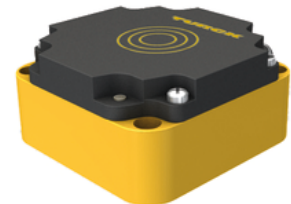
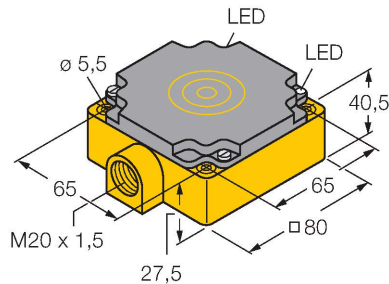


# NI75U-CP80-VN4X2

## Inductive Sensor – With Increased Switching Distance



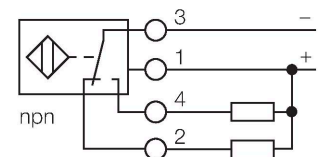
### Technical data

|                                        |                                                                |
|----------------------------------------|----------------------------------------------------------------|
| Type                                   | NI75U-CP80-VN4X2                                               |
| ID                                     | 1540810                                                        |
| <b>General data</b>                    |                                                                |
| Rated switching distance               | 75 mm                                                          |
| Mounting conditions                    | Non-flush                                                      |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                                    |
| Repeat accuracy                        | $\leq 2 \%$ of full scale                                      |
| Temperature drift                      | $\leq \pm 10 \%$                                               |
|                                        | $\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| 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                             |
| DC field stability                     | 300 mT                                                         |
| AC field stability                     | 300 mT <sub>ss</sub>                                           |
| Insulation class                       | □                                                              |

### Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Resistant to magnetic fields
- Large coverage
- Extended temperature range
- High switching frequency
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- Terminal chamber

### Wiring diagram



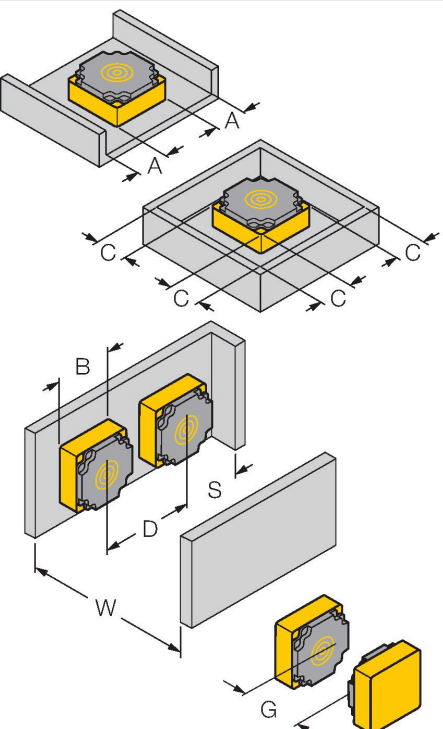
### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox 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

|                                 |                                           |
|---------------------------------|-------------------------------------------|
| Switching frequency             | 0.25 kHz                                  |
| <b>Mechanical data</b>          |                                           |
| Design                          | Rectangular, CP80                         |
| Dimensions                      | 80 x 80 x 41 mm                           |
| Housing material                | Plastic, PBT-GF30-V0                      |
| Active area material            | PBT-GF30-V0                               |
| Electrical connection           | Terminal chamber                          |
| Clamping ability                | $\leq 2.5 \text{ mm}^2$                   |
| <b>Environmental conditions</b> |                                           |
| Ambient temperature             | -30...+85 °C                              |
| Vibration resistance            | 55 Hz (1 mm)                              |
| Shock resistance                | 30 g (11 ms)                              |
| Protection class                | IP67                                      |
| MTTF                            | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication             | LED, Green                                |
| Switching state                 | LED, 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 A          | 1 x B   |
|                                                                                     | Distance C          | 1 x B   |
|                                                                                     | Width active area B | 80 mm   |
|                                                                                     |                     |         |