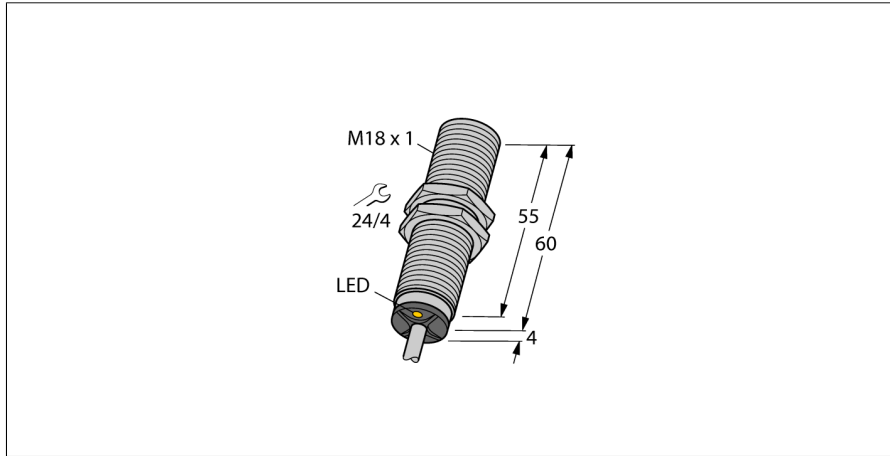
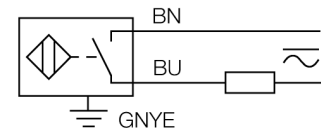


Inductive sensor BI5-M18-AZ3X



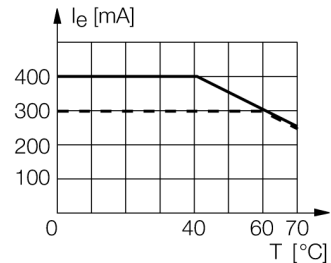
- Threaded barrel, M18 x 1
- Chrome-plated brass
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

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.



| | |
|---|---|
| Type designation | BI5-M18-AZ3X |
| Ident no. | 43104 |
| Rated switching distance Sn | 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 | $\leq \pm 10\%$ |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 20...250VAC |
| Operating voltage | 10...300 VDC |
| AC rated operational current | ≤ 400 mA |
| DC rated operational current | ≤ 300 mA |
| Frequency | $\geq 50... \leq 60$ 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 I _m | ≥ 3 mA |
| Switching frequency | 0.02 kHz |
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 64 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque housing nut | 25 Nm |
| Electrical connection | Cables |
| Cable quality | 5.2 mm, LifYY, PVC, 2 |
| Cable cross section | 3 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 |

Inductive sensor
BI5-M18-AZ3X

| | |
|------------------------|---------|
| 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 |
| <hr/> | |
| Diameter active area B | Ø 18 mm |



**Inductive sensor
BI5-M18-AZ3X**

Accessories

| Type code | Ident no. | Description | |
|-----------|-----------|--|--|
| BST-18B | 6947214 | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6 | |
| QM-18 | 6945102 | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. | |
| MW-18 | 6945004 | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304) | |
| BSS-18 | 6901320 | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene | |