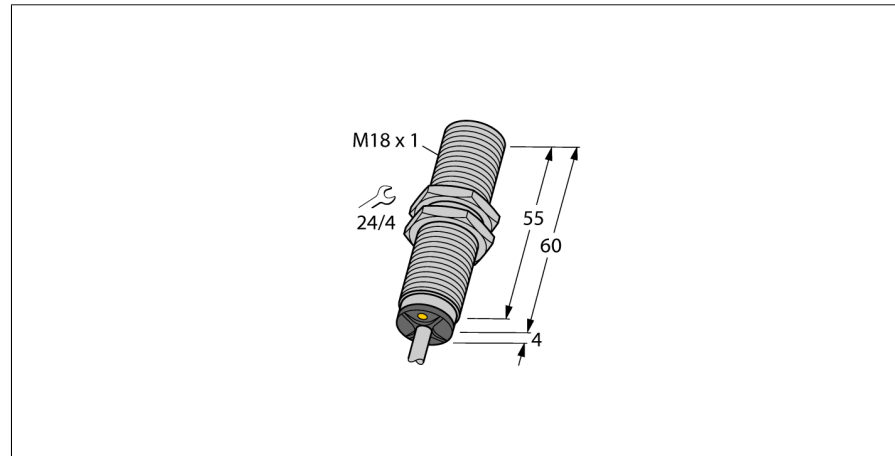
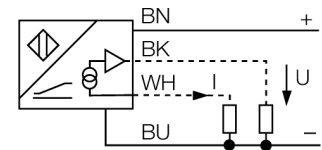


**Inductive sensor with analog output**  
**BI5-M18-LIU**



- Threaded barrel, M18 x 1
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- Cable connection

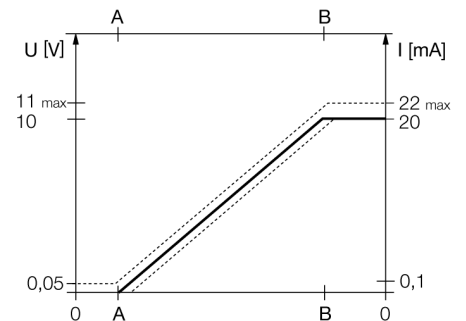
**Wiring diagram**



**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.

**Measuring range**

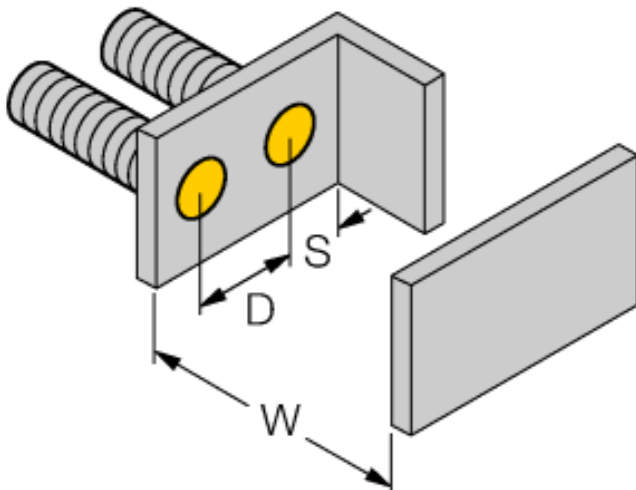
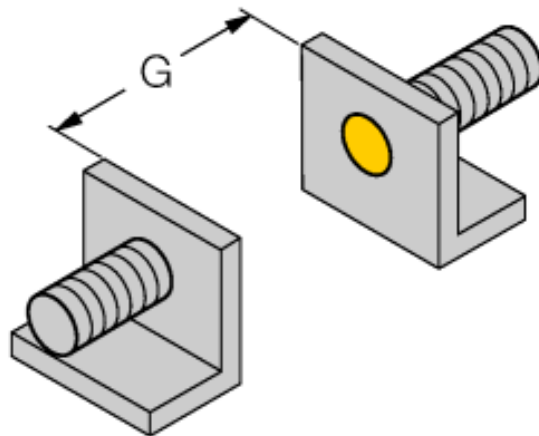
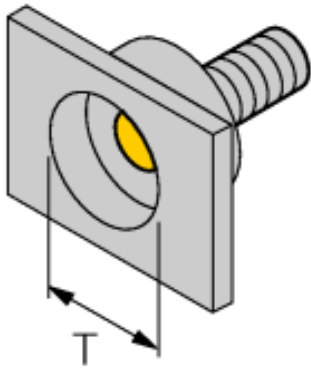


