



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_n	0.8 mm
Installation		flush
Output polarity		NAMUR
Assured operating distance	s_a	0 ... 0.65 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)
Operating voltage	U_B	5 ... 25 V
Switching frequency	f	0 ... 5000 Hz
Hysteresis	H	typ. 5 %
Suitable for 2:1 technology		yes, Reverse polarity protection diode not required
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA

Functional safety related parameters

MTTF _d	1050 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

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

Connection type	cable PVC, 2 m
Core cross-section	0.14 mm ²
Housing material	Stainless steel 1.4305 / AISI 303
Sensing face	PBT
Protection degree	IP67

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

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.

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

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

CE 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. ≤ 50 μ 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.