

## Inductive sensor

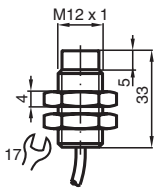
### NJ4-12GM-N



- 4 mm non-flush
- Usable up to SIL 2 acc. to IEC 61508
- NAMUR output
- Stainless steel housing



## Dimensions



## Technical Data

### General specifications

|                            |       |                      |
|----------------------------|-------|----------------------|
| Switching function         |       | Normally closed (NC) |
| Output type                |       | NAMUR                |
| Rated operating distance   | $s_n$ | 4 mm                 |
| Installation               |       | non-flush            |
| Assured operating distance | $s_a$ | 0 ... 3.24 mm        |
| Reduction factor $r_{AI}$  |       | 0.4                  |
| Reduction factor $r_{Cu}$  |       | 0.3                  |
| Reduction factor $r_{304}$ |       | 0.85                 |
| Output type                |       | 2-wire               |

### Nominal ratings

|                              |       |                                      |
|------------------------------|-------|--------------------------------------|
| Nominal voltage              | $U_o$ | 8.2 V ( $R_i$ approx. 1 k $\Omega$ ) |
| Switching frequency          | $f$   | 0 ... 1500 Hz                        |
| Hysteresis                   | $H$   | 3 %                                  |
| Current consumption          |       |                                      |
| Measuring plate not detected |       | min. 3 mA                            |
| Measuring plate detected     |       | $\leq 1$ mA                          |

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

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## Technical Data

### Functional safety related parameters

|                                |         |
|--------------------------------|---------|
| Safety Integrity Level (SIL)   | SIL 2   |
| MTTF <sub>d</sub>              | 11774 a |
| Mission Time (T <sub>M</sub> ) | 20 a    |
| Diagnostic Coverage (DC)       | 0 %     |

### Compliance with standards and directives

|                     |                                         |
|---------------------|-----------------------------------------|
| Standard conformity |                                         |
| NAMUR               | EN 60947-5-6:2000<br>IEC 60947-5-6:1999 |
| Standards           | EN IEC 60947-5-2                        |

### Approvals and certificates

|                               |                               |
|-------------------------------|-------------------------------|
| IECEX approval                |                               |
| Equipment protection level Ga | IECEX PTB 11.0037X            |
| Equipment protection level Gb | IECEX PTB 11.0037X            |
| Equipment protection level Da | IECEX PTB 11.0037X            |
| Equipment protection level Mb | IECEX PTB 11.0037X            |
| ATEX approval                 |                               |
| Equipment protection level Ga | PTB 00 ATEX 2048 X            |
| Equipment protection level Gb | PTB 00 ATEX 2048 X            |
| Equipment protection level Da | PTB 00 ATEX 2048 X            |
| UL approval                   | cULus Listed, General Purpose |
| Ordinary Location             | E87056                        |
| Hazardous Location            | E501628                       |
| Control drawing               | 116-0452                      |
| CCC approval                  |                               |
| Hazardous Location            | 2020322315002255              |
| CML approval                  | on request                    |
| ANZEx                         | 18.3018X                      |
| KCC approval                  |                               |
| Hazardous Location            | 19-AV4BO-0227                 |
| Marine approval               | DNVGL TAA00001A5              |

### Ambient conditions

|                     |                                 |
|---------------------|---------------------------------|
| Ambient temperature | -25 ... 100 °C (-13 ... 212 °F) |
|---------------------|---------------------------------|

### Mechanical specifications

|                      |                                   |
|----------------------|-----------------------------------|
| Connection type      | cable                             |
| Housing material     | Stainless steel 1.4305 / AISI 303 |
| Sensing face         | PBT                               |
| Degree of protection | IP67                              |
| Cable                |                                   |
| Cable diameter       | 4.8 mm ± 0.2 mm                   |
| Bending radius       | > 10 x cable diameter             |
| Material             | PVC                               |
| Core cross section   | 0.34 mm <sup>2</sup>              |
| Length               | L 2 m                             |
| Dimensions           |                                   |
| Length               | 33 mm                             |
| Diameter             | 12 mm                             |

### General information

|                           |                         |
|---------------------------|-------------------------|
| Use in the hazardous area | see instruction manuals |
|---------------------------|-------------------------|

## Connection

