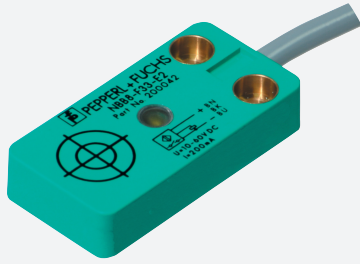


# Inductive sensor

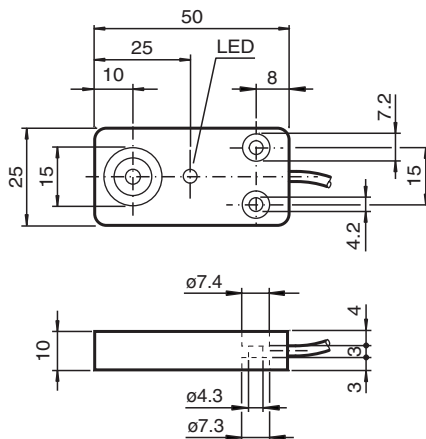
## NBB8-F33-E3



- 8 mm flush
- 3-wire DC



### Dimensions



### Technical Data

| General specifications      |       |                            |
|-----------------------------|-------|----------------------------|
| Switching function          |       | Normally closed (NC)       |
| Output type                 |       | PNP                        |
| Rated operating distance    | $s_n$ | 8 mm                       |
| Installation                |       | flush                      |
| Output polarity             |       | DC                         |
| Assured operating distance  | $s_a$ | 0 ... 6.48 mm              |
| Reduction factor $r_{Al}$   |       | 0.3                        |
| Reduction factor $r_{Cu}$   |       | 0.2                        |
| Reduction factor $r_{304}$  |       | 0.6                        |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 60 V DC             |
| Switching frequency         | $f$   | 0 ... 350 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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 **PEPPERL+FUCHS**

## Technical Data

|                                          |                |                                                   |
|------------------------------------------|----------------|---------------------------------------------------|
| Voltage drop                             | U <sub>d</sub> | ≤ 3 V                                             |
| Operating current                        | I <sub>L</sub> | 0 ... 200 mA                                      |
| Off-state current                        | I <sub>r</sub> | 0 ... 0.1 mA                                      |
| No-load supply current                   | I <sub>0</sub> | ≤ 10 mA                                           |
| Time delay before availability           | t <sub>v</sub> | ≤ 50 ms                                           |
| Switching state indicator                |                | LED yellow                                        |
| Functional safety related parameters     |                |                                                   |
| MTTF <sub>d</sub>                        |                | 1140 a                                            |
| Mission Time (T <sub>M</sub> )           |                | 20 a                                              |
| Diagnostic Coverage (DC)                 |                | 0 %                                               |
| Compliance with standards and directives |                |                                                   |
| Standard conformity                      |                |                                                   |
| Standards                                |                | EN 60947-5-2:2007<br>IEC 60947-5-2:2007           |
| Approvals and certificates               |                |                                                   |
| UL approval                              |                | cULus Listed, General Purpose                     |
| CSA approval                             |                | cCSAus Listed, General Purpose                    |
| CCC approval                             |                | Certified by China Compulsory Certification (CCC) |
| Ambient conditions                       |                |                                                   |
| Ambient temperature                      |                | -35 ... 70 °C (-31 ... 158 °F)                    |
| Storage temperature                      |                | -40 ... 85 °C (-40 ... 185 °F)                    |
| Mechanical specifications                |                |                                                   |
| Connection type                          |                | cable PVC , 2 m                                   |
| Core cross-section                       |                | 0.34 mm <sup>2</sup>                              |
| Housing material                         |                | PBT                                               |
| Sensing face                             |                | PBT                                               |
| Degree of protection                     |                | IP67                                              |
| Note                                     |                | Tightening torque: 5 Nm                           |

## Connection Assignment

