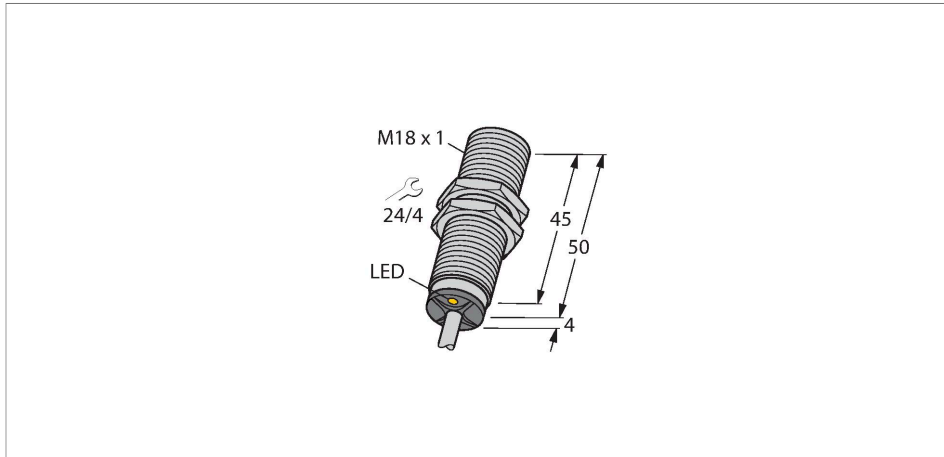


# BI10U-M18-VP6X

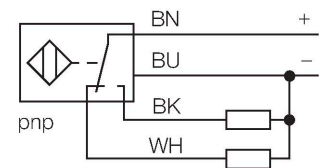
## Inductive Sensor



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

|   |                                    |
|---|------------------------------------|
| Type                                      | BI10U-M18-VP6X                     |
| ID  | 1644842                            |
| <b>General data</b>                       |                                    |
| Rated switching distance                  | 10 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 %                           |
| <b>Electrical data</b>                    |                                    |
| 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                           | 4-wire, Complementary contact, PNP |
| DC field stability                        | 300 mT                             |
| AC field stability                        | 300 mT <sub>SS</sub>               |
| Switching frequency                       | 1.5 kHz                            |

### Functional principle

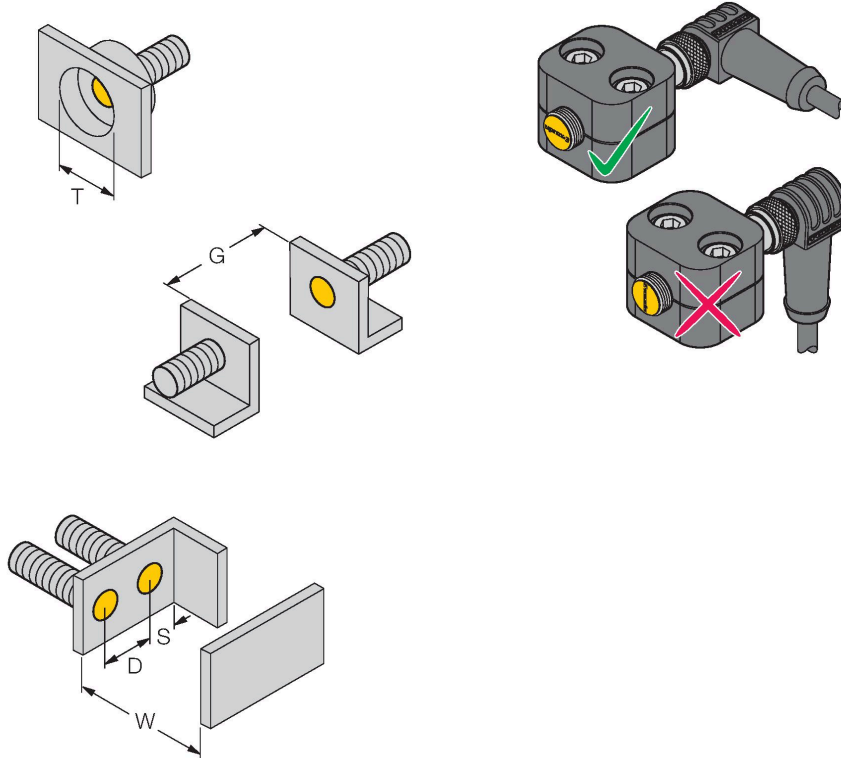
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

| Mechanical data                       |   |
|---------------------------------------|---|
| Design                                | Threaded barrel, M18 x 1                  |
| Dimensions                            | 54 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, LCP                              |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 10 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, Gray, LifYY, PVC, 2 m           |
| Core cross-section                    | 4 x 0.34 mm <sup>2</sup>                  |
| Environmental conditions              |   |
| Ambient temperature                   | -25...+70 °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

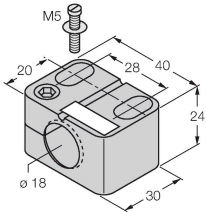
Diameter active area B  $\varnothing$  18 mm

## Accessories

BST-18B

6947214

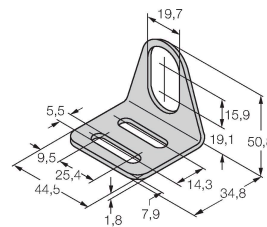
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



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

