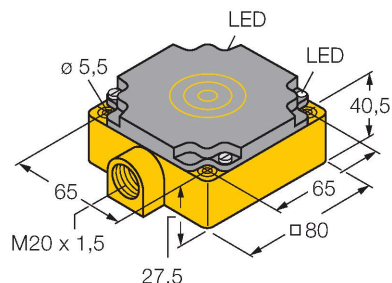


NI40-CP80-FZ3X2/S100

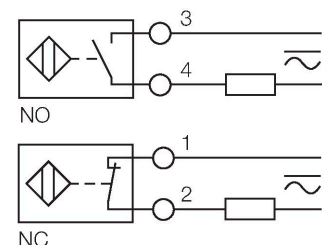
Inductive Sensor – With Increased Temperature Range



Features

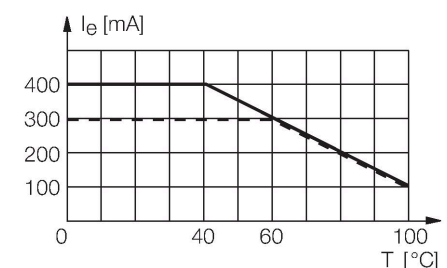
- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Temperatures up to +100 °C
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

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. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.



Technical data

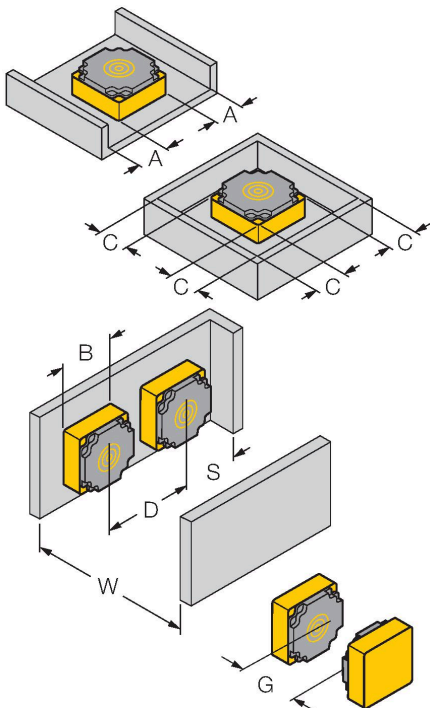
| | |
|--------------------------------|---|
| Type | NI40-CP80-FZ3X2/S100 |
| ID | 13443 |
| General data | |
| Rated switching distance | 40 mm |
| Mounting conditions | Non-flush |
| Secured operating distance | ≤ (0.81 × S _n) mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ±10 % ≤ ± 20 %, ≥ +70 °C |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 20...250 VAC |
| Operating voltage | 10...300 VDC |
| AC rated operational current | ≤ 400 mA |
| DC rated operational current | ≤ 300 mA |
| Rated operational current | See derating curve |
| Frequency | ≥ 50...≤ 60 Hz |
| Residual current | ≤ 1.7 mA |
| Isolation test voltage | ≤ 1.5 kV |
| Surge current | ≤ 8 A (≤ 10 ms max. 5 Hz) |
| Voltage drop at I _e | ≤ 6 V |
| Output function | 2-wire, Connection programmable, 2-wire |
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 0.01 kHz |

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 | Terminal chamber |
| Clamping ability | ≤ 2.5 mm ² |
| Environmental conditions | |
| Ambient temperature | -25...+100 °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 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 |