

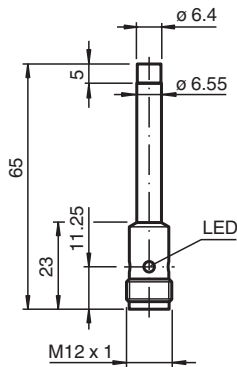


## Inductive sensor NEN6-6,5M40-E1-V1

- Increased operating distance
- 6 mm non-flush
- Extended temperature range  
-40 ... +85 °C



### Dimensions



### Technical Data

| General specifications              |                |                                                                             |
|-------------------------------------|----------------|-----------------------------------------------------------------------------|
| Switching function                  |                | Normally closed (NC)                                                        |
| Output type                         |                | NPN                                                                         |
| Rated operating distance            | s <sub>n</sub> | 6 mm                                                                        |
| Installation                        |                | non-flush                                                                   |
| Output polarity                     |                | DC                                                                          |
| Assured operating distance          | s <sub>a</sub> | 0 ... 4.86 mm                                                               |
| Actuating element                   |                | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>18 mm x 18 mm x 1 mm |
| Reduction factor r <sub>Al</sub>    |                | 0.55                                                                        |
| Reduction factor r <sub>Cu</sub>    |                | 0.5                                                                         |
| Reduction factor r <sub>304</sub>   |                | 0.75                                                                        |
| Reduction factor r <sub>Brass</sub> |                | 0.55                                                                        |
| Output type                         |                | 3-wire                                                                      |
| Nominal ratings                     |                |                                                                             |
| Operating voltage                   | U <sub>B</sub> | 5 ... 30 V                                                                  |
| Switching frequency                 | f              | 0 ... 1500 Hz                                                               |
| Hysteresis                          | H              | typ. 5%                                                                     |
| Reverse polarity protection         |                | reverse polarity protected                                                  |
| Short-circuit protection            |                | pulsing                                                                     |

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

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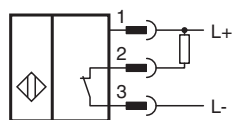
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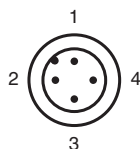
Technical Data

|                                                 |       |                                                                            |
|-------------------------------------------------|-------|----------------------------------------------------------------------------|
| Voltage drop                                    | $U_d$ | $\leq 1.5 \text{ V}$                                                       |
| Operating current                               | $I_L$ | 0 ... 100 mA                                                               |
| Off-state current                               | $I_r$ | 0 ... 0.2 mA                                                               |
| No-load supply current                          | $I_0$ | $\leq 10 \text{ mA}$                                                       |
| Time delay before availability                  | $t_v$ | $\leq 100 \text{ ms}$                                                      |
| Switching state indicator                       |       | Multihole-LED, yellow                                                      |
| <b>Functional safety related parameters</b>     |       |                                                                            |
| MTTF <sub>d</sub>                               |       | 960 a                                                                      |
| Mission Time (T <sub>M</sub> )                  |       | 20 a                                                                       |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                        |
| <b>Compliance with standards and directives</b> |       |                                                                            |
| Standard conformity                             |       |                                                                            |
| Standards                                       |       | EN IEC 60947-5-2                                                           |
| <b>Approvals and certificates</b>               |       |                                                                            |
| UL approval                                     |       | cULus Listed, General Purpose                                              |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36 \text{ V}$ |
| <b>Ambient conditions</b>                       |       |                                                                            |
| Ambient temperature                             |       | -25 ... 85 °C (-13 ... 185 °F)                                             |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)                                             |
| <b>Mechanical specifications</b>                |       |                                                                            |
| Connection type                                 |       | Connector plug M12 x 1 , 4-pin                                             |
| Housing material                                |       | brass, nickel-plated                                                       |
| Sensing face                                    |       | LCP                                                                        |
| Degree of protection                            |       | IP65 / IP66 / IP67                                                         |
| Mass                                            |       | 10 g                                                                       |
| Dimensions                                      |       |                                                                            |
| Length                                          |       | 65 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) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

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