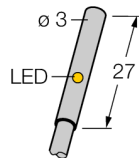


Inductive sensor BI1-EH03-AN7X

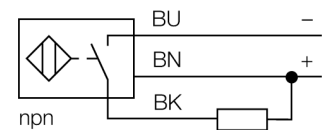
TURCK

Industrial
Automation



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

Wiring diagram



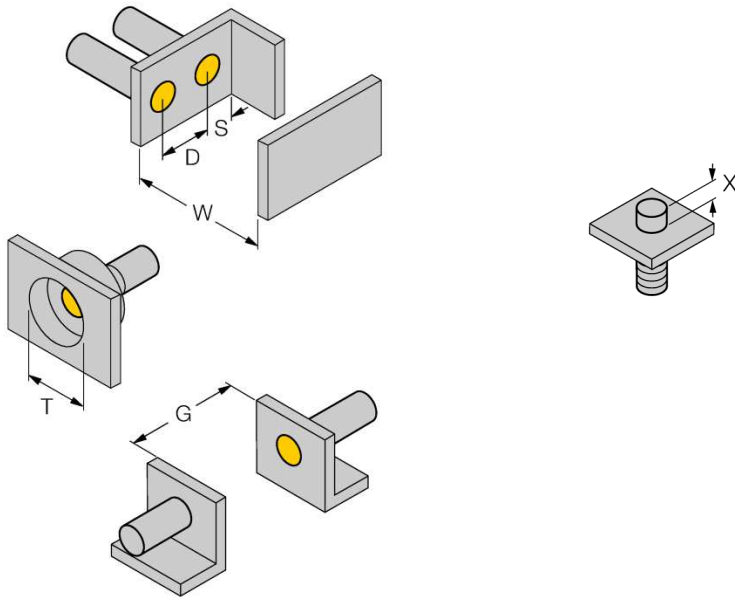
Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Type code	BI1-EH03-AN7X
Ident no.	1619323
Rated operating distance S_n	1 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x S _n) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 5 % of full scale
Temperaturdrift	10 %
Hysteresis	3...20 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30VDC
Residual ripple	≤ 10 % U _{ss}
DC rated operational current	≤ 100 mA
No-load current I ₀	≤ 10 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.075 kV
Short-circuit protection	no
Voltage drop at I _e	≤ 1.5 V
Wire breakage / Reverse polarity protection	yes/ yes (voltage supply)
Output function	3-wire, NO contact, NPN
Switching frequency	5 kHz
Design	smooth barrel, 3 mm
Dimensions	27 mm
Housing material	Metal, V2A (1.4301)
Material active face	Plastic, POM
Connection	cable
Cable quality	2.6 mm, LifYY-11Y, PUR, 2 m
Cable cross section	3 x 0.09 mm ²
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	● red

**Inductive sensor
BI1-EH03-AN7X**

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
<hr/>	
Diameter of the active area B	Ø 3 mm



The sensor can be flush-mounted in non-ferromagnetic material.

When mounted in ferromagnetic materials the distance X must be observed.

Distance X: 1,0 mm