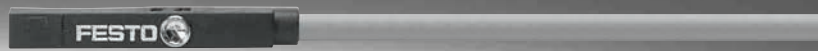


Proximity sensors SMT-10M, for C-slot



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
Simply good: Expected high Festo quality
Fast: Easy and fast to select

The Core Range offers you the best value for your automation tasks.



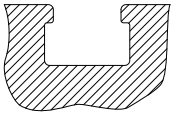
Product range overview

Design	Type of mounting	Measuring principle	Type	Operating voltage range	Switching output	Switching element function	→ Page/ Internet
For C-slot	Standard						
	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	–	
For T-slot	Standard						
	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
						N/C contact	
					NPN	N/O contact	
		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	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	
	Via accessories	Magneto-resistive	SMT0-8E	10 ... 30 V DC	PNP	N/O contact	
							NPN
					Magnetic reed		SME0-8E
			3 ... 250 V DC				
				3 ... 230 V AC			
	Corrosion-resistant						
	Inserted in the slot lengthwise, flush with the cylinder profile	Magneto-resistive	CRSMT-8	10 ... 30 V DC	PNP	N/O contact	T-slot
	Welding field immune						
	Via accessories	Magneto-inductive	SMTSO-8E	10 ... 30 V DC	PNP	N/O contact	T-slot
					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	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

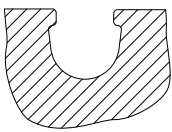
Exceptions



- 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

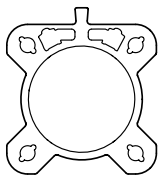


- ADVC $\varnothing 100$: SMT-10M and SME-10M cannot be used (ADVC has a T-slot and a C-slot)
- DSM/DSM-B-6/8/10: SME-10M cannot be used
- DSM/DSM-B-10/16: SMT-10M cannot be used
- HGPT-B: only SMT-10G can be used for sizes up to and including size 35

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

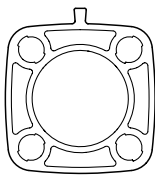
Only T-slot sensors CRSMT-8M and SMT-8M-A can be used, and only with the suitable profile identified below.

Example: DSBF



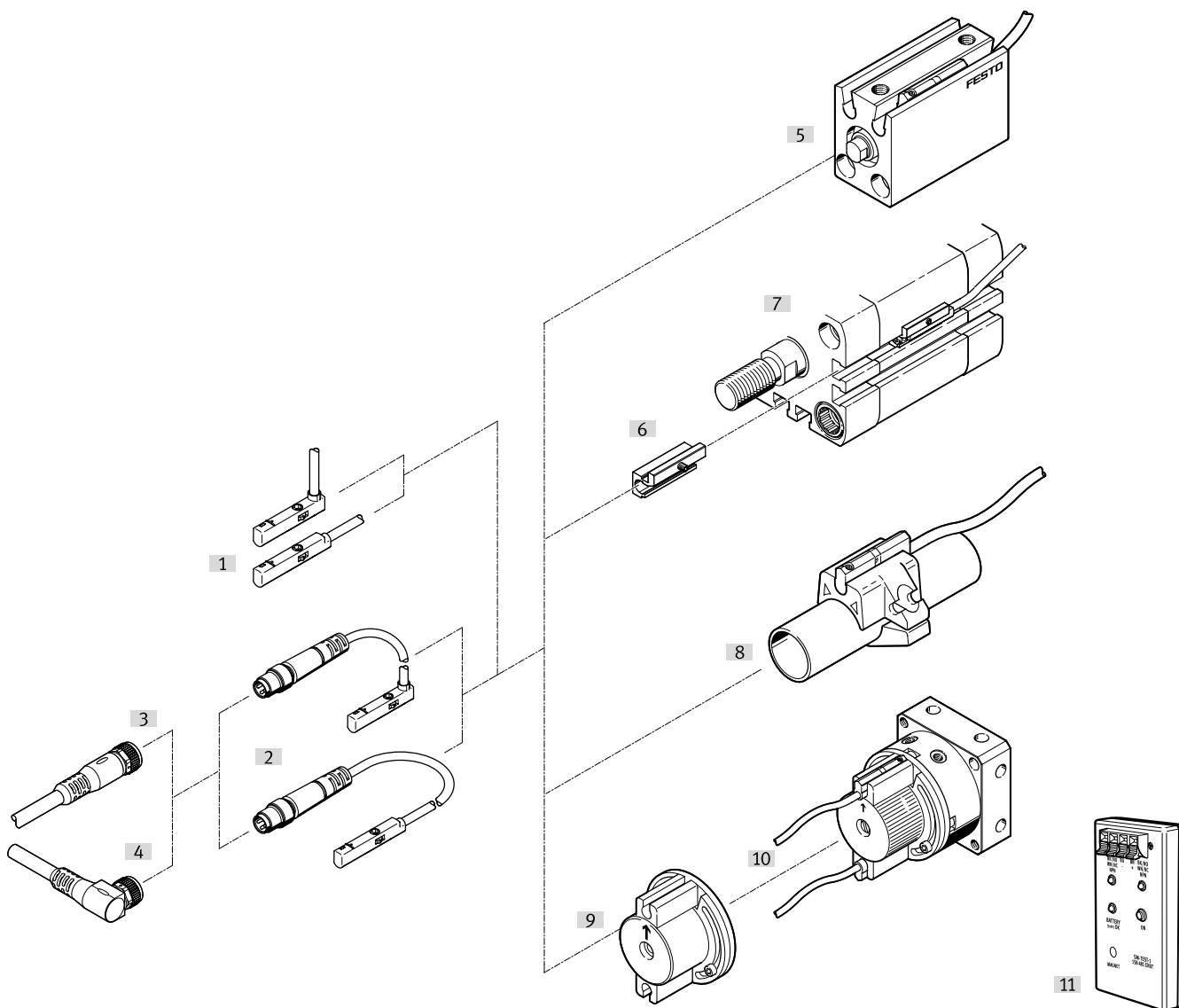
Suitable

Example: CDC



Not suitable

Peripherals overview



Mounting attachments and accessories		→ Page/ Internet
Proximity sensors		
[1]	SMT-10M-...-OE, with cable	7
[2]	SMT-10M-...-M..., with cable and plug	7
Connecting cables		
[3]	Connecting cable NEBU-M...G...	14
[4]	Connecting cable NEBU-M...W...	14
Mounting kits		
[6]	Mounting kit SMBN-10	13
[9]	Mounting kit WSM-...SME-10	14

Mounting attachments and accessories		→ Page/ Internet
Accessories		
[11]	Sensor tester SM-TEST-1	14
-	Positioning element SMM-10	13
-	Clip SMBK-10	14
-	Inscription label ASLR	14
-	Safety clip NEAU	14
Drives		
[5]	Drives with C-slot	-
[7]	Drives with T-slot	-
[8]	Round cylinder	-
[10]	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

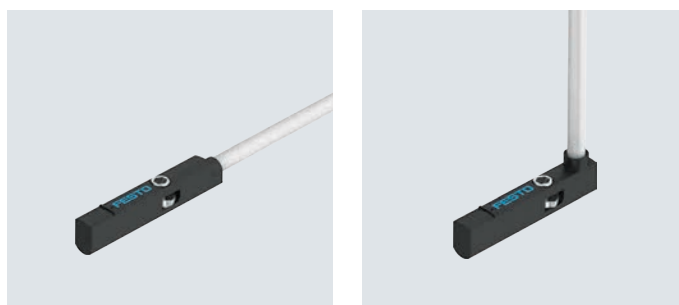
e.g. PNP, N/O contact, with cable



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				
Electrical connection 1, connection technology	M12x1, A-coded to EN 61076-2-101	M12x1, A-coded to EN 61076-2-101, M8x1, A-coded to EN 61076-2-104, open end	M8x1, A-coded to EN 61076-2-104	Open end
Design	For C-slot			
Conforms to standard	EN 60947-5-2			
Certification	RCM compliance mark			
KC mark ¹⁾	KCs explosion protection	KC EMC		
KC certification number EMC/ radio ²⁾	R-R-FTO-KC-2018-1076			
UKCA mark (see declaration of conformity) ²⁾	To UK instructions for EMC, to UK RoHS instructions			
CE mark (see declaration of conformity) ²⁾	To EU EMC Directive, to EU RoHS Directive			
Special characteristics	Oil resistant			
Note on materials	RoHS-compliant, free of halogen			
PWIS conformity	VDMA24364-B2-L			
Application information	Support / Actuator-sensor overview "The right sensor for the actuator"			
Suitable for the production of lithium-ion batteries	-			Metals with more than 1% copper, zinc or nickel by mass 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) Only with SMT-10M-PS-24V-E-0,3-L-M12

2) For information about the area of use, see the declaration of conformity at: www.festo.com/catalogue/sdbt → 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	PS	NS	ZS
Measured variable	Position		
Measuring principle	Magneto-resistive		
Ambient temperature [°C]	-40 ... +70		
Fused switching field strength			
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

Data sheet – Magneto-resistive

Switching output		PS		NS		ZS	
Type SMT-10M							
Switching output		PNP		NPN		Non-contacting, 2-wire	
Switching element function		N/O contact					
Switching output repetition accuracy in ± 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				2.4	
Residual current (in new condition at room temperature) [mA]		< 0.05		< 0.15		< 1.5	

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		PS/NS				ZS			
Type SMT-10M									
Electrical connection		OE	M8D	M8	M12	OE	M8D	M8	M12
Connection type		Cable	Cable with plug			Cable	Cable with plug		
Connection technology		Open end	M8x1, A-coded to EN 61076-2-104		M12x1, A-coded to EN 61076-2-101	Open end	M8x1, A-coded to EN 61076-2-104		M12x1, A-coded to EN 61076-2-101
Number of pins/wires		3				2	3		
Type of mounting		–	Screw-type lock			–	Screw-type lock		
Outlet direction of connection		In-line Lateral							
Cable test conditions		Energy 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 length [m]		0.2 ... 30							
Cable characteristic		Energy chain + robot							
Information on materials: Cable sheath		TPE-U(PUR)							



Data sheet – Magneto-resistive

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

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

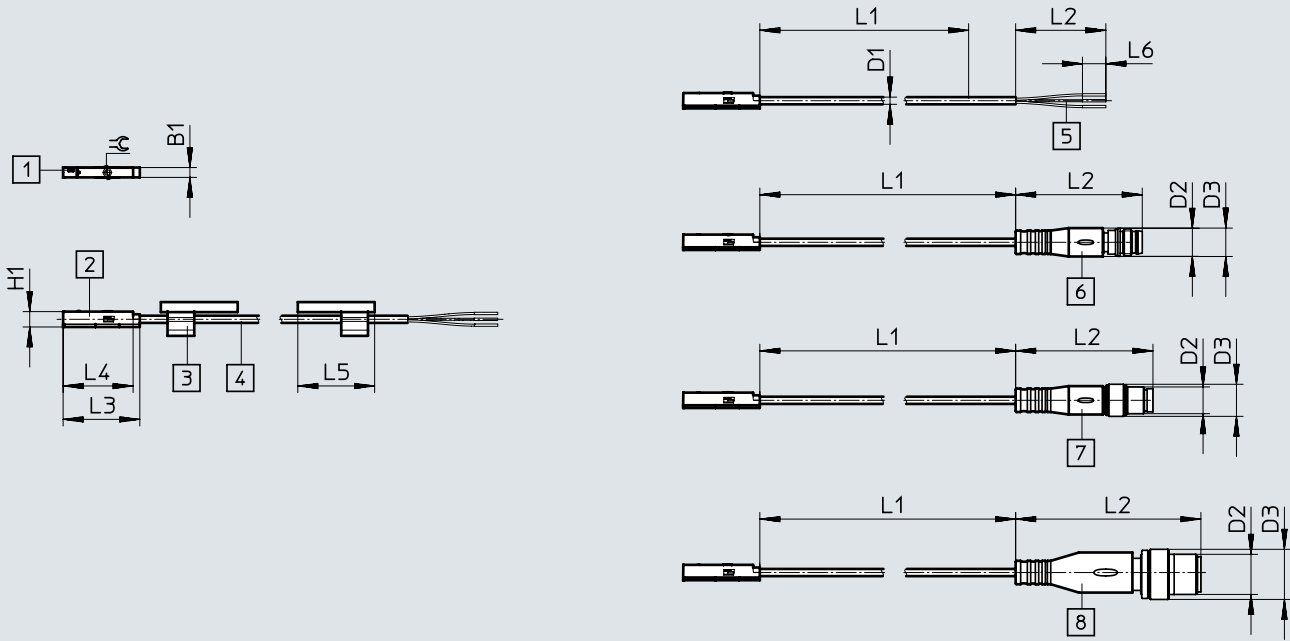
Pin allocation to EN 60947-5-2			
M12x1, 2-pin N/O contact 	Pin	Wire colour	Allocation
	1	Brown	+
	4	Black	Output
M12x1, 3-pin N/O contact 	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

