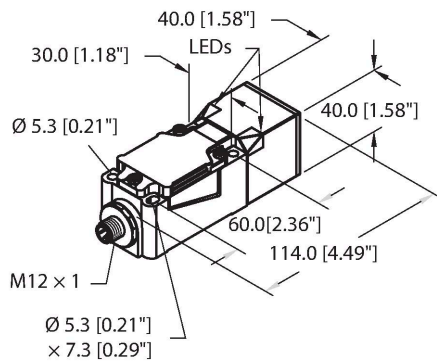


# NI50U-CP40-AP6X2-H1141

## Inductive Sensor – With Extended Switching Distance



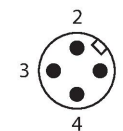
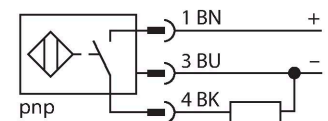
### Features

- 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 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### Technical data

Type	NI50U-CP40-AP6X2-H1141
ID	1625835
General data	
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
	$\leq \pm 20 \%, \leq -25 \text{ }^{\circ}\text{C} \vee \geq +70 \text{ }^{\circ}\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \%$ $U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	15 mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT <sub>ss</sub>
Insulation class	□
Switching frequency	0.25 kHz

### 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

Mechanical data	
Design	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PA6-GF30-X, yellow
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-30...+85 °C
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 as well as 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 in aperture plate:

T = 150 mm:

Sensor with twisted turning angle

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

JS025/037	69429	BSS-CP40	6901318
Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301		Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene	

Accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval