

# Inductive sensor

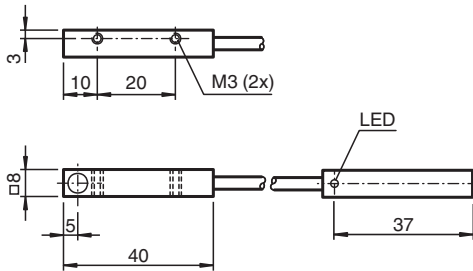
## NEB3-F41-E2



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



### Dimensions



### Technical Data

#### General specifications

|                              |       |                                                                           |
|------------------------------|-------|---------------------------------------------------------------------------|
| Switching function           |       | Normally open (NO)                                                        |
| Output type                  |       | PNP                                                                       |
| Rated operating distance     | $s_n$ | 3 mm                                                                      |
| Installation                 |       | quasi flush                                                               |
| Output polarity              |       | DC                                                                        |
| Assured operating distance   | $s_a$ | 0 ... 2.4 mm                                                              |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>9 mm x 9 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.35                                                                      |
| Reduction factor $r_{Cu}$    |       | 0.3                                                                       |
| Reduction factor $r_{304}$   |       | 0.7                                                                       |
| Reduction factor $r_{Brass}$ |       | 0.45                                                                      |
| Output type                  |       | 3-wire                                                                    |

#### Nominal ratings

|                         |       |                      |
|-------------------------|-------|----------------------|
| Installation conditions |       |                      |
| B                       |       | 6 mm                 |
| C                       |       | 9 mm                 |
| F                       |       | 16 mm                |
| G                       |       | 1 mm                 |
| Operating voltage       | $U_B$ | 10 ... 30 V DC       |
| Switching frequency     | $f$   | 0 ... 1000 Hz        |
| Hysteresis              | H     | 2 ... 20 % typ. 10 % |

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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

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## Technical Data

|                                                 |                |                                                              |
|-------------------------------------------------|----------------|--------------------------------------------------------------|
| Reverse polarity protection                     |                | reverse polarity protected                                   |
| Short-circuit protection                        |                | pulsing                                                      |
| Overload resistance                             |                | yes                                                          |
| Wire breakage protection                        |                | yes                                                          |
| Inductive overvoltage protection                |                | yes                                                          |
| Surge suppression                               |                | yes                                                          |
| Ripple                                          |                | ≤ 10 %                                                       |
| Voltage drop                                    | U <sub>d</sub> | ≤ 2 V                                                        |
| Repeat accuracy                                 | R              | 0.15 mm                                                      |
| Operating current                               | I <sub>L</sub> | 0 ... 200 mA , above 50°C max. 150 mA                        |
| Off-state current                               | I <sub>r</sub> | ≤ 10 µA                                                      |
| No-load supply current                          | I <sub>0</sub> | ≤ 15 mA                                                      |
| Time delay before availability                  | t <sub>v</sub> | ≤ 50 ms                                                      |
| Switching state indicator                       |                | LED, yellow                                                  |
| <b>Functional safety related parameters</b>     |                |                                                              |
| MTTF <sub>d</sub>                               |                | 2134 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, Class 2 Power Source          |
| CCC approval                                    |                | CCC approval / marking not required for products rated ≤36 V |
| <b>Ambient conditions</b>                       |                |                                                              |
| Ambient temperature                             |                | -25 ... 85 °C (-13 ... 185 °F)                               |
| Storage temperature                             |                | -40 ... 85 °C (-40 ... 185 °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                                  |                | 3.3 mm ± 0.2 mm                                              |
| Material                                        |                | PVC                                                          |
| Color                                           |                | black                                                        |
| Number of cores                                 |                | 3                                                            |
| Core cross section                              |                | 0.14 mm <sup>2</sup>                                         |
| Length                                          | L              | 2 m                                                          |
| Mass                                            |                | 50 g                                                         |
| <b>Dimensions</b>                               |                |                                                              |
| Height                                          |                | 8 mm                                                         |
| Width                                           |                | 8 mm                                                         |
| Length                                          |                | 40 mm                                                        |

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## Connection



## Installation Conditions

