

# BI5-M18-AD4X-H1141

## Inductive Sensor

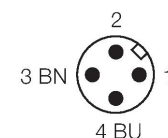
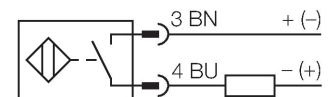


### Technical data

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| Type                                      | BI5-M18-AD4X-H1141                                  |
| ID                                        | 44145                                               |
| <b>General data</b>                       |                                                     |
| Rated switching distance                  | 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 |
| Repeat accuracy                           | $\leq 2$ % of full scale                            |
| Temperature drift                         | $\leq \pm 10$ %                                     |
| Hysteresis                                | 1...15 %                                            |
| <b>Electrical data</b>                    |                                                     |
| Operating voltage                         | 10...65 VDC                                         |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| DC rated operational current              | $\leq 100$ mA                                       |
| Residual current                          | $\leq 0.6$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes / Cyclic                                        |
| Voltage drop at $I_a$                     | $\leq 5$ V                                          |
| Wire breakage/Reverse polarity protection | Complete                                            |
| Output function                           | 2-wire, NO contact, 2-wire                          |
| Smallest operating current                | $\geq 3$ mA                                         |
| Switching frequency                       | 1 kHz                                               |
| <b>Mechanical data</b>                    |                                                     |
| Design                                    | Threaded barrel, M18 x 1                            |
| Dimensions                                | 52 mm                                               |
| Housing material                          | Metal, CuZn, Chrome-plated                          |

### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- DC 2-wire, 10...65 VDC
- NO contact
- M12 x 1 male connector



### 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

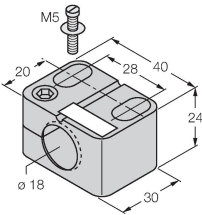
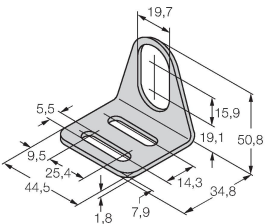
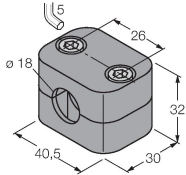
|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Active area material                  | Plastic, PA12-GF30                         |
| Max. tightening torque of housing nut | 25 Nm                                      |
| Electrical connection                 | Connector, M12 × 1                         |
| 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, Yellow                                |

Mounting instructions

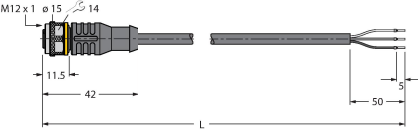
Mounting instructions/Description

|                        |         |
|------------------------|---------|
| 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 18 mm |

Accessories

|                                                                                   |         |                                                                                              |                                                                                    |         |                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BST-18B                                                                           | 6947214 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6                    | 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. |
|  |         |                                                                                              |  |         |                                                                                                                                                                                              |
| 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                                                                                                               |
|  |         |                                                                                              |  |         |                                                                                                                                                                                              |

Accessories

| Dimension drawing                                                                   | Type        | ID      |                                                                                                                         |
|-------------------------------------------------------------------------------------|-------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | RKC4T-2/TEL | 6625010 | Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |