



- Switch output contactless or via reed contacts
- Wide range of mounting and connection options
- Heat, welding field and corrosion resistant designs
- Switching status display via LED

Specified types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Proximity sensors

Key features



General information

| | | | |
|---|--|---|--|
| <p>Festo's proximity sensors are position sensors specially adapted and optimised for use with Festo cylinders. They are mounted on cylinders either directly or by means of special mounting kits and offer users the advantage of being able to</p> | <p>obtain from a single source an optimally harmonised system which requires only simple mounting components for assembly. The proximity sensors operate in conjunction with a permanent</p> | <p>magnet, matched to the overall system and integrated into the piston of the drive unit concerned. All drives provided by Festo with the designation "A" are equipped with a permanent magnet of this kind.</p> | <p>The proximity sensors are adjusted mechanically on the cylinder in question and locked into the desired position. As soon as the cylinder piston returns to this position, the switching signal status changes.</p> |
|---|--|---|--|

Variants

Inductive proximity sensors SMT

| | | | |
|---|---|---|--|
| <p>Inductive proximity sensors SMT consist of an oscillator circuit. Current flowing through this circuit changes when a magnetic field approaches.</p> | <p>This change generates a switching signal. Proximity sensors SMT are used</p> | <p>mainly in applications where they are connected to a controller by</p> | <p>means of which their switching signals are processed.</p> |
|---|---|---|--|

Contacting proximity sensors SME

| | | | |
|---|---|--|--|
| <p>Contacting proximity sensors SME consist of a reed switch whose contacts close when a magnetic field approaches, thus generating a switching signal.</p> | <p>Proximity sensors SME are used mainly in applications where it is necessary to switch high load currents (e.g. for the direct control of</p> | <p>electrical consuming devices). In applications involving large capacitive loads or long cable</p> | <p>lengths (over approx. 7.5 m), a protective circuit (→ 1 / 10.2-3) must be provided.</p> |
|---|---|--|--|

Welding field immune proximity sensors SMTSO

| | | | |
|---|---|--|---|
| <p>Welding field immune proximity sensors SMTSO work in the same way as inductive sensors SMT, but with the additional feature that the</p> | <p>switching signal is "frozen" as soon as the proximity sensor detects an alternating magnetic field. This</p> | <p>prevents incorrect switching during welding operations. Proximity sensors SMTSO are used on welding</p> | <p>machines where welding operations generate strong alternating magnetic fields.</p> |
|---|---|--|---|

Pneumatic proximity sensors SMPO

| | | | |
|--|--|---|---|
| <p>Pneumatic proximity sensors SMPO consist of a 3/2-way valve which is actuated when a magnetic field</p> | <p>approaches. A pneumatic output signal can be activated when the pneumatic proximity sensor is</p> | <p>switched. Proximity sensors SMPO are used in systems which are</p> | <p>capable of directly processing pneumatic output signals.</p> |
|--|--|---|---|

Proximity sensors SMH for grippers

| | | | |
|---|---|--|---|
| <p>Proximity sensors SMH are position sensors which have been specially developed for use with Festo mini and precision grippers. A magnet integrated into the piston of the gripper generates a magnetic field whose strength varies as a function of distance. An analogue electrical</p> | <p>signal is generated by the proximity sensor in proportion to the strength of the magnetic field, and is converted into digital signals by the electronic evaluation unit. Proximity sensors SMH allow 3 gripper jaw positions to be detected with only one sensor and the associated</p> | <p>evaluation unit SMH-AE1. This evaluation unit is essential when a proximity sensor SMH is used. It allows 3 switching points to be set independently by means of potentiometers and tapped as electrical signals at the 5-pin M12 plug.</p> | <p>Example: Two of the switching points can be set in such a way that 2 objects of different sizes can be detected. The third switching point can be used to detect a fault (no object in gripper).</p> |
|---|---|--|---|

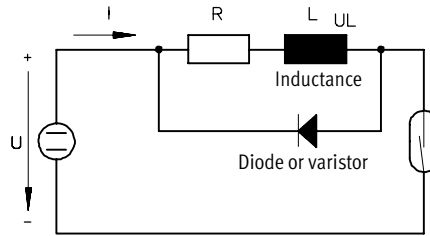
Proximity sensors

Key features

Protective circuit for contacting proximity sensors SME

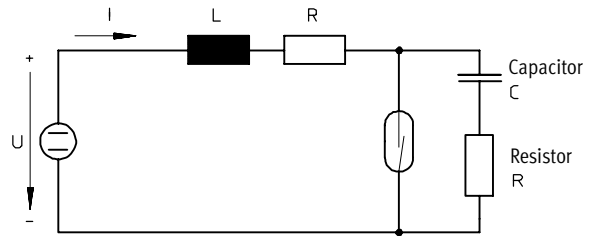
Inductive loads

When inductive loads are switched, a high voltage peak is produced at the moment of switch-off. For this reason, proximity sensors must be provided with a protective circuit. The protective circuit can consist either of an appropriate diode or varistor (→ circuit diagram). The electrical values of these components depend on the power component which is connected in series (e.g. relay, contactor, etc.). If a relay or auxiliary contactor is switched, allowance must be made for the technical data of the proximity sensor and of the relay or auxiliary contactor. With R-C circuits, there is no need for an additional resistor to protect against inductive loads.



Capacitive loads

When inductive loads are switched or cables longer than approx. 7.5 m are used, a high current peak occurs at the moment of switch-on. These current peaks can lead to severe damage to mechanical switching devices. For this reason, proximity sensors must be provided with a protective circuit. To protect against current peaks, a protective resistor R must be installed in the power supply line (brown cable) as close as possible to the proximity sensor. This protective resistor reduces the load current I. Ensure therefore during sizing that the minimum current necessary for reliable status detection is available (allow for the technical data of the connected load).



Note

The pick-up current rating of a relay or auxiliary contactor is much higher (8 to 10 times higher) than the holding power rating. For this reason, controller sizing should be based primarily on the pick-up power rating.

Cylinders with magnetically actuated proximity sensors should not be installed in places where strong magnetic fields (e.g. resistance welding machines) are present. Welding field immune proximity sensors SMTSO should be used instead.

The distance between a proximity sensor and the nearest outer wall of a cylinder with a permanent magnet integrated in the piston must be at least 100 mm if no special screening is used.

Proximity sensors

Selection aid



Drive accessories
Cylinder sensors

10.2

| Drive | Remarks | SMT-8 CRSMT-8 SME-8 SMPO-8 | SMT-10 SME-10 | SMT0-4U SME0-4U CRSME0-4 | SMT0-1 SMT0-6 SME0-1 SMPO-1 | SMH-S1 |
|-----------------------------------|-----------------|-------------------------------------|------------------|--------------------------------|--------------------------------------|-------------|
| Standards-based cylinders | | | | | | |
| Standard cylinders DSNU, ESNU | ∅ 8 ... 25 mm | ■ | ■ | ■ | ■ | - |
| Standard cylinders DSN, ESN | ∅ 8 ... 25 mm | ■ | ■ | ■ | ■ | - |
| Standard cylinders DNCB | | ■ | - | - | - | - |
| Standard cylinders DNC | | ■ | - | - | - | - |
| Standard cylinders DNG | | - | - | - | ■ | - |
| Standard cylinders DNU | | - | - | - | ■ | - |
| Standard cylinders ADN | | ■ | - | - | - | - |
| Piston cylinders | | | | | | |
| Compact cylinders ADVU, AEVU | | ■ | - | - | - | - |
| Short-stroke cylinders ADVC, AEVC | ∅ 6 ... 25 mm | - | ■ | - | - | - |
| | ∅ 32 ... 100 mm | ■ | - | - | - | - |
| Flat cylinders EZH-10/40-40-A-B | | ■ | - | - | - | - |
| Flat cylinders DZF | | ■ | - | - | - | - |
| Flat cylinders DZH | ∅ 16 ... 25 mm | ■ | - | - | - | - |
| | ∅ 32 ... 63 mm | - | - | - | ■ | - |
| Round cylinders DSNU, ESNU | ∅ 32 ... 63 mm | ■ | ■ | ■ | ■ | - |
| Round cylinders DSW, ESW | | ■ | ■ | ■ | ■ | - |
| Round cylinders DSEU, ESEU | | ■ | ■ | ■ | ■ | - |
| Multimount cylinders DMM, EMM | | ■ | - | - | - | - |
| Round cylinders CRDG | | - | - | ■ | - | - |
| Round cylinders CRDSW | | ■ | ■ | ■ | ■ | - |
| Standard cylinders CRHD | | ■ | - | - | - | - |
| Standard cylinders CRDSNU | | - | - | ■ | - | - |
| Standard cylinders CRDNG | | - | - | ■ | - | - |
| Standard cylinders CRDNGS | | - | - | ■ | - | - |
| Rodless cylinders | | | | | | |
| Linear drives DGC | | - | ■ | - | - | - |
| Linear drives DGP, DGPL | | ■ | - | - | - | - |
| Linear drives SLG | | - | ■ | - | - | - |
| Linear drives DGO | | - | - | ■ | - | - |
| Linear drives SLM | | ■ | - | - | - | - |
| Semi-rotary drives | | | | | | |
| Swivel modules DSM | ∅ 6 ... 10 mm | - | ■ | - | - | - |
| Semi-rotary drives DRQ | ∅ 16 ... 32 mm | ■ | - | - | - | - |
| | ∅ 40 ... 100 | - | - | - | ■ | - |
| Semi-rotary drives DRQD | ∅ 6 ... 12 mm | - | ■ | - | - | - |
| | ∅ 16 ... 32 mm | ■ | - | - | - | - |
| Technical data → Page | | 1 / 10.2-6 | 1 / 10.2-42 | 1 / 10.2-58 | 1 / 10.2-72 | 1 / 10.2-90 |

Proximity sensors






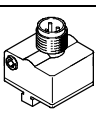
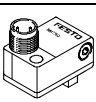
Selection aid

FESTO

| Drive | Remarks | SMT-8 CRSMT-8 SME-8 SMPO-8 | SMT-10 SME-10 | SMT0-4U SME0-4U CRSME0-4 | SMT0-1 SMT0-6 SME0-1 SMPO-1 | SMH-S1 |
|---------------------------------------|----------------|-------------------------------------|------------------|--------------------------------|--------------------------------------|-------------|
| Function-oriented drives | | | | | | |
| Stopper cylinders STA, STAF | | ■ | - | - | - | - |
| Linear/swivel clamps CLR | | ■ | - | - | - | - |
| Swivel/linear units DSL | | ■ | - | - | - | - |
| Drives with linear guide | | | | | | |
| Mini slides SLS, SLF, SLT | | - | ■ | - | - | - |
| Twin cylinders SPZ | | ■ | - | - | - | - |
| Slide units SLZ | | ■ | - | - | - | - |
| Guided cylinders DFP | ∅ 6 ... 16 mm | - | ■ | - | - | - |
| | ∅ 25 ... 80 mm | ■ | - | - | - | - |
| Mini guided drive units DFC | | - | ■ | - | - | - |
| Guided drive units DFM | | ■ | - | - | - | - |
| Linear units SLE | ∅ 32 ... 50 mm | ■ | - | - | - | - |
| Twin cylinders DPZC | | - | ■ | - | - | - |
| Twin cylinders DPZ | | ■ | - | - | - | - |
| Handling units | | | | | | |
| Linear modules HMP | | ■ | - | - | - | - |
| Linear modules HMPL | | ■ | - | - | - | - |
| Handling modules HSP | | ■ | - | - | - | - |
| Feed separators HPV | | ■ | - | - | - | - |
| Three-point grippers HGD | ∅ 32, 50 mm | ■ | - | - | - | - |
| Parallel grippers HGP | ∅ 6 mm | - | - | - | - | ■ |
| | ∅ 10 ... 35 mm | ■ | - | - | - | - |
| Precision parallel grippers HGPP | ∅ 12 ... 32 mm | - | - | - | - | ■ |
| T-slot grippers HGPT | ∅ 16 ... 63 mm | - | ■ | - | - | - |
| Three-point grippers HGD | ∅ 16 mm | - | - | - | - | ■ |
| Angle grippers HGW | ∅ 10 mm | - | - | - | - | ■ |
| | ∅ 16 ... 40 mm | ■ | - | - | - | - |
| Radial grippers HGR | ∅ 10 mm | - | - | - | - | ■ |
| | ∅ 16 ... 40 mm | ■ | - | - | - | - |
| Cushioning components | | | | | | |
| Stop elements YSRWJ | | ■ | - | - | - | - |
| Electrical positioning systems | | | | | | |
| Toothed belt axes DGE-ZR | | ■ | - | - | - | - |
| Spindle axes DGE-SP | | ■ | - | - | - | - |
| System components | | | | | | |
| Heavy-duty guides HD | | ■ | - | - | - | - |
| Actuators | | | | | | |
| Copac linear actuators DLP-A | | ■ | - | - | - | - |
| Technical data → Page | | 1 / 10.2-6 | 1 / 10.2-42 | 1 / 10.2-58 | 1 / 10.2-72 | 1 / 10.2-90 |



Proximity sensors for slot type 8

Product range overview

| Measuring principle | Design | Type | Mounting | Switching element function | | Switch output | Electrical connection | | | | |
|---------------------|---|---|--|---|----------------------------------|---------------|-----------------------|--------------|-----|---|--------------|
| | | | | NO contact | NC contact | | Cable | Plug | | | |
| Magneto-resistive | Operating voltage range 10 ... 30 V DC | | | | | | | | | | |
| |  | SMT-8F  New | Insertable from above | ■ | ■ | PNP | 3-wire | - | | | |
| | | | | ■ | - | | - | M8x1, 3-pin | | | |
| | | | | ■ | - | | - | M12x1, 3-pin | | | |
| | | | | ■ | - | NPN | 3-wire | M8x1, 3-pin | | | |
| | | | | ■ | - | - | 2-wire | - | | | |
| |  | SMT-8 | Insertable from end, flush with the cylinder profile | ■ | - | PNP | 3-wire | M8x1, 3-pin | | | |
| | | | | ■ | - | NPN | 3-wire | M8x1, 3-pin | | | |
| | | | | ■ | - | PNP | 3-wire | - | | | |
| | | CRSMT-8 Corrosion resistant | | ■ | - | | | | | | |
| |  | SMT-8-SL  New | Insertable from end | ■ | - | PNP | - | M8x1, 3-pin | | | |
| |  | SMTO-8E | With accessories | ■ | - | PNP | - | M8x1, 3-pin | | | |
| | | | | ■ | - | PNP | - | M12x1, 3-pin | | | |
| | | | | ■ | - | NPN | - | M8x1, 3-pin | | | |
| | | | | ■ | - | | - | M12x1, 3-pin | | | |
| | | | |  | SMTSO-8E Welding field immune | | ■ | - | PNP | - | M12x1, 3-pin |
| | | | | | | | ■ | - | NPN | - | M12x1, 3-pin |








Proximity sensors for slot type 8

Product range overview

| Type | Connection direction | | Replacement without re-adjustment | Switching status display with LED | Free of copper, PTFE and silicone | → Page |
|--|----------------------|---------|-----------------------------------|-----------------------------------|-----------------------------------|-------------|
| | In-line | Lateral | | | | |
| Operating voltage range 10 ... 30 V DC | | | | | | |
| SMT-8F  New | ■ | - | - | ■ | ■ | 1 / 10.2-13 |
| | ■ | - | - | ■ | ■ | |
| | ■ | - | - | ■ | ■ | |
| | ■ | - | - | ■ | ■ | |
| | ■ | - | - | ■ | ■ | |
| SMT-8 | ■ | - | - | ■ | ■ | 1 / 10.2-19 |
| | ■ | - | - | ■ | ■ | |
| CRSMT-8 Corrosion resistant | ■ | - | - | ■ | ■ | 1 / 10.2-21 |
| SMT-8-SL  New | ■ | - | - | ■ | ■ | 1 / 10.2-23 |
| SMT0-8E | - | ■ | ■ | ■ | ■ | 1 / 10.2-31 |
| | - | ■ | ■ | ■ | ■ | |
| | - | ■ | ■ | ■ | - | |
| | - | ■ | ■ | ■ | - | |
| SMTSO-8E Welding field immune | - | ■ | ■ | ■ | - | 1 / 10.2-33 |
| | - | ■ | ■ | ■ | - | |

Proximity sensors for slot type 8



Product range overview

| Measuring principle | Design | Type | Mounting | Switching element function | | Switch output | Electrical connection | |
|---|--|--|--|----------------------------|------------|---------------|-----------------------|--------------|
| | | | | NO contact | NC contact | | Cable | Plug |
| Magnetic reed | Operating voltage range 0 ... 30 V AC/DC | | | | | | | |
| |  | SME-8F New | Insertable from above | ■ | ■ | Contacting | 3-wire | – |
| | | | | ■ | – | | 2-wire | M8x1, 3-pin |
| |  | SME-8 | Insertable from end, flush with the cylinder profile | ■ | ■ | Contacting | 3-wire | – |
| | | | | ■ | – | | 2-wire | M8x1, 3-pin |
| | | SME-8-...-S6 Heat resistant up to 120 °C | | ■ | – | | 2-wire | – |
| |  | SME-8-SL New | Insertable from end | ■ | – | Contacting | – | M8x1, 3-pin |
| |  | SME0-8E | With accessories | ■ | – | Contacting | – | M8x1, 3-pin |
| | | | | ■ | – | | – | M12x1, 3-pin |
| | | SME0-8E-...-S6 Heat resistant up to 120 °C | | ■ | – | | 2-wire | – |
| Operating voltage range 3 ... 250 V AC/DC | | | | | | | | |
|  | SME-8-...-230 | Insertable from end, flush with the cylinder profile | ■ | – | Contacting | 2-wire | – | |
|  | SME0-8E-...-230 | With accessories | ■ | – | Contacting | – | M12x1, 2-pin | |
| Pneumatic | Operating pressure 2 ... 8 bar | | | | | | | |
|  | SMPO-8E | With accessories | ■ ¹⁾ | – | – | – | – | |

1) 3/2-way valve, normally closed

Proximity sensors for slot type 8

Product range overview

| Type | Connection direction | | Replacement without re-adjustment | Switching status display with LED | Free of copper, PTFE and silicone | → Page |
|---|----------------------|---------|-----------------------------------|-----------------------------------|-----------------------------------|-------------|
| | In-line | Lateral | | | | |
| Operating voltage range 0 ... 30 V AC/DC | | | | | | |
| SME-8F  New | ■ | - | - | ■ | ■ | 1 / 10.2-16 |
| | ■ | - | - | ■ | ■ | |
| SME-8 | ■ | - | - | ■ | ■ | 1 / 10.2-25 |
| | ■ | - | - | ■ | ■ | |
| SME-8-...-S6 Heat resistant up to 120 °C | ■ | - | - | - | - | |
| SME-8-SL  New | ■ | - | - | ■ | - | 1 / 10.2-28 |
| | | | | | | |
| SME0-8E | - | ■ | ■ | ■ | - | 1 / 10.2-35 |
| | - | ■ | ■ | ■ | - | |
| SME0-8E-...-S6 Heat resistant up to 120 °C | - | ■ | ■ | - | - | |
| Operating voltage range 3 ... 250 V AC/DC | | | | | | |
| SME-8-...-230 | ■ | - | - | ■ | - | 1 / 10.2-25 |
| SME0-8E-...-230 | - | ■ | ■ | ■ | - | 1 / 10.2-35 |
| Operating pressure 2 ... 8 bar | | | | | | |
| SMPO-8E | - | ■ | ■ | _ 2) | - | 1 / 10.2-38 |

2) Switching status is indicated by means of an LED.

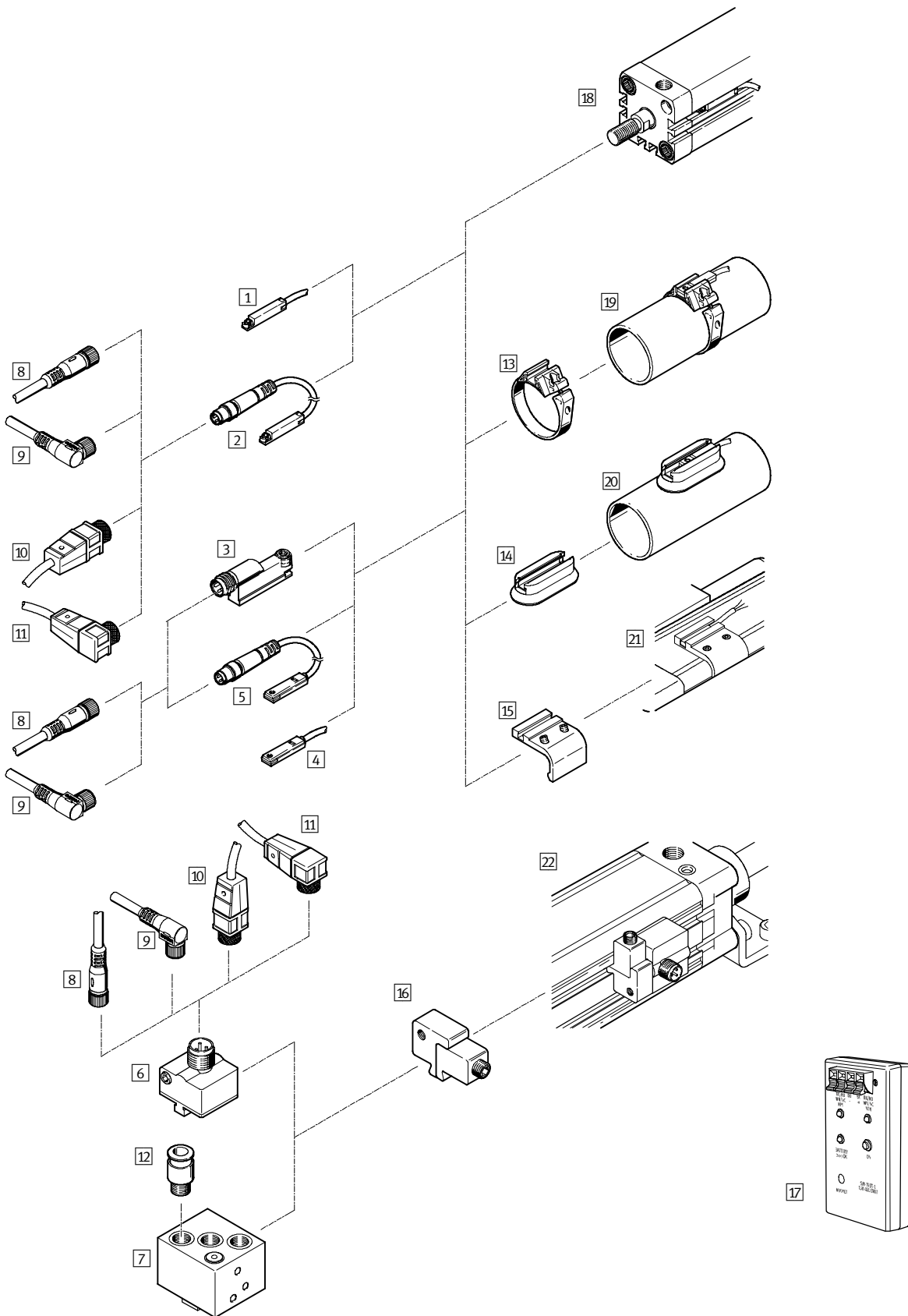
Proximity sensors for slot type 8

Peripherals overview



Drive accessories
Cylinder sensors

10.2



Proximity sensors for slot type 8

Peripherals overview

FESTO

| Mounting attachments and accessories | | | |
|--------------------------------------|---|--|---|
| | Brief description | → Page | |
| Proximity sensors | | | |
| 1 | SMT-8F-...-OE SME-8F-...-OE | Magneto-resistive, with cable Magnetic reed, with cable | 1 / 10.2-13 1 / 10.2-16 |
| 2 | SMT-8F-...-M8D/M12 SME-8F-...-M8D/M12 | Magneto-resistive, with cable and plug M8x1 or M12x1 Magnetic reed, with cable and plug M8x1 or M12x1 | 1 / 10.2-13 1 / 10.2-16 |
| 3 | SMT-8-SL-... SME-8-SL-... | Magneto-resistive, with plug M8x1 Magnetic reed, with plug M8x1 | 1 / 10.2-23 1 / 10.2-28 |
| 4 | SMT-8-K-... CRSMT-8-K-... SME-8-K-... | Magneto-resistive, with cable Magneto-resistive, corrosion resistant, with cable Magnetic reed, with cable | 1 / 10.2-19 1 / 10.2-21 1 / 10.2-25 |
| 5 | SMT-8-S-... SME-8-S-... | Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1 | 1 / 10.2-19 1 / 10.2-25 |
| 6 | SMT0-8E-... SMTSO-8E-... SME0-8E-... | Magneto-resistive, with plug M8x1 or M12x1 Magneto-resistive, welding field immune, with plug M8x1 or M12x1 Magnetic reed, with cable or with plug M8x1 or M12x1 | 1 / 10.2-31 1 / 10.2-33 1 / 10.2-35 |
| 7 | SMPO-8E-... | Pneumatic | 1 / 10.2-38 |
| 4 | SMT-8-K-... CRSMT-8-K-... SME-8-K-... | Magneto-resistive, with cable Magneto-resistive, corrosion resistant, with cable Magnetic reed, with cable | |
| 5 | SMT-8-S-... SME-8-S-... | Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1 | |
| 6 | SMT0-8E-... SMTSO-8E-... SME0-8E-... | Magneto-resistive, with plug M8x1 or M12x1 Magneto-resistive, welding field immune, with plug M8x1 or M12x1 Magnetic reed, with cable or with plug M8x1 or M12x1 | |
| 7 | SMPO-8E-... | Pneumatic | |
| Accessories | | | |
| 8 | Plug socket with cable SIM-M8-3GD-... | Straight socket, M8x1, 3-pin | 1 / 10.2-100 |
| 9 | Plug socket with cable SIM-M8-3WD-... | Angled socket, M8x1, 3-pin | 1 / 10.2-100 |
| 10 | Plug socket with cable SIM-M12-3GD-... | Straight socket, M12x1, 3-pin | 1 / 10.2-100 |
| 11 | Plug socket with cable SIM-M12-3WD-... | Angled socket, M12x1, 3-pin | 1 / 10.2-100 |
| 12 | Push-in fitting QSM-M5 | For standard O.D. tubing to CETOP RP 54 P | 1 / 10.2-41 |
| 13 | Mounting kit SMBR | For round cylinders DSEU, ESEU, DSNU, ESNU, DSW, ESW | 1 / 10.2-40 |
| 14 | Mounting kit CRSMB | Corrosion resistant, for round cylinders | 1 / 10.2-40 |
| 15 | Mounting kit SMB-8-FENG | For standard cylinders DNC, DNCB in combination with guide unit FENG | 1 / 10.2-41 |
| 16 | Mounting kit SMB-8E | For drives with slot type 8 | 1 / 10.2-41 |
| 17 | Sensor tester SM-TEST-1 | | 1 / 10.2-99 |
| Drives | | | |
| 18 | Drives with slot type 8 (T-slot) | | - |
| 19 | Round cylinders | ∅ 8 ... 63 mm | |
| 20 | Round cylinders | ∅ 32 ... 100 mm | |
| 21 | Standard cylinders DNC, DNCB | In combination with guide unit FENG | |
| 22 | Drives with slot type 8 (T-slot) | | |

