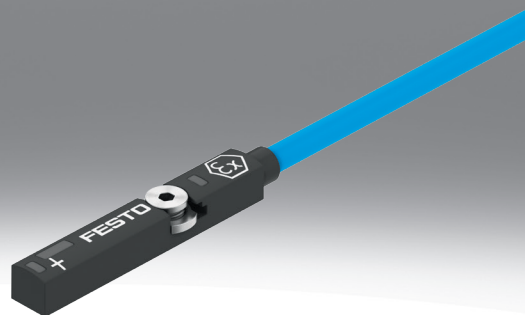


Proximity switch SDBT-MS

FESTO



Type code

001	Series	
SDBT	Sensor, position, binary, T series	

002	Sensor version	
M	Can be inserted in the slot	

003	Sensor principle	
S	Contactless (solid state)	

004	Additional features	
	None	

005	Nominal operating voltage	
20N	8.2 V DC (Namur)	

006	Display	
L	LED	

007	Digital switching output	
ZN	2-wire, Namur	

008	Cable characteristic	
E	Suitable for energy chains/robots	

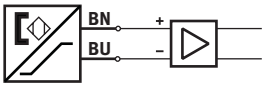
009	Cable length [m]	
2.5	2.5 m	
5	5 m	
10	10 m	
20	20 m	

010	Cable identification	
	With label holder	

011	Electrical connection	
LE	Open end	

Datasheet

General technical data



- ATEX 1GD

Design	For T-slot
Based on standard	EN 60947-5-6
Approval	RCM trademark, c UL us listed (OL), c UL us - listed (HazLoc)
Special characteristics	Oil resistant
Instructions on use	https://www.festo.com/Drive-Sensor-Overview
Max. input voltage U_i	28 V
Max. input current I_i	0.25 A
Max. input power P_i	T4: 350 mW, T6: 72 mW
Effective internal inductivity L_i	30 μ H
Effective internal capacitance C_i	79 nF
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK EX instructions, To UK RoHS instructions
Explosion protection certification outside the EU	EPL Da (BR), EPL Da (CA), EPL Da (CN), EPL Da (GB), EPL Da (IECEx), EPL Da (KR), EPL Da (TW), EPL Da (US), EPL Ga (BR), EPL Ga (CA), EPL Ga (CN), EPL Ga (GB), EPL Ga (IEC-EX), EPL Ga (KR), EPL Ga (TW), EPL Ga (US)
Certificate issuing authority	21-AV4B0-0130X, 21-AV4B0-0131X, CSAE 22UKEX1322X, DNV 17.0027 X, IECEx PTZ 18.0008X, ML091200700NZ0, PTZ 16 ATEX 0010 X, UL E232949, UL E539825
CE mark (see declaration of conformity)	To EU EMC Directive, To EU Explosion Protection Directive (ATEX), In accordance with EU RoHS Directive

Input signal/measuring element

Measured variable	Position
Measuring principle	Magneto-resistive
Ambient temperature	-40 ... 85°C
Ambient temperature with moving cable	-20 ... 85°C

ATEX

ATEX category gas	II 1G
Explosion ignition protection type for gas	Class I, Division 1, Group A, B, C and D, T4, Class I, Zone 0, AEx ia IIC T4...T6 Ga, Ex ia IIC T4 ...T6 Ga X
ATEX category dust	II 1D
Explosion ignition protection type for dust	Class II, Division 1, Group E, F and G, T4, Ex ia IIIC T135°C Da, Zone 20, AEx ia IIIC T135°C Da
Explosion ambient temperature	T4, Zone 20, IIIC, with fixed cable installation: -40°C ≤ Ta ≤ +85°C, T4, Zone 20, IIIC: -20°C ≤ Ta ≤ +85°C, T6, with fixed cable installation: -40°C ≤ Ta ≤ +45°C, T6: -20°C ≤ Ta ≤ +45°C
Explosion protection certification outside the EU	EPL Da (BR), EPL Da (CA), EPL Da (CN), EPL Da (GB), EPL Da (IECEx), EPL Da (KR), EPL Da (TW), EPL Da (US), EPL Ga (BR), EPL Ga (CA), EPL Ga (CN), EPL Ga (GB), EPL Ga (IEC-EX), EPL Ga (KR), EPL Ga (TW), EPL Ga (US)

Materials

Material housing	PA-reinforced, High-alloy stainless steel
Housing colour	Black
Material cable sheath	TPE-U(PUR)
Cable sheath colour	Blue
Material insulating sheath	PP
Note on materials	RoHS-compliant, Free of halogen
LABS (PWIS) conformity	VDMA24364-B2-L

Switching output

Switching element function	NAMUR
Repetition accuracy	0.2 mm
Switch-on time	<1 ms
Switch-off time	<1 ms
Max. switching frequency	330 Hz
Off-state current	0.4 ... 1 mA

Datasheet

Electronics

Rated operational voltage DC	8.2 V
Operational voltage range DC	7.5 ... 18 V
Residual ripple	10%
Reverse polarity protection	For all electrical connections

Electromechanics

Electrical connection 1, connection type	Cable
Electrical connection 1, connector system	Open end
Electrical connection 1, number of connections/cores	2
Connection outlet orientation	In-line
Cable characteristic	Suitable for energy chains, Suitable for robot applications
Test conditions cable	Bending strength: to Festo standard, Test conditions on request

Mechanics

Type of mounting	Screw-clamped, Insertable in the slot from above
Mounting position	optional
Tightening torque	0.1 ... 0.6 Nm
Max. tightening torque	0.6 Nm
Wire ends	Wire ferrule

Display/operation

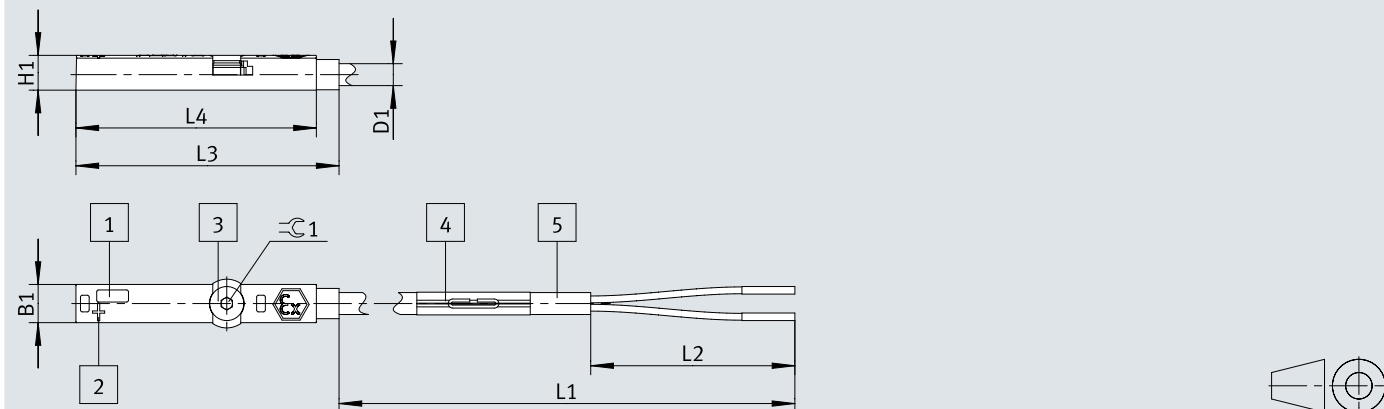
Switching status indication	Yellow LED
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Immission/emission

Degree of protection	IP65, IP68
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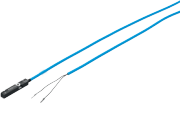
Dimensions

Dimensions – Proximity switch open end

Download CAD data www.festo.com

	B1	D1 ∅	H1	L1	L2 ±5	L3	L4	±1
SDBT-MS-20NL-ZN-E-2.5-LE-EX6	5,1	2,9	4,6	2500	50	34,8	31,8	1,5
SDBT-MS-20NL-ZN-E-5-LE-EX6				5000				
SDBT-MS-20NL-ZN-E-10-LE-EX6				10000				
SDBT-MS-20NL-ZN-E-20-LE-EX6				20000				

Ordering data

Proximity switch					
	Switching output	Cable length	Product weight	Part no.	Type
	NAMUR	2.5 m	28 g	8185110	SDBT-MS-20NL-ZN-E-2.5-LE-EX6
		5 m	53 g	579071	SDBT-MS-20NL-ZN-E-5-LE-EX6
		10 m	104 g	579072	SDBT-MS-20NL-ZN-E-10-LE-EX6
		20 m	206 g	8185111	SDBT-MS-20NL-ZN-E-20-LE-EX6