

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 4 mm

Selection and ordering data

Rated operating distance s_n	4 mm	4 mm
Form	M 8	M 12
Installation in metal	Non-embeddable	Non-embeddable
Dimensions	Type 1 NEW Type 2 NEW Type 3 NEW	Type 4 Type 5

Sg = plug thread

Number of cores	3 cores	2 cores
Group	U BERO (without reduction factor)	Normal requirements (PLC)
Housing material	Stainless steel	Brass, nickel-plated
Operational voltage	DC V	15 to 34
Indicator	LED	LED
Current input (no load)	mA	≤ 1.5
Loading capacity	mA	≤ 25
Minimum load current	mA	2
Operating frequency	DC Hz	300
Repeat accuracy	mm	0.2
Response time	ms	0.8
Build-up time	ms	2.5
Availability delay	ms	40

Protective measures	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>																																																																						
	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>1</td> <td>3RG46 21-0AN01 3RG46 21-0GN01</td> <td></td> <td></td> <td>11 13</td> </tr> <tr> <td>2</td> <td>3RG46 21-7AN01 3RG46 21-7GN01</td> <td></td> <td></td> <td>2 4</td> </tr> <tr> <td>3</td> <td>3RG46 21-3AN01 3RG46 21-3GN01</td> <td></td> <td></td> <td>2 4</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	1	3RG46 21-0AN01 3RG46 21-0GN01			11 13	2	3RG46 21-7AN01 3RG46 21-7GN01			2 4	3	3RG46 21-3AN01 3RG46 21-3GN01			2 4		-					-				<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>3RG40 22-0JB00</td> <td></td> <td>0.080</td> <td>15</td> </tr> <tr> <td>5</td> <td>3RG40 22-3JB00</td> <td></td> <td>0.035</td> <td>6</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.		-					-					-				4	3RG40 22-0JB00		0.080	15	5	3RG40 22-3JB00		0.035	6
Type	Order No.	Price	Weight approx.	Wiring diagram																																																																				
		1 unit	kg	p. 10/89 No.																																																																				
1	3RG46 21-0AN01 3RG46 21-0GN01			11 13																																																																				
2	3RG46 21-7AN01 3RG46 21-7GN01			2 4																																																																				
3	3RG46 21-3AN01 3RG46 21-3GN01			2 4																																																																				
	-																																																																							
	-																																																																							
Type	Order No.	Price	Weight approx.	Wiring diagram																																																																				
		1 unit	kg	p. 10/89 No.																																																																				
	-																																																																							
	-																																																																							
	-																																																																							
4	3RG40 22-0JB00		0.080	15																																																																				
5	3RG40 22-3JB00		0.035	6																																																																				

With cable, 2 m, PUR 3x 0.14 mm ²	NO function, pnp NO function, npn
With M 8 plug-in connection type A	NO function, pnp NO function, npn
With M 12 plug-in connection type E, F	NO function, pnp NO function, npn
With cable, 2 m, PUR 2 x 0.25 mm ²	NO function
With M 12 plug-in connection type E, F	NO function

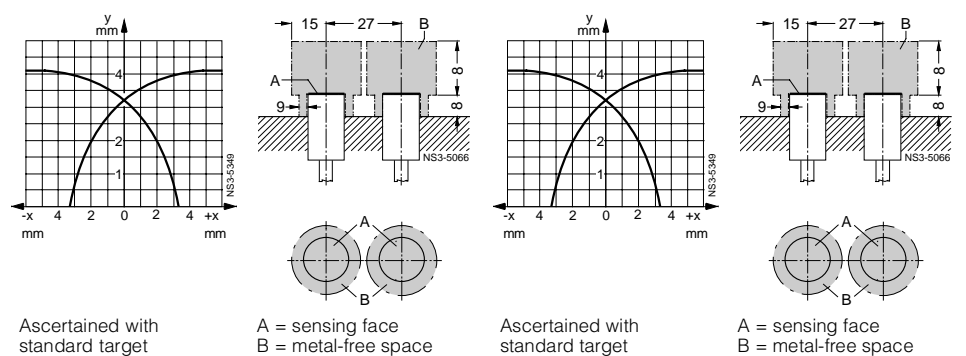
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



3RG4 BERO Inductive Proximity Switches

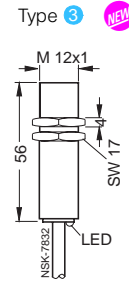
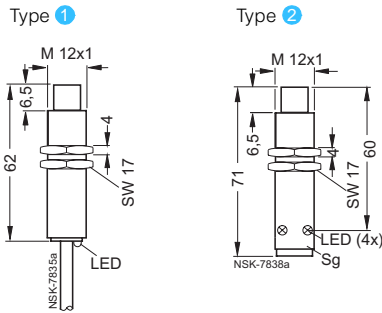
Rated Operating Distance 4 mm

Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

4 mm
M 12
Non-embeddable

4 mm
M 12
Non-embeddable



Sg = plug thread

Number of cores	
Group	
Housing material	
Operational voltage	AC/DC V
Indicator	
Current input (no load)	
AC 230 V/DC 24 V	mA
Loading capacity continuous	mA
20 ms	mA
Minimum load current	mA
Operating frequency	AC/DC Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	

2 cores
High electrical requirements (AC/DC)
Brass, nickel-plated
20 to 265/20 to 320
LED
1.5/1.0
200
1200 ¹⁾
5
25/900
0.12
0.4
0.5
100
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

2 cores	3 cores
Extreme environmental conditions (IP 68)	
Moulded plastic	Moulded plastic
20 to 265/20 to 320	-/10 to 65
LED	LED
1.5/1.0	-/≤ 10
200	300
1200 ¹⁾	-
5	-
25/900	800
0.12	0.2
0.4	0.4
0.5	0.5
100	40
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2 cores				
1	3RG40 22-0KB00		0.08	16
	3RG40 22-0KA00		0.08	17
2	3RG40 22-3KB00		0.035	8
	3RG40 22-3KA00		0.035	9
	-			
3 cores				
3	3RG40 22-0AB30			11

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2 cores				
-	-			
-	-			
3	3RG40 22-0KB30			16
3 cores				
3	3RG40 22-0AB30			11

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2 cores				
-	-			
-	-			
3	3RG40 22-0KB30			16
3 cores				
3	3RG40 22-0AB30			11

1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

Protective measures

Response characteristics

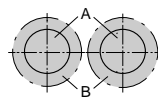
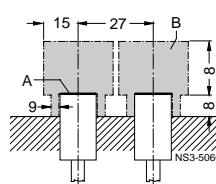
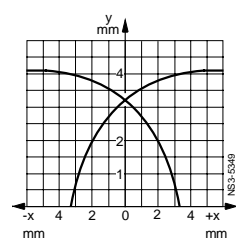
Mounting instructions

Delivery

► Preferred type.

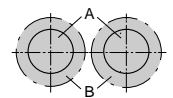
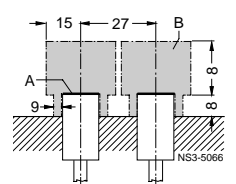
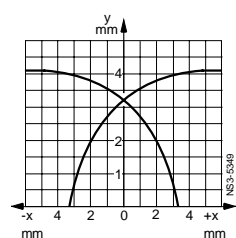
Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

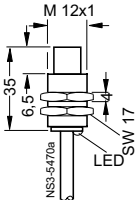
Rated Operating Distance 4 mm

Selection and ordering data

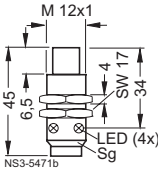
Rated operating distance s_n	4 mm
Form	M 12
Installation in metal	Non-embeddable

Dimensions

Type 1



Type 2

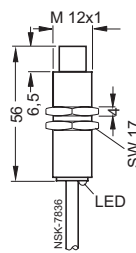


4 mm

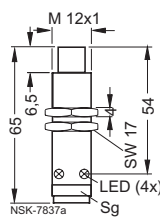
M 12

Non-embeddable

Type 3



Type 4



Sg = plug thread

Number of cores	3 cores
Group	Normal requirements
Housing material	Brass, nickel-plated
Operational voltage	DC V
Indicator	15 to 34
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn
--	--

With M 12 plug-in connection:	
Type E, F	NO function, pnp
Type F	NC function, pnp
Type E, F	NO function, npn
Type F	NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 22-0AG33		0.083	11
	3RG40 22-0AF33		0.083	12
	3RG40 22-0GB33		0.083	13
	3RG40 22-0GA33		0.083	14
2	3RG40 22-3AG33		0.026	2
	3RG40 22-3AF33		0.026	3
	3RG40 22-3GB33		0.026	4
	3RG40 22-3GA33		0.026	5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG40 22-0AG01		0.080	11
	3RG40 22-0AF01		0.080	12
	3RG40 22-0GB00		0.080	13
	3RG40 22-0GA00		0.080	14
4	3RG40 22-3AG01		0.032	2
	3RG40 22-3AF01		0.032	3
	3RG40 22-3GB00		0.032	4
	3RG40 22-3GA00		0.032	5

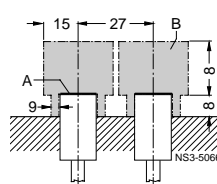
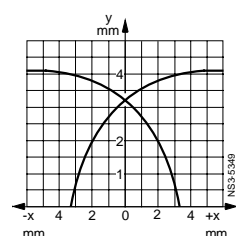
Protective measures Response characteristics Mounting instructions

Delivery

▶ Preferred type.

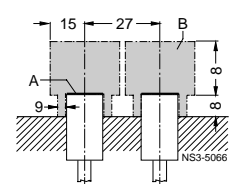
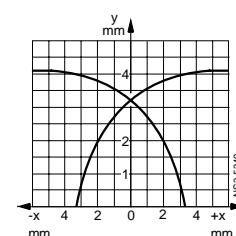
Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 4 mm

Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

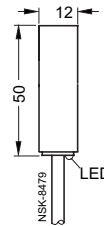
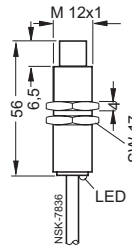
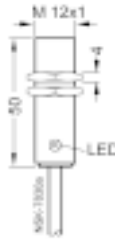
4 mm
M 12
Non-embeddable

4 mm
Ø 12
Non-embeddable

Type 1

Type 2 **NEW**

Type 3



Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic or brass, nickel-plated
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.2
0.4
0.5
40

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.2
0.4
0.5
40

Protective measures	
With cable, 2 m, PUR 3 x 0.25 mm ² Moulded plastic	NO function, pnp NC function, pnp NO function, npn NC function, npn
With cable, 2 m, PVC 3 x 0.25 mm ² Brass, nickel-plated	NO function, pnp NO function, npn

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG40 22-0AG30		0.08	11
	3RG40 22-0AF30		0.08	12
	3RG40 22-0GB30		0.08	13
	3RG40 22-0GA30		0.08	14
2	3RG40 22-0AG31		0.08	11
	3RG40 22-0GB31		0.08	13

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
3	3RG40 62-0AG30		0.075	11
	3RG40 62-0AF30		0.075	12
	3RG40 62-0GB30		0.075	13
	3RG40 62-0GA30		0.075	14
-	-			

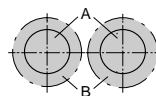
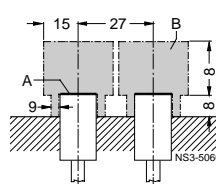
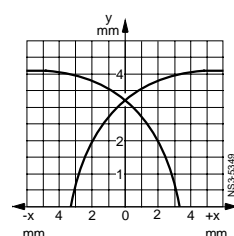
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

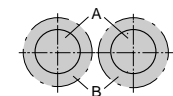
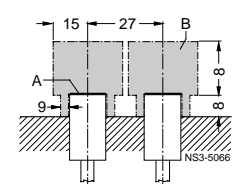
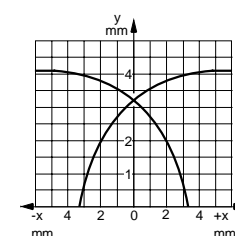
Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 4 mm

Selection and ordering data

Rated operating distance s_n	4 mm		4 mm																																																			
Form	M 12		M 12																																																			
Installation in metal	Non-embeddable		Embeddable																																																			
Dimensions	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6																																																
Sg = plug thread																																																						
Number of cores	3 cores		3 cores		3 cores																																																	
Group	High electrical requirements		Increased operating distance (for VW)																																																			
Housing material	Brass, nickel-plated		Brass, nickel-plated																																																			
Operational voltage	DC V	10 to 65	15 to 34																																																			
Indicator		LED	LED																																																			
Current input (no load)	mA	≤ 10	≤ 17 (24 V); ≤ 30 (34 V)																																																			
Loading capacity	mA	300	200 (≤ 50 °C); 150 (≤ 85 °C)																																																			
Operating frequency	Hz	800	800																																																			
Repeat accuracy	mm	0.2	0.2																																																			
Response time	ms	0.4	0.3																																																			
Build-up time	ms	0.5	0.9																																																			
Availability delay	ms	40	40																																																			
Protective measures	1 2 3 4 5 6		1 2 3 4 5 6																																																			
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, pnp	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>1</td> <td>3RG40 22-0AB00 3RG40 22-0AA00</td> <td></td> <td>0.090 0.090</td> <td>11 12</td> </tr> <tr> <td>2</td> <td>3RG40 22-3AB00 3RG40 22-3AA00</td> <td></td> <td>0.034 0.034</td> <td>2 3</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	1	3RG40 22-0AB00 3RG40 22-0AA00		0.090 0.090	11 12	2	3RG40 22-3AB00 3RG40 22-3AA00		0.034 0.034	2 3	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>3</td> <td>3RG41 12-0AG01 3RG41 12-0AF01</td> <td></td> <td>0.087 0.087</td> <td>11 12</td> </tr> <tr> <td>4</td> <td>3RG41 12-0AG33</td> <td></td> <td>0.080</td> <td>11</td> </tr> <tr> <td>5</td> <td>3RG41 12-3AG01 3RG41 12-3AF01</td> <td></td> <td>0.032 0.032</td> <td>2 3</td> </tr> <tr> <td>6</td> <td>3RG41 12-3AG33</td> <td></td> <td>0.026</td> <td>2</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	3	3RG41 12-0AG01 3RG41 12-0AF01		0.087 0.087	11 12	4	3RG41 12-0AG33		0.080	11	5	3RG41 12-3AG01 3RG41 12-3AF01		0.032 0.032	2 3	6	3RG41 12-3AG33		0.026	2	
Type	Order No.	Price	Weight approx.	Wiring diagram																																																		
		1 unit	kg	p. 10/89 No.																																																		
1	3RG40 22-0AB00 3RG40 22-0AA00		0.090 0.090	11 12																																																		
2	3RG40 22-3AB00 3RG40 22-3AA00		0.034 0.034	2 3																																																		
Type	Order No.	Price	Weight approx.	Wiring diagram																																																		
		1 unit	kg	p. 10/89 No.																																																		
3	3RG41 12-0AG01 3RG41 12-0AF01		0.087 0.087	11 12																																																		
4	3RG41 12-0AG33		0.080	11																																																		
5	3RG41 12-3AG01 3RG41 12-3AF01		0.032 0.032	2 3																																																		
6	3RG41 12-3AG33		0.026	2																																																		
With M 12 plug-in connection	NO function, pnp NC function, pnp NO function, pnp																																																					
Type E, F	NO function, pnp																																																					
Type F	NC function, pnp																																																					
Type E, F	NO function, pnp																																																					

Protective measures

Response characteristics

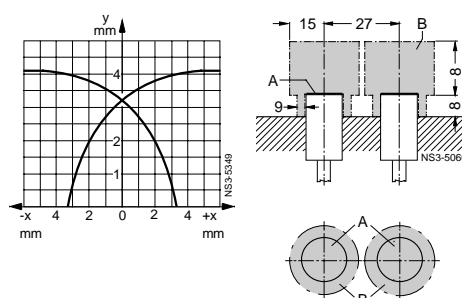
Mounting instructions

Delivery

► Preferred type.

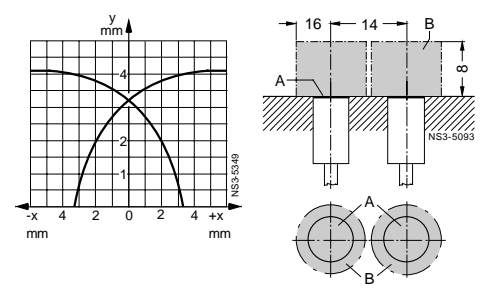
Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



Ascertained with standard target

A = sensing face
B = metal-free space



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 4 mm

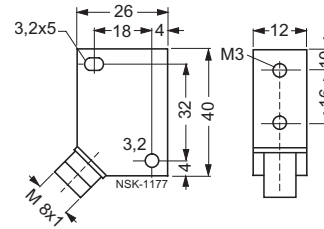
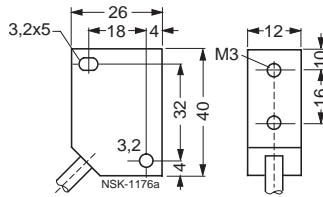
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

4 mm
Block
Non-embeddable

Type 1

Type 2



Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	LED
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	

3 cores
Normal requirements
Moulded plastic

15 to 34
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.2
0.4
0.5
40

1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp
With 8 mm combination plug-in connection type A	NO function, pnp

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG40 80-0AG45			11
2	3RG40 80-7AG45			13

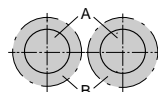
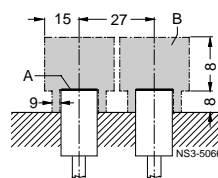
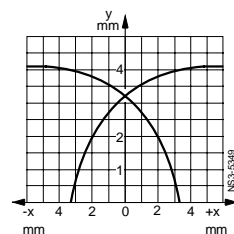
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

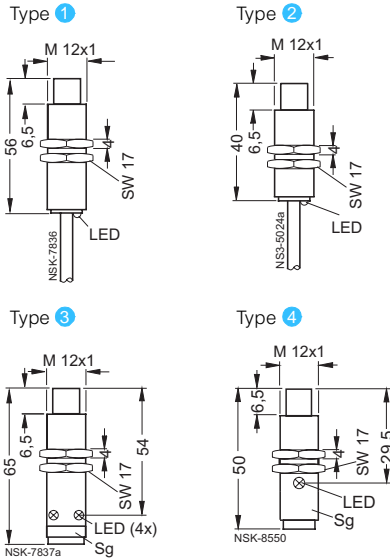
Rated Operating Distance 4 and 5 mm

Selection and ordering data

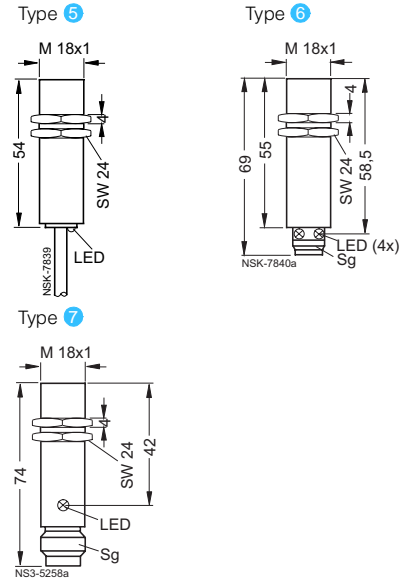
Rated operating distance s_n
Form
Installation in metal

Dimensions

4 mm
M 12
Non-embeddable



5 mm
M 18
Embeddable



Sg = plug thread

Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	
Current input (no load)	mA
Loading capacity continuous res./ind.	mA
Minimum load current	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms

4 cores	
Normal requirements	
Brass, nickel-plated	
15 to 34	15 to 34
LED	LED
25 (24 V); ≤ 40 (34 V)	1.0
200 (≤ 50 °C); 150 (≤ 85 °C)	50
–	–
800	
0.2	
0.4	
0.5	
40	

2 cores	
Normal requirements (PLC)	
Brass, nickel-plated	
15 to 34	
LED	
≤ 1.5	
25	
2	
400	
0.15	
0.8	
1.7	
40	

Protective measures	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
With cable, 2 m, PUR 4 x 0.14 mm ²	NO function and NC function, pnp
2 x 0.25 mm ²	NO function
With M 12 plug-in connection: Type F	NO function and NC function, pnp
Type F	NO function
Type E, F	NO function
With M 18 plug-in connection type P	NO function

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
		1 unit	kg	
1	3RG40 22-0CD00		0.080	10
2	3RG40 22-0CD10		0.083	10
3	3RG40 22-3CD00		0.030	1
4	3RG40 22-3CD11		0.027	1

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
		1 unit	kg	
5	3RG40 13-0JB00		0.115	15
6	3RG40 13-3JB00		0.075	6
7	3RG40 13-2JB00		0.062	6

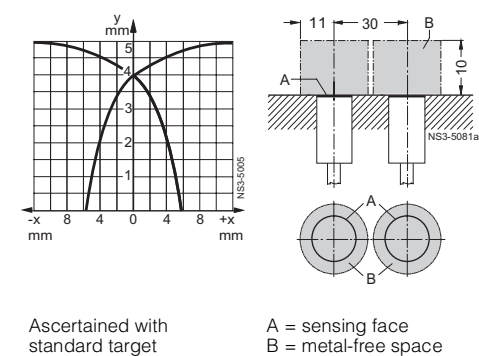
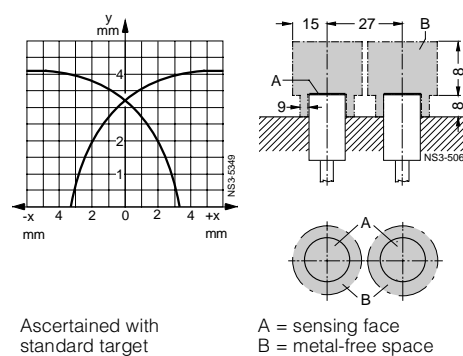
Protective measures Response characteristics Mounting instructions

Delivery

▶ Preferred type.

Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



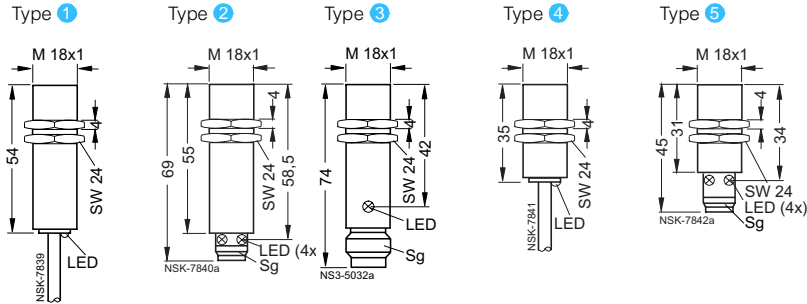
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 5 mm

Selection and ordering data

Rated operating distance s_n	5 mm
Form	M 18
Installation in metal	Embeddable

Dimensions



Sg = plug thread

Number of cores	Group	
Housing material		
Operational voltage	AC/DC V	20 to 265/20 to 320
Indicator		LED
Current input (no load)		1.5/1.0
AC 230 V/DC 24 V	mA	300
Loading capacity continuous	mA	1800 ¹⁾
20 ms	mA	5
Minimum load current	mA	
Operating frequency	AC/DC Hz	25/490
Repeat accuracy	mm	0.15
Response time	ms	0.5
Build-up time	ms	1.5
Availability delay	ms	100

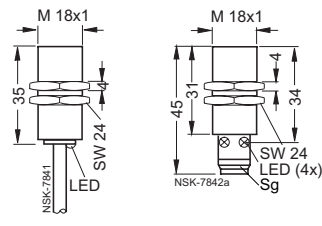
Protective measures

1 2 3 4 5 6

With cable, 2 m, PUR 2 x 0.25 mm ²	NO function NC function	1 ▶ 3RG40 13-0KB00 ▶ 3RG40 13-0KA00	0.11 0.11	16 17
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn	– – – –		
With M 12 plug-in connection: Type E, F Type F	NO function NC function	2 ▶ 3RG40 13-3KB00 3RG40 13-3KA00	0.075 0.075	8 9
With M 12 plug-in connection: Type E, F Type F Type E, F Type F	NO function, pnp NC function, pnp NO function, npn NC function, npn	– – – –		
With M 18 plug-in connection type P	NO function NC function	3 3RG40 13-2KB00 3RG40 13-2KA00	0.063 0.063	8 9

5 mm
M 18
Embeddable

Dimensions



2 cores

High electrical requirements (AC/DC)

Housing material		Brass, nickel-plated
Operational voltage		–/15 to 34
Indicator		LED
Current input (no load)		–/≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)		
Minimum load current		–
Operating frequency		–/800
Repeat accuracy		0.15
Response time		0.4
Build-up time		0.8
Availability delay		40

1 2 3 4 5 6

With cable, 2 m, PUR 2 x 0.25 mm ²	NO function NC function	– –		
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn	4 3RG40 13-0AG33 3RG40 13-0AF33 3RG40 13-0GB33 3RG40 13-0GA33	0.123 0.123 0.123 0.123	11 12 13 14
With M 12 plug-in connection: Type E, F Type F	NO function NC function	– –		
With M 12 plug-in connection: Type E, F Type F Type E, F Type F	NO function, pnp NC function, pnp NO function, npn NC function, npn	5 ▶ 3RG40 13-3AG33 3RG40 13-3AF33 3RG40 13-3GB33 3RG40 13-3GA33	0.067 0.067 0.067 0.067	2 3 4 5
With M 18 plug-in connection type P	NO function NC function	– –		

1) Siemens 3TF contactors up to size 4
(AC 230 V; max. operating frequency 0.25 Hz)

Protective measures

Response characteristics

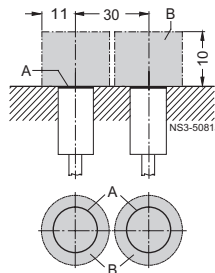
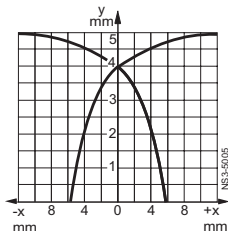
Mounting instructions

Delivery

▶ Preferred type.

Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space

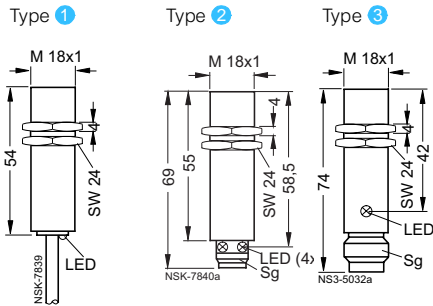
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 5 mm

Selection and ordering data

Rated operating distance s_n	5 mm
Form	M 18
Installation in metal	Embeddable

Dimensions



Sg = plug thread

		3 cores Normal requirements	3 cores High electrical requirements
Number of cores		3	3
Group			
Housing material		Brass, nickel-plated	Brass, nickel-plated
Operational voltage	DC V	15 to 34	10 to 65
Indicator		LED	LED
Current input (no load)	mA	≤ 17 (24 V); ≤ 30 (34 V)	≤ 10
Loading capacity	mA	200 (≤ 50 °C); 150 (≤ 85 °C)	300
Operating frequency	Hz	800	800
Repeat accuracy	mm	0.15	0.15
Response time	ms	0.4	0.4
Build-up time	ms	0.8	0.8
Availability delay	ms	40	40

Protective measures

1 2 3 4 5 6

1 2 3 4 5 6

		Type	Order No.	Price	Weight approx.	Wiring diagram	Type	Order No.	Price	Weight approx.	Wiring diagram
				1 unit	kg	p. 10/89 No.			1 unit	kg	p. 10/89 No.
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp	1	3RG40 13-0AG01		0.12	11	1	3RG40 13-0AB00		0.12	11
	NC function, pnp		3RG40 13-0AF01		0.12	12		3RG40 13-0AA00		0.12	12
	NO function, npn		3RG40 13-0GB00		0.12	13		-		-	-
	NC function, npn		3RG40 13-0GA00		0.12	14		-		-	-
With M 12 plug-in connection:	Type E, F	2	3RG40 13-3AG01		0.07	2	2	3RG40 13-3AB00		0.07	2
	Type F		3RG40 13-3AF01		0.07	3		3RG40 13-3AA00		0.07	3
	Type E, F		3RG40 13-3GB00		0.07	4		-		-	-
	Type F		3RG40 13-3GA00		0.07	5		-		-	-
With M 18 plug-in connection type P	NO function, pnp	3	3RG40 13-2AG01		0.06	2	3	3RG40 13-2AB00		0.06	2
	NC function, pnp		-					3RG40 13-2AA00		0.06	3

Protective measures

Response characteristics

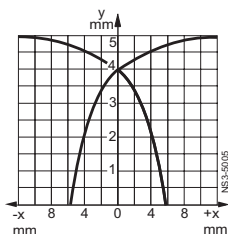
Mounting instructions

Delivery

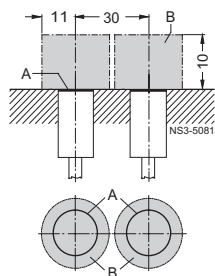
▶ Preferred type.

Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target



A = sensing face
B = metal-free space

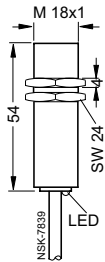
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 5 mm

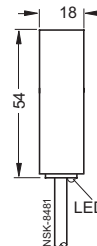
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

5 mm
M 18
Embeddable
Type 1



5 mm
Ø 18
Embeddable
Type 2



Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic or brass, nickel-plated
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.15
0.4
0.8
40
1 2 3 4 5 6

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.15
0.4
0.8
40
1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm ² Moulded plastic	NO function, pnp NC function, pnp NO function, npn NC function, npn
With cable, 2 m, PVC 3 x 0.25 mm ² Brass, nickel-plated	NO function, pnp NO function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 13-0AG30		0.12	11
	3RG40 13-0AF30		0.12	12
	3RG40 13-0GB30		0.12	13
	3RG40 13-0GA30		0.12	14
1	3RG40 13-0AG31			11
	3RG40 13-0GB31			13

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	3RG40 53-0AG30		0.12	11
	3RG40 53-0AF30		0.12	12
	3RG40 53-0GB30		0.12	13
	3RG40 53-0GA30		0.12	14
-	-			
-	-			

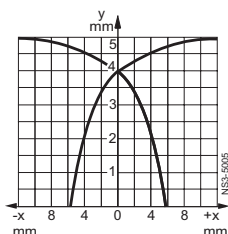
Protective measures Response characteristics Mounting instructions

Delivery

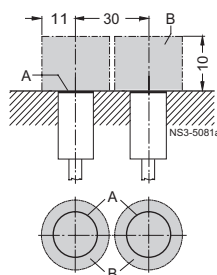
► Preferred type.

Protective measures

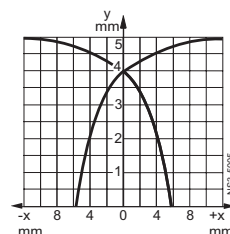
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



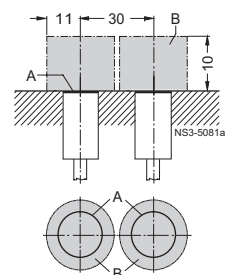
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

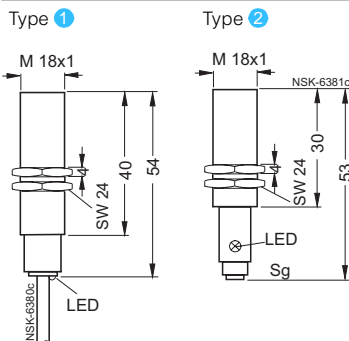
Rated Operating Distance 5 mm



Selection and ordering data

Rated operating distance s_n	5 mm
Form	M 18
Installation in metal	Embeddable

Dimensions



Sg = plug thread

Number of cores	3 cores
Group	U BERO (without reduction factor) ¹⁾
Housing material	Brass, chromium-plated or Teflonized, stainless steel
Operational voltage	DC V 10 to 30
Indicator	LED
Current input (no load)	mA ≤ 13
Loading capacity	mA 200
Operating frequency	Hz 2500
Repeat accuracy	mm 0.1
Response time	ms 0.09
Build-up time	ms 0.04
Availability delay	ms ≤ 8
Protective measures	1 2 3 4 5 6 7

With cable, 2 m, PUR 3 x 0.34 mm ²	NO function, pnp NO function, npn NO function, pnp NO function, npn
With M 12 plug-in connection type E, F	NO function, pnp NO function, npn NO function, pnp NO function, npn NO function, pnp NO function, npn

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.	Housing material
1	3RG46 13-0AN01		0.14	11	Brass, chromium-plated
	3RG46 13-0GN01		0.14	13	Brass, chromium-plated
	3RG46 13-0AN61		0.14	11	Stainless steel
	3RG46 13-0GN61		0.14	13	Stainless steel
2	3RG46 13-3AN01		0.052	2	Brass, chromium-plated
	3RG46 13-3GN01		0.052	4	Brass, chromium-plated
	3RG46 13-3AN61		0.052	2	Stainless steel
	3RG46 13-3GN61		0.052	4	Stainless steel
	3RG46 13-3AN05		0.052	2	Brass, Teflonized
	3RG46 13-3GN05		0.052	4	Brass, Teflonized

1) These BERO switches are resistant to magnetic fields up to 160 mT eff.

Protective measures

Response characteristics

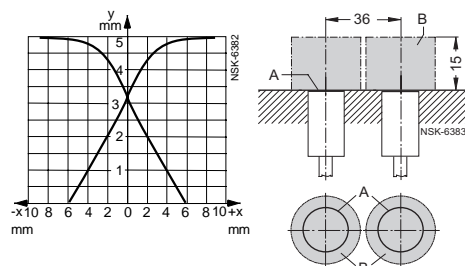
Mounting instructions

Delivery

▶ Preferred type.

Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection
- 7 Totally insulated



Ascertained with standard target

A = sensing face
B = metal-free space

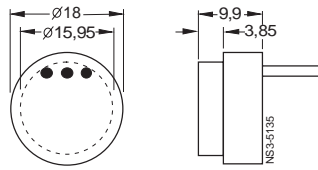
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 5 mm

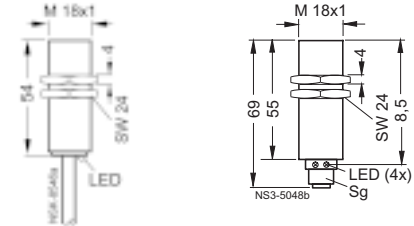
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

5 mm
Ø 18 mm
Embeddable¹⁾
Type 1



5 mm
M 18
Embeddable
Type 2
Type 3



Sg = plug thread	
Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	

1) 3RG40 75-0GJ00, non-embedded:
 $s_n = 3.2$ mm

3 cores
Normal requirements
Moulded plastic
10 to 30
–
≤ 1.5
50
100
0.15
0.3
1.5
1.0
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

4 cores
Normal requirements
Brass, nickel-plated
15 to 34
LED
≤ 25 (24 V); ≤ 40 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
800
0.15
0.4
0.8
40
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

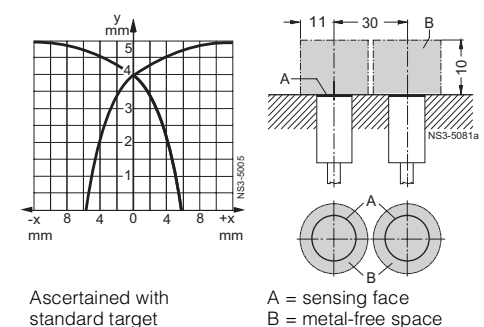
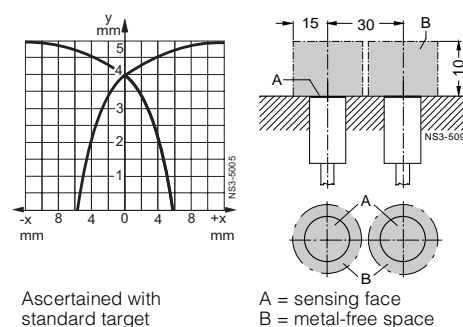
With individual cores; 0.5 m, PVC 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn
With cable, 2 m, PUR 4 x 0.14 mm ²	NO function and NC function, pnp
With M 12 plug-in connection type F	NO function and NC function, pnp

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 75-0AJ00		0.011	11
	3RG40 75-0AH00		0.011	12
	3RG40 75-0GJ00		0.011	13
	–			
	–			

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
–	–			
–	–			
2	3RG40 13-0CD00		0.10	10
3	3RG40 13-3CD00		0.061	1

Protective measures Response characteristics Mounting instructions

- Delivery**
▶ Preferred type.
- Protective measures**
- Not available
 - Spurious switching signal suppression
 - Short-circuit and overload protection
 - Polarity reversal protection
 - Wire-break protection
 - Inductive interference protection
 - Radio interference protection



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 5 mm

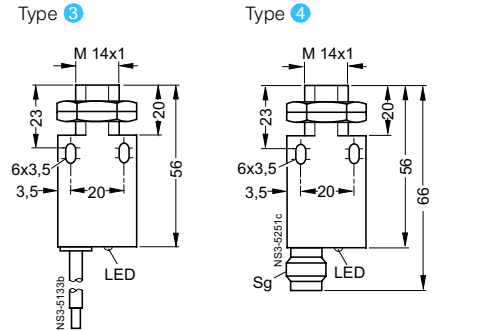
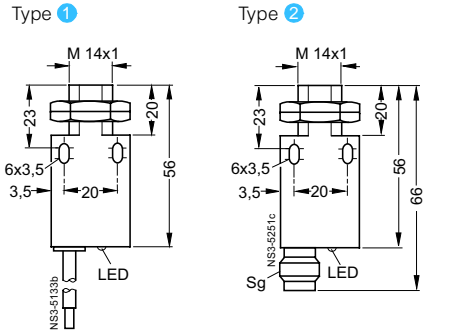
Selection and ordering data

Rated operating distance s_n	5 mm
Form	Block with M 14
Installation in metal	Non-embeddable

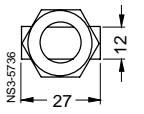
Rated operating distance s_n	5 mm
Form	Block with M 14
Installation in metal	Non-embeddable

Rated operating distance s_n	5 mm
Form	Block with M 14
Installation in metal	Non-embeddable

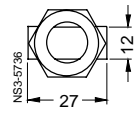
Dimensions	
Operational voltage	DC V
Indicator	LED
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms



Top view for types 1 and 2



Top view for types 3 and 4



Protective measures	
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp
With cable, 2 m, PUR 4 x 0.14 mm ²	NO function and NC function, pnp
With M 12 plug-in connection: Type E, F Type F	NO function, pnp NO function and NC function, pnp

3 cores
High electrical requirements

4 cores
Normal requirements

Housing material	Moulded plastic
Operational voltage	10 to 65
Indicator	LED
Current input (no load)	≤ 10
Loading capacity	300
Operating frequency	300
Repeat accuracy	0.1
Response time	0.7
Build-up time	0.8
Availability delay	40

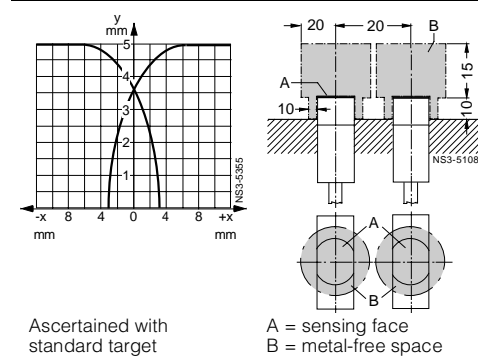
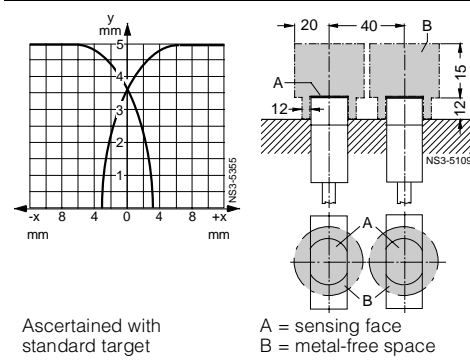
Housing material	Moulded plastic
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 25 (24 V); ≤ 40 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	300
Repeat accuracy	0.1
Response time	0.7
Build-up time	0.8
Availability delay	40

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 82-0AB00		0.085	11
2	3RG40 82-3AB00		0.030	2

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG40 82-0CD00		0.085	10
4	3RG40 82-3CD00		0.030	1

Protective measures Response characteristics Mounting instructions

- Delivery**
- ▶ Preferred type.
- Protective measures**
- Not available
 - 1 Spurious switching signal suppression
 - 2 Short-circuit and overload protection
 - 3 Polarity reversal protection
 - 4 Wire-break protection
 - 5 Inductive interference protection
 - 6 Radio interference protection



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 6 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

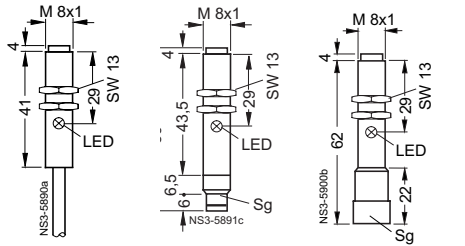
Dimensions

6 mm

M 8

Non-embeddable

Type 1 Type 2 Type 3

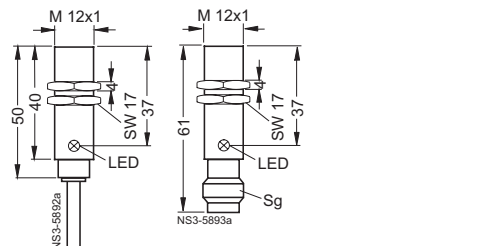


6 mm

M 12

Semi-embeddable (see mounting instructions)

Type 4 Type 5



Sg = plug thread

Number of cores

Group

Housing material

Operational voltage DC V

Indicator

Current input (no load) mA

Loading capacity mA

Operating frequency Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

3 cores

Increased operating distance

Brass, nickel-plated

10 to 30

LED

≤ 10

200

500

0.15

0.6

1.2

15

3 cores

Increased operating distance

Brass, nickel-plated

10 to 30

LED

≤ 10

200

800

0.15

0.3

0.7

15

With cable, 2 m, PUR
3 x 0.14 mm²

NO function, pnp
NO function, npn

With cable, 2 m, PUR
3 x 0.34 mm²

NO function, pnp
NO function, npn

With 8 mm combination
plug-in connection type A

NO function, pnp
NO function, npn

With M 12 plug-in
connection type E, F

NO function, pnp
NO function, npn

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG46 21-0AG02 3RG46 21-0GB02		0.050 0.050	11 13
	-			
2	3RG46 21-7AG02 3RG46 21-7GB02		0.021 0.021	2 4
3	3RG46 21-3AG02 3RG46 21-3GB02		0.030 0.030	2 4

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
	-			
4	3RG46 12-0AG01 3RG46 12-0GB01		0.096 0.096	11 13
	-			
5	3RG46 12-3AB01 3RG46 12-3GB01		0.033 0.033	2 4

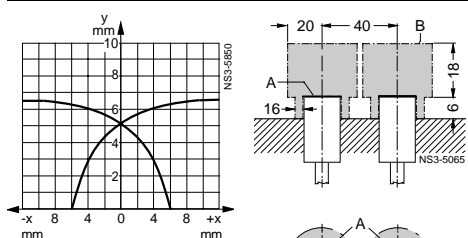
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

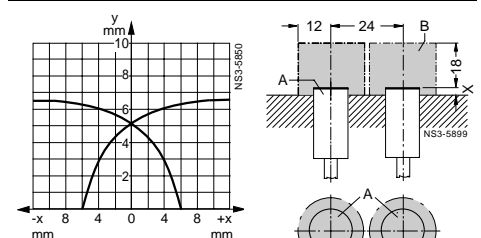
Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



Ascertained with
standard target

A = sensing face
B = metal-free space
in steel



Ascertained with
standard target

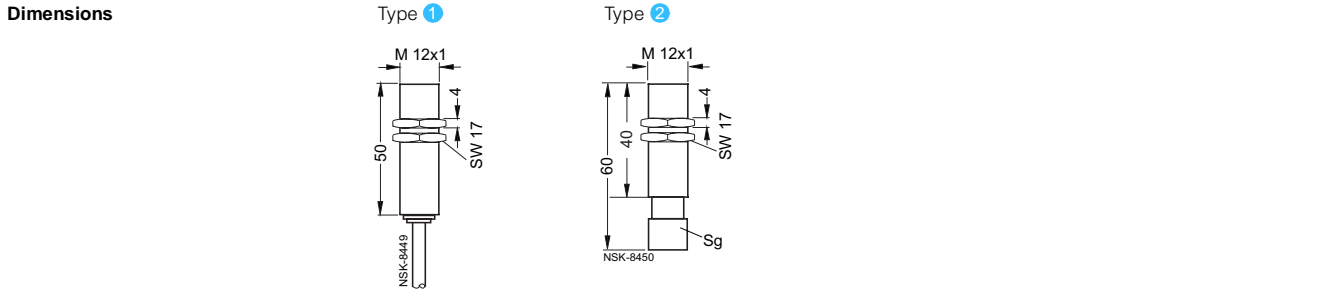
A = sensing face
B = metal-free space
X ≥ 2.4 mm when mounted
in steel
X ≥ 1.2 mm when mounted
in other metals

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 0 to 6 mm

Selection and ordering data

Rated operating distance s_n	0 to 6 mm
Form	M 12
Installation in metal	Semi-embeddable



Sg = plug thread

Number of cores	4 cores
Group	BERO with analog output

Housing material	Brass
------------------	-------

Operational voltage	DC V	10 to 30
Indicator		-
Current input (no load)	mA	10
Loading capacity	mA	
Operating frequency	Hz	1000
Repeat accuracy	mm	0.3
Response time	ms	
Build-up time	ms	
Availability delay	ms	50

Output voltage (A1) at	s = 0 mm	0 V (-0 to +0.2 V) at 25 °C
	s = 3 mm	+2.7 V (±0.2 V) at 25 °C
	s = 6 mm	+5 V (±0.2 V) at 25 °C
Load current at voltage output		Max. 10 mA
Output current (A2) at	s = 0 mm	1 mA (±0.2 mA) at 25 °C
	s = 6 mm	5 mA (±0.2 mA) at 25 °C
Max. load at current output		1 kΩ at $U_B = 10$ V; 5 kΩ at $U_B = 30$ V
Current input		Max. 10 mA

Protective measures	<input type="checkbox"/> ② <input type="checkbox"/> ③ <input type="checkbox"/> ④ <input type="checkbox"/> ⑤ <input type="checkbox"/> ⑥
---------------------	--

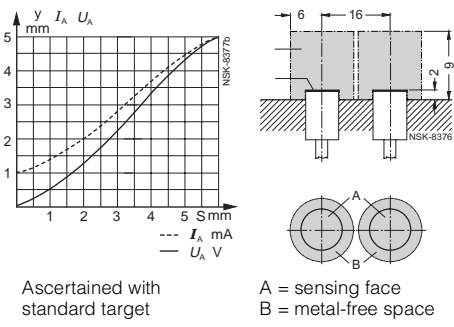
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
①	3RG46 12-0NB00		0.096	28
②	3RG46 12-3NB00		0.034	28

With cable, 2 m, PUR
4 x 0.25 mm²

With M 12 plug-in
connection type F

Protective measures Response characteristics Mounting instructions

- Delivery**
- ▶ Preferred type.
- Protective measures**
- Not available
 - ① Spurious switching signal suppression
 - ② Short-circuit and overload protection
 - ③ Polarity reversal protection
 - ④ Wire-break protection
 - ⑤ Inductive interference protection
 - ⑥ Radio interference protection





3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 8 mm

Selection and ordering data

Rated operating distance s_n	8 mm
Form	M 12
Installation in metal	Non-embeddable
Dimensions	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Type 1</p> </div> <div style="text-align: center;"> <p>Type 2</p> </div> </div>

Sg = plug thread

Number of cores	3 cores
Group	U BERO (without reduction factor) ¹⁾
Housing material	Brass, chromium-plated or Teflonized, stainless steel
Operational voltage	DC V 10 to 30
Indicator	LED
Current input (no load)	mA ≤ 12
Loading capacity	mA 200
Operating frequency	Hz 2000
Repeat accuracy	mm 0.16
Response time	ms 0.09
Build-up time	ms 0.04
Availability delay	ms ≤ 8
Protective measures	1 2 3 4 5 6 7

Type	Order No.	Price	Weight approx.	Wiring diagram	Housing material
		1 unit	kg	p. 10/89 No.	
1	3RG46 22-0AN01		0.105	11	Brass, chromium-plated
	3RG46 22-0GN01		0.105	13	Brass, chromium-plated
	3RG46 22-0AN61		0.105	11	Stainless steel
	3RG46 22-0GN61		0.105	13	Stainless steel
2	3RG46 22-3AN01		0.026	2	Brass, chromium-plated
	3RG46 22-3GN01		0.026	4	Brass, chromium-plated
	3RG46 22-3AN61		0.026	2	Stainless steel
	3RG46 22-3GN61		0.026	4	Stainless steel
	3RG46 22-3AN05		0.026	2	Brass, Teflonized
	3RG46 22-3GN05		0.026	4	Brass, Teflonized

With cable, 2 m, PUR 3 x 0.34 mm ²	NO function, pnp
	NO function, npn
	NO function, pnp
	NO function, npn
With M 12 plug-in connection type E, F	NO function, pnp
	NO function, npn
	NO function, pnp
	NO function, npn
	NO function, pnp
	NO function, npn

1) These BERO switches are resistant to magnetic fields up to 160 mT eff.

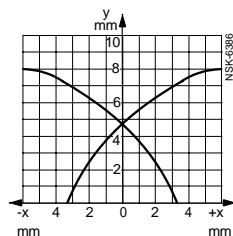
Protective measures Response characteristics Mounting instructions

Delivery

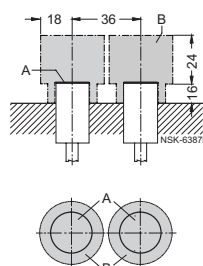
▶ Preferred type.

Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection
- 7 Totally insulated



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 8 mm

Selection and ordering data

Rated operating distance s_n	8 mm		8 mm	
Form	M 18		M 18	
Installation in metal	Non-embeddable		Non-embeddable	
Dimensions	Type 1	Type 2	Type 4	Type 5
	Type 3		Type 6	

Sg = plug thread

Number of cores	2 cores		2 cores	
Group	Normal requirements (PLC)		High electrical requirements (AC/DC)	
Housing material	Brass, nickel-plated		Brass, nickel-plated	
Operational voltage	AC/DC V	-/15 to 34	20 to 265/20 to 320	
Indicator		LED	LED	
Current input (no load)		-/≤ 1.5	1.5/1.0	
Loading capacity continuous	mA	25	300	
20 ms	mA	-	1800 ¹⁾	
Minimum load current	mA	2	5	
Operating frequency	AC/DC Hz	-/200	25/340	
Repeat accuracy	mm	0.2	0.2	
Response time	ms	1.8	0.7	
Build-up time	ms	3.1	2.2	
Availability delay	ms	40	100	

Protective measures	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
Type	Order No.	Price	Weight approx.	Wiring diagram	Type	Order No.	Price	Weight approx.	Wiring diagram	
		1 unit	kg	p. 10/89 No.			1 unit	kg	p. 10/89 No.	
With cable, 2 m, PUR 2 x 0.25 mm ²	NO function NC function	1 ▶ 3RG40 23-0JB00	0.100	15	4 ▶ 3RG40 23-0KB00	3RG40 23-0KA00	0.085 0.085	16 17		
With M 12 plug-in connection: Type E, F Type F	NO function NC function	2 ▶ 3RG40 23-3JB00	0.070	6	5 ▶ 3RG40 23-3KB00	3RG40 23-3KA00	0.040 0.040	8 9		
With M 18 plug-in connection type P	NO function	3 ▶ 3RG40 23-2JB00	0.060	6	6 ▶ 3RG40 23-2KB00		0.035	8		

1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

Protective measures

Response characteristics

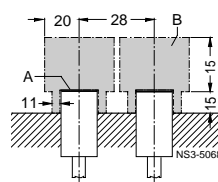
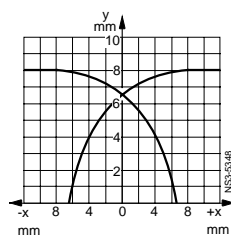
Mounting instructions

Delivery

▶ Preferred type.

