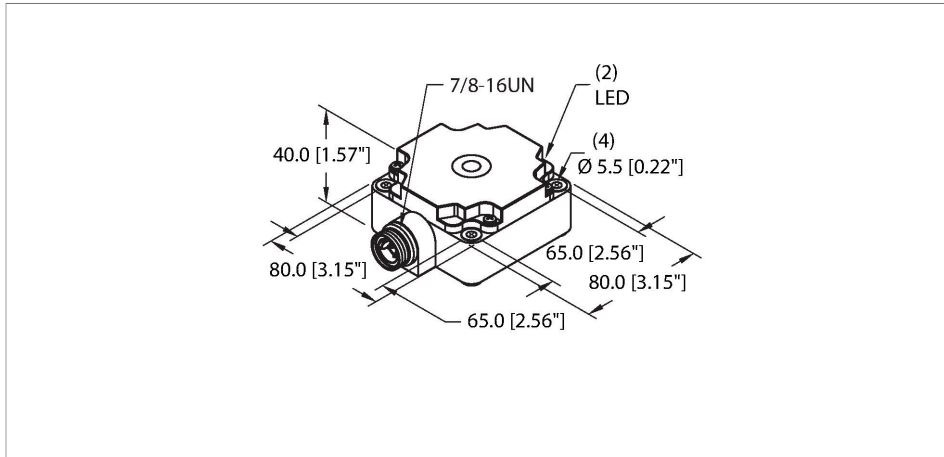


# NI50-CP80-FZ3X2-B2131

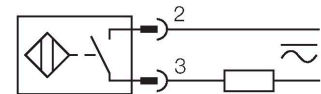
## Inductive Sensor – With Increased Switching Distance



### Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Large sensing range
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 7/8" connector

### Wiring diagram

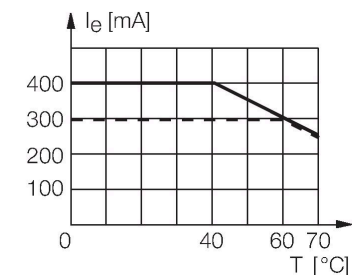


### Technical data

|                              |   |
|------------------------------|---|
| Type                         | NI50-CP80-FZ3X2-B2131                               |
| ID                           | 1341695   |
| <b>General data</b>          |   |
| Rated switching distance     | 50 mm   |
| Mounting conditions          | Non-flush   |
| Secured operating distance   | $\leq (0.81 \times S_n)$ mm                         |
| Correction factors           | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy              | $\leq 2$ % of full scale                            |
| Hysteresis                   | 3...15 %  |
| <b>Electrical data</b>       |   |
| Operating voltage            | 20...250 VAC  |
| Operating voltage            | 10...300 VDC  |
| AC rated operational current | $\leq 400$ mA                                       |
| DC rated operational current | $\leq 300$ mA                                       |
| Frequency                    | $\geq 50 \dots \leq 60$ Hz                          |
| Residual current             | $\leq 1.7$ mA                                       |
| Isolation test voltage       | $\leq 1.5$ kV                                       |
| Surge current                | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)                |
| Voltage drop at $I_e$        | $\leq 6$ V  |
| Output function              | 2-wire, Connection programmable, 2-wire             |
| Smallest operating current   | $\geq 3$ mA   |
| Switching frequency          | 0.02 kHz  |

### 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

| Mechanical data          |  |
|--------------------------|--|
| Design                   | Rectangular, CP80                          |
| Dimensions               | 80 x 80 x 41 mm                            |
| Housing material         | Plastic, PBT-GF30-V0                       |
| Active area material     | PBT-GF30-V0                                |
| Electrical connection    | Connector, 7/8"                            |
| 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      | LED, Green                                 |
| Switching state          | LED, Red                                   |

## Mounting instructions

| Mounting instructions/Description |                     |                |
|-----------------------------------|---------------------|----------------|
|                                   | Distance D          | $3 \times B$   |
|                                   | Distance W          | $3 \times S_n$ |
|                                   | Distance S          | $1.5 \times B$ |
|                                   | Distance G          | $6 \times S_n$ |
|                                   | Distance A          | $1 \times B$   |
|                                   | Distance C          | $1 \times B$   |
|                                   | Width active area B | 80 mm          |