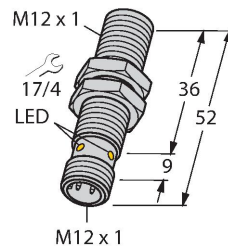


# BI6U-M12-AP6X-H1141

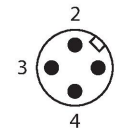
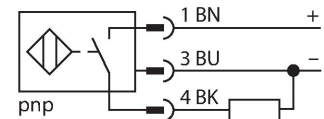
## Inductive Sensor



### Features

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



### Technical data

|                                           |                             |
|-------------------------------------------|-----------------------------|
| Type                                      | BI6U-M12-AP6X-H1141         |
| Ident. no.                                | 1644810                     |
| Rated switching distance                  | 6 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 %                    |
| Ambient temperature                       | -25...+70 °C                |
| Operating voltage                         | 10...30 VDC                 |
| Residual ripple                           | $\leq 10$ % $U_{ss}$        |
| DC rated operational current              | $\leq 200$ mA               |
| No-load current                           | $\leq 24$ 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     |
| Switching frequency                       | 2 kHz                       |
| Design                                    | Threaded barrel, M12 × 1    |
| Dimensions                                | 52 mm                       |
| Housing material                          | Metal, CuZn, Chrome-plated  |
| Active area material                      | Plastic, LCP                |

### Functional principle

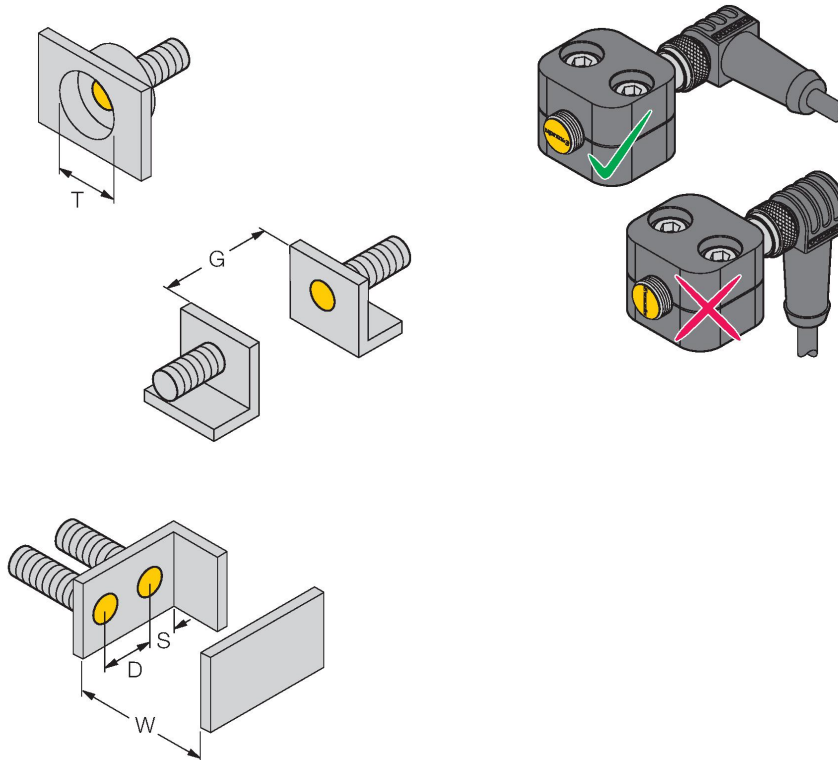
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Max. tightening torque of housing nut | 10 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

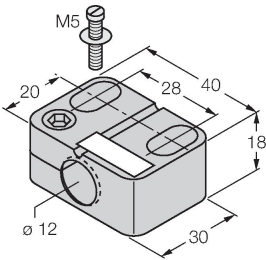


|                        |         |
|------------------------|---------|
| Distance D             | 24 mm   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 12 mm |

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

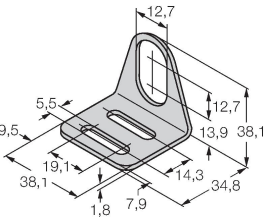
Accessories

BST-12B 6947212



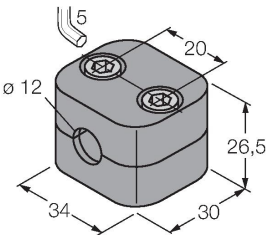
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW-12 6945003



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

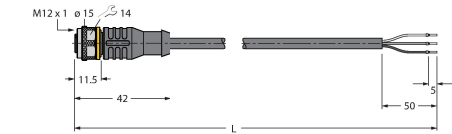
BSS-12 6901321



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

Wiring 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)