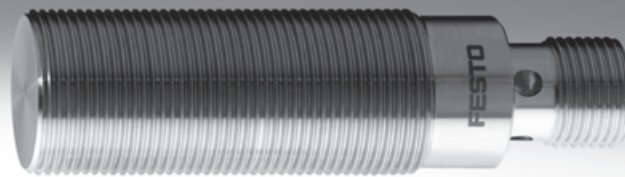


Proximity sensors SIE..., inductive

FESTO



Proximity sensors SIE..., inductive

Product range overview

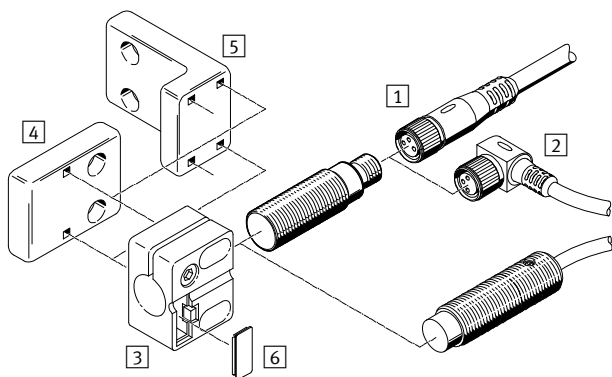
FESTO

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

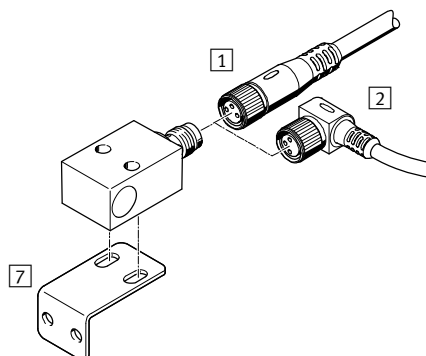
Proximity sensors SIE..., inductive

Peripherals overview

SIE...



SIES-V3B



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

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

Proximity sensors SIE..., inductive

Type codes

SIE N - M 30 NB - P S - K - L -

Type

| | |
|-----|-----------------------------|
| SIE | Proximity sensor, inductive |
|-----|-----------------------------|

Type

| | |
|---|--------------------------------------------------------------|
| 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 |

Design

| | |
|----|---------------|
| - | Round |
| M | Metric thread |
| Q | Block-shaped |
| V3 | Block-shaped |

Size

Mounting type

| | |
|----|-----------------|
| B | Flush |
| NB | Non-flush |
| S | Partially flush |

Electrical output

| | |
|----|--------------------------------------------|
| 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 |

Switching element function

| | |
|---|-------------|
| S | N/O contact |
| O | N/C contact |
| A | Antivalent |

Electrical connection

| | |
|---|-----------------|
| K | Cable |
| S | Plug |
| X | Screw terminals |

Display

| | |
|----|-----------------------------------|
| - | Without display |
| L | Switching status |
| 2L | Switching status and ready status |

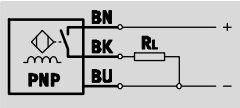
Version

| | |
|----|--------------------------------------|
| - | Standard |
| CR | Stainless steel housing |
| PA | Polyamide housing |
| WA | Housing resistant to welding spatter |

Proximity sensors SIEN, inductive

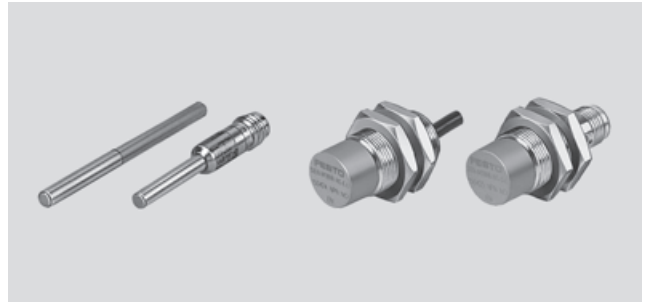
Technical data – Standard switching distance, basic version

Function¹⁾



- Standard switching distance
- For DC voltage
- Round design

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



| General technical data | | | | | | | |
|-----------------------------------------|-----------------------------------|----|--------|-----------------------------------------------------|-----|-----|-----|
| Size | 4 mm | M5 | 6.5 mm | M8 | M12 | M18 | M30 |
| Conforms to | EN 60947-5-2 | | | | | | |
| Certification | cULus listed (OL) | | | | | | |
| | RCM trademark | | | | | | |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ | | | | | | |
| 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/sp → 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 | | | |
| | 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 | | | |
| | 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

FESTO

| 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 | TPE-U (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 | | | | | Nickel-plated brass | | | | 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 | | Nickel-plated brass | | | | Chrome-plated brass | | | |
| | PA | | | | | | | | | | | |
| | – | | | PBTP | | | | | | | | |

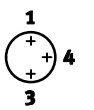
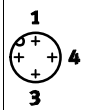
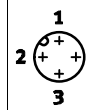
| Display/operation | |
|--------------------------|------------|
| Switching status display | Yellow LED |

Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version

| Immissions/emissions | | 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 ¹⁾ | | – | 4 | 2 | | | – | |
| Degree of contamination | | – | 3 | – | | | 3 | |

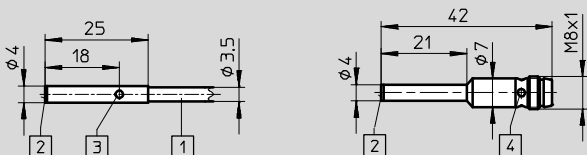
- 1) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
 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 |
|  | 1 | Brown | + |
| | 3 | Blue | – |
| | 4 | Black | Output |
|  | 1 | Brown | + |
| | 3 | Blue | – |
| | 4 | Black | Output |
| N/C contact | | | |
| | Pin | Wire colour | Allocation |
|  | 1 | Brown | + |
| | 3 | Blue | – |
| | 2 | White | Output |

