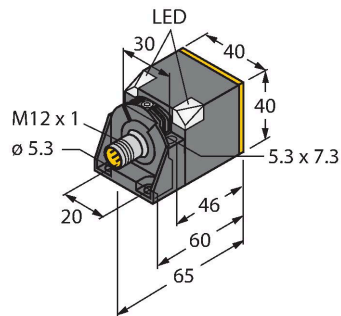


# NI50U-CK40-AP6X2-H1141

## Inductive Sensor – With Extended Switching Distance



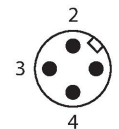
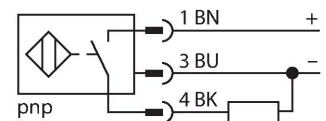
### Features

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

### Technical data

Type	NI50U-CK40-AP6X2-H1141
ID	1625837
<b>General data</b>	
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	$\leq \pm 10$ %
	$\leq \pm 20$ %, $\leq -25$ °C $v \geq +70$ °C
Hysteresis	3...15 %
<b>Electrical data</b>	
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

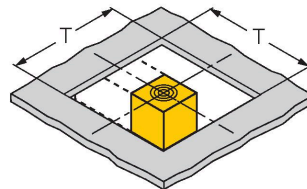
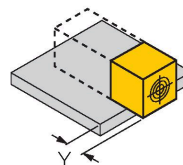
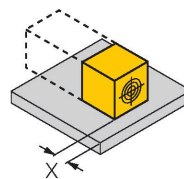
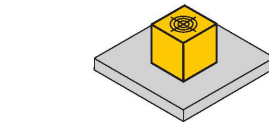
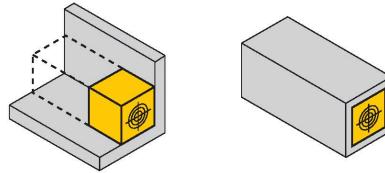
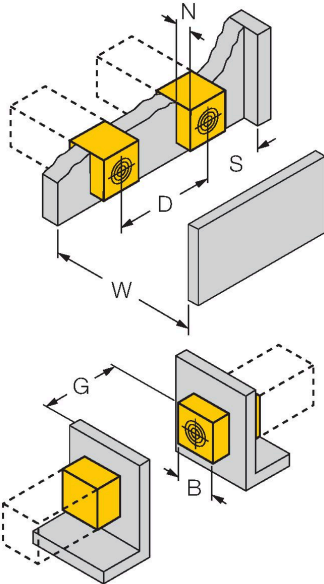
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

Mechanical data	
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, 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	
Switching state	2 × LEDs, Green
	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: 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 = 15 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

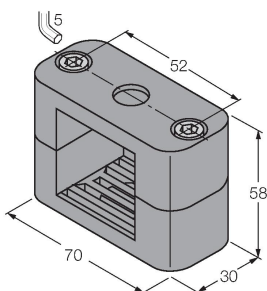
The values stated relate to a 1 mm thick steel plate.

## Accessories


BSS-CP40

6901318

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



## Accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>