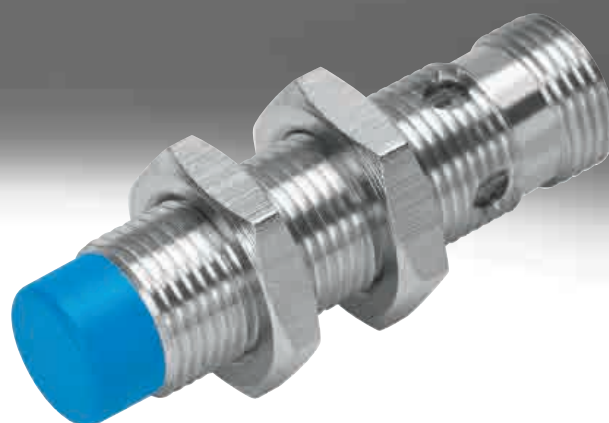


## Proximity switches SIEH, inductive

**FESTO**

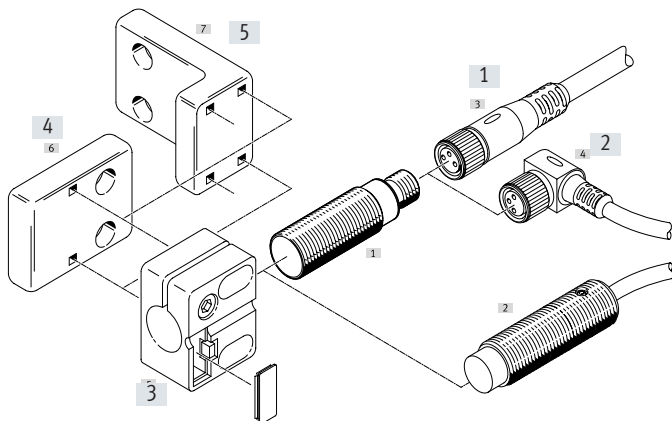


## Product range overview

| Design                                                            | Type                                                   | Operating voltage                  | Switching output/<br>analogue output | Type of installation     | Size                                       | → Page |
|-------------------------------------------------------------------|--------------------------------------------------------|------------------------------------|--------------------------------------|--------------------------|--------------------------------------------|--------|
| <b>Reduction factor, material-specific</b>                        |                                                        |                                    |                                      |                          |                                            |        |
| Standard switching distance                                       | SIEH<br>Basic version                                  | 10 ... 30 V DC<br>15 ... 34 V DC   | PNP<br>NPN                           | Flush<br>Not flush       | Ø 4 mm, M5, Ø 6.5 mm, M8,<br>M12, M18, M30 | –      |
|                                                                   | SIEH-...-PA<br>Polyamide housing                       | 10 ... 30 V DC                     | PNP<br>NPN                           | Flush<br>Not flush       | M12, M18, M30                              | –      |
|                                                                   | SIED<br>Basic version                                  | 20 ... 265 V AC<br>20 ... 320 V DC | Contactless, 2-wire                  | Flush<br>Not flush       | M12, M18, M30                              | –      |
|                                                                   | SIED-...-PA<br>Polyamide housing                       | 20 ... 250 V AC<br>10 ... 300 V DC | Contactless, 2-wire                  | Flush<br>Not flush       | M12, M18, M30                              | –      |
|                                                                   | SIES<br>Special design                                 | 10 ... 30 V DC                     | PNP<br>NPN                           | Flush                    | 5x5x25 mm ...<br>40x40x120 mm              | –      |
|                                                                   |                                                        |                                    |                                      |                          |                                            |        |
| 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                           | 5      |
|                                                                   | SIEH-...-CR<br>Stainless steel housing                 | 10 ... 30 V DC                     | PNP<br>NPN                           | Flush                    | M12, M18                                   | 9      |
|                                                                   |                                                        |                                    |                                      |                          |                                            |        |
| <b>Reduction factor 1 for all metals, welding-field-resistant</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           |        |
|                                                                   | SIEF-...-WA<br>Housing resistant to welding<br>spatter | 10 ... 30 V DC                     | PNP<br>NPN                           | Flush<br>Partially flush | M12, M18, M30                              |        |

