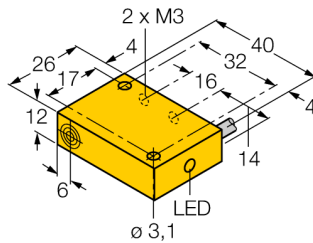


# Inductive sensor

## BI2-Q12-AZ31X

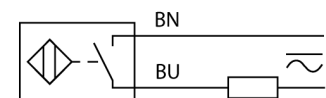
**TURCK**

Industrial  
Automation



- Rectangular, height 12 mm
- Active face, lateral
- Plastic, PBT-GF30-V0
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NO contact
- 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.

<b>Type designation</b>	BI2-Q12-AZ31X
Ident no.	13100
<b>Rated switching distance <math>S_n</math></b>	2 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 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	20...250VAC
Operating voltage	10...300 VDC
AC rated operational current	$\leq 100$ mA
DC rated operational current	$\leq 100$ mA
Frequency	$\geq 50... \leq 60$ Hz
Residual current	$\leq 1.7$ mA
Isolation test voltage	$\leq 1.5$ kV
Surge current	$\leq 1$ A ( $\leq 10$ ms max. 5 Hz)
Voltage drop at $I_n$	$\leq 6$ V
Output function	2-wire, NO contact
Smallest operating current $I_m$	$\geq 3$ mA
Switching frequency	0.02 kHz
<b>Design</b>	Rectangular, Q12
Dimensions	40 x 26 x 12 mm
Housing material	Plastic, PA12-GF30
Electrical connection	Cable
Cable quality	5.2 mm, LifYY, PVC, 2m
Cable cross section	2 x 0.34 mm <sup>2</sup>
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
<b>Switching state</b>	LED red

# Inductive sensor BI2-Q12-AZ31X

**TURCK**

Industrial  
Automation

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Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn

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Width active area B 12 mm

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