

# Inductive sensor

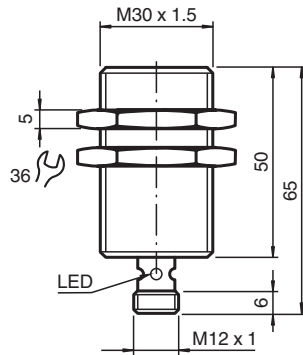
## NRB15-30GS50-E2-V1



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing



### Dimensions



### Technical Data

| General specifications      |       |                            |
|-----------------------------|-------|----------------------------|
| Switching function          |       | Normally open (NO)         |
| Output type                 |       | PNP                        |
| Rated operating distance    | $s_n$ | 15 mm                      |
| Installation                |       | flush                      |
| Output polarity             |       | DC                         |
| Assured operating distance  | $s_a$ | 0 ... 12.15 mm             |
| Reduction factor $r_{Al}$   |       | 1                          |
| Reduction factor $r_{Cu}$   |       | 1                          |
| Reduction factor $r_{304}$  |       | 1                          |
| Reduction factor $r_{St37}$ |       | 1                          |
| Output type                 |       | 3-wire                     |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 30 V                |
| Switching frequency         | $f$   | 0 ... 750 Hz               |
| Hysteresis                  | $H$   | typ. 3 %                   |
| Reverse polarity protection |       | reverse polarity protected |

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

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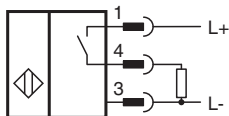
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**PEPPERL+FUCHS**

## Technical Data

|   |           |   |
|---|-----------|---|
| 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  |
| 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                       |           | Multihole-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 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |
| <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                                 |           | Connector plug M12 x 1 , 4-pin  |
| Housing material                                |           | Stainless steel 1.4305 / AISI 303   |
| Sensing face                                    |           | PBT   |
| Degree of protection                            |           | IP67  |
| Mass  |           | 113 g   |
| <b>General information</b>                      |           |   |
| Scope of delivery                               |           | 2 self locking nuts in scope of delivery  |

## Connection







## Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

## Accessories

|   |                      |   |
|---|----------------------|---|
|    | <b>BF 30</b>         | Mounting flange, 30 mm  |
|    | <b>V1-W-2M-PUR</b>   | Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey   |
|   | <b>V1-G-OR2M-POC</b> | Female cordset single-ended M12 straight A-coded, 4-pin, POC cable welding-bead resistant orange, suitable for robotic applications, torsion resistant, oil resistant, molecularly cross-linked |
|  | <b>V1-G-2M-PUR</b>   | Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey   |

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