

# Inductive sensor

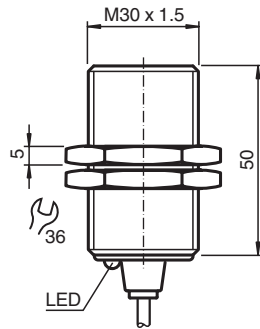
## NRB15-30GH50-E2



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing
- Front face FDA conform



### Dimensions



### Technical Data

| General specifications             |                |                            |
|------------------------------------|----------------|----------------------------|
| Switching function                 |                | Normally open (NO)         |
| Output type                        |                | PNP                        |
| Rated operating distance           | s <sub>n</sub> | 15 mm                      |
| Installation                       |                | flush                      |
| Output polarity                    |                | DC                         |
| Assured operating distance         | s <sub>a</sub> | 0 ... 12.15 mm             |
| Reduction factor r <sub>Al</sub>   |                | 1                          |
| Reduction factor r <sub>Cu</sub>   |                | 1                          |
| Reduction factor r <sub>304</sub>  |                | 1                          |
| Reduction factor r <sub>Si37</sub> |                | 1                          |
| Output type                        |                | 3-wire                     |
| Nominal ratings                    |                |                            |
| Operating voltage                  | U <sub>B</sub> | 10 ... 30 V DC             |
| Switching frequency                | f              | 0 ... 750 Hz               |
| Hysteresis                         | H              | typ. 5 %                   |
| Reverse polarity protection        |                | reverse polarity protected |

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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

|                                                 |           |                                                                            |
|-------------------------------------------------|-----------|----------------------------------------------------------------------------|
| Short-circuit protection                        |           | pulsing                                                                    |
| Voltage drop                                    | $U_d$     | $\leq 2 \text{ V}$                                                         |
| Rated insulation voltage                        | $U_{BIS}$ | 60 V                                                                       |
| Operating current                               | $I_L$     | 0 ... 200 mA                                                               |
| Off-state current                               | $I_r$     | 0 ... 0.5 mA typ. 0.1 $\mu\text{A}$ at 25 °C                               |
| No-load supply current                          | $I_0$     | $\leq 14 \text{ mA}$                                                       |
| Time delay before availability                  | $t_v$     | max. 15 ms                                                                 |
| Constant magnetic field                         | B         | 200 mT                                                                     |
| Alternating magnetic field                      | B         | 200 mT                                                                     |
| Switching state indicator                       |           | all direction LED, yellow                                                  |
| <b>Functional safety related parameters</b>     |           |                                                                            |
| MTTF <sub>d</sub>                               |           | 1140.2 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>               |           |                                                                            |
| Protection class                                |           | II                                                                         |
| Rated insulation voltage                        | $U_i$     | 60 V                                                                       |
| Rated impulse withstand voltage                 | $U_{imp}$ | 800 V                                                                      |
| UL approval                                     |           | cULus Listed, Type 1 enclosure<br>Class 2 power source                     |
| 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)                                             |
| Storage temperature                             |           | -40 ... 85 °C (-40 ... 185 °F)                                             |
| <b>Mechanical specifications</b>                |           |                                                                            |
| Connection type                                 |           | cable                                                                      |
| Housing material                                |           | Stainless steel 1.4404 / AISI 316L                                         |
| Sensing face                                    |           | LCP, (conforms with FDA)                                                   |
| Degree of protection                            |           | IP68 / IP69K                                                               |
| Cable                                           |           |                                                                            |
| Wire end ferrules                               |           | yes                                                                        |
| Cable diameter                                  |           | 4.3 mm $\pm$ 0.15 mm                                                       |
| Bending radius                                  |           | > 10 x cable diameter                                                      |
| Material                                        |           | PVC                                                                        |
| Color                                           |           | black                                                                      |
| Number of cores                                 |           | 3                                                                          |
| Core cross section                              |           | 0.34 mm <sup>2</sup>                                                       |
| Length                                          | L         | 2 m                                                                        |
| Mass                                            |           | 180 g                                                                      |
| Dimensions                                      |           |                                                                            |
| Length                                          |           | 50 mm                                                                      |
| Diameter                                        |           | 30 mm                                                                      |
| <b>General information</b>                      |           |                                                                            |
| Scope of delivery                               |           | Supplied with 2 nuts                                                       |

## Connection

