

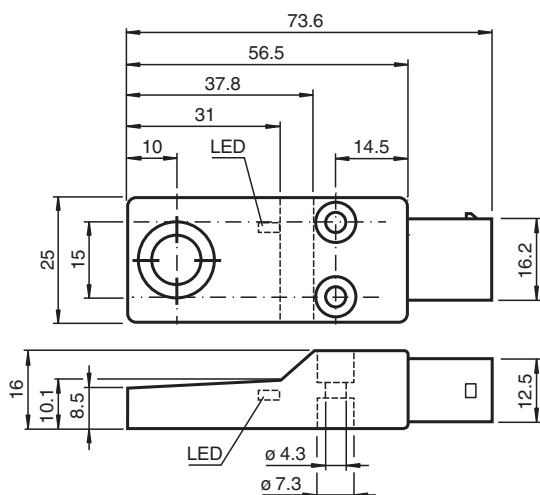


## Inductive sensor NBB8-F33X-E2-AMP

- 8 mm flush
- 3-wire DC
- Amp connector



### Dimensions



### Technical Data

#### General specifications

|                              |       |                    |
|------------------------------|-------|--------------------|
| Switching function           |       | Normally open (NO) |
| Output type                  |       | PNP                |
| Rated operating distance     | $s_n$ | 8 mm               |
| Installation                 |       | flush              |
| Output polarity              |       | DC                 |
| Assured operating distance   | $s_a$ | 0 ... 6.5 mm       |
| Reduction factor $r_{Al}$    |       | 0.3                |
| Reduction factor $r_{Cu}$    |       | 0.2                |
| Reduction factor $r_{304}$   |       | 0.6                |
| Reduction factor $r_{Brass}$ |       | 0.35               |

#### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 60 V DC             |
| Switching frequency         | $f$   | 0 ... 250 Hz               |
| Hysteresis                  | $H$   | typ. 5 %                   |
| Reverse polarity protection |       | reverse polarity protected |

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

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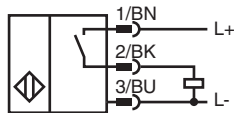
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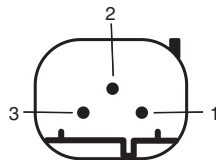
# Technical Data

|                                                 |       |                                         |
|-------------------------------------------------|-------|-----------------------------------------|
| 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 ... 0.1 mA                            |
| No-load supply current                          | $I_0$ | $\leq 10 \text{ mA}$                    |
| Time delay before availability                  | $t_v$ | $\leq 50 \text{ ms}$                    |
| Switching state indicator                       |       | LED yellow                              |
| <b>Functional safety related parameters</b>     |       |                                         |
| MTTF <sub>d</sub>                               |       | 1891 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>Ambient conditions</b>                       |       |                                         |
| Ambient temperature                             |       | -35 ... 70 °C (-31 ... 158 °F)          |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)          |
| <b>Mechanical specifications</b>                |       |                                         |
| Connection type                                 |       | Connector , AMP connector               |
| Housing material                                |       | PBT , black                             |
| Degree of protection                            |       | IP67                                    |
| Note                                            |       | Tightening torque: 5 Nm                 |

# Connection



# Connection Assignment



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