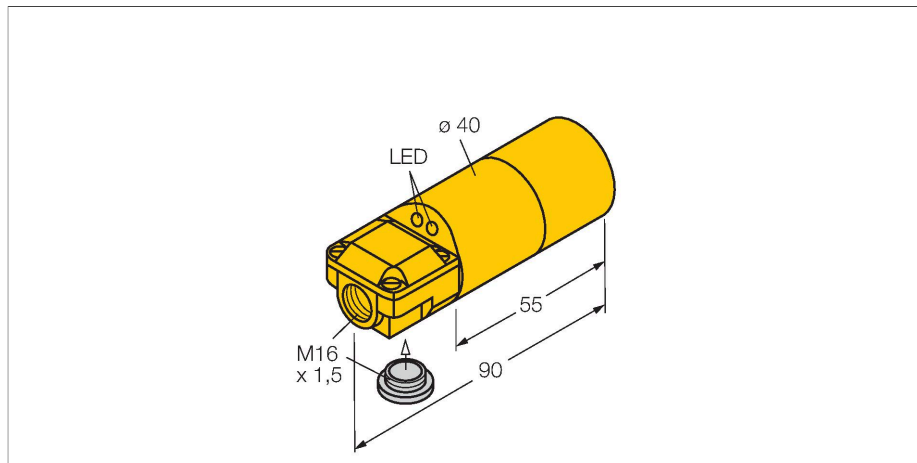


# NI20-K40SR-FZ3X2

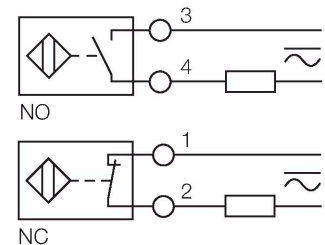
## Inductive Sensor



### Features

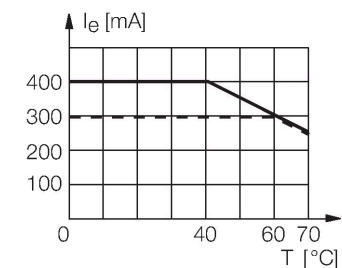
- 2 cable entries (axial, radial)
- Smooth barrel, Ø 40 mm
- Plastic, ABS
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, 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

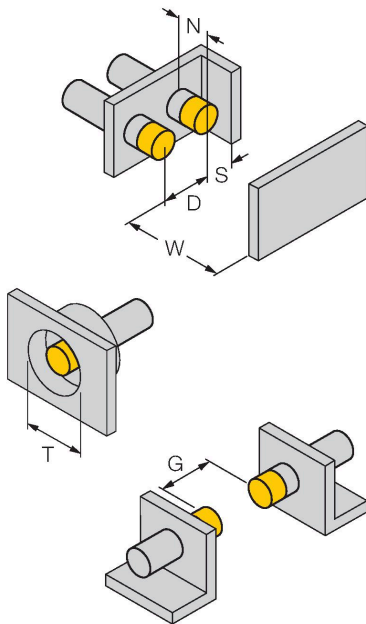
|                                |   |
|--------------------------------|---|
| Type                           | NI20-K40SR-FZ3X2                                    |
| ID                             | 13424   |
| <b>General data</b>            |   |
| Rated switching distance       | 20 mm   |
| Mounting conditions            | Non-flush   |
| Secured operating distance     | ≤ (0.81 × S <sub>n</sub> ) mm                       |
| Correction factors             | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                | ≤ 2 % of full scale                                 |
| Temperature drift              | ≤ ±10 %   |
| Hysteresis                     | 3...15 %  |
| <b>Electrical data</b>         |   |
| Operating voltage              | 20...250 VAC  |
| Operating voltage              | 10...300 VDC  |
| AC rated operational current   | ≤ 400 mA  |
| DC rated operational current   | ≤ 300 mA  |
| 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 <sub>e</sub> | ≤ 6 V   |
| Output function                | 2-wire, Connection programmable, 2-wire             |
| Smallest operating current     | ≥ 3 mA  |
| Switching frequency            | 0.02 kHz  |
| <b>Mechanical data</b>         |   |
| Design                         | Smooth barrel, 40 mm                                |
| Dimensions                     | 90 mm   |

## Technical data

|                                 |  |
|---------------------------------|--|
| Housing material                | Plastic, ABS, Yellow                       |
| Active area material            | Plastic, ABS, yellow                       |
| Electrical connection           | Terminal chamber                           |
| Clamping ability                | ≤ 2.5 mm <sup>2</sup>                      |
| <b>Environmental conditions</b> |  |
| 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                                   |
| Included in delivery            | BS40, cable gland, blanking plug           |

## Mounting instructions

### Mounting instructions/Description



|                        |         |
|------------------------|---------|
| Distance D             | 3 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Distance N             | 2 x Sn  |
| Diameter active area B | Ø 40 mm |

## Accessories

BS 40

69466

Fixing clamp; material mounting  
block: PBT

