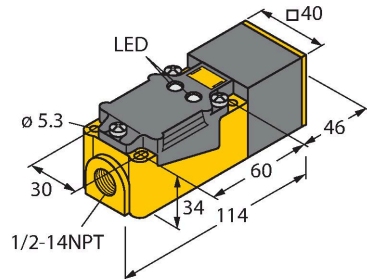


# NI20NF-CP40-FZ3X2/S10

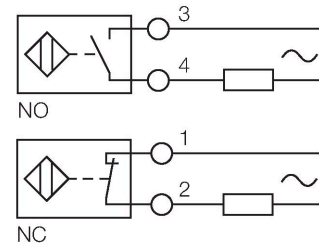
## Inductive Sensor – With Selective Behaviour



### Features

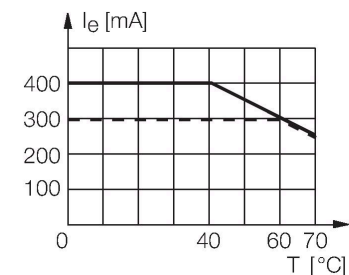
- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- Detects only non-ferromagnetic metal
- AC 2-wire, 20...250 VAC
- Programmable connection (NC or NO)
- Terminal chamber

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors of the NF series with selective performance detect non-ferrous metals only.



### Technical data

|                                  |                                                         |
|----------------------------------|---------------------------------------------------------|
| Type                             | NI20NF-CP40-FZ3X2/S10                                   |
| ID                               | 13782                                                   |
| 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       | $\leq (0.81 \times S_n)$ mm                             |
| Repeat accuracy                  | $\leq 2 \%$ of full scale                               |
| Temperature drift                | $\leq \pm 10 \%$                                        |
| Hysteresis                       | 3...15 %                                                |
| <b>Electrical data</b>           |                                                         |
| Operating voltage U <sub>b</sub> | 20...250 VAC                                            |
| AC rated operational current     | $\leq 400$ mA                                           |
| Frequency                        | $\geq 50 \dots \leq 60$ Hz                              |
| Residual current                 | $\leq 1.7$ mA                                           |
| Isolation test voltage           | 1.5 kV                                                  |
| Surge current                    | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)                    |
| Voltage drop at I <sub>o</sub>   | $\leq 6$ V                                              |
| Output function                  | 2-wire, Connection programmable, 2-wire                 |
| Smallest operating current       | $\geq 3$ mA                                             |
| Insulation class                 | □                                                       |
| Switching frequency              | 0.02 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         | ≤ 2.5 mm²                                 |
| Environmental conditions |                                           |
| Ambient temperature      | 0...+60 °C                                |
| Vibration resistance     | 55 Hz (1 mm)                              |
| Shock resistance         | 30 g (11 ms)                              |
| Protection class         | IP67                                      |
| MTTF                     | 348 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication      | 2 × LEDs, Green                           |
| Switching state          | 2 × LEDs, Red                             |

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 |
|                                   | 1 x B      |
| Width active area B               |            |
| 40 mm                             |            |

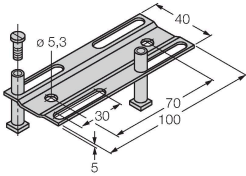
NI20NF-CP40-FZ3X2/S10| 02/21/2025 13-34 | technical changes reserved

## 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

