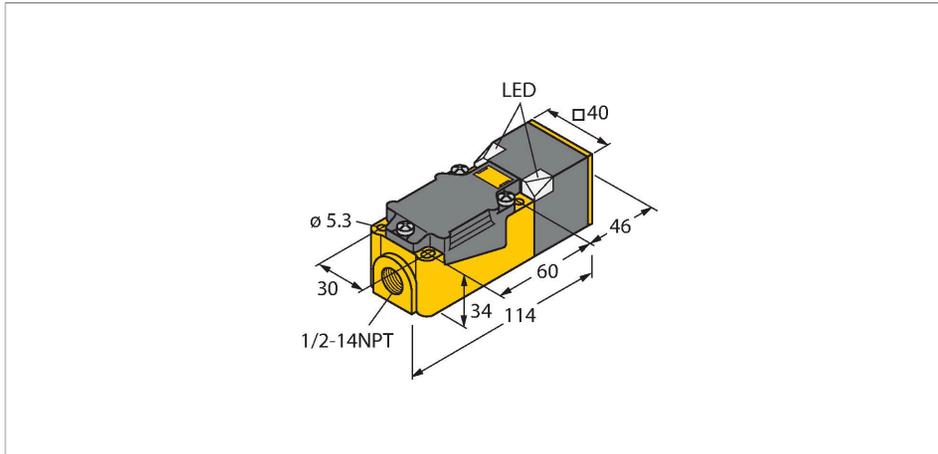


# NI20-CP40-FZ3X2/S100-S10

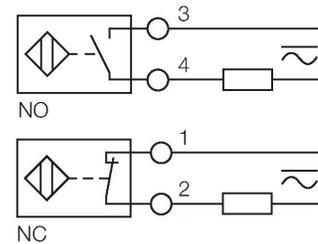
## Inductive Sensor – With Increased Temperature Range



### Features

- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- Temperatures up to +100 °C
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

### Wiring diagram

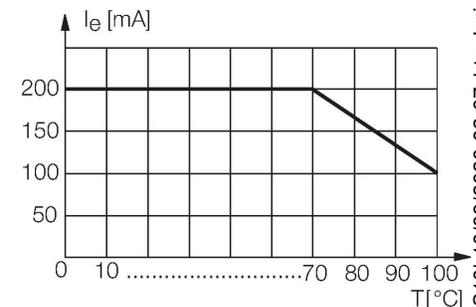


### Technical data

Type	NI20-CP40-FZ3X2/S100-S10
Ident. no.	13775
Special version	S100-S10 corresponds to: Mounting base with 1/2-14NPT thread Maximum ambient temperature = 100 °C
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	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ % $\leq \pm 20$ %, $\geq +70$ °C
Hysteresis	3...15 %
Ambient temperature	-25...+100 °C
Operating voltage	20...250 VAC
Operating voltage	10...300 VDC
DC rated operational current	$\leq 300$ mA
Rated operational current	See derating curve
Frequency	$\geq 50$ ... $\leq 60$ Hz
Residual current	$\leq 1.7$ mA
Isolation test voltage	$\leq 1.5$ kV
Surge current	$\leq 8$ A ( $\leq 10$ ms max. 5 Hz)
Voltage drop at $I_o$	$\leq 6$ V
Output function	2-wire, Connection programmable

### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.



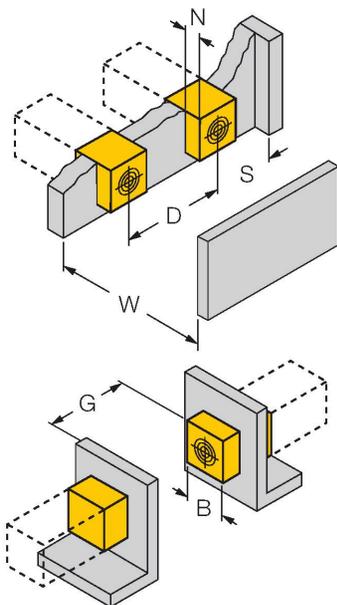
NI20-CP40-FZ3X2/S100-S10 | 10/03/2020 02-07 | technical changes reserved

## Technical data

Smallest operating current	$\geq 3 \text{ mA}$
Switching frequency	0.02 kHz
<b>Design</b>	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PBT-GF30-V0, yellow
Electrical connection	Terminal chamber
Clamping ability	$\leq 2.5 \text{ mm}^2$
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
<b>Power-on indication</b>	2 × LEDs, Green
Switching state	2 × LEDs, Red

## Mounting instructions

### Mounting instructions/Description



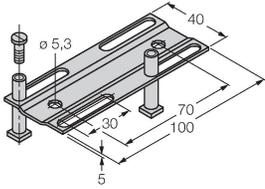
Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Distance N	$1 \times B$
Width active area B	40 mm

## Accessories

Adjusting bar JS 025/037

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

