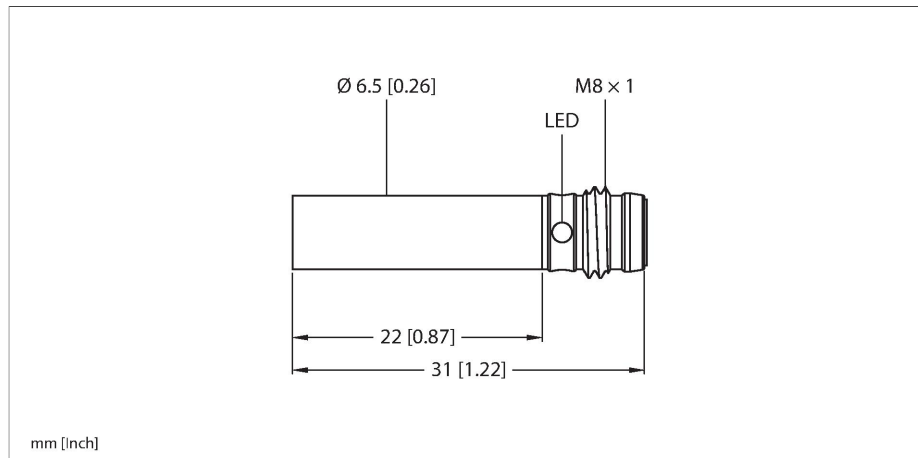


# BI1.5-EH6.5K-AP6X-V1131

## Inductive Sensor



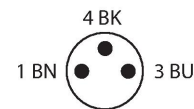
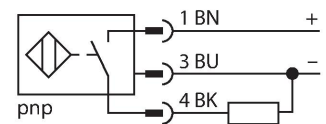
### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI1.5-EH6.5K-AP6X-V1131                             |
| ID                                     | 4610740                                             |
| <b>General data</b>                    |                                                     |
| Rated switching distance               | 1.5 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                               |
| Dimensions                             | 31 mm                                               |
| Housing material                       | Stainless steel, 1.4305 (AISI 303)                  |
| Active area material                   | Plastic, PA6.6                                      |

### Features

- Smooth barrel, Ø 6.5 mm
- Stainless steel, 1.4305 (AISI 303)
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M8 x 1 male connector

### Wiring diagram



### Functional principle

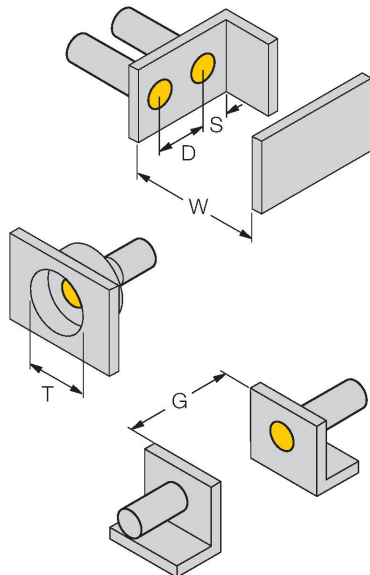
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

|                          |                                            |
|--------------------------|--------------------------------------------|
| Electrical connection    | Connector, M8 × 1                          |
| 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

The image contains three isometric diagrams illustrating different mounting methods for a connector. The top diagram shows a connector with two yellow circular active areas being mounted onto a rectangular plate. Dimension lines indicate 'D' as the distance between the active areas, 'S' as the distance from the active areas to the back of the plate, and 'W' as the total width of the plate. The middle diagram shows a side view of the connector mounted on a plate, with dimension 'T' indicating the thickness of the plate. The bottom diagram shows two separate components: a connector and a plate, with dimension 'G' indicating the distance between them.

|                        |          |
|------------------------|----------|
| 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 | Ø 6.5 mm |

Accessories

| Dimension drawing                                                                   | Type         | ID      |                                                                                                                                                      |
|-------------------------------------------------------------------------------------|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | PKGV3M-2/TEL | 6625385 | Connection cable, M8 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, black; cULus approval |