

## Proximity sensors SLE..., inductive

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# Proximity sensors SIE..., inductive

Product range overview

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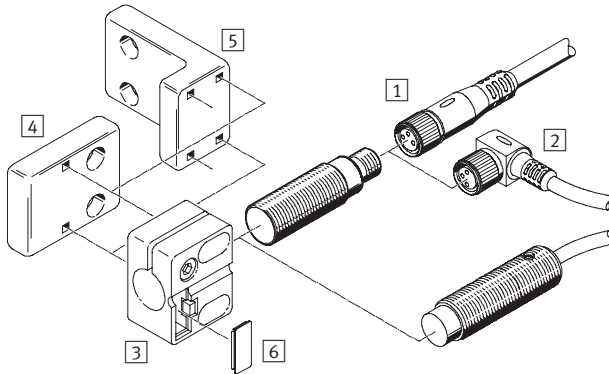
| Version                                                        | Type                                                | Operating voltage                  | Switching output/analogue output | Mounting type            | Size                                    | → Page/Internet |
|----------------------------------------------------------------|-----------------------------------------------------|------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------|
| <b>Reduction factor, material-specific</b>                     |                                                     |                                    |                                  |                          |                                         |                 |
| Standard switching distance                                    | SIEN<br>Basic version                               | 10 ... 30 V DC<br>15 ... 34 V DC   | PNP<br>NPN                       | Flush<br>Non-flush       | Ø 4 mm, M5, Ø 6.5 mm, M8, M12, M18, M30 | 5               |
|                                                                | SIEN-...-PA<br>Polyamide housing                    | 10 ... 30 V DC                     | PNP<br>NPN                       | Flush<br>Non-flush       | M12, M18, M30                           | 11              |
|                                                                | SIED<br>Basic version                               | 20 ... 265 V AC<br>20 ... 320 V DC | Contactless, 2-wire              | Flush<br>Non-flush       | M12, M18, M30                           | 14              |
|                                                                | SIED-...-PA<br>Polyamide housing                    | 20 ... 250 V AC<br>10 ... 300 V DC | Contactless, 2-wire              | Flush<br>Non-flush       | M12, M18, M30                           | 19              |
|                                                                | SIES<br>Special design                              | 10 ... 30 V DC                     | PNP<br>NPN                       | Flush                    | 5x5x25 mm ...<br>40x40x120 mm           | 22              |
|                                                                | Increased switching distance                        |                                    |                                  |                          |                                         |                 |
| Increased switching distance                                   | SIEH<br>Basic version                               | 10 ... 30 V DC<br>15 ... 34 V DC   | PNP<br>NPN                       | Flush                    | Ø 3 mm, M12, M18                        | 26              |
|                                                                | SIEH-...-CR<br>Stainless steel housing              | 10 ... 30 V DC                     | PNP<br>NPN                       | Flush                    | M12, M18                                | 30              |
| Analogue output                                                | SIEA                                                | 15 ... 30 V DC                     | 0 ... 10 V and<br>4 ... 20 mA    | Flush                    | M8, M12, M18, M30                       | 33              |
| <b>Reduction factor 1 for all metals, welding field immune</b> |                                                     |                                    |                                  |                          |                                         |                 |
| Increased switching distance                                   | SIEF<br>Basic version                               | 10 ... 65 V DC                     | PNP<br>NPN                       | Flush<br>Partially flush | M8, M12, M18, M30<br>40x40x65 mm        | 36              |
|                                                                | SIEF-...-WA<br>Housing resistant to welding spatter | 10 ... 30 V DC                     | PNP<br>NPN                       | Flush<br>Partially flush | M12, M18, M30                           | 42              |

## Proximity sensors SIE..., inductive

Peripherals overview

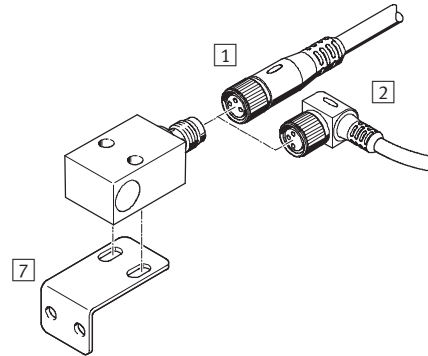
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### SIE...



| Mounting attachments and accessories |                                                    | → Page/<br>Internet |
|--------------------------------------|----------------------------------------------------|---------------------|
| 1                                    | Connecting cable, straight socket<br>NEBU-M...G... | 46                  |
| 2                                    | Connecting cable, angled socket<br>NEBU-M...W...   | 46                  |
| 3                                    | Sensor bracket<br>SIEZ-...B                        | 46                  |
| 4                                    | Sensor bracket<br>SIEZ-UV                          | 46                  |
| 5                                    | Sensor bracket<br>SIEZ-UH                          | 46                  |
| 6                                    | Inscription label<br>SIEZ-LB                       | 46                  |
| 7                                    | Mounting bracket<br>HV-M5                          | 46                  |

### SIES-V3B



| Mounting attachments and accessories |                           | → Page/<br>Internet |
|--------------------------------------|---------------------------|---------------------|
| –                                    | Foot mounting<br>HBN      | 46                  |
| –                                    | Foot mounting<br>HBE      | 46                  |
| –                                    | Flange mounting<br>FBN    | 46                  |
| –                                    | Stop for proximity<br>SDA | 46                  |

# Proximity sensors SIE..., inductive

Type codes

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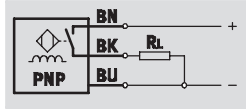
|                                   |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
|-----------------------------------|--------------------------------------------------------------|-----|---|---|---|----|----|---|---|---|---|---|---|---|---|--|
|                                   |                                                              | SIE | N | - | M | 30 | NB | - | P | S | - | K | - | L | - |  |
| <b>Type</b>                       |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| SIE                               | Proximity sensor, inductive                                  |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Type</b>                       |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| A                                 | With analogue output                                         |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| D                                 | For DC and AC voltage                                        |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| F                                 | With reduction factor 1 for all metals, welding field immune |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| H                                 | With increased switching distance                            |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| N                                 | With standard switching distance                             |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| S                                 | Special design                                               |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Design</b>                     |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| -                                 | Round                                                        |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| M                                 | Metric thread                                                |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| Q                                 | Block-shaped                                                 |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| V3                                | Block-shaped                                                 |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Size</b>                       |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Mounting type</b>              |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| B                                 | Flush                                                        |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| NB                                | Non-flush                                                    |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| S                                 | Partially flush                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Electrical output</b>          |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| P                                 | Switching output PNP                                         |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| N                                 | Switching output NPN                                         |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| Z                                 | 2-wire output                                                |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| PU                                | Analogue output 0 ... 10 V                                   |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| UI                                | Analogue output 0 ... 10 V and 4 ... 20 mA                   |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Switching element function</b> |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| S                                 | N/O contact                                                  |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| O                                 | N/C contact                                                  |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| A                                 | Antivalent                                                   |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Electrical connection</b>      |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| K                                 | Cable                                                        |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| S                                 | Plug                                                         |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| X                                 | Screw terminals                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Display</b>                    |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| -                                 | Without display                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| L                                 | Switching status                                             |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| 2L                                | Switching status and ready status                            |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| <b>Version</b>                    |                                                              |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| -                                 | Standard                                                     |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| CR                                | Stainless steel housing                                      |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| PA                                | Polyamide housing                                            |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |
| WA                                | Housing resistant to welding spatter                         |     |   |   |   |    |    |   |   |   |   |   |   |   |   |  |

# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

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Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Standard switching distance
- For DC voltage
- Round design



| General technical data                  |                                                     |    |        |    |     |     |     |
|-----------------------------------------|-----------------------------------------------------|----|--------|----|-----|-----|-----|
| Size                                    | 4 mm                                                | M5 | 6.5 mm | M8 | M12 | M18 | M30 |
| Conforms to                             | EN 60947-5-2                                        |    |        |    |     |     |     |
| Certification                           | cULus listed (OL)                                   |    |        |    |     |     |     |
|                                         | C-Tick                                              |    |        |    |     |     |     |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup>                   |    |        |    |     |     |     |
| Note on materials                       | Free of copper and PTFE                             |    |        |    |     |     |     |
|                                         | RoHS-compliant                                      |    |        |    |     |     |     |
|                                         | –                                                   |    |        |    |     |     |     |
|                                         | Contains PWIS (paint-wetting impairment substances) |    |        |    |     |     |     |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |                  |    |        |    |     |     |     |
|--------------------------------|------------------|----|--------|----|-----|-----|-----|
| Size                           | 4 mm             | M5 | 6.5 mm | M8 | M12 | M18 | M30 |
| Ambient temperature            | [°C] –25 ... +70 |    |        |    |     |     |     |

| Output, general          |  |       |      |        |      |     |      |           |      |     |     |      |
|--------------------------|--|-------|------|--------|------|-----|------|-----------|------|-----|-----|------|
| Mounting type            |  | Flush |      |        |      |     |      | Non-flush |      |     |     |      |
| Size                     |  | 4 mm  | M5   | 6.5 mm | M8   | M12 | M18  | M30       | M8   | M12 | M18 | M30  |
| Repetition accuracy [mm] |  | 0.04  | 0.04 | 0.07   | 0.07 | 0.1 | 0.25 | 0.5       | 0.12 | 0.2 | 0.4 | 0.75 |

| Switching output           |             |         |        |        |        |        |        |             |        |        |        |        |
|----------------------------|-------------|---------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|
| Mounting type              | Flush       |         |        |        |        |        |        | Non-flush   |        |        |        |        |
| Size                       | 4 mm        | M5      | 6.5 mm | M8     | M12    | M18    | M30    | M8          | M12    | M18    | M30    |        |
| Switching output           | PNP         |         |        |        |        |        |        | PNP         |        |        |        |        |
|                            | NPN         |         |        |        |        |        |        | NPN         |        |        |        |        |
| Switching element function | N/O contact |         |        |        |        |        |        | N/O contact |        |        |        |        |
|                            | N/C contact |         |        |        |        |        |        | N/C contact |        |        |        |        |
| Rated operating distance   | [mm]        | 0.8     | 0.8    | 1.5    | 1.5    | 2      | 5      | 10          | 2.5    | 4      | 8      | 15     |
| Assured switching distance | [mm]        | 0.64    | 0.64   | 1.21   | 1.21   | 1.62   | 4.05   | 8.1         | 2.03   | 3.24   | 6.48   | 12.15  |
|                            |             |         |        |        |        |        |        |             |        |        |        |        |
| Reduction factors          |             |         |        |        |        |        |        |             |        |        |        |        |
| Aluminium                  | 0.4         | 0.4     | 0.25   | 0.25   | 0.4    | 0.4    | 0.45   | 0.25        | 0.5    | 0.5    | 0.5    |        |
| Stainless steel St 18/8    | 0.7         | 0.7     | 0.7    | 0.7    | 0.6    | 0.8    | 0.8    | 0.7         | 0.9    | 0.8    | 0.85   |        |
| Copper                     | 0.3         | 0.3     | 0.2    | 0.2    | 0.3    | 0.4    | 0.4    | 0.2         | 0.5    | 0.4    | 0.43   |        |
| Brass                      | 0.4         | 0.4     | 0.35   | 0.35   | 0.5    | 0.5    | 0.55   | 0.35        | 0.6    | 0.5    | 0.53   |        |
| Steel St 37                | 1.0         | 1.0     | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0         | 1.0    | 1.0    | 1.0    |        |
|                            |             |         |        |        |        |        |        |             |        |        |        |        |
| Hysteresis                 | [mm]        | –       | –      | ≤ 0.07 | ≤ 0.07 | ≤ 0.18 | ≤ 0.55 | ≤ 1.1       | ≤ 0.12 | ≤ 0.36 | ≤ 0.88 | ≤ 1.65 |
| Max. switching frequency   | [Hz]        | 3,000   | 3,000  | 5,000  | 5,000  | 3,000  | 2,000  | 1,200       | 3,000  | 2,000  | 2,000  | 700    |
| Max. output current        | [mA]        | 200     |        |        |        |        |        |             |        |        |        |        |
| Voltage drop               | [V]         | 0 ... 2 |        |        |        |        |        |             |        |        |        |        |

# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

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| Output, additional data          |            |    |        |    |     |     |     |
|----------------------------------|------------|----|--------|----|-----|-----|-----|
| Size                             | 4 mm       | M5 | 6.5 mm | M8 | M12 | M18 | M30 |
| Protection against short circuit | Pulsed     |    |        |    |     |     |     |
| Inductive protective circuit     | Integrated |    |        |    |     |     |     |
| Induced voltage protection       | Integrated |    | –      |    |     |     |     |

| Electronic components       |        |                                |    |        |     |     |     |     |
|-----------------------------|--------|--------------------------------|----|--------|-----|-----|-----|-----|
| Size                        |        | 4 mm                           | M5 | 6.5 mm | M8  | M12 | M18 | M30 |
| Operating voltage range     | [V DC] | 10 ... 30                      |    |        |     |     |     |     |
| Residual ripple             | [%]    | 10                             |    |        | ±10 |     |     | ±20 |
| Idle current                | [mA]   | 0 ... 10                       |    |        |     |     |     |     |
| Reverse polarity protection |        | For all electrical connections |    |        |     |     |     |     |

| Electromechanical components |                   |                   |                   |                   |                    |                    |                    |
|------------------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| Size                         | 4 mm              | M5                | 6.5 mm            | M8                | M12                | M18                | M30                |
| Cable                        |                   |                   |                   |                   |                    |                    |                    |
| Electrical connection        | Cable, 3-wire     |                   |                   |                   |                    |                    |                    |
| Cable length [m]             | 2.5               |                   |                   |                   |                    |                    |                    |
| Cable sheath material        | PUR               |                   |                   |                   |                    |                    |                    |
|                              |                   |                   |                   |                   |                    |                    |                    |
| Plug                         |                   |                   |                   |                   |                    |                    |                    |
| Electrical connection        | Plug, M8x1, 3-pin | Plug, M8x1, 3-pin | Plug, M8x1, 3-pin | Plug, M8x1, 3-pin | Plug, M12x1, 3-pin | Plug, M12x1, 3-pin | Plug, M12x1, 3-pin |

| Mechanical components  |                            |              |                     |              |           |                     |           |       |           |       |           |  |
|------------------------|----------------------------|--------------|---------------------|--------------|-----------|---------------------|-----------|-------|-----------|-------|-----------|--|
| Size                   | 4 mm                       | M5           | 6.5 mm              | M8           | M12       | M18                 | M30       |       |           |       |           |  |
| Attachment type        | Clamped                    | Via lock nut | Clamped             | Via lock nut |           |                     |           |       |           |       |           |  |
| Mounting type          | Flush                      |              |                     | Flush        | Non-flush | Flush               | Non-flush | Flush | Non-flush | Flush | Non-flush |  |
| Tightening torque [Nm] | –                          | 2            | –                   | –            | –         | 20                  | 40        |       |           |       |           |  |
| Cable                  |                            |              |                     |              |           |                     |           |       |           |       |           |  |
| Product weight [g]     | 48                         | 48           | 45                  | 53           | 53        | 110                 | 90        | 108   | 105       | 155   | 150       |  |
| Housing material       | High-alloy stainless steel |              |                     |              |           | Chrome-plated brass |           |       |           |       |           |  |
|                        | –                          | PA           |                     |              | –         |                     |           |       |           |       |           |  |
|                        | –                          | –            |                     |              | PBTP      |                     |           |       |           |       |           |  |
| Plug                   |                            |              |                     |              |           |                     |           |       |           |       |           |  |
| Product weight [g]     | 9                          | 9            | 4                   | 18           | 18        | 30                  | 25        | 43    | 40        | 100   | 100       |  |
| Housing material       | High-alloy stainless steel |              |                     |              |           | –                   |           |       |           |       |           |  |
|                        | –                          | –            | Chrome-plated brass |              |           |                     |           |       |           |       |           |  |
|                        |                            | PA           |                     |              |           |                     |           |       |           |       |           |  |
|                        |                            | –            |                     |              |           | PBTP                |           |       |           |       |           |  |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

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| Immissions/emissions                                      |      |            |            |    |      |            |     |
|-----------------------------------------------------------|------|------------|------------|----|------|------------|-----|
| Size                                                      | 4 mm | M5         | 6.5 mm     | M8 | M12  | M18        | M30 |
| Ambient temperature with flexible cable installation [°C] | –    | –5 ... +70 | –5 ... +70 |    |      | –5 ... +70 |     |
| Protection class                                          | –    |            | IP65       |    | –    |            |     |
|                                                           | IP67 |            | IP67       |    | IP67 |            |     |
| Surge strength [kV]                                       | –    | 1          | –          |    |      | 0.8        |     |
| Corrosion resistance class CRC <sup>1)</sup>              | –    | 4          | 2          |    |      | –          |     |
| Degree of contamination                                   | –    | 3          | –          |    |      | 3          |     |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

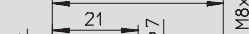
Corrosion resistance class 4 according to Festo standard 940 070

Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

| Pin allocation to EN 60947-5-2 |     |             |            |              |     |             |            |
|--------------------------------|-----|-------------|------------|--------------|-----|-------------|------------|
| M8x1, 3-pin                    |     |             |            | M12x1, 3-pin |     |             |            |
| N/O contact and N/C contact    |     |             |            | N/O contact  |     |             |            |
|                                | Pin | Wire colour | Allocation |              | Pin | Wire colour | Allocation |
|                                | 1   | Brown       | +          |              | 1   | Brown       | +          |
|                                | 3   | Blue        | –          |              | 3   | Blue        | –          |
|                                | 4   | Black       | Output     |              | 4   | Black       | Output     |
|                                |     |             |            |              |     |             |            |
|                                |     |             |            | N/C contact  |     |             |            |
|                                | Pin | Wire colour | Allocation |              | Pin | Wire colour | Allocation |
|                                | 1   | Brown       | +          |              | 1   | Brown       | +          |
|                                | 3   | Blue        | –          |              | 3   | Blue        | –          |
|                                | 2   | White       | Output     |              | 2   | White       | Output     |
|                                |     |             |            |              |     |             |            |

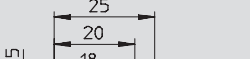
## Dimensions – 4 mm

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

| Flush fitting                                                                       |  | Plug                                                                                |  | <div><div>1</div> Connecting cable</div> <div><div>2</div> Active surface</div> <div><div>3</div> LED</div> <div><div>4</div> 4x LED</div> |
|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------|
| Cable                                                                               |  |                                                                                     |  |                                                                                                                                            |
|  |  |  |  |                                                                                                                                            |

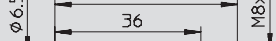
## Dimensions – M5

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

| Flush fitting                                                                       |  | Plug                                                                                |  | <div><div>1</div> Connecting cable</div> <div><div>2</div> Active surface</div> <div><div>3</div> LED</div> <div><div>4</div> 4x LED</div> |  |
|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------|--|
| Cable                                                                               |  |                                                                                     |  |                                                                                                                                            |  |
|  |  |  |  |                                                                                                                                            |  |

## Dimensions – 6.5 mm

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

|                                                                                     |                                                                                     |                                                                                                                                        |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--|
| Dimensions: 6.5 mm                                                                  |                                                                                     | Download and Data: <a href="#">Download and Data</a>                                                                                   |  |
| Flush fitting                                                                       |                                                                                     |                                                                                                                                        |  |
| Cable                                                                               | Plug                                                                                |                                                                                                                                        |  |
|  |  | <div><div>1</div>Connecting cable</div> <div><div>2</div>Active surface</div> <div><div>3</div>LED</div> <div><div>4</div>4x LED</div> |  |

# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

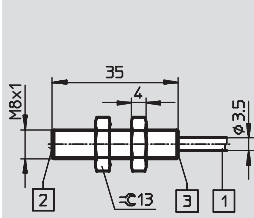
**FESTO**

## Dimensions – M8

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

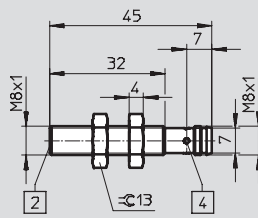
Flush fitting

Cable



1 Connecting cable

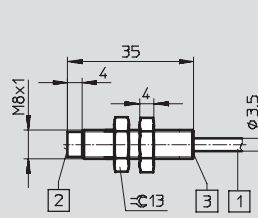
Plug



2 Active surface

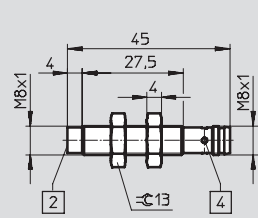
Non-flush fitting

Cable



3 LED

Plug



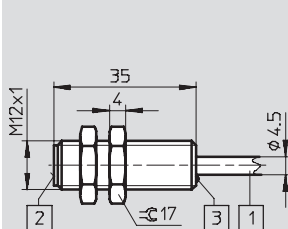
4 4x LED

## Dimensions – M12

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

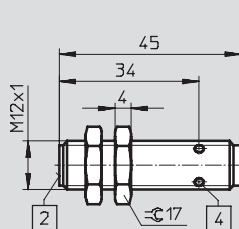
Flush fitting

Cable



1 Connecting cable

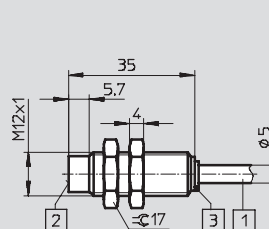
Plug



2 Active surface

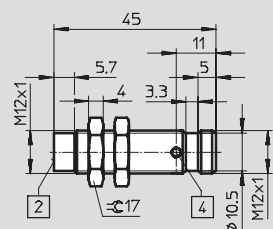
Non-flush fitting

Cable



3 LED

Plug



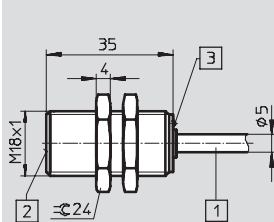
4 4x LED

## Dimensions – M18

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

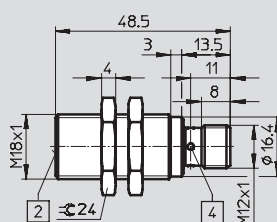
Flush fitting

Cable



1 Connecting cable

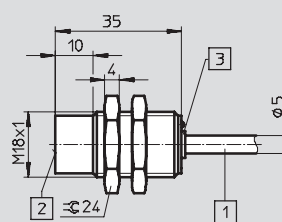
Plug



2 Active surface

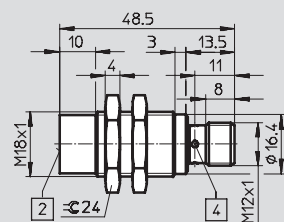
Non-flush fitting

Cable



3 LED

Plug



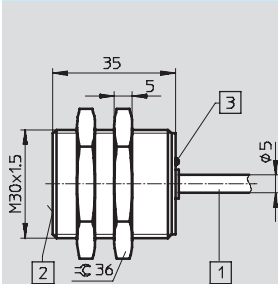
4 4x LED

## Dimensions – M30

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

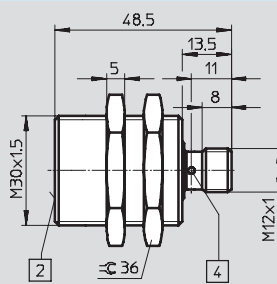
Flush fitting

Cable



1 Connecting cable

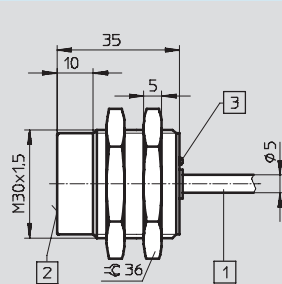
Plug



2 Active surface

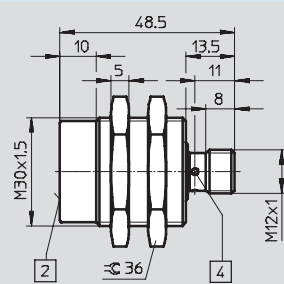
Non-flush fitting

Cable



3 LED

Plug



4 4x LED

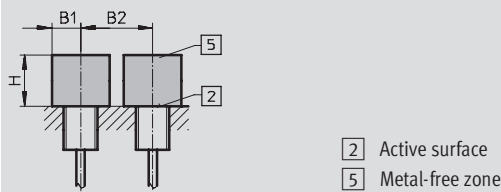
# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

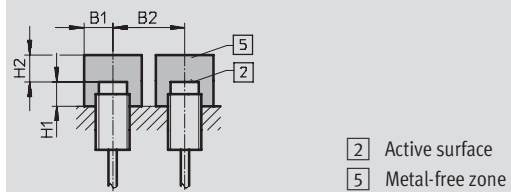
**FESTO**

## Fitting instructions

### Flush fitting



### Non-flush fitting



| Size   | B1  | B2  | H   |
|--------|-----|-----|-----|
| 4 mm   | 2.5 | 5   | 2   |
| M5     | 3.3 | 5   | 2.4 |
| 6.5 mm | 5   | 9.5 | 4.5 |
| M8     | 5.5 | 10  | 4.5 |
| M12    | 8   | 18  | 6   |
| M18    | 14  | 32  | 15  |
| M30    | 25  | 60  | 30  |

| Size | B1 | B2 | H1 | H2  |
|------|----|----|----|-----|
| M8   | 9  | 16 | 8  | 7.5 |
| M12  | 12 | 28 | 6  | 12  |
| M18  | 20 | 50 | 10 | 24  |
| M30  | 30 | 75 | 15 | 45  |

## Ordering data

| Size                                                                                | S <sub>n</sub> <sup>1)</sup><br>[mm] | Mounting<br>type | Switching<br>output | Switching<br>element function | Electrical connection |                  |          |                  |
|-------------------------------------------------------------------------------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|------------------|----------|------------------|
|                                                                                     |                                      |                  |                     |                               | Cable                 |                  | Plug     |                  |
|                                                                                     |                                      |                  |                     |                               | Part No.              | Type             | Part No. | Type             |
| 4 mm                                                                                |                                      |                  |                     |                               |                       |                  |          |                  |
|  | 0.8                                  | Flush            | PNP                 | N/O contact                   | 150362                | SIEN-4B-PS-K-L   | 150363   | SIEN-4B-PS-S-L   |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150366                | SIEN-4B-PO-K-L   | 150367   | SIEN-4B-PO-S-L   |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150360                | SIEN-4B-NS-K-L   | 150361   | SIEN-4B-NS-S-L   |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150364                | SIEN-4B-NO-K-L   | 150365   | SIEN-4B-NO-S-L   |
| M5                                                                                  |                                      |                  |                     |                               |                       |                  |          |                  |
|  | 0.8                                  | Flush            | PNP                 | N/O contact                   | 150370                | SIEN-M5B-PS-K-L  | 150371   | SIEN-M5B-PS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150374                | SIEN-M5B-PO-K-L  | 150375   | SIEN-M5B-PO-S-L  |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150368                | SIEN-M5B-NS-K-L  | 150369   | SIEN-M5B-NS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150372                | SIEN-M5B-NO-K-L  | 150373   | SIEN-M5B-NO-S-L  |
| 6.5 mm                                                                              |                                      |                  |                     |                               |                       |                  |          |                  |
|  | 1.5                                  | Flush            | PNP                 | N/O contact                   | 150378                | SIEN-6,5B-PS-K-L | 150379   | SIEN-6,5B-PS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150382                | SIEN-6,5B-PO-K-L | 150383   | SIEN-6,5B-PO-S-L |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150376                | SIEN-6,5B-NS-K-L | 150377   | SIEN-6,5B-NS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150380                | SIEN-6,5B-NO-K-L | 150381   | SIEN-6,5B-NO-S-L |
| M8                                                                                  |                                      |                  |                     |                               |                       |                  |          |                  |
|  | 1.5                                  | Flush            | PNP                 | N/O contact                   | 150386                | SIEN-M8B-PS-K-L  | 150387   | SIEN-M8B-PS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150390                | SIEN-M8B-PO-K-L  | 150391   | SIEN-M8B-PO-S-L  |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150384                | SIEN-M8B-NS-K-L  | 150385   | SIEN-M8B-NS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150388                | SIEN-M8B-NO-K-L  | 150389   | SIEN-M8B-NO-S-L  |
|  | 2.5                                  | Non-flush        | PNP                 | N/O contact                   | 150394                | SIEN-M8NB-PS-K-L | 150395   | SIEN-M8NB-PS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150398                | SIEN-M8NB-PO-K-L | 150399   | SIEN-M8NB-PO-S-L |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150392                | SIEN-M8NB-NS-K-L | 150393   | SIEN-M8NB-NS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150396                | SIEN-M8NB-NO-K-L | 150397   | SIEN-M8NB-NO-S-L |

1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

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| Ordering data                                                                       |                                      |                  |                     |                               |                       |                   |          |                   |
|-------------------------------------------------------------------------------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|-------------------|----------|-------------------|
| Size                                                                                | S <sub>n</sub> <sup>1)</sup><br>[mm] | Mounting<br>type | Switching<br>output | Switching<br>element function | Electrical connection |                   |          |                   |
|                                                                                     |                                      |                  |                     |                               | Cable                 |                   | Plug     |                   |
|                                                                                     |                                      |                  |                     |                               | Part No.              | Type              | Part No. | Type              |
| M12                                                                                 |                                      |                  |                     |                               |                       |                   |          |                   |
|    | 2.0                                  | Flush            | PNP                 | N/O contact                   | 150402                | SIEN-M12B-PS-K-L  | 150403   | SIEN-M12B-PS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150406                | SIEN-M12B-PO-K-L  | 150407   | SIEN-M12B-PO-S-L  |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150400                | SIEN-M12B-NS-K-L  | 150401   | SIEN-M12B-NS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150404                | SIEN-M12B-NO-K-L  | 150405   | SIEN-M12B-NO-S-L  |
|    | 4.0                                  | Non-flush        | PNP                 | N/O contact                   | 150410                | SIEN-M12NB-PS-K-L | 150411   | SIEN-M12NB-PS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150414                | SIEN-M12NB-PO-K-L | 150415   | SIEN-M12NB-PO-S-L |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150408                | SIEN-M12NB-NS-K-L | 150409   | SIEN-M12NB-NS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150412                | SIEN-M12NB-NO-K-L | 150413   | SIEN-M12NB-NO-S-L |
| M18                                                                                 |                                      |                  |                     |                               |                       |                   |          |                   |
|    | 5.0                                  | Flush            | PNP                 | N/O contact                   | 150418                | SIEN-M18B-PS-K-L  | 150419   | SIEN-M18B-PS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150422                | SIEN-M18B-PO-K-L  | 150423   | SIEN-M18B-PO-S-L  |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150416                | SIEN-M18B-NS-K-L  | 150417   | SIEN-M18B-NS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150420                | SIEN-M18B-NO-K-L  | 150421   | SIEN-M18B-NO-S-L  |
|    | 8.0                                  | Non-flush        | PNP                 | N/O contact                   | 150426                | SIEN-M18NB-PS-K-L | 150427   | SIEN-M18NB-PS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150430                | SIEN-M18NB-PO-K-L | 150431   | SIEN-M18NB-PO-S-L |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150424                | SIEN-M18NB-NS-K-L | 150425   | SIEN-M18NB-NS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150428                | SIEN-M18NB-NO-K-L | 150429   | SIEN-M18NB-NO-S-L |
| M30                                                                                 |                                      |                  |                     |                               |                       |                   |          |                   |
|  | 10.0                                 | Flush            | PNP                 | N/O contact                   | 150434                | SIEN-M30B-PS-K-L  | 150435   | SIEN-M30B-PS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150438                | SIEN-M30B-PO-K-L  | 150439   | SIEN-M30B-PO-S-L  |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150432                | SIEN-M30B-NS-K-L  | 150433   | SIEN-M30B-NS-S-L  |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150436                | SIEN-M30B-NO-K-L  | 150437   | SIEN-M30B-NO-S-L  |
|  | 15.0                                 | Non-flush        | PNP                 | N/O contact                   | 150442                | SIEN-M30NB-PS-K-L | 150443   | SIEN-M30NB-PS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150446                | SIEN-M30NB-PO-K-L | 150447   | SIEN-M30NB-PO-S-L |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 150440                | SIEN-M30NB-NS-K-L | 150441   | SIEN-M30NB-NS-S-L |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150444                | SIEN-M30NB-NO-K-L | 150445   | SIEN-M30NB-NO-S-L |

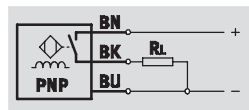
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIEN-...-PA, inductive

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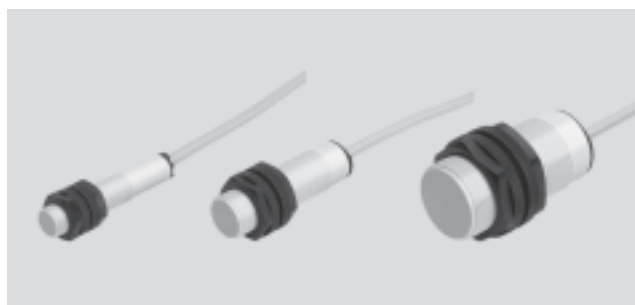
Technical data – Standard switching distance, polyamide housing

Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Standard switching distance
- Corrosion-resistant
- Polyamide housing
- For DC voltage
- Round design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Design                                  | Round                             |
| Conforms to                             | EN 60947-5-2                      |
| Certification                           | cULus listed (OL)<br>C-Tick       |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |
| Note on materials                       | Free of copper and PTFE           |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| Ambient temperature            | [°C] | –25 ... +70 |

| Output, general          |       |     |     |           |      |     |
|--------------------------|-------|-----|-----|-----------|------|-----|
| Mounting type            | Flush |     |     | Non-flush |      |     |
| Size                     | M12   | M18 | M30 | M12       | M18  | M30 |
| Repetition accuracy [mm] | 0.04  | 0.1 | 0.2 | 0.08      | 0.16 | 0.3 |

| Switching output                |             |      |     |             |      |       |
|---------------------------------|-------------|------|-----|-------------|------|-------|
| Mounting type                   | Flush       |      |     | Non-flush   |      |       |
| Size                            | M12         | M18  | M30 | M12         | M18  | M30   |
| Switching output                | PNP         |      |     | PNP         |      |       |
|                                 | NPN         |      |     | NPN         |      |       |
| Switching element function      | N/O contact |      |     | N/O contact |      |       |
| Rated operating distance [mm]   | 2           | 5    | 10  | 4           | 8    | 15    |
| Assured switching distance [mm] | 1.62        | 4.05 | 8.1 | 3.24        | 6.48 | 12.15 |

| Reduction factors           |      |               |               |             |               |              |               |
|-----------------------------|------|---------------|---------------|-------------|---------------|--------------|---------------|
| Aluminium                   |      | 0.35 ... 0.5  |               |             | 0.35 ... 0.5  |              |               |
| Stainless steel St 18/8     |      | 0.6 ... 1.0   |               |             | 0.6 ... 1.0   |              |               |
| Copper                      |      | 0.25 ... 0.45 |               |             | 0.25 ... 0.45 |              |               |
| Brass                       |      | 0.35 ... 0.5  |               |             | 0.35 ... 0.5  |              |               |
| Steel St 37                 |      | 1.0           |               |             | 1.0           |              |               |
|                             |      |               |               |             |               |              |               |
| Hysteresis                  | [mm] | 0.06 ... 0.3  | 0.15 ... 0.75 | 0.3 ... 1.5 | 0.12 ... 0.6  | 0.24 ... 1.2 | 0.45 ... 2.25 |
| Max. switching frequency DC | [Hz] | 2,000         | 1,000         | 500         | 2,000         | 1,000        | 500           |
| Max. output current         | [mA] | 200           |               |             | 200           |              |               |
| Voltage drop                | [V]  | ≤ 1.8         |               |             | ≤ 1.8         |              |               |

| Output, additional data          |        |
|----------------------------------|--------|
| Protection against short circuit | Pulsed |

# Proximity sensors SIEN-...-PA, inductive

Technical data – Standard switching distance, polyamide housing

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| Electronic components       |        |                                |
|-----------------------------|--------|--------------------------------|
| Operating voltage range     | [V DC] | 10 ... 30                      |
| Residual ripple             | [%]    | 10                             |
| Idle current                | [mA]   | ≤ 15                           |
| Reverse polarity protection |        | For all electrical connections |

| Electromechanical components |               |
|------------------------------|---------------|
| Electrical connection        | Cable, 3-wire |
| Cable length                 | [m] 2.5       |
| Cable sheath material        | PVC           |
| Insulating sheath material   | PVC           |

| Mechanical components |               |           |       |           |       |           |
|-----------------------|---------------|-----------|-------|-----------|-------|-----------|
| Size                  | M12           |           | M18   |           | M30   |           |
| Attachment type       | Via lock nut  |           |       |           |       |           |
| Mounting type         | Flush         | Non-flush | Flush | Non-flush | Flush | Non-flush |
| Tightening torque     | [Nm] –        | 25        | –     | 25        | 15    | 15        |
| Product weight        | [g] 41        | 38        | 124   | 141       | 48    | 48        |
| Housing material      | PA-reinforced |           |       |           |       |           |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

| Immissions/emissions                                 |                |     |     |           |     |     |
|------------------------------------------------------|----------------|-----|-----|-----------|-----|-----|
| Mounting type                                        | Flush          |     |     | Non-flush |     |     |
| Size                                                 | M12            | M18 | M30 | M12       | M18 | M30 |
| Ambient temperature with flexible cable installation | [°C] 0 ... +70 |     |     | 0 ... +70 |     |     |
| Protection class                                     | IP65<br>IP67   |     |     | IP67      |     |     |
| Corrosion resistance class CRC <sup>1)</sup>         | 4              |     |     | 4         |     |     |

- 1) Corrosion resistance class 4 according to Festo standard 940 070  
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

| Dimensions       |                | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a> |
|------------------|----------------|------------------------------------------------------------------------------------|
| M12              | M18            |                                                                                    |
|                  |                |                                                                                    |
| 1                | 2              | 3                                                                                  |
| Connecting cable | Active surface | LED                                                                                |

# Proximity sensors SIEN-...-PA, inductive

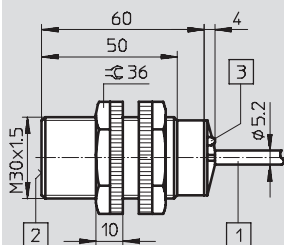
Technical data – Standard switching distance, polyamide housing

