



Model Number

NCN3-F31-N4-K-K-Y120844

Features

- Direct mounting on standard actuators
- Compact and stable housing
- Fixed setting
- EC-Type Examination Certificate TÜV99 ATEX 1479X

Technical Data

General specifications

Switching function		2 x normally closed (NC)
Output type		NAMUR
Rated operating distance	s_n	3 mm
Installation		flush mountable
Assured operating distance	s_a	0 ... 2.43 mm
Actual operating distance	s_r	2.7 ... 3.3 mm typ.
Reduction factor r_{AI}		0.5
Reduction factor r_{CU}		0.4
Reduction factor r_{304}		1
Reduction factor r_{Si37}		1.2
Output type		2-wire

Nominal ratings

Nominal voltage	U_o	8 V
Switching frequency	f	0 ... 200 Hz
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	1980 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Connection (system side)	20 m, PVC cable
Core cross-section (system side)	0.75 mm ²
Connection (valve side)	0.5 m, PVC cable
Core cross-section (valve side)	0.75 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP67
Cable	
Bending radius	> 10 x cable diameter

General information

Use in the hazardous area	see instruction manuals
Category	1G; 2G

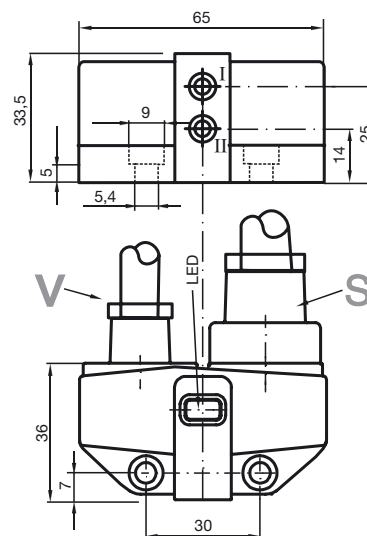
Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility	NE 21:2007
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

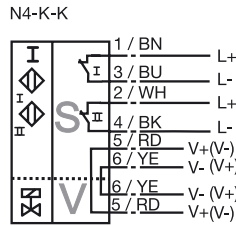
Approvals and certificates

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 Ga

CE marking	CE 0102	
ATEX marking	II 1G Ex ia IIC T6	
Directive conformity	94/9/EG	
Standards	EN 60079-0:2009, EN 60079-11:2007, EN 60079-26:2007 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions	
Appropriate type	NCN3-F31.-N4...	
Effective internal inductivity	C_i	≤ 100 nF A cable length of 10 m is considered. The value is applicable for one sensor circuit.
Effective internal inductance	L_i	≤ 100 μ H A cable length of 10 m is considered. The value is applicable for one sensor circuit.
Cable length	Dangerous electrostatic charges on the fixed connection cable must be taken into account for lengths equal to and exceeding the following values:	
Ambient temperature	The temperature ranges, according to temperature class, are given in 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. Note: Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1:2007 has already been accounted for in the temperature table for category 1.	

Equipment protection level Gb

CE marking	CE 0102	
ATEX marking	II 1G Ex ia IIC T6	
Directive conformity	94/9/EG	
Standards	EN 60079-0:2009, EN 60079-11:2007 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions	
Appropriate type	NCN3-F31.-N4...	
Effective internal inductivity	C_i	≤ 100 nF ; a cable length of 10 m is considered. The value is applicable for one sensor circuit.
Effective internal inductance	L_i	≤ 100 μ H ; a cable length of 10 m is considered. The value is applicable for one sensor circuit.
Maximum permissible ambient temperature T_{amb}	The temperature ranges, according to temperature class, are given in 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.	

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