



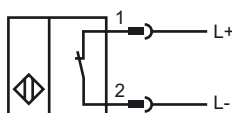
Model Number

NJ5-18GM-N-V1

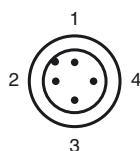
Features

- Comfort series
- 5 mm embeddable
- Usable up to SIL2 acc. to IEC 61508

Connection



Pinout



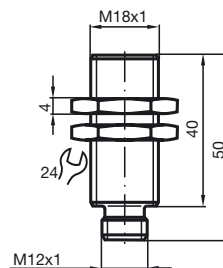
Wire colors in accordance with EN 60947-5-6

- | | | | |
|---|--|----|---------|
| 1 | | BN | (brown) |
| 2 | | BU | (blue) |

Accessories

- V1-G**
4-pin, M12 female field-attachable connector
- V1-W**
4-pin, M12 female field-attachable connector
- V1-G-N-2M-PUR**
Cable socket, M12, 2-pin, NAMUR, PUR cable
- V1-W-N-2M-PUR**
Cable socket, M12, 2-pin, NAMUR, PUR cable
- BF 18**
Mounting flange, 18 mm
- EXG-18**
Quick mounting bracket with dead stop

Dimensions



Technical Data

General specifications

Switching element function		NAMUR, NC
Rated operating distance	s_n	5 mm
Installation		embeddable
Output polarity		NAMUR
Assured operating distance	s_a	0 ... 4.05 mm
Reduction factor r_{AI}		0.21
Reduction factor r_{Cu}		0.18
Reduction factor r_{303}		0.63

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
Measuring plate detected		≤ 1 mA

Ambient conditions

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

Connection type	Device connector M12 x 1 , 4-pin
Housing material	Stainless steel
Sensing face	PBT
Protection degree	IP67

General information

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

Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

FM approval	
Control drawing	116-0165F
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of ≤ 36 V do not bear a CCC marking because they do not require approval.

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ATEX 1G

Instruction

Device category 1G

Directive conformity
Standard conformity

CE symbol

Ex-identification

EC-Type Examination Certificate
Appropriate type
Effective internal capacitance C_i
Effective internal inductance L_i
General

Highest permissible ambient temperature

Installation, Commissioning

Maintenance

Special conditions

Protection from mechanical danger

Electrostatic charging

Manual electrical apparatus for hazardous areasfor use in hazardous areas with gas, vapour and mist
94/9/EGEN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007
Ignition protection "Intrinsic safety"
Use is restricted to the following stated conditions
 0102

 II 1G Ex ia IIC T6

PTB 00 ATEX 2048 X

NJ 5-18GM-N...

≤ 70 nF ; a cable length of 10 m is considered.

≤ 50 μH ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.

The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions.

The use in ambient temperatures of > 60 °C was tested with regard to hot surfaces by the mentioned certification authority.

If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate. Note: Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1:2007 has already been accounted for in the temperature table for category 1.

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety. The associated apparatus must satisfy the requirements of category "ia" and have electrical isolation between the power supply and signal circuits.

The sensor must be protected from strong electromagnetic fields.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.

Electrostatic charges must be avoided on the mechanical housing components. Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding.

ATEX 2G

Instruction

Device category 2G

Directive conformity

Standard conformity

CE symbol

Ex-identification

EC-Type Examination Certificate

Appropriate type

Effective internal capacitance C_i Effective internal inductance L_i

General

Highest permissible ambient temperature

Installation, Commissioning

Maintenance

Special conditions

Protection from mechanical danger

Electrostatic charging

Manual electrical apparatus for hazardous areas

for use in hazardous areas with gas, vapour and mist

94/9/EG

EN 60079-0:2006, EN 60079-11:2007

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

 0102

 II 1G Ex ia IIC T6

PTB 00 ATEX 2048 X

NJ 5-18GM-N...

≤ 70 nF ; a cable length of 10 m is considered.

≤ 50 μH ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

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