**FESTO**

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

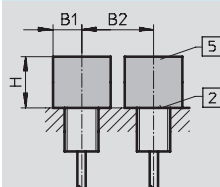
M30



- 1 Connecting cable
- 2 Active surface
- 3 LED

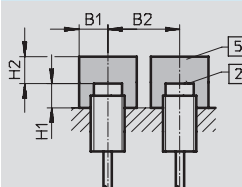
## Fitting instructions

### Flush fitting



- 2 Active surface
- 5 Metal-free zone

### Non-flush fitting



- 2 Active surface
- 5 Metal-free zone

| Size | B1 | B2 | H  |
|------|----|----|----|
| M12  | 18 | 24 | 6  |
| M18  | 27 | 36 | 15 |
| M30  | 45 | 60 | 30 |

| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M12  | 18 | 36 | 8  | 12 |
| M18  | 27 | 54 | 16 | 24 |
| M30  | 45 | 90 | 30 | 45 |

## Ordering data

| Size                                                                                | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output | Switching element function | Electrical connection |                      |
|-------------------------------------------------------------------------------------|------------------------------|---------------|------------------|----------------------------|-----------------------|----------------------|
|                                                                                     | [mm]                         |               |                  |                            | Cable                 |                      |
|                                                                                     |                              |               |                  |                            | Part No.              | Type                 |
| M12                                                                                 |                              |               |                  |                            |                       |                      |
|  | 2.0                          | Flush         | PNP              | N/O contact                | 538323                | SIEN-M12B-PS-K-L-PA  |
|                                                                                     |                              |               | NPN              |                            | 538324                | SIEN-M12B-NS-K-L-PA  |
|                                                                                     | 4.0                          | Non-flush     | PNP              |                            | 538329                | SIEN-M12NB-PS-K-L-PA |
|                                                                                     |                              |               | NPN              |                            | 538330                | SIEN-M12NB-NS-K-L-PA |
|                                                                                     |                              |               |                  |                            |                       |                      |
| M18                                                                                 |                              |               |                  |                            |                       |                      |
|  | 5.0                          | Flush         | PNP              | N/O contact                | 538325                | SIEN-M18B-PS-K-L-PA  |
|                                                                                     |                              |               | NPN              |                            | 538326                | SIEN-M18B-NS-K-L-PA  |
|                                                                                     | 8.0                          | Non-flush     | PNP              |                            | 538331                | SIEN-M18NB-PS-K-L-PA |
|                                                                                     |                              |               | NPN              |                            | 538332                | SIEN-M18NB-NS-K-L-PA |
|                                                                                     |                              |               |                  |                            |                       |                      |
| M30                                                                                 |                              |               |                  |                            |                       |                      |
|  | 10.0                         | Flush         | PNP              | N/O contact                | 538327                | SIEN-M30B-PS-K-L-PA  |
|                                                                                     |                              |               | NPN              |                            | 538328                | SIEN-M30B-NS-K-L-PA  |
|                                                                                     | 15.0                         | Non-flush     | PNP              |                            | 538333                | SIEN-M30NB-PS-K-L-PA |
|                                                                                     |                              |               | NPN              |                            | 538334                | SIEN-M30NB-NS-K-L-PA |

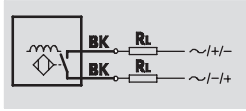
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIED, inductive

Technical data – Standard switching distance, for DC and AC voltage

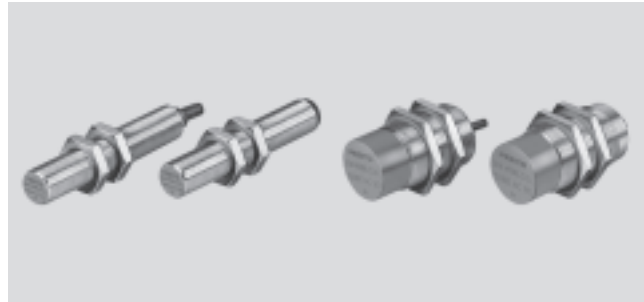
FESTO

Function<sup>1)</sup>



1) e.g. N/O contact with cable

- Standard switching distance
- For DC and AC voltage
- Round design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Design                                  | Round                             |
| Conforms to                             | EN 60947-5-2                      |
| Certification                           | cULus listed (OL)                 |
|                                         | C-Tick                            |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |
|                                         | To EU Low Voltage Directive       |
| Note on materials                       | Free of copper and PTFE           |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| Ambient temperature            | [°C] | –25 ... +85 |

| Output, general          |       |      |     |           |     |     |
|--------------------------|-------|------|-----|-----------|-----|-----|
| Mounting type            | Flush |      |     | Non-flush |     |     |
| Size                     | M12   | M18  | M30 | M12       | M18 | M30 |
| Repetition accuracy [mm] | 0.1   | 0.15 | 0.3 | 0.2       | 0.2 | 0.4 |

| Switching output                |                     |      |     |                     |     |      |
|---------------------------------|---------------------|------|-----|---------------------|-----|------|
| Mounting type                   | Flush               |      |     | Non-flush           |     |      |
| Size                            | M12                 | M18  | M30 | M12                 | M18 | M30  |
| Switching output                | Contactless, 2-wire |      |     | Contactless, 2-wire |     |      |
| Switching element function      | N/O contact         |      |     | N/O contact         |     |      |
|                                 | N/C contact         |      |     | N/C contact         |     |      |
| Rated operating distance [mm]   | 2                   | 5    | 10  | 4                   | 8   | 15   |
| Assured switching distance [mm] | 1.62                | 4.05 | 8.1 | 3.24                | 6.5 | 12.5 |

| Reduction factors           |      |               |               |              |               |              |              |
|-----------------------------|------|---------------|---------------|--------------|---------------|--------------|--------------|
| Aluminium                   | 0.5  | 0.4           | 0.4           | 0.6          | 0.4           | 0.5          |              |
| Stainless steel St 18/8     | 0.9  | 0.7           | 0.7           | 0.9          | 0.7           | 0.8          |              |
| Copper                      | 0.4  | 0.3           | 0.3           | 0.5          | 0.3           | 0.4          |              |
| Brass                       | 0.6  | 0.4           | 0.4           | 0.6          | 0.4           | 0.5          |              |
| Steel St 37                 | 1.0  | 1.0           | 1.0           | 1.0          | 1.0           | 1.0          |              |
|                             |      |               |               |              |               |              |              |
| Hysteresis                  | [mm] | 0.02 ... 0.44 | 0.04 ... 1.15 | 0.05 ... 2.2 | 0.03 ... 0.88 | 0.03 ... 1.9 | 0.04 ... 3.3 |
| Max. switching frequency AC | [Hz] | 25            |               |              | 25            |              |              |
| Max. switching frequency DC | [Hz] | 1,200         | 490           | 200          | 900           | 340          | 220          |
| Max. output current         | [mA] | 200           | 300           | 300          | 200           | 300          | 300          |
| Minimum load current        | [mA] | 5             |               |              | 5             |              |              |
| Voltage drop                | [V]  | ≤ 8           |               |              | ≤ 8           |              |              |

# Proximity sensors SIED, inductive

Technical data – Standard switching distance, for DC and AC voltage

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| Output, additional data          |    |
|----------------------------------|----|
| Protection against short circuit | No |

| Electronic components       |                                |            |
|-----------------------------|--------------------------------|------------|
| Operating voltage range AC  | [V AC]                         | 20 ... 265 |
| Operating voltage range DC  | [V DC]                         | 20 ... 320 |
| Idle current                | [mA]                           | ≤ 1.5      |
| Reverse polarity protection | For all electrical connections |            |

| Electromechanical components |               |                    |
|------------------------------|---------------|--------------------|
| Electrical connection        | Cable         | Plug               |
| Electrical connection        | Cable, 2-wire | Plug, M12x1, 2-pin |
| Cable length                 | [m]           | 2.5                |
| Cable sheath material        | PUR           | –                  |
| Insulating sheath material   | PVC           |                    |

| Mechanical components  |                         |      |                         |      |                         |      |
|------------------------|-------------------------|------|-------------------------|------|-------------------------|------|
| Size                   | M12                     |      | M18                     |      | M30                     |      |
| Electrical connection  | Cable                   | Plug | Cable                   | Plug | Cable                   | Plug |
| Attachment type        | Via lock nut            |      | Via lock nut            |      | Via lock nut            |      |
| Mounting type          | Flush                   |      | Flush                   |      | Flush                   |      |
|                        | Non-flush               |      | Non-flush               |      | Non-flush               |      |
| Tightening torque [Nm] | 10                      |      | 20                      |      | 40                      |      |
| Product weight [g]     | 90                      | 20   | 110                     | 50   | 190                     | 140  |
| Housing materials      | Nickel-plated brass, PA |      | Nickel-plated brass, PA |      | Nickel-plated brass, PA |      |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

| Immissions/emissions                                 |       |            |
|------------------------------------------------------|-------|------------|
| Electrical connection                                | Cable | Plug       |
| Ambient temperature with flexible cable installation | [°C]  | –5 ... +50 |
| Protection class                                     | IP67  |            |
| Corrosion resistance class CRC <sup>1)</sup>         | 1     |            |

- 1) Corrosion resistance class 1 according to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

| Pin allocation to EN 60947-5-2                                                      |     |             |            |                                                                                     |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M12x1, 2-pin                                                                        |     |             |            |                                                                                     |     |             |            |
| N/O contact                                                                         |     |             |            | N/C contact                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation | M12x1                                                                               | Pin | Wire colour | Allocation |
|  | 3   | Black       | /+/-       |  | 1   | Black       | /+/-       |
|                                                                                     | 4   | Black       | /-/+       |                                                                                     | 2   | Black       | /-/+       |
|                                                                                     |     |             |            |                                                                                     |     |             |            |

# Proximity sensors SIED, inductive

Technical data – Standard switching distance, for DC and AC voltage

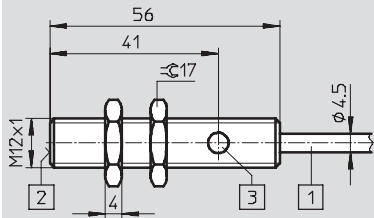
**FESTO**

## Dimensions – M12

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

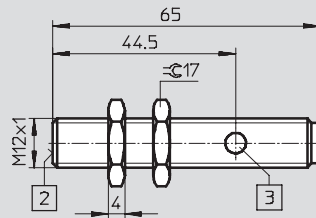
### Flush fitting

#### Cable



1 Connecting cable      2 Active surface

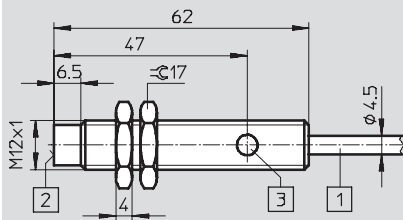
#### Plug



3 LED

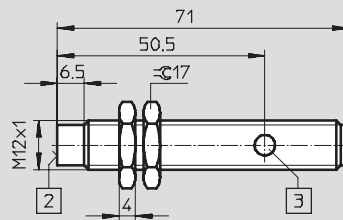
### Non-flush fitting

#### Cable



1 Connecting cable      2 Active surface

#### Plug



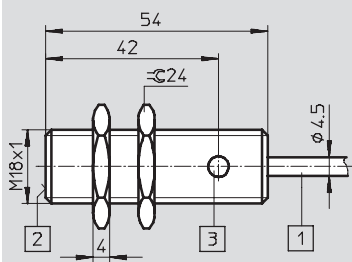
3 LED

## Dimensions – M18

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

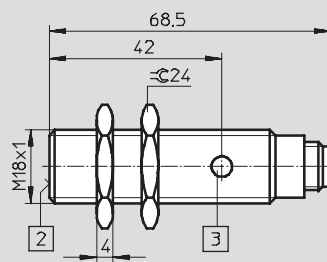
### Flush fitting

#### Cable



1 Connecting cable      2 Active surface

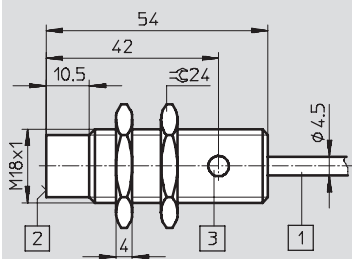
#### Plug



3 LED

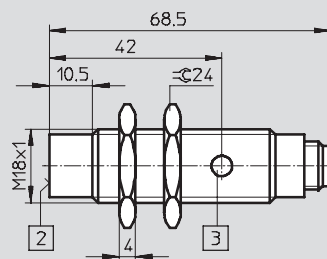
### Non-flush fitting

#### Cable



1 Connecting cable      2 Active surface

#### Plug



3 LED

# Proximity sensors SIED, inductive

Technical data – Standard switching distance, for DC and AC voltage

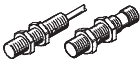
**FESTO**

| Dimensions – M30                                           |                                               |                                                            |                                                        | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a> |  |
|------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------|--|
| Flush fitting                                              |                                               | Non-flush fitting                                          |                                                        |                                                                                    |  |
| Cable                                                      | Plug                                          | Cable                                                      | Plug                                                   |                                                                                    |  |
| <p>54<br/>42<br/>15.5<br/>36<br/>4.5<br/>2<br/>3<br/>1</p> | <p>68.5<br/>42<br/>36<br/>4.5<br/>2<br/>3</p> | <p>54<br/>42<br/>15.5<br/>36<br/>4.5<br/>2<br/>3<br/>1</p> | <p>68.5<br/>42<br/>15.5<br/>36<br/>4.5<br/>2<br/>3</p> |                                                                                    |  |
| <p>1 Connecting cable</p>                                  | <p>2 Active surface</p>                       | <p>3 LED</p>                                               |                                                        |                                                                                    |  |

| Fitting instructions                  |                                       |
|---------------------------------------|---------------------------------------|
| Flush fitting                         | Non-flush fitting                     |
|                                       |                                       |
| 2 Active surface<br>5 Metal-free zone | 2 Active surface<br>5 Metal-free zone |

| Size | B1 | B2 | H  |
|------|----|----|----|
| M12  | 6  | 12 | 6  |
| M18  | 11 | 30 | 10 |
| M30  | 25 | 37 | 16 |

| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M12  | 15 | 27 | 8  | 8  |
| M18  | 20 | 50 | 15 | 15 |
| M30  | 30 | 80 | 15 | 25 |

| Ordering data                                                                       |                              |               |                     |                            |                       |                   |          |                   |
|-------------------------------------------------------------------------------------|------------------------------|---------------|---------------------|----------------------------|-----------------------|-------------------|----------|-------------------|
| Size                                                                                | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output    | Switching element function | Electrical connection |                   |          |                   |
|                                                                                     | [mm]                         |               |                     |                            | Cable                 |                   | Plug     |                   |
|                                                                                     |                              |               |                     |                            | Part No.              | Type              | Part No. | Type              |
| M12                                                                                 |                              |               |                     |                            |                       |                   |          |                   |
|  | 2.0                          | Flush         | Contactless, 2-wire | N/O contact                | 538272                | SIED-M12B-ZS-K-L  | 538271   | SIED-M12B-ZS-S-L  |
|                                                                                     |                              |               |                     | N/C contact                | 538274                | SIED-M12B-ZO-K-L  | 538273   | SIED-M12B-ZO-S-L  |
|  | 4.0                          | Non-flush     | Contactless, 2-wire | N/O contact                | 538268                | SIED-M12NB-ZS-K-L | 538267   | SIED-M12NB-ZS-S-L |
|                                                                                     |                              |               |                     | N/C contact                | 538270                | SIED-M12NB-ZO-K-L | 538269   | SIED-M12NB-ZO-S-L |
|                                                                                     |                              |               |                     |                            |                       |                   |          |                   |
| M18                                                                                 |                              |               |                     |                            |                       |                   |          |                   |
|  | 5.0                          | Flush         | Contactless, 2-wire | N/O contact                | 538280                | SIED-M18B-ZS-K-L  | 538279   | SIED-M18B-ZS-S-L  |
|                                                                                     |                              |               |                     | N/C contact                | 538282                | SIED-M18B-ZO-K-L  | 538281   | SIED-M18B-ZO-S-L  |
|  | 8.0                          | Non-flush     | Contactless, 2-wire | N/O contact                | 538276                | SIED-M18NB-ZS-K-L | 538275   | SIED-M18NB-ZS-S-L |
|                                                                                     |                              |               |                     | N/C contact                | 538278                | SIED-M18NB-ZO-K-L | 538277   | SIED-M18NB-ZO-S-L |
|                                                                                     |                              |               |                     |                            |                       |                   |          |                   |

## Proximity sensors SIED, inductive

**FESTO**

Technical data – Standard switching distance, for DC and AC voltage

| Ordering data                                                                     |                              |               |                     |                            |                       |                   |          |                   |
|-----------------------------------------------------------------------------------|------------------------------|---------------|---------------------|----------------------------|-----------------------|-------------------|----------|-------------------|
| Size                                                                              | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output    | Switching element function | Electrical connection |                   |          |                   |
|                                                                                   | [mm]                         |               |                     |                            | Cable                 |                   | Plug     |                   |
|                                                                                   |                              |               |                     |                            | Part No.              | Type              | Part No. | Type              |
| M30                                                                               |                              |               |                     |                            |                       |                   |          |                   |
|  | 10.0                         | Flush         | 2-wire, contactless | N/O contact                | 538288                | SIED-M30B-ZS-K-L  | 538287   | SIED-M30B-ZS-S-L  |
|                                                                                   |                              |               |                     | N/C contact                | 538290                | SIED-M30B-ZO-K-L  | 538289   | SIED-M30B-ZO-S-L  |
|                                                                                   |                              |               |                     |                            |                       |                   |          |                   |
|  | 15.0                         | Non-flush     | 2-wire, contactless | N/O contact                | 538284                | SIED-M30NB-ZS-K-L | 538283   | SIED-M30NB-ZS-S-L |
|                                                                                   |                              |               |                     | N/C contact                | 538286                | SIED-M30NB-ZO-K-L | 538285   | SIED-M30NB-ZO-S-L |
|                                                                                   |                              |               |                     |                            |                       |                   |          |                   |

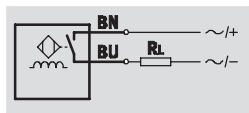
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIED-...-PA, inductive

FESTO

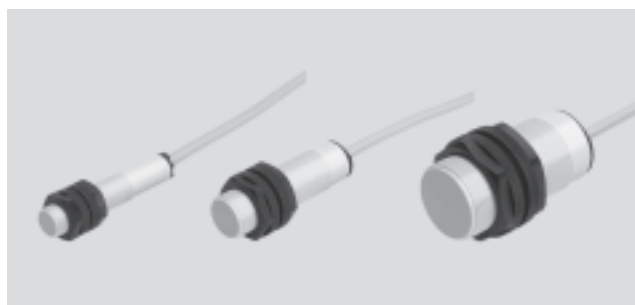
Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

Function<sup>1)</sup>



1) e.g. N/O contact with cable

- Standard switching distance
- Corrosion-resistant
- Polyamide housing
- For DC and AC voltage
- Round design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Design                                  | Round                             |
| Conforms to                             | EN 60947-5-2                      |
| Certification                           | cULus listed (OL)                 |
|                                         | C-Tick                            |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |
|                                         | To EU Low Voltage Directive       |
| Note on materials                       | Free of copper and PTFE           |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| Ambient temperature            | [°C] | −25 ... +70 |

| Output, general          |       |     |     |           |      |     |
|--------------------------|-------|-----|-----|-----------|------|-----|
| Mounting type            | Flush |     |     | Non-flush |      |     |
| Size                     | M12   | M18 | M30 | M12       | M18  | M30 |
| Repetition accuracy [mm] | 0.04  | 0.1 | 0.2 | 0.08      | 0.16 | 0.3 |

| Switching output                |                     |      |     |                     |      |       |
|---------------------------------|---------------------|------|-----|---------------------|------|-------|
| Mounting type                   | Flush               |      |     | Non-flush           |      |       |
| Size                            | M12                 | M18  | M30 | M12                 | M18  | M30   |
| Switching output                | Contactless, 2-wire |      |     | Contactless, 2-wire |      |       |
| Switching element function      | N/O contact         |      |     | N/O contact         |      |       |
| Rated operating distance [mm]   | 2                   | 5    | 10  | 4                   | 8    | 15    |
| Assured switching distance [mm] | 1.62                | 4.05 | 8.1 | 3.24                | 6.48 | 12.15 |

| Reduction factors           |               |              |               |               |              |              |               |
|-----------------------------|---------------|--------------|---------------|---------------|--------------|--------------|---------------|
| Aluminium                   | 0.35 ... 0.5  |              |               | 0.35 ... 0.5  |              |              |               |
| Stainless steel St 18/8     | 0.06 ... 0.1  |              |               | 0.06 ... 0.1  |              |              |               |
| Copper                      | 0.25 ... 0.45 |              |               | 0.25 ... 0.45 |              |              |               |
| Brass                       | 0.35 ... 0.5  |              |               | 0.35 ... 0.5  |              |              |               |
| Steel St 37                 | 1.0           |              |               | 1.0           |              |              |               |
|                             |               |              |               |               |              |              |               |
| Hysteresis                  | [mm]          | 0.06 ... 0.3 | 0.15 ... 0.75 | 0.3 ... 1.5   | 0.12 ... 0.6 | 0.24 ... 1.2 | 0.45 ... 2.25 |
| Max. switching frequency AC | [Hz]          | 20           |               |               | 20           |              |               |
| Max. switching frequency DC | [Hz]          | 60           |               |               | 60           |              |               |
| Max. output current         | [mA]          | 100          | 300           | 300           | 100          | 300          | 300           |
| Minimum load current        | [mA]          | 3            |               |               | 3            |              |               |
| Voltage drop                | [V]           | ≤ 6          |               |               | ≤ 6          |              |               |

| Output, additional data          |    |
|----------------------------------|----|
| Protection against short circuit | No |

# Proximity sensors SIED-...-PA, inductive

FESTO

Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

| Electronic components       |        |                                |
|-----------------------------|--------|--------------------------------|
| Operating voltage range AC  | [V AC] | 20 ... 250                     |
| Operating voltage range DC  | [V DC] | 10 ... 300                     |
| Idle current                | [mA]   | ≤ 1.5                          |
| Reverse polarity protection |        | For all electrical connections |

| Electromechanical components |               |
|------------------------------|---------------|
| Electrical connection        | Cable, 2-wire |
| Cable length                 | [m] 2.5       |
| Cable sheath material        | PVC           |
| Insulating sheath material   | PVC           |

| Mechanical components |               |     |     |
|-----------------------|---------------|-----|-----|
| Size                  | M12           | M18 | M30 |
| Attachment type       | Via lock nut  |     |     |
| Mounting type         | Flush         |     |     |
| Tightening torque     | [Nm] 1        | 2   | 5   |
| Product weight        | [g] 109       | 123 | 175 |
| Housing material      | PA-reinforced |     |     |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

| Immissions/emissions                                 |                |
|------------------------------------------------------|----------------|
| Ambient temperature with flexible cable installation | [°C] 0 ... +70 |
| Protection class                                     | IP65, IP67     |
| Corrosion resistance class CRC <sup>1)</sup>         | 4              |

1) Corrosion resistance class 4 according to Festo standard 940 070  
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

### M12

1 Connecting cable      2 Active surface      3 LED

### M18

1 Connecting cable      2 Active surface      3 LED

# Proximity sensors SIED-...-PA, inductive

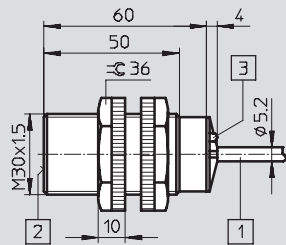
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Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

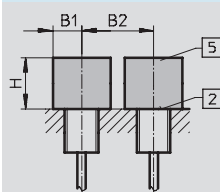
M30



- 1 Connecting cable
- 2 Active surface
- 3 LED

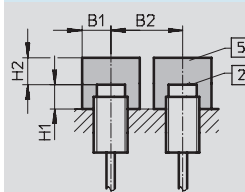
## Fitting instructions

### Flush fitting



- 2 Active surface
- 5 Metal-free zone

### Non-flush fitting



- 2 Active surface
- 5 Metal-free zone

| Size | B1 | B2 | H  |
|------|----|----|----|
| M12  | 18 | 24 | 6  |
| M18  | 27 | 36 | 15 |
| M30  | 45 | 60 | 30 |

| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M12  | 18 | 36 | 8  | 12 |
| M18  | 27 | 54 | 16 | 24 |
| M30  | 45 | 90 | 30 | 45 |

## Ordering data

| Size                                                                                | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output    | Switching element function | Electrical connection |                      |
|-------------------------------------------------------------------------------------|------------------------------|---------------|---------------------|----------------------------|-----------------------|----------------------|
|                                                                                     | [mm]                         |               |                     |                            | Cable                 |                      |
|                                                                                     |                              |               |                     |                            | Part No.              | Type                 |
| M12                                                                                 |                              |               |                     |                            |                       |                      |
|  | 2.0                          | Flush         | Contactless, 2-wire | N/O contact                | 538336                | SIED-M12B-ZS-K-L-PA  |
|                                                                                     | 4.0                          | Non-flush     |                     |                            | 538335                | SIED-M12NB-ZS-K-L-PA |
|                                                                                     |                              |               |                     |                            |                       |                      |
|                                                                                     |                              |               |                     |                            |                       |                      |
| M18                                                                                 |                              |               |                     |                            |                       |                      |
|  | 5.0                          | Flush         | Contactless, 2-wire | N/O contact                | 538338                | SIED-M18B-ZS-K-L-PA  |
|                                                                                     | 8.0                          | Non-flush     |                     |                            | 538337                | SIED-M18NB-ZS-K-L-PA |
|                                                                                     |                              |               |                     |                            |                       |                      |
|                                                                                     |                              |               |                     |                            |                       |                      |
| M30                                                                                 |                              |               |                     |                            |                       |                      |
|  | 10.0                         | Flush         | Contactless, 2-wire | N/O contact                | 538340                | SIED-M30B-ZS-K-L-PA  |
|                                                                                     | 15.0                         | Non-flush     |                     |                            | 538339                | SIED-M30NB-ZS-K-L-PA |
|                                                                                     |                              |               |                     |                            |                       |                      |

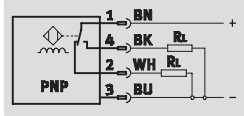
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

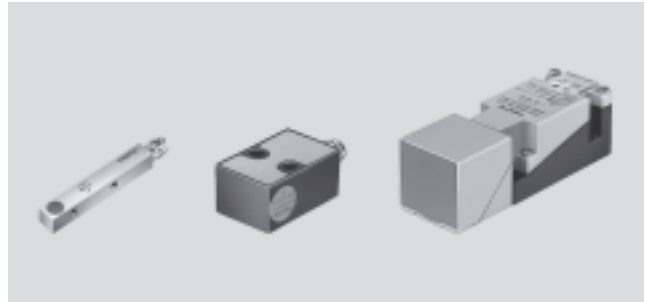
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Function<sup>1)</sup>



1) e.g. antivalent with PNP output and terminals

- Standard switching distance
- For DC voltage
- Block-shaped design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Conforms to                             | EN 60947-5-2                      |
| Certification                           | cULus listed (OL)                 |
|                                         | C-Tick                            |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |
| Note on materials                       | Free of copper and PTFE           |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |         |             |          |
|--------------------------------|------|-------------|---------|-------------|----------|
| Type                           |      | SIES-Q5     | SIES-Q8 | SIES-V3     | SIES-QB  |
| Size                           | [mm] | 5x5x25      | 8x8x40  | 15x20x30    | 12x26x40 |
| Ambient temperature            | [°C] | -25 ... +70 |         | -25 ... +85 |          |

| Output, general     |      |         |         |          |          |
|---------------------|------|---------|---------|----------|----------|
| Type                |      | SIES-Q5 | SIES-Q8 | SIES-V3  | SIES-QB  |
| Size                | [mm] | 5x5x25  | 8x8x40  | 15x20x30 | 12x26x40 |
| Repetition accuracy | [mm] | 0.04    | 0.075   | 0.1      | 0.1      |
|                     |      |         |         |          | 0.75     |

| Switching output               |      |             |         |             |          |
|--------------------------------|------|-------------|---------|-------------|----------|
| Type                           |      | SIES-Q5     | SIES-Q8 | SIES-V3     | SIES-QB  |
| Size                           | [mm] | 5x5x25      | 8x8x40  | 15x20x30    | 12x26x40 |
| Switching output               |      | PNP         |         | PNP         |          |
|                                |      | NPN         |         | NPN         |          |
| Switching element function     |      | N/O contact |         | N/O contact |          |
|                                |      | N/C contact |         | N/C contact |          |
| Rated operating distance       | [mm] | 0.8         | 1.5     | 2           | 15       |
| Assured switching distance     | [mm] | 0.64        | 1.2     | 1.6         | 12.2     |
| Reduction factors              |      |             |         |             |          |
| Aluminium                      |      | 0.4         |         | 0.45        | 0.3      |
| Stainless steel St 18/8        |      | 0.7         | 0.8     | 0.7         | 0.7      |
| Copper                         |      | 0.3         | 0.2     | 0.3         | 0.35     |
| Brass                          |      | 0.4         | 0.5     | 0.5         | 0.3      |
| Steel St 37                    |      | 1.0         |         | 1.0         | 1.0      |
| Max. switching frequency DC    | [Hz] | 3,000       | 1,500   | 1,200       | 100      |
| Max. output current            | [mA] | 200         |         | –           | –        |
| Max. output current at ≤ 50 °C | [mA] | –           |         | 200         | 200      |
| Max. output current at ≤ 85 °C | [mA] | –           |         | 150         | 150      |
| Voltage drop                   | [V]  | –           |         | ≤ 1.8       | ≤ 1.8    |

# Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

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| Output, additional data          |        |
|----------------------------------|--------|
| Protection against short circuit | Pulsed |

| Electronic components       |         |                                |         |          |          |
|-----------------------------|---------|--------------------------------|---------|----------|----------|
| Type                        | SIES-Q5 | SIES-Q8                        | SIES-V3 | SIES-QB  | SIES-Q40 |
| Size                        | [mm]    | 5x5x25                         | 8x8x40  | 15x20x30 | 12x26x40 |
| Operating voltage range     | [V DC]  | 10 ... 30                      |         |          |          |
| Residual ripple             | [%]     | 10                             |         |          |          |
| Idle current                | [mA]    | ≤ 10                           |         | ≤ 30     |          |
| Reverse polarity protection |         | ≤ 40                           |         |          |          |
|                             |         | For all electrical connections |         |          |          |

| Electromechanical components |               |         |          |                   |          |
|------------------------------|---------------|---------|----------|-------------------|----------|
| Electrical connection        | Cable         |         |          | Plug              |          |
| Type                         | SIES-Q5       | SIES-Q8 | SIES-QB  | SIES-Q8           | SIES-V3  |
| Size [mm]                    | 5x5x25        | 8x8x40  | 12x26x40 | 8x8x40            | 15x20x30 |
| Electrical connection        | Cable, 3-wire |         |          | Plug, M8x1, 3-pin |          |
| Cable length [m]             | 2.5           |         |          | –                 |          |
| Cable sheath material        | PUR           |         |          | –                 |          |

| Mechanical components |                     |         |                  |                |           |
|-----------------------|---------------------|---------|------------------|----------------|-----------|
| Type                  | SIES-Q5             | SIES-Q8 | SIES-V3          | SIES-QB        | SIES-Q40  |
| Size [mm]             | 5x5x25              | 8x8x40  | 15x20x30         | 12x26x40       | 40x40x120 |
| Attachment type       | Via female thread   |         | Via through-hole |                |           |
| Mounting type         | Flush               |         | Flush            |                |           |
| Product weight [g]    | 22                  | 15      | 120              | 170            | 230       |
| Housing material      | Nickel-plated brass |         | Die-cast zinc    | PBT-reinforced | PBT       |

| Display/operation        |            |         |          |          |            |
|--------------------------|------------|---------|----------|----------|------------|
| Type                     | SIES-Q5    | SIES-Q8 | SIES-V3  | SIES-QB  | SIES-Q40   |
| Size [mm]                | 5x5x25     | 8x8x40  | 15x20x30 | 12x26x40 | 40x40x120  |
| Ready status display     | –          |         |          |          | Green LED  |
| Switching status display | Yellow LED |         |          |          | Yellow LED |

| Immissions/emissions |         |         |          |          |           |
|----------------------|---------|---------|----------|----------|-----------|
| Type                 | SIES-Q5 | SIES-Q8 | SIES-V3  | SIES-QB  | SIES-Q40  |
| Size [mm]            | 5x5x25  | 8x8x40  | 15x20x30 | 12x26x40 | 40x40x120 |
| Protection class     | IP67    |         |          |          | IP65      |

| Pin allocation to EN 60947-5-2                                                      |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M8x1, 3-pin                                                                         |     |             |            |
| N/O contact and N/C contact                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | –          |
|                                                                                     | 4   | Black       | Output     |
|                                                                                     |     |             |            |

# Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

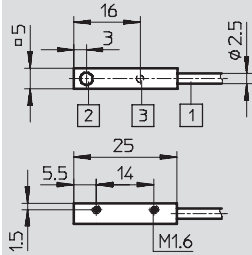
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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

SIES-Q5B

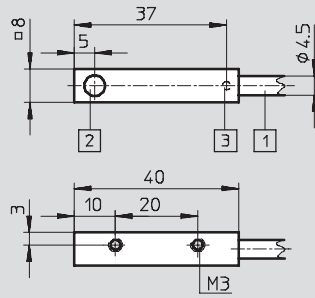
Cable



- 1 Connecting cable
- 2 Active surface

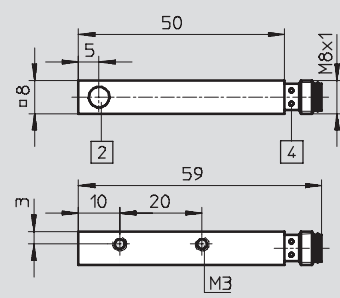
SIES-Q8B

Cable



- 3 LED
- 4 4x LED

Plug

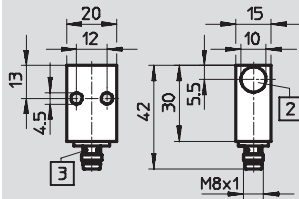


## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

SIES-V3B

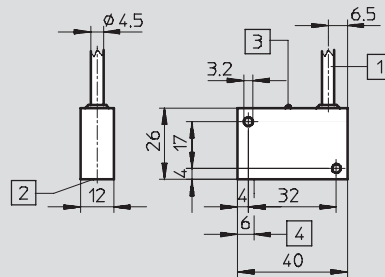
Plug



- 1 Connecting cable
- 2 Active surface

SIES-QB

Cable



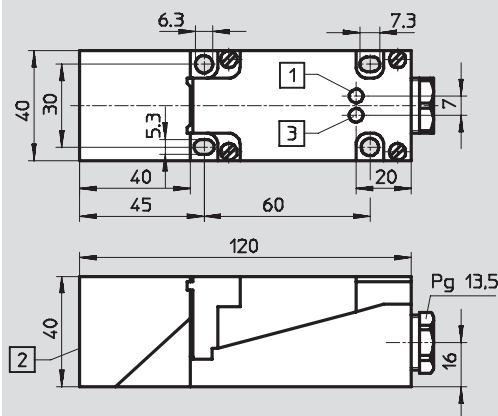
- 3 LED
- 4 Sensor centre

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

SIES-Q40B

Plug



- 2 Supplied with active surface facing forward: sensor head can be adjusted to any one of 5 response directions

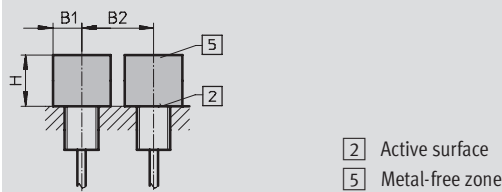
# Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

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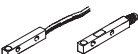
## Fitting instructions

### Flush fitting



| Size      | B1  | B2 | H  |
|-----------|-----|----|----|
| 5x5x25    | 2.5 | 5  | 2  |
| 8x8x40    | 4   | 12 | 3  |
| 15x20x30  | 6   | 12 | 5  |
| 12x26x40  | 6   | 12 | 5  |
| 40x40x120 | 25  | 75 | 30 |

## Ordering data

| Size<br>[mm]                                                                        | S <sub>n</sub> <sup>1)</sup><br>[mm] | Mounting<br>type | Switching<br>output | Switching<br>element function | Electrical connection |                 |          |                                |
|-------------------------------------------------------------------------------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|-----------------|----------|--------------------------------|
|                                                                                     |                                      |                  |                     |                               | Cable                 |                 | Plug     |                                |
|                                                                                     |                                      |                  |                     |                               | Part No.              | Type            | Part No. | Type                           |
| 5x5x25                                                                              |                                      |                  |                     |                               |                       |                 |          |                                |
|    | 0.8                                  | Flush            | PNP                 | N/O contact                   | 178291                | SIES-Q5B-PS-K-L | -        |                                |
|                                                                                     |                                      |                  |                     | N/C contact                   | 174549                | SIES-Q5B-PO-K-L |          |                                |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 178290                | SIES-Q5B-NS-K-L |          |                                |
|                                                                                     |                                      |                  |                     | N/C contact                   | 174548                | SIES-Q5B-NO-K-L |          |                                |
| 8x8x40                                                                              |                                      |                  |                     |                               |                       |                 |          |                                |
|  | 1.5                                  | Flush            | PNP                 | N/O contact                   | 178294                | SIES-Q8B-PS-K-L | 178295   | SIES-Q8B-PS-S-L                |
|                                                                                     |                                      |                  |                     | N/C contact                   | 174552                | SIES-Q8B-PO-K-L | 174553   | SIES-Q8B-PO-S-L                |
|                                                                                     |                                      |                  | NPN                 | N/O contact                   | 178292                | SIES-Q8B-NS-K-L | 178293   | SIES-Q8B-NS-S-L                |
|                                                                                     |                                      |                  |                     | N/C contact                   | 174550                | SIES-Q8B-NO-K-L | 174551   | SIES-Q8B-NO-S-L                |
| 15x20x30                                                                            |                                      |                  |                     |                               |                       |                 |          |                                |
|  | 2.0                                  | Flush            | PNP                 | N/O contact                   | -                     |                 | 150491   | SIES-V3B-PS-S-L                |
|                                                                                     |                                      |                  | NPN                 |                               |                       |                 | 150490   | SIES-V3B-NS-S-L                |
| 12x26x40                                                                            |                                      |                  |                     |                               |                       |                 |          |                                |
|  | 2.0                                  | Flush            | PNP                 | N/O contact                   | 150488                | SIES-QB-PS-K-L  | -        |                                |
|                                                                                     |                                      |                  |                     | N/C contact                   | 150489                | SIES-QB-PO-K-L  |          |                                |
| 40x40x120                                                                           |                                      |                  |                     |                               |                       |                 |          |                                |
|  | 15.0                                 | Flush            | PNP                 | Antivalent                    | -                     |                 | 150492   | SIES-Q40-PA-X-2L <sup>2)</sup> |

1) S<sub>n</sub> Rated operating distance [mm]

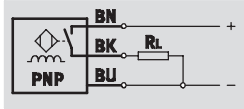
2) Electrical connection via screw terminals

# Proximity sensors SIEH, inductive

Technical data – Increased switching distance

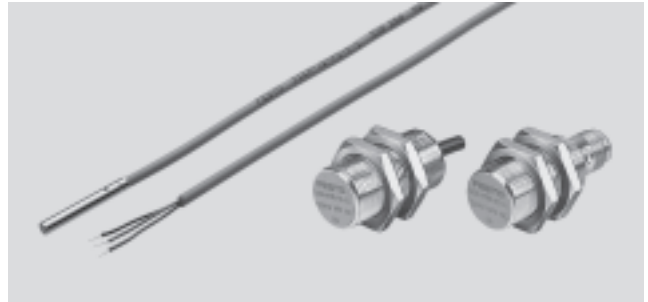
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Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Increased switching distance
- For DC voltage
- Round design



| General technical data                  |                                   |                                                     |                                                     |
|-----------------------------------------|-----------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Size                                    | 3 mm                              | M12                                                 | M18                                                 |
| Design                                  | Round                             | –                                                   | –                                                   |
| Conforms to                             | EN 60947-5-2                      | EN 60947-5-2                                        | EN 60947-5-2                                        |
| Certification                           | –                                 | cULus listed (OL)                                   | cULus listed (OL)                                   |
|                                         | C-Tick                            | C-Tick                                              | C-Tick                                              |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> | To EU EMC Directive <sup>1)</sup>                   | To EU EMC Directive <sup>1)</sup>                   |
| Note on materials                       | Free of copper and PTFE           | Free of copper and PTFE                             | Free of copper and PTFE                             |
|                                         | –                                 | –                                                   | RoHS-compliant                                      |
|                                         | –                                 | Contains PWIS (paint-wetting impairment substances) | Contains PWIS (paint-wetting impairment substances) |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |             |     |     |
|--------------------------------|-------------|-----|-----|
| Size                           | 3 mm        | M12 | M18 |
| Ambient temperature [°C]       | –25 ... +70 |     |     |

| Output, general                                    |      |     |     |
|----------------------------------------------------|------|-----|-----|
| Size                                               | 3 mm | M12 | M18 |
| Repetition accuracy [mm]                           | 0.02 | –   | 0.4 |
| Repetition accuracy under constant conditions [mm] | –    | 0.2 | –   |

| Switching output                |             |             |             |
|---------------------------------|-------------|-------------|-------------|
| Size                            | 3 mm        | M12         | M18         |
| Switching output                | PNP         | PNP         | PNP         |
|                                 | NPN         | NPN         | NPN         |
| Switching element function      | N/O contact | N/O contact | N/O contact |
|                                 | –           | N/C contact | N/C contact |
| Rated operating distance [mm]   | 1           | 4           | 8           |
| Assured switching distance [mm] | 0.81        | 3.24        | 6.48        |
| Reduction factors               |             |             |             |
| Aluminium                       | 0.5         | 0.4         | 0.35        |
| Stainless steel St 18/8         | 0.8         | 0.8         | 0.7         |
| Copper                          | 0.45        | 0.4         | 0.3         |
| Brass                           | 0.6         | 0.5         | 0.4         |
| Steel St 37                     | 1.0         | 1.0         | 1.0         |
| Hysteresis [mm]                 | ≤ 0.12      | ≤ 0.36      | ≤ 0.88      |
| Switch-on time [ms]             | 0.02        | –           |             |
| Max. switching frequency [Hz]   | 3,000       | 2,500       | 1,500       |
| Max. output current [mA]        | 100         | 200         | 200         |
| Voltage drop [V]                | 0 ... 2     |             |             |

# Proximity sensors SIEH, inductive

Technical data – Increased switching distance

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| Output, additional data          |                                 |            |        |
|----------------------------------|---------------------------------|------------|--------|
| Size                             | 3 mm                            | M12        | M18    |
| Protection against short circuit | Pulsed                          | Pulsed     | Pulsed |
| Inductive protective circuit     | Integrated                      | Integrated | –      |
|                                  | Output current < 100 mA         |            |        |
|                                  | and switching frequency < 10 Hz |            |        |

| Electronic components          |                                |     |     |
|--------------------------------|--------------------------------|-----|-----|
| Size                           | 3 mm                           | M12 | M18 |
| Operating voltage range [V DC] | 10 ... 30                      |     |     |
| Residual ripple [%]            | 20                             | ±10 | ±20 |
| Idle current [mA]              | 0 ... 10                       |     |     |
| Reverse polarity protection    | For all electrical connections |     |     |

| Electromechanical components |               |     |     |                              |                    |     |
|------------------------------|---------------|-----|-----|------------------------------|--------------------|-----|
| Electrical connection        | Cable         |     |     | Plug                         |                    |     |
| Size                         | 3 mm          | M12 | M18 | 3 mm                         | M12                | M18 |
| Electrical connection        | Cable, 3-wire |     |     | Cable with plug, M8x1, 3-pin | Plug, M12x1, 3-pin |     |
| Cable length [m]             | 2.5           |     |     | 0.15                         | –                  |     |
| Cable sheath material        | PUR           |     |     | PUR                          |                    |     |
| Insulating sheath material   | PVC           | –   | –   | PVC                          |                    |     |

| Mechanical components  |                            |                     |     |                            |                     |     |
|------------------------|----------------------------|---------------------|-----|----------------------------|---------------------|-----|
| Electrical connection  | Cable                      |                     |     | Plug                       |                     |     |
| Size                   | 3 mm                       | M12                 | M18 | 3 mm                       | M12                 | M18 |
| Attachment type        | Clamped                    | Via lock nut        |     | Clamped                    | Via lock nut        |     |
| Mounting type          | Flush                      |                     |     | Flush                      |                     |     |
| Tightening torque [Nm] | –                          | –                   | 20  | –                          | –                   | 20  |
| Product weight [g]     | 18                         | 110                 | 108 | 4                          | 30                  | 43  |
| Housing material       | High-alloy stainless steel | Chrome-plated brass |     | High-alloy stainless steel | Chrome-plated brass |     |
|                        |                            | PBTP                |     |                            | PBTP                |     |
|                        |                            | –                   |     |                            | PA                  |     |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

| Immissions/emissions                                      |            |      |     |            |      |     |
|-----------------------------------------------------------|------------|------|-----|------------|------|-----|
| Electrical connection                                     | Cable      |      |     | Plug       |      |     |
| Size                                                      | 3 mm       | M12  | M18 | 3 mm       | M12  | M18 |
| Ambient temperature with flexible cable installation [°C] | –5 ... +70 |      |     | –5 ... +70 |      |     |
| Protection class                                          | –          | IP65 | –   | –          | IP65 | –   |
|                                                           | IP67       |      |     | IP67       |      |     |
| Surge strength [kV]                                       | –          | –    | 0.8 | –          | –    | 0.8 |
| Corrosion resistance class CRC <sup>1)</sup>              | 4          | 2    | –   | 1          | 2    | –   |
| Degree of contamination                                   | –          | –    | 3   | –          | –    | 3   |

1) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

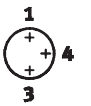
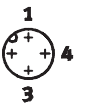
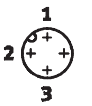
Corrosion resistance class 4 according to Festo standard 940 070

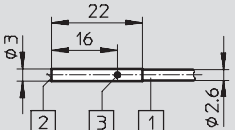
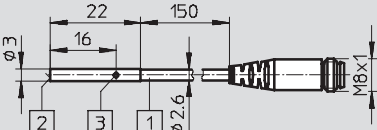
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

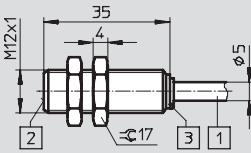
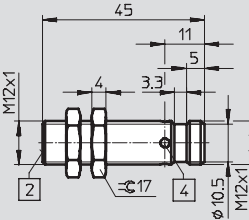
# Proximity sensors SIEH, inductive

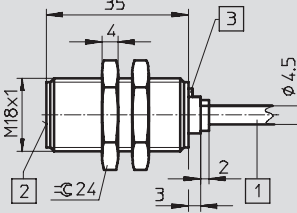
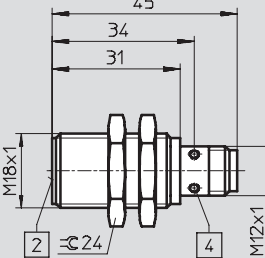
Technical data – Increased switching distance

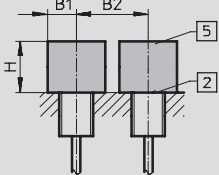
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| Pin allocation to EN 60947-5-2                                                      |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M8x1, 3-pin                                                                         |     |             |            |
| N/O contact                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|    | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | -          |
|                                                                                     | 4   | Black       | Output     |
| M12x1, 3-pin                                                                        |     |             |            |
| N/O contact                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|    | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | -          |
|                                                                                     | 4   | Black       | Output     |
| N/C contact                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | -          |
|                                                                                     | 2   | White       | Output     |

| Dimensions – 3 mm                                                                 |                                                                                   | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a>                            |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Cable                                                                             | Plug                                                                              |                                                                                                               |
|  |  | <ul style="list-style-type: none"> <li>1 Connecting cable</li> <li>2 Active surface</li> <li>3 LED</li> </ul> |

| Dimensions – M12                                                                    |                                                                                    | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a>                                              |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Cable                                                                               | Plug                                                                               |                                                                                                                                 |
|  |  | <ul style="list-style-type: none"> <li>1 Connecting cable</li> <li>2 Active surface</li> <li>3 LED</li> <li>4 4x LED</li> </ul> |

| Dimensions – M18                                                                    |                                                                                     | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a>                                              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Cable                                                                               | Plug                                                                                |                                                                                                                                 |
|  |  | <ul style="list-style-type: none"> <li>1 Connecting cable</li> <li>2 Active surface</li> <li>3 LED</li> <li>4 4x LED</li> </ul> |

| Fitting instructions                                                                |                                                                                                                                                                                                                                                                                               |    |    |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|------|----|----|---|------|-----|---|---|-----|----|----|----|-----|----|----|----|
| Flush fitting                                                                       |                                                                                                                                                                                                                                                                                               |    |    |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
|  | <table border="1"> <thead> <tr> <th>Size</th><th>B1</th><th>B2</th><th>H</th></tr> </thead> <tbody> <tr> <td>3 mm</td><td>2.5</td><td>5</td><td>3</td></tr> <tr> <td>M12</td><td>10</td><td>24</td><td>12</td></tr> <tr> <td>M18</td><td>18</td><td>40</td><td>24</td></tr> </tbody> </table> |    |    | Size | B1 | B2 | H | 3 mm | 2.5 | 5 | 3 | M12 | 10 | 24 | 12 | M18 | 18 | 40 | 24 |
| Size                                                                                | B1                                                                                                                                                                                                                                                                                            | B2 | H  |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
| 3 mm                                                                                | 2.5                                                                                                                                                                                                                                                                                           | 5  | 3  |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
| M12                                                                                 | 10                                                                                                                                                                                                                                                                                            | 24 | 12 |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
| M18                                                                                 | 18                                                                                                                                                                                                                                                                                            | 40 | 24 |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |
|                                                                                     | <ul style="list-style-type: none"> <li>2 Active surface</li> <li>5 Metal-free zone</li> </ul>                                                                                                                                                                                                 |    |    |      |    |    |   |      |     |   |   |     |    |    |    |     |    |    |    |

# Proximity sensors SIEH, inductive

Technical data – Increased switching distance

**FESTO**

| Ordering data                                                                     |                              |               |                  |                            |                       |                  |          |                  |
|-----------------------------------------------------------------------------------|------------------------------|---------------|------------------|----------------------------|-----------------------|------------------|----------|------------------|
| Size                                                                              | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output | Switching element function | Electrical connection |                  |          |                  |
|                                                                                   | [mm]                         |               |                  |                            | Cable                 |                  | Plug     |                  |
|                                                                                   |                              |               |                  |                            | Part No.              | Type             | Part No. | Type             |
| 3 mm                                                                              |                              |               |                  |                            |                       |                  |          |                  |
|  | 1.0                          | Flush         | PNP              | N/O contact                | 538264                | SIEH-3B-PS-K-L   | 538263   | SIEH-3B-PS-S-L   |
|                                                                                   |                              |               | NPN              | N/O contact                | 538266                | SIEH-3B-NS-K-L   | 538265   | SIEH-3B-NS-S-L   |
|                                                                                   |                              |               |                  |                            |                       |                  |          |                  |
| M12                                                                               |                              |               |                  |                            |                       |                  |          |                  |
|  | 4.0                          | Flush         | PNP              | N/O contact                | 150450                | SIEH-M12B-PS-K-L | 150451   | SIEH-M12B-PS-S-L |
|                                                                                   |                              |               |                  | N/C contact                | 150454                | SIEH-M12B-PO-K-L | 150455   | SIEH-M12B-PO-S-L |
|                                                                                   |                              |               | NPN              | N/O contact                | 150448                | SIEH-M12B-NS-K-L | 150449   | SIEH-M12B-NS-S-L |
|                                                                                   |                              |               |                  | N/C contact                | 150452                | SIEH-M12B-NO-K-L | 150453   | SIEH-M12B-NO-S-L |
|                                                                                   |                              |               |                  |                            |                       |                  |          |                  |
| M18                                                                               |                              |               |                  |                            |                       |                  |          |                  |
|  | 7.0                          | Flush         | PNP              | N/O contact                | 150458                | SIEH-M18B-PS-K-L | 150459   | SIEH-M18B-PS-S-L |
|                                                                                   |                              |               |                  | N/C contact                | 150462                | SIEH-M18B-PO-K-L | 150463   | SIEH-M18B-PO-S-L |
|                                                                                   |                              |               | NPN              | N/O contact                | 150456                | SIEH-M18B-NS-K-L | 150457   | SIEH-M18B-NS-S-L |
|                                                                                   |                              |               |                  | N/C contact                | 150460                | SIEH-M18B-NO-K-L | 150461   | SIEH-M18B-NO-S-L |

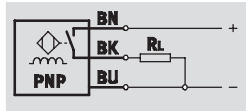
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIEH-...-CR, inductive

Technical data – Increased switching distance

FESTO

Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Increased switching distance
- For DC voltage
- Round design
- Resistant to chemicals and mechanical stress



| General technical data                  |                                   |     |                                   |     |
|-----------------------------------------|-----------------------------------|-----|-----------------------------------|-----|
| Size                                    | M12                               |     | M18                               |     |
| Switching output                        | PNP                               | NPN | PNP                               | NPN |
| Conforms to                             | EN 60947-5-2                      |     | EN 60947-5-2                      |     |
| Certification                           | cULus listed (OL)                 | –   | cULus listed (OL)                 | –   |
|                                         | C-Tick                            |     | C-Tick                            |     |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |     | To EU EMC Directive <sup>1)</sup> |     |
| Note on materials                       | Free of copper and PTFE           |     | Free of copper and PTFE           |     |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| Ambient temperature            | [°C] | –25 ... +70 |

| Output, general                     |      |     |
|-------------------------------------|------|-----|
| Size                                | M12  | M18 |
| Reproducibility, switching value FS | [mm] | 0.3 |
|                                     |      | 0.5 |

| Switching output            |             |        |             |        |
|-----------------------------|-------------|--------|-------------|--------|
| Size                        | M12         |        | M18         |        |
| Switching output            | PNP         | NPN    | PNP         | NPN    |
| Switching output            | PNP         |        | PNP         |        |
|                             | NPN         |        | NPN         |        |
| Switching element function  | N/O contact |        | N/O contact |        |
| Rated operating distance    | [mm]        | 6      | 10          |        |
| Assured switching distance  | [mm]        | 4.86   | 8.1         |        |
|                             |             |        |             |        |
| Reduction factors           |             |        |             |        |
| Aluminium                   | 1.0         |        | 1.0         |        |
| Stainless steel, 1 mm thick | 0.45        |        | 0.4         |        |
| Stainless steel, 2 mm thick | 0.9         |        | 0.8         |        |
| Copper                      | 0.85        |        | 0.8         | 0.85   |
| Brass                       | 1.3         |        | 1.3         |        |
| Steel St 37                 | 1.0         |        | 1.0         |        |
|                             |             |        |             |        |
| Hysteresis                  | [mm]        | ≤ 0.73 |             | ≤ 1.22 |
| Max. switching frequency    | [Hz]        | 400    | 600         | 200    |
| Max. output current         | [mA]        | 200    |             | 200    |
| Voltage drop                | [V]         | 2      | ≤ 2         | 2 ≤ 2  |

# Proximity sensors SIEH-...-CR, inductive

Technical data – Increased switching distance

FESTO

| Output, additional data          |                                 |
|----------------------------------|---------------------------------|
| Protection against short circuit | Pulsed                          |
| Inductive protective circuit     | Integrated                      |
|                                  | Output current < 100 mA         |
|                                  | and switching frequency < 10 Hz |

| Electronic components          |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|
| Switching output               | PNP                            | NPN                            |
| Operating voltage range [V DC] | 10 ... 30                      | 10 ... 30                      |
| Residual ripple [%]            | 20                             | 20                             |
| Idle current [mA]              | < 12                           | ≤ 17                           |
| Reverse polarity protection    | For all electrical connections | For all electrical connections |

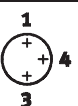
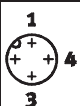
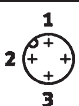
| Electromechanical components |               |                    |
|------------------------------|---------------|--------------------|
| Electrical connection        | Cable         | Plug               |
| Electrical connection        | Cable, 3-wire | Plug, M12x1, 3-pin |
| Cable sheath material        | PUR           | –                  |

| Mechanical components |                            |      |                            |      |
|-----------------------|----------------------------|------|----------------------------|------|
| Size                  | M12                        |      | M18                        |      |
| Electrical connection | Cable                      | Plug | Cable                      | Plug |
| Size                  | M12                        |      | M18                        |      |
| Attachment type       | Via lock nut               |      | Via lock nut               |      |
| Mounting type         | Flush                      |      | Flush                      |      |
| Product weight [g]    | 90                         | 28   | 115                        | 53   |
| Housing material      | High-alloy stainless steel |      | High-alloy stainless steel |      |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

| Immissions/emissions                                      |            |     |            |     |
|-----------------------------------------------------------|------------|-----|------------|-----|
| Size                                                      | M12        |     | M18        |     |
| Switching output                                          | PNP        | NPN | PNP        | NPN |
| Ambient temperature with flexible cable installation [°C] | –5 ... +70 |     | –5 ... +70 |     |
| Protection class                                          | IP67       |     | IP67       |     |
|                                                           | IP69K      |     | IP69K      |     |
| Corrosion resistance class CRC <sup>1)</sup>              | 2          | 4   | 2          | 4   |
| Resistance to sensor fitting pressure [bar]               | 80         |     | 60         |     |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
Corrosion resistance class 4 according to Festo standard 940 070  
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

| Pin allocation to EN 60947-5-2                                                      |     |             |            |                                                                                     |     |             |            |                                                                                       |     |             |            |  |
|-------------------------------------------------------------------------------------|-----|-------------|------------|-------------------------------------------------------------------------------------|-----|-------------|------------|---------------------------------------------------------------------------------------|-----|-------------|------------|--|
| M8x1, 3-pin                                                                         |     |             |            | M12x1, 3-pin                                                                        |     |             |            |                                                                                       |     |             |            |  |
| N/O contact                                                                         |     |             |            | N/O contact                                                                         |     |             |            | N/C contact                                                                           |     |             |            |  |
|                                                                                     | Pin | Wire colour | Allocation |                                                                                     | Pin | Wire colour | Allocation |                                                                                       | Pin | Wire colour | Allocation |  |
|  | 1   | Brown       | +          |  | 1   | Brown       | +          |  | 1   | Brown       | +          |  |
|                                                                                     | 3   | Blue        | –          |                                                                                     | 3   | Blue        | –          |                                                                                       | 3   | Blue        | –          |  |
|                                                                                     | 4   | Black       | Output     |                                                                                     | 4   | Black       | Output     |                                                                                       | 2   | White       | Output     |  |
|                                                                                     |     |             |            |                                                                                     |     |             |            |                                                                                       |     |             |            |  |

