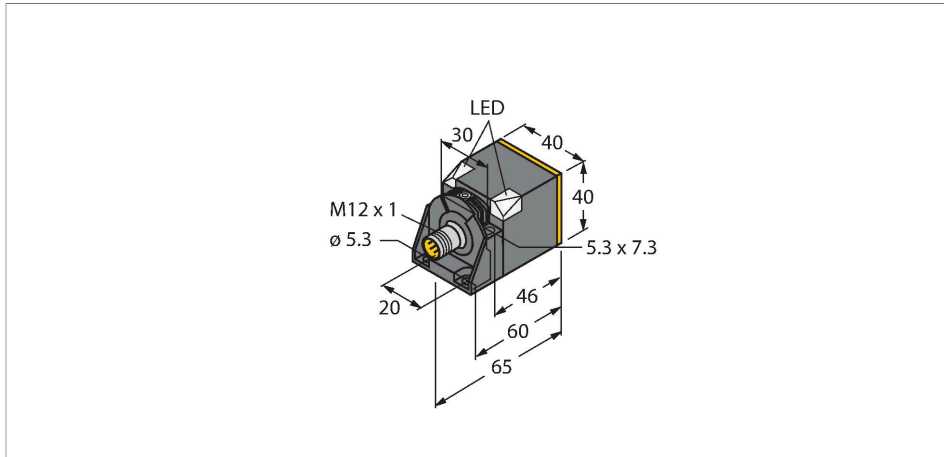


# NI50U-CK40-VN4X2-H1141

## Inductive Sensor



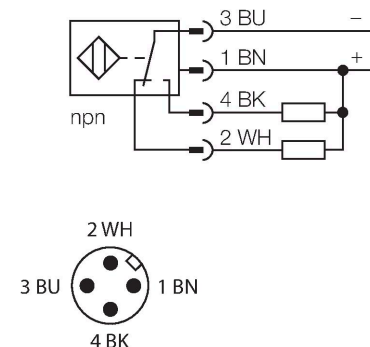
### Features

- 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, NPN output
- M12 x 1 male connector

### Technical data

Type	NI50U-CK40-VN4X2-H1141
Ident. no.	1625806
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	$\leq \pm 10\%$
	$\leq \pm 20\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...65 VDC
Residual ripple	$\leq 10\%$ $U_s$
DC rated operational current	$\leq 200$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_e$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	4-wire, Complementary contact, NPN
Insulation class	□
Switching frequency	0.25 kHz
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm

### Wiring diagram



### Functional principle

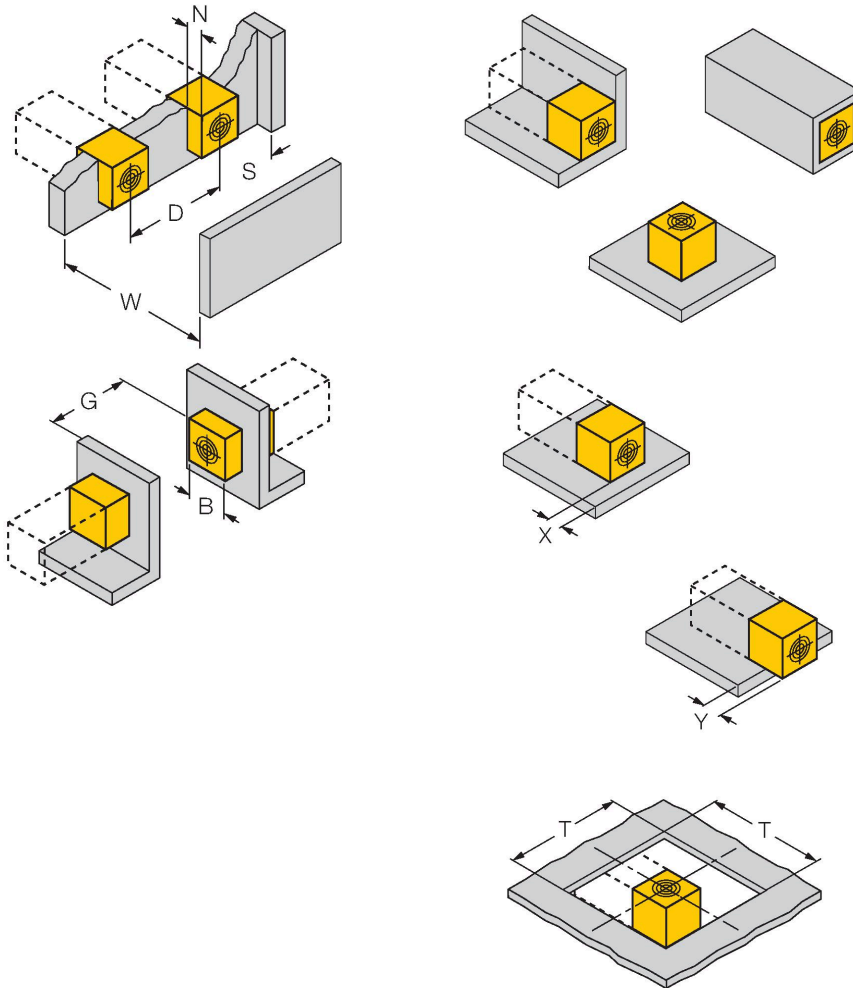
Inductive sensors detect metal objects contactless and wear-free. Due to the patented multi-coil system, *uprox*<sup>®</sup> sensors have distinct advantages over conventional sensors. They excel in largest switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## 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	Connector, 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

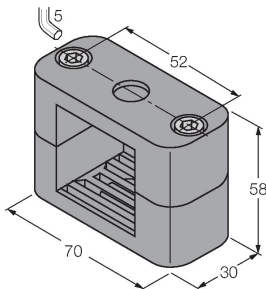
The values stated relate to a 1 mm thick steel plate.

## Accessories

BSS-CP40

6901318

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



## Wiring accessories

Dimension drawing	Type	Ident. 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 <a href="http://www.turck.com">www.turck.com</a>