



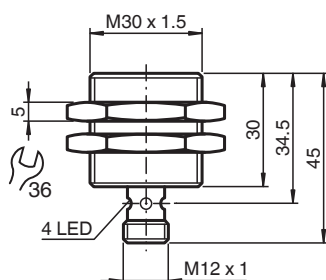
## Inductive proximity switches

NBB10-30GM30-E0-T-V1-Y263235

- Extended temperature range
- 10 mm flush



### Dimensions



### Technical Data

#### General specifications

|                              |       |                                                                             |
|------------------------------|-------|-----------------------------------------------------------------------------|
| Switching function           |       | Normally open (NO)                                                          |
| Output type                  |       | NPN                                                                         |
| 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                                                                         |

#### Nominal ratings

|                         |  |       |
|-------------------------|--|-------|
| Installation conditions |  |       |
| B                       |  | 25 mm |
| C                       |  | 16 mm |

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

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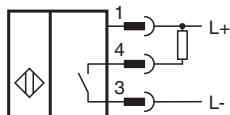
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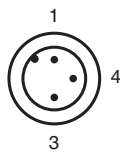
## Technical Data

|                                                 |       |                                                                                                                                                              |
|-------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F                                               |       | 37 mm                                                                                                                                                        |
| Operating voltage                               | $U_B$ | 10 ... 30 V                                                                                                                                                  |
| 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                                    | $U_d$ | $\leq 2.5$ V                                                                                                                                                 |
| Repeat accuracy                                 | R     | 0.3 mm                                                                                                                                                       |
| Operating current                               | $I_L$ | 0 ... 200 mA up to 85 °C, above this temperature max 150 mA                                                                                                  |
| Off-state current                               | $I_r$ | $\leq 0.01$ mA                                                                                                                                               |
| No-load supply current                          | $I_0$ | $\leq 7$ mA                                                                                                                                                  |
| Time delay before availability                  | $t_v$ | $\leq 40$ ms                                                                                                                                                 |
| Switching state indicator                       |       | Multihole-LED, yellow                                                                                                                                        |
| <b>Functional safety related parameters</b>     |       |                                                                                                                                                              |
| Mission Time ( $T_M$ )                          |       | 20 a                                                                                                                                                         |
| Diagnostic Coverage (DC)                        |       | 0 %                                                                                                                                                          |
| <b>Compliance with standards and directives</b> |       |                                                                                                                                                              |
| Standard conformity                             |       |                                                                                                                                                              |
| Standards                                       |       | EN 60947-5-2:2007<br>IEC 60947-5-2:2007                                                                                                                      |
| <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 M12 x 1 , 3-pin                                                                                                                                    |
| Housing material                                |       | brass, nickel-plated                                                                                                                                         |
| Sensing face                                    |       | PBT                                                                                                                                                          |
| Degree of protection                            |       | IP67                                                                                                                                                         |
| Mass                                            |       | 80 g                                                                                                                                                         |
| <b>General information</b>                      |       |                                                                                                                                                              |
| Note                                            |       | The sensor can be operated at ambient temperatures of up to 120 °C for short periods (<30 minutes). In such cases, the output load capacity drops to 100 mA. |

## Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

|                                                                                   |               |                                       |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------|
|  | <b>BF 30</b>  | Mounting flange, 30 mm                |
|  | <b>EXG-30</b> | Quick mounting bracket with dead stop |

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