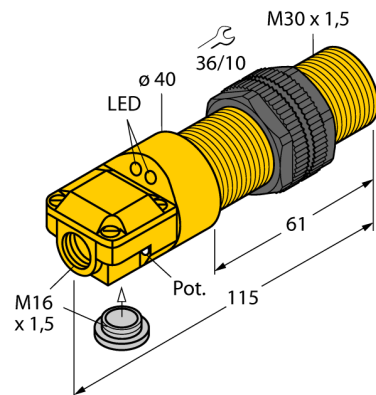


Capacitive sensor BC10-P30SR-VP4X2/3GD

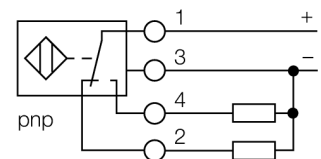
TURCK

Industrial
Automation



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

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.

Type code	BC10-P30SR-VP4X2/3GD
Ident no.	2505006
Rated operating distance Sn	10 mm
Rated operating distance Sn	15 mm, non-flush mounting
Assured sensing range	$\leq (0.72 \times S_n)$ mm
Hysteresis	2...20 %
Temperaturdrift	type $\leq \pm 20$ %
Repeatability	≤ 2 % of full scale
Ambient temperature	-25...+70 °C
Operating voltage	10...65VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Switching frequency	0.1 kHz
Rated insulation voltage	≤ 0.5 kV
Output function	4-wire, changover contact, PNP
Short-circuit protection	yes/ cyclic
Voltage drop at I_0	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Approval acc. to	ATEX declaration of conformity 3146M
Device designation	Ⓔ II 3 G EEx nA II T4 X / II3 D IP67 T 90 °C
Warning	Use ATEX approved cable glands only.
Design	threaded barrel, M30 x 1.5
Dimensions	115 mm
Housing material	Plastic, ABS
Material active face	Plastic, ABS, yellow
Max. tightening torque housing nut	5 Nm
Connection	Terminal chamber
Clamping ability	≤ 2.5 mm ²
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
Operating voltage	LED green
Switching state	• yellow
Included in scope of supply	cable gland, blank plug

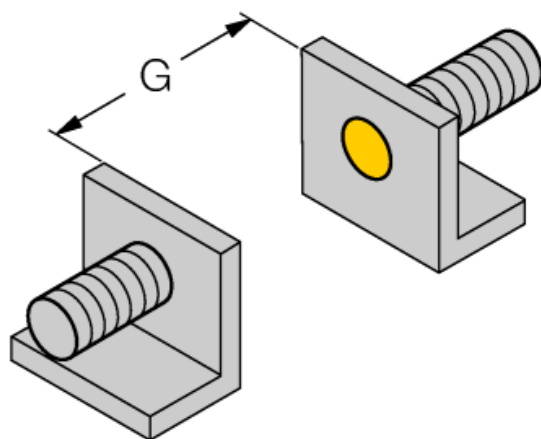
Capacitive sensor BC10-P30SR-VP4X2/3GD

TURCK

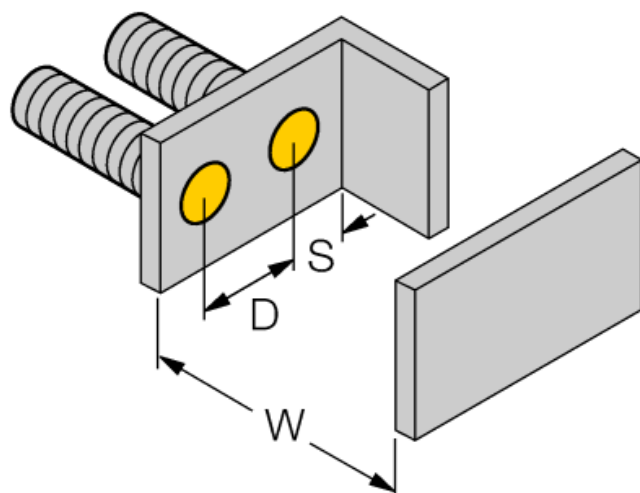
Industrial
Automation

Mounting instructions / Description	minimum distances
Distance D	60 mm
Distance W	30 mm
Distance S	45 mm
Distance G	60 mm

Diameter of the active area B	Ø 30 mm
-------------------------------	---------



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



Capacitive sensor BC10-P30SR-VP4X2/3GD

TURCK

Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
BST-30B	6947216	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MAP-M30	6950013	Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)	

Capacitive sensor

BC10-P30SR-VP4X2/3GD

TURCK

Industrial
Automation

Operating manual

Intended use

This device fulfils the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN50014, EN50020 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 G and II 3 D (Group II, Category 3 G, electrical equipment for gaseous atmospheres and category 3 D, electrical equipment for dust atmospheres).

Marking (see device or technical data sheet)

Ⓔ II 3 G and EEx nA II T4 X "non sparking" acc.to EN50021 and Ⓔ 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.