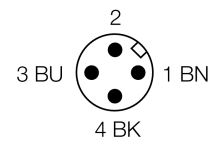
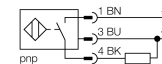


**Inductive sensor
with extended switching distance
BI4-M12E-AP6X-H1141**

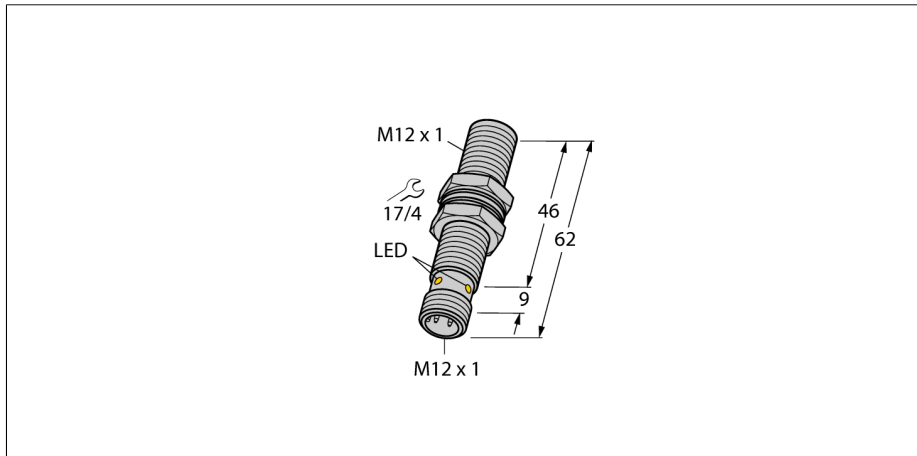
- Threaded barrel, M12 x 1
- Long version
- Chrome-plated brass
- Large detection range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 connector

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

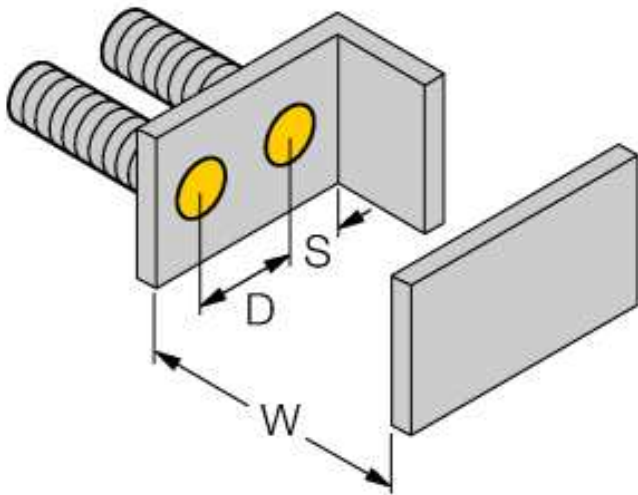
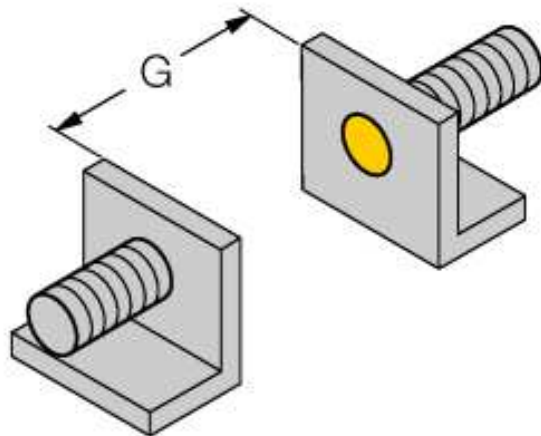
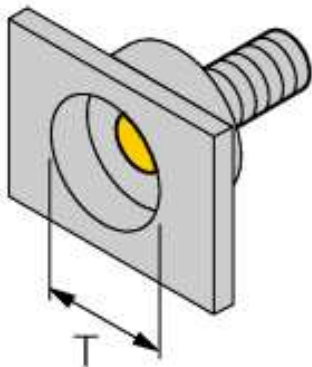


| | |
|---|---|
| Type code | BI4-M12E-AP6X-H1141 |
| Ident no. | 4608030 |
| Rated operating distance Sn | 4 mm |
| Mounting condition | flush |
| Assured sensing range | ≤ (0,81 x Sn) mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeatability | ≤ 2 % of full scale |
| Temperaturdrift | 10 % |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 10...30VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current I ₀ | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Rated insulation 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 x 1 |
| Dimensions | 62 mm |
| Housing material | Metal, CuZn, chrome-plated |
| Material active face | Plastic, PA |
| Max. tightening torque housing nut | 10 Nm |
| Connection | male, M12 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 | • yellow |

**Inductive sensor
with extended 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 of the active area B \varnothing 12 mm



**Inductive sensor
with extended switching distance
BI4-M12E-AP6X-H1141**

Accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------|-----------|--|-------------------|
| 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 | |