

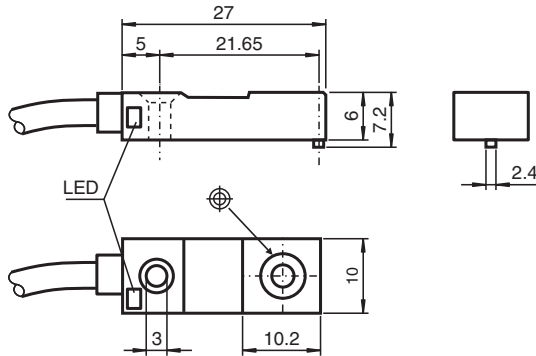


# Inductive sensor NBB2-F29-A2

- 2 mm flush
- 4-wire DC



## Dimensions



## Technical Data

### General specifications

|                            |       |               |
|----------------------------|-------|---------------|
| Switching function         |       | complementary |
| Output type                |       | PNP           |
| Rated operating distance   | $s_n$ | 2 mm          |
| Installation               |       | flush         |
| Output polarity            |       | DC            |
| Assured operating distance | $s_a$ | 0 ... 1.62 mm |
| Reduction factor $r_{Al}$  |       | 0.2           |
| Reduction factor $r_{Cu}$  |       | 0.15          |
| Reduction factor $r_{304}$ |       | 0.7           |
| Output type                |       | 4-wire        |

### Nominal ratings

|                             |       |  |
|-----------------------------|-------|--|
| Operating voltage           | $U_B$ | 4.75 ... 30 V DC                       |
| Switching frequency         | $f$   | 0 ... 1000 Hz                          |
| Hysteresis                  | $H$   | typ. 5 %                               |
| Reverse polarity protection |       | reverse polarity protected             |
| Short-circuit protection    |       | pulsing                                |
| Voltage drop                | $U_d$ | $\leq 2$ V                             |
| Operating current           | $I_L$ | 0 ... 100 mA                           |
| Off-state current           | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C |

Release date: 2023-12-08 Date of issue: 2023-12-08 Filename: 802137\_eng.pdf

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

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## Technical Data

|   |       |   |
|---|-------|---|
| No-load supply current                          | $I_0$ | ≤ 15 mA   |
| Switching state indicator                       |       | LED, yellow   |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 1680 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>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   |
| CCC approval                                    |       | CCC approval / marking not required for products rated ≤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                                 |       | cablc PVC , 2 m   |
| Core cross section                              |       | 0.14 mm <sup>2</sup>  |
| Housing material                                |       | Ryton R4  |
| Sensing face                                    |       | Ryton R4  |
| Degree of protection                            |       | IP67  |
| Cable   |       |   |
| Cable diameter                                  |       | 3 mm + 0.3 mm   |
| Bending radius                                  |       | > 10 x cable diameter   |

## Connection

