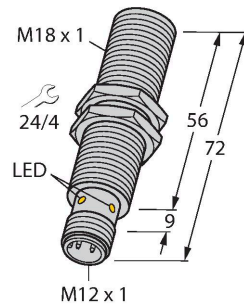


BI10U-M18E-AP6X-H1141

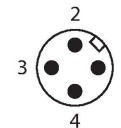
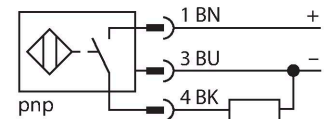
Inductive Sensor



Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Technical data

Type	BI10U-M18E-AP6X-H1141
ID	1644877
General data	
Rated switching distance	10 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 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, PNP
DC field stability	300 mT
AC field stability	300 mT _{SS}
Switching frequency	1.5 kHz

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

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	72 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, LCP
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 x 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 top diagram shows a side view of a sensor with a yellow dot in the center of a circular opening. A dimension line labeled 'T' indicates the distance from the center of the opening to the edge of the sensor.

The middle diagram shows a top view of a sensor with a yellow dot in the center of a circular opening. A dimension line labeled 'G' indicates the distance from the center of the opening to the edge of the sensor.

The bottom diagram shows a front view of a sensor with two yellow dots in the center of a circular opening. A dimension line labeled 'D' indicates the distance between the two dots. A dimension line labeled 'S' indicates the distance from the center of the opening to the edge of the sensor. A dimension line labeled 'W' indicates the width of the sensor.

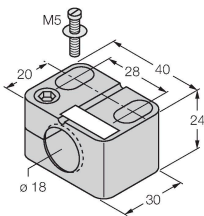
The top diagram shows a sensor with a green checkmark indicating correct alignment. The bottom diagram shows a sensor with a red X indicating incorrect alignment.

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.

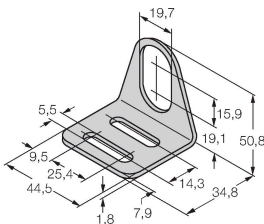
Accessories

BST-18B 6947214



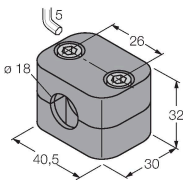
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW18 6945004



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

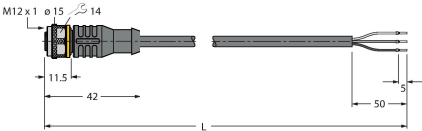
BSS-18 6901320



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

Wiring accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	



Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval