Remote I/O

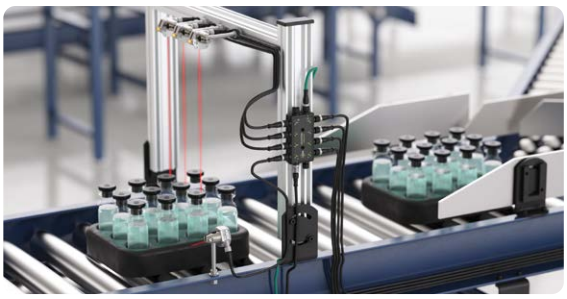


BANNER®

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Remote I/O Solutions from Banner

Remote I/O Blocks from Banner help machine builders optimize control system design, performance, and space efficiency with their compact form-factors, multi-protocol support, on-board programmability, and customization capability. Additionally, these products offer what you would expect from remote I/O blocks such as reduced wiring and costs associated with installation, integration, and diagnostics.



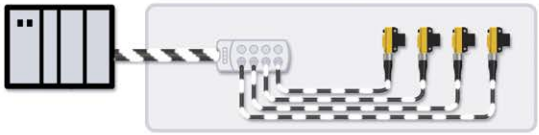
Reduce Wiring and Simplify Installation

Typically, the primary objective of machine builders using Remote I/O is to reduce wiring between field devices and the PLC located in the control panel. The graphics below illustrate the evolution of I/O management, from direct wired I/O to the most efficient IO-Link and Modbus I/O networks.

Direct Wired I/O



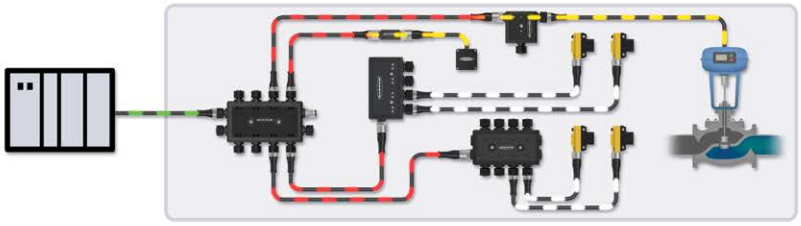
Passive (Passthrough) Junction Blocks



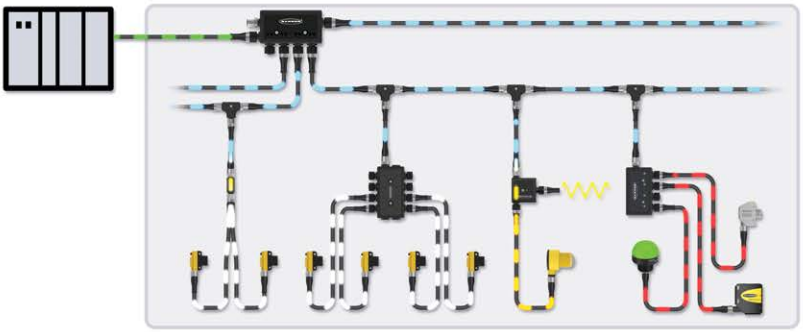
Network I/O Blocks



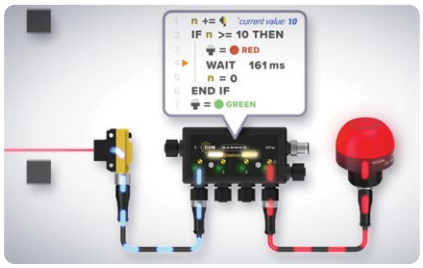
IO-Link Network



Modbus Network



Advanced Metrics and Simplified Programming



Optimize Control System Design through Customization



Versatile Housing and I/O Options



Multi-Protocol Ethernet Blocks



DXMR90 Industrial Controller

DXMR90 controllers are a central component of a Remote I/O system for device monitoring, An internal processor receives signals from sensors and other connected devices through four dedicated Modbus or IO-Link ports. The DXMR90 combines all signals into one unified stream of insightful data which can be exported via industrial Ethernet protocols.

Ethernet Connection	Modbus/IO-Link Connections	Other Connections	Models
1 x Female M12 D-Code Ethernet connector	4 x Female M12 Modbus client connections	1 x Male M12 (Port 0) for incoming power and Modbus RS-485, 1 x female M12 for daisy chaining Port 0 signals	**DXMR90-X1**
2 x Female M12 D-Code Ethernet connector	4 x Female M12 Modbus client connections		**DXMR90-X1E**
1 x Female M12 D-Code Ethernet connector	4 x Female M12 IO-Link master connections		**DXMR90-4K**



DXMR110-8K IO-Link Master

- Local control or connectivity with automation protocols, including EtherNet/IP, Modbus/TCP, and PROFINET
- Logic processing and problem-solving capable of deploying solutions to process and control data from multiple devices
- IP67 housing simplifies installation in any location by eliminating the need for a control cabinet
- Consolidate cable runs to minimize cabling and associated weight, especially in weight-critical applications such as robotics
- Flexible and customizable—expanded internal logic controller with action rules and ScriptBasic programming

Ethernet Connection	IO-Link Master Connections	Other Connections	Models
2 x female M12 D-Code Ethernet connectors for daisy chaining and communication to a higher-level control system	8 x Female M12	1 x Male M12 for incoming power, 1 x Female M12 for daisy chaining power	**DXMR110-8K**



DXMR190-8K Top-Exit IO-Link Master

- Two A-code or L-code pass-through power ports (depending on model) can share power with connected devices; high-amp L-code power allows more devices to be daisy-chained, simplifying cabling and installation
- Flexible configuration on each of eight A-code M12 IO-Link ports allows connection to either an IO-Link or discrete device
- Two D-code M12 multiprotocol ports with Ethernet pass-through minimize wiring and related costs, enabling easy integration into control systems via EtherNet/IP™, PROFINET®, or Modbus®

Ethernet Connections	IO-Link Master Connections	Power Connections	Max. Total Current	Models
2 x Female M12 D-Code Ethernet (for daisy chaining and communication to a higher-level control system)	8 x Female M12	1 x Male A-Code M12 (in) 1 x Female A-Code M12 (out)	4 A	**DXMR190-8K**
		1 x Male L-Code M12 (in) 1 x Female L-Code M12 (out)	8 A	**DXMR190-L-8K**

IO-Link Masters with Modbus RTU



R45C IO-Link Master Modbus Converter

- Connects two IO-Link devices and provides access via Modbus RTU interface
- Rugged design; easy installation with no assembly or individual wiring required
- 5-pin M12 male quick disconnect connector
- Two 4-pin M12 female quick disconnect connectors
- Built-in indication for two IO-Link master ports
- Built-in indication for Modbus RTU connection status
- Rugged over-molded design meets IP65, IP67, and IP68

Housing	Function		Converter		Connection	Connector
R45	**C**	–	**2K**	–	**M**	**Q**
	C = Converter		**2K** = 2-port IO-Link master (female)		**M** = Modbus server connection (male)	**Q** = M12 integral quick disconnect



R90C IO-Link Master Modbus Converter

The R90C 4-Port IO-Link Master connects to four IO-Link devices and provides access to IO-Link data and functionality via a Modbus RTU connection. Modbus registers allow for access to both IO-Link devices and their functions:

- Process Data In
- Process Data Out
- Connected device information
- ISDU data
- Discrete I/O configuration
- IO-Link events
- Data storage
- SIO mode

Housing	Function		Converter		Connection	Connector
R90	**C**	–	**4K**	–	**M**	**Q**
	C = Converter		**4K** = 4-port IO-Link master (female)		**M** = Modbus server connection (male)	**Q** = M12 integral quick disconnect (female)

IO-Link Hubs



S15C Hub

- Easily converts signals like 4–20 mA analog to IO-Link without any setup required
- Allows previously incompatible devices to be connected to a smart system
- Rugged over-molded design meets IP65, IP67, and IP68 standards
- Simple M12 connection for easy installation wherever needed in the circuit

S15C – **I** – **KQ**

I = 4–20 mA **U** = 0–10 V DC **B21** = Discrete input/output



R45C IO-Link to Analog Out Hub

- Compact analog to IO-Link device converter that outputs an analog value, voltage, or current, as presented by the IO-Link master
- Rugged over-molded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use

Housing	Function		Male		Female 1	Connector
R45	**C**	–	**K**	–	**I**	**Q**
	C = Converter		**K** = IO-Link		**I** = Analog current out **U** = Analog voltage out	**Q** = M12 integral quick disconnect



R45C IO-Link to Dual Analog Input-Output Hub

- Compact IO-Link device to analog converter that outputs an analog value, voltage, or current, as presented by the IO-Link master
- The converter also connects to an analog source, voltage, or current, and outputs the value to the IO-Link master and as a representative PFM output
- Rugged over-molded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use

Housing	Function		Male	Female 1 and 2	Connector
R45	**C**	–	**K**	**II — II**	**Q**
	C = Converter		**K** = IO-Link	**II–II** = Analog 1 current in/out, analog 2 current in/out **UU–UU** = Analog 1 voltage in/out, analog 2 voltage in/out	**Q** = M12 integral quick disconnect



R130C Discrete IO-Link Hub

- Cost-efficiently integrate up to 16 devices into an IO-Link system
- Simplify wiring and installation with M12 QD cables
- Minimize the size of the control panel by locating I/O remotely on the machine, closer to sensors and other devices
- Provide power to lighting products and other devices that draw higher current with 4 amps shared across ports

Housing	Function		Converter		Control	Connector
R130	**C**	–	**8P22**	–	**K**	**Q**
	C = Converter		**8P22** = 8-port, PNP with 2 inputs/outputs per port		**K** = IO-Link	**Q** = M12 integral quick disconnect

IO-Link Hubs



R90C Discrete IO-Link Hub

The R90C IO-Link Hubs connect two discrete signals to each of the unique ports, providing access to monitoring and configuring those ports with an IO-Link master. Host mirroring is available where a selected port input/output discrete signal can be routed to Pin 2 (male) on the PLC/Host connection.

Housing	Function		Converter		Control	Connector
R90	**C**	—	**4B21**	—	**K**	**Q**

C = Converter | **4B21** = 4-port, bimodal, 2 inputs, 1 output | **K** = IO-Link | **Q** = M12 integral quick disconnect



R95C Discrete IO-Link Hub

The R95C IO-Link Hubs connect two discrete signals to each of the unique ports, providing access to monitoring and configuring those ports with an IO-Link master. Host mirroring is available where a selected port input/output discrete signal can be routed to Pin 2 (male) on the PLC/Host connection.

Housing	Function		Converter		Control	Connector
R95	**C**	—	**8B21**	—	**K**	**Q**

C = Converter | **8B21** = 8-port, bimodal, 2 inputs, 1 output | **K** = IO-Link | **Q** = M12 integral quick disconnect

8B22 = 8-port, bimodal, 2 inputs, 2 outputs



R95C Discrete and Analog Input-Output IO-Link Hub

- Compact IO-Link device converter with the ability to send 4 ports of discrete input and 4 ports of analog input data (voltage or current) to an IO-Link Master
- The IO-Link Master Process Data Output can also output discrete values and analog outputs (voltage or current) through any of the respective sets of 4 ports
- Rugged overmolded design meets IP65, IP67, and IP68

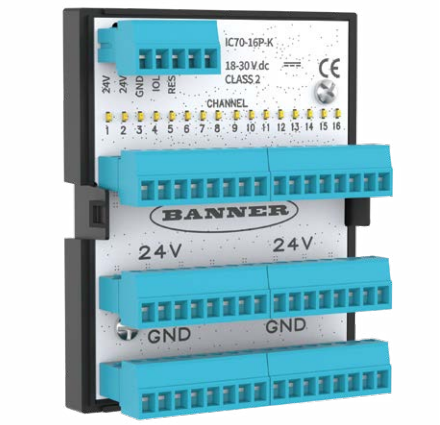
Housing	Function		Converter		Control	Connector
R95	**C**	—	**4B4UI**	—	**K**	**Q**
	C = Converter		**4B4UI** = 4-port, bimodal, 2 inputs/outputs per port 4-port, analog, 4 inputs and 4 outputs.		**K** = IO-Link	**Q** = M12 integral quick disconnect



