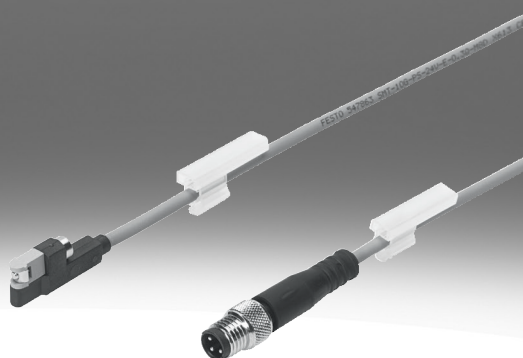


## Proximity switch SMT-10G

**FESTO**



Type code

|     |                                                 |  |
|-----|-------------------------------------------------|--|
| 001 | Series                                          |  |
| SMT | Proximity sensor                                |  |
| 002 | Design type                                     |  |
| 10G | For round slot, inserted in the slot lengthwise |  |
| 003 | Switching output                                |  |
| NS  | 3-wire NPN N/O contact                          |  |
| PS  | 3-wire PNP N/O contact                          |  |
| 004 | Rated operating voltage                         |  |
| 24V | 24 V                                            |  |

|     |                                               |  |
|-----|-----------------------------------------------|--|
| 005 | Cable characteristic                          |  |
| E   | Suitable for energy chains/robots             |  |
| 006 | Cable length [m]                              |  |
| 0,3 | 0.3 m                                         |  |
| 2,5 | 2.5 m                                         |  |
| 007 | Cable outlet                                  |  |
| Q   | Transverse                                    |  |
| 008 | Electrical connection                         |  |
| M8D | Cable with M8x1 plug, 3-pin, rotatable thread |  |
| OE  | Open end                                      |  |

# Datasheet

| General technical data                                     |                                                                                                       |                           |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------|
| Electrical connection 1, connector system                  | M8x1, A-coded, to EN 61076-2-104                                                                      | Open end                  |
| Design                                                     | For C-slot                                                                                            |                           |
| Based on standard                                          | EN 60947-5-2                                                                                          |                           |
| Approval                                                   | RCM trademark, c UL us listed (OL)                                                                    |                           |
| CE mark (see declaration of conformity) <sup>1)</sup>      | To EU EMC Directive, In accordance with EU RoHS Directive                                             |                           |
| UKCA marking (see declaration of conformity) <sup>2)</sup> | To UK instructions for EMC, To UK RoHS instructions                                                   |                           |
| Instructions on use                                        | <a href="https://www.festo.com/Drive-Sensor-Overview">https://www.festo.com/Drive-Sensor-Overview</a> |                           |
| Certificate issuing authority                              | UL E232949                                                                                            |                           |
| Suitability for the production of Li-ion batteries         | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                                    |                           |
| Note on materials                                          | RoHS-compliant                                                                                        |                           |
| Cleanroom suitability, measured according to ISO 14644-14  | Element installed statically, no meaningful evaluation possible according to ISO 14644-1              |                           |
| LABS (PWIS) conformity                                     | VDMA24364-B2-L                                                                                        |                           |
| Corrosion resistance class CRC <sup>3)</sup>               | 2 - Moderate corrosion stress                                                                         | 3 - high corrosion stress |

1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/smt](http://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 reducing the emitted interference may be necessary.

2) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/smt](http://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) More information visit [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

| Input signal/measuring element        |                   |
|---------------------------------------|-------------------|
| Measured variable                     | Position          |
| Measuring principle                   | Magneto-resistive |
| Ambient temperature                   | -20 ... 70°C      |
| Ambient temperature with moving cable | -5 ... 70°C       |

| Switching output             |                             |          |
|------------------------------|-----------------------------|----------|
| Switching output             | NPN                         | PNP      |
| Switching element function   | N/O contact                 |          |
| Voltage drop                 | ≤2 V                        |          |
| Inductive protective circuit | Adapted to MZ, MY, ME coils |          |
| Max. output current          | 100 mA                      |          |
| Off-state current            | ≤0.15 mA                    | ≤0.01 mA |
| Switch-on time               | ≤1 ms                       |          |
| Switch-off time              | ≤1 ms                       |          |
| Max. switching frequency     | 150 Hz                      |          |
| Repetition accuracy          | 0.2 mm                      |          |
| Max. switching capacity DC   | 2.8 W                       |          |