Drive accessories
Cylinder sensors

10.2

Proximity sensors SMT/SME-8F, for slot type 8

Type code

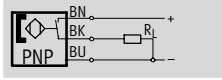
| | | | | | | | | | |
|--|--------------------------------------|-----|----|----|-----|------|----|--|--|
| | | SMT | 8F | PO | 24V | K7,5 | OE | | |
| Type | | | | | | | | | |
| SMT | Proximity sensor, magneto-resistive | | | | | | | | |
| SME | Proximity sensor, magnetic reed | | | | | | | | |
| Design | | | | | | | | | |
| 8F | For T-slot, inserted from above | | | | | | | | |
| Switching element function, switch output | | | | | | | | | |
| PS | NO contact, 3-wire, PNP | | | | | | | | |
| PO | NC contact, 3-wire, PNP | | | | | | | | |
| NS | NO contact, 3-wire, NPN | | | | | | | | |
| ZS | NO contact, 2-wire | | | | | | | | |
| DS | NO contact, 3-wire | | | | | | | | |
| DO | NC contact, 3-wire | | | | | | | | |
| Rated operating voltage | | | | | | | | | |
| 24V | 24 V DC | | | | | | | | |
| Cable length | | | | | | | | | |
| K0,3 | 0.3 m | | | | | | | | |
| K2,5 | 2.5 m | | | | | | | | |
| K5,0 | 5.0 m | | | | | | | | |
| K7,5 | 7.5 m | | | | | | | | |
| Electrical connection | | | | | | | | | |
| OE | Cable | | | | | | | | |
| M8D | Plug M8x1 with cable | | | | | | | | |
| M12 | Plug M12x1 with cable | | | | | | | | |
| Explosion protection | | | | | | | | | |
| EX | Certification acc. to ATEX directive | | | | | | | | |
| Packaging unit | | | | | | | | | |
| X | Quantity of 50 | | | | | | | | |

Proximity sensors SMT-8F, for slot type 8

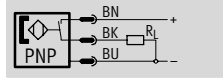
Technical data – Magneto-resistive measuring principle

Function

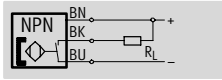
NO contact, PNP, with cable



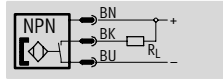
NO contact, PNP, with plug



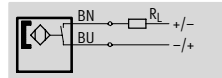
NO contact, NPN, with cable



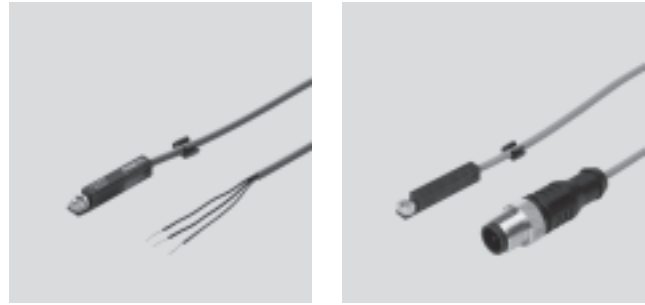
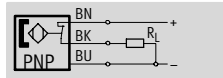
NO contact, NPN, with plug



NO contact, with 2-wire cable



NC contact, PNP, with cable



| General technical data | | | | | | | | | | |
|--|--|--|--------------|-----------------------------|------------------------------|---------------|-----------------------------|---------------|---------------|-----|
| Switching element function | | NO contact | | | | | | NC contact | | |
| Electrical data | | | | | | | | | | |
| Switch output | | PNP | | | NPN | | - | PNP | | |
| Electrical connection | | Cable, 3-wire | | Cable with plug M8x1, 3-pin | Cable with plug M12x1, 3-pin | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 2-wire | Cable, 3-wire | |
| Operating voltage range | | [V DC] | 10 ... 30 | | | | | | | |
| Max. output current | | [mA] | 100 | | | | | | | |
| Max. switching capacity | | [W] | 3 | | | | | | | |
| Voltage drop | | [V] | 1.8 | | | 1.8 | | 5.6 | 1.8 | |
| Residual current | | [mA] | ≤0.1 | | | 0.1 | | 0.8 | 0.1 | |
| Protection against short circuit | | Yes | | | | | | | | |
| Protection against polarity reversal | | For all electrical connections | | | | | | | | |
| Protection class to EN 60 529 | | IP65/IP67 | | | | | | | | |
| CE symbol | | 89/336/EEC (EMC) | Yes | | | | | | | |
| Design | | | | | | | | | | |
| Design | | For T-slot | | | | | | | | |
| Type of mounting | | Clamped in T-slot, insertable from above | | | | | | | | |
| Reproducibility of switching point ¹⁾ | | [mm] | ±0.1 | | | | | | | |
| Switch-on time | | [ms] | ≤0.2 | | | ≤0.2 | | ≤1.6 | 0.5 | |
| Switch-off time | | [ms] | ≤11 | | | ≤7 | | 1.6 | 11 | |
| Switching status display | | Yellow LED | | | | | | | | |
| Cable length | | [m] | 2.5 | 5.0 | 0.3 | 0.3 | 2.5 | 0.3 | 2.5 | 7.5 |
| Mounting position | | Any | | | | | | | | |
| Materials | | Housing | Polyamide | | | | | | | |
| | | Cable sheath | Polyurethane | | | | | | | |
| Note on material | | Free of copper, PTFE and silicone | | | | | | | | |
| Product weight | | [g] | 30 | 90 | 10 | 20 | 30 | 10 | 24 | 90 |

1) Only applicable to drives secured against rotation

Proximity sensors SMT-8F, for slot type 8

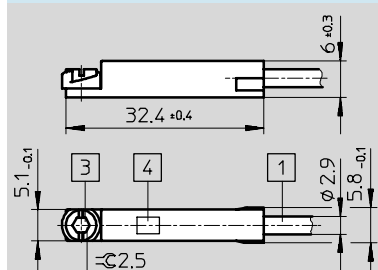
Technical data – Magneto-resistive measuring principle

| Operating and environmental conditions | | | | | | |
|--|---------------|------------|---------------|------------|-------------|------------|
| Electrical connection | Cable, 3-wire | | Cable, 2-wire | | Plug | |
| Cable installation | Fixed | Flexible | Fixed | Flexible | Fixed | Flexible |
| Ambient temperature [°C] | -20 ... +60 | -5 ... +60 | -25 ... +70 | -5 ... +70 | -20 ... +60 | -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 4 | | 2 | |

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

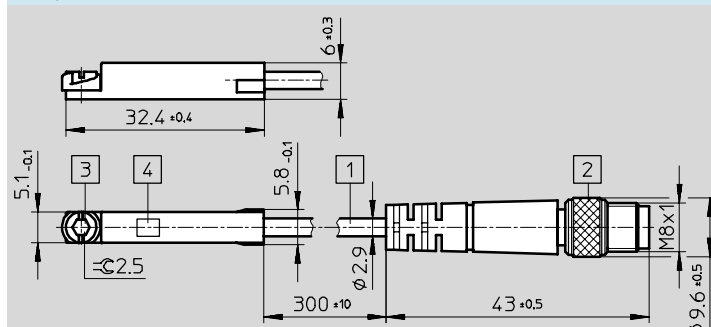
Dimensions Download CAD data → www.festo.com/en/engineering

With cable



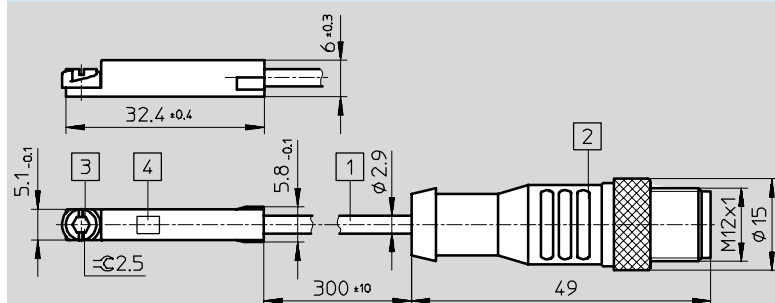
- 1 Connecting cable
- 3 Clamping component
- 4 Yellow LED

With plug M8



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED

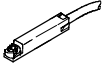
With plug M12



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M12-...
- 3 Clamping component
- 4 Yellow LED

Proximity sensors SMT-8F, for slot type 8

Technical data – Magneto-resistive measuring principle

| Ordering data | | | | | | | | | |
|---|---------------|-----------------------|---------|----------|---------------------|----------|-------------------------|--------------------------|----|
| | Switch output | Electrical connection | | | Cable length [m] | Part No. | Type | PU ¹⁾ | |
| | | Cable | Plug M8 | Plug M12 | | | | | |
|  | NO contact | | | | | | | | |
| | PNP | 3-wire | - | - | 2.5 | 525 898 | SMT-8F-PS-24V-K2,5-OE | 1 | |
| | | | | | | 535 199 | SMT-8F-PS-24V-K2,5-OE-X | 50 | |
| | | | | | 5.0 | 538 486 | SMT-8F-PS-24V-K5,0-OE | 1 | |
| | | - | 3-pin | - | - | 0.3 | 525 899 | SMT-8F-PS-24V-K0,3-M8D | 1 |
| | | | | | | | 535 200 | SMT-8F-PS-24V-K0,3-M8D-X | 50 |
| | | | | | | 525 900 | SMT-8F-PS-24V-K0,3-M12 | 1 | |
| | NPN | 3-wire | - | - | 2.5 | 525 909 | SMT-8F-NS-24V-K2,5-OE | 1 | |
| | | | | | 0.3 | 525 910 | SMT-8F-NS-24V-K0,3-M8D | 1 | |
| | | - | 3-pin | - | - | 2.5 | 525 908 | SMT-8F-ZS-24V-K2,5-OE-EX | 1 |
| | NC contact | | | | | | | | |
| | PNP | 3-wire | - | - | 7.5 | 525 911 | SMT-8F-PO-24V-K7,5-OE | 1 | |

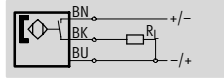
1) Packaging unit quantity

Proximity sensors SME-8F, for slot type 8

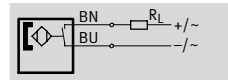
Technical data – Magnetic reed measuring principle

Function

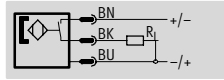
NO contact, with 3-wire cable



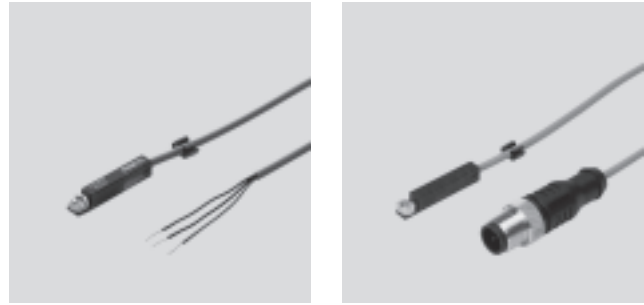
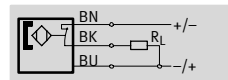
NO contact, with 2-wire cable



NO contact, 3-wire, with plug



NC contact, with 3-wire cable



| General technical data | | | NO contact | | | NC contact | |
|--|--------------|--------------|--|---------------|-----------------------------|--------------------------------|---------------|
| Switching element function | | | NO contact | | | NC contact | |
| Electrical data | | | | | | | |
| Switch output | | | Contacting, bipolar | | | | |
| Electrical connection | | | Cable, 3-wire | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 2-wire | Cable, 3-wire |
| Operating voltage range | D.C. voltage | [V DC] | 10 ... 30 | | | 5 ... 30 | 10 ... 30 |
| | A.C. voltage | [V AC] | 10 ... 30 | | | 5 ... 30 | 10 ... 30 |
| Max. output current | | [mA] | 500 | | | 100 | 80 |
| Max. switching capacity | D.C. voltage | [W] | 10 | | | 3 | 1.5 |
| | A.C. voltage | [VA] | 10 | | | 3 | 1.5 |
| Voltage drop | | [V] | | | | 3.5 | 4 |
| Protection against short circuit | | | No | | | | |
| Protection against polarity reversal | | | No | | | For all electrical connections | No |
| Protection class to EN 60 529 | | | IP65/IP67 | | | | |
| CE symbol | | | 89/336/EEC (EMC) Yes | | | | |
| Design | | | | | | | |
| Design | | | For T-slot | | | | |
| Type of mounting | | | Clamped in T-slot, inserted from above | | | | |
| Reproducibility of switching point ¹⁾ | | [mm] | ±0.1 | | | | |
| Switch-on time | | [ms] | ≤0.5 | | | 0.6 | 2 |
| Switch-off time | | [ms] | 0.03 | | | 0.05 | 0.2 |
| Switching status display | | | Yellow LED | | | | |
| Cable length | | [m] | 2.5 | 5.0 | 0.3 | 2.5 | 7.5 |
| Mounting position | | | Any | | | | |
| Materials | | Housing | Polyamide | | | | |
| | | Cable sheath | Polyurethane | | | | |
| Note on material | | | Free of copper, PTFE and silicone | | | | |
| Product weight | | [g] | 30 | 60 | 10 | 27 | |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | |
|--|--|-------------|------------|------------------------|
| Electrical connection | | Cable | | Plug |
| Cable installation | | Fixed | Flexible | Fixed Flexible |
| Ambient temperature | | [°C] | | |
| | | -20 ... +60 | -5 ... +60 | -20 ... +60 -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | | 4 | | 2 |

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

Proximity sensors SME-8F, for slot type 8

Technical data – Magnetic reed measuring principle

Dimensions Download CAD data → www.festo.com/en/engineering

With cable

- 1 Connecting cable
- 3 Clamping component
- 4 Yellow LED

With plug M8

- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED

With plug M12

- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M12-...
- 3 Clamping component
- 4 Yellow LED

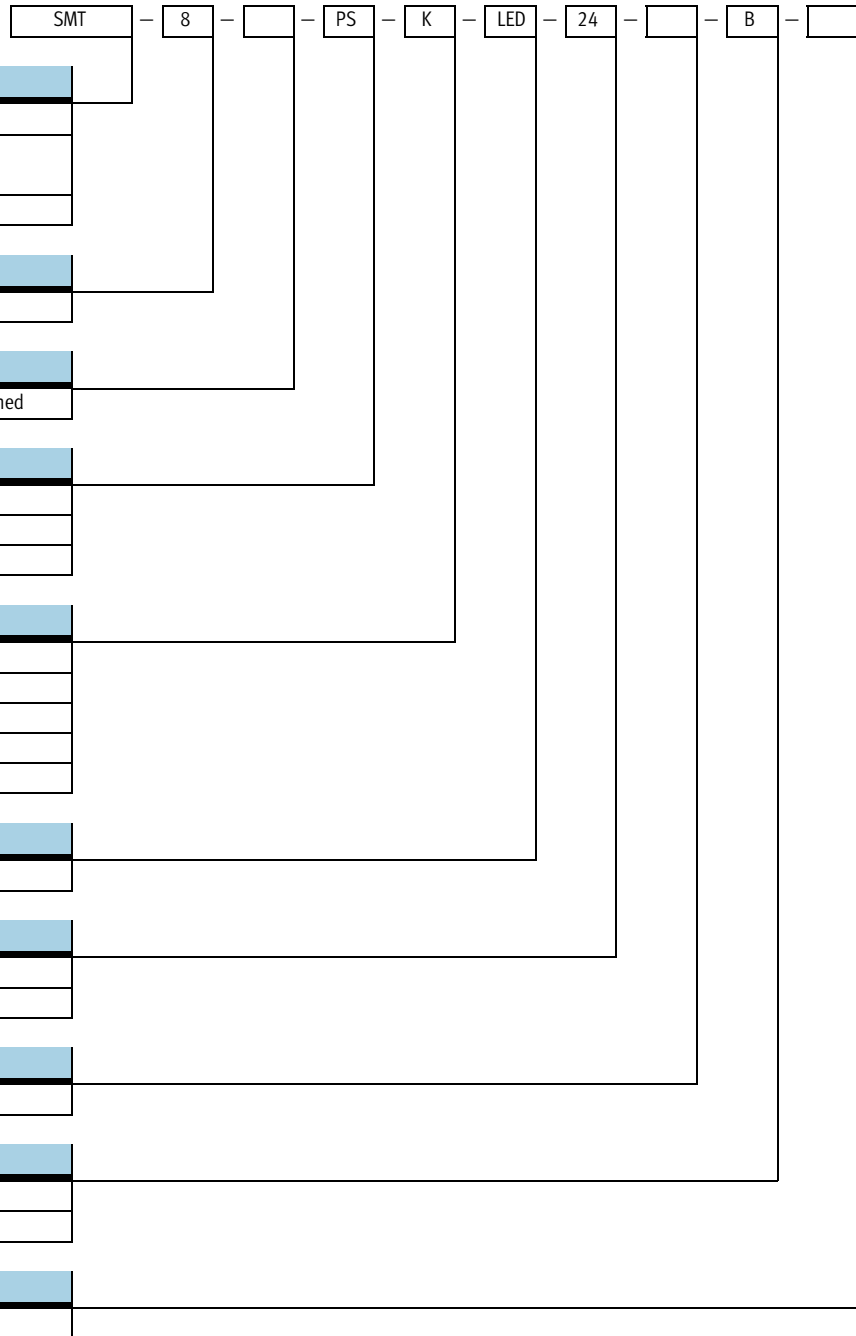
| Ordering data | | Cable length [m] | Part No. | Type | PU ¹⁾ |
|-----------------------|---------|------------------|----------|--------------------------|------------------|
| Electrical connection | Plug M8 | | | | |
| NO contact | | | | | |
| 3-wire | - | 2.5 | 525 895 | SME-8F-DS-24V-K2,5-OE | 1 |
| | | 5.0 | 535 197 | SME-8F-DS-24V-K2,5-OE-X | 50 |
| - | 3-pin | 0.3 | 525 897 | SME-8F-DS-24V-K5,0-OE | 1 |
| | | | 525 896 | SME-8F-DS-24V-K0,3-M8D | 1 |
| | | | 535 198 | SME-8F-DS-24V-K0,3-M8D-X | 50 |
| 2-wire | - | 2.5 | 525 907 | SME-8F-ZS-24V-K2,5-OE | 1 |
| NC contact | | | | | |
| 3-wire | - | 7.5 | 525 906 | SME-8F-DO-24V-K7,5-OE | 1 |

1) Packaging unit quantity

Core Range

Proximity sensors SMT/SME-8, for slot type 8

Type code



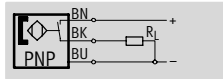
Proximity sensors SMT-8, for slot type 8

Technical data – Magneto-resistive measuring principle

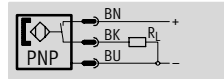


Function

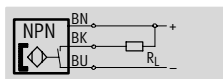
NO contact, PNP, with cable



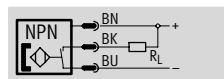
NO contact, PNP, with plug



NO contact, NPN, with cable



NO contact, NPN, with plug



| General technical data | | | | | | |
|--|---|---------------|--------------------------------|---------------|--------------------------------|-----|
| Switching element function | NO contact | | | | | |
| Electrical data | | | | | | |
| Switch output | PNP | | | NPN | | |
| Electrical connection | Cable, 3-wire | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 3-wire | Cable with plug M8x1, 3-pin | |
| Operating voltage range | [V DC] | 10 ... 30 | | | | |
| Max. output current | [mA] | 100 | | | | |
| Max. switching capacity | [W] | 3 | | | | |
| Voltage drop | [V] | 1.8 | | | | |
| Residual current | [mA] | ≤0.01 | | | | |
| Protection against short circuit | Yes | | | | | |
| Protection against polarity reversal | For all electrical connections | | | | | |
| Protection class to EN 60 529 | IP65/IP67 | | | | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | | | |
| Design | | | | | | |
| Design | For T-slot | | | | | |
| Type of mounting | Clamped in T-slot, insertable from end, flush with the cylinder profile | | | | | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.2 | | | | |
| Switch-on time | [ms] | ≤0.2 | | | | |
| Switch-off time | [ms] | ≤0.5 | | | | |
| Switching status display | Yellow LED | | | | | |
| Cable length | [m] | 2.5 | 5.0 | 0.3 | 2.5 | 0.3 |
| Mounting position | Any | | | | | |
| Materials | Housing | Polyurethane | | | | |
| | Cable sheath | Polyurethane | | | | |
| Note on material | Free of copper, PTFE and silicone | | | | | |
| Product weight | [g] | 30 | 60 | 10 | 30 | 10 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | | |
|--|---------------|-------------|-----------------|-------------|------------|
| Electrical connection | Cable, 3-wire | | Cable with plug | | |
| Cable installation | Fixed | Flexible | Fixed | Flexible | |
| Ambient temperature | [°C] | -20 ... +60 | -5 ... +60 | -20 ... +60 | -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 2 | | |

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Proximity sensors SMT-8, for slot type 8

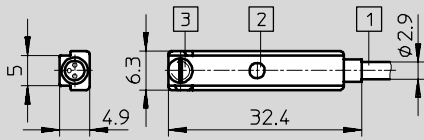
Technical data – Magneto-resistive measuring principle



Dimensions

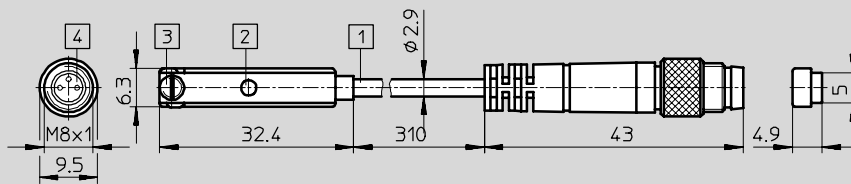
Download CAD data → www.festo.com/en/engineering

With cable



- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component

With plug M8



- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component
- 4 Plug suitable for plug socket with cable SIM-M8-...

Ordering data

| | Switch output | Electrical connection | | Cable length [m] | Part No. | Type | PU ¹⁾ |
|-----|---------------|-----------------------|---------|------------------|---------------------|-----------------------|------------------|
| | | Cable | Plug M8 | | | | |
| | NO contact | | | | | | |
| | PNP | 3-wire | - | 2.5 | 175 436 | SMT-8-PS-K-LED-24-B | 1 |
| | | | | 5.0 | 175 434 | SMT-8-PS-K5-LED-24-B | 1 |
| | | - | 3-pin | 0.3 | 175 484 | SMT-8-PS-S-LED-24-B | 1 |
| | | | | | 535 196 | SMT-8-PS-S-LED-24-B-X | 50 |
| | NPN | 3-wire | - | 2.5 | 171 180 | SMT-8-NS-K-LED-24-B | 1 |
| 0.3 | | | | 171 181 | SMT-8-NS-S-LED-24-B | 1 | |

1) Packaging unit quantity

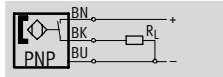
Proximity sensors CRSMT-8, for slot type 8

Technical data – Magneto-resistive measuring principle



Function

NO contact, PNP, with cable, corrosion resistant



| General technical data | | |
|--|---|---------------|
| Switching element function | NO contact | |
| Electrical data | | |
| Electrical connection | Cable, 3-wire | Cable, 3-wire |
| Switch output | PNP | |
| Operating voltage range | [V DC] | 10 ... 30 |
| Max. output current | [mA] | 100 |
| Max. switching capacity | [W] | 3 |
| Voltage drop | [V] | 1.8 |
| Residual current | [mA] | ≤0.01 |
| Protection against short circuit | Yes | |
| Protection against polarity reversal | For all electrical connections | |
| Protection class to EN 60 529 | IP65/IP67 | |
| CE symbol | 89/336/EEC (EMC) | Yes |
| Design | | |
| Design | For T-slot | |
| Type of mounting | Clamped in T-slot, insertable from end, flush with the cylinder profile | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.2 |
| Switch-on time | [ms] | ≤0.2 |
| Switch-off time | [ms] | ≤0.5 |
| Switching status display | Yellow LED | |
| Cable length | [m] | 2.5 5.0 |
| Mounting position | Any | |
| Materials | Housing | Polyurethane |
| | Cable sheath | Polyurethane |
| Note on material | Free of copper, PTFE and silicone | |
| Product weight | [g] | 30 60 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | |
|--|---------------|-----------------------------|
| Electrical connection | Cable, 3-wire | |
| Cable installation | Fixed | Flexible |
| Ambient temperature | [°C] | -20 ... +60 -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | |

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

Proximity sensors CRSMT-8, for slot type 8

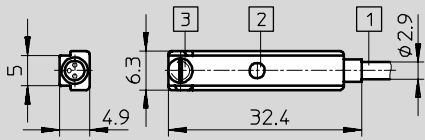
Technical data – Magneto-resistive measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering

With cable



- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component

Ordering data

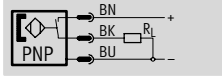
| | Switch output | Electrical connection | Cable length [m] | Part No. | Type |
|--|---------------|-----------------------|---------------------|----------|------------------------|
| | | Cable | | | |
| | NO contact | | | | |
| | PNP | 3-wire | 2.5 | 525 563 | CRSMT-8-PS-K2,5-LED-24 |
| | | | 5.0 | 525 564 | CRSMT-8-PS-K5-LED-24 |

Proximity sensors SMT-8-SL, for slot type 8

Technical data – Magneto-resistive measuring principle

Function

NO contact, PNP, with plug



| General technical data | |
|--|--|
| Switching element function | NO contact |
| Electrical data | |
| Switch output | PNP |
| Electrical connection | Plug M8x1, 3-pin |
| Operating voltage range | [V DC] 10 ... 30 |
| Max. output current | [mA] 200 |
| Max. switching capacity | [W] 6 |
| Voltage drop | [V] 1.8 |
| Residual current | [mA] 0.1 |
| Protection against short circuit | Yes |
| Protection against polarity reversal | For all electrical connections |
| Protection class to EN 60 529 | IP65/IP67 |
| CE symbol | 89/336/EEC (EMC) Yes |
| Design | |
| Design | For T-slot |
| Type of mounting | Clamped in T-slot, insertable from end |
| Reproducibility of switching point ¹⁾ | [mm] ±0.1 |
| Switch-on time | [ms] ≤0.5 |
| Switch-off time | [ms] 0.5 |
| Switching status display | Yellow LED |
| Mounting position | Any |
| Materials | Housing Polyamide |
| Note on material | Free of copper, PTFE and silicone |
| Product weight | [g] 5 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | |
|--|------------------|
| Electrical connection | Plug M8 |
| Ambient temperature | [°C] -25 ... +70 |
| Corrosion resistance class CRC ¹⁾ | 2 |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

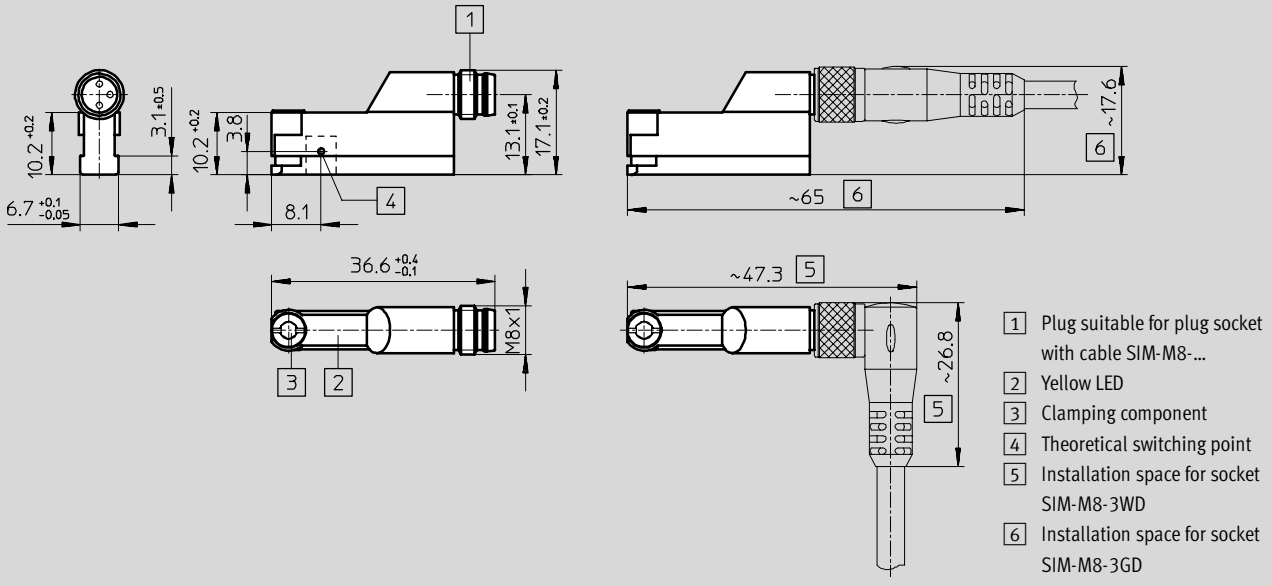
Proximity sensors SMT-8-SL, for slot type 8

Technical data – Magneto-resistive measuring principle


Dimensions

Download CAD data → www.festo.com/en/engineering

With plug M8



Ordering data

| | Switch output | Electrical connection | Cable length [m] | Part No. | Type |
|---|---------------|-----------------------|------------------|----------|--------------------|
| | | Plug M8 | | | |
|  | NO contact | | | | |
| | PNP | 3-pin | - | 531 145 | SMT-8-SL-PS-LED-24 |

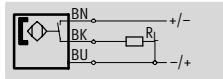
Proximity sensors SME-8, for slot type 8

Technical data – Magnetic reed measuring principle

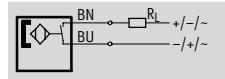


Function

NO contact, with 3-wire cable

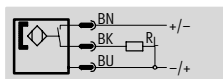


NO contact, with 2-wire cable¹⁾

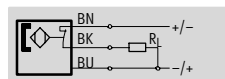


1) e. g. heat resistant

NO contact, 3-wire, with plug



NC contact, with 3-wire cable



| General technical data | | | NO contact | | | | NC contact | | |
|--|-------------------------|--------|---|---------------|-----------------------------|-------------------|--------------------|-----------------------------|---------------|
| Switching element function | | | NO contact | | | | NC contact | | |
| Electrical data | | | | | | | | | |
| Switch output | | | Contacting, bipolar | | | | | | |
| Electrical connection | | | Cable, 3-wire | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 2-wire | Cable, 2-wire | Cable, 2-wire ¹⁾ | Cable, 3-wire |
| Operating voltage range | D.C. voltage | [V DC] | 12 ... 30 | | | 12 ... 27 | 3 ... 250 | 0 ... 30 | 12 ... 30 |
| | A.C. voltage | [V AC] | – | | | – | 3 ... 250 | 0 ... 30 | 12 ... 30 |
| Max. output current | D.C. voltage | [mA] | 500 | | | 80 | 120 | 500 | 50 |
| | A.C. voltage | [mA] | – | | | – | 200 | – | 50 |
| Max. switching capacity | D.C. voltage | [W] | 10 | | | 2 | 10 | 10 | 1.5 |
| | A.C. voltage | [VA] | – | | | – | 10 | – | – |
| Voltage drop | | [V] | – | | | – | – | – | 1.8 |
| Protection against short circuit | | | No | | | | | | |
| Protection against polarity reversal | | | No | | | Yes ²⁾ | | Yes | No |
| Protection class to EN 60 529 | | | IP65/IP67 | | | IP67 | | | |
| CE symbol | 89/336/EEC (EMC) | | Yes | | | Yes | Yes | Omitted | Yes |
| | 73/23/EEC (low voltage) | | Omitted | | | Omitted | Yes | Omitted | Omitted |
| Design | | | | | | | | | |
| Design | | | For T-slot | | | | | | |
| Type of mounting | | | Clamped in T-slot, insertable from end, flush with the cylinder profile | | | | | | |
| Reproducibility of switching point ³⁾ | | [mm] | ±0.1 | | | | | | |
| Switch-on time | | [ms] | ≤0.5 | | | | ≤0.5 | | ≤2 |
| Switch-off time | | [ms] | 0.03 | | | | ≤0.5 | | ≤0.2 |
| Switching status display | | | Yellow LED | | | | | | |
| Cable length | | [m] | 2.5 | 5.0 | 0.3 | 2.5 | 2.5 | 2.5 | 7.5 |
| Mounting position | | | Any | | | | | | |
| Materials | Housing | | Polyester | | | | | | |
| | Cable sheath | | Polyurethane | | | | Polyvinyl chloride | Polyurethane | |
| Note on material | | | Free of copper, PTFE and silicone | | | – | | | |
| Product weight | | [g] | 30 | 60 | 8 | 24 | 40 | 50 | 85 |

1) Heat-resistant design

2) Without LED function

3) Only applicable to drives secured against rotation

Proximity sensors SME-8, for slot type 8

Technical data – Magnetic reed measuring principle



| Operating and environmental conditions | | | | | | |
|--|-------------|------------|-----------------------|-------------|-----------------|------------|
| Electrical connection | Cable | | Cable, heat resistant | | Cable with plug | |
| Cable installation | Fixed | Flexible | Fixed | Flexible | Fixed | Flexible |
| Ambient temperature [°C] | -20 ... +60 | -5 ... +60 | -40 ... +120 | -5 ... +120 | -20 ... +60 | -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 4 | | 2 | |

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

Dimensions Download CAD data → www.festo.com/en/engineering

NO contact with cable

- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component

NC contact with cable

- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component

Operating voltage range 3 ... 250 V DC/AC

- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component

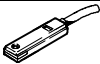
With plug M8

- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED

Proximity sensors SME-8, for slot type 8

Technical data – Magnetic reed measuring principle



| Ordering data | | | | | | |
|---|---|---------|---------------------|----------|--------------------|------------------|
| | Electrical connection | | Cable length [m] | Part No. | Type | PU ¹⁾ |
| | Cable | Plug M8 | | | | |
|  | NO contact | | | | | |
| | Operating voltage range 0 ... 30 V AC/DC | | | | | |
| | 3-wire | - | 2.5 | 150 855 | SME-8-K-LED-24 | 1 |
| | | | | 535 194 | SME-8-K-LED-24-X | 50 |
| | - | 3-pin | 0.3 | 175 404 | SME-8-K5-LED-24 | 1 |
| | | | | 150 857 | SME-8-S-LED-24 | 1 |
| | 2-wire | - | 2.5 | 535 195 | SME-8-S-LED-24-X | 50 |
| | | | | 171 169 | SME-8-ZS-KL-LED-24 | 1 |
| | Heat resistant up to 120 °C | | | | | |
| | 2-wire | - | 2.5 | 161 756 | SME-8-K-24-S6 | 1 |
| | Operating voltage range 3 ... 250 V AC/DC | | | | | |
| | 2-wire | - | 2.5 | 152 820 | SME-8-K-LED-230 | 1 |
| | NC contact | | | | | |
| | 3-wire | - | 7.5 | 160 251 | SME-8-O-K-LED-24 | 1 |

1) Packaging unit quantity

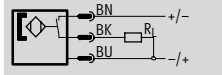
Proximity sensors SME-8-SL, for slot type 8

Technical data – Magnetic reed measuring principle



Function

NO contact, 3-wire, with plug



| General technical data | | |
|--|------------------|--|
| Switching element function | | NO contact |
| Electrical data | | |
| Switch output | | Contacting, bipolar |
| Electrical connection | | Plug M8x1, 3-pin |
| Operating voltage range | [V DC] | 10 ... 30 |
| Max. output current | [mA] | 500 |
| Max. switching capacity | [W] | 10 |
| Voltage drop | [V] | – |
| Protection against short circuit | | No |
| Protection against polarity reversal | | No |
| Protection class to EN 60 529 | | IP65/IP67 |
| CE symbol | 89/336/EEC (EMC) | Yes |
| Design | | |
| Design | | For T-slot |
| Type of mounting | | Clamped in T-slot, insertable from end |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 |
| Switch-on time | [ms] | ≤0.6 |
| Switch-off time | [ms] | ≤0.05 |
| Switching status display | | Yellow LED |
| Mounting position | | Any |
| Materials | Housing | PA |
| Note on material | | Free of copper, PTFE and silicone |
| Product weight | [g] | 5 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | |
|--|------|-------------|
| Electrical connection | | Plug M8 |
| Ambient temperature | [°C] | –20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | | 2 |

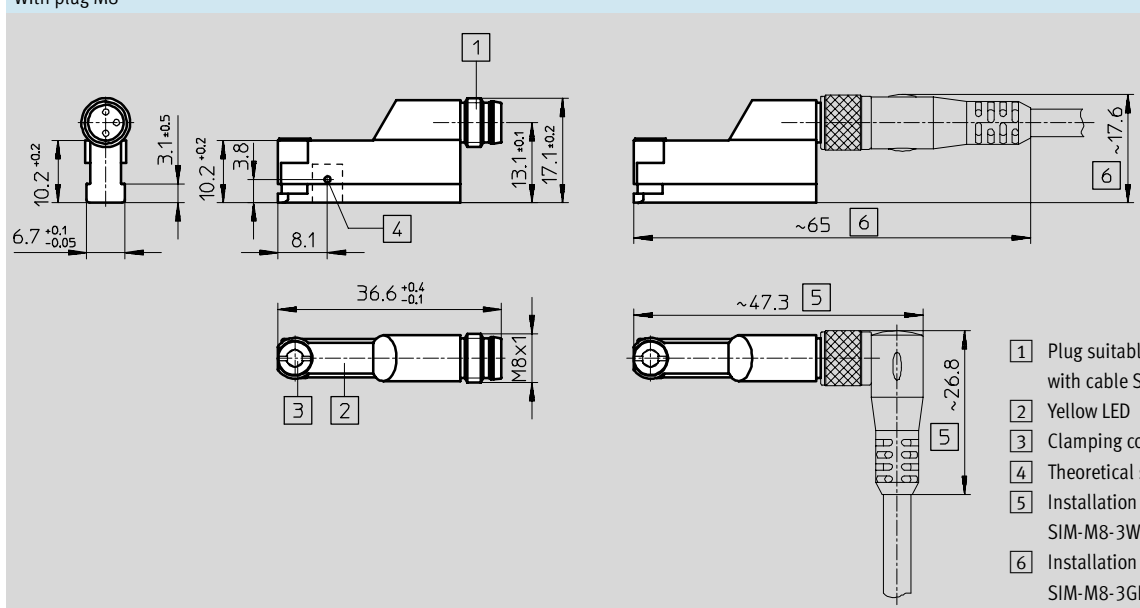
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Proximity sensors SME-8-SL, for slot type 8

Technical data – Magnetic reed measuring principle

Dimensions Download CAD data → www.festo.com/en/engineering


With plug M8



- 1 Plug suitable for plug socket with cable SIM-M8...
- 2 Yellow LED
- 3 Clamping component
- 4 Theoretical switching point
- 5 Installation space for socket SIM-M8-3WD
- 6 Installation space for socket SIM-M8-3GD

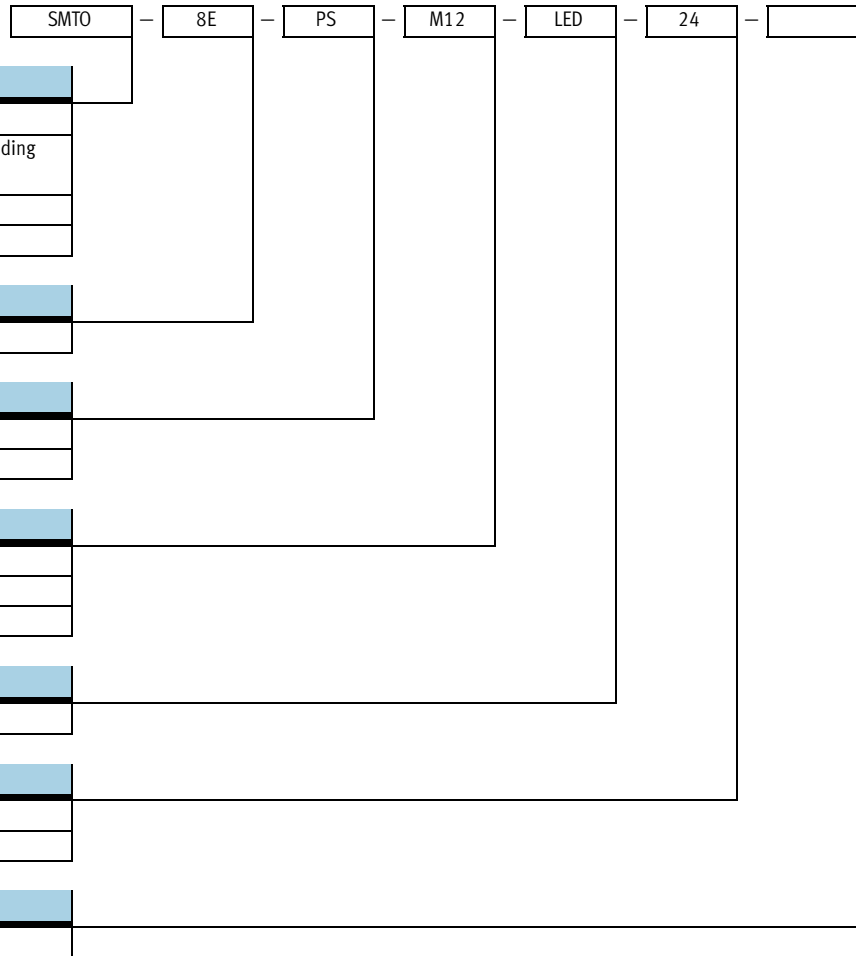
Drive accessories
Cylinder sensors

10.2

| Ordering data | | | | |
|---|-----------------------|---------------------|----------|-----------------|
| | Electrical connection | Cable length [m] | Part No. | Type |
| | Plug M8 | | | |
|  | NO contact | | | |
| | 3-pin | - | 526 622 | SME-8-SL-LED-24 |

Proximity sensors SMTO/SMEO-8E, for slot type 8

Type code



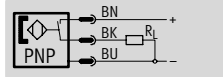
Proximity sensors SMTO-8E, for slot type 8

Technical data – Magneto-resistive measuring principle

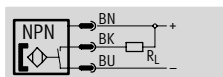


Function

NO contact, PNP, with plug



NO contact, NPN, with plug



| General technical data | | | | |
|--|-----------------------------------|-------------------|------------------|-------------------|
| Switching element function | NO contact | | | |
| Electrical data | | | | |
| Switch output | PNP | | NPN | |
| Electrical connection | Plug M8x1, 3-pin | Plug M12x1, 3-pin | Plug M8x1, 3-pin | Plug M12x1, 3-pin |
| Operating voltage range | [V DC] | 10 ... 30 | | |
| Max. output current | [mA] | 100 | | |
| Max. switching capacity | [W] | 3 | | |
| Voltage drop | [V] | 1.8 | | |
| Residual current | [mA] | ≤0.01 | | |
| Protection against short circuit | Yes | | | |
| Protection against polarity reversal | For all electrical connections | | | |
| Protection class to EN 60 529 | IP65/IP67 | | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | |
| Design | | | | |
| Design | For T-slot | | | |
| Type of mounting | With accessories | | | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 | | |
| Switch-on time | [ms] | ≤0.5 | | |
| Switch-off time | [ms] | ≤25 | | |
| Switching status display | Yellow LED | | | |
| Mounting position | Any | | | |
| Materials | Housing | Polyurethane | | |
| Note on material | Free of copper, PTFE and silicone | | - | |
| Product weight | [g] | 10 | 10 | 10 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | |
|--|------------------|
| Electrical connection | Plug |
| Ambient temperature | [°C] -20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 |

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

Proximity sensors SMTO-8E, for slot type 8

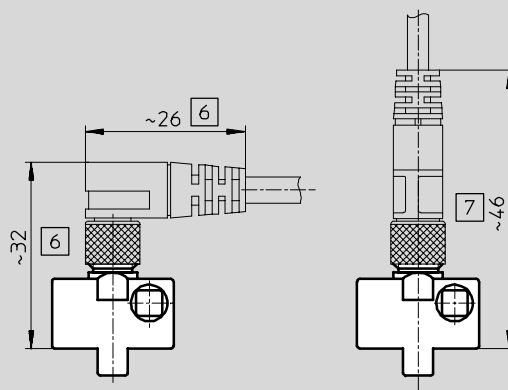
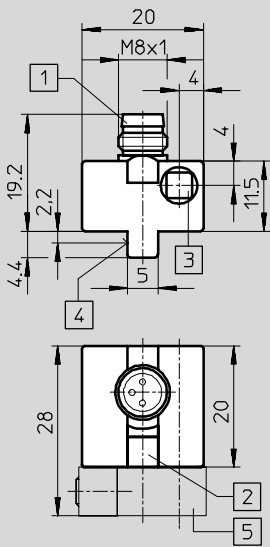
Technical data – Magneto-resistive measuring principle



Dimensions

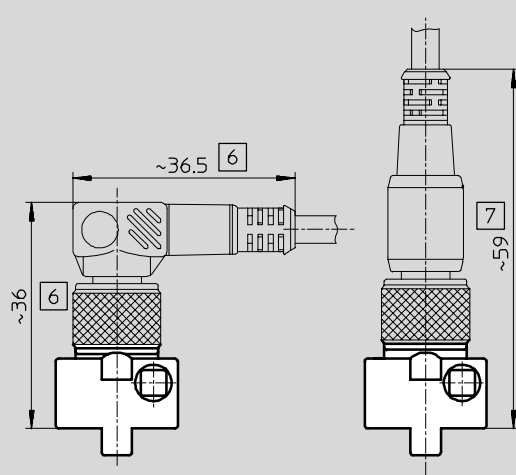
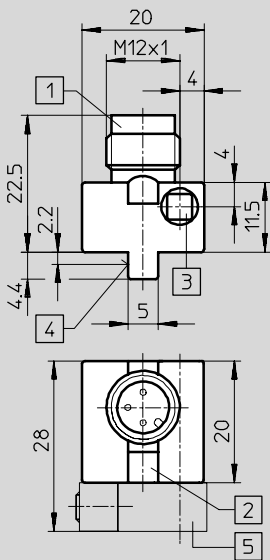
Download CAD data → www.festo.com/en/engineering

With plug M8



- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Yellow LED
- 3 Mounting screw
- 4 Theoretical switching point
- 5 Mounting kit SMB-8E
- 6 Installation space for socket SIM-M8-3WD
- 7 Installation space for socket SIM-M8-3GD

With plug M12



- 1 Plug suitable for plug socket with cable SIM-M12-...
- 2 Yellow LED
- 3 Mounting screw
- 4 Theoretical switching point
- 5 Mounting kit SMB-8E
- 6 Installation space for socket SIM-M12-3WD
- 7 Installation space for socket SIM-M12-3GD

Ordering data

| | Switch output | Electrical connection | | Cable length [m] | Part No. | Type |
|---|---------------|-----------------------|----------|------------------|-----------------------|-----------------------|
| | | Plug M8 | Plug M12 | | | |
| | NO contact | | | | | |
| | PNP | 3-pin | – | – | 171 178 | SMTO-8E-PS-S-LED-24 |
| | | – | 3-pin | – | 171 179 | SMTO-8E-PS-M12-LED-24 |
| | NPN | 3-pin | – | – | 171 166 | SMTO-8E-NS-S-LED-24 |
| – | | 3-pin | – | 171 176 | SMTO-8E-NS-M12-LED-24 | |

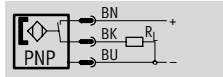
Proximity sensors SMTSO-8E, for slot type 8

Technical data – Magneto-resistive measuring principle

Function

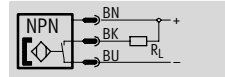
NO contact, PNP, with plug

Welding field immune



NO contact, NPN, with plug

Welding field immune



| General technical data | | |
|--|---|-----------|
| Switching element function | NO contact | |
| Electrical data | | |
| Switch output | PNP | NPN |
| Electrical connection | Plug M12x1, 3-pin | |
| Operating voltage range | [V DC] | 10 ... 30 |
| Max. output current | [mA] | 200 |
| Max. switching capacity | [W] | 6 |
| Voltage drop | [V] | 1.8 |
| Residual current | [mA] | 0.01 |
| Protection against short circuit | Yes | |
| Protection against polarity reversal | For all electrical connections | |
| Resistance to interference from magnetic fields | Alternating magnetic field 45 ... 65 Hz | |
| Protection class to EN 60 529 | IP65/IP67 | |
| CE symbol | 89/336/EEC (EMC) | Yes |
| Design | | |
| Design | For T-slot | |
| Type of mounting | With accessories | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 |
| Switch-on time | [ms] | ≤38 |
| Switch-off time | [ms] | ≤20 |
| Switching status display | Yellow LED | |
| Mounting position | Any | |
| Materials | Housing | Polyamide |
| Product weight | [g] | 10 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | |
|--|------|-------------|
| Electrical connection | Plug | |
| Ambient temperature | [°C] | -25 ... +70 |
| Corrosion resistance class CRC ¹⁾ | 2 | |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Proximity sensors SMTSO-8E, for slot type 8

Technical data – Magneto-resistive measuring principle



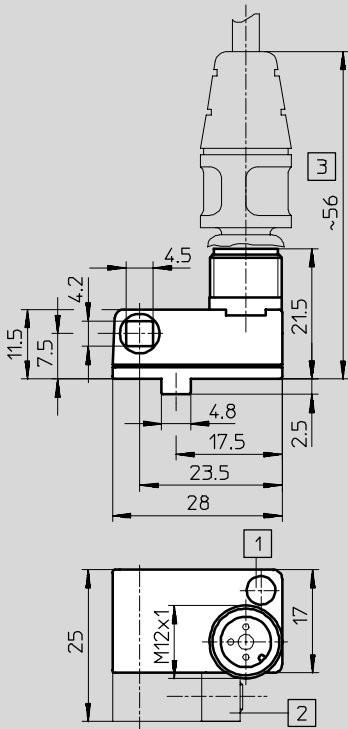
Drive accessories
Cylinder sensors

10.2

Dimensions

Download CAD data → www.festo.com/en/engineering

With plug M12



- 1 Yellow LED
- 2 Mounting kit SMB-8E
- 3 Installation space for socket SIM-M12-3GD

Ordering data

| | Switch output | Electrical connection | Cable length [m] | Part No. | Type |
|--|----------------------|-----------------------|---------------------|----------|------------------------|
| | | Plug M12 | | | |
| | NO contact | | | | |
| | Welding field immune | | | | |
| | PNP | 3-pin | - | 191 986 | SMTSO-8E-PS-M12-LED-24 |
| | NPN | | | 175 825 | SMTSO-8E-NS-M12-LED-24 |

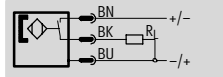
Proximity sensors SMEO-8E, for slot type 8

Technical data – Magnetic reed measuring principle

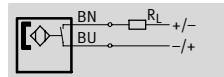


Function

NO contact, 3-wire, with plug

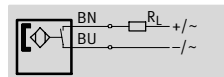


NO contact, with 2-wire cable¹⁾



1) Heat-resistant design

NO contact, 2-wire, with plug



| General technical data | | | | | | |
|--|-------------------------|---------------------|-------------------|-------------------|-----------------------------|--------------|
| Switching element function | | NO contact | | | | |
| Electrical data | | | | | | |
| Switch output | | Contacting, bipolar | | | | |
| Electrical connection | | Plug M8x1, 3-pin | Plug M12x1, 3-pin | Plug M12x1, 2-pin | Cable, 2-wire ¹⁾ | |
| Operating voltage range | D.C. voltage | [V DC] | 12 ... 30 | 12 ... 30 | 3 ... 250 | 0 ... 30 |
| | A.C. voltage | [V AC] | – | – | 3 ... 230 | – |
| Max. output current | D.C. voltage | [mA] | 500 | | 120 | 500 |
| | A.C. voltage | [mA] | – | | 120 | – |
| Max. switching capacity | D.C. voltage | [W] | 10 | | | |
| | A.C. voltage | [VA] | – | | 10 | – |
| Voltage drop | | [V] | – | | 3.9 | – |
| Protection against short circuit | | No | | | | |
| Protection against polarity reversal | | No | | Yes ²⁾ | | Yes |
| Protection class to EN 60 529 | | IP65/IP67 | | | | |
| CE symbol | 89/336/EEC (EMC) | | Yes | | Yes | |
| | 73/23/EEC (low voltage) | | Omitted | | Yes | |
| Design | | | | | | |
| Design | | For T-slot | | | | |
| Type of mounting | | With accessories | | | | |
| Reproducibility of switching point ³⁾ | | [mm] | ±0.1 | | | |
| Switch-on time | | [ms] | ≤0.5 | | ≤2 | ≤0.5 |
| Switch-off time | | [ms] | 0.03 | | | |
| Switching status display | | Yellow LED | | | | – |
| Cable length | | [m] | – | – | – | 2.5 |
| Mounting position | | Any | | | | |
| Materials | Housing | | Polyurethane | | | |
| | Cable sheath | | – | | | Polyurethane |
| Product weight | | [g] | 10 | 10 | 10 | 40 |

1) Heat-resistant design

2) Without LED function

3) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | |
|--|--|-----------------------|--------------|-------------|
| Electrical connection | | Cable, heat resistant | | Plug |
| Cable installation | | Fixed | Flexible | – |
| Ambient temperature | | [°C] | –20 ... +120 | –5 ... +120 |
| Corrosion resistance class CRC ¹⁾ | | 4 | | 4 |

1) Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Proximity sensors SMEO-8E, for slot type 8

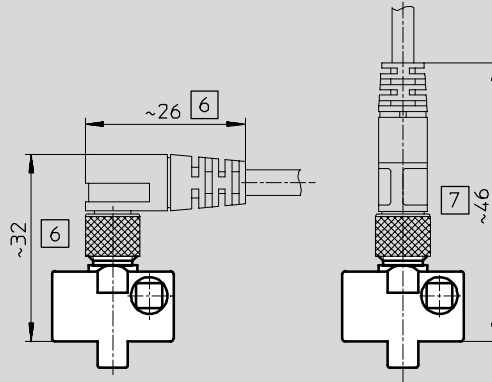
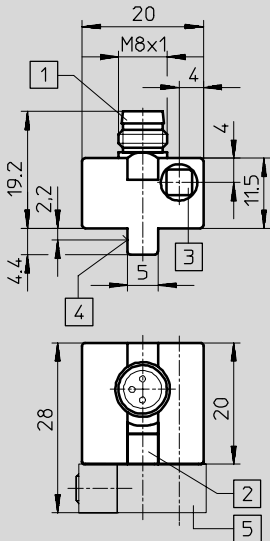
Technical data – Magnetic reed measuring principle



Dimensions

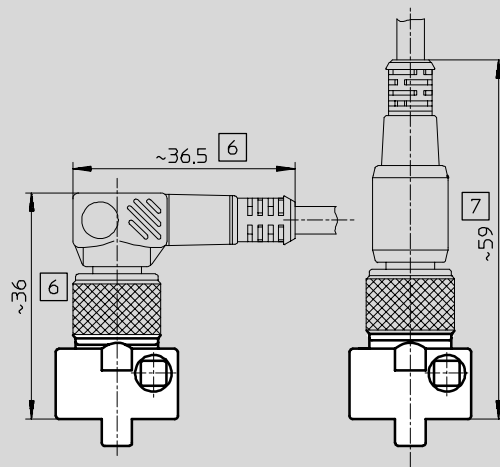
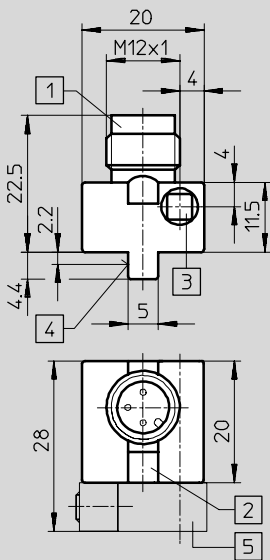
Download CAD data → www.festo.com/en/engineering

With plug M8



- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Yellow LED
- 3 Mounting screw
- 4 Theoretical switching point
- 5 Mounting kit SMB-8E
- 6 Installation space for socket SIM-M8-3WD
- 7 Installation space for socket SIM-M8-3GD

With plug M12



- 1 Plug suitable for plug socket with cable SIM-M12-...
- 2 Yellow LED
- 3 Mounting screw
- 4 Theoretical switching point
- 5 Mounting kit SMB-8E
- 6 Installation space for socket SIM-M12-3WD
- 7 Installation space for socket SIM-M12-3GD

Proximity sensors SMEO-8E, for slot type 8

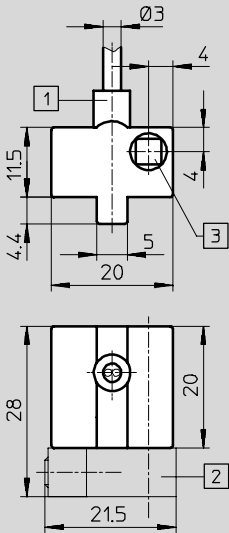
Technical data – Magnetic reed measuring principle



Dimensions


Download CAD data → www.festo.com/en/engineering

Heat resistant up to 120 °C



- 1 Connecting cable
- 2 Mounting kit SMB-8E
- 3 Mounting screw

Ordering data

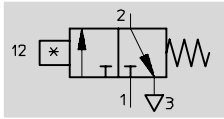
| | Electrical connection | | | Cable length [m] | Part No. | Type |
|---|--|---------|----------|---------------------|---------------------|--------------------|
| | Cable | Plug M8 | Plug M12 | | | |
|  | NO contact | | | | | |
| | Operating voltage range 0 ... 30 V AC/DC | | | | | |
| | - | 3-pin | - | - | 171 163 | SMEO-8E-S-LED-24 |
| | - | - | 3-pin | - | 171 164 | SMEO-8E-M12-LED-24 |
| | Heat resistant up to 120 °C | | | | | |
| | 2-wire | - | - | 2.5 | 171 158 | SMEO-8E-K-S6 |
| Operating voltage range 3 ... 250 V AC/DC | | | | | | |
| - | - | 2-pin | - | 171 160 | SMEO-8E-M12-LED-230 | |

Proximity sensors SMPO-8E, for slot type 8

Technical data – Pneumatic measuring principle



Function
3/2-way valve,
normally closed



| General technical data | | |
|--|---|----------------------|
| Switching element function | 3/2-way valve, normally closed | |
| Design | | |
| Design | For T-slot | |
| Type of mounting | With accessories | |
| Operating medium | Compressed air, filtered, unlubricated, grade of filtration 40 µm | |
| Operating pressure | [bar] | 2 ... 8 |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 |
| Switch-on time | [ms] | 22 |
| Switch-off time | [ms] | 52 |
| Switching status display | Visual | |
| Pneumatic connection | Female thread M5 | |
| Mounting position | Any | |
| Materials | Housing | Polyamide, aluminium |
| Product weight | [g] | 12 |
| Electrical data | | |
| Protection class to EN 60 529 | IP65 | |
| CE symbol | 89/336/EEC (EMC) | Omitted |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | |
|--|------|-------------|
| Ambient temperature | [°C] | -15 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 2 | |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

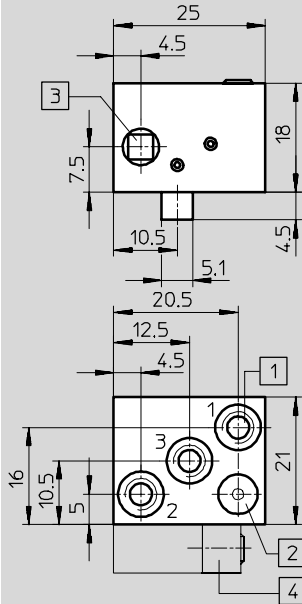
Proximity sensors SMPO-8E, for slot type 8

Technical data – Pneumatic measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering



- 1 Connecting thread M5
- 2 Pneumatic indicator
- 3 Mounting screw
- 4 Mounting kit SMB-8E

Drive accessories
Cylinder sensors

10.2

Ordering data

| | Pneumatic connection | Part No. | Type |
|--|--------------------------------|----------|---------|
| | 3/2-way valve, normally closed | | |
| | Female thread M5 | 178 563 | SMPO-8E |

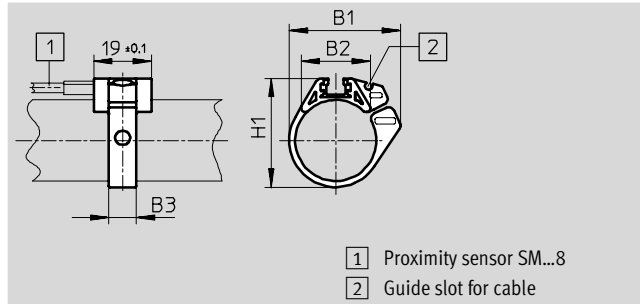
Proximity sensors for slot type 8

Accessories



Mounting kit SMBR

Material:
Polyacetate

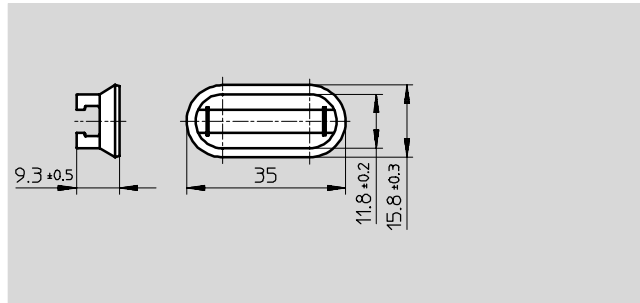


- 1 Proximity sensor SM...8
- 2 Guide slot for cable

| Dimensions and ordering data | | | | | | |
|------------------------------|------|------|----|------|----------|-----------|
| For piston Ø | B1 | B2 | B3 | H1 | Part No. | Type |
| 8 | 18.9 | 12.3 | 7 | 17.5 | 175 091 | SMBR-8-8 |
| 10 | 20.4 | 13.7 | 7 | 19.9 | 175 092 | SMBR-8-10 |
| 12 | 22.7 | 14.3 | 7 | 21.9 | 175 093 | SMBR-8-12 |
| 16 | 26.1 | 17.1 | 7 | 25.7 | 175 094 | SMBR-8-16 |
| 20 | 33.2 | 20.8 | 9 | 30.4 | 175 095 | SMBR-8-20 |
| 25 | 36.5 | 22.6 | 9 | 35.6 | 175 096 | SMBR-8-25 |
| 32 | 41.7 | 24.6 | 9 | 42.7 | 175 097 | SMBR-8-32 |
| 40 | 47.1 | 26.5 | 9 | 50.7 | 175 098 | SMBR-8-40 |
| 50 | 56.4 | 28.6 | 9 | 61.5 | 175 099 | SMBR-8-50 |
| 63 | 69.4 | 32 | 9 | 74.5 | 175 100 | SMBR-8-63 |

Mounting kit CRSMB

Material:
Housing: Polyurethane
Rail: Hard anodised aluminium
Free of copper, PTFE and silicone



| Dimensions and ordering data | | |
|------------------------------|----------|----------------|
| For piston Ø | Part No. | Type |
| 32 ... 100 | 525 565 | CRSMB-8-32/100 |

- - Note
The mounting kit is secured to the cylinder using the double-sided adhesive tape provided.

Core Range

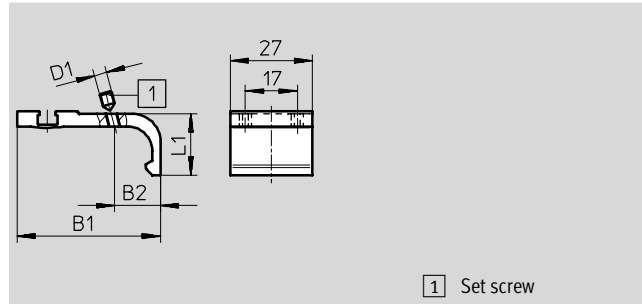
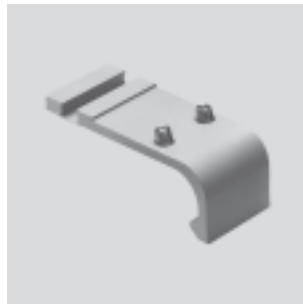
Proximity sensors for slot type 8

Accessories



Mounting kit SMB-8-FENG

Material:
Wrought aluminium alloy
Free of copper, PTFE and silicone

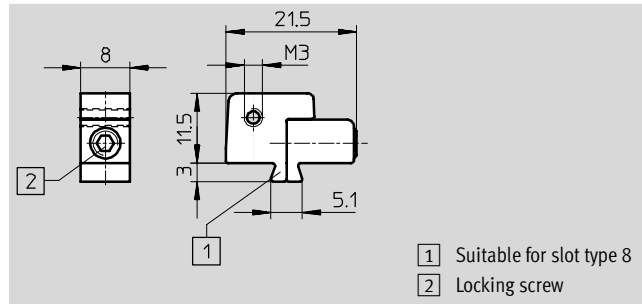


1 Set screw

| Dimensions and ordering data | | | | | | | |
|------------------------------|------|------|----|------|------------------------|----------|-------------------|
| For piston \varnothing | B1 | B2 | D1 | L1 | Tightening torque [Nm] | Part No. | Type |
| 32/40 | 35.1 | 8.7 | M3 | 15.5 | 0.2 | 175 705 | SMB-8-FENG-32/40 |
| 50/63 | 47 | 12.3 | M4 | 20 | 0.5 | 175 706 | SMB-8-FENG-50/63 |
| 80/100 | 64.3 | 15.7 | M5 | 24.3 | 0.7 | 175 707 | SMB-8-FENG-80/100 |

Mounting kit SMB-8E



Material:
Polyacetate




1 Suitable for slot type 8
2 Locking screw

| Ordering data | | |
|--------------------------|----------|--------|
| For piston \varnothing | Part No. | Type |
| 10 ... 125 | 178 230 | SMB-8E |

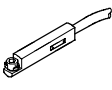

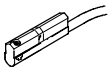

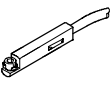

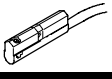

| Ordering data – Cable clip SMBK-8 | | |
|---|----------|--------|
| | Part No. | Type |
|  For fixing the cable in the sensor slot | 534 254 | SMBK-8 |

| Ordering data – Push-in fittings | | Technical data → Volume 3 | |
|---|---|---------------------------|-------------------|
| | | [mm] | Part No. Type |
|  | Push-in connector with connecting thread M5 for tubing OD | 3 | 153 302 QSM-M5-3 |
| | | 4 | 153 304 QSM-M5-4 |
| | | 6 | 153 306 QSM-M5-6 |
|  | Push-in L connector with connecting thread M5 for tubing OD | 3 | 153 331 QSML-M5-3 |
| | | 4 | 153 333 QSML-M5-4 |
| | | 6 | 153 335 QSML-M5-6 |

 Core Range





Proximity sensors for slot type 10

Product range overview

| Measuring principle | Design | Type | Mounting | Switching element function | | Switch output |
|--|---|--|-----------------------|-------------------------------------|------------|---------------|
| | | | | NO contact | NC contact | |
| Magneto-resistive | Operating voltage range 5 ... 30 V DC | | | | | |
| |  | SMT-10F  New | Insertable from above | <input checked="" type="checkbox"/> | - | PNP |
| | | | | <input checked="" type="checkbox"/> | - | NPN |
| |  | SMT-10  Type Discontinued | Insertable from end | <input checked="" type="checkbox"/> | - | PNP |
| | | | | <input checked="" type="checkbox"/> | - | NPN |
| | Magnetic reed | Operating voltage range 5 ... 30 V AC/DC | | | | |
|  | | SME-10F  New | Insertable from above | <input checked="" type="checkbox"/> | - | Contacting |
| | | | | <input checked="" type="checkbox"/> | - | |
|  | | SME-10  Type Discontinued | Insertable from end | <input checked="" type="checkbox"/> | - | Contacting |

Proximity sensors for slot type 10

Product range overview

| Type | Electrical connection | | Switching status display with LED | Free of copper, PTFE and silicone | → Page |
|---|-----------------------|-------------|-----------------------------------|-----------------------------------|-------------|
| | Cable | Plug | | | |
| Operating voltage range 5 ... 30 V DC | | | | | |
| SMT-10F  New | 3-wire | M8x1, 3-pin | ■ | ■ | 1 / 10.2-47 |
| | 3-wire | M8x1, 3-pin | ■ | ■ | |
| SMT-10  Type Discontinued | 3-wire | M8x1, 3-pin | ■ | ■ | 1 / 10.2-53 |
| | 3-wire | M8x1, 3-pin | ■ | ■ | |
| Operating voltage range 5 ... 30 V AC/DC | | | | | |
| SME-10F  New | 3-wire | M8x1, 3-pin | ■ | ■ | 1 / 10.2-50 |
| | 2-wire | - | ■ | ■ | |
| SME-10  Type Discontinued | 3-wire | M8x1, 3-pin | ■ | ■ | 1 / 10.2-55 |

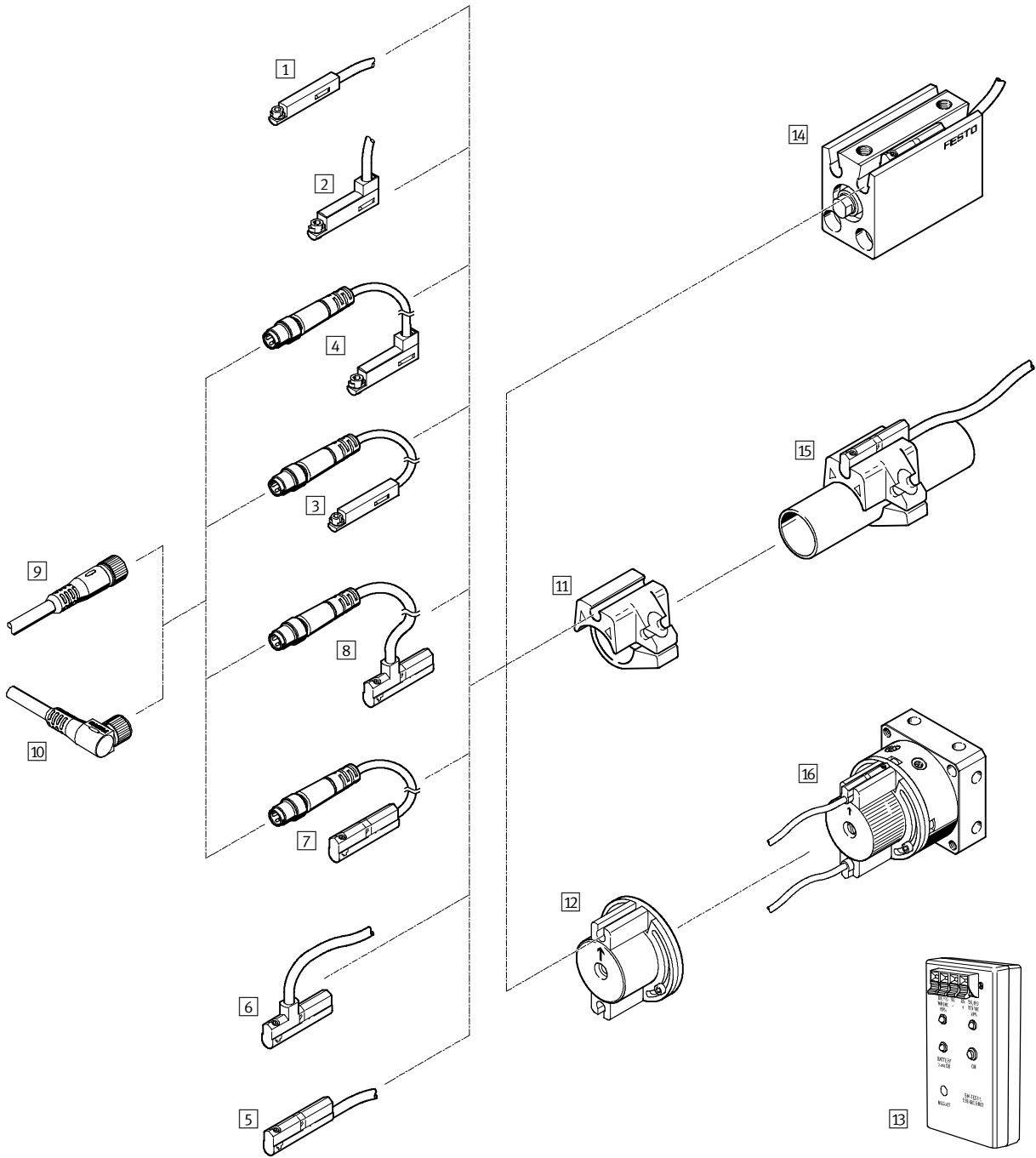
Proximity sensors for slot type 10

Peripherals overview



Drive accessories
Cylinder sensors

10.2



Proximity sensors for slot type 10

Peripherals overview

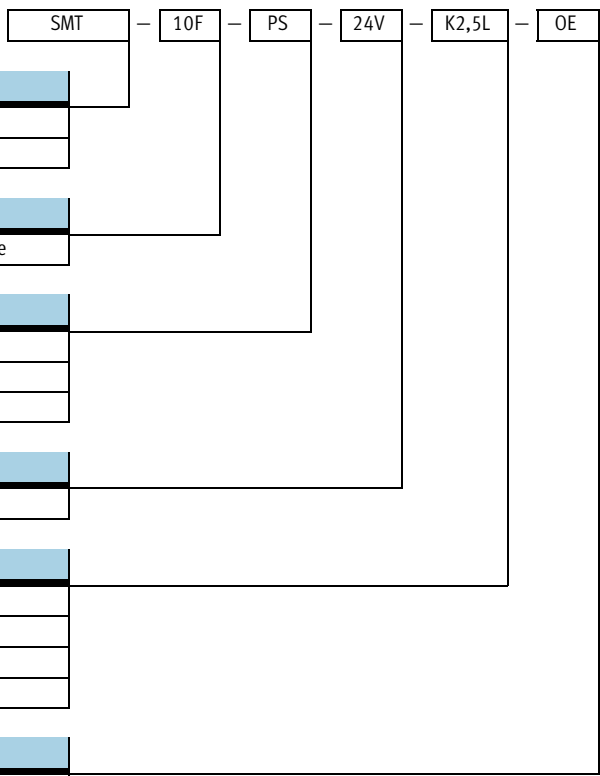
FESTO

| Mounting attachments and accessories | | | |
|--------------------------------------|--|--|----------------------------|
| | Brief description | → Page | |
| Proximity sensors | | | |
| 1 | SMT-10F...-K2,5L-OE SME-10F...-K2,5L-OE | Magneto-resistive, with cable, in-line connection Magnetic reed, with cable, in-line connection | 1 / 10.2-47 1 / 10.2-50 |
| 2 | SMT-10F...-K2,5Q-OE SME-10F...-K2,5Q-OE | Magneto-resistive, with cable, lateral connection Magnetic reed, with cable, lateral connection | 1 / 10.2-47 1 / 10.2-50 |
| 3 | SMT-10F...-K0,3L-M8D SME-10F...-K0,3L-M8D | Magneto-resistive, with cable and plug M8x1, in-line connection Magnetic reed, with cable and plug M8x1, in-line connection | 1 / 10.2-47 1 / 10.2-50 |
| 4 | SMT-10F...-K0,3Q-M8D SME-10F...-K0,3Q-M8D | Magneto-resistive, with cable and plug M8x1, lateral connection Magnetic reed, with cable and plug M8x1, lateral connection | 1 / 10.2-47 1 / 10.2-50 |
| 5 | SMT-10-KL-... SME-10-KL-... | Magneto-resistive, with cable, in-line connection Magnetic reed, with cable, in-line connection | 1 / 10.2-53 1 / 10.2-55 |
| 6 | SMT-10-KQ-... SME-10-KQ-... | Magneto-resistive, with cable, lateral connection Magnetic reed, with cable, lateral connection | 1 / 10.2-53 1 / 10.2-55 |
| 7 | SMT-10-SL-... SME-10-SL-... | Magneto-resistive, with cable and plug M8x1, in-line connection Magnetic reed, with cable and plug M8x1, in-line connection | 1 / 10.2-53 1 / 10.2-55 |
| 8 | SMT-10-SQ-... SME-10-SQ-... | Magneto-resistive, with cable and plug M8x1, lateral connection Magnetic reed, with cable and plug M8x1, lateral connection | 1 / 10.2-53 1 / 10.2-55 |
| Accessories | | | |
| 9 | Plug socket with cable SIM-M8-3GD-... | Straight socket, M8x1, 3-pin | 1 / 10.2-100 |
| 10 | Plug socket with cable SIM-M8-3WD-... | Angled socket, M8x1, 3-pin | 1 / 10.2-100 |
| 11 | Mounting kit SMBR-10-... | For round cylinders DSEU, ESEU, DSNU, ESNU, DSW, ESW | 1 / 10.2-57 |
| 12 | Mounting kit WSM-...-SME-10 | For swivel module DSM | 1 / 10.2-57 |
| 13 | Sensor tester SM-TEST-1 | | 1 / 10.2-99 |
| Drives | | | |
| 14 | Drives with slot type 10 (rounded slot) | | - |
| 15 | Round cylinder | ∅ 6 ... 63 mm | |
| 16 | Swivel module DSM | ∅ 6 ... 10 mm | |

Drive accessories
Cylinder sensors

10.2

Proximity sensors SMT/SME-10F, for slot type 10



Type

| | |
|-----|-------------------------------------|
| SMT | Proximity sensor, magneto-resistive |
| SME | Proximity sensor, magnetic reed |

Design

| | |
|-----|---------------------------------------|
| 10F | For rounded slot, inserted from above |
|-----|---------------------------------------|

Switching element function, switch output

| | |
|----|-------------------------|
| PS | NO contact, 3-wire, PNP |
| NS | NO contact, 3-wire, NPN |
| DS | NO contact, 3-wire |

Rated operating voltage

| | |
|-----|---------|
| 24V | 24 V DC |
|-----|---------|

Cable length, connection direction

| | |
|-------|--------------------------------------|
| K0,3L | 0.3 m, in-line with switch axis |
| K0,3Q | 0.3 m, at right angle to switch axis |
| K2,5L | 2.5 m, in-line with switch axis |
| K2,5Q | 2.5 m, at right angle to switch axis |

Electrical connection

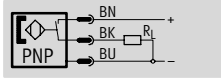
| | |
|-----|----------------------|
| OE | Cable |
| M8D | Plug M8x1 with cable |

Proximity sensors SMT-10F, for slot type 10

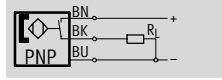
Technical data – Magneto-resistive measuring principle

Function

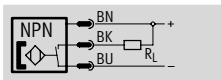
NO contact, PNP, with plug



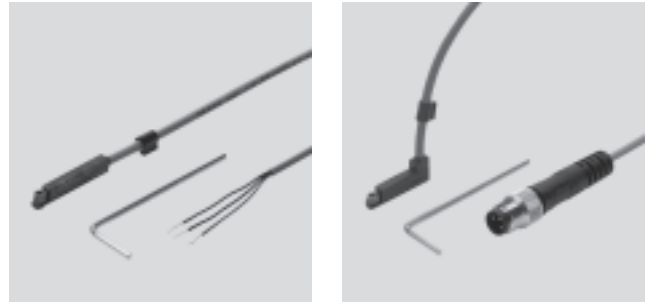
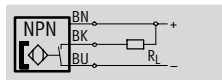
NO contact, PNP, with cable



NO contact, NPN, with plug



NO contact, NPN, with cable



| General technical data | | | | |
|--|------------------|--|-----------------------------|--|
| Switching element function | | NO contact | | |
| Electrical data | | | | |
| Switch output | | PNP | | NPN |
| Electrical connection | | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 3-wire Cable with plug M8x1, 3-pin |
| Operating voltage range | [V DC] | 5 ... 30 | | |
| Max. output current | [mA] | 200 | | |
| Max. switching capacity | [W] | 6 | | |
| Voltage drop | [V] | 2 | | |
| Residual current | [mA] | 0.06 | 0.01 | |
| Protection against short circuit | | Yes | | |
| Protection against polarity reversal | | For all electrical connections | | |
| Protection class to EN 60 529 | | IP65/IP67 | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | |
| Design | | | | |
| Design | | For rounded slot | | |
| Type of mounting | | Clamped in rounded slot, insertable from above | | |
| Reproducibility of switching point ¹⁾ | | ±0.1 [mm] | | |
| Switch-on time | | ≤0.33 [ms] | 0.5 | |
| Switch-off time | | 0.3 [ms] | 0.5 | |
| Switching status display | | Yellow LED | | |
| Cable length | | 2.5 [m] | 0.3 | 2.5 |
| Connection direction | | In-line or lateral | | |
| Mounting position | | Any | | |
| Materials | | Housing: Polyamide Cable sheath: Polyurethane | | |
| Note on material | | Free of copper, PTFE and silicone | | |
| Product weight | | 15.5 [g] | 5 | 15.5 |

1) Only applicable to drives secured against rotation

Proximity sensors SMT-10F, for slot type 10

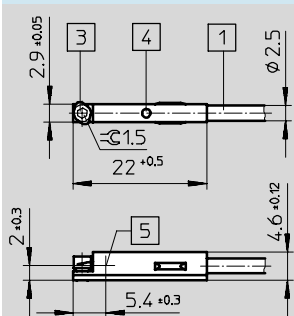
Technical data – Magneto-resistive measuring principle

| Operating and environmental conditions | | | | |
|--|-------------|------------|-------------|------------|
| Electrical connection | Cable | | Plug | |
| Cable installation | Fixed | Flexible | Fixed | Flexible |
| Ambient temperature [°C] | -20 ... +60 | -5 ... +60 | -20 ... +60 | -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 2 | |

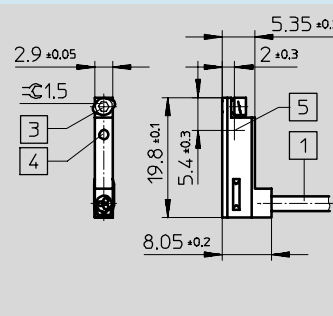
- 1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating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

Dimensions Download CAD data → www.festo.com/en/engineering

With cable, in-line connection

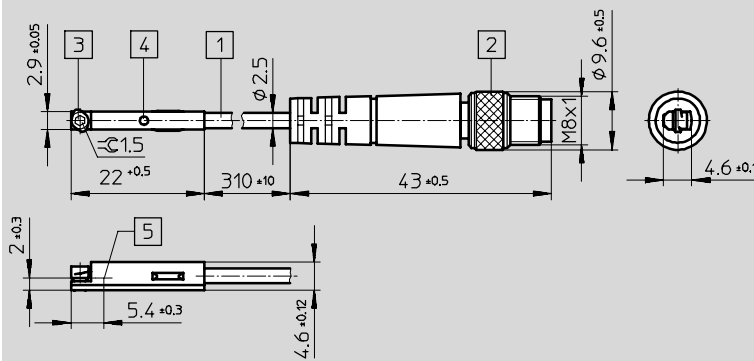


With cable, lateral connection



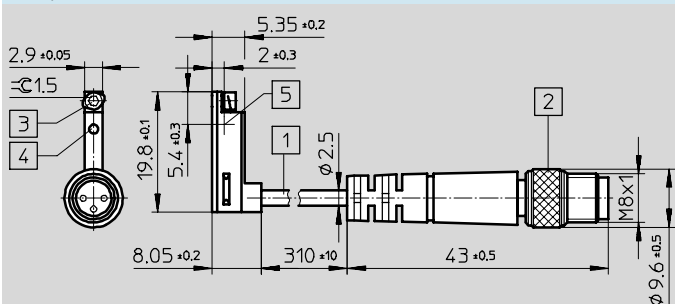
- 1 Connecting cable
- 3 Clamping component
- 4 Yellow LED
- 5 Switching point

With plug M8, in-line connection



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED
- 5 Switching point

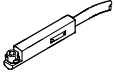
With plug M8, lateral connection



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED
- 5 Switching point

Proximity sensors SMT-10F, for slot type 10

Technical data – Magneto-resistive measuring principle

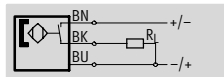
| Ordering data | | | | | | | |
|---|---------------|-----------------------|---------|---------------------|-------------------------|----------------|---------------------------------|
| | Switch output | Electrical connection | | Cable length [m] | Connection direction | Part No. | Type |
| | | Cable | Plug M8 | | | | |
|  | NO contact | | | | | | |
| | PNP | 3-wire | – | 2.5 | In-line | 525 915 | SMT-10F-PS-24V-K2,5L-OE |
| | | | | | Lateral | 526 674 | SMT-10F-PS-24V-K2,5Q-OE |
| | | – | 3-pin | 0.3 | In-line | 525 916 | SMT-10F-PS-24V-K0,3L-M8D |
| | | | | | Lateral | 526 675 | SMT-10F-PS-24V-K0,3Q-M8D |
| | NPN | 3-wire | – | 2.5 | In-line | 526 678 | SMT-10F-NS-24V-K2,5L-OE |
| | | | | | Lateral | 526 680 | SMT-10F-NS-24V-K2,5Q-OE |
| | | – | 3-pin | 0.3 | In-line | 526 679 | SMT-10F-NS-24V-K0,3L-M8D |
| | | | | | Lateral | 526 681 | SMT-10F-NS-24V-K0,3Q-M8D |

Proximity sensors SME-10F, for slot type 10

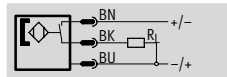
Technical data – Magnetic reed measuring principle

Function

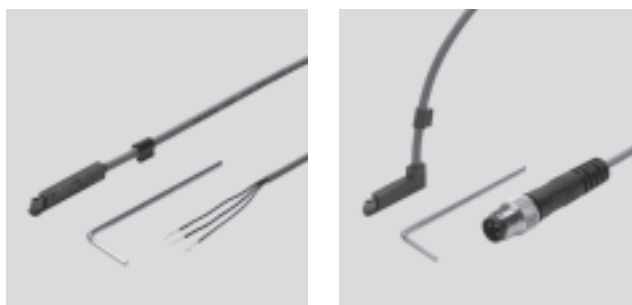
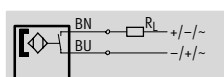
NO contact, with 3-wire cable



NO contact, 3-wire, with plug



NO contact, with 2-wire cable



| General technical data | | | | |
|--|--------------|--|-----------------------------|--------------------------------|
| Switching element function | | NO contact | | |
| Electrical data | | | | |
| Switch output | | Contacting, bipolar | | |
| Electrical connection | | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 2-wire |
| Operating voltage range | D.C. voltage | [V DC] | 10 ... 30 | 5 ... 30 |
| | A.C. voltage | [V AC] | 10 ... 30 | 5 ... 30 |
| Max. output current | | [mA] | 500 | 100 |
| Max. switching capacity | D.C. voltage | [W] | 10 | 3 |
| | A.C. voltage | [VA] | 10 | 3 |
| Voltage drop | | [V] | – | 4.5 |
| Residual current | | [mA] | – | – |
| Protection against short circuit | | No | | |
| Protection against polarity reversal | | No | | For all electrical connections |
| Protection class to EN 60 529 | | IP65/IP67 | | |
| CE symbol | | 89/336/EEC (EMC) | Yes | |
| Design | | | | |
| Design | | For rounded slot | | |
| Type of mounting | | Clamped in rounded slot, insertable from above | | |
| Reproducibility of switching point ¹⁾ | | [mm] | ±0.1 | |
| Switch-on time | | [ms] | ≤0.5 | ≤0.6 |
| Switch-off time | | [ms] | 0.03 | 0.05 |
| Switching status display | | Yellow LED | | |
| Cable length | | [m] | 2.5 | 0.3 |
| Connection direction | | In-line or lateral | | |
| Mounting position | | Any | | |
| Materials | Housing | Polyamide | | |
| | Cable sheath | Polyurethane | | |
| Note on material | | Free of copper, PTFE and silicone | | |
| Product weight | | [g] | 20 | 6 |
| | | | | 20 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | |
|--|--|-------|-------------|-------------|
| Electrical connection | | Cable | | Plug |
| Cable installation | | Fixed | Flexible | Fixed |
| | | | | Flexible |
| Ambient temperature | | [°C] | –20 ... +60 | –20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | | | 4 | 2 |

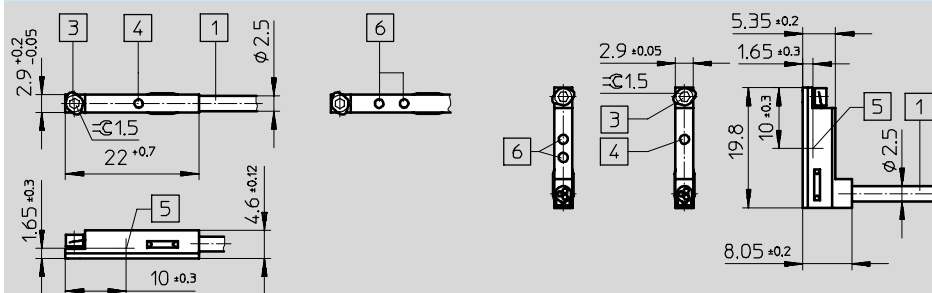
1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating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

Proximity sensors SME-10F, for slot type 10

Technical data – Magnetic reed measuring principle

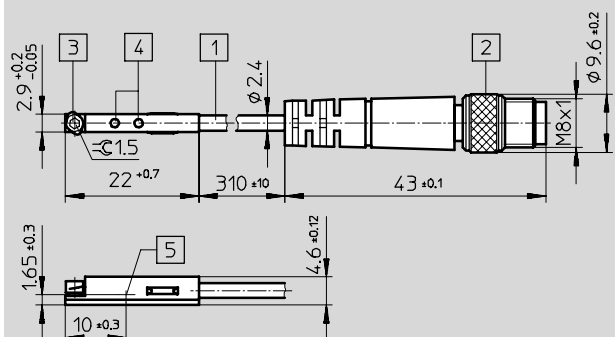
Dimensions Download CAD data → www.festo.com/en/engineering

With cable, in-line connection **With cable, lateral connection**



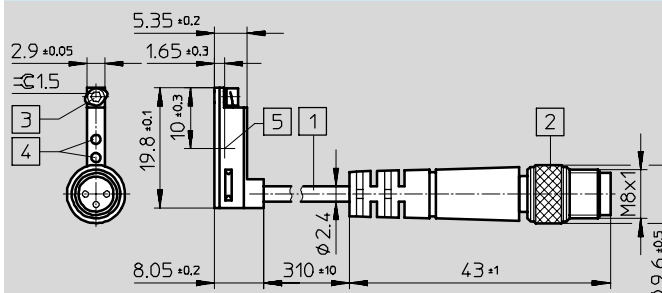
- 1 Connecting cable
- 3 Clamping component
- 4 Yellow LED (SME-10F-ZS-...)
- 5 Switching point
- 6 Yellow LED (SME-10F-DS-..., positive or negative switching)

With plug M8, in-line connection

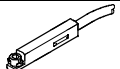


- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED (positive or negative switching)
- 5 Switching point

With plug M8, lateral connection



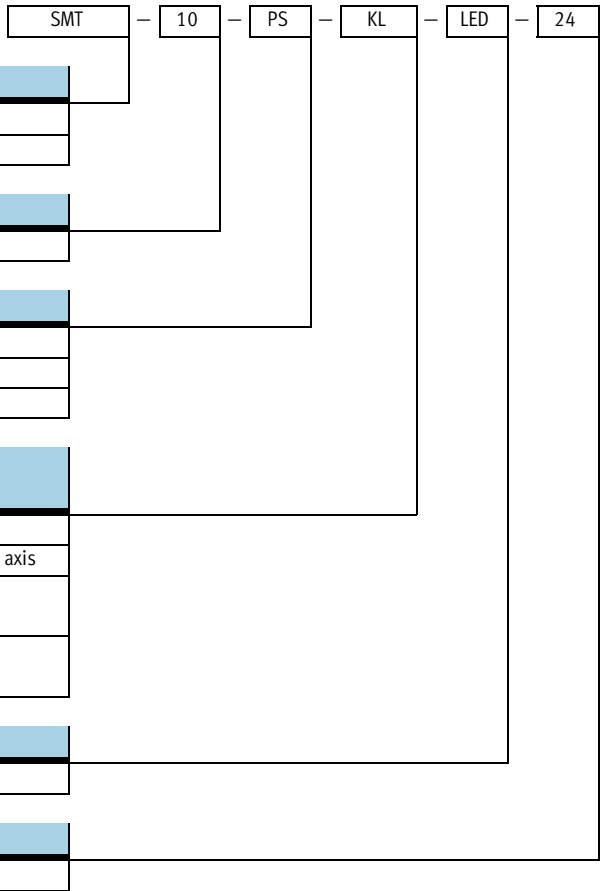
- 1 Connecting cable
- 2 Plug suitable for plug socket with cable SIM-M8-...
- 3 Clamping component
- 4 Yellow LED (positive or negative switching)
- 5 Switching point

| Ordering data | | Electrical connection | Cable length | Connection direction | Part No. | Type |
|---|---|-----------------------|--------------|----------------------|-------------------------|--------------------------|
| | | Cable | Plug M8 | [m] | | |
|  | NO contact | | | | | |
| | Operating voltage range 10 ... 30 V AC/DC | | | | | |
| | 3-wire | – | 2,5 | In-line | 525 913 | SME-10F-DS-24V-K2,5L-OE |
| | | | | Lateral | 526 670 | SME-10F-DS-24V-K2,5Q-OE |
| | – | 3-pin | 0,3 | In-line | 525 914 | SME-10F-DS-24V-K0,3L-M8D |
| | | | | Lateral | 526 671 | SME-10F-DS-24V-K0,3Q-M8D |
| Operating voltage range 5 ... 30 V AC/DC | | | | | | |
| 2-wire | – | 2,5 | In-line | 526 672 | SME-10F-ZS-24V-K2,5L-OE | |
| | | | Lateral | 526 673 | SME-10F-ZS-24V-K2,5Q-OE | |

 Core Range

Proximity sensors SMT/SME-10, for slot type 10

Type code



- 1 - Type discontinued
Available up until 2005

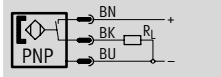
Proximity sensors SMT-10, for slot type 10

Technical data – Magneto-resistive measuring principle

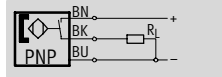
FESTO

Function

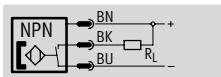
NO contact, PNP, with plug



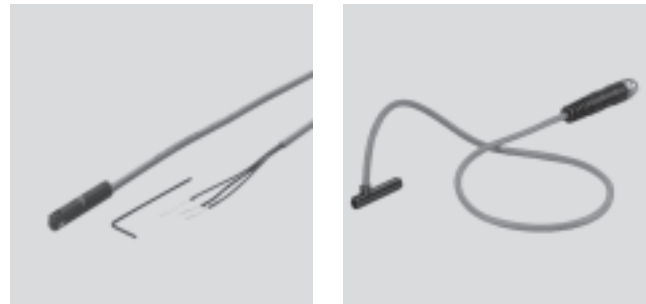
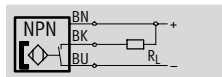
NO contact, PNP, with cable



NO contact, NPN, with plug



NO contact, NPN, with cable



| General technical data | | | | | |
|--|--|-----------------------------|---------------|-----------------------------|-----|
| Switching element function | NO contact | | | | |
| Electrical data | | | | | |
| Switch output | PNP | | NPN | | |
| Electrical connection | Cable, 3-wire | Cable with plug M8x1, 3-pin | Cable, 3-wire | Cable with plug M8x1, 3-pin | |
| Operating voltage range | [V DC] | 10 ... 30 | | | |
| Max. output current | [mA] | 200 | | | |
| Max. switching capacity | [W] | 6 | | | |
| Voltage drop | [V] | 1.8 | | | |
| Residual current | [mA] | ≤0.01 | | | |
| Protection against short circuit | Yes | | | | |
| Protection against polarity reversal | For all electrical connections | | | | |
| Protection class to EN 60 529 | IP65/IP67 | | | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | | |
| Design | | | | | |
| Design | For rounded slot | | | | |
| Type of mounting | Clamped in rounded slot, insertable from end | | | | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 | | | |
| Switch-on time | [ms] | ≤0.2 | | | |
| Switch-off time | [ms] | ≤0.2 | | | |
| Switching status display | Yellow LED | | | | |
| Cable length | [m] | 2.5 | 0.3 | 2.5 | 0.3 |
| Connection direction | In-line or lateral | | | | |
| Mounting position | Any | | | | |
| Materials | Housing | Polyamide | | | |
| | Cable sheath | Polyurethane | | | |
| Note on material | Free of copper, PTFE and silicone | | | | |
| Product weight | [g] | 20 | 6 | 20 | 6 |


1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | | |
|--|-------|-------------|------------|-------------|------------|
| Electrical connection | Cable | | Plug | | |
| Cable installation | Fixed | Flexible | Fixed | Flexible | |
| Ambient temperature | [°C] | -20 ... +60 | -5 ... +60 | -20 ... +60 | -5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 4 | | |

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

Drive accessories
 Cylinder sensors

10.2

 Type discontinued
Available up until 2005

FESTO

Proximity sensors SMT-10, for slot type 10

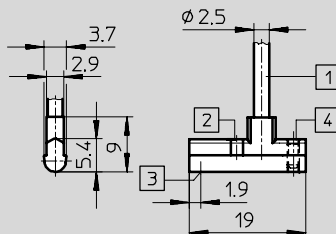
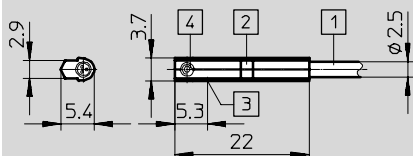
Technical data – Magneto-resistive measuring principle

Dimensions

Download CAD data → www.festo.com/en/engineering

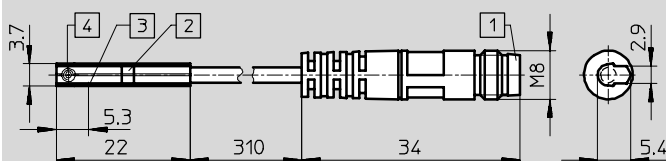
With cable, in-line connection

With cable, lateral connection



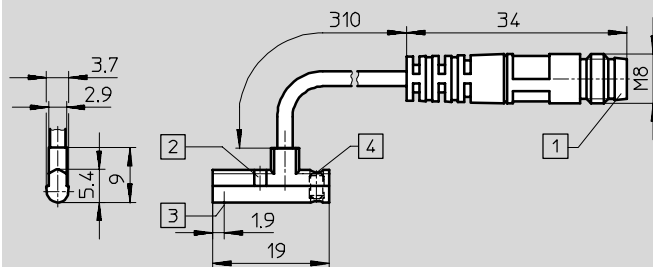
- 1 Connecting cable
- 2 Yellow LED
- 3 Theoretical switching point
- 4 Set screw M2x4

With plug M8, in-line connection



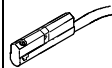
- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Yellow LED
- 3 Theoretical switching point
- 4 Set screw M2x4

With plug M8, lateral connection



- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Yellow LED
- 3 Theoretical switching point
- 4 Set screw M2x4

Ordering data

| | Switch output | Electrical connection | | Cable length [m] | Connection direction | Part No. | Type |
|---|---------------|-----------------------|---------|------------------|----------------------|---------------------|---------------------|
| | | Cable | Plug M8 | | | | |
|  | NO contact | | | | | | |
| | NPN | 3-wire | - | 2.5 | In-line | 173 222 | SMT-10-NS-KL-LED-24 |
| | | | | | Lateral | 173 223 | SMT-10-NS-KQ-LED-24 |
| | | - | 3-pin | 0.3 | In-line | 173 224 | SMT-10-NS-SL-LED-24 |
| | | | | | Lateral | 173 225 | SMT-10-NS-SQ-LED-24 |
| | PNP | 3-wire | - | 2.5 | In-line | 173 218 | SMT-10-PS-KL-LED-24 |
| | | | | | Lateral | 173 219 | SMT-10-PS-KQ-LED-24 |
| | | - | 3-pin | 0.3 | In-line | 173 220 | SMT-10-PS-SL-LED-24 |
| Lateral | | | | | 173 221 | SMT-10-PS-SQ-LED-24 | |

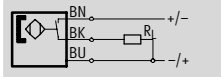
Proximity sensors SME-10, for slot type 10

Technical data – Magnetic reed measuring principle

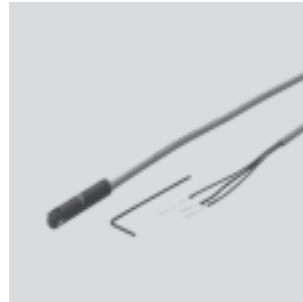
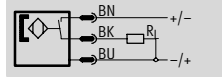
FESTO

Function

NO contact, with 3-wire cable



NO contact, 3-wire, with plug



| General technical data | | | |
|--|------------------|--|-----------------------------|
| Switching element function | | NO contact | |
| Electrical data | | | |
| Switch output | | Contacting, bipolar | |
| Electrical connection | | Cable, 3-wire | Cable with plug M8x1, 3-pin |
| Operating voltage range | [V DC] | 12 ... 27 | |
| Max. output current | [mA] | 100 | |
| Max. switching capacity | [W] | 1 | |
| Voltage drop | [V] | - | |
| Residual current | [mA] | - | |
| Protection against short circuit | | No | |
| Protection against polarity reversal | | No | |
| Protection class to EN 60 529 | | IP65/IP67 | |
| CE symbol | 89/336/EEC (EMC) | Yes | |
| Design | | | |
| Design | | For rounded slot | |
| Type of mounting | | Clamped in rounded slot, insertable from end | |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 | |
| Switch-on time | [ms] | ≤0.6 | |
| Switch-off time | [ms] | ≤0.05 | |
| Switching status display | | Yellow LED | |
| Cable length | [m] | 2.5 | 0.3 |
| Connection direction | | In-line or lateral | |
| Mounting position | | Any | |
| Materials | Housing | Polyphenylene sulphide | |
| | Cable sheath | Polyurethane | |
| Note on material | | Free of copper, PTFE and silicone | |
| Product weight | [g] | 20 | 5 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | | | |
|--|------|-------------|------------|-------------|------------|
| Electrical connection | | Cable | | Plug | |
| Cable installation | | Fixed | Flexible | Fixed | Flexible |
| Ambient temperature | [°C] | -20 ... +70 | -5 ... +70 | -20 ... +70 | -5 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 4 | | 2 | |

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

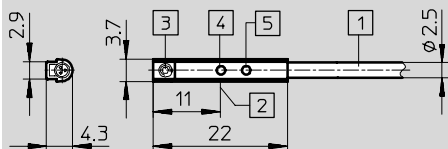
Proximity sensors SME-10, for slot type 10

Technical data – Magnetic reed measuring principle

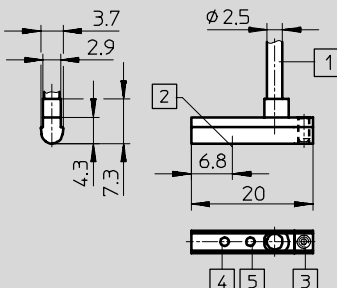
Download CAD data → www.festo.com/en/engineering

Dimensions

With cable, in-line connection

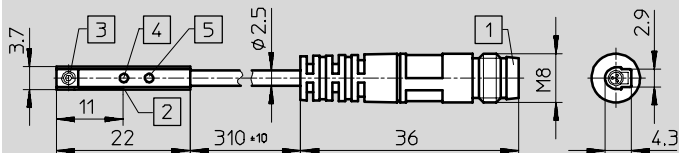


With cable, lateral connection



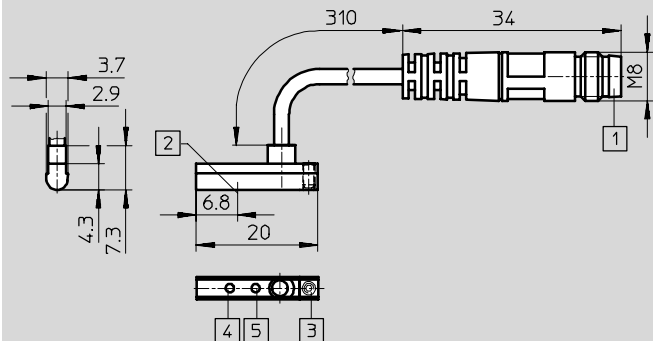
- 1 Connecting cable
- 2 Theoretical switching point
- 3 Set screw M2x4
- 4 Yellow LED (positive switching)
- 5 Yellow LED (negative switching)

With plug M8, in-line connection



- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Theoretical switching point
- 3 Set screw M2x4
- 4 Yellow LED (positive switching)
- 5 Yellow LED (negative switching)

With plug M8, lateral connection



- 1 Plug suitable for plug socket with cable SIM-M8-...
- 2 Theoretical switching point
- 3 Set screw M2x4
- 4 Yellow LED (positive switching)
- 5 Yellow LED (negative switching)

Ordering data

| | Electrical connection | | Cable length [m] | Connection direction | Part No. | Type |
|--|-----------------------|---------|------------------|----------------------|----------|------------------|
| | Cable | Plug M8 | | | | |
| | NO contact | | 2.5 | In-line | 173 210 | SME-10-KL-LED-24 |
| | 3-wire | | | Lateral | 173 211 | SME-10-KQ-LED-24 |
| | - | | 0.3 | In-line | 173 212 | SME-10-SL-LED-24 |
| | | | | Lateral | 173 213 | SME-10-SQ-LED-24 |

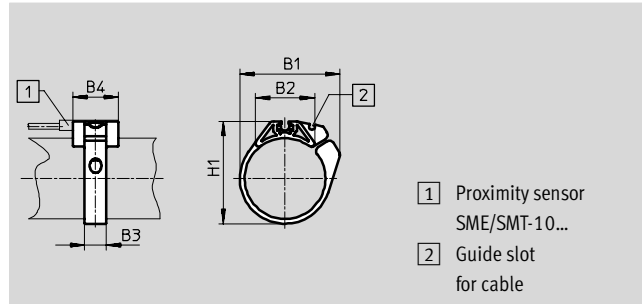
Proximity sensors for slot type 10

Accessories



Mounting kit SMBR

Material:
Polyacetate



| Dimensions and ordering data | | | | | | | |
|------------------------------|------|------|-----------------|-----------------|------|----------|------------|
| For piston \varnothing | B1 | B2 | B3 ± 0.1 | B4 ± 0.1 | H1 | Part No. | Type |
| 6 | 15.6 | 9.4 | 7 | 13.5 | 13.5 | 173 226 | SMBR-10-6 |
| 8 | 18.9 | 12.3 | 7 | 19 | 17.5 | 175 101 | SMBR-10-8 |
| 10 | 20.4 | 13.7 | 7 | 19 | 19.9 | 173 227 | SMBR-10-10 |
| 12 | 22.7 | 14.3 | 7 | 19 | 21.9 | 175 102 | SMBR-10-12 |
| 16 | 26.1 | 17 | 7 | 19 | 25.7 | 173 228 | SMBR-10-16 |
| 20 | 33.2 | 20.8 | 9 | 19 | 30.4 | 175 103 | SMBR-10-20 |
| 25 | 36.5 | 22.6 | 9 | 19 | 35.6 | 175 104 | SMBR-10-25 |
| 32 | 41.7 | 24.5 | 9 | 19 | 42.7 | 175 105 | SMBR-10-32 |
| 40 | 47 | 26.5 | 9 | 19 | 50.7 | 175 106 | SMBR-10-40 |
| 50 | 56.4 | 28.6 | 9 | 19 | 61.5 | 175 107 | SMBR-10-50 |
| 63 | 69.4 | 32 | 9 | 19 | 74.5 | 175 108 | SMBR-10-63 |

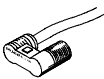
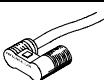

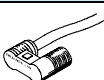
| Ordering data – Mounting kit WSM-...-SME-10 | | | |
|---|-----------------------|----------------------|-----------------------|
| | | Piston \varnothing | Part No. Type |
| | For swivel module DSM | 6 | 173 205 WSM-6-SME-10 |
| | | 8 | 173 206 WSM-8-SME-10 |
| | | 10 | 173 207 WSM-10-SME-10 |

| Ordering data – Cable clip SMBK-10 | | |
|------------------------------------|---|-----------------|
| | | Part No. Type |
| | For fixing the cable in the sensor slot | 534 255 SMBK-10 |

Core Range

Proximity sensors, round design

Product range overview

| Measuring principle | Design | Type | Mounting | Switching element function | | Switch output | Electrical connection | |
|---------------------|---|---------------------------------|------------------|----------------------------|------------|---------------|-----------------------|-------------|
| | | | | NO contact | NC contact | | Cable | Plug |
| Magneto-inductive | Operating voltage range 10 ... 30 V DC | | | | | | | |
| |  | SMT0-4U | With accessories | ■ | - | PNP | 3-wire | M8x1, 3-pin |
| | | | | ■ | - | NPN | 3-wire | M8x1, 3-pin |
| Magnetic reed | Operating voltage range 12 ... 30 V AC/DC | | | | | | | |
| |  | SME0-4U | With accessories | ■ | - | Contacting | 3-wire | M8x1, 3-pin |
| |  | CRSME0-4 Corrosion resistant | With accessories | ■ | - | Contacting | 3-wire | - |
| | Operating voltage range 12 ... 250 V AC/DC | | | | | | | |
| |  | SME0-4U | With accessories | ■ | - | Contacting | 2-wire | - |

Drive accessories
Cylinder sensors

10.2

Proximity sensors, round design

Product range overview



| Type | Connection direction | | Switching status display with LED | Free of copper, PTFE and silicone | → Page |
|---|----------------------|---------|-----------------------------------|-----------------------------------|-------------|
| | In-line | Lateral | | | |
| Operating voltage range 10 ... 30 V DC | | | | | |
| SMT0-4U | ■ | - | ■ | ■ | 1 / 10.2-63 |
| | ■ | - | ■ | | |
| Operating voltage range 12 ... 30 V AC/DC | | | | | |
| SME0-4U | ■ | - | ■ | ■ | 1 / 10.2-65 |
| CRSME0-4 Corrosion resistant | ■ | - | ■ | - | 1 / 10.2-68 |
| Operating voltage range 12 ... 250 V AC/DC | | | | | |
| SME0-4U | ■ | - | ■ | - | 1 / 10.2-65 |

