

# Capacitive sensor

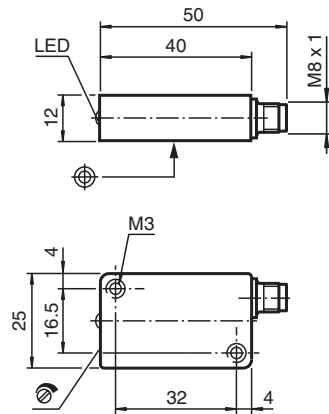
## CBN15-F64-A0-V31



- 15 mm non-flush
- Flat housing
- Switching distance adjustable between 2 mm ... 15 mm



### Dimensions



### Technical Data

| General specifications     |       |                   |
|----------------------------|-------|-------------------|
| Switching function         |       | complementary     |
| Output type                |       | NPN               |
| Rated operating distance   | $s_n$ | 15 mm             |
| Installation               |       | non-flush         |
| Output polarity            |       | DC                |
| Assured operating distance | $s_a$ | 0 ... 10.8 mm     |
| Actual operating distance  | $s_r$ | 13.5 ... 16.5 mm  |
| Output type                |       | 4-wire            |
| Nominal ratings            |       |                   |
| Installation conditions    |       |                   |
| B                          |       | 15 mm             |
| C                          |       | 30 mm             |
| F                          |       | 45 mm / 60 mm     |
| Operating voltage          | $U_B$ | 10 ... 30 V DC    |
| Switching frequency        | f     | 0 ... 100 Hz      |
| Hysteresis                 | H     | 1 ... 10 typ. 5 % |

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

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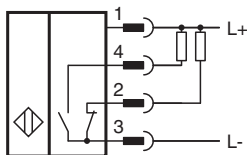
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 PEPPERL+FUCHS

## Technical Data

|   |       |   |
|---|-------|---|
| Reverse polarity protection                     |       | reverse polarity protected  |
| Short-circuit protection                        |       | pulsing<br>$I_{\max} \leq 500 \text{ mA}$   |
| Voltage drop                                    | $U_d$ | $\leq 2 \text{ V}$  |
| Repeat accuracy                                 | R     | $\leq 1.5 \text{ mm}$   |
| Operating current                               | $I_L$ | 0 ... 100 mA  |
| Off-state current                               | $I_r$ | 0 ... 50 $\mu\text{A}$ typ. 5 $\mu\text{A}$   |
| No-load supply current                          | $I_0$ | $\leq 15 \text{ mA}$  |
| Switching state indicator                       |       | LED, yellow   |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 941 a   |
| Mission Time (T <sub>M</sub> )                  |       | 20 a  |
| Diagnostic Coverage (DC)                        |       | 0 %   |
| <b>Indicators/operating means</b>               |       |   |
| Potentiometer                                   |       | sensitivity adjustment  |
| <b>Compliance with standards and directives</b> |       |   |
| Standard conformity                             |       |   |
| Standards                                       |       | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <b>Approvals and certificates</b>               |       |   |
| UL approval                                     |       | cULus Listed, General Purpose   |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36 \text{ V}$                  |
| <b>Ambient conditions</b>                       |       |   |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)  |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)  |
| Pollution degree                                |       | 3   |
| <b>Mechanical specifications</b>                |       |   |
| Connection type                                 |       | Connector plug M8 x 1 , 4-pin   |
| Housing material                                |       | PBT   |
| Sensing face                                    |       | PBT   |
| Degree of protection                            |       | IP67  |
| Tightening torque, housing screws               |       | $\leq 2 \text{ Nm}$   |
| Note  |       | Screw-in depth of housing screws, max. 8 mm   |

## Connection



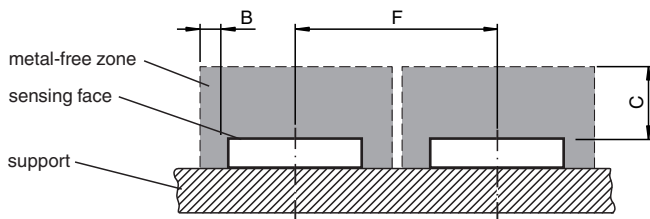
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

## Installation Conditions



## Accessories

|   |               |                |
|---|---------------|----------------|
|  | <b>MH-F64</b> | Mounting plate |
|---|---------------|----------------|

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