



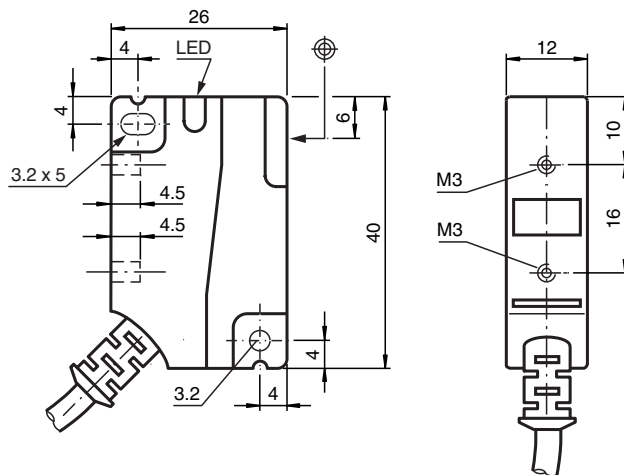
## Inductive sensor

### NBN8-F1-E2

- 8 mm non-flush
- 3-wire DC



## Dimensions



## Technical Data

### General specifications

|                              |       |                    |
|------------------------------|-------|--------------------|
| Switching function           |       | Normally open (NO) |
| Output type                  |       | PNP                |
| Rated operating distance     | $s_n$ | 8 mm               |
| Installation                 |       | non-flush          |
| Output polarity              |       | DC                 |
| Assured operating distance   | $s_a$ | 0 ... 6.48 mm      |
| Reduction factor $r_{Al}$    |       | 0.45               |
| Reduction factor $r_{Cu}$    |       | 0.45               |
| Reduction factor $r_{304}$   |       | 0.7                |
| Reduction factor $r_{Brass}$ |       | 0.55               |

Release date: 2022-05-18 Date of issue: 2022-05-18 Filename: 184376\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

## Technical Data

|   |           |   |
|---|-----------|---|
| Output type                                     | 3-wire    |   |
| <b>Nominal ratings</b>                          |           |   |
| Operating voltage                               | $U_B$     | 10 ... 30 V DC  |
| Switching frequency                             | f         | 0 ... 1400 Hz   |
| Hysteresis                                      | H         | typ. 5%   |
| Reverse polarity protection                     |           | reverse polarity protected  |
| Short-circuit protection                        |           | pulsing   |
| Voltage drop                                    | $U_d$     | $\leq 2.5$ V  |
| Rated insulation voltage                        | $U_{BIS}$ | 60 V  |
| Operating current                               | $I_L$     | 0 ... 250 mA  |
| Off-state current                               | $I_r$     | 0 ... 0.01 mA typ. 0.1 $\mu$ A at 25 °C   |
| No-load supply current                          | $I_o$     | $\leq 15$ mA  |
| Switching state indicator                       |           | LED, yellow   |
| <b>Functional safety related parameters</b>     |           |   |
| MTTF <sub>d</sub>                               |           | 1640 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>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <b>Approvals and certificates</b>               |           |   |
| Protection class                                |           | II  |
| Rated insulation voltage                        | $U_i$     | 60 V  |
| Rated impulse withstand voltage                 | $U_{imp}$ | 800 V   |
| UL approval                                     |           | cULus Listed, General Purpose   |
| CSA approval                                    |           | cCSAus Listed, General Purpose  |
| CCC approval                                    |           | CCC approval / marking not required for products rated $\leq 36$ V                          |
| <b>Ambient conditions</b>                       |           |   |
| Ambient temperature                             |           | -25 ... 70 °C (-13 ... 158 °F)  |
| <b>Mechanical specifications</b>                |           |   |
| Connection type                                 |           | cable PVC , 2 m   |
| Core cross section                              |           | 0.5 mm <sup>2</sup>   |
| Housing material                                |           | PA  |
| Sensing face                                    |           | PA  |
| Degree of protection                            |           | IP67  |
| Cable   |           |   |
| Cable diameter                                  |           | 5.2 mm $\pm$ 0.2 mm   |
| Bending radius                                  |           | > 10 x cable diameter   |
| Tightening torque, fastening screws             |           | Threading M3 max: 1.1 Nm  |

## Connection

