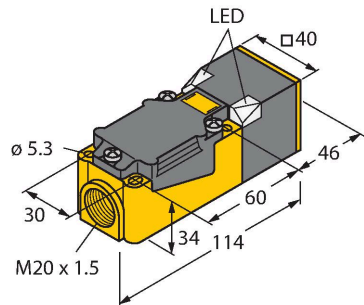


NI50U-CP40-VP4X2

Inductive Sensor



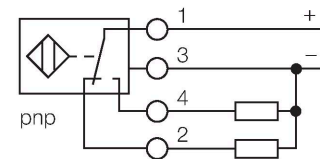
Features

- 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

Technical data

Type	NI50U-CP40-VP4X2
Ident. no.	1538303
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
	$\leq \pm 20$ %, ≤ -25 °C v $\geq +70$ °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_o	≤ 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

Wiring diagram



Functional principle

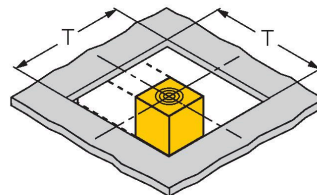
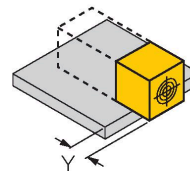
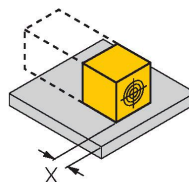
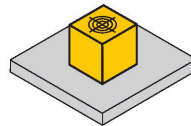
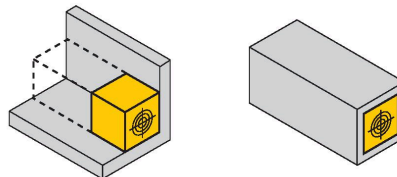
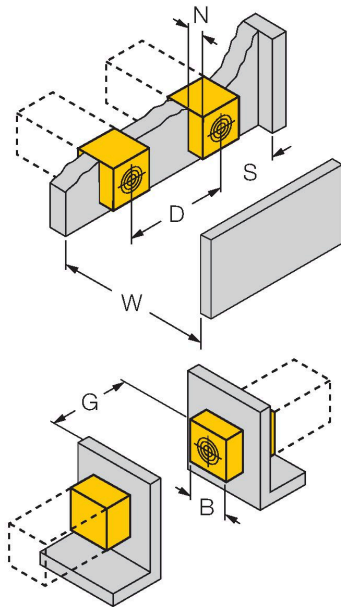
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PA6-GF30-X, yellow
Electrical connection	Terminal chamber
Clamping ability	$\leq 2.5 \text{ mm}^2$
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: $S_r = 35$ mm; $D = 240$ mm

2-side mounting: $S_r = 25$ mm; $D = 240$ mm

3-side mounting: $S_r = 20$ mm; $D = 80$ mm

4-side mounting: $S_r = 17$ mm; $D = 60$ mm

Backside and recessed mounting with reduced switching distance

Recessed mounting in metal:

$x = 10$ mm: $S_r = 20$ mm

$x = 20$ mm: $S_r = 20$ mm

$x = 30$ mm: $S_r = 20$ mm

$x = 40$ mm: $S_r = 20$ mm

Protruded mounting:

$y = 10$ mm: $S_r = 40$ mm

$y = 20$ mm: $S_r = 50$ mm

$y = 30$ mm: $S_r = 50$ mm

$y = 40$ mm: $S_r = 50$ mm

Mounting position in aperture plate:

$T = 150$ mm

Twisted mounting position

On metal $S_r = 50$ mm

Metal-enclosed on one side $S_r = 25$ mm

Metal-enclosed on two sides $S_r = 15$ mm

Metal-enclosed on three sides $S_r = 12$ mm

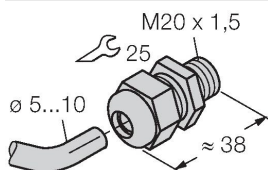
The values stated relate to a 1 mm thick steel plate.

Accessories

STRM M20X1.5 SCHWARZ

6965902

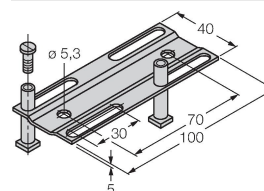
M20 × 1.5 cable gland



Adjusting bar JS 025/037

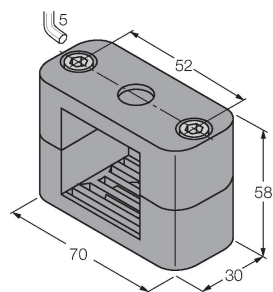
69429

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