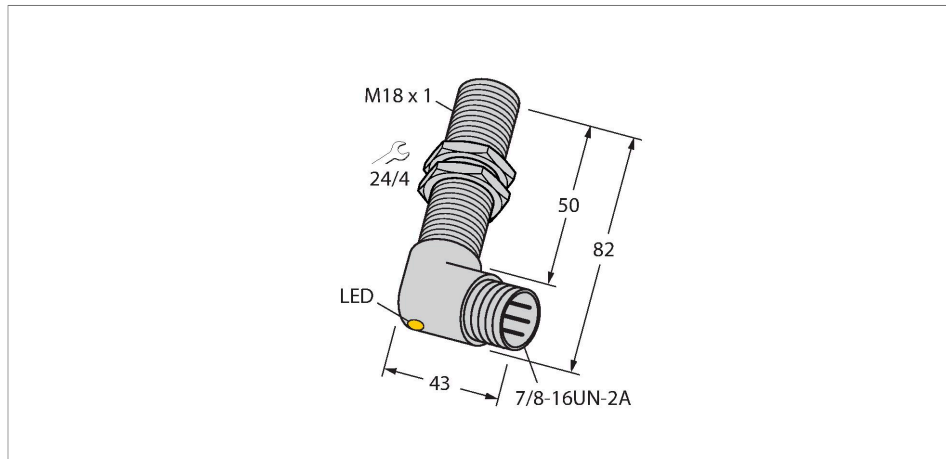


BI5-G18-RZ3X-B1431

Inductive Sensor



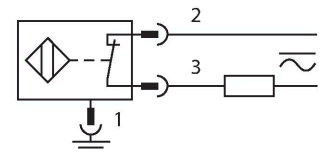
Technical data

| | |
|------------------------------|---|
| Type | BI5-G18-RZ3X-B1431 |
| ID | 43735 |
| General data | |
| 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 | $\leq \pm 10\%$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 20...250 VAC |
| Operating voltage | 10...300 VDC |
| AC rated operational current | ≤ 400 mA |
| DC rated operational current | ≤ 300 mA |
| Frequency | $\geq 50... \leq 60$ 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, NC contact, 2-wire |
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 0.02 kHz |

Features

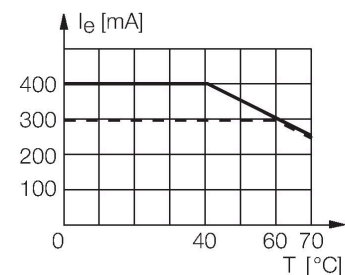
- Threaded barrel, M18 x 1
- Chrome-plated brass
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC contact
- 7/8" male connector

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

| Mechanical data | |
|---------------------------------------|--|
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 82 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Connector, 7/8" |
| 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, 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

MW-18

6945004



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

BSS-18

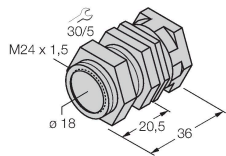
6901320



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

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.