

CE
0102



Model Number

NJ2-11-N-G-Y132813

Features

- Comfort series
- 2 mm flush

Technical Data

General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	s_n	2 mm
Installation		flush
Assured operating distance	s_a	0 ... 1.62 mm
Actual operating distance	s_r	1.8 ... 2.2 mm
Reduction factor r_{AI}		0.4
Reduction factor r_{CU}		0.3
Reduction factor r_{304}		0.85
Output type		2-wire

Nominal ratings

Nominal voltage	U_o	8 V
Switching frequency	f	0 ... 3000 Hz
Hysteresis	H	0.5 ... 3.5 typ. 2 %

Current consumption

Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA

Functional safety related parameters

MTTF _d	5887 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 , 10 m
Core cross-section	0.34 mm ²
Housing material	Stainless steel 1.4305 / AISI 303
Sensing face	PVDF
Degree of protection	IP66 / IP68
Cable	
Bending radius	> 10 x cable diameter

General information

Use in the hazardous area	see instruction manuals
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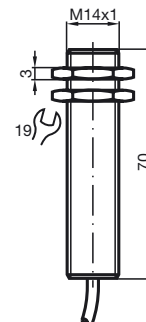
Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

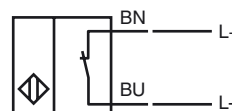
Approvals and certificates

UL approval	cULus Listed, General Purpose
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Dimensions



Electrical Connection



Data for application in connection with hazardous areas

Equipment protection level	Ga , Gb , Da , Mb	
Equipment protection level Ga		
Type of protection	intrinsic safety	
CE marking	CE 0102	
Certificates		
Appropriate type	NJ2-11-N-G...	
ATEX certificate	PTB 00 ATEX 2048 X	
ATEX marking	Ex II 1G Ex ia IIC T6...T1 Ga	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
IECEX certificate	IECEX PTB 11.0037X	
IECEX marking	Ex ia IIC T6 Ga	
Standards	IEC 60079-0:2004 , IEC 60079-11:2006 , IEC 60079-26:2006	
Effective internal inductivity	C_i	≤ 30 nF A cable length of 10 m is considered.
Effective internal inductance	L_i	≤ 50 μ H A cable length of 10 m is considered.
Maximum permissible ambient temperature T_{amb}	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values.	
for ATEX	at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 34$ mW , T6 : 59 °C (138.2 °F) T5 : 71 °C (159.8 °F) T4 : 99 °C (210.2 °F) T3 : 99 °C (210.2 °F) T2 : 99 °C (210.2 °F) T1 : 99 °C (210.2 °F) at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 64$ mW , T6 : 56 °C (132.8 °F) T5 : 68 °C (154.4 °F) T4 : 96 °C (204.8 °F) T3 : 96 °C (204.8 °F) T2 : 96 °C (204.8 °F) T1 : 96 °C (204.8 °F) at $U_i = 16$ V , $I_i = 52$ mA , $P_i = 169$ mW , T6 : 45 °C (113 °F) T5 : 57 °C (134.6 °F) T4 : 81 °C (177.8 °F) T3 : 81 °C (177.8 °F) T2 : 81 °C (177.8 °F) T1 : 81 °C (177.8 °F) at $U_i = 16$ V , $I_i = 76$ mA , $P_i = 242$ mW , T6 : 37 °C (98.6 °F) T5 : 49 °C (120.2 °F) T4 : 63 °C (145.4 °F) T3 : 63 °C (145.4 °F) T2 : 63 °C (145.4 °F) T1 : 63 °C (145.4 °F)	
for IECEx	at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 34$ mW , T6 : 59 °C (138.2 °F) T5 : 71 °C (159.8 °F) T4 : 99 °C (210.2 °F) T3 : 99 °C (210.2 °F) T2 : 99 °C (210.2 °F) T1 : 99 °C (210.2 °F) at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 64$ mW , T6 : 56 °C (132.8 °F) T5 : 68 °C (154.4 °F) T4 : 96 °C (204.8 °F) T3 : 96 °C (204.8 °F) T2 : 96 °C (204.8 °F) T1 : 96 °C (204.8 °F) at $U_i = 16$ V , $I_i = 52$ mA , $P_i = 169$ mW , T6 : 45 °C (113 °F) T5 : 57 °C (134.6 °F) T4 : 81 °C (177.8 °F) T3 : 81 °C (177.8 °F) T2 : 81 °C (177.8 °F) T1 : 81 °C (177.8 °F) at $U_i = 16$ V , $I_i = 76$ mA , $P_i = 242$ mW , T6 : 37 °C (98.6 °F) T5 : 49 °C (120.2 °F) T4 : 63 °C (145.4 °F) T3 : 63 °C (145.4 °F) T2 : 63 °C (145.4 °F) T1 : 63 °C (145.4 °F)	

