

## Inductive sensor

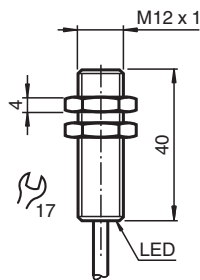
### NBB2-12GS40-Z4L-3G-3D



- 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                 |

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

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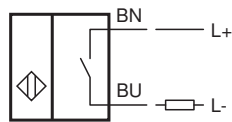
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 **PEPPERL+FUCHS**

## Technical Data

|                                                 |       |                                                     |
|-------------------------------------------------|-------|-----------------------------------------------------|
| Short-circuit protection                        |       | pulsing                                             |
| Voltage drop                                    | $U_d$ | $\leq 4 \text{ V}$                                  |
| Operating current                               | $I_L$ | 2 ... 30 mA                                         |
| Lowest operating current                        | $I_m$ | 2 mA                                                |
| Off-state current                               | $I_r$ | $\leq 200 \mu\text{A}$                              |
| 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 IEC 60947-5-2                                    |
| <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 |
| KCC approval                                    |       |                                                     |
| Hazardous Location                              |       | 23-AV4BO-0236X                                      |
| <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                                               |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303                   |
| Sensing face                                    |       | PBT                                                 |
| Degree of protection                            |       | IP67                                                |
| Cable                                           |       |                                                     |
| Wire end ferrules                               |       | yes                                                 |
| Cable diameter                                  |       | 3 mm $\pm$ 0.2 mm                                   |
| Bending radius                                  |       | > 10 x cable diameter                               |
| Material                                        |       | PVC                                                 |
| Color                                           |       | grey                                                |
| Number of cores                                 |       | 2                                                   |
| Core cross section                              |       | 0.14 mm <sup>2</sup>                                |
| Length                                          | L     | 2 m                                                 |
| Mass                                            |       | 55 g                                                |
| Dimensions                                      |       |                                                     |
| Length                                          |       | 40 mm                                               |
| Diameter                                        |       | 12 mm                                               |
| <b>General information</b>                      |       |                                                     |
| Scope of delivery                               |       | 2 self locking nuts in scope of delivery            |
| Use in the hazardous area                       |       | see instruction manuals                             |

Connection



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