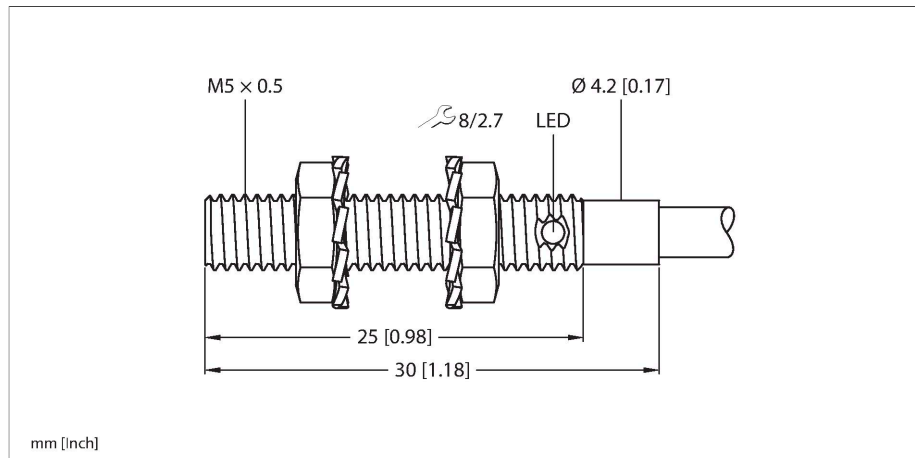


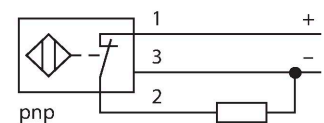
BI1-EG05-RP6X Inductive Sensor



Features

- Threaded barrel, M5 × 0.5
- Stainless steel, 1.4305 (AISI303)
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- Cable connection

Wiring diagram



Technical data

Type	BI1-EG05-RP6X
ID no.	4609750
Rated switching distance	1 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	10 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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_o	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NC contact, PNP
Switching frequency	3 kHz
Design	Threaded barrel, M5 × 0.5
Dimensions	30 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6
Max. tightening torque of housing nut	2.5 Nm

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

Electrical connection	Cable
Cable quality	Ø 3.3 mm, Gray, LiFY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 mm ²
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:

- Top Diagram:** Shows a single sensor mounted on a surface. The dimension T is indicated as the distance from the mounting surface to the center of the sensor's active area.
- Middle Diagram:** Shows two sensors mounted on a surface. The dimension G is indicated as the distance between the centers of the two sensors.
- Bottom Diagram:** Shows two sensors mounted on a surface. The dimensions D , S , and W are indicated:
 - D : Distance from the mounting surface to the center of the sensor's active area.
 - S : Distance between the centers of the two sensors.
 - W : Distance from the mounting surface to the center of the sensor's active area.

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance T	$3 \times B$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Diameter active area B	$\varnothing 5 \text{ mm}$