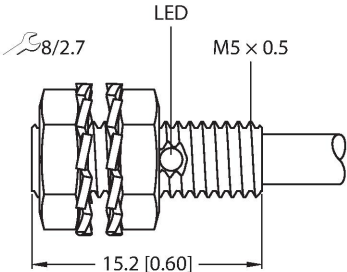


BI1-EG05K-AP6X

Inductive Sensor



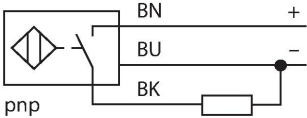
Technical data

Type	BI1-EG05K-AP6X
ID	4609765
General data	
Rated switching distance	1 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
Hysteresis	10 %
Electrical data	
Operating voltage U _B	10...30 VDC
Ripple U _{ss}	≤ 10 % U _{Bmax}
DC rated operating current I _e	≤ 100 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 _e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M5 x 0.5
Dimensions	15 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6

Features

- Threaded barrel, M5 × 0.5
- Stainless steel, 1.4305 (AISI303)
- DC 3-wire, 10...30 VDC
- NO 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

Max. tightening torque of housing nut	2.5 Nm
Electrical connection	Cable
Cable quality	Ø 3.3 mm, Gray, LiFY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 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. The dimension **T** is indicated as the distance from the wall to the center of the active area.
- Middle Diagram:** Shows two sensors mounted on a wall. The dimension **G** is indicated as the distance between the centers of the two active areas.
- Bottom Diagram:** Shows two sensors mounted on a wall. The dimensions **D**, **S**, and **W** are indicated. **D** is the distance from the wall to the center of the active area. **S** is the distance between the centers of the two active areas. **W** is the distance from the wall to the center of the active area.

Distance D	3 × 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 5 mm