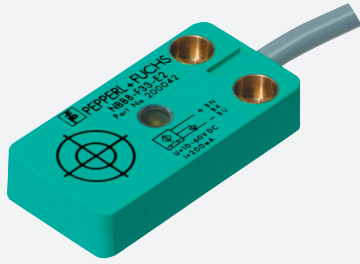


Inductive sensor

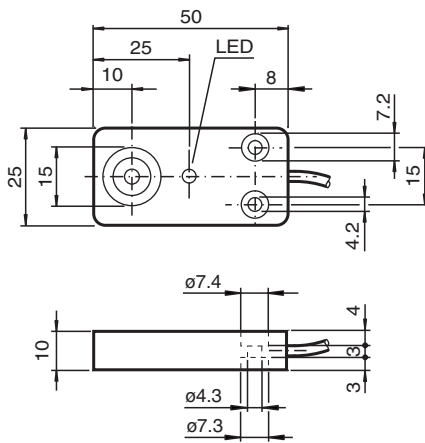
NBB8-F33-E0-M



- 8 mm flush
- E1-Type approval
- Extended temperature range
-40 ... +85 °C
- Increased operating distance
- Increased noise immunity 100 V/m



Dimensions



Technical Data

| General specifications | | |
|-----------------------------|-------|----------------------------|
| Switching function | | Normally open (NO) |
| Output type | | NPN |
| 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 |
| Output type | | 3-wire |
| Nominal ratings | | |
| Operating voltage | U_B | 5 ... 60 V DC |
| Switching frequency | f | 0 ... 350 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |

Release date: 2022-06-22 Date of issue: 2022-06-22 Filename: 220775_eng.pdf

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

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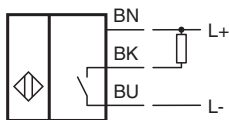
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

 PEPPERL+FUCHS

Technical Data

| | | |
|---|-------|---|
| Voltage drop | U_d | $\leq 2 \text{ V}$ |
| Operating current | I_L | 0 ... 200 mA |
| Off-state current | I_r | 0 ... 0.1 mA |
| No-load supply current | I_0 | $\leq 10 \text{ mA}$ |
| Time delay before availability | t_v | $\leq 80 \text{ ms}$ |
| Switching state indicator | | LED yellow |
| Functional safety related parameters | | |
| MTTF _d | | 1150 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Compliance with standards and directives | | |
| Standard conformity | | |
| Standards | | EN 60947-5-2:2007 IEC 60947-5-2:2007 |
| Approvals and certificates | | |
| CCC approval | | Certified by China Compulsory Certification (CCC) |
| E1 Type approval | | 10R-04 |
| Ambient conditions | | |
| Ambient temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Connection type | | cablE PUR , 2 m |
| Core cross section | | 0.5 mm ² |
| Housing material | | PBT |
| Sensing face | | PBT |
| Degree of protection | | IP67 / IP69K |
| Note | | Tightening torque: 5 Nm |

Connection



Mounting

Emitted interference and interference immunity in accordance with motor vehicle directive 2006/28/EG (e1 Type approval)
 Interference immunity in accordance with DIN ISO 11452-2: 100 V/m
 Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2: Pulse

| | 1 | 2a | 2b | 3a | 3b | 4 | 5 |
|-------------------|-----|-----|-----|-----|-----|-----|----|
| Severity level | III | III | III | III | III | III | IV |
| Failure criterion | C | A | C | A | A | A | C |

EN 61000-4-2: CD: 8 kV / AD: 15 kV
 Severity level IV IV

EN 61000-4-3: 30 V/m (80...2500 MHz)
 Severity level IV

EN 61000-4-4: 2 kV
 Severity level III

EN 61000-4-6: 10 V (0.01...80 MHz)
 Severity level III

EN 55011: Class A