

# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 10 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with Pg 9 = Pg 9 thread for moulded-plastic joint  
Fastening clamp included in the scope of supply.

Number of cores  
Group

Housing material

Operational voltage AC/DC V  
Indicator  
Current input (no load) AC/DC mA  
Loading capacity continuous res./ind. mA  
20 ms  
Minimum load current mA

Operating frequency AC/DC Hz  
Repeat accuracy mm  
Response time ms  
Build-up time ms  
Availability delay ms

Protective measures

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function or NC function, programmable

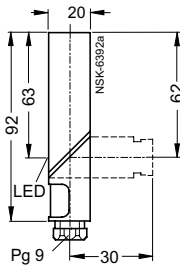
With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function, npn

**10 mm**

Ø 20 mm

**Non-embeddable**

Type 1



**2 cores**

High electrical requirements (AC/DC)

Moulded plastic

20 to 250/20 to 250  
LED  
≤ 2.5/≤ 0.8  
250/100  
2200<sup>1)</sup>  
5

25/70  
0.2  
0.7  
1.4  
15

□□□□□□

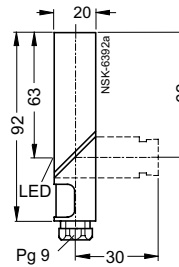
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 25-6KD00		0.074	24
-	-			

**10 mm**

Ø 20 mm

**Non-embeddable**

Type 2



**3 cores**

Normal requirements

Moulded plastic

-/10 to 36  
LED  
-/5  
≤ 250  
-

-/300  
0.3  
0.4  
1.3  
6

□□□□□□

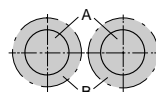
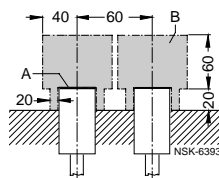
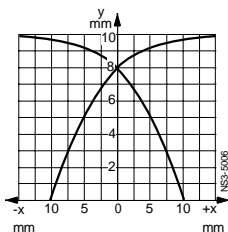
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
-	-			
2	3RG46 25-6AG00		0.074	26

1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.5 Hz)

### Protective measures Response characteristics Mounting instructions

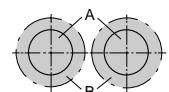
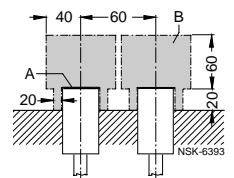
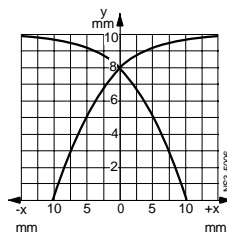
#### Protective measures

- 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 12 mm

### Selection and ordering data

Rated operating distance  $s_n$

Form

Installation in metal

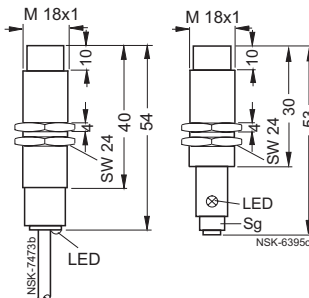
Dimensions

12 mm

M 18

Non-embeddable

Type 1 **NEW** Type 2 **NEW**

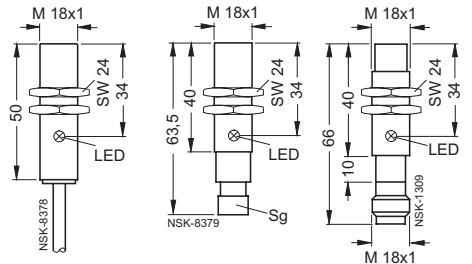


12 mm

M 18

Semi-embeddable

Type 3 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  
U BERO (without reduction factor)<sup>1)</sup>

Brass, chromium-plated or Teflonized, stainless steel

10 to 30  
LED  
≤ 13  
200

2000  
0.24  
0.11  
0.07  
≤ 8

1 2 3 4 5 6 7

3 cores  
Increased operating distance

Brass

10 to 30  
LED  
≤ 10  
200

500  
0.6  
0.4  
1.5  
50

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram	Housing material
		1 unit	kg	p. 10/89 No.	
1	3RG46 23-0AN01		0.127	11	Brass, chr.-plated
	3RG46 23-0GN01		0.127	13	chr.-plated
	3RG46 23-0AN61		0.127	11	Stainless steel
	3RG46 23-0GN61		0.127	13	Stainless steel
2	3RG46 23-3AN01		0.045	2	Brass, chr.-plated
	3RG46 23-3GN01		0.045	4	chr.-plated
	3RG46 23-3AN61		0.045	2	Stainless steel
	3RG46 23-3GN61		0.045	4	Stainless steel
	3RG46 23-3AN05		0.045	2	Brass, Teflonized
	3RG46 23-3GN05		0.045	4	Teflonized
-	-	-	-	-	-
-	-	-	-	-	-

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG46 13-1AB01		0.1	11
	3RG46 13-0GB00		0.1	13
	-		-	-
4	3RG46 13-3AB01		0.06	2
	3RG46 13-3GB01		0.06	4
	-		-	-
	-		-	-
	-		-	-
5	3RG46 13-2AB00		0.065	2
	3RG46 13-2GB01		0.065	4

With cable, NO function, pnp  
2 m, PUR NO function, npn  
3 x 0.34 mm<sup>2</sup> NO function, pnp  
NO function, npn

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

With M 18 plug- NO function, pnp  
in connection NO function, npn  
Type P

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

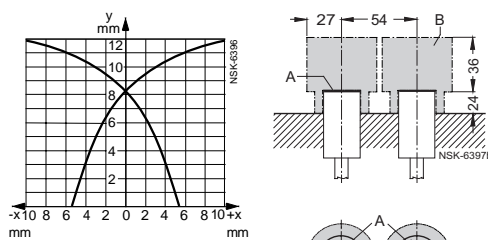
### Protective measures Response characteristics Mounting instructions

#### Delivery

► Preferred type.

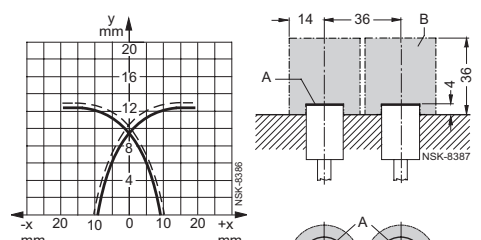
#### Protective measures

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



Ascertained with standard target

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Ascertained with standard target

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# 3RG4 BERO Inductive Proximity Switches

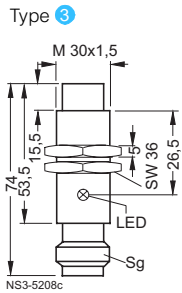
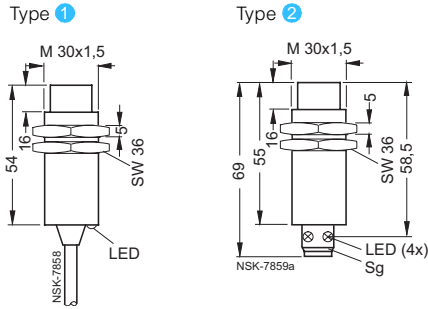
## Rated Operating Distance 15 mm

### Selection and ordering data

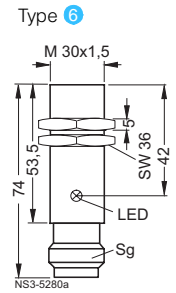
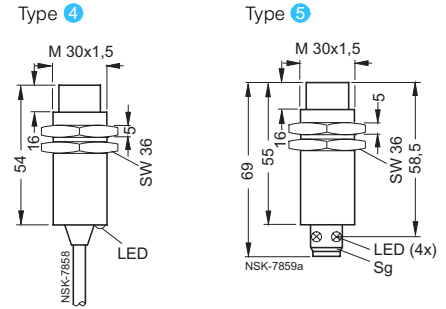
<b>Rated operating distance <math>s_n</math></b>	<b>15 mm</b>
<b>Form</b>	<b>M 30</b>
<b>Installation in metal</b>	<b>Non-embeddable</b>

Dimensions

<b>15 mm</b>
<b>M 30</b>
<b>Non-embeddable</b>



<b>15 mm</b>
<b>M 30</b>
<b>Non-embeddable</b>



Sg = plug thread

<b>Number of cores</b>	<b>2 cores</b>
<b>Group</b>	<b>Normal requirements (PLC)</b>

Housing material

<b>Operational voltage</b>	AC/DC V	-/15 to 34
<b>Indicator</b>		LED
<b>Current input (no load)</b>		-/1.5
<b>AC 230 V/DC 24 V</b>	mA	25
<b>Loading capacity continuous</b>	mA	-
<b>20 ms</b>	mA	2
<b>Minimum load current</b>	mA	
<b>Operating frequency</b>	AC/DC Hz	-/180
<b>Repeat accuracy</b>	mm	0.4
<b>Response time</b>	ms	2
<b>Build-up time</b>	ms	3.5
<b>Availability delay</b>	ms	40

Protective measures

<b>2 cores</b>
<b>Normal requirements (PLC)</b>

Housing material

<b>Operational voltage</b>	AC/DC V	20 to 265/20 to 320
<b>Indicator</b>		LED
<b>Current input (no load)</b>		1.5/1.0
<b>AC 230 V/DC 24 V</b>	mA	300
<b>Loading capacity continuous</b>	mA	1800 <sup>1)</sup>
<b>Minimum load current</b>	mA	5
<b>Operating frequency</b>	AC/DC Hz	25/220
<b>Repeat accuracy</b>	mm	0.4
<b>Response time</b>	ms	1.2
<b>Build-up time</b>	ms	3.0
<b>Availability delay</b>	ms	100

Protective measures

<b>2 cores</b>
<b>High electrical requirements (AC/DC)</b>

Housing material

<b>Operational voltage</b>	AC/DC V	20 to 265/20 to 320
<b>Indicator</b>		LED
<b>Current input (no load)</b>		1.5/1.0
<b>AC 230 V/DC 24 V</b>	mA	300
<b>Loading capacity continuous</b>	mA	1800 <sup>1)</sup>
<b>Minimum load current</b>	mA	5
<b>Operating frequency</b>	AC/DC Hz	25/220
<b>Repeat accuracy</b>	mm	0.4
<b>Response time</b>	ms	1.2
<b>Build-up time</b>	ms	3.0
<b>Availability delay</b>	ms	100

Protective measures

With cable, 2 m, PUR 2 x 0.25 mm <sup>2</sup>	NO function NC function	<b>1</b>	<b>3RG40 24-0JB00</b>	0.18	15
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With M 12 plug-in connection: Type E, F	NO function NC function	<b>2</b>	<b>3RG40 24-3JB00</b>	0.16	6
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With M 18 plug-in connection type P	NO function	<b>3</b>	<b>3RG40 24-2JB00</b>	0.13	6
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1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

<b>4</b>	<b>3RG40 24-0KB00</b> <b>3RG40 24-0KA00</b>	0.13 0.13	16 17
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<b>5</b>	<b>3RG40 24-3KB00</b> <b>3RG40 24-3KA00</b>	0.11 0.11	8 9
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<b>6</b>	<b>3RG40 24-2KB00</b>	0.09	8
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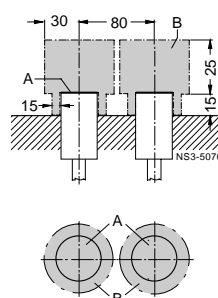
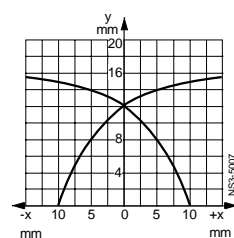
### Protective measures Response characteristics Mounting instructions

#### Delivery

► Preferred type.

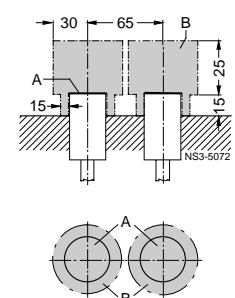
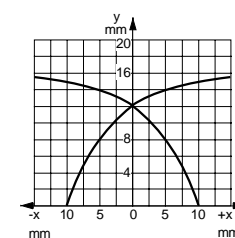
#### Protective measures

- 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 15 mm

### Selection and ordering data

Rated operating distance  $s_n$

Form

Installation in metal

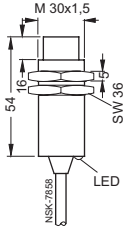
Dimensions

15 mm

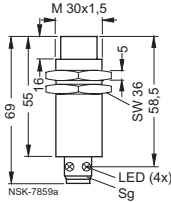
M 30

Non-embeddable

Type 1



Type 2

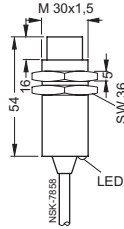


15 mm

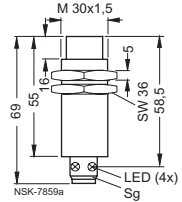
M 30

Non-embeddable

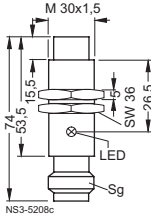
Type 4



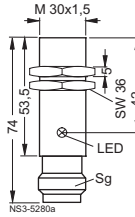
Type 5



Type 3



Type 6



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

15 to 34  
LED  
 $\leq 17$  (24 V);  $\leq 30$  (34 V)  
200 ( $\leq 50$  °C); 150 ( $\leq 85$  °C)

1 2 3 4 5 6

3 cores

High electrical requirements

Brass, nickel-plated

10 to 65  
LED  
 $\leq 10$   
300

300  
0.4  
1  
2  
40

1 2 3 4 5 6

With cable, 2 m, PUR  
3 x 0.25 mm<sup>2</sup>  
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

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 24-0AG01		0.185	11
	3RG40 24-0AF01		0.185	12
	3RG40 24-0GB00		0.185	13
	3RG40 24-0GA00		0.185	14
2	3RG40 24-3AG01		0.165	2
	3RG40 24-3AF01		0.165	3
	3RG40 24-3GB00		0.165	4
3	3RG40 24-2AG01		0.14	2
	3RG40 24-2AF01		0.14	3

Type	Order No.	Price 1 unit	Weight approx. kg	Wiring diagram p. 10/89 No.
4	3RG40 24-0AB00		0.13	11
	3RG40 24-0AA00		0.13	12
	-			
	-			
5	3RG40 24-3AB00		0.11	2
	3RG40 24-3AA00		0.11	3
	-			
6	3RG40 24-2AB00		0.08	2
	3RG40 24-2AA00		0.08	3

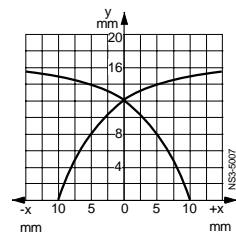
### Protective measures Response characteristics Mounting instructions

#### Delivery

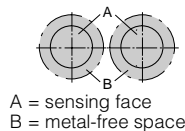
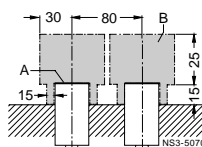
► Preferred type.

#### Protective measures

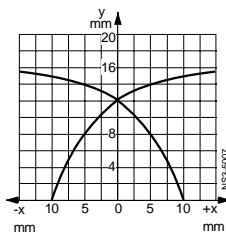
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



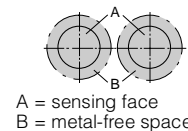
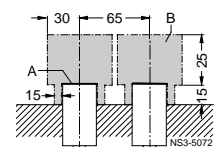
Ascertained with standard target



A = sensing face  
B = metal-free space



Ascertained with standard target



A = sensing face  
B = metal-free space

# 3RG4 BERO Inductive Proximity Switches

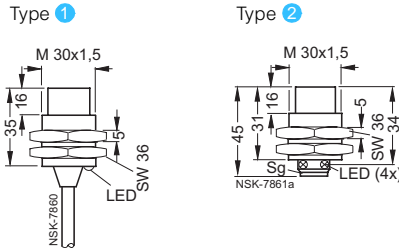
## Rated Operating Distance 15 mm

### Selection and ordering data

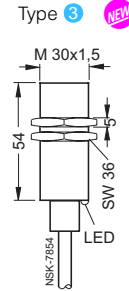
<b>Rated operating distance <math>s_n</math></b>	<b>15 mm</b>
<b>Form</b>	<b>M 30</b>
<b>Installation in metal</b>	<b>Non-embeddable</b>

Dimensions

<b>15 mm</b>
<b>M 30</b>
<b>Non-embeddable</b>



<b>15 mm</b>
<b>M 30</b>
<b>Non-embeddable</b>



Sg = plug thread

Number of cores	<b>3 cores</b>
Group	Normal requirements
Housing material	Brass, nickel-plated
Operational voltage	AC/DC V
Indicator	LED
Current input (no load)	mA
AC 230 V/DC 24 V	–/≤ 17 (24 V); ≤ 30 (34 V)
Loading capacity continuous	mA
20 ms	≤ 200 (≤ 50 °C); 150 (≤ 85 °C)
Minimum load current	mA
–	–
Operating frequency	AC/DC Hz
–/300	–/300
Repeat accuracy	mm
0.4	0.4
Response time	ms
1	1
Build-up time	ms
2	2
Availability delay	ms
40	40
Protective measures	1 2 3 4 5 6

<b>2 cores</b>	<b>3 cores</b>
Extreme environmental	conditions (IP 68)
Moulded plastic	Moulded plastic
20 to 265/20 to 250	–/10 to 65
LED	LED
1.5/1.0	–/≤ 10
300	300
1800 1)	–
5	–
25/220	300
0.4	0.4
1.2	1
3	2
100	40
Protective measures	1 2 3 4 5 6

Number of cores	
With cable, 2 m, PVC	NO function
2 x 0.25 mm <sup>2</sup>	
Number of cores	
With cable, 2 m, PUR	NO function, pnp
3 x 0.25 mm <sup>2</sup>	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
With cable, 2 m, PVC	NO function, pnp
3 x 0.25 mm <sup>2</sup>	

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
<b>2 cores</b>				
3	<b>3RG40 24-0KB30</b>			16
<b>3 cores</b>				
1	<b>3RG40 24-0AG33</b>		0.21	11
	<b>3RG40 24-0AF33</b>		0.21	12
	<b>3RG40 24-0GB33</b>		0.21	13
	<b>3RG40 24-0GA33</b>		0.21	14
2	<b>3RG40 24-3AG33</b>		0.12	2
	<b>3RG40 24-3AF33</b>		0.12	3
	<b>3RG40 24-3GB33</b>		0.12	4
	<b>3RG40 24-3GA33</b>		0.12	5

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
<b>2 cores</b>				
3	<b>3RG40 24-0KB30</b>			16
<b>3 cores</b>				
3	<b>3RG40 24-0AB30</b>			11

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

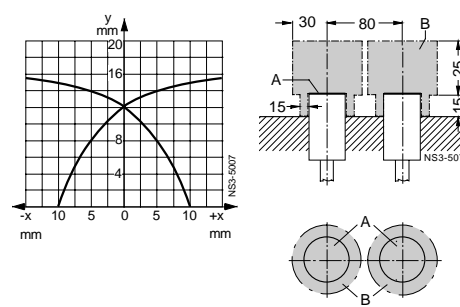
### Protective measures Response characteristics Mounting instructions

#### Delivery

▶ Preferred type.

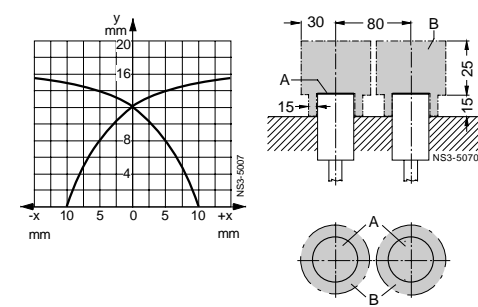
#### Protective measures

- Not available
- 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



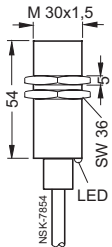
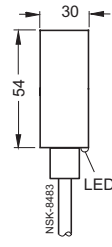
Ascertained with standard target

A = sensing face  
B = metal-free space

# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 15 mm

### Selection and ordering data

Rated operating distance $s_n$	15 mm	15 mm																																																												
Form	M 30	Ø 30																																																												
Installation in metal	Non-embeddable	Non-embeddable																																																												
Dimensions	Type 1 	Type 2 																																																												
Number of cores	<b>3 cores</b>	<b>3 cores</b>																																																												
Group	Extreme environmental conditions (IP 68)	Extreme environmental conditions (IP 68)																																																												
Housing material	Moulded plastic or brass, nickel-plated	Moulded plastic																																																												
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	300																																																												
Repeat accuracy	mm	0.4																																																												
Response time	ms	1																																																												
Build-up time	ms	2																																																												
Availability delay	ms	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 <sup>2</sup>	<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><b>3RG40 24-0AG30</b></td> <td></td> <td>0.185</td> <td>11</td> </tr> <tr> <td></td> <td><b>3RG40 24-0AF30</b></td> <td></td> <td>0.185</td> <td>12</td> </tr> <tr> <td></td> <td><b>3RG40 24-0GB30</b></td> <td></td> <td>0.185</td> <td>13</td> </tr> <tr> <td></td> <td><b>3RG40 24-0GA30</b></td> <td></td> <td>0.185</td> <td>14</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	1	<b>3RG40 24-0AG30</b>		0.185	11		<b>3RG40 24-0AF30</b>		0.185	12		<b>3RG40 24-0GB30</b>		0.185	13		<b>3RG40 24-0GA30</b>		0.185	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>2</td> <td><b>3RG40 64-0AG30</b></td> <td></td> <td>0.18</td> <td>11</td> </tr> <tr> <td></td> <td><b>3RG40 64-0AF30</b></td> <td></td> <td>0.18</td> <td>12</td> </tr> <tr> <td></td> <td><b>3RG40 64-0GB30</b></td> <td></td> <td>0.18</td> <td>13</td> </tr> <tr> <td></td> <td><b>3RG40 64-0GA30</b></td> <td></td> <td>0.18</td> <td>14</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	p. 10/89 No.	2	<b>3RG40 64-0AG30</b>		0.18	11		<b>3RG40 64-0AF30</b>		0.18	12		<b>3RG40 64-0GB30</b>		0.18	13		<b>3RG40 64-0GA30</b>		0.18	14
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### Protective measures

### Response characteristics

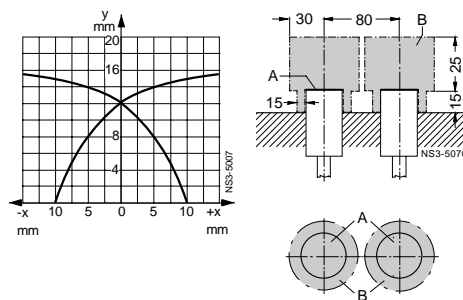
### Mounting instructions

#### 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

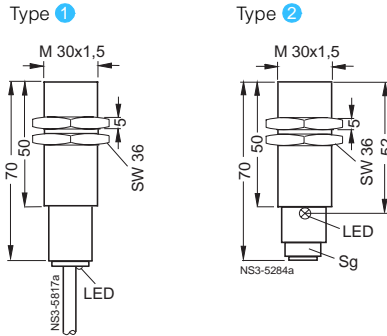
# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 15 mm

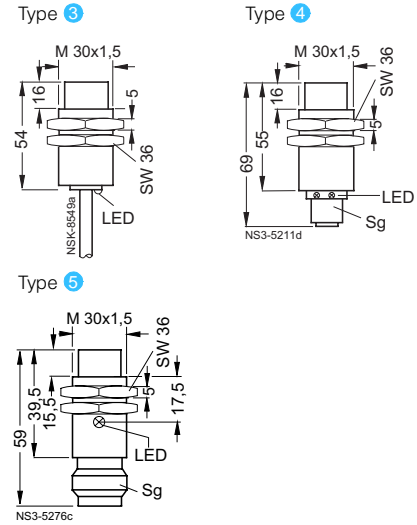
### Selection and ordering data

<b>Rated operating distance <math>s_n</math></b>	<b>15 mm</b>
<b>Form</b>	<b>M 30</b>
<b>Installation in metal</b>	<b>Embeddable</b>

Dimensions



<b>Rated operating distance <math>s_n</math></b>	<b>15 mm</b>
<b>Form</b>	<b>M 30</b>
<b>Installation in metal</b>	<b>Non-embeddable</b>



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	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms

<b>3 cores</b>
Increased operating distance

Housing material	Brass, nickel-plated
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	$\leq 17$ (24 V); $\leq 30$ (34 V)
Loading capacity	200 ( $\leq 50$ °C); 150 ( $\leq 85$ °C)

<b>4 cores</b>
Normal requirements

Housing material	Brass, nickel-plated
Operational voltage	15 to 34
Indicator	LED
Current input (no load)	$\leq 25$ (24 V); $\leq 40$ (34 V)
Loading capacity	200 ( $\leq 50$ °C); 150 ( $\leq 85$ °C)

Protective measures

1 2 3 4 5 6

With cable, 2 m, PUR 3 x 0.25 mm <sup>2</sup>	NO function, pnp
With cable, 2 m, PUR 4 x 0.14 mm <sup>2</sup>	NO function and NC function, pnp
With M 12 plug-in connection: Type E, F	NO function, pnp
Type F	NO function and NC function, pnp
With M 18 plug-in connection type P	NO function and NC function, pnp

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG41 14-0AG01		0.10	11
2	3RG41 14-3AG01		0.15	2

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
3	3RG40 24-0CD00		0.15	10
4	3RG40 24-3CD00		0.15	1
5	3RG40 24-2CD00		0.15	1

### Protective measures

### Response characteristics

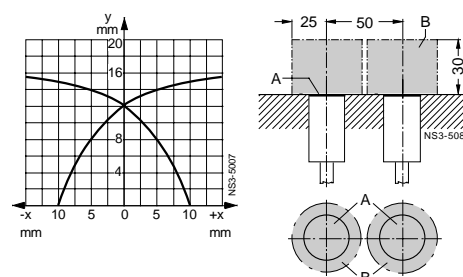
### Mounting instructions

#### Delivery

► Preferred type.

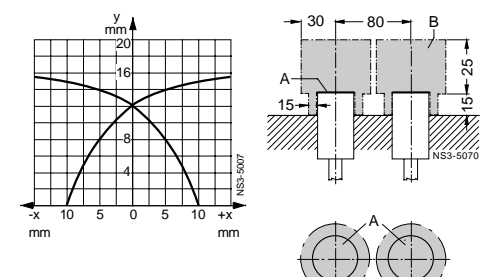
#### Protective measures

- 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 15 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

Number of cores  
Group

Housing material

Operational voltage AC/DC V

Indicator

Current input (no load) mA

AC 230 V/DC 24 V

Loading capacity continuous mA

20 ms

Minimum load current mA

Operating frequency AC/DC Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function or NC function, programmable

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function

With cable, 2 m, PUR 2 x 0.25 mm<sup>2</sup> NO function  
Sensor in longitudinal axis NC function

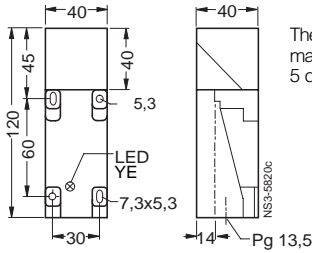
With cable, 2 m, PUR 2 x 0.25 mm<sup>2</sup> NO function  
Sensor 90° to longitudinal axis NC function

**15 mm**

**40 mm x 40 mm block**

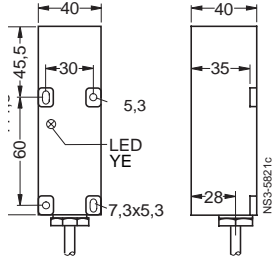
**Embeddable**

Type 1



The sensing face may be set to 5 different planes.

Type 2



**2 cores**

High electrical requirements (AC/DC)  
Extreme environmental conditions (IP 68)

Moulded plastic

20 to 265/20 to 320

LED

≤ 1.5/1.0

300

1.5

1800'

5

25/150

0.75

1.5

4.5

100

□□□□□□

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

High electrical requirements (AC/DC)

1 ▶	<b>3RG40 31-6KD00</b>		0.23	24
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	-			
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Extreme environmental conditions (IP 68)

2	<b>3RG40 30-0KB00</b>		0.40	16
	<b>3RG40 30-0KA00</b>		0.40	17

2	<b>3RG40 30-0KB01</b>		0.40	16
	<b>3RG40 30-0KA01</b>		0.40	17

**2 cores**

Normal requirements (PLC)

Moulded plastic

-/15 to 34

LED

≤ 1.5

25

-

2

-/100

0.75

1

5

100

□□□□□□

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

Normal requirements (PLC)

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

1 ▶	<b>3RG40 31-6JB00</b>		0.25	22
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1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

### Protective measures

### Response characteristics

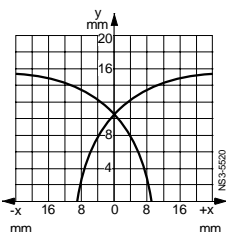
### Mounting instructions

#### Delivery

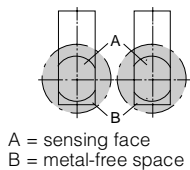
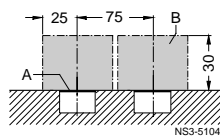
▶ Preferred type.

#### Protective measures

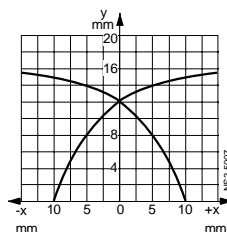
- Not available
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- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



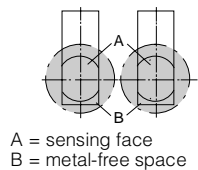
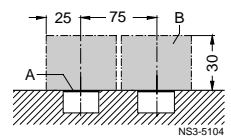
Ascertained with standard target



A = sensing face  
B = metal-free space



Ascertained with standard target



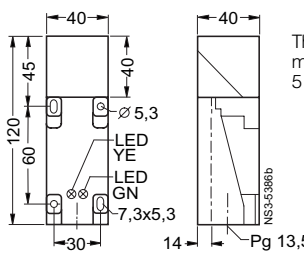
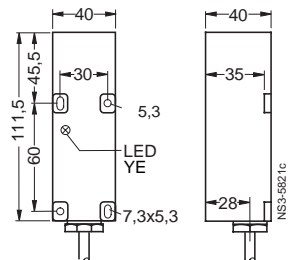
A = sensing face  
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# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 15 mm

### Selection and ordering data

Rated operating distance $s_n$	15 mm																																																																							
Form	40 mm x 40 mm block																																																																							
Installation in metal	Embeddable																																																																							
Dimensions	Type 1  The sensing face may be set to 5 different planes.	Type 2 																																																																						
Delivered with	Pg 13.5 = Pg 13.5 thread for moulded-plastic joint, 3SX6 274 connector plug or 3RX1 566 adapter																																																																							
Number of cores	<b>3 cores</b>																																																																							
Group	Normal requirements																																																																							
Housing material	Moulded plastic																																																																							
Operational voltage	DC V	15 to 34																																																																						
Indicator		2 LED																																																																						
Current input (no load)	mA	≤ 25 (24 V); ≤ 40 (34 V)																																																																						
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With terminal compartment for cables of 0.5 to 2.5 mm <sup>2</sup>	NO function or NC function, pnp programmable																																																																							
With cable, 2 m, PUR 3 x 0.25 mm <sup>2</sup> Sensor in longitudinal axis	NO function, pnp NC function, pnp																																																																							
With cable, 2 m, PUR 3 x 0.25 mm <sup>2</sup> Sensor 90° to longitudinal axis	NO function, pnp																																																																							

### Protective measures

#### Response characteristics

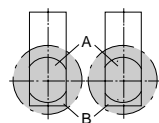
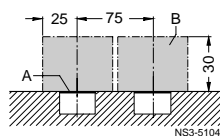
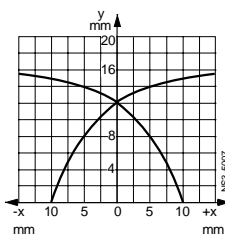
#### Mounting instructions

#### Delivery

► Preferred type.

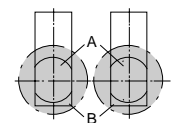
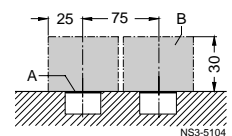
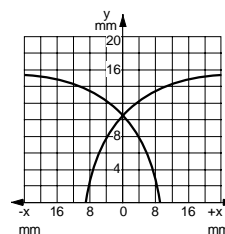
#### Protective measures

- 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



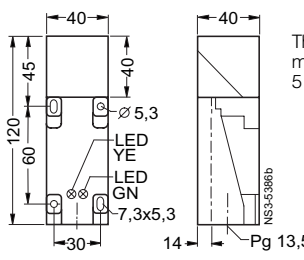
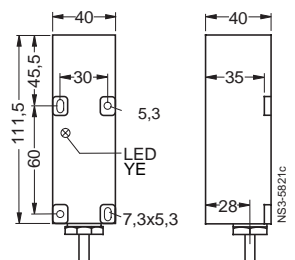
Ascertained with standard target

