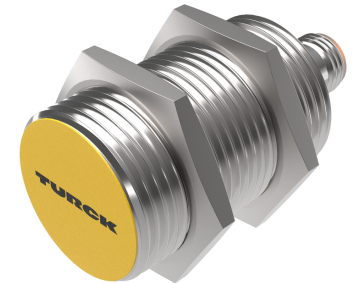
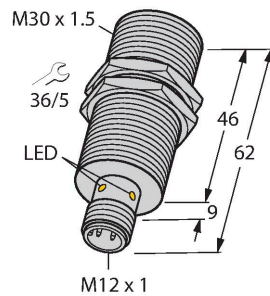


# BI15U-M30-VP6X-H1141

## Inductive Sensor – With Extended Switching Distance



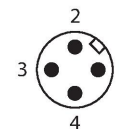
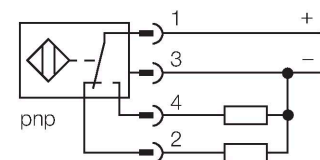
### Technical data

|                                        |                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------|
| Type                                   | BI15U-M30-VP6X-H1141                                                                     |
| ID                                     | 1634944                                                                                  |
| 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                      | $\leq \pm 10 \%$<br>$\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$ |
| Hysteresis                             | 3...15 %                                                                                 |
| Electrical data                        |                                                                                          |
| Operating voltage $U_B$                | 10...30 VDC                                                                              |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                                                                  |
| DC rated operating current $I_o$       | $\leq 200$ mA                                                                            |
| No-load current                        | $\leq 15$ mA                                                                             |
| Residual current                       | $\leq 0.1$ mA                                                                            |
| Isolation test voltage                 | 0.5 kV                                                                                   |
| Short-circuit protection               | yes/Cyclic                                                                               |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                                                             |
| Wire break/reverse polarity protection | yes/Complete                                                                             |
| Output function                        | 4-wire, Complementary contact, PNP                                                       |
| DC field stability                     | 300 mT                                                                                   |
| AC field stability                     | 300 mT <sub>ss</sub>                                                                     |
| Insulation class                       | □                                                                                        |
| Switching frequency                    | 1 kHz                                                                                    |
| Mechanical data                        |                                                                                          |
| Design                                 | Threaded barrel, M30 x 1.5                                                               |

### Features

- M30 × 1.5 threaded tube
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 4-wire, 10...30 VDC
- Changeover 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

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Dimensions                            | 62 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, LCP                              |
| Max. tightening torque of housing nut | 75 Nm                                     |
| Electrical connection                 | Connector, M12 × 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

A technical drawing of a square sensor plate with a central circular hole. A dimension line labeled 'T' indicates the thickness of the plate.

A technical drawing showing two views of a sensor plate. The top view shows a square plate with a central hole. The bottom view shows the plate being inserted into a rectangular recess. A dimension line labeled 'G' indicates the distance from the edge of the recess to the center of the hole.

A technical drawing showing a sensor plate being inserted into a recess. The plate has two circular holes. Dimensions are labeled: 'D' for the distance between the centers of the two holes, 'S' for the distance from the edge of the plate to the center of a hole, 'W' for the width of the plate, and 'T' for the thickness of the plate.

A technical drawing of a threaded barrel sensor. A yellow rectangular area at the top of the barrel indicates the active area.

Distance D 60 mm

Distance W 3 x Sn

Distance T 3 x B

Distance S 1.5 x B

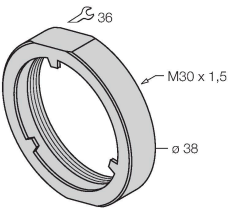
Distance G 6 x Sn

Diameter active area B

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.

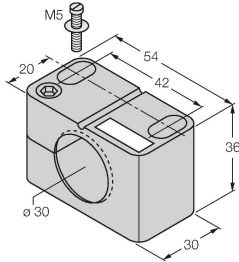
Accessories

PN-M30 6905308



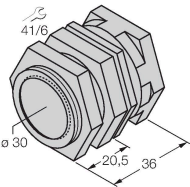
Protective nut for M30 x 1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)

BST-30B 6947216



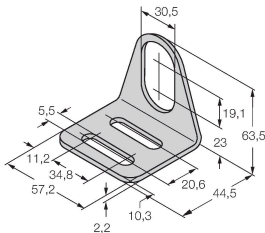
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

QM-30 6945103



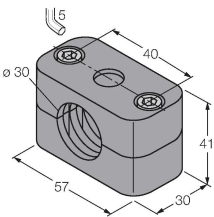
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW30 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