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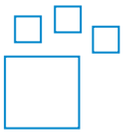
Proximity switch SMT-8M-A



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Characteristics

Ordering data - modular system



Configurable product
This product and all its product options can be ordered online via the configurator.

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Type code

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 N/O contact	

006	Rated operating voltage	
24V	24 V	

007	Cable characteristic	
E	Suitable for energy chains/robots	

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	

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Datasheet

General technical data

Switching output	3-wire N/C contact NPN	3-wire PNP N/C contact	3-wire PNP N/O contact	2-wire N/O contact
Connection technology	Open end		Open end, M8, rotatable thread, M12, rotatable thread	Open end
Sensor version	Inserted in the slot from above			
Design	For T-slot			
Mounting position	Any			
Based on standard	EN 60947-5-2			
Approval	RCM c UL us - Listed (Oil)			
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive			
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK RoHS instructions			
Instructions on use	https://www.festo.com/Drive-Sensor-Overview			
Note on materials	RoHS compliant Free of halogen			
LABS (PWIS) conformity	VDMA24364-B2-L			
Certificate issuing authority	UL E232949			
Special characteristics	Oil-resistant			
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)			
Cleanroom suitability, measured according to ISO 14644-14	Element installed statically, no meaningful evaluation possible according to ISO 14644-1			

Input signal/measuring element

Measured variable	Position
Measuring principle	Magneto-resistive

Switching output

Switching output	3-wire N/C contact NPN	3-wire PNP N/C contact	3-wire PNP N/O contact	2-wire N/O contact
Switching element function	N/C contact		N/O contact	
Repetition accuracy	0.2 mm			
Switch-on time	≤1.3 ms			≤1 ms
Switch-off time	≤7.3 ms			≤1 ms
Max. output current	100 mA			80 mA
Max. output current using mounting kits	100 mA			80 mA
Max. switching capacity DC	2.8 W			1.9 W
Max. switching capacity DC using mounting kits	2.8 W			1.5 W
Max. switching frequency	130 Hz			180 Hz
Voltage drop	<1.5 V			<6 V

Output, additional data

Short circuit current rating	Yes
Overload protection	Yes

Electronics

Switching output	3-wire N/C contact NPN	3-wire PNP N/C contact	3-wire PNP N/O contact	2-wire N/O contact
Operational voltage range DC	5 ... 30 V			7 ... 30 V
Rated operational voltage DC	24 V			
Reverse polarity protection	For all electrical connections			

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Datasheet

Electromechanics			
Electrical connection 1, connection type	Cable	Cable with plug	
Electrical connection 1, connector system	Open end	M12x1, A-coded to EN 61076-2-101, M8x1, A-coded, to EN 61076-2-104	
Electrical connection 1, number of connections/cores	2, 3	3	
Electrical connection 1, type of mounting	–	Screw-type lock, Rotatable	
Electrical connection 1, compatible type of mounting	–	Compatible with rotatable/non-rotatable screw-type lock	
Connection outlet orientation	In-line		
Test conditions cable	Test conditions on request Torsional strength: > 300,000 cycles, ±270°/0.1 m Flexural strength: >50000 cycles, bending radius 5 mm Energy chain: > 5 million cycles, bending radius 28 mm		
Wire ends	Wire ferrule	–	
Cable characteristic	Suitable for energy chains/robot applications		
Material cable sheath	TPE-U(PUR)		
Cable sheath colour	Grey		

Mechanical system			
Electrical connection 1, connector system	M12x1, A-coded to EN 61076-2-101	M8x1, A-coded, to EN 61076-2-104	Open end
Type of mounting	Screw-clamped, Insertable in the slot from above		
Max. tightening torque	0.6 Nm		
Material housing	Reinforced PA High-alloy stainless steel		
Material connector housing	TPE-U(PU)		–
Material electrical contact	Gold-plated copper alloy		–
Material insulating sheath	PP		
Material screw-type lock	Brass, nickel-plated		–
Material union nut	–		
Housing colour	Black		

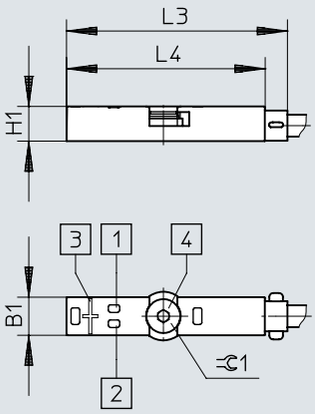
Display/operation	
Switching status indication	Yellow LED
Function reserve indication	Orange LED

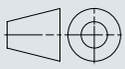
Immission/emission	
Ambient temperature	-40 ... 85°C
Ambient temperature with moving cable	-20 ... 85°C
Degree of protection	IP65, IP68, IP69K

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Dimensions

Dimensions – N/O contact / N/C contact PS, NS, PO, NO, ZS Download CAD data www.festo.com





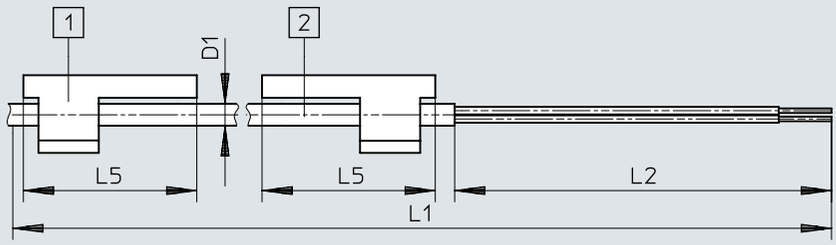
[1] Yellow light emitting diode
[2] Orange light emitting diode
[3] Centre of the position sensor element
[4] Clamping piece, tightening torque 0.6 Nm

SMT-8M-A	B1	H1	L3	L4	⌀1
SMT-8M-A-...-24V-E- (PS, NS, PO, NO, ZS)	5	4,6	29,3	26,3	1,5

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Dimensions

Dimensions – Cable, open end Download CAD data www.festo.com



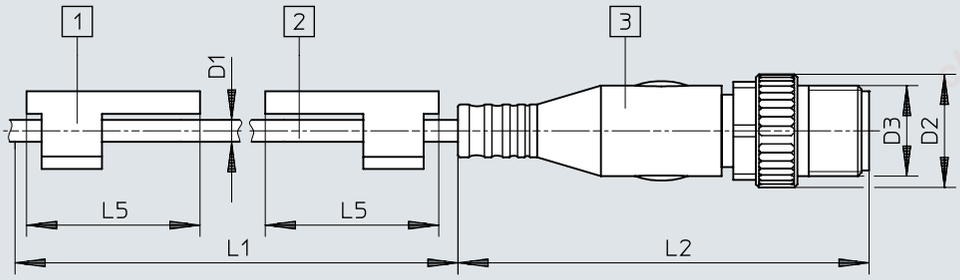
[1] Inscription label holder drawn turned by 90°
[2] Connecting cables

	D1 ⌀	L1	L2	L5	=⊂ 1
SMT-8M-A-...-OE	2,9	2500, 5000, 7500	50	23	1,5

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Dimensions

Dimensions – M12 – Cable with plug M12x1, rotatable thread Download CAD data www.festo.com



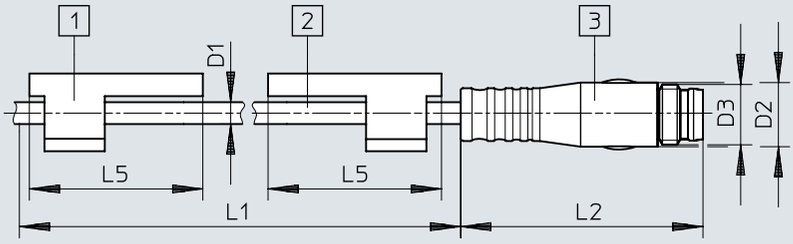
[1] Inscription label holder drawn turned by 90°
[2] Connecting cables
[3] Plug suitable for connecting cable NEBU-M12

SMT-8M-A	D1 ø	D2 ø	D3	L1	L2	L5	⊂ 1
SMT-8M-A-...-M12	2,9	15	M12x1	–	54,5	23	1,5

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Dimensions

Dimensions – M8 – cable with plug M8x1, snap collar Download CAD data www.festo.com



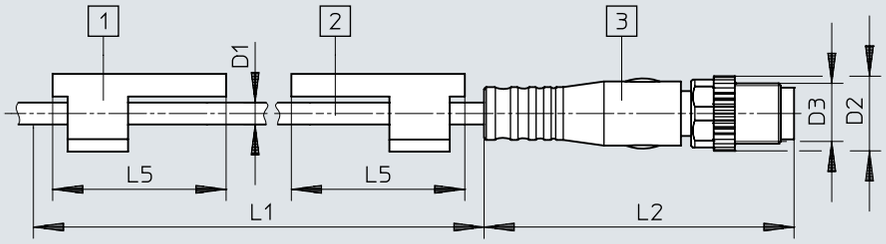
[1] Inscription label holder drawn turned by 90°
[2] Connecting cables
[3] Plug suitable for connecting cable NEBU-M8

SMT-8M-A	D1 ø	D2 ø	D3	L1	L2	L5	⊂ 1
SMT-8M-A-...-M8	2,9	8,5	M8x1	–	32,7	23	1,5

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Dimensions

Dimensions – M8D – Cable with plug M8x1, rotatable thread Download CAD data www.festo.com



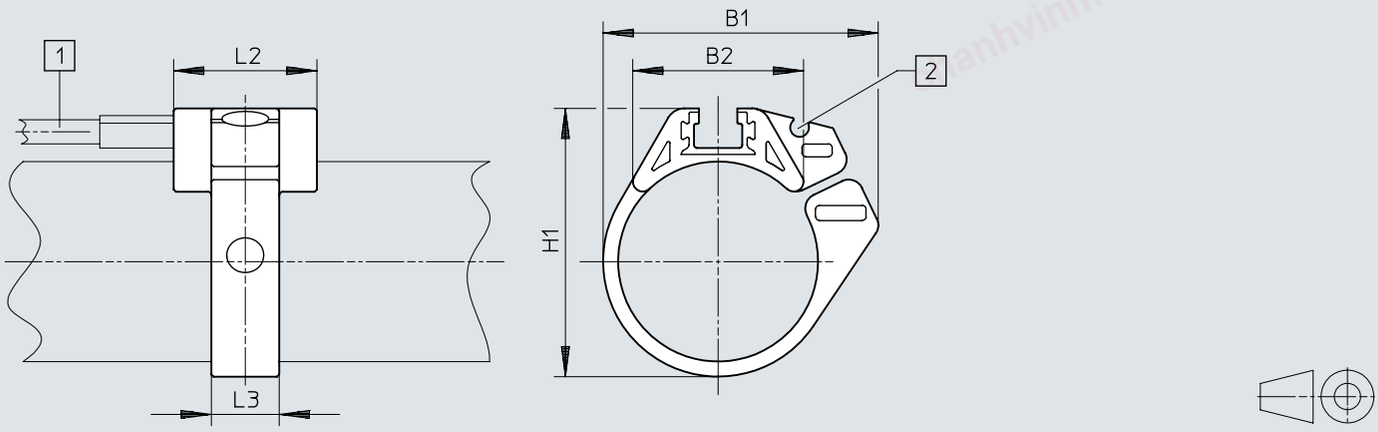
[1] Inscription label holder drawn turned by 90°
[2] Connecting cables
[3] Plug suitable for connecting cable NEBU-M8

SMT-8M-A	D1 ø	D2 ø	D3	L1	L2	L5	⌀ 1
SMT-8M-A-...-M8D	2,9	10	M8x1	300	41,1	23	1,5

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Dimensions

Dimensions – Mounting kit SMBR Download CAD data www.festo.com



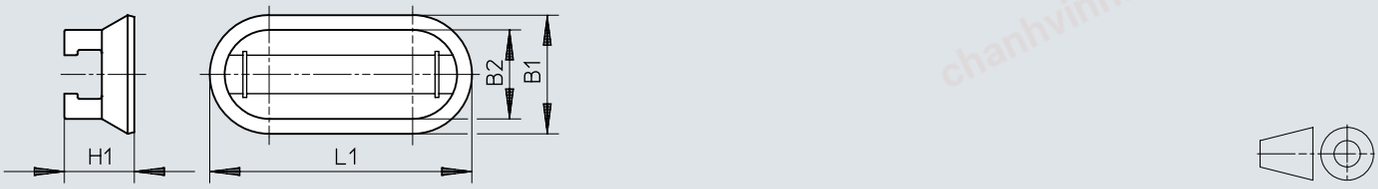
[1] Proximity switches SME-8- ..., SMT-8- ...
[2] Guide slot for switch cable

	B1	B2	H1	L2	L3
SMBR-8-8	18,9	12,3	17,5	19	7
SMBR-8-10	20,4	13,7	19,9	19	7
SMBR-8-12	22,7	14,3	21,9	19	7
SMBR-8-16	28,2	16,9	25,7	19	8
SMBR-8-20	34,5	20,8	30,4	19	9
SMBR-8-25	36,7	22,7	35,6	19	9
SMBR-8-32	41,7	24,6	42,7	19	9
SMBR-8-40	47,1	26,5	50,7	19	9
SMBR-8-50	56,4	28,6	61,5	19	9
SMBR-8-63	69,4	32	74,5	19	9

