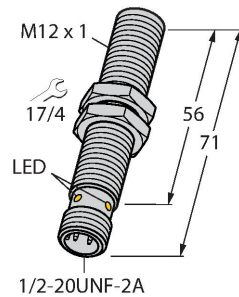


# BI4-G12-RDZ32X-B3131

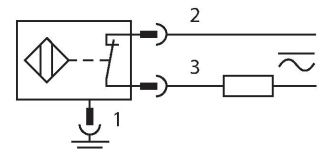
## Inductive Sensor



### Features

- Threaded barrel, M12 x 1
- Chrome-plated brass
- AC 2-wire, 20...250 V AC
- DC 2-wire, 10...300 V DC
- NC contact
- 1/2" connector

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

### Technical data

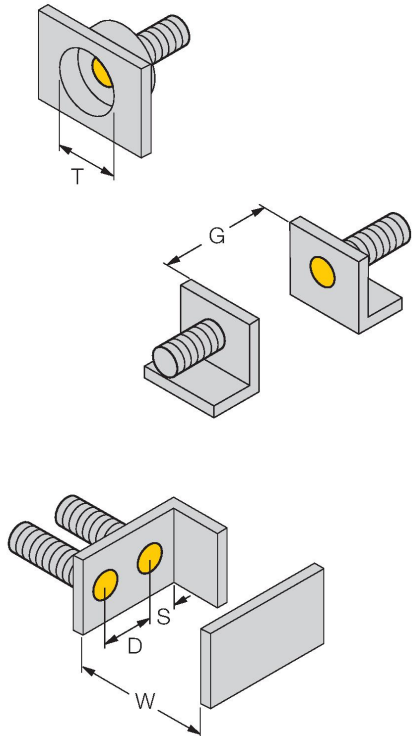
|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI4-G12-RDZ32X-B3131                                |
| ID                                     | 4205083                                             |
| <b>General data</b>                    |                                                     |
| Rated switching distance               | 4 mm                                                |
| Mounting conditions                    | Flush                                               |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                         |
| Correction factors                     | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                        | $\leq 2$ % of full scale                            |
| 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                          | $\leq 3$ 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, NC contact, 2-wire                          |
| Smallest operating current             | $\geq 3$ mA                                         |

Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Switching frequency                   | 0.02 kHz                                   |
| Mechanical data                       |                                            |
| Design                                | Threaded barrel, M12 x 1                   |
| Dimensions                            | 71 mm                                      |
| Housing material                      | Metal, CuZn, Chrome-plated                 |
| Active area material                  | Plastic, PA12-GF30                         |
| Max. tightening torque of housing nut | 10 Nm                                      |
| Electrical connection                 | Connector, 1/2"                            |
| Environmental conditions              |                                            |
| Ambient temperature                   | -25...+70 °C                               |
| Vibration resistance                  | 55 Hz (1 mm)                               |
| Shock resistance                      | 30 g (11 ms)                               |
| Protection class                      | IP67                                       |
| MTTF                                  | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Red                                   |

Mounting instructions

|                                   |
|-----------------------------------|
| Mounting instructions/Description |
|-----------------------------------|



|                        |         |
|------------------------|---------|
| 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 12 mm |

B14-G12-RDZ32X-B3131 | 02/21/2025 14-08 | technical changes reserved

## 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