Data sheet – Magneto-resistive

Dimensions

Download CAD data → 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

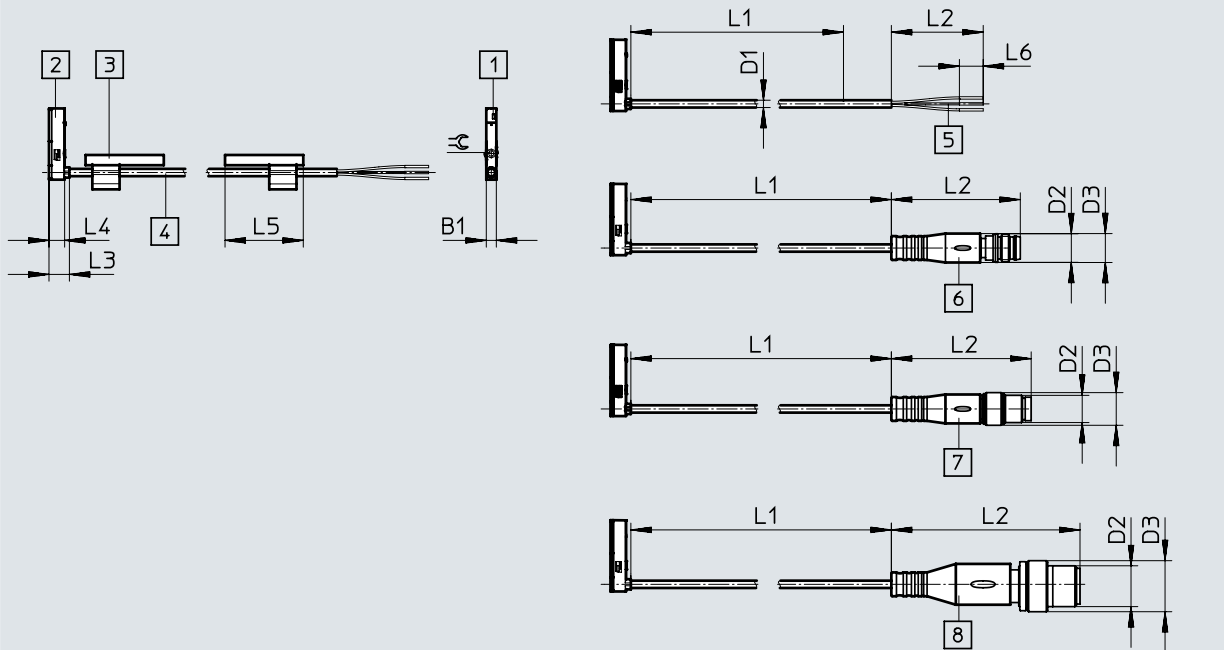
Type	B1	D1	D2	D3	H1	L2	L3	L4	L5	L6	L7	⌀
SMT-10M-...-OE	2.9	2.15	-	-	4.6	50	22.9	20.9	23	50	7	1.5
SMT-10M-...-M8D			M8x1	8.5		-						
SMT-10M-...-M8			M8x1	9.6		-						
SMT-10M-...-M12			M12x1	15		-						

Data sheet – Magneto-resistive

Dimensions

Download CAD data → www.festo.com

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

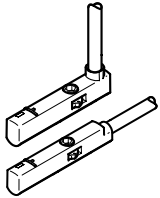


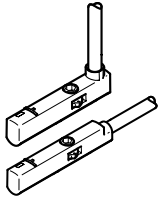
- [1] Yellow LED
- [2] SMT-10M
- [3] Inscription label holder
- [4] Connecting cable
- [5] Cable with open end
- [6] Plug M8x1, snap-on flange
- [7] Plug M8x1, rotatable thread
- [8] Plug M12x1
- L1 Cable length

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					-	

Data sheet – Magneto-resistive

★ Core product range

Ordering data	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, rotatable thread				
	N/O contact						
	PNP	3-wire, open end	–	2.5	16.8	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		3-pin	M8x1, A-coded to EN 61076-2-104	0.3	6.7	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
	NPN	3-wire, open end	–	2.5	16.8	★ 551377	SMT-10M-NS-24V-E-2,5-L-OE
		3-pin	M8x1, A-coded to EN 61076-2-104	0.3	6.7	★ 551379	SMT-10M-NS-24V-E-0,3-L-M8D
	Non-contacting, 2-wire	2-wire, open end	–	2.5	14.6	★ 551382	SMT-10M-ZS-24V-E-2,5-L-OE

