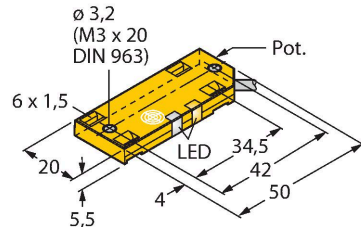


# BC10-QF5.5-AP6X2

## Capacitive Sensor



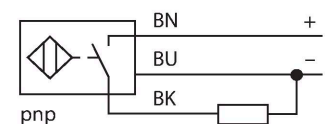
### Technical data

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Type                                   | BC10-QF5.5-AP6X2                                          |
| ID                                     | 2620117                                                   |
| 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 %                                                  |
| Repeat accuracy                        | $\leq 2$ % of full scale                                  |
| Ambient temperature                    | -25...+70 °C                                              |
| <b>Electrical data</b>                 |                                                           |
| Operating voltage $U_B$                | 10...30 VDC                                               |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                                    |
| DC rated operating current $I_e$       | $\leq 200$ mA                                             |
| No-load current                        | $\leq 15$ mA                                              |
| Residual current                       | $\leq 0.1$ 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 $I_e$                  | $\leq 1.8$ V                                              |
| Wire break/reverse polarity protection | yes/Complete                                              |
| <b>Tests/approvals</b>                 |                                                           |
| Approvals                              | UL                                                        |
| UL registration number                 | E210608                                                   |
| <b>Mechanical data</b>                 |                                                           |
| Design                                 | Rectangular, QF5,5                                        |

### Features

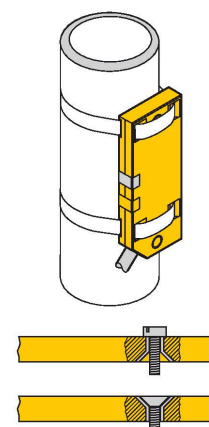
- Rectangular, height 5.5 mm
- Large active face, marked for correct installation
- Plastic, PP
- Fine adjustment via potentiometer
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### 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.

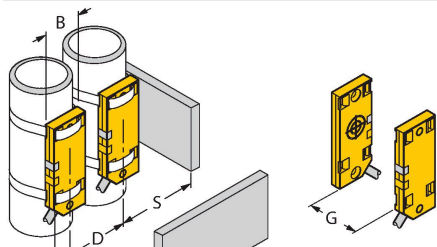


Technical data

|                       |                                            |
|-----------------------|--------------------------------------------|
| Dimensions            | 54 x 20.3 x 5.5 mm                         |
| Housing material      | Plastic, PP                                |
| Active area material  | PP                                         |
| Electrical connection | Cable                                      |
| Cable quality         | Ø 3 mm, Lif9Y-11Y, PUR, 2 m                |
| Core cross-section    | 3 x 0.14 mm²                               |
| 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                                |

Mounting instructions

### Product features



The technical drawing illustrates the sensor's dimensions in two views. The side view shows the sensor mounted on a wall, with dimensions D (distance from wall to sensor), S (sensor thickness), and B (active area diameter). The top-down view shows the sensor's footprint, with dimensions G (sensor width) and B (active area diameter).

|                        |         |
|------------------------|---------|
| 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.