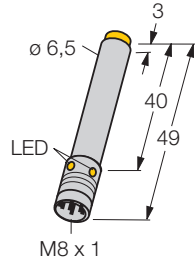


# Inductive sensor Ni3-EH6,5-AP6X-V1131

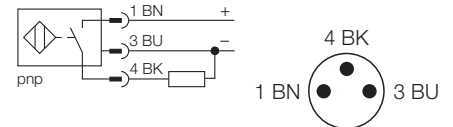
**TURCK**

Industrial  
Automation



- smooth barrel, 6.5 mm diameter
- stainless steel, 1.4404
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- connector, M8 x 1

## 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. Concerning inductive sensors, this field is generated by an LC resonant circuit with a ferrite core coil.

|                                                  |                                                    |
|--------------------------------------------------|----------------------------------------------------|
| <b>Type</b>                                      | Ni3-EH6,5-AP6X-V1131                               |
| Ident-No.                                        | 4612420                                            |
| <b>Rated operating distance <math>S_n</math></b> | 3 mm                                               |
| Mounting condition                               | non-flush                                          |
| Assured sensing range                            | $\leq (0,81 \times S_n)$ mm                        |
| Correction factors                               | $St37 = 1, V2A \sim 0,7, Ms \sim 0,4, Al \sim 0,3$ |
| Repeatability                                    | $\leq 2 \%$                                        |
| Temperature drift                                | $\leq \pm 10 \%$                                   |
| Hysteresis                                       | 3... 15 %                                          |
| Ambient temperature                              | -25...+ 70 °C                                      |
| <b>Operating voltage</b>                         | 10... 30 VDC                                       |
| Residual ripple                                  | $\leq 10 \% U_{ss}$                                |
| DC rated operational current                     | $\leq 150$ mA                                      |
| No-load current $I_0$                            | $\leq 15$ mA                                       |
| Residual current                                 | $\leq 0,1$ mA                                      |
| Rated insulation voltage                         | $\leq 0,5$ kV                                      |
| Short-circuit protection                         | yes / cyclic                                       |
| Voltage drop at $I_e$                            | $\leq 1,8$ V                                       |
| Wire breakage / Reverse polarity protection      | yes / complete                                     |
| Output function                                  | 3-wire, NO contact, PNP                            |
| Switching frequency                              | $\leq 3$ kHz                                       |
| <b>Housing</b>                                   | smooth barrel, 6.5 mm                              |
| Dimensions                                       | 49 mm                                              |
| Housing material                                 | metal, V2A (1.4301)                                |
| Material active face                             | Plastic, plastic, PA12-GF20                        |
| Electrical connection                            | Connectors, M8 x 1                                 |
| Vibration resistance                             | 55 Hz (1 mm)                                       |
| Shock resistance                                 | 30g (11 ms)                                        |
| Protection class                                 | IP67                                               |
| <b>Display switch state</b>                      | LED yellow                                         |

# Inductive sensor Ni3-EH6,5-AP6X-V1131

| Mounting instructions                | minimum distances            |
|--------------------------------------|------------------------------|
| Distance W                           | $3 \times S_n$               |
| Distance T                           | $3 \times B$                 |
| Distance S                           | $1.5 \times B$               |
| Distance G                           | $6 \times S_n$               |
| Distance N                           | $2 \times S_n$               |
| <b>Diameter of the active area B</b> | $\varnothing 6.5 \text{ mm}$ |

