



Model Number

NCN4-12GM40-Z0-3G-3D

Features

- 4 mm non-flush
- ATEX-approval for zone 2 and zone 22

Accessories

BF 12

Mounting flange, 12 mm

Technical Data

General specifications

| | | |
|----------------------------|-------|---------------------|
| Switching function | | Normally open (NO) |
| Output type | | Two-wire |
| 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_{A1} | | 0.42 |
| Reduction factor r_{Cu} | | 0.4 |
| Reduction factor r_{304} | | 0.75 |
| Output type | | 2-wire |

Nominal ratings

| | | |
|-----------------------------|-------|---------------------------|
| Operating voltage | U_B | 5 ... 60 V DC |
| Switching frequency | f | 0 ... 800 Hz |
| Hysteresis | H | 1 ... 10 typ. 5 % |
| Reverse polarity protection | | reverse polarity tolerant |
| Short-circuit protection | | pulsing |
| Voltage drop | U_d | ≤ 5 V |
| Operating current | I_L | 2 ... 100 mA |
| Lowest operating current | I_m | 2 mA |
| Off-state current | I_r | 0 ... 0.5 mA typ. |
| Switching state indicator | | all direction LED, yellow |

Functional safety related parameters

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| MTTF _d | 2020 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Ambient conditions

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|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--------------------------------|

Mechanical specifications

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|----------------------|-----------------------------------|
| Connection type | cable PVC, 2 m |
| Core cross-section | 0.14 mm ² |
| Housing material | Stainless steel 1.4305 / AISI 303 |
| Sensing face | PBT |
| Degree of protection | IP67 |
| Cable | |

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| Cable diameter | 3 mm ± 0.2 mm |
| Bending radius | > 10 x cable diameter |

General information

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|---------------------------|-------------------------|
| Use in the hazardous area | see instruction manuals |
| Category | 3G; 3D |

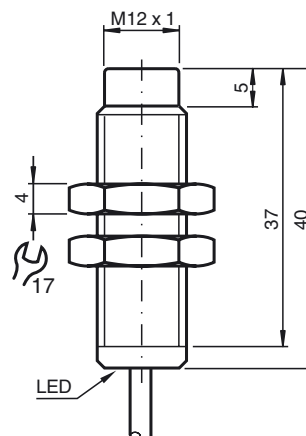
Compliance with standards and directives

| | |
|---------------------|---|
| Standard conformity | |
| Standards | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 |

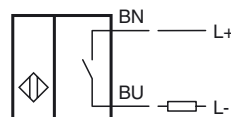
Approvals and certificates

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

Dimensions



Electrical Connection



Equipment protection level Gc (nA)

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|-------------|-----------------|
| Certificate | PF 15CERT3754 X |
| CE marking | CE |

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| ATEX marking | Ex II 3G Ex nA IIC T6 Gc The Ex-related marking can also be printed on the enclosed label. |
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| Standards | EN 60079-0:2012+A11:2013, EN 60079-15:2010 Ignition protection category "n" Use is restricted to the following stated conditions |
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Special conditions

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| Maximum operating current I_L | The maximum permissible load current must be restricted to the values given in the following list. High load currents and load short-circuits are not permitted. |
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| Maximum operating voltage U_{Bmax} | The maximum permissible operating voltage U_{Bmax} is restricted to the values in the following list. Tolerances are not permissible. |
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| Maximum permissible ambient temperature T_{Umax} | dependant of the load current I_L and the max. operating voltage U_{Bmax} Information can be taken from the following list. |
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| at $U_{Bmax}=60\text{ V}$, $I_L=100\text{ mA}$ | 38 °C (100.4 °F) |
|---|------------------|

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|--|------------------|
| at $U_{Bmax}=60\text{ V}$, $I_L=50\text{ mA}$ | 52 °C (125.6 °F) |
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|--|------------------|
| at $U_{Bmax}=60\text{ V}$, $I_L=25\text{ mA}$ | 61 °C (141.8 °F) |
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Equipment protection level Dc (tc)

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| CE marking | CE |
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| ATEX marking | Ex II 3D Ex tc IIIC T80°C Dc The Ex-related marking can also be printed on the enclosed label. |
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| Standards | EN 60079-0:2012+A11:2013, EN 60079-31:2014 Protection by enclosure "tc" Some of the information in this instruction manual is more specific than the information provided in the datasheet. |
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| General | The corresponding datasheets, declarations of conformity, EC-type examination certificates, certifications, and control drawings, where applicable (see datasheets), form an integral part of this document. These documents can be found at www.pepperl-fuchs.com . The maximum surface temperature of the device was determined without a layer of dust on the apparatus. Some of the information in this instruction manual is more specific than the information provided in the datasheet. |
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Special conditions

| | |
|--|--|
| Maximum permissible ambient temperature T_{Umax} | dependant of the load current I_L and the max. operating voltage U_{Bmax} Information can be taken from the following list. |
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