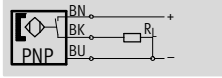


# Proximity sensors SMT0-1, block design, magneto-resistive

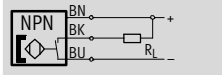
Technical data

Function

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



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



- Magneto-resistive measuring principle



Design	
Constructional design	Block design
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED

1) Only applicable to drives secured against rotation.

Technical data – N/O contact		
Switch output	PNP NPN	
Electrical connection	Cable, 3-wire	Plug M8x1, 3-pin
Cable length	[m] 2.5	–
Operating voltage range	[V DC] 10 ... 30	
Max. switching current	[mA] 200	
Max. switching capacity	[W] 6	
Voltage drop	[V] 3	
Residual current	[mA] ≤0.01	
Switch-on time	[ms] ≤1	
Switch-off time	[ms] ≤1	
Protection against short circuit	Yes	
Protection against polarity reversal	For all electrical connections	
Protection class	IP67	

Operating and environmental conditions			
Electrical connection	Cable		Plug
Cable installation	Fixed	Flexible	
Ambient temperature	[°C] –25 ... +70	–5 ... +70	–25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	4		2
CE symbol (declaration of conformity)	In accordance with EU EMC directive <sup>2)</sup>		
Certification	RCM trademark		

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.  
Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Materials	
Housing	Die-cast zinc, polyester
Cable sheath	Polyvinyl chloride
Note on materials	Free of copper and PTFE

# Proximity sensors SMTO-1, block design, magneto-resistive

Technical data

Product weights [g]		
Electrical connection	Cable	Plug
N/O contact		
PNP	85	20
NPN	85	20

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

Cable type

1 Connecting cable  
2 Yellow LED

Plug type M8x1

2 Yellow LED  
3 Plug suitable for plug socket with cable NEBU-M8...  
4 Installation space for angled socket

**Ordering data**

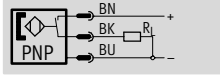
	Switch output	Electrical connection		Cable length [m]	Part No.	Type
		Cable	Plug M8x1			
	N/O contact					
	PNP	3-wire	–	2.5	151683	SMTO-1-PS-K-LED-24-C
		–	3-pin	–	151685	SMTO-1-PS-S-LED-24-C
	NPN	3-wire	–	2.5	151684	SMTO-1-NS-K-LED-24-C
–		3-pin	–	151686	SMTO-1-NS-S-LED-24-C	

# Proximity sensors SMTSO-1, block design, magneto-resistive

Technical data

Function

PNP, N/O contact, with plug



- Welding field immune
- Magneto-resistive measuring principle



Design	
Constructional design	Block design
Type of mounting	Via accessories
Connection direction	In-line
Reproducibility of switching point <sup>1)</sup>	[mm] ±0.1
Switching status display	Yellow LED
Ready status display	Green LED

1) Only applicable to drives secured against rotation

Technical data – PNP, N/O contact	
Electrical connection	Plug M12x1, 3-pin
Operating voltage range	[V DC] 10 ... 30
Max. switching current	[mA] 200
Max. switching capacity	[W] 6
Voltage drop	[V] 3
Residual current	[mA] 0.01
Switch-on time	[ms] ≤35
Switch-off time	[ms] ≤20
Resistance to interference from magnetic fields	Alternating magnetic field 50 ... 60 Hz
Protection against short circuit	Yes
Protection against polarity reversal	For all electrical connections
Protection class	IP65/IP67

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +70
Corrosion resistance class CRC <sup>1)</sup>	1
CE symbol (declaration of conformity)	In accordance with EU EMC directive <sup>2)</sup>
Certification	RCM trademark

- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
- 2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Materials	
Housing	Die-cast zinc

Product weights [g]	
N/O contact	
PNP	70

# Proximity sensors SMTSO-1, block design, magneto-resistive

Technical data

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

Plug type M12x1

The drawing shows two views of the sensor. The front view (left) shows a square block with a diameter of 25 mm and a mounting flange with a diameter of 22 mm. The side view (right) shows the sensor's profile with a total length of approximately 85 mm. Key dimensions include a 34 mm distance from the front face to the LED window, a 22 mm distance to the M4 mounting hole, and a 7.5 mm distance to the magneto-resistive sensor element. Callouts 1, 2, 3, and 4 indicate the Green LED, Yellow LED, mounting kit, and installation space for the socket, respectively.

- 1 Green LED
- 2 Yellow LED
- 3 Mounting kit
- 4 Installation space for socket

Ordering data				
	Switch output	Electrical connection	Part No.	Type
	N/O contact			
	Welding field immune			
	PNP	Plug M12x1, 3-pin	<b>30441</b>	<b>SMTSO-1-PS-S-LED-24</b>