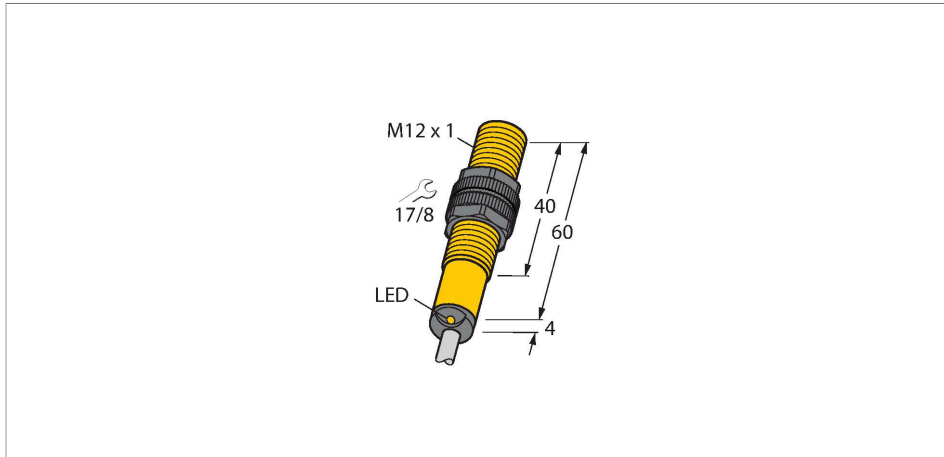


BI2-S12-AZ31X/S100

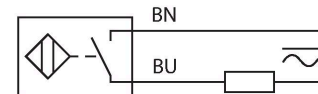
Inductive Sensor – With Increased Temperature Range



Features

- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

Wiring diagram

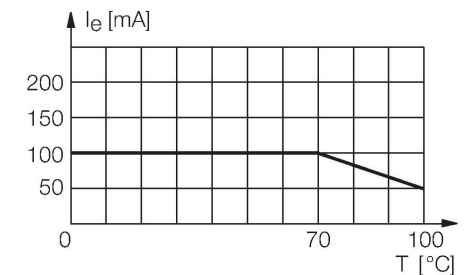


Technical data

| | |
|--------------------------------|--|
| Type | BI2-S12-AZ31X/S100 |
| ID no. | 1302001 |
| Special version | S100 corresponds to: Maximum ambient temperature = 100 °C |
| Rated switching distance | 2 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 |
| Temperature drift | ≤ ± 10 % ≤ ± 20 %, ≥ +70 °C |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+100 °C |
| Operating voltage | 20...250 VAC |
| Operating voltage | 10...300 VDC |
| AC rated operational current | ≤ 100 mA |
| DC rated operational current | ≤ 100 mA |
| Rated operational current | See derating curve |
| Frequency | ≥ 50...≤ 60 Hz |
| Residual current | ≤ 1.7 mA |
| Isolation test voltage | ≤ 1.5 kV |
| Surge current | ≤ 1 A (≤ 10 ms max. 5 Hz) |
| Voltage drop at I _o | ≤ 6 V |
| Output function | 2-wire, NO contact, 2-wire |

Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.

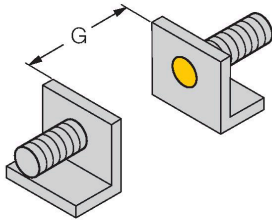


Technical data

| | |
|---------------------------------------|--|
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 0.02 kHz |
| Design | Threaded barrel, M12 × 1 |
| Dimensions | 60 mm |
| Housing material | Plastic, PA12-GF30 |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 1 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY-T105, PVC, 2 m |
| Core cross-section | 2 x 0.5 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, Red |

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

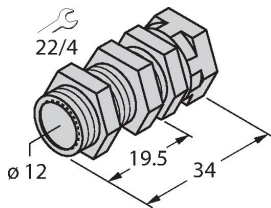
Distance G 6 x Sn

Diameter active area B \varnothing 12 mm

Accessories

QM-12

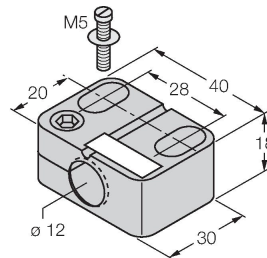
6945101



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

BST-12B

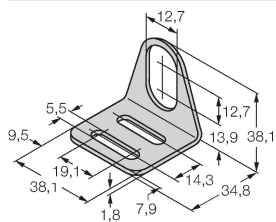
6947212



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

MW-12

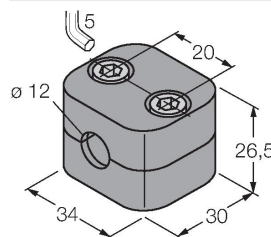
6945003



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