

# Inductive sensor

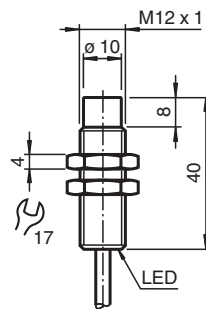
## NBN4-12GS40-Z4L



- 4 mm non-flush
- 2-wire DC sensor with minimum off-state current
- Switching status indicator, yellow LED
- 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    | $s_n$ | 4 mm                                    |
| Installation                |       | non-flush                               |
| Output polarity             |       | DC                                      |
| Assured operating distance  | $s_a$ | 0 ... 3.24 mm                           |
| Actual operating distance   | $s_r$ | 3.6 ... 4.4 mm typ.                     |
| Reduction factor $r_{AI}$   |       | 0.4                                     |
| Reduction factor $r_{Cu}$   |       | 0.36                                    |
| 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".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## 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>                               |       | 1536 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>               |       |                                                                            |
| UL approval                                     |       | cULus Listed, General Purpose, Class 2 Power Source                        |
| CCC approval                                    |       | CCC approval / marking not required for products rated $\leq 36 \text{ V}$ |
| <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                                 |       | cable                                                                      |
| Housing material                                |       | Stainless steel 1.4305 / AISI 303                                          |
| Sensing face                                    |       | PBT                                                                        |
| Degree of protection                            |       | IP67                                                                       |
| <b>Cable</b>                                    |       |                                                                            |
| Wire end ferrules                               |       | yes                                                                        |
| Cable diameter                                  |       | 2.8 mm $\pm$ 0.1 mm                                                        |
| Bending radius                                  |       | > 10 x cable diameter                                                      |
| Material                                        |       | PUR                                                                        |
| Color                                           |       | black                                                                      |
| Number of cores                                 |       | 2                                                                          |
| Core cross section                              |       | 0.14 mm <sup>2</sup>                                                       |
| Length                                          | L     | 2 m                                                                        |
| Mass                                            |       | 46 g                                                                       |
| <b>Dimensions</b>                               |       |                                                                            |
| Length                                          |       | 40 mm                                                                      |
| Diameter                                        |       | 12 mm                                                                      |
| <b>General information</b>                      |       |                                                                            |
| Scope of delivery                               |       | 2 self locking nuts in scope of delivery                                   |

## Connection