A = sensing face  
B = metal-free space

# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 15 mm

### Selection and ordering data

Rated operating distance $s_n$	15 mm	15 mm																																													
Form	40 mm × 40 mm block	40 mm × 40 mm block																																													
Installation in metal	Embeddable	Embeddable																																													
Dimensions	Type 1  <p>The sensing face may be set to 5 different planes.</p>	Type 2 																																													
Delivered with	Pg 13.5 = Pg 13.5 thread for moulded-plastic joint, 3SX6 274 connector plug or 3RX1 566 adapter																																														
Number of cores	4 cores	4 cores																																													
Group	Normal requirements	Extreme environmental conditions (IP 68)																																													
Housing material	Moulded plastic	Moulded plastic																																													
Operational voltage	DC V	15 to 34																																													
Indicator	2 LED	LED																																													
Current input (no load)	mA	≤ 30 (24 V); ≤ 50 (34 V)																																													
Loading capacity	mA	200 (≤ 50 °C); 150 (≤ 85 °C)																																													
Operating frequency	Hz	100																																													
Repeat accuracy	mm	0.75																																													
Response time	ms	1																																													
Build-up time	ms	5																																													
Availability delay	ms	100																																													
Protective measures	1 2 3 4 5 6	1 2 3 4 5 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> <tr> <td></td> <td></td> <td>1 unit</td> <td>kg</td> <td>Diagram p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>1</td> <td><b>3RG40 31-6CD00</b></td> <td>-</td> <td>0.23</td> <td>18</td> </tr> </tbody> </table>	Type	Order No.	Price	Weight approx.	Wiring diagram			1 unit	kg	Diagram p. 10/89 No.	-	-	-	-	-	1	<b>3RG40 31-6CD00</b>	-	0.23	18	<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>Diagram p. 10/89 No.</td> </tr> </thead> <tbody> <tr> <td>2</td> <td><b>3RG40 30-0CD00</b></td> <td>-</td> <td>0.36</td> <td>10</td> </tr> <tr> <td>3</td> <td><b>3RG40 30-0CD01</b></td> <td>-</td> <td>0.36</td> <td>10</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	Diagram p. 10/89 No.	2	<b>3RG40 30-0CD00</b>	-	0.36	10	3	<b>3RG40 30-0CD01</b>	-	0.36	10	-	-	-	-	-
Type	Order No.	Price	Weight approx.	Wiring diagram																																											
		1 unit	kg	Diagram p. 10/89 No.																																											
-	-	-	-	-																																											
1	<b>3RG40 31-6CD00</b>	-	0.23	18																																											
Type	Order No.	Price	Weight approx.	Wiring diagram																																											
		1 unit	kg	Diagram p. 10/89 No.																																											
2	<b>3RG40 30-0CD00</b>	-	0.36	10																																											
3	<b>3RG40 30-0CD01</b>	-	0.36	10																																											
-	-	-	-	-																																											
With cable, 2 m, PUR 4 x 0.14 mm <sup>2</sup> Sensor in longitudinal axis	NO function and NC function, pnp	-	-	-																																											
With cable, 2 m, PUR 4 x 0.14 mm <sup>2</sup> Sensor 90° to longitudinal axis	NO function and NC function, pnp	-	-	-																																											
With terminal compartment for cables of 0.5 to 2.5 mm <sup>2</sup>	NO function and NC function, pnp	1	0.23	18																																											

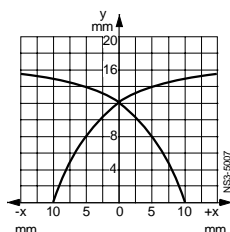
### Protective measures Response characteristics Mounting instructions

#### Delivery

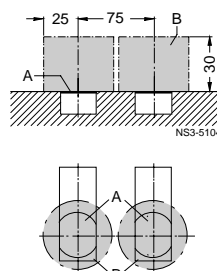
► Preferred type.

#### Protective measures

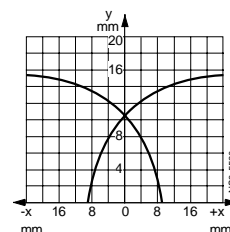
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



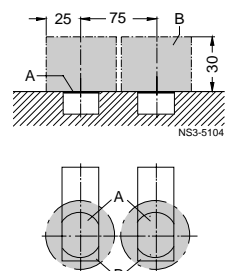
Ascertained with standard target



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 15 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

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

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup>

With M 12 plug-in connection type E, F

NO function, npn

NO function, npn

NO function, npn

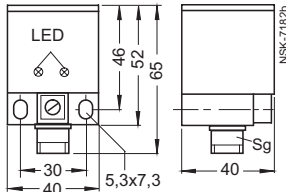
NO function, npn

**15 mm**

**40 mm × 40 mm block**

**Embeddable**

Type 1



**3 cores**

U BERO (without reduction factor)<sup>1)</sup>

Moulded plastic

10 to 30

2 LED

≤ 13

200

250

0.3

2.5

2.5

8

1 2 3 4 5 6 7

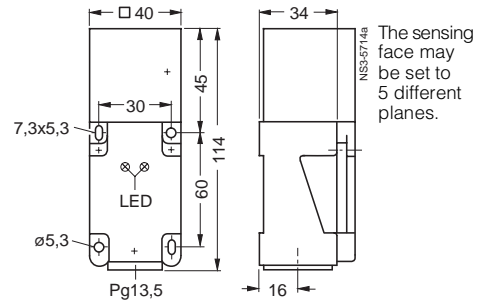
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 38-3AN01		0.18	2
	3RG46 38-3GN01		0.18	4

**15 mm**

**40 mm × 40 mm block**

**Embeddable**

Type 2



**4 cores**

U BERO (without reduction factor)<sup>1)</sup>

Moulded plastic

10 to 30

2 LED

≤ 15

200

250

0.3

2.5

2.5

8

1 2 3 4 5 6 7

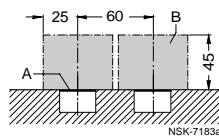
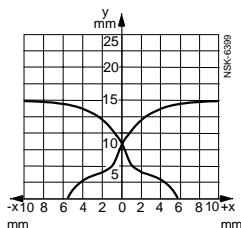
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	3RG46 34-6AN01		0.22	19
	3RG46 34-6GN01		0.22	21

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

### Protective measures Response characteristics Mounting instructions

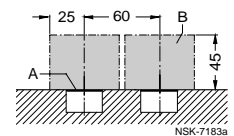
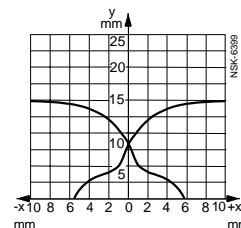
#### Protective measures

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



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 15 and 20 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

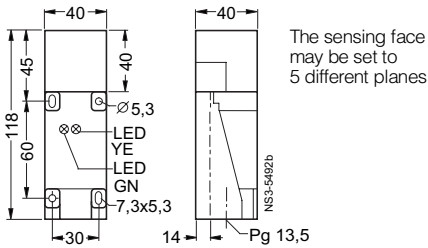
**Dimensions**

**15 mm**

**40 mm x 40 mm block**

**Embeddable**

Type 1



Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter  
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**

**4 cores**  
**Automotive industry (Mercedes Benz)<sup>1)</sup>**

**Moulded plastic**

15 to 34  
2 LED  
≤ 30 (24 V); ≤ 50 (34 V)  
200 (≤ 50 °C); 150 (≤ 85 °C)

100  
0.75  
1  
5  
100

1 2 3 4 5 6

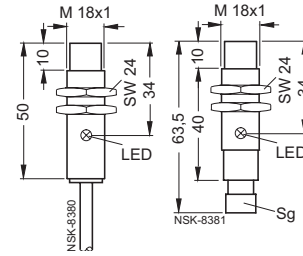
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
-	-			
-	-			
-	-			
-	-			
1	3RG40 34-6CD00		0.24	25

**20 mm**

**M 18**

**Non-embeddable**

Type 2 Type 3



**3 cores**  
**Increased operating distance**

**Brass**

10 to 30  
LED  
≤ 10  
200

200  
1  
0.9  
1.4  
100

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	3RG46 23-0AB02 3RG46 23-0GB02		0.12 0.12	11 13
3	3RG46 23-3AB02 3RG46 23-3GB02		0.06 0.06	2 4
4	3RG46 23-2AB02 3RG46 23-2GB02		0.07 0.07	2 4
-	-			

1) With sensor screwed on,  
more stability.

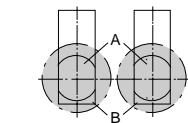
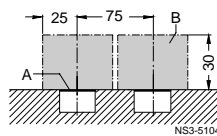
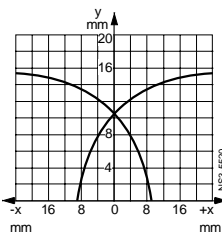
### Protective measures Response characteristics Mounting instructions

#### Delivery

▶ Preferred type.

