriver	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for QUICKON distributor boxes with a connection cross section of 0.34 mm² ... 0.75 mm²

The scope of supply of the distributors includes a black rubber seal for an external cable diameter from 6.5 mm to 9.5 mm. Rubber seals are also available from 4.0 mm to 6.5 mm (yellow seal) or 9.0 mm to 13.0 mm (red seal) master cables. The torque screwdriver with a W24 nut is suitable for tightening the pressure nuts to a defined value.

The QUICKON set comprising a pressure nut, a cap, a line seal, and a splice ring serves for replacement purposes if necessary.

The socket wrench facilitates comfortable loosening or tightening of the QUICKON pressure nuts.

The Q-PROT 9/11 closing cap – for unoccupied slots – protects the distributors against foreign bodies and water. The IP65/67 degree of protection is attained.

The slots can be marked using the marking material. They can be marked either by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 5.



Description		Type	Order No.	Pcs. / Pkt.
		Ordering data		
Rubber seal for Pg13.5 screw connection for cable Ø: 4.0 mm ... 6.5 mm	①	**SACB-D PG 13,5 (4,0-6,5) YE**	1680377	10
Rubber seal for Pg13.5 screw connection For cable Ø: 6.5 mm ... 9.5 mm	②	**SACB-D PG 13,5 (6,5-9,5) BK**	1680380	10
Rubber seal for Pg13.5 screw connection For cable Ø: 9.0 mm ... 13.0 mm	③	**SACB-D PG 13,5 (9,0-13,0) RD**	1680393	10
Closing cap For Pg9/ Pg11, to close unoccupied connections	④	**Q-PROT 9/11**	1670235	10
Marking material - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow	⑤	**ZBN 18:UNBEDRUCKT** **UC-TMF 16 YE** **ZBN 18 CUS** **ZBN 18 YE CUS**	2809128 0819259 0825059 0825058	10 10 1 1
QUICKON set for replacement purposes, consisting of pressure nut, cap, conductor seal, and splice ring	⑥	**Q SET-11/4 COD1 SACB-Q**	1670743	25
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑦	**SZK PZ1 VDE**	1206450	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size: 22 mm	⑧	**QSS 22**	1670206	1
Torque screwdriver With a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑨	**TSD 25 SAC**	1212315	1
Nut For reliable tightening of the pressure nuts with a wrench size of 24 mm, for 4 mm hexagonal screwdriver	⑩	**SAC BIT HOOD-W 24**	1212486	1

Symbol key


With UL Style


UV resistant


Good oil resistance


Halogen-free


Suitable for drag chain applications


Flame-retardant


Good resistance to chemicals


Suitable for the food industry


Resistant to welding sparks



High temperature resistance



Suitable for torsional stress


Suitable for railway applications

PUR, halogen-free – PHOENIX CONTACT standard

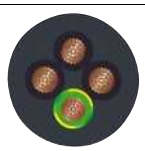
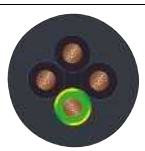


Permanently flexible control cables for use in drag chains, revolving/swivel tables, and as machine control cables for extreme operating conditions. Suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, lubricants, cooling agents, and other aggressive substances.

Additional features: halogen and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis and flame-retardant according to UL-FT2.

Outer sheath material	**PUR**
Min. bending cycles	**4 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**10 m/s²**
Speed	**3 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	172 234 236 282
		M8 Shielded	3 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	179 282
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	172 236 282
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	179
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	216 to 224 284

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**4-pos.**	M8	4 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	172 180 282
		M8 Shielded	4 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	185 282
		M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	180 235 282
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	185 282
		M12 power	4 x 1.5 mm² (84 x 0.15 mm)		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	274
		M12 power	4 x 1.5 mm² (84 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	272
		M12 power Shielded	4 x 1.5 mm² (78 x 0.15 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	275
		Valve connectors	4 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	216 to 224
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	187 282
		M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	190 282
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	228 284
	6-pos.	M8	6 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	191 282

Sensor/actuator cable - cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**6-pos.**	M8 Shielded	6 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 282
	8-pos.	M8	8 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	193
		M8 Shielded	8 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	196
		M12	8 x 0.25 mm² (32 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	194 282
		M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	197 282
	12-pos.	M12	12 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	198
	17-pos.	M12	17 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	198
PUR Orange	**4-pos.**	M12 power Shielded	4 x 1.5 mm² (78 x 0.15 mm) Shielding: copper braid		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	273
115 Black	**5-pos.**	M8	5 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	186
		M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	187
121 Black	**3-pos.**	Valve connectors	3 x 1.0 mm² (32 x 0.20 mm)		Black 1, black 2, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	216 218
240 Yellow	**3-pos.**	Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	216 to 224

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
240 Yellow	**4-pos.**	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	180
	5-pos.	Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	216 to 224
280 Gray	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	172 174 236
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	174 236
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	216 to 224
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	180
	5-pos.	Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	228
	8-pos.	M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	197

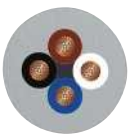
TPE-U highly flexible



Permanently flexible control cable that is ideal for use in drag chains and industrial robots. The cable can be used wherever extreme bending and torsional stress occur simultaneously and significantly longer durability is desired. It is resistant to welding sparks and is therefore designed exclusively for use in resistance welding processes. The use of new materials eliminates irradiation cross-linking, which makes the cable easier to recycle. The cables therefore meet the requirements of DIN EN ISO 14001. Additional features: halogen and PVC-free, flame-retardant according to UL-FT1, VW1, and 1581 §1061, very good resistance to oils according to VDE 0250 Part 407, chemicals, lubricants, and coolants as well as other aggressive substances.

Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.

Outer sheath material	**TPE-U**
Min. bending cycles	**10 million**
Minimum bending radius	
Fixed	**5 x D**
Mobile	**7.5 x D**
Traverse path	**5 m**
Acceleration	**20 m/s²**
Speed	**3.33 m/s**
Torsion angle	**±360°**
Min. torsion cycles	**13 million**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
800 Gray	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	172 174 236
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	174 236 178
	4-pos.	M8	4 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	172 180
		M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	180 184
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	187
	8-pos.	M12	8 x 0.25 mm² (32 x 0.1 mm)		According to DIN 47100	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	194
802 Gray	**5-pos.**	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	189

PUR irradiated, resistant to welding sparks



Due to the irradiation of the PUR outer sheath, the properties typical of PUR, e.g., resistance to temperature, UV, and welding sparks, are greatly improved. The cables are suitable for robust use in robot technology, particularly in welding robots, and are characterized by very long durability. Flame-retardant according to DIN VDE 0472, Part 804, test type B.

Outer sheath material	**PUR irradiated**
Min. bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**10 m/s²**
Speed	**3 m/s**
Torsion	**±360°**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
150 Orange	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	174 236
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	216 to 224
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	180
	5-pos.	M12	4 x 0.34 mm² + 1 x 0.5 mm² (42 x 0.1 mm, 24 x 0.15 mm)		Brown, white, blue, black, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	187
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	228
160 Yellow	**4-pos.**	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	180

PUR/PVC (also applies to type PUR for M5 connectors)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. They are free from silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to DIN EN 60811-2-1 and is flame-retardant according to DIN EN 50265.
The outer sheath is manufactured using the coextrusion process.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**2 million**
Minimum bending radius	**10 x D**
Traverse path	**5 m**
For type 35T	**10 m**
Acceleration	**5 m/s²**
For type 35T	**10 m/s²**
Speed	**3 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
35T Black Twisted pair	**12-pos.**	M12 Shielded	6 x 2 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	200
	17-pos.	M12 Shielded	7 x 2 x 0.14 mm² 1 x 3 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	201
PUR Black **For M5**	**3-pos.**	M5	3 x 0.14 mm² (18 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	170
	4-pos.	M5	4 x 0.14 mm² (18 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	170

PUR/PVC (for 7/8")



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting.
They are free from silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to HD 22.10 and VDE 0282-10 and is flame-retardant according to EN 60332-1-2, UL VW1, and CSA FT1.

Outer sheath material	**PUR**
Minimum bending radius	
Fixed	**7.5 x D**
Mobile	**15 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
440 Gray	**5-pos.**	7/8"	5 x 1.5 mm² (30 x 0.25 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	278
441 Gray	**5-pos.**	7/8"	5 x 2.5 mm² (50 x 0.25 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	279

PVC - 80°C and 105°C

These very reasonably priced high-quality cables are suitable for use under dry conditions and average mechanical strain associated with machine tools, packaging machines, and assembly/production lines. The cable offers a certain degree of resistance to oil and chemicals and is less susceptible to wear. Flame-retardant to VW-1 according to UL 758.

VW-1 is the toughest flame-resistance test for single cables.

Outer sheath material **PVC**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**3-pos.**	M8	3 x 0.25 mm² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	174 236 282
		M12	3 x 0.34 mm² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	174 236 282
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	179 282
		Valve connectors	3 x 0.5 mm² (16 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	216 to 224
	4-pos.	M8	4 x 0.25 mm² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	180 282
		M12	4 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	180 282
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	185 282
		Valve connectors	4 x 0.5 mm² (16 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	228
	5-pos.	M12	5 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	187 282

Sensor/actuator cable - cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**5-pos.**	M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	190 282
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	216 to 224
	8-pos.	M12	8 x 0.25 mm² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 282
		M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid and filler litz wire		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	197 282
	12-pos.	M12	12 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	199 282
	17-pos.	M12	17 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -25°C ... +90°C	199 282
500 Gray	**3-pos.**	M8	3 x 0.25 mm² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	174 236
		M12	3 x 0.34 mm² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	174 236
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	179
	4-pos.	M8	4 x 0.25 mm² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	180
		M12	4 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	180
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	185

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
500 Gray	**5-pos.**	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	187
		M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	190
	8-pos.	M12	8 x 0.25 mm² (32 x 0.1 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194
515 Black	**5-pos.**	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	187
534 Black	**3-pos.**	Valve connectors	3 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	216 to 224 284
	4-pos.	Valve connectors	4 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	228
	5-pos.	Valve connectors	5 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	228 284
540 Yellow	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	174 236
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	180
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	187

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
542 Yellow	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	174 236
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	180
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	187

PVC (for 7/8")

These very reasonably priced high-quality cables are suitable for use under dry conditions and average mechanical strain associated with machine tools, packaging machines, and assembly/production lines.

The cable offers a certain degree of resistance to oil and chemicals and is less susceptible to wear. Flame-retardant according to IEC 60332-1-2 and UL 1581 Cable Flame Test.

Outer sheath material **PVC**

Minimum bending radius
Fixed **4 x D**
Mobile **12.5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
430 Gray	**5-pos.**	7/8"	5 x 1.5 mm² (30 x 0.25 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	276
431 Gray	**5-pos.**	7/8"	5 x 2.5 mm² (50 x 0.25 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	277

PE-X - for outdoor applications



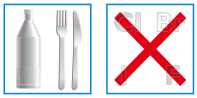
The halogen-free control cable is suitable for outdoor installation in direct sunlight. The insulation and sheath materials offer excellent resistance to weather, UV, and wear. The outstanding resistance to oil, high degree of flexibility, and low smoke gas density also make it suitable for automation technology as well as machine building and systems manufacturing.

Additional features: halogen-free according to DIN VDE 0472 Part 815, flame-retardant according to DIN EN 60332-1-2 and 50266-2-5, UV resistant according to DIN VDE 0276-605, oil resistant according to DIN EN 60811-2-1 (168 h at 100°C) and 50306.

Outer sheath material	**PE copolymer irradiated**
Min. bending cycles	**2 million**
Shielded	**1 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**10 m/s²**
Speed	**3 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
28X Black	**4-pos.**	M12	4 x 0.5 mm² (28 x 0.15 mm)		Brown, white, blue, black	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products
		M12 Shielded	4 x 0.5 mm² (28 x 0.15 mm)		Brown, white, blue, black	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products
	5-pos.	M12	5 x 0.5 mm² (28 x 0.15 mm)		Brown, white, blue, black, gray	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products
		M12 Shielded	5 x 0.5 mm² (28 x 0.15 mm) Shielding: Copper braid		Brown, white, blue, black, gray	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products
	8-pos.	M12	8 x 0.25 mm² (32 x 0.1 mm)		According to DIN 47100	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products
		M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: Copper braid		According to DIN 47100	PE copolymer	Mobile: -15°C ... +105°C Fixed: -40°C ... +105°C	phoenixcontact.net/products

PP-EPDM - for the food industry



This cable with PP-EPDM outer sheath is specifically designed for use in the food industry. Dirt can be easily detected on the light colored surface so that food is not contaminated by coming into contact with the cable. Furthermore, the cable is resistant to common cleaning agents and disinfectants.

Outer sheath material **PP-EPDM**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
600 Light gray	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	PP	Fixed: -40°C ... +105°C	phoenixcontact.net/products
	4-pos.	M8	4 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black	PP	Fixed: -40°C ... 105°C	phoenixcontact.net/products
		M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Fixed: -40°C ... +105°C	phoenixcontact.net/products
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: Copper braid		Brown, white, blue, black	PP	Fixed: -40°C ... +105°C	phoenixcontact.net/products
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PP	Fixed: -40°C ... +105°C	phoenixcontact.net/products

RADOX® - for railway applications



In railway applications, special demands are placed on the cables used. Special considerations must be made regarding fire protection, in that cables must meet the highest fire safety standards. In addition, the cables are very resistant to mineral oil and fuel.

Outer sheath material **RADOX® GKW S**

Minimum bending radius
Fixed **3 x D**
Mobile **4 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
28R Black	**3-pos.**	M12	3 x 0.5 mm² (19 x 0.18 mm) Shielding: Copper braid		White 1, white 2, white 3	RADOX® TI303	Mobile: -25°C ... +90°C Fixed: -40°C ... +120°C	phoenixcontact.net/products
	4-pos.	M12	4 x 0.5 mm² (19 x 0.18 mm) Shielding: Copper braid		White 1, white 2, white 3, white 4	RADOX® TI303	Mobile: -25°C ... +90°C Fixed: -40°C ... +120°C	phoenixcontact.net/products
	5-pos.	M12	5 x 0.5 mm² (19 x 0.18 mm) Shielding: Copper braid		White 1, white 2, white 3, white 4, white 5	RADOX® TI303	Mobile: -25°C ... +90°C Fixed: -40°C ... +120°C	phoenixcontact.net/products

PUR/PVC (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. They are free from silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis. The outer sheath is manufactured using the coextrusion process.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	**3-pos., single-occupancy**	M8 and QUICKON up to 0.34 mm² 4 slots	4 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	246 252 285
		M8 and QUICKON up to 0.34 mm² 6 slots	6 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	246 252 285
		M8 and QUICKON up to 0.34 mm² 8 slots	8 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	246 252 285
		M8 10 slots	10 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, white-pink, pink-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	246 285
	4-pos., double-occupancy	QUICKON up to 0.34 mm² 4 slots	8 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	252
		M8 and QUICKON up to 0.34 mm² 8 slots	16 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	246 252 285

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	**4-pos., single-occupancy**	M12 and QUICKON up to 0.75 mm² 4 slots	4 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 253 285
		M12 and QUICKON up to 0.75 mm² 6 slots	6 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, pink, red, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 253 285
		M12 and QUICKON up to 0.75 mm² 8 slots	8 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 253 285
	5-pos., double-occupancy	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 285
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 285
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	248 250 285

PUR/PVC shielded (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. Analog signals are reliably protected against electromagnetic influences by the tin-plated copper braid with 85% coverage. The cables are free from silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC shielded Black	**5-pos., double-occupancy**	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	254 285
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	254 285
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	254 285

PVC - for the food industry (for sensor/actuator boxes)



Master cable that is resistant to cleaning agents for use in the splash zone. Can be used together with our stainless steel sensor/actuator box to implement signal distribution in a washdown design. The cable is flame-retardant according to IEC 60332-1-2 and UL 758 FT2 and has an oil-resistant outer sheath according to DIN EN 60811-404.

Outer sheath material	**PVC**
Minimum bending radius	
Fixed	**5 x D**
Mobile	**10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**5-pos., double-occupancy**	M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	See: phoenixcontact.net/products

PUR, halogen-free (for sensor/actuator boxes)



Permanently flexible control cables for use in drag chains and as machine control cables for extreme operating conditions. Suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to VDE 0472 Part 803, lubricants, cooling agents, and other aggressive substances. Additional features: halogen- and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis, and flame-retardant according to DIN EN 50265.

Outer sheath material	**PUR**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**5-pos., double-occupancy**	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	250 285
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	250 285
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	250 285

80 MC - highly stranded (for sensor/actuator boxes)



Permanently flexible cables for use in drag chains, industrial robots or portal tables. Suitable for bending cycle loads and torsional stress with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, chemicals, and hydrolysis.

The cable is also flame-retardant according to DIN EN 50265-2-1 and is halogen-free.

Outer sheath material	**PUR**
Min. bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**5 m**
Acceleration	**5 m/s²**
Speed	**3 m/s**
Torsion angle	**+/- 120°**
Min. torsion cycles	**3 million**
Test length	**1 m**
Tested at	**+20°C ... +25°C**

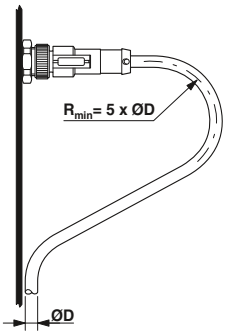
Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
80MC Black	**5-pos., double-occupancy**	M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: +5°C ... +70°C Fixed: -30°C ... +70°C	285



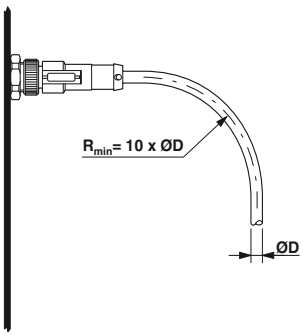
The following pages provide an overview of the appropriate installation of SAC cables in harsh industrial environments that will guarantee a long service life and reduce costs.

Bending radius

In the case of a mobile installation, a generous bending radius can be advantageous, since the greater the bending radius, the lower the voltages occurring as a result of the movement. The result is an increased cable service life (the minimum cable-specific bending radii must be taken into consideration).



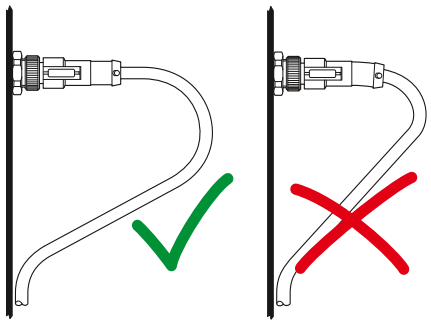
Fixed installation



Mobile installation

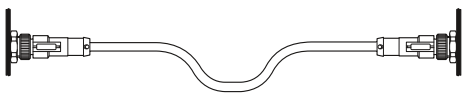
Load

A sufficient cable loop at the connection point can prevent the material from becoming prematurely worn and in the case of additional loads ensures sufficient clearance for voltages to be absorbed.



Mobile installation

In the case of a mobile installation, the cable length should be sufficient to adequately absorb the tensile loads. This can be implemented, for example, using cable loops and C drag chains.



Cables in power track chains

Where possible, cables should be laid individually and loosely next to each other within power track chains. Isolating segments or bridges should be placed between the various cables or these should be arranged into separate bore holes in the neutral zone of the drag chain.

The laying of cables that have very different outside diameters next to or across each other is generally not recommended. If, however, this cannot be avoided for design reasons, isolating segments or bridges should be installed for a reasonable service life. If isolating segments cannot be installed between each cable, we recommend that our cables with an outside diameter < 10 mm should be laid loose, together with cables with similar cross sections within a guide tube in the drag chain.

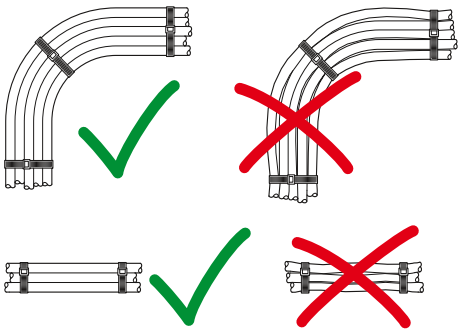
In terms of the arrangement of the cables, it is also important to ensure that heavy cables are routed outwards and light cables, such as our SAC cables, are routed inwards. They should be strain-relieved on both sides, or at least at the moving end of the drag chain. A distance of 20 to 30 times the outside diameter of the cable is recommended between the point at which the bending motion ends and the attachment.

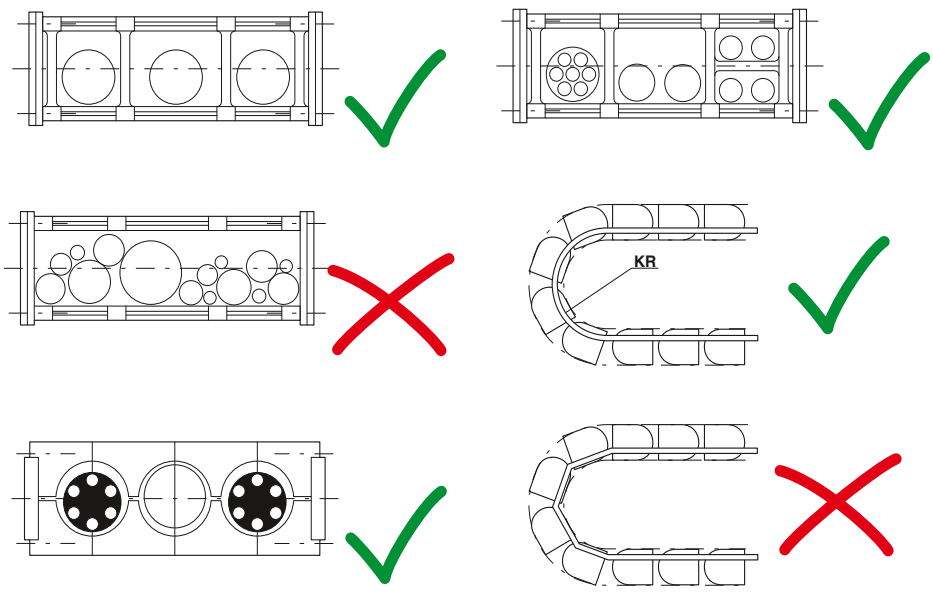
The cables must be able to move completely freely within the radius of curvature in order to prevent forced guidance of the drag chain. Guide value: 10% of the outside diameter should be allocated as free space.

Note: when laying the cables, observe the information provided by the drag chain manufacturer.

Cable bundling

When bundling several individual cables, it is important to ensure that the cables can move freely within the bundle. The cables must not become deformed. Round cables with greatly varying outside diameters should only be laid next to each other when bridges are used.





KR = radius of curvature



Data connectors and cables

Standardized data interfaces are increasingly being used in industrial applications as part of the decentralization of complex manufacturing systems and the increasing need for rapid information and data exchange.

PLUSCON data is the connector range from Phoenix Contact for secure and reliable data transmission. Benefit from innovative connection technologies and a design suitable for industrial applications. The product range includes assembled cables, flush-type connectors, and connectors for field assembly, plus special tool-free connector systems for FO and copper-based cabling.

When it comes to implementing networks, Phoenix Contact offers a comprehensive portfolio for Industrial Ethernet and PROFINET as well as EtherCAT®. Furthermore, we offer components for fieldbus systems such as PROFIBUS, CANopen®/DeviceNet™, and FOUNDATION Fieldbus.

Solutions for copper cabling
- Up to 10 Gbps
- Protection class IP20 to IP69K
- 4 and 8-pos. versions
- Spring, pierce, and IDC displacement connection
- 360° shielding concept
- For all common networks and fieldbuses

Solutions for FO cabling
- Up to 40 Gbps
- Protection class IP20 to IP65/67
- For POF, PCF, and GOF
- For all common FO interfaces

System overview - network	**320**
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Patch cables	**374**
Assembled cables	**380**
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AS-Interface	**426**
D-SUB connectors	**432**
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Cable range	**440**

	Industrial Ethernet				
	Ethernet	**Ethernet**	**Ethernet**	**Ethernet**	**Ethernet**
Area of application	Ethernet M8 (4-pos.) All industrial environments	Ethernet M12 (4-pos.) All industrial environments	Ethernet M12 (8-pos.) All industrial environments	Ethernet M12/10G (8-pos.) All industrial environments	Ethernet hybrid M12 (8-pos.) All industrial environments
Topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology
Data transmission	Up to 100 Mbps	Up to 100 Mbps	Up to 1 Gbps	Up to 10 Gbps	Up to 100 Mbps
Special connectors				M12 with shield crossover	M12 with Y-shield

Pin assignment

Signal des.	Connector RJ45	Connector M8
TD+	1	1
TD-	2	4
RD+	3	2
RD-	6	3

Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Signal des.	Connector RJ45	Connector M12
D1+	1	6
D1-	2	4
D3+	5	1
D3-	4	7
D2+	3	5
D2-	6	8
D4+	7	2
D4-	8	3

Signal des.	Connector RJ45	Connector M12
D1+	1	1
D1-	2	2
D3+	5	7
D3-	4	8
D2+	3	3
D2-	6	4
D4+	7	5
D4-	8	6

Signal des.	Connector M12
TD+	1
TD-	2
RD+	3
RD-	4

Signal designation Wire assignment

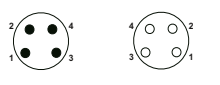
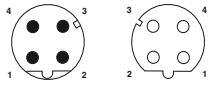
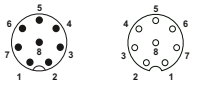
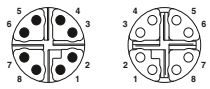
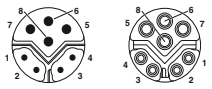
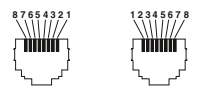
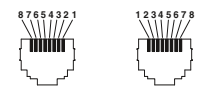
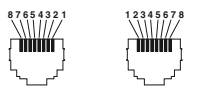
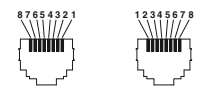
Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Wire color	Signal
WHOG	TD+
OG	TD-
WHGN	RD+
GN	RD-

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3+
BU	D3-
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3+
BU	D3-
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Wire color	Signal
WHOG	TD+
OG	TD-
WHGN	RD+
GN	RD-
BU	
WH	
BN	
BK	

Segment length	Up to 100 m from hub/switch to termination device	Up to 100 m from hub/switch to termination device	Up to 100 m from hub/switch to termination device	Up to 100 m from hub/switch to termination device	Up to 100 m from hub/switch to termination device
User organization					
Standardization of cabling	ISO/IEC 24702	ISO/IEC 24702	ISO/IEC 24702	ISO/IEC 24702	
Connector pin assignments					
	Plug / Socket	Plug / Socket	Plug / Socket	Plug / Socket	Plug / Socket
	M8, 4-pos.	M12, 4-pos., D-coded	M12, 8-pos., A-coded	M12, 8-pos., X-coded	M12, hybrid, 8-pos., Y-coded
					
	Plug / Socket	Plug / Socket	Plug / Socket	Plug / Socket	
	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	
Topology	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

Ethernet/IP™

EtherNet/IP

Automation applications in industrial control technology

Usually active star topology

Up to 100 Mbps

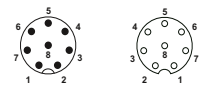
Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
WHOG	TD+
OG	TD-
WHBU	
BU	
WHGN	RD+
GN	RD-
WHBN	
BN	

Up to 100 m from hub/switch to termination device

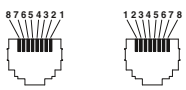
www.odva.org

IEC 61784-5-2



Plug | Socket

M12, 8-pos., A-coded



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

Ethernet/IP™

EtherNet/IP CAT6A 10 Gigabit/s

Automation applications in industrial control technology

Usually active star topology

Up to 100 Mbps

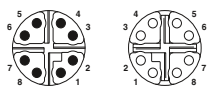
Signal des.	Connector RJ45	Connector M12
D1+	1	1
D1-	2	2
D3+	5	7
D3-	4	8
D2+	3	3
D2-	6	4
D4+	7	5
D4-	8	6

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3+
BU	D3-
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Up to 100 m from hub/switch to termination device

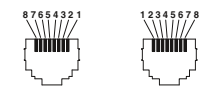
www.odva.org

IEC 61784-5-2



Plug | Socket

M12, 8-pos., X-coded



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

PROFINET

PROFINET

Production, process automation in the automotive industry

Star, line, tree, and ring structures. Hybrid forms also supported.

100 Mbps to 1 Gbps

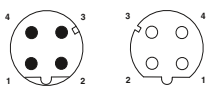
Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Up to 100 m from hub/switch to termination device

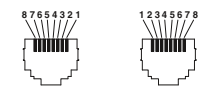
www.profibus.com

IEC 61784-5-3



Plug | Socket

M12, 4-pos., D-coded



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

EtherCAT®

EtherCAT Technology Group

Automation technology

Line, tree, star, and combinations of these

100 Mbps, upgrade to Gigabit Ethernet possible

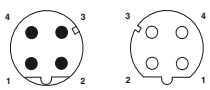
Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Up to 100 m from hub/switch to termination device

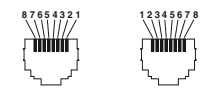
www.ethercat.org

IEC 61784-5-12



Plug | Socket

M12, 4-pos., D-coded



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

Sercos®

sercos the automation bus

Motion control applications

Line, ring, and hierarchical, cascaded network structures

Fast Ethernet with 100 Mbps

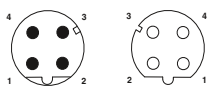
Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Up to 100 m from hub/switch to termination device

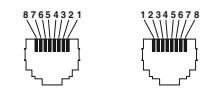
www.sercos.de

IEC 61784-5-16



Plug | Socket

M12, 4-pos., D-coded



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

VARAN

VARAN

Automation technology

Tree, line, and star topology

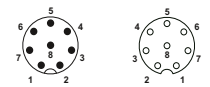
2+4 power/Ethernet connection technology (IP65 and IP67)

Signal des.	Connector RJ45	Connector M12
TD+	2	2
TD-	1	3
RD+	3	5
RD-	6	8

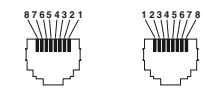
Wire color	Signal
n. c.	
OG	TD-
WHOG	TD+
n. c.	
WHGN	RD+
BU	
BN	
GN	RD-

Up to 100 m from hub/switch to termination device

www.varan-bus.net



Plug | Socket



Plug | Socket

RJ45, 8-pos.

See phoenixcontact.net/products

System overview - fieldbuses

	INTERBUS	PROFIBUS DP	PROFIBUS PA	DeviceNet™
Area of application	Sensor/actuator level, process automation, monitoring PC	Distributed I/O devices for networking several controllers	Process automation for potentially explosive areas (Ex zone 0 and 1)	Automation technology
Topology	Active ring structure	Line, tree, ring or star depending on the physical network design	Line, tree or ring	Line
Data transmission	Between 500 kbps and 16 Mbps depending on the segment length	Up to 12 Mbps	Up to 31.25 kbps	Up to 500 kBaud
Special connectors				

Pin assignment

Signal designation	Connector D-SUB 9	Connector M12
DO	1	2
DO	6	1
DI	2	4
DI	7	3
GND	3	5

Signal designation	Connector D-SUB 9	Connector M12
A cable	8	2
B cable	3	4

Signal designation	Connector M12
DATA+	1
DATA-	3
Shield	4

Signal designation	Connector COMBICON	Connector M12	Connector 7/8"	Connector M8
CAN_L	2	5	5	5
CAN_H	4	4	4	3
V+	5	2	2	2
V-	1	3	3	4
Drain	3	1	1	1

Signal designation, wire assignment

Wire color	Signal
YE	DO
GN	DO
GY	DI
PK	DI
BN	GND
WH	NC

Wire color	Signal
GN	A cable
RD	B cable

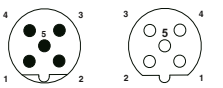
Wire color	Signal
OG	DATA+
BU	DATA-

Filler litz wire

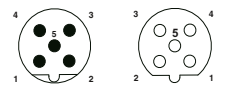
Wire color	Signal
BU	CAN_L
WH	CAN_H
RD	V+
BK	V-

Shield on housing	Shield on housing	Shield on pin	Shield on pin
Segment length	400 m segment length between two devices; max. 13 km total length	Up to 1200 m with copper installation, up to 15 km with fiber optic installation	Max. 1900 m	Up to 500 m
User organization	www.interbusclub.com	www.profibus.com	www.profibus.com	www.odva.org
Standardization of cabling	IEC 61158	IEC 61158/IEC 61784	IEC 61158/IEC 61784	IEC 61158 IEC 61784-1 CPF 2/3

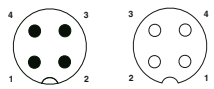
Connector pin assignments



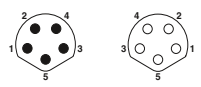
Plug	Socket
M12, 5-pos., B-coded	



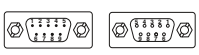
Plug	Socket
M12, 5-pos., B-coded	



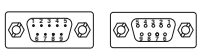
Plug	Socket
M12, 3-pos., A-coded	



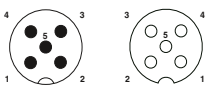
Plug	Socket
M8, 5-pos., B-coded	



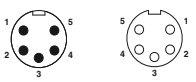
Plug	Socket
D-SUB 9	



Plug	Socket
D-SUB 9	



Plug	Socket
M12, 5-pos., A-coded	



Plug	Socket
7/8" 16UNF, 5-pos.	

Topology	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

CANopen®

Automation technology and for networking within complex devices

Line or tree
(when using repeaters)

10 kBaud to 1 Mbaud

Signal designation	Connector				
	COMBICON	D-SUB 9	M12	RJ45	7/8"
CAN_L	2	2	5	2	5
CAN_H	4	7	4	1	4
V+	5	9	2	8	2
V-	1	3	3	3	3
Drain	3	4	1	6	1

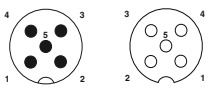
Wire color	Signal
BU	CAN_L
WH	CAN_H
RD	V+
BK	V-

Shield on pin

Up to 1000 m depending on the transmission speed; can be increased by using repeaters

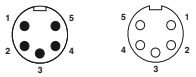
www.can-cia.de

EN 50325-4



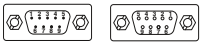
Plug | Socket

M12, 5-pos., A-coded



Plug | Socket

7/8" 16UNF, 5-pos.



Plug | Socket

D-SUB 9

See phoenixcontact.net/products

AS-Interface

Sensor/actuator level

Bus, star, ring, and tree structures

167 kbps

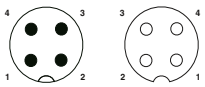
Signal designation	Connector
	M12
AS-i+	1
AS-i-	3

Wire color	Signal
BN	AS-i-
WH	
BU	AS-i+
BK	

Max. 100 m cable length, 300 m with termination resistors, 500 m with repeaters

www.as-interface.net

EN 50295 and IEC 62026-2



Plug | Socket

M12, 4-pos., A-coded

See phoenixcontact.net/products

FOUNDATION Fieldbus

Process automation

Point-to-point line (with branch lines), tree structure, combination of all topologies

H1: 31.25 kbps, IEC physical transmission channel, incl. Ex bus
H2: 1.0 and 2.5 Mbps data rate, via two-wire cable or fiber optics

Signal designation	Connector	
	M12	7/8"
DATA+	2	2
DATA-	1	1
Shield	3	3

Wire color	Signal
OG	DATA+
BU	DATA-

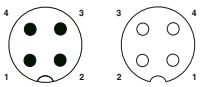
Filler litz wire

Shield on pin 3

Max. 1900 m; max. 9500 m when using repeaters depending on the selected cable

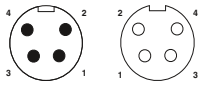
www.fieldbus.org

IEC 1158, IEC 61158



Plug | Socket

M12, 4-pos., A-coded



Plug | Socket

7/8" 16UNF, 4-pos.

See phoenixcontact.net/products

USB

All industrial environments

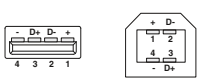
Star topology, the connection is established at the star nodes via hubs

Up to 480 Mbps

Signal designation	Connector	
	M12, MINI - USB	USB
V_{BUS}	1	1
D-	2	2
D+	3	3
ID	4	
GND	5	4

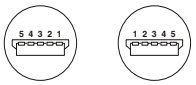
Wire color	Signal
WHOG	D-
WH	V_{BUS}
OG	D+
n.c.	ID
BK	GND

5 m per segment



Plug, type A | Socket, type B

USB, 4-pos.



Plug | Socket

M12 mini-USB, 5-pos.

See phoenixcontact.net/products

CC-Link

Production level applications

Bus, multi-drop, T-branching, star

Up to 10 Mbps

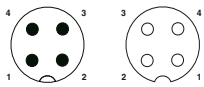
Signal designation	Connector
	M12
SLD	1
DB	2
DG	3
DA	4

Wire color	Signal
Shield	SLD
WH	DB
YE	DG
BU	DA

Max. 1200 m; max. 13.2 km with repeaters

www.clpa-europe.com

IEC 61784-1 CPF 8



Plug | Socket

M12, 4-pos., A-coded

See phoenixcontact.net/products

M12 connector and cable connector, for assembly

new



10 Gbps, IDC QUICKON connection, X-coded



10 Gbps, Piercecon® connection, X-coded

	Technical data		Technical data
	Ethernet	**PROFINET**	**Ethernet**
M12 circular connector according to:	IEC 61076-2-109	IEC 61076-2-109	IEC 61076-2-109
Pollution degree	3	3	2
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	IDC connection technology	IDC connection technology	Piercecon®
Electrical data			
Rated voltage	57 V DC	57 V DC	48 V
Rated current	0.6 A (30 W)	0.6 A (30 W)	0.5 A
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ
Transmission characteristics (category)	$CAT6_A$	$CAT6_A$	$CAT6_A$
Material data			
Contact material	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au
Contact carrier material	PA	PA	PP
Inflammability class according to UL 94	V0	V0	V0
Coding	X - data	X - data	X - data
No. of pos.	8	8	8
Temperature data			
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**Ethernet**			
Connector, $CAT6_A$, shielded, X-coded, color-coded terminal blocks, **cable diameter: 5.0 mm ... 10.0 mm**								
Plug, straight	1411043	1	1411044	1				
Cable connector, $CAT6_A$, shielded, X-coded, color-coded terminal blocks, **cable diameter: 5.0 mm ... 10.0 mm**	1414412	1	1414413	1				
Connector, $CAT6_A$, shielded, X-coded, color-coded litz wire manager, **cable diameter: 4 mm ... 8 mm**								
Plug, straight					1417430	1		
Plug, angled					1417443	1		

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

M12 connector and cable connector, for assembly

new



100 Mbps, IDC QUICKON connection, D-coded



100 Mbps, IDC QUICKON connection

		Technical data		Technical data	
		Ethernet	**PROFINET**	**D-coded**	**A-coded**
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree		3	3	3	3
Degree of protection		IP65/IP67	IP65/IP67	IP67	IP67
Connection method		IDC connection technology	IDC connection technology	IDC connection technology	IDC connection technology
Electrical data					
Rated voltage		250 V AC/DC	250 V AC/DC	60 V DC	30 V
Rated current		4 A	4 A	1.75 A	2 A
Insulation resistance		≥ 100 Ω	≥ 100 Ω	≥ 100 MΩ	≥ 100 MΩ
Transmission characteristics (category)		CAT5	CAT5	CAT5	CAT5
Material data					
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Contact carrier material		PA	PA	PA 66	PA 66
Inflammability class according to UL 94		V0	V0	V0	V0
Coding		D - data	D - data	D - data	A - standard
Temperature data					
Plug/socket	[°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**D-coded**		**A-coded**	
Connector, 4-pos., shielded, D-coded, color-coded terminal blocks, **cable diameter: 5.0 mm ... 10 mm**								
Plug, straight	1411066	1	1411068	1				
Socket, straight	1411069	1	1411071	1				
Connector, 4-pos., shielded, D-coded, color-coded terminal blocks for Ethernet, **max. cable diameter: 8 mm**								
Plug, angled					1553624	1		
Socket, angled					1553637	1		
Connector, 4-pos., shielded, D-coded, color-coded terminal blocks for PROFINET, **max. cable diameter: 8 mm**								
Plug, angled					1554539	1		
Socket, angled					1554542	1		
Connector, 8-pos., shielded, A-coded, color-coded terminal blocks for Ethernet, **max. cable diameter: 8 mm**								
Plug, straight							1543236	1
Plug, angled							1553653	1
Socket, straight							1553640	1
Socket, angled							1553666	1
Connector, 6-pos., shielded, A-coded, color-coded terminal blocks for VARAN, **max. cable diameter: 8 mm**								
Plug, straight							1429130	1
Plug, angled							1429156	1
Socket, straight							1429143	1
Socket, angled							1429169	1
Cable connector, CAT5, 4-pos., shielded, color-coded terminal blocks, **cable diameter: 5.0 mm ... 10 mm**								
	1414415	1	1414416	1				

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

M12 flush-type connector, with 0.5 m litz wires



Front mounting, D-coded



Rear mounting, D-coded

	Technical data	Technical data
	SACC-E-...-4CON-M16/0,5 SCO	SACC-DSI-FSD-4CON...
Electrical data		
Nominal voltage U_N	250 V	250 V
Rated current	4 A	4 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	CAT5 (IEC 11801:2002)
Contact material	CuZn	CuZn
Material of grip body	-	-
Inflammability class according to UL 94	V0	V0
Connection method	Individual wires	Individual wires
Insertion/withdrawal cycles	> 100	≥ 100
Temperature data		
Plug/socket [°C]	-25 -40 ... 85 85	-25 -40 ... 85 85

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket	**SACC-E-FSD-4CON-M16/0,5 SCO**	1535202	1			
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, can be positioned, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket	**SACC-EC-FSD-4CON-M16/0,5 SCO**	1535215	1			
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, rear/screw mounting with Pg9 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket				**SACC-DSI-FSD-4CON-PG9/0,5 SCO**	1551529	1

Control cabinet feed-through/bulkhead, M12/RJ45



Bulkhead,
10 Gbps



Bulkhead,
100 Mbps and 1 Gbps

Technical data

		VS-BH-M12FSX-10G-RJ45/...	VS-BH-M12FS-8CON-RJ45...	VS-BH-M12FSD-RJ45...
Electrical data				
Nominal voltage U_N		60 V	50 V	50 V
Rated current		0.5 A	1 A	1 A
Transmission characteristics (category)		$CAT6_A$	CAT5 (IEC 11801:2002)	CAT5 (IEC 11801:2002)
Contact material		Copper alloy	Copper alloy	Copper alloy
Material of grip body		PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0
Insertion/withdrawal cycles		≥ 100	≥ 100	≥ 100
Temperature data				
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Control cabinet feed-through, $CAT6_A$, M12, 8-pos., X-coded to RJ45 socket						
Socket exit 90°	**VS-BH-M12FSX-10G-RJ45/90**	1404548	1			
Socket exit 180°	**VS-BH-M12FSX-10G-RJ45/180**	1404549	1			
Control cabinet feed-through, M12, 8-pos., A-coded on RJ45 socket						
Socket exit 90°				**VS-BH-M12FS-8CON-RJ45/ 90**	1405057	1
Socket exit 180°				**VS-BH-M12FS-8CON-RJ45/180**	1405060	1
Control cabinet feed-through, M12, 4-pos., D-coded on RJ45 socket						
Socket exit 90°				**VS-BH-M12FSD-RJ45/90**	1657261	1
Socket exit 180°				**VS-BH-M12FSD-RJ45/180**	1657494	1

M12 terminal outlets, IP65/67

- Easy installation, thanks to captive cover screws
- Robust design
- Integrated cable management system



Terminal outlet with 2 x M12 slots

Technical data

	VS-TO-RO-MCBK-F142...
Electrical data	
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet, M12, IP65/67, 2 slots, with protective plugs, 2 cable entries			
M12 with 2 x sockets, 8-pos., A-coded	**VS-TO-RO-MCBK-F1422/1422**	1404304	1
M12 with 2 x socket, 4-pos., D-coded	**VS-TO-RO-MCBK-F1421/1421**	1404294	1

FO connectors, cables, and panel feed-throughs for POF, PCF, and GOF, IP65/67

– 2.2 mm individual wires made from extremely hard-wearing polyamide chloride (PA)
– Assembled patch cable with test report
– Robust connector, IP65/67



M12 optic connectors



M12 transceiver

EAC

	Technical data	Technical data
Material data		
Ferrule material	Copper alloy	-
Inflammability class according to UL 94	V0	V0
Degree of protection	IP65/IP67	IP65/IP67
Cable diameter	7.5 mm ... 8.5 mm	-
Temperature data		
Ambient temperature (operation)	-20 °C ... 70 °C	-40 °C ... 85 °C

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled FO round cable, 980/1000 µm POF fiber, M12 FO to M12 FO							
	1 m	**FOC-PN-B-1000/M12-C/M12-C/1**	1408871	1			
	2 m	**FOC-PN-B-1000/M12-C/M12-C/2**	1408870	1			
	5 m	**FOC-PN-B-1000/M12-C/M12-C/5**	1416680	1			
Assembled FO round cable, 980/1000 µm POF fiber, M12 FO to SC-RJ/IP20							
	1 m	**FOC-PN-B-1000/M12-C/SCRJ/1**	1408865	1			
	2 m	**FOC-PN-B-1000/M12-C/SCRJ/2**	1408864	1			
	5 m	**FOC-PN-B-1000/M12-C/SCRJ/5**	1416648	1			
Assembled FO breakout cable, 200/230 µm PCF-GI fiber, M12 FO to M12 FO							
	1 m	**FOC-HCS-GI-1005/M12-C/M12-C/1**	1408873	1			
	2 m	**FOC-HCS-GI-1005/M12-C/M12-C/2**	1408872	1			
	5 m	**FOC-HCS-GI-1005/M12-C/M12-C/5**	1416693	1			
Assembled FO round cable, 200/230 µm PCF-GI fiber, M12 FO to SC-RJ/IP20							
	1 m	**FOC-HCS-GI-1005/M12-C/SCRJ/1**	1408867	1			
	2 m	**FOC-HCS-GI-1005/M12-C/SCRJ/2**	1408866	1			
	5 m	**FOC-HCS-GI-1005/M12-C/SCRJ/5**	1416651	1			
Assembled FO round cable, 50/125 µm GOF-MM fiber, M12 FO to M12 FO							
	1 m	**FOC-M12-M12-GB02/1**	1408875	1			
	2 m	**FOC-M12-M12-GB02/2**	1408874	1			
	5 m	**FOC-M12-M12-GB02/5**	1416703	1			
Assembled FO round cable, 50/125 µm GOF-MM fiber, M12 FO to LC duplex							
	1 m	**FOC-M12-LC:A-GB02/1**	1408869	1			
	2 m	**FOC-M12-LC:A-GB02/2**	1408868	1			
	5 m	**FOC-M12-LC:A-GB02/5**	1416664	1			
M12 fiber optic transceiver, duplex, for POF fiber, for PCB mounting, M16 fastening thread, with sealing cap							
Wavelength: 650 nm					**FOC-M12-MNNA-TC-650**	1416716	1
Wavelength: 1300 nm					**FOC-M12-MNNA-TC-1300**	1416729	1
M12 fiber optics coupling, duplex, suitable for all fibers, with wall bracket, IP65 degree of protection					**FOC-M12-BU/BU**	1416677	1
Repair set, 10 replacement ferrules for M12 fiber optic connectors in plastic box							
For 980/1000 µm POF fiber					**FOC-M12-RS-POF**	1406421	1
For 200/230 µm PCF fiber					**FOC-M12-RS-HCS**	1406422	1
For 50/125 µm GOF fiber					**FOC-M12-RS-GOF**	1406423	1
		Accessories			**Accessories**		
Ferrule cleaner, approx. 500 cleaning cycles							
2.50 mm, for ST, SC, FC					**FOC-TOOL-FERRULECLEANER-2.50**	1407029	1

RJ45 connector, IP65/67



RJ45 connector

Technical data

	VS-V1-C-RJ45-MNNA-PG9-8-I-5-S
Electrical data	
Rated voltage	50 V
Rated current	1.75 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Surge voltage category	I
Material data	
Housing material	Zinc die-cast
Inflammability class according to UL 94	V0
Pollution degree	2
Connection data	
Connection method	IDC connection
Connection cross section AWG	27 ... 24 (stranded)
External cable diameter	5 mm ... 10 mm
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP67, with bayonet interlocking, metal housing, CAT5, 8-pos.	**VS-V1-C-RJ45-MNNA-PG9-8-I-5-S**	1419182	1

Accessories

Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ connector	**VS-V1-C-PC-POBK**	1419183	1

RJ45 panel mounting frame, IP65/67



Panel mounting frame with RJ45 coupling module



Panel mounting frame with RJ45 cable connection module

	Technical data	Technical data
Electrical data		
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	CAT5 (IEC 11801:2002)
Housing material	Zinc die-cast	Zinc die-cast
Inflammability class according to UL 94	V0	V0
No. of pos.	8	8
Connection cross section AWG	-	26 ... 22 (stranded)
Insertion/withdrawal cycles	750	750
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 panel mounting frame, IP67, for bayonet locking, metal, **with socket/socket contact insert**, for round mounting cutout, with seal, without mounting screws	**VS-V1-F-RJ45-MNNA-1-C-S-JJ-S**	1419184	1			
RJ45 panel mounting frame, IP67, for bayonet locking, metal, **with contact insert for cable connection,** for round mounting cutout, with seal, without mounting screws				**VS-V1-F-RJ45-MNNA-1-C-S-JI-S**	1419185	1
	Accessories			**Accessories**		
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ panel mounting frame	**VS-V1-F-PC-POBK**	1419186	1	**VS-V1-F-PC-POBK**	1419186	1

FO connector and panel mounting frame, for POF, IP65/67



SC-RJ connector



Panel mounting frame with SC-RJ coupling module

EAC

Technical data

	VS-V1-C-...-A4A-G
Material data	
Housing material	Zinc die-cast
Color	Silver
Degree of protection	IP67
Cable diameter	5 mm ... 10 mm
Insertion/withdrawal cycles	500
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ FO connector, IP67, with bayonet interlocking, metal housing, duplex, with adhesive connection technology For POF fiber	**VS-V1-C-SCRJ-MNNA-PG9-A4A-G**	1419189	1
SC-RJ panel mounting frame, IP67, for bayonet interlocking, metal, SC-RJ to 2 x SC, for round mounting cutout, with seal, without mounting screws, with coupling for: GOF multi mode, POF			

Accessories

Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ connector	**VS-V1-C-PC-POBK**	1419183	1
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ panel mounting frame			

EAC

Technical data

	VS-V1-F-...-C-S-A1
Material data	
Housing material	Zinc die-cast
Color	Silver
Degree of protection	IP67
Cable diameter	-
Insertion/withdrawal cycles	500
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-V1-F-SCRJ-MNNA-PG9-C-S-A1	1420197	1

Accessories

VS-V1-F-PC-POBK	1419186	1

FO connector and panel mounting frame, for GOF, IP65/67



SC-RJ connector



Panel mounting frame with SC-RJ coupling module

EAC

Technical data

	VS-V1-C-SCRJ-MNNA-PG9...
Material data	
Housing material	Zinc die-cast
Inflammability class according to UL 94	V0
Color	Silver
Degree of protection	IP67
Cable diameter	5 mm ... 10 mm
Insertion/withdrawal cycles	500
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ FO connector, IP67, with bayonet interlocking, metal housing, duplex, with adhesive connection technology			
For multi-mode fiber	**VS-V1-C-SCRJ-MNNA-PG9-A1-G**	1419187	1
For single-mode fiber	**VS-V1-C-SCRJ-MNNA-PG9-B1-G**	1419188	1
LC FO connector, IP67, with bayonet interlocking, metal housing, duplex, with adhesive connection technology			
For multi-mode fiber	**VS-V1-C-LC-MNNA-PG9-A1-G**	1419190	1
For single-mode fiber	**VS-V1-C-LC-MNNA-PG9-B1-G**	1419191	1
SC-RJ panel mounting frame, IP67, for bayonet interlocking, metal, SC-RJ to 2 x SC, for round mounting cutout, with seal, without mounting screws, with coupling for:			
GOF multi mode, POF			
Single mode			
LC panel mounting frame, IP67, for bayonet interlocking, metal, for round mounting cutout, with seal, without mounting screws, with coupling for:			
GOF multi mode			
GOF single mode			

Accessories

Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ connector	**VS-V1-C-PC-POBK**	1419183	1
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ panel mounting frame			

EAC

Technical data

	VS-V1-F-SCRJ-MNNA-PG9-C-S...
Material data	
Housing material	Zinc die-cast
Inflammability class according to UL 94	V0
Color	Silver
Degree of protection	IP67
Cable diameter	-
Insertion/withdrawal cycles	500
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-V1-F-SCRJ-MNNA-PG9-C-S-A1	1420197	1
VS-V1-F-SCRJ-MNNA-PG9-C-S-B1	1420207	1
VS-V1-F-LC-MNNA-PG9-C-S-A1	1420210	1
VS-V1-F-LC-MNNA-PG9-C-S-B1	1420223	1

Accessories

VS-V1-F-PC-POBK	1419186	1

RJ45 connector, IP65/67

– Compact design
– IP67 protection class
– Push-pull interlocking



RJ45 connector



Panel mounting frames and RJ45 modules

	Technical data	Technical data
Electrical data		
Transmission characteristics (category)	$CAT6_A$	CAT5
Material data		
Housing material	Plastic	Copper alloy
Inflammability class according to UL 94	V0	V0
Mechanical data		
No. of pos.	8	8
Connection method	Crimp connection	Solder connection
Connection cross section AWG	28 ... 24 (stranded)	-
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP67, with push-pull interlocking (version 4), plastic housing, for 10 Gbps, for 24 ... 28 AWG stranded conductors	**CUC-V04-RJ45-POBK-8**	1407413	1			
RJ45 socket insert, 1-way, for PCB mounting, CAT5, 8-pos., shielded						
Straight solder pins				**CUC-V04-BU-180**	1407409	1
Angled solder pins				**CUC-V04-BU-90**	1407408	1
Panel mounting frame						
For 180° socket insert				**CUC-V04-F-POBK-180**	1407410	1
For 90° socket insert				**CUC-V04-F-POBK-90**	1407411	1
Panel mounting frame set						
Socket/socket				**CUC-V04-F-BU/BU-RJ45**	1407412	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1			
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1			
Crimping pliers, for assembling the RJ45 connectors	**FL CRIMPTOOL**	2744869	1			

RJ45 connector, IP65/67



RJ45 connector



RJ45 connector
with field and crimp connection

	Technical data	Technical data	
	VS-08-RJ45-5-Q/IP67...	VS-08-T-H-RJ45...	VS-08-ST-H...-RJ45
Electrical data			
Rated voltage	50 V	-	125 V
Rated current	1.75 A	-	0.5 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	-	-
Surge voltage category	I	-	I
Material data			
Housing material	PA	PA	-
Contact material	Copper alloy	-	Copper alloy
Inflammability class according to UL 94	V0	V0	V2
Pollution degree	2	-	2
Connection data			
Connection method	IDC fast connection	-	IDC connection technology
Connection cross section AWG	26 ... 24 (solid)	-	27 ... 26 (stranded)
Connection cross section AWG	26 ... 24 (stranded)	-	-
External cable diameter	5 mm ... 8 mm	5 mm ... 8.5 mm	-
Insertion/withdrawal cycles	≥ 1000	≥ 1000	≥ 750
Temperature data			
Ambient temperature (operation)	-20 °C ... 70 °C	-40 °C ... 80 °C	-25 °C ... 60 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG						
Military gray RAL 7042	**VS-08-RJ45-5-Q/IP67**	1656990	1			
Deep black RAL 9005	**VS-08-RJ45-5-Q/IP67-BK**	1658493	1			
Sleeve housing, for VS-08-ST-H...-RJ45 pin insert, for cable diameter of 5.0 mm ... 8.5 mm						
Military gray RAL 7042				**VS-08-T-H-RJ45/IP67**	1652732	5
Deep black RAL 9005				**VS-08-T-H-RJ45/IP67-BK**	1658671	5
RJ45 pin insert, 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief						
CAT5				**VS-08-ST-H11-RJ45**	1652716	5
CAT6				**VS-08-ST-H21-RJ45**	1652729	5
RJ45 pin insert, 8-pos., shielded, IDC pierce connection, for litz wires AWG 27 ... 24, with strain relief						
CAT6				**VS-08-ST-H21P-RJ45**	1404388	5
RJ45 pin insert, $CAT6_A$, 10 Gbps				**VS-08-RJ45-10G/C**	1418853	5
	Accessories			**Accessories**		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Crimp tool, pliers with die, for VS-08-ST-H...-RJ45				**VS-CT-RJ45-H**	1653265	1

RJ45 panel mounting frames and Freenet socket inserts, IP65/67



Keystone panel mounting frames and keystones



Freenet panel mounting frames and modules

Technical data

	VS-08-BU-RJ45-6/KA/LSA
Electrical data	
Nominal voltage U_N	250 V AC
Rated current	2 A
Housing material	Nickel-plated brass
Contact material	Copper alloy
Inflammability class according to UL 94	V0
No. of pos.	8
Connection method	LSA
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-20 °C ... 70 °C

Technical data

	VS-08-BU-RJ45/10G-F	VS-A-F-IP67
Electrical data		
Nominal voltage U_N	50 V	-
Rated current	1 A	-
Housing material	Copper alloy	PA
Contact material	CuSn	-
Inflammability class according to UL 94	V0	V0
No. of pos.	8	-
Connection method	IDC	-
Insertion/withdrawal cycles	≥ 750	≥ 1000
Temperature data		
Ambient temperature (operation)	-10 °C ... 60 °C	-40 °C ... 80 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert, 8-pos., shielded, with cable connection			
CAT6	**VS-08-BU-RJ45-6/KA/LSA**	1653168	5
RJ45 socket insert, 8-pos., shielded, socket to socket			
CAT5	**VS-08-BU-RJ45/BU**	1689064	5
CAT6	**VS-08-BU-RJ45-6-MOD/BU**	1653155	5
RJ45 keystone panel mounting frame, Version 6, for round mounting cutout, with seal and central nut			
Military gray RAL 7042	**VS-08-A-RJ45/MOD-1-R-IP67**	1689844	1
Deep black RAL 9005	**VS-08-A-RJ45/MOD-1-R-IP67 BK**	1658053	5
RJ45 keystone panel mounting frame, Version 6, with rectangular mounting cutout, with seal, without mounting screws			
Military gray RAL 7042	**VS-08-A-RJ45/MOD-1-IP67**	1689080	5
Deep black RAL 9005	**VS-08-A-RJ45/MOD-1-IP67-BK**	1658642	5
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection			
10 Gbps, $CAT6_A$			
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection			
1 Gbps, CAT5			
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket			
1 Gbps, CAT5			
Freenet panel mounting frame, Version 6, for round mounting cutout, with seal, without mounting screws			
Military gray RAL 7042			
Deep black RAL 9005			

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-BU-RJ45/10G-F	1424009	1
VS-08-BU-RJ45-5-F/PK	1652936	1
VS-08-BU/BU-RJ45-F	1405617	1
VS-A-F-IP67	1653744	5
VS-A-F-IP67-BK	1658668	5

Accessories

Protective cover for Version 6 panel mounting frame			
Military gray RAL 7042	**VS-08-SD-F**	1652606	5
Deep black RAL 9005	**VS-08-SD-F-BK**	1658066	5
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

Accessories

VS-08-SD-F	1652606	5
VS-08-SD-F-BK	1658066	5
VS-CABLE-STRIP-VARIO	1657407	1

RJ45 terminal outlets, IP65/IP67

– Robust design
– Including covers to protect against environmental influences
– Integrated cable management system



Terminal outlet with 2 x RJ45 slots

Technical data	
	VS-TO-RO-MCBK-F141...
Electrical data	
Transmission characteristics (category)	CAT5
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet RJ45 IP65/67, 2 slots version 6, with protective plugs, 2 cable entries 2x RJ45	**VS-TO-RO-MCBK-F1418/1418**	1404278	1

Field coupling, IP65/67

– Fixed mounting is also an option
– Including covers to protect against environmental influences



Field coupling with RJ45

Technical data

	VS-08-KU-IP67
Electrical data	
Rated voltage	50 V
Rated current	1 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	PBT
Contact material	Copper alloy
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10 °C ... 60 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 coupling, IP67, CAT5, with protective cover			
Military gray RAL 7042	**VS-08-KU-IP67**	**1689268**	1
Deep black RAL 9005	**VS-08-KU-IP67-BK**	**1658684**	1

FO connectors, IP65/67

Notes:

For further technical data, see:
phoenixcontact.net/products



SC-RJ connector for polymer fiber 980/1000 µm

Technical data

Material data	
Housing material	PA
Ferrule material	Copper alloy
Inflammability class according to UL 94	V0
Color	Gray
Degree of protection	IP67
External cable diameter	5 mm ... 8.5 mm
Wire diameter	2.2 mm
Ferrule diameter	2.50 mm
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-20 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
FO connector SC-RJ, duplex, with fast connection POF fiber 980/1000 µm PCF fiber 200/230 µm GOF, 50/125 µm, multi mode	**VS-SCRJ-POF-FA-IP67**	1657009	1
SC-RJ socket insert, duplex, for VARIOSUB IP67 panel mounting frame, can be used for GOF multi mode, GOF single mode, PCF, and POF fiber types - 1 x SC-RJ/SC-RJ (duplex)			
VS-SC-RJ panel mounting frame, for use with an AVAGO transceiver, type: AFBR 5978Z			
Freenet panel mounting frame, version 6, for round mounting cutout, with seal, without mounting screws Military gray RAL 7042 Deep black RAL 9005			

Accessories

Protective cover SC-RJ/IP67, for covering the SC-RJ pin insert on the SC-RJ/IP67 sleeve housing	**VS-SCRJ-PC**	1653757	5
Protective cover for version 6 panel mounting frame Military gray RAL 7042 Deep black RAL 9005			
Tool set for POF assembly, for field installation of SC connectors	**TF-SCRJ-POF KONF SET**	1405246	1
Tool set for PCF assembly, for field installation of SC connectors			
Tool set for GOF assembly, for field installation of LC and SC connectors			



SC-RJ connector
for PCF fiber 200/230 µm



SC-RJ connector
for 50/125 µm multi mode fiberglass



Panel mounting frame
and SC-RJ coupling module

Technical data

PA	
Copper alloy	
V0	
Gray	
IP67	
5 mm ... 8.5 mm	
2.9 mm	
2.50 mm	
≥ 1000	
-20 °C ... 70 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP67	1657012	1

Accessories

VS-SCRJ-PC	1653757	5
FOC-TOOL-PCF KONF SET	1411051	1

Technical data

PA	
Zirconia ceramics	
V0	
Gray	
IP67	
5 mm ... 8.5 mm	
2.9 mm	
2.50 mm	
≥ 1000	
-20 °C ... 70 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-FA-IP67	1657083	1

Accessories

VS-SCRJ-PC	1653757	5
FOC-TOOL-GOF KONF SET	1411049	1

Technical data

PBT	
Zirconia ceramics	
V0	
Black	
IP20	
-	
-	
2.50 mm	
≥ 500	
-25 °C ... 70 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-BU/BU	1652978	1
VS-SCRJ-A-TC-IP67	1658545	1
VS-A-F-IP67	1653744	5
VS-A-F-IP67-BK	1658668	5

Accessories

VS-08-SD-F	1652606	5
VS-08-SD-F-BK	1658066	5

SC-RJ terminal outlet, IP65/67

- Easy installation, thanks to captive cover screws
- Robust design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet, IP67, with 2 x SC-RJ slots

Technical data

Material data	
Housing material	Aluminum cast alloy, powder-coated
Ferrule material	Zirconia ceramics
Mechanical data	
Color	Black
Degree of protection	IP65/IP67
Fiber type	GOF, HCS, POF
Connection profile	SCRJ according to DIN EN 50377-6-1
Insertion/withdrawal cycles	≥ 500

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet SC-RJ IP65/67, 2 slots version 6, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1420/1420**	**1404317**	1

SC-RJ coupling, IP65/67

– Fixed mounting is also an option
– Including covers to protect against environmental influences
– Can be used for all fiber types



SC-RJ field coupling

Technical data

Material data	
Housing material	PBT
Contact material	-
Ferrule material	Zirconia ceramics
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	2
Color	Gray
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10 °C ... 60 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ coupling, IP67, duplex, can be used for GOF (multi mode and single mode), PCF, and polymer fiber types	**FOC-V06-D1PGY-S/SJBE4**	1410050	1

Push-pull ADVANCE connector, IP65/67

- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal
- Consistent 360° shielding concept



RJ45 connector, straight cable outlet



RJ45 connector, cable outlet at the top

	Technical data		Technical data	
	Ethernet	**PROFINET**	**Ethernet**	**PROFINET**
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)	26 ... 24 (solid)	23 ... 22 (solid)
Transmission speed	10 Gbps	10 Gbps	10 Gbps	10 Gbps
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**Ethernet**		**PROFINET**	
Push-pull ADVANCE, RJ45 industrial connector, IP67, 8-pos.								
Single pack	1407890	1	1407889	1	1468007	1	1408027	1
Pack of 10	1467901	1	1408039	1	1467807	1	1408092	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1	VS-CABLE-STRIP-VARIO	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	MICROFOX-SP-1	1212487	1	MICROFOX-SP-1	1212487	1

Push-pull ADVANCE connector, IP65/67



RJ45 connector, cable outlet at the bottom



RJ45 connector

	Technical data		Technical data	
	Ethernet	**PROFINET**		
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)	27 ... 24 (stranded)	26 ... 22 (solid)
Transmission speed	10 Gbps	10 Gbps	10 Gbps	-
Housing material	Zinc die-cast	Zinc die-cast	Plastic	PA-GF
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5 mm ... 8 mm	5 mm ... 8 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 200	≥ 500
Temperature data				
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-25 °C ... 60 °C	-10 °C ... 60 °C

	Ordering data			Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**					
Push-pull ADVANCE, RJ45 industrial connector, IP67, 8-pos.								
Single pack	1408011	1	1407895	1				
Pack of 10	1467804	1	1408046	1				
Push-pull connector (version 14) for 10 Gbps, with RJ45 crimp connection, for 26 ... 24 AWG stranded conductors, 5.0 mm ... 8.0 mm cable diameter								
Plastic housings					1422205	1		
Push-pull connector (version 14) for PROFINET with RJ45 QUICKON fast connection technology, for 22 AWG 1 and 7-wire conductors, cable diameter of 5.0 mm ... 8.0 mm								
4-pos., 100 Mbps							1608126	1
8-pos., 1 Gbps							1657834	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1			
Protective cover, IP65, with push-pull locking, for covering the contact insert in the push-pull connector for RJ45 and SC-RJ, plastic				**VS-PPC-F1-PC-POBK**	1405316	1
Shielding foil set, 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20				**VS-08-RJ45-FOLIEN-SET**	1417184	1

RJ45 panel mounting frames and Freenet socket inserts, IP65/67



Freenet panel mounting frames and modules



Freenet panel mounting frame with central nut and modules

Technical data

	VS-08-BU-RJ45/10G-F
Electrical data	
Nominal voltage U_N	50 V
Rated current	1 A
Housing material	Copper alloy
Contact material	CuSn
Inflammability class according to UL 94	V0
No. of pos.	8
Connection method	IDC
Insertion/withdrawal cycles	≥ 750
Temperature data	
Ambient temperature (operation)	-10 °C ... 60 °C

Technical data

	VS-08-BU-RJ45-5-F/PK
Electrical data	
Nominal voltage U_N	50 V
Rated current	1 A
Housing material	Copper alloy
Contact material	Copper alloy
Inflammability class according to UL 94	V0
No. of pos.	8
Connection method	IDC
Insertion/withdrawal cycles	≥ 750
Temperature data	
Ambient temperature (operation)	-20 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection 10 Gbps, $CAT6_A$	**VS-08-BU-RJ45/10G-F**	1424009	1
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection 1 Gbps, CAT5	**VS-08-BU-RJ45-5-F/PK**	1652936	1
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket 1 Gbps, CAT5	**VS-08-BU/BU-RJ45-F**	1405617	1
RJ45 Freenet panel mounting frame, version 14, IP65/IP67, for rectangular mounting cutout, with seal, without mounting screws Metal housing	**VS-PPC-F1-RJ45-MNNA-1R-F**	1405358	1
Plastic housings	**VS-PPC-F1-RJ45-POBK-1R-F**	1608197	1
RJ45 Freenet panel mounting frame, version 14, IP65/IP67, for round mounting cutout, with seal and central nut Metal housing			

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-BU-RJ45/10G-F	1424009	1
VS-08-BU-RJ45-5-F/PK	1652936	1
VS-08-BU/BU-RJ45-F	1405617	1
VS-PPC-F1-RJ45-MNNA-1C-F	1405222	1

Accessories

Protective cover for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

Accessories

VS-PPC-C1-PC-ROBK-L	1405293	1
VS-CABLE-STRIP-VARIO	1657407	1

Field couplings, IP65/67



RJ45 and power field coupling with cable connection



RJ45 field coupling with cable connection

	Technical data	Technical data
	VS-MP-PPC/CG-PO/10G	VS-MP-PPC/CG-10G
Electrical data		
Transmission characteristics (category)	$CAT6_A$	$CAT6_A$
Material data		
Housing material	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc
Connection data		
Connection method	Spring connection / IDC	IDC
Connection cross section AWG	-	-
Cable diameter	5 mm ... 8 mm (data cable gland)	5 mm ... 8 mm (data cable gland)
Insertion/withdrawal cycles	> 1000 (data)	> 1000 (data)
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Multi-port connection, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO/10G**	1403682	1	**VS-MP-PPC/CG-10G**	1403678	1
Multi-port power connection: push-pull power, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO**	1403681	1			

	Accessories			Accessories		
Protective cover						
For data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1	**VS-PPC-C1-PC-ROBK-L**	1405293	1
For power port	**VS-PPC-C2-PC-ROBK-L**	1405303	1	**VS-PPC-C2-PC-ROBK-L**	1405303	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

Power and data field couplings, IP65/67

– Fixed mounting is also an option
– Robust design
– Including covers to protect against environmental influences



RJ45 and power field coupling

EAC

Technical data

	VS-MP-PPC/PPC-1G
Electrical data	
Rated voltage	-
Rated current	-
Transmission characteristics (category)	CAT5
Material data	
Housing material	Aluminum press-drawn section / die-cast zinc
Contact material	Phosphor bronze
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65
Temperature data	
Ambient temperature (operation)	-

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Multi-port data coupling: for passive PROFINET cabling to robots, including mounting foot Metal housing	**VS-MP-PPC/PPC-1G**	**1403685**	1
Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/PPC-PO**	**1403684**	1

Terminal outlets, IP65/67

- Easy installation, thanks to captive cover screws
- Robust design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet with 2 x RJ45 slots



Terminal outlet with RJ45 and power slots

	Technical data	Technical data
Electrical data		
Rated voltage	-	-
Rated current	-	-
Transmission characteristics (category)	CAT6	CAT6
Material data		
Housing material	Aluminum cast alloy, powder-coated	Aluminum cast alloy, powder-coated
Mechanical data		
Color	Black	Black
Degree of protection	IP65/IP67	IP65/IP67

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Terminal outlet, IP65/IP67, 2 slots, version 14, with protective plugs, 2 cable entries Push-pull with 2 x RJ45	**VS-TO-RO-MCBK-F1411/1411**	1404281	1			
Terminal outlet, IP65/IP67, 2 slots, version 14, with protective plugs, 2 cable entries Push-pull with 1 x Power and 1 x RJ45				**VS-TO-RO-MCBK-F1411/1413**	1404333	1

Push-pull power connector, IP65/67

- Fixed coding for PROFINET
- Flexible coding (on request)
- Various solder versions
- Spring connection



Push-pull connector



Push-pull panel mounting side

	Technical data	Technical data	
	VS-PPC-C2-MSTB-MNNA...	VS-MSTBA...-BK-A	VS-PPC-F2-MSTB-MNNA...
Electrical data			
Rated current	16 A	16 A	-
Material data			
Housing material	Zinc die-cast	-	Zinc die-cast
Inflammability class according to UL 94	V0	V0	V0
Conductor cross section	0.75 mm² ... 2.5 mm²	-	-
Connection cross section AWG	18 ... 13	-	-
Insertion/withdrawal cycles	≤ 100	≥ 100	≥ 500
Temperature data			
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 80 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Connector MSTB, IP67, with a push-pull interlock, 5-pos., with a spring, for cable diameter 9.0 mm ... 13.0 mm						
Metal housing, 24 V	**VS-PPC-C2-MSTB-MNNA-P13-A5-SP**	1608074	1			
Plastic housing, 24 V	**VS-PPC-C2-MSTB-POBK-P13-A5-SP**	1657892	1			
Plastic housing, 400 V	**VS-PPC-C2-MSTB-POBK-P13-B5-SP**	1608236	1			
MSTB contact insert, for PCB mounting, 24 V, 5-pos., RAL 9005 (black), for VS-PPC-F2-MSTB-...-1R-P panel mounting frame						
Angled solder pins				**VS-MSTBAH 2,5/ 5-GB-5,08-BK-A**	1657915	50
Straight solder pins				**VS-MSTBVA 2,5/ 5-GB-5,08-BK-A**	1609565	50
MSTB contact insert, for PCB mounting, 400 V, 5-pos., RAL 3000 (red), for VS-PPC-F2-MSTB-...-1R-P panel mounting frame						
Angled solder pins				**VS-MSTBAH 2,5/ 5-GB-5,08-RD-B**	1609549	50
Straight solder pins				**VS-MSTBVA 2,5/ 5-GB-5,08-RD-B**	1609581	50
MSTB panel mounting frame, IP67, for Push-pull locking, for PCB connection, for rectangular assembly opening, with gasket, without mounting screws						
Metal housing				**VS-PPC-F2-MSTB-MNNA-1R-P**	1608087	1
Plastic housing				**VS-PPC-F2-MSTB-POBK-1R-P**	1608281	1
MSTB panel mounting frame, IP67, for push-pull locking, with an integrated contact insert for conductor connection, spring connection, for rectangular mounting cutout, with seal, without mounting screws						
24 V, plastic				**VS-PPC-F2-MSTB-POBK-1R-SPSA5**	1608294	1
400 V, plastic				**VS-PPC-F2-MSTB-POBK-1R-SPSB5**	1608304	1
24 V, metal				**VS-PPC-F2-MSTB-MNNA-1R-SPSA5**	1608249	1
400 V, metal				**VS-PPC-F2-MSTB-MNNA-1R-SPSB5**	1608252	1
MSTB panel mounting frame, IP67, for push-pull locking, metal, with an integrated contact insert for conductor connection, spring, for round mounting cutout, with seal, without mounting screws						
24 V				**VS-PPC-F2-MSTB-MNNA-1C-SPSA5**	1405248	1
400 V				**VS-PPC-F2-MSTB-MNNA-1C-SPSB5**	1405167	1
Protective cover, IP67, to cover the contact insert in the push-pull panel mounting frame Power						
Metal housing				**VS-PPC-C2-PC67-MNNA**	1404045	1
Protective cover						
For power port				**VS-PPC-C2-PC-ROBK-L**	1405303	1
Protective cap, IP65, with push-pull locking for covering the contact insert in the push-pull connector for Power, plastic						
				VS-PPC-F2-PC-POBK	1405329	1

Push-pull power distributor, IP65/67



Push-pull Y-distributor



Push-pull H-distributor

	Technical data	Technical data
	VS-PPC-J-1220-1227-1020-0,2	VS-PPC-J-4X-1227
Electrical data		
Rated voltage	24 V	24 V
Rated current	16 A	16 A
Material data		
Housing material	Aluminum die-cast	Zinc die-cast
Mechanical data		
No. of pos.	5	5
Degree of protection	IP65/IP67	IP65/IP67
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)	-40 °C ... 70 °C

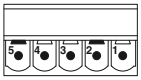
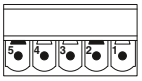
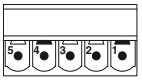
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, **MSTB connector** with metal housing to 2 x socket in the metal housing, cable length:						
0.2 m	**VS-PPC-J-1220-1227-1020-0,2**	1404799	1			
Variable	**VS-PPC-J-1220-1227-1020-...**	1405484	1			
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, **7/8" connector** with metal housing to 2 x socket in the metal housing, cable length:						
0.2 m	**VS-PPC-J-1226-1227-1021-0,2**	1404812	1			
Variable	**VS-PPC-J-1226-1227-1021-...**	1405497	1			
Power H distributor, 4 x MSTB contact inserts, metal housing, without mounting screws				**VS-PPC-J-4X-1227**	1405387	1
	Accessories			**Accessories**		
Mounting foot for power distributors, plastic	**VS-PPC-J-M**	1405390	1	**VS-PPC-J-M**	1405390	1

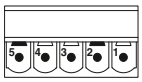
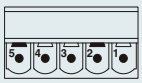
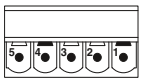
Ordering example for articles with variable cable:

For a distributor with a cable length of 34.5 m, the order data is as follows:

Order No.		Length [m]
1405484	/	**34.5** **Increment:** 0.5 m; **Maximum length:** 50 m

Assembled POWER cables 2.5 mm²

	Power, metal, 24 V	Power, plastic, 24 V	Power, plastic, 400 V
			
			

	Ordering data		Ordering data		Ordering data	Ordering data		Ordering data	
Power, metal, 24 V		**Order No.**		**Order No.**	**Order No.**		**Order No.**		**Order No.**
 	1 m	1609170							
	2 m	1609183							
	5 m	1609196							
	Variable	1609206							
Power, plastic, 24 V									
 			1 m	1609251					
			2 m	1609264					
			5 m	1609277					
			Variable	1609280					
Power, plastic, 400 V									
 							1 m	1609374	
							2 m	1609387	
							5 m	1609390	
							Variable	1609400	

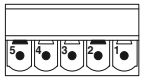
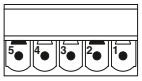
Ordering example for cable with variable cable length:

Assembled PROFINET Power cable for 24 V, with two push-pull connectors in metal design and a cable length of 34.5 m.

Order No.		Length [m] Max. 100 m
1609206	/	34.5
1609280 1609400		**Increments:** 1.0 m ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

		Technical data	Technical data	Technical data
Technical data		**Power, metal, 24 V**	**Power, plastic, 24 V**	**Power, plastic, 400 V**
Housing material		Zinc die-cast	PA-GF	PA-GF
Outer sheath, material		PVC	PVC	PVC
Conductor cross section	[mm²]	2.5	2.5	2.5
External cable diameter	[mm]	11.8	11.8	11.8
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67
Ambient temperature				
Fixed installation	[°C]	-40 ... 70	-40 ... 70	-40 ... 70
Flexible installation	[°C]	-5 ... 70	-5 ... 70	-5 ... 70
Plug/socket	[°C]	-40 ... 70	-40 ... 70	-40 ... 70

Assembled POWER cables 1.5 mm²

	Power, metal, 24 V	Power, plastic, 24 V
		
		

		Ordering data		Ordering data		Ordering data
Power, 7/8"			**Order No.**		**Order No.**	**Order No.**
		1 m	1609219	1 m	1609293	
		2 m	1609222	2 m	1609303	
		5 m	1609235	5 m	1609316	
		Variable	1609248	Variable	1609329	

Ordering example for cable with variable cable length:

Assembled PROFINET Power cable for 24 V, with one push-pull connector in metal design and a 7/8" connector and a cable length of 34.5 m.

Order No.		Length [m] Max. 100 m
1609248	/	34.5
1609329		**Increments:** 1.0 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

		Technical data	Technical data
Technical data		**Power, plastic, 24 V**	**Power, metal, 24 V**
Housing material		Zinc die-cast/PBT	PA-GF/PBT
Outer sheath, material		PVC	PVC
Conductor cross section	[mm²]	1.5	1.5
External cable diameter	[mm]	10	10
Degree of protection		IP65/IP67	IP65/IP67
Ambient temperature			
Fixed installation	[°C]	-40 ... 70	-40 ... 70
Flexible installation	[°C]	-5 ... 70	-5 ... 70
Plug/socket	[°C]	-40 ... 70	-40 ... 70

Push-pull ADVANCE connector, IP65/67

– Available for POF, PCF, and GOF
– Easy handling, thanks to one-piece design
– Locking system to prevent unintentional removal



SC-RJ connector, straight cable outlet



SC-RJ connector, cable outlet at the top

	Technical data			Technical data		
	POF	PCF	GOF	POF	PCF	GOF
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Temperature data						
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	POF		PCF		GOF		POF		PCF		GOF	
Push-pull ADVANCE, SC-RJ connector												
Single pack	1407896	1	1407897	1	1407898	1	1408028	1	1408029	1	1408030	1
Pack of 10	1408047	1	1408048	1	1408049	1	1408093	1	1408094	1	1408095	1

	Accessories			Accessories		
Tool set for POF assembly, for field installation of SC connectors	TF-SCRJ-POF KONF SET	1405246	1	TF-SCRJ-POF KONF SET	1405246	1
Tool set for PCF assembly, for field installation of SC connectors	FOC-TOOL-PCF KONF SET	1411051	1	FOC-TOOL-PCF KONF SET	1411051	1
Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1	FOC-TOOL-GOF KONF SET	1411049	1

Push-pull ADVANCE connector, IP65/67



SC-RJ connector, cable outlet at the bottom



SC-RJ connector

	Technical data			Technical data	
	POF	PCF	GOF	POF	PCF
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	PA-GF	PA-GF
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	6.5 mm ... 9.5 mm	6.5 mm ... 9.5 mm
Insertion/withdrawal cycles	≥ 50	≥ 50	≥ 50	≥ 500	≥ 500
Temperature data					
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-20 °C ... 70 °C	-20 °C ... 70 °C

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	POF		PCF		GOF		POF		PCF			
Push-pull ADVANCE, SC-RJ connector												
Single pack	1407902	1	1407904	1	1407905	1						
Pack of 10	1408053	1	1408055	1	1408056	1						
FO connector SC-RJ, IP67, with push-pull locking, duplex, with fast connection technology												
Plastic housings							1657850	1	1657863	1		

	Accessories			Accessories		
Tool set for POF assembly, for field installation of SC connectors	TF-SCRJ-POF KONF SET	1405246	1	TF-SCRJ-POF KONF SET	1405246	1
Tool set for PCF assembly, for field installation of SC connectors	FOC-TOOL-PCF KONF SET	1411051	1	FOC-TOOL-PCF KONF SET	1411051	1
Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1			

FO connectors, panel mounting frames, and couplings



SC-RJ panel mounting side

Technical data

	Metal housing	Plastic housing
Material data		
Housing material	Zinc die-cast	PA-GF
Ferrule material	-	-
Inflammability class according to UL 94	V0	V0
Color	Silver	Black
Degree of protection	IP65/IP67	IP65/IP67
Insertion/withdrawal cycles	≥ 500	≥ 500
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ panel mounting frame, IP67, for push-pull locking, for rectangular mounting cutout, for **AVAGO transceiver (type: AFBR5978BZ)** on PCB, with seal, without mounting screws			
Metal housing	**VS-PPC-F1-SCRJ-MNNA-1RP**	**1608061**	1
Plastic housing	**VS-PPC-F1-SCRJ-POBK-1RP**	**1657889**	1
SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling, for push-pull interlocking, for square mounting cutout, with grommet, without mounting screws			
Metal housing	**VS-PPC-F1-SCRJ-MNNA-1RF**	**1405374**	1
Plastic housing	**VS-PPC-F1-SCRJ-POBK-1RF**	**1608210**	1
SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling, for push-pull interlocking, for round mounting cutout, with seal			
	VS-PPC-F1-SCRJ-MNNA-1C-F	**1405235**	1

Accessories

Protective cover for data port	**VS-PPC-C1-PC-ROBK-L**	**1405293**	1

Power and data field couplings, IP65/67



SC-RJ and power field coupling with cable connection



SC-RJ field coupling with cable connection

Technical data

	VS-MP-PPC/CG-PO/FO	VS-MP-PPC/CG-PO
Material data		
Housing material	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc
Connection data		
Connection profile	Data/power: SCRJ/5-pos.	Power: 5-pos.
Insertion/withdrawal cycles	≥ 500 (data) // ≤ 100 (power)	≤ 100 (power)
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Multi-port connection, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO/FO**	1404321	1
Multi-port power connection: push-pull power, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO**	1403681	1
Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/PPC-PO**	1403684	1

Accessories

Protective cover			
for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1
for power port	**VS-PPC-C2-PC-ROBK-L**	1405303	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

Technical data

	VS-MP-PPC/CG-FO
Material data	
Housing material	Aluminum press-drawn section / die-cast zinc
Connection data	
Connection profile	Data: SCRJ
Insertion/withdrawal cycles	≥ 500 (data)
Temperature data	
Ambient temperature (operation)	-40 °C ... 70 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-MP-PPC/CG-FO	1404319	1

Accessories

VS-CABLE-STRIP-VARIO	1657407	1

Terminal outlet and coupling, IP65/67

- Easy installation, thanks to captive cover screws
- Robust design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet with SC-RJ and power slots



SC-RJ field coupling

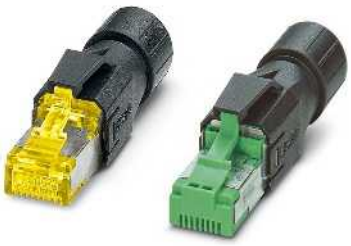
	Technical data	Technical data
Material data		
Housing material	Aluminum cast alloy, powder-coated	Zinc die-cast
Connection data		
Connection profile	-	-
Insertion/withdrawal cycles	-	>= 500
Temperature data		
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Terminal outlet SC-RJ/Power IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1417/1413**	1404346	1			
Terminal outlet SC-RJ IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1417/1417**	1404320	1			
SC-RJ push-pull coupling, IP67, metal, with protective cover, color: nickel-plated				**VS-PPC-J-1-SCRJ-MNBK**	1405206	1

RJ45 connector, IP20



RJ45 crimp connectors



RJ45 field connection connectors

	Technical data		Technical data	
	VS-08-RJ45-10G/C	VS-08-ST-H...-RJ45	VS-08-RJ45-10G/Q	VS-...-RJ45-...-Q...
Electrical data				
Transmission characteristics (category)	$CAT6_A$	-	$CAT6_A$ (IEC 60512-27-100:2008, TIA-568-C.2:2009)	CAT5 (IEC 11801:2002)
Surge voltage category	I	I	I	I
Material data				
Housing material	-	-	PA 6.6	PA 6.6
Contact material	Phosphor bronze	Copper alloy	CuSn	CuSn
Inflammability class according to UL 94	V2	V2	V2	V2
Pollution degree	-	2	2	2
External cable diameter	-	-	4.5 mm ... 8 mm	4.5 mm ... 8 mm
Insertion/withdrawal cycles	-	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-25 °C ... 60 °C	-25 °C ... 60 °C	-40 °C ... 70 °C	-20 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP20, **$CAT6_A$**, 8-pos., with QUICKON fast connection technology, for 1-wire and 7-wire AWG 26 ... 24 conductors, color: black				**VS-08-RJ45-10G/Q**	1419001	1
RJ45 connector, IP20, CAT5, 8-pos., with QUICKON fast connection technology, for 1 and 7-wire conductors 26 ... 24 AWG						
Gray				**VS-08-RJ45-5-Q/IP20**	1656725	1
Black				**VS-08-RJ45-5-Q/IP20 BK**	1658008	1
RJ45 connector, 4-pos., with QUICKON fast connection technology, for 22 AWG, color: gray				**VS-PN-RJ45-5-Q/IP20**	1658435	1
RJ45 pin insert, $CAT6_A$, 10 Gbps	**VS-08-RJ45-10G/C**	1418853	5			
RJ45 pin insert, 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief						
CAT5	**VS-08-ST-H11-RJ45**	1652716	5			
RJ45 bend protection sleeve, for VS-08-ST-H11-RJ45 and VS-08-RJ45-10G/C pin inserts, for cable diameters up to 7 mm						
Gray	**VS-08-KS-H/GY**	1654743	5			
Green	**VS-08-KS-H/GN**	1654756	5			
	Accessories			**Accessories**		
Crimp tool, pliers with die, for VS-08-ST-H...-RJ45	**VS-CT-RJ45-H**	1653265	1			
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Shielding foil set, 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20				**VS-08-RJ45-FOLIEN-SET**	1417184	1

RJ45 industrial connector, IP20

- Optimized for industrial use with a high degree of resistance to vibration
- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Metal locking mechanism



RJ45 industrial, straight cable outlet



RJ45 industrial, cable outlet at the bottom and top

	Technical data		Technical data	
	Ethernet	**PROFINET**	**Ethernet**	**PROFINET**
Degree of protection	IP20	IP20	IP20	IP20
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)	26 ... 24 (solid)	23 ... 22 (solid)
Connection cross section AWG	26 ... 24 (stranded)	23 ... 22 (stranded)	26 ... 24 (stranded)	23 ... 22 (stranded)
Transmission speed	10 Gbps	10 Gbps	10 Gbps	10 Gbps
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C	-40 °C ... 70 °C

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**Ethernet**		**PROFINET**	
RJ45 industrial connector, 8-pos.								
Single pack	1406333	1	1406334	1				
Pack of 30	1406351	1	1406352	1				
RJ45 industrial connector, 8-pos., cable outlet at the bottom								
Single pack					1406339	1	1406340	1
Pack of 30					1406357	1	1406358	1
RJ45 industrial connector, 8-pos., cable outlet at the top								
Single pack					1406336	1	1406337	1
Pack of 30					1406354	1	1406355	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1	**MICROFOX-SP-1**	1212487	1
Markers for terminal blocks, roll, unmarked, can be marked with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1						
White	**TMT 5 R**	0816430	1	**TMT 5 R**	0816430	1
Red	**TMT 5 R RD**	0816427	1	**TMT 5 R RD**	0816427	1
Green	**TMT 5 R GN**	0816401	1	**TMT 5 R GN**	0816401	1
Marker for terminal blocks, sheet, white, unmarked, can be marked with: BLUEMARK CLED, BLUEMARK LED, plotter	**UC-TMF 5**	0818153	10	**UC-TMF 5**	0818153	10

RJ45 panel mounting frames and inserts, IP20



Keystone panel mounting frames and keystones

Technical data

	VS-08-BU-RJ45-6/KA/LSA
Electrical data	
Rated current	2 A
Transmission characteristics (category)	-
Material data	
Housing material	Nickel-plated brass
Contact material	Copper alloy
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	8
Connection method	LSA
Conductor cross section	0.13 mm² ... 0.32 mm² (solid)
Connection cross section AWG	26 ... 22 (solid)
Temperature data	
Ambient temperature (operation)	-20 °C ... 70 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert, 8-pos., shielded, socket to socket CAT5	**VS-08-BU-RJ45/BU**	1689064	5
RJ45 socket insert, 8-pos., shielded, with cable connection CAT6	**VS-08-BU-RJ45-6/KA/LSA**	1653168	5
RJ45 panel mounting frame, single, for modular socket inserts (keystone), without mounting screws	**VS-08-A-RJ45/MOD-1-IP20**	1689433	5

Accessories

Split-core tool, for connecting the copper wires to the LSA Plus strips	**CT-WZ/A**	2765505	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

RJ45 patch panel IP20



Patch panel
with various connection types



Patch panel
with IDC fast connection

	Technical data	Technical data
	FL-PP-RJ45-...	VS-PP-F-RJ45-CAT6
Electrical data		
Rated voltage	-	50 V
Rated current	-	1 A
Transmission characteristics (category)	-	-
Material data		
Housing material	PVC / PA	PC-GF
Contact material	-	Copper alloy
Inflammability class according to UL 94	-	V0
Mechanical data		
No. of pos.	-	8
Color	Green	Gray
Degree of protection	IP20	IP20
Connection method	-	IDC fast connection
Conductor cross section	-	0.2 mm² ... 0.32 mm²
Connection cross section AWG	-	24 ... 22
Temperature data		
Ambient temperature (operation)	-25 °C ... 70 °C	-10 °C ... 60 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Patch panel, one **RJ45 socket to 8 IDC connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to LSA connection terminal blocks	**FL-PP-RJ45-LSA**	2901645	1			
Patch panel, one **RJ45 socket to 8 screw connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to screw connection terminal blocks	**FL-PP-RJ45-SC**	2901643	1			
Patch panel, two RJ45 sockets (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
	FL-PP-RJ45/RJ45	2901646	1			
Patch panel, one **RJ45 socket to 8 connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to spring connection terminal blocks	**FL-PP-RJ45-SCC**	2901642	1			
RJ45 patch panel, DIN rail mounting, IP20, CAT6						
for 1 Gbps				**VS-PP-F-RJ45-CAT6**	1658118	1
RJ45 patch panel, DIN rail mounting, IP20, $CAT6_A$						
for 10 Gbps				**VS-PP-F-RJ45-10G**	1403154	1

FO connectors, IP20



POF, 980/1000 µm



PCF, 200/230 µm, 2.9 mm

	Technical data	Technical data
Material data		
Housing material	PBT	PBT
Ferrule material	Copper alloy	Copper alloy
Inflammability class according to UL 94	V0	V0
Color	Black	Black
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 1000	≥ 1000
Temperature data		
Ambient temperature (operation)	-20 °C ... 70 °C	-20 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
FO connector SC-RJ, duplex, with fast connection						
IP20	**VS-SCRJ-POF-FA-IP20**	1654879	1			
IP20, for single wire diameter: 2.9 mm				**VS-SCRJ-HCS-FA-IP20**	1654866	1
IP20, for single wire diameter: 2.2 mm						
FO connector for 200/230 µm PCF fibers, crimp connection						
- SC-RJ						
- SC duplex						
Connector set for polymer fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection						
- F-SMA set, 4 connectors	**PSM-SET-FSMA/4-KT**	2799720	1			
Connector set for PCF fibers (diameter of the individual elements: 2.9 mm), for self-assembly, with bend protection						
- F-SMA set, 4 connectors				**PSM-SET-FSMA/4-HCS**	2799487	1
- B-FOC (ST®) set, 4 connectors				**PSM-SET-B-FOC/4-HCS**	2708481	1
Connector set for PROFINET PCF fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection						
- SC duplex set, 2 duplex connectors						
- B-FOC (ST®) set, 4 connectors						
	Accessories			**Accessories**		
Tool set for POF assembly, for field installation of SC connectors	**TF-SCRJ-POF KONF SET**	1405246	1			
Tool set for PCF assembly, for field installation of SC connectors						



PCF, 200/230 µm, 2.2 mm



PCF, 200/230 µm

EAC

Technical data	
PBT	
Copper alloy	
V0	
Black	
IP20	
≥ 1000	
-20 °C ... 70 °C	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP20-PN	**1404087**	1
PSM-SET-SC-DUPLEX/2-HCS/PN	**2313779**	1
PSM-SET-B-FOC/4-HCS/PN	**2313782**	1

Accessories		

Technical data	
PBT	
Zirconia ceramics	
V0	
Beige	
IP20	
≥ 500	
-40 °C ... 70 °C	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
FOC-C-SCRJ-PCF	**1411304**	1
FOC-C-SCDU-PCF	**1411305**	1

Accessories		
FOC-TOOL-PCF KONF SET	**1411051**	1

FO connector, IP20, field connection

– Cleave technology
– Reusable connectors
– Optimum attenuation values with easy assembly
– No bonding or polishing

new



LC duplex connector, 1.25 mm - ferrules

new



LC simplex connector for pigtails, 1.25 mm - ferrules

	Technical data	Technical data
Material data		
Housing material	-	-
Ferrule material	Zirconia ceramics	Zirconia ceramics
Inflammability class according to UL 94	V0	V0
Color	Beige	Beige
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500 (according to IEC 61300-2-2)	≥ 500 (according to IEC 61300-2-2)
Temperature data		
Ambient temperature (operation)	-10 °C ... 70 °C (IEC 61300-2)	-10 °C ... 70 °C (IEC 61300-2)

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
FO connector, fast connection, reusable						
GOF, 50/125 µm, multi mode	**FOC-C-LCDU-GOF-MM**	1411052	1	**FOC-C-LC:P-GOF-MM**	1411294	1
GOF, 9/125 µm, single mode (APC)	**FOC-C-LCDU-GOF-SM-APC**	1412472	1	**FOC-C-LC:P-GOF-SM-APC**	1412476	1
GOF, 9/125 µm, single mode (PC)	**FOC-C-LCDU-GOF-SM-PC**	1411053	1	**FOC-C-LC:P-GOF-SM-PC**	1411295	1
FO connector, fast connection, reusable, **value pack**						
GOF, 50/125 µm, multi mode	**FOC-C-LCDU-GOF-MM/10**	1411298	1			
GOF, 9/125 µm, single mode (APC)	**FOC-C-LCDU-GOF-SM-APC/10**	1412479	1			
GOF, 9/125 µm, single mode (PC)	**FOC-C-LCDU-GOF-SM-PC/10**	1411299	1			
	Accessories			**Accessories**		
Tool set for GOF assembly, for field installation of LC and SC connectors	**FOC-TOOL-GOF KONF SET**	1411049	1	**FOC-TOOL-GOF KONF SET**	1411049	1

new



SC duplex connector, 2.5 mm - ferrules

new



SC simplex connector for pigtails, 2.5 mm - ferrules

new



SC-RJ connector, 2.5 mm - ferrules

Technical data

-	-
Zirconia ceramics	Zirconia ceramics
V0	V0
Green	Blue
IP20	IP20
≥ 500 (according to IEC 61300-2-2)	≥ 500 (according to IEC 61300-2-2)
-10 °C ... 70 °C (IEC 61300-2)	-10 °C ... 70 °C (IEC 61300-2)

Ordering data

Type	Order No.	Pcs. / Pkt.
FOC-C-SCDU-GOF-MM	**1411292**	1
FOC-C-SCDU-GOF-SM-APC	**1412474**	1
FOC-C-SCDU-GOF-SM-PC	**1411293**	1
FOC-C-SCDU-GOF-MM/10	**1411302**	1
FOC-C-SCDU-GOF-SM-APC/10	**1412481**	1
FOC-C-SCDU-GOF-SM-PC/10	**1411303**	1

Accessories

FOC-TOOL-GOF KONF SET	**1411049**	1

Technical data

-	-
Zirconia ceramics	Zirconia ceramics
V0	V0
Green	Blue
IP20	IP20
≥ 500 (according to IEC 61300-2-2)	≥ 500 (according to IEC 61300-2-2)
-10 °C ... 70 °C (IEC 61300-2)	-10 °C ... 70 °C (IEC 61300-2)

Ordering data

Type	Order No.	Pcs. / Pkt.
FOC-C-SC:P-GOF-MM	**1411296**	1
FOC-C-SC:P-GOF-SM-APC	**1412478**	1
FOC-C-SC:P-GOF-SM-PC	**1411297**	1

Accessories

FOC-TOOL-GOF KONF SET	**1411049**	1

Technical data

-	-
Zirconia ceramics	Zirconia ceramics
V0	V0
Green	Beige
IP20	IP20
≥ 500 (according to IEC 61300-2-2)	≥ 500 (according to IEC 61300-2-2)
-10 °C ... 70 °C (IEC 61300-2)	-10 °C ... 70 °C (IEC 61300-2)

Ordering data

Type	Order No.	Pcs. / Pkt.
FOC-C-SCRJ-GOF-MM	**1411290**	1
FOC-C-SCRJ-GOF-SM-APC	**1412473**	1
FOC-C-SCRJ-GOF-SM-PC	**1411291**	1
FOC-C-SCRJ-GOF-MM/10	**1411300**	1
FOC-C-SCRJ-GOF-SM-APC/10	**1412480**	1
FOC-C-SCRJ-GOF-SM-PC/10	**1411301**	1

Accessories

FOC-TOOL-GOF KONF SET	**1411049**	1

Fiber optic couplings

Suitable for fiber types:
– POF (980/1000 µm), PCF (200/230 µm), GOF MM (50/125 µm), GOF SM (9/125 µm)



SC-RJ coupling



Couplings for connecting FO cables

	Technical data	Technical data
Material data		
Housing material	PBT	-
Ferrule material	Zirconia ceramics	-
Inflammability class according to UL 94	V0	-
Color	Black	-
Degree of protection	IP20	-
Insertion/withdrawal cycles	≥ 500	-
Temperature data		
Ambient temperature (operation)	-25 °C ... 70 °C	-

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ coupling, for VS-TO-... terminal outlets and 19" VS-PP-19-1HE-16-F patch panels, and VS-SI-FP-2F front plate	**VS-SCRJ-GOF-KU**	1654358	1			
Coupling; set, consisting of:						
- 2x F-SMA/F-SMA				**PSM-SET-FSMA-LINK/2**	2799416	1
- 2x B-FOC (ST®)/B-FOC (ST®)				**PSM-SET-BFOC-LINK/2**	2799429	1
- 1 x SC-RJ/SC-RJ (duplex)				**VS-SCRJ-GOF-BU/BU**	1652978	1
- 1 x LC/LC (duplex, multi-mode fiber)				**FL MM PATCH COUPLER LC-LC**	2700312	1
- 1 x LC/LC (duplex, single-mode fiber)				**FL SM PATCH COUPLER LC-LC**	2700313	1
- 1x SC duplex/SC duplex				**FL COUPLER SC-DUPLEX**	2901788	1

FO patch panel and splice box

Patch panel suitable for fiber types:
– POF (980/1000 µm), PCF (200/230 µm), GOF MM (50/125 µm), GOF SM (9/125 µm)

Splice box:
– Compact dimensions despite large splice comb
– Snap-in adapter for easy DIN rail mounting
– Ready for equipotential bonding
– Suitable for industrial applications



SC-RJ patch panel, socket/socket



Splice box for DIN rail

	Technical data	Technical data
Material data		
Housing material	PC-GF	Sheet steel
Ferrule material	Zirconia ceramics	-
Inflammability class according to UL 94	V0	V0
Color	Gray	Light gray RAL 7035
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500	> 500
Temperature data		
Ambient temperature (operation)	-10 °C ... 60 °C	-25 °C ... 70 °C (according to IEC 61300-2)

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ patch panel, DIN rail mounting, IP20, 1 slot	**VS-PP-F-SCRJ**	1658121	1			
Splice box, for DIN rail, robust metal housing, for GOF multi mode						
6 x LC duplex				**FOC-PP-SB-LC:6**	1411901	1
6 x SC duplex				**FOC-PP-SB-SC:6**	1411902	1
12 x ST				**FOC-PP-SB-ST:6**	1411903	1
	Accessories			**Accessories**		
Cable gland, M20				**G-INS-M20-S68N-PNES-GY**	1411125	5
Locking nut, M20				**A-INL-M20-P-GY**	1411207	5

Accessories for processing fiber optics





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Ceramic blade	**FOC-TOOL-CERAMIC-BLADE**	1407019	1			
Solvent dispenser, 100 ml, lockable pump dispenser				**FOC-TOOL-DISPENSER**	1406995	1

Polishing fiber optic connectors





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Polishing film, silicon carbide						
15 µm	**FOC-POLISHINGFILM-SK-15.0**	1407034	25			
Polishing film, ALO^2						
1 µm	**FOC-POLISHINGFILM-AO-01.0**	1407037	25			
3 µm	**FOC-POLISHINGFILM-AO-03.0**	1407039	25			
Polishing film, diamond						
0.1 µm	**FOC-POLISHINGFILM-D-00.1**	1407046	10			
1 µm	**FOC-POLISHINGFILM-D-01.0**	1407042	10			
9 µm	**FOC-POLISHINGFILM-D-09.0**	1407044	10			
Polishing disc						
1.25 mm, for LC				**FOC-POLISHINGDISC-1.25**	1407024	1
2.50 mm, for ST, SC, FC				**FOC-POLISHINGDISC-2.50**	1407021	1

Cleaning tools for fiber optic connection technology





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Ferrule cleaner, approx. 500 cleaning cycles						
1.25 mm, for LC	**FOC-TOOL-FERRULECLEANER-1.25**	1407032	1			
2.50 mm, for ST, SC, FC	**FOC-TOOL-FERRULECLEANER-2.50**	1407029	1			
Stick cleaner for couplings and plug end faces						
1.25 mm, for LC				**FOC-TOOL-STICKCLEANER-1.25**	1407000	1
2.50 mm, for ST, SC, FC				**FOC-TOOL-STICKCLEANER-2.50**	1407002	1

Tool for processing fiber optics





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Fiber stripper, for stripping the coating from 250 µm to 125 µm						
For 1 fiber	**FOC-TOOL-STRIPPING-1HOLE-250**	1407004	1			
For 2 fibers	**FOC-TOOL-STRIPPING-2HOLE-250**	1407008	1			
T-stripper						
AWG 18 ... 10/1.0 mm ... 2.6 mm				**FOC-TOOL-STRIPPING-T-1**	1407016	1
AWG 30 ... 22/0.25 mm ... 0.64 mm				**FOC-TOOL-STRIPPING-T-2**	1407014	1
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum, Kevlar fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint						
				CUTFOX-ES	1212621	1

Tools for FO cabling, POF

- For quick and easy field assembly
- No bonding or polishing
- Blade can be replaced easily on site
- Optimum attenuation values with easy assembly
- Reusable connectors





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Polishing tool set SC-RJ, for polymer fiber, for field assembly of SC-RJ/IP20 and SC-RJ/IP67 connectors with fast connection system	VS-SCRJ-POF-KONFTOOL-POLISH	1658820	1			
Refill set for VS-SC-RJ-POF-KONFTOOL-POLISH, consisting of two polishers and a polishing disc - For SCRJ connectors	VS-SCRJ-POF-POLISH	1656673	1			
Tool set for POF assembly, for field installation of SC connectors.				TF-SCRJ-POF KONF SET	1405246	1
Cutting tool, SC-RJ, for polymer fiber				CUTFOX-SCRJ-POF	1405247	1
Sheath stripping tool, for polymer fiber				WIREFOX-PN POF	1405249	1
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum, Kevlar fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint				CUTFOX-ES	1212621	1

Tools for FO cabling, PCF

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool set for PCF assembly, for field installation of SC connectors	FOC-TOOL-PCF KONF SET	1411051	1

Tools for FO cabling, GOF

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly
- Reusable connectors



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1

Ethernet RJ45, patch cables



Ethernet

	RJ45 connector, IP20, straight		RJ45 connector, IP20, angled	
				
	Ordering data		Ordering data	
		Order No.		Order No.
RJ45 connector, IP20, straight 	0.3 m	1417993	0.3 m	1418002
	0.5 m	1418028	0.5 m	1418031
	1 m	1418057	1 m	1418070
	2 m	1418109	2 m	1418125
	5 m	1418141	5 m	1418154
RJ45 connector, IP20, angled 			0.3 m	1418015
			0.5 m	1418044
			1 m	1418099
			2 m	1418138
			5 m	1418167

Notes:

For information about the cable qualities, see page 445

Pin RJ45*)	Pin RJ45*)	Wire color	Signal
1	1	WHOG	D1+
2	2	OG	D1–
5	5	WHBU	D3+
4	4	BU	D3–
3	3	WHGN	D2+
6	6	GN	D2–
7	7	WHBN	D4+
8	8	BN	D4–

*) RJ45 assignment according to TIA568B

		Technical data
		Patch cable
Transmission characteristics (category)		CAT5
Cable structure		4x2xAWG26/7; SF/UTP
Conductor cross section		4x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.4 mm
Conductor resistance		≤ 290 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		water blue RAL 5021
Color, single wire		white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	-20 ... 80

RJ45 patch cables

Notes:

Additional accessories for network installation can be found in the “Ethernet networks” section on page 376

Ethernet



RJ45 patch cables for IP20 applications

Technical data

	FL CAT5 PATCH 0,3	FL CAT6 PATCH 0,3
Cable, properties		
External diameter	5.5 mm	5.5 mm
Single wire, material	Cu litz wire	Cu litz wire
Individual wires per module	8	8
Single wire, cross section	0.14 mm²	0.14 mm²
Outer sheath, material	LSFROH	LSFROH
Smallest bending radius, fixed installation	30 mm	30 mm
Shielding	SF/UTP	S/FTP
Plug		
Contact resistance	≤ 0.003 Ω (IEC 60603-7)	≤ 0.003 Ω (IEC 60603-7)
General data		
Ambient temperature (operation)	-10 °C ... 60 °C	-10 °C ... 60 °C

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
Patch cable, CAT5, preassembled				
	0.3 m	**FL CAT5 PATCH 0,3**	2832250	10
	0.5 m	**FL CAT5 PATCH 0,5**	2832263	10
	1 m	**FL CAT5 PATCH 1,0**	2832276	10
	1.5 m	**FL CAT5 PATCH 1,5**	2832221	10
	2 m	**FL CAT5 PATCH 2,0**	2832289	10
	3 m	**FL CAT5 PATCH 3,0**	2832292	10
	5 m	**FL CAT5 PATCH 5,0**	2832580	10
	7.5 m	**FL CAT5 PATCH 7,5**	2832616	10
	10 m	**FL CAT5 PATCH 10,0**	2832629	10
Patch cable, CAT6, preassembled				
	0.3 m	**FL CAT6 PATCH 0,3**	2891181	10
	0.5 m	**FL CAT6 PATCH 0,5**	2891288	10
	1 m	**FL CAT6 PATCH 1,0**	2891385	10
	1.5 m	**FL CAT6 PATCH 1,5**	2891482	10
	2 m	**FL CAT6 PATCH 2,0**	2891589	10
	3 m	**FL CAT6 PATCH 3,0**	2891686	10
	5 m	**FL CAT6 PATCH 5,0**	2891783	10
	7.5 m	**FL CAT6 PATCH 7,5**	2891880	10
	10 m	**FL CAT6 PATCH 10**	2891877	10
	12.5 m	**FL CAT6 PATCH 12,5**	2891369	5
	15 m	**FL CAT6 PATCH 15,0**	2891372	5
	20 m	**FL CAT6 PATCH 20,0**	2891576	5

Accessories

The reliability of networks is becoming more and more important and is a decisive factor for the future of entire companies. Independent studies show that more than 70% of network errors and crashes are due to faulty cabling infrastructure and manipulation of the connecting cables.

