



## Model Number

**NBB20-L2-Z5-V1**

## Features

- Sensor head bidirectional and rotatable
- 20 mm flush
- Quick mounting bracket

## Accessories

### V1-G

Female connector, M12, 4-pin, field attachable

### V1-W

Female connector, M12, 4-pin, field attachable

### V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

### V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

### MHW 01

Modular mounting bracket

### MH 02-L

Mounting aid

## Technical Data

### General specifications

|                              |       |               |
|------------------------------|-------|---------------|
| Switching element function   |       | NC contact    |
| Rated operating distance     | $s_n$ | 20 mm         |
| Installation                 |       | flush         |
| Assured operating distance   | $s_a$ | 0 ... 16.2 mm |
| Reduction factor $r_{Al}$    |       | 0.33          |
| Reduction factor $r_{Cu}$    |       | 0.31          |
| Reduction factor $r_{304}$   |       | 0.74          |
| Reduction factor $r_{Brass}$ |       | 0.41          |

### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 3.8 ... 30 V DC            |
| Switching frequency         | $f$   | 0 ... 30 Hz                |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | yes                        |
| Voltage drop                | $U_d$ | $\leq 3.8$ V               |
| Operating current           | $I_L$ | 2 ... 100 mA               |
| Off-state current           | $I_r$ | 0 ... 0.5 mA               |
| Switching state indication  |       | LED, yellow                |

### Ambient conditions

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

### Mechanical specifications

|                   |                          |
|-------------------|--------------------------|
| Connection type   | Connector M12 x 1, 4-pin |
| Housing material  | PA                       |
| Sensing face      | PA                       |
| Protection degree | IP69K                    |
| Mass              | 130 g                    |

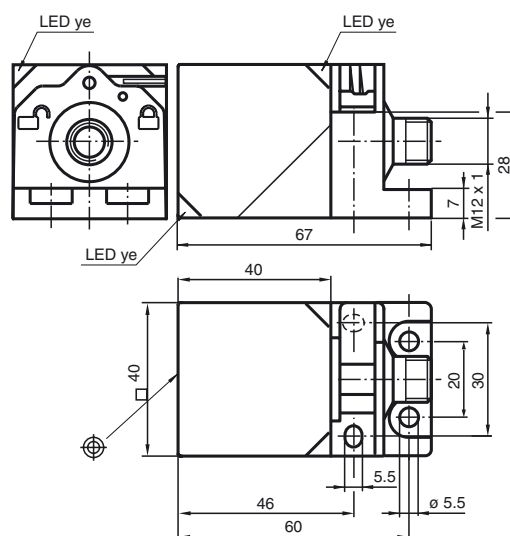
### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| Standards           | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

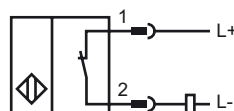
### Approvals and certificates

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

## Dimensions

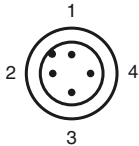


## Electrical Connection





Pinout



Wire colors in accordance with EN 60947-5-2

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