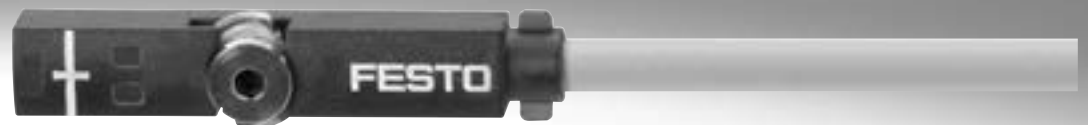# Proximity switch for T-slot

| ★	Festo Core Range Solves the majority of your automation tasks	With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery.
Worldwide:	Quickest delivery – wherever, whenever	The Core Range offers you the best value
Simply good:	Expected high Festo quality	for your automation tasks.
Fast:	Easy and fast to select	

Just look for the star!

Peripherals overview
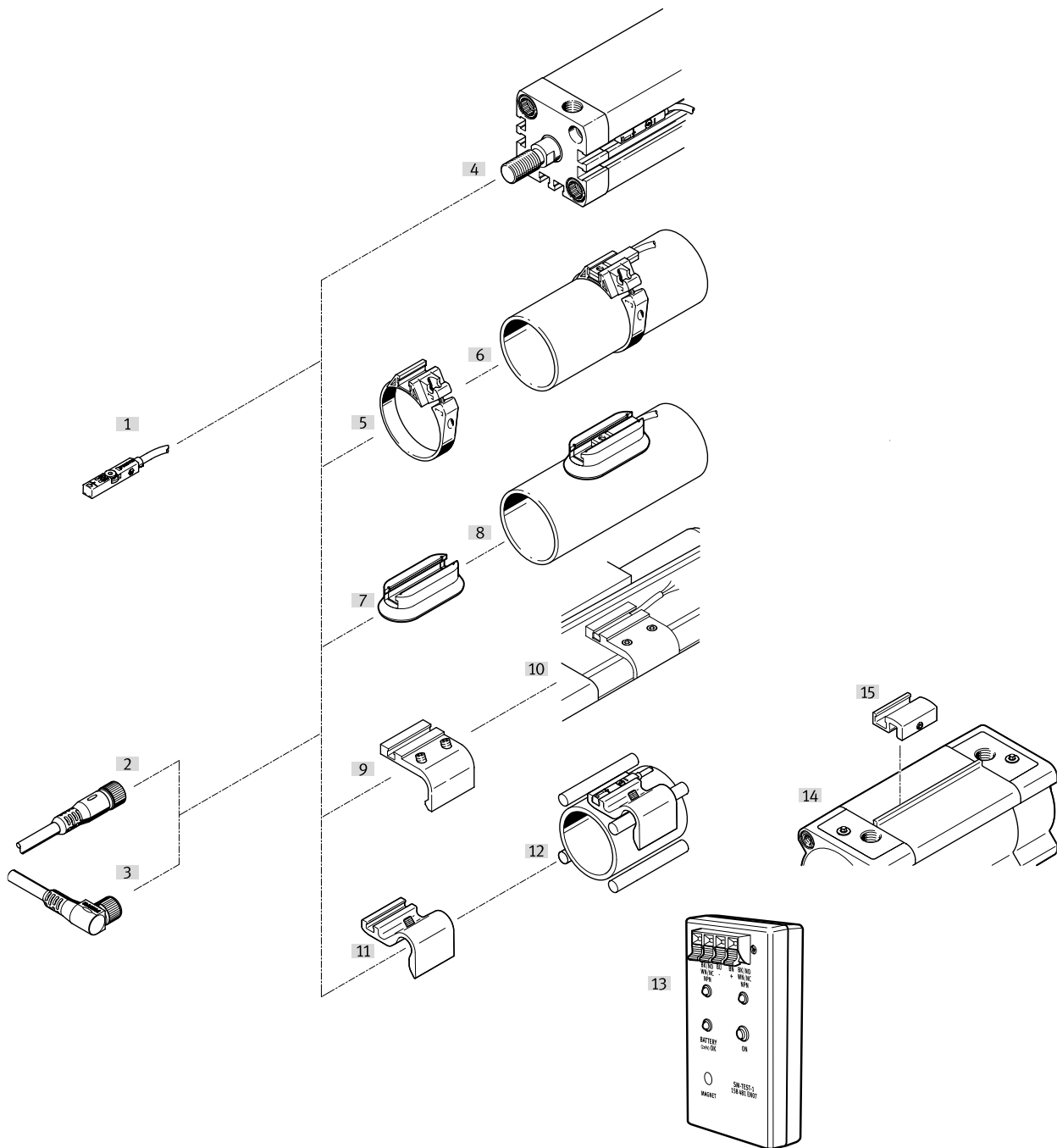
Peripherals overview

Mounting components and accessories		→ Page
Proximity switches		
[1]	SMT-8M-A-..., with cable	5
Connecting cables		
[2]	NEBU-M...G...	15
[3]	NEBU-M...W...	15

Mounting components and accessories		→ Page
Mounting kits and accessories		
[5]	Mounting kit SMBR	12
[7]	Mounting kit CRSMB, corrosion-resistant	12
[9]	Mounting kit SMB-8-FENG	13
[11]	Sensor bracket DASP-M4-...	13
[15]	Mounting kit SMB-8-C	14
[13]	Sensor tester SM-TEST-1	15
Drives		
[4]	Drives with T-slot	–
[6], [8]	Round cylinders	–
[10]	Standards-based cylinders DSBC	–
[12]	Drives with tie or mounting rod	–
[14]	Standards-based cylinders DSBF	–

Type codes

001	Series	
SMT	Proximity sensor	

002	Design type	
8	For T-slot	

003	Sensor version	
M	Inserted in the slot from above	

004	Design	
A	Short	

005	Switching output	
NO	3-wire N/C contact NPN	
NS	3-wire NPN N/O contact	
PO	3-wire PNP N/C contact	
PS	3-wire PNP N/O contact	
ZS	2-wire PNP N/O contact	

006	Rated operating voltage	
24V	24 V	

007	Cable characteristic	
E	Suitable for energy chains/robot applications	

008	Cable length [m]	
	0.1 … 30 m	
0,3	0.3 m	
2,5	2.5 m	
5,0	5 m	
7,5	7.5 m	

009	Cable identification	
	With label holder	
N	Without label holder	

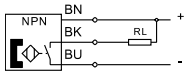| 010	Connection technology	
OE	Open end	
M8	M8, snap-on flange	
M8D	M8, rotatable thread	
M12	M12, rotatable thread	

Data sheet – Magneto-resistive

Function

PNP, N/O contact, with cable
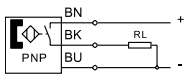
NPN, N/O contact, with cable

- Magneto-resistive measuring principle
- Insertable in the slot from above, does not protrude over the cylinder profile

General technical data

Electrical connection	M8, M8D, M12	OE	NO- ... -OE
Design	For T-slot		
Mounting position	Any		
Based on standard	EN 60947-5-2		
Certification	c UL us - Listed (OL)		–
	RCM		
CE marking (see declaration of conformity)	To EU EMC Directive		
	To EU RoHS Directive		
UKCA marking (see declaration of conformity)[1]	To UK EMC regulations		
	To UK RoHS regulations		
Application information	Support / Actuator-sensor overview "The right sensor for the actuator"		
Note on materials	Halogen-free		
	RoHS-compliant		
PWIS conformity	VDMA24364-B2-L		
Certificate-issuing authority	UL E232949		
Special characteristics	Oil-resistant		
Suitable for the production of lithium-ion batteries	–	Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils	–
Cleanroom class	–	Class 4 to ISO 14644-1	–

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... ➜ Support/Downloads.
   If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

Input signal/measuring element

Measured variable		Position
Measuring principle		Magneto-resistive
Ambient temperature	[°C]	−40 ... +85

Data sheet – Magneto-resistive

Switching output

Type		PS	NS	PO	NO	ZS
Switching output		PNP	NPN	PNP	NPN	Non-contacting, 2-wire
Switching element function		N/O contact	N/O contact	N/C contact	N/C contact	N/O contact
Repetition accuracy	[mm]	0.2				
Switch-on time	[ms]	≤ 1.3				≤ 1.0
Switch-off time	[ms]	≤ 1.4				≤ 1.0
Max. output current	[mA]	100	100	100	100	80
Max. output current in mounting kits	[mA]	100				80
Max. switching capacity DC	[W]	2.8	2.8	2.8	2.8	1.9
Max. switching capacity DC in mounting kits	[W]	2.8	2.8	2.8	2.8	1.5
Max. switching frequency	[Hz]	180				
Voltage drop	[V]	< 1.5				< 6

Output, additional data

Short circuit protection	Yes
Overload protection	Present

Electronics

Type		PS, NS, PO, NO	ZS
Operating voltage range	[V DC]	5 … 30	7 … 30
Rated operating voltage	[V DC]	24	
Reverse polarity protection		For all electrical connections	

Electromechanics

Electrical connection	M8	M8D	M12	OE	ZS-…-OE
Connection type	Cable with plug			Cable	
Connection technology	Open end	M8x1, A-coded to EN 61076-2-104	M12x1, A-coded to EN 61076-2-101	Open end	
Number of pins/wires	3			3	2
Type of mounting	–	Screw-type lock		–	
Outlet direction of connection	In-line				
Cable test conditions	Cable chain: 5 million cycles, bending radius 28 mm				
	Torsional resistance: › 300,000 cycles, ±270°/0.1 m				
	Resistance to bending: to Festo standard; test conditions on request				
Cable characteristic	Cable chain + robot				
Information on materials: cable sheath	TPE-U(PUR)				
Cable sheath colour	Grey				

Data sheet – Magneto-resistive

Mechanics		
Electrical connection	M8, M8D, M12	OE
Type of mounting	Screw-clamped, insertable in the slot from above	
Max. tightening torque [Nm]	0.6	
Housing	black	
	PA-reinforced	
	High-alloy stainless steel	
	Nickel-plated brass	–

Display/operation	
	PS, NS, PO, NO, ZS
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

Pin allocation to EN 60947-5-2

M8x1, 2-pin
N/O contact

Pin	Wire colour	Allocation
1	Brown	+
4	Black	–

M12x1, 2-pin
N/O contact

Pin	Wire colour	Allocation
1	Brown	+
4	Black	–

Pin allocation to EN 60947-5-2

M8x1, 3-pin
N/O contact / N/C 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

Pin allocation to EN 60947-5-2

M12x1, 3-pin
N/C contact

Pin	Wire colour	Allocation
1	Brown	+
3	Blue	–
2	White	Output

Data sheet – Magneto-resistive

Dimensions

SMT8-M-A-24V-E-...-... (PS, NS, PO, NO, ZS)

Download CAD data ➔ www.festo.com
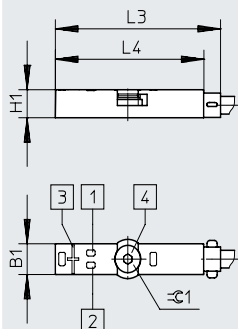
[1] Yellow light emitting diode
[2] Orange light emitting diode
[3] Position of sensor element
     centre
[4] Clamping element, tightening
     torque 0.6 Nm

Yellow light emitting diode for safe
switching status.
Yellow and orange light emitting
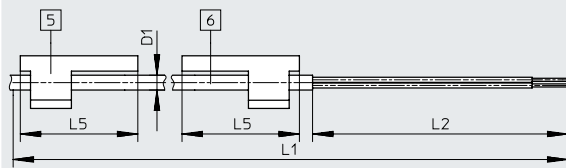diode for unsafe switching status.

