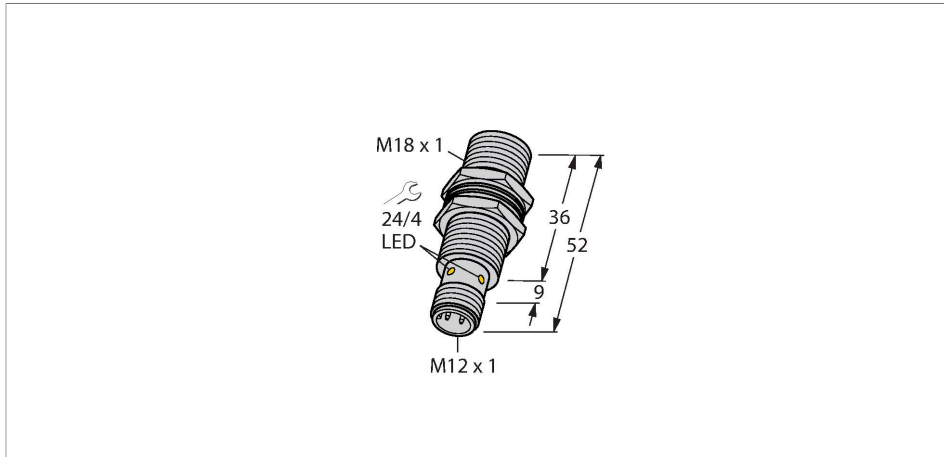


BI5U-MT18-AP6X-H1141/S1589

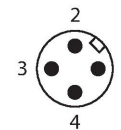
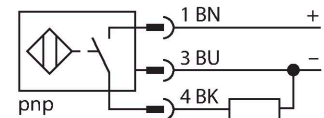
Inductive Sensor – With WeldGuard™ Coating



Features

- M18 × 1 threaded barrel
- 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, PNP output
- M12 x 1 male connector

Wiring diagram



Technical data

| | |
|---|---|
| Type | BI5U-MT18-AP6X-H1141/S1589 |
| Ident. no. | 1635294 |
| Special version | S1589 corresponds to: With weldguard coating |
| Rated switching distance | 5 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | $\leq \pm 10$ % $\leq \pm 15$ %, ≤ -25 °C v $\geq +70$ °C |
| Hysteresis | 3...15 % |
| Ambient temperature | -30...+85 °C |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U_{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | ≤ 20 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| Insulation class | □ |
| Switching frequency | 1.5 kHz |

Functional principle

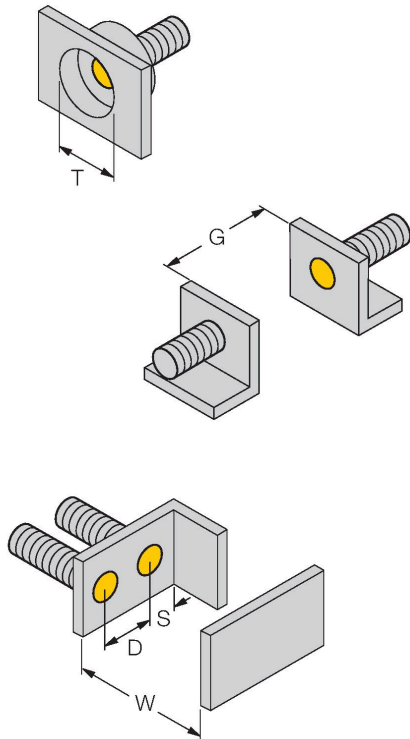
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless 3-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields. Turck WeldGuard sensors for use in welding systems are equipped with a thin coating made of thermosetting plastic. This high-tech coating is resistant to abrasion and withstands mechanical stress.

Technical data

| | |
|---------------------------------------|---|
| Design | Threaded barrel, M18 × 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 |
| 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 |

Accessories

| | | | |
|-----------------------|---|----------------------|--|
| <p>BST-18B</p> | <p>6947214</p> <p>Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6</p> | <p>QMT-18</p> | <p>6945104</p> <p>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.</p> |
| <p>QM-18</p> | <p>6945102</p> <p>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.</p> | <p>BSS-18</p> | <p>6901320</p> <p>Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene</p> |

Wiring accessories

| Dimension drawing | Type | Ident. no. | |
|-------------------|------------------------|----------------|---|
| | <p>RKC4T-2/TXL1001</p> | <p>6630249</p> | <p>Connection cable, M12 connector, female, straight, 3-pin, cable length: 2 m, protective sheathing material: Aramid fibers, yellow; Temperature peak: 200 °C; other cable lengths and qualities available, see www.turck.com</p> |