

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Overview

SIMATIC sensors PXI300

Sensors for applications with special requirements:

- Increased operating voltages
- Higher degrees of protection
- Operating distances better than specified in standard

Selection table

SIMATIC PXI300								
								
Type, Ø	4 mm	M5	M8	M12	Box with M14	6.5 mm	8 mm x 8 mm	M18
Operating distance								
• 0 ... 0.8 mm (PXI.1.)	0.6 mm	0.6 mm						
• 1 ... 4 mm (PXI.2.)			1 mm 2 mm 2.5 mm 3 mm	2 mm 4 mm	2.5 mm	2.5 mm 3 mm	3 mm	
• 5 ... 10 mm (PXI.3.)			6 mm	6 mm 10 mm	5 mm			5 mm 8 mm
• 12 ... 22 mm (PXI.4.)								12 mm 20 mm
Output								
• NO contact/NC contact	■ / —	■ / —	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / ■
• pnp/npn	■ / —	■ / —	■ / ■	■ / ■	■ / —	■ / —	■ / ■	■ / ■
Number of wires	3	3	3	2, 3	2, 3	3	3	2, 3
Operating voltage								
• 10/15 ... 30/35 V DC	■	■	■	■		■	■	■
• 10 ... 65 V DC			■	■	■			■
• 20 ... 265/320 V AC/DC				■	■			■
Connection								
• M8 connector			■			■	■	
• M12 connector			■	■	■			■
• Cable	■	■	■	■	■	■	■	■
Degree of protection								
• IP65 / IP67			— / ■	— / ■	— / ■	— / ■	— / ■	— / ■
• IP68 / IP69K	■ / —	■ / —	■ / —	■ / ■		■ / —		■ / ■
See page	2/172	2/172	from 2/172	from 2/173	2/176, 2/184	from 2/178	2/179	from 2/185

A configurator for fast product selection and ordering in the Internet can be found at www.siemens.com/simatic-sensors/px

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SIMATIC PXI300



Type, Ø	18 mm	M30	40 mm x 40 mm	60 mm x 80 mm	80 mm x 100 mm
Operating distance					
• 5 ... 10 mm (PXI33.)	5 mm 8 mm	10 mm			
• 12 ... 22 mm (PXI34.)		15 mm 22 mm	15 mm 20 mm		
• 25 ... 40 mm (PXI35.)		40 mm	25 mm 30 mm 35 mm 40 mm	30 mm	30 mm 40 mm
• 50 ... 75 mm (PXI36.)				50 mm	65 mm
Output					
• NO contact/NC contact	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
• pnp/npn	■ / ■	■ / ■	■ / ■	■ / —	■ / —
Number of wires	3	2, 3	2, 3, 4	2, 3	2, 3
Operating voltage					
• 10/15 ... 30/35 V DC	■	■	■		
• 10 ... 65 V DC		■	■	■	■
• 20 ... 265/320 V AC/DC		■	■	■	■
Connection					
• M12 connector		■	■		
• Cable	■	■	■		
• Terminal compartment			■	■	■
Degree of protection					
• IP65 / IP67		— / ■	■ / ■	■ / —	■ / —
• IP68 / IP69K	■ / ■	■ / ■	■ / ■		
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SIMATIC PXI inductive proximity switches

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Operating distance 0.6 mm
Operating distance 1 mm

Technical specifications

Class	IP68	IP68	Extra duty (65 V DC)
Number of wires	3-wire	3-wire	3-wire
Design	Ø 4 mm, mini	M5, mini	M8
Installation in metal	Flush	Flush	Flush
Rated operating distance s_n	0.6 mm	0.6 mm	1 mm
Enclosure material	Stainless steel	Stainless steel	Stainless steel
Operational voltage (DC) V	10 ... 30	10 ... 30	10 ... 65
No-load supply current I_0 mA	≤ 10	≤ 10	≤ 10
Rated operational current I_e mA	200	200	200
Switching frequency f Hz	3000	3000	5000
Repeat accuracy R mm	0.01	0.01	0.1
Power-up delay t_v ms	8	8	40
Switching status display	—	—	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68	IP68	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With 2 m cable, PUR			3 × 0.14 mm ²	3 × 0.14 mm ²	3 × 0.14 mm ²
NO contact, pnp	11	▶	3RG46 00-0AG02	▶	3RG46 10-0AG02
NC contact, pnp	12		—	—	3RG40 11-0AB00 3RG40 11-0AA00
With 8 mm combination plug					
NO contact, pnp	2	A	—	—	▶ 3RG40 11-7AB00
NC contact, pnp	3	A	—	—	3RG40 11-7AA00
With M12 connector					
NO contact, pnp	2	E, F	—	—	▶ 3RG40 11-3AB00
NC contact, pnp	3	F	—	—	3RG40 11-3AA00

1) See page 2/242.

2) See from page 2/268.

▶ Preferred type, available from stock.

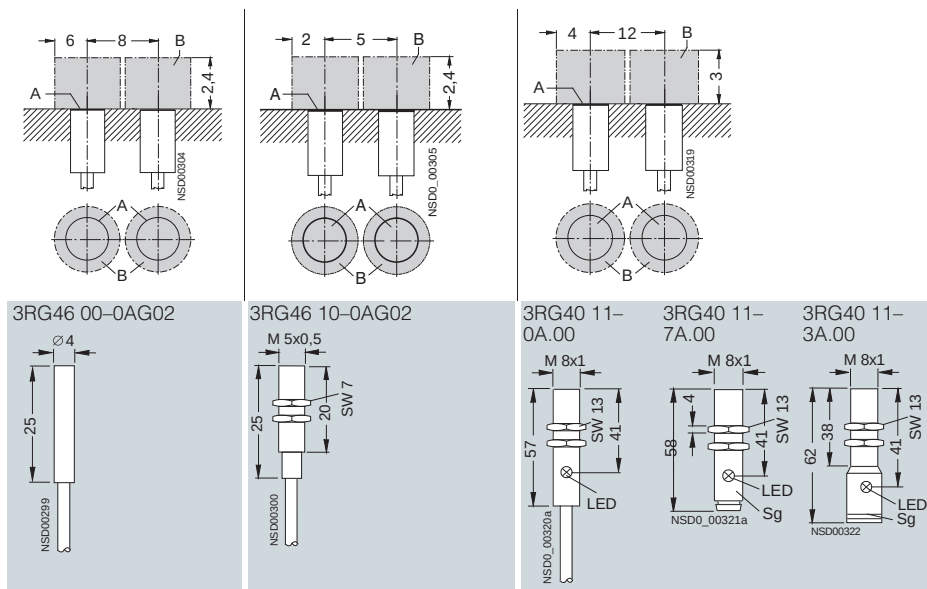
Dimensions

Mounting instructions

Dimension depending on form

A = active surface

B = metal-free area



Technical specification

Class	Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires	3-wire	2-wire
Design	M12	M12
Installation in metal	Flush	Flush
Rated operating distance s_n	2 mm	2 mm
Enclosure material	Brass, nickel-plated	Brass, nickel-plated
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	200
• 20 ms	mA –	1800
Minimum load current	mA –	5
Switching frequency f	Hz 4000	25/1200 (AC/DC)
Repeat accuracy R	mm 0.1	0.04
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	► B	3RG40 12-0AB00	–
NC contact, pnp	12	►	3RG40 12-0AA00	–
NO contact	16	–	–	► B 3RG40 12-0KB00
NC contact	17	–	–	B 3RG40 12-0KA00
With M12 connector				
NO contact, pnp	2	E, F ► B	3RG40 12-3AB00	–
NC contact, pnp	3	F	3RG40 12-3AA00	–
NO contact	8	E, F	–	► B 3RG40 12-3KB00
NC contact	9	F	–	B 3RG40 12-3KA00

1) See page 2/242.

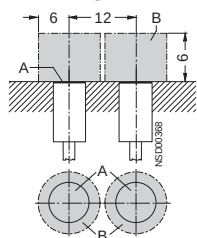
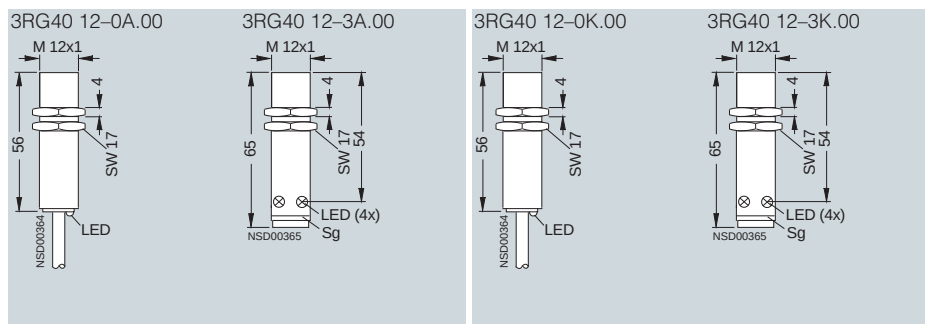
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free area

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Operating distance 2 mm

Technical specifications

Class	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire	3-wire
Design	Ø 12 mm	M12	M12
Installation in metal	Flush	Flush	Flush
Rated operating distance s_n	2 mm	2 mm	2 mm
Enclosure material	Molded plastic	Molded plastic	Brass, nickel-plated
Operating voltage (DC)	V 15 ... 34	15 ... 34	15 ... 34
No-load supply current I_0	mA ≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e	mA 200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f	Hz 1200	1200	1200
Repeat accuracy R	mm 0.1	0.1	0.1
Power-up delay t_v	ms 40	40	40
Switching status display	Yellow LED	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With M12 connector					
NO contact, pnp	2	E, F	–	–	B 3RG40 12-3AG31
With 2 m cable			PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²	PVC, 3 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 52-0AG30	B 3RG40 12-0AG30	B 3RG40 12-0AG31
NC contact, pnp	12	B	3RG40 52-0AF30	B 3RG40 12-0AF30	–
NO contact, npn	13	B	3RG40 52-0GB30	B 3RG40 12-0GB30	B 3RG40 12-0GB31
NC contact, npn	14	B	3RG40 52-0GA30	B 3RG40 12-0GA30	–

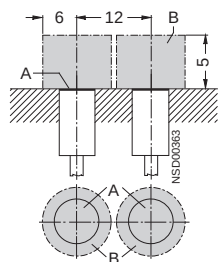
1) See page 2/242.

2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

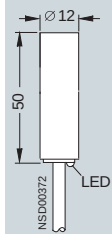
Dimensions

Mounting instructions

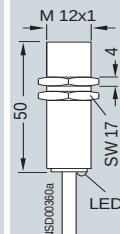


A = active surface
B = metal-free area

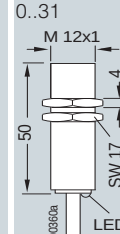
3RG40 52-0..30



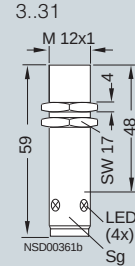
3RG40 12-0..30



3RG40 12-0..31



3RG40 12-3..31



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Operating distance 2 mm

Technical specifications

Class	Greater rated operating distance	
Number of wires	3-wire	
Design	M8, Shorty	M8
Installation in metal	Flush	Flush
Rated operating distance s_n	2 mm	2 mm
Enclosure material	Stainless steel	Stainless steel
Operating voltage (DC) V	15 ... 34	10 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	600	600
Repeat accuracy R mm	0.1	0.1
Power-up delay t_v ms	40	40
Switching status display	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	3 m, 3 × 0.25 mm ²
NO contact, pnp	11	▶ B	3RG41 11-0AG33	▶ 3RG41 11-0AG00
NC contact, pnp	12	B	3RG41 11-0AF33	–
NO contact, npn	13		3RG41 11-0GB33	–
NC contact, npn	14		3RG41 11-0GA33	–
With 8 mm combination plug				
NO contact, pnp	2	A	B 3RG41 11-7AG33	–
NC contact, pnp	3	A	▶ B 3RG41 11-7AF33	–
NO contact, npn	4	A	B 3RG41 11-7GB33	–
NC contact, npn	5	A	B 3RG41 11-7GA33	–
With M12 connector				
NO contact, pnp	2	E, F	–	▶ 3RG41 11-3AG00
NO contact, npn	2	E, F	–	

1) See page 2/242.

