

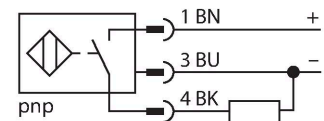
# BI2U-MT12-AP6X-H1141

## Inductive Sensor

### Features

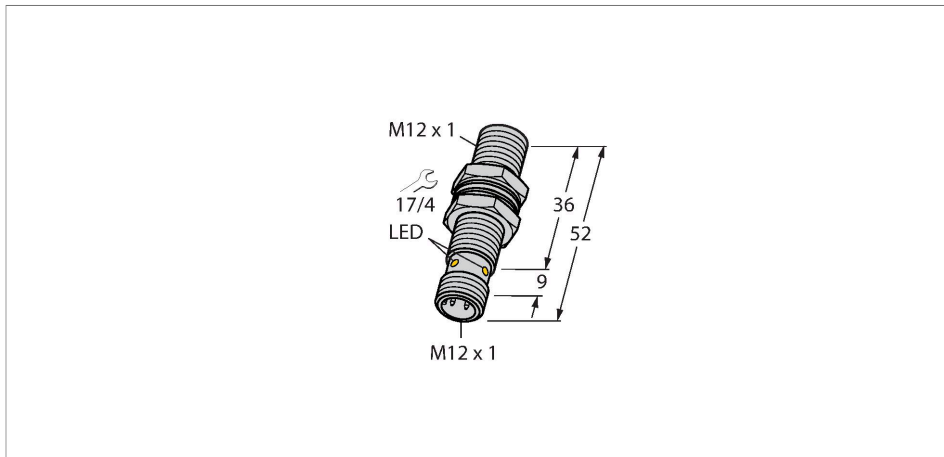
- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### Wiring diagram



### Functional principle

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



### Technical data

|   |   |
|---|---|
| Type                                      | BI2U-MT12-AP6X-H1141  |
| Ident. no.                                | 1634239   |
| Rated switching distance                  | 2 mm  |
| Mounting conditions                       | Flush   |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm                                   |
| Repeat accuracy                           | $\leq 2\%$ of full scale                                      |
| Temperature drift                         | $\leq \pm 10\%$   |
|   | $\leq \pm 15\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$ |
| Hysteresis                                | 3...15 %  |
| Ambient temperature                       | -30...+85 °C  |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | $\leq 10\% U_s$   |
| DC rated operational current              | $\leq 200$ mA   |
| No-load current                           | $\leq 20$ mA  |
| Residual current                          | $\leq 0.1$ mA   |
| Isolation test voltage                    | $\leq 0.5$ kV   |
| Short-circuit protection                  | yes / Cyclic  |
| Voltage drop at $I_e$                     | $\leq 1.8$ 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   |

## Technical data

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

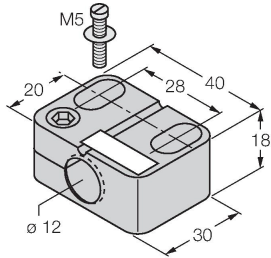


|                           |         |
|---------------------------|---------|
| Distance D                | 24 mm   |
| Distance W                | 3 x Sn  |
| Distance T                | 3 x B   |
| Distance S                | 1.5 x B |
| Distance G                | 6 x Sn  |
| Diameter active area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

## Accessories

**BST-12B**

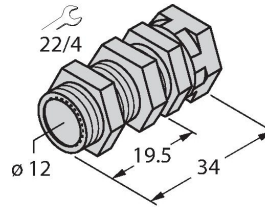
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

**QMT-12**

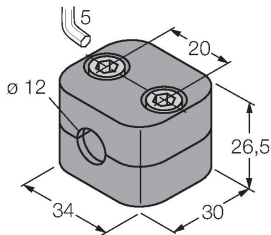
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Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

**BSS-12**

6901321



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

## Wiring accessories

Dimension drawing

Type

Ident. no.

RKC4T-2/TXL1001

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)

