

Proximity switches for T-slot

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Product range overview

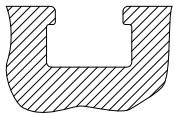
Design	Type of mounting	Measuring principle	Type	Operating voltage range	Switching output	Switching element function	→ Page	
For T-slot	Standard							
	Screw-clamped, inserted in the slot from above	Magnetic Hall	SDBT-MSX	10 ... 30 V DC	PNP/NPN, switchable	N/O/ N/C contact, switchable	–	
	Inserted in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-8M-A	5 ... 30 V DC	PNP	N/O contact	–	
						N/C contact		
					NPN	N/O contact		
					Non-contacting, 2-wire	N/O contact		
	Inserted 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		
	Inserted in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8	12 ... 30 V AC/DC	Contacting, bipolar	N/O contact	–	
						N/C contact		
				3 ... 230 V AC/DC		N/O contact	–	
	Inserted 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	–	
		Magnetic reed	SME-8-SL	10 ... 30 V AC/DC	Contacting, bipolar	N/O contact	–	
	With accessories	Magneto-resistive	SMT0-8E	10 ... 30 V DC	PNP	N/O contact	–	
								NPN
		Magnetic reed	SME0-8E	12 ... 30 V DC	Contacting, bipolar	N/O contact	–	
				3 ... 250 V DC				
				3 ... 230 V AC				
Corrosion-resistant								
Inserted in the slot from above, flush with the cylinder profile	Magneto-resistive	CRSMT-8M	5 ... 30 V DC	PNP	N/O contact	7		
Welding-field-resistant								
Inserted 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	SMTSO-8E	10 ... 30 V DC	PNP	N/O contact	–		
							NPN	
Heat-resistant up to 120°C								
Inserted in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8-...S6	0 ... 30 V AC/DC	Contacting, bipolar	N/O contact	–		
With accessories	Magnetic reed	SME0-8E-...S6	0 ... 30 V DC	Contacting	N/O contact	–		
							0 ... 30 V AC	
To EU Explosion Protection Directive (ATEX)								
Inserted 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	Standard						
	Inserted 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		
	Inserted in the slot lengthwise	Magnetic reed	SME-10M	5 ... 30 V AC/DC	Contacting, bipolar	N/O contact	
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		

T-slot switches can be used for drives with T-slot

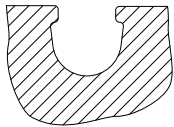
Exceptions



- DFM-B: SMT0-8E, SMTSO-8E, SME0-8E and SMP0-8E cannot be used
- DHDS: SME-8M can only be used on $\varnothing 50$
- DHPS: SME-8M can only be used on $\varnothing 20 \dots 35$
- HGDD-63-A: SMT-8M-A cannot be used
- HGPT-B: only SMT-8G can be used from size 40 and upwards
- SDBT-BSW- ... -PU/NU can only be used on a limited number of drive series. Page → 53

C-slot switches can be used for drives with C-slot

Exceptions



- ADVC $\varnothing 100$: SMT-10M and SME-10M cannot be used (ADVC has a T-slot and C-slot)
- DSM/DSM-B-6/8/10: SME-10M cannot be used
- DSM/DSM-B-10/16: SMT-10M cannot be used
- HGPT-B: only SMT-10G can be used for sizes up to and including size 35

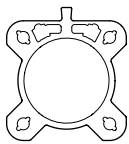
For drives with sensor rail: these are available with 2 cylinder barrel contours

Only T-slot switches CRSMT-8M, SMT-8M-A and SDBT-MS- ... -EX6 can be used, and only with the identified profile.

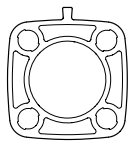
CRSMT-8M and SMT-8M-A can be used for all diameters; SDBT-MS- ... -EX6 cannot be used for diameters 40 and 50.

Example: DSBF

Example: CDC

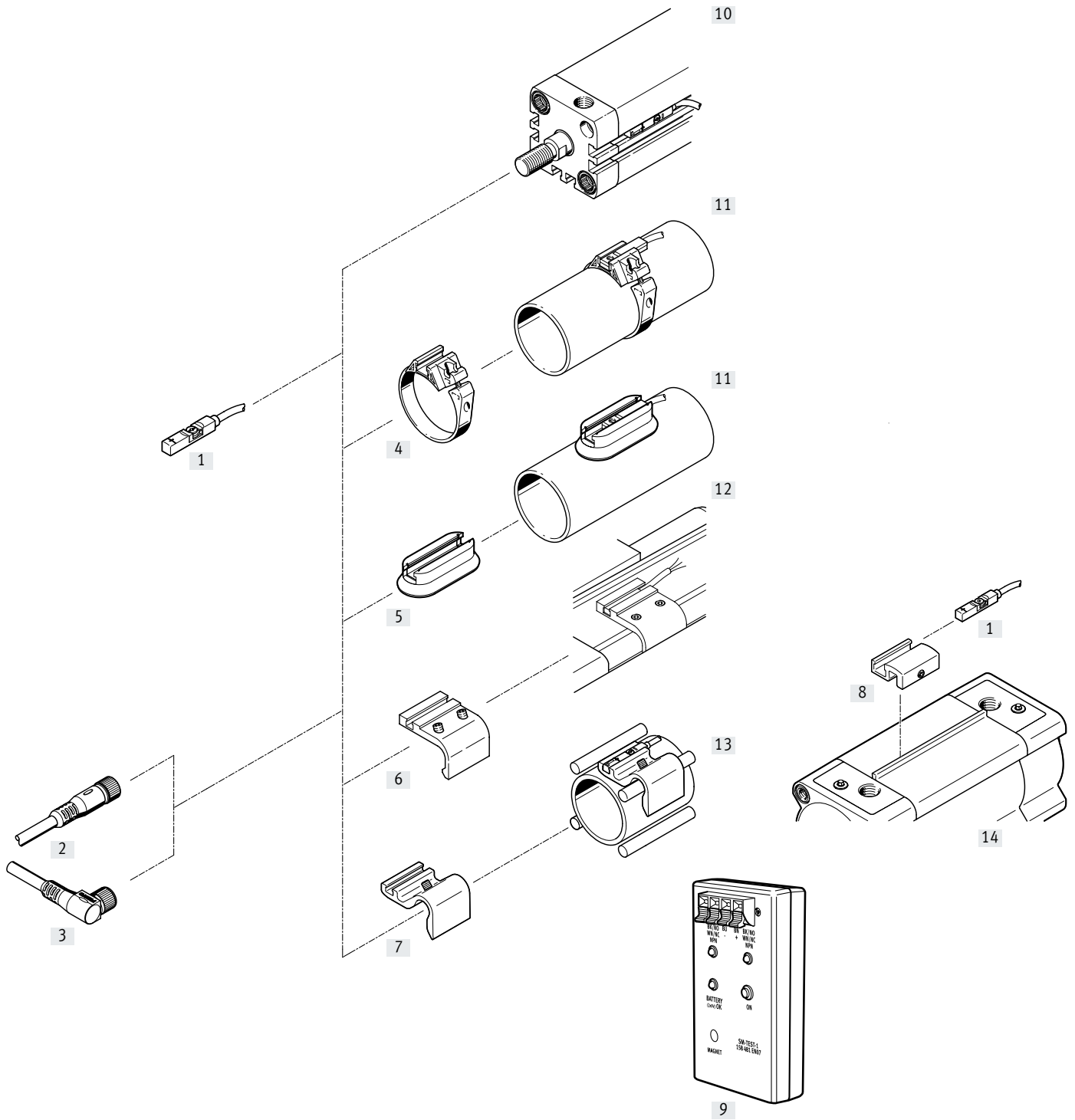


Suitable



Not suitable

Peripherals overview



Peripherals overview

Mounting components and accessories		→ Page	Mounting components and accessories		→ Page
Proximity switches			Mounting kits and accessories		
[1]	CRSMT-8M-..., with cable	7	[4]	Mounting kit SMBR	11
			[5]	Mounting kit CRSMB, corrosion-resistant	11
			[6]	Mounting kit SMB-8-FENG	12
			[7]	Sensor bracket DASP-M4-...	13
			[8]	Mounting kit SMB-8-C	12
			[9]	Sensor tester SM-TEST-1	14
			-	Positioning element SMM-8	13
			-	Clip SMBK-8	14
			-	Inscription label ASLR	14
			-	Safety clip NEAU	14
Connecting cables			Drives		
[2]	NEBU-M...G...	14	[10]	Drives with T-slot	-
[3]	NEBU-M...W...	14	[11]	Round cylinder	-
			[12]	Standards-based cylinder DSBC	-
			[13]	Drives with tie or mounting rod	-
			[14]	Standards-based cylinders DSBF	-

Type codes

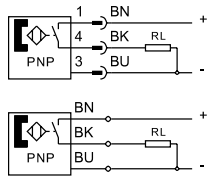
001	Series	
CRSMT	Proximity sensor	
002	Design type	
8	For T-slot	
003	Sensor version	
M	Can be inserted in the slot	
004	Switching output	
PS	3-wire PNP N/O contact	
005	Rated operating voltage	
24V	24 V	

006	Cable characteristic	
K	Standard/suitable for energy chains	
007	Cable length [m]	
0,3	0.3 m	
5,0	5 m	
10,0	10 m	
008	Connection technology	
OE	Open end	
M8D	M8, rotatable thread	
M12	M12, rotatable thread	

Data sheet – Magneto-resistive

Function

PNP, N/O contact, with plug



- Food-safe
- Acid resistant
- Alkali resistant
- Resistant to cooling lubricants



General technical data	
Design	For T-slot
Based on standard	EN 60947-5-2
Application information	Support / Actuator-sensor overview "The right sensor for the actuator"
CE marking (see declaration of conformity)	To EU EMC Directive
	To EU Explosion Protection Directive (ATEX)
	To EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC
	To UK EX instructions
	To UK RoHS instructions
Certification	RCM compliance mark
KC mark	KC EMC
Special characteristics	Resistant to acids, alkalis, cooling lubricants
Inductive protective circuit	Adapted to MZ, MY, ME coils
Resistance to interference from magnetic fields	Design insensitive to permanent magnetic fields < Bon
Food-safe ¹⁾	See supplementary information on materials
Note on materials	RoHS-compliant, halogen-free
PWIS conformity	VDMA24364-B2-L

1) Additional information is available at www.festo.com/sp → Certificates.

Input signal/measuring element	
Measuring principle	Magneto-resistive
Measured variable	Position
Ambient temperature	[°C] -40 ... 85

Switching output	
Switching element function	N/O contact
Switching output	PNP
Repetition accuracy	[mm] 0.2
Switch-on time	[ms] ≤ 1
Switch-off time	[ms] ≤ 1
Max. switching frequency	[Hz] 180
Max. output current	[mA] 100
Max. output current in mounting kit	[mA] 100
Max. switching capacity DC	[W] 2.8
Max. switching capacity DC in mounting kits	[W] 2.8
Voltage drop	[V] < 1.5
Off-state current	[mA] < 0.05

Output, additional data	
Short circuit current rating	Yes
Overload protection	Provided

Data sheet – Magneto-resistive

Electronics			
Switching output		PNP	
Rated operating voltage	[V DC]	24	
Operating voltage range	[V DC]	5 ... 30	
Residual ripple	[%]	10	
Reverse polarity protection		For all electrical connections	
Electromechanics			
Electrical connection	OE	M8D	M12
Connection type	Cable	Cable with plug	
Connection technology	Open end	M8x1, A-coded to EN 61076-2-104	M12x1, A-coded to EN 61076-2-101
Number of pins/wires	3		
Type of mounting	–		
	Screw-clamped		
	Inserted in the slot from above		
Outlet direction of connection	In-line		
Cable characteristic	Standard + energy chain		
Cable test conditions	Cable chain: 5 million cycles, bending radius 75 mm		
	Torsional resistance: > 300,000 cycles, ±270°/0.1 m		
	Bending strength: to Festo standard		
Mechanics			
Electrical connection	OE	M8D	M12
Mounting position	Any		
Tightening torque	[Nm]	0.1 ... 0.6	
Max. tightening torque	[Nm]	0.6	
Information on materials			
Housing	High-alloy stainless steel, PA, PP		
Union nut	–	Nickel-plated brass	
Cable sheath	TPE-O		
Insulating sheath	PP		
Plug housing	–	PP	
Wire ends	Wire end sleeves		–
Pin contacts	–	Nickel-plated and gold-plated brass	
Display/operation			
Switching status indication	Yellow LED		
Function reserve indication	Orange LED		
Immission/emission			
Ambient temperature with flexible cable installation	[°C]	–20 ... 85	
Degree of protection	IP65		
	IP68		
	IP69K		
ATEX			
ATEX category for gas	II 3G		
Type of ignition protection for gas	Ex nA IIC T4 X Gc		
ATEX category for dust	II 3D		
Type of ignition protection for dust	Ex tc IIIC T120°C X Dc		
Explosion-proof ambient temperature	[°C]	–40°C ≤ Ta ≤ +85°C	
CE marking (see declaration of conformity)	To EU EMC Directive		
	To EU Explosion Protection Directive (ATEX)		

Data sheet – Magneto-resistive

Pin allocation to EN 60947-5-2

M8x1, 3-pin
N/O contact

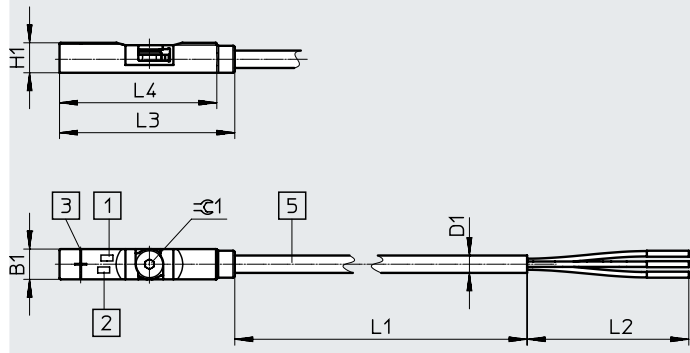
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

M12x1, 3-pin
N/O contact

	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

Dimensions, open end

Download CAD data → www.festo.com



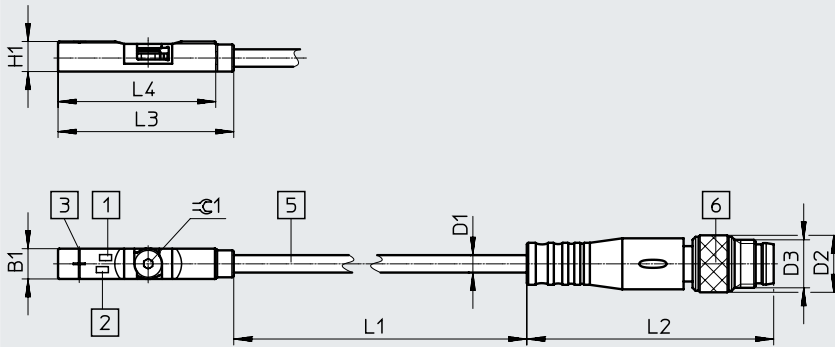
- [1] Yellow light emitting diode
- [2] Orange light emitting diode
- [3] Centre of the sensor element
- [5] Connecting cable

Type	B1	D1 ∅	H1	L1	L2	L3	L4	± 1
CRSMT-8M-PS-24V-K-5.0-OE	5	2.9	5	5000	50	29.3	26.3	1.5
CRSMT-8M-PS-24V-K-10.0-OE				10000				

Data sheet – Magneto-resistive

Dimensions with plug

Download CAD data → www.festo.com



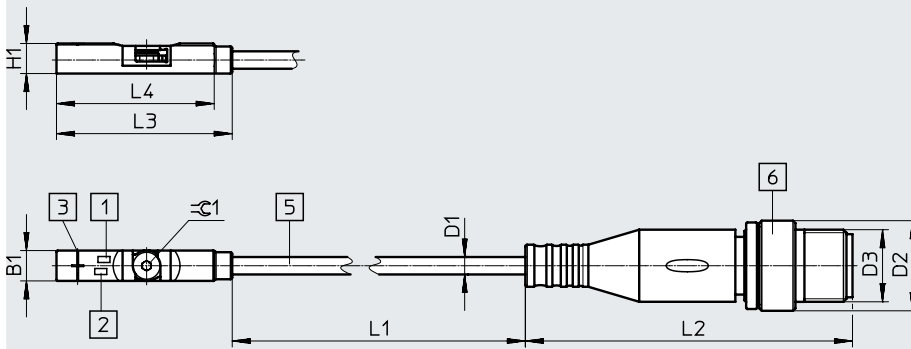
- [1] Yellow light emitting diode
- [2] Orange light emitting diode
- [3] Centre of the sensor element
- [4] Slot for screwdriver
- [5] Connecting cable
- [6] Plug module M8D

L1 Cable length

Type	B1	D1 ∅	D2	D3	H1	L2	L3	L4	∅ 1
CRSMT-8M-PS-24V-K-0.3-M8D	5	2.9	9.5	M8x1	5	41.1	29.3	26.3	1.5

Dimensions with plug

Download CAD data → www.festo.com



- [1] Yellow light emitting diode
- [2] Orange light emitting diode
- [3] Centre of the sensor element
- [4] Slot for screwdriver
- [5] Connecting cable
- [6] Plug module M12 3-pin

L1 Cable length

Type	B1	D1 ∅	D2 ∅	D3	H1	L2	L3	L4	∅ 1
CRSMT-8M-PS-24V-K-0.3-M12	5	2.9	15	M12x1	5	54.5	29.3	26.3	1.5

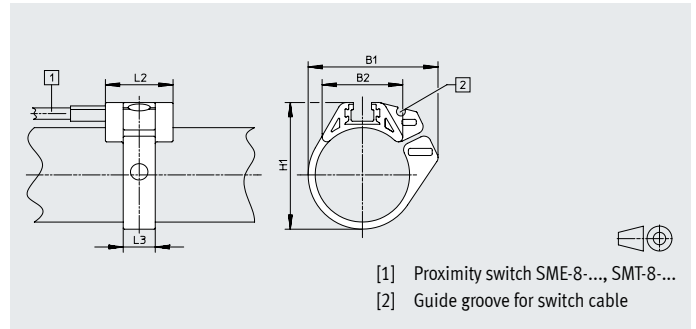
Ordering data

	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, screw-type lock				
N/O contact, corrosion-resistant							
	PNP	3-wire, open end	–	5	47.6	574380	CRSMT-8M-PS-24V-K-5.0-OE
	PNP	3-wire, open end	–	10	93.4	574381	CRSMT-8M-PS-24V-K-10.0-OE
	PNP	3-pin with plug	M12x1, A-coded To EN 61076-2-101	0.3	9.1	574382	CRSMT-8M-PS-24V-K-0.3-M12
	PNP	3-pin with plug	M8x1, A-coded To EN 61076-2-104	0.3	16.1	574383	CRSMT-8M-PS-24V-K-0.3-M8D

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

Mounting kit CRSMB

Design: For round cylinders
Type of mounting: Bonded using enclosed adhesive tape

Degree of protection: IP65, IP68, IP69K

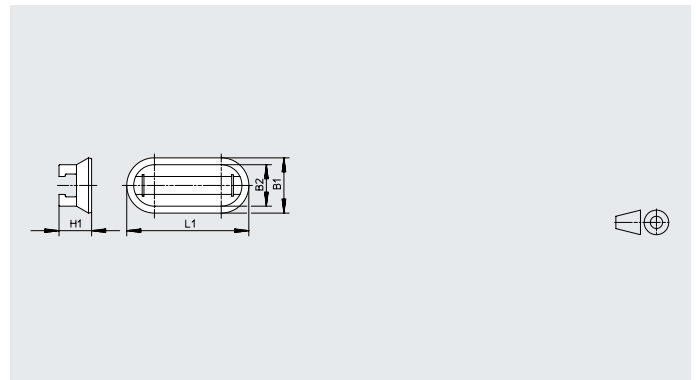
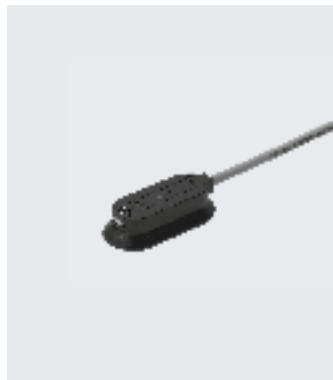
Ambient temperature: $-40 \dots +90^{\circ}\text{C}$

Material:

Housing: Polyurethane

Rail: Hard anodised aluminium

Free of copper and PTFE



Ordering data

For piston \varnothing	B1	B2	H1	L1	CRC ¹⁾	Part no.	Type
32 ... 100	15.8	11.8	9.3	35	4	525565	CRSMB-8-32/100

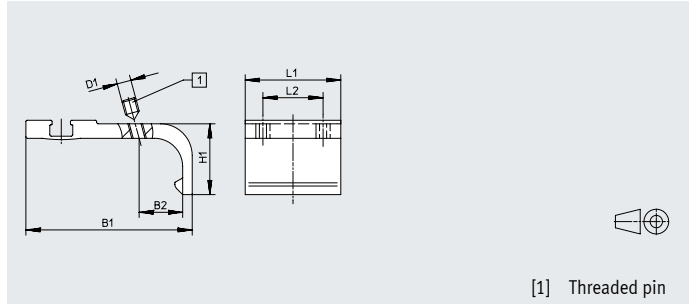
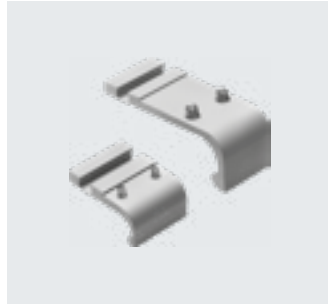
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, 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.

Accessories

Mounting kit SMB-8-FENG

Material:
Wrought aluminium alloy
Free of copper and PTFE



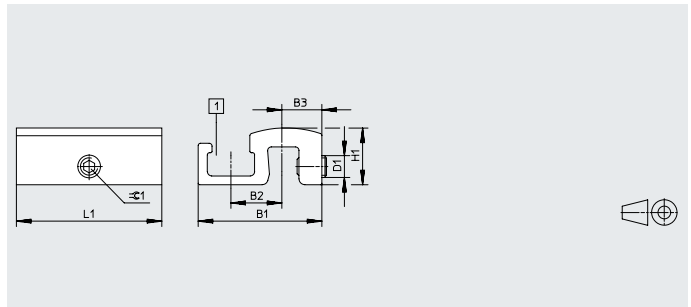
[1] Threaded pin

Dimensions and ordering data

For piston \varnothing	B1	B2	D1	H1	L1	L2	Tightening torque [Nm]	Part no.	Type
3 2/40	35.1	8.7	M3	15.5	27	17	0.2	175705	SMB-8-FENG-32/40
5 0/63	47	12.3	M4	20	27	17	0.5	175706	SMB-8-FENG-50/63
8 0/100	64.3	15.7	M5	24.3	27	17	0.7	175707	SMB-8-FENG-80/100

