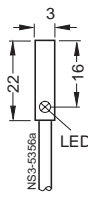
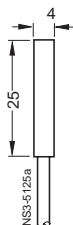
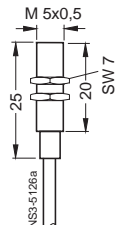


3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 0.6 mm

Selection and ordering data

Rated operating distance s_n	0.6 mm	0.6 mm	0.6 mm																																							
Form	Ø 3 mm	Ø 4 mm	M 5																																							
Installation in metal	Embeddable	Embeddable	Embeddable																																							
Dimensions	Type 1 	Type 2 	Type 3 																																							
Number of cores	3 cores	3 cores	3 cores																																							
Group	Normal requirements	Extreme environmental conditions (IP 68)																																								
Housing material	Stainless steel	Stainless steel																																								
Operational voltage	DC V	10 to 30	10 to 30																																							
Indicator	LED	-	-																																							
Current input (no load)	mA	≤ 10	≤ 10																																							
Loading capacity	mA	100	200																																							
Operating frequency	Hz	3000	3000																																							
Repeat accuracy	mm	0.01	0.01																																							
Response time	ms	0.02	0.01																																							
Build-up time	ms	0.2	0.1																																							
Availability delay	ms	10	8																																							
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	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6																																							
	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3RG46 03-2AB00</td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No. 11</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	3RG46 03-2AB00	1 unit	kg	p. 10/89 No. 11	-	-	-	-	-	-	-	-	-	-	<table border="1"> <thead> <tr> <th>Type</th> <th>Order No.</th> <th>Price</th> <th>Weight approx.</th> <th>Wiring diagram</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>-</td> <td>1 unit</td> <td>kg</td> <td>p. 10/89 No. 11</td> </tr> <tr> <td>2</td> <td>3RG46 00-0AG02</td> <td>-</td> <td>0.037</td> <td>11</td> </tr> <tr> <td>3</td> <td>3RG46 10-0AG02</td> <td>-</td> <td>0.036</td> <td>11</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram	-	-	1 unit	kg	p. 10/89 No. 11	2	3RG46 00-0AG02	-	0.037	11	3	3RG46 10-0AG02	-	0.036	11
Type	Order No.	Price	Weight approx.	Wiring diagram																																						
1	3RG46 03-2AB00	1 unit	kg	p. 10/89 No. 11																																						
-	-	-	-	-																																						
-	-	-	-	-																																						
Type	Order No.	Price	Weight approx.	Wiring diagram																																						
-	-	1 unit	kg	p. 10/89 No. 11																																						
2	3RG46 00-0AG02	-	0.037	11																																						
3	3RG46 10-0AG02	-	0.036	11																																						
With cable, 2 m, PUR 3 x 0.055 mm ²	NO function, pnp																																									
With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, pnp																																									
With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, pnp																																									

Protective measures

Response characteristics

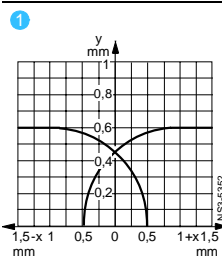
Mounting instructions

Delivery

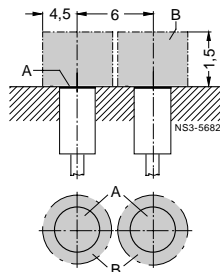
► Preferred type.

Protective measures

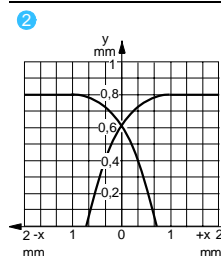
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



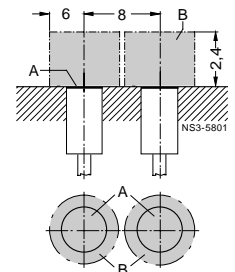
Ascertained with standard target



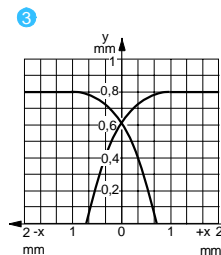
A = sensing face
B = metal-free space



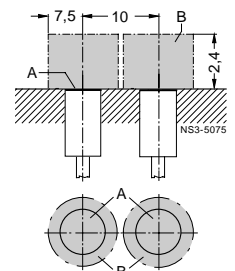
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 0.8 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

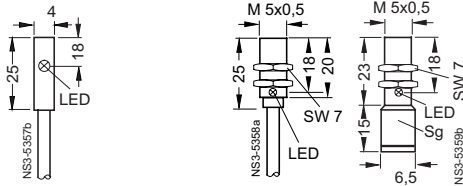
Dimensions

0.8 mm

Ø 4 mm

Embeddable

Type 1 Type 2 Type 3

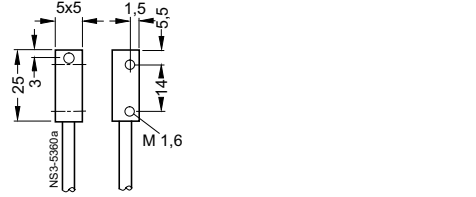


0.8 mm

5 x 5 mm

Embeddable

Type 4



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
Normal requirements

Stainless steel Brass, nickel-plated

10 to 30
LED
≤ 10
200
3000
0.01
0.01
0.1
8

1 2 3 5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 00-1AB00		0.033	11
2	3RG46 10-0AG00 3RG46 10-0GB00		0.036 0.036	11 13
3	3RG46 10-7AG00 3RG46 10-7GB00		0.010 0.010	2 4

3 cores
Normal requirements

Brass, nickel-plated

10 to 30
-
≤ 10
200
3000
0.01
0.02
0.2
10

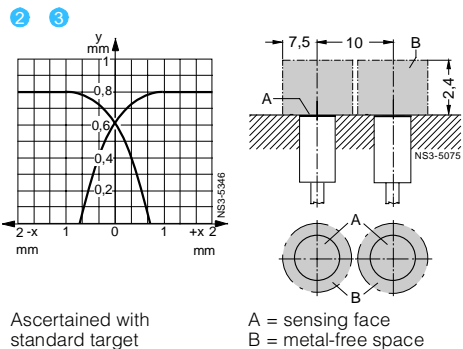
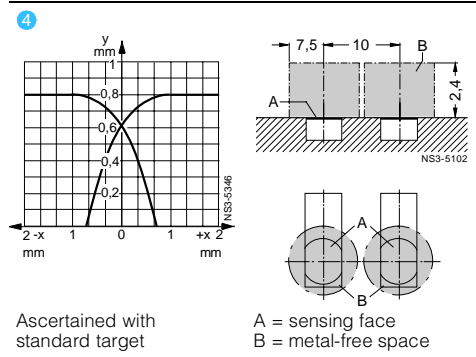
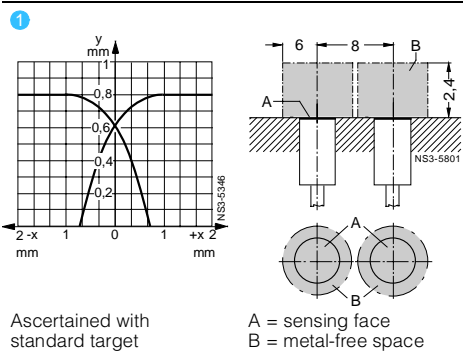
1 2 3 5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
-	-			
4	3RG46 36-0AG00 3RG46 36-0GB00		0.026 0.026	11 13
-	-			

With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, npn
With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, npn NO function, npn
With 8 mm combination plug-in connection type A	NO function, npn NO function, npn

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



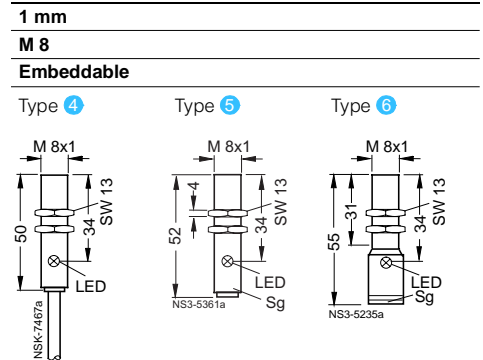
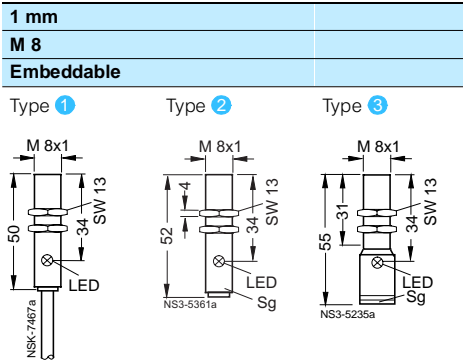
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1 mm

Selection and ordering data

Rated operating distance s_n	1 mm
Form	M 8
Installation in metal	Embeddable

Dimensions



Sg = plug thread

Number of cores	2 cores
Group	Normal requirements (PLC)
Housing material	Stainless steel
Operational voltage	DC V 15 to 34
Indicator	LED
Current input (no load)	mA ≤ 1.5
Loading capacity	mA ≤ 25
Minimum load current	mA 2
Operating frequency	Hz 1500
Repeat accuracy	mm 0.1
Response time	ms 0.2
Build-up time	ms 0.4
Availability delay	ms 40

Protective measures

Protective measures	<input type="checkbox"/> 1 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
---------------------	--

