

# SIMATIC PXC capacitive proximity switches

## Introduction

2

### Capacitive proximity switches – Monitoring fill levels and more



Capacitive proximity switches are also non-contact sensors and respond to the same degree almost instinctively when conducting and non-conducting materials in solid, powder or liquid state are to be measured. They impress customers especially in the case of fill level monitoring through non-metallic materials such as plastic or glass and through various materials in the case of counting objects.

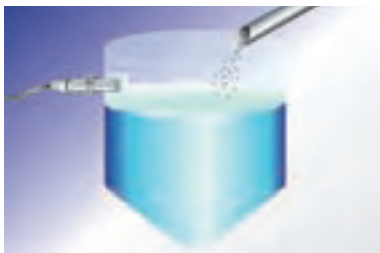
## Highlights

- Detection of all materials (e.g. plastics, wood, paper)
- Measurement of liquids through plastic tubes or glass pipes
- Measurement of aggressive chemicals
- Adjustable compensation of operating distance on the object

### Application examples



Recognition of milk in cartons



Level control for bulk material in vessel

### Standards

The same standards are applicable as for the inductive proximity switches.

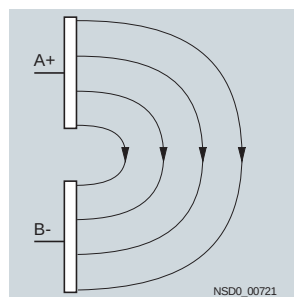
### Type

The devices are available in DC or AC versions:

- The DC versions can activate electronic controllers (SIMATIC) or relays directly.
- With the AC version, the load (contactor relay, solenoid valve) is connected directly to the AC supply network (preferably 230 V, 50 Hz) in series with the proximity switches.

### Function

The sensing face of a capacitive sensor is formed by two concentrically arranged metal electrodes that are equivalent to the electrodes of an unwound capacitor. The electrode surfaces A and B are connected into the feedback branch of a high-frequency oscillator that is tuned such that it does not oscillate when the surface is free.



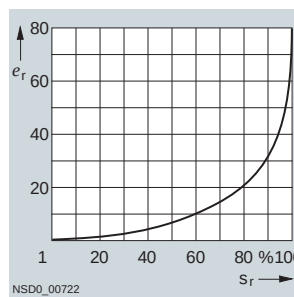
When an object approaches the active face of the sensor, it enters the electric field in front of the electrode surfaces and causes a change in the coupling capacitance. The oscillator starts to oscillate; the amplitude is recorded by an evaluation circuit and converted into a switching command.

### Switching rate

The build-up characteristics specific to other pulse/interval conditions may result in higher switching frequencies than those specified.

### Operating distance

The stated values are applicable to a target of metal which is grounded and whose area corresponds to the sensing face of the proximity switch. The real operating distance  $s_r$  for non-conductive targets is dependent on the relative dielectric constant  $\epsilon_r$  and the characteristic value (see characteristic curve).



**Dielectric constants  $\epsilon_r$  of various materials**

| Material                  | $\epsilon_r$ | Material          | $\epsilon_r$ |
|---------------------------|--------------|-------------------|--------------|
| Alcohol                   | 25.8         | Polyethylene      | 2.3          |
| Araldite                  | 3.6          | Polypropylene     | 2.3          |
| Bakelite                  | 3.6          | Polystyrene       | 3            |
| Glass                     | 5            | Polyvinylchloride | 2.9          |
| Mica                      | 6            | Porcelain         | 4.4          |
| Vulcanized rubber         | 4            | Pressboard        | 4            |
| Hard paper                | 4.5          | Quartz glass      | 3.7          |
| Wood                      | 2 ... 7      | Quartz sand       | 4.5          |
| Cable insulating compound | 2.5          | Silicone rubber   | 2.8          |
| Air, vacuum               | 1            | Teflon            | 2            |
| Marble                    | 8            | Turpentine oil    | 2.2          |
| Oiled paper               | 4            | Transformer oil   | 2.2          |
| Paper                     | 2.3          | Vacuum, air       | 1            |
| Paraffin                  | 2.2          | Water             | 80           |
| Petroleum                 | 2.2          | Soft rubber       | 2.5          |
| Plexiglas                 | 3.2          | Celluloid         | 3            |
| Polyamide                 | 5            |                   |              |

**Built-in protection**

The protective circuits built into the DC versions make them easy to handle and protect the devices from damage.

- Spurious signal suppression
- Short-circuit and overload protection
- Reverse polarity protection of connections
- Inductive interference protection

**Technical specifications**

| Type                                     | DC                               | AC           |
|------------------------------------------|----------------------------------|--------------|
| Operational voltage                      | 10 ... 65 (30) V                 | 20 ... 250 V |
| • Residual ripple                        | Max. 10%                         | –            |
| No-load supply current $I_0$             | 6 ... 12 mA                      | max. 1.7 mA  |
| Switching frequency $f$                  | 100 Hz                           | 20 Hz        |
| Repeat accuracy $R$                      | Max. 2%                          |              |
| Hysteresis $H$                           | 0.02 ... 0.2 × 0.02 to 0.2 $s_r$ |              |
| <b>Outputs</b>                           |                                  |              |
| Rated operational current $I_e$          |                                  |              |
| • For DC                                 | 200 mA                           | –            |
| • For 230 V AC (contactor up to size S3) | –                                |              |
| - Continuous                             |                                  | 500 mA       |
| - Momentary up to 20 ms                  |                                  | 5 A          |
| Smallest operating current $I_m$         | –                                |              |
| • Mainly inductive load                  |                                  | 10 mA        |
| • Mainly resistive load                  |                                  | 5 mA         |
| Residual current $I_r$                   | 6 ... 12 mA                      | max. 1.7 mA  |
| Voltage drop                             | Max. 1.8 V                       | Max. 7 V     |
| Lead length, max. permissible            | 300 m                            |              |
| Degree of protection                     | IP67                             |              |
| Ambient temperature                      |                                  |              |
| • Operation                              | –20 ... +70 °C                   |              |
| • Bearings                               | –40 ... +85 °C                   |              |
| Shock resistance                         | 30 × g, 11 ms duration           |              |
| Resistance to vibration                  | 10 ... 55 Hz, 1 mm amplitude     |              |

**Schematics****DC**

Fig. 1

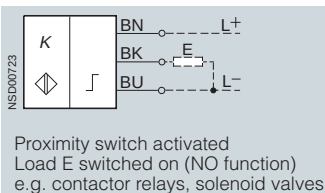


Fig. 2

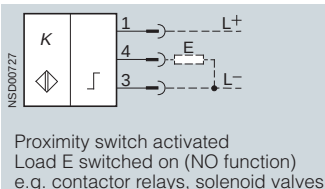


Fig. 3

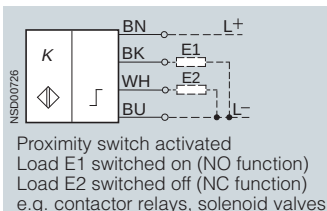


Fig. 4

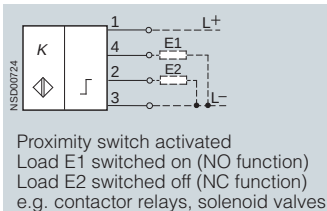
**AC**

Fig. 5

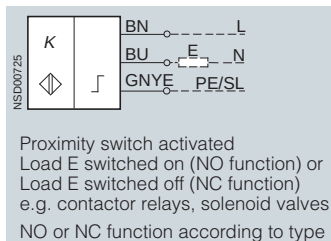
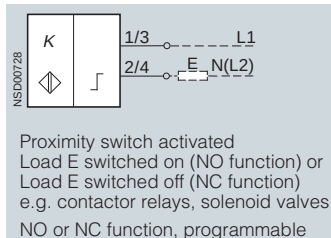


Fig. 6



# SIMATIC PXC capacitive proximity switches

## SIMATIC PXC200

### Overview

#### SIMATIC sensors PXC200

- 10 ... 65 V DC
- 20 ... 250 V AC

### Selection table

#### SIMATIC PXC200



|                             | M18   | M30          | Ø 40 mm | 20 mm x 32 mm | 40 mm x 40 mm |
|-----------------------------|-------|--------------|---------|---------------|---------------|
| <b>Operating distance</b>   |       |              |         |               |               |
| • 5 mm                      | ■     |              |         | ■             |               |
| • 10 mm                     |       | ■            |         |               |               |
| • 20 mm                     |       |              | ■       |               | ■             |
| <b>Operating voltage</b>    |       |              |         |               |               |
| • 10 ... 30 V DC            |       |              |         | ■             |               |
| • 10 ... 65 V DC            | ■     | ■            | ■       |               | ■             |
| • 20 ... 250 V AC           |       | ■            | ■       |               | ■             |
| <b>Number of wires</b>      |       |              |         |               |               |
| • 2 wires                   |       | ■            | ■       |               | ■             |
| • 3 wires                   | ■     |              |         | ■             |               |
| • 4 wires                   |       | ■            | ■       |               | ■             |
| <b>Output</b>               |       |              |         |               |               |
| • pnp                       | ■     | ■            | ■       | ■             | ■             |
| • NO contact                | ■     | ■            |         | ■             |               |
| • NC contact                |       | ■            |         |               |               |
| • NO contact and NC contact |       | ■            | ■       |               | ■             |
| • NO contact or NC contact  |       | ■            | ■       |               | ■             |
| <b>Mounting</b>             |       |              |         |               |               |
| • flush                     | ■     | ■            | ■       | ■             | ■             |
| <b>Connection</b>           |       |              |         |               |               |
| • Plug, Ø 8 mm              |       |              |         | ■             |               |
| • Cable                     | ■     | ■            |         | ■             |               |
| • Terminal compartment      |       | ■            | ■       |               | ■             |
| <b>Degree of protection</b> |       |              |         |               |               |
| • IP67                      | ■     | ■            | ■       | ■             | ■             |
| <b>See page</b>             | 2/257 | 2/257, 2/258 | 2/258   | 2/257         | 2/258         |

# SIMATIC PXC capacitive proximity switch

## SIMATIC PXC200

10 ... 65 V DC

### Technical specifications

| Number of wires                    | 3                        | 3                                | 4                              |
|------------------------------------|--------------------------|----------------------------------|--------------------------------|
| Design                             | M18                      | Cubic 20 mm × 32 mm              | M30                            |
| Installation in metal              | Flush                    | Flush                            | Flush                          |
| Rated operating distance $s_n$     | <sup>1)</sup> 5 mm       | 5 mm                             | 10 mm                          |
| Effective operating distance $s_r$ | <sup>2)</sup> Adjustable | Fixed comparison                 | Adjustable                     |
| Enclosure material                 | Molded plastic           | Metal                            | Metal with molded-plastic head |
| Operational voltage (DC)           | V 10 ... 65              | 10 ... 30                        | 10 ... 65                      |
| Rated operational current $I_e$    | mA 200                   | 200                              | 200                            |
| Displays                           |                          |                                  |                                |
| • Operating distance               | Red LED                  | Yellow LED                       | Red LED                        |
| • Operational voltage              | –                        | Green LED                        | –                              |
| Degree of protection               | IP67                     | IP67                             | IP67                           |
| Type                               | 3RG16 13-0AB00           | 3RG16 73-0AG00<br>3RG16 73-7AG00 | 3RG16 14-0AC00                 |

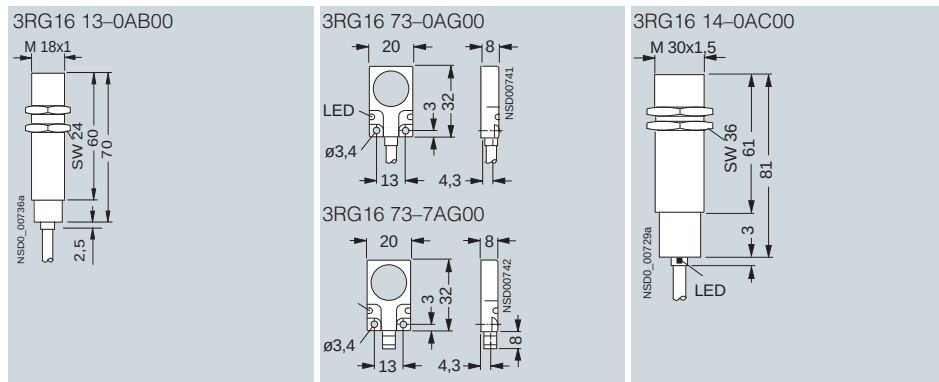
1) For operation with grounded metal.

2) With an alignment  $s_r > s_n$ , the hysteresis can increase significantly.

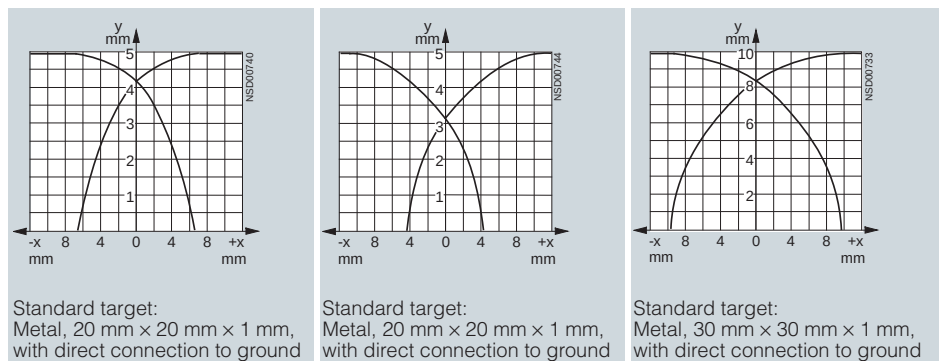
### Selection and Ordering data

| Switching output                            | Circuit diagram number | Connector type | Order No.                   | Order No.                    | Order No.                    |
|---------------------------------------------|------------------------|----------------|-----------------------------|------------------------------|------------------------------|
| <b>With LiYY cable, 2 m</b>                 |                        |                | $3 \times 0.5 \text{ mm}^2$ | $3 \times 0.25 \text{ mm}^2$ | $4 \times 0.34 \text{ mm}^2$ |
| NO contact, pnp                             | 1                      | ▶              | <b>3RG16 13-0AB00</b>       | ▶                            | <b>3RG16 73-0AG00</b>        |
| NO contact and NC contact, pnp (antivalent) | 3                      |                | –                           | ▶                            | <b>3RG16 14-0AC00</b>        |
| <b>With connector, Ø 8 mm</b>               |                        |                |                             |                              |                              |
| NO contact, pnp                             | 2                      | A, C           | –                           | ▶                            | <b>3RG16 73-7AG00</b>        |
| ▶ Preferred type, available from stock.     |                        |                |                             |                              |                              |

### Dimensions



### Characteristic curves



# SIMATIC PXC capacitive proximity switch

## SIMATIC PXC200

10 ... 65 V DC

### Technical specifications

| Number of wires                    | 4               | 4              | 4                   |
|------------------------------------|-----------------|----------------|---------------------|
| Design                             | M30             | Ø 40 mm        | Cubic 40 mm × 40 mm |
| Installation in metal              | Flush           | Flush          | Flush               |
| Rated operating distance $s_n$     | 1) <b>10 mm</b> | <b>20 mm</b>   | <b>20 mm</b>        |
| Effective operating distance $s_r$ | 2) Adjustable   | Adjustable     | Adjustable          |
| Enclosure material                 | Molded plastic  | Molded plastic | Molded plastic      |
| Operational voltage (DC)           | V 10 ... 65     | 10 ... 65      | 10 ... 65           |
| Rated operational current $I_e$    | mA 200          | 200            | 200                 |
| Displays                           |                 |                |                     |
| • Operating distance               | Yellow LED      | Yellow LED     | Yellow LED          |
| • Operational voltage              | Green LED       | Green LED      | Green LED           |
| Degree of protection               | IP67            | IP67           | IP67                |
| Type                               | 3RG16 14-6AC00  | 3RG16 55-6AC00 | 3RG16 30-6AC00      |

1) For operation with grounded metal.

2) With an alignment  $s_r > s_n$ , the hysteresis can increase significantly.

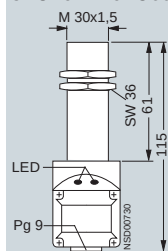
### Selection and Ordering data

| Switching output                            | Circuit diagram number | Connector type | Order No.              | Order No.               | Order No.               |
|---------------------------------------------|------------------------|----------------|------------------------|-------------------------|-------------------------|
| <b>With terminal box</b>                    |                        |                | to 2.5 mm <sup>2</sup> | to 2.5 mm <sup>2</sup>  | to 2.5 mm <sup>2</sup>  |
| NO contact and NC contact, pnp (antivalent) | 4                      | ►              | <b>3RG16 14-6AC00</b>  | ► <b>3RG16 55-6AC00</b> | ► <b>3RG16 30-6AC00</b> |

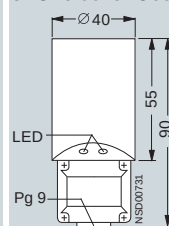
► Preferred type, available from stock.

### Dimensions

3RG16 14-6AC00

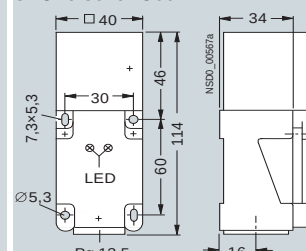


3RG16 55-6AC00

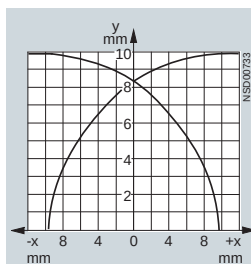


Fixing clamp, Ø 40 mm, included in scope of supply.

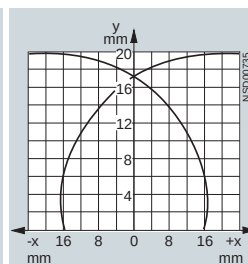
3RG16 30-6AC00



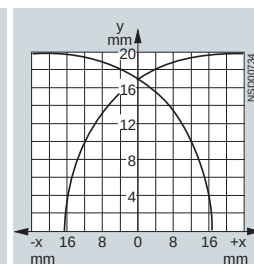
### Characteristic curves



Standard target:  
Metal, 30 mm × 30 mm × 1 mm,  
with direct connection to ground



Standard target:  
Metal, 60 mm × 60 mm × 1 mm,  
with direct connection to ground



Standard target:  
Metal, 60 mm × 60 mm × 1 mm,  
with direct connection to ground

# SIMATIC PXC capacitive proximity switch

## SIMATIC PXC200

20 ... 250 V AC

### Technical specifications

| Number of wires                                  | 2 + PE                         | 2              | 2              | 2                   |
|--------------------------------------------------|--------------------------------|----------------|----------------|---------------------|
| Design                                           | M30                            |                | Ø 40 mm        | Cubic 40 mm × 40 mm |
| Installation in metal                            | Flush                          |                | Flush          | Flush               |
| Rated operating distance $s_n$ <sup>1)</sup>     | 10 mm                          |                | 20 mm          | 20 mm               |
| Effective operating distance $s_r$ <sup>2)</sup> | Adjustable                     |                | Adjustable     | Adjustable          |
| Enclosure material                               | Metal with molded-plastic head | Molded plastic | Molded plastic | Molded plastic      |
| Operational voltage (AC) V                       | 20 ... 250                     |                | 20 ... 250     | 20 ... 250          |
| Rated operational current $I_e$ mA               | 500                            |                | 500            | 500                 |
| LEDs                                             |                                |                |                |                     |
| • Operating distance                             | Red LED                        | Red LED        | Red LED        | Red LED             |
| • Operational voltage                            | –                              | Green LED      | Green LED      | Green LED           |
| Degree of protection                             | IP67                           |                | IP67           | IP67                |
| Type                                             | 3RG16 14-0LB00, 3RG16 14-0LA00 | 3RG16 14-6LD00 | 3RG16 55-6LD00 | 3RG16 30-6LD00      |

1) For operation with grounded metal.

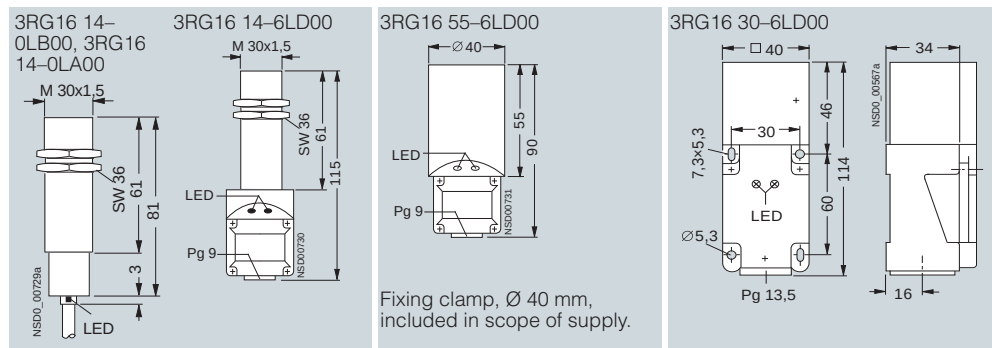
2) With an alignment  $s_r > s_n$ , the hysteresis can increase significantly.

### Selection and Ordering data

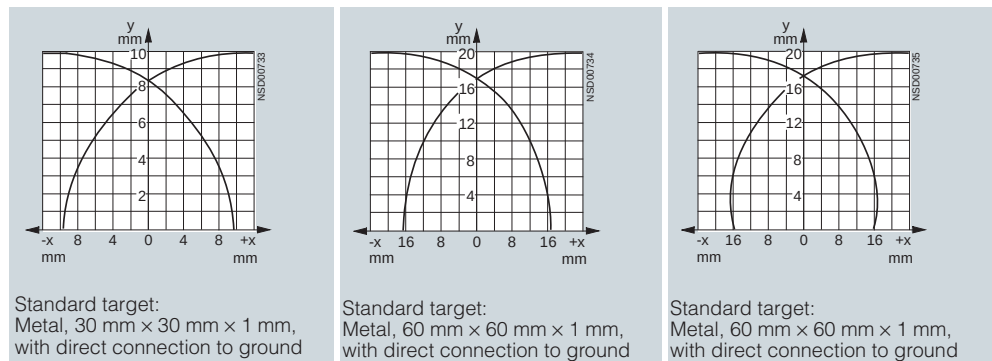
| Switching output                        | Circuit diagram number | Connector type | Order No.                   | Order No.               | Order No.               |
|-----------------------------------------|------------------------|----------------|-----------------------------|-------------------------|-------------------------|
| <b>With LiYY cable, 2 m</b>             |                        |                | $3 \times 0.5 \text{ mm}^2$ |                         |                         |
| NO contact                              | 5                      | ►              | <b>3RG16 14-0LB00</b>       | –                       | –                       |
| NC contact                              | 5                      | ►              | <b>3RG16 14-0LA00</b>       | –                       | –                       |
| <b>With terminal box</b>                |                        |                | to $2.5 \text{ mm}^2$       | to $2.5 \text{ mm}^2$   | to $2.5 \text{ mm}^2$   |
| NO contact or 6 NC contact programmable | 6                      | ►              | <b>3RG16 14-6LD00</b>       | ► <b>3RG16 55-6LD00</b> | ► <b>3RG16 30-6LD00</b> |

► Preferred type, available from stock.

### Dimensions



### Characteristic curves

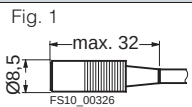
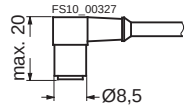
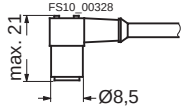
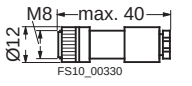
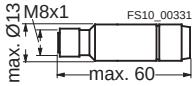


# Proximity switches

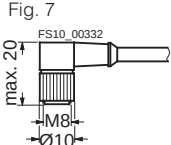
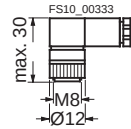
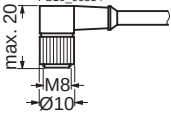
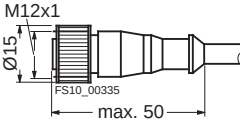
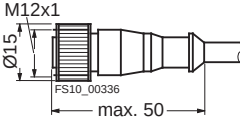
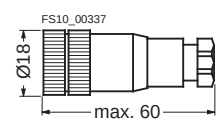
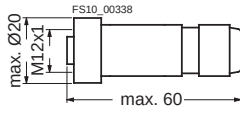
## Accessories

### Plug-in connections

#### Selection and Ordering data

|                                                                                     | Fig.                                                                                       | Type <sup>1)</sup> | Cable <sup>2)</sup>                                          | Length m | Color       |   | Order No.                  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------|----------|-------------|---|----------------------------|
|    | <b>8 mm cable sockets (female) for snap-on mounting, degree of protection IP65</b>         |                    |                                                              |          |             |   |                            |
|                                                                                     | 3-pole, 3 × 0.34 mm <sup>2</sup>                                                           |                    |                                                              |          |             |   |                            |
|                                                                                     | 1                                                                                          | A                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BH32-1AF0</b> |
|                                                                                     | 1                                                                                          | A                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BH32-1AL0</b> |
|    | 4-pole, 4 × 0.34 mm <sup>2</sup>                                                           |                    |                                                              |          |             |   |                            |
|                                                                                     | 1                                                                                          | B                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BH42-1AF0</b> |
|                                                                                     | 1                                                                                          | B                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BH42-1AL0</b> |
|    | <b>8 mm angular cable sockets (female) for snap-on mounting, degree of protection IP65</b> |                    |                                                              |          |             |   |                            |
|                                                                                     | 3-pole, 3 × 0.34 mm <sup>2</sup>                                                           |                    |                                                              |          |             |   |                            |
|                                                                                     | 2                                                                                          | A                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BJ32-1AF0</b> |
|                                                                                     | 2                                                                                          | A                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BJ32-1AL0</b> |
|                                                                                     | 4-pole, 4 × 0.34 mm <sup>2</sup>                                                           |                    |                                                              |          |             |   |                            |
|                                                                                     | 2                                                                                          | B                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BJ42-1AF0</b> |
|                                                                                     | 2                                                                                          | B                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BJ42-1AL0</b> |
|                                                                                     | 3-pole, 3 × 0.34 mm <sup>2</sup> , with 2 LEDs for pnp proximity switches                  |                    |                                                              |          |             |   |                            |
|                                                                                     | 3                                                                                          | C                  | PUR                                                          | 5        | Black/clear | ▶ | <b>3RX8 000-0BJ34-1AF0</b> |
|                                                                                     | 3                                                                                          | C                  | PUR                                                          | 10       | Black/clear | ▶ | <b>3RX8 000-0BJ34-1AL0</b> |
|  | <b>M8 cable sockets (female) for screw mounting, degree of protection IP67</b>             |                    |                                                              |          |             |   |                            |
|                                                                                     | 4                                                                                          | A                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BB32-1AF0</b> |
|                                                                                     | 4                                                                                          | A                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BB32-1AL0</b> |
|                                                                                     | 5                                                                                          | A                  | Coupling plug with soldering pins, max. 0.25 mm <sup>2</sup> |          | Black       | ▶ | <b>3RX8 000-0BB35</b>      |
|  | 6                                                                                          | A                  | Coupling plug, can be assembled                              |          | Black       | ▶ | <b>3RX8 000-0BB37</b>      |
|                                                                                     | 4-pole, 4 × 0.34 mm <sup>2</sup>                                                           |                    |                                                              |          |             |   |                            |
|                                                                                     | 4                                                                                          | B                  | PUR                                                          | 5        | Black       | ▶ | <b>3RX8 000-0BB42-1AF0</b> |
|                                                                                     | 4                                                                                          | B                  | PUR                                                          | 10       | Black       | ▶ | <b>3RX8 000-0BB42-1AL0</b> |
|  | 5                                                                                          | B                  | Coupling plug with soldering pins, max. 0.25 mm <sup>2</sup> |          | Black       | ▶ | <b>3RX8 000-0BB45</b>      |
|                                                                                     | 6                                                                                          | B                  | Coupling plug, can be assembled                              |          | Black       | ▶ | <b>3RX8 000-0BB47</b>      |

- Cable sockets (female) with special lengths available as options:
- Minimum order quantity: 50 units
  - Delivery time on request.
  - Extra charge per m.
- 1) For terminal assignment, see page 2/273.  
 2) PUR cables suitable for trailing  
 ▶ Preferred type, available from stock.

| Fig.                                                                                   | Type <sup>1)</sup>               | Cable <sup>2)</sup> | Length m                                                      | Color   |       | Order No.             |
|----------------------------------------------------------------------------------------|----------------------------------|---------------------|---------------------------------------------------------------|---------|-------|-----------------------|
| <b>M8 angular cable sockets (female) for screw mounting, degree of protection IP67</b> |                                  |                     |                                                               |         |       |                       |
| 3-pole, 3 × 0.34 mm <sup>2</sup>                                                       |                                  |                     |                                                               |         |       |                       |
|       | 7                                | A                   | PUR                                                           | 5       | Black | ▶ 3RX8 000-0BC32-1AF0 |
|                                                                                        | 7                                | A                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0BC32-1AL0 |
|                                                                                        | 8                                | A                   | Coupling plug with soldering pins, max. 0.25 mm <sup>2</sup>  |         | Black | ▶ 3RX8 000-0BC35      |
| 3-pole, 3 × 0.34 mm <sup>2</sup> , with LEDs                                           |                                  |                     |                                                               |         |       |                       |
|       | 9                                | C                   | PUR                                                           | 5 (pnp) | Black | ▶ 3RX8 000-0BC34-1AF0 |
|                                                                                        | 9                                | C                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0BC34-1AL0 |
|                                                                                        | 9                                | D                   | PUR                                                           | 5 (nnp) | Black | ▶ 3RX8 000-0BC30-1AF0 |
|       | 9                                | D                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0BC30-1AL0 |
|                                                                                        | 7                                | B                   | PUR                                                           | 5       | Black | ▶ 3RX8 000-0BC42-1AF0 |
|                                                                                        | 7                                | B                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0BC42-1AL0 |
|                                                                                        | 8                                | B                   | Coupling plug with soldering pins, max. 0.25 mm <sup>2</sup>  |         | Black | ▶ 3RX8 000-0BC45      |
| <b>M12 cable sockets (female) for screw mounting, degree of protection IP67</b>        |                                  |                     |                                                               |         |       |                       |
| 4-pole, 4 × 0.34 mm <sup>2</sup>                                                       |                                  |                     |                                                               |         |       |                       |
|      | 10                               | E                   | PUR                                                           | 5       | Black | ▶ 3RX8 000-0CB32-1AF0 |
|                                                                                        | 10                               | E                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0CB32-1AL0 |
|                                                                                        | 11                               | E                   | PUR, shielded                                                 | 2       | Black | ▶ 3RX8 000-0CB32-1GC0 |
|                                                                                        | 11                               | E                   | PUR, shielded                                                 | 10      | Black | ▶ 3RX8 000-0CB32-1GL0 |
|     | 10                               | F                   | PUR                                                           | 5       | Black | ▶ 3RX8 000-0CB42-1AF0 |
|                                                                                        | 10                               | F                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0CB42-1AL0 |
|                                                                                        | 12                               | F                   | Coupling plug with terminal compartment, preassembly possible |         | Black | ▶ 3RX8 000-0CB45      |
|                                                                                        | 13                               | F                   | Coupling plug with quick-connection technology                |         | Black | ▶ 3RX8 000-0CB47      |
| 5-pole, 5 × 0.34 mm <sup>2</sup>                                                       |                                  |                     |                                                               |         |       |                       |
|     | 10                               | G                   | PUR                                                           | 5       | Black | ▶ 3RX8 000-0CB52-1AF0 |
|                                                                                        | 10                               | G                   | PUR                                                           | 10      | Black | ▶ 3RX8 000-0CB52-1AL0 |
|                                                                                        | 11                               | G                   | PUR, shielded                                                 | 5       | Black | ▶ 3RX8 000-0CB52-1GF0 |
|                                                                                        | 11                               | G                   | PUR, shielded                                                 | 10      | Black | ▶ 3RX8 000-0CB52-1GL0 |
|     | 12                               | G                   | Coupling plug with terminal compartment, preassembly possible |         | Black | ▶ 3RX8 000-0CB55      |
|                                                                                        | 8-pole, 8 × 0.25 mm <sup>2</sup> |                     |                                                               |         |       |                       |
|                                                                                        | 11                               | O                   | PUR, shielded                                                 | 5       | Black | ▶ 3RX8 000-0CB81-1GF0 |

Cable sockets (female) with special lengths available as options:

- Minimum order quantity: 50 units
- Delivery time on request.
- Extra charge per m.

<sup>1)</sup> For terminal assignment, see page 2/273.

<sup>2)</sup> PUR cables suitable for trailing.

▶ Preferred type, available from stock.



# Proximity switches

## Accessories

### Plug-in connections

| Fig. Type <sup>1)</sup> Cable <sup>2)</sup> Length m Color                                             |   |                                                               |    |       | Order No.             |
|--------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------|----|-------|-----------------------|
| <b>M12 angular cable sockets (female) for screw mounting, degree of protection IP67</b>                |   |                                                               |    |       |                       |
| 3-pole, 3 × 0.34 mm <sup>2</sup> ,                                                                     |   |                                                               |    |       |                       |
| 14                                                                                                     | E | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC32-1AF0 |
| 14                                                                                                     | E | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC32-1AL0 |
| 14                                                                                                     | E | PVC                                                           | 5  | Black | ▶ 3RX8 000-0CC32-1BF0 |
| 14                                                                                                     | E | PVC                                                           | 10 | Black | ▶ 3RX8 000-0CC32-1BL0 |
| 3-pole, 3 × 0.34 mm <sup>2</sup> , with LEDs for pnp proximity switches, NO contact only <sup>3)</sup> |   |                                                               |    |       |                       |
| 15                                                                                                     | H | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC34-1AF0 |
| 15                                                                                                     | H | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC34-1AL0 |
| 15                                                                                                     | H | PVC                                                           | 5  | Black | ▶ 3RX8 000-0CC34-1BF0 |
| 15                                                                                                     | H | PVC                                                           | 10 | Black | ▶ 3RX8 000-0CC34-1BL0 |
| 16                                                                                                     | H | Coupling plug with terminal compartment, preassembly possible |    |       | ▶ 3RX8 000-0CC36      |
| 3-pole, 3 × 0.34 mm <sup>2</sup> , with LEDs for pnp proximity switches, NO or NC <sup>3)</sup>        |   |                                                               |    |       |                       |
| 15                                                                                                     | J | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC38-1AF0 |
| 15                                                                                                     | J | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC38-1AL0 |
| 4-pole, 4 × 0.34 mm <sup>2</sup>                                                                       |   |                                                               |    |       |                       |
| 14                                                                                                     | F | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC42-1AF0 |
| 14                                                                                                     | F | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC42-1AL0 |
| 16                                                                                                     | F | Coupling plug with terminal compartment, preassembly possible |    | Black | ▶ 3RX8 000-0CC45      |
| 4-pole, 4 × 0.34 mm <sup>2</sup> , with LEDs <sup>3)</sup>                                             |   |                                                               |    |       |                       |
| 15                                                                                                     | K | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC44-1AF0 |
| 15                                                                                                     | K | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC44-1AL0 |
| 16                                                                                                     | K | With terminal compartment, transparent for LEDs               |    | clear | ▶ 3RX8 000-0CC46      |
|                                                                                                        |   | LED insert for angular cable plug, transparent                |    |       | ▶ 3RX8 000-0CA06      |
| 5-pole, 5 × 0.34 mm <sup>2</sup>                                                                       |   |                                                               |    |       |                       |
| 14                                                                                                     | G | PUR                                                           | 5  | Black | ▶ 3RX8 000-0CC52-1AF0 |
| 14                                                                                                     | G | PUR                                                           | 10 | Black | ▶ 3RX8 000-0CC52-1AL0 |
| 16                                                                                                     | G | Coupling plug with terminal compartment, preassembly possible |    | Black | ▶ 3RX8 000-0CC55      |
| <b>M18 angular cable sockets (female) for screw-type mounting, degree of protection IP65, 4-pole</b>   |   |                                                               |    |       |                       |
| 17                                                                                                     | F | Preassembly possible, with terminal compartment               |    | Black | ▶ 3RX8 000-0DC45      |

Cable sockets (female) with special lengths available as options:

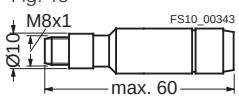
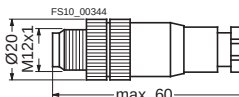
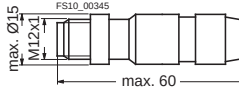
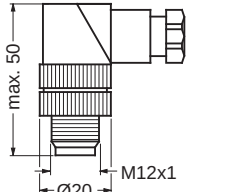
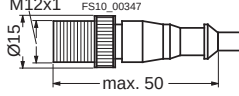
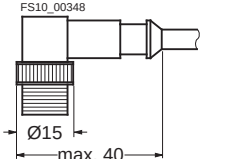
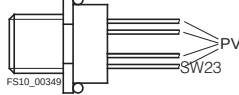
- Minimum order quantity: 50 units
- Delivery time on request.
- Extra charge per m.

<sup>1)</sup> For terminal assignment, see page 2/273.

<sup>2)</sup> PUR cables suitable for trailing.

<sup>3)</sup> Only limited use of sonar proximity switches.

▶ Preferred type, available from stock.

| Fig.                                                                                                                                                             | Type <sup>1)</sup> | Cable <sup>2)</sup> | Length m                                    | Color | Order No.                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|---------------------------------------------|-------|------------------------------|
| <b>M8 coupling sockets (female), degree of protection IP67</b><br>For extension cable (metal screw cap) can be assembled; max. 0.34 mm <sup>2</sup>              |                    |                     |                                             |       |                              |
| Fig. 18<br>                                                                     | 18                 | 3-pole              | –                                           | Black | ▶ <b>3RX8 000-0BD37</b>      |
|                                                                                                                                                                  | 18                 | 4-pole              | –                                           | Black | ▶ <b>3RX8 000-0BD47</b>      |
| <b>M12 coupling sockets (female), degree of protection IP67</b><br>for extension cable (metal screw cap) with terminal compartment, cable gland max. 6 mm        |                    |                     |                                             |       |                              |
| Fig. 19<br>                                                                     | 19                 | L 4-pole            | –                                           | Black | ▶ <b>3RX8 000-0CD45</b>      |
|                                                                                                                                                                  | 19                 | M 5-pole            | –                                           | Black | ▶ <b>3RX8 000-0CD55</b>      |
| Fig. 20<br>                                                                     | 20                 | L 4-pole            | Can be assembled; max. 0.34 mm <sup>2</sup> | Black | ▶ <b>3RX8 000-0CD47</b>      |
| <b>M12 angled coupling sockets (female), degree of protection IP67</b><br>for extension cable (metal screw cap) with terminal compartment, cable gland max. 6 mm |                    |                     |                                             |       |                              |
| Fig. 21<br>                                                                     | 21                 | L 4-pole            | –                                           | Black | ▶ <b>3RX8 000-0CE45</b>      |
|                                                                                                                                                                  | 21                 | M 5-pole            | –                                           | Black | ▶ <b>3RX8 000-0CE55</b>      |
| <b>For AS-Interface, degree of protection IP67</b>                                                                                                               |                    |                     |                                             |       |                              |
| <b>M12 cable plugs (male)</b><br>4 × 0.34 mm <sup>2</sup> (metal screw cap)                                                                                      |                    |                     |                                             |       |                              |
|                                                                                                                                                                  | 22                 | L PUR               | 5                                           | Black | ▶ <b>3RX8 000-0CD42-1AF0</b> |
|                                                                                                                                                                  | 22                 | L PUR               | 10                                          | Black | ▶ <b>3RX8 000-0CD42-1AL0</b> |
| <b>M12 angular cable plugs (male)</b><br>4 × 0.34 mm <sup>2</sup> (metal screw cap)                                                                              |                    |                     |                                             |       |                              |
| Fig. 22<br>                                                                   | 23                 | L PUR               | 5                                           | Black | ▶ <b>3RX8 000-0CE42-1AF0</b> |
|                                                                                                                                                                  | 23                 | L PUR               | 10                                          | Black | ▶ <b>3RX8 000-0CE42-1AL0</b> |
| Fig. 23<br>                                                                   |                    |                     |                                             |       |                              |
| Fig. 24<br>                                                                   |                    |                     |                                             |       |                              |
| <b>Flush-type M12 connector</b><br>Adapter with single cores, 4-pole with single cores                                                                           |                    |                     |                                             |       |                              |
|                                                                                                                                                                  | 24                 | • Twistable         | 0.5                                         |       | ▶ <b>3RX8 000-0CA40-1JA5</b> |
|                                                                                                                                                                  | 24                 | • Not twistable     | 0.2                                         |       | ▶ <b>3RX8 000-0CA40-1JA2</b> |

Cable sockets (female) with special lengths available as options:

- Minimum order quantity: 50 units
- Delivery time on request.
- Extra charge per m.

1) For terminal assignment, see page 2/273.

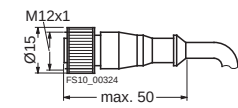
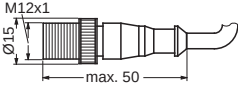
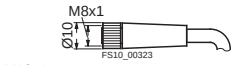
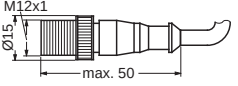
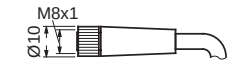
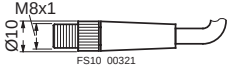
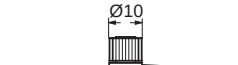
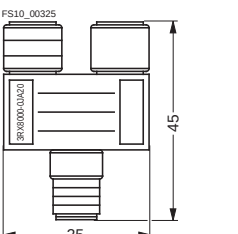
2) Suitable for trailing.

▶ Preferred type, available from stock.