With the new accessories for Factoryline patch cables, the various safety requirements for automation are comprehensively met.



Dust protection for SFN switches and FL MC 1000 and 2000 media converters



Security lock for SFN switches and FL MC 1000 and 2000 media converters

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Dust protection with color marking, for SFN switch and angled patch connector						
- Black	**FL DUST CVR BK**	2891107	10			
- Blue	**FL DUST CVR BU**	2891204	10			
- Brown	**FL DUST CVR BN**	2891301	10			
- Yellow	**FL DUST CVR YE**	2891408	10			
- Gray	**FL DUST CVR GY**	2891505	10			
- Green	**FL DUST CVR GN**	2891602	10			
- Red	**FL DUST CVR RD**	2891709	10			
- Violet	**FL DUST CVR VT**	2891806	10			
- White	**FL DUST CVR WH**	2891903	10			
Security frame for SFN switch and patch fields						
- Green				**FL PLUG GUARD GN**	2891615	20
- Red				**FL PLUG GUARD RD**	2891712	20
- White				**FL PLUG GUARD WH**	2891819	20
Locking element for FL PLUG GUARD... security frame						
- Locking element				**FL PORT GUARD**	2891220	20
- Key				**FL PLUG GUARD KEY**	2891327	1
Color marking for FL CAT... Patch...						
- Black						
- Blue						
- Brown						
- Yellow						
- Gray						
- Green						
- Red						
- Violet						
Security element for FL CAT ...patch...						
- Security element						
- Security element, lockable						
- Key						
Dust protection cap for RJ45 socket						







Color coding for RJ45 FL patch cables



Security element for RJ45 FL patch cables



Dust protection for RJ45 sockets

Ordering data

Type	Order No.	Pcs. / Pkt.
FL PATCH CCODE BK	2891194	20
FL PATCH CCODE BU	2891291	20
FL PATCH CCODE BN	2891495	20
FL PATCH CCODE YE	2891592	20
FL PATCH CCODE GY	2891699	20
FL PATCH CCODE GN	2891796	20
FL PATCH CCODE RD	2891893	20
FL PATCH CCODE VT	2891990	20

Ordering data

Type	Order No.	Pcs. / Pkt.
FL PATCH SAFE CLIP	2891246	20
FL PATCH GUARD	2891424	20
FL PATCH GUARD KEY	2891521	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FL RJ45 PROTECT CAP	2832991	10







Modular distribution panel

- Plug and play
- Extremely robust design
- GHMT-certified
- Front release without special tool
- Modules can be replaced



Assembled modules for 19" mounting frames



19" mounting frame

	Technical data	Technical data
	$CAT6_A$	CUC-PP-FRAME-19
Electrical data		
Transmission characteristics (category)	Class E_A	-
Material data		
Housing material	Stainless steel	Steel, powder-coated
Inflammability class according to UL 94	V0	V0
Connection data		
External cable diameter	18 mm ... 18 mm	-
Insertion/withdrawal cycles	≥ 750	-
Temperature data		
Ambient temperature (operation)	-20 °C ... 60 °C	-20 °C ... 60 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
19-inch frame, empty, for using 8 modules (RJ45/ARJ45)						
Gray (similar to RAL 7035)				**CUC-PP-FRAME-19**	1407986	1
Black (similar to RAL 9005)				**CUC-PP-FRAME-19 BK**	1409140	1
RJ45 module, 6 x RJ45 to 6 x RJ45, $CAT6_A$, can be unlocked from the front, variable length	**CUC-PP-MODUL-RJ45:6-RJ45:6/...**	1407995	1			
Patch bay, 19", for orderly cabling in the control cabinet						
Gray, with plastic hooks				**CUC-PP-PATCHBAY**	1407994	1
Dummy frame, size of one module, for use in the frame	**CUC-PP-MODUL-COVER**	1407988	1			
	Accessories			**Accessories**		
Screw set, fixing material for the frame				**CUC-PP-FRAME-SCREWSET**	1407989	1
Cable binder, fixing material for module cable routing	**CUC-PP-MODUL-CABLEFIXSET**	1407991	1			

Ordering example for modules of variable length:

For an RJ45 module with a cable length of 25.0 m, the ordering data is as follows:

Order No.		Length [m] Max. 80 m
1407995	/	**25**
		Increment: 1.5 m ... 80 m = **0.5 m**

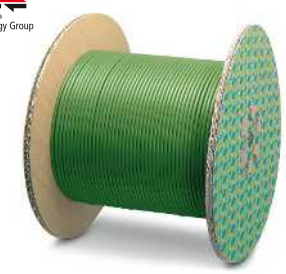
Network cables, sold by the meter, PROFINET, EtherCAT®, shielded

Notes:

For information about the cable qualities, see page 440



4-wire, star quad



4-wire, star quad

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PVC solid - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type A						
Cable ring: 100 m	**VS-OE-OE-93A-100,0**	1416392	1			
Cable ring: 1 m ... 100 m	**VS-93A/...**	1416486	1			
PVC stranded - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type B						
Cable ring: 100 m	**VS-OE-OE-93B-100,0**	1416389	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93B/...**	1417362	1			
Cable drum: 110 m ... 500 m	**NBC-93B/...**	1408537	1			
PUR suitable for use with drag chain - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type C						
Cable ring: 100 m	**VS-OE-OE-93C-100,0**	1416376	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93C/...**	1417491	1			
Cable drum: 110 m ... 500 m	**NBC-93C/...**	1408538	1			
PUR suitable for use with robots - green, 1 x 4 x 22 AWG, CAT5, S/TQ						
Cable ring: 100 m	**VS-OE-OE-93R-100,0**	1416363	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93R/...**	1417388	1			
Cable drum: 110 m ... 500 m	**NBC-93R/...**	1408539	1			
RADOX® for railway applications - black, 1 x 4 x 22 AWG, CAT5, SF/TQ						
Cable ring: 1 m ... 100 m	**VS-OE-OE-937/...**	1402687	1			
Cable drum: 110 m ... 500 m	**NBC-937/...**	1408540	1			
PVC stranded - green, 1 x 4 x 22 AWG, CAT5, SF/TQ						
Cable drum: 110 m ... 500 m				**NBC-93G/...**	1408541	1

Ordering example for cables with variable cable length:

For a network cable **type 93A** with a cable length of 34.0 m, the ordering data is as follows:

Order No.		Length [m] Max. 100 m
1416486	/	**34.0**
		Increment: 1.0 m ... 100 m = **1.0 m** 110 m ... 500 m = **10 m**

Network cables, sold by the meter, Ethernet, shielded

Notes:
For information about the cable qualities, see page 440

Ethernet



2-pair, twisted pair

Ethernet



4-pair, twisted pair

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR stranded - blue, 2 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m	**VS-OE-OE-93E-100,0**	1416295	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93E/...**	1417320	1			
Cable drum: 110 m ... 500 m	**NBC-93E/...**	1408534	1			
PUR solid - blue, 4 x 2 x 24 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94A-100,0**	1416305	1
Cable ring: 1 m ... 100 m				**VS-94A/...**	1416415	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94B-100,0**	1416567	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94B/...**	1417333	1
Cable drum: 110 m ... 500 m				**NBC-94B/...**	1408535	1
PUR suitable for use with drag chain - blue, 4 x 2 x 26 AWG, CAT5, S/UTP						
Cable ring: 100 m				**VS-OE-OE-94C-100,0**	1416318	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94C/...**	1417346	1
Cable drum: 110 m ... 500 m				**NBC-94C/...**	1408536	1
PVC stranded, outdoor - black, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94D-100,0**	1416334	1
Cable ring: 1 m ... 100 m				**VS-94D/...**	1416444	1
FRNC solid - blue, 4 x 2 x 23 AWG, CAT7, S/FTP						
Cable ring: 100 m				**VS-OE-OE-94E-100,0**	1416350	1
Cable ring: 1 m ... 100 m				**VS-94E/...**	1416460	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT6$_A$, S/FTP						
Cable ring: 100 m				**VS-OE-OE-94F-100,0**	1416347	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94F/...**	1417359	1

Ordering example for cables with variable cable length:

For a network cable type **94A** with a cable length of 34.0 m, the ordering data is as follows:

Order No.		Length [m] Max. 100 m
1416415	/	**34.0**
		Increment: 1.0 m ... 100 m = **1.0 m** 110 m ... 500 m = **10 m**

Assembled cables, PROFINET, 4-pos., shielded, CAT5



	RJ45 connector, IP20		RJ45 connector, IP20		RJ45 connector, Version 14, metal	
						
	R4AC		R4ACR		R4RC	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Open cable end						
 OE	Variable	1411857	Variable	1411858	5 m Variable	1416162 1411859
RJ45 connector, IP20						
 R4AC	1 m 2 m 5 m 10 m Variable	1408968 1408969 1408970 1408971 1411861	1 m 2 m Variable	1418248 1418277 1411862	5 m Variable	1416138 1411863
RJ45 connector, IP20						
 R4ACR			1 m 2 m 5 m 10 m Variable	1409002 1409003 1409004 1409005 1411865		
RJ45 connector, Version 14, metal						
 R4RC					1 m 2 m 5 m 10 m Variable	1408974 1408975 1408972 1408976 1411866
RJ45 connector, Version 14, plastic						
 R4QC						
M12 connector, SPEEDCON						
 MSD SCO						
M12 connector, SPEEDCON						
 MRD SCO						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a network cable, type **93C**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408639	93C	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PVC stranded - green, 1 x 4, CAT5	93B
PUR suitable for drag chain applications - green, 1 x 4, CAT5	93C
PUR for robot applications - green, 1 x 4, CAT5	93R
RADOX® for railway applications - black, 1 x 4, CAT5	937
PUR stranded - green, 1 x 4, CAT5	93M

Pin M12	Pin RJ45	Wire color	Signal
1	1	YE	TD+
3	2	OG	TD–
2	3	WH	RD+
4	6	BU	RD–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
R4QC		MSD SCO		MRD SCO		FSD SCO		FRD SCO		FSDBP	
Ordering data		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**	
	Order No.		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
		1 m	1407495			1 m	1407528			1 m	1437779
		2 m	1407496			2 m	1407529			2 m	1437782
5 m	1416168	5 m	1407497			5 m	1407530			5 m	1437795
		10 m	1407498			10 m	1407531				
Variable	1411860	Variable	1408640	Variable	1408633	Variable	1408623	Variable	1408615		
		1 m	1407499			1 m	1407532				
		2 m	1407500			2 m	1407533				
5 m	1416141	5 m	1407501			5 m	1407534				
		10 m	1407502			10 m	1407535				
Variable	1411864	Variable	1408639	Variable	1408632	Variable	1408622	Variable	1408613		
		1 m	1407508			1 m	1407536				
		2 m	1407509			2 m	1407537				
		5 m	1407510			5 m	1407538				
		10 m	1407511			10 m	1407539				
		Variable	1408638	Variable	1408631	Variable	1408621	Variable	1408612		
		1 m	1407516			1 m	1407544				
		2 m	1407517			2 m	1407545				
		5 m	1407518			5 m	1407546				
		10 m	1407519			10 m	1407547				
		Variable	1408636	Variable	1408628	Variable	1408619	Variable	1408610		
1 m	1408978	1 m	1407520			1 m	1407548				
2 m	1408979	2 m	1407521			2 m	1407549				
5 m	1408977	5 m	1407522			5 m	1407551				
10 m	1408980	10 m	1407523			10 m	1407552				
Variable	1411867	Variable	1408635	Variable	1408626	Variable	1408618	Variable	1408609		
		1 m	1407524			1 m	1407553				
		2 m	1407525			2 m	1407554				
		5 m	1407526			5 m	1407555				
		10 m	1407527			10 m	1407556				
		Variable	1408634	Variable	1408625	Variable	1408617	Variable	1408608		
				Variable	1408624	Variable	1408616	Variable	1408607		

		Technical data	Technical data	Technical data	Technical data
		PROFINET PVC stranded CAT5 [93B]	**PROFINET drag chain CAT5 [93C]**	**PROFINET robot CAT5 [93R]**	**PROFINET railway applications [937]**
Transmission characteristics (category)		CAT5	CAT5	CAT5	CAT5
Cable structure		1x4xAWG22/7; SF/TQ	1x4xAWG22/7; SF/TQ	1x4xAWG22/19; S/TQ	1x4xAWG22/7; SF/TQ
Conductor cross section		4x 0.34 mm²	4x 0.34 mm²	4x 0.34 mm²	4x 0.34 mm²
Conductor structure for signal		7x 0.25 mm	7x 0.25 mm	19x 0.15 mm	7x 0.25 mm
AWG signal line		22	22	22	22
Cable diameter		6.5 mm	6.5 mm	6.5 mm	6.6 mm
Conductor resistance		≤ 120 Ω/km	≤ 120 Ω/km	≤ 120 Ω/km	≤ 54.4 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield	Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield	Plastic-coated aluminum foil, tinned copper braided shield
Conductor material		Tin-plated Cu litz wires	Tin-plated Cu litz wires	Tin-plated Cu litz wires	Silver-plated Cu litz wires
Outer sheath material		PVC	PUR	PUR	RADOX® GKW S
Color of outer sheath		Green RAL 6018	Green RAL 6018	Green RAL 6018	Black RAL 9005
Color, single wire		White, yellow, blue, orange	White, yellow, blue, orange	White, yellow, blue, orange	white-blue, orange-yellow
Ambient temperature					
Fixed installation	[°C]	-40 ... 70	-40 ... 70	-40 ... 80	-50 ... 90
Flexible installation	[°C]	-40 ... 70	-40 ... 70	-40 ... 80	-40 ... 90

Assembled cables, EtherCAT®, 4-pos., shielded, CAT5



EtherCAT Technology Group

	RJ45 connector, IP20		RJ45 connector, IP20		M12 connector, SPEEDCON	
						
	R4AC		R4ACR		MSD SCO	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Open cable end					1 m	1407557
 OE					2 m	1407558
					5 m	1407559
					10 m	1407560
	Variable	1411868	Variable	1411869	Variable	1408600
RJ45 connector, IP20						
 R4AC	1 m	1408981	1 m	1402505	1 m	1407561
	2 m	1408982	2 m	1402508	2 m	1407562
	5 m	1408983			5 m	1407563
	10 m	1408984			10 m	1407564
			Variable	1411871	Variable	1408599
RJ45 connector, IP20						
 R4ACR			1 m	1409006	1 m	1407565
			2 m	1409007	2 m	1407566
			5 m	1409014	5 m	1407567
			10 m	1409015	10 m	1407568
			Variable	1411872	Variable	1408598
M12 connector, SPEEDCON						
 MSD SCO					1 m	1407569
					2 m	1407570
					5 m	1407571
					10 m	1407572
					Variable	1408597
M12 connector, SPEEDCON						
 MRD SCO						
RJ45 connector, Freenet						
 F4AC	2 m	1419142				
	Variable	1411873				

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93G** cable type and are available from stock.

Cable description	Cable type
PVC stranded - green, 1 x 4, CAT5	93G
PUR suitable for drag chain applications - green, 1 x 4, CAT5	93H

Pin M12	Pin RJ45	Wire color		Signal
1	1	YE		TD+
3	2	OG		TD–
2	3	WH		RD+
4	6	BU		RD–

Ordering data for cables with variable cable length:

For a network cable, type **93H**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408599	93H	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

M12 connector, SPEEDCON	M12 socket, SPEEDCON	M12 socket, SPEEDCON	M12 flush-type socket, rear mounting
			
MRD SCO	FSD SCO	FRD SCO	FSDBP
Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.
			1 m 1419135 2 m 1419136 5 m 1419137
Variable 1408596	Variable 1408590	Variable 1408584	
			2 m 1419146
Variable 1408595	Variable 1408589	Variable 1408583	
Variable 1408594	Variable 1408587	Variable 1408582	
Variable 1408593	Variable 1408586	Variable 1408581	
Variable 1408592	Variable 1408585	Variable 1408580	

		Technical data	Technical data
		EtherCAT® [93G]	EtherCAT® [93H]
Transmission characteristics (category)		CAT5	CAT5
Cable structure		1x4xAWG22/7; SF/TQ	1x4xAWG22/7; SF/TQ
Conductor cross section		4x 0.34 mm²	4x 0.34 mm²
Conductor structure for signal		7x 0.25 mm	7x 0.25 mm
AWG signal line		22	22
Cable diameter		6.5 mm	6.5 mm
Conductor resistance		≤ 120 Ω/km	≤ 120 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield	Aluminum-coated foil, tinned copper braided shield
Conductor material		Tin-plated Cu litz wires	Tin-plated Cu litz wires
Outer sheath material		PVC	PUR
Color of outer sheath		Green RAL 6018	Green RAL 6018
Color, single wire		White, yellow, blue, orange	White, yellow, blue, orange
Ambient temperature			
Fixed installation	[°C]	-40 ... 70	-40 ... 70
Flexible installation	[°C]	-40 ... 70	-40 ... 70

Assembled cables, Ethernet, 4-pos., shielded, CAT5



Ethernet

		M8 connector		M8 socket	
					
		M8MS		M8FS	
		Ordering data		Ordering data	
			Order No.		Order No.
Open cable end					
	OE	1 m	1407344		
		2 m	1407345		
		5 m	1407346		
		10 m	1407347		
		Variable	1408719	Variable	1408716
M8 connector					
	M8MS	1 m	1407348		
		2 m	1407349		
		5 m	1407350		
		10 m	1407351		
		Variable	1408718	Variable	1408715
RJ45 connector, IP20					
	R4AC	1 m	1407352		
		2 m	1407353		
		5 m	1407354		
		10 m	1407355		
		Variable	1408717	Variable	1408714

Information for products with fixed cable lengths:

Products with fixed cable lengths are produced with the **93B** cable type and are available from stock.

Ordering data for cables with variable cable lengths:

For a network cable, type **93B**, fitted with a **straight M8 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408717	93B	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

Pin M8	Pin RJ45	Wire color	Signal
2	1	YE	TD+
3	2	OG	TD–
1	3	WH	RD+
4	6	BU	RD–

		Technical data
		PROFINET PVC stranded CAT5 [93B]
Transmission characteristics (category)		CAT5
Cable structure		1x4xAWG22/7; SF/TQ
Conductor cross section		4x 0.34 mm²
Conductor structure for signal		7x 0.25 mm
AWG signal line		22
Cable diameter		6.5 mm
Conductor resistance		≤ 120 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield
Conductor material		Tin-plated Cu litz wires
Outer sheath material		PVC
Color of outer sheath		Green RAL 6018
Color, single wire		White, yellow, blue, orange
Ambient temperature		
Fixed installation	[°C]	-40 ... 70
Flexible installation	[°C]	-40 ... 70

Assembled cables, Ethernet, 4-pos., shielded, CAT5



Ethernet

	RJ45 connector, IP20		RJ45 connector, Version 6		RJ45 connector, Version 14, metal	
						
	R4AC		R4MC		R4RC	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Open cable end  OE	1 m	1405633	2 m	1405675	5 m	1405743
	Variable	1411827	Variable	1411828	Variable	1411829
RJ45 connector, IP20  R4AC	1 m	1408933				
	2 m	1408934	2 m	1405921		
	5 m	1408935			5 m	1405992
	10 m	1408936				
	Variable	1411831	Variable	1411832	Variable	1411833
RJ45 connector, Version 6  R4MC			1 m	1408937		
			2 m	1408938		
			5 m	1408939		
			10 m	1408940		
			Variable	1411835		
RJ45 connector, Version 14, metal  R4RC					1 m	1408941
					2 m	1408942
					5 m	1408943
					10 m	1408945
					Variable	1411836
RJ45 connector, Version 14, plastic  R4QC						
M12 connector, SPEEDCON  MSD SCO						
M12 connector, SPEEDCON  MRD SCO						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93E** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a network cable, type **93E**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408712	93E	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR stranded - blue, 2 x 2, CAT5	93E

Pin M12	Pin RJ45	Wire color	Signal
1	1	WHOG	TD+
3	2	OG	TD–
2	3	WHGN	RD+
4	6	GN	RD–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
R4QC		MSD SCO		MRD SCO		FSD SCO		FRD SCO		FSDBP	
Ordering data		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**	
	Order No.		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
		1 m	1407356			1 m	1407380				
		2 m	1407357			2 m	1407381			2 m	1405866
5 m	1405772	5 m	1407358			5 m	1407382				
		10 m	1407359			10 m	1407383				
Variable	1411830	Variable	1408713	Variable	1408705	Variable	1408697	Variable	1408690		
		1 m	1407360			1 m	1407384				
		2 m	1407361			2 m	1407385			2 m	1406085
5 m	1406030	5 m	1407362			5 m	1407386				
		10 m	1407363			10 m	1407387				
Variable	1411834	Variable	1408712	Variable	1408704	Variable	1408696	Variable	1408689		
		1 m	1407364			1 m	1407388				
		2 m	1407365			2 m	1407389			2 m	1406247
		5 m	1407366			5 m	1407390				
		10 m	1407367			10 m	1407391				
		Variable	1408710	Variable	1408703	Variable	1408695	Variable	1408688		
		1 m	1407368			1 m	1407392				
		2 m	1407369			2 m	1407393			2 m	1406519
		5 m	1407370			5 m	1407394				
		10 m	1407371			10 m	1407395				
		Variable	1408709	Variable	1408702	Variable	1408694	Variable	1408687		
1 m	1408947	1 m	1407372			1 m	1407396				
2 m	1408948	2 m	1407373			2 m	1407397			2 m	1406603
5 m	1408946	5 m	1407374			5 m	1407398				
10 m	1408949	10 m	1407375			10 m	1407399				
Variable	1411837	Variable	1408707	Variable	1408701	Variable	1408693	Variable	1408686		
		1 m	1407376			1 m	1407400				
		2 m	1407377			2 m	1407401				
		5 m	1407378			5 m	1407402				
		10 m	1407379			10 m	1407403				
		Variable	1408706	Variable	1408700	Variable	1408692	Variable	1408684		
				Variable	1408699	Variable	1408691	Variable	1408683		

Technical data

		PUR ETHERNET 2x2 FLEX [93E]
Transmission characteristics (category)		CAT5
Cable structure		2x2xAWG26/7; SF/UTP
Conductor cross section		2x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.4 mm
Conductor resistance		≤ 290 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		water blue RAL 5021
Color, single wire		white/orange-orange, white/green-green
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	-20 ... 80

Assembled cables, Ethernet, 8-pos., shielded, CAT5



Ethernet

	RJ45 connector, IP20		RJ45 connector, Version 6		RJ45 connector, Version 14, metal	
						
	R4AC		R4MC		R4RC	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Open cable end						
 OE	5 m	1407699	5 m	1407725	5 m	1407783
	Variable	1411838	Variable	1411839	Variable	1411840
RJ45 connector, IP20						
 R4AC	1 m	1408950				
	2 m	1408951				
	5 m	1408952	5 m	1407932	5 m	1407990
	10 m	1408953				
	Variable	1411842	Variable	1411843	Variable	1411844
RJ45 connector, Version 6						
 R4MC			1 m	1408955		
			2 m	1408956		
			5 m	1408954		
			10 m	1408958		
			Variable	1411846		
RJ45 connector, Version 14, metal						
 R4RC					1 m	1408961
					2 m	1408962
					5 m	1408959
					10 m	1408963
					Variable	1411847
RJ45 connector, Version 14, plastic						
 R4QC						
M12 connector, SPEEDCON						
 MS SCO						
M12 connector, SPEEDCON						
 MR SCO						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **94B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a network cable, type **94C**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408681	94C	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR stranded - blue, 4 x 2, CAT5	94B
PUR suitable for drag chain applications - blue, 4 x 2, CAT5	94C

Pin M12	Pin RJ45	Wire color	Signal
6	1	WHOG	D1+
4	2	OG	D1–
1	5	WHBU	D3+
7	4	BU	D3–
5	3	WHGN	D2+
8	6	GN	D2–
2	7	WHBN	D4+
3	8	BN	D4–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
	R4QC		MS SCO		MR SCO		FS SCO		FR SCO		FSBP
Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.		Order No.
		1 m	1407404			1 m	1407439				
		2 m	1407405			2 m	1407440				
5 m	1407819	5 m	1407406			5 m	1407441			5 m	1407877
		10 m	1407407			10 m	1407442				
Variable	1411841	Variable	1408682	Variable	1408675	Variable	1408665	Variable	1408657		
		1 m	1407414			1 m	1407443				
		2 m	1407415			2 m	1407444				
5 m	1412024	5 m	1407416			5 m	1407445			5 m	1412082
		10 m	1407417			10 m	1407446				
Variable	1411845	Variable	1408681	Variable	1408674	Variable	1408664	Variable	1408655		
		1 m	1407422			1 m	1407451				
		2 m	1407423			2 m	1407452				
		5 m	1407424			5 m	1407453			5 m	1412231
		10 m	1407425			10 m	1407454				
		Variable	1408679	Variable	1408671	Variable	1408662	Variable	1408653		
		1 m	1407426			1 m	1407455				
		2 m	1407427			2 m	1407456				
		5 m	1407428			5 m	1407457			5 m	1412503
		10 m	1407429			10 m	1407458				
		Variable	1408678	Variable	1408670	Variable	1408661	Variable	1408652		
1 m	1408965	1 m	1407430			1 m	1407459				
2 m	1408966	2 m	1407431			2 m	1407460				
5 m	1408964	5 m	1407432			5 m	1407461			5 m	1412590
10 m	1408967	10 m	1407433			10 m	1407462				
Variable	1411848	Variable	1408677	Variable	1408668	Variable	1408660	Variable	1408651		
		1 m	1407434			1 m	1407463				
		2 m	1407435			2 m	1407464				
		5 m	1407436			5 m	1407465				
		10 m	1407438			10 m	1407466				
		Variable	1408676	Variable	1408667	Variable	1408659	Variable	1408650		
				Variable	1408666	Variable	1408658	Variable	1408649		

		Technical data	Technical data
		Ethernet, flexible, CAT5 [94B]	Ethernet drag chain CAT5 [94C]
Transmission characteristics (category)		CAT5	CAT5
Cable structure		4x2xAWG26/7; SF/UTP	4x2xAWG26/19; S/UTP
Conductor cross section		4x 2x 0.14 mm²	4x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm	19x 0.10 mm
AWG signal line		26	26
Cable diameter		6.4 mm	6.9 mm
Conductor resistance		≤ 290 Ω/km	≤ 290 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield
Conductor material		Bare Cu litz wires	Bare Cu litz wires
Outer sheath material		PUR	PUR
Color of outer sheath		water blue RAL 5021	water blue RAL 5021
Color, single wire		white/blue-blue, white/orange-orange, white/green-green, white/brown-brown	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature			
Fixed installation	[°C]	-40 ... 80	-40 ... 80
Flexible installation	[°C]	-20 ... 80	-20 ... 80

Assembled cables, Ethernet, 8-pos., shielded, CAT6$_A$



Ethernet

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
			
	R4AC	R4MC	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Open cable end  OE	Variable 1411853	Variable 1415639	Variable 1415637
RJ45 connector, IP20  R4AC	1 m 1418866 2 m 1408360 5 m 1418879 10 m 1408367 Variable 1411854	Variable 1414321	Variable 1411855
RJ45 connector, Version 6  R4MC			Variable 1414322
RJ45 connector, Version 14, metal  R4RC			Variable 1414323
RJ45 connector, Version 14, plastic  R4QC			
M12 connector, SPEEDCON  MSX SCO			

Information for products with fixed cable lengths:

Products with fixed cable lengths are produced with the **94F** cable type and are available from stock.

Cable description	Cable type
PUR stranded - blue, 4 x 2, CAT6$_A$	94F

Pin M12	Pin RJ45	Wire color	Signal
1	1	WHOG	D1+
2	2	OG	D1–
7	5	WHBU	D3+
8	4	BU	D3–
3	3	WHGN	D2+
4	6	GN	D2–
5	7	WHBN	D4+
6	8	BN	D4–

Ordering data for cables with variable cable lengths:

For a network cable, type **94F**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408647	94F	4.5

Minimum order amount = 25

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 flush-type socket, rear mounting	
					
R4QC		MSX SCO		FSBPX	
Ordering data		**Ordering data**		**Ordering data**	
	Order No.		**Order No.**		**Order No.**
		1 m	1407467	0.5 m	1424135
		2 m	1407468	1 m	1424148
		5 m	1407469	2 m	1424151
		10 m	1407470	5 m	1424164
Variable	1415638	Variable	1408648		
		1 m	1407471		
		2 m	1407472		
		5 m	1407473		
		10 m	1407474		
Variable	1411856	Variable	1408647		
		1 m	1407475		
		2 m	1407476		
		5 m	1407477		
		10 m	1407478		
		Variable	1408646		
		1 m	1407479		
		2 m	1407480		
		5 m	1407481		
		10 m	1407482		
Variable	1414324	Variable	1408645		
		1 m	1407483		
		2 m	1407484		
		5 m	1407485		
		10 m	1407486		
		Variable	1408644		

		Technical data
		Ethernet 10 Gbit [94F]
Transmission characteristics (category)		$CAT6_A$
Cable structure		4x2xAWG26/7; S/FTP
Conductor cross section		4x 2x 0.14 mm^2
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.4 mm
Conductor resistance		≤ 290 Ω/km
Type of shield		Tinned copper braided shield
Type of pair shielding		Aluminum-lined foil
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		water blue RAL 5021
Color, single wire		white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	-20 ... 80

Assembled cables for railway applications, Ethernet, shielded, CAT6$_A$



Ethernet

SPEEDCON LOCKING

M12 connector, SPEEDCON



MSX SCO

Ordering data

	Order No.
Open cable end	
 OE	
2 m	1415599
5 m	1415600
10 m	1415601
M12 connector, SPEEDCON, straight	
 MSX SCO	
2 m	1415595
5 m	1415598

Pin M12	Wire color	Signal
1	WHOG	D1+
2	OG	D1–
7	WHBU	D3+
8	BU	D3–
3	WHGN	D2+
4	GN	D2–
5	WHBN	D4+
6	BN	D4–

Technical data

		Ethernet for rail applications [94S]
Transmission characteristics (category)		CAT7
Cable structure		4x2xAWG26/7; S/FTP
Conductor cross section		4x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.6 mm
Conductor resistance		≤ 145 Ω/km
Type of shield		Tinned copper braided shield
Type of pair shielding		Aluminum-lined polyester foil
Conductor material		Tin-plated Cu litz wires
Outer sheath material		Elastomer electron beam cross-linked
Color of outer sheath		Black
Color, single wire		White-blue, white-orange, white-green, white-brown
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	- ... -

Assembled cables, Ethernet hybrid, 4+4-pos., shielded, CAT5



Ethernet

SPEEDCON LOCKING

	M12 connector, SPEEDCON		M12 flush-type socket, rear mounting	
				
	MSY SCO		FSBPY	
	Ordering data		Ordering data	
		Order No.		Order No.
Open cable end  OE	1 m	1407487	0.5 m	1407504
	2 m	1407488	1 m	1407505
	5 m	1407489	2 m	1407506
	10 m	1407490	5 m	1407507
	Variable	1408642		
M12 connector, SPEEDCON  MSY SCO	1 m	1407491		
	2 m	1407492		
	5 m	1407493		
	10 m	1407494		
	Variable	1408641		

Information for products with fixed cable lengths:

Products with fixed cable lengths are produced with the **94H** cable type and are available from stock.

Ordering data for cables with variable cable lengths:

For a network cable, type **94H**, fitted with a **straight M12 connector** at one end and an **RJ45 connector with IP20 protection** at the other end, and **4.5 m in length,** the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 100 m
1408717	94H	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount = 25

Pin M12	Wire color	Signal
1	WHOG	TD+
2	OG	TD–
3	WHGN	RD+
4	GN	RD–
5	BU	
6	WH	
7	BN	
8	BK	

Technical data		Ethernet hybrid [94H]
Transmission characteristics (category)		CAT5
Cable structure		1x4xAWG26+1x4xAWG20
Conductor cross section for signal	[mm²]	0.15
Conductor structure for signal		19x 0.10 mm
AWG signal line		26
Conductor cross section for power	[mm²]	0.6
Conductor structure for power		19x 0.20 mm
AWG power supply		20
Cable diameter		7.6 mm
Type of shield		Tinned copper braided shield
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		Black RAL 9005
Color, single wire		White/orange, orange, white/green, green, white, blue, brown, black
Ambient temperature		
Fixed installation	[°C]	-40 ... 90
Flexible installation	[°C]	-30 ... 70

Fiber optic patch cables

Connectors:
– LC
– SC duplex
– B-FOC (ST®)

Fixed lengths:
– 1 m
– 2 m
– 5 m

Fiber types:
– Single-mode fiberglass (SM)

Sheath colors:
– Single mode: Yellow

Technical Data:
– Halogen-free
– Flame-retardant
– No corrosive or toxic fumes
– External dimensions: 2.8 mm x 5.7 mm



LC connector

Technical data

Cable, properties	
Individual wire diameter	2.8 mm
Outer sheath, material	FRNC
External sheath, strain relief elements	Non-metallic, aramide fiber
Lateral pressure, long-term	60 N/cm
Tensile strength short-term/long-term	600 N
Halogen-free	According to IEC 60754-2
General data	
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Ambient temperature (installation)	-5 °C ... 50 °C
Ambient temperature (operation)	-5 °C ... 70 °C

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
FO patch cable with **single-mode fiberglass (OS1)** - **LC connector** to LC, SC duplex or B-FOC connector				
	1 m	**FL SM PATCH 1,0 LC-LC**	2989187	1
	2 m	**FL SM PATCH 2,0 LC-LC**	2989284	1
	5 m	**FL SM PATCH 5,0 LC-LC**	2901826	1
FO patch cable with **single-mode fiberglass (OS1)** - **SC duplex connector** to SC duplex or B-FOC connector				
	1 m			
	2 m			
	5 m			
FO patch cable with **single-mode fiberglass (OS1)** - **B-FOC connector** to B-FOC connector				
	1 m			
	2 m			
	5 m			



SC duplex connector



B-FOC connector

Technical data	
2.8 mm	
FRNC	
Non-metallic, aramide fiber	
60 N/cm	
600 N	
According to IEC 60754-2	
-25 °C ... 70 °C	
-5 °C ... 50 °C	
-5 °C ... 70 °C	

Ordering data		
Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-SC	2989190	1
FL SM PATCH 2,0 LC-SC	2989297	1
FL SM PATCH 5,0 LC-SC	2901827	1
FL SM PATCH 1,0 SC-SC	2901829	1
FL SM PATCH 2,0 SC-SC	2901830	1
FL SM PATCH 5,0 SC-SC	2901831	1

Technical data	
2.8 mm	
FRNC	
Non-metallic, aramide fiber	
60 N/cm	
600 N	
According to IEC 60754-2	
-25 °C ... 70 °C	
-5 °C ... 50 °C	
-5 °C ... 70 °C	

Ordering data		
Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-ST	2989242	1
FL SM PATCH 2,0 LC-ST	2989349	1
FL SM PATCH 5,0 LC-ST	2901828	1
FL SM PATCH 1,0 SC-ST	2901832	1
FL SM PATCH 2,0 SC-ST	2901833	1
FL SM PATCH 5,0 SC-ST	2901834	1
FL SM PATCH 1,0 ST-ST	2901836	1
FL SM PATCH 2,0 ST-ST	2901837	1
FL SM PATCH 5,0 ST-ST	2901838	1

Fiber optic outdoor cables, sold by the meter

- Robust round cable for outdoor installation
- Ozone and UV resistant
- Watertight lengthwise
- Integrated vapor barrier and rodent-proof scrim



GOF fiber type



PCF fiber type

	Technical data		Technical data	
	FOC-OE-OE-GB01/...	FOC-OE-OE-GB02/...	FOC-OE-OE-GB03/...	FOC-OE-OE-HB01/...
Cable data				
Cable abbreviation in accordance with IEC 61977:2010	02-G50/FJ(ZNG)H-...22	02-G50/FJ(ZN)Z-...22	04-G50/FJ(ZNG)H-...22	02-H200/VJ(ZNG)H-...22
Fibers	50/125 µm OM2	50/125 µm OM2	50/125 µm OM2	200/230 µm
Attenuation, typical	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	10 dB/km (at 660 nm), 8 dB/km (at 850 nm)
Outer sheath				
Material	PE	PUR	PE	PE
Color	Black	Black	Black	Black
Strain relief elements	Aramide/glass fibers	Non-metallic, aramide fiber	Aramide/glass fibers	Aramide/glass fibers
Diameter	7.5 mm	7.5 - 8 mm	9 mm	7.5 mm
Individual wire				
Color	Black/orange	Black/orange	Black/orange	Black/orange
Diameter	2.2 mm	2.2 mm	2.15 mm	2.2 mm
Strain relief elements	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers
General data				
Weight	59.00 kg/km	46.00 kg/km	90.00 kg/km	67.00 kg/km
Ambient temperature (operation)	-40 °C ... 70 °C	-40 °C ... 85 °C	-40 °C ... 70 °C	-20 °C ... 70 °C
Ambient temperature (storage/transport)	-45 °C ... 70 °C	-45 °C ... 85 °C	-40 °C ... 70 °C	-25 °C ... 70 °C
Ambient temperature (installation)	-20 °C ... 60 °C	-20 °C ... 60 °C	-20 °C ... 60 °C	-10 °C ... 60 °C
Halogen-free as per:	Complying with IEC 60754-1/2	Complying with IEC 60754-1/2	Complying with IEC 60754-1/2	Complying with IEC 60754-1/2

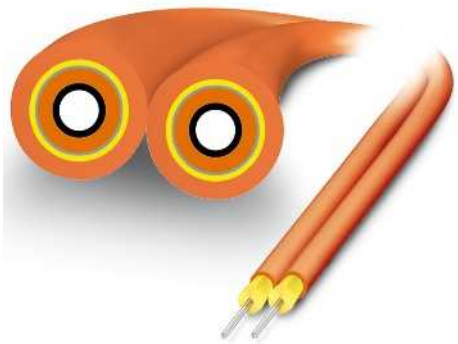
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
GOF outdoor cable, 2-wire, full breakout cable for **fixed** installation	**FOC-OE-OE-GB01/...**	1406429	1			
GOF outdoor cable, 2-wire, full breakout cable for **flexible** installation	**FOC-OE-OE-GB02/...**	1406430	1			
GOF outdoor cable, 4-wire, full breakout cable for **fixed** installation	**FOC-OE-OE-GB03/...**	1406431	1			
PCF outdoor cable, 2-wire, full breakout cable for **fixed** installation				**FOC-OE-OE-HB01/...**	1406432	1

Ordering example for cables with variable cable lengths:

For fiber optic outdoor cable type **GB02** with a cable length of 34.0 m, the ordering data is as follows:

Order No.		Length [m] Max. 1000 m
1406430	/	**34.0**
		Increment: 1.0 m ... 1000 m = **1.0 m**

Zip cord fiberglass cable for assembly, OM2



- Multi-mode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting termination devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada

	Free end		SC-RJ connector, IP20		SC duplex connector, IP20	
						
	OE		SCRJ		SCDUP	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Free end						
 OE	Variable	1411561				
SC-RJ connector, IP20						
 SCRJ			1 m 2 m	1409813 1400697	1 m 2 m	1409810 1400690
			Variable	1405703	Variable	1405700
SC duplex connector, IP20						
 SCDUP					1 m 2 m	1409798 1400685
					Variable	1405697
B-FOC (ST®) connector, IP20						
 BFOC						
LC duplex connector, IP20						
 LC					1 m 2 m	1409790 1400639
					Variable	1405691

Ordering example for configured cable:

For a **zip cord fiberglass cable,** fitted with an **IP20 SC duplex connector** at one end and an **IP20 SC-RJ connector** at the other end, and **15 m in length**, the ordering data is as follows:

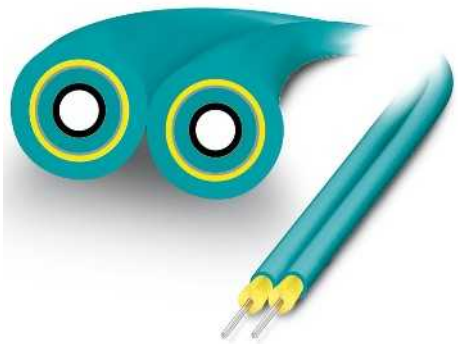
Order No.	Length [m]
1405700	/ 15

Length:	Min. 1 m Max. 1000 m
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20		LC duplex connector, IP20	
			
	BFOC		LC
Ordering data		Ordering data	
	Order No.		Order No.
1 m	1409822	1 m	1409793
2 m	1400706	2 m	1400682
Variable	1405710	Variable	1405694
1 m	1409819		
2 m	1400703		
Variable	1405708		
1 m	1409824		
2 m	1404768		
Variable	1405712		
1 m	1409816	1 m	1409787
2 m	1400701	2 m	1400604
Variable	1405706	Variable	1405688

	Technical data
Cable data	
Cable abbreviation in accordance with IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM2
Attenuation, typical	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)
Outer sheath	
Material	-
Color	Orange
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	900 µm
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Ambient temperature (installation)	-5 °C ... 50 °C
Halogen-free as per:	Complying with IEC 60754-1/2

Zip cord fiberglass cable for assembly, OM3



- Multi-mode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting termination devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 300 m

	Free end		SC-RJ connector, IP20		SC duplex connector, IP20	
						
	OE		SCRJ		SCDUP	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Free end 						
OE	Variable	1411563				
SC-RJ connector, IP20 			1 m 2 m	1409814 1400699	1 m 2 m	1409811 1400691
SCRJ			Variable	1405704	Variable	1405701
SC duplex connector, IP20 					1 m 2 m	1409799 1400688
SCDUP					Variable	1405698
LC duplex connector, IP20 					1 m 2 m	1409791 1400673
LC					Variable	1405692

Ordering example for configured cable:

For a **zip cord fiberglass cable,** fitted with an **IP20 SC duplex connector** at one end and an **IP20 SC-RJ connector** at the other end, and **15 m in length**, the ordering data is as follows:

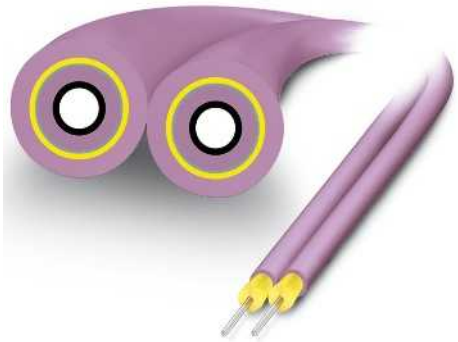
Order No.	Length [m]
1405701	/ 15

Length:	Min. 1 m Max. 1000 m
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20		LC duplex connector, IP20	
			
	BFOC		LC
Ordering data		Ordering data	
	Order No.		Order No.
1 m	1409823	1 m	1409796
2 m	1400711	2 m	1400683
Variable	1405711	Variable	1405695
1 m	1409821		
2 m	1400705		
Variable	1405709		
1 m	1409818	1 m	1409788
2 m	1400702	2 m	1400621
Variable	1405707	Variable	1405695

	Technical data
Cable data	
Cable abbreviation in accordance with IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM3
Attenuation, typical	2.5 dB/km (at 850 nm), 0.7 dB/km (at 1300 nm)
Smallest bending radius, fixed installation	15 nm
Smallest bending radius, movable installation	30 nm
Outer sheath	
Material	-
Color	Aqua
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	-
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Ambient temperature (installation)	-5 °C ... 50 °C
Halogen-free as per:	Complying with IEC 60754-1/2

Zip cord fiberglass cable for assembly, OM4



- Multi-mode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting termination devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 550 m

	Free end		SC-RJ connector, IP20		SC duplex connector, IP20	
						
	OE		SCRJ		SCDUP	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Free end						
 OE	Variable	1411564				
SC-RJ connector, IP20						
 SCRJ			1 m 2 m	1409815 1400700	1 m 2 m	1409812 1400695
			Variable	1405705	Variable	1405702
SC duplex connector, IP20						
 SCDUP					1 m 2 m	1409801 1400689
					Variable	1405699
LC duplex connector, IP20						
 LC					1 m 2 m	1409792 1400681
					Variable	1405693

Ordering example for configured cable:

For a **zip cord fiberglass cable,** fitted with an **IP20 SC duplex connector** at one end and an **IP20 SC-RJ connector** at the other end, and **15 m in length**, the ordering data is as follows:

Order No.	Length [m]
1405702	/ 15

Length:	Min. 1 m Max. 1000 m
Increment:	1 m 1 m ... 1000 m

LC duplex connector, IP20



	LC
Ordering data	
	Order No.
1 m	1409797
2 m	1400684
Variable	1405696
1 m	1409789
2 m	1400622
Variable	1405690

	Technical data
Cable data	
Cable abbreviation in accordance with IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM4
Attenuation, typical	2.5 dB/km (at 850 nm), 0.7 dB/km (at 1300 nm)
Smallest bending radius, fixed installation	15 nm
Smallest bending radius, movable installation	30 nm
Outer sheath	
Material	-
Color	Violet
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	-
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Ambient temperature (installation)	-5 °C ... 50 °C
Halogen-free as per:	Complying with IEC 60754-1/2

M12 connector, for assembly



INTERBUS



PROFIBUS DP

	Technical data		Technical data	
	Spring connection	**Screw connection**	**Spring connection**	**Screw connection**
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67
Connection method	Spring connection	Screw connection	Spring connection	Screw connection
Electrical data				
Rated voltage	60 V DC	60 V DC	60 V DC	60 V DC
Rated current	4 A	4 A	4 A	4 A
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ
Material data				
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Au	Ni/Au	Au
Contact carrier material	TPU	PA 66	TPU	PA 66
Inflammability class according to UL 94	V0	HB	V0	HB
Coding	B-coded	B - inverse	B-coded	B - inverse
No. of pos.	5	5	2	5
Temperature data				
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Spring connection		**Screw connection**		**Springconnection**		**Screw connection**	
Connectors								
Socket, straight	1432826	1	1507777	1	1432868	1	1507777	1
Plug, straight	1432800	1	1507764	1	1432842	1	1507764	1
Socket, angled	1432839	1	1430420	1	1432871	1	1430420	1
Plug, angled	1432813	1	1430417	1	1432855	1	1430417	1

new



PROFIBUS DP, PROFIBUS PA



CANopen®, DeviceNet™



CC-Link

Technical data

PROFIBUS DP	PROFIBUS PA
IEC 61076-2-101	IEC 61076-2-101
3	3
IP65/IP67	IP65/IP67
IDC connection technology	IDC connection technology
60 V DC	30 V DC
4 A	4 A
≥ 100 MΩ	≥ 100 MΩ
CuSn	CuSn
Ni/Au	Ni/Au
PA	PA
V0	V0
B-coded	A-coded
2	2
-40 ... 85	-40 ... 85

Ordering data

Order No.	Pcs. / Pkt.
PROFIBUS DP	
1413932	1
1413931	1

Order No.	Pcs. / Pkt.
PROFIBUS PA	
1413934	1
1413933	1

Technical data

Spring connection	Screw connection
IEC 61076-2-101	IEC 61076-2-101
3	3
IP65/IP67	IP67
Spring connection	Screw connection
60 V DC	60 V DC
4 A	4 A
≥ 100 MΩ	≥ 100 MΩ
CuSn	CuSn
Ni/Au	Au
TPU	PA 66
V0	HB
A - standard	A - standard
5	5
-40 ... 85	-40 ... 85

Ordering data

Order No.	Pcs. / Pkt.
Spring connection	
1432787	1
1432761	1
1432790	1
1432774	1

Order No.	Pcs. / Pkt.
Screw connection	
1508365	1
1508352	1

Technical data

Spring connection
IEC 61076-2-101
3
IP67
Spring connection
60 V DC
4 A
≥ 100 MΩ
CuSn
Ni/Au
PA 66
V0
A - standard
4
-40 ... 85

Ordering data

Order No.	Pcs. / Pkt.
Spring connection	
1559770	1
1559767	1

M12 flush-type connector, shielded



with 0.5 m long litz wires, front mounting

Technical data

M12 circular connector according to:	IEC 61076-2-101
Pollution degree	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	250 V
Rated current	4 A
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Material data	
Material contact/contact surface	CuZn / Ni/Au
Contact carrier material	PA66 GF
Inflammability class according to UL 94	V0
Temperature data	
Plug/socket [°C]	-25 ... 85

Ordering data

Description	Coding	Type	Order No.	Pcs. / Pkt.
Device connectors				
Socket	A - standard	**SACC-E-M12FS-4CON-PG9/0,5 FFVA**	1431429	1
Plug	A - standard	**SACC-E-M12MS-4CON-PG9/0,5 FFVA**	1431432	1

Flush-type connector, with pre-assembled cable, type 900



Rear mounting



Front mounting, can be positioned

		Technical data		Technical data	
		M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	
Degree of protection		IP67	IP67	IP67	
Electrical data					
Rated voltage		60 V	60 V	60 V	
Rated current		4 A	4 A	4 A	
Contact resistance		≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance		≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data					
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data				Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**			
Flush-type connector, B-coded, with bus system cable, 6-wire, shielded, PUR halogen-free, green outer cable sheath, 3 x 2 x 0.25 mm²									
Socket	0.5 m	1534546	1	1437601	1	1529742	1		
Plug	0.5 m	1534504	1	1437643	1	1529629	1		
Socket	1 m	1534559	1	1437614	1	1529755	1		
Plug	1 m	1534517	1	1437656	1	1530223	1		
Socket	2 m	1534562	1	1437627	1	1529768	1		
Plug	2 m	1534520	1	1437669	1	1529726	1		
Socket	5 m	1534575	1	1437630	1	1529771	1		
Plug	5 m	1534533	1	1437672	1	1529739	1		
EMC hexagonal nut with fine toothing, for all device connectors with:									
M16 fastening thread		1440164	10						
Pg9 fastening thread				1440177	10				

Flush-type connector, with pre-assembled cable, type 910



Rear mounting



Front mounting, can be positioned

	Technical data		Technical data	
	M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree	3	3	3	
Degree of protection	IP67	IP67	IP67	
Electrical data				
Rated voltage	60 V	60 V	60 V	
Rated current	4 A	4 A	4 A	
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data				
Material contact/contact surface	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material	PA 66	PA 66	PA 66	
Inflammability class according to UL 94	V0	V0	V0	
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**	
Flush-type connector, B-coded, with bus system cable, 2-wire, shielded, PUR halogen-free, violet outer cable sheath, 1 x 2 x 0.25 mm²							
Socket	0.5 m	1534384	1	1437449	1	1525597	1
Plug	0.5 m	1534342	1	1437481	1	1525555	1
Socket	1 m	1534397	1	1437452	1	1525607	1
Plug	1 m	1534355	1	1437494	1	1525568	1
Socket	2 m	1534407	1	1437465	1	1519574	1
Plug	2 m	1534368	1	1437504	1	1519561	1
Socket	5 m	1534410	1	1437478	1	1525610	1
Plug	5 m	1534371	1	1437517	1	1525571	1
EMC hexagonal nut with fine toothing, for all device connectors with:							
M16 fastening thread		1440164	10				
Pg9 fastening thread				1440177	10		

Flush-type connector, with pre-assembled cable, type 920



Rear mounting



Front mounting, can be positioned

		Technical data		Technical data	
		M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree		3	3	3	
Degree of protection		IP67	IP67	IP67	
Electrical data					
Rated voltage		60 V	60 V	60 V	
Rated current		4 A	2 A	4 A	
Contact resistance		≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance		≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data					
Material contact/contact surface		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	
Inflammability class according to UL 94		V0	V0	V0	
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data				Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**			
Flush-type connector, A-coded, with bus system cable, 4-wire, shielded, PUR halogen-free, violet outer cable sheath, 2 x 0.34 mm²; 2 x 0.25 mm²									
Socket	0.5 m	1534465	1	1437520	1	1525678	1		
Plug	0.5 m	1534423	1	1437562	1	1525623	1		
Socket	1 m	1534478	1	1437533	1	1525681	1		
Plug	1 m	1534436	1	1437575	1	1525636	1		
Socket	2 m	1534481	1	1437546	1	1525694	1		
Plug	2 m	1534449	1	1437588	1	1525649	1		
Socket	5 m	1534494	1	1437559	1	1525704	1		
Plug	5 m	1534452	1	1437591	1	1525652	1		
EMC hexagonal nut with fine toothing, for all device connectors with:									
M16 fastening thread		1440164	10						
Pg9 fastening thread				1440177	10				

Assembled cables, INTERBUS, M12-SPEEDCON, and M12

Notes:

For information about the cable qualities, see page 440

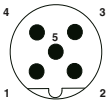


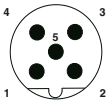


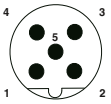


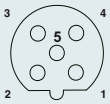
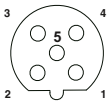
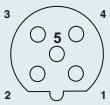










	Free end		Connector M12-SPEEDCON		Connector M12-SPEEDCON		M12 connector		
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
			2 m	1517877			2 m	1507065	
			5 m	1517880			5 m	1507078	
			10 m	1517893			10 m	1507081	
			15 m	1517903			15 m	1507094	
	Variable	2723123	Variable	1537996	Variable	1433184	Variable	1537983	
M12-SPEEDCON socket, straight									
 			0.3 m	1517958					
			0.5 m	1517961					
			1 m	1517974					
	2 m	1517916	2 m	1517987					
	5 m	1517929	5 m	1517990					
	10 m	1517932	10 m	1518009					
	15 m	1517945	15 m	1518012					
	Variable	1538018	Variable	1538034	Variable	1433210			
M12-SPEEDCON socket, angled									
 	Variable	1433197	Variable	1433207	Variable	1433223			
M12 socket, straight									
 							0.3 m	1507162	
							0.5 m	1507175	
							1 m	1507188	
	2 m	1507117					2 m	1507191	
	5 m	1507120					5 m	1507201	
	10 m	1507133					10 m	1507214	
	15 m	1507146					15 m	1507227	
	Variable	1538005					Variable	1538021	

Ordering example for cable **with** connector assembly:

For an INTERBUS bus cable, straight M12 socket to a straight M12 connector and a cable length of 34.5 m, the order data is as follows:

Order No.	Length [m] Max. 40 m
1538021	/ 34.5

Increments:
0.2 ... 3.0 m = 0.1 m
> 3.0 m = 0.5 m

Ordering example for cable **without** connector assembly:

For an INTERBUS bus cable with a cable length of 34.5 m, the order data is as follows:

Order No.	Length [m] Max. 400 m
2723123	/ 34.5

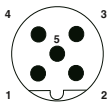
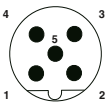
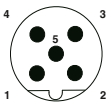
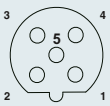
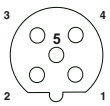
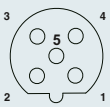
Increments:
0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, PROFIBUS DP, M12-SPEEDCON, and M12

Notes:

For information about the cable qualities, see page 440

	Free end		Connector, M12-SPEEDCON				M12 connector		
									
									
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
			2 m	1518025			2 m	1507243	
			5 m	1518038			5 m	1507256	
			10 m	1518041			10 m	1507269	
			15 m	1518054			15 m	1507272	
	Variable	1511491	Variable	1538050	Variable	1433236	Variable	1538047	
M12-SPEEDCON socket, straight									
 			0.3 m	1518106					
			0.5 m	1518119					
			1 m	1518122					
	2 m	1518067	2 m	1518135					
	5 m	1518070	5 m	1518148					
	10 m	1518083	10 m	1518151					
	15 m	1518096	15 m	1518164					
	Variable	1538076	Variable	1538092	Variable	1433265			
M12-SPEEDCON socket, angled									
 									
	Variable	1433249	Variable	1433252	Variable	1433278			
M12 socket, straight									
 							0.3 m	1507340	
							0.5 m	1507353	
							1 m	1507366	
	2 m	1507298					2 m	1507379	
	5 m	1507308					5 m	1507382	
	10 m	1507311					10 m	1507395	
	15 m	1507324					15 m	1507405	
	Variable	1538063					Variable	1538089	

Ordering example for cable **with** connector assembly:

For a PROFIBUS bus cable, straight M12 socket to a straight M12 connector and the cable length of 34.5 m, the order data is as follows:

Order No.		Length [m] Max. 40 m
1538089	/	34.5
		Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for cable **without** connector assembly:

For a PROFIBUS bus cable with a cable length of 34.5 m, the order data is as follows:

Order No.		Length [m] Max. 400 m
1511491	/	34.5
		Increments: 0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	250
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, PROFIBUS PA, M12 stainless steel

Notes:

For information about the cable qualities, see page 442

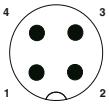


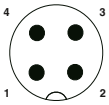
Free end

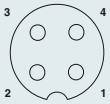
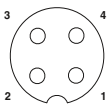




M12 connector





	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			2 m	1419092	2 m	1419097
			5 m	1419093	5 m	1419098
			10 m	1419094	10 m	1419099
			15 m	1419095	15 m	1419100
			20 m	1419096	20 m	1419101
M12 socket, straight						
 			0.3 m	1419102	0.3 m	1419110
			0.5 m	1419103	0.5 m	1419111
			1 m	1419104	1 m	1419112
	2 m	1419082	2 m	1419105	2 m	1419113
	5 m	1419083	5 m	1419106	5 m	1419114
	10 m	1419084	10 m	1419107	10 m	1419115
	15 m	1419085	15 m	1419108	15 m	1419116
	20 m	1419086	20 m	1419109	20 m	1419117
M12 socket, angled						
 			0.3 m	1419118	0.3 m	1419126
			0.5 m	1419119	0.5 m	1419127
			1 m	1419120	1 m	1419128
	2 m	1419087	2 m	1419121	2 m	1419129
	5 m	1419088	5 m	1419122	5 m	1419130
	10 m	1419089	10 m	1419123	10 m	1419131
	15 m	1419090	15 m	1419124	15 m	1419132
	20 m	1419091	20 m	1419125	20 m	1419133

Color coding	Pin assignment M12
OG	1
n.c.	2
BU	3
Shield	4

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67 / IP68 / IP69K
Temperature data		
Plug/socket	[°C]	-25 ... 90

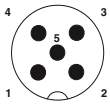
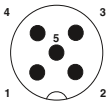
Assembled cables, DeviceNet™/CANopen®, M12-SPEEDCON

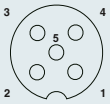
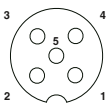
Notes:

For information about the cable qualities, see page 441

Connector, unshielded.

DeviceNet CANopen

	Free end	M12 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1419039	2 m	1419044
				5 m	1419040	5 m	1419045
				10 m	1419041	10 m	1419046
				15 m	1419042	15 m	1419047
				20 m	1419043	20 m	1419048
M12 socket, straight							
				0.3 m	1419049	0.3 m	1419057
				0.5 m	1419050	0.5 m	1419058
				1 m	1419051	1 m	1419059
		2 m	1419081	2 m	1419052	2 m	1419060
		5 m	1419030	5 m	1419053	5 m	1419061
		10 m	1419031	10 m	1419054	10 m	1419062
		15 m	1419032	15 m	1419055	15 m	1419063
		20 m	1419033	20 m	1419056	20 m	1419064
M12 socket, angled							
				0.3 m	1419065	0.3 m	1419073
				0.5 m	1419066	0.5 m	1419074
				1 m	1419067	1 m	1419075
		2 m	1419034	2 m	1419068	2 m	1419076
		5 m	1419035	5 m	1419069	5 m	1419077
		10 m	1419036	10 m	1419070	10 m	1419078
		15 m	1419037	15 m	1419071	15 m	1419079
		20 m	1419038	20 m	1419072	20 m	1419080

Color coding		Pin assignment M12
Shield		1
RD		2
BK		3
WH		4
BU		5

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		< 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M8

Notes:

For information about the cable qualities, see page 441

	Free end	M8 connector	
			
			

DeviceNet CANopen

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1575712		
				5 m	1575725		
				10 m	1575738		
				15 m	1575754		
				Variable	1575767	Variable	1575903
M8 socket, straight							
				0.3 m	1575822		
				0.5 m	1575835		
				1 m	1575848		
		2 m	1575770	2 m	1575851		
		5 m	1575783	5 m	1575864		
		10 m	1575796	10 m	1575877		
		15 m	1575806	15 m	1575880		
		Variable	1575819	Variable	1575893	Variable	1575932
M8 socket, angled							
							
		Variable	1575916			Variable	1575945

Ordering example for cables **with** variable cable length:

For a DeviceNet™ bus cable, straight M8 socket to a straight M8 connector and a cable length of 34.5 m, the order data is as follows:

Order No.		Length [m] Max. 40 m
1575893	/	34.5
		Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

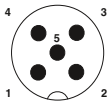
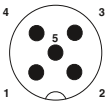
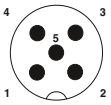
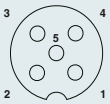
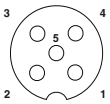
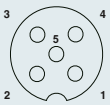
		Technical data
		M8
Rated voltage	[V]	30
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M12-SPEEDCON and M12

Notes:

For information about the cable qualities, see page 441

DeviceNet CANopen

	Free end		Connector, M12-SPEEDCON				M12 connector	
								
								
	Ordering data		Ordering data		Ordering data		Ordering data	Ordering data
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**
			2 m	1518177			2 m	1507421
			5 m	1518180			5 m	1507434
			10 m	1518193			10 m	1507447
			15 m	1518203			15 m	1507450
	Variable	1511504	Variable	1538115	Variable	1433281	Variable	1538102
M12 socket, SPEEDCON, straight								
 			0.3 m	1518258				
			0.5 m	1518261				
			1 m	1518274				
	2 m	1518216	2 m	1518287				
	5 m	1518229	5 m	1518290				
	10 m	1518232	10 m	1518300				
	15 m	1518245	15 m	1518313				
	Variable	1538131	Variable	1538157	Variable	1433317		
M12 socket, SPEEDCON, angled								
 								
	Variable	1433294	Variable	1433304	Variable	1433320		
M12 socket, straight								
 							0.3 m	1507528
							0.5 m	1507531
							1 m	1507544
	2 m	1507476					2 m	1507557
	5 m	1507489					5 m	1507560
	10 m	1507492					10 m	1507573
	15 m	1507502					15 m	1507586
	Variable	1538128					Variable	1538144

Ordering example for cable **with** connector assembly:

For a DeviceNet™ bus cable, straight M12 socket to a straight M12 connector and the cable length of 34.5 m, the order data is as follows:

Order No.	Length [m] Max. 40 m
1538144 /	34.5
	Increments: 0.2 ... 3.0 m = 0.1 m; > 3.0 m = 0.5 m

Ordering example for cable **without** connector assembly:

For a DeviceNet™ bus cable with a cable length of 34.5 m, the order data is as follows:

Order No.	Length [m] Max. 400 m
1511504 /	34.5
	Increments: 0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Material of grip body		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled drop cable, DeviceNet™, 7/8", type 923

Notes:

For information about the cable qualities, see page 441

Free end	7/8" connector	
		
		

DeviceNet

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1418523	2 m	1418578
				5 m	1418536	5 m	1418581
				10 m	1418549	10 m	1418594
				15 m	1418552	15 m	1418604
				20 m	1418565	20 m	1418617
7/8" socket, straight							
				0.3 m	1418620	0.3 m	1418701
				0.5 m	1418633	0.5 m	1418714
				1 m	1418646	1 m	1418727
		2 m	1418426	2 m	1418659	2 m	1418730
		5 m	1418439	5 m	1418662	5 m	1418743
		10 m	1418442	10 m	1418675	10 m	1418756
		15 m	1418455	15 m	1418688	15 m	1418769
		20 m	1418468	20 m	1418691	20 m	1418772
7/8" socket, angled							
				0.3 m	1418785	0.3 m	1420045
				0.5 m	1418798	0.5 m	1420058
				1 m	1418808	1 m	1420061
		2 m	1418471	2 m	1418811	2 m	1420074
		5 m	1418484	5 m	1418824	5 m	1420087
		10 m	1418497	10 m	1418837	10 m	1420090
		15 m	1418507	15 m	1420029	15 m	1420100
		20 m	1418510	20 m	1420032	20 m	1420113

Color coding		Pin assignment 7/8"
Shield		1
RD		2
BK		3
WH		4
BU		5

		Technical data
		7/8"
Rated voltage	[V]	30
Rated current	[A]	5.2
Contact resistance		< 5 mΩ
Contact material		CuZn
Contact surface material		Au
Material of grip body		TPU
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-40 ... 80

Assembled trunk cable, DeviceNet™, 7/8", type 928

Notes:

For information about the cable qualities, see page 441

Free end	7/8" connector	
		
		

DeviceNet

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1417553	2 m	1417605
				5 m	1417566	5 m	1417618
				10 m	1417579	10 m	1417621
				15 m	1417582	15 m	1417634
				20 m	1417595	20 m	1417647
7/8" socket, straight							
				0.3 m	1417650	0.3 m	1417731
				0.5 m	1417663	0.5 m	1417744
				1 m	1417676	1 m	1417757
		2 m	1417456	2 m	1417689	2 m	1417760
		5 m	1417469	5 m	1417692	5 m	1417773
		10 m	1417472	10 m	1417702	10 m	1417786
		15 m	1417485	15 m	1417715	15 m	1417799
		20 m	1417498	20 m	1417728	20 m	1417809
7/8" socket, angled							
				0.3 m	1417812	0.3 m	1417896
				0.5 m	1417825	0.5 m	1417906
				1 m	1417838	1 m	1417919
		2 m	1417508	2 m	1417841	2 m	1417922
		5 m	1417511	5 m	1417854	5 m	1417935
		10 m	1417524	10 m	1417867	10 m	1417948
		15 m	1417537	15 m	1417870	15 m	1417951
		20 m	1417540	20 m	1417883	20 m	1417964

Color coding		Pin assignment 7/8"
Shield		1
RD		2
BK		3
WH		4
BU		5

		Technical data
		7/8"
Rated voltage	[V]	30
Rated current	[A]	5.2
Contact resistance		< 5 mΩ
Contact material		CuZn
Contact surface material		Au
Material of grip body		TPU
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-40 ... 80

M12 Y distributor

Notes:
For information about the cable qualities, see page 441
Connector, unshielded.

DeviceNet

CANopen



Bus system cable

DeviceNet

CANopen



Bus system cable

		Technical data	Technical data
Electrical data			
Rated voltage		60 V	60 V
Rated current		4 A	4 A
Contact resistance		≤ 5 mΩ	≤ 5 mΩ
Material data			
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Contact carrier material		TPU GF	-
Inflammability class according to UL 94		HB	HB
Mechanical data			
No. of pos.		5	5
Pollution degree		3	3
Degree of protection		IP65/IP67	IP65/IP67
External cable diameter		6.70 mm	6.70 mm
Conductor cross section for signal		0.2 mm²	0.2 mm²
Conductor structure signal line		19x 0.12 mm	19x 0.12 mm
Conductor cross section for power		0.32 mm²	0.32 mm²
Conductor structure, voltage supply		19x 0.15 mm	19x 0.15 mm
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90
Cable, fixed installation	[°C]	-40 ... 80	-40 ... 80
Cable, flexible installation	[°C]	-20 ... 70	-20 ... 70

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to straight M12 socket and straight M12 connector						
- Conductor length 0.3 m	**SAC-5PY-F/2X 0,3-920-MS-FS**	1436013	1			
- Conductor length 0.5 m	**SAC-5PY-F/2X 0,5-920-MS-FS**	1436026	1			
- Conductor length 1.0 m	**SAC-5PY-F/2X 1,0-920-MS-FS**	1436039	1			
- Conductor length 2.0 m	**SAC-5PY-F/2X 2,0-920-MS-FS**	1436042	1			
- Conductor length 5.0 m	**SAC-5PY-F/2X 5,0-920-MS-FS**	1436055	1			
- Conductor length 10.0 m	**SAC-5PY-F/2X10,0-920-MS-FS**	1436068	1			
- Conductor length 15.0 m	**SAC-5PY-F/2X15,0-920-MS-FS**	1436071	1			
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-connector to free cable ends						
- Conductor length 2.0 m				**SAC-5PY-M/2X 2,0-920**	1436084	1
- Conductor length 5.0 m				**SAC-5PY-M/2X 5,0-920**	1436097	1
- Conductor length 10.0 m				**SAC-5PY-M/2X10,0-920**	1436107	1
- Conductor length 15.0 m				**SAC-5PY-M/2X15,0-920**	1436110	1
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to free cable ends						
- Conductor length 2.0 m				**SAC-5PY-F/2X 2,0-920**	1436123	1
- Conductor length 5.0 m				**SAC-5PY-F/2X 5,0-920**	1436136	1
- Conductor length 10.0 m				**SAC-5PY-F/2X10,0-920**	1436149	1
- Conductor length 15.0 m				**SAC-5PY-F/2X15,0-920**	1436152	1

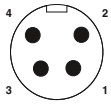
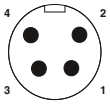
Assembled cables, FOUNDATION Fieldbus, 7/8"

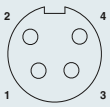
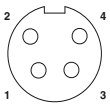
Notes:

For applications in circuits of the intrinsic safety "i" protection type.

For information about the cable qualities, see page 442

FOUNDATION

	Free end	7/8" plug	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			2 m	1433964	2 m	1434057
			5 m	1433977	5 m	1434060
			10 m	1433980	10 m	1434073
	Variable	1434620				
7/8" socket, straight						
 			0.3 m	1434141	0.3 m	1434264
			0.5 m	1434154	0.5 m	1434277
			1 m	1434167	1 m	1434280
	2 m	1433786	2 m	1434170	2 m	1434293
	5 m	1433799	5 m	1434183	5 m	1434303
	10 m	1433809	10 m	1434196	10 m	1434316
7/8" socket, angled						
 			0.3 m	1434387	0.3 m	1434507
			0.5 m	1434390	0.5 m	1434510
			1 m	1434400	1 m	1434523
	2 m	1433870	2 m	1434413	2 m	1434536
	5 m	1433883	5 m	1434426	5 m	1434549
	10 m	1433896	10 m	1434439	10 m	1434552

Ordering example for products with **variable** cable:

For a FOUNDATION Fieldbus cable that is 34.5 m in length, the ordering data is as follows:

Order No.	Length [m] max. 50 m
1434620 /	**34.5**
	Increment: 0.5 m

Color coding		Pin assignment	
		7/8"	M12
BU		1	1
BN		2	2
Shield		3	3
n.c.		4	4

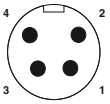
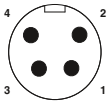
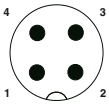
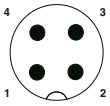
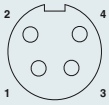
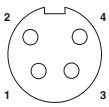
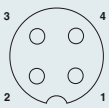
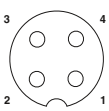
		Technical data
		7/8"
Rated voltage	[V]	300
Rated current	[A]	5.2
Contact resistance		≤ 5 mΩ
Contact material		CuZn
Contact surface material		AU
Material of grip body		TPU
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-40 ... 105

Assembled cables, FOUNDATION Fieldbus, 7/8" and M12 stainless steel

Notes:

For information about the cable qualities, see page 442



	Free end		7/8" connector				M12 connector			
										
										
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
			2 m	1429350	2 m	1429444	2 m	1431173		
			5 m	1429363	5 m	1429457	5 m	1431186		
			10 m	1429376	10 m	1429460	10 m	1431199		
			15 m	1429389	15 m	1429473	15 m	1431209		
			20 m	1429392	20 m	1429486				
			25 m	1429402	25 m	1429499				
			30 m	1429415	30 m	1429509				
			40 m	1429428	40 m	1429512				
			50 m	1429431	50 m	1429525				
	Variable	1432389					Variable	1431322	Variable	1431335
7/8" socket, straight										
 			0.3 m	1429538	0.3 m	1429664				
			0.5 m	1429554	0.5 m	1429677				
			1 m	1429567	1 m	1429680				
	2 m	1429712	2 m	1429570	2 m	1429693				
	5 m	1429185	5 m	1429583	5 m	1429703				
	10 m	1429198	10 m	1429596	10 m	1429716				
	15 m	1429208	15 m	1429606	15 m	1429729				
	20 m	1429211	20 m	1429619	20 m	1429732				
	25 m	1429224	25 m	1429622	25 m	1429745				
	30 m	1429237	30 m	1429635	30 m	1429758				
	40 m	1429240	40 m	1429648	40 m	1429761				
	50 m	1429253	50 m	1429651	50 m	1429774				
7/8" socket, angled										
 			0.3 m	1429787	0.3 m	1429907				
			0.5 m	1429790	0.5 m	1429910				
			1 m	1429800	1 m	1429923				
	2 m	1429266	2 m	1429813	2 m	1429936				
	5 m	1429279	5 m	1429826	5 m	1429949				
	10 m	1429282	10 m	1429839	10 m	1429952				
	15 m	1429295	15 m	1429842	15 m	1429965				
	20 m	1429305	20 m	1429855	20 m	1429978				
	25 m	1429318	25 m	1429868	25 m	1429981				
	30 m	1429321	30 m	1429871	30 m	1429994				
	40 m	1429334	40 m	1429884	40 m	1430006				
	50 m	1429347	50 m	1429897	50 m	1430019				
M12 socket, straight										
 							0.3 m	1431254		
							0.5 m	1431267		
							1 m	1431270		
	2 m	1431212					2 m	1431283		
	5 m	1431225					5 m	1431296		
	10 m	1431238					10 m	1431306		
	15 m	1431241					15 m	1431319		
	Variable	1431348					Variable	1431364	Variable	1431377
M12 socket, angled										
 										
	Variable	1431351					Variable	1431380	Variable	1431393

Ordering example for products with **variable** cable:

For a FOUNDATION Fieldbus cable, fitted with a straight M12 connector at one end and an M12 socket at the other end, and 34.5 m in length, the ordering data is as follows:

Order No.	Length [m] max. 50 m
1431364	34.5 **Increment:** 0.5 m

Color coding		Pin assignment	
		7/8"	M12
BU		1	1
BN		2	2
Shield		3	3
n.c.		4	4

		Technical data	Technical data
		7/8"	Connectors M12
Rated voltage	[V]	300	250
Rated current	[A]	5.2	4
Contact resistance		≤ 5 mΩ	≤ 5 mΩ
Contact material		CuZn	CuSn
Contact surface material		AU	Ni/Au
Material of grip body		TPU	TPU, hardly inflammable, self-extinguishing
Material, knurls		Stainless steel	Stainless steel
Degree of protection		IP67	IP65 / IP67 / IP68 / IP69K
Temperature data			
Plug/socket	[°C]	-40 ... 105	-25 ... 90

H- and T-distributors



H-distributor



T-distributor

	Technical data	Technical data	
	SAC-5PH-M-F/2XF SH1 SCO	SAC-5P-M12T/2XMIN DN	SAC-5P-M12T/2XM12 VP
Electrical data			
Nominal voltage U_N	60 V	60 V	60 V
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ
Surge voltage category/pollution degree	II / 3	II / 3	II / 3
Material data			
Contact material	CuZn	CuZn	CuZn
Contact surface material	Ni/Au	AU	Ni/Au
Contact carrier material	TPU GF	PA/TPE-U	TPU GF
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Temperature data			
Plug/socket [°C]	-25 ... 90	-40 ... 75	-25 ... 90

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system **H-distributor**, for **DeviceNet™** with two mounting holes M12 connector to 3x M12 sockets	**SAC-5PH-M-F/2XF SH1 SCO**	1417414	1			
Bus system **T-distributor**, for **DeviceNet™**, with stainless steel knurl and two mounting holes M12 socket to 7/8" connector and 7/8" socket				**SAC-5P-M12T/2XMIN DN**	1401028	1
7/8" socket to 7/8" connector and 7/8" socket				**SAC-5P-MINT/2XMIN DN**	1401029	1
Bus system **T-distributor**, for **CANopen® and DeviceNet™,** M12 socket to M12 socket and M12 connector						
Green				**SAC-5P-M12T/2XM12 VP**	1541186	1
Black, with two mounting holes				**SAC-M12T/2XM12 CAN**	1507793	1
Bus system-**T-distributor**, for **CC-Link** M12 socket to M12 socket and M12 connector				**SAC-4P-M12T/2XM12 CCL**	1559783	5
Bus system **T-distributor,** for FOUNDATION Fieldbus and PROFIBUS PA (M12), with stainless steel knurl M12 socket to M12 socket and M12 connector				**SAC-4P-M12T/2XM12 FF VA**	1431416	5
7/8" socket to 7/8" connector and 7/8" socket, with two mounting holes				**SAC-4P-MIN-T/2XMIN FF VA**	1430035	1
Bus system **T-distributor**, for **PROFIBUS** M12 socket to M12 connector and M12 socket, with two mounting holes				**SAC-M12T/2XM12 PBDP**	1458884	1

Termination resistors



M8/M12 termination resistors

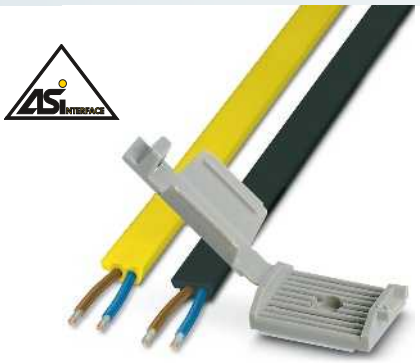


7/8" termination resistors

	Technical data		Technical data
	SAC-5P-M12MS PB TR	SAC-4P-M12MS FF TR VA	SAC-4P-MINMS FF-TR VA
Electrical data			
Nominal voltage U_N	60 V	24 V	50 V
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 10 MΩ
Surge voltage category/pollution degree	II / 3	II / 3	II / 2
Material data			
Contact material	CuSn	CuZn	CuZn
Contact surface material	Ni/Au	Ni/Au	AU
Contact carrier material	TPU GF	TPU GF	PA 66
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU
Degree of protection	IP65/IP67/IP69K	IP65/IP68/IP69K	IP67
Temperature data			
Plug/socket [°C]	-25 ... 90	-25 ... 90	-40 ... 80

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Termination resistor, M8 connector						
- DeviceNet™	**SAC-5P-M 8MS DN TR**	1435988	5			
Termination resistor, M12 connector						
- PROFIBUS	**SAC-5P-M12MS PB TR**	1507803	5			
- DeviceNet™/CANopen®	**SAC-5P-M12MS CAN TR**	1507816	5			
- CC-Link	**SAC-4P-M12MS CCL TR**	1558470	1			
Termination resistor, M12 connector, stainless steel knurl						
- FOUNDATION Fieldbus	**SAC-4P-M12MS FF TR VA**	1431403	5			
Termination resistor, 7/8" connector, stainless steel knurl						
- FOUNDATION Fieldbus				**SAC-4P-MINMS FF-TR VA**	1430023	1
Termination resistor, 7/8" connector						
- DeviceNet™				**SAC-5P-MINMS TR-DN**	1434701	1

Flat-ribbon conductors, flat-ribbon conductor connectors, and panel feed-throughs



Flat-ribbon conductors and accessories



Flat-ribbon conductors and panel feed-throughs with QUICKON fast connection technology

Technical data

		VS-ASI-FC-PVC...	VS-ASI-FC-PUR...	Q 1,5/4IDC	Q 1,5/4M20
Mechanical data					
No. of pos.		2	2	4	4
Degree of protection		-	-	IP65/IP67	IP65/IP67
Cable data					
Outer sheath material		PVC	PUR	-	-
Conductor cross section		1.5 mm²	1.5 mm²	-	-
Connector data QUICKON connection					
Conductor cross section [mm²]		-	-	0.75 mm² ... 1.5 mm²	0.75 mm² ... 1.5 mm²
Conductor cross section [AWG]		-	-	18 ... 16	18 ... 16
Temperature data					
Plug/socket	[°C]	-	-	-25 ... 80	-25 ... 80
Cable, fixed installation	[°C]	-30 ... 90	-40 ... 85	-	-
Cable, flexible installation	[°C]	-20 ... 90	-30 ... 85	-	-

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AS-Interface EPDM flat-ribbon conductor, 2 x 1.5 mm²							
Yellow	100 m	**VS-ASI-FC-EPDM-YE 100M**	1432402	1			
Yellow	1000 m	**VS-ASI-FC-EPDM-YE 1000M**	1434646	1			
Black	100 m	**VS-ASI-FC-EPDM-BK 100M**	1432415	1			
Black	1000 m	**VS-ASI-FC-EPDM-BK 1000M**	1434659	1			
AS-Interface PVC flat-ribbon conductor to UL, 2 x 1.5 mm²							
Yellow	100 m	**VS-ASI-FC-PVC-UL-YE 100M**	1404906	1			
Yellow	1000 m	**VS-ASI-FC-PVC-UL-YE/1000**	1404867	1			
Black	100 m	**VS-ASI-FC-PVC-UL-BK 100M**	1404919	1			
Black	1000 m	**VS-ASI-FC-PVC-UL-BK/1000**	1404870	1			
AS-Interface TPE flat-ribbon conductor to UL, 2 x 1.5 mm²							
Yellow	100 m	**VS-ASI-FC-TPE-UL-YE 100M**	1404922	1			
Yellow	1000 m	**VS-ASI-FC-TPE-UL-YE 1000M**	1434662	1			
Black	100 m	**VS-ASI-FC-TPE-UL-BK 100M**	1404935	1			
Black	1000 m	**VS-ASI-FC-TPE-UL-BK 1000M**	1434675	1			
AS-Interface PUR flat-ribbon conductor, 2 x 1.5 mm²							
Yellow	100 m	**VS-ASI-FC-PUR-YE 100M**	1404883	1			
Yellow	1000 m	**VS-ASI-FC-PUR-YE/1000**	1404841	1			
Black	100 m	**VS-ASI-FC-PUR-BK 100M**	1404896	1			
Black	1000 m	**VS-ASI-FC-PUR-BK/1000**	1404854	1			
Flat connector, 4-pos., for connecting one or two AS-i flat-ribbon conductors					**Q 1,5/4IDC/24-24KU-KU-ASI-BK**	1585058	1
Panel feed-through, for accommodating one or two AS-i flat-ribbon conductors, on the rear side with manual solder/slip-on connection 4.8 x 0.8 mm					**Q 1,5/4FL/24-M20KU-ESA-ASI BK**	1437261	1
Panel feed-through, for accommodating one or two AS-Interface flat-ribbon conductors, on the rear side with four individual 1.5 mm² wires	0.5 m				**Q 1,5/4A50/24-M20KU-ESA-ASI BK**	1437274	1
Metal gland, for AS-Interface flat-ribbon conductor							
Thread type: M20					**HC-M-KV-M20(1ASI)**	1584017	10
Thread type: M25					**HC-M-KV-M25(1ASI)**	1584020	10

Distributor with spring connection and with round conductors



Flat-ribbon conductor distributors and distributors with spring connection



Distributor with round cable and molded M12 connector with SPEEDCON

Technical data

		SAC-ASI-J-Y-B-FFKDS	SAC-ASI-J-Y-Y-N
Electrical data			
Rated voltage		≤ 35 V	≤ 32 V
Rated current		≤ 6 A	≤ 8 A
Material specifications for exit			
Material of grip body		-	-
Material specifications for distributor			
Housing material		PBT	PBT
Mechanical data			
No. of pos.		4	4
Degree of protection		IP20	IP65/IP67
Connection data for spring-cage terminal blocks			
Conductor cross section		0.2 mm² ... 1.5 mm²	-
Connection cross section AWG		24 ... 16	-
Cable data			
Outer sheath material		-	-
External cable diameter		-	-
Conductor cross section		-	-
Temperature data			
Plug/socket	[°C]	-25 ... 75	-25 ... 75
Cable, fixed installation	[°C]	-	-
Cable, flexible installation	[°C]	-	-

Technical data

		SAC-ASI-J-Y-N...	SAC-ASI-J-Y-B...
Electrical data			
Rated voltage		≤ 32 V	≤ 32 V
Rated current		≤ 4 A	≤ 4 A
Material specifications for exit			
Material of grip body		TPU	TPU
Material specifications for distributor			
Housing material		PBT	PBT
Mechanical data			
No. of pos.		2	4
Degree of protection		IP65/IP67	IP65/IP67
Connection data for spring-cage terminal blocks			
Conductor cross section		-	-
Connection cross section AWG		-	-
Cable data			
Outer sheath material		PUR	PUR
External cable diameter		4.30 mm	4.30 mm
Conductor cross section		4x 0.34 mm² (signal line)	4x 0.34 mm² (signal line)
Temperature data			
Plug/socket	[°C]	-25 ... 75	-25 ... 75
Cable, fixed installation	[°C]	-40 ... 80	-40 ... 80
Cable, flexible installation	[°C]	-25 ... 80	-25 ... 80

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
AS-Interface distributor with IP20 degree of protection for **two flat conductors**, 4-pos., with **spring-cage terminal blocks**		**SAC-ASI-J-Y-B-FFKDS**	**1407579**	1
AS-Interface H-distributor with high degree of protection, **parallel wired,** for distribution from one to two flat-ribbon conductors		**SAC-ASI-J-Y-Y-N**	**1405622**	1
AS-Interface distributor for **1 flat-ribbon conductor**, with **PUR** round cable and molded, **straight**, A-coded, **2-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **2 flat-ribbon conductors**, with **PUR** round cable and molded, **straight**, A-coded, **4-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **2 flat-ribbon conductors**, with **PUR** round cable and molded, **angled**, A-coded, **4-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **1 flat-ribbon conductor,** with 2.0 m **PUR** round cable and open cable end	2 m			
AS-Interface distributor for **2 flat-ribbon conductors,** with 2.0 m **PUR** round cable and open cable end	2 m			

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-ASI-J-Y-N-PUR-1,0-FS SCO	**1407573**	1
SAC-ASI-J-Y-N-PUR-2,0-FS SCO	**1407574**	1
SAC-ASI-J-Y-B-PUR-1,0-FS SCO	**1407575**	1
SAC-ASI-J-Y-B-PUR-2,0-FS SCO	**1407576**	1
SAC-ASI-J-Y-B-PUR-1,0-FR SCO	**1407577**	1
SAC-ASI-J-Y-B-PUR-2,0-FR SCO	**1407578**	1
SAC-ASI-J-Y-N-PUR-2,0-OE	**1407580**	1
SAC-ASI-J-Y-B-PUR-2,0-OE	**1407581**	1

Distributors with M12-socket, with screw connection, pre-assembled round cable



Distributors with M12 slot and with screw connection



PUR round conductors with molded M12-SPEEDCON connectors

		Technical data		Technical data
		SAC-ASI-J-Y-N-M12FS	VS-ASI-J-Y-N-SWA-LC	-
Material data				
Housing material		PBT	PA	-
Material of grip body		-	-	TPU, hardly inflammable, self-extinguishing
No. of pos.		2	2	4
Degree of protection		IP65/IP67	IP67	IP65/IP67
Connection data for screw connection				
Conductor cross section		-	0.14 mm² ... 1 mm² (solid)	-
Connection cross section AWG		-	26 ... 17 (solid)	-
Conductor cross section		-	0.14 mm² ... 0.75 mm² (With ferrules)	-
Connection cross section AWG		-	26 ... 18 (With ferrules)	-
Cable data				
Conductor cross section		-	-	0.75 mm²
Temperature data				
Plug/socket	[°C]	-25 ... 75	-25 ... 70	-25 ... 90
Cable, fixed installation	[°C]	-	-	-25 ... 80
Cable, flexible installation	[°C]	-	-	-5 ... 80

Description	Cable length	Ordering data Type	Order No.	Pcs. / Pkt.	Ordering data Type	Order No.	Pcs. / Pkt.
AS-Interface distributor for flat-ribbon conductors, with straight, A-coded M12 socket							
One flat conductor, 2-pos.		**SAC-ASI-J-Y-N-M12FS**	1405619	1			
Two flat conductors, 4-pos.		**SAC-ASI-J-Y-B-M12FS**	1405621	1			
AS-Interface distributor, with straight, A-coded M12 socket							
One flat conductor, 2-pos.		**VS-ASI-J-Y-N-M12FS-LC**	1433155	1			
AS-Interface distributor, with screw connection, angled							
One flat conductor, 2-pos.		**VS-ASI-J-Y-N-SWA-LC**	1433168	1			
Pre-assembled round conductor M12 pin, straight, free conductor end							
	2 m				**SAC-4P-MS/ 2,0-186 SCO**	1555606	1
	5 m				**SAC-4P-MS/ 5,0-186 SCO**	1555619	1
	10 m				**SAC-4P-MS/10,0-186 SCO**	1555622	1
	15 m				**SAC-4P-MS/15,0-186 SCO**	1555635	1
Pre-assembled round conductor M12 socket, straight, free conductor end							
	2 m				**SAC-4P- 2,0-186/FS SCO**	1555648	1
	5 m				**SAC-4P- 5,0-186/FS SCO**	1555651	1
	10 m				**SAC-4P-10,0-186/FS SCO**	1555664	1
	15 m				**SAC-4P-15,0-186/FS SCO**	1555677	1
Pre-assembled round conductor M12 pin, straight, M12 socket, straight							
	0.3 m				**SAC-4P-MS/ 0,3-186/FS SCO**	1555680	1
	0.5 m				**SAC-4P-MS/ 0,5-186/FS SCO**	1555693	1
	1 m				**SAC-4P-MS/ 1,0-186/FS SCO**	1555703	1
	2 m				**SAC-4P-MS/ 2,0-186/FS SCO**	1555716	1
	5 m				**SAC-4P-MS/ 5,0-186/FS SCO**	1555729	1
	10 m				**SAC-4P-MS/10,0-186/FS SCO**	1555732	1
	15 m				**SAC-4P-MS/15,0-186/FS SCO**	1555745	1

Digital I/O devices with M8 connection method

The digital I/O devices are particularly suitable for use in machines close to the process.

Features:

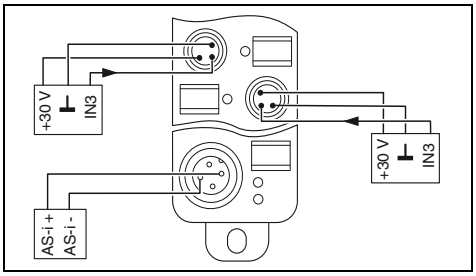
– Optimized for 30 mm mounting profile
– M12 connection method with SPEEDCON fast locking system for the AS-Interface connection
– M8 connection method for the I/Os

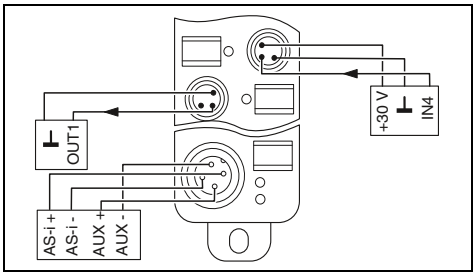


4 digital inputs



4 digital inputs and 4 digital outputs





Technical data

Interface			
Fieldbus system		AS-i	AS-i
Connection method		M12 connector, (A-coded)	M12 connector, (A-coded)
AS-Interface			
AS-i specification		2.0	2.0
Required master specification		>= 2.0	>= 2.0
AS-i profile		S-0.0	S-7.0
Digital inputs			
Connection method		M8 connector	M8 connector
Connection technology		2, 3-wire	2, 3-wire
Maximum number of inputs		-	-
Input characteristic curve		IEC 61131-2 type 2	IEC 61131-2 type 2
Digital outputs			
Connection method		-	M8 connector
Connection technology		-	2-wire
Maximum number of outputs		-	-
Maximum output current per channel		-	1 A
Maximum output current per module/terminal block		-	4 A
General data			
Weight		85 g	125 g
Drill hole spacing		93 mm	133 mm
Dimensions	W / H / D	30 mm / 26 mm / 103 mm	30 mm / 26 mm / 143 mm
Degree of protection		IP65/IP67	IP65/IP67
Ambient temperature (operation)		-25 °C ... 70 °C	-25 °C ... 70 °C
EMC note		Class A product, see page 730	Class A product, see page 730

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fieldline Extension AS-i digital input device			
- 4 inputs	**FLX ASI DI 4 M8**	2773403	1
Fieldline Extension AS-i digital I/O device			
- 4 inputs, 4 outputs, 1 A	**FLX ASI DIO 4/4 M8-1A**	2773416	1

Accessories

M8 screw plug	**PROT-M8**	1682540	5
Zack marker strip, flat, 10-section, without color print	**ZBF 8:UNBEDRUCKT**	0808781	10
Manual addressing device, for AS-Interface devices	**ASI CC ADR**	2741338	1

Digital I/O devices with M12 connection method

The innovative locking mechanism enables quick and easy installation of the I/O devices.

Features:

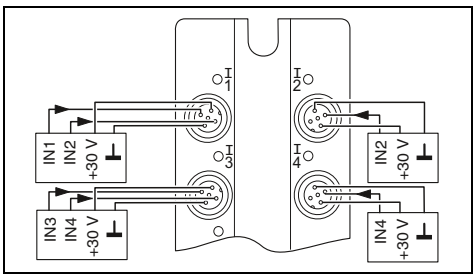
- Optimized for direct mounting and DIN rail mounting
- Tool-free connection to AS-Interface using penetration technique
- M12 connection method with SPEEDCON fast locking system for the I/Os

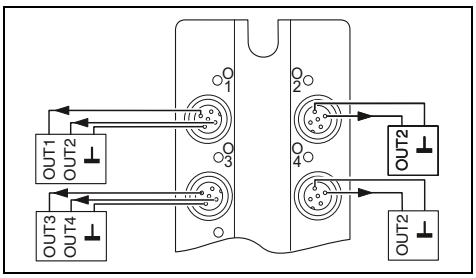


4 digital inputs



4 digital outputs





Technical data

Interface			
Fieldbus system		AS-i	AS-i
Connection method		Flat-ribbon cable penetration technique	Flat-ribbon cable penetration technique
AS-Interface			
AS-i specification		2.1	2.0
Required master specification		>= 2.0	>= 2.0
AS-i profile		S-0.A.2	S-8.1
Digital inputs			
Connection method		M12 connector	-
Connection technology		2, 3-wire	-
Maximum number of inputs		-	-
Input characteristic curve		IEC 61131-2 type 2	-
Digital outputs			
Connection method		-	M12 connector
Connection technology		-	2-wire
Maximum number of outputs		-	4
Maximum output current per channel		-	2 A
Maximum output current per module/terminal block		-	4 A
General data			
Weight		195 g	195 g
Drill hole spacing		108 mm	108 mm
Dimensions	W / H / D	58 mm / 118 mm / 35 mm	58 mm / 118 mm / 35 mm
Degree of protection		IP65/IP67	IP65/IP67
Ambient temperature (operation)		-25 °C ... 70 °C	-25 °C ... 70 °C
EMC note		Class A product, see page 730	Class A product, see page 730

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fieldline Extension AS-i digital input device			
- 4 inputs	**FLX ASI DI 4 M12**	2773429	1
Fieldline Extension AS-i digital output device			
- 4 outputs, 2 A	**FLX ASI DO 4 M12-2A**	2773458	1
Fieldline Extension AS-i digital I/O device			
- 2 inputs, 2 outputs, 2 A			
- 4 inputs, 3 outputs, 2 A			
- 4 inputs, 4 outputs, 2 A			

Accessories

M12 screw plug	**PROT-M12**	1680539	5
Label sheet for laser printers, 64 x 16 mm, color: white	**BMKL 64X16 WH**	0821807	2
Label sheet for laser printers, 108 x 16 mm, color: white			
Manual addressing device, for AS-Interface devices	**ASI CC ADR**	2741338	1
Programming cable, for addressing the AS-i devices	**ASI CC ADR CAB CINCH**	2741341	1



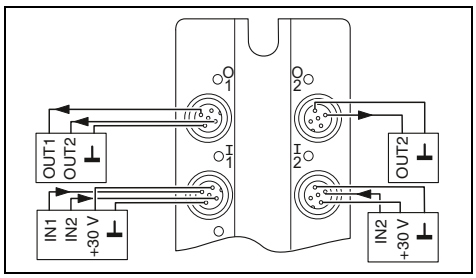
2 digital inputs and 2 digital outputs

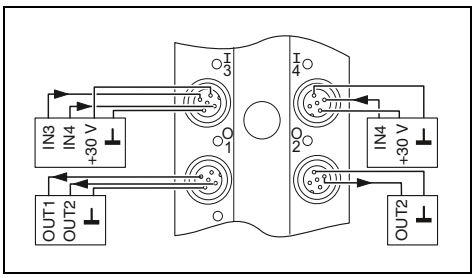


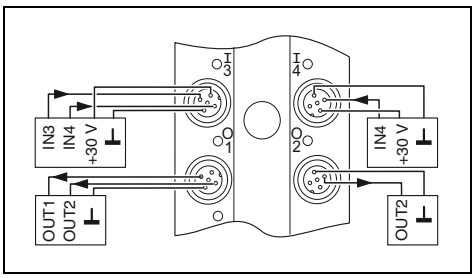
4 digital inputs and 3 digital outputs



4 digital inputs and 4 digital outputs







Technical data

AS-i	
Flat-ribbon cable penetration technique	
2.1	
>= 2.0	
S-B.A.2	
M12 connector	
2, 3-wire	
-	
IEC 61131-2 type 2	
M12 connector	
2-wire	
-	
2 A	
4 A	
195 g	
108 mm	
58 mm / 118 mm / 35 mm	
IP65/IP67	
-25 °C ... 70 °C	
Class A product, see page 730	

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 2/2 M12-2A	**2773432**	1

Accessories

PROT-M12	**1680539**	5
BMKL 64X16 WH	**0821807**	2
ASI CC ADR	**2741338**	1
ASI CC ADR CAB CINCH	**2741341**	1

Technical data

AS-i	
Flat-ribbon cable penetration technique	
2.1	
>= 2.0	
S-7.A.2	
M12 connector	
2, 3-wire	
-	
IEC 61131-2 type 2	
M12 connector	
2-wire	
-	
2 A	
4 A	
245 g	
108 mm	
58 mm / 150 mm / 35 mm	
IP65/IP67	
-25 °C ... 70 °C	
Class A product, see page 730	

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 4/3 M12-2A	**2773445**	1

Accessories

PROT-M12	**1680539**	5
BMKL 11,5 (108X16) WH	**0821797**	2
ASI CC ADR	**2741338**	1
ASI CC ADR CAB CINCH	**2741341**	1

Technical data

AS-i	
Flat-ribbon cable penetration technique	
3.0	
>= 3.0	
S-7.A.7	
M12 connector	
2, 3-wire	
-	
IEC 61131-2 type 2	
M12 connector	
2-wire	
-	
2 A	
245 g	
108 mm	
58 mm / 150 mm / 35 mm	
IP65/IP67	
-25 °C ... 70 °C	
Class A product, see page 730	

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI 3.0 DIO 4/4 M12-2A	**2773474**	1

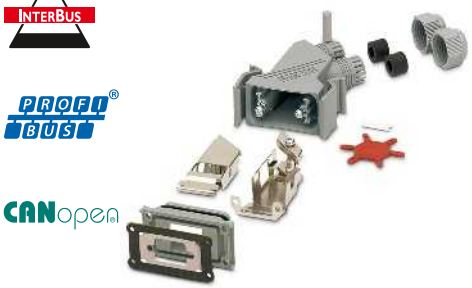
Accessories

PROT-M12	**1680539**	5
BMKL 11,5 (108X16) WH	**0821797**	2
ASI CC ADR	**2741338**	1
ASI CC ADR CAB CINCH	**2741341**	1

D-SUB connector, IP67



D-SUB complete connector for INTERBUS in IP67 protection



D-SUB connector set IP67, consisting of: Sleeve housing, panel mounting frame and accessories, shielded design

	Technical data	Technical data
Electrical data		
Rated voltage	63 V	-
Rated current	1 A	-
Surge voltage category	II	-
Material data		
Housing material	PA	PA
Contact material	Copper alloy	-
Contact surface material	Gold over nickel	-
Contact carrier material	PBTP	-
Inflammability class according to UL 94	V0	V0
Mechanical data		
No. of pos.	9	9
Color	Gray	Gray
Pollution degree	2	2
Degree of protection	IP67	IP67
Connection method	Screw connection	-
Conductor cross section	0.14 mm² ... 0.5 mm²	-
Connection cross section AWG	26 ... 20	-
Insertion/withdrawal cycles	≥ 200	≥ 1000
Temperature data		
Ambient temperature (operation)	-20 °C ... 70 °C	-40 °C ... 80 °C

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
D-SUB complete connector, for INTERBUS, shell size 1, screw connection, shielded						
Pin	**VS-09-IBS-ST**	1689271	1			
Socket	**VS-09-IBS-BU**	1689284	1			
D-SUB complete connector, for PROFIBUS, shell size 1, pin, shielded						
Screw connection	**VS-09-PROFIBUS-SC**	1654549	1			
Spring connection	**VS-09-PROFIBUS-SP**	1654345	1			
D-SUB complete connector, for CANopen®, shell size 1, socket, screw connection, shielded						
Socket	**VS-09-CAN**	1689307	1			
D-SUB panel mounting frame, for taking up D-SUB contact inserts						
D-SUB 09				**VS-09-A**	1688366	5
D-SUB EMC shroud, for the IP67 panel mounting frame, for shield contacting to the housing panel						
D-SUB 09				**VS-09-A-EMV-S**	1688463	5
D-SUB connector set						
D-SUB 09				**VS-09-SET-EMV**	1689158	1



Screw connection
Fixing: 2.5 mm hole



D-SUB panel mounting frame IP67,
with integrated gender changer

	Technical data	
Electrical data		
Rated voltage	60 V	125 V
Rated current	5 A	5 A
Surge voltage category	III	III
Material data		
Housing material	-	PA
Contact material	Copper alloy	Copper alloy
Contact surface material	Gold over nickel	Hard gold-plated over nickel
Contact carrier material	PBTP	Polyester GF
Inflammability class according to UL 94	V0	V0
Mechanical data		
No. of pos.	9	9
Color	-	Gray
Pollution degree	2	2
Degree of protection	IP20	IP67
Connection method	Screw connection	-
Conductor cross section	0.14 mm² ... 0.5 mm²	-
Connection cross section AWG	26 ... 20	-
Insertion/withdrawal cycles	≥ 200	≥ 200
Temperature data		
Ambient temperature (operation)	-20 °C ... 80 °C	-40 °C ... 80 °C

	Technical data
Electrical data	
Rated voltage	125 V
Rated current	5 A
Surge voltage category	III
Material data	
Housing material	PA
Contact material	Copper alloy
Contact surface material	Hard gold-plated over nickel
Contact carrier material	Polyester GF
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	9
Color	Gray
Pollution degree	2
Degree of protection	IP67
Connection method	-
Conductor cross section	-
Connection cross section AWG	-
Insertion/withdrawal cycles	≥ 200
Temperature data	
Ambient temperature (operation)	-40 °C ... 80 °C

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
D-SUB contact insert			
Pin	**VS-09-ST-DSUB/10-MPT-0,5**	**1688379**	10
Socket	**VS-09-BU-DSUB/9-MPT-0,5**	**1688395**	10
D-SUB panel mounting frame, with integrated gender changer, shielded			
D-SUB 09, pin/pin			
D-SUB 09, socket/socket			
D-SUB coupling, with integrated gender changer, shielded			
D-SUB 09, pin/pin			
D-SUB 09, socket/socket			

	Ordering data		
	Type	Order No.	Pcs. / Pkt.
D-SUB contact insert			
Pin			
Socket			
D-SUB panel mounting frame, with integrated gender changer, shielded			
D-SUB 09, pin/pin	**VS-09-A-GC-ST/ST**	**1689705**	5
D-SUB 09, socket/socket	**VS-09-A-GC-BU/BU**	**1689695**	5
D-SUB coupling, with integrated gender changer, shielded			
D-SUB 09, pin/pin	**VS-09-KU-ST/ST**	**1689640**	5
D-SUB 09, socket/socket	**VS-09-KU-BU/BU**	**1689637**	5

Signal contacts



Contacts for standard D-SUB contact carriers



Contacts for high density D-SUB contact carriers

	Technical data		Technical data
	AWG 28 ... 24	AWG 24 ... 20	VS-...-CD-HD-1,0/13,5/0,37
Electrical data			
Rated voltage	125 V	125 V	60 V
Rated current	5 A	5 A	3 A
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Hard gold-plated over nickel	Hard gold-plated over nickel	Hard gold-plated over nickel
Mechanical data			
Connection method	Crimp connection	Crimp connection	Crimp connection
Conductor cross section	0.08 mm² ... 0.2 mm²	0.2 mm² ... 0.5 mm²	0.34 mm²
Connection cross section AWG	28 ... 24	24 ... 20	22
Insertion/withdrawal cycles	≥ 200	≥ 200	≥ 200
Temperature data			
Ambient temperature (operation)	-55 °C ... 125 °C	-55 °C ... 125 °C	-55 °C ... 125 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Turned pin crimp contacts, for D-SUB contact inserts with standard contact density, gold-plated surface						
AWG 28 ... 24	**VS-ST-CD-1,0/14,8/0,2**	1688971	30			
AWG 24 ... 20	**VS-ST-CD-1,0/14,8/0,5**	1688968	30			
Turned crimp contacts VS 1,0 Gold-plated	**VS-BU-CD-1,0/14,4/0,2**	1688997	30			
	VS-BU-CD-1,0/14,4/0,5	1688984	30			
Turned crimp contacts, for D-SUB contact inserts with high density, gold-plated surface						
AWG 22, pin				**VS-ST-CD-HD-1,0/13,5/0,37**	1655276	100
AWG 22, socket				**VS-BU-CD-HD-1,0/13,5/0,37**	1655263	100

	Accessories			Accessories		
Crimping pliers - For turned contacts VS...CD (D-SUB contacts); crimping tool with four mandrels	**CRIMPFOX RC 2,5**	1205448	1	**CRIMPFOX RC 2,5**	1205448	1
Insertion/Extraction Tool, for fitting and removing the D-SUB **standard** signal contacts	**VS-IET-DSUB-SIGNAL-STD**	1658794	1			
Insertion/Extraction Tool, for fitting and removing the D-SUB **High Density** signal contacts				**VS-IET-DSUB-SIGNAL-HD**	1658503	1

Power contacts



With straight solder cups or angled solder pins



With screw connection

	Technical data		Technical data
	VS.../2,6	VS-.../4,6	VS-...SC-2,6
Electrical data			
Rated voltage	-	-	-
Rated current	20 A	40 A	20 A
Material data			
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Hard gold-plated over nickel	Hard gold-plated over nickel	Hard gold-plated over nickel
Mechanical data			
Connection method	Solder cup	Solder cup	Screw connection
Conductor cross section	2 mm² ... 3.5 mm²	4.5 mm² ... 8.5 mm²	0.75 mm² ... 2 mm²
Connection cross section AWG	14 ... 12	10 ... 8	18 ... 14
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500
Temperature data			
Ambient temperature (operation)	-55 °C ... 155 °C	-55 °C ... 155 °C	-55 °C ... 155 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power contact, for D-SUB combination inserts, with straight solder cup, gold-plated surface						
Up to 20 A, pin	**VS-ST-LK-3,6/22,4/2,6**	1688243	30			
Up to 40 A, pin	**VS-ST-LK-3,6/22,4/4,6**	1688269	30			
Up to 20 A, socket	**VS-BU-LK-3,6/22,8/2,6**	1688256	30			
Up to 40 A, socket	**VS-BU-LK-3,6/22,8/4,6**	1688272	30			
Power contact, for D-SUB combination inserts, with angled solder pins for PCB mounting, gold-plated surface						
Up to 40 A, pin	**VS-ST-LH-3,6/18/3,8**	1655467	30			
Up to 40 A, socket	**VS-BU-LH-3,6/18/3,8**	1655454	30			
Power contact, for D-SUB combination inserts, with straight screw connection, gold-plated surface						
Up to 40 A, pin				**VS-ST-SC-2,6**	1655483	30
Up to 40 A, socket				**VS-BU-SC-2,6**	1655470	30
	Accessories			**Accessories**		
Removal tool	**HC-M4-KOAX-EWZ**	1676747	1	**HC-M4-KOAX-EWZ**	1676747	1

Shell size 1 ... 3				Signal transmission								
				Screw connection			Solder connection					
												
							Straight solder cups					
				VS-...-ST-DSUB/...-MPT-0,5 VS-...-BU-DSUB/...-MPT-0,5			VS-...-ST-DSUB-EG VS-...-BU-DSUB-EG			VS-...-ST-DSUB-HD-EG VS-...-BU-DSUB-HD-EG		
				D-SUB contact insert Fixing: 2.5 mm hole			D-SUB contact insert Fixing: 3 mm hole			D-SUB contact insert, high-pos. Fixing: 3 mm hole		
	Type	Order No.		Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket
	IP67 panel mounting frame											
	VS-09-A	1688366		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-A	1688036		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-A	1689750		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-A	1689750										
	IP20 sleeve housing											
	VS-09-T-20-1-S-A	1655661					9	1688793	1688803	15	1655111	1655108
	VS-15-T-20-1-S-A	1655687					15	1688874	1688887	26	1655179	1655166
	VS-25-T-20-1-S-A	1655700					25	1689899	1689909	44	1655234	1655221
	VS-09-T-20-1-S-S	1655658					9	1688793	1688803	15	1655111	1655108
	VS-15-T-20-1-S-A	1655687					15	1688874	1688887	26	1655179	1655166
	VS-25-T-20-1-S-S	1655690					25	1689899	1689909	44	1655234	1655221
	IP67 sleeve housing											
	VS-09-T-2M16	1688353		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-T-2Pg11	1688052		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-T-2M20	1689792		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-T-2M20	1689792										
	VS-09-SET-STD	1689145	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-STD	1689129	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-STD	1652198	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									
	VS-09-SET-EMV	1689158	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-EMV	1689132	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-EMV	1652208	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									

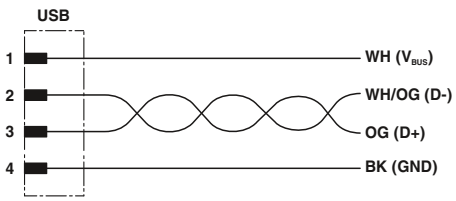
Note:
The EMC inner sleeve of the IP67 sleeve housing cannot be used on the panel mounting side.

