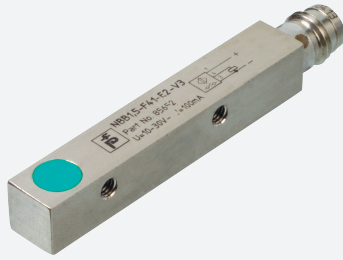


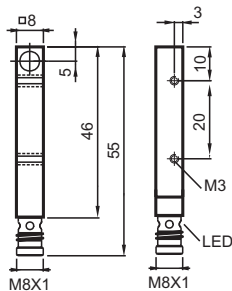
# Inductive sensor NBB1,5-F41-E3-V3



- Basic series
- 1.5 mm flush
- 3-wire DC
- Metal housing



## Dimensions



## Technical Data

### General specifications

|                            |       |                      |
|----------------------------|-------|----------------------|
| Switching function         |       | Normally closed (NC) |
| Output type                |       | PNP                  |
| Rated operating distance   | $s_n$ | 1.5 mm               |
| Installation               |       | flush                |
| Output polarity            |       | DC                   |
| Assured operating distance | $s_a$ | 0 ... 1.215 mm       |
| Reduction factor $r_{Al}$  |       | 0.45                 |
| Reduction factor $r_{Cu}$  |       | 0.35                 |
| Reduction factor $r_{304}$ |       | 0.75                 |

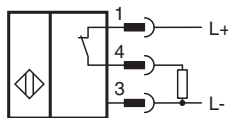
### Nominal ratings

|                     |       |                |
|---------------------|-------|----------------|
| Operating voltage   | $U_B$ | 10 ... 30 V DC |
| Switching frequency | $f$   | 0 ... 1500 Hz  |

# Technical Data

|                                                 |       |                                                                            |
|-------------------------------------------------|-------|----------------------------------------------------------------------------|
| Hysteresis                                      | H     | typ. 3 %                                                                   |
| Reverse polarity protection                     |       | reverse polarity protected                                                 |
| Short-circuit protection                        |       | pulsing                                                                    |
| Voltage drop                                    | $U_d$ | $\leq 3 \text{ V}$                                                         |
| Operating current                               | $I_L$ | 0 ... 100 mA                                                               |
| Off-state current                               | $I_r$ | 0 ... 0.5 mA typ.                                                          |
| No-load supply current                          | $I_0$ | $\leq 15 \text{ mA}$                                                       |
| Time delay before availability                  | $t_v$ | $\leq 20 \text{ ms}$                                                       |
| Switching state indicator                       |       | LED, yellow                                                                |
| <b>Functional safety related parameters</b>     |       |                                                                            |
| MTTF <sub>d</sub>                               |       | 1750 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>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 $\leq 36 \text{ V}$ |
| <b>Ambient conditions</b>                       |       |                                                                            |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °F)                                             |
| <b>Mechanical specifications</b>                |       |                                                                            |
| Connection type                                 |       | Connector M8 x 1 , 3-pin                                                   |
| Housing material                                |       | brass, nickel-plated                                                       |
| Sensing face                                    |       | PBT                                                                        |
| Degree of protection                            |       | IP67                                                                       |
| Mass                                            |       | 13.5 g                                                                     |

# Connection



# Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

Accessories

|                                                                                   |                     |                                                   |
|-----------------------------------------------------------------------------------|---------------------|---------------------------------------------------|
|  | <b>V3-WM-2M-PUR</b> | Female cordset single-ended, M8, 3-pin, PUR cable |
|-----------------------------------------------------------------------------------|---------------------|---------------------------------------------------|

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