|   |   |
|---|---|
| <b>Type code</b>                            | BI5-M18-LIU   |
| Ident no.                                   | 1536000   |
| <b>Measuring range [A...B]</b>              | 2...4mm   |
| Mounting condition                          | flush   |
| Correction factors                          | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeatability                               | ≤ 1 % of measuring range  A - B                     |
|   | ≤ 0.5 %, after warm-up 0.5 h                        |
| Reproducibility                             | ≤ 20 μm   |
|   | ≤ 10 μm, after a warm-up time of 0.5 h              |
| Linearity deviation                         | ≤ 3 %   |
| Temperature drift                           | ≤ ± 0.06 % / K                                      |
| Ambient temperature                         | -25...+70 °C  |
| <b>Operating voltage</b>                    | 15...30VDC  |
| Residual ripple                             | ≤ 10 % U <sub>ss</sub>                              |
| No-load current I <sub>0</sub>              | ≤ 8 mA  |
| Rated insulation voltage                    | ≤ 0.5 kV  |
| Short-circuit protection                    | yes   |
| Wire breakage / Reverse polarity protection | yes/ complete                                       |
| Output function                             | 4-wire, analog output                               |
| Voltage output                              | 0...10V   |
| Current output                              | 0...20mA  |
| Load resistance voltage output              | ≥ 4.7 kΩ  |
| Load resistance current output              | ≤ 0.4 kΩ  |
| Measuring sequence frequency                | 200 Hz  |
| <b>Design</b>                               | threaded barrel, M18 x 1                            |
| Dimensions                                  | 64 mm   |
| Housing material                            | metal, CuZn, chrome-plated                          |
| Material active area                        | Plastic, PA   |
| End cap                                     | Plastic, EPTR                                       |
| Max. tightening torque housing nut          | 25 Nm   |
| Connection                                  | cable   |
| Cable quality                               | 5.2 mm, LifYY, PVC, 2 m                             |
| Cable cross section                         | 4 x 0.34 mm <sup>2</sup>                            |
| 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           |

**Inductive sensor  
with analog output  
BI5-M18-LIU**

|            |         |
|------------|---------|
| Distance D | 2 x B   |
| Distance W | 12 mm   |
| Distance T | 3 x B   |
| Distance S | 1.5 x B |
| Distance G | 24 mm   |

Diameter of the active area B                     $\varnothing$  18 mm

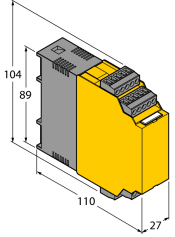
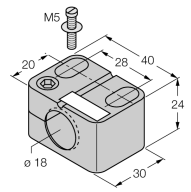
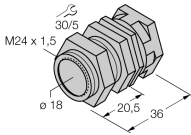
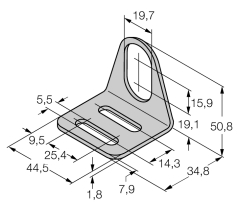
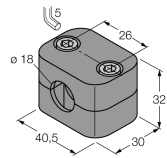


**Inductive sensor  
with analog output  
BI5-M18-LIU**

**TURCK**

Industrial  
Automation

**Accessories**

| Type code  | Ident no. | Description  | Dimension drawing   |
|------------|-----------|--|---|
| IM43-13-SR | 7540041   | Limit value monitor; 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 monitors are described in our "Interface Technology" catalog. |    |
| BST-18B    | 6947214   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6  |    |
| QM-18      | 6945102   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.   |  |
| MW-18      | 6945004   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)   |  |
| BSS-18     | 6901320   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene   |  |