Dimensions – 4 mm Download CAD data → www.festo.com

Flush fitting Plug

Cable

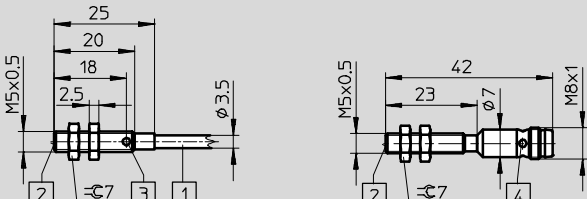


- 1 Connecting cable
- 2 Active surface
- 3 LED
- 4 4x LED

Dimensions – M5 Download CAD data → www.festo.com

Flush fitting Plug

Cable

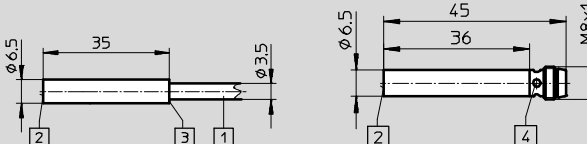


- 1 Connecting cable
- 2 Active surface
- 3 LED
- 4 4x LED

Dimensions – 6.5 mm Download CAD data → www.festo.com

Flush fitting Plug

Cable



- 1 Connecting cable
- 2 Active surface
- 3 LED
- 4 4x LED

Proximity sensors SIEN, inductive

Technical data – Standard switching distance, basic version



Dimensions – M8 Download CAD data → www.festo.com

| | | | |
|------------------------|------|----------------------------|------|
| Flush fitting Cable | Plug | Non-flush fitting Cable | Plug |
|------------------------|------|----------------------------|------|

1 Connecting cable 2 Active surface 3 LED 4 4x LED

Dimensions – M12 Download CAD data → www.festo.com

| | | | |
|------------------------|------|----------------------------|------|
| Flush fitting Cable | Plug | Non-flush fitting Cable | Plug |
|------------------------|------|----------------------------|------|

1 Connecting cable 2 Active surface 3 LED 4 4x LED

Dimensions – M18 Download CAD data → www.festo.com

| | | | |
|------------------------|------|----------------------------|------|
| Flush fitting Cable | Plug | Non-flush fitting Cable | Plug |
|------------------------|------|----------------------------|------|

1 Connecting cable 2 Active surface 3 LED 4 4x LED

Dimensions – M30 Download CAD data → www.festo.com

| | | | |
|------------------------|------|----------------------------|------|
| Flush fitting Cable | Plug | Non-flush fitting Cable | Plug |
|------------------------|------|----------------------------|------|

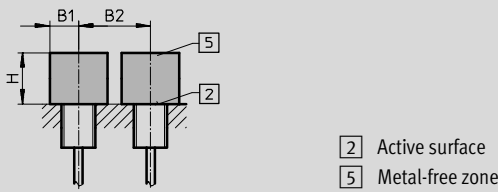
1 Connecting cable 2 Active surface 3 LED 4 4x LED

Proximity sensors SIEN, inductive

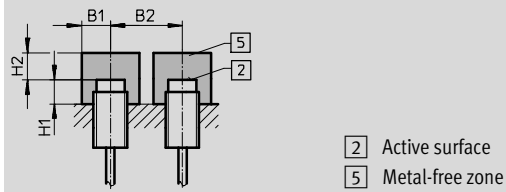
Technical data – Standard switching distance, basic version

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



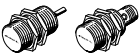



| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | |
|---------------|--------------------------------------|------------------|---------------------|----------------------------------|-----------------------|------------------|----------|------------------|
| | | | | | 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_n Rated operating distance [mm]

Proximity sensors SIEN, inductive



Technical data – Standard switching distance, basic version

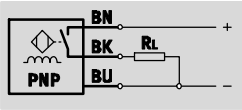
| Ordering data | | | | | | | | | |
|-------------------------------------------------------------------------------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|-------------------|----------|-------------------|------|
| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | | |
| | | | | | Cable | | Plug | | Type |
| | | | | | 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_n Rated operating distance [mm]

Proximity sensors SIEN-...-PA, inductive

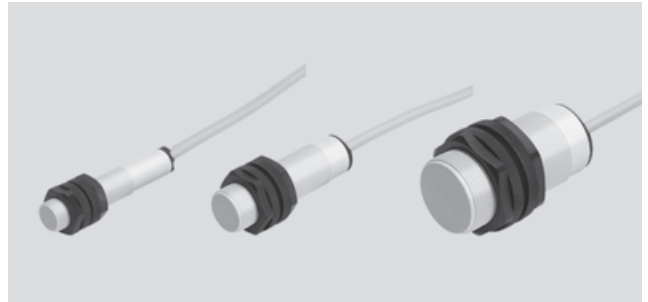
Technical data – Standard switching distance, polyamide housing

Function¹⁾



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) |
| | RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |
| 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/sp → 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 | | | | | | | |
|-----------------------------|------|---------------|---------------|-------------|---------------|--------------|---------------|
| | | Flush | | | Non-flush | | |
| 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

| 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 |

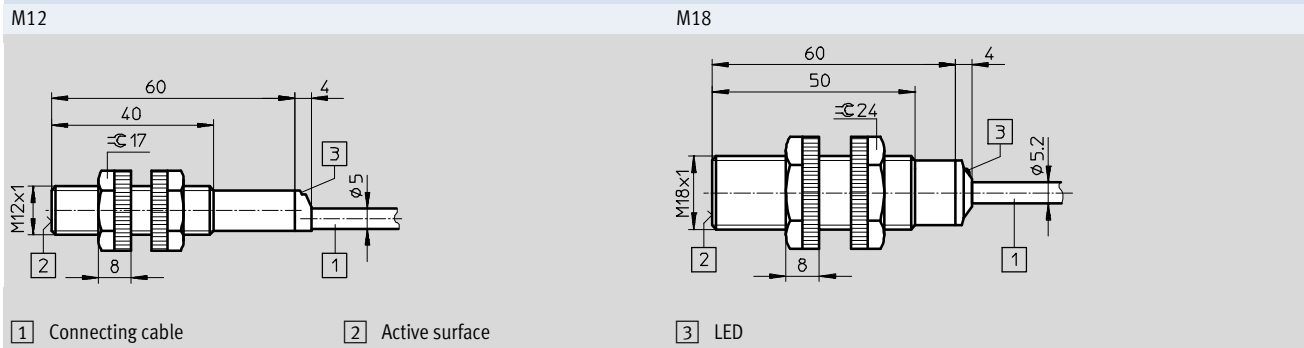
| Mechanical components | | | | | | |
|-----------------------|---------------|-----------|-------|-----------|-------|-----------|
| Size | M12 | | M18 | | M30 | |
| Attachment type | Via lock nut | | | | | |
| Mounting type | Flush | Non-flush | Flush | Non-flush | Flush | Non-flush |
| Tightening 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 IP67 | | | IP67 | | |
| Corrosion resistance class CRC ¹⁾ | | 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 → www.festo.com



Proximity sensors SIEN...-PA, inductive

Technical data – Standard switching distance, polyamide housing

Dimensions Download CAD data → www.festo.com

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

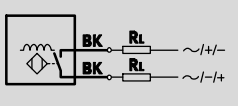
| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | |
|---------|--------------------------------------|---------------|------------------|----------------------------|-----------------------|----------------------|
| | | | | | Cable | Part 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_n Rated operating distance [mm]

Proximity sensors SIED, inductive

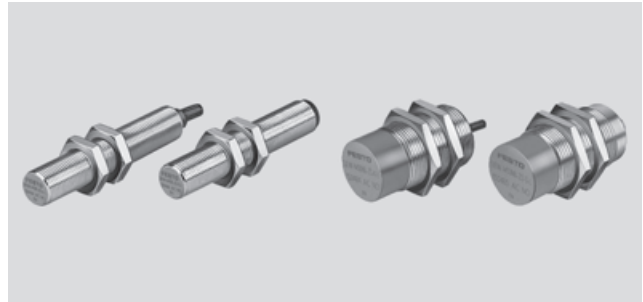
Technical data – Standard switching distance, for DC and AC voltage

Function¹⁾



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) |
| | RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |
| | 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/sp → 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

| 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 | TPE-U (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 | 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 | IP67 |
| Corrosion resistance class CRC ¹⁾ | 1 | 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 | |
| | 3 | Black | /+/- | |
| | 4 | Black | /-/+ | |
| | | | | |

Proximity sensors SIED, inductive

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

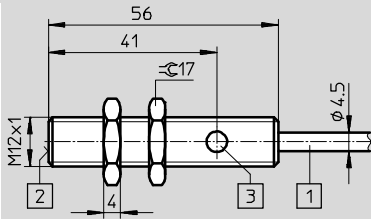


Dimensions – M12

Download CAD data → www.festo.com

Flush fitting

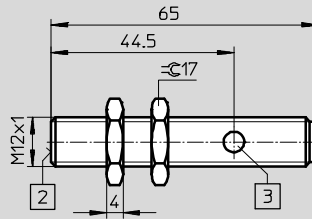
Cable



1 Connecting cable

2 Active surface

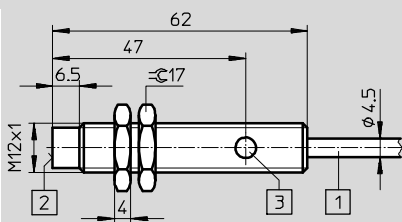
Plug



3 LED

Non-flush fitting

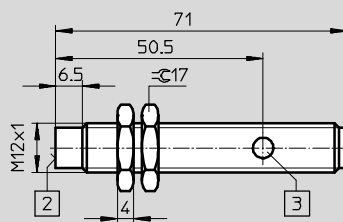
Cable



1 Connecting cable

2 Active surface

Plug



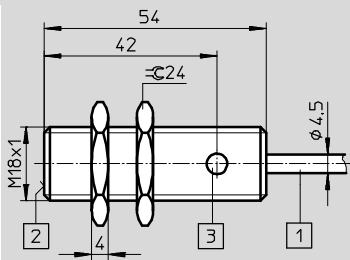
3 LED

Dimensions – M18

Download CAD data → www.festo.com

Flush fitting

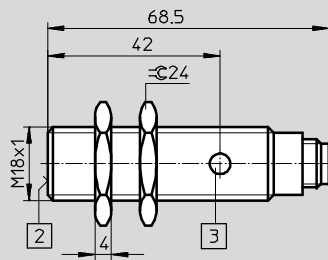
Cable



1 Connecting cable

2 Active surface

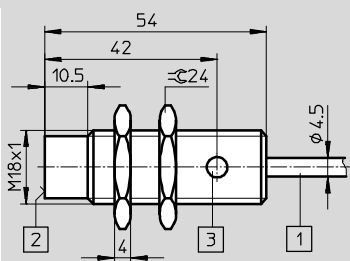
Plug



3 LED

Non-flush fitting

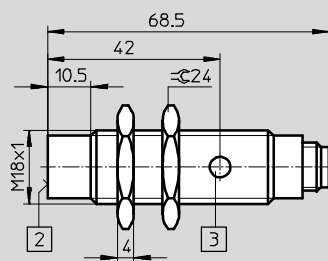
Cable



1 Connecting cable

2 Active surface

Plug



3 LED

Proximity sensors SIED, inductive

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

Dimensions – M30 Download CAD data → www.festo.com

Flush fitting Plug Non-flush fitting Plug

Cable Cable Cable Cable

1 Connecting cable 2 Active surface 3 LED

Fitting instructions

Flush fitting Non-flush fitting

2 Active surface 5 Metal-free zone 2 Active surface 5 Metal-free zone

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


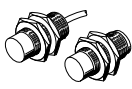
| Size | B1 | B2 | H1 | H2 |
|------|----|----|----|----|
| M12 | 15 | 27 | 8 | 8 |
| M18 | 20 | 50 | 15 | 15 |
| M30 | 30 | 80 | 15 | 25 |

Ordering data

| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | |
|------------|--------------------------------------|---------------|---------------------|----------------------------|-----------------------|-------------------|----------|-------------------|
| | | | | | 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

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

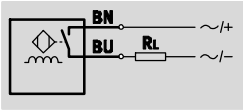
| Ordering data | | | | | | | | |
|-----------------------------------------------------------------------------------|--------------------------------------|---------------|---------------------|----------------------------|-----------------------|--------------------------|---------------|--------------------------|
| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | |
| | | | | | 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_n Rated operating distance [mm]

Proximity sensors SIED-...-PA, inductive

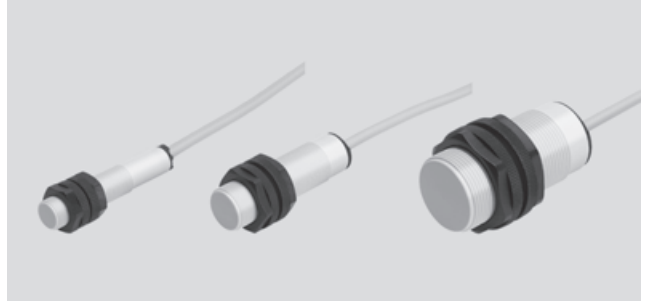
Technical data – Standard switching distance, polyamide housing, for DC and AC voltage

Function¹⁾



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) |
| | RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |
| | 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/sp → 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 | |
| Stainless steel St 18/8 | 0.06 ... 0.1 | |
| Copper | 0.25 ... 0.45 | |
| Brass | 0.35 ... 0.5 | |
| Steel St 37 | 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

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 ¹⁾ | 4 |

1) Corrosion resistance class 4 according to Festo standard 940 070
 Components subject to particularly high corrosion stress, 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

M12

M18

1 Connecting cable
 2 Active surface
 3 LED

Proximity sensors SIED-...-PA, inductive

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

Dimensions Download CAD data → www.festo.com

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 _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | |
|------|--------------------------------------|---------------|---------------------|----------------------------|-----------------------|----------------------|
| | | | | | Part No. | Type |
| | 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 |
| | 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 |
| | 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 |

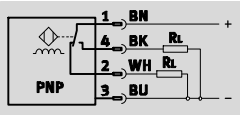
1) S_n Rated operating distance [mm]

Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

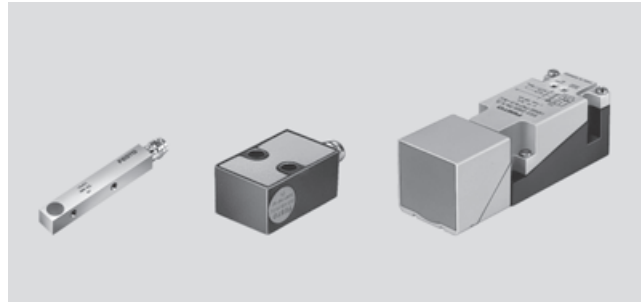


Function¹⁾



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) RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |
| 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/sp → 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 | SIES-Q40 |
| Size | [mm] | 5x5x25 | 8x8x40 | 15x20x30 | 12x26x40 | 40x40x120 |
| Ambient temperature | [°C] | -25 ... +70 | | -25 ... +85 | | |

| Output, general | | | | | | |
|---------------------|------|---------|---------|----------|----------|-----------|
| Type | | SIES-Q5 | SIES-Q8 | SIES-V3 | SIES-QB | SIES-Q40 |
| Size | [mm] | 5x5x25 | 8x8x40 | 15x20x30 | 12x26x40 | 40x40x120 |
| Repetition accuracy | [mm] | 0.04 | 0.075 | 0.1 | 0.1 | 0.75 |

| Switching output | | | | | | |
|--------------------------------|------|-------------|---------|-------------|-------------|------------|
| Type | | SIES-Q5 | SIES-Q8 | SIES-V3 | SIES-QB | SIES-Q40 |
| Size | [mm] | 5x5x25 | 8x8x40 | 15x20x30 | 12x26x40 | 40x40x120 |
| Switching output | | PNP | | PNP | | PNP |
| | | NPN | | NPN | | - |
| Switching element function | | N/O contact | | N/O contact | | Antivalent |
| | | 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 | 0.8 | 0.7 |
| Copper | | 0.3 | 0.2 | 0.3 | 0.35 | 0.25 |
| 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

| 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 | 40x40x120 |
| Operating voltage range | [V DC] | 10 ... 30 | | | | |
| Residual ripple | [%] | 10 | | | | |
| Idle current | [mA] | ≤ 10 | | ≤ 30 | | ≤ 40 |
| Reverse polarity protection | | For all electrical connections | | | | |

| Electromechanical components | | | | | | | |
|------------------------------|------|---------------|---------|----------|-------------------|----------|----------------|
| Electrical connection | | Cable | | | Plug | | |
| Type | | SIES-Q5 | SIES-Q8 | SIES-QB | SIES-Q8 | SIES-V3 | SIES-Q40 |
| Size | [mm] | 5x5x25 | 8x8x40 | 12x26x40 | 8x8x40 | 15x20x30 | 40x40x120 |
| Electrical connection | | Cable, 3-wire | | | Plug, M8x1, 3-pin | | Screw terminal |
| Cable length | [m] | 2.5 | | | - | | - |
| Cable sheath material | | TPE-U (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

Dimensions Download CAD data → www.festo.com

| | | |
|--------------------------------------------------------------------------|-----------------------------------------------------|-------------|
| <p>SIES-Q5B Cable</p> <p>1 Connecting cable 2 Active surface</p> | <p>SIES-Q8B Cable</p> <p>3 LED 4 4x LED</p> | <p>Plug</p> |
|--------------------------------------------------------------------------|-----------------------------------------------------|-------------|

Dimensions Download CAD data → www.festo.com

| | |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <p>SIES-V3B Plug</p> <p>2 Active surface 3 LED</p> | <p>SIES-QB Cable</p> <p>1 Connecting cable 2 Active surface 3 LED 4 Sensor centre</p> |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

Dimensions Download CAD data → www.festo.com

SIES-Q40B
Plug

- 1 Green operational status indicator
- 2 Supplied with active surface facing forward: sensor head can be adjusted to any one of 5 response directions
- 3 Switching status display LED (yellow)
- 5 M20x1.5, suitable for cable diameter 7.5 mm to 12.2 mm

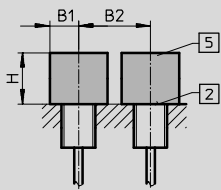
| Type | B1 | B2 | B3 | D1 | D2 | H1 | H2 | L1 | L2 | L3 | L4 | L5 | L6 |
|------------------|----|----|----|-----|-----|----|----|-----|----|----|----|----|-----|
| SIE-Q40B-PA-X-2L | 40 | 30 | 7 | 5.3 | 5.3 | 40 | 16 | 120 | 60 | 45 | 40 | 20 | 7.3 |

Proximity sensors SIES, inductive

Technical data – Standard switching distance, special design

Fitting instructions


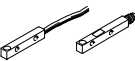



Flush fitting



- 2 Active surface
- 5 Metal-free zone

| 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 [mm] | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching 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-Q40B-PA-X-2L²⁾ |

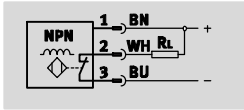
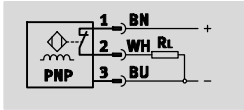
1) S_n Rated operating distance [mm]
 2) Electrical connection via screw terminals

Proximity sensors SIEH, inductive

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 | EN 60947-5-2 | EN 60947-5-2 | EN 60947-5-2 |
| Certification | cULus listed (OL) | cULus listed (OL) | cULus listed (OL) |
| | RCM trademark | C-Tick | RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ | To EU EMC Directive ¹⁾ | To EU EMC Directive ¹⁾ |
| 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 applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → 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/C contact | N/O contact |
| | – | N/C contact | N/C contact |
| Rated operating distance | [mm] | 1 | 4 |
| Assured switching distance | [mm] | 0.81 | 3.24 |
| 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 |
| Switch-on time | [ms] | 0.02 | – |
| Max. switching frequency | [Hz] | 3,000 | 2,500 |
| Max. output current | [mA] | 100 | 200 |
| Voltage drop | [V] | 0 ... 2 | |

