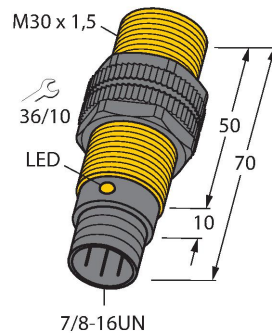


BI10-P30-AP6X-B2141/S100

Inductive Sensor – With Increased Temperature Range



Features

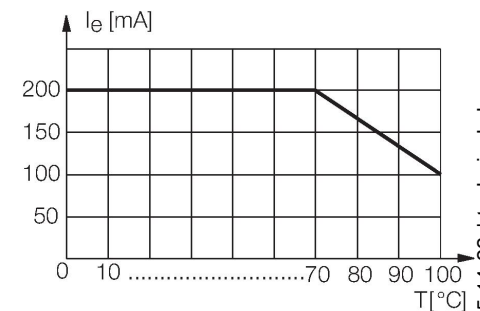
- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- 7/8" male connector

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.



Technical data

Type	BI10-P30-AP6X-B2141/S100
ID	4697521
Special version	S100 Corresponds to: Maximum ambient temperature = 100 °C
General data	
Rated switching distance	10 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × S _n) 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 _B	10...30 VDC
Ripple U _{ss}	≤ 10 % U _{Bmax}
DC rated operating current I _e	≤ 200 mA
Rated operational current	See derating curve
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I _e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete

Technical data

Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	70 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, 7/8"
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

Mounting instructions

Mounting instructions/Description

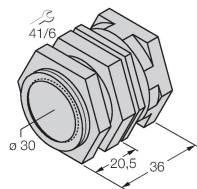


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 30 mm

Accessories

QM-30

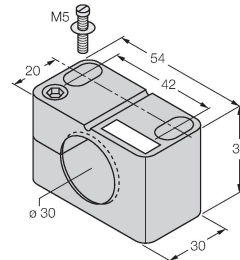
6945103



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

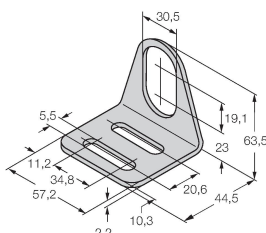
6947216



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

MW30

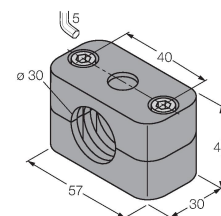
6945005



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