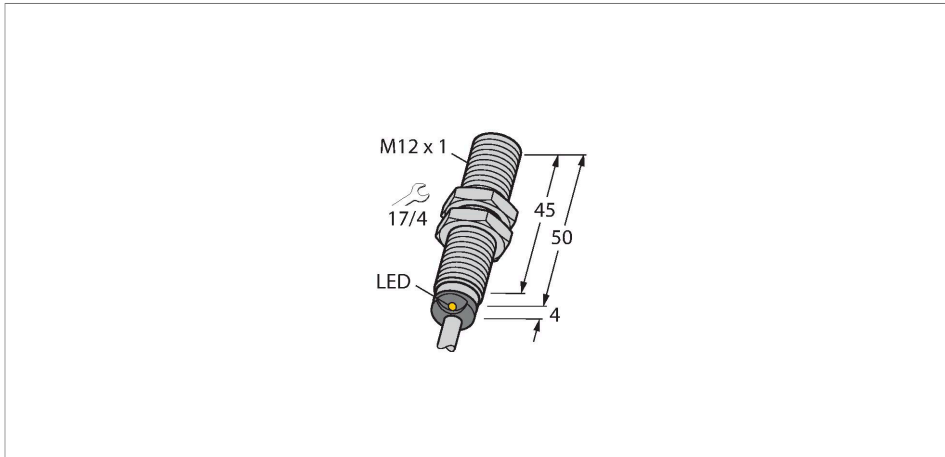


# BI6U-M12-AN6X Inductive Sensor



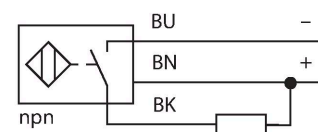
## Technical data

|   |                             |
|---|-----------------------------|
| Type                                      | BI6U-M12-AN6X               |
| ID  | 1644806                     |
| <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   |
| Temperature drift                         | $\leq \pm 10 \%$            |
| Hysteresis                                | 3...15 %                    |
| <b>Electrical data</b>                    |                             |
| Operating voltage                         | 10...30 VDC                 |
| Residual ripple                           | $\leq 10 \%$ $U_{ss}$       |
| DC rated operational current              | $\leq 200$ mA               |
| No-load current                           | 25 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, NPN     |
| DC field stability                        | 300 mT                      |
| AC field stability                        | 300 mT <sub>SS</sub>        |
| Switching frequency                       | 2 kHz                       |

## 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, NPN output
- Cable connection

## 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

| Mechanical data                       |   |
|---------------------------------------|---|
| Design                                | Threaded barrel, M12 x 1                  |
| Dimensions                            | 54 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, LCP                              |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 7 Nm                                      |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                 |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                  |
| 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



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  $\varnothing$  12 mm

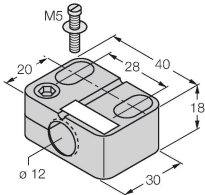
The sensor along with the BSS-12 half-shell clamp can be mounted with a torque of up to 0.5 Nm in any orientation.

## Accessories

### BST-12B

6947212

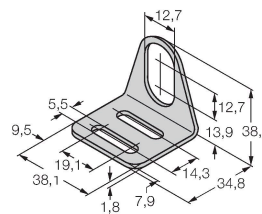
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



### 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

