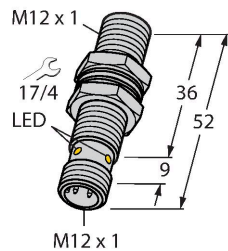


# BI4U-MT12-AP6X-H1141

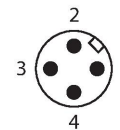
## Inductive Sensor



### Features

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

### Wiring diagram



### Technical data

|   |  |
|---|--|
| Type                                      | BI4U-MT12-AP6X-H1141   |
| Ident. no.                                | 1634809  |
| Rated switching distance                  | 4 mm   |
| Mounting conditions                       | Flush  |
| Secured operating distance                | $\leq (0.81 \times S_n) \text{ mm}$                          |
| Repeat accuracy                           | $\leq 2 \%$ of full scale                                    |
| Temperature drift                         | $\leq \pm 10 \%$   |
|   | $\leq \pm 15 \%, \leq -25 \text{ °C v } \geq +70 \text{ °C}$ |
| Hysteresis                                | 3...15 %   |
| Ambient temperature                       | -30...+85 °C   |
| Operating voltage                         | 10...30 VDC  |
| Residual ripple                           | $\leq 10 \%$ $U_{ss}$  |
| DC rated operational current              | $\leq 200 \text{ mA}$  |
| No-load current                           | $\leq 20 \text{ mA}$   |
| Residual current                          | $\leq 0.1 \text{ mA}$  |
| Isolation test voltage                    | $\leq 0.5 \text{ kV}$  |
| Short-circuit protection                  | yes / Cyclic   |
| Voltage drop at $I_o$                     | $\leq 1.8 \text{ V}$   |
| Wire breakage/Reverse polarity protection | yes / Complete   |
| Output function                           | 3-wire, NO contact, PNP                                      |
| Insulation class                          | □  |
| Switching frequency                       | 2 kHz  |
| Design                                    | Threaded barrel, M12 x 1                                     |
| Dimensions                                | 52 mm  |

### Functional principle

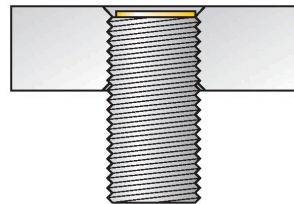
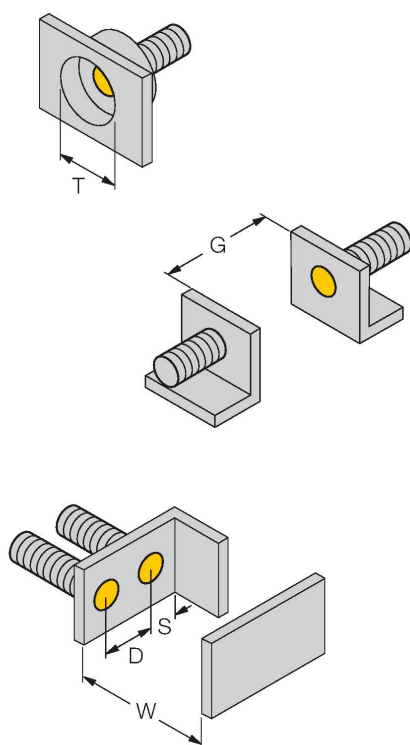
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

|                                       |   |
|---------------------------------------|---|
| Housing material                      | Metal, CuZn, PTFE-coated                  |
| Active area material                  | Plastic, LCP, PTFE-coated                 |
| Max. tightening torque of housing nut | 7 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



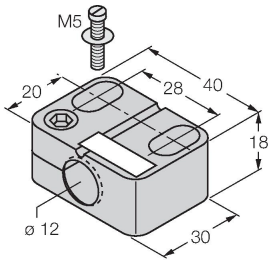
|                        |         |
|------------------------|---------|
| Distance D             | 24 mm   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 12 mm |

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

## Accessories

### BST-12B

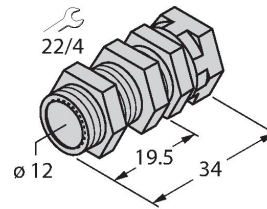
6947212



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

### QMT-12

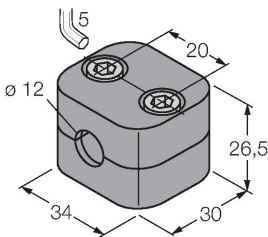
6945106



Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

### BSS-12

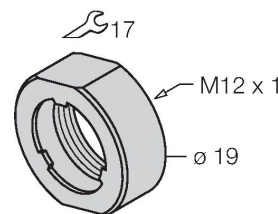
6901321



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

### PN-M12

6905309



Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)

## Wiring accessories

### Dimension drawing

#### Type

RKC4T-2/TXL1001

#### Ident. no.

6630249

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](http://www.turck.com)

