



CE  
0102

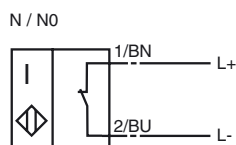
### Model Number

NJ5-18GK-N

### Features

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

### Connection

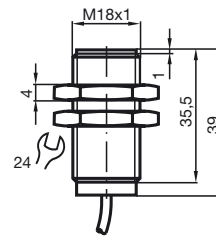


### Accessories

#### BF 18

Mounting flange

## 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 $r_{AI}$	0.4
Reduction factor $r_{Cu}$	0.3
Reduction factor $r_{V2A}$	0.85

### Nominal ratings

Nominal voltage	$U_o$ 8 V
Switching frequency	$f$ 0 ... 500 Hz
Hysteresis	$H$ 1 ... 10 typ. 5 %

### Current consumption

Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA

### Standard conformity

EMC in accordance with	IEC / EN 60947-5-2:2004
Standards	DIN EN 60947-5-6 (NAMUR)

### Ambient conditions

Ambient temperature	-25 ... 100 °C (248 ... 373 K)
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### Mechanical specifications

Connection type	2 m, PVC cable
Core cross-section	0.75 mm <sup>2</sup>
Housing material	PBT/PPS
Sensing face	PBT
Protection degree	IP68

### General information

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

**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 50014:1997, EN 50020:1994

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

C  0102 II 2G EEx ia IIC T6

PTB 00 ATEX 2048 X

NJ 5-18GK-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 94/9EG 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.

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.

**ATEX 1D**

Instruction

**Device category 1D**

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

Maximum housing surface temperature

Installation, Commissioning

Maintenance

[Fett]Special conditions

Electrostatic charging

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with combustible dust

94/9/EG

IEC 61241-11:2002: draft; prEN61241-0:2002

type of protection intrinsic safety "iD"

Use is restricted to the following stated conditions

CE 0102

Ex II 1D Ex iaD 20 T 108 °C

ZELM 03 ATEX 0128 X

NJ 5-18GK-N...

 $\leq 70$  nF ; a cable length of 10 m is considered. $\leq 50$   $\mu$ 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 maximum surface temperature of the housing is 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 associated apparatus must satisfy at least the requirements of category IIB or iaD. Because of the possibility of the danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation in the power supply and signal circuits is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.

The intrinsically safe circuit has to be protected against influences due to lightning.

When used in the isolating wall between Zone 20 and Zone 21 or Zone 21 und Zone 22 the sensor must not be exposed to any mechanical danger and must be sealed in such a way, that the protective function of the isolating wall is not impaired. The applicable directives and standards must be observed.

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

The connection cables are to be laid in accordance with EN 50281-1-2 and must not normally be subjected to chaffing during use.