With cable, 2 m, PUR 2 x 0.25 mm ²	NO function	1	3RG40 11-0JB00	0.080	15
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn	- - -	- - -	- - -	- - -
With 8 mm combination plug-in connection type A	NO function	2	3RG40 11-7JB00	0.018	7
With 8 mm combination plug-in connection type A	NO function, pnp NC function, pnp	- -	- -	- -	- -
With M 12 plug-in connection type E, F	NO function	3	3RG40 11-3JB00	0.025	6
With M 12 plug-in connection: Type E, F	NO function, pnp NC function, pnp NO function, npn	- - -	- - -	- - -	- - -

Number of cores	3 cores
Group	Normal requirements
Housing material	Stainless steel
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)
Minimum load current	-
Operating frequency	1500
Repeat accuracy	0.1
Response time	0.2
Build-up time	0.4
Availability delay	40

Protective measures

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
---------------------	---

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
4	3RG40 11-0AG00 3RG40 11-0AF00 3RG40 11-0GB00	- - -	0.080 0.080 0.080	11 12 13
5	3RG40 11-7AG00 3RG40 11-7AF00	- -	0.018 0.018	2 3
6	3RG40 11-3AG00 3RG40 11-3AF00 3RG40 11-3GB00	- - -	0.021 0.021 0.021	2 3 4

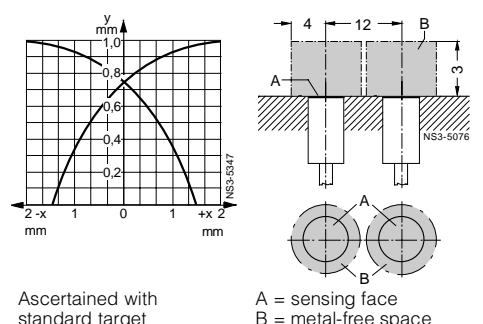
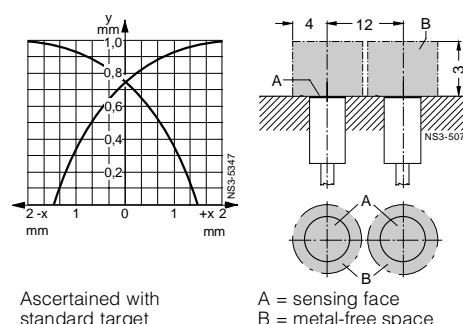
Protective measures Response characteristics Mounting instructions

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



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1 mm

Selection and ordering data

Rated operating distance s_n	1 mm			1 mm		
Form	M 8			M 8		
Installation in metal	Embeddable			Embeddable		
Dimensions	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
Sg = plug thread						
Number of cores	3 cores			4 cores		
Group	High electrical requirements			Normal requirements		
Housing material	Stainless steel			Stainless steel		
Operational voltage	DC V	10 to 65		10 to 30		
Indicator		LED		LED		
Current input (no load)	mA	≤ 10		≤ 1.0		
Loading capacity	mA	200		50		
Operating frequency	Hz	5000		1500		
Repeat accuracy	mm	0.1		0.01		
Response time	ms	0.1		0.02		
Build-up time	ms	0.1		0.4		
Availability delay	ms	40		6		
Protective measures	1 2 3 4 5 6			1 2 3 5 6		
	Type	Order No.	Price	Weight approx.	Wiring diagram	
			1 unit	kg	p. 10/89	No.
With cable, 2 m, PUR 3 x 0.25 mm ²	1	3RG40 11-0AB00 3RG40 11-0AA00		0.080 0.080	11 12	
With cable, 2 m, PUR 4 x 0.14 mm ²	-					4
With 8 mm combination plug-in connection: Type A	2	3RG40 11-7AB00 3RG40 11-7AA00		0.018 0.018	2 3	
Type A						5
Type B						
With M 12 plug-in connection: Type E, F	3	3RG40 11-3AB00 3RG40 11-3AA00		0.022 0.022	2 3	
Type F						6
Type F						

Protective measures

Response characteristics

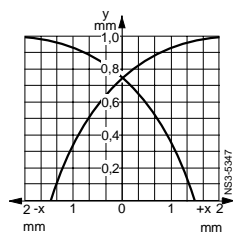
Mounting instructions

Delivery

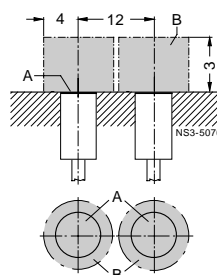
► Preferred type.

Protective measures

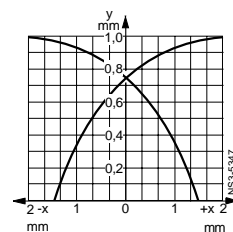
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



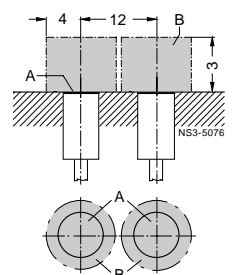
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

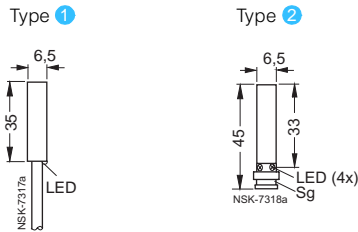
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1.5 mm

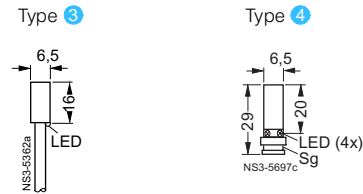
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

1.5 mm
Form
Embeddable



1.5 mm
Form
Embeddable



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

3 cores	
Normal requirements	
Housing material	Stainless steel
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 17 (24 V; ≤ 30 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	1500
Repeat accuracy	0.1
Response time	0.2
Build-up time	0.4
Availability delay	40

3 cores	
Normal requirements	
Housing material	Stainless steel
Operational voltage	10 to 30
Indicator	LED
Current input (no load)	≤ 10
Loading capacity	200
Operating frequency	2000
Repeat accuracy	0.01
Response time	0.02
Build-up time	0.2
Availability delay	7

Protective measures	
□ 1 □ 2 □ 3 □ 4 □ 5 □ 6	
With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, pnp
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn
With 8 mm combination plug-in connection:	
Type A	NO function, pnp
Type A	NC function, pnp
Type A	NO function, npn
Type A	NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
	—			
1	3RG40 50-0AG33		0.066	11
	3RG40 50-0AF33		0.066	12
	3RG40 50-0GB33		0.066	13
	3RG40 50-0GA33		0.066	14
2	3RG40 50-7AG33		0.010	2
	3RG40 50-7AF33		0.010	3
	3RG40 50-7GB33		0.010	4
	3RG40 50-7GA33		0.010	5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG46 01-1AB00		0.035	11
—	—			
—	—			
—	—			
4	3RG46 01-7AG00		0.010	4
	3RG46 01-7GB00		0.010	4

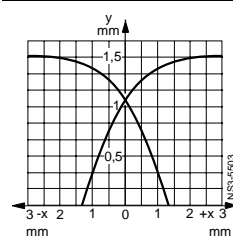
Protective measures Response characteristics Mounting instructions

Delivery

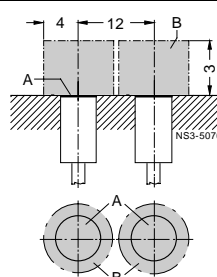
▶ Preferred type.

Protective measures

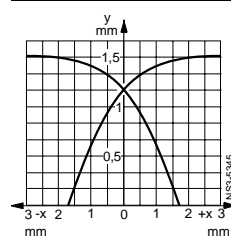
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



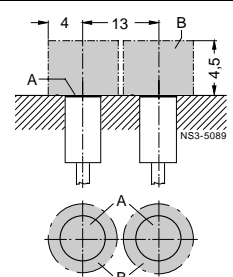
Ascertained with standard target



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 1.5 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

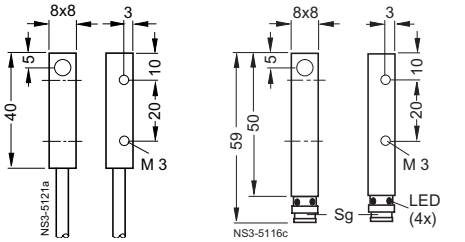
Dimensions

1.5 mm

8 mm × 8 mm block

Embeddable

Type 1 Type 2

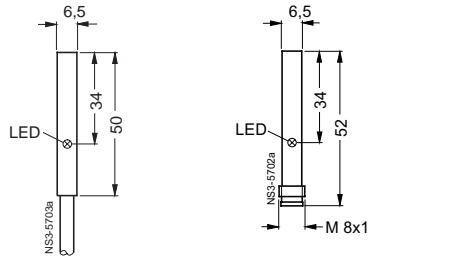


1.5 mm

Ø 6.5 mm

Embeddable

Type 3 Type 4



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

Normal requirements

Brass, nickel-plated

10 to 30

LED

≤ 10

200

1000

0.07

0.3

0.6

10

1 2 3 5

Type Order No. Price Weight approx. Wiring diagram

1 unit kg No.

With cable, 2 m, PUR
3 × 0.14 mm²

NO function, pnp
NO function, npn

1 3RG46 37-0AB00
3RG46 37-0GG00

0.045
0.045

11
13

With cable, 2 m, PUR
3 × 0.25 mm²

NO function, pnp
NO function, pnp
NO function, npn
NC function, npn

-
-
-
-

With 8 mm combination plug-in connection:

Type A

Type A

Type A

Type A

NO function, pnp

NC function, pnp

NO function, npn

NC function, npn

2 3RG46 37-7AB00

3RG46 37-7AA00

3RG46 37-7GG00

3RG46 37-7GF00

0.020

0.020

0.020

0.020

2

3

4

5

3 cores

Normal requirements

Stainless steel

15 to 34

LED

≤ 17 (24 V); ≤ 30 (34 V)

200 (≤ 50 °C); 150 (≤ 85 °C)

1500

0.01

0.02

0.4

40

1 2 3 4 5 6

Type Order No. Price Weight approx. Wiring diagram

1 unit kg No.

-

3 3RG40 50-0AG05

3RG40 50-0AF05

3RG40 50-0GB05

3RG40 50-0GA05

0.070

0.070

0.070

0.070

11

12

13

14

4 3RG40 50-7AG05

3RG40 50-7AF05

3RG40 50-7GB05

3RG40 50-7GA05

0.010

0.010

0.010

0.010

2

3

4

5

Protective measures

Response characteristics

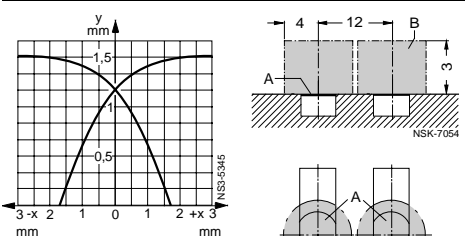
Mounting instructions

Delivery

▶ Preferred type.

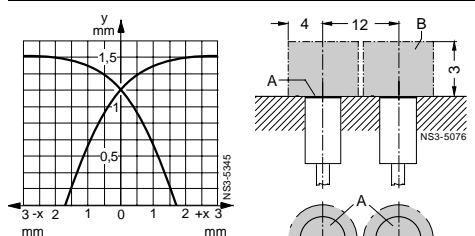
Protective measures

- 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

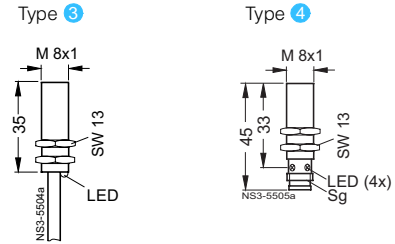
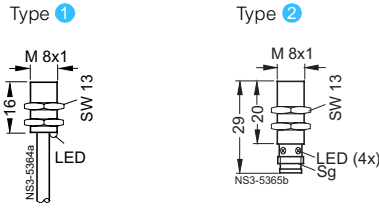
Rated Operating Distance 1.5 mm

Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

1.5 mm
M 8
Embeddable

1.5 mm
M 8
Embeddable



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

3 cores
Normal requirements
Brass, nickel-plated
10 to 30
LED
≤ 10
200
2000
0.01
0.02
0.2
7

3 cores
Normal requirements
Stainless steel
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)
1500
0.1
0.2
0.4
40

Protective measures	
□ 1 □ 2 □ 3 □ 5 □	
With cable, 2 m, PUR 3 x 0.14 mm ²	NO function, pnp
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn
With 8 mm combination plug-in connection:	
Type A	NO function, pnp
Type A	NC function, pnp
Type A	NO function, npn
Type A	NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 11-0AG31		0.044	11
-	-			
-	-			
-	-			
2	3RG46 11-7AG31		0.016	2
	3RG46 11-7AF31		0.016	3
	3RG46 11-7GB31		0.016	4
-	-			

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
-	-			
3	3RG40 11-0AG33		0.070	11
	3RG40 11-0AF33		0.070	12
	3RG40 11-0GB33		0.070	13
	3RG40 11-0GA33		0.070	14
4	3RG40 11-7AG33		0.017	2
	3RG40 11-7AF33		0.017	3
	3RG40 11-7GB33		0.017	4
	3RG40 11-7GA33		0.017	5

Protective measures

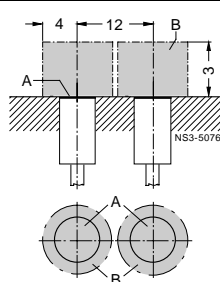
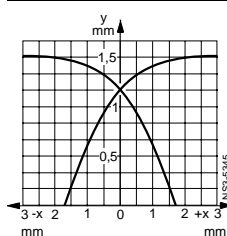
Response characteristics

Mounting instructions

Delivery
▶ Preferred type.

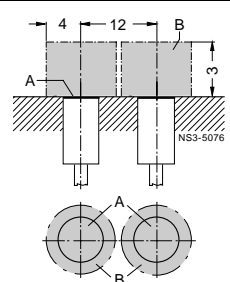
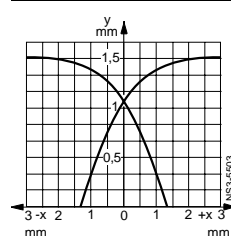
Protective measures

- 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

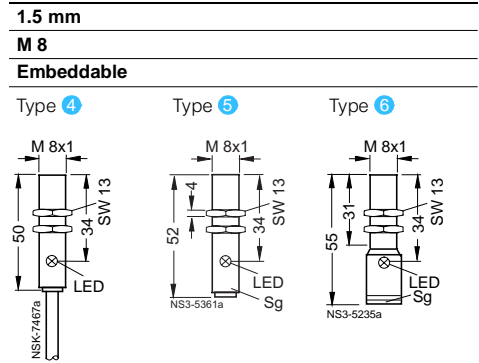
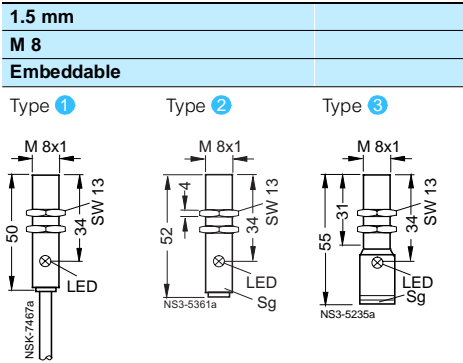
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1.5 mm

Selection and ordering data

Rated operating distance s_n	1.5 mm
Form	M 8
Installation in metal	Embeddable

Dimensions



Sg = plug thread

Number of cores	3 cores
Group	Normal requirements
Housing material	Stainless steel
Operational voltage	DC V 15 to 34
Indicator	LED
Current input (no load)	mA ≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	mA 200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	Hz 1500
Repeat accuracy	mm 0.1
Response time	ms 0.2
Build-up time	ms 0.4
Availability delay	ms 40
Protective measures	1 2 3 4 5 6

Number of cores	4 cores
Group	Normal requirements
Housing material	Stainless steel
Operational voltage	DC V 10 to 30
Indicator	LED
Current input (no load)	mA ≤ 1.0
Loading capacity	mA 50
Operating frequency	Hz 1500
Repeat accuracy	mm 0.1
Response time	ms 0.2
Build-up time	ms 0.4
Availability delay	ms 3
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	1 ▶ 3RG40 11-0AG05 3RG40 11-0AF05 3RG40 11-0GB05 3RG40 11-0GA05 -	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
4 x 0.14 mm ²	NO function and NC function, pnp	-			
With 8 mm combination plug-in connection: Type A, C Type A, C Type B	NO function, pnp NC function, pnp NO function and NC function, pnp	2 ▶ 3RG40 11-7AG05 3RG40 11-7AF05 -			
With M 12 plug-in connection: Type E, F Type E, F Type E, F Type E, F Type F	NO function, pnp NC function, pnp NO function, npn NC function, npn NO function and NC function, pnp	3 ▶ 3RG40 11-3AG05 3RG40 11-3AF05 3RG40 11-3GB05 3RG40 11-3GA05 -			

-	-	-	-	-	-
4 ▶ 3RG40 11-0CC05	Price 1 unit	0.071	10		
-					
5 ▶ 3RG40 11-7CC05	Price 1 unit	0.020	1		
-					
6 ▶ 3RG40 11-3CC05	Price 1 unit	0.020	1		

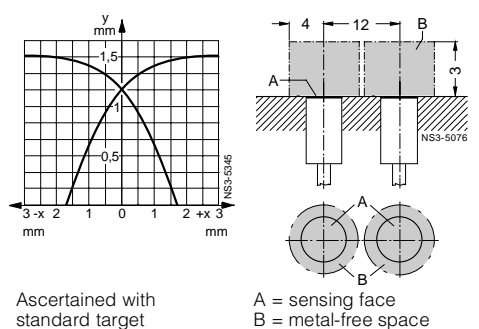
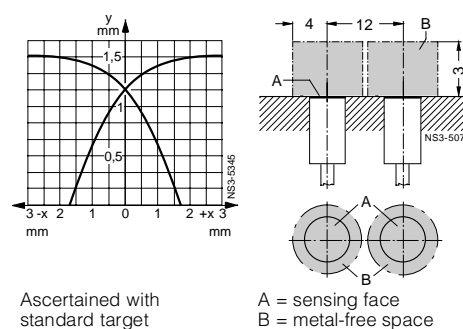
Protective measures Response characteristics Mounting instructions

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



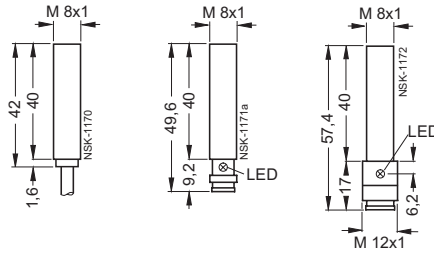


3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1.5 mm

Selection and ordering data

Rated operating distance s_n	1.5 mm
Form	M 8
Installation in metal	Embeddable
Dimensions	Type 1 Type 2 Type 3



Number of cores	3 cores
Group	U BERO (without reduction factor) ¹⁾
Housing material	Stainless steel
Operational voltage	DC V 10 to 30
Indicator	LED
Current input (no load)	mA ≤ 13
Loading capacity	mA 150
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

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 11-0AN01		11	
	3RG46 11-0GN01		13	
2	3RG46 11-7AN01		2	
	3RG46 11-7GN01		4	
2	3RG46 11-3AN01		2	
	3RG46 11-3GN01		4	

With cable, 2 m, PUR 3 x 0.25 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

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

Protective measures

Response characteristics

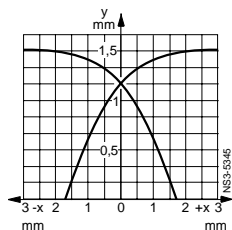
Mounting instructions

Delivery

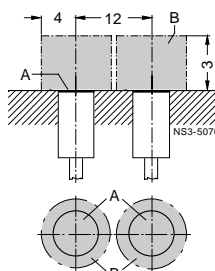
▶ Preferred type.

