



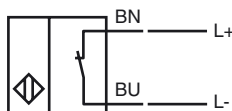
Model Number

SC3,5-G-N0-Y245463

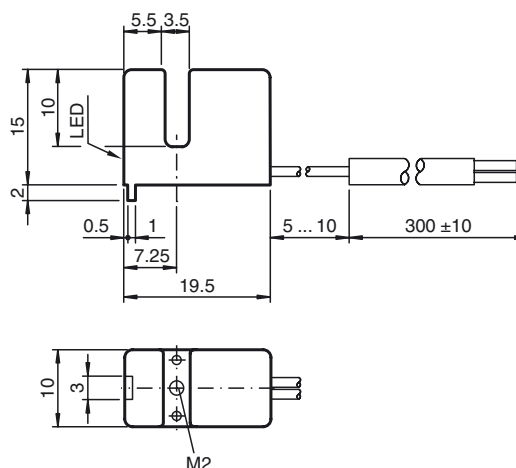
Features

- Comfort series
- 3.5 mm slot width

Connection



Dimensions



Technical Data

General specifications

Switching element function	NAMUR, NC
Slot width	3.5 mm
Depth of immersion (lateral)	5 ... 7 typ. 6 mm
Installation	
Output polarity	NAMUR

Nominal ratings

Nominal voltage	U_o	8 V
Operating voltage	U_B	5 ... 25 V
Switching frequency	f	0 ... 3000 Hz
Hysteresis	H	0 ... 0.6 mm
Suitable for 2:1 technology		yes, Reverse polarity protection diode not required
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA
Switching state indication		LED, yellow

Ambient conditions

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

Connection type	cable PVC, 300 mm
Core cross-section	0.14 mm ²
Housing material	PBT
Protection degree	IP67

General information

Use in the hazardous area	see instruction manuals
Category	1G; 2G; 3G; 1D

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	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

ATEX 1G

Instruction

Device category 1G
 Directive conformity
 Standard conformity

CE marking

Ex-identification

EC-Type Examination Certificate

Appropriate type
 Effective internal capacitance C_i
 Effective internal inductance L_i
 Cable length

Explosion group IIA

Explosion group IIB

Explosion group IIC

General

Highest permissible ambient temperature

Installation, Commissioning


Maintenance

Specific conditions

Protection from mechanical danger

Manual electrical apparatus for hazardous areas

for use in hazardous areas with gas, vapour and mist
 94/9/EG
 EN 60079-0:2009, EN 60079-11:2007, EN 60079-26:2007
 Ignition protection "Intrinsic safety"
 Use is restricted to the following stated conditions
 C E 0102

 II 1G Ex ia IIC T6 Ga

PTB 99 ATEX 2219 X

SC3,5...-N0...

≤ 150 nF ; a cable length of 10 m is considered.

≤ 150 μH ; a cable length of 10 m is considered.

Dangerous electrostatic charges on the fixed connection cable must be taken into account for lengths equal to and exceeding the following values:

166 cm

83 cm

13 cm

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.

The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate. 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.

Laws and/or regulations and standards governing the use or intended usage goal must be observed.

The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.

The associated apparatus must satisfy the requirements of category ia.

Due to the possible danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation of the power supply and signal circuit is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.

ATEX 2G

Instruction

Device category 2G

Directive conformity

Standard conformity

CE marking

Ex-identification

EC-Type Examination Certificate

Appropriate type

Effective internal capacitance C_i Effective internal inductance L_i

General

Highest permissible ambient temperature

Installation, Commissioning

Maintenance

Specific conditions

Protection from mechanical danger

Manual electrical apparatus for hazardous areas

for use in hazardous areas with gas, vapour and mist


94/9/EG

EN 60079-0:2009, EN 60079-11:2007

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions


 0102

 II 1G Ex ia IIC T6 Ga

PTB 99 ATEX 2219 X

SC3,5...-N0...

≤ 150 nF ; a cable length of 10 m is considered.

≤ 150 μH ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate.

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.

ATEX 1D

Instruction

Device category 1D

Directive conformity

Standard conformity

CE marking

Ex-identification

EC-Type Examination Certificate

Appropriate type

Effective internal capacitance C_i Effective internal inductance L_i

General

Maximum housing surface temperature

Installation, Commissioning

Maintenance

Specific conditions

Electrostatic charging

Manual electrical apparatus for hazardous areas


for use in hazardous areas with combustible dust

94/9/EG

IEC 61241-11:2002: draft; prEN61241-0:2002

type of protection intrinsic safety "ID"

Use is restricted to the following stated conditions

 0102 II 1D Ex iaD 20 T 108 °C (226.4 °F)

ZELM 03 ATEX 0128 X

SC3,5...-N0...

≤ 150 nF ; a cable length of 10 m is considered.

≤ 150 μH ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.

The EC-Type Examination Certificate has to be observed.

The special conditions must be adhered to!

The maximum surface temperature of the housing is given in the EC-Type Examination Certificate.

Laws and/or regulations and standards governing the use or intended usage goal must be observed.

The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.

The associated apparatus must satisfy at least the requirements of category ia IIB or iaD. Because of the possibility of the danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation in the power supply and signal circuits is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.

The intrinsically safe circuit has to be protected against influences due to lightning. When used in the isolating wall between Zone 20 and Zone 21 or Zone 21 und Zone 22 the sensor must not be exposed to any mechanical danger and must be sealed in such a way, that the protective function of the isolating wall is not impaired. The applicable directives and standards must be observed.

No changes can be made to apparatus, which are operated in hazardous areas.

Repairs to these apparatus are not possible.

The connection cables are to be laid in accordance with EN 50281-1-2 and must not normally be subjected to chaffing during use.

ATEX 3G (ic)

Instruction

Device category 3G (ic)

Directive conformity

Standard conformity

CE marking

Ex-identification

Effective internal capacitance C_i Effective internal inductance L_i

General

Installation, Commissioning

Maintenance

Specific conditionsMaximum permissible ambient temperature T_{Umax} at $U_i = 20 V$ for $P_i=34 mW$, $I_i=25 mA$, T6for $P_i=34 mW$, $I_i=25 mA$, T5for $P_i=34 mW$, $I_i=25 mA$, T4-T1for $P_i=64 mW$, $I_i=25 mA$, T6for $P_i=64 mW$, $I_i=25 mA$, T5for $P_i=64 mW$, $I_i=25 mA$, T4-T1for $P_i=169 mW$, $I_i=52 mA$, T6for $P_i=169 mW$, $I_i=52 mA$, T5for $P_i=169 mW$, $I_i=52 mA$, T4-T1for $P_i=242 mW$, $I_i=76 mA$, T6for $P_i=242 mW$, $I_i=76 mA$, T5for $P_i=242 mW$, $I_i=76 mA$, T4-T1

Protection from mechanical danger

Connection parts

Manual electrical apparatus for hazardous areas

for use in hazardous areas with gas, vapour and mist

94/9/EG

EN 60079-0:2009, EN 60079-11:2007 Ignition protection category "ic"

Use is restricted to the following stated conditions

CE 0102

II 3G Ex ic IIC T6 Gc X

 $\leq 150 nF$; a cable length of 10 m is considered. $\leq 150 \mu H$; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The data stated in the data sheet are restricted by this operating instruction!

The special conditions must be observed!

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The sensor must only be operated with energy-limited circuits, which satisfy the requirements of IEC 60079-11. The explosion group complies with the connected, supplying, power limiting circuit.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

66 °C (150.8 °F)

81 °C (177.8 °F)

100 °C (212 °F)

66 °C (150.8 °F)

81 °C (177.8 °F)

100 °C (212 °F)

45 °C (113 °F)

60 °C (140 °F)

89 °C (192.2 °F)

30 °C (86 °F)

45 °C (113 °F)

74 °C (165.2 °F)

The sensor must not be mechanically damaged.

When used in the temperature range below -20 °C the sensor should be protected from knocks by the provision of an additional housing.

The connection parts are to be installed, such that a minimum protection class of IP20 is achieved, in accordance with IEC 60529.