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Dimensions

Dimensions – Mounting kit CRSMB Download CAD data www.festo.com

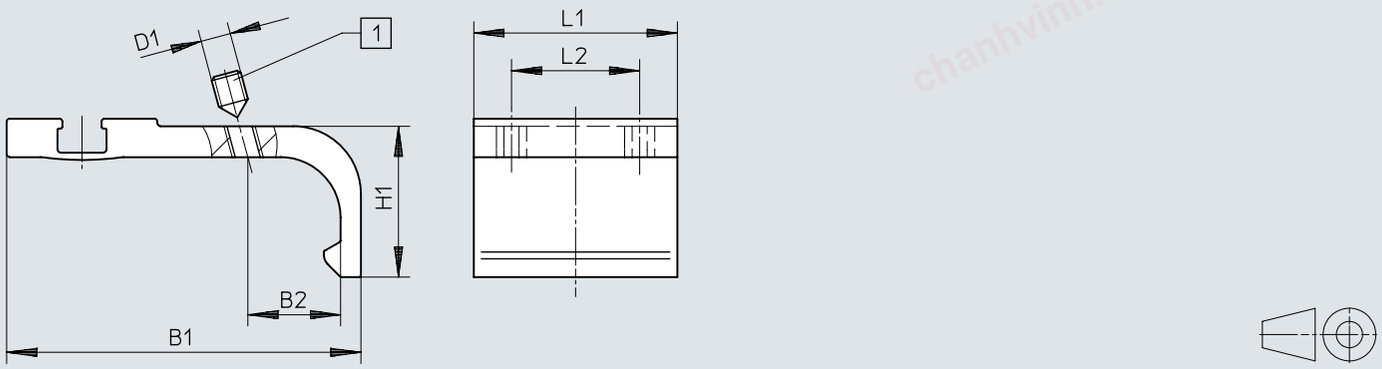


	B1	B2	H1	L1
CRSMB-8-32/100	15,8	11,8	9,3	35

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Dimensions

Dimensions – Mounting kit SMB-8-FENG Download CAD data www.festo.com



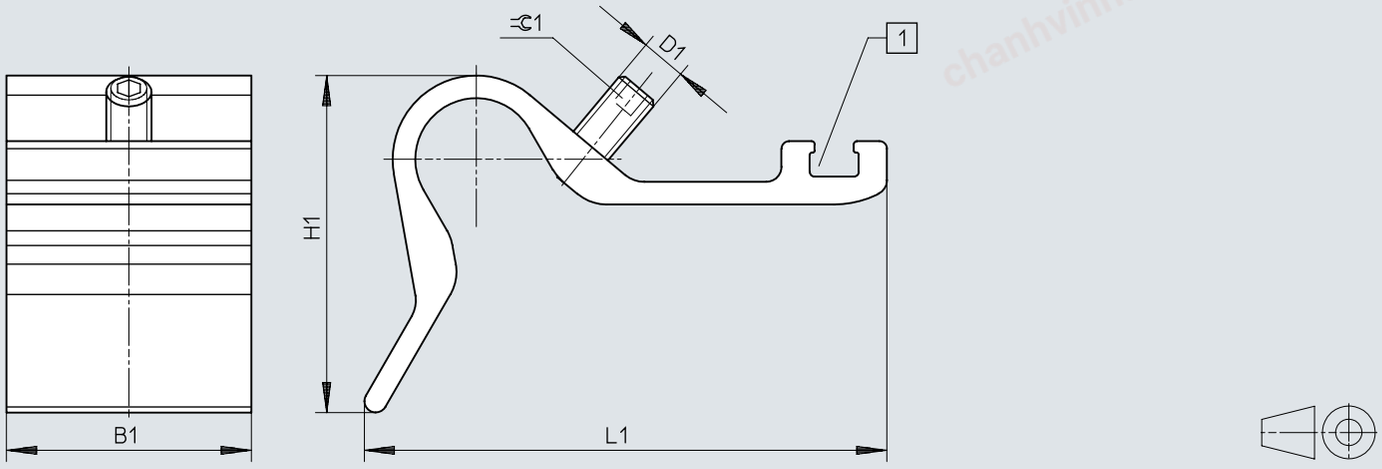
[1] Threaded pin

	B1	B2	D1	H1	L1	L2
SMB-8-FENG-32/40	35,1	8,7	M3	15,5	27	17
SMB-8-FENG-50/63	47	12,3	M4	20	27	17
SMB-8-FENG-80/100	64,3	15,7	M5	24,3	27	17

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Dimensions

Dimensions – Sensor holder DASP-M4-...-A Download CAD data www.festo.com



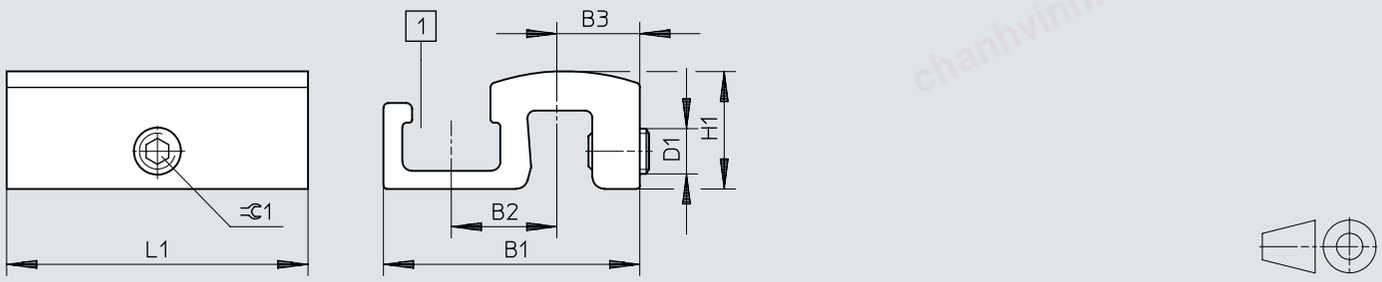
[1] Slot for proximity switch

	B1	D1	H1	L1	⊂ 1
DASP-M4-125-A	32,5	M5	28	45,4	2,5
DASP-M4-160-A	32,5	M6	44,7	69,4	3
DASP-M4-250-A	32,5	M6	56,3	88	3
DASP-M4-320-A	32,5	M6	56,3	88	3

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Dimensions

Dimensions – Mounting kit SMB-8-C Download CAD data www.festo.com

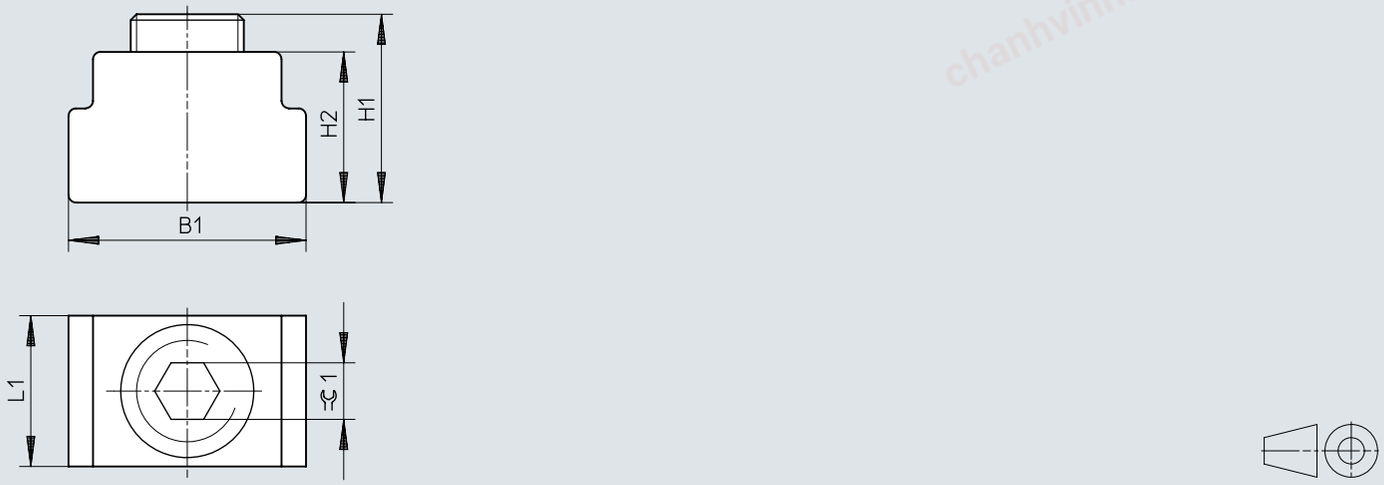


[1] Slot for proximity switch

	B1	B2	B3	D1	H1	L1	⌀1
SMB-8-C	17	7	5,5	M3	7,8	20	1,5

Dimensions

Dimensions – Positioning element SMM Download CAD data www.festo.com



	B1	H1	H2	L1	⊆1
SMM-8	6,3	5,0	4,0	4,0	1,5

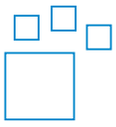
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Ordering data

Ordering data

	Switching output	Switching element function	Cable length	Product weight	Part no.	Type
	NPN	N/C contact	2.5 m	29.1 g	**8138000**	**SMT-8M-A-NO-24V-E-2,5-OE**
			7.5 m	85.1 g	**8138001**	**SMT-8M-A-NO-24V-E-7,5-OE**
		N/O contact	0.3 m	8.9 g	**574339**	**SMT-8M-A-NS-24V-E-0,3-M8D**
			2.5 m	29.1 g	**574338**	**SMT-8M-A-NS-24V-E-2,5-OE**
	PNP	N/C contact	7.5 m	85.1 g	**574340**	**SMT-8M-A-PO-24V-E-7,5-OE**
		N/O contact	0.3 m	8.9 g	**574334**	**SMT-8M-A-PS-24V-E-0,3-M8D**
				15.9 g	**574337**	**SMT-8M-A-PS-24V-E-0,3-M12**
			2.5 m	29.1 g	**574335**	**SMT-8M-A-PS-24V-E-2,5-OE**
			5 m	57.1 g	**574336**	**SMT-8M-A-PS-24V-E-5,0-OE**
	Contactless, 2-wire				**8165237**	**SMT-8M-A-ZS-24V-E-5,0-OE**

