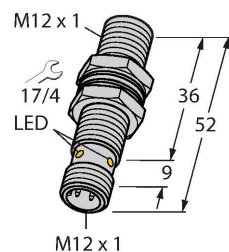


# BI6U-MT12-VP6X-H1141

## Inductive Sensor



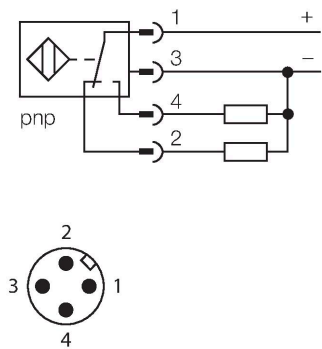
### Technical data

|                                        |                                    |
|----------------------------------------|------------------------------------|
| Type                                   | BI6U-MT12-VP6X-H1141               |
| ID                                     | 1644819                            |
| General data                           |                                    |
| 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 %                           |
| Electrical data                        |                                    |
| Operating voltage $U_B$                | 10...30 VDC                        |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$            |
| DC rated operating current $I_o$       | $\leq 200$ 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 $I_o$                  | $\leq 1.8$ V                       |
| Wire break/reverse polarity protection | yes/Complete                       |
| Output function                        | 4-wire, Complementary contact, PNP |
| DC field stability                     | 300 mT                             |
| AC field stability                     | 300 mT <sub>ss</sub>               |
| Switching frequency                    | 2 kHz                              |
| Mechanical data                        |                                    |
| Design                                 | Threaded barrel, M12 x 1           |
| Dimensions                             | 52 mm                              |
| Housing material                       | Metal, CuZn, PTFE-coated           |
| Active area material                   | Plastic, LCP, PTFE-coated          |

### 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 4-wire, 10...30 VDC
- Changeover 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

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| 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 |
| Switching state                       | LED, Yellow                               |

Mounting instructions

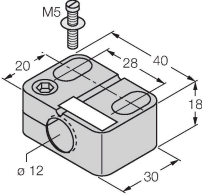
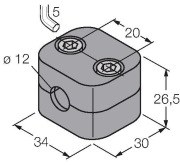
Mounting instructions/Description

The image contains three technical drawings of the BSS-12 half-shell clamp. The top drawing is a side view showing the clamp's profile with a dimension line labeled 'T' indicating its thickness. The middle drawing shows two clamps from a perspective view, with a dimension line labeled 'G' indicating the distance between their mounting holes. The bottom drawing is a front view of two clamps, showing two mounting holes. Dimension lines are labeled 'D' (distance between holes), 'S' (distance from the edge to the first hole), and 'W' (total width of the clamp).

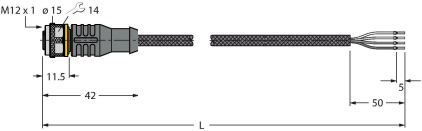
|                        |         |
|------------------------|---------|
| Distance D             | 24 mm   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 12 mm |

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.

Accessories

|                                                                                   |         |                                                                                    |         |
|-----------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------|---------|
| BST-12B                                                                           | 6947212 | BSS-12                                                                             | 6901321 |
| Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6         |         | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene     |         |
|  |         |  |         |

Accessories

|                                                                                   |      |         |                                                                                                                                                         |
|-----------------------------------------------------------------------------------|------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimension drawing                                                                 | Type | ID      |                                                                                                                                                         |
| RKC4.4T-2/TXL1001                                                                 |      | 6628825 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C |
|  |      |         |                                                                                                                                                         |