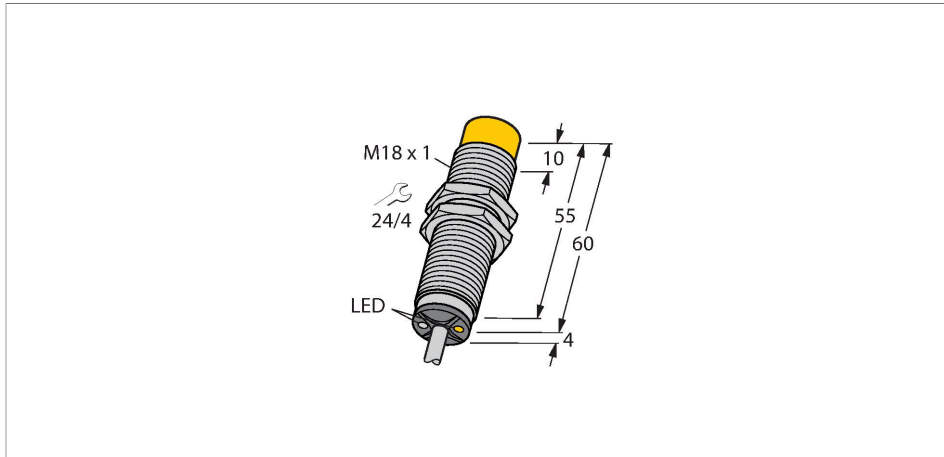


# NI12U-M18-ADZ30X2 4M Inductive Sensor



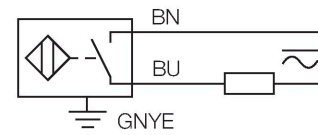
## Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

## Technical data

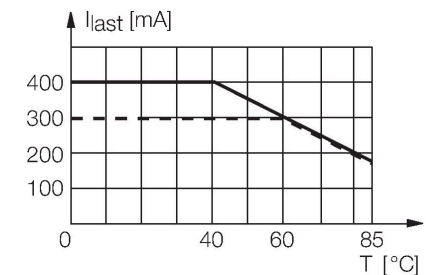
|  |  |
|--|--|
| Type                                   | NI12U-M18-ADZ30X2 4M   |
| ID                                     | 4282413  |
| <b>General data</b>                    |  |
| Rated switching distance               | 12 mm  |
| Mounting conditions                    | Non-flush  |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm  |
| Repeat accuracy                        | $\leq 2 \%$ of full scale  |
| Temperature drift                      | $\leq \pm 10 \%$   |
|  | $\leq \pm 15 \%, \leq -25 \text{ }^\circ\text{C} \vee \geq +70 \text{ }^\circ\text{C}$ |
| Hysteresis                             | 3...15 %   |
| <b>Electrical data</b>                 |  |
| Operating voltage $U_b$                | 20...250 VAC   |
| Operating voltage $U_b$                | 10...300 VDC   |
| AC rated operational current           | $\leq 400$ mA  |
| DC rated operating current $I_o$       | $\leq 300$ mA  |
| Frequency                              | $\geq 50 \dots \leq 60$ Hz   |
| Residual current                       | $\leq 1.7$ mA  |
| Isolation test voltage                 | 1.5 kV   |
| Surge current                          | $\leq 3$ A ( $\leq 20$ ms max. 5 Hz)   |
| Short-circuit protection               | yes/Latching   |
| Voltage drop at $I_o$                  | $\leq 6$ V   |
| Wire break/reverse polarity protection | yes/Complete   |
| Output function                        | 2-wire, NO contact, 2-wire   |
| DC field stability                     | 300 mT   |

## Wiring diagram



## Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx 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.

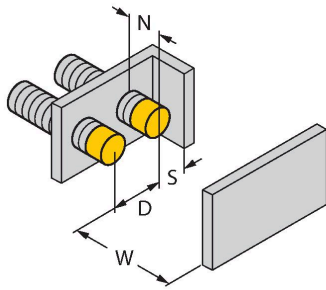
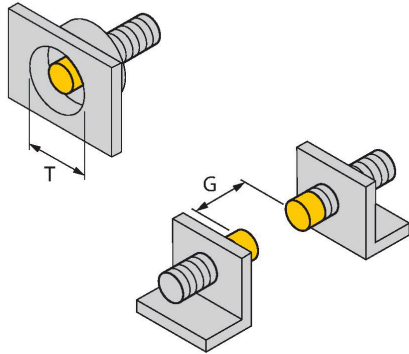


## Technical data

|                                       |   |
|---------------------------------------|---|
| AC field stability                    | 300 mT <sub>ss</sub>                      |
| Smallest operating current            | ≥ 3 mA                                    |
| Insulation class                      | □   |
| Switching frequency                   | 0.01 kHz                                  |
| <b>Mechanical data</b>                |   |
| Design                                | Threaded barrel, M18 x 1                  |
| Dimensions                            | 65 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PBT                              |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 25 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 4 m                 |
| Core cross-section                    | 3 x 0.5 mm <sup>2</sup>                   |
| <b>Environmental conditions</b>       |   |
| 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 |
| Power-on indication                   | LED, Green                                |
| 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

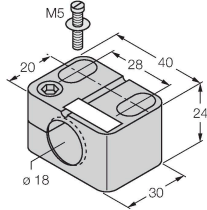
Diameter active area B  $\varnothing$  18 mm

## Accessories

BST-18B

6947214

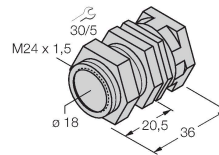
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



QM-18

6945102

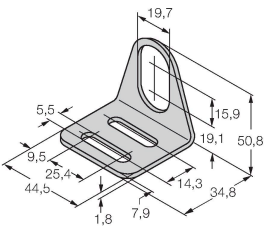
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



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

