

# Inductive sensor

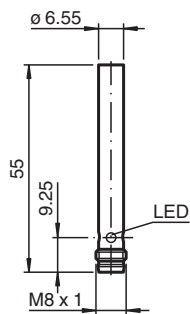
## NEB3-6,5M45-E2-V3



- Increased operating distance
- 3 mm quasi flush
- Extended temperature range  
-40 ... +85 °C



### Dimensions



### Technical Data

#### General specifications

|                              |       |                                                                           |
|------------------------------|-------|---------------------------------------------------------------------------|
| Switching function           |       | Normally open (NO)                                                        |
| Output type                  |       | PNP                                                                       |
| Rated operating distance     | $s_n$ | 3 mm                                                                      |
| Installation                 |       | quasi flush                                                               |
| Output polarity              |       | DC                                                                        |
| Assured operating distance   | $s_a$ | 0 ... 2.43 mm                                                             |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>9 mm x 9 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.4                                                                       |
| Reduction factor $r_{Cu}$    |       | 0.3                                                                       |
| Reduction factor $r_{304}$   |       | 0.7                                                                       |
| Reduction factor $r_{Brass}$ |       | 0.45                                                                      |
| Output type                  |       | 3-wire                                                                    |

#### Nominal ratings

|                         |       |                              |
|-------------------------|-------|------------------------------|
| Installation conditions |       |                              |
| A                       |       | in steel 1.0037 (St37): 1 mm |
| B                       |       | 6 mm                         |
| C                       |       | 9 mm                         |
| F                       |       | 16 mm                        |
| Operating voltage       | $U_B$ | 5 ... 30 V                   |
| Switching frequency     | f     | 0 ... 3500 Hz                |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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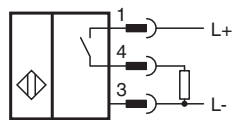
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**PEPPERL+FUCHS**

Technical Data

|                                          |                |                                                              |
|------------------------------------------|----------------|--------------------------------------------------------------|
| Hysteresis                               | H              | typ. 5%                                                      |
| Reverse polarity protection              |                | reverse polarity protected                                   |
| Short-circuit protection                 |                | pulsing                                                      |
| Voltage drop                             | U <sub>d</sub> | ≤ 1.5 V                                                      |
| Operating current                        | I <sub>L</sub> | 0 ... 100 mA                                                 |
| Off-state current                        | I <sub>r</sub> | 0 ... 0.2 mA                                                 |
| No-load supply current                   | I <sub>0</sub> | ≤ 10 mA                                                      |
| Time delay before availability           | t <sub>v</sub> | ≤ 100 ms                                                     |
| Switching state indicator                |                | Multihole-LED, yellow                                        |
| Functional safety related parameters     |                |                                                              |
| MTTF <sub>d</sub>                        |                | 960 a                                                        |
| Mission Time (T <sub>M</sub> )           |                | 20 a                                                         |
| Diagnostic Coverage (DC)                 |                | 0 %                                                          |
| Compliance with standards and directives |                |                                                              |
| Standard conformity                      |                |                                                              |
| Standards                                |                | EN IEC 60947-5-2                                             |
| Approvals and certificates               |                |                                                              |
| UL approval                              |                | cULus Listed, General Purpose                                |
| CCC approval                             |                | CCC approval / marking not required for products rated ≤36 V |
| Ambient conditions                       |                |                                                              |
| Ambient temperature                      |                | -40 ... 70 °C (-40 ... 158 °F)                               |
| Storage temperature                      |                | -40 ... 85 °C (-40 ... 185 °F)                               |
| Mechanical specifications                |                |                                                              |
| Connection type                          |                | Connector plug M8 x 1 , 3-pin                                |
| Housing material                         |                | brass, nickel-plated                                         |
| Sensing face                             |                | LCP                                                          |
| Degree of protection                     |                | IP65 / IP66 / IP67                                           |
| Mass                                     |                | 8 g                                                          |
| Dimensions                               |                |                                                              |
| Length                                   |                | 55 mm                                                        |
| Diameter                                 |                | 6.5 mm                                                       |

Connection



Connection Assignment



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## Connection Assignment

Wire colors in accordance with EN 60947-5-2

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

## Installation