Proximity sensors, round design

Peripherals overview

FESTO

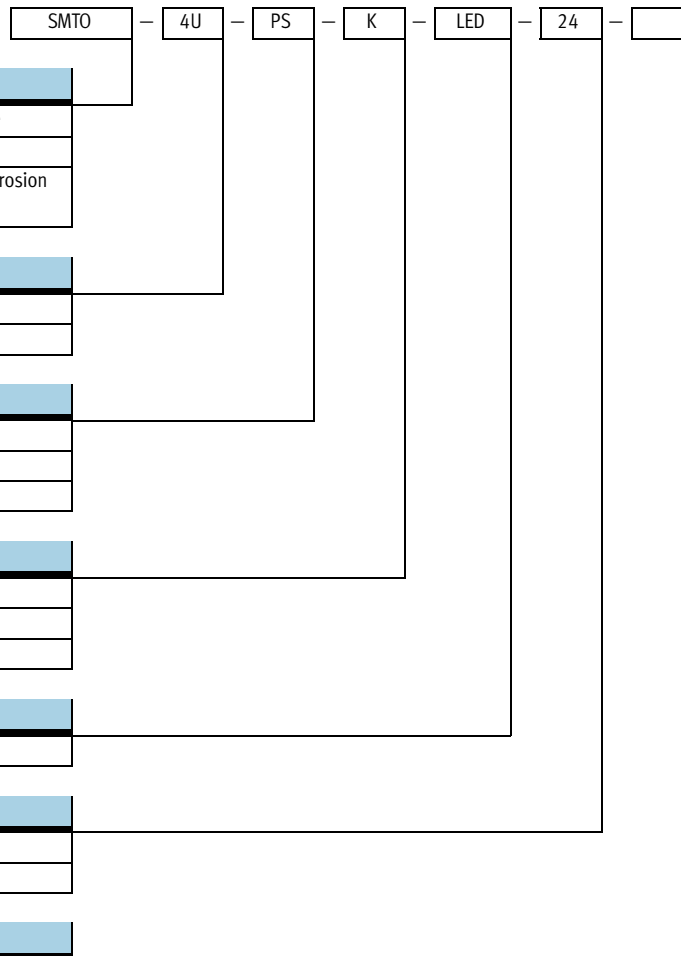
| Mounting attachments and accessories | | |
|--------------------------------------|--|--|
| | Brief description | → Page |
| Proximity sensors | | |
| 1 | SMT0-4U-K | Magneto-inductive, with cable |
| | SME0-4U-K | Magnetic reed, with cable |
| 2 | SMT0-4U-S | Magneto-inductive, with plug M8x1 |
| | SME0-4U-S | Magnetic reed, with plug M8x1 |
| 3 | CRSME0-4 | Magnetic reed, corrosion resistant, with cable |
| Accessories | | |
| 4 | Plug socket with cable SIM-M8-3GD-... | Straight socket, M8x1, 3-pin |
| 5 | Plug socket with cable SIM-M8-3WD-... | Angled socket, M8x1, 3-pin |
| 6 | Mounting kit SMBR-... | For round cylinders |
| 7 | Mounting kit CRSMBR-... | Corrosion resistant, for round cylinders |
| 8 | Mounting kit CRSMB-... | Corrosion resistant |
| 9 | Sensor tester SM-TEST-1 | |
| Drives | | |
| 10 | Round cylinder | ∅ 8 ... 63 mm |
| 11 | Round cylinders CRDG, CRDSW, CRDSNU, stainless steel | ∅ 12 ... 63 mm |
| 12 | Standard cylinders CRDNG, CRDNGS, stainless steel | ∅ 32 ... 125 mm |

Drive accessories
Cylinder sensors

10.2

Proximity sensors, round design

Type code



| Type | |
|--------|--|
| SMT0 | Proximity sensor, magneto-inductive |
| SME0 | Proximity sensor, magnetic reed |
| CRSMEO | Proximity sensor, magnetic reed, corrosion resistant |

| Design | |
|--------|--------------------------------|
| 4U | Round design, U-shaped housing |
| 4 | Round design, straight housing |

| Switching element function, switch output | |
|---|--------------------------|
| PS | NO contact, 3-wire, PNP |
| NS | NO contact, 3-wire, NPN |
| | NO contact, 2- or 3-wire |

| Electrical connection, cable length | |
|-------------------------------------|--------------|
| K | Cable, 2.5 m |
| K5 | Cable, 5 m |
| S | Plug M8x1 |

| Switching status display | |
|--------------------------|------------|
| LED | Yellow LED |

| Rated operating voltage | |
|-------------------------|----------|
| 24 | 24 V DC |
| 230 | 230 V AC |

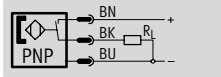
| Generation | |
|------------|----------|
| | Series A |
| B | Series B |

Proximity sensors SMTO-4U, round design

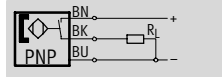
Technical data – Magneto-inductive measuring principle

Function

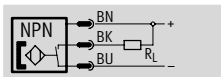
NO contact, PNP, with plug



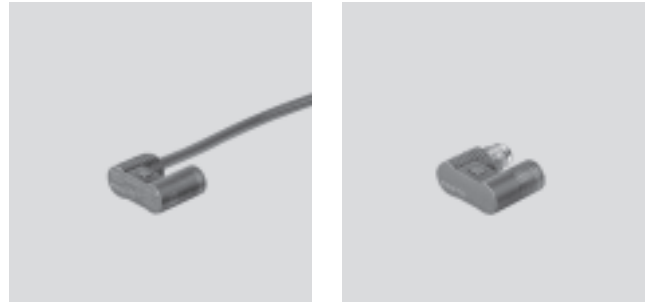
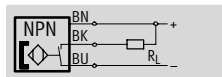
NO contact, PNP, with cable



NO contact, NPN, with plug



NO contact, NPN, with cable



| General technical data | | | | |
|---|--|-----------------------------------|------------------|-----------------------------------|
| Switching element function | | NO contact | | |
| Electrical data | | | | |
| Switch output | | PNP | | NPN |
| Electrical connection | | Cable, 3-wire | Plug M8x1, 3-pin | Cable, 3-wire Plug M8x1, 3-pin |
| Operating voltage range [V DC] | | 10 ... 30 | | |
| Max. output current [mA] | | 200 | | |
| Max. switching capacity [W] | | 6 | | |
| Voltage drop [V] | | 2 | | |
| Residual current [mA] | | ≤0.01 | | |
| Protection against short circuit | | Yes | | |
| Protection against polarity reversal | | For all electrical connections | | |
| Protection class to EN 60 529 | | IP67 | | |
| CE symbol 89/336/EEC (EMC) | | Yes | | |
| Design | | | | |
| Design | | Round | | |
| Type of mounting | | With accessories | | |
| Reproducibility of switching point ¹⁾ [mm] | | ±0.1 | | |
| Switch-on time [ms] | | ≤0.5 | | |
| Switch-off time [ms] | | ≤0.5 | | |
| Switching status display | | Yellow LED | | |
| Cable length [m] | | 2.5 | – | 2.5 |
| Connection direction | | In-line | | |
| Mounting position | | Any | | |
| Materials | | Polyester | | |
| Housing | | Polyester | | |
| Cable sheath | | PVC | – | PVC |
| Note on material | | Free of copper, PTFE and silicone | | |
| Product weight [g] | | 70 | 6 | 70 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | |
|--|--|------------|------------|
| Electrical connection | | Cable | |
| Cable installation | | Fixed | Flexible |
| Ambient temperature [°C] | | –25... +70 | –5 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 4 | 2 |

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Proximity sensors SMT0-4U, round design

Technical data – Magneto-inductive measuring principle



Dimensions Download CAD data → www.festo.com/en/engineering

With cable

1 Connecting cable
2 Yellow LED

With plug M8

2 Yellow LED
3 Plug suitable for plug socket with cable SIM-M8-...
4 Installation space for angled socket

Ordering data

| | Switch output | Electrical connection | | Cable length [m] | Part No. | Type |
|---|---------------|-----------------------|---------|------------------|---------------------|---------------------|
| | | Cable | Plug M8 | | | |
| | NO contact | | | | | |
| | PNP | 3-wire | – | 2.5 | 152 836 | SMT0-4U-PS-K-LED-24 |
| | | – | 3-pin | – | 152 742 | SMT0-4U-PS-S-LED-24 |
| | NPN | 3-wire | – | 2.5 | 152 837 | SMT0-4U-NS-K-LED-24 |
| – | | 3-pin | – | 152 743 | SMT0-4U-NS-S-LED-24 | |

Drive accessories
Cylinder sensors

10.2

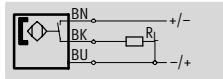
Proximity sensors SMEO-4U, round design

Technical data – Magnetic reed measuring principle

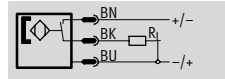


Function

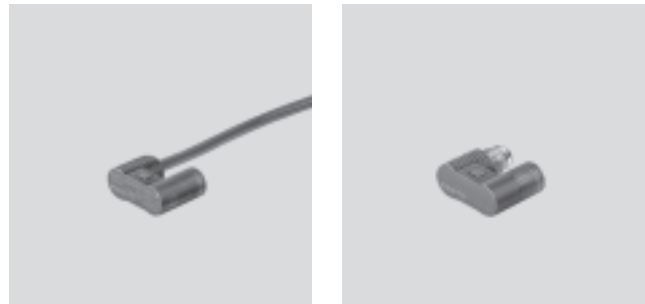
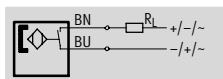
NO contact, with 3-wire cable



NO contact, 3-wire, with plug



NO contact, with 2-wire cable



| General technical data | | | | |
|--|-------------------------|-----------------------------------|-----------------------------------|------------------|
| Switching element function | | NO contact | | |
| Electrical data | | | | |
| Switch output | | Contacting, bipolar ¹⁾ | | |
| Electrical connection | | Cable, 3-wire | Cable, 3-wire | Plug M8x1, 3-pin |
| Operating voltage range | D.C. voltage | [V DC] | 12 ... 27 | 12 ... 250 |
| | A.C. voltage | [V AC] | – | 12 ... 250 |
| Max. output current | | [mA] | 500 | 500 |
| Max. switching capacity | D.C. voltage | [W] | 10 | 10 |
| | A.C. voltage | [VA] | – | 10 |
| Voltage drop | | [V] | – | 4.1 |
| Residual current | | [mA] | – | – |
| Protection against short circuit | | No | | |
| Protection against polarity reversal | | No | | |
| Protection class to EN 60 529 | | IP67 | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | Yes |
| | 73/72/EEC (low voltage) | Omitted | | Yes |
| Design | | | | |
| Design | | Round | | |
| Type of mounting | | With accessories | | |
| Reproducibility of switching point ²⁾ | | [mm] | ±0.1 | |
| Switch-on time | | [ms] | 0.03 | |
| Switch-off time | | [ms] | ≤0.5 | |
| Switching status display | | Yellow LED | | |
| Cable length | | [m] | 2.5 | 5 |
| Connection direction | | In-line | | |
| Mounting position | | Any | | |
| Materials | | Polyester | | |
| Cable sheath | | Polyurethane | Polyvinyl chloride | – |
| Note on material | | – | Free of copper, PTFE and silicone | – |
| Product weight | | [g] | 70 | 130 |
| | | | 16 | 70 |

- 1) 2-wire design, bipolar, without LED function
 2) Only applicable to drives secured against rotation

Proximity sensors SMEO-4U, round design

Technical data – Magnetic reed measuring principle



| Operating and environmental conditions | | | |
|--|-------------|------------|-------------|
| Electrical connection | Cable | | Plug |
| Cable installation | Fixed | Flexible | |
| Ambient temperature [°C] | -20 ... +60 | -5 ... +60 | -20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 2 |

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

Dimensions Download CAD data → www.festo.com/en/engineering

With cable

- 1 Connecting cable
- 2 Yellow LED

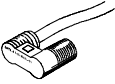
With plug M8

- 2 Yellow LED
- 3 Plug suitable for plug socket with cable SIM-M8-...
- 4 Installation space for angled socket

Proximity sensors SMEO-4U, round design

Technical data – Magnetic reed measuring principle



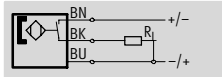
| Ordering data | | | | | |
|---|--|---------|---------------------|--------------------------|---------------------------|
| | Electrical connection | | Cable length [m] | Part No. | Type |
| | Cable | Plug M8 | | | |
|  | NO contact | | | | |
| | Operating voltage range 12 ... 27 V DC | | | | |
| | 3-wire | – | 2.5 | 36 198 | SMEO-4U-K-LED-24 |
| | | | 5 | 175 401 | SMEO-4U-K5-LED-24 |
| | – | 3-pin | – | 151 526 | SMEO-4U-S-LED-24-B |
| | Operating voltage range 12 ... 250 V AC/DC | | | | |
| 2-wire | – | 2.5 | 150 011 | SMEO-4U-K-LED-230 | |

Proximity sensors CRSMEO-4, round design

Technical data – Magnetic reed measuring principle



Function
NO contact, with 3-wire cable
corrosion resistant



| General technical data | | | |
|--|--------------|---------------------|-----------|
| Switching element function | | NO contact | |
| Electrical data | | | |
| Switch output | | Contacting | |
| Electrical connection | | Cable, 3-wire | |
| Operating voltage range | D.C. voltage | [V DC] | 12 ... 30 |
| | A.C. voltage | [V AC] | 12 ... 30 |
| Max. output current | | [mA] | 500 |
| Max. switching capacity | D.C. voltage | [W] | 10 |
| | A.C. voltage | [VA] | 10 |
| Voltage drop | | [V] | – |
| Residual current | | [mA] | – |
| Protection against short circuit | | No | |
| Protection against polarity reversal | | No | |
| Protection class to EN 60 529 | | IP65/IP67 | |
| CE symbol | | 89/336/EEC (EMC) | Yes |
| Design | | | |
| Design | | Round | |
| Type of mounting | | With accessories | |
| Reproducibility of switching point ¹⁾ | | [mm] | ±0.1 |
| Switch-on time | | [ms] | 0.03 |
| Switch-off time | | [ms] | ≤0.5 |
| Switching status display | | Yellow LED | |
| Cable length | | [m] | 2.5 |
| Connection direction | | In-line | |
| Mounting position | | Any | |
| Materials | Housing | Polypropylene | |
| | Cable sheath | Termoplastic rubber | |
| Product weight | | [g] | 70 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | |
|--|--|-------|-------------|
| Electrical connection | | Cable | |
| Cable installation | | Fixed | Flexible |
| Ambient temperature | | [°C] | –20 ... +60 |
| Corrosion resistance class CRC ¹⁾ | | 4 | |

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

Proximity sensors CRSMEO-4, round design

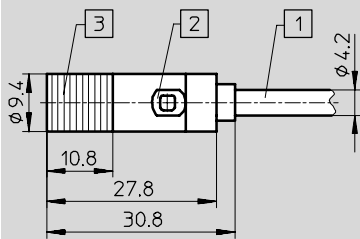
Technical data – Magnetic reed measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering

With cable



- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping range

Ordering data

| | Electrical connection | Cable length [m] | Part No. | Type |
|--|-----------------------|---------------------|----------|-------------------|
| | Cable | | | |
| | NO contact | | | |
| | Corrosion resistant | | | |
| | 3-wire | 2.5 | 161 775 | CRSMEO-4-K-LED-24 |

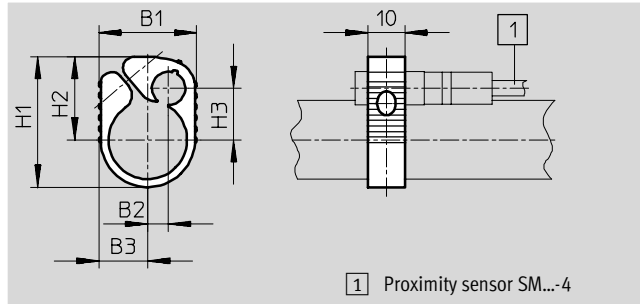
Proximity sensors, round design

Accessories



Mounting kit SMBR

Material:
Polyacetate



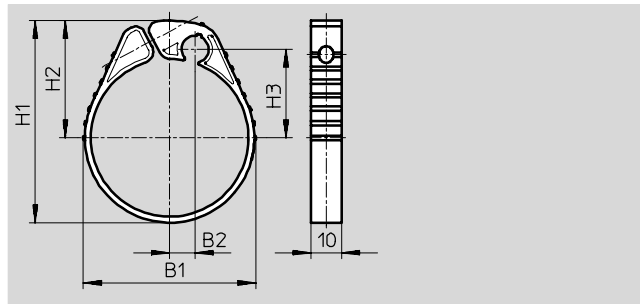
1) Proximity sensor SM...-4

| Dimensions and ordering data | | | | | | | |
|------------------------------|------|-----|------|------|------|------|--|
| For piston \varnothing | B1 | B2 | B3 | H1 | H2 | H3 | Part No. Type |
| 8 | 21 | - | 14 | 23.5 | 16.5 | 9 | 19 272 SMBR-8 |
| | | | | | | | 166 398 SMBR-8-CT¹⁾ |
| 10 | 22 | 0.5 | 14 | 26 | 18.5 | 10 | 19 273 SMBR-10 |
| | | | | | | | 166 399 SMBR-10-CT¹⁾ |
| 12 | 22 | 4 | 11 | 28.5 | 20 | 10.2 | 19 274 SMBR-12 |
| | | | | | | | 166 400 SMBR-12-CT¹⁾ |
| 16 | 22.5 | 4 | 11.5 | 33.5 | 22.5 | 12.4 | 19 275 SMBR-16 |
| | | | | | | | 166 401 SMBR-16-CT¹⁾ |
| 20 | 26.5 | 5.5 | 13.5 | 35.5 | 22.5 | 14 | 19 276 SMBR-20 |
| | | | | | | | 166 402 SMBR-20-CT¹⁾ |
| 25 | 31.5 | 7.5 | 16 | 40.5 | 25 | 16 | 19 277 SMBR-25 |
| | | | | | | | 166 403 SMBR-25-CT¹⁾ |

1) Free of Copper, PTFE and silicone

Mounting kit CRSMBR

Material:
Polypropylene



| Dimensions and ordering data | | | | | | | |
|------------------------------|------|-----|-------|------|------|--------------------------|--|
| For piston \varnothing | B1 | B2 | H1 | H2 | H3 | Part No. Type | |
| 12 | 22 | 4.1 | 28.6 | 20 | 10.2 | 164 581 CRSMBR-12 | |
| 16 | 22.3 | 4 | 33.2 | 22.5 | 12.4 | 164 582 CRSMBR-16 | |
| 20 | 26.5 | 5.6 | 35.25 | 22.5 | 14 | 164 583 CRSMBR-20 | |
| 25 | 31.5 | 7.4 | 40.2 | 25 | 16 | 164 584 CRSMBR-25 | |
| 32 | 38.6 | 7.9 | 47.8 | 29 | 19.7 | 163 888 CRSMBR-32 | |
| 40 | 46.6 | 8.1 | 55.8 | 33 | 23.8 | 163 889 CRSMBR-40 | |
| 50 | 57.4 | 8.2 | 67.2 | 39 | 29.5 | 163 890 CRSMBR-50 | |
| 63 | 70.4 | 8.2 | 80.8 | 45.9 | 36.2 | 163 891 CRSMBR-63 | |

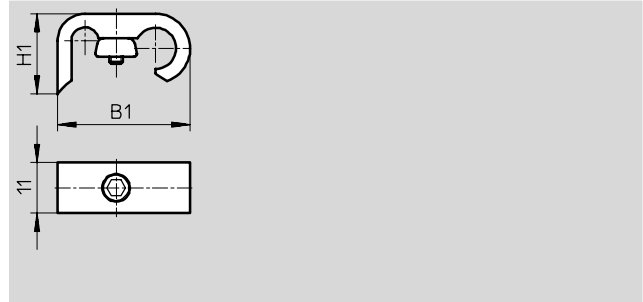
Proximity sensors, round design

Accessories



Mounting kit CRSMB

Material:
High-alloy stainless steel



| Dimensions and ordering data | | | | |
|------------------------------|------|------|----------|-----------|
| For piston \varnothing | B1 | H1 | Part No. | Type |
| 32 | 29 | 17.6 | 161 763 | CRSMB-32 |
| 40 | 29 | 15.1 | 161 764 | CRSMB-40 |
| 50 | 31.1 | 17.4 | 161 765 | CRSMB-50 |
| 63 | 31.1 | 18.1 | 161 766 | CRSMB-63 |
| 80 | 33 | 24.2 | 161 767 | CRSMB-80 |
| 100 | 33 | 27.5 | 161 768 | CRSMB-100 |
| 125 | 36.5 | 31.1 | 185 365 | CRSMB-125 |


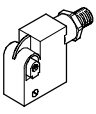
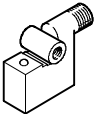



Proximity sensors, block design

Product range overview



Drive accessories
Cylinder sensors

10.2

| Measuring principle | Design | Type | Mounting | Switching element function | | Switch output | Electrical connection | |
|--|---|---------------------------------|------------------|----------------------------|------------|---------------|-----------------------|---------------------------|
| | | | | NO contact | NC contact | | Cable | Plug |
| Magneto-resistive | Operating voltage range 10 ... 30 V DC | | | | | | | |
| |  | SMTO-1 | With accessories | ■ | - | PNP | 3-wire | M8x1, 3-pin |
| | | | | ■ | - | NPN | 3-wire | M8x1, 3-pin |
| |  | SMTSO-1 Welding field immune | | ■ | - | PNP | - | M12x1, 3-pin |
| Magneto-inductive | Operating voltage range 10 ... 30 V DC | | | | | | | |
| |  | SMTO-6 | With accessories | ■ | - | PNP | - | M12x1, 3-pin |
| Magnetic reed | Operating voltage range 0 ... 30 V DC | | | | | | | |
| |  | SMEO-1 | With accessories | ■ | - | Contacting | - | M8x1, 3-pin ¹⁾ |
| | | | | ■ | - | | 3-wire | M8x1, 3-pin |
| | Operating voltage range 0 ... 250 V AC, 0 ... 200 V DC | | | | | | | |
| |  | SMEO-1-B | With accessories | ■ | - | Contacting | 2-wire | - |
| | | SMEO-1 | | ■ | - | | 2-wire | - |
| | | ■ | | - | 2-wire | | - | |
| SMEO-1-S6-C Heat resistant up to 120 °C | | ■ | | - | 2-wire | | - | |
| Pneumatic | Operating pressure 2 ... 6 bar | | | | | | | |
| |  | SMPO-1 | With accessories | ■ ²⁾ | - | - | - | - |

1) The proximity sensor has 2 wires internally. One pin of the M8x1 plug is unused.

2) 3/2-way valve, normally closed

Proximity sensors, block design

Product range overview

| Type | Connection direction | | Replacement without re-adjustment | Switching status display with LED | Free of copper, PTFE and silicone | → Page |
|---|----------------------|---------|-----------------------------------|-----------------------------------|-----------------------------------|-------------|
| | In-line | Lateral | | | | |
| Operating voltage range 10 ... 30 V DC | | | | | | |
| SMT0-1 | ■ | - | ■ 1) | ■ | ■ | 1 / 10.2-77 |
| | ■ | - | ■ 1) | ■ | - | |
| SMTSO-1 Welding field immune | ■ | - | - | ■ | - | 1 / 10.2-79 |
| Operating voltage range 10 ... 30 V DC | | | | | | |
| SMT0-6 | ■ | - | - | ■ | - | 1 / 10.2-81 |
| Operating voltage range 0 ... 30 V DC | | | | | | |
| SME0-1 | ■ | - | ■ 1) | - | ■ | 1 / 10.2-83 |
| | ■ | - | ■ 1) | ■ | ■ | |
| Operating voltage range 0 ... 250 V AC, 0 ... 200 V DC | | | | | | |
| SME0-1-B | ■ | - | ■ 1) | - | - | 1 / 10.2-83 |
| SME0-1 | ■ | - | ■ 1) | ■ | - | |
| | ■ | - | ■ 1) | - | - | |
| SME0-1-S6-C Heat resistant up to 120 °C | ■ | - | ■ 1) | ■ | - | |
| Operating pressure 2 ... 6 bar | | | | | | |
| SMPO-1 | ■ | - | ■ 1) | - 2) | - | 1 / 10.2-86 |

1) Not in combination with mounting kit SMB-1 or SMBS-...
 2) Switching status is indicated by means of an LED.

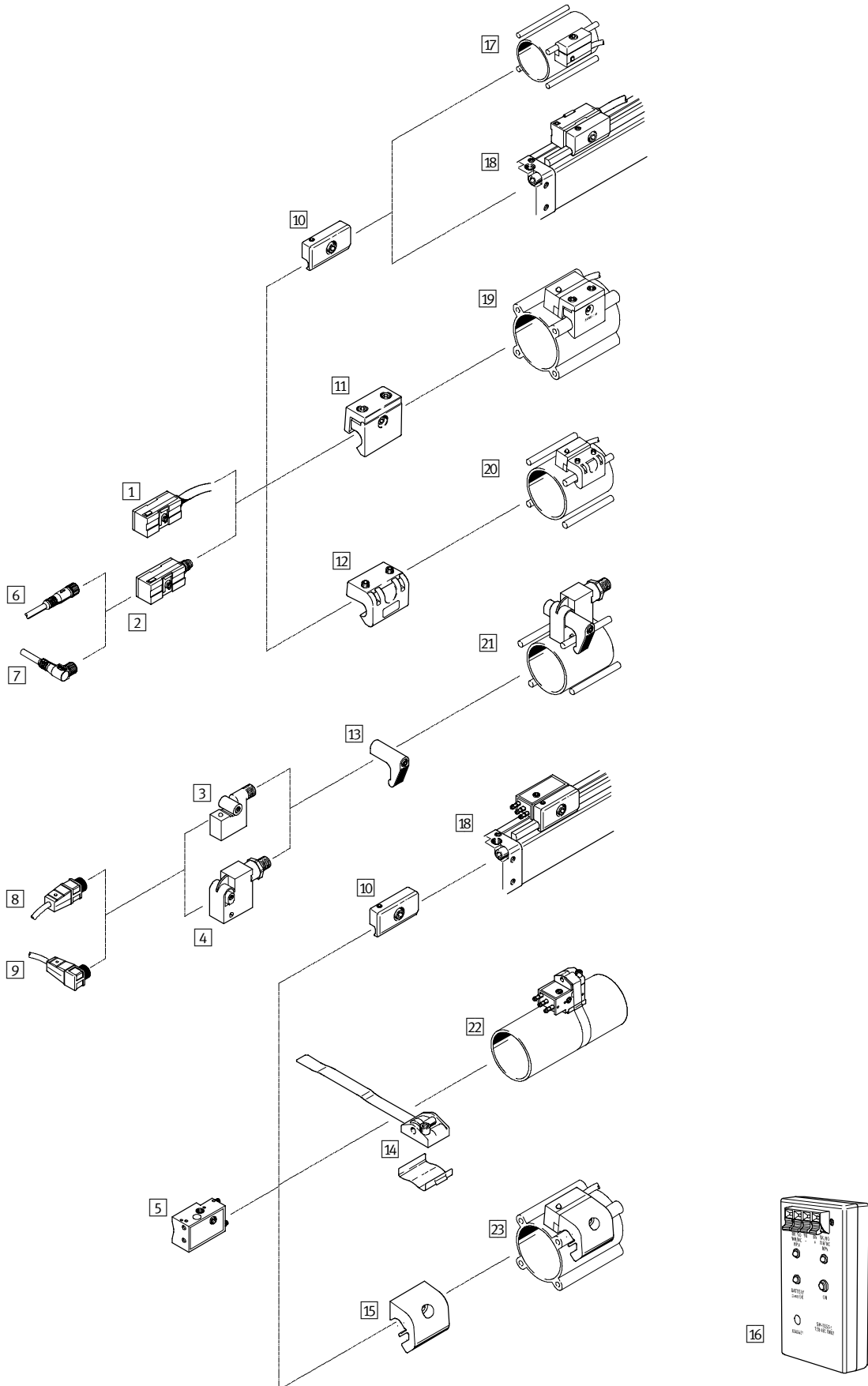
Proximity sensors, block design

Peripherals overview



Drive accessories
Cylinder sensors

10.2



Proximity sensors, block design

Peripherals overview

FESTO

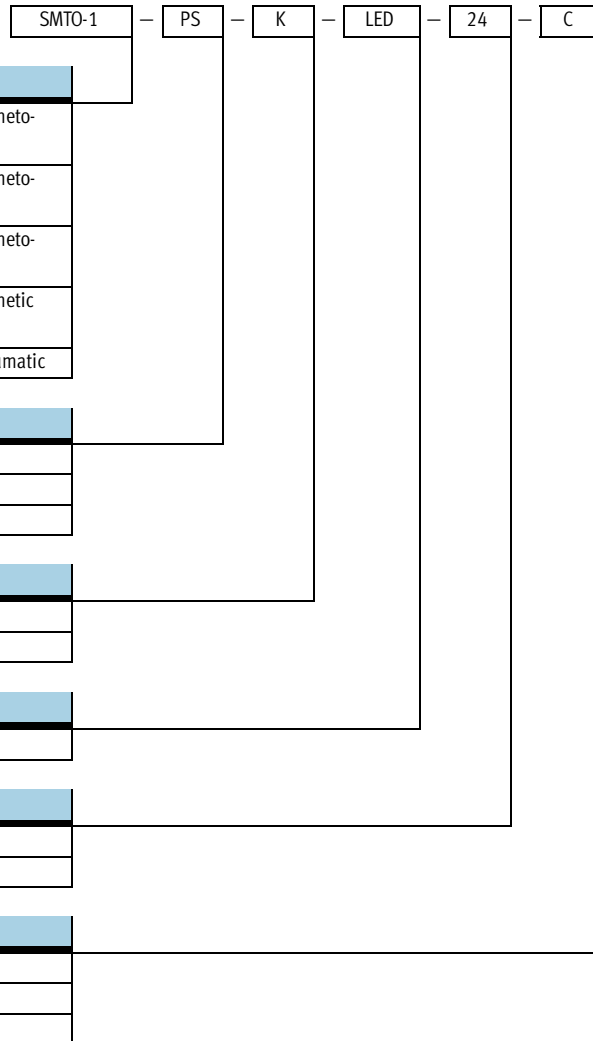
| Mounting attachments and accessories | | |
|--------------------------------------|--|--|
| | Brief description | → Page |
| Proximity sensors | | |
| 1 | SMT0-1-... SME0-1-... | Magneto-resistive, with cable Magnetic reed, with cable 1 / 10.2-77 1 / 10.2-83 |
| 2 | SMT0-1-... SME0-1-... | Magneto-resistive, with plug M8x1 Magnetic reed, with plug M8x1 1 / 10.2-77 1 / 10.2-83 |
| 3 | SMT0-6-... | Magneto-inductive, with plug M12x1 1 / 10.2-81 |
| 4 | SMTSO-1-... | Magneto-resistive, welding field immune, with plug M12x1 1 / 10.2-79 |
| 5 | SMPO-1-... | Pneumatic 1 / 10.2-86 |
| Accessories | | |
| 6 | Plug socket with cable SIM-M8-3GD-... | Straight socket, M8x1, 3-pin 1 / 10.2-100 |
| 7 | Plug socket with cable SIM-M8-3WD-... | Angled socket, M8x1, 3-pin 1 / 10.2-100 |
| 8 | Plug socket with cable SIM-M12-3GD-... | Straight socket, M12x1, 3-pin 1 / 10.2-100 |
| 9 | Plug socket with cable SIM-M12-3WD-... | Angled socket, M12x1, 3-pin 1 / 10.2-100 |
| 10 | Mounting kit SMB-1 | For standard cylinders DNG 1 / 10.2-88 |
| 11 | Mounting kit SMBU-1-B | For standard cylinders DNG 1 / 10.2-88 |
| 12 | Mounting kits SMB-2-B, SMB-3-B | For standard cylinders DNG 1 / 10.2-88 |
| 13 | Mounting kit SMBT-1 | For standard cylinders DNG 1 / 10.2-89 |
| 14 | Mounting kit SMBS-... | For round cylinders 1 / 10.2-89 |
| 15 | Mounting kit SMBU-1-H-32 | For standard cylinders DNU 1 / 10.2-89 |
| 16 | Sensor tester SM-TEST-1 | 1 / 10.2-99 |
| Drives | | |
| 17 | Standard cylinder DNG | ∅ 32 ... 320 mm - |
| 18 | Flat cylinder DZH | ∅ 32 ... 63 mm |
| | Semi-rotary drive DRQ | ∅ 40 ... 100 mm |
| 19 | Standard cylinder DNU | ∅ 32 ... 125 mm |
| 20 | Standard cylinder DNG | ∅ 32 ... 320 mm |
| 21 | Standard cylinder DNG | ∅ 32 ... 320 mm |
| 22 | Round cylinder | ∅ 8 ... 100 mm |
| 23 | Standard cylinder DNU | ∅ 32 ... 125 mm |

