

Inductive sensor

NJ2-11-SN



- 2 mm flush
- Usable up to SIL 3 acc. to IEC 61508
- ATEX approval Ex-i and Ex-nA/tc for zone 0-2 and zone 20-22
- Degree of protection IP68



Dimensions



Technical Data

General specifications

Switching function		Normally closed (NC)
Output type		NAMUR with safety function
Rated operating distance	s_n	2 mm
Installation		flush
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
Safety Integrity Level (SIL)		up to SIL3 acc. to IEC 61508 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 as an integral part of this product's documentation.
Output type		2-wire

Nominal ratings

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Nominal voltage	U_o	8.2 V (R_i approx. 1 k Ω)
Switching frequency	f	0 ... 3000 Hz
Suitable for 2:1 technology		yes , with reverse polarity protection diode
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
MTTF _d		10660 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
NAMUR		EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards		EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
Approvals and certificates		
IECEX approval		
Equipment protection level Ga		IECEX PTB 11.0092X
Equipment protection level Gb		IECEX PTB 11.0092X
Equipment protection level Da		IECEX PTB 11.0092X
Equipment protection level Mb		IECEX PTB 11.0092X
ATEX approval		
Equipment protection level Ga		PTB 00 ATEX 2049 X
Equipment protection level Gb		PTB 00 ATEX 2049 X
Equipment protection level Gc (nA)		PF15CERT3754X
Equipment protection level Da		PTB 00 ATEX 2049 X
Equipment protection level Dc (tc)		PF15CERT3774X
FM approval		
Control drawing		116-0165
UL approval		
Ordinary Location		cULus Listed, General Purpose E87056
Hazardous Location		E501628
Control drawing		116-0454
CCC approval		
Hazardous Location		2020322315002308
NEPSI approval		
NEPSI certificate		GYJ16.1392X
Ambient conditions		
Ambient temperature		-40 ... 100 °C (-40 ... 212 °F)
Mechanical specifications		
Connection type		cable silicone , 2 m
Core cross-section		0.34 mm ²
Housing material		Valox (PBT) , black
Sensing face		Valox (PBT) , black
Degree of protection		IP68
Cable		
Bending radius		> 10 x cable diameter
General information		
Use in the hazardous area		see instruction manuals

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Connection



Accessories

	BF 11	Mounting flange, 11 mm
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Application

**Danger!**

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