Proximity sensors SIEH, inductive

Technical data – Increased switching distance

| 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 |
| 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 | TPE-U (PUR) | | | TPE-U (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 | 108 | 4 | 30 | 43 |
| Housing material | High-alloy stainless steel | Nickel-plated brass | | High-alloy stainless steel | Nickel-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 ¹⁾ | | 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

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

Dimensions – 3 mm

Download CAD data → www.festo.com

| | | |
|--------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Cable</p> | <p>Plug</p> | <ul style="list-style-type: none"> 1 Connecting cable 2 Active surface 3 LED |
|--------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Dimensions – M12

Download CAD data → www.festo.com

| | | |
|--------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Cable</p> | <p>Plug</p> | <ul style="list-style-type: none"> 1 Connecting cable 2 Active surface 3 LED 4 4x LED |
|--------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Dimensions – M18

Download CAD data → www.festo.com

| | | |
|--------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Cable</p> | <p>Plug</p> | <ul style="list-style-type: none"> 1 Connecting cable 2 Active surface 3 LED 4 4x LED |
|--------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Fitting instructions




Flush fitting

- 2 Active surface
- 5 Metal-free zone

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

Proximity sensors SIEH, inductive

Technical data – Increased switching distance

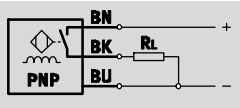
| Ordering data | | | | | | | | |
|-----------------------------------------------------------------------------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|------------------|----------|------------------|
| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | |
| | | | | | 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_n Rated operating distance [mm]

Proximity sensors SIEH...-CR, inductive

Technical data – Increased switching distance

Function¹⁾



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) | – |
| | RCM trademark | | RCM trademark | |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ | | To EU EMC Directive ¹⁾ | |
| 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/sp → 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 |

| 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 |

Proximity sensors SIEH...-CR, inductive

Technical data – Increased switching distance

| 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 | TPE-U (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 ¹⁾ | 2 | | 4 | |
| | 4 | | 2 | |
| 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 | | | |
| 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 |

Proximity sensors SIEH...-CR, inductive

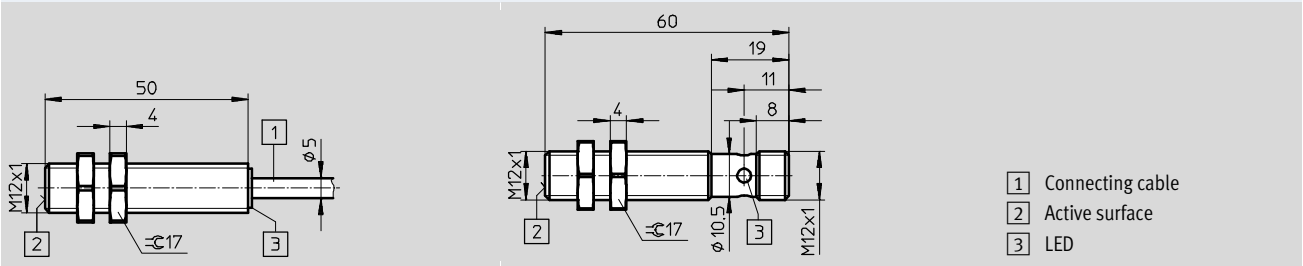
Technical data – Increased switching distance

Dimensions – M12

Download CAD data → www.festo.com

Cable

Plug

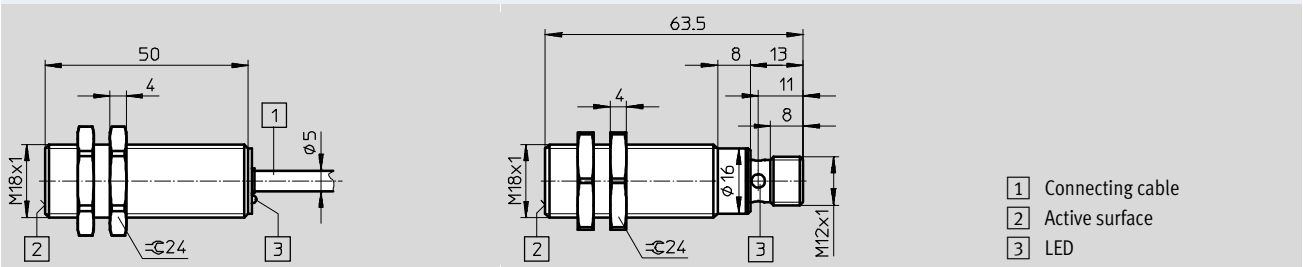


Dimensions – M18

Download CAD data → www.festo.com

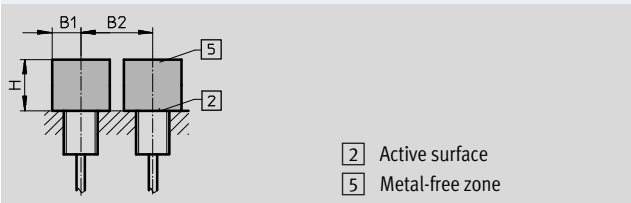
Cable

Plug



Fitting instructions

Flush fitting



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

Ordering data

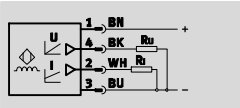
| Size | S _n ¹⁾ [mm] | Mounting type | Switching output | Switching element function | Electrical connection | | | |
|------------|--------------------------------------|------------------|---------------------|-------------------------------|-----------------------|---------------------|----------|---------------------|
| | | | | | 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_n Rated operating distance [mm]

Proximity sensors SIEA, inductive

Technical data – Analogue output

Function¹⁾



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

- Analogue output
- For DC voltage
- Round design



| General technical data | |
|-----------------------------------------|------------------------------------|
| Design | Round |
| Certification | cULus listed (OL) RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |
| 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/sp → 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 | | | | | |
|-----------------------------------------------|------|-------|-----|-------|-------|
| Size | | 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 | | | | | |
|-------------------------|------|----------------------|----------------------|----------------------|-----------------------|
| Size | | 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 | | | | | |
|-------------------------|--|------|------|------|------|
| 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

| Switching output | | | | | |
|--------------------------------------------------|------|------------------------------|------------------------------|----------------------------|-----------------------------|
| Size | | M8 | M12 | M18 | M30 |
| Max. switching frequency DC | [Hz] | 1,600 | 1,000 | 500 | 200 |
| Bandwidth | [Hz] | 1,600 (-3 dB at s = 2 mm) | 1,000 (-3 dB at s = 3 mm) | 500 (-3 dB at s = 5 mm) | 200 (-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 |

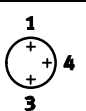
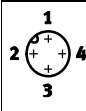
| Electronic components | |
|-----------------------------|-----------------------|
| Operating voltage range | [V DC] 15 ... 30 |
| Residual ripple | [%] 20 |
| Idle current | [mA] ≤ 10 |
| Reverse polarity protection | For operating voltage |

| 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 ¹⁾ | 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.