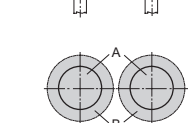
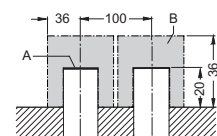
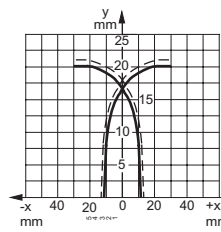
#### Protective measures

- 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

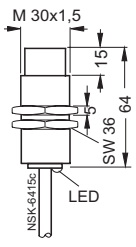
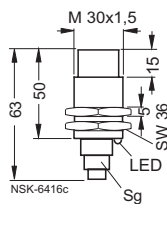
# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 20 mm



### Selection and ordering data

<b>Rated operating distance <math>s_n</math></b>	<b>20 mm</b>
<b>Form</b>	<b>M 30</b>
<b>Installation in metal</b>	<b>Non-embeddable</b>

<b>Dimensions</b>	Type ①  Type ② 
-------------------	---

Sg = plug thread

Number of cores	<b>3 cores</b>
Group	U BERO (without reduction factor) <sup>1)</sup>

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	1500
Repeat accuracy	mm	0.4
Response time	ms	0.23
Build-up time	ms	0.11
Availability delay	ms	8

Protective measures: ①②③④⑤⑥⑦

Type	Order No.	Price	Weight approx.	Wiring diagram	Housing material
		1 unit	kg	p. 10/89 No.	
①	<b>3RG46 24-0AN01</b>		0.18	11	Brass, chromium-plated
	<b>3RG46 24-0GN01</b>		0.18	13	Brass, chromium-plated
	<b>3RG46 24-0AN61</b>		0.18	11	Stainless steel
	<b>3RG46 24-0GN61</b>		0.18	13	Stainless steel
②	<b>3RG46 24-3AN01</b>		0.1	2	Brass, chromium-plated
	<b>3RG46 24-3GN01</b>		0.1	4	Brass, chromium-plated
	<b>3RG46 24-3AN61</b>		0.1	2	Stainless steel
	<b>3RG46 24-3GN61</b>		0.1	4	Stainless steel
	<b>3RG46 24-3AN05</b>		0.1	2	Brass, Teflonized
	<b>3RG46 24-3GN05</b>		0.1	4	Brass, Teflonized

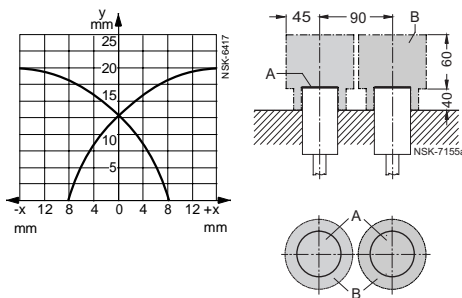
With cable, 2 m, PUR 3 x 0.34 mm<sup>2</sup> NO function, pnp NO function, npn NO function, pnp NO function, npn

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 isolated



Ascertained with standard target A = sensing face B = metal-free space

# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 20 mm

### Selection and ordering data

Rated operating distance  $s_n$

Form

Installation in metal

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

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 res./ind. mA

20 ms

Minimum load current mA

Operating frequency AC/DC Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function or NC function, programmable

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup> NO function or NC function, pnp programmable

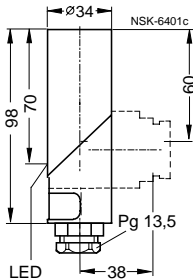
NO function

20 mm

Ø 34 mm

Non-embeddable

Type 1 2



2 cores

High electrical requirements (AC/DC)

3 cores

Normal requirements (PLC)

Moulded plastic

1 20 to 250/20 to 250 LED

2 -/10 to 36 LED

2.5/0.8

-/5

250/100

200/-

2200<sup>1)</sup>

-

5

-

20/70

-/350

0.75

0.75

1

1

15

15

20

20

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.

High electrical requirements (AC/DC)<sup>3)</sup>

1 3RG46 26-6KD00 0.16 24

Normal requirements<sup>3)</sup>

2 3RG46 26-6AD00 0.16 27

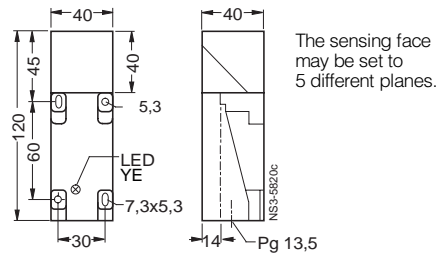
-

20 mm

40 mm x 40 mm block

Non-embeddable

Type 3 4



2 cores

High electrical requirements (AC/DC)

Normal requirements (PLC)

Moulded plastic

3 20 to 265/20 to 320 LED

4 -/15 to 34 LED

1.5/1

-/≤ 5

300

25

1800<sup>2)</sup>

-

5

2

25/100

-/75

1.0

0.75

2

2

7

10

20

100

1 2 3 4 5 6

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

High electrical requirements (AC/DC)

3 3RG40 41-6KD00 0.23 24

Normal requirements (PLC)

4 3RG40 41-6JB00 0.25 22

1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.5 Hz)

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

3) Fastening clamp included in the scope of supply.

### Protective measures Response characteristics Mounting instructions

#### Delivery

► Preferred type.

#### Protective measures

□ Not available

1 Spurious switching signal suppression

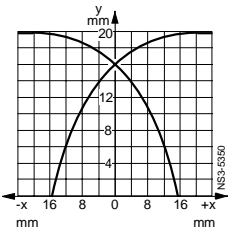
2 Short-circuit and overload protection

3 Polarity reversal protection

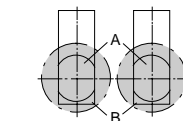
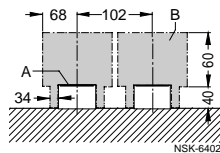
4 Wire-break protection

5 Inductive interference protection

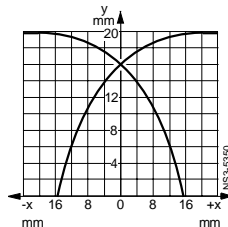
6 Radio interference protection



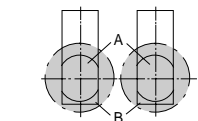
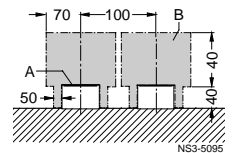
Ascertained with standard target



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 20 mm

### Selection and ordering data

Rated operating distance  $s_n$

Form

Installation in metal

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

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

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup>

With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup>

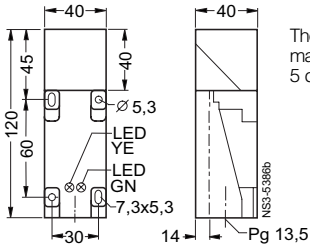
With terminal compartment for cables of 0.5 to 2.5 mm<sup>2</sup>

20 mm

40 mm × 40 mm block

Non-embeddable

Type 1 2



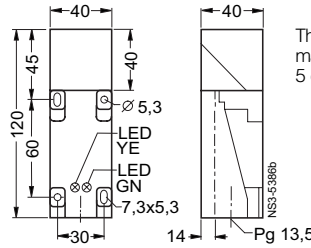
The sensing face may be set to 5 different planes.

20 mm

40 mm × 40 mm block

Non-embeddable

Type 3



The sensing face may be set to 5 different planes.

3 cores

Normal requirements

High electrical requirements

Moulded plastic

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
1	3RG40 41-6AG01		0.23	19
2	3RG40 41-6AF01		0.23	20
	3RG40 41-6GB00		0.23	21

1 2 3 4 5 6

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

Normal requirements

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
1	3RG40 41-6AG01		0.23	19
	3RG40 41-6AF01		0.23	20
	3RG40 41-6GB00		0.23	21

High electrical requirements

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
2	3RG40 41-6AD00		0.23	23

4 cores

Normal requirements

Moulded plastic

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

1 2 3 4 5 6

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

Normal requirements

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
3	3RG40 41-6CD00		0.23	18

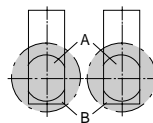
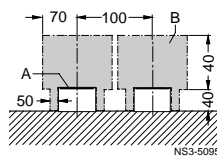
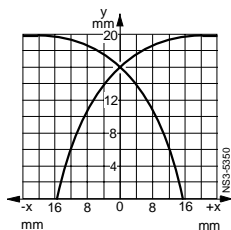
### Protective measures Response characteristics Mounting instructions

Delivery

► Preferred type.

