



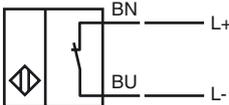
Model Number

NJ5-18GK-N-150

Features

- 5 mm flush
- Temperature range
-40 ... 150 °C (-40 ... 302 °F)

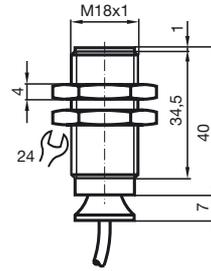
Connection



Matching system components

NJ5-18GK-N-150+KCD
Inductive proximity switches

Dimensions



Technical Data

General specifications

Switching element function		NAMUR, NC
Rated operating distance	s_n	5 mm
Installation		flush
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_{304}		0.85

Nominal ratings

Nominal voltage	U_o	8.2 V (R_i approx. 1 k Ω)
Switching frequency	f	0 ... 500 Hz
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA

Functional safety related parameters

MTTF _d	4542 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-40 ... 150 °C (-40 ... 302 °F)
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Mechanical specifications

Connection type	cabl SIHF , 2 m
Core cross-section	0.34 mm ²
Housing material	PPS
Sensing face	PPS
Protection degree	IP65

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
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

ATEX 1G

Instruction

Device category 1G
 Directive conformity
 Standard conformity

CE marking

Ex-identification

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

Explosion group IIA
 Explosion group IIB
 Explosion group IIC
 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, EN 60079-26:2007
 Ignition protection "Intrinsic safety"
 Use is restricted to the following stated conditions
 C E 0102

 II 1G Ex ia IIC T6 Ga

PTB 00 ATEX 2048 X
 NJ5-18GK-N-150...

≤ 70 nF ; a cable length of 10 m is considered.
 ≤ 50 μ H ; a cable length of 10 m is considered.

Dangerous electrostatic charges on the fixed connection cable must be taken into account for lengths equal to and exceeding the following values:

96 cm
 48 cm
 7 cm

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.

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.

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.

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 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

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

NJ5-18GK-N-150...

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