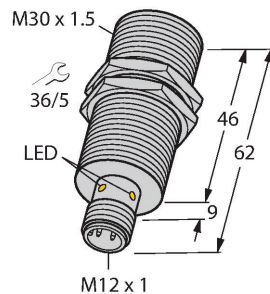


BI15U-EM30-AP6X-H1141

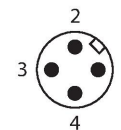
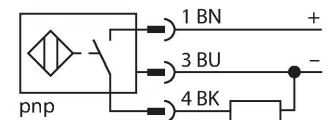
Inductive Sensor – With Extended Switching Distance



Features

- M30 × 1.5 threaded tube
- Stainless steel, 1.4301
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

| | |
|---|--|
| Type | BI15U-EM30-AP6X-H1141 |
| ID | 1636733 |
| General data | |
| Rated switching distance | 15 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| | $\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | $\leq 10 \%$ U_{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | 25 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |
| Switching frequency | 1 kHz |

Technical data

| Mechanical data | |
|---------------------------------------|---|
| Design | Threaded barrel, M30 x 1.5 |
| Dimensions | 62 mm |
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Active area material | Plastic, LCP |
| Max. tightening torque of housing nut | 75 Nm |
| Electrical connection | Connector, M12 x 1 |
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

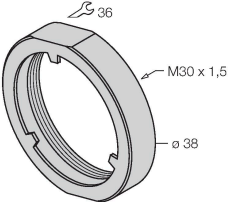
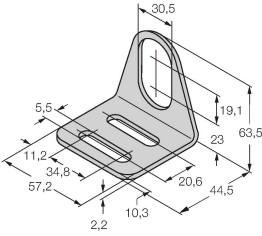
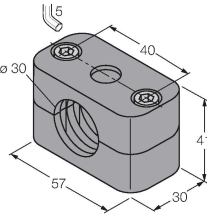
Mounting instructions

Mounting instructions/Description

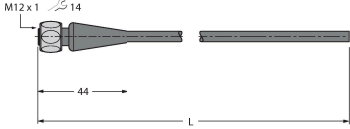
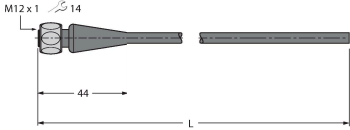
| | |
|------------------------|---------|
| Distance D | 60 mm |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 30 mm |

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

| | | | | | |
|---|---------|--|--|---------|--|
| PN-M30 | 6905308 | Protective nut for M30 x 1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303) | 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 | ID | |
|---|------------|---------|--|
|  | RKH4-2/TFE | 6935482 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C |
|  | RKH4-2/TFG | 6934384 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C |