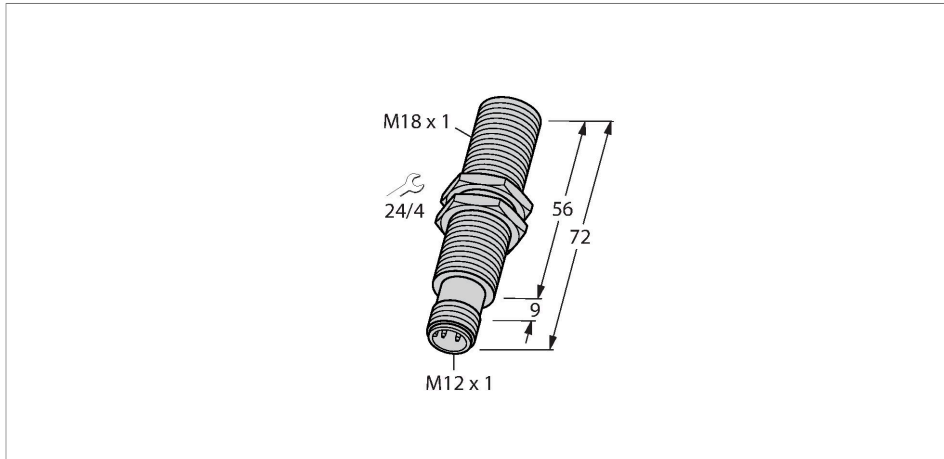


# BI8-M18E-LIU-H1141

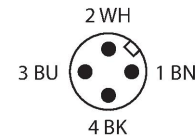
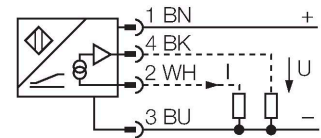
## Inductive Sensor – With Analog Output



### Features

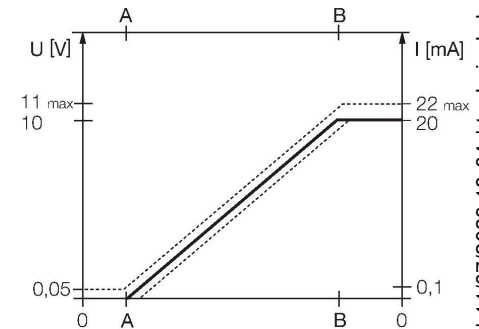
- Threaded barrel, M18 x 1
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- M12 x 1 male connector

### 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                                      | BI8-M18E-LIU-H1141                                    |
| ID  | 1535561   |
| <b>General data</b>                       |   |
| Measuring range                           | 1...5 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                           | $\leq 40 \mu\text{m}$                                 |
|   | $\leq 20 \mu\text{m}$ , 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   |

BI8-M18E-LIU-H1141 | 11/07/2023 13-04 | technical changes reserved

## 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          | 200 Hz                                    |
| <b>Mechanical data</b>                |   |
| Design                                | Threaded barrel, M18 x 1                  |
| Dimensions                            | 72 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PA12-GF30                        |
| Max. tightening torque of housing nut | 25 Nm                                     |
| Electrical connection                 | Connector, M12 x 1                        |
| <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

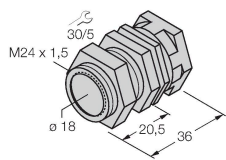


|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 12 mm   |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 24 mm   |
| Diameter active area B | Ø 18 mm |

## Accessories

QM-18

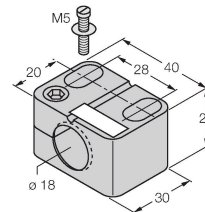
6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-18B

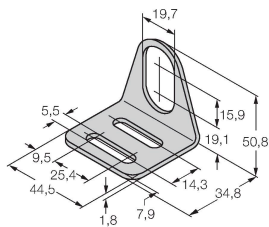
6947214



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

MW-18

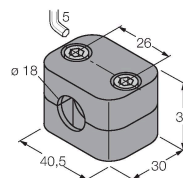
6945004



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

## Wiring accessories

| Dimension drawing | Type                         | ID      |  |
|-------------------|------------------------------|---------|--|
|                   | RKC4.4T-2/TEL                | 6625013 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval  |
|                   | RKC4.301T-0.15-RSC4.334T/TXL | 6631382 | Extension cable, M12 female/male, straight, 4-pin, cable length: 0.15m, jacket material: PUR, black; cULus approval; Adapter cable for sensors with analog output on pin 2, for connection to analog inputs of fieldbus modules with 4-wire technology |