



Model Number

NJ5-18GM-N

Features

- **Comfort series**
- **5 mm flush**
- **Usable up to SIL 2 acc. to IEC 61508**

Accessories

BF 18

Mounting flange, 18 mm

EXG-18

Quick mounting bracket with dead stop

Technical Data

General specifications

| | |
|----------------------------|----------------------|
| Switching function | Normally closed (NC) |
| Output type | NAMUR |
| Rated operating distance | s_n 5 mm |
| Installation | flush |
| Assured operating distance | s_a 0 ... 4.05 mm |
| Reduction factor r_{AI} | 0.21 |
| Reduction factor r_{Cu} | 0.18 |
| Reduction factor r_{304} | 0.63 |
| Output type | 2-wire |

Nominal ratings

| | | |
|---------------------|-------|--------------------------------------|
| Nominal voltage | U_o | 8.2 V (R_i approx. 1 k Ω) |
| Operating voltage | U_B | 5 ... 25 V |
| Switching frequency | f | 0 ... 500 Hz |
| Hysteresis | H | 3 % |

Current consumption

| | |
|------------------------------|--------------------------------|
| Measuring plate not detected | ≥ 3 mA at nominal voltage |
| Measuring plate detected | ≤ 1 mA at nominal voltage |

Functional safety related parameters

| | |
|--------------------------|---------|
| MTTF _d | 14110 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 | 0.75 mm ² |
| Housing material | Stainless steel 1.4305 / AISI 303 |
| Sensing face | PBT |
| Degree of protection | IP66 / IP67 |
| Cable | |
| Bending radius | > 10 x cable diameter |

General information

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

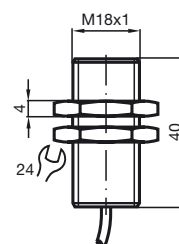
Compliance with standards and directives

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

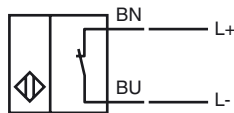
Approvals and certificates

| | |
|-----------------|--|
| 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 Ga

| | | |
|--------------------------------|---|---|
| CE marking | CE 0102 | |
| ATEX marking | Ex II 1G Ex ia IIC T6...T1 Ga 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 5-18GM-N... | |
| Effective internal capacitance | C_i | $\leq 70 \text{ nF}$; 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. |
| Ambient temperature | 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. Note: Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. | |

Equipment protection level Gb

| | | |
|---|--|---|
| CE marking | CE 0102 | |
| ATEX marking | Ex II 1G Ex ia IIC T6...T1 Ga 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 5-18GM-N... | |
| Effective internal capacitance | C_i | $\leq 70 \text{ nF}$; 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 | Ex II 1D Ex ia IIIC 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 5-18GM-N... | |
| Effective internal capacitance | C_i | $\leq 70 \text{ nF}$; 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. | |