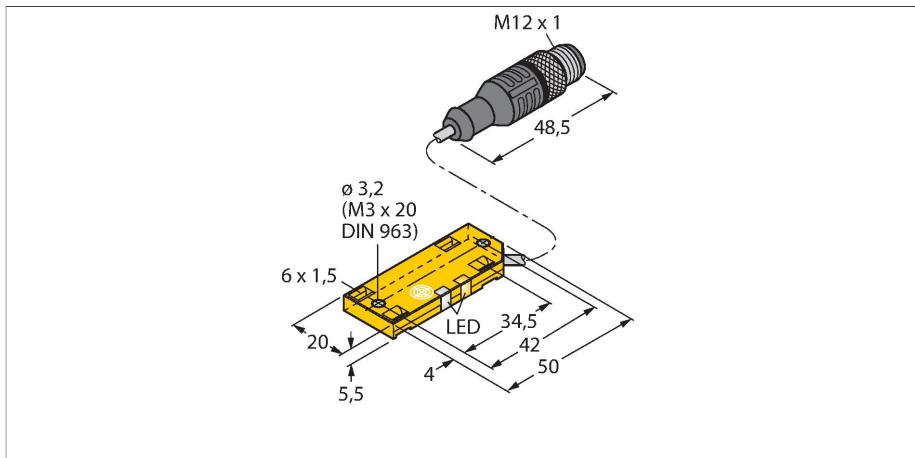


# BCE10-QF5.5-AN6X2-0.3-RS4

## Capacitive Sensor



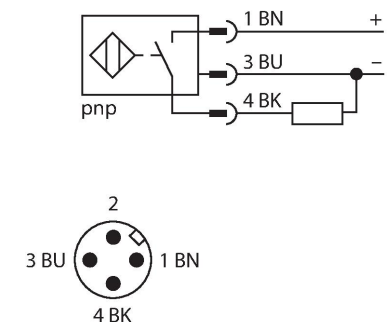
### Technical data

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Type                                   | BCE10-QF5.5-AN6X2-0.3-RS4                                 |
| ID                                     | 100029092                                                 |
| Rated switching distance (flush)       | 10 mm                                                     |
| Rated switching distance (non-flush)   | 10 mm                                                     |
| Secured operating distance             | $\leq (0.72 \times S_n)$ mm                               |
| Hysteresis                             | 1...20 %                                                  |
| Temperature drift                      | Typical 20 %                                              |
| Repeat accuracy                        | $\leq 5$ % of full scale                                  |
| Ambient temperature                    | -10...+60 °C                                              |
| <b>Electrical data</b>                 |                                                           |
| Operating voltage $U_B$                | 10...30 VDC                                               |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                                    |
| DC rated operating current $I_o$       | $\leq 100$ mA                                             |
| No-load current                        | $\leq 15$ mA                                              |
| Residual current                       | $\leq 0.1$ mA                                             |
| Switching frequency                    | 0.05 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, NPN                                   |
| Short-circuit protection               | yes/Cyclic                                                |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                              |
| Wire break/reverse polarity protection | yes/Complete                                              |
| <b>Tests/approvals</b>                 |                                                           |
| Approvals                              | UL                                                        |
| UL registration number                 | E210608                                                   |

### Features

- Rectangular, height 5.5 mm
- Large active face, marked for correct installation
- Plastic, PP
- Fine adjustment via potentiometer
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable with M12 × 1 male connector

### 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.

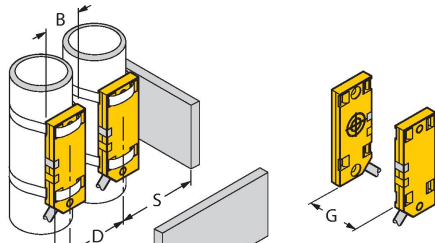
Technical data

| 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 | Cable with connector, M12 × 1              |
| Cable quality         | Ø 3 mm, LifYY-11Y, PUR, 0.3 m              |
| Core cross-section    | 3 x 0.14 mm <sup>2</sup>                   |
| Vibration resistance  | 55 Hz (1 mm)                               |
| Shock resistance      | 30 g (11 ms)                               |
| Protection class      | IP65                                       |
| MTTF                  | 1080 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication   | LED, Green                                 |
| Switching state       | LED, Yellow                                |



Mounting instructions

### Product features



The technical drawing illustrates the QF5,5 sensor in two views. The isometric view on the left shows the sensor (yellow) mounted on a cylindrical object (white). Dimension lines indicate: 'D' for the distance from the mounting surface to the sensor's active area, 'W' for the sensor's width, 'S' for the sensor's depth, and 'B' for the diameter of the active area. The side view on the right shows the sensor's profile with dimension 'G' indicating the distance from the mounting surface to the sensor's base.

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