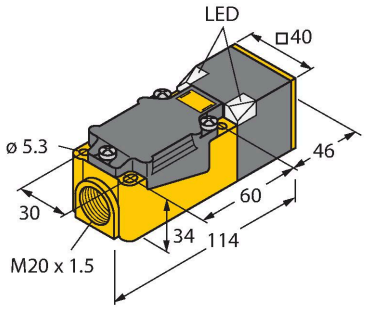
# NI50U-CP40-VP4X2
# Inductive Sensor



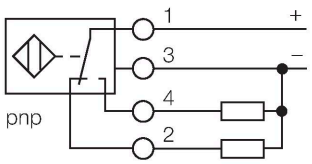

## Technical data

| | |
|---|---|
| Type | NI50U-CP40-VP4X2 |
| Ident. no. | 1538303 |
| Rated switching distance | 50 mm |
| Mounting conditions | Non-flush, flush |
| Secured operating distance | ≤ (0.81 × Sn) mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| | ≤ ± 20 %, ≤ -25 °C v ≥ +70 °C |
| Hysteresis | 3…15 % |
| Ambient temperature | -30…+85 °C |
| Operating voltage | 10…65 VDC |
| Residual ripple | ≤ 10 % $U_{ss}$ |
| DC rated operational current | ≤ 200 mA |
| No-load current | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at $I_e$ | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 4-wire, Complementary contact, PNP |
| Insulation class | ⧈ |
| Switching frequency | 0.25 kHz |
| **Design** | Rectangular, CP40 |
| Dimensions | 114 x 40 x 40 mm |

## Features

- 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
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to magnetic fields
- Auto-compensation protects against pre-damping
- Partially embeddable
- DC 4-wire, 10…65 VDC
- Changeover contact, PNP output
- Terminal chamber

## Wiring diagram




## Functional principle

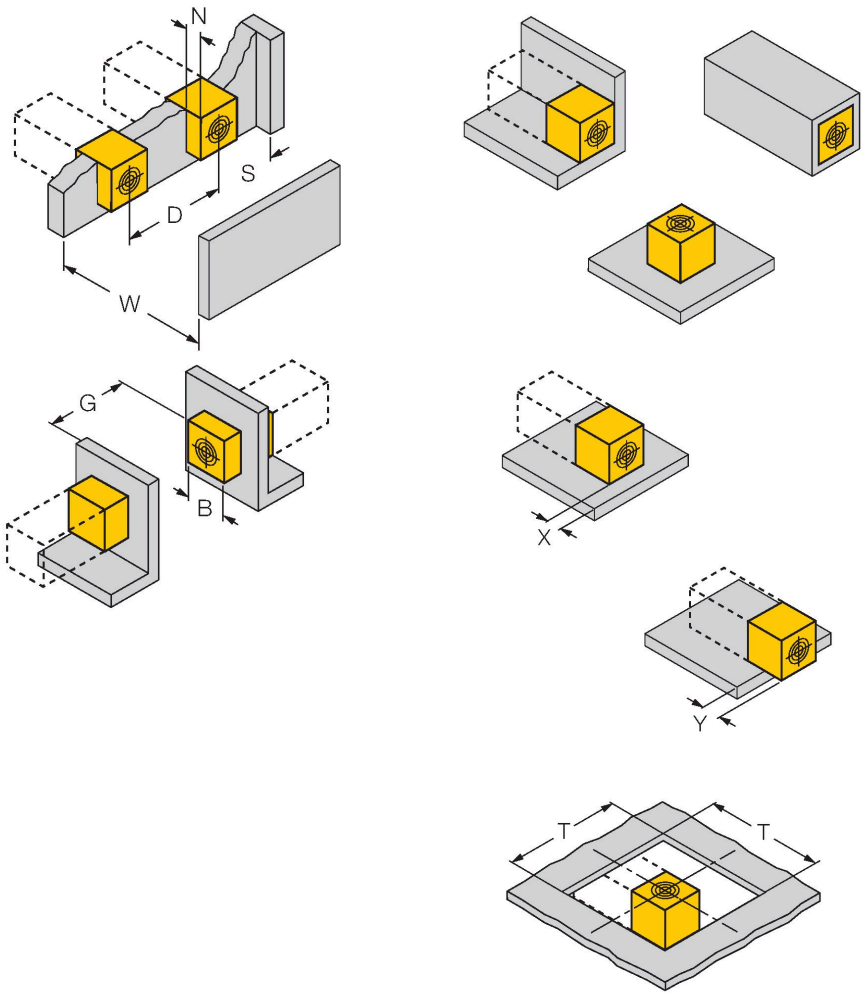
Inductive sensors detect metal objects contactless and wear-free. Due to the patented multi-coil system, *uprox*®+ sensors have distinct advantages over conventional sensors. They excel in largest switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

| | |
|---|---|
| Housing material | Plastic, PBT-GF30-V0, Black |
| Active area material | Plastic, PA6-GF30-X, yellow |
| Electrical connection | Terminal chamber |
| Clamping ability | ≤ 2.5 mm² |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication | 2 × LEDs, Green |
| Switching state | 2 × LEDs, Yellow |

## Mounting instructions

**Mounting instructions/Description**




| | |
|---|---|
| Distance D | 240 mm |
| Distance W | 105 mm |
| Distance S | 60 mm |
| Distance G | 300 mm |
| Distance N | 30 mm |
| Width active area B | 40 mm |

Flush mounting
1-side mounting: Sr = 35 mm; D = 240 mm
2-side mounting: Sr = 25 mm; D = 240 mm
3-side mounting: Sr = 20 mm; D = 80 mm
4-side mounting: Sr = 17 mm; D = 60 mm

Backside and recessed mounting with reduced switching distance

Recessed mounting in metal:
x = 10 mm: Sr = 20 mm
x = 20 mm: Sr = 20 mm
x = 30 mm: Sr = 20 mm
x = 40 mm: Sr = 20 mm

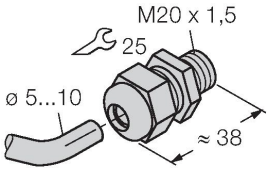
Protruded mounting:
y = 10 mm: Sr = 40 mm
y = 20 mm: Sr = 50 mm
y = 30 mm: Sr = 50 mm
y = 40 mm: Sr = 50 mm

Mounting position in aperture plate:
T = 150 mm
Twisted mounting position
On metal Sr = 50 mm
Metal-enclosed on one side Sr = 25 mm
Metal-enclosed on two sides Sr = 15 mm
Metal-enclosed on three sides Sr = 12 mm

The values stated relate to a 1 mm thick steel plate.

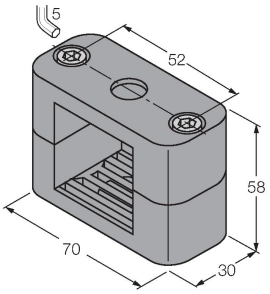
## Accessories

| STRM M20X1.5 SCHWARZ | 6965902 |
|---|---|



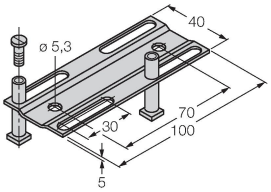

M20 × 1.5 cable gland

| BSS-CP40 | 6901318 |
|---|---|




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

| JS025/037 | 69429 |
|---|---|




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