

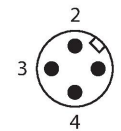
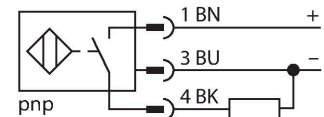
BI4U-MT12-AP6X-H1141/S1589

Inductive Sensor – With WeldGuard™ coating

Features

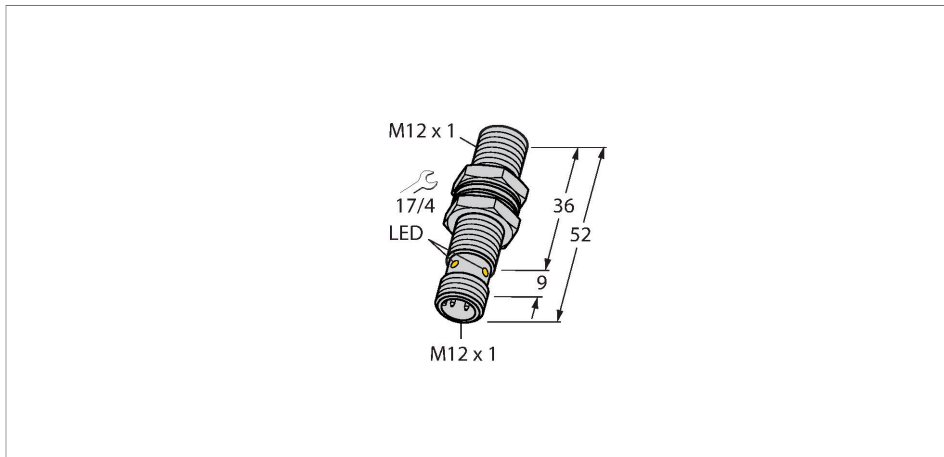
- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Front cap with special coating, very resistant to thermal and mechanical load
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, 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 3-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields. Turck WeldGuard sensors for use in welding systems are equipped with a thin coating made of thermosetting plastic. This high-tech coating is resistant to abrasion and withstands mechanical stress.



Technical data

Type	BI4U-MT12-AP6X-H1141/S1589
ID	1634997
Special version	S1589 corresponds to: With weldguard coating
General data	
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × S _n) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 % ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 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

Technical data

AC field stability	300 mT _{ss}
Switching frequency	3 kHz
Mechanical data	
Design	Threaded barrel, M12 × 1
Dimensions	52 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP + WeldGuard™, grey
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M12 × 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

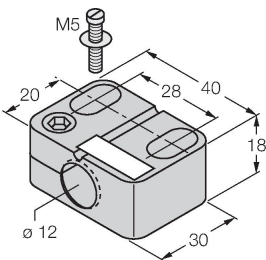


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

Accessories

BST-12B

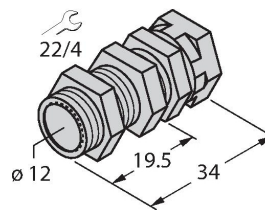
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

QMT-12

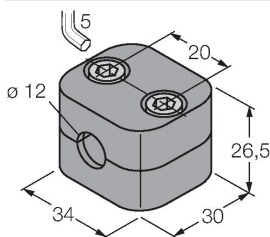
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Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BSS-12

6901321



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

Wiring accessories

Dimension drawing	Type	ID	Connection cable, M12 connector, female, straight, 3-pin, cable length: 2 m, protective sheathing material: Aramid fibers, yellow; Temperature peak: 200 °C; other cable lengths and qualities available, see www.turck.com
	RKC4T-2/TXL1001	6630249	