

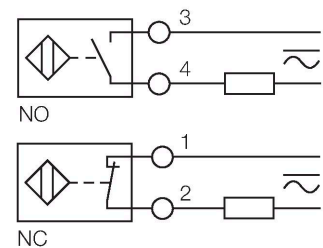
# BI10-P30SR-FZ3X2

## Inductive Sensor

### Features

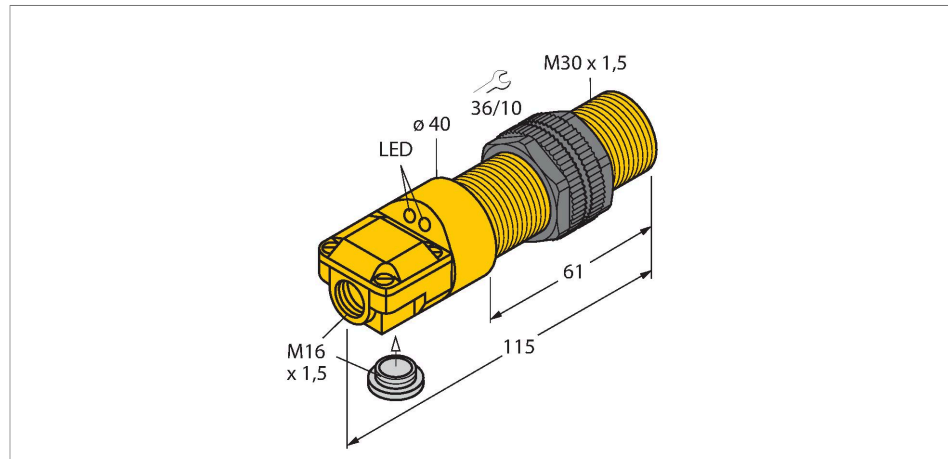
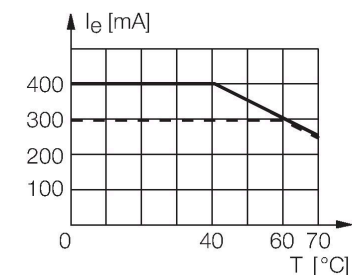
- 2 cable entries (axial, radial)
- Threaded barrel, M30 x 1.5
- Plastic, ABS
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- Programmable connection (NC or NO)
- Terminal chamber

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.



### Technical data

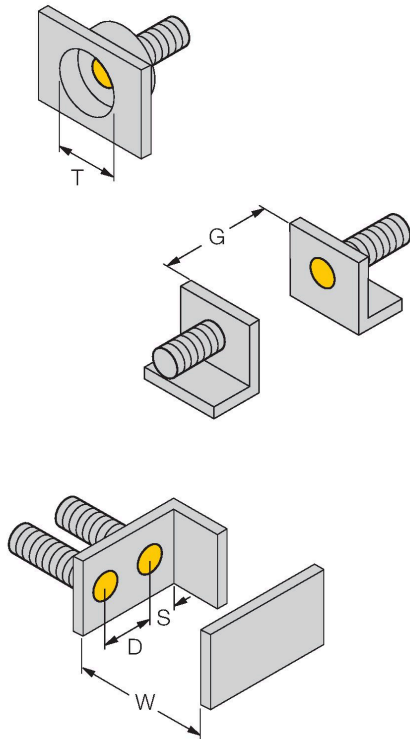
Type	BI10-P30SR-FZ3X2
ID	13420
General data	
Rated switching distance	10 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U <sub>b</sub>	20...250 VAC
Operating voltage U <sub>b</sub>	10...300 VDC
AC rated operational current	$\leq 400$ mA
DC rated operating current I <sub>e</sub>	$\leq 300$ mA
Frequency	$\geq 50$ ... $\leq 60$ Hz
Residual current	$\leq 1.7$ mA
Isolation test voltage	1.5 kV
Surge current	$\leq 8$ A ( $\leq 10$ ms max. 5 Hz)
Voltage drop at I <sub>e</sub>	$\leq 6$ V
Output function	2-wire, Connection programmable, 2-wire
Smallest operating current	$\geq 3$ mA
Switching frequency	0.02 kHz

## Technical data

Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	115 mm
Housing material	Plastic, ABS
Active area material	Plastic, ABS
Max. tightening torque of housing nut	5 Nm
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Red
Included in delivery	cable gland, blanking plug

## Mounting instructions

### Mounting instructions/Description

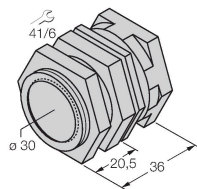


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 30 mm

## Accessories

### QM-30

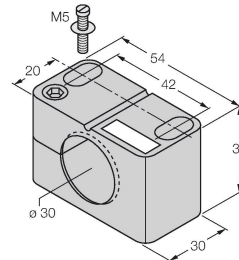
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Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

### BST-30B

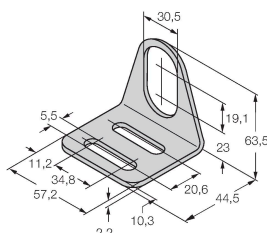
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

### MW30

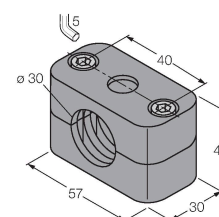
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Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

### BSS-30

6901319



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