

## Proximity sensors SMT-10G, for C-slot

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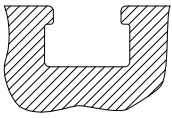
## Product range overview

Design	Type of mounting	Measuring principle	Type	Operating voltage range	Switching output	Switching element function	→ Page/ Internet
<b>For C-slot</b>	<b>Standard</b>						
	Insertable in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-10M	5 ... 30 V DC	PNP	N/O contact	–
					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, NPN	N/O contact	6	
	Magnetic reed	SME-10	12 ... 27 V AC/DC	Contacting	N/O contact	–	
<b>For T-slot</b>	<b>Standard</b>						
	Insertable in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-8M	10 ... 30 V DC	PNP	N/O contact	T-slot
					NPN	N/C contact	
					Contacting, bipolar	N/O contact	
		Magnetic reed	SME-8M	5 ... 30 V AC/DC		N/C contact	
	Insertable in the slot lengthwise, flush with the cylinder profile	Magneto-resistive	SMT-8	10 ... 30 V DC	PNP	N/O contact	
					NPN		
	Insertable in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8	12 ... 30 V AC/DC	Contacting, bipolar	N/O contact	
				3 ... 230 V AC/DC		N/C contact	
				5 ... 250 V AC/DC		N/O contact	
	Insertable in the slot lengthwise	Magneto-resistive	SMT-8G	10 ... 30 V DC	PNP	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	
	Insertable in the slot from above	Magnetic reed	SME-8-FM	10 ... 30 V AC/DC	Contacting, bipolar	N/O contact	
	Via 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			
	<b>Corrosion-resistant</b>						
	Insertable in the slot lengthwise, flush with the cylinder profile	Magneto-resistive	CRSMT-8	10 ... 30 V DC	PNP	N/O contact	T-slot
	<b>Welding field immune</b>						
	Via accessories	Magneto-inductive	SMTSO-8E	10 ... 30 V DC	PNP	N/O contact	T-slot
	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	T-slot	
Via accessories	Magnetic reed	SME0-8E-...S6	0 ... 30 V DC	Contacting	N/O contact	T-slot	
			0 ... 30 V AC				

## Product range overview

### T-slot sensors can be used for drives with T-slot

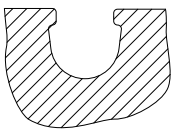
#### Exceptions



- DFM-B: SMT0-8E, SMTSO-8E, SME0-8E and SMPO-8E cannot be used
- DHDS: SME-8M can only be used on  $\varnothing$  50
- DHPS: SME-8M can only be used on  $\varnothing$  20 ... 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

### C-slot sensors can be used for drives with C-slot

#### Exceptions

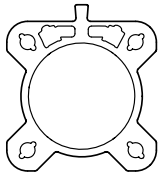


- ADVC  $\varnothing$  100: SMT-10M and SME-10M cannot be used (ADVC has a T-slot and C-slot)
- DSM/DSM-B-6/8/10: SME-10M cannot be used
- DSM/DSM-B-10/16: SMT-10M cannot be used
- HGPT-B: only SMT-10G can be used for sizes up to and including size 35

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

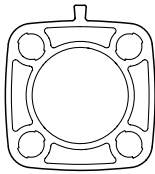
Only T-slot sensors CRSMT-8M and SMT-8M-A can be used, and only with the profile identified as suitable.

Example: DSBF



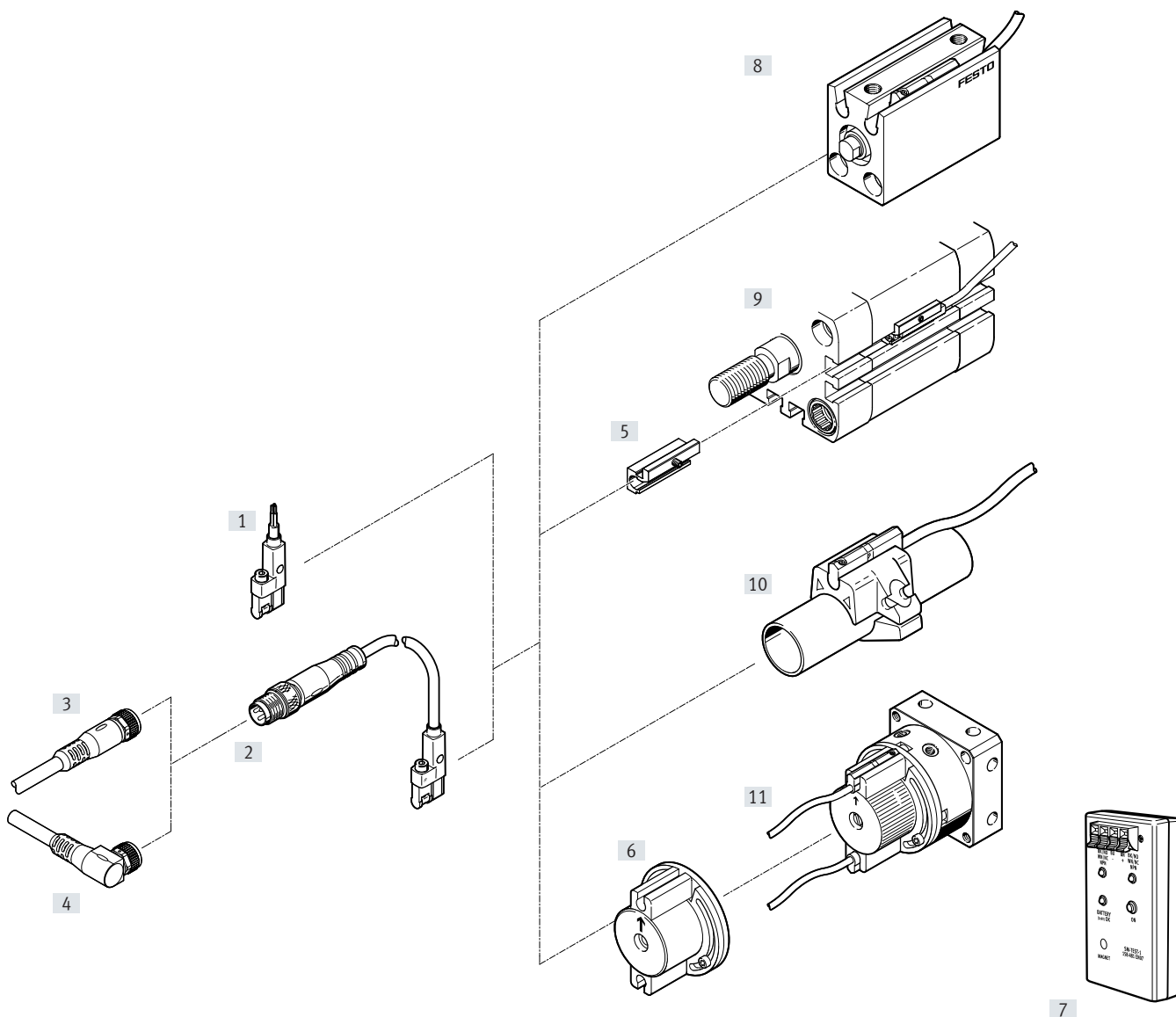
Suitable

Example: CDC



Not suitable

Peripherals overview



Mounting components and accessories		→ Page/ Internet
<b>Proximity sensors</b>		
[1]	SMT-10G-...-OE, with cable	6
[2]	SMT-10G-...-M..., with cable and plug	6
<b>Connecting cables</b>		
[3]	Connecting cable NEBU-M...G...	10
[4]	Connecting cable NEBU-M...W...	10
<b>Mounting kits</b>		
[5]	Mounting kit SMBN-10	9
[6]	Mounting kit WSM...SME-10	10

