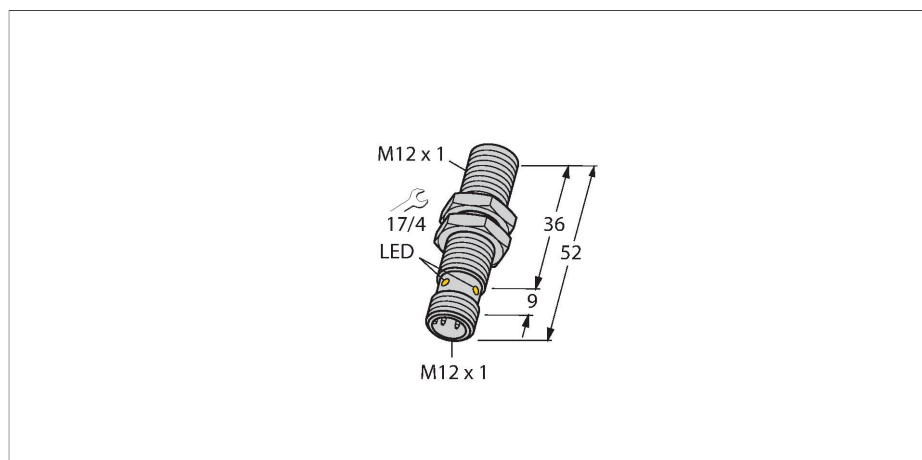


# BI3U-M12-AN6X-H1141

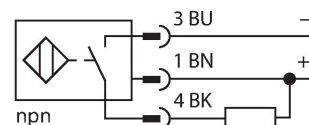
## Inductive sensor



### Features

- M12 x 1 threaded barrel
- Chrome-plated brass
- 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 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

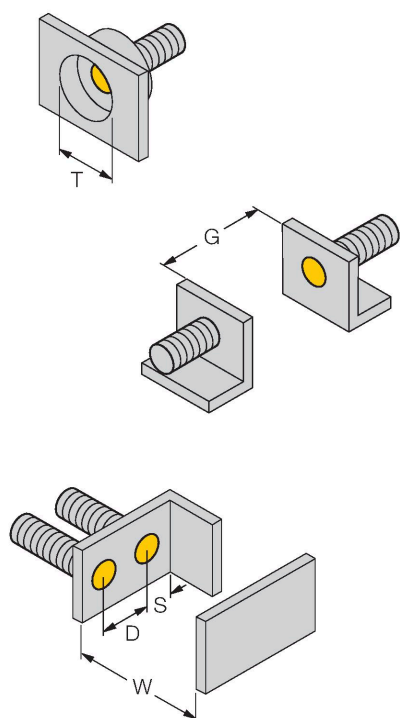
|   |   |
|---|---|
| Type                                      | BI3U-M12-AN6X-H1141                       |
| Ident. no.                                | 1634150                                   |
| Rated switching distance                  | 3 mm                                      |
| Mounting conditions                       | Flush                                     |
| Secured operating distance                | ≤ (0.81 × Sn) mm                          |
| Repeat accuracy                           | ≤ 2 % of full scale                       |
| Temperature drift                         | ≤ ± 10 %<br>≤ ± 15 %, ≤ -25 °C v ≥ +70 °C |
| Hysteresis                                | 3...15 %                                  |
| Ambient temperature                       | -30...+85 °C                              |
| Operating voltage                         | 10...30 VDC                               |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                    |
| 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 <sub>e</sub>            | ≤ 1.8 V                                   |
| Wire breakage/Reverse polarity protection | yes / Complete                            |
| Output function                           | 3-wire, NO contact, NPN                   |
| Insulation class                          | □   |
| Switching frequency                       | 2 kHz                                     |
| Design                                    | Threaded barrel, M12 × 1                  |
| Dimensions                                | 52 mm                                     |
| Housing material                          | Metal, CuZn, Chrome-plated                |
| Active area material                      | Plastic, LCP                              |
| Max. tightening torque housing nut        | 10 Nm                                     |

## Technical data

|                       |   |
|-----------------------|---|
| Electrical connection | Connectors, M12 x 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 |

## Accessories

**QM-12** **6945101**

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

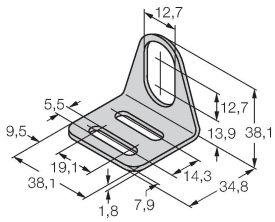
**BST-12B** **6947212**

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

**MW12**

**6945003**

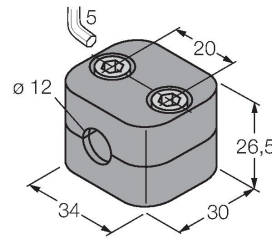
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



**BSS-12**

**6901321**

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



Accessories

**Dimension drawing**

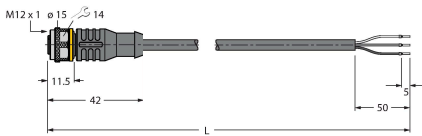
**Type**

**Ident. no.**

**RKC4T-2/TEL**

**6625010**

Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see [www.turck.com](http://www.turck.com)





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