

## Proximity switches for T-slot

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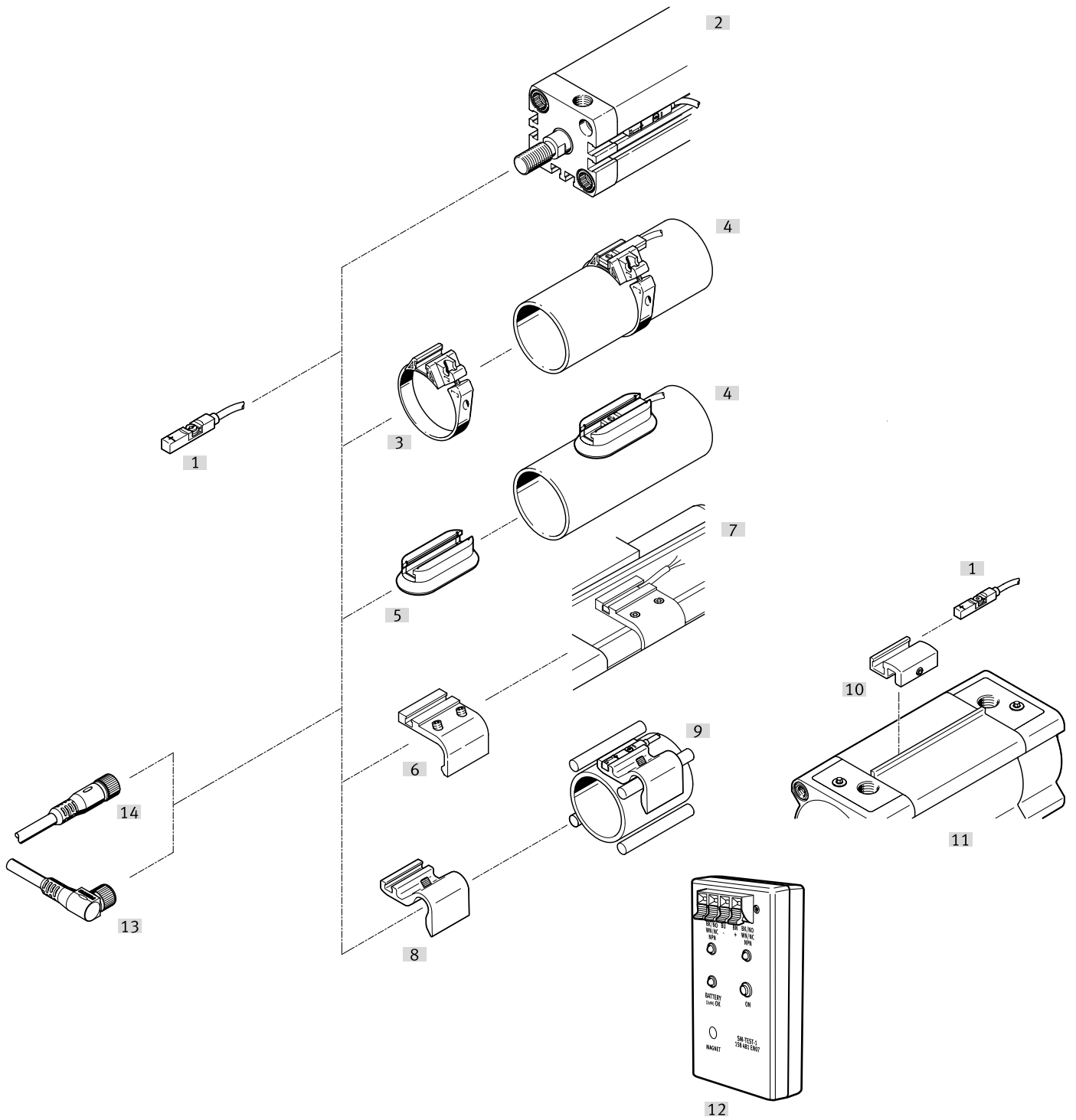
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for the  
star!

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]	CRSMT-8M-..., with cable	5	[3]	Mounting kit SMBR	9
			[5]	Mounting kit CRSMB, corrosion-resistant	9
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<b>Connecting cables</b>			<b>Drives</b>		
[14]	NEBU-M...G...	12	[2]	Drives with T-slot	-
[13]	NEBU-M...W...	12	[4]	Round cylinder	-
			[7]	Standards-based cylinder DSBC	-
			[9]	Drives with tie or mounting rod	-
			[11]	Standards-based cylinders DSBF	-

## Type codes

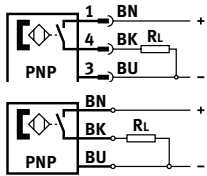
<b>001</b>	<b>Series</b>	
<b>CRSMT</b>	Proximity sensor	
<b>002</b>	<b>Design type</b>	
<b>8</b>	For T-slot	
<b>003</b>	<b>Sensor version</b>	
<b>M</b>	Can be inserted in the slot	
<b>004</b>	<b>Switching output</b>	
<b>PS</b>	3-wire PNP N/O contact	
<b>005</b>	<b>Rated operating voltage</b>	
<b>24V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

<b>006</b>	<b>Cable characteristic</b>	
<b>K</b>	Standard/suitable for energy chains	
<b>007</b>	<b>Cable length [m]</b>	
<b>0,3</b>	0.3 m	
<b>5,0</b>	5 m	
<b>10,0</b>	10 m	
<b>008</b>	<b>Connection technology</b>	
<b>OE</b>	Open end	
<b>M8D</b>	M8, rotatable thread	
<b>M12</b>	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 <sup>1)</sup>	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](http://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

<b>Electronics</b>			
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	
<b>Electromechanics</b>			
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		
<b>Mechanics</b>			
Electrical connection	OE	M8D	M12
Mounting position	Any		
Tightening torque	[Nm]	0.1 ... 0.6	
Max. tightening torque	[Nm]	0.6	
<b>Information on materials</b>			
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	
<b>Display/operation</b>			
Switching status indication	Yellow LED		
Function reserve indication	Orange LED		
<b>Immission/emission</b>			
Ambient temperature with flexible cable installation	[°C]	–20 ... 85	
Degree of protection	IP65		
	IP68		
	IP69K		
<b>ATEX</b>			
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

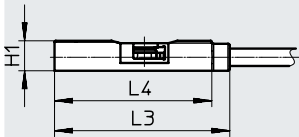
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

M12x1, 3-pin  
N/O contact

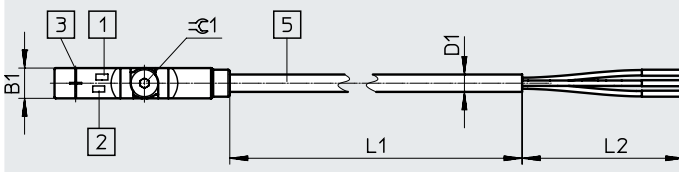
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

**Dimensions, open end**

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



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

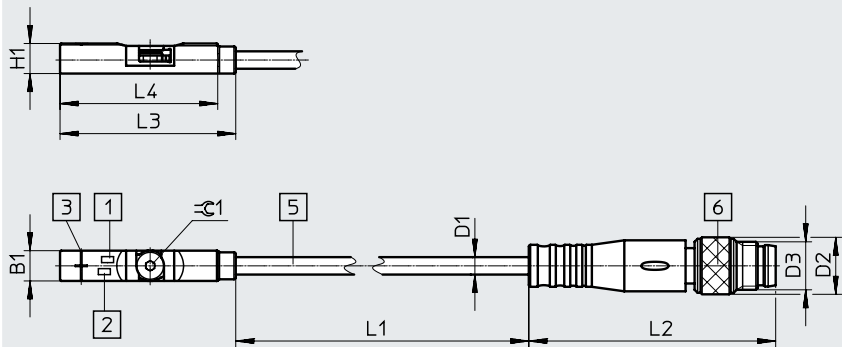


Type	B1	D1 ∅	H1	L1	L2	L3	L4	≈ 1
CRSMT-8M-PS-24V-K-5.0-OE	5	2.9	5	5000	50	29.3	26.3	1.5
CRSMT-8M-PS-24V-K-10.0-OE				10000				

