

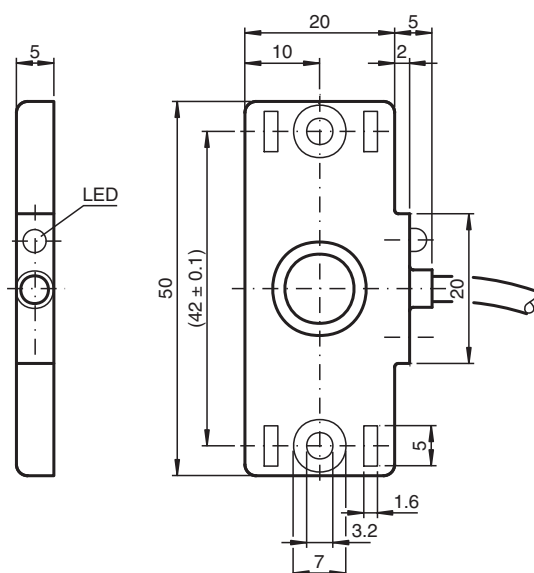
## Capacitive sensor

### CBN5-F46-E0-Y70121257

- 5 mm non-flush
- 3-wire DC with additional wire for teach-in
- Flat housing
- Mounting slots for cable ties
- Thru-holes for screw mounting



## Dimensions



## Technical Data

### General specifications

|                            |       |                    |
|----------------------------|-------|--------------------|
| Switching function         |       | Normally open (NO) |
| Output type                |       | NPN                |
| Rated operating distance   | $s_n$ | 5 mm               |
| Installation               |       | non-flush          |
| Output polarity            |       | DC                 |
| Assured operating distance | $s_a$ | 0 ... 3.5 mm       |
| Output type                |       | 3-wire             |

### Nominal ratings

|                         |  |               |
|-------------------------|--|---------------|
| Installation conditions |  |               |
| B                       |  | 0 mm          |
| C                       |  | 10 mm         |
| F                       |  | 20 mm / 50 mm |

Release date: 2024-12-10 Date of issue: 2024-12-11 Filename: 70121257\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**PEPPERL+FUCHS**

## Technical Data

|                                                        |       |                            |
|--------------------------------------------------------|-------|----------------------------|
| Operating voltage                                      | $U_B$ | 10 ... 30 V DC             |
| Switching frequency                                    | $f$   | 0 ... 50 Hz                |
| Hysteresis                                             | $H$   | 5 ... 15 % typ. 10 %       |
| Reverse polarity protection                            |       | reverse polarity protected |
| Short-circuit protection                               |       | pulsing                    |
| Voltage drop                                           | $U_d$ | $\leq 2$ V                 |
| Operating current                                      | $I_L$ | 0 ... 100 mA               |
| Lowest operating current                               | $I_m$ | 0 mA                       |
| Off-state current                                      | $I_r$ | 0 ... 0.5 mA typ. 0.04 mA  |
| Off-state current $T_U = 40$ °C, switching element off |       | $\leq 100$ $\mu$ A         |
| No-load supply current                                 | $I_0$ | $\leq 15$ mA               |
| Time delay before availability                         | $t_v$ | $\leq 80$ ms               |
| Switching state indicator                              |       | LED, yellow                |

### Compliance with standards and directives

|                     |  |                  |
|---------------------|--|------------------|
| Standard conformity |  |                  |
| Standards           |  | EN IEC 60947-5-2 |

### Approvals and certificates

|              |  |                                                                    |
|--------------|--|--------------------------------------------------------------------|
| UL approval  |  | cULus Listed, General Purpose                                      |
| CCC approval |  | CCC approval / marking not required for products rated $\leq 36$ V |

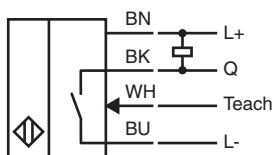
### Ambient conditions

|                     |  |                                |
|---------------------|--|--------------------------------|
| Ambient temperature |  | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature |  | -40 ... 85 °C (-40 ... 185 °F) |

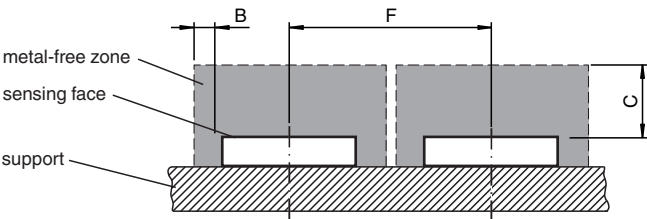
### Mechanical specifications

|                      |     |                       |
|----------------------|-----|-----------------------|
| Connection type      |     | cable                 |
| Housing material     |     | PBT                   |
| Sensing face         |     | PBT                   |
| Degree of protection |     | IP67                  |
| Cable                |     |                       |
| Wire end ferrules    |     | yes                   |
| Cable diameter       |     | 3.5 mm $\pm$ 0.2 mm   |
| Bending radius       |     | > 10 x cable diameter |
| Material             |     | PVC                   |
| Color                |     | grey                  |
| Number of cores      |     | 4                     |
| Core cross section   |     | 0.14 mm <sup>2</sup>  |
| Length               | $L$ | 2 m                   |
| Mass                 |     | 44 g                  |
| Dimensions           |     |                       |
| Height               |     | 5 mm                  |
| Width                |     | 50 mm                 |
| Length               |     | 25 mm                 |

## Connection



Installation Conditions



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## Teach-In

### Teach-In Instructions

1. For Teach-In connect pin WH to pin L+ with target at desired distance for 2.5 s ... 5 s.  
->LED is in green light mode.
2. Release connection between first (2.5 s) and second flash (5 s).  
-> LED will flash (5 times in quick succession) if process is successful.

### Note

Holding the connection 5 s ... 7.5 s resets the setting. If during Teach-In on product target is out of range (> 6 mm), LED (yellow light) will blink slowly 3 times. The taught sensing distance is stored in the sensor. The Teach-in value is still available when the power supply is turned off. The endurance of this non-volatile memory is rated for more than 100,000 teach-in repetitions.