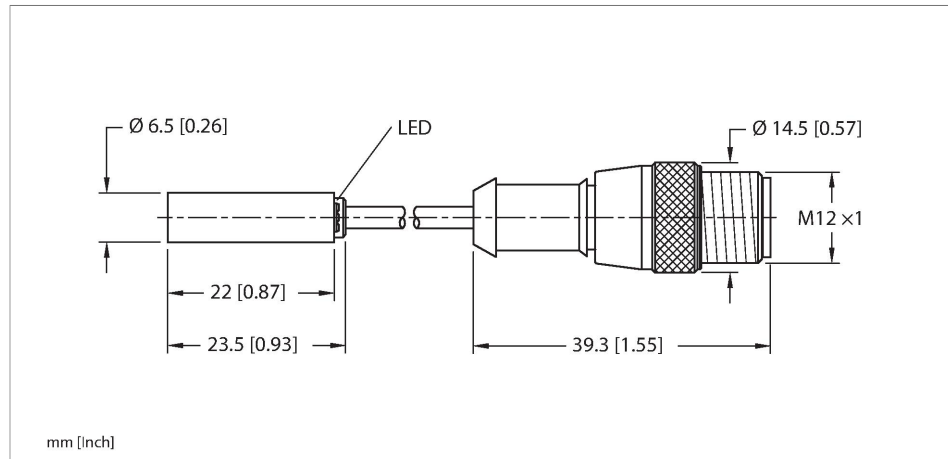


# BI2-EH6.5K-AP6X-0.2-RS4T

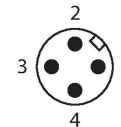
## Inductive Sensor – With Increased Switching Distance



### Features

- Smooth barrel, Ø 6.5 mm
- Stainless steel, 1.4305 (AISI 303)
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M12 x 1

### Wiring diagram



### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI2-EH6.5K-AP6X-0.2-RS4T                            |
| ID                                     | 4610091                                             |
| <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                           |
| Hysteresis                             | 20 %                                                |
| <b>Electrical data</b>                 |                                                     |
| Operating voltage $U_B$                | 10...30 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                             |
| DC rated operating current $I_o$       | $\leq 150$ mA                                       |
| No-load current                        | $\leq 15$ mA                                        |
| Residual current                       | $\leq 0.1$ mA                                       |
| Isolation test voltage                 | 0.5 kV                                              |
| Short-circuit protection               | yes/Cyclic                                          |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                        |
| Wire break/reverse polarity protection | yes/Complete                                        |
| Output function                        | 3-wire, NO contact, PNP                             |
| Switching frequency                    | 3 kHz                                               |
| <b>Mechanical data</b>                 |                                                     |
| Design                                 | Smooth barrel, 6,5 mm                               |

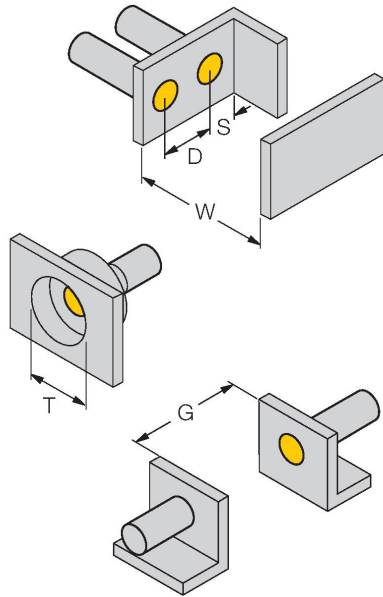
### Functional principle

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

|                          |                                            |
|--------------------------|--------------------------------------------|
| Dimensions               | 23.5 mm                                    |
| Housing material         | Stainless steel, 1.4305 (AISI 303)         |
| Active area material     | Plastic, PA6.6                             |
| End cap                  | Plastic, PP                                |
| Electrical connection    | Cable with connector, M12 × 1              |
| Cable quality            | Ø 3.3 mm, Gray, LifY-11Y, PUR, 0.2 m       |
| Core cross-section       | 3 x 0.14 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 D2 x B                |
|                                                                                     | Distance W3 x Sn               |
|                                                                                     | Distance T3 x B                |
|                                                                                     | Distance S1.5 x B              |
|                                                                                     | Distance G6 x Sn               |
|                                                                                     | Diameter active area BØ 6.5 mm |
|                                                                                     |                                |

BI2-EH6.5K-AP6X-0.2-RS4T| 02/21/2025 14-36 | technical changes reserved