



- Versions for T-slot, rounded slot, round design or block-shaped
- Contactless switch output, with reed contact or to Namur (DIN EN 60 947-5-6)
- Wide range of mounting and connection options
- Heat, welding field and corrosion resistant designs

Specified types in accordance with ATEX directive for potentially explosive atmospheres  
→ [www.festo.com/en/ex](http://www.festo.com/en/ex)

# Proximity sensors

Key features



## General information

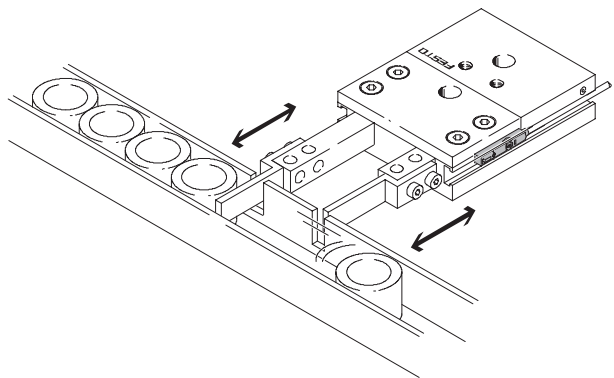
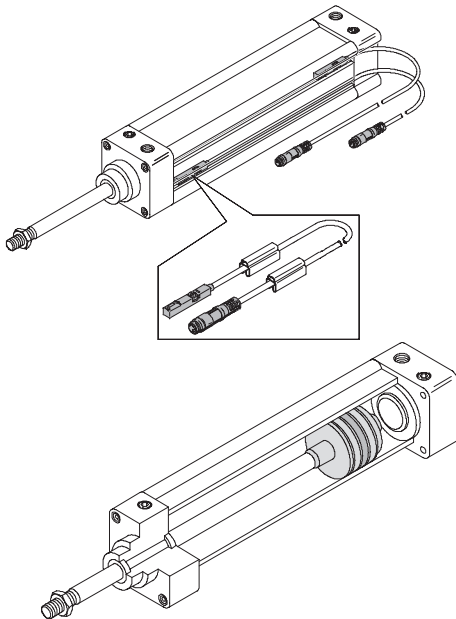
Festo's proximity sensors are position sensors specially adapted and optimised for use with Festo cylinders. Given their special measuring methods, however, this does not

prevent them from being used in many other applications for which magnetic fields are to be detected. As a system supplier, Festo offers specific tailored

sensing solutions for a broad range of applications.

The proximity sensor range offers in-stock parts with fixed and variable

configuration according to module types.



Proximity sensors detect the magnetic field of permanent magnets fitted on cylinder pistons and thus also indirectly report the position of the piston rod. It is essential that they be coordinated to suit the magnets used,

the relevant distance to the magnet, and the geometry and tolerance of the slot. As the leading supplier of pneumatic solutions, Festo can fulfil this requirement safely and reliably.

The proximity switch is fixed mechanically at the desired switching position in the drive slot. As soon as the cylinder piston reaches this position, the switching signal status changes. This

standardised binary switching signal is, for example, logically linked to programmable logic controllers (PLCs) and used to control the process sequence.

## Designs

### Electronic proximity sensors SMT

Electronic proximity sensors from Festo process the switching signal without contacts, are unaffected by the slot angle, are polarity-safe, short circuit proof and overload proof. The

SMT-8M series is characterised by its maximum reliability and boasts an MTBF value of 450 years (continuous operation 24 h / 365 days / 70 °C).

### Contacting proximity sensors SME

Contacting proximity sensors use a reed switch as the switching element. The SME-8M series has an integrated protective circuit, which significantly increases the service life of the reed contacts. When connected to typical PLC loads, 100 million switching cycles can be achieved. Series without the protective circuit achieve 20 mil-

lion switching cycles at PLC load. Due to their robust structure, Festo reed switches are designed for currents up to 0.5 A, special variants up to 2 A. Switches for operating voltages up to 230 V and normally closed reeds complete the range. All reed switch variants can be used for PNP and NPN.

### Welding field immune proximity sensors SMTSO

This electronic proximity sensor is designed for use in welding areas with alternating fields from 45 ... 65 Hz. The switching signal is "frozen" as

soon as the proximity sensor detects an alternating magnetic field. This prevents incorrect switching during welding operations.

### Pneumatic proximity sensors SMPO

Pneumatic proximity sensors consist of a 3/2-way valve which is actuated when a magnetic field approaches. As a result of switching, a pneumatic output signal is set which can be immediately processed.

# Proximity sensors

Key features



<b>Proximity sensors for explosion protection areas</b> → <a href="http://www.festo.com">www.festo.com</a>		<b>Corrosion-resistant proximity sensors CRSMT</b>	
<p>The range also includes types for device categories 1GD and 3GD. The switch meets the high requirements of device category 1GD thanks to its Namur interface and is thus to be operated via an isolation amplifier.</p>	<p>Proximity sensors for device category 3GD have a normal switching output and can be connected directly to fieldbus units or programmable logic controllers PLC.</p>	<p>The use of high quality materials for the housing and cables make the switch a reliable sensing solution for extreme environmental conditions. It</p>	<p>was developed for use in the food area, for acids (electroplating) and for contact with cooling lubricants.</p>
<b>Proximity sensors for high and low temperatures</b>		<b>Position sensors for gripper SMH</b>	
<p>The S6 variants are approved for temperatures up to 120 °C. The SME-8...-S6 can additionally be used</p>	<p>for the low temperature range down to -40 °C.</p>	<p>Proximity sensors SMH are position sensors which have been specially developed for use with Festo grippers. An analogue electrical signal is generated in the proximity sensor</p>	<p>depending on the gripper position. The conversion to 3 digital output signals (corresponding to 3 gripper jaw positions) takes place via the evaluation units SVE4 or SMH-AE.</p>
<b>Position transmitter SMAT</b> → <a href="http://www.festo.com">www.festo.com</a>		<b>Typical applications</b>	
<p>The SMAT-8E is a sturdy magnetic measuring system in the 50 mm range. It provides a standardised analogue current and voltage signal via an M8x1 plug connection, regardless of the drive unit used. The transmitter</p>	<p>can thus be connected directly to the analogue input of a programmable logic controller. The piston position of a pneumatic cylinder can be recorded by means of contactless sensing and switching points within the coverage</p>	<p>range can be freely selected. Furthermore the travel distance can be measured between any set switching points with typical reproducibility of 0.1 mm.</p>	<p><b>Object detection</b> Press-fitting, clamping, position sensing, quality sorting of parts, workpiece replacement.</p> <p><b>Process monitoring</b> Quality inspection, wear monitoring, thickness measuring.</p>
<b>Accessories</b>			
<b>Mounting kits SMBR, SMBZ, ...</b>		<b>Connecting cables NEBU</b>	
<p>Proximity sensors are mounted on the round and tie-rod cylinders by means of mounting kits. It is thus possible to</p>	<p>use the same type of proximity sensor for the most varied of drives.</p>	<p>These are developed for the secure connection of all devices using M5, M8 and M12 plugs. The range offers</p>	<p>in-stock parts with fixed and variable configuration via modules.</p>
<b>Clip SMBK-8, SMBK-10</b>		<b>Push-in T-connector NEDU</b>	
<p>The clip enables secure fixing of the cable in the slot, prevents cable breakage and increases the system availability.</p>		<p>Depending on the design, two M8 or M12 connection sockets connect to one M12 plug or two M8 connection</p>	<p>sockets connect to one M8 plug. Using the distributor saves, for example, on inputs to a controller.</p>
<p> <b>Note</b></p>			
<p>Cylinders with magnetically actuated proximity sensors should not be operated in areas with strong external magnetic fields (e.g. resistance welding machines), unless their output signal is filtered in the subsequent PLC in the case of AC fields (low pass). The grid dimension of sensing-capable cylinders should not be less than 100 mm in order to exclude the possibility of mutual interference. In</p>	<p>cases of doubt, this can be avoided using conventional means (shielding). Sensors that detect magnetic fields, such as proximity sensors and position transmitters must not be secured onto the drive using mountings made from ferritic materials, as any occurring field interference could falsify the switching signal. Practical function trials are recommended in each</p>	<p>individual case. If inductive loads (e.g. valves) are controlled directly with the proximity sensor switching signal, Festo approved types should be used. Otherwise, an appropriate circuit should be integrated (idling diode, varistor or similar) with the relevant valve, relay etc. to exclude damage to the proximity sensor caused by</p>	<p>switch-off voltage peaks. The maximum permissible cable length for reed switches is 10 m. With longer lengths there is the risk that the service life will be cut short or the contact will stick because of the capacitive cable coating. In this case, the connection to an interface with electrical isolation (e.g. PLC, fieldbus module) is recommended.</p>

Drive accessories  
 Cylinder sensors  
**10.2**

# Proximity sensors

Selection aid

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Drive accessories  
Cylinder sensors

10.2

Drive		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	SMT-C1
<b>Standards-based cylinders</b>						
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 CDN-...-R with sensor strip		-	-	-	-	■
Standard cylinders DNU		-	-	-	■	-
Standard cylinders ADN		■	-	-	-	-
<b>Cylinders with piston rod</b>						
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		-	-	■	-	-
<b>Rodless cylinders</b>						
Linear drives DGC		-	■	-	-	-
Linear drives DGP, DGPL		■	-	-	-	-
Linear drives SLG		-	■	-	-	-
Linear drives DGO		-	-	■	-	-
Linear drives SLM		■	-	-	-	-
<b>Semi-rotary drives</b>						
Swivel modules DSM	∅ 6 ... 10 mm	-	■	-	-	-
Semi-rotary drives DRQ	∅ 16 ... 32 mm	■	-	-	-	-
	∅ 40 ... 100 mm	-	-	-	■	-
Semi-rotary drives DRQD	∅ 6 ... 12 mm	-	■	-	-	-
	∅ 16 ... 32 mm	■	-	-	-	-
<b>Technical data → Page</b>		1 / 10.2-6	1 / 10.2-53	1 / 10.2-70	1 / 10.2-84	1 / 10.2-100

# Proximity sensors

Selection aid

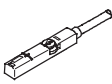

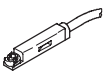
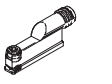
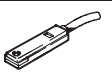

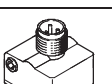
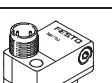
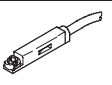
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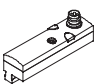
Drive	SMT-8 CRSMT-8 SME-8 SMPO-8	SMT-10 SME-10	SMH-S1
<b>Function-oriented drives</b>			
Stopper cylinders STA, STAF	■	-	-
Linear/swivel clamps CLR	■	-	-
Swivel/linear units DSL	■	-	-
<b>Drives with linear guide</b>			
Mini slides SLS, SLF, SLT	-	■	-
Twin cylinders SPZ	■	-	-
Slide units SLZ	■	-	-
Guided cylinders DFP	∅ 6 ... 16 mm	-	■
	∅ 25 ... 80 mm	■	-
Mini guided drives DFC	-	■	-
Guided drives DFM	■	-	-
Linear drive units SLE	∅ 32 ... 50 mm	■	-
Twin cylinders DPZC	-	■	-
Twin cylinders DPZ	■	-	-
<b>Handling units</b>			
Linear modules HMP	■	-	-
Linear modules HMPL	■	-	-
Handling modules HSP	■	-	-
Feed separators HPV	■	-	-
Three-point grippers HGD	∅ 16 mm	-	■
	∅ 32, 50 mm	■ <sup>1)</sup>	-
Parallel grippers HGP	∅ 6 mm	-	■
	∅ 10 ... 35 mm	■ <sup>1)</sup>	-
Parallel grippers HGPP	∅ 12 ... 32 mm	-	■
Parallel grippers HGPT	∅ 16 ... 63 mm	-	■
Angle grippers HGW	∅ 10 mm	-	■
	∅ 16 ... 40 mm	■	-
Radial grippers HGR	∅ 10 mm	-	■
	∅ 16 ... 40 mm	■	-
<b>Cushioning components</b>			
Stop elements YSRWJ	■	-	-
<b>Electrical positioning systems</b>			
Toothed belt axes DGE-ZR	■	-	-
Spindle axes DGE-SP	■	-	-
<b>System components</b>			
Heavy-duty guides HD	■	-	-
<b>Process valve actuators</b>			
Copac linear actuators DLP-A	■	-	-
<b>Technical data → Page</b>	1 / 10.2-6	1 / 10.2-53	1 / 10.2-104

1) SME-8M only for HGD-50, HGP-20 ... 35

## Proximity sensors for T-slot


Product range overview

Measuring principle	Version	Type	Assembly	Switching element function			Switch output	Electrical connection	
				N/O contact	N/C contact	Namur		Cable	Cable with plug
Magneto-resistive	Operating voltage range 10 ... 30 V DC								
		SMT-8M 	Insertable from above, flush with the cylinder profile	■	■	-	PNP	3-wire	-
				■	-	-	PNP	-	M5x0.5, 3-pin
				-	-	-	-	M8x1, 3-pin	
				-	-	-	NPN	3-wire	M12x1, 3-pin
		SMT-8F-...-EX	Insertable from above	■	-	-	-	2-wire	-
				-	-	-	-	-	
				-	-	-	-	-	
		SMT-8-SL	Insertable from end	■	-	-	PNP	-	M8x1, 3-pin
				-	-	-	-	-	
		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 and acid resistant	Insertable from end, flush with the cylinder profile	■	-	-	PNP	3-wire	M8x1, 3-pin
■				-	-	NPN	3-wire	M8x1, 3-pin	
	SMT-8E	Via accessories	■	-	-	PNP	-	M8x1, 3-pin	
			■	-	-	NPN	-	M12x1, 3-pin	
			■	-	-	PNP	-	M8x1, 3-pin	
			■	-	-	NPN	-	M12x1, 3-pin	
	SMTSO-8E Welding field immune	Via accessories	■	-	-	PNP	-	M12x1, 3-pin	
			■	-	-	NPN	-	M12x1, 3-pin	
Magneto-inductive	Operating voltage range 10 ... 30 V DC								
		SMT-8F-I-...-EX	Insertable from above	-	-	■	-	2-wire	-

Measuring principle	Version	Type	Assembly	Analogue output	Electrical connection	
					Cable	Plug
Magnetic	Position transmitter, operating voltage range 15 ... 30 V DC					
		SMAT-8E	Insertable from end	0 ... 10 V 0 ... 20 mA	-	M8x1, 4-pin

## Proximity sensors for T-slot

Product range overview

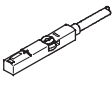


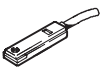
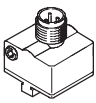
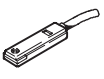
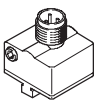
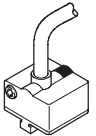

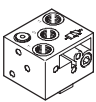
Type	Connection direction		Replacement without re-adjustment	Switching status display via LED	Free of copper and PTFE	→ Page
	In-line	Lateral				
<b>Operating voltage range 10 ... 30 V DC</b>						
SMT-8M 	■	-	-	■	■	1 / 10.2-13
	■	-	-	■	■	
	■	-	-	■	■	
SMT-8F-...-EX	■	-	-	■	■	www.festo.com
SMT-8-SL	■	-	-	■	■	1 / 10.2-24
SMT-8	■	-	-	■	■	1 / 10.2-30
	■	-	-	■	■	
CRSMT-8 Corrosion and acid resistant	■	-	-	■	■ <sup>1)</sup>	1 / 10.2-32
SMT0-8E	-	■	■	■	■	1 / 10.2-40
	-	■	■	■	■	
SMTSO-8E Welding field immune	-	■	■	■	-	1 / 10.2-42
	-	■	■	■	-	
<b>Operating voltage range 5 ... 30 V DC</b>						
SMT-8F-I-...-EX	■	-	-	■	■	www.festo.com

Type	Connection direction		Replacement without re-adjustment	Status display via LED	Free of copper and PTFE	→ Page
	In-line	Lateral				
<b>Position transmitter, operating voltage range 15 ... 30 V DC</b>						
SMAT-8E	■	-	-	■	■	1 / 10.2-123

1) Paint wetting impairment substances only contained in removable covering film

## Proximity sensors for T-slot

Product range overview



Measuring principle	Version	Type	Assembly	Switching element function		Switch output	Electrical connection		
				N/O contact	N/C contact		Cable	Cable with plug	
Magnetic reed	<b>Operating voltage range 0 ... 30 V AC/DC</b>								
		<b>SME-8-M</b>		Insertable from above, flush with the cylinder profile	■	-	Contacting	3-wire	M5x0.5, 3-pin M8x1, 3-pin
					■	-		2-wire	-
		<b>SME-8-SL</b>		Insertable from end	■	-	Contacting	-	M8x1, 3-pin
		<b>SME-8</b>		Insertable from end, flush with the cylinder profile	■	■	Contacting	3-wire	-
					■	-		2-wire	M8x1, 3-pin
		<b>SME-8-...-S6</b>			■	-	2-wire	-	
			Heat resistant up to 120 °C						
		<b>SMEO-8E</b>		Via accessories	■	-	Contacting	-	M8x1, 3-pin M12x1, 3-pin
		<b>SMEO-8E-...-S6</b>		Via accessories	■	-	Contacting	2-wire	-
			Heat resistant up to 120 °C						
	<b>Operating voltage range 3 ... 250 V AC/DC</b>								
	<b>SME-8-...-230</b>		Insertable from end	■	-	Contacting	2-wire	-	
	<b>SMEO-8E-...-230</b>		Via accessories	■	-	Contacting	-	M12x1, 2-pin	
				■	-		2-wire	-	
	<b>SMEO-8E-...-S6</b>			■	-				
		Heat resistant up to 120 °C							
Magnetic	<b>Pneumatic proximity sensor, operating pressure 2 ... 8 bar</b>								
		<b>SMPO-8E</b>		Via accessories	■ <sup>1)</sup>	-	-	-	-

1) 3/2-way valve, normally closed



## Proximity sensors for T-slot

Product range overview

Type	Connection direction		Replacement without re-adjustment	Switching status display via LED	Free of copper and PTFE	→ Page
	In-line	Lateral				
<b>Operating voltage range 0 ... 30 V AC/DC</b>						
SME-8-M 	■	-	-	■	■	1 / 10.2-18
	■	-	-	■	■	
SME-8-SL	■	-	-	■	■	1 / 10.2-26
SME-8	■	-	-	■	-	1 / 10.2-34
	■	-	-	■	-	
SME-8-...-S6 Heat resistant up to 120 °C	■	-	-	-	-	
SME0-8E	-	■	■	■	-	1 / 10.2-44
SME0-8E-...-S6 Heat resistant up to 120 °C	-	■	■	-	-	
<b>Operating voltage range 3 ... 250 V AC/DC</b>						
SME-8-...-230	■	■	-	■	-	1 / 10.2-34
SME0-8E-...-230	-	■	■	■	-	1 / 10.2-44
SME0-8E-...-S6 	-	■	■	■	■	
<b>Pneumatic proximity sensor, operating pressure 2 ... 8 bar</b>						
SMPO-8E	-	■	■	- 2)	-	1 / 10.2-48

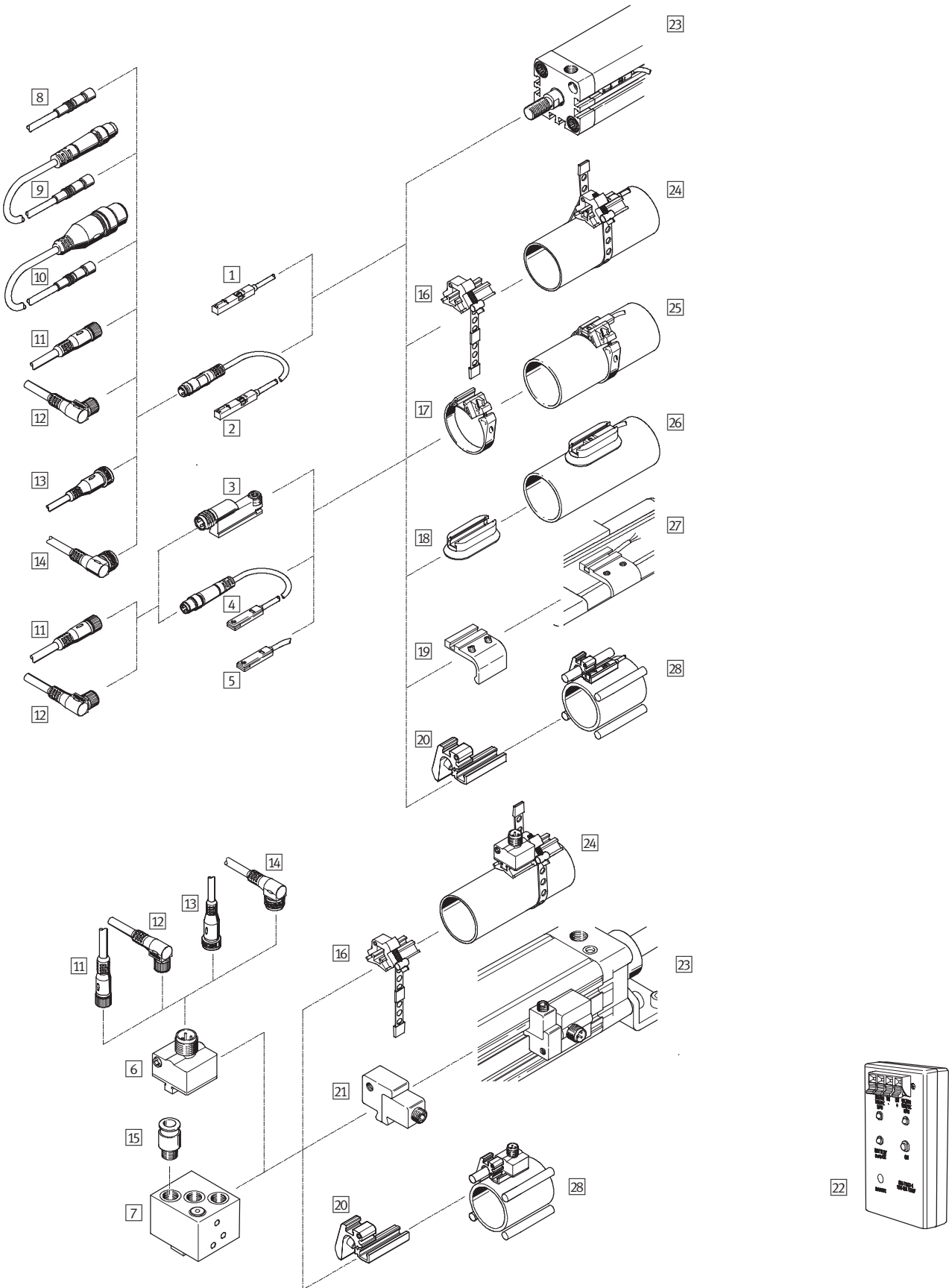
2) Switching status is via pneumatic indicator

Proximity sensor for T-slot

Peripherals overview

Drive accessories  
Cylinder sensors

10.2



# Proximity sensor for T-slot

Peripherals overview

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Mounting attachments and accessories			
	Brief description	→ Page	
<b>Proximity sensors</b>			
1	SMT-8M-...-OE SME-8M-...-OE	Magneto-resistive, with cable Magnetic reed, with cable	1 / 10.2-13 1 / 10.2-18
2	SMT-8M-...-M5D/M8D/M12 SME-8M-...-M5D/M8D/M12	Magneto-resistive, with cable and plug M5x0.5, M8x1 or M12x1 Magnetic reed, with cable and plug M5x0.5, M8x1 or M12x1	1 / 10.2-13 1 / 10.2-18
3	SMT-8-SL-... SME-8-SL-...	Magneto-resistive, with plug M8x1 Magnetic reed, with plug M8x1	1 / 10.2-24 1 / 10.2-26
4	SMT-8-S-... SME-8-S-...	Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1	1 / 10.2-30 1 / 10.2-34
5	SMT-8-K-... CRSMT-8-K-... SME-8-K-...	Magneto-resistive, with cable Magneto-resistive, corrosion resistant, with cable Magnetic reed, with cable	1 / 10.2-30 1 / 10.2-32 1 / 10.2-34
6	SMT-8E-... SMTSO-8E-... SMEO-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 / 10.2-40 1 / 10.2-42 1 / 10.2-44
7	SMPO-8E-...	Pneumatic proximity sensor, magnetically actuated	1 / 10.2-48
<b>Accessories</b>			
8	Connecting cable NEBU-...-5-Q3-LE3	Straight socket, M5x0.5, 4-pin; open at one end, 3-wire	1 / 10.2-114
9	Connecting cable NEBU-...-1-Q3-M8G3	Straight socket, M5x0.5, 4-pin; plug M8x1, 3-pin	
10	Connecting cable NEBU-...-1-Q3-M12G4	Straight socket, M5x0.5, 4-pin; plug M12x1, 5-pin	
11	Connecting cable NEBU-M8G3-...	Straight socket, M8x1, 3-pin	
12	Connecting cable NEBU-M8W3-...	Angled socket, M8x1, 3-pin	
13	Connecting cable NEBU-M12G3-...	Straight socket, M12x1, 3-pin	1 / 10.2-115
14	Connecting cable NEBU-M12W3-...	Angled socket, M12x1, 3-pin	
15	Push-in fitting QSM-M5	For standard O.D. tubing	1 / 10.2-52
16	Mounting kit SMBR-8-8/100-S6	Heat resistant, for round cylinders	1 / 10.2-50
17	Mounting kit SMBR	For round cylinders	
18	Mounting kit CRSMB	Corrosion resistant, for round cylinders	1 / 10.2-51
19	Mounting kit SMB-8-FENG	For standard cylinders DNC, DNCB in combination with guide unit FENG	
20	Mounting SMBZ-8-...	For drives with tie or mounting rod, DUO or clamping rail	1 / 10.2-52
21	Mounting kit SMB-8E	For drives with T-slot	1 / 10.2-51
22	Sensor tester SM-TEST-1	-	1 / 10.2-113
<b>Drives</b>			
23	Drives with T-slot	-	-
24	Round cylinder	∅ 8 ... 100 mm	
25	Round cylinder	∅ 8 ... 63 mm	
26	Round cylinder	∅ 32 ... 100 mm	
27	Standard cylinders DNC, DNCB	In combination with guide unit FENG	
28	Drives with tie or mounting rod, DUO or clamping rail	-	

# Proximity sensors SMT/SME-8M, for T-slot

Type codes

SMT – 8M – PO – 24V – K – 7.5 – OE

**Function**

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

**Construction**

8M	For T-slot sensor, inserted from above
----	----------------------------------------

**Switch output, switching element function**

PS	PNP, N/O contact, 3-wire
PO	PNP, N/C contact, 3-wire
NS	NPN, N/O contact, 3-wire
ZS	N/O contact, 2-wire
DS	N/O contact, 3-wire

**Rated operating voltage**

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

**Cable attribute**

K	Standard
E	Suitable for chain link trunking
R	Suitable for robots

**Cable length [m]**

**Connection technology**

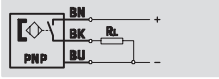
OE	Open end
M5D	Cable with plug M5x0.5, rotatable thread
M8	Cable with plug M8x1, snap-on flange
M8D	Cable with plug M8x1, rotatable thread
M12	Cable with plug M12x1, rotatable thread

# Proximity sensors SMT-8M, for T-slot, magneto-resistive

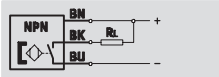
Technical data

Function

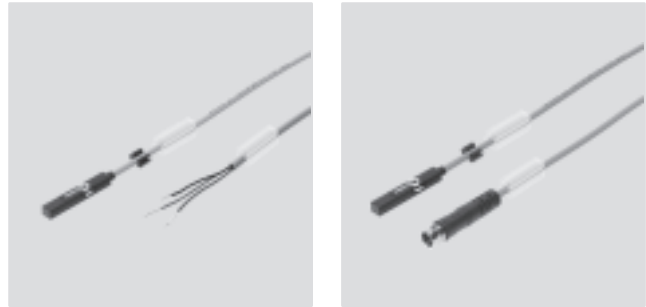
e.g. PNP, N/O contact, with cable



e.g. NPN, N/O contact, with cable



- Magneto-resistive measuring principle
- Insertable in the slot from above, flush with cylinder profile
- Cable clip and inscription labels included in the scope of delivery



Construction	
Constructional design	For T-slot
Type of mounting	Secured with screw, insertable in the slot from above
Connection direction	Inline
Cable attribute	Standard
	Suitable for chain link trunking
	Suitable for robots
Test conditions for standard cables	Chain link trunking: 5 million cycles, bending radius 75 mm Resistance to bending: To Festo standard; test conditions on request
Test conditions for suitability for chain link trunking	Chain link trunking: 5 million cycles, bending radius 28 mm Resistance to bending: To Festo standard; test conditions on request
Test conditions for suitability for robots	Chain link trunking: 5 million cycles, bending radius 28 mm Torsional strength: > 300,000 cycles, ±270°/0.1 m Resistance to bending: To Festo standard; test conditions on request
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – PNP, N/O contact						
Electrical connection		Cable, 3-wire		Cable with plug, rotatable thread		
				M5x0.5, 3-pin	M8x1, 3-pin	M12x1, 3-pin
Cable length	[m]	2.5	5.0	0.3		
Operating voltage range	[V DC]	10 ... 30				
Max. output current	[mA]	100				
Max. switching capacity	[W]	3				
Voltage drop	[V]	1.7		1.6		
Residual current	[µA]	≤ 1				
Switch-on time	[ms]	≤ 1.5				
Switch-off time	[ms]	2 ... 6				
Protection against short circuit		Pulsed				
Protection against overloading		Yes				
Protection against polarity reversal		For all electrical connections				
Protection class		IP65/IP68				

# Proximity sensors SMT-8M, for T-slot, magneto-resistive

Technical data

Technical data – PNP, N/C contact		
Electrical connection	Cable, 3-wire	
Cable length	[m]	7.5
Operating voltage range	[V DC]	10 ... 30
Max. output current	[mA]	100
Max. switching capacity	[W]	3
Voltage drop	[V]	1.85
Residual current	[µA]	≤ 1
Switch-on time	[ms]	≤ 1.5
Switch-off time	[ms]	2 ... 6
Protection against short circuit	Pulsed	
Protection against overloading	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP65/IP68	

Technical data – NPN, N/O contact			
Electrical connection	Cable, 3-wire		Cable with plug, rotatable thread M8x1, 3-pin
Cable length	[m]	2.5	0.3
Operating voltage range	[V DC]	10 ... 30	
Max. output current	[mA]	100	
Max. switching capacity	[W]	3	
Voltage drop	[V]	1.7	1.6
Residual current	[µA]	≤ 1	
Switch-on time	[ms]	≤ 3.0	
Switch-off time	[ms]	2 ... 8	
Protection against short circuit	Pulsed		
Protection against overloading	Yes		
Protection against polarity reversal	For all electrical connections		
Protection class	IP65/IP68		

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Flexible cable installation	Fixed	Versatile	Fixed	Versatile
Ambient temperature	[°C]	-20 ... +70	-5 ... +70	-20 ... +70
Corrosion resistance class CRC <sup>1)</sup>	3		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			
Certification	c UL us - Listed (OL)			
	C tick			

1) Corrosion resistance class 2 as per Festo standard 940 070

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

Corrosion resistance class 3 as per Festo standard 940 070

Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials	
Housing	Polyamide
	Polyurethane
	High-alloy stainless steel
Cable sheath	Polyurethane
Plug housing	Brass, nickel-plated
Note on materials	Free of copper and PTFE

# Proximity sensors SMT-8M, for T-slot, magneto-resistive

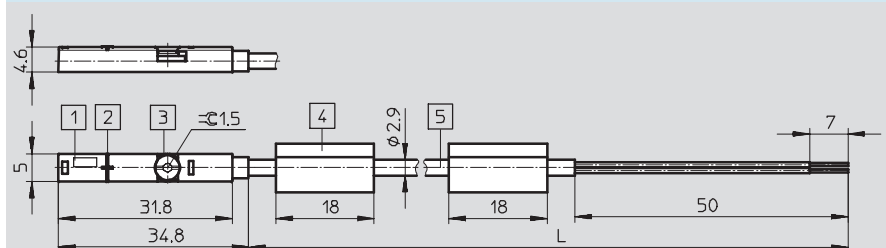
Technical data

**FESTO**

Product weights [g]						
Connection technology	Cable			Cable with plug		
	M5x0.5	M8x1	M12x1			
Cable length [m]	2.5	5.0	7.5	0.3		
N/O contact						
PNP	29.8	58.3	–	6.3	8.9	17.4
NPN	29.8	–	–	–	8.9	–
N/C contact						
PNP	–	–	86.8	–	–	–

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

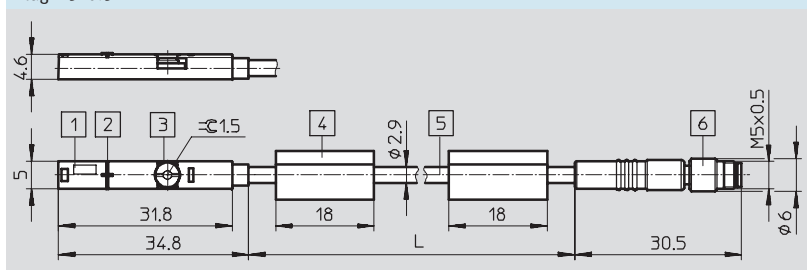
**Cable**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable

L Cable length

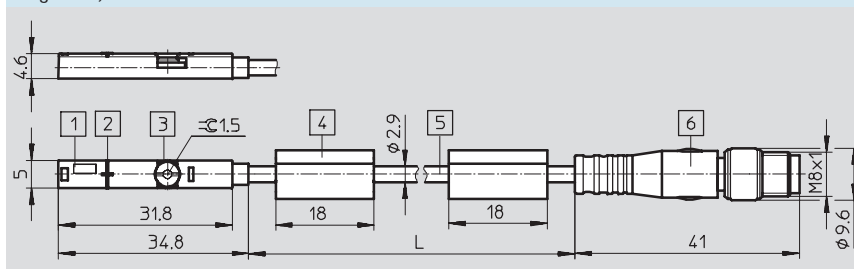
**Plug M5x0.5**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M5

L Cable length

**Plug M8x1, rotatable thread**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M8

L Cable length

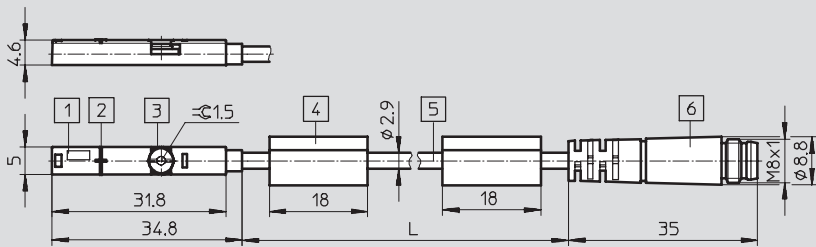
# Proximity sensors SMT-8M, for T-slot, magneto-resistive

Technical data

## Dimensions

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

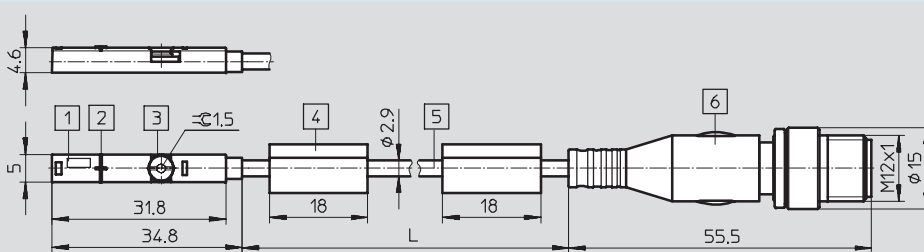
Plug M8x1, snap-on flange



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M8

L Cable length

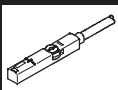
Plug M12x1



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M12

L Cable length

## Ordering data

	Switch output	Electrical connection			Cable length [m]	Part no.	Type	
		Cable	Cable with plug					
			M5x0.5	M8x1				M12x1
	<b>N/O contact</b>							
	PNP	3-wire	-	-	-	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE
		-	3-pin	-	-	0.3	543 868	SMT-8M-PS-24V-K-5.0-OE
		-	-	3-pin	-	-	543 865	SMT-8M-PS-24V-K-0,3-M5D
		-	-	-	3-pin	-	543 866	SMT-8M-PS-24V-K-0,3-M8D
	NPN	3-wire	-	-	-	2.5	543 870	SMT-8M-PS-24V-K-2,5-OE
		-	-	3-pin	-	0.3	543 871	SMT-8M-NS-24V-K-0,3-M8D
<b>N/C contact</b>								
PNP	3-wire	-	-	-	7.5	543 873	SMT-8M-PO-24V-K-7,5-OE	



# Proximity sensors SMT-8M, for T-slot

Ordering data – Modular products

**[M] Mandatory data**

Module No.	Function	Switch output	Nominal operating voltage	Cable attribute	Cable length	Connection technology
543 893	SMT-8M	PS NS PO	24V	K E R	0.2 ... 30	OE M8D M8 M12
<b>Order example</b>						
543 893	SMT-8M	- NS	- 24V	- E	- 3	- M8D

**Ordering table**

Size	8	Condi- tions	Code	Enter code
<b>[M] Module No.</b>	<b>543 893</b>			
Function	Proximity sensor for T-slot, contactless		<b>SMT-8M</b>	SMT-8M
			-	-
Switch output	3-wire PNP N/O contact		<b>PS</b>	
	3-wire NPN N/O contact		<b>NS</b>	
	3-wire PNP N/C contact		<b>PO</b>	
			-	-
Nominal operating voltage [V DC]	24		<b>24V</b>	24V
			-	-
Cable attribute	Standard		<b>K</b>	
	Suitable for chain link trunking		<b>E</b>	
	Suitable for robots		<b>R</b>	
			-	-
Cable length [m]	0.2 ... 30		<b>...</b>	
	(0.2 ... 2.5 m in 0.1 m steps, 2.5 ... 15 m in 0.5 m steps, 15 ... 30 m in 1 m steps)			
			-	-
Connection technology	Open end		<b>OE</b>	
	M8, rotatable thread		<b>M8D</b>	
	M8, snap-on flange		<b>M8</b>	
	M12, rotatable thread		<b>M12</b>	

Drive accessories  
Cylinder sensors

10.2

Transfer order code

543 893	SMT-8M	-		-	24V	-		-		-	
---------	--------	---	--	---	-----	---	--	---	--	---	--

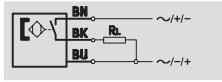
# Proximity sensors SME-8M, for T-slot, magnetic reed



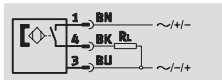
Technical data

**Function**

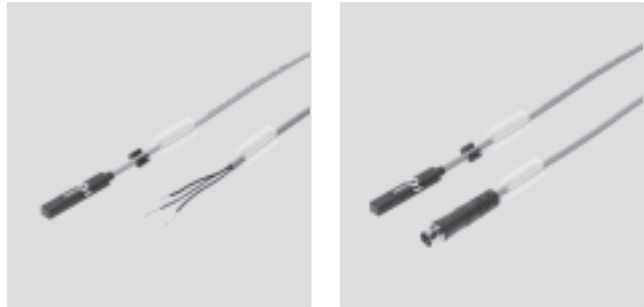
e.g. N/O contact, 3-wire, with cable



e.g. N/O contact, 3-wire, with plug



- Magnetic reed measuring principle
- Insertable in the slot from above, flush with cylinder profile
- Cable clip and inscription labels included in the scope of delivery



Construction	
Constructional design	For T-slot
Type of mounting	Secured with screw, insertable in the slot from above
	In mounting kit
Connection direction	Inline
Cable attribute	Standard
	Suitable for chain link trunking
	Suitable for robots
Test conditions for standard cables	Chain link trunking: 5 million cycles, bending radius 75 mm
	Resistance to bending: To Festo standard; test conditions on request
Test conditions for suitability for chain link trunking	Chain link trunking: 5 million cycles, bending radius 28 mm
	Resistance to bending: To Festo standard; test conditions on request
Test conditions for suitability for robots	Chain link trunking: 5 million cycles, bending radius 28 mm
	Torsional strength: > 300,000 cycles, ±270°/0.1 m
	Resistance to bending: To Festo standard; test conditions on request
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact, 3-wire				
Switching element function		N/O contact		
Switch output		Contacting, bipolar		
Electrical connection		Cable, 3-wire		Cable with plug, rotatable thread
				M5x0.5, 3-pin    M8x1, 3-pin
Cable length	[m]	2.5	5.0	7.5
Operating voltage range DC	[V DC]	5 ... 30		
Operating voltage range AC	[V AC]	5 ... 30		
Max. output current	[mA]	500		
Max. output current when securing in the mounting kit	[mA]	80		
Max. switching capacity DC	[W]	10		
Max. switching capacity AC	[VA]	10		
Max. switching capacity DC when securing in the mounting kit	[W]	2.4		
Max. switching capacity AC when securing in the mounting kit	[VA]	2.4		
Voltage drop	[V]	1.5	1.9	2.3
Residual current	[mA]	0		
Switch-on time	[ms]	≤ 1		
Switch-off time	[ms]	≤ 1		
Protection against short circuit		No		
Protection against overloading		Not available		
Protection against polarity reversal		No		
Protection class		IP65/IP68		

# Proximity sensors SME-8M, for T-slot, magnetic reed

Technical data

Technical data – N/O contact, 2-wire		
Switching element function	N/O contact	
Switch output	Contacting, bipolar	
Electrical connection	Cable, 2-wire	
Cable length	[m]	2.5
Operating voltage range DC	[V DC]	5 ... 30
Operating voltage range AC	[V AC]	5 ... 30
Max. output current	[mA]	500
Max. output current when securing in the mounting kit	[mA]	80
Max. switching capacity DC	[W]	10
Max. switching capacity AC	[VA]	10
Max. switching capacity DC when securing in the mounting kit	[W]	2.4
Max. switching capacity AC when securing in the mounting kit	[VA]	2.4
Voltage drop	[V]	4.8
Residual current	[mA]	0
Switch-on time	[ms]	≤ 1
Switch-off time	[ms]	≤ 1
Protection against short circuit	No	
Protection against overloading	Not available	
Protection against polarity reversal	No	
Protection class	IP65/IP68	

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Flexible cable installation	Fixed	Versatile	Fixed	Versatile
Ambient temperature	[°C]	-20 ... +70	-5 ... +70	-20 ... +70
Corrosion resistance class CRC <sup>1)</sup>	3		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			
Certification	c UL us - Listed (OL)			
	C tick			

1) Corrosion resistance class 2 as per Festo standard 940 070

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

Corrosion resistance class 3 as per Festo standard 940 070

Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials	
Housing	Polyamide
	Polyurethane
	High-alloy stainless steel
Cable sheath	Polyurethane
Plug housing	Brass, nickel-plated
Note on materials	Free of copper and PTFE

Product weights [g]					
Connection technology	Cable			Cable with plug	
				M5x0.5	M8x1
Cable length [m]	2.5	5.0	7.5	0.3	
N/O contact					
3-wire	29.8	58.3	86.8	6.3	8.9
2-wire	27	-	-	-	-

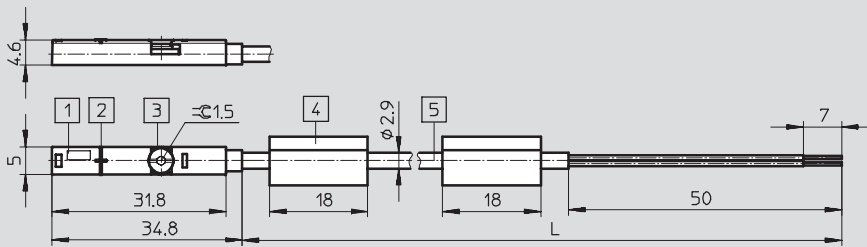
# Proximity sensors SME-8M, for T-slot, magnetic reed

Technical data

**Dimensions**

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

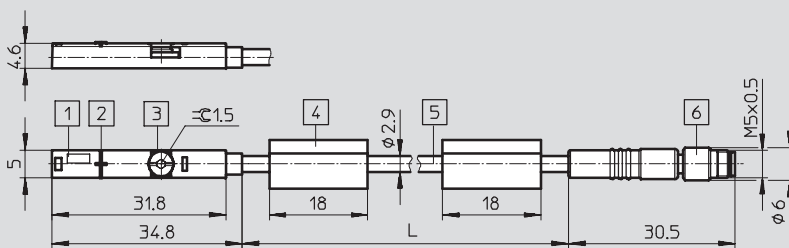
**Cable**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable

L Cable length

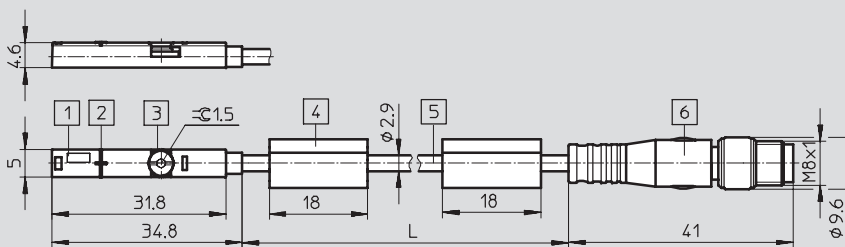
**Plug M5x0.5**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M5

L Cable length

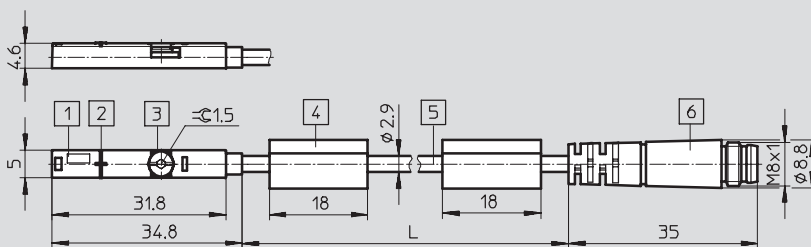
**Plug M8x1, rotatable thread**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M8

L Cable length

**Plug M8x1, snap-on flange**



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M8

L Cable length

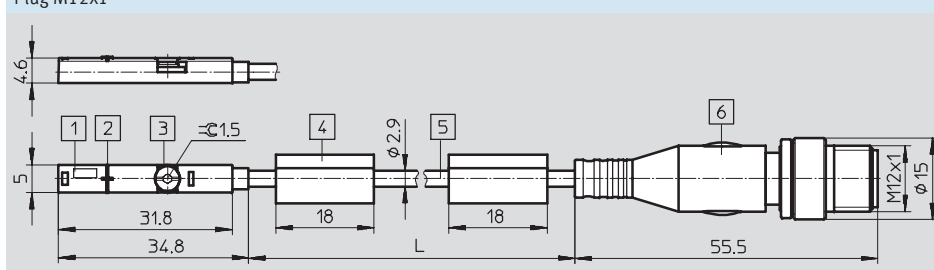
# Proximity sensors SME-8M, for T-slot, magnetic reed

Technical data



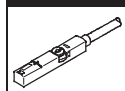
**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Plug M12x1



- 1 Yellow LED
- 2 Centre of the sensor element
- 3 Clamping component, tightening torque 0.6 Nm
- 4 Inscription label holder
- 5 Connecting cable
- 6 Plug to fit connecting cable NEBU-M12

L Cable length

Ordering data						
	Electrical connection			Cable length [m]	Part no.	Type
	Cable	Cable with plug				
		M5x0.5	M8x1			
	N/O contact					
	3-wire	-	-	2.5	543 862	SME-8M-DS-24V-K-2,5-OE
				5.0	543 863	SME-8M-DS-24V-K-5.0-OE
				7.5	543 876	SME-8M-DS-24V-K-7.5-OE
	-	3-pin	-	0.3	543 864	SME-8M-DS-24V-K-0,3-M5D
	-			0.3	543 861	SME-8M-DS-24V-K-0,3-M8D
2-wire	-	-	2.5	543 872	SME-8M-ZS-24V-K-2,5-OE	

# Proximity sensors SME-8M, for T-slot

Ordering data – Modular products

**M** Mandatory data

Module No.	Function	Switch output	Nominal operating voltage	Cable attribute	Cable length	Connection technology
543 892	SME-8M	DS ZS	24V	K E R	0.2 ... 10	OE M8D M8 M12
<b>Order example</b>						
543 892	SME-8M	ZS	24V	K	0.8	OE

**Ordering table**

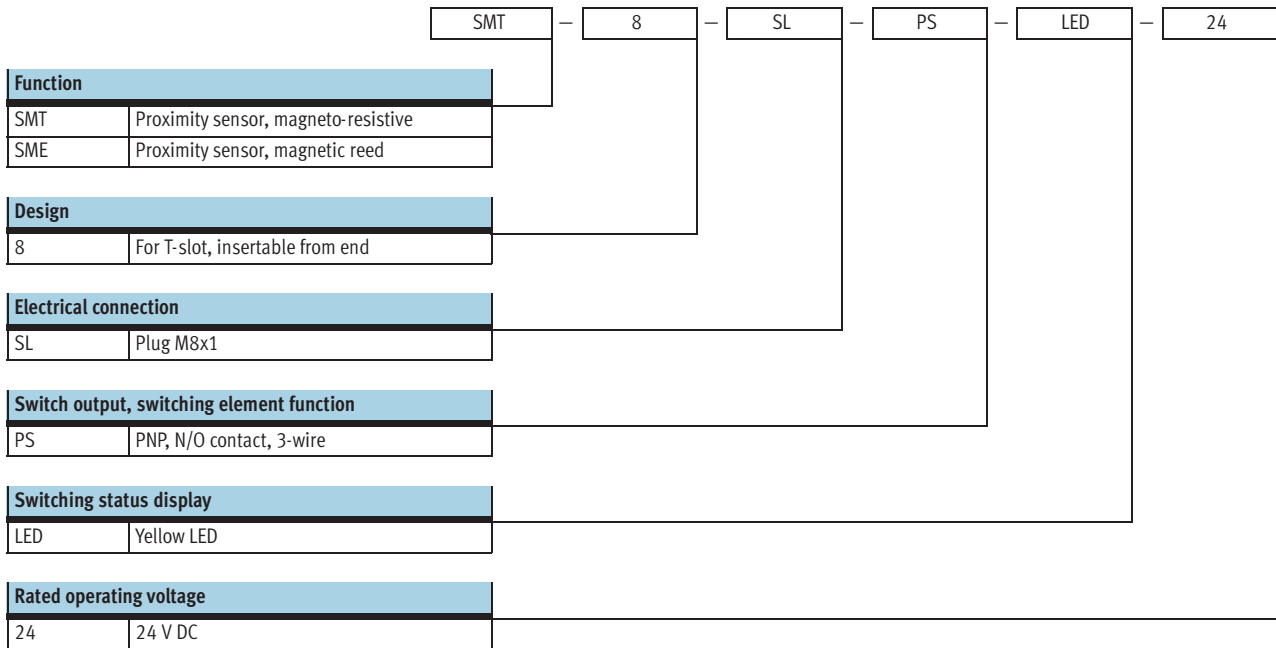
Size	8	Condi- tions	Code	Enter code
<b>M</b> Module No.	543 892			
Function	Proximity sensor for T-slot, contact-type		<b>SME-8M</b>	SME-8M
			–	–
Switch output	3-wire N/O contact		<b>DS</b>	
	2-wire N/O contact		<b>ZS</b>	
			–	–
Nominal operating voltage [V DC]	24		<b>24V</b>	24V
			–	–
Cable attribute	Standard		<b>K</b>	
	Suitable for chain link trunking		<b>E</b>	
	Suitable for robots		<b>R</b>	
			–	–
Cable length [m]	0.2 ... 10 (0.2 ... 2.5 m in 0.1 m steps, 2.5 ... 10 m in 0.5 m steps)		...	
			–	–
Connection technology	Open end		<b>OE</b>	
	M8, rotatable thread		<b>M8D</b>	
	M8, snap-on flange		<b>M8</b>	
	M12, rotatable thread		<b>M12</b>	

Transfer order code

543 892	SME-8M	–		–	24V	–		–		–	
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# Proximity sensors SMT/SME-8-SL, for T-slot

Type codes



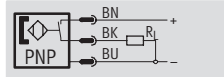
# Proximity sensors SMT-8-SL, for T-slot, magneto-resistive

Technical data



Function

PNP, N/O contact, with plug



- Magneto-resistive measuring principle
- Sturdy thanks to long guides
- Plug directly on sensor
- Insertable in the slot lengthwise



Design	
Constructional design	For T-slot
Type of mounting	Clamped, insertable in the slot lengthwise
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – PNP, N/O contact	
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
Switch-on time	[ms] ≤0.5
Switch-off time	[ms] 0.5
Protection against short circuit	Yes
Protection against polarity reversal	For all electrical connections
Protection class	IP65/IP67

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	2
CE symbol (declaration of conformity)	In accordance with EU EMC directive

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 normal industrial environment or media such as coolants or lubricating agents.

Materials	
Housing	Polyamide
Plug	Nickel plated brass
Note on materials	Free of copper and PTFE

Product weights [g]	
N/O contact	
PNP	5



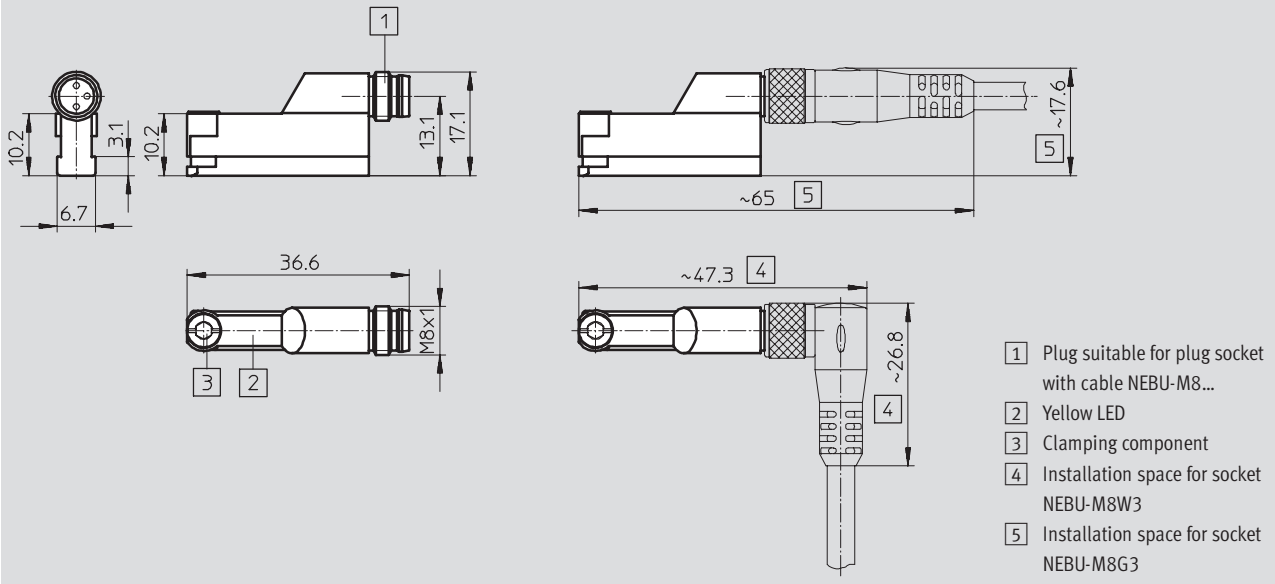
# Proximity sensors SMT-8-SL, for T-slot, magneto-resistive

Technical data



**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Plug type M8x1



Drive accessories  
Cylinder sensors

**10.2**

Ordering data				
	Switch output	Electrical connection	Part No.	Type
	N/O contact			
	PNP	Plug M8x1, 3-pin	<b>531 145</b>	<b>SMT-8-SL-PS-LED-24</b>

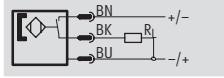
# Proximity sensors SME-8-SL, for T-slot, magnetic reed

Technical data



Function

N/O contact, 3-wire, with plug



- Magnetic reed measuring principle
- Sturdy thanks to long guides
- Plug directly on sensor
- Insertable in the slot lengthwise



Design	
Constructional design	For T-slot
Type of mounting	Clamped, insertable in the slot lengthwise
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact, 3-wire	
Switch output	Conventional contact, 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] –
Switch-on time	[ms] ≤0.6
Switch-off time	[ms] ≤0.05
Protection against short circuit	No
Protection against polarity reversal	No
Protection class	IP65/IP67

Operating and environmental conditions	
Ambient temperature	[°C] –20 ... +60
Corrosion resistance class CRC <sup>1)</sup>	2
CE symbol (declaration of conformity)	In accordance with EU EMC directive

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 normal industrial environment or media such as coolants or lubricating agents.

Materials	
Housing	Polyamide
Plug	Nickel plated brass
Note on materials	Free of copper and PTFE

Product weights [g]	
N/O contact	
3-wire	5

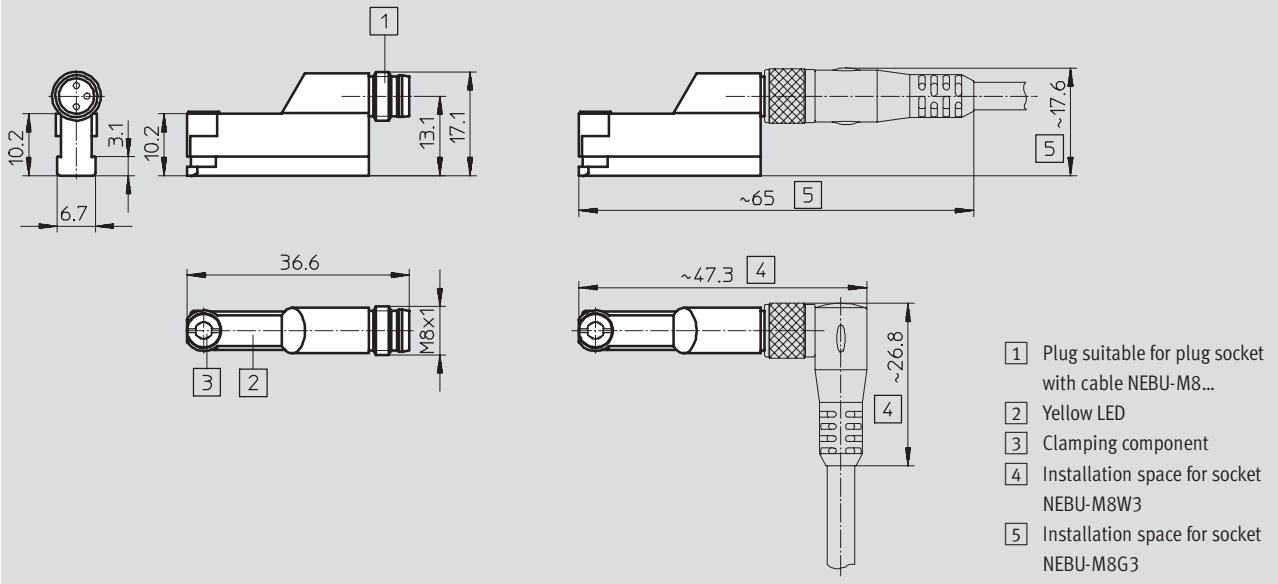
# Proximity sensors SME-8-SL, for T-slot, magnetic reed

Technical data



**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Plug type M8x1



Ordering data			
	Electrical connection	Part No.	Type
	N/O contact		
	Plug M8x1, 3-pin	526 622	SME-8-SL-LED-24

Drive accessories  
Cylinder sensors

**10.2**

# Proximity sensors SMT/SME-8, for T-slot

Type codes



## 3-wire

SMT – 8 – PS – K – LED – 24 – B

### Function

SMT	Proximity sensor, magneto-resistive
CRSMT	Proximity sensor, magneto-resistive, corrosion resistant
SME	Proximity sensor, magnetic reed

### Design

8	For T-slot, insertable from end
---	---------------------------------

### Switch output, switching element function

PS	PNP, N/O contact, 3-wire
NS	NPN, N/O contact, 3-wire
0	N/C contact, 3-wire

### Electrical connection, cable length

K	Cable, 2.5 m or 7.5 m
K2,5	Cable, 2.5 m
K5	Cable, 5.0 m
K-7,5	Cable, 7.5 m
KL	Cable, 2.5 m
S	Plug M8x1 with cable, 0.3 m

### Switching status display

LED	Yellow LED
-----	------------

### Rated operating voltage

24	24 V DC
230	230 V AC

### Variant

S6	Heat resistant
----	----------------

### Generation

B	B series
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## Proximity sensors SMT/SME-8, for T-slot

Type codes

FESTO

### 2-wire

		SME	8	ZS	230V	K2,5Q	OE
<b>Function</b>							
SME	Proximity sensor, magnetic reed						
<b>Design</b>							
8	For T-slot, insertable from end						
<b>Switch output, switching element function</b>							
ZS	N/O contact, 2-wire						
<b>Rated operating voltage</b>							
230V	230 V AC/DC						
<b>Electrical connection, cable length, connection direction</b>							
K2,5Q	Cable, 2.5 m, lateral						
K5,0Q	Cable, 5.0 m, lateral						
<b>Electrical connection</b>							
OE	Open at one end						

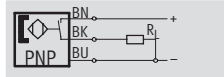
# Proximity sensors SMT-8, for T-slot, magneto-resistive

Technical data



Function

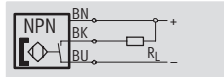
e.g. PNP, N/O contact, with cable



- Magneto-resistive measuring principle
- Insertable in the slot lengthwise



e.g. NPN, N/O contact, with cable



Design	
Constructional design	For T-slot
Type of mounting	Clamped, insertable in the slot lengthwise, flush with the cylinder profile
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.2
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact		
Electrical connection	Cable, 3-wire	Cable with plug M8x1, 3-pin
Cable length	[m] 2.5	5.0
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	
Switch-on time	[ms] ≤0.2	
Switch-off time	[ms] ≤0.5	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP65/IP67	

Technical data – NPN, N/O contact		
Electrical connection	Cable, 3-wire	Cable with plug M8x1, 3-pin
Cable length	[m] 2.5	0.3
Operating voltage range	[V DC] 10 ... 30	
Max. output current	[mA] 100	
Max. switching capacity	[W] 3	
Voltage drop	[V] 1.5	
Residual current	[mA] 0.002	
Switch-on time	[ms] ≤0.1	
Switch-off time	[ms] 0.8	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP65/IP67	

# Proximity sensors SMT-8, for T-slot, magneto-resistive

Technical data

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 <sup>1)</sup>	4		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			

- 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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Polyurethane
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

Product weights [g]			
Electrical connection	Cable		Cable with plug
Cable length [m]	2.5	5.0	0.3
N/O contact			
PNP	30	60	10
NPN	30	-	10

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

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

Plug type M8x1

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

	Switch output	Electrical connection		Cable length [m]	Part No.	Type
		Cable	Plug M8x1			
	N/O contact					
	PNP	3-wire	-	2.5	175 436	SMT-8-PS-K-LED-24-B
			-	5.0	175 434	SMT-8-PS-K5-LED-24-B
	NPN	3-wire	3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B
			-	2.5	171 180	SMT-8-NS-K-LED-24-B
	NPN	-	3-pin	0.3	171 181	SMT-8-NS-S-LED-24-B
-			0.3			

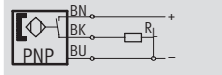
# Proximity sensors CRSMT-8, for T-slot, magneto-resistive

Technical data



Function

PNP, N/O contact, with cable



- Corrosion resistant
- Magneto-resistive measuring principle
- Insertable in the slot lengthwise



Design	
Constructional design	For T-slot
Type of mounting	Clamped, insertable in the slot lengthwise, flush with the cylinder profile
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.2
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact	
Electrical connection	Cable, 3-wire
Cable length	[m] 2.5   5.0
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] ≤0.1
Switch-on time	[ms] ≤0.2
Switch-off time	[ms] ≤0.5
Protection against short circuit	Yes
Protection against polarity reversal	For all electrical connections
Protection class	IP65/IP67

Operating and environmental conditions		
Cable installation	Fixed	Flexible
Ambient temperature	[°C] -20 ... +60	-5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4	
CE symbol (declaration of conformity)	In accordance with EU EMC directive	

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.

Materials	
Housing	Polypropylene
Cable sheath	Thermoplastic rubber
Note on materials	Free of copper and PTFE

Product weights [g]	
Electrical connection	Cable
Cable length	[m] 2.5   5.0
N/O contact	
PNP	30   60



# Proximity sensors CRSMT-8, for T-slot, magneto-resistive



Technical data

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

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

Ordering data					
	Switch output	Electrical connection	Cable length	Part No.	Type
	N/O contact				
	PNP	Cable, 3-wire	2.5	525 563	CRSMT-8-PS-K2,5-LED-24
			5.0	525 564	CRSMT-8-PS-K5-LED-24

Drive accessories  
Cylinder sensors

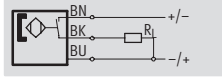
**10.2**

## Proximity sensors SME-8, for T-slot, magnetic reed

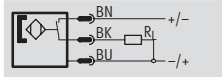
Technical data

Function

e.g. N/O contact, 3-wire, with cable



e.g. N/O contact, 3-wire, with plug



- Magnetic reed measuring principle
- Heat resistant variant
- Variant for 3 ... 250 V DC/AC
- Insertable in the slot lengthwise



### Design

Constructional design	For T-slot
Type of mounting	Clamped, insertable in the slot lengthwise, flush with the cylinder profile <sup>1)</sup>
Connection direction	In-line or lateral <sup>2)</sup>
Reproducibility of switching point <sup>3)</sup>	[mm] ±0.1

1) Not for N/O contact, 2-wire, operating voltage range 3 ... 250 V AC/DC and 5 ... 250 V AC/DC

2) N/O contact, 2-wire, operating voltage range 5 ... 250 V AC/DC

3) Only applicable to drives secured against rotation

### Technical data – N/O contact, 3-wire

Switch output	Conventional contact, bipolar			
Electrical connection	Cable, 3-wire			Cable with plug M8x1, 3-pin
Cable length	[m]	2.5	5.0	7.5
Operating voltage range	DC [V DC]	12 ... 30		
Max. output current	DC [mA]	500		
Max. switching capacity	DC [W]	10		
Switch-on time	[ms]	≤0.5		
Switch-off time	[ms]	0.03		
Protection against short circuit	No			
Protection against polarity reversal	No			
Protection class	IP65/IP67			
Switching status display	Yellow LED			

### Technical data – N/O contact, 2-wire

Switch output	Conventional contact, bipolar <sup>1)</sup>			
Electrical connection	Cable, 2-wire			
Cable length	[m]	2.5	2.5	5.0
Operating voltage range	DC [V DC]	12 ... 27	3 ... 250	5 ... 250
	AC [V AC]	–	3 ... 250	5 ... 250
Max. output current	DC [mA]	80	120	120
	AC [mA]	–	120	120
Max. switching capacity	DC [W]	2	10	10
	AC [VA]	–	10	10
Voltage drop	[V]	3.5	3.9	4
Switch-on time	[ms]	≤0.5	≤2	≤2
Switch-off time	[ms]	0.03	–	≤0.1
Protection against short circuit	No			
Protection against polarity reversal	No			
Protection class	IP67		IP65, IP67	
Switching status display	Yellow LED			

1) Without LED function

## Proximity sensors SME-8, for T-slot, magnetic reed

Technical data

Technical data – N/O contact, heat resistant			
Switch output	Conventional contact, bipolar		
Electrical connection	Cable, 2-wire		
Cable length	[m]	2.5	
Operating voltage range	DC	[V DC]	0 ... 30
Max. output current	DC	[mA]	500
Max. switching capacity	DC	[W]	10
Voltage drop		[V]	–
Switch-on time		[ms]	≤0.5
Switch-off time		[ms]	≤0.5
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP67		
Switching status display	–		

Technical data – N/C contact, 3-wire			
Switch output	Conventional contact, bipolar		
Electrical connection	Cable, 3-wire		
Cable length	[m]	7.5	
Operating voltage range	DC	[V DC]	12 ... 30
Max. output current	DC	[mA]	50
Max. switching capacity	DC	[W]	1.5
Voltage drop		[V]	1.8
Switch-on time		[ms]	≤2
Switch-off time		[ms]	≤0.2
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP67		
Switching status display	Yellow LED		

Operating and environmental conditions							
Electrical connection	Cable		Cable with plug		Cable, heat resistant		
Cable installation	Fixed	Flexible	Fixed	Flexible	Fixed	Flexible	
Ambient temperature	[°C]	–20 ... +60	–5 ... +60	–20 ... +60	–5 ... +60	–40 ... +120	–5 ... +120
Corrosion resistance class CRC <sup>1)</sup>	4		2		4		
CE symbol (declaration of conformity)	In accordance with EU EMC directive					In accordance with EU low voltage directive <sup>2)</sup>	
						–	

- 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 normal industrial environment or media such as coolants 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.
- 2) Only valid for N/O contact, 2-wire, operating voltage range 3 ... 250 V AC/DC and 5 ... 250 V AC/DC

Materials			
Electrical connection	Cable	Cable with plug	Cable, heat resistant
Housing	Polyethylene terephthalate, polycarbonate		
Cable sheath	Polyurethane, polyvinyl chloride <sup>1)</sup>		Thermoplastic styrene elastomer
Note on materials	Free of copper and PTFE		

- 1) N/O contact, 2-wire, operating voltage range 3 ... 250 V AC/DC

## Proximity sensors SME-8, for T-slot, magnetic reed

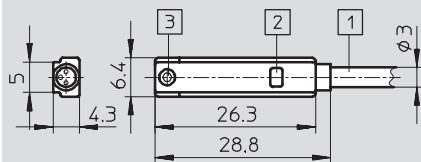
Technical data

**FESTO**

Product weights [g]				
Electrical connection	Cable			Cable with plug
Cable length [m]	2.5	5.0	7.5	0.3
<b>N/O contact</b>				
3-wire	30	60	85	8
2-wire, operating voltage range 12 ... 27 V DC	24	-	-	-
2-wire, operating voltage range 3 ... 250 V AC/DC	40	-	-	-
2-wire, operating voltage range 5 ... 250 V AC/DC	30	51	-	-
2-wire, heat resistant	50	-	-	-
<b>N/C contact</b>				
3-wire	-	-	85	-

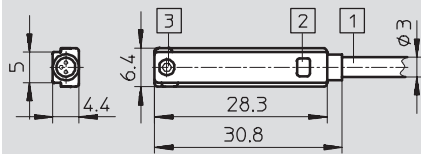
### Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

#### N/O contact cable type



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

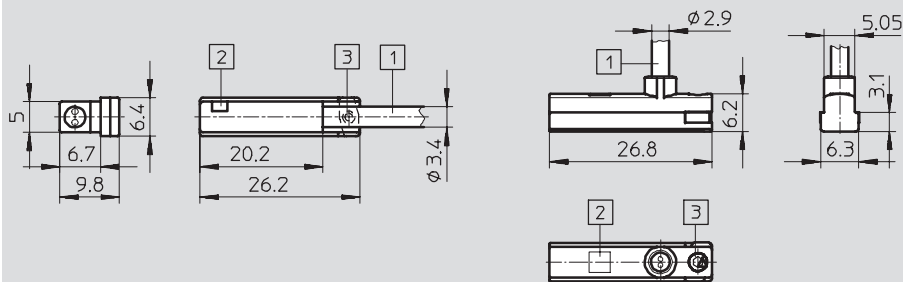
#### N/C contact cable type



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

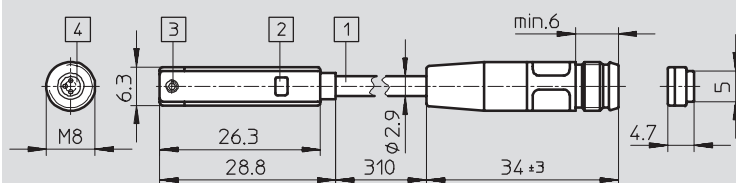
#### Operating voltage range 3 ... 250 V AC/DC

#### Operating voltage range 5 ... 250 V AC/DC



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

#### Plug type M8x1

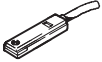




- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M8...
- 3 Clamping component
- 4 Yellow LED

## Proximity sensors SME-8, for T-slot, magnetic reed

Technical data

**FESTO**

Ordering data						
	Electrical connection		Cable length [m]	Part No.	Type	
	Cable	Plug M8x1				
	N/O contact					
	Operating voltage range 0 ... 30 V AC/DC					
	3-wire	-		2.5	150 855	SME-8-K-LED-24
				5.0	175 404	SME-8-K5-LED-24
				7.5	530 491	SME-8-K-7,5-LED-24
	-	3-pin		0.3	150 857	SME-8-S-LED-24
	2-wire	-		2.5	171 169	SME-8-ZS-KL-LED-24
	Heat resistant up to 120°C					
	2-wire	-		2.5	161 756	SME-8-K-24-S6
	Operating voltage range 3 ... 250 V AC/DC					
	2-wire	-		2.5	152 820	SME-8-K-LED-230
	Operating voltage range 5 ... 250 V AC/DC					
	2-wire	-		2.5	538 816	SME-8-ZS-230V-K2,5Q-OE  New
				5.0	538 817	SME-8-ZS-230V-K5,0Q-OE  New
	N/C contact					
3-wire	-		7.5	160 251	SME-8-O-K-LED-24	

# Proximity sensors SMTO/SMEO/SMPO-8E, for T-slot

Type codes



3-wire	
SMT0 – 8E – PS – M12 – LED – 24 –	
<b>Function</b>	
SMT0	Proximity sensor, magneto-resistive
SMTSO	Proximity sensor, magneto-inductive, welding field immune
SMEO	Proximity sensor, magnetic reed
SMPO	Proximity sensor, pneumatic
<b>Design</b>	
8E	For T-slot, mounting via accessories
<b>Switch output, switching element function</b>	
PS	PNP, N/O contact, 3-wire
NS	NPN, N/O contact, 3-wire
<b>Electrical connection, cable length</b>	
K	Cable, 2.5 m or 7.5 m
S	Plug M8x1
M12	Plug M12x1
<b>Switching status display</b>	
LED	Yellow LED
<b>Rated operating voltage</b>	
24	24 V DC
230	230 V AC
<b>Variant</b>	
S6	Heat resistant

## Proximity sensors SMTO/SMEO/SMPO-8E, for T-slot

Type codes

**FESTO**

2-wire	
SMEO – 8E – ZS – 230V – K2,5Q – OE – S6	
<b>Function</b>	
SMEO	Proximity sensor, magnetic reed
<b>Design</b>	
8E	For T-slot, mounting via accessories
<b>Switch output, switching element function</b>	
ZS	N/O contact, 2-wire
<b>Rated operating voltage</b>	
230V	230 V AC/DC
<b>Electrical connection, cable length, connection direction</b>	
K2,5Q	Cable, 2.5 m, lateral
<b>Electrical connection</b>	
OE	Open at one end
<b>Variant</b>	
S6	Heat resistant

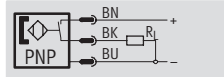
# Proximity sensors SMTO-8E, for T-slot, magneto-resistive

Technical data



## Function

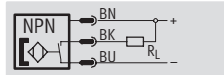
PNP, N/O contact, with plug



- Magneto-resistive measuring principle



NPN, N/O contact, with plug



Design	
Constructional design	For T-slot
Type of mounting	Via accessories
Connection direction	Lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact		
Switching element function	PNP NPN	
Electrical connection	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	
Switch-on time	[ms] ≤0.5	
Switch-off time	[ms] ≤25	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP65/IP67	
CE symbol (declaration of conformity)	In accordance with EU EMC directive	
Product weight	[g] 10	10

Operating and environmental conditions	
Electrical connection	Plug
Ambient temperature	[°C] -20 ... +60
Corrosion resistance class CRC <sup>1)</sup>	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 normal industrial environment or media such as coolants or lubricating agents.

Materials	
Housing	Polyurethane
Note on materials	Free of copper and PTFE

Product weights [g]	
N/O contact	
PNP	10
NPN	10



# Proximity sensors SMT0-8E, for T-slot, magneto-resistive

Technical data



**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Plug type M8x1

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

Plug type M12x1

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

Ordering data						
	Switch output	Electrical connection		Cable length [m]	Part No.	Type
		Plug M8x1	Plug M12x1			
	N/O contact					
	PNP	3-pin	–	–	171 178	SMT0-8E-PS-S-LED-24
		–	3-pin	–	–	171 179
	NPN	3-pin	–	–	171 166	SMT0-8E-NS-S-LED-24
–		3-pin	–	–	171 176	SMT0-8E-NS-M12-LED-24

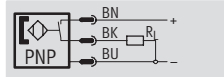
# Proximity sensors SMTSO-8E, for T-slot, magneto-resistive

Technical data



Function

e.g. PNP, N/O contact, with plug



- Welding field immune
- Magneto-resistive measuring principle



Design	
Constructional design	For T-slot
Type of mounting	Via accessories
Connection direction	Lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact	
Switching element function	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
Switch-on time	[ms] ≤38
Switch-off time	[ms] ≤20
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	IP65/IP67

Operating and environmental conditions	
Electrical connection	Plug
Ambient temperature	[°C] -25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	2
CE symbol (declaration of conformity)	In accordance with EU EMC directive

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 normal industrial environment or media such as coolants or lubricating agents.

Materials	
Housing	Polyamide

Product weights [g]	
N/O contact	
PNP	10
NPN	10

# Proximity sensors SMTSO-8E, for T-slot, magneto-resistive

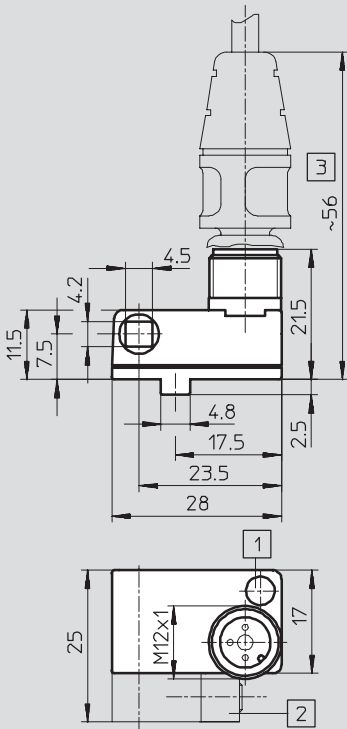
Technical data



## Dimensions

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

Plug type M12x1



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

## Ordering data

	Switch output	Electrical connection	Part No.	Type
	N/O contact			
	Welding field immune			
	PNP	Plug M12x1, 3-pin	191 986	SMTSO-8E-PS-M12-LED-24
	NPN		175 825	SMTSO-8E-NS-M12-LED-24

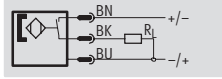
## Proximity sensors SMEO-8E, for T-slot, magnetic reed

**FESTO**

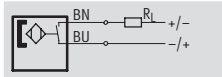
Technical data

Function

e.g. N/O contact, 3-wire, with plug



e.g. N/O contact, 2-wire, with cable



- Magnetic reed measuring principle
- Heat resistant variant



### Design

Constructional design	For T-slot
Type of mounting	Via accessories
Connection direction	Lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1

1) Only applicable to drives secured against rotation.

### Technical data – N/O contact, 3-wire

Switch output	Conventional contact, bipolar	
Electrical connection	Plug M8x1, 3-pin	Plug M12x1, 3-pin
Operating voltage range DC	[V DC]	12 ... 30
Max. output current DC	[mA]	500
Max. switching capacity DC	[W]	10
Switch-on time	[ms]	≤0.5
Switch-off time	[ms]	0.03
Protection against short circuit	No	
Protection against polarity reversal	No	
Protection class	IP65/IP67	
Switching status display	Yellow LED	

### Technical data – N/O contact, 2-wire

Switch output	Conventional contact, bipolar <sup>1)</sup>	
Electrical connection	Plug M12x1, 2-pin	
Operating voltage range DC	[V DC]	3 ... 250
Operating voltage range AC	[V AC]	3 ... 230
Max. output current DC	[mA]	120
Max. output current AC	[mA]	120
Max. switching capacity DC	[W]	10
Max. switching capacity AC	[VA]	10
Voltage drop	[V]	3.9
Switch-on time	[ms]	≤2
Switch-off time	[ms]	0.03
Protection against short circuit	No	
Protection against polarity reversal	No	
Protection class	IP65/IP67	
Switching status display	Yellow LED	

1) Without LED function

## Proximity sensors SMEO-8E, for T-slot, magnetic reed

**FESTO**

Technical data

Technical data – N/O contact, heat resistant			
Switch output	Conventional contact, bipolar		
Electrical connection	Cable, 2-wire		
Cable length	[m]	2.5	
Operating voltage range DC	[V DC]	0 ... 30	5 ... 250
Operating voltage range AC	[V AC]	–	5 ... 250
Max. output current DC	[mA]	500	120
Max. switching capacity DC	[W]	10	10
Max. switching capacity AC	[VA]	–	10
Voltage drop	[V]	–	4
Switch-on time	[ms]	≤0.5	≤0.5
Switch-off time	[ms]	0.03	≤0.1
Protection against short circuit		No	No
Protection against polarity reversal		No	No
Protection class		IP65/IP67	IP65/IP67
Switching status display		–	LED yellow

Operating and environmental conditions			
Electrical connection	Cable		Plug
Cable installation	Fixed	Flexible	–
Ambient temperature	[°C]	–20 ... +120	–5 (–20) <sup>1)</sup> ... +120
Corrosion resistance class CRC <sup>2)</sup>		4	4
CE symbol (declaration of conformity)	In accordance with EU EMC directive		
		In accordance with EU low voltage directive <sup>1)</sup>	In accordance with EU low voltage directive <sup>3)</sup>

- 1) Only valid for N/O contact, heat resistant, operating voltage range 5 ... 250 V AC / 5 ... 250 V DC
- 2) 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
- 3) Only valid for N/O contact, 2-wire, operating voltage range 3 ... 230 V AC / 3 ... 250 V DC

Materials	
Housing	Polyurethane
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE <sup>1)</sup>

- 1) Only valid for N/O contact, heat resistant, operating voltage range 5 ... 250 V AC / 5 ... 250 V DC

Product weights [g]		
Electrical connection	Cable	Plug
N/O contact	40 (44.3) <sup>1)</sup>	10

- 1) Only valid for N/O contact, heat resistant, operating voltage range 5 ... 250 V AC / 5 ... 250 V DC

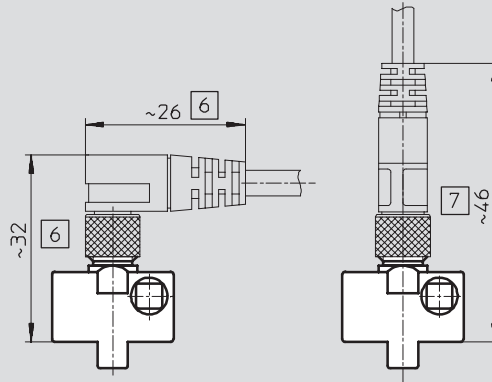
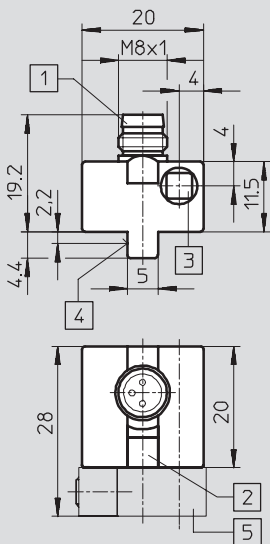
## Proximity sensors SMEO-8E, for T-slot, magnetic reed

Technical data

### Dimensions

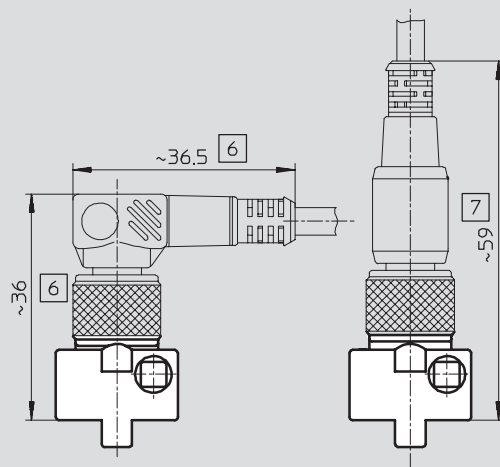
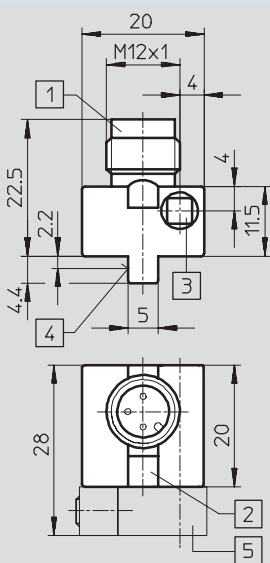
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

#### Plug type M8x1



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

#### Plug type M12x1



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

## Proximity sensors SMEO-8E, for T-slot, magnetic reed

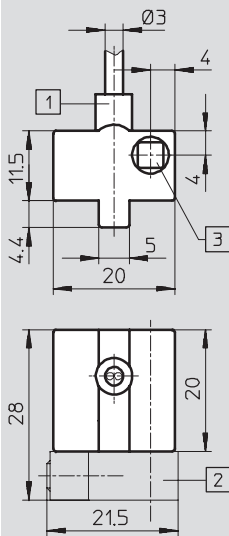
Technical data

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### Dimensions

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

Heat resistant up to 120 °C





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

Drive accessories  
Cylinder sensors

**10.2**

### Ordering data

	Electrical connection			Cable length [m]	Part No.	Type
	Cable	Plug M8x1	Plug M12x1			
	N/O 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
	Heat resistant up to 120 °C					
	2-wire	-	-	2.5	538 990	SMEO-8E-ZS-230V-2,5Q-OE-S6  New

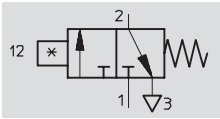
# Proximity sensors SMPO-8E, for T-slot, pneumatic

Technical data



Function  
3/2-way valve,  
normally closed

- Pneumatic proximity sensor
- Magnetic measuring principle



Design	
Constructional design	For T-slot
Type of mounting	Via accessories
Connection direction	Lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Optical

1) Only applicable to drives secured against rotation

Technical data	
Switching element function	3/2-way valve, normally closed
Operating medium	Compressed air, filtered, unlubricated, grade of filtration 40µm
Operating pressure	[bar] 2 ... 8
Switch-on time	[ms] 22
Switch-off time	[ms] 52
Pneumatic connection	Female thread M5
Protection class	IP65

Operating and environmental conditions	
Ambient temperature	[°C] -15 ... +60
Corrosion resistance class CRC <sup>1)</sup>	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 normal industrial environment or media such as coolants or lubricating agents.

Materials	
Housing	Polyamide, aluminium

Product weights [g]	
	12



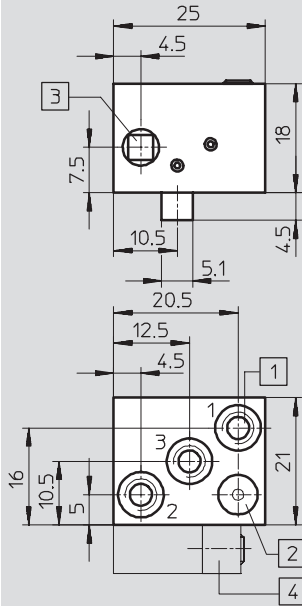
# Proximity sensors SMPO-8E, for T-slot, pneumatic

Technical data



## Dimensions

Download CAD data → [www.festo.com/en/engineering](http://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	178 563	SMPO-8E
	Female thread M5		

## Proximity sensors for T-slot

Accessories



### Mounting kit SMBR-8-8/100-S6

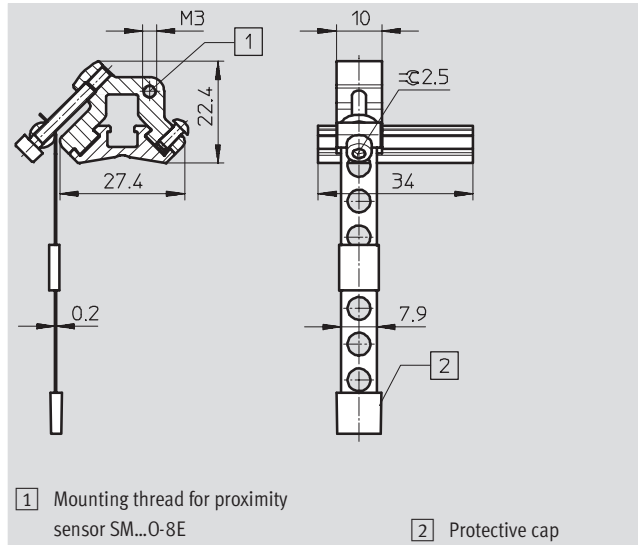
Material:

Rail: Wrought aluminium alloy, anodised

Clamping strap, screws:

High-alloy stainless steel

Free of copper and PTFE



1) Mounting thread for proximity sensor SM...0-8E

2) Protective cap

Dimensions and ordering data			
For piston $\varnothing$	Corrosion resistance class CRC <sup>1)</sup>	Part No.	Type
8 ... 100	4	538 937	SMBR-8-8/100-S6

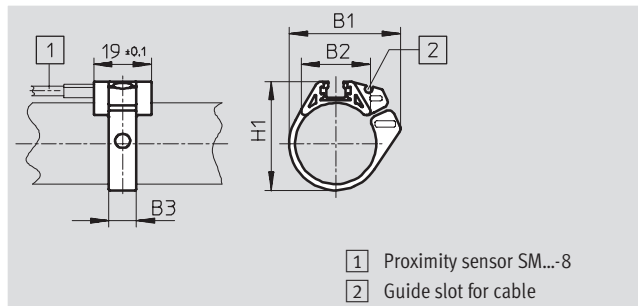
1) Corrosion resistance class 4 according to Festo standard 940 070

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.

### Mounting kit SMBR

Material:

Polyacetate



1) Proximity sensor SM...-8

2) Guide slot for cable

Dimensions and ordering data						
For piston $\varnothing$	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

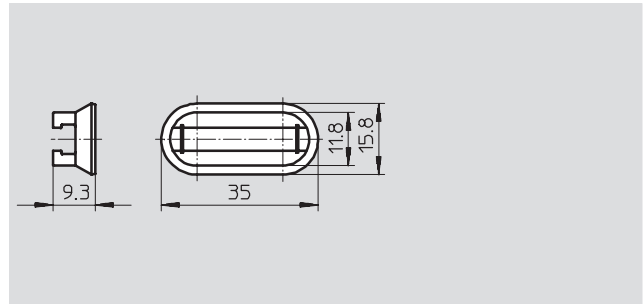
# Proximity sensors for T-slot


Accessories



## Mounting kit CRSMB

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

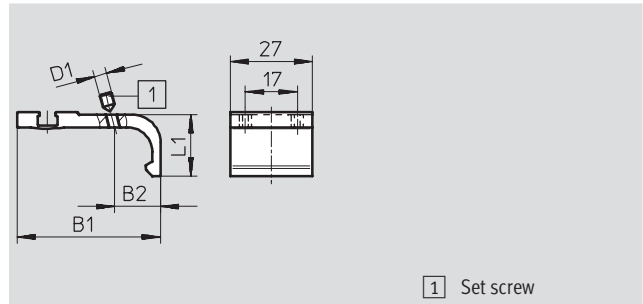
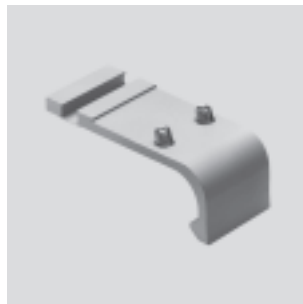


 Note  
 The mounting kit is secured to the cylinder using the double-sided adhesive tape provided.

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

## Mounting kit SMB-8-FENG

Material:  
 Wrought aluminium alloy  
 Free of copper and PTFE

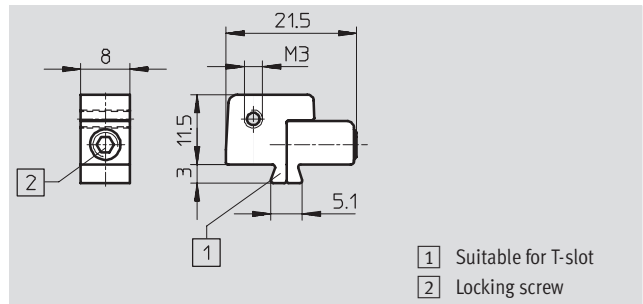


1 Set screw

Dimensions and ordering data							
For piston Ø	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 T-slot  
 2 Locking screw

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

## Proximity sensors for T-slot

Accessories

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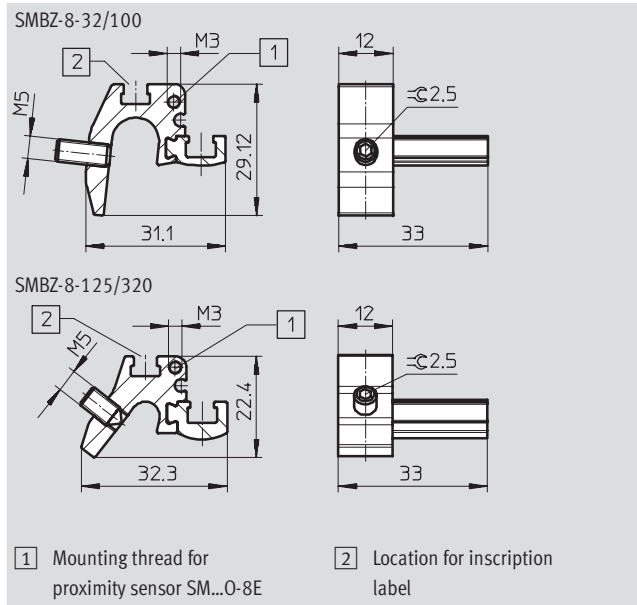
### Mounting SMBZ-8-...

Material:

Rail: Wrought aluminium alloy,  
anodised


Screws: High-alloy stainless steel



Free of copper and PTFE



- 1 Mounting thread for proximity sensor SM...O-8E  
2 Location for inscription label

Ordering data		
For piston $\varnothing$	Part No.	Type
32 ... 100	537 806	SMBZ-8-32/100
125 ... 320	537 808	SMBZ-8-125/320

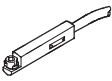
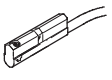
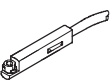
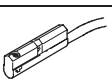
Ordering data – Cable clip SMBK-8		
	Part No.	Type
	534 254	SMBK-8
For fixing the cable in the sensor slot		

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

## Proximity sensors for rounded slot

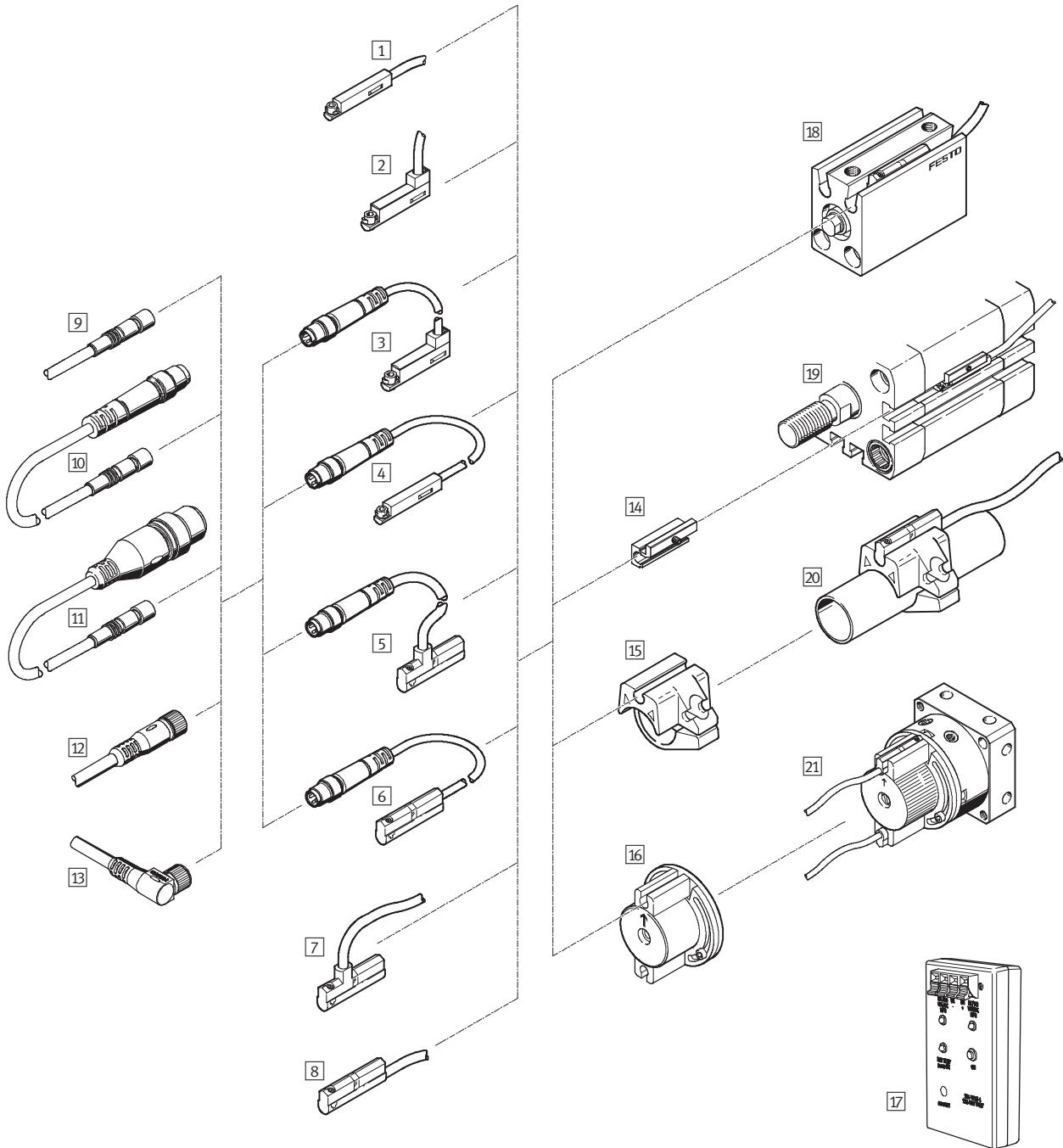
Product range overview

FESTO

Measuring principle	Version	Type	Assembly	Switching element function		Switch output	Electrical connection		→ Page
				N/O contact	N/C contact		Cable	Cable with plug	
Magneto-resistive	Operating voltage range 5 ... 30 V DC								
		SMT-10F	Insertable from above	■	-	PNP	3-wire	M8x1, 3-pin	1 / 10.2-57
				■	-	NPN	3-wire	M5x0.5, 3-pin	
				■	-	Contactless, 2-wire	2-wire	-	
		SMT-10	Insertable from end	■	-	PNP	3-wire	M8x1, 3-pin	1 / 10.2-64
				■	-	NPN	3-wire	M8x1, 3-pin	
Magnetic reed	Operating voltage range 5 ... 30 V AC/DC								
		SME-10F	Insertable from above	■	-	Contacting	3-wire	M8x1, 3-pin	1 / 10.2-60
				■	-			M5x0.5, 3-pin	
				■	-		2-wire	-	
		SME-10	Insertable from end	■	-	Contacting	3-wire	M8x1, 3-pin	1 / 10.2-66

## Proximity sensors for rounded slot

Peripherals overview



# Proximity sensors for rounded slot

Peripherals overview

Mounting attachments and accessories					
	Brief description	Connection direction		→ Page	
		In-line	Lateral		
<b>Proximity sensors</b>					
1	SMT-10F...-K2,5L-OE SME-10F...-K2,5L-OE	Magneto-resistive, with cable Magnetic reed, with cable	■ ■	- -	1 / 10.2-57 1 / 10.2-60
2	SMT-10F...-K2,5Q-OE SME-10F...-K2,5Q-OE	Magneto-resistive, with cable Magnetic reed, with cable	- -	■ ■	1 / 10.2-57 1 / 10.2-60
3	SMT-10F...-K0,3Q-M8D SME-10F...-K0,3Q-M8D	Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1	- -	■ ■	1 / 10.2-57 1 / 10.2-60
4	SMT-10F...-K0,3L-M5D SME-10F...-K0,3L-M5D SMT-10F...-K0,3L-M8D SME-10F...-K0,3L-M8D	Magneto-resistive, with cable and plug M5x0.5 Magnetic reed, with cable and plug M5x0.5 Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1	■ ■ ■ ■	- - - -	1 / 10.2-57 1 / 10.2-60 1 / 10.2-57 1 / 10.2-60
5	SMT-10-KQ-... SME-10-KQ-...	Magneto-resistive, with cable Magnetic reed, with cable	- -	■ ■	1 / 10.2-64 1 / 10.2-66
6	SMT-10-KL-... SME-10-KL-...	Magneto-resistive, with cable Magnetic reed, with cable	■ ■	- -	1 / 10.2-64 1 / 10.2-66
7	SMT-10-SQ-... SME-10-SQ-...	Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1	- -	■ ■	1 / 10.2-64 1 / 10.2-66
8	SMT-10-SL-... SME-10-SL-...	Magneto-resistive, with cable and plug M8x1 Magnetic reed, with cable and plug M8x1	■ ■	- -	1 / 10.2-64 1 / 10.2-66
<b>Accessories</b>					
9	Connecting cable NEBU-...-5-Q3-LE3	Straight socket, M5x0.5, 4-pin, open at one end, 3-wire	-		1 / 10.2-114
10	Connecting cable NEBU-...-1-Q3-M8G3	Straight socket, M5x0.5, 4-pin, plug M8x1, 3-pin			
11	Connecting cable NEBU-...-1-Q3-M12G4	Straight socket, M5x0.5, 4-pin, plug M12x1, 5-pin			
12	Connecting cable NEBU-M8G3-...	Straight socket, M8x1, 3-pin			
13	Connecting cable NEBU-M8W3-...	Angled socket, M8x1, 3-pin			1 / 10.2-114
14	Mounting kit SMBN-10-...	For cylinders with T-slot			1 / 10.2-68
15	Mounting kit SMBR-10-...	For round cylinders			1 / 10.2-68
16	Mounting kit WSM-...-SME-10	For swivel modules DSM			
17	Sensor tester SM-TEST-1	-			1 / 10.2-113
<b>Drives</b>					
18	Drives with rounded slot	-			
19	Drives with T-slot	-			
20	Round cylinders	∅ 6 ... 63 mm			
21	Swivel modules DSM	∅ 6 ... 10 mm			

## Proximity sensors SMT/SME-10F, for rounded slot

Type codes

SMT		10F		PS		24V		K2,5L		OE	
<b>Function</b>											
SMT		Proximity sensor, magneto-resistive									
SME		Proximity sensor, magnetic reed									
<b>Design</b>											
10F		For rounded slot, insertable from above									
<b>Switch output, switching element function</b>											
PS		PNP, N/O contact, 3-wire									
NS		NPN, N/O contact, 3-wire									
DS		N/O contact, 3-wire									
ZS		N/O contact, 2-wire, contactless (SMT)									
		N/O contact, 2-wire (SME)									
<b>Rated operating voltage</b>											
24V		24 V DC									
<b>Cable length, connection direction</b>											
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									
<b>Electrical connection</b>											
OE		Cable									
M5D		Cable with plug M5x0.5									
M8D		Cable with plug M8x1									

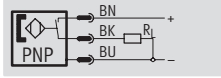


## Proximity sensors SMT-10F, for rounded slot, magneto-resistive

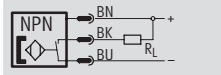
Technical data

Function

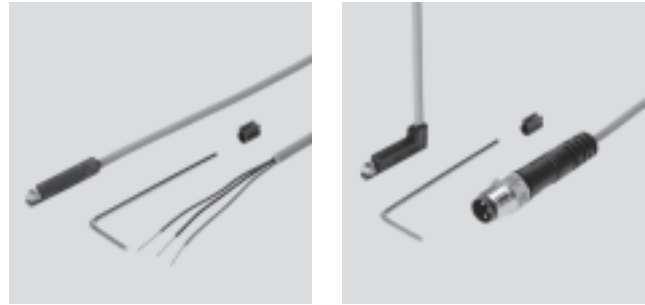
e.g. PNP, N/O contact, with plug



e.g. NPN, N/O contact, with plug



- Magneto-resistive measuring principle
- Insertable in the slot from above
- Cable clip included in the scope of delivery



Design	
Constructional design	For rounded slot
Type of mounting	Clamped, insertable in the slot from above
Connection direction	In-line or lateral
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact			
Electrical connection		Cable, 3-wire	Cable with plug
			M5x0.5, 3-pin      M8x1, 3-pin
Cable length	[m]	2.5	0.3
Operating voltage range DC	[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      0.06
Switch-on time	[ms]	≤0.33	0.5      ≤0.33
Switch-off time	[ms]	0.3	0.5      0.3
Protection against short circuit		Yes	
Protection against polarity reversal		For all electrical connections	
Protection class		IP65/IP67	
Tightening torque	[Nm]	0.2	

Technical data – NPN, N/O contact			
Electrical connection		Cable, 3-wire	Cable with plug M8x1, 3-pin
			0.3
Cable length	[m]	2.5	0.3
Operating voltage range DC	[V DC]	5 ... 30	
Max. output current	[mA]	200	
Max. switching capacity	[W]	6	
Voltage drop	[V]	2	
Residual current	[mA]	0.01	
Switch-on time	[ms]	0.5	
Switch-off time	[ms]	0.5	
Protection against short circuit		Yes	
Protection against polarity reversal		For all electrical connections	
Protection class		IP65/IP67	
Tightening torque	[Nm]	0.2	

**Proximity sensors SMT-10F, for rounded slot, magneto-resistive**

Technical data

Technical data – N/O contact, 2-wire, contactless	
Electrical connection	Cable, 2-wire
Cable length [m]	2.5
Operating voltage range DC [V DC]	10 ... 30
Max. output current [mA]	50
Max. switching capacity [W]	1.5
Voltage drop [V]	< 8
Residual current [mA]	< 1
Switch-on time [ms]	< 0.5
Switch-off time [ms]	> 0.5
Protection against short circuit	Yes
Protection against overloading	Yes
Protection against polarity reversal	For all electrical connections
Protection class	IP65/IP67
Tightening torque [Nm]	0.2

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Cable installation	Fixed	Flexible	Fixed	Flexible
Ambient temperature [°C]	-20 ... +60	-5 ... +60	-20 ... +60	-5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			
Certification	c UL us - Listed (OL)			
	C tick			

- 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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Polyamide, high-alloy stainless steel
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

Product weights [g]		
Electrical connection	Cable	Cable with plug
Cable length [m]	2.5	0.3
N/O contact		
PNP	15.5	5
NPN	15.5	5
2-wire, contactless	15.9	-

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type, in-line connection

Cable type, lateral connection

1 Connecting cable  
3 Clamping component, tightening torque 0.2 Nm  
4 Yellow LED

## Proximity sensors SMT-10F, for rounded slot, magneto-resistive

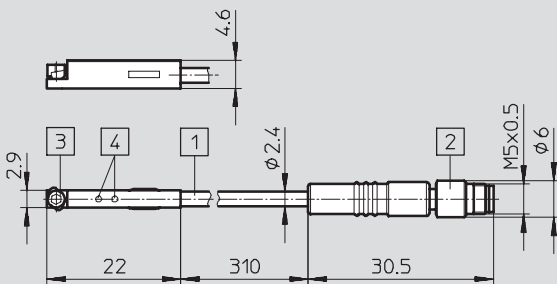
Technical data

**FESTO**

### Dimensions

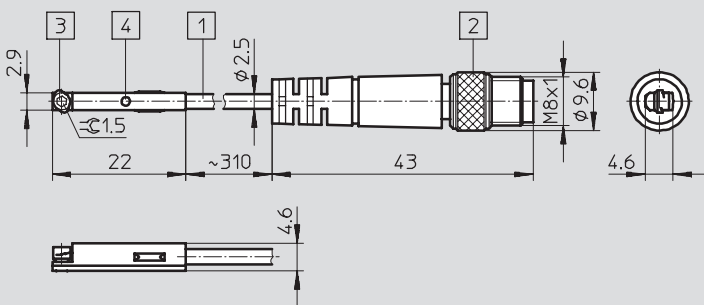
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

#### Plug type M5x0.5, in-line connection



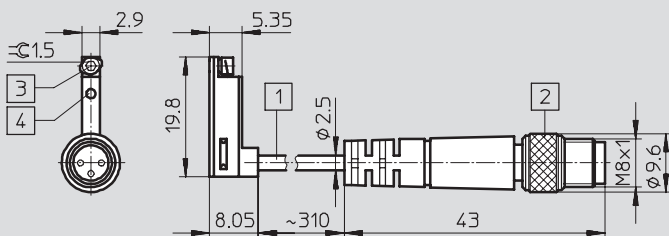
- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M5G4
- 3 Clamping component, tightening torque 0.2 Nm
- 4 Yellow LED

#### Plug type M8x1, in-line connection



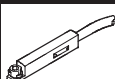
- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M8
- 3 Clamping component, tightening torque 0.2 Nm
- 4 Yellow LED

#### Plug type M8x1, lateral connection



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M8
- 3 Clamping component, tightening torque 0.2 Nm
- 4 Yellow LED

### Ordering data

	Switch output	Electrical connection			Cable length [m]	Connection direction	Part No.	Type
		Cable	Cable with plug					
			M5x0.5	M8x1				
	N/O contact							
	PNP	3-wire	-	-	2.5	In-line	525 915	SMT-10F-PS-24V-K2,5L-OE
			-	-	0.3	Lateral	526 674	SMT-10F-PS-24V-K2,5Q-OE
		-	3-pin	-	0.3	In-line	539 495	SMT-10F-PS-24V-K0,3L-M5D
		-	-	3-pin	0.3	In-line	525 916	SMT-10F-PS-24V-K0,3L-M8D
	NPN	3-wire	-	-	2.5	Lateral	526 675	SMT-10F-PS-24V-K0,3Q-M8D
			-	-	0.3	In-line	526 678	SMT-10F-NS-24V-K2,5L-OE
		-	-	3-pin	0.3	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
	Contactless, 2-wire	2-wire	-	-	2.5	Lateral	526 681	SMT-10F-NS-24V-K0,3Q-M8D
-			-	2.5	In-line	526 676	SMT-10F-ZS-24V-K2,5L-OE	
					Lateral	526 677	SMT-10F-ZS-24V-K2,5Q-OE	

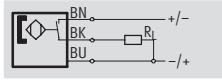
# Proximity sensors SME-10F, for rounded slot, magnetic reed

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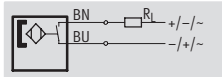
Technical data

Function

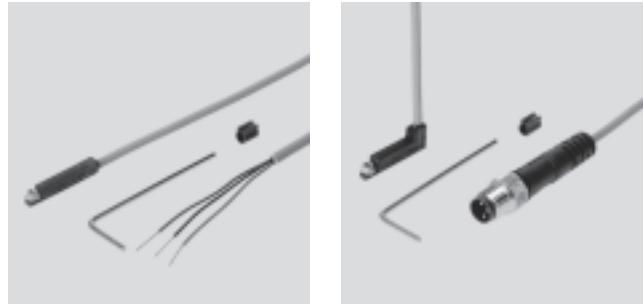
e.g. N/O contact, 3-wire, with cable



e.g. N/O contact, 2-wire, with cable



- Magnetic reed measuring principle
- Insertable in the slot from above
- Cable clip included in the scope of delivery



Design	
Constructional design	For rounded slot
Type of mounting	Clamped, insertable in the slot from above
Connection direction	In-line or lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact, 3-wire			
Switch output	Conventional contact, bipolar		
Electrical connection	Cable, 3-wire		Cable with plug
			M5x0.5, 3-pin      M8x1, 3-pin
Cable length	[m]	2.5	0.3
Operating voltage range DC	[V DC]	10 ... 30	
Operating voltage range AC	[V AC]	10 ... 30	
Max. output current	[mA]	500	
Max. switching capacity DC	[W]	10	
Max. switching capacity AC	[W]	10	
Switch-on time	[ms]	≤0.5	
Switch-off time	[ms]	0.03	
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP65/IP67		

Technical data – N/O contact, 2-wire	
Switch output	Conventional contact, bipolar <sup>1)</sup>
Electrical connection	Cable, 2-wire
Cable length	[m] 2.5
Operating voltage range DC	[V DC] 5 ... 30
Operating voltage range AC	[V AC] 5 ... 30
Max. output current	[mA] 100
Max. switching capacity DC	[W] 3
Max. switching capacity AC	[VA] 3
Voltage drop	[V] 4.5
Switch-on time	[ms] ≤0.6
Switch-off time	[ms] 0.05
Protection against short circuit	No
Protection against polarity reversal	For all electrical connections
Protection class	IP65/IP67

1) Without LED function

# Proximity sensors SME-10F, for rounded slot, magnetic reed

Technical data

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Cable installation	Fixed	Flexible	Fixed	Flexible
Ambient temperature [°C]	-20 ... +60	-5 ... +60	-20 ... +60	-5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			
Certification	c UL us - Listed (OL) C tick			

- 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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Polyamide, high-alloy stainless steel
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

Product weights [g]			
Electrical connection	Cable	Cable with plug M5x0.5	Cable with plug M8x1
Cable length [m]	2.5	0.3	0.3
N/O contact			
3-wire	20	5	6
2-wire	20	-	-

## Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type, in-line connection

Cable type, lateral connection

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

Plug type M5x0.5, in-line connection

- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M5G4, tightening torque 0.4 Nm
- 3 Clamping component
- 4 Yellow LED

# Proximity sensors SME-10F, for rounded slot, magnetic reed

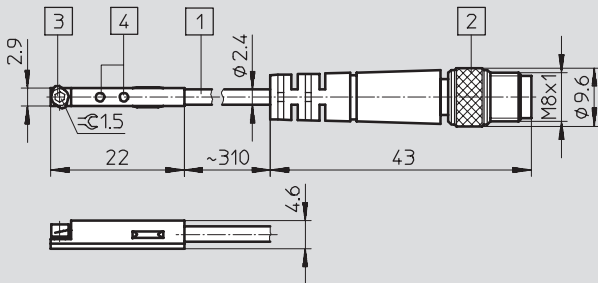
Technical data



## Dimensions

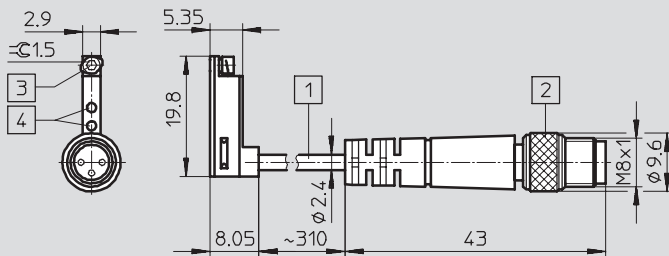
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

### Plug type M8x1, in-line connection



- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M8, tightening torque 0.2 Nm
- 3 Clamping component
- 4 Yellow LED (positive or negative switching)

### Plug type M8x1, lateral connection



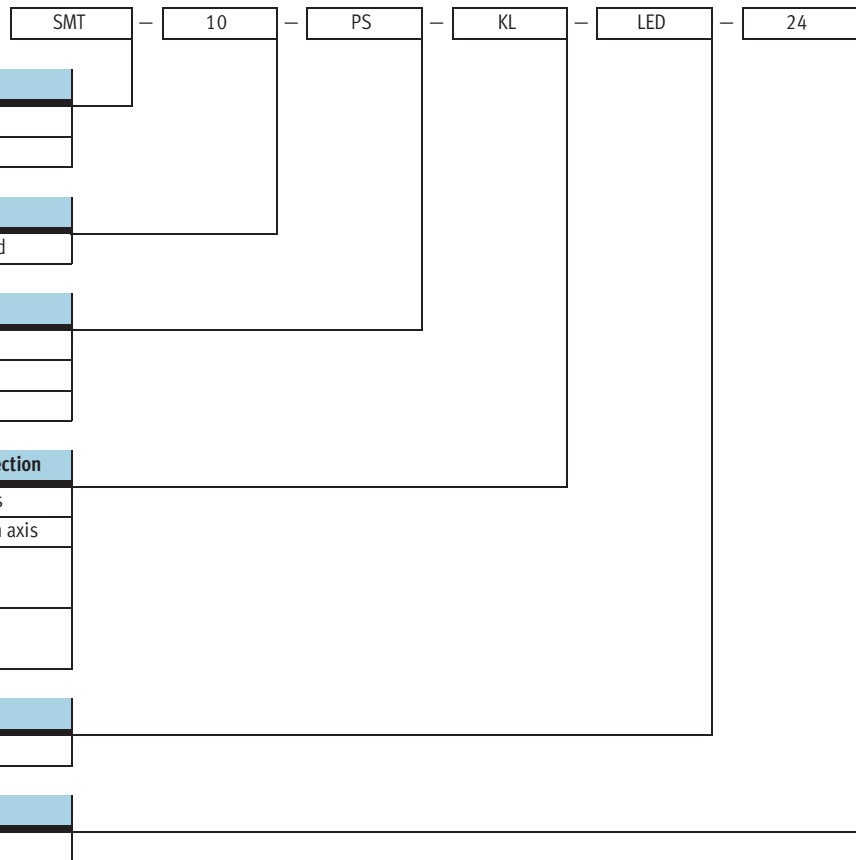
- 1 Connecting cable
- 2 Plug suitable for plug socket with cable NEBU-M8
- 3 Clamping component
- 4 Yellow LED (positive or negative switching)

## Ordering data

	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
	Cable	Cable with plug					
	N/O 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	539 494	SME-10F-DS-24V-K0,3L-M5D
	-	-	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	

# Proximity sensors SMT/SME-10, for rounded slot

Type codes



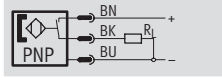
# Proximity sensors SMT-10, for rounded slot, magneto-resistive



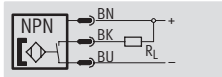
Technical data

Function

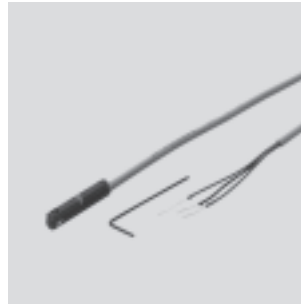
e.g. PNP, N/O contact, with plug



e.g. NPN, N/O contact, with plug



- Magneto-resistive measuring principle
- Insertable in the slot lengthwise



Design	
Constructional design	For rounded slot
Type of mounting	Clamped, insertable in the slot lengthwise
Connection direction	In-line or lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact		
Switch output	PNP	
	NPN	
Electrical connection	Cable, 3-wire	Cable with plug M8x1, 3-pin
Cable length	[m] 2.5	0.3
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	
Switch-on time	[ms] ≤0.2	
Switch-off time	[ms] ≤0.2	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP65/IP67	

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Cable installation	Fixed	Flexible	Fixed	Flexible
Ambient temperature	[°C] -20 ... +60	-5 ... +60	-20 ... +60	-5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4		4	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			

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.

Materials	
Housing	Polyamide
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE



# Proximity sensors SMT-10, for rounded slot, magneto-resistive

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Technical data

Product weights [g]		
Electrical connection	Cable	Cable with plug
Cable length [m]	2.5	0.3
N/O contact		
PNP	20	6
NPN	20	6

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type, in-line connection Cable type, lateral connection

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

Plug type M8x1, in-line connection

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

Plug type M8x1, lateral connection

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

	Switch output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
		Cable	Plug M8x1				
	N/O contact	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	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	In-line	173 220	SMT-10-PS-SL-LED-24			
-	-	Lateral	173 221	SMT-10-PS-SQ-LED-24			

# Proximity sensors SME-10, for rounded slot, magnetic reed

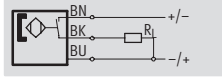
Technical data



Function

e.g. N/O contact, 3-wire, with cable

- Magnetic reed measuring principle
- Insertable in the slot lengthwise



Design	
Constructional design	For rounded slot
Type of mounting	Clamped, insertable in the slot lengthwise
Connection direction	In-line or lateral
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact, 3-wire		
Switching element function	N/O contact	
Switch output	Conventional contact, bipolar	
Electrical connection	Cable, 3-wire	Cable with plug M8x1, 3-pin
Cable length	[m] 2.5	0.3
Operating voltage range	[V DC] 12 ... 27	
Max. output current	[mA] 100	
Max. switching capacity	[W] 1	
Voltage drop	[V] –	
Residual current	[mA] –	
Switch-on time	[ms] ≤0.6	
Switch-off time	[ms] ≤0.05	
Protection against short circuit	No	
Protection against polarity reversal	No	
Protection class	IP65/IP67	

Operating and environmental conditions				
Electrical connection	Cable		Cable with plug	
Cable installation	Fixed	Flexible	Fixed	Flexible
Ambient temperature	[°C] –20 ... +60	–5 ... +60	–20 ... +60	–5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4		2	
CE symbol (declaration of conformity)	In accordance with EU EMC directive			

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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Polyphenylene sulphide
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

# Proximity sensors SME-10, for rounded slot, magnetic reed



Technical data

Product weights [g]		
Electrical connection	Cable	Cable with plug
Cable length [m]	2.5	0.3
N/O contact		
3-wire	20	5

## Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

**Cable type, in-line connection** **Cable type, lateral connection**

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

**Plug type M8x1, in-line connection**

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

**Plug type M8x1, lateral connection**

- 1 Plug suitable for plug socket with cable NEBU-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 M8x1				
	N/O contact					
	3-wire	-	2.5	In-line	173 210	SME-10-KL-LED-24
				Lateral	173 211	SME-10-KQ-LED-24
	-	3-pin	0.3	In-line	173 212	SME-10-SL-LED-24
Lateral				173 213	SME-10-SQ-LED-24	

# Proximity sensors for rounded slot

Accessories



## Mounting SMBN-10

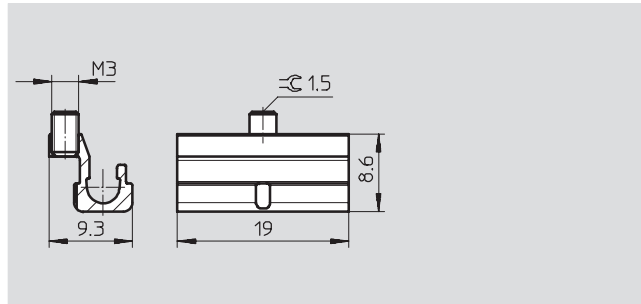
for mounting proximity sensors  
SME/SMT-10 on drives with T-slot

Material:

Rail: Wrought aluminium alloy,  
anodised

Screws: High-alloy stainless steel

Free of copper and PTFE

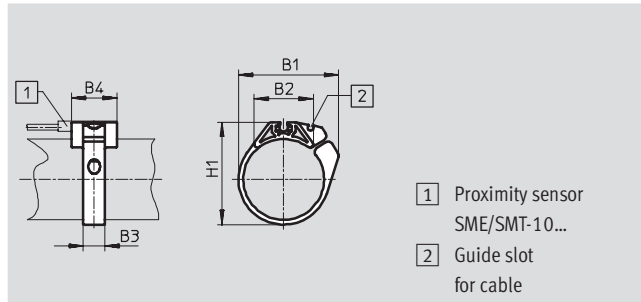


Ordering data			
For piston Ø	Part No.	Type	
125 ... 320	537 809	SMBN-10	

## Mounting kit SMBR

Material:

Polycarbonate



- 1 Proximity sensor  
SME/SMT-10...
- 2 Guide slot  
for cable

Dimensions and ordering data							
For piston Ø	B1	B2	B3 ±0.1	B4 ±0.1	H1	Part No.	Type
6	15.6	9.4	7	19	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 Ø	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



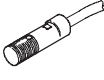
Ordering data – Cable clip SMBK-10			
	Part No.	Type	
	For fixing the cable in the sensor slot	534 255	SMBK-10



# Proximity sensors, round design

Product range overview



Measuring principle	Version	Type	Assembly	Switching element function		Switch output	Electrical connection	
				N/O contact	N/C contact		Cable	Plug
Magneto-inductive 	Operating voltage range 10 ... 30 V DC							
	SMTO-4U	Via accessories	■	-	PNP	3-wire	M8x1, 3-pin	
			■	-	NPN	3-wire	M8x1, 3-pin	
Magnetic reed  	Operating voltage range 12 ... 30 V AC/DC							
	SMEO-4U	Via accessories	■	-	Contacting	3-wire	M8x1, 3-pin	
	CRSMEO-4 Corrosion resistant	Via accessories	■	-	Contacting	3-wire	-	
	Operating voltage range 12 ... 250 V AC/DC							
SMEO-4U	Via accessories	■	-	Contacting	2-wire	-		

Drive accessories  
Cylinder sensors

10.2

# Proximity sensors, round design

Product range overview

Type	Connection direction		Switching status display via LED	Free of copper and PTFE	→ Page
	In-line	Lateral			
<b>Operating voltage range 10 ... 30 V DC</b>					
SMT0-4U	■	-	■	■	1 / 10.2-75
	■	-	■	-	
<b>Operating voltage range 12 ... 30 V AC/DC</b>					
SME0-4U	■	-	■	■	1 / 10.2-77
CRSME0-4 Corrosion resistant	■	-	■	-	1 / 10.2-79
<b>Operating voltage range 12 ... 250 V AC/DC</b>					
SME0-4U	■	-	■	-	1 / 10.2-77

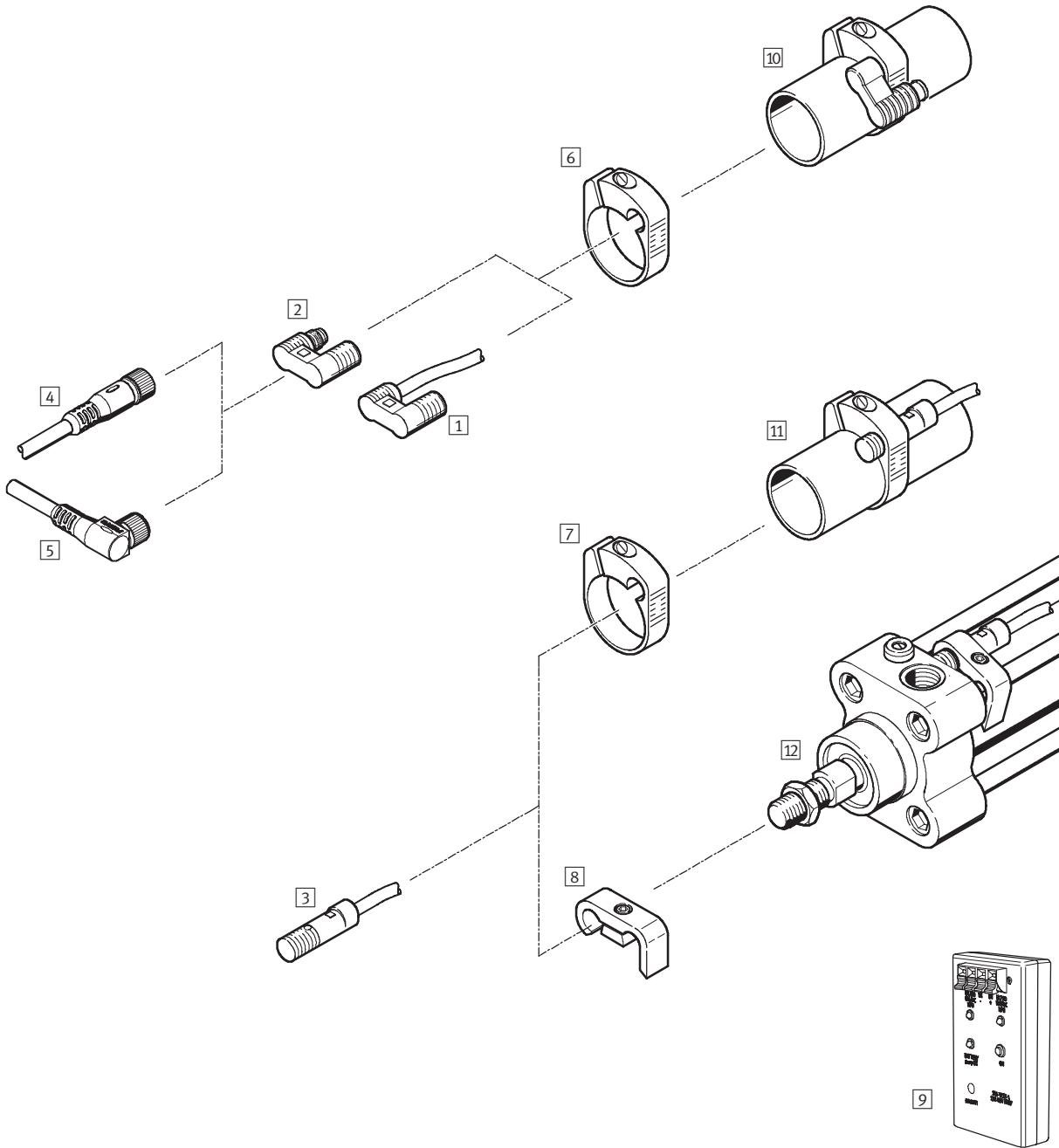
# Proximity sensors, round design

Peripherals overview



Drive accessories  
Cylinder sensors

10.2





# Proximity sensors, round design

Peripherals overview

FESTO

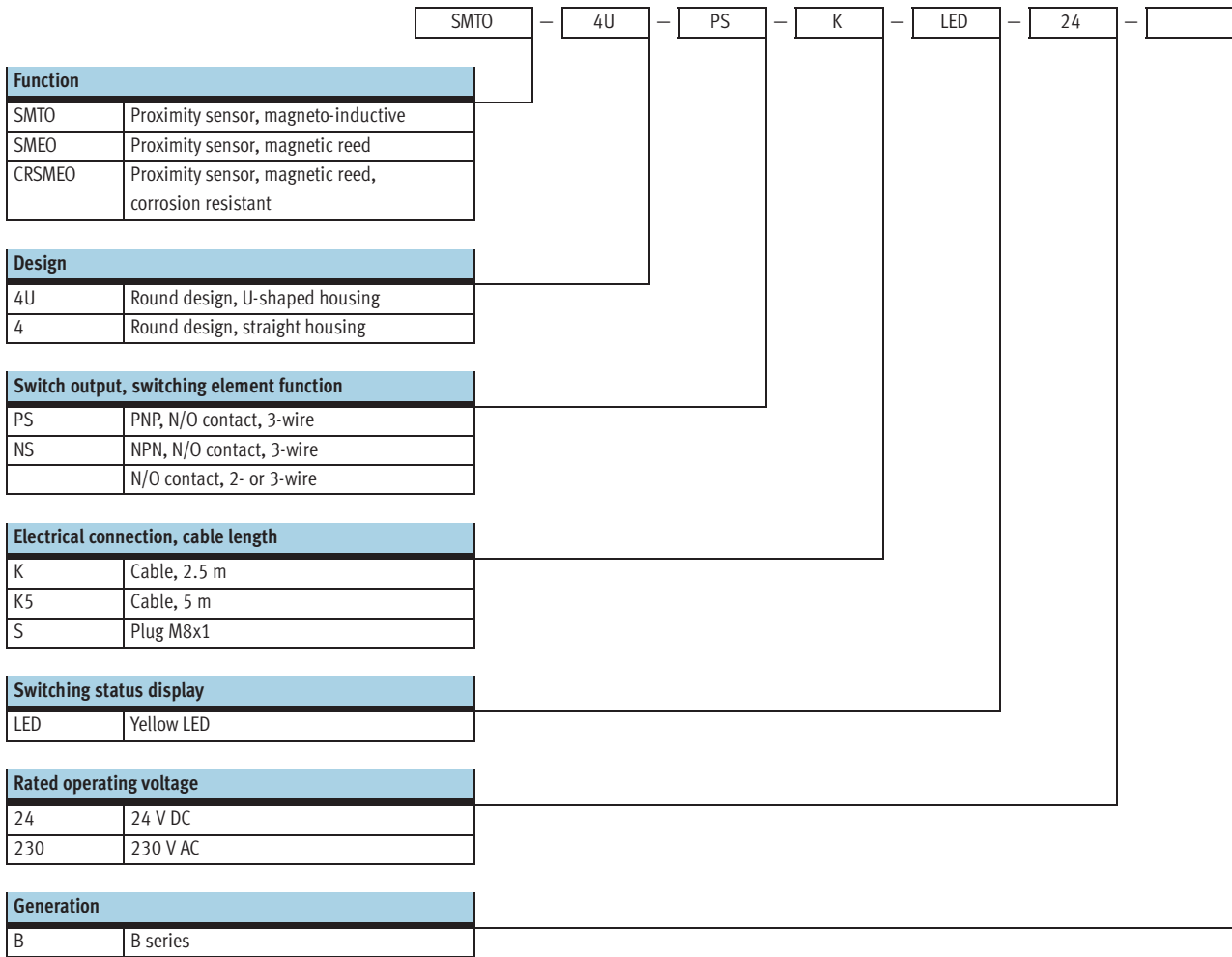
Mounting attachments and accessories		
	Brief description	→ Page
<b>Proximity sensors</b>		
1	SMT0-4U-K	Magneto-inductive, with cable
	SME0-4U-K	Magnetic reed, with cable
2	SMT0-4U-S	Magneto-inductive, with plug M8x1
	SME0-4U-S	Magnetic reed, with plug M8x1
3	CRSME0-4	Magnetic reed, corrosion resistant, with cable
<b>Accessories</b>		
4	Plug socket with cable NEBU-M83GD-...	Straight socket, M8x1, 3-pin
5	Plug socket with cable NEBU-M83WD-...	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	
<b>Drives</b>		
10	Round cylinders	∅ 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 codes

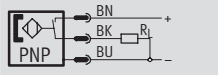


# Proximity sensors SMTO-4U, round design, magneto-resistive

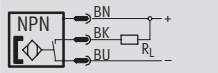
Technical data

Function

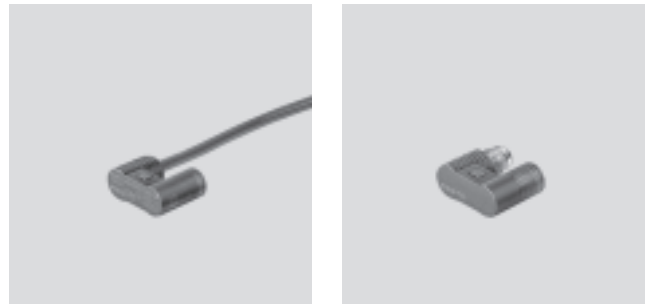
e.g. PNP, N/O contact, with plug



e.g. NPN, N/O contact, with plug



- Magneto-inductive measuring principle



Design	
Constructional design	Round
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact		
Switch output	PNP NPN	
Electrical connection	Cable, 3-wire	Plug M8x1, 3-pin
Cable length [m]	2.5	–
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	
Switch-on time [ms]	≤0.5	
Switch-off time [ms]	≤0.5	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP67	

Operating and environmental conditions			
Electrical connection	Cable		Plug
Cable installation	Fixed	Flexible	
Ambient temperature [°C]	–25... +70	–5 ... +70	–25... +70
Corrosion resistance class CRC <sup>1)</sup>	4		2
CE symbol (declaration of conformity)	In accordance with EU EMC directive		

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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Polyester
Cable sheath	Polyvinyl chloride
Note on materials	Free of copper and PTFE

# Proximity sensors SMT0-4U, round design, magneto-resistive

Technical data



Drive accessories  
Cylinder sensors

10.2

Product weights [g]		
Electrical connection	Cable	Cable with plug
N/O contact		
PNP	70	6
NPN	70	6

## Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

- 1 Connecting cable
- 2 Yellow LED

Plug type M8x1

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

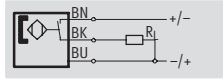
	Switch output	Electrical connection		Cable length [m]	Part No.	Type
		Cable	Plug M8x1			
	N/O contact					
	PNP	3-wire	-	2.5	152 836	SMT0-4U-PS-K-LED-24
		-	3-pin	-	152 742	SMT0-4U-PS-S-LED-24
	NPN	3-wire	-	2.5	152 837	SMT0-4U-NS-K-LED-24
-		3-pin	-	152 743	SMT0-4U-NS-S-LED-24	

# Proximity sensors SMEO-4U, round design, magnetic reed

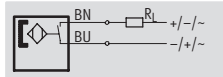
Technical data

Function

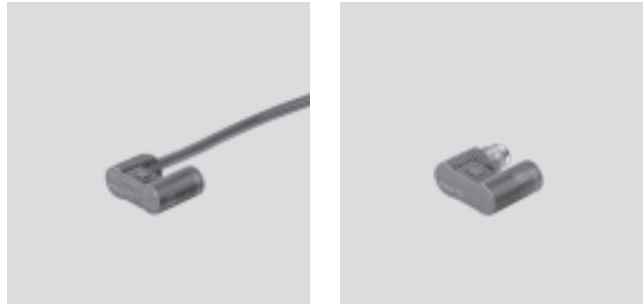
e.g. N/O contact, 3-wire, with cable



e.g. N/O contact, 2-wire, with cable



- Magnetic reed measuring principle



Design	
Constructional design	Round
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact, 3-wire			
Switch output	Conventional contact, bipolar		
Electrical connection	Cable, 3-wire	Cable, 3-wire	Plug M8x1, 3-pin
Cable length [m]	2.5	5	-
Operating voltage range DC [V DC]	12 ... 27		
Max. output current [mA]	500		
Max. switching capacity DC [W]	10		
Voltage drop [V]	-		
Switch-on time [ms]	≤0.5		
Switch-off time [ms]	0.03		
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP67		

Technical data – N/O contact, 2-wire			
Switch output	Conventional contact, bipolar <sup>1)</sup>		
Electrical connection	Cable, 2-wire		
Cable length [m]	2.5		
Operating voltage range DC [V DC]	12 ... 250		
AC [V AC]	12 ... 250		
Max. output current [mA]	500		
Max. switching capacity DC [W]	10		
AC [VA]	10		
Voltage drop [V]	4.1		
Switch-on time [ms]	≤2		
Switch-off time [ms]	2		
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP67		

1) Without LED function

Materials	
Housing	Polyethylene terephthalate
Cable sheath	Polyvinyl chloride
Note on materials	Free of copper and PTFE

# Proximity sensors SMEO-4U, round design, magnetic reed

Technical data



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 <sup>1)</sup>	4		2
CE symbol (declaration of conformity)	In accordance with EU EMC directive		
	In accordance with EU low voltage directive <sup>2)</sup>		-

- 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 normal industrial environment or media such as coolants 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.
- 2) Only valid for N/O contact, 2-wire, operating voltage range 3 ... 250 V AC / 250 V DC

Product weights [g]			
Electrical connection	Cable		Plug
Cable length [m]	2,5	5,0	
N/O contact			
3-wire	70	130	16
2-wire	70	-	-

## Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

1 Connecting cable  
2 Yellow LED

## Plug type M8x1

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

## Ordering data

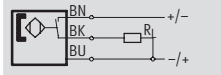
	Electrical connection		Cable length [m]	Part No.	Type
	Cable	Plug M8x1			
	N/O contact				
	Operating voltage range 12 ... 27 V DC				
	3-wire	-	2.5	36 198	SMEO-4U-K-LED-24
	-	3-pin	5	175 401	SMEO-4U-K5-LED-24
	-	3-pin	-	151 526	SMEO-4U-S-LED-24-B
Operating voltage range 12 ... 250 V AC/DC					
2-wire	-	2.5	150 011	SMEO-4U-K-LED-230	

# Proximity sensors CRSMEO-4, round design, magnetic reed

Technical data

Function

N/O contact, 3-wire, with cable



- Corrosion resistant
- Magnetic reed measuring principle



Design	
Constructional design	Round
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – N/O contact, 3-wire			
Switch output	Contacting		
Electrical connection	Cable, 3-wire		
Cable length	[m]	2.5	
Operating voltage range	DC	[V DC]	12 ... 30
	AC	[V AC]	12 ... 30
Max. output current	[mA]	500	
Max. switching capacity	DC	[W]	10
	AC	[VA]	10
Switch-on time	[ms]	0.03	
Switch-off time	[ms]	≤0.5	
Protection against short circuit	No		
Protection against polarity reversal	No		
Protection class	IP65/IP67		

Operating and environmental conditions			
Electrical connection	Cable		
Cable installation	Fixed	Flexible	
Ambient temperature	[°C]	-20 ... +60	-5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	4		
CE symbol (declaration of conformity)	In accordance with EU EMC directive		

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.

Materials	
Housing	Polypropylene
Cable sheath	Thermoplastic rubber
Note on materials	Free of copper and PTFE

Product weights [g]	
N/O contact	
3-wire	70

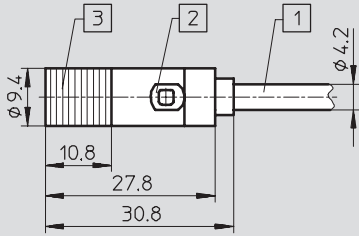
# Proximity sensors CRSMEO-4, round design, magnetic reed

Technical data



## Dimensions

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



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

## Ordering data

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



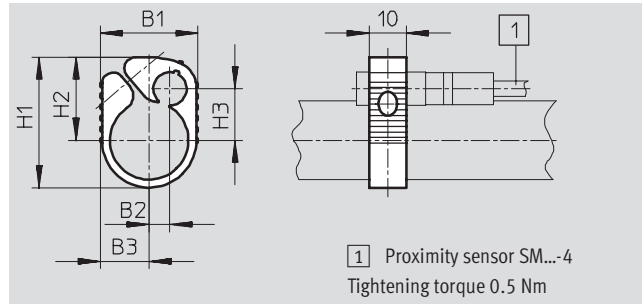
# Proximity sensors, round design



Accessories

## Mounting kit SMBR

Material:  
Polyacetate

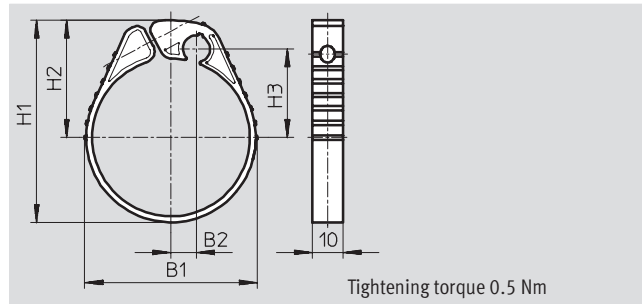


Dimensions and ordering data								
For piston $\varnothing$	B1	B2	B3	H1	H2	H3	Part No.	Type
8	21	-	14	23.5	16.5	9	19 272	SMBR-8
							166 398	SMBR-8-CT <sup>1)</sup>
10	22	0.5	14	26	18.5	10	19 273	SMBR-10
							166 399	SMBR-10-CT <sup>1)</sup>
12	22	4	11	28.5	20	10.2	19 274	SMBR-12
							166 400	SMBR-12-CT <sup>1)</sup>
16	22.5	4	11.5	33.5	22.5	12.4	19 275	SMBR-16
							166 401	SMBR-16-CT <sup>1)</sup>
20	26.5	5.5	13.5	35.5	22.5	14	19 276	SMBR-20
							166 402	SMBR-20-CT <sup>1)</sup>
25	31.5	7.5	16	40.5	25	16	19 277	SMBR-25
							166 403	SMBR-25-CT <sup>1)</sup>

1) Free of copper and PTFE

## 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	

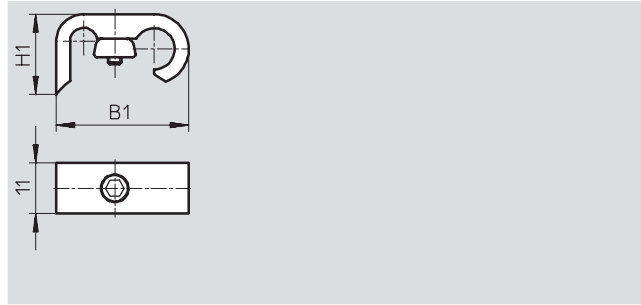
# Proximity sensors, round design

Accessories



## Mounting kit CRSMB

Material:  
High-alloy stainless steel




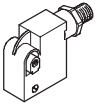
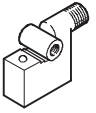



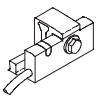
Dimensions and ordering data				
For piston $\varnothing$	B1	H1	Part No.	Type
32	29	17.6	161 763	CRSMB-32
40	29	15.1	161 764	CRSMB-40
50	31.1	17.4	161 765	CRSMB-50
63	31.1	18.1	161 766	CRSMB-63
80	33	24.2	161 767	CRSMB-80
100	33	27.5	161 768	CRSMB-100
125	36.5	31.1	185 365	CRSMB-125



# Proximity sensors, block-shaped

Product range overview



Measuring principle	Version	Type	Assembly	Switching element function		Switch output	Electrical connection	
				N/O contact	N/C contact		Cable	Plug
Magneto-resistive	Operating voltage range 10 ... 30 V DC							
		SMTO-1	Via 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	Via accessories	■	-	PNP	-	M12x1, 3-pin
Magnetic reed	Operating voltage range 0 ... 30 V DC							
		SMEO-1	Via accessories	■	-	Contacting	-	M8x1, 3-pin <sup>1)</sup>
				■	-		3-wire	M8x1, 3-pin
	Operating voltage range 0 ... 250 V AC, 0 ... 200 V DC							
		SMEO-1-B	Via accessories	■	-	Contacting	2-wire	-
		SMEO-1		■	-		2-wire	-
		■		-	2-wire		-	
	SMEO-1-S6-C Heat resistant up to 120°C	■		-	2-wire		-	
Magnetic	Pneumatic proximity sensor, operating pressure 2 ... 6 bar							
		SMPO-1	Via accessories	■ <sup>2)</sup>	-	-	-	-
Inductive	Operating voltage range 10 ... 30 V DC							
		SMT-C1	Clamped	■	-	PNP	3-wire	-

1) The proximity sensor has 2 wires internally. One pin of the M8 plug is unused.

2) 3/2-way valve, normally closed

# Proximity sensors, block-shaped

Product range overview

FESTO

Type	Connection direction		Replacement without re-adjustment	Switching status display via LED	Free of copper and PTFE	→ Page
	In-line	Lateral				
<b>Operating voltage range 10 ... 30 V DC</b>						
SMT0-1	■	-	■ 1)	■	■	1 / 10.2-89
	■	-	■ 1)	■	-	
SMTSO-1 Welding field immune	■	-	-	■	-	1 / 10.2-91
<b>Operating voltage range 10 ... 30 V DC</b>						
SMT0-6	■	-	-	■	-	1 / 10.2-93
<b>Operating voltage range 0 ... 30 V DC</b>						
SME0-1	■	-	■ 1)	-	■	1 / 10.2-95
	■	-	■ 1)	■	■	
<b>Operating voltage range 0 ... 250 V DC, 0 ... 200 V DC</b>						
SME0-1-B	■	-	■ 1)	-	-	1 / 10.2-95
SME0-1	■	-	■ 1)	■	-	
	■	-	■ 1)	-	-	
SME0-1-S6-C Heat resistant up to 120°C	■	-	■ 1)	■	-	
<b>Pneumatic proximity sensor, operating pressure 2 ... 6 bar</b>						
SMPO-1	■	-	■ 1)	- 2)	-	1 / 10.2-98
<b>Operating voltage range 10 ... 30 V DC</b>						
SMT-C1	■	-	-	■	■	1 / 10.2-100

- 1) Not in combination with mounting kit SMB-1 or SMBS-...  
 2) Switching status is via pneumatic indicator

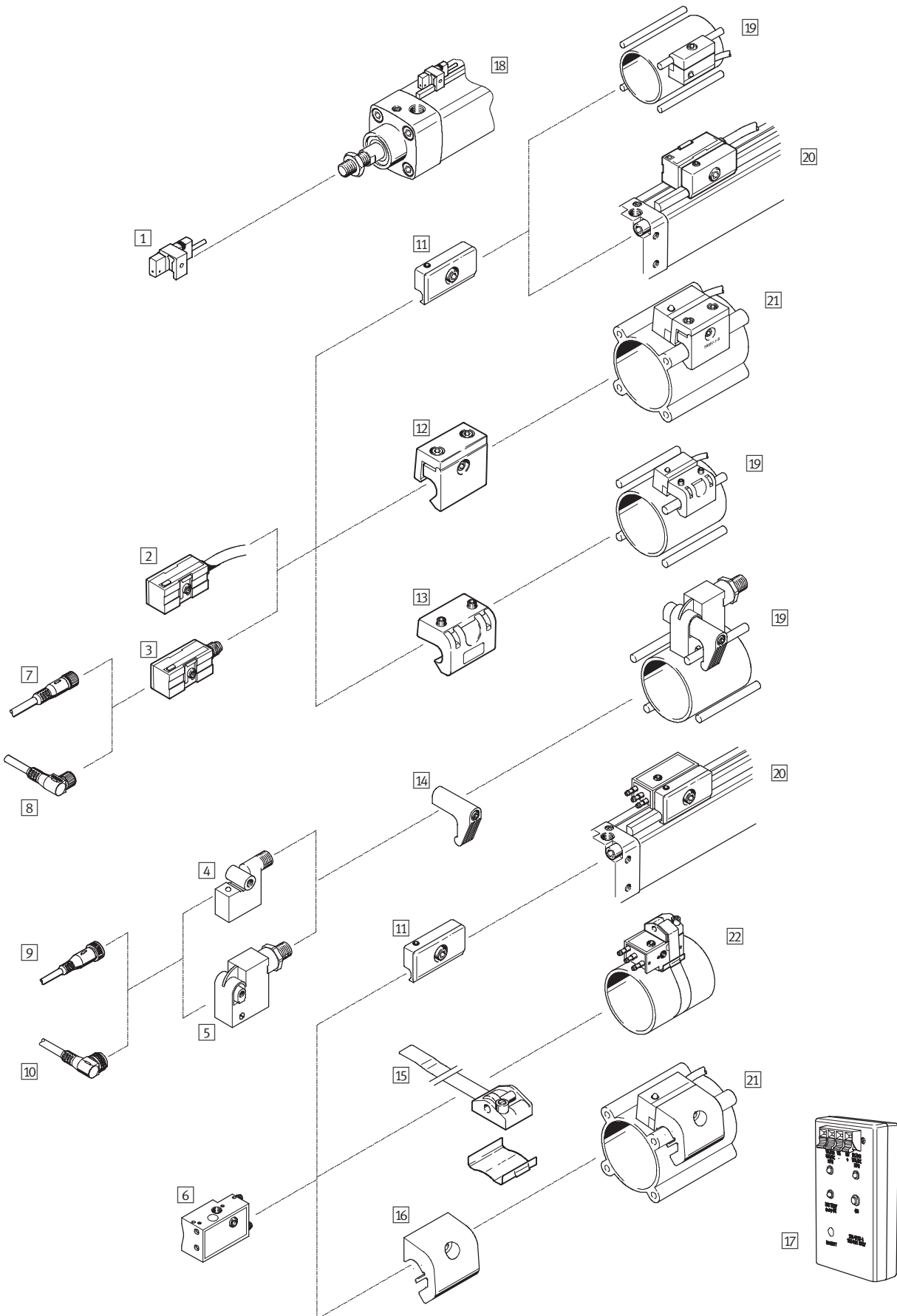
# Proximity sensors, block-shaped

Peripherals overview



Drive accessories  
Cylinder sensors

10.2



# Proximity sensors, block-shaped

Peripherals overview

FESTO

Mounting attachments and accessories		
	Brief description	→ Page
Proximity sensors		
1	SMT-C1-...	Inductive, with cable and clamping component
2	SMT0-1-... SMEO-1-...	Magneto-resistive, with cable
		Magnetic reed, with cable
3	SMT0-1-... SMEO-1-...	Magneto-resistive, with plug M8x1
		Magnetic reed, with plug M8x1
4	SMT0-6-...	Magneto-inductive, with plug M12x1
5	SMTSO-1-...	Magneto-resistive, welding field immune, with plug M12x1
6	SMPO-1-...	Pneumatically actuated
Accessories		
7	Plug socket with cable NEBU-M83GD-...	Straight socket, M8x1, 3-pin
8	Plug socket with cable NEBU-M83WD-...	Angled socket, M8x1, 3-pin
9	Plug socket with cable NEBU-M123GD-...	Straight socket, M12x1, 3-pin
10	Plug socket with cable NEBU-M123WD-...	Angled socket, M12x1, 3-pin
11	Mounting kit SMB-1	For standard cylinders DNG
12	Mounting kit SMBU-1-B	For standard cylinders DNU
13	Mounting kits SMB-2-B, SMB-3-B	For standard cylinders DNG
14	Mounting kit SMBT-1	For standard cylinders DNG
15	Mounting kit SMBS-...	For round cylinders
16	Mounting kit SMBU-1-H-32	For standard cylinders DNU
17	Sensor tester SM-TEST-1	
Drives		
18	Standard cylinders CDN-...-R with sensor strip	∅ 32 ... 100 mm
19	Standard cylinders DNG	∅ 32 ... 320 mm
20	Flat cylinders DZH	∅ 32 ... 63 mm
	Semi-rotary drives DRQ	∅ 40 ... 100 mm
21	Standard cylinders DNU	∅ 32 ... 125 mm
22	Round cylinders	∅ 8 ... 100 mm

Drive accessories  
Cylinder sensors

10.2

# Proximity sensors, block-shaped

Type codes

## Proximity sensor for cylinders with tie or mounting rod

SMT0-1 – PS – K – LED – 24 – C

### Function

SMT0-1	Proximity sensor, block-shaped, magneto-resistive
SMTSO-1	Proximity sensor, block-shaped, magneto-resistive, welding field immune
SMT0-6	Proximity sensor, block-shaped, magneto-inductive
SMEO-1	Proximity sensor, block-shaped, magnetic reed
SMPO-1	Proximity sensor, block-shaped, magnetic

### Switch output, switching element function

PS	PNP, N/O contact, 3-wire
NS	N/O contact, 3-wire, NPN
	N/O contact, 2- or 3-wire

### Electrical connection, cable length

K	Cable, 2.5 m
S	Plug M8x1

### Switching status display

LED	Yellow LED
-----	------------

### Rated operating voltage

24	24 V DC
230	230 V AC

### Generation

B	B series
C	C series

## Proximity sensor for standard cylinders CDN...-R with sensor strip

SMT-C1 – PS – 24V – K2,5 – OE

### Function

SMT-C1	Proximity sensor, block-shaped, inductive
--------	-------------------------------------------

### Switching element function, switch output

PS	PNP, N/O contact, 3-wire
----	--------------------------

### Rated operating voltage

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

### Cable length

K2,5	2.5 m
K5,0	5.0 m

### Electrical connection

OE	Cable with open end
----	---------------------



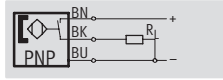
# Proximity sensors SMTO-1, block-shaped, magneto-resistive

FESTO

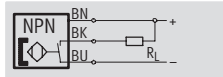
Technical data

Function

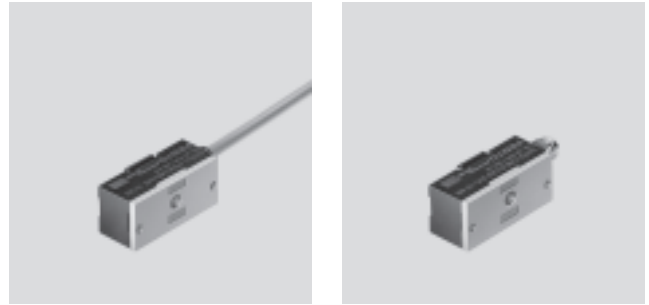
e.g. PNP, N/O contact, with cable



e.g. NPN, N/O contact, with cable



- Magneto-resistive measuring principle



Design	
Constructional design	Block-shaped
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact		
Switch output	PNP NPN	
Electrical connection	Cable, 3-wire	Plug M8x1, 3-pin
Cable length [m]	2.5	–
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	
Switch-on time [ms]	≤1	
Switch-off time [ms]	≤1	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP67	
Product weight [g]	85	20

Operating and environmental conditions			
Electrical connection	Cable		Plug
Cable installation	Fixed	Flexible	
Ambient temperature [°C]	–25 ... +70	–5 ... +70	–25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	4		2
CE symbol (declaration of conformity)	In accordance with EU EMC directive		

- 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 normal industrial environment or media such as coolants 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.

Materials	
Housing	Die-cast zinc, polyester
Cable sheath	Polyvinyl chloride
Note on materials	Free of copper and PTFE

# Proximity sensors SMTO-1, block-shaped, magneto-resistive

Technical data



Product weights [g]		
Electrical connection	Cable	Plug
N/O contact		
PNP	85	20
NPN	85	20

## Dimensions Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

1 Connecting cable  
2 Yellow LED

## Plug type M8x1

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

## Ordering data

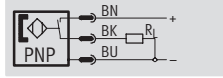
	Switch output	Electrical connection		Cable length [m]	Part No.	Type
		Cable	Plug M8x1			
	N/O contact					
	PNP	3-wire	–	2.5	151 683	SMTO-1-PS-K-LED-24-C
		–	3-pin	–	151 685	SMTO-1-PS-S-LED-24-C
	NPN	3-wire	–	2.5	151 684	SMTO-1-NS-K-LED-24-C
–		3-pin	–	151 686	SMTO-1-NS-S-LED-24-C	

# Proximity sensors SMTSO-1, block-shaped, magneto-resistive

Technical data

**Function**

PNP, N/O contact, with plug



- Welding field immune
- Magneto-resistive measuring principle



Design	
Constructional design	Block-shaped
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED
Ready status display	Green LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact	
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
Switch-on time [ms]	≤35
Switch-off time [ms]	≤20
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	IP65/IP67

Operating and environmental conditions	
Electrical connection	Plug
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	1
CE symbol (declaration of conformity)	In accordance with EU EMC directive

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.

Materials	
Housing	Die-cast zinc

Product weights [g]	
N/O contact	
PNP	70

# Proximity sensors SMTSO-1, block-shaped, magneto-resistive

Technical data



**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Plug type M12x1

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

Ordering data				
	Switch output	Electrical connection	Part No.	Type
	N/O contact			
	Welding field immune			
	PNP	Plug M12x1, 3-pin	30 441	SMTSO-1-PS-S-LED-24

Drive accessories  
Cylinder sensors

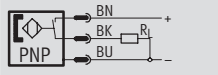
10.2

# Proximity sensors SMTO-6, block-shaped, magneto-resistive

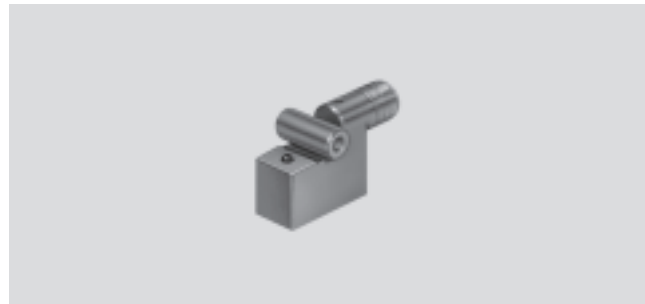
Technical data

Function

PNP, N/O contact, with plug



- Magneto-inductive measuring principle



Design	
Constructional design	Block-shaped
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup> [mm]	±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact	
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
Switch-on time [ms]	≤1
Switch-off time [ms]	≤1
Protection against short circuit	Yes
Protection against polarity reversal	For all electrical connections
Protection class	IP67

Operating and environmental conditions	
Electrical connection	Plug
Ambient temperature [°C]	-25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	1
CE symbol (declaration of conformity)	In accordance with EU EMC directive

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.

Materials	
Housing	Die-cast zinc

Product weights [g]	
N/O contact	
PNP	36

# Proximity sensors SMTO-6, block-shaped, magneto-resistive

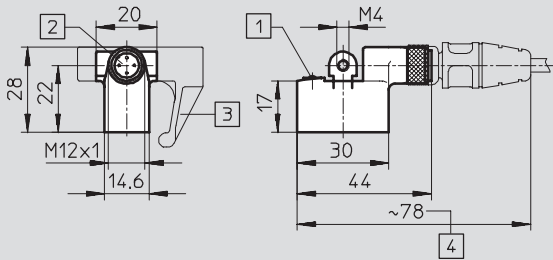
Technical data



## Dimensions

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

Plug type M12x1



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

## Ordering data

	Switch output	Electrical connection	Part No.	Type
	N/O contact			
	PNP	Plug M12x1, 3-pin	35 573	SMTO-6-PS-S-LED-24

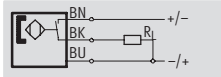
# Proximity sensors SMEO-1, block-shaped, magnetic reed

Technical data

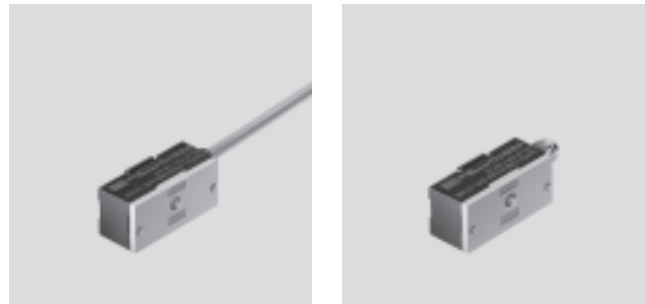
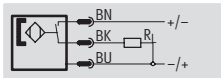
Function

- Magnetic reed measuring principle

e.g. N/O contact, 3-wire, with cable



e.g. N/O contact, 3-wire, with plug



Design	
Constructional design	Block-shaped
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1

1) Only applicable to drives secured against rotation.

Technical data – N/O contact, 3-wire			
Switching element function		N/O contact	
Switch output		Conventional contact, bipolar	
Electrical connection		Cable, 3-wire	Plug M8x1, 3-pin
Cable length	[m]	2.5	5.0
Operating voltage range	DC [V DC]	12 ... 27	
Max. output current	DC [mA]	1,000	
Max. switching capacity	DC [W]	27	
Switch-on time	[ms]	≤0.5	
Switch-off time	[ms]	≤0.03	
Protection against short circuit		No	
Protection against polarity reversal		No	
Protection class		IP67	
Switching status display		Yellow LED	

Technical data – N/O contact, heat resistant			
Switching element function		N/O contact	
Switch output		Conventional contact, bipolar	
Electrical connection		Cable, 2-wire	
Cable length	[m]	2.5	
Operating voltage range	DC [V DC]	0 ... 200	
	AC [V AC]	0 ... 250	
Max. output current	DC [mA]	1,000	
	AC [mA]	1,000	
Max. switching capacity	DC [W]	40	
	AC [VA]	40	
Switch-on time	[ms]	≤0.5	
Switch-off time	[ms]	≤0.03	
Protection against short circuit		No	
Protection against polarity reversal		No	
Protection class		IP67	
Switching status display		–	

# Proximity sensors SMEO-1, block-shaped, magnetic reed

Technical data

FESTO

Technical data – N/O contact, 2-wire				
Switching element function		N/O contact		
Switch output		Conventional contact, bipolar <sup>1)</sup>		Conventional contact, bipolar
Electrical connection		Cable, 2-wire		Cable, 2-wire      Plug M8x1, 2-pin
Cable length	[m]	2.5	5.0	2.5      –
Operating voltage range	DC [V DC]	5 ... 200		0 ... 200      0 ... 30
	AC [V AC]	5 ... 250		0 ... 250      –
Max. output current	DC [mA]	500		1,000      1,000
	AC [mA]	500		1,000      –
Max. switching capacity	DC [W]	40		40      40
	AC [VA]	40		40      –
Voltage drop	[V]	4.1		–      –
Switch-on time	[ms]	≤0.5		
Switch-off time	[ms]	≤0.03		
Protection against short circuit		No		
Protection against polarity reversal		No		
Protection class		IP67		
Switching status display		Yellow LED	Yellow LED	–      –

1) Without LED function.

Operating and environmental conditions						
Electrical connection		Cable		Cable, heat resistant		Plug
Cable installation		Fixed	Flexible	Fixed	Flexible	Fixed
Ambient temperature	[°C]	–20 ... +70	–5 ... +70	–10 ... +120	–5 ... +120	–20 ... +70
Corrosion resistance class CRC <sup>1)</sup>		4		4		2
CE symbol (declaration of conformity)		In accordance with EU EMC directive <sup>2)</sup>		In accordance with EU low voltage directive		In accordance with EU EMC directive
		In accordance with EU low voltage directive <sup>3)</sup>				

- 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 normal industrial environment or media such as coolants 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.
- 2) Only valid for N/O contact, 3-wire, operating voltage range 12 ... 27 V DC and for N/O contact, 2-wire, operating voltage range 5 ... 250 V AC / 5 ... 200 V DC.
- 3) Only valid for N/O contact, 2-wire, with cable.

Materials	
Housing	Die-cast zinc, polyester
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

Product weights [g]				
Electrical connection		Cable		Plug
Cable length	[m]	2,5	5,0	–
N/O contact				
3-wire		85	130	20
2-wire		100(85) <sup>1)</sup>	130	20
2-wire, heat resistant		130	–	–

2) Value in brackets only valid for operating voltage range 0 ... 250 V AC / 0 ... 200 V DC.



# Proximity sensors SMEO-1, block-shaped, magnetic reed

Technical data



**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

- 1 Connecting cable
- 2 Yellow LED

Plug type M8x1

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

Ordering data		Cable length [m]	Switching status display via LED	Part No.	Type
Electrical connection	Plug M8x1				
N/O 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 <sup>1)</sup>	–	–	150 847	SMEO-1-S-24-B

1) The proximity sensor has 2 wires internally. One pin of the M8 plug is unused.

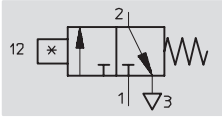
# Proximity sensor SMPO-1, block-shaped, pneumatic

Technical data



Function  
3/2-way valve,  
normally closed

- Pneumatic proximity sensor
- Magnetic measuring principle



Design	
Constructional design	Block-shaped
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Optical

1) Only applicable to drives secured against rotation.

Technical data	
Switching element function	3/2-way valve, normally closed
Operating medium	Filtered, unlubricated compressed air
Operating pressure	[bar] 2 ... 6
Switch-on time	[ms] 12
Switch-off time	[ms] 30
Pneumatic connection	Barbed connector PK-3
Protection class	IP65

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

Materials	
Housing	Polyamide
Barbed connector	Brass
Note on materials	Free of copper and PTFE

Product weights [g]	
PNP	14

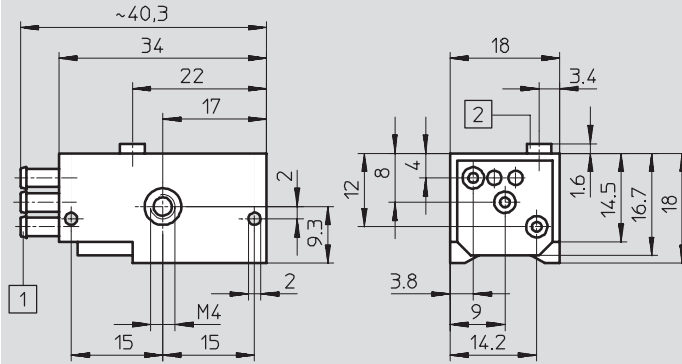
# Proximity sensors SMPO-1, block-shaped, pneumatic

Technical data



## Dimensions

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



- 1 Barbed connector for tubing, nominal diameter 3 mm
- 2 Visual indicator

## Ordering data

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

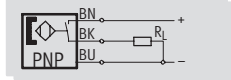
# Proximity sensors SMT-C1, block-shaped, inductive

Technical data



## Function

PNP, N/O contact, with cable



- Inductive measuring principle
- For standard cylinders CDN-...-R with sensor strip



Design	
Constructional design	Block-shaped
Type of mounting	Clamped
Connection direction	In-line
Switching status display	Yellow LED

Technical data – PNP, N/O contact	
Method of measurement	Absolute
Electrical connection	Cable, 3-wire
Cable length	[m] 5.0
Operating voltage range	[V DC] 10 ... 30
Max. output current	[mA] 200
Max. switching capacity DC	[W] 6.0
Voltage drop	[V] < 1.8
Residual current	[mA] < 0.1
Switch-on time	[ms] ≤ 0.5
Switch-off time	[ms] ≤ 0.5
Hysteresis	[mm] ≤ 2.0
Protection against short circuit	Yes
Protection against polarity reversal	For all electrical connections
Inductive protective circuit	Adapted to MZ, MY, ME coils
Protection against overloading	Yes
Protection class	IP65/IP67
Tightening torque	[Nm] 1.2
Conforms to	DIN EN 60 947-5-2

Operating and environmental conditions		
Cable installation	Fixed	Flexible
Ambient temperature	[°C] -20 ... +70	-20 ... +70
Corrosion resistance class CRC <sup>1)</sup>	3	
CE symbol (declaration of conformity)	In accordance with EU EMC directive	

3) Corrosion resistance class 3 according to Festo standard 940 070  
 Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials	
Housing	Aluminium High-alloy stainless steel Polypropylene Polyurethane
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE Halogen-free

# Proximity sensors SMT-C1, block-shaped, inductive



Technical data

Product weights [g]	
N/O contact	
3-wire	60

**Dimensions** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Cable type

- 1 Connecting cable
- 2 Yellow LED
- 3 Clamping component, tightening torque 1,2 Nm

Ordering data					
	Switch output	Electrical connection	Cable length [m]	Part No.	Type
	N/O contact				
	PNP	Cable, 3-wire	2.5	540 431	SMT-C1-PS-24V-2,5-OE
			5.0	540 432	SMT-C1-PS-24V-5,0-OE