Drive accessories
Cylinder sensors

10.2

Proximity sensors, block design

Type code

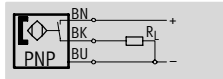


Proximity sensors SMTO-1, block design

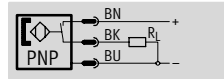
Technical data – Magneto-resistive measuring principle

Function

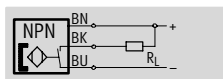
NO contact, PNP, with cable



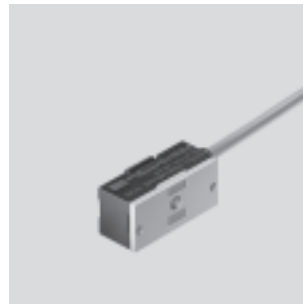
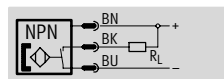
NO contact, PNP, with plug



NO contact, NPN, with cable



NO contact, NPN, with plug



| General technical data | | | | |
|---|--|--|------------------|-----------------------------------|
| Switching element function | | NO contact | | |
| Electrical data | | | | |
| Switch output | | PNP | | NPN |
| Electrical connection | | Cable, 3-wire | Plug M8x1, 3-pin | Cable, 3-wire Plug M8x1, 3-pin |
| Operating voltage range [V DC] | | 10 ... 30 | | |
| Max. switching current [mA] | | 200 | | |
| Max. switching capacity [W] | | 6 | | |
| Voltage drop [V] | | 3 | | |
| Residual current [mA] | | ≤0.01 | | |
| Protection against short circuit | | Yes | | |
| Protection against polarity reversal | | For all electrical connections | | |
| Protection class to EN 60 529 | | IP67 | | |
| CE symbol 89/336/EEC (EMC) | | Yes | | |
| Design | | | | |
| Design | | Block design | | |
| Type of mounting | | With accessories | | |
| Reproducibility of switching point ¹⁾ [mm] | | ±0.1 | | |
| Switch-on time [ms] | | ≤1 | | |
| Switch-off time [ms] | | ≤1 | | |
| Switching status display | | Yellow LED | | |
| Cable length [m] | | 2.5 | – | 2.5 |
| Mounting position | | Any | | |
| Materials | | Die-cast zinc, polyester, spring steel | | |
| Housing | | Die-cast zinc, polyester, spring steel | | |
| Cable sheath | | Polyvinyl chloride | | |
| Note on material | | Free of copper, PTFE and silicone | | – |
| Product weight [g] | | 85 | 20 | 85 |
| | | | | 20 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | | |
|--|--|-------------|------------|
| Electrical connection | | Cable | |
| Cable installation | | Fixed | Flexible |
| Ambient temperature [°C] | | –25 ... +70 | –5 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 4 | 2 |

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

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Proximity sensors SMTO-1, block design

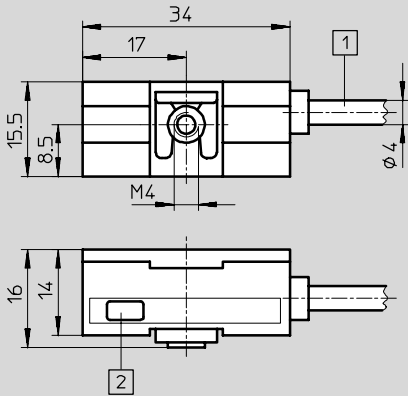
Technical data – Magneto-resistive measuring principle



Dimensions

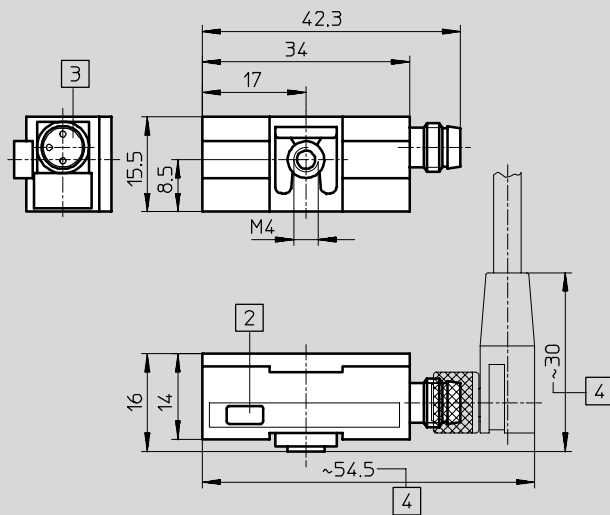
Download CAD data → www.festo.com/en/engineering

With cable



- 1 Connecting cable
- 2 Yellow LED

With plug M8



- 2 Yellow LED
- 3 Plug suitable for plug socket with cable SIM-M8-...
- 4 Installation space for angled socket

Ordering data

| | Switch output | Electrical connection | | Cable length [m] | Part No. | Type |
|---|---------------|-----------------------|---------|---------------------|----------------------|----------------------|
| | | Cable | Plug M8 | | | |
| | NO contact | | | | | |
| | PNP | 3-wire | – | 2.5 | 151 683 | SMTO-1-PS-K-LED-24-C |
| | | – | 3-pin | – | 151 685 | SMTO-1-PS-S-LED-24-C |
| | NPN | 3-wire | – | 2.5 | 151 684 | SMTO-1-NS-K-LED-24-C |
| – | | 3-pin | – | 151 686 | SMTO-1-NS-S-LED-24-C | |

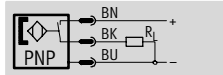
Proximity sensors SMTSO-1, block design

Technical data – Magneto-resistive measuring principle

Function

NO contact, PNP, with plug

Welding field immune



| General technical data | |
|--|---|
| Switching element function | NO contact |
| Electrical data | |
| Switch output | PNP |
| Electrical connection | Plug M12x1, 3-pin |
| Operating voltage range | [V DC] 10 ... 30 |
| Max. switching current | [mA] 200 |
| Max. switching capacity | [W] 6 |
| Voltage drop | [V] 3 |
| Residual current | [mA] 0.01 |
| Resistance to interference from magnetic fields | Alternating magnetic field 50 ... 60 Hz |
| Protection against short circuit | Yes |
| Protection against polarity reversal | For all electrical connections |
| Protection class to EN 60 529 | IP65/IP67 |
| CE symbol | 89/336/EEC (EMC) Yes |
| Design | |
| Design | Block design |
| Type of mounting | With accessories |
| Reproducibility of switching point ¹⁾ | [mm] ±0.1 |
| Switch-on time | [ms] ≤35 |
| Switch-off time | [ms] ≤20 |
| Switching status display | Yellow LED |
| Ready status display | Green LED |
| Mounting position | Any |
| Materials | Housing Die-cast zinc |
| Product weight | [g] 70 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | |
|--|------------------|
| Electrical connection | Plug |
| Ambient temperature | [°C] -25 ... +70 |
| Corrosion resistance class CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. 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.

Proximity sensors SMTSO-1, block design

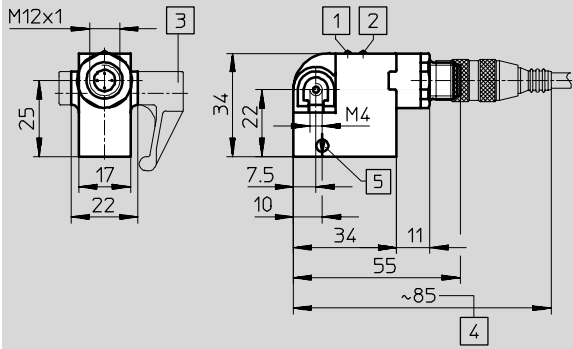
Technical data – Magneto-resistive measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering

With plug M12



- 1 Green LED
- 2 Yellow LED
- 3 Mounting kit
- 4 Installation space for socket

Ordering data

| | Switch output | Electrical connection | Cable length | Part No. | Type |
|--|----------------------|-----------------------|--------------|----------|---------------------|
| | | Plug M12 | [m] | | |
| | NO contact | | | 30 441 | SMTSO-1-PS-S-LED-24 |
| | Welding field immune | | | | |
| | PNP | 3-pin | – | | |

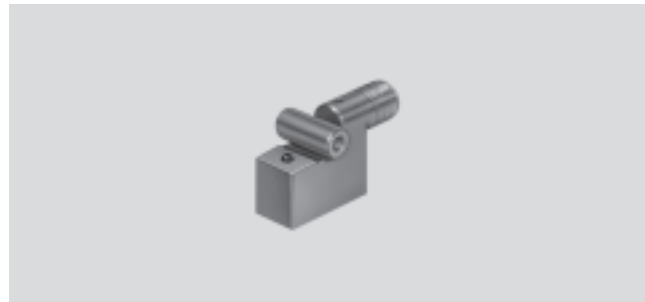
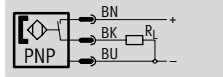
Proximity sensors SMTO-6, block design

Technical data – Magneto-inductive measuring principle



Function

NO contact, PNP, with plug



| General technical data | | |
|--|------------------|--------------------------------|
| Switching element function | | NO contact |
| Electrical data | | |
| Switch output | | PNP |
| Electrical connection | | Plug M12x1, 3-pin |
| Operating voltage range | [V DC] | 10 ... 30 |
| Max. switching current | [mA] | 200 |
| Max. switching capacity | [W] | 6 |
| Voltage drop | [V] | 3 |
| Residual current | [mA] | ≤0.01 |
| Protection against short circuit | | Yes |
| Protection against polarity reversal | | For all electrical connections |
| Protection class to EN 60 529 | | IP67 |
| CE symbol | 89/336/EEC (EMC) | Yes |
| Design | | |
| Design | | Block design |
| Type of mounting | | With accessories |
| Reproducibility of switching point ¹⁾ | [mm] | ±0.1 |
| Switch-on time | [ms] | ≤1 |
| Switch-off time | [ms] | ≤1 |
| Switching status display | | Yellow LED |
| Mounting position | | Any |
| Materials | Housing | Die-cast zinc |
| Product weight | [g] | 36 |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | | |
|--|------|-------------|
| Electrical connection | | Plug |
| Ambient temperature | [°C] | -25 ... +70 |
| Corrosion resistance class CRC ¹⁾ | | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. 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.

Proximity sensors SMT0-6, block design

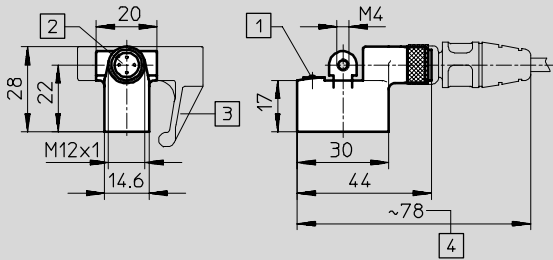
Technical data – Magneto-inductive measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering

With plug M12



- 1 Yellow LED
- 2 Plug suitable for plug socket with cable SIM-M12-...
- 3 Mounting kit
- 4 Installation space for socket

Ordering data

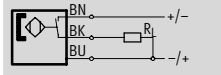
| | Switch output | Electrical connection | Cable length [m] | Part No. | Type |
|--|---------------|-----------------------|---------------------|----------|--------------------|
| | | Plug M12 | | | |
| | NO contact | | | | |
| | PNP | 3-pin | – | 35 573 | SMT0-6-PS-S-LED-24 |

Proximity sensors SMEO-1, block design

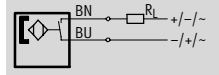
Technical data – Magnetic reed measuring principle

Function

NO contact, with 3-wire cable

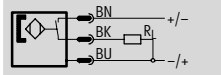


NO contact, with 2-wire cable¹⁾

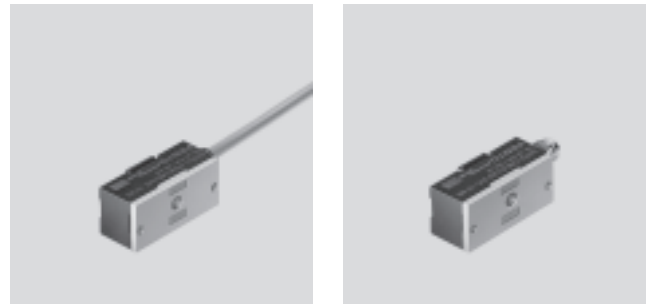
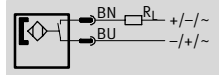


1) Heat-resistant design, 0 ... 30 V AC/DC

NO contact, 3-wire, with plug



NO contact, 2-wire, with plug



| General technical data | | | | | | | | | |
|---|-------------------------|--|---------------|------------------|---------------|---------------|---------------|-----------------------------|------------------|
| Switching element function | | NO contact | | | | | | | |
| Electrical data | | | | | | | | | |
| Switch output | | Contacting, bipolar | | | | | | | |
| Electrical connection | | Cable, 3-wire | Cable, 3-wire | Plug M8x1, 3-pin | Cable, 2-wire | Cable, 2-wire | Cable, 2-wire | Cable, 2-wire ¹⁾ | Plug M8x1, 2-pin |
| Operating voltage range | D.C. voltage [V DC] | 12 ... 27 | | | 5 ... 200 | | 0 ... 200 | | 0 ... 30 |
| | A.C. voltage [V AC] | - | | | 5 ... 250 | | 0 ... 250 | | - |
| Max. switching current | D.C. voltage [mA] | 1000 | | | 500 | | 1000 | | 1000 |
| | A.C. voltage [mA] | - | | | 500 | | 1000 | | - |
| Max. switching capacity | D.C. voltage [W] | 27 | | | 40 | | 40 | | 40 |
| | A.C. voltage [VA] | - | | | 40 | | 40 | | - |
| Voltage drop [V] | | - | | | 4.1 | | - | | - |
| Protection against short circuit | | No | | | | | | | |
| Protection against polarity reversal | | No | | | | | | | |
| Protection class to EN 60 529 | | IP67 | | | | | | | |
| CE symbol | 89/336/EEC (EMC) | Yes | | | Yes | | Omitted | | Yes |
| | 73/23/EEC (low voltage) | Omitted | | | Yes | | Yes | | Omitted |
| Design | | | | | | | | | |
| Design | | Block design | | | | | | | |
| Type of mounting | | With accessories | | | | | | | |
| Reproducibility of switching point ²⁾ [mm] | | ±0.1 | | | | | | | |
| Switch-on time [ms] | | ≤0.5 | | | | | | | |
| Switch-off time [ms] | | ≤0.03 | | | | | | | |
| Switching status display | | Yellow LED | Yellow LED | Yellow LED | Yellow LED | Yellow LED | - | - | - |
| Cable length [m] | | 2.5 | 5.0 | - | 2.5 | 5.0 | 2.5 | 2.5 | - |
| Mounting position | | Any | | | | | | | |
| Materials | Housing | Die-cast zinc, polyester, spring steel | | | | | | | |
| | Cable sheath | Polyurethane | | | - | | Polyurethane | | - |
| Note on material | | Free of copper, PTFE and silicone | | | - | | | | |
| Product weight [g] | | 85 | 130 | 20 | 100 | 130 | 85 | 130 | 20 |

1) Heat-resistant design
2) Only applicable to drives secured against rotation

Proximity sensors SMEO-1, block design

Technical data – Magnetic reed measuring principle

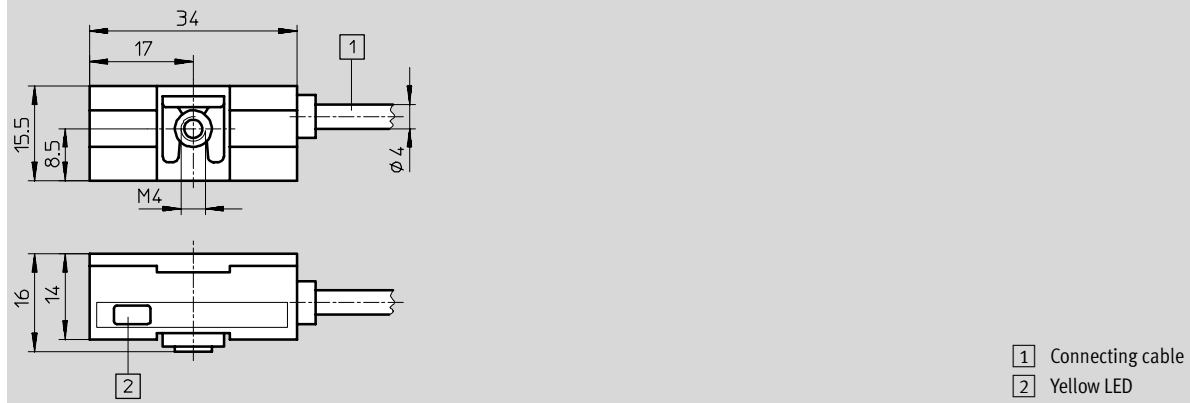


| Operating and environmental conditions | | | | | |
|--|-------------|------------|-----------------------|-------------|-------------|
| Electrical connection | Cable | | Cable, heat resistant | | Plug |
| Cable installation | Fixed | Flexible | Fixed | Flexible | |
| Ambient temperature [°C] | -20 ... +70 | -5 ... +70 | -10 ... +120 | -5 ... +120 | -20 ... +70 |
| Corrosion resistance class CRC ¹⁾ | 4 | | 4 | | 2 |

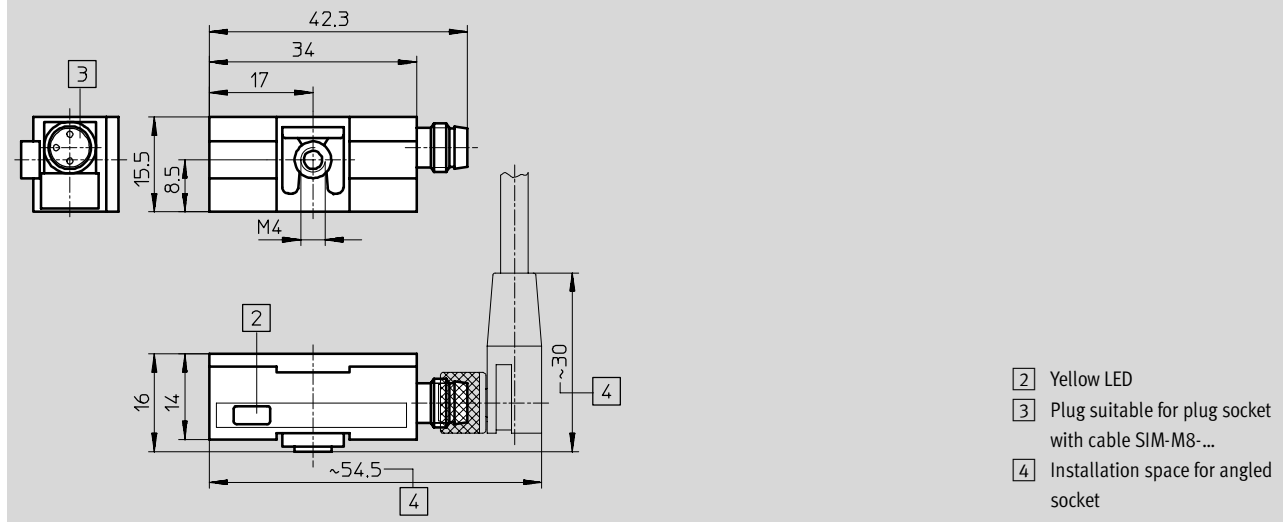
- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating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

Dimensions Download CAD data → www.festo.com/en/engineering

With cable




With plug M8



Proximity sensors SMEO-1, block design

Technical data – Magnetic reed measuring principle



| Ordering data | | | | | | |
|---|--|---------------------|---------------------|--------------------------------------|----------|---------------------|
| | Electrical connection | | Cable length [m] | Switching status display with LED | Part No. | Type |
| | Cable | Plug M8 | | | | |
|  | NO contact | | | | | |
| | Operating voltage range 12 ... 27 V DC | | | | | |
| | 3-wire | – | 2.5 | ■ | 30 459 | SMEO-1-LED-24-B |
| | 3-wire | – | 5.0 | ■ | 151 672 | SMEO-1-LED-24-K5-B |
| | – | 3-pin | – | ■ | 150 848 | SMEO-1-S-LED-24-B |
| | Operating voltage range 0 ... 250 V AC, 0 ... 200 V DC | | | | | |
| | 2-wire | – | 2.5 | – | 30 457 | SMEO-1-B |
| | 2-wire | – | 2.5 | ■ | 151 671 | SMEO-1-LED-230-B |
| | 2-wire | – | 5.0 | ■ | 160 998 | SMEO-1-LED-230-K5-B |
| | Heat resistant up to 120 °C | | | | | |
| | 2-wire | – | 2.5 | – | 151 673 | SMEO-1-S6-C |
| | Operating voltage range 0 ... 30 V DC | | | | | |
| | – | 3-pin ¹⁾ | – | – | 150 847 | SMEO-1-S-24-B |

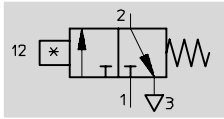
1) The proximity sensor has 2 wires internally. One pin of the M8x1 plug is unused.

Proximity sensors SMPO-1, block design

Technical data – Pneumatic measuring principle



Function
3/2-way valve,
normally closed



| General technical data | |
|---|--|
| Switching element function | 3/2-way valve, normally closed |
| Design | |
| Design | Block design |
| Type of mounting | With accessories |
| Operating medium | Filtered, unlubricated compressed air |
| Operating pressure [bar] | 2 ... 6 |
| Reproducibility of switching point ¹⁾ [mm] | ±0.1 |
| Switch-on time [ms] | 12 |
| Switch-off time [ms] | 30 |
| Switching status display | Visual |
| Pneumatic connection | Barbed connector PK-3 |
| Mounting position | Any |
| Materials | Housing: PA Barbed connector: Brass |
| Product weight [g] | 14 |
| Electrical data | |
| Protection class to EN 60 529 | IP65 |
| CE symbol | Omitted |

1) Only applicable to drives secured against rotation

| Operating and environmental conditions | |
|--|-------------|
| Ambient temperature [°C] | -15 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 1 |

1) Corrosion resistance class 1 according to Festo standard 940 070
Components requiring low corrosion resistance. 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.

