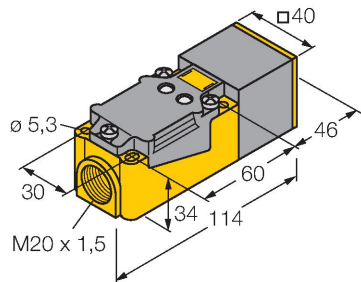


# NI20NF-CP40-VN4X2

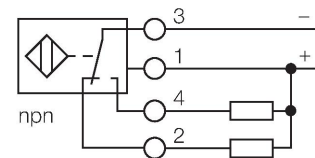
## Inductive Sensor – With Selective Behaviour



### Features

- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- Detects only non-ferromagnetic metal
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- Terminal chamber

### Wiring diagram



### Technical data

|                                        |                                    |
|----------------------------------------|------------------------------------|
| Type                                   | NI20NF-CP40-VN4X2                  |
| ID                                     | 15784                              |
| <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 $U_B$                | 10...65 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                        | 4-wire, Complementary contact, NPN |
| Insulation class                       | □                                  |
| Switching frequency                    | 0.1 kHz                            |
| <b>Mechanical data</b>                 |                                    |
| 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       |

### 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

|                          |                                           |
|--------------------------|-------------------------------------------|
| 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                     | 392 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication      | LED, Green                                |
| Switching state          | LED, Yellow                               |

Mounting instructions

| Mounting instructions/Description |                        |
|-----------------------------------|------------------------|
|                                   | Distance D3 x B        |
|                                   | Distance W3 x Sn       |
|                                   | Distance S1.5 x B      |
|                                   | Distance G6 x Sn       |
|                                   | Distance N1 x B        |
|                                   | Width active area40 mm |
| B                                 |                        |
| flush mounting in St37 admissible |                        |

Accessories

STRM M20X1.5 SCHWARZ6965902

M20 × 1.5 cable gland

JS025/03769429

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

