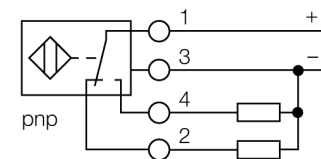


**Inductive sensor**  
**BI10-P30SR-VP4X2/3D**



- ATEX category II 3 D, Ex-zone 22
- 2 cable entries (axial, radial)
- Threaded barrel, M30 x 1.5
- Plastic, ABS
- 4-wire DC, 10...65 VDC
- Changeover contact, PNP output
- Terminal chamber

**Wiring diagram**



**Functional principle**

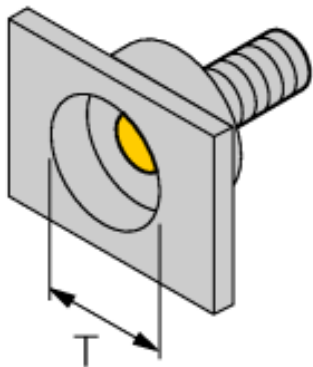
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

We offer special versions for temperatures of -60 °C up to +250 °C.

<b>Type code</b>	BI10-P30SR-VP4X2/3D
Ident no.	1565202
<b>Rated operating distance Sn</b>	10 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	10...65VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
DC rated operational current	≤ 200 mA
No-load current I <sub>0</sub>	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Voltage drop at I <sub>0</sub>	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	4-wire, changover contact, PNP
Switching frequency	0.5 kHz
<b>Approval acc. to</b>	ATEX declaration of conformity 3105-1M
Device designation	⊕ II 3 D IP67 T95°C
Warning	Use ATEX approved cable glands only.
<b>Design</b>	threaded barrel, M30 x 1.5
Dimensions	115 mm
Housing material	plastic, ABS
Material active area	Plastic, ABS
Max. tightening torque housing nut	5 Nm
Connection	terminal chamber
Clamping ability	≤ 2.5 mm <sup>2</sup>
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
<b>Power-on indication</b>	LED green
Switching state	LED yellow
Included in scope of supply	cable gland, blanking plug

**Inductive sensor  
BI10-P30SR-VP4X2/3D**

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
<hr/>	
Diameter of the active area B	Ø 30 mm



**Inductive sensor  
BI10-P30SR-VP4X2/3D**

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Industrial  
Automation

**Accessories**

Type code	Ident no.	Description	Dimension drawing
QM-30	6945103	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M36 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
BST-30B	6947216	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MW-30	6945005	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-30	6901319	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	

# Inductive sensor

## BI10-P30SR-VP4X2/3D

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### Operating manual

#### Intended use

This device fulfils the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN50014 and EN50281-1-1. In order to ensure correct operation to the intended purpose it is required to observe the national regulations and directives.

#### For use in explosion hazardous areas conform to classification

II 3 D (Group II, Category 3 D, electrical equipment for dust atmospheres).

#### Marking (see device or technical data sheet)

⊕ II 3 D IP67 T 95°C acc.to EN50281-1-1

#### Local admissible ambient temperature

-25...+70 °C

#### Installation / Commissioning

These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas.

Please verify that the classification and the marking on the device comply with the actual application conditions.

#### Installation and mounting instructions

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.

If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields.

The pin configuration and the electrical specifications can be taken from the device marking or the technical data sheet.

In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.

#### Special conditions for safe operation

Devices with terminal chamber (cable glands) have a weaker strain relief. Sufficient strain relief must be ensured or the cable must be stationary-mounted.

For devices with M12 connectors please use the supplied safety clip SC-M12/3GD.

Do not disconnect the plug-in connection or cable when energised.

Please attach a warning label permanently in an appropriate fashion in close proximity to the plug-in connection with the following inscription:

Nicht unter Spannung trennen / Do not separate when energized.

#### service / maintenance

Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.