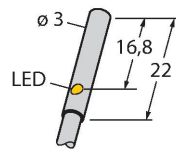


BI1-EH03-AP6X Inductive Sensor



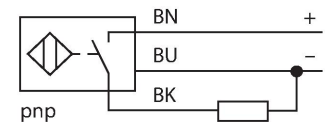
Technical data

Type	BI1-EH03-AP6X
ID	1619325
General data	
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.5; Cu=0.45; stainless steel = 0.8; Ms = 0.6
Repeat accuracy	$\leq 2 \%$ of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 20 \%$ U_{Bmax}
DC rated operating current I_o	≤ 100 mA
No-load current	≤ 10 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 2 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	3 kHz
Mechanical data	
Design	Smooth barrel, 3 mm
Dimensions	22 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, Polyester

Features

- Smooth barrel, Ø 3 mm
- Stainless steel, 1.4301
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

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	Cable
Cable quality	Ø 2.6 mm, LifY-11Y, PUR, 2 m
Core cross-section	3 x 0.055 mm ²
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, Flashes within the limits (>0.8 Sn)

Mounting instructions

Mounting instructions/Description

The image contains three isometric diagrams illustrating different mounting methods for a device.
 1. The top diagram shows a device with two yellow circular active areas mounted on a rectangular plate. Dimension 'D' is the distance between the active areas, 'S' is the distance from the active areas to the edge of the plate, and 'W' is the width of the plate.
 2. The middle diagram shows a side view of the device mounted on a plate, with dimension 'T' indicating the thickness of the plate.
 3. The bottom diagram shows the device mounted on a bracket. Dimension 'G' is the distance between the mounting points of the bracket.

Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	9 x Sn
Diameter active area B	Ø 3 mm

Accessories

MBS30	6948000
Fixing clamp; material mounting block: plastic	
