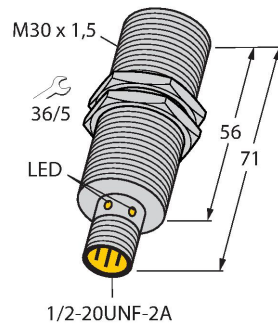


# BI10U-G30-ADZ30X2-B3131

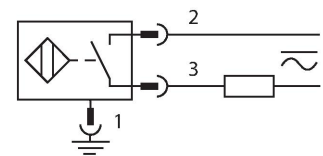
## Inductive Sensor



### Features

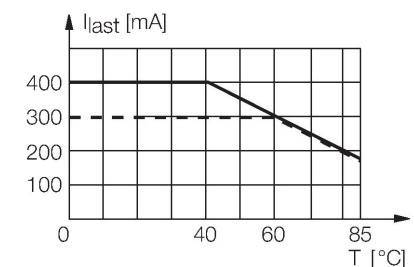
- Threaded barrel, M30 x 1.5
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 1/2" male connector

### Wiring diagram



### Functional principle

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

|                                        |                                                      |
|----------------------------------------|------------------------------------------------------|
| Type                                   | BI10U-G30-ADZ30X2-B3131                              |
| ID                                     | 4281613                                              |
| General data                           |                                                      |
| Rated switching distance               | 10 mm                                                |
| Mounting conditions                    | Flush                                                |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                          |
| Repeat accuracy                        | $\leq 2 \%$ of full scale                            |
| Temperature drift                      | $\leq \pm 10 \%$                                     |
|                                        | $\leq \pm 15 \%, -25 \text{ °C} \leq +70 \text{ °C}$ |
| Hysteresis                             | 3...15 %                                             |
| Electrical data                        |                                                      |
| 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                                               |
| 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, M30 x 1.5                |
| Dimensions                            | 71 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PBT-GF30                         |
| Max. tightening torque of housing nut | 75 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 |
| Power-on indication                   | LED, Green                                |
| Switching state                       | LED, Yellow                               |

Mounting instructions

Mounting instructions/Description

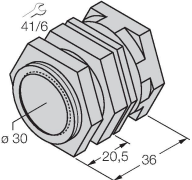
The image contains three technical diagrams illustrating the mounting of a threaded barrel into a housing. 
   
1. The top diagram is a side view showing a barrel with a yellow-colored active area. A dimension line labeled 'T' indicates the thickness of the housing wall.
   
2. The middle diagram shows two isometric views of the barrel being inserted into a U-shaped housing. A dimension line labeled 'G' indicates the distance between the two housing walls.
   
3. The bottom diagram is a top-down view of the barrel seated in the housing. It shows two yellow-colored active areas. Dimension lines are labeled: 'D' for the distance between the centers of the active areas, 'S' for the distance from the housing wall to the center of an active area, and 'W' for the total width of the housing.

|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 30 mm |

Accessories

QM-30

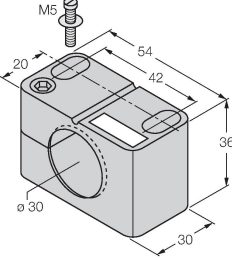
6945103



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-30B

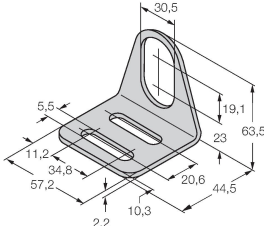
6947216



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

MW30

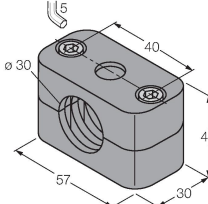
6945005



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-30

6901319



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene