

Model Number

SC3,5-N0-Y106570

Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	NAMUR
Slot width	3.5 mm
Depth of immersion (lateral)	5 ... 7 typ. 6 mm
Output type	2-wire

Nominal ratings

Nominal voltage	U_0	8 V
Operating voltage	U_B	5 ... 25 V
Switching frequency	f	0 ... 3000 Hz
Hysteresis	H	0 ... 0.05
Suitable for 2:1 technology		yes, Reverse polarity protection diode not required

Design data

Current consumption	
Measuring plate not detected	≥ 3 mA at nominal voltage
Measuring plate detected	≤ 1 mA at nominal voltage

Functional safety related parameters

MTTF _d	5290 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 100 °C (-13 ... 212 °F)
---------------------	---------------------------------

Mechanical specifications

Connection type	flexible leads PVC, 500 mm
Core cross-section	0.14 mm ²
Housing material	PBT
Degree of protection	IP67

General information

Use in the hazardous area	see instruction manuals
---------------------------	-------------------------

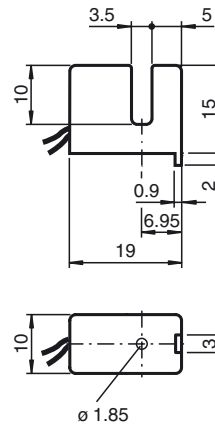
Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	
	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

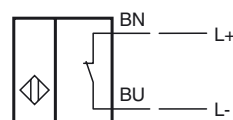
Approvals and certificates

UL approval	cULus Listed, General Purpose
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0453
CSA approval	cCSAus Listed, General Purpose

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	SC3,5-N0-Y...	
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.
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 $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, $T_6 : 55 \text{ }^\circ\text{C} (131 \text{ }^\circ\text{F})$ $T_5 : 67 \text{ }^\circ\text{C} (152.6 \text{ }^\circ\text{F})$ $T_4 : 95 \text{ }^\circ\text{C} (203 \text{ }^\circ\text{F})$ $T_3 : 95 \text{ }^\circ\text{C} (203 \text{ }^\circ\text{F})$ $T_2 : 95 \text{ }^\circ\text{C} (203 \text{ }^\circ\text{F})$ $T_1 : 95 \text{ }^\circ\text{C} (203 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, $T_6 : 48 \text{ }^\circ\text{C} (118.4 \text{ }^\circ\text{F})$ $T_5 : 60 \text{ }^\circ\text{C} (140 \text{ }^\circ\text{F})$ $T_4 : 88 \text{ }^\circ\text{C} (190.4 \text{ }^\circ\text{F})$ $T_3 : 88 \text{ }^\circ\text{C} (190.4 \text{ }^\circ\text{F})$ $T_2 : 88 \text{ }^\circ\text{C} (190.4 \text{ }^\circ\text{F})$ $T_1 : 88 \text{ }^\circ\text{C} (190.4 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, $T_6 : 23 \text{ }^\circ\text{C} (73.4 \text{ }^\circ\text{F})$ $T_5 : 35 \text{ }^\circ\text{C} (95 \text{ }^\circ\text{F})$ $T_4 : 63 \text{ }^\circ\text{C} (145.4 \text{ }^\circ\text{F})$ $T_3 : 63 \text{ }^\circ\text{C} (145.4 \text{ }^\circ\text{F})$ $T_2 : 63 \text{ }^\circ\text{C} (145.4 \text{ }^\circ\text{F})$ $T_1 : 63 \text{ }^\circ\text{C} (145.4 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, $T_6 : 6 \text{ }^\circ\text{C} (42.8 \text{ }^\circ\text{F})$ $T_5 : 18 \text{ }^\circ\text{C} (64.4 \text{ }^\circ\text{F})$ $T_4 : 46 \text{ }^\circ\text{C} (114.8 \text{ }^\circ\text{F})$ $T_3 : 46 \text{ }^\circ\text{C} (114.8 \text{ }^\circ\text{F})$ $T_2 : 46 \text{ }^\circ\text{C} (114.8 \text{ }^\circ\text{F})$ $T_1 : 46 \text{ }^\circ\text{C} (114.8 \text{ }^\circ\text{F})$	
for IECEx	at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 34 \text{ mW}$, $T_6 : 72 \text{ }^\circ\text{C} (161.6 \text{ }^\circ\text{F})$ $T_5 : 87 \text{ }^\circ\text{C} (188.6 \text{ }^\circ\text{F})$ $T_4 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_3 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_2 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_1 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 25 \text{ mA}$, $P_i = 64 \text{ mW}$, $T_6 : 65 \text{ }^\circ\text{C} (149 \text{ }^\circ\text{F})$ $T_5 : 80 \text{ }^\circ\text{C} (176 \text{ }^\circ\text{F})$ $T_4 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_3 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_2 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ $T_1 : 100 \text{ }^\circ\text{C} (212 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 52 \text{ mA}$, $P_i = 169 \text{ mW}$, $T_6 : 40 \text{ }^\circ\text{C} (104 \text{ }^\circ\text{F})$ $T_5 : 55 \text{ }^\circ\text{C} (131 \text{ }^\circ\text{F})$ $T_4 : 75 \text{ }^\circ\text{C} (167 \text{ }^\circ\text{F})$ $T_3 : 75 \text{ }^\circ\text{C} (167 \text{ }^\circ\text{F})$ $T_2 : 75 \text{ }^\circ\text{C} (167 \text{ }^\circ\text{F})$ $T_1 : 75 \text{ }^\circ\text{C} (167 \text{ }^\circ\text{F})$ at $U_i = 16 \text{ V}$, $I_i = 76 \text{ mA}$, $P_i = 242 \text{ mW}$, $T_6 : 23 \text{ }^\circ\text{C} (73.4 \text{ }^\circ\text{F})$ $T_5 : 38 \text{ }^\circ\text{C} (100.4 \text{ }^\circ\text{F})$ $T_4 : 54 \text{ }^\circ\text{C} (129.2 \text{ }^\circ\text{F})$ $T_3 : 54 \text{ }^\circ\text{C} (129.2 \text{ }^\circ\text{F})$ $T_2 : 54 \text{ }^\circ\text{C} (129.2 \text{ }^\circ\text{F})$ $T_1 : 54 \text{ }^\circ\text{C} (129.2 \text{ }^\circ\text{F})$	

Release date: 2019-08-27 16:39 Date of issue: 2019-08-27 106570_eng.xml

Equipment protection level Gb

Type of protection	intrinsic safety	
CE marking	CE 0102	
Certificates		
Appropriate type	SC3,5-N0-Y...	
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	≤ 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 $U_i = 16 V$, $I_i = 25 mA$, $P_i = 34 mW$, 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 $U_i = 16 V$, $I_i = 25 mA$, $P_i = 64 mW$, 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 $U_i = 16 V$, $I_i = 52 mA$, $P_i = 169 mW$, 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 $U_i = 16 V$, $I_i = 76 mA$, $P_i = 242 mW$, 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 Da

Type of protection	intrinsic safety	
CE marking	CE 0102	
Certificates		
Appropriate type	SC3,5-N0-Y...	
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	SC3,5-N0-Y...	
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.

Release date: 2019-08-27 16:39 Date of issue: 2019-08-27 106570_eng.xml



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 $U_i = 16\text{ V}$, $I_i = 25\text{ mA}$, $P_i = 34\text{ mW}$: 100 °C (212 °F)

at $U_i = 16\text{ V}$, $I_i = 25\text{ mA}$, $P_i = 64\text{ mW}$: 100 °C (212 °F)

at $U_i = 16\text{ V}$, $I_i = 52\text{ mA}$, $P_i = 169\text{ mW}$: 75 °C (167 °F)

at $U_i = 16\text{ V}$, $I_i = 76\text{ mA}$, $P_i = 242\text{ mW}$: 54 °C (129.2 °F)

Release date: 2019-08-27 16:39 Date of issue: 2019-08-27 106570_eng.xml

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**