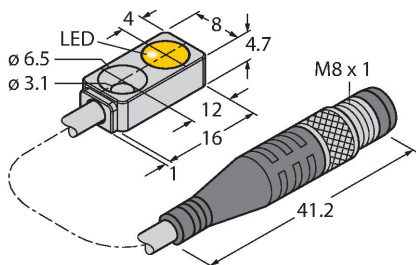


# BI2-Q4.7-AP6X-0.3-PSG3M

## Inductive Sensor



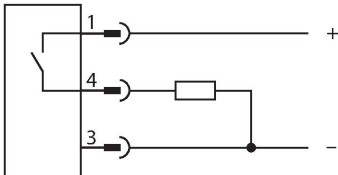
### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI2-Q4.7-AP6X-0.3-PSG3M                             |
| ID                                     | 1614005                                             |
| 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 $I_o$       | $\leq 100$ 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                    | 1 kHz                                               |
| Mechanical data                        |                                                     |
| Design                                 | Rectangular, Q4,7                                   |
| Dimensions                             | 16 x 8 x 4.7 mm                                     |
| Housing material                       | Metal, GD-ZnAl                                      |

### Features

- Rectangular, height 4.7 mm
- Active face on top
- Metal housing, GD-ZnAl
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M8 x 1

### Wiring diagram



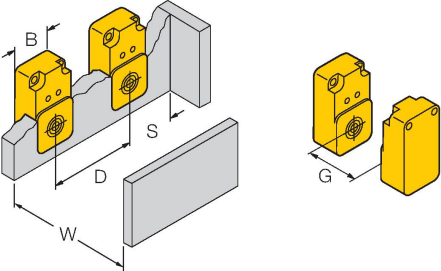
### Functional principle

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

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Active area material           | Plastic, PA12                              |
| Tightening torque fixing screw | 0.5 Nm                                     |
| Electrical connection          | Cable with connector, M8 × 1               |
| Cable quality                  | Ø 3 mm, Gray, LifY-11Y, PUR, 0.3 m         |
| Core cross-section             | 3 x 0.14 mm <sup>2</sup>                   |
| Environmental conditions       |                                            |
| Ambient temperature            | 0...+85 °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 |
|                                                                                     | 1.5 x B    |
|                                                                                     | Distance G |
|                                                                                     | 6 x Sn     |
| Width active area                                                                   |            |
| B                                                                                   |            |
| 8 mm                                                                                |            |

Accessories

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| MW-Q4.7/Q5.5                                                      | 6945013 |
| Mounting bracket for rectangular Q4.7 or Q5.5; material VA 1.4401 |         |

