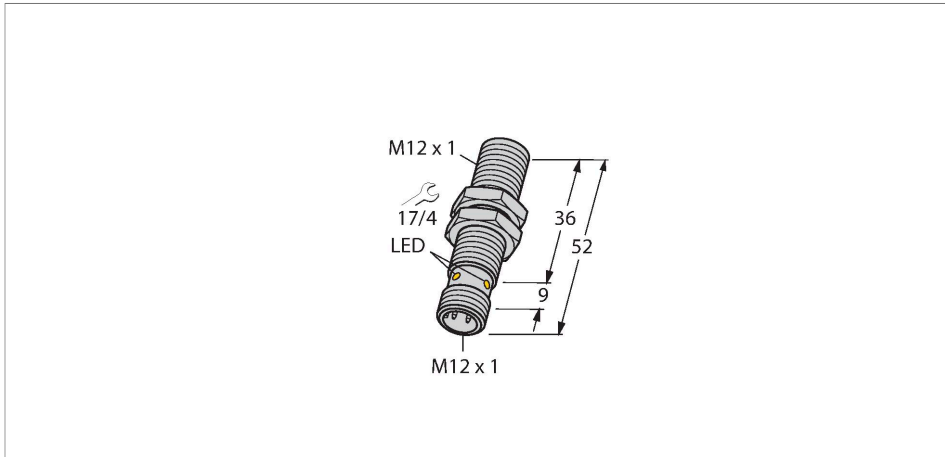


BI3-M12-AD4X-H1141

Inductive Sensor

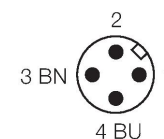
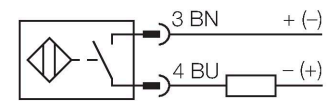


Technical data

| | |
|---|---|
| Type | BI3-M12-AD4X-H1141 |
| ID | 4405041 |
| 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 | ≤ 2 % of full scale |
| Temperature drift | $\leq \pm 10$ % |
| Hysteresis | 1...15 % |
| Electrical data | |
| Operating voltage | 10...65 VDC |
| Residual ripple | ≤ 10 % U_{ss} |
| DC rated operational current | ≤ 100 mA |
| Residual current | ≤ 0.6 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I_o | ≤ 5 V |
| Wire breakage/Reverse polarity protection | Complete |
| Output function | 2-wire, NO contact, 2-wire |
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 1 kHz |

Features

- M12 x 1 threaded barrel
- Chrome-plated brass
- DC 2-wire, 10...65 VDC
- NO contact
- M12 x 1 male connector



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, M12 × 1 |
| Dimensions | 52 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Connector, M12 × 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

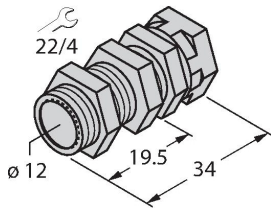
Mounting instructions/Description



| | |
|------------------------|---------|
| Distance D | 24 mm |
| 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 |

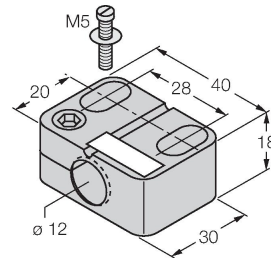
Accessories

QM-12 6945101



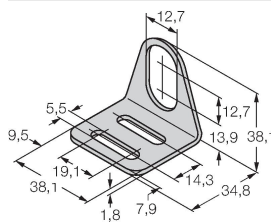
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B 6947212



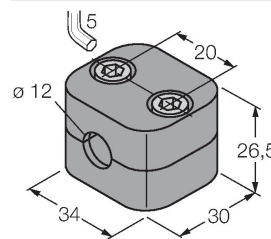
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW-12 6945003



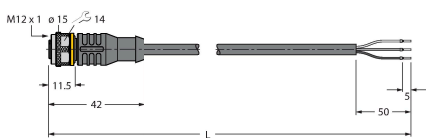
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12 6901321



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

Wiring accessories

| Dimension drawing | Type | ID | |
|---|-------------|---------|--|
|  | 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, see www.turck.com |