



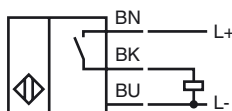
### Model Number

NBB1,5-F41-E2

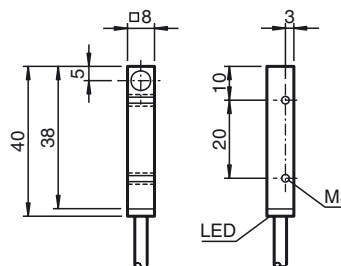
### Features

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

### Connection



## Dimensions



## Technical Data

### General specifications

|                            |       |                |    |
|----------------------------|-------|----------------|----|
| Switching element function |       | PNP            | NO |
| 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           |    |

### Nominal ratings

|                                   |       |                            |
|-----------------------------------|-------|----------------------------|
| Operating voltage                 | $U_B$ | 10 ... 30 V DC             |
| Switching frequency               | $f$   | 0 ... 1500 Hz              |
| Hysteresis                        | $H$   | typ. 3 %                   |
| Reverse polarity protected        |       | reverse polarity protected |
| Short-circuit protection          |       | pulsing                    |
| Voltage drop                      | $U_d$ | $\leq 3$ V                 |
| Operating current                 | $I_L$ | 0 ... 100 mA               |
| Off-state current                 | $I_r$ | 0 ... 0.5 mA typ.          |
| No-load supply current            | $I_0$ | $\leq 15$ mA               |
| Indication of the switching state |       | LED, yellow                |

### Functional safety related parameters

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 1528 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--------------------------------|

### Mechanical specifications

|                    |                      |
|--------------------|----------------------|
| Connection type    | cable PVC , 2 m      |
| Core cross-section | 0.14 mm <sup>2</sup> |
| Housing material   | brass, nickel-plated |
| Sensing face       | PBT                  |
| Protection degree  | IP67                 |
| Mass               | 13.5 g               |

### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| Standards           | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

### Approvals and certificates

|              |  |
|--------------|--|
| UL approval  | cULus Listed, General Purpose  |
| CSA approval | cCSAus Listed, General Purpose   |
| CCC approval | Products with a maximum operating voltage of $\leq 36$ V do not bear a CCC marking because they do not require approval. |