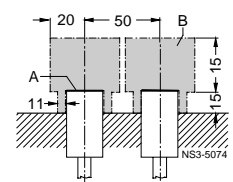
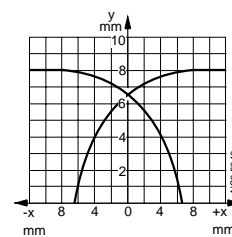
Protective measures

- Not available
- Spurious switching signal suppression
- Short-circuit and overload protection
- Polarity reversal protection
- Wire-break protection
- Inductive interference protection
- Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



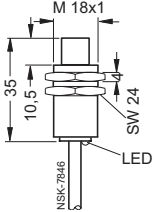
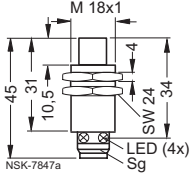
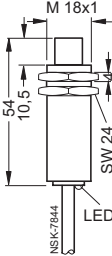
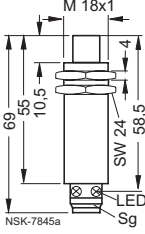
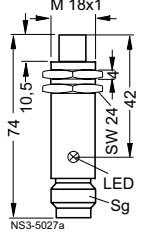
Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 8 mm

Selection and ordering data

Rated operating distance s_n	8 mm	8 mm
Form	M 18	M 18
Installation in metal	Non-embeddable	Non-embeddable
Dimensions	<p>Type 1</p>  <p>Type 2</p> 	<p>Type 3</p>  <p>Type 4</p>  <p>Type 5</p> 
Number of cores	3 cores	3 cores
Group	Normal requirements	Normal requirements
Housing material	Brass, nickel-plated	Brass, nickel-plated
Operational voltage	DC V	15 to 34
Indicator	LED	LED
Current input (no load)	mA	≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	mA	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	Hz	500
Repeat accuracy	mm	0.2
Response time	ms	0.5
Build-up time	ms	1.2
Availability delay	ms	40

Sg = plug thread

Protective measures	1 2 3 4 5 6	1 2 3 4 5 6																																																																																										
With cable, 2 m, PUR 3 x 0.25 mm ²	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89</td> </tr> </thead> <tbody> <tr> <td>1</td> <td>3RG40 23-0AG33</td> <td></td> <td>0.11</td> <td>11</td> </tr> <tr> <td></td> <td>3RG40 23-0AF33</td> <td></td> <td>0.11</td> <td>12</td> </tr> <tr> <td></td> <td>3RG40 23-0GB33</td> <td></td> <td>0.11</td> <td>13</td> </tr> <tr> <td></td> <td>3RG40 23-0GA33</td> <td></td> <td>0.11</td> <td>14</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89	1	3RG40 23-0AG33		0.11	11		3RG40 23-0AF33		0.11	12		3RG40 23-0GB33		0.11	13		3RG40 23-0GA33		0.11	14	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89</td> </tr> </thead> <tbody> <tr> <td>3</td> <td>3RG40 23-0AG01</td> <td></td> <td>0.115</td> <td>11</td> </tr> <tr> <td></td> <td>3RG40 23-0AF01</td> <td></td> <td>0.115</td> <td>12</td> </tr> <tr> <td></td> <td>3RG40 23-0GB00</td> <td></td> <td>0.115</td> <td>13</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>3RG40 23-3AG01</td> <td></td> <td>0.07</td> <td>2</td> </tr> <tr> <td></td> <td>3RG40 23-3AF01</td> <td></td> <td>0.07</td> <td>3</td> </tr> <tr> <td></td> <td>3RG40 23-3GB00</td> <td></td> <td>0.07</td> <td>4</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>3RG40 23-2AG01</td> <td></td> <td>0.06</td> <td>2</td> </tr> <tr> <td></td> <td>3RG40 23-2AF01</td> <td></td> <td>0.06</td> <td>3</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89	3	3RG40 23-0AG01		0.115	11		3RG40 23-0AF01		0.115	12		3RG40 23-0GB00		0.115	13		-				4	3RG40 23-3AG01		0.07	2		3RG40 23-3AF01		0.07	3		3RG40 23-3GB00		0.07	4		-				5	3RG40 23-2AG01		0.06	2		3RG40 23-2AF01		0.06	3
Type	Order No.	Price	Weight approx.	Wiring diagram																																																																																								
		1 unit	kg	p. 10/89																																																																																								
1	3RG40 23-0AG33		0.11	11																																																																																								
	3RG40 23-0AF33		0.11	12																																																																																								
	3RG40 23-0GB33		0.11	13																																																																																								
	3RG40 23-0GA33		0.11	14																																																																																								
Type	Order No.	Price	Weight approx.	Wiring diagram																																																																																								
		1 unit	kg	p. 10/89																																																																																								
3	3RG40 23-0AG01		0.115	11																																																																																								
	3RG40 23-0AF01		0.115	12																																																																																								
	3RG40 23-0GB00		0.115	13																																																																																								
	-																																																																																											
4	3RG40 23-3AG01		0.07	2																																																																																								
	3RG40 23-3AF01		0.07	3																																																																																								
	3RG40 23-3GB00		0.07	4																																																																																								
	-																																																																																											
5	3RG40 23-2AG01		0.06	2																																																																																								
	3RG40 23-2AF01		0.06	3																																																																																								
With M 12 plug-in connection:																																																																																												
Type E, F	NO function, pnp	2																																																																																										
Type F	NC function, pnp	3																																																																																										
Type E, F	NO function, npn	4																																																																																										
Type F	NC function, npn	5																																																																																										
With M 18 plug-in connection type P	NO function, pnp	-																																																																																										
	NC function, pnp	-																																																																																										

Protective measures

Response characteristics

Mounting instructions

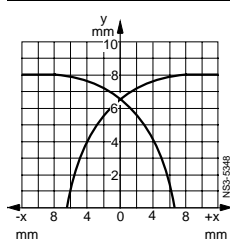
Delivery

► Preferred type.

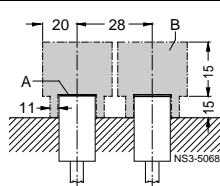
Protective measures

Not available

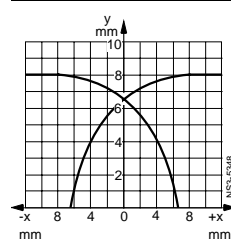
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



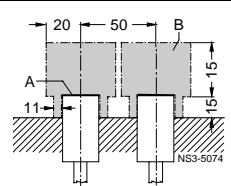
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 8 mm



Selection and ordering data

Rated operating distance s_n	8 mm	8 mm	
Form	M 18	M 18	
Installation in metal	Non-embeddable	Non-embeddable	
Dimensions	Type 1 	Type 2 	Type 3

Number of cores	3 cores	2 cores	3 cores
Group	Extreme environmental conditions (IP 68)	Extreme environmental conditions (IP 68)	Extreme environmental conditions (IP 68)
Housing material	Moulded plastic or brass, nickel-plated	Moulded plastic	Moulded plastic
Operational voltage	AC/DC V	20 to 265/20 to 250	-10 to 65
Indicator	LED	LED	LED
Current input (no load)	mA	1.5/1	-10 to 65
AC 230 V/DC 24 V	-15 to 34	300	LED
Loading capacity continuous	mA	1800 ¹⁾	-
20 ms	mA	5	-
Minimum load current	mA	-	-
Operating frequency	AC/DChz	25/34	-/500
Repeat accuracy	mm	0.2	0.2
Response time	ms	0.5	0.5
Build-up time	ms	2.2	1.2
Availability delay	ms	40	40

Protective measures: 1 2 3 4 5 6

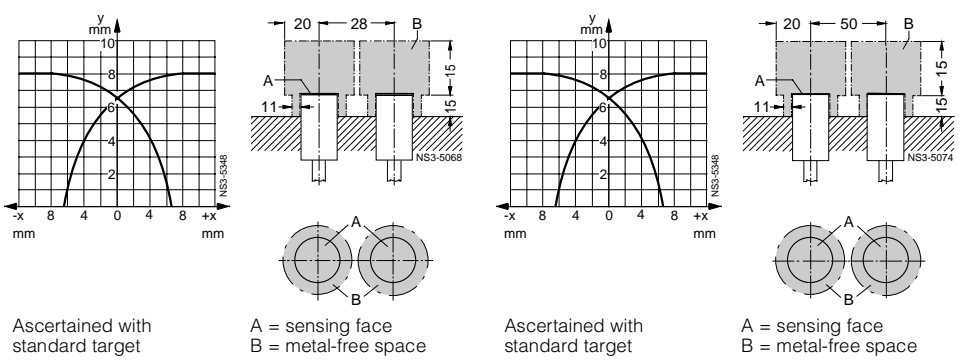
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
Number of cores				
With cable, 2 m, PVC NO function, pnp 2 x 0.25 mm ²				
-				
Number of cores				
3 cores				
1	3RG40 23-0AG30		0.11	11
	3RG40 23-0AF30		0.11	12
	3RG40 23-0GB30		0.11	13
	3RG40 23-0GA30		0.11	14
2	3RG40 23-0AG31			11
	3RG40 23-0GB31			13
Number of cores				
3 cores				
3	3RG40 23-0AB30			11
-				
2 cores				
3	3RG40 23-0KB30			16
-				

Protective measures

Response characteristics

Mounting instructions

- Delivery**
- ▶ Preferred type.
- Protective measures**
- Not available
 - 1 Spurious switching signal suppression
 - 2 Short-circuit and overload protection
 - 3 Polarity reversal protection
 - 4 Wire-break protection
 - 5 Inductive interference protection
 - 6 Radio interference protection



3RG4 BERO Inductive Proximity Switches

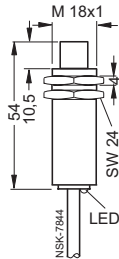
Rated Operating Distance 8 mm

Selection and ordering data

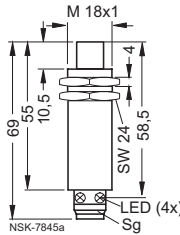
Rated operating distance s_n	8 mm
Form	M 18
Installation in metal	Non-embeddable

Dimensions

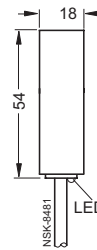
Type 1



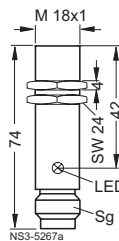
Type 2



Type 4



Type 3



Sg = plug thread

Number of cores	3 cores
Group	High electrical requirements
Housing material	Brass, nickel-plated
Operational voltage	DC V
Indicator	LED
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn
--	--

With M 12 plug-in connection: Type E, F	NO function, pnp NC function, pnp
--	--------------------------------------

With M 18 plug-in connection type P	NO function, pnp NC function, pnp
-------------------------------------	--------------------------------------

3 cores	3 cores
High electrical requirements	Extreme environmental conditions (IP 68)
Brass, nickel-plated	Moulded plastic
10 to 65	15 to 34
LED	LED
≤ 10	≤ 17 (24 V); ≤ 30 (34 V)
300	200 (≤ 50 °C); 150 (≤ 85 °C)
500	500
0.2	0.2
0.5	0.5
1.2	1.2
40	40
1 2 3 4 5 6	1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 23-0AB00		0.09	11
	3RG40 23-0AA00		0.09	12
2	3RG40 23-3AB00		0.04	2
	3RG40 23-3AA00		0.04	3
3	3RG40 23-2AB00		0.04	2
	3RG40 23-2AA00		0.04	3

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
4	3RG40 63-0AG30		0.085	11
	3RG40 63-0AF30		0.085	12
	3RG40 63-0GB30		0.085	13
	3RG40 63-0GA30		0.085	14

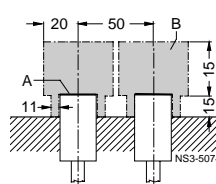
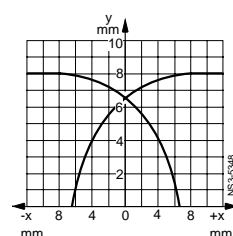
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

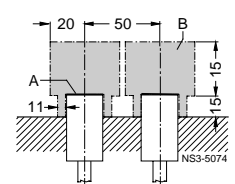
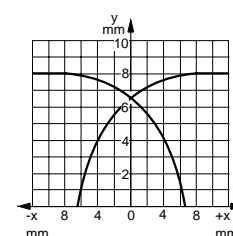
Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