## Peripherals overview

SIE...



| Mounting attachments and accessories |                                                    | → Page |
|--------------------------------------|----------------------------------------------------|--------|
| [1]                                  | Connecting cable, straight socket<br>NEBU-M...G... | 13     |
| [2]                                  | Connecting cable, angled socket<br>NEBU-M...W...   | 13     |
| [3]                                  | Sensor bracket<br>SIEZ-...B                        | 13     |
| [4]                                  | Sensor bracket<br>SIEZ-NB                          | 13     |
| [5]                                  | Sensor bracket<br>SIEZ-UH                          | 13     |
| –                                    | Mounting bracket<br>HV-M5                          | 13     |
| Mounting attachments and accessories |                                                    | → Page |
| –                                    | Foot mounting<br>HBN                               | 13     |
| –                                    | Flange mounting<br>FBN                             | 13     |
| –                                    | Stop<br>SDA                                        | 13     |

## Type codes

| 001         | Series                                                         |
|-------------|----------------------------------------------------------------|
| <b>SIEH</b> | Proximity sensor, inductive, with increased switching distance |

| 002        | Design               |
|------------|----------------------|
| <b>3</b>   | Round, diameter 3 mm |
| <b>M12</b> | Round, M12x1         |
| <b>M18</b> | Round, M18x1         |

| 003      | Mounting type |
|----------|---------------|
| <b>B</b> | Flush         |

| 004      | Switching input/output |
|----------|------------------------|
| <b>N</b> | NPN                    |
| <b>P</b> | PNP                    |

| 005      | Switching element function |
|----------|----------------------------|
| <b>O</b> | N/C contact                |
| <b>S</b> | N/O contact                |

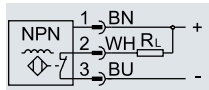
| 006      | Electrical connection |
|----------|-----------------------|
| <b>K</b> | Open end              |
| <b>S</b> | Plug M8x1, 4-pin      |

| 007      | Display          |
|----------|------------------|
| <b>L</b> | Switching status |

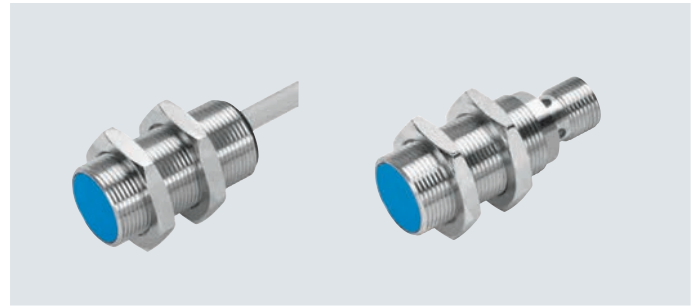
| 008       | Housing material        |
|-----------|-------------------------|
|           | Standard                |
| <b>CR</b> | Stainless steel housing |

## Technical data – Increased switching distance

### Function



- Increased switching distance
- For DC voltage
- Round design



| General technical data                        |                                   |                                   |                                   |
|-----------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Size                                          | 3 mm                              | M12                               | M18                               |
| Design                                        | Round                             | –                                 | –                                 |
| Conforms to standard                          | EN 60947-5-2                      | EN 60947-5-2                      | EN 60947-5-2                      |
| Certification                                 | c UL us Listed (OL)               | c UL us Listed (OL)               | c UL us Listed (OL)               |
|                                               | RCM compliance mark               | C-Tick                            | RCM compliance mark               |
| CE marking<br>(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                    |

