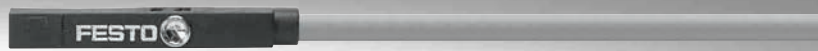


# Proximity sensors SMT-10M, for C-slot



Festo core product range  
Covers 80% of your automation tasks

Worldwide:

Always in stock

Superb:

Festo quality at an attractive price

Easy:

Simplified procurement and warehousing

★ Generally ready for dispatch from the factory within 24 hours

In stock at 13 Service Centres worldwide

More than 2200 products

★ Generally ready for dispatch from the factory within 5 days

Assembled for you at 4 Service Centres worldwide

Up to  $6 \times 10^{12}$  variants per product family

Just look  
for the  
star!

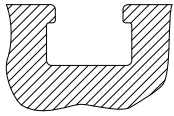
## Product range overview

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>						
	Inserted in the slot from above, flush with the cylinder profile	Magneto-resistive	SMT-10M	5 ... 30 V DC	PNP	N/O contact	6
					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, NPN	N/O contact	–	
	Magnetic reed	SME-10	12 ... 27 V AC/DC	Contacting	N/O contact	–	
<b>For T-slot</b>	<b>Standard</b>						
	Inserted 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	
						N/O contact	
	Inserted in the slot lengthwise, flush with the cylinder profile	Magnetic reed	SME-8M	5 ... 30 V AC/DC	Contacting, bipolar	N/O contact	
						N/C contact	
						N/O contact	
	Inserted in the slot lengthwise, flush with the cylinder profile	Magneto-resistive	SMT-8	10 ... 30 V DC	PNP	N/O contact	
					NPN		
	Inserted 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	
	Inserted 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	
	Inserted 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>						
	Inserted 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>							
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	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

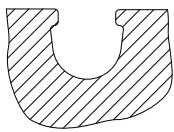
#### Exceptions



- DFM-B: SMT0-8E, SMTSO-8E, SME0-8E, 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 for 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

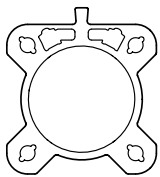


- ADVC  $\varnothing 100$ : SMT-10M and SME-10M cannot be used (ADVC has a T-slot and a C-slot)
- DSM/DSM-B-6/8/10: SME-10M cannot be used
- DSM/DSM-B-10/16: SMT-10M cannot be used
- HGPT-B: only SMT-10G can be used for sizes up to and including size 35

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

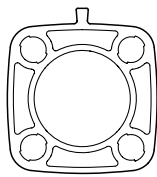
Only T-slot sensors CRSMT-8M and SMT-8M-A can be used, and only with the suitable profile identified below.

Example: DSBF



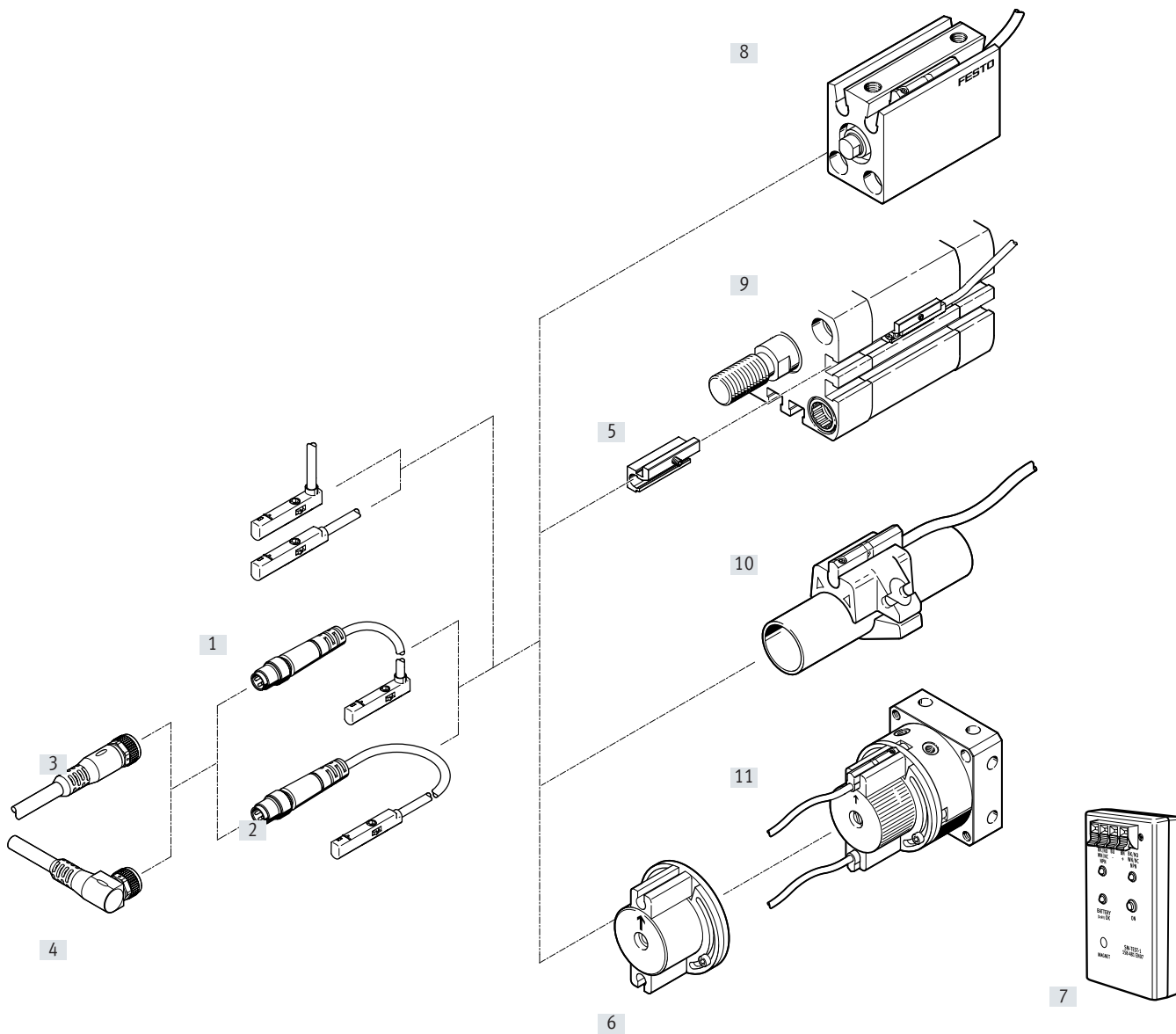
Suitable

Example: CDC



Not suitable

Peripherals overview



Mounting attachments and accessories		→ Page/ Internet
<b>Proximity sensors</b>		
[1]	SMT-10M-...-OE, with cable	6
[2]	SMT-10M-...-M..., with cable and plug	6
<b>Connecting cables</b>		
[3]	Connecting cable NEBU-M...G...	13
[4]	Connecting cable NEBU-M...W...	13
<b>Mounting kits</b>		
[5]	Mounting kit SMBN-10	12
[6]	Mounting kit WSM-...-SME-10	13

Mounting attachments and accessories		→ Page/ Internet
<b>Accessories</b>		
[7]	Sensor tester SM-TEST-1	13
-	Positioning element SMM-10	12
-	Clip SMBK-10	13
-	Inscription label ASLR	13
-	Safety clip NEAU	13
<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	
SMT	Proximity sensor	

002	Design type	
10M	For C-slot, inserted in slot from above	

003	Switching output	
NS	3-wire NPN N/O contact	
PS	3-wire PNP N/O contact	
ZS	2-wire PNP N/O contact	

004	Rated operating voltage	
24V	24 V	

005	Cable characteristic	
E	Suitable for energy chains/robot applications	

006	Cable length [m]	
0.2	0.2	
0.3	0.3	
2.5	2.5	
30	30	

007	Display	
L	LED	

008	Cable outlet	
L	Longitudinal	
Q	Transverse	

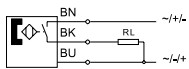
009	Cable identification	
	With label holder	
N	Without label holder	