# Proximity switches

## Accessories

### Plug-in connections

|                                                                                                                                                                                                                                                                  | Version                                                                                                                                                                                | Type <sup>1)</sup> | Wire cross-section/color         | Length m | Order No.                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------|----------|----------------------------|
| <br>                                                                                           | <b>Cable</b><br>with M12 socket (female) and M12 plug (male)<br>Connection to 3RX8 000-0JA0 distributor (metal union nut), PUR cable<br>Caution:<br>Only terminal 4 (NO) is connected. | E, L               | 3 × 0.34 mm <sup>2</sup> , Black | 0.6 ▶    | <b>3RX8 000-0GF32-1AA6</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1 ▶      | <b>3RX8 000-0GF32-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1.5 ▶    | <b>3RX8 000-0GF32-1AB5</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        | F, L               | 4 × 0.34 mm <sup>2</sup> , Black | 0.6 ▶    | <b>3RX8 000-0GF42-1AA6</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1 ▶      | <b>3RX8 000-0GF42-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1.5 ▶    | <b>3RX8 000-0GF42-1AB5</b> |
| <br>                                                                                           | <b>Cable</b><br>with M8 socket (female) and M12 plug (male)<br>Connection to 3RX8 000-0JA0 distributor (metal union nut), PUR cable<br>Caution:<br>Only terminal 4 (NO) is connected.  | A, L               | 3 × 0.34 mm <sup>2</sup> , Black | 0.6 ▶    | <b>3RX8 000-0FF32-1AA6</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1 ▶      | <b>3RX8 000-0FF32-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1.5 ▶    | <b>3RX8 000-0FF32-1AB5</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        | B, L               | 4 × 0.34 mm <sup>2</sup> , Black | 0.6 ▶    | <b>3RX8 000-0FF42-1AA6</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1 ▶      | <b>3RX8 000-0FF42-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 1.5 ▶    | <b>3RX8 000-0FF42-1AB5</b> |
| <br><br> | <b>Cable</b><br>with M8 socket (female) and M8 plug (male), PUR cable                                                                                                                  | A                  | 3 × 0.34 mm <sup>2</sup> , Black | 1 ▶      | <b>3RX8 000-0EF32-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 2 ▶      | <b>3RX8 000-0EF32-1AC0</b> |
|                                                                                                                                                                                                                                                                  | <b>Cable</b><br>with M8 angular socket (female) and M8 plug (male), PUR cable                                                                                                          | A                  | 3 × 0.34 mm <sup>2</sup> , Black | 1 ▶      | <b>3RX8 000-0EG32-1AB0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | 2 ▶      | <b>3RX8 000-0EG32-1AC0</b> |
|                                                                                                                                                                                                                                                                  | <b>Cables, 20 m, black</b><br>According to the number of cores, the cables can be used for all inductive proximity switches, sonar proximity switches and optical proximity switches.  |                    | 3 × 0.34 mm <sup>2</sup>         | ▶        | <b>3RX8 000-0KA32-1AR0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | ▶        | <b>3RX8 000-0KA42-1AR0</b> |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  | ▶        | <b>3RX8 000-0KA42-1GR0</b> |
|                                                                                                                                                                               | <b>T-distributor, M12 connection</b><br>For connection of thru-beam sensors to AS-Interface modules                                                                                    |                    |                                  | ▶        | <b>3RX8 000-0JA20</b>      |
|                                                                                                                                                                                                                                                                  |                                                                                                                                                                                        |                    |                                  |          |                            |

<sup>1)</sup> For terminal assignment, see page 2/273.

▶ Preferred type, available from stock.

## Schematics

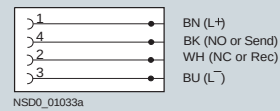
### Plug connections

#### Type A, E



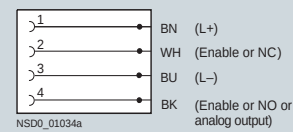
proximity switches with NO contact

#### Type B, F, L, N, P



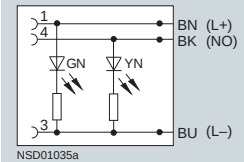
proximity switches with NC/NO contact

#### Type B, F, L, N, P



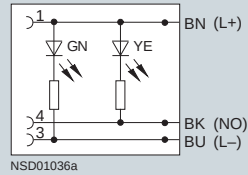
sonar proximity switches in M18 compact series

#### Type C, H



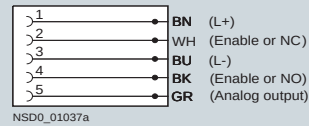
proximity switches with NO contact, npn

#### Type D



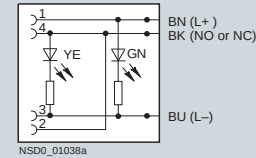
proximity switches with NO contact, npn

#### Type G, M



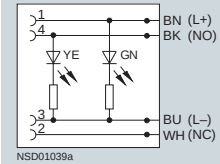
proximity switches with NC/NO contact, sonar proximity switches M30 K2 and M30 K3 compact series

#### Type J



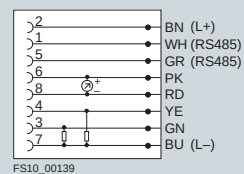
proximity switch with NC or NO contact, npn

#### Type K



proximity switch with NO contact or NC/NO contact, npn

#### Type O



PXQ530/540 proximity switch

BN = Brown  
BK = Black  
WH = White

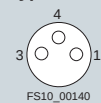
BU = Blue  
GR = Gray  
GN = Green

YE = Yellow  
PK = Pink  
RD = Red

### Pin assignment

M8 wiring for cable plugs and angular cable plugs

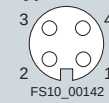
#### Type A, C, D



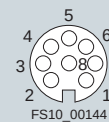
#### Type B



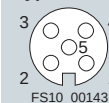
#### Type E, F, H, J, K, L, N



#### Type O



#### Type G, M



# Proximity switches

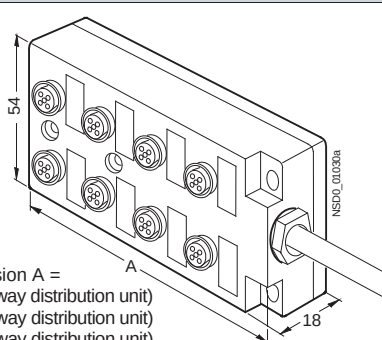
## Accessories

### Distributors

#### Technical specifications

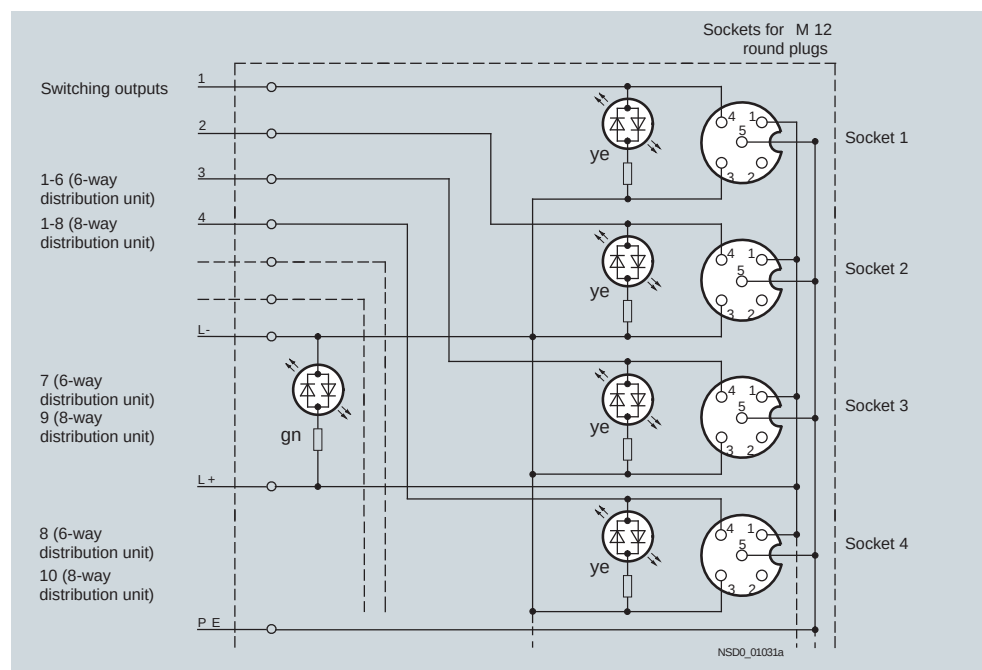
| Type                              | 3RX8 000-0JA                                               |             |
|-----------------------------------|------------------------------------------------------------|-------------|
| Operational voltage               | V DC                                                       | 24          |
| Max. current per switching output | A                                                          | 2           |
| Connections                       | M12 connector-in connections (socket in distribution unit) |             |
| Core identification, PUR cable    | in color                                                   |             |
| Display                           |                                                            |             |
| • Per output                      | Yellow LED                                                 |             |
| • Operational voltage             | Green LED                                                  |             |
| Enclosure material                | Molded plastic                                             |             |
| Degree of protection              | IP65, in inserted and locked state                         |             |
| Operating temperature             | °C                                                         | -15 ... +80 |