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Equipment protection level Gb

Type of protection	intrinsic safety	
CE marking	CE 0102	
Certificates		
Appropriate type	NJ2-11-N-G...	
ATEX certificate	PTB 00 ATEX 2048 X	
ATEX marking	Ⓔ II 1G Ex ia IIC T6... T1 Ga	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
IECEX certificate	IECEX PTB 11.0037X	
IECEX marking	Ex ia IIC T6 Ga	
Standards	IEC 60079-0:2004 , IEC 60079-11:2006	
Effective internal inductivity	C_i	≤ 30 nF A cable length of 10 m is considered.
Effective internal inductance	L_i	≤ 50 μ H A cable length of 10 m is considered.
Maximum permissible ambient temperature T_{amb}	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 34$ mW , T6 : 76 °C (168.8 °F) T5 : 91 °C (195.8 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 64$ mW , T6 : 73 °C (163.4 °F) T5 : 88 °C (190.4 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 52$ mA , $P_i = 169$ mW , T6 : 62 °C (143.6 °F) T5 : 77 °C (170.6 °F) T4 : 81 °C (177.8 °F) T3 : 81 °C (177.8 °F) T2 : 81 °C (177.8 °F) T1 : 81 °C (177.8 °F) at $U_i = 16$ V , $I_i = 76$ mA , $P_i = 242$ mW , T6 : 54 °C (129.2 °F) T5 : 63 °C (145.4 °F) T4 : 63 °C (145.4 °F) T3 : 63 °C (145.4 °F) T2 : 63 °C (145.4 °F) T1 : 63 °C (145.4 °F)	

Equipment protection level Da

Type of protection	intrinsic safety	
CE marking	CE 0102	
Certificates		
Appropriate type	NJ2-11-N-G...	
ATEX certificate	PTB 00 ATEX 2048 X	
ATEX marking	Ⓔ II 1D Ex ia IIIC T135°C Da	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
Effective internal inductivity	C_i	≤ 30 nF A cable length of 10 m is considered.
Effective internal inductance	L_i	≤ 50 μ H A cable length of 10 m is considered.
Maximum permissible ambient temperature T_{amb}	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 34$ mW : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 64$ mW : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 52$ mA , $P_i = 169$ mW : 81 °C (177.8 °F) at $U_i = 16$ V , $I_i = 76$ mA , $P_i = 242$ mW : 63 °C (145.4 °F)	

Equipment protection level Mb

Type of protection	intrinsic safety	
Certificates		
Appropriate type	NJ2-11-N-G...	
IECEX certificate	IECEX PTB 11.0037X	
IECEX marking	Ex ia I	
Standards	IEC 60079-0:2004 , IEC 60079-11:2006	
Effective internal inductivity	C_i	≤ 30 nF A cable length of 10 m is considered.
Effective internal inductance	L_i	≤ 50 μ H A cable length of 10 m is considered.
Maximum permissible ambient temperature T_{amb}	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 34$ mW : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 25$ mA , $P_i = 64$ mW : 100 °C (212 °F) at $U_i = 16$ V , $I_i = 52$ mA , $P_i = 169$ mW : 81 °C (177.8 °F) at $U_i = 16$ V , $I_i = 76$ mA , $P_i = 242$ mW : 63 °C (145.4 °F)	

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