Mounting components and accessories		→ Page/ Internet
<b>Accessories</b>		
[7]	Sensor tester SM-TEST-1	10
-	Positioning element SMM-10	9
-	Clip SMBK-10	10
-	Inscription label ASLR	10
-	Safety clip NEAU	10
<b>Drives</b>		
[8]	Drives with C-slot	-
[9]	Drives with T-slot	-
[10]	Round cylinder	-
[11]	Semi-rotary drive DSM	-

## Type codes

001	Series	
<b>SMT</b>	Proximity sensor	

002	Design type	
<b>10G</b>	For round slot, inserted in the slot lengthwise	

003	Switching output	
<b>PS</b>	3-wire PNP N/O contact	
<b>NS</b>	3-wire NPN N/O contact	

004	Rated operating voltage	
<b>24V</b>	24 V	

005	Cable characteristic	
<b>E</b>	Suitable for energy chains/robot applications	

006	Cable length [m]	
<b>0.3</b>	0.3	
<b>2.5</b>	2.5	

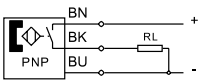
007	Cable outlet	
<b>Q</b>	Transverse	

008	Electrical connection	
<b>OE</b>	Open end	
<b>M8D</b>	Cable with M8x1 plug, 3-pin, rotatable thread	

## Data sheet – Magneto-resistive

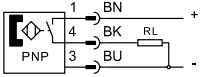
**Function**

PNP, N/O contact, with cable, 3-wire

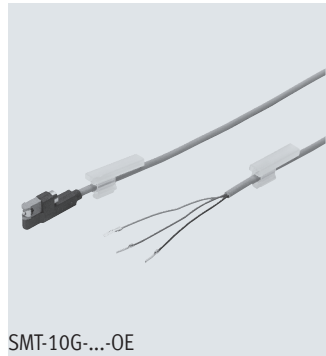
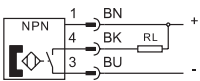
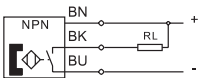


- Magneto-resistive measuring principle
- Insertable in the slot lengthwise
- Design ideal for gripper sensing

PNP, N/O contact, with plug



NPN, N/O contact, with cable



SMT-10G-...-OE



SMT-10G-...-M8D

General technical data	SMT-10G-PS-...	SMT-10G-NS-...
Design	For C-slot	
Mounting position	Any	
Based on standard	EN 60947-5-2	
Certification	RCM compliance mark c UL us Listed (OL)	
CE marking (see declaration of conformity)	To EU EMC Directive To EU RoHS Directive	
KC marking	KC EMC	
UKCA marking (see declaration of conformity) <sup>1)</sup>	To UK instructions for EMC To UK RoHS instructions	
Application information	Support / Actuator-sensor overview "The right sensor for the actuator"	
Certificate-issuing authority	UL E232949	
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	-
Note on materials	RoHS-compliant	
PWIS conformity	VDMA24364-B2-L	

1) For information about the area of use, see the declaration of conformity at: [www.festo.com/catalogue/...](http://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]	-20 ... +70

Switching output		
Switching element function	N/O contact	
Voltage drop	[V]	≤ 2
Inductive protective circuit	Adapted to MZ, MY, ME coils	
Max. output current	[mA]	100
Residual current	[mA]	≤ 0.01
Switch-on time	[ms]	≤ 1
Switch-off time	[ms]	≤ 1
Max. switching frequency	[Hz]	150
Repetition accuracy	[mm]	0.2
Max. switching capacity DC	[W]	2.8

## Data sheet – Magneto-resistive

Output, additional data	
Short circuit protection	Yes
Overload protection	Present


Electronics		
Operating voltage range	[V DC]	10 ... 30
Rated operating voltage	[V DC]	24
Residual ripple	[%]	10
Reverse polarity protection		For all electrical connections

