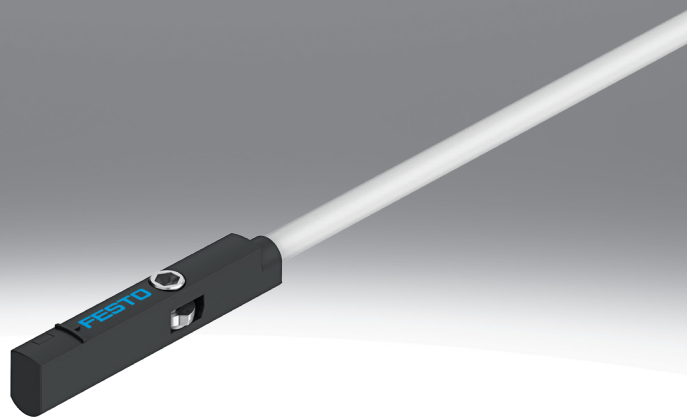


Proximity switch SMT-10M

FESTO



Characteristics

Product segmentation



Festo Core Range

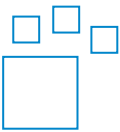
Solves the majority of your automation tasks

With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery. The Core Range offers you the best value with the expected high Festo quality.

Quickest delivery, worldwide – wherever, whenever

- Expected high Festo quality
- Easy and fast to select

Ordering data - modular system



Configurable product

This product and all its product options can be ordered online via the configurator.

Type code

| | | |
|------------|---|--|
| 001 | Series | |
| SMT | Proximity sensor | |
| 002 | Design type | |
| 10M | For C-slot, inserted in slot from above | |
| 003 | Switching output | |
| NS | 3-wire NPN N/O contact | |
| PS | 3-wire PNP N/O contact | |
| ZS | 2-wire PNP N/O contact | |
| 004 | Rated operating voltage | |
| 24V | 24 V | |
| 005 | Cable characteristic | |
| E | Suitable for energy chains/robot applications | |

| | | |
|------------|------------------------------|--|
| 006 | Cable length [m] | |
| | 0.2 ... 30 m | |
| 0,3 | 0.3 m | |
| 2,5 | 2.5 m | |
| 007 | Display | |
| L | LED | |
| 008 | Cable outlet | |
| Q | Transverse | |
| L | Longitudinal | |
| 009 | Cable identification | |
| | With label holder | |
| N | Without label holder | |
| 010 | Connection technology | |
| OE | Open end | |
| M8 | M8, snap-on flange | |
| M8D | M8, rotatable thread | |
| M12 | M12, rotatable thread | |

Datasheet

| General technical data | | | |
|--|--|----------------------------------|---------------------------|
| Electrical connection 1, connector system | M12x1, A-coded to EN 61076-2-101 | M8x1, A-coded, to EN 61076-2-104 | Open end |
| Design | For C-slot | | |
| Conforms to standard | EN 60947-5-2 | | |
| Approval | RCM trademark | | |
| KC mark ¹⁾ | – | | |
| KC Approval No. EMC/Radio ²⁾ | – | | |
| CE mark (see declaration of conformity) ³⁾ | To EU EMC Directive, In accordance with EU RoHS Directive | | |
| CE marking (see declaration of conformity) ⁴⁾ | To UK instructions for EMC, To UK RoHS instructions | | |
| Special characteristics | Oil resistant | | |
| Note on materials | RoHS-compliant, Free of halogen | | |
| Instructions on use | https://www.festo.com/Drive-Sensor-Overview | | |
| LABS (PWIS) conformity | VDMA24364-B2-L | | |
| Suitability for the production of Li-ion batteries | Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils | | |
| Cleanroom class | Class 4 according to ISO 14644-1 | | |
| Corrosion resistance class CRC | 2 - Moderate corrosion stress | | 3 - high corrosion stress |

1) Only for SMT-10M-PS-24V-E-0.3-L-M12

2) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/smt → Support/Downloads.

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

3) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/smt → Support/Downloads.

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

4) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/smt → Support/Downloads.

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

| Input signal/measuring element | |
|---------------------------------------|-------------------|
| Measured variable | Position |
| Measuring principle | Magneto-resistive |
| Ambient temperature | -40 ... 70°C |
| Ambient temperature with moving cable | -20 ... 70°C |

| Switching output | | | |
|--|--|--|------------------------|
| Switching output | NPN | PNP | Non-contacting, 2-wire |
| Electrical connection 1, connector system | M8x1, A-coded, to EN 61076-2-104, Open end | M12x1, A-coded to EN 61076-2-101, M8x1, A-coded, to EN 61076-2-104, Open end | Open end |
| Switching element function | N/O contact | | |
| Repetition accuracy | 0.2 mm | | |
| Switch-on time | ≤1.3 ms | | ≤1 ms |
| Switch-off time | 4.2 ... 7.3 ms | | ≤1 ms |
| Max. switching frequency | 130 Hz | | 150 Hz |
| Max. output current | 100 mA | | |
| Max. output current using mounting kits | 50 mA | | |
| Max. switching capacity DC | 2.8 W | | 2.4 W |
| Max. switching capacity DC using mounting kits | 1.5 W | | 1.2 W |
| Voltage drop | ≤1.5 V | ≤1.7 V | ≤6 V |

| Output, additional data | |
|------------------------------|-----------|
| Short circuit current rating | yes |
| Overload protection | Available |

| Electronics | | | |
|------------------------------|--------------------------------|-----|---|
| Switching output | NPN | PNP | NPN, PNP, Non-contacting, 2-wire Non-contacting, 2-wire |
| Rated operational voltage DC | 24 V | | |
| Operational voltage range DC | 5 ... 30 V | | 7 ... 30 V |
| Reverse polarity protection | For all electrical connections | | |

Datasheet

| Electromechanics | | |
|--|--|--|
| Electrical connection 1, connection type | Cable | Cable with plug |
| Electrical connection 1, connector system | Open end | M12x1, A-coded to EN 61076-2-101, M8x1, A-coded, to EN 61076-2-104 |
| Electrical connection 1, number of connections/cores | 2, 3 | 3 |
| Electrical connection 1, type of mounting | – | Screw-type lock |
| Connection outlet orientation | In-line, Lateral | |
| Test conditions cable | Bending strength: to Festo standard, Test conditions on request, Torsional resistance: > 300,000 cycles, $\pm 270^\circ/0.1$ m, Energy chain: > 5 million cycles, bending radius 28 mm | |
| Cable length | 2.5 m | 0.3 m |
| Cable characteristic | Suitable for energy chains/robot applications | |

| Mechanics | |
|------------------------|--|
| Type of mounting | Screw-clamped, Insertable in the slot from above |
| Max. tightening torque | 0.4 Nm |
| Mounting position | optional |
| Material housing | PA-reinforced, High-alloy stainless steel |
| Material cable sheath | TPE-U(PUR) |