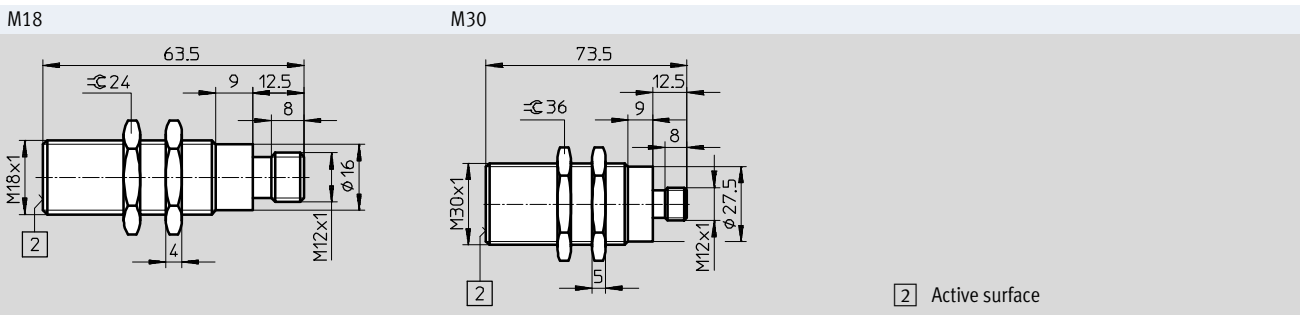
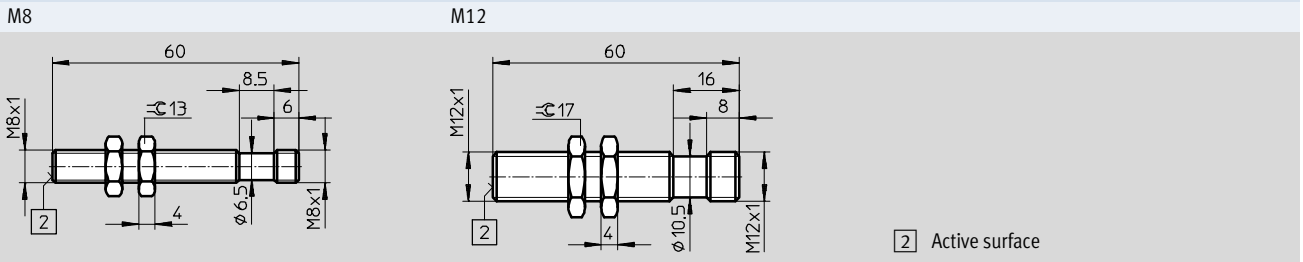
| Pin allocation | | | |
|-------------------------------------------------------------------------------------|-----|-------------|------------|
| M8x1, 3-pin | | | |
| | Pin | Wire colour | Allocation |
|  | 1 | Brown | + |
| | 3 | Blue | - |
| | 4 | Black | Voltage |
| M12x1, 4-pin | | | |
| | Pin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

Proximity sensors SIEA, inductive

Technical data – Analogue output

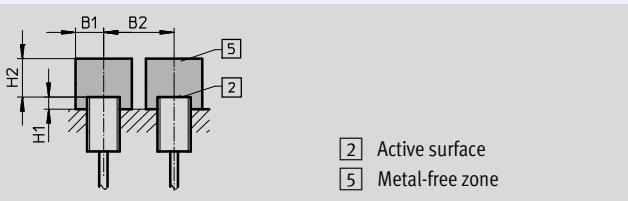
Dimensions

Download CAD data → www.festo.com







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

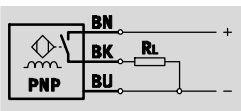
| Size | S ¹⁾ [mm] | Mounting type | Analogue output | Electrical connection | |
|--------------------------------------------------------------------------------------------|-------------------------|---------------|-----------------|-----------------------|-----------------------|
| | | | | Plug | 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

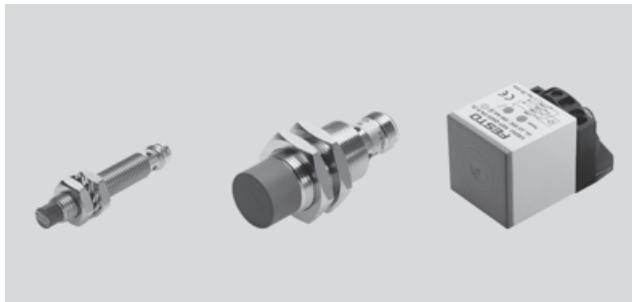
Technical data – Increased switching distance, reduction factor 1, welding field immune

Function¹⁾



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

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



| 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) | | | | | | |
| | RCM trademark | | | | RCM trademark | | | | | | |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ | | | | To EU EMC Directive ¹⁾ | | | | | | |
| 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/sp → 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 | Cable | | | Plug | | |
| Ambient temperature [°C] | –30 ... +70 | | | –30 ... +85 | | –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

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 (PUR) | | | | TPE-U (PUR) | | | | | – |
| Insulating sheath material | PVC | | | | PVC | | | | | – |
| Plug | | | | | | | | | | |
| Electrical connection | Plug, M8x1, 3-pin | Plug, M12x1, 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

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 ¹⁾ | 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 ¹⁾ | 4 | 2 | | | 4 | 2 | | | – |
| Degree of contamination | – | | | | – | | | | – |

