

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

### Introduction

#### Principle of operation

The inductive BERO sensors are position switches that can be operated without contact, that contain no mechanical parts subject to wear and that are mainly insensitive to environmental conditions.

They are used in applications with stringent requirements for reliability, switch point accuracy, service life, number of switching operations, operating speed, and so on.

A high-frequency alternating field is generated in the BERO and emerges at the sensing face. The physical size of this alternating field determines the sensing range of the device. When a material that is a good conductor of electricity and/or

magnetism comes into close proximity with the sensing surface, the field is damped. Both states (field damped or undamped) are evaluated in the BERO and result in a change in the output state of the switch.

#### Application

The inductive BERO proximity switches are classified in accordance with their applications or their technical characteristics:

##### *BERO for standard duty (3 or 4-wire)*

See page 10/26.

- Rated operational voltage: DC 15 to 34 V  
3RG46: DC 10 to 30 V
- Output
  - 3-wire BERO: 1 NO or 1 NC up to 200 mA
  - 4-wire BERO: 1 NO and 1 NC (non-equivalent), pnp up to 200 mA
- Switching frequency up to 3000 Hz (Ø 4 mm)
- Operating distance acc. to standard
- The actuation distance is between 0 and 81% of the rated operating distance.

##### *Optimized for solid-state inputs (PLC)*

See page 10/32.

- Rated operational voltage: DC 15 to 34 V,
- Output
  - 2-wire BERO: 1 NO, up to 25 mA
- Off-state current and voltage drop to suit PLC inputs
- Switching frequency up to 1500 Hz (Ø 8 mm, M 8),
- Operating distance acc. to standard
- The actuation distance is between 0 and 81% of the rated operating distance.

Advantages:

- Minimum wiring overheads
- Direct replacement of mechanical position switches possible in installations that are not safety-oriented
- Power is supplied from the PLC input
- npn as well as pnp switching

##### *BERO for extra duty*

See page 10/33.

- Rated operational voltage:
  - 3-wire BERO: DC 10 to 65 V
  - 2-wire BERO: AC/DC 20 to 320 V,
- Output
  - 3-wire BERO: 1 NO or 1 NC, pnp up to 300 mA
  - 2-wire BERO: 1 NO or 1 NC, resistive load up to 300 mA
- Switching frequency up to 5000 Hz (M 8)
- The actuation distance is between 0 and 81% of the rated operating distance.

Advantages:

- Problem-free adaptation to different rated operational currents
- Insensitive to voltage deviations

##### *BERO for extreme environment (IP 68)*

See page 10/36.

- Rated operational voltage:
  - 2-wire BERO: AC/DC 20 to 320 V,
  - 3-wire BERO: DC 15 to 34 V, DC 10 to 65 V
  - 4-wire BERO: DC 15 to 34 V,
- Output
  - 3-wire BERO: 1 NO or 1 NC, pnp up to 300 mA
  - 4-wire BERO: 1 NO and 1 NC (non-equivalent), pnp up to 200 mA
- The actuation distance is between 0 and 81% of the rated operating distance.

Advantages:

- Can be used under extreme environmental conditions according to IP 68 by use of a well-sealed housing with a special potting compound.

##### *BERO with greater rated operating distance*

See page 10/38.

- Rated operational voltage: DC 10 to 65 V (for 3RG46: DC 10 to 30 V)
- Output
  - 3-wire BERO: 1 NO or 1 NC, pnp up to 300 mA
- Switching frequency up to 1000 Hz (Ø 6.5 mm),
- Operating distance considerably higher than standard: Up to 3 times the standard rated operating distance
- The actuation distance is between 0 and 81% of the rated operating distance.

Advantages

- Wide range of mounting adjustment
- A smaller type can be selected for the required operating distance
- Reduction of actuation distance is corrected for non-ferrous metals

##### *No reduction factor*

See page 10/41.

- Rated operational voltage:
  - 3-wire BERO: DC 10 to 30 V
- Output
  - 3-wire BERO: 1 NO, pnp up to 200 mA
- Switching frequency up to 3000 Hz

Advantages:

- No reduction factor for non-ferrous metals
- Magnetic field resistant, i.e. these BEROs are insensitive to welding current. Magnetic field resistant up to 160 mT r.m.s. = 21 kA at 25.4 mm; exceptions: 3RG46 48: 140 mT r.m.s. 3RG46 44: 140 mT r.m.s. 3RG46 43: 75 mT r.m.s.

##### *BERO pressure-resistant up to 500 bar (7250 psi)*

See page 10/43.

- Rated operational voltage: DC 10 to 30 V
- 3-wire BERO: 1 NO, pnp up to 200 mA
- Switching frequency up to 400 Hz
- Operating distance: 3 mm.

Advantages:

- Suitable for extreme dynamic mechanical stress
- Easy to install: BERO can be screw fastened against a stop, no adjustment required
- Sensing face seal is gas-tight

##### *BERO with analogue output*

See page 10/43.

- Rated operational current DC 10 to 30 V
- Output
  - Voltage output DC 0 to 5 V
  - Current output 1 to 5 mA,
- Short-circuit protection, inductive interference protection, total reverse polarity protection
- Non-linearized design
- Connection via cable or S12 connector

#### Application

##### BERO for DESINA

See page 10/43.

DESINA describes a comprehensive overall concept for the standardization and decentralization of the electrical and fluidic installation of machines and installations.

- Acc. to Specification 06
- Rated operational voltage:
  - 3-wire BERO DC 10 to 30 V
  - 2-wire BERO DC 10 to 55 V
- Output
  - 3-wire BERO: 1 NO, pnp up to 200 mA
  - 2-wire BERO: 1 NO, up to 200 mA
  - Additional diagnostics output, load rating up to 50 mA
- Switching frequency up to 3000 Hz

Advantages:

- Standardized connection technique
- Diagnostic functions
- Adjustment aid

##### BERO for AS-Interface

See page 10/43.

- For direct connection to AS-Interface
- Outputs:
  - Operating range
  - Safe operating distance
  - Coil monitoring

Advantages:

- Simple connection directly to AS-Interface.

##### BERO to NAMUR and DIN 19 234 standards

See page 10/44.

- Intrinsically safe for use in potentially explosive areas (not Zone 0)
- Rated operational voltage: DC 5 to 25 V (can be extended with series-connection switching devices)
- Output
  - 2-wire current loop for series connection of switching devices (continuous characteristic curve)
- Switching frequency up to 5000 Hz (Ø 4.5 mm, M 8)
- Operating distance acc. to standard

- The actuation distance is between 0 and 81% of the rated operating distance.

Advantages:

- Intrinsically safe, EEx ib IIC, certified by PTB (No. Ex-88.B.2145),
- Small types
- Matching SIMATIC NAMUR input modules
- Wire-break and short-circuit monitoring by series-connection switching devices

##### Applications in Zone 2

to DIN VDE 0165/2.91, Section 6.3

The proximity switches with the order designations

- **3RG40** . .
- **3RG41** . .
- **3RG46** . .

are permitted to be implemented in Zone 2 in accordance with DIN VDE 0165 Section 6.3.

The following requirements are met or must be complied with.

- The proximity switches operate without contact. No sparks or arcing occur during operation.
- The maximum surface temperature with reference to the

ambient temperature is +50 K.

- The requirements of the IP 54 degree of protection are met.
- For devices with plugs and connectors, they must be interlocked, such that plugging in and unplugging is only possible with the power turned off. A warning notice "Do not operate when live" must be applied to them.

In addition, the general requirements of the DIN VDE 0165 standard for the installation of electrical equipment in potentially explosive areas must be observed.

##### Approvals

3RG40 and 3RG41 devices with M 12 or M 18 connectors as well as terminal compartments are UL and CSA listed.

For a complete overview, see the Appendix.

##### Personal safety

The use of inductive BEROs is not permissible for applications in which the safety of persons is dependent on the function of the BERO.

#### Functions

##### Built-in protection

The protective circuits built into most BEROs (see selection data) make them easy to handle and protect the devices from damage.

Protection is possible against

- Wire-break (connection L- or L+),
- Spurious signals
- Short-circuit and overload (DC)
- Overvoltage peaks
- Swapped connectors
- Radio interference

##### Electromagnetic compatibility

All inductive BEROs meet the protection requirements of EMC guideline No. 89/336/EWG. This is verified by application of the standard EN 60 947-5-2 and certified by the appropriate authority.

The following EMC standards are applicable for the individual tests:

- ENV 50 140
- ENV 50 141
- EN 55 011
- EN 55 022

- EN 61 000-4-2
- EN 61 000-4-4

##### LEDs

The cylindrical BEROs (with the exception of BEROs for extreme environmental conditions and BEROs according to NAMUR) are equipped with one or two light emitting diodes (LEDs).

