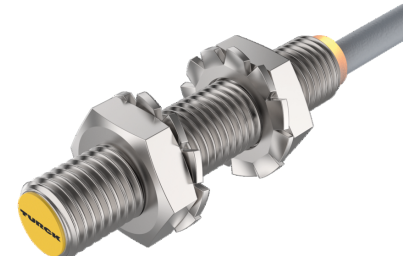
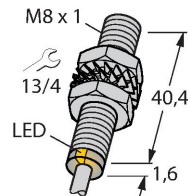


# BI2U-EG08-AP6X

## Inductive Sensor – With Extended Switching Distance



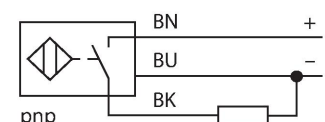
### Technical data

|                                        |                                                                |
|----------------------------------------|----------------------------------------------------------------|
| Type                                   | BI2U-EG08-AP6X                                                 |
| ID                                     | 4602032                                                        |
| General data                           |                                                                |
| Rated switching distance               | 2 mm                                                           |
| Mounting conditions                    | Flush                                                          |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                                    |
| Repeat accuracy                        | $\leq 2 \%$ of full scale                                      |
| Temperature drift                      | $\leq \pm 10 \%$                                               |
|                                        | $\leq \pm 20 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| Hysteresis                             | 3...15 %                                                       |
| Electrical data                        |                                                                |
| Operating voltage $U_B$                | 10...30 VDC                                                    |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                                        |
| DC rated operating current $I_o$       | $\leq 150$ 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                                        |
| DC field stability                     | 200 mT                                                         |
| AC field stability                     | 200 mT <sub>ss</sub>                                           |
| Insulation class                       | □                                                              |
| Switching frequency                    | 1 kHz                                                          |
| Mechanical data                        |                                                                |
| Design                                 | Threaded barrel, M8 x 1                                        |

### Features

- Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- High switching frequency
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Dimensions                            | 42 mm                                     |
| Housing material                      | Stainless steel, 1.4427 SO                |
| Active area material                  | Plastic                                   |
| End cap                               | Plastic, PA12-GF30                        |
| Max. tightening torque of housing nut | 5 Nm                                      |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 4 mm, LifY-11Y, PUR, 2 m                |
| Core cross-section                    | 3 x 0.25 mm <sup>2</sup>                  |
| Environmental conditions              |                                           |
| Ambient temperature                   | -30...+85 °C                              |
| Vibration resistance                  | 55 Hz (1 mm)                              |
| Shock resistance                      | 30 g (11 ms)                              |
| Protection class                      | IP68                                      |
| MTTF                                  | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                               |

Mounting instructions

Mounting instructions/Description

Isometric view of a flush mountable sensor. Dimension T indicates the distance from the mounting surface to the active area of the sensor.

Isometric view of two sensors being mounted onto a bracket. Dimension G indicates the distance between the mounting points of the two sensors.

Isometric view of a sensor mounted on a plate. Dimensions D, S, and W are indicated. D is the distance from the mounting surface to the active area. S is the distance between the mounting points of the two sensors. W is the width of the mounting plate.

Cross-sectional view of the sensor's threaded barrel, showing the internal components and the mounting thread.

Distance D 16 mm

Distance W 6 mm

Distance T 24 mm

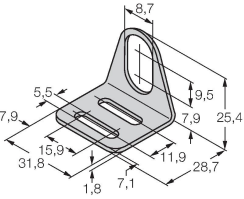
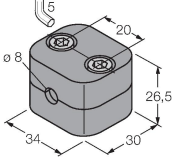
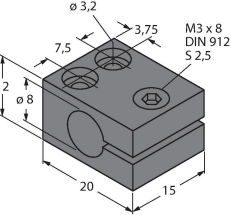
Distance S 12 mm

Distance G 12 mm

Diameter active area B Ø 8 mm

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

|                                                                                     |         |                                                                                                                                                                                          |                                                                                    |         |                                                                                |
|-------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------|
| QM-08                                                                               | 6945100 | Quick-mount bracket with dead-stop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quick-mount brackets. | BST-08B                                                                            | 6947210 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6      |
|    |         |                                                                                                                                                                                          |  |         |                                                                                |
| 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                                                                                                     |                                                                                    |         |                                                                                |
|  |         |                                                                                                                                                                                          |                                                                                    |         |                                                                                |