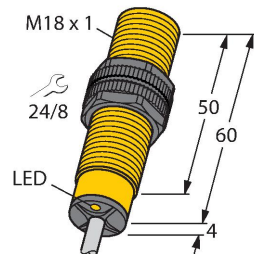


BI5-S18-AN6X

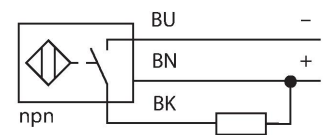
Inductive Sensor



Features

- Threaded barrel, M18 x 1
- Plastic, PA12-GF30
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

Wiring diagram



Technical data

Type	BI5-S18-AN6X
ID	46561
General data	
Rated switching distance	5 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	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, NPN
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	64 mm
Housing material	Plastic, PA12-GF30

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

Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	2 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

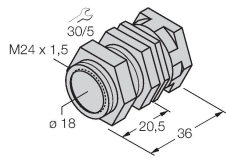
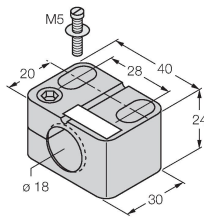
Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor. The sensor is depicted as a rectangular plate with a central circular active area, highlighted in yellow.

- Top Diagram:** Shows a single sensor mounted on a wall. A dimension line labeled 'T' indicates the distance from the bottom edge of the sensor to the mounting surface.
- Middle Diagram:** Shows two sensors mounted on a wall. A dimension line labeled 'G' indicates the distance between the centers of the two sensors.
- Bottom Diagram:** Shows two sensors mounted on a wall. Dimension lines indicate the following:
 - 'D': The distance between the centers of the two sensors.
 - 'S': The distance from the center of the sensor to the mounting surface.
 - 'W': The distance from the left edge of the sensor to the mounting surface.

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

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.	BST-18B	6947214	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6
					
MW-18	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
