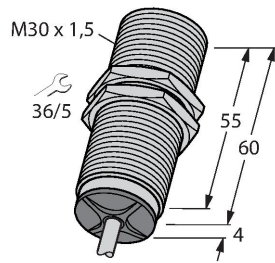


# BI10-M30-LIU

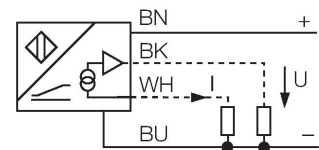
## Inductive Sensor – With Analog Output



### Features

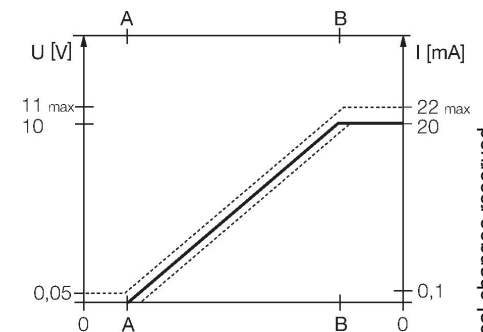
- M30 × 1.5 threaded tube
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- Cable connection

### Wiring diagram



### Functional principle

Inductive TURCK sensors with analog output accomplish simple control tasks. They provide a current, voltage or frequency signal proportional to the target's distance. The output signal is linear to the distance of the target over the entire sensing range.



### Technical data

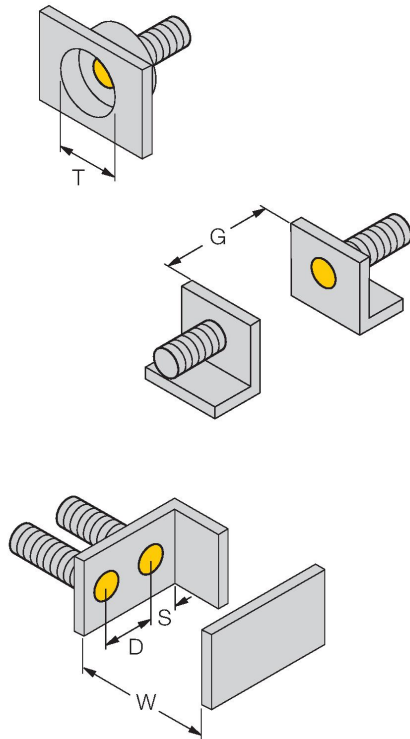
|                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| Type                                   | BI10-M30-LIU                                          |
| ID                                     | 15355                                                 |
| General data                           |                                                       |
| Measuring range                        | 3...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   |
| Repeatability                          | $\leq 1 \%$ of measuring range  A - B                 |
|                                        | 0.5 %, after warm-up 0.5 h                            |
| Reproducibility                        | $\leq 50 \mu\text{m}$                                 |
|                                        | $\leq 25 \mu\text{m}$ , after a warm-up time of 0.5 h |
| Linearity deviation                    | $\leq 3 \%$                                           |
| Temperature drift                      | $\leq \pm 0.06 \%/K$                                  |
| Electrical data                        |                                                       |
| Operating voltage $U_B$                | 15...30 VDC                                           |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                               |
| No-load current                        | $\leq 8 \text{ mA}$                                   |
| Isolation test voltage                 | 0.5 kV                                                |
| Short-circuit protection               | yes                                                   |
| Wire break/reverse polarity protection | no/Complete                                           |
| Output function                        | 4-wire, Analog output                                 |
| Voltage output                         | 0...10 V                                              |
| Current output                         | 0...20 mA                                             |

## Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Load resistance voltage output        | $\geq 4.7 \text{ k}\Omega$                |
| Load resistance current output        | $\leq 0.4 \text{ k}\Omega$                |
| Measuring sequence frequency          | 140 Hz                                    |
| <b>Mechanical data</b>                |                                           |
| Design                                | Threaded barrel, M30 x 1.5                |
| Dimensions                            | 64 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PA12-GF30                        |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 75 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, Gray, LifYY, PVC, 2 m           |
| Core cross-section                    | 4 x 0.34 mm <sup>2</sup>                  |
| <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                                  | 751 years acc. to SN 29500 (Ed. 99) 40 °C |

## Mounting instructions

### Mounting instructions/Description



Distance D 60 mm

Distance W 27 mm

Distance T 3 x B

Distance S 45 mm

Distance G 54 mm

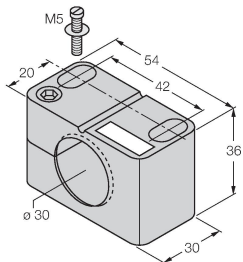
Diameter active area B Ø 30 mm

## Accessories

### BST-30B

6947216

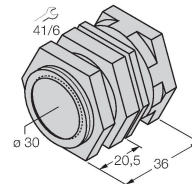
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



### QM-30

6945103

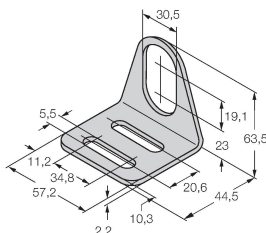
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



### 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

