

BI8-M18-AN6X

Inductive Sensor – With Increased Switching Distance



Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

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	BI8-M18-AN6X
ID	4615130
General data	
Rated switching distance	8 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	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 200 mA
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_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.5 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	54 mm
Housing material	Metal, CuZn, Chrome-plated

Technical data

Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm ²
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
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor.

1. The top diagram shows a single sensor with a circular active area (highlighted in yellow) being mounted to a flat surface using a screw. A dimension line labeled 'T' indicates the distance from the mounting surface to the center of the active area.

2. The middle diagram shows two sensors mounted to a surface, each secured with a screw. A dimension line labeled 'G' indicates the distance between the centers of the two active areas.

3. The bottom diagram shows a sensor mounted to a surface with two screws. It includes three dimension lines: 'D' for the distance from the mounting surface to the center of the active area, 'S' for the distance between the two mounting points, and 'W' for the total width of the sensor's mounting bracket.

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 18 mm

Accessories

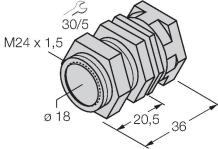
BST-18B 6947214

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



QM-18 6945102

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW18 6945004

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



BSS-18 6901320

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

