



Model Number

NJ6-22-N

Features

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

Technical Data

General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	s_n	6 mm
Installation		flush
Assured operating distance	s_a	0 ... 4.86 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	8.2 V (R_i approx. 1 k Ω)
Switching frequency	f	0 ... 2000 Hz
Hysteresis	H	1 ... 7 typ. 4 %
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA

Functional safety related parameters

MTTF _d	4566 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	0.75 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68
Cable	
Bending radius	> 10 x cable diameter

General information

Use in the hazardous area	see instruction manuals
Category	2G; 3G

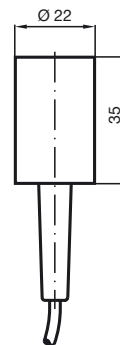
Compliance with standards and directives

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

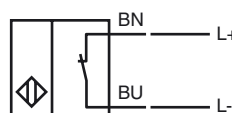
Approvals and certificates

FM approval	
Control drawing	116-0165
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤ 36 V


Dimensions



Electrical Connection




Equipment protection level Gb

CE marking	CE 0102	
ATEX marking	 II 2G Ex ia IIC T6...T1 Gb 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 6-22-N...	
Effective internal capacitance	C_i	$\leq 130 \text{ nF}$; a cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 100 \text{ }\mu\text{H}$; 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 temperature class, and the effective internal reactance values can be found on the EU-type examination certificate.	

Special conditions


Equipment protection level Gc (ic)

Certificate	PF 13 CERT 2895 X	
CE marking	CE	
ATEX marking	 II 3G Ex ic IIC T6...T1 Gc 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 category "ic" Use is restricted to the following stated conditions	
Effective internal capacitance	C_i	$\leq 130 \text{ nF}$; a cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 100 \text{ }\mu\text{H}$; A cable length of 10 m is considered.

Special conditions

for $P_i=34 \text{ mW}$, $I_i=25 \text{ mA}$, T6	70 °C (158 °F)
for $P_i=34 \text{ mW}$, $I_i=25 \text{ mA}$, T5	85 °C (185 °F)
for $P_i=34 \text{ mW}$, $I_i=25 \text{ mA}$, T4-T1	100 °C (212 °F)
for $P_i=64 \text{ mW}$, $I_i=25 \text{ mA}$, T6	69 °C (156.2 °F)
for $P_i=64 \text{ mW}$, $I_i=25 \text{ mA}$, T5	84 °C (183.2 °F)
for $P_i=64 \text{ mW}$, $I_i=25 \text{ mA}$, T4-T1	100 °C (212 °F)
for $P_i=169 \text{ mW}$, $I_i=52 \text{ mA}$, T6	51 °C (123.8 °F)
for $P_i=169 \text{ mW}$, $I_i=52 \text{ mA}$, T5	66 °C (150.8 °F)
for $P_i=169 \text{ mW}$, $I_i=52 \text{ mA}$, T4-T1	80 °C (176 °F)
for $P_i=242 \text{ mW}$, $I_i=76 \text{ mA}$, T6	39 °C (102.2 °F)
for $P_i=242 \text{ mW}$, $I_i=76 \text{ mA}$, T5	54 °C (129.2 °F)
for $P_i=242 \text{ mW}$, $I_i=76 \text{ mA}$, T4-T1	61 °C (141.8 °F)

Equipment protection level Da

CE marking	CE 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 6-22-N...	
Effective internal capacitance	C_i	$\leq 130 \text{ }\mu\text{F}$ A cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 100 \text{ }\mu\text{H}$ A cable length of 10 m is considered.

Special conditions

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