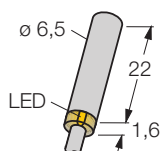
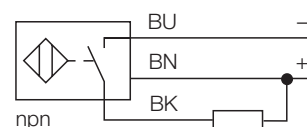


# Inductive sensor with extended switching distance Bi2-EH6,5K-AN6X



- smooth barrel, 6.5 mm diameter
- stainless steel, 1.4404
- large detection range
- 3-wire DC, 10...30 VDC
- normally open npn output
- cable connection

## Wiring diagram



## Functional principle

Inductive sensors are designed for wear-free and non-contact detection of metal objects. For this purpose they use a high-frequency electro-magnetic AC field that interacts with the target. With inductive sensors, this field is generated by an LC resonant circuit with a ferrite core coil.

|   |   |
|---|---|
| <b>Type</b>                                 | Bi2-EH6,5K-AN6X                         |
| Ident-No.                                   | 4610100                                 |
| <b>Rated operating distance Sn</b>          | 2 mm                                    |
| Mounting condition                          | flush                                   |
| Assured sensing range                       | (0,81 x Sn) mm                          |
| Correction factors                          | St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3 |
| Repeatability                               | 2 %                                     |
| 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                | 150 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>e</sub>              | 1.8V                                    |
| Wire breakage / Reverse polarity protection | yes / complete                          |
| Output function                             | 3-wire, normally open, npn              |
| Switching frequency                         | 3 kHz                                   |
| <b>Housing</b>                              | smooth barrel, 6.5 mm                   |
| Dimensions                                  | 23.6 mm                                 |
| Housing material                            | metal, AISI 316L                        |
| Material active face                        | plastic, plastic, PA12-GF20             |
| End cap                                     | plastic, PP                             |
| Connection                                  | cable                                   |
| Cable quality                               | Ø 4, LiYY-11Y, PUR, 2 m                 |
| Cable cross section:                        | 3 x 0.25mm <sup>2</sup>                 |
| Vibration resistance                        | 55 Hz (1 mm)                            |
| Shock resistance                            | 30g (11 ms)                             |
| Degree of protection                        | IP67                                    |
| <b>Display switch state</b>                 | LED yellow                              |

# Inductive sensor with extended switching distance Bi2-EH6,5K-AN6X

| Mounting instructions                | minimum distances            |
|--------------------------------------|------------------------------|
| Distance D                           | $2 \times B$                 |
| Distance W                           | $3 \times S_n$               |
| Distance T                           | $3 \times B$                 |
| Distance S                           | $1,5 \times B$               |
| Distance G                           | $6 \times S_n$               |
| <b>Diameter of the active area B</b> | $\varnothing 6.5 \text{ mm}$ |