1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/SIEH](http://www.festo.com/catalogue/SIEH) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| Input signal/measuring element |      |             |
|--------------------------------|------|-------------|
| 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  | N/C  | N/O  |      |
|                            | –    | N/C  | N/C  |      |
| Rated operating distance   | [mm] | 1    | 4    | 8    |
| Actual operating 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 |        |        |

## Technical data – Increased switching distance

| Output, additional data                              |                                 |                     |     |                              |                     |        |
|------------------------------------------------------|---------------------------------|---------------------|-----|------------------------------|---------------------|--------|
| Size                                                 | 3 mm                            |                     |     | M12                          |                     | M18    |
| Short circuit current rating                         | Pulsed                          |                     |     | Pulsed                       |                     | Pulsed |
| Inductive protective circuit                         | Integrated                      |                     |     | Integrated                   |                     | –      |
|                                                      | Output current < 100 mA         |                     |     |                              |                     |        |
|                                                      | and switching frequency < 10 Hz |                     |     |                              |                     |        |
|                                                      |                                 |                     |     |                              |                     |        |
| Electronics                                          |                                 |                     |     |                              |                     |        |
| Size                                                 | 3 mm                            |                     |     | M12                          |                     | M18    |
| Operating voltage range                              | [V DC]                          | 10 ... 30           |     |                              |                     |        |
| Residual ripple                                      | [%]                             | 20                  |     | ±10                          |                     | ±20    |
| No-load supply current                               | [mA]                            | 0 ... 10            |     |                              |                     |        |
| Reverse polarity protection                          | For all electrical connections  |                     |     |                              |                     |        |
|                                                      |                                 |                     |     |                              |                     |        |
| Electromechanics                                     |                                 |                     |     |                              |                     |        |
| 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                         | –                   |        |
| Information on materials: Cable sheath               | TPE-U (PUR)                     |                     |     | TPE-U (PUR)                  |                     |        |
| Information on materials: Insulating sheath          | PVC                             | –                   | –   | PVC                          |                     |        |
|                                                      |                                 |                     |     |                              |                     |        |
| Mechanical system                                    |                                 |                     |     |                              |                     |        |
| Electrical connection                                | Cable                           |                     |     | Plug                         |                     |        |
| Size                                                 | 3 mm                            | M12                 | M18 | 3 mm                         | M12                 | M18    |
| Type of mounting                                     | Clamped                         | With lock nut       |     | Clamped                      | With lock nut       |        |
| Type of installation                                 | Flush                           |                     |     | Flush                        |                     |        |
| Tightening torque                                    | [Nm]                            | –                   | 20  | –                            | –                   | 20     |
| Product weight                                       | [g]                             | 18                  | 110 | 108                          | 4                   | 30     |
| Information on materials: Housing                    | High-alloy stainless steel      | Nickel-plated brass |     | High-alloy stainless steel   | Nickel-plated brass |        |
|                                                      |                                 | PBTP                |     |                              | PBTP                |        |
|                                                      |                                 | –                   |     |                              | PA                  |        |
|                                                      |                                 |                     |     |                              |                     |        |
| Display/operation                                    |                                 |                     |     |                              |                     |        |
| Switching status indication                          | Yellow LED                      |                     |     |                              |                     |        |
|                                                      |                                 |                     |     |                              |                     |        |
| Immission/emission                                   |                                 |                     |     |                              |                     |        |
| Electrical connection                                | Cable                           |                     |     | Plug                         |                     |        |
| Size                                                 | 3 mm                            | M12                 | M18 | 3 mm                         | M12                 | M18    |
| Ambient temperature with flexible cable installation | [°C]                            | –5 ... +70          |     | –5 ... +70                   |                     |        |
| Degree of protection                                 | –                               | IP65                | –   | –                            | IP65                | –      |
|                                                      | IP67                            |                     |     | IP67                         |                     |        |
| Surge resistance                                     | [kV]                            | –                   | 0.8 | –                            | –                   | 0.8    |
| Corrosion resistance class CRC <sup>1)</sup>         | 4                               |                     | 2   | 1                            | 2                   | –      |
| Pollution degree                                     | –                               |                     | 3   | –                            | –                   | 3      |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries.

Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

## Technical data – Increased switching distance

## Pin allocation to EN 60947-5-2

M8x1, 3-pin

| N/O                                                                               |     |             |            |
|-----------------------------------------------------------------------------------|-----|-------------|------------|
|                                                                                   | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                   | 3   | Blue        | -          |
|                                                                                   | 4   | Black       | Output     |

M12x1, 3-pin

| N/O                                                                               |     |             |            |
|-----------------------------------------------------------------------------------|-----|-------------|------------|
|                                                                                   | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                   | 3   | Blue        | -          |
|                                                                                   | 4   | Black       | Output     |

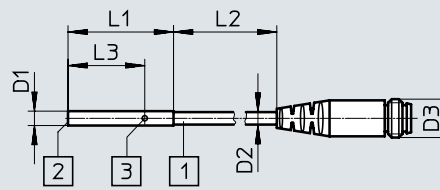
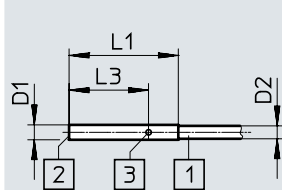
| N/C                                                                                 |     |             |            |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
|                                                                                     | Pin | Wire colour | Allocation |
|  | 1   | Brown       | +          |
|                                                                                     | 3   | Blue        | -          |
|                                                                                     | 2   | White       | Output     |

## Dimensions – 3 mm

Download CAD data → [www.festo.com](http://www.festo.com)

Cable

Plug



- [1] 3-wire cable, 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow

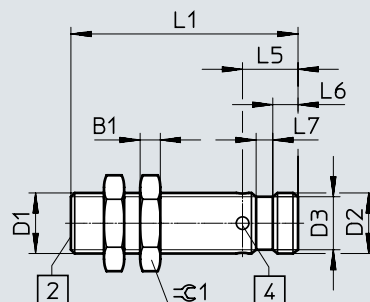
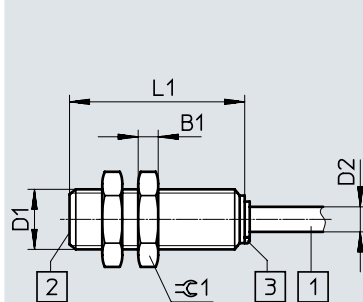
| Type              | D1<br>ø | D2<br>ø | D3   | L1 | L2  | L3 |
|-------------------|---------|---------|------|----|-----|----|
| SIEH-3B-...-S-K-L | 3       | 2.6     | -    | 22 | -   | 16 |
| SIEH-3B-...-S-S-L | 3       | 2.6     | M8x1 | 22 | 150 | 16 |

## Dimensions – M12

Download CAD data → [www.festo.com](http://www.festo.com)

Cable

Plug



- [1] 3-wire cable, 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow
- [4] 4 switching status indications, yellow

| Type              | B1 | D1    | D2<br>ø | D2    | D3<br>ø | L1 | L5 | L6 | L7  | ⌀ 1 |
|-------------------|----|-------|---------|-------|---------|----|----|----|-----|-----|
| SIEH-M12B-...-K-L | 4  | M12x1 | 5       | -     | -       | 35 | -  | -  | -   | 17  |
| SIEH-M12B-...-S-L | 4  | M12x1 | -       | M12x1 | 10.5    | 45 | 11 | 5  | 3.3 | 17  |

Technical data – Increased switching distance

Dimensions – M18

Download CAD data → [www.festo.com](http://www.festo.com)

