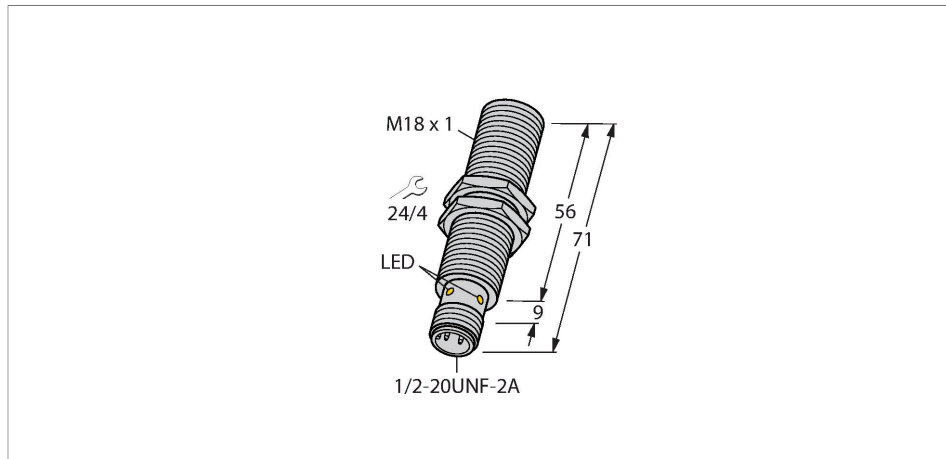


# BI8-G18-ADZ30X2-B3331

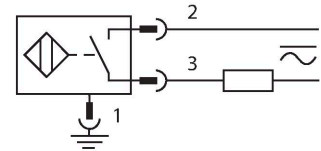
## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large sensing range
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 1/2" male connector

### Wiring diagram

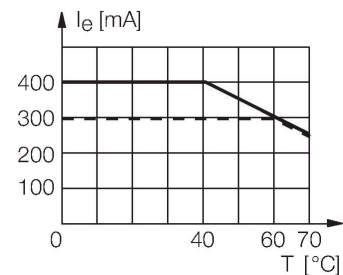


### Technical data

|   |   |
|---|---|
| Type                                      | BI8-G18-ADZ30X2-B3331                               |
| ID  | 4209301   |
| <b>General data</b>                       |   |
| Rated switching distance                  | 8 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                         | 20...250 VAC  |
| Operating voltage                         | 10...300 VDC  |
| AC rated operational current              | $\leq 400$ mA                                       |
| DC rated operational current              | $\leq 300$ mA                                       |
| Frequency                                 | $\geq 50$ ... $\leq 60$ Hz                          |
| Residual current                          | $\leq 1.7$ mA                                       |
| Isolation test voltage                    | $\leq 1.5$ kV                                       |
| Surge current                             | $\leq 3$ A ( $\leq 20$ ms max. 5 Hz)                |
| Short-circuit protection                  | yes / Latching                                      |
| Voltage drop at $I_e$                     | $\leq 6$ V  |
| Wire breakage/Reverse polarity protection | yes / Complete                                      |
| Output function                           | 2-wire, NO contact, 2-wire                          |
| Smallest operating current                | $\geq 3$ mA   |

### 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

|                                       |  |
|---------------------------------------|--|
| Switching frequency                   | 0.02 kHz                                   |
| <b>Mechanical data</b>                |  |
| Design                                | Threaded barrel, M18 x 1                   |
| Dimensions                            | 71 mm                                      |
| Housing material                      | Metal, CuZn, Chrome-plated                 |
| Active area material                  | Plastic, PA12-GF30                         |
| Max. tightening torque of housing nut | 25 Nm                                      |
| Electrical connection                 | Connector, 1/2"                            |
| <b>Environmental conditions</b>       |  |
| 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 |
| Power-on indication                   | LED, Green                                 |
| 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

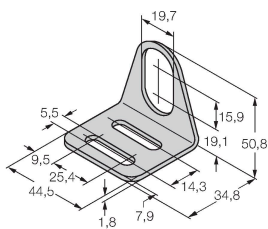
Distance G 6 x Sn

Diameter active area B  $\varnothing$  18 mm

## Accessories

MW-18

6945004



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

BSS-18

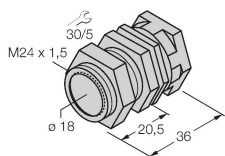
6901320



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

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.