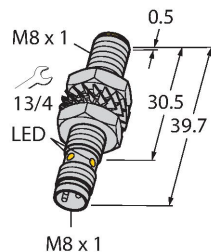


# BI3-M08-AN6X-V1131

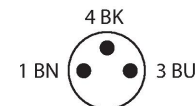
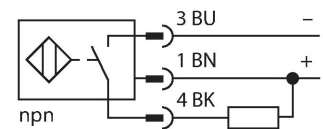
## Inductive Sensor – With Increased Switching Distance



### 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



### 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                                   | BI3-M08-AN6X-V1131                                  |
| ID                                     | 4602914                                             |
| <b>General data</b>                    |                                                     |
| 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 %                                            |
| <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                        | 3-wire, NO contact, NPN                             |
| Switching frequency                    | 2.8 kHz                                             |
| <b>Mechanical data</b>                 |                                                     |
| Design                                 | Threaded barrel, M8 x 1                             |
| Dimensions                             | 39.7 mm                                             |
| Housing material                       | Metal, CuZn, Nickel Plated                          |

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

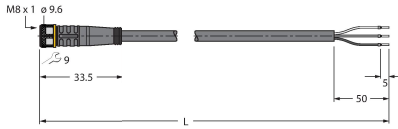
|                        |         |
|------------------------|---------|
| Distance D             | 2 x B   |
| Distance W             | 3 x Sn  |
| Distance T             | 3 x B   |
| Distance S             | 1.5 x B |
| Distance G             | 6 x Sn  |
| Diameter active area B | Ø 8 mm  |

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

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

Accessories

| Dimension drawing                                                                   | Type        | ID      |                                                                                                                        |
|-------------------------------------------------------------------------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------|
|  | PKG3M-2/TEL | 6625058 | Connection cable, M8 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |