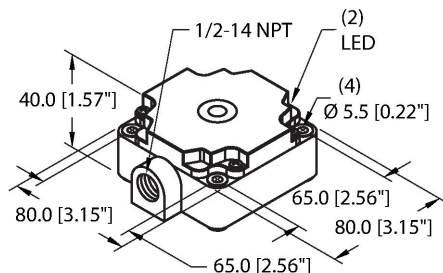


NI50-CP80-VN4X2/F2-S10

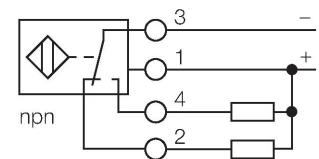
Inductive Sensor – With Increased Switching Distance



Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Large coverage
- Oscillation frequency F2
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- 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	NI50-CP80-VN4X2/F2-S10
ID	15207
Special version	S10 Corresponds to: Mounting base with 1/2-14NPT thread
General data	
Rated switching distance	50 mm
Mounting conditions	Non-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	10...65 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_B	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_B	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, NPN
Switching frequency	0.01 kHz

Technical data

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 mm 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, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three isometric diagrams illustrating the mounting of the NI50-CP80 sensor. The top diagram shows a single sensor mounted on a panel, with dimensions A (distance from the left edge to the center of the sensor), C (distance from the center of the sensor to the right edge), and D (distance from the center of the sensor to the bottom edge). The middle diagram shows two sensors mounted on a panel, with dimensions B (width of the active area), S (distance between the centers of the two sensors), D (distance from the center of the sensor to the bottom edge), W (distance from the left edge to the center of the sensor), and G (distance from the center of the sensor to the right edge). The bottom diagram shows a single sensor mounted on a panel, with dimensions B (width of the active area), S (distance between the centers of the two sensors), D (distance from the center of the sensor to the bottom edge), W (distance from the left edge to the center of the sensor), and G (distance from the center of the sensor to the right edge).

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Distance A	$1 \times B$
Distance C	$1 \times B$
Width active area B	80 mm