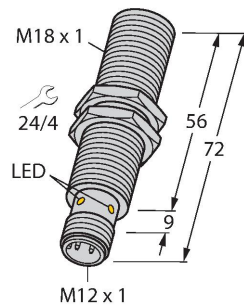


BI5U-MT18E-AP6X-H1141

Inductive Sensor



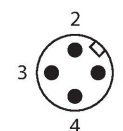
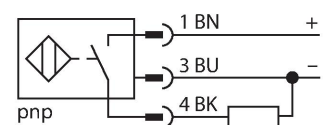
Technical data

Type	BI5U-MT18E-AP6X-H1141
ID	1635248
General data	
Rated switching distance	5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \%$ U_{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	2.5 kHz

Features

- Threaded barrel, M18 x 1
- Long version
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO 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. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	72 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, PBT, PTFE-coated
Max. tightening torque of housing nut	15 Nm
Electrical connection	Connector, M12 x 1
Environmental conditions	
Ambient temperature	-30...+85 °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

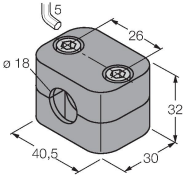
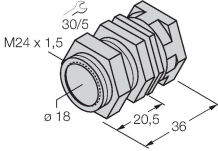
Mounting instructions

Mounting instructions/Description

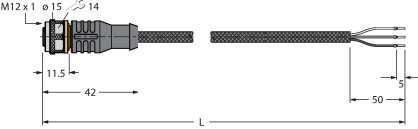
The image contains three technical diagrams illustrating the mounting of a sensor. The top diagram shows a side view of the sensor with dimension T. The middle diagram shows two sensors mounted on a plate with dimension G. The bottom diagram shows two sensors mounted on a plate with dimensions D, S, and W.

Distance D	2 x B
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

Accessories

BST-18B	6947214	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	QMT-18	6945104	Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.
					
BSS-18	6901320	Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	QM-18	6945102	Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.
					

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