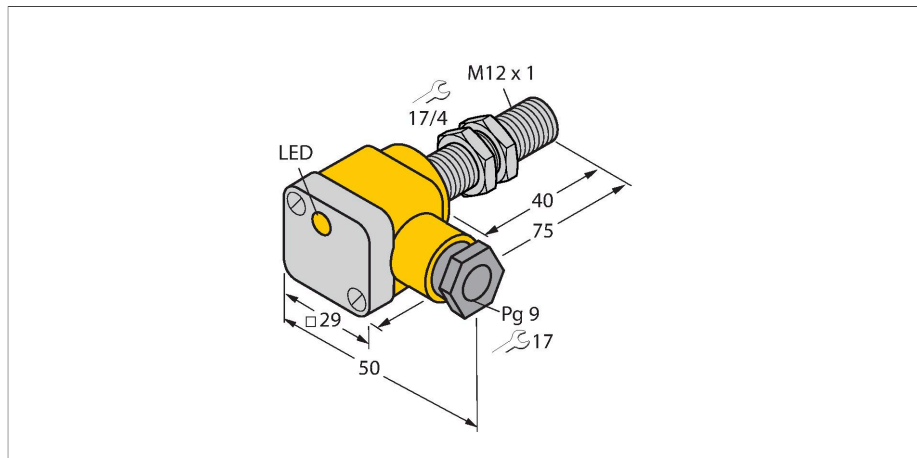


BI3U-EG12SK-AP6X

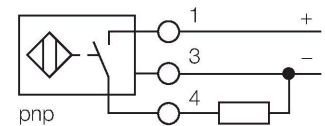
Inductive Sensor



Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- Factor 1 for all metals
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Terminal chamber

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

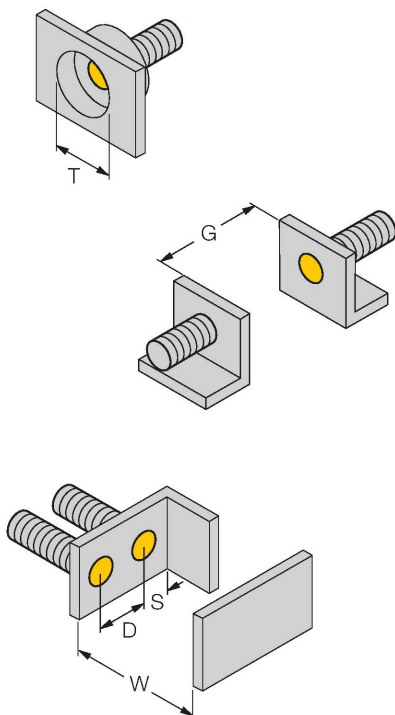
| | |
|---|---|
| Type | BI3U-EG12SK-AP6X |
| ID | 1634400 |
| General data | |
| Rated switching distance | 3 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | $\leq \pm 10$ % |
| | $\leq \pm 15$ %, ≤ -25 °C \vee $\geq +70$ °C |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U_{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | 25 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, PNP |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |
| Switching frequency | 3 kHz |

Technical data

| Mechanical data | |
|---------------------------------------|---|
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 75 mm |
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Terminal chamber cover material | plastic, Ultem |
| Terminal chamber housing material | plastic, PA12-GF30 |
| Active area material | Plastic, PBT |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Terminal chamber |
| Clamping ability | $\leq 2.5 \text{ mm}^2$ |
| Cable external diameter | 4.5...8 mm |
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP67 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |
| Included in delivery | cable gland; 2x plastic seals |

Mounting instructions

Mounting instructions/Description

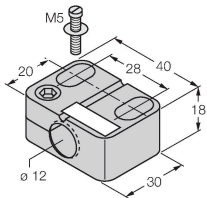


| | |
|------------------------|-----------------------------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | $\varnothing 12 \text{ mm}$ |

Accessories

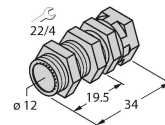
BST-12B 6947212

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



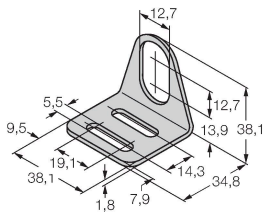
QM-12 6945101

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW-12 6945003

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-12 6901321

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