R95C Analog Input IO-Link Hub

- Compact analog IO-Link hub that connects to a current or voltage analog source and outputs the value to an IO-Link master
- Ability to represent one of the eight analog inputs as a PFM output
- R95C IO-Link hubs are a quick, easy, and economical way to integrate non-IO-Link devices into an IO-Link system
- Rugged over-molded design meets IP65, IP67, and IP68

Housing	Function		Converter		Control	Connector
R95	**C**	—	**8UI**	—	**K**	**Q**
	C = Converter		**8UI** = 8-port, voltage/current analog input		**K** = IO-Link	**Q** = M12 integral quick disconnect



IC70 In-Cabinet IO-Link Hub

- Save space with a compact, DIN-rail mountable design
- Increase system flexibility with configurable input/output channels
- Reduce wiring and PLC logic with built-in delays and port mirroring
- Speed up troubleshooting with real-time status LEDs

Description	Connections	Model
16-Channel PNP IO-Link Hub	Screw terminals	**IC70-16P-K**
16-Channel NPN IO-Link Hub		**IC70-16N-K**

Modbus RTU I/O Blocks



S15C Converter

- Easily converts signals like discrete, analog, and more to Modbus, which makes it easy to monitor and send data to the cloud
- Allows previously incompatible devices to be connected to a smart system
- Rugged over-molded design meets IP65, IP67, and IP68 standards

Housing		Converter		Connector
S15C	—	**I**	—	**MQ**
		I = 4–20 mA **B22** = Discrete inputs (NPN/PNP)		**Q** = M12 integral quick disconnect



R45C Modbus to Dual Analog Input-Output Converter

- Compact Modbus to analog converter that can output an analog value, voltage, or current as presented to the appropriate Modbus register
- The converter can also connect to an analog source, voltage, or current, and outputs the value to defined Modbus register
- Rugged over-molded design meets IP65, IP67, and IP68

Housing	Function		Male	Female 1 and 2	Connector
R45	**C**	—	**M**	**II — II**	**Q**
	C = Converter		**M** = Modbus	**II–II** = Analog 1 current in/out, analog 2 current in/out **UU–UU** = Analog 1 voltage in/out, analog 2 voltage in/out	**Q** = M12 integral quick disconnect



R95C Discrete Bimodal to Modbus Hub

The R95C Discrete Bimodal to Modbus Hub connects two discrete channels to each of the eight unique ports, providing access to monitoring and configuring those ports via Modbus registers. Host mirroring is available where a selected port input/output discrete signal can be routed to Pin 5 (male) on the PLC/Host connection.

Housing	Function		Converter		Control	Connector
R95	**C**	—	**8B21**	—	**M**	**Q**
	C = Converter		**8B21** = 8-port, bimodal, 2 inputs, 1 output		**M** = Modbus	**Q** = M12 integral quick disconnect



R95C Hybrid I/O Modbus Hub

- Consolidate discrete and analog I/O and sent it to a control system via Modbus RTU
- Reduce system cost and installation time with four analog I/O, plus eight discrete I/O
- Locate more I/O in a smaller space with compact design and stackable form factor
- Simplify wiring and installation by mounting on machines and not in cabinets with IP67- and IP68-rated housing

Housing	Function		Converter		Control	Connector
R95	**C**	—	**4B4UI**	—	**M**	**Q**
	C = Converter		**4B4UI** = 4 analog inputs/outputs 8 discrete (PNP or NPN) I/O		**M** = Modbus	**Q** = M12 integral quick disconnect



R95C Analog In to Modbus Hub

- Compact analog to Modbus device converter that connects up to eight analog sources (either current or voltage) and converts to Modbus
- R95C Modbus hubs are a quick and economical way to integrate device signals into a Modbus system
- Rugged over-molded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use

Housing	Function		Converter		Control	Connector
R95	**C**	—	**8UI**	—	**M**	**Q**
	C = Converter		**8UI** = 8-port, voltage/current analog input		**M** = Modbus	**Q** = M12 integral quick disconnect

Specialized I/O



Motor Driven Roller Controllers

- Easily control motor driven roller (MDR) systems via an IO-Link® master, Banner's Snap Signal® software or a PLC using Modbus® RTU, or through DXM gateways using common Ethernet protocols
- Configure features including ramp up/ramp down, and alerts for voltage, motor current and overload, MDR controller board temperature, and motor run time
- Simplify installation of multiple MDR controllers on a conveyor using standard A-coded M12 connectors for signals and L-coded M12 connectors for daisy chaining up to 16 amps of motor power

Function	Control	Connectors	Models
M12 port for MDR Control with two configurable I/O pins and a 0–18 V output pin	Modbus	5-pin M12 A-Code male quick-disconnect connector (power/comms) 5-pin M12 A-Code female quick-disconnect connector (MDR control) 5-pin M12 L-Code male quick-disconnect connector (16 amp power/pass-through) 5-pin M12 L-Code female quick-disconnect connector (16 amp power/pass-through)	**R50C-L-MDR-MQ**
	IO-Link	5-pin M12 A-Code male quick-disconnect connector (power/comms) 5-pin M12 A-Code female quick-disconnect connector (MDR control) 5-pin M12 L-Code male quick-disconnect connector (motor power) 5-pin M12 L-Code female quick-disconnect connector (motor power)	**R50C-L-MDR-KQ**
4 x M12 ports for MDR Control with two configurable I/O pins and a 0–18 V output pin	Modbus	4 x 5-pin M12 A-Code female quick-disconnect connectors (MDR control) 5-pin M12 A-Code female quick-disconnect connector (Modbus port) 5-pin M12 A-Code male quick-disconnect connector (power/comms) 5-pin M12 L-Code female quick-disconnect connector (motor power) 5-pin M12 L-Code male quick-disconnect connector (motor power)	**R95C-L-4MDR-MQ**
	IO-Link	4 x 5-pin M12 A-Code female quick-disconnect connectors (MDR control) 5-pin M12 A-Code male quick-disconnect connector (power/comms) 5-pin M12 L-Code female quick-disconnect connector (motor power) 5-pin M12 L-Code male quick-disconnect connector (motor power)	**R95C-L-4MDR-KQ**





