



### Model Number

**NBB2-12GM40-E0**

### Features

- 2 mm flush

### Accessories

#### EXG-12

Quick mounting bracket with dead stop

#### BF 12

Mounting flange, 12 mm

## Technical Data

### General specifications

|                            |       |               |    |
|----------------------------|-------|---------------|----|
| Switching element function |       | NPN           | NO |
| Rated operating distance   | $s_n$ | 2 mm          |    |
| Installation               |       | flush         |    |
| Output polarity            |       | DC            |    |
| Assured operating distance | $s_a$ | 0 ... 1.62 mm |    |
| Reduction factor $r_{Al}$  |       | 0.3           |    |
| Reduction factor $r_{Cu}$  |       | 0.2           |    |
| Reduction factor $r_{304}$ |       | 0.7           |    |

### Nominal ratings

|                             |       |                                        |
|-----------------------------|-------|----------------------------------------|
| Operating voltage           | $U_B$ | 10 ... 30 V                            |
| Switching frequency         | $f$   | 0 ... 1000 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                           |
| Switching state indicator   |       | all direction LED, yellow              |

### Functional safety related parameters

|                          |        |
|--------------------------|--------|
| MTTF <sub>d</sub>        | 3220 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      | cable PVC, 2 m       |
| Core cross-section   | 0.14 mm <sup>2</sup> |
| Housing material     | brass, nickel-plated |
| Sensing face         | PBT                  |
| Degree of protection | IP67                 |

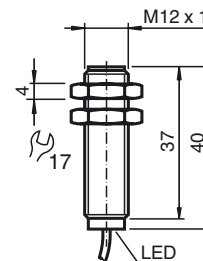
### Compliance with standards and directives

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

