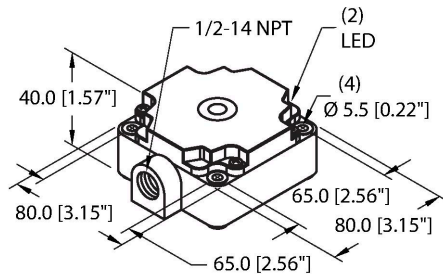


NI40-CP80-VP4X2/F2-S10

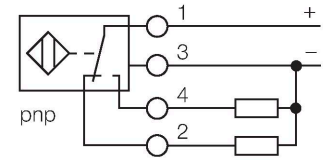
Inductive Sensor – With Increased Switching Distance



Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Large coverage
- Oscillation frequency F2
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP 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	NI40-CP80-VP4X2/F2-S10
ID	15119
Special version	S10 Corresponds to: Mounting base with 1/2-14NPT thread
General data	
Rated switching distance	40 mm
Mounting conditions	Non-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	$\leq 2 \text{ \% of full scale}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...65 VDC
Ripple U_{rs}	$\leq 10 \text{ \% } U_{Bmax}$
DC rated operating current I_B	$\leq 200 \text{ mA}$
No-load current	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_B	$\leq 1.8 \text{ V}$
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.1 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 two isometric diagrams illustrating the mounting of a sensor. The top diagram shows the sensor (a yellow cube with a grey top) mounted inside a grey rectangular housing. Dimension lines indicate: 'A' for the distance from the front face of the housing to the front face of the sensor; 'C' for the distance from the side faces of the housing to the side faces of the sensor; 'D' for the distance from the bottom face of the housing to the bottom face of the sensor; 'G' for the distance from the bottom face of the housing to the bottom face of the sensor's base; 'S' for the distance from the top face of the housing to the top face of the sensor; and 'W' for the width of the housing. The bottom diagram shows the sensor mounted on a grey wall. Dimension lines indicate: 'B' for the width of the sensor; 'D' for the distance from the wall to the front face of the sensor; 'S' for the distance from the wall to the top face of the sensor; 'W' for the width of the sensor; and 'G' for the distance from the wall to the bottom face of the sensor. A small inset shows the sensor's terminal chamber.

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance A	1 x B
Distance C	1 x B
Width active area B	80 mm