Drive accessories  
Cylinder sensors

**10.2**

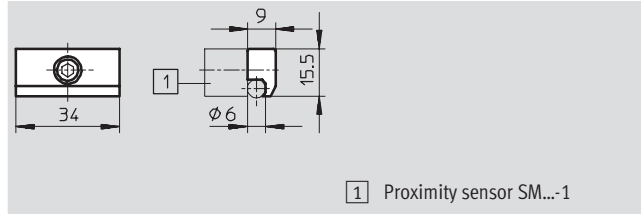
# Proximity sensors, block-shaped

Accessories



## Mounting kit SMB-1

Material:  
Die-cast zinc

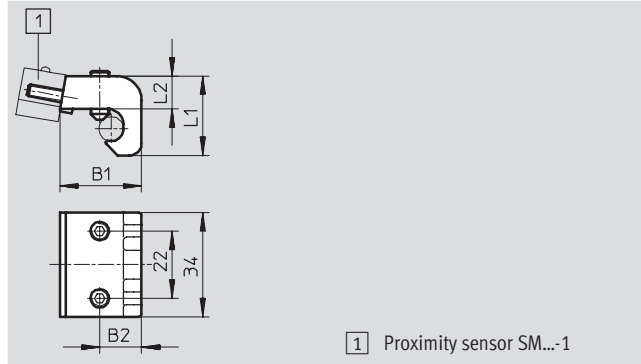


1) Proximity sensor SM...-1

Dimensions and ordering data						
For piston Ø			Part No.	Type		
32 ... 100			<b>11 886</b>	<b>SMB-1</b>		

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

Material:  
Die-cast aluminium

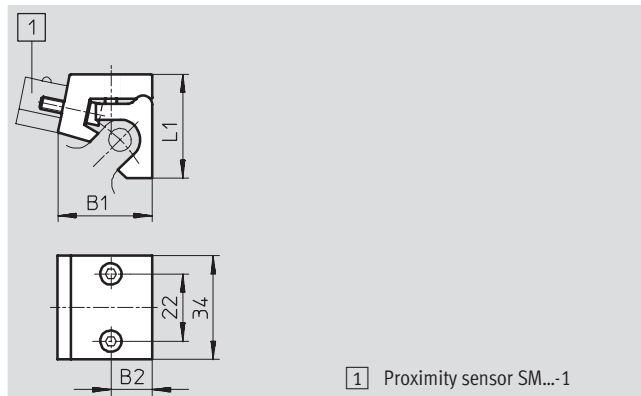


1) Proximity sensor SM...-1

Dimensions and ordering data						
For piston Ø	B1	B2	L1	L2	Part No.	Type
32 ... 50	18	11	23	11.6	<b>36 162</b>	<b>SMB-2-B</b>
63 ... 100	26.8	13.7	26	10.8	<b>36 163</b>	<b>SMB-3-B</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	<b>36 173</b>	<b>SMBU-1-B<sup>1)</sup></b>	
63 ... 100	31	13.5	34	<b>36 174</b>	<b>SMBU-2-B<sup>1)</sup></b>	
125	31	13.5	37	<b>125 828</b>	<b>SMBU-3-B</b>	

1) Free of copper and PTFE

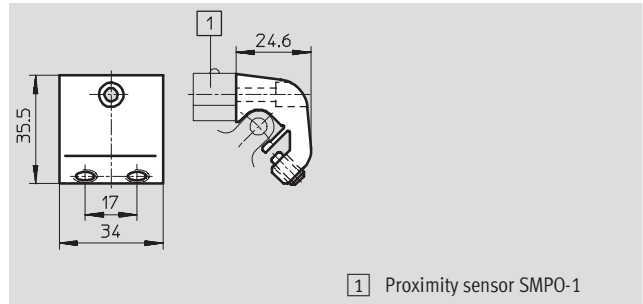
# Proximity sensors, block-shaped

Accessories



## Mounting kit SMBU-1-H-32

Material:  
Aluminium

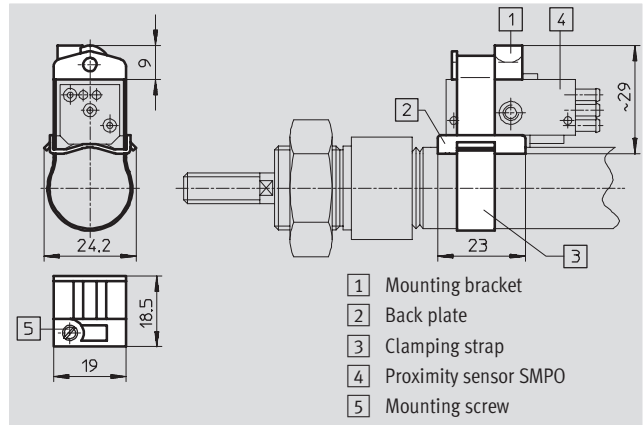


1 Proximity sensor SMPO-1

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

## Mounting kit SMBS

Material:  
Brass, plastic

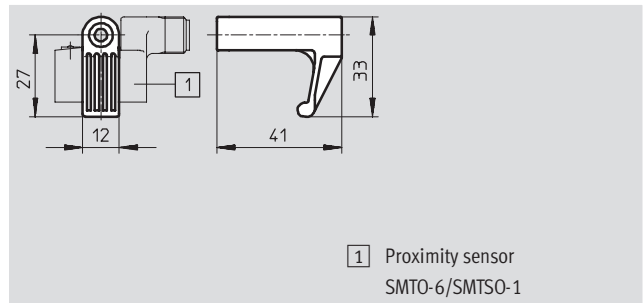


- 1 Mounting bracket
- 2 Back plate
- 3 Clamping strap
- 4 Proximity sensor SMPO
- 5 Mounting screw

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

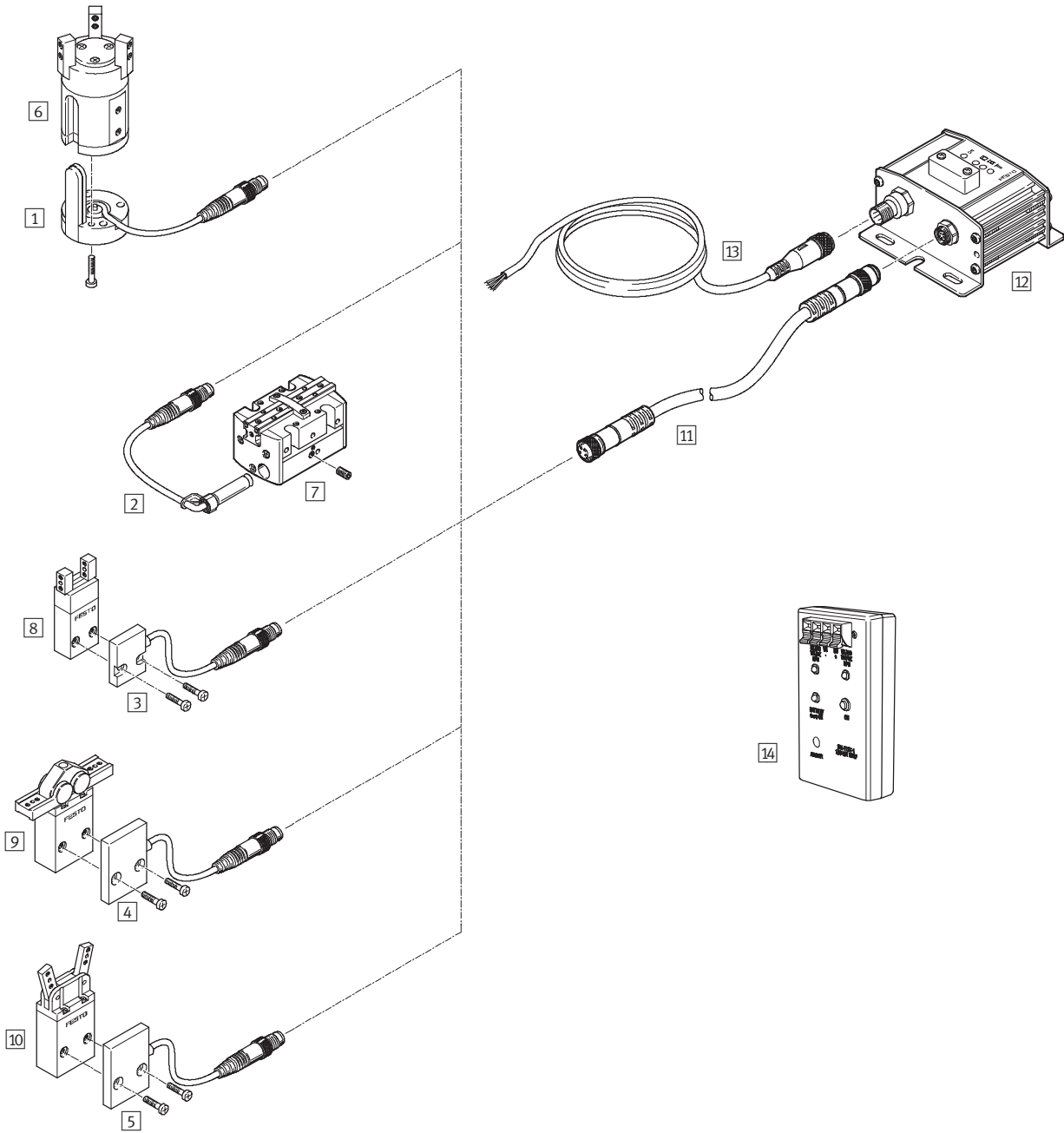
# Position sensors SMH, for grippers

Peripherals overview



Drive accessories  
Cylinder sensors

10.2





# Position sensors SMH, for grippers

Peripherals overview

FESTO

Mounting attachments and accessories		
	Brief description	→ Page
Position sensors		
1	SMH-S1-HGD16	For three-point grippers HGD-16-A
2	SMH-S1-HGPP-...	For parallel grippers HGPP-...
3	SMH-S1-HGP06	For parallel grippers HGP-06-A
4	SMH-S1-HGR10	For radial grippers HGR-10-A
5	SMH-S1-HGW10	For angle grippers HGW-10-A
Drives		
6	Three-point grippers HGD-16-A	
7	Parallel grippers HGPP-...	∅ 10 ... 32 mm
8	Parallel grippers HGP-06-A	
9	Radial grippers HGR-10-A	
10	Angle grippers HGW-10-A	
Accessories		
11	Connecting cable KSMH-1-M8-2-M8	Position 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	

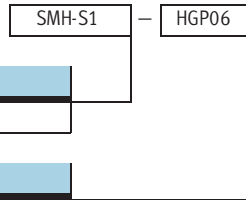
Drive accessories  
Cylinder sensors

10.2

# Position sensors SMH, for grippers

Type codes

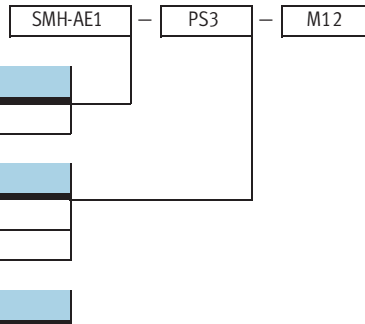
## Position sensor



Type	
SMH-S1	Position sensor for gripper

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	Parallel gripper HGPP-10-... and HGPP-12-...
HGPP-16	Parallel gripper HGPP-16-...
HGPP20/25	Parallel gripper HGPP-20-... and HGPP-25-...
HGPP-32	Parallel gripper HGPP-32-...

## Evaluation unit



Type	
SMH-AE1	Evaluation unit

Switch output	
PS3	N/O contact, PNP, 3 switch outputs
NS3	N/O contact, NPN, 3 switch outputs

Electrical connection	
M12	Plug M12x1, 5-pin

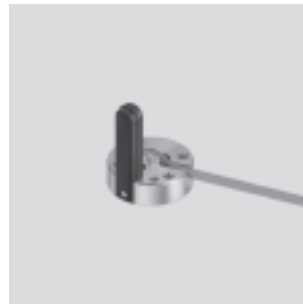
# Position sensors SMH, for grippers

Technical data

## Position sensor SMH-S1-...

- Magnetic Hall measuring principle

Function



Design	
Constructional design	For grippers
Type of mounting	Screwed to gripper

Technical data	
Electrical connection	Cable with plug M8x1, 4-pin
Cable length [m]	0.5
Protection against short circuit	No
Protection against polarity reversal	No
Protection class	IP65
CE symbol (declaration of conformity)	In accordance with EU EMC directive
Product weight [g]	20 (30) <sup>1)</sup>

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

Materials	
Housing	Polyamide
Cable sheath	Polyurethane
Note on materials	Free of copper and PTFE

Operating and environmental conditions	
Electrical connection	Cable
Ambient temperature [°C]	5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	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 normal industrial environment or media such as coolants or lubricating agents.

# Position sensors SMH, for grippers

Technical data



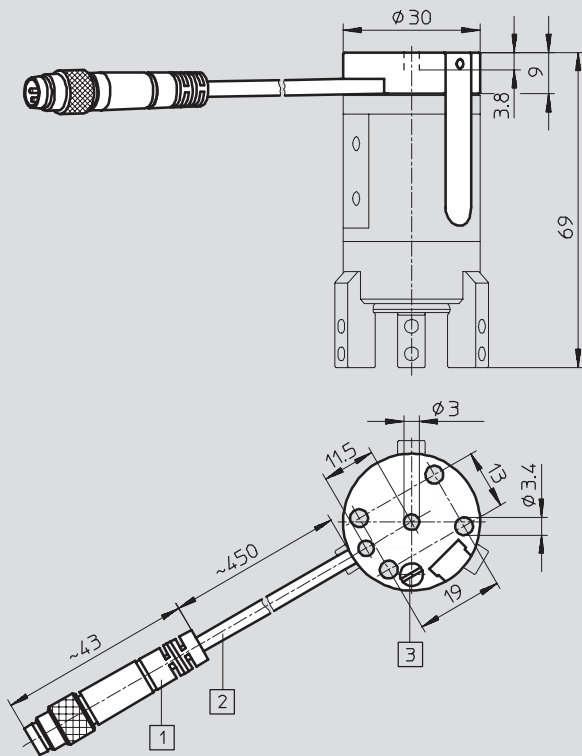
Drive accessories  
Cylinder sensors

10.2

## Dimensions

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

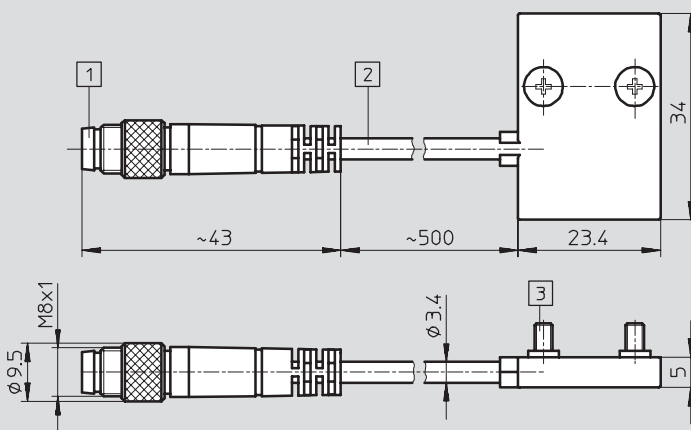
SMH-S1-HGD16



- 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

# Position sensors SMH, for grippers

Technical data

Dimensions Download CAD data → [www.festo.com/en/engineering](http://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

# Position sensors SMH, for grippers

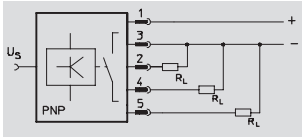
Technical data – Evaluation unit



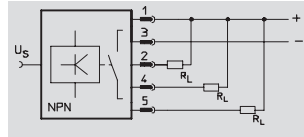
## Evaluation unit SMH-AE1-...

Function

PNP



NPN



Design	
Type of mounting	Via through-holes
Switching status display	Yellow LED
Ready status display	Green LED

Technical data		
Switch output	PNP	NPN
Electrical connection	Plug M12x1, 5-pin	
Sensor connection	4-pin	
Operating voltage range	[V DC]	12 ... 30
Protection class	IP53	
CE symbol (declaration of conformity)	In accordance with EU EMC directive	

Materials	
Housing	Wrought aluminium alloy
Note on materials	Free of copper and PTFE

Operating and environmental conditions		
Electrical connection	Cable	
Ambient temperature	[°C]	5 ... +60
Corrosion resistance class CRC <sup>1)</sup>	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 normal industrial environment or media such as coolants or lubricating agents.

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

# Position sensors SMH, for grippers

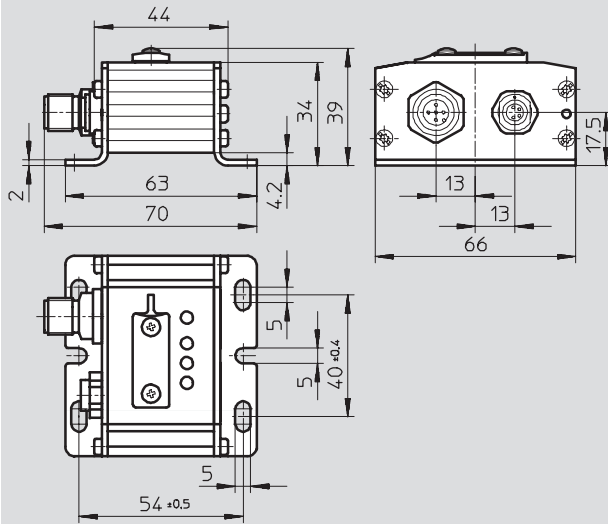
Technical data – Evaluation unit



## Dimensions

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

# Position sensors SMH, for grippers

Accessories



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

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

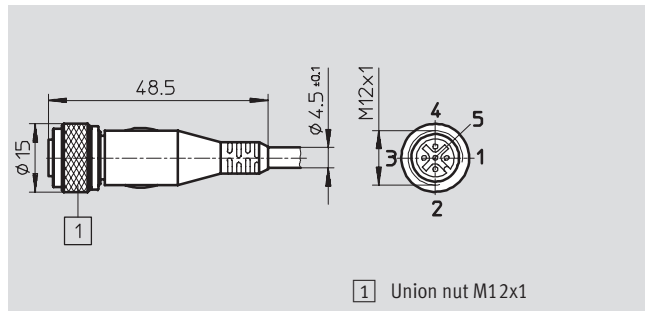


Ordering data		Technical data → 4 / 8.3-2	
Cable length [m]	CRC <sup>1)</sup>	Part No.	Type
Straight socket			
2	2	175 714	KSMH-1-M8-2-M8

- 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 normal industrial environment or media such as coolants or lubricating agents.

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

Material:  
Housing: Polyurethane  
Cable sheath: Polyurethane



Ordering data		Technical data → 4 / 8.3-2	
Cable length [m]	CRC <sup>1)</sup>	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 normal industrial environment or media such as coolants or lubricating agents.



# Sensor testers SM-TEST-1

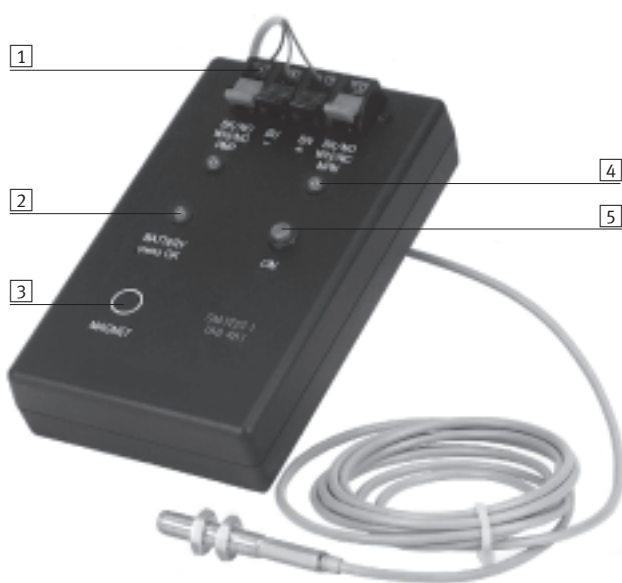
Technical data

## Description

The sensor tester is used to test and adjust sensors and proximity switches. The sensor tester also 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

 Note

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

## Ordering data

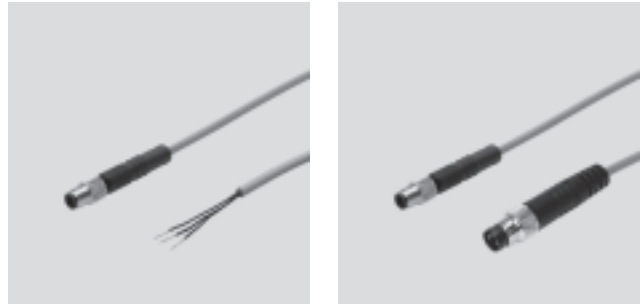
Part No.	Type
158 481	SM-TEST-1

## Proximity sensors

Accessories

### Connecting cable M5x0.5 NEBU-M5

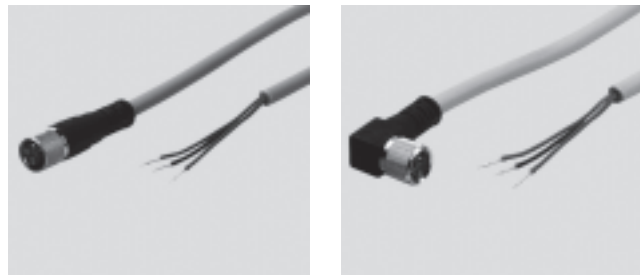
Material:  
Housing: Polyurethane  
Cable sheath: Polyurethane



Ordering data					
Electrical connection, left	Electrical connection, right	Switch output	Cable length [m]	Part No.	Type
Basic version					
Straight plug, M5x0.5, 3-pin	Cable, open end, 3-wire	–	5	539 508	NEBU-M5G4-K-5-Q3-LE3
	Straight socket, M8x1, 3-pin	–	1	539 510	NEBU-M5G4-K-1-Q3-M8G3
	Straight socket, M12x1, 4-pin	–	1	539 512	NEBU-M5G4-K-1-Q3-M12G4

### Connecting cable M8x1 NEBU-M8

Material:  
Housing: Polyurethane  
Cable sheath: Polyurethane



Ordering data					
Electrical connection, left	Electrical connection, right	Switch output	Cable length [m]	Part No.	Type
Basic version					
Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	–	2.5	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
			10	541 332	NEBU-M8G3-K-10-LE3
Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	–	2.5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3
			10	541 335	NEBU-M8W3-K-10-LE3
With switching status display					
Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	PNP	2.5	541 337	NEBU-M8W5P-K-2.5-LE3
			5	541 340	NEBU-M8W5P-K-5-LE3
		NPN	2.5	541 336	NEBU-M8W5N-K-2.5-LE3
			5	541 339	NEBU-M8W5N-K-5-LE3

## Proximity sensors

Accessories

### Connecting cable M12x1

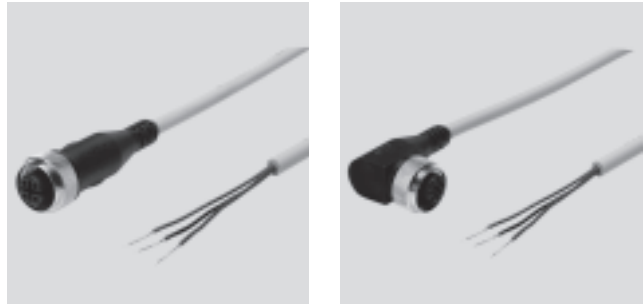
**NEBU-M12**

**SIM-M12**


Material:

Housing: Polyurethane

Cable sheath: Polyurethane



Ordering data					
Electrical connection, left	Electrical connection, right	Switch output	Cable length [m]	Part No.	Type
Basic version					
Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	–	2.5	541 363	NEBU-M12G5-K-2.5-LE3
			5	541 364	NEBU-M12G5-K-5-LE3
Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	–	2.5	541 367	NEBU-M12W5-K-2.5-LE3
			5	541 370	NEBU-M12W5-K-5-LE3
With switching status display					
Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	PNP	2.5	541 366	NEBU-M12W5P-K-2.5-LE3
			5	541 369	NEBU-M12W5P-K-5-LE3
		NPN	2.5	541 365	NEBU-M12W5N-K-2.5-LE3
			5	541 368	NEBU-M12W5N-K-5-LE3
Welding field immune					
Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	–	3	30 450	SIM-M12-RS-3GD-3
Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	–	3	30 451	SIM-M12-RS-3WD-3

Ordering data – Inscription labels						
	Material	Use	Dimensions [mm]	Part No.	Type	PU <sup>1)</sup>
	Polycarbonate	For insertion in the inscription label holder	23x4	541 598	ASLR-L-423	51
			18x4	546 111	ASLR-L-418	57

1) Packaging unit in quantity per frame.