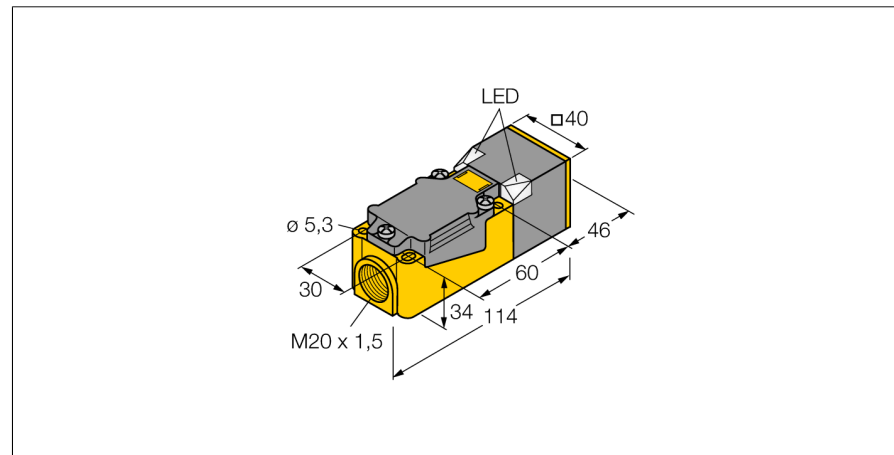


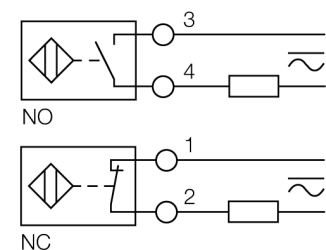
**Inductive sensor
with extended temperature range
NI20-CP40-FZ3X2/S100**



- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- For temperatures up to +100 °C
- AC 2-wire, 20...250 VAC
- 2-wire DC, 10...300 VDC
- NC/NO programmable
- Terminal chamber

Type code	NI20-CP40-FZ3X2/S100
Ident no.	13441
Rated operating distance Sn	20 mm
Mounting condition	non-flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
Hysteresis	≤ ± 20 %, ≥ +70 °C
Ambient temperature	3...15 %
	-25...+100 °C
Operating voltage	20...250 VAC
Operating voltage	10...300VDC
AC rated operational current	≤ 400 mA
DC rated operational current	≤ 300 mA
Rated operational current	see derating curve
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Rated insulation voltage	≤ 1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I _e	≤ 6 V
Output function	2-wire, connection programmable
Smallest operating current I _o	≤ 3 mA
Switching frequency	0.02 kHz
Design	rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	plastic, PBT, black
Connection	terminal chamber
Clamping ability	≤ 2.5 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
Power-on indication	2 x LEDs green
Switching state	LED red

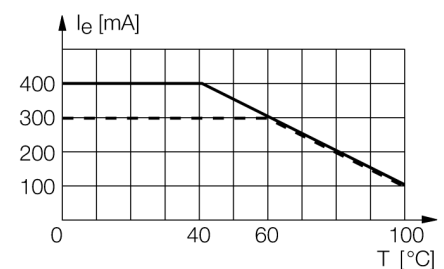
Wiring diagram



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.

derating curve



**Inductive sensor
with extended temperature range
NI20-CP40-FZ3X2/S100**

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	$0.5 \times B$

Width of the active face B 40 mm



**Inductive sensor
with extended temperature range
NI20-CP40-FZ3X2/S100**

Accessories

Type code	Ident no.	Description	Dimension drawing
STRM M20X1,5 BLACK	6965902	Cable glands M20 x 1.5	
Adjusting bar JS 025/037	69429	Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301	
BSS-CP40	6901318	Mounting bracket for rectangular devices; material: Polypropylene	