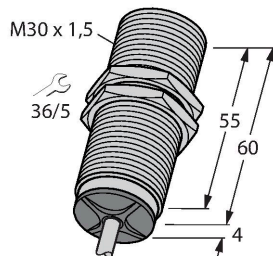


# BI15-M30-LIU

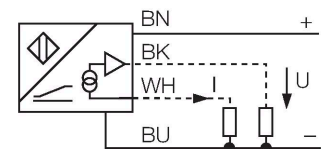
## Inductive Sensor – With Analog Output



### Features

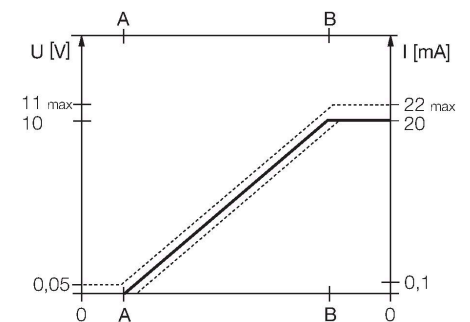
- M30 × 1.5 threaded tube
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- Cable connection

### 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                                      | BI15-M30-LIU  |
| ID  | 1535543   |
| <b>General data</b>                       |   |
| Measuring range                           | 2...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 |
| Repeatability                             | $\leq 1$ % of measuring range  A - B                |
|   | 0.5 %, after warm-up 0.5 h                          |
| Reproducibility                           | $\leq 80$ $\mu$ m                                   |
|   | $\leq 40$ $\mu$ m, after a warm-up time of 0.5 h    |
| Linearity deviation                       | $\leq 5$ %  |
| Temperature drift                         | $\leq \pm 0.06$ %/K                                 |
| <b>Electrical data</b>                    |   |
| Operating voltage                         | 15...30 VDC   |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| No-load current                           | 8 mA  |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes   |
| Wire breakage/Reverse polarity protection | no / Complete                                       |
| Output function                           | 4-wire, Analog output                               |
| Voltage output                            | 0...10 V  |
| Current output                            | 0...20 mA   |
| Load resistance voltage output            | $\geq 4.7$ k $\Omega$                               |
| Load resistance current output            | $\leq 0.4$ k $\Omega$                               |
| Measuring sequence frequency              | 140 Hz  |

## Technical data

| Mechanical data                       |   |
|---------------------------------------|---|
| 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>                  |
| Environmental conditions              |   |
| 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 |

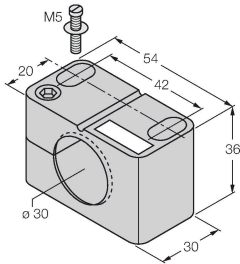
## Mounting instructions

| 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

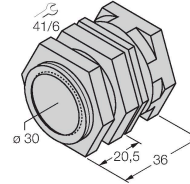
6947216



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

QM-30

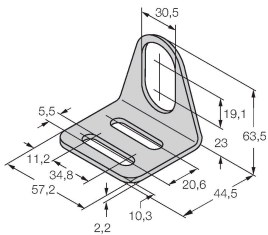
6945103



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.

MW-30

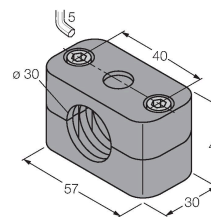
6945005



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

## Accessories

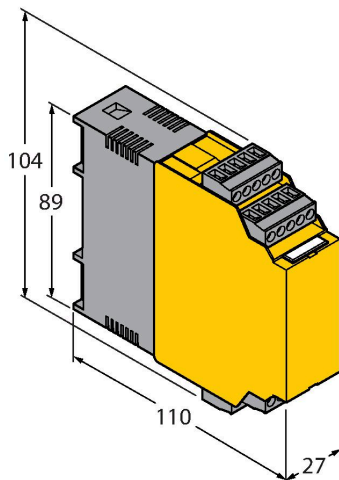
Dimension drawing

Type

ID

IM43-13-SR

7540041



Trip amplifier; 1-channel; input 0/4... 20 mA or 0/2... 10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20... 250 VUC; further Limit value indicators are described in our "Interface Technology" catalog.