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



Ascertained with standard target

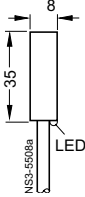
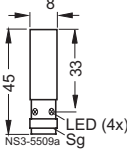
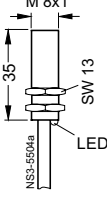
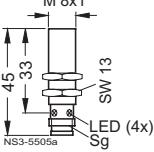


A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 1.5 and 2 mm

Selection and ordering data

Rated operating distance s_n	1.5 mm	2 mm																																																												
Form	Ø 8 mm	M 8																																																												
Installation in metal	Embeddable	Embeddable																																																												
Dimensions	Type ①  Type ② 	Type ③  Type ④ 																																																												
Number of cores	3 cores	3 cores																																																												
Group	Normal requirements	Increased operating distance																																																												
Housing material	Stainless steel	Stainless steel																																																												
Operational voltage	15 to 34	15 to 34																																																												
Indicator	LED	LED																																																												
Current input (no load)	mA ≤ 17 (24 V); ≤ 30 (34 V)	mA ≤ 17 (24 V); ≤ 30 (34 V)																																																												
Loading capacity	mA 200 (≤ 50 °C); 150 (≤ 85 °C)	mA 200 (≤ 50 °C); 150 (≤ 85 °C)																																																												
Operating frequency	Hz 1500	Hz 600																																																												
Repeat accuracy	mm 0.1	mm 0.1																																																												
Response time	ms 0.2	ms 0.6																																																												
Build-up time	ms 0.4	ms 0.8																																																												
Availability delay	ms 40	ms 40																																																												
Protective measures	①②③④⑤⑥	①②③④⑤⑥																																																												
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 No.</td> </tr> </thead> <tbody> <tr> <td>①</td> <td>3RG40 51-0AG33</td> <td></td> <td>0.070</td> <td>11</td> </tr> <tr> <td>②</td> <td>3RG40 51-0AF33</td> <td></td> <td>0.070</td> <td>12</td> </tr> <tr> <td>③</td> <td>3RG40 51-0GB33</td> <td></td> <td>0.070</td> <td>13</td> </tr> <tr> <td>④</td> <td>3RG40 51-0GA33</td> <td></td> <td>0.070</td> <td>14</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	①	3RG40 51-0AG33		0.070	11	②	3RG40 51-0AF33		0.070	12	③	3RG40 51-0GB33		0.070	13	④	3RG40 51-0GA33		0.070	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 No.</td> </tr> </thead> <tbody> <tr> <td>③</td> <td>3RG41 11-0AG33</td> <td></td> <td>0.073</td> <td>11</td> </tr> <tr> <td>④</td> <td>3RG41 11-0AF33</td> <td></td> <td>0.073</td> <td>12</td> </tr> <tr> <td>⑤</td> <td>3RG41 11-0GB33</td> <td></td> <td>0.073</td> <td>13</td> </tr> <tr> <td>⑥</td> <td>3RG41 11-0GA33</td> <td></td> <td>0.073</td> <td>14</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	③	3RG41 11-0AG33		0.073	11	④	3RG41 11-0AF33		0.073	12	⑤	3RG41 11-0GB33		0.073	13	⑥	3RG41 11-0GA33		0.073	14
Type	Order No.	Price	Weight approx.	Wiring diagram																																																										
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With 8 mm combination plug-in connection:	<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>Type A</td> <td>3RG40 51-7AG33</td> <td></td> <td>0.014</td> <td>2</td> </tr> <tr> <td>Type A</td> <td>3RG40 51-7AF33</td> <td></td> <td>0.014</td> <td>3</td> </tr> <tr> <td>Type A</td> <td>3RG40 51-7GB33</td> <td></td> <td>0.014</td> <td>4</td> </tr> <tr> <td>Type A</td> <td>3RG40 51-7GA33</td> <td></td> <td>0.014</td> <td>5</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	Type A	3RG40 51-7AG33		0.014	2	Type A	3RG40 51-7AF33		0.014	3	Type A	3RG40 51-7GB33		0.014	4	Type A	3RG40 51-7GA33		0.014	5	<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 11-7AG33</td> <td></td> <td>0.017</td> <td>2</td> </tr> <tr> <td>④</td> <td>3RG41 11-7AF33</td> <td></td> <td>0.017</td> <td>3</td> </tr> <tr> <td>⑤</td> <td>3RG41 11-7GB33</td> <td></td> <td>0.017</td> <td>4</td> </tr> <tr> <td>⑥</td> <td>3RG41 11-7GA33</td> <td></td> <td>0.017</td> <td>5</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	③	3RG41 11-7AG33		0.017	2	④	3RG41 11-7AF33		0.017	3	⑤	3RG41 11-7GB33		0.017	4	⑥	3RG41 11-7GA33		0.017	5
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⑥	3RG41 11-7GA33		0.017	5																																																										

Protective measures

Response characteristics

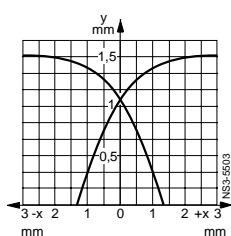
Mounting instructions

Delivery

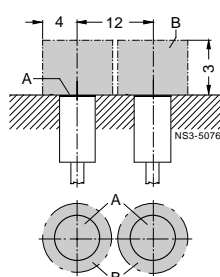
▶ Preferred type.

Protective measures

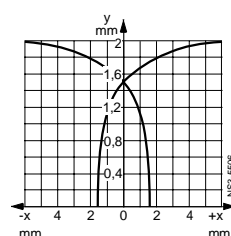
- Not available
- ① Spurious switching signal suppression
- ② Short-circuit and overload protection
- ③ Polarity reversal protection
- ④ Wire-break protection
- ⑤ Inductive interference protection
- ⑥ Radio interference protection



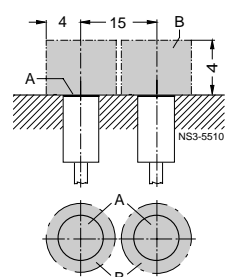
Ascertained with standard target



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 2 mm

Selection and ordering data

Rated operating distance s_n	2 mm			2 mm	
Form	M 8			M 12	
Installation in metal	Embeddable			Embeddable	
Dimensions	Type 1	Type 2	Type 3	Type 4	Type 5
Sg = plug thread					
Number of cores	3 cores			2 cores	
Group	Increased operating distance (for VW)			Normal requirements (PLC)	
Housing material	Stainless steel			Brass, nickel-plated	
Operational voltage	DC V 15 to 34			15 to 34	
Indicator	LED			LED	
Current input (no load)	mA ≤ 17 (24 V); ≤ 30 (34 V)			1.5	
Loading capacity	mA 200 (≤ 50 °C); 150 (≤ 85 °C)			25	
Minimum load current	mA -			2	
Operating frequency	Hz 600		Hz 1000	Hz 700	
Repeat accuracy	mm 0.1		mm 0.1	mm 0.1	
Response time	ms 0.4		ms 0.4	ms 0.3	
Build-up time	ms 0.5		ms 0.5	ms 0.1	
Availability delay	ms 40		ms 40	ms 40	
Protective measures	[1][2][3][4][5][6]			[1][3][4][5][6]	
	Type	Order No.	Price	Weight approx.	Wiring diagram No.
			1 unit	kg	p. 10/89 No.
With cable, 2 m, PUR 2 x 0.25 mm ²		-			
With cable, 2 m, PUR 3 x 0.25 mm ²	1	3RG41 11-0AG00		0.08	11
With M 12 plug-in connection: Type E, F	2	3RG41 11-3AG00		0.03	2
With M 12 plug-in connection: Type E, F	3	3RG41 11-3AG22		0.03	2
	Type	Order No.	Price	Weight approx.	Wiring diagram No.
			1 unit	kg	p. 10/89 No.
4	3RG40 12-0JB00			0.080	15
5	3RG40 12-3JB00			0.03	6

Protective measures

Response characteristics

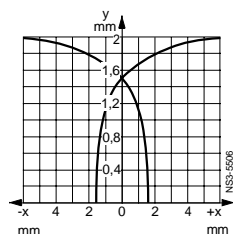
Mounting instructions

Delivery

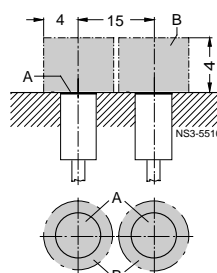
► Preferred type.

Protective measures

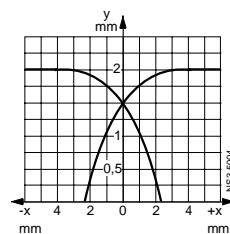
- Not available
- [1] Spurious switching signal suppression
- [2] Short-circuit and overload protection
- [3] Polarity reversal protection
- [4] Wire-break protection
- [5] Inductive interference protection
- [6] Radio interference protection



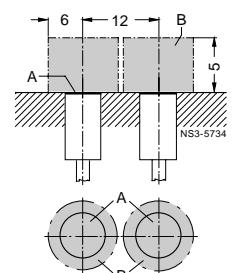
Ascertained with standard target



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 2 mm

Selection and ordering data

Rated operating distance s_n	2 mm	2 mm		
Form	M 12	M 12		
Installation in metal	Embeddable	Embeddable		
Dimensions	Type 1 	Type 2 	Type 3 	Type 4

Sg = plug thread

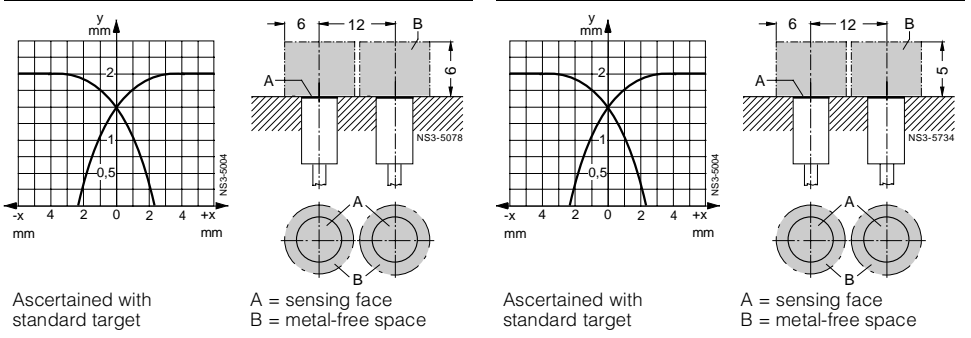
Number of cores	2 cores	3 cores
Group	High electrical requirements (AC/DC)	Normal requirements
Housing material	Brass, nickel-plated	Brass, nickel-plated
Operational voltage	AC/DC V	AC/DC V
Indicator	20 to 265/20 to 320 LED	-/15 to 34 LED
Current input (no load)	mA	mA
AC 230 V/DC 24 V	1.5/1.0	-/≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity continuous pnp/npn	200 mA	200 (≤ 50 °C); 150 (≤ 85 °C)
20 ms	1800 ¹⁾ mA	-
Minimum load current	5 mA	-
Operating frequency	AC/DC Hz	AC/DC Hz
Repeat accuracy	mm	mm
Response time	ms	ms
Build-up time	ms	ms
Availability delay	ms	ms
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	<input type="checkbox"/> 1 <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	Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.			1 unit	kg	p. 10/89 No.
1	3RG40 12-0KB00 3RG40 12-0KA00		0.080 0.080	16 17	-	-			
2	3RG40 12-3KB00 3RG40 12-3KA00		0.033 0.033	8 9	3	3RG40 12-0AG33 3RG40 12-0AF33 3RG40 12-0GB33 3RG40 12-0GA33		0.085 0.085 0.085 0.085	11 12 13 14
					4	3RG40 12-3AG33 3RG40 12-3AF33 3RG40 12-3GB33 3RG40 12-3GA33		0.030 0.030 0.030 0.030	2 3 4 5

1) Siemens 3 TF 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

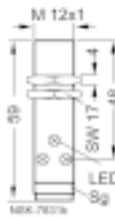
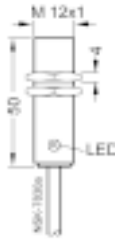


3RG4 BERO Inductive Proximity Switches

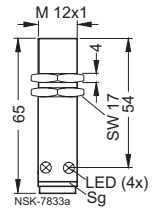
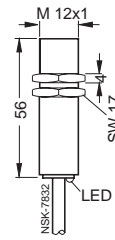
Rated Operating Distance 2 mm

Selection and ordering data

Rated operating distance s_n	2 mm
Form	M 12
Installation in metal	Embeddable
Dimensions	Type ① Type ②



Rated operating distance s_n	2 mm
Form	M 12
Installation in metal	Embeddable
Dimensions	Type ③ Type ④



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

3 cores
Normal requirements
Brass, nickel-plated
15 to 34
LED
≤ 17 (24 V); ≤ 30 (34 V)
200 (≤ 50 °C); 150 (≤ 85 °C)

3 cores
High electrical requirements
Brass, nickel-plated
10 to 65
LED
≤ 10
300

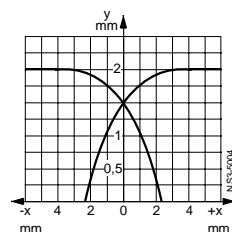
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, pnp NC function, pnp NO function, npn NC function, npn
With M 12 plug-in connection:	
Type E, F	NO function, pnp
Type F	NC function, pnp
Type E, F	NO function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
①	3RG40 12-0AG01		0.085	11
	3RG40 12-0AF01		0.085	12
	3RG40 12-0GB00		0.085	13
	3RG40 12-0GA00		0.085	14
②	3RG40 12-3AG01		0.031	2
	3RG40 12-3AF01		0.031	3
	3RG40 12-3GB00		0.031	4

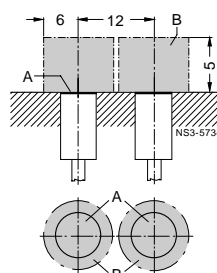
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
③	3RG40 12-0AB00		0.090	11
	3RG40 12-0AA00		0.090	12
	-		-	-
④	3RG40 12-3AB00		0.033	2
	3RG40 12-3AA00		0.033	3
	-		-	-

Protective measures Response characteristics Mounting instructions

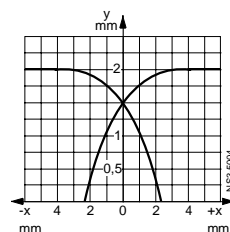
- Delivery**
- ▶ Preferred type.
- Protective measures**
- Not available
 - ① Spurious switching signal suppression
 - ② Short-circuit and overload protection
 - ③ Polarity reversal protection
 - ④ Wire-break protection
 - ⑤ Inductive interference protection
 - ⑥ Radio interference protection



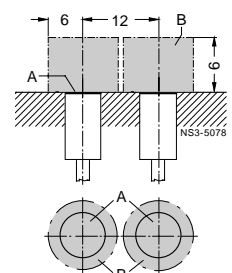
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

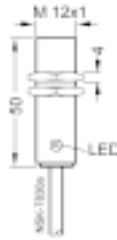
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2 mm

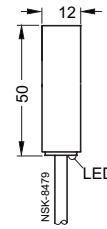
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

2 mm
M 12
Embeddable
Type ①



2 mm
Ø 12
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)
1200
0.1
0.4
0.4
40
①②③④⑤⑥

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)
1200
0.1
0.4
0.4
40
①②③④⑤⑥

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
①	3RG40 12-0AG30		0.09	11
	3RG40 12-0AF30		0.09	12
	3RG40 12-0GB30		0.09	13
	3RG40 12-0GA30		0.09	14
①	3RG40 12-0AG31		0.09	11
NEW	3RG40 12-0GB31		0.09	13

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89
②	3RG40 52-0AG30		0.09	11
	3RG40 52-0AF30		0.09	12
	3RG40 52-0GB30		0.09	13
	3RG40 52-0GA30		0.09	14
-				
-				

Protective measures

Response characteristics

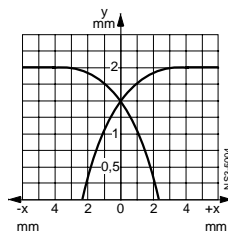
Mounting instructions

Delivery

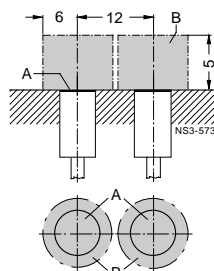
► Preferred type.

Protective measures

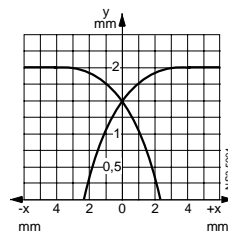
- Not available
- ① Spurious switching signal suppression
- ② Short-circuit and overload protection
- ③ Polarity reversal protection
- ④ Wire-break protection
- ⑤ Inductive interference protection
- ⑥ Radio interference protection



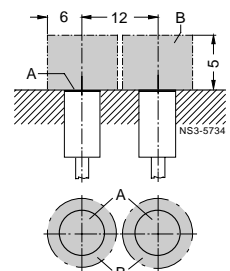
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

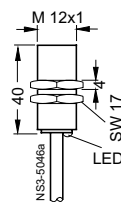
Rated Operating Distance 2 mm

Selection and ordering data

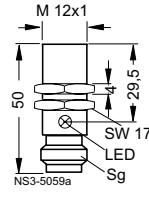
Rated operating distance s_n	2 mm
Form	M 12
Installation in metal	Embeddable

Dimensions

Type 1



Type 2



2 mm
M 12
Embeddable

Type 3



Type 4



Sg = plug thread

Number of cores	4 cores
Group	Normal requirements
Housing material	Brass, nickel-plated
Operational voltage	DC V 15 to 34
Indicator	LED
Current input (no load)	mA ≤ 1.0
Loading capacity	mA 50
Operating frequency	Hz 800
Repeat accuracy	mm 0.1
Response time	ms 0.4
Build-up time	ms 0.5
Availability delay	ms 3
Protective measures	1 2 3 5 6

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

4 cores	
Normal requirements	
Housing material	Brass, nickel-plated
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 1.0
Loading capacity	50
Operating frequency	800
Repeat accuracy	0.1
Response time	0.4
Build-up time	0.5
Availability delay	3
Protective measures	1 2 3 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 12-0CD10		0.080	10
2	3RG40 12-3CD11		0.040	1

4 cores	
Normal requirements	
Housing material	Brass, nickel-plated
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	1200
Repeat accuracy	0.1
Response time	0.4
Build-up time	0.4
Availability delay	40
Protective measures	1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG40 12-0CD00		0.085	10
4	3RG40 12-3CD00		0.032	1

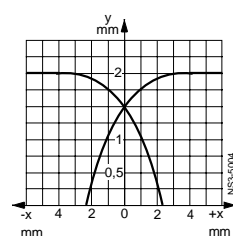
Protective measures Response characteristics Mounting instructions

Delivery

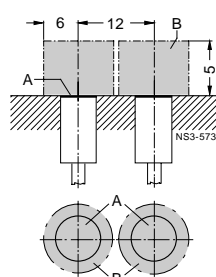
▶ Preferred type.

Protective measures

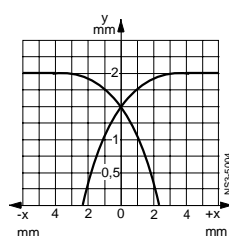
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



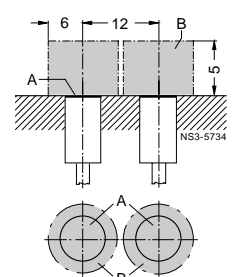
Ascertained with standard target



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 2 mm



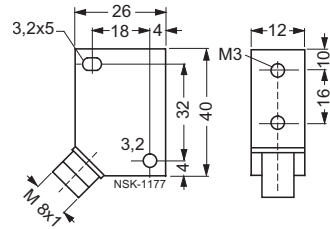
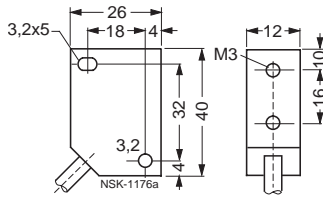
Selection and ordering data

Rated operating distance s_n	2 mm
Form	Block
Installation in metal	Embeddable

Dimensions

Type 1

Type 2



Number of cores		3 cores
Group		Normal requirements
Housing material		Moulded plastic
Operational voltage	DC V	15 to 34
Indicator		LED
Current input (no load)	mA	≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	mA	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	Hz	800
Repeat accuracy	mm	0.2
Response time	ms	0.4
Build-up time	ms	0.5
Availability delay	ms	40

Protective measures: 1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 70-0AG45			11
2	3RG40 70-7AG45			13

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

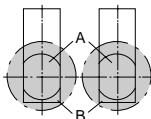
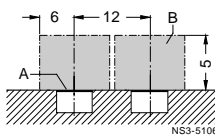
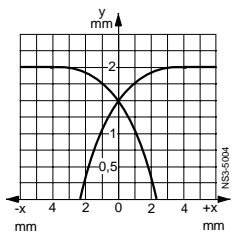
With 8 mm combination plug-in connection type A NO function, pnp

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

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

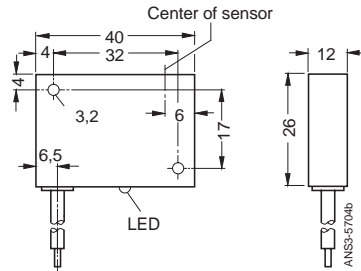
Dimensions

2 mm

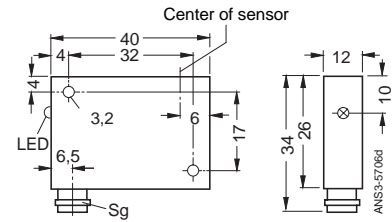
Block

Embeddable

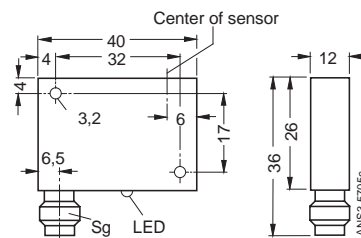
Type 1



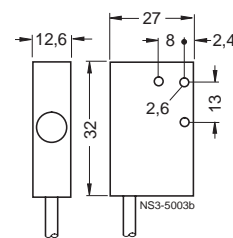
Type 2



Type 3



Type 4



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

Normal requirements

Moulded plastic

15 to 34

LED

≤ 17 (24 V); ≤ 40 (34 V)

200 (≤ 50 °C); 150 (≤ 85 °C)

1200

0.1

0.4

0.4

40

1 2 3 4 5 6

4 cores

Normal requirements

Moulded plastic

15 to 34

–

≤ 1.0

200 (≤ 50 °C); 150 (≤ 85 °C)

1200

0.1

0.4

0.4

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 8 mm combination
plug-in connection type A

NO function, pnp

With M 12 plug-in connection:
Type E, F
Type F

NO function, pnp
NC function, pnp

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 70-0AG01 3RG40 70-0AF01		0.080 0.080	11 13
2	3RG40 70-7AG01		0.021	2
3	3RG40 70-3AG01 3RG40 70-3AF01		0.023 0.023	2 3

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
–	–			
4	3RG40 71-0CD00		0.073	10
–	–			

Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

Protective measures

□ Not available

1 Spurious switching signal suppression

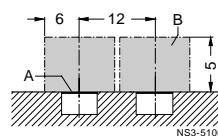
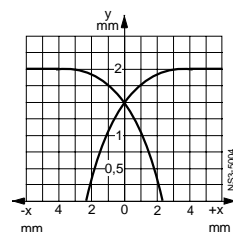
2 Short-circuit and overload protection

3 Polarity reversal protection

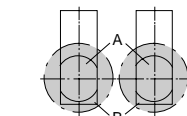
4 Wire-break protection

5 Inductive interference protection

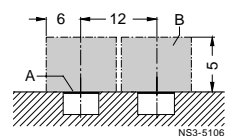
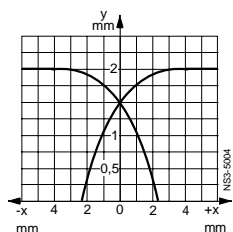
6 Radio interference protection



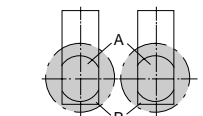
Ascertained with
standard target



A = sensing face
B = metal-free space



Ascertained with
standard target



A = sensing face
B = metal-free space

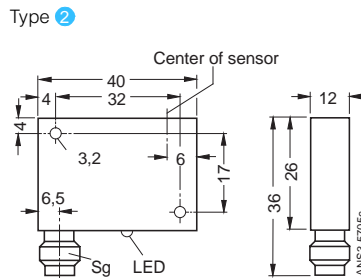
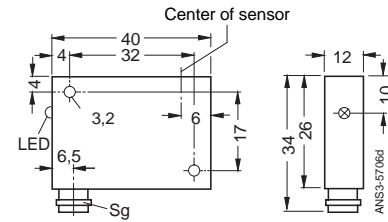
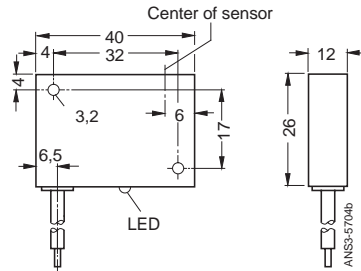
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2 mm

Selection and ordering data

Rated operating distance s_n	2 mm
Form	Block
Installation in metal	Embeddable
Dimensions	Type 1

Rated operating distance s_n	2 mm
Form	Block
Installation in metal	Embeddable
Dimensions	Type 3



Sg = plug thread

Number of cores	4 cores
Group	Normal requirements

Number of cores	4 cores
Group	Normal requirements

Housing material	Moulded plastic
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

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	1200
Repeat accuracy	0.1
Response time	0.4
Build-up time	0.4
Availability delay	40

Protective measures 1 2 3 4 5 6

Protective measures 1 2 3 4 5 6

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

Type	Order No.	Price	Weight approx.	Wiring diagram
1	3RG40 70-0CD00	1 unit	kg	p. 10/89 No.