Cable

Plug

[1] 3-wire cable, 2.5 m long

[2] Active surface

[3] 1 switching status indication, yellow

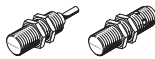
[4] 4 switching status indications, yellow

| Type              | B1 | D1    | D2<br>ø | D2    | D3<br>ø | L1   | L4   | L5 | L6 | L7 | ⌀ 1 |
|-------------------|----|-------|---------|-------|---------|------|------|----|----|----|-----|
| SIEH-M18B-...-K-L | 4  | M18x1 | 5       | –     | –       | 35   | –    | –  | –  | –  | 24  |
| SIEH-M18B-...-S-L | 4  | M18x1 | –       | M12x1 | 16.4    | 48.5 | 13.5 | 11 | 8  | 3  | 24  |

Fitting instructions

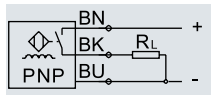
Flush installation

| Size | B1  | B2 | H  |
|------|-----|----|----|
| 3 mm | 2.5 | 5  | 3  |
| M12  | 10  | 24 | 12 |
| M18  | 18  | 40 | 24 |

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

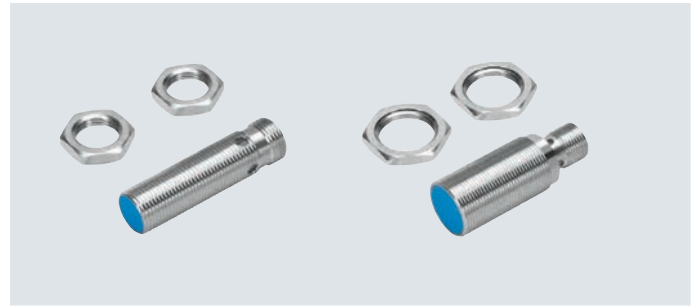
1) S<sub>n</sub> Rated operating distance [mm]

## Technical data – Increased switching distance

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 stresses



| General technical data                        |                                            |     |                                            |     |
|-----------------------------------------------|--------------------------------------------|-----|--------------------------------------------|-----|
| Size                                          | M12                                        |     | M18                                        |     |
| Switching output                              | PNP                                        | NPN | PNP                                        | NPN |
| Conforms to standard                          | EN 60947-5-2                               |     | EN 60947-5-2                               |     |
| Certification                                 | c UL us Listed (OL)<br>RCM compliance mark |     | c UL us Listed (OL)<br>RCM compliance mark |     |
| CE marking<br>(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 area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/SIEH](http://www.festo.com/catalogue/SIEH) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of 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 |

| Switching output            |      |        |        |      |
|-----------------------------|------|--------|--------|------|
| Size                        | M12  |        | M18    |      |
| Switching output            | PNP  | NPN    | PNP    | NPN  |
| Switching output            | PNP  |        | PNP    |      |
|                             | NPN  |        | NPN    |      |
| Switching element function  | N/O  |        | N/O    |      |
| Rated operating distance    | [mm] | 6      | 10     |      |
| Actual operating 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] | 600    | 200    |      |
| Max. output current         | [mA] | 200    | 200    |      |
| Voltage drop                | [V]  | 2      | ≤ 2    | 2    |
|                             |      |        | ≤ 2    |      |

## Technical data – Increased switching distance

| Output, additional data                              |        |                                 |      |                                |      |
|------------------------------------------------------|--------|---------------------------------|------|--------------------------------|------|
| Short circuit current rating                         |        | Pulsed                          |      |                                |      |
| Inductive protective circuit                         |        | Integrated                      |      |                                |      |
|                                                      |        | Output current < 100 mA         |      |                                |      |
|                                                      |        | and switching frequency < 10 Hz |      |                                |      |
| Electronics                                          |        |                                 |      |                                |      |
| Switching output                                     |        | PNP                             |      | NPN                            |      |
| Operating voltage range                              | [V DC] | 10 ... 30                       |      | 10 ... 30                      |      |
| Residual ripple                                      | [%]    | 20                              |      | 20                             |      |
| No-load supply current                               | [mA]   | < 12                            |      | ≤ 17                           |      |
| Reverse polarity protection                          |        | For all electrical connections  |      | For all electrical connections |      |
| Electromechanics                                     |        |                                 |      |                                |      |
| Electrical connection                                |        | Cable                           |      | Plug                           |      |
| Electrical connection                                |        | Cable, 3-wire                   |      | Plug, M12x1, 3-pin             |      |
| Information on materials: Cable sheath               |        | TPE-U (PUR)                     |      | –                              |      |
| Mechanical system                                    |        |                                 |      |                                |      |
| Size                                                 |        | M12                             |      | M18                            |      |
| Electrical connection                                |        | Cable                           | Plug | Cable                          | Plug |
| Size                                                 |        | M12                             |      | M18                            |      |
| Type of mounting                                     |        | With lock nut                   |      | With lock nut                  |      |
| Type of installation                                 |        | Flush                           |      | Flush                          |      |
| Product weight                                       | [g]    | 90                              | 28   | 115                            | 53   |
| Information on materials: Housing                    |        | High-alloy steel                |      | High-alloy steel               |      |
| Display/operation                                    |        |                                 |      |                                |      |
| Switching status indication                          |        | Yellow LED                      |      |                                |      |
| Immission/emission                                   |        |                                 |      |                                |      |
| Size                                                 |        | M12                             |      | M18                            |      |
| Switching output                                     |        | PNP                             | NPN  | PNP                            | NPN  |
| Ambient temperature with flexible cable installation | [°C]   | –5 ... +70                      |      | –5 ... +70                     |      |
| Degree of protection                                 |        | IP67                            |      | IP67                           |      |
|                                                      |        | IP69K                           |      | IP69K                          |      |
| Corrosion resistance class CRC <sup>1)</sup>         |        | 2                               |      | 2                              |      |
| Resistance to sensor fitting pressure                | [bar]  | 80                              |      | 60                             |      |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

## Pin allocation to EN 60947-5-2

| M8x1, 3-pin |     |             |            | M12x1, 3-pin |     |             |            | N/C |     |             |            |
|-------------|-----|-------------|------------|--------------|-----|-------------|------------|-----|-----|-------------|------------|
| N/O         |     |             |            | N/O          |     |             |            | N/C |     |             |            |
|             | 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     |

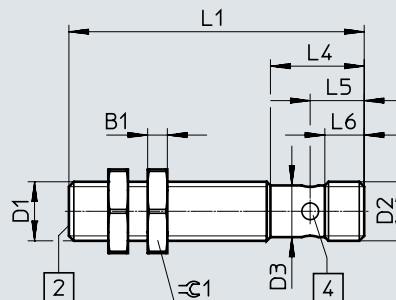
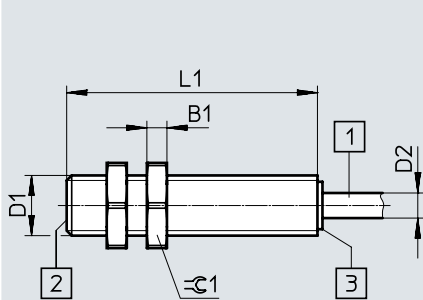
## Technical data – Increased switching distance

## Dimensions – M12

Download CAD data → [www.festo.com](http://www.festo.com)

Cable

Plug



- [1] 3-wire cable, 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow
- [4] 4 switching status indications, yellow

