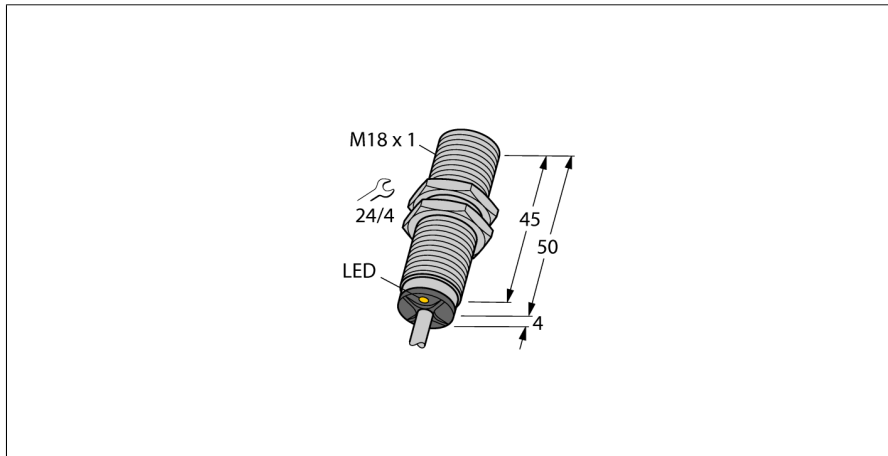


# Inductive sensor

## BI5-M18-AN6X

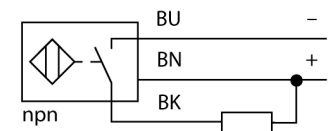
**TURCK**

Industrial  
Automation



- Threaded barrel, M18 x 1
- Chrome-plated brass
- 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.

We offer special versions for temperatures of -60 °C up to +250 °C.

|   |  |
|---|--|
| <b>Type code</b>                            | BI5-M18-AN6X                               |
| Ident no.                                   | 46111                                      |
| <b>Rated operating distance Sn</b>          | 5 mm                                       |
| Mounting condition                          | flush                                      |
| Assured switching distance                  | ≤ (0,81 x Sn) mm                           |
| Repeatability                               | ≤ 2 % of full scale                        |
| Temperature drift                           | ≤ ± 10 %                                   |
| Hysteresis                                  | 3...15 %                                   |
| Ambient temperature                         | -25...+70 °C                               |
| <b>Operating voltage</b>                    | 10...30VDC                                 |
| 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                                   |
| Rated insulation 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                         | 0.5 kHz                                    |
| <b>Construction</b>                         | threaded barrel, M18 x 1                   |
| Dimensions                                  | 54 mm                                      |
| Housing material                            | metal, CuZn, chrome-plated                 |
| Material active area                        | plastic, PA                                |
| End cap                                     | Plastic, EPTR                              |
| Max. tightening torque housing nut          | 25 Nm                                      |
| Connection                                  | cable                                      |
| Cable quality                               | 5.2 mm, LifYY, PVC, 2m                     |
| Cable cross section                         | 3 x 0.34 mm <sup>2</sup>                   |
| Vibration resistance                        | 55 Hz (1 mm)                               |
| Shock resistance                            | 30 g (11 ms)                               |
| IP Rating                                   | IP67                                       |
| MTTF  | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| <b>Switching state</b>                      | LED yellow                                 |

**Inductive sensor  
BI5-M18-AN6X**

|                               |         |
|-------------------------------|---------|
| 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  |
| <hr/>                         |         |
| Diameter of the active area B | Ø 18 mm |



Accessories

| Type code | Ident no. | Description  | Design |
|-----------|-----------|--|--------|
| BST-18B   | 6947214   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6  |        |
| QM-18     | 6945102   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. |        |
| MW-18     | 6945004   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)   |        |
| BSS-18    | 6901320   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene   |        |