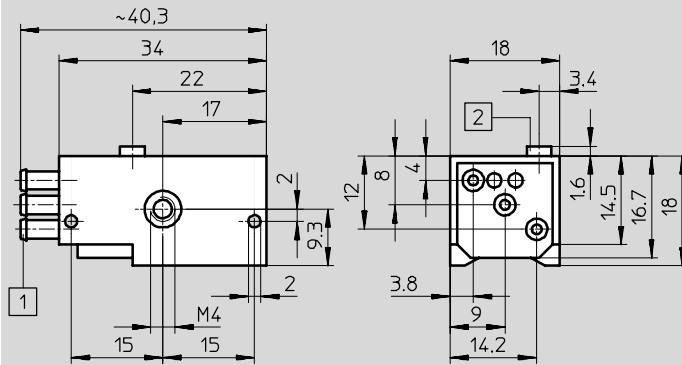
Proximity sensors SMPO-1, block design

Technical data – Pneumatic measuring principle



Dimensions

Download CAD data → www.festo.com/en/engineering



- 1 Barbed connector for tubing, 3mm I.D.
- 2 Visual indicator

Ordering data

| | Pneumatic connection | Part No. | Type |
|--|--------------------------------------|----------|------------|
| | 3/2-way valve, normally closed | | |
| | Barbed connector for 3mm I.D. tubing | 31 008 | SMPO-1-H-B |

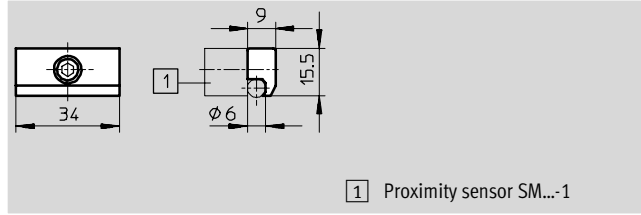
Proximity sensors, block design

Accessories



Mounting kit SMB-1

Material:
Die-cast zinc



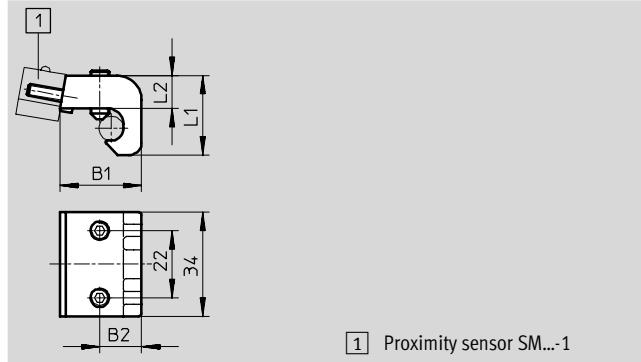
1 Proximity sensor SM...-1

Dimensions and ordering data

| For piston Ø | Part No. | Type |
|--------------|---------------|--------------|
| 32 ... 100 | 11 886 | SMB-1 |

Mounting kit SMB-2-B/SMB-3-B

Material:
Die-cast aluminium



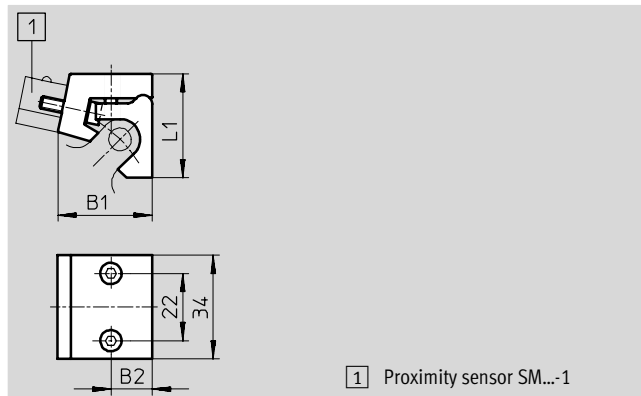
1 Proximity sensor SM...-1

Dimensions and ordering data

| For piston Ø | B1 | B2 | L1 | L2 | Part No. | Type |
|--------------|------|------|----|------|---------------|----------------|
| 32 ... 50 | 18 | 11 | 23 | 11.6 | 36 162 | SMB-2-B |
| 63 ... 100 | 26.8 | 13.7 | 26 | 10.8 | 36 163 | SMB-3-B |

Mounting kit SMBU

Material:
Die-cast aluminium



1 Proximity sensor SM...-1

Dimensions and ordering data

| For piston Ø | B1 | B2 | L1 | Part No. | Type |
|--------------|----|------|----|----------------|------------------------------|
| 32 ... 50 | 19 | 8.5 | 30 | 36 173 | SMBU-1-B¹⁾ |
| 63 ... 100 | 31 | 13.5 | 34 | 36 174 | SMBU-2-B¹⁾ |
| 125 | 31 | 13.5 | 37 | 125 828 | SMBU-3-B |

1) Free of copper, PTFE and silicone

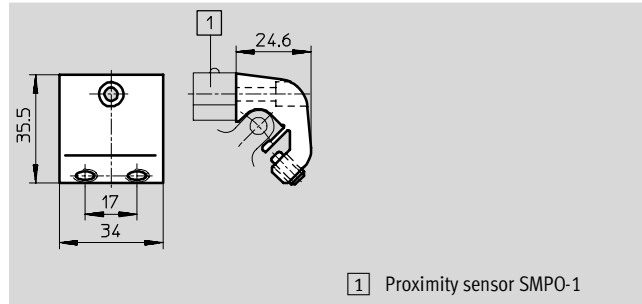
Proximity sensors, block design

Accessories



Mounting kit SMBU-1-H-32

Material:
Aluminium

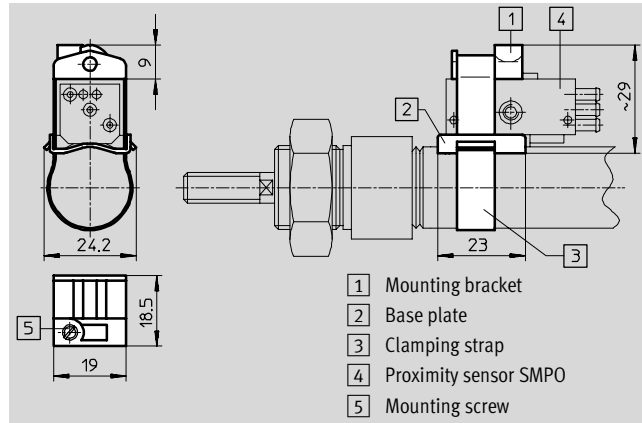


1 Proximity sensor SMPO-1

| Dimensions and ordering data | | |
|------------------------------|----------|-------------|
| For piston \varnothing | Part No. | Type |
| 32 | 150 216 | SMBU-1-H-32 |

Mounting kit SMBS

Material:
Brass, plastic

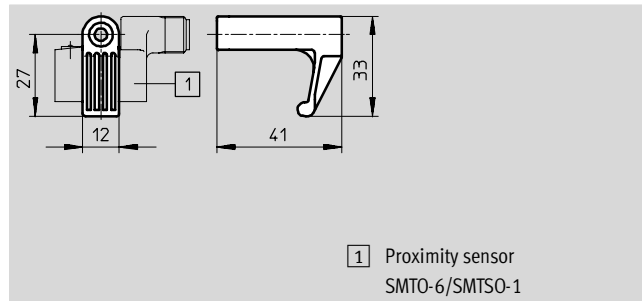


- 1 Mounting bracket
- 2 Base plate
- 3 Clamping strap
- 4 Proximity sensor SMPO
- 5 Mounting screw

| Dimensions and ordering data | | |
|------------------------------|----------|--------|
| For piston \varnothing | Part No. | Type |
| 8 ... 25 | 151 225 | SMBS-1 |
| 32 ... 100 | 151 226 | SMBS-2 |

Mounting kit SMBT-1

Material:
Die-cast zinc

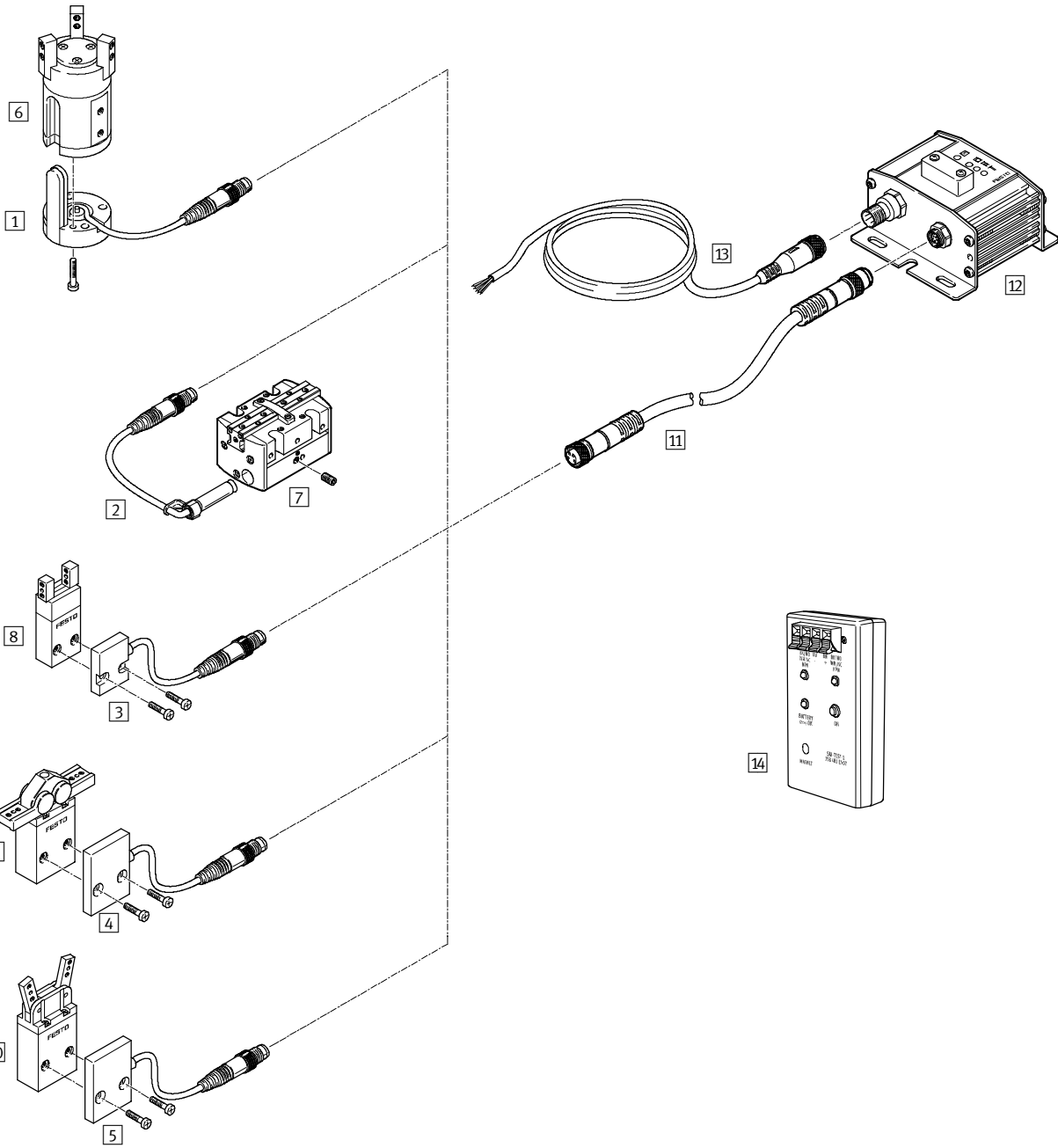


1 Proximity sensor SMT0-6/SMTSO-1

| Dimensions and ordering data | | |
|------------------------------|----------|--------|
| For piston \varnothing | Part No. | Type |
| 32 ... 200 | 150 002 | SMBT-1 |

Proximity sensors SMH, for grippers

Peripherals overview



Drive accessories
Cylinder sensors

10.2

Proximity sensors SMH, for grippers

Peripherals overview

FESTO

| Mounting attachments and accessories | | |
|--------------------------------------|---|--|
| | Brief description | → Page |
| Hall proximity sensor | | |
| 1 | SMH-S1-HGD16 | For three-point gripper HGD-16-A |
| 2 | SMH-S1-HGPP-... | For precision parallel gripper HGPP-... |
| 3 | SMH-S1-HGP06 | For parallel gripper HGP-06-A |
| 4 | SMH-S1-HGR10 | For radial gripper HGR-10-A |
| 5 | SMH-S1-HGW10 | For angle gripper HGW-10-A |
| Drives | | |
| 6 | Three-point gripper HGD-16-A | |
| 7 | Precision parallel gripper HGPP-... | ∅ 10 ... 32 mm |
| 8 | Parallel gripper HGP-06-A | |
| 9 | Radial gripper HGR-10-A | |
| 10 | Angle gripper HGW-10-A | |
| Accessories | | |
| 11 | Connecting cable KSMH-1-M8-2-M8 | Proximity sensor/evaluation unit connecting cable, plug/straight socket, M8x1, 4-pin |
| 12 | Evaluation unit SMH-AE1-... | |
| 13 | Plug socket with cable SIM-M12-5GD-...-PU | Evaluation unit/controller connecting cable, straight socket, M12x1, 5-pin |
| 14 | Sensor tester SM-TEST-1 | |

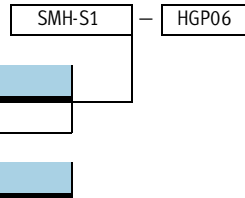
Drive accessories
Cylinder sensors

10.2

Proximity sensors SMH, for grippers

Type code

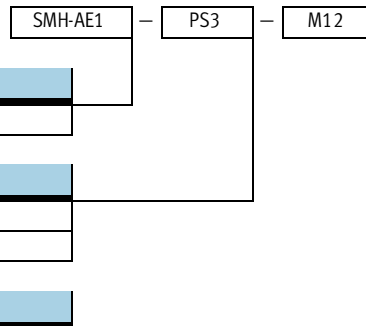
Proximity sensor



| Type | |
|--------|------------------------------------|
| SMH-S1 | Hall proximity sensor for grippers |

| Associated grippers | |
|---------------------|--|
| HGD16 | Three-point gripper HGD-16-... |
| HGP06 | Parallel gripper HGP-06-... |
| HGR10 | Radial gripper HGR-10-... |
| HGW10 | Angle gripper HGW-10-... |
| HGPP-10/12 | Precision parallel gripper HGPP-10-... and HGPP-12-... |
| HGPP-16 | Precision parallel gripper HGPP-16-... |
| HGPP20/25 | Precision parallel gripper HGPP-20-... and HGPP-25-... |
| HGPP-32 | Precision parallel gripper HGPP-32-... |

Evaluation unit



| Type | |
|---------|-----------------|
| SMH-AE1 | Evaluation unit |

| Switch output | |
|---------------|-----------------------------------|
| PS3 | NO contact, PNP, 3 switch outputs |
| NS3 | NO contact, NPN, 3 switch outputs |

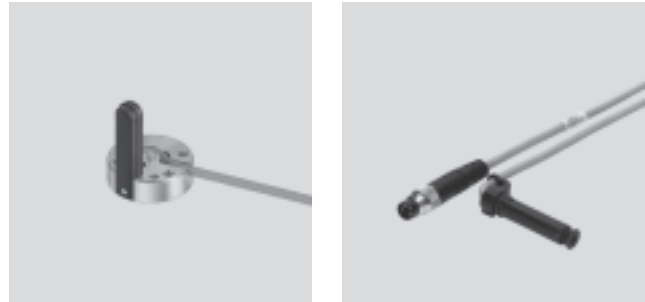
| Electrical connection | |
|-----------------------|-------------------|
| M12 | Plug M12x1, 5-pin |

Proximity sensors SMH, for grippers

Technical data – Magnetic Hall measuring principle



Proximity sensor SMH-S1-...



| General technical data | |
|--------------------------------------|--|
| Electrical data | |
| Electrical connection | Cable with plug M8x1, 4-pin |
| Protection against short circuit | No |
| Protection against polarity reversal | No |
| Protection class to EN 60 529 | IP65 |
| CE symbol | 89/336/EEC (EMC) Yes |
| Design | |
| Design | Hall sensor for grippers |
| Type of mounting | Screwed to gripper |
| Cable length | [m] 0.5 |
| Materials | Housing Polyamide Cable sheath Polyurethane |
| Note on material | Free of copper, PTFE and silicone |
| Product weight | [g] 20 (30) ¹⁾ |

1) Weight in brackets applies to SMH-S1-HGD16

| Operating and environmental conditions | |
|--|----------------|
| Electrical connection | Cable |
| Ambient temperature | [°C] 5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 2 |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Proximity sensors SMH, for grippers

Technical data – Magnetic Hall measuring principle



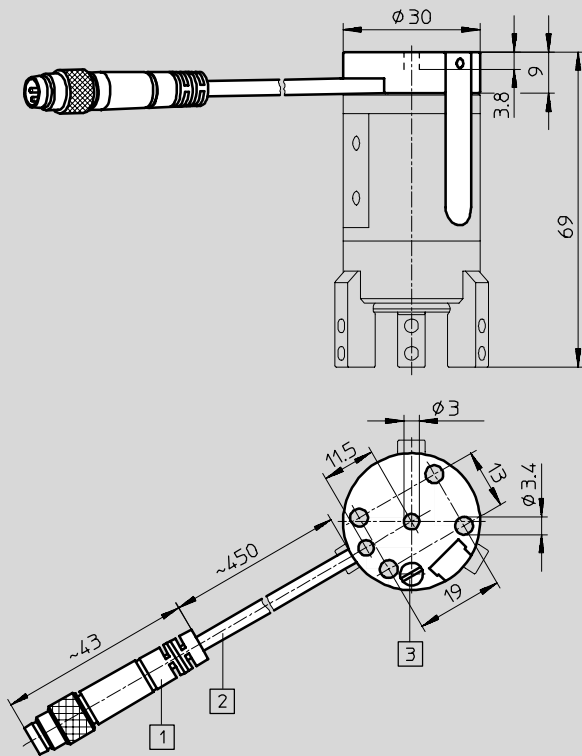
Drive accessories
Cylinder sensors

10.2

Dimensions

Download CAD data → www.festo.com/en/engineering

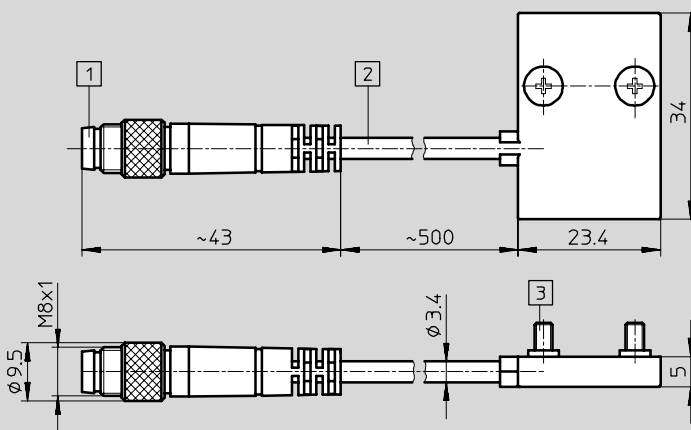
SMH-S1-HGD16



- 1 Plug suitable for plug socket with cable KSMH-1-M8-2-M8 or evaluation unit SMH-AE1-...
- 2 Connecting cable
- 3 Mounting screw

SMH-S1-HGR10

SMH-S1-HGW10



- 1 Plug suitable for plug socket with cable KSMH-1-M8-2-M8 or evaluation unit SMH-AE1-...
- 2 Connecting cable
- 3 Mounting screw

Proximity sensors SMH, for grippers

Technical data – Magnetic Hall measuring principle



Dimensions Download CAD data → www.festo.com/en/engineering

SMH-S1-HGP06

1 Plug suitable for plug socket with cable KSMH-1-M8-2-M8 or evaluation unit SMH-AE1-...
 2 Connecting cable
 3 Mounting screw

SMH-S1-HGPP-...

1 Plug suitable for plug socket with cable KSMH-1-M8-2-M8 or evaluation unit SMH-AE1-...
 2 Connecting cable
 3 Clip for lateral cable exit

| Type | L1 | L2 | L3 |
|------------------|-----|------|------|
| SMH-S1-HGPP10/12 | 8.6 | 29.5 | 31.2 |
| SMH-S1-HGPP16 | 9.1 | 36.4 | 38.6 |
| SMH-S1-HGPP20/25 | 9.1 | 39.5 | 41.7 |
| SMH-S1-HGPP32 | 9.1 | 46.9 | 49 |

| Ordering data | | |
|---------------------|----------|------------------|
| Associated grippers | Part No. | Type |
| HGD-16-A | 175 713 | SMH-S1-HGD16 |
| HGP-06-A | 175 710 | SMH-S1-HGP06 |
| HGR-10-A | 175 712 | SMH-S1-HGR10 |
| HGW-10-A | 175 711 | SMH-S1-HGW10 |
| HGPP-10-... | 189 040 | SMH-S1-HGPP10/12 |
| HGPP-12-... | | |
| HGPP-16-... | 189 041 | SMH-S1-HGPP16 |
| HGPP-20-... | 189 042 | SMH-S1-HGPP20/25 |
| HGPP-25-... | | |
| HGPP-32-... | 526 895 | SMH-S1-HGPP32 |

Proximity sensors SMH, for grippers

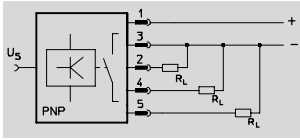
Technical data – Evaluation unit



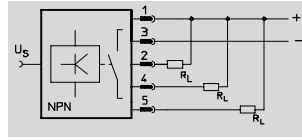
Evaluation unit SMH-AE1-...

Function

PNP



NPN



| General technical data | | |
|-------------------------------|-----------------------------------|-------------------------|
| Electrical data | | |
| Switch output | PNP | NPN |
| Electrical connection | Plug M12x1, 5-pin | |
| Sensor connection | 4-pin | |
| Operating voltage range | [V DC] | 12 ... 30 |
| Protection class to EN 60 529 | IP53 | |
| CE symbol | 89/336/EEC (EMC) | Yes |
| Design | | |
| Type of mounting | Via through holes | |
| Switching status display | Yellow LED | |
| Ready status display | Green LED | |
| Mounting position | Any | |
| Materials | Housing | Wrought aluminium alloy |
| Note on material | Free of copper, PTFE and silicone | |

| Operating and environmental conditions | | |
|--|-------|-----------|
| Electrical connection | Cable | |
| Ambient temperature | [°C] | 5 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 2 | |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

| Terminal allocation | | | |
|---------------------|------------|--------|---------------------------------------|
| | Connection | Symbol | Meaning |
| | 1 | — | 0 V DC |
| | 2 | | Large object gripped |
| | 3 | — | 24 V DC |
| | 4 | | Small object gripped |
| | 5 | | Gripper closed (no object gripped) |

Proximity sensors SMH, for grippers

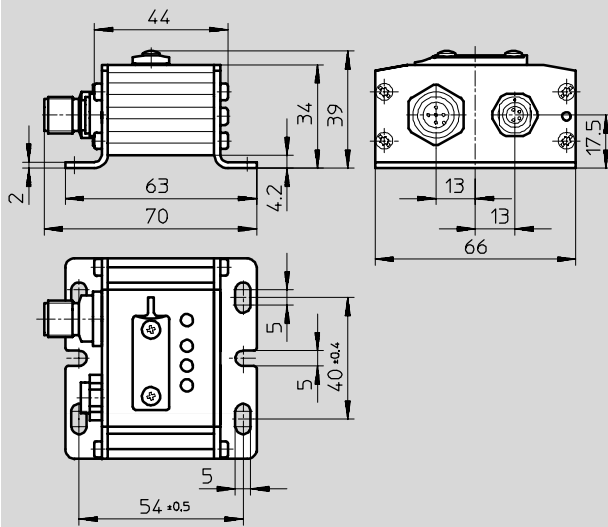
Technical data – Evaluation unit

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

SMH-AE1-...



Ordering data

| Switch output | Part No. | Type |
|---------------|----------|-----------------|
| PNP | 175 708 | SMH-AE1-PS3-M12 |
| NPN | 175 709 | SMH-AE1-NS3-M12 |

Drive accessories
Cylinder sensors

10.2

Proximity sensors SMH, for grippers

Accessories



Connecting cable M8x1 KSMH-1-M8-2-M8

Material:
Housing: Polyurethane
Cable sheath: Polyurethane
Free of copper, PTFE and silicone



| Ordering data | | Technical data → 2 | |
|------------------|-------------------|--------------------|----------------|
| Cable length [m] | CRC ¹⁾ | Part No. | Type |
| Straight socket | | | |
| 2 | 2 | 175 714 | KSMH-1-M8-2-M8 |

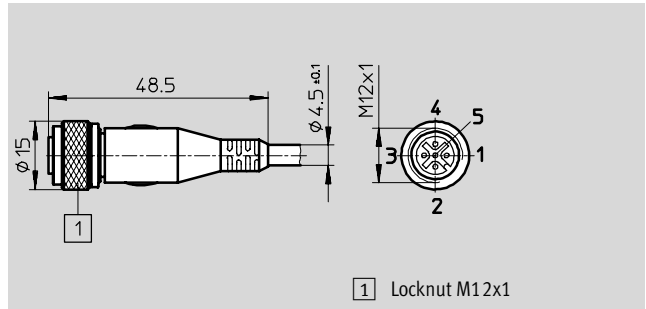
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Drive accessories
Cylinder sensors

10.2

Plug socket with cable M12x1 SIM-M12-5GD-...

Material:
Housing: Polyurethane
Cable sheath: Polyurethane



| Ordering data | | Technical data → 2 | |
|------------------|-------------------|--------------------|--------------------|
| Cable length [m] | CRC ¹⁾ | Part No. | Type |
| Straight socket | | | |
| 2.5 | 2 | 175 715 | SIM-M12-5GD-2,5-PU |
| 5 | 2 | 175 716 | SIM-M12-5GD-5-PU |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Sensor tester SM-TEST-1

Technical data

Description

The sensor tester is used to test and adjust sensors and proximity switches. The sensor tester facilitates commissioning and servicing work.

Functions:

- Testing of operation of proximity sensors using the integrated voltage supply
- Adjustment of proximity switches whilst attached to cylinders
- Identification of switching outputs of proximity switches and sensors with PNP, NPN, NC and NO functions by means of the appropriate LED



- 1 Terminal strip for connecting cable
- 2 LED for battery check
- 3 Magnet for testing of proximity sensors
- 4 LED for indicating switching status
- 5 On-off button

Ordering data – Sensor tester

| Part No. | Type |
|----------|-----------|
| 158 481 | SM-TEST-1 |

-  - Note

The tester is powered by two 9 V block batteries, which are not included in the scope of delivery.

Proximity sensors

Accessories



Plug socket with cable M8

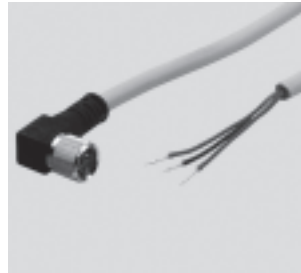
SIM-M8-3GD-...

SIM-M8-3WD-...

Material:

Housing: Polyurethane

Cable sheath: Polyurethane



| Ordering data | | | | | | |
|-----------------|-----|-----------------------------------|------------------|------------|----------|-----------------------|
| Switch output | | Switching status display with LED | Cable length [m] | Weight [g] | Part No. | Type |
| PNP | NPN | | | | | |
| Straight socket | | | | | | |
| ■ | ■ | - | 2.5 | 79 | 159 420 | SIM-M8-3GD-2,5-PU |
| ■ | ■ | - | 5 | 150 | 159 421 | SIM-M8-3GD-5-PU |
| ■ | ■ | - | 10 | 284 | 192 964 | SIM-M8-3GD-10-PU |
| Angled socket | | | | | | |
| ■ | ■ | - | 2.5 | 81 | 159 422 | SIM-M8-3WD-2,5-PU |
| ■ | ■ | - | 5 | 146 | 159 423 | SIM-M8-3WD-5-PU |
| ■ | ■ | - | 10 | 283 | 192 965 | SIM-M8-3WD-10-PU |
| - | ■ | ■ | 2.5 | 80 | 159 426 | SIM-M8-3WD-2,5-NSL-PU |
| - | ■ | ■ | 5 | 150 | 159 427 | SIM-M8-3WD-5-NSL-PU |
| ■ | - | ■ | 2.5 | 83 | 159 424 | SIM-M8-3WD-2,5-PSL-PU |
| ■ | - | ■ | 5 | 143 | 159 425 | SIM-M8-3WD-5-PSL-PU |

Plug socket with cable M12

SIM-M12-3GD-...

SIM-M12-3WD-...

Material:

Housing: Polyurethane

Cable sheath: Polyurethane



| Ordering data | | | | | | | |
|-----------------|-----|-----------------------------------|----------------------|------------------|------------|----------|------------------------|
| Switch output | | Switching status display with LED | Welding field immune | Cable length [m] | Weight [g] | Part No. | Type |
| PNP | NPN | | | | | | |
| Straight socket | | | | | | | |
| ■ | ■ | - | - | 2.5 | 85 | 159 428 | SIM-M12-3GD-2,5-PU |
| ■ | ■ | - | - | 5 | 151 | 159 429 | SIM-M12-3GD-5-PU |
| ■ | ■ | - | ■ | 3 | 131 | 30 450 | SIM-M12-RS-3GD-3 |
| Angled socket | | | | | | | |
| ■ | ■ | - | - | 2.5 | 87 | 159 430 | SIM-M12-3WD-2,5-PU |
| ■ | ■ | - | - | 5 | 155 | 159 431 | SIM-M12-3WD-5-PU |
| - | ■ | ■ | - | 2.5 | 88 | 159 434 | SIM-M12-3WD-2,5-NSL-PU |
| - | ■ | ■ | - | 5 | 155 | 159 435 | SIM-M12-3WD-5-NSL-PU |
| ■ | - | ■ | - | 2.5 | 86 | 159 432 | SIM-M12-3WD-2,5-PSL-PU |
| ■ | - | ■ | - | 5 | 158 | 159 433 | SIM-M12-3WD-5-PSL-PU |
| ■ | ■ | - | ■ | 3 | 138 | 30 451 | SIM-M12-RS-3WD-3 |

Core Range