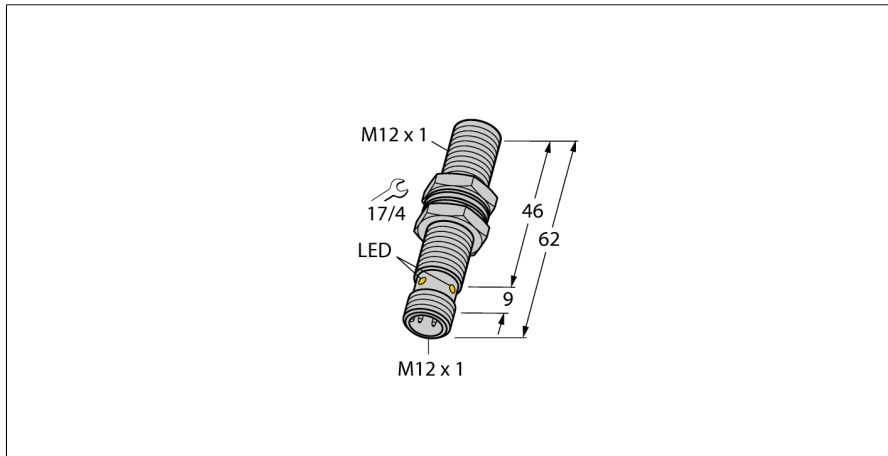


Inductive sensor

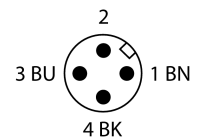
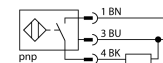
With increased switching distance

BI4-M12E-AP6X-H1141



- M12 × 1 threaded barrel
- Long version
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring Diagram



Functional principle

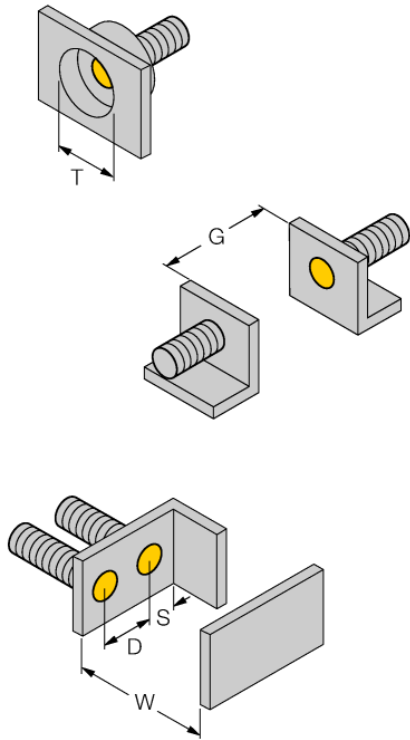
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

| | |
|---|---|
| Type designation | BI4-M12E-AP6X-H1141 |
| Ident-No. | 4608030 |
| Ident-No (TUSA) | T4608030 |
| Rated switching distance Sn | 4 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0,81 x Sn) mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U _{in} |
| DC rated operational current | ≤ 200 mA |
| No-load current I ₀ | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes/ Cyclic |
| Voltage drop at I ₀ | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes/ Complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 2 kHz |
| Design | Threaded barrel, M12 × 1 |
| Dimensions | 62 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| Max. tightening torque housing nut | 10 Nm |
| Electrical connection | Connector, M12 × 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 |

Inductive sensor
With increased switching distance
BI4-M12E-AP6X-H1141

| | |
|------------|---------|
| 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 12 mm |
|------------------------|---------|



Inductive sensor
With increased switching distance
BI4-M12E-AP6X-H1141



Accessories

| Type code | Ident-No. | Description | |
|-----------|-----------|--|--|
| QM-12 | 6945101 | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. | |
| BST-12B | 6947212 | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6 | |
| MW-12 | 6945003 | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304) | |
| BSS-12 | 6901321 | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene | |

Wiring accessories

| Type code | Ident-No. | Description | |
|-------------|-----------|---|--|
| RKC4T-2/TEL | 6625010 | Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available. | |