

Model Number

NJ2-12GK-N

Features

- 2 mm flush
- Usable up to SIL 2 acc. to IEC 61508

Accessories

BF 12

Mounting flange, 12 mm

Technical Data

General specifications

| | | |
|----------------------------|-------|----------------------|
| Switching function | | Normally closed (NC) |
| Output type | | NAMUR |
| Rated operating distance | s_n | 2 mm |
| Installation | | flush |
| Assured operating distance | s_a | 0 ... 1.62 mm |
| Reduction factor r_{AI} | | 0.4 |
| Reduction factor r_{Cu} | | 0.3 |
| Reduction factor r_{304} | | 0.85 |
| Output type | | 2-wire |

Nominal ratings

| | | |
|------------------------------|-------|---|
| Nominal voltage | U_o | 8.2 V (R_i approx. 1 k Ω) |
| Switching frequency | f | 0 ... 2000 Hz |
| Suitable for 2:1 technology | | yes, Reverse polarity protection diode not required |
| Current consumption | | |
| Measuring plate not detected | | ≥ 3 mA |
| Measuring plate detected | | ≤ 1 mA |

Functional safety related parameters

| | | |
|--------------------------|--|--------|
| MTTF _d | | 5887 a |
| Mission Time (T_M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |

Ambient conditions

| | | |
|---------------------|--|---------------------------------|
| Ambient temperature | | -25 ... 100 °C (-13 ... 212 °F) |
|---------------------|--|---------------------------------|

Mechanical specifications

| | | |
|----------------------|--|-----------------------|
| Connection type | | cable PVC, 2 m |
| Core cross-section | | 0,34 mm ² |
| Housing material | | PBT |
| Sensing face | | PBT |
| Degree of protection | | IP66 / IP68 |
| Cable | | |
| Cable diameter | | 4.8 mm \pm 0.2 mm |
| Bending radius | | > 10 x cable diameter |

General information

| | | |
|---------------------------|--|-------------------------|
| Use in the hazardous area | | see instruction manuals |
| Category | | 2G; 1D |

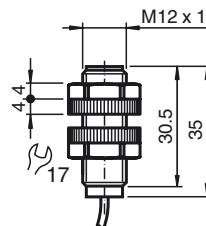
Compliance with standards and directives

| | | |
|---------------------|--|---|
| Standard conformity | | |
| NAMUR | | EN 60947-5-6:2000 IEC 60947-5-6:1999 |
| Standards | | EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 |

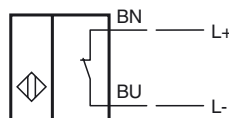
Approvals and certificates

| | | |
|-----------------|--|--|
| EAC conformity | | TR CU 012/2011 |
| FM approval | | |
| Control drawing | | 116-0165 |
| UL approval | | cULus Listed, General Purpose |
| CSA approval | | cCSAus Listed, General Purpose |
| CCC approval | | CCC approval / marking not required for products rated ≤ 36 V |

Dimensions



Electrical Connection



Equipment protection level Gb

| | | |
|--|--|--|
| CE marking | CE 0102 | |
| ATEX marking | II 2G Ex ia IIC T6...T1 Gb The Ex-related marking can also be printed on the enclosed label. | |
| Standards | EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions | |
| Appropriate type | NJ 2-12GK-N... | |
| Effective internal capacitance C_i | $\leq 45 \text{ nF}$; a cable length of 10 m is considered. | |
| Effective internal inductance L_i | $\leq 50 \text{ }\mu\text{H}$; a cable length of 10 m is considered. | |
| Maximum permissible ambient temperature T_{amb} | Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate. | |

Equipment protection level Da

| | | |
|--|--|--|
| CE marking | CE 0102 | |
| ATEX marking | II 1D Ex ia IIC T135°C Da The Ex-related marking can also be printed on the enclosed label. | |
| Standards | EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions | |
| Appropriate type | NJ 2-12GK-N... | |
| Effective internal capacitance C_i | $\leq 45 \text{ nF}$; a cable length of 10 m is considered. | |
| Effective internal inductance L_i | $\leq 50 \text{ }\mu\text{H}$; a cable length of 10 m is considered. | |
| Maximum permissible ambient temperature T_{amb} | Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the surface temperature, and the effective internal reactance values can be found on the EC-type-examination certificate. The maximum permissible ambient temperature of the data sheet must be noted, in addition, the lower of the two values must be maintained. | |