The yellow LEDs indicate the operating status, i.e.

- For the NO function: BERO damped = LED lit

- For the NC function: BERO not damped = LED lit

The green LED indicates that the operational voltage is applied. This function is only available in certain devices.

#### Design

##### Specifications

EN 60 947-5-2 (VDE 0660, Part 208)

##### Connectors

For the cylindrical types, 8 mm combined plugs or plugs with M 12 threads are offered as standard (3-pole or 4-pole). A cable plug is additionally required for the plug-and-socket connections, see Accessories. As an option, plugs with an M 18 thread (3-pole) are also offered for the M 18 and M 30 types.

##### Cables

In general, highly flexible cables with oil-resistant outer sheaths of polyurethane (PUR) are used that are 2 m long as standard.

For applications where cables come into contact with acids or alkalis, please order devices with PVC cables.

For devices used in applications to UL and CSA, PVC cables must be ordered.

Other cable lengths and materials are available on request.

##### Cable length

For the BERO proximity switches, long cables cause:

- Capacitive loading of the output
- Increased injection of interference.

Cables should be shorter than 300 m even under favourable conditions.

##### Cable routing

The connecting leads of the proximity switches should not be routed in a cable duct alongside cables that are used to switch inductive loads (e.g. contactor coils, solenoid valves or motors)

or that carry the currents of electronic motorized operating mechanisms. The lead lengths should be as short as possible; they can, however, be up to 300 m in length under the best conditions (minimal coupling capacitance, low interference voltage levels).

Interference can be reduced by means of the following measures:

- Clearance from interfering cables > 100 mm
- Shielding
- Connection of coils (of contactors, relays or solenoid valves) with RC elements or varistors.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

### Standard duty

#### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 30 V) • 3 or 4-wire • Degree of protection IP 67

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm			mA					Preferred type		
	0.6	∅ 3 × 22	Shielded	Stainless steel	100	3	2 m cable, PUR, 3 × 0.055 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 03-2AB00</b>		122
	0.8	∅ 4 × 25	Shielded	Stainless steel	200		2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 00-1AB00</b>		122
	0.8	M 5 × 25	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 10-0AG00</b>		122
							NO, npn	A	<b>3RG46 10-0GB00</b>		122	
		M 5 × 38					8 mm combined plug, Type A, C	NO, pnp	▶	<b>3RG46 10-7AG00</b>		122
								NO, npn	A	<b>3RG46 10-7GB00</b>		122
	0.8	5 × 5 × 25	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 36-0AG00</b>		122
								NO, npn	A	<b>3RG46 36-0GB00</b>		122
	1	M 8 × 50	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 11-0AG00</b>		122
							NC, pnp	C	<b>3RG40 11-0AF00</b>		122	
							NO, npn	▶	<b>3RG40 11-0GB00</b>		122	
	M 8 × 52					8 mm combined plug, Type A, C	NO, pnp	▶	<b>3RG40 11-7AG00</b>		122	
							NC, pnp	C	<b>3RG40 11-7AF00</b>		122	
	1	M 8 × 55	Shielded	Stainless steel	50	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 11-0CC00</b>		122
								NO + NC, C	<b>3RG40 11-7CC00</b>		122	
								NO + NC, C	<b>3RG40 11-3CC00</b>		122	
	1.5	∅ 6.5 × 16	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 01-1AB00</b>		122
											8 mm combined plug, Type A	NO, pnp
		∅ 6.5 × 20						NC, npn	A	<b>3RG46 01-7GB00</b>		122
	1.5	M 8 × 16	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 11-0AG31</b>		122
											8 mm combined plug, Type A	NO, pnp
		M 8 × 29						NC, pnp	A	<b>3RG46 11-7AF31</b>		122
								NO, npn	A	<b>3RG46 11-7GB31</b>		122
	1.5	8 × 8 × 40	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 37-0AB00</b>		122
											NO, npn	X
		8 × 8 × 59					8 mm combined plug, Type A	NO, pnp	A	<b>3RG46 37-7AB00</b>		122
								NC, pnp	A	<b>3RG46 37-7AA00</b>		122
								NO, npn	A	<b>3RG46 37-7GG00</b>		122
	1.5	∅ 6.5 × 35	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 50-0AG33</b>		122
								NC, pnp	C	<b>3RG40 50-0AF33</b>		122
								NO, npn	C	<b>3RG40 50-0GB33</b>		122
								NC, npn	C	<b>3RG40 50-0GA33</b>		122
		∅ 6.5 × 45					8 mm combined plug, Type A	NO, pnp	C	<b>3RG40 50-7AG33</b>		122
								NC, pnp	C	<b>3RG40 50-7AF33</b>		122
								NO, npn	C	<b>3RG40 50-7GB33</b>		122
							NC, npn	C	<b>3RG40 50-7GA33</b>		122	
	1.5	∅ 6.5 × 50	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 50-0AG05</b>		122
								NC, pnp	C	<b>3RG40 50-0AF05</b>		122
								NO, npn	C	<b>3RG40 50-0GB05</b>		122
								NC, npn	C	<b>3RG40 50-0GA05</b>		122
		∅ 6.5 × 52					8 mm combined plug, Type A	NO, pnp	C	<b>3RG40 50-7AG05</b>		122
								NC, pnp	C	<b>3RG40 50-7AF05</b>		122
							NO, npn	C	<b>3RG40 50-7GB05</b>		122	
							NC, npn	X	<b>3RG40 50-7GA05</b>		122	

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Standard duty

### Selection and ordering data

Rated operational voltage DC 15 to 34 V • 3 or 4-wire • Degree of protection IP 67

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
mm	mm			mA					Preferred type		
1.5	Ø 8 × 35	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 51-0AG33</b>	122	
							NC, pnp	▶	<b>3RG40 51-0AF33</b>	122	
	NO, npn						▶	<b>3RG40 51-0GB33</b>	122		
	NC, npn						▶	<b>3RG40 51-0GA33</b>	122		
	Ø 8 × 45					8 mm combined plug, Type A	NO, pnp	▶	<b>3RG40 51-7AG33</b>	122	
							NC, pnp	▶	<b>3RG40 51-7AF33</b>	122	
		NO, npn	▶	<b>3RG40 51-7GB33</b>	122						
		NC, npn	▶	<b>3RG40 51-7GA33</b>	122						
1.5	M 8 × 35	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 11-0AG33</b>	122	
							NC, pnp	▶	<b>3RG40 11-0AF33</b>	122	
	NO, npn						C	<b>3RG40 11-0GB33</b>	122		
	NC, npn						C	<b>3RG40 11-0GA33</b>	122		
	M 8 × 45					8 mm combined plug, Type A	NO, pnp	▶	<b>3RG40 11-7AG33</b>	122	
							NC, pnp	▶	<b>3RG40 11-7AF33</b>	122	
		NO, npn	C	<b>3RG40 11-7GB33</b>	122						
		NC, npn	C	<b>3RG40 11-7GA33</b>	122						
1.5	M 8 × 50	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 11-0AG05</b>	122	
							NC, pnp	▶	<b>3RG40 11-0AF05</b>	122	
	NO, npn						C	<b>3RG40 11-0GB05</b>	122		
	NC, npn						C	<b>3RG40 11-0GA05</b>	122		
	M 8 × 52					8 mm combined plug, Type A, C	NO, pnp	▶	<b>3RG40 11-7AG05</b>	122	
							NC, pnp	C	<b>3RG40 11-7AF05</b>	122	
M 8 × 55	M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 11-3AG05</b>	122						
		NC, pnp	C	<b>3RG40 11-3AF05</b>	122						
		NO, npn	C	<b>3RG40 11-3GB05</b>	122						
		NC, npn	C	<b>3RG40 11-3GA05</b>	122						
1.5	M 8 × 50	Shielded	Stainless steel	50	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG40 11-0CC05</b>	122	
								NO + NC, C	<b>3RG40 11-7CC05</b>	122	
								NO + NC, C	<b>3RG40 11-3CC05</b>	122	
2	M 12 × 35	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 12-0AG33</b>	122	
							NC, pnp	C	<b>3RG40 12-0AF33</b>	122	
	NO, npn						▶	<b>3RG40 12-0GB33</b>	122		
	NC, npn						C	<b>3RG40 12-0GA33</b>	122		
	M 12 × 45					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 12-3AG33</b>	122	
							NC, pnp	C	<b>3RG40 12-3AF33</b>	122	
		NO, npn	▶	<b>3RG40 12-3GB33</b>	122						
		NC, npn	C	<b>3RG40 12-3GA33</b>	122						
2	M 12 × 50	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 12-0AG01</b>	122	
							NC, pnp	C	<b>3RG40 12-0AF01</b>	122	
	NO, npn						▶	<b>3RG40 12-0GB00</b>	122		
	NC, npn						C	<b>3RG40 12-0GA00</b>	122		
	M 12 × 59					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 12-3AG01</b>	122	
							NC, pnp	C	<b>3RG40 12-3AF01</b>	122	
		NO, npn	▶	<b>3RG40 12-3GB00</b>	122						
2	M 12 × 40	Shielded	Brass, nickel-pl.	50	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG40 12-0CD10</b>	122	
									NO + NC, C	<b>3RG40 12-3CD11</b>	122
2	M 12 × 50	Shielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 12-0CD00</b>	122	
									NO + NC, pnp	▶	<b>3RG40 12-3CD00</b>