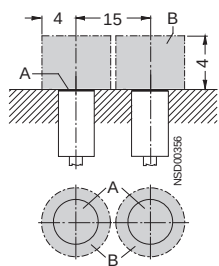
2) See from page 2/268.

▶ Preferred type, available from stock.

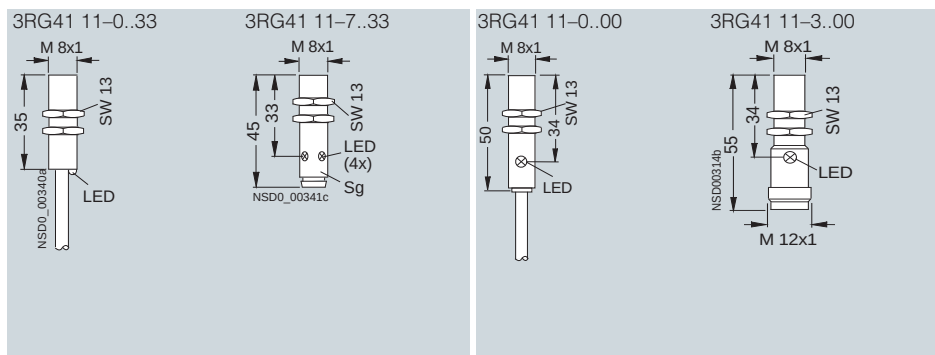
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



SIMATIC PXI inductive proximity switches

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Operating distance 2.5 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		M14	M14
Installation in metal		Flush	Flush
Rated operating distance s_n		2.5 mm	2.5 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 10	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	200
• 20 ms	mA	–	1200
Minimum load current	mA	–	5
Switching frequency f	Hz	800	25/1000 (AC/DC)
Repeat accuracy R	mm	0.05	0.04
Power-up delay t_v	ms	40	100
Switching status display		Yellow LED	Yellow LED
Precautions			
• Spurious signal suppression	•		•
• Short-circuit-proof/overload-proof	•		–
• Reverse-polarity protection	•		•
• Wire-break protection	•		•
• Inductive interference protection	•		•
• Radio interference protection	•		•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	► B	3RG40 72-0AB00	–
NC contact, pnp	12	B	3RG40 72-0AA00	–
NO contact	16	–	–	B 3RG40 72-0KB00
NC contact	17	–	–	B 3RG40 72-0KA00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG40 72-3AB00	–
NO contact	8	E, F	–	B 3RG40 72-3KB00
NC contact	9	F	–	B 3RG40 72-3KA00

1) See page 2/242.

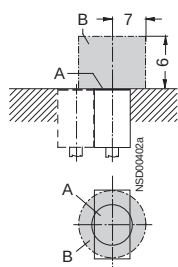
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

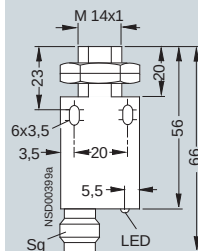
Mounting instructions



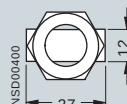
A = active surface
B = metal-free area

These proximity switches can be mounted next to one another.

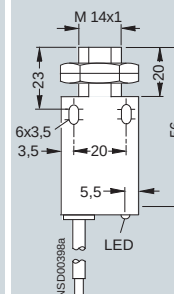
3RG40 72-3..00



Plan view



3RG40 72-0..00



Technical specifications

Class	Increased operating distance (IP68)	
Number of wires	3-wire	3-wire
Design	Ø 6.5 mm	M8
Installation in metal	Flush	Flush
Rated operating distance s_n	2.5 mm	2.5 mm
Enclosure material	Stainless steel	
Operational voltage (DC)	V	10 ... 30
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	200
Switching frequency f	Hz	1000
Repeat accuracy R	mm	0.15
Power-up delay t_v	ms	50
Switching status display	—	—
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP68	IP68

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With 2 m cable, PUR		3 × 0.14 mm ²	3 × 0.14 mm ²
NO contact, pnp	11	▶ 3RG46 02-0AG02	▶ 3RG46 11-0AG02

1) See page 2/242.

▶ Preferred type, available from stock.

Dimensions

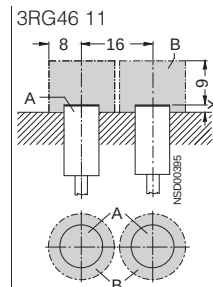
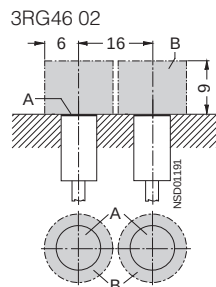
Mounting instructions

A = active surface

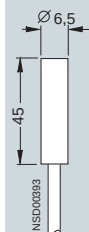
B = metal-free area

X ≥ 1.6 mm when mounted in steel,

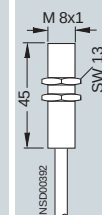
X ≥ 0.8 mm when mounted in other metal



3RG46 02-0AG02



3RG46 11-0AG02



SIMATIC PXI inductive proximity switches

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Operating distance 3 mm

Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	3-wire
Design	Ø 6.5 mm	M8
Installation in metal	Almost flush	Almost flush
Rated operating distance s_n	3 mm	3 mm
Enclosure material	Brass, nickel-plated	
Operating voltage (DC) V	10 ... 30	10 ... 30
No-load supply current I_0 mA	≤ 10	≤ 10
Rated operational current I_e mA	200	200
Switching frequency f Hz	1000	1000
Repeat accuracy R mm	0.15	0.15
Power-up delay t_v ms	50	50
Switching status display	Yellow LED	
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.14 mm ²	3 × 0.14 mm ²
NO contact, pnp	11	▶ B	3RG43 02-0AG01	▶ B 3RG43 11-0AG01
NO contact, npn	13	–	–	B 3RG43 11-0GB01
With 8 mm combination plug				
NO contact, pnp	2	A ▶ B	3RG43 02-7AG01	▶ B 3RG43 11-7AG01
With M12 connector				
NO contact, pnp	2	E, F	–	▶ B 3RG43 11-3AG01
NC contact, pnp	3	F	–	B 3RG43 11-3AF01
NO contact, npn	4	E, F	–	B 3RG43 11-3GB01

1) See page 2/242.

2) See from page 2/268.

▶ Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

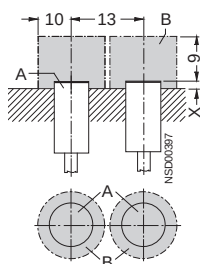
Dimensions

Mounting instructions

Dimension depending on form

A = active surface

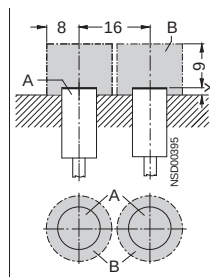
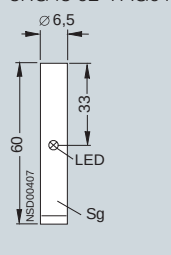
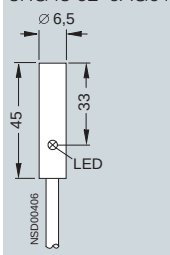
B = metal-free area



$X \geq 1.3$ mm when mounted in steel,
 $X \geq 0.65$ mm when mounted in other metal

3RG43 02-0AG01

3RG43 02-7AG01

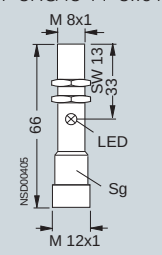
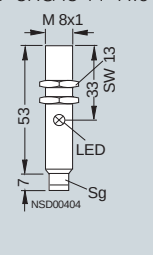
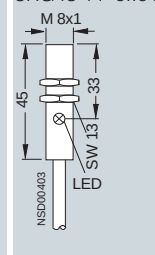


$X \geq 1.6$ mm when mounted in steel,
 $X \geq 0.8$ mm when mounted in other metal

3RG43 11-0..01

3RG43 11-7..01

3RG43 11-3..01



SIMATIC PXI inductive proximity switches

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Operating distance 3 mm

Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	
Design	8 mm × 8 mm	
Installation in metal	Almost flush	
Rated operating distance s_n	3 mm	
Enclosure material	Brass, nickel-plated	
Operating voltage (DC)	V	10 ... 30
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	200
Switching frequency f	Hz	1000
Repeat accuracy R	mm	0.15
Power-up delay t_v	ms	50
Switching status display	Yellow LED	
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.
With 2 m cable, PUR			3 × 0.14 mm ²
NO contact, pnp	11	► B	3RG43 37-0AG01
NO contact, npn	13		3RG43 37-0GB01
With 8 mm combination plug			
NO contact, pnp	2	A ► B	3RG43 37-7AG01
NO contact, npn	4	A B	3RG43 37-7GB01

1) See page 2/242.

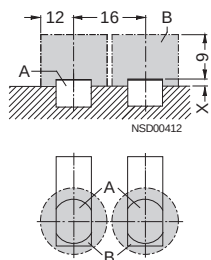
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

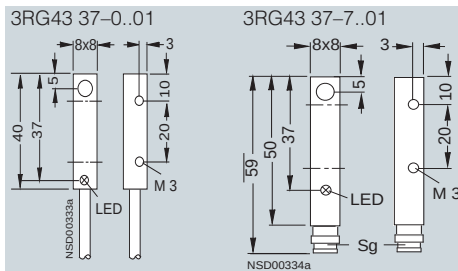


A = active surface

B = metal-free area

X ≥ 2,4 mm when mounted in steel,

X ≥ 1,2 mm when mounted in other metal



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 4 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		M12	M12
Installation in metal		Not flush	Not flush
Rated operating distance s_n		4 mm	4 mm
Enclosure material		Brass, nickel-plated	Brass, nickel-plated
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 10	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	200
• 20 ms	mA	–	1200
Minimum load current	mA	–	5
Switching frequency f	Hz	800	25/900 (AC/DC)
Repeat accuracy R	mm	0.2	0.12
Power-up delay t_v	ms	40	100
Switching status display		Yellow LED	Yellow LED
Precautions			
• Spurious signal suppression	•		•
• Short-circuit-proof/overload-proof	•		–
• Reverse-polarity protection	•		•
• Wire-break protection	•		•
• Inductive interference protection	•		•
• Radio interference protection	•		•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	► B	3RG40 22-0AB00	–
NC contact, pnp	12		3RG40 22-0AA00	–
NO contact	16	–	–	► B 3RG40 22-0KB00
NC contact	17	–	–	B 3RG40 22-0KA00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG40 22-3AB00	–
NC contact, pnp	3	F	3RG40 22-3AA00	–
NO contact	8	E, F	–	► B 3RG40 22-3KB00
NC contact	9	F	–	B 3RG40 22-3KA00

1) See page 2/242.

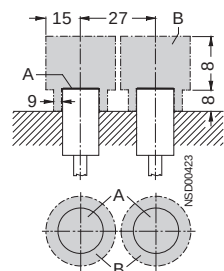
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

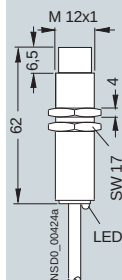
Dimensions

Mounting instructions

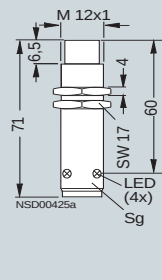


A = active surface
B = metal-free area

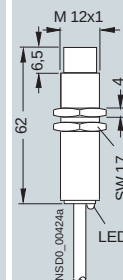
3RG40 22-0A.00



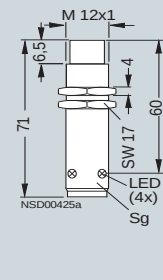
3RG40 22-3A.00



3RG40 22-0K.00



3RG40 22-3K.00



Technical specifications

Class	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire	3-wire
Design	Ø 12 mm	M12	M12
Installation in metal	Not flush	Not flush	Not flush
Rated operating distance s_n	4 mm	4 mm	4 mm
Enclosure material	Molded plastic	Molded plastic	Brass, nickel-plated
Operating voltage (DC) V	15 ... 34	15 ... 34	15 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	800	800	800
Repeat accuracy R mm	0.2	0.2	0.2
Power-up delay t_v ms	40	40	40
Switching status display	Yellow LED	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With 2 m cable			PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²	PVC, 3 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 62-0AG30	B 3RG40 22-0AG30	B 3RG40 22-0AG31
NC contact, pnp	12	B	3RG40 62-0AF30	B 3RG40 22-0AF30	—
NO contact, npn	13	B	3RG40 62-0GB30	B 3RG40 22-0GB30	B 3RG40 22-0GB31
NC contact, npn	14	B	3RG40 62-0GA30	B 3RG40 22-0GA30	—
With M12 connector					
NO contact, pnp	2	E, F	—	—	B 3RG40 22-3AG31

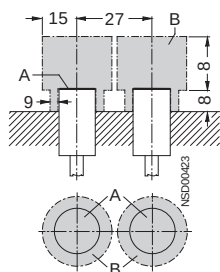
1) See page 2/242.

2) See from page 2/268.

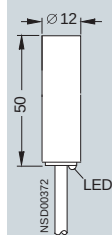
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

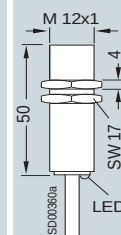
Mounting instructions

A = active surface
B = metal-free area

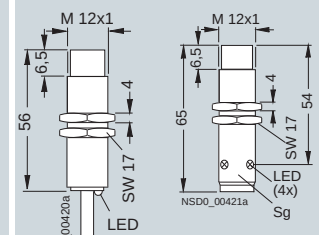
3RG40 62-0..30



3RG40 22-0..30



3RG40 22-0..31 3RG40 22-3..31



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 4 mm

Technical specifications

Class	IP68 / 69 K (DC 65 V)	IP68 / 69 K (AC/DC)
Number of wires	3-wire	2-wire
Design	M12	M12
Installation in metal	Not flush	Not flush
Rated operating distance s_n	4 mm	4 mm
Enclosure material	Molded plastic	Molded plastic
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	200
• 20 ms	mA –	1200
Minimum load current	mA –	5
Switching frequency f	Hz 800	25/900 (AC/DC)
Repeat accuracy R	mm 0.2	0.12
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	▶ B	3RG40 22-0AB30	–
NC contact, pnp	12		3RG40 22-0AA30	–
NO contact	16	E, F	–	B 3RG40 22-0KB30
NC contact	17		–	3RG40 22-3KA30
With M12 connector				
NO contact, pnp	2	E, F	B 3RG40 22-3AB30	–
NO contact	8	E, F	–	B 3RG40 22-3KB30

1) See page 2/242.

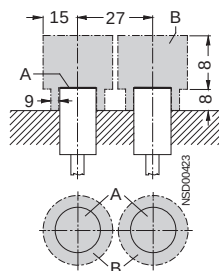
2) See from page 2/268.

▶ Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

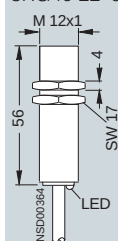
Dimensions

Mounting instructions

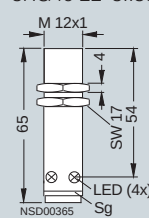


A = active surface
B = metal-free area

3RG40 22-0..30



3RG40 22-3..30



Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	3-wire
Design	M12, Shorty	M12
Installation in metal	Flush	Flush
Rated operating distance s_n	4 mm	4 mm
Enclosure material	Brass, nickel-plated	Brass, nickel-plated
Operating voltage (DC) V	10 ... 34	10 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	400	400
Repeat accuracy R mm	0.2	0.2
Power-up delay t_v ms	40	40
Switching status display	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			$3 \times 0.25 \text{ mm}^2$	$3 \times 0.25 \text{ mm}^2$
NO contact, pnp	11	B	3RG41 12-0AG33	► B 3RG41 12-0AG01
NC contact, pnp	12		–	B 3RG41 12-0AF01
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG41 12-3AG33	► B 3RG41 12-3AG01
NC contact, pnp	3	F	3RG41 12-3AF33	B 3RG41 12-3AF01

1) See page 2/242.

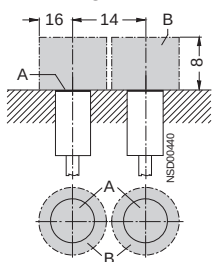
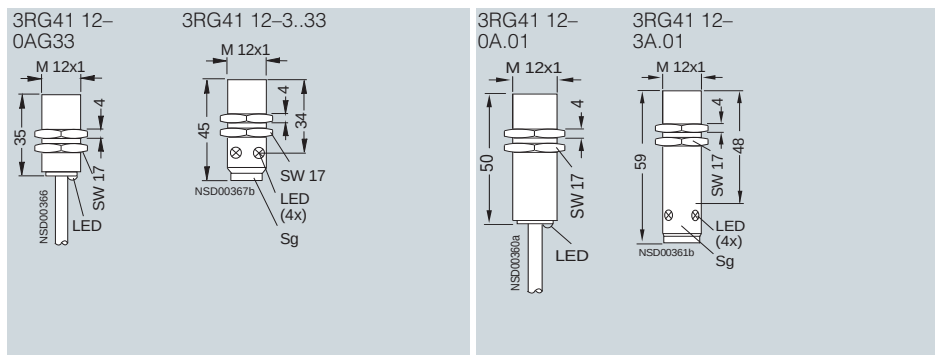
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free area

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 5 mm

Technical specifications

Class	Extra duty (65 V DC)	
Number of wires	3-wire	
Design	M14	
Installation in metal	Not flush	
Rated operating distance s_n	5 mm	
Enclosure material	Molded plastic	
Operating voltage (DC)	V	10 ... 65
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	300
Switching frequency f	Hz	300
Repeat accuracy R	mm	0.1
Power-up delay t_v	ms	40
Switching status display	Yellow LED	
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²
NO contact, pnp	13	► B	3RG40 82-0AB00
With M12 connector			
NO contact, pnp	4	E, F ► B	3RG40 82-3AB00

1) See page 2/242.

2) See from page 2/268.

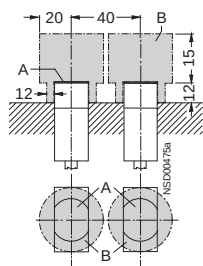
► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

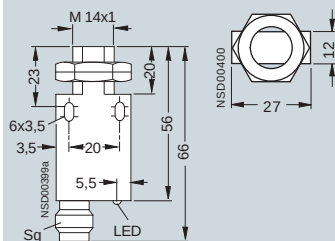
3RG40 82



A = active surface
B = metal-free area

3RG40 82-3..00

Plan view:



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 5 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		M18	M18
Installation in metal		Flush	Flush
Rated operating distance s_n		5 mm	5 mm
Enclosure material		Brass, nickel-plated	Brass, nickel-plated
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 10	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency f	Hz	800 (NO contact), 4000 (NC contact)	25/490 (AC/DC)
Repeat accuracy R	mm	0.15	0.15
Power-up delay t_v	ms	40	100
Switching status display		Yellow LED	Yellow LED
Precautions			
• Spurious signal suppression	•		•
• Short-circuit-proof/overload-proof	•		–
• Reverse-polarity protection	•		•
• Wire-break protection	•		•
• Inductive interference protection	•		•
• Radio interference protection	•		•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	► B	3RG40 13-0AB00	–
NC contact, pnp	12	► B	3RG40 13-0AA00	–
NO contact	16	–	–	► B 3RG40 13-0KB00
NC contact	17	–	–	► B 3RG40 13-0KA00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG40 13-3AB00	–
NC contact, pnp	3	F	B 3RG40 13-3AA00	–
NO contact	8	E, F	–	► B 3RG40 13-3KB00
NC contact	9	F	–	B 3RG40 13-3KA00

1) See page 2/242.

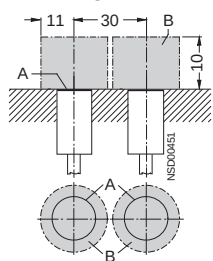
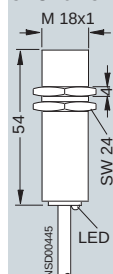
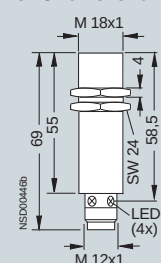
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free area3RG40 13-0..00
3RG40 13-0..013RG40 13-3..00
3RG40 13-3..01

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 5 mm

Technical specifications

Class	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire	3-wire
Design	Ø 18 mm	M18	M18
Installation in metal	Flush	Flush	Flush
Rated operating distance s_n	5 mm	5 mm	5 mm
Enclosure material	Molded plastic	Molded plastic	Brass, nickel-plated
Operating voltage (DC)	V 15 ... 34	15 ... 34	15 ... 34
No-load supply current I_0	mA ≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e	mA 200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f	Hz 800	800	800
Repeat accuracy R	mm 0.15	0.15	0.15
Power-up delay t_v	ms 40	40	40
Switching status display	Yellow LED	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With 2 m cable, PUR			PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²	PVC, 3 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 53-0AG30	B 3RG40 13-0AG30	B 3RG40 13-0AG31
NC contact, pnp	12	B	3RG40 53-0AF30	B 3RG40 13-0AF30	—
NO contact, npn	13	B	3RG40 53-0GB30	B 3RG40 13-0GB30	B 3RG40 13-0GB31
NC contact, npn	14	B	3RG40 53-0GA30	B 3RG40 13-0GA30	—
With M12 connector					
NO contact, pnp	2	E, F	—	—	B 3RG40 13-3AG31

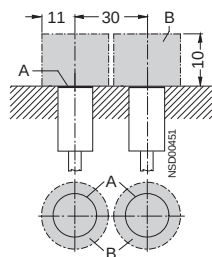
1) See page 2/242.

