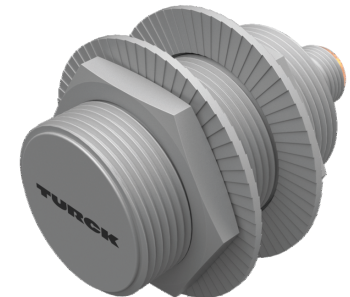
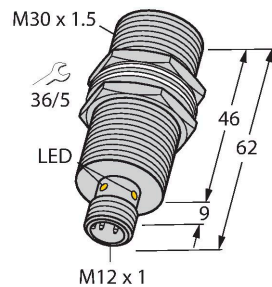


BI20U-MT30-VP6X-H1141

Inductive Sensor



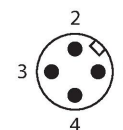
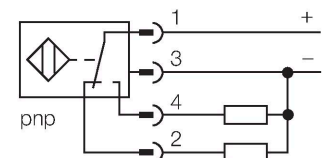
Technical data

Type	BI20U-MT30-VP6X-H1141
ID	1644885
General data	
Rated switching distance	20 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
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, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	62 mm
Housing material	Metal, CuZn, PTFE-coated

Features

- Threaded barrel, M30 x 1.5
- Brass, PTFE-coated
- Factor 1 for all metals
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- Changeover 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. 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

Active area material	Plastic, LCP, PTFE-coated
Max. tightening torque of housing nut	50 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

Technical drawing of a half-shell-clamp. A dimension line labeled 'T' indicates the thickness of the clamp plate.

Technical drawing showing two half-shell-clamps being assembled. A dimension line labeled 'G' indicates the distance between the two clamps.

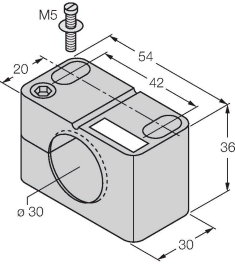
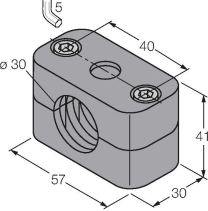
Technical drawing of a sensor mounted on a plate. Dimensions are indicated: 'D' for the distance from the edge to the sensor center, 'S' for the sensor width, and 'W' for the total plate width.

Two 3D renderings of a sensor with a half-shell-clamp. The top rendering shows the sensor correctly aligned with the clamp, marked with a green checkmark. The bottom rendering shows the sensor misaligned, marked with a red 'X'.

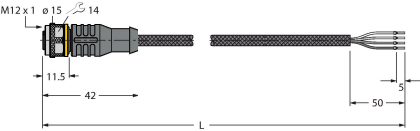
Distance D	60 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 30 mm

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-30B	6947216	BSS-30	6901319
 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