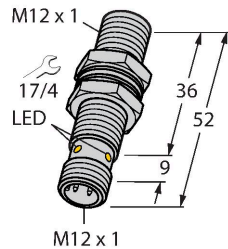


# BI6U-MT12-AP6X2-H1141

## Inductive Sensor



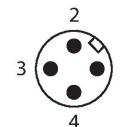
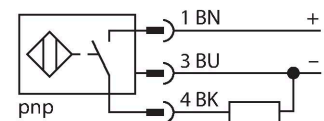
### Technical data

|  |                             |
|--|-----------------------------|
| Type                                   | BI6U-MT12-AP6X2-H1141       |
| ID                                     | 1644904                     |
| <b>General data</b>                    |                             |
| 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   |
| Hysteresis                             | 3...15 %                    |
| <b>Electrical data</b>                 |                             |
| Operating voltage $U_B$                | 10...30 VDC                 |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$     |
| DC rated operating current $I_e$       | $\leq 200$ mA               |
| No-load current                        | $\leq 25$ mA                |
| Residual current                       | $\leq 0.1$ mA               |
| Isolation test voltage                 | 0.5 kV                      |
| Short-circuit protection               | yes/Cyclic                  |
| Voltage drop at $I_e$                  | $\leq 1.8$ V                |
| Wire break/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                    | 2 kHz                       |
| <b>Mechanical data</b>                 |                             |
| Design                                 | Threaded barrel, M12 x 1    |

### Features

- Threaded barrel, M12 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

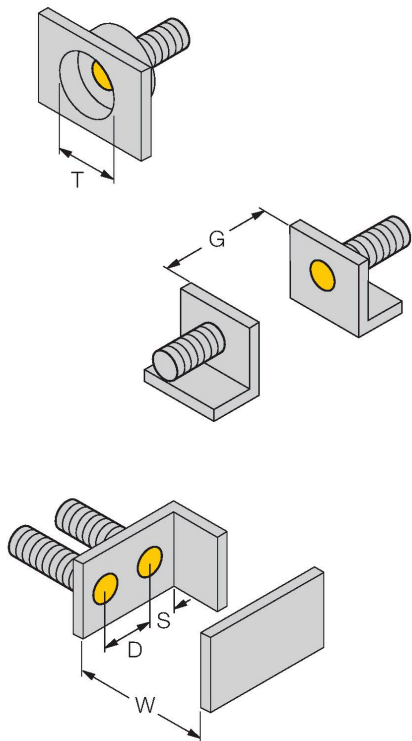
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

|                                       |   |
|---------------------------------------|---|
| Dimensions                            | 52 mm                                     |
| 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                        |
| 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 |
| Power-on indication                   | LED, Green                                |
| 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 |

The sensor along with the BSS-12 half-shell clamp can be mounted with a torque of up to 0.5 Nm in any orientation.

BI6U-MT12-AP6X2-H114 1| 02/21/2025 14-24 | technical changes reserved

## Accessories

BST-12B

6947212

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



BSS-12

6901321

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

