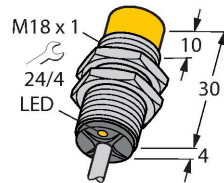


# NI10-G18K-RP6X

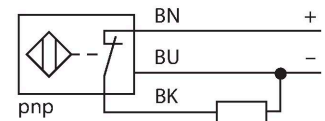
## Inductive Sensor



### Features

- M18 × 1 threaded barrel
- Chrome-plated brass
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

|  |   |
|--|---|
| Type                                   | NI10-G18K-RP6X                                      |
| ID                                     | 4670591   |
| <b>General data</b>                    |   |
| Rated switching distance               | 10 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                            |
| Temperature drift                      | $\leq \pm 10$ %                                     |
| Hysteresis                             | 3...15 %  |
| <b>Electrical data</b>                 |   |
| Operating voltage $U_B$                | 10...30 VDC   |
| Ripple $U_{rs}$                        | $\leq 10$ % $U_{Bmax}$                              |
| 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                        | 3-wire, NC contact, PNP                             |
| Switching frequency                    | 0.5 kHz   |

### Functional principle

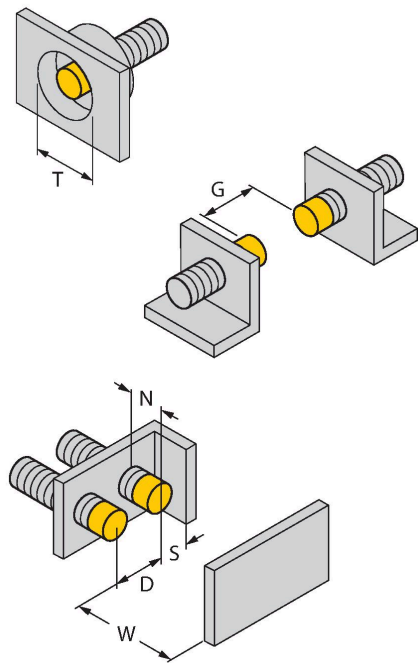
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

| Mechanical data                       |  |
|---------------------------------------|--|
| Design                                | Threaded barrel, M18 x 1                   |
| Dimensions                            | 34 mm                                      |
| Housing material                      | Metal, CuZn, Chrome-plated                 |
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Max. tightening torque of housing nut | 25 Nm                                      |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                  |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                   |
| 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 |
| Switching state                       | LED, Yellow                                |

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 18 mm |

NI10-G18K-RP6X | 02/21/2025 14-21 | technical changes reserved

## Accessories

QM-18

6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-18B

6947214



Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW18

6945004



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18

6901320



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene