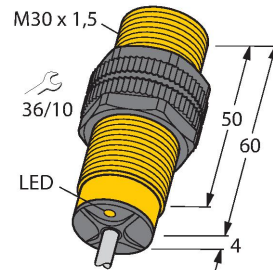


BI10-S30-VP4X/S100

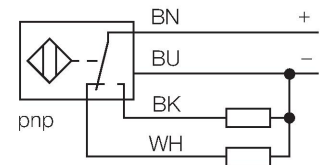
Inductive Sensor – With Increased Temperature Range



Features

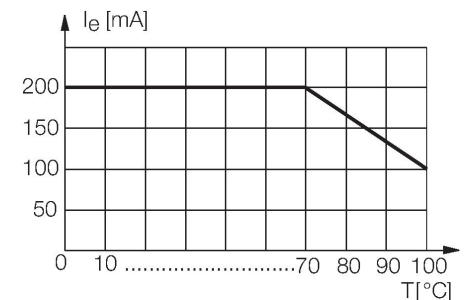
- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- Cable connection

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-S30-VP4X/S100
ID	15140
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	10...65 VDC
Residual ripple	≤ 10 % U _{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.5 kHz

Technical data

Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	64 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY-T105, PVC, 2 m
Core cross-section	4 x 0.34 mm ²
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

The image contains three technical diagrams illustrating the mounting of a sensor. The top diagram shows a side view of the sensor with dimension T. The middle diagram shows two sensors with dimension G. The bottom diagram shows a sensor mounted on a plate with dimensions D, S, and W.

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

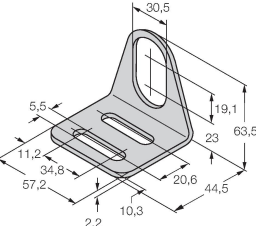
6947216



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

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