



### Model Number

**NEN6-8GM45-E3-V3**

### Features

- Increased operating distance
- 6 mm non-flush

### Accessories

#### BF 8

Mounting flange, 8 mm

#### V3-GM

Female connector, M8, 3-pin, field attachable

#### V3-WM

Female connector, M8, 3-pin, field attachable

#### V3-WM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

## Technical Data

### General specifications

|                              |       |   |    |
|------------------------------|-------|---|----|
| Switching element function   |       | PNP   | NC |
| Rated operating distance     | $s_n$ | 6 mm  |    |
| Installation                 |       | non-flush   |    |
| Output polarity              |       | DC  |    |
| Assured operating distance   | $s_a$ | 0 ... 4.86 mm                                       |    |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2) |    |
|                              |       | 18 mm x 18 mm x 1 mm                                |    |
| Reduction factor $r_{Al}$    |       | 0.5   |    |
| Reduction factor $r_{Cu}$    |       | 0.45  |    |
| Reduction factor $r_{304}$   |       | 0.8   |    |
| Reduction factor $r_{Brass}$ |       | 0.55  |    |

### Nominal ratings

|                                |       |  |  |
|--------------------------------|-------|--|--|
| Installation conditions        |       |  |  |
| A                              |       | in steel 1.0037 (St37): 8 mm           |  |
| B                              |       | 12 mm                                  |  |
| C                              |       | 18 mm                                  |  |
| F                              |       | 28 mm                                  |  |
| Operating voltage              | $U_B$ | 10 ... 30 V DC                         |  |
| Switching frequency            | $f$   | 0 ... 750 Hz                           |  |
| Hysteresis                     | H     | 0.06 ... 0.6 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                | R     | 0.3 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                           |  |
| Switching state indicator      |       | 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                     | Connector M8 x 1, 3-pin |
| Housing material                    | brass, nickel-plated    |
| Sensing face                        | PBT                     |
| Degree of protection                | IP67                    |
| Mass                                | 20 g                    |
| Tightening torque, fastening screws | max. 2 Nm               |

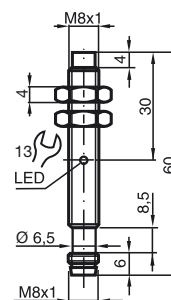
### Compliance with standards and directives

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

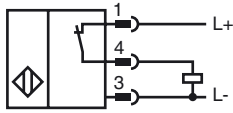
### Approvals and certificates

|                |  |
|----------------|--|
| EAC conformity | TR CU 020/2011   |
| UL approval    | cULus Listed, General Purpose, Class 2 Power Source                |
| CCC approval   | CCC approval / marking not required for products rated $\leq 36$ V |

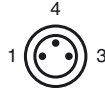
## Dimensions



**Electrical Connection**



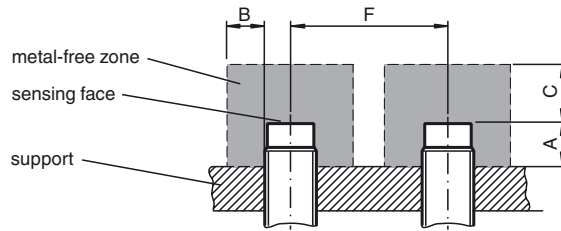
**Pinout**



Wire colors in accordance with EN 60947-5-2

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

**Installation Conditions**



Release date: 2016-06-17 09:59 Date of issue: 2016-06-17 231703\_eng.xml