

# Inductive sensor

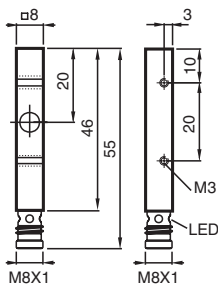
## NBB1,5-F41A-E3-V3



- 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 $r_{AI}$   |       | 0.45                       |
| Reduction factor $r_{Cu}$   |       | 0.35                       |
| Reduction factor $r_{304}$  |       | 0.75                       |
| Output type                 |       | 3-wire                     |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 30 V DC             |
| Switching frequency         | $f$   | 0 ... 1500 Hz              |
| Hysteresis                  | $H$   | typ. 3 %                   |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |

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

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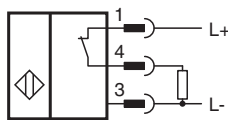
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**PEPPERL+FUCHS**

Technical Data

|                                          |       |                                                                           |
|------------------------------------------|-------|---------------------------------------------------------------------------|
| 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                                                               |
| Functional safety related parameters     |       |                                                                           |
| MTTF <sub>d</sub>                        |       | 1750 a                                                                    |
| Mission Time (T <sub>M</sub> )           |       | 20 a                                                                      |
| Diagnostic Coverage (DC)                 |       | 0 %                                                                       |
| Compliance with standards and directives |       |                                                                           |
| Standard conformity                      |       |                                                                           |
| Standards                                |       | EN IEC 60947-5-2                                                          |
| Approvals and certificates               |       |                                                                           |
| UL approval                              |       | cULus Listed, General Purpose                                             |
| CCC approval                             |       | CCC approval / marking not required for products rated $\leq 36\text{ V}$ |
| Ambient conditions                       |       |                                                                           |
| Ambient temperature                      |       | -25 ... 70 °C (-13 ... 158 °F)                                            |
| Mechanical specifications                |       |                                                                           |
| Connection type                          |       | Connector plug M8 x 1 , 3-pin                                             |
| Housing material                         |       | brass, nickel-plated                                                      |
| Sensing face                             |       | PBT                                                                       |
| Degree of protection                     |       | IP67                                                                      |
| Mass                                     |       | 13.5 g                                                                    |
| Dimensions                               |       |                                                                           |
| Height                                   |       | 8 mm                                                                      |
| Width                                    |       | 8 mm                                                                      |
| Length                                   |       | 46 mm                                                                     |

Connection



Connection Assignment



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Connection Assignment

Wire colors in accordance with EN 60947-5-2

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

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