DXMR50 Logic Blocks

- Run logic and arithmetic functions like AND, OR, counting, on-delay, or scaling—without the cost and complexity of a PLC
- Configure logic easily using free configuration software—no expertise required
- Simplify deployment with nine model variants that combine discrete, analog (0–10 V DC or 4–20 mA), and Modbus to match I/O requirements
- Install in the field—IP67/IP68-rated sealed compact housing needs no enclosure, DIN rail, or panel wiring
- Diagnose issues quickly with onboard LEDs that show input/output and power status at a glance

Series	Style		Inputs		Outputs
DXMR50	– **LB**	–	**MPA**	–	**PI**

LB = Logic block

2PA = Input Port 1 and 2:
Pin 2: Analog (selectable 0–10 V DC or 4–20 mA)
Pin 4: Discrete PNP

2M = Input Port 1 and 2: Modbus RS-485

MPA = Input Port 1: Modbus RS-485
Input Port 2: Discrete PNP and Analog (selectable 0–10 V DC or 4–20 mA)

2P = Pin 1: Discrete PNP, Pin 4: Discrete PNP

PI = Pin 2: Analog (4–20 mA), Pin 4: Discrete PNP

PU = Pin 2: Analog (0–10 V DC), Pin 4: Discrete PNP



Input Scaling for Live Tank Level Indication

Challenge

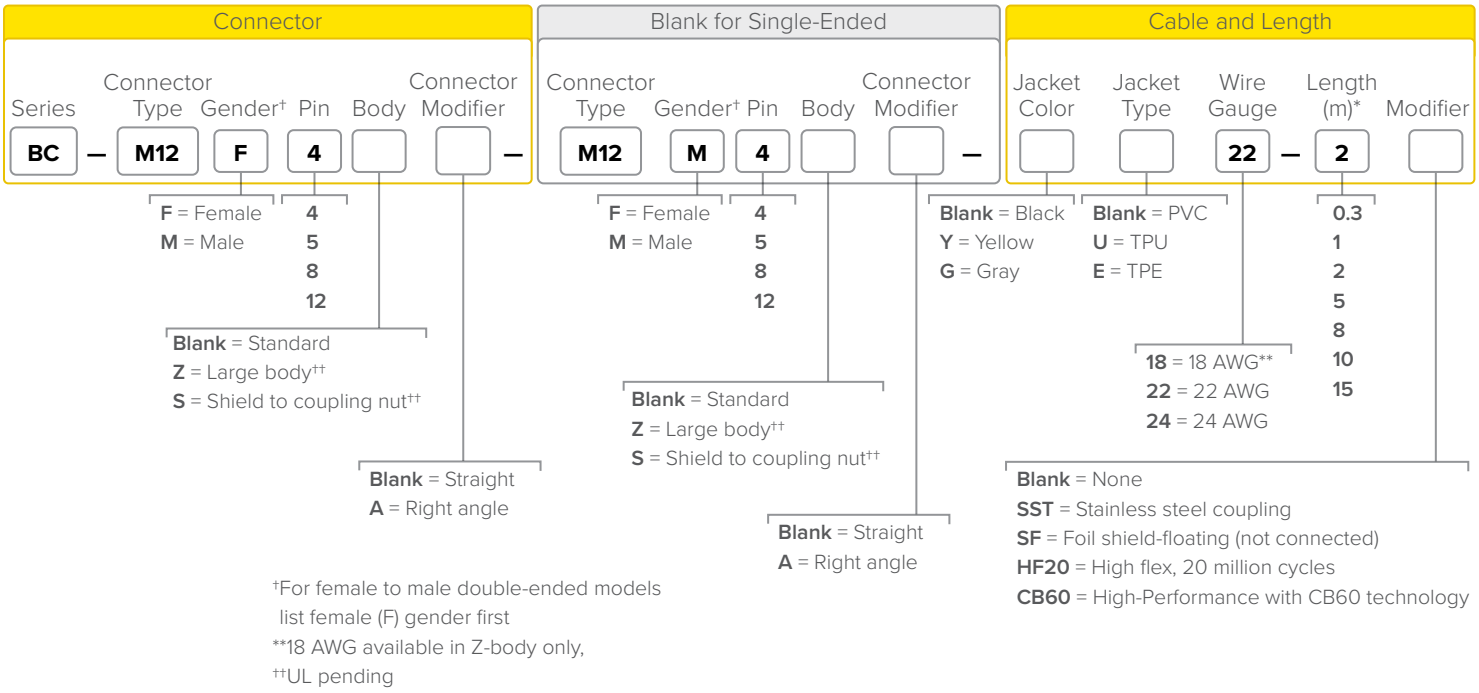
Tank level is already monitored by an analog sensor tied into a PLC, but there is no way for operators to visualize level directly at the tank.

Solution

A DXMR50-LB-MPA-PI Logic Block takes the analog signal representing the tank level from a T30R sensor on Input 2. The Logic Block scales the value and writes it to an SD50 Status Display over Modbus on Input 1. Set to Measure Mode, the SD50 displays the tank level with LED fill, text, and color indication. At the same time, the Logic Block recasts the analog signal on its Output back to the PLC, ensuring the existing monitoring system remains unchanged.

Connectivity

M12 Signal Cordsets



†For female to male double-ended models list female (F) gender first
**18 AWG available in Z-body only,
††UL pending

Vibration Shock	Meets IEC 60068-2-6 requirements	**Temperature**	-40° to +70 °C
Mechanical Shock	Meets IEC 60068-2-27 requirements	**Environmental Rating**	IP66, IP67, IP68, NEMA 1, UL Type 1
		Certifications	CE cULus LISTED

4-Pin PVC A-Code (Voltage: 30 V DC, Current: 4 A, AWG: 22, Cable ø: 5.2 mm)

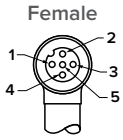






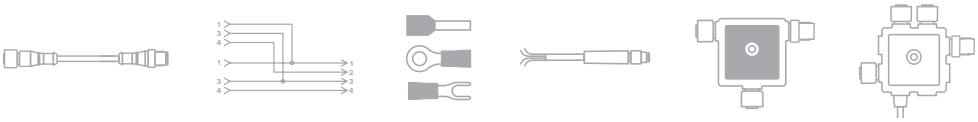
Description	Length*	Straight	Right-Angle
Female QD to Flying Leads	2 m	BC-M12F4-22-2	BC-M12F4A-22-2
	5 m	BC-M12F4-22-5	BC-M12F4A-22-5
	10 m	BC-M12F4-22-10	BC-M12F4A-22-10
Male QD to Flying Leads	2 m	BC-M12M4-22-2	—
	5 m	BC-M12M4-22-5	—
	10 m	BC-M12M4-22-10	—
Description	**Length***	**Straight/Straight** (Female/Male)	**Straight/Right-Angle** (Female/Male)
Double-Ended	2 m	BC-M12F4-M12M4-22-2	BC-M12F4-M12M4A-22-2
	5 m	BC-M12F4-M12M4-22-5	BC-M12F4-M12M4A-22-5
	10 m	BC-M12F4-M12M4-22-10	BC-M12F4-M12M4A-22-10

Pinout



1 = Brown
2 = White
3 = Blue
4 = Black
5 = Unused

***Custom lengths available to the nearest 0.1 m.**



Contact Banner for more connectivity solutions and custom capabilities.

5-Pin PVC A-Code (Voltage: 30 V DC, Current: 4 A, AWG: 22, Cable ø: 5.6 mm)



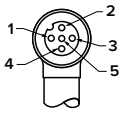




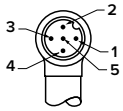
Description	Length*	Straight	Right-Angle
Female QD to Flying Leads	2 m	BC-M12F5-22-2	BC-M12F5A-22-2
	5 m	BC-M12F5-22-5	BC-M12F5A-22-5
	10 m	BC-M12F5-22-10	BC-M12F5A-22-10
Male QD to Flying Leads	2 m	BC-M12M5-22-2	BC-M12M5A-22-2
	5 m	BC-M12M5-22-5	BC-M12M5A-22-5
	10 m	BC-M12M5-22-10	BC-M12M5A-22-10
Description	**Length***	**Straight/Straight** (Female/Male)	**Straight/Right-Angle**
Double-Ended	2 m	BC-M12F5-M12M5-22-2	BC-M12F5-M12M5A-22-2
	5 m	BC-M12F5-M12M5-22-5	BC-M12F5-M12M5A-22-5
	10 m	BC-M12F5-M12M5-22-10	BC-M12F5-M12M5A-22-10

Pinout

Female



Male



1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray

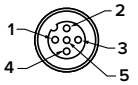
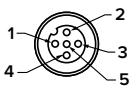
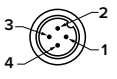
M12 Coiled Cordsets

Cable Jacket	PVC	**Temperature**	-40° to +105 °C
Vibration Shock	Meets IEC 60068-2-6 requirements	**Environmental Rating**	IP67, IP69, NEMA 1, 3, 4, 6P, 13
Mechanical Shock	Meets IEC 60068-2-27 requirements		

4-Pin A-Code (Voltage: 60 V DC, Current: 4 A, AWG: 22, Cable ø: 5.2 mm)





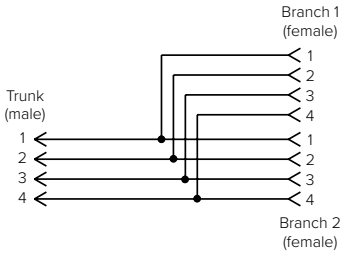
Description	Length* (retracted to extended)	Straight	Pinout
Female QD to Flying Leads	0.8 to 1.7 m	MQDC-401.7M-PUR-C	Female  **1** = Brown **2** = White **3** = Blue **4** = Black **5** = Unused
	1.0 to 2.6 m	MQDC-402.6M-PUR-C	
	1.2 to 3.3 m	MQDC-403.3M-PUR-C	
Description	**Length*** (retracted to extended)	**Straight/Straight** (Female/Male)	**Pinout**
Double-Ended	0.8 to 1.7 m	MQDEC-401.7M-PUR-C	Female  Male  **1** = Brown **2** = White **3** = Blue **4** = Black **5** = Unused
	1.0 to 2.6 m	MQDEC-403.3M-PUR-C	

Connectivity

Flat QD Splitters

Cable Jacket	PVC	**Temperature**	–40 °C to +105 °C
Overmold	Black PUR	**Environmental Rating**	IP67

Example of Parallel 4-Pin Wiring

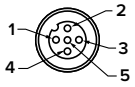


4-Pin A-Code (Voltage: 30 V DC/AC, Current: 4 A, AWG: 22, Trunk Cable ø: 4.4 mm, Branch Cable ø: 5.5 mm)

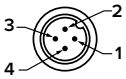


Cable Lengths*		Models	Pinout
Trunk (Male)	**Branches** (Female)		
No Trunk/Integral QD	2 x 0.3 m	**CSB-M1240M1241**	
0.3 m	2 x 0.3 m	**CSB-M1241M1241**	
1 m	2 x 1 m	**CSB-M1243M1243**	
2.4 m	2 x 0.3 m	**CSB-M1248M1241**	
4.6 m	2 x 0.3 m	**CSB-M12415M1241**	
7.6 m Unterminated	2 x 0.3 m	**CSB-UNT425M1241**	

Female



Male

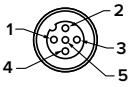


5-Pin A-Code (Voltage: 30 V DC/AC, Current: 4 A, AWG: 22, Cable ø: 5.9 mm)

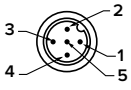


Cable Lengths*		Models	Pinout
Trunk	**Branches**		
0.3 m (Male)	2 x 0.3 m (Female)	**CSB-M1251M1251B**	
0.3 m (Female)	2 x 0.3 m (Male)	**CSB-M1251FM1251M**	

