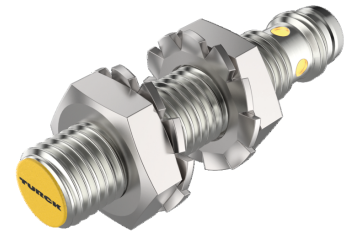
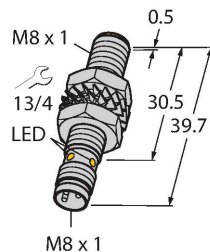


BI3-M08-AP6X-V1131

Inductive Sensor – With Increased Switching Distance



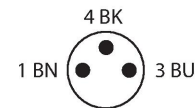
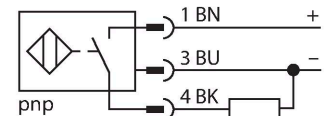
Technical data

| | |
|--|---|
| Type | BI3-M08-AP6X-V1131 |
| ID | 4602911 |
| General data | |
| 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 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{rs} | $\leq 10\% U_{Bmax}$ |
| DC rated operating current I_o | ≤ 150 mA |
| No-load current | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | 0.5 kV |
| Short-circuit protection | yes/Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire break/reverse polarity protection | yes/Complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 2.8 kHz |

Features

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

Wiring diagram



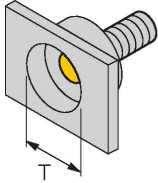
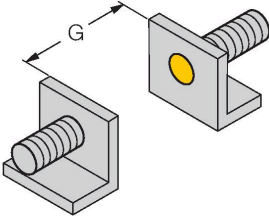
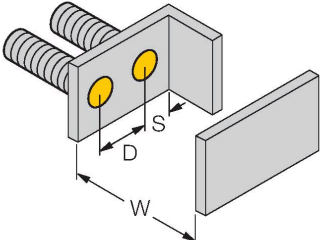
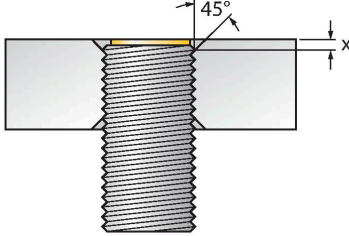
Functional principle

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

| Mechanical data | |
|---------------------------------------|--|
| Design | Threaded barrel, M8 x 1 |
| Dimensions | 39.7 mm |
| Housing material | Metal, CuZn, Nickel Plated |
| Active area material | Plastic, PP-GF20 |
| Max. tightening torque of housing nut | 7 Nm |
| 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

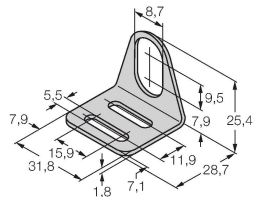
| Mounting instructions/Description | | | | | | | | | | | | |
|---|---|------------|-------|------------|--------|------------|-------|------------|---------|------------|--------|------------------------|
|    |  | | | | | | | | | | | |
| | <table> <tr> <td>Distance D</td><td>2 x B</td></tr> <tr> <td>Distance W</td><td>3 x Sn</td></tr> <tr> <td>Distance T</td><td>3 x B</td></tr> <tr> <td>Distance S</td><td>1.5 x B</td></tr> <tr> <td>Distance G</td><td>6 x Sn</td></tr> <tr> <td>Diameter active area B</td><td>Ø 8 mm</td></tr> </table> | 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 |
| 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

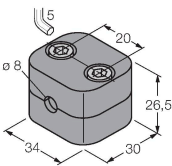
MW08 6945008

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



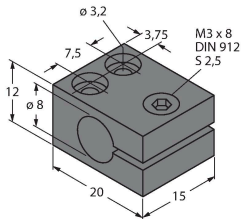
BSS-08 6901322

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



MBS80 69479

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



Wiring 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

