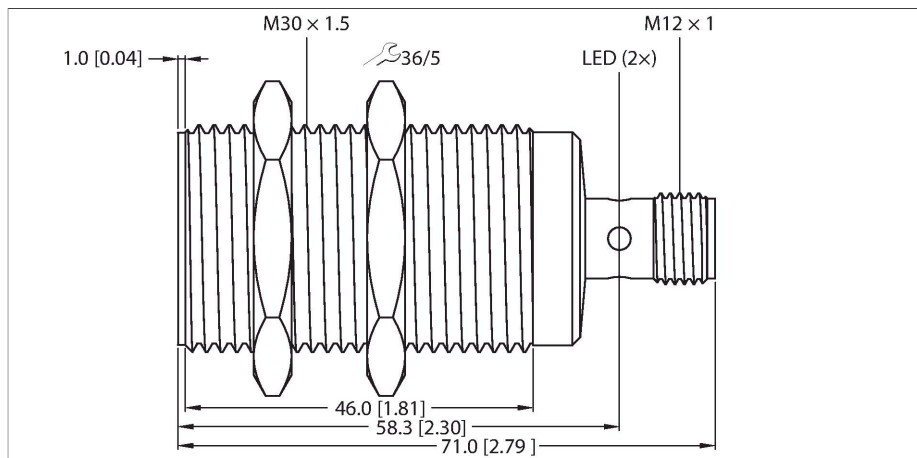


BI12-M30-2APS8X2-H1141

Inductive Safety Sensor



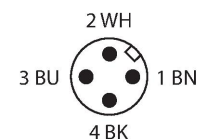
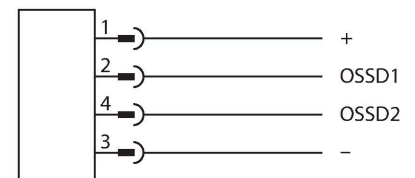
Technical data

| | |
|---|--|
| Type | BI12-M30-2APS8X2-H1141 |
| Ident. no. | 100016608 |
| Rated switching distance | 12 mm |
| Secured switch-on distance | 9.6 mm |
| Secured switch-off distance | 18 mm |
| Mounting conditions | Flush |
| Correction factors | St37 = 1; Al = 0.45; stainless steel = 0.8; Ms = 0.4 |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| Hysteresis | 3...15 % |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 19.2...28.8 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| No-load current | ≤ 20 mA |
| Impulse withstand voltage | 1.5 kV |
| Isolation test voltage | ≤ 0.0288 kV |
| Short-circuit protection | yes |
| Wire breakage/Reverse polarity protection | Complete |
| Output function | 4-wire, 2 × OSSD, NO contacts, PNP |
| Number of safe semiconductor outputs | 2 |
| Switching frequency | 0.1 kHz |
| Design | Threaded barrel, M30 × 1.5 |
| Dimensions | 71 mm |
| Housing material | Metal, CuZn |
| Active area material | Plastic, PA |
| Max. tightening torque of housing nut | 12 Nm |

Features

- M30 × 1.5 threaded tube
- Nickel-plated brass
- SIL 2 (IEC 61508)
- PL d (ISO 13849-1)
- 2 × OSSD output, NO contact, PNP
- DC 4-wire, 24 VDC

Wiring diagram



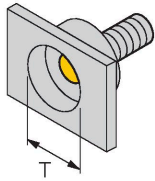
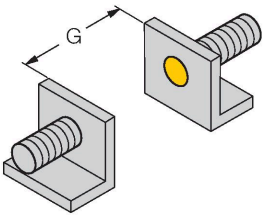
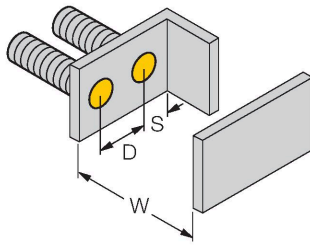
Functional principle

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

| | |
|--------------------------------------|---------------------|
| Electrical connection | Connectors, M12 × 1 |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| PL acc. to DIN EN 13849-1:2008 | d |
| Category acc. to DIN EN 13849-1:2008 | 2 |
| SIL according IEC 61508 | 2 |
| Protection class | IP67 |
| Power-on indication | LED, Red |
| Switching state | LED, Green |

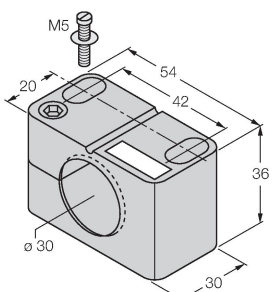
Mounting instructions

| 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 B | Ø 30 mm |
| | | |

Accessories

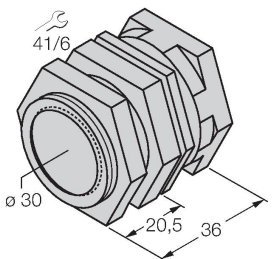
BST-30B 6947216

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



QM-30 6945103

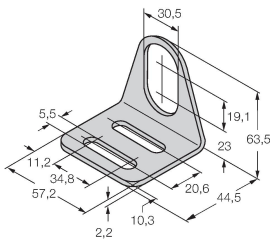
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW-30

6945005

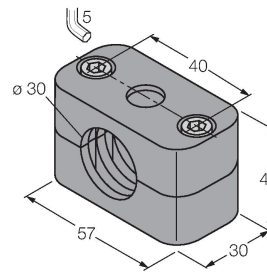
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-30

6901319

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



Accessories

Dimension drawing

Type

Ident. no.

RKC4.4T-2/TEL

6625013

Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