Electromechanical components		
Type	SMT-10G-...-OE	SMT-10G-...-M8D
Electrical connection		
Connection type	Cable	Cable with plug
Connection technology	Open end	M8x1, A-coded to EN 61076-2-104
Number of pins/wires	3	3
Type of mounting	–	Screw-type lock
Outlet direction of connection	Lateral	
Cable test conditions	Cable chain: 5 million cycles, bending radius 28 mm	
	Torsional resistance: > 300,000 cycles, $\pm 270^\circ/0.1$ m	
	Resistance to bending: to Festo standard; test conditions on request	
Cable length	[m]	2.5   0.3
Cable characteristic	Suitable for energy chains and robot applications	
Material of cable sheath	TPE-U(PU)	
Cable sheath colour	Grey	
Material of pin contacts	–	Gold-plated brass
Wire ends	Wire end sleeve	–

Mechanical components		
	SMT-10G-...-OE	SMT-10G-...-M8D
Type of mounting	Clamped in C-slot	
	Insertable in the slot lengthwise	
Max. tightening torque	[Nm]	0.6
Housing material	Aluminium, high-alloy stainless steel, reinforced PA	
Housing colour	Black	
Union nut material	–	Nickel-plated brass
Product weight	[g]	30   10

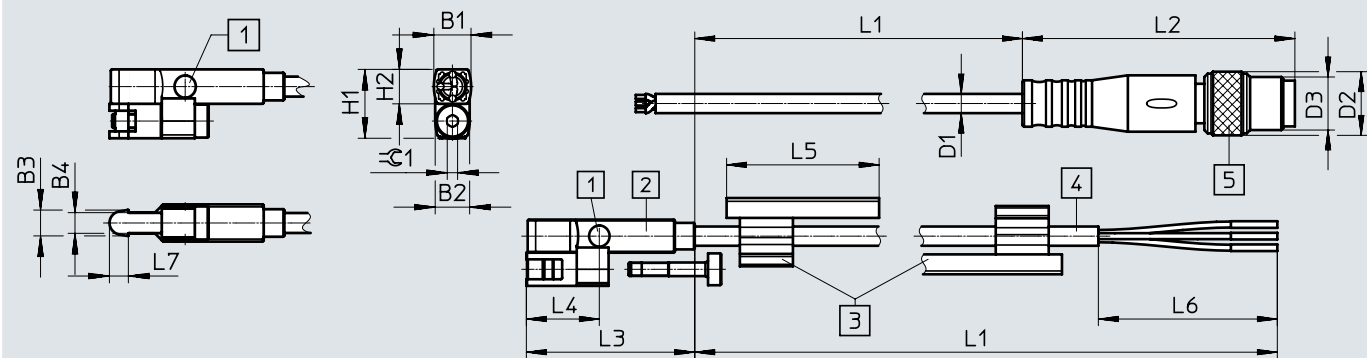
Display/operation	
Switching status indication	Yellow LED

Immission/emission		
Ambient temperature with flexible cable installation	[°C]	–5 ... +70
Degree of protection	IP65	
	IP68	

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

Data sheet – Magneto-resistive

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



- [1] 2x LED
- [2] SMT-10G
- [3] Inscription label holder in a separate bag
- [4] Connecting cable
- [5] Plug M8x1
- L1 Cable length

	B1	B2	B3	B4	D1 ∅	D2 ∅	D3	H1	H2	L1	L2 ±0.4	L3 ±0.15	L4	L5	L6 ±5	L7	≅
SMT-10G-PS-...-OE	5.4	5	3.8	3	2.9	-	-	10	5	2500 + 70	-	25.2	10.8	23	50	2.8	1.5
SMT-10G-PS-...-M8D						9.6	M8x1			300 + 30	41.1				-		
SMT-10G-NS-...-OE						-	-			2500 + 70	-				50		
SMT-10G-NS-...-M8D						9.6	M8x1			300 + 30	41.1				-		

Ordering data	Switching output	Electrical connection		Cable length [m]	Part no.	Type
		Cable	Cable with plug, rotatable thread M8x1			

N/O contact						
	PNP	3-wire	-	2.5	547862	SMT-10G-PS-24V-E-2.5Q-OE
		-	3-pin	0.3	547863	SMT-10G-PS-24V-E-0.3Q-M8D
	NPN	3-wire	-	2.5	8065030	SMT-10G-NS-24V-E-2.5Q-OE
		-	3-pin	0.3	8065029	SMT-10G-NS-24V-E-0.3Q-M8D



