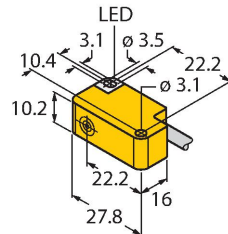


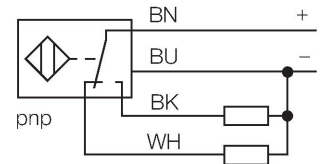
# BI2-Q10S-VP6X Inductive Sensor



## Features

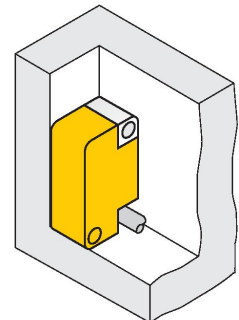
- Rectangular, height 10.2 mm
- Active face, lateral
- Cable outlet to all sides
- Plastic, PP-GF20
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- Cable connection

## 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.



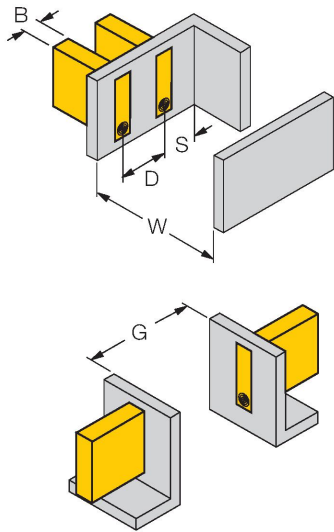
## Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI2-Q10S-VP6X                                       |
| ID                                     | 1609340                                             |
| General data                           |                                                     |
| Rated switching distance               | 2 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                            |
| Temperature drift                      | $\leq \pm 10$ %                                     |
| Hysteresis                             | 3...15 %                                            |
| Electrical data                        |                                                     |
| Operating voltage $U_B$                | 10...30 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                              |
| DC rated operating current $I_o$       | $\leq 150$ mA                                       |
| No-load current                        | $\leq 15$ mA                                        |
| Residual current                       | $\leq 0.1$ mA                                       |
| Isolation test voltage                 | 0.5 kV                                              |
| Short-circuit protection               | yes/Cyclic                                          |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                        |
| Wire break/reverse polarity protection | yes/Complete                                        |
| Output function                        | 4-wire, Complementary contact, PNP                  |
| Switching frequency                    | 2 kHz                                               |
| Mechanical data                        |                                                     |
| Design                                 | Rectangular, Q10S                                   |
| Dimensions                             | 27.8 x 16 x 10.2 mm                                 |
| Housing material                       | Plastic, PP-GF20                                    |

Technical data

|                          |                                            |
|--------------------------|--------------------------------------------|
| Active area material     | PP-GF20                                    |
| Electrical connection    | Cable                                      |
| Cable quality            | Ø 3 mm, Gray, Lif9Y-11YFHF, PUR, 2 m       |
| Core cross-section       | 4 x 0.14 mm <sup>2</sup>                   |
| 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 |
| Switching state          | LED, 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                                                                                   |            |
| 10.2 mm                                                                             |            |