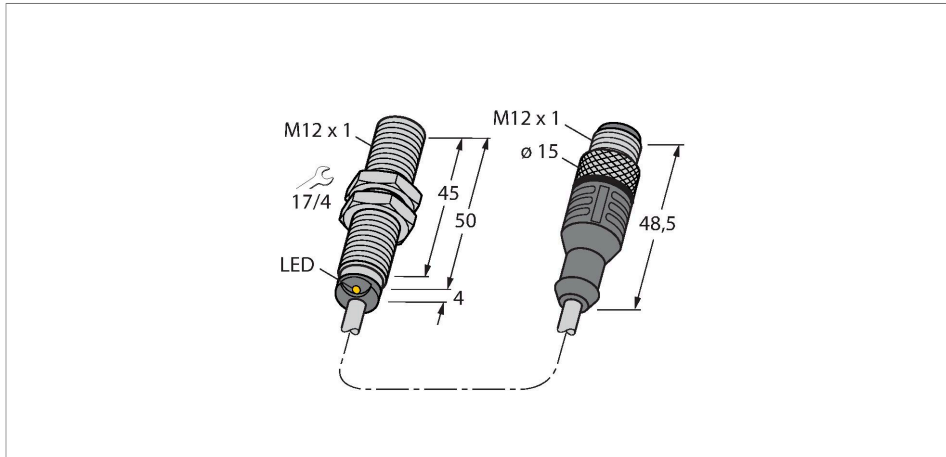


# BI2-G12-AN6X-0.2-RS4T

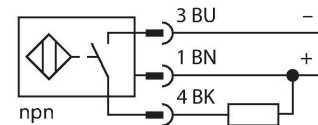
## Inductive Sensor



### Features

- Threaded barrel, M12 x 1
- Chrome-plated brass
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Pigtail with M12 x 1 connector

### Wiring diagram



### Technical data

|   |   |
|---|---|
| Type                                      | BI2-G12-AN6X-0.2-RS4T                               |
| ID  | 4635588   |
| <b>General data</b>                       |   |
| Rated switching distance                  | 2 mm  |
| Mounting conditions                       | Flush   |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm                         |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| 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                           | 15 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                             |
| Switching frequency                       | 2 kHz   |

### Functional principle

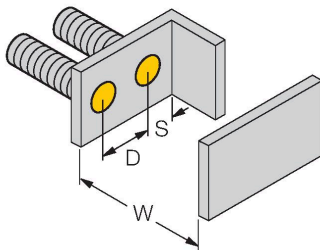
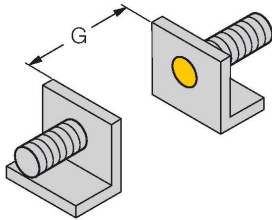
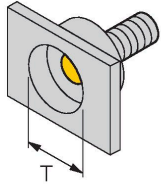
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

## Technical data

| Mechanical data                       |  |
|---------------------------------------|--|
| Design                                | Threaded barrel, M12 × 1                   |
| Dimensions                            | 54 mm                                      |
| Housing material                      | Metal, CuZn, Chrome-plated                 |
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Material coupling nut                 | CuZn, nickel-plated                        |
| Max. tightening torque of housing nut | 10 Nm                                      |
| Electrical connection                 | Cable with connector, M12 × 1              |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 0.2 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                      | IP67                                       |
| MTTF                                  | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                                |

## Mounting instructions

### Mounting instructions/Description



Distance D 2 x B

Distance W 3 x Sn

Distance T 3 x B

Distance S 1.5 x B

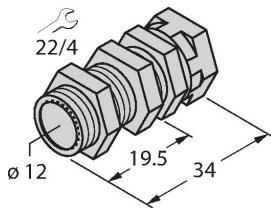
Distance G 6 x Sn

Diameter active area B  $\varnothing$  12 mm

## Accessories

QM-12

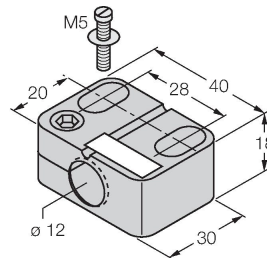
6945101



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

BST-12B

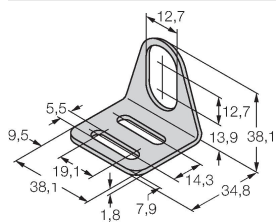
6947212



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

MW-12

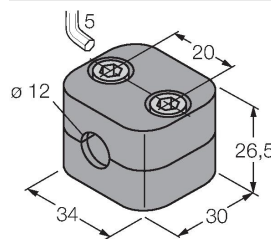
6945003



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