2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

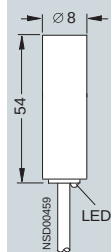
Dimensions

Mounting instructions

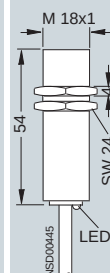


A = active surface
B = metal-free area

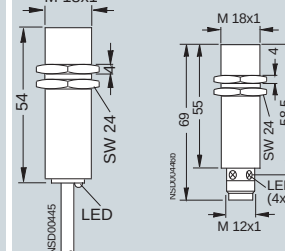
3RG40 53-0..30



3RG40 13-0..30



3RG40 13-0..31 3RG40 13-3AG31



Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	3-wire
Design	M8	M12
Installation in metal	Not flush	Almost flush
Rated operating distance s_n	6 mm	6 mm
Enclosure material	Brass, nickel-plated	
Operating voltage (DC) V	10 ... 30	10 ... 30
No-load supply current I_0 mA	≤ 10	≤ 10
Rated operational current I_e mA	200	200
Switching frequency f Hz	500	800
Repeat accuracy R mm	0.15	0.15
Power-up delay t_v ms	15	15
Switching status display	Yellow LED	
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	•
• Reverse-polarity protection	•	•
• Wire-break protection	–	–
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.14 mm ²	3 × 0.34 mm ²
NO contact, pnp	11	► B	3RG43 21-0AG01	► B 3RG43 12-0AG01
NC contact, pnp	12	B	3RG43 21-0AF01	3RG43 12-0AF01
NO contact, npn	13	B	3RG43 21-0GB01	B 3RG43 12-0GB01
NC contact, npn	14	B	3RG43 21-0GA01	–
With 8 mm combination plug				
NO contact, pnp	2	A	► B 3RG43 21-7AG01	–
NC contact, pnp	3	A	B 3RG43 21-7AF01	–
NO contact, npn	4	A	B 3RG43 21-7GB01	–
NC contact, npn	5	A	B 3RG43 21-7GA01	–
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG43 21-3AG01	► B 3RG43 12-3AG01
NC contact, pnp	3	F	B 3RG43 21-3AF01	3RG43 12-3AF01
NO contact, npn	4	E, F	B 3RG43 21-3GB01	B 3RG43 12-3GB01
NC contact, npn	5	F	B 3RG43 21-3GA01	–

1) See page 2/242.

2) See from page 2/268.

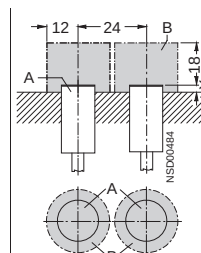
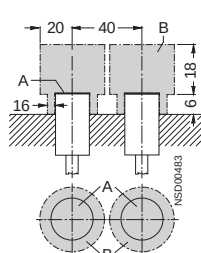
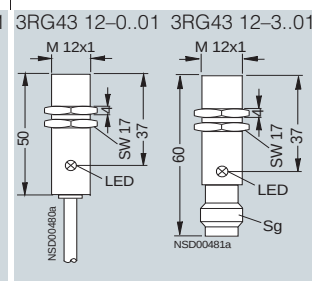
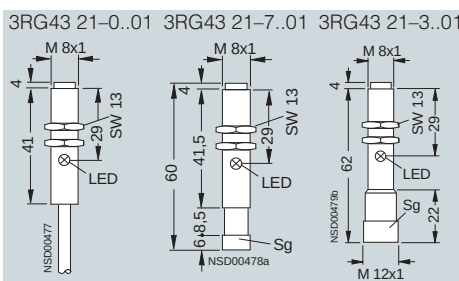
► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

Dimension depending on form

A = active surface
B = metal-free areaX ≥ 2.4 mm for mounting in steel,
X ≥ 1.2 mm for mounting in other metals

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 8 mm

Technical specifications

Class	Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires	3-wire	2-wire
Design	M18	M18
Installation in metal	Not flush	Not flush
Rated operating distance s_n	8 mm	8 mm
Enclosure material	Brass, nickel-plated	Brass, nickel-plated
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	300
• 20 ms	mA –	1800
Minimum load current	mA –	5
Switching frequency f	Hz 500	25/340 (AC/DC)
Repeat accuracy R	mm 0.2	0.2
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	► B	3RG40 23-0AB00	–
NC contact, pnp	12	► B	3RG40 23-0AA00	–
NO contact	16	–	–	► B 3RG40 23-0KB00
NC contact	17	–	–	B 3RG40 23-0KA00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG40 23-3AB00	–
NC contact, pnp	3	F	B 3RG40 23-3AA00	–
NO contact	8	E, F	–	► B 3RG40 23-3KB00
NC contact	9	F	–	B 3RG40 23-3KA00

1) See page 2/242.

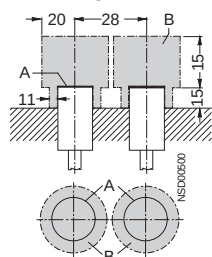
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

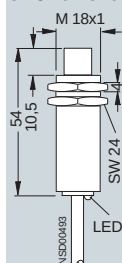
Dimensions

Mounting instructions

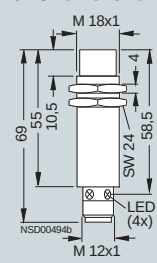


A = active surface
B = metal-free area

3RG40 23-0..00
3RG40 23-0..01



3RG40 23-3..00
3RG40 23-3..01



Technical specifications

Class	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire	3-wire
Design	Ø 18 mm	M18	M18
Installation in metal	Not flush	Not flush	Not flush
Rated operating distance s_n	8 mm	8 mm	8 mm
Enclosure material	Molded plastic	Molded plastic	Brass, nickel-plated
Operating voltage (DC) V	15 ... 34	15 ... 34	15 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	300	300	300
Repeat accuracy R mm	0.2	0.2	0.2
Power-up delay t_v ms	40	40	40
Switching status display	Yellow LED	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With 2 m cable			PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²	PVC, 3 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 63-0AG30	B 3RG40 23-0AG30	B 3RG40 23-0AG31
NC contact, pnp	12	B	3RG40 63-0AF30	B 3RG40 23-0AF30	—
NO contact, npn	13	B	3RG40 63-0GB30	B 3RG40 23-0GB30	B 3RG40 23-0GB31
NC contact, npn	14	B	3RG40 63-0GA30	B 3RG40 23-0GA30	—
With M12 connector			—	—	B 3RG40 23-3AG31
NO contact, pnp	2	E, F	—	—	B 3RG40 23-3AG31

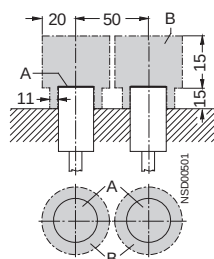
1) See page 2/242.

2) See from page 2/268.

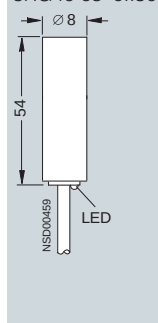
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

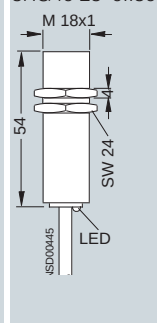
Mounting instructions

A = active surface
B = metal-free area

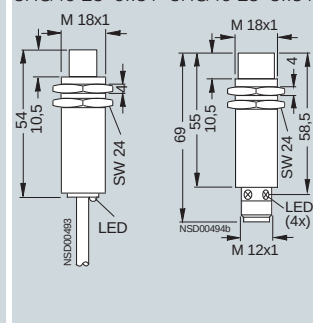
3RG40 63-0..30



3RG40 23-0..30



3RG40 23-0..31 3RG40 23-3..31



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 8 mm

Technical specifications

Class	IP68 / 69 K (65 V DC)	IP68 / 69 K (AC/DC)
Number of wires	3-wire	2-wire
Design	M18	M18
Installation in metal	Not flush	Not flush
Rated operating distance s_n	8 mm	8 mm
Enclosure material	Molded plastic	Molded plastic
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	300
• 20 ms	mA –	1800
Minimum load current	mA –	5
Switching frequency f	Hz 500	25/340 (AC/DC)
Repeat accuracy R	mm 0.2	0.2
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 23-0AB30	–
NC contact, pnp	12	B	3RG40 23-0AA30	–
NO contact	16	–	–	▶ B 3RG40 23-0KB30
NC contact	17	–	–	B 3RG40 23-0KA30
With M12 connector				
NO contact, pnp	2	E, F	B 3RG40 23-3AB30	–
NC contact, pnp	3	F	B 3RG40 23-3AA30	–
NO contact	8	E, F	–	B 3RG40 23-3KB30
NC contact	9	F	–	3RG40 23-3KA30

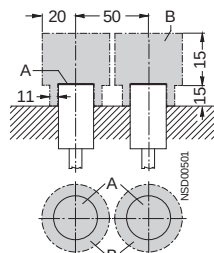
1) See page 2/242.

2) See from page 2/268.

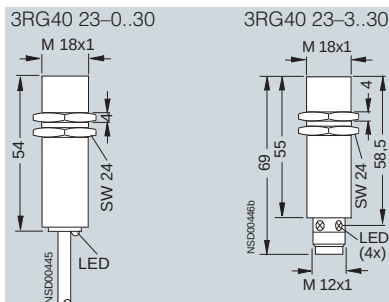
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 8 mm

Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	3-wire
Design	M18, Shorty	M18
Installation in metal	Flush	Flush
Rated operating distance s_n	8 mm	8 mm
Enclosure material	Brass, nickel-plated	
Operating voltage (DC)	V	10 ... 34
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	200
Switching frequency f	Hz	500
Repeat accuracy R	mm	0.2
Power-up delay t_v	ms	3
Switching status display	Yellow LED	
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	
NO contact, pnp	11	B	3RG41 13-0AG33	—
With 3 m cable, PUR			3 × 0.25 mm ²	
NO contact, pnp	11	—	B	3RG41 13-0AG01
With M12 connector				
NO contact, pnp	2	E, F	B	3RG41 13-3AG33
			► B	3RG41 13-3AG01

1) See page 2/242.

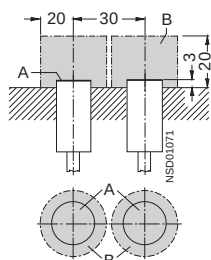
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

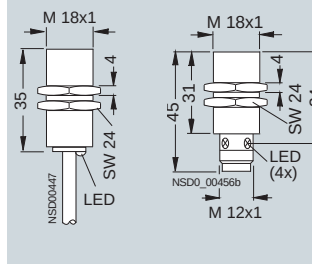
Dimensions

Mounting instructions

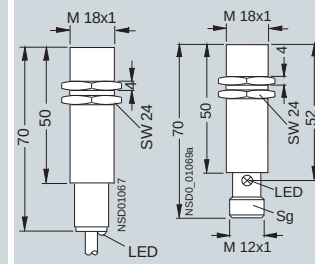


A = active surface
B = metal-free area

3RG41 13-0..33 3RG41 13-3..33



3RG41 13-0..01 3RG41 13-3..01



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 10 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		M30	M30
Installation in metal		Flush	Flush
Rated operating distance s_n		10 mm	10 mm
Enclosure material		Brass, nickel-plated	Brass, nickel-plated
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 10	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency f	Hz	300	25/200 (AC/DC)
Repeat accuracy R	mm	0.3	0.3
Power-up delay t_v	ms	40	100
Switching status display		Yellow LED	Yellow LED
• Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	–
• Reverse-polarity protection		•	•
• Wire-break protection		•	•
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	▶ B	3RG40 14-0AB00	–
NC contact, pnp	12	B	3RG40 14-0AA00	–
NO contact	16	–	–	▶ B 3RG40 14-0KB00
NC contact	17	–	–	▶ B 3RG40 14-0KA00
With M12 connector				
NO contact, pnp	2	E, F	▶ B 3RG40 14-3AB00	–
NC contact, pnp	3	F	B 3RG40 14-3AA00	–
NO contact	8	E, F	–	▶ B 3RG40 14-3KB00
NC contact	9	F	–	B 3RG40 14-3KA00

1) See page 2/242.

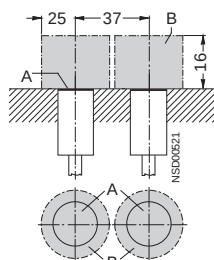
2) See from page 2/268.

