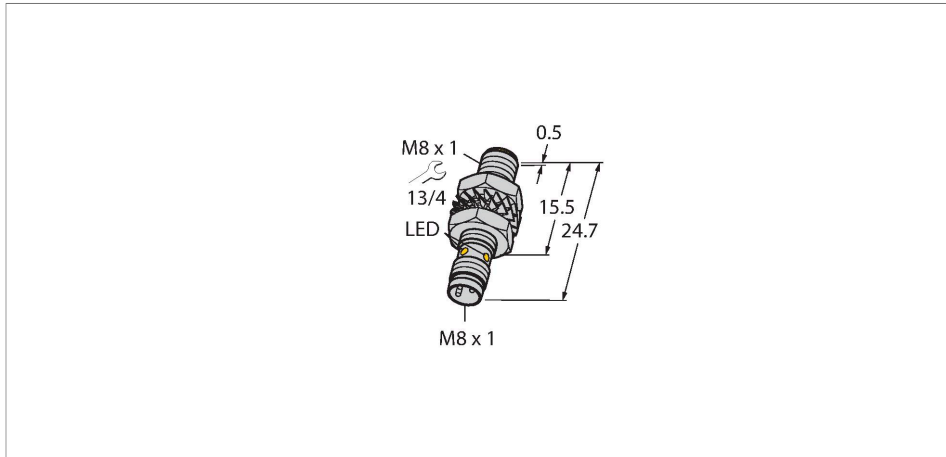


BI3-M08KK-AP6X-V1131

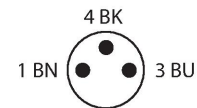
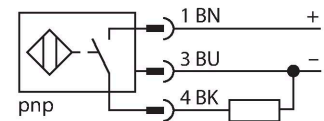
Inductive Sensor – With Increased Switching Distance



Features

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

Wiring diagram



Technical data

| | |
|---|---|
| Type | BI3-M08KK-AP6X-V1131 |
| Ident. no. | 4602939 |
| 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 | $\leq 10\% U_s$ |
| DC rated operational current | ≤ 100 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_e | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 2.8 kHz |
| Design | Threaded barrel, M8 x 1 |
| Dimensions | 24.7 mm |
| Housing material | Metal, CuZn, Nickel-plated |

Functional principle

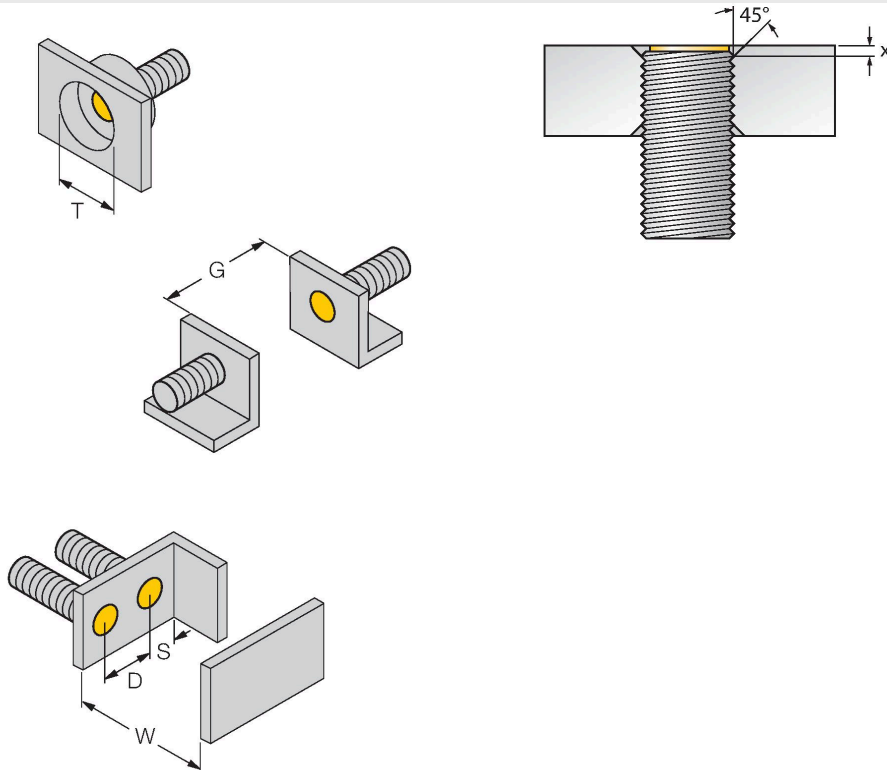
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

| | |
|------------------------------------|--|
| Active area material | Plastic, PP-GF20 |
| Max. tightening torque housing nut | 7 Nm |
| Electrical connection | Connector, M8 x 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

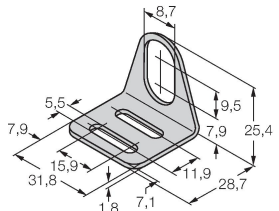
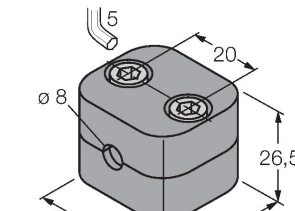
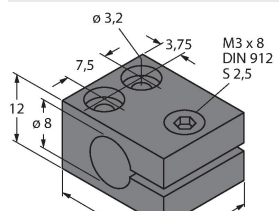
Mounting instructions/Description



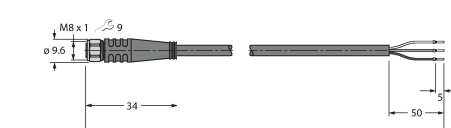
| | |
|----------------------|---------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area | Ø 8 mm |
| B | |

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

| | | | |
|---|---|---|---|
| <p>MW08</p>  | <p>6945008</p> <p>Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)</p> | <p>BSS-08</p>  | <p>6901322</p> <p>Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene</p> |
| <p>MBS80</p>  | <p>69479</p> <p>Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum</p> | | |

Wiring accessories

| Dimension drawing | Type | Ident. no. | |
|---|---------------------|----------------|--|
|  | <p>PKGV3M-2/TEL</p> | <p>6625385</p> | <p>Connection cable, female M8, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com</p> |