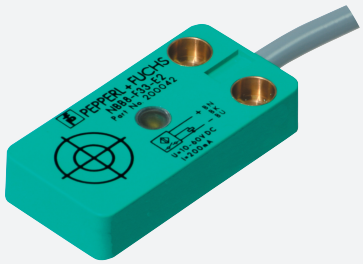
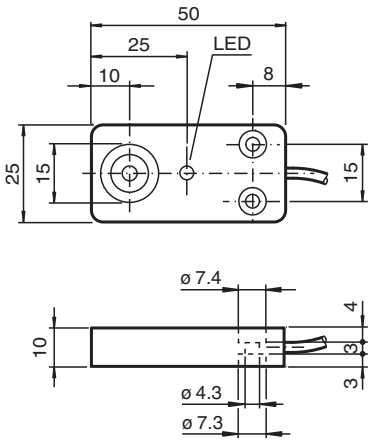
# Inductive sensor

# NBB8-F33-E1-5M

- 8 mm flush
- 3-wire DC



## Dimensions




## Technical Data

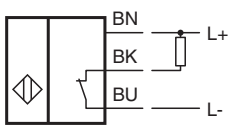
| | | |
|---|---|---|
| **General specifications** | | |
| Switching function | | Normally closed (NC) |
| Output type | | NPN |
| Rated operating distance | $s_n$ | 8 mm |
| Installation | | flush |
| Output polarity | | DC |
| Assured operating distance | $s_a$ | 0 ... 6.48 mm |
| Reduction factor $r_{Al}$ | | 0.3 |
| Reduction factor $r_{Cu}$ | | 0.2 |
| Reduction factor $r_{304}$ | | 0.6 |
| Output type | | 3-wire |
| **Nominal ratings** | | |
| Operating voltage | $U_B$ | 10 ... 60 V DC |
| Switching frequency | f | 0 ... 350 Hz |
| Hysteresis | H | typ. 5 % |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | $U_d$ | ≤ 3 V |

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## Technical Data

| | | |
|---|---|---|
| Operating current | $I_L$ | 0 ... 200 mA |
| Off-state current | $I_r$ | 0 ... 0.1 mA |
| No-load supply current | $I_0$ | ≤ 10 mA |
| Time delay before availability | $t_v$ | ≤ 50 ms |
| Switching state indicator | | LED yellow |
| **Safety-relevant product characteristics** | | |
| $MTTF_d$ | | 1150 a |
| Mission Time ($T_M$) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| **Compliance with standards and directives** | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| **Approvals and certificates** | | |
| UL approval | | cULus Listed<br>Load Type: General Purpose<br>Circuitry: Class 2 Power Source<br>Enclosure Type Rating: Type 1<br>Supply/Switching Voltage: 60 V DC<br>Output Switching Current: 200 mA |
| **Ambient conditions** | | |
| Ambient temperature | | -35 ... 70 °C (-31 ... 158 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| **Mechanical specifications** | | |
| Connection type | | cable |
| Housing material | | PBT |
| Sensing face | | PBT |
| Degree of protection | | IP67 |
| Cable | | |
| Wire end ferrules | | yes |
| Cable diameter | | 4.8 mm ± 0.2 mm |
| Bending radius | | > 10 x cable diameter |
| Material | | PVC |
| Color | | grey |
| Number of cores | | 3 |
| Core cross section | | 0.34 $mm^2$ |
| Length | L | 5 m |
| Dimensions | | |
| Height | | 10 mm |
| Width | | 25 mm |
| Length | | 50 mm |
| Tightening torque | | ≤ 5 Nm |

## Connection Assignment




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