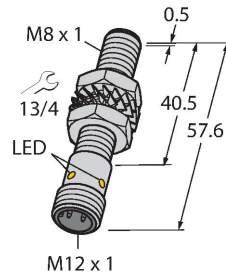


# BI2-M08E-AP6X-H1341

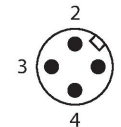
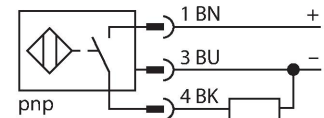
## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M8 x 1
- Nickel-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### 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-M08E-AP6X-H1341                                 |
| ID                                     | 4602955                                             |
| <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 $U_{rs}$                        | $\leq 10$ % $U_{Bmax}$                              |
| 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                        | 3-wire, NO contact, PNP                             |
| Switching frequency                    | 2.8 kHz                                             |

Technical data

| Mechanical data                       |                                            |
|---------------------------------------|--------------------------------------------|
| Design                                | Threaded barrel, M8 x 1                    |
| Dimensions                            | 57.6 mm                                    |
| Housing material                      | Metal, CuZn, Nickel Plated                 |
| Active area material                  | Plastic, PP-GF20                           |
| Max. tightening torque of housing nut | 7 Nm                                       |
| Electrical connection                 | Connector, M12 x 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

The image contains three technical diagrams illustrating the mounting of a sensor. The top diagram is a side view showing a square sensor plate with a central circular hole and a threaded rod passing through it. A dimension line labeled 'T' indicates the thickness of the plate. The middle diagram shows a top view of the sensor plate with a central circular hole. A dimension line labeled 'G' indicates the distance from the center of the hole to the edge of the plate. The bottom diagram shows a perspective view of the sensor mounted on a rectangular plate. The sensor plate has two circular holes. Dimension lines indicate the following: 'D' is the distance between the centers of the two holes; 'S' is the distance from the center of a hole to the edge of the sensor plate; 'W' is the width of the mounting plate; and 'B' is the diameter of the active area (the central hole).

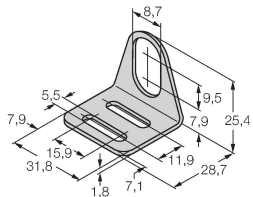
|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 8 mm  |

BI2-M08E-AP6X-H1341 | 02/21/2025 14-25 | technical changes reserved

Accessories

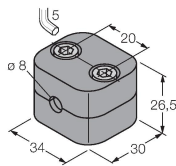
MW08 6945008

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



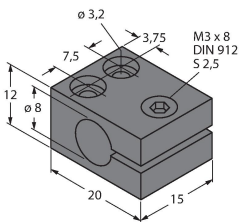
BSS-08 6901322

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



MBS80 69479

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



Wiring accessories

| Dimension drawing | Type        | ID      |
|-------------------|-------------|---------|
|                   | RKC4T-2/TEL | 6625010 |

Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

