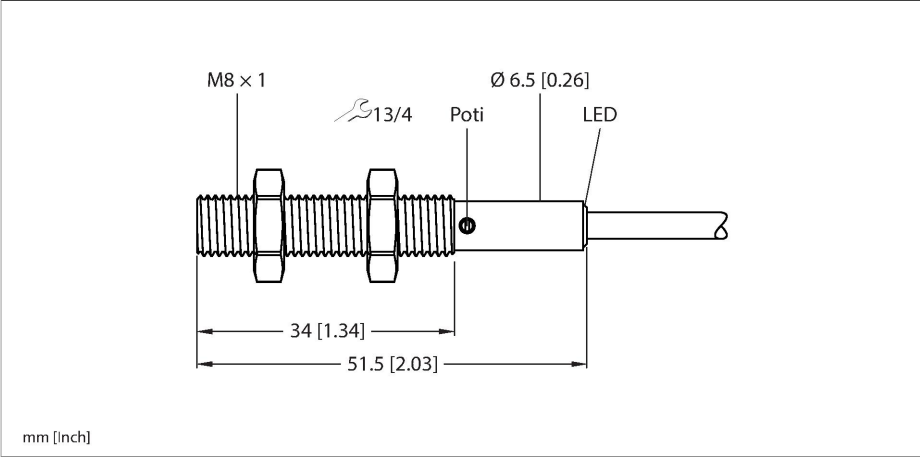


# BC2-EM08-UP8X

## Capacitive Sensor



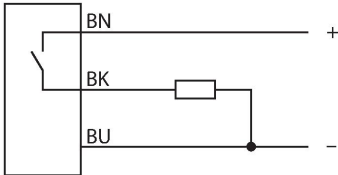
### Technical data

|                                        |                                 |
|----------------------------------------|---------------------------------|
| Type                                   | BC2-EM08-UP8X                   |
| ID                                     | 100021821                       |
| Rated switching distance (flush)       | 2 mm                            |
| Hysteresis                             | 10...20 %                       |
| Ambient temperature                    | -25...+70 °C                    |
| Medium temperature                     | -25...+70 °C                    |
| Electrical data                        |                                 |
| 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                        | 3-wire, 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                             |
| Tests/approvals                        |                                 |
| Mechanical data                        |                                 |
| Design                                 | Threaded barrel, M8 x 1         |
| Dimensions                             | 51.5 mm                         |
| Housing material                       | Stainless steel                 |
| Active area material                   | PBT, yellow                     |
| Electrical connection                  | Cable                           |
| Cable quality                          | Ø 3.4 mm, PUR, 2 m              |
| Core cross-section                     | 3 x 0.14 mm²                    |

### 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 cable connection, open strands

### Wiring diagram



### Functional principle

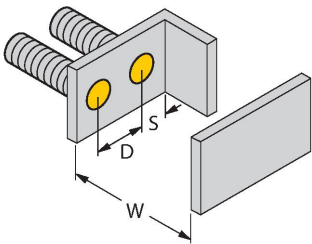
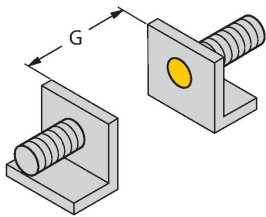
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

Technical data

|                     |                                            |
|---------------------|--------------------------------------------|
| Protection class    | IP67                                       |
| 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:        |
|                    | Sensor at minimum switching distance   |
|                    | Potentiometer clockwise:               |
| Flashes yellow 3 × | Sensor at maximum switching distance   |
|                    | NO/NC switching successful             |

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