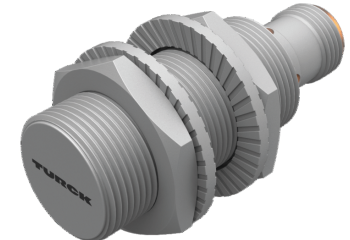
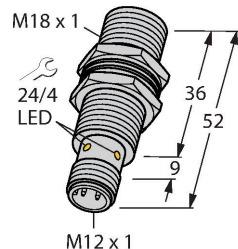


# BI10U-MT18-AP6X-H1141

## Inductive Sensor



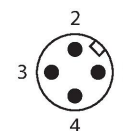
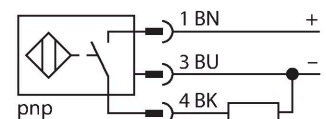
### Technical data

|                                           |                             |
|-------------------------------------------|-----------------------------|
| Type                                      | BI10U-MT18-AP6X-H1141       |
| ID                                        | 1644831                     |
| General data                              |                             |
| Rated switching distance                  | 10 mm                       |
| Mounting conditions                       | Flush                       |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy                           | $\leq 2 \%$ of full scale   |
| Temperature drift                         | $\leq \pm 10 \%$            |
| Hysteresis                                | 3...15 %                    |
| Electrical data                           |                             |
| Operating voltage                         | 10...30 VDC                 |
| Residual ripple                           | $\leq 10 \%$ $U_{ss}$       |
| DC rated operational current              | $\leq 200$ mA               |
| No-load current                           | 25 mA                       |
| Residual current                          | $\leq 0.1$ mA               |
| Isolation test voltage                    | $\leq 0.5$ kV               |
| Short-circuit protection                  | yes / Cyclic                |
| Voltage drop at $I_o$                     | $\leq 1.8$ V                |
| Wire breakage/Reverse polarity protection | yes / Complete              |
| Output function                           | 3-wire, NO contact, PNP     |
| DC field stability                        | 300 mT                      |
| AC field stability                        | 300 mT <sub>ss</sub>        |
| Switching frequency                       | 1.5 kHz                     |
| Mechanical data                           |                             |
| Design                                    | Threaded barrel, M18 x 1    |
| Dimensions                                | 52 mm                       |

### Features

- Threaded barrel, M18 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### Wiring diagram



### Functional principle

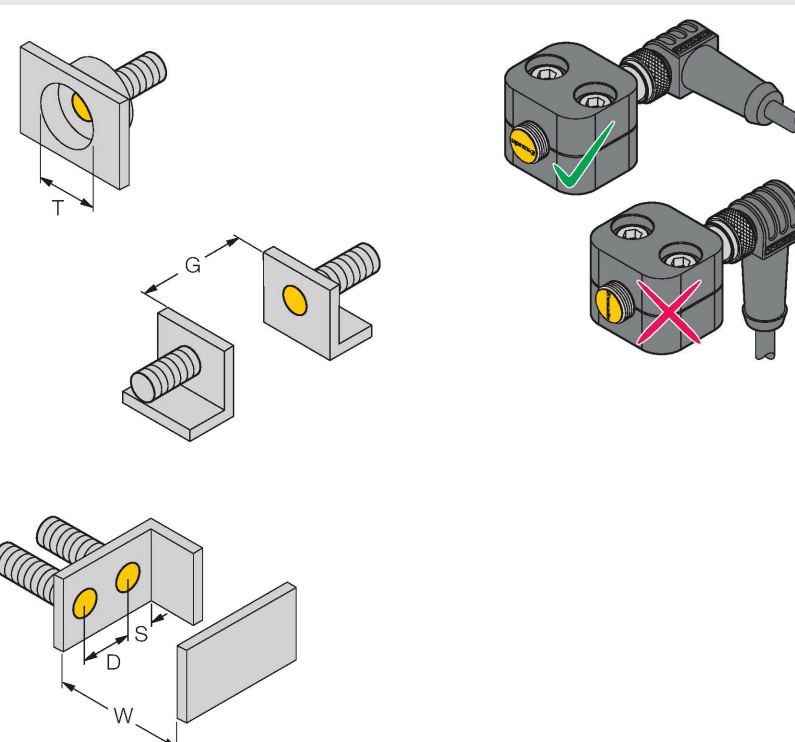
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Housing material                      | Metal, CuZn, PTFE-coated                  |
| Active area material                  | Plastic, LCP, PTFE-coated                 |
| Max. tightening torque of housing nut | 10 Nm                                     |
| Electrical connection                 | Connector, M12 × 1                        |
| Environmental conditions              |                                           |
| Ambient temperature                   | -25...+70 °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

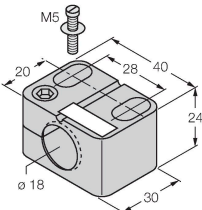
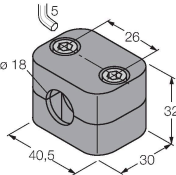
Mounting instructions/Description



|                        |         |
|------------------------|---------|
| Distance D             | 36 mm   |
| 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 |

When installing the sensor in combination with the illustrated half-shell-clamp, observe its correct alignment towards the clamp. For this, see the uprox-lettering on the front cap of the sensor and the adjacent installation drawing.

Accessories

|                                                                                   |                                                                           |                                                                                    |                                                                                |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| BST-18B                                                                           | 6947214                                                                   | BSS-18                                                                             | 6901320                                                                        |
|  | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6 |  | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene |

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 |