

# Inductive sensor

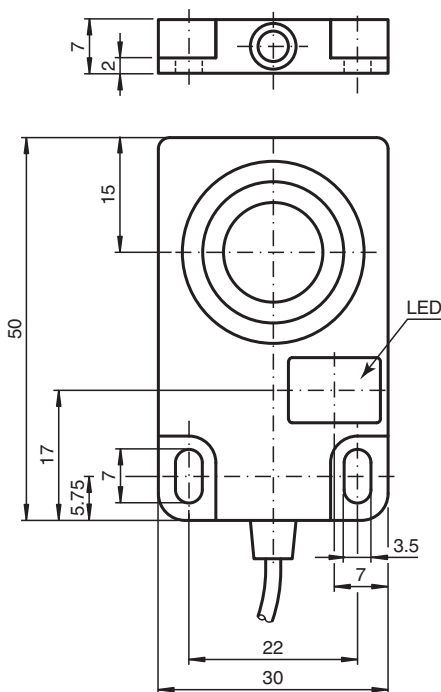
## NBB10-F17-E3



- 10 mm flush
- 3-wire DC



### Dimensions



### Technical Data

#### General specifications

|                            |       |                        |
|----------------------------|-------|------------------------|
| Switching function         |       | Normally closed (NC)   |
| Output type                |       | PNP                    |
| Rated operating distance   | $s_n$ | 10 mm                  |
| Installation               |       | flush                  |
| Output polarity            |       | DC                     |
| Assured operating distance | $s_a$ | 0 ... 8.1 mm           |
| Actual operating distance  | $s_r$ | 9 ... 11 mm typ. 10 mm |
| Reduction factor $r_{AI}$  |       | 0.36                   |
| Reduction factor $r_{Cu}$  |       | 0.31                   |

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

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## Technical Data

|                                                 |       |                                                                    |
|-------------------------------------------------|-------|--------------------------------------------------------------------|
| Reduction factor $r_{304}$                      |       | 0.67                                                               |
| Output type                                     |       | 3-wire                                                             |
| <b>Nominal ratings</b>                          |       |                                                                    |
| Operating voltage                               | $U_B$ | 10 ... 30 V DC                                                     |
| Switching frequency                             | $f$   | 0 ... 1000 Hz                                                      |
| Hysteresis                                      | $H$   | 1 ... 10 % typ. 6 %                                                |
| Reverse polarity protection                     |       | reverse polarity protected                                         |
| Short-circuit protection                        |       | pulsing                                                            |
| Voltage drop                                    | $U_d$ | $\leq 2.8$ V                                                       |
| Operating current                               | $I_L$ | 0 ... 100 mA                                                       |
| No-load supply current                          | $I_0$ | 10 mA                                                              |
| Time delay before availability                  | $t_v$ | $\leq 1$ ms                                                        |
| Switching state indicator                       |       | LED, yellow                                                        |
| <b>Functional safety related parameters</b>     |       |                                                                    |
| MTTF <sub>d</sub>                               |       | 1935 a                                                             |
| Mission Time ( $T_M$ )                          |       | 20 a                                                               |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                |
| <b>Compliance with standards and directives</b> |       |                                                                    |
| Standard conformity                             |       |                                                                    |
| Standards                                       |       | EN IEC 60947-5-2                                                   |
| <b>Approvals and certificates</b>               |       |                                                                    |
| UL approval                                     |       | cULus 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)                                     |
| Storage temperature                             |       | -40 ... 85 °C (-40 ... 185 °F)                                     |
| <b>Mechanical specifications</b>                |       |                                                                    |
| Connection type                                 |       | cable                                                              |
| Housing material                                |       | PMMA                                                               |
| Sensing face                                    |       | PMMA                                                               |
| Degree of protection                            |       | IP67                                                               |
| <b>Cable</b>                                    |       |                                                                    |
| Wire end ferrules                               |       | yes                                                                |
| Cable diameter                                  |       | 3 mm - 0.2 mm                                                      |
| Bending radius                                  |       | $> 12 \times$ cable diameter                                       |
| Material                                        |       | PUR                                                                |
| Color                                           |       | black                                                              |
| Number of cores                                 |       | 3                                                                  |
| Core cross section                              |       | 0.14 mm <sup>2</sup>                                               |
| Length                                          | $L$   | 2 m                                                                |
| <b>Dimensions</b>                               |       |                                                                    |
| Height                                          |       | 30 mm                                                              |
| Width                                           |       | 50 mm                                                              |
| Length                                          |       | 7 mm                                                               |
| Tightening torque                               |       | 0.5 Nm ... 0.6 Nm                                                  |

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## Connection Assignment