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# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Standard duty

### Selection and ordering data

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	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG									
	mm	mm			mA					Preferred type											
	2	12 × 40 × 26	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 70-0AG45</b>		122									
							8 mm combined plug, Type A	NO, pnp	▶	<b>3RG40 70-7AG45</b>		122									
	2	12 × 32 × 27	Shielded	Moulded plastic	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶		<b>3RG40 71-0CD00</b>		122								
	2	12 × 40 × 26	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C		<b>3RG40 70-0AG01</b>		122								
											8 mm combined plug, Type A	NO, pnp	C	<b>3RG40 70-0AF01</b>		122					
														<b>3RG40 70-7AG01</b>		122					
														M 12 connector, Type E, F	NO, pnp	C	<b>3RG40 70-3AG01</b>		122		
														NC, pnp	C	<b>3RG40 70-3AF01</b>		122			
	2	12 × 40 × 26	Shielded	Moulded plastic	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶		<b>3RG40 70-0CD00</b>		122								
											8 mm combined plug, Type A	NO + NC, pnp	C	<b>3RG40 70-7CD01</b>		122					
														<b>3RG40 70-7CD02</b>		122					
M 12 connector, Type E, F											NO + NC, pnp	C	<b>3RG40 70-3CD00</b>		122						
2.5	∅ 6.5 × 35	Unshielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	C	<b>3RG40 60-0AG33</b>		122									
										NC, pnp	C	<b>3RG40 60-0AF33</b>		122							
												NO, npn	X	<b>3RG40 60-0GB33</b>		122					
										NC, npn	X			<b>3RG40 60-0GA33</b>		122					
												∅ 6.5 × 45	Unshielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	C	<b>3RG40 60-0AG33</b>
										NC, pnp	C										<b>3RG40 60-7AG33</b>
	NO, npn	X	<b>3RG40 60-7AF33</b>		122																
			NC, npn	X	<b>3RG40 60-7GB33</b>		122														
	NC, npn	X			<b>3RG40 60-7GA33</b>		122														
			M 8 × 35	Unshielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	C										<b>3RG40 21-0AG33</b>
	NC, pnp	C										<b>3RG40 21-0AF33</b>		122							
												NO, npn	C	<b>3RG40 21-0GB33</b>		122					
NC, npn	C	<b>3RG40 21-0GA33</b>													122						
		M 8 × 45										Unshielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	C	<b>3RG40 21-0AG33</b>	
NC, pnp	C																			<b>3RG40 21-7AG33</b>	
			NO, npn	C	<b>3RG40 21-7AF33</b>		122														
NC, npn	C				<b>3RG40 21-7GB33</b>		122														
			NC, npn	C	<b>3RG40 21-7GA33</b>		122														
2.5	M 14 × 56				Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, npn	C									<b>3RG40 72-0GB00</b>	
		NC, npn	▶	<b>3RG40 72-0GA00</b>									122								
				M 12 connector, Type E, F								NO, npn	C	<b>3RG40 72-3GB00</b>		122					
	NC, npn	C	<b>3RG40 72-3GA00</b>			122															
			2.5		M 14 × 66	Shielded	Moulded plastic	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp			▶	<b>3RG40 72-0CD00</b>		122				
	M 12 connector, Type F	NO + NC, pnp		▶								<b>3RG40 72-3CD00</b>			122						
4	M 12 × 35	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	C	<b>3RG40 22-0AG33</b>		122									
										NC, pnp	C	<b>3RG40 22-0AF33</b>		122							
												NO, npn	C	<b>3RG40 22-0GB33</b>		122					
										NC, npn	C			<b>3RG40 22-0GA33</b>		122					
												M 12 × 45	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	C	<b>3RG40 22-3AG33</b>
										NC, pnp	C										<b>3RG40 22-3AF33</b>
	NO, npn	C	<b>3RG40 22-3GB33</b>		122																
			NC, npn	C	<b>3RG40 22-3GA33</b>		122														

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.


# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Standard duty

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG40 75: 10 to 30 V) • 3 or 4-wire • Degree of protection IP 67

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG	
									Preferred type			
	4	M 12 x 56	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	▶	3RG40 22-0AG01	122	
										3RG40 22-0AF01	122	
		3RG40 22-0GB00								122		
		3RG40 22-0GA00								122		
	M 12 x 65	M 12 connector, Type E, F	3RG40 22-3AG01	122								
			3RG40 22-3AF01	122								
	3RG40 22-3GB00		122									
	3RG40 22-3GA00		122									
	4	M 12 x 40	Unshielded	Brass, nickel-pl.	50	4	2 m cable, PUR, 4 x 0.14 mm <sup>2</sup>	NO + NC, pnp	C	3RG40 22-0CD10	122	
										3RG40 22-3CD11	122	
		M 12 x 50								M 12 connector, Type F	3RG40 22-0CD00	122
											3RG40 22-3CD00	122
M 12 x 56	Unshielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 x 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	3RG40 22-0CD00	122			
								3RG40 22-3CD00	122			
M 12 x 65								M 12 connector, Type F	3RG40 22-0AG45	122		
									3RG40 80-7AG45	122		
M 14 x 56	Unshielded	Moulded plastic	200	4	2 m cable, PUR, 4 x 0.14 mm <sup>2</sup>	NO + NC, pnp	▶		3RG40 82-0CD00	122		
									3RG40 82-3CD00	122		
M 14 x 66								M 12 connector, Type F	3RG40 13-0AG33	122		
									3RG40 13-0AF33	122		
M 18 x 35	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C		3RG40 13-0GB33	122		
									3RG40 13-0GA33	122		
M 18 x 45								M 12 connector, Type E, F	3RG40 13-3AG33	122		
									3RG40 13-3AF33	122		
M 18 x 54	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	▶		3RG40 13-0AG01	122		
									3RG40 13-0AF01	122		
M 18 x 69								M 12 connector, Type E, F	3RG40 13-0GB00	122		
									3RG40 13-0GA00	122		
M 18 x 74	M 18 connector, Type P	3RG40 13-3AG01	122									
		3RG40 13-3AF01	122									
M 18 x 54		Shielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 x 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	3RG40 13-0GB00	122		
									3RG40 13-3GB00	122		
M 18 x 69	M 12 connector, Type F								3RG40 13-3GA00	122		
									3RG40 13-2AG01	122		
M 18 x 54		Shielded	Moulded plastic	50	3	Single cores 0.5 m, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn	▶	3RG40 13-0CD00	122		
									3RG40 13-3CD00	122		
M 18 x 69	M 12 connector, Type F								3RG40 75-0AJ00	122		
									3RG40 75-0AH00	122		
M 18 x 35		Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C	3RG40 75-0GJ00	122		
									3RG40 23-0AG33	122		
M 18 x 45	M 12 connector, Type E, F								3RG40 23-0AF33	122		
									3RG40 23-0GB33	122		
M 18 x 35		Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C	3RG40 23-0GA33	122		
									3RG40 23-3AG33	122		
M 18 x 45	M 12 connector, Type E, F								3RG40 23-3AF33	122		
									3RG40 23-3GB33	122		
M 18 x 35		Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C	3RG40 23-3GA33	122		
									3RG40 23-3GA33	122		

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

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# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Standard duty

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 36 V) • 3 or 4-wire • Degree of protection IP 67  
(with terminal compartment: IP 65)

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm			mA					Preferred type		
	8	M 18 × 54	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn	▶ C C	<b>3RG40 23-0AG01</b> <b>3RG40 23-0AF01</b> <b>3RG40 23-0GB00</b>		122 122 122
		M 18 × 69					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn	C C C	<b>3RG40 23-3AG01</b> <b>3RG40 23-3AF01</b> <b>3RG40 23-3GB00</b>		122 122 122
		M 18 × 74					M 18 connector, Type P	NO, pnp NC, pnp	C C	<b>3RG40 23-2AG01</b> <b>3RG40 23-2AF01</b>		122 122
	8	M 18 × 54	Unshielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 23-0CD00</b>		122
		M 18 × 69					M 12 connector, Type F	NO + NC, pnp	C	<b>3RG40 23-3CD00</b>		122
		M 18 × 74					M 18 connector, Type P	NO + NC, pnp	C	<b>3RG40 23-2CD00</b>		122
	10	M 30 × 35	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C C C C	<b>3RG40 14-0AG33</b> <b>3RG40 14-0AF33</b> <b>3RG40 14-0GB33</b> <b>3RG40 14-0GA33</b>		122 122 122 122
		M 30 × 45					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn NC, npn	▶ C C C	<b>3RG40 14-3AG33</b> <b>3RG40 14-3AF33</b> <b>3RG40 14-3GB33</b> <b>3RG40 14-3GA33</b>		122 122 122 122
	10	M 30 × 54	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn	▶ ▶ ▶	<b>3RG40 14-0AG01</b> <b>3RG40 14-0AF01</b> <b>3RG40 14-0GB00</b>		122 122 122
		M 30 × 69					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn	▶ C C	<b>3RG40 14-3AG01</b> <b>3RG40 14-3AF01</b> <b>3RG40 14-3GB00</b>		122 122 122
		M 30 × 84					M 18 connector, Type P	NO, pnp NC, pnp	C C	<b>3RG40 14-2AG01</b> <b>3RG40 14-2AF01</b>		122 122
	10	M 30 × 54	Shielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 14-0CD00</b>		122
	M 30 × 69					M 12 connector, Type F	NO + NC, pnp	C	<b>3RG40 14-3CD00</b>		122	
10	M 30 × 80	Shielded	Brass, nickel-pl.	300	4	M 12 connector, Type F	NO + NC, pnp	D	<b>3RG40 14-3CD01</b>		122	
10	∅ 20 × 62	Unshielded	Moulded plastic	250	3	With terminal compartment for cables 0.75 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 25-6AG00</b>		122	
	15	M 30 × 35	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	C C C C	<b>3RG40 24-0AG33</b> <b>3RG40 24-0AF33</b> <b>3RG40 24-0GB33</b> <b>3RG40 24-0GA33</b>		122 122 122 122
		M 30 × 45					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn NC, npn	▶ C C C	<b>3RG40 24-3AG33</b> <b>3RG40 24-3AF33</b> <b>3RG40 24-3GB33</b> <b>3RG40 24-3GA33</b>		122 122 122 122
	15	M 30 × 54	Unshielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NC, pnp NO, npn NC, npn	▶ C C C	<b>3RG40 24-0AG01</b> <b>3RG40 24-0AF01</b> <b>3RG40 24-0GB00</b> <b>3RG40 24-0GA00</b>		122 122 122 122
		M 30 × 69					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn NC, npn	▶ C C C	<b>3RG40 24-3AG01</b> <b>3RG40 24-3AF01</b> <b>3RG40 24-3GB00</b> <b>3RG40 24-3GA01</b>		122 122 122 122
		M 30 × 84					M 18 connector, Type P	NO, pnp NC, pnp	C C	<b>3RG40 24-2AG01</b> <b>3RG40 24-2AF01</b>		122 122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Standard duty

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 36 V) • 3 or 4-wire • Degree of protection IP 67  
(with terminal compartment: IP 65)

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
mm	mm			mA					Preferred type		
15	M 30 × 54	Unshielded	Brass, nickel-pl.	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 24-0CD00</b>	122	
	M 30 × 69								M 12 connector, Type F		
15	40 × 40 × 69 (incl. connectors)	Shielded	Moulded plastic	200	4	M 12 connector, Type F	NO + NC, pnp	▶	<b>3RG40 38-3CD00</b>	122	
									NO + NC, A npn		
15	40 × 40 × 120	Shielded	Moulded plastic	200	3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 31-6AG01</b>	122	
							NC, pnp	C	<b>3RG40 31-6AF01</b>		
							NO, npn	▶	<b>3RG40 31-6GB00</b>		
15	40 × 40 × 120	Shielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 31-6CD00</b>	122	
15	40 × 40 × 118	Shielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 34-6CD00</b>	122	
20	∅ 34 × 98	Unshielded	Moulded plastic	200	3	With terminal compartment for cables 0.75 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	A	<b>3RG46 26-6AD00</b>	122	
20	40 × 40 × 120	Unshielded	Moulded plastic	200	3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 41-6AG01</b>	122	
							NC, pnp	C	<b>3RG40 41-6AF01</b>		
							NO, npn	C	<b>3RG40 41-6GB00</b>		
20	40 × 40 × 120	Unshielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 41-6CD00</b>	122	
25	60 × 77 × 41	Shielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	▶	<b>3RG40 32-6CD00</b>	122	
30	60 × 77 × 41	Unshielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG40 42-6CD00</b>	122	
40	80 × 100 × 42	Unshielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG40 43-6CD00</b>	122	



For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.



# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Optimized for solid-state inputs (PLC)

### Selection and ordering data

Rated operational voltage DC 15 to 34 V • Rated operational current 25 mA • 2-wire • Degree of protection IP 67

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm						▶ Preferred type		
	1	M 8 × 50	Shielded	Stainless steel	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 11-0JB00</b>		122
		M 8 × 52			8 mm combined plug, Type A	NO	C	<b>3RG40 11-7JB00</b>		122
		M 8 × 55			M 12 connector, Type E, F	NO	▶	<b>3RG40 11-3JB00</b>		122
	2	M 12 × 50	Shielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 12-0JB00</b>		122
		M 12 × 59			M 12 connector, Type E, F	NO	▶	<b>3RG40 12-3JB00</b>		122
	4	M 12 × 56	Unshielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 22-0JB00</b>		122
		M 12 × 65			M 12 connector, Type E, F	NO	▶	<b>3RG40 22-3JB00</b>		122
	2.5	M 14 × 56	Shielded	Moulded plastic	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	C	<b>3RG40 72-0JB00</b>		122
		M 14 × 66			M 12 connector, Type E, F	NO	C	<b>3RG40 72-3JB00</b>		122
	5	M 18 × 54	Shielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 13-0JB00</b>		122
		M 18 × 69			M 12 connector, Type E, F	NO	▶	<b>3RG40 13-3JB00</b>		122
		M 18 × 74			With M 18 connector, Type P	NO	C	<b>3RG40 13-2JB00</b>		122
	8	M 18 × 54	Unshielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 23-0JB00</b>		122
		M 18 × 69			M 12 connector, Type E, F	NO	▶	<b>3RG40 23-3JB00</b>		122
		M 18 × 74			M 18 connector, Type P	NO	C	<b>3RG40 23-2JB00</b>		122
	10	M 30 × 54	Shielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 14-0JB00</b>		122
		M 30 × 69			M 12 connector, Type E, F	NO	C	<b>3RG40 14-3JB00</b>		122
		M 30 × 84			M 18 connector, Type P	NO	C	<b>3RG40 14-2JB00</b>		122
	15	M 30 × 54	Unshielded	Brass, nickel-pl.	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 24-0JB00</b>		122
		M 30 × 69			M 12 connector, Type E, F	NO	C	<b>3RG40 24-3JB00</b>		122
		M 30 × 84			M 18 connector, Type P	NO	C	<b>3RG40 24-2JB00</b>		122
	15	40 × 40 × 120	Shielded	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO	▶	<b>3RG40 31-6JB00</b>		122
	20	40 × 40 × 120	Unshielded	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO	▶	<b>3RG40 41-6JB00</b>		122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Extra duty

### Selection and ordering data

Rated operational voltage AC 20 to 265 V / DC 20 to 320 V • 2-wire • Degree of protection IP 67  
 Rated operational voltage DC 10 to 65 V • 3-wire • Degree of protection IP 67

