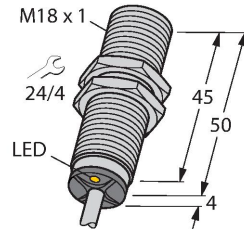


BI8-M18-VP6X

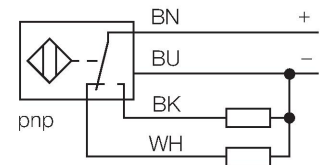
Inductive Sensor – With Increased Switching Distance



Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large sensing range
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP 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-VP6X
ID	4605154
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	4-wire, Complementary contact, PNP
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, Gray, LifYY, PVC, 2 m
Core cross-section	4 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 surface. The dimension **T** is indicated as the distance from the center of the active area to the edge of the mounting plate.
- Middle Diagram:** Shows two sensors mounted on a surface. The dimension **G** is indicated as the distance between the centers of the two active areas.
- Bottom Diagram:** Shows two sensors mounted on a surface. The dimensions **D**, **S**, and **W** are indicated. **D** is the distance between the centers of the two active areas. **S** is the distance from the center of the active area to the edge of the mounting plate. **W** is the width of the mounting plate.

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

