

## Proximity switch for T-slot

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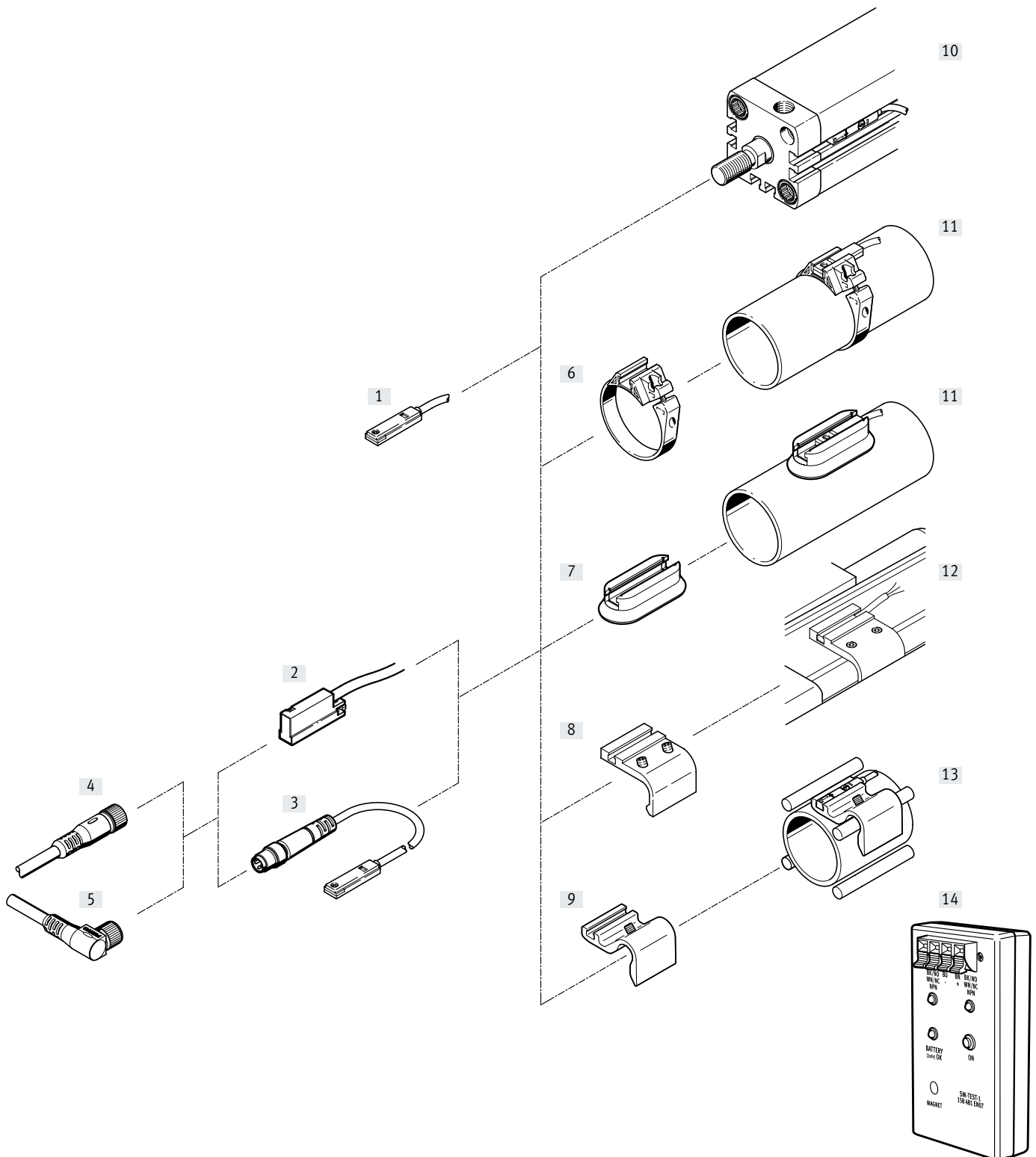
## Product range overview

Design	Type of mounting	Measuring principle	Type	Operating voltage range	Switching output	Switching element function	→ Page
<b>For T-slot</b>	<b>Standard</b>						
	Screw-clamped, insertable in the slot from above	Magnetic Hall	SDBT-MSX	10 ... 30 V DC	PNP/NPN, switchable	N/O / N/C contact, switchable	–
	Insertable in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-8M-A	5 ... 30 V DC	PNP	N/O contact	–
					NPN	N/C contact	
					Non-contacting, 2-wire	N/O contact	
	Insertable in the slot from above, flush with the cylinder profile	Magnetic reed	SME-8M	5 ... 30 V AC/DC	Contacting, bipolar	N/O contact	–
						N/C contact	
	Insertable in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8	12 ... 30 V AC/DC	Contacting, bipolar	N/O contact	7
				3 ... 230 V AC/DC		N/C contact	11
	Insertable in the slot lengthwise	Magneto-resistive	SMT-8G	10 ... 30 V DC	PNP, NPN	N/O contact	–
		Magneto-resistive	SMT-8-SL	10 ... 30 V DC	PNP	N/O contact	–
	With accessories	Magneto-resistive	SMT-8E	10 ... 30 V DC	PNP	N/O contact	–
					NPN		
	<b>Corrosion-resistant</b>						
	Insertable in the slot from above, flush with the cylinder profile	Magneto-resistive	CRSMT-8M	5 ... 30 V DC	PNP	N/O contact	–
	<b>Welding-field-resistant</b>						
	Insertable in the slot from above, screw-clamped	Magneto-resistive	SDBT-BSW	10 ... 30 V DC	PNP	N/O contact	–
					NPN		
					Non-contacting, 2-wire		
	With accessories	Magneto-inductive	SMT-8E	10 ... 30 V DC	PNP	N/O contact	–
					NPN		
	<b>Heat-resistant up to 120°C</b>						
	Insertable in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8-...-S6	0 ... 30 V AC/DC	Contacting, bipolar	N/O contact	11
With accessories	Magnetic reed	SME-8E-...-S6	0 ... 30 V DC	Contacting	N/O contact	–	
			0 ... 30 V AC				
<b>To EU Explosion Protection Directive (ATEX)</b>							
Insertable in the slot from above, screw-clamped	Magneto-resistive	SDBT-MS-...-EX6	8.2 V DC	NAMUR	NAMUR	–	

## Product range overview

Design	Type of mounting	Measuring principle	Type	Operating voltage range	Switching output	Switching element function	→ Page
For C-slot	<b>Standard</b>						
	Insertable in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-10M	10 ... 30 V DC	PNP	N/O contact	C-slot
					NPN		
					Non-contacting, 2-wire		
		Magnetic reed	SME-10M	5 ... 30 V AC/DC	Contacting, bipolar	N/O contact	
	Insertable in the slot lengthwise	Magneto-resistive	SMT-10G	10 ... 30 V DC	PNP	N/O contact	
Magnetic reed		SME-10	12 ... 27 V AC/DC	Contacting	N/O contact		

Peripherals overview



## Peripherals overview

Mounting components and accessories		→ Page	Mounting components and accessories		→ Page
<b>Proximity switches</b>			<b>Mounting kits and accessories</b>		
[1]	SME-8-K-..., with cable	7	[6]	Mounting kit SMBR	14
[2]	SME-8-K-LED-230	11	[7]	Mounting kit CRSMB, corrosion-resistant	15
[3]	SME-8-SL-..., with plug	7	[8]	Mounting kit SMB-8-FENG	15
			[9]	Sensor bracket DASP-M4-...	16
			[14]	Sensor tester SM-TEST-1	17
			-	Positioning element SMM-8	16
			-	Clip SMBK-8	17
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<b>Connecting cables</b>			<b>Drives</b>		
[4]	NEBU-M...G...	17	[10]	Drives with T-slot	-
[5]	NEBU-M...W...	17	[11]	Round cylinders	-
			[12]	Standards-based cylinders DSBC	-
			[13]	Drives with tie or mounting rod	-

## Type codes

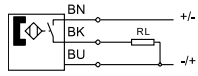
001	Series	
SME	Proximity sensor	
002	Design type	
8	For T-slot	
003	Sensor version	
	Inserted in the slot lengthwise	
004	Switching output	
	None	
0	N/C contact, 3-wire	
ZS	2-wire PNP N/O contact	
005	Switching status indication	
	None	
LED	Yellow LED	

006	Rated operating voltage	
24	24 V DC	
230	230 V AC	
007	Cable characteristic	
K	Standard/suitable for energy chains	
008	Cable length [m]	
5,0	5.0 m	
7,5	7.5 m	
009	Electrical connection	
OE	Open end	

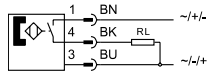
## Data sheet – Magnetic reed

Function

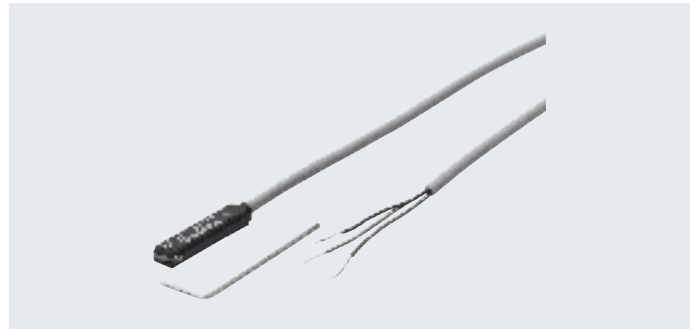
N/O contact, with cable, 3-wire



N/O contact, with plug



- Magnetic reed measuring principle
- Insertable in the slot lengthwise



General technical data		SME-8-K	SME-8-S	SME-8-ZS	SME-8-O
Type					
Design		For T-slot			
Mounting position		Any			
Measured variable		Position			
Conforms to standard		EN 60947-5-2			
Certification		RCM trademark			
Application information		Support / Actuator-sensor overview			
Inductive protective circuit		Adapted to MZ, MY, ME coils			
CE marking (see declaration of conformity)		To EU EMC Directive <sup>1)</sup> To EU RoHS Directive			
UKCA marking (see declaration of conformity)		To UK instructions for EMC To UK RoHS instructions			
Note on materials		RoHS-compliant			

1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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

Input signal/measuring element		SME-8-K	SME-8-K5	SME-8-K-7.5	SME-8-S	SME-8-ZS	SME-8-O
Type							
Measuring principle		Magnetic reed					
Ambient temperature	[°C]	-40 ... +60	-40 ... +70			-40 ... +60	

Switching output		SME-8-K	SME-8-S	SME-8-ZS	SME-8-O
Type					
Switching output		Contacting, bipolar			
Switching element function		N/O contact	N/O contact	N/O contact	N/C contact
Repetition accuracy		0.2			
Reproducibility of switching value	[mm]	±0.1	±0.1	±0.1	±0.1
Switch-on time	[ms]	≤ 0.5	≤ 0.5	≤ 0.5	≤ 2
Switch-off time	[ms]	≤ 0.03	≤ 0.03	≤ 0.03	≤ 0.2
Max. switching frequency	[Hz]	800	–	800	500
Max. output current	[mA]	500	500	80	50
Max. switching capacity AC	[VA]	10	10	–	1.5
Max. switching capacity DC	[W]	10	10	2.16	1.5
Voltage drop	[V]	0	–	≤ 3.5	≤ 2.5

Output, additional data	
Short circuit protection	No
Overload protection	Not present

## Data sheet – Magnetic reed


Electronics					
Type		SME-8-K	SME-8-S	SME-8-ZS	SME-8-O
Operating voltage range	[V AC]	12 ... 30	12 ... 30	–	12 ... 30
Operating voltage range	[V DC]	12 ... 30	12 ... 30	12 ... 27	12 ... 30
Reverse polarity protection		No			

