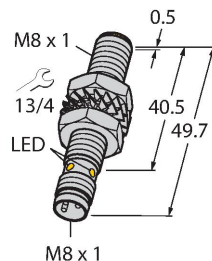


# BI2-M08E-VP6X-V1141

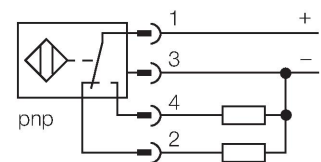
## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M8 x 1
- Nickel-plated brass
- Large sensing range
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M8 x 1 male connector

### Wiring diagram



### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | BI2-M08E-VP6X-V1141                                 |
| ID                                     | 4602962                                             |
| <b>General data</b>                    |                                                     |
| 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 %                                            |
| <b>Electrical data</b>                 |                                                     |
| 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                    | 2.8 kHz                                             |
| <b>Mechanical data</b>                 |                                                     |
| Design                                 | Threaded barrel, M8 x 1                             |
| Dimensions                             | 49.7 mm                                             |
| Housing material                       | Metal, CuZn, Nickel Plated                          |

### 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, PP-GF20                           |
| Max. tightening torque of housing nut | 7 Nm                                       |
| Electrical connection                 | Connector, M8 × 1                          |
| 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

A side view of a square mounting bracket with a central circular hole. A dimension line labeled 'T' indicates the thickness of the bracket.

Two L-shaped mounting brackets are shown. A dimension line labeled 'G' indicates the distance between the inner corners of the two brackets.

A detailed view of a mounting bracket with two circular holes. Dimensions are indicated: 'D' for the distance between the centers of the holes, 'S' for the distance from the edge to the center of the first hole, and 'W' for the total width of the bracket.

|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 8 mm  |

Accessories

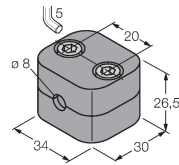
MW086945008

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-086901322

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene



MBS8069479

Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum

