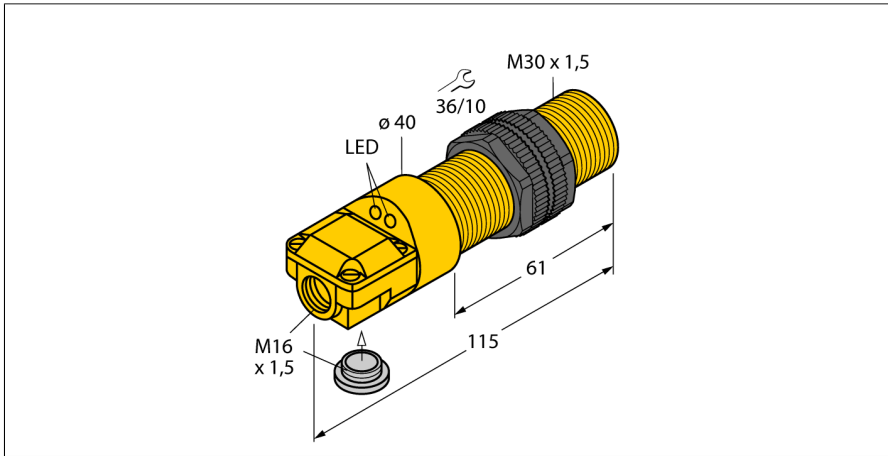
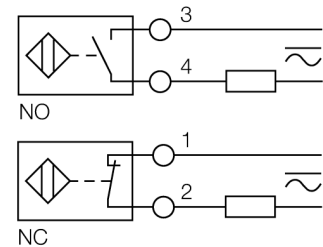


# Inductive Sensor With Increased Temperature Range BI10-P30SR-FZ3X2/S85



- 2 cable entries (axial, radial)
- Threaded barrel, M30 x 1.5
- Plastic, ABS
- Temperatures up to +85 °C
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- Programmable connection (NC or NO)
- Terminal chamber

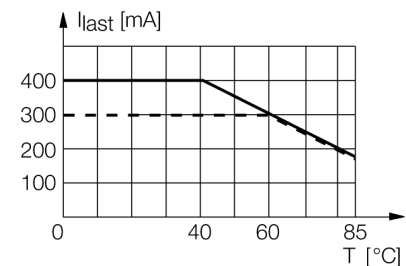
### Wiring Diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Special versions are available for ambient temperatures between -60°C and +250°C.



Type	BI10-P30SR-FZ3X2/S85
ID	13725
Special version	S85 Corresponds to: Maximum ambient temperature = 85 °C

General data	
Rated switching distance S <sub>n</sub>	10 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × S <sub>n</sub> ) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
	≤ ±20 %, ≥ +70 °C
Hysteresis	3...15 %

Electrical data	
Operating voltage U <sub>s</sub>	20...250VAC
Operating voltage U <sub>s</sub>	10...300 VDC
AC rated operational current	≤ 400 mA
DC rated operating current I <sub>s</sub>	≤ 300 mA
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Isolation test voltage	1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I <sub>s</sub>	≤ 6 V
Output function	2-wire, Connection programmable, 2-wire
Smallest operating current I <sub>m</sub>	≥ 3 mA
Switching frequency	0.02 kHz

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...+85 °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	
Switching state	LED, Green
Switching state	LED, Red
Included in delivery	cable gland, blanking plug

## Accessories

Type code	Ident-No.		Dimension drawing
QM-30	6945103	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	6947216	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	
MW-30	6945005	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	