#### Selection and Ordering data

| Type                                                                                                                                                                                                         | Order No.                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Dimension A =<br/>82 (4-way distribution unit)<br/>100 (6-way distribution unit)<br/>127 (8-way distribution unit)</p> | <b>Distribution units, quadruple</b><br>• 5 m PUR line ▶ <b>3RX8 000-0JA40-1AF0</b><br>• 10 m PUR line ▶ <b>3RX8 000-0JA40-1AL0</b> |
|                                                                                                                                                                                                              | <b>Distribution units, 6x</b><br>• 5 m PUR line ▶ <b>3RX8 000-0JA60-1AF0</b><br>• 10 m PUR line ▶ <b>3RX8 000-0JA60-1AL0</b>        |
|                                                                                                                                                                                                              | <b>Distribution units, 8x</b><br>• 5 m PUR line ▶ <b>3RX8 000-0JA80-1AF0</b><br>• 10 m PUR line ▶ <b>3RX8 000-0JA80-1AL0</b>        |
|                                                                                                                                                                                                              | <b>Distributors</b> ▶ <b>3RX8 000-0JA80</b><br>Preassembly possible, with connecting hood                                           |

▶ Preferred type, available from stock.

#### Schematics



# Proximity switches

## Accessories

### Sensor assembly system

#### Overview



Sensor assembly system

#### Selection and Ordering data

Order No.

##### Sensor assembly system

Consisting of:

Mounting base for sensor assembly system, with 12 mm hole for inserting round rod

▶ **3RX7 322**

Holding plate for sensor assembly system, for mounting on 12 mm round rod, suitable for all cubic proximity switches

▶ **3RX7 326**

Round rod for sensor assembly system, 12 mm diameter

- 200 mm long

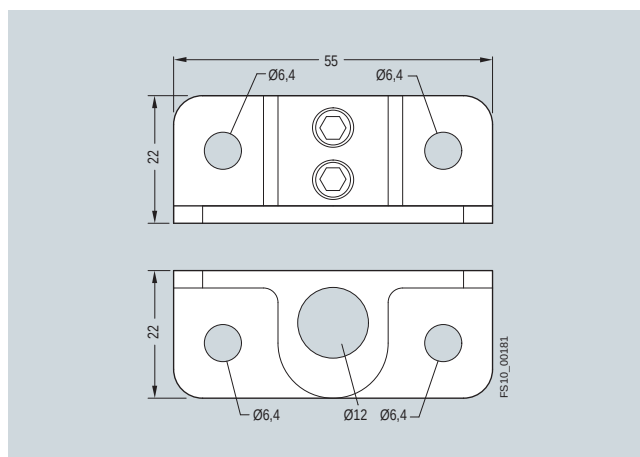
▶ **3RX7 315**

- 300 mm long

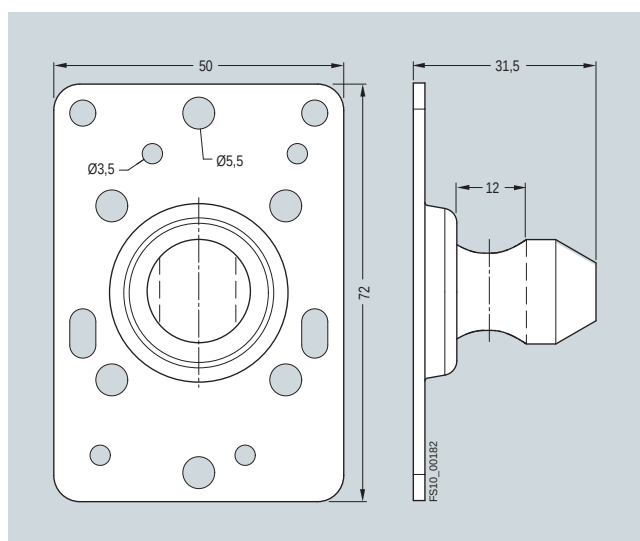
▶ **3RX7 316**

▶ Preferred type, available from stock.

#### Dimensions

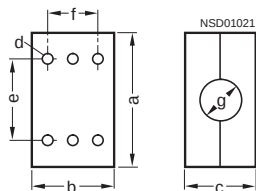
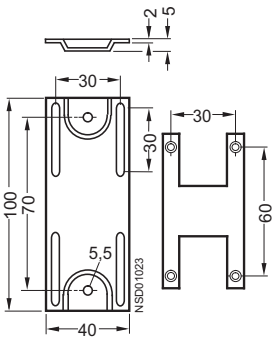
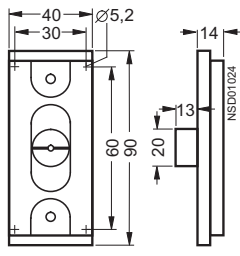


Mounting base 3RX7 322



Holding plate for accommodating 3RX7 326 sensors

#### Selection and Ordering data

| Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          | Order No.                                                                                       |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------|-----------|-----------|----------|----------|---|----|----|----|----|---|----|----|----|----|---|------|----|----|----|---|-------|-------|-------|-------|---|----|----|----|----|---|------|------|------|------|---|-----|------|------|------|--|----------|-----------|-----------|-----------|------------------------------------------------------------------------------------------------------------|
| <div>32SX6 281 to 3SX6 284</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |                                                                                                 |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>Fixing clamp<br/>(molded plastic, supplied without fixing screws)</div> <div>for proximity switches with thread</div> <table><thead><tr><th></th><th>3SX6 281</th><th>3SX6 282</th><th>3SX6 283</th><th>3SX6 284</th></tr></thead><tbody><tr><td>a</td><td>26</td><td>36</td><td>45</td><td>58</td></tr><tr><td>b</td><td>22</td><td>30</td><td>30</td><td>30</td></tr><tr><td>c</td><td>11,6</td><td>18</td><td>26</td><td>36</td></tr><tr><td>d</td><td>Ø 3.5</td><td>Ø 4.5</td><td>Ø 4.5</td><td>Ø 4.5</td></tr><tr><td>e</td><td>16</td><td>24</td><td>32</td><td>44</td></tr><tr><td>f</td><td>12.6</td><td>18.5</td><td>19.6</td><td>19.6</td></tr><tr><td>g</td><td>7.9</td><td>11.9</td><td>18.0</td><td>29.8</td></tr><tr><td></td><td>(for M8)</td><td>(for M12)</td><td>(for M18)</td><td>(for M30)</td></tr></tbody></table> |          |                                                                                                 | 3SX6 281  | 3SX6 282  | 3SX6 283 | 3SX6 284 | a | 26 | 36 | 45 | 58 | b | 22 | 30 | 30 | 30 | c | 11,6 | 18 | 26 | 36 | d | Ø 3.5 | Ø 4.5 | Ø 4.5 | Ø 4.5 | e | 16 | 24 | 32 | 44 | f | 12.6 | 18.5 | 19.6 | 19.6 | g | 7.9 | 11.9 | 18.0 | 29.8 |  | (for M8) | (for M12) | (for M18) | (for M30) | <div>M8</div> <div>M12</div> <div>M18</div> <div>M30</div> <div></div> <div></div> <div></div> <div></div> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3SX6 281 | 3SX6 282                                                                                        | 3SX6 283  | 3SX6 284  |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26       | 36                                                                                              | 45        | 58        |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 22       | 30                                                                                              | 30        | 30        |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 11,6     | 18                                                                                              | 26        | 36        |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ø 3.5    | Ø 4.5                                                                                           | Ø 4.5     | Ø 4.5     |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16       | 24                                                                                              | 32        | 44        |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| f                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.6     | 18.5                                                                                            | 19.6      | 19.6      |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7.9      | 11.9                                                                                            | 18.0      | 29.8      |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (for M8) | (for M12)                                                                                       | (for M18) | (for M30) |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>3SX9 910</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>Adapter</div> <div>from Pg 13.5 to NPT ½, for proximity switches with Pg 13.5 connecting thread</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>Adapter</div> <div>from M20 x 1.5 to NPT ½, for proximity switches with M20 connecting thread</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>Molded plastic M20 x 1.5 screwed joint</div> <div>6 mm long, with seal, for proximity switches with M20 connecting thread</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>3RX1 303</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>3RX1 304</div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |
| <div>Mounting bracket</div> <div>For snapping onto C-shaped rails, can slide up to 20 mm lengthwise, rotatable through 360°</div> <div>for cubic proximity switches</div> <div>3RG16 30, 3RG40 30, 3RG40 31, 3RG40 34, 3RG40 41, 3RG41 31, 3RG41 41, 3RG46 31</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> |           |           |          |          |   |    |    |    |    |   |    |    |    |    |   |      |    |    |    |   |       |       |       |       |   |    |    |    |    |   |      |      |      |      |   |     |      |      |      |  |          |           |           |           |                                                                                                            |

► Preferred type, available from stock.

