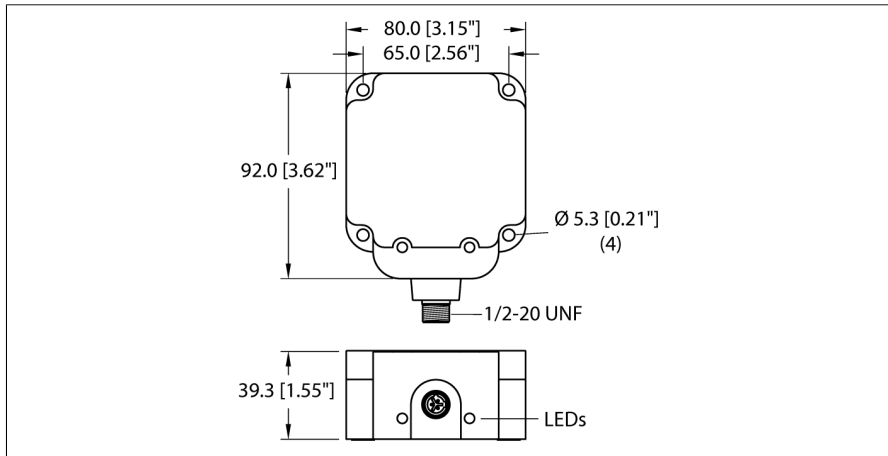


# Inductive sensor

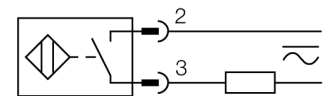
## With increased switching distance

### BI50-Q80-ADZ30X2-B3131



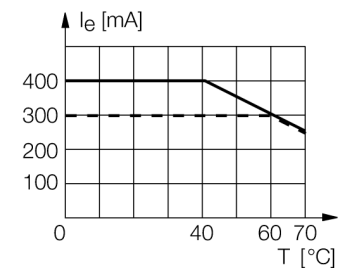
- Rectangular, height 40 mm
- Active face on top
- Plastic, PBT-GF30-V0
- Large sensing range
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NO contact
- 1/2" male connector

#### 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.



<b>Type designation</b>	BI50-Q80-ADZ30X2-B3131
Ident-No.	4200311
<b>Rated switching distance Sn</b>	50 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	$\leq 400$ mA
DC rated operational current	$\leq 300$ mA
Frequency	$\geq 50... \leq 60$ Hz
Residual current	$\leq 1.7$ mA
Isolation test voltage	$\leq 1.5$ kV
Surge current	$\leq 3$ A ( $\leq 20$ ms max. 5 Hz)
Short-circuit protection	yes/ Latching
Voltage drop at I <sub>e</sub>	$\leq 6$ V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	2-wire, NO contact
Smallest operating current I <sub>m</sub>	$\geq 3$ mA
Switching frequency	0.02 kHz
<b>Design</b>	Rectangular, Q80
Dimensions	92 x 80 x 40 mm
Housing material	Plastic, PBT-GF30-V0
Tightening torque fixing screw	4 Nm
Electrical connection	Connector, 1/2"
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
Packaging unit	1
<b>Power-on indication</b>	LED, Green
Switching state	LED, Yellow

**Inductive sensor**  
**With increased switching distance**  
**BI50-Q80-ADZ30X2-B3131**

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn

Width active area B	80 mm
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