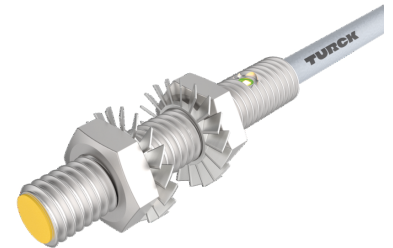
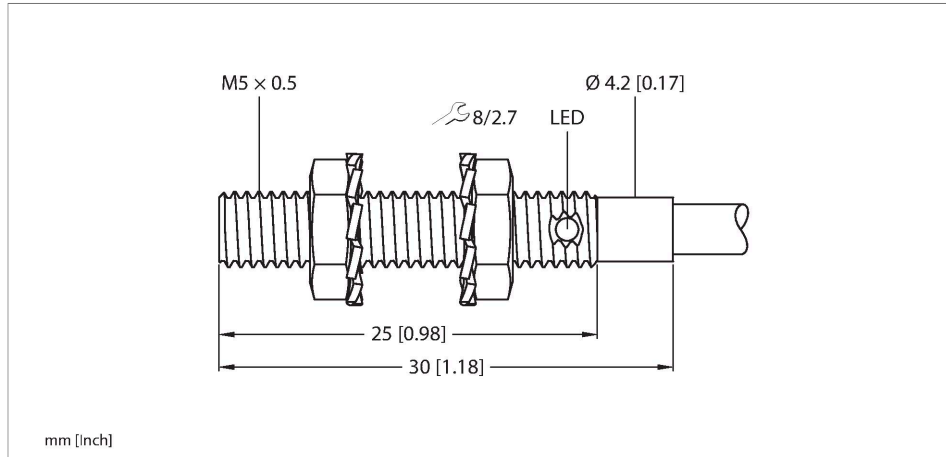


BI1-EG05-RP6X Inductive Sensor



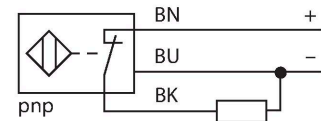
Technical data

| | |
|---|---|
| Type | BI1-EG05-RP6X |
| ID | 4609750 |
| General data | |
| 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 | $\leq 2\%$ of full scale |
| Hysteresis | 10 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | $\leq 10\% U_{ss}$ |
| 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 |
| Mechanical data | |
| Design | Threaded barrel, M5 x 0.5 |

Features

- Threaded barrel, M5 x 0.5
- Stainless steel, 1.4305 (AISI303)
- DC 3-wire, 10...30 VDC
- NC 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

| | |
|---------------------------------------|--|
| 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 |
| 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



| | |
|------------------------|---------|
| Distance D | 3 × B |
| Distance W | 3 × Sn |
| Distance T | 3 × B |
| Distance S | 1.5 × B |
| Distance G | 6 × Sn |
| Diameter active area B | Ø 5 mm |