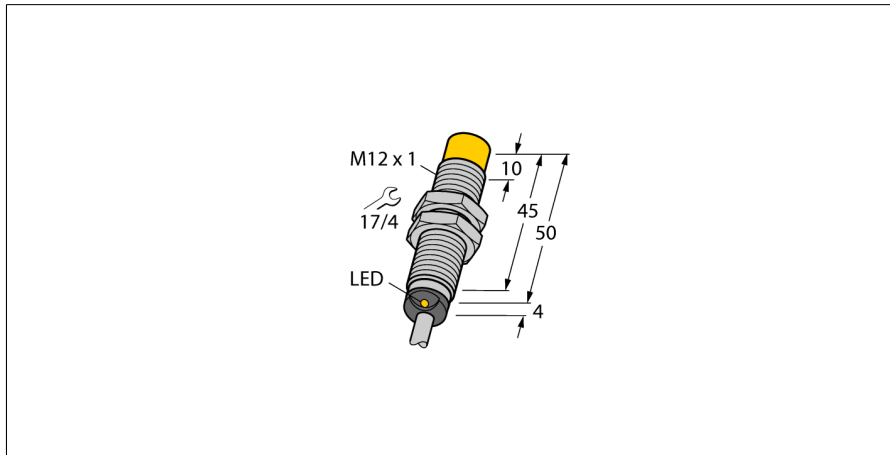
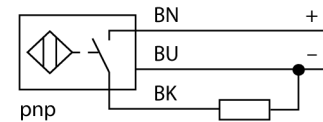


Inductive Sensor NI8U-M12-AP6X 7M



- M12 × 1 threaded barrel
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring Diagram



| | |
|------|------------------|
| Type | NI8U-M12-AP6X 7M |
| ID | 1644106 |

| General data | |
|--------------------------------|---|
| Rated switching distance S_n | 8 mm |
| Mounting conditions | Non-flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2\%$ of full scale |
| | $\leq \pm 15\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$ |
| Hysteresis | 3...15 % |

| Electrical data | |
|---|-------------------------|
| Operating voltage | 10...30 VDC |
| Residual ripple | $\leq 10\%$ U_{ss} |
| DC rated operational current | ≤ 200 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes/ Cyclic |
| Voltage drop at I_s | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes/ Complete |
| Output function | 3-wire, NO contact, PNP |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |
| Switching frequency | 1 kHz |

| Mechanical data | |
|---------------------------------------|----------------------------|
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 54 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, LCP |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2mm, LifYY, PVC, 7 m |
| Core cross-section | 3 x 0.34 mm ² |

Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

| | |
|--------------------------|---|
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | |
| | LED, Yellow |

Accessories

| Type code | Ident-No. | | Dimension drawing |
|-----------|-----------|--|-------------------|
| QM-12 | 6945101 | Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets. | |
| BST-12B | 6947212 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6 | |
| MW-12 | 6945003 | Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) | |
| BSS-12 | 6901321 | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene | |