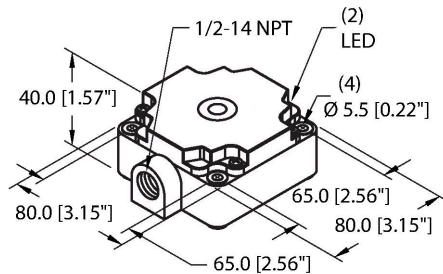


BI40-CP80-FDZ30X2/S10

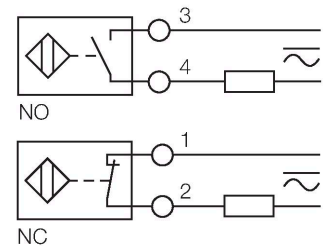
Inductive Sensor



Features

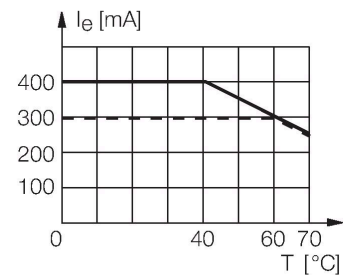
- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Thread, 1/2-14 NPT
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

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.



Technical data

Type	BI40-CP80-FDZ30X2/S10
ID	4230901
Special version	S10 Corresponds to: Mounting base with 1/2-14NPT thread
General data	
Rated switching distance	40 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	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	20...250 VAC
Operating voltage U_B	10...300 VDC
AC rated operational current	≤ 400 mA
DC rated operating current I_e	≤ 300 mA
Frequency	$\geq 50 \dots \leq 60$ Hz
Residual current	≤ 1.7 mA
Isolation test voltage	1.5 kV
Surge current	≤ 3 A (≤ 20 ms max. 5 Hz)
Short-circuit protection	yes/Latching
Voltage drop at I_e	≤ 6 V
Wire break/reverse polarity protection	yes/Complete

Technical data

Output function	2-wire, Connection programmable, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz
Mechanical data	
Design	Rectangular, CP80
Dimensions	80 x 80 x 41 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm²
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Red

Mounting instructions

Mounting instructions/Description

The image contains two technical diagrams. The primary diagram on the left illustrates the sensor's installation on a wall. It shows a yellow rectangular sensor with a crosshair on its face. Dimension lines indicate: 'B' for the sensor's width, 'D' for the distance from the wall to the sensor's front face, 'S' for the sensor's depth, and 'W' for the total width of the mounting bracket. A secondary diagram on the right shows the sensor from a different perspective, highlighting the mounting holes with dimension 'G'.

Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn
Width active area B	80 mm

B140-CP80-FDZ30X2/S10| 02/21/2025 13-45 | technical changes reserved