

# Inductive sensor

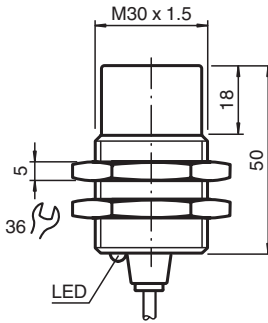
## NRN30-30GH50-E2



- 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    | $s_n$              | 30 mm         |
| Installation                |                    | non-flush     |
| Output polarity             |                    | DC            |
| Assured operating distance  | $s_a$              | 0 ... 24.3 mm |
| Reduction factor $r_{Al}$   |                    | 1             |
| Reduction factor $r_{Cu}$   |                    | 1             |
| Reduction factor $r_{304}$  |                    | 1             |
| Reduction factor $r_{Si37}$ |                    | 1             |
| Output type                 | 3-wire             |               |

#### Nominal ratings

|                             |           |                            |
|-----------------------------|-----------|----------------------------|
| Operating voltage           | $U_B$     | 10 ... 30 V                |
| Switching frequency         | $f$       | 0 ... 300 Hz               |
| Hysteresis                  | $H$       | typ. 5 %                   |
| Reverse polarity protection |           | reverse polarity protected |
| Short-circuit protection    |           | pulsing                    |
| Voltage drop                | $U_d$     | $\leq 2$ V                 |
| Rated insulation voltage    | $U_{BIS}$ | 60 V                       |
| Operating current           | $I_L$     | 0 ... 200 mA               |

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

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# Technical Data

|                                                 |           |                                                                    |
|-------------------------------------------------|-----------|--------------------------------------------------------------------|
| Off-state current                               | $I_r$     | 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C                             |
| No-load supply current                          | $I_0$     | $\leq$ 14 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 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 PVC , 2 m                                                    |
| Core cross section                              |           | 0.34 mm <sup>2</sup>                                               |
| Housing material                                |           | Stainless steel 1.4404 / AISI 316L                                 |
| Sensing face                                    |           | LCP, (conforms with FDA)                                           |
| Degree of protection                            |           | IP68 / IP69K                                                       |
| Mass                                            |           | 164 g                                                              |
| Dimensions                                      |           |                                                                    |
| Length                                          |           | 50 mm                                                              |
| Diameter                                        |           | 30 mm                                                              |
| <b>General information</b>                      |           |                                                                    |
| Scope of delivery                               |           | Supplied with 2 nuts                                               |

# Connection

