

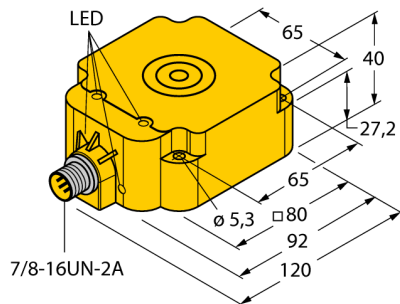
Inductive sensor

With increased switching distance

BI50-Q80-ADZ30X2-B1131

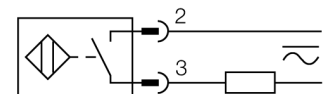
TURCK
works

Industrial
Automation



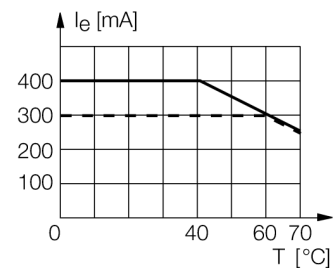
- Rectangular, height 40 mm
- Active face on top
- Plastic, PBT-GF30-V0
- Large sensing range
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NO contact
- 7/8" male connector

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.



Type designation	BI50-Q80-ADZ30X2-B1131
Ident-No.	4200310
Rated switching distance Sn	50 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0,81 \times S_n) \text{ mm}$
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2 \% \text{ of full scale}$
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	20...250VAC
Operating voltage	10...300 VDC
AC rated operational current	$\leq 400 \text{ mA}$
DC rated operational current	$\leq 300 \text{ mA}$
Frequency	$\geq 50... \leq 60 \text{ Hz}$
Residual current	$\leq 1.7 \text{ mA}$
Isolation test voltage	$\leq 1.5 \text{ kV}$
Surge current	$\leq 3 \text{ A} (\leq 20 \text{ ms max. } 5 \text{ Hz})$
Short-circuit protection	yes/ Latching
Voltage drop at I_e	$\leq 6 \text{ V}$
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	2-wire, NO contact
Smallest operating current I_m	$\geq 3 \text{ mA}$
Switching frequency	0.02 kHz
Design	Rectangular, Q80
Dimensions	92 x 80 x 40 mm
Housing material	Plastic, PBT-GF30-V0
Tightening torque fixing screw	4 Nm
Electrical connection	Connector, 7/8"
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
Power-on indication	LED, Green
Switching state	LED, Red

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Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$

Width active area B	80 mm
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