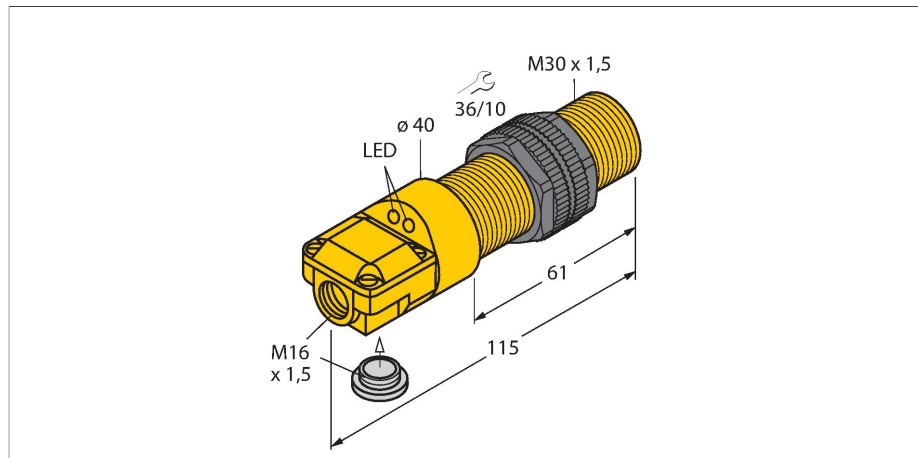


# BI10-P30SR-VN4X2

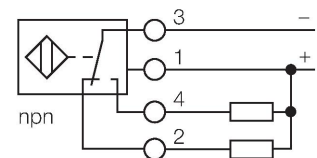
## Inductive Sensor



### Features

- 2 cable entries (axial, radial)
- Threaded barrel, M30 x 1.5
- Plastic, ABS
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- Terminal chamber

### 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

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| Type                                      | BI10-P30SR-VN4X2                                    |
| ID                                        | 15752                                               |
| General data                              |                                                     |
| Rated switching distance                  | 10 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                           | $\leq 2$ % of full scale                            |
| Temperature drift                         | $\leq \pm 10$ %                                     |
| Hysteresis                                | 3...15 %                                            |
| Electrical data                           |                                                     |
| Operating voltage                         | 10...65 VDC                                         |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| DC rated operational current              | $\leq 200$ mA                                       |
| No-load current                           | 15 mA                                               |
| Residual current                          | $\leq 0.1$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes / Cyclic                                        |
| Voltage drop at $I_o$                     | $\leq 1.8$ V                                        |
| Wire breakage/Reverse polarity protection | yes / Complete                                      |
| Output function                           | 4-wire, Complementary contact, NPN                  |
| Switching frequency                       | 0.5 kHz                                             |
| Mechanical data                           |                                                     |
| Design                                    | Threaded barrel, M30 x 1.5                          |
| Dimensions                                | 115 mm                                              |
| Housing material                          | Plastic, ABS                                        |

Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Active area material                  | Plastic, ABS                               |
| Max. tightening torque of housing nut | 5 Nm                                       |
| Electrical connection                 | Terminal chamber                           |
| Clamping ability                      | ≤ 2.5 mm²                                  |
| 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 |
| Power-on indication                   | LED, Green                                 |
| Switching state                       | LED, Yellow                                |
| Included in delivery                  | cable gland, blanking plug                 |

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of a cable gland. The top diagram shows a side view of the gland with a dimension line labeled 'T' indicating the distance from the mounting surface to the center of the active area. The middle diagram shows a top view of the gland with a dimension line labeled 'G' indicating the distance between the mounting surface and the center of the active area. The bottom diagram shows a perspective view of the gland with three dimension lines: 'D' for the distance from the mounting surface to the center of the active area, 'S' for the distance from the mounting surface to the center of the active area, and 'W' for the distance from the mounting surface to the center of the active area.

|                        |         |
|------------------------|---------|
| 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 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-30B

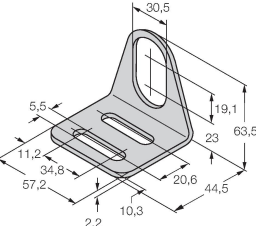
6947216



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