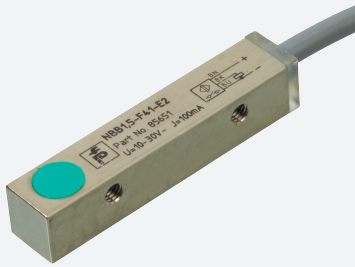


# Inductive sensor

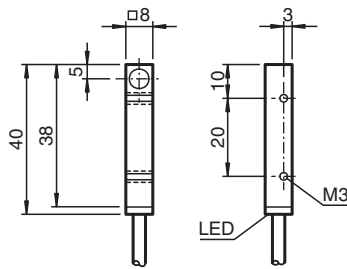
## NBB1,5-F41-E3



- 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                    |

Release date: 2025-02-27 Date of issue: 2025-02-27 Filename: 085653\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **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                                                                |
| <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 IEC 60947-5-2                                                           |
| <b>Approvals and certificates</b>               |       |                                                                            |
| UL approval                                     |       | cULus 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                                 |       | cable                                                                      |
| Housing material                                |       | brass, nickel-plated                                                       |
| Sensing face                                    |       | PBT                                                                        |
| Degree of protection                            |       | IP67                                                                       |
| Cable                                           |       |                                                                            |
| Wire end ferrules                               |       | yes                                                                        |
| Cable diameter                                  |       | 3 mm + 0.3 mm                                                              |
| Bending radius                                  |       | > 10 x cable diameter                                                      |
| Material                                        |       | PVC                                                                        |
| Color                                           |       |                                                                            |
| Number of cores                                 |       | 3                                                                          |
| Core cross section                              |       | 0.14 mm <sup>2</sup>                                                       |
| Length                                          | L     | 2 m                                                                        |
| Mass                                            |       | 13.5 g                                                                     |
| Dimensions                                      |       |                                                                            |
| Height                                          |       | 8 mm                                                                       |
| Width                                           |       | 8 mm                                                                       |
| Length                                          |       | 40 mm                                                                      |

## Connection Assignment

