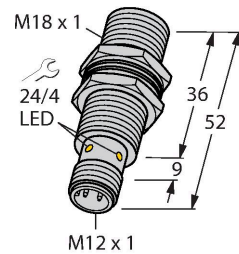


BI5U-MT18-AN6X-H1141

Inductive Sensor



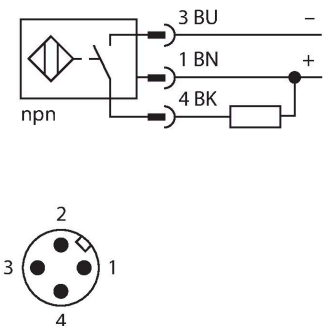
Technical data

| | |
|--|--|
| Type | BI5U-MT18-AN6X-H1141 |
| ID | 1635250 |
| General data | |
| Rated switching distance | 5 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| | $\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{ss} | $\leq 10 \%$ U_{Bmax} |
| DC rated operating current I_o | $\leq 200 \text{ mA}$ |
| No-load current | $\leq 25 \text{ mA}$ |
| Residual current | $\leq 0.1 \text{ mA}$ |
| Isolation test voltage | 0.5 kV |
| Short-circuit protection | yes/Cyclic |
| Voltage drop at I_o | $\leq 1.8 \text{ V}$ |
| Wire break/reverse polarity protection | yes/Complete |
| Output function | 3-wire, NO contact, NPN |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |

Features

- Threaded barrel, M18 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- M12 x 1 male connector

Wiring diagram



Functional principle

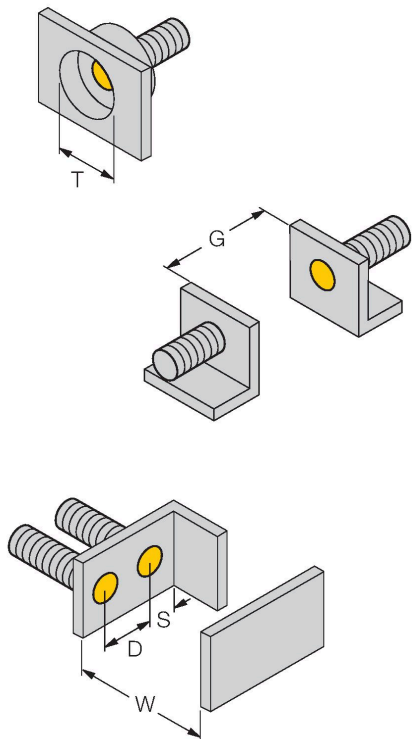
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

| | |
|---------------------------------------|---|
| Switching frequency | 1.5 kHz |
| Mechanical data | |
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 52 mm |
| Housing material | Metal, CuZn, PTFE-coated |
| Active area material | Plastic, PBT, PTFE-coated |
| Max. tightening torque of housing nut | 15 Nm |
| Electrical connection | Connector, M12 × 1 |
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

Mounting instructions

| |
|-----------------------------------|
| Mounting instructions/Description |
|-----------------------------------|



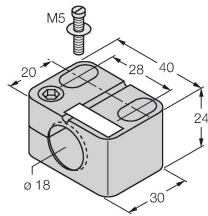
| | |
|------------------------|---------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 18 mm |

BI5U-MT18-AN6X-H1141 | 02/21/2025 13-18 | technical changes reserved

Accessories

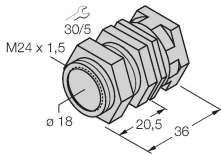
BST-18B 6947214

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



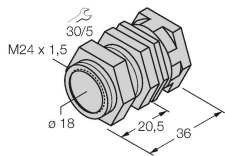
QMT-18 6945104

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



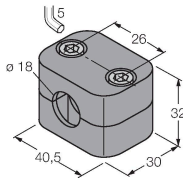
QM-18 6945102

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.



BSS-18 6901320

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



Wiring accessories

| Dimension drawing | Type | ID | |
|-------------------|-----------------|---------|--|
| | RKC4T-2/TXL1001 | 6630249 | |

Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C

