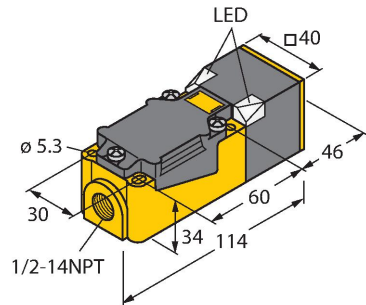


# NI20-CP40-AP6X2/S10

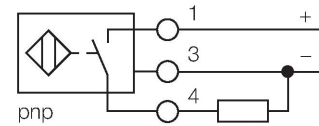
## Inductive Sensor



### 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
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Terminal chamber

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

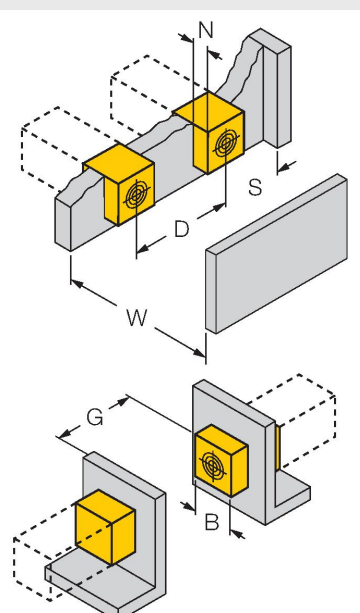
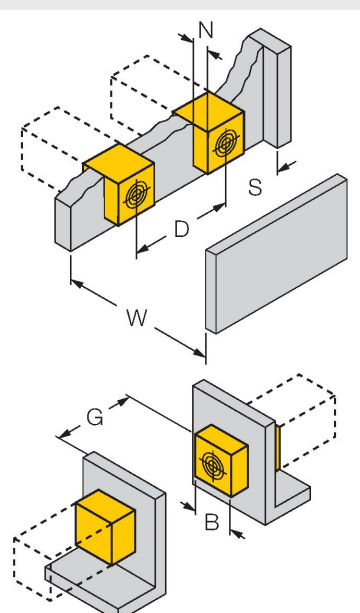
### Technical data

|                                        |                                                         |
|----------------------------------------|---------------------------------------------------------|
| Type                                   | NI20-CP40-AP6X2/S10                                     |
| ID                                     | 16031                                                   |
| Special version                        | S10 Corresponds to: Mounting base with 1/2-14NPT thread |
| <b>General data</b>                    |                                                         |
| Rated switching distance               | 20 mm                                                   |
| Mounting conditions                    | Non-flush                                               |
| Secured operating distance             | $\leq (0.81 \times S_n) \text{ mm}$                     |
| Correction factors                     | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4     |
| Repeat accuracy                        | $\leq 2 \text{ \% of full scale}$                       |
| Temperature drift                      | $\leq \pm 10 \text{ \%}$                                |
| Hysteresis                             | 3...15 %                                                |
| <b>Electrical data</b>                 |                                                         |
| Operating voltage $U_B$                | 10...30 VDC                                             |
| Ripple $U_{ss}$                        | $\leq 10 \text{ \% } U_{Bmax}$                          |
| DC rated operating current $I_o$       | $\leq 200 \text{ mA}$                                   |
| No-load current                        | $\leq 15 \text{ mA}$                                    |
| Residual current                       | $\leq 0.1 \text{ mA}$                                   |
| Isolation test voltage                 | 0.5 kV                                                  |
| Short-circuit protection               | yes/Cyclic                                              |
| Voltage drop at $I_o$                  | $\leq 1.8 \text{ V}$                                    |
| Wire break/reverse polarity protection | yes/Complete                                            |
| Output function                        | 3-wire, NO contact, PNP                                 |
| Switching frequency                    | 0.15 kHz                                                |

## Technical data

| Mechanical data          |                                            |
|--------------------------|--------------------------------------------|
| Design                   | Rectangular, CP40                          |
| Dimensions               | 114 x 40 x 40 mm                           |
| Housing material         | Plastic, PBT-GF30-V0, Black                |
| Active area material     | Plastic, PBT-GF30-V0, yellow               |
| Electrical connection    | Terminal chamber                           |
| Clamping ability         | $\leq 2.5 \text{ mm}^2$                    |
| Environmental conditions |                                            |
| Ambient temperature      | -25...+70 °C                               |
| Vibration resistance     | 55 Hz (1 mm)                               |
| Shock resistance         | 30 g (11 ms)                               |
| Protection class         | IP67                                       |
| MTTF                     | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication      | 2 × LEDs, Green                            |
| Switching state          | 2 × LEDs, Yellow                           |

## Mounting instructions

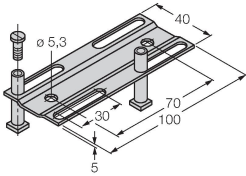
| Mounting instructions/Description                                                   |            |
|-------------------------------------------------------------------------------------|------------|
|  | Distance D |
|                                                                                     | 3 x B      |
|                                                                                     | Distance W |
|                                                                                     | 3 x Sn     |
|                                                                                     | Distance S |
|                                                                                     | 1.5 x B    |
|                                                                                     | Distance G |
|  | 6 x Sn     |
|                                                                                     | Distance N |
|                                                                                     | 0.5 x B    |
| Width active area B                                                                 |            |
| 40 mm                                                                               |            |

## Accessories

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

