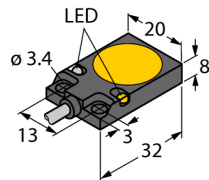


# Inductive sensor

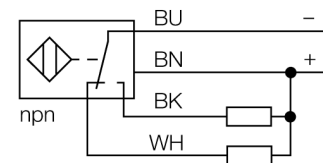
## With increased switching distance

### BI7-Q08-VN6X2



- Rectangular, height 8 mm
- Active face on top
- Metall, zinc die casting
- Large sensing range
- DC 4-wire, 10...30 VDC
- Complementary, NPN 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.

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| <b>Type designation</b>                   | BI7-Q08-VN6X2                                       |
| Ident-No.                                 | 1600920                                             |
| <b>Rated switching distance Sn</b>        | 7 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 %                                            |
| Ambient temperature                       | -25...+70 °C                                        |
| <b>Operating voltage</b>                  | 10...30 VDC                                         |
| Residual ripple                           | $\leq 10\% U_{ss}$                                  |
| DC rated operational current              | $\leq 200$ mA                                       |
| No-load current $I_0$                     | $\leq 15$ mA                                        |
| Residual current                          | $\leq 0.1$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes/ Cyclic                                         |
| Voltage drop at $I_0$                     | $\leq 1.8$ V                                        |
| Wire breakage/Reverse polarity protection | yes/ Complete                                       |
| Output function                           | 4-wire, Complementary contact, NPN                  |
| Switching frequency                       | 0.5 kHz                                             |
| <b>Design</b>                             | Rectangular,Q08                                     |
| Dimensions                                | 32 x 20 x 8 mm                                      |
| Housing material                          | Metal, GD-Zn                                        |
| Active area material                      | Plastic, PA12-GF30, yellow                          |
| Electrical connection                     | Cable                                               |
| Cable quality                             | 4mm, LiFY-11Y, PUR, 2                               |
| Cable cross section                       | 4 x 0.25 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          |
| Packaging unit                            | 1                                                   |
| <b>Power-on indication</b>                | LED,Green                                           |
| Switching state                           | LED, Yellow                                         |

**Inductive sensor**  
**With increased switching distance**  
**BI7-Q08-VN6X2**

**TURCK**  
*works*

Industrial  
Automation

|                   |        |
|-------------------|--------|
| <b>Distance D</b> | 2 x B  |
| Distance W        | 3 x Sn |
| Distance S        | 1 x B  |
| Distance G        | 6 x Sn |

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|                            |       |
|----------------------------|-------|
| <b>Width active area B</b> | 20 mm |
|----------------------------|-------|

