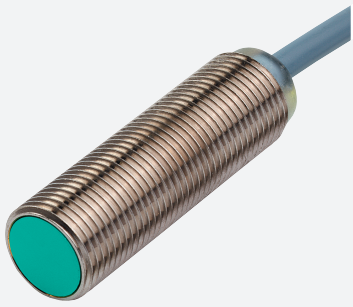


# Inductive sensor

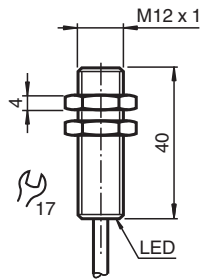
## NBB2-12GS40-Z4L-3G-3D



- 2 mm flush
- 2-wire DC sensor with minimum off-state current
- Switching status indicator, yellow LED
- ATEX-/IECEX-approvals for zone 2/22 (Ex ec/tc)
- Stainless steel housing



### Dimensions



### Technical Data

#### General specifications

|                            |       |   |
|----------------------------|-------|---|
| Switching function         |       | Normally open (NO)                      |
| Output type                |       | Two-wire with minimum off-state current |
| Rated operating distance   | $s_n$ | 2 mm                                    |
| Installation               |       | flush                                   |
| Output polarity            |       | DC                                      |
| Assured operating distance | $s_a$ | 0 ... 1.62 mm                           |
| Actual operating distance  | $s_r$ | 1.8 ... 2.2 mm typ.                     |
| Reduction factor $r_{AI}$  |       | 0.3                                     |
| Reduction factor $r_{Cu}$  |       | 0.17                                    |
| Reduction factor $r_{304}$ |       | 0.7                                     |
| Output type                |       | 2-wire                                  |

#### Nominal ratings

|                             |       |                   |
|-----------------------------|-------|-------------------|
| Operating voltage           | $U_B$ | 4 ... 30 V        |
| Switching frequency         | $f$   | 0 ... 700 Hz      |
| Hysteresis                  | $H$   | 1 ... 10 typ. 5 % |
| Reverse polarity protection |       | yes               |

Release date: 2022-06-20 Date of issue: 2022-06-20 Filename: 70134926-0001\_eng.pdf

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

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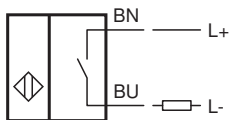
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**PF** PEPPERL+FUCHS

## Technical Data

|   |       |   |
|---|-------|---|
| Short-circuit protection                        |       | pulsing   |
| Voltage drop                                    | $U_d$ | $\leq 4$ V  |
| Operating current                               | $I_L$ | 2 ... 30 mA   |
| Lowest operating current                        | $I_m$ | 2 mA  |
| Off-state current                               | $I_r$ | $\leq 200$ $\mu$ A  |
| Switching state indicator                       |       | all direction LED, yellow   |
| <b>Functional safety related parameters</b>     |       |   |
| MTTF <sub>d</sub>                               |       | 1558 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>               |       |   |
| IECEX approval                                  |       |   |
| Equipment protection level Gc (ec)              |       | IECEX TUR 21.0017X  |
| Equipment protection level Dc (tc)              |       | IECEX TUR 21.0018X  |
| ATEX approval                                   |       |   |
| Equipment protection level Gc (ec)              |       | TÜV 20 ATEX 8523 X  |
| Equipment protection level Dc (tc)              |       | TÜV 20 ATEX 8524 X  |
| UL approval                                     |       | cULus Listed, General Purpose, Class 2 Power Source   |
| <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                              |       | 0.14 mm <sup>2</sup>  |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303   |
| Sensing face                                    |       | PBT   |
| Degree of protection                            |       | IP67  |
| Mass  |       | 47 g  |
| <b>General information</b>                      |       |   |
| Scope of delivery                               |       | 2 self locking nuts in scope of delivery  |

## Connection



## Accessories

|   |              |                        |
|---|--------------|------------------------|
|  | <b>BF 12</b> | Mounting flange, 12 mm |
|---|--------------|------------------------|