## Accessories

### Mounting SMBN-10

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

Material:

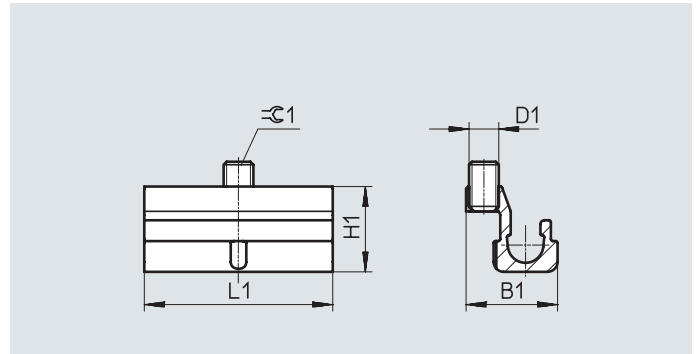
Housing: anodised wrought aluminium alloy

Screws: high-alloy stainless steel

Note on materials:

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data							
For piston $\varnothing$	D1	B1	H1	L1	$\approx \varnothing 1$	Part no.	Type
125 ... 320	M3	9.3	8.6	19	1.5	537809	SMBN-10

### Positioning element SMM

Insertable in the slot lengthwise

Ambient temperature:  $-40 \dots +120^{\circ}\text{C}$

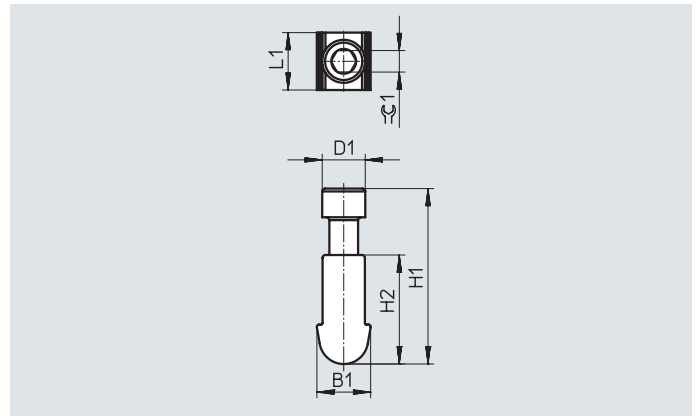
Materials:

Housing: anodised wrought aluminium alloy

Screws: high-alloy stainless steel

Note on materials:

RoHS-compliant



Dimensions and ordering data									
B1	D1	H1	H2	L1	$\approx \varnothing 1$	CRC <sup>1)</sup>	Part no.	Type	PU <sup>2)</sup>
3.75	3.0	12.23	7.6	4.0	1.5	3	547942	SMM-10	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

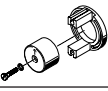

## Accessories

## Ordering data – Connecting cables


Data sheets → Internet: nebu

	Type	Number of wires	Cable length [m]	Part no.	Type
<b>Socket M8x1, 3-pin</b>					
	For SMT/SME-10...	3	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5	★ 541334	NEBU-M8G3-K-5-LE3
	For SMT/SME-10...	3	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5	★ 541341	NEBU-M8W3-K-5-LE3

## Ordering data – Mounting components

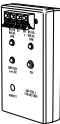
	For Ø	Description	Part no.	Type
	6	Mounting kit for mounting proximity sensors on semi-rotary drive DSM	173205	WSM-6-SME-10
	8		173206	WSM-8-SME-10
	10		173207	WSM-10-SME-10
	–	For fixing connecting cables in place	534255	SMBK-10

## Ordering data – Safety clips 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 – Sensor tester

	Description	Part no.	Type
	<ul style="list-style-type: none"> <li>Testing of the functionality of proximity sensors using the integrated voltage supply</li> <li>Adjusting the proximity sensors 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

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