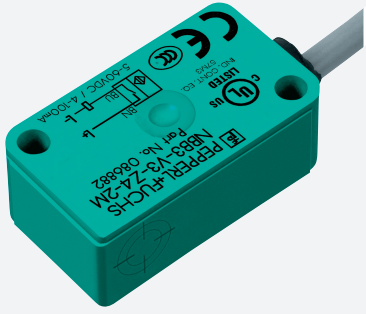


# Inductive sensor

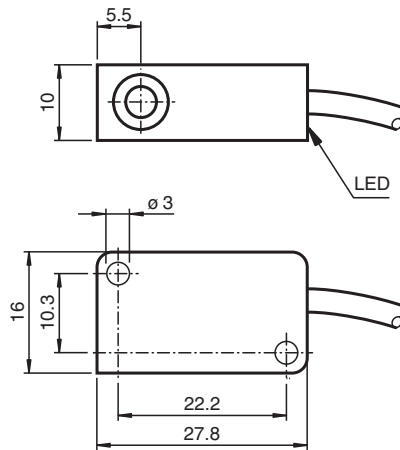
## NBB3-V3-Z5



- 3 mm flush
- 2-wire DC



### Dimensions



### Technical Data

| General specifications       |       |                      |
|------------------------------|-------|----------------------|
| Switching function           |       | Normally closed (NC) |
| Output type                  |       | Two-wire             |
| Rated operating distance     | $s_n$ | 3 mm                 |
| Installation                 |       | flush                |
| Output polarity              |       | DC                   |
| Assured operating distance   | $s_a$ | 0 ... 2.4 mm         |
| Actual operating distance    | $s_r$ | 2.7 ... 3.3 mm typ.  |
| Reduction factor $r_{Al}$    |       | 0.45                 |
| Reduction factor $r_{Cu}$    |       | 0.35                 |
| Reduction factor $r_{304}$   |       | 0.8                  |
| Reduction factor $r_{Brass}$ |       | 0.5                  |
| Output type                  |       | 2-wire               |
| Nominal ratings              |       |                      |
| Operating voltage            | $U_B$ | 5 ... 60 V DC        |
| Switching frequency          | $f$   | 0 ... 2000 Hz        |
| Hysteresis                   | $H$   | typ. 0.2 mm          |

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

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## Technical Data

|  |       |   |
|--|-------|---|
| Reverse polarity protection                      |       | reverse polarity protected  |
| Short-circuit protection                         |       | no  |
| Inductive overvoltage protection                 |       | yes   |
| Voltage drop                                     | $U_d$ | $\leq 4$ V  |
| Voltage drop at $I_L$                            |       |   |
| Voltage drop $I_L = 10$ mA, switching element on | $U_d$ | 3.4 ... 3.9 V typ. 3.6 V  |
| Operating current                                | $I_L$ | 4 ... 100 mA  |
| Lowest operating current                         | $I_m$ | 4 mA  |
| Off-state current                                | $I_r$ | 0.4 ... 0.55 mA typ. 0.46 mA  |
| Time delay before availability                   | $t_v$ | $\leq 1$ ms   |
| Switching state indicator                        |       | LED, yellow   |
| <b>Limit data</b>                                |       |   |
| Tightening torque, fastening screws              |       | 0.4 Nm  |
| <b>Functional safety related parameters</b>      |       |   |
| MTTF <sub>d</sub>                                |       | 1552 a  |
| Mission Time ( $T_M$ )                           |       | 20 a  |
| Diagnostic Coverage (DC)                         |       | 0 %   |
| <b>Standard conformity</b>                       |       |   |
| EMC in accordance with                           |       | 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                                     |       | Certified by China Compulsory Certification (CCC)   |
| <b>Ambient conditions</b>                        |       |   |
| Ambient temperature                              |       | -25 ... 70 °C (-13 ... 158 °F)  |
| <b>Mechanical specifications</b>                 |       |   |
| Connection type                                  |       | cablc PVC , 130 mm  |
| Core cross section                               |       | 0.14 mm <sup>2</sup>  |
| Housing material                                 |       | PBT   |
| Sensing face                                     |       | PBT   |
| Degree of protection                             |       | IP67  |

## Connection

