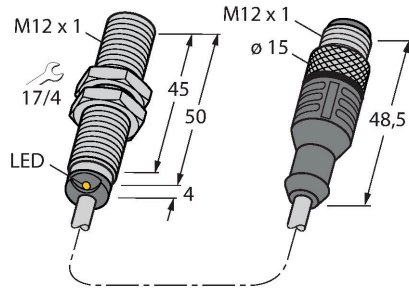


# BI4U-MT12-AN6X-0.5-RS4T/S1589

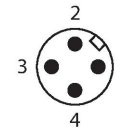
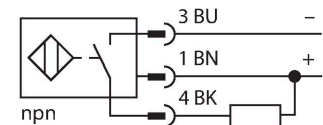
## Inductive Sensor – With WeldGuard™ Coating



### Features

- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Pigtail with M12 x 1 connector

### Wiring diagram



### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ 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

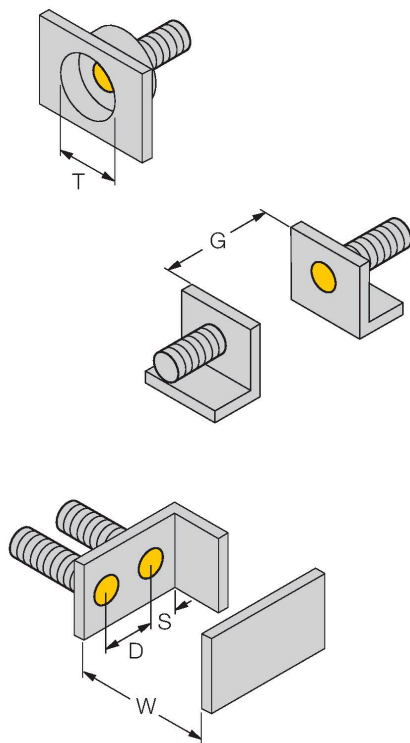
|  |  |
|--|--|
| Type                                   | BI4U-MT12-AN6X-0.5-RS4T/S1589  |
| ID                                     | 16348291   |
| Special version                        | S1589 Corresponds to: With weldguard coating   |
| <b>General data</b>                    |  |
| Rated switching distance               | 4 mm   |
| Mounting conditions                    | Flush  |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm  |
| Repeat accuracy                        | $\leq 2 \%$ of full scale  |
|  | $\leq \pm 15 \%$ , $\leq -25 \text{ }^{\circ}\text{C}$ v $\geq +70 \text{ }^{\circ}\text{C}$ |
| 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 $I_o$       | $\leq 200$ 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                        | 3-wire, NO contact, NPN  |
| DC field stability                     | 300 mT   |
| AC field stability                     | 300 mT <sub>ss</sub>   |

## Technical data

|                                       |   |
|---------------------------------------|---|
| Insulation class                      | □   |
| Switching frequency                   | 3 kHz                                     |
| <b>Mechanical data</b>                |   |
| Design                                | Threaded barrel, M12 x 1                  |
| Dimensions                            | 54 mm                                     |
| Housing material                      | Metal, CuZn, PTFE-coated                  |
| Active area material                  | Plastic, LCP + WeldGuard™, PTFE-coated    |
| End cap                               | Plastic, EPTR                             |
| Material coupling nut                 | metal, CuZn, nickel-plated                |
| Max. tightening torque of housing nut | 7 Nm                                      |
| Electrical connection                 | Cable with connector, M12 × 1             |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 0.5 m               |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                  |
| <b>Environmental conditions</b>       |   |
| Ambient temperature                   | -30...+85 °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



|                        |                             |
|------------------------|-----------------------------|
| Distance D             | 24 mm                       |
| Distance W             | $3 \times S_n$              |
| Distance T             | 36 mm                       |
| Distance S             | $1.5 \times B$              |
| Distance G             | $6 \times S_n$              |
| Diameter active area B | $\varnothing 12 \text{ mm}$ |

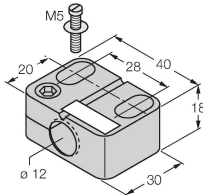
All flush-mountable uprox+ threaded barrel types can also be mounted recessed. Safe operation is ensured if it is mounted recessed by half a screw turn.

## Accessories

### BST-12B

6947212

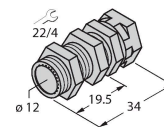
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



### QMT-12

6945106

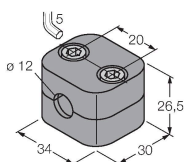
Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



### BSS-12

6901321

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



### PN-M12

6905309

Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)

