



**Model Number**

**SC3,5-G-N0**

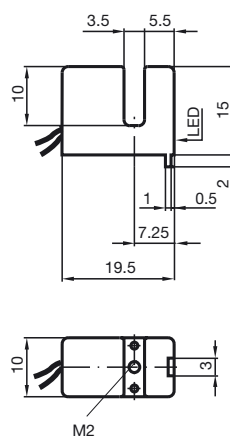
**Features**

- 3.5 mm slot width
- Usable up to SIL 2 acc. to IEC 61508

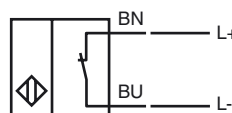
**Technical Data**

<b>General specifications</b>	
Switching function	Normally closed (NC)
Output type	NAMUR
Slot width	3.5 mm
Depth of immersion (lateral)	5 ... 7 mm , typ. 6 mm
Output type	2-wire
<b>Nominal ratings</b>	
Nominal voltage	$U_0$ 8.2 V ( $R_f$ approx. 1 k $\Omega$ )
Operating voltage	$U_B$ 5 ... 25 V
Switching frequency	f 0 ... 3000 Hz
Hysteresis	H 0.41 ... 0.6 mm
Suitable for 2:1 technology	yes , Reverse polarity protection diode not required
<b>Design data</b>	
<b>Current consumption</b>	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA
Switching state indicator	LED, yellow
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 2
MTTF <sub>d</sub>	5880 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 100 °C (-13 ... 212 °F)
<b>Mechanical specifications</b>	
Connection type	flexible leads PVC , 135 mm
Core cross-section	0.14 mm <sup>2</sup>
Housing material	PBT
Degree of protection	IP67
<b>General information</b>	
Use in the hazardous area	see instruction manuals
<b>Compliance with standards and directives</b>	
<b>Standard conformity</b>	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
<b>Electromagnetic compatibility</b>	
Standards	NE 21:2007 EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<b>Approvals and certificates</b>	
EAC conformity	TR CU 012/2011
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

**Dimensions**



**Electrical Connection**



Release date: 2019-04-25 16:32 Date of issue: 2019-04-25 045585\_eng.xml

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

Equipment protection level	Ga , Gb , Gc (ic) , Da , Mb	
<b>Equipment protection level Ga</b>		
Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	SC3,5...-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	$C_i$	≤ 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.	
for ATEX	at $U_i = 16 V$ , $I_i = 25 mA$ , $P_i = 34 mW$ , 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 $U_i = 16 V$ , $I_i = 25 mA$ , $P_i = 64 mW$ , T6 : 49 °C (120.2 °F) T5 : 61 °C (141.8 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16 V$ , $I_i = 52 mA$ , $P_i = 169 mW$ , T6 : 28 °C (82.4 °F) T5 : 40 °C (104 °F) T4 : 68 °C (154.4 °F) T3 : 68 °C (154.4 °F) T2 : 68 °C (154.4 °F) T1 : 68 °C (154.4 °F) at $U_i = 16 V$ , $I_i = 76 mA$ , $P_i = 242 mW$ , T6 : 13 °C (55.4 °F) T5 : 25 °C (77 °F) T4 : 53 °C (127.4 °F) T3 : 53 °C (127.4 °F) T2 : 53 °C (127.4 °F) T1 : 53 °C (127.4 °F)	
for IECEx	at $U_i = 16 V$ , $I_i = 25 mA$ , $P_i = 34 mW$ , 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 $U_i = 16 V$ , $I_i = 25 mA$ , $P_i = 64 mW$ , 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 $U_i = 16 V$ , $I_i = 52 mA$ , $P_i = 169 mW$ , T6 : 45 °C (113 °F) T5 : 60 °C (140 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16 V$ , $I_i = 76 mA$ , $P_i = 242 mW$ , T6 : 30 °C (86 °F) T5 : 45 °C (113 °F) T4 : 74 °C (165.2 °F) T3 : 74 °C (165.2 °F) T2 : 74 °C (165.2 °F) T1 : 74 °C (165.2 °F)	

Release date: 2019-04-25 16:32 Date of issue: 2019-04-25 045585\_eng.xml

**Equipment protection level Gb**

Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	SC3,5...-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	$C_i$	≤ 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 $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ , 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 $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 64\text{ mW}$ , 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 $U_i = 16\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ , T6 : 45 °C (113 °F) T5 : 60 °C (140 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ , T6 : 30 °C (86 °F) T5 : 45 °C (113 °F) T4 : 74 °C (165.2 °F) T3 : 74 °C (165.2 °F) T2 : 74 °C (165.2 °F) T1 : 74 °C (165.2 °F)	

**Equipment protection level Gc (ic)**

Type of protection	intrinsic safety	
CE marking	CE	
<b>Certificates</b>		
ATEX certificate	PF13CERT2895 X	
ATEX marking	Ⓔ II 3G Ex ic IIC T6...T1 Gc	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
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 $U_i = 20\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ , 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 : 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 $U_i = 20\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ , T6 : 45 °C (113 °F) T5 : 60 °C (140 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 20\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ , T6 : 30 °C (86 °F) T5 : 45 °C (113 °F) T4 : 74 °C (165.2 °F) T3 : 74 °C (165.2 °F) T2 : 74 °C (165.2 °F) T1 : 74 °C (165.2 °F)	

Release date: 2019-04-25 16:32 Date of issue: 2019-04-25 045585\_eng.xml

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.comUSA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.comGermany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com PEPPERL+FUCHS

**Equipment protection level Da**

Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	SC3,5...-N0...	
ATEX certificate	PTB 99 ATEX 2219 X	
ATEX marking	Ex 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 $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ : 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 $U_i = 16\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ : 89 °C (192.2 °F) at $U_i = 16\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ : 74 °C (165.2 °F)	

**Equipment protection level Mb**

Type of protection	intrinsic safety	
<b>Certificates</b>		
Appropriate type	SC3,5...-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 $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ : 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 $U_i = 16\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ : 89 °C (192.2 °F) at $U_i = 16\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ : 74 °C (165.2 °F)	

Release date: 2019-04-25 16:32 Date of issue: 2019-04-25 045585\_eng.xml