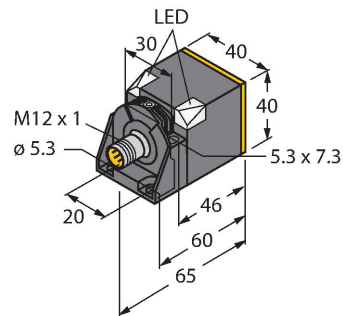


NI50U-CK40-VP4X2-H1141

Inductive Sensor – With Extended Switching Distance



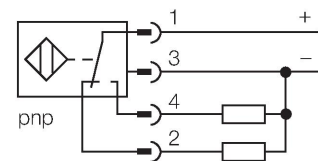
Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 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
- M12 x 1 male connector

Technical data

Type	NI50U-CK40-VP4X2-H1141
ID no.	1538302
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	$\leq \pm 10 \%$ $\leq \pm 20 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...65 VDC
Residual ripple	$\leq 10 \%$ 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
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	0.25 kHz
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm

Wiring diagram



Functional principle

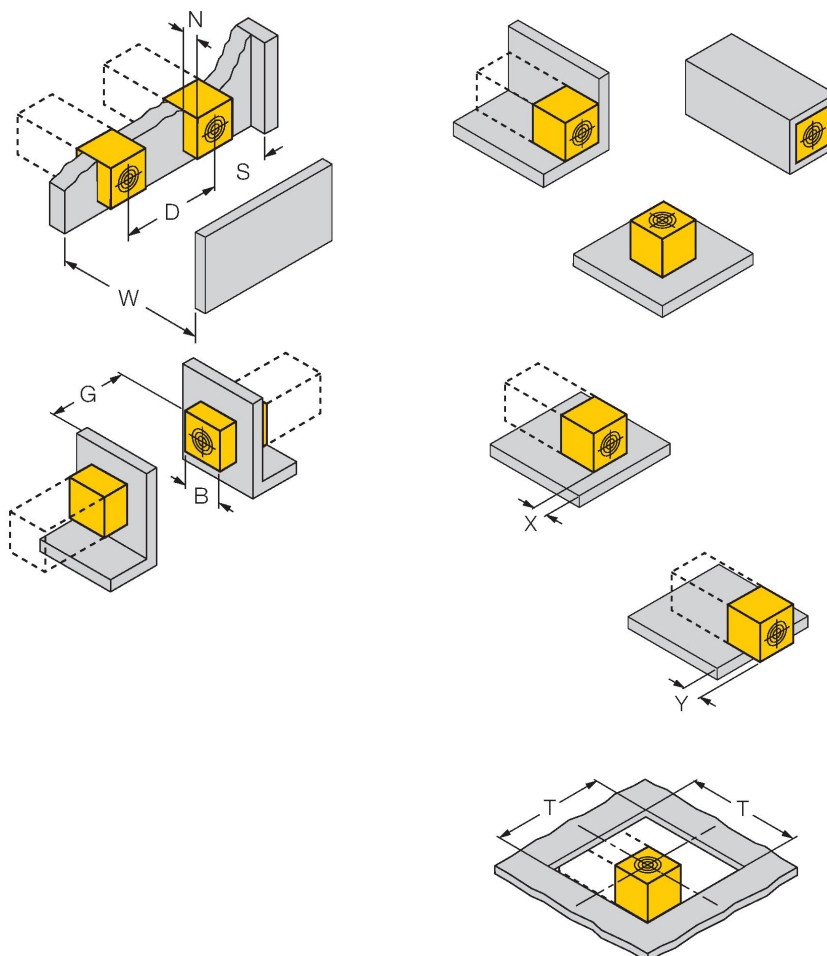
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, yellow
Electrical connection	Connectors, M12 × 1
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
Included in delivery	Fixing clamp BS4-CK40

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: $S_r = 15$ mm; $D = 60$ mm

Backside as well as 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 in aperture plate:

$T = 150$ mm:

Sensor with twisted turning angle

On metal $S_r = 50$ mm

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

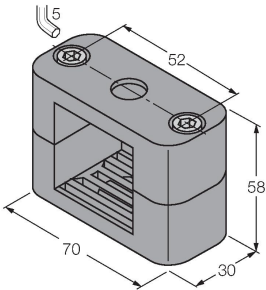
Metal-enclosed on two sides $S_r = 15$ mm

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

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

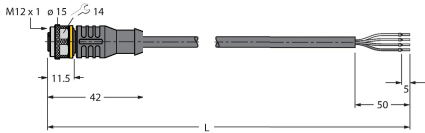
Accessories

BSS-CP40 6901318



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

Accessories

Dimension drawing	Type	ID no.	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com