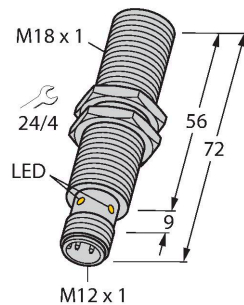


# BI8U-MT18E-AP6X-H1141

## Inductive Sensor – With Extended Switching Distance



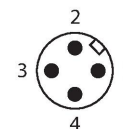
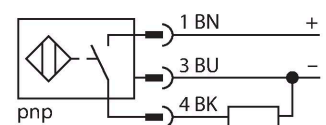
### Technical data

|   |                             |
|---|-----------------------------|
| Type                                      | BI8U-MT18E-AP6X-H1141       |
| ID  | 1644752                     |
| General data                              |                             |
| Rated switching distance                  | 8 mm                        |
| Mounting conditions                       | Flush                       |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy                           | $\leq 2 \%$ of full scale   |
| Temperature drift                         | $\leq \pm 10 \%$            |
| Hysteresis                                | 3...15 %                    |
| Electrical data                           |                             |
| Operating voltage                         | 10...30 VDC                 |
| Residual ripple                           | $\leq 10 \% U_{ss}$         |
| DC rated operational current              | $\leq 200$ mA               |
| No-load current                           | 25 mA                       |
| Residual current                          | $\leq 0.1$ mA               |
| Isolation test voltage                    | $\leq 0.5$ kV               |
| Short-circuit protection                  | yes / Cyclic                |
| Voltage drop at $I_o$                     | $\leq 1.8$ V                |
| Wire breakage/Reverse polarity protection | yes / Complete              |
| Output function                           | 3-wire, NO contact, PNP     |
| DC field stability                        | 300 mT                      |
| AC field stability                        | 300 mT <sub>ss</sub>        |
| Insulation class                          | □                           |
| Switching frequency                       | 1.5 kHz                     |
| Mechanical data                           |                             |
| Design                                    | Threaded barrel, M18 x 1    |

### Features

- Threaded barrel, M18 x 1
- Long version
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### Wiring diagram



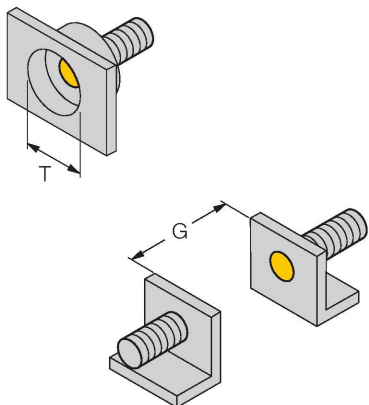
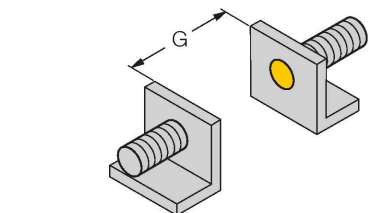
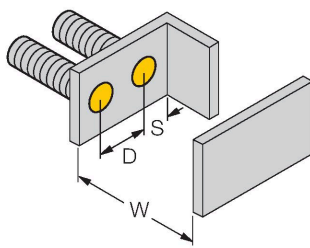
### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

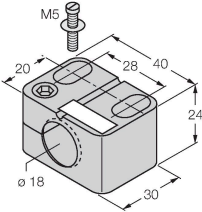
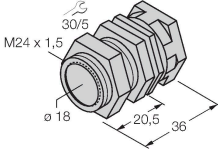
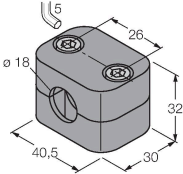
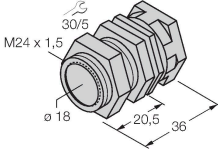
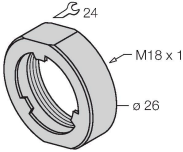
|                                       |   |
|---------------------------------------|---|
| Dimensions                            | 72 mm                                     |
| Housing material                      | Metal, CuZn, PTFE-coated                  |
| Active area material                  | Plastic, LCP, PTFE-coated                 |
| Max. tightening torque of housing nut | 15 Nm                                     |
| Electrical connection                 | Connector, M12 × 1                        |
| Environmental conditions              |   |
| Ambient temperature                   | -30...+85 °C                              |
| Vibration resistance                  | 55 Hz (1 mm)                              |
| Shock resistance                      | 30 g (11 ms)                              |
| Protection class                      | IP68                                      |
| MTTF                                  | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                               |

Mounting instructions

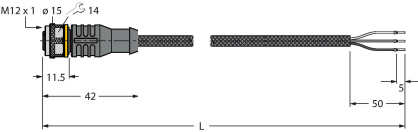
| Mounting instructions/Description   |                                |
|---|--------------------------------|
|  | Distance D 36 mm               |
|   | Distance W 3 x Sn              |
|   | Distance T 3 x B               |
|  | Distance S 1.5 x B             |
|   | Distance G 6 x Sn              |
|   | Diameter active area B Ø 18 mm |
|  |                                |

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

|   |         |   |  |         |  |
|---|---------|---|--|---------|--|
| BST-18B   | 6947214 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6                   | QMT-18   | 6945104 | Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.  |
|    |         |   |  |         |  |
| BSS-18  | 6901320 | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene              | 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. |
|    |         |   |  |         |  |
| PN-M18  | 6905310 | Protective nut for M18 x 1 threaded barrels; material: Stainless steel A2 1.4305 (AISI 303) |  |         |  |
|  |         |   |  |         |  |

Accessories

| Dimension drawing   | Type            | ID      |   |
|---|-----------------|---------|---|
|  | RKC4T-2/TXL1001 | 6630249 | Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C |