Ordering data	Switching output	Electrical connection		Cable length [m]	Weight [g]	Part no.	Type
		Cable	Cable with plug, rotatable thread				
	N/O contact						
	PNP	3-wire, open end	–	2.5	16.8	551374	SMT-10M-PS-24V-E-2,5-Q-OE
		3-pin	M8x1	0.3	6.7	551376	SMT-10M-PS-24V-E-0,3-Q-M8D
	PNP	3-pin	M12x1, A-coded to EN 61076-2-101	0.3	14	8152201	SMT-10M-PS-24V-E-0,3-L-M12
	NPN	3-wire, open end	–	2.5	16.8	551378	SMT-10M-NS-24V-E-2,5-Q-OE
		3-pin	M8x1, A-coded to EN 61076-2-104	0.3	6.7	551380	SMT-10M-NS-24V-E-0,3-Q-M8D
Non-contacting, 2-wire	2-wire, open end	–	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.	551372			
Function	Proximity sensor for C-slot, non-contacting		SMT-10M	SMT-10M
			-	-
Switching output	3-wire PNP N/O contact		PS	
	3-wire NPN N/O contact		NS	
	2-wire N/O contact		ZS	
			-	-
Rated operating voltage [V DC]	24		24V	24V
			-	-
Cable characteristic	Energy chain + robot		E	E
			-	-
Cable length [m]	0.2 ... 30		...	
	(0.2 ... 5.0 m in 0.1 m increments, 5.0 ... 30 m in 0.5 m increments)			
			-	-
Cable outlet	In-line		L	
	Lateral		Q	
			-	-
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 SMBN-10

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

Material:

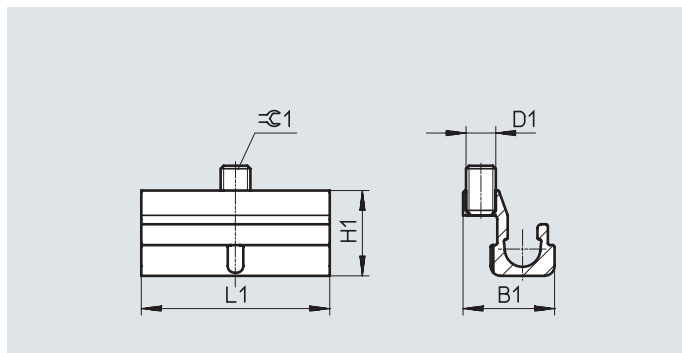
Rail: Anodised wrought aluminium
alloy

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

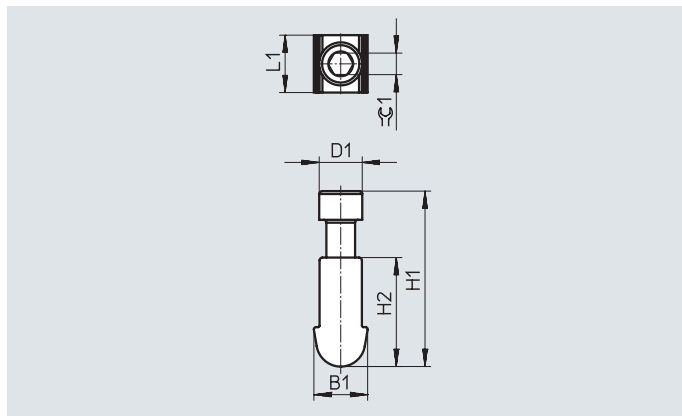
Materials:

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 ¹⁾	Part no.	Type	PU ²⁾
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

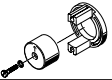

Accessories

Ordering data – Connecting cables


Data sheets → Internet: nebu

	Type	Number of wires	Cable length [m]	Part no.	Type
Socket M8x1, 3-pin					
	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

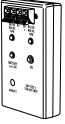
	For Ø	Description	Part no.	Type
	6	Mounting kit for mounting proximity sensors on semi-rotary drive DSM	173205	WSM-6-SME-10
	8		173206	WSM-8-SME-10
	10		173207	WSM-10-SME-10
	–	For fixing connecting cables in place	534255	SMBK-10

Ordering data – Safety clips for ATEX zone

	Size	Description	Part no.	Type	PJ 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 – Sensor testers


	Description	Part no.	Type
	<ul style="list-style-type: none"> Testing the functionality of proximity sensors using the integrated voltage supply Adjusting the proximity sensors on the cylinder 	158481	SM-TEST-1

Ordering data – Inscription labels

	Size	Part no.	Type	PJ 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	10.1 mm	1.7 ... 3 mm	8078305	NEAU-LH-1	100

1) Pack size

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