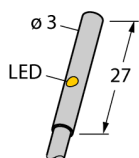


Inductive Sensor

BI1-EH03-AP7X 5M



Type	BI1-EH03-AP7X
ID	1619322

General data	
Rated switching distance S_n	1 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	$\leq 5\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...20 %

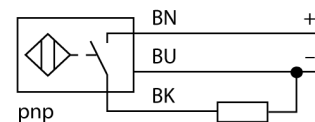
Electrical data	
Operating voltage U_s	10...30 VDC
Ripple U_{rs}	$\leq 10\% U_{Bmax}$
DC rated operating current I_s	≤ 100 mA
Residual current	≤ 0.01 mA
Isolation test voltage	0.5 kV
Short-circuit protection	no
Voltage drop at I_s	≤ 2 V
Wire break/reverse polarity protection	yes/yes (voltage supply)
Output function	3-wire, NO contact, PNP
Switching frequency	3.5 kHz

Mechanical data	
Design	Smooth barrel, 3 mm
Dimensions	27 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PBT
Electrical connection	Cable
Cable quality	$\varnothing 2.6$ mm, LifYY-11Y, PUR, 5 m
Core cross-section	3 x 0.1 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

- Smooth barrel, $\varnothing 3$ 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.

Switching state	LED, Red
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