Signal transmission									Power and signal transmission						Power	
Solder connection			Crimp connection						Solder connection						Screw connection	
																
Angled solder pins			Contact carriers for crimp contacts												3/5-pos.	
VS-...-ST-DSUB-LH-B VS-...-BU-DSUB-LH-B			VS-...-ST-DSUB-CD-... VS-...-BU-DSUB-CD-...			VS-...-ST-DSUB-HD-CD-B VS-...-BU-DSUB-HD-CD-B			VS-...-ST-DSUB-...P VS-...-BU-DSUB-...P			VS-...-ST-DSUB-...P-...S VS-...-BU-DSUB-...P-...S			PSC 1,5/...-F	
D-SUB contact insert Fixing: 2.5 mm hole and solder metal plate			D-SUB contact carrier Fixing: 3 mm hole			D-SUB contact carrier, high-pos. Fixing: 3 mm hole			D-SUB contact carrier Fixing: 3 mm hole			D-SUB contact insert Fixing: 3 mm hole			D-SUB contact insert Fixing: 3 mm hole	
Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Socket
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	2PK	1688418	1688421	1PK-4S	1689006	1689019		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	3PK	1688201	1688214	2PK-5S	1688227	1688230		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	5PK	1689970	1689983	3PK-10S	1689996	1690008		
												4PK-5S	1655386	1655373		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124							3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182							5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247								
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124							3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182							5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247								
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	2PK	1688418	1688421	1PK-4S	1689006	1689019	3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	3PK	1688201	1688214	2PK-5S	1688227	1688230	5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	5PK	1689970	1689983	3PK-10S	1689996	1690008		
												4PK-5S	1655386	1655373		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	2PK	1688418	1688421	1PK - 4S	1689006	1689019		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	2PK	1688418	1688421	1PK - 4S	1689006	1689019	3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	3PK	1688201	1688214	2PK - 5S	1688227	1688230		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	3PK	1688201	1688214	2PK - 5S	1688227	1688230	5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	5PK	1689970	1689983	3PK-10S	1689996	1690008		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	5PK	1689970	1689983	3PK-10S	1689996	1690008		
												4PK - 5S	1655386	1655373		
												4PK - 5S	1655386	1655373		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	2PK	1688418	1688421	1PK - 4S	1689006	1689019		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124							3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	3PK	1688201	1688214	2PK - 5S	1688227	1688230		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182							5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	5PK	1689970	1689983	3PK-10S	1689996	1690008		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247								
												4PK - 5S	1655386	1655373		

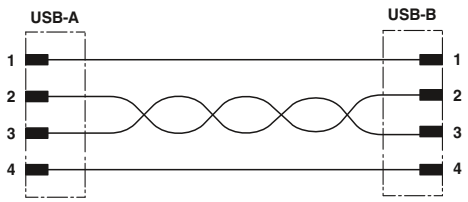
Assembled cables, IP20/IP67

	USB type A connector, IP20	USB type A connector, IP67
		
		

		Ordering data		Ordering data	Ordering data
Free end			**Order No.**		**Order No.**
		1 m	1655771	1 m	1655742
		2 m	1655784	2 m	1655755
		5 m	1655797	5 m	1655768
USB type B connector, IP20					
		1 m	1654853		
		2 m	1653935	2 m	1653896
		5 m	1653948	5 m	1653906
USB type B connector, IP67					
		2 m	1653919	2 m	1653870
		5 m	1653922	5 m	1653883
M12 Mini USB, SPEEDCON					
		1 m	1420168		
		2 m	1420171		
		5 m	1420184		



USB cable with a free end



USB connector pin assignment

		Technical data	Technical data
		IP20	**IP67**
Transmission characteristics (category)		USB 2.0	USB 2.0
Cable diameter	[mm]	6.7	6.7
Housing material		PA	PA
Handle color		Black	Gray
No. of pos.		4	4
Degree of protection		IP20	IP67
Temperature data			
Cable, fixed installation	[°C]	-20 ... 60	-20 ... 60
Cable, flexible installation	[°C]	0 ... 50	0 ... 50

Panel feed-throughs, memory sticks, protective cover

Panel feed-throughs can be implemented with the IP67 panel mounting frame and the USB socket inserts. The USB memory sticks with IP67 protection enable wireless data transmission in rough industrial environments.



USB panel mounting frame

Technical data

	VS-04-BUA-BUB-F/IP67
Electrical data	
Rated voltage	30 V
Transmission speed	-
Material data	
Housing material	PC
Inflammability class according to UL 94	V0
Mechanical data	
No. of pos.	4
Degree of protection	IP67
Insertion/withdrawal cycles	-
Temperature data	
Ambient temperature (operation)	-15 °C ... 65 °C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Version 6, panel mounting frame with USB coupling:				
Slot V6 with USB-B		**CUC-V06-F1PGY-UBB/UBAB**	1411905	1
Slot V6 with USB-A		**CUC-V06-F1PGY-UBA/UBBB**	1411904	1
USB socket insert, 4-pos., socket on flat-ribbon cable terminal strip, pitch 2.54				
Socket, type A		**VS-04-BUA-FK-F/IP67**	1653854	1
Socket, type B		**VS-04-BUB-FK-F/IP67**	1653867	1
USB cable, assembled on one side with USB connectors				
Connector type: A, length: 0.3 m	0.3 m	**VS-04-C-SDA/PH/0,3**	1405552	1
Connector type: B, length: 0.3 m	0.3 m	**VS-04-C-SDB/PH/0,3**	1405565	1
Connector type: A to B, length: 1.8 m	1.8 m	**VS-04-C-SDA/SDB/1,8**	1405578	1
Freenet panel mounting frame, Version 6, for round mounting cutout, with seal, without mounting screws				
Military gray RAL 7042		**VS-A-F-IP67**	1653744	5
USB memory stick, USB 2.0				
IP67		**VS-04-MS-IP67**	1402489	1
Protective cover for Version 6 panel mounting frame				
Military gray RAL 7042		**VS-08-SD-F**	1652606	5

Symbol key

With UL Style

Suitable for drag chain applications

Resistant to welding sparks

UV resistant

Extremely flame-retardant



High temperature resistance

Good oil resistance

Good resistance to chemicals



Suitable for torsional stress

Halogen-free

CAT5

Transmission properties



Suitable for railway applications

INTERBUS cable – type 900

INTERBUS cable for highly flexible use in dry and humid rooms and harsh industrial environments. The remote bus cable is certified in accordance with the requirements of the INTERBUS Club under No. 117.

The cable is halogen-free and flame-retardant according to VDE 0482, Part 265-2-1/IEC 332-1.
The wire insulation of the inner conductor is made from polyethylene.

Outer sheath material	**PVC**
Minimum bending radius	**7.5 x D**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
900 **PVC** Green	6-pos.	M12	3 x 2 x 0.25 mm² 32 x 0.1 mm		Yellow, green, white, brown, pink, gray	PE	-30°C ... 70°C	409 412

PROFIBUS cable – type 910

PROFIBUS cable, suitable for use in drag chains in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
910 **PUR** Violet	2-pos.	M12	1 x 2 x 24 AWG 19 x 0.15 mm		Green, red	PE	-40°C ... 80°C	410 413

DeviceNet™/CANopen® cable – type 920



DeviceNet™/CANopen® cable for flexible installation. The cable is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
920 **PUR** Violet	4-pos.	M12, M8	1 x 2 x 22 AWG 19 x 0.15 mm + 1 x 2 x 24 AWG 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	411 416 417 420

DeviceNet™/CANopen® cable – type 923



DeviceNet™/CANopen® cable for flexible installation. The cable is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
923 **PUR** Gray	4-pos.	M12, 7/8"	1 x 2 x 22 AWG 19 x 0.15 mm + 1 x 2 x 24 AWG 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	415 418

DeviceNet™ cable - type 928



DeviceNet™/CANopen® cable for fixed installation. The cable is suitable for use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PVC**
Minimum bending radius	**10 x D**

Type	Number of posi-tions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
928 **PVC** Gray	4-pos.	7/8"	1 x 2 x 18 AWG 19 x 0.26 mm + 1 x 2 x 15 AWG 19 x 0.34 mm		Red, black, blue, white	PVC	Fixed: -40°C ... 80°C	419

FOUNDATION Fieldbus cable – type 960
FOUNDATION Fieldbus/PROFIBUS PA cable – type 961

FOUNDATION Fieldbus cable for fixed installation. The cable is UV resistant and flame-retardant according to UL 1685. This makes it suitable for use both outdoors and indoors.

Cable type 961 is available in a blue version designed specifically for use in the hazardous area.

Outer sheath material **PVC**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
960 **PVC** Orange	2-pos.	7/8", M12	2 x 20 AWG 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	422
961 **PVC** Blue	2-pos.	7/8", M12	2 x 20 AWG 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	414 421

CC-Link cable – type 990

CC-Link cable for fixed indoor installation. The cable is flame-retardant according to UL 1685.

Outer sheath material **PVC**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
990 **PVC** Red	3-pos.	M12	3 x 22 AWG 7 x 0.28 mm		White, blue, yellow	Foam PE	-30°C ... 60°C	See: phoenix contact.net/ products

PROFINET cable – type 93A

PROFINET cable for fixed installation. The cable is flame-retardant and its transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7.5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93A **PVC** Green	4-pos.	M12, RJ45	4 x 22 AWG single-strand		White, yellow, blue, orange	PE	-25°C ... 80°C	380

PROFINET cable – type 93B



PROFINET cable for flexible installation. The cable is oil resistant. It is UV resistant according to UL 1581 Sec. 1200 and therefore also suitable for outdoor use. The cable's transmission properties meet CAT5.

Outer sheath material	**PVC**
Minimum bending radius	**7 x D**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93B **PVC** Green	4-pos.	M12, RJ45	4 x 22 AWG 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	386 380 382

PROFINET cable – type 93C



PROFINET cable for use in drag chains. The cable is halogen-free and oil resistant. It is UV resistant and therefore also suitable for outdoor use. The cable's transmission properties meet CAT5.

Outer sheath material	**PUR**
Number of bending cycles	**3 million**
Minimum bending radius	**7.5 x D**
Traverse path	**10 m**
Acceleration	**4 m/s²**
Speed	**4 m/s**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93C **PUR** Green	4-pos.	M12, RJ45	4 x 22 AWG 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	380 382

PROFINET cable – type 93R



PROFINET cable for robot applications. The cable is oil resistant. It is UV resistant according to UL 1581 Sec. 1200 and therefore also suitable for outdoor use. The cable's transmission properties meet CAT5.

Outer sheath material	**PUR**
Torsion angle	**±180°**
Torsion cycles	**1 million**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93R **PUR** Green	4-pos.	M12, RJ45	4 x 22 AWG 19 x 0.15 mm		White, yellow, blue, orange	PE	-40°C ... 80°C	380 382

PROFINET cable – type 937



PROFINET cable for railway applications. The cable is oil resistant. It meets fire safety standard BS6853.
The cable's transmission properties meet CAT5.

Outer sheath material **RADOX® GKW S**

Minimum bending radius **6 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
937 **RADOX®** Black	4 pos.	M12, RJ45	4 x 22 AWG 7 x 0.25 mm		White, yellow, blue, orange	RADOX®	-40°C ... 90°C	380 382

EtherCAT® cable - type 93G



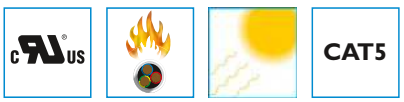
EtherCAT® cable for flexible installation. The cable is oil resistant. It is UV resistant according to UL 1581 Sec. 1200 and is therefore also suitable for use in harsh industrial environments. The cable's transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7 x D**
Tested at **20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93G **PVC** Green	4 pos.	M12, PP, RJ45	4 x 22 AWG 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	384

Sercos® cable - type 93K



Sercos® cable for flexible installation. The cable is oil resistant. It is UV resistant according to UL 1581 Sec. 1200 and is therefore also suitable for use in harsh industrial environments. The cable's transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7 x D**
Tested at **20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93K **PVC** Red	4 pos.	M12, PP, RJ45	4 x 22 AWG 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	See: phoenix contact.net/ products

Ethernet cable – type 93E



Ethernet cable for flexible use. The cable is halogen-free and oil resistant. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93E **PUR** Blue	4 pos.	M12, RJ45	2 x 2 x 26 AWG 7 x 0.25 mm		White/orange-orange, white/green-green	PE	-20°C ... 80°C	381 388

Ethernet cable – type 94A



Ethernet cable for fixed installation. The cable's transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **7 x D**
Tested at **20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94A **PUR** Blue	8-pos.	M12, PP, RJ45	4 x 2 x 24 AWG single-strand Twisted pair		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-20°C ... 70°C	381

Ethernet cable – type 94B



Ethernet cable for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. The cable's transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94B **PUR** Blue	8-pos.	M12, RJ45	4 x 2 x 26 AWG 7 x 0.25 mm		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-40°C ... 80°C	381 390

Ethernet cable – type 94P



Ethernet cable for flexible installation. The cable is flame-retardant and halogen-free. The cable's transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **90 mm (mobile)**
50 mm (fixed installation)

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94P **PUR** Blue	8-pos.	M12, RJ45	4 x 2 x 26 AWG 7 x 0.16 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 70°C	374

Ethernet cable – type 94C



Ethernet cable for universal use in drag chains. The cable is resistant to oil and chemicals and is flame-retardant. The cable's transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94C **PUR** Blue	8-pos.	M12, RJ45	4 x 2 x 26 AWG 19 x 0.10 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-20°C ... 80°C	381 390

Ethernet cable – type 94D



Ethernet cable for flexible installation. The cable is oil resistant. It is UV resistant according to UL 1581 Sec. 1200 and therefore also suitable for outdoor use. The cable's transmission properties meet CAT5.

Outer sheath material **PVC**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94D **PVC** Black	8-pos.	M12, PP, RJ45	4 x 2 x 26 AWG 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-40°C ... 80°C	381

Ethernet cable – type 94E



Ethernet cable for fixed installation. The cable is resistant to oil and chemicals and is flame-retardant. It is also halogen-free and its transmission properties meet $CAT6_A$.

Outer sheath material **PUR**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94E **PUR** Blue	8-pos.	M12, PP, RJ45	4 x 2 x 23 AWG single-strand Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	381

Ethernet cable – type 94F



Ethernet cable for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. It is also halogen-free and its transmission properties meet $CAT6_A$.

Outer sheath material **PUR**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94F **PUR** Blue	8-pos.	M12, PP, RJ45	4 x 2 x 26 AWG 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	392

Ethernet hybrid cable – type 94H



Ethernet hybrid cable for drag chain application. The cable has four wires for data transmission and four wires for power supply. It is oil resistant and flame-retardant. It is also halogen-free and its transmission properties meet CAT5.

Outer sheath material **PUR**

Number of bending cycles **2 million**
Minimum bending radius **10 x D**
Traverse path **4.5 m**
Acceleration **3 m/s²**
Speed **3 m/s**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94H **PUR** Black	8-pos.	M12	1 x 4 x 26 AWG 19 x 0.15 mm 1 x 4 x 20 AWG 19 x 0.6 mm		White-orange, orange, white-green, green, white, blue, brown, black	PP	-40°C ... 90°C	395

VARAN cable – type 970

CAT5

VARAN cable for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. The cable's transmission properties meet CAT5.

Outer sheath material	**Santoprene**
Minimum bending radius	**7.5 x D**
Tested at	**20 ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
970 **Santoprene** Black	6-pos.	M12, PP, RJ45	1 x 2 x 22 AWG 19 x 0.1 mm + 2 x 2 x 26 AWG 19 x 0.1 mm		Brown, blue White-orange, orange, white-green, green	PE	-40°C ... 80°C	See: phoenix contact.net/ products



Installation systems

QPD installation system

Industrial power distribution does not have to be time-consuming or complicated. The robust IP68/IP69K installation system for capacities up to 690 V/40 A from Phoenix Contact is proof of this.

Thanks to the proven QUICKON IDC fast connection, cables up to 5 x 6.0 mm² can be connected quickly and easily, without the need for stripping or special tools.

The system, which consists of H- and T-distributors, panel feed-throughs, connectors, and cable connectors, offers a wide range of options for power distribution in industrial environments and building installation.

1.5 mm² installation system

H-distributor	**452**
T-distributor	**453**
Cable connectors	**454**
Panel feed-throughs	**456**
Connectors	**459**
Accessories	**460**

2.5 mm² installation system

H-distributor	**461**
T-distributor	**462**
Cable connectors	**463**
Panel feed-throughs	**464**
Connectors	**467**
Accessories	**468**

6.0 mm² installation system

H-distributor	**469**
T-distributor	**470**
Cable connectors	**471**
Panel feed-throughs	**472**
Connectors	**473**
Accessories	**474**

Special solutions **475**

H-distributor, 1.5 mm²

new

new

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With four QUICKON nuts



Without QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP68 / IP69K			IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Surge voltage category/pollution degree	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Inflammability class according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data QUICKON connection						
Core insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 80 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:												
4 mm ... 9 mm	1414719	1	1414715	1								
8 mm ... 13 mm	1414720	1	1414716	1								
5 mm ... 10 mm					1414755	1						
9 mm ... 14 mm					1414756	1						
H-distributor, without QUICKON nuts							1414721	1	1414717	1	1414757	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

T-distributor, 1.5 mm²

new

new

– Can be used as a T-distributor with continuous master cable
– Touch-proof in accordance with DIN EN 50274
– Also available as gray color versions



With three QUICKON nuts



With two QUICKON nuts

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP68 / IP69K			IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Surge voltage category/pollution degree	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Inflammability class according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data QUICKON connection						
Core insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 80 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
T-distributor, for cable diameter:												
4 mm ... 9 mm	1414712	1	1414708	1			1414711	1	1414707	1		
8 mm ... 13 mm	1414714	1	1414710	1			1414713	1	1414709	1		
5 mm ... 10 mm					1414753	1					1414751	1
9 mm ... 14 mm					1414754	1					1414752	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Cable connector, 0.14 mm² ... 1.5 mm²

new

- Easy cable extension or cable repairs
- The QUICKON connections feature different position markings and mechanical coding
- Touch-proof in accordance with DIN EN 50274



Unshielded



Shielded

EAC

	Technical data			Technical data		
	0.34 mm²	0.75 mm²	1.5 mm²	4-pos.	5-pos.	8-pos.
General data						
Degree of protection	IP65 / IP67			IP65 / IP67		
Electrical data						
Rated voltage (III/3)	125 V	250 V	500 V	250 V	60 V	30 V
Rated surge voltage	2.5 kV	4 kV	6 kV		-	
Rated current	5 A	9 A	15 A	4 A		2 A
Surge voltage category/pollution degree	III / 3			II / 3		III / 3
Material data						
Housing material	PA			Zinc die-cast, surface bronzed, and nickel-plated		
Contact material	Steel		CuZn	CuSn		
Contact surface material	Tin-plated			Ni/Au		
Inflammability class according to UL 94	V0			V0		
Impact category	IK06			-		
Connector data QUICKON connection						
Core insulation	PVC/PE			PVC / PE / PP / rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6 / min. 0.10 mm	VDE 0295 class 1 to 6/min. 0.15 mm		Class 2-6 / 0.1 mm		
Connection frequency	10			10		
Conductor cross section [mm²] solid/stranded	0.14 mm² ... 0.25 mm² / 0.14 mm² ... 0.34 mm²	0.34 mm² ... 0.5 mm² / 0.34 mm² ... 0.75 mm²	0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²	0.14 mm² ... 0.75 mm² / 0.14 mm² ... 0.75 mm²		0.14 mm² ... 0.5 mm² / 0.14 mm² ... 0.5 mm²
Conductor cross section [AWG]	26 ... 22	22 ... 18	18 ... 16	26 ... 18		26 ... 20
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 85 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	0.34 mm²		0.75 mm²		1.5 mm²		4-pos.		5-pos.		8-pos.	
Cable connector, for connecting round cables, cable diameter:												
3.5 mm ... 6 mm, 4-pos.	1641879	1										
4.0 mm ... 8 mm, 4-pos.			1642140	1								
6 mm ... 12 mm, 4-pos.					1642153	1						
6 mm ... 12 mm, 3+PE-pos.					1642182	1						
Cable connector, shielded, color-coded terminal blocks, cable diameter:												
5.0 mm ... 10.0 mm							1414418	1	1414417	1	1414612	1

Cable connector, 1.5 mm²

new

new

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 1.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



With two QUICKON nuts



With one QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP68 / IP69K			IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Surge voltage category/pollution degree	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Contact surface material	Silver-plated			Silver-plated		
Inflammability class according to UL 94	V0			V0		
Impact category	IK07			IK07		
Color	Black			Black		
Connector data QUICKON connection						
Core insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	10			10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 80 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Cable connector, for cable diameter:												
4 mm ... 9 mm	1414700	1	1414696	1			1414699	1	1414694	1		
8 mm ... 13 mm	1414702	1	1414698	1			1414701	1	1414697	1		
5 mm ... 10 mm					1414740	1					1414739	1
9 mm ... 14 mm					1414742	1					1414741	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Panel feed-throughs, 1.5 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274



With litz wires



With manual solder/slip-on connection

	Technical data		Technical data	
	3+PE-pos.	4-pos.	3-pos.	4-pos.
General data				
Degree of protection	IP65 / IP67		IP65 / IP67	
Electrical data				
Rated voltage (III/3)	500 V		500 V	
Rated surge voltage	6 kV		6 kV	
Rated current	15 A		15 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	CuZn		CuZn	
Contact surface material	Tin-plated		Tin-plated	
Inflammability class according to UL 94	V0		V0	
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE		PVC/PE	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 Cl.2-5, min. wire diameter 0.2 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²		0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²	
Conductor cross section [AWG]	18 ... 16		18 ... 16	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-25 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

		Ordering data			Ordering data			
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		4-pos.		3-pos.		4-pos.	
Panel feed-through, with 1.5 mm² litz wire, connecting thread: M20 x 1.5									
	0.1 m	1584787	10						
	0.5 m			1585045	10				
Panel feed-through, with 4.8 mm x 0.8 mm manual solder/slip-on connection, connection thread: M20 x 1.5, color: black, terminal marking: L1, N, PE						1641594	10		
Panel feed-through, with 4.8 mm x 0.8 mm manual solder/slip-on connection, connecting thread: M20 x 1.5, color: black									
	0.05 m					1641659	10	1643000	10

Panel feed-throughs, 1.5 mm², with litz wires

new

new

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With QUICKON nut



Without QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP68 / IP69K			IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Surge voltage category/pollution degree	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Inflammability class according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data QUICKON connection						
Core insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 80 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

		Ordering data						Ordering data					
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:													
4 mm ... 9 mm	0.5 m	1414684	1	1414675	1								
4 mm ... 9 mm	1 m	1414685	1	1414676	1								
8 mm ... 13 mm	0.5 m	1414687	1	1414678	1								
8 mm ... 13 mm	1 m	1414688	1	1414679	1								
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:													
5 mm ... 10 mm	0.5 m					1414730	1						
5 mm ... 10 mm	1 m					1414731	1						
9 mm ... 14 mm	0.5 m					1414733	1						
9 mm ... 14 mm	1 m					1414734	1						
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut													
	0.5 m							1414690	1	1414681	1		
	1 m							1414691	1	1414682	1		
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut													
	0.5 m											1414736	1
	1 m											1414737	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:													
4 mm ... 9 mm								1415099	1	1415097	1		
8 mm ... 13 mm								1415100	1	1415098	1		
5 mm ... 10 mm												1415101	1
9 mm ... 14 mm												1415104	1

Panel feed-throughs, 1.5 mm², with manual solder/slip-on connection

new

new

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Also available as gray color versions
- Touch-proof in accordance with DIN EN 50274



With QUICKON nut



Without QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP68 / IP69K			IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Surge voltage category/pollution degree	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Inflammability class according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data QUICKON connection						
Core insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40 °C ... 80 °C			-40 °C ... 80 °C		
Temperature when conductor connected	-5 °C ... 50 °C			-5 °C ... 50 °C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:												
4 mm ... 9 mm	1414686	1	1414677	1								
8 mm ... 13 mm	1414689	1	1414680	1								
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:												
5 mm ... 10 mm					1414732	1						
9 mm ... 14 mm					1414735	1						
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut							1414692	1	1414683	1		
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut											1414738	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Connector, 1.5 mm²

new

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent incorrect connection of similar connectors
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



Technical data

	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Surge voltage category/pollution degree		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Contact surface material		Silver-plated	
Inflammability class according to UL 94		V0	
Impact category		IK07	
Color		Black	
Connector data QUICKON connection			
Core insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		10	
Conductor cross section [mm²] solid/stranded		0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40 °C ... 80 °C	
Temperature when conductor connected		-5 °C ... 50 °C	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.	
Connectors, for cable diameters:						
4 mm ... 9 mm	1414705	1	1414703	1		
8 mm ... 13 mm	1414706	1	1414704	1		
5 mm ... 10 mm					1414749	1
9 mm ... 14 mm					1414750	1

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Plastic label	③			
For plotting and engraving		**GPE 13X 9 WH**	0806932	10
Can be printed using thermal transfer printer		**EMLP (13X9)R**	0819453	1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	1400284	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	1400270	10
Protective cap, captive, IP68	⑤			
Color: gray		**QPD QSK BK 3/4X1,5 FS**	1414722	1
Color: gray		**QPD QSK BK 5X1,5 FS**	1414728	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M20/SW26/color: green		**Q-MU M20**	1640702	25
M25 /SW32/color: black		**Q-MU M25**	1640715	25
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 3/4X1,5	1414723	10
		QPD QSK 5X1,5	1414758	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
		QPD PSK 3/4X1,5	1414724	10
		QPD PSK 5X1,5	1414759	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size:	⑩			
15 mm		**QSS 15**	1641992	1
19 mm		**QSS 19**	1670895	1
22 mm		**QSS 22**	1670206	1
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD 3/4X1,5	1414729	10
		CP-QPD 5X1,5	1414760	10
Shielding tape, for shielded QPD versions	⑬			
		ALU-SB	1404531	100

H-distributor, 2.5 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With four QUICKON nuts



Without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Inflammability class according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:								
6 mm ... 10 mm	1582145	1						
9 mm ... 14 mm	1582148	1						
6 mm ... 11 mm			1406368	1				
9 mm ... 16 mm			1406369	1				
H-distributor, without QUICKON nuts					1582154	1	1406370	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

T-distributor, 2.5 mm²

– Can be used as a T-distributor with continuous master cable
– Touch-proof in accordance with DIN EN 50274
– Also available as gray color versions



With three QUICKON nuts



With two QUICKON nuts

Technical data	4+PE-pos.	Technical data	4+PE-pos.
General data			
Degree of protection	IP68 / IP69K		IP68 / IP69K
Electrical data			
Rated voltage (III/3)	690 V		690 V
Rated surge voltage	6 kV		6 kV
Rated current	20 A		20 A
Surge voltage category/pollution degree	III / 3		III / 3
Material data			
Housing material	PA		PA
Contact material	Cu		Cu
Inflammability class according to UL 94	V0		V0
Mechanical data			
Impact category	IK07		IK07
Color	Black		Black
Connector data QUICKON connection			
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10		max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14		16 ... 14
Temperature data			
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C

Description	Ordering data Type	Order No.	Pcs. / Pkt.	Ordering data Type	Order No.	Pcs. / Pkt.
T-distributor, for cable diameter:						
6 mm ... 11 mm	**QPD T 4PE 3X6-11 BK**	1405401	1	**QPD T 4PE 2X6-11 BK**	1405403	1
9 mm ... 16 mm	**QPD T 4PE 3X9-16 BK**	1405402	1	**QPD T 4PE 2X9-16 BK**	1405404	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:						
6 mm ... 11 mm				**QPD N 4PE2,5 6-11 BK**	1459663	1
9 mm ... 16 mm				**QPD N 4PE2,5 9-16 BK**	1459647	1

Cable connector, 2.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 2.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



With two QUICKON nuts



With one QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Contact surface material	Silver-plated		Silver-plated	
Inflammability class according to UL 94	V0		V0	
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Cable connector, for cable diameter:								
6 mm ... 10 mm	1582211	1			1582220	1		
9 mm ... 14 mm	1582214	1			1582223	1		
6 mm ... 11 mm			1403838	1			1403834	1
9 mm ... 16 mm			1403836	1			1403831	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

Panel feed-throughs, 2.5 mm², with litz wires

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With QUICKON nut



Without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Inflammability class according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

		Ordering data				Ordering data			
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, I_N=15 A, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:									
6 mm ... 11 mm	0.5 m			1403725	1				
6 mm ... 11 mm	1 m			1403727	1				
9 mm ... 16 mm	0.5 m			1403731	1				
9 mm ... 16 mm	1 m			1403733	1				
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:									
6 mm ... 10 mm	0.5 m	1582163	1						
6 mm ... 10 mm	1 m	1582160	1						
9 mm ... 14 mm	0.5 m	1582175	1						
9 mm ... 14 mm	1 m	1582172	1						
6 mm ... 11 mm	0.5 m			1582557	1				
6 mm ... 11 mm	1 m			1582558	1				
9 mm ... 16 mm	0.5 m			1582561	1				
9 mm ... 16 mm	1 m			1582562	1				
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut									
	0.5 m							1403737	1
	1 m							1403739	1
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut									
	0.5 m					1582187	1	1582565	1
	1 m					1582190	1	1582566	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:									
6 mm ... 10 mm						1582226	1		
9 mm ... 14 mm						1582229	1		
6 mm ... 11 mm								1459663	1
9 mm ... 16 mm								1459647	1

Panel feed-throughs, 2.5 mm², with manual solder/slip-on connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Also available as gray color versions



With QUICKON nut



Without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A	15 A	20 A	15 A
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Inflammability class according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, I_N=15 A, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 11 mm			1403729	1				
9 mm ... 16 mm			1403735	1				
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 10 mm	1582166	1						
9 mm ... 14 mm	1582178	1						
6 mm ... 11 mm			1582559	1				
9 mm ... 16 mm			1582563	1				
Panel feed-through, with mounting flange, **without** QUICKON nut, connecting thread:								
M20, I_N=15 A							1403741	1
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut								
M25, I_N=20 A					1582196	1	1582567	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

Panel feed-throughs, 2.5 mm², with push-in connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- For internal push-in connection, solid conductors are simply stripped and inserted in the connection
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With QUICKON nut



Without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Inflammability class according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/rubber/TPE		PVC/PE/rubber/TPE	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm		VDE 0295 class 1 to 6/ min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.			
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 10 mm	1582169	1						
9 mm ... 14 mm	1582181	1						
6 mm ... 11 mm			1411432	1				
9 mm ... 16 mm			1411433	1				
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut					1582193	1		
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		

Connector, 2.5 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent incorrect connection of similar connectors
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions
- 5-pos. version with SPEEDCON fast locking system, cannot be released manually



With green screw locking



With black and gray screw locking

	Technical data		Technical data	
	3+PE-pos.		3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP68 / IP69K		IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Surge voltage category/pollution degree	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Contact surface material	Silver-plated		Silver-plated	
Inflammability class according to UL 94	V0		V0	
Impact category	IK07		IK07	
Color	Black		Black	
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm		VDE 0295 class 1 to 6/ min. 0.15 mm	
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40 °C ... 80 °C		-40 °C ... 80 °C	
Temperature when conductor connected	-5 °C ... 50 °C		-5 °C ... 50 °C	

	Ordering data			Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.				3+PE-pos.		4+PE-pos.	
Connectors, for cable diameters:								
6 mm ... 10 mm	1582202	1			1582637	1		
9 mm ... 14 mm	1582205	1			1582638	1		
6 mm ... 11 mm							1403784	1
9 mm ... 16 mm							1403782	1

Accessories

- Mounting clip ① for easily fixing the H-distributor in place without the need for tools
- DIN rail mounting can be achieved using two DIN-rail adapters ②
- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- AS-Interface seals ⑫ for connecting 1 or 2 AS-Interface cables
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Mounting clip, for H-distributor	①	**QPD CLIP 2,5 BK**	1582235	10
DIN rail adapter	②			
For M5 screws		**USA 10/4,6**	1202713	10
Plastic label	③			
For plotting and engraving		**GPE 13X 9 WH**	0806932	10
Can be printed using thermal transfer printer		**EMLP (13X9)R**	0819453	1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	1400284	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	1400270	10
Protective cap, captive, IP68	⑤			
Color: green		**QPD QSK 2,5 FS**	1582488	1
Color: black		**QPD QSK BK 2,5 FS**	1582645	1
Color: gray		**QPD QSK GY 5X2,5 FS**	1404526	1
Color: black		**QPD QSK BK 5X2,5 FS**	1404525	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M16 / SW22 / color: green		**Q-MU M16**	1640692	25
M20 / SW26 / color: green		**Q-MU M20**	1640702	25
M25 / SW32 / color: black		**Q-MU M25**	1640715	25
Pg21 / SW36 / color: black		**Q-MU PG 21 BK**	1582655	50
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 2,5	1582150	10
		QPD QSK 5X2,5	1404528	10
		QPD QSK 5X6,0	1411403	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
		QPD PSK 2,5	1582151	10
		QPD PSK 5X2,5	1404529	10
		QPD PSK 5X6,0	1411404	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size:	⑩			
15 mm		**QSS 15**	1641992	1
19 mm		**QSS 19**	1670895	1
22 mm		**QSS 22**	1670206	1
24 mm		**QSS 24**	1670219	1
27 mm		**QSS 27**	1670646	1
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD	1582459	10
		CP-QPD 5X2,5	1404530	10
Seal for 4-pos. versions, NBR, black, for IP65/IP67 protection	⑫			
One AS-i cable		**KV-DI-PG16-1XASI**	1582462	10
Two AS-i cables		**KV-DI-PG16-2XASI**	1582464	10
Shielding tape, for shielded QPD versions	⑬			
		ALU-SB	1404531	100

H-distributor, 6.0 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With four QUICKON nuts



Without QUICKON nut

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Surge voltage category/pollution degree	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C	-5 °C ... 50 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:						
9 mm ... 14 mm	**QPD H 4PE6,0 4X9-14 BK**	1411422	1			
12 mm ... 20 mm	**QPD H 4PE6,0 4X12-20 BK**	1411425	1			
H-distributor, without QUICKON nuts				**QPD H 4PE6,0 BK**	1411426	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

T-distributor, 6.0 mm²

– Can be used as a T-distributor with continuous master cable
– Touch-proof in accordance with DIN EN 50274
– Also available as gray color versions



With three QUICKON nuts



With two QUICKON nuts

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Surge voltage category/pollution degree	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C	-5 °C ... 50 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
T-distributor, with **three** QUICKON nuts, for cable diameter:						
9 mm ... 14 mm	**QPD T 4PE6,0 3X9-14 BK**	1411414	1			
12 mm ... 20 mm	**QPD T 4PE6,0 3X12-20 BK**	1411415	1			
T-distributor, with **two** QUICKON nuts, for cable diameter:						
9 mm ... 14 mm				**QPD T 4PE6,0 2X9-14 BK**	1411416	1
12 mm ... 20 mm				**QPD T 4PE6,0 2X12-20 BK**	1411417	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

Cable connector, 6.0 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 6.0 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



With two QUICKON nuts



With one QUICKON nut

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Surge voltage category/pollution degree	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	10 ... 14	10 ... 14
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C	-5 °C ... 50 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable connector, with **two** QUICKON nuts, for cable diameters:						
9 mm ... 14 mm	**QPD C 4PE6,0 2X9-14 BK**	1410410	1			
12 mm ... 20 mm	**QPD C 4PE6,0 2X12-20 BK**	1410412	1			
Cable connector, with **one** QUICKON nut, for cable diameters:						
9 mm ... 14 mm				**QPD C 4PE6,0 1X9-14 BK**	1410415	1
12 mm ... 20 mm				**QPD C 4PE6,0 1X12-20 BK**	1410416	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

Panel feed-throughs, 6.0 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions



With one QUICKON nut



Without QUICKON nut

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Surge voltage category/pollution degree	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C	-5 °C ... 50 °C

Description	Cable length	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M25 x 1.5 mounting flange, with **one** QUICKON nut, for cable diameter:							
9 mm ... 14 mm	0.5 m	**QPD W 4PE6,0 9-14 M25 0,5 BK**	1410392	1			
9 mm ... 14 mm	1 m	**QPD W 4PE6,0 9-14 M25 1,0 BK**	1410393	1			
12 mm ... 20 mm	0.5 m	**QPD W 4PE6,0 12-20 M25 0,5 BK**	1410394	1			
12 mm ... 20 mm	1 m	**QPD W 4PE6,0 12-20 M25 1,0 BK**	1410395	1			
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut							
	0.5 m				**QPD W 4PE6,0 M25 0,5 BK**	1410396	1
	1 m				**QPD W 4PE6,0 M25 1,0 BK**	1410397	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:							
9 mm ... 14 mm					**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm					**QPD N 4PE6,0 12-20 BK**	1410406	1

Connector, 6.0 mm²

new

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent incorrect connection of similar connectors
- Touch-proof in accordance with DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



With gray screw locking

Technical data

	4+PE-pos.
General data	
Degree of protection	IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Surge voltage category/pollution degree	III / 3
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	Silver-plated
Inflammability class according to UL 94	V0
Impact category	IK07
Color	Black
Connector data QUICKON connection	
Core insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connectors, for cable diameters:			
9 mm ... 14 mm	**QPD P 4PE6,0 9-14 BK**	1410386	1
12 mm ... 20 mm	**QPD P 4PE6,0 12-20 BK**	1410387	1

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Plastic label For plotting and engraving Can be printed using thermal transfer printer	③	**GPE 13X 9 WH** **EMLP (13X9)R**	0806932 0819453	10 1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	1400284	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	1400270	10
Protective cap, captive, IP68	⑤			
		QPD QSK GY 5X6,0 FS	1411401	1
		QPD QSK BK 5X6,0 FS	1411400	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M25/SW32/color: black		**Q-MU M25**	1640715	25
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 5X6,0	1411403	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
		QPD PSK 5X6,0	1411404	10
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD 5X6,0	1411402	10
Shielding tape, for shielded QPD versions	⑬			
		ALU-SB	1404531	100

Panel feed-throughs, 2.5 mm² for intrinsically safe circuits

– Devices no longer need to be opened in order to connect the cables
– User-friendly connection, even on devices that are difficult to access
– Touch-proof in accordance with DIN EN 50274

Notes:

Intended for applications in intrinsically safe circuits according to EN 60079-11 and EN 60079-14.



With litz wires



With manual solder/slip-on connection

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage	60 V	60 V
Rated surge voltage	6 kV	6 kV
Surge voltage category/pollution degree	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14	16 ... 14
Temperature data		
Ambient temperature (operation)	-40 °C ... 80 °C	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C	-5 °C ... 50 °C

Description	Cable length	Ordering data Type	Order No.	Pcs. / Pkt.	Ordering data Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M20 0,5 EX**	1411393	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M20 1,0 EX**	1411394	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M20 FC EX**	1411395	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M20 0,5 EX**	1411397	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M20 1,0 EX**	1411398	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M20 FC EX**	1411399	1
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M25 0,5 EX**	1411387	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M25 1,0 EX**	1411388	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M25 FC EX**	1411389	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M25 0,5 EX**	1411390	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M25 1,0 EX**	1411391	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M25 FC EX**	1411392	1

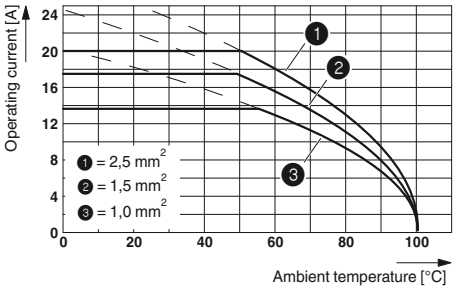
Special solution for motor connection



- Particularly suitable for connecting drives of up to 15 kW using wires with ring cable lugs
- Direct connection without the need to open the motor terminal box

Pin assignment

- Pos. 1 BK (black)
- Pos. 2 BN (brown)
- Pos. 3 GY (gray)
- Pos. ⏚ GNYE (green-yellow)



Derating diagram



Panel feed-throughs with/ without QUICKON nut

Technical data

General data	
Pollution degree	3
Degree of protection	IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Surge voltage category	III
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	Silver-plated
Contact carrier material	PA
Inflammability class according to UL 94	V0
Mechanical data	
Wrench size, union nut	22 mm
Tightening torque, union nut	5 Nm
Tightening torque, contact carrier	-
Impact category	IK07
Connector data QUICKON connection	
Core insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Panel feed-through, 3+PE-pos., **with** QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end, for cable diameters:			
6 mm ... 10 mm	**QPDW3PE1,5 6-10 M25 0,1 BKKTH**	1582475	1
9 mm ... 14 mm	**QPDW3PE1,5 9-14 M25 0,1 BKKTH**	1582476	1
Panel feed-through, 3+PE-pos., **without** QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end	**QPD W 3PE1,5 M25 0,1 BK K TH**	1577273	1

Assembled cables, 2.5 mm²

- Connecting cable between two QUICKON connections
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274
- Other versions available on request
- With SPEEDCON fast locking system



4+PE-pos.

Technical data

General data	
Degree of protection	IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Surge voltage category/pollution degree	III / 3
Material data	
Housing material	PA
Contact material	Cu
Inflammability class according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	Black
Connector data QUICKON connection	
Core insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40 °C ... 80 °C
Temperature when conductor connected	-5 °C ... 50 °C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Assembled cable				
	1 m	**QPD 5P/ 1,0-PVC/5P 5X2,5 BK**	1408720	1
	3 m	**QPD 5P/ 3,0-PVC/5P 5X2,5 BK**	1408721	1
	5 m	**QPD 5P/ 5,0-PVC/5P 5X2,5 BK**	1408722	1
	10 m	**QPD 5P/10,0-PVC/5P 5X2,5 BK**	1408723	1


HC EVO
PHOENIX CONTACT

Heavy-duty connectors

HEAVYCON are industrial connectors for harsh operating conditions. The product range consists of housings, contact inserts, cable glands, and accessories. The housings are available in versions for different ambient conditions. For contact inserts, a distinction is made between fixed, modular, and combined versions.

Housing

The ambient conditions determine the material from which the housings are produced. With HEAVYCON EVO, for example, high-grade industrial plastics and NBR seals cover a wide range of industrial environments.

In applications where plastic cable glands have already proven themselves, there is nothing standing in the way of using plastic HEAVYCON EVO. Metal housings are essential for EMC applications, but also for applications with high cable tensile load or extreme temperatures.

For plug-in connections that are only for startup or infrequent servicing, HEAVYCON ADVANCE or HPR housings with screw locking are recommended for economic reasons. These series are characterized in particular by their stability, and excellent EMC shielding.

Contact inserts with a fixed number of positions

Fixed contact inserts are contact carriers and contacts with different connection technologies such as screw, spring, crimp, insulation displacement, and axial screw connections.

Modular contact inserts

Modular contact inserts allow you to combine several individual connectors, e.g., for power, data, signals, and pneumatics, in the same connector housing.

HEAVYCON product range overview

HEAVYCON cross-reference list - contact inserts and housing 482

Series D7

Contact inserts 484
Housing 490

Series D

Contact inserts 494
Housing 502

Series B

Contact inserts 512
Housing 570
Connector sets 622
Housing for railway applications 626

Compact series

Contact inserts 630
Housing 632

Accessories

Contact inserts 634
Housing 642

DUPLICON stackable power distribution 654

HEAVYCON product range overview





STANDARD connectors

The robust metal housings of the connectors are resistant to dirt, water, vibration and high mechanical loads. Standard housings have a single or double locking latch. Various supporting base elements such as panel mounting bases, box mounting bases or coupling housings are available as required. In addition to contact inserts with a fixed number of positions, modular contact inserts are also available.



EVO connectors

The EVO connectors are characterized by the patented EVO-Lock system. It allows the cable outlet direction to be freely selected during assembly. This reduces the stored housing variance by up to 75%. The EVO housings are compatible with standard aluminum housings. They fit the standard panel cutouts of heavy-duty connectors.



ADVANCE connectors

Space and cost savings as there is no need for panel mounting bases. The ADVANCE housings with screw locking are suitable for the most stringent requirements, such as particularly aggressive atmospheres and sensitive interfaces. In addition to contact inserts with a fixed number of positions, modular contact inserts are also available.



Contact inserts with a fixed number of positions

The range includes A/B/BB/BBB/D/DD/HS/HV and K series contact inserts. The B series is available with screw, crimp, push-in, and QUICKON connection.



Modular contact inserts

There is an increasing demand for data, control signals, and energy supply to be combined in a single connector housing. With 4 frame sizes and 25 contact inserts to choose from, individual combinations can be created.



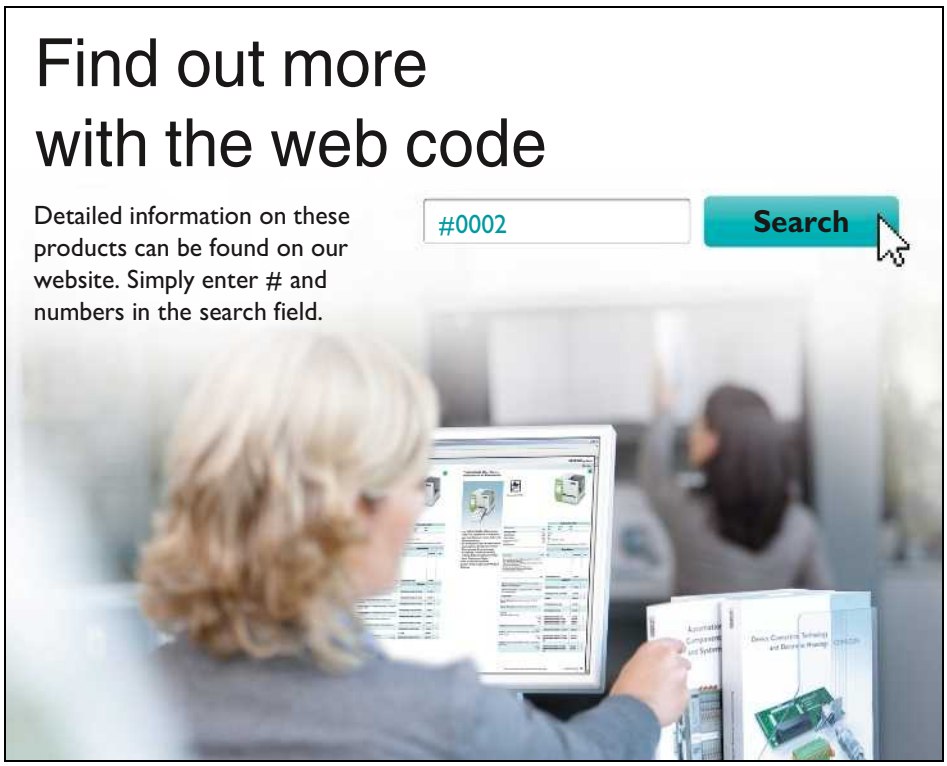
Housing for railway applications

HEAVYCON HPR is specified for use in transport and transportation technology. The sleeve housings, panel mounting bases, and box mounting bases conform to the established standard for the safe transmission of signal and power circuits on rail vehicles. They offer protection class IP68/IP69K and ensure comprehensive protection in the event of electromagnetic interference fields.



Stackable power distribution

DUPLICON stackable connectors are designed for distributed installation with the focus on power distribution. The connectors can be easily and flexibly integrated into modular machines and systems. Thanks to this stackable design, DUPLICON offers consistent installation, from the busbar in the control cabinet to the PCB in the field device, and can be extended by simply connecting further connectors.



HEAVYCON cross-reference list - contact inserts and housing

The top rows describe the contact insert according to the number of positions, voltage, current, and connection method.

The markings in the columns denote the corresponding housing size.



Configurator for creating complete connectors can be found on our website:

Your web code: #0003






Series	A					B						BB						BBB	
Number of positions	3	4	10	16	2x16	6	10	16	24	2x16	2x24	10	18	32	46	2x32	2x46	40	64
Housing size	D7	D7	D15	D25	D50	B6	B10	B16	B24	B32	B48	B6	B10	B16	B24	B32	B48	B16	B24
Rated voltage [V]	230/400		250			500						500						500	
Rated current [A]	24		20			16						16						16	
Connection method																			
UT = Screw	UT					UT						-						-	
CT = Crimp	-		CT			CT						CT						CT	
PT = Push-in	-					PT						-						-	
Z = Spring	-					-						-						-	
Q = QUICKON	Q	-				Q						-						-	
L = Fiber optics	-					-						-						-	
A = Axial screw	-					-						-						-	
P = Pneumatics	-					-						-						-	

Series	A					B						BB						BBB	
Number of positions	3	4	10	16	2x16	6	10	16	24	2x16	2x24	10	18	32	46	2x32	2x46	40	64
Page	484	484	494	496	496	520	522	524	526	524	526	532	532	532	532	532	532	534	534

HEAVYCON housing

D7, D15 to D50, and EVO D housing



D7	From 490	●	●																
D15	From 502			●															
D25	From 506				●														
D50	From 510					●													

STANDARD, EVO, and ADVANCE housing



B6	From 570						●					●							
B10	From 576							●					●						
B16	From 590								●					●				●	
B24	From 604									●					●				●
B32	From 618										●					●			
B48	From 620											●					●		

HPR housing



B6	From 626						●					●							
B10	From 627							●					●						
B16	From 628								●					●				●	
B24	From 629									●					●				●

HEAVYCON contact inserts









	D									DD						HV			HS		Q				K	M
	7	8	15	25	40	2x25	64	2x40	2x64	24	42	72	108	2x72	2x108	3+2	6+2	10+2	6	12	2	5	7	12	Variable	Variable
	D7	D7	D15	D25	B16	D50	B24	B32	B48	B6	B10	B16	B24	B32	B48	B10	B16	B24	B16	B32	D7	D7	D7	D7	B10 - B24	B6 - B48
	250	50	250							250						830			400/690		400	230/400	400		160 - 830	50 - 5000
	10									10						16			35		40	16	10		10 - 80	5 - 200
	-									-						-			UT		-				UT	-
	CT									CT						CT			-		-	CT			CT	CT
	-									-						PT			-		-				-	-
	-									-						-			-		-				-	Z
	-									-						-			-		-				-	-
	L									L						-			-		-				L	L
	-									-						-			-		A	-			A	A
	-									-						-			-		-				-	P

	D									DD						HV			HS		Q				K	M
	7	8	15	25	40	2x25	64	2x40	2x64	24	42	72	108	2x72	2x108	3	6	10	6	12	2	5	7	12	Variable	Variable
	486	486	498	500	512	500	512	512	512	518	518	518	518	518	518	536	538	540	542	542	488	488	488	488	544	548
	●	●																			●	●	●	●		
			●																							
				●																						
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					●							●					●		●						●	●
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A3, A4 series

230/400 V, 10 - 24 A

Connection technology:
– Screw connection
– Insulation displacement connection

To determine the corresponding housing, see cross-reference list on page 482.

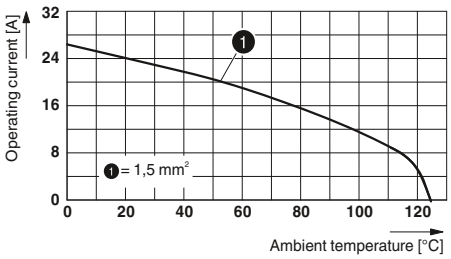
Notes:
For accessories, see from page 634
HC-A03-I-UT... / HC-A04-I-UT... profile gaskets made from NBR
HC-A04-I-UT... contact inserts already contain an IP65 sealing screw
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
[1]) For solid conductors and stranded wires with wire end protection



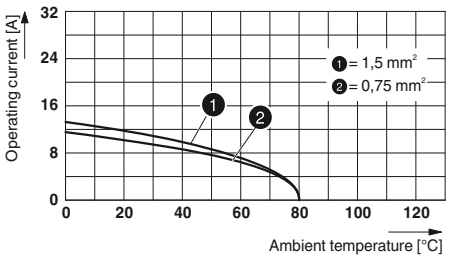
Technical data

Type		① HC-A03-I-UT-...	② HC-A3-...Q1,5-TFL-G-PA Sleeve housing	③ HC-A3-...Q1,5-KML-G-PA Coupling housing	④ HC-A04-I-UT-...
Approvals		-	cULus EAC	cULus EAC	-
IEC data					
Rated current, contacts (at 40°C)	A	24	10	10	24
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	230 / 400	230 / 400	230 / 400	230 / 400
Rated surge voltage, contacts	kV	4	4	4	4
Connection cross section	mm^2	0.5 ... 2.5	0.75 ... 1.5	0.75 ... 1.5	0.5 ... 2.5
UL data					
Rated voltage	V	-	600	600	-
Rated current	A	-	10	10	-
Connection cross section	AWG	-	18-16	18-16	-
CSA / cUL data					
Rated voltage	V	-	600	600	-
Rated current	A	-	10	10	-
Connection cross section	AWG	-	18-16	18-16	-
Material data					
Contact carrier material		PC	PA / PC	PA / PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	°C	-40 ... 125	-25 ... 80	-25 ... 80	-40 ... 125
General data					
Connection method		Screw connection	QUICKON connection	QUICKON connection	Screw connection
Stripping length	mm	5	-	-	5
No. of pos.		3	3	3	4
Contact numbering		1 - 3	1 - 3	1 - 3	1 - 4
Insertion/withdrawal cycles		≥ 500	>= 500	>= 500	≥ 500

Derating curves



HC-A03... / HC-A04...

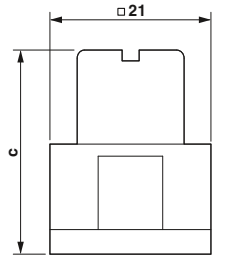


HC-A 3...Q1,5...

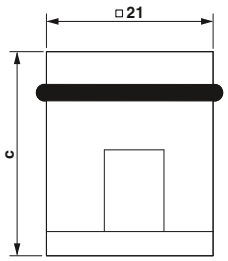
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection[1])							
	3	1 - 3	D7	① **HC-A03-I-UT-...**	1585223	1585210	1
Insulation displacement connection							
	3	1 - 3	D7	Sleeve housing ② **HC-A3-...Q1,5-TFL-G-PA**	1641510	1641581	1
Insulation displacement connection							
	3	1 - 3	D7	Coupling housing ③ **HC-A3-...Q1,5-KML-G-PA**	1641617	1641604	1
Screw connection[1])							
	4	1 - 4	D7	④ **HC-A04-I-UT-...**	1585249	1585236	1

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: plug

		a	b	c	d
①	Socket				
	Plug			30	
②	Socket				
	Plug			66	
③	Socket				
	Plug			62.8	
④	Socket				
	Plug			30	

Accessories



Sealing screw, IP65
From page 653



Coding profile
From page 568



Replacement latch
From page 652

D7, D8 series

50 - 250 V, 10 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

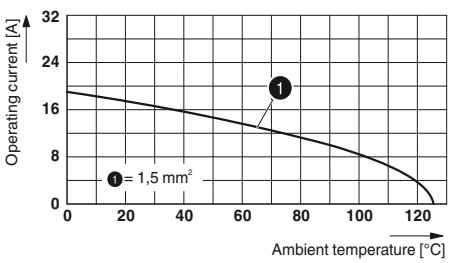
Notes:
For accessories, see from page 634
Coding of HC-D 7-I-CT... / HC-D 8-I-CT... contact inserts using CK 1,6 ED-BB dummy sockets
HC-D 7... / HC-D 8... contact inserts already contain an IP65 sealing screw
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
1) For voltages > 42 V, only use with plastic housing



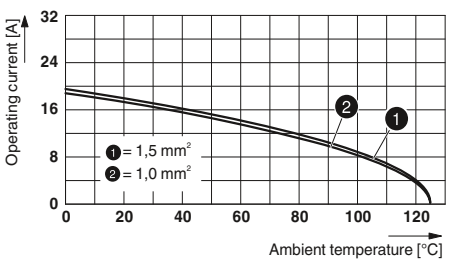
Technical data

Type		① HC-D 7-I-CT-...	② HC-D 8-I-CT-... Without PE
Approvals		EAC UL	EAC UL
IEC data			
Rated current, contacts (at 40°C)	A	10	10
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	250[1])	50
Rated surge voltage, contacts	kV	4	0.8
Connection cross section	mm^2	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	V	600	600
Rated current	A	12	12
Connection cross section	AWG	14	14
CSA / cUL data			
Rated voltage	V	-	-
Rated current	A	-	-
Connection cross section	AWG	-	-
Material data			
Contact carrier material		PC	PC
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Crimp connection	Crimp connection
Stripping length	mm	8	8
No. of pos.		7	8
Contact numbering		1 - 7	1 - 8
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves



HC-D 7-I-CT-...

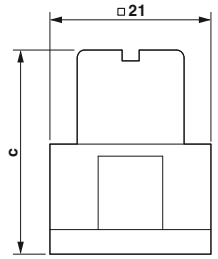


HC-D 8-I-CT-....

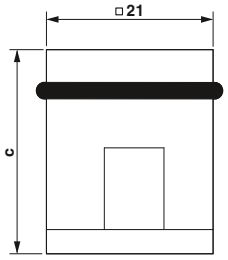
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection	7	1 - 7	D7	① **HC-D 7-I-CT-...**	1584347	1584334	10
Crimp connection	8	1 - 8	D7	Without PE ② **HC-D 8-I-CT-...**	1584363	1584350	10
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 22 - 24		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: plug

		a	b	c	d
①	Socket			32	
	Plug				
②	Socket			32	
	Plug				

Accessories



Crimping tools
From page 636



Sealing screw, IP65
From page 653



Dummy sockets
phoenixcontact.net/products

Q series

250 - 500 V, 10 - 40 A

Connection technology:
– Axial screw connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

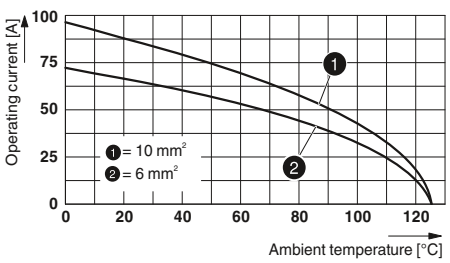
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



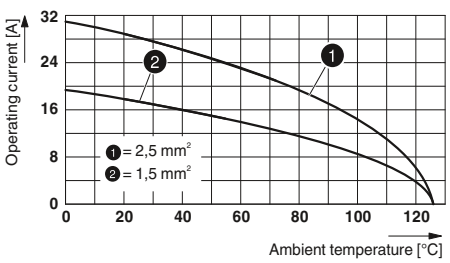
Technical data

Type		① HC-HS 2-D7-E...S	② HC-Q05-I-CT-...	③ HC-D 7-E...C-COD	④ HC-Q 12-I-CT-...
Approvals		cULus EAC	EAC cULus	cULus EAC	EAC
IEC data					
Rated current, contacts (at 40°C)	A	40	24	10	10
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	400	230 / 400	400	400
Rated surge voltage, contacts	kV	6	4	6	6
Connection cross section	mm^2	4 ... 10	0.5 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data					
Rated voltage	V	400	600	600	-
Rated current	A	28	24	10	-
Connection cross section	AWG	12	14	14	-
CSA / cUL data					
Rated voltage	V	400	-	600	-
Rated current	A	26	-	10	-
Connection cross section	AWG	12	-	14	-
Material data					
Contact carrier material		PC	PA	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Axial screw connection	Crimp connection	Crimp connection	Crimp connection
Hexagonal socket	mm	2	-	-	-
Stripping length	mm	8	7.5	8	8
No. of pos.		2	5	7	12
Contact numbering		1 - 2	1 - 5	1 - 7	1 - 12
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

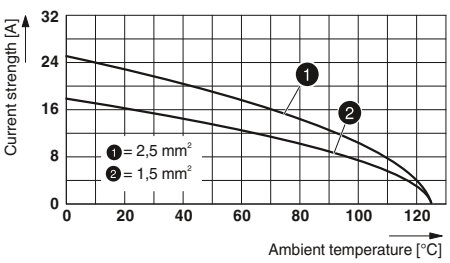
Derating curves



HC-HS 2-D7-E...S



HC-Q05-I-CT-...

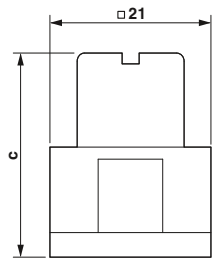


HC-D 7-E...C-COD

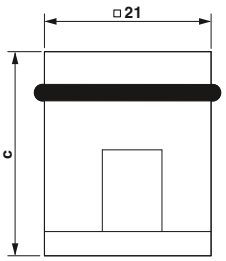
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Axial screw connection							
	2	1 - 2	D7	① HC-HS 2-D7-E...S	1586264	1586277	10
Crimp connection CK 2,5							
	5	1 - 5	D7	② HC-Q05-I-CT-...	1406537	1406538	1
Crimp connection CK 1,6							
	7	1 - 7	D7	③ HC-D 7-E...C-COD	1408588	1408575	10
Crimp connection CK 1,6							
	12	1 - 12	D7	④ HC-Q 12-I-CT-...	1409419	1409422	1
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100
		2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: plug

		a	b	c	d
①	Socket			34.8	
	Plug			40	
②	Socket			40.1	
	Plug			39.5	
③	Socket			40.1	
	Plug			39.5	
④	Socket			43.1	
	Plug			40.8	

Accessories



HC-HS 2... coding profile
From page 638



CK 2,5 dummy socket
From page 639



HC-D 7... coding profile
From page 638



HC-Q 12... coding profile
From page 638

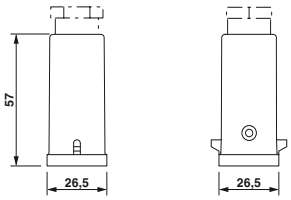
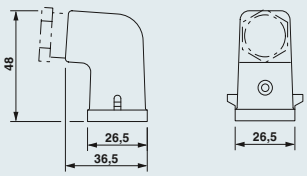
Size D7, plastic, sleeve housing for single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP54 / IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm** 	1x M20 1x Pg11 1x M20	Light gray, cable outlet: top **HC-D 7-TFL-57/O1M20G/PA** **HC-D 7-TFL-57/O1PG11G/PA** Black, cable outlet: top **HC-D 7-TFL-57/O1M20G/PA BK**	 1604889 1675450 1410673	 10 10 10	
Sleeve housing **Height: 48 mm** 	1x M20 1x Pg11 1x M20	Light gray, cable outlet: lateral **HC-D 7-TFL-48/O1M20S/PA** **HC-D 7-TFL-49/O1PG11S/PA** Black, cable outlet: lateral **HC-D 7-TFL-48/O1M20S/PA BK**	 1604890 1675463 1413510	 10 10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Replacement sealing screw, IP65
From page 653



Replacement latch
From page 652

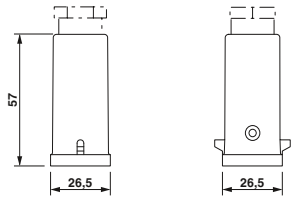
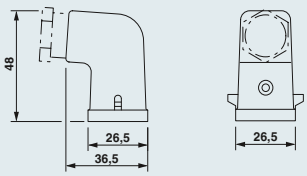
Size D7, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Zinc die-cast
Surface material	Powder-coated, gray
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP54 / IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm** 	1x M20 1x Pg11	Cable outlet: top **HC-D 7-TFL-57/O1M20G** **HC-D 7-TFL-57/O1PG11G**	 1604888 1660627	 10 10	
Sleeve housing **Height: 48 mm** 	1x M20 1x Pg11	Cable outlet: lateral **HC-D 7-TFL-48/O1M20S** **HC-D 7-TFL-48/O1PG11S**	 1604891 1672932	 10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Replacement sealing screw, IP65
From page 653

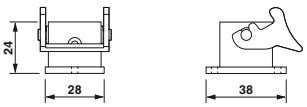
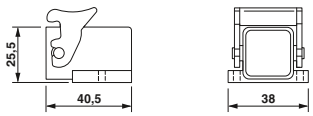
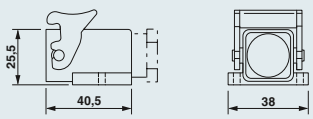
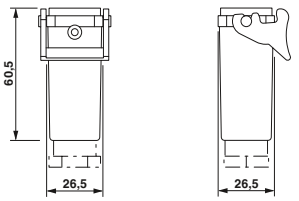
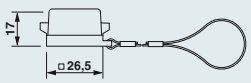
Size D7, plastic, supporting base element with single locking latch

Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP54 / IP65



Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 24 mm**		Light gray, without cover **HC-D 7-AML-24/GR/PA** Black, without cover **HC-D 7-AML-24/GR/PA BK**	 1772272 1413112	 10 10	
Panel mounting base **Height: 25.5 mm**		Light gray, angled version **HC-D 7-AML-26/GW/PA** Black, angled version **HC-D 7-AML-26/GW/PA BK**	 1772285 1410686	 10 10	
Box mounting base **Height: 25.5 mm**	1x M20 1x Pg11 1x M20	Light gray **HC-D 7-SML-26/O1STM20/PA** **HC-D7-SML-57/O1STPG11/PA** Black **HC-D 7-SML-26/O1STM20/PA BK**	 1674886 1416405 1413717	 10 10 10	
Coupling housing **Height: 60.5 mm**	1x M20 1x Pg11 1x M20	**HC-D 7-KML-61/O1M20/PA** **HC-D 7-KML-51/O1PG11/PA** Black **HC-D 7-KML-61/O1M20/PA BK**	1604884 1675434 1413718	10 10 10	
Protective cover, plastic		Socket **HC-D 7-SD-FL/FS-MD** Plug **HC-D 7-SD-FL/FS**	 1644300 1772573	 10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Replacement sealing screw, IP65
From page 653



Replacement seals
From page 651



Replacement latch
From page 652

Size D7, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Zinc die-cast
Surface material	Powder-coated, gray (metal housing)
Locking latch material	Steel, galvanized and passivated
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP54 / IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 24 mm**		Without cover **HC-D 7-AML-24/GR**	1773035	10	
Panel mounting base **Height: 24 mm**		With metal cover, socket **HC-D 7-AMLD-24/GR** With metal cover, plug **HC-D 7-AMLD-24/GR-OD**	1676970 1684994	10 10	
Panel mounting base **Height: 25.5 mm**		Angled version **HC-D 7-AML-26/GW**	1773022	10	
Box mounting base **Height: 25.5 mm**	1x M20 1x Pg11	**HC-D 7-SML-26/O1STM20** **HC-D7-SML-26/O1STPG11**	1674899 1416406	10 10	
Coupling housing **Height: 60.5 mm**	1x M20 1x Pg11	**HC-D 7-KML-61/O1M20** **HC-D 7-KML-61/O1PG11**	1604883 1672893	10 10	
Protective cover, plastic		Socket **HC-D 7-SD-FL/FS-MD** Plug **HC-D 7-SD-FL/FS**	1644300 1772573	10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Replacement sealing screw, IP65
From page 653



Replacement seals
From page 651

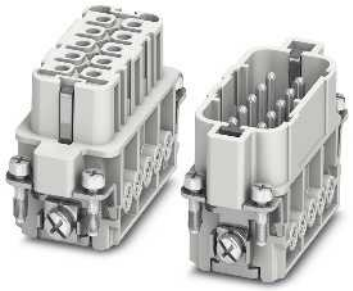
A10 series

250 V, 16 - 20 A

Connection technology:
– Screw connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

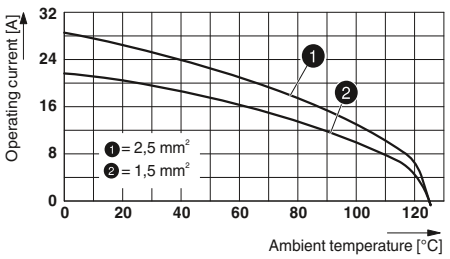
Notes:
For accessories, see from page 634
A10 series with wire protection
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



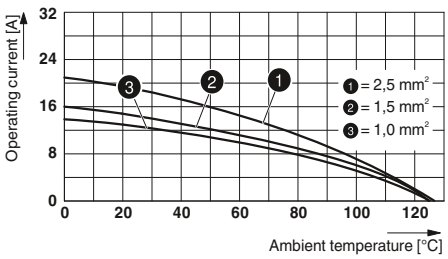
Technical data

Type		① HC-A 10-I-UT-...	② HC-A 10-E...C
Approvals		-	
IEC data			
Rated current, contacts (at 40°C)	A	20	16
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	250	250
Rated surge voltage, contacts	kV	4	4
Connection cross section	mm²	0.5 ... 2.5	0.5 ... 4
UL data			
Rated voltage	V	-	600
Rated current	A	-	-
Connection cross section	AWG	-	-
CSA / cUL data			
Rated voltage	V	-	600
Rated current	A	-	10
Connection cross section	AWG	-	20-13
Material data			
Contact carrier material		PC	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Screw connection	Crimp connection
Stripping length	mm	7	8
No. of pos.		10	10
Contact numbering		1 - 16	1 - 10
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves



HC-A 10...-I-UT-...

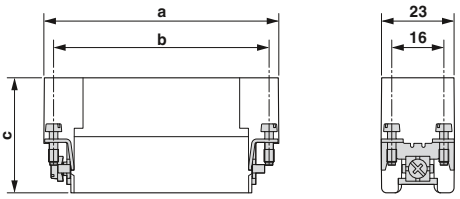


HC-A 10-E...C

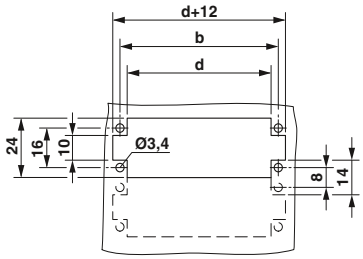
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	10	1 - 16	D15	① HC-A 10-I-UT-...	1585304	1585294	1
Crimp connection							
	10	1 - 10	D15	② HC-A 10-E...C	1676983	1676996	10
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	55.5	49.5	31.5	43.5
	Plug			34.1	
②	Socket	56.5	49.5	30	43.5
	Plug			33	

Accessories



Crimping tools
From page 636



Coding profiles
From page 638



Coding elements
From page 639



Replacement PE screws
From page 640

A16 series

250 V, 16 - 20 A

Connection technology:
– Screw connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

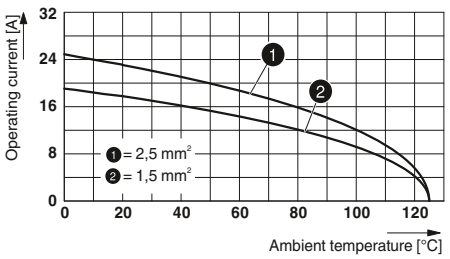
Notes:
For accessories, see from page 634
A16 series with wire protection
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



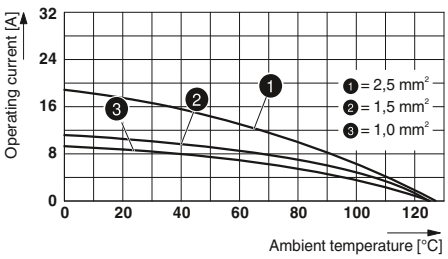
Technical data

Type		① ② HC-A 16-I-UT-...	③ ④ HC-A 16-E...C
Approvals		-	
IEC data			
Rated current, contacts (at 40°C)	A	20	16
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	250	250
Rated surge voltage, contacts	kV	4	4
Connection cross section	mm²	0.5 ... 2.5	0.5 ... 4
UL data			
Rated voltage	V	-	600
Rated current	A	-	-
Connection cross section	AWG	-	-
CSA / cUL data			
Rated voltage	V	-	600
Rated current	A	-	10
Connection cross section	AWG	-	20-13
Material data			
Contact carrier material		PC	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Screw connection	Crimp connection
Stripping length	mm	7	8
No. of pos.		16	16
Contact numbering		1 - 16	1 - 16
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves

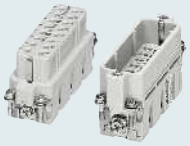


HC-A 16-I-UT-...

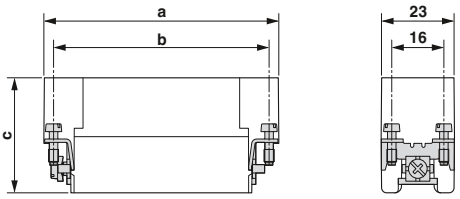


HC-A 16-E...C

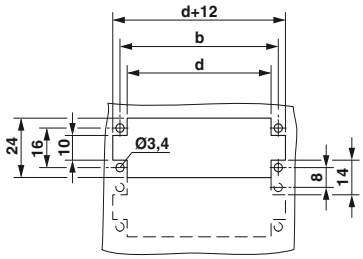
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	16	1 - 16	D25 / D50	① HC-A 16-I-UT-...	1585320	1585317	1
	16	17 - 32	D25 / D50	② HC-A 16-I-UT-...-32	1585346	1585333	1
Crimp connection							
	16	1 - 16	D25 / D50	③ HC-A 16-E...C	1677018	1677034	10
	16	17 - 32	D25 / D50	④ HC-A 16-E...C-32	1677050	1677076	10
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	72	66	31.5	60
	Plug			34.1	
②	Socket	72	66	31.5	60
	Plug			34.1	
③	Socket	72	66	31.7	60
	Plug			31.8	
④	Socket	72	66	31.7	60
	Plug			31.8	

Accessories



Crimping tools
From page 636



Coding profiles
From page 638



Coding elements
From page 639



Replacement PE screws
From page 640

D15 series

250 V, 10 A

Connection technology:
– Crimp connection

Coding pins and sockets are mandatory for HC-D... and HC-DD series contact inserts.

To determine the corresponding housing, see cross-reference list on page 482.

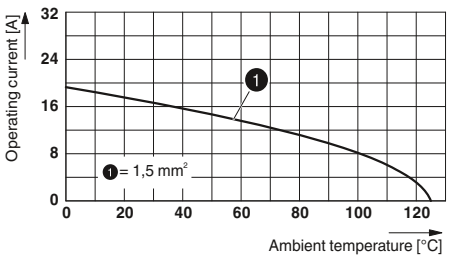
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-D 15-I-CT-...
Approvals		EAC, UL
IEC data		
Rated current, contacts (at 40°C)	A	10
Surge voltage category		III
Pollution degree		3
Rated voltage (III/3) contacts	V	250
Rated surge voltage, contacts	kV	4
Connection cross section	mm^2	0.14 ... 2.5
UL data		
Rated voltage	V	600
Rated current	A	10
Connection cross section	AWG	14
CSA / cUL data		
Rated voltage	V	-
Rated current	A	-
Connection cross section	AWG	-
Material data		
Contact carrier material		PC
Inflammability class in acc. with UL 94		V0
Contact material		Copper alloy
Contact surface material		Ag (alternatively Au)
Temperature data		
Ambient temperature range	°C	-40 ... 125
General data		
Connection method		Crimp connection
Stripping length	mm	8
No. of pos.		15
Contact numbering		-
Insertion/withdrawal cycles		≥ 500

Derating curves

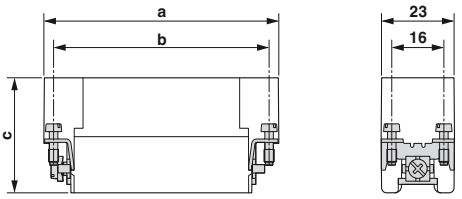


HC-D 15-I-CT-....

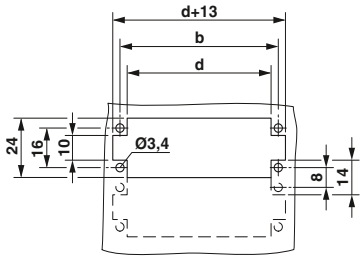
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	15		D15	① **HC-D 15-I-CT-...**	1584389	1584376	10
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 22 - 24		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	55.4	49.5	33.5	43.5
	Plug			34.2	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HEAVYCON D - contact inserts

D25 series

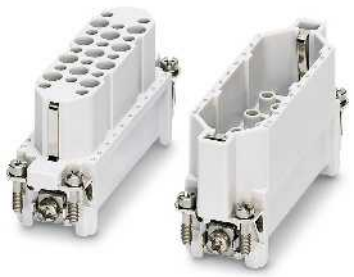
250 V, 10 A

Connection technology:
– Crimp connection

Coding pins and sockets are mandatory for HC-D... and HC-DD series contact inserts.

To determine the corresponding housing, see cross-reference list on page 482.

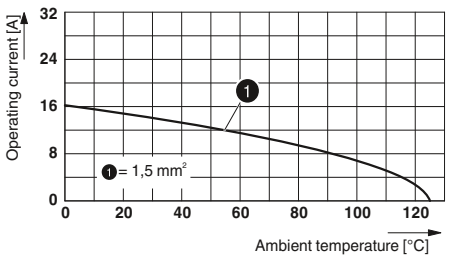
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① ② HC-D 25-I-CT-...
Approvals		
IEC data		
Rated current, contacts (at 40°C)	A	10
Surge voltage category		III
Pollution degree		3
Rated voltage (III/3) contacts	V	250
Rated surge voltage, contacts	kV	4
Connection cross section	mm^2	0.14 ... 2.5
UL data		
Rated voltage	V	600
Rated current	A	10
Connection cross section	AWG	14
CSA / cUL data		
Rated voltage	V	-
Rated current	A	-
Connection cross section	AWG	-
Material data		
Contact carrier material		PC
Inflammability class in acc. with UL 94		V0
Contact material		Copper alloy
Contact surface material		Ag (alternatively Au)
Temperature data		
Ambient temperature range	°C	-40 ... 125
General data		
Connection method		Crimp connection
Stripping length	mm	8
No. of pos.		25
Contact numbering		-
Insertion/withdrawal cycles		≥ 500

Derating curves

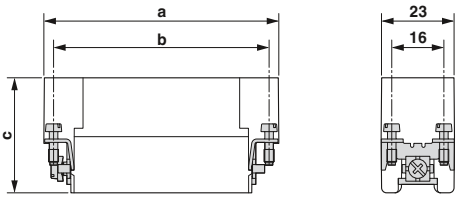


HC-D 25-I-CT-...

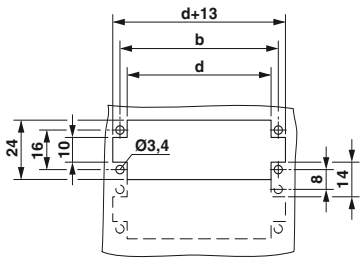
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	25		D25 / D50	① **HC-D 25-I-CT-...**	1584402	1584392	10
	25		D25 / D50	② **HC-D 25-I-CT-...**	1584402	1584392	10
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 22 - 24		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	72	66	33.5	60
	Plug			34.2	
②	Socket	72	66	33.5	60
	Plug			34.2	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HEAVYCON D - housing

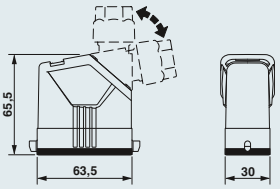
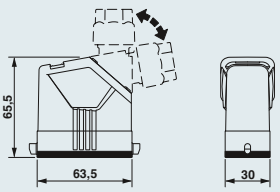
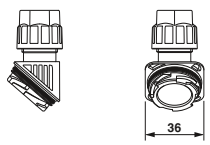
Size D15, plastic, EVO sleeve housing for single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	-
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 65.5 mm**		**HC-EVO-D15-HHFS-PL-BK**	1411340	1	
Sleeve housing **Height: 65.5 mm**		**HC-EVO-D15-HHFS-PL-BK**	1411340	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	
Connector set		Without cover, screw connection **HC-EVO-A10UT-BWS-HH-M20-PLRBK** With cover, screw connection **HC-EVO-A10UT-BWSC-HH-M20-PLRBK**	 1411356 1411357	 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643

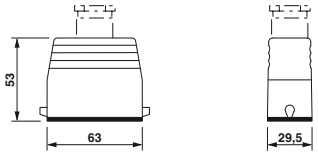
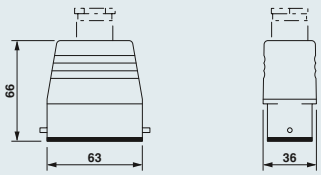
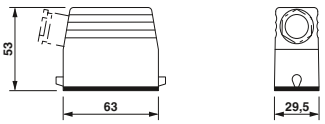
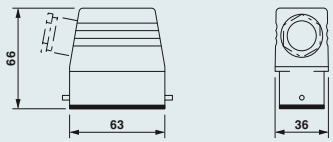
Size D15, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	-
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 53 mm 	1x M20	Cable outlet: top **HC-D 15-TFL-53/O1M20G**	1416379	10	
	1x Pg16	**HC-D 15-TFL-53/O1PG16G**	1672741	10	
Sleeve housing Height: 66 mm 	1x M20	Cable outlet: top **HC-D 15-TFL-66/O1STM20G**	1645163	10	
	1x M25	**HC-D 15-TFL-66/O1STM25G**	1645176	10	
	1x Pg16	**HC-D15-TFL-66/O1PG16G**	1416384	10	
	1x Pg21	**HC-D15-TFL-66/O1PG21G**	1416385	10	
Sleeve housing Height: 53 mm 	1x M20	Cable outlet: lateral **HC-D 15-TFL-53/O1M20S**	1604896	10	
	1x Pg16	**HC-D 15-TFL-53/O1PG16S**	1672699	10	
Sleeve housing Height: 66 mm 	1x M20	Cable outlet: lateral **HC-D 15-TFL-66/O1STM20S**	1636046	10	
	1x M25	**HC-D 15-TFL-66/O1STM25S**	1636059	10	
	1x Pg16	**HC-D 15-TFL-66/O1PG16S**	1672709	10	
	1x Pg21	**HC-D15-TFL-66/O1PG21S**	1416386	10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Cover plates
From page 648



D-SUB adapter plates
From page 649

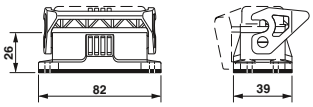
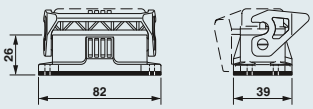
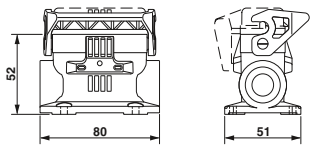
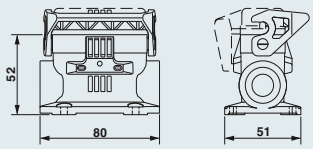
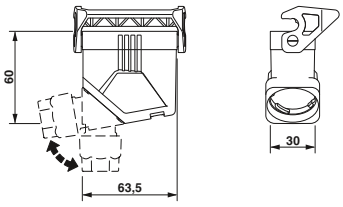
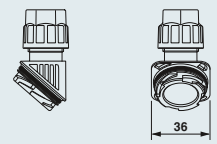
Size D15, plastic, EVO supporting base element with single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm** 		Without cover **HC-EVO-D15-BWS-PLR-BK**	1411336	1	
Panel mounting base **Height: 26 mm** 		With cover **HC-EVO-D15-BWSC-PLR-BK**	1411337	1	
Box mounting base[1]) **Height: 52 mm** 	2x M25	Without cover **HC-EVO-D15-SLWS-2SSM25-PLR-BK**	1411341	1	
Box mounting base[1]) **Height: 52 mm** 	2x M25	With cover **HC-EVO-D15-SLWSC-2SSM25-PLR-BK**	1411343	1	
Coupling housing **Height: 60 mm** 		**HC-EVO-D15-CHWS-PL-BK**	1411338	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	

Notes:

For further accessories, see page 642

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement protective cover
From page 647



Replacement latch
From page 652

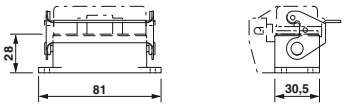
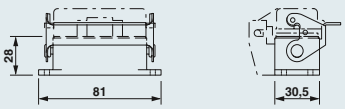
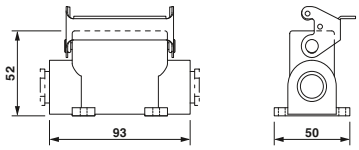
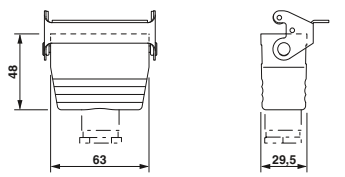
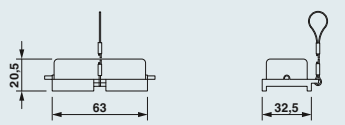
Size D15, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	CR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm** 		Without cover **HC-D 15-AML**	1772379	10	
Panel mounting base **Height: 26 mm** 		With cover **HC-D 15-AMLD**	1678363	10	
Box mounting base **Height: 52 mm** 		Without cover			
	1x M25	**HC-D 15-SML-52/O1M25**	1604893	10	
	1x Pg16	**HC-D 15-SML-52/O1PG16**	1672657	10	
	2x M20	**HC-D 15-SML-52/O2M20**	1604894	10	
	2x M25	**HC-D 15-SML-52/O2M25**	1604895	10	
	1x Pg16	**HC-D 15-SML-52/O2PG16**	1672660	10	
Coupling housing **Height: 48 mm** 	1x M20	**HC-D 15-KML-48/O1M20**	1604892	10	
	1x Pg16	**HC-D 15-KML-48/O1PG16**	1678266	10	
Protective cover, plastic 		**HC-D 15-SD-FL/FS**	1660164	10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Cover plates
From page 648



D-SUB adapter plates
From page 649



Replacement seals
From page 651

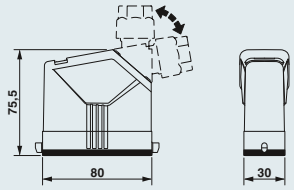
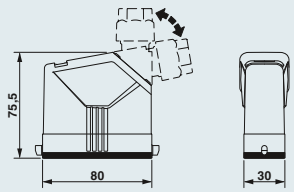
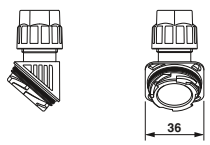
Size D25, plastic, EVO sleeve housing for single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	-
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 75.5 mm** 		**HC-EVO-D25-HHFS-PL-BK**	1411347	1	
Sleeve housing **Height: 75.5 mm** 		**HC-EVO-D25-HHFS-PL-BK**	1411347	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	
Connector set 		Without cover, screw connection **HC-EVO-A16UT-BWS-HH-M25-PLRBK** With cover, screw connection **HC-EVO-A16UT-BWSC-HH-M25-PLRBK**	 1411358 1411359	 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643

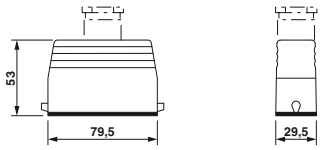
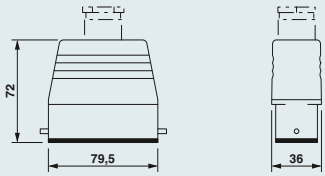
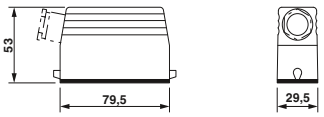
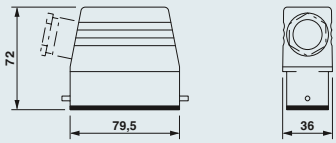
Size D25, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	-
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 58 mm 	1x M20 1x Pg16	Cable outlet: top **HC-D 25-TFL-58/O1M20G** **HC-D 25-TFL-58/O1PG16G**	 1416380 1672819	 10 10	
Sleeve housing Height: 72 mm 	1x M20 1x M25 1x Pg21	Cable outlet: top **HC-D 25-TFL-72/O1STM20G** **HC-D 25-TFL-72/O1STM25G** **HC-D25-TFL-72/O1PG21G**	 1636075 1645189 1416387	 10 10 10	
Sleeve housing Height: 58 mm 	1x M20 1x Pg16	Cable outlet: lateral **HC-D 25-TFL-58/O1M20S** **HC-D 25-TFL-58/O1PG16S**	 1416381 1672822	 10 10	
Sleeve housing Height: 72 mm 	1x M20 1x M25 1x Pg16 1x Pg21	Cable outlet: lateral **HC-D 25-TFL-72/O1STM20S** **HC-D 25-TFL-72/O1STM25S** **HC-D 25-TFL-72/O1PG16S** **HC-D 25-TFL-72/O1PG21S**	 1636062 1645273 1672851 1672864	 10 10 10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Cover plates
From page 648

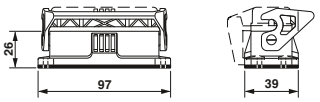
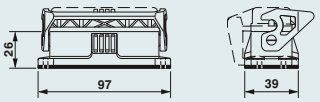
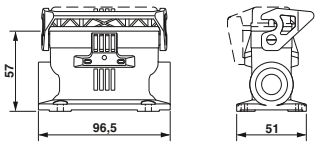
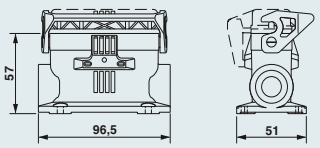
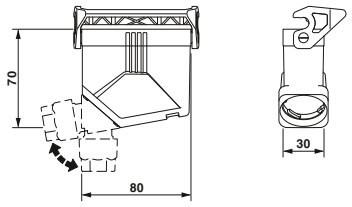
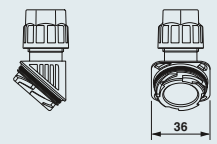
Size D25, plastic, EVO supporting base element with single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm** 		Without cover **HC-EVO-D25-BWS-PLR-BK**	1411344	1	
Panel mounting base **Height: 26 mm** 		With cover **HC-EVO-D25-BWSC-PLR-BK**	1411345	1	
Box mounting base[1]) **Height: 57 mm** 	2x M25	Without cover **HC-EVO-D25-SLWS-2SSM25-PLR-BK**	1411348	1	
Box mounting base[1]) **Height: 57 mm** 	2x M25	With cover **HC-EVO-D25-SLWSC-2SSM25-PLR-BK**	1411349	1	
Coupling housing **Height: 70 mm** 		**HC-EVO-D25-CHWS-PLR-BK**	1411346	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	

Notes:

For further accessories, see page 642

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement protective cover
From page 647



Replacement latch
From page 652

Size D25, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	CR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

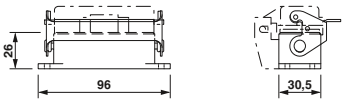
Ordering data

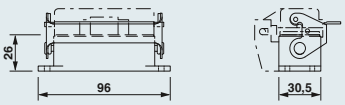
Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm**		Without cover **HC-D 25-AML**	1772463	10	
Panel mounting base **Height: 26 mm**		With cover **HC-D 25-AMLD**	1672754	10	
Box mounting base **Height: 57 mm**		Without cover			
	1x M25	**HC-D 25-SML-57/O1M25**	1604901	10	
	1x Pg16	**HC-D25-SML-57/O1PG16**	1416388	10	
	1x Pg21	**HC-D25-SML-57/O1PG21**	1416390	10	
	2x M20	**HC-D 25-SML-57/O2M20**	1604902	10	
	2x M25	**HC-D 25-SML-57/O2M25**	1604903	10	
	2x Pg16	**HC-D 25-SML-57/O2PG16**	1672783	10	
Box mounting base **Height: 57 mm**		With cover			
	1x Pg16	**HC-D 25-SMLD-57/O1PG16**	1672796	10	
	1x Pg21	**HC-D 25-SMLD-57/O1PG21**	1416378	10	
	2x M20	**HC-D 25-SMLD-57/O2M20**	1416382	10	
	2x Pg16	**HC-D25-SMLD-57/O2PG16**	1416391	10	
Coupling housing **Height: 57 mm**	1x M20	**HC-D 25-KML-53/O1M20**	1604900	10	
	1x Pg16	**HC-D25-KML-53/O1PG16**	1416393	10	
Protective cover, plastic		**HC-D 25-SD-FL/FS**	1660135	10	

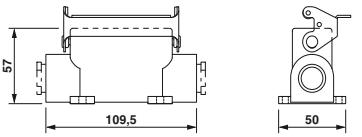


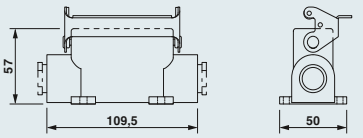


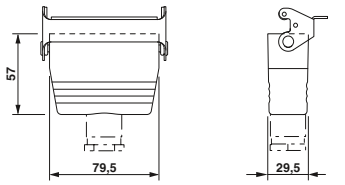


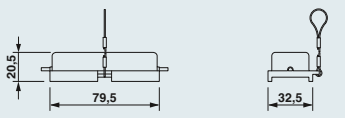













Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Cover plates
From page 648



Replacement seals
From page 651

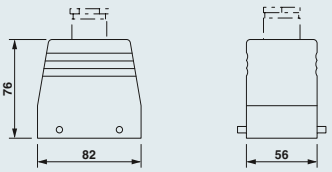
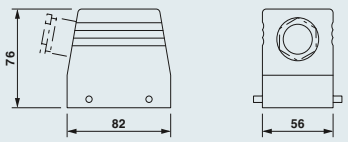
Size D50, metal, sleeve housing for double locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 76 mm** 	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top **HC-D 50-TFQ-76/O1STM25G** **HC-D 50-TFQ-76/O1STM32G** **HC-D50-TFQ-76/O1PG21G** **HC-D50-TFQ-76/O1PG29G**	 1645192 1645215 1416394 1416395	 10 10 10 10	
Sleeve housing **Height: 76 mm** 	1x M25 1x M32 1x Pg21 Pg29	Cable outlet: lateral **HC-D 50-TFQ-76/O1STM25S** **HC-D 50-TFQ-76/O1STM32S** **HC-D50-TFQ-76/O1PG21S** **HC-D50-TFQ-76/O1PG29S**	 1645202 1645286 1416396 1416397	 10 10 10 10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680

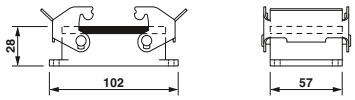
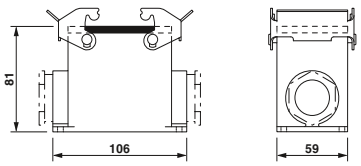
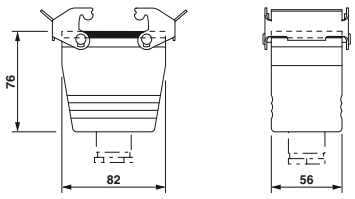
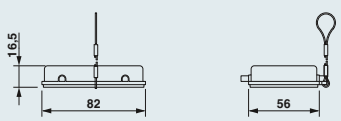
Size D50, metal, supporting base element with double locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 28 mm** 		Without cover **HC-D 50-AMQ**	1775868	10	
Box mounting base **Height: 81 mm** 	1x M25 1x M32 1x Pg21 1x Pg29 2x M25 2x M32 2x Pg21 2x Pg29	**HC-D 50-SMQ-81/O1M25** **HC-D 50-SMQ-81/O1M32** **HC-D50-SMQ-81/O1PG21** **HC-D50-SMQ-81/O1PG29** **HC-D 50-SMQ-81/O2M25** **HC-D 50-SMQ-81/O2M32** **HC-D50-SMQ-81/O2PG21** **HC-D50-SMQ-81/O2PG29**	1604908 1604909 1416398 1416399 1416383 1604910 1416400 1416401	10 10 10 10 10 10 10 10	
Coupling housing **Height: 76 mm** 	1x M25 1x M32 1x Pg21 1x Pg29	**HC-D 50-KMQ-76/O1M25** **HC-D 50-KMQ-76/O1M32** **HC-D50-KMQ-76/O1PG21** **HC-D50-KMQ-76/O1PG29**	1604970 1604971 1416403 1416404	10 10 10 10	
Protective cover, plastic 		**HC-D 50-SD-FQ/FS**	1660193	10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Replacement seals
From page 651

D40, D64 series

250 V, 10 A

Connection technology:
– Crimp connection

Coding pins and sockets are mandatory for HC-D... and HC-DD series contact inserts.

To determine the corresponding housing, see cross-reference list on page 482.

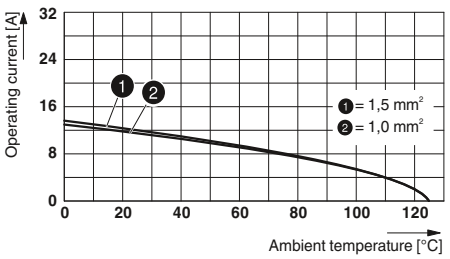
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-D 40-I-CT-...	② HC-D 64-I-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	A	10	10
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	250	250
Rated surge voltage, contacts	kV	4	4
Connection cross section	mm²	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	V	600	600
Rated current	A	10	10
Connection cross section	AWG	14	14
CSA / cUL data			
Rated voltage	V	-	-
Rated current	A	-	-
Connection cross section	AWG	-	-
Material data			
Contact carrier material		PC	PC
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Crimp connection	Crimp connection
Stripping length	mm	8	8
No. of pos.		40	64
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves

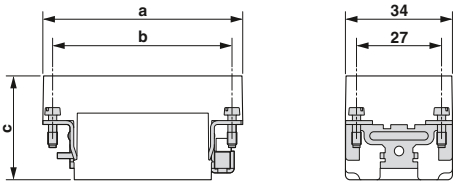


HC-D 40-I-CT-... / HC-D 64-I-CT-...

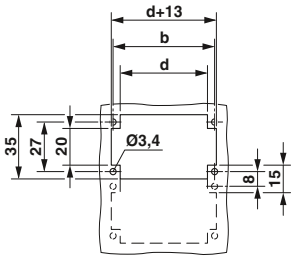
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	40		B16 / B32	① **HC-D 40-I-CT-...**	1584428	1584415	10
Crimp connection							
	64		B24 / B48	② **HC-D 64-I-CT-...**	1584444	1584431	10
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 22 - 24		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	83.5	77.5	34.2	72
	Plug			32.8	
②	Socket	110.5	104.5	34.2	98
	Plug			32.8	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

D40, D64 series
Terminal adapters

250 V, 10 A

Connection technology:
– Screw connection

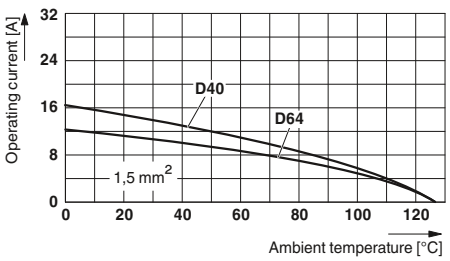
Notes:
For accessories, see from page 634
Not for HC-EVO panel mounting bases
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① ② HC-D 40-A-UT-PEL-... PE left	③ ④ HC-D 64-A-UT-PEL-... PE left		
Approvals		EAC	EAC		
IEC data					
Rated current, contacts (at 40°C)	A	10	10		
Surge voltage category		III	III		
Pollution degree		3	3		
Rated voltage (III/3) contacts	V	250	250		
Rated surge voltage, contacts	kV	4	4		
Connection cross section	mm^2	0.5 ... 2.5	0.2 ... 2.5		
UL data					
Rated voltage	V	-	-		
Rated current	A	-	-		
Connection cross section	AWG	-	-		
CSA / cUL data					
Rated voltage	V	-	-		
Rated current	A	-	-		
Connection cross section	AWG	-	-		
Material data					
Contact carrier material		PA	PA		
Inflammability class in acc. with UL 94		V0	V0		
Contact material		Copper alloy	Copper alloy		
Contact surface material		Ag	Ag		
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125		
General data					
Connection method		Screw connection	Screw connection		
Stripping length	mm	10	10		
No. of pos.		40	64		
Contact numbering		-	-		
Insertion/withdrawal cycles		≥ 500	≥ 500		

Derating curves

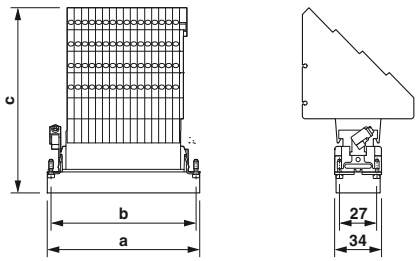


HC-D 40-A-UT-PER-.../HC-D 40-A-UT-PER-...

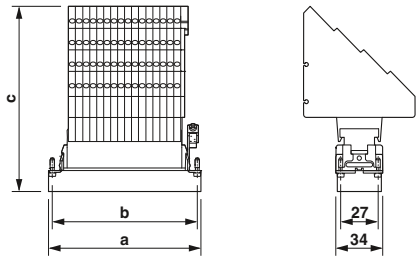
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	40		B16	PE left ① **HC-D 40-A-UT-PEL-...**	1584253	1584240	1
	40		B16	PE right ② **HC-D 40-A-UT-PER-...**	1584279	1584266	1
Screw connection							
	64		B24	PE left ③ **HC-D 64-A-UT-PEL-...**	1584295	1584282	1
	64		B24	PE right ④ **HC-D 64-A-UT-PER-...**	1584321	1584318	1
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

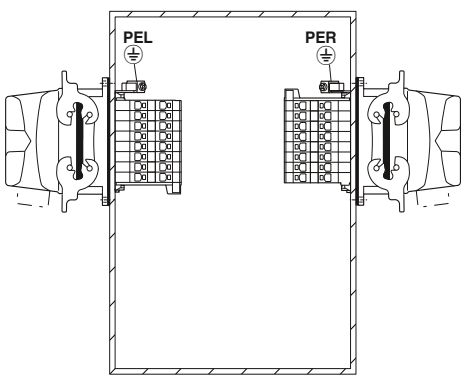


PEL



PER

		a	b	c	d
①	Socket	83	77.5	129.9	
	Plug				
②	Socket	83	77.5	129.9	
	Plug				
③	Socket	110	104	132.6	
	Plug				
④	Socket	110	104	132.6	
	Plug				



Mounting position PEL/PER

D40, D64 series
TWIN terminal adapters

250 V, 10 A

Connection technology:
– Push-in connection

– For 2 wires per position

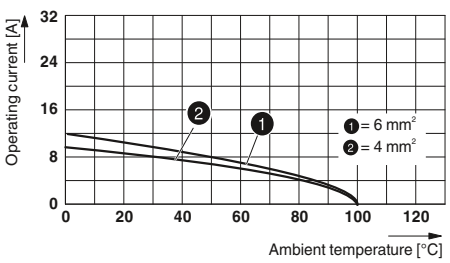
Notes:
For accessories, see from page 634
Not for HC-EVO panel mounting bases
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



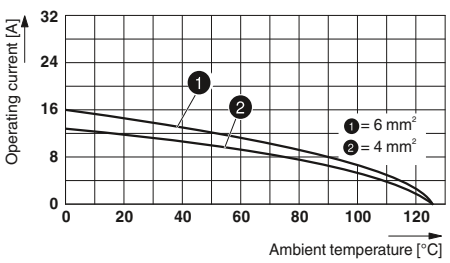
Technical data

Type		① ② HC-D 40-A-TWIN-PEL-... PE left	③ ④ HC-D 64-A-TWIN-PEL-... PE left
Approvals		EAC	EAC
IEC data			
Rated current, contacts (at 40°C)	A	10	10
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	250	250
Rated surge voltage, contacts	kV	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.5 ... 2.5
UL data			
Rated voltage	V	-	-
Rated current	A	-	-
Connection cross section	AWG	-	-
CSA / cUL data			
Rated voltage	V	-	-
Rated current	A	-	-
Connection cross section	AWG	-	-
Material data			
Contact carrier material		PA	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag	Ag
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Push-in connection	Push-in connection
Stripping length	mm	10	10
No. of pos.		40	64
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves



HC-D 40-A-TWIN-PER-...

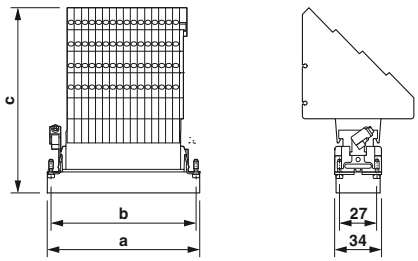


HC-D 64-A-TWIN-PER-...

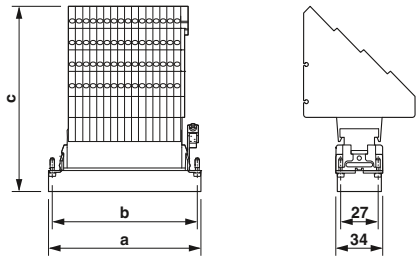
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Push-in connection							
				PE left			
	40		B16	① **HC-D 40-A-TWIN-PEL-...**	1580147	1580150	4
				PE right			
	40		B16	② **HC-D 40-A-TWIN-PER-...**	1580163	1580176	4
Push-in connection							
				PE left			
	64		B24	③ **HC-D 64-A-TWIN-PEL-...**	1580189	1580192	4
				PE right			
	64		B24	④ **HC-D 64-A-TWIN-PER-...**	1580202	1580215	4
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

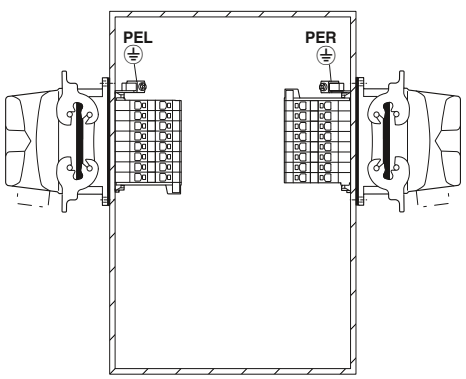


PEL



PER

		a	b	c	d
①	Socket	83	77.5	141.1	
	Plug			139.3	
②	Socket	83	77.5	141.1	
	Plug			139.3	
③	Socket	110	104	141.1	
	Plug			139.3	
④	Socket	110	104	141.1	
	Plug			139.3	



Mounting position PEL/PER

DD24, DD42, DD72, DD108 series

250 V, 10 A

Connection technology:
– Crimp connection

Coding pins and sockets are mandatory for HC-D... and HC-DD series contact inserts.

To determine the corresponding housing, see cross-reference list on page 482.

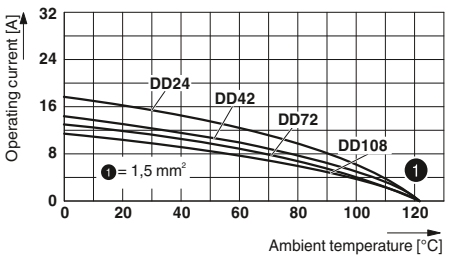
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-DD24-I-CT-...	② HC-DD42-I-CT-...	③ ④ HC-DD72-I-CT-...	⑤ ⑥ HC-DD108-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	10	10	10	10
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	250	250	250	250
Rated surge voltage, contacts	kV	4	4	4	4
Connection cross section	mm²	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data					
Rated voltage	V	250	250	250	250
Rated current	A	10	10	10	10
Connection cross section	AWG	14	14	14	14
CSA / cUL data					
Rated voltage	V	250	250	250	250
Rated current	A	7	7	7	7
Connection cross section	AWG	26-14	26-14	26-14	26-14
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	8	8	8	8
No. of pos.		24	42	72	108
Contact numbering		1 - 24	1 - 42	1 - 72	1 - 108
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

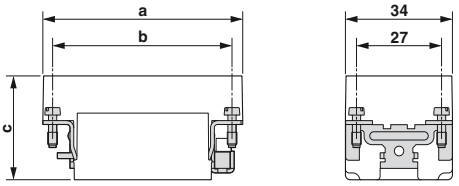


HC-DD...

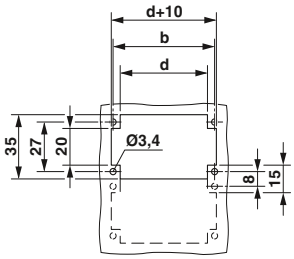
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	24	1 - 24	B6	① HC-DD24-I-CT-...	1584046	1584033	10
Crimp connection							
	42	1 - 42	B10	② HC-DD42-I-CT-...	1584062	1584059	10
Crimp connection							
	72	1 - 72	B16 / B32	③ HC-DD72-I-CT-...	1584091	1584075	10
	72	73 - 144	B16 / B32	④ HC-DD72-I-CT-...-144	1584101	1584088	10
Crimp connection							
	108	1 - 108	B24 / B48	⑤ HC-DD108-I-CT-...	1584130	1584114	10
	108	109 - 216	B24 / B48	⑥ HC-DD108-I-CT-...-216	1584143	1584127	10
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	50.5	44	34.5	36
	Plug			32.5	
②	Socket	64	57	34.5	49
	Plug			32.5	
③	Socket	84	77.5	34.5	72
	Plug			32.5	
④	Socket	84	77.5	34.5	72
	Plug			32.5	
⑤	Socket	111	104	34.5	98
	Plug			32.5	
⑥	Socket	111	104	34.5	98
	Plug			32.5	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 640

B6 series

500 V, 16 A

Connection technology:
– Screw connection
– Push-in connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

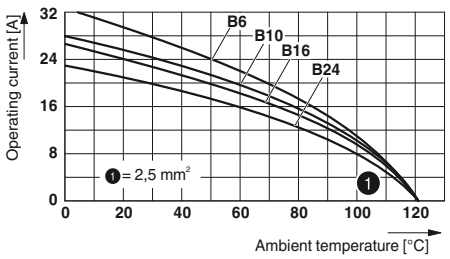
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



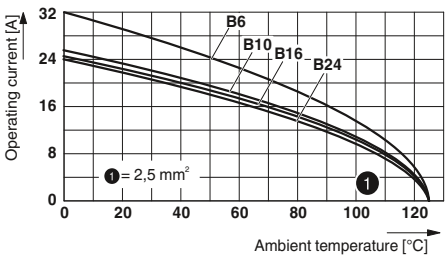
Technical data

Type		① HC-B 6-I-UT-...	② HC-B 6-I-PT-...	③ HC-B 6-E...Q-2,5	④ HC-B 6-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	400	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.14 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	10	13
Connection cross section	AWG	22-14	14	14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	10	20
Connection cross section	AWG	22-14	14	16	20-12
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag/Sn (tarnish protection)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Screw connection	Push-in connection	QUICKON connection	Crimp connection
Stripping length	mm	8	8 ... 10	-	7.5
No. of pos.		6	6	6	6
Contact numbering		1 - 6	1 - 6	1 - 6	1 - 6
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

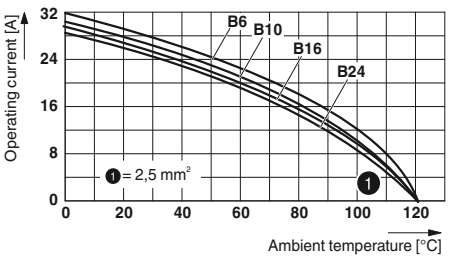
Derating curves



HC-B 6-I-UT-...



HC-B 6-E...Q-2,5

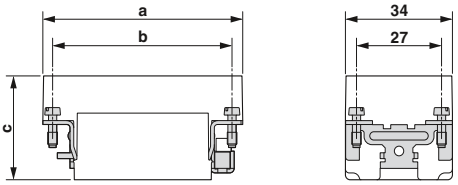


HC-B 6-I-CT-...

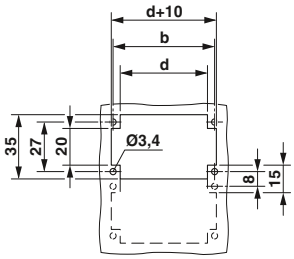
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	6	1 - 6	B6	① HC-B 6-I-UT-...	1648128	1648115	10
Push-in connection							
	6	1 - 6	B6	② HC-B 6-I-PT-...	1407727	1407728	1
Insulation displacement connection							
	6	1 - 6	B6	③ HC-B 6-E...Q-2,5	1605556	1605611	10
Crimp connection							
	6	1 - 6	B6	④ HC-B 6-I-CT-...	1648160	1648157	10
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	50.5	44	34.6	36
	Plug			32	
②	Socket	50.5	44	37	36
	Plug			34.4	
③	Socket	51	44	37	36
	Plug	51.5		35	
④	Socket	50.5	44	34.6	36
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 638



Replacement PE screws
From page 640

B10 series

500 V, 16 A

Connection technology:
– Screw connection
– Push-in connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

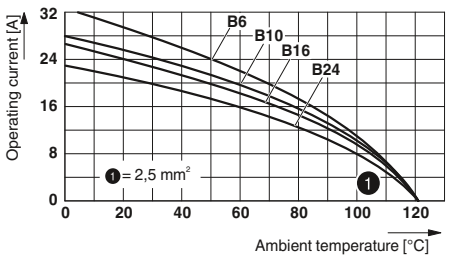
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



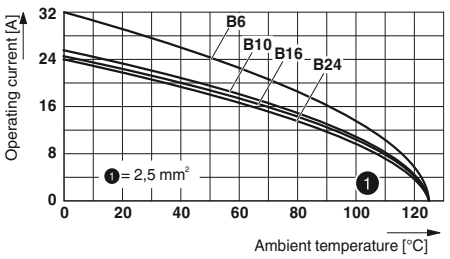
Technical data

Type		① HC-B 10-I-UT-...	② HC-B 10-I-PT-...	③ HC-B 10-E...Q-2,5	④ HC-B 10-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	400	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.14 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	10	13
Connection cross section	AWG	22-14	14	14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	10	10	20
Connection cross section	AWG	22-14	14	16	20-12
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag/Sn (tarnish protection)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Screw connection	Push-in connection	QUICKON connection	Crimp connection
Stripping length	mm	8	8 ... 10	-	7.5
No. of pos.		10	10	10	10
Contact numbering		1 - 10	1 - 10	1 - 10	1 - 10
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

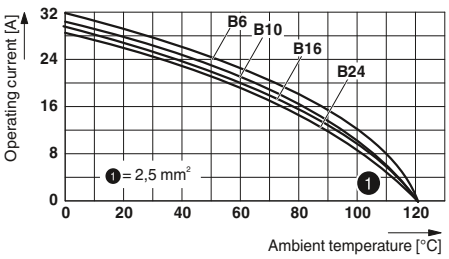
Derating curves



HC-B 10-I-UT-...

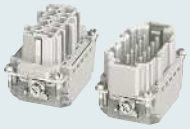


HC-B 10-E...Q-2,5

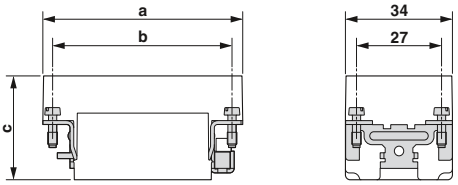


HC-B 10-I-CT-...

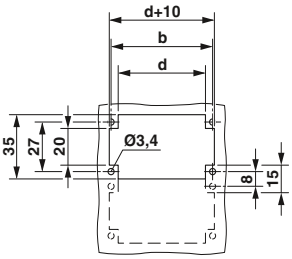
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	10	1 - 10	B10	① HC-B 10-I-UT-...	1648186	1648173	10
Push-in connection							
	10	1 - 10	B10	② HC-B 10-I-PT-...	1407729	1407730	1
Insulation displacement connection							
	10	1 - 10	B10	③ HC-B 10-E...Q-2,5	1605569	1605624	10
Crimp connection							
	10	1 - 10	B10	④ HC-B 10-I-CT-...	1648225	1648212	10
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	64	57	34.6	49
	Plug			32	
②	Socket	64	57	37	49
	Plug			34.4	
③	Socket	64	57	37	49
	Plug			35	
④	Socket	64	57	34.6	49
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 638



Replacement PE screws
From page 640

B16 series

500 V, 16 A

Connection technology:
– Screw connection
– Push-in connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

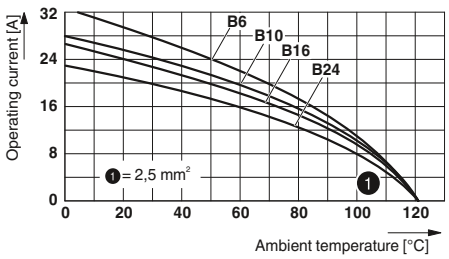
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



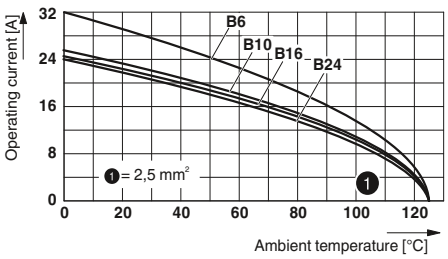
Technical data

Type		① ② HC-B 16-I-UT-...	③ ④ HC-B 16-I-PT-...	⑤ ⑥ HC-B 16-E...Q-2,5	⑦ ⑧ HC-B 16-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	400	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.14 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	10	13
Connection cross section	AWG	22-14	14	14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	10	10	20
Connection cross section	AWG	22-14	14	16	20-12
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag/Sn (tarnish protection)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Screw connection	Push-in connection	QUICKON connection	Crimp connection
Stripping length	mm	8	8 ... 10	-	7.5
No. of pos.		16	16	16	16
Contact numbering		1 - 16	1 - 16	1 - 16	1 - 16
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

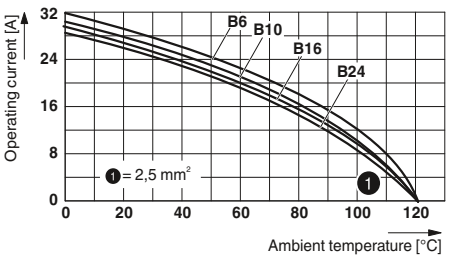
Derating curves



HC-B 16-I-UT-...

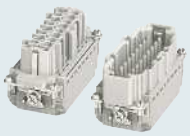


HC-B 16-E...Q-2,5

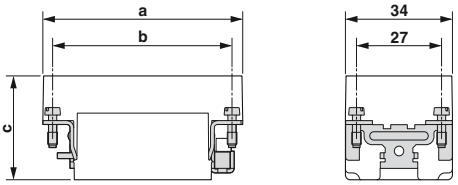


HC-B 16-I-CT-...

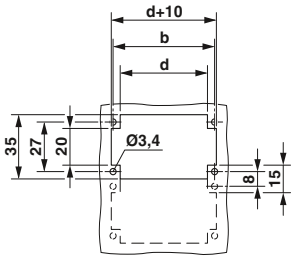
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	16	1 - 16	B16 / B32	① HC-B 16-I-UT-...	1648241	1648238	10
	16	17 - 32	B16 / B32	② HC-B 16-I-UT-...-32	1584884	1584871	10
Push-in connection							
	16	1 - 16	B16 / B32	③ HC-B 16-I-PT-...	1407731	1407732	1
	16	17 - 32	B16 / B32	④ HC-B 16-I-PT-...-32	1407733	1407734	1
Insulation displacement connection							
	16	1 - 16	B16 / B32	⑤ HC-B 16-E...Q-2,5	1605572	1605637	10
	16	17 - 32	B16 / B32	⑥ HC-B 16-E...Q-2,5-32	1605598	1605653	10
Crimp connection							
	16	1 - 16	B16 / B32	⑦ HC-B 16-I-CT-...	1648283	1648270	10
	16	17 - 32	B16 / B32	⑧ HC-B 16-I-CT-...-32	1584923	1584910	10
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84	77.5	34.6	72
	Plug			32	
②	Socket	84	77.5	34.6	72
	Plug			32	
③	Socket	84	77.5	37	72
	Plug			34.4	
④	Socket	84	77.5	37	72
	Plug			34.4	
⑤	Socket	84.5	77.5	37	72
	Plug			35	
⑥	Socket	84.5	77.5	37	72
	Plug			35	
⑦	Socket	84	77.5	34.6	72
	Plug			32	
⑧	Socket	84	77.5	34.6	72
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 638



Replacement PE screws
From page 640

B24 series

500 V, 16 A

Connection technology:
– Screw connection
– Push-in connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

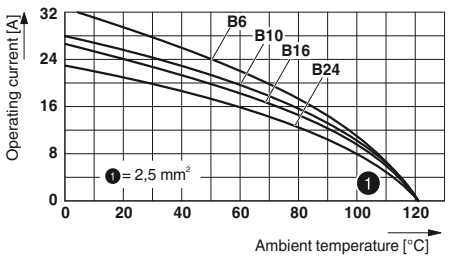
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



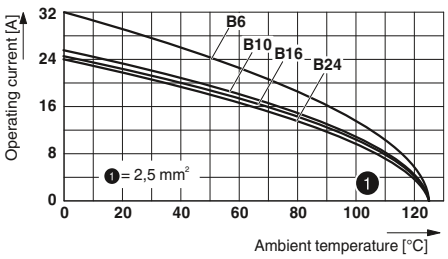
Technical data

Type		① ② HC-B 24-I-UT-...	③ ④ HC-B 24-I-PT-...	⑤ ⑥ HC-B 24-E...Q-2,5	⑦ ⑧ HC-B 24-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	400	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm²	0.5 ... 2.5	0.14 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	10	13
Connection cross section	AWG	22-14	14	14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	10	10	20
Connection cross section	AWG	22-14	14	16	20-12
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag/Sn (tarnish protection)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Screw connection	Push-in connection	QUICKON connection	Crimp connection
Stripping length	mm	8	8 ... 10	-	7.5
No. of pos.		24	24	24	24
Contact numbering		1 - 24	1 - 24	1 - 24	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

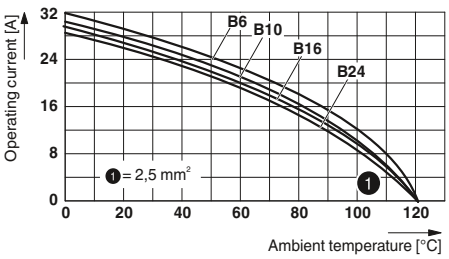
Derating curves



HC-B 24-I-UT-...

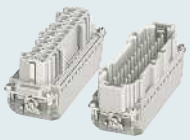
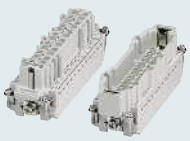


HC-B 24-E...Q-2,5

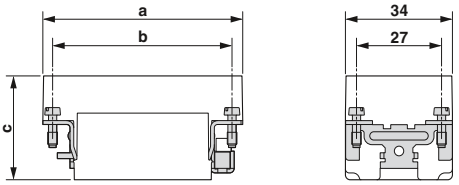


HC-B 24-I-CT-...

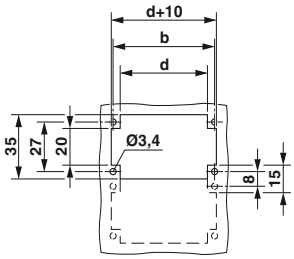
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	24	1 - 24	B24 / B48	① HC-B 24-I-UT-...	1648306	1648296	10
	24	25 - 48	B24 / B48	② HC-B 24-I-UT-...-48	1584949	1584936	10
Push-in connection							
	24	1 - 24	B24 / B48	③ HC-B 24-I-PT-...	1407735	1407736	1
	24	25 - 48	B24 / B48	④ HC-B 24-I-PT-...-48	1407737	1407738	1
Insulation displacement connection							
	24	1 - 24	B24 / B48	⑤ HC-B 24-E...Q-2,5	1605585	1605640	10
	24	1 - 24	B24 / B48	⑥ HC-B 24-E...Q-2,5-48	1605608	1605666	10
Crimp connection							
	24	1 - 24	B24 / B48	⑦ HC-B 24-I-CT-...	1648348	1648335	10
	24	25 - 48	B24 / B48	⑧ HC-B 24-I-CT-...-48	1584981	1584978	10
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	111	104	34.6	98
	Plug			32	
②	Socket	111	104	34.6	98
	Plug			32	
③	Socket	111	104	37	98
	Plug			34.4	
④	Socket	111	104	37	98
	Plug			34.4	
⑤	Socket	111	104	37	98
	Plug			35	
⑥	Socket	111	104	37	98
	Plug			35	
⑦	Socket	111	104	34.6	98
	Plug			32	
⑧	Socket	111	104	34.6	98
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 638



Replacement PE screws
From page 640

B6, B10, B16, B24 series
UT... terminal adapters

500 V, 16 A

Connection technology:
– Screw connection

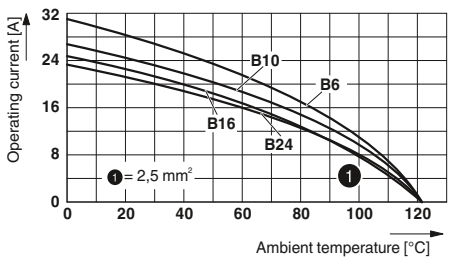
Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① ② HC-B 6-A-UT-PEL-... PE left	③ ④ HC-B 10-A-UT-PEL-... PE left	⑤ ⑥ HC-B 16-A-UT-PEL-... PE left	⑦ ⑧ HC-B 24-A-UT-PEL-... PE left
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	500	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Screw connection	Screw connection	Screw connection	Screw connection
Stripping length	mm	12	12	12	12
No. of pos.		6	10	16	24
Contact numbering		1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

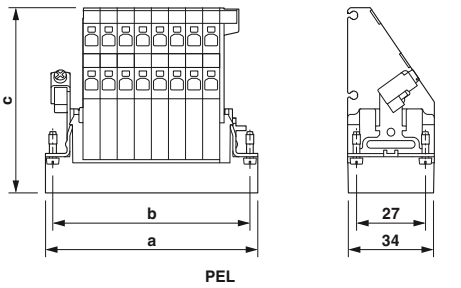


HC-B ...-A-UT-...

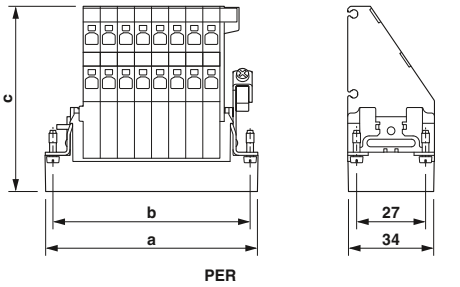
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
				PE left			
	6	1 - 6	B6	① **HC-B 6-A-UT-PEL-...**	1648018	1648024	5
				PE right			
	6	1 - 6	B6	② **HC-B 6-A-UT-PER-...**	1648066	1648072	5
Screw connection							
				PE left			
	10	1 - 10	B10	③ **HC-B 10-A-UT-PEL-...**	1648030	1648036	5
				PE right			
	10	1 - 10	B10	④ **HC-B 10-A-UT-PER-...**	1648078	1648084	5
Screw connection							
				PE left			
	16	1 - 16	B16	⑤ **HC-B 16-A-UT-PEL-...**	1648042	1648048	5
				PE right			
	16	1 - 16	B16	⑥ **HC-B 16-A-UT-PER-...**	1648090	1648096	5
Screw connection							
				PE left			
	24	1 - 24	B24	⑦ **HC-B 24-A-UT-PEL-...**	1648054	1648060	5
				PE right			
	24	1 - 24	B24	⑧ **HC-B 24-A-UT-PER-...**	1648102	1648108	5
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

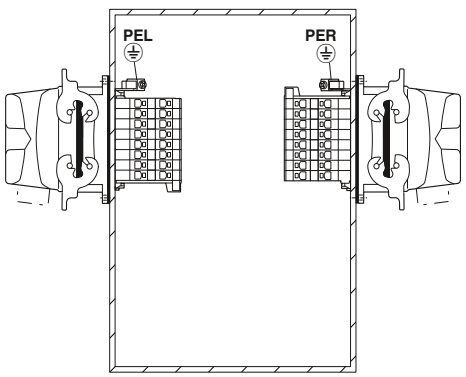


PEL



PER

		a	b	c	d
①	Socket	51	44	74.2	
	Plug			71.6	
②	Socket	51	44	74.2	
	Plug			71.6	
③	Socket	64	57	74.2	
	Plug			71.6	
④	Socket	64	57	74.2	
	Plug			71.6	
⑤	Socket	84.5	77.5	74.2	
	Plug			71.6	
⑥	Socket	84.5	77.5	74.2	
	Plug			71.6	
⑦	Socket	111	104	74.2	
	Plug			71.6	
⑧	Socket	111	104	74.2	
	Plug			71.6	



Mounting position PEL/PER

Accessories



Coding elements
From page 638

B6, B10, B16, B24 series
DT terminal adapters

500 V, 16 A

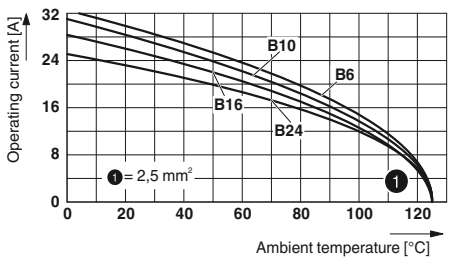
Connection technology:
– Push-in connection

Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



		Technical data			
Type		① ② **HC-B 6-A-DT-PEL-...** PE left	③ ④ **HC-B 10-A-DT-PEL-...** PE left	⑤ ⑥ **HC-B 16-A-DT-PEL-...** PE left	⑦ ⑧ **HC-B 24-A-DT-PEL-...** PE left
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	500	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
CSA / cUL data					
Rated voltage	V	600	600	600	600
Rated current	A	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Push-in connection	Push-in connection	Push-in connection	Push-in connection
Stripping length	mm	10	10	10	10
No. of pos.		6	10	16	24
Contact numbering		1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

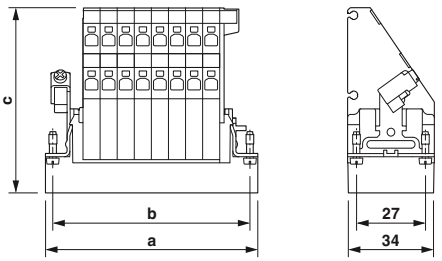


HC-B ...-A-DT-PER-...

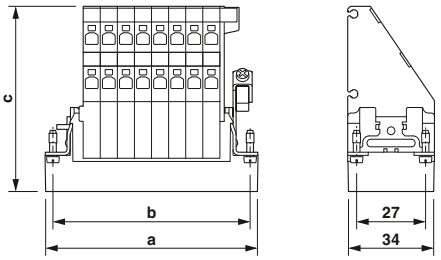
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Push-in connection							
				PE left			
	6	1 - 6	B6	① **HC-B 6-A-DT-PEL-...**	1648351	1648364	5
				PE right			
	6	1 - 6	B6	② **HC-B 6-A-DT-PER-...**	1648377	1648380	5
Push-in connection							
				PE left			
	10	1 - 10	B10	③ **HC-B 10-A-DT-PEL-...**	1648393	1648403	5
				PE right			
	10	1 - 10	B10	④ **HC-B 10-A-DT-PER-...**	1648416	1648429	5
Push-in connection							
				PE left			
	16	1 - 16	B16	⑤ **HC-B 16-A-DT-PEL-...**	1648432	1648445	5
				PE right			
	16	1 - 16	B16	⑥ **HC-B 16-A-DT-PER-...**	1648458	1648461	5
Push-in connection							
				PE left			
	24	1 - 24	B24	⑦ **HC-B 24-A-DT-PEL-...**	1648474	1648487	5
				PE right			
	24	1 - 24	B24	⑧ **HC-B 24-A-DT-PER-...**	1648490	1648500	5
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

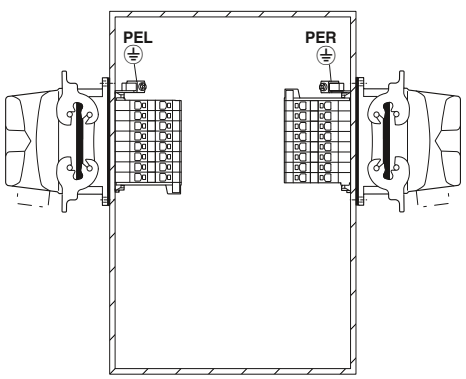


PEL



PER

		a	b	c	d
①	Socket	50.5	44	72.1	
	Plug			70.5	
②	Socket	50.5	44	72.1	
	Plug			70.5	
③	Socket	64	57	72.1	
	Plug			70.5	
④	Socket	64	57	72.1	
	Plug			70.5	
⑤	Socket	84	77.5	72.1	
	Plug			70.5	
⑥	Socket	84	77.5	72.1	
	Plug			70.5	
⑦	Socket	111	104	72.1	
	Plug			70.5	
⑧	Socket	111	104	72.1	
	Plug			70.5	



Mounting position PEL/PER

Accessories



Coding elements
From page 638

BB10, BB18, BB32, BB46 series

500 V, 16 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

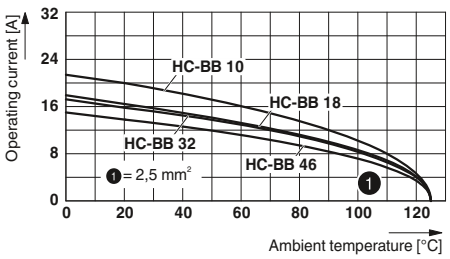
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-BB 10-I-CT-...	② HC-BB 18-I-CT-...	③ ④ HC-BB 32-I-CT-...	⑤ ⑥ HC-BB 46-I-CT-...
Approvals		EAC cULus	EAC cULus	EAC cULus	EAC cULus
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	500	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm²	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	20	20	16	16
Connection cross section	AWG	12	12	12	12
CSA / cUL data					
Rated voltage	V	-	-	-	-
Rated current	A	-	-	-	-
Connection cross section	AWG	-	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	7.5	7.5	7.5	7.5
No. of pos.		10	18	32	46
Contact numbering		1 - 10	1 - 18	1 - 32	1 - 46
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

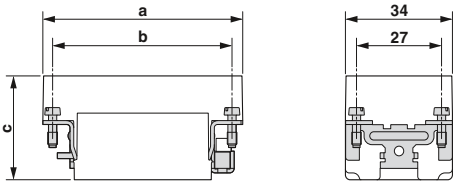


HC-BB ...

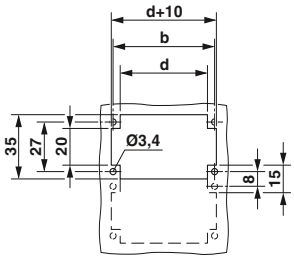
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	10	1 - 10	B6	① HC-BB 10-I-CT-...	1584703	1584774	1
Crimp connection							
	18	1 - 18	B10	② HC-BB 18-I-CT-...	1584729	1584716	1
Crimp connection							
	32	1 - 32	B16 / B32	③ HC-BB 32-I-CT-...	1584745	1584732	1
	32	33 - 64	B16 / B32	④ HC-BB 32-I-CT-... 33-64	1406543	1406544	1
Crimp connection							
	46	1 - 46	B24 / B48	⑤ HC-BB 46-I-CT-...	1584758	1584761	1
	46	47 - 92	B24 / B48	⑥ HC-BB 46-I-CT-... 47-92	1406545	1406546	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	51	44	32.5	35
	Plug			33.2	
②	Socket	64	57	32.5	48
	Plug			33.2	
③	Socket	84.5	77.5	32.5	68.5
	Plug			33.2	
④	Socket	84.5	77.5	32.5	68.5
	Plug			33.2	
⑤	Socket	111	104	32.5	95
	Plug			33.2	
⑥	Socket	111	104	32.5	95
	Plug			33.2	

Accessories



Crimping tools
From page 636



Coding profiles
From page 638



Replacement PE screws
From page 640

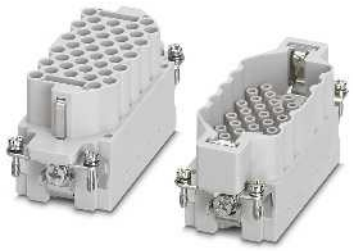
BBB40, BBB64 series

500 V, 16 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

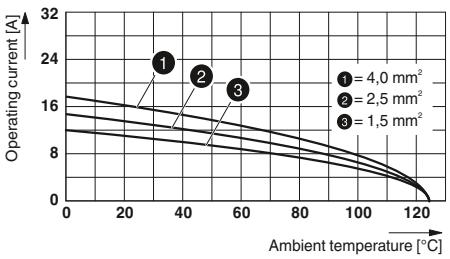
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-BBB 40-E...C	② HC-BBB 64-E...C		
Approvals		cULus EAC	cULus EAC		
IEC data					
Rated current, contacts (at 40°C)	A	16	16		
Surge voltage category		III	III		
Pollution degree		3	3		
Rated voltage (III/3) contacts	V	500	500		
Rated surge voltage, contacts	kV	6	6		
Connection cross section	mm^2	0.5 ... 4	0.5 ... 4		
UL data					
Rated voltage	V	500	500		
Rated current	A	-	-		
Connection cross section	AWG	12	12		
CSA / cUL data					
Rated voltage	V	500	500		
Rated current	A	-	-		
Connection cross section	AWG	12	12		
Material data					
Contact carrier material		PC	PC		
Inflammability class in acc. with UL 94		V0	V0		
Contact material		Copper alloy	Copper alloy		
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)		
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125		
General data					
Connection method		Crimp connection	Crimp connection		
Stripping length	mm	7.5	7.5		
No. of pos.		40	64		
Contact numbering		1 - 40	1 - 64		
Insertion/withdrawal cycles		≥ 500	≥ 500		

Derating curves

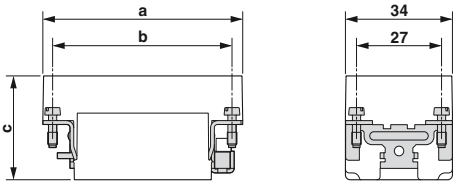


HC-BBB ...

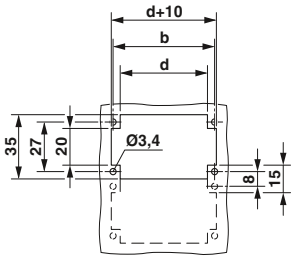
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	40	1 - 40	B16 / B32	① **HC-BBB 40-E...C**	1409930	1409921	1
Crimp connection							
	64	1 - 64	B24 / B48	② **HC-BBB 64-E...C**	1409914	1409901	1
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AG**	1663640	1663572	100
			0.75 / 18	**CK2,5-ED-0,75... AG**	1663653	1663585	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AG**	1663666	1663598	100
			1.5 / 16	**CK2,5-ED-1,50... AG**	1663679	1663608	100
			2.5 / 14	**CK2,5-ED-2,50... AG**	1663682	1663611	100
			4 / 12	**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AU**	1674859	1674804	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AU**	1674833	1674781	100
			1.5 / 16	**CK2,5-ED-1,50... AU**	1674820	1674778	100
			2.5 / 14	**CK2,5-ED-2,50... AU**	1674862	1674817	100
			4 / 12	**CK2,5-ED-4,00... AU**	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84	77.5	37	68.5
	Plug	84.5		34.4	
②	Socket	111	104	39	95
	Plug			36.4	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HV03 series
High-voltage applications

830 V, 16 - 25 A

Connection technology:
– Push-in connection
– Crimp connection

– With 2 lagging switch contacts
– For all size B housing

To determine the corresponding housing, see cross-reference list on page 482.

Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



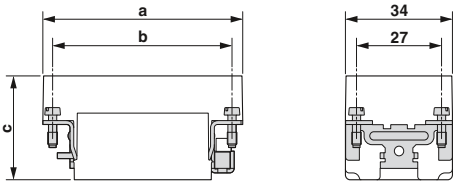
Technical data

Type		① HC-HV03-I-PT-...	② HC-HV03-I-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	A	16	25
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	830	830
Rated surge voltage, contacts	kV	8	8
Connection cross section	mm^2	0.14 ... 2.5	0.5 ... 4
UL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
CSA / cUL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
Material data			
Contact carrier material		PA	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		-	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Push-in connection	Crimp connection
Stripping length	mm	8 ... 10	7.5
No. of pos.		3	3
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

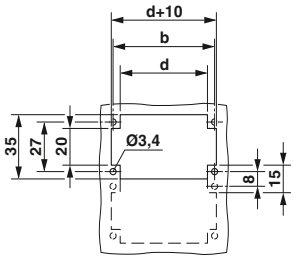
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Push-in connection							
	3 / 2		B10	① HC-HV03-I-PT-...	1407743	1407739	1
Crimp connection							
	3 / 2		B10	② HC-HV03-I-CT-...	1405261	1405260	1
Turned crimp contacts CK 2,5 Silver-plated		Cross section mm² / AWG					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		Cross section mm² / AWG					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100
Turned switch contacts CK 2,5 Pin, silver-plated		Cross section mm² / AWG					
		1 / 18		CK2,5-ED-1,00ST-S AG		1663857	
		1.5 / 16		CK2,5-ED-1,50ST-S AG		1663860	
		2.5 / 14		CK2,5-ED-2,50ST-S AG		1663873	

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	64	57	34.6	49
	Plug			32	
②	Socket	64	57	34.6	49
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HV06 series
High-voltage applications

830 V, 16 - 25 A

Connection technology:
– Push-in connection
– Crimp connection

– With 2 lagging switch contacts
– For all size B housing

To determine the corresponding housing, see cross-reference list on page 482.

Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



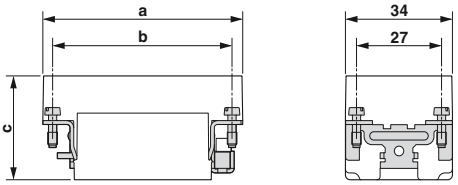
Technical data

Type		① HC-HV06-I-PT-...	② HC-HV06-I-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	A	16	25
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	830	830
Rated surge voltage, contacts	kV	8	8
Connection cross section	mm^2	0.14 ... 2.5	0.5 ... 4
UL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
CSA / cUL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
Material data			
Contact carrier material		PA	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		-	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Push-in connection	Crimp connection
Stripping length	mm	8 ... 10	7.5
No. of pos.		6	6
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

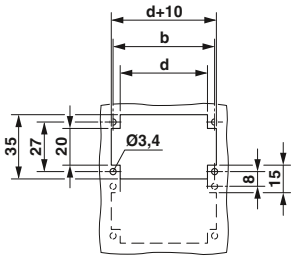
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Push-in connection							
	6 / 2		B16 / B32	① **HC-HV06-I-PT-...**	1407744	1407740	1
Crimp connection							
	6 / 2		B16 / B32	② **HC-HV06-I-CT-...**	1405263	1405262	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AG**	1663640	1663572	100
		0.75 / 18		**CK2,5-ED-0,75... AG**	1663653	1663585	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AG**	1663666	1663598	100
		1.5 / 16		**CK2,5-ED-1,50... AG**	1663679	1663608	100
		2.5 / 14		**CK2,5-ED-2,50... AG**	1663682	1663611	100
		4 / 12		**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AU**	1674859	1674804	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AU**	1674833	1674781	100
		1.5 / 16		**CK2,5-ED-1,50... AU**	1674820	1674778	100
		2.5 / 14		**CK2,5-ED-2,50... AU**	1674862	1674817	100
		4 / 12		**CK2,5-ED-4,00... AU**	1674846	1674794	100
Turned switch contacts CK 2,5 Pin, silver-plated		**Cross section mm² / AWG**					
		1 / 18		**CK2,5-ED-1,00ST-S AG**		1663857	
		1.5 / 16		**CK2,5-ED-1,50ST-S AG**		1663860	
		2.5 / 14		**CK2,5-ED-2,50ST-S AG**		1663873	

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84	77.5	34.6	72
	Plug			32	
②	Socket	84	77.5	34.6	72
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HV10 series
High-voltage applications

830 V, 16 - 25 A

Connection technology:
– Push-in connection
– Crimp connection

– With 2 lagging switch contacts
– For all size B housing

To determine the corresponding housing, see cross-reference list on page 482.

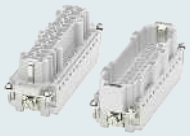
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



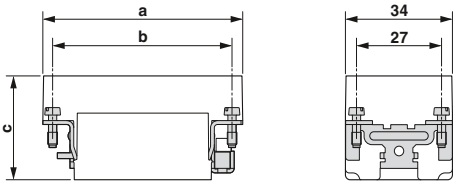
Technical data

Type		① HC-HV10-I-PT-...	② HC-HV10-I-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	A	16	25
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	830	830
Rated surge voltage, contacts	kV	8	8
Connection cross section	mm^2	0.14 ... 2.5	0.5 ... 4
UL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
CSA / cUL data			
Rated voltage	V	800	-
Rated current	A	13	-
Connection cross section	AWG	14	-
Material data			
Contact carrier material		PA	PA
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		-	Ag (alternatively Au)
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Push-in connection	Crimp connection
Stripping length	mm	8 ... 10	7.5
No. of pos.		10	10
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

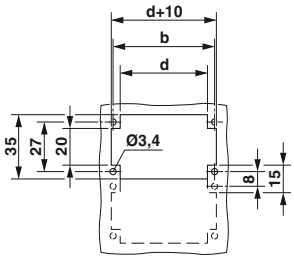
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Push-in connection							
	10 / 2		B24 / B48	① HC-HV10-I-PT-...	1407745	1407741	1
Crimp connection							
	10 / 2		B24 / B48	② HC-HV10-I-CT-...	1405265	1405264	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100
Turned switch contacts CK 2,5 Pin, silver-plated		**Cross section mm² / AWG**					
		1 / 18		CK2,5-ED-1,00ST-S AG		1663857	
		1.5 / 16		CK2,5-ED-1,50ST-S AG		1663860	
		2.5 / 14		CK2,5-ED-2,50ST-S AG		1663873	

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	111	104	34.6	98
	Plug			32	
②	Socket	111	104	34.6	98
	Plug			32	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Replacement PE screws
From page 640

HS series
High-current applications

400/690 V, 41A
1000 V, 80 A

Connection technology:
– Screw connection

To determine the corresponding housing, see cross-reference list on page 482.

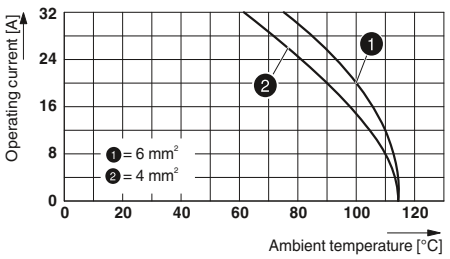
Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
[1]) For solid conductors and stranded wires with wire end protection



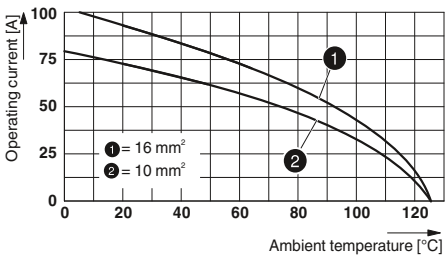
Technical data

Type		① ② HC-HS06-I-UT-...	③ HC-K 6/0-E...S		
Approvals		EAC cULus	EAC cULus		
IEC data					
Rated current, contacts (at 40°C)	A	41	80		
Surge voltage category		III	III		
Pollution degree		3	3		
Rated voltage (III/3) contacts	V	400 / 690	1000		
Rated surge voltage, contacts	kV	6	8		
Connection cross section	mm^2	0.5 ... 6	6 ... 16		
UL data					
Rated voltage	V	600	600		
Rated current	A	35	-		
Connection cross section	AWG	10	10-6		
CSA / cUL data					
Rated voltage	V	-	-		
Rated current	A	-	-		
Connection cross section	AWG	-	-		
Material data					
Contact carrier material		PC	PA		
Inflammability class in acc. with UL 94		V0	V0		
Contact material		Copper alloy	Copper alloy		
Contact surface material		Ag	-		
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125		
General data					
Connection method		Screw connection	Screw connection		
Stripping length	mm	10	15		
No. of pos.		6	6		
Contact numbering		1 - 6	1-6		
Insertion/withdrawal cycles		≥ 500	≥ 500		

Derating curves



HC-HS06-I-UT-...

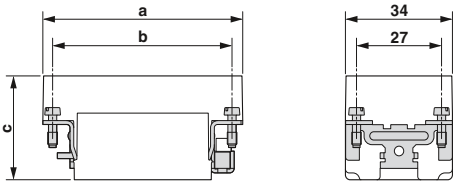


HC-K 6/0-E...S

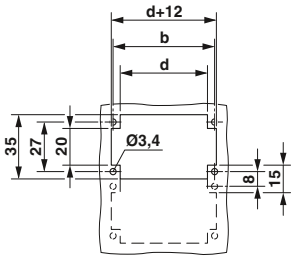
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection							
	6	1 - 6	B16 / B32	① **HC-HS06-I-UT-...**	1406530	1406531	1
	6	7 - 12	B16 / B32	② **HC-HS06-I-UT-... 7-12**	1406533	1406534	1
Screw connection[1])							
	6	1 - 6	B16 / B32	③ **HC-K 6/0-E...S**	1580537	1580538	10

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	34	72
	Plug				
②	Socket	84.5	77.5	34	72
	Plug				
③	Socket	84	77.4	49.7	72
	Plug			46.3	

Accessories



Coding profiles
From page 638



Replacement PE screws
From page 640



Replacement PE terminal block base
From page 640

K series
Combination applications

400 - 830 V, 40 - 80 A

Connection technology:
– Power and control contacts
– Screw connection

To determine the corresponding housing, see cross-reference list on page 482.

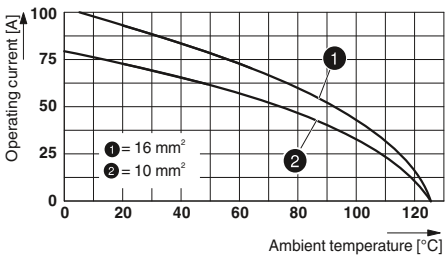
Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
[1]) For solid conductors and stranded wires with wire end protection



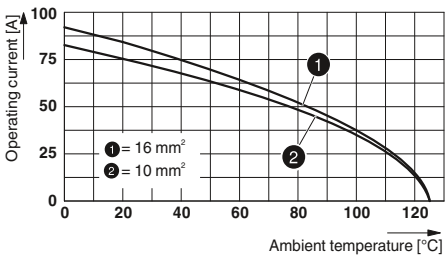
Technical data

Type		① HC-K 4/0-E...S		② HC-K 4/8-E...S		③ HC-K 6/12-E...S	
		Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals							
IEC data							
Rated current	A	80	-	80	16	40	10
Surge voltage category		III		III		III	
Pollution degree		3		3		3	
Rated voltage (III/3) contacts	V	830	-	400	400	690	230 / 400
Rated surge voltage, contacts	kV	8	-	6	6	8	4
Connection cross section	mm²	1.5 ... 16	-	1.5 ... 16	0.5 ... 2.5	2.5 ... 8	0.2 ... 2.5
UL data							
Rated voltage	V	600	-	600	-	600	-
Rated current	A	-	-	-	-	-	-
Connection cross section	AWG	-	-	-	-	-	-
CSA / cUL data							
Rated voltage	V	600	-	600	-	600	-
Rated current	A	80	-	80	-	40	-
Connection cross section	AWG	5	-	16-4	-	13-7	-
Material data							
Contact carrier material		PC		PA		PC	
Inflammability class in acc. with UL 94		V0		HB		V0	
Contact material		Cu alloy		Cu alloy		Cu alloy	
Contact surface material		Ag	-	Ag	Ag	Ag	Ag
Temperature data							
Ambient temperature range	°C	-40 ... 125		-40 ... 125		-40 ... 125	
General data							
Connection method		Screw connection	-	Screw connection	Screw connection	Axial screw connection	Screw connection
Hexagonal socket	mm	-	-	-	-	2	-
Stripping length	mm	-	-	14	7	8	10
No. of pos.		4	-	4	8	6	12
Contact numbering		1 - 4	-	1 - 4	1 - 8	1 - 6	1 - 12
Insertion/withdrawal cycles		≥ 500		≥ 500		≥ 500	

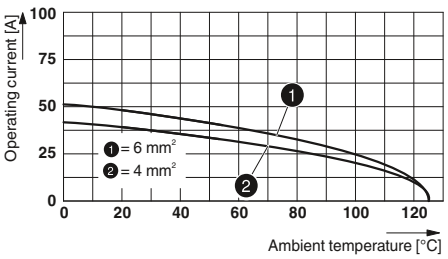
Derating curves



HC-K 4/0-E...S



HC-K 4/8-E...S

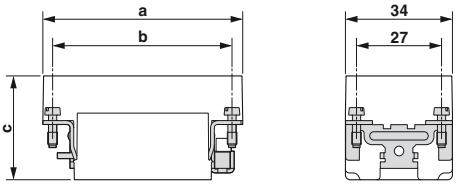


HC-K 6/12-E...S

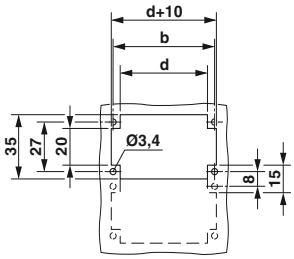
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection[1])							
	4	1 - 4	B16 / B32	① **HC-K 4/0-E...S**	1679427	1679414	1
Screw connection[1])							
	4 / 8	1 - 4	B24 / B48	② **HC-K 4/8-E...S**	1679320	1679333	1
Axial screw connection							
	6 / 12	1 - 6	B16 / B32	③ **HC-K 6/12-E...S**	1636363	1636350	1

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	44.2	72
	Plug			42	
②	Socket	111	104	44.2	98
	Plug			42	
③	Socket	84.1	77.5	47	68.5
	Plug	84.5		47.2	

Accessories



Coding elements
From page 639



Replacement PE screws
From page 640

K series
Combination applications

400 - 690 V, 16 - 40 A

Connection technology:
– Power and control contacts
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

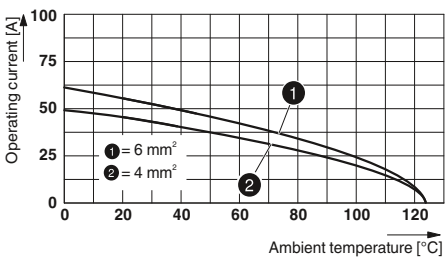
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



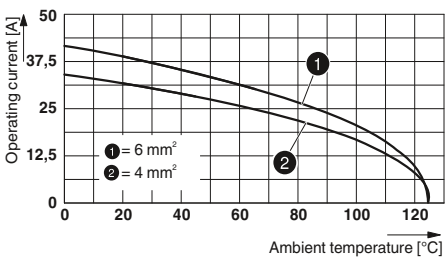
Technical data

Type		① HC-K 6/36-E...C		② HC-K12/ 2-E...C		③ HC-K 8/24-E...C	
		Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals							
IEC data							
Rated current	A	40	10	40	10	16	10
Surge voltage category		III		III		III	
Pollution degree		3		3		3	
Rated voltage (III/3) contacts	V	690	160	690	250	230 / 400	160
Rated surge voltage, contacts	kV	8	2.5	8	4	4	2.5
Connection cross section	mm²	1.5 ... 6	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5	0.5 ... 4	0.14 ... 2.5
UL data							
Rated voltage	V	600	-	600	-	600	-
Rated current	A	-	-	-	-	-	-
Connection cross section	AWG	-	-	-	-	-	-
CSA / cUL data							
Rated voltage	V	600	-	600	-	600	-
Rated current	A	40	-	40	-	16	-
Connection cross section	AWG	13-9	-	13-8	-	20-12	-
Material data							
Contact carrier material		PC		PC		PA	
Inflammability class in acc. with UL 94		V0		V0		V0	
Contact material		Cu alloy		Cu alloy		Cu alloy	
Contact surface material		Ag	Ag (alternatively Au)	Ag	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data							
Ambient temperature range	°C	-40 ... 125		-40 ... 125		-40 ... 125	
General data							
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	9	8	9	8	7.5	8
No. of pos.		6	36	12	2	8	24
Contact numbering		1 - 6	1 - 36	1 - 12	1 - 2	1 - 8	1 - 24
Insertion/withdrawal cycles		≥ 500		≥ 500		≥ 500	

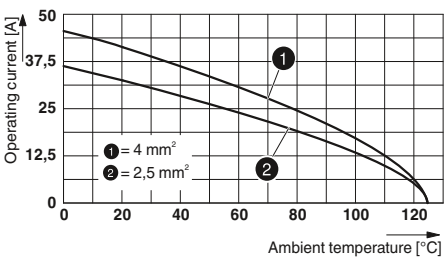
Derating curves



HC-K 6/36 E...C



HC-K 12/2 E...C

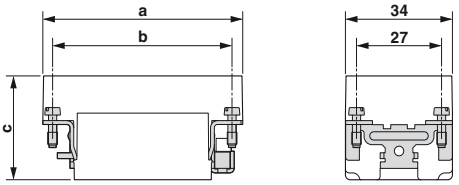


HC-K 8/24 E...C

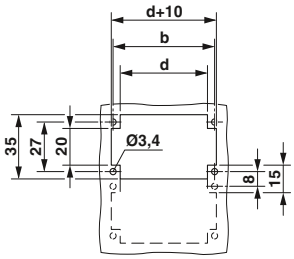
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection CK 4,0/CK 1,6							
	6 / 36	1 - 6	B16 / B32	① **HC-K 6/36-E...C**	1636389	1636376	1
Crimp connection CK 4,0/CK 1,6							
	12 / 2	1 - 12	B16 / B32	② **HC-K12/ 2-E...C**	1636347	1636334	1
Crimp connection CK 2,5/CK 1,6							
	8 / 24	1 - 8	B10	③ **HC-K 8/24-E...C**	1636321	1636318	1
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	**CK1,6-ED-0,37... AG**	1663394	1663336	100
			0.5 / 20	**CK1,6-ED-0,50... AG**	1663404	1663349	100
			0.75 / 18	**CK1,6-ED-0,75... AG**	1663417	1663352	100
			0.75 - 1 / 18	**CK1,6-ED-1,00... AG**	1663420	1663365	100
			1.5 / 16	**CK1,6-ED-1,50... AG**	1663433	1663378	100
			2.5 / 14	**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AG**	1663640	1663572	100
			0.75 / 18	**CK2,5-ED-0,75... AG**	1663653	1663585	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AG**	1663666	1663598	100
			1.5 / 16	**CK2,5-ED-1,50... AG**	1663679	1663608	100
			2.5 / 14	**CK2,5-ED-2,50... AG**	1663682	1663611	100
			4 / 12	**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 4,0 Silver-plated			**Cross section mm² / AWG**				
			1.5 / 16	**CK4,0-ED-1,50... AG**	1663271	1663239	25
			2.5 / 14	**CK4,0-ED-2,50... AG**	1663284	1663242	25
			4 / 12	**CK4,0-ED-4,00... AG**	1663297	1663255	25
			6 / 10	**CK4,0-ED-6,00... AG**	1663307	1663268	25
			10 / 8	**CK4,0-ED-10,00... AG**	1586183	1586198	25

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	41.5	68.5
	Plug			39	
②	Socket	84.5	77.5	41.5	72
	Plug			39.6	
③	Socket	64	57	38	49
	Plug			36	

Accessories



Crimping tools
From page 636



Coding elements
From page 639



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 640

HEAVYCON B - contact inserts



HEAVYCON modular offers space and cost savings by combining several connectors into one. The modular inserts fit in HC-B size housings (HC-EVO, HC-STA, HC-ADV, etc.). Pin and socket modules can be freely combined and are polarized to prevent mismatching.

Lower and uppercase letters on the frames (A, B, .../a, b, ...) enable assignment on the cable and mounting side. The frames are available for 2 to 6 single modules. A double module requires the space of two single modules.






TYPE		HC-M-HS200/40-MOD...	HC-M-HS200/70-MOD...	HC-M-HS-MOD...	HC-M-02-HS-70/...-MOD...
Comments		200 A axial connection module	200 A axial connection module	100 A axial connection module	70 A axial connection module
Number of positions		1	1	2	2
Rated current	[A]	200	200	100	70
Rated voltage	[V]	1000	1000	1000	1000
Conductor cross section		25 ... 40 mm²	40 ... 70 mm²	16 ... 35 mm²	6 ... 22 mm²
Connection method		Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection
Number of module slots		2	2	2	1
Page		550	550	552	552






TYPE		HC-M-02-MOD...	HC-M-02-MOD...C	HC-M-03-MOD...C	HC-M-04-MOD...C
Comments		40 A axial connection module	Crimp connection module	Crimp connection module	Crimp connection module
Number of positions		2	2	3	4
Rated current	[A]	70	40	40	40
Rated voltage	[V]	1000	1000	500	830
Conductor cross section		2.5 ... 8 mm²	1.5 ... 10 mm²	1.5 ... 6 mm²	1.5 ... 6 mm²
Connection method		Axial screw connection	Crimp connection CK 4,0	Crimp connection CK 4,0	Crimp connection CK 4,0
Number of module slots		1	1	1	1
Page		552	554	554	554






TYPE		HC-M-03/04-MOD...C	HC-M-HV-MOD...	HC-M-06P-MOD...	HC-M-06-MOD...
Comments		Crimp connection module	High-voltage module	Crimp connection module	Crimp connection module
Number of positions		3 power contacts	2	6	6
Rated current	[A]	40/10	16	16	16
Rated voltage	[V]	830/830	2900/5000	830	500
Conductor cross section		1.5 ... 6 mm²/0.14 ... 2.5 mm²	0.5 ... 4 mm²	0.5 ... 4 mm²	0.5 ... 4 mm²
Connection method		Crimp connection CK 1,6	Crimp connection CK 2,5	Crimp connection CK 2,5	Crimp connection CK 2,5
Number of module slots		1	2	1	1
Page		554	556	556	556



TYPE		HC-M-08-MOD...
Comments		Crimp connection module
Number of positions		8
Rated current	[A]	16
Rated voltage	[V]	400
Conductor cross section		0.5 ... 4 mm²
Connection method		Crimp connection CK 2,5
Number of module slots		1
Page		556



TYPE		HC-M-20-MOD...
Comments		Crimp connection module
Number of positions		20
Rated current	[A]	16
Rated voltage	[V]	500
Conductor cross section		0.5 ... 4 mm²
Connection method		Crimp connection CK 2,5
Number of module slots		2
Page		556



TYPE		HC-M-12-MOD...
Comments		Crimp connection module
Number of positions		12
Rated current	[A]	10
Rated voltage	[V]	250
Conductor cross section		0.14 ... 2.5 mm²
Connection method		Crimp connection CK 1,6
Number of module slots		1
Page		558



TYPE		HC-M-17-MOD...
Comments		Crimp connection module
Number of positions		17
Rated current	[A]	10
Rated voltage	[V]	160
Conductor cross section		0.14 ... 2.5 mm²
Connection method		Crimp connection CK 1,6
Number of module slots		1
Page		558



TYPE		HC-M-EMV-MOD...
Comments		EMC bus module
Number of positions		-
Rated current	[A]	-
Rated voltage	[V]	-
Conductor cross section		-
Connection method		-
Number of module slots		2
Page		558



TYPE		HC-M-EMV-.../3-9,5
Comments		EMC connector
Number of positions		2 x 4
Rated current	[A]	16
Rated voltage	[V]	42
Conductor cross section		0.14 ... 2.5 mm²
Connection method		Crimp connection CK 1,6
Number of module slots		-
Page		558



TYPE		HC-M-25-MOD...
Comments		Crimp connection module
Number of positions		25
Rated current	[A]	5
Rated voltage	[V]	50
Conductor cross section		0.08 ... 0.5 mm²
Connection method		Crimp connection VS 1,0
Number of module slots		1
Page		560



TYPE		HC-M-08-GBIT-MOD...C
Comments		Crimp connection module
Number of positions		8
Rated current	[A]	5
Rated voltage	[V]	50
Conductor cross section		0.08 ... 0.5 mm²
Connection method		Crimp connection VS 1,0
Number of module slots		1
Page		560



TYPE		HC-M-DSUB09/02T-MOD...
Comments		PROFIBUS module
Number of positions		2
Rated current	[A]	5
Rated voltage	[V]	50
Conductor cross section		0.09 ... 0.5 mm²
Connection method		Screw connection
Number of module slots		1
Page		560



TYPE		HC-M-DSUB09/02T-MOD...
Comments		PROFIBUS module
Number of positions		2
Rated current	[A]	5
Rated voltage	[V]	50
Conductor cross section		0.09 ... 0.5 mm²
Connection method		Screw connection
Number of module slots		1
Page		560



TYPE		HC-M-PN2-MOD...
Comments		Pneumatic module
Number of positions		2
Rated current	[A]	-
Rated voltage	[V]	-
Conductor cross section		-
Connection method		Pneumatic hose connection
Number of module slots		1
Page		564



TYPE		HC-M-PN3-MOD...
Comments		Pneumatic module
Number of positions		3
Rated current	[A]	-
Rated voltage	[V]	-
Conductor cross section		-
Connection method		Pneumatic hose connection
Number of module slots		1
Page		564



TYPE		HC-M-05-MOD...
Comments		Spring connection module
Number of positions		5
Rated current	[A]	16
Rated voltage	[V]	400
Conductor cross section		0.14 ... 2.5 mm²
Connection method		Spring connection
Number of module slots		1
Page		562



TYPE		HC-M-04-MOD...
Comments		Coaxial module
Number of positions		1.5
Rated current	[A]	16
Rated voltage	[V]	50
Conductor cross section		-
Connection method		Solder and crimp connection
Number of module slots		1
Page		562



TYPE		HC-M-BM
Comments		Dummy module
Number of positions		-
Rated current	[A]	-
Rated voltage	[V]	-
Conductor cross section		-
Connection method		-
Number of module slots		1
Page		569



TYPE		HC-M-MHR-...
Comments		Hinged retaining frame
Number of positions		-
Rated current	[A]	-
Rated voltage	[V]	-
Conductor cross section		-
Connection method		-
Number of module slots		-
Page		566

Modular contact inserts, high-current modules

1000 V, 200 A

Connection technology:
– Axial screw connection

To determine the corresponding housing, see cross-reference list on page 482.

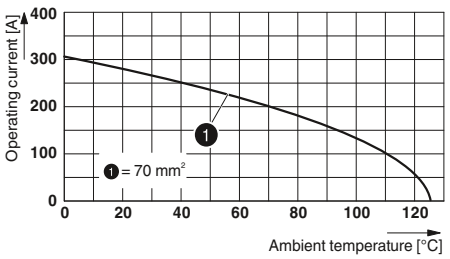
Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
1) Housing height ≥ 72 mm



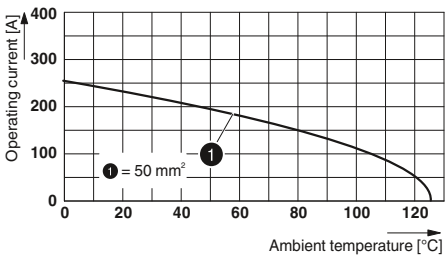
Technical data

Type		① HC-M-HS 200/70-MOD-...	② HC-M-HS 200/70-MOD-...-PE	③ HC-M-HS 200/40-MOD-...	④ HC-M-HS 200/40-MOD-...-PE
Approvals		EAC cULus	EAC cULus	EAC cULus	EAC cULus
IEC data					
Rated current, contacts (at 40°C)	A	200	200	200	200
Surge voltage category		III	-	III	-
Pollution degree		3	-	3	-
Rated voltage (III/3) contacts	V	1000	-	1000	-
Rated surge voltage, contacts	kV	8	-	8	-
Connection cross section	mm^2	40 ... 70	40 ... 70	25 ... 40	25 ... 40
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	200	200	200	200
Connection cross section	AWG	2	2	2	2
CSA / cUL data					
Rated voltage	V	-	-	-	-
Rated current	A	-	-	-	-
Connection cross section	AWG	-	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection
Hexagonal socket	mm	5	5	5	5
Stripping length	mm	16	16	16	16
No. of pos.		1	1	1	1
Contact numbering		-	-	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-M-HS 200/70-MOD-...

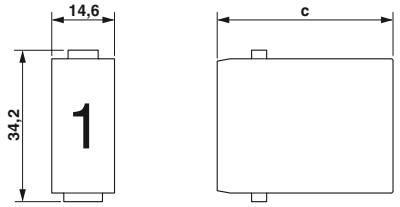


HC-M-HS 200/40-MOD-...

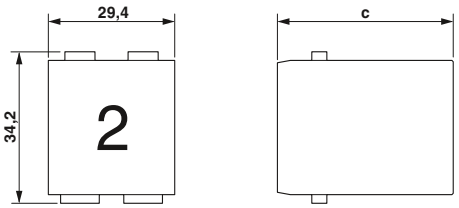
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Axial screw connection[1])	1		2	① HC-M-HS 200/70-MOD-...	1636897	1636884	1
Axial screw connection[1])	1		2	② HC-M-HS 200/70-MOD-...-PE	1636910	1636907	1
Axial screw connection[1])	1		2	③ HC-M-HS 200/40-MOD-...	1637171	1637168	1
Axial screw connection[1])	1		2	④ HC-M-HS 200/40-MOD-...-PE	1637197	1637184	1

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.4		60	
	Plug			54.5	
②	Socket	29.4		54.3	
	Plug			54.5	
③	Socket	29.4		60	
	Plug			54.5	
④	Socket	29.4		54.3	
	Plug			54.5	

Accessories



Hinged retaining frames
From page 566



Dummy module
From page 569

Modular contact inserts, 2-pos. modules

1000 V, 40 - 100 A

Connection technology:
– Axial screw connection

To determine the corresponding housing, see cross-reference list on page 482.

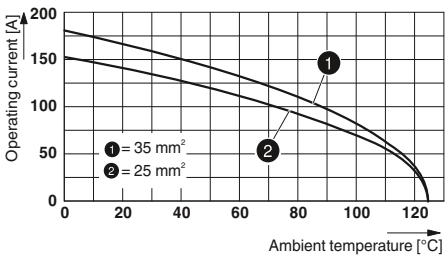
Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
1) Housing height ≥ 72 mm



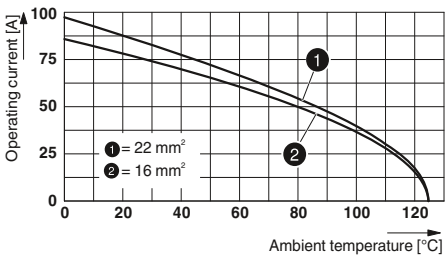
Technical data

Type		① HC-M-HS-MOD-...	② HC-M-02-HS-70/22-MOD-...	③ HC-M-02-HS-70/16-MOD-...	④ HC-M-02-MOD-...
Approvals		cULus EAC	EAC UL	EAC UL	cULus EAC
IEC data					
Rated current, contacts (at 40°C)	A	100	70	70	40
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	1000	1000	1000	1000
Rated surge voltage, contacts	kV	8	8	8	8
Connection cross section	mm²	16 ... 35	14 ... 22	6 ... 16	2.5 ... 8
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	100	70	70	40
Connection cross section	AWG	2	4	4	8
CSA / cUL data					
Rated voltage	V	600	-	-	600
Rated current	A	100	-	-	40
Connection cross section	AWG	2	-	-	8
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection
Hexagonal socket	mm	4	2.5	2.5	2
Stripping length	mm	13	11	11	8
No. of pos.		2	2	2	2
Contact numbering		1 - 2	1 - 2	1 - 2	1 - 2
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

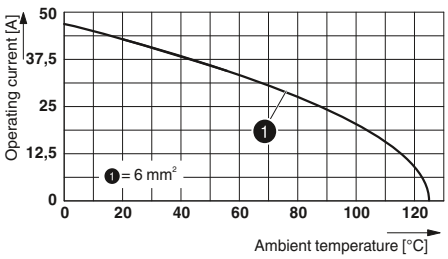
Derating curves



HC-M-HS-MOD-...



HC-M-02-HS- 70/...-MOD-...

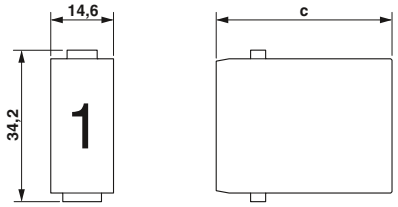


HC-M-02-MOD-...

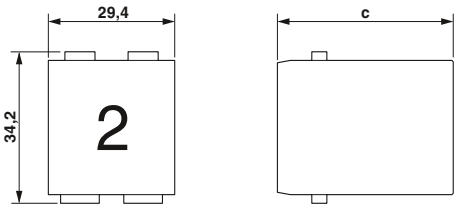
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Axial screw connection[1])							
	2	1 - 2	2	① HC-M-HS-MOD-...	1605001	1605000	1
Axial screw connection[1])							
	2	1 - 2	1	② HC-M-02-HS-70/22-MOD-...	1585731	1585728	2
Axial screw connection[1])							
	2	1 - 2	1	③ HC-M-02-HS-70/16-MOD-...	1585715	1585702	2
Axial screw connection[1])							
	2	1 - 2	1	④ HC-M-02-MOD-...	1679359	1679346	2

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.4		50.3	
	Plug			49	
②	Socket	14.6		46.5	
	Plug			45	
③	Socket	14.6		46.5	
	Plug			45	
④	Socket	14.6		40.6	
	Plug			41.8	

Accessories



Hinged retaining frames
From page 566



Dummy module
From page 569

Modular contact inserts

500 - 1000 V, 40 A

Connection technology:
– Crimp connection CK 4,0

To determine the corresponding housing, see cross-reference list on page 482.

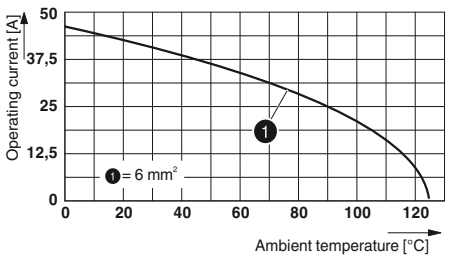
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



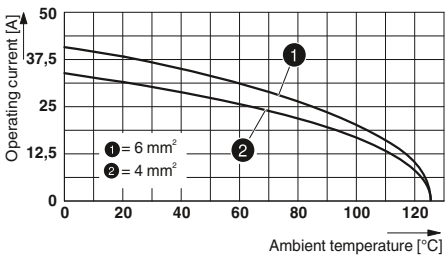
Technical data

Type		① HC-M-02-MOD-...C	② HC-M-03-MOD-...C	③ HC-M-04-MOD-...C	④ HC-M-03/04-MOD-...C
Approvals		EAC cULus	EAC cULus	EAC cULus	EAC cULus
IEC data					
Rated current, contacts (at 40°C)	A	40	40	40	40
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	1000	500	830	830
Rated surge voltage, contacts	kV	8	6	8	8
Connection cross section	mm^2	1.5 ... 10	1.5 ... 10	1.5 ... 6	1.5 ... 6
UL data					
Rated voltage	V	600	600	600	600
Rated current	A	40	40	40	-
Connection cross section	AWG	12-8	8	10	18-10
CSA / cUL data					
Rated voltage	V	-	-	-	-
Rated current	A	-	-	-	-
Connection cross section	AWG	-	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	-
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	9	9	9	9
No. of pos.		2	3	4	-
Contact numbering		1 - 2	1 - 3	1 - 4	1-3
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

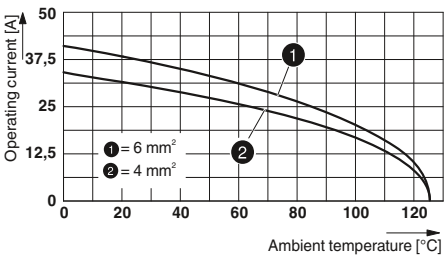
Derating curves



HC-M-02-MOD-...C



HC-M-03-MOD-...C

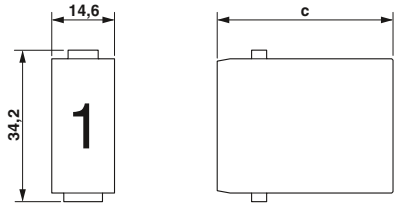


HC-M-04-MOD-...C

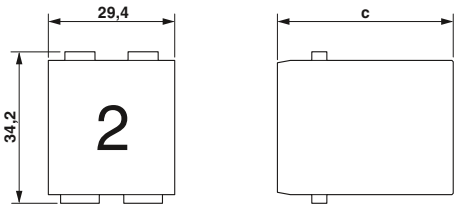
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection CK 4,0							
	2	1 - 2	1	① HC-M-02-MOD-...C	1587519	1587506	2
Crimp connection CK 4,0							
	3	1 - 3	1	② HC-M-03-MOD-...C	1645972	1645969	2
Crimp connection CK 4,0							
	4	1 - 4	1	③ HC-M-04-MOD-...C	1585605	1585618	2
Crimp connection CK 4,0/CK 1,6							
	3 / 4	1 - 3	1	④ HC-M-03/04-MOD-...C	1585786	1585799	2
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100
		2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 4,0 Silver-plated		**Cross section mm² / AWG**					
		1.5 / 16		CK4,0-ED-1,50... AG	1663271	1663239	25
		2.5 / 14		CK4,0-ED-2,50... AG	1663284	1663242	25
		4 / 12		CK4,0-ED-4,00... AG	1663297	1663255	25
		6 / 10		CK4,0-ED-6,00... AG	1663307	1663268	25
		10 / 8		CK4,0-ED-10,00... AG	1586183	1586198	25

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		42.4	
	Plug			43.7	
②	Socket	14.6		44.7	
	Plug			43.1	
③	Socket	14.6		40.9	
	Plug			44.6	
④	Socket	14.6		39.1	
	Plug			44.3	

Accessories



Hinged retaining frames
From page 566



Crimping tools
From page 636



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 569

Modular contact inserts

400 - 830 V, 16 A

Connection technology:
– Crimp connection CK 2,5

To determine the corresponding housing, see cross-reference list on page 482.

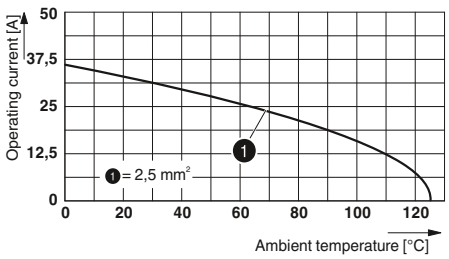
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
[1]) Housing height ≥ 72 mm



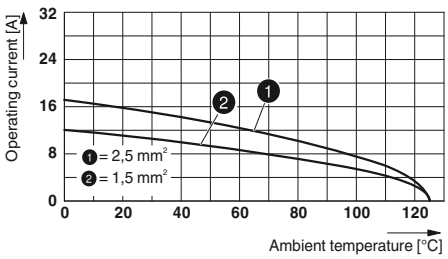
Technical data

Type		① HC-M-HV-MOD-...	② HC-M-06P-MOD-...	③ HC-M-06-MOD-...	④ HC-M-08-MOD-...	⑤ HC-M-20-MOD-...
Approvals		EAC	EAC UL	CB EAC UL	EAC UL	EAC UL
IEC data						
Rated current, contacts (at 40°C)	A	16	16	16	16	16
Surge voltage category		III	III	III	III	III
Pollution degree		3	3	3	3	3
Rated voltage (III/3) contacts	V	2900 / 5000	830	500	400	500
Rated surge voltage, contacts	kV	15	8	6	6	6
Connection cross section	mm^2	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data						
Rated voltage	V	-	600	600	600	600
Rated current	A	-	16	-	16	16
Connection cross section	AWG	-	12	-	12	12
CSA / cUL data						
Rated voltage	V	-	-	600	-	-
Rated current	A	-	-	32	-	-
Connection cross section	AWG	-	-	16-10	-	-
Material data						
Contact carrier material		PC / PTFE	PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Ambient conditions						
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	9.5	7.5	7.5	7.5	7.5
No. of pos.		2	6	6	8	20
Contact numbering		I, II	1 - 6	1 - 6	1 - 8	1 - 20
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

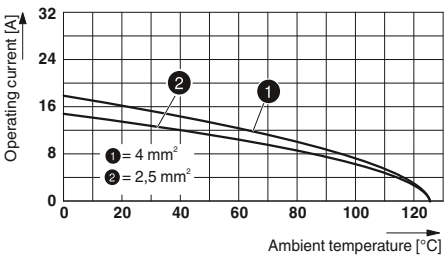
Derating curves



HC-M-HV-MOD-...



HC-M-06-MOD-...

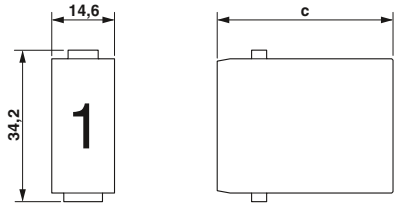


HC-M-20-MOD-...

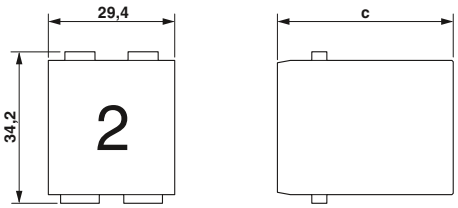
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection CK 2,5[1)]							
	2	I, II	2	① HC-M-HV-MOD-...	1604999	1604998	1
Crimp connection CK 2,5							
	6	1 - 6	1	② HC-M-06P-MOD-...	1636460	1636457	2
Crimp connection CK 2,5							
	6	1 - 6	1	③ HC-M-06-MOD-...	1663462	1663459	2
Crimp connection CK 2,5							
	8	1 - 8	1	④ HC-M-08-MOD-...	1605003	1605002	2
Crimp connection CK 2,5							
	20	1 - 20	2	⑤ HC-M-20-MOD-...	1636936	1636923	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.4		62	
	Plug			59	
②	Socket	14.6		37.4	
	Plug			39.2	
③	Socket	14.6		35.8	
	Plug			34	
④	Socket	14.6		35.8	
	Plug			34.5	
⑤	Socket	29.4		39.95	
	Plug			37.6	

Accessories



Hinged retaining frames
From page 566



Crimping tools
From page 636



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 569

Modular contact inserts

50 - 250 V, 10 A

Connection technology:
– Crimp connection CK 1,6

To determine the corresponding housing, see cross-reference list on page 482.

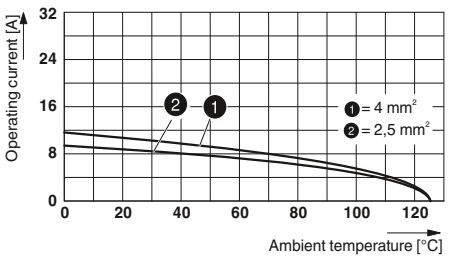
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4
[1]) Housing height ≥ 72 mm



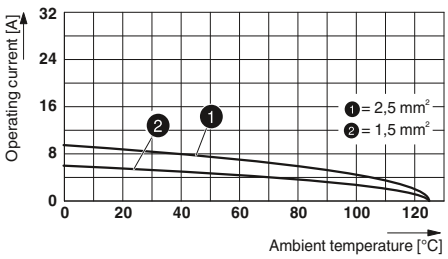
Technical data

Type		① HC-M-12-MOD-...	② HC-M-17-MOD-...	③ HC-M-EMV-MOD-...	④ HC-M-EMV-.../3-9,5
Approvals					
IEC data					
Rated current, contacts (at 40°C)	A	10	10	-	10
Surge voltage category		III	III	-	III
Pollution degree		3	3	-	3
Rated voltage (III/3) contacts	V	250	160	-	50
Rated surge voltage, contacts	kV	3	2.5	-	0.8
Connection cross section	mm^2	0.14 ... 2.5	0.14 ... 2.5	-	0.14 ... 2.5
UL data					
Rated voltage	V	600	250	42	42
Rated current	A	-	10	10	10
Connection cross section	AWG	-	14	16	16
CSA / cUL data					
Rated voltage	V	600	-	42	42
Rated current	A	12	-	9	9
Connection cross section	AWG	26-14	-	16	16
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	-	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	-	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 85
General data					
Connection method		Crimp connection	Crimp connection	-	Crimp connection
Stripping length	mm	8	8	-	8
No. of pos.		12	17	-	4
Contact numbering		1 - 12	1 - 17	-	1 - 4
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-M-12-MOD-...

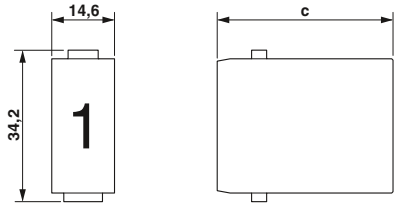


HC-M-17-MOD-...

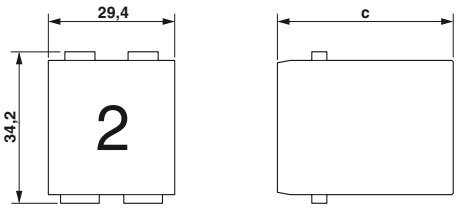
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection CK 1,6							
	12	1 - 12	1	① HC-M-12-MOD-...	1663323	1663310	2
Crimp connection CK 1,6							
	17	1 - 17	1	② HC-M-17-MOD-...	1636486	1636473	2
EMC module[1])							
			2	③ HC-M-EMV-MOD-...	1678570	1678567	2
EMC connector, crimp connection CK 1,6							
	4	1 - 4		④ HC-M-EMV-.../3-9,5	1636091	1636088	1
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100
		2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 22 - 24		CK1,6-ED-0,37... AU	1674969	1674901	100
		0.75 / 18		CK1,6-ED-0,75... AU	1672440	1672453	100
		0.75 / 18		CK1,6-ED-0,75... AU	1672440	1674914	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AU	1674943	1674888	100
		1.5 / 16		CK1,6-ED-1,50... AU	1674930	1674875	100
		2.5 / 14		CK1,6-ED-2,50... AU	1674985	1674927	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		34	
	Plug				
②	Socket	14.6		34	
	Plug				
③	Socket	29.4		34	
	Plug				
④	Socket				
	Plug				

Accessories



Hinged retaining frames
From page 566



Crimping tools
From page 636



Dummy module
From page 569

Modular contact inserts, Ethernet and D-SUB 09

50 V, 1 - 5 A

Connection technology:
– Crimp connection VS 1,0
– Screw connection

Coding pins and sockets are mandatory when using HC-M-25-MOD-... and HC-M-DSUB 09-MOD-... modules.

To determine the corresponding housing, see cross-reference list on page 482.

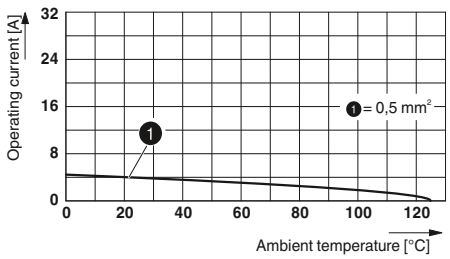
Notes:
For accessories, see from page 634
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



Technical data

Type		① HC-M-25-MOD-...	② HC-M-08-GBIT-...C	③ HC-M-08-GBIT-MOD-...	④ HC-M-DSUB 09/O2T-MOD-... 2-pos.	⑤ HC-M-DSUB 09-MOD-...	
Approvals		EAC cULus	EAC cULus	EAC cULus	EAC	EAC	
IEC data							
Rated current, contacts (at 40°C)	A	4	5	-	5	1	
Surge voltage category		III	III	-	III	III	
Pollution degree		3	3	-	3	3	
Rated voltage (III/3) contacts	V	50	50	-	50	50	
Rated surge voltage, contacts	kV	0.8	0.8	-	0.8	0.8	
Connection cross section	mm^2	0.08 ... 0.5	0.08 ... 0.5	-	0.09 ... 0.5	0.08 ... 0.5	
UL data							
Rated voltage	V	30	30	30	-	-	
Rated current	A	-	5	5	-	-	
Connection cross section	AWG	28-20	22-20	22-20	-	-	
CSA / cUL data							
Rated voltage	V	-	-	-	-	-	
Rated current	A	-	-	-	-	-	
Connection cross section	AWG	-	-	-	-	-	
Material data							
Contact carrier material		PC	PC	PC	PC	PC	
Inflammability class in acc. with UL 94		V0	V0	V0	V0	V0	
Contact material		Copper alloy	Copper alloy	-	Copper alloy	Copper alloy	
Contact surface material		Au	Au	-	Au	Au	
Ambient conditions							
Ambient temperature range	°C	-40 ... 125	-40 ... 85	-40 ... 85	-40 ... 125	-40 ... 125	
General data							
Connection method		Crimp connection	Crimp connection	-	Screw connection	Crimp connection	
Stripping length	mm	4.2	4.2	-	3.8	4.2	
No. of pos.		25	8	-	2	9	
Contact numbering		1 - 25	1 - 8	-	A,B	1 - 9	
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	

Derating curves

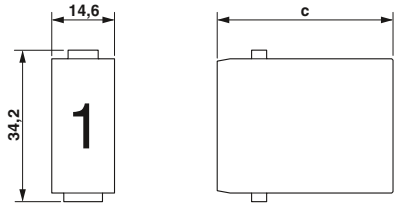


HC-M-25-MOD-...

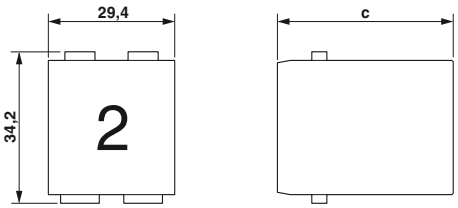
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection VS 1,0							
	25	1 - 25	1	① HC-M-25-MOD-...	1605005	1605004	2
Ethernet connector, crimp connection VS 1,0							
	8	1 - 8	1	② HC-M-08-GBIT-...C	1587726	1587713	1
Module, Ethernet connector							
			1	③ HC-M-08-GBIT-MOD-...	1587700	1587690	1
D-SUB 09 module, screw connection							
	2	A,B	1	2-pos. ④ HC-M-DSUB 09/O2T-MOD-...	1636444		2
D-SUB 09 module, crimp connection VS 1,0							
	9	1 - 9	1	⑤ HC-M-DSUB 09-MOD-...	1647543	1647530	2
Turned crimp contacts VS 1,0 Gold-plated		**Cross section mm² / AWG**					
		0.08 - 0.2 / 28 - 24		VS-...-CD-1,0/14,4/0,2	1688997	1688971	30
		0.2 - 0.5 / 24 - 20		VS-...-CD-1,0/14,4/0,5	1688984	1688968	30

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		30.65	
	Plug			34	
②	Socket	13.9		40.3	
	Plug			41.4	
③	Socket	14.6		28.1	
	Plug			40.85	
④	Socket	14.6		35.2	
	Plug				
⑤	Socket	14.6		35.2	
	Plug				

Accessories



Hinged retaining frames
From page 566



Crimping tools
From page 636



Dummy module
From page 569

Modular contact inserts

50 - 400 V, 1.5 - 16 A

Connection technology:
– Spring connection
– Coaxial contacts

To determine the corresponding housing, see cross-reference list on page 482.

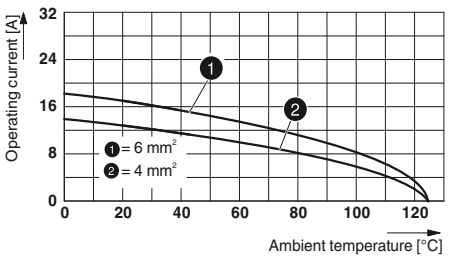
Notes:
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
Coaxial module with coding pin and coding socket
For connection technologies, see page 4



Technical data

Type		① HC-M-05-MOD-...Z	② HC-M-04-MOD-...
Approvals		EAC UL	CSA EAC UL
IEC data			
Rated current, contacts (at 40°C)	A	16	1.5
Surge voltage category		III	III
Pollution degree		3	3
Rated voltage (III/3) contacts	V	400	50
Rated surge voltage, contacts	kV	6	3
Connection cross section	mm²	0.14 ... 1.5	-
UL data			
Rated voltage	V	600	600
Rated current	A	16	-
Connection cross section	AWG	12	-
CSA / cUL data			
Rated voltage	V	-	-
Rated current	A	-	-
Connection cross section	AWG	-	-
Material data			
Contact carrier material		PC	PC
Inflammability class in acc. with UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag	AU
Temperature data			
Ambient temperature range	°C	-40 ... 125	-40 ... 125
General data			
Connection method		Spring connection	Soldering and crimp connection
Stripping length	mm	8	-
No. of pos.		5	4
Contact numbering		1 - 5	1 - 4
Insulation resistance	GΩ	-	≥ 10
Contact resistance	mΩ	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves

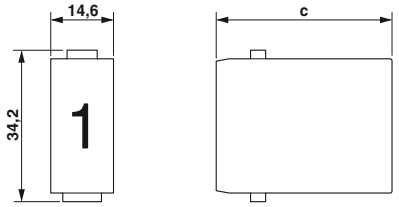


HC-M-05-MOD-...Z

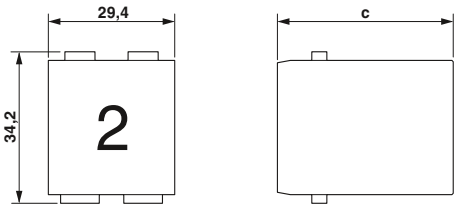
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Spring connection							
	5	1 - 5	1	① HC-M-05-MOD-...Z	1647721	1647718	2
Coaxial module							
	4	1 - 4	1	② HC-M-04-MOD-...	1676789	1676792	2
Coaxial contacts, 50 Ω							
				HC-M-04-...-KOAX-50	1676815	1676802	10
Coaxial contacts, 75 Ω							
				HC-M-04-...-KOAX-75	1686245	1686258	10

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		34	
	Plug			35.5	
②	Socket	14.6		32.6	
	Plug			31.5	

Accessories



Hinged retaining frames
From page 566



Crimping tools
From page 637



Removal tool
From page 637



Dummy module
From page 569

Modular contact inserts, pneumatic modules

Connection technology:
– Pneumatic contact with valve
– Pneumatic contact without valve

To determine the corresponding housing, see cross-reference list on page 482.

