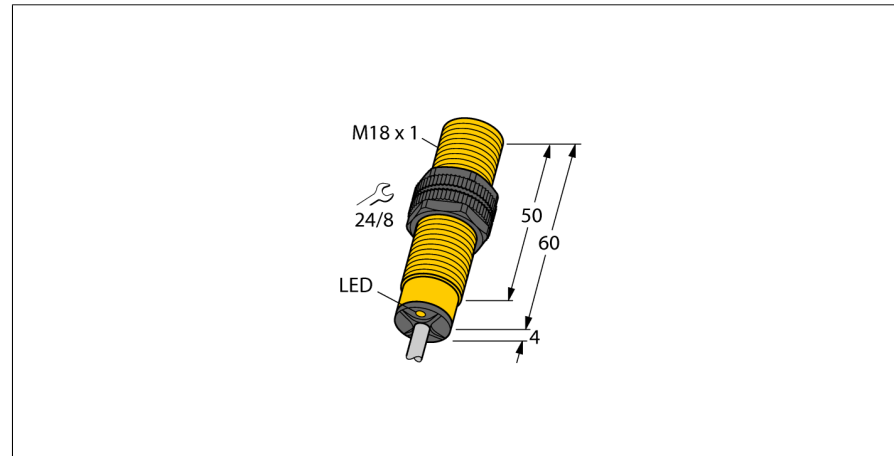
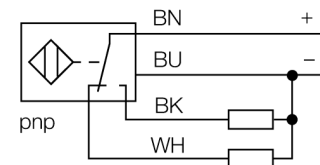


**Inductive sensor**  
**With extended temperature range**  
**BI5-S18-VP4X/S100**



- Threaded barrel, M18 x 1
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- Cable connection

**Wiring Diagram**

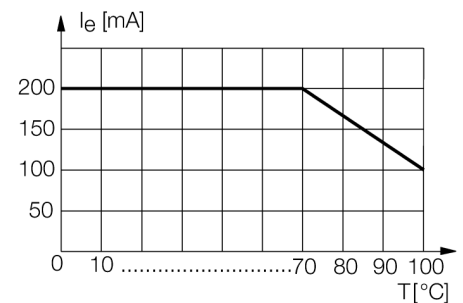


**Functional principle**

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Special versions are available for ambient temperatures between -60°C and +250°C.

**Derating Curve**



|   |   |
|---|---|
| <b>Type designation</b>                       | BI5-S18-VP4X/S100                                   |
| Ident no.                                     | 1513402   |
| <b>Rated switching distance S<sub>n</sub></b> | 5 mm  |
| Mounting conditions                           | Flush   |
| Secured operating distance                    | ≤ (0,81 x S <sub>n</sub> ) mm                       |
| Correction factors                            | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                               | ≤ 2 % of full scale                                 |
| Temperature drift                             | ≤ ± 10 %  |
| Hysteresis                                    | ≤ ± 20 %, ≥ +70 °C                                  |
| Ambient temperature                           | 3...15 %  |
|   | -25...+100 °C                                       |
| <b>Operating voltage</b>                      | 10...65 VDC   |
| Residual ripple                               | ≤ 10 % U <sub>s</sub>                               |
| DC rated operational current                  | ≤ 200 mA  |
| Rated operational current                     | See derating curve                                  |
| No-load current I <sub>0</sub>                | ≤ 15 mA   |
| Residual current                              | ≤ 0.1 mA  |
| Isolation test voltage                        | ≤ 0.5 kV  |
| Short-circuit protection                      | yes   |
| Voltage drop at I <sub>e</sub>                | ≤ 1.8 V   |
| Wire breakage/Reverse polarity protection     | yes/ Complete                                       |
| Output function                               | 4-wire, Complementary contact, PNP                  |
| Reverse polarity protection                   | Complete  |
| Switching frequency                           | 0.5 kHz   |
| <b>Design</b>                                 | Threaded barrel, M18 × 1                            |
| Dimensions                                    | 64 mm   |
| Housing material                              | Plastic, PA12-GF30                                  |
| Active area material                          | Plastic, PA12-GF30                                  |
| End cap                                       | Plastic, EPTR                                       |
| Max. tightening torque housing nut            | 2 Nm  |
| Electrical connection                         | Cable   |
| Cable quality                                 | 5.2 mm, LiYY-T105, PVC, 2m                          |
| Cable cross section                           | 4 x 0.34 mm <sup>2</sup>                            |
| 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          |
| <b>Switching state</b>                        | LED yellow  |

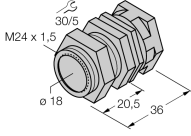
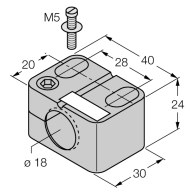
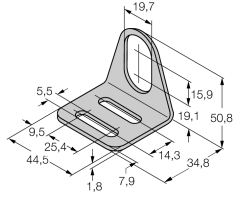
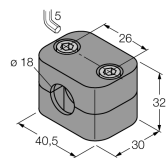
**Inductive sensor**  
**With extended temperature range**  
**BI5-S18-VP4X/S100**

|                        |         |
|------------------------|---------|
| 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  |
| <hr/>                  |         |
| Diameter active area B | Ø 18 mm |



**Inductive sensor  
With extended temperature range  
BI5-S18-VP4X/S100**

**Accessories**

| Type code | Ident no. | Description  |   |
|-----------|-----------|--|---|
| QM-18     | 6945102   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. |    |
| BST-18B   | 6947214   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6  |    |
| MW-18     | 6945004   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)   |  |
| BSS-18    | 6901320   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene   |  |