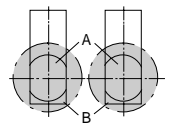
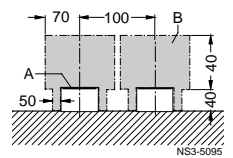
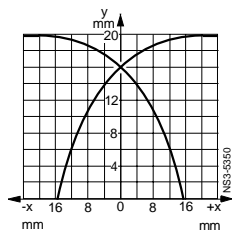
Protective measures

- 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



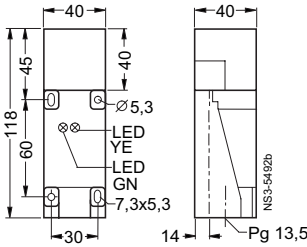
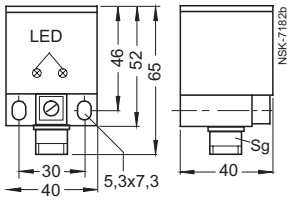
Ascertained with standard target

A = sensing face  
B = metal-free space

# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 20 mm

### Selection and ordering data

Rated operating distance $s_n$	20 mm	20 mm
Form	40 mm × 40 mm block	40 mm × 40 mm block
Installation in metal	Embeddable	Embeddable
Dimensions	Type 1 	Type 2 
Delivered with Pg 13.5 = Pg 13.5 thread for moulded-plastic joint, 3SX6 274 connector plug or 3RX1 566 adapter		
Sg = plug thread		
Number of cores	<b>4 cores</b> Increased operating distance <sup>1)</sup>	<b>3 cores</b> Increased operating distance
Housing material	Moulded plastic	Moulded plastic
Operational voltage	DC V 15 to 34	10 to 30
Indicator	2 LED	2 LED
Current input (no load)	mA ≤ 30 (24 V); ≤ 50 (34 V)	9.5
Loading capacity	mA 200 (≤ 50 °C); 150 (≤ 85 °C)	200
Operating frequency	Hz 30	150
Repeat accuracy	mm 1.5	≤ 2%
Response time	ms 5	2
Build-up time	ms 10	2
Availability delay	ms 100	≤ 8
Protective measures	1 2 3 4 5 6	1 2 3 4 5 6 7
With terminal compartment for cables of 0.5 to 2.5 mm <sup>2</sup>	NO function and NC function, pnp	
With M 12 plug-in connection type E, F	NO function, pnp NO function, npn	

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	<b>3RG41 34-6CD01</b>		0.23	18
	-			
	-			

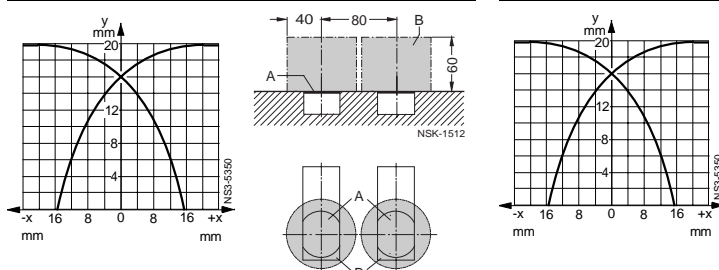
  

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
	-			
2	<b>3RG46 38-3AG01</b>		0.18	2
	<b>3RG46 38-3GB01</b>		0.18	4

1) With sensor screwed on, more stability.

### 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 isolated



Ascertained with standard target

A = sensing face  
B = metal-free space

Ascertained with standard target



# 3RG4 BERO Inductive Proximity Switches

## Rated Operating Distance 22 and 25 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter  
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

With cable, 2 m, PUR  
3 x 0.34 mm<sup>2</sup> NO function, pnp  
NO function, npn

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

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

With terminal compart-  
ment for cables of  
0.5 to 2.5 mm<sup>2</sup> NO function or  
NC function, pnp  
programmable

With terminal compart-  
ment for cables of  
0.5 to 2.5 mm<sup>2</sup> NO function or  
NC function, pnp  
programmable

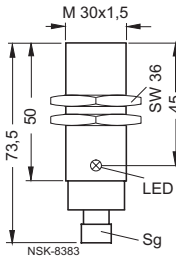
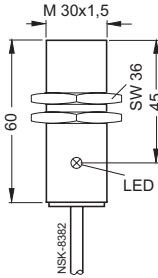
**22 mm**

**M 30**

**Embeddable**

Type 1

Type 2



**3 cores**

Increased operating distance

Brass

10 to 30  
LED  
≤ 10  
200

100  
1.1  
0.9  
1.4  
200

1 2 3 4 5 6

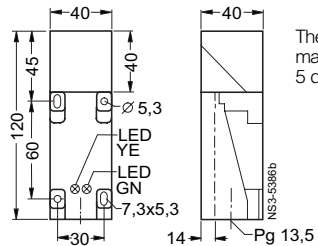
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	3RG46 14-0AB00		0.215	11
	3RG46 14-0GB00		0.215	13
2	3RG46 14-3AB00		0.155	2
	3RG46 14-3GB00		0.155	4
	3RG46 14-2AB00		0.16	2
	3RG46 14-2GB00		0.16	4
	-			

**25 mm**

**40 mm x 40 mm block**

**Semi-embeddable** (see mounting instructions)

Type 3



The sensing face may be set to 5 different planes.

**3 cores**

Increased operating distance

Moulded plastic

10 to 65  
2 LED  
≤ 8  
500

80  
1.5  
2  
8  
300

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
-	-			
-	-			
-	-			
3	3RG41 31-6AD00		0.23	23

**Automotive industry (Opel)**  
Extremely high EMC

3 3RG41 31-6AD04 0.23 23

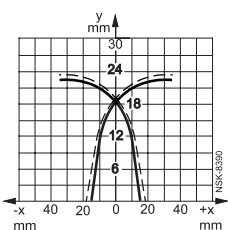
### Protective measures Response characteristics Mounting instructions

**Delivery**

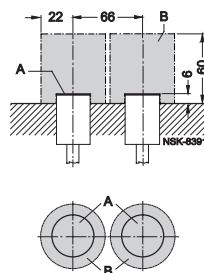
► Preferred type.

**Protective measures**

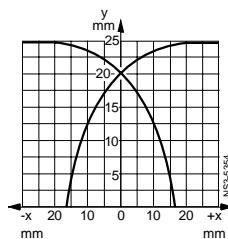
- Not available
- 1 Spurious switching signal suppression
- 2 Short-circuit and overload protection
- 3 Polarity reversal protection
- 4 Wire-break protection
- 5 Inductive interference protection
- 6 Radio interference protection



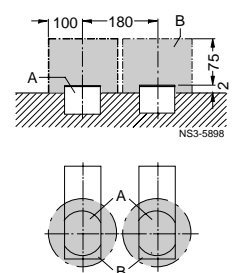
Ascertained with standard target



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 25 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

Sg = plug thread

Number of cores

Group

Housing material

Operational voltage DC V

Indicator

Current input (no load) mA

Loading capacity continuous pnp/npn mA

Operating frequency Hz

Repeat accuracy mm

Response time ms

Build-up time ms

Availability delay ms

Protective measures

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

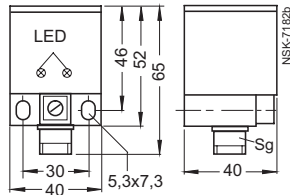
With terminal compartment for cables of NO function, pnp  
NO function, npn  
0.5 to 2.5 mm<sup>2</sup>

**25 mm**

**40 mm × 40 mm block**

**Non-embeddable**

Type 1



**3 cores**

U BERO (without reduction factor)<sup>1)</sup>

Moulded plastic

10 to 30

2 LED

13

200

250

0.5

–

–

≤ 8

1 2 3 4 5 6 7

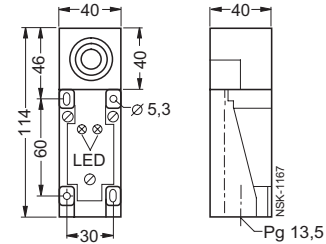
Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
1	<b>3RG46 48-3AN01</b>		0.18	2
	<b>3RG46 48-3GN01</b>		0.18	4
–	–			
–	–			

**25 mm**

**40 mm × 40 mm block**

**Non-embeddable**

Type 2 **NEW**



**3 cores**

U BERO (without reduction factor)

Moulded plastic

10 to 30

LED

≤ 13

150

< 2000

0.16

0.09

0.04

≤ 8

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
–	–			
2	<b>3RG46 44-6AN02</b>			26
	<b>3RG46 44-6GN02</b>			

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

Spurious switching signal suppression

Short-circuit and overload protection

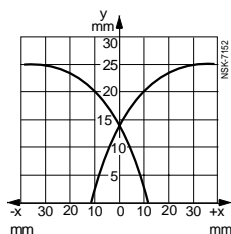
Polarity reversal protection

Wire-break protection

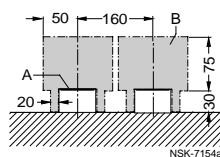
Inductive interference protection

Radio interference protection

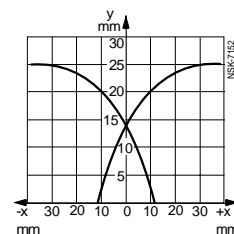
Totally isolated



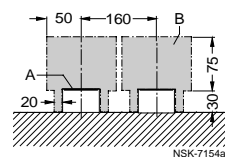
Ascertained with standard target



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 25 and 30 mm

### Selection and ordering data

**Rated operating distance  $s_n$**

**Form**

**Installation in metal**

Dimensions

Delivered with  
Pg 13.5 = Pg 13.5 thread  
for moulded-plastic joint,  
3SX6 274 connector plug  
or 3RX1 566 adapter

**Number of cores**  
Group

**Housing material**

**Operational voltage** AC/DC V  
**Indicator**  
**Current input (no load)** mA  
**Loading capacity continuous pnp/npn** mA

**Operating frequency** AC/DC Hz  
**Repeat accuracy** mm  
**Response time** ms  
**Build-up time** ms  
**Availability delay** ms