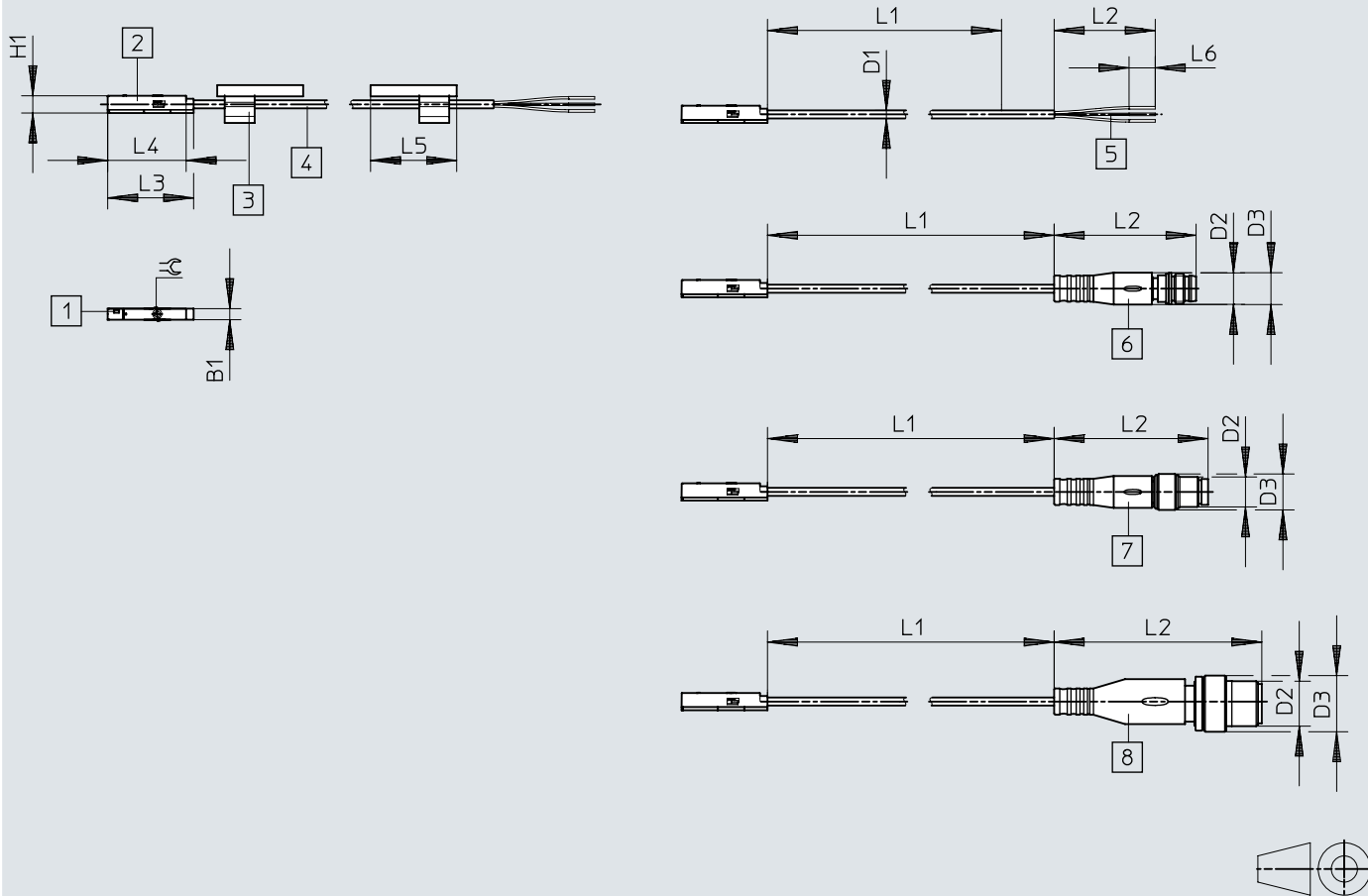
| Display/operation | |
|-----------------------------|------------|
| Switching status indication | Yellow LED |

| Immission/emission | |
|---------------------------------------|--------------|
| Ambient temperature with moving cable | -20 ... 70°C |
| Degree of protection | IP65, IP68 |

