



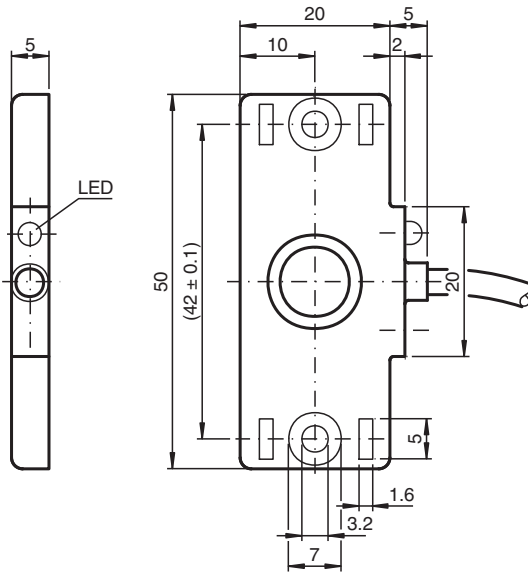
# Capacitive sensor

## CBN5-F46-E2-Y70121258

- 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		PNP
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: 2022-06-20 Date of issue: 2022-06-20 Filename: 70121258\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## 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 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

### Approvals and certificates

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

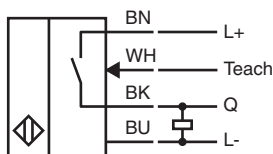
### Ambient conditions

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

### Mechanical specifications

Connection type		cable PVC , 2 m
Core cross section		0.14 mm <sup>2</sup>
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Cable		
Cable diameter		3.5 mm $\pm$ 0.2 mm
Bending radius		> 10 x cable diameter
Mass		44 g

## 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.