



Model Number

SC2-N0-GN

Features

- 2 mm slot width

Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	NAMUR
Slot width	2 mm
Depth of immersion (lateral)	5 ... 7 mm , typ. 6 mm
Output type	2-wire

Nominal ratings

Nominal voltage	U_o	8.2 V (R_i approx. 1 k Ω)
Operating voltage	U_B	5 ... 25 V
Switching frequency	f	0 ... 5000 Hz
Hysteresis	H	0.11 ... 0.2 mm

Design data

Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	5790 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 , 500 mm
Core cross-section	0.06 mm ²
Housing material	PBT
Degree of protection	IP67

General information

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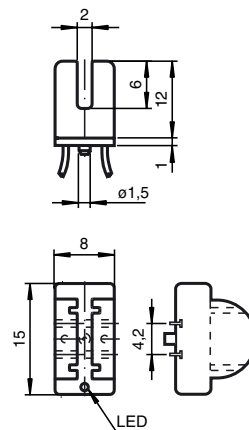
Compliance with standards and directives

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

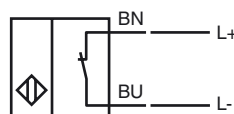
Approvals and certificates

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



**Data for application in connection with hazardous areas**

Equipment protection level		Ga , Gb , Gc (ic) , Da , Mb
Equipment protection level Ga		
Type of protection		intrinsic safety
CE marking		0102
Certificates		
Appropriate type		SC2-N0...
ATEX certificate		PTB 99 ATEX 2219 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 11.0091X
IECEX marking		Ex ia IIC T6...T1 Ga
Standards		IEC 60079-0:2011 , IEC 60079-11:2011
Effective internal capacitance	C_i	$\leq 150 \text{ nF}$ A cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 150 \text{ }\mu\text{H}$ 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 $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, T6 : 55 °C (131 °F) T5 : 67 °C (152.6 °F) T4 : 95 °C (203 °F) T3 : 95 °C (203 °F) T2 : 95 °C (203 °F) T1 : 95 °C (203 °F) at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, T6 : 48 °C (118.4 °F) T5 : 60 °C (140 °F) T4 : 88 °C (190.4 °F) T3 : 88 °C (190.4 °F) T2 : 88 °C (190.4 °F) T1 : 88 °C (190.4 °F) at $U_i = 16 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, T6 : 23 °C (73.4 °F) T5 : 35 °C (95 °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) at $U_i = 16 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, T6 : 6 °C (42.8 °F) T5 : 18 °C (64.4 °F) T4 : 46 °C (114.8 °F) T3 : 46 °C (114.8 °F) T2 : 46 °C (114.8 °F) T1 : 46 °C (114.8 °F)
for IECEx		at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, T6 : 72 °C (161.6 °F) T5 : 87 °C (188.6 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, T6 : 65 °C (149 °F) T5 : 80 °C (176 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, T6 : 40 °C (104 °F) T5 : 55 °C (131 °F) T4 : 75 °C (167 °F) T3 : 75 °C (167 °F) T2 : 75 °C (167 °F) T1 : 75 °C (167 °F) at $U_i = 16 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, T6 : 23 °C (73.4 °F) T5 : 38 °C (100.4 °F) T4 : 54 °C (129.2 °F) T3 : 54 °C (129.2 °F) T2 : 54 °C (129.2 °F) T1 : 54 °C (129.2 °F)

Equipment protection level Gb

Type of protection	intrinsic safety
CE marking	CE 0102

Certificates

Appropriate type	SC2-N0...
ATEX certificate	PTB 99 ATEX 2219 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 11.0091X
IECEx marking	Ex ia IIC T6...T1 Ga
Standards	IEC 60079-0:2011 , IEC 60079-11:2011

Effective internal capacitance	C_i	$\leq 150 \text{ nF}$ A cable length of 10 m is considered.
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Effective internal inductance	L_i	$\leq 150 \text{ }\mu\text{H}$ A cable length of 10 m is considered.
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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 $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, T6 : 72 °C (161.6 °F) T5 : 87 °C (188.6 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, T6 : 65 °C (149 °F) T5 : 80 °C (176 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, T6 : 40 °C (104 °F) T5 : 55 °C (131 °F) T4 : 75 °C (167 °F) T3 : 75 °C (167 °F) T2 : 75 °C (167 °F) T1 : 75 °C (167 °F) at $U_i = 16 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, T6 : 23 °C (73.4 °F) T5 : 38 °C (100.4 °F) T4 : 54 °C (129.2 °F) T3 : 54 °C (129.2 °F) T2 : 54 °C (129.2 °F) T1 : 54 °C (129.2 °F)	
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Equipment protection level Gc (ic)

Type of protection	intrinsic safety
CE marking	CE

Certificates

ATEX certificate	PF13CERT2895 X
ATEX marking	Ex II 3G Ex ic IIC T6...T1 Gc
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012

Effective internal capacitance	C_i	$\leq 150 \text{ nF}$ A cable length of 10 m is considered.
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Effective internal inductance	L_i	$\leq 150 \text{ }\mu\text{H}$ A cable length of 10 m is considered.
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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 $U_i = 20 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, T6 : 66 °C (150.8 °F) T5 : 81 °C (177.8 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 20 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, T6 : 65 °C (149 °F) T5 : 80 °C (176 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 20 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, T6 : 40 °C (104 °F) T5 : 55 °C (131 °F) T4 : 75 °C (167 °F) T3 : 75 °C (167 °F) T2 : 75 °C (167 °F) T1 : 75 °C (167 °F) at $U_i = 20 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, T6 : 23 °C (73.4 °F) T5 : 38 °C (100.4 °F) T4 : 54 °C (129.2 °F) T3 : 54 °C (129.2 °F) T2 : 54 °C (129.2 °F) T1 : 54 °C (129.2 °F)	
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**Equipment protection level Da**

Type of protection		intrinsic safety
CE marking		 0102
Certificates		
Appropriate type		SC2-N0...
ATEX certificate		PTB 99 ATEX 2219 X
ATEX marking		 II 1D Ex ia IIIC T135°C Da
Standards		EN 60079-0:2012+A11:2013 , EN 60079-11:2012
IECEx certificate		IECEx PTB 11.0091X
IECEx marking		Ex ia IIIC T135°C Da
Standards		IEC 60079-0:2011 , IEC 60079-11:2011
Effective internal capacitance	C _i	≤ 150 nF A cable length of 10 m is considered.
Effective internal inductance	L _i	≤ 150 μH 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 : 75 °C (167 °F) at U _i = 16 V , I _i = 76 mA , P _i = 242 mW : 54 °C (129.2 °F)

Equipment protection level Mb

Type of protection		intrinsic safety
Certificates		
Appropriate type		SC2-N0...
IECEx certificate		IECEx PTB 11.0091X
IECEx marking		Ex ia I Mb
Standards		IEC 60079-0:2011 , IEC 60079-11:2011
Effective internal capacitance	C _i	≤ 150 nF A cable length of 10 m is considered.
Effective internal inductance	L _i	≤ 150 μH 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 : 75 °C (167 °F) at U _i = 16 V , I _i = 76 mA , P _i = 242 mW : 54 °C (129.2 °F)