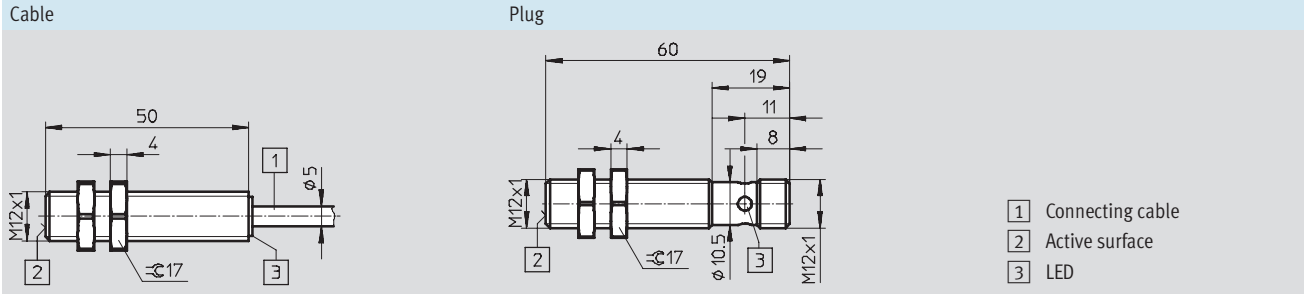
# Proximity sensors SIEH-...-CR, inductive

Technical data – Increased switching distance

**FESTO**

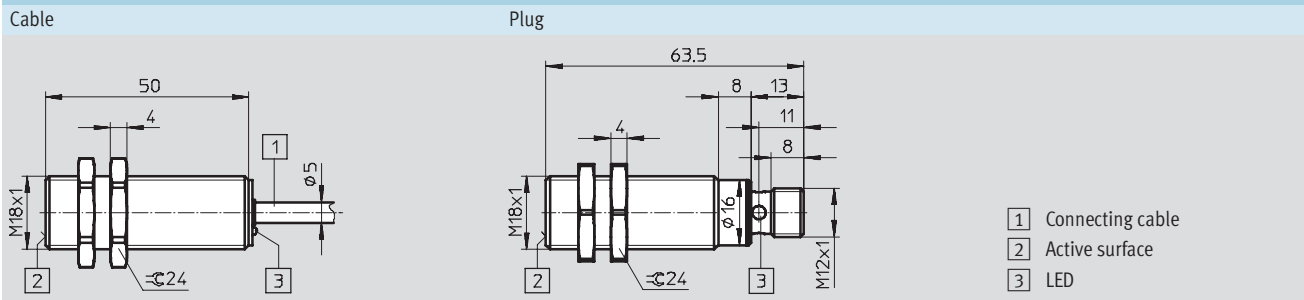
## Dimensions – M12

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



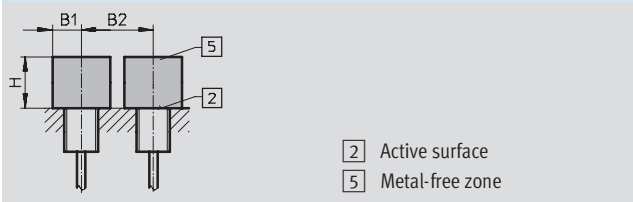
## Dimensions – M18

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



## Fitting instructions

### Flush fitting



| Size | B1 | B2 | H  |
|------|----|----|----|
| M12  | 12 | 40 | 18 |
| M18  | 25 | 60 | 30 |

## Ordering data

| Size                                                                                | S <sub>n</sub> <sup>1)</sup> | Mounting type | Switching output | Switching element function | Electrical connection |                     |          |                     |
|-------------------------------------------------------------------------------------|------------------------------|---------------|------------------|----------------------------|-----------------------|---------------------|----------|---------------------|
|                                                                                     | [mm]                         |               |                  |                            | Cable                 |                     | Plug     |                     |
|                                                                                     |                              |               |                  |                            | Part No.              | Type                | Part No. | Type                |
| M12                                                                                 |                              |               |                  |                            |                       |                     |          |                     |
|  | 6.0                          | Flush         | PNP              | N/O contact                | 538252                | SIEH-M12B-PS-K-L-CR | 538251   | SIEH-M12B-PS-S-L-CR |
|                                                                                     |                              |               | NPN              | N/O contact                | 538254                | SIEH-M12B-NS-K-L-CR | 538253   | SIEH-M12B-NS-S-L-CR |
|                                                                                     |                              |               |                  |                            |                       |                     |          |                     |
| M18                                                                                 |                              |               |                  |                            |                       |                     |          |                     |
|  | 10.0                         | Flush         | PNP              | N/O contact                | 538256                | SIEH-M18B-PS-K-L-CR | 538255   | SIEH-M18B-PS-S-L-CR |
|                                                                                     |                              |               | NPN              | N/O contact                | 538258                | SIEH-M18B-NS-K-L-CR | 538257   | SIEH-M18B-NS-S-L-CR |
|                                                                                     |                              |               |                  |                            |                       |                     |          |                     |

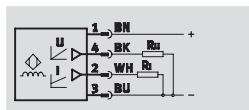
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIEA, inductive

Technical data – Analogue output

**FESTO**

Function<sup>1)</sup>



1) e.g. with analogue output for current and voltage

- Analogue output
- For DC voltage
- Round design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Design                                  | Round                             |
| Certification                           | C-Tick                            |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |
| Note on materials                       | Free of copper and PTFE           |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element               |  |      |  |                      |  |             |  |          |  |          |  |
|----------------------------------------------|--|------|--|----------------------|--|-------------|--|----------|--|----------|--|
| Size                                         |  | M8   |  | M12                  |  | M18         |  | M30      |  |          |  |
| Ambient temperature                          |  | [°C] |  | -25 ... +70          |  | -25 ... +70 |  |          |  |          |  |
| Position measuring range                     |  | [mm] |  | 0 ... 4              |  | 0 ... 6     |  | 0 ... 10 |  | 0 ... 20 |  |
| Distance resolution                          |  | [mm] |  | 0.001                |  | 0.002       |  | 0.005    |  |          |  |
| Temperature drift of real switching distance |  | [%]  |  | ≤ ±10 (-25 ... 0 °C) |  | ≤ ±10       |  |          |  |          |  |
|                                              |  | [%]  |  | ≤ ±5 (0 ... 70 °C)   |  |             |  |          |  |          |  |

| Output, general                               |      | M8    | M12 | M18   | M30   |
|-----------------------------------------------|------|-------|-----|-------|-------|
| Repetition accuracy                           | [mm] | 0.3   |     | 0.3   |       |
| Repetition accuracy under constant conditions | [mm] | ±0.01 |     | ±0.02 | ±0.05 |

| Switching output        |      | M8                   | M12                  | M18                  | M30                   |
|-------------------------|------|----------------------|----------------------|----------------------|-----------------------|
| Analogue output         | [V]  | 0 ... 10             | 0 ... 10             | 0 ... 10             | 0 ... 10              |
|                         | [mA] | –                    | 4 ... 20             | 4 ... 20             | 4 ... 20              |
| Output voltage at 23 °C | [V]  | +10/±0.4 (s = 4 mm)  | +10/±0.4 (s = 6 mm)  | +10/±0.4 (s = 10 mm) | +10/±0.4 (s = 20 mm)  |
|                         | [V]  | +5.2/±0.4 (s = 2 mm) | +5.2/±0.4 (s = 3 mm) | +5.2/±0.4 (s = 5 mm) | +5.2/±0.4 (s = 10 mm) |
|                         | [V]  | 0/-0 +0.4 (s = 0 mm) | 0/-0 +0.4 (s = 0 mm) | 0/-0 +0.4 (s = 0 mm) | 0/-0 +0.4 (s = 0 mm)  |
| Output current at 23 °C | [mA] | –                    | 20/±0.8 (s = 6 mm)   | 20/±0.8 (s = 10 mm)  | 20/±0.8 (s = 20 mm)   |
|                         | [mA] | –                    | 4/±0.8 (s = 0 mm)    | 4/±0.8 (s = 0 mm)    | 4/±0.8 (s = 0 mm)     |

| Reduction factors       |  | M8   | M12  | M18  | M30  |
|-------------------------|--|------|------|------|------|
| Aluminium               |  | 0.28 | 0.28 | 0.18 | 0.2  |
| Stainless steel St 18/8 |  | 0.68 | 0.47 | 0.6  | 0.65 |
| Copper                  |  | 0.25 | 0.2  | 0.15 | 0.17 |
| Brass                   |  | 0.4  | 0.35 | 0.28 | 0.3  |
| Steel St 37             |  | 1.0  | 1.0  | 1.0  | 1.0  |

# Proximity sensors SIEA, inductive

Technical data – Analogue output

FESTO

| Switching output                                 |      |                              |                              |                            |                             |
|--------------------------------------------------|------|------------------------------|------------------------------|----------------------------|-----------------------------|
| Size                                             |      | M8                           | M12                          | M18                        | M30                         |
| Max. switching frequency DC                      | [Hz] | 1,600                        | 1,000                        | 500                        | 200                         |
| Bandwidth                                        | [Hz] | 1,600<br>(−3 dB at s = 2 mm) | 1,000<br>(−3 dB at s = 3 mm) | 500<br>(−3 dB at s = 5 mm) | 200<br>(−3 dB at s = 10 mm) |
| Max. load at analogue current output             | [Ω]  | –                            | 500                          | 500                        | 500                         |
| Max. load current at analogue voltage output     | [mA] | 10                           | 10                           | 10                         | 10                          |
| Max. current/voltage output value without object | [%]  | 120                          | 120                          | 120                        | 120                         |

| Output, additional data          |        |
|----------------------------------|--------|
| Protection against short circuit | Pulsed |
| Protection against overloading   | Yes    |

| Electronic components       |                       |
|-----------------------------|-----------------------|
| Operating voltage range     | [V DC] 15 ... 30      |
| Residual ripple             | [%] 20                |
| Idle current                | [mA] ≤ 10             |
| Reverse polarity protection | For operating voltage |

| Electromechanical components |                   |     |                    |     |
|------------------------------|-------------------|-----|--------------------|-----|
| Size                         | M8                | M12 | M18                | M30 |
| Electrical connection        | Plug, M8x1, 3-pin |     | Plug, M12x1, 4-pin |     |
| Cable length [m]             | 2.5               |     |                    |     |

| Mechanical components  |                     |     |     |     |
|------------------------|---------------------|-----|-----|-----|
| Size                   | M8                  | M12 | M18 | M30 |
| Attachment type        | Via lock nut        |     |     |     |
| Mounting type          | Flush               |     |     |     |
| Tightening torque [Nm] | 4                   | 10  | 25  | 70  |
| Product weight [g]     | 25                  | 33  | 55  | 155 |
| Housing material       | Chrome-plated brass |     |     |     |

| Immissions/emissions                         |      |
|----------------------------------------------|------|
| Protection class                             | IP67 |
| Corrosion resistance class CRC <sup>1)</sup> | 2    |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Pin allocation                                                                      |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M8x1, 3-pin                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | –          |
|                                                                                     | 4   | Black       | Voltage    |
| M12x1, 4-pin                                                                        |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 2   | White       | Current    |
|                                                                                     | 3   | Blue        | –          |
|                                                                                     | 4   | Black       | Voltage    |

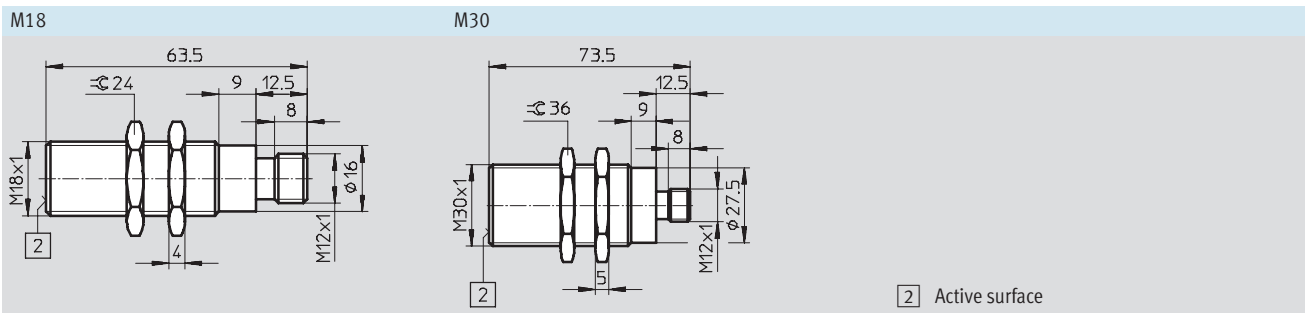
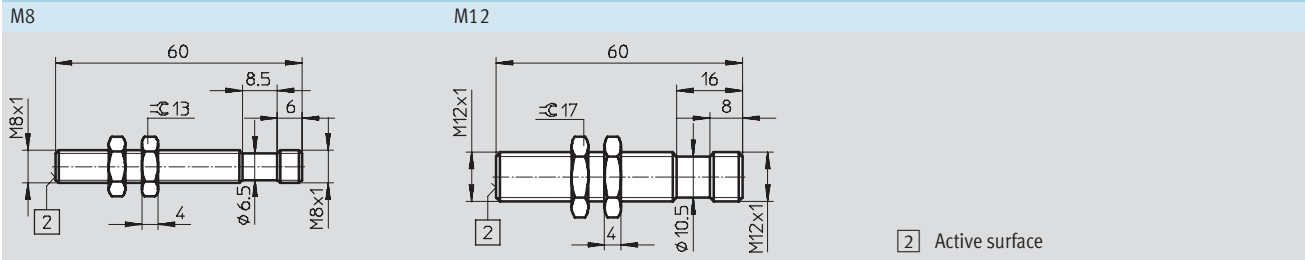
# Proximity sensors SIEA, inductive

Technical data – Analogue output

**FESTO**

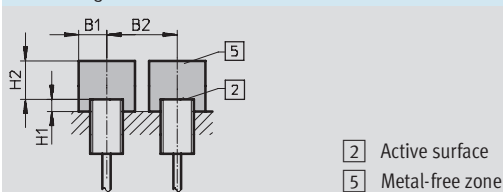
## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



## Fitting instructions

### Flush fitting



| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M8   | 8  | 20 | 1  | 12 |
| M12  | 12 | 30 | 2  | 18 |
| M18  | 19 | 44 | 4  | 30 |
| M30  | 35 | 80 | 6  | 60 |

## Ordering data

| Size                                                                                | S <sup>1)</sup><br><br>[mm] | Mounting type | Analogue output |             | Electrical connection |                |
|-------------------------------------------------------------------------------------|-----------------------------|---------------|-----------------|-------------|-----------------------|----------------|
|                                                                                     |                             |               |                 |             | Plug                  |                |
|                                                                                     |                             |               |                 |             | Part No.              | Type           |
| M8                                                                                  |                             |               |                 |             |                       |                |
|  | 0 ... 4                     | Flush         | 0 ... 10 V      | –           | 538291                | SIEA-M8B-PU-S  |
| M12                                                                                 |                             |               |                 |             |                       |                |
|  | 0 ... 6                     | Flush         | 0 ... 10 V      | 4 ... 20 mA | 538292                | SIEA-M12B-UI-S |
| M18                                                                                 |                             |               |                 |             |                       |                |
|  | 0 ... 10                    | Flush         | 0 ... 10 V      | 4 ... 20 mA | 538293                | SIEA-M18B-UI-S |
| M30                                                                                 |                             |               |                 |             |                       |                |
|  | 0 ... 20                    | Flush         | 0 ... 10 V      | 4 ... 20 mA | 538294                | SIEA-M30B-UI-S |

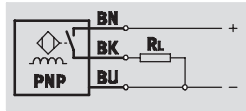
1) S Position measuring range [mm]

# Proximity sensors SIEF, inductive

FESTO

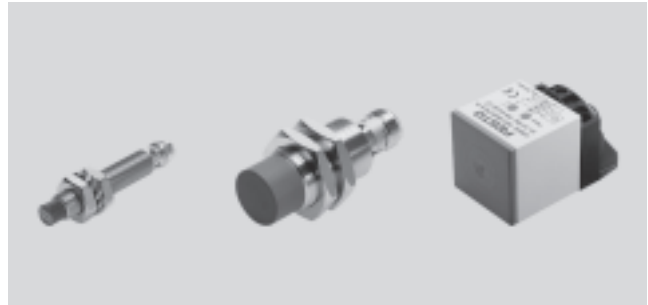
Technical data – Increased switching distance, reduction factor 1, welding field immune

Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Standard switching distance
- Reduction factor 1 for all metals
- For DC voltage
- Round design



| General technical data                  |                                   |     |     |     |                                   |     |     |     |              |
|-----------------------------------------|-----------------------------------|-----|-----|-----|-----------------------------------|-----|-----|-----|--------------|
| Mounting type                           | Flush                             |     |     |     | Partially flush                   |     |     |     |              |
| Size                                    | M8                                | M12 | M18 | M30 | M8                                | M12 | M18 | M30 | Q40          |
| Design                                  | Round                             |     |     |     | Round                             |     |     |     | Block-shaped |
| Conforms to                             | EN 60947-5-2                      |     |     |     | EN 60947-5-2                      |     |     |     |              |
| Certification                           | cULus listed (OL)                 |     |     |     | cULus listed (OL)                 |     |     |     |              |
|                                         | C-Tick                            |     |     |     | C-Tick                            |     |     |     |              |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |     |     |     | To EU EMC Directive <sup>1)</sup> |     |     |     |              |
| Note on materials                       | Free of copper and PTFE           |     |     |     | Free of copper and PTFE           |     |     |     |              |
|                                         | RoHS-compliant                    |     |     |     | –                                 |     |     |     |              |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |             |  |                 |      |
|--------------------------------|-------------|--|-----------------|------|
| Mounting type                  | Flush       |  | Partially flush |      |
| Electrical connection          | Cable       |  | Plug            | Plug |
| Ambient temperature [°C]       | –30 ... +70 |  | –30 ... +85     |      |

| Output, general          |       |      |      |      |                 |      |      |     |     |
|--------------------------|-------|------|------|------|-----------------|------|------|-----|-----|
| Mounting type            | Flush |      |      |      | Partially flush |      |      |     |     |
| Size                     | M8    | M12  | M18  | M30  | M8              | M12  | M18  | M30 | Q40 |
| Repetition accuracy [mm] | 0.08  | 0.16 | 0.28 | 0.55 | 0.08            | 0.16 | 0.24 | 0.4 | 0.7 |

| Switching output                 |             |       |       |       |                 |            |            |            |             |
|----------------------------------|-------------|-------|-------|-------|-----------------|------------|------------|------------|-------------|
| Mounting type                    | Flush       |       |       |       | Partially flush |            |            |            |             |
| Size                             | M8          | M12   | M18   | M30   | M8              | M12        | M18        | M30        | Q40         |
| Switching output                 | PNP         |       |       |       | PNP             |            |            |            |             |
|                                  | NPN         |       |       |       | NPN             |            |            |            |             |
| Switching element function       | N/O contact |       |       |       | N/O contact     |            |            |            | Antivalent  |
| Rated operating distance [mm]    | 1.5         | 3     | 5     | 10    | 4               | 8          | 12         | 20         | 35          |
| Assured switching distance [mm]  | –           | –     | –     | –     | 3.24            | 6.48       | 9.72       | 16.2       | 28.35       |
| Reduction factors                |             |       |       |       |                 |            |            |            |             |
| Aluminium                        | –           |       |       |       | 1.0             |            |            |            |             |
| Stainless steel St 18/8          |             |       |       |       | 1.0             |            |            |            |             |
| Copper                           |             |       |       |       | 1.0             |            |            |            |             |
| Brass                            |             |       |       |       | 1.0             |            |            |            |             |
| Steel St 37                      |             |       |       |       | 1.0             |            |            |            |             |
| Hysteresis [mm]                  | –           |       |       |       | 0.12...0.6      | 0.24...1.2 | 0.36...1.8 | 0.36...1.8 | 1.05...5.25 |
| Max. switching frequency DC [Hz] | 2,000       | 3,000 | 2,500 | 2,000 | 2,000           | 2,000      | 2,000      | 1,500      | 250         |
| Max. output current [mA]         | 150         | 200   |       |       | 150             | 200        |            |            |             |
| Voltage drop [V]                 | –           |       |       |       | ≤ 1.8           |            |            |            |             |

## Proximity sensors SIEF, inductive

**FESTO**

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Output, additional data          |        |  |  |  |  |  |  |  |  |
|----------------------------------|--------|--|--|--|--|--|--|--|--|
| Protection against short circuit | Pulsed |  |  |  |  |  |  |  |  |

| Electronic components          |                                |     |     |     |                                |     |     |     |           |
|--------------------------------|--------------------------------|-----|-----|-----|--------------------------------|-----|-----|-----|-----------|
| Mounting type                  | Flush                          |     |     |     | Partially flush                |     |     |     |           |
| Size                           | M8                             | M12 | M18 | M30 | M8                             | M12 | M18 | M30 | Q40       |
| Operating voltage range [V DC] | 10 ... 30                      |     |     |     | 10 ... 30                      |     |     |     | 10 ... 65 |
| Residual ripple [%]            | –                              |     |     |     | 10                             |     |     |     | 10        |
| Idle current [mA]              | –                              |     |     |     | ≤ 15                           |     |     |     | ≤ 15      |
| Reverse polarity protection    | For all electrical connections |     |     |     | For all electrical connections |     |     |     |           |

| Electromechanical components |                     |     |     |     |                     |                            |     |     |                            |
|------------------------------|---------------------|-----|-----|-----|---------------------|----------------------------|-----|-----|----------------------------|
| Mounting type                | Flush               |     |     |     | Partially flush     |                            |     |     |                            |
| Size                         | M8                  | M12 | M18 | M30 | M8                  | M12                        | M18 | M30 | Q40                        |
| Cable                        |                     |     |     |     |                     |                            |     |     |                            |
| Electrical connection        | Cable, 3-wire       |     |     |     | Cable, 3-wire       |                            |     |     | –                          |
| Cable length [m]             | 2.5                 |     |     |     | 2.5                 |                            |     |     |                            |
| Cable sheath material        | TPE-U(PU)           |     |     |     | PUR                 |                            |     |     |                            |
| Insulating sheath material   | PVC                 |     |     |     | PVC                 |                            |     |     |                            |
|                              |                     |     |     |     |                     |                            |     |     |                            |
| Plug                         |                     |     |     |     |                     |                            |     |     |                            |
| Electrical connection        | Plug, M8x1, 3-pin   |     |     |     | Plug, M8x1, 3-pin   | Plug, M12x1, 3-pin, Fixcon |     |     | Plug, M12x1, 4-pin, Fixcon |
| Plug housing material        | Chrome-plated brass |     |     |     | Chrome-plated brass |                            |     |     |                            |

| Mechanical components |                            |      |                     |      |                     |      |                     |      |                |
|-----------------------|----------------------------|------|---------------------|------|---------------------|------|---------------------|------|----------------|
| Mounting type         | Flush                      |      |                     |      |                     |      |                     |      |                |
| Size                  | M8                         |      | M12                 |      | M18                 |      | M30                 |      | Q40            |
| Electrical connection | Cable                      | Plug | Cable               | Plug | Cable               | Plug | Cable               | Plug | Plug           |
| Product weight [g]    | 61.4                       | 12   | 105                 | 24   | 124                 | 41   | 191                 | 100  | 156            |
| Housing material      | High-alloy stainless steel |      | Chrome-plated brass |      | Chrome-plated brass |      | Chrome-plated brass |      | PBT-reinforced |
|                       | PA                         |      | LCP-reinforced      |      | LCP-reinforced      |      | LCP-reinforced      |      | PA             |
|                       | PP                         | –    | TPE-O               | –    | TPE-O               | –    | TPE-O               | –    | –              |

| Mechanical components  |                            |      |                     |      |                     |      |                     |      |                  |
|------------------------|----------------------------|------|---------------------|------|---------------------|------|---------------------|------|------------------|
| Mounting type          | Partially flush            |      |                     |      |                     |      |                     |      |                  |
| Size                   | M8                         |      | M12                 |      | M18                 |      | M30                 |      | Q40              |
| Electrical connection  | Cable                      | Plug | Cable               | Plug | Cable               | Plug | Cable               | Plug | Plug             |
| Attachment type        | Via lock nut               |      |                     |      |                     |      |                     |      | Via through-hole |
| Tightening torque [Nm] | 10                         | 10   | 10                  | 10   | 25                  | 25   | 75                  | 75   | –                |
| Product weight [g]     | 77                         | 19   | 120                 | 22   | 141                 | 38   | 194                 | 90   | 156              |
| Housing material       | High-alloy stainless steel |      | Chrome-plated brass |      | Chrome-plated brass |      | Chrome-plated brass |      | PBT-reinforced   |
|                        | PA                         |      | PBT                 |      | PBT                 |      | PBT                 |      | PA               |

# Proximity sensors SIEF, inductive

FESTO

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Display/operation        |            |     |     |     |                 |     |     |     |            |
|--------------------------|------------|-----|-----|-----|-----------------|-----|-----|-----|------------|
| Mounting type            | Flush      |     |     |     | Partially flush |     |     |     |            |
| Size                     | M8         | M12 | M18 | M30 | M8              | M12 | M18 | M30 | Q40S       |
| Ready status display     | –          |     |     |     | –               |     |     |     | Green LED  |
| Switching status display | Yellow LED |     |     |     | Yellow LED      |     |     |     | Yellow LED |

| Immissions/emissions                                           |                                       |     |     |     |                                       |     |     |     |     |
|----------------------------------------------------------------|---------------------------------------|-----|-----|-----|---------------------------------------|-----|-----|-----|-----|
| Electrical connection                                          | Cable                                 |     |     |     | Plug                                  |     |     |     |     |
| Size                                                           | M8                                    | M12 | M18 | M30 | M8                                    | M12 | M18 | M30 | Q40 |
| Flush                                                          |                                       |     |     |     |                                       |     |     |     |     |
| Ambient temperature with flexible cable installation      [°C] | −5 ... +70                            |     |     |     | −                                     |     |     |     | −   |
| Protection class                                               | IP68                                  |     |     |     | IP68                                  |     |     |     |     |
| Resistance to interference from magnetic fields                | Magnetic direct and alternating field |     |     |     | Magnetic direct and alternating field |     |     |     |     |
| Surge resistance      [kV]                                     | 0.8                                   |     |     |     | 0.8                                   |     |     |     |     |
| Corrosion resistance class CRC <sup>1)</sup>                   | 2                                     |     |     |     | 2                                     |     |     |     |     |
| Degree of contamination                                        | 3                                     |     |     |     | 3                                     |     |     |     |     |
| Partially flush                                                |                                       |     |     |     |                                       |     |     |     |     |
| Ambient temperature with flexible cable installation      [°C] | 0 ... 80                              |     |     |     | −                                     |     |     |     | −   |
| Protection class                                               | IP67                                  |     |     |     | IP67                                  |     |     |     |     |
| Resistance to interference from magnetic fields                | Magnetic direct and alternating field |     |     |     | Magnetic direct and alternating field |     |     |     |     |
| Surge resistance      [kV]                                     | −                                     |     |     |     | −                                     |     |     |     |     |
| Corrosion resistance class CRC <sup>1)</sup>                   | 4                                     | 2   |     |     | 4                                     | 2   |     |     |     |
| Degree of contamination                                        | −                                     |     |     |     | −                                     |     |     |     |     |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
Corrosion resistance class 4 according to Festo standard 940 070  
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

| Pin allocation to EN 60947-5-2 |     |             |            |  |              |     |             |            |  |
|--------------------------------|-----|-------------|------------|--|--------------|-----|-------------|------------|--|
| M8x1, 3-pin                    |     |             |            |  | M12x1, 3-pin |     |             |            |  |
| N/O contact                    |     |             |            |  | N/O contact  |     |             |            |  |
|                                | Pin | Wire colour | Allocation |  |              | Pin | Wire colour | Allocation |  |
|                                | 1   | Brown       | +          |  |              | 1   | Brown       | +          |  |
|                                | 3   | Blue        | –          |  |              | 3   | Blue        | –          |  |
|                                | 4   | Black       | Output     |  |              | 4   | Black       | Output     |  |
|                                |     |             |            |  |              |     |             |            |  |

| M12x1, 4-pin    |     |             |             |  |                 |     |             |             |  |
|-----------------|-----|-------------|-------------|--|-----------------|-----|-------------|-------------|--|
| NPN, antivalent |     |             |             |  | PNP, antivalent |     |             |             |  |
|                 | Pin | Wire colour | Allocation  |  |                 | Pin | Wire colour | Allocation  |  |
|                 | 1   | Brown       | +           |  |                 | 1   | Brown       | +           |  |
|                 | 2   | White       | N/O contact |  |                 | 2   | White       | N/C contact |  |
|                 | 3   | Blue        | –           |  |                 | 3   | Blue        | –           |  |
|                 | 4   | Black       | N/C contact |  |                 | 4   | Black       | N/O contact |  |

# Proximity sensors SIEF, inductive

Technical data – Increased switching distance, reduction factor 1, welding field immune

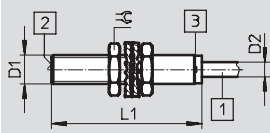
**FESTO**

## Dimensions

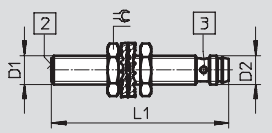
Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

### M8 – Flush fitting

Cable

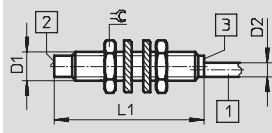


Plug

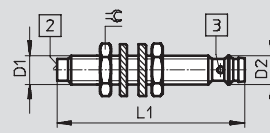


### M8 – Partially flush fitting

Cable

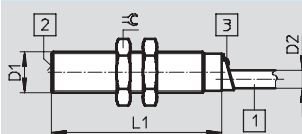


Plug

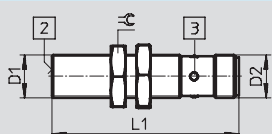


### M12 – Flush fitting

Cable

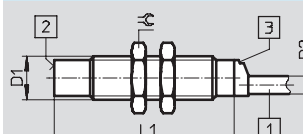


Plug

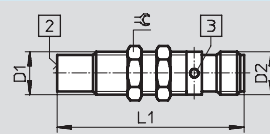


### M12 – Partially flush fitting

Cable

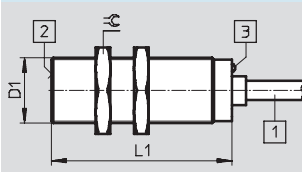


Plug

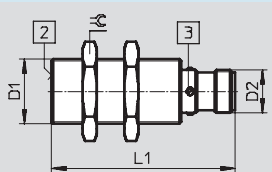


### M18 – Flush fitting

Cable

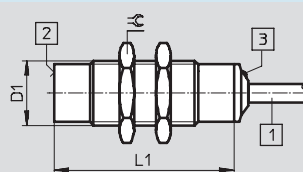


Plug

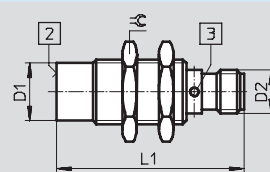


### M18 – Partially flush fitting

Cable



Plug



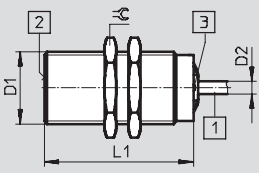
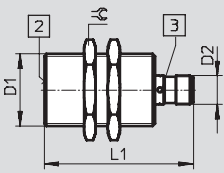
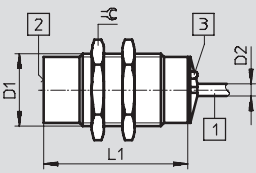
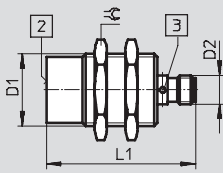
| Mounting type   | Electrical connection | D1    | D2    | L1   | ⌀  |
|-----------------|-----------------------|-------|-------|------|----|
| M8              |                       |       |       |      |    |
| Flush           | Cable                 | M8x1  | 4     | 41.6 | 13 |
|                 | Plug                  |       | M8x1  | 49   |    |
| Partially flush | Cable                 | M8x1  | 4     | 41.6 | 13 |
|                 | Plug                  |       | M8x1  | 52   |    |
|                 |                       |       |       |      |    |
| M12             |                       |       |       |      |    |
| Flush           | Cable                 | M12x1 | 5.2   | 50   | 17 |
|                 | Plug                  |       | M12x1 | 52   |    |
| Partially flush | Cable                 | M12x1 | 5     | 50   | 17 |
|                 | Plug                  |       | M12x1 | 52   | 13 |
|                 |                       |       |       |      |    |
| M18             |                       |       |       |      |    |
| Flush           | Cable                 | M18x1 | 5.2   | 50   | 24 |
|                 | Plug                  |       | M12x1 | 52   |    |
| Partially flush | Cable                 | M18x1 | 5.2   | 50   | 24 |
|                 | Plug                  |       | M12x1 | 52   |    |

- 1 Connecting cable
- 2 Active surface
- 3 LED

# Proximity sensors SIEF, inductive

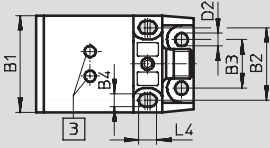
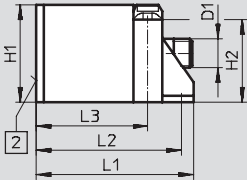
FESTO

Technical data – Increased switching distance, reduction factor 1, welding field immune

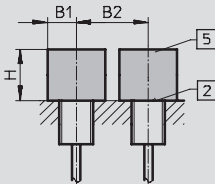
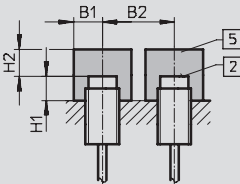
| Dimensions                                                                        |                                                                                   | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a> |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| M30 – Flush fitting                                                               |                                                                                   | M30 – Partially flush fitting                                                      |                                                                                     |
| Cable                                                                             | Plug                                                                              | Cable                                                                              | Plug                                                                                |
|  |  |  |  |

| Mounting type   | Electrical connection | D1      | D2    | L1 | ⌀  |
|-----------------|-----------------------|---------|-------|----|----|
| M30             |                       |         |       |    |    |
| Flush           | Cable                 | M30x1.5 | 5.2   | 60 | 36 |
|                 | Plug                  |         | M12x1 | 62 |    |
| Partially flush | Cable                 | M30x1.5 | 5.2   | 60 | 36 |
|                 | Plug                  |         | M12x1 | 62 |    |

- 1 Connecting cable
- 2 Active surface
- 3 LED

| Dimensions – 40x40x65 mm                                                            |                                                                                     | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a> |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--|
| Partially flush fitting                                                             |                                                                                     |                                                                                    |  |
|  |  |                                                                                    |  |
|                                                                                     |                                                                                     |                                                                                    |  |

| Mounting type   | Electrical connection | B1 | B2 | B3 | B4  | D1    | D2  | H1 | H2 | L1 | L2 | L3 | L4  |
|-----------------|-----------------------|----|----|----|-----|-------|-----|----|----|----|----|----|-----|
| 40x40x65 mm     |                       |    |    |    |     |       |     |    |    |    |    |    |     |
| Partially flush | Plug                  | 40 | 30 | 20 | 5.3 | M12x1 | 5.3 | 40 | 34 | 65 | 60 | 46 | 7.3 |

| Fitting instructions                                                                |                                                                                      |  |  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|--|
| Flush fitting                                                                       | Partially flush fitting                                                              |  |  |
|  |  |  |  |
|                                                                                     |                                                                                      |  |  |

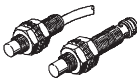
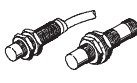
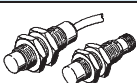
| Size | B1 | B2 | H   |
|------|----|----|-----|
| M8   | 12 | 16 | 4.5 |
| M12  | 18 | 24 | 12  |
| M18  | 27 | 36 | 15  |
| M30  | 45 | 60 | 30  |

| Size        | B1 | B2  | H1 | H2  |
|-------------|----|-----|----|-----|
| M8          | 12 | 32  | 8  | 12  |
| M12         | 18 | 48  | 16 | 24  |
| M18         | 27 | 54  | 24 | 36  |
| M30         | 45 | 90  | 30 | 60  |
| 40x40x65 mm | 60 | 120 | 30 | 105 |

## Proximity sensors SIEF, inductive

**FESTO**

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Ordering data                                                                       |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|-------------------------------------------------------------------------------------|--------------------------------------|--------------------|----------------------------------|---------------------|-----------------------|-------------------|--------|-------------------|-------------------|
| Size                                                                                | S <sub>n</sub> <sup>1)</sup><br>[mm] | Mounting<br>type   | Switching<br>element<br>function | Switching<br>output | Electrical connection |                   |        |                   |                   |
|                                                                                     |                                      |                    |                                  |                     | Cable                 |                   |        | Plug              |                   |
|                                                                                     |                                      |                    |                                  |                     | Part No.              | Type              |        | Part No.          | Type              |
| M8                                                                                  |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|    | 1.5                                  | Flush              | N/O contact                      | PNP                 | 553538                | SIEF-M8B-PS-K-L   | 553537 | SIEF-M8B-PS-S-L   |                   |
|                                                                                     | 4.0                                  | Partially<br>flush |                                  | NPN                 | 553540                | SIEF-M8B-NS-K-L   | 553539 | SIEF-M8B-NS-S-L   |                   |
|                                                                                     |                                      |                    |                                  | PNP                 | 538308                | SIEF-M8NB-PS-K-L  | 538307 | SIEF-M8NB-PS-S-L  |                   |
|                                                                                     |                                      |                    |                                  | NPN                 | 538310                | SIEF-M8NB-NS-K-L  | 538309 | SIEF-M8NB-NS-S-L  |                   |
| M12                                                                                 |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|    | 3.0                                  | Flush              | N/O contact                      | PNP                 | 553542                | SIEF-M12B-PS-K-L  | 553541 | SIEF-M12B-PS-S-L  |                   |
|                                                                                     | 8.0                                  | Partially flush    |                                  | NPN                 | 553544                | SIEF-M12B-NS-K-L  | 553543 | SIEF-M12B-NS-S-L  |                   |
|                                                                                     |                                      |                    |                                  | PNP                 | 538312                | SIEF-M12NB-PS-K-L | 538311 | SIEF-M12NB-PS-S-L |                   |
|                                                                                     |                                      |                    |                                  | NPN                 | 538314                | SIEF-M12NB-NS-K-L | 538313 | SIEF-M12NB-NS-S-L |                   |
| M18                                                                                 |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|    | 5.0                                  | Flush              | N/O contact                      | PNP                 | 553546                | SIEF-M18B-PS-K-L  | 553545 | SIEF-M18B-PS-S-L  |                   |
|                                                                                     | 12.0                                 | Partially flush    |                                  | NPN                 | 553548                | SIEF-M18B-NS-K-L  | 553547 | SIEF-M18B-NS-S-L  |                   |
|                                                                                     |                                      |                    |                                  | PNP                 | 538316                | SIEF-M18NB-PS-K-L | 538315 | SIEF-M18NB-PS-S-L |                   |
|                                                                                     |                                      |                    |                                  | NPN                 | 538318                | SIEF-M18NB-NS-K-L | 538317 | SIEF-M18NB-NS-S-L |                   |
| M30                                                                                 |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|  | 10.0                                 | Flush              | N/O contact                      | PNP                 | 553550                | SIEF-M30B-PS-K-L  | 553549 | SIEF-M30B-PS-S-L  |                   |
|                                                                                     | 20.0                                 | Partially flush    |                                  | NPN                 | 553552                | SIEF-M30B-NS-K-L  | 553551 | SIEF-M30B-NS-S-L  |                   |
|                                                                                     |                                      |                    |                                  | PNP                 | 538320                | SIEF-M30NB-PS-K-L | 538319 | SIEF-M30NB-PS-S-L |                   |
|                                                                                     |                                      |                    |                                  | NPN                 | 538322                | SIEF-M30NB-NS-K-L | 538321 | SIEF-M30NB-NS-S-L |                   |
| 40x40x65 mm                                                                         |                                      |                    |                                  |                     |                       |                   |        |                   |                   |
|  | 35.0                                 | Partially flush    | Antivalent                       | PNP                 | —                     |                   |        | 538341            | SIEF-Q40S-PA-S-2L |
|                                                                                     |                                      |                    | NPN                              | 538342              |                       |                   |        | SIEF-Q40S-NA-S-2L |                   |

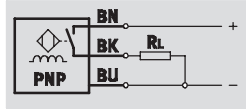
1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIEF-...-WA, inductive

FESTO

Technical data – Increased switching distance, reduction factor 1, welding field immune

Function<sup>1)</sup>



1) e.g. N/O contact with PNP output and cable

- Standard switching distance
- Reduction factor 1 for all metals
- Welding field immune
- For DC voltage
- Round design



| General technical data                  |                                   |
|-----------------------------------------|-----------------------------------|
| Design                                  | Round                             |
| Conforms to                             | EN 60947-5-2                      |
| Certification                           | cULus listed (OL)                 |
|                                         | C-Tick                            |
| CE mark (see declaration of conformity) | To EU EMC Directive <sup>1)</sup> |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| Ambient temperature            | [°C] | −30 ... +85 |

| Output, general          |       |     |     |                 |      |     |
|--------------------------|-------|-----|-----|-----------------|------|-----|
| Mounting type            | Flush |     |     | Partially flush |      |     |
| Size                     | M12   | M18 | M30 | M12             | M18  | M30 |
| Repetition accuracy [mm] | 0.06  | 0.1 | 0.2 | 0.16            | 0.24 | 0.4 |

| Switching output                 |              |               |              |                 |              |              |
|----------------------------------|--------------|---------------|--------------|-----------------|--------------|--------------|
| Mounting type                    | Flush        |               |              | Partially flush |              |              |
| Size                             | M12          | M18           | M30          | M12             | M18          | M30          |
| Switching output                 | PNP          |               |              |                 |              |              |
|                                  | NPN          |               |              |                 |              |              |
| Switching element function       | N/O contact  |               |              |                 |              |              |
| Rated operating distance [mm]    | 3            | 5             | 10           | 8               | 12           | 20           |
| Assured switching distance [mm]  | 2.43         | 4.05          | 16.2         | 6.48            | 9.72         | 16.2         |
|                                  |              |               |              |                 |              |              |
| Reduction factors                |              |               |              |                 |              |              |
| Aluminium                        | 1.0          |               |              |                 |              |              |
| Stainless steel St 18/8          | 1.0          |               |              |                 |              |              |
| Copper                           | 1.0          |               |              |                 |              |              |
| Brass                            | 1.0          |               |              |                 |              |              |
| Steel St 37                      | 1.0          |               |              |                 |              |              |
|                                  |              |               |              |                 |              |              |
| Hysteresis [mm]                  | 0.24 ... 1.2 | 0.15 ... 0.75 | 0.36 ... 1.8 | 0.24 ... 1.2    | 0.36 ... 1.8 | 0.36 ... 1.8 |
| Max. switching frequency DC [Hz] | 3,000        | 2,500         | 1,500        | 2,000           | 2,000        | 1,500        |
| Max. output current [mA]         | 200          |               |              |                 |              |              |
| Voltage drop [V]                 | ≤ 1.8        |               |              |                 |              |              |

| Output, additional data          |        |
|----------------------------------|--------|
| Protection against short circuit | Pulsed |

## Proximity sensors SIEF-...-WA, inductive

**FESTO**

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Electronic components       |        |                                |
|-----------------------------|--------|--------------------------------|
| Operating voltage range     | [V DC] | 10 ... 30                      |
| Residual ripple             | [%]    | 10                             |
| Idle current                | [mA]   | ≤ 15                           |
| Reverse polarity protection |        | For all electrical connections |

| Electromechanical components |                            |
|------------------------------|----------------------------|
| Electrical connection        | Plug, M12x1, 3-pin, Fixcon |
| Plug housing material        | PTFE-coated brass          |

| Mechanical components |                   |                 |         |                 |       |     |                 |
|-----------------------|-------------------|-----------------|---------|-----------------|-------|-----|-----------------|
| Size                  | M12               |                 | M18     |                 | M30   |     |                 |
| Mounting type         | Flush             | Partially flush | Flush   | Partially flush | Flush |     | Partially flush |
| Switching output      | PNP/NPN           | PNP/NPN         | PNP/NPN | PNP/NPN         | PNP   | NPN | PNP NPN         |
| Attachment type       | Via lock nut      |                 |         |                 |       |     |                 |
| Tightening torque     | [Nm]              | 7               | 15      | 75              | 75    |     |                 |
| Product weight        | [g]               | 26              | 48      | 373             | 464   | 919 | 1,010           |
| Housing material      | PTFE-coated brass |                 |         |                 |       |     |                 |
|                       | PBT               |                 |         |                 |       |     |                 |

| Display/operation        |            |
|--------------------------|------------|
| Switching status display | Yellow LED |

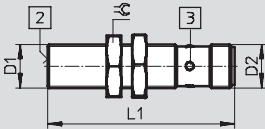
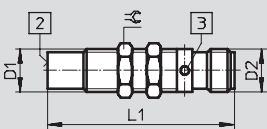
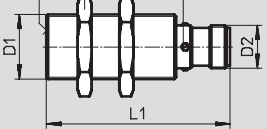
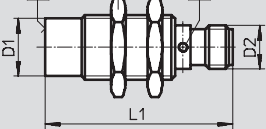
| Immissions/emissions                            |                                       |
|-------------------------------------------------|---------------------------------------|
| Protection class                                | IP67                                  |
| Resistance to interference from magnetic fields | Magnetic direct and alternating field |

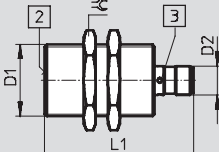
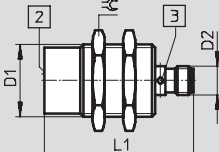
| Pin allocation to EN 60947-5-2                                                      |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M12x1, 3-pin                                                                        |     |             |            |
| N/O contact                                                                         |     |             |            |
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | -          |
|                                                                                     | 4   | Black       | Output     |
|                                                                                     |     |             |            |

# Proximity sensors SIEF-...-WA, inductive

FESTO

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Dimensions                                                                        |                                                                                   | Download CAD Data → <a href="http://www.festo.com/us/cad">www.festo.com/us/cad</a> |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| M12                                                                               |                                                                                   | M18                                                                                |                                                                                     |
| Flush fitting                                                                     | Partially flush fitting                                                           | Flush fitting                                                                      | Partially flush fitting                                                             |
|  |  |  |  |

| M30                                                                               |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Flush fitting                                                                     | Partially flush fitting                                                           |
|  |  |

| Mounting type   | Electrical connection | D1      | D2    | L1 |  |
|-----------------|-----------------------|---------|-------|----|-------------------------------------------------------------------------------------|
| M12             |                       |         |       |    |                                                                                     |
| Flush           | Plug                  | M12x1   | M12x1 | 52 | 17                                                                                  |
| Partially flush |                       |         |       |    | 13                                                                                  |
|                 |                       |         |       |    |                                                                                     |
| M18             |                       |         |       |    |                                                                                     |
| Flush           | Plug                  | M18x1   | M12x1 | 52 | 24                                                                                  |
| Partially flush |                       |         |       |    |                                                                                     |
|                 |                       |         |       |    |                                                                                     |
| M30             |                       |         |       |    |                                                                                     |
| Flush           | Plug                  | M30x1.5 | M12x1 | 62 | 36                                                                                  |
| Partially flush |                       |         |       |    |                                                                                     |

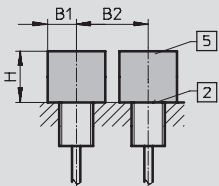
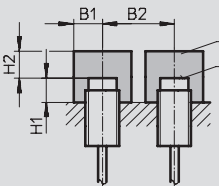
2

Active surface

3

LED

- 2 Active surface  
3 LED

| Fitting instructions                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flush fitting                                                                                                                                                                                                                                                                        | Partially flush fitting                                                                                                                                                                                                                                                               |
|  <p> <span style="border: 1px solid black; padding: 0 2px;">2</span> Active surface<br/> <span style="border: 1px solid black; padding: 0 2px;">5</span> Metal-free zone                     </p> |  <p> <span style="border: 1px solid black; padding: 0 2px;">2</span> Active surface<br/> <span style="border: 1px solid black; padding: 0 2px;">5</span> Metal-free zone                     </p> |

| Size | B1 | B2 | H  |
|------|----|----|----|
| M12  | 18 | 24 | 9  |
| M18  | 27 | 36 | 15 |
| M30  | 45 | 60 | 30 |

| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M12  | 18 | 48 | 16 | 24 |
| M18  | 27 | 54 | 24 | 36 |
| M30  | 45 | 90 | 40 | 60 |

## Proximity sensors SIEF-...-WA, inductive

**FESTO**

Technical data – Increased switching distance, reduction factor 1, welding field immune

| Ordering data                                                                     |                              |                 |                            |                  |                       |                      |
|-----------------------------------------------------------------------------------|------------------------------|-----------------|----------------------------|------------------|-----------------------|----------------------|
| Size                                                                              | S <sub>n</sub> <sup>1)</sup> | Mounting type   | Switching element function | Switching output | Electrical connection |                      |
|                                                                                   | [mm]                         |                 |                            |                  | Plug                  |                      |
|                                                                                   |                              |                 |                            |                  | Part No.              | Type                 |
| M12                                                                               |                              |                 |                            |                  |                       |                      |
|  | 3.0                          | Flush           | N/O contact                | PNP              | 538297                | SIEF-M12B-PS-S-L-WA  |
|                                                                                   |                              |                 |                            | NPN              | 538298                | SIEF-M12B-NS-S-L-WA  |
|                                                                                   | 8.0                          | Partially flush |                            | PNP              | 538295                | SIEF-M12NB-PS-S-L-WA |
|                                                                                   |                              |                 |                            | NPN              | 538296                | SIEF-M12NB-NS-S-L-WA |
|                                                                                   |                              |                 |                            |                  |                       |                      |
| M18                                                                               |                              |                 |                            |                  |                       |                      |
|  | 5.0                          | Flush           | N/O contact                | PNP              | 538301                | SIEF-M18B-PS-S-L-WA  |
|                                                                                   |                              |                 |                            | NPN              | 538302                | SIEF-M18B-NS-S-L-WA  |
|                                                                                   | 12.0                         | Partially flush |                            | PNP              | 538299                | SIEF-M18NB-PS-S-L-WA |
|                                                                                   |                              |                 |                            | NPN              | 538300                | SIEF-M18NB-NS-S-L-WA |
|                                                                                   |                              |                 |                            |                  |                       |                      |
| M30                                                                               |                              |                 |                            |                  |                       |                      |
|  | 10.0                         | Flush           | N/O contact                | PNP              | 538305                | SIEF-M30B-PS-S-L-WA  |
|                                                                                   |                              |                 |                            | NPN              | 538306                | SIEF-M30B-NS-S-L-WA  |
|                                                                                   | 20.0                         | Partially flush |                            | PNP              | 538303                | SIEF-M30NB-PS-S-L-WA |
|                                                                                   |                              |                 |                            | NPN              | 538304                | SIEF-M30NB-NS-S-L-WA |

1) S<sub>n</sub> Rated operating distance [mm]

# Proximity sensors SIE..., inductive

Accessories

**FESTO**

| Ordering data – Connecting cables M8x1                                            |                 |                  |          | Technical data ➔ Internet: nebu    |  |
|-----------------------------------------------------------------------------------|-----------------|------------------|----------|------------------------------------|--|
|                                                                                   | Number of wires | Cable length [m] | Part No. | Type                               |  |
| Straight socket                                                                   |                 |                  |          |                                    |  |
|  | 3               | 2.5              | 541333   | NEBU-M8G3-K-2.5-LE3                |  |
|                                                                                   |                 | 5                | 541334   | NEBU-M8G3-K-5-LE3                  |  |
| Angled socket                                                                     |                 |                  |          |                                    |  |
|  | 3               | 2.5              | 541338   | NEBU-M8W3-K-2.5-LE3                |  |
|                                                                                   |                 | 5                | 541341   | NEBU-M8W3-K-5-LE3                  |  |
| Straight socket, straight plug                                                    |                 |                  |          |                                    |  |
|  | 4               | 2.5              | 554037   | NEBU-M8G3-K-2.5-M8G4 <sup>1)</sup> |  |

1) For connecting proximity sensor SIEA-M8B to signal converter SVE4-US.

| Ordering data – Connecting cables M12x1                                           |                 |                  |          | Technical data ➔ Internet: nebu     |  |
|-----------------------------------------------------------------------------------|-----------------|------------------|----------|-------------------------------------|--|
|                                                                                   | Number of wires | Cable length [m] | Part No. | Type                                |  |
| Straight socket                                                                   |                 |                  |          |                                     |  |
|  | 3               | 2.5              | 541363   | NEBU-M12G5-K-2.5-LE3                |  |
|                                                                                   |                 | 5                | 541364   | NEBU-M12G5-K-5-LE3                  |  |
|                                                                                   | 4               | 2.5              | 550326   | NEBU-M12G5-K-2.5-LE4 <sup>1)</sup>  |  |
|                                                                                   |                 | 5                | 541328   | NEBU-M12G5-K-5-LE4 <sup>1)</sup>    |  |
|                                                                                   |                 |                  |          |                                     |  |
| Angled socket                                                                     |                 |                  |          |                                     |  |
|  | 3               | 2.5              | 541367   | NEBU-M12W5-K-2.5-LE3                |  |
|                                                                                   |                 | 5                | 541370   | NEBU-M12W5-K-5-LE3                  |  |
|                                                                                   | 4               | 2.5              | 550325   | NEBU-M12W5-K-2.5-LE4 <sup>1)</sup>  |  |
|                                                                                   |                 | 5                | 541329   | NEBU-M12W5-K-5-LE4 <sup>1)</sup>    |  |
|                                                                                   |                 |                  |          |                                     |  |
| Straight socket, straight plug                                                    |                 |                  |          |                                     |  |
|  | 4               | 2.5              | 554036   | NEBU-M12G5-K-2.5-M8G4 <sup>2)</sup> |  |

1) For connecting proximity sensor SIE...-M12/M18/M30 in N/C contact version with plug.

2) For connecting proximity sensor SIEA-MxxB to signal converter SVE4.

| Ordering data – Mounting attachments                                                |             |          |             |
|-------------------------------------------------------------------------------------|-------------|----------|-------------|
|                                                                                     | For size    | Part No. | Type        |
| Sensor bracket with stop for flush fitting                                          |             |          |             |
|  | M8          | 538346   | SIEZ-B-8    |
|                                                                                     |             |          |             |
|  | M12         | 538348   | SIEZ-B-12   |
|                                                                                     | M18         | 538350   | SIEZ-B-18   |
|                                                                                     | M30         | 538352   | SIEZ-B-30   |
| Sensor bracket without stop                                                         |             |          |             |
|  | 4           | 538343   | SIEZ-NB-4   |
|                                                                                     | 6.5         | 538344   | SIEZ-NB-6,5 |
|                                                                                     | M8          | 538345   | SIEZ-NB-8   |
|  | M12         | 538347   | SIEZ-NB-12  |
|                                                                                     | M18         | 538349   | SIEZ-NB-18  |
|                                                                                     | M30         | 538351   | SIEZ-NB-30  |
|  | M12, M18    | 538354   | SIEZ-UH     |
|                                                                                     |             |          |             |
|  | M12, M18    | 538355   | SIEZ-UV     |
| Inscription label                                                                   |             |          |             |
|                                                                                     | M12 ... M30 | 538353   | SIEZ-LB     |

| Ordering data – Mounting attachments                                                |          |          |            |
|-------------------------------------------------------------------------------------|----------|----------|------------|
|                                                                                     | For size | Part No. | Type       |
| Foot mounting                                                                       |          |          |            |
|  | M12      | 5123     | HBN-8/10x1 |
|                                                                                     |          |          |            |
|  | M18      | 188990   | HBE-25     |
|                                                                                     |          |          |            |
| Flange mounting                                                                     |          |          |            |
|  | M30      | 195855   | FBN-32     |
|                                                                                     |          |          |            |
| Mounting bracket                                                                    |          |          |            |
|  | SIES-V3B | 9634     | HV-M5      |
|                                                                                     |          |          |            |
| Stop                                                                                |          |          |            |
|  | M8       | 11542    | SDA-8x1-B  |
|                                                                                     | M12      | 11541    | SDA-12x1-B |

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