With 8 mm combination plug-in connection type B	NO function and NC function, pnp
--	-------------------------------------

3	3RG40 70-7CD01 (LED for NO function)	0.023	1	
	3RG40 70-7CD02 (LED for NC function)	47,40	0.023	1

With M 12 plug-in connection Type F	NO function and NC function, pnp
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2	3RG40 70-3CD00	0.023	1	
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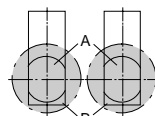
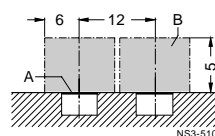
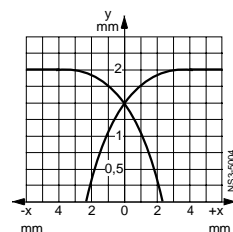
Protective measures Response characteristics Mounting instructions

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 2.5 mm

Selection and ordering data

Rated operating distance s_n
Form
Installation in metal

2.5 mm
Ø 6.5 mm
Non-embeddable

2.5 mm
M 8
Non-embeddable

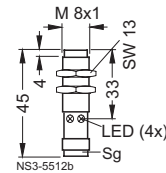
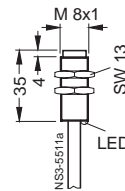
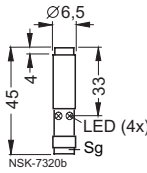
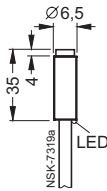
Dimensions

Type 1

Type 2

Type 3

Type 4



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

3 cores	
Normal requirements	
Housing material	Stainless steel
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	1200
Repeat accuracy	0.1
Response time	0.4
Build-up time	0.4
Availability delay	40

3 cores	
Normal requirements	
Housing material	Stainless steel
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	1200
Repeat accuracy	0.1
Response time	0.4
Build-up time	0.4
Availability delay	40

Protective measures

1 2 3 4 5 6

1 2 3 4 5 6

With cable, 2 m, PUR
3 x 0.25 mm²

NO function, pnp
NC function, pnp
NO function, npn
NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG40 60-0AG33		0.040	11
	3RG40 60-0AF33		0.040	12
	3RG40 60-0GB33		0.040	13
	3RG40 60-0GA33		0.040	14
2	3RG40 60-7AG33		0.020	2
	3RG40 60-7AF33		0.020	3
	3RG40 60-7GB33		0.020	4
	3RG40 60-7GA33		0.020	5

With 8 mm combination plug-in connection:

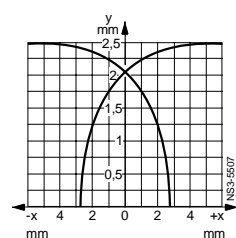
Type A NO function, pnp
Type A NC function, pnp
Type A NO function, npn
Type A NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG40 21-0AG33		0.070	11
	3RG40 21-0AF33		0.070	12
	3RG40 21-0GB33		0.070	13
	3RG40 21-0GA33		0.070	14
4	3RG40 21-7AG33		0.017	2
	3RG40 21-7AF33		0.017	3
	3RG40 21-7GB33		0.017	4
	3RG40 21-7GA33		0.017	5

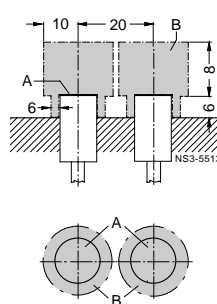
Protective measures Response characteristics Mounting instructions

Protective measures

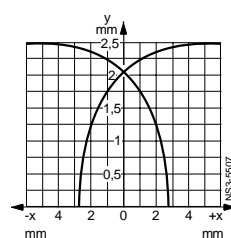
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



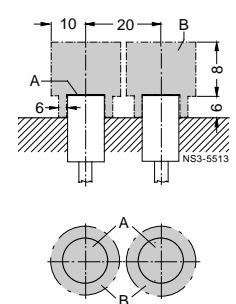
Ascertained with standard target



A = sensing face
B = metal-free space



Ascertained with standard target



A = sensing face
B = metal-free space

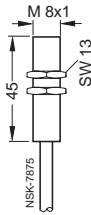
3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2.5 mm

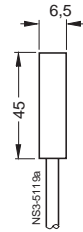
Selection and ordering data

Rated operating distance s_n
Form
Installation in metal
Dimensions

2.5 mm
M 8
Semi-embeddable (see mounting instructions)
Type 1



2.5 mm
Ø 6.5 mm
Semi-embeddable (see mounting instructions)
Type 2



Number of cores		
Group		
Housing material		
Operational voltage	DC V	10 to 30
Indicator		-
Current input (no load)	mA	≤ 10
Loading capacity	mA	200
Operating frequency	Hz	1000
Repeat accuracy	mm	0.07
Response time	ms	0.3
Build-up time	ms	0.6
Availability delay	ms	6
Protective measures		<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

3 cores
Extreme environmental conditions (IP 68)
Brass, nickel-plated
10 to 30
-
≤ 10
200
1000
0.07
0.3
0.6
6
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

3 cores
Extreme environmental conditions (IP 68)
Brass, nickel-plated
10 to 30
-
≤ 10
200
1000
0.07
0.3
0.6
6
<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

With cable, 2 m, PUR NO function, prp
3 x 0.14 mm²

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 11-0AG02		0.045	11

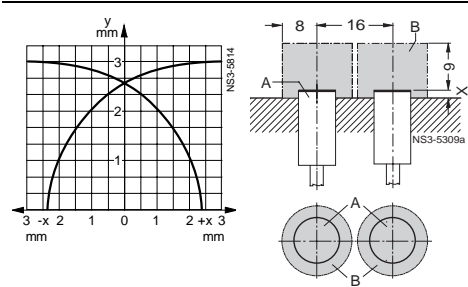
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	3RG46 02-0AG02		0.036	11

Protective measures

Response characteristics

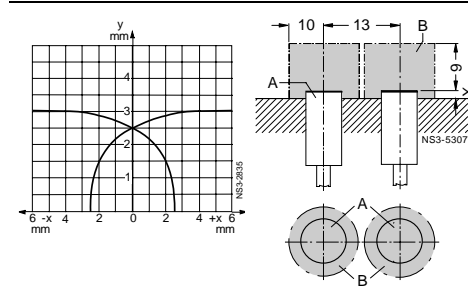
Mounting instructions

- 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
X ≥ 1.6 mm when mounted in steel
X ≥ 0.8 mm when mounted in other metals



Ascertained with standard target

A = sensing face
B = metal-free space
X ≥ 1.3 mm when mounted in steel
X ≥ 0.65 mm when mounted in other metals

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2.5 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

Dimensions

2.5 mm

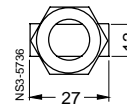
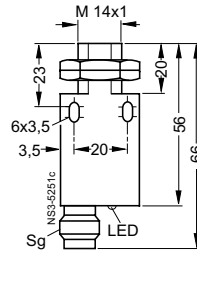
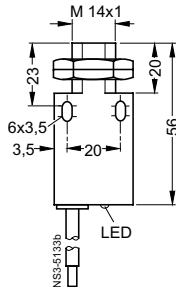
Block with M 14

Embeddable

Type 1

Type 2

Top view for Type 1 and 2



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

Normal requirements (PLC)

Moulded plastic

-15 to 34

LED

-1.5

25

-

2

-/800

0.1

0.4

0.5

40

1 3 4 5 6

2 cores

High electrical requirements (AC/DC)

Moulded plastic

10 to 265/20 to 320

LED

1.5/1

200

1200

5

25/1000

0.04

0.4

0.5

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 E, F NO function
Type F NC function

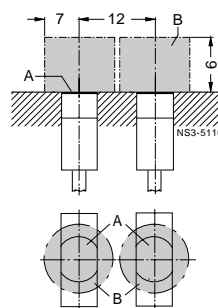
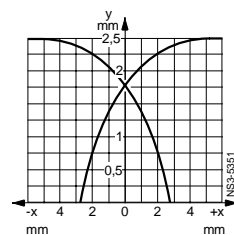
Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG40 72-0JB00 -		0.082	15
2	3RG40 72-3JB00 - -		0.030	6

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
1	3RG40 72-0KB00 3RG40 72-0KA00		0.082 0.082	16 17
2	- 3RG40 72-3KB00 3RG40 72-3KA00		0.030 0.030	8 9

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



Ascertained with
standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 2.5 mm

Selection and ordering data

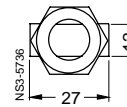
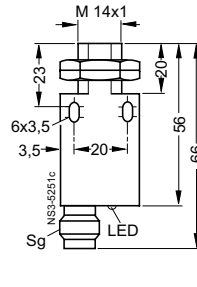
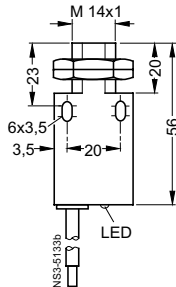
Rated operating distance s_n	2.5 mm
Form	Block with M 14
Installation in metal	Embeddable

Dimensions

Type ①

Type ②

Top view for Type ① and ②



Sg = plug thread

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

	3 cores	4 cores
Normal requirements	Moulded plastic	Moulded plastic
Operational voltage	15 to 34	15 to 34
Indicator	LED	LED
Current input (no load)	≤ 17 (24 V); ≤ 30 (34 V)	25 (24 V); 40 (34 V)
Loading capacity	200 (≤ 50 °C); 150 (≤ 85 °C)	200 (≤ 50 °C); 150 (≤ 85 °C)
Operating frequency	800	800
Repeat accuracy	0.1	0.1
Response time	0.4	0.4
Build-up time	0.5	0.5
Availability delay	40	40

	3 cores
High electrical requirements	Moulded plastic
Operational voltage	10 to 65
Indicator	LED
Current input (no load)	≤ 10
Loading capacity	300
Operating frequency	800
Repeat accuracy	0.05
Response time	0.4
Build-up time	0.5
Availability delay	40

Protective measures

①②③④⑤⑥

①②③④⑤⑥

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.

