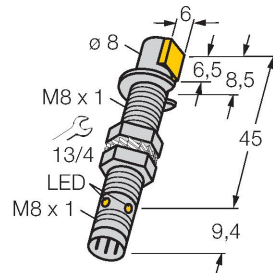


# BI1.5-GS880-AP6X-V1631

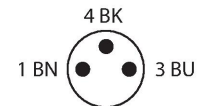
## Inductive Sensor



### Features

- Threaded barrel, M8 x 1
- Active face, lateral
- Stainless steel, 1.4404
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M8 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                                      | BI1.5-GS880-AP6X-V1631                              |
| ID                                        | 4604403                                             |
| <b>General data</b>                       |                                                     |
| Rated switching distance                  | 1.5 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                         | 10...30 VDC                                         |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| DC rated operational current              | $\leq 150$ mA                                       |
| No-load current                           | 15 mA                                               |
| Residual current                          | $\leq 0.1$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes / Cyclic                                        |
| Voltage drop at $I_o$                     | $\leq 1.8$ V                                        |
| Wire breakage/Reverse polarity protection | yes / Complete                                      |
| Output function                           | 3-wire, NO contact, PNP                             |
| Switching frequency                       | 3 kHz                                               |

## Technical data

| Mechanical data          |                                            |
|--------------------------|--------------------------------------------|
| Design                   | Threaded barrel, M8 x 1                    |
| Dimensions               | 54.4 mm                                    |
| Housing material         | Metal                                      |
| Active area material     | Plastic, POM                               |
| Electrical connection    | Connector, M8 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 diagrams illustrate the components and dimensions for mounting a sensor. The top diagram shows a single component with dimension T. The middle diagram shows two components with dimension G. The bottom diagram shows a component with two holes, with dimensions D, S, and W.

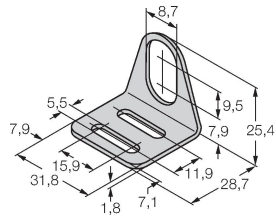
The diagrams illustrate the assembly process. The top diagram shows a component being inserted into a housing with a torque of 1 Nm. The bottom diagram shows a component being tightened into a housing with a torque of 10 Nm.

|                        |         |
|------------------------|---------|
| 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

MW-08

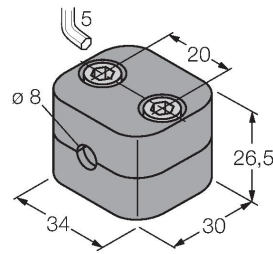
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Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-08

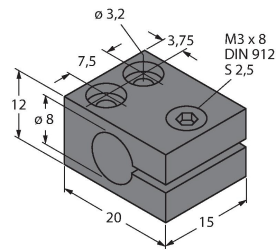
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Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

MBS80

69479



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