▶ Preferred type, available from stock.

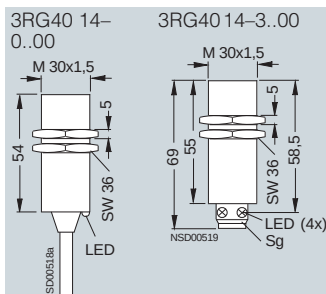
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 10 mm

Technical specifications

Class	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire
Design	Ø 30 mm	M30
Installation in metal	Flush	Flush
Rated operating distance s_n	10 mm	10 mm
Enclosure material	Molded plastic	Molded plastic
Operating voltage (DC) V	15 ... 34	15 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	300	300
Repeat accuracy R mm	0.3	0.3
Power-up delay t_v ms	40	40
Switching status display	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

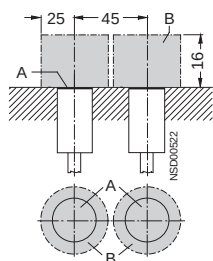
Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With 2 m cable		PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²
NO contact, pnp 11		B 3RG40 54-0AG30	B 3RG40 14-0AG30
NC contact, pnp 12		B 3RG40 54-0AF30	B 3RG40 14-0AF30
NO contact, npn 13		B 3RG40 54-0GB30	B 3RG40 14-0GB30
NC contact, npn 14		B 3RG40 54-0GA30	B 3RG40 14-0GA30

1) See page 2/242.

B: Subject to export regulations AL = N and ECCN = EAR99.

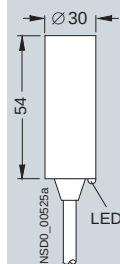
Dimensions

Mounting instructions

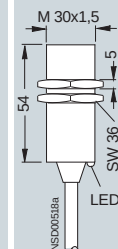


A = active surface
B = metal-free area

3RG40 54-0..30



3RG40 14-0..30



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 10 mm

Technical specifications

Class	IP68 / 69 K	IP68 / 69 K (AC/DC)
Number of wires	3-wire	2-wire
Design	M30	M30
Installation in metal	Flush	Flush
Rated operating distance s_n	10 mm	10 mm
Enclosure material	Brass, nickel-plated	Brass, nickel-plated
Operating voltage		
• DC	V	20 ... 320
• AC	V	20 ... 265
No-load supply current I_0		
• At 24 V/34 V DC	mA	1.0
• At 230 V AC	mA	1.5
Rated operational current I_e		
• Continuous	mA	300
• 20 ms	mA	1800
Switching frequency f	Hz	25/200 (AC/DC)
Repeat accuracy R	mm	0.3
Power-up delay t_v	ms	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	-
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable			PVC, 3 × 0.25 mm ²	PUR, 2 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 14-0AG31	-
NO contact, npn	13	B	3RG40 14-0GB31	-
NO contact	16	-	-	B 3RG40 14-0KB31
NC contact	17	-	-	B 3RG40 14-0KA31
With M12 connector				
NO contact	8	E, F	-	B 3RG40 14-3KB31
NC contact	9	F	-	B 3RG40 14-3KA31

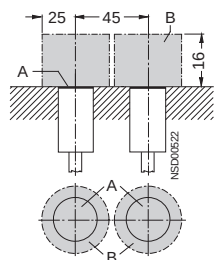
1) See page 2/242.

2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

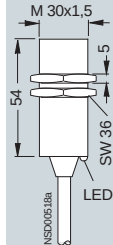
Dimensions

Mounting instructions

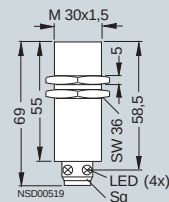


A = active surface
B = metal-free area

3RG40 14-0..31



3RG40 14-0..31



Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	3-wire
Design	M12	M18
Installation in metal	Not flush	Almost flush
Rated operating distance s_n	10 mm	12 mm
Enclosure material	Brass, nickel-plated	
Operating voltage (DC) V	10 ... 30	10 ... 30
No-load supply current I_0 mA	10	≤ 10
Rated operational current I_e mA	200	200
Switching frequency f Hz	400	500
Repeat accuracy R mm	0.2	0.6
Power-up delay t_v ms	15	50
Switching status display	Yellow LED	
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR				
NO contact, pnp	11	► B	3RG43 22-0AG01	3RG46 13-1AB01
NO contact, npn	13		—	3RG46 13-0GB00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG43 22-3AG01	► 3RG46 13-3AB01
NC contact, pnp	3	F	B 3RG43 22-3AF01	—
NO contact, npn	4	E, F	—	3RG46 13-3GB01

1) See page 2/242.

2) See from page 2/268.

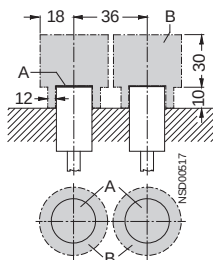
► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

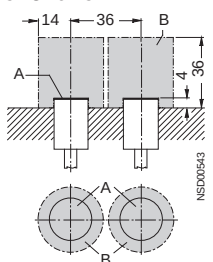
Dimensions

Mounting instructions

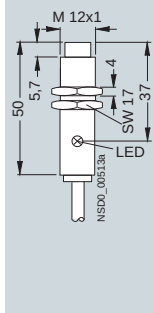
3RG43 22



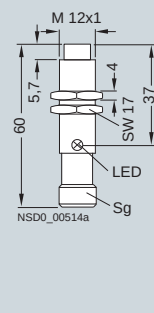
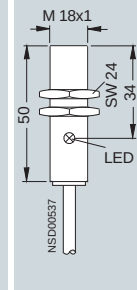
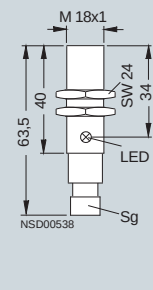
3RG46 13

A = active surface
B = metal-free area

3RG43 22-0AG01



3RG43 22-3..01

3RG46 13-1AB01
3RG46 13-0GB003RG46 13-3AB01
3RG46 13-3GB01

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 15 mm

Technical specifications

Class	Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires	3-wire	2-wire
Design	M30	M30
Installation in metal	Not flush	Not flush
Rated operating distance s_n	15 mm	15 mm
Enclosure material	Brass, nickel-plated	Brass, nickel-plated
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	300
• 20 ms	mA –	1800
Minimum load current	mA –	5
Switching frequency f	Hz 300	25/220 (AC/DC)
Repeat accuracy R	mm 0.4	0.4
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			$3 \times 0.25 \text{ mm}^2$	$2 \times 0.25 \text{ mm}^2$
NO contact, pnp	11	B	3RG40 24-0AB00	–
NC contact, pnp	12	B	3RG40 24-0AA00	–
NO contact	16	–	–	► B 3RG40 24-0KB00
NC contact	17	–	–	► B 3RG40 24-0KA00
With M12 connector				
NO contact, pnp	2	E, F	► B 3RG40 24-3AB00	–
NC contact, pnp	3	F	B 3RG40 24-3AA00	–
NO contact	8	E, F	–	► B 3RG40 24-3KB00
NC contact	9	F	–	B 3RG40 24-3KA00

1) See page 2/242.

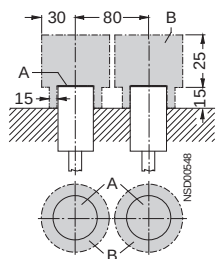
2) See from page 2/268.

► Preferred type, available from stock.

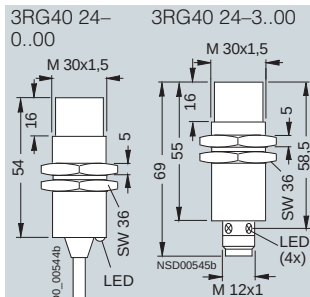
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		Cubic 40 mm × 40 mm	Cubic 40 mm × 40 mm
Installation in metal		Flush	Flush
Rated operating distance s_n		15 mm	15 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 20	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency f	Hz	100	25/150 (AC/DC)
Repeat accuracy R	mm	0.75	0.75
Power-up delay t_v	ms	100	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	–
• Reverse-polarity protection		•	•
• Wire-break protection		•	•
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP65	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With terminal box		0.5 ... 2.5 mm ²	0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, pnp	23	▶ B 3RG40 31-6AD00	–
NO contact or NC contact repositionable	24	–	▶ B 3RG40 31-6KD00

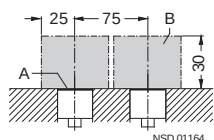
1) See page 2/242.

▶ Preferred type, available from stock.

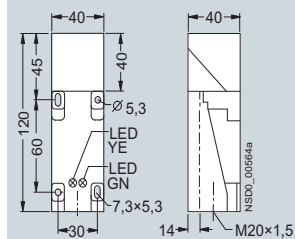
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

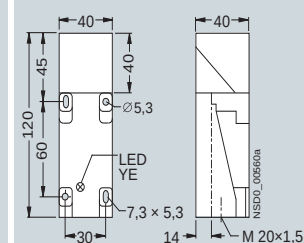
A = active surface
B = metal-free area

3RG40 31-6AD00



The active surface can be adjusted in 5 directions.

3RG40 31-6KD00



The active surface can be adjusted in 5 directions.

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 15 mm

Technical specifications

Class	Extra duty (AC/DC)	Increased operating distance
Number of wires	2-wire	3-wire
Design	Cubic 40 mm × 40 mm	M30
Installation in metal	Flush	Flush
Rated operating distance s_n	15 mm	15 mm
Enclosure material	Molded plastic	Brass, nickel-plated
Operating voltage		
• DC	V 20 ... 320	15 ... 34
• AC	V 20 ... 265	–
No-load supply current I_0		
• At 24 V DC	mA 1.5	≤ 17 (24 V); ≤ 30 (34 V)
• At 230 V AC	mA ≤ 2.0	–
Rated operational current I_e		
• Continuous	mA 300	200 (≤ 50 °C); 150 (≤ 85 °C)
• 20 ms	mA –	–
Minimum load current	mA ≤ 2	–
Switching frequency f	Hz 25/50 (AC/DC)	300
Repeat accuracy R	mm 0.75	0.4
Hysteresis	mm 0.04 ... 3.3	–
Power-up delay t_v	ms 100	40
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	–	•
• Reverse-polarity protection	•	•
• Wire-break protection	–	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 3 m cable, PUR				3 × 0.25 mm ²
NO contact, npn	11	–	B	3RG41 14-0AG01
With M12 connector				
NO contact, npn	2	E, F	–	B 3RG41 14-3AG01
With M12 connector, rotatable				
NO contact	8	E, F	B 3RG40 38-3KB00	–

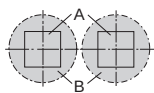
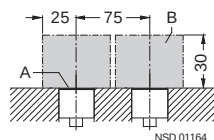
1) See page 2/242.

2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

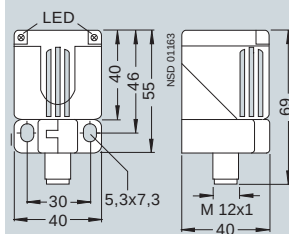
Dimensions

Mounting instructions



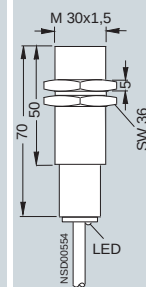
A = active surface
B = metal-free area

3RG40 38-3..00

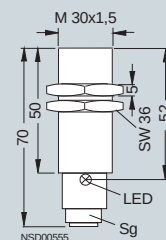


The active surface can be adjusted in 5 directions.
With rotatable connector..

3RG41 14-0AG01



3RG41 14-3AG01



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 15 mm

Technical specifications

Class	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K
Number of wires	3-wire	3-wire	3-wire
Design	Ø 30 mm	M30	M30
Installation in metal	Not flush	Not flush	Not flush
Rated operating distance s_n	15 mm	15 mm	15 mm
Enclosure material	Molded plastic	Molded plastic	Brass, nickel-plated
Operating voltage (DC) V	15 ... 34	15 ... 34	15 ... 34
No-load supply current I_0 mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)	≤ 17 (24 V); ≤ 30 (34 V)
Rated operational current I_e mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f Hz	300	300	300
Repeat accuracy R mm	0.4	0.4	0.4
Power-up delay t_v ms	40	40	40
Switching status display	Yellow LED	Yellow LED	Yellow LED
Precautions	• Spurious signal suppression • Short-circuit-proof/overload-proof • Reverse-polarity protection • Wire-break protection • Inductive interference protection • Radio interference protection	• • • • • •	• • • • • •
Degree of protection	IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.	Order No.
With 2 m cable			PUR, 3 × 0.25 mm ²	PUR, 3 × 0.25 mm ²	PVC, 3 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 64-0AG30	B 3RG40 24-0AG30	B 3RG40 24-0AG31
NC contact, pnp	12	B	3RG40 64-0AF30	B 3RG40 24-0AF30	—
NO contact, npn	13	B	3RG40 64-0GB30	B 3RG40 24-0GB30	B 3RG40 24-0GB31
NC contact, npn	14	B	3RG40 64-0GA30	B 3RG40 24-0GA30	—
With M12 connector					
NO contact, pnp	8	E, F	—	B 3RG40 24-3AG30	B 3RG40 24-3AG31
NC contact, pnp	9	F	—	B 3RG40 24-3AF30	—

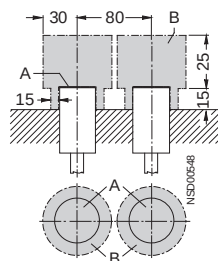
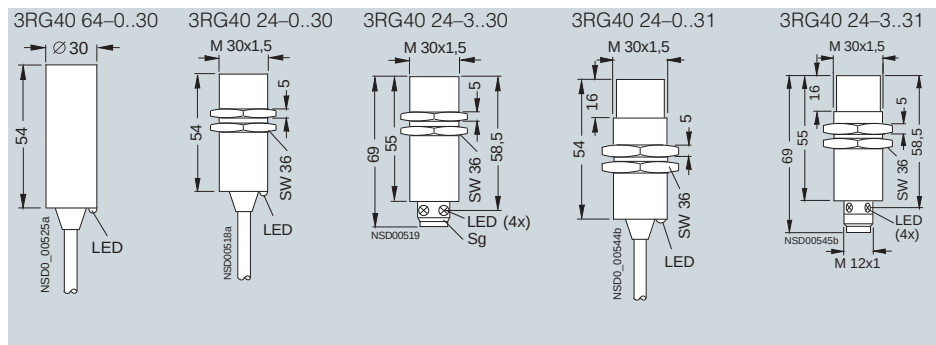
1) See page 2/242.

2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free area

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 15 mm

Technical specifications

Class	IP68 / 69 K (DC 65 V)	IP68 / 69 K (AC/DC)
Number of wires	3-wire	2-wire
Design	M30	M30
Installation in metal	Not flush	Not flush
Rated operating distance s_n	15 mm	15 mm
Enclosure material	Molded plastic	Molded plastic
Operating voltage		
• DC	V 10 ... 65	20 ... 320
• AC	V –	20 ... 265
No-load supply current I_0		
• At 24 V DC	mA ≤ 10	1.0
• At 230 V AC	mA –	1.5
Rated operational current I_e		
• Continuous	mA 300	300
• 20 ms	mA –	1800
Minimum load current	mA –	5
Switching frequency f	Hz 300	25/220 (AC/DC)
Repeat accuracy R	mm 0.4	0.4
Power-up delay t_v	ms 40	100
Switching status display	Yellow LED	Yellow LED
Precautions		
• Spurious signal suppression	•	•
• Short-circuit-proof/overload-proof	•	–
• Reverse-polarity protection	•	•
• Wire-break protection	•	•
• Inductive interference protection	•	•
• Radio interference protection	•	•
Degree of protection	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.25 mm ²	2 × 0.25 mm ²
NO contact, pnp	11	B	3RG40 24-0AB30	–
NC contact, pnp	12	B	3RG40 24-0AA30	–
NO contact	16	–	–	▶ B 3RG40 24-0KB30
NC contact	17	–	–	B 3RG40 24-0KA30
With M12 connector				
NO contact, pnp	2	E, F	B 3RG40 24-3AB30	–
NC contact, pnp	3	F	B 3RG40 24-3AA30	–
NO contact	8	E, F	–	B 3RG40 24-3KB30
NC contact	9	F	–	B 3RG40 24-3KA30

1) See page 2/242.

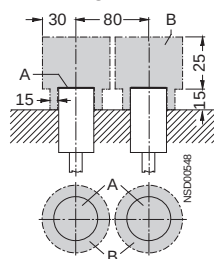
2) See from page 2/268.

▶ Preferred type, available from stock.

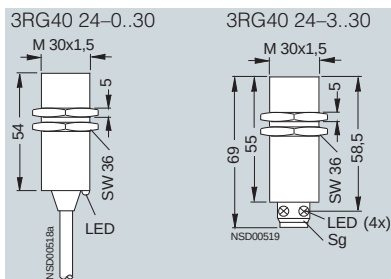
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



Technical specifications

Class		IP68 / 69 K	IP68 / 69 K (65 V DC)	IP68 / 69 K (AC/DC)
Number of wires		4-wire	3-wire	2-wire
Design		Cubic 40 mm × 40 mm	Cubic 40 mm × 40 mm	Cubic 40 mm × 40 mm
Installation in metal		Flush	Flush	Flush
Rated operating distance s_n		15 mm	15 mm	15 mm
Enclosure material		Molded plastic	Molded plastic	Molded plastic
Operating voltage				
• DC	V	15 ... 34	10 ... 65	20 ... 320
• AC	V	–	–	20 ... 265
No-load supply current I_0				
• At 24 V DC	mA	≤ 25 (24 V); ≤ 40 (34 V)	≤ 20	≤ 1.0
• At 230 V AC	mA	–	–	≤ 1.5
Rated operational current I_e				
• Continuous	mA	200 (≤ 50 °C); 150 (≤ 85 °C)	300	300
• 20 ms	mA	–	–	1800
Minimum load current	mA	–	–	5
Switching frequency f	Hz	100	100	25/150 (AC/DC)
Repeat accuracy R	mm	0.75	0.75	0.75
Power-up delay t_v	ms	100	100	100
Switching status display		Yellow LED	Yellow LED	Yellow LED
Precautions				
• Spurious signal suppression	•	•	•	•
• Short-circuit-proof/overload-proof	•	•	•	–
• Reverse-polarity protection	•	•	•	•
• Wire-break protection	•	•	•	•
• Inductive interference protection	•	•	•	•
• Radio interference protection	•	•	•	•
Degree of protection		IP68 / 69 K	IP68 / 69 K	IP68 / 69 K

Selection and Ordering data

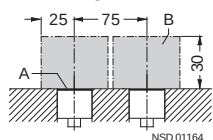
Switching output	Circuit diagram number ¹⁾	Order No.	Order No.	Order No.
With 2 m cable, PUR		4 × 0.14 mm ²	3 × 0.25 mm ²	2 × 0.25 mm ²
Sensor in longitudinal axis				
NO contact, pnp	11	–	B 3RG40 30-0AB00	–
NC contact, pnp	12	–	B 3RG40 30-0AA00	–
NO contact and NC contact, pnp	10	B 3RG40 30-0CD00	–	–
NO contact	16	–	–	B 3RG40 30-0KB00
NC contact	17	–	–	B 3RG40 30-0KA00
Sensor 90° to longitudinal axis				
NO contact, pnp	11	–	B 3RG40 30-0AB01	–
NO contact and NC contact, pnp	10	B 3RG40 30-0CD01	–	–
NO contact	16	–	–	B 3RG40 30-0KB01
NC contact	17	–	–	B 3RG40 30-0KA01

1) See page 2/242.

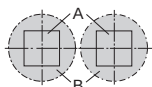
B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

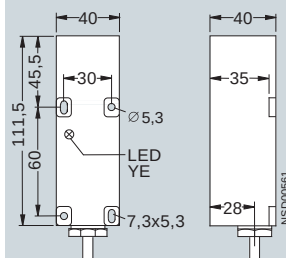
Mounting instructions



NSD 01164

A = active surface
B = metal-free area

3RG40 30-0..0.



NSD00561

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 20 mm

Technical specifications

Class		Increased operating distance	Increased operating distance
Number of wires		3-wire	4-wire
Design		M18	Cubic 40 mm × 40 mm
Installation in metal		Not flush	Flush
Rated operating distance s_n		20 mm	20 mm
Enclosure material		Brass, nickel-plated	Molded plastic
Operational voltage (DC)	V	10 ... 30	15 ... 34
No-load supply current I_0	mA	≤ 10	≤ 30 (24 V); ≤ 50 (34 V)
Rated operational current I_e	mA	200	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f	Hz	200	30
Repeat accuracy R	mm	1.0	1.5
Power-up delay t_v	ms	100	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		–	Green LED
Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	•
• Reverse-polarity protection		•	•
• Wire-break protection		•	•
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP67	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With 2 m cable, PUR			3 × 0.34 mm ²	
NO contact, pnp	11	▶	3RG46 23-0AB02	–
NO contact, npn	13		3RG46 23-0GB02	–
With M12 connector				
NO contact, pnp	2	E, F ▶	3RG46 23-3AB02	–
NO contact, npn	4	E, F	3RG46 23-3GB02	–
With terminal box				0.5 ... 2.5 mm ²
NO contact and NC contact, pnp	18	–	–	B 3RG41 34-6CD01

1) See page 2/242.

2) See from page 2/268.

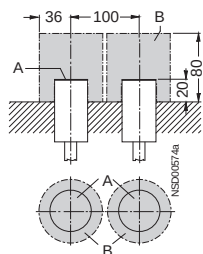
▶ Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

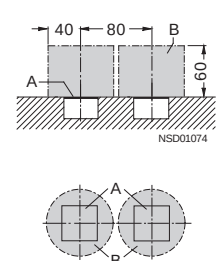
Dimensions

Mounting instructions

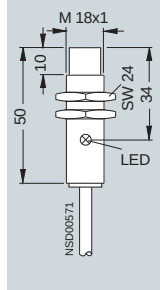
3RG46 23



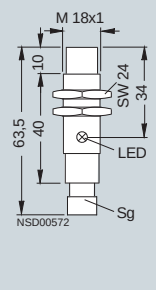
3RG41 34



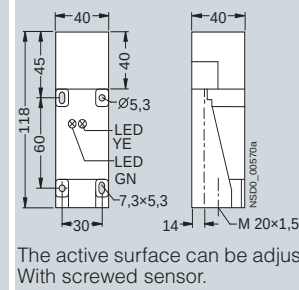
3RG46 23-0..02



3RG46 23-3..02



3RG41 34-6CD01



The active surface can be adjusted in 5 directions.
With screwed sensor.