Number of cores	
With cable, 2 m, PUR 3 x 0.25 mm ²	NO function, npn NC function, npn NO function, pnp NC function, pnp
With M 12 plug-in connection: Type E, F	NO function, npn NC function, npn
Type F	NO function, pnp
Type E, F	NO function, pnp

3 cores				
①	3RG40 72-0GB00 3RG40 72-0GA00		0.085 0.085	14 15
②	3RG40 72-3GB00 3RG40 72-3GA00		0.030 0.030	4 5

3 cores				
①	3RG40 72-0AB00 3RG40 72-0AA00		0.085 0.085	11 12
②	3RG40 72-3AB00		0.030	2

Number of cores	
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

4 cores				
①	3RG40 72-0CD00		0.085	10
②	3RG40 72-3CD00		0.030	1

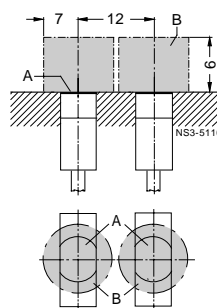
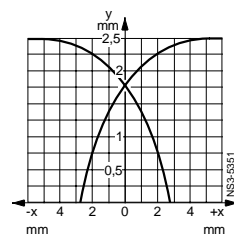
Protective measures Response characteristics Mounting instructions

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



Ascertained with standard target

A = sensing face
B = metal-free space

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 3 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

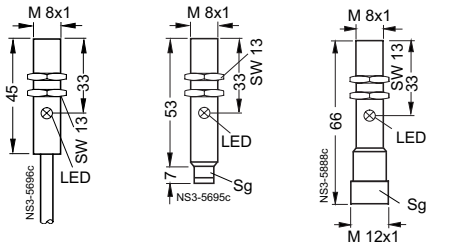
Dimensions

3 mm

M 8

Semi-embeddable (see mounting instructions)

Type 1 Type 2 Type 3

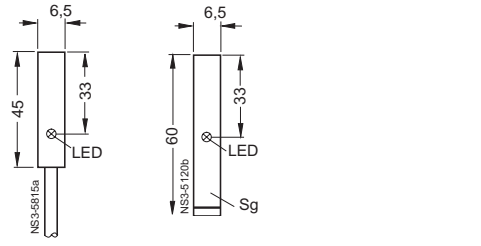


3 mm

Ø 6.5 mm

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

1000

0.07

0.3

0.6

6

3 cores

Increased operating distance

Brass, nickel-plated

10 to 30

LED

≤ 10

200

1000

0.07

0.3

0.6

6

With cable, 2 m, PUR 3 x 0.14 mm² NO function, npn NO function, npn

With 8 mm combination plug-in connection type A NO function, npn

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

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 11-0AG01 3RG46 11-0GB01		0.050 0.050	11 13
2	3RG46 11-7AG01		0.021	2
3	3RG46 11-3AG01 3RG46 11-3GB01		0.025 0.025	2 4

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
4	3RG46 02-1AB00 3RG46 02-1GB01		0.039 0.039	11 13
5	3RG46 02-7AG01		0.012	2
-				

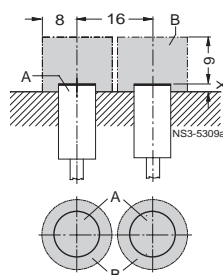
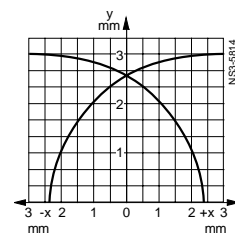
Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

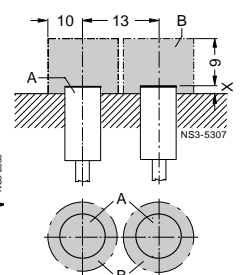
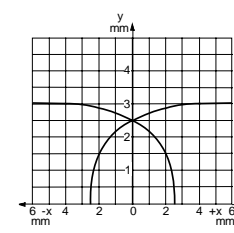
Protective measures

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



Ascertained with standard target

A = sensing face
B = metal-free space
X ≥ 1.6 mm when mounted in steel
X ≥ 0.8 mm when mounted in other metals



Ascertained with standard target

A = sensing face
B = metal-free space
X ≥ 1.3 mm when mounted in steel
X ≥ 0.65 mm when mounted in other metals

3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 3 mm

Selection and ordering data

Rated operating distance s_n

Form

Installation in metal

Dimensions

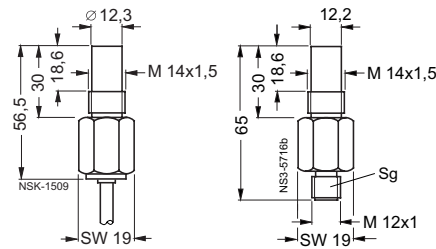
3 mm

Ø 12 mm (pressure-proof)

Semi-embeddable (see mounting instructions)

Type 1

Type 2



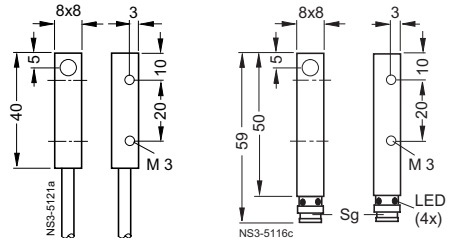
3 mm

8 mm x 8 mm block

Semi-embeddable (see mounting instructions)

Type 3

Type 4



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

Pressure-proof up to 500 bar

Stainless steel, sensing face: aluminium oxide ceramics

10 to 30

–

≤ 10

200

400

0.1

1.0

3.0

10

12345

3 cores

Increased operating distance

Brass, nickel-plated

10 to 30

LED

≤ 10

200

1000

0.07

0.3

0.6

6

12345

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
NC function, pnp
NO function, npn
NC 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 NO function, pnp

Type F NC function, pnp

Type E NO function, npn

Type F NC function, npn

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
–	–	–	–	–
1	3RG46 52-0PG00	–	0.135	11
	3RG46 52-0PF00	–	0.135	12
	3RG46 52-0PB00	–	0.135	13
	3RG46 52-0PA00	–	0.135	14
–	–	–	–	–
2	3RG46 52-3PG00	–	0.070	2
	3RG46 52-3PF00	–	0.070	3
	3RG46 52-3PB00	–	0.070	4
	3RG46 52-3PA00	–	0.070	5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG46 37-0AG01	–	0.044	11
	3RG46 37-0GB01	–	0.044	13
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
4	3RG46 37-7AG01	–	0.020	2
	3RG46 37-7GB01	–	0.020	4
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–

Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

Protective measures

Not available

1 Spurious switching signal suppression

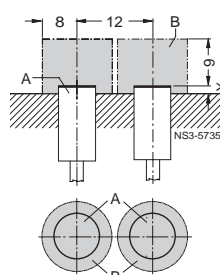
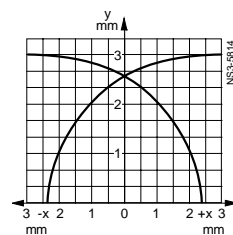
2 Short-circuit and overload protection

3 Polarity reversal protection

4 Wire-break protection

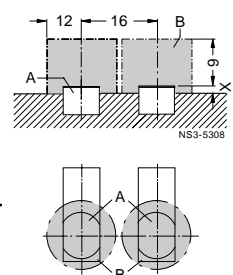
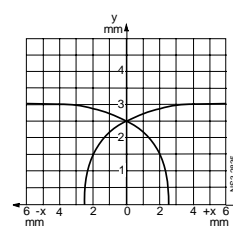
5 Inductive interference protection

6 Radio interference protection



Ascertained with standard target

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



Ascertained with standard target

A = sensing face
B = metal-free space
X ≥ 1.6 mm when mounted in steel
X ≥ 0.8 mm when mounted in other metals



3RG4 BERO Inductive Proximity Switches

Rated Operating Distance 3 mm

Selection and ordering data

Rated operating distance s_n	3 mm
Form	M 12
Installation in metal	Embeddable
Dimensions	<p>Type 1 Type 2</p>
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 3000
Repeat accuracy	mm 0.04
Response time	ms 0.08
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 12-0AN01		0.11	11	Brass, chromium-plated
	3RG46 12-0GN01		0.11	13	Brass, chromium-plated
	3RG46 12-0AN61		0.11	11	Stainless steel
	3RG46 12-0GN61		0.11	13	Stainless steel
2	3RG46 12-3AN01		0.032	2	Brass, chromium-plated
	3RG46 12-3GN01		0.032	4	Brass, chromium-plated
	3RG46 12-3AN61		0.030	2	Stainless steel
	3RG46 12-3GN61		0.030	4	Stainless steel
	3RG46 12-3AN05		0.030	2	Brass, Teflonized
	3RG46 12-3GN05		0.030	4	Brass, Teflonized

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

Protective measures

Response characteristics

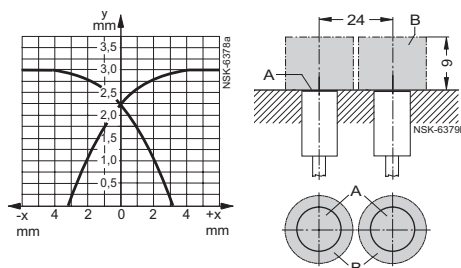
Mounting instructions

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 isolated



Ascertained with standard target

A = sensing face
B = metal-free space