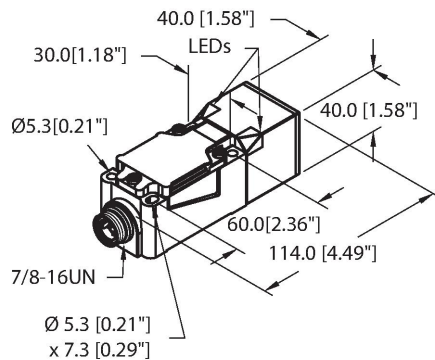


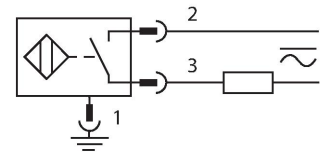
NI20-CP40-FZ3X2-B1131 Inductive Sensor



Features

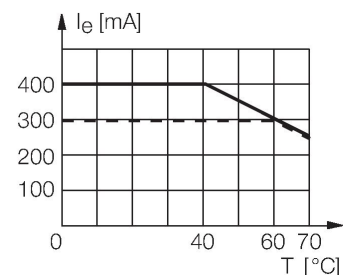
- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-VO
- High-luminance corner LEDs
- Optimum view of operating voltage and switching state from any position
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 7/8" connector

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.



Technical data

Type	NI20-CP40-FZ3X2-B1131
ID	1341192
General data	
Rated switching distance	20 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	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	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I_o	≤ 6 V
Output function	2-wire, Connection programmable, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz

Technical data

Mechanical data	
Design	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PBT-GF30-V0, yellow
Connector housing	metal
Electrical connection	Connector, 7/8"
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	2 × LEDs, Green
Switching state	2 × LEDs, Red

Mounting instructions

Mounting instructions/Description

The image contains two isometric diagrams illustrating the mounting of a sensor. The top diagram shows the sensor mounted on a wall. The sensor is represented by a yellow cube with a circular logo. The mounting plate is a grey L-shaped bracket. Dimensions are indicated: 'N' is the distance from the top of the wall to the top of the sensor; 'D' is the distance from the wall to the sensor; 'S' is the distance from the sensor to the edge of the mounting plate; and 'W' is the width of the mounting plate. The bottom diagram shows the sensor mounted on a panel. The sensor is represented by a yellow cube with a circular logo. The mounting plate is a grey L-shaped bracket. Dimensions are indicated: 'G' is the distance from the panel to the sensor; and 'B' is the width of the sensor.

Distance D	$3 \times B$
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Distance W	$3 \times S_n$
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Distance S	$1.5 \times B$
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Distance G	$6 \times S_n$
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Distance N	$0.5 \times B$
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Width active area B	40 mm
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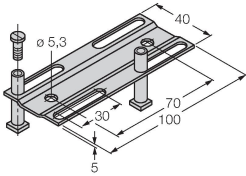
NI20-CP40-FZ3X2-B1131 | 02/21/2025 13-55 | technical changes reserved

Accessories

JS025/037

69429

Adjusting bar for rectangular housings
CK/CP40; material: VA 1.4301



BSS-CP40

6901318

Mounting clamp for rectangular
housings 40 x 40 mm; material:
Polypropylene

