



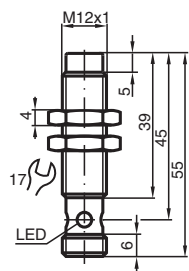
# Inductive sensor

## NBN4-12GM40-Z3-V1

- 4 mm non-flush
- 2-wire DC



## Dimensions



## Technical Data

### General specifications

|                            |       |                     |
|----------------------------|-------|---------------------|
| Switching function         |       | Normally open (NO)  |
| Output type                |       | Two-wire            |
| 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 $r_{AI}$  |       | 0.37                |
| Reduction factor $r_{Cu}$  |       | 0.36                |
| Reduction factor $r_{304}$ |       | 0.74                |
| Output type                |       | 2-wire              |

### Nominal ratings

|                             |       |                           |
|-----------------------------|-------|---------------------------|
| Operating voltage           | $U_B$ | 5 ... 60 V                |
| Switching frequency         | $f$   | 0 ... 1000 Hz             |
| Hysteresis                  | $H$   | 1 ... 10 % typ. 5 %       |
| Reverse polarity protection |       | reverse polarity tolerant |

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

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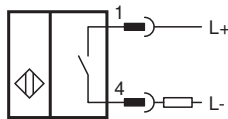
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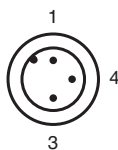
# Technical Data

|                                                 |       |                                                   |
|-------------------------------------------------|-------|---------------------------------------------------|
| Short-circuit protection                        |       | pulsing                                           |
| Voltage drop                                    | $U_d$ | $\leq 5\text{ V}$                                 |
| Operating current                               | $I_L$ | 2 ... 100 mA                                      |
| Lowest operating current                        | $I_m$ | 2 mA                                              |
| Off-state current                               | $I_r$ | 0 ... 0.5 mA typ.                                 |
| Switching state indicator                       |       | Multihole-LED, yellow                             |
| <b>Functional safety related parameters</b>     |       |                                                   |
| MTTF <sub>d</sub>                               |       | 2300 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                     |
| CCC approval                                    |       | Certified by China Compulsory Certification (CCC) |
| <b>Ambient conditions</b>                       |       |                                                   |
| Ambient temperature                             |       | -25 ... 70 °C (-13 ... 158 °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                                            |       | 26 g                                              |
| Dimensions                                      |       |                                                   |
| Length                                          |       | 40 mm                                             |
| Diameter                                        |       | 12 mm                                             |

# Connection



# Connection Assignment



## Connection Assignment

Wire colors in accordance with EN 60947-5-2

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