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

| Electronics                  |                                |
|------------------------------|--------------------------------|
| Operational voltage range DC | 10 ... 30 V                    |
| Rated operational voltage DC | 24 V                           |
| Residual ripple              | 10%                            |
| 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                                                                                                                                                                             | M8x1, A-coded, to EN 61076-2-104                                        |
| Electrical connection 1, number of connections/cores | 3                                                                                                                                                                                    |                                                                         |
| Electrical connection 1, type of mounting            | –                                                                                                                                                                                    | Screw-type lock with hexagon A/F 9 mm and longitudinal knurl, Rotatable |
| Electrical connection 1, compatible type of mounting | –                                                                                                                                                                                    | Compatible with rotatable/non-rotatable screw-type lock                 |
| Connection outlet orientation                        | Lateral                                                                                                                                                                              |                                                                         |
| Test conditions cable                                | Bending strength: to Festo standard, Test conditions on request, Torsional strength: > 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                                                                                                                                        |                                                                         |
| Material cable sheath                                | TPE-U(PU)                                                                                                                                                                            |                                                                         |
| Cable sheath colour                                  | Grey                                                                                                                                                                                 |                                                                         |
| Material electrical contact                          | –                                                                                                                                                                                    | Gold-plated brass                                                       |
| Wire ends                                            | Wire ferrule                                                                                                                                                                         | –                                                                       |

**Mechanical system**

|                                           |                                                      |          |
|-------------------------------------------|------------------------------------------------------|----------|
| Electrical connection 1, connector system | M8x1, A-coded, to EN 61076-2-104                     | Open end |
| Type of mounting                          | Clamped in C-slot, Insertable in the slot lengthwise |          |
| Max. tightening torque                    | 0.6 Nm                                               |          |
| Mounting position                         | optional                                             |          |
| Material housing                          | Aluminium, PA-reinforced, High-alloy stainless steel |          |
| Housing colour                            | Black                                                |          |
| Product weight                            | 10 g                                                 | 30 g     |

**Display/operation**

|                             |            |
|-----------------------------|------------|
| Switching status indication | Yellow LED |
|-----------------------------|------------|

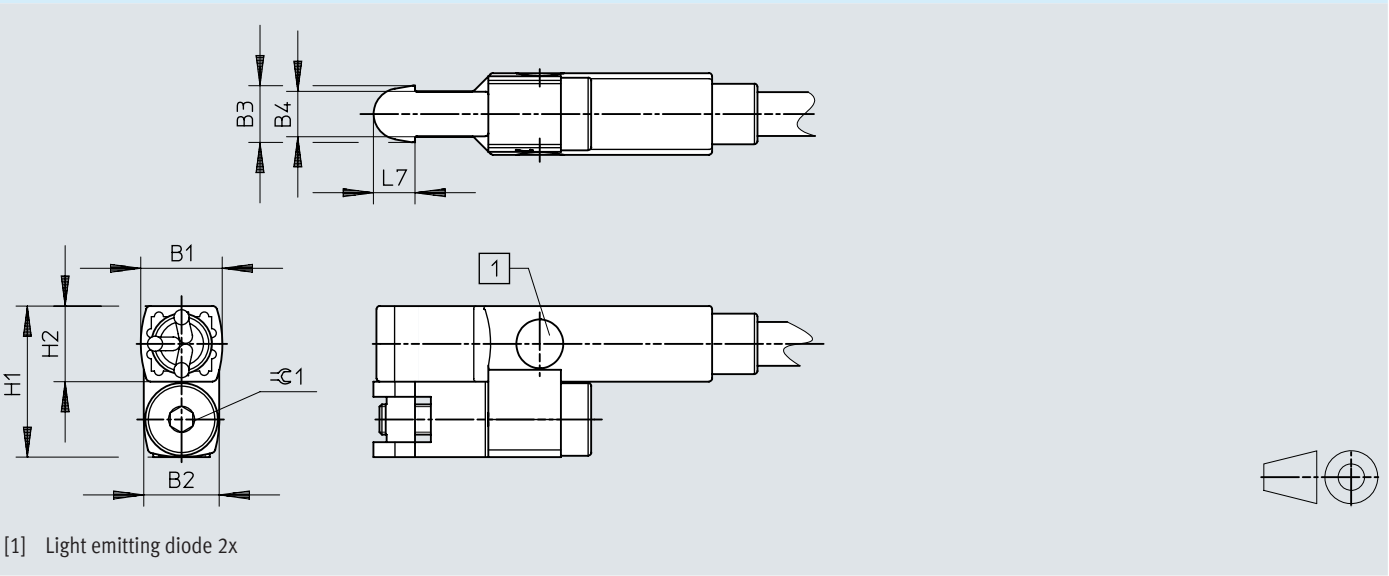
**Immission/emission**

|                                                           |                                                                                          |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------|
| Ambient temperature with moving cable                     | -5 ... 70°C                                                                              |
| Degree of protection                                      | IP65, IP68                                                                               |
| Suitability for the production of Li-ion batteries        | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                       |
| Cleanroom suitability, measured according to ISO 14644-14 | Element installed statically, no meaningful evaluation possible according to ISO 14644-1 |

Dimensions

Dimensions – SMT-10G

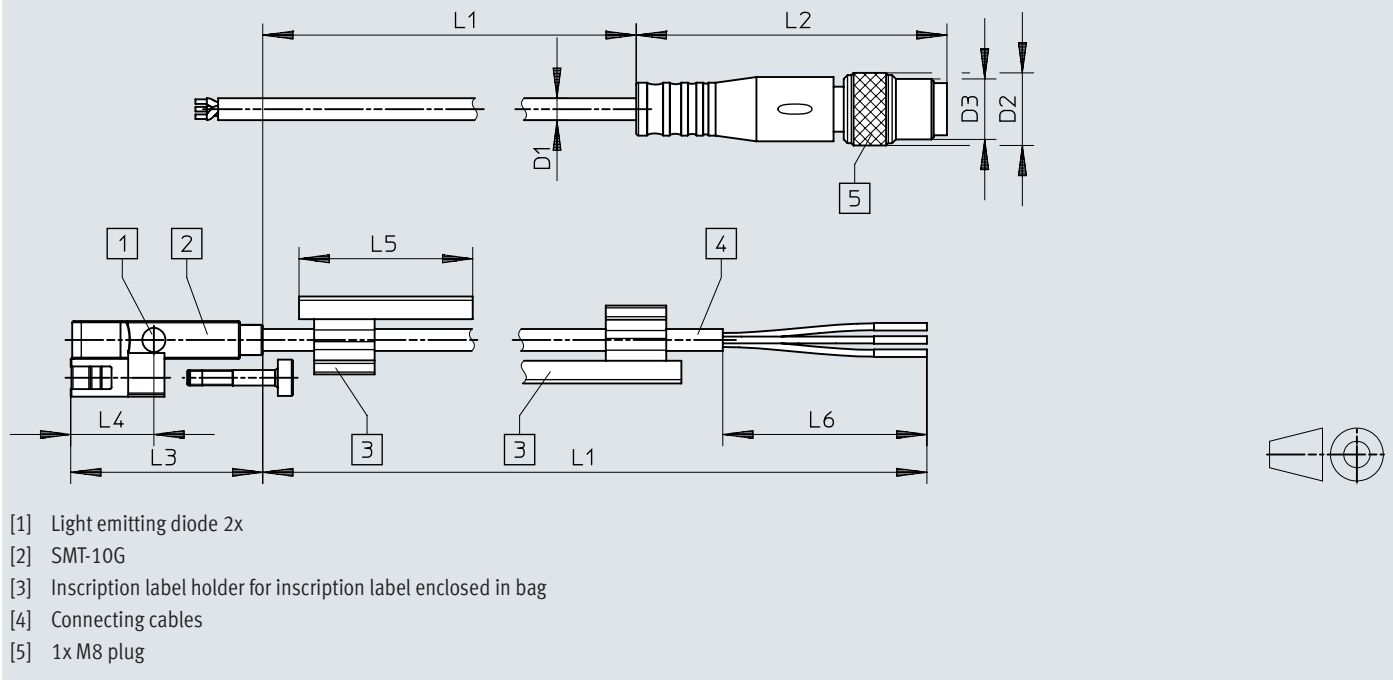
Download CAD data [www.festo.com](http://www.festo.com)



|                    | B1  | B2 | B3  | B4 | H1 | H2 | L7  | ≡   |
|--------------------|-----|----|-----|----|----|----|-----|-----|
| SMT-10G-PS-...-OE  | 5,4 | 5  | 3,8 | 3  | 10 | 5  | 2,8 | 1,5 |
| SMT-10G-PS-...-M8D |     |    |     |    |    |    |     |     |
| SMT-10G-NS-...-OE  |     |    |     |    |    |    |     |     |
| SMT-10G-NS-...-M8D |     |    |     |    |    |    |     |     |

Dimensions

Dimensions – Proximity switch SMT-10G Download CAD data [www.festo.com](http://www.festo.com)

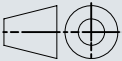
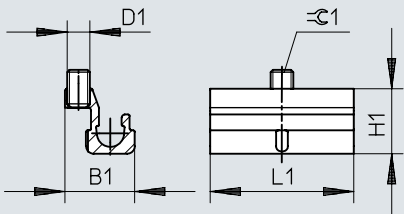


|                    | D1<br>ø | D2<br>ø | D3   | L1        | L2<br>±0,4 | L3<br>±0,15 | L4   | L5 | L6<br>±5 |
|--------------------|---------|---------|------|-----------|------------|-------------|------|----|----------|
| SMT-10G-PS-...-OE  | 2,9     | –       | –    | 2500 + 70 | –          | 25,2        | 10,8 | 23 | 50       |
| SMT-10G-PS-...-M8D |         | 9,6     | M8x1 | 300 + 30  | 41,1       |             |      |    | –        |
| SMT-10G-NS-...-OE  |         | –       | –    | 2500 + 70 | –          |             |      |    | 50       |
| SMT-10G-NS-...-M8D |         | 9,6     | M8x1 | 300 + 30  | 41,1       |             |      |    | –        |

Dimensions

Dimensions – Mounting SMBN-10

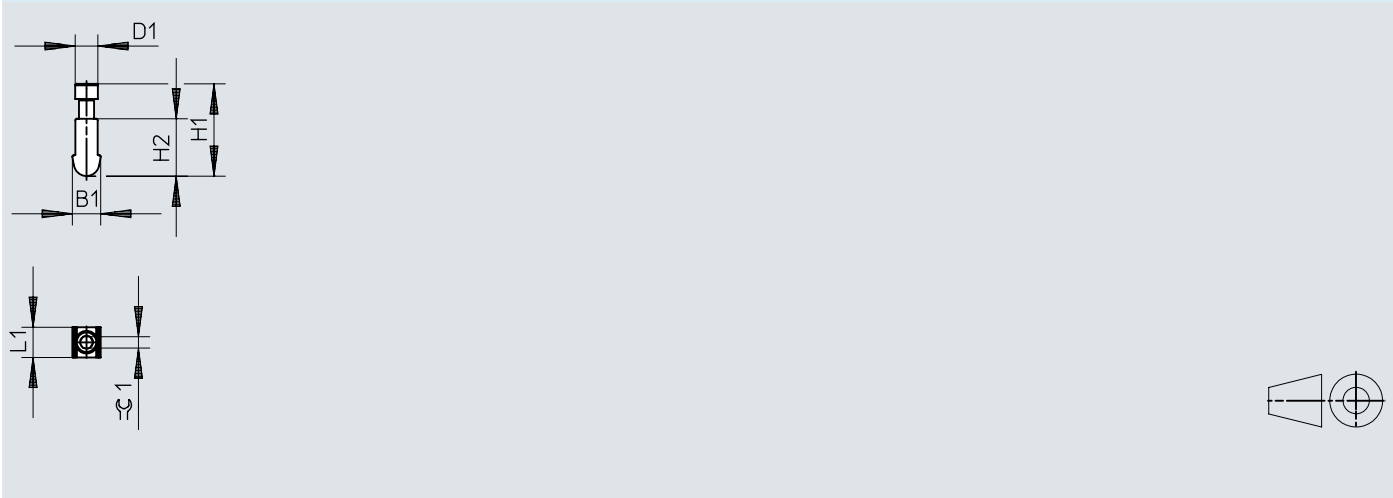
Download CAD data [www.festo.com](http://www.festo.com)



|         | D1 | B1  | H1  | L1 | 1.5 |
|---------|----|-----|-----|----|-----|
| SMBN-10 | M3 | 9,3 | 8,6 | 19 | 1,5 |

Dimensions

Dimensions – Positioning element SMM Download CAD data [www.festo.com](http://www.festo.com)



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

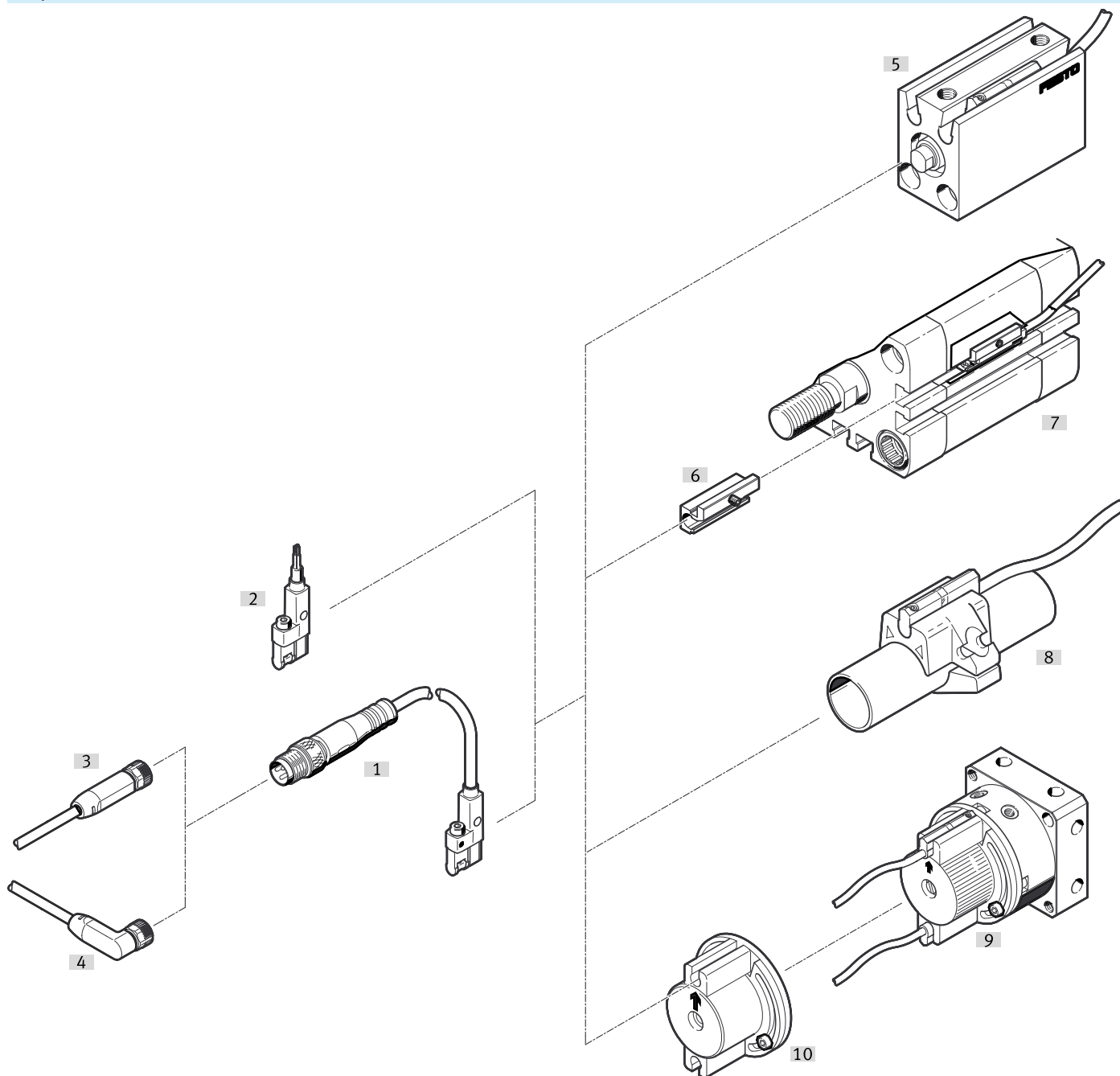


## Ordering data

| Ordering data                                                                     |                  |                                           |                                                      |              |          |                           |
|-----------------------------------------------------------------------------------|------------------|-------------------------------------------|------------------------------------------------------|--------------|----------|---------------------------|
|                                                                                   | Switching output | Electrical connection 1, connector system | Electrical connection 1, number of connections/cores | Cable length | Part no. | Type                      |
|  | NPN              | M8x1, A-coded, to EN 61076-2-104          | 3                                                    | 0.3 m        | 8065029  | SMT-10G-NS-24V-E-0,3Q-M8D |
|                                                                                   |                  | Open end                                  |                                                      | 2.5 m        | 8065030  | SMT-10G-NS-24V-E-2,5Q-OE  |
|                                                                                   | PNP              | M8x1, A-coded, to EN 61076-2-104          |                                                      | 0.3 m        | 547863   | SMT-10G-PS-24V-E-0,3Q-M8D |
|                                                                                   |                  | Open end                                  |                                                      | 2.5 m        | 547862   | SMT-10G-PS-24V-E-2,5Q-OE  |

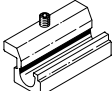
## Peripherals

## Peripherals overview

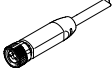


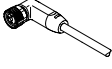
| Accessories     |                                   |                                                                                                | → Link                  |
|-----------------|-----------------------------------|------------------------------------------------------------------------------------------------|-------------------------|
| Type/order code | Description                       |                                                                                                |                         |
| [1]             | Proximity switch SMT-10G-...-M... | Can be inserted into the slot from above, flush with the cylinder profile, with cable and plug | <a href="#">smt-10g</a> |
| [2]             | Proximity switch SMT-10G-...-OE   | Can be inserted into the slot from above, flush with the cylinder profile, with cable          | <a href="#">smt-10g</a> |
| [3]             | Connecting cable NEBA-M8          | Straight socket                                                                                | 11                      |
| [4]             | Connecting cable NEBA-M8          | Angled socket                                                                                  | 11                      |
| [5]             | Drives with round slot            | –                                                                                              | <a href="#">–</a>       |
| [6]             | Mounting kit SMBN-10              | For mounting proximity switches on drives with T-slot                                          | 11                      |
| [7]             | Drives with T-slot                | –                                                                                              | <a href="#">–</a>       |
| [8]             | Round cylinder                    | –                                                                                              | <a href="#">–</a>       |
| [9]             | Semi-rotary drive DSM             | –                                                                                              | <a href="#">dsm</a>     |
| [10]            | Mounting kit WSM-...SME-10        | Mounting kit for mounting proximity switches on semi-rotary drive DSM                          | 11                      |

## 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 M8x1, straight socket                                            |                          |              |                |          |                       |
|-----------------------------------------------------------------------------------|--------------------------|--------------|----------------|----------|-----------------------|
|                                                                                   | Cable structure          | Cable length | Product weight | Part no. | Type                  |
|  | 3 x 0.25 mm <sup>2</sup> | 2.5 m        | 50 g           | 8078223  | NEBA-M8G3-U-2.5-N-LE3 |
|                                                                                   |                          | 5 m          | 96 g           | 8078224  | NEBA-M8G3-U-5-N-LE3   |

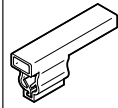
| Connecting cable M8x1, angled socket                                                |                          |              |                |          |                       |
|-------------------------------------------------------------------------------------|--------------------------|--------------|----------------|----------|-----------------------|
|                                                                                     | Cable structure          | Cable length | Product weight | Part no. | Type                  |
|  | 3 x 0.25 mm <sup>2</sup> | 2.5 m        | 50 g           | 8078230  | NEBA-M8W3-U-2.5-N-LE3 |
|                                                                                     |                          | 5 m          | 96 g           | 8078231  | NEBA-M8W3-U-5-N-LE3   |

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

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

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

Accessories

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