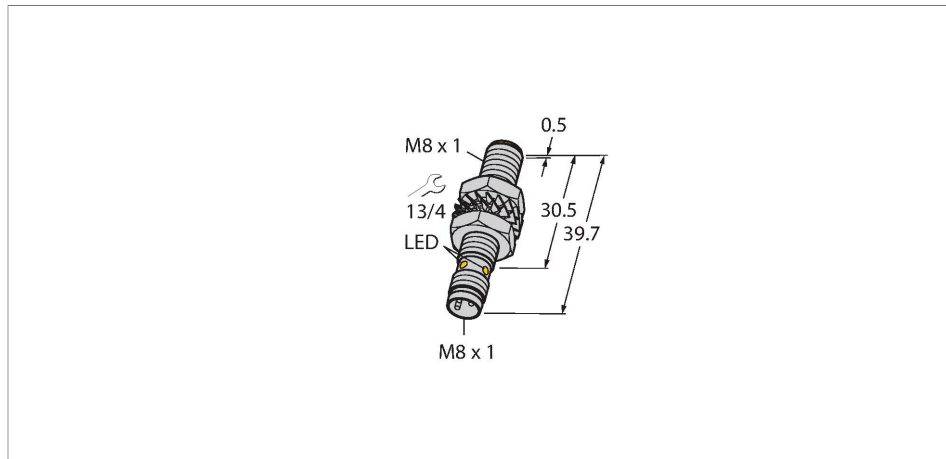


# BI3-M08-AN6X-V1131

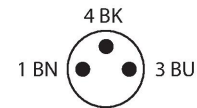
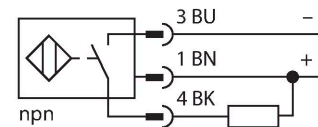
## Inductive Sensor – With Increased Switching Distance



### Features

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

### Wiring diagram



### Technical data

|   |   |
|---|---|
| Type                                      | BI3-M08-AN6X-V1131                                  |
| Ident. no.                                | 4602914   |
| Rated switching distance                  | 3 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 %  |
| Ambient temperature                       | -25...+70 °C  |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| DC rated operational current              | $\leq 150$ mA                                       |
| No-load current                           | $\leq 15$ 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, NPN                             |
| Switching frequency                       | 2.8 kHz   |
| Design                                    | Threaded barrel, M8 x 1                             |
| Dimensions                                | 39.7 mm   |

### Functional principle

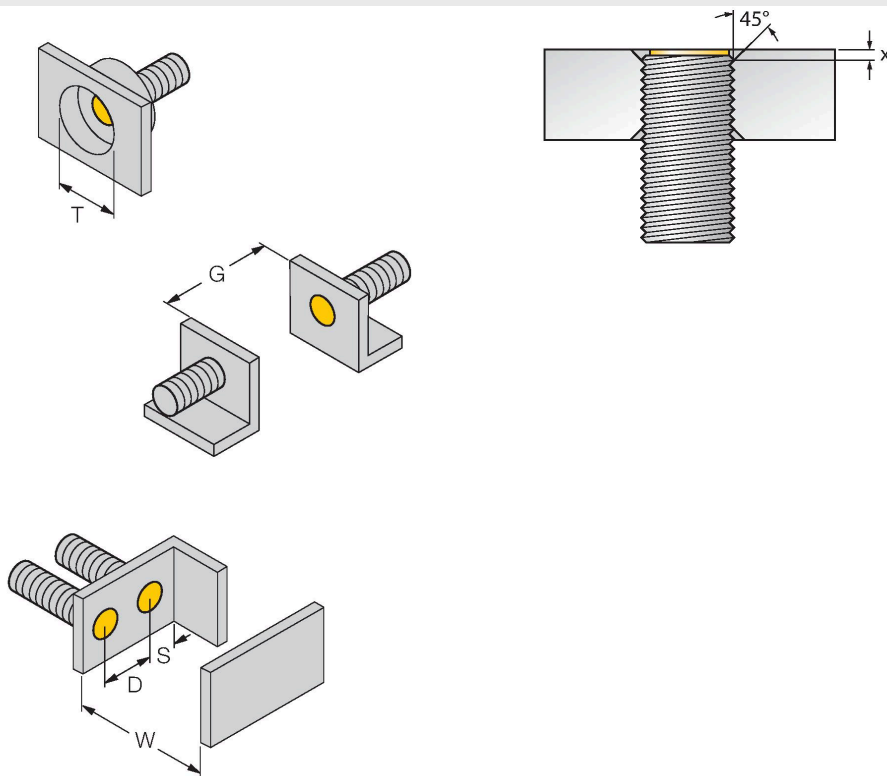
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

## Technical data

|                                       |  |
|---------------------------------------|--|
| Housing material                      | Metal, CuZn, Nickel-plated                 |
| Active area material                  | Plastic, PP-GF20                           |
| Max. tightening torque of housing nut | 7 Nm                                       |
| Electrical connection                 | Connector, M8 × 1                          |
| 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



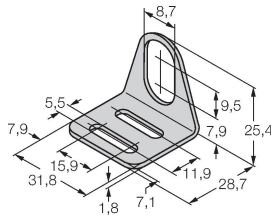
|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 8 mm  |

Flush installation in brass, aluminium and stainless steel with the supplied nuts is possible without restrictions.

If installed flush in steel, a phase of 45° and min. depth of 1.7 mm (dimension X) must be observed.

## Accessories

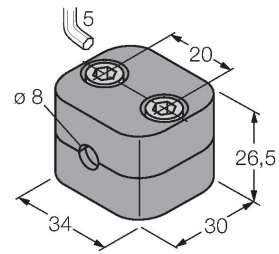
**MW-08** 6945008



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

Technical drawing showing dimensions: 8,7, 5,5, 7,9, 15,9, 31,8, 1,8, 7,1, 7,9, 11,9, 28,7, 9,5, 25,4.

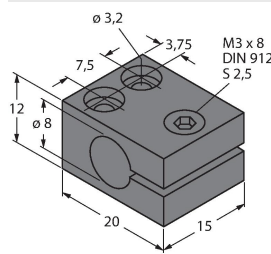
**BSS-08** 6901322



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

Technical drawing showing dimensions: 5, 20, 26,5, 30, 34, 8.

**MBS80** 69479

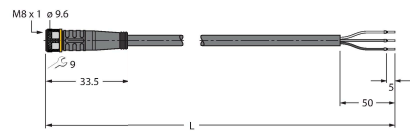


Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum

Technical drawing showing dimensions: 7,5, 12, 20, 15, 3,2, 3,75, M3 x 8 DIN 912 5,2,5, 8.

## Wiring accessories

| Dimension drawing | Type        | Ident. no. |   |
|-------------------|-------------|------------|---|
|                   | PKG3M-2/TEL | 6625058    | Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |



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