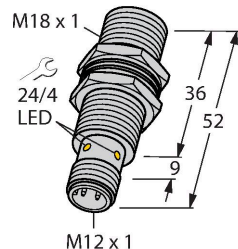


BI10U-MT18-VP6X-H1141

Inductive Sensor



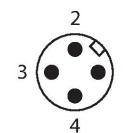
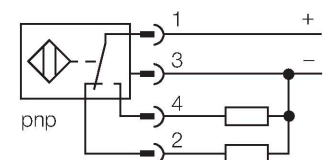
Technical data

Type	BI10U-MT18-VP6X-H1141
ID	1644855
General data	
Rated switching distance	10 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 200 mA
No-load current	≤ 25 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Switching frequency	1.5 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	52 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP, PTFE-coated

Features

- Threaded barrel, M18 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three technical drawings and two 3D models illustrating the correct and incorrect installation of a sensor with a half-shell-clamp.

Top Left Drawing: A side view of a half-shell-clamp with a central hole. A dimension line labeled 'T' indicates the thickness of the clamp.

Middle Left Drawing: A perspective view showing the half-shell-clamp and a sensor. A dimension line labeled 'G' indicates the distance between the sensor and the clamp.

Bottom Left Drawing: A perspective view showing the half-shell-clamp and a sensor. Dimension lines indicate the following: 'D' (distance from the sensor to the clamp), 'S' (distance between the sensor and the clamp), and 'W' (width of the clamp).

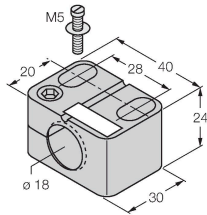
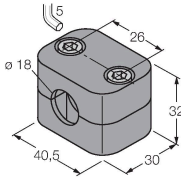
Top Right 3D Model: A 3D perspective view of the sensor and half-shell-clamp assembly. A green checkmark is placed on the sensor, indicating correct installation.

Bottom Right 3D Model: A 3D perspective view of the sensor and half-shell-clamp assembly. A red 'X' is placed on the sensor, indicating incorrect installation.

Distance D	36 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 18 mm

When installing the sensor in combination with the illustrated half-shell-clamp, observe its correct alignment towards the clamp. For this, see the uprox-lettering on the front cap of the sensor and the adjacent installation drawing.

Accessories

BST-18B	6947214	BSS-18	6901320
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6		Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	
			

Accessories

Dimension drawing	Type	ID	
RKC4.4T-2/TXL1001		6628825	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C
