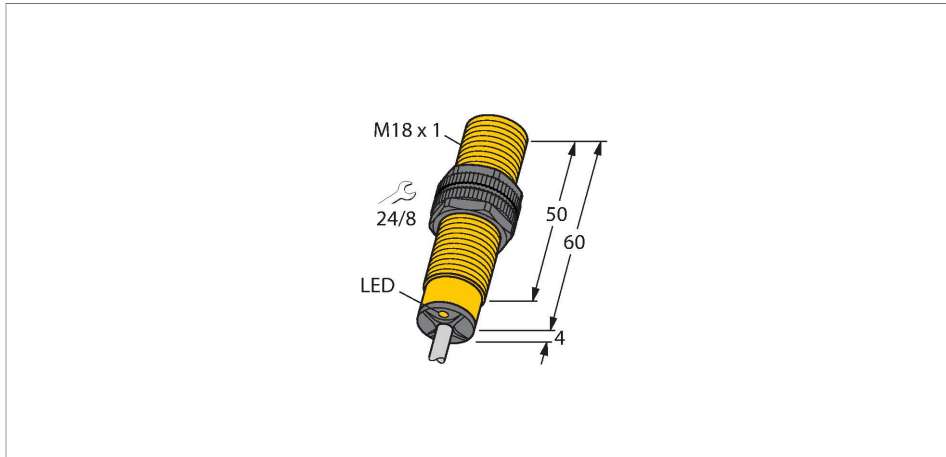


BI5-S18-AZ3X/S97

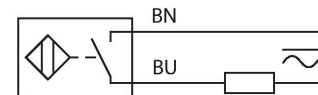
Inductive Sensor – With Increased Temperature Range



Features

- Threaded barrel, M18 x 1
- Plastic, PA12-GF30
- Temperatures up to -40 °C
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

Wiring diagram



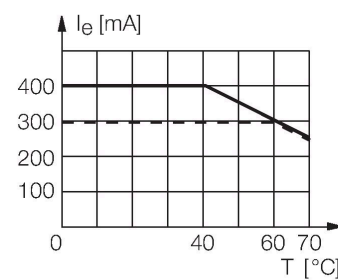
Technical data

| | |
|------------------------------|--|
| Type | BI5-S18-AZ3X/S97 |
| Ident. no. | 1373410 |
| Rated switching distance | 5 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 |
| Temperature drift | $\leq \pm 10\%$ $\leq \pm 20\%, \leq -25\text{ °C}$ |
| Hysteresis | 3...15 % |
| Ambient temperature | -40...+70 °C |
| Operating voltage | 20...250 VAC |
| Operating voltage | 10...300 VDC |
| AC rated operational current | ≤ 400 mA |
| DC rated operational current | ≤ 300 mA |
| Frequency | $\geq 50 \dots \leq 60$ Hz |
| Residual current | ≤ 1.7 mA |
| Isolation test voltage | ≤ 1.5 kV |
| Surge current | ≤ 8 A (≤ 10 ms max. 5 Hz) |
| Voltage drop at I_e | ≤ 6 V |
| Output function | 2-wire, NO contact |
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 0.02 kHz |

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.

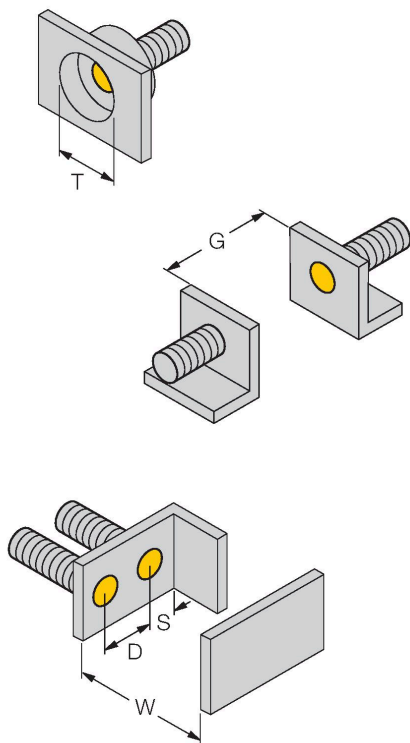


Technical data

| | |
|------------------------------------|--|
| Design | Threaded barrel, M18 × 1 |
| Dimensions | 64 mm |
| Housing material | Plastic, PA12-GF30 |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque housing nut | 2 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, SiHSi, Silicone, 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

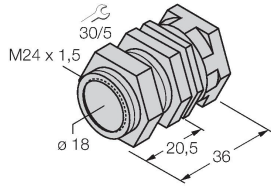


| | |
|---------------------------|---------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 18 mm |

Accessories

QM-18

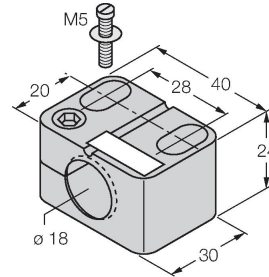
6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-18B

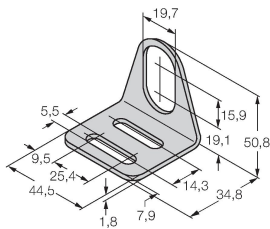
6947214



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

MW18

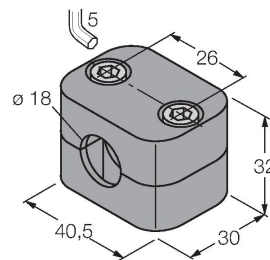
6945004



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

BSS-18

6901320



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