Notes:
For accessories, see from page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

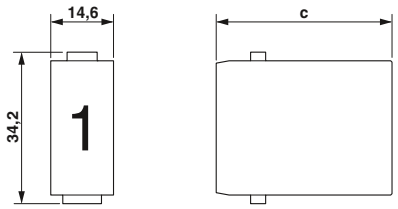


Type	① HC-M-PN2-MOD-...	② HC-M-PN2-6,00-...-V With valve	③ HC-M-PN2-6,00-... Without valve	④ HC-M-PN3-MOD-...	⑤ ⑥ ⑦ HC-M-PN3-1,60-BU-V With valve	⑧ ⑨ ⑩ HC-M-PN3-1,60-... Without valve
	Technical data					
Approvals	EAC cULus	EAC	EAC	EAC cULus	EAC	EAC
Material data for pneumatic module						
Contact carrier material	PC	-	-	PC	-	-
Inflammability class in acc. with UL 94	V0	-	-	V0	-	-
Module slots	1	-	-	1	-	-
Material data for pneumatic contact						
Contact material	-	Delrin acetal	Delrin acetal	-	Delrin acetal	Delrin acetal
Seal material (contact)	-	Buna-N	Buna-N	-	Buna-N	Buna-N
Valve material (contact)	-	Polypropylene	Polypropylene	-	Polypropylene	Polypropylene
Mechanical data						
No. of pos.	2	-	-	3	-	-
Contact numbering	1 - 2	-	-	1 - 3	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500
Internal diameter of pressure hose connection	6 mm	6 mm	6 mm	4 mm	1.6 mm	1.6 mm
Operating pressure	-	8.00 bar	8.00 bar	-	8.00 bar	8.00 bar
Ambient conditions						
Ambient temperature range °C	-40 ... 80	-40 ... 125	-40 ... 125	-40 ... 80	-40 ... 125	-40 ... 125

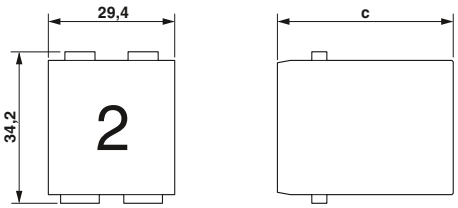
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
PN2 pneumatic module							
	2	1 - 2	1	① **HC-M-PN2-MOD-...**	1674998	1674998	2
PN2 pneumatic contact				With valve ② **HC-M-PN2-6,00-...-V**	1676776		10
							
PN2 pneumatic contact				Without valve ③ **HC-M-PN2-6,00-...**	1676763	1676750	10
							
PN3 pneumatic module							
	3	1 - 3	1	④ **HC-M-PN3-MOD-...**	1663475	1663475	2
PN3 pneumatic contact				With valve ⑤ **HC-M-PN3-1,60-BU-V** With valve ⑥ **HC-M-PN3-3,00-BU-V** With valve ⑦ **HC-M-PN3-4,00-BU-V**	1663543 1663556 1663569		10 10 10
							
PN3 pneumatic contact				Without valve ⑧ **HC-M-PN3-1,60-...** Without valve ⑨ **HC-M-PN3-3,00-...** Without valve ⑩ **HC-M-PN3-4,00-...**	1663514 1663527 1663530	1663488 1663491 1663501	10 10 10
							

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket Plug	14.6		27.2	
④	Socket Plug	14.6		27.2	

Accessories



Hinged retaining frames
From page 566



Dummy module
From page 569

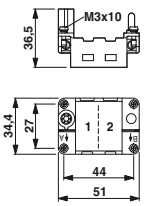
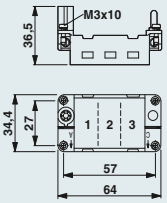
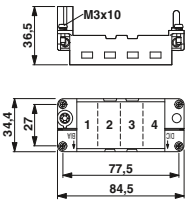
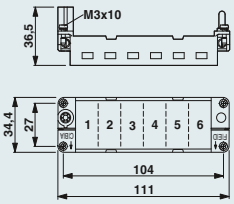
Modular contact inserts, hinged retaining frames



Technical data

General data		
Hinged retaining frame material		Die-cast zinc alloy
Connection cross section	[mm²]	4 mm² ... 6 mm² (for PE conductor – power side)
Connection cross section	[mm²]	1 mm² ... 2.5 mm² (for PE conductor – control side)
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Insertion/withdrawal cycles		≥ 500
Ambient temperature (operation)		-40 °C ... 125 °C

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Hinged retaining frames[1]) 	B6	For sleeve housing (A, B, C, etc.) **HC-M-MHR-T2-N**	1679249	2	
	B6	For panel mounting base (a, b, c, etc.) **HC-M-MHR-A2-N**	1679281	2	
Hinged retaining frames[1]) 	B10	For sleeve housing (A, B, C, etc.) **HC-M-MHR-T3-N**	1679252	2	
	B10	For panel mounting base (a, b, c, etc.) **HC-M-MHR-A3-N**	1679294	2	
Hinged retaining frames[1]) 	B16 / B32	For sleeve housing (A, B, C, etc.) **HC-M-MHR-T4-N**	1679265	2	
	B16 / B32	For panel mounting base (a, b, c, etc.) **HC-M-MHR-A4-N**	1679304	2	
Hinged retaining frames[1]) 	B24/B48	For sleeve housing (A, B, C, etc.) **HC-M-MHR-T6-N**	1679278	2	
	B24/B48	For panel mounting base (a, b, c, etc.) **HC-M-MHR-A6-N**	1679317	2	
Fixing wedges 		20 in the block **HC-M-MHR-FIX**	1585155	2	
Cable lug 		PE extension to 16 mm² **HC-M-MHR-PE16**	1636981	50	

Notes:

For assembly instructions, see phoenixcontact.net/products

[1]) For solid conductors and stranded wires with wire end protection

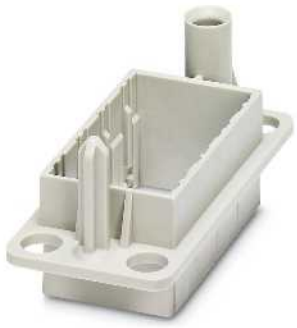
Accessories



Dummy module

From page 569

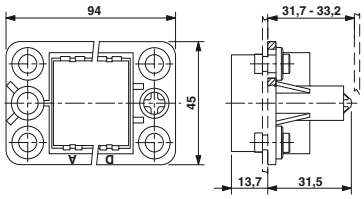
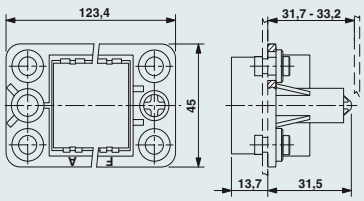
Modular contact inserts, docking frames



Technical data

General data	
Material	PC
Inflammability class in acc. with UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	-

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Docking frame 		Floating (A, B, C, etc.)			
	B16	**HC-B 16-ANDOCK-MOD-T**	1587454	2	
		Fixed (a, b, c, etc.)			
	B16	**HC-B 16-ANDOCK-MOD-A**	1587467	2	
Docking frame 		Floating (A, B, C, etc.)			
	B24	**HC-B 24-ANDOCK-MOD-T**	1587470	2	
		Fixed (a, b, c, etc.)			
	B24	**HC-B 24-ANDOCK-MOD-A**	1587483	2	
Washer, floating 		For M4 cylinder head screws			
		HC-MOD-ANDOCK-USCH	1587496	20	

Notes:
Use of docking frames, e.g., in the back panel of control cabinet racks.
A metal mounting panel must be grounded separately, as the plastic frame does not have a PE connection.
Docking frames ensure correct contacting of plug and socket modules

Accessories



Dummy module
From page 569



Metal docking frame
From page 641

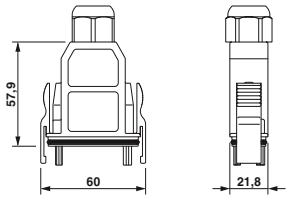
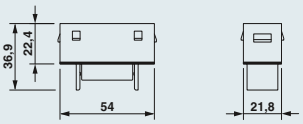
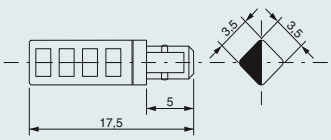
Modular contact inserts, accessories



Technical data

General data	
Housing material	Polycarbonate
Lock material	-
Inflammability class in acc. with UL 94	V0
External cable diameter	6 mm ... 13 mm
Ambient temperature (operation)	-40 °C ... 85 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57.9 mm** 	1x M20	For one module, with PE marking **HC-MOD-K-TMS-M1M20-G-PE**	1408520	2	
	1x M20	For one module, without PE marking **HC-MOD-K-TMS-M1M20-G-OPE**	1408546	2	
Panel mounting base **Height: 22.4 mm** 		For one module, without PE marking **HC-MOD-K-AFS-PE**	1408533	2	
		For one module, without PE marking **HC-MOD-K-AFS-OPE**	1408559	2	
Coding profile 		**HC-MOD-K-CP**	1408562	1	

Notes:

For assembly instructions, see phoenixcontact.net/products

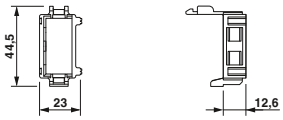
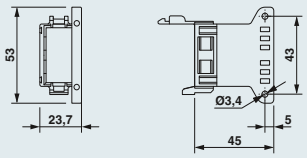
Modular contact inserts, accessories



Technical data

General data	
Material	PC
Inflammability class in acc. with UL 94	-
Ambient temperature (operation)	-40 °C ... 125 °C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Contact insert frame 		Without strain relief **HC-M-MHOZ**	1676844	2	
Contact insert frame 		With strain relief **HC-M-MHMZ**	1676831	2	
Dummy module 		For unused slots **HC-M-BM**	1676828	2	

Notes:

For assembly instructions, see phoenixcontact.net/products

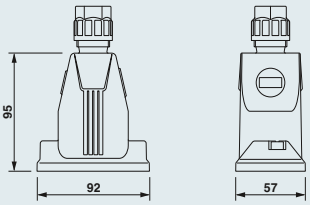
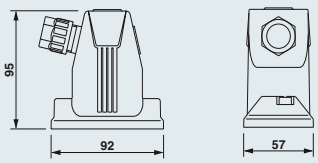
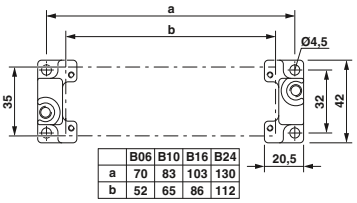
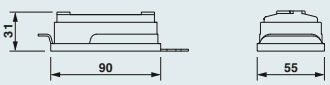
Size B6, plastic, ADVANCE sleeve housing with cable gland



Technical data

General data	
Housing material	Polyamide
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 100 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 93.7 mm** 	1x M20 1x M25	Cable outlet: top **HC-ADV-B06-HHWH-1TGM20-PL** **HC-ADV-B06-HHWH-1TGM25-PL**	 1404222 1404225	 1 1	
Sleeve housing **Height: 93.7 mm** 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B06-HHWH-1SGM20-PL** **HC-ADV-B06-HHWH-1SGM25-PL**	 1404224 1404226	 1 1	
Panel mounting flange[1)] 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	 |	B06	B10	B16	B24 | | a | 70 | 83 | 103 | 130 | | b | 52 | 65 | 86 | 112 |
Protective cover 		For sleeve side, IP50 **HC-B 6-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 6-TMS-SD-IP66**	 1690736 1411494	 10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1)] Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

Size B6, metal, ADVANCE sleeve housing, Offshore/EMC

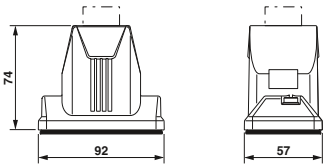
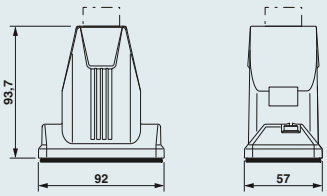
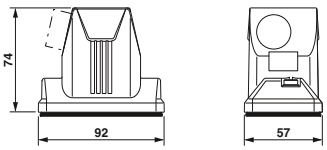
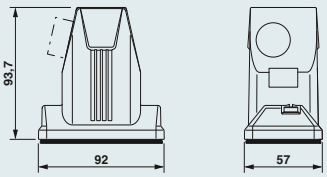
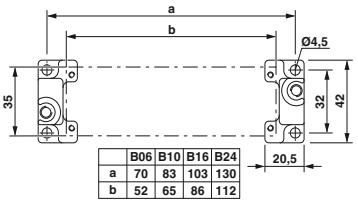
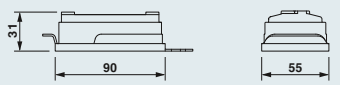
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h) / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: top **HC-ADV-B06-HLWH-1TTM20-EMC-AL** **HC-ADV-B06-HLWH-1TTM25-EMC-AL**	 1413362 1413364	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top **HC-ADV-B06-HHWH-1TTM25-EMC-AL** **HC-ADV-B06-HHWH-1TTM32-EMC-AL**	 1413374 1413376	 1 1	
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B06-HLWH-1STM20-EMC-AL** **HC-ADV-B06-HLWH-1STM25-EMC-AL**	 1413363 1413365	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B06-HHWH-1STM25-EMC-AL** **HC-ADV-B06-HHWH-1STM32-EMC-AL**	 1413375 1413377	 1 1	
Panel mounting flange[2]) 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		For sleeve side, IP50 **HC-B 6-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 6-TMS-SD-IP66**	 1690736 1411494	 10 10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws
[2]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Cable glands
From page 680



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

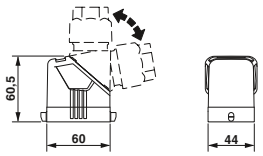
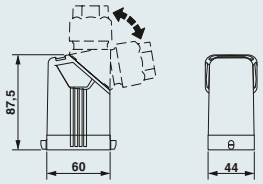
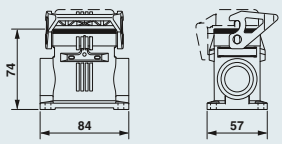
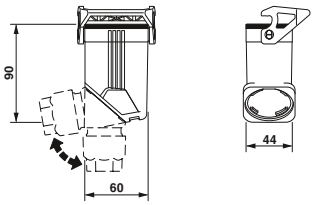
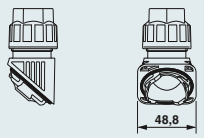
Size B6, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B06-HLFS-PLBK**	1407619	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B06-HHFS-PLBK**	1407620	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B06-BWS-PLRBK** With cover **HC-EVO-B06-BWSC-PLRBK**	 1407621 1407622	 1 1	
Box mounting base[1] **Height: 74 mm** 	 2x M32 2x M32	Without cover **HC-EVO-B06-SHWS-2SSM32-PLRBK** With cover **HC-EVO-B06-SHWSC-2SSM32-PLRBK**	 1407623 1407624	 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B06-CHWS-PLRBK**	1407625	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

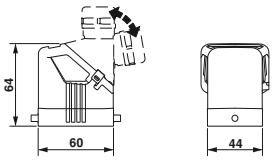
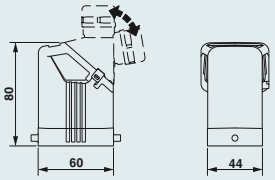
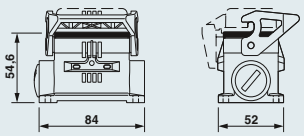
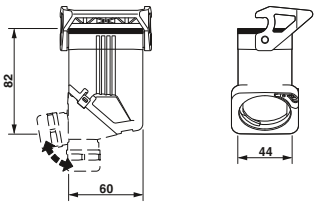
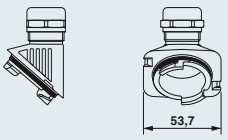
Size B6, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm**		**HC-EVO-B06-HLFS-EL-AL**	1411448	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B06-HHFS-EL-AL**	1411447	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B06-BWS-ELC-AL** With cover **HC-STA-B06-BWSC-ELC-AL**	 1411318 1411319	 1 1	
Box mounting base[1] **Height: 54.6 mm**	 2x M20 2x M25 2x Pg16 2x M20 2x M25 2x Pg16	Without cover **HC-STA-B06-SLWS-2SSM20-ELC-AL** **HC-STA-B06-SLWS-2SSM25-ELC-AL** **HC-STA-B06-SLWS-2SSP16-ELC-AL** With cover **HC-STA-B06-SLWSC-2SSM20-ELC-AL** **HC-STA-B06-SLWSC-2SSM25-ELC-AL** **HC-STA-B06-SLWSC-2SSP16-ELC-AL**	 1412821 1412822 1412823 1412825 1412826 1412827	 1 1 1 1 1 1	
Coupling housing **Height: 82 mm**		**HC-EVO-B06-CHWS-ELC-AL**	1411450	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	 1411442 1411443 1411444 1411445	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B6, metal, STANDARD sleeve housing for single locking latch

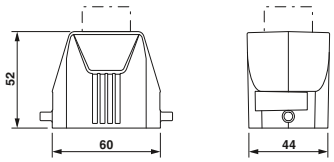
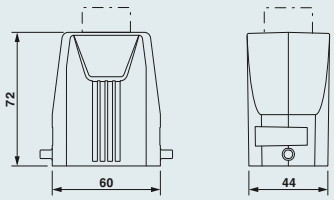
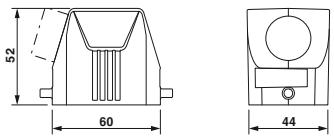
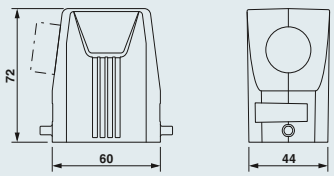
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 52 mm**		Cable outlet: top			
	1x M20	**HC-STA-B06-HLFS-1TTM20-EL-AL**	1412574	1	
	1x M25	**HC-STA-B06-HLFS-1TTM25-EL-AL**	1412575	1	
	1x Pg13.5	**HC-STA-B06-HLFS-1TTP13-EL-AL**	1412576	1	
	1x Pg16	**HC-STA-B06-HLFS-1TTP16-EL-AL**	1412577	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B06-HHFS-1TTM25-EL-AL**	1412566	1	
	1x M32	**HC-STA-B06-HHFS-1TTM32-EL-AL**	1412567	1	
	1x Pg21	**HC-STA-B06-HHFS-1TTP21-EL-AL**	1412568	1	
	1x Pg29	**HC-STA-B06-HHFS-1TTP29-EL-AL**	1412569	1	
Sleeve housing **Height: 52 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B06-HLFS-1STM20-EL-AL**	1412570	1	
	1x M25	**HC-STA-B06-HLFS-1STM25-EL-AL**	1412571	1	
	1x Pg13.5	**HC-STA-B06-HLFS-1STP13-EL-AL**	1412572	1	
	1x Pg16	**HC-STA-B06-HLFS-1STP16-EL-AL**	1412573	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B06-HHFS-1STM25-EL-AL**	1412562	1	
	1x M32	**HC-STA-B06-HHFS-1STM32-EL-AL**	1412563	1	
	1x Pg21	**HC-STA-B06-HHFS-1STP21-EL-AL**	1412564	1	
	1x Pg29	**HC-STA-B06-HHFS-1STP29-EL-AL**	1412565	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B6, metal, STANDARD supporting base element with single locking latch

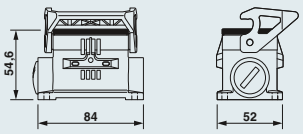
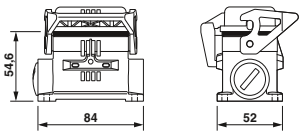
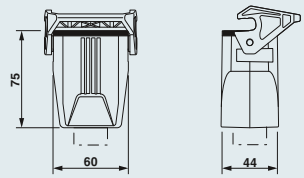
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B06-BWS-ELC-AL** With cover **HC-STA-B06-BWSC-ELC-AL**	 1411318 1411319	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B06-SLWS-2SSM20-ELC-AL** **HC-STA-B06-SLWS-2SSM25-ELC-AL** **HC-STA-B06-SLWS-2SSP16-ELC-AL**	 1412821 1412822 1412823	 1 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	With cover **HC-STA-B06-SLWSC-2SSM20-ELC-AL** **HC-STA-B06-SLWSC-2SSM25-ELC-AL** **HC-STA-B06-SLWSC-2SSP16-ELC-AL**	 1412825 1412826 1412827	 1 1 1	
Coupling housing **Height: 73 mm**	1x M20 1x M25 1x M32 1x Pg13.5 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B06-CHWS-1TTM20-ELC-AL** **HC-STA-B06-CHWS-1TTM25-ELC-AL** **HC-STA-B06-CHWS-1TTM32-ELC-AL** **HC-STA-B06-CHWS-1TTP13-ELC-AL** **HC-STA-B06-CHWS-1TTP21-ELC-AL** **HC-STA-B06-CHWS-1TTP29-ELC-AL**	 1412555 1412556 1412557 1412558 1412559 1412560	 1 1 1 1 1 1	

Notes:

For further accessories, see page 642

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

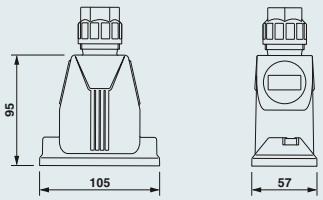
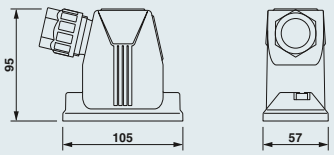
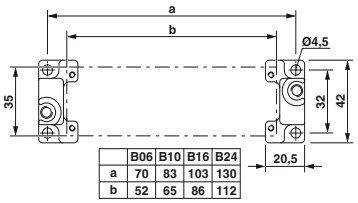
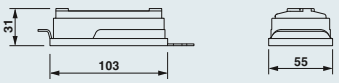
Size B10, plastic, ADVANCE sleeve housing with cable gland



Technical data

General data	
Housing material	Polyamide
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 100 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 95 mm** 	1x M25 1x M32	Cable outlet: top **HC-ADV-B10-HHWH-1TGM25-PL** **HC-ADV-B10-HHWH-1TGM32-PL**	1404227 1404229	1 1	
Sleeve housing **Height: 95 mm** 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B10-HHWH-1SGM25-PL** **HC-ADV-B10-HHWH-1SGM32-PL**	1404228 1404230	1 1	
Panel mounting flange[1]) 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1	 |	B06	B10	B16	B24 | | a | 70 | 83 | 103 | 130 | | b | 52 | 65 | 86 | 112 |
Protective cover 		For sleeve side, IP50 **HC-B 10-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	1690749 1411504	10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

Size B10, metal, ADVANCE sleeve housing, Offshore/EMC

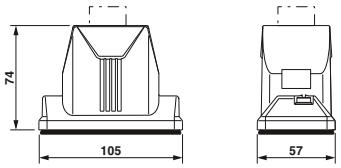
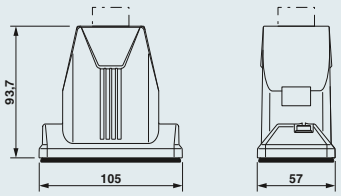
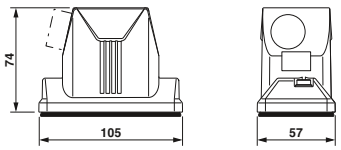
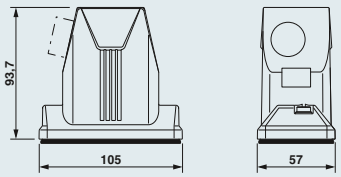
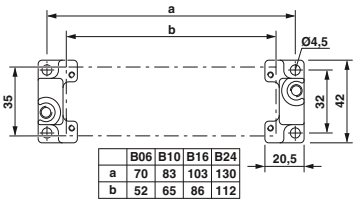
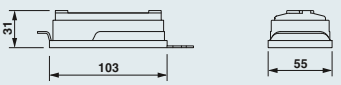
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h) / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: top **HC-ADV-B10-HLWH-1TTM20-EMC-AL** **HC-ADV-B10-HLWH-1TTM25-EMC-AL**	 1413388 1413390	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top **HC-ADV-B10-HHWH-1TTM25-EMC-AL** **HC-ADV-B10-HHWH-1TTM32-EMC-AL**	 1413400 1413402	 1 1	
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B10-HLWH-1STM20-EMC-AL** **HC-ADV-B10-HLWH-1STM25-EMC-AL**	 1413389 1413391	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B10-HHWH-1STM25-EMC-AL** **HC-ADV-B10-HHWH-1STM32-EMC-AL**	 1413401 1413403	 1 1	
Panel mounting flange[2]) 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		For sleeve side, IP50 **HC-B 10-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	 1690749 1411504	 10 10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws
[2]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Screw connections
From page 680



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

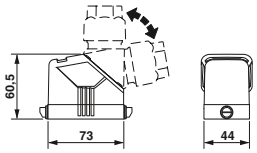
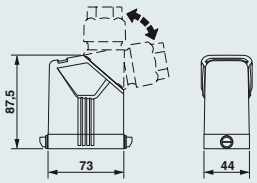
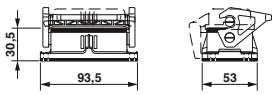
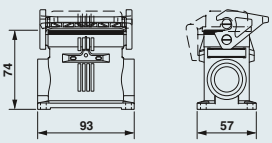
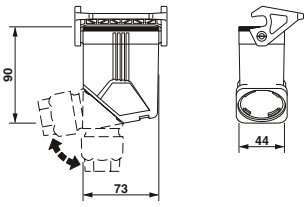
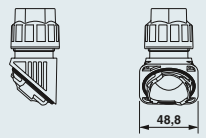
Size B10, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLFS-PLBK**	1407626	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHFS-PLBK**	1407627	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B10-BWS-PLRBK** With cover **HC-EVO-B10-BWSC-PLRBK**	 1407632 1407633	 1 1	
Box mounting base[1] **Height: 74 mm** 	 2x M32 2x M32	Without cover **HC-EVO-B10-SHWS-2SSM32-PLRBK** With cover **HC-EVO-B10-SHWSC-2SSM32-PLRBK**	 1407636 1407637	 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B10-CHWS-PLRBK**	1407640	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

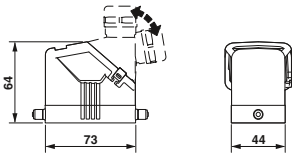
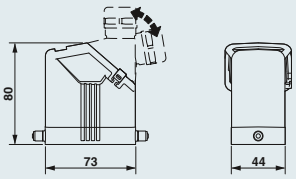
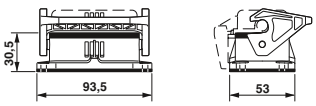
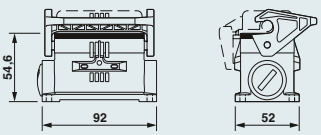
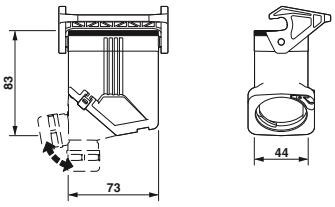
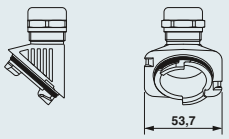
Size B10, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm**		**HC-EVO-B10-HLFS-EL-AL**	1411456	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B10-HHFS-EL-AL**	1411453	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWS-ELC-AL** With cover **HC-STA-B10-BWSC-ELC-AL**	 1411320 1411321	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	 2x M20 2x M25 2x Pg16 2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWS-2SSM20-ELC-AL** **HC-STA-B10-SLWS-2SSM25-ELC-AL** **HC-STA-B10-SLWS-2SSP16-ELC-AL** With cover **HC-STA-B10-SLWSC-2SSM20-ELC-AL** **HC-STA-B10-SLWSC-2SSM25-ELC-AL** **HC-STA-B10-SLWSC-2SSP16-ELC-AL**	 1412839 1412840 1412842 1412844 1412845 1412846	 1 1 1 1 1 1	
Coupling housing **Height: 83 mm**		**HC-EVO-B10-CHWS-ELC-AL**	1411459	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	 1411442 1411443 1411444 1411445	 1 1 1 1	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B10, metal, STANDARD sleeve housing for single locking latch

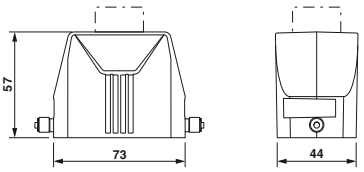
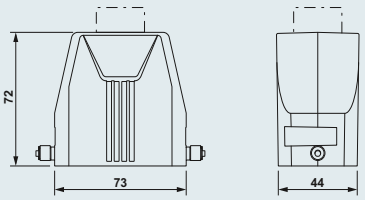
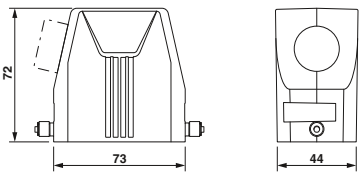
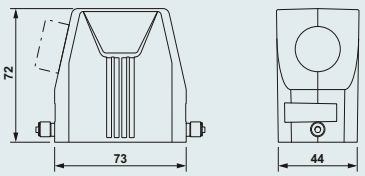
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm**		Cable outlet: top			
	1x M20	**HC-STA-B10-HLFS-1TTM20-EL-AL**	1412629	1	
	1x M25	**HC-STA-B10-HLFS-1TTM25-EL-AL**	1412630	1	
	1x Pg16	**HC-STA-B10-HLFS-1TTP16-EL-AL**	1412631	1	
	1x Pg21	**HC-STA-B10-HLFS-1TTP21-EL-AL**	1412632	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B10-HHFS-1TTM25-EL-AL**	1412604	1	
	1x M32	**HC-STA-B10-HHFS-1TTM32-EL-AL**	1412605	1	
	1x Pg21	**HC-STA-B10-HHFS-1TTP21-EL-AL**	1412606	1	
	1x Pg29	**HC-STA-B10-HHFS-1TTP29-EL-AL**	1412607	1	
Sleeve housing **Height: 57 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLFS-1STM20-EL-AL**	1412624	1	
	1x M25	**HC-STA-B10-HLFS-1STM25-EL-AL**	1412625	1	
	1x Pg16	**HC-STA-B10-HLFS-1STP16-EL-AL**	1412627	1	
	1x Pg21	**HC-STA-B10-HLFS-1STP21-EL-AL**	1412628	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHFS-1STM25-EL-AL**	1412600	1	
	1x M32	**HC-STA-B10-HHFS-1STM32-EL-AL**	1412601	1	
	1x Pg21	**HC-STA-B10-HHFS-1STP21-EL-AL**	1412602	1	
	1x Pg29	**HC-STA-B10-HHFS-1STP29-EL-AL**	1412603	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B10, metal, STANDARD supporting base element with single locking latch

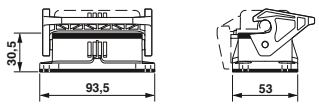
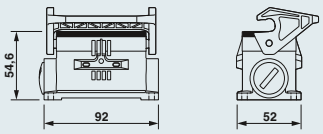
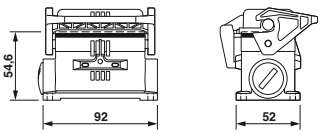
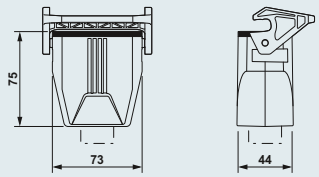
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWS-ELC-AL** With cover **HC-STA-B10-BWSC-ELC-AL**	 1411320 1411321	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWS-2SSM20-ELC-AL** **HC-STA-B10-SLWS-2SSM25-ELC-AL** **HC-STA-B10-SLWS-2SSP16-ELC-AL**	 1412839 1412840 1412842	 1 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	With cover **HC-STA-B10-SLWSC-2SSM20-ELC-AL** **HC-STA-B10-SLWSC-2SSM25-ELC-AL** **HC-STA-B10-SLWSC-2SSP16-ELC-AL**	 1412844 1412845 1412846	 1 1 1	
Coupling housing **Height: 73 mm**	1x M20 1x M25 1x M32 1x Pg16 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B10-CHWS-1TTM20-ELC-AL** **HC-STA-B10-CHWS-1TTM25-ELC-AL** **HC-STA-B10-CHWS-1TTM32-ELC-AL** **HC-STA-B10-CHWS-1TTP16-ELC-AL** **HC-STA-B10-CHWS-1TTP21-ELC-AL** **HC-STA-B10-CHWS-1TTP29-ELC-AL**	 1412584 1412585 1412586 1412587 1412588 1412589	 1 1 1 1 1 1	

Notes:

For further accessories, see page 642

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

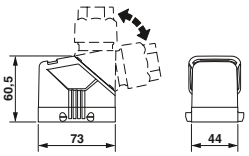
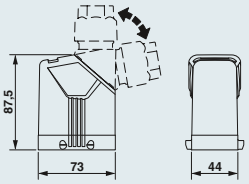
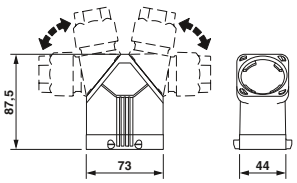
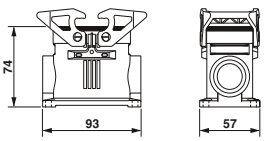
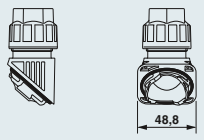
Size B10, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLFD-PLBK**	1407628	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHFD-PLBK**	1407629	1	
Double sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHFD-2B-PL-BK**	1411495	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B10-BWD-PLRBK**	1407634	1	
Box mounting base[1]) **Height: 74 mm** 	2x M32	Without cover **HC-EVO-B10-SHWD-2SSM32-PLRBK**	1407638	1	
Cable gland	**Clamping area**				
	7 mm ... 13 mm	**HC-B-G-M20-PLRBK**	1407669	1	
	9 mm ... 17 mm	**HC-B-G-M25-PLRBK**	1407670	1	
	11 mm ... 21 mm	**HC-B-G-M32-PLRBK**	1407671	1	
	19 mm ... 28 mm	**HC-B-G-M40-PLRBK**	1407672	1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

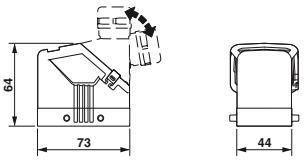
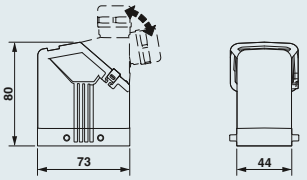
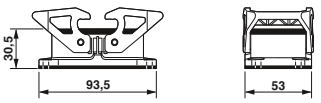
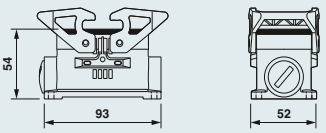
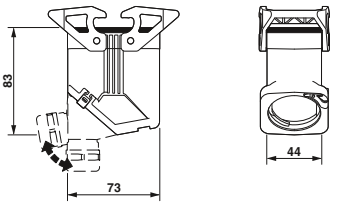
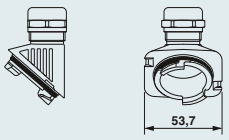
Size B10, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm**		**HC-EVO-B10-HLFD-EL-AL**	1411455	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B10-HHFD-EL-AL**	1411451	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWD-ELC-AL**	1411322	1	
Box mounting base[1] **Height: 54 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWD-2SSM20-ELC-AL** **HC-STA-B10-SLWD-2SSM25-ELC-AL** **HC-STA-B10-SLWD-2SSP16-ELC-AL**	1412835 1412836 1412837	1 1 1	
Coupling housing **Height: 83 mm**		**HC-EVO-B10-CHWD-ELC-AL**	1411458	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	 1411442 1411443 1411444 1411445	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B10, metal, STANDARD sleeve housing for double locking latch

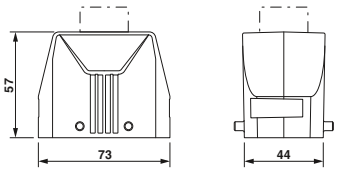
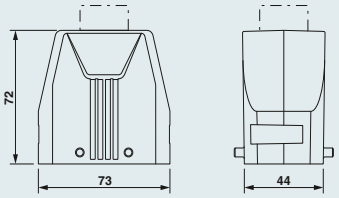
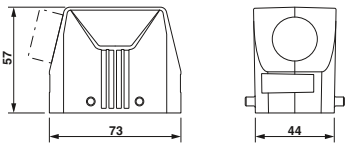
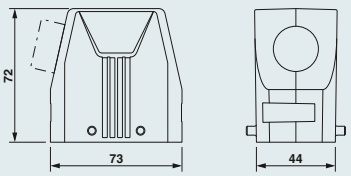
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm**		Cable outlet: top			
	1x M20	**HC-STA-B10-HLFD-1TTM20-EL-AL**	1412620	1	
	1x M25	**HC-STA-B10-HLFD-1TTM25-EL-AL**	1412621	1	
	1x Pg16	**HC-STA-B10-HLFD-1TTP16-EL-AL**	1412622	1	
	1x Pg21	**HC-STA-B10-HLFD-1TTP21-EL-AL**	1412623	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B10-HHFD-1TTM25-EL-AL**	1412596	1	
	1x M32	**HC-STA-B10-HHFD-1TTM32-EL-AL**	1412597	1	
	1x Pg21	**HC-STA-B10-HHFD-1TTP21-EL-AL**	1412598	1	
	1x Pg29	**HC-STA-B10-HHFD-1TTP29-EL-AL**	1412599	1	
Sleeve housing **Height: 57 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLFD-1STM20-EL-AL**	1412616	1	
	1x M25	**HC-STA-B10-HLFD-1STM25-EL-AL**	1412617	1	
	1x Pg16	**HC-STA-B10-HLFD-1STP16-EL-AL**	1412618	1	
	1x Pg21	**HC-STA-B10-HLFD-1STP21-EL-AL**	1412619	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHFD-1STM25-EL-AL**	1412592	1	
	1x M32	**HC-STA-B10-HHFD-1STM32-EL-AL**	1412593	1	
	1x Pg21	**HC-STA-B10-HHFD-1STP21-EL-AL**	1412594	1	
	1x Pg29	**HC-STA-B10-HHFD-1STP29-EL-AL**	1412595	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B10, metal, STANDARD supporting base element with double locking latch

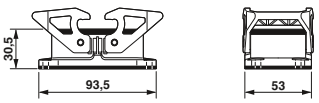
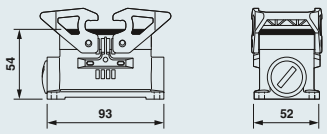
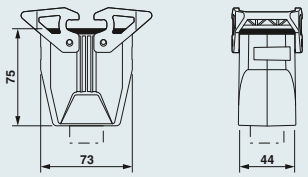
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWD-ELC-AL**	1411322	1	
Box mounting base[1]) **Height: 54 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWD-2SSM20-ELC-AL** **HC-STA-B10-SLWD-2SSM25-ELC-AL** **HC-STA-B10-SLWD-2SSP16-ELC-AL**	1412835 1412836 1412837	1 1 1	
Coupling housing **Height: 73 mm**	1x M20 1x M25 1x M32 1x Pg16 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B10-CHWD-1TTM20-ELC-AL** **HC-STA-B10-CHWD-1TTM25-ELC-AL** **HC-STA-B10-CHWD-1TTM32-ELC-AL** **HC-STA-B10-CHWD-1TTP16-ELC-AL** **HC-STA-B10-CHWD-1TTP21-ELC-AL** **HC-STA-B10-CHWD-1TTP29-ELC-AL**	1412578 1412579 1412580 1412581 1412582 1412583	1 1 1 1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

HEAVYCON B - housing

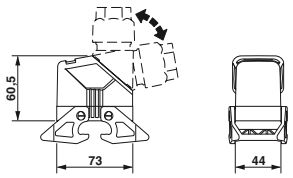
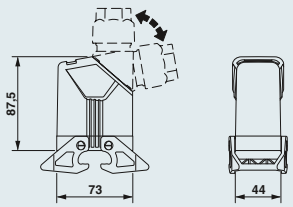
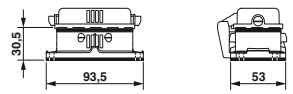
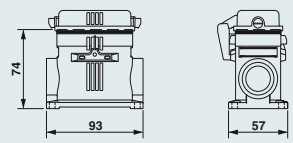
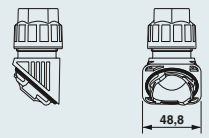
Size B10, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLWD-PLBK**	1407630	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHWD-PLBK**	1407631	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B10-BFDC-PLRBK**	1407635	1	
Box mounting base[1] **Height: 74 mm** 	2x M32	With cover **HC-EVO-B10-SHFDC-2SSM32-PLRBK**	1407639	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	**HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Replacement latch
From page 652

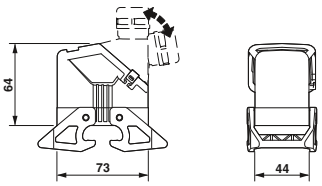
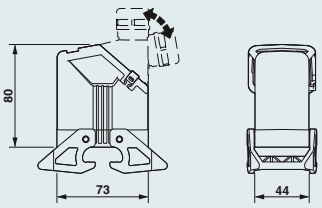
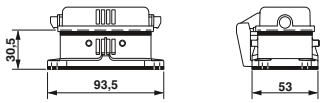
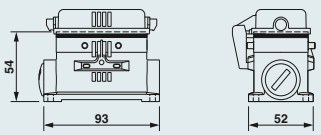
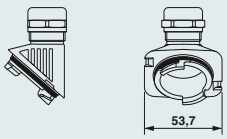
Size B10, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B10-HLWD-EL-AL**	1411457	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B10-HHWD-EL-AL**	1411454	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B10-BFDC-ELC-AL**	1411323	1	
Box mounting base[1] **Height: 54 mm** 	2x M20 2x M25 2x Pg16	With cover **HC-STA-B10-SLFDC-2SSM20-ELC-AL** **HC-STA-B10-SLFDC-2SSM25-ELC-AL** **HC-STA-B10-SLFDC-2SSP16-ELC-AL**	1412830 1412831 1412832	1 1 1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	1411442 1411443 1411444 1411445	1 1 1 1	

Notes:
For further accessories, see page 642
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Replacement latch
From page 652

Size B10, metal, STANDARD sleeve housing with double locking latch

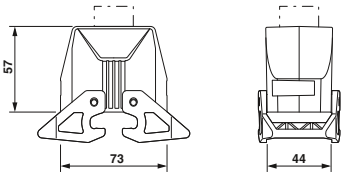
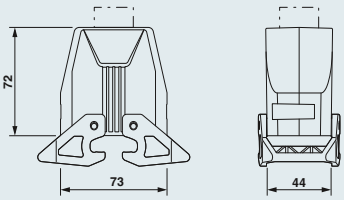
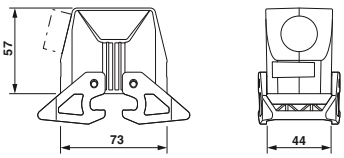
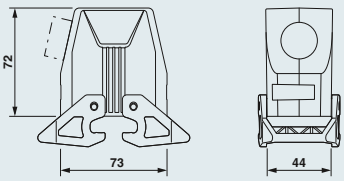
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	PA
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm**		Cable outlet: top			
	1x M20	**HC-STA-B10-HLWD-1TTM20-EL-AL**	1412637	1	
	1x M25	**HC-STA-B10-HLWD-1TTM25-EL-AL**	1412638	1	
	1x Pg16	**HC-STA-B10-HLWD-1TTP16-EL-AL**	1412639	1	
	1x Pg21	**HC-STA-B10-HLWD-1TTP21-EL-AL**	1412640	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B10-HHWD-1TTM25-EL-AL**	1412612	1	
	1x M32	**HC-STA-B10-HHWD-1TTM32-EL-AL**	1412613	1	
	1x Pg21	**HC-STA-B10-HHWD-1TTP21-EL-AL**	1412614	1	
	1x Pg29	**HC-STA-B10-HHWD-1TTP29-EL-AL**	1412615	1	
Sleeve housing **Height: 57 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLWD-1STM20-EL-AL**	1412633	1	
	1x M25	**HC-STA-B10-HLWD-1STM25-EL-AL**	1412634	1	
	1x Pg16	**HC-STA-B10-HLWD-1STP16-EL-AL**	1412635	1	
	1x Pg21	**HC-STA-B10-HLWD-1STP21-EL-AL**	1412636	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHWD-1STM25-EL-AL**	1412608	1	
	1x M32	**HC-STA-B10-HHWD-1STM32-EL-AL**	1412609	1	
	1x Pg21	**HC-STA-B10-HHWD-1STP21-EL-AL**	1412610	1	
	1x Pg29	**HC-STA-B10-HHWD-1STP29-EL-AL**	1412611	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Replacement latch
From page 652



Protective cover
From page 646

Size B10, metal, STANDARD supporting base element for double locking latch

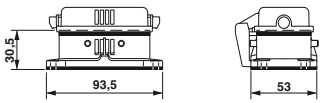
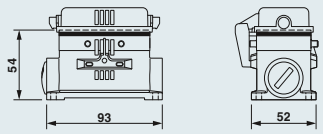
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B10-BFDC-ELC-AL**	1411323	1	
Box mounting base[1]) **Height: 54 mm**	2x M20 2x M25 2x Pg16	With cover **HC-STA-B10-SLFDC-2SSM20-ELC-AL** **HC-STA-B10-SLFDC-2SSM25-ELC-AL** **HC-STA-B10-SLFDC-2SSP16-ELC-AL**	1412830 1412831 1412832	1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Cover plates
From page 648

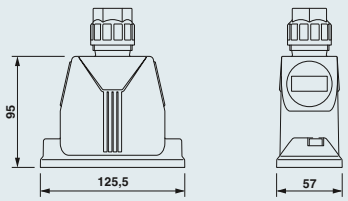
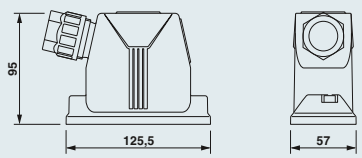
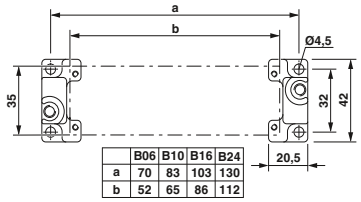
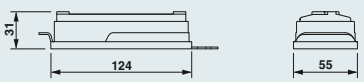
Size B16, plastic, ADVANCE sleeve housing with cable gland



Technical data

General data	
Housing material	Polyamide
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 100 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 95 mm** 	1x M32 1x M40	Cable outlet: top **HC-ADV-B16-HHWH-1TGM32-PL** **HC-ADV-B16-HHWH-1TGM40-PL**	 1404231 1404233	 1 1	
Sleeve housing **Height: 95 mm** 	1x M32 1x M40	Cable outlet: lateral **HC-ADV-B16-HHWH-1SGM32-PL** **HC-ADV-B16-HHWH-1SGM40-PL**	 1404232 1404234	 1 1	
Panel mounting flange[1] 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	 |	B06	B10	B16	B24 | | a | 70 | 83 | 103 | 130 | | b | 52 | 65 | 86 | 112 |
Protective cover 		For sleeve side, IP50 **HC-B 16-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 16-TMS-SD-IP66**	 1690752 1411517	 10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

Size B16, metal, ADVANCE sleeve housing, Offshore/EMC

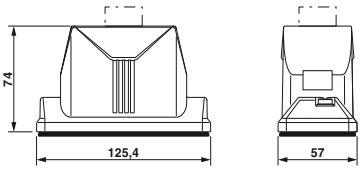
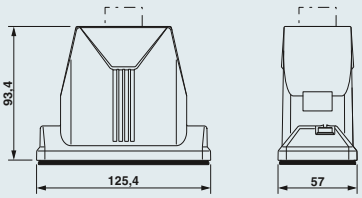
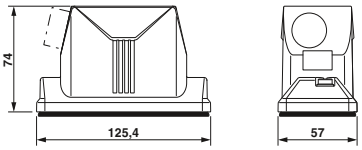
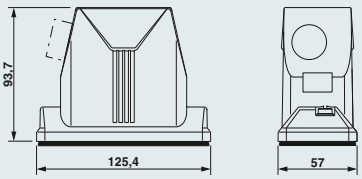
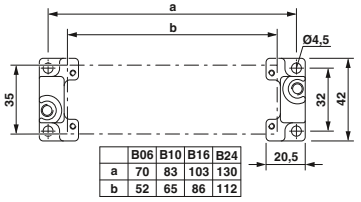
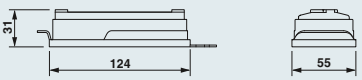
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h) / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B16-HLWH-1TTM25-EMC-AL**	1414975	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B16-HHWH-1TTM25-EMC-AL** **HC-ADV-B16-HHWH-1TTM32-EMC-AL** **HC-ADV-B16-HHWH-1TTM40-EMC-AL**	 1414977 1413416 1413418	 1 1 1	
Cable entry: lateral[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B16-HLWH-1STM25-EMC-AL**	1414976	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B16-HHWH-1STM25-EMC-AL** **HC-ADV-B16-HHWH-1STM32-EMC-AL** **HC-ADV-B16-HHWH-1STM40-EMC-AL**	 1414978 1413417 1413419	 1 1 1	
Panel mounting flange[2]) 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		For sleeve side, IP50 **HC-B 16-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 16-TMS-SD-IP66**	 1690752 1411517	 10 10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws
[2]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Cable glands
From page 680



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

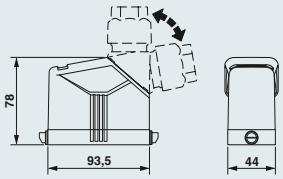
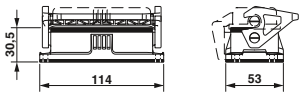
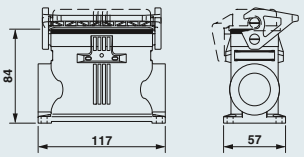
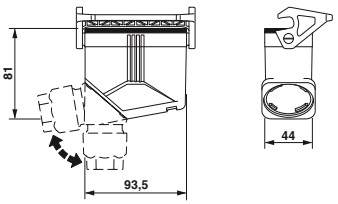
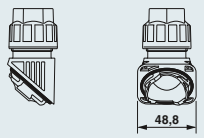
Size B16, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHFS-PLBK**	1407642	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B16-BWS-PLRBK** With cover **HC-EVO-B16-BWSC-PLRBK**	 1407646 1407647	 1 1	
Box mounting base[1]) **Height: 84 mm** 	 2x M40 2x M40	Without cover **HC-EVO-B16-SHWS-2SSM40-PLRBK** With cover **HC-EVO-B16-SHWSC-2SSM40-PLRBK**	 1407650 1407651	 1 1	
Coupling housing **Height: 81 mm** 		**HC-EVO-B16-CHWS-PLRBK**	1407654	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

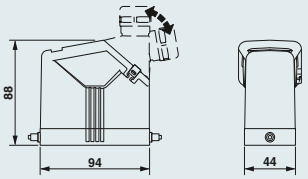
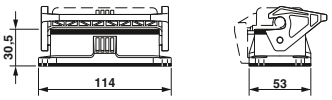
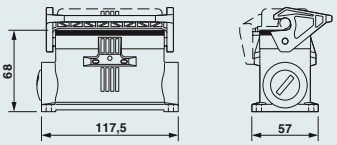
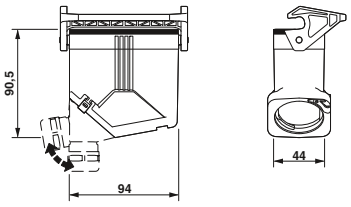
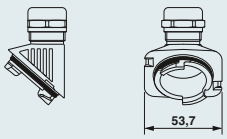
Size B16, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B16-HHFS-EL-AL**	1411461	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B16-BWS-ELC-AL** With cover **HC-STA-B16-BWSC-ELC-AL**	1411324 1411325	1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21 2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWS-2SSM25-ELC-AL** **HC-STA-B16-SLWS-2SSM32-ELC-AL** **HC-STA-B16-SLWS-2SSP21-ELC-AL** With cover **HC-STA-B16-SLWSC-2SSM25-ELC-AL** **HC-STA-B16-SLWSC-2SSM32-ELC-AL** **HC-STA-B16-SLWSC-2SSP21-ELC-AL**	 1412861 1412862 1412863 1412865 1412866 1412867	 1 1 1 1 1 1	
Coupling housing **Height: 90.5 mm**		**HC-EVO-B16-CHWS-ELC-AL**	1411464	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	 1411442 1411443 1411444 1411445	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B16, metal, STANDARD sleeve housing for single locking latch

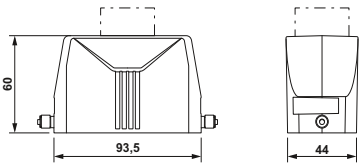
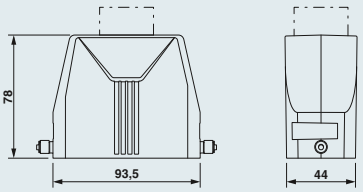
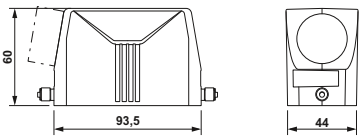
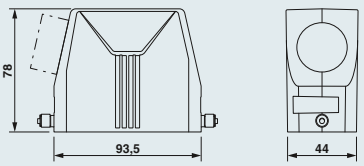
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B16-HLFS-1TTM25-EL-AL**	1412729	1	
	1x M32	**HC-STA-B16-HLFS-1TTM32-EL-AL**	1412730	1	
	1x Pg16	**HC-STA-B16-HLFS-1TTP16-EL-AL**	1412731	1	
	1x Pg21	**HC-STA-B16-HLFS-1TTP21-EL-AL**	1412732	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B16-HHFS-1TTM32-EL-AL**	1412689	1	
	1x M40	**HC-STA-B16-HHFS-1TTM40-EL-AL**	1412700	1	
	1x Pg21	**HC-STA-B16-HHFS-1TTP21-EL-AL**	1412701	1	
	1x Pg29	**HC-STA-B16-HHFS-1TTP29-EL-AL**	1412702	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLFS-1STM25-EL-AL**	1412725	1	
	1x M32	**HC-STA-B16-HLFS-1STM32-EL-AL**	1412726	1	
	1x Pg16	**HC-STA-B16-HLFS-1STP16-EL-AL**	1412727	1	
	1x Pg21	**HC-STA-B16-HLFS-1STP21-EL-AL**	1412728	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHFS-1STM32-EL-AL**	1412679	1	
	1x M40	**HC-STA-B16-HHFS-1STM40-EL-AL**	1412682	1	
	1x Pg21	**HC-STA-B16-HHFS-1STP21-EL-AL**	1412683	1	
	1x Pg29	**HC-STA-B16-HHFS-1STP29-EL-AL**	1412684	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B16, metal, STANDARD supporting base element with single locking latch

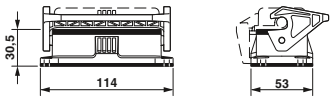
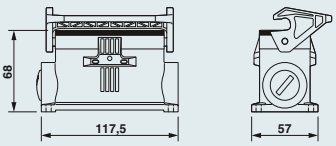
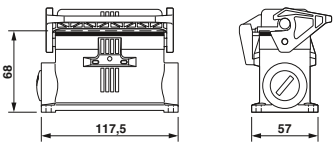
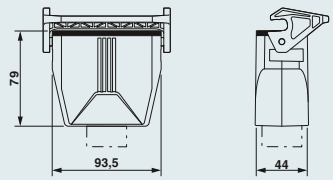
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B16-BWS-ELC-AL** With cover **HC-STA-B16-BWSC-ELC-AL**	 1411324 1411325	 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWS-2SSM25-ELC-AL** **HC-STA-B16-SLWS-2SSM32-ELC-AL** **HC-STA-B16-SLWS-2SSP21-ELC-AL**	 1412861 1412862 1412863	 1 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B16-SLWSC-2SSM25-ELC-AL** **HC-STA-B16-SLWSC-2SSM32-ELC-AL** **HC-STA-B16-SLWSC-2SSP21-ELC-AL**	 1412865 1412866 1412867	 1 1 1	
Coupling housing **Height: 79 mm**	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B16-CHWS-1TTM25-ELC-AL** **HC-STA-B16-CHWS-1TTM32-ELC-AL** **HC-STA-B16-CHWS-1TTP21-ELC-AL** **HC-STA-B16-CHWS-1TTP29-ELC-AL**	 1412645 1412646 1412647 1412648	 1 1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

HEAVYCON B - housing

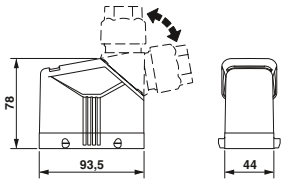
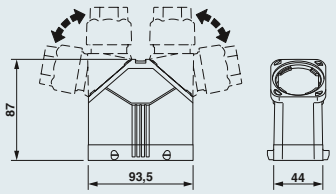
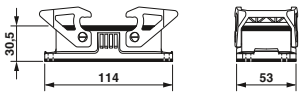
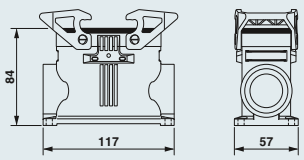
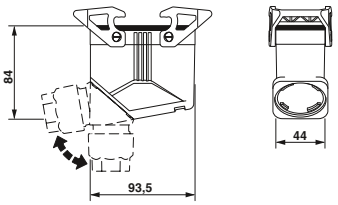
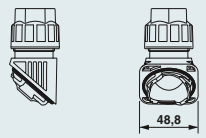
Size B16, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHFD-PLBK**	1407643	1	
Double sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHFD-2B-PL-BK**	1411496	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B16-BWD-PLRBK**	1407648	1	
Box mounting base[1] **Height: 84 mm** 	2x M40	Without cover **HC-EVO-B16-SHWD-2SSM40-PLRBK**	1407652	1	
Coupling housing **Height: 84 mm** 		**HC-EVO-B16-CHWD-PLRBK**	1407655	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	
					

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

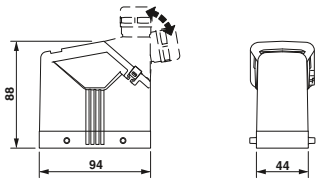
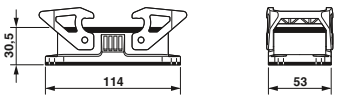
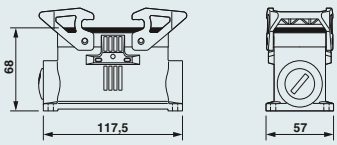
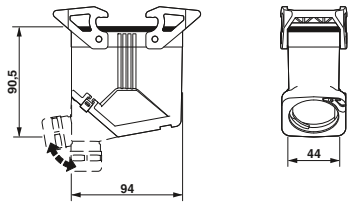
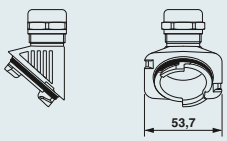
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHFD-EL-AL**	1411460	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B16-BWD-ELC-AL**	1411327	1	
Box mounting base[1] **Height: 54.6 mm** 	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWD-2SSM25-ELC-AL** **HC-STA-B16-SLWD-2SSM32-ELC-AL** **HC-STA-B16-SLWD-2SSP21-ELC-AL**	1412855 1412856 1412857	1 1 1	
Coupling housing **Height: 90.5 mm** 		**HC-EVO-B16-CHWD-ELC-AL**	1411463	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	1411442 1411443 1411444 1411445	1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B16, metal, STANDARD sleeve housing for double locking latch

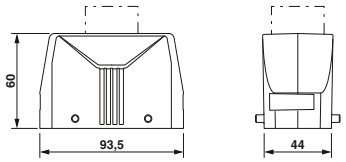
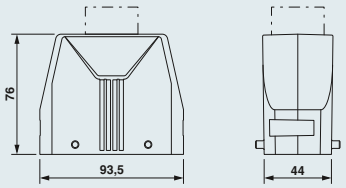
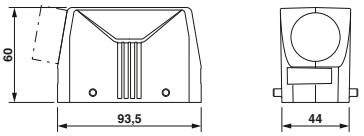
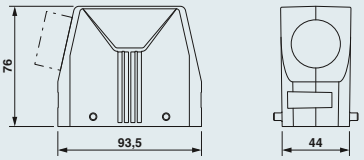
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B16-HLFD-1TTM25-EL-AL**	1412721	1	
	1x M32	**HC-STA-B16-HLFD-1TTM32-EL-AL**	1412722	1	
	1x Pg16	**HC-STA-B16-HLFD-1TTP16-EL-AL**	1412723	1	
	1x Pg21	**HC-STA-B16-HLFD-1TTP21-EL-AL**	1412724	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B16-HHFD-1TTM32-EL-AL**	1412653	1	
	1x M40	**HC-STA-B16-HHFD-1TTM40-EL-AL**	1412654	1	
	1x Pg21	**HC-STA-B16-HHFD-1TTP21-EL-AL**	1412669	1	
	1x Pg29	**HC-STA-B16-HHFD-1TTP29-EL-AL**	1412678	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLFD-1STM25-EL-AL**	1412717	1	
	1x M32	**HC-STA-B16-HLFD-1STM32-EL-AL**	1412718	1	
	1x Pg16	**HC-STA-B16-HLFD-1STP16-EL-AL**	1412719	1	
	1x Pg21	**HC-STA-B16-HLFD-1STP21-EL-AL**	1412720	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHFD-1STM32-EL-AL**	1412649	1	
	1x M40	**HC-STA-B16-HHFD-1STM40-EL-AL**	1412650	1	
	1x Pg21	**HC-STA-B16-HHFD-1STP21-EL-AL**	1412651	1	
	1x Pg29	**HC-STA-B16-HHFD-1STP29-EL-AL**	1412652	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B16, metal, STANDARD supporting base element with double locking latch

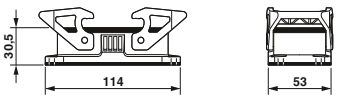
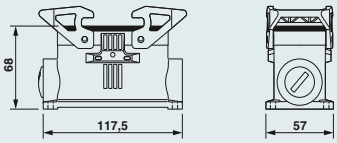
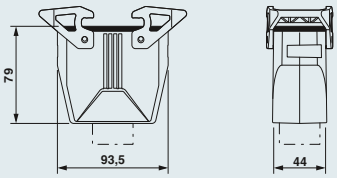
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B16-BWD-ELC-AL**	1411327	1	
Box mounting base[1]) **Height: 54.6 mm** 	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWD-2SSM25-ELC-AL** **HC-STA-B16-SLWD-2SSM32-ELC-AL** **HC-STA-B16-SLWD-2SSP21-ELC-AL**	1412855 1412856 1412857	1 1 1	
Coupling housing **Height: 79 mm** 	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B16-CHWD-1TTM25-ELC-AL** **HC-STA-B16-CHWD-1TTM32-ELC-AL** **HC-STA-B16-CHWD-1TTP21-ELC-AL** **HC-STA-B16-CHWD-1TTP29-ELC-AL**	1412641 1412642 1412643 1412644	1 1 1 1	

Notes:

For further accessories, see page 642

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

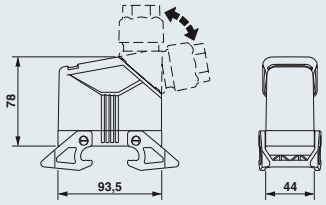
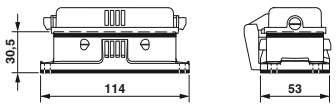
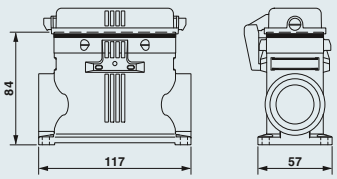
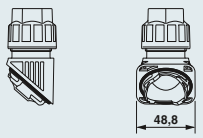
Size B16, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHWD-PLBK**	1407644	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B16-BFDC-PLRBK**	1407649	1	
Box mounting base[1]) **Height: 84 mm** 	2x M40	With cover **HC-EVO-B16-SHFDC-2SSM40-PLRBK**	1407653	1	
Cable gland	**Clamping area**				
	7 mm ... 13 mm	**HC-B-G-M20-PLRBK**	1407669	1	
	9 mm ... 17 mm	**HC-B-G-M25-PLRBK**	1407670	1	
	11 mm ... 21 mm	**HC-B-G-M32-PLRBK**	1407671	1	
	19 mm ... 28 mm	**HC-B-G-M40-PLRBK**	1407672	1	

Notes:

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Replacement latch
From page 652

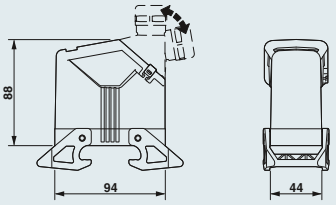
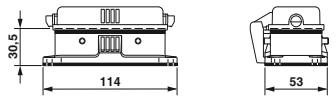
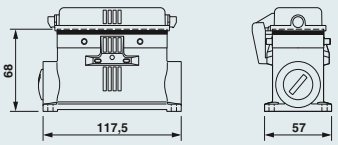
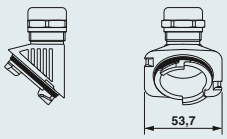
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHWD-EL-AL**	1411462	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B16-BFDC-ELC-AL**	1411328	1	
Box mounting base[1]) **Height: 68 mm** 	2x M25 2x M32 2x Pg16 2x Pg21	With cover **HC-STA-B16-SLFDC-2SSM25-ELC-AL** **HC-STA-B16-SLFDC-2SSM32-ELC-AL** **HC-STA-B16-SLFDC-2SSP16-ELC-AL** **HC-STA-B16-SLFDC-2SSP21-ELC-AL**	1412849 1412850 1412852 1412853	1 1 1 1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-ER-AL** **HC-B-G-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	1411442 1411443 1411444 1411445	1 1 1 1	

Notes:

For further accessories, see page 642

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Replacement latch
From page 652

Size B16, metal, STANDARD sleeve housing with double locking latch

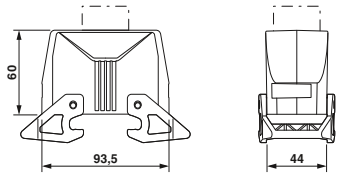
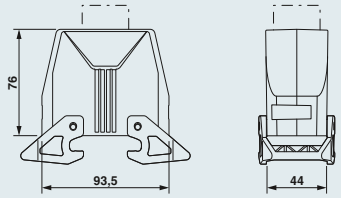
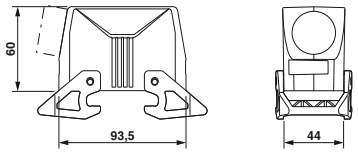
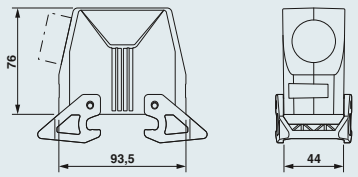
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	PA
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B16-HLWD-1TTM25-EL-AL**	1412738	1	
	1x M32	**HC-STA-B16-HLWD-1TTM32-EL-AL**	1412739	1	
	1x Pg16	**HC-STA-B16-HLWD-1TTP16-EL-AL**	1412740	1	
	1x Pg21	**HC-STA-B16-HLWD-1TTP21-EL-AL**	1412741	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B16-HHWD-1TTM32-EL-AL**	1412708	1	
	1x M40	**HC-STA-B16-HHWD-1TTM40-EL-AL**	1412709	1	
	1x Pg21	**HC-STA-B16-HHWD-1TTP21-EL-AL**	1412715	1	
	1x Pg29	**HC-STA-B16-HHWD-1TTP29-EL-AL**	1412716	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLWD-1STM25-EL-AL**	1412733	1	
	1x M32	**HC-STA-B16-HLWD-1STM32-EL-AL**	1412734	1	
	1x Pg16	**HC-STA-B16-HLWD-1STP16-EL-AL**	1412735	1	
	1x Pg21	**HC-STA-B16-HLWD-1STP21-EL-AL**	1412737	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHWD-1STM32-EL-AL**	1412703	1	
	1x M40	**HC-STA-B16-HHWD-1STM40-EL-AL**	1412704	1	
	1x Pg21	**HC-STA-B16-HHWD-1STP21-EL-AL**	1412705	1	
	1x Pg29	**HC-STA-B16-HHWD-1STP29-EL-AL**	1412706	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Replacement latch
From page 652

Size B16, metal, STANDARD supporting base element for double locking latch

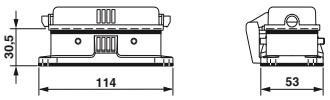
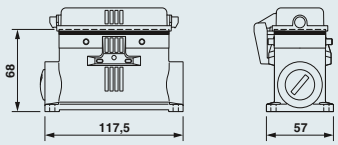
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B16-BFDC-ELC-AL**	1411328	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg16 2x Pg21	With cover **HC-STA-B16-SLFDC-2SSM25-ELC-AL** **HC-STA-B16-SLFDC-2SSM32-ELC-AL** **HC-STA-B16-SLFDC-2SSP16-ELC-AL** **HC-STA-B16-SLFDC-2SSP21-ELC-AL**	 1412849 1412850 1412852 1412853	 1 1 1 1	

Notes:

For further accessories, see page 642

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Cover plates
From page 648

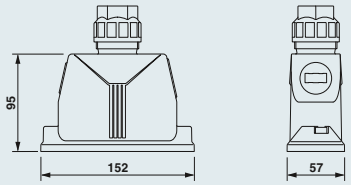
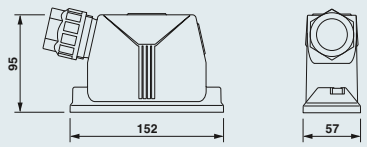
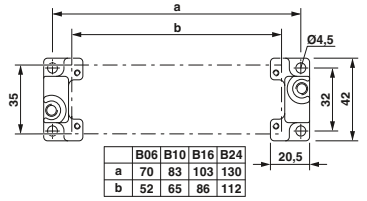
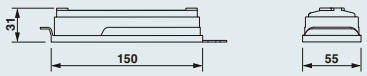
Size B24, plastic, ADVANCE sleeve housing with cable gland



Technical data

General data	
Housing material	Polyamide
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 100 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 95 mm** 	1x M32 1x M40	Cable outlet: top **HC-ADV-B24-HHWH-1TGM32-PL** **HC-ADV-B24-HHWH-1TGM40-PL**	1404235 1404238	1 1	
Sleeve housing **Height: 95 mm** 	1x M32 1x M40	Cable outlet: lateral **HC-ADV-B24-HHWH-1SGM32-PL** **HC-ADV-B24-HHWH-1SGM40-PL**	1404237 1404239	1 1	
Panel mounting flange[1)] 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1	 |	B06	B10	B16	B24 | | a | 70 | 83 | 103 | 130 | | b | 52 | 65 | 86 | 112 |
Protective cover 		For sleeve side, IP50 **HC-B 24-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 24-TMS-SD-IP66**	1690765 1411520	10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1)] Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

Size B24, metal, ADVANCE sleeve housing, Offshore/EMC

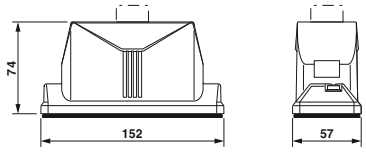
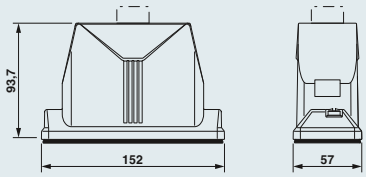
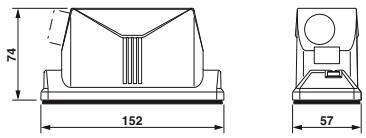
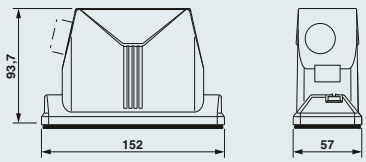
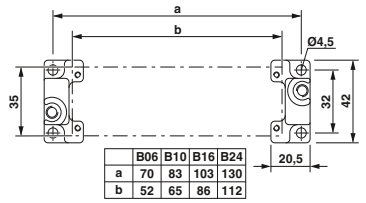
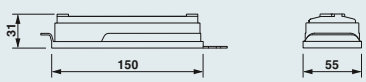
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar/24 h) / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B24-HLWH-1TTM25-EMC-AL**	1414982	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B24-HHWH-1TTM25-EMC-AL** **HC-ADV-B24-HHWH-1TTM32-EMC-AL** **HC-ADV-B24-HHWH-1TTM40-EMC-AL**	 1414980 1413430 1413432	 1 1 1	
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B24-HLWH-1STM25-EMC-AL**	1414983	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B24-HHWH-1STM25-EMC-AL** **HC-ADV-B24-HHWH-1STM32-EMC-AL** **HC-ADV-B24-HHWH-1STM40-EMC-AL**	 1414981 1413431 1413433	 1 1 1	
Panel mounting flange[2]) 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		For sleeve side, IP50 **HC-B 24-TMS-SD-IP50** For panel mounting side, IP66 **HC-B 24-TMS-SD-IP66**	 1690765 1411520	 10 10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws
[2]) Bore hole Ø 4.5 mm when using M4 screws, bore hole Ø 3.6 mm when using self-tapping M4 screws (Torx®)

Accessories



Cable glands
From page 680



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5



Replacement seals
From page 651

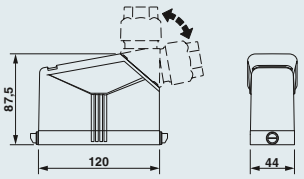
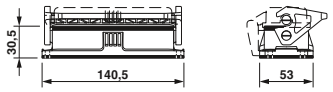
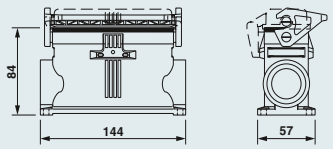
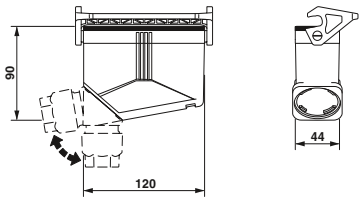
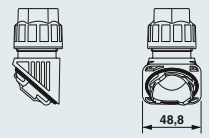
Size B24, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHFS-PLBK**	1407656	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B24-BWS-PLRBK** With cover **HC-EVO-B24-BWSC-PLRBK**	 1407659 1407660	 1 1	
Box mounting base[1]) **Height: 84 mm** 	2x M40 2x M40	Without cover **HC-EVO-B24-SHWS-2SSM40-PLRBK** With cover **HC-EVO-B24-SHWSC-2SSM40-PLRBK**	 1407663 1407664	 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWS-PLRBK**	1407667	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

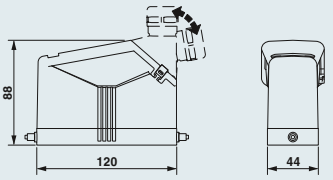
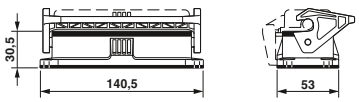
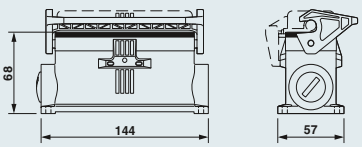
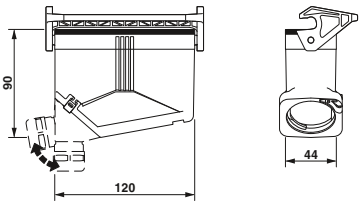
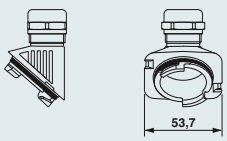
Size B24, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B24-HHFS-EL-AL**	1411473	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B24-BWS-ELC-AL** With cover **HC-STA-B24-BWSC-ELC-AL**	1411329 1411330	1 1	
Box mounting base[1]) **Height: 68 mm** 	2x M25 2x M32 2x Pg21 2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWS-2SSM25-ELC-AL** **HC-STA-B24-SLWS-2SSM32-ELC-AL** **HC-STA-B24-SLWS-2SSP21-ELC-AL** With cover **HC-STA-B24-SLWSC-2SSM25-ELC-AL** **HC-STA-B24-SLWSC-2SSM32-ELC-AL** **HC-STA-B24-SLWSC-2SSP21-ELC-AL**	 1412877 1412878 1412879 1412881 1412882 1412883	 1 1 1 1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWS-ELC-AL**	1411476	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	1411442 1411443 1411444 1411445	1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B24, metal, STANDARD sleeve housing for single locking latch

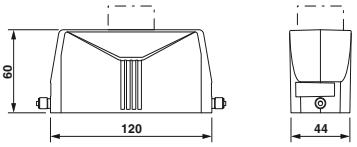
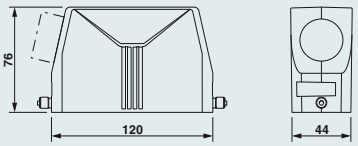
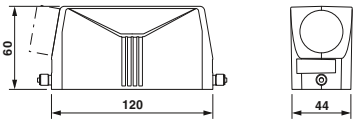
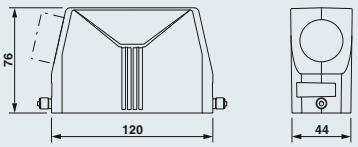
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B24-HLFS-1TTM25-EL-AL**	1412788	1	
	1x M32	**HC-STA-B24-HLFS-1TTM32-EL-AL**	1412789	1	
	1x Pg16	**HC-STA-B24-HLFS-1TTP16-EL-AL**	1412790	1	
	1x Pg21	**HC-STA-B24-HLFS-1TTP21-EL-AL**	1412791	1	
	1x Pg29	**HC-STA-B24-HLFS-1TTP29-EL-AL**	1412792	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B24-HHFS-1TTM32-EL-AL**	1412761	1	
	1x M40	**HC-STA-B24-HHFS-1TTM40-EL-AL**	1412098	1	
	1x Pg21	**HC-STA-B24-HHFS-1TTP21-EL-AL**	1412762	1	
	1x Pg29	**HC-STA-B24-HHFS-1TTP29-EL-AL**	1412763	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLFS-1STM25-EL-AL**	1412783	1	
	1x M32	**HC-STA-B24-HLFS-1STM32-EL-AL**	1412784	1	
	1x Pg16	**HC-STA-B24-HLFS-1STP16-EL-AL**	1412785	1	
	1x Pg21	**HC-STA-B24-HLFS-1STP21-EL-AL**	1412786	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHFS-1STM32-EL-AL**	1412757	1	
	1x M40	**HC-STA-B24-HHFS-1STM40-EL-AL**	1412758	1	
	1x Pg21	**HC-STA-B24-HHFS-1STP21-EL-AL**	1412759	1	
	1x Pg29	**HC-STA-B24-HHFS-1STP29-EL-AL**	1412760	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B24, metal, STANDARD supporting base element with single locking latch

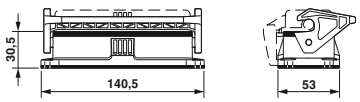
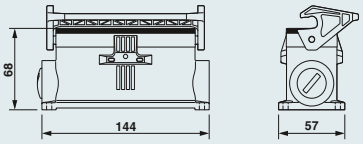
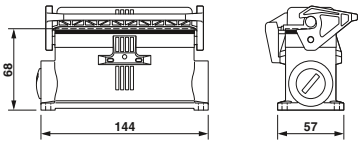
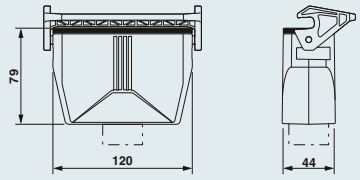
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWS-ELC-AL** With cover **HC-STA-B24-BWSC-ELC-AL**	 1411329 1411330	 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWS-2SSM25-ELC-AL** **HC-STA-B24-SLWS-2SSM32-ELC-AL** **HC-STA-B24-SLWS-2SSP21-ELC-AL**	 1412877 1412878 1412879	 1 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLWSC-2SSM25-ELC-AL** **HC-STA-B24-SLWSC-2SSM32-ELC-AL** **HC-STA-B24-SLWSC-2SSP21-ELC-AL**	 1412881 1412882 1412883	 1 1 1	
Coupling housing **Height: 77 mm**	1x M32 1x M40 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B24-CHWS-1TTM32-ELC-AL** **HC-STA-B24-CHWS-1TTM40-ELC-AL** **HC-STA-B24-CHWS-1TTP21-ELC-AL** **HC-STA-B24-CHWS-1TTP29-ELC-AL**	 1412746 1412747 1412748 1412749	 1 1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

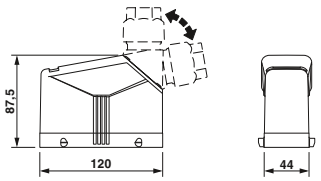
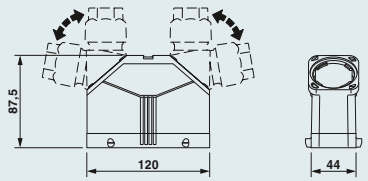
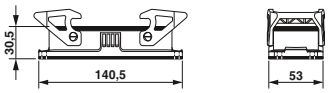
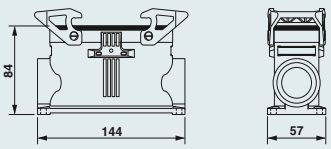
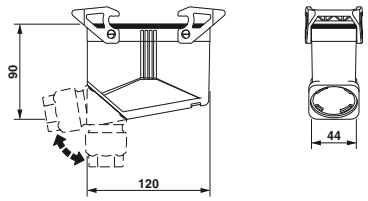
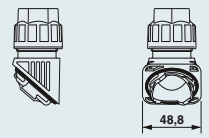
Size B24, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHFD-PLBK**	1407657	1	
Double sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHFD-2B-PL-BK**	1411497	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B24-BWD-PLRBK**	1407661	1	
Box mounting base[1] **Height: 84 mm** 	2x M40	Without cover **HC-EVO-B24-SHWD-2SSM40-PLRBK**	1407665	1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWD-PLRBK**	1407668	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	**HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Connector set
From page 622

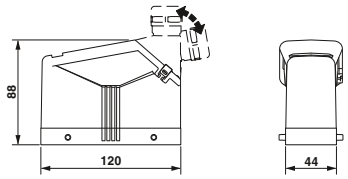
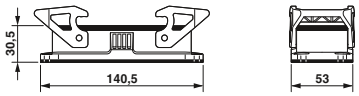
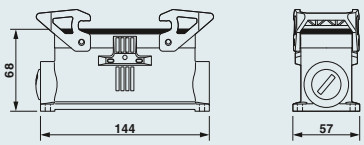
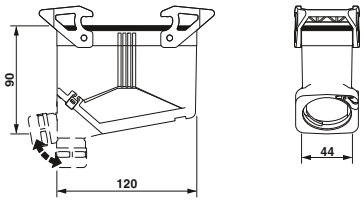
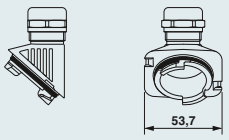
Size B24, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B24-HHFD-EL-AL**	1411472	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWD-ELC-AL**	1411331	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWD-2SSM25-ELC-AL** **HC-STA-B24-SLWD-2SSM32-ELC-AL** **HC-STA-B24-SLWD-2SSP21-ELC-AL**	1412873 1412874 1412875	1 1 1	
Coupling housing **Height: 90 mm**		**HC-EVO-B24-CHWD-ELC-AL**	1411475	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	 1411442 1411443 1411444 1411445	 1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Connector set
From page 623

Size B24, metal, STANDARD sleeve housing for double locking latch

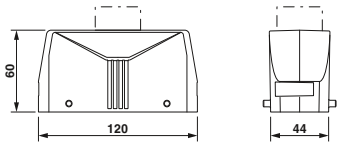
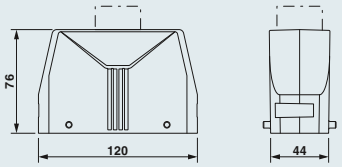
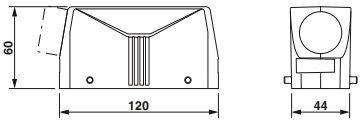
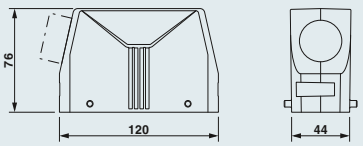
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm		Cable outlet: top			
	1x M25	**HC-STA-B24-HLFD-1TTM25-EL-AL**	1412778	1	
	1x M32	**HC-STA-B24-HLFD-1TTM32-EL-AL**	1412779	1	
	1x Pg16	**HC-STA-B24-HLFD-1TTP16-EL-AL**	1412780	1	
	1x Pg21	**HC-STA-B24-HLFD-1TTP21-EL-AL**	1412781	1	
	1x Pg29	**HC-STA-B24-HLFD-1TTP29-EL-AL**	1412782	1	
Sleeve housing Height: 76 mm		Cable outlet: top			
	1x M32	**HC-STA-B24-HHFD-1TTM32-EL-AL**	1412754	1	
	1x M40	**HC-STA-B24-HHFD-1TTM40-EL-AL**	1412099	1	
	1x Pg21	**HC-STA-B24-HHFD-1TTP21-EL-AL**	1412755	1	
	1x Pg29	**HC-STA-B24-HHFD-1TTP29-EL-AL**	1412756	1	
Sleeve housing Height: 60 mm		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLFD-1STM25-EL-AL**	1412773	1	
	1x M32	**HC-STA-B24-HLFD-1STM32-EL-AL**	1412774	1	
	1x Pg16	**HC-STA-B24-HLFD-1STP16-EL-AL**	1412775	1	
	1x Pg21	**HC-STA-B24-HLFD-1STP21-EL-AL**	1412776	1	
Sleeve housing Height: 76 mm		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHFD-1STM32-EL-AL**	1412750	1	
	1x M40	**HC-STA-B24-HHFD-1STM40-EL-AL**	1412751	1	
	1x Pg21	**HC-STA-B24-HHFD-1STP21-EL-AL**	1412752	1	
	1x Pg29	**HC-STA-B24-HHFD-1STP29-EL-AL**	1412753	1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Cover plates
From page 648



Connector set
From page 624

Size B24, metal, STANDARD base element with double locking latch

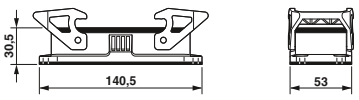
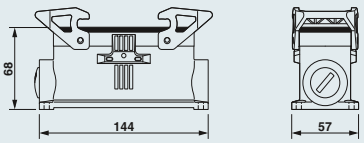
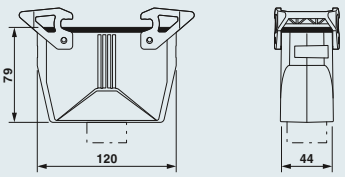
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWD-ELC-AL**	1411331	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWD-2SSM25-ELC-AL** **HC-STA-B24-SLWD-2SSM32-ELC-AL** **HC-STA-B24-SLWD-2SSP21-ELC-AL**	 1412873 1412874 1412875	 1 1 1	
Coupling housing **Height: 77 mm**	1x M32 1x M40 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B24-CHWD-1TTM32-ELC-AL** **HC-STA-B24-CHWD-1TTM40-ELC-AL** **HC-STA-B24-CHWD-1TTP21-ELC-AL** **HC-STA-B24-CHWD-1TTP29-ELC-AL**	 1412742 1412743 1412744 1412745	 1 1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Replacement latch
From page 652

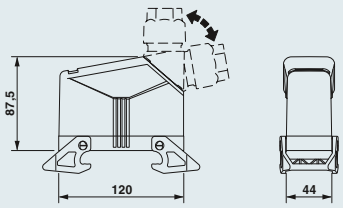
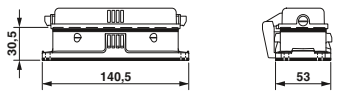
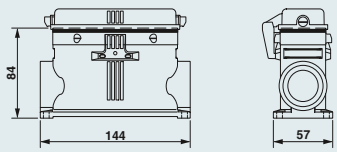
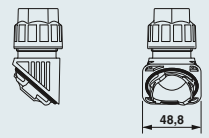
Size B24, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHWD-PLBK**	1407658	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B24-BFDC-PLRBK**	1407662	1	
Box mounting base[1] **Height: 84 mm** 	2x M40	With cover **HC-EVO-B24-SHFDC-2SSM40-PLRBK**	1407666	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	**HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:

For further accessories, see from page 642

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 653



Thread adapter
From page 643



Replacement seals
From page 650



Replacement latch
From page 652

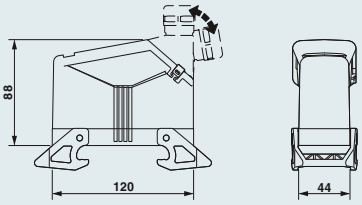
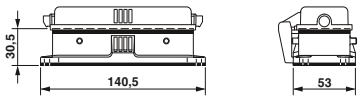
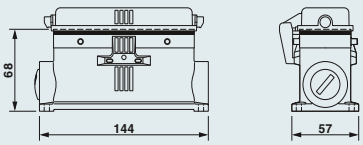
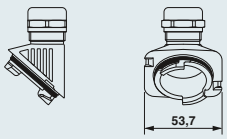
Size B24, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B24-HHWD-EL-AL**	1411474	1	
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B24-BFDC-ELC-AL**	1411332	1	
Box mounting base[1] **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLFDC-2SSM25-ELC-AL** **HC-STA-B24-SLFDC-2SSM32-ELC-AL** **HC-STA-B24-SLFDC-2SSP21-ELC-AL**	1412869 1412870 1412871	1 1 1	
Cable gland	**Clamping area** 7 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-ER-AL** **HC-B-G-M25-ER-AL** **HC-B-G-M32-ER-AL** **HC-B-G-M40-ER-AL**	1411442 1411443 1411444 1411445	1 1 1 1	

Notes:

For further accessories, see page 642

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 643



EMC cable gland
From page 642



Replacement seals
From page 650



Replacement latch
From page 652

Size B24, metal, STANDARD sleeve housing with double locking latch

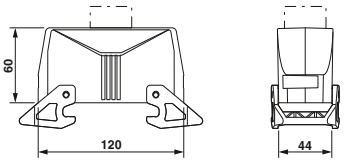
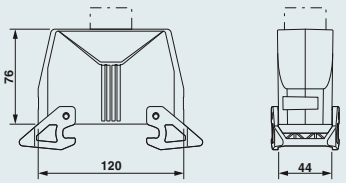
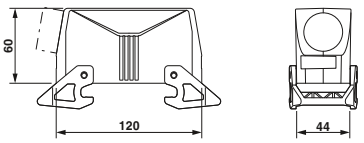
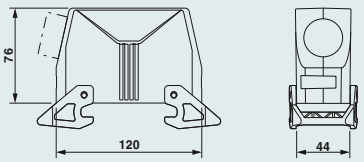
new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Locking latch material	PA
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B24-HLWD-1TTM25-EL-AL**	1412799	1	
	1x M32	**HC-STA-B24-HLWD-1TTM32-EL-AL**	1412800	1	
	1x Pg16	**HC-STA-B24-HLWD-1TTP16-EL-AL**	1412801	1	
	1x Pg21	**HC-STA-B24-HLWD-1TTP21-EL-AL**	1412802	1	
	1x Pg29	**HC-STA-B24-HLWD-1TTP29-EL-AL**	1412803	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B24-HHWD-1TTM32-EL-AL**	1412769	1	
	1x M40	**HC-STA-B24-HHWD-1TTM40-EL-AL**	1412770	1	
	1x Pg21	**HC-STA-B24-HHWD-1TTP21-EL-AL**	1412771	1	
	1x Pg29	**HC-STA-B24-HHWD-1TTP29-EL-AL**	1412772	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLWD-1STM25-EL-AL**	1412793	1	
	1x M32	**HC-STA-B24-HLWD-1STM32-EL-AL**	1412795	1	
	1x Pg16	**HC-STA-B24-HLWD-1STP16-EL-AL**	1412796	1	
	1x Pg21	**HC-STA-B24-HLWD-1STP21-EL-AL**	1412797	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHWD-1STM32-EL-AL**	1412764	1	
	1x M40	**HC-STA-B24-HHWD-1STM40-EL-AL**	1412766	1	
	1x Pg21	**HC-STA-B24-HHWD-1STP21-EL-AL**	1412767	1	
	1x Pg29	**HC-STA-B24-HHWD-1STP29-EL-AL**	1412768	1	

Notes:
For further accessories, see page 642
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 680



Protective cover
From page 646



Replacement latch
From page 652

Size B24, metal, STANDARD supporting base element for double locking latch

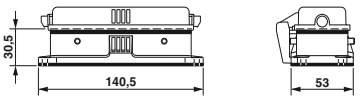
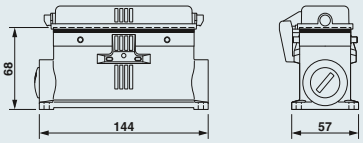
new



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	-
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B24-BFDC-ELC-AL**	1411332	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLFDC-2SSM25-ELC-AL** **HC-STA-B24-SLFDC-2SSM32-ELC-AL** **HC-STA-B24-SLFDC-2SSP21-ELC-AL**	1412869 1412870 1412871	1 1 1	

Notes:
For further accessories, see page 642
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 680



Replacement seals
From page 651



Replacement protective cover
From page 647



Cover plates
From page 648

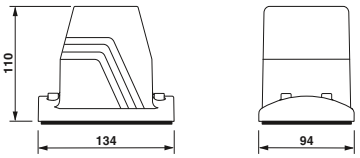
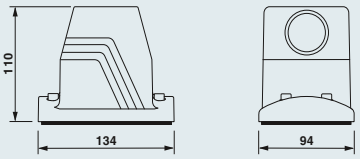
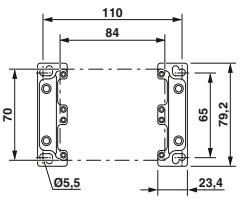
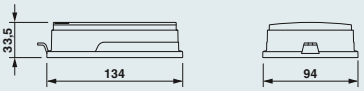
Size B32, metal, ADVANCE sleeve housing, Offshore/EMC



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP68 (0.2 bar 24 h) / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 6P / 12

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 110 mm		Cable outlet: top			
	1x M32	**HC-B 32-TMS-100-O1STM32G-EEE**	1580516	6	
	1x M40	**HC-B 32-TMS-100-O1STM40G-EEE**	1580518	6	
	1x M50	**HC-B 32-TMS-100-O1STM50G-EEE**	1580522	6	
Sleeve housing[1]) Height: 110 mm		Cable outlet: lateral			
	1x M32	**HC-B 32-TMS-100-O1STM32S-EEE**	1580517	6	
	1x M40	**HC-B 32-TMS-100-O1STM40S-EEE**	1580519	6	
	1x M50	**HC-B 32-TMS-100-O1STM50S-EEE**	1580521	6	
Panel mounting flange[2])		2 pcs. per housing			
		**HC-B 32/48-AF**	1580524	20	
		Set with 2 panel mounting flanges			
		HC-B 32/48-AF-SET	1580523	1	
IP65 protective cover		**HC-B 32-TMS-SD-IP65**	1580539	6	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws
[2]) Bore hole Ø 5.5 mm when using M4 screws, bore hole Ø 4.5 mm when using self-tapping M5 screws (Torx®)

Accessories



Cable glands
From page 680



Box mounting base
phoenixcontact.net/products



Allen key
See Catalog 5

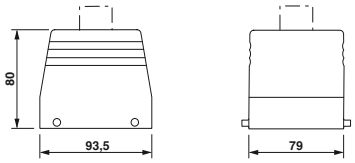
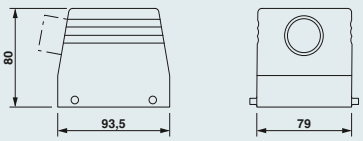
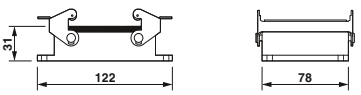
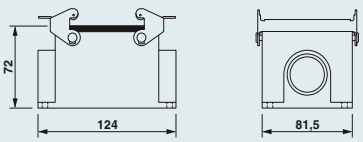
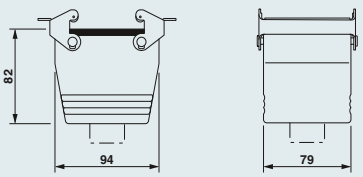
Size B32, metal, housing, double locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 80 mm**		Cable outlet: top			
	1x M32	**HC-B 32-TFQ-80/O1STM32G**	1645383	10	
	1x M40	**HC-B 32-TFQ-80/O1STM40G**	1647307	10	
	1x M50	**HC-B 32-TFQ-80/O1STM50G**	1460197	10	
	1x Pg29	**HC-B 32-TFQ-80/O1PG29G**	1675081	10	
	1x Pg36	**HC-B 32-TFQ-80/O1PG36G**	1460138	10	
Sleeve housing **Height: 80 mm**		Cable outlet: lateral			
	1x M32	**HC-B 32-TFQ-80/O1STM32S**	1645150	10	
	1x M40	**HC-B 32-TFQ-80/O1STM40S**	1645451	10	
	1x M50	**HC-B 32-TFQ-80/O1STM50S**	1585980	10	
	1x Pg29	**HC-B 32-TFQ-80/O1PG29S**	1675094	10	
	1x Pg36	**HC-B 32-TFQ-80/O1PG36S**	1644818	10	
Panel mounting base **Height: 31 mm**		Without cover			
		**HC-B 32-AMQ**	1775693	10	
Box mounting base **Height: 72 mm**		Without cover			
	1x M32	**HC-B 32-SMQ-72/O1M32**	1604867	10	
	1x Pg29	**HC-B 32-SMQ-72/O1PG29**	1675036	10	
	2x M32	**HC-B 32-SMQ-72/O2M32**	1604868	10	
	2x M40	**HC-B 32-SMQ-72/O2M40**	1604869	10	
	2x Pg29	**HC-B 32-SMQ-72/O2PG29**	1675049	10	
Coupling housing **Height: 82 mm**		Cable outlet: top			
	1x M32	**HC-B 32-KMQ-82/O1STM32**	1647284	10	
	1x M40	**HC-B 32-KMQ-82/O1STM40**	1647297	10	
	1x Pg21	**HC-B 32-KMQ-82/O1PG21**	1675010	10	
	1x Pg29	**HC-B 32-KMQ-82/O1PG29**	1675023	10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Flat gaskets
From page 651



Cover plates
From page 648

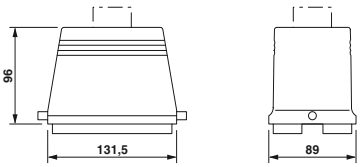
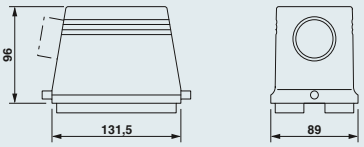
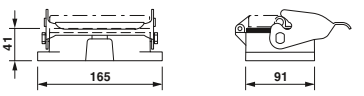
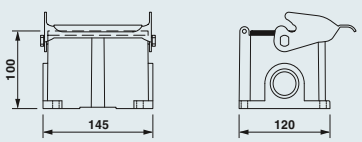
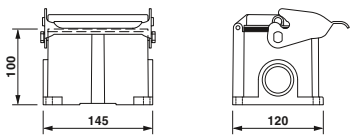
Size B48, metal, housing, single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 96 mm** 		Cable outlet: top			
	1x M32	**HC-B 48-TFL-96/O1STM32G**	1647349	1	
	1x M40	**HC-B 48-TFL-96/O1STM40G**	1647310	1	
	1x M50	**HC-B 48-TFL-96/O1STM50G**	1460337	10	
	1x Pg29	**HC-B 48-TFL-96/O1PG29G**	1675159	1	
	1x Pg36	**HC-B 48-TFL-96/O1PG36G**	1675175	1	
Sleeve housing **Height: 96 mm** 		Cable outlet: lateral			
	1x M32	**HC-B 48-TFL-96/O1STM32S**	1647336	1	
	1x M40	**HC-B 48-TFL-96/O1STM40S**	1647323	1	
	1x M50	**HC-B 48-TFL-96/O1STM50S**	1460351	10	
	1x Pg29	**HC-B 48-TFL-96/O1PG29S**	1675162	1	
	1x Pg36	**HC-B 48-TFL-96/O1PG36S**	1675188	1	
Panel mounting base **Height: 41 mm** 		Without cover			
		HC-B 48-AML	1772175	1	
		With cover			
		HC-B 48-AMLD	1772188	1	
Box mounting base **Height: 100 mm** 		Without cover			
	1x M32	**HC-B 48-SML-100/O1M32**	1604875	1	
	1x Pg29	**HC-B 48-SML-100/O1PG29**	1675117	1	
	2x M32	**HC-B 48-SML-100/O2M32**	1460228	10	
	2x M40	**HC-B 48-SML-100/O2M40**	1604876	1	
	2x Pg29	**HC-B 48-SML-100/O2PG29**	1675120	1	
	2x Pg36	**HC-B 48-SML-100/O2PG36**	1460248	10	
Box mounting base **Height: 100 mm** 		With cover			
	1x M32	**HC-B 48-SMLD-100/O1M32**	1604877	1	
	2x M40	**HC-B 48-SMLD-100/O2M40**	1604878	1	
	2x Pg36	**HC-B 48-SMLD-100/O2PG36**	1460037	10	

Notes:

For further accessories, see page 642

Accessories



Cable glands
From page 680



Flat gaskets
From page 651



Cover plates
From page 648

Connector sets, EVO housing, plastic, push-in connection



Technical data

General data	
Housing material	Polyamide
Sealing material	NBR
Inflammability class in acc. with UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set 	6	B6	Single locking latch, with cover **HC-EVO-B06PT-BWSC-HL-M20-PLRBK**	1407710	1	
Connector set 	10	B10	Single locking latch, with cover **HC-EVO-B10PT-BWSC-HL-M25-PLRBK**	1408791	1	
	10	B10	Double locking latch, without cover **HC-EVO-B10PT-BWD-HL-M25-PLRBK**	1407711	1	
Connector set 	16	B16	Single locking latch, with cover **HC-EVO-B16PT-BWSC-HH-M25-PLRBK**	1408793	1	
	16	B16	Double locking latch, without cover **HC-EVO-B16PT-BWD-HH-M25-PLRBK**	1407712	1	
Connector set 	24	B24	Single locking latch, with cover **HC-EVO-B24PT-BWSC-HH-M32-PLRBK**	1408794	1	
	24	B24	Double locking latch, without cover **HC-EVO-B24PT-BWD-HH-M32-PLRBK**	1407713	1	
Sample kit 			**CASE HC EVO OVERVIEW**	5053053	1	

Notes:
For further accessories, see page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



EVO unlocking
From page 653



Replacement latch
From page 652



Replacement seals
From page 650

Connector sets, EVO housing, metal, push-in connection

new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Sealing material	NBR, conductive
Inflammability class in acc. with UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set	6	B6	Single locking latch, with cover **HC-EVO-B06PT-BWSC-HL-M20ELC-AL**	1411487	1	
Connector set	10	B10	Single locking latch, with cover **HC-EVO-B10PT-BWSC-HL-M25ELC-AL**	1411491	1	
	10	B10	Double locking latch, without cover **HC-EVO-B10PT-BWD-HL-M25ELC-AL**	1411488	1	
Connector set	16	B16	Single locking latch, with cover **HC-EVO-B16PT-BWSC-HH-M25ELC-AL**	1411492	1	
	16	B16	Double locking latch, without cover **HC-EVO-B16PT-BWD-HH-M25ELC-AL**	1411489	1	
Connector set	24	B24	Single locking latch, with cover **HC-EVO-B24PT-BWSC-HH-M32ELC-AL**	1411493	1	
	24	B24	Double locking latch, without cover **HC-EVO-B24PT-BWD-HH-M32ELC-AL**	1411490	1	
Sample kit			**CASE HC EVO OVERVIEW**	5053053	1	

Notes:
For further accessories, see page 634
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 652



Replacement seals
From page 650

Connector sets, STANDARD housing, metal, push-in connection

new



Technical data

General data	
Housing material	Aluminum, corrosion resistant
Sealing material	NBR
Inflammability class in acc. with UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: top						
	6	B6	Single locking latch, with cover **HC-STA-B06PT-BWSC-LT-M20-ELCAL**	1416344	1	
Connector set, cable outlet: top						
	10	B10	Single locking latch, with cover **HC-STA-B10PT-BWSC-LT-M25-ELCAL**	1416345	1	
	10	B10	Double locking latch, without cover **HC-STA-B10PT-BWD-LT-M25-ELCAL**	1416346	1	
Connector set, cable outlet: top						
	16	B16	Single locking latch, with cover **HC-STA-B16PT-BWSC-LT-M25-ELCAL**	1416348	1	
	16	B16	Double locking latch, without cover **HC-STA-B16PT-BWD-LT-M25-ELCAL**	1416349	1	
Connector set, cable outlet: top						
	24	B24	Single locking latch, with cover **HC-STA-B24PT-BWSC-LT-M32-ELCAL**	1416351	1	
	24	B24	Double locking latch, without cover **HC-STA-B24PT-BWD-LT-M32-ELCAL**	1416352	1	

Notes:

- For further accessories, see page 634
- Only operate connectors when there is no load/the power is switched off
- For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 652



Replacement seals
From page 650

Connector sets, STANDARD housing, metal, push-in connection

new



Technical data

General data	
Housing material	Die-cast aluminum, corrosion resistant
Sealing material	NBR
Inflammability class in acc. with UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP66 / IP69K (ISO 20653:2013-02)
NEMA degree of protection (when plugged in)	4 / 4X / 12

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: lateral						
	6	B6	Single locking latch, with cover **HC-STA-B06PT-BWSC-LS-M20-ELCAL**	1416353	1	
Connector set, cable outlet: lateral						
	10	B10	Single locking latch, with cover **HC-STA-B10PT-BWSC-LS-M25-ELCAL**	1416354	1	
	10	B10	Double locking latch, without cover **HC-STA-B10PT-BWD-LS-M25-ELCAL**	1416355	1	
Connector set, cable outlet: lateral						
	16	B16	Single locking latch, with cover **HC-STA-B16PT-BWSC-LS-M25-ELCAL**	1416356	1	
	16	B16	Double locking latch, without cover **HC-STA-B16PT-BWD-LS-M25-ELCAL**	1416357	1	
Connector set, cable outlet: lateral						
	24	B24	Single locking latch, with cover **HC-STA-B24PT-BWSC-LS-M32-ELCAL**	1416358	1	
	24	B24	Double locking latch, without cover **HC-STA-B24PT-BWD-LS-M32-ELCAL**	1416359	1	

Notes:

- For further accessories, see page 634
- Only operate connectors when there is no load/the power is switched off
- For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 652



Replacement seals
From page 650

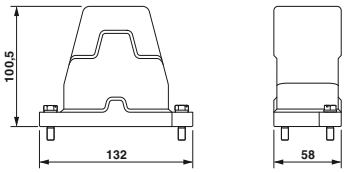
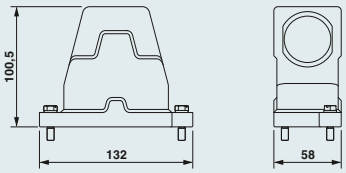
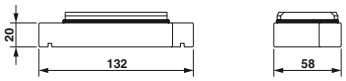
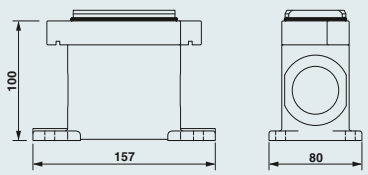
Size B6, metal, housing for railway applications, screw locking



Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP68 (0.5 bar, 24 h) / IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 100.5 mm** 	1x M20 1x M25	Cable outlet: top **HC-HPR-B06-HHWH-1TTM20-EM-BK** **HC-HPR-B06-HHWH-1TTM25-EM-BK**	1411879 1411106	1 1	
Sleeve housing **Height: 100.5 mm** 	1x M20 1x M25	Cable outlet: lateral **HC-HPR-B06-HHWH-1STM20-EM-BK** **HC-HPR-B06-HHWH-1STM25-EM-BK**	1411878 1411119	1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B06-BFH-EMR-BK**	1411122	1	
Box mounting base **Height: 100 mm** 	2x M20 2x M25	Without cover **HC-HPR-B06-SHFH-2SSM20-EMR-BK** **HC-HPR-B06-SHFH-2SSM25-EMR-BK**	1411880 1411135	1 1	

Accessories



Cable glands
From page 680

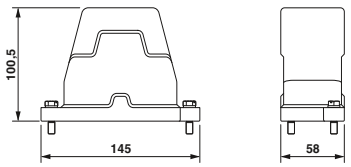
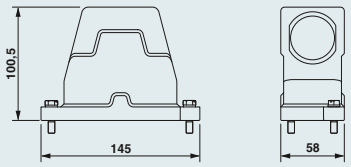
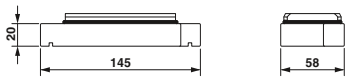
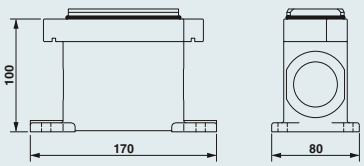
Size B10, metal, housing for railway applications, screw locking



Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP68 (0.5 bar, 24 h) / IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 100.5 mm**		Cable outlet: top			
	1x M25	**HC-HPR-B10-HHWH-1TTM25-EM-BK**	1411882	1	
	1x M32	**HC-HPR-B10-HHWH-1TTM32-EM-BK**	1411067	1	
Sleeve housing **Height: 100.5 mm**		Cable outlet: lateral			
	1x M25	**HC-HPR-B10-HHWH-1STM25EM-BK**	1411881	1	
	1x M32	**HC-HPR-B10-HHWH-1STM32-EM-BK**	1411070	1	
Panel mounting base **Height: 20 mm**		Without cover			
		**HC-HPR-B10-BFH-EMR-BK**	1411083	1	
Box mounting base **Height: 100 mm**		Without cover			
	2x M25	**HC-HPR-B10-SHFH-2SSM25-EMR-BK**	1411883	1	
	2x M32	**HC-HPR-B10-SHFH-2SSM32-EMR-BK**	1411096	1	

Accessories



Cable glands
From page 680

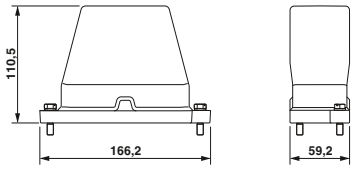
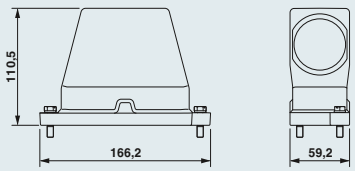
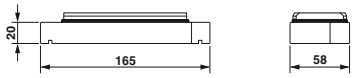
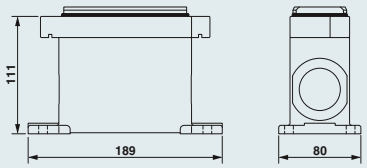
Size B16, metal, housing for railway applications, screw locking



Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP68 (0.5 bar, 24 h) / IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable outlet: top **HC-HPR-B16-HHWH-1TTM32-EM-BK** **HC-HPR-B16-HHWH-1TTM40-EM-BK**	 **1411059** **1411885**	 1 1	
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable outlet: lateral **HC-HPR-B16-HHWH-1STM32-EM-BK** **HC-HPR-B16-HHWH-1STM40-EM-BK**	 **1411058** **1411884**	 1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B16-BFH-EMR-BK**	 **1411060**	 1	
Box mounting base **Height: 111 mm** 	2x M32 2x M40	Without cover **HC-HPR-B16-SHFH-2SSM32-EMR-BK** **HC-HPR-B16-SHFH-2SSM40-EMR-BK**	 **1411054** **1411886**	 1 1	

Accessories



Cable glands
From page 680

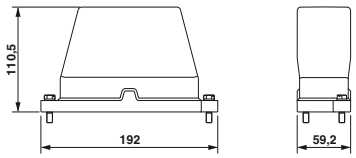
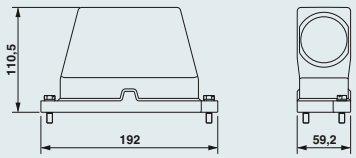
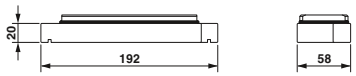
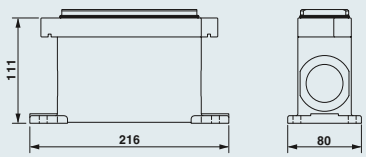
Size B24, metal, housing for railway applications, screw locking



Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP68 (0.5 bar, 24 h) / IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 110.5 mm**		Cable outlet: top			
	1x M32	**HC-HPR-B24-HHWH-1TTM32-EM-BK**	1411888	1	
	1x M40	**HC-HPR-B24-HHWH-1TTM40-EM-BK**	1411062	1	
Sleeve housing **Height: 110.5 mm**		Cable outlet: lateral			
	1x M32	**HC-HPR-B24-HHWH-1STM32-EM-BK**	1411887	1	
	1x M40	**HC-HPR-B24-HHWH-1STM40-EM-BK**	1411061	1	
Panel mounting base **Height: 20 mm**		Without cover			
		**HC-HPR-B24-BFH-EMR-BK**	1411055	1	
Box mounting base **Height: 111 mm**		Without cover			
	2x M32	**HC-HPR-B24-SHFH-2SSM32-EM-BK**	1411889	1	
	2x M40	**HC-HPR-B24-SHFH-2SSM40-EM-BK**	1411063	1	

Accessories



Cable glands
From page 680

Compact series

200 - 690 V, 10 - 40 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see cross-reference list on page 482.

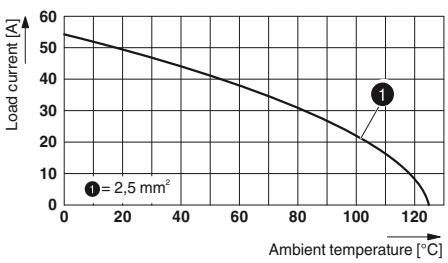
Notes:
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
For connection technologies, see page 4



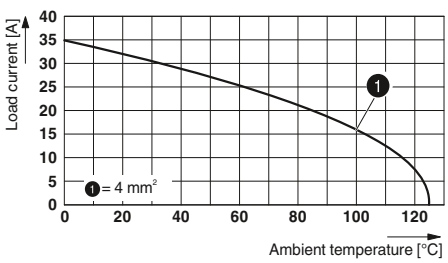
Technical data

Type		① HC-COM- 8-E...C	② HC-COM- 17-E...C	③ HC-COM- 4/2-E...C Power contacts	③ HC-COM- 4/2-E...C Control contacts
Approvals		cULus EAC	cULus EAC	cULus EAC	
IEC data					
Rated current, contacts (at 40°C)	A	16	10	40	10
Surge voltage category		III	III	III	
Pollution degree		3	3	3	
Rated voltage (III/3) contacts	V	500	200	400 / 690	250
Rated surge voltage, contacts	kV	6	4	6	4
Connection cross section	mm²	0.5 ... 4	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5
UL data					
Rated voltage	V	600	600	600	-
Rated current	A	-	19.5	40	-
Connection cross section	AWG	20-12	22-14	16-10	-
CSA / cUL data					
Rated voltage	V	600	600	600	-
Rated current	A	-	10.5	30	-
Connection cross section	AWG	20-12	22-14	16-10	-
Material data					
Contact carrier material		PC	PC	PC	
Inflammability class in acc. with UL 94		V0	V0	V0	
Contact material		Copper alloy	Copper alloy	Copper alloy	
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 100	-40 ... 100	-40 ... 100	
General data					
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	mm	7.5	8	9	8
				9.6	6
No. of pos.		8	17	4	2
Contact numbering		1 - 8	1 - 17	1 - 4	1 - 2
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	

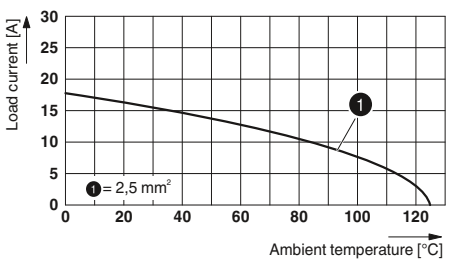
Derating curves



HC-COM- 4/2-E...C



HC-COM- 8-E...C

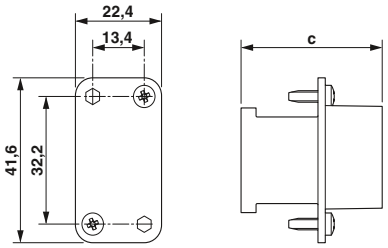


HC-COM- 17-E...C

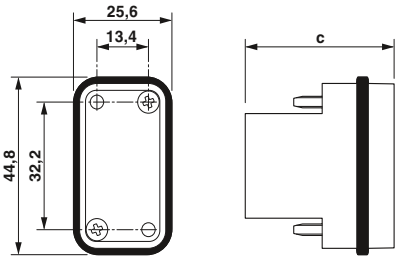
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection CK 2,5							
	8	1 - 8	COM	① HC-COM- 8-E...C	1408494	1408481	2
Crimp connection CK 1,6							
	17	1 - 17	COM	② HC-COM- 17-E...C	1408478	1408465	2
Crimp connection CK 4,0/CK 1,6							
	4 / 2	1 - 4	COM	③ HC-COM- 4/2-E...C	1408517	1408504	2
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,37... AG	1663394	1663336	100
			0.5 / 20	CK1,6-ED-0,50... AG	1663404	1663349	100
			0.75 / 18	CK1,6-ED-0,75... AG	1663417	1663352	100
			0.75 - 1 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100
			1.5 / 16	CK1,6-ED-1,50... AG	1663433	1663378	100
			2.5 / 14	CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 4,0 Silver-plated			**Cross section mm² / AWG**				
			1.5 / 16	CK4,0-ED-1,50... AG	1663271	1663239	25
			2.5 / 14	CK4,0-ED-2,50... AG	1663284	1663242	25
			4 / 12	CK4,0-ED-4,00... AG	1663297	1663255	25
			6 / 10	CK4,0-ED-6,00... AG	1663307	1663268	25

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: plug

		a	b	c	d
①	Socket			38.5	
	Plug				
②	Socket			36.7	
	Plug			38.7	
③	Socket			48.05	
	Plug				

Accessories



Dummy sockets
From page 639



Crimping tools
From page 636



Crimp contacts, gold-plated
phoenixcontact.net/products

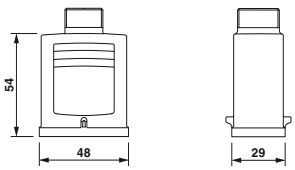
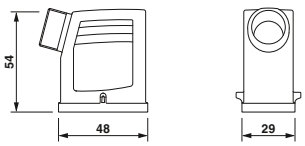
Compact series, plastic, sleeve housing



Technical data

General data	
Housing material	Polycarbonate
Lock material	-
Sealing material	-
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65 / IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 54 mm** 	1x Pg16	Cable outlet: top **HC-COM-K-TFL-O1PG16-G**	1408342	2	
Sleeve housing **Height: 54 mm** 	1x Pg16	Cable outlet: lateral **HC-COM-K-TFL-O1PG16-S**	1408339	2	
Pg16 cable gland 		**VC-K-KV-PG16(9-13)** **VC-K-KV-PG16(11,5-15,5)**	1853764 1854844	5 5	

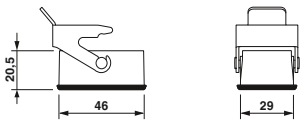
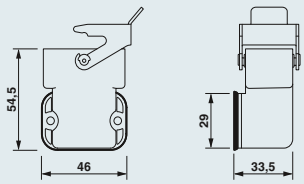
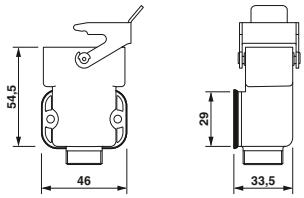
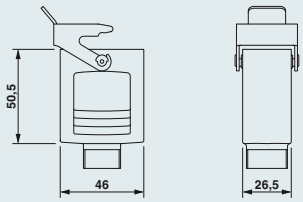
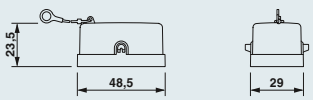
Compact series, plastic, supporting base element



Technical data

General data	
Housing material	Polycarbonate
Lock material	Stainless steel
Sealing material	NBR
Ambient temperature (operation)	-40 °C ... 125 °C
IP degree of protection (when plugged in)	IP65 / IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 20.5 mm** 		Straight version **HC-COM-K-AML-GR**	1408355	2	
Panel mounting base **Height: 33.5 mm** 		Angled version **HC-COM-K-AML-GW**	1408368	2	
Box mounting base **Height: 33.5 mm** 	1x Pg16	**HC-COM-K-SML-O1PG16**	1408371	2	
Coupling housing **Height: 50.5 mm** 	1x Pg16	**HC-COM-K-KML-O1PG16**	1408384	2	
Pg16 cable gland 		**HC-COM-K-KV-PG16(9-12) SML** **HC-COM-K-KV-PG16(11,5-15) SML**	1409286 1409299	2 2	
Protective cover, plastic 		Socket **HC-COM-K-SD-FLU-BU/FS** Plug **HC-COM-K-SD-FLU-ST/FS**	1408397 1408407	2 2	

Notes:

Box mounting base with open bottom

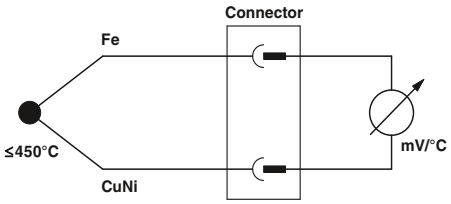
Type J iron and constantan crimp contacts

In hot runner injection molding machines, temperatures are often measured using iron/constantan thermocouples. Iron/constantan elements are used for temperatures up to around 450°C.

When measuring the temperatures using iron/constantan elements, the control system is connected with iron/constantan conductors. The connection point of the iron or constantan conductor to a brass crimp contact of a connector would result in thermoelectric voltages that can falsify the measuring result. We therefore recommend using iron/constantan crimp contacts.

Iron/constantan crimp contacts can be used in contact inserts of the A / B / BB / HV series and in the HC-M-HV-..., HC-M-06..., HC-M-08..., HC-M-20-... modules.

A combination (standard contacts/thermo contacts) of crimp contact inserts is also possible.





Turned crimp contacts, for contact inserts:
HC-M-06, HC-M-HV, HC-M-08, HC-M-20, HC-B, HC-BB, HC-A, HC-HV

Technical data

Material data	CK2,5-ED...FE	CK2,5-ED...CUNI
Contact material	Iron	Copper-nickel (constants)
Contact surface material	Hard gold-plated	-
Stripping length of the individual wire	7.5 mm (9.5 mm at HC-M-HV...)	7.5 mm (9.5 mm at HC-M-HV...)
Insertion/withdrawal cycles	≥ 500	≥ 500
Temperature data		
Ambient temperature (operation)	-40 °C ... 125 °C	-40 °C ... 125 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Turned socket contacts, 0.5 mm²			
iron (Fe), Au surface	**CK2,5-ED-0,5BU FE**	1585773	25
Constants (CuNi), uncoated	**CK2,5-ED-0,5BU CUNI**	1585757	25
Turned pin contacts, 0.5 mm²			
iron (Fe), Au surface	**CK2,5-ED-0,5ST FE**	1585760	25
Constants (CuNi), uncoated	**CK2,5-ED-0,5ST CUNI**	1585744	25

FO crimp contacts

Fiber optics crimp contacts (980/1000 µm) are suitable for coupling fiber optic cables (polymer fiber optic cable). These can be used in the crimp contact carriers:
– VC-D (for turned contacts)
– HC M 12... / HC-M-17... / HC-M-03/04...
– HC-D... (for turned contacts) and
– HC-DD...

The optic fibers are polished, stripped, and then crimped.

Notes:
For crimping pliers, assembly and removal tools, see 637



Crimp contacts for fiber optic cables, polymer optic fibers (POF)

Technical data

Material data	
Contact material	Nickel silver
Insertion/withdrawal cycles	≥ 500

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fiber optic contact POF, turned, for VC-D contact carriers			
Socket	**CK1,6-ED-BU-POF**	1885004	50
Plug	**CK1,6-ED-ST-POF**	1884995	50
Polisher, metal, for CK1,6-...POF contacts, POF conductor diameter: 2.2 mm	**POLISHER-POF**	1686122	1
Stripping tool for FO cables - **stripping pliers** for individual elements	**PSM-FO-STRIP**	2744199	1
Polishing foil	**POLFOL 1 MIC-POF**	1636800	10
Polishing paper	**POLPAP 1500-POF**	1636813	10

Shield connection



The HEAVYCON D bus contact is used to connect shielded, 2-core bus conductors.

The connection occupies 4 adjacent positions in the contact carrier and is also suitable as a T-coupler (two positions for the conductor shield).



For crimp contact carriers of series HC-D40 / -D64 / HC-M-12

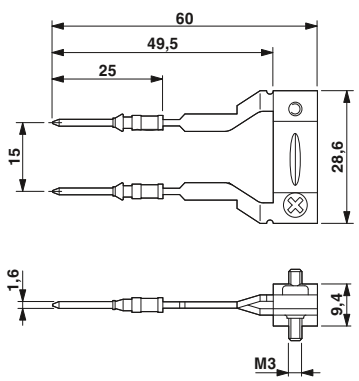
EAC

Technical data

Electrical data	
Rated voltage	60 V
Rated current	10 A
Transmission speed	-
Material data	
Contact material	Copper alloy
Contact surface material	Hard-silver plated
Mechanical data	
External cable diameter	6 mm ... 9 mm
Temperature data	
Ambient temperature (operation)	-40 °C ... 60 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Shield connection, for two shielded cables, incl. two loose socket crimp contacts for PROFIBUS cables.	**HC-D 4-BU-2BUS**	1886139	1
Shield connection, for a shielded line on pin contact carriers, incl. two loose crimp contacts for PROFIBUS line	**HC-D 4-ST-1BUS**	1886142	1
Shield connection, for shielded cables on socket contact carriers, without loose crimp contacts			
For one bus line	**HC-D 4-1BU**	1886143	1
For two bus lines	**HC-D 4-2BU**	1886140	1
Shield connection, for shielded cables on pin contact carriers, without loose crimp contacts			
For one bus line	**HC-D 4-1ST**	1886144	1
For two bus lines	**HC-D 4-2ST**	1886141	1
Crimping pliers			
- For turned contacts; 0.14 ... 4 mm²	**CRIMPFOX-1,6/2,5-ED-4,0**	1687419	1
Removal tool			
- For CK1,6-ED.../CK1,6-ER.../CK1,6...POF contacts	**VC-EW 1,6**	1884869	1
Assembly tool			
- For CK1,6-ED.../CK2,5-ED.../CK1,6-ER... contacts	**CK1,6/2,5-MWZ**	1676734	1



HC-D 4-...BUS

CRIMPFOX crimping pliers for turned contacts

– The integrated positioning tool ensures that the contacts are perfectly aligned in the die
– Marked die stations for precise processing of the relevant cross sections

Notes:

For replacement dies and retaining springs, go to the product area on the website at phoenixcontact.net/products.



Conductor cross section of 0.5 - 4 mm²



Conductor cross section of 6 - 10 mm²

Technical data

Application range		
Conductor	mm² / AWG	0.5 ... 4 / 22 ... 12
Compression		Square crimp

Technical data

Application range		
Conductor	mm² / AWG	6 ... 10 / 10 ... 8
Compression		Square crimp

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers, for turned contacts with a pin diameter of 1.6 / 2.5 / 4.0 mm - For CK1,6-ED ... , CK2,5-ED..., CK4,0-E D... 0.5-4 mm² turned contacts - For CK4,0-ED...6 - 10 mm² turned contacts	**CRIMPFOX-TC 4**	1212113	1

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
	CRIMPFOX-TC 10	1212114	1

Accessories

Removal tool - For CK1,6-ED.../CK1,6-ER.../CK1,6...POF contacts	**VC-EW 1,6**	1884869	1
- For CK2,5-ED... contacts	**CK2,5-EWZ**	1662722	1
- For CK4,0-ED... contacts	**CK4,0-EWZ**	1662735	1

Accessories

	CK4,0-EWZ	1662735	1

CRIMPFOX universal pliers for accommodating various crimp inserts

– One of the key features of the CRIMPFOX–M crimping pliers is the way the crimp inserts can be quickly replaced without the need for tools

Notes:

For more crimping dies for ferrules, cable lugs, slip-on sleeves, turned contacts, coaxial, RJ45, and RJ11 connectors, visit phoenixcontact.net/products



Basic pliers

Technical data

Application range		
Compression		Universal

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Basic pliers, for accommodating dies for various contact types, pressure lock can be unlocked, lateral entry	**CRIMPFOX-M**	1212072	1

Accessories

Die, For turned contacts with pin diameters 2.5 mm and 4.0 mm (CK 2,5...,CK 4,0), cross section 0.14 - 4 mm²	**CRIMPFOX-M TC 4/DIE**	1212075	1
For turned contacts with pin diameter 4 mm (CK 4,0...), cross section 6 – 10 mm²	**CRIMPFOX-M TC 10/DIE**	1212076	1

CRIMPFOX crimping pliers for rolled contacts

– For processing rolled contacts for fiber optics (POF)



Conductor cross section of 0.5 - 1.5 mm²

Technical data		
Application range		
Conductor	mm² / AWG	0.5 ... 1.5 / -
Compression		Universal

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers - For rolled CK1,6-ER... contacts	**CRIMPFOX-1,6-ER-1,50-AT**	1884843	1
Accessories			
Assembly tool - For CK1,6-ED.../CK2,5-ED.../CK1,6-ER... contacts	**CK1,6/2,5-MWZ**	1676734	1
Removal tool - For CK1,6-ED.../CK1,6-ER.../CK1,6...POF contacts	**VC-EW 1,6**	1884869	1

CRIMPFOX crimping pliers for coaxial connectors

– CRIMPFOX–CX... are crimping pliers for processing coaxial connectors
– Unlockable pressure lock
– Lateral conductor entry

Notes:
For replacement dies and retaining springs, go to the product area on the website at phoenixcontact.net/products.





For coaxial connectors



Conductor cross section of 0.14 - 2.5 mm²

Technical data		
Application range		
Compression	HEX crimp	

Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Crimp pliers, for: - for coaxial connectors, 1.69 mm, 3.25 mm, 4.52 mm, three marked die stations, unlockable pressure lock, lateral entry, hex crimp	**CRIMPFOX-CX 4,52**	1212094	1
- For turned VS...CD contacts (D-SUB contacts) ; crimping tool with four mandrels			
Accessories			
Removal tool - For coax HC-M-04...KOAX... contacts - For D-SUB VS-...CD... contacts	**HC-M4-KOAX-EWZ**	1676747	1

Technical data	
Application range	
Compression	Indent crimp

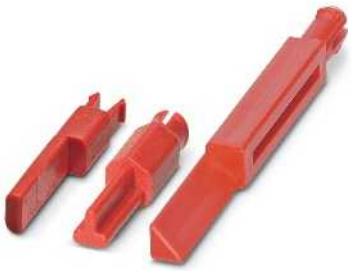
Ordering data		
Type	Order No.	Pcs. / Pkt.
CRIMPFOX RC 2,5	1205448	1
Accessories		
EWR	1665075	1

Coding profiles

– Can be coded in seconds, thanks to the coding profiles



HC/HC-S coding profile



HS2/D7/Q12 coding profile

	Technical data	Technical data
Material data		
Material	PA	PA

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Coding profiles, for contact inserts in series:						
HC-B... and HC-B...A-UT... terminal adapter HC-B...A-DT...	**CP-HC**	1686478	10			
HC-A10..., HC-BB...	**CP-HC-S**	1410916	10			
Coding profiles, for contact inserts in series:						
HC-HS2-D7-E...S				**HC-HS 2-CP**	1586280	50
HC-D 7-EBUC-COD				**HC-D 7-CD-BU**	1408601	50
HC-D 7-ESTC-COD				**HC-D 7-CD-ST**	1408591	50
HC-Q12...				**HC-Q 12-COD**	1409435	10

Coding bolts

– Up to 6 plug-in connections can be protected against mismatching

Notes:

For assembly instructions, see phoenixcontact.net/products



Coded bolts

	Technical data
Material data	
Material	Steel

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Coding bolt, for contact inserts in series:			
HC-B...	**HC-CB**	1772722	10

Coding pins, sockets

– Up to 16 plug-in connections can be protected against mismatching
– Mandatory for HC-D..., HC-DD... as well as HC-M-25-MOD..., HC-M-04MOD..., and HC-M-DSUB09...

Notes:
For assembly instructions, see phoenixcontact.net/products



Coding pin/socket



Coding pin/socket

	Technical data	Technical data
Material data		
Material	Steel, galvanized	Steel, galvanized

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Coding sockets and pins, for coding to protect against mismatching and as a guide to prevent accidentally jamming the connector in at an angle, cannot be used with HC-Modular and HC-D7 ...						
Coding pin	**HC-CST**	1676857	10			
Coding socket	**HC-CBU**	1676860	10			
Coding sockets and pins, for coding to protect against mismatching and as a guide to prevent accidentally jamming the connector in at an angle, for HC-Modular						
Coding pin				**HC-CST-MOD**	1636127	10
Coding socket				**HC-CBU-MOD**	1636130	10

Dummy sockets

Dummy sockets prevent plugging of a plug-in connection if a pin is mounted at the coding position in the pin insert. Identical connectors can thus be protected against being plugged in incorrectly.

Notes:
For assembly instructions, see phoenixcontact.net/products



Dummy socket



Dummy socket

	Technical data	Technical data
Material data		
Material	PA	Copper alloy

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Dummy sockets, for contact inserts with turned socket contacts of type:						
CK-2,5-ED...	**CK2,5-ED-BB**	1584693	100			
CK-1,6-ED...				**CK1,6-ED-BB**	1645888	50

PE screws, PE multiplier

If several PE conductors are led via one contact insert, additional PE connections are required. This is done using additional PE screws or the PE multiplier.



PE screw



PE multiplier

		Technical data	Technical data
Material data			
Material		Steel, galvanized	Brass, nickel-plated
Application range			
Connection cross section	mm^2	-	0.5 ... 2.5
Connection cross section	AWG	-	20 ... 14

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PE screw, for contact inserts in series:						
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...	**HC-B-PES**	1604997	10			
HC-HS 6...	**HC-HS-PES**	1586219	100			
PE screw, for contact inserts in series:						
HC-A..., HC-D15..., HC-D25...	**HC-A-PES**	1584868	10			
PE multiplier, with 3 PE connections, for contact inserts in series:						
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...				**HC-B-3PE**	1644326	1

PE terminal block base

If two PE conductors are led via one contact insert, additional PE connections are required. For HC-K6/0... this is done using a PE terminal block base.



PE terminal block base

	Technical data
Material data	
Material	Brass

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
PE terminal block base, PE extension for HC-K6/0... contact inserts			
Socket	**HC-K 6 PE 16 QMM F**	1583869	25
Plug	**HC-K 6 PE 16 QMM M**	1583870	25

Strain relief clamps

Cable trees with crimp contacts must not put a strain on the engaged contacts with their weight.

This is avoided by the use of strain relief clamps.



Lateral cable outlet



Straight cable outlet

	Technical data	Technical data
Material data		
Material	Steel, galvanized	Steel, galvanized

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Strain relief clamps, clamping area of 9 - 19 mm, for contact inserts in series: HC-B..., HC-BB..., HC-D40..., HC-D64..., HC-DD..., HC-HV...	**HC-B-ZS**	1685330	10	**HC-B-ZG**	1685327	10

Docking frame

Docking frames ensure that socket and pin inserts are located in insert systems and contact is made reliably.

Notes:

Due to the floating frame, the mounting panel must be grounded.



Docking frames

	Technical data
Material data	
Material	Stainless steel
Insertion/withdrawal cycles	≥ 500
Temperature data	
Ambient temperature (operation) °C	-40 ... 125

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Docking frame, with 4 flat headed screws with shoulder, for contact inserts in series:			
B6, DD24, BB10, K, M	**HC-B 6-ANDOCK**	1586112	1
B10, DD42, BB18, K, M	**HC-B 10-ANDOCK**	1586125	1
B16, D40, DD72, BB32, K, M	**HC-B 16-ANDOCK**	1586138	1
B24, D64, DD108, BB46, K, M	**HC-B 24-ANDOCK**	1586141	1

Plastic cable glands for EVO B series housing



Plastic cable gland

Technical data

General data		
Material		PA
Ambient temperature (operation)	°C	-40 ... 100

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series plastic housing, for cable diameter:				
7 mm ... 13 mm	M20	**HC-B-G-M20-PLRBK**	1407669	1
9 mm ... 17 mm	M25	**HC-B-G-M25-PLRBK**	1407670	1
11 mm ... 21 mm	M32	**HC-B-G-M32-PLRBK**	1407671	1
19 mm ... 28 mm	M40	**HC-B-G-M40-PLRBK**	1407672	1

Metal cable glands for EVO B series housing



Metal cable gland for EMC applications



Metal cable gland for higher strain relief

Technical data

General data		
Material		Die-cast aluminum, corrosion-resistant
Ambient temperature (operation)	°C	-40 ... 125

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series metal housing, for EMC applications, for cable diameter:				
7 mm ... 13 mm	M20	**HC-B-G-M20-EC-AL**	1411439	1
11 mm ... 16 mm	M25	**HC-B-G-M25-EC-AL**	1411446	1
14 mm ... 21 mm	M32	**HC-B-G-M32-EC-AL**	1411440	1
19 mm ... 27 mm	M40	**HC-B-G-M40-EC-AL**	1411441	1
Cable gland, for HEAVYCON EVO metal housing, for higher strain relief, with NBR seal, for cable diameter:				
7 mm ... 13 mm	M20			
11 mm ... 16 mm	M25			
14 mm ... 21 mm	M32			
19 mm ... 27 mm	M40			

Technical data

General data		
Material		Die-cast aluminum, corrosion-resistant
Ambient temperature (operation)	°C	-40 ... 125

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series metal housing, for EMC applications, for cable diameter:				
7 mm ... 13 mm	M20			
11 mm ... 16 mm	M25			
14 mm ... 21 mm	M32			
19 mm ... 27 mm	M40			
Cable gland, for HEAVYCON EVO metal housing, for higher strain relief, with NBR seal, for cable diameter:				
7 mm ... 13 mm	M20	**HC-B-G-M20-ER-AL**	1411442	1
11 mm ... 16 mm	M25	**HC-B-G-M25-ER-AL**	1411443	1
14 mm ... 21 mm	M32	**HC-B-G-M32-ER-AL**	1411444	1
19 mm ... 27 mm	M40	**HC-B-G-M40-ER-AL**	1411445	1

Plastic cable glands and thread adapters for EVO D series housing



Plastic cable gland



Plastic thread adapter

	Technical data	Technical data
General data		
Material	PA	PA
Ambient temperature (operation) °C	-40 ... 100	-40 ... 125

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO D series plastic housing, for cable diameter:							
7 mm ... 13 mm	M20	HC-D-G-M20-PLRBK	1411350	1			
9 mm ... 17 mm	M25	HC-D-G-M25-PLRBK	1411351	1			
Thread adapter, for HEAVYCON EVO D series plastic housing							
	M25				HC-D-TA-M25-PLRBK	1411352	1
	Pg16				HC-D-TA-PG16-PLR-BK	1411353	1
	3/4 inch NPT				HC-D-TA-NPT-3/4-PLR-BK	1411354	1

Thread adapters for EVO B series housing

new

new



Plastic thread adapter



Metal thread adapter

	Technical data	Technical data
General data		
Material	Polyamide	Die-cast aluminum, corrosion-resistant
Ambient temperature (operation) °C	-40 ... 100	-40 ... 125

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Thread adapter, for HEAVYCON EVO B series housing							
	M20	HC-B-TA-M20-PLR-BK	1414243	1	HC-B-TA-M20-ER-AL	1414256	1
	M25	HC-B-TA-M25-PLR-BK	1414244	1	HC-B-TA-M25-ER-AL	1414257	1
	M32	HC-B-TA-M32-PLR-BK	1414245	1	HC-B-TA-M32-ER-AL	1414258	1
	M40	HC-B-TA-M40-PLR-BK	1414246	1	HC-B-TA-M40-ER-AL	1414259	1
	Pg13.5	HC-B-TA-PG13-PLR-BK	1414247	1	HC-B-TA-PG13-ER-AL	1414260	1
	Pg16	HC-B-TA-PG16-PLR-BK	1414248	1	HC-B-TA-PG16-ER-AL	1414261	1
	Pg21	HC-B-TA-PG21-PLR-BK	1414249	1	HC-B-TA-PG21-ER-AL	1414262	1
	Pg29	HC-B-TA-PG29-PLR-BK	1414250	1	HC-B-TA-PG29-ER-AL	1414263	1
	1/2-inch NPT	HC-B-TA-NPT-1/2-PLR-BK	1414251	1	HC-B-TA-NPT-1/2-ER-AL	1414264	1
	3/4 inch NPT	HC-B-TA-NPT-3/4-PLR-BK	1414252	1	HC-B-TA-NPT-3/4-ER-AL	1414265	1
	1/1 inch NPT	HC-B-TA-NPT-1/1-PLR-BK	1414253	1	HC-B-TA-NPT-1/1-ER-AL	1414266	1
	1 1/4 in. NPT	HC-B-TA-NPT-1 1/4-PLR-BK	1414254	1	HC-B-TA-NPT-1 1/4-ER-AL	1414267	1

Corrugated pipe adapter for EVO B series housing

new

Notes:

For protective hoses for corrugated pipe adapters, see Catalog 5



Plastic corrugated pipe adapter

Technical data

General data		
Material		PA
Ambient temperature (operation)	°C	-40 ... 115

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Corrugated pipe adapter, for HEAVYCON EVO B series plastic housing, for protective hose outside diameter:				
21.2 mm	M20	**HC-B-GCA-M20-PLRBK**	1412021	1
28.5 mm	M25	**HC-B-GCA-M25-PLRBK**	1411973	1
34.5 mm	M32	**HC-B-GCA-M32-PLRBK**	1412022	1
42.5 mm	M40	**HC-B-GCA-M40-PLRBK**	1412023	1

Screw connection for multiple cables for EVO B series housing

new



Plastic cable gland for multiple cables

Technical data

General data		
Material		PA
Ambient temperature (operation)	°C	-30 ... 100

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series housing, with seal insert for cable diameter:				
Without bore hole	M40	**HC-B-GM0-M40-PLTBK**	1414643	1
4x 10 mm	M40	**HC-B-GM4X10-M40-PLTBK**	1414644	1
5x 8.5 mm	M40	**HC-B-GM5X8,5-M40-PLTBK**	1414645	1
8x 6.5 mm	M40	**HC-B-GM8X6,5-M40-PLTBK**	1414646	1

new



Metal cable gland for multiple cables

Technical data

	Die-cast aluminum, corrosion-resistant
	-30 ... 100

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-B-GM0-M40-ET-AL	1414647	1
HC-B-GM4X10-M40-ET-AL	1414648	1
HC-B-GM5X8,5-M40-ET-AL	1414649	1
HC-B-GM8X6,5-M40-ET-AL	1414650	1

Screw connection with bend protection for EVO B series housing

new



Plastic cable gland with bend protection

Technical data

General data		
Material		Polyamide
Ambient temperature (operation)	°C	-40 ... 100

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series housing, for cable diameter:				
6 mm ... 13 mm	M20	**HC-B-GB-M20-PLRBK**	1414660	1
9 mm ... 17 mm	M25	**HC-B-GB-M25-PLRBK**	1414661	1
13 mm ... 21 mm	M32	**HC-B-GB-M32-PLRBK**	1414662	1
16 mm ... 28 mm	M40			

new



Metal cable gland with bend protection

Technical data

		-
		-40 ... 100

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-B-GB-M20-ER-AL	1414663	1
HC-B-GB-M25-ER-AL	1414664	1
HC-B-GB-M32-ER-AL	1414665	1
HC-B-GB-M40-ER-AL	1414666	1

Screw connection with bend protection and strain relief for EVO B series housing

new



Plastic cable gland with strain relief

Technical data

General data		
Material		Polyamide
Ambient temperature (operation)	°C	-40 ... 100

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series housing, for cable diameter:				
6 mm ... 13 mm	M20	**HC-B-GTRS-M20-PLRBK**	1414651	1
9 mm ... 17 mm	M25	**HC-B-GTRS-M25-PLRBK**	1414652	1
13 mm ... 21 mm	M32	**HC-B-GTRS-M32-PLRBK**	1414654	1
16 mm ... 28 mm	M40			

new



Metal cable gland with strain relief

Technical data

		-
		-40 ... 100

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-B-GTRS-M20-ER-AL	1414656	1
HC-B-GTRS-M25-ER-AL	1414657	1
HC-B-GTRS-M32-ER-AL	1414658	1
HC-B-GTRS-M40-ER-AL	1414659	1

Protective cover for sleeve housing



Protective cover with single locking latch



Protective cover with double locking latch

	Technical data			Technical data		
	Plastic, gray	Plastic, black	Metal	Plastic, gray	Plastic, black	Metal
General data						
Degree of protection	IP54	IP54	IP65	IP54	IP54	IP65
Material	PA	PA	Aluminum, die-cast	PA	PA	Aluminum, die-cast
Inflammability class according to UL 94	HB	HB	-	HB	HB	-
Ambient temperature (operation) °C	-20 ... 100	-20 ... 100	-40 ... 125	-20 ... 100	-20 ... 100	-40 ... 125

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for sleeve housing **without locking latch**, with retaining cord, **with** seal, for housing sizes:												
B6	1678282	10	1414634	1	1644546	10						
B10	1678295	10	1414635	1	1584512	10	1678305	10	1414638	1	1584541	10
B16	1678318	10	1414636	1	1584525	10	1678321	10	1414639	1	1584554	10
B24	1678334	10	1414637	1	1584538	10	1678347	10	1414640	1	1584567	10

Protective cover for sleeve housing



Protective cover without double locking latch

	Technical data		
	Plastic, gray	Plastic, black	Metal
General data			
Degree of protection	IP54	IP54	IP65
Material	PA	PA	Aluminum, die-cast
Inflammability class according to UL 94	HB	HB	-
Ambient temperature (operation) °C	-20 ... 100	-20 ... 100	-40 ... 125

	Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for sleeve housing **with double locking latch**, with retaining cord, **with** seal, for housing sizes:						
B10	1687260	10	1414631	10	1647750	10
B16	1687273	10	1414632	10	1647763	10
B24	1687286	10	1414633	10	1647776	10

Protective cover for panel mounting base



Protective cover without single locking latch



Protective cover without double locking latch

	Technical data			Technical data		
	Plastic, gray	Plastic, black	Metal	Plastic, gray	Plastic, black	Metal
General data						
Degree of protection	IP54	IP54	IP65	IP54	IP54	IP65
Material	PA	PA	Aluminum, die-cast	PA	PA	Aluminum, die-cast
Inflammability class according to UL 94	HB	HB	-	HB	HB	-
Ambient temperature (operation) °C	-20 ... 100	-20 ... 100	-40 ... 125	-20 ... 100	-20 ... 100	-40 ... 125

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for panel mounting base, box mounting base, and coupling housing **with locking latch,** with retaining cord, **without** seal, for housing sizes:												
B6	1660180	10	1414623	10	1644559	10						
B10	1660177	10	1414625	10	1644562	10	1772586	10	1414628	10	1644575	10
B16	1660151	10	1414626	10	1644588	10	1772599	10	1414629	10	1644591	10
B24	1660148	10	1414627	10	1644601	10	1772609	10	1414630	10	1644614	10
B32							1646120	10				
D15			1414641	10								
D25			1414642	10								

Replacement protective cover for EVO supporting base elements



Hinged protective cover

	Technical data
General data	
Degree of protection	IP65 / IP66
Material	PA
Inflammability class according to UL 94	V0
Ambient temperature (operation) °C	-40 ... 100

	Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
Replacement protective cover, hinged, for HEAVYCON EVO supporting base element, for housing sizes:			
B6	HC-B06-BC-HI-PLBK	1407692	1
B10	HC-B10-BC-HI-PLBK	1407693	1
B16	HC-B16-BC-HI-PLBK	1407694	1
B24	HC-B24-BC-HI-PLBK	1407695	1
D15	HC-D15-BC-HI-PLBK	1414673	1
D25	HC-D25-BC-HI-PLBK	1414674	1

Cover plates

For sealing unused openings in control cabinet manufacturing.



Cover plate, height: 3.5 mm



Cover plate, height: 7 mm

		Technical data	Technical data
General data			
Material		PA	PA
Color		Light gray	Gray
Degree of protection		IP54	IP54
Inflammability class according to UL 94		HB	HB
Ambient temperature (operation)	°C	-20 ... 100	-20 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cover plate, for a panel cutout in size:						
B6 (cutout: 35 mm x 52 mm)	**HC-B 6-AP-GY**	1660368	10			
B10 (cutout: 35 mm x 65 mm)	**HC-B 10-AP-GY**	1660371	10			
B16 (cutout: 35 mm x 86 mm)	**HC-B 16-AP-GY**	1660384	10	**HC-B 16-APV-GY**	1661121	10
B24 (cutout: 35 mm x 113 mm)	**HC-B 24-AP-GY**	1660397	10	**HC-B 24-APV-GY**	1661037	10
D15 (cutout: 24 mm x 58 mm)	**HC-D 15-AP-GY**	1660342	10			
D25 (cutout: 24 mm x 74 mm)	**HC-D 25-AP-GY**	1660355	10			

Adapter plates

For changing panel cutouts to different size.



Adapter plate



Adapter plate

		Technical data	Technical data
General data			
Material		PA	PA
Color		Light gray	Light gray
Degree of protection		IP54	IP54
Inflammability class according to UL 94		HB	HB
Ambient temperature (operation)	°C	-20 ... 100	-20 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Adapter plate, for reduction from a B24 panel cutout to:						
B16 (cutout: 35 mm x 86 mm)	**HC-B 24-ADP-B 16-GY**	1660449	10			
B10 (cutout: 35 mm x 65 mm)	**HC-B 24-ADP-B 10-GY**	1660436	10			
B6 (cutout: 35 mm x 52 mm)	**HC-B 24-ADP-B 6-GY**	1660407	10			
Adapter plate, for reduction from a B24 panel cutout to:						
3 x D7 (cutout: 21.5 mm x 21.5 mm)				**HC-B 24-ADP-3D 7-GY**	1661448	10
3 x circular connector cutouts (Ø 21 mm)				**HC-B 24-ADP-3RST-GY**	1662175	10

D-SUB adapter plates, B series

For installing D-SUB connectors in HEAVYCON B series housing.
– IP65 with HEAVYCON standard housing
– IP66 with HEAVYCON EVO housing
– IP69K with HEAVYCON ADVANCE EEE housing

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting



Adapter plate for a D-SUB connector



Adapter plate for two D-SUB connectors

Technical data				Technical data			
General data							
Material		PA		PA			
Color		Gray		Gray			
Inflammability class according to UL 94		HB		HB			
Ambient temperature (operation)	°C	-20 ... 100		-20 ... 100			

Ordering data				Ordering data			
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
D-SUB adapter plate, for mounting HEAVYCON housings with D-SUB connector, for housing size / D-SUB type:							
B6 / D-SUB 09		**HC-B 6-ADP/1 DSUB 9**	1775457	2	**HC-B 6-ADP/2 DSUB 9**	1775460	2
B6 / D-SUB 15		**HC-B 6-ADP/1 DSUB 15**	1775473	2	**HC-B 6-ADP/2 DSUB 15**	1775486	2
B10 / D-SUB 25		**HC-B 10-ADP/1 DSUB 25**	1775499	2	**HC-B 10-ADP/2 DSUB 25**	1775509	2
B16 / D-SUB 37		**HC-B 16-ADP/1 DSUB 37**	1775512	2	**HC-B 16-ADP/2 DSUB 37**	1775525	2
B16 / D-SUB 50		**HC-B 16-ADP/1 DSUB 50**	1775538	2	**HC-B 16-ADP/2 DSUB 50**	1775541	2

D-SUB adapter plates, D series

For installing D-SUB connectors in HEAVYCON D series housing.
– IP65 with HEAVYCON standard housing
– IP66 with HEAVYCON EVO housing

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting



Adapter plate for a D-SUB connector

Technical data			
General data			
Material		PA	
Color		Gray	
Ambient temperature (operation)	°C	-20 ... 100	

Ordering data				
Description		Type	Order No.	Pcs. / Pkt.
D-SUB adapter plate, for equipping HC-D15... housings with **one** D-SUB connector, D-SUB type:				
D-SUB 09		**HC-D 15-ADP/1 DSUB 9**	1661312	2
D-SUB 15		**HC-D 15-ADP/1 DSUB 15**	1775253	2
D-SUB 25		**HC-D 15-ADP/1 DSUB 25**	1775266	2

Replacement seals for EVO housing

Notes:

Bond the replacement profile gaskets to the housing, adhesive: Loctite® 454.



Replacement flat gasket for EVO panel mounting bases



Replacement profile gasket for EVO supporting base elements

Technical data		Technical data	
General data			
Material	NBR	NBR	
Ambient temperature (operation) °C	-40 ... 125	-40 ... 125	

Ordering data						
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement seal, for HEAVYCON EVO plastic housing in size:						
B6	HC-B06-SG-RBK	1407702	10	HC-B06-SP-RBK	1407706	10
B10	HC-B10-SG-RBK	1407703	10	HC-B10-SP-RBK	1407707	10
B16	HC-B16-SG-RBK	1407704	10	HC-B16-SP-RBK	1407708	10
B24	HC-B24-SG-RBK	1407705	10	HC-B24-SP-RBK	1407709	10
D15	HC-D15-SG-RBK	1414669	1	HC-D15-SP-RBK	1414671	1
D25	HC-D25-SG-RBK	1414670	1	HC-D25-SP-RBK	1414672	1

Replacement seals for STANDARD housing

Notes:

Bond the replacement profile gaskets to the housing, adhesive: Loctite® 454.



Replacement flat gasket for STANDARD panel mounting bases



Replacement profile gasket for STANDARD supporting base elements

Technical data		Technical data	
General data			
Material	NBR, conductive	NBR, conductive	
Ambient temperature (operation) °C	-40 ... 125	-40 ... 125	

Ordering data						
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement seal, for HEAVYCON STANDARD metal housing in size:						
B6	HC-B06-SG-CBK	1411483	10	HC-B06-SP-CBK	1411477	10
B10	HC-B10-SG-CBK	1411484	10	HC-B10-SP-CBK	1411479	10
B16	HC-B16-SG-CBK	1411485	10	HC-B16-SP-CBK	1411480	10
B24	HC-B24-SG-CBK	1411486	10	HC-B24-SP-CBK	1411482	10

Replacement seals for HC-B/D housing

Notes:
Bond the replacement profile gaskets to the housing, adhesive: Loctite® 454.



Replacement flat gasket for HC-B/D panel mounting bases



Replacement profile gasket for HC-D supporting base elements

Technical data		
General data		
Material	CR	NBR
Ambient temperature (operation) °C	-40 ... 125	-40 ... 125

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement seal, for HEAVYCON HC-B/D metal housing in size:						
B32	**HC-B 32-FL-DI**	1687778	10			
B48	**HC-B 48-FL-DI**	1774678	10			
D7	**HC-D 7-FL-DI**	1645503	10			
D15	**HC-D 15-FL-DI**	1679582	10	**HC-D 15-PR-DI**	1661189	10
D25	**HC-D 25-FL-DI**	1679595	10	**HC-D 25-PR-DI**	1408054	10

Replacement seals for ADVANCE housing

Notes:
Bond the replacement profile gaskets to the housing, adhesive: Loctite® 454.



Replacement profile gasket for ADVANCE sleeve housing

Technical data	
General data	
Material	NBR, conductive
Ambient temperature (operation) °C	-40 ... 125

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Replacement profile gasket, conductive, for uneven mounting panels, for HEAVYCON ADVANCE sleeve housing in size:			
B6	**HC-B 6-TMS-EEE-PR-DI**	1409794	10
B10	**HC-B 10-TMS-EEE-PR-DI**	1409804	10
B16	**HC-B 16-TMS-EEE-PR-DI**	1409817	10
B24	**HC-B 24-TMS-EEE-PR-DI**	1409820	10

Replacement latch for EVO B and D series plastic housing



Replacement latch for EVO B series housing



Replacement latch for EVO D series housing

	Technical data	Technical data
Material data		
Material	PA	PA

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON EVO plastic housing in sizes:						
B6	**HC-B06-SL-PLBK**	1407697	10			
B10	**HC-B10-SL-PLBK**	1407698	10			
B16	**HC-B16-SL-PLBK**	1407700	10			
B24	**HC-B24-SL-PLBK**	1407701	10			
Replacement double locking latch, plastic, for HEAVYCON EVO plastic housing in sizes:						
B10 ... B24	**HC-B10-24-DL-PLBK**	1407696	10			
Replacement single locking latch, plastic, for HEAVYCON EVO plastic housing in sizes:						
D15				**HC-D15-SL-PLBK**	1414667	1
D25				**HC-D25-SL-PLBK**	1414668	1

Replacement latch for STANDARD and EVO B and D7 series metal housing



Replacement latch for STANDARD and EVO B series metalhousing



Replacement latch for D7 series housing

	Technical data	Technical data
Material data		
Material	PA	PA

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON STANDARD and EVO metal housing in sizes:						
B6	**HC-STA-B06-SL-PLBK**	1412591	1			
B10	**HC-STA-B10-SL-PLBK**	1412804	1			
B16	**HC-STA-B16-SL-PLBK**	1412284	1			
B24	**HC-STA-B24-SL-PLBK**	1412885	1			
Replacement double locking latch, plastic, for HEAVYCON STANDARD and EVO metal housing in sizes:						
B6 ... B24	**HC-STA-B10-24-DL-PLBK**	1412886	1			
Replacement latch, plastic, for HEAVYCON housing in sizes:						
D7				**HC-D 7-LB-KU**	1584680	10

Replacement bolt and sealing screw



Replacement bolt



Sealing screw

	Technical data	Technical data
Material data		
Material	Steel, galvanized	Steel, galvanized

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement bolt, steel, for HEAVYCON HC-B...-TFL... sleeve housing (not EMC housing) in size: B48	**HC-B 48-LB ERSBOLZ**	1636114	10			
M3 sealing screw, IP65, for HEAVYCON standard housing in size: D7				**HC-D 7-DS-IP65**	1686229	100

EVO unlocking for EVO plastic housing



Water pump pliers

	Technical data
Material data	
Material	-

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Water pump pliers, with groove joint, gripping surfaces with dual notching, acc. to VDE ISO 8976, size: 240 mm	**UNIFOX-WP**	1212365	1

DUPLICON stackable power distribution

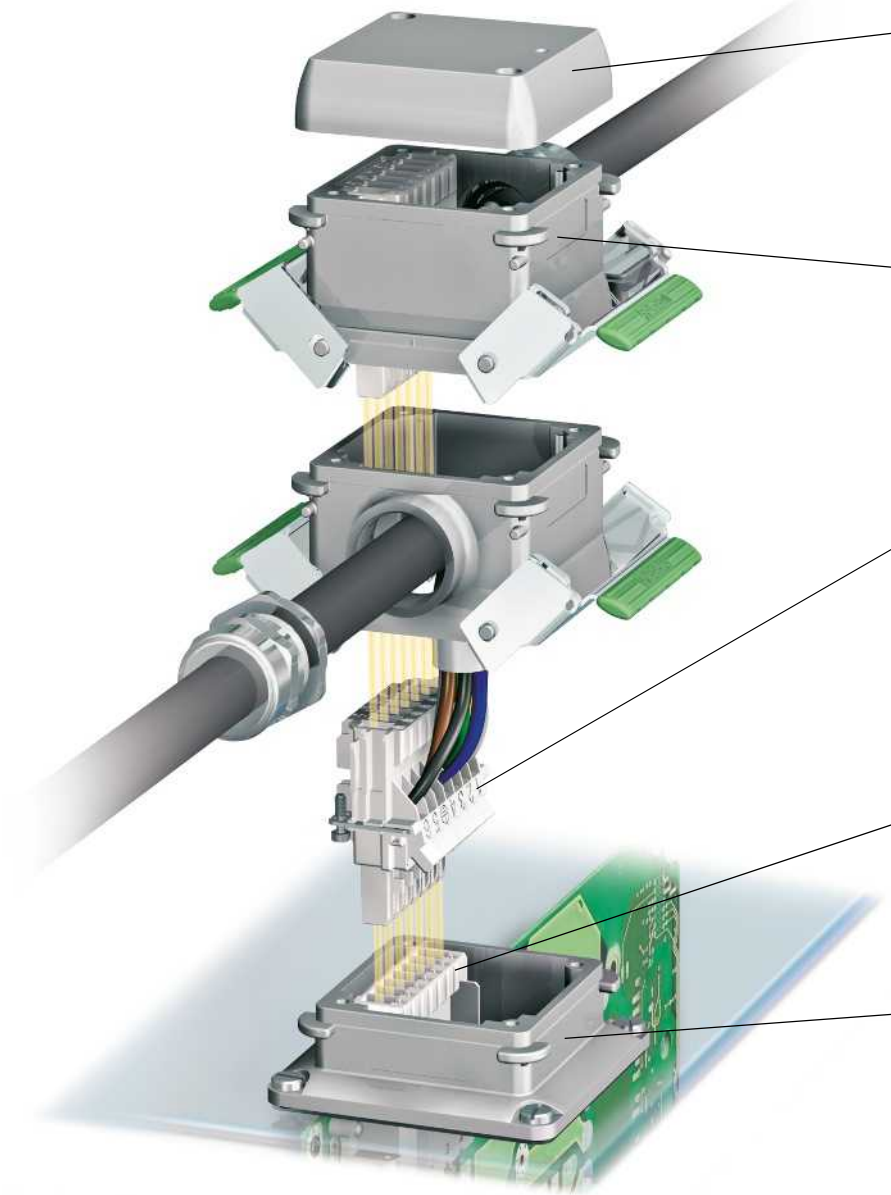


DUPLICON is a consistent power distributor system for 6 x 4 mm² + PE conductors (25 A/400/690 V), from the busbar to ST-COMBI in the control cabinet right up to the PCB or plug-in connection on the power load. The system has a minimum of components and handling is extremely flexible. The robust metal housings with vibration-resistant locking latches means that DUPLICON is qualified for the harshest operating conditions.

The design meets the requirements for IP67 protection. The contact inserts have a capacitive PE contact and the screw connections can be assembled using standard tools. DUPLICON acts as an interface between the control cabinet and the device or actuators/drives. With additional connection options of 24 V or two-wire bus lines for AS-i or PROFIBUS, DUPLICON also provides a connection to the signal world, which opens up a broad range of possible applications.

Thanks to the plug-in design, all cables can be conveniently assembled in the workshop and quickly connected together in the system. All connections are touch-proof according to DIN VDE 0105 and meet the requirements of BGV A2 accident prevention regulations.

Your web code: #0004



Cover (removable)
Testing possible when inserted and easy retrofitting of additional connectors

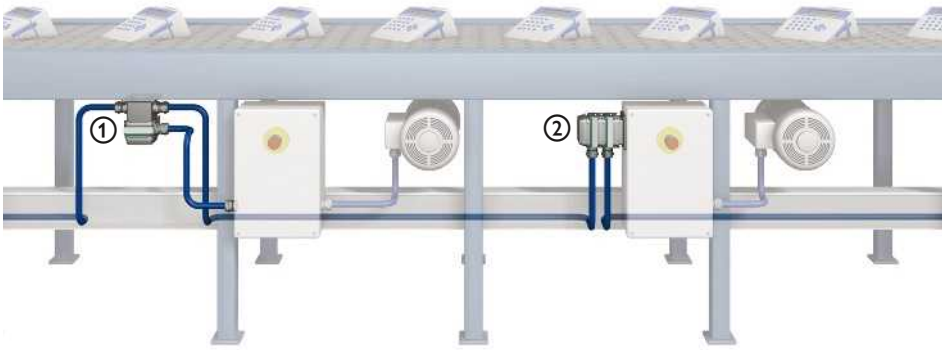
Stackable housing
The square design enables three cable outlet directions

Contact insert
400/690 V/25 A
6 x 4.0 mm² + PE
0.2 - 4.0 mm²/24 - 12 AWG
Capacitive PE
Touch-proof, IP20
Screw connection

PCB contact insert
With a choice of screw connection or plug-in with an ST-COMBI coupling

Panel mounting base
Extremely robust for up to 4 DUPLICON stackable connectors

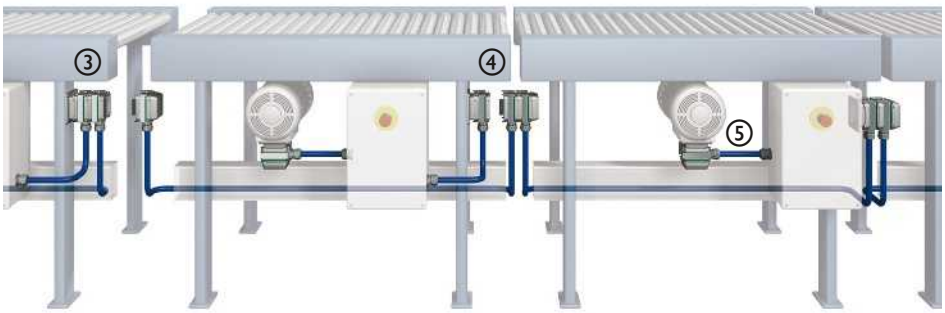
Stationary power distribution



There are essentially two DUPLICON options for stationary power distribution:
① Using the T-box, which is installed permanently next to the power load and has a plug-in cable outlet.
② Using a stackable device connection. Direct device connection is always the best option, but this requires design-based integration.

The main advantages are separate plug-in capability of the cables during startup and uninterrupted device replacement during future servicing.

Modular power distribution



③ Your power distribution can be configured in advance, thanks the stackable design. Plug and Play ensures quick and reliable startup.
④ During servicing, the main power cable is disconnected from the load without causing any interruption and the system continues running.
⑤ DUPLICON is also suitable for use as a motor connector. The square design enables different cable outlet directions and the vibration-resistant locking mechanism can withstand the harshest operating conditions.

The modular contact inserts offer a wide range of possible applications.

Cable routing options



With hybrid cables

In the classic and simplest case, one cable is introduced per stackable housing. With the aid of an M25 adapter screw connection, cables with a diameter of up to 21 mm can be connected.



With separate cables

The cable glands with two holes allow thin power and 24 V cables to be routed separately into stackable housing.



With opposing cables

Housings with two cable entries allow cables with larger diameters or combinations, e.g., with AS-i cables or PROFIBUS, to be routed in.

Connector sets

Suitable standard and EMC cable glands can be found in the Installation and mounting material section.

Notes:
Cable glands, see starting with page 680
For accessories, refer to page: 664



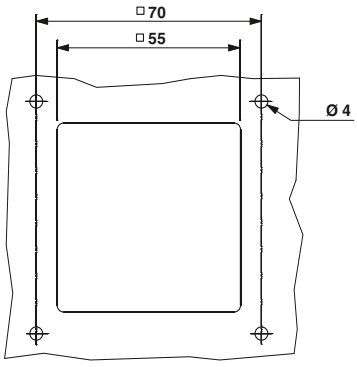
Stackable connector set (stackable housing, contact insert)



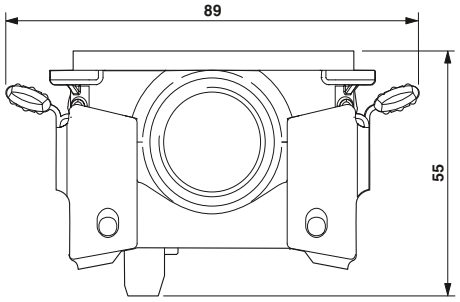
Panel feed-through set (panel mounting base, stackable housing, 2 contact inserts, housing cover)

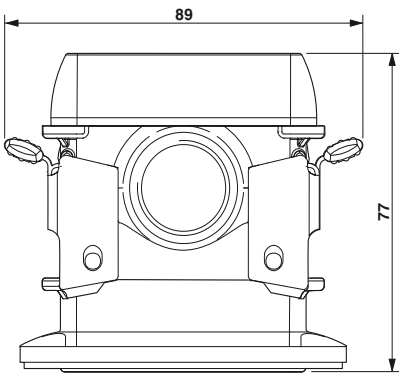
	Technical data	Technical data
Technical data		
Electrical data in acc. with IEC 61076-2-101		
Rated voltage (III/3)	400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV	6 kV
Rated current	25 A	25 A
Surge voltage category/pollution degree	III / 3	III / 3
Contact resistance	1.5 mΩ	1.5 mΩ
Material data		
Housing material	Aluminum die-cast	Aluminum die-cast
Housing surface material	EMC-conductive	EMC-conductive
Seal material	NBR	NBR
Locking latch material	Stainless steel	Stainless steel
Contact material	Cu	Cu
Contact surface material	Ag	Ag
Contact carrier material	PA	PA
Material grip body interlock	PA	PA
Inflammability class according to UL 94	V0	V0
Mechanical data		
Degree of protection	IP65/IP66/IP67	IP65/IP66/IP67
Insertion/withdrawal cycles	≥ 100	≥ 100
Connection data		
Connection method	Screw connection	Screw connection
Stripping length of the individual wire	10 mm	10 mm
Conductor cross section	0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm
Temperature data		
Ambient temperature (operation)	-40 °C ... 100 °C	-40 °C ... 100 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
DUPLICON sets, stackable housing without cable screw connection						
With M20 thread	**DC-B 6-SET-HD-M20-M-7X4-UT**	1602216	1	**DC-B 6-SET-WF-M20R-M-7X4-UT**	1602232	1
With M25 thread	**DC-B 6-SET-HD-M25-M-7X4-UT**	1602229	1	**DC-B 6-SET-WF-M25R-M-7X4-UT**	1602258	1
	Accessories			**Accessories**		
Special cable screw connection M25, brass						
With 10 mm and 11 mm hole	**HC-M-KV-M25(1X10/1X11)**	1580228	10	**HC-M-KV-M25(1X10/1X11)**	1580228	10



Panel cutout: DC-B 6-SET-WF...







Coupling set
(basic housing, 2 stackable housings, 2 contact inserts, housing cover)



Distributor set
(basic housing, 3 stackable housings, 3 contact inserts, housing cover)



T-box set
(T-box with contact insert, stackable housing with contact insert, housing cover)

Technical data

400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)
6 kV	6 kV	6 kV
25 A	25 A	25 A
III / 3	III / 3	- / 3
1.5 mΩ	1.5 mΩ	1.5 mΩ
Aluminum die-cast	Aluminum die-cast	Aluminum die-cast
EMC-conductive	EMC-conductive	EMC-conductive
NBR	NBR	NBR
Stainless steel	Stainless steel	Stainless steel
Cu	Cu	Cu
Ag	Ag	Ag
PA	PA	PA
PA	PA	PA
V0	V0	V0
IP65/IP66/IP67	IP65/IP66/IP67	IP65/IP66/IP67
≥ 100	≥ 100	≥ 100
Screw connection	Screw connection	Screw connection
10 mm	10 mm	10 mm
0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)
24 ... 12 (AWG 10 without ferrule)	24 ... 12 (AWG 10 without ferrule)	24 ... 12
0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm
-40 °C ... 100 °C	-40 °C ... 100 °C	-40 °C ... 100 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-CO-M20-M-7X4-UT	1602274	1
DC-B 6-SET-CO-M25-M-7X4-UT	1602287	1

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-3D-M20-M-7X4-UT	1602290	1
DC-B 6-SET-3D-M25-M-7X4-UT	1602300	1

Accessories

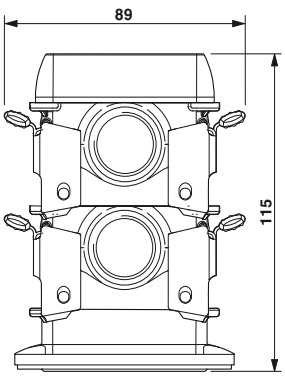
HC-M-KV-M25(1X10/1X11)	1580228	10

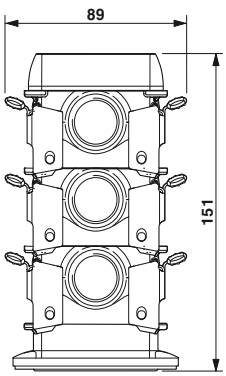
Ordering data

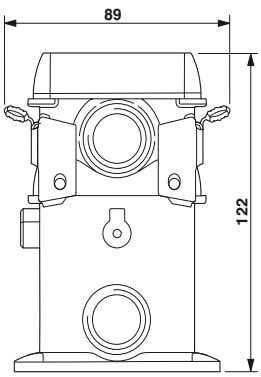
Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-TB-M20-M-7X4-UT	1581023	1
DC-B 6-SET-TB-M25-M-7X4-UT	1581036	1

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10







Contact inserts



With the stackable contact inserts, the power conductors for modular mechanical and plant engineering can be pre-assembled and combined on-site to form power distributors quickly, easily and reliably.

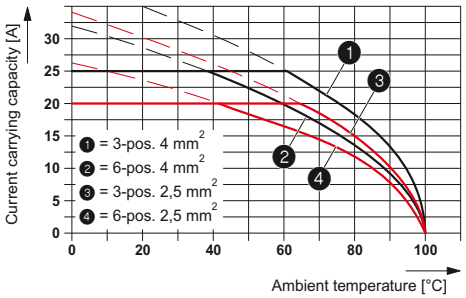
The T-Box contact insert is predestined for stationary installations. With two connections per position, it serves to loop through power conductors on site. Compared to the DUPLICON 3-way distributor, the T-Box connectors save 20% on height and permit one to dispense with a full set of stackable connectors.

DUPLICON is the first IP67 connector that can be tested from the outside while it is plugged in. All that is necessary is to unscrew both screws in the cover, after which all the contacts will be immediately accessible to conventional testing devices. For safety reasons, all the contacts are IP20 touch proof in acc. with DIN VDE 0105.

Note:

Coding stars with 4 coding branches are available for the purpose of coding several connectors of the same kind against being plugged in incorrectly, Order No. 3040588.

EB 2-6 dual insertion bridges with a 2 mm pitch (Order No. 0201155) are available for bridging two adjacent connections.



Derating diagram



Stacked contact insert

Technical data

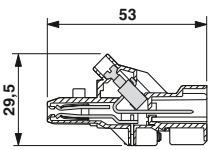
Technical data	
Electrical data in acc. with IEC 61076-2-101	
Rated voltage (III/3)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV
Rated current	25 A
Surge voltage category/pollution degree	III / 3
No. of pos.	6
Material data	
Contact material	Cu
Contact surface material	Ag
Contact carrier material	PA
Inflammability class according to UL 94	V0
Mechanical data	
Degree of protection	IP20, touch proof
Insertion/withdrawal cycles	≥ 100
Connection data	
Connection method	Screw connection
Stripping length of the individual wire	10 mm
Conductor cross section	0.2 mm² ... 4 mm² (6 mm² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm
Temperature data	
Ambient temperature (operation)	-40 °C ... 100 °C

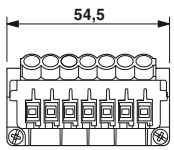
Ordering data

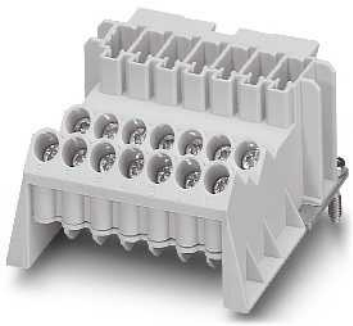
Description	Type	Order No.	Pcs. / Pkt.
Stacked contact insert, 6 x 4 mm² + PE Screw connection	**DC-B 6-ID-7X4-UT**	1602203	10
T-Box contact insert, 6 x 4 mm² + PE With two screw connections per position			
Panel mounting contact insert, 6 x 4 mm² + PE 180° PCB connection			
Panel mounting contact insert, 6 x 4 mm² + PE 90° PCB connection			

Accessories

Coding star, with four coding branches, to code the connector	**PC**	3040588	50
Insertion bridge, insulated	**EB 2- 6**	0201155	100
Replacement screws			
M3 screw, V2A, for fixing the contact inserts for PCB connection in the panel mounting base			







T-Box contact insert



Panel mounting contact insert, 180° PCB connection



Panel mounting contact insert, 90° PCB connection

Technical data

400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch proof	
≥ 100	
Screw connection	
10 mm	
0.2 mm² ... 4 mm² (6 mm² without ferrule)	
24 ... 12 (AWG 10 without ferrule)	
0.5 Nm ... 0.6 Nm	
-40 °C ... 100 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IBT-7X4-UT	1581065	10

Accessories

PC	3040588	50
EB 2- 6	0201155	100

Technical data

400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch proof	
≥ 100	
Solder connection	
-	
-	
-	
-	
-40 °C ... 100 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB-180	1602177	10

Accessories

PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100

Technical data

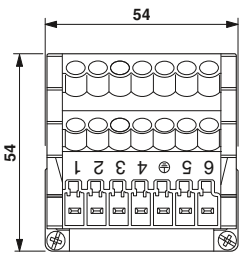
400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch proof	
≥ 100	
Solder connection	
-	
-	
-	
-	
-40 °C ... 100 °C	

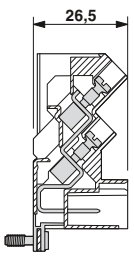
Ordering data

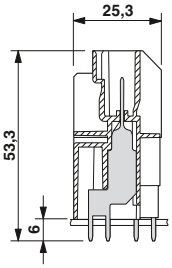
Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB- 90	1602180	10

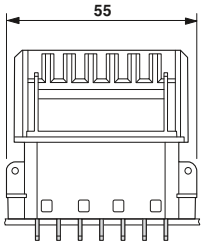
Accessories

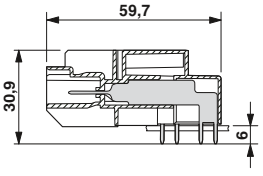
PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100

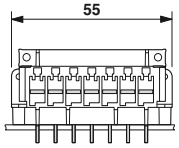












Housing

Notes:

Cable glands, see from page 680



Housing cover

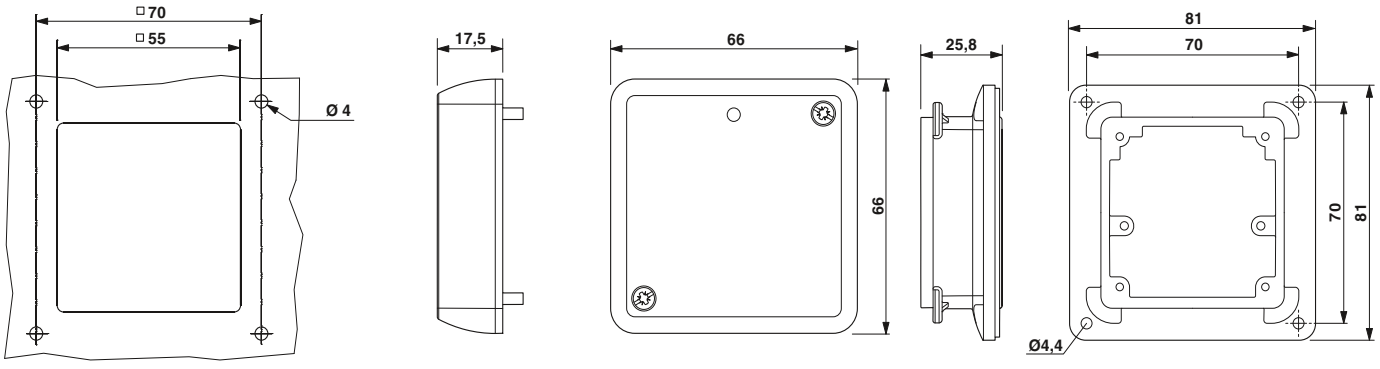


Panel mounting base with open bottom

	Technical data	Technical data
Technical data		
Material data		
Housing material	Aluminum die-cast	Aluminum die-cast
Housing surface material	EMC-conductive	EMC-conductive
Seal material	NBR	NBR
Locking latch material	-	-
Material grip body interlock	-	-
Mechanical data		
Degree of protection	IP65/IP66/IP67	IP65/IP66/IP67
Temperature data		
Ambient temperature (operation)	-40 °C ... 125 °C	-40 °C ... 125 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Aluminum housing cover	**DC-B 6-CT-M**	1602025	10			
Aluminum panel mounting base, with open base				**DC-B 6-HB-M**	1602038	10
Aluminum basic housing with enclosed base						
Aluminum stackable housing						
With 2 x M20 thread						
With 2 x M25 thread						
With 1 x M20 thread						
With 1 x M25 thread						
T-Box housing						
With 2 x M20 thread						
With 2 x M25 thread						

	Accessories	Accessories
Special cable screw connection M25, brass With 10 mm and 11 mm hole		



Panel cutout: DC-B 6-HB-M



Base housing
with closed bottom



Stackable housing
without cable gland



T-Box, box mounting base

Technical data

Aluminum die-cast	Aluminum die-cast	Aluminum die-cast
EMC-conductive	EMC-conductive	EMC-conductive
-	NBR	-
-	Stainless steel	-
-	PA	-
IP65/IP66/IP67	IP65/IP66/IP67	IP65/IP66/IP67
-40 °C ... 125 °C	-40 °C ... 125 °C	-40 °C ... 125 °C

Ordering data

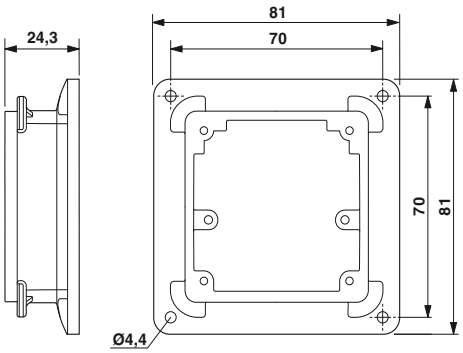
Type	Order No.	Pcs. / Pkt.
DC-B 6-HM-M	1602164	10

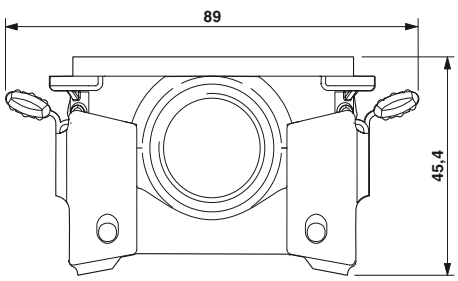
Type	Order No.	Pcs. / Pkt.
DC-B 6-HD-M20/M20-M	1602067	10
DC-B 6-HD-M25/M25-M	1602070	10
DC-B 6-HD-M20-M	1602041	10
DC-B 6-HD-M25-M	1602054	10

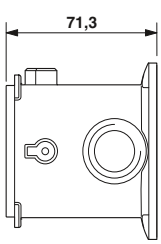
Type	Order No.	Pcs. / Pkt.
DC-B 6-HTC-M20-M20-M	1581049	10
DC-B 6-HTC-M25-M25-M	1581052	10

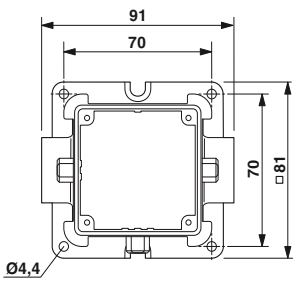
Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10









Motor connector, sleeve housing, EMC-protected

Notes:
Cable glands, see from page 680
For accessories, refer to page: 664



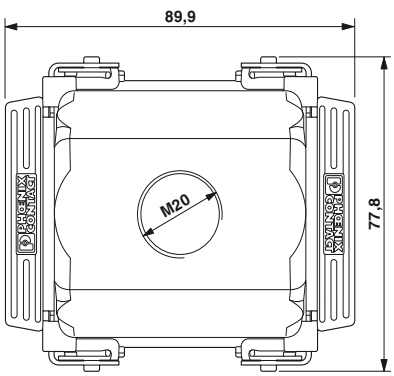
Sleeve housing, one cable entry, without cable gland



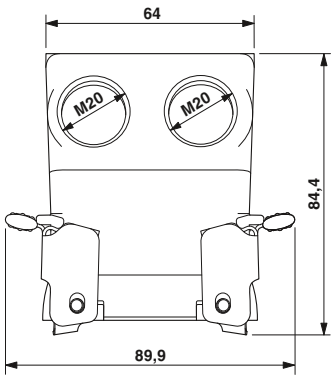
Sleeve housing, two cable entries, without cable gland

	Technical data	Technical data
Technical data		
Material data		
Housing material	Aluminum die-cast	Aluminum die-cast
Housing surface material	EMC-conductive	EMC-conductive
Seal material	NBR	NBR
Locking latch material	Stainless steel	Stainless steel
Material grip body interlock	PA	PA
Mechanical data		
Degree of protection	IP65/IP66/IP67	IP65/IP66/IP67
Temperature data		
Ambient temperature (operation)	-40 °C ... 125 °C	-40 °C ... 125 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Sleeve housing, with one cable entry						
1 x M20, straight	**DC-B 6-H-80/O1STM20G-M**	1581173	10			
1 x M20, lateral	**DC-B 6-H-80/O1STM20S-M**	1581117	10			
1 x M25, straight	**DC-B 6-H-80/O1STM25G-M**	1581194	10			
1 x M25, lateral	**DC-B 6-H-80/O1STM25S-M**	1581138	10			
1 x M32, straight	**DC-B 6-H-80/O1STM32G-M**	1581215	10			
1 x M32, lateral	**DC-B 6-H-80/O1STM32S-M**	1581159	10			
Sleeve housing, with two cable entries						
2 x M20, straight				**DC-B 6-H-80/O2STM20G-M**	1581180	10
2 x M20, lateral				**DC-B 6-H-80/O2STM20S-M**	1581124	10
2 x M25, straight				**DC-B 6-H-80/O2STM25G-M**	1581201	10
2 x M25, lateral				**DC-B 6-H-80/O2STM25S-M**	1581145	10



Dimensional drawing with straight cable outlet



Dimensional drawing with lateral cable outlet

Motor connector, hinged retaining frame



DUPLICON Modular has been designed for use in drives in the power distribution field. The square-shaped housing allows flexible cable outlet directions and the absolutely vibration-free locking latch can withstand the roughest of conditions. The requirements as per railway standard EN 50155 are markedly overshot.

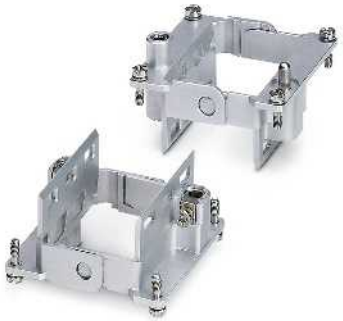
The modularity of contact inserts from the HEAVYCON field offers numerous applications.

The hinged retaining frames have been designed with leading PE contacts and can accommodate up to 3 contact insert modules.

The housings have one or two conductor entries in different sizes, depending on the type of cable entry.

Notes:

For contact insert modules, see from page: 548



Hinged retaining frame

EAC

Technical data

Material data		
Hinged retaining frame material		Die-cast zinc alloy
Connection data		
Connection cross section	[mm²]	4 ... 6
Connection cross section	[mm²]	1 ... 2.5
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Temperature data		
Ambient temperature (operation)		-40 °C ... 125 °C

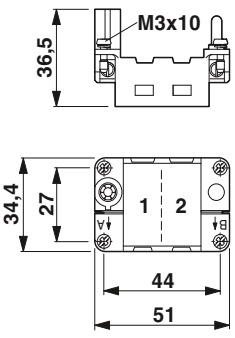
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Hinged retaining frame, for sleeve housing, marking: upper case letters (A, B, C, ...)	**DC-B 6-MHR-T3**	1581285	10
Hinged retaining frame, for panel mounting base, marking: lower case letters (a, b, c, ...)	**DC-B 6-MHR-A3**	1581287	10
Cable lug PE extension to 16 mm²	**HC-M-MHR-PE16**	1636981	50

Accessories

Cable lug PE extension to 16 mm²	**HC-M-MHR-PE16**	1636981	50

Coding elements see from page 638



Accessories

The DUPLICON-M12 adapter can be used to tap 24 V branches for active sensor/actuator boxes on site. The 5-pos. M12 connectors have thus been pre-wired only parallel to the connectors.



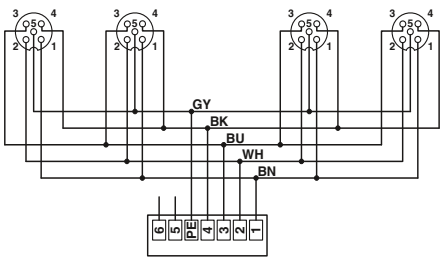
M12 adapters



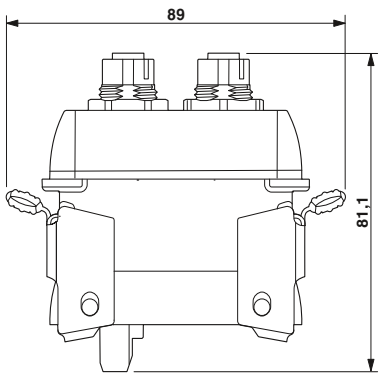
Mounting brackets

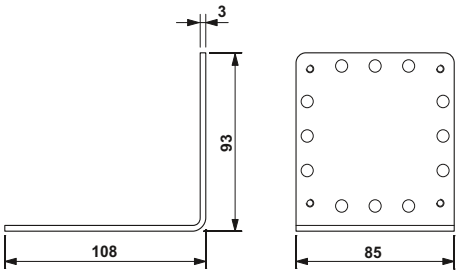
	Technical data	Technical data
Technical data		
Material data		
Material	-	Stainless steel V2A
Housing material	Aluminum die-cast	-
Housing surface material	EMC-conductive	-
Material, protective cover	-	-
Seal material	NBR	-
Locking latch material	Stainless steel	-
Material grip body interlock	PA	-
Mechanical data		
Color	Pearl gray	Gray
Type	DC-B6	DC-B6
Degree of protection	IP65/IP66/IP67	-
Tightening torque	-	-
Temperature data		
Ambient temperature (operation)	-40 °C ... 100 °C	-

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
M12 adapter for low-voltage distribution, A-coded	**DC-B 6-ADP-4M12-FS-5CON-7X4-UT**	1581010	1			
Mounting bracket, made of 3 mm stainless steel plate, with predrilled holes, with long and short sides				**DC-B 6-A-SA**	1602313	5
M4 Torx® screw T20, 12 mm long, self tapping, consisting of high-strength steel, anti-corrosive, for housing assembly						
Profile gasket for stackable housing						
Flat seal for panel mounting base						
Dust protection cover, for snapping on, with retaining cord eyelet, can be painted over						



Circuit diagram







Screw



Replacement seals



Dust protection cover

Technical data	
Steel	
-	
-	
-	
-	
-	
-	
Chromated	
-	
-	
1.5 Nm ... 2 Nm	
-	

Technical data	
-	
-	
-	
-	
NBR	
-	
-	
Black	
DC-B6	
-	
-	
-	

Technical data	
-	
-	
-	
Polyamide	
-	
-	
-	
Black	
DC-B6	
IP54	
-	
-40 °C ... 100 °C	

Ordering data

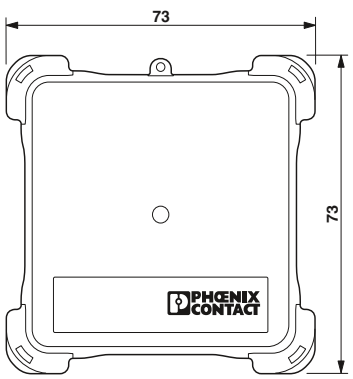
Type	Order No.	Pcs. / Pkt.
T20-M4X12	1602410	100

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-A-HD-G	1602326	10
DC-B 6-A-HB-G	1602339	10

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-CT-P	1581078	10





Installation and mounting material

Cable entry systems are in demand as an efficient alternative to heavy-duty connectors and cable glands. They can be used to route assembled cables directly into the control cabinet, to devices, and onto DIN rails without an additional plug-in connection. With the CES cable entry system, Phoenix Contact offers a well-designed system solution from system and field cabling to the DIN rail.

Plug assembly frames from Phoenix Contact can be easily mounted on standard DIN rails and so save entire jumpering levels in the control cabinet. They accommodate pre-assembled contact inserts and can be combined with HEAVYCON STANDARD sleeve housings. Thanks to the robust, conductive die-cast aluminum design, capacitive PE contact is ensured.

Clear and permanent marking of all cables and distributor boxes considerably improves transparency in control cabinets and systems. It makes assembly and maintenance work easier and assists in rectifying faults. Phoenix Contact cable marking systems provide the ideal marking option for any application. Just select an assembly method. The markers can be threaded on, clipped on, adhered in place or secured with cable binders.

Your web code: #0005

CES cable entry system

Sealing frames **668**
Rubber cable sleeves **670**
Plastic cable sleeves **672**
Accessories **674**

Cable feed-throughs

CES Multigates cable feed-throughs **676**
Floor panels **677**
Cable feed-throughs **678**

Plug assembly frames **679**

Cable glands

Plastic and brass cable glands **680**
Cable glands for Ex protection **697**

Service interfaces **704**

Marking systems, tools, and mounting material **710**

Sealing frames for cable sleeves



- Sealing frame with integrated metal reinforcement to protect against deformation
- Only two locking elements are required (screws or latch)
- Suitable for standard panel cutouts (e.g., Rittal)
- Snap-on frame for simplifying on-site installation
- Sealing frame with convenient locking latch for tool-free actuation
- Marking for cable sleeve location on the underside of the frame

Notes:

For dimensional drawings, see page 675

If the panel cutout width is 51 mm, HC industrial connectors and CIF plug assembly frames can also be fed through the panel using the cable entry system (CES).



Sealing frame with locking latch

Technical data

General data		
Material of frames		Polyamide
Material of cable sleeves		-
Degree of protection		IP54
Torque		-
Inflammability class according to UL 94		V0
Temperature range	[°C]	-40 ... 120

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Sealing frame, including flat gasket, for accommodating cable sleeves, **for standard cutout:**			
B10 (cutout: 35 mm x 65 mm), for up to 6 cable sleeves	**CES-B10-HFFS-PLBK**	0801663	1
B16 (cutout: 35 mm x 86 mm), for up to 8 cable sleeves	**CES-B16-HFFS-PLBK**	0801662	1
B24 (cutout: 35 mm x 113 mm), for up to 10 cable sleeves	**CES-B24-HFFS-PLBK**	0801661	1
Pre-assembled sealing frames with **cone-shaped cable sleeves,** for cables with a diameter of 2 mm ... 11 mm, **for standard cutouts:**			
B16 (cutout: 36 mm x 86 mm)			
B24 (cutout: 36 mm x 113 mm)			
Snap-on frame, including integrated seal for mounting panel, for accommodating sealing frames, **for standard cutouts:**			
B10 (cutout: 35 mm x 65 mm)			
B16 (cutout: 35 mm x 86 mm)			
B24 (cutout: 35 mm x 113 mm)			

Accessories

Replacement flat gasket, for sealing frame with **standard cutout:**			
B10 (cutout: 35 mm x 65 mm)	**CES-B10-WRG-BK**	0801725	10
B16 (cutout: 35 mm x 86 mm)	**CES-B16-WRG-BK**	0801726	10
B24 (cutout: 35 mm x 113 mm)	**CES-B24-WRG-BK**	0801727	10
Locking plate, metal, locks an unused snap-up frame, transport protection, **for standard cutouts:**			
B10			
B16			
B24			
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum, Kevlar fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint			
M4 replacement locking screw, with 3 mm Allen screw head, for sealing frame with screw locking			
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic			
Screw bit, hexagonal, E6.3-1/4" drive, hardened, suitable for holder according to DIN 3126-F 6.3/ISO 1173, size: hex 3 x 50 mm			
Size: hex 3 x 50 mm			



Sealing frame with screw locking



Sealing frames with cone-shaped cable sleeves and screw locking



Snap-up frame

Technical data

Polyamide	
-	
IP54 / IP65 (when using a CES-SRC../CES-LRC.. cone sleeve and a cable binder)	
2 Nm ... 4 Nm (locking screw)	
V0	
-40 ... 120	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B10-SFFS-PLBK	0801660	1
CES-B16-SFFS-PLBK	0801659	1
CES-B24-SFFS-PLBK	0801658	1

Accessories

CES-B10-WRG-BK	0801725	10
CES-B16-WRG-BK	0801726	10
CES-B24-WRG-BK	0801727	10
CES-SFFS-H	0801728	10
SF-M BH	1212070	1
SF-BIT-HEX 3-50	1212647	5

Technical data

Polyamide	
NBR	
IP54 (DIN IEC 60529)	
2 Nm ... 4 Nm (locking screw)	
-	
-40 ... 120	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B16-8XSRC-BK	1411073	1
CES-B24-10XSRC-BK	1411074	1

Accessories

CUTFOX-ES	1212621	1
CES-SFFS-H	0801728	10
SF-M BH	1212070	1
SF-BIT-HEX 3-50	1212647	5

Technical data

Polyamide	
-	
IP54	
-	
V0	
-20 ... 80	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B10-SF-PLBK	0801655	10
CES-B16-SF-PLBK	0801651	10
CES-B24-SF-PLBK	0801647	10

Accessories

CES-B10-SFC-M	0801645	10
CES-B16-SFC-M	0801642	10
CES-B24-SFC-M	0801641	10

Cable sleeves, rubber

Advantages:

– Significantly improved long-term performance
– Resistant to oil, fuels, and grease
– Halogen-free

Notes:
The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).
The cable sleeves must be mounted in accordance with the mounting instructions provided.



Cable sleeves, small



Cable sleeves, large

Technical data

General data			
Material		NBR	NBR
Degree of protection		IP54	IP54
Temperature range	[°C]	-40 ... 125	-40 ... 125

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cone-shaped cable sleeves, IP65 in sealing frames with screw locking and cable binders, IP54 in sealing frames with locking latch. For cables with a diameter of:							
2 mm ... 11 mm	black	CES-SRC-BK	0801718	10			
7 mm ... 24 mm	black				CES-LRC-BK	0801719	10
Cable sleeves, IP65, without bore hole, can be used in sealing frames with locking latch and screw locking							
	black	CES-SRG-BK	0801670	10	CES-LRG-BK	0801671	10
Cable sleeves, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
1 mm ... 2 mm	black	CES-SRG-BK-2	0801635	10			
2 mm ... 3 mm	black	CES-SRG-BK-3	0801633	10			
3 mm ... 4 mm	black	CES-SRG-BK-4	0801632	10			
4 mm ... 5 mm	black	CES-SRG-BK-5	0801630	10			
5 mm ... 6 mm	black	CES-SRG-BK-6	0801628	10			
6 mm ... 7 mm	black	CES-SRG-BK-7	0801627	10			
7 mm ... 8 mm	black	CES-SRG-BK-8	0801625	10			
8 mm ... 9 mm	black	CES-SRG-BK-9	0801622	10			
9 mm ... 10 mm	black	CES-SRG-BK-10	0801620	10			
10 mm ... 11 mm	black	CES-SRG-BK-11	0801618	10			
11 mm ... 12 mm	black	CES-SRG-BK-12	0801617	10			
12 mm ... 13 mm	black	CES-SRG-BK-13	0801616	10			
13 mm ... 14 mm	black	CES-SRG-BK-14	0801615	10			
14 mm ... 15 mm	black	CES-SRG-BK-15	1410563	10			
15 mm ... 16 mm	black	CES-SRG-BK-16	1410576	10			
16 mm ... 17 mm	black	CES-SRG-BK-17	1410589	10			
Cable sleeves, large, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
14 mm ... 15 mm	black				CES-LRG-BK-15	0801619	10
15 mm ... 16 mm	black				CES-LRG-BK-16	0801621	10
16 mm ... 17 mm	black				CES-LRG-BK-17	0801624	10
17 mm ... 18 mm	black				CES-LRG-BK-18	0801626	10
18 mm ... 19 mm	black				CES-LRG-BK-19	0801629	10
19 mm ... 20 mm	black				CES-LRG-BK-20	0801631	10
20 mm ... 21 mm	black				CES-LRG-BK-21	0801634	10
21 mm ... 22 mm	black				CES-LRG-BK-22	0801637	10
22 mm ... 23 mm	black				CES-LRG-BK-23	0801638	10
23 mm ... 24 mm	black				CES-LRG-BK-24	0801639	10
24 mm ... 25 mm	black				CES-LRG-BK-25	0801640	10
25 mm ... 26 mm	black				CES-LRG-BK-26	0801643	10
26 mm ... 27 mm	black				CES-LRG-BK-27	0801644	10
27 mm ... 28 mm	black				CES-LRG-BK-28	0801646	10
28 mm ... 29 mm	black				CES-LRG-BK-29	0801648	10
29 mm ... 30 mm	black				CES-LRG-BK-30	0801650	10
30 mm ... 31 mm	black				CES-LRG-BK-31	0801653	10
31 mm ... 32 mm	black				CES-LRG-BK-32	0801654	10
32 mm ... 33 mm	black				CES-LRG-BK-33	0801656	10

Cable sleeves, rubber, special formats

Advantages:

– Significantly improved long-term performance
– Resistant to oil, fuels, and grease
– Halogen-free

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

The cable sleeves must be mounted in accordance with the mounting instructions provided.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS interface cables

		Technical data	Technical data
General data			
Material		NBR	NBR
Degree of protection		IP54	-
Temperature range	[°C]	-40 ... 125	-40 ... 125

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, with 2 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
2x 2 mm ... 3 mm	black	**CES-SRG-BK-2X3**	1410398	10			
2x 3 mm ... 4 mm	black	**CES-SRG-BK-2X4**	1410408	10			
2x 4 mm ... 5 mm	black	**CES-SRG-BK-2X5**	0801657	10			
2x 5 mm ... 6 mm	black	**CES-SRG-BK-2X6**	0801664	10			
2x 6 mm ... 7 mm	black	**CES-SRG-BK-2X7**	1410084	10			
2x 7 mm ... 8 mm	black	**CES-SRG-BK-2X8**	1410097	10			
2x 8 mm ... 9 mm	black	**CES-SRG-BK-2X9**	1410411	10			
Cable sleeves, with 4 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
4 x 2 mm ... 3 mm	black	**CES-SRG-BK-4X3**	0801665	10			
4 x 3 mm ... 4 mm	black	**CES-SRG-BK-4X4**	0801666	10			
4 x 4 mm ... 5 mm	black	**CES-SRG-BK-4X5**	1410107	10			
4 x 5 mm ... 6 mm	black	**CES-SRG-BK-4X6**	1410152	10			
Cable sleeve, IP54, slotted, for **one AS-I**nterface cable, **cable arrangement:**							
L	black				**CES-SRG-BK-1ASI-L**	1410042	10
R	black				**CES-SRG-BK-1ASI-R**	0801667	10
Cable sleeve, IP54, slotted, for **two AS-I**nterface cables, **cable arrangement:**							
LL	black				**CES-SRG-BK-2ASI-LL**	1410055	10
RR	black				**CES-SRG-BK-2ASI-RR**	0801668	10
LR	black				**CES-SRG-BK-2ASI-LR**	0801669	10

Cable sleeves, thermoplastics

Advantages:

– Low flammability according to UL 94 V0 of thermoplastic sleeves
– Good resistance to acids and lyes

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

The cable sleeves must be mounted in accordance with the mounting instructions provided.



Cable sleeves, small



Cable sleeves, large

Technical data

General data			
Material		SEBS	SEBS
Degree of protection		IP44	IP44
Inflammability class according to UL 94		V0	V0
Temperature range	[°C]	-40 ... 80	-40 ... 80

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
1 mm ... 2 mm	gray	**CES-STPG-GY-2**	0801672	10			
2 mm ... 3 mm	gray	**CES-STPG-GY-3**	0801673	10			
3 mm ... 4 mm	gray	**CES-STPG-GY-4**	0801674	10			
4 mm ... 5 mm	gray	**CES-STPG-GY-5**	0801675	10			
5 mm ... 6 mm	gray	**CES-STPG-GY-6**	0801676	10			
6 mm ... 7 mm	gray	**CES-STPG-GY-7**	0801677	10			
7 mm ... 8 mm	gray	**CES-STPG-GY-8**	0801679	10			
8 mm ... 9 mm	gray	**CES-STPG-GY-9**	0801680	10			
9 mm ... 10 mm	gray	**CES-STPG-GY-10**	0801682	10			
10 mm ... 11 mm	gray	**CES-STPG-GY-11**	0801683	10			
11 mm ... 12 mm	gray	**CES-STPG-GY-12**	0801684	10			
12 mm ... 13 mm	gray	**CES-STPG-GY-13**	0801685	10			
13 mm ... 14 mm	gray	**CES-STPG-GY-14**	0801686	10			
14 mm ... 15 mm	gray	**CES-STPG-GY-15**	1410521	10			
15 mm ... 16 mm	gray	**CES-STPG-GY-16**	1410534	10			
16 mm ... 17 mm	gray	**CES-STPG-GY-17**	1410547	10			
Cable sleeves, large, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
14 mm ... 15 mm	gray				**CES-LTPG-GY-15**	0801687	10
15 mm ... 16 mm	gray				**CES-LTPG-GY-16**	0801688	10
16 mm ... 17 mm	gray				**CES-LTPG-GY-17**	0801689	10
17 mm ... 18 mm	gray				**CES-LTPG-GY-18**	0801690	10
18 mm ... 19 mm	gray				**CES-LTPG-GY-19**	0801691	10
19 mm ... 20 mm	gray				**CES-LTPG-GY-20**	0801692	10
20 mm ... 21 mm	gray				**CES-LTPG-GY-21**	0801693	10
21 mm ... 22 mm	gray				**CES-LTPG-GY-22**	0801695	10
22 mm ... 23 mm	gray				**CES-LTPG-GY-23**	0801696	10
23 mm ... 24 mm	gray				**CES-LTPG-GY-24**	0801697	10
24 mm ... 25 mm	gray				**CES-LTPG-GY-25**	0801698	10
25 mm ... 26 mm	gray				**CES-LTPG-GY-26**	0801699	10
26 mm ... 27 mm	gray				**CES-LTPG-GY-27**	0801700	10
27 mm ... 28 mm	gray				**CES-LTPG-GY-28**	0801701	10
28 mm ... 29 mm	gray				**CES-LTPG-GY-29**	0801702	10
29 mm ... 30 mm	gray				**CES-LTPG-GY-30**	0801703	10
30 mm ... 31 mm	gray				**CES-LTPG-GY-31**	0801705	10
31 mm ... 32 mm	gray				**CES-LTPG-GY-32**	0801706	10
32 mm ... 33 mm	gray				**CES-LTPG-GY-33**	0801707	10
Cable sleeves, IP65, without bore hole, can be used in sealing frames with locking latch and screw locking							
	gray	**CES-STPG-GY**	0801715	10	**CES-LTPG-GY**	0801716	10

Cable sleeves, thermoplastics, special formats

Advantages:

– Low flammability according to UL 94 V0 of thermoplastic sleeves
– Good resistance to acids and lyes

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

The cable sleeves must be mounted in accordance with the mounting instructions provided.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS interface cables

Technical data

General data			
Material		SEBS	SEBS
Degree of protection		IP44	IP54
Inflammability class according to UL 94		V0	V0
Temperature range	[°C]	-40 ... 80	-40 ... 80

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, with 2 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
2x 2 mm ... 3 mm	gray	**CES-STPG-GY-2X3**	1410424	10			
2x 3 mm ... 4 mm	gray	**CES-STPG-GY-2X4**	1410438	10			
2x 4 mm ... 5 mm	gray	**CES-STPG-GY-2X5**	0801708	10			
2x 5 mm ... 6 mm	gray	**CES-STPG-GY-2X6**	0801709	10			
2x 6 mm ... 7 mm	gray	**CES-STPG-GY-2X7**	1410110	10			
2x 7 mm ... 8 mm	gray	**CES-STPG-GY-2X8**	1410123	10			
2x 8 mm ... 9 mm	gray	**CES-STPG-GY-2X9**	1410440	10			
Cable sleeves, with 4 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
4 x 2 mm ... 3 mm	gray	**CES-STPG-GY-4X3**	0801710	10			
4 x 3 mm ... 4 mm	gray	**CES-STPG-GY-4X4**	0801711	10			
4 x 4 mm ... 5 mm	gray	**CES-STPG-GY-4X5**	1410136	10			
4 x 5 mm ... 6 mm	gray	**CES-STPG-GY-4X6**	1410149	10			
Cable sleeve, IP54, slotted, for **one AS-I**nterface cable, **cable arrangement:**							
L	gray				**CES-STPG-GY-1ASI-L**	1410068	10
R	gray				**CES-STPG-GY-1ASI-R**	0801712	10
Cable sleeve, IP54, slotted, for **two AS-I**nterface cables, **cable arrangement:**							
LL	gray				**CES-STPG-GY-2ASI-LL**	1410071	10
RR	gray				**CES-STPG-GY-2ASI-RR**	0801713	10
LR	gray				**CES-STPG-GY-2ASI-LR**	0801714	10

Accessories, filler plugs, EMC cable catch rails



Filler plugs with a diameter of 2 mm to 17 mm

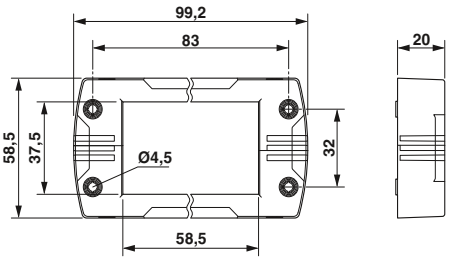


EMC cable catch rail for mounting on CES sealing frames

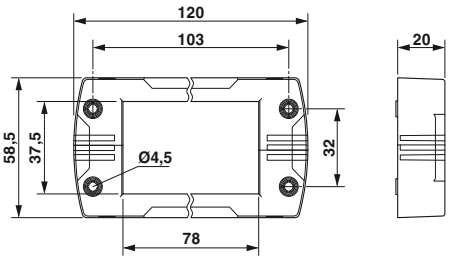
	Technical data	Technical data
General data		
Material	PA	Stainless steel
Degree of protection	IP54	-
Inflammability class according to UL 94	-	-
Temperature range [°C]	-20 ... 80	-

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Filler plugs, for sealing unused cable sleeves with a diameter of:							
2 mm	black	**KDT-ST 2**	1410220	25			
3 mm	black	**KDT-ST 3**	3063921	25			
4 mm	black	**KDT-ST 4**	3063934	25			
5 mm	black	**KDT-ST 5**	3063947	25			
6 mm	black	**KDT-ST 6**	3063950	25			
7 mm	black	**KDT-ST 7**	3063963	25			
8 mm	black	**KDT-ST 8**	3063976	25			
9 mm	black	**KDT-ST 9**	3063989	25			
10 mm	black	**KDT-ST 10**	3063992	25			
11 mm	black	**KDT-ST 11**	3064001	25			
12 mm	black	**KDT-ST 12**	3062016	25			
13 mm	black	**KDT-ST 13**	3062029	25			
14 mm	black	**KDT-ST 14**	3062032	25			
15 mm	black	**KDT-ST 15**	3062045	25			
16 mm	black	**KDT-ST 16**	3062058	25			
17 mm	black	**KDT-ST 17**	3062061	25			
EMC cable catch rail, for mounting on the **longitudinal side** of the CES-B16... CES sealing frame					**KEL-EMV 16-4**	3063507	5
EMC cable catch rail, for mounting on the **longitudinal side** of the CES-B24... CES sealing frame					**KEL-EMV 24-5**	3063510	5
EMC cable catch rail, for mounting on the **diagonal side** of the CES-B16 ... and CES-24 ... CES sealing frames					**KEL-EMV-F**	3063523	5

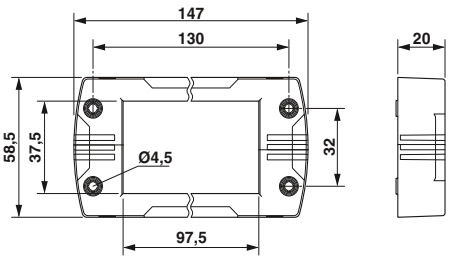
Dimensional drawings
CES... sealing frames



CES-B10-HFFS-PLBK
CES-B10-SFFS-PLBK

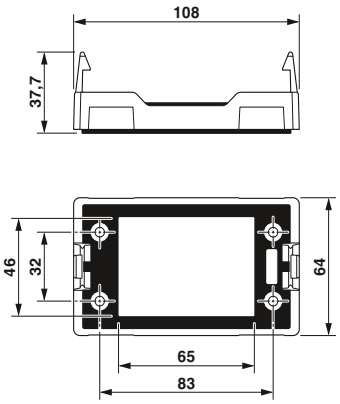


CES-B16-HFFS-PLBK
CES-B16-SFFS-PLBK
CES-B16-8XSRC-BK

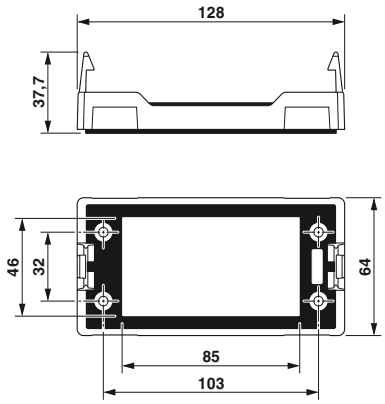


CES-B24-HFFS-PLBK
CES-B24-SFFS-PLBK
CES-B24-10XSRC-BK

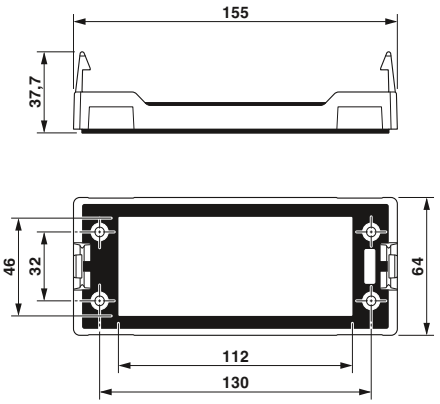
Dimensional drawings
CES... snap-on frames



CES-B10-SF-PLBK



CES-B16-SF-PLBK



CES-B24-SF-PLBK

CES Multigates cable feed-throughs

new

Notes:
Other versions available on request.





CES Multigates cable feed-through

Cable feed-throughs for housing and control cabinets.

Advantages:

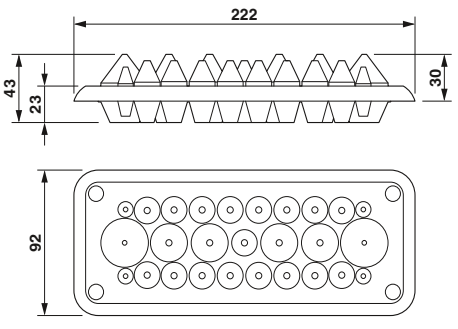
– Space-saving feed-through of up to 37 cables
– High degree of protection thanks to double membrane sealing
– Quick installation of unassembled cables
– Suitable for cables sizes from 5 mm to 60 mm
– Flame-retardant and oil-resistant (black material)

Technical data

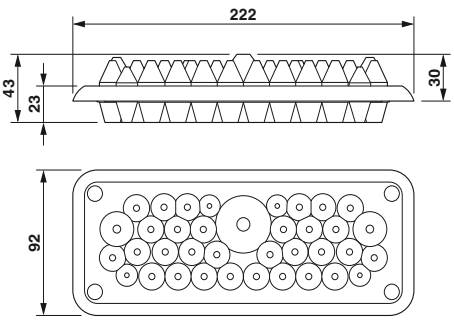
General data		
Material		TPE-SEBS
Degree of protection		IP66 / IP67
Inflammability class according to UL 94		V0
Temperature range	[°C]	-40 ... 100

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
CES Multigates, flange size FL21 for C standard openings, cable feed-throughs for cable diameter:				
4 x 8-16 mm, 2 x 24-54 mm, 1 x 30-60 mm	gray	**MC-3/7-MULTI-67-PV-LG**	1415234	1
4 x 5-7 mm, 4 x 8-12 mm, 13 x 10-14 mm, 4 x 14-20 mm, 2 x 20-26 mm	gray	**MC-25/27-MULTI-67-PV-LG**	1415236	1
4 x 6-10 mm, 14 x 8-12 mm, 16 x 10-14 mm, 2 x 12-18 mm, 1 x 17-32 mm	gray	**MC-35/37-MULTI-67-PV-LG**	1415240	1
CES Multigates, flange size FL21 for C standard openings, cable feed-throughs for cable diameter:				
4 x 8-16 mm, 2 x 24-54 mm, 1 x 30-60 mm	black	**MC-3/7-MULTI-67-PVO-BK**	1415235	1
4 x 5-7 mm, 4 x 8-12 mm, 13 x 10-14 mm, 4 x 14-20 mm, 2 x 20-26 mm	black	**MC-25/27-MULTI-67-PVO-BK**	1415237	1
4 x 6-10 mm, 14 x 8-12 mm, 16 x 10-14 mm, 2 x 12-18 mm, 1 x 17-32 mm	black	**MC-35/37-MULTI-67-PVO-BK**	1415241	1



MC-25/27-MULTI-67-PV-LG



MC-35/37-MULTI-67-PV-LG

Module plates

new



For accommodating CES B24 sealing frames and CES Multigates cable feed-throughs.

Pre-assembled for time-saving and easy assembly:
– Partition plates
– Control cabinet bottom
– Control cabinet hole matrix
– Rails for the TS system (Rittal)



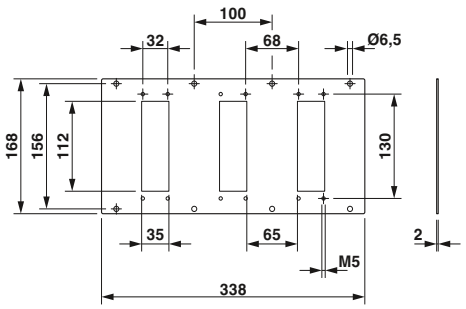
Module plates

Technical data

General data		
Material		Stainless steel 1.4301/AISI 304
Sealing material		NBR
Degree of protection		IP54
Temperature range	[°C]	-40 ... 100

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Module plates, with seal, for CES B24 sealing frames				
3 openings	silver	**MD-INB24-3-SZP-S**	1415242	1
4 openings	silver	**MD-INB24-4-SZP-S**	1415243	1
Floor panel, with seal, CES Multigates				
One opening	silver	**MD-INC-1-SZP-S**	1415245	1
Floor panel, with seal				
No opening	silver	**MD-IN-0-SZP-S**	1415244	1



MD-INB24-3-SZP-S

Cable feed-throughs



The conduits make IP54-rated sealing possible when leading preassembled conductors into the control cabinet.

This is done by pushing the slit sleeves over the conductor, positioning them and placing them in the cable feed-through housing.

Unused feed-through positions are filled with filler plugs.



Conduit/cable feed-through sleeves

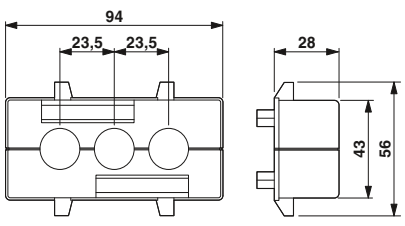
EAC

Technical data

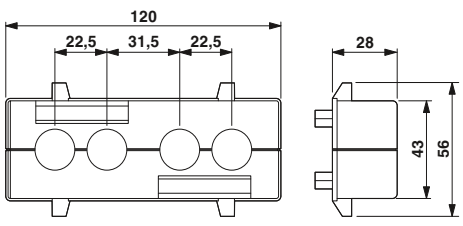
	HC-KD/SG-...	HC-KDT... / HC-KDG-B
Material data		
Material	PC; gray similar to RAL 7044	Thermoplastic rubber
Inflammability class according to UL 94	V0	HB
Degree of protection	IP54	IP54
Temperature data		
Ambient temperature (operation)	-40 °C ... 125 °C	-40 °C ... 125 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Conduit, for connector housings:			
HC-B16-AMQ (Order No. 1771587)	**HC-KD/SG 16/ 3**	**1644012**	1
HC-B24-AMQ (Order No. 1771927)	**HC-KD/SG 24/ 4**	**1644025**	1
Cable feed-through sleeves, for insertion in the conduit, for conductor diameters:			
3 mm ... 4 mm	**HC-KDT 3-4**	**1644038**	10
4 mm ... 5 mm	**HC-KDT 4-5**	**1644041**	10
5 mm ... 6 mm	**HC-KDT 5-6**	**1644054**	10
6 mm ... 7 mm	**HC-KDT 6-7**	**1644067**	10
7 mm ... 8 mm	**HC-KDT 7-8**	**1644070**	10
8 mm ... 9 mm	**HC-KDT 8-9**	**1644083**	10
9 mm ... 10 mm	**HC-KDT 9-10**	**1644093**	10
Cable feed-through sleeves, for insertion in the conduit, in addition to the strain relief, a cable binder can be used, for conductor diameters:			
10 mm ... 11 mm	**HC-KDT 10-11**	**1644106**	10
11 mm ... 12 mm	**HC-KDT 11-12**	**1644119**	10
12 mm ... 13 mm	**HC-KDT 12-13**	**1644122**	10
13 mm ... 14 mm	**HC-KDT 13-14**	**1644135**	10
14 mm ... 15 mm	**HC-KDT 14-15**	**1644148**	10
15 mm ... 16 mm	**HC-KDT 15-16**	**1644151**	10
Filler plug, to close the unused openings of the HC-KD/SG-... conduit	**HC-KDG-B**	**1644164**	10
Marker tags, 5-section, unprinted, marking with X-PEN, B-STIFT, plotter or BKMT 20 x 8 label			
Lettering field size: 20 x 8 mm	**SS-ZB WH**	**5031171**	50



HC-KD/SG 16/ 3



HC-KD/SG 24/ 4

Connector assembly frame



Advantages:

- For standard HEAVYCON contact inserts on NS35/7,5 DIN rail
- Robust cast aluminum housing
- Base frame for pre-assembled contact inserts
- Cable duct function
- Grounding for DIN rail
- Coding function

Notes:
The bridging function of the aluminum design ensures that there is a leading PE.
Stainless steel locking latch, handle: PA-GF
Upon delivery, there is no pre-assembled bracket (HC-CIF..BFWD..). The bracket is assembled after the contact insert.



Base frame/top frame

EAC

Technical data

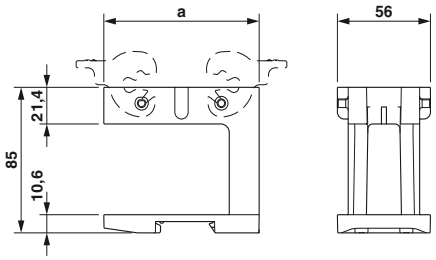
Material data	
Material	Cast aluminum, uncoated
Tightening torque	2 Nm (locking screw)
Temperature data	
Ambient temperature (operation)	-40 °C ... 125 °C

Ordering data

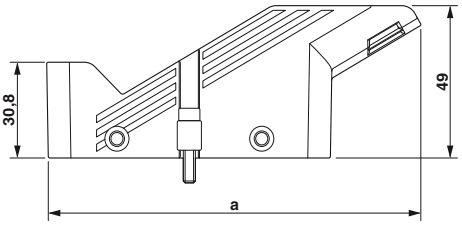
Description	Size	Type	Order No.	Pcs. / Pkt.
Base frame, with double locking latch				
a = 93.5 mm	For B10	**HC-CIF-B10-BFWD-FH-AL**	1404220	1
a = 93.5 mm	For B16	**HC-CIF-B16-BFWD-FH-AL**	1404217	1
a = 120.0 mm	For B24	**HC-CIF-B24-BFWD-FH-AL**	1404212	1
Base frame, without double locking latch, for screw locking				
a = 120.0 mm	For 2xB6	**HC-CIF-2B6-BFFD-FH-AL**	1404214	1
a = 93.5 mm	For B10	**HC-CIF-B10-BFFD-FH-AL**	1404219	1
a = 93.5 mm	For B16	**HC-CIF-B16-BFFD-FH-AL**	1404216	1
a = 120.0 mm	For B24	**HC-CIF-B24-BFFD-FH-AL**	1404211	1
Top frame, for double locking latch and optionally with locking screws, Allen screw, WAF 3				
a = 150.2 mm	For 2xB6	**HC-CIF-2B6-HFFD-WH-AL**	1404215	1
a = 103.2 mm	For B10	**HC-CIF-B10-HFFD-WH-AL**	1404221	1
a = 123.7 mm	For B16	**HC-CIF-B16-HFFD-WH-AL**	1404218	1
a = 150.2 mm	For B24	**HC-CIF-B24-HFFD-WH-AL**	1404213	1

Accessories

Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic	**SF-M BH**	1212070	1
Screw bit, hexagonal, E6.3-1/4" drive, hardened, suitable for holder according to DIN 3126-F 6.3/ISO 1173, size: hex 3 x 50 mm			
Size: hex 3 x 50 mm	**SF-BIT-HEX 3-50**	1212647	5



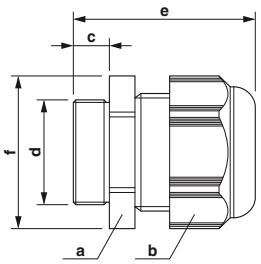
HC-CIF-B24-BFWD-FH-AL



HC-CIF-B24-HFFD-WH-AL

Plastic cable glands, metric, EN 60423

– Material: polyamide 6
– Color: silver gray (RAL 7001)
– Seal: CR
– Ambient temperature: -30°C ... +80°C (+150°C briefly)
– Degree of protection: IP68, 5 bar (30 minutes)
– Strain relief: integrated according to EN 50262





Plastic cable gland

243143 / QCRV2.E320158 / 40024418

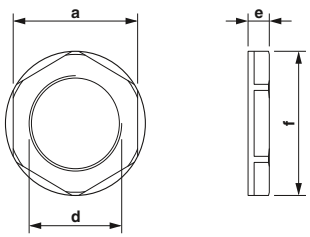
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	silver gray	3.00 - 6.50	15.00	15.00	8.00	12.00	32.10	17.10	-
M16	silver gray	5.00 - 10.00	22.00	22.00	10.00	16.00	39.70	25.00	-
M20	silver gray	6.00 - 12.00	24.00	24.00	10.00	20.00	42.30	27.80	-
M25	silver gray	11.00 - 17.00	29.00	29.00	8.00	25.00	42.50	33.50	-
M32	silver gray	15.00 - 21.00	36.00	36.00	10.00	32.00	50.80	40.90	-
M40	silver gray	19.00 - 28.00	46.00	46.00	10.00	40.00	55.10	52.00	-
M50	silver gray	30.00 - 38.00	60.00	60.00	18.00	50.00	71.70	67.70	-
M63	silver gray	34.00 - 44.00	65.00	65.00	18.00	63.00	75.40	72.20	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-M12-S68N-PNES-GY	1411123	10
G-INS-M16-S68N-PNES-GY	1411124	10
G-INS-M20-S68N-PNES-GY	1411125	5
G-INS-M25-M68N-PNES-GY	1411126	5
G-INS-M32-M68N-PNES-GY	1411127	5
G-INS-M40-M68N-PNES-GY	1411128	5
G-INS-M50-L68L-PNES-GY	1411129	1
G-INS-M63-L68L-PNES-GY	1411130	1

Plastic counter nuts, metric, EN 60423

– Material: polyamide 6
– Color: silver gray (RAL 7001)
– Ambient temperature: -20°C ... +80°C





Plastic counter nut

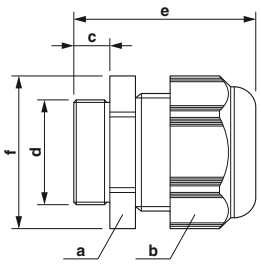
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	silver gray	-	18.00	-	-	12.00	5.00	19.50	-
M16	silver gray	-	22.00	-	-	16.00	5.00	24.20	-
M20	silver gray	-	26.00	-	-	20.00	6.00	28.60	-
M25	silver gray	-	32.00	-	-	25.00	6.00	35.00	-
M32	silver gray	-	41.00	-	-	32.00	7.00	46.10	-
M40	silver gray	-	50.00	-	-	40.00	7.00	55.30	-
M50	silver gray	-	60.00	-	-	50.00	8.00	66.10	-
M63	silver gray	-	75.00	-	-	63.00	8.00	82.50	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-M12-P-GY	1411205	10
A-INL-M16-P-GY	1411206	10
A-INL-M20-P-GY	1411207	5
A-INL-M25-P-GY	1411208	5
A-INL-M32-P-GY	1411209	5
A-INL-M40-P-GY	1411210	5
A-INL-M50-P-GY	1411211	5
A-INL-M63-P-GY	1411212	5

Plastic cable glands, metric, EN 60423

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Seal: CR
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)
- Strain relief: integrated according to EN 50262





Plastic cable gland

243143 / QCRV.E320158 / 40024418

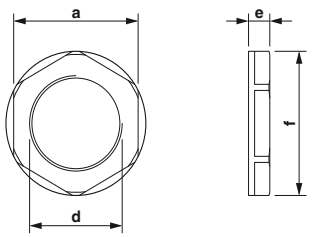
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	jet black	3.00 - 6.50	15.00	15.00	8.00	12.00	32.10	17.10	-
M16	jet black	5.00 - 10.00	22.00	22.00	10.00	16.00	39.70	25.00	-
M20	jet black	6.00 - 12.00	24.00	24.00	10.00	20.00	42.30	27.80	-
M25	jet black	11.00 - 17.00	29.00	29.00	8.00	25.00	42.50	33.50	-
M32	jet black	15.00 - 21.00	36.00	36.00	10.00	32.00	50.80	40.90	-
M40	jet black	19.00 - 28.00	46.00	46.00	10.00	40.00	55.10	52.00	-
M50	jet black	30.00 - 38.00	60.00	60.00	18.00	50.00	71.70	67.70	-
M63	jet black	34.00 - 44.00	65.00	65.00	18.00	63.00	75.40	72.20	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-M12-S68N-PNES-BK	1411131	10
G-INS-M16-S68N-PNES-BK	1411132	10
G-INS-M20-S68N-PNES-BK	1411133	5
G-INS-M25-M68N-PNES-BK	1411134	5
G-INS-M32-M68N-PNES-BK	1411136	5
G-INS-M40-M68N-PNES-BK	1411137	5
G-INS-M50-L68L-PNES-BK	1411138	1
G-INS-M63-L68L-PNES-BK	1411139	1

Plastic counter nuts, metric, EN 60423

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Ambient temperature: -20°C ... +80°C





Plastic counter nut

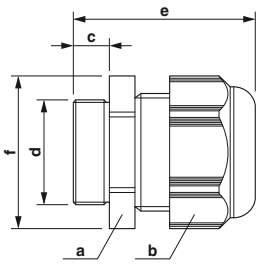
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	jet black	-	18.00	-	-	12.00	5.00	19.50	-
M16	jet black	-	22.00	-	-	16.00	5.00	24.20	-
M20	jet black	-	26.00	-	-	20.00	6.00	28.60	-
M25	jet black	-	32.00	-	-	25.00	6.00	35.00	-
M32	jet black	-	41.00	-	-	32.00	7.00	46.10	-
M40	jet black	-	50.00	-	-	40.00	7.00	55.30	-
M50	jet black	-	60.00	-	-	50.00	8.00	66.10	-
M63	jet black	-	75.00	-	-	63.00	8.00	82.50	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-M12-P-BK	1411213	10
A-INL-M16-P-BK	1411214	10
A-INL-M20-P-BK	1411215	5
A-INL-M25-P-BK	1411216	5
A-INL-M32-P-BK	1411217	5
A-INL-M40-P-BK	1411218	5
A-INL-M50-P-BK	1411219	5
A-INL-M63-P-BK	1411220	5

Plastic cable glands, Pg, EN 40430

– Material: polyamide 6
– Color: silver gray (RAL 7001)
– Seal: CR
– Ambient temperature: -30°C ... +80°C (+150°C briefly)
– Degree of protection: IP68, 5 bar (30 minutes)
– Strain relief: integrated according to EN 50262





Plastic cable gland

243143 / QCRV2.E320158

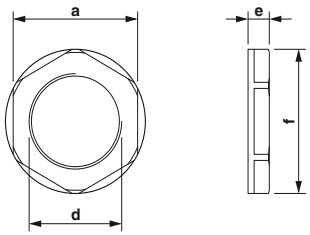
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver gray	3.00 - 6.50	15.00	15.00	8.00	12.50	32.70	17.10	-
Pg9	silver gray	4.00 - 8.00	19.00	19.00	8.00	15.20	36.20	21.60	-
Pg11	silver gray	5.00 - 10.00	22.00	22.00	8.00	18.60	38.10	25.00	-
Pg13.5	silver gray	6.00 - 12.00	24.00	24.00	9.00	20.40	40.00	27.80	-
Pg16	silver gray	10.00 - 14.00	27.00	27.00	10.00	22.50	44.20	30.80	-
Pg21	silver gray	13.00 - 18.00	33.00	33.00	11.00	28.30	49.30	37.80	-
Pg29	silver gray	18.00 - 25.00	42.00	42.00	11.00	37.00	53.90	48.00	-
Pg36	silver gray	22.00 - 32.00	53.00	53.00	13.00	47.00	65.40	60.00	-
Pg42	silver gray	30.00 - 38.00	60.00	60.00	13.00	54.00	65.90	67.70	-
Pg48	silver gray	34.00 - 44.00	65.00	65.00	14.00	59.30	68.80	72.20	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-PG7-S68N-PNES-GY	1411140	10
G-INS-PG9-S68N-PNES-GY	1411141	10
G-INS-PG11-S68N-PNES-GY	1411142	5
G-INS-PG13,5-S68N-PNES-GY	1411143	5
G-INS-PG16-S68N-PNES-GY	1411144	5
G-INS-PG21-M68N-PNES-GY	1411145	5
G-INS-PG29-M68N-PNES-GY	1411146	5
G-INS-PG36-L68N-PNES-GY	1411147	5
G-INS-PG42-L68N-PNES-GY	1411149	1
G-INS-PG48-L68N-PNES-GY	1411150	1

Plastic counter nuts, Pg, EN 40430

– Material: polyamide 6
– Color: silver gray (RAL 7001)
– Ambient temperature: -20°C ... +80°C





Plastic counter nut

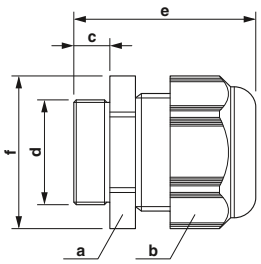
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver gray	-	19.00	-	-	12.50	5.00	21.00	-
Pg9	silver gray	-	22.00	-	-	15.20	5.00	24.00	-
Pg11	silver gray	-	24.00	-	-	18.60	5.00	26.00	-
Pg13.5	silver gray	-	27.00	-	-	20.40	6.00	29.00	-
Pg16	silver gray	-	30.00	-	-	22.50	6.00	33.00	-
Pg21	silver gray	-	36.00	-	-	28.30	7.00	39.00	-
Pg29	silver gray	-	46.00	-	-	37.00	7.00	50.00	-
Pg36	silver gray	-	60.00	-	-	47.00	8.00	66.00	-
Pg42	silver gray	-	65.00	-	-	54.00	8.00	73.00	-
Pg48	silver gray	-	70.00	-	-	59.30	8.00	78.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-PG7-P-GY	1411221	10
A-INL-PG9-P-GY	1411222	10
A-INL-PG11-P-GY	1411223	5
A-INL-PG13,5-P-GY	1411224	5
A-INL-PG16-P-GY	1411225	5
A-INL-PG21-P-GY	1411226	5
A-INL-PG29-P-GY	1411227	5
A-INL-PG36-P-GY	1411228	5
A-INL-PG42-P-GY	1411229	5
A-INL-PG48-P-GY	1411230	5

Plastic cable glands, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: silver gray (RAL 7001)
- Seal: CR
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)
- Strain relief: integrated according to EN 50262





Plastic cable gland

243143 / QCRV.E320158

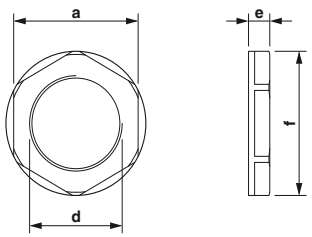
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	silver gray	5.00 - 10.00	22.00	22.00	15.00	16.60	44.50	25.00	-
1/2 inch NPT	silver gray	10.00 - 14.00	27.00	27.00	15.00	20.60	47.10	30.80	-
3/4 inch NPT	silver gray	13.00 - 18.00	33.00	33.00	15.00	25.90	47.50	37.80	-
1 inch NPT	silver gray	18.00 - 25.00	42.00	42.00	18.00	32.40	58.50	48.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-N3/8-S68L-PNES-GY	1411152	10
G-INS-N1/2-S68L-PNES-GY	1411153	10
G-INS-N3/4-M68L-PNES-GY	1411154	5
G-INS-N1-M68L-PNES-GY	1411155	5

Plastic counter nuts, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: silver gray (RAL 7001)
- Ambient temperature: -20°C ... +80°C





Plastic counter nut

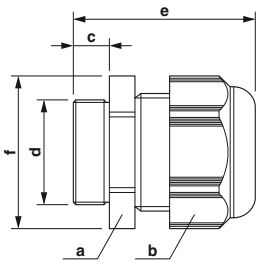
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	silver gray	-	22.00	-	-	16.60	5.00	25.00	-
1/2 inch NPT	silver gray	-	27.00	-	-	20.60	5.00	30.50	-
3/4 inch NPT	silver gray	-	33.00	-	-	25.90	5.00	37.50	-
1 inch NPT	silver gray	-	47.00	-	-	32.40	6.00	46.50	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-NPT3/8-P-GY	1411231	10
A-INL-NPT1/2-P-GY	1411233	10
A-INL-NPT3/4-P-GY	1411234	5
A-INL-NPT1-P-GY	1411235	5

Plastic cable glands, NPT, ANSI B1.20.1

– Material: polyamide 6
– Color: deep black (RAL 9005)
– Seal: CR
– Ambient temperature: -30°C ... +80°C (+150°C briefly)
– Degree of protection: IP68, 5 bar (30 minutes)
– Strain relief: integrated according to EN 50262





Plastic cable gland

243143 / QCRV.E320158

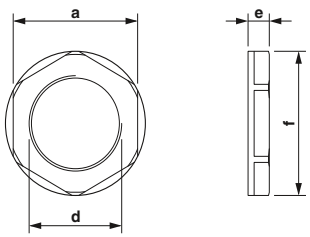
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	jet black	5.00 - 10.00	22.00	22.00	15.00	16.60	44.50	-	-
1/2 inch NPT	jet black	10.00 - 14.00	27.00	27.00	15.00	20.60	47.10	-	-
3/4 inch NPT	jet black	13.00 - 18.00	33.00	33.00	12.00	25.90	47.50	-	-
1 inch NPT	jet black	18.00 - 25.00	42.00	42.00	18.00	32.40	58.50	-	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-N3/8-S68L-PNES-BK	1411156	10
G-INS-N1/2-S68L-PNES-BK	1411157	10
G-INS-N3/4-M68L-PNES-BK	1411158	5
G-INS-N1-M68L-PNES-BK	1411159	5

Plastic counter nuts, NPT, ANSI B1.20.1

– Material: polyamide 6
– Color: deep black (RAL 9005)
– Ambient temperature: -20°C ... +80°C





Plastic counter nut

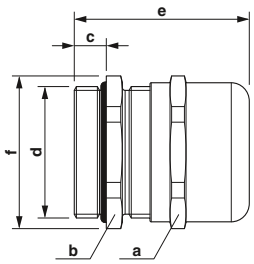
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	jet black	-	22.00	-	-	16.60	5.00	25.00	-
1/2 inch NPT	jet black	-	27.00	-	-	20.60	5.00	30.50	-
3/4 inch NPT	jet black	-	33.00	-	-	25.90	5.00	37.50	-
1 inch NPT	jet black	-	47.00	-	-	32.40	6.00	46.50	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-NPT3/8-P-BK	1411236	10
A-INL-NPT1/2-P-BK	1411237	10
A-INL-NPT3/4-P-BK	1411238	5
A-INL-NPT1-P-BK	1411239	5

Brass cable glands, metric, EN 60423

- Material: brass, nickel-plated
- Seal: CR
- Clamping insert: polyamide 6
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69K
- Strain relief: integrated according to EN 50262





Brass cable gland

Notes:

For alternative clamping areas, see page 690

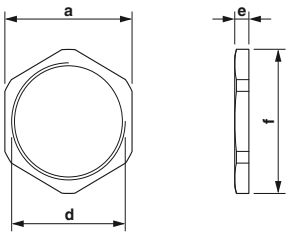
QCRV.E320158

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	silver	3.00 - 6.50	14.00	14.00	6.00	12.00	27.80	15.50	-	G-INS-M12-S68N-NNES-S	1411160	10
M16	silver	5.00 - 10.00	20.00	20.00	7.00	16.00	34.50	22.00	-	G-INS-M16-S68N-NNES-S	1411162	10
M20	silver	6.00 - 12.00	22.00	22.00	8.00	20.00	37.50	24.50	-	G-INS-M20-S68N-NNES-S	1411163	5
M25	silver	11.00 - 17.00	27.00	27.00	8.00	25.00	40.00	30.00	-	G-INS-M25-M68N-NNES-S	1411165	5
M32	silver	15.00 - 21.00	34.00	34.00	8.00	32.00	43.00	37.00	-	G-INS-M32-M68N-NNES-S	1411166	5
M40	silver	19.00 - 28.00	43.00	43.00	9.00	40.00	53.70	48.40	-	G-INS-M40-M68N-NNES-S	1411167	5
M50	silver	27.00 - 38.00	58.00	58.00	9.00	50.00	61.00	64.00	-	G-INS-M50-L68N-NNES-S	1411168	1
M63	silver	34.00 - 44.00	64.00	68.00	14.00	63.00	65.20	70.00	-	G-INS-M63-L68N-NNES-S	1411169	1

Ordering data

Brass counter nuts, metric, EN 60423

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C





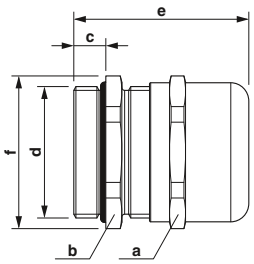
Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	silver	-	15.00	-	-	12.00	2.80	16.50	-	A-INL-M12-N-S	1411240	100
M16	silver	-	19.00	-	-	16.00	2.80	21.00	-	A-INL-M16-N-S	1411241	100
M20	silver	-	24.00	-	-	20.00	3.00	27.00	-	A-INL-M20-N-S	1411242	100
M25	silver	-	30.00	-	-	25.00	3.50	33.50	-	A-INL-M25-N-S	1411243	100
M32	silver	-	36.00	-	-	32.00	4.00	40.00	-	A-INL-M32-N-S	1411244	100
M40	silver	-	46.00	-	-	40.00	5.00	50.00	-	A-INL-M40-N-S	1411246	50
M50	silver	-	57.00	-	-	50.00	5.00	65.00	-	A-INL-M50-N-S	1411247	25
M63	silver	-	70.00	-	-	63.00	6.00	75.00	-	A-INL-M63-N-S	1411248	25

Ordering data

Brass cable glands, Pg, EN 40430

- Material: brass, nickel-plated
- Seal: CR
- O-ring: NBR
- Clamping insert: polyamide 6
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69K
- Strain relief: integrated according to EN 50262





Brass cable gland

QCRV.E320158

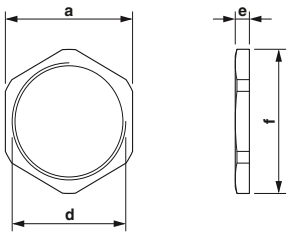
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	12.50	27.80	15.50	-
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	15.20	28.20	18.90	-
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	18.60	21.00	22.00	-
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	20.40	30.50	24.50	-
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	22.50	33.90	26.80	-
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	28.30	38.50	33.00	-
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	37.00	46.90	44.50	-
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	47.00	57.20	55.50	-
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	54.00	60.00	64.00	-
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	59.30	63.40	70.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-PG7-S68N-NNES-S	1411170	10
G-INS-PG9-S68N-NNES-S	1411171	10
G-INS-PG11-S68N-NNES-S	1411172	5
G-INS-PG13,5-S68N-NNES-S	1411173	5
G-INS-PG16-S68N-NNES-S	1411174	5
G-INS-PG21-M68N-NNES-S	1411175	5
G-INS-PG29-M68N-NNES-S	1411176	5
G-INS-PG36-L68N-NNES-S	1411178	5
G-INS-PG42-L68N-NNES-S	1411179	1
G-INS-PG48-L68N-NNES-S	1411181	1

Brass counter nuts, Pg, EN 40430

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C





Brass counter nut

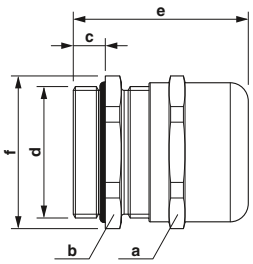
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver	-	15.00	-	-	12.50	2.80	16.50	-
Pg9	silver	-	18.00	-	-	15.20	2.80	20.00	-
Pg11	silver	-	21.00	-	-	18.60	3.00	24.00	-
Pg13.5	silver	-	23.00	-	-	20.40	3.00	26.00	-
Pg16	silver	-	26.00	-	-	22.50	3.00	29.00	-
Pg21	silver	-	32.00	-	-	28.30	3.50	36.00	-
Pg29	silver	-	41.00	-	-	37.00	4.00	45.00	-
Pg36	silver	-	51.00	-	-	47.00	5.00	56.00	-
Pg42	silver	-	60.00	-	-	54.00	5.00	65.00	-
Pg48	silver	-	64.00	-	-	59.30	5.50	69.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-PG7-N-S	1411255	100
A-INL-PG9-N-S	1411256	100
A-INL-PG11-N-S	1411257	100
A-INL-PG13,5-N-S	1411259	100
A-INL-PG16-N-S	1411260	100
A-INL-PG21-N-S	1411262	100
A-INL-PG29-N-S	1411263	50
A-INL-PG36-N-S	1411264	50
A-INL-PG42-N-S	1411265	25
A-INL-PG48-N-S	1411266	25

Brass cable glands, NPT, ANSI B1.20.1

- Material: brass, nickel-plated
- Seal: CR
- O-ring: NBR
- Clamping insert: polyamide 6
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68, 5 bar (30 minutes)
- Strain relief: integrated according to EN 50262





Brass cable gland

QCRV2.E320158

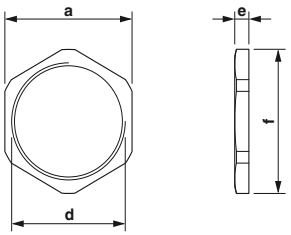
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	silver	5.00 - 10.00	17.00	19.00	11.50	16.00	34.50	22.00	-
1/2 inch NPT	silver	10.00 - 14.00	22.00	22.00	13.00	21.00	39.00	29.70	-
3/4 inch NPT	silver	13.00 - 18.00	30.00	30.00	13.00	29.00	48.50	33.00	-
1 inch NPT	silver	18.00 - 25.00	40.00	43.00	13.00	32.00	56.00	44.50	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-NPT3/8-S68L-NNES-S	1411182	10
G-INS-NPT1/2-S68L-NNES-S	1411183	10
G-INS-NPT3/4-M68L-NNES-S	1411184	5
G-INS-NPT1-M68L-NNES-S	1411185	5

Brass counter nuts NPT, ANSI B1.20.1

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C





Brass counter nut

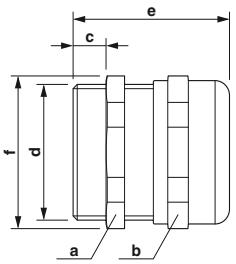
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8 inch	silver	-	21.00	-	-	16.60	4.00	24.00	-
1/2 inch NPT	silver	-	26.00	-	-	20.60	5.50	29.00	-
3/4 inch NPT	silver	-	32.00	-	-	25.90	5.50	36.00	-
1 inch NPT	silver	-	41.00	-	-	32.40	7.00	45.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-NPT3/8-N-S	1416009	10
A-INL-NPT1/2-N-S	1416010	10
A-INL-NPT3/4-N-S	1416011	5
A-INL-NPT1-N-S	1416012	5

Brass EMC cable glands, metric, EN 60423

- Material: brass, nickel-plated
- Seal: CR/NBR
- O-ring: NBR
- Clamping insert: polyamide 6
- Contact spring: stainless steel
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP68, 5 bar (30 minutes)
- Strain relief: integrated according to EN 50262



EMC



Brass cable gland

QCRV.E140310 / QCRV2.E140310

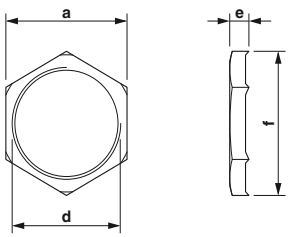
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	silver	3.00 - 6.50	14.00	14.00	6.00	12.00	28.00	15.50	-
M16	silver	5.00 - 9.00	17.00	17.00	5.00	16.00	30.00	19.00	-
M20	silver	9.00 - 13.00	22.00	22.00	6.00	20.00	33.50	24.00	-
M25	silver	11.00 - 16.00	27.00	27.00	7.00	25.00	36.50	30.00	-
M32	silver	14.00 - 21.00	34.00	34.00	8.00	32.00	38.00	36.00	-
M40	silver	19.00 - 27.00	43.00	43.00	8.00	40.00	41.00	46.00	-
M50	silver	24.00 - 35.00	55.00	55.00	9.00	50.00	49.50	60.00	-
M63	silver	32.00 - 42.00	65.00	65.00	10.00	63.00	52.50	70.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INSEC-M12-S68N-NCRS-S	1411187	10
G-INSEC-M16-S68N-NCRS-S	1411188	10
G-INSEC-M20-S68N-NCRS-S	1411189	5
G-INSEC-M25-S68N-NCRS-S	1411190	5
G-INSEC-M32-M68N-NCRS-S	1411191	5
G-INSEC-M40-M68N-NCRS-S	1411192	5
G-INSEC-M50-L68N-NCRS-S	1411193	1
G-INSEC-M63-L68N-NCRS-S	1411194	1

Brass counter nuts, metric, EN 60423, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed





Brass counter nut

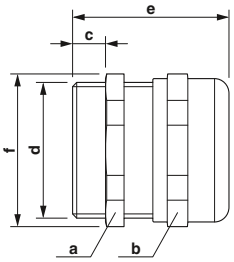
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M12	silver	-	15.00	-	-	12.00	4.70	16.50	-
M16	silver	-	19.00	-	-	16.00	4.70	21.00	-
M20	silver	-	24.00	-	-	20.00	4.70	27.00	-
M25	silver	-	30.00	-	-	25.00	5.20	33.50	-
M32	silver	-	36.00	-	-	32.00	5.70	40.00	-
M40	silver	-	46.00	-	-	40.00	6.50	50.00	-
M50	silver	-	60.00	-	-	50.00	6.50	65.00	-
M63	silver	-	70.00	-	-	63.00	7.00	75.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INLE-M12-N-S	1411267	100
A-INLE-M16-N-S	1411268	100
A-INLE-M20-N-S	1411269	100
A-INLE-M25-N-S	1411270	50
A-INLE-M32-N-S	1411271	50
A-INLE-M40-N-S	1411272	50
A-INLE-M50-N-S	1411273	10
A-INLE-M63-N-S	1411274	10

Brass EMC cable glands, Pg, EN 40430

- Material: brass, nickel-plated
- Seal: CR
- O-ring: NBR
- Clamping insert: polyamide 6
- Contact spring: copper beryllium
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68, 5 bar (30 minutes)
- Strain relief: integrated according to EN 50262





Brass cable gland

QCRV2.E320158

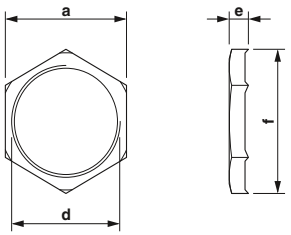
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	12.50	27.00	15.50	-
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	15.20	29.00	18.90	-
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	18.60	30.00	22.00	-
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	20.40	30.00	24.50	-
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	22.50	33.90	26.80	-
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	28.30	38.50	33.00	-
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	37.00	47.00	44.50	-
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	47.00	57.00	55.50	-
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	54.00	60.00	64.00	-
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	59.30	65.00	70.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INSEC-PG7-S68N-NNES-S	1411195	10
G-INSEC-PG9-S68N-NNES-S	1411196	10
G-INSEC-PG11-S68N-NNES-S	1411197	5
G-INSEC-PG13,5-S68N-NNES-S	1411198	5
G-INSEC-PG16-S68N-NNES-S	1411199	5
G-INSEC-PG21-M68N-NNES-S	1411200	5
G-INSEC-PG29-M68N-NNES-S	1411201	5
G-INSEC-PG36-L68N-NNES-S	1411202	5
G-INSEC-PG42-L68N-NNES-S	1411203	1
G-INSEC-PG48-L68N-NNES-S	1411204	1

Brass counter nuts, Pg, EN 40430, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed





Brass counter nut

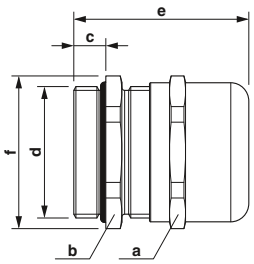
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
Pg7	silver	-	15.00	-	-	12.50	4.70	16.50	-
Pg9	silver	-	18.00	-	-	15.20	4.70	20.00	-
Pg11	silver	-	21.00	-	-	18.60	4.70	24.00	-
Pg13.5	silver	-	23.00	-	-	20.40	4.70	26.00	-
Pg16	silver	-	26.00	-	-	22.50	4.70	29.00	-
Pg21	silver	-	32.00	-	-	28.30	5.20	36.00	-
Pg29	silver	-	41.00	-	-	37.00	5.70	45.00	-
Pg36	silver	-	51.00	-	-	47.00	6.50	56.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INLE-PG7-N-S	1411275	100
A-INLE-PG9-N-S	1411276	100
A-INLE-PG11-N-S	1411277	100
A-INLE-PG13,5-N-S	1411278	100
A-INLE-PG16-N-S	1411279	100
A-INLE-PG21-N-S	1411280	50
A-INLE-PG29-N-S	1411281	50
A-INLE-PG36-N-S	1411282	50

Brass cable glands, metric, EN 60423

– Material: brass, nickel-plated
– Seal: CR
– O-ring: NBR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP68, 5 bar (30 minutes)





Brass cable gland

Notes:
For counter nuts, see page 685

EAC
7500651.22.01.00246

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M20	silver	11.00 - 16.00	27.00	27.00	6.00	20.00	26.00	30.00	-
M25	silver	14.00 - 21.00	34.00	34.00	7.50	25.00	31.00	36.00	-
M32	silver	19.00 - 27.00	43.00	43.00	8.00	32.00	32.00	46.00	-
M40	silver	27.00 - 34.00	50.00	50.00	8.00	40.00	35.00	58.00	-

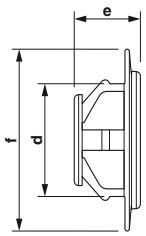
Ordering data

Type	Order No.	Pcs. / Pkt.
HC-M-KV-M20(11-16)	1645998	25
HC-M-KV-M25(14-21)	1646007	25
HC-M-KV-M32(19-27)	1646010	10
HC-M-KV-M40(27-34)	1607729	10

Membrane screw connection

new

– Material: polypropylene
– For panel thickness of 0.8 mm ... 3.5 mm
– UV-resistant
– Ambient temperature: -40°C ... +65°C
– Degree of protection: IP66/IP67





Membrane screw connection

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M16	light gray	4.00 - 10.00	-	-	8.00	16.00	15.00	32.00	-
M20	light gray	6.00 - 13.00	-	-	8.00	20.00	15.00	34.00	-
M25	light gray	9.00 - 17.00	-	-	8.00	25.00	15.00	40.00	-

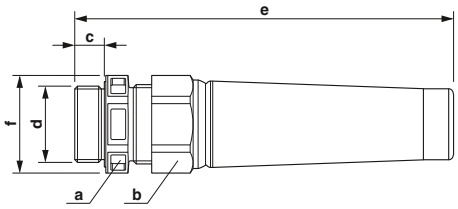
Ordering data

Type	Order No.	Pcs. / Pkt.
MG-INC-M16-S67L-PTES-LG	1415186	20
MG-INC-M20-S67L-PTES-LG	1415187	20
MG-INC-M25-M67L-PTES-LG	1415188	20

Plastic cable glands with bend protection, metric, EN 60423

new

- Material: polyamide
- Seal: EPDM
- Glow-wire test: 750°C
- Ambient temperature: -40°C ... +100°C (+120°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)





Plastic cable gland with bend protection

Notes:

For counter nuts, see page 680

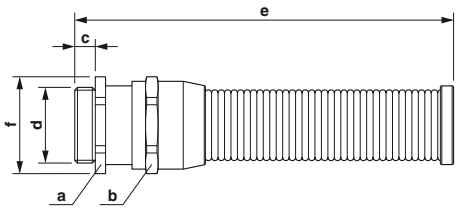
cULus E179850

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	light gray	3.00 - 7.00	16.00	16.00	9.00	12.00	72.00	18.00	-	G-INB-M12-S68N-PEPDS-LG	1415171	10
M16	light gray	4.50 - 10.00	20.00	20.00	9.00	16.00	82.00	22.00	-	G-INB-M16-S68N-PEPDS-LG	1415172	10
M20	light gray	6.00 - 13.00	24.00	24.00	12.00	20.00	103.00	27.00	-	G-INB-M20-S68N-PEPDS-LG	1415174	10
M25	light gray	9.00 - 17.00	29.00	29.00	12.00	25.00	113.00	32.00	-	G-INB-M25-M68N-PEPDS-LG	1415175	10
M32	light gray	13.00 - 21.00	36.00	36.00	12.00	32.00	138.00	40.00	-	G-INB-M32-M68N-PEPDS-LG	1415176	5
M12	black	3.00 - 7.00	16.00	16.00	9.00	12.00	72.00	18.00	-	G-INB-M12-S68N-PEPDS-BK	1415177	10
M16	black	4.50 - 10.00	20.00	20.00	9.00	16.00	82.00	22.00	-	G-INB-M16-S68N-PEPDS-BK	1415178	10
M20	black	6.00 - 13.00	24.00	24.00	12.00	20.00	103.00	27.00	-	G-INB-M20-S68N-PEPDS-BK	1415179	10
M25	black	9.00 - 17.00	29.00	29.00	12.00	25.00	113.00	32.00	-	G-INB-M25-M68N-PEPDS-BK	1415180	10
M32	black	13.00 - 21.00	36.00	36.00	12.00	32.00	138.00	40.00	-	G-INB-M32-M68N-PEPDS-BK	1415181	5

Brass cable glands with bend protection, metric, EN 60423

new

- Material: brass, nickel-plated
- Seal: EPDM
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C (+120°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)





Brass cable gland with bend protection

Notes:

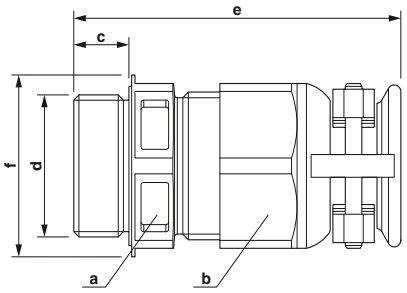
For counter nuts, see page 685

cULus E179850

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	6.00 - 13.00	24.00	24.00	6.00	20.00	96.00	27.00	-	G-INB-M20-S68N-NEPDS-S	1415182	5
M25	silver	9.00 - 17.00	29.00	29.00	7.00	25.00	120.00	32.00	-	G-INB-M25-M68N-NEPDS-S	1415183	5
M32	silver	13.00 - 21.00	36.00	36.00	8.00	32.00	146.00	40.00	-	G-INB-M32-M68N-NEPDS-S	1415184	1
M40	silver	16.00 - 28.00	46.00	46.00	8.00	40.00	184.00	51.00	-	G-INB-M40-M68N-NEPDS-S	1415185	1

Plastic cable glands with strain relief, metric, EN 60423

- Material: polyamide
- Seal: EPDM
- Glow-wire test: 750°C
- Ambient temperature: -40°C ... +100°C (+120°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)



new



Plastic cable gland with strain relief

Notes:
For counter nuts, see page 681

E179850

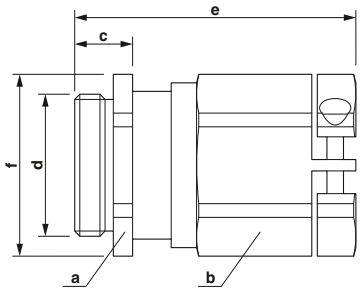
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M20	black	6.00 - 13.00	24.00	24.00	10.00	20.00	49.00	26.50	-
M25	black	9.00 - 17.00	29.00	29.00	10.00	25.00	51.00	32.00	-
M32	black	13.00 - 21.00	36.00	36.00	12.00	32.00	57.00	40.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INTRO-M20-S68N-PEPDS-BK	1415189	10
G-INTRO-M25-M68N-PEPDS-BK	1415190	10
G-INTRO-M32-M68N-PEPDS-BK	1415191	5

Brass cable glands with strain relief, metric, EN 60423

- Material: brass, nickel-plated
- Seal: EPDM
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C (+120°C briefly)
- Degree of protection: IP68, 5 bar (30 minutes)



new



Brass cable gland with strain relief

Notes:
For counter nuts, see page 685

E179850

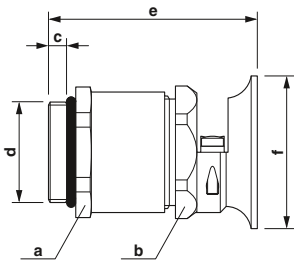
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M20	silver	6.00 - 13.00	24.00	24.00	6.00	20.00	37.00	27.00	-
M25	silver	9.00 - 17.00	29.00	29.00	7.00	25.00	42.00	32.00	-
M32	silver	13.00 - 21.00	36.00	36.00	8.00	32.00	45.00	40.00	-
M40	silver	16.00 - 28.00	46.00	46.00	8.00	40.00	54.00	51.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INESR-M20-S68N-NEPDS-S	1415192	5
G-INESR-M25-M68N-NEPDS-S	1415193	5
G-INESR-M32-M68N-NEPDS-S	1415194	1
G-INESR-M40-M68N-NEPDS-S	1415195	1

Brass cable glands with bend protection and strain relief, metric, EN 60423

– Material: brass, nickel-plated
– Seal: NBR
– O-ring: NBR
– Ambient temperature: -30°C … +80°C
– Degree of protection: IP65





Brass cable gland with cable bend protection and strain relief

Notes:
For counter nuts, see page 685

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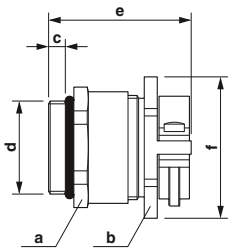
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M20	silver	7.50 - 15.00	24.00	24.00	6.00	20.00	40.00	32.00	-
M25	silver	10.00 - 19.00	30.00	30.00	7.00	25.00	44.00	38.00	-
M32	silver	18.00 - 27.00	41.00	40.00	8.00	32.00	51.00	50.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-M-KV-T-M20	**1646188**	10
HC-M-KV-T-M25	**1646191**	10
HC-M-KV-T-M32	**1646201**	10

Brass cable glands with strain relief clamp, metric, EN 60423

– Material: brass, nickel-plated
– Seal: NBR
– O-ring: NBR
– Ambient temperature: -30°C … +80°C
– Degree of protection: IP65





Brass cable gland with strain relief clamp

Notes:
For counter nuts, see page 685

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Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
M20	silver	7.50 - 15.00	27.00	24.00	6.00	20.00	35.00	30.00	-
M25	silver	10.00 - 19.00	34.00	30.00	7.00	25.00	39.00	38.00	-
M32	silver	18.00 - 27.00	42.00	40.00	8.00	32.00	43.00	47.00	-
M40	silver	24.00 - 33.00	52.00	50.00	8.00	40.00	49.00	56.00	-

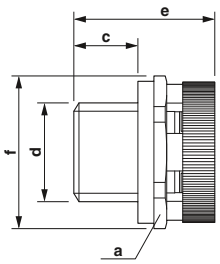
Ordering data

Type	Order No.	Pcs. / Pkt.
HC-M-KV-Z-M20	**1646146**	10
HC-M-KV-Z-M25	**1646159**	10
HC-M-KV-Z-M32	**1646162**	10
HC-M-KV-Z-M40	**1646175**	10

Pressure compensation elements

new

For avoiding condensation
– Material: polyamide, stainless steel
– Membrane: acrylic copolymer
– O-ring: NBR
– Ambient temperature:
-40°C ... +105°C
– Degree of protection: IP66/IP67/IP69K



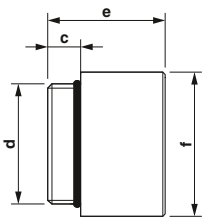


Pressure compensation elements

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
M12	light gray	-	17.00	-	10.00	12.00	17.50	18.50	-	A-INB-M12-69KN-P-LG	1415222	5
M12	black	-	17.00	-	10.00	12.00	17.50	18.50	-	A-INB-M12-69KN-P-BK	1415223	5
M12	silver	-	17.00	-	10.00	12.00	21.00	18.50	-	A-INB-M12-69KN-S-S	1415224	5

Metal NPT adapter, metric external thread, NPT internal thread

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature:
-20°C ... +80°C





NPT adapter

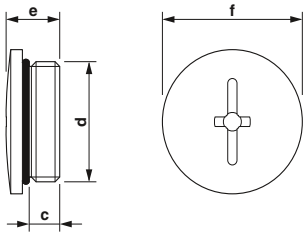
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Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
M20 / 1/2-inch NPT	silver	-	-	-	6.50	20.00	25.00	24.00	-	HC-NPT-1/2-M20	1686847	25
M25 / 3/4 inch NPT	silver	-	-	-	7.00	25.00	28.00	30.00	-	HC-NPT-3/4-M25	1686850	25
M32 / 1/1 inch NPT	silver	-	-	-	8.00	32.00	33.00	38.00	-	HC-NPT-1/1-M32	1686863	10
M40 / 1 1/4 in. NPT	silver	-	-	-	8.00	40.00	26.00	46.00	-	HC-NPT-1 1/4-M40	1687587	10

Plastic screw plugs

new

- Material: polyamide, fiberglass reinforced
- O-ring: EPDM
- Ambient temperature:
  -40°C ... +100°C (+150°C briefly)
- Degree of protection: IP68





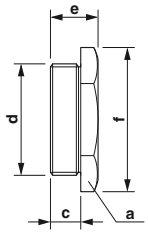
Plastic screw plug

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	black	-	-	-	6.00	20.00	9.50	24.00	-	A-INSP-M20-65N-P-BK	1415206	10
M25	black	-	-	-	8.00	25.00	11.50	30.00	-	A-INSP-M25-65N-P-BK	1415207	10
M32	black	-	-	-	8.00	32.00	12.00	37.00	-	A-INSP-M32-65N-P-BK	1415208	10
M40	black	-	-	-	8.00	40.00	13.00	46.00	-	A-INSP-M40-65N-P-BK	1415210	5
Pg16	black	-	-	-	6.00	22.50	9.50	27.00	-	A-INSP-PG16-65N-P-BK	1415213	10
Pg21	black	-	-	-	8.00	28.30	11.00	33.00	-	A-INSP-PG21-65N-P-BK	1415214	10
Pg29	black	-	-	-	8.00	37.00	12.00	44.00	-	A-INSP-PG29-65N-P-BK	1415215	10

Ordering data

Metal screw plugs

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature:
  -20°C ... +80°C
- Degree of protection: IP68





Metal screw plug

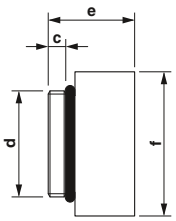
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Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M16	silver	-	18.00	-	5.00	16.00	8.00	20.00	-	HC-M-BS-M16	1646227	10
M20	silver	-	22.00	-	6.00	20.00	9.00	24.00	-	HC-M-BS-M20	1645846	10
M25	silver	-	28.00	-	6.50	25.00	10.00	31.50	-	HC-M-BS-M25	1645859	10
M32	silver	-	35.00	-	7.00	32.00	10.50	39.00	-	HC-M-BS-M32	1645862	10
M40	silver	-	44.00	-	8.00	40.00	12.00	50.00	-	HC-M-BS-M40	1645875	10
Pg11	silver	-	-	-	6.00	19.00	9.00	20.00	-	HC-BS-PG11	1674493	10
Pg13.5	silver	-	-	-	6.50	21.00	9.50	22.00	-	HC-BS-PG13	1674503	10
Pg16	silver	-	-	-	6.50	23.00	9.50	24.00	-	HC-BS-PG16	1674516	10
Pg21	silver	-	-	-	7.00	29.00	11.00	30.00	-	HC-BS-PG21	1674529	10
Pg29	silver	-	-	-	8.00	37.50	12.00	39.00	-	HC-BS-PG29	1674532	10
Pg36	silver	-	-	-	9.00	47.50	15.00	50.00	-	HC-BS-PG36	1674545	10

Ordering data

Metal extensions

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature:
-20°C ... +80°C





Metal extension adapter

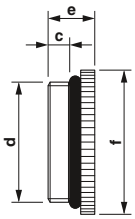
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Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M16 / M20	silver	-	-	-	6.00	16.00	17.50	22.00	-	ENLAR-M-KV-M16/M20	1647653	10
M20 / M25	silver	-	-	-	6.50	20.00	19.00	27.00	-	ENLAR-M-KV-M20/M25	1647666	10
M25 / M32	silver	-	-	-	6.50	25.00	21.00	34.00	-	ENLAR-M-KV-M25/M32	1647679	10
M32 / M40	silver	-	-	-	7.00	32.00	23.00	42.00	-	ENLAR-M-KV-M32/M40	1647682	10
Pg13.5 / Pg16	silver	-	-	-	6.50	21.00	19.00	24.00	-	A-INE-PG13/16-N-NS-S	1415219	10
Pg16 / Pg21	silver	-	-	-	6.50	23.00	21.00	30.00	-	A-INE-PG16/21-N-NS-S	1415220	10
Pg21 / Pg29	silver	-	-	-	7.00	29.00	23.00	39.00	-	A-INE-PG21/29-N-NS-S	1415221	10

Ordering data

Metal reducing adapter

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature:
-20°C ... +80°C





Metal reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20 / M16	silver	-	-	-	6.50	20.00	9.00	24.00	-	REDUC-M-KV-M20/M16	1647611	10
M25 / M20	silver	-	-	-	7.00	25.00	10.00	30.00	-	REDUC-M-KV-M25/M20	1647624	10
M32 / M25	silver	-	-	-	8.00	32.00	11.50	37.00	-	REDUC-M-KV-M32/M25	1647637	10
M40 / M32	silver	-	-	-	8.00	40.00	11.50	43.00	-	REDUC-M-KV-M40/M32	1647640	10
Pg29 / Pg21	silver	-	-	-	8.00	37.50	11.50	44.00	-	A-INR-PG16/13-N-NS-S	1415216	10
Pg21 / Pg16	silver	-	-	-	7.00	29.00	10.00	33.50	-	A-INR-PG21/16-N-NS-S	1415217	10
Pg16 / Pg13,5	silver	-	-	-	6.50	23.00	9.50	27.00	-	A-INR-PG29/21-N-NS-S	1415218	10

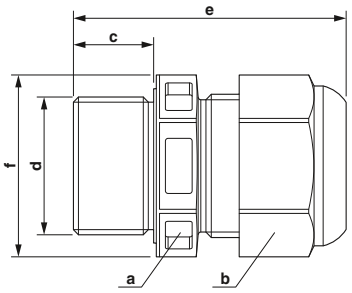
Ordering data

Plastic cable glands, metric, Ex protection

new

- Halogen-free
- Vibration-proof plastic cable gland with protection against over-tightening of the cap nut
- Glow-wire test: 750°C
- Degree of protection: IP66/IP68, 5 bar (30 minutes)

Marking:
- II 2 G Ex e IIC Gb
- II 2 D Ex IIIC Db IP68



Notes:
For counter nuts, see page 681



Plastic cable gland

Ex: PTB 13 ATEX 1015 X / IECEx PTB 13.0034X

Technical data

General data	
Cable gland material	Polyamide
Seal material	EPDM
O-ring material	EPDM
Ambient temperature (operation)	-40 °C ... 75 °C

Ordering data

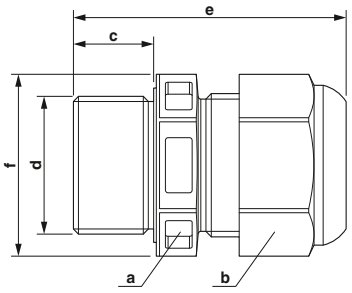
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	black	3.00 - 6.00	16.00	16.00	15.00	12.00	35.00	18.00	-	G-ESIS-M12-S68L-PEPDS-BK	1415106	10
M16	black	4.50 - 9.00	20.00	20.00	15.00	16.00	37.00	23.00	-	G-ESIS-M16-S68L-PEPDS-BK	1415107	10
M20	black	7.00 - 13.00	24.00	24.00	15.00	20.00	41.00	28.00	-	G-ESIS-M20-S68L-PEPDS-BK	1415108	10
M25	black	10.00 - 17.00	29.00	29.00	15.00	25.00	43.00	33.00	-	G-ESIS-M25-M68L-PEPDS-BK	1415109	10
M32	black	13.00 - 21.00	36.00	36.00	15.00	32.00	45.00	41.00	-	G-ESIS-M32-M68L-PEPDS-BK	1415110	5
M40	black	17.00 - 28.00	46.00	46.00	18.00	40.00	58.00	51.00	-	G-ESIS-M40-M68L-PEPDS-BK	1415111	5
M50	black	23.00 - 35.00	55.00	55.00	18.00	50.00	63.00	61.00	-	G-ESIS-M50-L68L-PEPDS-BK	1415112	1
M63	black	34.00 - 48.00	68.00	68.00	18.00	63.00	67.00	75.00	-	G-ESIS-M63-L68L-PEPDS-BK	1415113	1

Plastic cable glands, metric, Ex protection

new

- Halogen-free
- Vibration-proof plastic cable gland with protection against over-tightening of the cap nut
- Glow-wire test: 750°C
- Degree of protection: IP66/IP68, 5 bar (30 minutes)

Marking:
- II 2 G Ex e IIC Gb
- II 2 D Ex IIIC Db IP68



Notes:
For counter nuts, see page 681



Plastic cable gland

Ex: PTB 13 ATEX 1015 X / IECEx PTB 13.0034X

Technical data

General data	
Cable gland material	Polyamide
Seal material	EPDM
O-ring material	EPDM
Ambient temperature (operation)	-40 °C ... 75 °C

Ordering data

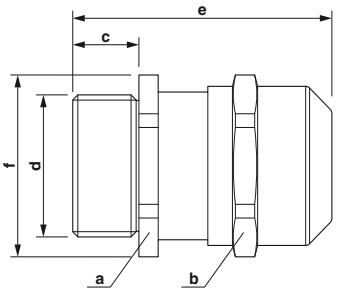
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	black/blue	3.00 - 6.00	16.00	16.00	15.00	12.00	35.00	18.00	-	G-ESIS-M12-S68L-PEPDS-BL	1415114	10
M16	black/blue	4.50 - 9.00	20.00	20.00	15.00	16.00	37.00	23.00	-	G-ESIS-M16-S68L-PEPDS-BL	1415116	10
M20	black/blue	7.00 - 13.00	24.00	24.00	15.00	20.00	41.00	28.00	-	G-ESIS-M20-S68L-PEPDS-BL	1415117	10
M25	black/blue	10.00 - 17.00	29.00	29.00	15.00	25.00	43.00	33.00	-	G-ESIS-M25-M68L-PEPDS-BL	1415118	10
M32	black/blue	13.00 - 21.00	36.00	36.00	15.00	32.00	45.00	41.00	-	G-ESIS-M32-M68L-PEPDS-BL	1415119	5
M40	black/blue	17.00 - 28.00	46.00	46.00	18.00	40.00	58.00	51.00	-	G-ESIS-M40-M68L-PEPDS-BL	1415120	5
M50	black/blue	23.00 - 35.00	55.00	55.00	18.00	50.00	63.00	61.00	-	G-ESIS-M50-L68L-PEPDS-BL	1415121	1
M63	black/blue	34.00 - 48.00	68.00	68.00	18.00	63.00	67.00	75.00	-	G-ESIS-M63-L68L-PEPDS-BL	1415122	1

Brass cable glands, metric, Ex protection

new

- Halogen-free
- Polyamide compression ring
- Degree of protection: IP66/IP68, 5 bar (30 minutes)

Marking:
- II 2 G Ex e IIC Gb
- II 2 D Ex IIIC Db IP68





Brass cable gland

Notes:
For counter nuts, see page 685

Ex: PTB 04 ATEX 1112 X / IECEx PTB 13.0027X

Technical data

General data	
Cable gland material	Nickel-plated brass
Seal material	EPDM
O-ring material	EPDM
Ambient temperature (operation)	-40 °C ... 75 °C

Ordering data

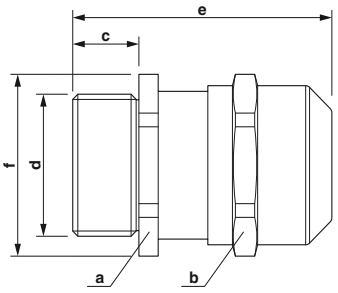
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	silver	4.00 - 7.00	-	16.00	12.00	12.00	30.00	18.00	-	G-ESIS-M12-S68N-NEPDS-S	1415123	10
M16	silver	5.00 - 10.00	-	20.00	12.00	16.00	33.00	22.00	-	G-ESIS-M16-S68N-NEPDS-S	1415124	10
M20	silver	6.00 - 13.00	-	24.00	12.00	20.00	35.00	27.00	-	G-ESIS-M20-S68N-NEPDS-S	1415125	10
M25	silver	10.00 - 17.00	-	29.00	12.00	25.00	38.00	32.00	-	G-ESIS-M25-M68N-NEPDS-S	1415126	10
M32	silver	13.00 - 21.00	-	36.00	15.00	32.00	43.00	40.00	-	G-ESIS-M32-M68L-NEPDS-S	1415127	5
M40	silver	16.00 - 28.00	-	46.00	15.00	40.00	51.00	51.00	-	G-ESIS-M40-M68L-NEPDS-S	1415129	5
M50	silver	21.00 - 35.00	-	55.00	15.00	50.00	57.00	61.00	-	G-ESIS-M50-L68L-NEPDS-S	1415146	1
M63	silver	34.00 - 48.00	-	68.00	15.00	63.00	61.00	75.00	-	G-ESIS-M63-L68L-NEPDS-S	1415147	1

Brass EMC cable glands, metric, Ex protection

new

- Halogen-free
- Polyamide compression ring
- Permanent braided shield contact by means of grounding cones in the EMC screw connection
- Degree of protection: IP66/IP68, 5 bar (30 minutes)

Marking:
- II 2 G Ex e IIC Gb
- II 2 D Ex IIIC Db IP68





Brass EMC cable gland

Notes:
For ribbed counter nut, see page 688

Ex: PTB 04 ATEX 1112 X / IECEx PTB 13.0027X

Technical data

General data	
Cable gland material	Nickel-plated brass
Seal material	EPDM
O-ring material	EPDM
Ambient temperature (operation)	-40 °C ... 75 °C

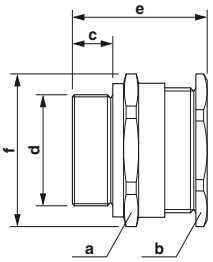
Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	silver	4.00 - 7.00	16.00	16.00	12.00	12.00	30.00	18.00	-	G-ESISEC-M12-S68N-NEPDS-S	1415148	10
M16	silver	5.00 - 10.00	20.00	20.00	12.00	16.00	33.00	22.00	-	G-ESISEC-M16-S68N-NEPDS-S	1415149	10
M20	silver	6.00 - 13.00	24.00	24.00	12.00	20.00	35.00	27.00	-	G-ESISEC-M20-S68N-NEPDS-S	1415163	10
M25	silver	10.00 - 17.00	29.00	29.00	12.00	25.00	38.00	32.00	-	G-ESISEC-M25-M68N-NEPDS-S	1415165	10
M32	silver	13.00 - 21.00	36.00	36.00	15.00	32.00	43.00	40.00	-	G-ESISEC-M32-M68L-NEPDS-S	1415166	5
M40	silver	16.00 - 28.00	46.00	46.00	15.00	40.00	51.00	51.00	-	G-ESISEC-M40-M68L-NEPDS-S	1415168	5
M50	silver	21.00 - 35.00	55.00	55.00	15.00	50.00	57.00	61.00	-	G-ESISEC-M50-L68L-NEPDS-S	1415169	1
M63	silver	34.00 - 48.00	68.00	68.00	15.00	63.00	61.00	75.00	-	G-ESISEC-M63-L68L-NEPDS-S	1415170	1

Brass cable glands, metric, Ex protection

The cable glands for unarmored and braided cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) protection.

– Degree of protection: IP66/IP67/IP68





Brass cable gland

Notes:

For counter nuts, see page 685

Ex: CIDET EAC Ex NEPSI
SIRA13ATEX1068X / IECEx SIR13.0023X

Technical data

General data	
Cable gland material	Nickel-plated brass
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60 °C ... 130 °C

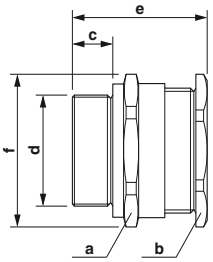
Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	6.50 - 14.00	27.00	27.00	15.00	20.00	39.00	29.70	-	G-ESS-M20-S66L-NTES-S	1411075	20
M25	silver	11.10 - 20.00	36.00	36.00	15.00	25.00	41.00	39.60	-	G-ESS-M25-M66L-NTES-S	1411077	20
M32	silver	17.00 - 26.30	41.00	41.00	15.00	32.00	42.00	45.10	-	G-ESS-M32-M66L-NTES-S	1411079	10
M40	silver	23.50 - 32.20	50.00	50.00	15.00	40.00	43.00	55.00	-	G-ESS-M40-L66L-NTES-S	1411081	2
M50	silver	35.60 - 44.10	60.00	60.00	15.00	50.00	45.00	66.00	-	G-ESS-M50-L66L-NTES-S	1411084	2
M63	silver	47.20 - 56.00	75.00	75.00	15.00	63.00	45.00	82.50	-	G-ESS-M63-L66L-NTES-S	1411086	2

Stainless steel cable glands, metric, Ex protection

The cable glands for unarmored and braided cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) protection.

– Degree of protection: IP66/IP67/IP68





Stainless steel cable gland

Notes:

For counter nuts, see page 703

Ex: CIDET EAC Ex NEPSI
SIRA13ATEX1068X / IECEx SIR13.0023X

Technical data

General data	
Cable gland material	Stainless steel 1.4404
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60 °C ... 130 °C

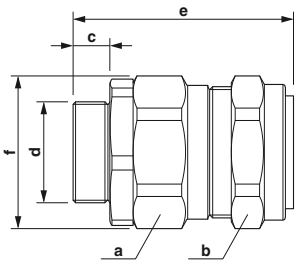
Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	6.50 - 14.00	27.00	27.00	15.00	20.00	39.00	29.70	-	G-ESS-M20-S66L-STES-S	1411076	20
M25	silver	11.10 - 20.00	36.00	36.00	15.00	25.00	41.00	39.60	-	G-ESS-M25-M66L-STES-S	1411078	20
M32	silver	17.00 - 26.30	41.00	41.00	15.00	32.00	42.00	45.10	-	G-ESS-M32-M66L-STES-S	1411080	10
M40	silver	23.50 - 32.20	50.00	50.00	15.00	40.00	43.00	55.00	-	G-ESS-M40-L66L-STES-S	1411082	2
M50	silver	35.60 - 44.10	60.00	60.00	15.00	50.00	45.00	66.00	-	G-ESS-M50-L66L-STES-S	1411085	2
M63	silver	47.20 - 56.00	75.00	75.00	15.00	63.00	45.00	82.50	-	G-ESS-M63-L66L-STES-S	1411087	2

Brass cable glands, metric, Ex protection

The cable glands for armored cables provide increased safety (type “e”) protection.

– Degree of protection: IP66/IP67/IP68





Brass cable gland

Notes:

For counter nuts, see page 685

Ex: CIDET EAC Ex NEPSI
SIRA13ATEX1070X / IECEx SIR13.0025X

Technical data

General data	
Cable gland material	Nickel-plated brass
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60 °C ... 130 °C

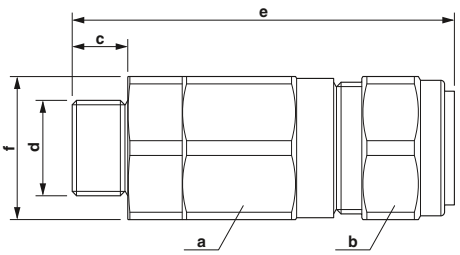
Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	9.50 - 15.90	24.00	24.00	15.00	20.00	62.00	26.40	-	G-ESSWU-M20S-S66L-NTES-S	1411088	10
M20	silver	12.50 - 20.90	30.50	30.50	15.00	20.00	65.00	33.60	-	G-ESSWU-M20-M66L-NTES-S	1411090	10
M25	silver	18.20 - 26.20	37.50	37.50	15.00	25.00	70.00	41.30	-	G-ESSWU-M25-M66L-NTES-S	1411092	10
M32	silver	23.70 - 33.90	46.00	46.00	15.00	32.00	73.00	50.60	-	G-ESSWU-M32-L66L-NTES-S	1411094	5
M40	silver	27.90 - 40.40	55.00	55.00	15.00	40.00	73.00	60.50	-	G-ESSWU-M40-L66L-NTES-S	1411097	1
M50	silver	40.40 - 53.10	70.00	70.00	15.00	50.00	75.00	77.00	-	G-ESSWU-M50-L66L-NTES-S	1411100	1
M63	silver	54.60 - 65.90	80.00	80.00	15.00	63.00	78.00	88.00	-	G-ESSWU-M63-L66L-NTES-S	1411102	1

Stainless steel cable glands, metric, Ex protection

The cable glands for armored cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) protection.

– Degree of protection: IP66/IP67/IP68





Stainless steel cable gland

Notes:

For counter nuts, see page 703

Ex: CIDET EAC Ex NEPSI
SIRA13ATEX1073X / IECEx SIR13.0028X

Technical data

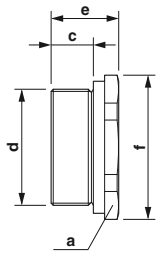
General data	
Cable gland material	Stainless steel 1.4404
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60 °C ... 130 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	9.50 - 15.90	24.00	24.00	15.00	20.00	85.00	26.40	-	G-EDSWU-M20S-S66L-STES-S	1411089	10
M20	silver	12.50 - 20.90	30.50	30.50	15.00	20.00	87.00	33.60	-	G-EDSWU-M20-M66L-STES-S	1411091	10
M25	silver	18.20 - 26.20	37.50	37.50	15.00	25.00	97.00	41.30	-	G-EDSWU-M25-M66L-STES-S	1411093	10
M32	silver	23.70 - 33.90	46.00	46.00	15.00	32.00	100.00	50.60	-	G-EDSWU-M32-L66L-STES-S	1411095	5
M40	silver	27.90 - 40.40	55.00	55.00	15.00	40.00	101.00	60.50	-	G-EDSWU-M40-L66L-STES-S	1411099	1
M50	silver	40.40 - 53.10	70.00	70.00	15.00	50.00	115.00	77.00	-	G-EDSWU-M50-L66L-STES-S	1411101	1
M63	silver	54.60 - 65.90	80.00	80.00	15.00	63.00	118.00	88.00	-	G-EDSWU-M63-L66L-STES-S	1411103	1

Brass screw plugs, metric, Ex protection

Screw plugs provide IP66 and IP68 protection when installed with an entry thread ring, sealing unused cable entries in flameproof (type “d”) and increased safety (type “e”) installations.



Notes:

For counter nuts, see page 685



Brass screw plug

Ex: SIRA01ATEX1284U / IECEx SIR07.0083X

Technical data

General data

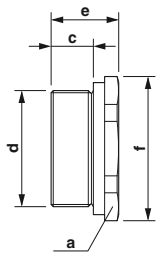
Material	Nickel-plated brass
Ambient temperature (operation)	-60 °C ... 200 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	-	24.00	-	15.00	20.00	24.00	26.40	-	**A-EXSH-M20-68L-N-S**	1411104	20
M25	silver	-	30.00	-	15.00	25.00	24.00	33.00	-	**A-EXSH-M25-68L-N-S**	1411107	20
M32	silver	-	36.00	-	15.00	32.00	24.00	39.60	-	**A-EXSH-M32-68L-N-S**	1411109	10
M40	silver	-	46.00	-	15.00	40.00	24.00	50.60	-	**A-EXSH-M40-68L-N-S**	1411111	5
M50	silver	-	55.00	-	15.00	50.00	24.00	60.50	-	**A-EXSH-M50-68L-N-S**	1411113	2
M63	silver	-	65.00	-	15.00	63.00	24.00	77.00	-	**A-EXSH-M63-68L-N-S**	1411115	1

Stainless steel screw plugs, metric, Ex protection

Screw plugs provide IP66 and IP68 protection when installed with an entry thread ring, sealing unused cable entries in flameproof (type “d”) and increased safety (type “e”) installations.



Notes:

For counter nuts, see page 703



Stainless steel screw plug

Ex: SIRA01ATEX1284U / IECEx SIR07.0083X

Technical data

General data

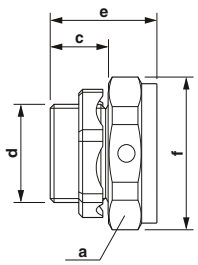
Material	Stainless steel 1.4404
Ambient temperature (operation)	-60 °C ... 200 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	-	24.00	-	15.00	20.00	24.00	26.40	-	**A-EXSH-M20-68L-S-S**	1411105	20
M25	silver	-	30.00	-	15.00	25.00	24.00	33.00	-	**A-EXSH-M25-68L-S-S**	1411108	20
M32	silver	-	36.00	-	15.00	32.00	24.00	39.60	-	**A-EXSH-M32-68L-S-S**	1411110	10
M40	silver	-	46.00	-	15.00	40.00	24.00	50.60	-	**A-EXSH-M40-68L-S-S**	1411112	5
M50	silver	-	55.00	-	15.00	50.00	24.00	60.50	-	**A-EXSH-M50-68L-S-S**	1411114	2
M63	silver	-	65.00	-	15.00	63.00	24.00	77.00	-	**A-EXSH-M63-68L-S-S**	1411116	1

Brass pressure compensation, metric, Ex protection

Breather/drain plugs for increased safety (type “e”) provide superior ventilation for devices. They are designed to act as a pressure compensation element preventing moisture build-up to IP66.





Brass pressure compensation

Notes:

For counter nuts, see page 685

Ex: EAC Ex NEPSI
SIRA10ATEX1307U / IECEx SIR10.0149U

Technical data

General data

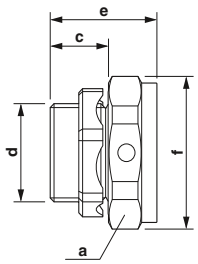
Material	Nickel-plated brass
Ambient temperature (operation)	-60 °C ... 130 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	-	30.00	-	15.00	20.00	32.00	33.00	-	**A-EXB-20-66L-N-S**	1411117	5
M25	silver	-	31.50	-	15.00	25.00	32.00	39.60	-	**A-EXB-25-66L-N-S**	1411120	5

Stainless steel pressure compensation, metric, Ex protection

Breather/drain plugs for increased safety (type “e”) provide superior ventilation for devices. They are designed to act as a pressure compensation element preventing moisture build-up to IP66.





Stainless steel pressure compensation

Notes:

For counter nuts, see page 703

Ex: EAC Ex NEPSI
SIRA10ATEX1307U / IECEx SIR10.0149U

Technical data

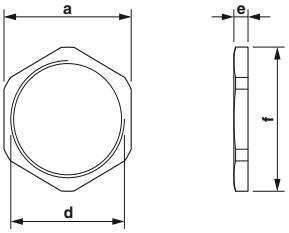
General data

Material	Stainless steel 1.4404
Ambient temperature (operation)	-60 °C ... 130 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	-	30.00	-	15.00	20.00	32.00	26.40	-	**A-EXB-20-66L-S-S**	1411118	5
M25	silver	-	31.50	-	15.00	25.00	32.00	33.00	-	**A-EXB-25-66L-S-S**	1411121	5

Stainless steel counter nuts, metric





Stainless steel counter nut

Technical data

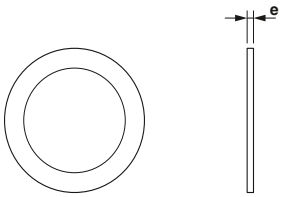
General data

Material	Stainless steel 1.4305
Ambient temperature (operation)	-70 °C ... 220 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	silver	-	24.00	-	-	20.00	3.00	27.00	-	**A-INL-M20-S-S**	1411249	10
M25	silver	-	30.00	-	-	25.00	3.50	33.50	-	**A-INL-M25-S-S**	1411250	10
M32	silver	-	36.00	-	-	32.00	4.00	40.00	-	**A-INL-M32-S-S**	1411251	5
M40	silver	-	46.00	-	-	40.00	5.00	50.00	-	**A-INL-M40-S-S**	1411252	5
M50	silver	-	55.00	-	-	50.00	5.00	65.00	-	**A-INL-M50-S-S**	1411253	2
M63	silver	-	70.00	-	-	63.00	6.00	75.00	-	**A-INL-M63-S-S**	1411254	1

Sealing washers, metric





Sealing washer

Technical data

General data

Material	Nylon
Ambient temperature (operation)	-70 °C ... 100 °C

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	white	-	-	-	-	-	2.00	-	-	**A-SEW-20-P-W**	1411283	20
M25	white	-	-	-	-	-	2.00	-	-	**A-SEW-25-P-W**	1411284	20
M32	white	-	-	-	-	-	2.00	-	-	**A-SEW-32-P-W**	1411285	20
M40	white	-	-	-	-	-	2.00	-	-	**A-SEW-40-P-W**	1411286	20
M50	white	-	-	-	-	-	2.00	-	-	**A-SEW-50-P-W**	1411287	10
M63	white	-	-	-	-	-	2.00	-	-	**A-SEW-63-P-W**	1411288	10

Mounting frame, front plates and socket inserts

Notes:

For RJ45 socket inserts, see page 708



EMC mounting frame for front plates

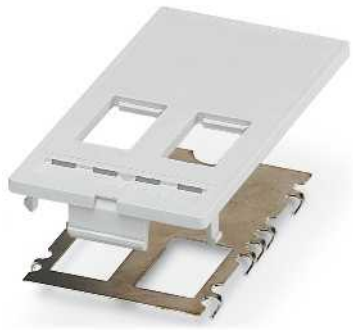


Mounting frame for front plates

	Technical data	Technical data
	VS-SI-EB-EMV-...	SI-M...
Electrical data		
Rated voltage	-	-
Rated current	-	-
Housing material	Zinc alloy	PBT
Inflammability class according to UL 94	V0	V0
Degree of protection	IP65	IP65
Connection method	-	-
Conductor cross section	-	-
Connection cross section AWG	-	-
Ambient temperature (operation)	-10 °C ... 60 °C	-30 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Mounting frame, metal frame, matt nickel-plated, electrically conductive, transparent cover						
Single	**VS-SI-EB-EMV-1**	1656482	1			
Double	**VS-SI-EB-EMV-2**	1656495	1			
Mounting frame, black, transparent PC plastic cover, closed with 3 mm two-way key bit						
Single				**SI-M1A**	1404493	1
Double				**SI-M1B**	1404494	1
Mounting frame, black, transparent PC plastic cover, closed with turn knob						
Single				**SI-M1A-T**	1407586	1
Double				**SI-M1B-T**	1407587	1
Mounting frame, black, metallic ABS plastic cover, closed with 3 mm two-way key bit						
Single				**SI-M1A-ML**	1407588	1
Double				**SI-M1B-ML**	1407589	1
Mounting frame, black, metallic ABS plastic cover, closed with turn knob						
Single				**SI-M1A-MT**	1407590	1
Double				**SI-M1B-MT**	1407591	1
Mounting frame, black, gray PBT plastic cover, closed with 3 mm two-way key bit						
Single				**SI-M1A-GL**	1407592	1
Double				**SI-M1B-GL**	1407593	1
Mounting frame, black, gray PBT plastic cover, closed with turn knob						
Single				**SI-M1A-GT**	1407594	1
Double				**SI-M1B-GT**	1407595	1
Front plate						
2 x RJ (with shroud)						
2 x D-SUB 09						
1 x D-SUB 09, 1 x D-SUB 15						
1 x D-SUB 09, 1 x D-SUB 25						
2 x D-SUB 15						
1 x D-SUB 15, 1 x D-SUB 25						
2 x D-SUB 25						
Socket inserts						
Germany						
Germany, yellow						
USA						
France						
Great Britain						
Italy						

	Accessories			Accessories		
Marker labels, for identifying mounting frames and front plates, one sheet has 20 labels	**VS-SI-BZ**	1656660	1	**VS-SI-BZ**	1656660	1
Dummy plate, plastic				**VS-SI-FP-BP**	1656657	1



Front plate, without contact inserts



Data front plate with contact inserts RJ45 (socket to socket), D-SUB (socket to pin)



Socket inserts

EAC

Technical data

VS-SI-FP-2RJ-MOD
-
-
PBT
V0
-
-
-
-
-10 °C ... 60 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2RJ-MOD	**1656631**	1
VS-SI-FP-2DSUB9	**1656563**	1
VS-SI-FP-DSUB9-DSUB15	**1656576**	1
VS-SI-FP-DSUB9-DSUB25	**1656589**	1
VS-SI-FP-2DSUB15	**1656592**	1
VS-SI-FP-DSUB15-DSUB25	**1656602**	1
VS-SI-FP-2DSUB25	**1656615**	1

Accessories

EAC

Technical data

VS-SI-FP...RJ45...	VS-SI-FP...DSUB...
50 V	125 V
1 A	3 A
PBT	PBT
V0	V0
IP20	IP20
-	-
-	-
-	-
-10 °C ... 60 °C	-10 °C ... 60 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-FP-2RJ45-5-MOD-BU/BU	**1657766**	1
VS-SI-FP-2DSUB9-GC-BU/ST	**1657708**	1
VS-SI-FP-DSUB9-DSUB15-GC-BU/ST	**1657711**	1
VS-SI-FP-DSUB9-DSUB25-GC-BU/ST	**1657724**	1
VS-SI-FP-2DSUB15-GC-BU/ST	**1657737**	1
VS-SI-FP-DSUB15DSUB25-GC-BU/ST	**1657740**	1
VS-SI-FP-2DSUB25-GC-BU/ST	**1657753**	1

Accessories

EAC

Technical data

VS-SI-SD-DE	VS-SI-SD-USA
250 V	125 V
16 A	15 A
PA	PA
V0	V0
IP20	IP20
Screw connection	Slip-on connection
2.5 mm²	2.5 mm²
14	14
-10 °C ... 60 °C	-10 °C ... 60 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SI-SD-DE	**1656505**	1
VS-SI-SD-DE-G	**1656518**	1
VS-SI-SD-USA	**1656521**	1
VS-SI-SD-FR	**1656534**	1
VS-SI-SD-GB	**1656547**	1
VS-SI-SD-IT	**1656550**	1

Accessories

Data front plates, service sockets, and programming interfaces



Front plates



Service sockets

	Technical data	Technical data
Material data		
Housing material	PBT	PA
Mechanical data		
Degree of protection	IP20	IP65
Temperature data		
Ambient temperature (operation)	-10 °C ... 60 °C	-25 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Front plate, with the following contact inserts:						
D-SUB9	**SI-FP-D1A**	1404501	1			
D-SUB9, D-SUB9-BP	**SI-FP-D1D-D1E**	1404509	1			
2x D-SUB 9	**SI-FP-2D1D**	1404510	1			
D-SUB9, D-SUB9, RJ45	**SI-FP-R1A-D1A-D1C**	1404507	1			
D-SUB9, RJ45	**SI-FP-R1A-D1A**	1404496	1			
D-SUB9, D-SUB25, RJ45	**SI-FP-R1A-D1B-D3B**	1404502	1			
D-SUB9, RJ45, USB with 0.7 m cable	**SI-FP-R1A-D1B-U1A/0,7**	1404504	1			
D-SUB9 BP, RJ45	**SI-FP-R1A-D1E**	1404500	1			
RJ45, RJ12, 2 x USB	**SI-FP-R1A-R2A-2U1A**	1404503	1			
RJ45, USB	**SI-FP-R1A-U1A**	1404499	1			
RJ45, USB with 0.7 m cable	**SI-FP-R1A-U1A/0,7**	1404512	1			
D-SUB9, RJ45, USB	**SI-FP-R1A-U1A-D1A**	1404497	1			
D-SUB9, RJ45, USB	**SI-FP-R1A-U1A-D1B**	1404495	1			
2x RJ45, USB	**SI-FP-2R1A-U1A**	1404506	1			
USB	**SI-FP-U1A**	1404505	1			
Service sockets						
RJ45				**SI-SES-R1A**	1404513	1
USB with 0.6 m cable				**SI-SES-U1A/0,6**	1404514	1
USB with 1.0 m cable				**SI-SES-U1A/1**	1404515	1
Programming interface for HEAVYCON panel mounting base, with:						
2x RJ45 gender changers						
2x USB (A), D-SUB15						
RJ45						
RJ45, RJ11						
RJ45, socket insert USA						
RJ45, socket insert USA 3A						
USB (A)						



Programming interfaces

EAC

Technical data

Aluminum die-cast
IP54
-35 °C ... 65 °C

Ordering data

Type	Order No.	Pcs. / Pkt.
SI-PP-2R1A	**1404520**	1
SI-PP-2U1A-D2A	**1404519**	1
SI-PP-R1A	**1404517**	1
SI-PP-R1A-R3A	**1404521**	1
SI-PP-R1A-S0A	**1404516**	1
SI-PP-R1A-S0B	**1404518**	1
SI-PP-U1A	**1404522**	1

Front plate and socket inserts (Freenet system)

Ethernet

PROFINET®



Front plate
with two Freenet slots



RJ45 socket inserts,
Freenet system

EAC

	Technical data	Technical data	
	VS-SI-FP-2F	VS-08-BU/BU-RJ45-F	VS-08-BU-RJ45-6-F/PK
Electrical data			
Rated voltage	-	50 V	50 V
Rated current	-	1 A	1 A
Transmission speed	-	-	-
Transmission characteristics (category)	-	-	-
Material data			
Housing material	PBT	Copper alloy	-
Contact material	-	Copper alloy	Copper alloy
Contact surface material	-	Gold over nickel	Gold over nickel
Contact carrier material	-	PC	PC
Ferrule material	-	-	-
Inflammability class according to UL 94	V0	V0	V0
Mechanical data			
No. of pos.	-	8	8
Pollution degree	-	1	1
Degree of protection	IP20	IP20	IP20
Connection method	-	IDC	IDC
Conductor cross section	-	0.2 mm² ... 0.32 mm² (solid)	0.14 mm² ... 0.35 mm²
Connection cross section AWG	-	24 ... 22 (solid)	26 ... 22 (7-wire)
Fiber type	-	-	-
Insertion/withdrawal cycles	-	≥ 750	≥ 750
Temperature data			
Ambient temperature (operation)	-10 °C ... 60 °C	-20 °C ... 70 °C	-20 °C ... 70 °C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Front plate	**VS-SI-FP-2F**	1658532	1			
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket 1 Gbps, CAT5				**VS-08-BU/BU-RJ45-F**	1405617	1
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection 1 Gbps, CAT5				**VS-08-BU-RJ45-5-F/PK**	1652936	1
SC-RJ coupling, for VS-TO-... terminal outlets and 19" VS-PP-19-1HE-16-F patch panels and VS-SI-FP-2F front plate						
USB socket insert, 4-pos., version 6, panel mounting frame with USB coupling: Slot V6 with USB-A Slot V6 with USB-B						
USB socket insert, 4-pos., socket on flat-ribbon cable terminal strip, pitch 2.54 Socket, type A Socket, type B						
	Accessories			**Accessories**		
Marker labels, for identifying mounting frames and front plates, one sheet has 20 labels	**VS-SI-BZ**	1656660	1			

Ethernet



SC-RJ coupling



Panel mounting frame,
USB socket insert

Technical data	
VS-SCRJ-GOF-KU	
-	
-	
-	
-	
PBT	
-	
-	
-	
Zirconia ceramics	
V0	
2	
-	
IP20	
Coupling	
-	
-	
GOF, PCF, POF	
≥ 500	
-25 °C ... 70 °C	

Technical data		
CUC-V06-F1PGY-UBA/UB...	VS-04-BUA-FK-F/IP67	
30 V	30 V	
1 A	1 A	
-	-	
-	-	
PC	PC	
Copper alloy	Copper alloy	
Gold over nickel	Gold over nickel	
Thermoplastic	PET	
-	-	
V0	V0	
4	4	
-	-	
IP67	IP20	
USB type A, socket	Flat-ribbon cable connection, pitch 2.54 mm	
-	-	
-	-	
-	-	
-	≥ 1000	
-15 °C ... 65 °C	-15 °C ... 65 °C	

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-GOF-KU	1654358	1

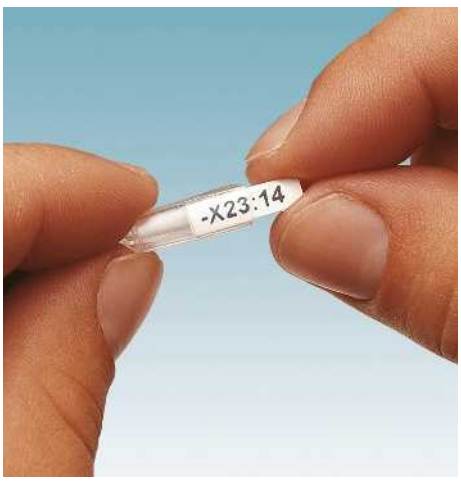
Ordering data

Type	Order No.	Pcs. / Pkt.
CUC-V06-F1PGY-UBA/UBBB	1411904	1
CUC-V06-F1PGY-UBB/UBAB	1411905	1
VS-04-BUA-FK-F/IP67	1653854	1
VS-04-BUB-FK-F/IP67	1653867	1

Accessories

Accessories





Cable marking

The cables are supplied with marked marking collars. Suitable marking materials are available for each marking system.



Distributor box marking

High-quality marking materials for individual marking of distributor boxes are available for each marking system.



Connector marking

Marking materials ranging from adhesive labels to high-quality engraved labels are available for marking heavy-duty connectors.



Cable markers

Markers can be fitted using cable binders almost regardless of cable diameter. The large marking area provides enough space for comprehensive marking.



Cable marker labels

Cable marker labels consist of a marking field and a transparent film that protects the marking against abrasion and dirt.



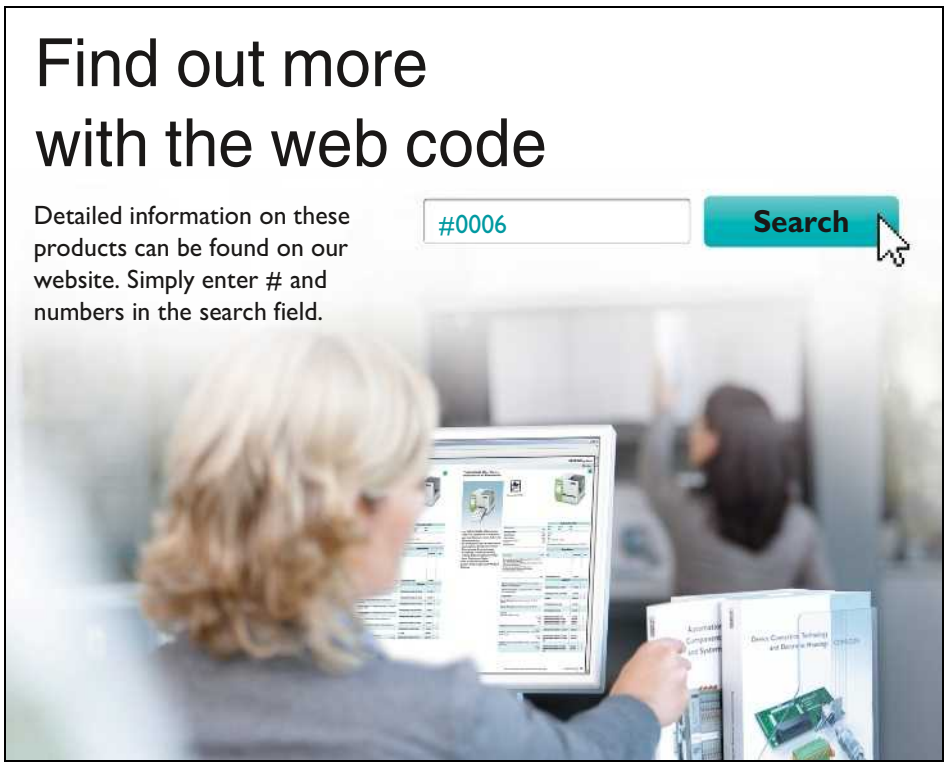
Plastic cable markers

Plastic cable markers are suitable for bundling and marking cables. The marking is protected against dirt and can be replaced.



Cable protection

The comprehensive range of plastic and metal protective hoses offers the right solution for every application.
Protective hose screw connections with tool-free quick mounting function and various IP protection classes round off the range of products.




PHOENIX CONTACT

Plug-in charging systems for E-Mobility

Phoenix Contact E-Mobility offers a product and technology portfolio that enables the flexible, modular, and efficient implementation of various concepts for the charging infrastructure for different business models. Whether charging on an AC power grid or rapid DC charging – the AC and DC charging systems from Phoenix Contact are safe, reliable, and user-friendly.

Product range overview	**714**
DC charging cables	**716**
AC charging cables	**718**
Mobile AC charging cables	**722**
Infrastructure Socket Outlets	**726**



The development of a widespread charging infrastructure in conjunction with renewable energy is an important step toward a mobile future. Internationally standardized charging systems are used to establish an electrical connection between the electric vehicle and the infrastructure (e.g., a charging station). In terms of the charging interfaces required, a distinction is made between:

– Vehicle inlets
– Infrastructure Socket Outlets
– Charging cables with Vehicle Connectors, Infrastructure Plugs, and integrated IC-CPD control units

International standards ensure uniform connection for charging stations and vehicles:

– Type 1 according to SAE J1772 and IEC 62196 (USA, Japan)
– Type 2 according to IEC 62196 (Europe)
– GB/T 20234 standard (China)

The charging systems from Phoenix Contact offer reliable, standard-compliant solutions for a consistent charging interface for all applications.

This is implemented, for example, with the Combined Charging System (CCS), which was developed by major German automobile manufacturers in cooperation with Phoenix Contact. The electric vehicle can be charged conventionally with AC at home, for example. In addition, the vehicle-side inlet is also designed for rapid DC charging. Only short stops are required for the charging process - e.g., at rest stops when on the road.



AC type 1

AC charging system Type 1 is based on the SAE J1772 and IEC 62196 standard. It is primarily used in the USA and Japan. The lock is implemented using a lever system.



AC type 2

The type 2 AC charging system, developed for Europe, is designed according to the IEC 62196-2 standard. It supports single- and three-phase charging. An electromechanical actuator lock safeguards the charging process.



AC GB/T

The AC charging system standardized according to the Chinese GB/T standard supports both single and three-phase charging. Charging takes place securely thanks to a special lever system.



DC CCS type 1

In the USA, the type 1 DC CCS charging system is used for fast DC charging, according to SAE J1772 and IEC 62196-3. The lever locking mechanism is also supported by an additional actuator lock.



DC CCS type 2

In Europe, the type 2 DC CCS charging system is the vanguard for rapid DC charging according to IEC 62196-3. The electromechanical actuator lock prevents premature removal during the charging process.



DC GB/T

The DC charging system for China is based on the GB/T standard. It offers rapid DC charging for Chinese charging stations. The locking mechanism is integrated in the Vehicle Connector.

Combined charging system (CCS) DC charging cables type 1 and type 2

The CCS DC charging cables with open cable end are connected directly to a DC charging station. They are suitable for fast DC charging of electric vehicles.

The CCS Vehicle Connector is compatible with the CCS Vehicle Inlet, which also accommodates an AC Vehicle Connector.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.



CCS Type 1 Vehicle Connector, with AWG cable



CCS Type 2 Vehicle Connector, with metric cable

	Technical data			Technical data		
	60 A	125 A		60 A	125 A	200 A
Rated current	60 A	125 A		60 A	125 A	200 A
Rated voltage	600 V DC	600 V DC		850 V DC	850 V DC	850 V DC
Approvals	-	-		-		-
Standards	SAE J1772	SAE J1772		IEC 62196-3	IEC 62196-3	IEC 62196-3
Charging mode	DC level 2	DC level 2		Mode 4	Mode 4	Mode 4
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)		1500 Ω (between PE and PP)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C		-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)		3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000	> 10000		> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N		< 100 N	< 100 N	< 100 N
Temperature sensor	Pt 1000	Pt 1000		Pt 1000	Pt 1000	Pt 1000
Type of protection (when plugged in)	IP44	IP44		IP44	IP44	IP44
Degree of protection (when not plugged in)	IP20	IP20		IP20	IP20	IP20
Cable data						
Cable type	Straight	Straight		Straight	Straight	Straight
Cable length	5 m	5 m		4.5 m	5 m	5 m
Cable diameter	20.6 mm ±0.2 mm	32.2 mm ±0.2 mm		18.5 mm ±0.2 mm	28.2 mm ±0.2 mm	32 mm ±0.2 mm
Cable structure	3 x 6 AWG + 3 x 2 x 18 AWG	2 x 1 AWG + 1 x 3 AWG + 3 x 2 x 18 AWG		3 x 16 mm² + 3 x 2 x 0.75 mm²	2 x 50 mm² + 1 x 25 mm² + 3 x 2 x 0.75 mm²	2 x 70 mm² + 1 x 35 mm² + 3 x 2 x 0.75 mm²
Sheath color	Black	Black		Black	Black	Black

	Ordering data					Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	60 A		125 A				60 A		125 A		200 A	
DC charging cable with Vehicle Connector and open cable end, Combined Charging System (CCS)												
	1621488	1	1409950	1			1618306	1	1409060	1	1621653	1

DC charging cables GB/T (China)

DC GB charging cables with open cable end are installed in Chinese charging stations with a stationary AC/DC converter. They are suitable for fast DC charging of electric vehicles.

An innovative locking mechanism is integrated in the Vehicle Connector for secure locking during the charging process.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
All Vehicle Connectors are supplied with a protective cap.



GB/T DC Vehicle Connector, with metric cable

Technical data

	60 A	125 A	250 A
Rated current	60 A	125 A	250 A
Rated voltage	750 V DC	750 V DC	750 V DC
Standards	GB/T 20234.3	GB/T 20234.3	GB/T 20234.3
Charging mode	Mode 4	Mode 4	Mode 4
Resistor coding	1000 Ω	1000 Ω	1000 Ω
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Temperature sensor	Pt 1000	Pt 1000	Pt 1000
Type of protection (when plugged in)	IP55	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54	IP54
Cable data			
Cable type	Straight	Straight	Straight
Cable length	5 m	5 m	5 m
Cable diameter	20.2 mm ±0.2 mm	28 mm ±0.2 mm	32.4 mm ±0.2 mm
Cable structure	3 x 16 mm^2 + 2 x 2.5 mm^2 + 9 x 0.5 mm^2	2 x 50 mm^2 + 1 x 16 mm^2 + 2 x 2.5 mm^2 + 9 x 0.5 mm^2	2 x 70 mm^2 + 1 x 25 mm^2 + 2 x 2.5 mm^2 + 9 x 0.5 mm^2
Sheath color	Black	Black	Black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	60 A		125 A		250 A	
DC charging cable with Vehicle Connector and open cable end, GB/T	1621468	1	1622119	1	1622120	1

AC charging cables type 1 with open cable end

Type 1 AC charging cables with open cable end are primarily installed in charging stations and wall boxes in the USA and Japan. They are used to charge electric vehicles with alternating current.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors are supplied with a protective cap.



AC Type 1 Vehicle Connector, with metric cable



AC Type 1 Vehicle Connector, with AWG cable

	Technical data		Technical data	
	20 A, 1-phase	**32 A, 1-phase**	**16 A, 1-phase**	**30 A, 1-phase**
Rated current	20 A	32 A	16 A	30 A
Number of phases	1	1	1	1
Rated voltage	250 V AC	250 V AC	240 V AC	240 V AC
Standards	IEC 62196-2	IEC 62196-2	SAE J1772	SAE J1772
Charging mode	Mode 3	Mode 3	AC level 2	AC level 2
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44	IP44
Cable data				
Cable length	4 m	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5 mm	13.9 mm ±0.5 mm	9.4 mm ±0.2 mm	16.4 mm ±0.2 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6 mm² + 1 x 0.5 mm²	3 x 14 AWG + 1 x 18 AWG	3 x 10 AWG + 1 x 18 AWG
Sheath color	Black	Black	Black	Black

	Ordering data			Ordering data			
Description	**Order No.**	Pcs. / Pkt.		**Order No.**	Pcs. / Pkt.		
	20 A, 1-phase			**32 A, 1-phase**			
AC charging cable with Type 1 Vehicle Connector and **straight** cable with open cable end	1621482	1		1409952	1		
AC charging cable with Type 1 Vehicle Connector and **spiraled** cable with open cable end	1621670	1		1621794	1		
	16 A, 1-phase			**30 A, 1-phase**			
	1621484	1		1409949	1		

AC charging cables GB/T with open cable end

The AC charging cables with open cable end according to the GB/T standard are specially designed for the Chinese charging infrastructure. They are used to charge electric vehicles in China with alternating current at GB/T charging stations and wall boxes.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors are supplied with a protective cap.



AC GB/T Vehicle Connector, with metric cable



AC GB/T Vehicle Connector, with metric cable

	Technical data		Technical data	
	16 A, 1-phase		32 A, 1-phase	32 A, 3-phase
Rated current	16 A		32 A	32 A
Number of phases	1		1	3
Rated voltage	250 V		250 V	440 V
Standards	GB/T 20234.2		GB/T 20234.2	GB/T 20234.2
Charging mode	Mode 3		Mode 3	Mode 3
Resistor coding	680 Ω (between PE and CC)		220 Ω (between PE and CC)	220 Ω (between PE and CC)
Ambient temperature (operation)	-30 °C ... 50 °C		-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)		3 (L1, N, PE)	5 (L, NC1, NC2, N, PE)
Insertion/withdrawal cycles	> 10000		> 10000	> 10000
Insertion/withdrawal force	< 100 N		< 100 N	< 100 N
Type of protection (when plugged in)	IP55		IP55	IP55
Degree of protection (with protective cap)	IP54		IP54	IP54
Cable data				
Cable type	Straight		Straight	Straight
Cable length	5 m		5 m	5 m
Cable diameter	10.5 mm		13.9 mm	17.1 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²		3 x 6.0 mm² + 1 x 0.5 mm²	5 x 6.0 mm² + 1 x 0.5 mm²
Sheath color	Orange		Orange	Orange

	Ordering data			Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	16 A, 1-phase				32 A, 1-phase		32 A, 3-phase	
AC charging cable with GB/T Vehicle Connector and open cable end	1408166	1			1408167	1	1408168	1

AC charging cables type 2 with open cable end

AC charging cables Type 2 with open cable end are installed in charging stations and wall boxes in European infrastructure. They are used to charge electric vehicles with single or three-phase alternating current.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors are supplied with a protective cap.



AC Type 2 Vehicle Connector, with metric cable



AC Type 2 Vehicle Connector, with metric cable

	Technical data		Technical data	
	20 A, 1-phase	**20 A, 3-phase**	**32 A, 1-phase**	**32 A, 3-phase**
Rated current	20 A	20 A	32 A	32 A
Number of phases	1	3	1	3
Rated voltage	250 V AC	480 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3	Mode 3	Mode 3	Mode 3
Resistor coding	680 Ω (between PE and PP)	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44	IP44
Cable data				
Cable length	4 m	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5 mm	13 mm ±0.5 mm	13.9 mm ±0.5 mm	17 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	5 x 2.5 mm² + 1 x 0.5 mm²	3 x 6 mm² + 1 x 0.5 mm²	5 x 6 mm² + 1 x 0.5 mm²
Sheath color	Black	Black	Black	Black

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.	**20 A, 1-phase**	**Order No.**	Pcs. / Pkt.	**20 A, 3-phase**
AC charging cable with Type 2 Vehicle Connector and **straight** cable with open cable end	1409319	1		1409320	1	
AC charging cable with Type 2 Vehicle Connector and **spiraled** cable with open cable end	1405195	1		1405197	1	

	Ordering data			Ordering data		
	Order No.	Pcs. / Pkt.	**32 A, 1-phase**	**Order No.**	Pcs. / Pkt.	**32 A, 3-phase**
AC charging cable with Type 2 Vehicle Connector and **straight** cable with open cable end	1405198	1		1405199	1	
AC charging cable with Type 2 Vehicle Connector and **spiraled** cable with open cable end	1622042	1		1410088	1	

AC charging cables type 2 with open cable end

AC charging cables Type 2 with open cable end are installed in charging stations and wall boxes in European infrastructure. They are used to charge electric vehicles with single or three-phase alternating current.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors are supplied with a protective cap.



AC Type 2 Vehicle Connector, with metric, red cable



AC Type 2 Vehicle Connector, with metric, red cable

Technical data

	20 A, 1-phase
Rated current	20 A
Number of phases	1
Rated voltage	250 V AC
Standards	IEC 62196-2
Charging mode	Mode 3
Resistor coding	680 Ω (between PE and PP)
Ambient temperature (operation)	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Type of protection (when plugged in)	IP44
Degree of protection (with protective cap)	IP44
Cable data	
Cable type	Straight
Cable length	4 m
Cable diameter	10.5 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²
Sheath color	Red

Technical data

	20 A, 1-phase
Rated current	20 A
Number of phases	1
Rated voltage	250 V AC
Standards	IEC 62196-2
Charging mode	Mode 3
Resistor coding	680 Ω (between PE and PP)
Ambient temperature (operation)	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Type of protection (when plugged in)	IP44
Degree of protection (with protective cap)	IP44
Cable data	
Cable type	Spiraled
Cable length	4 m
Cable diameter	10.5 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²
Sheath color	Red

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
AC charging cable with Type 2 Vehicle Connector and **straight** cable with open cable end	**EV-T2M3C-1AC20A-4,0M2,5ESRD00**	**1408274**	1
AC charging cable with Type 2 Vehicle Connector and **spiraled** cable with open cable end	**EV-T2M3C-1AC20A-4,0M2,5EHRD00**	**1405194**	1

Mobile AC charging cables
Type 1 to Type 2 (mode 3)

The mobile AC charging cables enable electric vehicles to be charged with alternating current at European charging stations or wall boxes at home and while on the move. They can easily be stored inside the vehicle.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors and Infrastructure Plugs are supplied with a protective cap.



Type 1 Vehicle Connector with Type 2 Infrastructure Plug



Type 1 Vehicle Connector with Type 2 Infrastructure Plug

	Technical data		Technical data
	20 A, 1-phase	**32 A, 1-phase**	**20 A, 1-phase**
Rated current	20 A	32 A	20 A
Number of phases	1	1	1
Rated voltage	250 V AC	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3	Mode 3	Mode 3
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44
Cable data			
Cable type	Straight	Straight	Spiraled
Cable length	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5 mm	13.9 mm ±0.5 mm	10.5 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6 mm² + 1 x 0.5 mm²	3 x 2.5 mm² + 1 x 0.5 mm²
Sheath color	Black	Black	Black

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	20 A, 1-phase		**32 A, 1-phase**		**20 A, 1-phase**			
AC charging cable with Type 1 Vehicle Connector, **straight** cable, and Type 2 Infrastructure Plug	1621481	1	1410090	1				
AC charging cable with Type 1 Vehicle Connector, **spiraled** cable, and Type 2 Infrastructure Plug					1621669	1		

Mobile AC charging cables Type 2 (mode 3)

The mobile AC charging cables enable electric vehicles to be charged with alternating current at European charging stations or wall boxes at home and while on the move. They can easily be stored inside the vehicle.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors and Infrastructure Plugs are supplied with a protective cap.



Type 2 Vehicle Connector with Type 2 Infrastructure Plug



Type 2 Vehicle Connector with Type 2 Infrastructure Plug

Technical data				
	20 A, 1-phase	20 A, 3-phase	32 A, 1-phase	32 A, 3-phase
Rated current	20 A	20 A	32 A	32 A
Number of phases	1	3	1	3
Rated voltage	250 V AC	480 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3	Mode 3	Mode 3	Mode 3
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44	IP44
Cable data				
Cable length	4 m	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5 mm	13 mm ±0.5 mm	13.9 mm ±0.5 mm	17 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	5 x 2.5 mm² + 1 x 0.5 mm²	3 x 6 mm² + 1 x 0.5 mm²	5 x 6 mm² + 1 x 0.5 mm²

Ordering data								
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 1-phase		20 A, 3-phase		32 A, 1-phase		32 A, 3-phase	
AC charging cable with Type 2 Vehicle Connector, **black**, **straight** cable, and Type 2 Infrastructure Plug	1405193	1	1404877	1	1404568	1	1404569	1
AC charging cable with Type 2 Vehicle Connector, **red**, **straight** cable, and Type 2 Infrastructure Plug	1404876	1						
AC charging cable with Type 2 Vehicle Connector, **black**, **spiraled** cable, and Type 2 Infrastructure Plug								
Outer sheath color: black	1405192	1	1404567	1			1622495	1
AC charging cable with Type 2 Vehicle Connector, **red**, **spiraled cable**, and Type 2 Infrastructure Plug	1404563	1						

Mobile AC charging cables GB/T (mode 3)

The mobile GB/T charging cables enable electric vehicles to be charged with alternating current at Chinese charging stations or wall boxes at home and while on the move.

They can easily be stored inside the vehicle.

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
All Vehicle Connectors and Infrastructure Plugs are supplied with a protective cap.



GB/T Vehicle Connector with GB/T Infrastructure Plug



GB/T Vehicle Connector with GB/T Infrastructure Plug

Technical data

	16 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	16 A	32 A	32 A
Number of phases	1	1	3
Rated voltage	250 V	250 V	440 V
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2
Charging mode	Mode 3	Mode 3	Mode 3
Resistor coding	680 Ω (between PE and CC)	220 Ω (between PE and CC)	220 Ω (between PE and CC)
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	5 (L, NC1, NC2, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP55	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54	IP54
Cable data			
Cable type	Straight	Straight	Straight
Cable length	5 m	5 m	5 m
Cable diameter	10.5 mm	13.9 mm	17.1 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6.0 mm² + 1 x 0.5 mm²	5 x 6.0 mm² + 1 x 0.5 mm²
Sheath color	Orange	Orange	Orange

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	16 A, 1-phase				32 A, 1-phase		32 A, 3-phase	
AC charging cable with GB/T Vehicle Connector and GB/T Infrastructure Plug	1408161	1			1408163	1	1408165	1

Mobile AC charging cables type 1 and type 2 (mode 2)

The mobile AC charging cables with In-Cable Control and Protection Device (IC-CPD) enable electric vehicles to be charged with alternating current at a normal, European socket at home and while on the move. The components for standardized communication with the vehicle as well as the safety equipment are integrated in the IC-CPD.

Notes:

Color variants for housing, cables, and customer-specific labels available on request.

All Vehicle Connectors are supplied with a protective cap.



Type 1 Vehicle Connector with IC-CPD and SCHUKO connector



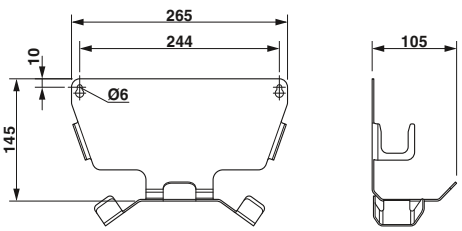
Type 2 Vehicle Connector with IC-CPD and SCHUKO connector

	Technical data	Technical data
	13 A, 1-phase	**13 A, 1-phase**
Rated current	6 A ... 13 A	6 A ... 13 A
Number of phases	1	1
Rated voltage	200 V AC ... 250 V AC	200 V AC ... 250 V AC
Frequency	50 Hz	50 Hz
Charging power	1.4 kW ... 3 kW	1.4 kW ... 3 kW
Standards	IEC 61851-1	IEC 61851-1
Charging mode	Mode 2	Mode 2
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C
Tripping characteristics / residual current	Type A/30 mA	Type A/30 mA
Infrastructure plug	SCHUKO (CEE 7/7, type AF)	SCHUKO (CEE 7/7, type AF)
Temperature sensor (infrastructure plug)	Available	Available
Degree of protection (IC-CPD)	IP67	IP67
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44
Cable data		
Cable type	Straight	Straight
Cable length	4 m	4 m
Cable diameter	10.5 mm ±0.5 mm	10.5 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 2 x 0.5 mm²	3 x 2.5 mm² + 2 x 0.5 mm²
Sheath color	Red	Red

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AC charging cable with Vehicle Connector and IC-CPD control unit	**EV-ICCPD-T1C-EU-S-13A1-A-GEN2**	1621797	1	**EV-ICCPD-T2C-EU-S-13A1-A**	1621516	1
	Accessories			**Accessories**		
Wall bracket, for mobile AC charging cables with Vehicle Connector and IC-CPD	**EV-ICCPD-WB**	1622474	1	**EV-ICCPD-WB**	1622474	1



Wall bracket



AC Infrastructure Socket Outlets GB/T and Type 2

Single or three-phase charging is possible with the standardized Infrastructure Socket Outlets for charging stations or wall charging stations. Up to 22 kW of power can be transmitted when a mobile AC charging cable is connected.

Notes:

All Infrastructure Socket Outlets can be mounted on the housing panel from both the front and the rear (see below).

As an option, the AC Infrastructure Socket Outlet Type 2 can be secured with a hinged cover or a panel mounting frame for both front and rear panel mounting.



Infrastructure Socket Outlet GB/T with actuator



Infrastructure Socket Outlet GB/T without actuator

	Technical data		Technical data	
	32 A, 1-phase	**32 A, 3-phase**	**32 A, 1-phase**	**32 A, 3-phase**
Rated current	32 A	32 A	32 A	32 A
Number of phases	1	3	-	3
Rated voltage	250 V AC	440 V AC	250 V AC	440 V AC
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2
Charging mode	Mode 3	Mode 3	Mode 3	Mode 3
Ambient temperature (operation)	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Type of protection (when plugged in)	IP55	IP55	IP55	IP55
Degree of protection (with hinged cover)	-	-	-	-
Cable data				
Cable type	Single wires	Single wires	Single wires	Single wires
Cable length	0.70 m	0.70 m	0.70 m	0.70 m
Cable structure	3 x 6.0 mm² + 2 x 0.5 mm²	5 x 6.0 mm² + 2 x 0.5 mm²	3 x 6.0 mm² + 2 x 0.5 mm²	5 x 6.0 mm² + 2 x 0.5 mm²
Actuator data				
Mechanical emergency release	Available	Available	Available	Available
Lock recognition	Available	Available	Available	Available

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.		**Order No.**	Pcs. / Pkt.	
	32 A, 1-phase			**32 A, 3-phase**		
AC socket outlet						
With actuator (12 V operating voltage)	1408171	1		1408172	1	
With actuator (24 V operating voltage)						
Without actuator	1408169	1		1408170	1	
AC socket outlet accessories						



Infrastructure Socket Outlet Type 2 with actuator



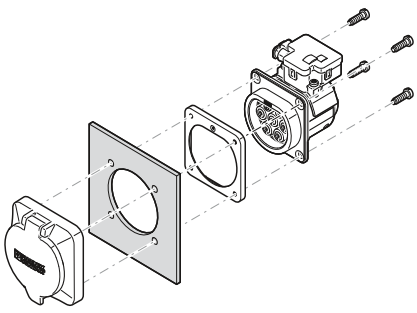
Hinged cover for Infrastructure Socket Outlet Type 2



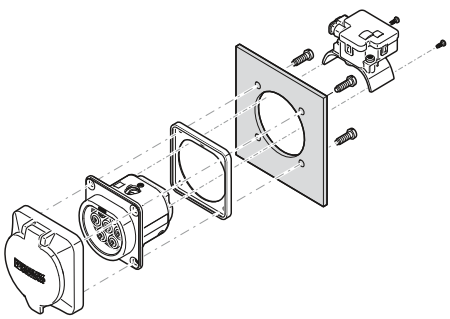
Panel mounting frame for Infrastructure Socket Outlet Type 2

Technical data		Technical data		Technical data	
20 A, 3-phase	**32 A, 3-phase**				
20 A	32 A	-		-	
3	3	-		-	
480 V AC	480 V AC	-		-	
IEC 62196-2	IEC 62196-2	IEC 62196-2		IEC 62196-2	
Mode 3	Mode 3	Mode 3		Mode 3	
-30 °C ... 50 °C	-30 °C ... 50 °C	-30 °C ... 50 °C		-30 °C ... 50 °C	
5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)	-		-	
> 10000	> 10000	-		-	
IP44	IP44	-		-	
IP54	IP54	IP54		-	
Single wires	Single wires	-		-	
0.70 m	0.70 m	-		-	
5 x 2.5 mm² + 2 x 0.5 mm²	5 x 6.0 mm² + 2 x 0.5 mm²	-		-	
Available	Available	-		-	
Available	Available	-		-	

Ordering data				Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
20 A, 3-phase		**32 A, 3-phase**									
1405213	1	1405214	1								
1405215	1	1405216	1								
				1405217	1			1405218	1		

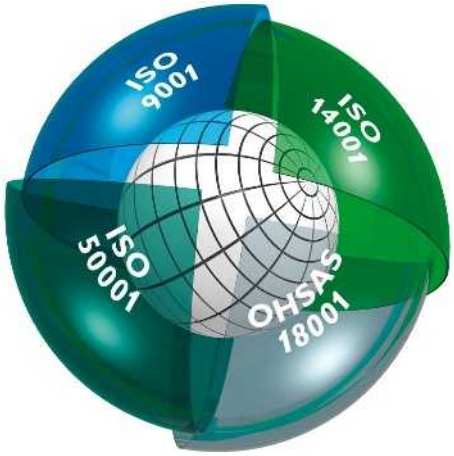


Rear panel mounting



Front mounting

Quality in quantity



Integrated management system

The aim of the Phoenix Contact integrated management system is to coordinate all the requirements regarding products, processes, and organization.

Statutory and regulatory requirements, as well as those of international standards and our customers, are met and, in some cases, even exceeded in all phases of the product lifecycle.

The Phoenix Contact management system is monitored by internationally recognized independent bodies each year to ensure that quality, environmental protection, energy efficiency, and occupational safety have been integrated in conformance with the relevant requirements. Certification in accordance with international standards ISO 9001, ISO 14001, ISO 50001, and BS OHSAS 18001 is the result of our corporate philosophy of meeting the needs of our customers, staff, and environment as best as possible. They serve as the basis for innovative products with the familiar high Phoenix quality standard, actively practiced environmental protection through efficient production and products that conserve resources, and responsibility in the field of occupational health and safety. It goes without saying that we integrate all further requirements of standards, international approvals or special customer requirements into our company processes.

This system provides a building block for the success of the Phoenix Contact Group and its products and services.

CE marking

CE marking was introduced as an important instrument for the free movement of goods and services within the single European market. By attaching the mark to a product, the manufacturer confirms that it complies with all applicable European Union (EU) directives. EC directives describe the product properties with regard to device safety and avoiding danger. These are legally binding regulations of the European Union (EU). In other words, compliance with the requirements is a **statutory condition for marketing the product within the EU**.

Where applicable, the products that our company currently manufactures fall within the scope of the following directives:

– 2006/95/EC and 2014/35/EU
  Electrical equipment designed for use within certain voltage limits (Low-Voltage Directive)
– 2004/108/EC and 2014/30/EU
  Electromagnetic compatibility (EMC Directive)
– 2004/22/EC and 2014/32/EU
  Measuring instruments
– 2006/42/EC
  Safety of machinery (Machinery Directive)
– 94/9/EC and 2014/34/EU
  Equipment and protective systems intended for use in potentially explosive areas (ATEX Directive)
– 1999/5/EC
  R&TTE Directive and
  2014/53/EU
  Radio Equipment Directive

The standards upon which the specified directives are based have been part of our standard of development for a long time. This guarantees conformance with European directives. The numbers of the directives indicate their version at the time of publication. In the event of changes to directives and/or standards, our products will undergo conformity assessment again in good time and a new declaration of conformity will be issued promptly. The current declarations for each product can also be found in our download area.

The EMC Directive occupies a special place among the European directives listed. It defines electromagnetic compatibility as a fundamental property of devices based on mandatory guidelines. European Law therefore acknowledges the electromagnetic compatibility of devices and systems as an important condition for error-free operation of machinery and systems. Phoenix Contact is one of the leading international companies in surge protection, and therefore possesses broad expertise in EMC. This expertise and the experience gained over years of developing and applying industrial interface and communication technology have resulted in our products having an extremely high standard of quality with regard to electromagnetic compatibility. It was with a view to providing other companies with this expertise that our associate company, Phoenix Testlab, was founded. Phoenix Testlab GmbH is an independent, accredited service provider offering EMC testing that conforms to European standards. At Phoenix Testlab, devices are also tested with regard to their electrical safety, mechanical influences, and their behavior in relation to environmental influences. Furthermore, Phoenix Testlab is a "Notified Body" in accordance with EMC Directive 2004/108/EC and according to R&TTE Directive 1999/5/EC for radio and telecommunications terminal equipment. As a "Telecom Certification Body" (TCB), Phoenix Testlab may also approve these products for markets in the USA, Canada, and Japan.

Standards and regulations

All relevant standards and regulations are used as the basis for the development and maintenance of our products.

International standards are subject to continuous changes as a result of harmonization and new developments. In line with this process, the current version of all standards that are relevant to our products is documented in the product area on our website at **www.phoenixcontact.net/products**.

Online product information service on the web

Phoenix Contact's product range is growing constantly.

Due to our commitment to product monitoring, all products are subject to improvement.

The Internet is an ideal platform to quickly communicate new product developments and improvements to the market.

You can quickly access the relevant Phoenix Contact website for your region via www.phoenixcontact.com. Here, you will always find the latest overview of products, solutions, and services from Phoenix Contact. This includes technical documents, such as data sheets and user manuals, the latest driver and demo software, plus a means of contacting the appropriate contact person directly.

Connection cross section

IEC 60947-7-1/-2

The connection capacity for connectors and PCB terminal blocks is documented in the technical data. The connection capacity defines the conductor cross section which can be connected for conductors in solid (single and multi-strand) or stranded (fine-strand) versions. Cross section ranges are also specified for the use of ferrules. In addition, ranges where two conductors in solid and stranded versions are to be simultaneously connected are also mentioned.

Phoenix Contact PCB terminal blocks and PCB connectors are designed to allow copper conductors to be connected to them untreated. "Special treatment" or the use of ferrules is not required. "Special treatment" includes tin-plating the litz wires of a conductor, using cable lugs, bending the eyes, etc. However, it does not include straightening the conductor before inserting it into the terminal block or twisting a stranded conductor in order to consolidate its ends.

If ferrules are nevertheless used to protect stranded conductors against splicing, the connection capacity of the stranded conductor is generally reduced by one level. Conductors must not be soldered ("soldering all litz wires of a conductor together").

It is always recommended that you use Phoenix Contact CRIMPFOX crimping tools to crimp ferrules.

Structure and dimensions of connecting cables

Cross section	Single-strand		Multi-strand		Fine-strand		American Wire Gauge [AWG]						
	Diameter max. dimension	Number of wires	Diameter max. dimension	Number of wires (minimum number)	Diameter max. dimension	Number of wires (guide value)	Gauge No.	Solid wires*			Stranded wires*		
[mm²]							AWG	[Ø mm]	[circ. mils]	[mm²]	[Ø mm]	[circ. mils]	[mm²]
0.2	0.5	1	-	-	-	-	24	0.51	404	0.21	-	-	-
0.5	0.9	1	1.1	7	1.1	16	20	0.81	1022	0.52	0.97	1111	0.56
0.75	1.0	1	1.2	7	1.3	24	18	1.02	1620	0.82	1.16	1600	0.82
1	1.2	1	1.4	7	1.5	32	(17)	1.15	2050	1.04	-	-	-
-	-	-	-	-	-	-	16	1.29	2580	1.31	1.50	2580	1.32
1.5	1.5	1	1.7	7	1.8	30	(15)	1.45	3260	1.65	-	-	-
-	-	-	-	-	-	-	14	1.63	4110	2.08	1.85	4100	2.09
2.5	1.9	1	2.2	7	2.3	50	(13)	1.83	5180	2.63	-	-	-
-	-	-	-	-	-	-	12	2.05	6530	3.31	2.41	6500	3.32
4	2.4	1	2.7	7	2.9	56	(11)	2.30	8230	4.17	-	-	-
-	-	-	-	-	-	-	10	2.59	10380	5.26	2.95	10530	5.37
6	2.9	1	3.3	7	3.9	84	(9)	2.91	13100	6.63	-	-	-
-	-	-	-	-	-	-	8	3.26	16510	8.37	3.73	16625	8.48
10	3.7	1	4.2	7	5.1	80	(7)	3.67	20800	10.56	4.15	20820	10.55
-	-	-	-	-	-	-	6	4.12	26240	13.30	4.67	26250	13.39
16	4.6	1	5.3	7	6.3	126	(5)	4.62	33100	16.77	5.24	33100	16.77
-	-	-	-	-	-	-	4	5.19	41740	21.15	5.90	41650	21.24
25	-	-	6.6	7	7.8	196	3	5.83	52600	26.67	6.61	52630	26.67
35	-	-	7.9	7	9.2	276	2	6.54	66360	33.62	7.42	66150	33.74
-	-	-	-	-	-	-	1	7.35	83690	42.41	8.33	83706	42.69
50	-	-	9.1	19	11	396	1/0	8.25	105600	53.51	9.35	104640	53.36
70	-	-	11	19	13.1	360	2/0	9.27	133100	67.44	10.52	132300	67.47

Tightening torque of terminal block screws

DIN EN 60947-1

Table 4 of the standard specifies the tightening torque to demonstrate the mechanical strength of screw connections/screw terminal blocks.

These torques are sufficient for connecting conductors with Phoenix Contact terminal blocks.

The table opposite lists recommended tightening torques which differ from those in this standard and which will ensure gas-tight connections with long-term stability.

Phoenix Contact torque screwdrivers can be set to the corresponding torques.

Extract from DIN EN 60947-1/EN 60947-1, Table 4

The torque according to IEC/EN and the recommended tightening torque for Phoenix Contact terminal blocks are specified.

Head screw with slot	
Thread	**Torque**
	[Nm]
M1.6	0.1*
M2.0	0.2*
M2.5 (M2.6)	0.4*
M3	0.5*
M4	1.2*
M4.5	1.8*
M5	2.0*
M6	2.5*
M8	3.5*
M10	4.0* / 10**
M12	14**
M14	19**
M16	25**
M20	36**
M24	50**

* Valid for nuts and screws tightened with screwdrivers.
**Valid for nuts and screws that can be tightened with tools other than screwdrivers.

Note:

Subject to changes that serve the purpose of technical progress.

Current carrying capacity

Standard IEC 60947-7-1/ EN 60947-7-1/DIN VDE 0611-1 specifies the test currents for the individual conductor cross sections listed in the adjacent table. The corresponding currents are listed with the connection data for the individual terminal blocks. The type tests of terminal blocks are based on this data.

Test currents according to IEC 60947-7-1/EN 60947-7-1, Table 5

Rated cross section	[mm²]	0.2	0.5	0.75	1.0	1.5	2.5	4	6	10	16
Test current	[A]	4	6	9	13.5	17.5	24	32	41	57	76

Rated cross section	[mm²]	25	35	50	70	95	120	150	185	240	300
Test current	[A]	101	125	150	192	232	269	309	353	415	520

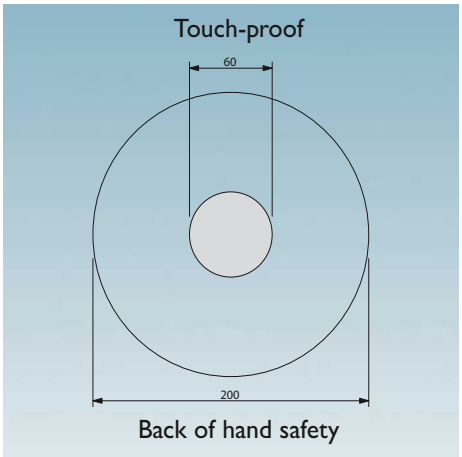
Color designations

Color	Code
White	WH
Red	RD
Blue	BU
Green	GN
Yellow	YE
Gray	GY
Brown	BN
Orange	OG
Black	BK
Turquoise	TQ
Ivory	IV
Beige	BE
Olive	OL

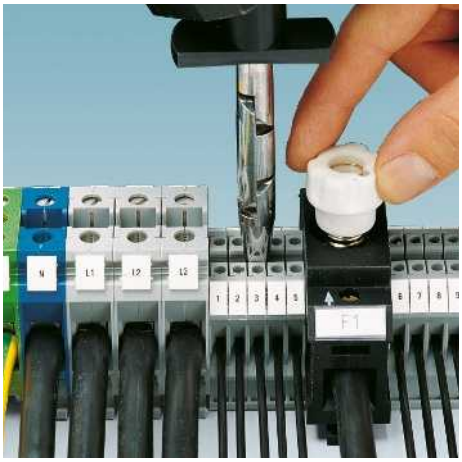
EMC: Class A product:

In accordance with statutory regulations, our products are indicated with this footnote if they are intended for use in industrial environments. This means that the permitted limit values for residential applications may be exceeded in the event of conducted and emitted disturbance variables. In such cases, the operator may have to take additional safety measures in order to ensure electromagnetic compatibility in residential applications.

Shock protection



Example: pressure actuation



Finger safety



Back of hand safety

The accident prevention regulations BGV A 2 issued by the German employer's liability insurance association for precision mechanics and electrical engineering apply to the operators of electrical systems and are aimed at the prevention of electrical accidents by means of special safety requirements.

These regulations contain specifications regarding the safety distances for work, operation, and occasional handling in the proximity of "live parts" in low-voltage systems up to 1000 V ~ or 1500 V –.

– Work with live parts is only permitted once they have been de-energized. Operational activities are only permitted in the vicinity of live parts if these parts are de-energized or are protected against direct contact (§ 6). The following safety measures apply when working in the vicinity of live parts:
– Provision of the de-energized state for the duration of the work
– Ensure shock protection is in place in the form of covers or barriers during the work
– Assurance that proximity limits will not be violated (§ 7)

The term "occasional handling" has been introduced for the operation of elements such as pushbuttons, rocker arms or rotary buttons in the proximity of live parts.

According to VDE 0105-1, this is covered by "operation with partial protection against direct contact".

Detailed specifications for "occasional handling" can be found in DIN VDE 0106-100. This specifies to what degree live parts in the proximity of operating elements are to be protected against contact. The basis for this is the definition of a "protection area for occasional handling"; this is the area into which the user must reach in order to handle the machine.

The most important thing is that an area formed by an even envelope curve 30 mm in radius must surround the live parts. This area must be **touch-proof**, i.e., the live parts of the electrical device must not be within reach of the VDE test finger according to IEC 60529/DIN VDE 0470-1 (test finger).

Back of hand safety is specified for the "rest of the area" up to 100 mm around the operating element. **Back of hand safety** means that when a force of 50 N is applied to a ball with a diameter of 50 mm, this does not come into contact with the live parts of the equipment. No special measures for ensuring contact safety are stipulated outside this area.

Note: systems and equipment that are operated with SELV up to 25 V ~ or 60 V – are considered to be protected against "direct contact".

According to § 5, Subsection 4 of the BGV A 2 regulations, there is no need to test the condition of the system prior to initial start-up if the company has confirmation from the manufacturer or installer that the electrical systems and equipment conform to BGV A 2. The confirmation required relates to systems and equipment that have been installed and are ready for operation and can only be issued by the installer or installation company. The manufacturer of the electrical equipment can only issue a confirmation that products have been produced in accordance with the relevant electrotechnical DIN VDE regulations stipulated in BGV A 2. The installer must bear this in mind when selecting the equipment to be used.

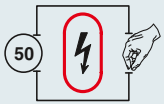
In the field of connection technology, Phoenix Contact offers a wide range of products which are touch-proof or can be protected against contact by means of covers. Depending on the conditions, all of this must be taken into account when selecting the individual types of terminal blocks and accessories.

Degrees of protection according to DIN EN 60529

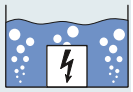
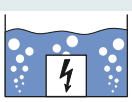
Definition:

IP (Ingress Protection) protection according to DIN EN 60529 is defined by two digits (e.g., IP54), the meaning of which is explained in the following tables.

Degree of protection against access to dangerous parts and against solid foreign objects

First digit	Short description	Example	Definition
0	Not protected		
1	Protected against solid foreign objects		Protected against touching dangerous parts with the back of the hand. Protection against ingress of solid foreign objects with Ø > 50 mm.
2	Protected against solid foreign objects with Ø 12.5 mm or more		Protected against touching dangerous parts with a finger. Protection against ingress of solid foreign objects with Ø > 12.5 mm.
3	Protected against solid foreign objects with Ø 2.5 mm or more		Protected against touching dangerous parts with a tool. Protection against ingress of solid foreign objects with Ø > 2.5 mm.
4	Protected against solid foreign objects with Ø 1 mm or more		Protected against touching dangerous parts with a wire. Protection against ingress of solid foreign objects with Ø > 1 mm.
5	Protected against dust		Protected against touching dangerous parts with a wire. The ingress of dust is not completely prevented, but dust may not enter in such an amount that the satisfactory operation of the device or its safety is impaired.
6	Dust-proof		Protected against touching dangerous parts with a wire. No ingress of dust.

Degree of protection against water

Second digit	Short description	Example	Definition
0	Not protected		
1	Protected against dripping water		Vertically falling drops shall have no effect.
2	Protected against dripping water if the housing is inclined at an angle of up to 15°		Vertically falling drops shall have no effect if the housing is inclined at an angle of up to 15° either side of the perpendicular.
3	Protected against spray water		Water that is sprayed at an angle of up to 60° either side of the perpendicular shall have no harmful effect.
4	Protected against splash water		Water that splashes against the housing from any direction shall have no harmful effect.
5	Protected against jet water		Water that is directed as a jet against the housing from every direction shall have no harmful effect.
6	Protected against powerful jet water		Water that is directed as a strong jet against the housing from every direction shall have no harmful effect.
7	Protected against the effect of temporary submersion in water		Water may not penetrate in a harmful quantity when the housing is temporarily submerged in water under standard pressure and time conditions.
8	Protected against the effect of continuous submersion in water		Water may not penetrate in a harmful quantity when the housing is submerged in water continuously under conditions to be agreed between the manufacturer and user.
9K	Protected against water during high-pressure and jet-stream cleaning		Water that is directed against the housing under extremely high pressure from every direction shall have no harmful effect. (Example: IP69K according to DIN 40050 Part 9)

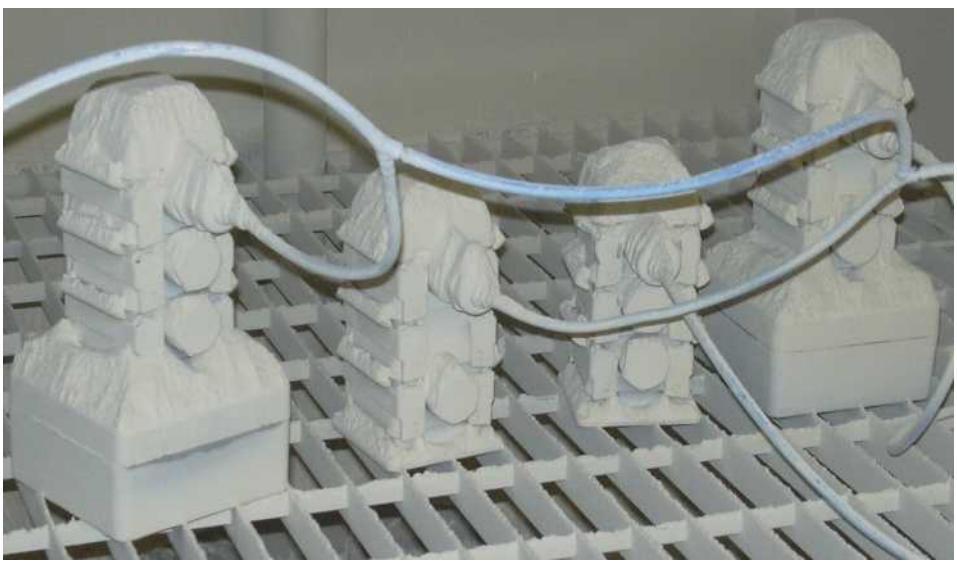
For safety reasons, electrical equipment must be protected against external influences. This is the job of the housing, which protects electrical equipment against contact, ingress of solid objects, dust, and moisture.

The following table contains possible combinations of degrees of protection according to DIN EN 60529 which can be practically applied to housing.

Shock protection	Foreign object protection	Protection against water	No protection	Protection against vertically falling dripping water	Protection against dripping water if the housing is inclined at an angle of up to 15°	Protection against spray water from all directions, even when inclined at an angle of up to 60°	Protection against splash water from all directions	Protection against jet water from all directions	Protection against powerful jet water from all directions	Protection against temporary submersion	Protection against the effects of continuous submersion in water	Protected against water during high-pressure and jet-stream cleaning (DIN 40050-9)
			IPx0	**IPx1**	**IPx2**	**IPx3**	**IPx4**	**IPx5**	**IPx6**	**IPx7**	**IPx8**	**IPX9K**
No shock protection	No protection against solid foreign objects	**IP0x**	IP00									
Back of hand safety	Protection against solid foreign objects > 50 mm Ø	**IP1x**	IP10	IP11	IP12							
Touch-proof	Protection against solid foreign objects > 12.5 mm Ø	**IP2x**	IP20	IP21	IP22	IP23						
Protection against touching with tools, wires, etc. > 2.5 mm Ø	Protection against solid foreign objects > 2.5 mm Ø	**IP3x**	IP30	IP31	IP32	IP33						
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against solid foreign objects > 1.5 mm Ø	**IP4x**	IP40	IP41	IP42	IP43	IP44					
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against harmful dust accumulations inside the device	**IP5x**	IP50				IP54	IP55				
Protection against touching with tools, wires, etc. > 1 mm Ø	No ingress of dust	**IP6x**	IP60					IP65	IP66	IP67	IP68	IP69K

Example: DUPLICON power distribution with IP67 protection according to DIN EN 60529

Dust-proof
(IP6x)



Protected against temporary submersion
(IPx7)



Photo shows DUPLICON test sample during the IP6x dust test

Quality features of insulation material

Our insulating housings are made from various thermoplastic materials. Depending on the application, the best-suited material is selected based on its electrical and mechanical properties.

All plastics used by Phoenix Contact are RoHS-compliant.

All plastics used at Phoenix Contact have been listed with UL (Underwriters Laboratories Inc.) in the USA.

Behavior of plastics under the influence of temperature (operating temperatures)

All plastics undergo thermal aging when they are subjected to heat over long periods. This process causes changes in the mechanical and electrical properties of the material. External influences, e.g., radiation, additional mechanical, chemical or electrical stresses, amplify this effect. All characteristics included in the table have been determined based on samples which provides a good means of drawing comparisons between different materials. However, applying these characteristics to an evaluation of molded plastic parts is only possible to a limited extent, and can only give the designer a rough guide when it comes to selecting a plastic material. This catalog uses RTI Elec. according to UL 746B as an assessment criterion for temperature resistance.

Insulation materials

Polyamide: PA and PA-GF

Polyamide has excellent electrical, mechanical, and chemical properties even at high operating temperatures. Brief peak temperatures of up to approximately 200°C are permitted as a result of heat aging stabilization. The absorption of water makes the plastic flexible and resistant to breakage, even at low temperatures.

Fiber-reinforced polyamides feature greater rigidity and hardness as well as operating temperatures higher than those of non-reinforced materials.

Polyamide for high-temperature applications: PA HT and PA-GF HT

Special high-temperature-resistant types of polyamide are used in non-reinforced or fiberglass-reinforced versions for reflow applications. These high-temperature polyamides combine the excellent electrical properties of polyamide and the requirements of the reflow soldering process for temperature resistance.

Liquid crystal polymers: LCP GF

LCP combines high temperature stability with excellent dimensional stability and creepage resistance for products used in reflow processes. LCP has exceptional mechanical properties across a wide temperature range and a very low thermal expansion.

Polyester: PBT and PBT-GF

We use thermoplastic polyester in non-reinforced and fiberglass-reinforced versions for special applications which require increased dimensional and form stability.

In addition to the high operating temperature, the material is characterized by excellent mechanical stability, hardness, and excellent notched impact strength. PBT does not absorb moisture from its surroundings. PBT is therefore particularly suitable for strips, for example, which are soldered onto PCBs.

Polycarbonate: PC

Polycarbonate combines many advantages such as rigidity, impact strength, transparency, dimensional stability, good insulation properties, and resistance to heat.

The amorphous material only absorbs moisture to a very limited degree, and is used for items such as large, rigid electronic component housing.

In its transparent form, polycarbonate is particularly suitable for use as a material for cover profiles or marking materials.

Acrylonitrile butadiene styrene: ABS

We use ABS for products which must have good impact and notched impact properties in addition to high mechanical stability and rigidity. The products are also characterized by their special surface quality and hardness.

ABS is suitable for coating metal surfaces, e.g., nickel.

Polyvinyl chloride: PVC

While most thermoplastic materials are processed with injection molding using ready-to-use molding and extrusion material, PVC is processed as a powder in the extruder. This is why it is used in our profile products. PVC is also self-extinguishing without flame protection and has high mechanical strength but is notch-sensitive.

Polyoxymethylene: POM

Polyoxymethylene is a technical material that combines high rigidity with mechanical stability, excellent elastic properties, high tenacity, dimensional accuracy, and exceptional sliding friction behavior.

Polyethylene: PE

Polyethylene is characterized by excellent chemical resistance and electrical insulation properties. PE is thermoplastic and can therefore be processed using almost all procedures. Furthermore, PE has excellent tenacity even at low temperatures and a good elongation at break.

Polypropylene: PP

PP has higher rigidity, hardness, and stability and is more heat-resistant than PE. PP is not as tough at low temperatures, however.

Thermoplastic polyurethane: TPU and TPU-GF

TPU is characterized by excellent electrical properties, a good surface feel, a high degree of flexibility over a wide temperature range, and high resistance to wear. Thermoplastic polyurethanes are also elastic and low-temperature impact resistant.

In contrast to non-reinforced materials, fiberglass-reinforced TPU is characterized by high rigidity and hardness.

Cross-linked ethylene-propylene-diene polymer/polypropylene: EPDM-PP

EPDM-PP is a polymer blend of PP and cross-linked EPDM. EPDM-PP is a rubber-like material which can be processed using thermoplastic procedures. EPDM-PP combines high temperature resistance, a low compression set, and excellent resistance to abrasion and chemicals.

Acrylonitrile butadiene styrene rubber: NBR

NBR is a rubber with excellent resistance to aging. It also features excellent resistance to abrasion and low plastic flow. Its elasticity is lower than other rubbers.

Fluorinated rubber: FPM

FPM rubbers are characterized by very high temperature resistance, but behave less favorably at low temperatures than other rubbers.

Chlorine-butadiene rubber: CR

CR rubber stands out against other rubbers with its excellent resistance to weather and ozone.

Properties	Standard	Unit	PA	PA GF	PA HT	PA GF HT	PBT	PBT GF	LCP GF	PC	ABS	PVC	POM	PP	PE
RTI Elec[1])	UL 746B	°C	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 130	≥ 105	≥ 80	≥ 50	≥ 105	65	50
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40	-40	-40	-40	-40	-40	-40	-15	-40	-40	-40
Dielectric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	600	400		> 200	400	400		> 300	850		850		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	400	≥ 250	225	600	225	175	175	600	600	600		
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		550	250			600	225		175	600	600	600		
Inflammability class	UL 94	HB – V0	V2, V0	HB, V0	V0	V0	V0	V0	V0	V2, V0		V0	HB	HB	HB
Tropical and termite resistance			Good	Good			Good			Good					

[1]) Possible at "≥" higher temperatures, but not recommended due to increased aging of plastics and insufficient current carrying capacity.

Properties	Standard	Unit	TPU	TPU GF	EPDM/ PP
RTI Elec.	UL 746B	°C	50	50	100
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40
Dielectric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	35	35	
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	600	600
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		600		
Inflammability class	UL 94	HB – V0	V2	HB	HB
Chemical resistance	See table for resistance to chemicals				

Properties	Standard	Unit	NBR	FPM	CR
Operating temperature		°C	≤ 100	≤ 200	≤ 100
Minimum temperature for use (without mechanical load)		°C	-40	-25	-40
Dielectric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	Not relevant as these are sealing materials		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1				
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1				
Inflammability class	UL 94	HB – V0			

Resistance to chemicals

- Not resistant
0 Moderately resistant
+ Good resistance

Chemicals	Plastics																	
	Concentration in %	Temperature in °C	PA 66/PA 6	PA 66 GF	PA 46 GF	PC GF	POM	NBR	PP	EPDM	PBT	PUR	PUR irradiated*	PVC-P (soft)	PE-LD	TPU	FPM (Viton)	CR (neoprene)
Acetaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	-	0
Acetone		20	+				+	-	+	+	0	0	0	-	+	-	-	0
Acetate			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Acetophenone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Aldehyde			0	0	0	-	0	-	-	0		+	+	+	0	-	0	0
Formic acid			-	-	0	0	+	-	+	+	+	0	0	-	+	0	0	+
Amines			+	+	+	-	0	-	-	0	+	+	+	+	0	-	-	-
Alcohols			0	0	0	0	+	0	+	+	+	+	+	-	+	+	0	+
Ammonia	10	20	+				+	0	+	+	+	+	+	0	+	0	-	+
Benzaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	-	0
Gasoline		20	+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Benzol		50	+	+	+	+	0	-	0	-	+	0	0	-	0	-	0	-
Benzophenone		20	+	+	+	0	0	-	+	0	0	+	+	-	-	-	+	-
Boracic acid	100	20	0				0	+		+	+	0	0	0	+	+	+	+
Brake fluid		100	+				+	-		+	+	-	-	0	+	-	-	-
Butyric acid			-	-	0	0	+	0	+	+	+	0	0	+	+	-	0	0
Cyclohexanone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Diesel oil			+				+	+	+	-	+	+	+	-	+	-	+	-
Diethylamine			+	+	+	-	0	-	-	0	+	+	+	+	-	-	-	-
Dimethylamine			+	+	+	-	0	-	-	0	+	+	+	+	0		-	-
Glacial acetic acid		50		-	-	-	-	-	0	+	-	-	-	-	+	-	-	-
Acetic acid	20		-	-	0	0	+	-	+	+	+	0	0	0	+	-	-	0
Ester			+	+	+	0	-	-	-	0	+			-	+	-	-	-
Ethanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Ether			+	+	+	-	0	-	0	0	+	+	+	-	0	+	-	-
Greases			+	+	+	+	+	+	0	0				0	+	-	+	0
Formaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	+	0
Gear oil		100	+				+	+		-	+	+	+	+	+	-	+	-
Halogens (fluorine, chlorine, bromine, iodine)			-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-
Hydraulic oil		20	+				0	+		-	+	+	+	-	+	-	+	-
Potassium hydroxide solution			+	+	+	-	+	0	+		-	+	+	+	+	0	+	-
Kerosene		20	+				+				+	+	+	-	0	-	+	-
Ketones			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Hydrocarbons, aliphatic			+	+	+	+	+	+	0	0	+	+	+	-	+	+	+	-
Hydrocarbons, aromatic			+	+	+	-	0	-	0	0	0	+	+	-	-	-	+	-
Hydrocarbons, chlorinated			0	0	0	-	+	-	-	-	0	-	-	-	-	-	+	-
Hydrocarbons, unsaturated chlorinated			0	0	0	-	+	-	-	-	0	0	0	-	-	-	+	-
Fuels			+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Alkalis, weak			+	+	+	-	+	0	+	+	+	+	+	+	+	0	+	0
Alkalis, strong			0	-	-	-	+	-	+		+	-	-	+	0	0	-	-
Inorganic salt solutions			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	
Machine oil			+				+				+	+	+	0	+	-	+	-
Metal chloride			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal sulfate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal nitrate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Methanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	-	+
Methylamine			+	+	+	-	0	-	-	0	+	+	+	+	+	0	0	-
Lactic acid	10	20	+				+	+	+	+	+	+	+	-	+	+	+	+
Mineral oil			+	+	+		+	+	+	-	+	+	+	-	+	-	+	-
Motor oil		120	+	+	+	0	+	+	+	-	+	+	+	-	+	-	+	-
Sodium hydroxide solution	50	50	0	0	+	-	+	+	+	+	-	+	+	+	+	0	0	0
Nitrobenzene			0				0	-		0	+	-	-	-	0	+	0	-
Ozone			0	0	0	-	0	-	+	+	+	0	0	+	+	0	+	-
Propyl alcohol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Nitric acid	30	20	-	0	-	0	-	-	+	0	0	0	0	-	+	-	+	-
Hydrochloric acid		20	-				-	0	+	0	0	-	-	-	+	0	+	0
Sulfuric acid	50	50	-	0	-	0	-	-	+	+	-	0	0	+	+	0	+	-
Salt water		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Turpentine			0	0	0	+	-	+	-	-	+	0	0	-	-	-	+	-
UV resistance			+	+	+	0	0	-	-		+	+	+	0	0	+	+	
Detergent alkalis	2	100	0				+	+		+	+	+	+	-	+	+	+	0
Water (dist.)		20												+				
Water, cold			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Water, hot			-	-	-	-	+	+	+	+	-	+	+	+	+	0	+	0
Citric acid	10		+				+	+	+	+	+			+	+	+	+	+

* The irradiated PUR version is generally more resistant than the non-irradiated version. This cannot be quantified and must be checked in individual cases.

The information in the table has been gathered from the recommendations of our plastic suppliers.

Since individual operating conditions can also affect the usability of each product, this information should be used as a guide only.

For applications where no prior experience exists, we recommend that the user carries out preliminary tests.

Insulation coordination for electrical equipment within low-voltage systems

Dimensioning of clearances and creepage distances according to DIN EN 60664-1/VDE 0110-1.

This part of the standard, based on IEC 60664, contains specifications for the insulation coordination of equipment in low-voltage systems. This part is applicable for equipment to be used at an altitude of up to 2000 m above sea level. This basic safety standard is primarily aimed at technical committees, and if suitable product directives are not available for equipment, it can be applied at the user's own responsibility. International and European product standards cited in this catalog contain specifications for insulation coordination according to DIN EN 60664/VDE 0110-1.

Insulation coordination

Insulation coordination includes the selection of electrical insulation properties for equipment as regards intended applications and ambient conditions. Separate requirements must be applied for clearances and creepage distances and for rigid insulation. The surge voltages to be expected, characteristics of surge protective devices, and pollution at the intended site must be considered when dimensioning clearances. Clearances are then dimensioned according to the external or internal surge voltages to be expected. Different surge voltages, grouped into categories, i.e., a value that specifies a rated impulse voltage, determine the required clearance directly. These surge voltage categories (I to IV) are mainly based on a statistical study, and are used for equipment that is directly supplied by low-voltage networks. Definitions of the individual categories are provided below as an extract of DIN EN 60664/VDE 0110-1.

The clearances can be calculated according to Table 2 (minimum clearances) depending on the homogeneity level of the field between the electrodes (case A – non-homogeneous field, case B – homogeneous field).

Clearances according to case A are capable of withstanding the assigned impulse voltages under all conditions. Equipment that is dimensioned according to case A can therefore be used without any further testing. Clearance values according to case B are based on ideal conditions. Clearance values which fall between case A and case B must be proven by means of an impulse voltage test.

The voltages present, the properties of insulation materials, the pollution to be expected, and safety measures against pollution are considered when dimensioning creepage distances.

The effect of pollution is considered when determining the clearances and creepage distances according to three intensity levels (pollution degree 1 to 3).

The creepage distance is based on the rated voltage that is derived from the working voltage or nominal mains voltage. The minimum creepage distances are assigned to the rated voltages according to the pollution degree in Table 4.

If the respective product descriptions do not contain any additional specifications, the products presented in this catalog are dimensioned for surge voltage category III and pollution degree 3 according to this regulation (DIN EN 60664-1/VDE 0110-1).

Surge voltage categories I to IV

– Equipment in **surge voltage category IV** can be used at the terminal point of the installation.
  Note: examples of such equipment include electricity meters and primary devices for overcurrent protection.
– Equipment in **surge voltage category III** can be used in fixed installations and is intended for such cases where there are special requirements for the reliability and availability of the equipment.
  Note: examples of such equipment include switches in fixed installations and equipment for industrial use with permanent connection to the fixed installation.
– Equipment in **surge voltage category II** is power-consuming equipment that is supplied by the fixed installation.
  Note: examples of such equipment include household appliances, portable tools, other domestic appliances, and similar devices.
– Equipment in **surge voltage category I** can be connected to circuits where measures have been taken to limit the surge voltages to a suitable lower value.

Pollution degrees 1 to 4

The following four pollution degrees have been defined for the micro-environment in order to determine clearances and creepage distances:

– Pollution degree 1
  No pollution or only dry, non-conductive pollution occurs. The pollution has no effect.
– Pollution degree 2
  Only non-conductive pollution occurs. However, temporary conductivity due to condensation must occasionally be taken into consideration.
– Pollution degree 3
  Conductive pollution occurs or dry, non-conductive pollution which becomes conductive, since condensation is to be expected.
– Pollution degree 4
  Permanent conductivity occurs, caused by conductive dust, rain or moisture.

Insulation material

DIN EN 60664/VDE 0110-1 classifies insulation materials into four groups depending on their CTI values that were obtained using solution A as per IEC 60112. These are:

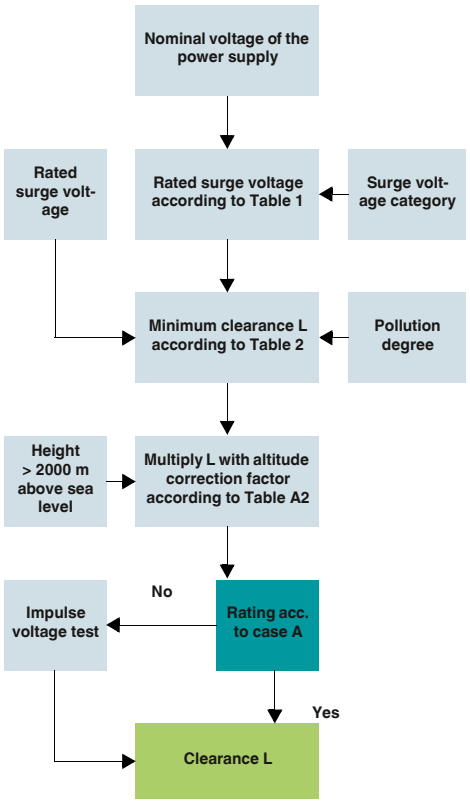
Insulation material group I: $600 \leq CTI$
Insulation material group II: $400 \leq CTI \leq 600$
Insulation material group IIIa:
$175 \leq CTI < 400$
Insulation material group IIIb:
$100 \leq CTI < 175$

The comparative tracking index of the creepage distance formation must have been determined based on suitable samples using test solution A as specified in DIN IEC 60112.

The proof tracking index of the creepage distance formation (PTI) is used as proof of the creepage current properties of insulation materials.

Dimensioning of clearances

Schematic for determining clearances



Rated surge voltages for equipment that is directly supplied by the low-voltage network (extract from Table 1)

Nominal voltage of the power supply system [1] (mains) acc. to IEC 60038 [3]		Conductor-neutral conductor voltage derived from the total nominal AC voltage or nominal DC voltage	Rated surge voltage [2] [V]			
Three-phase [V]	Single-phase [V]	[V]	Surge voltage category [4]			
			I	II	III	IV
	120 to 240	50	330	500	800	1500
		100	500	800	1500	2500
		150	800	1500	2500	4000
230/400 277/480		300	1500	2500	4000	6000
400/690		600	2500	4000	6000	8000
1000		1000	4000	6000	8000	12000

[1]) Refer to Appendix B for application in existing deviating low-voltage networks and their nominal voltages.

[2]) Equipment with this rated surge voltage may be used in systems according to IEC 60364-4-443.

[3]) The slash, i.e., /, indicates a three-phase four-conductor system. The lower value is the conductor-to-neutral conductor voltage, whereas the higher value is the conductor-to-conductor voltage. When only one value is specified, it refers to a three-phase three-conductor system, and indicates the conductor-to-conductor voltage.

[4]) Refer to 2.2.2.1.1 for an explanation of surge voltage categories.

Minimum clearances for surge voltages (extract from Table 2)

Required rated impulse voltage [1] [5]	Condition A Non-homogeneous field (refer to 3.15)			Condition B Homogeneous field (refer to 3.14)		
	Pollution degree [6]			Pollution degree [6]		
	1	2	3	1	2	3
[kV]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0.33 [2])	0.01	0.2 [3]) [4])	0.8 [4])	0.01	0.2 [3]) [4])	0.8 [4])
0.40	0.02			0.02		
0.5 [2])	0.04			0.04		
0.60	0.06			0.06		
0.80 [2])	0.10			0.10		
1.0	0.15			0.15		
1.2	0.25	0.25		0.2		
1.5 [2])	0.5	0.5		0.3	0.3	
2.0	1.0	1.0	1.0	0.45	0.45	
2.5 [2])	1.5	1.5	1.5	0.6	0.6	
3.0	2.0	2.0	2.0	0.8	0.8	
4.0 [2])	3	3	3	1.2	1.2	1.2
5.0	4	4	4	1.5	1.5	1.5
6.0 [2])	5.5	5.5	5.5	2	2	2
8.0 [2])	8	8	8	3	3	3
10	11	11	11	3.5	3.5	3.5
12 [2])	14	14	14	4.5	4.5	4.5
15	18	18	18	5.5	5.5	5.5
20	25	25	25	8	8	8
25	33	33	33	10	10	10
30	40	40	40	12.5	12.5	12.5
40	60	60	60	17	17	17
50	75	75	75	22	22	22
60	90	90	90	27	27	27
80	130	130	130	35	35	35
100	170	170	170	45	45	45

[1]) This voltage is:
– For function insulation: the highest surge voltage expected for the clearance
– For basic insulation, if influenced directly or considerably by surge voltages from the low-voltage network: the rated surge voltage of the equipment
– For a different basic insulation: the highest impulse voltage possible in the circuit

[2]) Preferred values

[3]) For PCBs, the values of pollution degree 1 are applicable, except that no deviation below the value of 0.04 mm is permitted, as specified in Table 4.

[4]) Minimum clearances for pollution degrees 2 and 3 are based on the corresponding creepage distances. This resistance is reduced due to the effects of humidity.

[5]) Values can be interpolated for parts or circuits within equipment that are subjected to impulse voltages.

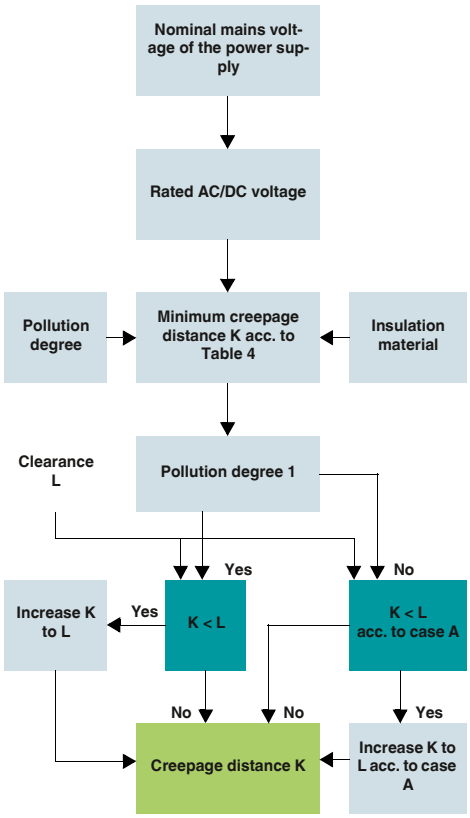
[6]) The distances for pollution degree 4 are equal to those for pollution degree 3, except that the minimum clearance is 1.6 mm.

Altitude correction factors (extract from Table A.2)

Height in m	Normal air pressure in kPa	Multiplication factor for gaps
2000	80.0	1.00
3000	70.0	1.14
4000	62.0	1.29
5000	54.0	1.48
6000	47.0	1.70
7000	41.0	1.95
8000	35.5	2.25
9000	30.5	2.62
10000	26.5	3.02
15000	12.0	6.67
20000	5.5	14.50

Dimensioning of creepage distances

Schematic for determining creepage distances



Single-phase three or two-conductor AC or DC voltage systems (extract from Table 3a)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4	
	For conductor-conductor insulation 1) All systems	For conductor-ground insulation 1) Three-conductor systems center point grounded
[V]	[V]	[V]
12.5	12.5	–
24 25	25	–
30	32	–
42 48 50 **)	50	–
60	63	–
30-60	63	32
100 **)	100	–
110 120	125	–
150 **)	160	–
220	250	–
110-220 220-240	250	125
300 **)	320	–
220-440	500	250
600 **)	630	–
480-960	1000	500
1000 **)	1000	–

1) Conductor-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-conductor voltage. This is due to the fact that the actual voltage to ground is determined by the insulation resistance and the capacitive reactance of each conductor to ground. A low (but permissible) insulation resistance of one conductor can thereby practically ground it and increase the other two to conductor-conductor voltage to ground.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Three-phase four or three-conductor AC voltage systems (extract from Table 3b)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4		
	For conductor-conductor insulation All systems	Insulation for conductor-ground	
		Three-phase four-conductor systems with grounded neutral conductor 2)	Three-phase three-conductor systems non-grounded 1) or conductor grounded
[V]	[V]	[V]	[V]
60	63	32	63
110/120/127	125	80	125
150 **)	160	–	160
208	200	125	200
220/230/240	250	160	250
300 **)	320	–	320
380/400/415	400	250	400
440	500	250	400
480/500	500	320	500
575	630	400	630
600 **)	630	–	630
660/690	630	400	630
720/830	800	500	800
960	1000	630	1000
1000 **)	1000	–	1000

1) Conductor-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-conductor voltage. This is due to the fact that the actual voltage to ground is determined by the insulation resistance and the capacitive reactance of each conductor to ground. A low (but permissible) insulation resistance of one conductor can thereby practically ground it and increase the other two to conductor-conductor voltage to ground.

2) For equipment designed for use in three-phase four-conductor and three-phase three-conductor systems, grounded as well as non-grounded, only the values for three-conductor systems may be used.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Creepage distances to prevent failures occurring due to creepage (extract from Table 4)

Voltage 1) r.m.s. value	Minimum creepage distances								
	Printed circuits								
	Pollution degree			Pollution degree					
	1	2	1	2			3		
	All insulation material groups	All insulation material groups except IIIb	All insulation material groups	Insulation material group			Insulation material group		
				I	II	III	I	II	III 2)
[V]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
10	0.025	0.04	0.08	0.40	0.40	0.40	**1.00**	**1.00**	**1.00**
12.5	0.025	0.04	0.09	0.42	0.42	0.42	**1.05**	**1.05**	**1.05**
16	0.025	0.04	0.10	0.45	0.45	0.45	**1.10**	**1.10**	**1.10**
20	0.025	0.04	0.11	0.48	0.48	0.48	**1.20**	**1.20**	**1.20**
25	0.025	0.04	0.125	0.50	0.50	0.50	**1.25**	**1.25**	**1.25**
32	0.025	0.04	0.14	0.53	0.53	0.53	**1.30**	**1.30**	**1.30**
40	0.025	0.04	0.16	0.56	0.80	1.10	**1.4**	**1.6**	**1.8**
50	0.025	0.04	0.18	0.60	0.85	1.20	**1.5**	**1.7**	**1.9**
63	0.040	0.63	0.20	0.63	0.90	1.25	**1.6**	**1.8**	**2.0**
80	0.063	0.10	0.22	0.67	0.95	1.3	**1.7**	**1.9**	**2.1**
100	0.10	0.16	0.25	0.71	1.00	1.4	**1.8**	**2.0**	**2.2**
125	0.16	0.25	0.28	0.75	1.05	1.5	**1.9**	**2.1**	**2.4**
160	0.25	0.40	0.32	0.80	1.1	1.6	**2.0**	**2.2**	**2.5**
200	0.40	0.63	0.42	1.00	1.4	2.0	**2.5**	**2.8**	**3.2**
250	0.56	1.00	0.56	1.25	1.8	2.5	**3.2**	**3.6**	**4.0**
320	0.75	1.60	0.75	1.60	2.2	3.2	**4.0**	**4.5**	**5.0**
400	1.00	2.00	1.00	2.00	2.8	4.0	**5.0**	**5.6**	**6.3**
500	1.30	2.50	1.30	2.50	3.6	5.0	**6.3**	**7.1**	**8.0**
630	1.80	3.20	1.8	3.2	4.5	6.3	**8.0**	**9**	**10.0**
800	2.40	4.00	2.4	4.0	5.6	8.0	**10.0**	**11**	**12.5**
1000	3.20	5.00	3.2	5.0	7.1	10	**12.5**	**14**	**16.0**
1250			4.2	6.3	9	12.5	**16**	**18**	**20**
1600			5.6	8	11	16	**20**	**22**	**25**
2000			7.5	10	14	20	**25**	**28**	**32**
2500			10	12.5	18	25	**32**	**36**	**40**
3200			12.5	16	22	32	**40**	**45**	**50**
4000			16	20	28	40	**50**	**56**	**63**
5000			20	25	36	50	**63**	**71**	**80**
6300			25	32	45	63	**80**	**90**	**100**
8000			32	40	56	80	**100**	**110**	**125**
10000			40	50	71	100	**125**	**140**	**160**

1) This voltage is:
a) For function insulation: the working voltage
b) For basic and additional insulation of a circuit supplied directly by the low-voltage network: either the voltage selected from Table 3a or 3b on the basis of the rated voltage of the equipment or the rated insulation voltage;
c) For basic and additional insulation of systems, equipment, and internal circuits which are not supplied directly from the mains: the highest r.m.s. value of the voltage that, within the bounds of the rated data, can occur in the system, the equipment or the internal circuit, when supplied with rated voltage and in the case of the most unfavorable combination of operating conditions.

2) With pollution degree 3, insulation material group IIIb is not recommended for use if voltages are greater than 630 V.

Certification bodies and safety marks

Certification bodies and approvals		Country code
CB scheme	IECEE CB Scheme (in combination with certifying body)	Interna-tional
CCA	CENELEC Certification Agreement (CCA inspection report) (in combination with certifying body)	EU
	Canadian Standards Association (CSA)	CA
	Canadian Standards Association (CSA) - CSA approval for the USA -	US
	Canadian Standards Association. (CSA) Combined logo - CSA approval for Canada and the USA -	CA US
	Underwriters Laboratories Inc. (UL)	US
	Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA
	Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA
	INSIEME PER LA QUALITA'E LA SICUREZZA	IT
EAC	Eurasian Conformity	BY KZ RU
KEMA KEUR	DEKRA Certification B.V.	NL
ÖVE	Österreichischer Verband für Elektrotechnik	AT
SEV	electrosuisse SEV Verband für Elektro-, Energie- und Informationstechnik	CH
VDE	Verband Deutscher Elektrotechniker e.V. (VDE) – Approval of drawings – Reports with production monitoring	DE
DGUV Test	Berufsgenossenschaft (BG) GS - Geprüfte Sicherheit	DE
Intertek	Intertek ETL Listed - Approval for the USA -	US
Intertek	Intertek ETL Listed - Approval for Canada -	CA
Intertek	Intertek ETL Listed - Approval for the USA and Canada -	US CA
TÜV	TÜV Rheinland Industrie Service GmbH	DE
CCC	China Compulsory Certificate	CN

Explosion protection		Country code
IEC IECEx	International Electrotechnical Commission	Interna-tional
DEKRA	DEKRA Certification B.V.	NL
PTB	Physikalisch-Technische Bundesanstalt	DE
kiwa	KIWA Nederland B.V.	NL
QS International	QS Schaffhausen AG	CH
VTT	VTT Expert Services Oy	FI
IBExU	IBExU Institut für Sicherheitstechnik GmbH	DE
UL UnioCertificadora	TÜV Rheinland do Brasil	BR
TÜV NORD	Technischer Überwachungsverein Nord	DE
DEKRA	DEKRA EXAM GmbH	DE
	Canadian Standards Association (CSA)	CA
	Canadian Standards Association (CSA) - CSA approval for the USA -	US
	Canadian Standards Association. (CSA) Combined logo - CSA approval for Canada and the USA -	CA US
	Underwriters Laboratories Inc. (UL)	US
	Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA
	Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA
FM APPROVED	FM Approvals	US
EAC Ex	Eurasian Conformity for Ex-products	BY KZ RU

Ship classification societies		Country code
BUREAU VERITAS	Bureau Veritas	FR
GL	Germanischer Lloyd AG	DE
Lloyd's Register	Lloyd's Register of Shipping	GB
ClassNK	Nippon Kaiji Kyokai	JP
DNV	Det Norske Veritas	NO
	Polski Rejestr Statków	PL
	Russian Maritime Register of Shipping	RU
KR KOREAN REGISTER	Korean Register of Shipping	KR
ABS	American Bureau of Shipping	US

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A-EXSH-M63-68L-S-S	1411116	701
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A-INE-PG16/21-N-NS-S	1415220	696
A-INE-PG21/29-N-NS-S	1415221	696
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A-INL-M16-N-S	1411241	685
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A-INL-M25-N-S	1411243	685
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A-INLE-PG7-N-S	1411275	689
A-INLE-PG9-N-S	1411276	689
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A-INR-PG29/21-N-NS-S	1415218	696
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A-INSP-M32-65N-P-BK	1415208	695
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A-SEW-25-P-W	1411284	703
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G-ESSWU-M40-L66L-NTES-S	1411097	700
G-ESSWU-M50-L66L-NTES-S	1411100	700
G-ESSWU-M63-L66L-NTES-S	1411102	700
G-INB-M12-S68N-PEPDS-BK	1415177	691
G-INB-M12-S68N-PEPDS-LG	1415171	691
G-INB-M16-S68N-PEPDS-BK	1415178	691
G-INB-M16-S68N-PEPDS-LG	1415172	691
G-INB-M20-S68N-NEPDS-S	1415182	691
G-INB-M20-S68N-PEPDS-BK	1415179	691

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G-INB-M25-M68N-NEPDS-S	1415183	691
G-INB-M25-M68N-PEPDS-BK	1415180	691
G-INB-M25-M68N-PEPDS-LG	1415175	691
G-INB-M32-M68N-NEPDS-S	1415184	691
G-INB-M32-M68N-PEPDS-BK	1415181	691
G-INB-M32-M68N-PEPDS-LG	1415176	691
G-INB-M40-M68N-NEPDS-S	1415185	691
G-INESR-M20-S68N-NEPDS-S	1415192	692
G-INESR-M25-M68N-NEPDS-S	1415193	692
G-INESR-M32-M68N-NEPDS-S	1415194	692
G-INESR-M40-M68N-NEPDS-S	1415195	692
G-INS-M12-S68N-NNES-S	1411160	685
G-INS-M12-S68N-PNES-BK	1411131	681
G-INS-M12-S68N-PNES-GY	1411123	680
G-INS-M16-S68N-NNES-S	1411162	685
G-INS-M16-S68N-PNES-BK	1411132	681
G-INS-M16-S68N-PNES-GY	1411124	680
G-INS-M20-S68N-NNES-S	1411163	685
G-INS-M20-S68N-PNES-BK	1411133	681
G-INS-M20-S68N-PNES-GY	1411125	680
G-INS-M25-M68N-NNES-S	1411165	685
G-INS-M25-M68N-PNES-BK	1411134	681
G-INS-M25-M68N-PNES-GY	1411126	680
G-INS-M32-M68N-NNES-S	1411166	685
G-INS-M32-M68N-PNES-BK	1411136	681
G-INS-M32-M68N-PNES-GY	1411127	680
G-INS-M40-M68N-NNES-S	1411167	685
G-INS-M40-M68N-PNES-BK	1411137	681
G-INS-M40-M68N-PNES-GY	1411128	680
G-INS-M50-L68L-PNES-BK	1411138	681
G-INS-M50-L68L-PNES-GY	1411129	680
G-INS-M50-L68N-NNES-S	1411168	685
G-INS-M63-L68L-PNES-BK	1411139	681
G-INS-M63-L68L-PNES-GY	1411130	680
G-INS-M63-L68N-NNES-S	1411169	685
G-INS-N1-M68L-PNES-BK	1411159	684
G-INS-N1-M68L-PNES-GY	1411155	683
G-INS-N1/2-S68L-PNES-BK	1411157	684
G-INS-N1/2-S68L-PNES-GY	1411153	683
G-INS-N3/4-M68L-PNES-BK	1411158	684
G-INS-N3/4-M68L-PNES-GY	1411154	683
G-INS-N3/8-S68L-PNES-BK	1411156	684
G-INS-N3/8-S68L-PNES-GY	1411152	683
G-INS-NPT1-M68L-NNES-S	1411185	687
G-INS-NPT1/2-S68L-NNES-S	1411183	687
G-INS-NPT3/4-M68L-NNES-S	1411184	687
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G-INS-PG11-S68N-NNES-S	1411172	686
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G-INS-PG16-S68N-NNES-S	1411174	686
G-INS-PG16-S68N-PNES-GY	1411144	682
G-INS-PG21-M68N-NNES-S	1411175	686
G-INS-PG21-M68N-PNES-GY	1411145	682
G-INS-PG29-M68N-NNES-S	1411176	686
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G-INS-PG36-L68N-NNES-S	1411178	686
G-INS-PG36-L68N-PNES-GY	1411147	682
G-INS-PG42-L68N-NNES-S	1411179	686
G-INS-PG42-L68N-PNES-GY	1411149	682
G-INS-PG48-L68N-NNES-S	1411181	686
G-INS-PG48-L68N-PNES-GY	1411150	682
G-INS-PG7-S68N-NNES-S	1411170	686
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G-INS-PG9-S68N-NNES-S	1411171	686
G-INS-PG9-S68N-PNES-GY	1411141	682
G-INSEC-M12-S68N-NCRS-S	1411187	688
G-INSEC-M16-S68N-NCRS-S	1411188	688
G-INSEC-M20-S68N-NCRS-S	1411189	688
G-INSEC-M25-S68N-NCRS-S	1411190	688
G-INSEC-M32-M68N-NCRS-S	1411191	688
G-INSEC-M40-M68N-NCRS-S	1411192	688
G-INSEC-M50-L68N-NCRS-S	1411193	688
G-INSEC-M63-L68N-NCRS-S	1411194	688
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G-INSEC-PG13,5-S68N-NNES-S	1411198	689
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G-INSEC-PG21-M68N-NNES-S	1411200	689
G-INSEC-PG29-M68N-NNES-S	1411201	689
G-INSEC-PG36-L68N-NNES-S	1411202	689
G-INSEC-PG42-L68N-NNES-S	1411203	689
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G-INSEC-PG9-S68N-NNES-S	1411196	689
G-INTRO-M20-S68N-PEPDS-BK	1415189	692
G-INTRO-M25-M68N-PEPDS-BK	1415190	692
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HC-A 16-EBUC	1677018	497
HC-A 16-EBUC-32	1677050	497
HC-A 16-ESTC	1677034	497
HC-A 16-ESTC-32	1677076	497
HC-A-PES	1584868	640
HC-A03-I-UT-F	1585223	485
HC-A03-I-UT-M	1585210	485
HC-A04-I-UT-F	1585249	485
HC-A04-I-UT-M	1585236	485
HC-A10-I-UT-F	1585304	495
HC-A10-I-UT-M	1585294	495
HC-A16-I-UT-F	1585320	497
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HC-A16-I-UT-M	1585317	497
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HC-A3-BUQ1,5-TFL-G-PA	1641510	485
HC-A3-STQ1,5-KML-G-PA	1641604	485
HC-A3-STQ1,5-TFL-G-PA	1641581	485
HC-ADV-B06-HHWH-1SGM20-PL	1404224	570
HC-ADV-B06-HHWH-1SGM25-PL	1404226	570
HC-ADV-B06-HHWH-1STM25-EMC-AL	1413375	571
HC-ADV-B06-HHWH-1STM32-EMC-AL	1413377	571
HC-ADV-B06-HHWH-1TGM20-PL	1404222	570
HC-ADV-B06-HHWH-1TGM25-PL	1404225	570
HC-ADV-B06-HHWH-1TTM25-EMC-AL	1413374	571
HC-ADV-B06-HHWH-1TTM32-EMC-AL	1413376	571
HC-ADV-B06-HLWH-1STM20-EMC-AL	1413363	571
HC-ADV-B06-HLWH-1STM25-EMC-AL	1413365	571
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HC-ADV-B06-HLWH-1TTM25-EMC-AL	1413364	571
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HC-ADV-B16-HHWH-1SGM32-PL	1404232	590
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HC-ADV-B24-HHWH-1SGM32-PL	1404237	604
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HC-ADV-B24-HHWH-1TGM32-PL	1404235	604
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HC-ADV-B24-HLWH-1STM25-EMC-AL	1414983	605
HC-ADV-B24-HLWH-1TTM25-EMC-AL	1414982	605
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HC-B 6-A-DT-PEL-M	1648364	531
HC-B 6-A-DT-PER-F	1648377	531
HC-B 6-A-DT-PER-M	1648380	531
HC-B 6-A-UT-PEL-F	1648018	529
HC-B 6-A-UT-PEL-M	1648024	529
HC-B 6-A-UT-PER-F	1648066	529
HC-B 6-A-UT-PER-M	1648072	529
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HC-B 6-ADP/1 DSUB 15	1775473	649
HC-B 6-ADP/2 DSUB 9	1775460	649
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HC-B 6-I-CT-M	1648157	521
HC-B 6-I-UT-F	1648128	521
HC-B 6-I-UT-M	1648115	521
HC-B 6-SD-FL/FS	1660180	647
HC-B 6-SD-FLU/FS-AL	1644559	647
HC-B 6-SD-ML/FS	1678282	646
HC-B 6-SD-MLT/FS-AL	1644546	646
HC-B 6-TMS-SD-IP50	1690736	570
HC-B 6-TMS-SD-IP66	1411494	570
HC-B 06-I-PT-F	1407727	521
HC-B 06-I-PT-M	1407728	521
HC-B 10-A-DT-PEL-F	1648393	531
HC-B 10-A-DT-PEL-M	1648403	531
HC-B 10-A-DT-PER-F	1648416	531
HC-B 10-A-DT-PER-M	1648429	531
HC-B 10-A-UT-PEL-F	1648030	529
HC-B 10-A-UT-PEL-M	1648036	529
HC-B 10-A-UT-PER-F	1648078	529
HC-B 10-A-UT-PER-M	1648084	529
HC-B 10-ADP/1 DSUB 25	1775499	649
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HC-B 10-ANDOCK	1586125	641
HC-B 10-AP-GY	1660371	648
HC-B 10-EBUQ-2,5	1605569	523
HC-B 10-ESTQ-2,5	1605624	523
HC-B 10-I-CT-F	1648225	523
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HC-B 10-I-PT-F	1407729	523
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HC-B 10-I-UT-F	1648186	523
HC-B 10-I-UT-M	1648173	523
HC-B 10-SD-FL/FS	1660177	647
HC-B 10-SD-FLU/FS-AL	1644562	647
HC-B 10-SD-FQ/FS	1772586	647
HC-B 10-SD-FQT/FS	1687260	646
HC-B 10-SD-FQT/FS-AL	1647750	646
HC-B 10-SD-FQU/FS-AL	1644575	647
HC-B 10-SD-ML/FS	1678295	646
HC-B 10-SD-MLT/FS-AL	1584512	646
HC-B 10-SD-MQ/FS	1678305	646
HC-B 10-SD-MQT/FS-AL	1584541	646
HC-B 10-TMS-EEE-PR-DI	1409804	653
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HC-B 10-TMS-SD-IP66	1411504	576
HC-B 16-A-DT-PEL-F	1648432	531
HC-B 16-A-DT-PEL-M	1648445	531
HC-B 16-A-DT-PER-F	1648458	531
HC-B 16-A-DT-PER-M	1648461	531
HC-B 16-A-UT-PEL-F	1648042	529
HC-B 16-A-UT-PEL-M	1648048	529
HC-B 16-A-UT-PER-F	1648090	529
HC-B 16-A-UT-PER-M	1648096	529
HC-B 16-ADP/1 DSUB 37	1775512	649
HC-B 16-ADP/1 DSUB 50	1775538	649
HC-B 16-ADP/2 DSUB 37	1775525	649
HC-B 16-ADP/2 DSUB 50	1775541	649
HC-B 16-ANDOCK	1586138	641
HC-B 16-ANDOCK-MOD-A	1587467	567
HC-B 16-ANDOCK-MOD-T	1587454	567
HC-B 16-AP-GY	1660384	648
HC-B 16-APV-GY	1661121	648
HC-B 16-EBUQ-2,5	1605572	525
HC-B 16-EBUQ-2,5-32	1605598	525
HC-B 16-ESTQ-2,5	1605637	525
HC-B 16-ESTQ-2,5-32	1605653	525
HC-B 16-I-CT-F	1648283	525
HC-B 16-I-CT-F-32	1584923	525
HC-B 16-I-CT-M	1648270	525
HC-B 16-I-CT-M-32	1584910	525
HC-B 16-I-PT-F	1407731	525
HC-B 16-I-PT-F-32	1407733	525
HC-B 16-I-PT-M	1407732	525
HC-B 16-I-PT-M-32	1407734	525
HC-B 16-I-UT-F	1648241	525
HC-B 16-I-UT-F-32	1584884	525
HC-B 16-I-UT-M	1648238	525
HC-B 16-I-UT-M-32	1584871	525
HC-B 16-SD-FL/FS	1660151	647
HC-B 16-SD-FLU/FS-AL	1644588	647
HC-B 16-SD-FQ/FS	1772599	647
HC-B 16-SD-FQT/FS	1687273	646
HC-B 16-SD-FQT/FS-AL	1647763	646
HC-B 16-SD-FQU/FS-AL	1644591	647
HC-B 16-SD-ML/FS	1678318	646
HC-B 16-SD-MLT/FS-AL	1584525	646
HC-B 16-SD-MQ/FS	1678321	646
HC-B 16-SD-MQT/FS-AL	1584554	646
HC-B 16-TMS-EEE-PR-DI	1409817	653
HC-B 16-TMS-SD-IP50	1690752	590
HC-B 16-TMS-SD-IP66	1411517	590
HC-B 24-A-DT-PEL-F	1648474	531
HC-B 24-A-DT-PEL-M	1648487	531
HC-B 24-A-DT-PER-F	1648490	531
HC-B 24-A-DT-PER-M	1648500	531
HC-B 24-A-UT-PEL-F	1648054	529
HC-B 24-A-UT-PEL-M	1648060	529
HC-B 24-A-UT-PER-F	1648102	529
HC-B 24-A-UT-PER-M	1648108	529
HC-B 24-ADP-3D 7-GY	1661448	648
HC-B 24-ADP-3RST-GY	1662175	648
HC-B 24-ADP-B 6-GY	1660407	648
HC-B 24-ADP-B 10-GY	1660436	648
HC-B 24-ADP-B 16-GY	1660449	648
HC-B 24-ANDOCK	1586141	641
HC-B 24-ANDOCK-MOD-A	1587483	567
HC-B 24-ANDOCK-MOD-T	1587470	567
HC-B 24-AP-GY	1660397	648
HC-B 24-APV-GY	1661037	648
HC-B 24-EBUQ-2,5	1605585	527
HC-B 24-EBUQ-2,5-48	1605608	527
HC-B 24-ESTQ-2,5	1605640	527
HC-B 24-ESTQ-2,5-48	1605666	527
HC-B 24-I-CT-F	1648348	527
HC-B 24-I-CT-F-48	1584981	527
HC-B 24-I-CT-M	1648335	527
HC-B 24-I-CT-M-48	1584978	527
HC-B 24-I-PT-F	1407735	527
HC-B 24-I-PT-F-48	1407737	527
HC-B 24-I-PT-M	1407736	527
HC-B 24-I-PT-M-48	1407738	527
HC-B 24-I-UT-F	1648306	527
HC-B 24-I-UT-F-48	1584949	527
HC-B 24-I-UT-M	1648296	527
HC-B 24-I-UT-M-48	1584936	527
HC-B 24-SD-FL/FS	1660148	647
HC-B 24-SD-FLU/FS-AL	1644601	647
HC-B 24-SD-FQ/FS	1772609	647
HC-B 24-SD-FQT/FS	1687286	646
HC-B 24-SD-FQT/FS-AL	1647776	646
HC-B 24-SD-FQU/FS-AL	1644614	647
HC-B 24-SD-ML/FS	1678334	646
HC-B 24-SD-MLT/FS-AL	1584538	646
HC-B 24-SD-MQ/FS	1678347	646
HC-B 24-SD-MQT/FS-AL	1584567	646
HC-B 24-TMS-EEE-PR-DI	1409820	653
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HC-B 24-TMS-SD-IP66	1411520	604
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HC-B 32-KMQ-82/O1PG29	1675023	620
HC-B 32-KMQ-82/O1STM32	1647284	620
HC-B 32-KMQ-82/O1STM40	1647297	620
HC-B 32-SD-FQU/FS	1646120	647
HC-B 32-SMQ-72/O1M32	1604867	620
HC-B 32-SMQ-72/O1PG29	1675036	620
HC-B 32-SMQ-72/O2M32	1604868	620
HC-B 32-SMQ-72/O2M40	1604869	620
HC-B 32-SMQ-72/O2PG29	1675049	620
HC-B 32-TFQ-80/O1PG29G	1675081	620
HC-B 32-TFQ-80/O1PG29S	1675094	620
HC-B 32-TFQ-80/O1PG36G	1460138	620
HC-B 32-TFQ-80/O1PG36S	1644818	620
HC-B 32-TFQ-80/O1STM32G	1645383	620
HC-B 32-TFQ-80/O1STM32S	1645150	620
HC-B 32-TFQ-80/O1STM40G	1647307	620
HC-B 32-TFQ-80/O1STM40S	1645451	620
HC-B 32-TFQ-80/O1STM50G	1460197	620
HC-B 32-TFQ-80/O1STM50S	1585980	620
HC-B 32-TMS-100-O1STM32G-EEE	1580516	618
HC-B 32-TMS-100-O1STM32S-EEE	1580517	618
HC-B 32-TMS-100-O1STM40G-EEE	1580518	618
HC-B 32-TMS-100-O1STM40S-EEE	1580519	618
HC-B 32-TMS-100-O1STM50G-EEE	1580522	618
HC-B 32-TMS-100-O1STM50S-EEE	1580521	618
HC-B 32-TMS-SD-IP65	1580539	618
HC-B 32/48-AF	1580524	618
HC-B 32/48-AF-SET	1580523	618
HC-B 48-AML	1772175	621
HC-B 48-AMLD	1772188	621
HC-B 48-FL-DI	1774678	653
HC-B 48-LB ERSBOLZ	1636114	651
HC-B 48-SML-100/O1M32	1604875	621
HC-B 48-SML-100/O1PG29	1675117	621
HC-B 48-SML-100/O2M40	1604876	621
HC-B 48-SML-100/O2PG29	1675120	621
HC-B 48-SMLD-100/O2M40	1604878	621
HC-B 48-TFL-96/O1PG29G	1675159	621
HC-B 48-TFL-96/O1PG29S	1675162	621
HC-B 48-TFL-96/O1PG36G	1675175	621
HC-B 48-TFL-96/O1PG36S	1675188	621
HC-B 48-TFL-96/O1STM32G	1647349	621
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HC-B-G-M25-ER-AL	1411443	573
HC-B-G-M25-PLRBK	1407670	572
HC-B-G-M32-EC-AL	1411440	642
HC-B-G-M32-ER-AL	1411444	573
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HC-B-GB-M25-ER-AL	1414664	645
HC-B-GB-M25-PLRBK	1414661	645
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HC-D 7-TFL-57/O1M20G	1604888	491
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HC-STA-B10PT-BWD-LT-M25-ELCAL	1416346	624
HC-STA-B10PT-BWSC-LS-M25-ELCAL	1416354	625
HC-STA-B10PT-BWSC-LT-M25-ELCAL	1416345	624
HC-STA-B16-BFDC-ELC-AL	1411328	601
HC-STA-B16-BWD-ELC-AL	1411327	597
HC-STA-B16-BWS-ELC-AL	1411324	593
HC-STA-B16-BWSC-ELC-AL	1411325	593
HC-STA-B16-CHWD-1TTM25-ELC-AL	1412641	599
HC-STA-B16-CHWD-1TTM32-ELC-AL	1412642	599
HC-STA-B16-CHWD-1TTP21-ELC-AL	1412643	599
HC-STA-B16-CHWD-1TTP29-ELC-AL	1412644	599
HC-STA-B16-CHWS-1TTM25-ELC-AL	1412645	595
HC-STA-B16-CHWS-1TTM32-ELC-AL	1412646	595
HC-STA-B16-CHWS-1TTP21-ELC-AL	1412647	595
HC-STA-B16-CHWS-1TTP29-ELC-AL	1412648	595
HC-STA-B16-HHFD-1STM32-EL-AL	1412649	598
HC-STA-B16-HHFD-1STM40-EL-AL	1412650	598
HC-STA-B16-HHFD-1STP21-EL-AL	1412651	598
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HC-STA-B16-HHFD-1TTM32-EL-AL	1412653	598
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HC-STA-B16-HHFD-1TTP21-EL-AL	1412669	598
HC-STA-B16-HHFD-1TTP29-EL-AL	1412678	598
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HC-STA-B16-HHFS-1TTP29-EL-AL	1412702	594
HC-STA-B16-HHWD-1STM32-EL-AL	1412703	602
HC-STA-B16-HHWD-1STM40-EL-AL	1412704	602
HC-STA-B16-HHWD-1STP21-EL-AL	1412705	602
HC-STA-B16-HHWD-1STP29-EL-AL	1412706	602
HC-STA-B16-HHWD-1TTM32-EL-AL	1412708	602
HC-STA-B16-HHWD-1TTM40-EL-AL	1412709	602
HC-STA-B16-HHWD-1TTP21-EL-AL	1412715	602
HC-STA-B16-HHWD-1TTP29-EL-AL	1412716	602
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SAC-3P- 5,0-PUR/BI-1L-V	1443200	216
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SAC-3P- 5,0-PUR/C-1L-V	1443242	216
SAC-3P- 5,0-PUR/C-1L-Z	1435551	214
SAC-3P- 5,0-PUR/CI-1L-R-ES	1401544	220
SAC-3P- 5,0-PUR/CI-1L-V	1443284	216
SAC-3P- 5,0-PUR/CI-1L-Z	1435700	214
SAC-3P- 5,0-PUR/DTFS	1414997	230
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SAC-3P- 5,0-PUR/M 8FR SH	1521782	179
SAC-3P- 5,0-PUR/M 8FR-2L	1671085	174
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SAC-3P- 5,0-PUR/M12FS B	1668098	174
SAC-3P- 5,0-PUR/M12FS SH	1682809	179
SAC-3P- 5,0-PUR/M12FS-2L	1694787	174
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SAC-3P- 5,0-PUR/M5FS	1530443	170
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SAC-3P- 5,0-PVC/A-1L-R	1415918	223
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SAC-3P- 5,0-PVC/CI-1L-V	1415943	217
SAC-3P- 5,0-PVC/CI-1L-Z	1415940	215
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SAC-3P- 5,0-PVC/FSS PE SCO	1411646	271
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SAC-3P- 5,0-PVC/M 8FS	1510748	176
SAC-3P- 5,0-PVC/M12FR	1579051	176
SAC-3P- 5,0-PVC/M12FR-2L	1505326	176
SAC-3P- 5,0-PVC/M12FS	1400505	176
SAC-3P- 5,0-PVC/M12FS-2L	1508459	176
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SAC-3P-1,5-PVC/A-1L-R	1415916	223
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SAC-3P-10,0-800/M12FR-2L	1454341	178
SAC-3P-10,0-800/M12FS	1456705	178
SAC-3P-10,0-961/M12FR VA	1419089	414
SAC-3P-10,0-961/M12FS VA	1419084	414
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SAC-3P-10,0-PUR/A-1L-R	1400799	222
SAC-3P-10,0-PUR/A-1L-R-ES	1413118	220
SAC-3P-10,0-PUR/A-1L-R-ES 4A	1401168	221
SAC-3P-10,0-PUR/A-1L-V	1443132	216
SAC-3P-10,0-PUR/A-1L-V 230V	1402986	218
SAC-3P-10,0-PUR/A-1L-Z	1435014	214
SAC-3P-10,0-PUR/B-1L-R-ES	1401339	220
SAC-3P-10,0-PUR/B-1L-V	1443174	216
SAC-3P-10,0-PUR/B-1L-Z	1435412	214
SAC-3P-10,0-PUR/BI	1438862	224
SAC-3P-10,0-PUR/BI-1L-R-ES	1401359	220
SAC-3P-10,0-PUR/BI-1L-V	1443213	216
SAC-3P-10,0-PUR/BI-1L-Z	1435263	214
SAC-3P-10,0-PUR/C	1400641	224
SAC-3P-10,0-PUR/C-1L-R-ES	1401465	220
SAC-3P-10,0-PUR/C-1L-V	1443255	216
SAC-3P-10,0-PUR/C-1L-Z	1435564	214
SAC-3P-10,0-PUR/CI-1L-R-ES	1401617	220
SAC-3P-10,0-PUR/CI-1L-V	1443297	216
SAC-3P-10,0-PUR/CI-1L-Z	1435713	214
SAC-3P-10,0-PUR/DTFS	1414998	230
SAC-3P-10,0-PUR/M 8FR	1694169	174
SAC-3P-10,0-PUR/M 8FR SH	1521795	179
SAC-3P-10,0-PUR/M 8FR-2L	1683594	174
SAC-3P-10,0-PUR/M 8FS	1694101	174
SAC-3P-10,0-PUR/M 8FS SH	1521740	179
SAC-3P-10,0-PUR/M12FR	1694538	174
SAC-3P-10,0-PUR/M12FR B	1681017	174
SAC-3P-10,0-PUR/M12FR SH	1500693	179
SAC-3P-10,0-PUR/M12FR-2L	1694428	174
SAC-3P-10,0-PUR/M12FR-2L B	1681059	174
SAC-3P-10,0-PUR/M12FS	1693034	174
SAC-3P-10,0-PUR/M12FS B	1694208	174
SAC-3P-10,0-PUR/M12FS SH	1500680	179
SAC-3P-10,0-PUR/M12FS-2L	1694790	174
SAC-3P-10,0-PUR/M5FR	1530537	170
SAC-3P-10,0-PUR/M5FS	1530456	170
SAC-3P-10,0-PVC/A	1402978	225
SAC-3P-10,0-PVC/A-1L-R	1415919	223
SAC-3P-10,0-PVC/A-1L-V	1415911	217
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SAC-3P-10,0-PVC/BI-1L-V	1415934	217
SAC-3P-10,0-PVC/BI-1L-Z	1400607	215
SAC-3P-10,0-PVC/C-1L-V	1415938	217
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SAC-3P-10,0-PVC/CI-1L-Z	1400605	215
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SAC-3P-10,0-PVC/FSS PE SCO	1411647	271
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SAC-3P-10,0-PVC/M 8FS	1506532	176
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SAC-3P-10,0-PVC/M12FR-2L	1414575	176
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SAC-3P-10,0-PVC/M12FS-2L	1414565	176
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SAC-3P-100,0-PUR/0,25	1501689	282
SAC-3P-100,0-PUR/0,34	1501650	282
SAC-3P-100,0-PUR/0,5	1457393	284
SAC-3P-100,0-PUR/SH-0,25	1526525	283
SAC-3P-100,0-PUR/SH-0,34	1501702	283
SAC-3P-100,0-PVC/0,25	1501854	282
SAC-3P-100,0-PVC/0,34	1501825	282
SAC-3P-100,0-PVC/SH-0,34	1550656	283
SAC-3P-15,0-961/M12FR VA	1419090	414
SAC-3P-15,0-961/M12FS VA	1419085	414
SAC-3P-20,0-961/M12FR VA	1419091	414
SAC-3P-20,0-961/M12FS VA	1419086	414
SAC-3P-3,0-PUR/A-1L-R	1400588	222
SAC-3P-3,0-PVC/A-1L-R	1415917	223
SAC-3P-5,0-PUR/A-1L-V 230V	1400648	218
SAC-3P-5,0-PUR/C	1400814	224
SAC-3P-5,0-PVC/A-1L-V 230V	1415914	219
SAC-3P-A-1L-V/.../...	1400876	216
SAC-3P-A-1L-Z/.../...	1435027	214
SAC-3P-A/.../...	1400897	224
SAC-3P-B-1L-V/.../...	1400882	216
SAC-3P-B-1L-Z/.../...	1435425	214
SAC-3P-B/.../...	1400909	224
SAC-3P-BI-1L-V/.../...	1400879	216
SAC-3P-BI-1L-Z/.../...	1435276	214
SAC-3P-BI/.../...	1400902	224
SAC-3P-C-1L-V/.../...	1400894	216
SAC-3P-C-1L-Z/.../...	1435726	214
SAC-3P-C/.../...	1400921	224
SAC-3P-CI-1L-V/.../...	1400891	216
SAC-3P-CI-1L-Z/.../...	1435577	214
SAC-3P-CI/.../...	1400918	224
SAC-3P-DTMS/ 0,3-PUR/DTFS	1415003	230
SAC-3P-DTMS/ 0,6-PUR/DTFS	1415004	230
SAC-3P-DTMS/ 1,5-PUR	1414999	230
SAC-3P-DTMS/ 1,5-PUR/DTFS	1415005	230
SAC-3P-DTMS/ 3,0-PUR	1415000	230
SAC-3P-DTMS/ 3,0-PUR/DTFS	1415006	230
SAC-3P-DTMS/ 5,0-PUR	1415001	230
SAC-3P-DTMS/10,0-PUR	1415002	230
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SAC-3P-M 8FS SH/.../...	1521753	179
SAC-3P-M 8FS/.../...	1697580	174
SAC-3P-M 8MR SH/.../...	1521708	179
SAC-3P-M 8MR-M 8FR SH/.../...	1552081	179
SAC-3P-M 8MR-M 8FR-2L/.../...	1697687	174
SAC-3P-M 8MR-M 8FR/.../...	1697674	174
SAC-3P-M 8MR-M 8FS SH/.../...	1552078	179
SAC-3P-M 8MR-M 8FS/.../...	1697661	174
SAC-3P-M 8MR-M12FR-2L/.../...	1697742	174
SAC-3P-M 8MR-M12FR/.../...	1697739	174
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SAC-4P- 1,5-PUR/M12FR SH	1682906	185
SAC-4P- 1,5-PUR/M12FR-3L	1668289	180
SAC-4P- 1,5-PUR/M12FS	1668108	180
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SAC-4P-M12MR/0,6-PVC/M 8FR	1415668	182
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SAC-4P-M12MR/0,6-PVC/M12FS	1415628	182
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SAC-4P-M12MR/1,5-PUR/M 8FR	1671577	180
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SAC-4P-M12MR/1,5-PUR/M12FR-3L	1668771	180
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SAC-4P-M12MS-M 8FS/.../...	1697072	180
SAC-4P-M12MS-M 8SIFS	1519778	240
SAC-4P-M12MS-M12FR FF VA/...	1431380	422
SAC-4P-M12MS-M12FR SH/.../...	1536094	185
SAC-4P-M12MS-M12FR-3L/.../...	1697027	180
SAC-4P-M12MS-M12FR/.../...	1697014	180
SAC-4P-M12MS-M12FS FF VA/...	1431364	422
SAC-4P-M12MS-M12FS SH/.../...	1536081	185
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SAC-4P-M12MS/ 0,3-PUR/M12FR	1668470	180
SAC-4P-M12MS/ 0,3-PUR/M12FR SH	1500965	185
SAC-4P-M12MS/ 0,3-PUR/M12FS	1668357	180
SAC-4P-M12MS/ 0,3-PUR/M12FS SH	1500842	185
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SAC-4P-M12MS/ 0,6-PUR/M12FR	1668483	180
SAC-4P-M12MS/ 0,6-PUR/M12FR SH	1500978	185
SAC-4P-M12MS/ 0,6-PUR/M12FS	1668360	180
SAC-4P-M12MS/ 0,6-PUR/M12FS SH	1500855	185
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SAC-4P-M12MS/ 1,5-PUR SH	1682715	185
SAC-4P-M12MS/ 1,5-PUR/M12FR SH	1500981	185
SAC-4P-M12MS/ 1,5-PUR/M12FS	1668373	180
SAC-4P-M12MS/ 1,5-PUR/M12FS SH	1500868	185
SAC-4P-M12MS/ 1,5-PVC	1415585	182
SAC-4P-M12MS/ 1,5-PVC/M12FS	1415613	182
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SAC-4P-M12MS/ 2,0-960/M12FS VA	1431283	422
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SAC-4P-M12MS/ 3,0-800/M12FR	1457092	184
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SAC-4P-M12MS/ 3,0-800/M12FS	1457076	184
SAC-4P-M12MS/ 3,0-PUR	1668056	180
SAC-4P-M12MS/ 3,0-PUR SH	1682618	185
SAC-4P-M12MS/ 3,0-PUR/M12FR SH	1500994	185
SAC-4P-M12MS/ 3,0-PUR/M12FS	1668386	180
SAC-4P-M12MS/ 3,0-PUR/M12FS SH	1500871	185
SAC-4P-M12MS/ 3,0-PVC	1415588	182
SAC-4P-M12MS/ 3,0-PVC/M12FS	1415614	182
SAC-4P-M12MS/ 5,0-800	1457034	184
SAC-4P-M12MS/ 5,0-960 VA	1431186	422
SAC-4P-M12MS/ 5,0-960/M12FS VA	1431296	422
SAC-4P-M12MS/ 5,0-PUR	1668069	180
SAC-4P-M12MS/ 5,0-PUR SH	1682647	185
SAC-4P-M12MS/ 5,0-PVC	1415589	182
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SAC-4P-M12MS/0,3-PUR/M 8FS	1694923	180
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SAC-4P-M12MS/0,6-PUR/M12FR-3L	1668522	180
SAC-4P-M12MS/0,6-PVC/M 8FS	1415672	182
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SAC-4P-M12MS/1,5-PUR/M 8FS	1693089	180
SAC-4P-M12MS/1,5-PUR/M12FR	1668496	180
SAC-4P-M12MS/1,5-PUR/M12FR-3L	1668535	180
SAC-4P-M12MS/1,5-PVC/M 8FS	1415673	182
SAC-4P-M12MS/1,5-PVC/M12FR	1415618	182
SAC-4P-M12MS/1,5-PVC/M12FR-3L	1415624	182
SAC-4P-M12MS/10,0-800	1457047	184
SAC-4P-M12MS/10,0-960 VA	1431199	422
SAC-4P-M12MS/10,0-960/M12FS VA	1431306	422
SAC-4P-M12MS/10,0-PUR	1682993	180
SAC-4P-M12MS/10,0-PUR SH	1694389	185
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SAC-5P- 5,0-900/FSB SCO	1517929	412
SAC-5P- 5,0-900/M12FSB	1507120	412
SAC-5P- 5,0-920/FS SCO	1518229	417
SAC-5P- 5,0-920/M 8FS	1575783	416
SAC-5P- 5,0-920/M12FS	1507489	417
SAC-5P- 5,0-923/FR CAN SCO	1419035	415
SAC-5P- 5,0-923/FS CAN SCO	1419030	415
SAC-5P- 5,0-923/MINFR DN	1418484	418
SAC-5P- 5,0-923/MINFS DN	1418439	418
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SAC-5P- 5,0-928/MINFS DN	1417469	419
SAC-5P- 5,0-PUR/AD-2L	1435108	226
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SAC-5P- 5,0-PUR/M12FS SH	1682951	190
SAC-5P- 5,0-PVC/AD-2L	1438639	227
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SAC-5P-10,0-920/M 8FS	1575796	416
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SAC-MR/0,1-116/2XBI-1L-Z SCO	1458499	245
SAC-MR/0,15-116/2XA-1L-Z SCO	1458143	244
SAC-MR/0,15-116/2XB-1L-Z SCO	1458321	245
SAC-MR/0,15-116/2XBI-1L-Z SCO	1458509	245
SAC-MR/0,2-116/2XA-1L-Z SCO	1458156	244
SAC-MR/0,2-116/2XB-1L-Z SCO	1458334	245
SAC-MR/0,2-116/2XBI-1L-Z SCO	1458512	245
SAC-MS/0,1-116/2XA-1L-Z SCO	1458101	244
SAC-MS/0,1-116/2XB-1L-Z SCO	1458282	245
SAC-MS/0,1-116/2XBI-1L-Z SCO	1458460	245
SAC-MS/0,15-116/2XA-1L-Z SCO	1458114	244
SAC-MS/0,15-116/2XB-1L-Z SCO	1458295	245
SAC-MS/0,15-116/2XBI-1L-Z SCO	1458473	245
SAC-MS/0,2-116/2XA-1L-Z SCO	1458127	244
SAC-MS/0,2-116/2XB-1L-Z SCO	1458305	245
SAC-MS/0,2-116/2XBI-1L-Z SCO	1458486	245
SACB 10-3 L M8 PUR/	1516166	246
SACB 4- 4 L SCO NPN PUR/	1537019	250
SACB 4- 4 L SCO PUR/	1516904	250
SACB 4- 8 L SCO NPN PUR/	1537048	250
SACB 4- 8 L SCO PUR/	1516917	250
SACB 4-3 L M8 PUR/	1516137	246
SACB 4-3 L QO-0,34 PUR/	1548503	252
SACB 4-3 QO-0,34 PUR/	1548642	252
SACB 4-4 L QO-0,34 PUR/	1548590	252
SACB 4-4 QO-0,34 PUR/	1548671	252
SACB 6- 6 L SCO NPN PUR/	1537022	250
SACB 6- 6 L SCO PUR/	1516920	250
SACB 6-12 L SCO NPN PUR/	1537051	250
SACB 6-12 L SCO PUR/	1516933	250
SACB 6-3 L M8 PUR/	1516140	246
SACB 8- 8 L SCO NPN PUR/	1537035	250
SACB 8- 8 L SCO PUR/	1516946	250
SACB 8-16 L SCO NPN PUR/	1537064	250
SACB 8-16 L SCO PUR/	1516959	250
SACB 8-3 L M8 PUR/	1516153	246
SACB 8-3 L QO-0,34 PUR/	1548529	252
SACB 8-3 QO-0,34 PUR/	1548668	252
SACB 8-4 L M8 PUR/	1516179	246
SACB 8-4 L QO-0,34 PUR/	1548613	252
SACB 8-4 QO-0,34 PUR/	1548697	252
SACB 8Q-4P L PUR/	1695304	253
SACB- 4/3-C QO-0,34	1548354	252
SACB- 4/3-L- 5,0PUR QO-0,34	1548448	252
SACB- 4/3-L- 5,0PUR-M8	1516014	246
SACB- 4/3-L-10,0PUR QO-0,34	1548451	252
SACB- 4/3-L-10,0PUR-M8	1516027	246
SACB- 4/3-L-C QO-0,34	1548325	252
SACB- 4/3-L-C-M8	1503412	247
SACB- 4/3-L-C-M8 GG	1516250	247
SACB- 4/3-L-M12-M8	1516234	246
SACB- 4/3-L-M16-M8	1516182	247
SACB- 4/3-L-SC-M8	1503386	247
SACB- 4/4-C QO-0,34	1548419	252
SACB- 4/4-L- 5,0PUR QO-0,34	1548532	252
SACB- 4/4-L-10,0PUR QO-0,34	1548545	252
SACB- 4/4-L-C QO-0,34	1548383	252
SACB- 4X0,34/ 3X0,75-50,0 PUR	1503328	285
SACB- 4X0,34/2X0,75-50 PUR	1517576	285
SACB- 6/3-C QO-0,34	1548367	252
SACB- 6/3-L- 5,0PUR-M8	1516030	246
SACB- 6/3-L-10,0PUR-M8	1516043	246
SACB- 6/3-L-C QO-0,34	1548338	252

Type	Order No.	Page
SACB- 6/3-L-C-M8	1503425	247
SACB- 6/3-L-C-M8 GG	1516263	247
SACB- 6/3-L-M12-M8	1516247	246
SACB- 6/3-L-M16-M8	1516195	247
SACB- 6/3-L-SC-M8	1503399	247
SACB- 6/4-C QO-0,34	1548422	252
SACB- 6/4-L-C QO-0,34	1548396	252
SACB- 6X0,34/ 3X0,75-50,0 PUR	1503331	285
SACB- 6X0,34/2X0,75-50 PUR	1517589	285
SACB- 8/3-C QO-0,34	1548370	252
SACB- 8/3-L- 5,0PUR QO-0,34	1548480	252
SACB- 8/3-L- 5,0PUR-M8	1516056	246
SACB- 8/3-L-10,0PUR QO-0,34	1548493	252
SACB- 8/3-L-10,0PUR-M8	1516069	246
SACB- 8/3-L-C QO-0,34	1548341	252
SACB- 8/3-L-C-M8	1511750	247
SACB- 8/3-L-C-M8 GG	1516276	247
SACB- 8/3-L-M12-M8	1434840	246
SACB- 8/3-L-M16-M8	1516205	247
SACB- 8/3-L-SC-M8	1511747	247
SACB- 8/4-C QO-0,34	1548435	252
SACB- 8/4-L- 5,0PUR QO-0,34	1548574	252
SACB- 8/4-L- 5,0PUR-M8	1516111	246
SACB- 8/4-L-10,0PUR QO-0,34	1548587	252
SACB- 8/4-L-10,0PUR-M8	1516124	246
SACB- 8/4-L-C QO-0,34	1548406	252
SACB- 8/4-L-C-M8	1503467	247
SACB- 8/4-L-SC-M8	1503454	247
SACB- 8X0,34/ 3X0,75-50,0 PUR	1503344	285
SACB- 8X0,34/2X0,75-50 PUR	1517592	285
SACB- 8X0,5/ 3X1,0-50,0 PUR	1503357	285
SACB-10/3-L- 5,0PUR-M8	1516072	246
SACB-10/3-L-10,0PUR-M8	1516085	246
SACB-10/3-L-C-M8	1503438	247
SACB-10/3-L-C-M8 GG	1516289	247
SACB-10/3-L-M12-M8	1434853	246
SACB-10/3-L-M16-M8	1516218	247
SACB-10/3-L-SC-M8	1503409	247
SACB-10X0,34/2X0,75-50 PUR	1517602	285
SACB-12X0,5/ 3X1,0-50,0 PUR	1503360	285
SACB-12X0,5/3X1,0-50 PUR SH	1401239	285
SACB-16X0,34/2X0,75-50 PUR	1539350	285
SACB-16X0,5/ 3X1,0-200,0 PUR	1559893	285
SACB-16X0,5/ 3X1,0-50,0 80MC	1402304	285
SACB-16X0,5/ 3X1,0-50,0 PUR	1503373	285
SACB-16X0,5/ 3X1,0-50,0 VPUR	1430938	285
SACB-16X0,5/3X1,0-50 PUR SH	1539156	285
SACB-4/ 3-L- 5,0PUR M5	1530663	255
SACB-4/ 3-L-10,0PUR M5	1530676	255
SACB-4/ 3-L-M12 M5	1530760	255
SACB-4/ 4- 5,0PUR SCO	1516962	250
SACB-4/ 4- 5,0PUR SCO P	1452398	248
SACB-4/ 4-10,0PUR SCO	1516975	250
SACB-4/ 4-10,0PUR SCO P	1452408	248
SACB-4/ 4-C SCO	1516849	250
SACB-4/ 4-C SCO P	1452741	249
SACB-4/ 4-L SCO P PUR/	1401376	248
SACB-4/ 4-L- 5,0PUR M5	1530702	255
SACB-4/ 4-L- 5,0PUR SCO	1517084	250
SACB-4/ 4-L- 5,0PUR SCO P	1452576	248
SACB-4/ 4-L- 5,0PUR SCO P NPN	1405678	248
SACB-4/ 4-L-10,0PUR M5	1530715	255
SACB-4/ 4-L-10,0PUR SCO	1517097	250
SACB-4/ 4-L-10,0PUR SCO P	1452589	248
SACB-4/ 4-L-10,0PUR SCO P NPN	1405687	248
SACB-4/ 4-L-C GG SCO	1516726	251
SACB-4/ 4-L-C GG SCO P	1452864	249
SACB-4/ 4-L-C NPN SCO	1537077	250
SACB-4/ 4-L-C SCO	1516784	250
SACB-4/ 4-L-C SCO P	1452806	249
SACB-4/ 4-L-SC SCO P	1452987	248
SACB-4/ 4-SC SCO P	1452929	248
SACB-4/ 8- 5,0HPUR SCO	1517204	250
SACB-4/ 8- 5,0PUR SCO	1516988	250
SACB-4/ 8- 5,0PUR SCO P	1452424	248
SACB-4/ 8- 5,0PUR SH	1695786	254
SACB-4/ 8-10,0HPUR SCO	1517217	250
SACB-4/ 8-10,0PUR SCO	1516991	250
SACB-4/ 8-10,0PUR SCO P	1452437	248
SACB-4/ 8-10,0PUR SH	1695799	254
SACB-4/ 8-C SCO	1516852	250
SACB-4/ 8-C SCO P	1452754	249
SACB-4/ 8-L SCO P PUR/	1401419	248
SACB-4/ 8-L- 5,0HPUR SCO	1517262	250
SACB-4/ 8-L- 5,0PUR SCO	1517107	250
SACB-4/ 8-L- 5,0PUR SCO P	1452602	248
SACB-4/ 8-L- 5,0PUR SCO P NPN	1405713	248
SACB-4/ 8-L-10,0HPUR SCO	1517275	250
SACB-4/ 8-L-10,0PUR SCO	1517110	250
SACB-4/ 8-L-10,0PUR SCO P	1452615	248
SACB-4/ 8-L-10,0PUR SCO P NPN	1405732	248
SACB-4/ 8-L-C GG SCO	1516739	251
SACB-4/ 8-L-C GG SCO P	1452877	249
SACB-4/ 8-L-C NPN SCO	1537103	250
SACB-4/ 8-L-C SCO	1516797	250
SACB-4/ 8-L-C SCO P	1452819	249
SACB-4/ 8-L-PT SCO P	1412058	248
SACB-4/ 8-L-SC SCO P	1452990	248
SACB-4/ 8-M23 SH	1695757	254
SACB-4/ 8-SC SCO P	1452932	248
SACB-4/T-L-8FUSE CT AXL	1413929	281
SACB-4/T-L-8FUSE DIAG CT AXL	1411048	281
SACB-4Q/4P L PUR/	1695249	253
SACB-4Q/4P- 5,0PUR	1683662	253
SACB-4Q/4P-10,0PUR	1683675	253
SACB-4Q/4P-L- 5,0PUR	1695223	253
SACB-4Q/4P-L-10,0PUR	1695236	253
SACB-4Q/4P-L-SC	1662939	253
SACB-4Q/4P-L-SC NPN	1680856	253
SACB-4Q/4P-SC	1683633	253
SACB-6/ 6- 5,0PUR SCO	1517000	250
SACB-6/ 6- 5,0PUR SCO P	1452453	248
SACB-6/ 6-10,0PUR SCO	1517013	250
SACB-6/ 6-10,0PUR SCO P	1452466	248
SACB-6/ 6-C SCO	1516865	250
SACB-6/ 6-C SCO P	1452767	249
SACB-6/ 6-L SCO P PUR/	1401379	248
SACB-6/ 6-L- 5,0PUR SCO	1517123	250
SACB-6/ 6-L- 5,0PUR SCO P	1452631	248
SACB-6/ 6-L- 5,0PUR SCO P NPN	1405733	248
SACB-6/ 6-L-10,0PUR SCO	1517136	250
SACB-6/ 6-L-10,0PUR SCO P	1452644	248
SACB-6/ 6-L-10,0PUR SCO P NPN	1405734	248
SACB-6/ 6-L-C GG SCO	1516742	251
SACB-6/ 6-L-C GG SCO P	1452880	249
SACB-6/ 6-L-C NPN SCO	1537080	250
SACB-6/ 6-L-C SCO	1516807	250
SACB-6/ 6-L-C SCO P	1452822	249
SACB-6/ 6-L-SC SCO P	1453009	248
SACB-6/ 6-SC SCO P	1452945	248
SACB-6/12- 5,0HPUR SCO	1517220	250
SACB-6/12- 5,0PUR SCO	1517026	250
SACB-6/12- 5,0PUR SCO P	1452482	248
SACB-6/12- 5,0PUR SH	1695809	254
SACB-6/12-10,0HPUR SCO	1517233	250
SACB-6/12-10,0PUR SCO	1517039	250
SACB-6/12-10,0PUR SCO P	1452495	248
SACB-6/12-10,0PUR SH	1695812	254
SACB-6/12-C SCO	1516878	250
SACB-6/12-C SCO P	1452770	249
SACB-6/12-L SCO P PUR/	1401380	248
SACB-6/12-L- 5,0HPUR SCO	1517288	250
SACB-6/12-L- 5,0PUR SCO	1517149	250
SACB-6/12-L- 5,0PUR SCO P	1452660	248
SACB-6/12-L- 5,0PUR SCO P NPN	1405735	248
SACB-6/12-L-10,0HPUR SCO	1517291	250
SACB-6/12-L-10,0PUR SCO	1517152	250
SACB-6/12-L-10,0PUR SCO P	1452673	248
SACB-6/12-L-10,0PUR SCO P NPN	1405736	248
SACB-6/12-L-C GG SCO	1516755	251
SACB-6/12-L-C GG SCO P	1452893	249
SACB-6/12-L-C NPN SCO	1537116	250
SACB-6/12-L-C SCO	1516810	250
SACB-6/12-L-C SCO P	1452835	249
SACB-6/12-L-PT SCO P	1412059	248
SACB-6/12-L-SC SCO P	1453012	248
SACB-6/12-M23 SH	1695760	254
SACB-6/12-SC SCO P	1452958	248
SACB-6Q/4P L PUR/	1695278	253
SACB-6Q/4P- 5,0PUR	1683688	253
SACB-6Q/4P-10,0PUR	1683691	253
SACB-6Q/4P-L- 5,0PUR	1695252	253
SACB-6Q/4P-L-10,0PUR	1695265	253
SACB-6Q/4P-L-SC	1662942	253
SACB-6Q/4P-L-SC NPN	1680869	253
SACB-6Q/4P-SC	1683646	253
SACB-8/ 3-L- 5,0PUR M5	1530689	255
SACB-8/ 3-L-10,0PUR M5	1530692	255
SACB-8/ 3-L-M12 M5	1530773	255
SACB-8/ 4-L- 5,0PUR M5	1530744	255
SACB-8/ 4-L-10,0PUR M5	1530757	255
SACB-8/ 8- 5,0PUR SCO	1517042	250
SACB-8/ 8- 5,0PUR SCO P	1452518	248
SACB-8/ 8-10,0PUR SCO	1517055	250
SACB-8/ 8-10,0PUR SCO P	1452521	248
SACB-8/ 8-C SCO	1516881	250
SACB-8/ 8-C SCO P	1452783	249
SACB-8/ 8-L SCO P PUR/	1401382	248
SACB-8/ 8-L- 5,0PUR SCO	1517165	250
SACB-8/ 8-L- 5,0PUR SCO P	1452699	248
SACB-8/ 8-L- 5,0PUR SCO P NPN	1405737	248
SACB-8/ 8-L-10,0PUR SCO	1517178	250
SACB-8/ 8-L-10,0PUR SCO P	1452709	248
SACB-8/ 8-L-10,0PUR SCO P NPN	1405738	248
SACB-8/ 8-L-C GG SCO	1516768	251
SACB-8/ 8-L-C GG SCO P	1452903	249
SACB-8/ 8-L-C NPN SCO	1537093	250
SACB-8/ 8-L-C SCO	1516823	250
SACB-8/ 8-L-C SCO P	1452848	249
SACB-8/ 8-L-PUR SCO OTB 1,5M	1437245	251
SACB-8/ 8-L-SC SCO P	1453025	248
SACB-8/ 8-SC SCO P	1452961	248
SACB-8/16- 5,0HPUR SCO	1517246	250
SACB-8/16- 5,0PUR SCO	1517068	250
SACB-8/16- 5,0PUR SCO P	1452547	248
SACB-8/16- 5,0PUR SH	1695825	254
SACB-8/16-10,0HPUR SCO	1517259	250
SACB-8/16-10,0PUR SCO	1517071	250
SACB-8/16-10,0PUR SCO P	1452550	248
SACB-8/16-10,0PUR SH	1695838	254
SACB-8/16-C SCO	1516894	250
SACB-8/16-C SCO P	1452796	249
SACB-8/16-L SCO P PUR/	1401383	248
SACB-8/16-L- 5,0HPUR SCO	1517301	250
SACB-8/16-L- 5,0PUR SCO	1517181	250
SACB-8/16-L- 5,0PUR SCO P	1452725	248
SACB-8/16-L- 5,0PUR SCO P NPN	1405739	248
SACB-8/16-L-10,0HPUR SCO	1517314	250
SACB-8/16-L-10,0PUR SCO	1517194	250
SACB-8/16-L-10,0PUR SCO P	1452738	248
SACB-8/16-L-10,0PUR SCO P NPN	1405740	248
SACB-8/16-L-C GG SCO	1516771	251
SACB-8/16-L-C GG SCO P	1452916	249
SACB-8/16-L-C NPN SCO	1537129	250
SACB-8/16-L-C SCO	1516836	250
SACB-8/16-L-C SCO OTB	1437232	251
SACB-8/16-L-C SCO P	1452851	249
SACB-8/16-L-PT SCO P	1412060	248
SACB-8/16-L-SC SCO P	1453038	248
SACB-8/16-M23 SH	1695773	254
SACB-8/16-SC SCO P	1452974	248
SACB-8/8-L-PUR SCO FLK14/MCV3P	1547928	251
SACB-8Q/4P- 5,0PUR	1683701	253
SACB-8Q/4P-10,0PUR	1683714	253
SACB-8Q/4P-L- 5,0PUR	1695281	253
SACB-8Q/4P-L-10,0PUR	1695294	253
SACB-8Q/4P-L-SC	1662955	253
SACB-8Q/4P-L-SC NPN	1680872	253
SACB-8Q/4P-SC	1683659	253
SACB-8X0,5/3X1,0-50 PUR SH	1401240	285
SACB-8X0,5/3X1,0-50,0 HPUR	1401690	285
SACB-C-H180 10-3 M8 PUR/	1516409	247
SACB-C-H180 4- 4 SCO PUR/	1516658	251
SACB-C-H180 4- 8 SCO PUR/	1516661	251
SACB-C-H180 4-3 M8 PUR/	1516373	247
SACB-C-H180 6- 6 SCO PUR/	1516674	251
SACB-C-H180 6-12 SCO PUR/	1516687	251
SACB-C-H180 6-3 M8 PUR/	1516386	247
SACB-C-H180 8- 8 SCO PUR/	1516690	251
SACB-C-H180 8-16 SCO PUR/	1516700	251
SACB-C-H180 8-3 M8 PUR/	1516399	247
SACB-C-H180 8/16 SCO	1516713	251
SACB-C-H180 8/4 QO-0,34	1560235	295
SACB-C-H180- 4/3- 5,0PUR-M8	1516292	247
SACB-C-H180- 4/3-10,0PUR-M8	1516302	247
SACB-C-H180- 4/3-M8	1521229	247
SACB-C-H180- 6/3- 5,0PUR-M8	1516315	247
SACB-C-H180- 6/3-10,0PUR-M8	1516328	247
SACB-C-H180- 6/3-M8	1521216	247
SACB-C-H180- 8/3- 5,0PUR-M8	1516331	247
SACB-C-H180- 8/3-10,0PUR-M8	1516344	247
SACB-C-H180- 8/3-M8	1516425	247
SACB-C-H180-10/3- 5,0PUR-M8	1516357	247
SACB-C-H180-10/3-10,0PUR-M8	1516360	247
SACB-C-H180-10/3-M8	1516412	247
SACB-C-H180-4/ 4 SCO P PUR/	1401391	249
SACB-C-H180-4/ 4- 5,0PUR SCO	1516353	251
SACB-C-H180-4/ 4- 5,0PUR SCO P	1453054	249
SACB-C-H180-4/ 4-10,0PUR SCO	1516548	251
SACB-C-H180-4/ 4-10,0PUR SCO P	1453067	249
SACB-C-H180-4/ 8 SCO P PUR/	1401393	249
SACB-C-H180-4/ 8- 5,0PUR SCO	1516593	251
SACB-C-H180-4/ 8- 5,0PUR SCO P	1453083	249
SACB-C-H180-4/ 8-10,0PUR SCO	1516603	251
SACB-C-H180-4/ 8-10,0PUR SCO P	1453096	249
SACB-C-H180-6/ 6 SCO P PUR/	1401411	249
SACB-C-H180-6/ 6- 5,0PUR SCO	1516551	251
SACB-C-H180-6/ 6- 5,0PUR SCO P	1453119	249
SACB-C-H180-6/ 6-10,0PUR SCO	1516564	251
SACB-C-H180-6/ 6-10,0PUR SCO P	1453122	249
SACB-C-H180-6/12 SCO P PUR/	1401413	249
SACB-C-H180-6/12- 5,0PUR SCO	1516616	251
SACB-C-H180-6/12- 5,0PUR SCO P	1453148	249
SACB-C-H180-6/12-10,0PUR SCO	1516629	251
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SACC-M12FS-8CON-PG11-M	1410665	21
SACC-M12FS-8CON-PG9-M	1513347	21
SACC-M12FS-8Q SH	1553640	325
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