

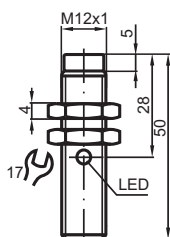


# Inductive sensor NJ4-12GM40-E2-V1

■ 4 mm non-flush



## Dimensions



## Technical Data

### General specifications

|                            |       |                     |
|----------------------------|-------|---------------------|
| Switching function         |       | Normally open (NO)  |
| Output type                |       | PNP                 |
| Rated operating distance   | $s_n$ | 4 mm                |
| Installation               |       | non-flush           |
| Output polarity            |       | DC                  |
| Assured operating distance | $s_a$ | 0 ... 3.24 mm       |
| Actual operating distance  | $s_r$ | 3.6 ... 4.4 mm typ. |
| Reduction factor $r_{AI}$  |       | 0.37                |
| Reduction factor $r_{Cu}$  |       | 0.36                |
| Reduction factor $r_{304}$ |       | 0.74                |

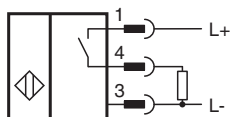
### Nominal ratings

|                   |       |             |
|-------------------|-------|-------------|
| Operating voltage | $U_B$ | 10 ... 60 V |
|-------------------|-------|-------------|

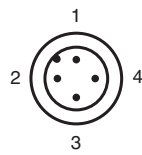
## Technical Data

|                                                   |       |                                                   |
|---------------------------------------------------|-------|---------------------------------------------------|
| Switching frequency                               | f     | 0 ... 2000 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                                      |
| Off-state current                                 | $I_r$ | $\leq 0.5$ mA                                     |
| No-load supply current                            | $I_0$ | $\leq 9$ mA                                       |
| Time delay before availability                    | $t_v$ | $\leq 20$ ms                                      |
| Switching state indicator                         |       | LED, yellow                                       |
| <b>Functional safety related parameters</b>       |       |                                                   |
| MTTF <sub>d</sub>                                 |       | 750 a                                             |
| Mission Time ( $T_M$ )                            |       | 20 a                                              |
| Diagnostic Coverage (DC)                          |       | 0 %                                               |
| <b>Compliance with standards and directives</b>   |       |                                                   |
| Standard conformity                               |       |                                                   |
| Standards                                         |       | EN 60947-5-2:2007<br>IEC 60947-5-2:2007           |
| <b>Approvals and certificates</b>                 |       |                                                   |
| EAC conformity                                    |       | TR CU 020/2011                                    |
| UL approval                                       |       | cULus Listed, General Purpose                     |
| CSA approval                                      |       | cCSAus Listed, General Purpose                    |
| CCC approval                                      |       | Certified by China Compulsory Certification (CCC) |
| <b>Ambient conditions</b>                         |       |                                                   |
| Ambient temperature                               |       | -25 ... 70 °C (-13 ... 158 °F)                    |
| Storage temperature                               |       | -40 ... 85 °C (-40 ... 185 °F)                    |
| <b>Mechanical specifications</b>                  |       |                                                   |
| Connection type                                   |       | Connector M12 x 1 , 4-pin                         |
| Housing material                                  |       | Stainless steel 1.4305 / AISI 303                 |
| Sensing face                                      |       | PBT                                               |
| Degree of protection                              |       | IP67                                              |
| <b>General information</b>                        |       |                                                   |
| 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>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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