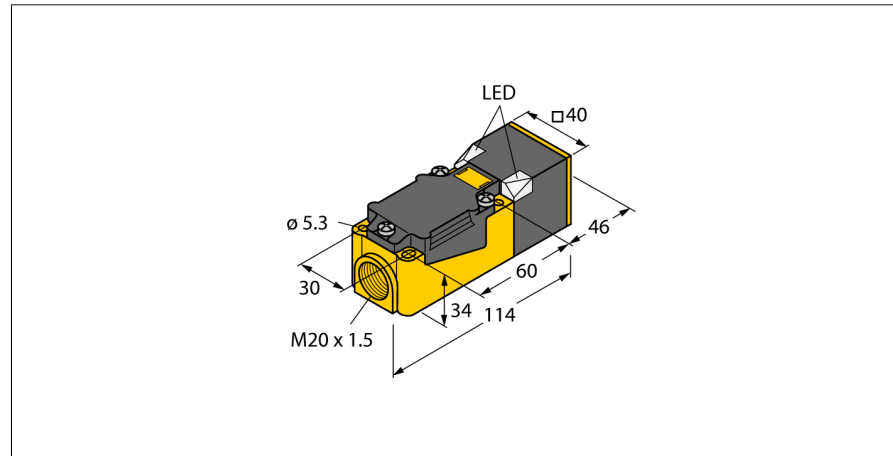


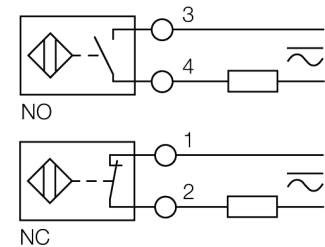
**Inductive sensor**  
**With extended temperature range**  
**BI15-CP40-FZ3X2/S97**



- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Temperatures up to -40 °C
- AC 2-wire, 20...250 VDC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

|  |   |
|--|---|
| <b>Type code</b>                                 | BI15-CP40-FZ3X2/S97                                 |
| Ident no.  | 1341015   |
| <b>Rated switching distance <math>S_n</math></b> | 15 mm   |
| Mounting conditions                              | flush   |
| Assured switching distance                       | $\leq (0,81 \times S_n)$ mm                         |
| Correction factors                               | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeatability                                    | $\leq 2\%$ of full scale                            |
| Temperature drift                                | $\leq \pm 10\%$                                     |
| Hysteresis                                       | $\leq \pm 20\%$ , $\leq -25\text{ °C}$              |
| Ambient temperature                              | -40...+70 °C  |
| <b>Operating voltage</b>                         | 20...250 VAC  |
| Operating voltage                                | 10... 300VDC  |
| AC rated operational current                     | $\leq 400$ mA                                       |
| DC rated operational current                     | $\leq 300$ mA                                       |
| Frequency  | $\geq 50... \leq 60$ Hz                             |
| Residual current                                 | $\leq 1.7$ mA                                       |
| Rated insulation voltage                         | $\leq 1.5$ kV                                       |
| Surge current                                    | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)                |
| Voltage drop at $I_n$                            | $\leq 6$ V  |
| Output function                                  | 2-wire, connection programmable                     |
| Smallest operating current $I_m$                 | $\geq 3$ mA   |
| Switching frequency                              | 0.02 kHz  |
| <b>Construction</b>                              | rectangular, CP40                                   |
| Dimensions                                       | 114 x 40 x 40 mm                                    |
| Housing material                                 | Plastic, PBT-GF30-V0, black                         |
| Connection                                       | terminal chamber                                    |
| Clamping ability                                 | $\leq 2.5$ 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>Power-on indication</b>                       | LED green   |
| Switching state                                  | LED red   |

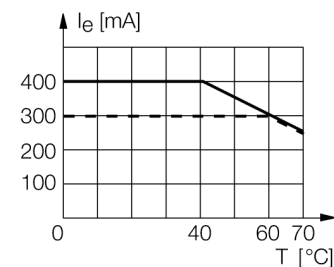
**Wiring Diagram**



**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.



**Inductive sensor  
With extended temperature range  
BI15-CP40-FZ3X2/S97**

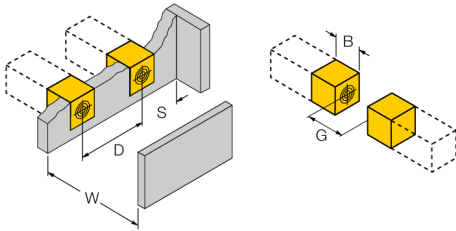
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|            |        |
|------------|--------|
| Distance D | 2 x B  |
| Distance W | 3 x Sn |
| Distance S | 1 x B  |
| Distance G | 6 x Sn |

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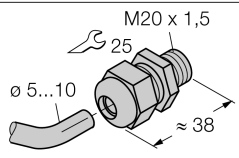
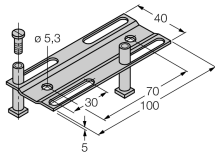
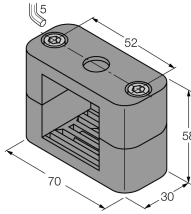
**Width of the active face B** 40 mm

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**Inductive sensor**  
**With extended temperature range**  
**BI15-CP40-FZ3X2/S97**

**Accessories**

| Type code                | Ident no. | Description   |   |
|--------------------------|-----------|---|---|
| STRM M20X1,5 BLACK       | 6965902   | Cable glands M20 x 1.5  |    |
| Adjusting bar JS 025/037 | 69429     | Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301 |    |
| BSS-CP40                 | 6901318   | Mounting bracket for rectangular devices; material: Polypropylene   |  |