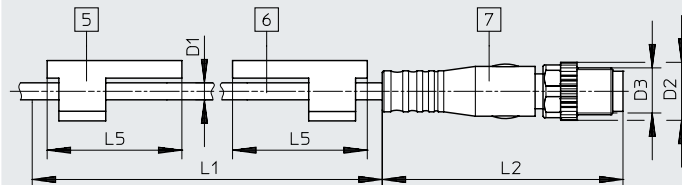| Type	B1	H1	L3	L4	⊏1
SMT-8M-A-...-24V-E- (PS, NS, PO, NO, ZS)	5	4.6	29.3	26.3	1.5

Data sheet – Magneto-resistive

Dimensions

SMT-8M-A-...-OE – Cable

[5] Inscription label holder drawn turned by 90°
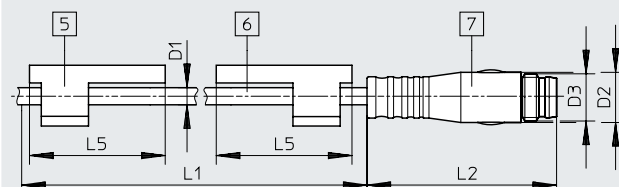[6] Connecting cable

L1 Cable length

SMT-8M-A-...-M8D – Cable with plug M8x1, rotatable thread

[5] Inscription label holder drawn turned by 90°
[6] Connecting cable
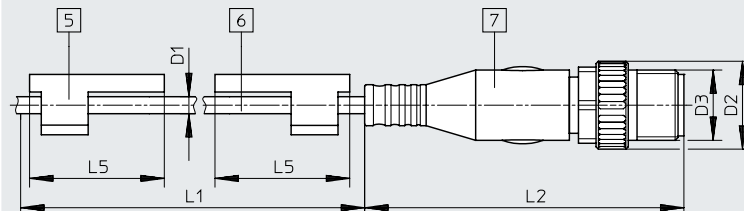[7] Plug suitable for connecting cable NEBU-M8

L1 Cable length

SMT-8M-A-...-M8 – Cable with plug M8x1, snap-on flange

[5] Inscription label holder drawn turned by 90°
[6] Connecting cable
[7] Plug suitable for connecting cable NEBU-M8

L1 Cable length
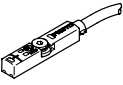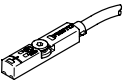
SMT-8M-A-...-M12 – Cable with plug M12x1, rotatable thread

[5] Inscription label holder drawn turned by 90°
[6] Connecting cable
[7] Plug suitable for connecting cable NEBU-M12

L1 Cable length

Type	D1	D2 ∅	D3	L1	L2	L5	⏦1
SMT-8M-A-...-OE	2.9	–	–	2500, 7500	50	23	1.5
SMT-8M-A-...-M8D		10	M8x1	300	41.1		
SMT-8M-A-...-M8		8.5	M8x1	–	32.7		
SMT-8M-A-...-M12		15	M12x1	–	54.5		

Data sheet – Magneto-resistive

Ordering data

	Switching output	Electrical connection Cable	Cable with plug, rotatable thread M8x1	M12x1	Cable length [m]	Weight [g]	Part no.	Type
	N/O contact							
	PNP	–	3-pin	–	0.3	8.9	★ 574334	SMT-8M-A-PS-24V-E-0.3-M8D
	PNP	3-wire	–	–	2.5	29.1	★ 574335	SMT-8M-A-PS-24V-E-2.5-OE
	PNP	3-wire	–	–	5	57.1	★ 574336	SMT-8M-A-PS-24V-E-5.0-OE
	PNP	–	–	3-pin	0.3	15.9	★ 574337	SMT-8M-A-PS-24V-E-0.3-M12
	NPN	3-wire	–	–	2.5	29.1	★ 574338	SMT-8M-A-NS-24V-E-2.5-OE
		–	3-pin	–	0.3	8.9	★ 574339	SMT-8M-A-NS-24V-E-0.3-M8D
	Non-contacting	2-wire, open end	–	–	5	57.1	8165237	SMT-8M-A-ZS-24V-E-5-OE
	N/C contact							
	PNP	3-wire	–	–	7.5	85.1	★ 574340	SMT-8M-A-PO-24V-E-7.5-OE

Ordering data

	Switching output	Electrical connection Cable	Cable with plug, rotatable thread M8x1	M12x1	Cable length [m]	Weight [g]	Part no.	Type
	N/C contact							
	NPN/NO	3-wire, open end	–	–	2.5	29.1	8138000	SMT-8M-A-NO-24V-E-2,5-OE
	NPN/NO	3-wire, open end	–	–	7.5	85.1	8138001	SMT-8M-A-NO-24V-E-7,5-OE

Ordering data – Modular product system

Ordering table

Size	8	Conditions	Code	Enter code
Module no.	**574333**			
Function	Proximity switch for T-slot, electronic		**SMT-8M**	SMT-8M
			–	–
Series	Short design		**A**	A
			–	–
Switching output	3-wire PNP N/O contact		**PS**	
	3-wire NPN N/O contact		**NS**	
	3-wire PNP N/C contact		**PO**	
	2-wire PNP N/O contact		**ZS**	
	PNP / NPN, switchable		**PNS**	
	PNP N/C contact / N/O contact, switchable		**PSO**	
	3-wire NPN N/C contact		**NO**	
			–	–
Rated operating voltage [V DC]	24		**24V**	24V
			–	–
Cable characteristic	Cable chain + robot		**E**	E
			–	–
Cable length [m]	0.1 … 30 (0.1 … 5.0 in increments of 0.1, 5.0 … 30 in increments of 0.5)		**...**	
			–	–
Cable designation	With inscription label holder			
	Without inscription label holder		**N**	
			–	–
Connection technology	Open end		**OE**	
	M8, rotatable thread		**M8D**	
	M8, snap-on flange		**M8**	
	M12, rotatable thread		**M12**	

Accessories

Mounting kit SMBR

Material:
Polyacetal
RoHS-compliant

[1] Proximity switch SME-8-..., SMT-8-...
[2] Guide groove for switch cable
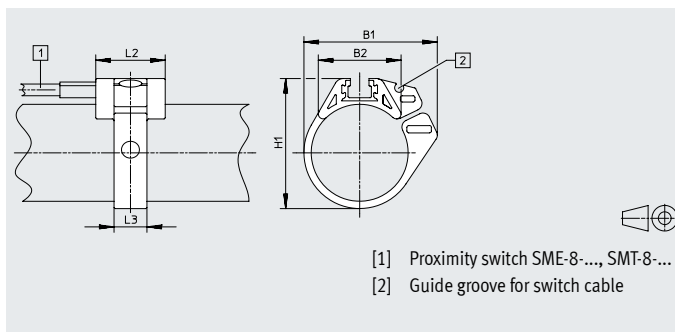
Dimensions and ordering data

For piston ∅	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: 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
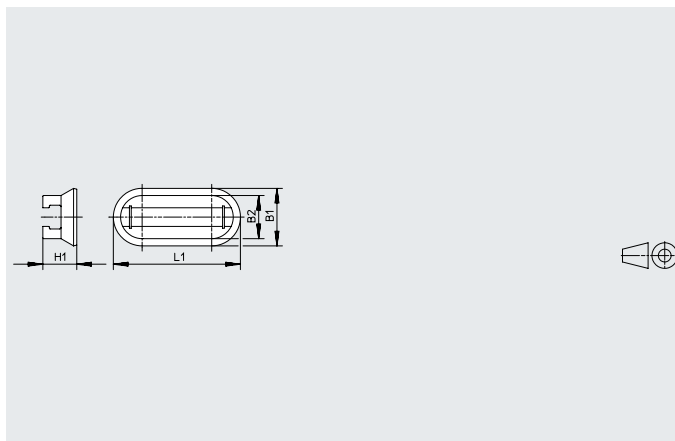
Ordering data

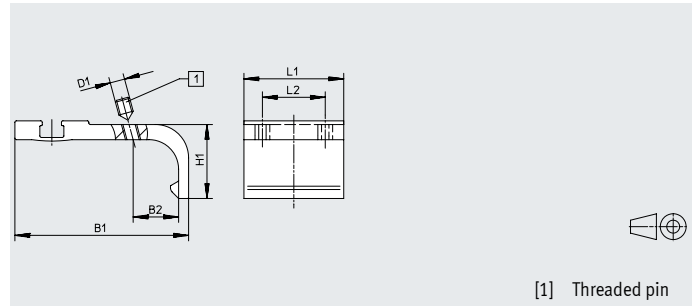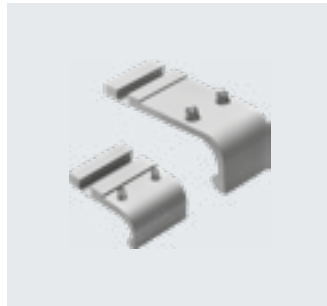| For piston ∅	B1	B2	H1	L1	CRC[1]	Part no.	Type
32 ... 100	15.8	11.8	9.3	35	4	525565	CRSMB-8-32/100

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 Ø	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-32/40**
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**

Sensor bracket DASP-M4-...-A

Material:
Anodised wrought aluminium alloy
Screws: high-alloy stainless steel
RoHS-compliant
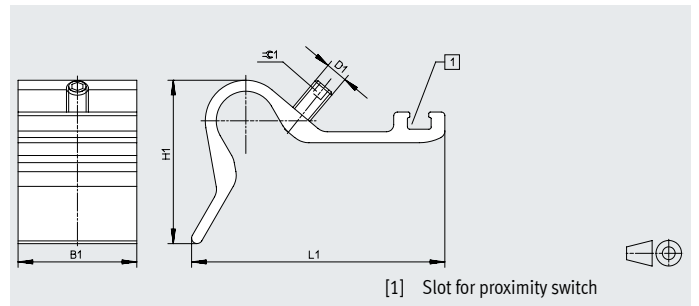
[1]   Slot for proximity switch

Dimensions and ordering data

Type	B1	D1	H1	L1	⊏C 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.

Accessories

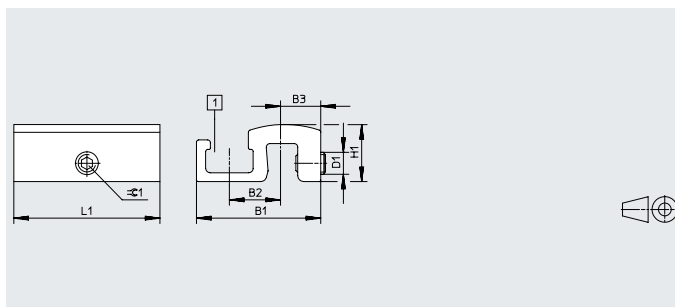### Mounting kit SMB-8-C

Temperature: −40 ... 120°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	⌑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.

Positioning element SMM
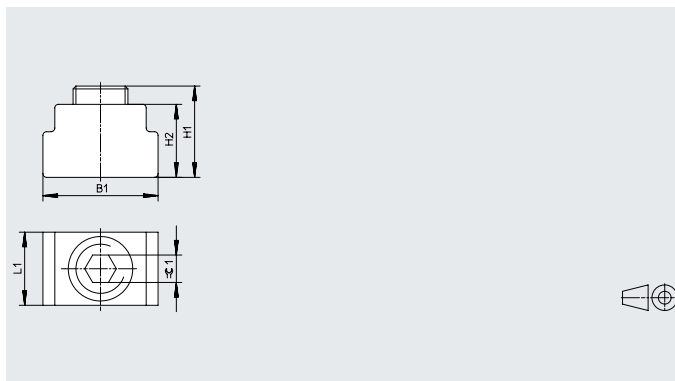Insertable in the slot lengthwise

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	⌑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

Data sheets → Internet: nebu/sim

		Number of wires	Cable length [m]	Part no.	Type
Socket M8x1, 3-pin					
	For SMT/SME-8... and SMTO/SMTSO/SMEO-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/SMEO-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 SMTO/SMTSO/SMEO-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/SMEO-8E	3	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5	541370	NEBU-M12W5-K-5-LE3

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
	• 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

Ordering data – Inscription label holder

	Length	Width	Height	For cable diameter	Part no.	Type	PS[1]
	23 mm	5.4 mm	10.3 mm	2.5 ... 3.5 mm	8078306	NEAU-LH-2	100

1) Pack size