



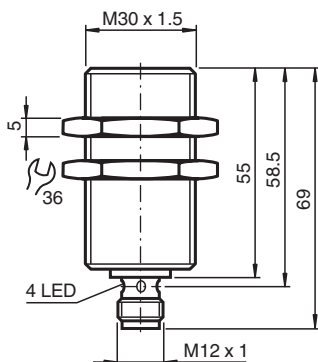
# Inductive sensor

## NBB10-30GM50-E2-T-V1

- Extended temperature range
- 10 mm flush



### Dimensions



### Technical Data

#### General specifications

|                              |       |                                                                             |
|------------------------------|-------|-----------------------------------------------------------------------------|
| Switching function           |       | Normally open (NO)                                                          |
| Output type                  |       | PNP                                                                         |
| Rated operating distance     | $s_n$ | 10 mm                                                                       |
| Installation                 |       | flush                                                                       |
| Output polarity              |       | DC                                                                          |
| Assured operating distance   | $s_a$ | 0 ... 8.1 mm                                                                |
| Actuating element            |       | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>30 mm x 30 mm x 1 mm |
| Reduction factor $r_{Al}$    |       | 0.4                                                                         |
| Reduction factor $r_{Cu}$    |       | 0.3                                                                         |
| Reduction factor $r_{304}$   |       | 0.7                                                                         |
| Reduction factor $r_{Brass}$ |       | 0.4                                                                         |
| Output type                  |       | 3-wire                                                                      |

#### Nominal ratings

|                         |       |             |
|-------------------------|-------|-------------|
| Installation conditions |       |             |
| B                       |       | 25 mm       |
| C                       |       | 16 mm       |
| F                       |       | 37 mm       |
| Operating voltage       | $U_B$ | 10 ... 65 V |

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

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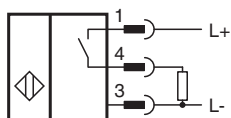
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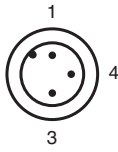
## Technical Data

|                                                 |                |                                 |
|-------------------------------------------------|----------------|---------------------------------|
| Switching frequency                             | f              | 0 ... 300 Hz                    |
| Hysteresis                                      | H              | 0.05 ... 2.2 mm                 |
| Reverse polarity protection                     |                | yes                             |
| Short-circuit protection                        |                | yes                             |
| Overload resistance                             |                | yes                             |
| Wire breakage protection                        |                | yes                             |
| Inductive overvoltage protection                |                | yes                             |
| Surge suppression                               |                | yes                             |
| Ripple                                          |                | 10 %                            |
| Voltage drop                                    | U <sub>d</sub> | ≤ 2.5 V                         |
| Repeat accuracy                                 | R              | 0.3 mm                          |
| Operating current                               | I <sub>L</sub> | 0 ... 300 mA                    |
| Off-state current                               | I <sub>r</sub> | ≤ 0.01 mA                       |
| No-load supply current                          | I <sub>0</sub> | ≤ 10 mA                         |
| Time delay before availability                  | t <sub>v</sub> | ≤ 40 ms                         |
| Switching state indicator                       |                | Multihole-LED, yellow           |
| <b>Functional safety related parameters</b>     |                |                                 |
| 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>Ambient conditions</b>                       |                |                                 |
| Ambient temperature                             |                | -25 ... 100 °C (-13 ... 212 °F) |
| Storage temperature                             |                | -40 ... 100 °C (-40 ... 212 °F) |
| <b>Mechanical specifications</b>                |                |                                 |
| Connection type                                 |                | Connector plug                  |
| Housing material                                |                | brass, nickel-plated            |
| Sensing face                                    |                | PBT                             |
| Degree of protection                            |                | IP67                            |
| Connector                                       |                |                                 |
| Threading                                       |                | M12 x 1                         |
| Number of pins                                  |                | 3                               |
| Mass                                            |                | 115 g                           |
| Dimensions                                      |                |                                 |
| Length                                          |                | 69 mm                           |
| Diameter                                        |                | 30 mm                           |

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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