Female

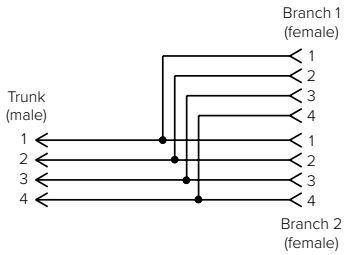


Male

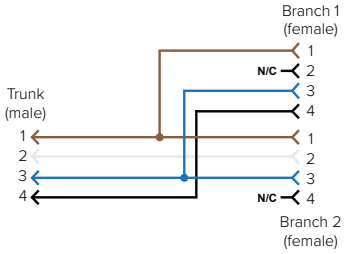


Round QD Splitters

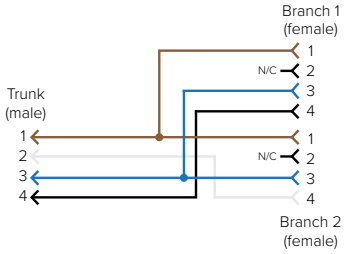
Example of Parallel 4-Pin Wiring



S15YA24-M124-M124-0.2M
Non-parallel 4-Pin Wiring

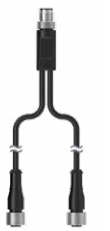


S15YA4-M124-M124-0.2M
Non-parallel 4-Pin Wiring



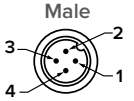
4-Pin A-Code

(Voltage: 30 V DC/AC, Current: 4 A, AWG: 4 x 22, Cable ø: 5.2 mm, Temperature: –40 °C to +70 °C, Environmental Rating: IP67)

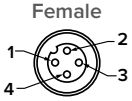


Cable Lengths*		Straight	Wiring	Pinout
Trunk (Male)	**Branches** (Female)			
No Trunk/ Integral M12 QD	0.2 m	**S15YA24-M124-M124-0.2M**	See above	
	0.2 m	**S15YA4-M124-M124-0.2M**	Discrete	
	0.2 m	**S15YB-M124-M124-0.2M**	Parallel	

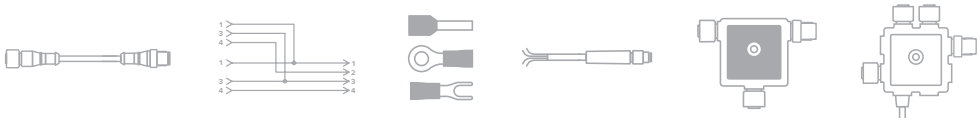
Male



Female



***Custom lengths available to the nearest 0.1 m.**

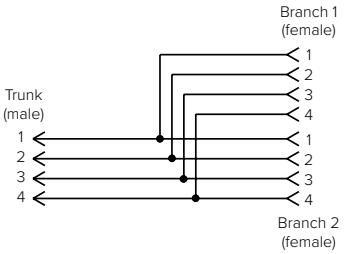


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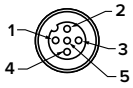
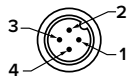
Compact QD Splitters and Tees

Overmold	Black PUR	**Environmental Rating**	IP67
Temperature	–40 °C to +105 °C		

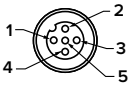
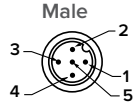
Example of Parallel 4-Pin Wiring



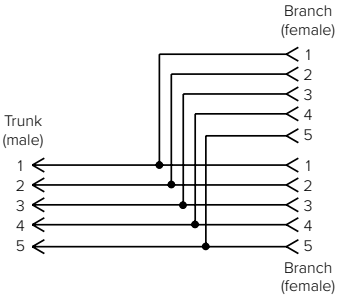
4-Pin A-Code (Voltage: 30 V DC/AC, Current: 4 A, AWG: 22)

	Ports	Models	Pinout
	1 x Male 2 x Female	**CSB-M1240M1240**	Female  Male 

5-Pin A-Code (Voltage: 30 V DC/AC, Current: 4 A, AWG: 22)

	Ports	Models	Pinout
	1 x Male 1 x Female 1 x Female	**CSB-M1250M1250-T**	Female 
	1 x Male 2 x Female	**CSB-M1250M1250A**	Male 

Example of Parallel 5-Pin Wiring (diagram applies to all branches)

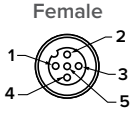
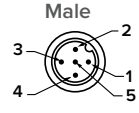


Multi-port Splitters

Cable Jacket	PVC	**Temperature**	–40 °C to +105 °C
Overmold	Black PUR	**Environmental Rating**	IP67



5-Pin A-Code (Voltage: 30 V DC/AC, Current: 4 A, AWG: 4 x 22, Cable ø: 5.6 mm)

Cable Lengths*		Models	Pinout
Branches (Female)	**Trunk** (Male)		
4 x No Branch/Integral QD	0.3 m	**CSB4-M1251M1250**	Female  Male 

RJ45 Data Cordsets

Connector							Length
Series		Connector Type†		Gender		Connector Type	Length (m)*
BCD	—	**RJ45**		**M**	—	**RJ45**	— **2**
		M12D = 4-pin D-Code **M8** = 4-pin **RJ45** = 8-pin RJ45		**M** = Male **Blank** = RJ45		**RJ45** = 8-pin RJ45	**0.5** **1** **2** **3** **5**

Note: All cordsets are shielded to coupling nut

†For M12/M8 to RJ45 double-ended models list M12/M8 connector first

Cable Jacket	PVC	**Environmental Rating**	IP20
Temperature	-20° to +70 °C	**Certifications**	CE, cULus LISTED

4-Pin D-Code (Voltage: 60 V DC/AC, Current: 1.5 A, AWG: 22, M12 Cable ø: 7 mm, M8 Cable ø: 5.8 mm)



Description	Length*	Straight
M12 Double-Ended Male QD to RJ45	2 m	BCD-M12DM-RJ45-2
	5 m	BCD-M12DM-RJ45-5
	10 m	BCD-M12DM-RJ45-10



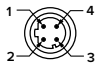
Description	Length*	Straight
M8 Double-Ended Male QD to RJ45	2 m	BCD-M8M-RJ45-2
	5 m	BCD-M8M-RJ45-5
	10 m	BCD-M8M-RJ45-10



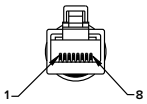
Description	Length*	Straight/Straight (Female/Male)
Double-Ended RJ45	2 m	BCD-RJ45-RJ45-2
	5 m	BCD-RJ45-RJ45-5
	10 m	BCD-RJ45-RJ45-10

