

# Inductive sensor

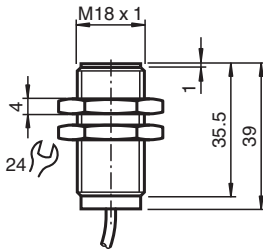
## NJ5-18GK-SN



- 5 mm flush
- Usable up to SIL 3 acc. to IEC 61508
- Degree of protection IP68
- ATEX-/IECEx-approvals for zone 0/1/20/21 (Ex i)
- ATEX-/IECEx-approvals for zone 2/22 (Ex ec/tc)



### Dimensions



### Technical Data

| General specifications       |       |   |
|------------------------------|-------|---|
| Switching function           |       | Normally closed (NC)  |
| Output type                  |       | NAMUR with safety function  |
| Rated operating distance     | $s_n$ | 5 mm  |
| Installation                 |       | flush   |
| Assured operating distance   | $s_a$ | 0 ... 4.05 mm   |
| Reduction factor $r_{AI}$    |       | 0.4   |
| Reduction factor $r_{Cu}$    |       | 0.3   |
| Reduction factor $r_{304}$   |       | 0.85  |
| Safety Integrity Level (SIL) |       | up to SIL3 acc. to IEC 61508 <b>Danger!</b> In safety-related applications the sensor must be operated with a qualified fail safe interface from Pepperl+Fuchs, such as KFD2-SH-EX1. Consider the "exida Functional Safety Assessment" document which is available on <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> as an integral part of this product's documentation. |
| Output type                  |       | 2-wire  |
| Nominal ratings              |       |   |
| Nominal voltage              | $U_o$ | 8.2 V ( $R_f$ approx. 1 k $\Omega$ )  |
| Switching frequency          | $f$   | 0 ... 500 Hz  |
| Current consumption          |       |   |

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## Technical Data

|   |   |  |
|---|---|--|
| Measuring plate not detected                    |   | ≥ 3 mA   |
| Measuring plate detected                        |   | ≤ 1 mA   |
| <b>Functional safety related parameters</b>     |   |  |
| Safety Integrity Level (SIL)                    |   | SIL 3  |
| MTTF <sub>d</sub>                               |   | 11850 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 11.0092X                                       |
| Equipment protection level Gb                   |   | IECEX PTB 11.0092X                                       |
| Equipment protection level Gc (ec)              |   | IECEX TUR 21.0017X                                       |
| Equipment protection level Da                   |   | IECEX PTB 11.0092X                                       |
| Equipment protection level Dc (tc)              |   | IECEX TUR 21.0018X                                       |
| Equipment protection level Mb                   |   | IECEX PTB 11.0092X                                       |
| ATEX approval                                   |   |  |
| Equipment protection level Ga                   |   | PTB 00 ATEX 2049 X                                       |
| Equipment protection level Gb                   |   | PTB 00 ATEX 2049 X                                       |
| Equipment protection level Gc (ec)              |   | TÜV 20 ATEX 8523 X                                       |
| Equipment protection level Da                   |   | PTB 00 ATEX 2049 X                                       |
| Equipment protection level Dc (tc)              |   | TÜV 20 ATEX 8524 X                                       |
| UL approval                                     |   |  |
| Ordinary Location                               |   | E87056   |
| Hazardous Location                              |   | E501628  |
| Control drawing                                 |   | 116-0454   |
| CCC approval                                    |   |  |
| Hazardous Location                              |   | 2020322315002308<br>2024322315005947<br>2024322315005860 |
| <b>Ambient conditions</b>                       |   |  |
| Ambient temperature                             |   | -40 ... 100 °C (-40 ... 212 °F)                          |
| <b>Mechanical specifications</b>                |   |  |
| Connection type                                 |   | cable  |
| Housing material                                |   | Crastin (PBT), black                                     |
| Sensing face                                    |   | Crastin (PBT), black                                     |
| Degree of protection                            |   | IP68   |
| Cable   |   |  |
| Cable diameter                                  |   | 6 mm ± 0.2 mm  |
| Bending radius                                  |   | > 10 x cable diameter                                    |
| Material  |   | silicone   |
| Core cross section                              |   | 0.75 mm <sup>2</sup>                                     |
| Length  | L | 2 m  |
| Dimensions                                      |   |  |
| Length  |   | 39 mm  |
| Diameter  |   | 18 mm  |
| <b>General information</b>                      |   |  |
| Scope of delivery                               |   | Supplied with 2 nuts                                     |
| Use in the hazardous area                       |   | see instruction manuals                                  |

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## Connection Assignment



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## Application

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