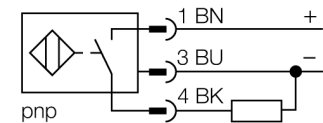


- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to magnetic fields
- Auto-compensation protects against pre-attenuation
- Partially embeddable
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Male M12 x 1

Type code	NI50U-CP40-AP6X2-H1141
Ident no.	1625835
Rated operating distance Sn	50 mm
Mounting condition	non-flush, flush mountable
Assured sensing range	$\leq (0,81 \times S_n)$ mm
Repeatability	$\leq 2\%$ of full scale
Temperature drift	10 %
	$\leq \pm 20\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...30VDC
Residual ripple	$\leq 10\%$ U _{ss}
DC rated operational current	≤ 200 mA
No-load current I ₀	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I ₀	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Protection class	□
Switching frequency	0.25 kHz
Design	rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	plastic, PBT, black
Connection	male, M12 x 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 x LEDs green
Switching state	LED yellow

Wiring diagram

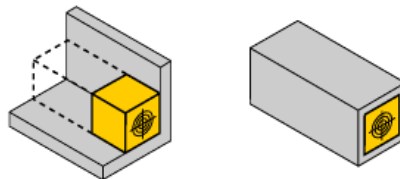
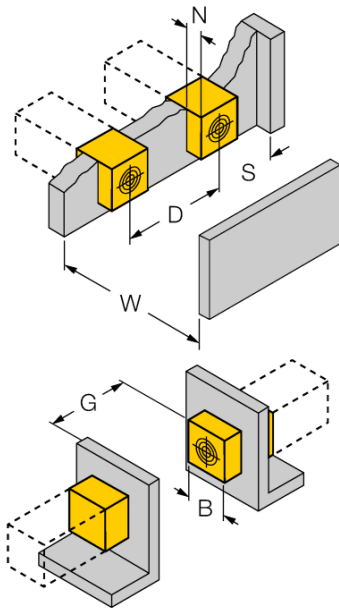


Functional principle

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

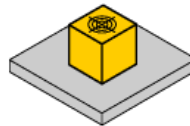
Distance D	240 mm
Distance W	105 mm
Distance S	60 mm
Distance G	300 mm
Distance N	30 mm

Width of the active face B 40 mm



Flush mounting

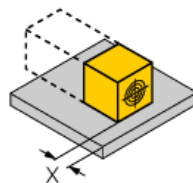
- 1-side mounting: $S_r = 35 \text{ mm}$; $D = 240 \text{ mm}$
- 2-side mounting: $S_r = 25 \text{ mm}$; $D = 240 \text{ mm}$
- 3-side mounting: $S_r = 20 \text{ mm}$; $D = 80 \text{ mm}$
- 4-side mounting: $S_r = 17 \text{ mm}$; $D = 60 \text{ mm}$



Backside as well as recessed mounting with reduced switching distance

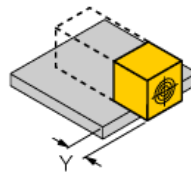
Recessed mounting in metal:

- $x = 10 \text{ mm}$: $S_r = 20 \text{ mm}$
- $x = 20 \text{ mm}$: $S_r = 20 \text{ mm}$
- $x = 30 \text{ mm}$: $S_r = 20 \text{ mm}$
- $x = 40 \text{ mm}$: $S_r = 20 \text{ mm}$



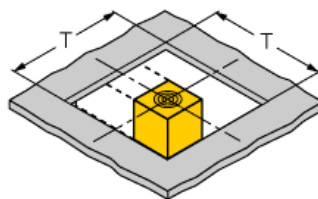
Protruded mounting:

- $y = 10 \text{ mm}$: $S_r = 40 \text{ mm}$
- $y = 20 \text{ mm}$: $S_r = 50 \text{ mm}$
- $y = 30 \text{ mm}$: $S_r = 50 \text{ mm}$
- $y = 40 \text{ mm}$: $S_r = 50 \text{ mm}$



Mounting in aperture plate:

- $T = 150 \text{ mm}$:
- Sensor with twisted turning angle
- On metal $S_r = 50 \text{ mm}$
- Metal-enclosed on one side $S_r = 25 \text{ mm}$
- Metal-enclosed on two sides $S_r = 15 \text{ mm}$
- Metal-enclosed on three sides $S_r = 12 \text{ mm}$



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

Accessories

Type code	Ident no.	Description	Dimension drawing
Adjusting bar JS 025/037	69429	Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301	
BSS-CP40	6901318	Mounting bracket for rectangular devices; material: Polypropylene	

Wiring accessories

Type code	Ident no.	Description	Dimension drawing
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 www.turck.com	