



Model Number

NJ2-11-N-G

Features

- 2 mm flush ٠
- Usable up to SIL 2 acc. to IEC 61508 •

Technical Data		
General specifications		
Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	Sn	2 mm
Installation	-11	flush
Assured operating distance	S ₂	0 1.62 mm
Actual operating distance	S _r	1.8 2.2 mm
Reduction factor r		0.4
Reduction factor r _{Cu}		0.3
Reduction factor r ₃₀₄		0.85
Output type		2-wire
Nominal ratings		
Nominal voltage	U_	8.2 V (R _i approx. 1 kΩ)
Switching frequency	f	0 3000 Hz
Hysteresis	Н	0.5 3.5 typ. 2 %
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤1 mA
Functional safety related parameter	ers	
MTTEd		5887 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Ambient conditions		
Ambient temperature		-25 100 °C (-13 212 °E)
Mechanical specifications		
Connection type		cable PV/C 2 m
Core cross-section		0.34 mm^2
Housing material		Stainless steel 1 /305 / AISI 303
Sensing face		PI/DE
Degree of protection		IP68
Cable		
Bending radius		> 10 x cable diameter
General information		
		and the state of the second
Use in the nazardous area		see instruction manuals
Category		TG; 2G; 3G; TD; 3D
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		116-0165
UL approval		cULus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤3

Dimensions

-	 M14 x 1
19	

CCC approval / marking not required for products rated \leq 36 V

Electrical Connection



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

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Equipment protection level Ga		
CE marking	€0102	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety"	
Clandardo	Use is restricted to the following stated conditions	
Appropriate type	NJ 2-11-N-G	
Effective internal inductivity C _i	\leq 30 nF ; a cable length of 10 m is considered.	
Effective internal inductance L _i	\leq 50 μH ; a cable length of 10 m is considered.	
Ambient temperature	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate	3
	Note: Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1 has already	
	been applied to the temperature table for category 1.	
Equipment protection level Gb		
CE marking	C€ 0102	
-		
ATEX marking	(b) II 1G Ex ia IIC T6T1 Ga The Ex-related marking can also be printed on the enclosed label.	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety"	
Appropriate type	NJ 2-11-N-G	
Effective internal inductivity C _i	\leq 30 nF ; a cable length of 10 m is considered.	
Effective internal inductance Li	\leq 50 μ H ; a cable length of 10 m is considered.	
Maximum permissible ambient temperature T_{amb}	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the	э
	temperature class, and the effective internal reactance values can be found on the EC-type examination certificate	•
Equipment protection level Gc (ic)		
Certificate	PF 13 CERT 2895 X	
CE marking	(6	
ATEX marking	(F) II 3G Ex ic IIC T6 T1 Gc	
ALEA Marking	The Ex-significant identification is on the enclosed adhesive label	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following	
	stated conditions	
Effective internal inductivity C _i	≤ 30 nF ; a cable length of 10 m is considered.	
Effective internal inductance L _i	\leq 50 μ H ; A cable length of 10 m is considered.	
Special conditions		
for Pi=34 mW, li=25 mA, T6	55 °C (131 °F)	
for Pi=34 mW, li=25 mA, T5	55 °C (131 °F)	
for Pi=34 mW, li=25 mA, T4-T1	55 °C (131 °F)	
for Pi=64 mW, li=25 mA, T6	55 °C (131 °F)	
for Pi=64 mW, li=25 mA, T5	55 °C (131 °F)	
for Pi=64 mW, li=25 mA, T4-T1	55 °C (131 °F)	
for Pi=169 mW, li=52 mA, T6	52 °C (125.6 °F)	
for Pi=169 mW, li=52 mA, T5	52 °C (125.6 °F)	
for Pi=169 mW, li=52 mA, T4-T1	52 °C (125.6 °F)	
for Pi=242 mW, li=76 mA, T6	44 °C (111.2 °F)	
for Pi=242 mW, li=76 mA, T5	44 °C (111.2 °F)	
for PI=242 mW, II=76 mA, 14-11	44 °C (111.2 °F)	
Equipment protection level Gc (nL)		
Standard conformity	EN 60079-15:2005 Ignition protection category "n"	
	Use is restricted to the following stated conditions	
Effective internal capacitance C _i	\leq 30 nF; a cable length of 10 m is considered.	
General	\leq 50 μ m, a cable length of 10 m is considered.	
General	The data stated in the data sheet are restricted by this operating instruction!	•
	The special conditions must be observed!	Ε
	If you use the device outside atmospheric conditions, consider that the permissible safety parameters should be	x.pu
	reduced.	78 e
Special conditions		063
for PI=34 mW, II=25 mA, T6		- 9
TOT PI=34 MW, II=25 MA, 15)2-1(
101 PI=34 IIIW, II=25 MA, 14-11	55 °C (131 °E)	18-0
$101 \text{ F}_{1}=04 \text{ IIIV}, 11=25 \text{ IIIA}, 16$ for Pi-64 m/V/ 11=25 mA T5	55 °C (131 °F)	a: 20
for Pi=64 mW li=25 mA T4-T1	55 °C (131 °F)	issue
for Pi=169 mW. li=52 mA T6	52 °C (125.6 °F)	e of
for Pi=169 mW. li=52 mA. T5	52 °C (125.6 °F)	Dat
for Pi=169 mW, li=52 mA. T4-T1	52 °C (125.6 °F)	37
for Pi=242 mW, li=76 mA, T6	44 °C (111.2 °F)	3 17:
for Pi=242 mW, li=76 mA, T5	44 °C (111.2 °F)	-1-06
for Pi=242 mW, li=76 mA, T4-T1	44 °C (111.2 °F)	16-1
		3: 20
		date
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Equipment protection level Da						
CE marking	C€0102					
ATEX marking	🐵 II 1D Ex ia IIIC T135°C Da The Ex-related marking can also be printed on the enclosed label.					
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions					
Appropriate type	NJ 2-11-N-G					
Effective internal inductivity C _i	\leq 30 nF ; a cable length of 10 m is considered.					
Effective internal inductance L _i	\leq 50 μH ; a cable length of 10 m is considered.					
Maximum permissible ambient temperature T _{amb}	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the surface temperature, and the effective internal reactance values can be found on the EC-type-examination certificate. The maximum permissible ambient temperature of the data sheet must be noted, in addition, the lower of the two values must be maintained.					
Equipment protection level Dc (tD)						
General	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The maximum surface temperature has been determined in accordance with method A without a dust layer on the equipment. The data stated in the data sheet are restricted by this operating instruction! The special conditions must be adhered to!					
Special conditions						
Minimum series resistance R_{V}	A minimum series resistance RV is to be provided between the power supply voltage and the proximity switch in accordance with the following list. This can also be assured by using a switch amplifier.					
Maximum permissible ambient temperature T_{Umax}	Values can be obtained from the following list, depending on the max. operating voltage Ub max and the minimum series resistance Rv.					
at U _{Bmax} =9 V, R _V =562 Ω	61 °C (141.8 °F)					
using an amplifier in accordance with EN 60947	- 61 °C (141.8 °F)					

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