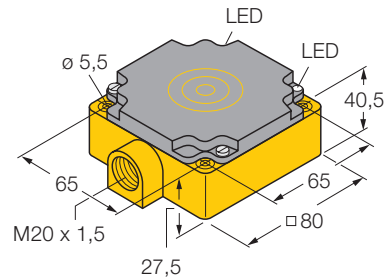


# **Inductive sensor with extended switching distance Ni75U-CP80-FDZ30X2**



- rectangular, height 41 mm
- plastic, PBT-GF30-V0
- factor 1 for all metals
- magnetic field immune
- extended switching distance
- extended temperature range
- high switching frequency
- 2-wire AC, 20...250 VAC
- 2-wire DC, 10...300 VDC
- connection programmable (n.c./n.o.)
- terminal chamber

## **Wiring diagram**



## **Function principles**

Inductive proximity switches are designed for wear-free non-contact detection of metal objects. Due to a ferrite-less 3-coil system, Uprox factor 1 sensor have distinct advantages. The detect all metals at the same switching distance, are magnetic field immune and feature large switching distances.

|                                                        |                                                                                                       |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Type</b>                                            | Ni75U-CP80-FDZ30X2                                                                                    |
| Ident-No.                                              | 4280900                                                                                               |
| <b>Rated operating distance <math>S_n</math></b>       | 75 mm                                                                                                 |
| Mounting mode                                          | non-flush                                                                                             |
| Hysteresis (switching distance)                        | 3... 15 %                                                                                             |
| Min. repeat accuracy                                   | $\leq 2 \%$                                                                                           |
| Temperature drift                                      | $\leq \pm 10 \%$                                                                                      |
| Operating temperature                                  | $\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$<br>$-30 \dots +85^\circ\text{C}$ |
| <b>Rated operational voltage (AC) <math>U_B</math></b> | 20... 250 VAC                                                                                         |
| Rated operational voltage (DC) $U_B$                   | 10... 300 VDC                                                                                         |
| Rated operational current (AC) $I_e$                   | $\leq 400 \text{ mA}$                                                                                 |
| Rated operational current (DC) $I_e$                   | $\leq 300 \text{ mA}$                                                                                 |
| Line frequency                                         | 50... 60 Hz                                                                                           |
| Max. OFF-state current                                 | $\leq 1,7 \text{ mA}$                                                                                 |
| Max. switching frequency                               | $\leq 0,06 \text{ kHz}$                                                                               |
| Rated insulation voltage                               | $\leq 1,5 \text{ kV}$                                                                                 |
| Surge Current                                          | $\leq 3 \text{ A} (\leq 20 \text{ ms max. } 5 \text{ Hz})$                                            |
| Output function                                        | 2-wire, connection programmable                                                                       |
| Short-circuit protection                               | yes, short-circuit                                                                                    |
| Max. voltage drop at $I_e$                             | $\leq 6 \text{ V}$                                                                                    |
| Wire breakage / reverse polarity protection            | yes / complete                                                                                        |
| Min. operational current $I_m$                         | $\geq 3 \text{ mA}$                                                                                   |
| Protection class                                       | IP67                                                                                                  |
| <b>Housing style</b>                                   | rectangular; CP80                                                                                     |
| Dimensions                                             | 80 x 80 x 41 mm                                                                                       |
| Housing material                                       | plastic, PBT-GF30-V0                                                                                  |
| Active face                                            | plastic, PBT-GF30-V0                                                                                  |
| Wiring                                                 | terminal chamber                                                                                      |
| Clamping ability                                       | $\leq 2,5 \text{ mm}^2$                                                                               |
| Vibration resistance                                   | 55 Hz (1 mm)                                                                                          |
| Shock resistance                                       | 30 x g (11 ms)                                                                                        |
| Degree of protection                                   | IP67                                                                                                  |



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with extended switching distance  
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**Supply voltage indication**

LED green

Switching status indication

LED yellow

The TURCK logo, consisting of the word "TURCK" in a bold, black, sans-serif font, positioned on a yellow background that forms part of a large "T" shape.

**TURCK**

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**Mounting instructions**

|       |                      |
|-------|----------------------|
| Gap D | minimum gap<br>3 x B |
| Gap W | 3 x Sn               |
| Gap S | 1,5 x B              |
| Gap G | 6 x Sn               |
| Gap N | 1 x B                |
| Gap A | 1 x B                |
| Gap C | 1 x B                |

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**Width of active face B**80 mm

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