# Appendix

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| 3RG1614-0AC00  | 2/257 | N     |
| 3RG1614-0LA00  | 2/259 | N     |
| 3RG1614-0LB00  | 2/259 | N     |
| 3RG1614-6AC00  | 2/258 | N     |
| 3RG1614-6LD00  | 2/259 | N     |
| 3RG1630-6AC00  | 2/258 | N     |
| 3RG1630-6LD00  | 2/259 | N     |
| 3RG1655-6AC00  | 2/258 | N     |
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| 3RG1673-0AG00  | 2/257 | N     |
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| 3RG4011-0AF00  | 2/142 | N     |
| 3RG4011-0AF05  | 2/147 | N     |
| 3RG4011-0AF33  | 2/147 | EAR99 |
| 3RG4011-0AG00  | 2/142 | N     |
| 3RG4011-0AG05  | 2/147 | N     |
| 3RG4011-0AG33  | 2/147 | N     |
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| 3RG4011-0GB00  | 2/142 | N     |
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| 3RG4011-3AA00  | 2/172 | N     |
| 3RG4011-3AB00  | 2/172 | N     |
| 3RG4011-3AF00  | 2/142 | N     |
| 3RG4011-3AF05  | 2/147 | N     |
| 3RG4011-3AG00  | 2/142 | N     |
| 3RG4011-3AG05  | 2/147 | N     |
| 3RG4011-3CC00  | 2/142 | N     |
| 3RG4011-3CC05  | 2/147 | N     |
| 3RG4011-3GA05  | 2/147 | N     |
| 3RG4011-3GB00  | 2/142 | N     |
| 3RG4011-3GB05  | 2/147 | N     |
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| 3RG4011-7AA00  | 2/172 | N     |
| 3RG4011-7AB00  | 2/172 | N     |
| 3RG4011-7AF00  | 2/142 | N     |
| 3RG4011-7AF05  | 2/147 | N     |
| 3RG4011-7AF33  | 2/147 | EAR99 |
| 3RG4011-7AG00  | 2/142 | N     |
| 3RG4011-7AG05  | 2/147 | N     |
| 3RG4011-7AG33  | 2/147 | N     |
| 3RG4011-7CC00  | 2/142 | EAR99 |
| 3RG4011-7CC05  | 2/147 | EAR99 |
| 3RG4011-7GA33  | 2/147 | EAR99 |
| 3RG4011-7GB33  | 2/147 | N     |
| 3RG4011-7JB00  | 2/143 | EAR99 |

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| 3RG4012-0AF01      | 2/148        | EAR99  |
| 3RG4012-0AF30      | 2/174        | EAR99  |
| 3RG4012-0AF33      | 2/148        | EAR99  |
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| 3RG4012-0AG31      | 2/174        | EAR99  |
| 3RG4012-0AG33      | 2/148        | N      |
| 3RG4012-0CD00      | 2/148        | EAR99  |
| 3RG4012-0CD00-0XA0 | 2/230        | EAR99  |
| 3RG4012-0CD00-0XB0 | 2/230        | EAR99  |
| 3RG4012-0CD10      | 2/148        | N      |
| 3RG4012-0GA00      | 2/148        | EAR99  |
| 3RG4012-0GA30      | 2/174        | EAR99  |
| 3RG4012-0GA33      | 2/148        | N      |
| 3RG4012-0GB00      | 2/148        | EAR99  |
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| 3RG4012-0GB31      | 2/174        | EAR99  |
| 3RG4012-0GB33      | 2/148        | EAR99  |
| 3RG4012-0JB00      | 2/149        | EAR99  |
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| 3RG4012-0KB00      | 2/173        | EAR99  |
| 3RG4012-3AA00      | 2/173        | N      |
| 3RG4012-3AA31-4AA0 | 2/234        | EAR99H |
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| 3RG4012-3AG33      | 2/148        | N      |
| 3RG4012-3CD00      | 2/148        | EAR99  |
| 3RG4012-3CD00-0XA0 | 2/230        | EAR99  |
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| 3RG4012-3CD11      | 2/148        | N      |
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| 3RG4013-0AB00      | 2/185        | EAR99  |
| 3RG4013-0AB30-4AA0 | 2/235        | EAR99H |
| 3RG4013-0AB31-4AA0 | 2/235        | EAR99H |
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| 3RG4013-0AF30      | 2/186        | EAR99  |
| 3RG4013-0AF33      | 2/157        | EAR99  |
| 3RG4013-0AG01      | 2/157        | EAR99  |
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| 3RG4013-0CD00-0XB0 | 2/231        | EAR99  |
| 3RG4013-0GA00      | 2/157        | N      |
| 3RG4013-0GA30      | 2/186        | EAR99  |
| 3RG4013-0GA33      | 2/157        | EAR99  |
| 3RG4013-0GB00      | 2/157        | EAR99  |
| 3RG4013-0GB30      | 2/186        | EAR99  |
| 3RG4013-0GB31      | 2/186        | EAR99  |
| 3RG4013-0GB33      | 2/157        | EAR99  |
| 3RG4013-0JB00      | 2/159        | EAR99  |
| 3RG4013-0KA00      | 2/185        | EAR99  |
| 3RG4013-0KB00      | 2/185        | N      |
| 3RG4013-3AA00      | 2/185        | EAR99  |
| 3RG4013-3AA31-4AA0 | 2/235        | EAR99H |
| 3RG4013-3AB00      | 2/185        | EAR99  |
| 3RG4013-3AB31-4AA0 | 2/235        | EAR99H |
| 3RG4013-3AF01      | 2/157        | EAR99  |
| 3RG4013-3AF33      | 2/157        | EAR99  |
| 3RG4013-3AG01      | 2/157        | EAR99  |
| 3RG4013-3AG31      | 2/186        | EAR99  |
| 3RG4013-3AG33      | 2/157        | EAR99  |
| 3RG4013-3CD00      | 2/157        | EAR99  |
| 3RG4013-3CD00-0XA0 | 2/231        | EAR99  |
| 3RG4013-3CD00-0XB0 | 2/231        | EAR99  |
| 3RG4013-3GA00      | 2/157        | EAR99  |
| 3RG4013-3GA33      | 2/157        | EAR99  |
| 3RG4013-3GB00      | 2/157        | EAR99  |
| 3RG4013-3GB33      | 2/157        | EAR99  |
| 3RG4013-3JB00      | 2/159        | EAR99  |
| 3RG4013-3KA00      | 2/185        | EAR99  |
| 3RG4013-3KB00      | 2/185        | EAR99  |
| <b>3RG4014</b>     |              |        |
| 3RG4014-0AA00      | 2/192        | EAR99  |
| 3RG4014-0AA30-4AA0 | 2/237        | EAR99H |
| 3RG4014-0AA31-4AA0 | 2/237        | EAR99H |
| 3RG4014-0AB00      | 2/192        | EAR99  |
| 3RG4014-0AB30-4AA0 | 2/237        | EAR99H |
| 3RG4014-0AB31-4AA0 | 2/237        | EAR99H |
| 3RG4014-0AF01      | 2/162        | EAR99  |
| 3RG4014-0AF30      | 2/193        | EAR99  |
| 3RG4014-0AF33      | 2/162        | EAR99  |
| 3RG4014-0AG01      | 2/162        | EAR99  |
| 3RG4014-0AG30      | 2/193        | EAR99  |
| 3RG4014-0AG31      | 2/194        | EAR99  |
| 3RG4014-0AG33      | 2/162        | EAR99  |
| 3RG4014-0CD00      | 2/162, 2/163 | EAR99  |
| 3RG4014-0CD00-0XA0 | 2/232        | EAR99  |
| 3RG4014-0CD00-0XB0 | 2/232        | EAR99  |
| 3RG4014-0GA00      | 2/162        | EAR99  |
| 3RG4014-0GA30      | 2/193        | EAR99  |
| 3RG4014-0GA33      | 2/162        | EAR99  |
| 3RG4014-0GB00      | 2/162        | EAR99  |
| 3RG4014-0GB30      | 2/193        | EAR99  |