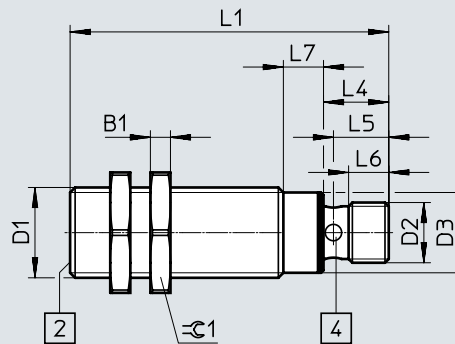
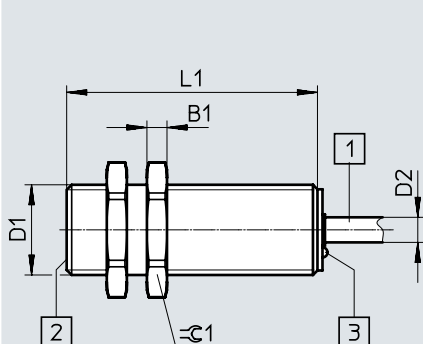
| Type                  | B1 | D1    | D2<br>ø | D2    | D3<br>ø | L1 | L4 | L5 | L6 | 1  |
|-----------------------|----|-------|---------|-------|---------|----|----|----|----|----|
| SIEH-M12B-...S-K-L-CR | 4  | M12x1 | 5       | –     | –       | 50 | –  | –  | –  | 17 |
| SIEH-M12B-...S-S-L-CR | 4  | M12x1 | –       | M12x1 | 10.5    | 60 | 19 | 11 | 8  | 17 |

## Dimensions – M18

Download CAD data → [www.festo.com](http://www.festo.com)

Cable

Plug



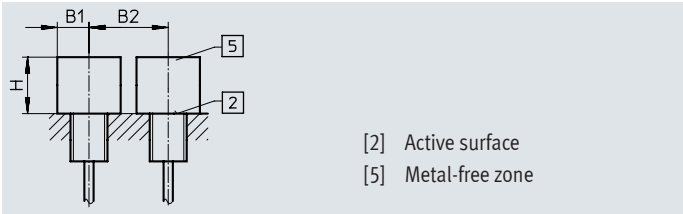
- [1] 3-wire cable, 2.5 m long
- [2] Active surface
- [3] 1 switching status indication, yellow
- [4] 4 switching status indications, yellow

| Type                  | B1 | D1    | D2<br>ø | D2    | D3<br>ø | L1   | L4 | L5 | L6 | L7 | 1  |
|-----------------------|----|-------|---------|-------|---------|------|----|----|----|----|----|
| SIEH-M18B-...S-K-L-CR | 4  | M18x1 | 5       | –     | –       | 50   | –  | –  | –  | –  | 24 |
| SIEH-M18B-...S-S-L-CR | 4  | M18x1 | –       | M12x1 | 16      | 63.5 | 13 | 11 | 8  | 8  | 24 |

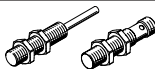
Technical data – Increased switching distance

Fitting instructions

Flush installation



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

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

1)  $S_n$  Rated operating distance [mm]

## Accessories

| 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               |  |

| 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>   |

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

| Ordering data – Mounting components                                                 |          |          |             |
|-------------------------------------------------------------------------------------|----------|----------|-------------|
|                                                                                     | For size | Part No. | Type        |
| <b>Sensor bracket with stop for flush mounting</b>                                  |          |          |             |
|  | M8       | 538346   | SIEZ-B-8    |
|                                                                                     |          |          |             |
|  | M12      | 538348   | SIEZ-B-12   |
|                                                                                     | M18      | 538350   | SIEZ-B-18   |
|                                                                                     | M30      | 538352   | SIEZ-B-30   |
| <b>Sensor bracket without stop</b>                                                  |          |          |             |
|  | 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     |

## Accessories

| Ordering data – Mounting components                                              |          | Part No. | Type       |
|----------------------------------------------------------------------------------|----------|----------|------------|
|                                                                                  | For size |          |            |
| <b>Foot mounting</b>                                                             |          |          |            |
|  | M12      | 5123     | HBN-8/10X1 |
| <b>Flange mounting</b>                                                           |          |          |            |
|  | M30      | 195855   | FBN-32     |
| <b>Mounting bracket</b>                                                          |          |          |            |
|  | SIES-V3B | 9634     | HV-M5      |
| <b>Stop</b>                                                                      |          |          |            |
|  | M8       | 11542    | SDA-8x1-B  |
|                                                                                  | M12      | 11541    | SDA-12x1-B |

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