A = active surface
B = metal-free area

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 20 mm

Technical specifications

Class		Increased operating distance	Increased operating distance (AC/DC)
Number of wires		4-wire	2-wire
Design		Cubic 40 mm × 40 mm	Cubic 40 mm × 40 mm
Installation in metal		Flush	Flush
Rated operating distance s_n		20 mm	20 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage			
• DC	V	15 ... 34	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 30 (24 V); ≤ 40 (34 V)	1.5
• At 230 V AC	mA	–	≤ 2.0
Rated operational current I_e			
• Continuous	mA	200 (≤ 50 °C); 150 (≤ 85 °C)	200
• 20 ms	mA	–	–
Minimum load current	mA	–	< 2
Switching frequency f	Hz	30	25/30 (AC/DC)
Repeat accuracy R	mm	0.75	0.75
Hysteresis H	mm	0.05 ... 3.3	0.05 ... 3.3
Power-up delay t_v	ms	100	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	–
• Reverse-polarity protection		•	•
• Wire-break protection		•	–
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With M12 connector				
NO contact and NC contact, pnp	1	F	► B 3RG41 38–3CD00	–
NO contact and NC contact, npn	–	F	B 3RG41 38–3GD00	–
NO contact	8	F	–	B 3RG41 38–3KB00

1) See page 2/242.

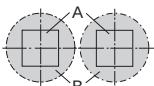
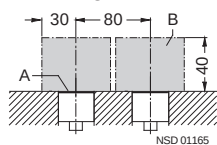
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

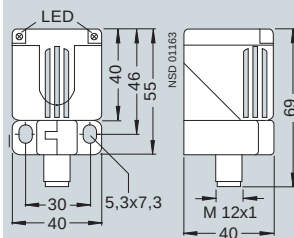
Dimensions

Mounting instructions



A = active surface
B = metal-free area

3RG41 38–3..00



The active surface can be adjusted in 5 directions.
With rotatable connector.

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 22 mm

Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	
Design	M30	
Installation in metal	Almost flush	
Rated operating distance s_n	22 mm	
Enclosure material	Brass, nickel-plated	
Operational voltage (DC)	V	10 ... 30
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	200
Switching frequency f	Hz	100
Repeat accuracy R	mm	1.1
Power-up delay t_v	ms	200
LEDs		
• Switching status	Yellow LED	
• Supply voltage	–	
Precautions		
• Spurious signal suppression	•	
• Short-circuit-proof/overload-proof	•	
• Reverse-polarity protection	•	
• Wire-break protection	•	
• Inductive interference protection	•	
• Radio interference protection	•	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.
With 2 m cable, PUR			3 × 0.34 mm ²
NO contact, pnp	11	▶	3RG46 14-0AB00
NO contact, npn	13		3RG46 14-0GB00
With M12 connector			
NO contact, pnp	2	E, F ▶	3RG46 14-3AB00
NO contact, npn	4	E, F	3RG46 14-3GB00

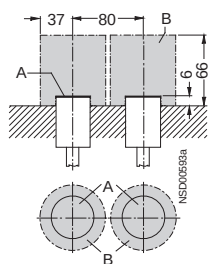
1) See page 2/242.

2) See from page 2/268.

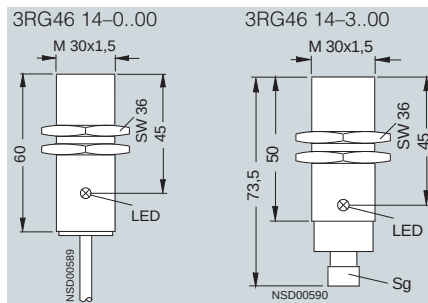
▶ Preferred type, available from stock.

Dimensions

Mounting instructions



A = active surface
B = metal-free area



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 25 mm

Technical specifications

Class		Increased operating distance (65 V DC)
Number of wires		3-wire
Design		Cubic 40 mm × 40 mm
Installation in metal		Almost flush
Rated operating distance s_n		25 mm
Enclosure material		Molded plastic
Operating voltage (DC)	V	10 ... 65
No-load supply current I_0	mA	20
Rated operational current I_e	mA	300
Switching frequency f	Hz	50
Repeat accuracy R	mm	1.5
Power-up delay t_v	ms	100
LEDs		
• Switching status		Yellow LED
• Supply voltage		Green LED
Precautions		
• Spurious signal suppression		•
• Short-circuit-proof/overload-proof		•
• Reverse-polarity protection		•
• Wire-break protection		•
• Inductive interference protection		•
• Radio interference protection		•
Degree of protection		IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.
With terminal box		0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, prnp	23	► B 3RG41 31-6AD00

1) See page 2/242.

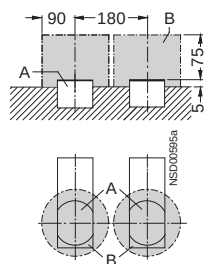
► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

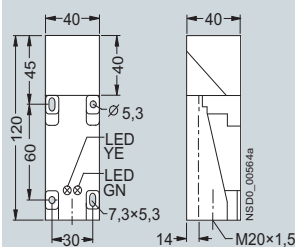
Mounting instructions

3RG41 31



A = active surface
B = metal-free area

3RG41 31-6AD0.



The active surface can be adjusted in 5 directions.

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		Cubic 60 mm × 80 mm	Cubic 60 mm × 80 mm
Installation in metal		Not flush	Not flush
Rated operating distance s_n		30 mm	30 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 40	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency f	Hz	50	25/60 (AC/DC)
Repeat accuracy R	mm	1.0	1.0
Power-up delay t_v	ms	100	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	–
• Reverse-polarity protection		•	•
• Wire-break protection		•	•
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP65	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With terminal box		0.5 ... 2.5 mm ²	0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, npn	23	► B 3RG40 42–6AD00	–
NO contact or NC contact repositionable	24	–	► B 3RG40 42–6KD00

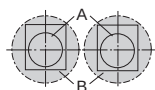
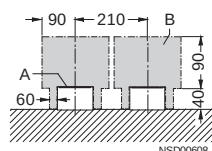
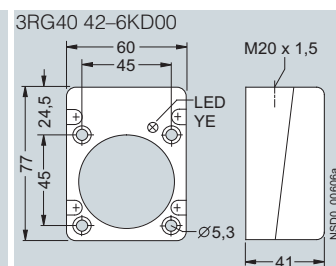
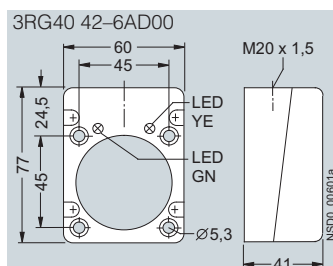
1) See page 2/242.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free area

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 30 mm

Technical specifications

Class	Increased operating distance	
Number of wires	4-wire	
Design	Cubic 40 mm × 40 mm	
Installation in metal	Not flush	
Rated operating distance s_n	30 mm	
Enclosure material	Molded plastic	
Operating voltage	V	15 ... 34
No-load supply current I_0	mA	≤ 30 (24 V); ≤ 50 (34 V)
Rated operational current I_e	mA	200 (≤ 50 °C); 150 (≤ 85 °C)
Switching frequency f	Hz	30
Repeat accuracy R	mm	1.5
Power-up delay t_v	ms	100
LEDs		
• Switching status	Yellow LED	
• Supply voltage	Green LED	
Precautions		
• Spurious signal suppression	•	
• Short-circuit-proof/overload-proof	•	
• Reverse-polarity protection	•	
• Wire-break protection	•	
• Inductive interference protection	•	
• Radio interference protection	•	
Degree of protection	IP65	

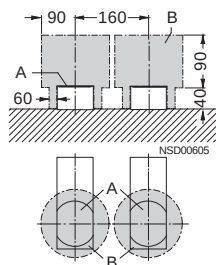
Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.
With terminal box		0.5 ... 2.5 mm ²
NO contact and NC contact, pnp	18	3RG41 44-6CD01

1) See page 2/242.

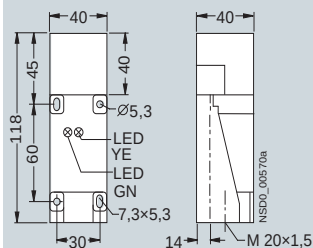
Dimensions

Mounting instructions



A = active surface
B = metal-free area

3RG41 44-6CD01



The active surface can be adjusted in 5 directions.
With screwed sensor.

Technical specifications

Class		Increased operating distance	Increased operating distance (AC/DC)
Number of wires		4-wire	2-wire
Design		Cubic 40 mm × 40 mm	Cubic 40 mm × 40 mm
Installation in metal		Not flush	Not flush
Rated operating distance s_n		35 mm	35 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage U_B			
• DC	V	15 ... 34	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 30 (24 V); ≤ 40 (34 V)	1.5
• At $U_{B \max}$	mA	–	≤ 2.0
Rated operational current I_e			
• Continuous	mA	200 (≤ 50 °C); 150 (≤ 85 °C)	300
• 20 ms	mA	–	–
Minimum load current		mA	< 2
Switching frequency f		Hz	25/30 (AC/DC)
Repeat accuracy R		mm	0.75
Hysteresis H		mm	0.05 ... 7.7
Power-up delay t_v		ms	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression		•	•
• Short-circuit-proof/overload-proof		•	–
• Reverse-polarity protection		•	–
• Wire-break protection		•	–
• Inductive interference protection		•	•
• Radio interference protection		•	•
Degree of protection		IP67	IP67

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.	Order No.
With M12 connector				
NO contact and NC contact, pnp	1	F	► B 3RG41 48–3CD00	–
NO contact and NC contact, npn	–	F	B 3RG41 48–3GD00	–
NO contact	8	F	–	B 3RG41 48–3KB00

1) See page 2/242.

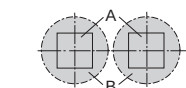
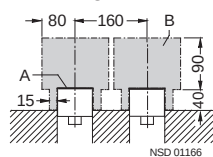
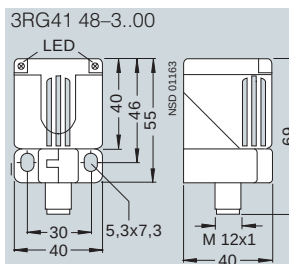
2) See from page 2/268.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

Dimensions

Mounting instructions

A = active surface
B = metal-free areaThe active surface can be adjusted in 5 directions.
With rotatable connector.

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 40 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		Cubic 80 mm × 100 mm	Cubic 80 mm × 100 mm
Installation in metal		Not flush	Not flush
Rated operating distance s_n		40 mm	40 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage U_B			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 40	1.0
• At 230 V AC	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency	Hz	10	25/60 (AC/DC)
Repeat accuracy R	mm	1.0	1.0
Power-up delay t_v	ms	200	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression	•	•	•
• Short-circuit-proof/overload-proof	•	•	•
• Reverse-polarity protection	•	•	•
• Wire-break protection	•	•	•
• Inductive interference protection	•	•	•
• Radio interference protection	•	•	•
Degree of protection		IP65	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With terminal box		0.5 ... 2.5 mm ²	0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, npn	23	► B 3RG40 43-6AD00	–
NO contact or NC contact repositionable	24	–	► B 3RG40 43-6KD00

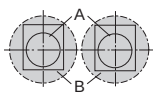
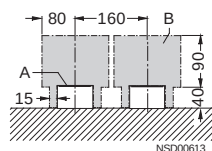
1) See page 2/242.

► Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

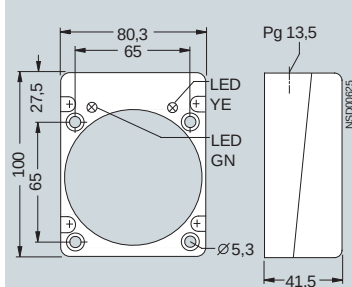
Dimensions

Mounting instructions

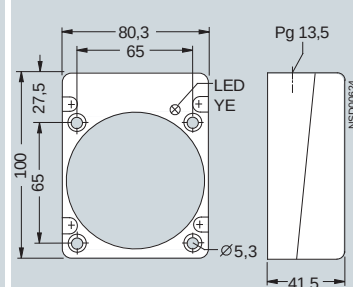


A = active surface
B = metal-free area

3RG40 43-6AD00



3RG40 43-6KD00



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 30/40 mm

Technical specifications

Class		Extra duty (65 V DC)	Extra duty (AC/DC)
Number of wires		3-wire	2-wire
Design		Cubic 80 mm × 100 mm	Cubic 80 mm × 100 mm
Installation in metal		Not flush / flush	Not flush / flush
Rated operating distance s_n		30 mm / 40 mm	30 mm / 40 mm
Enclosure material		Molded plastic	Molded plastic
Operating voltage U_B			
• DC	V	10 ... 65	20 ... 320
• AC	V	–	20 ... 265
No-load supply current I_0			
• At 24 V DC	mA	≤ 40	1.0
• At U_{max}	mA	–	1.5
Rated operational current I_e			
• Continuous	mA	300	300
• 20 ms	mA	–	1800
Minimum load current	mA	–	5
Switching frequency f	Hz	10	25/60 (AC/DC)
Repeat accuracy R	mm	2	2
Power-up delay t_v	ms	200	100
LEDs			
• Switching status		Yellow LED	Yellow LED
• Supply voltage		Green LED	–
Precautions			
• Spurious signal suppression	•	•	•
• Short-circuit-proof/overload-proof	•	•	•
• Reverse-polarity protection	•	•	•
• Wire-break protection	•	•	•
• Inductive interference protection	•	•	•
• Radio interference protection	•	•	•
Degree of protection		IP65	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With terminal box		0.5 ... 2.5 mm ²	0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, pnp	23	▶ B 3RG40 33-6AD01	–
NO contact or NC contact repositionable	24	–	B 3RG40 33-6KD01

1) See page 2/242.

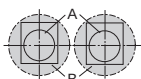
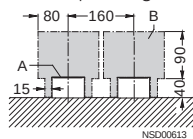
▶ Preferred type, available from stock.

B: Subject to export regulations AL = N and ECCN = EAR99.

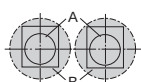
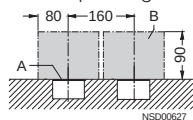
Dimensions

Mounting instructions

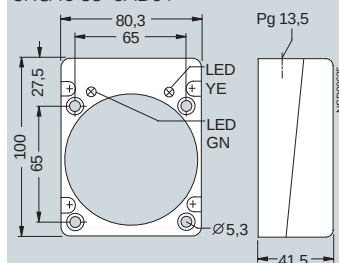
Rated operating distance 30 mm



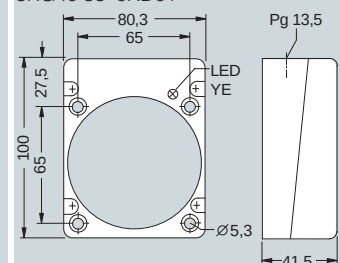
Rated operating distance 40 mm



3RG40 33-6AD01

A = active surface
B = metal-free area

3RG40 33-6KD01



SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 40 mm

Technical specifications

Class	Increased operating distance	
Number of wires	3-wire	
Design	M30	
Installation in metal	Not flush	
Rated operating distance s_n	40 mm	
Enclosure material	Brass, nickel-plated	
Operating voltage U_B	V	10 ... 30
No-load supply current I_0	mA	≤ 10
Rated operational current I_e	mA	200
Switching frequency f	Hz	100
Repeat accuracy R	mm	1.1
Power-up delay t_v	ms	200
LEDs		
• Switching status	Yellow LED	
• Supply voltage	–	
Precautions		
• Spurious signal suppression	•	
• Short-circuit-proof/overload-proof	•	
• Reverse-polarity protection	•	
• Wire-break protection	•	
• Inductive interference protection	•	
• Radio interference protection	•	
Degree of protection	IP67 (not suitable for use under continuous wet conditions or outdoors)	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.
With 2 m cable, PUR			3 × 0.34 mm ²
NO contact, pnp	11	▶	3RG46 24-0AB02
NO contact, npn	13		3RG46 24-0GB02
With M12 connector			
NO contact, pnp	2	E, F ▶	3RG46 24-3AB02
NO contact, npn	4	E, F	3RG46 24-3GB02

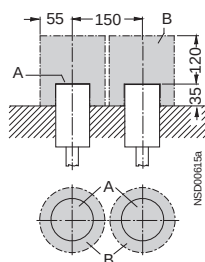
1) See page 2/242.

2) See from page 2/268.

▶ Preferred type, available from stock.

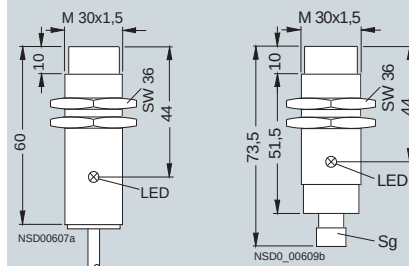
Dimensions

Mounting instructions



A = active surface
B = metal-free area

3RG46 24-0..02 3RG46 24-3..02



Technical specifications

Class	Increased operating distance (65 V DC)	
Number of wires	3-wire	
Design	Cubic 40 mm × 40 mm	
Installation in metal	Not flush	
Rated operating distance s_n	40 mm	
Enclosure material	Molded plastic	
Operational voltage (DC)	V	10 ... 65
No-load supply current I_0	mA	20
Rated operational current I_e	mA	300
Switching frequency f	Hz	20
Repeat accuracy R	mm	1.5
Power-up delay t_v	ms	100
LEDs		
• Switching status	Yellow LED	
• Supply voltage	Green LED	
Precautions		
• Spurious signal suppression	•	
• Short-circuit-proof/overload-proof	•	
• Reverse-polarity protection	•	
• Wire-break protection	•	
• Inductive interference protection	•	
• Radio interference protection	•	
Degree of protection	IP65	

Selection and Ordering data

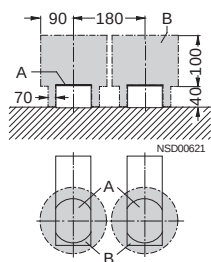
Switching output	Circuit diagram number ¹⁾	Order No.
With terminal box		0.5 ... 2.5 mm ²
NO contact, pnp	19	B 3RG41 41-6AB03
NO contact or NC contact repositionable, pnp	23	B 3RG41 41-6AD00

1) See page 2/242.

B: Subject to export regulations AL = N and ECCN = EAR99.

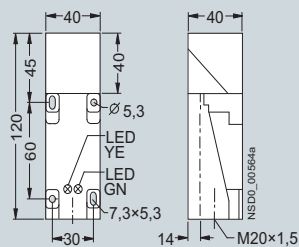
Dimensions

Mounting instructions



A = active surface
B = metal-free area

3RG41 41-6A.0.



The active surface can be adjusted in 5 directions.

SIMATIC PXI inductive proximity switches

SIMATIC PXI300

Operating distance 25 mm or 40 mm

Technical specifications

Class	Increased operating distance (65 V DC)	
Number of wires	3-wire	
Design	Cubic 40 mm × 40 mm	
Installation in metal	Not flush	
Rated operating distance s_n	25 mm or 40 mm, selectable	
Enclosure material	Molded plastic	
Operational voltage (DC)	V	10 ... 65
No-load supply current I_0	mA	20
Rated operational current I_e	mA	300
Switching frequency f	Hz	20
Repeat accuracy R	mm	1.5
Power-up delay t_v	ms	100
LEDs	- Switching status: Yellow LED - Supply voltage: Green LED	
Precautions	- Spurious signal suppression - Short-circuit-proof/overload-proof - Reverse-polarity protection - Wire-break protection - Inductive interference protection - Radio interference protection	
Degree of protection	IP67	

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Connector type ²⁾	Order No.
With M12 connector			
NO contact, pnp	2	E, F	B 3RG41 41-3AB02
<i>Connector can be offset in steps of 30°</i>			
NO contact, pnp	2	E, F	B 3RG41 41-3AB01

1) See page 2/242.

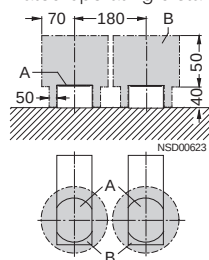
2) See from page 2/268.

B: Subject to export regulations AL = N and ECCN = EAR99.

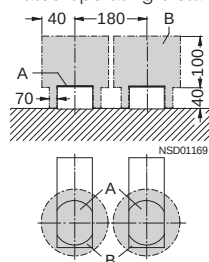
Dimensions

Mounting instructions

Rated operating distance 25 mm

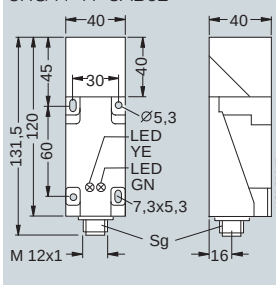


Rated operating distance 40 mm



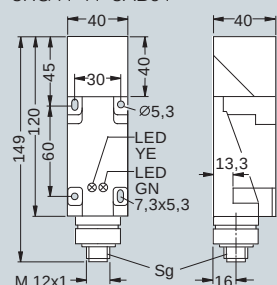
A = active surface
B = metal-free area

3RG41 41-3AB02



The active surface can be adjusted in 5 directions.

3RG41 41-3AB01



The active surface can be adjusted in 5 directions.

Technical specifications

Class	Increased operating distance (65 V DC)	
Number of wires	3-wire	
Design	Cubic 60 mm × 80 mm	
Installation in metal	Not flush	
Rated operating distance s_n	50 mm	
Enclosure material	Molded plastic	
Operational voltage (DC)	V	10 ... 65
No-load supply current I_0	mA	20
Rated operational current I_e	mA	300
Switching frequency f	Hz	20
Repeat accuracy R	mm	1.5
Power-up delay t_v	ms	100
LEDs		
• Switching status	Yellow LED	
• Operating voltage	Green LED	
Precautions		
• Spurious signal suppression	•	
• Short-circuit-proof/overload-proof	•	
• Reverse-polarity protection	•	
• Wire-break protection	•	
• Inductive interference protection	•	
• Radio interference protection	•	
Degree of protection	IP65	IP65

Selection and Ordering data

Switching output	Circuit diagram number ¹⁾	Order No.	Order No.
With terminal box		0.5 ... 2.5 mm ²	0.5 ... 2.5 mm ²
NO contact or NC contact repositionable, prnp	23	B 3RG41 42-6AD00	B 3RG41 43-6AD00

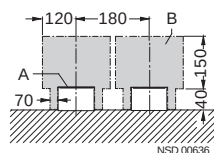
1) See page 2/242.

B: Subject to export regulations AL = N and ECCN = EAR99.

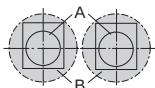
Dimensions

Mounting instructions

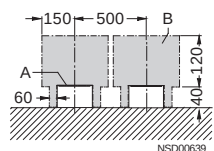
3RG41 42



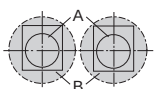
NSD 00636



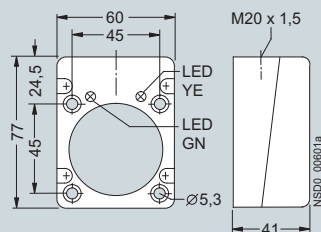
3RG41 43



NSD 00639

A = active surface
B = metal-free area

3RG41 42-6AD00



3RG41 43-6AD00

