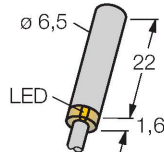


# BI1.5-EH6.5K-RN6X

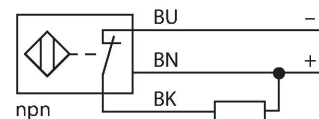
## Inductive Sensor



### Features

- Smooth barrel, Ø 6.5 mm
- Stainless steel, 1.4427 SO
- DC 3-wire, 10...30 VDC
- NC contact, NPN output
- Cable connection

### Wiring diagram



### Technical data

Type	BI1.5-EH6.5K-RN6X
ID	4610651
<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
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10$ % $U_{ss}$
DC rated operational current	$\leq 150$ mA
No-load current	15 mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NC contact, NPN
Switching frequency	3 kHz

### 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

Mechanical data	
Design	Smooth barrel, 6.5 mm
Dimensions	23.6 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic, PA12-GF30
End cap	Plastic, PP
Electrical connection	Cable
Cable quality	Ø 4 mm, LifYY-11Y, PUR, 2 m
Core cross-section	3 x 0.25 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

The image contains three isometric diagrams illustrating different mounting configurations for a sensor. Each diagram shows a grey L-shaped bracket with a yellow circular sensor area.
 

- Top Diagram:** Shows the sensor mounted on a vertical plate. Dimension *D* is the distance between two mounting holes. Dimension *W* is the width of the plate. Dimension *S* is the diameter of the mounting hole.
- Middle Diagram:** Shows the sensor mounted on a vertical plate. Dimension *T* is the thickness of the plate.
- Bottom Diagram:** Shows the sensor mounted on a vertical plate. Dimension *G* is the distance from the edge of the plate to the center of the sensor.

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

BI1.5-EH6.5K-RN6X| 11/29/2022 06:48 | technical changes reserved