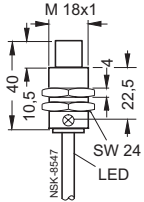
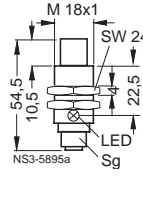
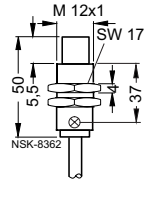
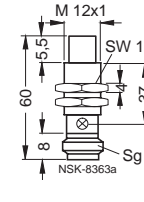
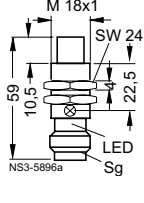
Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 8 and 10 mm

Selection and ordering data

Rated operating distance s_n	8 mm	10 mm
Form	M 18	M 12
Installation in metal	Non-embeddable	Non-embeddable
Dimensions	Type 1  Type 2 	Type 4  Type 5 
	Type 3 	

Sg = plug thread

Number of cores	4 cores	3 cores
Group	Normal requirements	Increased operating distance
Housing material	Brass, nickel-plated	Brass, nickel-plated
Operational voltage	DC V	10 to 30
Indicator	LED	LED
Current input (no load)	mA	10
Loading capacity	mA	200
Operating frequency	Hz	400
Repeat accuracy	mm	0.2
Response time	ms	0.5
Build-up time	ms	1.2
Availability delay	ms	40
Protective measures	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

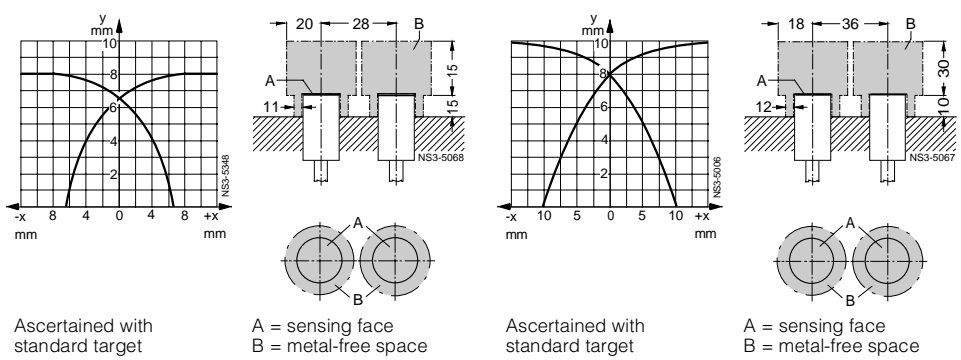
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 23-0CD00		0.10	10
2	3RG40 23-3CD00		0.06	1
3	3RG40 23-2CD00		0.05	1
4	3RG46 22-0AG02		0.45	11
5	3RG46 22-3AB03		0.03	2

Protective measures

Response characteristics

Mounting instructions

- Delivery**
- ▶ Preferred type.
- Protective measures**
- Not available
 - Spurious switching signal suppression
 - Short-circuit and overload protection
 - Polarity reversal protection
 - Wire-break protection
 - Inductive interference protection
 - Radio interference protection



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 10 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

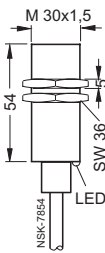
Dimensions

10 mm

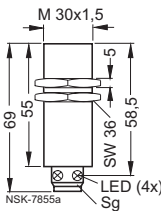
M 30

Embeddable

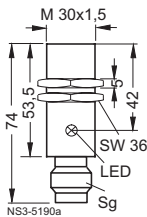
Type 1



Type 2



Type 3

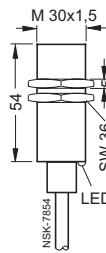


10 mm

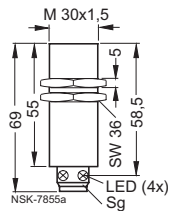
M 30

Embeddable

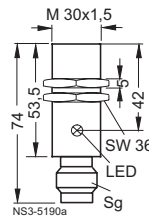
Type 4



Type 5



Type 6



Sg = plug thread

Number of cores

Group

Housing material

Operational voltage AC/DC V

Indicator LED

Current input (no load) AC/DC mA

Loading capacity continuous mA

20 ms mA

Minimum load current mA

Operating frequency AC/DC Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

2 cores

Normal requirements (PLC)

Brass, nickel-plated

-/15 to 34

LED

-/≤ 1.5

25

-

2

-/300

0.3

0.8

2.5

40

1 3 4 5 6

2 cores

High electrical requirements (AC/DC)

Brass, nickel-plated

20 to 265/20 to 320

LED

1.5/1.0

300

1800¹⁾

5

25/200

0.3

1.2

3.5

100

1 3 4 5 6

With cable, 2 m, PUR
2 x 0.25 mm² NO function
NC function

With M 12 plug-in connection:
Type E, F NO function
Type F NC function

With M 18 plug-in
connection type P NO function
NC function

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 14-0JB00		0.19	15
2	3RG40 14-3JB00		0.17	6
3	3RG40 14-2JB00		0.14	6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
4	3RG40 14-0KB00 3RG40 14-0KA00		0.19 0.19	16 17
5	3RG40 14-3KB00 3RG40 14-3KA00		0.17 0.17	8 9
6	3RG40 14-2KB00 3RG40 14-2KA00		0.14 0.14	8 9

1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

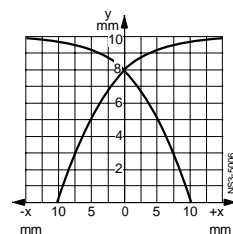
Protective measures Response characteristics Mounting instructions

Delivery

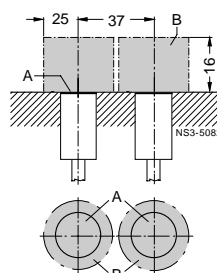
► Preferred type.

Protective measures

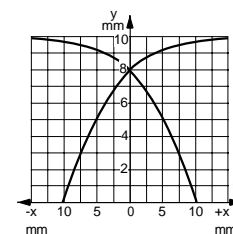
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



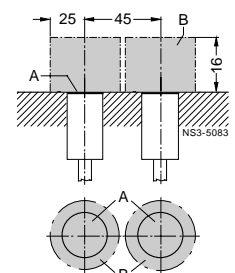
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 10 mm

Selection and ordering data

Rated operating distance s_n	10 mm
Form	M 30
Installation in metal	Embeddable

Dimensions	Type 1	Type 2	Type 3	Type 4	Type 5

Sg = plug thread

Number of cores	3 cores
Group	Normal requirements
Housing material	Brass, nickel-plated
Operational voltage	DC V
Indicator	15 to 34
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms

Protective measures	1 2 3 4 5 6																															
	3 cores																															
	Normal requirements																															
	Brass, nickel-plated																															
	15 to 34																															
	LED																															
	≤ 17 (24 V); ≤ 30 (34 V)																															
	200 (≤ 50 °C); 150 (≤ 85 °C)																															
	300																															
	0.3																															
	1																															
	2																															
	40																															
	1 2 3 4 5 6																															
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>1</td> <td>3RG40 14-0AG01</td> <td></td> <td>0.20</td> <td>11</td> </tr> <tr> <td>2</td> <td>3RG40 14-0AF01</td> <td></td> <td>0.20</td> <td>12</td> </tr> <tr> <td>3</td> <td>3RG40 14-0GB00</td> <td></td> <td>0.20</td> <td>13</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	1	3RG40 14-0AG01		0.20	11	2	3RG40 14-0AF01		0.20	12	3	3RG40 14-0GB00		0.20	13		-			
Type	Order No.	Price	Weight approx.	Wiring diagram																												
		1 unit	kg	p. 10/89 No.																												
1	3RG40 14-0AG01		0.20	11																												
2	3RG40 14-0AF01		0.20	12																												
3	3RG40 14-0GB00		0.20	13																												
	-																															
With M 12 plug-in connection: Type E, F Type F Type E, F Type F	NO function, pnp NC function, pnp NO function, npn NC function, npn	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>2</td> <td>3RG40 14-3AG01</td> <td></td> <td>0.18</td> <td>2</td> </tr> <tr> <td></td> <td>3RG40 14-3AF01</td> <td></td> <td>0.18</td> <td>3</td> </tr> <tr> <td></td> <td>3RG40 14-3GB00</td> <td></td> <td>0.18</td> <td>4</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	2	3RG40 14-3AG01		0.18	2		3RG40 14-3AF01		0.18	3		3RG40 14-3GB00		0.18	4		-			
Type	Order No.	Price	Weight approx.	Wiring diagram																												
		1 unit	kg	p. 10/89 No.																												
2	3RG40 14-3AG01		0.18	2																												
	3RG40 14-3AF01		0.18	3																												
	3RG40 14-3GB00		0.18	4																												
	-																															
With M 18 plug-in connection type P	NO function, pnp NC function, pnp	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>3</td> <td>3RG40 14-2AG01</td> <td></td> <td>0.15</td> <td>2</td> </tr> <tr> <td></td> <td>3RG40 14-2AF01</td> <td></td> <td>0.15</td> <td>3</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	3	3RG40 14-2AG01		0.15	2		3RG40 14-2AF01		0.15	3		-								
Type	Order No.	Price	Weight approx.	Wiring diagram																												
		1 unit	kg	p. 10/89 No.																												
3	3RG40 14-2AG01		0.15	2																												
	3RG40 14-2AF01		0.15	3																												
	-																															

Protective measures

Response characteristics

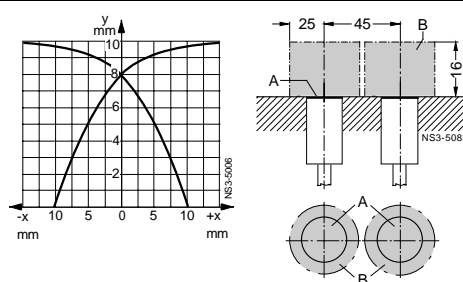
Mounting instructions

Delivery

► Preferred type.

