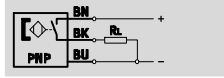


Proximity sensors SMT-8M-A, for T-slot

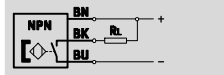
Technical data – Magneto-resistive

Function

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



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



- Magneto-resistive measuring principle
- Insertable in the slot from above, does not protrude over the cylinder profile
- Cable clip and inscription labels included in the scope of delivery
- Variant EX2 for use in potentially explosive areas in zones 2 and 22



General technical data	
Design	For T-slot
Assembly position	Any
Based on standard	EN 60947-5-2
Approval certificate	UL listed (OL) RCM trademark
CE marking (see declaration of conformity)	To EU EMC Directive
Note on materials	Cable halogen-free, oil-resistant RoHS-compliant, free of copper and PTFE

Input signal/measuring element	
Measured variable	Position
Measuring principle	Magneto-resistive
Ambient temperature	[°C] -40 ... +85

Switching output							
Type	PS	NS	PO	ZS	PNS	PSO	
Switching output	PNP	NPN	PNP	Non-contacting, 2-wire	PNP, NPN switchable	PNP	
Switching element function	N/O contact	N/O contact	N/C contact	N/O contact	N/O contact	N/C contact, N/O contact switchable	
Repetition accuracy	[mm]	±0.1					
Switch-on time	[ms]	≤ 1					
Switch-off time	[ms]	≤ 1					
Max. output current	[mA]	100 ¹⁾	100 ¹⁾	100 ¹⁾	80 ¹⁾	100	100
Max. output current in mounting kits	[mA]	100			80 ¹⁾	100	
Max. switching capacity DC	[W]	2.8	2.8	2.8	1.9	2.7	2.7
Max. switching capacity DC in mounting kits	[W]	2.8 ²⁾	2.8 ²⁾	2.8 ²⁾	1.5 ²⁾	2.7	2.7
Max. switching frequency	[Hz]	180					
Voltage drop ¹⁾	[V]	0 ... 1.5		0 ... 1.5	0 ... 6	0 ... 2.5	0 ... 2.5

1) Variant ...PS/NS/PO...-Ex2: max. output current in mounting kits 80 mA, T_a 70 °C
Variant ...ZS...-Ex2: max. output current in mounting kits 50 mA, T_a 70 °C
2) Variant ...PS/NS/PO...-Ex2: max. switching capacity 2.2 W
Variant ...ZS...-Ex2: max. switching capacity 1.2 W

Output, additional data	
Protection against short circuit	Pulsed
Overload protection	Yes

Proximity sensors SMT-8M-A, for T-slot



Technical data – Magneto-resistive

Electronic components				
Type		PS, NS, PO, ZS	PNS, PSO	Ex2
Operating voltage range	[V DC]	5 ... 30	7 ... 30	5 ... 30
Rated operating voltage	[V DC]	24		
Reverse polarity protection		For all electrical connections		

Electromechanical components					
Electrical connection		M8	M8D	M12	OE
Electrical connection		Cable with plug, 3-pin			Cable, 3-wire
		M8x1		M12x1	Cable, 2-wire
		–	Rotatable thread		
Connection direction		In-line			
Cable test conditions		Energy chain: 5 million cycles, bending radius 28 mm			
		Torsional strength: > 300,000 cycles, ±270°/0.1 m			
		Resistance to bending: according to Festo standard; test conditions on request			
Cable length	[m]	0.1 ... 30			
Cable characteristics		Energy chain + robot			
Cable sheath materials		TPE-U(PU)			
Cable sheath colour		Grey			

Mechanical components				
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		–

Proximity sensors SMT-8M-A, for T-slot

Technical data – Magneto-resistive

FESTO

Display/operation			
	PS, NS, PO, ZS	PNS	PSO
Switching status indication	Yellow LED	Yellow LED (for PNP)/white LED (for NPN)	Yellow LED (for N/O contact)/white LED (for N/C contact)
Operating reserve indication	Orange LED	–	

Immissions/emissions	
Ambient temperature with flexible cable installation [°C]	–20 ... +85
Degree of protection	IP65, IP68, IP69K

ATEX	
SMT-8M-A-...-	Ex2
ATEX category for gas	II 3G
Explosion ignition protection type for gas	Ex nA IIC T4 X Gc
ATEX category for dust	II 3D
Explosion ignition protection type for dust	Ex tc IIIC T120 °C X Dc IP65
Explosion-proof temperature	–40 °C ≤ Ta ≤ +70 °C
Explosion protection	Zone 2 (ATEX) Zone 22 (ATEX)
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

Pin allocation to EN 60947-5-2			
M8x1, 2-pin		M12x1, 2-pin	
N/O contact		N/O contact	
	Pin	Wire colour	Allocation
	1	Brown	+
	4	Blue	–
	1	Brown	+
	4	Blue	–

Pin allocation to EN 60947-5-2			
M8x1, 3-pin		M12x1, 3-pin	
N/O contact and N/C contact		N/O contact	
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	–
	4	Black	Output
	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

Proximity sensors SMT-8M-A, for T-slot

Technical data – Magneto-resistive

Dimensions Download CAD data → www.festo.com

SMT-8M-A-24V-E-...-... (PS, NS, PO, ZS)

Yellow LED for safe switching status.
Yellow and orange LED for unsafe switching status.

- 1 Yellow LED
- 2 Orange LED
- 3 Position of sensor element centre
- 4 Tightening torque of clamping component 0.6 Nm

SMT-8M-A-24V-E-...-... (PNS, PSO)

Switching status indication for PNS:
Yellow LED for PS switching output.
White LED for NS switching output.

Switching status indication for PSO:
Yellow LED for PS switching output.
White LED for PO switching output.

- 1 Yellow LED
- 2 White LED
- 3 Position of sensor element centre
- 4 Slot for screwdriver

Type	B1	H1	L3	L4	±0.1
SMT-8M-A-...-24V-E- (PS, NS, PO, ZS)	5	4.6	29.3	26.3	1.5
SMT-8M-A-...-24V-E- (PNS, PSO)			34.8	31.8	

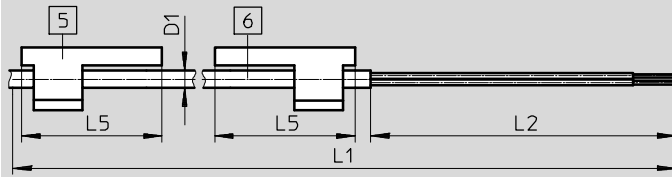
Proximity sensors SMT-8M-A, for T-slot

Technical data – Magneto-resistive

Dimensions

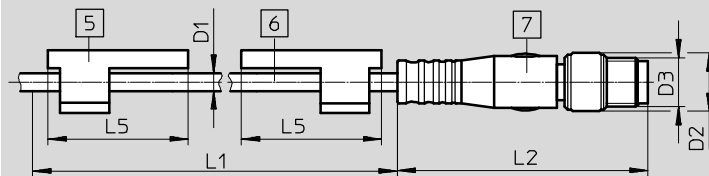
Download CAD data → www.festo.com

SMT-8M-A-...-OE/OE-Ex – Cable



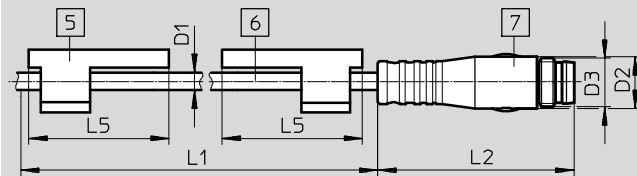
- 5 Inscription label holder drawn turned by 90°
- 6 Connecting cable
- L1 Cable length

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



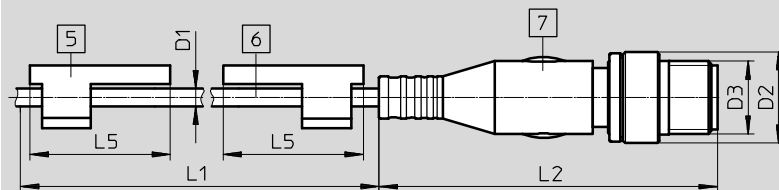
- 5 Inscription label holder drawn turned by 90°
- 6 Connecting cable
- 7 Plug suitable for connecting cable NEBU-M8
- L1 Cable length

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

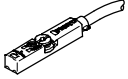


- 5 Inscription label holder drawn turned by 90°
- 6 Connecting cable
- 7 Plug suitable for connecting cable NEBU-M12
- L1 Cable length

Type	D1	D2 Ø	D3	L2	L5	± 1
SMT-8M-A-...-OE	2.9	-	-	50	23	1.5
SMT-8M-A-...-OE-Ex		-	-	50		
SMT-8M-A-...-M8D		9.6	M8x1	41.1		
SMT-8M-A-...-M8		8.5	M8x1	32.7		
SMT-8M-A-...-M12		15	M12x1	54.5		

Proximity sensors SMT-8M-A, for T-slot

Technical data – Magneto-resistive

Ordering data									
	Switching output	Electrical connection			Cable length	Weight	Part No.	Type	
		Cable	Cable with plug, rotatable thread						
				M8x1	M12x1	[m]	[g]		
	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
	PNP	–	3-pin	–	0.3	8.9	574342	SMT-8M-A-PS-24V-E-0,3-M8D-Ex2	
	Non-contacting	2-wire	–	–	5	57.1	574341	SMT-8M-A-ZS-24V-E-5,0-OE-Ex2	
	Switchable								
	PNP/NPN	–	3-pin	–	0.3	9	574343	SMT-8M-A-PNS-24V-E-0,3-M8D	
	PNP PS/PO	–	3-pin	–	0.3	9	574344	SMT-8M-A-PSO-24V-E-0,3-M8D	
	N/C contact								
	PNP	3-wire	–	–	7.5	85.1	574340	SMT-8M-A-PO-24V-E-7,5-OE	

Proximity sensors SMT-8M-A, for T-slot

Ordering data – Modular products

Ordering table				
Size	8	Condi- tions	Code	Entry code
M Module No.	574333			
Function	Proximity sensor 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 N/O contact		ZS	
	PNP/NPN switchable		PNS	
	PNP N/C contact, N/O contact switchable		PSO	
			-	-
Rated operating voltage [V DC]	24		24 V	24V
			-	-
Cable characteristics	Energy chain + robot		E	E
			-	-
Cable length [m]	0.1 ... 30 (0.1 ... 5.0 in 0.1 increments, 5.0 ... 30 in 0.5 increments)		...	
			-	-
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	
O EU certification	II 3GD in accordance with EU Directive 94/9/EC	1	-Ex2	

1 Ex2 Not with switching output PNS, PSO, minimum cable length 0.2 m

Transfer order code

574333 SMT-8M - A - [] - 24 V - E - [] - N - [] - []