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG				
mm	mm		mA						Preferred type						
1	M 8 × 57	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 11-0AB00</b>	122					
							NC, pnp	C	<b>3RG40 11-0AA00</b>	122					
	M 8 × 58							NO, pnp	▶	<b>3RG40 11-7AB00</b>	122				
								NC, pnp	C	<b>3RG40 11-7AA00</b>	122				
	M 8 × 62				M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 11-3AB00</b>	122						
						NC, pnp	C	<b>3RG40 11-3AA00</b>	122						
2	M 12 × 56	Shielded	Brass, nickel-pl.	200	2	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 12-0KB00</b>	122					
							NC	C	<b>3RG40 12-0KA00</b>	122					
	M 12 × 65							NO	▶	<b>3RG40 12-3KB00</b>	122				
								NC	C	<b>3RG40 12-3KA00</b>	122				
	M 12 × 56			300	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 12-0AB00</b>	122					
							NC, pnp	▶	<b>3RG40 12-0AA00</b>	122					
	M 12 × 65					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 12-3AB00</b>	122					
							NC, pnp	C	<b>3RG40 12-3AA00</b>	122					
4	M 12 × 62	Un-shielded	Brass, nickel-pl.	200	2	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 22-0KB00</b>	122					
							NC	C	<b>3RG40 22-0KA00</b>	122					
	M 12 × 71							NO	▶	<b>3RG40 22-3KB00</b>	122				
								NC	C	<b>3RG40 22-3KA00</b>	122				
	M 12 × 62			300	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 22-0AB00</b>	122					
							NC, pnp	▶	<b>3RG40 22-0AA00</b>	122					
	M 12 × 71					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 22-3AB00</b>	122					
							NC, pnp	C	<b>3RG40 22-3AA00</b>	122					
2.5	M 14 × 56	Shielded	Moulded plastic	200	2	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	C	<b>3RG40 72-0KB00</b>	122					
							NC	C	<b>3RG40 72-0KA00</b>	122					
	M 14 × 66							NO	C	<b>3RG40 72-3KB00</b>	122				
								NC	C	<b>3RG40 72-3KA00</b>	122				
	M 14 × 56			300	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 72-0AB00</b>	122					
							NC, pnp	▶	<b>3RG40 72-0AA00</b>	122					
	M 14 × 66					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 72-3AB00</b>	122					
							NC, pnp	▶	<b>3RG40 72-3AA00</b>	122					
5	M 14 × 56	Un-shielded	Moulded plastic	300	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 82-0AB00</b>	122					
								NO, pnp	▶	<b>3RG40 82-3AB00</b>	122				
5	M 18 × 54	Shielded	Brass, nickel-pl.	300	2	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 13-0KB00</b>	122					
								NC	▶	<b>3RG40 13-0KA00</b>	122				
	M 18 × 69							NO	▶	<b>3RG40 13-3KB00</b>	122				
								NC	C	<b>3RG40 13-3KA00</b>	122				
	M 18 × 74								M 12 connector, Type E, F	NO	C	<b>3RG40 13-2KB00</b>	122		
										NC	C	<b>3RG40 13-2KA00</b>	122		
	M 18 × 54								3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 13-0AB00</b>	122	
											NC, pnp	▶	<b>3RG40 13-0AA00</b>	122	
	M 18 × 69					M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 13-3AB00</b>	122					
							NC, pnp	▶	<b>3RG40 13-3AA00</b>	122					
	M 18 × 74					M 18 connector, Type P	NO, pnp	C	<b>3RG40 13-2AB00</b>	122					
							NC, pnp	C	<b>3RG40 13-2AA00</b>	122					

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches




Extra duty

### Selection and ordering data

Rated operational voltage AC 20 to 265 V / DC 20 to 320 V (3RG 46: max. 250 V) • 2-wire • Degree of protection IP 67

(with terminal compartment: IP 65)

Rated operational voltage DC 10 to 65 V • 3-wire • Degree of protection IP 67 (with terminal compartment: IP 65)

	Rated operating distance	Form, dimensions	Embed-dable in metal	Enclosure	Rated opera-tional current	Con-necting wires	Connection	Switch-ing output function	DT	Order No.	Price	PG					
	mm	mm			mA					Preferred type							
	8	M 18 x 54	Un-shielded	Brass, nickel-pl.	300	2	2 m cable, PUR, 2 x 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 23-0KB00</b>	122						
							NC	▶	<b>3RG40 23-0KA00</b>	122							
		M 18 x 69					M 12 connector, Type E, F	NO	▶	<b>3RG40 23-3KB00</b>	122						
							NC	▶	<b>3RG40 23-3KA00</b>	122							
		M 18 x 74					M 18 connector, Type P	NO	▶	<b>3RG40 23-2KB00</b>	122						
		M 18 x 54					3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 23-0AB00</b>	122					
								NC, pnp	▶	<b>3RG40 23-0AA00</b>	122						
M 18 x 69	M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 23-3AB00</b>	122												
		NC, pnp	▶	<b>3RG40 23-3AA00</b>	122												
M 18 x 74	M 18 connector, Type P	NO, pnp	▶	<b>3RG40 23-2AB00</b>	122												
	10	∅ 20 x 62	Un-shielded	Moulded plastic	250 / at AC 230 V 100 / at DC 24 V	2	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶	<b>3RG46 25-6KD00</b>	122						
		10					M 30 x 54	Shielded	Brass, nickel-pl.	300	2	2 m cable, PUR, 2 x 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 14-0KB00</b>	122	
												NC	▶	<b>3RG40 14-0KA00</b>	122		
							M 30 x 69					M 12 connector, Type E, F	NO	▶	<b>3RG40 14-3KB00</b>	122	
												NC	▶	<b>3RG40 14-3KA00</b>	122		
							M 30 x 84					M 18 connector, Type P	NO	▶	<b>3RG40 14-2KB00</b>	122	
												NC	▶	<b>3RG40 14-2KA00</b>	122		
		M 30 x 54					3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 14-0AB00</b>	122					
								NC, pnp	▶	<b>3RG40 14-0AA00</b>	122						
		M 30 x 69						M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 14-3AB00</b>	122					
								NC, pnp	▶	<b>3RG40 14-3AA00</b>	122						
		M 30 x 84					M 18 connector, Type P	NO, pnp	▶	<b>3RG40 14-2AB00</b>	122						
								NC, pnp	▶	<b>3RG40 14-2AA00</b>	122						
	15	M 30 x 54	Un-shielded	Brass, nickel-pl.	300	2	2 m cable, PUR, 2 x 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 24-0KB00</b>	122						
							NC	▶	<b>3RG40 24-0KA00</b>	122							
		M 30 x 69					M 12 connector, Type E, F	NO	▶	<b>3RG40 24-3KB00</b>	122						
							NC	▶	<b>3RG40 24-3KA00</b>	122							
		M 30 x 84					M 18 connector, Type P	NO	▶	<b>3RG40 24-2KB00</b>	122						
		M 30 x 54					3	2 m cable, PUR, 3 x 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 24-0AB00</b>	122					
								NC, pnp	▶	<b>3RG40 24-0AA00</b>	122						
		M 30 x 69						M 12 connector, Type E, F	NO, pnp	▶	<b>3RG40 24-3AB00</b>	122					
		NC, pnp	▶	<b>3RG40 24-3AA00</b>	122												
M 30 x 84	M 18 connector, Type P	NO, pnp	▶	<b>3RG40 24-2AB00</b>	122												
		NC, pnp	▶	<b>3RG40 24-2AA00</b>	122												

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.








# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Extra duty

### Selection and ordering data

Rated operational voltage AC 20 to 265 V / DC 20 to 320 V • 2-wire • Degree of protection IP 67 (with terminal compartment: IP 65)  
 Rated operational voltage DC 10 to 65 V • 3-wire • Degree of protection IP 67 (with terminal compartment: IP 65)

Rated operating distance	Type, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
mm	mm			mA					Preferred type		
	15	40 × 40 × 69 (incl. connectors)	Shielded	Moulded plastic	300	2	M 12 connector, Type E, F	NO	▶ <b>3RG40 38-3KB00</b>		122
	15	40 × 40 × 120	Shielded	Moulded plastic	300	2 <sup>1)</sup>	With terminal compartment for cables 0.5 to 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG40 31-6KD00</b>		122
						3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	▶ <b>3RG40 31-6AD00</b>		122
	20	40 × 40 × 120	Unshielded	Moulded plastic	300	2 <sup>1)</sup>	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG40 41-6KD00</b>		122
						3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	▶ <b>3RG40 41-6AD00</b>		122
	20	∅ 34 × 98	Unshielded	Moulded plastic	250 / at AC 230 V 100 / at DC 24 V	2	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG46 26-6KD00</b>		122
	30	60 × 77 × 41	Unshielded	Moulded plastic	300	2 <sup>1)</sup>	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG40 42-6KD00</b>		122
						3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	▶ <b>3RG40 42-6AD00</b>		122
	40, embeddable 30, non-embeddable	80 × 100 × 42	Shielded/unshielded	Moulded plastic	300	2 <sup>1)</sup>	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG40 33-6KD01</b>		122
						3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	▶ <b>3RG40 33-6AD01</b>		122
	40	80 × 100 × 42	Unshielded	Moulded plastic	300	2 <sup>1)</sup>	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, programmable	▶ <b>3RG40 43-6KD00</b>		122
						3	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	▶ <b>3RG40 43-6AD00</b>		122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

1) With only 1 LED.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Extreme environment

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 30 V) • 2 or 3-wire • Degree of protection IP 68