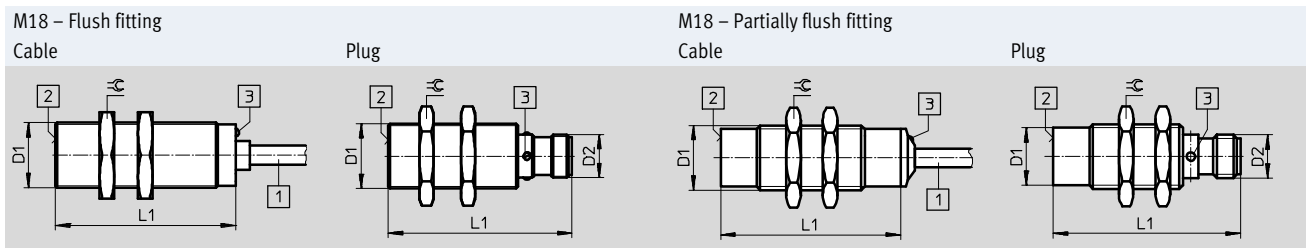
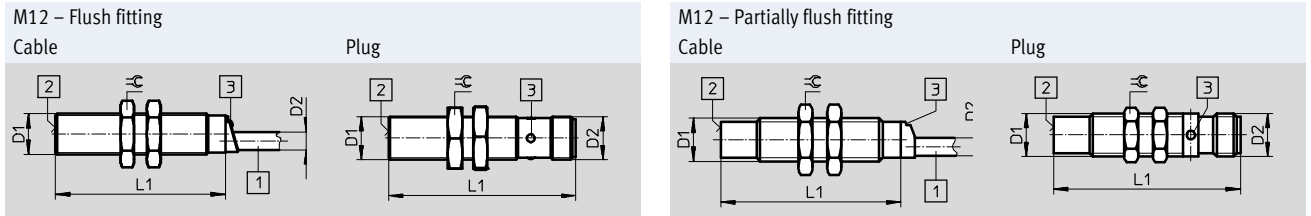
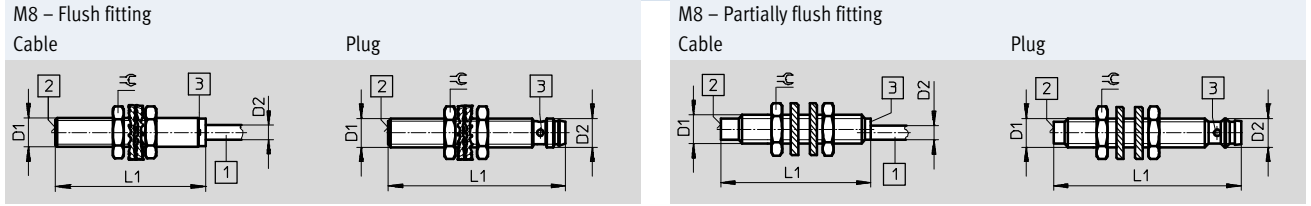
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
 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 |
| | 1 | Brown | + |
| | 3 | Blue | – |
| | 4 | Black | Output |
| | Pin | Wire colour | Allocation |
| | 1 | Brown | + |
| | 3 | Blue | – |
| | 4 | Black | Output |
| M12x1, 4-pin | | M12x1, 4-pin | |
| NPN, antivalent | | PNP, antivalent | |
| | Pin | Wire colour | Allocation |
| | 1 | Brown | + |
| | 2 | White | N/O contact |
| | 3 | Blue | – |
| | 4 | Black | N/C contact |
| | Pin | Wire colour | Allocation |
| | 1 | Brown | + |
| | 2 | White | N/C contact |
| | 3 | Blue | – |
| | 4 | Black | N/O contact |

Proximity sensors SIEF, inductive

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

Dimensions Download CAD data → www.festo.com



| 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 | |
| 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

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

Download CAD data → www.festo.com

Dimensions

M30 – Flush fitting

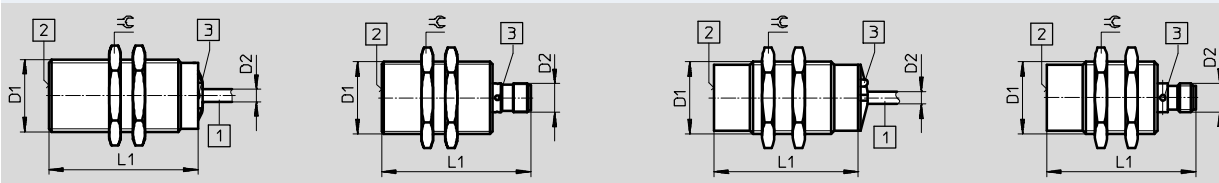
Cable

Plug

M30 – Partially flush fitting

Cable

Plug



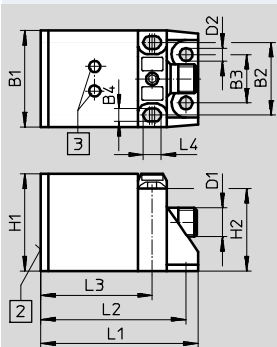
| Mounting type | Electrical connection | D1 | D2 | L1 | ⚡ |
|-----------------|-----------------------|---------|-------|----|----|
| M30 | | | | | |
| Flush | Cable | M30x1.5 | 5.2 | 60 | 36 |
| | Plug | | M12x1 | 62 | |
| Partially flush | Cable | M30x1.5 | 5.2 | 60 | 36 |
| | Plug | | M12x1 | 62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

- 1 Connecting cable
- 2 Active surface
- 3 LED

Dimensions – 40x40x65 mm

Download CAD data → www.festo.com

Partially flush fitting

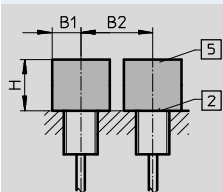


- 2 Active surface
- 3 LED

| 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 |

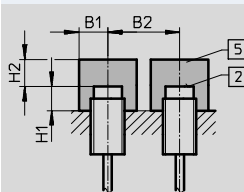
Fitting instructions

Flush fitting



- 2 Active surface
- 5 Metal-free zone

Partially flush fitting



- 2 Active surface
- 5 Metal-free zone

| 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

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

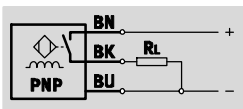
| Ordering data | | | | | | | | |
|--------------------|--------------------------------------|-----------------|----------------------------|------------------|-----------------------|-------------------|----------|-------------------|
| Size | S _n ¹⁾ [mm] | Mounting type | Switching element function | Switching 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 |
| | | | | NPN | 553540 | SIEF-M8B-NS-K-L | 553539 | SIEF-M8B-NS-S-L |
| | 4.0 | Partially flush | | 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 |
| | | | | NPN | 553544 | SIEF-M12B-NS-K-L | 553543 | SIEF-M12B-NS-S-L |
| | 8.0 | Partially flush | | 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 |
| | | | | NPN | 553548 | SIEF-M18B-NS-K-L | 553547 | SIEF-M18B-NS-S-L |
| | 12.0 | Partially flush | | 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 |
| | | | | NPN | 553552 | SIEF-M30B-NS-K-L | 553551 | SIEF-M30B-NS-S-L |
| | 20.0 | Partially flush | | 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_n Rated operating distance [mm]

Proximity sensors SIEF-...-WA, inductive

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

Function¹⁾



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) |
| | RCM trademark |
| CE mark (see declaration of conformity) | To EU EMC Directive ¹⁾ |

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → 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

