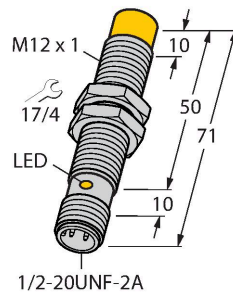


# NI8U-G12-ADZ32X-B3131

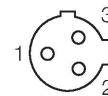
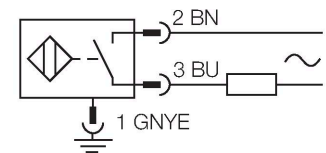
## Inductive Sensor



### Features

- Threaded barrel, M12 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
- 1/2" male connector

### Wiring diagram



### Functional principle

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

|                                        |                                                                      |
|----------------------------------------|----------------------------------------------------------------------|
| Type                                   | NI8U-G12-ADZ32X-B3131                                                |
| ID                                     | 4281105                                                              |
| <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                                            |
| Temperature drift                      | $\leq \pm 10 \%$                                                     |
|                                        | $\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$ |
| 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           | $\leq 100$ mA                                                        |
| DC rated operating current $I_o$       | $\leq 100$ mA                                                        |
| Frequency                              | $\geq 50 \dots \leq 60$ Hz                                           |
| Residual current                       | $\leq 1.7$ mA                                                        |
| Isolation test voltage                 | 1.5 kV                                                               |
| Surge current                          | $\leq 1$ A ( $\leq 10$ 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                                                               |
| AC field stability                     | 300 mT <sub>SS</sub>                                                 |
| Smallest operating current             | $\geq 3$ mA                                                          |
| Switching frequency                    | 0.01 kHz                                                             |

Technical data

| Mechanical data                       |                                           |
|---------------------------------------|-------------------------------------------|
| Design                                | Threaded barrel, M12 x 1                  |
| Dimensions                            | 71 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PBT-GF30                         |
| Max. tightening torque of housing nut | 10 Nm                                     |
| Electrical connection                 | Connector, 1/2"                           |
| 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, Red                                  |

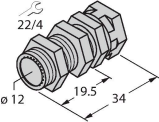
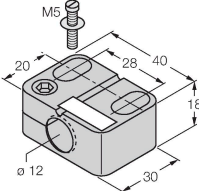
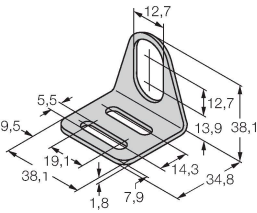
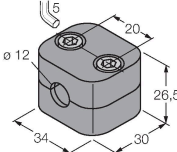
Mounting instructions

# Mounting instructions/Description

The image contains three technical drawings illustrating the mounting of a sensor. The top drawing is a side view showing the sensor (yellow cylinder) mounted on a plate (grey) with a dimension line labeled 'T' indicating the distance from the sensor to the edge of the plate. The middle drawing is a top view showing the sensor mounted on a plate with a dimension line labeled 'G' indicating the distance between the sensor and the edge of the plate. The bottom drawing is a perspective view showing the sensor mounted on a plate with dimensions 'N', 'S', 'D', and 'W' indicated by dimension lines. 'N' is the distance from the sensor to the edge of the plate, 'S' is the distance from the sensor to the edge of the plate, 'D' is the distance from the sensor to the edge of the plate, and 'W' is the width of the plate.

|                        |         |
|------------------------|---------|
| 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 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 |
|  |         |                                                                                                                                                                                            |  |         |                                                                                |