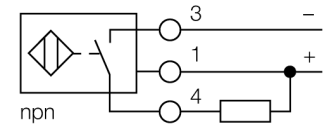


- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to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

**Wiring diagram**



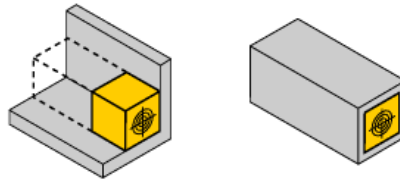
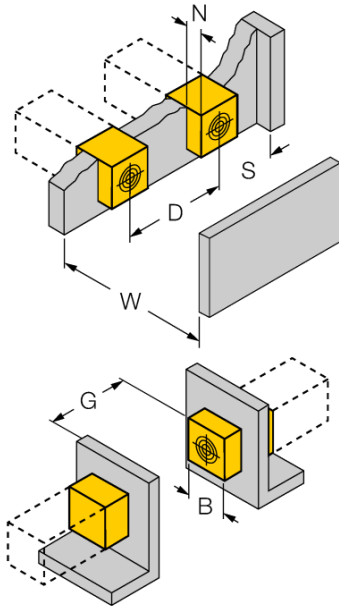
**Functional principle**

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.

<b>Type code</b>	NI50U-CP40-AN6X2
Ident no.	1625846
<b>Rated operating distance Sn</b>	50 mm
Mounting condition	non-flush, flush mountable
Assured sensing range	≤ (0,81 x Sn) mm
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
	≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
DC rated operational current	≤ 200 mA
No-load current I <sub>0</sub>	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I <sub>0</sub>	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, NPN
Protection class	IP68
Switching frequency	0.25 kHz
<b>Design</b>	rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	plastic, PBT, black
Connection	terminal chamber
Clamping ability	≤ 2.5 mm <sup>2</sup>
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
<b>Power-on indication</b>	2 x LEDs green
Switching state	LED yellow

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**

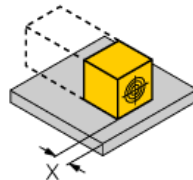
- 1-side mounting:  $S_r = 35 \text{ mm}$ ;  $D = 240 \text{ mm}$
- 2-side mounting:  $S_r = 25 \text{ mm}$ ;  $D = 240 \text{ mm}$
- 3-side mounting:  $S_r = 20 \text{ mm}$ ;  $D = 80 \text{ mm}$
- 4-side mounting:  $S_r = 17 \text{ mm}$ ;  $D = 60 \text{ mm}$



**Backside and recessed mounting with reduced switching distance**

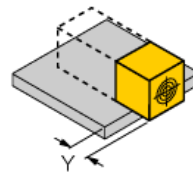
**Recessed mounting in metal:**

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



**Protruded mounting:**

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

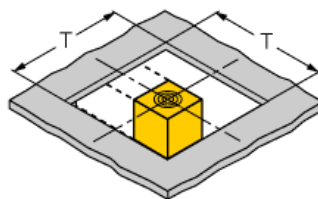


**Mounting position in aperture plate:**

$T = 150 \text{ mm}$

**Twisted mounting position**

- 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
STRM M20X1,5 BLACK	6965902	Cable glands M20 x 1.5	
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	