Mounting kit SMB-8-C

Temperature: $-40 \dots 120^\circ\text{C}$
Material:
Retaining bracket: Anodised wrought aluminium alloy
Screws: High-alloy stainless steel
Free of copper and PTFE,
RoHS-compliant



Dimensions and ordering data

Type	B1	B2	B3	D1	H1	L1	≈ 0.1	Tightening torque [Nm]	CRC ¹⁾	Weight [g]	Part no.	Type
SMB-8-C	17	7	5.5	M3	7.8	20	1.5	0.2 ... 0.6	3	3.5	1806790	SMB-8-C

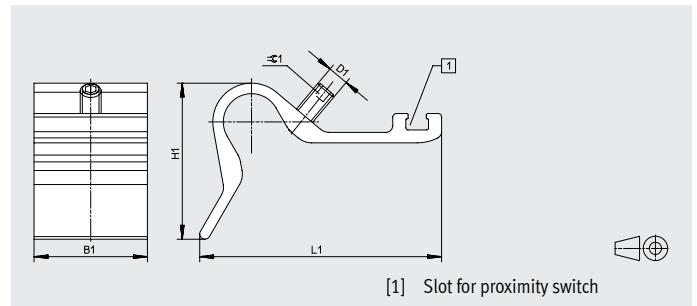
1) Corrosion resistance class CRC 3 to Festo standard FN 940070

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

Sensor bracket DASP-M4-...-A

Material:
Anodised wrought aluminium alloy
Screws: High-alloy stainless steel
RoHS-compliant



Dimensions and ordering data										
Type	B1	D1	H1	L1	≈ 1	Tightening torque [Nm]	CRC ¹⁾	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

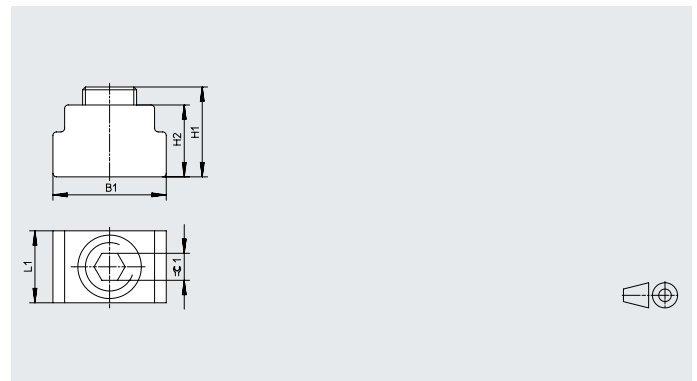
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Positioning element SMM

Inserted 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	≈ 1	CRC ¹⁾	Part no.	Type	PU ²⁾	
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


Accessories


Ordering data – Connecting cables		Number of wires	Cable length [m]	Part no.	Type	Data sheets → Internet: nebu/sim
Socket M8x1, 3-pin						
	For SMT/SME-8... and SMT0/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 SMT0/SMTSO/SME0-8E	3	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3	
			5	★ 541341	NEBU-M8W3-K-5-LE3	
Socket M12x1, 5-pin						
	For SMT/SME-8M and SMT0/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 SMT0/SMTSO/SME0-8E	3	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	

Ordering data – Safety clip for ATEX zone		Size	Description	Part no.	Type	PU ¹⁾
	M8	<ul style="list-style-type: none"> Protects "equipment that is not intrinsically safe" in zones 2 and 22 against simple disconnection ATEX category: gas: II 3G / dust: II 3D 	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"> Testing the functionality of proximity switches using the integrated voltage supply Adjusting proximity switches on the cylinder 	158481	SM-TEST-1

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

1) Packaging unit