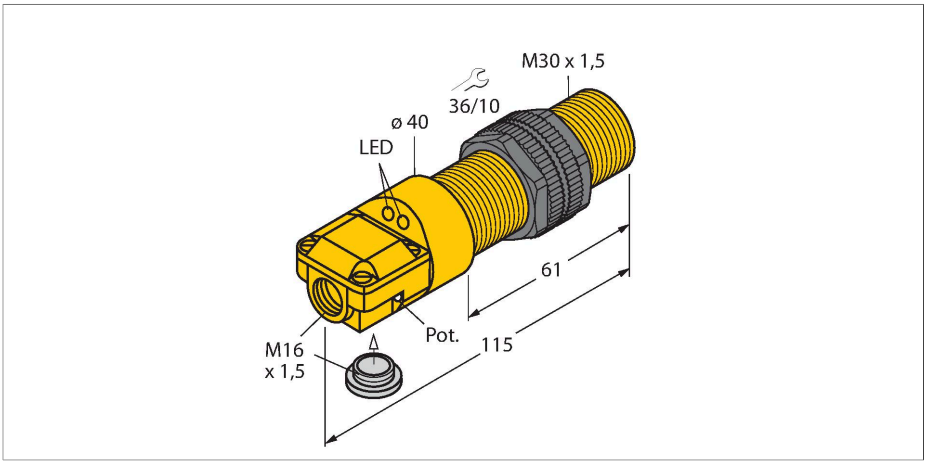
BC10-P30SR-VP4X2/3GD
Capacitive Sensor



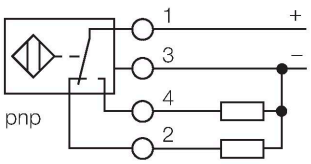
Technical data

Type	BC10-P30SR-VP4X2/3GD
Ident. no.	2505006
Rated switching distance (flush)	10 mm
Rated switching distance (non-flush)	15 mm
Secured operating distance	≤ (0.72 x Sn)
Hysteresis	2…20 %
Temperature drift	type 20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25…+70 °C
Electrical data	
Operating voltage	10…65 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Switching frequency	0.1 kHz
Isolation test voltage	≤ 0.5 kV
Output function	4-wire, Complementary contact, PNP
Short-circuit protection	yes / Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Approval acc. to	ATEX declaration of conformity 3146M
Device marking	Ex II 3 G EEx nA II T4 X / II3 D IP67 T 90 °C

Features

- M30 × 1.5 threaded barrel
- Plastic, ABS
- Fine adjustment via potentiometer
- DC 4-wire, 10…65 VDC
- Complementary contact, PNP output
- Terminal chamber
- ATEX category II 3 G, Ex zone 2
- ATEX category II 3 D, Ex zone 22

Wiring diagram



Functional principle

Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

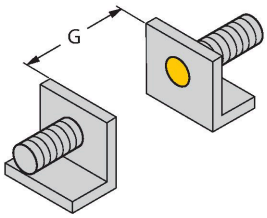
BC10-P30SR-VP4X2/3GD| 02/13/2020 16-14 | technical changes reserved

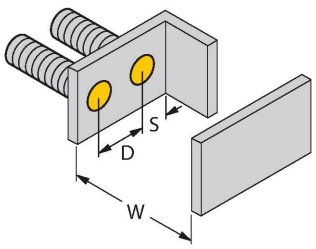
Technical data

Warning	Use ATEX approved cable glands only.
Mechanical data	
Design	Threaded barrel, M30 × 1.5
Housing material	Plastic, ABS
Active area material	Plastic, ABS, yellow
Admissible pressure on front cap	≤ 3 bar
Max. tightening torque housing nut	5 Nm
Electrical connection	Terminal chamber
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	1080 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED

Mounting instructions

Product features



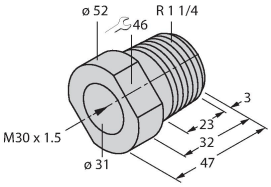


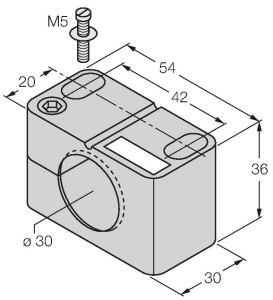
Distance D	60 mm
Distance W	30 mm
Distance S	45 mm
Distance G	60 mm
Diameter active area B	Ø 30 mm

The given minimum distances have been checked against the standard switching distance. Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

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Accessories

MAP-M30	6950013
	Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)

BST-30B	6947216
	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

Accessories

Accessories

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Operating Instructions

Intended use

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 G and II 3 D (Group II, Category 3 G, electrical equipment for gaseous atmospheres and category 3 D, electrical equipment for dust atmospheres).

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.Do not disconnect the plug-in connection or cable under voltage.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.

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