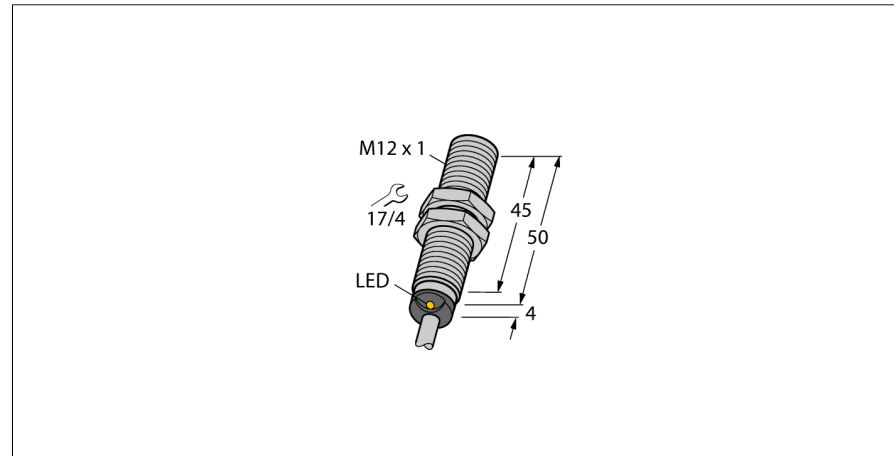
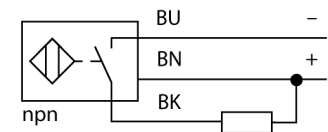


**Inductive sensor**  
**With increased switching distance**  
**BI4-M12-AN6X**



- M12 × 1 threaded barrel
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

**Wiring Diagram**



**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.

|   |   |
|---|---|
| <b>Type designation</b>                   | BI4-M12-AN6X  |
| Ident no.                                 | 4607130   |
| <b>Rated switching distance Sn</b>        | 4 mm  |
| Mounting conditions                       | Flush   |
| Secured operating distance                | ≤ (0,81 × Sn) mm                                    |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                           | ≤ 2 % of full scale                                 |
| Temperature drift                         | ≤ ± 10 %  |
| Hysteresis                                | 3...15 %  |
| Ambient temperature                       | -25...+70 °C  |
| <b>Operating voltage</b>                  | 10...30 VDC   |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                              |
| DC rated operational current              | ≤ 200 mA  |
| No-load current I <sub>0</sub>            | ≤ 15 mA   |
| Residual current                          | ≤ 0.1 mA  |
| Isolation test voltage                    | ≤ 0.5 kV  |
| Short-circuit protection                  | yes/ Cyclic   |
| Voltage drop at I <sub>0</sub>            | ≤ 1.8 V   |
| Wire breakage/Reverse polarity protection | yes/ Complete                                       |
| Output function                           | 3-wire, NO contact, NPN                             |
| Switching frequency                       | 2 kHz   |
| <b>Design</b>                             | Threaded barrel, M12 × 1                            |
| Dimensions                                | 54 mm   |
| Housing material                          | Metal, CuZn, Chrome-plated                          |
| Active area material                      | Plastic, PA12-GF30                                  |
| End cap                                   | Plastic, EPTR                                       |
| Max. tightening torque housing nut        | 10 Nm   |
| Electrical connection                     | Cables  |
| Cable quality                             | 5.2 mm, LifYY, PVC, 2m                              |
| Cable cross section                       | 3 × 0.34 mm <sup>2</sup>                            |
| 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          |
| Packaging unit                            | 1   |
| <b>Switching state</b>                    | LED, Yellow   |

**Inductive sensor**  
**With increased switching distance**  
**BI4-M12-AN6X**

|                        |         |
|------------------------|---------|
| 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  |
| <hr/>                  |         |
| Diameter active area B | Ø 12 mm |



**Inductive sensor  
With increased switching distance  
BI4-M12-AN6X**

**Accessories**

| Type code | Ident no. | Description  |  |
|-----------|-----------|--|--|
| QM-12     | 6945101   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. |  |
| BST-12B   | 6947212   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6  |  |
| MW-12     | 6945003   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)   |  |
| BSS-12    | 6901321   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene   |  |