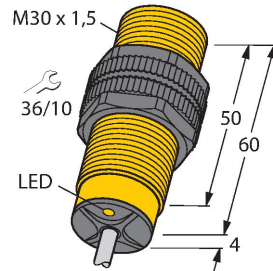


# BI10-S30-RZ3X

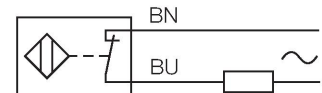
## Inductive Sensor



### Features

- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC contact
- Cable connection

### Wiring diagram

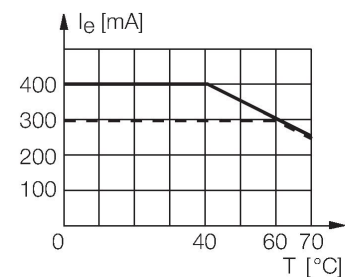


### Technical data

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Type                             | BI10-S30-RZ3X                                       |
| ID                               | 43556                                               |
| General data                     |                                                     |
| Rated switching distance         | 10 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                            |
| Temperature drift                | $\leq \pm 10$ %                                     |
| 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 $I_e$ | $\leq 300$ mA                                       |
| Frequency                        | $\geq 50 \dots \leq 60$ Hz                          |
| Residual current                 | $\leq 1.7$ mA                                       |
| Isolation test voltage           | 1.5 kV                                              |
| Surge current                    | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)                |
| Voltage drop at $I_e$            | $\leq 6$ V                                          |
| Output function                  | 2-wire, NC contact, 2-wire                          |
| Smallest operating current       | $\geq 3$ mA                                         |
| Switching frequency              | 0.02 kHz                                            |

### 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.

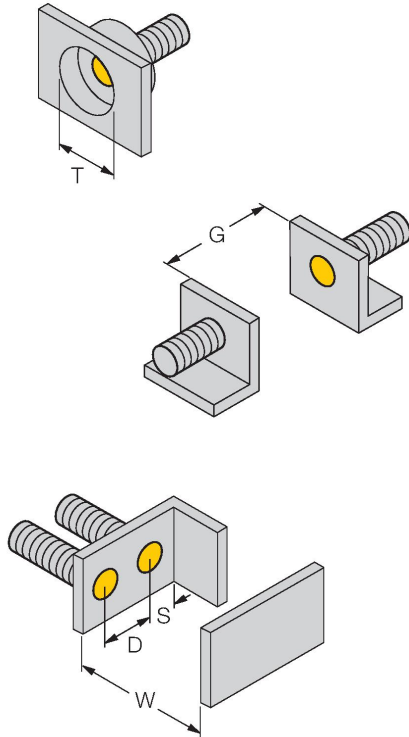


## Technical data

| Mechanical data                       |                                            |
|---------------------------------------|--------------------------------------------|
| Design                                | Threaded barrel, M30 x 1.5                 |
| Dimensions                            | 64 mm                                      |
| Housing material                      | Plastic, PA12-GF30                         |
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Max. tightening torque of housing nut | 5 Nm                                       |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                  |
| Core cross-section                    | 2 x 0.34 mm <sup>2</sup>                   |
| 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

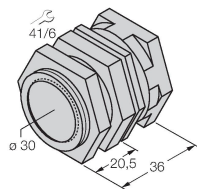


|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 30 mm |

## Accessories

### QM-30

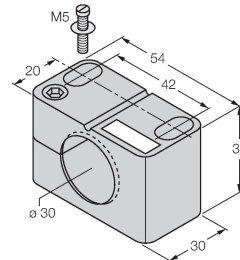
6945103



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

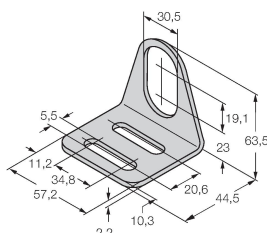
6947216



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

### MW30

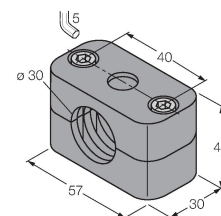
6945005



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