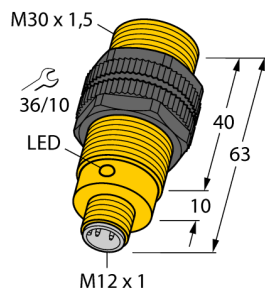


Inductive Sensor

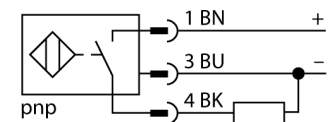
With Increased Temperature Range

BI10-P30-AP6X-H1141/S100



- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring Diagram

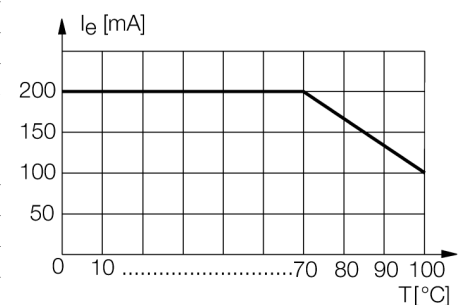


Functional principle

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.

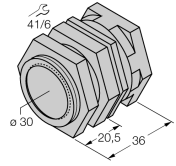
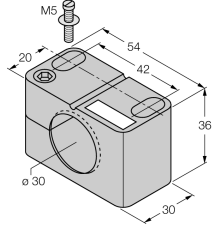
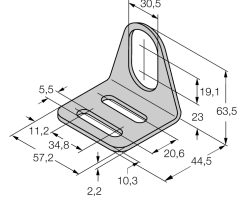
Derating Curve



Type	BI10-P30-AP6X-H1141/S100
ID	4697591
Special version	S100 Corresponds to:Maximum ambient temperature = 100 °C
General data	
Rated switching distance S_n	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
	$\leq \pm 20\%$, $\geq +70\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_s	10...30 VDC
Ripple U_{rs}	$\leq 10\%$ U_{smax}
DC rated operating current I_s	≤ 200 mA
Rated operational current	See derating curve
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_s	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	63 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M12 x 1

Environmental conditions	
Ambient temperature	-25...+100 °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
Switching state	
	LED, Yellow

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	