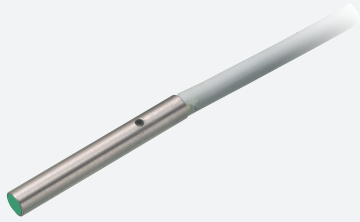


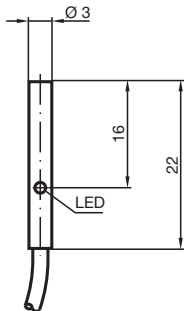
# Inductive sensor NBB1-3M22-E2



- 1 mm flush
- Miniature design



## Dimensions



## Technical Data

### General specifications

|                              |       |                    |
|------------------------------|-------|--------------------|
| Switching function           |       | Normally open (NO) |
| Output type                  |       | PNP                |
| Rated operating distance     | $s_n$ | 1 mm               |
| Installation                 |       | flush              |
| Output polarity              |       | DC                 |
| Assured operating distance   | $s_a$ | 0 ... 0.81 mm      |
| Reduction factor $r_{Al}$    |       | 0.4                |
| Reduction factor $r_{Cu}$    |       | 0.29               |
| Reduction factor $r_{304}$   |       | 0.76               |
| Reduction factor $r_{Brass}$ |       | 0.46               |
| Output type                  |       | 3-wire             |

### Nominal ratings

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

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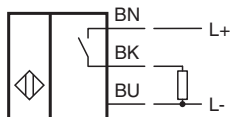
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**PEPPERL+FUCHS**

## Technical Data

|                                                 |       |                                                                                             |
|-------------------------------------------------|-------|---------------------------------------------------------------------------------------------|
| Operating voltage                               | $U_B$ | 10 ... 30 V                                                                                 |
| Switching frequency                             | $f$   | 0 ... 700 Hz                                                                                |
| Hysteresis                                      | $H$   | typ. 5%                                                                                     |
| Reverse polarity protection                     |       | reverse polarity protected                                                                  |
| Short-circuit protection                        |       | pulsing                                                                                     |
| Voltage drop                                    | $U_d$ | $\leq 3$ V                                                                                  |
| Operating current                               | $I_L$ | 0 ... 100 mA                                                                                |
| Off-state current                               | $I_r$ | 0 ... 0.1 mA typ. at 25 °C                                                                  |
| No-load supply current                          | $I_0$ | $\leq 10$ mA                                                                                |
| Switching state indicator                       |       | LED, yellow                                                                                 |
| <b>Functional safety related parameters</b>     |       |                                                                                             |
| MTTF <sub>d</sub>                               |       | 1340 a                                                                                      |
| Mission Time ( $T_M$ )                          |       | 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>               |       |                                                                                             |
| 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 PUR , 2 m                                                                             |
| Core cross-section                              |       | 0.055 mm <sup>2</sup>                                                                       |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303                                                           |
| Sensing face                                    |       | PC                                                                                          |
| Degree of protection                            |       | IP67                                                                                        |
| Cable                                           |       |                                                                                             |
| Cable diameter                                  |       | 2.6 mm $\pm$ 0.1 mm                                                                         |
| Bending radius                                  |       | > 10 x cable diameter                                                                       |

## Connection



## Mounting