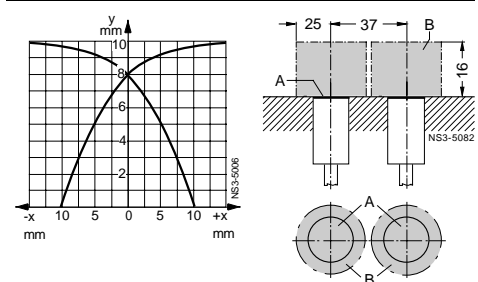
Protective measures

- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



Ascertained with standard target

A = sensing face
B = metal-free space



Ascertained with standard target

A = sensing face
B = metal-free space

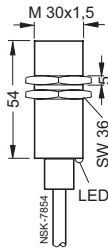
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 10 mm

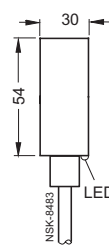
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

10 mm
M 30
Embeddable
Type 1



10 mm
Ø 30 mm
Embeddable
Type 2



Number of cores	
Group	
Housing material	
Operational voltage	DC V
Indicator	
Current input (no load)	mA
Loading capacity	mA
Operating frequency	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms
Protective measures	

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic or brass, nickel-plated
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
300
0.3
1
2
40
1 2 3 4 5 6

3 cores
Extreme environmental conditions (IP 68)
Moulded plastic
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
300
0.3
1
2
40
1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm ² Moulded plastic	NO function, pnp NC function, pnp NO function, npn NC function, npn
With cable, 2 m, PVC 3 x 0.25 mm ² Brass, nickel-plated	NO function, pnp NO function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 14-0AG30		0.17	11
	3RG40 14-0AF30		0.17	12
	3RG40 14-0GB30		0.17	13
	3RG40 14-0GA30		0.17	14
1	3RG40 14-0AG31		0.17	11
	3RG40 14-0GB31		0.17	13

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	3RG40 54-0AG30		0.17	11
	3RG40 54-0AF30		0.17	12
	3RG40 54-0GB30		0.17	13
	3RG40 54-0GA30		0.17	14
-				
-				

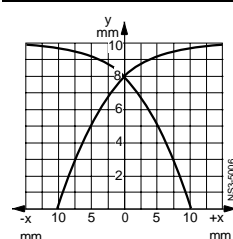
Protective measures Response characteristics Mounting instructions

Delivery

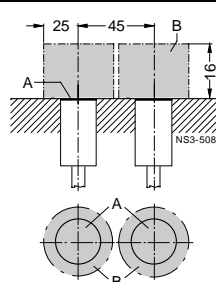
► Preferred type.

Protective measures

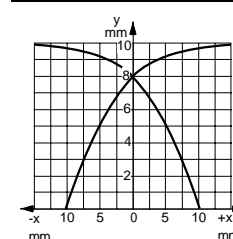
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



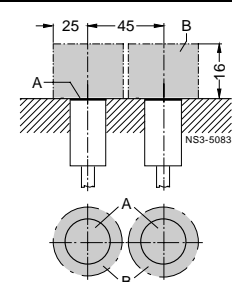
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 10 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

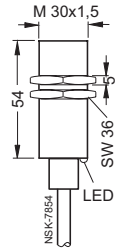
Dimensions

10 mm

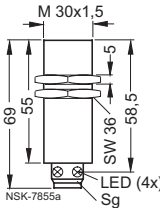
M 30

Embeddable

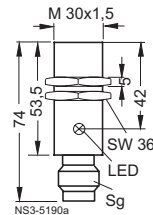
Type 1



Type 2



Type 3

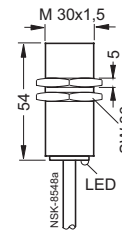


10 mm

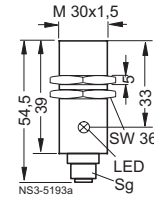
M 30

Embeddable

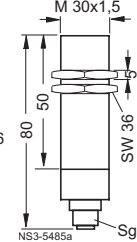
Type 4



Type 5



Type 6



Automotive industry
(Mercedes-Benz)

Sg = plug thread

Number of cores

Group

Housing material

Operational voltage DC V

Indicator

Current input (no load) mA

Loading capacity mA

Operating frequency Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

3 cores

High electrical requirements

Brass, nickel-plated

10 to 65

LED

≥ 10

300

300

0,3

1

2

40

1 2 3 4 5 6

4 cores

Normal requirements

Brass, nickel-plated

15 to 34

LED

≤ 25 (24 V); ≤ 40 (34 V)

200 (≤ 50 °C); 150 (≤ 85 °C)

300

0,3

1

2

40

1 2 3 4 5 6

With cable, 2 m, PUR
3 x 0.25 mm² NO function, pnp
NC function, pnp

With cable, 2 m, PUR
4 x 0.14 mm² NO function and
NC function, pnp

With M 12 plug-in connection:
Type E, F NO function, pnp
Type F NC function, pnp
Type F NO function and
NC function, pnp

With M 12 plug-in
connection type F NO function and
NC function, pnp

With M 18 plug-in
connection type P NO function, pnp
NC function, pnp

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG40 14-0AB00 3RG40 14-0AA00		0.20 0.20	11 12
2	3RG40 14-3AB00 3RG40 14-3AA00		0.18 0.18	2 3
3	3RG40 14-2AB00 3RG40 14-2AA00		0.15 0.15	2 3

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
4	3RG40 14-0CD00		0.17	10
5	3RG40 14-3CD00		0.15	1
6	3RG40 14-3CD01		0.17	1

Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

Protective measures

Not available

1 Spurious switching signal suppression

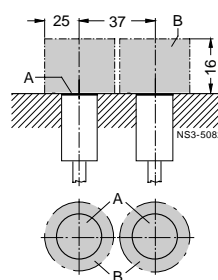
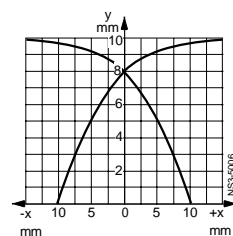
2 Short-circuit and overload protection

3 Polarity reversal protection

4 Wire-break protection

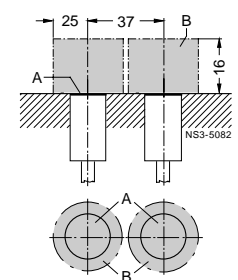
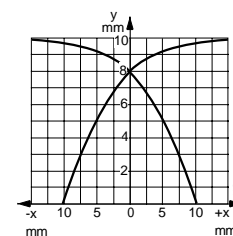
5 Inductive interference protection

6 Radio interference protection



Ascertained with
standard target

A = sensing face
B = metal-free space



Ascertained with
standard target

A = sensing face
B = metal-free space



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 10 mm

Selection and ordering data

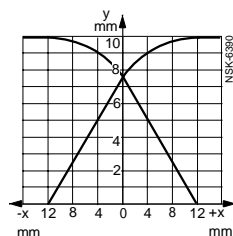
Rated operating distance s_n	10 mm																																																																
Form	M 30																																																																
Installation in metal	Embeddable																																																																
Dimensions	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Type ①</p> </div> <div style="text-align: center;"> <p>Type ②</p> </div> </div>																																																																
Sg = plug thread																																																																	
Number of cores	3 cores																																																																
Group	U BERO (without reduction factor) ¹⁾																																																																
Housing material	Brass, chromium-plated or Teflonized, stainless steel																																																																
Operational voltage	DC V 10 to 30																																																																
Indicator	LED yellow																																																																
Current input (no load)	mA ≤ 1.0																																																																
Loading capacity	mA 200																																																																
Operating frequency	Hz 2000																																																																
Repeat accuracy	mm 0.2																																																																
Response time	ms 0.13																																																																
Build-up time	ms 0.1																																																																
Availability delay	ms ≤ 8																																																																
Protective measures	①②③④⑤⑥⑦																																																																
	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> <th>Housing material</th> </tr> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No.</td> <td></td> </tr> </thead> <tbody> <tr> <td rowspan="4">①</td> <td>3RG46 14-0AN01</td> <td></td> <td>0.202</td> <td>11</td> <td>Brass, chromium-plated</td> </tr> <tr> <td>3RG46 14-0GN01</td> <td></td> <td>0.202</td> <td>13</td> <td>Brass, chromium-plated</td> </tr> <tr> <td>3RG46 14-0AN61</td> <td></td> <td>0.202</td> <td>11</td> <td>Stainless steel</td> </tr> <tr> <td>3RG46 14-0GN61</td> <td></td> <td>0.202</td> <td>13</td> <td>Stainless steel</td> </tr> <tr> <td rowspan="6">②</td> <td>3RG46 14-3AN01</td> <td></td> <td>0.115</td> <td>2</td> <td>Brass, chromium-plated</td> </tr> <tr> <td>3RG46 14-3GN01</td> <td></td> <td>0.115</td> <td>4</td> <td>Brass, chromium-plated</td> </tr> <tr> <td>3RG46 14-3AN61</td> <td></td> <td>0.115</td> <td>2</td> <td>Stainless steel</td> </tr> <tr> <td>3RG46 14-3GN61</td> <td></td> <td>0.115</td> <td>4</td> <td>Stainless steel</td> </tr> <tr> <td>3RG46 14-3AN05</td> <td></td> <td>0.115</td> <td>2</td> <td>Brass, Teflonized</td> </tr> <tr> <td>3RG46 14-3GN05</td> <td></td> <td>0.115</td> <td>4</td> <td>Brass, Teflonized</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram	Housing material			1 unit	kg	p. 10/89 No.		①	3RG46 14-0AN01		0.202	11	Brass, chromium-plated	3RG46 14-0GN01		0.202	13	Brass, chromium-plated	3RG46 14-0AN61		0.202	11	Stainless steel	3RG46 14-0GN61		0.202	13	Stainless steel	②	3RG46 14-3AN01		0.115	2	Brass, chromium-plated	3RG46 14-3GN01		0.115	4	Brass, chromium-plated	3RG46 14-3AN61		0.115	2	Stainless steel	3RG46 14-3GN61		0.115	4	Stainless steel	3RG46 14-3AN05		0.115	2	Brass, Teflonized	3RG46 14-3GN05		0.115	4	Brass, Teflonized
Type	Order No.	Price	Weight approx.	Wiring diagram	Housing material																																																												
		1 unit	kg	p. 10/89 No.																																																													
①	3RG46 14-0AN01		0.202	11	Brass, chromium-plated																																																												
	3RG46 14-0GN01		0.202	13	Brass, chromium-plated																																																												
	3RG46 14-0AN61		0.202	11	Stainless steel																																																												
	3RG46 14-0GN61		0.202	13	Stainless steel																																																												
②	3RG46 14-3AN01		0.115	2	Brass, chromium-plated																																																												
	3RG46 14-3GN01		0.115	4	Brass, chromium-plated																																																												
	3RG46 14-3AN61		0.115	2	Stainless steel																																																												
	3RG46 14-3GN61		0.115	4	Stainless steel																																																												
	3RG46 14-3AN05		0.115	2	Brass, Teflonized																																																												
	3RG46 14-3GN05		0.115	4	Brass, Teflonized																																																												
With cable, 2 m, PUR 3 x 0.34 mm ²	NO function, pnp NO function, npn NO function, pnp NO function, npn																																																																
With M 12 plug-in connection type E, F	NO function, pnp NO function, npn NO function, pnp NO function, npn NO function, pnp NO function, npn																																																																

1) These BERO switches are resistant to magnetic fields up to 160 mT eff.

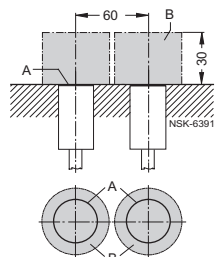
Protective measures Response characteristics Mounting instructions

Protective measures

- Not available
- ① Spurious switching signal suppression
- ② Short-circuit and overload protection
- ③ Polarity reversal protection
- ④ Wire-break protection
- ⑤ Inductive interference protection
- ⑥ Radio interference protection
- ⑦ Totally insulated



Ascertained with standard target



A = sensing face
B = metal-free space