

# Inductive sensor

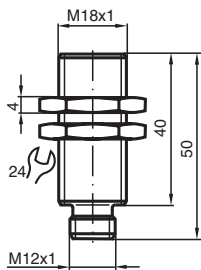
## NJ5-18GM-N-V1



- 5 mm 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   | $s_n$ | 5 mm                 |
| Installation               |       | flush                |
| Assured operating distance | $s_a$ | 0 ... 4.05 mm        |
| Reduction factor $r_{AI}$  |       | 0.21                 |
| Reduction factor $r_{Cu}$  |       | 0.18                 |
| Reduction factor $r_{304}$ |       | 0.63                 |
| Output type                |       | 2-wire               |

#### Nominal ratings

|                              |       |                                      |
|------------------------------|-------|--------------------------------------|
| Nominal voltage              | $U_o$ | 8.2 V ( $R_i$ approx. 1 k $\Omega$ ) |
| Operating voltage            | $U_B$ | 5 ... 25 V                           |
| Switching frequency          | $f$   | 0 ... 500 Hz                         |
| Hysteresis                   | $H$   | 3 %                                  |
| Current consumption          |       |                                      |
| Measuring plate not detected |       | $\geq 3$ mA at nominal voltage       |

Release date: 2024-10-09 Date of issue: 2024-10-09 Filename: 70133064\_eng.pdf

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

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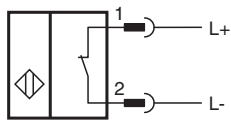
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## Technical Data

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| Measuring plate detected                        | ≤ 1 mA at nominal voltage               |
| <b>Functional safety related parameters</b>     |                                         |
| Safety Integrity Level (SIL)                    | SIL 2                                   |
| MTTF <sub>d</sub>                               | 4566 a                                  |
| Mission Time (T <sub>M</sub> )                  | 20 a                                    |
| Diagnostic Coverage (DC)                        | 0 %                                     |
| <b>Compliance with standards and directives</b> |                                         |
| Standard conformity                             |                                         |
| NAMUR                                           | EN 60947-5-6:2000<br>IEC 60947-5-6:1999 |
| Standards                                       | EN IEC 60947-5-2                        |
| <b>Approvals and certificates</b>               |                                         |
| 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                                     |                                         |
| 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                        |
| <b>Ambient conditions</b>                       |                                         |
| Ambient temperature                             | -25 ... 100 °C (-13 ... 212 °F)         |
| <b>Mechanical specifications</b>                |                                         |
| Connection type                                 | Connector plug                          |
| Housing material                                | Stainless steel 1.4305 / AISI 303       |
| Sensing face                                    | PBT                                     |
| Degree of protection                            | IP66 / IP67                             |
| Connector                                       |                                         |
| Threading                                       | M12 x 1                                 |
| Number of pins                                  | 4                                       |
| Dimensions                                      |                                         |
| Length                                          | 50 mm                                   |
| Diameter                                        | 18 mm                                   |
| <b>General information</b>                      |                                         |
| Use in the hazardous area                       | see instruction manuals                 |

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Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-6

|   |  |    |         |
|---|--|----|---------|
| 1 |  | BN | (brown) |
| 2 |  | BU | (blue)  |

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