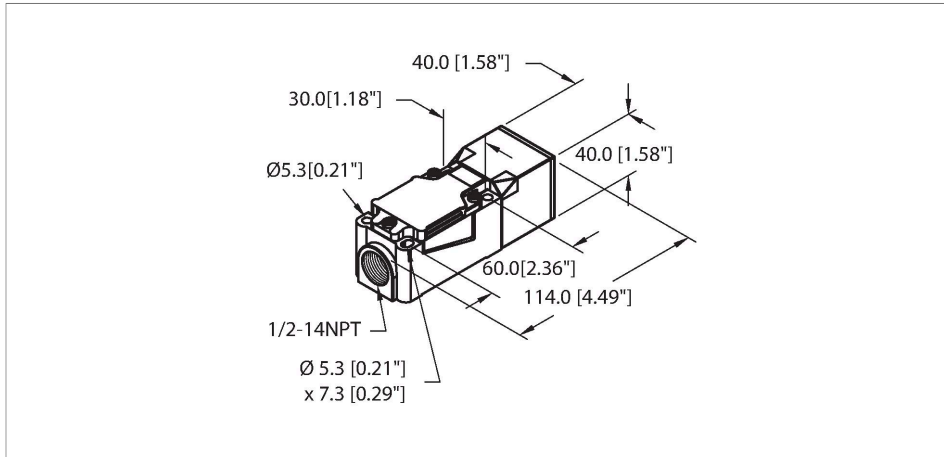


# BI15-CP40-FZ3X2/S10-S97

## Inductive Sensor – With Extended Temperature Range



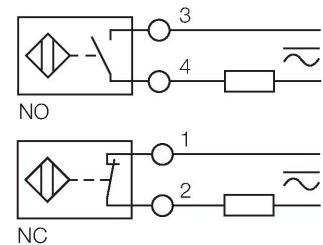
### Features

- 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 -40 °C
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC/NO programmable
- Terminal chamber

### Technical data

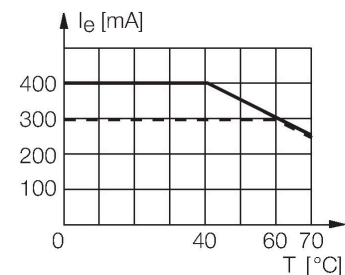
|                              |   |
|------------------------------|---|
| Type                         | BI15-CP40-FZ3X2/S10-S97   |
| ID                           | 1341010   |
| Special version              | S10-S97 corresponds to:<br>Mounting base with 1/2-14NPT thread<br>Temperature range up to -40°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; Ms = 0.4   |
| Repeat accuracy              | $\leq 2$ % of full scale<br>$\leq \pm 20$ %, $\leq -25$ °C                                      |
| <b>Electrical data</b>       |   |
| Operating voltage            | 20...250 VAC  |
| Operating voltage            | 10...300 VDC  |
| 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   |
| Isolation test voltage       | $\leq 1.5$ kV   |
| Surge current                | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)  |
| Voltage drop at $I_e$        | $\leq 6$ V  |
| Output function              | 2-wire, Connection programmable, 2-wire   |

### 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

|                                 |  |
|---------------------------------|--|
| Smallest operating current      | ≥ 3 mA                                     |
| Switching frequency             | 0.02 kHz                                   |
| <b>Mechanical data</b>          |  |
| 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 mm <sup>2</sup>                      |
| <b>Environmental conditions</b> |  |
| Ambient temperature             | -40...+70 °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             | LED, Green                                 |
| Switching state                 | LED, Red                                   |

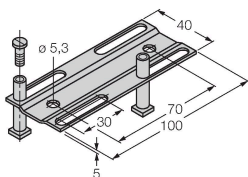
## Mounting instructions

| 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

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