Dimensions

Dimensions – SMT-10M-...-L, outlet direction lengthwise connection

Download CAD data → www.festo.com



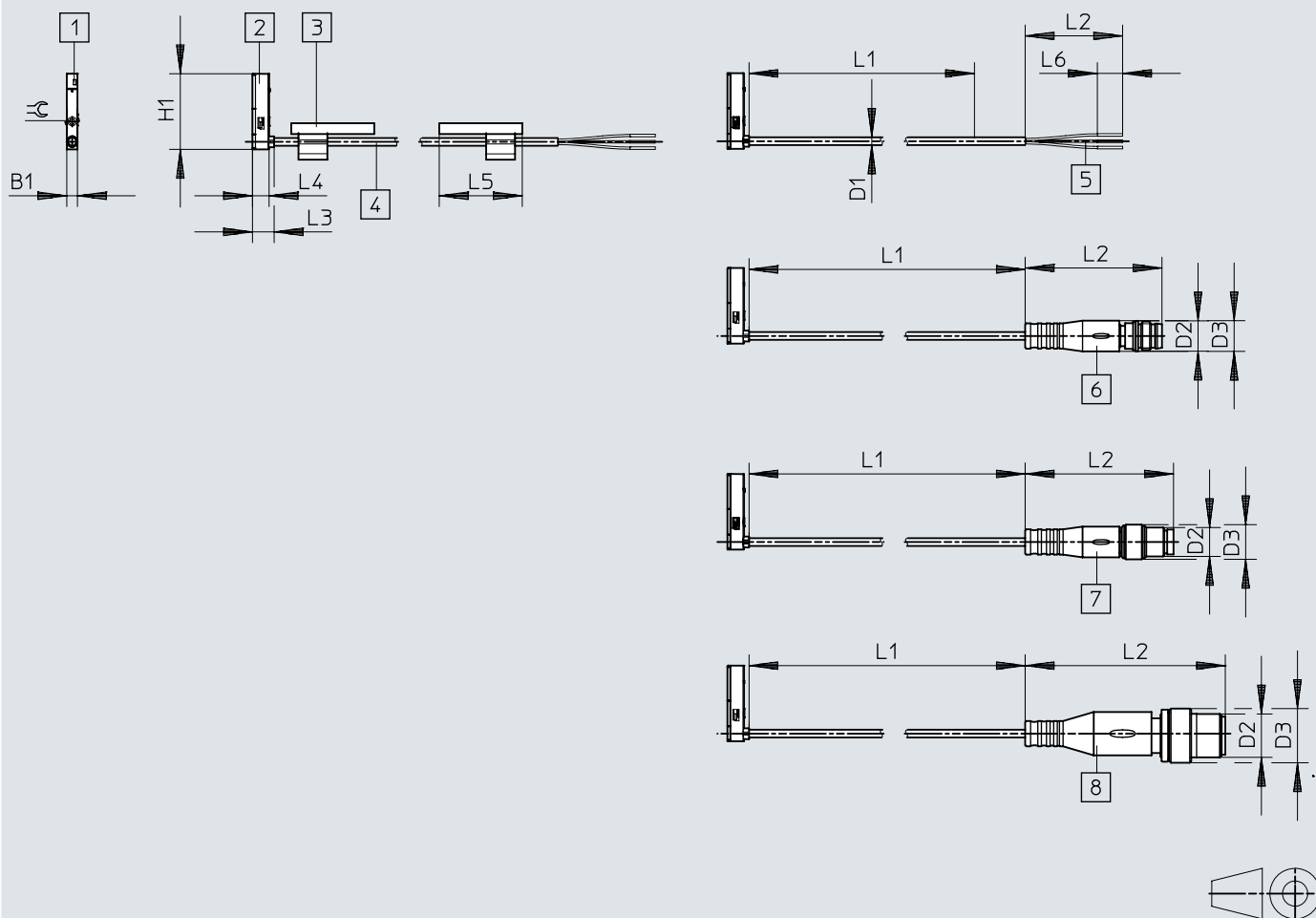
- [1] Yellow light emitting diode
- [2] SMT-10M
- [3] Inscription label holder
- [4] Connecting cables
- [5] Cable open end
- [6] Plug M8x1, snap collar
- [7] Plug M8x1, rotatable thread
- [8] Plug M12x1
- [9] L1 cable length

| | B1 | D1 ∅ | D2 | D3 ∅ | H1 | L2 | L3 | L4 | L5 | L6 | L7 | ⊕ |
|-----------------|-----|---------|-------|---------|-----|------|------|------|----|----|----|-----|
| SMT-10M-...-OE | 2,9 | 2,15 | - | - | 4,6 | 50 | 22,9 | 20,9 | 23 | 50 | 7 | 1,5 |
| SMT-10M-...-M8D | | | M8x1 | 8,5 | | 32,7 | | | | | - | |
| SMT-10M-...-M8 | | | M8x1 | 9,6 | | 41,1 | | | | | - | |
| SMT-10M-...-M12 | | | M12x1 | 15 | | 55,5 | | | | | - | |

