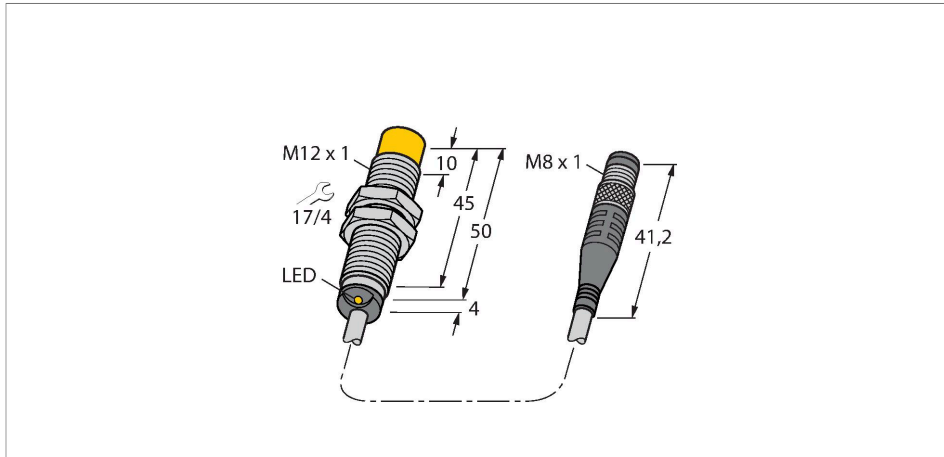


# NI8U-M12-AP6X-0.2-PSG3M

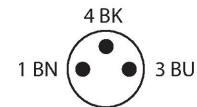
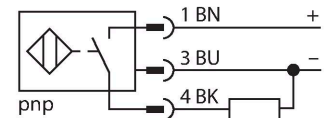
## Inductive Sensor



### 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
- Pigtail with male end M8 x 1

### Wiring diagram



### Technical data

|   |   |
|---|---|
| Type                                      | NI8U-M12-AP6X-0.2-PSG3M                                       |
| ID  | 1644184   |
| <b>General data</b>                       |   |
| 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                                      |
|   | $\leq \pm 15\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$ |
| Hysteresis                                | 3...15 %  |
| <b>Electrical data</b>                    |   |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | $\leq 10\%$ $U_{ss}$  |
| DC rated operational current              | $\leq 200$ mA   |
| No-load current                           | 25 mA   |
| Residual current                          | $\leq 0.1$ mA   |
| Isolation test voltage                    | $\leq 0.5$ kV   |
| Short-circuit protection                  | yes / Cyclic  |
| Voltage drop at $I_o$                     | $\leq 1.8$ 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 <sub>SS</sub>  |
| Insulation class                          | □   |
| Switching frequency                       | 1 kHz   |

### Functional principle

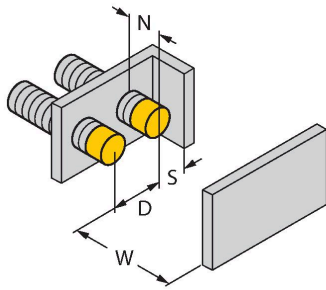
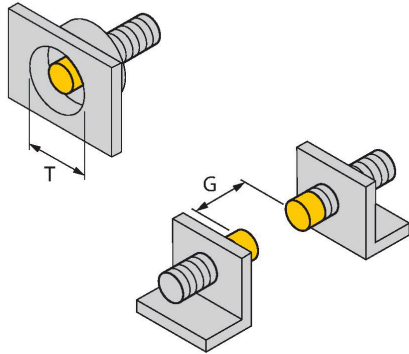
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

## Technical data

| 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                             |
| Material coupling nut                 | metal, CuZn, nickel-plated                |
| Max. tightening torque of housing nut | 10 Nm                                     |
| Electrical connection                 | Cable with connector, M8 × 1              |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 0.2 m               |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                  |
| 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                               |

## 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

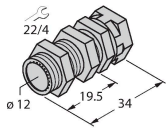
Diameter active area B  $\varnothing$  12 mm

## Accessories

QM-12

6945101

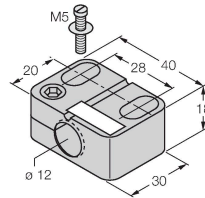
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

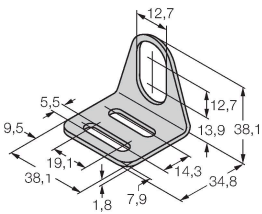
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



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

