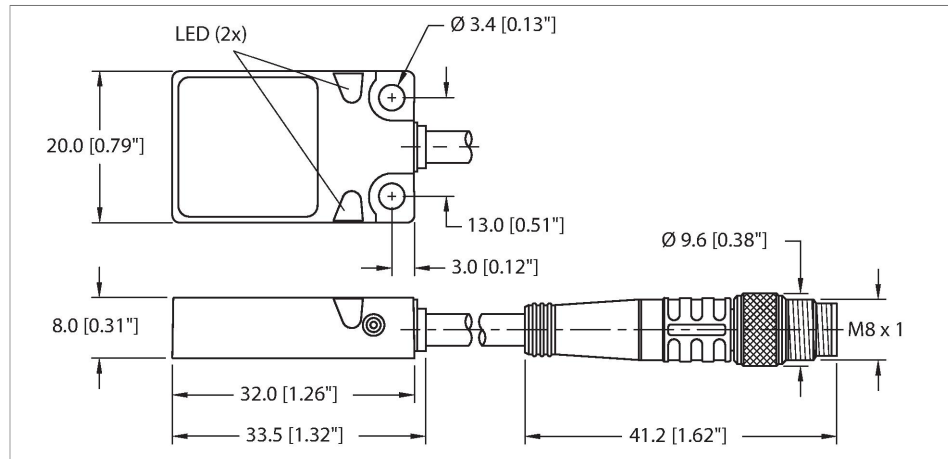


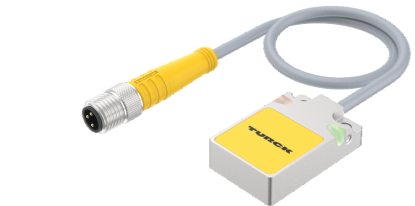
# BI7-Q08-AP6X2-0.2-PSG3M

## Inductive Sensor – With Increased Switching Distance



### Technical data

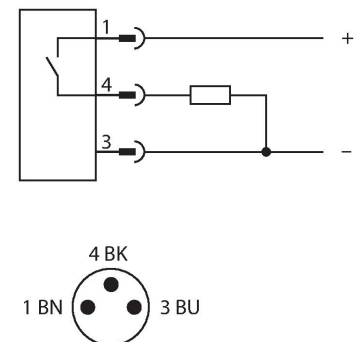
|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI7-Q08-AP6X2-0.2-PSG3M                             |
| ID                                     | 1601699                                             |
| General data                           |                                                     |
| Rated switching distance               | 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                           |
| Hysteresis                             | 3...15 %                                            |
| Electrical data                        |                                                     |
| Operating voltage $U_B$                | 10...30 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                             |
| DC rated operating current $I_o$       | $\leq 200$ 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                        | 3-wire, NO contact, PNP                             |
| Switching frequency                    | 0.5 kHz                                             |
| Mechanical data                        |                                                     |
| Design                                 | Rectangular, Q08                                    |



### Features

- Rectangular, height 8 mm
- Active face on top
- Metal, Zamak, nickel-plated
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M8 x 1

### 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

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| Dimensions               | 32 x 20 x 8 mm                                                      |
| Housing material         | Metal, Zamak, Nickel Plated                                         |
| Active area material     | Plastic, PP, yellow                                                 |
| Electrical connection    | Cable with connector, M8 × 1                                        |
| Cable quality            | Ø 3 mm, Gray, Lif9Y-11Y, PUR, 0.2 m                                 |
|                          | Suited for E-ChainSystems® acc. to manufacturers declaration H1063M |
| Core cross-section       | 3 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         | IP68                                                                |
| MTTF                     | 2283 years acc. to SN 29500 (Ed. 99) 40 °C                          |
| Power-on indication      | LED, Green                                                          |
| Switching state          | LED, Yellow                                                         |

Mounting instructions

| Mounting instructions/Description |                     |
|-----------------------------------|---------------------|
|                                   | Distance D          |
|                                   | 40 mm               |
|                                   | Distance W          |
|                                   | 24 mm               |
|                                   | Distance S          |
|                                   | 1 × B               |
|                                   | Distance G          |
|                                   | 48 mm               |
|                                   | Width active area B |
|                                   | 20 mm               |

BI7-Q08-AP6X2-0.2-PSG3M| 02/21/2025 14:00 | technical changes reserved