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm			mA					Preferred type		
	0.6	∅ 4 × 25	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 00-0AG02</b>		122
	0.6	M 5 × 25	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 10-0AG02</b>		122
	2.5	∅ 6.5 × 45	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 02-0AG02</b>		122
	2.5	M 8 × 45	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 11-0AG02</b>		122
	2	∅ 12 × 50	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 52-0AG30</b>		122
								NC, pnp	C	<b>3RG40 52-0AF30</b>		122
								NO, npn	C	<b>3RG40 52-0GB30</b>		122
								NC, npn	C	<b>3RG40 52-0GA30</b>		122
	2	M 12 × 50	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG40 12-0AG30</b>		122
								NC, pnp	C	<b>3RG40 12-0AF30</b>		122
								NO, npn	C	<b>3RG40 12-0GB30</b>		122
								NC, npn	C	<b>3RG40 12-0GA30</b>		122
	2	M 12 × 50	Shielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 12-0AG31</b>		122
								NO, npn	C	<b>3RG40 12-0GB31</b>		122
	4	∅ 12 × 50	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 62-0AG30</b>		122
								NC, pnp	C	<b>3RG40 62-0AF30</b>		122
								NO, npn	▶	<b>3RG40 62-0GB30</b>		122
								NC, npn	C	<b>3RG40 62-0GA30</b>		122
	4	M 12 × 50	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 22-0AG30</b>		122
								NC, pnp	C	<b>3RG40 22-0AF30</b>		122
								NO, npn	▶	<b>3RG40 22-0GB30</b>		122
								NC, npn	C	<b>3RG40 22-0GA30</b>		122
	4	M 12 × 56	Unshielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 22-0AG31</b>		122
								NO, npn	C	<b>3RG40 22-0GB31</b>		122
4	M 12 × 56	Unshielded	Moulded plastic	200	2	2 m cable, PVC, 2 × 0.25 mm <sup>2</sup>	AC/DC	NO	▶	<b>3RG40 22-0KB30</b>		122
											3	DC 65 V
	5	∅ 18 × 54	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 53-0AG30</b>		122
								NC, pnp	C	<b>3RG40 53-0AF30</b>		122
								NO, npn	C	<b>3RG40 53-0GB30</b>		122
								NC, npn	C	<b>3RG40 53-0GA30</b>		122
	5	M 18 × 54	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 13-0AG30</b>		122
								NC, pnp	C	<b>3RG40 13-0AF30</b>		122
								NO, npn	C	<b>3RG40 13-0GB30</b>		122
								NC, npn	C	<b>3RG40 13-0GA30</b>		122
	5	M 18 × 54	Shielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 13-0AG31</b>		122
								NO, npn	C	<b>3RG40 13-0GB31</b>		122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Extreme environment

### Selection and ordering data

Rated operational voltage DC 15 to 34 V • 2, 3 or 4-wire • Degree of protection IP 68

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
mm	mm			mA					Preferred type		
8	Ø 18 × 54	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 63-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 63-0AF30</b>	122	
							NO, npn	C	<b>3RG40 63-0GB30</b>	122	
							NC, npn	C	<b>3RG40 63-0GA30</b>	122	
8	M 18 × 54	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 23-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 23-0AF30</b>	122	
							NO, npn	C	<b>3RG40 23-0GB30</b>	122	
							NC, npn	C	<b>3RG40 23-0GA30</b>	122	
8	M 18 × 54	Unshielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 23-0AG31</b>	122	
							NO, npn	C	<b>3RG40 23-0GB31</b>	122	
8	M 18 × 54	Unshielded	Moulded plastic	300	2 AC/DC	2 m cable, PVC, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 23-0KB30</b>	122	
							3 DC 65 V	NO, pnp	C	<b>3RG40 23-0AB30</b>	
10	Ø 30 × 54	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 54-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 54-0AF30</b>	122	
							NO, npn	C	<b>3RG40 54-0GB30</b>	122	
							NC, npn	C	<b>3RG40 54-0GA30</b>	122	
10	M 30 × 54	Shielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 14-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 14-0AF30</b>	122	
							NO, npn	C	<b>3RG40 14-0GB30</b>	122	
							NC, npn	C	<b>3RG40 14-0GA30</b>	122	
10	M 30 × 54	Shielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 14-0AG31</b>	122	
							NO, npn	C	<b>3RG40 14-0GB31</b>	122	
15	Ø 30 × 54	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 64-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 64-0AF30</b>	122	
							NO, npn	C	<b>3RG40 64-0GB30</b>	122	
							NC, npn	C	<b>3RG40 64-0GA30</b>	122	
15	M 30 × 54	Unshielded	Moulded plastic	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	A	<b>3RG40 24-0AG30</b>	122	
							NC, pnp	C	<b>3RG40 24-0AF30</b>	122	
							NO, npn	C	<b>3RG40 24-0GB30</b>	122	
							NC, npn	C	<b>3RG40 24-0GA30</b>	122	
15	M 30 × 54	Unshielded	Brass	200	3	2 m cable, PVC, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 24-0AG31</b>	122	
							NO, npn	C	<b>3RG40 24-0GB31</b>	122	
15	M 30 × 54	Unshielded	Moulded plastic	300	2 AC/DC	2 m cable, PVC, 2 × 0.25 mm <sup>2</sup>	NO	▶	<b>3RG40 24-0KB30</b>	122	
							3 DC 65 V	NO, pnp	C	<b>3RG40 24-0AB30</b>	
15	40 × 40 × 112	Shielded	Moulded plastic	200	4	2 m cable, PUR, 4 × 0.14 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG40 30-0CD00</b>	97.70	122
							NO + NC, pnp	C	<b>3RG40 30-0CD01</b>	97.70	122
15	40 × 40 × 112	Shielded	Moulded plastic	300	2 AC/DC	2 m cable, PUR, 2 × 0.25 mm <sup>2</sup>	NO	C	<b>3RG40 30-0KB00</b>	200.—	122
							NC	C	<b>3RG40 30-0KA00</b>	200.—	122
							NO	C	<b>3RG40 30-0KB01</b>	200.—	122
							NC	C	<b>3RG40 30-0KA01</b>	200.—	122
							NO, pnp	C	<b>3RG40 30-0AB00</b>	84.40	122
							NC, pnp	C	<b>3RG40 30-0AA00</b>	84.40	122
				300	3 DC 65 V	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG40 30-0AB01</b>	84.40	122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Greater rated operating distance

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 30 V) • 3-wire • Degree of protection IP 67

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
mm	mm			mA					Preferred type		
2	M 8 × 35	Shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG41 11-0AG33</b>	122	
							NC, pnp	▶	<b>3RG41 11-0AF33</b>	122	
							NO, npn	C	<b>3RG41 11-0GB33</b>	122	
							NC, npn	C	<b>3RG41 11-0GA33</b>	122	
	M 8 × 45	8 mm combined plug, Type A	NO, pnp	▶	<b>3RG41 11-7AG33</b>	122					
			NC, pnp	▶	<b>3RG41 11-7AF33</b>	122					
			NO, npn	C	<b>3RG41 11-7GB33</b>	122					
			NC, npn	C	<b>3RG41 11-7GA33</b>	122					
2	M 8 × 50	Shielded	Stainless steel	200	3	3 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG41 11-0AG00</b>	122	
	M 8 × 55						NO, pnp	▶	<b>3RG41 11-3AG00</b>	122	
	M 8 × 60						NO, pnp	▶	<b>3RG41 11-3AG22</b>	122	
3	Ø 6.5 × 45	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 02-1AB00</b>	122	
							NO, npn	A	<b>3RG46 02-1GB01</b>	122	
	Ø 6.5 × 60						8 mm combined plug, Type A	NO, pnp	▶	<b>3RG46 02-7AG01</b>	122
3	8 × 8 × 40	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.14 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 37-0AG01</b>	122	
							NO, npn	A	<b>3RG46 37-0GB01</b>	122	
	8 × 8 × 59						8 mm combined plug, Type A	NO, pnp	▶	<b>3RG46 37-7AG01</b>	122
							NO, npn	A	<b>3RG46 37-7GB01</b>	122	
3	M 8 × 45	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG46 11-0AG01</b>	122	
							NO, npn	A	<b>3RG46 11-0GB01</b>	122	
	M 8 × 53						8 mm combined plug, Type A	NO, pnp	▶	<b>3RG46 11-7AG01</b>	122
	M 8 × 66	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 11-3AG01</b>	122					
			NO, npn	A	<b>3RG46 11-3GB01</b>	122					
4	M 12 × 35	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	<b>3RG41 12-0AG33</b>	122	
	M 12 × 45						NO, pnp	C	<b>3RG41 12-3AG33</b>	122	
4	M 12 × 50	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	▶	<b>3RG41 12-0AG01</b>	122	
							NC, pnp	▶	<b>3RG41 12-0AF01</b>	122	
	M 12 × 59						NO, pnp	▶	<b>3RG41 12-3AG01</b>	122	
							NC, pnp	C	<b>3RG41 12-3AF01</b>	122	

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.

# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Greater rated operating distance

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 30 V) • 3-wire • Degree of protection IP 67

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG		
	mm	mm			mA					▶ Preferred type				
	6	M 8 × 41	Un-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp NO, npn	▶ A	3RG46 21-0AG02	122			
		M 8 × 60								3RG46 21-0GB02	122			
		M 8 × 62								8 mm combined plug, Type A	NO, pnp NO, npn	▶ A	3RG46 21-7AG02	122
										M 12 connector, Type E, F	NO, pnp NO, npn	A	3RG46 21-7GB02	122
	6	M 12 × 50	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NO, npn	▶ A	3RG46 12-0AG01	122			
		M 12 × 60								M 12 connector, Type E, F	NO, pnp NO, npn	▶ A	3RG46 12-3AB01	122
	8	M 18 × 35	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	3RG41 13-0AG33	122			
		M 18 × 45								M 12 connector, Type E, F	NO, pnp	C	3RG41 13-3AG33	122
	8	M 18 × 70	Semi-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	3RG41 13-0AG01	122			
										M 12 connector, Type E, F	NO, pnp	C	3RG41 13-3AG01	122
	10	M 12 × 50	Un-shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp	▶	3RG46 22-0AG02	122			
		M 12 × 60								M 12 connector, Type E, F	NO, pnp	▶	3RG46 22-3AB03	122
12	M 18 × 50	Semi-shielded	Brass	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NO, npn	A	3RG46 13-1AB01	122				
									3RG46 13-0GB00	122				
	M 18 × 63.5								M 12 connector, Type E, F	NO, pnp NO, npn	A	3RG46 13-3AB01	122	
									3RG46 13-3GB01	122				
15	M 30 × 70	Shielded	Brass, nickel-pl.	200	3	2 m cable, PUR, 3 × 0.25 mm <sup>2</sup>	NO, pnp	C	3RG41 14-0AG01	122				
									M 12 connector, Type E, F	NO, pnp	C	3RG41 14-3AG01	122	
20	M 18 × 50	Un-shielded	Brass	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NO, npn	A	3RG46 23-0AB02	122				
									3RG46 23-0GB02	122				
	M 18 × 63.5								M 12 connector, Type E, F	NO, pnp NO, npn	▶ A	3RG46 23-3AB02	122	
									3RG46 23-3GB02	122				
22	M 30 × 60	Semi-shielded	Brass	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NO, npn	A	3RG46 14-0AB00	122				
									3RG46 14-0GB00	122				
	M 30 × 73.5								M 12 connector, Type E, F	NO, pnp NO, npn	A	3RG46 14-3AB00	122	
									3RG46 14-3GB00	122				
40	M 30 × 60	Un-shielded	Brass	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NO, npn	A	3RG46 24-0AB02	122				
									3RG46 24-0GB02	122				
	M 30 × 74								M 12 connector, Type E, F	NO, pnp NO, npn	▶ A	3RG46 24-3AB02	122	
									3RG46 24-3GB02	122				

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.



# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches






Greater rated operating distance

### Selection and ordering data

Rated operational voltage DC 15 to 34 V (3RG46: 10 to 30 V) • 3 or 4-wire • Degree of protection IP 67  
(with terminal compartment: IP 65)

Rated operational voltage AC 20 to 265 V / DC 20 to 320 V • 2-wire • Degree of protection of IP 67

Rated operational voltage DC 10 to 65 V • 3-wire • Degree of protection IP 67 (with terminal compartment: IP 65)

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm			mA					▶ Preferred type		
	20	40 × 40 × 65 (incl. connectors)	Shielded	Moulded plastic	200	3	M 12 connector, Type E, F	NO, pnp NO, npn	A A	<b>3RG46 38-3AG01</b> <b>3RG46 38-3GB01</b>	122	122
	20	40 × 40 × 69 (incl. connectors)	Shielded	Moulded plastic	200	2 AC/DC	M 12 connector, Type E, F	NO	▶	<b>3RG41 38-3KB00</b>	122	
					200	4	M 12 connector, Type F	NO + NC, pnp NO + NC, npn	▶ A	<b>3RG41 38-3CD00</b> <b>3RG41 38-3GD00</b>	122	122
	35	40 × 40 × 69 (incl. connectors)	Unshielded	Moulded plastic	300	2 AC/DC	M 12 connector, Type E, F	NO	▶	<b>3RG41 48-3KB00</b>	122	
					200	4	M 12 connector, Type F	NO + NC, pnp NO + NC, npn	▶ A	<b>3RG41 48-3CD00</b> <b>3RG41 48-3GD00</b>	122	122
	20	40 × 40 × 118	Shielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG41 34-6CD01</b>	122	
	30	40 × 40 × 118	Unshielded	Moulded plastic	200	4	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO + NC, pnp	C	<b>3RG41 44-6CD01</b>	122	
	25	40 × 40 × 120	Semi-flush	Moulded plastic	300	3 DC 65 V	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable NO or NC, npn, programmable	▶ C	<b>3RG41 31-6AD00</b> <b>3RG41 31-6AD04</b>	122	122
	40	40 × 40 × 120	Unshielded	Moulded plastic	300	3 DC 65 V	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp NO or NC, pnp, programmable NO or NC, npn, programmable	C ▶ C	<b>3RG41 41-6AB03</b> <b>3RG41 41-6AD00</b> <b>3RG41 41-6AD04</b>	122	122
25 / 40, switchable	40 × 40 × 132 (incl. connectors)	Unshielded	Moulded plastic	300	3 DC 65 V	M 12 connector, Type E, F	NO, pnp	C	<b>3RG41 41-3AB02</b>	122		
25 / 40, switchable	40 × 40 × 149 (incl. connectors)	Unshielded	Moulded plastic	300	3 DC 65 V	M 12 connector, Type E, F, movable in 30° steps	NO, pnp	C	<b>3RG41 41-3AB01</b>	122		
	50	60 × 77 × 41	Unshielded	Moulded plastic	300	3 DC 65 V	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	C	<b>3RG41 42-6AD00</b>	122	
	65	80 × 100 × 42	Unshielded	Moulded plastic	300	3 DC 65 V	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO or NC, pnp, programmable	C	<b>3RG41 43-6AD00</b>	122	

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.






# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

No reduction factor

### Selection and ordering data

Rated operational voltage 10 to 30 V DC • 3-wire • Degree of protection IP 67

	Rated operating distance	Form, dimensions	Embed-dable in metal	Rated operation al current	Enclosure	Connection	Switch-ing output function	DT	Order No.	Price	PG			
	mm	mm		mA					Preferred type					
	1.5	M 8 × 42	Shielded	150	Stainless steel	2 m cable, PUJ, 3 × 0.25 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 11-0AN01</b>		122			
		M 8 × 49.6				8 mm combined plug, Type A	NO, pnp	A	<b>3RG46 11-7AN01</b>		122			
		M 8 × 57.4				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 11-3AN01</b>		122			
		4	M 8 × 41.6	Un-shielded	150	Stainless steel	2 m cable, PUJ, 3 × 0.25 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 21-0AN01</b>		122		
		M 8 × 49.2				8 mm combined plug, Type A	NO, pnp	A	<b>3RG46 21-7AN01</b>		122			
		M 8 × 57				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 21-3AN01</b>		122			
		3	M 12 × 50.4	Shielded	200	Brass, chrome-plated	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 12-0AN01</b>		122		
		M 12 × 52				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 12-3AN01</b>		122			
		M 12 × 50.4			Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 12-3AN05</b>		122			
		M 12 × 50.4			Stainless steel	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 12-0AN61</b>		122			
	M 12 × 52				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 12-3AN61</b>		122				
	8	M 12 × 55	Un-shielded	200	Brass, chrome-plated	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 22-0AN01</b>		122			
		M 12 × 51				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 22-3AN01</b>		122			
		M 12 × 55			Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 22-3AN05</b>		122			
		M 12 × 55			Stainless steel	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 22-0AN61</b>		122			
	M 12 × 51				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 22-3AN61</b>		122				
	5	M 18 × 54	Shielded	200	Brass, chrome-plated	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 13-0AN01</b>		122			
		M 18 × 53				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 13-3AN01</b>		122			
		M 18 × 54			Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 13-3AN05</b>		122			
		M 18 × 54			Stainless steel	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 13-0AN61</b>		122			
	M 18 × 53				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 13-3AN61</b>		122				
	12	M 18 × 54	Un-shielded	200	Brass, chrome-plated	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 23-0AN01</b>		122			
		M 18 × 53				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 23-3AN01</b>		122			
		M 18 × 54			Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 23-3AN05</b>		122			
		M 18 × 54			Stainless steel	2 m cable, PUJ, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 23-0AN61</b>		122			
	M 18 × 53				M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 23-3AN61</b>		122				

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.






# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

No reduction factor

### Selection and ordering data

Rated operational voltage 10 to 30 V DC • 3-wire • Degree of protection IP 67 (with terminal compartment: IP 65)

	Rated operating distance	Form, dimensions	Embed-dable in metal	Rated operation al current	Enclosure	Connection	Switching output function	DT	Order No.	Price	PG
	mm	mm		mA							
	10	M 30 × 64	Shielded	200	Brass, chrome-plated	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 14-0AN01</b>		122
		M 30 × 63				M 12 connector, Type E, F	NO, npn	A	<b>3RG46 14-0GN01</b>		122
	M 30 × 64	Shielded	200	Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 14-3AN01</b>		122	
					M 12 connector, Type E, F	NO, npn	A	<b>3RG46 14-3GN01</b>		122	
		Un-shielded	200	Stainless steel	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 14-0AN61</b>		122	
					M 12 connector, Type E, F	NO, npn	A	<b>3RG46 14-0GN61</b>		122	
	20	M 30 × 64	Un-shielded	200	Brass, chrome-plated	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 24-0AN01</b>		122
		M 30 × 63				M 12 connector, Type E, F	NO, npn	A	<b>3RG46 24-0GN01</b>		122
	M 30 × 64	Un-shielded	200	Brass, Teflon-coated	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 24-3AN01</b>		122	
					M 12 connector, Type E, F	NO, npn	A	<b>3RG46 24-3GN01</b>		122	
		Shielded	200	Stainless steel	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 24-0AN61</b>		122	
					M 12 connector, Type E, F	NO, npn	A	<b>3RG46 24-0GN61</b>		122	
	15	40 × 40 × 65 (incl. connectors)	Shielded	200	Moulded plastic	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 38-3AN01</b>		122
		M 12 connector, Type E, F					NO, npn	A	<b>3RG46 38-3GN01</b>		122
	25	Un-shielded	200	Moulded plastic	M 12 connector, Type E, F	NO, pnp	A	<b>3RG46 48-3AN01</b>		122	
					M 12 connector, Type E, F	NO, npn	A	<b>3RG46 48-3GN01</b>		122	
		Shielded	200	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 48-3AN11</b>		122	
					With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, npn	A	<b>3RG46 48-3GN11</b>		122	
	15	40 × 40 × 114	Un-shielded	150	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 34-6AN01</b>		122
		40 × 40 × 114					NO, npn	A	<b>3RG46 34-6GN01</b>		122
	25	Un-shielded	200	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 44-6AN02</b>		122	
					With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, npn	A	<b>3RG46 44-6GN02</b>		122	
		Shielded	200	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 44-6AN01</b>		122	
					With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, npn	A	<b>3RG46 44-6GN01</b>		122	
	75	80 × 80 × 40.5	Un-shielded	200	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	NO, pnp	A	<b>3RG46 43-6AN01</b>		122
							NO, npn	A	<b>3RG46 43-6GN01</b>		122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.





# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches

Special designs

### Selection and ordering data

Rated operational voltage DC 10 to 30 V • 2, 3 or 4-wire • Degree of protection IP 67 (DESINA IP 68)

Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Rated operational current	Connecting wires	Connection	Switching element function/ analogue output	DT	Order No.	Price	PG	
mm	mm			mA								
<b>Pressure-resistant up to 500 bar (7250 psi)</b>												
	3	∅ 12 × 56.5 M 14 thread	Semi-shielded	Stainless steel	200	3	2 m cable, PUR, 3 × 0.34 mm <sup>2</sup>	NO, pnp NC, pnp	A	<b>3RG46 52-0PG00</b>	122	
				Aluminium-oxide ceramic sensing face				NO, npn NC, npn	A	<b>3RG46 52-0PB00</b> <b>3RG46 52-0PA00</b>	122 122	
		∅ 12 × 65 M 14 thread					M 12 connector, Type E, F	NO, pnp NC, pnp NO, npn NC, npn	A C A A	<b>3RG46 52-3PG00</b> <b>3RG46 52-3PF00</b> <b>3RG46 52-3PB00</b> <b>3RG46 52-3PA00</b>	122 122 122 122	
	<b>With analogue output</b>											
		0 ... 6	M 12 × 50 M 12 × 60	Semi-shielded	Brass	10	4	2 m cable, PUR, 4 × 0.25 mm <sup>2</sup>	0 ... 5 V, 1 ... 5 mA	A	<b>3RG46 12-0NB00</b>	122
								M 12 connector, Type F	0 ... 5 V, 1 ... 5 mA	A	<b>3RG46 12-3NB00</b>	122
<b>Optimized for DESINA</b>												
	2	M 12 × 69 M 12 × 66	Shielded	Stainless steel	200, 50 diagnostic	2 + 1 3 + 1	M 12 connector, Type F	NO + diagnostic	X	<b>3RG46 12-3JR00</b>	122	
				Stainless steel			M 12 connector, Type F	NO + diagnostic, pnp	X	<b>3RG46 12-3AR00</b>	122	
	4	M 12 × 69	Shielded	Stainless steel	200, 10 diagnostic	2 + 1	M 12 connector, Type F	NO + diagnostic	X	<b>3RG46 12-3JR01</b>	122	
<b>For connection to AS-Interface</b>												
	5	M 18 × 80	Shielded	Moulded plastic	-	2	M 12 connector, Type E, F		A	<b>3RG46 13-3WS00</b>	122	
		10	M 30 × 78	Shielded	Moulded plastic	-	2	M 12 connector, Type E, F		A	<b>3RG46 14-3WS00</b>	122
		15	40 × 40 × 66.5	Shielded	Moulded plastic	-	2	M 12 connector, Type E, F		A	<b>3RG46 38-3WS00</b>	122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.


# BERO Proximity Switches

## BERO 3RG4 Inductive Proximity Switches


According to NAMUR (non-self contained)

### Selection and ordering data

Rated operational voltage DC 5 to 25 V • 2-wire • Degree of protection IP 67

	Rated operating distance	Form, dimensions	Embeddable in metal	Enclosure	Connection	DT	Order No.	Price	PG
	mm	mm					Preferred type		
	0.8	∅ 4.5 × 20	Shielded	Stainless steel	2 m cable, LiYY, 2 × 0.14 mm <sup>2</sup>	A	<b>3RG46 04-1NA00</b>		122
	1.5	M 8 × 22	Shielded	Stainless steel	2 m cable, LiYY, 2 × 0.14 mm <sup>2</sup>	A	<b>3RG46 11-1NA00</b>		122
	2	M 12 × 35	Shielded	Stainless steel	2 m cable, LiYY, 2 × 0.34 mm <sup>2</sup>	A	<b>3RG46 12-1NA00</b>		122
	4	M 12 × 35	Unshielded	Moulded plastic	2 m cable, LiYY, 2 × 0.34 mm <sup>2</sup>	A	<b>3RG46 22-1NA00</b>		122
	5	M 18 × 40	Shielded	Stainless steel	2 m cable, LiYY, 2 × 0.34 mm <sup>2</sup>	A	<b>3RG46 13-1NA00</b>		122
	8	M 18 × 40	Unshielded	Moulded plastic	2 m cable, LiYY, 2 × 0.34 mm <sup>2</sup>	A	<b>3RG46 23-1NA00</b>		122
	10	M 30 × 40	Shielded	Stainless steel	2 m cable, LiYY, 2 × 0.75 mm <sup>2</sup>	A	<b>3RG46 14-1NA00</b>		122
	15	M 30 × 40	Unshielded	Moulded plastic	2 m cable, LiYY, 2 × 0.75 mm <sup>2</sup>	A	<b>3RG46 24-1NA00</b>		122
	15	40 × 40 × 118	Shielded	Moulded plastic	With terminal compartment for cables 0.5 ... 2.5 mm <sup>2</sup>	A	<b>3RG46 31-6NA00</b>		122

### Evaluation devices • for snapping onto 35 mm mounting rail • degree of protection IP 20

	Dimensions (W × H × D)	Operating voltage range	Outputs	Outputs: Rated currents (short-circuit proof)	DT	Order No.	Price	PG
	mm	V		mA				
	20 × 92.5 × 110	10 ... 30	2 electronic outputs (NO or NC adjustable)	Output 1: 10 mA, Output 2: 100 mA	A	<b>3RX1 730</b>		122
		20.4 ... 27.6	1 relay output (changeover)	AC 250 V: 2 A, p.f. = 0.7 DC 30 V: 2 A	A	<b>3RX1 731</b>		122

For comprehensive data and dimension drawings, see Catalogue NS BERO and the Internet: <http://www.siemens.de/bero>.