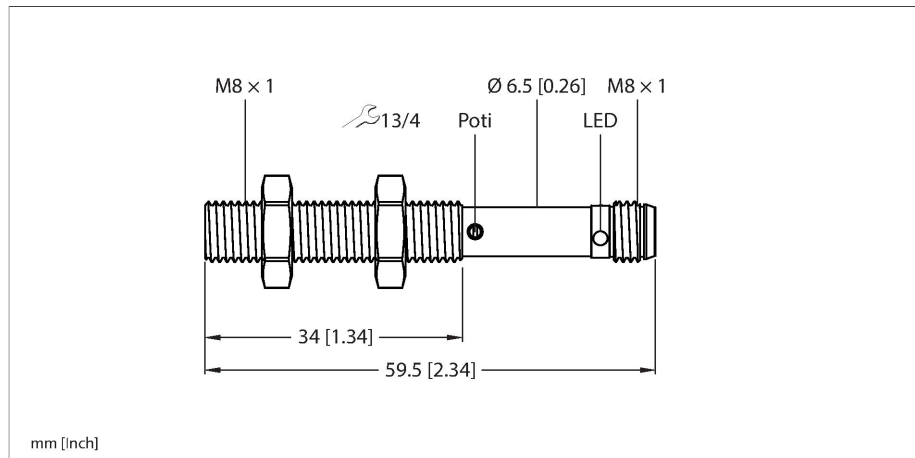


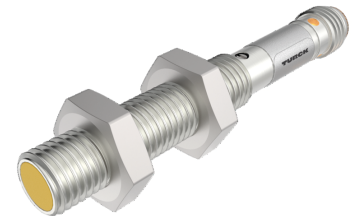
# BC2-EM08-UP8X-V1131

## Capacitive Sensor



### Technical data

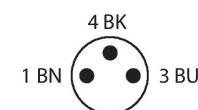
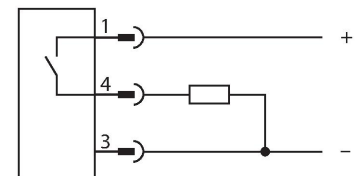
|                                        |                         |
|----------------------------------------|-------------------------|
| Type                                   | BC2-EM08-UP8X-V1131     |
| ID                                     | 100021819               |
| Rated switching distance (flush)       | 2 mm                    |
| Hysteresis                             | 10...20 %               |
| Ambient temperature                    | -25...+70 °C            |
| Medium temperature                     | -25...+70 °C            |
| <b>Electrical data</b>                 |                         |
| Operating voltage $U_B$                | 18...30 VDC             |
| DC rated operating current $I_o$       | ≤ 100 mA                |
| No-load current                        | ≤ 15 mA                 |
| Switching frequency                    | 0.1 kHz                 |
| Isolation test voltage                 | 0.5 kV                  |
| Number of digital outputs              | 1                       |
| Output function                        | NO/NC (NO pre-set), PNP |
| Short-circuit protection               | yes                     |
| Voltage drop at $I_o$                  | ≤ 2.4 V                 |
| Wire break/reverse polarity protection | yes/Complete            |
| Insulation class                       | III                     |
| <b>Tests/approvals</b>                 |                         |
| <b>Mechanical data</b>                 |                         |
| Design                                 | Threaded barrel, M8 x 1 |
| Dimensions                             | 59.5 mm                 |
| Housing material                       | Stainless steel         |
| Active area material                   | PBT, yellow             |
| Electrical connection                  | Connector, M8 x 1       |
| Protection class                       | IP67                    |



### Features

- M8 x 1 threaded barrel
- Stainless steel housing, probe made of PBT
- Fine adjustment via potentiometer
- DC 3-wire, 18...30 VDC
- Adjustable NC/NO contact
- Factory-set NO contact
- 3-pin connector device, M8 x 1

### Wiring diagram



### Functional principle

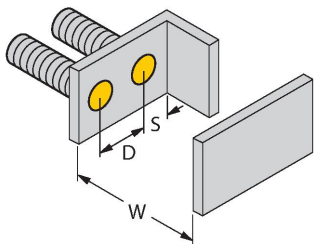
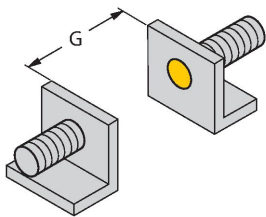
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

Technical data

|                     |                                            |
|---------------------|--------------------------------------------|
| MTTF                | 1080 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication | Green                                      |
| Switching state     | LED, Yellow                                |

Mounting instructions

Product features



|                        |        |
|------------------------|--------|
| Distance D             | 16 mm  |
| Distance W             | 8 mm   |
| Distance S             | 12 mm  |
| Distance G             | 16 mm  |
| Diameter active area B | Ø 8 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.

LED status indicators

| LED                | Meaning                                                                 |
|--------------------|-------------------------------------------------------------------------|
| Yellow             | Operating mode NO: Object detected                                      |
|                    | Operating mode NC: Object not detected                                  |
| Flashes yellow 1 × | Potentiometer counterclockwise:<br>Sensor at minimum switching distance |
|                    | Potentiometer clockwise:<br>Sensor at maximum switching distance        |
| Flashes yellow 3 × | NO/NC switching successful                                              |

For a detailed description of the NO/NC switching, see Quick Start Guide BC2-EM08-Ux8X... (100034228.pdf)

Accessories

| Dimension drawing | Type         | ID      |                                                                                                                                                      |
|-------------------|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PKG3M-2/TEL  | 6625058 | Connection cable, M8 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval                               |
|                   | PKW3M-2/TEL  | 6625064 | Connection cable, M8 female connector, angled, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval                                 |
|                   | PKGV3M-2/TEL | 6625385 | Connection cable, M8 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, black; cULus approval |
|                   | PKWV3M-2/TEL | 6625391 | Connection cable, M8 female connector, angled, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, black; cULus approval   |
|                   | PKG3M-2/TXL  | 6625550 | Connection cable, M8 female connector, straight, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval                               |

| Dimension drawing | Type                | ID      |                                                                                                                                                              |
|-------------------|---------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PKW3M-2/TXL         | 6625556 | Connection cable, M8 female connector, angled, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval                                         |
|                   | PKGV3M-2/TXL        | 6627803 | Connection cable, M8 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PUR, black; cULus approval         |
|                   | PKWV3M-2/TXL        | 6628798 |                                                                                                                                                              |
|                   | PKG4M-2-RSC4.4T/TXL | 6627063 | Extension cable, M8 female connector, straight, 4-pin to M12 male connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval |