



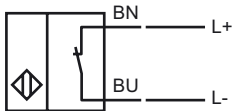
**Model Number**

NJ4-12GK-SN-Y197959

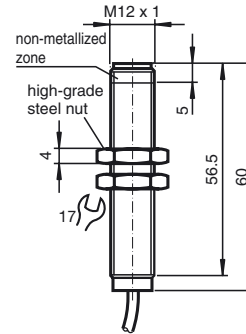
**Features**

- 4 mm not embeddable
- Usable up to SIL 3 acc. to IEC 61508

**Connection**



**Dimensions**



**Technical Data**

**General specifications**

Switching element function	NAMUR, NC
Rated operating distance	$s_n$ 4 mm
Installation	not embeddable
Output polarity	Safety Function
Assured operating distance	$s_a$ 0 ... 3.24 mm
Reduction factor $r_{AI}$	0.4
Reduction factor $r_{Cu}$	0.3
Reduction factor $r_{V2A}$	0.85

**Nominal ratings**

Nominal voltage	$U_o$ 8 V
Switching frequency	$f$ 0 ... 1500 Hz
Current consumption	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA

**Ambient conditions**

Ambient temperature	-40 ... 100 °C (-40 ... 212 °F)
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**Mechanical specifications**

Connection type	cable silicon , 3 m
Core cross-section	0.34 mm <sup>2</sup>
Housing material	PP
Sensing face	PP
Protection degree	IP68
Note	nuts, 1.4305 / AISI 303

**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**

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose

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**ATEX 1G**

Instruction

**Manual electrical apparatus for hazardous areas**

Device category 1G

for use in hazardous areas with gas, vapour and mist  
94/9/EG

Directive conformity

EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007

Standard conformity

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

CE symbol

 0102

Ex-identification

 II 1G Ex ia IIC T6

The Ex-significant identification is on the enclosed adhesive label

EC-Type Examination Certificate

PTB 00 ATEX 2049 X

Appropriate type

NJ 4-12GK-SN...

Effective internal capacitance  $C_i$  $\leq 70$  nF ; a cable length of 10 m is considered.Effective internal inductance  $L_i$  $\leq 150$   $\mu$ 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:

Explosion group IIA

96 cm

Explosion group IIB

48 cm

Explosion group IIC

7 cm

General

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!

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.

The adhesive label provided must be affixed in the immediate vicinity of the sensor!

The surface to which the label is applied must be clean, flat and free from grease!

The affixed adhesive label must be readable and durable, taking account of the possibility of chemical corrosion!

Maintenance

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

**Special 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

When used in group IIC non-permissible electrostatic charges should be avoided on the plastic housing parts.

**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

**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 2049 X

NJ 4-12GK-SN...

 $\leq 70$  nF ; a cable length of 10 m is considered. $\leq 150$   $\mu$ 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!

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.

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.