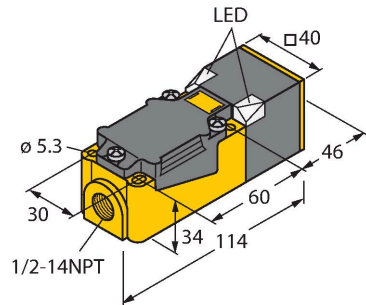


NI50U-CP40-AN6X2/S10

Inductive Sensor – With Extended Switching Distance



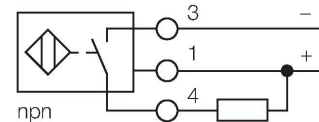
Features

- 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, NPN output
- Terminal chamber

Technical data

Type	NI50U-CP40-AN6X2/S10
ID	1625824
Special version	S10 Corresponds to: Mounting base with 1/2-14NPT thread
General data	
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n) \text{ mm}$
Repeat accuracy	$\leq 2 \text{ \% of full scale}$
	$\leq \pm 20 \text{ \%}, \leq -25 \text{ }^\circ\text{C} \vee \geq +70 \text{ }^\circ\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \text{ \% } U_{Bmax}$
DC rated operating current I_o	$\leq 200 \text{ mA}$
No-load current	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	$\leq 1.8 \text{ V}$
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}

Wiring diagram



Functional principle

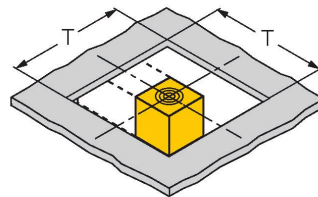
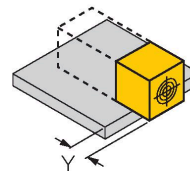
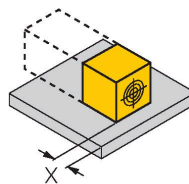
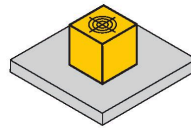
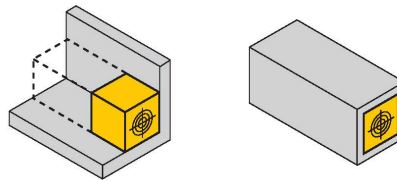
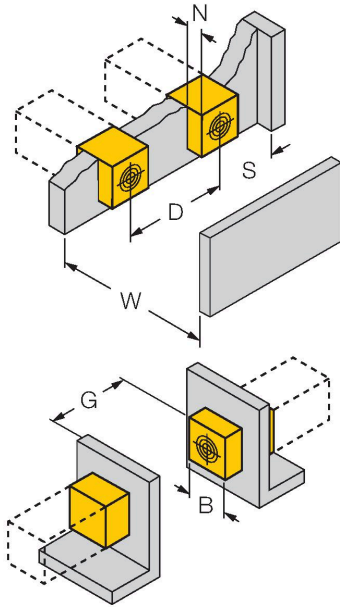
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

Switching frequency	0.25 kHz
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	Terminal chamber
Clamping ability	≤ 2.5 mm ²
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

up to 4-side flush mounting possible

1-side flush mounting: $S_r = 35$ mm; $D = 240$ mm

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

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

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

back-mounting as well as recessed mounting
with switching distance reduction possible

recessed sensor 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 sensor mounting on metal:

$x = 10$ mm: $S_r = 40$ mm

$x = 20$ mm: $S_r = 50$ mm

$x = 30$ mm: $S_r = 50$ mm

$x = 40$ mm: $S_r = 50$ mm

mounting in aperture plate:

$T = 150$ mm:

sensor with rotated turning angle

based on metal $S_r = 50$ mm

based on metal and one-side embedding $S_r = 25$ mm

based on metal and two-side embedding $S_r = 15$ mm

based on metal and three-side embedding $S_r = 12$ mm

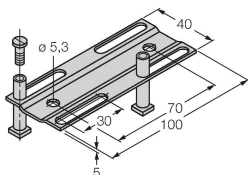
The values stated relate to 1 mm thick steel plate.

Accessories

JS025/037

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

