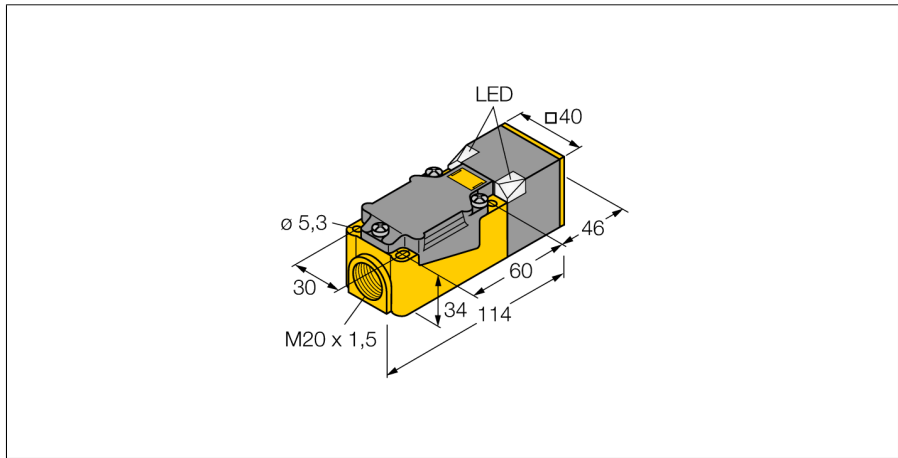
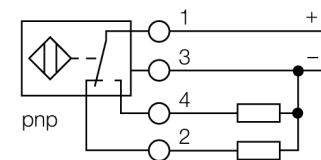


**Inductive sensor  
with extended temperature range  
NI20-CP40-VP4X2/S97**



- 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 -40 °C
- 4-wire DC, 10...65 VDC
- Changeover contact, PNP output
- Terminal chamber

**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.

<b>Type code</b>	NI20-CP40-VP4X2/S97
Ident no.	1569101
<b>Rated operating distance Sn</b>	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 %
	≤ ± 20 %, ≤ -25 °C
Hysteresis	3...15 %
Ambient temperature	-40...+70 °C
<b>Operating voltage</b>	10...65VDC
Residual ripple	≤ 10 % U <sub>in</sub>
DC rated operational current	≤ 200 mA
No-load current I <sub>0</sub>	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Voltage drop at I <sub>0</sub>	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	4-wire, changeover contact, PNP
Switching frequency	0.15 kHz
<b>Design</b>	rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	plastic, PBT, black
Connection	terminal chamber
Clamping ability	≤ 2.5 mm <sup>2</sup>
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 x LEDs green
Switching state	LED yellow

**Inductive sensor  
with extended temperature range  
NI20-CP40-VP4X2/S97**

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-VP4X2/S97**

**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	