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

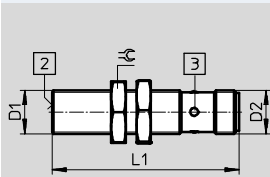
Technical data – Increased switching distance, reduction factor 1, welding field immune

Download CAD data → www.festo.com

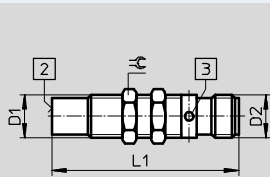
Dimensions

M12

Flush fitting

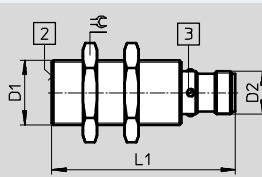


Partially flush fitting

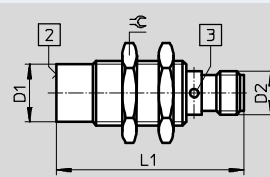


M18

Flush fitting

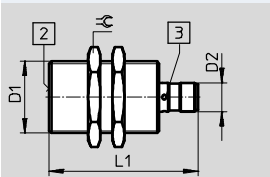


Partially flush fitting

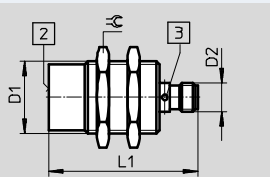


M30

Flush fitting



Partially flush fitting

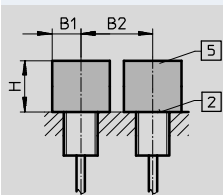


| Mounting type | Electrical connection | D1 | D2 | L1 | ⌀ |
|-----------------|-----------------------|---------|-------|----|----|
| M12 | | | | | |
| Flush | Plug | M12x1 | M12x1 | 52 | 17 |
| Partially flush | | | | | 13 |
| M18 | | | | | |
| Flush | Plug | M18x1 | M12x1 | 52 | 24 |
| Partially flush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

- 2 Active surface
- 3 LED

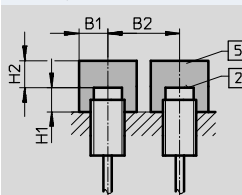
Fitting instructions

Flush fitting



- 2 Active surface
- 5 Metal-free zone

Partially flush fitting






- 2 Active surface
- 5 Metal-free zone

| 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

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




| Ordering data | | | | | | |
|-----------------------------------------------------------------------------------|--------------------------------------|-----------------|----------------------------|------------------|-----------------------|----------------------|
| Size | S _n ¹⁾ [mm] | Mounting type | Switching element function | Switching output | Electrical connection | |
| | | | | | 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_n 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 ¹⁾ |





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 ¹⁾ |
| | | 5 | 541328 | NEBU-M12G5-K-5-LE4 ¹⁾ |
| 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 ¹⁾ |
| | | 5 | 541329 | NEBU-M12W5-K-5-LE4 ¹⁾ |
| Straight socket, straight plug | | | | |
|  | 4 | 2.5 | 554036 | NEBU-M12G5-K-2.5-M8G4 ²⁾ |

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 |
| | | | | |
| 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 |
| | | | | |
|  | 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 |
| Flange mounting | | | |
|  | M30 | 195855 | FBN-32 |
| Mounting bracket | | | |
|  | SIES-V3B | 9634 | HV-M5 |
| Stop | | | |
|  | M8 | 11542 | SDA-8x1-B |
| | M12 | 11541 | SDA-12x1-B |

Product Range and Company Overview

A Complete Suite and Company Overview

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

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Electromechanical actuators, motors, controllers & drivers



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PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

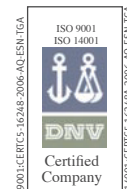
Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 16,000 employees in 60 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

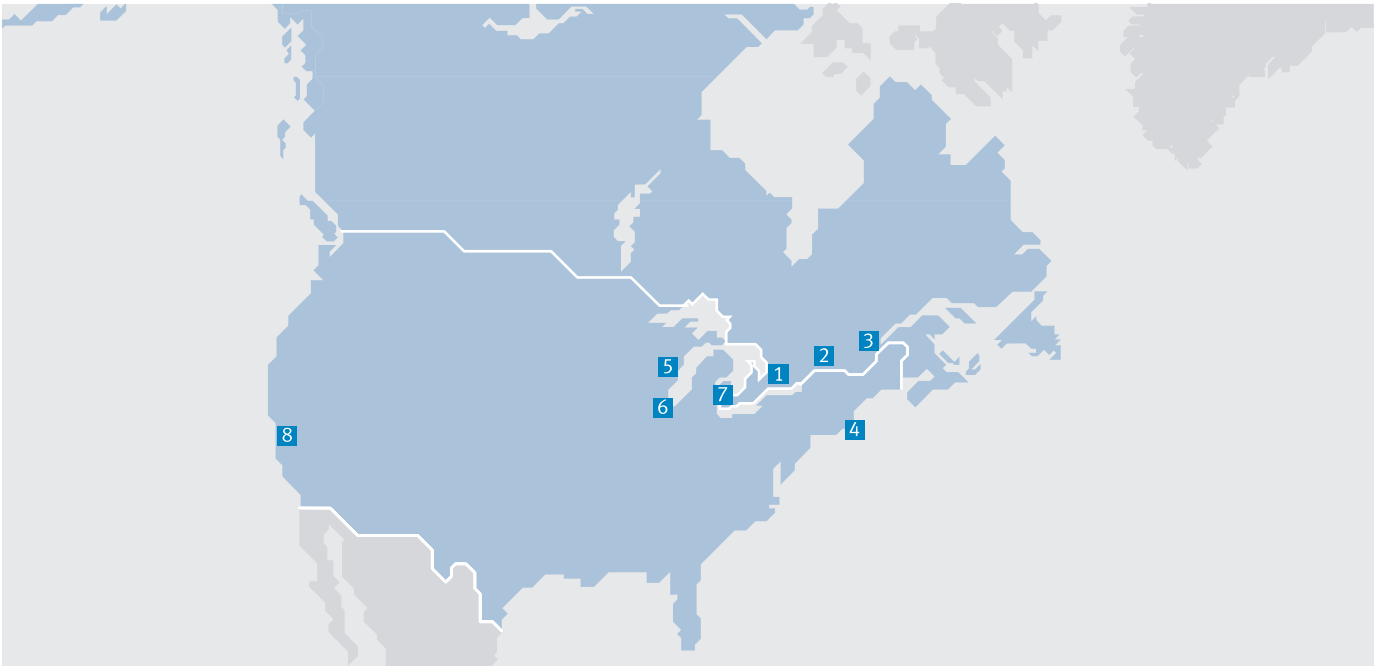


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