



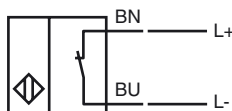
Model Number

NJ1,5-8GM-N

Features

- 1.5 mm flush
- Usable up to SIL2 acc. to IEC 61508

Connection

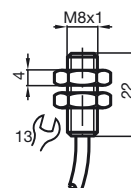


Accessories

BF 8

Mounting flange, 8 mm

Dimensions



Technical Data

General specifications

Switching element function		NAMUR, NC
Rated operating distance	s_n	1.5 mm
Installation		flush
Output polarity		NAMUR
Assured operating distance	s_a	0 ... 1.215 mm
Reduction factor r_{AI}		0.4
Reduction factor r_{Cu}		0.3
Reduction factor r_{304}		0.85

Nominal ratings

Nominal voltage	U_o	8.2 V (R_i approx. 1 k Ω)
Switching frequency	f	0 ... 5000 Hz
Hysteresis	H	1 ... 10 typ. 5 %
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

Ambient conditions

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

Connection type		cable PVC, 2 m
Core cross-section		0.14 mm ²
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Protection degree		IP66 / 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.

ATEX 1G

Instruction	Manual electrical apparatus for hazardous areas
Device category 1G	for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	EN 60079-0:2009, EN 60079-11:2007, EN 60079-26:2007
	Ignition protection "Intrinsic safety"
	Use is restricted to the following stated conditions
CE marking	 0102
Ex-identification	 II 1G Ex ia IIC T6 Ga
EC-Type Examination Certificate	PTB 00 ATEX 2048 X
Appropriate type	NJ 1,5-8GM-N...
Effective internal capacitance C_i	≤ 30 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 50 μ H ; a cable length of 10 m is considered.
Cable length	Dangerous electrostatic charges on the fixed connection cable must be taken into account for lengths equal to and exceeding the following values:
	13 cm
Explosion group IIC	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.
General	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.
Highest permissible ambient temperature	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.
Installation, Commissioning	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.
	Due to the possible danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation of the power supply and signal circuit is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
Specific conditions	
Protection from mechanical danger	When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.
Electrostatic charging	Electrostatic charges on the metal housing components must be avoided. Dangerous electrostatic charges on the metal housing components can be avoided by incorporating these components in the equipotential bonding.

ATEX 2G

Instruction

Device category 2G

Directive conformity

Standard conformity

CE marking

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

Specific 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 60079-0:2009, EN 60079-11:2007

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

 0102

 II 1G Ex ia IIC T6 Ga

PTB 00 ATEX 2048 X

NJ 1,5-8GM-N...

 ≤ 30 nF ; a cable length of 10 m is considered. ≤ 50 μ H ; 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.

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 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.