

BI4U-MT12-AP6X

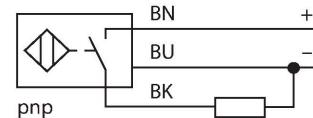
Inductive Sensor – With Extended Switching Distance



Features

- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ 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

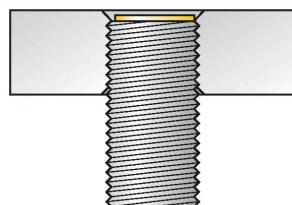
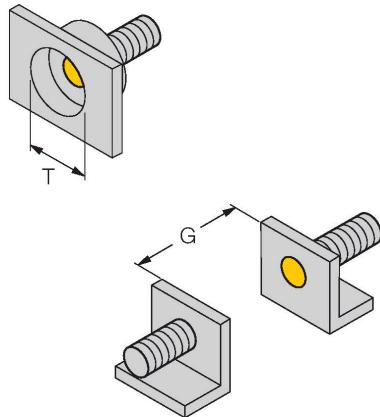
Type	BI4U-MT12-AP6X
ID	1634958
General data	
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
	$\leq \pm 15\%$, $\leq -25\text{ }^\circ\text{C} \vee \geq +70\text{ }^\circ\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10\% U_{B\max}$
DC rated operating current I_e	$\leq 200\text{ mA}$
No-load current	$\leq 25\text{ mA}$
Residual current	$\leq 0.1\text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	$\leq 1.8\text{ V}$
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}
Insulation class	<input type="checkbox"/>

Technical data

Switching frequency	3 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	54 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP, PTFE-coated
End cap	Plastic, EPTR
Max. tightening torque of housing nut	7 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm ²
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

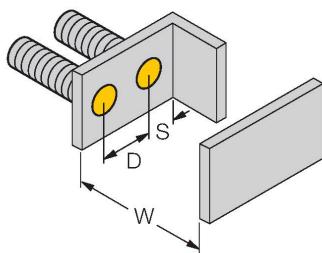
Mounting instructions

Mounting instructions/Description



Distance D	24 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	\varnothing 12 mm

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

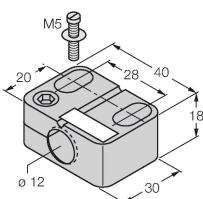


Accessories

BST-12B

6947212

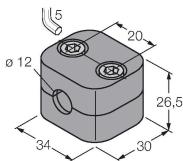
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



BSS-12

6901321

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



QMT-12

6945106

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.



PN-M12

6905309

Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)

