









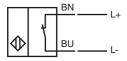
## **Model Number**

NJ0,8-4,5-N

# **Features**

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

## Connection

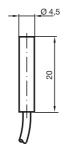


# **Accessories**

BF 4,5

Mounting flange, 4.5 mm

## **Dimensions**



# **Technical Data**

General specifications			
Switching element function		NAMUR, NC	
Rated operating distance	s <sub>n</sub>	0.8 mm	
Installation		flush	
Output polarity		NAMUR	
Assured operating distance	sa	0 0.65 mm	
Reduction factor r <sub>Al</sub>		0.4	
Reduction factor r <sub>Cu</sub>		0.3	
Reduction factor rook		0.85	

rieduction factor [A]		0.4
Reduction factor r <sub>Cu</sub>		0.3
Reduction factor r <sub>304</sub>		0.85
Iominal ratings		
Nominal voltage	Uo	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Operating voltage	U <sub>B</sub>	5 25 V
0 11 11 1	,	0 500011

0 ... 5000 Hz typ. 5 % Switching frequency Hysteresis Suitable for 2:1 technology yes , Reverse polarity protection diode not required Current consumption

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

Functional safety related parameters

 $MTTF_d$ 1050 a Mission Time (T<sub>M</sub>)
Diagnostic Coverage (DC) 20 a 0 %

Ambient conditions

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

Mechanical specifications

Connection type cable PVC , 2 m 0.14 mm<sup>2</sup> Core cross-section Housing material Stainless steel 1.4305 / AISI 303

Sensing face Protection degree IP67

General information Use in the hazardous area see instruction manuals

Category 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.

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### ATEX 2G

Instruction

### Device category 2G

Directive conformity Standard conformity

CE marking

General

Ex-identification

EC-Type Examination Certificate Appropriate type Effective internal capacitance Ci Effective internal inductance L

Highest permissible ambient temperature

Installation, Comissioning

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 **C**€0102

⟨ II 2G Ex ia IIC T6 Gb

PTB 00 ATEX 2048 X

NJ 0,8-4,5-N...

≤ 30 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!

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.

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.