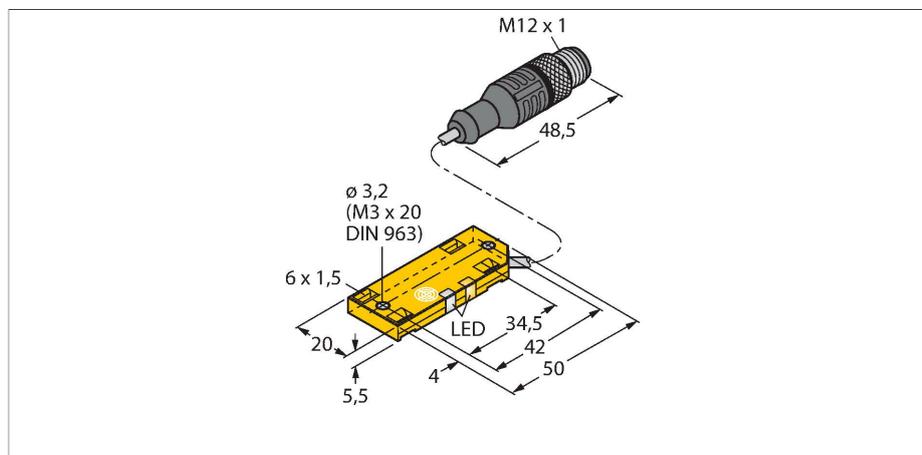


BC5-QF5.5-AP6X2-2-RS4/S250/3G

Capacitive Sensor



Technical data

Type	BC5-QF5.5-AP6X2-2-RS4/S250/3G
ID	2620135
Rated switching distance (flush)	5 mm
Rated switching distance (non-flush)	5 mm
Secured operating distance	$\leq (0.72 \times S_n)$ mm
Hysteresis	1...20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25...+70 °C

For explosion hazardous areas see instruction leaflet

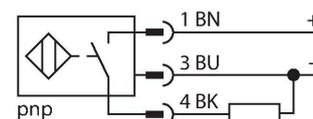
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Switching frequency	0.1 kHz
Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1...2.0 MHz
Isolation test voltage	0.5 kV
Output function	3-wire, NO contact, PNP
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete

Tests/approvals	
Approvals	ATEX
Approval acc. to	ATEX declaration of conformity TURCK Ex-03010H X

Features

- Rectangular, height 5.5 mm
- Large active face, marked for correct installation
- Plastic, PP
- Fixed settings
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 × 1 connector
- ATEX category II 3 G, Ex Zone 2

Wiring diagram

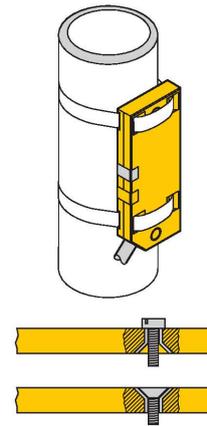


Functional principle

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

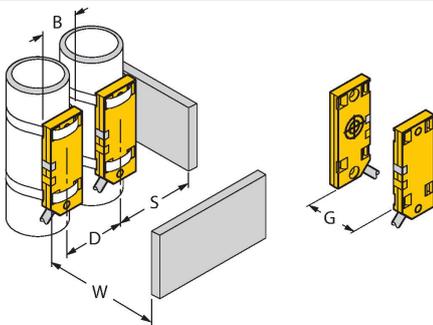
Technical data

Device marking	EX II 3 G Ex nA IIC T4 Gc
Mechanical data	
Design	Rectangular, QF5,5
Dimensions	54 x 20.3 x 5.5 mm
Housing material	Plastic, PP
Active area material	PP
Electrical connection	Connector, M12 × 1
Cable quality	Ø 3 mm, Lif9Y-11Y, PUR, 2 m
Core cross-section	3 x 0.14 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
Power-on indication	LED, Green
Switching state	LED, Yellow
Included in delivery	2 straps, safety clip SC-M12/3GD



Mounting instructions

Product features



Distance D	40 mm
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Distance W	30 mm
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Distance S	30 mm
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Distance G	60 mm
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Diameter active area B	Ø 20 mm
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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.

Instructions for use

Intended use

This device fulfills the directive 2014/34/EC and is suited for use in explosion hazardous areas according to EN 60079-0 and EN 60079-15. 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 (Group II, Category 3 G, electrical equipment for gaseous atmospheres).

Marking (see device or technical data sheet)

 II 3 G Ex nA IIC T4 Gc acc. to EN 60079-0 and EN 60079-15

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 and if necessary, of the regulations applicable to safety-related systems. 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

For devices with M12 connectors please use the supplied safety clip SC-M12/3GD. 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. The device must be protected against any kind of mechanical damage and degrading UV-radiation. On selecting the approval-relevant accessories, always ensure that they are installed conform to the application. The IP protection rating of the connectors is given only in combination with a suitable O-ring. Load voltage and operating voltage of this equipment must be supplied from power supplies with safe isolation (IEC 60 364/UL508), to ensure that the rated voltage of the equipment (24 VDC +20% = 28.8 VDC) is never exceeded by more than 40%.

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.