

# Inductive sensor

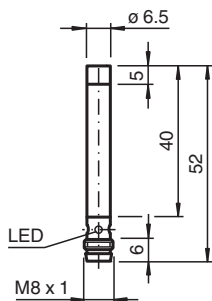
## NRN6-6,5S40-E2-V3



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing



### Dimensions



### Technical Data

| General specifications             |                |                    |
|------------------------------------|----------------|--------------------|
| Switching function                 |                | Normally open (NO) |
| Output type                        |                | PNP                |
| 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      |
| Reduction factor r <sub>Al</sub>   |                | 1                  |
| Reduction factor r <sub>Cu</sub>   |                | 1                  |
| Reduction factor r <sub>304</sub>  |                | 1                  |
| Reduction factor r <sub>St37</sub> |                | 1                  |
| Output type                        |                | 3-wire             |
| Nominal ratings                    |                |                    |
| Operating voltage                  | U <sub>B</sub> | 10 ... 30 V        |
| Switching frequency                | f              | 0 ... 2500 Hz      |
| Hysteresis                         | H              | type 5 %           |

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

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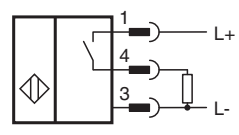
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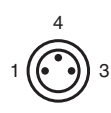
Technical Data

|                                                 |       |                                                                           |
|-------------------------------------------------|-------|---------------------------------------------------------------------------|
| Reverse polarity protection                     |       | reverse polarity protected                                                |
| Short-circuit protection                        |       | pulsing                                                                   |
| Voltage drop                                    | $U_d$ | $\leq 2.5\text{ V}$                                                       |
| Operating current                               | $I_L$ | 0 ... 200 mA                                                              |
| Off-state current                               | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu\text{A}$ at 25 °C                              |
| No-load supply current                          | $I_0$ | $\leq 15\text{ mA}$                                                       |
| Constant magnetic field                         | B     | 200 mT                                                                    |
| Alternating magnetic field                      | B     | 200 mT                                                                    |
| Switching state indicator                       |       | Multihole-LED, yellow                                                     |
| <b>Functional safety related parameters</b>     |       |                                                                           |
| MTTF <sub>d</sub>                               |       | 1010.5 a                                                                  |
| Mission Time (T <sub>M</sub> )                  |       | 20 a                                                                      |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                       |
| <b>Compliance with standards and directives</b> |       |                                                                           |
| Standard conformity                             |       |                                                                           |
| Standards                                       |       | EN 60947-5-2:2007<br>IEC 60947-5-2:2007                                   |
| <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 ... 70 °C (-13 ... 158 °F)                                            |
| Storage temperature                             |       | -45 ... 85 °C (-49 ... 185 °F)                                            |
| <b>Mechanical specifications</b>                |       |                                                                           |
| Connection type                                 |       | Connector M8 x 1 , 3-pin                                                  |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303                                         |
| Sensing face                                    |       | LCP , green                                                               |
| Degree of protection                            |       | IP67                                                                      |

Connection



Connection Assignment



Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 250531\_eng.pdf

Wire colors in accordance with EN 60947-5-2

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

Accessories

|                                                                                   |                     |                                                   |
|-----------------------------------------------------------------------------------|---------------------|---------------------------------------------------|
|  | <b>BF 6,5</b>       | Mounting flange, 6.5 mm                           |
|  | <b>V3-WM-2M-PUR</b> | Female cordset single-ended, M8, 3-pin, PUR cable |

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