

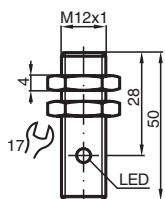


# Inductive sensor NJ2-12GM40-E-V1

■ 2 mm flush



## Dimensions



## Technical Data

| General specifications      |       |                            |
|-----------------------------|-------|----------------------------|
| Switching function          |       | Normally open (NO)         |
| Output type                 |       | NPN                        |
| Rated operating distance    | $s_n$ | 2 mm                       |
| Installation                |       | flush                      |
| Output polarity             |       | DC                         |
| Assured operating distance  | $s_a$ | 0 ... 1.62 mm              |
| Actual operating distance   | $s_r$ | 1.8 ... 2.2 mm typ.        |
| Reduction factor $r_{AI}$   |       | 0.23                       |
| Reduction factor $r_{Cu}$   |       | 0.21                       |
| Reduction factor $r_{304}$  |       | 0.7                        |
| Output type                 |       | 3-wire                     |
| Nominal ratings             |       |                            |
| Operating voltage           | $U_B$ | 10 ... 60 V                |
| Switching frequency         | $f$   | 0 ... 3000 Hz              |
| Hysteresis                  | $H$   | 1 ... 10 % typ. 3 %        |
| Reverse polarity protection |       | reverse polarity protected |

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

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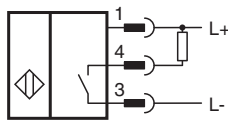
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Technical Data

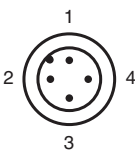
|                                                           |       |                                                                                    |
|-----------------------------------------------------------|-------|------------------------------------------------------------------------------------|
| Short-circuit protection                                  |       | pulsing                                                                            |
| Voltage drop                                              | $U_d$ | $\leq 3\text{ V}$                                                                  |
| Voltage drop at $I_L$                                     |       |                                                                                    |
| Voltage drop $I_L = 100\text{ mA}$ , switching element on | $U_d$ | $1.2 \dots 2.5\text{ V}$                                                           |
| Operating current                                         | $I_L$ | $0 \dots 200\text{ mA}$                                                            |
| No-load supply current                                    | $I_o$ | $\leq 11\text{ mA}$                                                                |
| Time delay before availability                            | $t_v$ | $\leq 20\text{ ms}$                                                                |
| Switching state indicator                                 |       | LED, yellow                                                                        |
| Functional safety related parameters                      |       |                                                                                    |
| MTTF <sub>d</sub>                                         |       | 1200 a                                                                             |
| Mission Time ( $T_M$ )                                    |       | 20 a                                                                               |
| Diagnostic Coverage (DC)                                  |       | 0 %                                                                                |
| Compliance with standards and directives                  |       |                                                                                    |
| Standard conformity                                       |       |                                                                                    |
| Standards                                                 |       | EN IEC 60947-5-2                                                                   |
| Approvals and certificates                                |       |                                                                                    |
| UL approval                                               |       | cULus Listed, General Purpose                                                      |
| CCC approval                                              |       | Certified by China Compulsory Certification (CCC)                                  |
| Ambient conditions                                        |       |                                                                                    |
| Ambient temperature                                       |       | $-25 \dots 70\text{ }^{\circ}\text{C}$ ( $-13 \dots 158\text{ }^{\circ}\text{F}$ ) |
| Storage temperature                                       |       | $-40 \dots 85\text{ }^{\circ}\text{C}$ ( $-40 \dots 185\text{ }^{\circ}\text{F}$ ) |
| Mechanical specifications                                 |       |                                                                                    |
| Connection type                                           |       | Connector plug                                                                     |
| Housing material                                          |       | Stainless steel 1.4305 / AISI 303                                                  |
| Sensing face                                              |       | PBT                                                                                |
| Degree of protection                                      |       | IP67                                                                               |
| Connector                                                 |       |                                                                                    |
| Threading                                                 |       | M12 x 1                                                                            |
| Number of pins                                            |       | 4                                                                                  |
| Dimensions                                                |       |                                                                                    |
| Length                                                    |       | 50 mm                                                                              |
| Diameter                                                  |       | 12 mm                                                                              |
| General information                                       |       |                                                                                    |
| Scope of delivery                                         |       | 2 self locking nuts in scope of delivery                                           |

Connection



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Connection Assignment



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |

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