Pinout

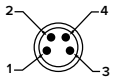
M12 Male



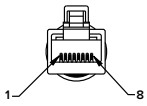
M12 RJ45



M8 Male

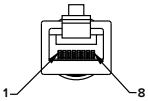


M8 RJ45

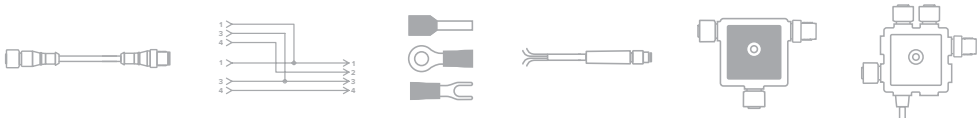


1 = White/orange
2 = Orange
3 = White/green
4 = Green

RJ45



***Custom lengths available to the nearest 0.1 m.**

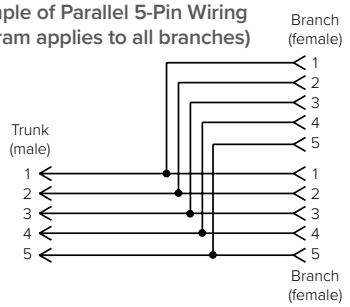


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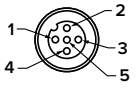
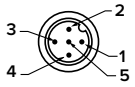
Molded Junction Blocks

Overmold	Black PUR	**Environmental Rating**	IP65, IP67, and IP68
Temperature	–40 °C to +70 °C		

Example of Parallel 5-Pin Wiring (diagram applies to all branches)



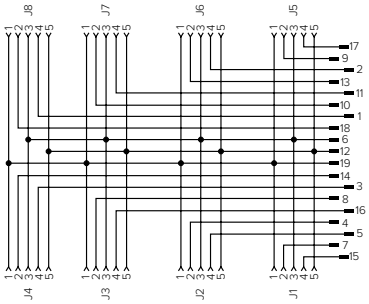
5-Pin (Voltage: 60 V DC/AC, Current: 4 A)

	Connections	Models	Pinout
	4 x Female M12 1 x Male M12	R50-4M125-M125Q-P	Female 
	8 x Female M12 1 x Male M12	R95-8M125-M125Q-P	Male 

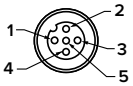
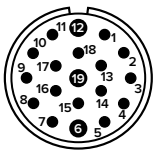
Molded I/O Junction Blocks

Temperature	–40 °C to +70 °C	**Environmental Rating**	IP67
		Certifications	CE cULus LISTED

Wiring Diagram



5-Pin (Voltage: 30 V DC/AC, Current: 8 A total per connector, AWG: 18 and 22, Cable ø: 9.2 mm)

	Cable Lengths*		LED	Models	Pinout
	Branches (Female)	**Trunk**			
	8 x No Branch/ Integral QD	1 m with Flying Leads	PNP LED	R95-8M125-C1-D24P	Female  **1** = Purple **2** = Red **3** = Gray **4** = Red/Blue **5** = Green **6** = Blue (18 AWG) **7** = Gray/Pink **8** = White/Green **9** = White/Yellow **10** = White/Gray **11** = Black **12** = Green/Yellow (18 AWG) **13** = Yellow/Brown **14** = Brown/Green **15** = White **16** = Yellow **17** = Pink **18** = Gray/Brown **19** = Brown (18 AWG)
		2 m with Flying Leads		R95-8M125-C2-D24P	
		5 m with Flying Leads		R95-8M125-C5-D24P	
		10 m with Flying Leads		R95-8M125-C10-D24P	
		0.3 m 19-pin M23 Male QD		R95-8M125-0.3M23-D24P	
		1 m with Flying Leads	No LED	R95-8M125-C1-D24	Male 
		2 m with Flying Leads		R95-8M125-C2-D24	
		5 m with Flying Leads		R95-8M125-C5-D24	
		10 m with Flying Leads		R95-8M125-C10-D24	
		0.3 m 19-pin M23 Male QD		R95-8M125-0.3M23-D24	

M12 Field Wireable

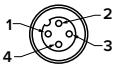
Terminal	Screw	**Temperature**	-40° to +85 °C
		Environmental Rating	IP68

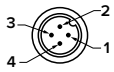
4-Pin (Voltage: 60 V DC/AC, Current: 4 A, Max AWG: 22, Cable ø: 4-6 mm)





Description	Straight	Right-Angle	Pinout
Female Screw Terminal	BFW-M12F4-6X	BFW-M12F4A-6X	Female
Male Screw Terminal	BFW-M12M4-6X	BFW-M12M4A-6X	Male



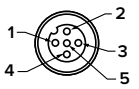


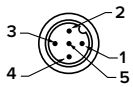
5-Pin (Voltage: 60 V DC/AC, Current: 4 A, Max AWG: 22, Cable ø: 4-6 mm)





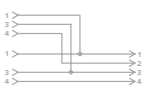
Description	Straight	Right-Angle	Pinout
Female Screw Terminal	BFW-M12F5-6X	BFW-M12F5A-6X	Female
Male Screw Terminal	BFW-M12M5-6X	BFW-M12M5A-6X	Male



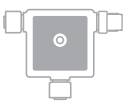


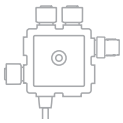
***Custom lengths available to the nearest 0.1 m.**











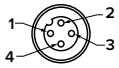
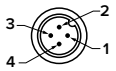
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M12 Field Wireable Slide Lock

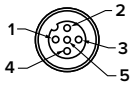
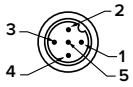
Terminal	Slide Lock	**Temperature**	-40° to +85 °C
		Environmental Rating	IP68


Slide Lock Terminal

4-Pin (Voltage: 60 V DC/AC, Current: 4 A, AWG: 20-24, Cable ø: 4-6 mm)

	Description	Straight	Right-Angle	Pinout
	Female Slide Lock Terminal	BFW-M12F4-6SL	BFW-M12F4A-6SL	Female 
	Male Slide Lock Terminal	BFW-M12M4-6SL	BFWM12M4A-6SL	Male 

5-Pin (Voltage: 60 V DC/AC, Current: 4 A, AWG: 20-24, Cable ø: 4-6 mm)

	Description	Straight	Right-Angle	Pinout
	Female Slide Lock Terminal	BFW-M12F5-6SL	BFW-M12F5A-6SL	Female 
	Male Slide Lock Terminal	BFW-M12M5-6SL	BFWM12M5A-6SL	Male 

