



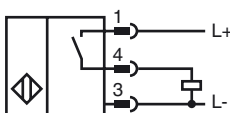
**Model Number**

NEB3-8GM45-E2-V1

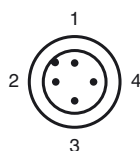
**Features**

- Increased operating distance
- 3 mm virtually flush

**Connection**



**Pinout**



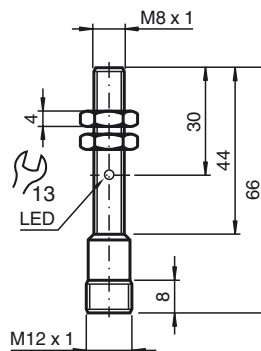
Wire colors in accordance with EN 60947-5-2

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

**Accessories**

- BF 8**  
Mounting flange, 8 mm
- V1-G**  
4-pin, M12 female field-attachable connector
- V1-W**  
4-pin, M12 female field-attachable connector
- V1-G-2M-PUR**  
Cable socket, M12, 4-pin, PUR cable
- V1-W-2M-PUR**  
Cable socket, M12, 4-pin, PUR cable

**Dimensions**



**Technical Data**

**General specifications**

|                              |       |   |
|------------------------------|-------|---|
| Switching element function   | PNP   | NO  |
| Rated operating distance     | $s_n$ | 3 mm  |
| Installation                 |       | virtually flush   |
| Output polarity              |       | DC  |
| Assured operating distance   | $s_a$ | 0 ... 2.4 mm  |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>9 mm x 9 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.5   |
| Reduction factor $r_{Cu}$    |       | 0.3   |
| Reduction factor $r_{304}$   |       | 0.8   |
| Reduction factor $r_{Brass}$ |       | 0.5   |

**Nominal ratings**

|                                   |       |  |
|-----------------------------------|-------|--|
| <b>Installation conditions</b>    |       |  |
| A                                 |       | in steel 1.0037 (St37): 1 mm           |
| B                                 |       | 6 mm                                   |
| C                                 |       | 9 mm                                   |
| F                                 |       | 16 mm                                  |
| Operating voltage                 | $U_B$ | 10 ... 30 V DC                         |
| Switching frequency               | f     | 0 ... 1500 Hz                          |
| Hysteresis                        | H     | 0.03 ... 0.3 mm                        |
| Reverse polarity protection       |       | yes                                    |
| Short-circuit protection          |       | pulsing                                |
| Overload resistance               |       | yes                                    |
| Wire breakage protection          |       | yes                                    |
| Surge suppression                 |       | yes                                    |
| Ripple                            |       | 10 %                                   |
| Voltage drop                      | $U_d$ | $\leq 2$ V                             |
| Repeat accuracy                   |       | 0.15 mm                                |
| Operating current                 | $I_L$ | 0 ... 200 mA, above 50°C $\leq 150$ mA |
| Off-state current                 | $I_r$ | $\leq 10$ $\mu$ A                      |
| No-load supply current            | $I_0$ | $\leq 15$ mA                           |
| Time delay before availability    | $t_v$ | $\leq 50$ ms                           |
| Indication of the switching state |       | LED, yellow                            |

**Functional safety related parameters**

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 1740 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

**Ambient conditions**

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 85 °C (-13 ... 185 °F) |
| Storage temperature | -40 ... 85 °C (-40 ... 185 °F) |

**Mechanical specifications**

|                   |                                 |
|-------------------|---------------------------------|
| Connection type   | Device connector M12 x 1, 4-pin |
| Housing material  | brass, nickel-plated            |
| Sensing face      | PBT                             |
| Protection degree | IP67                            |
| Mass              | 20 g                            |

**Compliance with standards and directives**

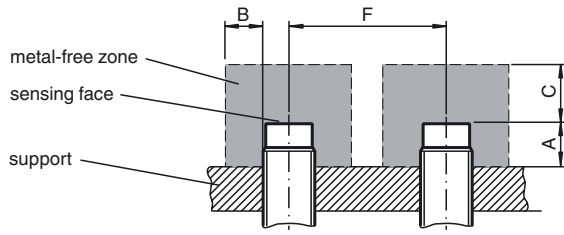
|                            |   |
|----------------------------|---|
| <b>Standard conformity</b> |   |
| Standards                  | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

**Approvals and certificates**

|              |  |
|--------------|--|
| UL approval  | cULus Listed, General Purpose, Class 2 Power Source  |
| CCC approval | Products with a maximum operating voltage of $\leq 36$ V do not bear a CCC marking because they do not require approval. |

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Installation conditions



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