**Protective measures**

With terminal compart-  
ment for cables of  
0.5 to 2.5 mm<sup>2</sup>

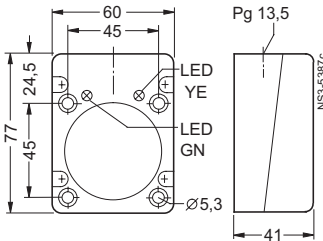
NO function and  
NC function, pnp

**25 mm**

**60 mm × 80 mm block**

**Embeddable**

Type 1



**4 cores**  
Normal requirements

Moulded plastic

-15 to 34  
2 LED  
≤ 30 (24 V); ≤ 50 (34 V)  
200 (≤ 50 °C); 150 (≤ 85 °C)

-70  
1.0  
0.5  
7.0  
100

1 2 3 4 5 6

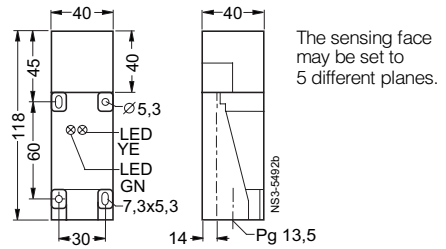
Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
1	3RG40 32-6CD00	1 unit	kg	18

**30 mm**

**40 mm × 40 mm block**

**Non-embeddable**

Type 2



**4 cores**  
Automotive industry (Mercedes Benz)

Moulded plastic

15 to 34  
2 LED  
≤ 30 (24 V); ≤ 50 (34 V)  
200 (≤ 50 °C); 150 (≤ 85 °C)

30  
1.5  
5  
25  
100

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram p. 10/89 No.
2	3RG41 44-6CD01	1 unit	kg	18

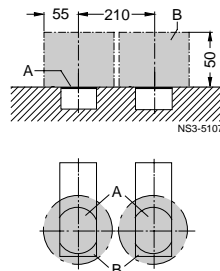
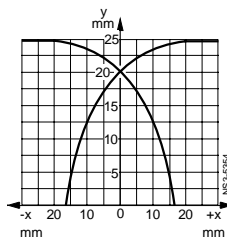
### Protective measures Response characteristics Mounting instructions

**Delivery**

► Preferred type.

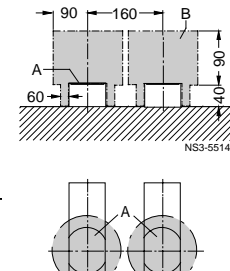
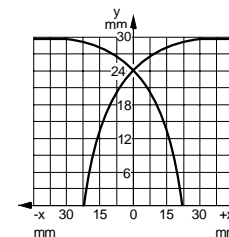
**Protective measures**

- 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 30 mm

### Selection and ordering data

<b>Rated operating distance <math>s_n</math></b>	<b>30 mm</b>		
<b>Form</b>	<b>60 mm × 80 mm block</b>		
<b>Installation in metal</b>	<b>Non-embeddable</b>		
Dimensions	Type ①	Type ②	
Delivered with Pg 13.5 = Pg 13.5 thread for moulded-plastic joint, 3SX6 274 connector plug or 3RX1 566 adapter			
<b>Number of cores</b>	<b>2 cores</b>	<b>3 cores</b>	<b>4 cores</b>
<b>Group</b>	High electrical requirements		Normal requirements
<b>Housing material</b>	Moulded plastic		Moulded plastic
<b>Operational voltage</b>	① 20 to 265/20 to 320	② -/10 to 65	② -/15 to 34
<b>Indicator</b>	LED	2 LED	2 LED
<b>Current input (no load)</b>	1.5/1.0	-/≤ 20	-/≤ 30 (24 V); ≤ 50 (34 V)
<b>AC 230 V/DC 24 V</b>			200 (≤ 50 °C); 150 (≤ 85 °C)
<b>Loading capacity continuous</b>	300	300	-
<b>20 ms</b>	1800 <sup>1)</sup>	-	-
<b>Minimum load current</b>	5	-	-
<b>Operating frequency</b>	AC/DC Hz	-/50	-/50
<b>Repeat accuracy</b>	mm	1	1
<b>Response time</b>	ms	4	4
<b>Build-up time</b>	ms	11	15
<b>Availability delay</b>	ms	100	100
<b>Protective measures</b>	<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

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
<b>2 cores</b>				
①	<b>3RG40 42-6KD00</b>		0.27	24
	-			
<b>4 cores</b>				
	-			
②	<b>3RG40 42-6CD00</b>		0.27	18
<b>3 cores</b>				
②	<b>3RG40 42-6AD00</b>		0.27	23

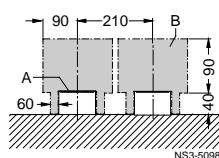
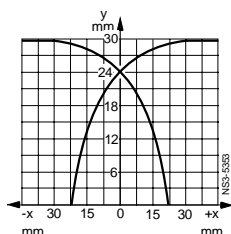
1) Siemens 3TF contactors up to size 4 (AC 230 V; max. operating frequency 0.25 Hz)

### Protective measures Response characteristics Mounting instructions

**Delivery**  
▶ Preferred type.

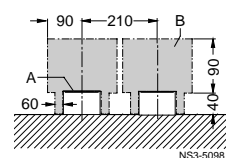
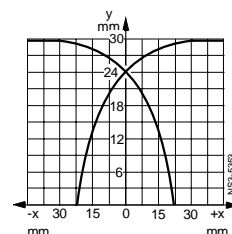
#### Protective measures

- 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 35 and 40 mm

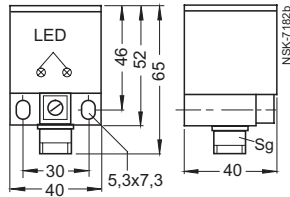
### Selection and ordering data

<b>Rated operating distance <math>s_n</math></b>
<b>Form</b>
<b>Installation in metal</b>

Dimensions

<b>35 mm</b>
<b>40 mm × 40 mm block</b>
<b>Non-embeddable</b>

Type 1 **NEW**



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	Hz
Repeat accuracy	mm
Response time	ms
Build-up time	ms
Availability delay	ms

Protective measures

<b>3 cores</b>
<b>U BERO (without reduction factor)</b>

Moulded plastic

10 to 30
LED
≤ 13
150

< 2000
0.16
0.09
0.04
≤ 8

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
	–			
1	<b>3RG46 48–3AN11</b> <b>3RG46 48–3GN11</b>			2 4
	–			

With cable, 2 m, PUR 3 × 0.34 mm <sup>2</sup>	NO function, pnp NO function, npn
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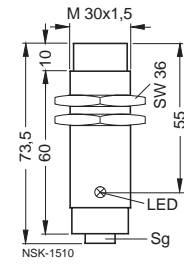
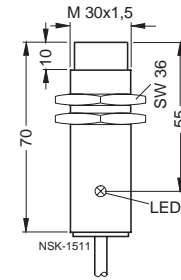
With M 12 plug-in connection type E, F	NO function, pnp NO function, npn
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With M 18 plug-in connection type P	NO function, pnp NO function, npn
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<b>40 mm</b>
<b>M 30</b>
<b>Non-embeddable</b>

Type 2

Type 3



<b>3 cores</b>
<b>Increased operating distance</b>

Brass

10 to 30
LED
≤ 10
200

100
2.0
0.9
1.4
200

1 2 3 4 5 6

Type	Order No.	Price	Weight approx.	Wiring diagram
		1 unit	kg	p. 10/89 No.
2	<b>3RG46 24–0AB02</b> <b>3RG46 24–0GB02</b>		0.22 0.22	11 13
3	<b>3RG46 24–3AB02</b> <b>3RG46 24–3GB02</b>		0.165 0.165	2 4
4	<b>3RG46 24–2AB02</b> <b>3RG46 24–2GB02</b>		0.175 0.175	2 4

### Protective measures

#### Response characteristics

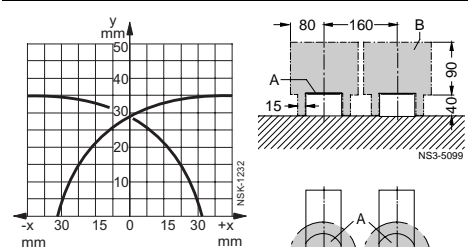
#### Mounting instructions

#### Delivery

► Preferred type.

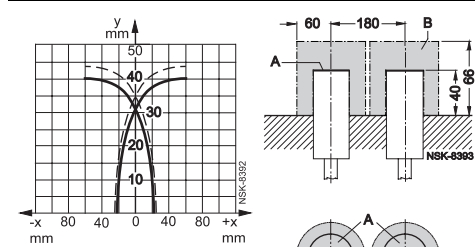
#### Protective measures

- 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