



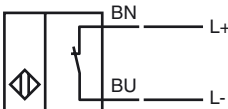
### Model Number

NJ2-12GK-SN-Y18111

### Features

- 2 mm flush

### Connection



### Application

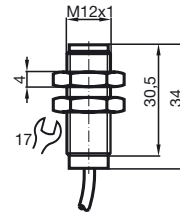


#### Danger!

In safety-related applications the sensor must be operated with a qualified fail safe interface from

Pepperl+Fuchs, such as KFD2-SH-EX1. Consider the "exida Functional Safety Assessment" document which is available on [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com) as an integral part of this product's documentation.

### Dimensions



### Technical Data

#### General specifications

Switching element function	NAMUR, NC
Rated operating distance	$s_n$ 2 mm
Installation	flush
Output polarity	Safety Function
Assured operating distance	$s_a$ 0 ... 1.62 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 V
Operating voltage	$U_B$ 5 ... 25 V <sup>1)</sup>
Switching frequency	$f$ 0 ... 2000 Hz
Current consumption	
Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA

#### Functional safety related parameters

MTTF <sub>d</sub>	7660 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

#### Ambient conditions

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

Connection type	cable silicon, 2 mm
Core cross-section	0.34 mm <sup>2</sup>
Housing material	PBT-GF20, Crastin SK 643 FR
Sensing face	black
Protection degree	PBT-GF20, Crastin SK 643 FR
Sensing face	black
Protection degree	IP68

#### General information

Use in the hazardous area	see instruction manuals
Category	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

**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 2G Ex ia IIC T6 Gb

PTB 00 ATEX 2049 X

NJ 2-12GK-SN...

 $\leq 50$  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.