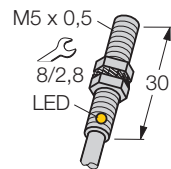


# Inductive sensor

## Bi1-EG05-AP6X

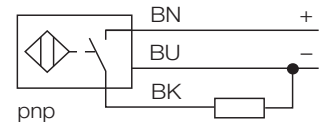
**TURCK**

Industrial  
Automation



- threaded barrel, M5 x 0,5
- stainless steel, 1.4301
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- cable connection

### 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>	Bi1-EG05-AP6X
Ident-No.	4609740
<b>Rated operating distance Sn</b>	1 mm
Mounting condition	flush
Assured sensing range	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1, V2A ~ 0,7, Ms ~ 0,4, Al ~ 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	$\leq 100$ 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>	threaded barrel, M5 x 0.5
Dimensions	30 mm
Housing material	metal, V4A (1.4404)
Material active face	Plastic, plastic, PA12-GF20
Tightening torque of housing nut	5 Nm
Electrical connection	cables
Cable quality	$\varnothing 3$ , LifYY-11Y, PUR, 2 m
Cable cross section:	$3 \times 0,14$ mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Protection class	IP67
<b>Display switch state</b>	LED yellow

**Inductive sensor  
Bi1-EG05-AP6X**

Mounting instructions	minimum distances
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

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**Diameter of the active area B**                       $\varnothing$  5 mm

