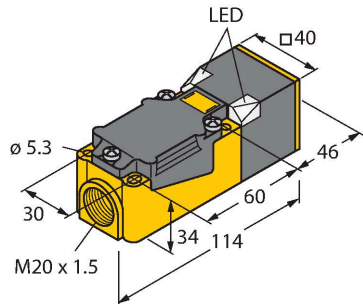


# BI15-CP40-VP4X2/S100

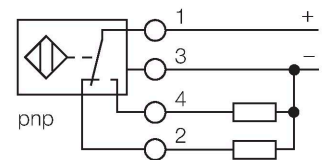
## Inductive Sensor – With Increased Temperature Range



### Features

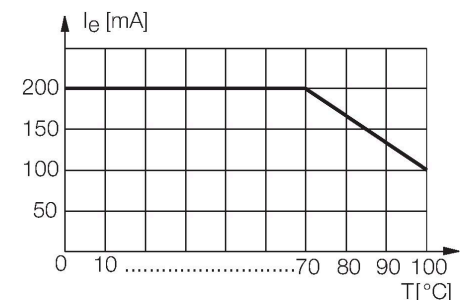
- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Temperatures up to +100 °C
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- Terminal chamber

### 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.



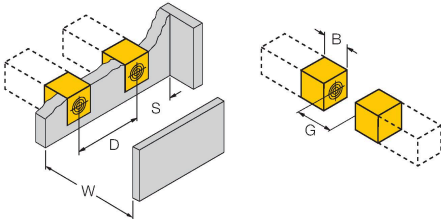
### Technical data

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Type                                      | BI15-CP40-VP4X2/S100                                         |
| ID                                        | 15045                                                        |
| Special version                           | S100 corresponds to:<br>Maximum ambient temperature = 100 °C |
| <b>General data</b>                       |                                                              |
| Rated switching distance                  | 15 mm                                                        |
| Mounting conditions                       | Flush                                                        |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm                                  |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7;<br>Ms = 0.4       |
| Repeat accuracy                           | $\leq 2$ % of full scale                                     |
| Temperature drift                         | $\leq \pm 10$ %<br>$\leq \pm 20$ %, $\geq +70$ °C            |
| Hysteresis                                | 3...15 %                                                     |
| <b>Electrical data</b>                    |                                                              |
| Operating voltage                         | 10...65 VDC                                                  |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                         |
| DC rated operational current              | $\leq 200$ mA                                                |
| Rated operational current                 | See derating curve                                           |
| No-load current                           | 15 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                           |
| Switching frequency                       | 0.15 kHz                                                     |

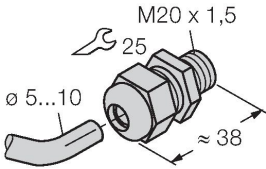
Technical data

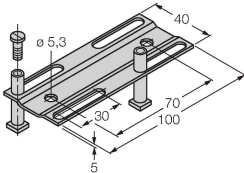
| Mechanical data          |                                            |
|--------------------------|--------------------------------------------|
| Design                   | Rectangular, CP40                          |
| Dimensions               | 114 x 40 x 40 mm                           |
| Housing material         | Plastic, PBT-GF30-V0, Black                |
| Active area material     | Plastic, PBT-GF30-V0, yellow               |
| Electrical connection    | Terminal chamber                           |
| Clamping ability         | ≤ 2.5 mm²                                  |
| Environmental conditions |                                            |
| Ambient temperature      | -25...+100 °C                              |
| 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 |
| Power-on indication      | 2 × LEDs, Green                            |
| Switching state          | 2 × LEDs, Yellow                           |

Mounting instructions

| Mounting instructions/Description                                                   |                     |        |
|-------------------------------------------------------------------------------------|---------------------|--------|
|  | Distance D          | 2 x B  |
|                                                                                     | Distance W          | 3 x Sn |
|                                                                                     | Distance S          | 1 x B  |
|                                                                                     | Distance G          | 6 x Sn |
|                                                                                     | Width active area B | 40 mm  |
|                                                                                     |                     |        |

Accessories

|                                                                                     |         |
|-------------------------------------------------------------------------------------|---------|
| STRM M20X1.5 SCHWARZ                                                                | 6965902 |
|  |         |
| M20 × 1.5 cable gland                                                               |         |

|                                                                                      |       |
|--------------------------------------------------------------------------------------|-------|
| JS025/037                                                                            | 69429 |
|  |       |
| Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301                  |       |

BSS-CP40

6901318

Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene

