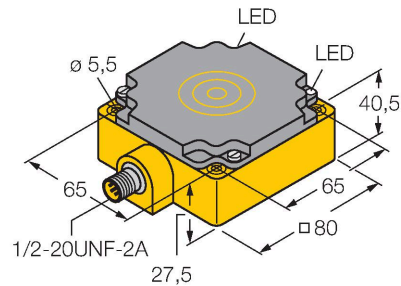


BI40-CP80-FDZ30X2-B3131

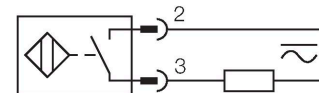
Inductive Sensor



Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 1/2" male connector

Wiring diagram

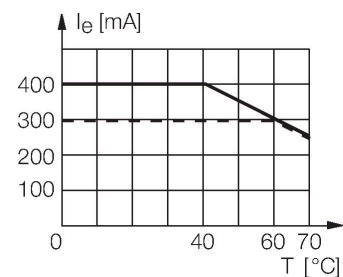


Technical data

Type	BI40-CP80-FDZ30X2-B3131
ID	4230992
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
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_o	≤ 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_o	≤ 6 V
Wire break/reverse polarity protection	yes/Complete
Output function	2-wire, NO contact, 2-wire
Smallest operating current	≥ 3 mA

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

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	Connector, 1/2"
Environmental conditions	
Ambient temperature	-25...+70 °C
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

Mounting instructions

Mounting instructions/Description

The image contains two technical diagrams for the CP80 sensor mounting. The primary diagram on the left shows two sensors mounted on a wall. Dimension 'B' indicates the width of a single sensor. Dimension 'D' indicates the vertical distance between the centers of two sensors. Dimension 'S' indicates the depth of the sensor from the wall. Dimension 'W' indicates the horizontal distance between the centers of two sensors. An inset diagram on the right shows a single sensor with dimension 'G' indicating the width of its mounting bracket.

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

BI40-CP80-FDZ30X2-B3131 | 02/21/2025 13-58 | technical changes reserved