

BI15-CP40-VN4X2

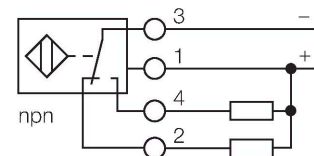
Inductive Sensor



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
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- Terminal chamber

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

| | |
|---|---|
| Type | BI15-CP40-VN4X2 |
| ID | 15790 |
| General data | |
| 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 | ≤ 2 % of full scale |
| Temperature drift | $\leq \pm 10$ % |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...65 VDC |
| Residual ripple | ≤ 10 % U_{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | 15 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 4-wire, Complementary contact, NPN |
| Switching frequency | 0.15 kHz |
| Mechanical data | |
| Design | Rectangular, CP40 |
| Dimensions | 114 x 40 x 40 mm |
| Housing material | Plastic, PBT-GF30-V0, Black |

Technical data

| | |
|---------------------------------|--|
| Active area material | Plastic, PBT-GF30-V0, yellow |
| Electrical connection | Terminal chamber |
| Clamping ability | ≤ 2.5 mm ² |
| Environmental conditions | |
| Ambient temperature | -25...+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 | 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 | 40 mm |
| | B | |

Accessories

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

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

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|---|----------------|
| BSS-CP40 | 6901318 |
| Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene | |
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