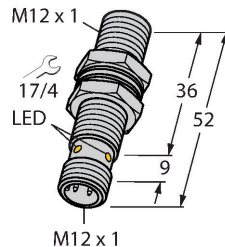


BI6U-MT12-VN6X-H1141

Inductive Sensor



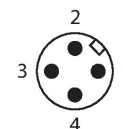
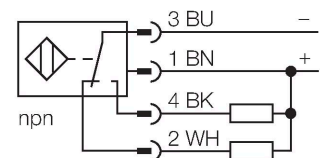
Technical data

Type	BI6U-MT12-VN6X-H1141
ID	1644825
General data	
Rated switching distance	6 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	4-wire, Complementary contact, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP, PTFE-coated

Features

- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- Changeover 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	7 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

Diagram showing the side view of the sensor mounting bracket. Dimension T is indicated as the distance from the center of the active area to the edge of the bracket.

Diagram showing two sensor mounting brackets. Dimension G is indicated as the distance between the centers of the active areas of the two brackets.

Diagram showing the front view of the sensor mounting bracket. Dimensions D, S, and W are indicated. D is the distance from the center of the active area to the edge of the bracket. S is the distance from the center of the active area to the center of the mounting hole. W is the width of the bracket.

Distance D 24 mm

Distance W 3 x Sn

Distance T 3 x B

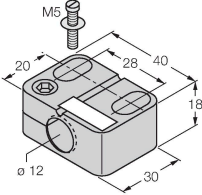
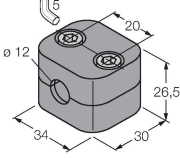
Distance S 1.5 x B

Distance G 6 x Sn

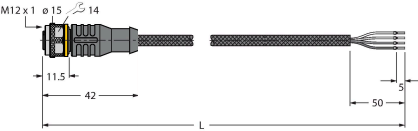
Diameter active area B Ø 12 mm

The sensor along with the BSS-12 half-shell clamp can be mounted with a torque of up to 0.5 Nm in any orientation.

Accessories

BST-12B	6947212	BSS-12	6901321
	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	
	RKC4.4T-2/TXL1001	6628825	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C