



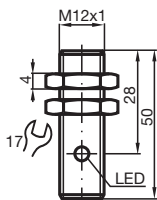
# Inductive sensor

## 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 $r_{Al}$  |       | 0.23                |
| Reduction factor $r_{Cu}$  |       | 0.21                |
| Reduction factor $r_{304}$ |       | 0.7                 |
| Nominal ratings            |       |                     |
| Operating voltage          | $U_B$ | 10 ... 60 V         |

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

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**PEPPERL+FUCHS**

## Technical Data

|                                                   |       |                            |
|---------------------------------------------------|-------|----------------------------|
| Switching frequency                               | f     | 0 ... 3000 Hz              |
| Hysteresis                                        | H     | 1 ... 10 typ. 3 %          |
| Reverse polarity protection                       |       | reverse polarity protected |
| Short-circuit protection                          |       | pulsing                    |
| Voltage drop                                      | $U_d$ | $\leq 3$ V                 |
| Voltage drop at $I_L$                             |       |                            |
| Voltage drop $I_L = 100$ mA, switching element on | $U_d$ | 1.2 ... 2.5 V              |
| Operating current                                 | $I_L$ | 0 ... 200 mA               |
| No-load supply current                            | $I_0$ | $\leq 11$ mA               |
| Time delay before availability                    | $t_v$ | $\leq 20$ 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 60947-5-2:2007<br>IEC 60947-5-2:2007 |

### Approvals and certificates

|              |  |                                                   |
|--------------|--|---------------------------------------------------|
| UL approval  |  | cULus Listed, General Purpose                     |
| CSA approval |  | cCSAus Listed, General Purpose                    |
| CCC approval |  | Certified by China Compulsory Certification (CCC) |

### Ambient conditions

|                     |  |                                |
|---------------------|--|--------------------------------|
| Ambient temperature |  | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature |  | -40 ... 85 °C (-40 ... 185 °F) |

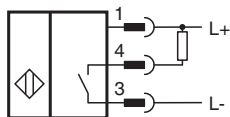
### Mechanical specifications

|                      |  |                                   |
|----------------------|--|-----------------------------------|
| Connection type      |  | Connector M12 x 1 , 4-pin         |
| Housing material     |  | Stainless steel 1.4305 / AISI 303 |
| Sensing face         |  | PBT                               |
| Degree of protection |  | IP67                              |

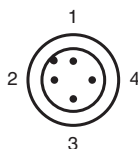
### General information

|                   |  |                                          |
|-------------------|--|------------------------------------------|
| Scope of delivery |  | 2 self locking nuts in scope of delivery |
|-------------------|--|------------------------------------------|

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

|                                                                                   |                    |                                       |
|-----------------------------------------------------------------------------------|--------------------|---------------------------------------|
|  | <b>BF 12</b>       | Mounting flange, 12 mm                |
|  | <b>EXG-12</b>      | Quick mounting bracket with dead stop |
|  | <b>V1-G-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |
|  | <b>V1-W-2M-PUR</b> | Female cordset, M12, 4-pin, PUR cable |

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