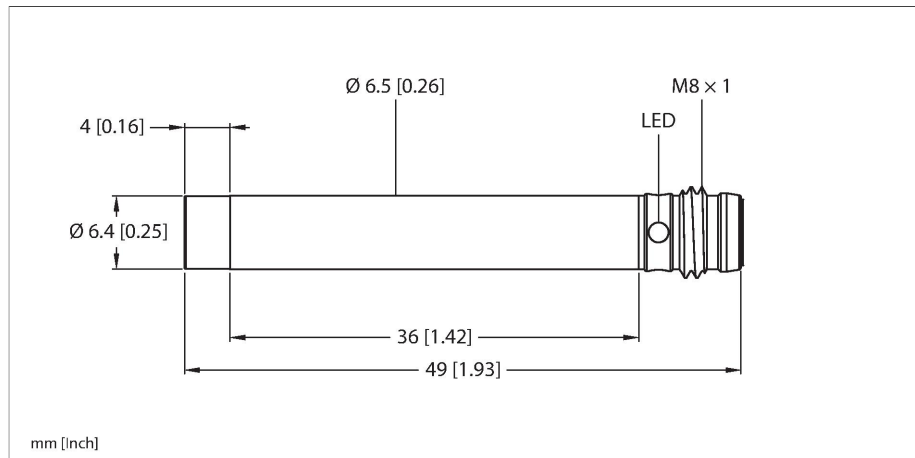


# NI3-EH6.5-AP6X-V1131

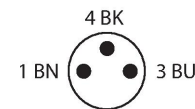
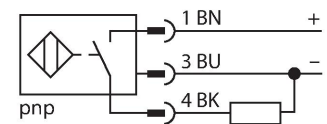
## Inductive Sensor



### 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



### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | NI3-EH6.5-AP6X-V1131                                |
| ID                                     | 4612420                                             |
| <b>General data</b>                    |                                                     |
| Rated switching distance               | 3 mm                                                |
| Mounting conditions                    | Non-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                            |
| Temperature drift                      | $\leq \pm 10$ %                                     |
| 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                             | 49 mm                                               |
| Housing material                       | Stainless steel, 1.4305 (AISI 303)                  |

### 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

|                          |                                            |
|--------------------------|--------------------------------------------|
| Active area material     | Plastic, PBT                               |
| 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                                |

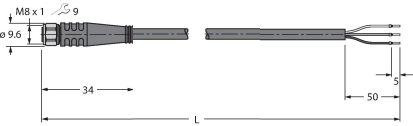
Mounting instructions

# Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor. The top diagram shows a side view of a sensor mounted on a wall, with dimensions D (distance from wall to sensor), S (sensor thickness), W (wall thickness), and N (distance from wall to sensor). The middle diagram shows a top view of a sensor mounted on a wall, with dimension T (distance from wall to sensor). The bottom diagram shows a front view of a sensor mounted on a wall, with dimension G (distance from wall to sensor).

|                        |          |
|------------------------|----------|
| Distance D             | 3 x B    |
| Distance W             | 3 x Sn   |
| Distance T             | 3 x B    |
| Distance S             | 1.5 x B  |
| Distance G             | 6 x Sn   |
| Distance N             | 2 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 |