## Data sheet – Magneto-resistive

### Dimensions with plug

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



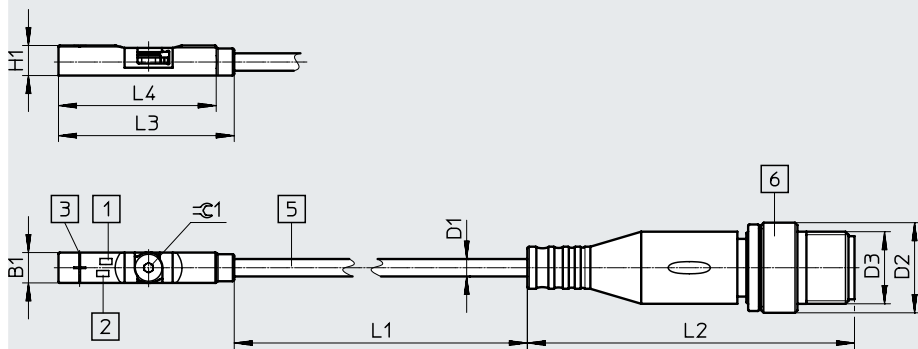
- [1] Yellow light emitting diode
- [2] Orange light emitting diode
- [3] Centre of the sensor element
- [4] Slot for screwdriver
- [5] Connecting cable
- [6] Plug module M8D

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](http://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

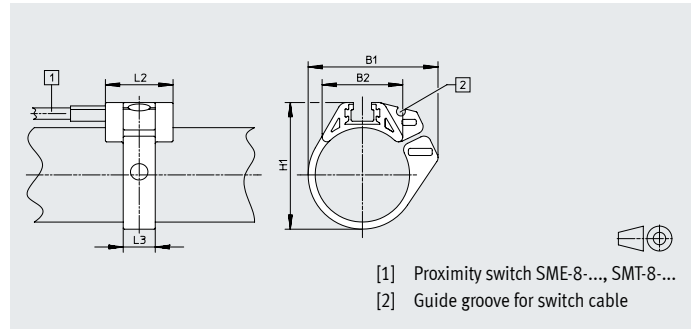
	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, screw-type lock				
<b>N/O contact, corrosion-resistant</b>							
	PNP	3-wire, open end	–	5	47.6	574380	CRSMT-8M-PS-24V-K-5,0-OE-EX2
	PNP	3-wire, open end	–	10	93.4	574381	CRSMT-8M-PS-24V-K-10,0-OE-EX2
	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-EX2
	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-EX2



## 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

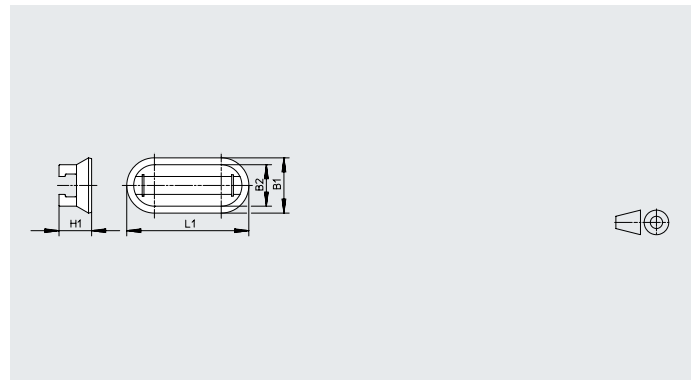
Ambient temperature:  $-40 \dots +90^{\circ}\text{C}$

Material:

Housing: Polyurethane

Rail: Hard anodised aluminium

Free of copper and PTFE



#### Ordering data

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

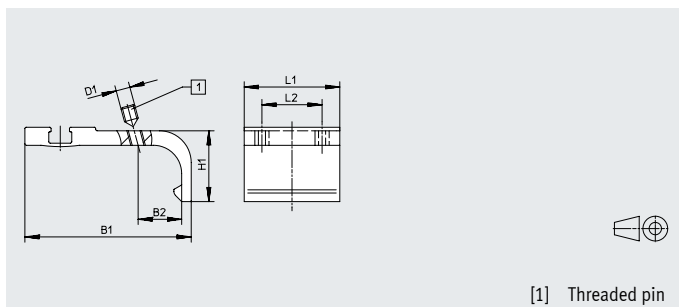
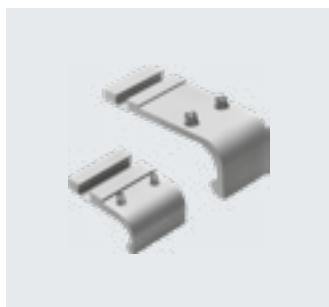
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

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



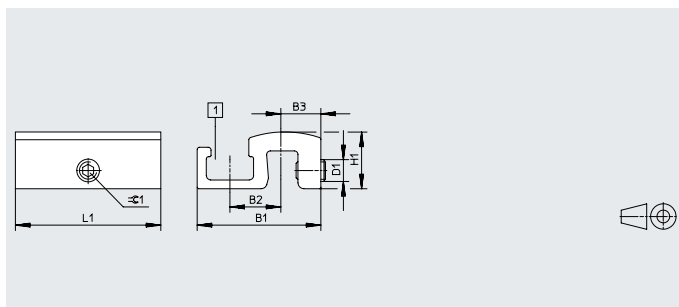
[1] Threaded pin

#### 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	$\pm 1$	Tightening torque [Nm]	CRC <sup>1)</sup>	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

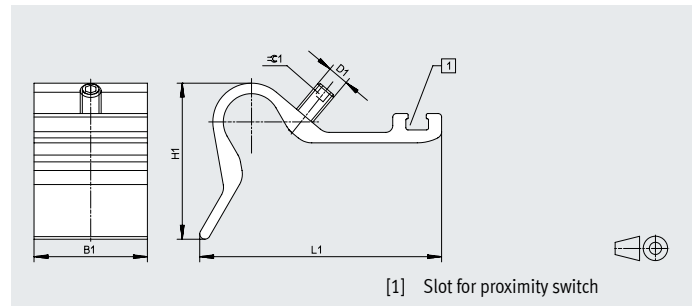
1) Corrosion resistance class CRC 3 to Festo standard FN 940070

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	$\approx 1$	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

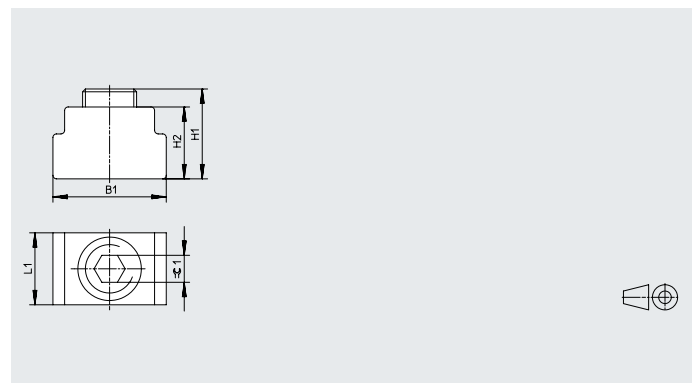
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

### 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	$\approx 1$	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


## Accessories


Ordering data – Sensor mounting			
	Description	Part no.	Type
	Stainless steel sensor mounting for piston Ø 32 ... 63	8174843	DASP-V4-8-A-R1
	Stainless steel sensor mounting for piston Ø 80 ... 125	8174844	DASP-V4-12-A-R1


Ordering data – Connecting cables				Data sheets → Internet: nebu/sim	
		Number of wires	Cable length [m]	Part no.	Type
<b>Socket M8x1, 3-pin</b>					
	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
<b>Socket M12x1, 5-pin</b>					
	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 <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 – Impact protection			
	Description	Part no.	Type
	Accessories for CRSMT-8M use in EX environment zone 2/22	8184143	SACC-N8-SP

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