



## Model Number

**NBB8-18GM30-E2-V1**

## Features

- 8 mm flush
- Increased operating distance
- Extended temperature range

## Accessories

### V1-G

Female connector, M12, 4-pin, field attachable

### BF 18-F

Mounting flange with dead stop, 18 mm

### 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

### EXG-18

Quick mounting bracket with dead stop

## Technical Data

### General specifications

|                            |       |   |
|----------------------------|-------|---|
| Switching function         |       | Normally open (NO)  |
| Output type                |       | PNP   |
| Rated operating distance   | $s_n$ | 8 mm  |
| Installation               |       | flush   |
| Output polarity            |       | DC  |
| Assured operating distance | $s_a$ | 0 ... 6.48 mm ( -25 ... 70 °C ( -13 ... 158 °F ) )<br>0 ... 6.08 mm ( -40 ... -25 °C ( -40 ... -13 °F ) ) |
| Reduction factor $r_{Al}$  |       | 0.45  |
| Reduction factor $r_{Cu}$  |       | 0.4   |
| Reduction factor $r_{304}$ |       | 0.7   |
| Output type                |       | 3-wire  |

### Nominal ratings

|                                |       |  |
|--------------------------------|-------|--|
| Operating voltage              | $U_B$ | 10 ... 30 V                            |
| Switching frequency            | $f$   | 0 ... 500 Hz                           |
| Hysteresis                     | $H$   | typ. 5%                                |
| Reverse polarity protection    |       | reverse polarity protected             |
| Short-circuit protection       |       | pulsing                                |
| Voltage drop                   | $U_d$ | $\leq 3$ V                             |
| Operating current              | $I_L$ | 0 ... 100 mA                           |
| Off-state current              | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C |
| No-load supply current         | $I_0$ | $\leq 15$ mA                           |
| Time delay before availability | $t_v$ | $\leq 20$ ms                           |
| Switching state indicator      |       | LED, yellow                            |

### Functional safety related parameters

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 2090 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -40 ... 70 °C (-40 ... 158 °F) |
|---------------------|--------------------------------|

### Mechanical specifications

|                      |                          |
|----------------------|--------------------------|
| Connection type      | Connector M12 x 1, 4-pin |
| Housing material     | brass, nickel-plated     |
| Sensing face         | PBT                      |
| Degree of protection | IP67                     |

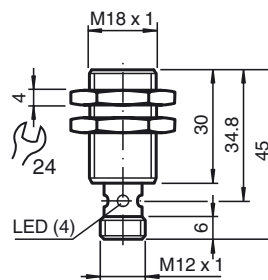
### Compliance with standards and directives

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

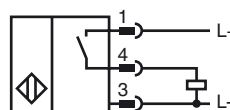
### Approvals and certificates

|              |  |
|--------------|--|
| 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) |