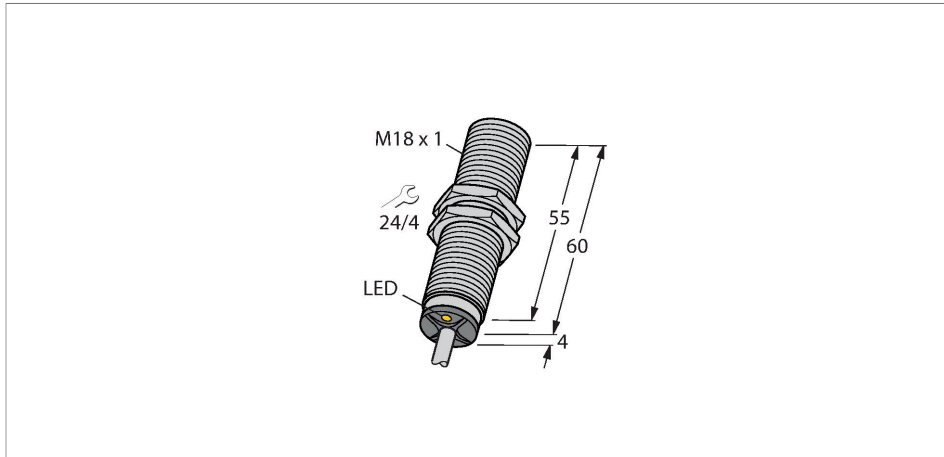


# BI5U-M18M-VP4X

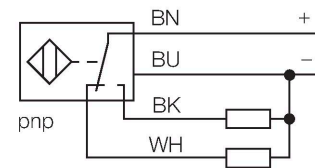
## Inductive Sensor



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

|  |  |
|--|--|
| Type                                   | BI5U-M18M-VP4X   |
| ID                                     | 1581201  |
| <b>General data</b>                    |  |
| Rated switching distance               | 5 mm   |
| Mounting conditions                    | Flush  |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm  |
| Repeat accuracy                        | $\leq 2 \%$ of full scale  |
| Temperature drift                      | $\leq \pm 10 \%$<br>$\leq \pm 15 \%, \leq -25 \text{ °C v } \geq +70 \text{ °C}$ |
| Hysteresis                             | 3...15 %   |
| <b>Electrical data</b>                 |  |
| Operating voltage $U_B$                | 10...65 VDC  |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$  |
| DC rated operating current $I_o$       | $\leq 200$ mA  |
| No-load current                        | $\leq 15$ mA   |
| Residual current                       | $\leq 0.1$ mA  |
| Isolation test voltage                 | 0.5 kV   |
| Short-circuit protection               | yes/Cyclic   |
| Voltage drop at $I_o$                  | $\leq 1.8$ V   |
| Wire break/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>   |
| Insulation class                       | □  |

### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Prox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

## Technical data

|                                       |   |
|---------------------------------------|---|
| Switching frequency                   | 1.5 kHz                                   |
| <b>Mechanical data</b>                |   |
| Design                                | Threaded barrel, M18 x 1                  |
| Dimensions                            | 64 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, PBT                              |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 25 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>                  |
| <b>Environmental conditions</b>       |   |
| 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 2 x B

Distance W 3 x Sn

Distance T 3 x B

Distance S 1.5 x B

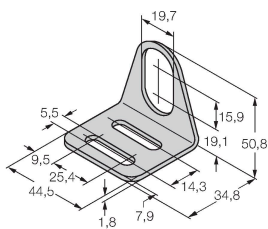
Distance G 6 x Sn

Diameter active area B  $\varnothing$  18 mm

## Accessories

MW18

6945004



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

BSS-18

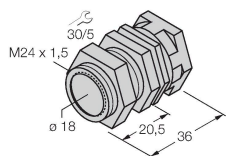
6901320



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

QM-18

6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.