

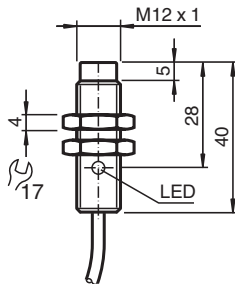
# Inductive sensor NJ4-12GM40-E3



■ 4 mm non-flush



## Dimensions



## Technical Data

### General specifications

|                            |       |                      |
|----------------------------|-------|----------------------|
| Switching function         |       | Normally closed (NC) |
| 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                 |
| Output type                |       | 3-wire               |

### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 10 ... 60 V                |
| Switching frequency         | $f$   | 0 ... 2000 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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**PEPPERL+FUCHS**

## 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                                     | $I_0$ | $\leq 9 \text{ mA}$                                                              |
| Time delay before availability                             | $t_v$ | $\leq 20 \text{ ms}$                                                             |
| 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 IEC 60947-5-2                                                                 |
| <b>Approvals and certificates</b>                          |       |                                                                                  |
| UL approval                                                |       | cULus Listed, General Purpose                                                    |
| CCC approval                                               |       | Certified by China Compulsory Certification (CCC)                                |
| <b>Ambient conditions</b>                                  |       |                                                                                  |
| Ambient temperature                                        |       | $-25 \dots 70 \text{ }^\circ\text{C}$ ( $-13 \dots 158 \text{ }^\circ\text{F}$ ) |
| Storage temperature                                        |       | $-40 \dots 85 \text{ }^\circ\text{C}$ ( $-40 \dots 185 \text{ }^\circ\text{F}$ ) |
| <b>Mechanical specifications</b>                           |       |                                                                                  |
| Connection type                                            |       | cable                                                                            |
| Housing material                                           |       | Stainless steel 1.4305 / AISI 303                                                |
| Sensing face                                               |       | PBT                                                                              |
| Degree of protection                                       |       | IP67                                                                             |
| <b>Cable</b>                                               |       |                                                                                  |
| Wire end ferrules                                          |       | yes                                                                              |
| Cable diameter                                             |       | $4.8 \text{ mm} \pm 0.2 \text{ mm}$                                              |
| Bending radius                                             |       | $> 10 \times \text{cable diameter}$                                              |
| Material                                                   |       | PUR                                                                              |
| Color                                                      |       | black                                                                            |
| Number of cores                                            |       | 3                                                                                |
| Core cross section                                         |       | $0.34 \text{ mm}^2$                                                              |
| Length                                                     | $L$   | 2 m                                                                              |
| <b>Dimensions</b>                                          |       |                                                                                  |
| Length                                                     |       | 40 mm                                                                            |
| Diameter                                                   |       | 12 mm                                                                            |
| <b>General information</b>                                 |       |                                                                                  |
| Scope of delivery                                          |       | 2 self locking nuts in scope of delivery                                         |

## Connection Assignment