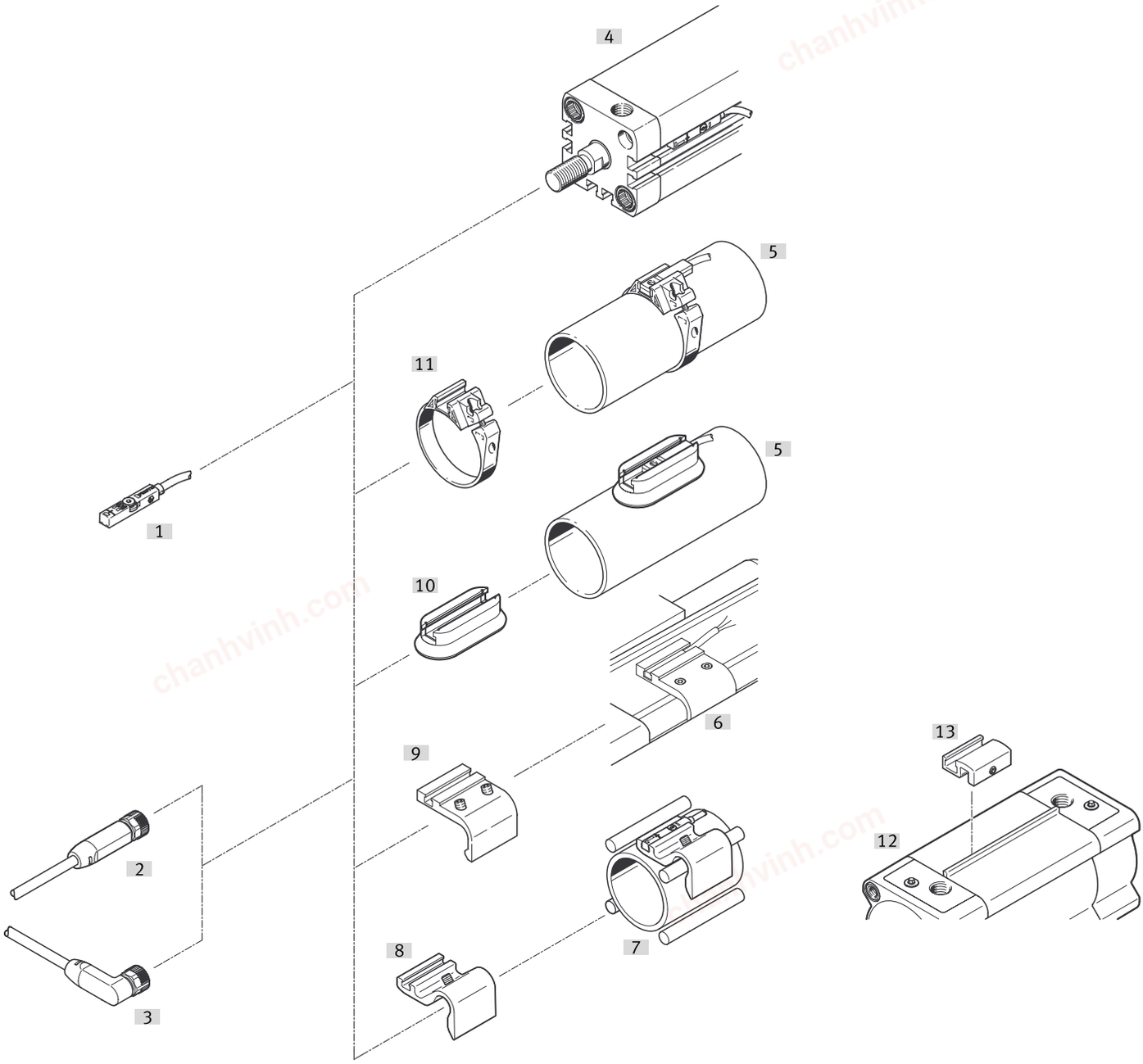
Modular product system – Ordering information

	Design	Switching output	Switching element function	Part no.	Type
	For T-slot	NPN, PNP, Contactless, 2-wire	N/C contact, N/O contact	**574333**	**SMT-8M-A**

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Peripherals

Peripherals overview



Accessories			→ Link
	Type/order code	Description	
[1]	SMT-8M-A proximity switch	With cable	🔗 smt-8m-a
[2]	Connecting cables NEBA-M…G…	–	20
[3]	Connecting cables NEBA-M…W…	–	20
[4]	Drives with T-slot e.g. ADN	-	🔗 –
[5]	Round cylinder e.g. DSNU	-	🔗 –
[5]	Round cylinder e.g. CRDSNU	-	🔗 –
[6]	Standards-based cylinder DSBC	-	🔗 dsbc
[7]	Drives with tie rod or mounting rod e.g. DSBG	-	🔗 –
[8]	Sensor holder DASP-M4-…	-	19
[9]	Mounting kit SMB-8-FENG	-	19
[10]	Mounting kit CRSMB	For round cylinders, corrosion protected	19
[11]	Mounting kit SMBR	For round cylinders	19
[12]	Standards-based cylinder DSBF	-	🔗 dsbf
[13]	Mounting kit SMB-8-C	-	19

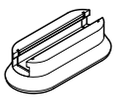
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Accessories

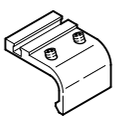
Mounting kit SMBR

	Size	Part no.	Type
	8	175091	SMBR-8-8
	10	175092	SMBR-8-10
	12	175093	SMBR-8-12
	16	175094	SMBR-8-16
	20	175095	SMBR-8-20
	25	175096	SMBR-8-25
	32	175097	SMBR-8-32
	40	175098	SMBR-8-40
	50	175099	SMBR-8-50
	63	175100	SMBR-8-63

Mounting kit CRSMB

	For piston diameter	Part no.	Type
	Ø32 - Ø100	525565	CRSMB-8-32/100

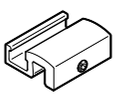
Mounting kit SMB-8-FENG

	Note on materials	Part no.	Type
	RoHS compliant	175706	SMB-8-FENG-50/63
		175707	SMB-8-FENG-80/100
		175705	SMB-8-FENG-32/40

Sensor holder DASP-M4-...-A

	For piston diameter	Part no.	Type
	Ø125	1451483	DASP-M4-125-A
	Ø160 - Ø200	1553813	DASP-M4-160-A
	Ø250	1456781	DASP-M4-250-A
	Ø320	3015256	DASP-M4-320-A

Mounting kit SMB-8-C

	Note on materials	Part no.	Type
	RoHS compliant	1806790	SMB-8-C

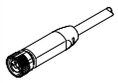
Positioning element SMM

	Note on materials	Part no.	Type
	RoHS compliant	547941	SMM-8

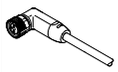
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Accessories

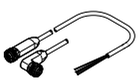
Connecting cable M8x1, straight socket

	Cable structure	Cable length	Product weight	Part no.	Type
	3 x 0.25 mm²	2.5 m	50 g	**8078223**	**NEBA-M8G3-U-2.5-N-LE3**
		5 m	96 g	**8078224**	**NEBA-M8G3-U-5-N-LE3**

Connecting cable M8x1, angled socket

	Cable structure	Cable length	Product weight	Part no.	Type
	3 x 0.25 mm²	2.5 m	50 g	**8078230**	**NEBA-M8W3-U-2.5-N-LE3**
		5 m	96 g	**8078231**	**NEBA-M8W3-U-5-N-LE3**

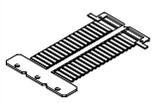
Connecting cable NEBU, socket M12x1, 5-pin

	Connection technology left, field device side	Electrical connection 1, cable outlet	Connection technology right, controller side	Cable length	Part no.	Type
	Socket M12x1 A-coded, EN 61076-2-101	Straight	Open end	2.5 m	**8078236**	**NEBA-M12G5-U-2.5-N-LE3**
				5 m	**8078237**	**NEBA-M12G5-U-5-N-LE3**
		Angled		2.5 m	**8078245**	**NEBA-M12W5-U-2.5-N-LE3**

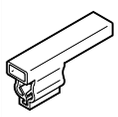
Mounting attachment SMBK-8

	Description	Part no.	Type
	For attaching connecting cables	**534254**	**SMBK-8**

Inscription labels

	Size	Part no.	Type
	4x23 mm	**541598**	**ASLR-L-423**

Inscription label holder

	Length	Width	Height	Size of pack	Part no.	Type
	23 mm	5.4 mm	10.3 mm	100	**8078306**	**NEAU-LH-2**