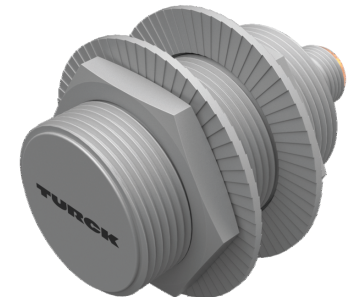
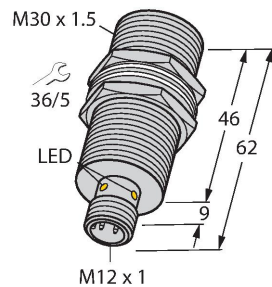


BI20U-MT30-AP6X-H1141

Inductive Sensor



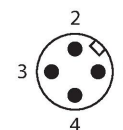
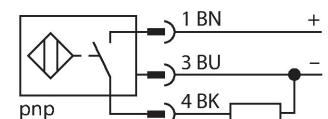
Technical data

Type	BI20U-MT30-AP6X-H1141
ID	1644881
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	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}
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	62 mm

Features

- Threaded barrel, M30 x 1.5
- Brass, PTFE-coated
- Factor 1 for all metals
- Resistant to magnetic fields
- Large switching distance
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

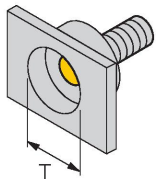
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

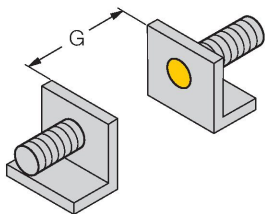
Technical data

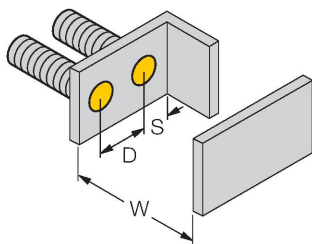
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP, PTFE-coated
Max. tightening torque of housing nut	50 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

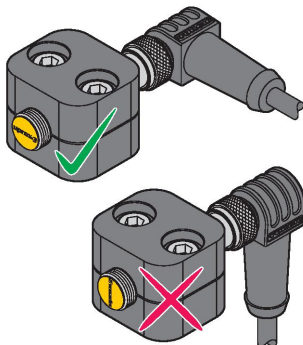
Mounting instructions

Mounting instructions/Description

A technical drawing of a half-shell-clamp, which is a rectangular plate with a central circular hole. A dimension line labeled 'T' indicates the thickness of the plate.

A technical drawing showing two half-shell-clamps being assembled into a full shell. A dimension line labeled 'G' indicates the distance between the two plates.

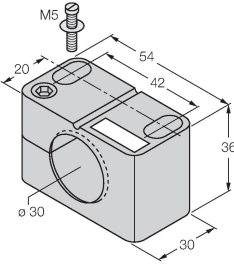
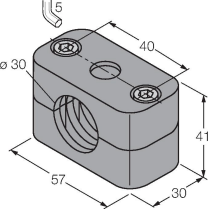
A technical drawing of a sensor mounting plate. It shows two circular holes for sensors. Dimensions are indicated: 'D' for the diameter of the holes, 'S' for the distance between the centers of the holes, and 'W' for the width of the plate.

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

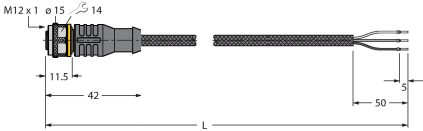
Distance D	60 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 30 mm

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	
 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