Dimensions

Dimensions – SMT-10M-...-Q, outlet direction lateral connection

Download CAD data → www.festo.com



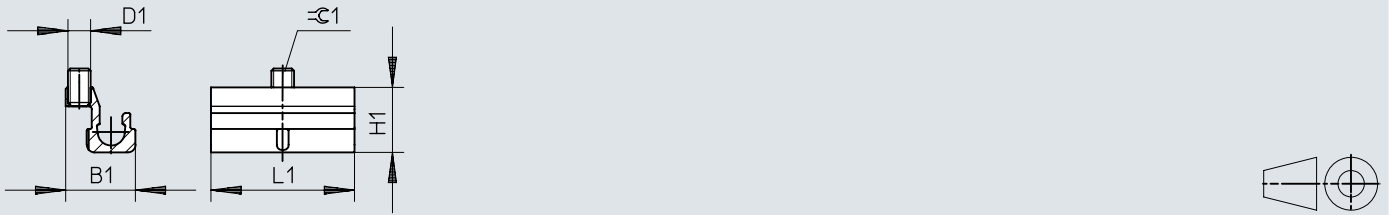
- [1] Yellow light emitting diode
- [2] SMT-10M
- [3] Inscription label holder
- [4] Connecting cables
- [5] Cable open end
- [6] Plug M8x1, snap collar
- [7] Plug M8x1, rotatable thread
- [8] Plug M12x1
- [9] L1 cable length

| | B1 | D1 ∅ | D2 | D3 ∅ | H1 | L2 | L3 | L4 | L5 | L6 | L7 | ⊕ |
|-----------------|-----|---------|-------|---------|------|------|----|-----|----|----|----|-----|
| SMT-10M-...-OE | 2,9 | 2,15 | - | - | 20,9 | 50 | 6 | 4,6 | 23 | 50 | 7 | 1,5 |
| SMT-10M-...-M8D | | | M8x1 | 8,5 | | 32,7 | | | | | - | |
| SMT-10M-...-M8 | | | M8x1 | 9,6 | | 41,1 | | | | | - | |
| SMT-10M-...-M12 | | | M12x1 | 15 | | 55,5 | | | | | - | |

Dimensions

Dimensions – Mounting SMBN-10

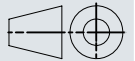
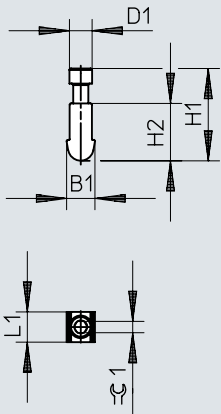
Download CAD data → www.festo.com



| | D1 | B1 | H1 | L1 | ∅ |
|---------|----|-----|-----|----|-----|
| SMBN-10 | M3 | 9,3 | 8,6 | 19 | 1,5 |


Dimensions

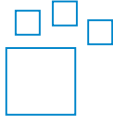
Dimensions – Positioning element SMM

Download CAD data → www.festo.com

| | B1 | D1 | H1 | H2 | L1 | $\varnothing 1$ |
|--------|------|-----|-------|-----|-----|-----------------|
| SMM-10 | 3,75 | 3,0 | 12,23 | 7,6 | 4,0 | 1,5 |

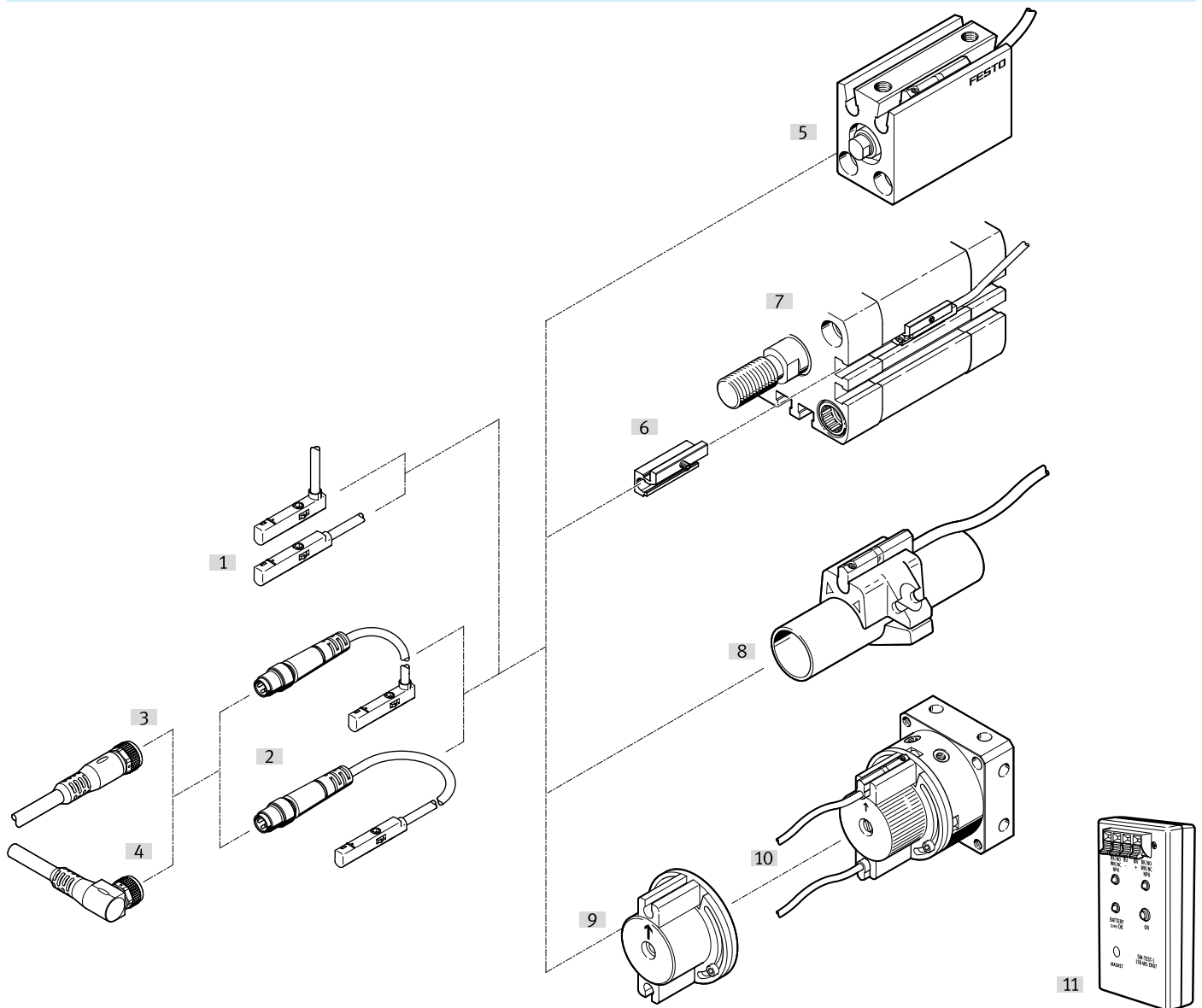
Ordering data

| Ordering data | | | | | |
|--|---------------------------|--------------|----------------|---------------------------|----------------------------|
| | Switching output | Cable length | Product weight | Part no. | Type |
|  | NPN | 0.3 m | 6.7 g | 551380 | SMT-10M-NS-24V-E-0,3-Q-M8D |
| | | 2.5 m | 16.8 g | ★ 551379 | SMT-10M-NS-24V-E-0,3-L-M8D |
| | | | | ★ 551377 | SMT-10M-NS-24V-E-2,5-L-OE |
| | | | | 551378 | SMT-10M-NS-24V-E-2,5-Q-OE |
| | PNP | 0.3 m | 6.7 g | ★ 551375 | SMT-10M-PS-24V-E-0,3-L-M8D |
| | | | | 551376 | SMT-10M-PS-24V-E-0,3-Q-M8D |
| | | 2.5 m | 16.8 g | 8152201 | SMT-10M-PS-24V-E-0,3-L-M12 |
| | | | | 551374 | SMT-10M-PS-24V-E-2,5-Q-OE |
| | Non-contacting, 2-wire | 14.6 g | ★ 551373 | SMT-10M-PS-24V-E-2,5-L-OE | |
| | | | 551383 | SMT-10M-ZS-24V-E-2,5-Q-OE | |
| ★ 551382 | SMT-10M-ZS-24V-E-2,5-L-OE | | | | |

| Ordering data – Modular product system | | | | |
|--|------------|----------------------------------|----------|---------|
| | Design | Switching output | Part no. | Type |
|  | For C-slot | NPN, PNP, Non-contacting, 2-wire | 551372 | SMT-10M |

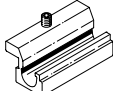
Peripherals

Peripherals overview

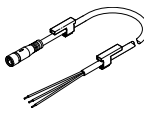


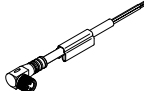
| Accessories | | | → Page/Internet |
|---------------------------------------|--|--|-----------------|
| Type/order code | Description | | |
| [1] Proximity switch SMT-10M-...-OE | Can be inserted into the slot from above, flush with the cylinder profile, with cable | | smt-10m |
| [2] Proximity switch SMT-10M-...-M... | Can be inserted into the slot from above, flush with the cylinder profile, with cable and plug | | smt-10m |
| [3] Connecting cables NEBU-M...G... | - | | 12 |
| [4] Connecting cables NEBU-M...W... | - | | |
| [5] Drives with round slot | - | | - |
| [6] Mounting kit SMBN-10 | For mounting proximity switches on drives with T-slot | | 12 |
| [7] Drives with T-slot | - | | - |
| [8] Round cylinder | - | | - |
| [9] Mounting kit WSM-...-SME-10 | Mounting kit for mounting proximity switches on semi-rotary drive DSM | | 12 |
| [10] Semi-rotary drive DSM-B | - | | dsm |
| [11] Sensor tester SM-TEST-1 | Checking the function of proximity switches using the built-in voltage source. Adjusting proximity switches on the cylinder. | | 13 |

Accessories


| Mounting kit SMBN-10 | | | |
|--|------|----------|---------|
| | Size | Part no. | Type |
|  | 10 | 537809 | SMBN-10 |

| Positioning element SMM | | | |
|--|-------------------|----------|--------|
| | Note on materials | Part no. | Type |
|  | RoHS-compliant | 547942 | SMM-10 |

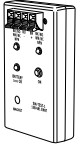
| Connecting cable NEBU, connection straight | | | | | | |
|--|---|---------------------------------------|--|------------------|----------|---------------------|
| | Connection technology left, field device side | Electrical connection 1, cable outlet | Connection technology right, controller side | Cable length [m] | Part no. | Type |
|  | Socket M8x1 A-coded, EN 61076-2-104 | Straight | Open end | 2.5 m | 541333 | NEBU-M8G3-K-2.5-LE3 |
| | | | | 5 m | 541334 | NEBU-M8G3-K-5-LE3 |


| Connecting cable NEBU, angled connection | | | | | | |
|--|---|---------------------------------------|--|------------------|----------|---------------------|
| | Connection technology left, field device side | Electrical connection 1, cable outlet | Connection technology right, controller side | Cable length [m] | Part no. | Type |
|  | Socket M8x1 A-coded, EN 61076-2-104 | Angled | Open end | 2.5 m | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | | | 5 m | 541341 | NEBU-M8W3-K-5-LE3 |

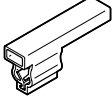
| Mounting kit for semi-rotary drive DSM | | | |
|--|------|----------|---------------|
| | Size | Part no. | Type |
|  | 10 | 173206 | WSM-8-SME-10 |
| | | 173207 | WSM-10-SME-10 |
| | | 173205 | WSM-6-SME-10 |

| Mounting component SMBK-10 | | | | |
|--|------------|-------------------|----------|---------|
| | Design | Type of mounting | Part no. | Type |
|  | For C-slot | Clamped in C-slot | 534255 | SMBK-10 |

Accessories

| Sensor tester | | | |
|---|--|---------------|------------------|
| | Description | Part no. | Type |
|  | Adjusting proximity switches on the cylinder, Checking the function of proximity switches with the help of the built-in voltage source | 158481 | SM-TEST-1 |

| Inscription labels | | | |
|---|---------|---------------|-------------------|
| | Size | Part no. | Type |
|  | 4x23 mm | 541598 | ASLR-L-423 |

| Inscription label holder | | | | | | |
|---|--------|--------|---------|--------------|----------------|------------------|
| | Length | Width | Height | Size of pack | Part no. | Type |
|  | 23 mm | 5.4 mm | 10.1 mm | 100 | 8078305 | NEAU-LH-1 |