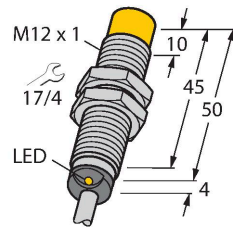


# NI8U-M12-AP6X

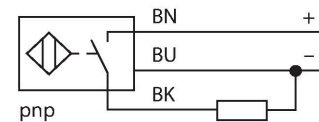
## Inductive sensor



### Features

- 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



### Functional principle

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

### Technical data

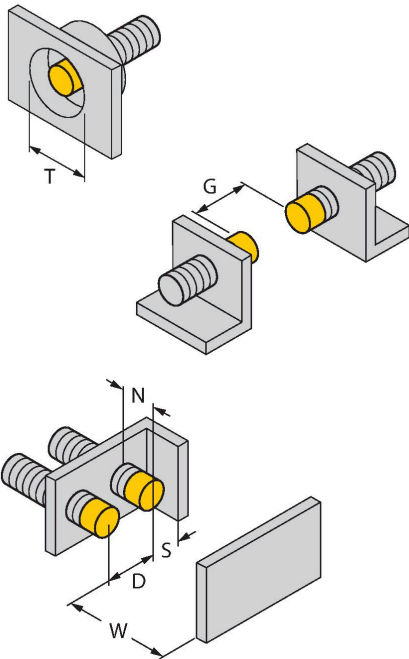
|   |   |
|---|---|
| Type                                      | NI8U-M12-AP6X   |
| Ident. no.                                | 1644100   |
| Rated switching distance                  | 8 mm  |
| Mounting conditions                       | Non-flush   |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm                                   |
| Repeat accuracy                           | $\leq 2\%$ of full scale                                      |
| Temperature drift                         | $\leq \pm 10\%$   |
|   | $\leq \pm 15\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$ |
| Hysteresis                                | 3...15 %  |
| Ambient temperature                       | -30...+85 °C  |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | $\leq 10\% U_s$   |
| DC rated operational current              | $\leq 200$ mA   |
| No-load current                           | $\leq 20$ mA  |
| Residual current                          | $\leq 0.1$ mA   |
| Isolation test voltage                    | $\leq 0.5$ kV   |
| Short-circuit protection                  | yes / Cyclic  |
| Voltage drop at $I_e$                     | $\leq 1.8$ V  |
| Wire breakage/Reverse polarity protection | yes / Complete  |
| Output function                           | 3-wire, NO contact, PNP                                       |
| Insulation class                          | □   |
| Switching frequency                       | 2 kHz   |
| Design                                    | Threaded barrel, M12 × 1                                      |
| Dimensions                                | 54 mm   |

## Technical data

|                                    |   |
|------------------------------------|---|
| Housing material                   | Metal, CuZn, Chrome-plated                |
| Active area material               | Plastic, LCP                              |
| End cap                            | Plastic, EPTR                             |
| Max. tightening torque housing nut | 10 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>                  |
| 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                               |

## Mounting instructions

### Mounting instructions/Description

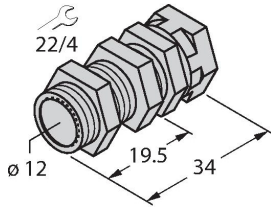


|                        |         |
|------------------------|---------|
| Distance D             | 48 mm   |
| Distance W             | 3 x Sn  |
| Distance T             | 45 mm   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Distance N             | 2 x Sn  |
| Diameter active area B | Ø 12 mm |

Accessories

**QM-12**

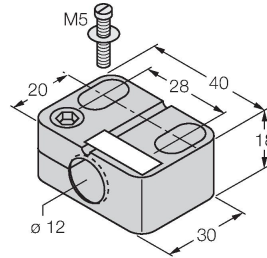
**6945101**



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**

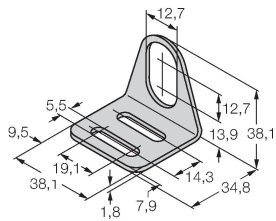
**6947212**



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

**MW12**

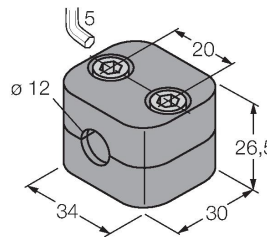
**6945003**



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



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