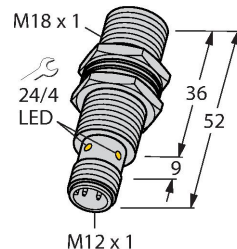


BI10U-MT18-AN6X-H1141

Inductive Sensor



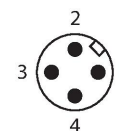
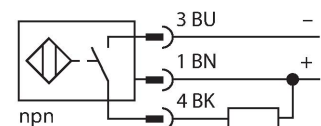
Technical data

Type	BI10U-MT18-AN6X-H1141
ID	1644858
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	3-wire, NO contact, NPN
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 3-wire, 10...30 VDC
- NO contact, NPN 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

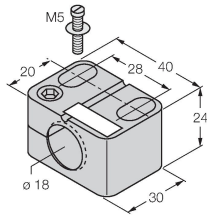
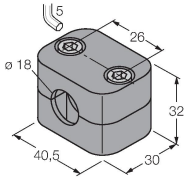
The image contains several technical drawings and 3D models illustrating the correct and incorrect installation of a sensor with a half-shell-clamp.

- Top Left:** A side view of the sensor housing with a dimension line labeled 'T' indicating the thickness of the housing.
- Middle Left:** Two views of the half-shell-clamp. One view shows the clamp with a dimension line labeled 'G' indicating the distance between the mounting holes.
- Bottom Left:** A top view of the sensor housing with two mounting holes. Dimension lines indicate 'D' (distance between holes), 'S' (distance from the edge to the hole), and 'W' (width of the housing).
- Top Right:** A 3D model of the sensor assembly with a green checkmark, indicating correct installation.
- Bottom Right:** A 3D model of the sensor assembly with a red 'X' over 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	
RKC4T-2/TXL1001		6630249	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C