Electromechanics							
Type		SME-8-K	SME-8-K5	SME-8-K-7.5	SME-8-S	SME-8-ZS	SME-8-O
Electrical connection 1							
Function		Switching output, power supply			Switching output	Switching output, power supply	
Connection type		Cable			Plug	Cable	Cable
Connection technology		Open end			M8x1, A-coded to EN 61076-2-104	Open end	Open end
Number of pins/wires		3			3	2	3
Outlet direction of connection		In-line					
Cable length	[m]	2.5	5	7.5	0.3	2.5	7.5
Information on materials: cable sheath		TPE-U (PUR)					
Cable sheath colour		Grey					

Mechanics							
Type		SME-8-K	SME-8-K5	SME-8-K-7.5	SME-8-S	SME-8-ZS	SME-8-O
Type of mounting		Clamped in T-slot Insertable in the slot lengthwise					
Information on materials: housing		Epoxy resin PC PET High-alloy stainless steel					
Housing colour		Black					

Display/operation	
Switching status indication	Yellow LED

Immission/emission							
Type		SME-8-K	SME-8-K5	SME-8-K-7.5	SME-8-S	SME-8-ZS	SME-8-O
Ambient temperature with flexible cable installation	[°C]	–5 ... +60	–5 ... +70	–5 ... +70	–5 ... +70	–5 ... +60	–5 ... +60
Degree of protection		IP65 IP67			– IP67	IP65 IP67	– IP67
Insulation voltage	[V]	50					
Surge resistance	[kV]	3					
Pollution degree		3					
PWIS conformity		VDMA24364-B2-L					

Pin allocation to EN 60947-5-2			
Plug, 3-pin M8x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	–
	4	Black	Output

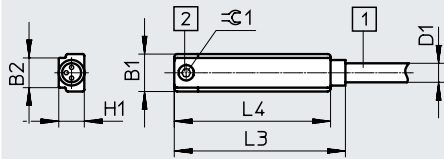


## Data sheet – Magnetic reed

## Dimensions

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N/O contact, cable



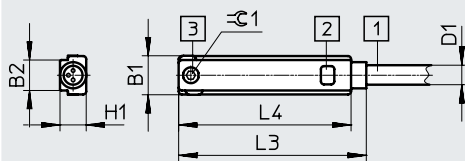
- [1] Connecting cable, 3-wire cable, 3 x 0.14 mm<sup>2</sup>
- [2] Yellow light emitting diode
- [3] Max. tightening torque 0.2 Nm

Type	B1	B2	D1 ∅	H1	L3	L4	⊕ 1
SME-8-K- ...	6.4	5	2.9	4.3	28.8	26.3	1.3

## Dimensions

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

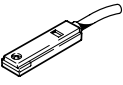
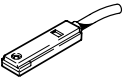
N/C contact, cable



- [1] Connecting cable, 3-wire cable, 3 x 0.14 mm<sup>2</sup>
- [2] Yellow light emitting diode
- [3] Max. tightening torque 0.2 Nm

Type	B1	B2	D1 ∅	H1	L3	L4	⊕ 1
SME-8-O-K-LED-24	6.4	5	2.9	4.4	30.8	28.3	1.3

Data sheet – Magnetic reed

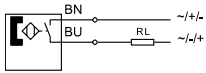
Ordering data							
	Switching output	Electrical connection			Cable length [m]	Part no.	Type
		Cable	Cable with plug M8x1	Plug M8x1			
<b>N/O contact, basic version</b>							
	Contacting, bipolar	3-wire	–	–	2.5	150855	SME-8-K-LED-24
			–	–	5.0	175404	SME-8-K5-LED-24
			–	–	7.5	530491	SME-8-K-7.5-LED-24
	–	3-pin	–	0.3	150857	SME-8-S-LED-24	
	–	2-wire	–	–	2.5	171169	SME-8-ZS-KL-LED-24
<b>N/C contact</b>							
	Contacting, bipolar	3-wire	–	–	7.5	160251	SME-8-O-K-LED-24

## Data sheet – Magnetic reed

### Function

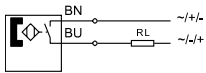
N/O contact, with cable, 2-wire

0...30 V AC/DC

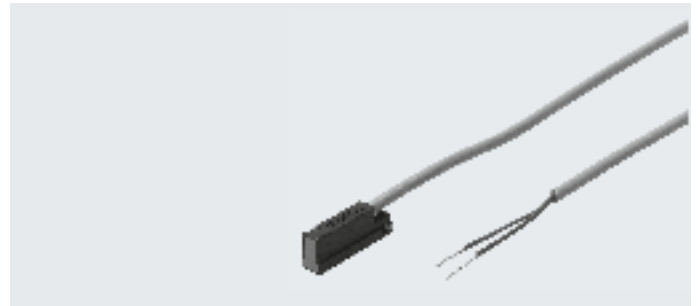


N/O contact, with cable, 2-wire

3...230 V AC/DC



- Magnetic reed measuring principle
- Insertable in the slot lengthwise
- Heat-resistant design
- Variants with operating voltage range up to 230 V DC/AC



General technical data		SME-8...S6	SME-8...230
Design		For T-slot	
Conforms to standard		EN 60947-5-2	
Mounting position		Any	
Measured variable		Position	
Application information		Support / Actuator-sensor overview	Only for fixed cable installation
Certification		–	RCM trademark
		–	CCC
CE marking (see declaration of conformity)		To EU EMC Directive <sup>1)</sup>	
		To EU RoHS Directive	
		–	To EU Low Voltage Directive
UKCA marking (see declaration of conformity)		To UK instructions for EMC	
		To UK RoHS instructions	
		–	To UK regulations for electrical equipment
Vibration resistance to DIN/IEC 68, Part 2-6		Tested to severity level 2	
Continuous shock resistance to DIN/IEC 68, Part 2 - 82		Tested to severity level 2	
Note on materials		RoHS-compliant	

1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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

Input signal/measuring element		SME-8...S6	SME-8...230
Measuring principle		Magnetic reed	
Ambient temperature	[°C]	–40 ... +120	–30 ... +60

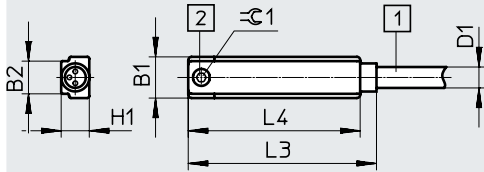
Switching output		SME-8...S6	SME-8...230
Switching output		Contacting, bipolar	
Switching element function		N/O contact	
Repetition accuracy		0.2	
Reproducibility of switching value	[mm]	±0.1	±0.1
Switch-on time	[ms]	≤ 0.5	2
Switch-off time	[ms]	≤ 0.03	0.03
Max. switching frequency	[Hz]	800	500
Max. output current	[mA]	500	120
Max. switching capacity AC	[VA]	10	
Max. switching capacity DC	[W]	10	
Voltage drop	[V]	0	≤ 3.9
Minimum load current	[mA]	0	5
Off-state current	[mA]	–	0

## Data sheet – Magnetic reed

Output, additional data		
	SME-8-...-S6	SME-8-...-230
Short circuit protection	No	
Overload protection	Not present	
Electronics		
	SME-8-...-S6	SME-8-...-230
Operating voltage range [V AC]	0 ... 30	3 ... 230
Operating voltage range [V DC]	0 ... 30	3 ... 230
Reverse polarity protection	No	
Electromechanics		
	SME-8-...-S6	SME-8-...-230
Electrical connection 1		
Function	Switching output	
Connection type	Cable	
Connection technology	Open end	
Number of pins/wires	2	
Outlet direction of connection	In-line	
Cable length [m]	2.5	2.5
Information on materials: cable sheath	TPE-S	TPE-U (PUR)
Cable sheath colour	–	Grey
Mechanics		
	SME-8-...-S6	SME-8-...-230
Type of mounting	Clamped in T-slot Insertable in the slot lengthwise	
Information on materials: housing	Epoxy resin PET High-alloy stainless steel	
Housing colour	Black	
Information on materials: cable sheath	TPE-S	TPE-U (PUR)
Display/operation		
	SME-8-...-S6	SME-8-...-230
Switching status indication	–	Yellow LED
Immission/emission		
	SME-8-...-S6	SME-8-...-230
Ambient temperature with flexible cable installation [°C]	–5 ... +120	–5 ... +60
Ambient temperature	–40 ... +120	–
Degree of protection	– IP67	– IP68
Insulation voltage [V]	50	2500
Surge resistance [kV]	0.8	4
Pollution degree	3	3
PWIS conformity	VDMA24364-B2-L	

## Data sheet – Magnetic reed

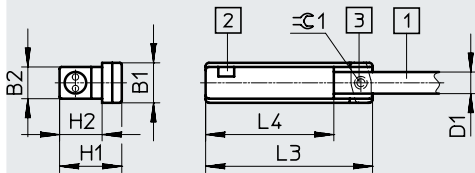
## Dimensions

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

- [1] Connecting cable, 3-wire cable,  
3 x 0.14 mm<sup>2</sup>
- [2] Max. tightening torque  
0.2 Nm

Type	B1	B2	D1 ∅	H1	L3	L4	∅ 1
	±0.05	-0.08	±0.05...-0.1	-0.1		+0.2	
SME-8-...-S6	6.4	5	2.9	4.3	28.8	26.3	1.3

## Dimensions

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

- [1] Connecting cable
- [2] Yellow light emitting diode
- [3] Max. tightening torque  
0.2 Nm

Type	B1	B2	D1 ∅	H1	H2	L3	L4	∅ 1
SME-8-K-LED-230	6.4	5	3.4	9.8	6.7	26.2	20.2	1.3

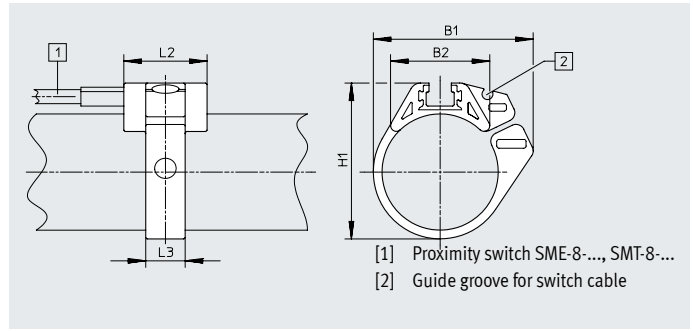
## Ordering data

	Switching output	Electrical connection	Outlet direction of connection	Cable length	Weight	Part no.	Type
		Cable		[m]	[g]		
<b>N/O contact, heat-resistant</b>							
	Contacting, bipolar	2-wire, open end	In-line	2.5	50	<b>161756</b>	<b>SME-8-K-24-S6</b>
<b>N/O contact, operating voltage range up to 230 V AC/DC</b>							
	Contacting, bipolar	2-wire, open end	In-line	2.5	39	<b>152820</b>	<b>SME-8-K-LED-230</b>

## Accessories

### Mounting kit SMBR

Material:  
Polyacetal  
RoHS-compliant



#### Dimensions and ordering data

For piston $\varnothing$	B1	B2	H1	L2	L3	Part no.	Type
8	18.9	12.3	17.5	19	7	175091	SMBR-8-8
10	20.4	13.7	19.9	19	7	175092	SMBR-8-10
12	22.7	14.3	21.9	19	7	★ 175093	SMBR-8-12
16	28.2	16.9	25.7	19	8	★ 175094	SMBR-8-16
20	34.5	20.8	30.4	19	9	★ 175095	SMBR-8-20
25	36.7	22.7	35.6	19	9	★ 175096	SMBR-8-25
32	41.7	24.6	42.7	19	9	175097	SMBR-8-32
40	47.1	26.5	50.7	19	9	175098	SMBR-8-40
50	56.4	28.6	61.5	19	9	175099	SMBR-8-50
63	69.4	32	74.5	19	9	175100	SMBR-8-63

## Accessories

### Mounting kit CRSMB

Design: for round cylinders

Type of mounting: any

Type of mounting: glued

Degree of protection: IP65, IP68, IP69K

Ambient temperature: -40 ... +90°C

Material:

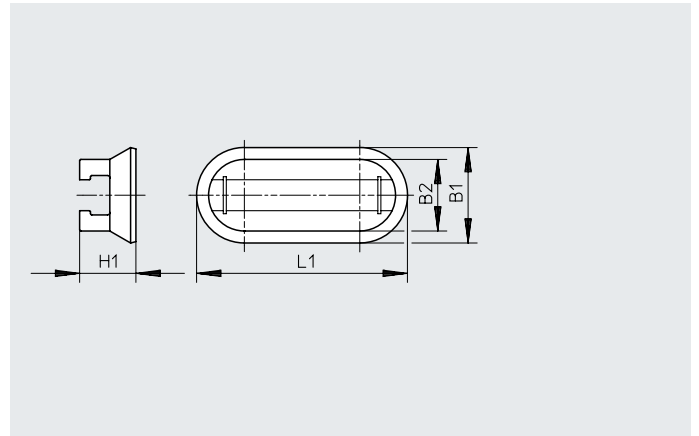
Housing: anodised aluminium,  
TPE-U(PU)

Free of copper and PTFE

RoHS-compliant

PWIS conformity:

VDMA24364-B2-L



Ordering data									
For piston $\varnothing$	B1	B2	H1	L1	CRC <sup>1)</sup>	Part no.	Type		
32 ... 100	15.8	11.8	9.3	35	4	525565	CRSMB-8-3 2/100		

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

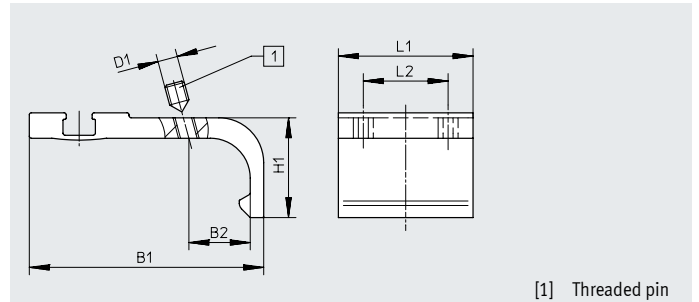
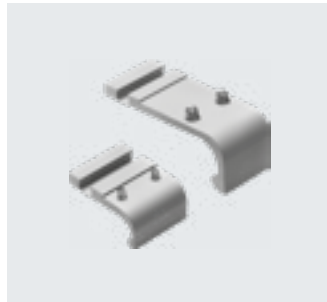
### Mounting kit

#### SMB-8-FENG

Material:

Wrought aluminium alloy

Free of copper and PTFE



[1] Threaded pin

Dimensions and ordering data									
For piston $\varnothing$	B1	B2	D1	H1	L1	L2	Tightening torque [Nm]	Part no.	Type
32/40	35.1	8.7	M3	15.5	27	17	0.2	175705	SMB-8-FENG-3 2/40
50/63	47	12.3	M4	20	27	17	0.5	175706	SMB-8-FENG-50/63
80/100	64.3	15.7	M5	24.3	27	17	0.7	175707	SMB-8-FENG-80/100

## Accessories

### Positioning element SMM

Insertable in the slot lengthwise

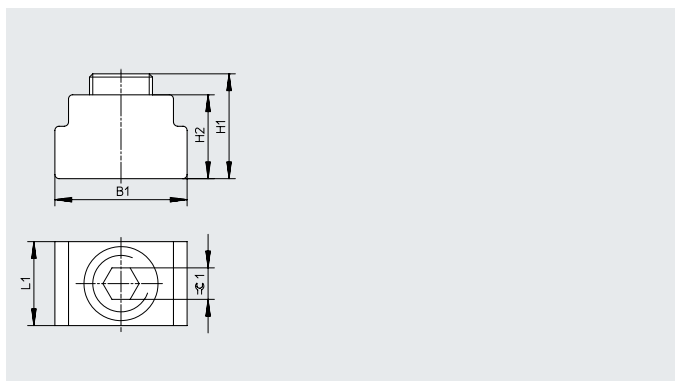
Ambient temperature: -40 ... +120°C

Materials:

Housing: anodised wrought aluminium alloy

Screws: high-alloy stainless steel

Note on materials: RoHS-compliant



Dimensions and ordering data								
B1	H1	H2	L1	$\approx \ominus 1$	CRC <sup>1)</sup>	Part no.	Type	PU <sup>2)</sup>
6.3	5.0	4.0	4.0	1.5	3	547941	SMM-8	10

1) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

2) Packaging unit

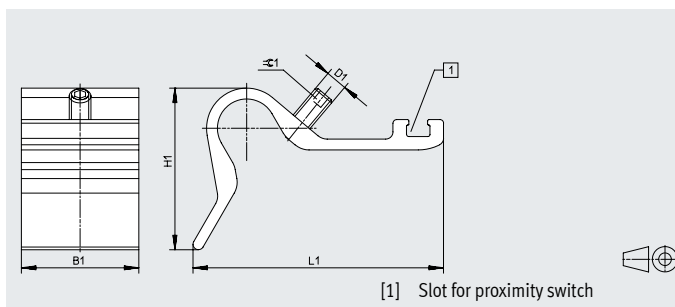
### Sensor bracket DASP-M4-...-A

Material:

Anodised wrought aluminium alloy

Screws: high-alloy stainless steel

RoHS-compliant



[1] Slot for proximity switch







Dimensions and ordering data										
Type	B1	D1	H1	L1	$\approx \ominus 1$	Tightening torque [Nm]	CRC <sup>1)</sup>	Weight [g]	Part no.	Type
DASP-M4-125-A	32.5	M5	28	45.4	2.5	1	3	26.5	1451483	DASP-M4-125-A
DASP-M4-160-A	32.5	M6	44.7	69.4	3	1	3	41.5	1553813	DASP-M4-160-A
DASP-M4-250-A	32.5	M6	56.3	88	3	1	3	60	1456781	DASP-M4-250-A
DASP-M4-320-A	32.5	M6	56.3	88	3	1	3	60	3015256	DASP-M4-320-A


1) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.





## Accessories


Ordering data – Connecting cables		Number of wires	Cable length [m]	Part no.	Type	Data sheets → Internet: nebu/sim
<b>Socket M8x1, 3-pin</b>						
	For SMT/SME-8... and SMTO/SMTSO/SME0-8E	3	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3	
			5	★ 541334	NEBU-M8G3-K-5-LE3	
	For SMT/SME-8... and SMTO/SMTSO/SME0-8E	3	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3	
			5	★ 541341	NEBU-M8W3-K-5-LE3	
<b>Socket M12x1, 5-pin</b>						
	For SMT/SME-8M and SMTO/SMTSO/SME0-8E	3	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3	
			5	★ 541364	NEBU-M12G5-K-5-LE3	
	For SMT/SME-8M and SMTO/SMTSO/SME0-8E	3	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	
<b>Socket M12x1, resistant to welding spatter</b>						
	For SDBT and SMTSO	3	3	30450	SIM-M12-RS-3GD-3	
	For SDBT and SMTSO	3	3	30451	SIM-M12-RS-3WD-3	

Ordering data – Safety clip for ATEX zone		Size	Description	Part no.	Type	PU <sup>1)</sup>
	M8	<ul style="list-style-type: none"> <li>Protects "equipment that is not intrinsically safe" in zones 2 and 22 against simple disconnection</li> <li>ATEX category: gas: II 3G / dust: II 3D</li> </ul>	548067	NEAU-M8-GD	1	
	M12		548068	NEAU-M12-GD	1	

1) Packaging unit

Ordering data – Mounting components		Description	Part no.	Type
		For fixing connecting cables in place	534254	SMBK-8

Ordering data – Sensor tester		Description	Part no.	Type
		<ul style="list-style-type: none"> <li>Testing the functionality of proximity switches using the integrated voltage supply</li> <li>Adjusting proximity switches on the cylinder</li> </ul>	158481	SM-TEST-1

Ordering data – Inscription labels		Size	Part no.	Type	PU <sup>1)</sup>
		23x4 mm	541598	ASLR-L-423	34

1) Packaging unit