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

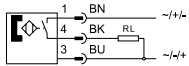
## Data sheet – Magneto-resistive

### Function

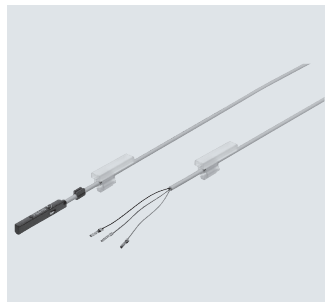
e.g. PNP, N/O contact, with cable



e.g. NPN, N/O contact, with cable



- Magneto-resistive measuring principle
- Inserted in the slot from above, does not protrude beyond the cylinder profile
- Cable clip and retaining bracket for inscription labels holders included in the scope of delivery



### General technical data

Design	For C-slot
Conforms to standard	EN 60947-5-2
Certification	RCM compliance mark c UL us - Listed (OL)
KC mark	KC EMC
CE mark (see declaration of conformity)	To EU EMC Directive <sup>1)</sup> To EU RoHS Directive
Special characteristics	Oil resistant
Note on materials	Cable free of halogen Free of copper and PTFE 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	PS	NS	ZS
Measured variable	Position		
Measuring principle	Magneto-resistive		
Ambient temperature [°C]	-40 ... +70		
<b>Fused switching field strength</b>			
at -40 ... +70°C [mT]	1.6 ... 3.0		1.95 ... 2.6
at 25°C [mT]	1.8 ... 2.8		2.0 ... 2.5

Switching output	PS	NS	ZS
Type SMT-10M	PNP	NPN	Non-contacting, 2-wire
Switching output	N/O contact		
Switching element function	N/O contact		
Switching output repetition accuracy in ± mm [mm]	0.2		
Switch-on time [ms]	≤ 1.3	≤ 1.3	≤ 1.0
Switch-off time [ms]	≤ 1.4	≤ 1.4	≤ 1.0
Max. switching frequency [Hz]	150		
Max. output current [mA]	100		
Max. output current in mounting kits [mA]	50		
Max. switching capacity DC [W]	2.8	2.8	2.4
Max. switching capacity DC in mounting kits [W]	1.5		1.2
Voltage drop [V]	≤ 1.7	≤ 1.5	≤ 6
Devices can be switched in parallel	5	3	5
Minimum load current [mA]	0		
Residual current (in new condition at room temperature) [mA]	< 0.05	< 0.15	< 1.5

## Data sheet – Magneto-resistive

Additional output data									
Short circuit current rating	Yes								
Overload protection	Present								
Electronics			PS/NS			ZS			
Rated operating voltage	[V DC]	24							
Operating voltage range	[V DC]	5 ... 30							
Ready-state delay	[ms]	< 45				< 17.2			
Reverse polarity protection	For all electrical connections								
Electromechanical components									
Type SMT-10M	PS/NS			ZS					
Electrical connection	OE	M8D	M8	M12	OE	M8D	M8	M12	
Electrical connection	Cable, 3-wire	Cable with plug, 3-pin			Cable, 2-wire	Cable with plug, 2-pin			
		M8x1	M8x1	M12x1		M8x1	M8x1	M12x1	
		Rotatable thread	Snap-on flange	Rotatable thread		Rotatable thread	Snap-on flange	Rotatable thread	
Outlet direction of connection	In-line Lateral								
Cable test conditions	Energy 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]	0.2 ... 30							
Cable characteristic	Energy chain + robot								
Information on materials: Cable sheath	TPE-U(PUR)								
Mechanical system									
Type of mounting	Screw-clamped, inserted in the slot from above								
Max. tightening torque	[Nm]	0.4							
Mounting position	Any								
Housing	PA-reinforced								
	High-alloy stainless steel								
Display/operation									
Switching status indication	Yellow LED								
Immission/emission									
Ambient temperature with flexible cable installation	[°C]	-20 ... +70							
Degree of protection	IP65								
	IP68								

## Data sheet – Magneto-resistive

### Pin allocation to EN 60947-5-2

M8x1, 2-pin  
N/O contact

	Pin	Wire colour	Allocation
	1	Brown	+
	4	Black	Output

M8x1, 3-pin  
N/O contact

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

### Pin allocation to EN 60947-5-2

M12x1, 2-pin  
N/O contact

	Pin	Wire colour	Allocation
	1	Brown	+
	4	Black	Output

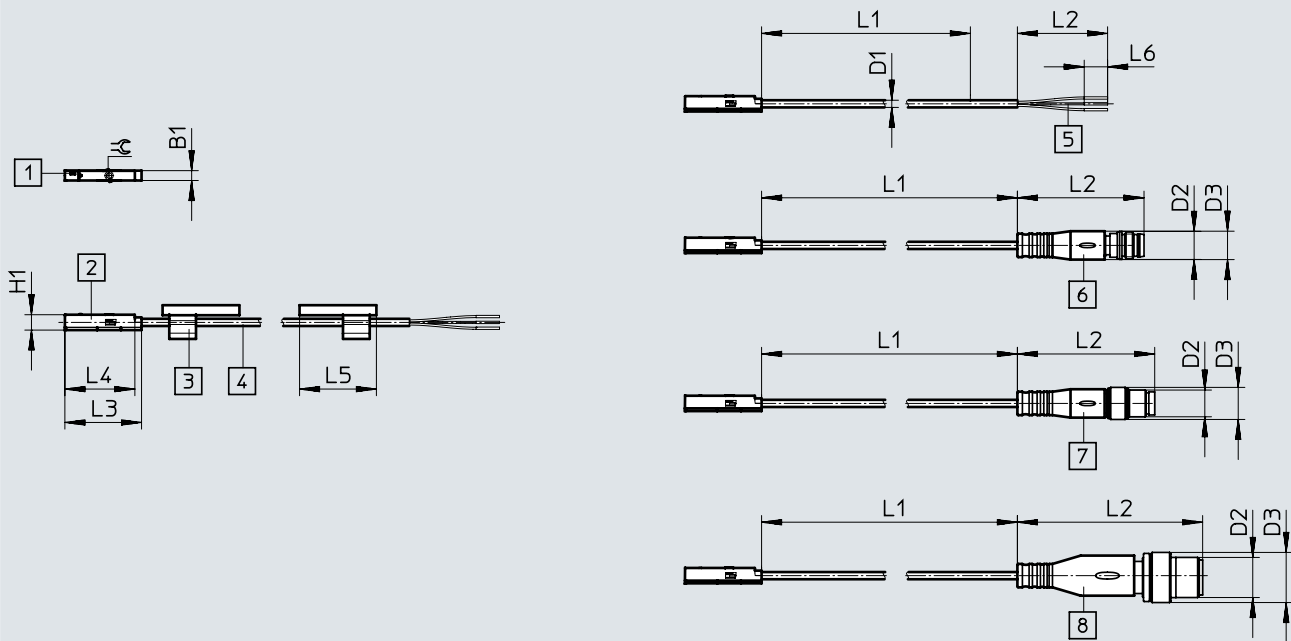
M12x1, 3-pin  
N/O contact

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

### Dimensions

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

SMT-10M-...-L, in-line connection direction



- [1] Yellow LED
- [2] SMT-10M
- [3] Inscription label holder
- [4] Connecting cable
- [5] Cable with open end
- [6] Plug M8x1, snap-on flange
- [7] Plug M8x1, rotatable thread
- [8] Plug M12x1
- L1 Cable length

Type	B1	D1	D2	D3	H1	L2	L3	L4	L5	L6	L7	⌀
SMT-10M-...-OE	2.9	2.15	-	-	4.6	50	22.9	20.9	23	50	7	1.5
SMT-10M-...-M8D			M8x1	8.5		-						
SMT-10M-...-M8			M8x1	9.6		-						
SMT-10M-...-M12			M12x1	15		-						

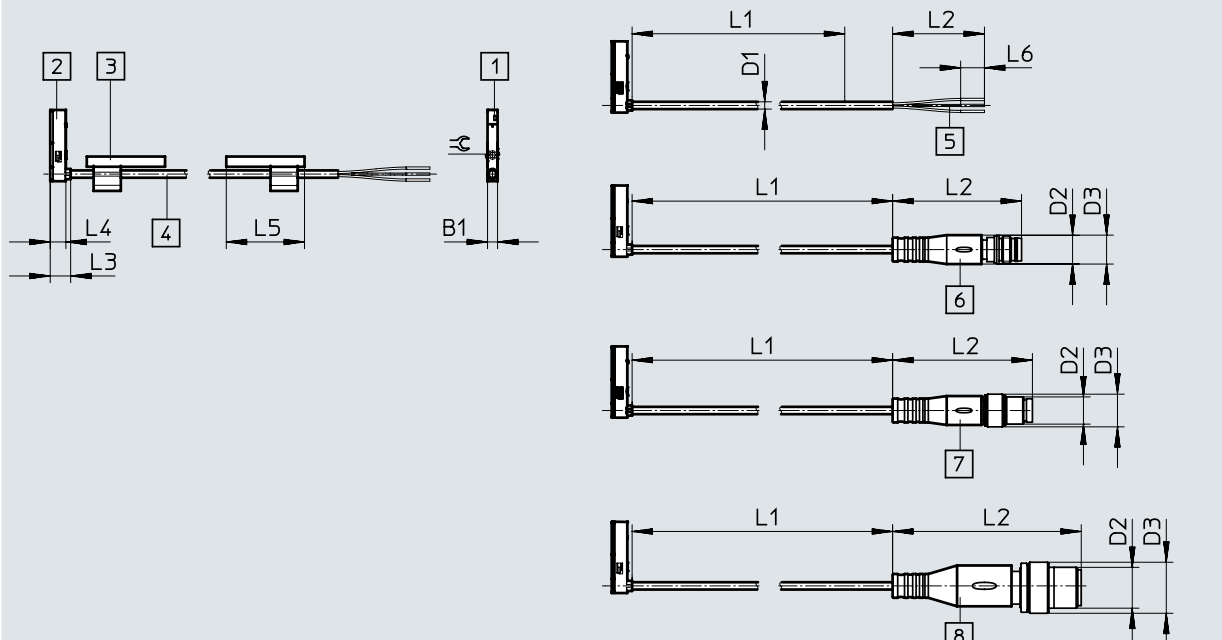


## Data sheet – Magneto-resistive

### Dimensions

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

SMT-10M-...-Q, lateral connection direction



- [1] Yellow LED
- [2] SMT-10M
- [3] Inscription label holder
- [4] Connecting cable
- [5] Cable with open end
- [6] Plug M8x1, snap-on flange
- [7] Plug M8x1, rotatable thread
- [8] Plug M12x1
- L1 Cable length

Type	B1	D1	D2	D3	H1	L2	L3	L4	L5	L6	L7	±
SMT-10M-...-OE	2.9	2.15	-	-	20.9	50	6	4.6	23	50	7	1.5
SMT-10M-...-M8D			M8x1	8.5		32.7					-	
SMT-10M-...-M8			M8x1	9.6		41.1					-	
SMT-10M-...-M12			M12x1	15		55.5					-	

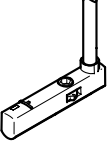
### ★ Core product range

Ordering data	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, rotatable thread				
	<b>N/O contact</b>						
	PNP	3-wire	-	2.5	16.8	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		-	M8x1, 3-pin	0.3	6.7	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
	NPN	3-wire	-	2.5	16.8	★ 551377	SMT-10M-NS-24V-E-2,5-L-OE
		-	M8x1, 3-pin	0.3	6.7	★ 551379	SMT-10M-NS-24V-E-0,3-L-M8D
	Non-contacting, 2-wire	2-wire	-	2.5	14.6	★ 551382	SMT-10M-ZS-24V-E-2,5-L-OE

Festo core product range

- ★ Generally ready for dispatch from the factory within 24 hours
- ★ Generally ready for dispatch from the factory within 5 days

## Data sheet – Magneto-resistive

Ordering data	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, rotatable thread				
	<b>N/O contact</b>						
	PNP	3-wire	–	2.5	16.8	551374	SMT-10M-PS-24V-E-2,5-Q-OE
		–	M8x1, 3-pin	0.3	6.7	551376	SMT-10M-PS-24V-E-0,3-Q-M8D
	NPN	3-wire	–	2.5	16.8	551378	SMT-10M-NS-24V-E-2,5-Q-OE
		–	M8x1, 3-pin	0.3	6.7	551380	SMT-10M-NS-24V-E-0,3-Q-M8D
	Non-contacting, 2-wire	2-wire	–	2.5	14.6	551383	SMT-10M-ZS-24V-E-2,5-Q-OE

## Modular products – Magneto-resistive

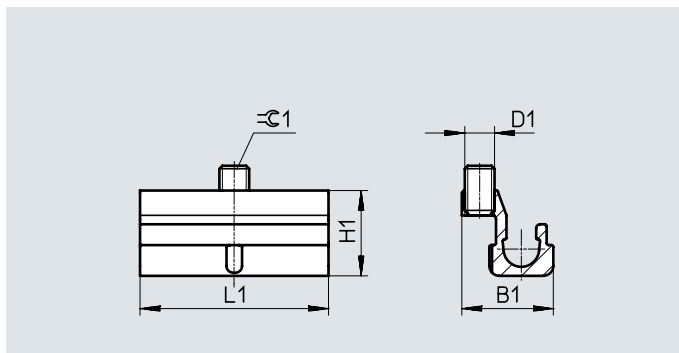
Ordering table				
Size	10	Conditions	Code	Enter code
Module no.	<b>551372</b>			
Function	Proximity sensor for C-slot, non-contacting		<b>SMT-10M</b>	SMT-10M
			-	-
Switching output	3-wire PNP N/O contact		<b>PS</b>	
	3-wire NPN N/O contact		<b>NS</b>	
	2-wire N/O contact		<b>ZS</b>	
			-	-
Rated operating voltage [V DC]	24		<b>24V</b>	24V
			-	-
Cable characteristic	Energy chain + robot		<b>E</b>	E
			-	-
Cable length [m]	0.2 ... 30		<b>...</b>	
	(0.2 ... 5.0 m in 0.1 m increments, 5.0 ... 30 m in 0.5 m increments)			
			-	-
Cable outlet	In-line		<b>L</b>	
	Lateral		<b>Q</b>	
			-	-
Cable designation	With inscription label holder		<b>-</b>	
	Without inscription label holder		<b>N</b>	
			-	-
Connection technology	Open end		<b>OE</b>	
	M8, rotatable thread		<b>M8D</b>	
	M8, snap-on flange		<b>M8</b>	
	M12, rotatable thread		<b>M12</b>	

## Accessories

### Mounting SMBN-10

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

Material:  
Rail: Anodised wrought aluminium alloy  
Screws: High-alloy stainless steel  
Note on materials:  
Free of copper and PTFE  
RoHS-compliant



#### Dimensions and ordering data

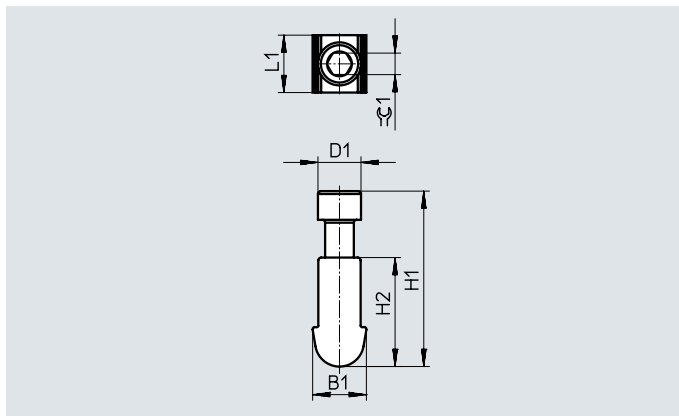
For piston $\varnothing$	D1	B1	H1	L1	$\varnothing 1$	Part no.	Type
125 ... 320	M3	9.3	8.6	19	1.5	537809	SMBN-10

### Positioning element SMM

Inserted 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	$\varnothing 1$	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

- 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.
- Packaging unit

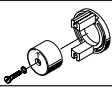

## Accessories

## 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

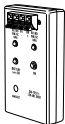
	For Ø	Description	Part no.	Type
	6	Mounting kit for mounting proximity sensors on semi-rotary drive DSM	173205	WSM-6-SME-10
	8		173206	WSM-8-SME-10
	10		173207	WSM-10-SME-10
	–	For fixing connecting cables in place	534255	SMBK-10

## 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 testers

	Description	Part no.	Type
	<ul style="list-style-type: none"> <li>Testing 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

Festo core product range



Generally ready for dispatch from the factory within 24 hours

Generally ready for dispatch from the factory within 5 days

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