Accessories



LMBM12MAG
Attaches to M12 cordset end (magnetic)



BWA-M12CAB-MAG
Attaches to M12 cable (magnetic)



LMBM12SP
Attaches to M12 cordset end



ACC-CAP M12-10
Protective end cap



LMBS15MAG
Attaches to S15C (magnetic)

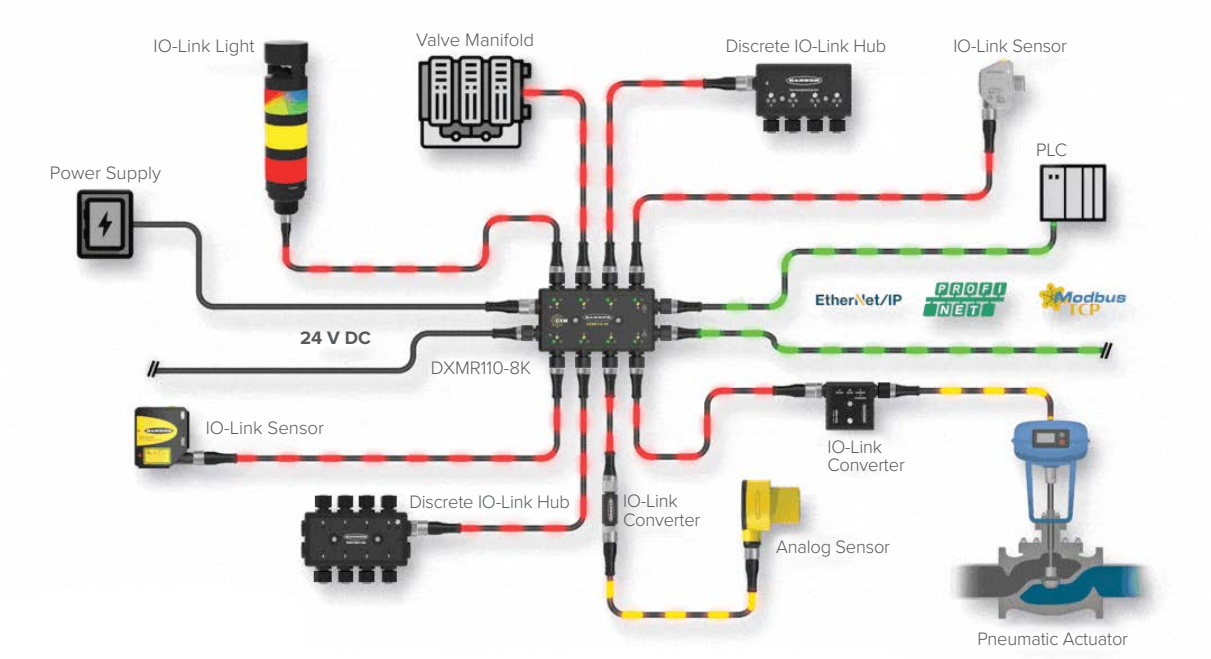


LMBS15SP
Attaches to S15C

Streamline Your IO-Link Network

The compact DXMR110-8K allows for the connection and control of up to eight IO-Link devices such as sensors, indicator lights, IO-Link hubs, without the need for multiple traditionally expensive input cards. The DXMR110-8K can communicate with higher-level control systems via EtherNet/IP, Modbus/TCP, and PROFINET. The DXMR110-8K also has the ability to push IO-Link data to cloud platforms.

DXMR110-8K System Diagram

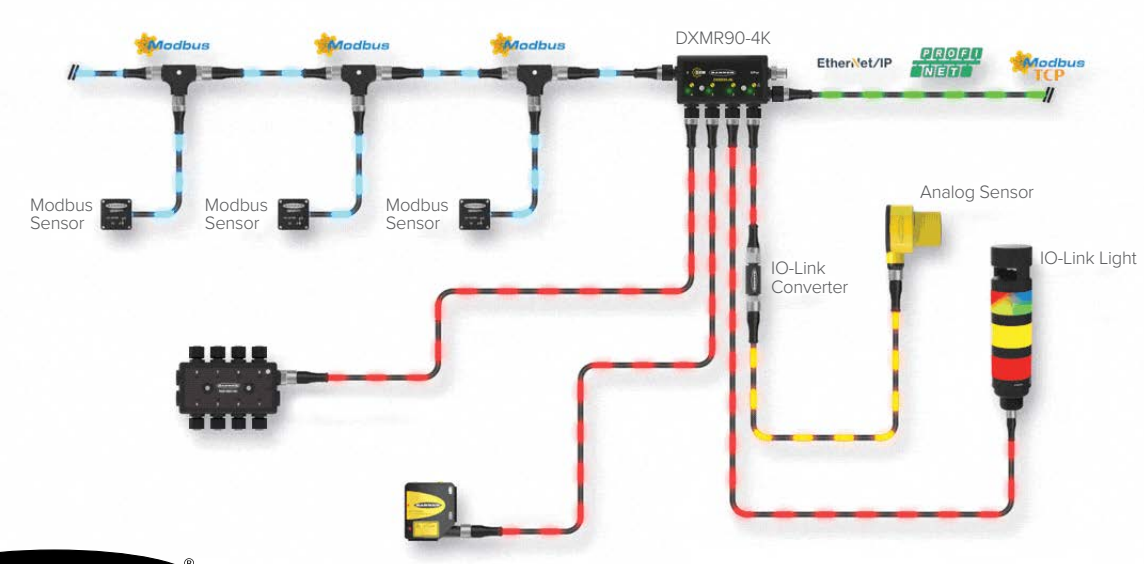


No IO-Link Device? No problem. Our expansive line of converters can adapt most industrial devices to IO-Link quickly, giving you the flexibility to build the system you need.

Connect More Devices with Ease

The DXMR90-4K allows for the connection and control of up to four IO-Link devices, replacing multiple traditionally expensive input cards. The DXMR90-4K can communicate with higher-level control systems via EtherNet/IP, Modbus/TCP, and PROFINET. This IO-Link master also has an additional serial port that allows for the connection of more devices for maximum flexibility.

DXMR90-4K System Diagram



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