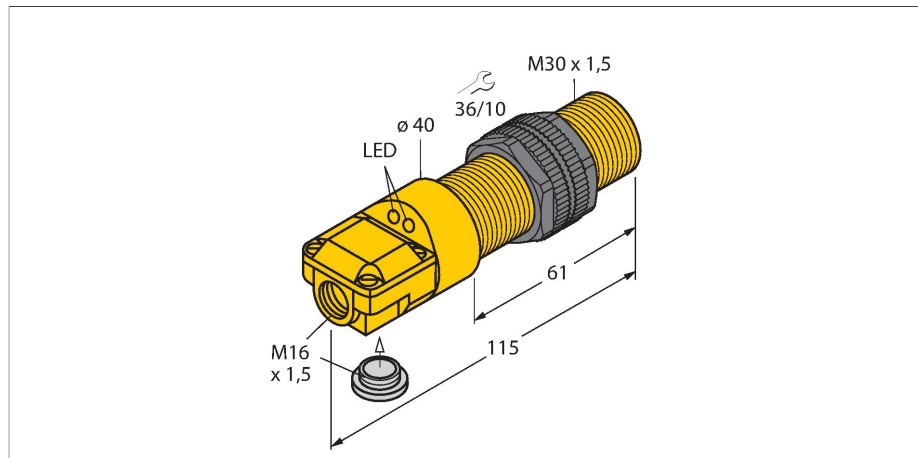


# BI10-P30SR-VN4X2

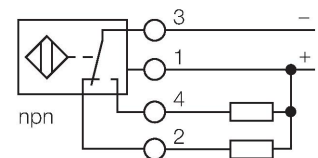
## Inductive Sensor



### 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



### 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 $U_B$                | 10...65 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, NPN                  |
| Switching frequency                    | 0.5 kHz                                             |
| Mechanical data                        |                                                     |
| Design                                 | Threaded barrel, M30 x 1.5                          |
| Dimensions                             | 115 mm                                              |
| Housing material                       | Plastic, ABS                                        |

### 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

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| 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 drawings of a cable gland mounting. The top drawing is a side view showing a square flange with a central hole and a threaded rod passing through it. Dimension T is indicated as the distance from the center of the hole to the edge of the flange. The middle drawing is a top view showing two L-shaped brackets with threaded rods. Dimension G is indicated as the distance between the centers of the two rods. The bottom drawing is a perspective view showing a rectangular plate with two holes and a threaded rod passing through one of them. Dimensions D, S, and W are indicated: D is the distance between the centers of the two holes, S is the distance from the center of the hole to the edge of the plate, and W is the width of the plate.

|                        |         |
|------------------------|---------|
| 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

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