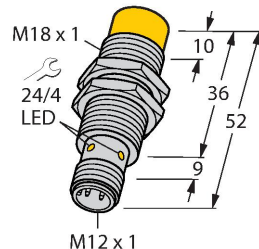


# NI8-M18-AD4X-H1141

## Inductive Sensor

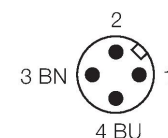
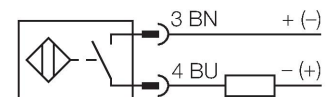


### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | NI8-M18-AD4X-H1141                                  |
| ID                                     | 44147                                               |
| General data                           |                                                     |
| Rated switching distance               | 8 mm                                                |
| Mounting conditions                    | Non-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 %                                            |
| Electrical data                        |                                                     |
| Operating voltage $U_B$                | 10...65 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                              |
| DC rated operating current $I_o$       | $\leq 100$ mA                                       |
| Residual current                       | $\leq 0.6$ mA                                       |
| Isolation test voltage                 | 0.5 kV                                              |
| Short-circuit protection               | yes/Cyclic                                          |
| Voltage drop at $I_o$                  | $\leq 5$ V                                          |
| Wire break/reverse polarity protection | Complete                                            |
| Output function                        | 2-wire, NO contact, 2-wire                          |
| Smallest operating current             | $\geq 3$ mA                                         |
| Switching frequency                    | 0.5 kHz                                             |
| Mechanical data                        |                                                     |
| 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

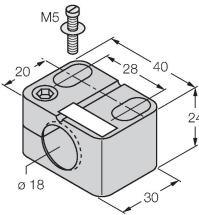
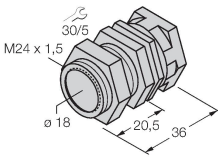
# Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor. The sensor is represented by a yellow cylinder with a threaded end.

- Top Diagram:** A side view of the sensor mounted on a rectangular plate. Dimension **T** indicates the thickness of the plate.
- Middle Diagram:** A top view of the sensor mounted on a plate. Dimension **G** is the distance from the edge of the plate to the center of the sensor. Dimension **S** is the distance between the center of the sensor and the edge of the plate.
- Bottom Diagram:** A perspective view of the sensor mounted on a plate. Dimension **N** is the distance from the edge of the plate to the center of the sensor. Dimension **S** is the distance between the center of the sensor and the edge of the plate. Dimension **D** is the distance from the center of the sensor to the edge of the plate. Dimension **W** is the width of the plate.

|                        |         |
|------------------------|---------|
| Distance D             | 3 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Distance N             | 2 x Sn  |
| Diameter active area B | Ø 18 mm |

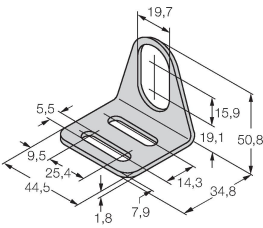
Accessories

|                                                                                     |         |                                                                                                                                                                                              |         |
|-------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| BST-18B                                                                             | 6947214 | QM-18                                                                                                                                                                                        | 6945102 |
|  |         |                                                                                                          |         |
| Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6           |         | 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. |         |

MW18

6945004

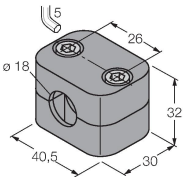
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



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

