



## Model Number

**NBB10-30GM50-E2-C3-V1**

## Features

- 10 mm flush
- Weld Immune
- Ceramic coated sensing face

## Accessories

### BF 30

Mounting flange, 30 mm

### EXG-30

Quick mounting bracket with dead stop

### 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

### V1-G-OR2M-POC

Female cordset, M12, 4-pin, TPE cable, welding-bead resistant

### V1-W-OR2M-POC

Female cordset, M12, 4-pin, TPE cable, welding-bead resistant

## Technical Data

### General specifications

|                            |                    |
|----------------------------|--------------------|
| Switching function         | Normally open (NO) |
| Output type                | PNP                |
| Rated operating distance   | $s_n$ 10 mm        |
| Installation               | flush              |
| Output polarity            | DC                 |
| Assured operating distance | $s_a$ 0 ... 8.1 mm |
| Reduction factor $r_{AI}$  | 0.3                |
| Reduction factor $r_{CU}$  | 0.2                |
| Reduction factor $r_{304}$ | 0.6                |
| Output type                | 3-wire             |

### Nominal ratings

|                             |                                              |
|-----------------------------|----------------------------------------------|
| Operating voltage           | $U_B$ 10 ... 30 V DC                         |
| Switching frequency         | $f$ 0 ... 10 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 ... 200 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                           |
| Constant magnetic field     | $B$ 150 mT                                   |
| Alternating magnetic field  | $B$ 150 mT                                   |
| Operating voltage indicator | LED, green                                   |
| Switching state indicator   | LED, yellow                                  |

### Functional safety related parameters

|                          |        |
|--------------------------|--------|
| MTTF <sub>d</sub>        | 1835 a |
| Mission Time ( $T_M$ )   | 20 a   |
| Diagnostic Coverage (DC) | 0 %    |

### Ambient conditions

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

### Mechanical specifications

|                      |                               |
|----------------------|-------------------------------|
| Connection type      | Connector plug M12 x 1, 4-pin |
| Housing material     | Brass, PTFE coated            |
| Sensing face         | Ceramic coated                |
| Degree of protection | IP67                          |

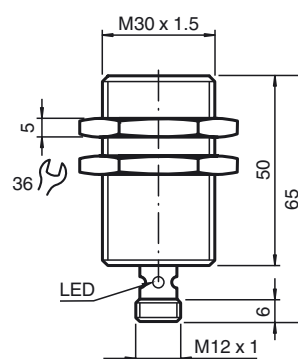
### Compliance with standards and directives

|                     |                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------|
| 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 |

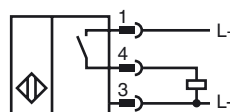
### Approvals and certificates

|              |                                                                    |
|--------------|--------------------------------------------------------------------|
| 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 |

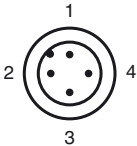
## Dimensions



## Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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