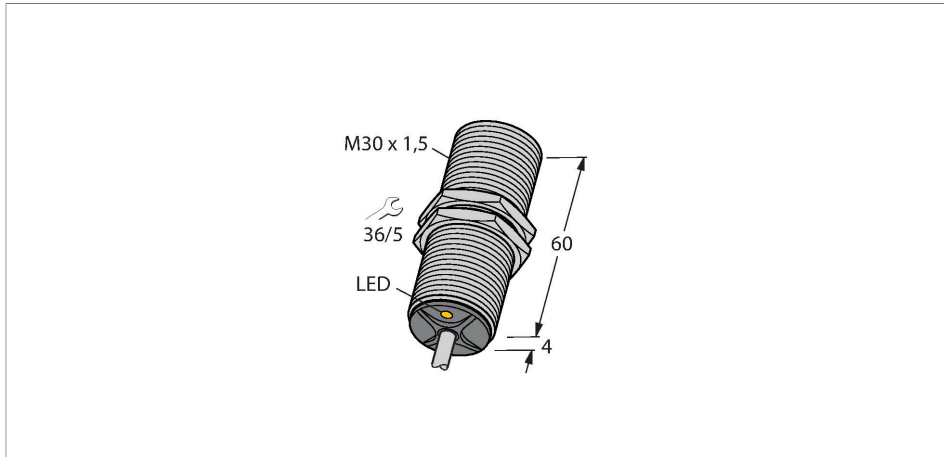


BI12-G30-AM6/37X/S97

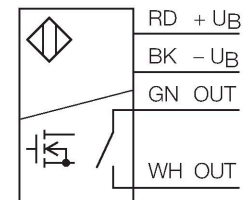
Inductive Sensor – With Extended Temperature Range



Features

- Threaded barrel, M30 x 1.5
- Chrome-plated brass
- Temperatures up to -40 °C
- Supply voltage 10...30 VDC
- Potential-free semiconductor output, galvanically isolated, NO
- Output power max. 300 W (6 A, 50 VDC / 35 VAC)
- Cable connection

Wiring diagram



Technical data

| | |
|------------------------------|---|
| Type | BI12-G30-AM6/37X/S97 |
| ID | 1711200 |
| General data | |
| Rated switching distance | 12 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 | $\leq \pm 10$ % $\leq \pm 20$ %, ≤ -25 °C |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U_{ss} |
| AC rated operational current | ≤ 6000 mA |
| DC rated operational current | ≤ 6000 mA |
| AC output voltage | ≤ 35 VAC |
| DC output voltage | ≤ 50 VDC |
| output load | ≤ 300 W |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Surge current | ≤ 8 A (≤ 10 ms max. 5 Hz) |
| Short-circuit protection | no |

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. Special versions are available for ambient temperatures between -60°C and +250°C.

Technical data

| | |
|---|--|
| Voltage drop at I _e | ≤ 0.4 V |
| Wire breakage/Reverse polarity protection | yes / yes (voltage supply) |
| Output function | 2-wire, NO contact, Potential-free |
| Smallest operating current | ≥ 1 mA |
| Switching frequency | 0.02 kHz |
| Mechanical data | |
| Design | Threaded barrel, M30 x 1.5 |
| Dimensions | 64 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 75 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY-T105, PVC, 2 m |
| Core cross-section | 4 x 0.34 mm ² |
| Environmental conditions | |
| Ambient temperature | -40...+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

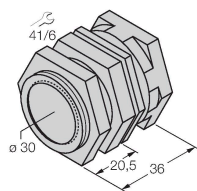


| | |
|------------------------|---------|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 30 mm |

Accessories

QM-30

6945103



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

BST-30B

6947216



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

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