

# NI25U-CP40-AP6X2

## Inductive Sensor



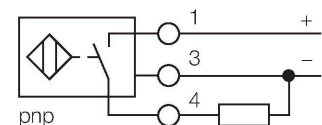
### Features

- 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
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against pre-damping
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Terminal chamber

### Technical data

Type	NI25U-CP40-AP6X2
ID	1623700
<b>General data</b>	
Rated switching distance	25 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%$ , $\leq -25 \text{ }^\circ\text{C}$ v $\geq +70 \text{ }^\circ\text{C}$
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_b$	10...30 VDC
Ripple $U_{ss}$	$\leq 10 \%$ $U_{Bmax}$
DC rated operating current $I_o$	$\leq 200$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire break/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
<b>Mechanical data</b>	
Design	Rectangular, CP40

### Wiring diagram



### Functional principle

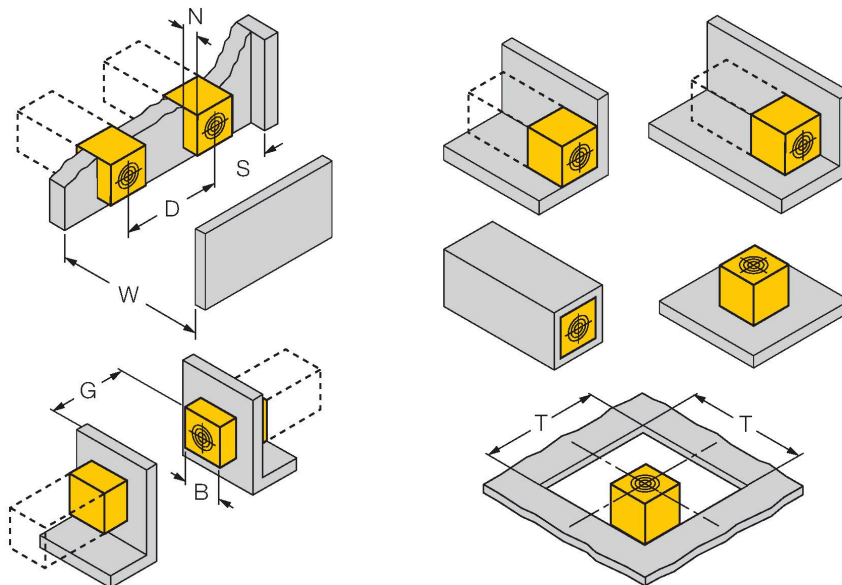
Inductive sensors are designed for wear-free and contactless detection of metal objects. approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

## Technical data

Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PA6-GF30-X, yellow
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm <sup>2</sup>
<b>Environmental conditions</b>	
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	2 × LEDs, Green
Switching state	2 × LEDs, Yellow

## Mounting instructions

### Mounting instructions/Description



Distance D	240 mm
Distance W	75 mm
Distance T	100 mm
Distance S	20 mm
Distance G	150 mm
Distance N	30 mm
Width active area B	40 mm

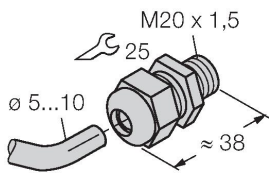
up to 4-side flush mounting possible  
 1-side flush mounting:  $S_r = 22$  mm  
 2-side flush mounting:  $S_r = 20$  mm  
 3-side flush mounting:  $S_r = 17$  mm  
 4-side flush mounting:  $S_r = 13$  mm  
 back-mounting without reduction of the switching distance  
 recessed mounting with switching distance reduction possible

## Accessories

STRM M20X1.5 SCHWARZ

6965902

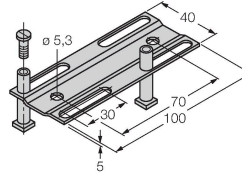
M20 × 1.5 cable gland



JS025/037

69429

Adjusting bar for rectangular housings  
CK/CP40; material: VA 1.4301



BSS-CP40

6901318

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

