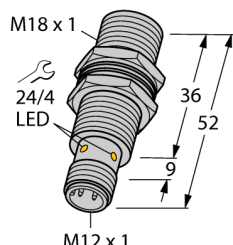


# Inductive sensor

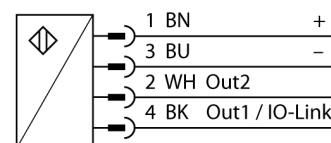
## IO-Link Communication and Configuration

### BI10U-MT18-IOL6X2-H1141



- Threaded barrel, M18 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- M12 x 1 connector
- Configuration and communication via IO-Link v1.1 or via standard I/O
- Electrical outputs independently configurable
- Switching distance can be parametrized per output and hysteresis
- Identification via 32-byte memory
- Temperature monitoring with adjustable limits
- Various timer and pulse monitoring functions

#### Wiring Diagram



#### Functional principle

Inductive sensors detect metal objects contactless and wear-free. *uprox®3* sensors have significant advantages due to their patented ferrite-coreless multicoil system. They excel in largest switching distances, maximum flexibility and operational reliability as well as efficient standardization. In addition, the *uprox®3-IO-Link* sensors allow certain parameters to be set within predefined limits and various device functions to be configured to customer needs, using an IO-Link Master. For detailed information refer to the *uprox®3-IO-Link* manual.

|                                                  |                                     |
|--------------------------------------------------|-------------------------------------|
| <b>Type designation</b>                          | BI10U-MT18-IOL6X2-H1141             |
| Ident-No.                                        | 1644876                             |
| <b>Rated switching distance <math>S_n</math></b> | 10 mm                               |
| Mounting conditions                              | Flush                               |
| Secured operating distance                       | $\leq (0,81 \times S_n) \text{ mm}$ |
| Repeat accuracy                                  | $\leq 2 \% \text{ of full scale}$   |
| Temperature drift                                | $\leq \pm 10 \%$                    |
| Hysteresis                                       | 3...15 %                            |
| Ambient temperature                              | -25...+70 °C                        |

|                                           |                                  |
|-------------------------------------------|----------------------------------|
| <b>Operating voltage</b>                  | 10...30 VDC                      |
| Residual ripple                           | $\leq 10 \% U_{ss}$              |
| DC rated operational current              | $\leq 150 \text{ mA}$            |
| No-load current $I_o$                     | $\leq 20 \text{ mA}$             |
| Residual current                          | $\leq 0,1 \text{ mA}$            |
| Isolation test voltage                    | $\leq 0,5 \text{ kV}$            |
| Short-circuit protection                  | yes/ Cyclic                      |
| Voltage drop at $I_o$                     | $\leq 1,8 \text{ V}$             |
| Wire breakage/Reverse polarity protection | yes/ Complete                    |
| Output function                           | 4-wire, NO/NC, PNP/NPN, IO-Link  |
| Output 1                                  | Switching output or IO-Link mode |
| Output 2                                  | switching output                 |
| Switching frequency                       | 0,5 kHz                          |

|                         |                    |
|-------------------------|--------------------|
| <b>IO-Link</b>          |                    |
| IO-Link Specification   | V 1.1              |
| IO-Link port type       | Class A            |
| Communication Mode      | COM 2 (38,4 kBaud) |
| Process data width      | 16 bit             |
| Switchpoint information | 2 bit              |
| Status bit information  | 3 bit              |
| Frame type              | 2.2                |
| Minimum cycle time      | 8 ms               |
| Function Pin 4          | IO-Link            |
| Function Pin 2          | DI                 |
| Maximum cable length    | 20 m               |

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| <b>Design</b>                      | Threaded barrel, M18 x 1                  |
| Dimensions                         | 52 mm                                     |
| Housing material                   | Metal, CuZn, PTFE-coated                  |
| Active area material               | Plastic, LCP, PTFE-coated                 |
| Max. tightening torque housing nut | 10 Nm                                     |
| Electrical connection              | Connector, M12 x 1                        |
| 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 |
| Packaging unit                     | 1                                         |



**Inductive sensor**  
**IO-Link Communication and Configuration**  
**BI10U-MT18-IOL6X2-H1141**

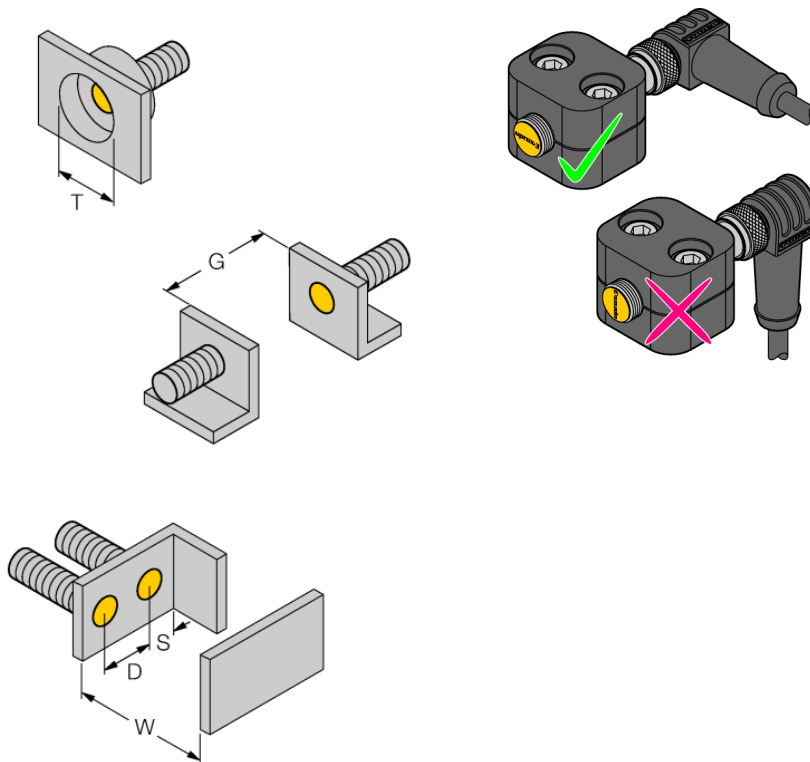
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|                     |             |
|---------------------|-------------|
| Power-on indication | LED, Green  |
| Switching state     | LED, Yellow |

**Inductive sensor**  
**IO-Link Communication and Configuration**  
**BI10U-MT18-IOL6X2-H1141**

|            |         |
|------------|---------|
| 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 |
|------------------------|---------|



When installing the sensor in combination with the illustrated half-shell-clamp, observe its correct alignment towards the clamp. For this, see the uprox-lettering on the front cap of the sensor and the adjacent installation drawing.

**Inductive sensor**  
**IO-Link Communication and Configuration**  
**BI10U-MT18-IOL6X2-H1141**

**Accessories**

| Type code      | Ident-No. | Description                                                                      |  |
|----------------|-----------|----------------------------------------------------------------------------------|--|
| BST-18B        | 6947214   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6          |  |
| BSS-18         | 6901320   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene |  |
| USB-2-IOL-0002 | 6825482   | IO-Link Master with integrated USB port                                          |  |