



**ATEX 1G**

## Instruction

## Device category 1G

## EC-Type Examination Certificate

## CE marking

## ATEX marking

## Directive conformity

## Standards

## Appropriate type

Effective internal capacitance  $C_i$ Effective internal inductance  $L_i$ 

## General

## Ambient temperature

## Installation, Commissioning

## Maintenance

**Specific conditions**

## Protection from mechanical danger

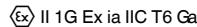
## Electrostatic charging

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with gas, vapour and mist

TÜV 99 ATEX 1479 X

CE 0102



94/9/EG

EN 60079-0:2009, EN 60079-11:2012, EN 60079-26:2007

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

NCN3-F31.-N4...

 $\leq 100 \text{ nF}$  A cable length of 10 m is considered.

The value is applicable for one sensor circuit.

 $\leq 100 \mu\text{H}$  A cable length of 10 m is considered.

The value is applicable for one sensor circuit.

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!

Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions.

The use in ambient temperatures of  $> 60^\circ\text{C}$  was tested with regard to hot surfaces by the mentioned certification authority.

If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.

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.

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  $-20^\circ\text{C}$  the sensor should be protected from knocks by the provision of an additional housing.

When used in Group IIC, impermissible electrostatic charges on the plastic housing components should be avoided.

Electrostatic charges on the metal housing components must be avoided. Dangerous electrostatic charges on the metal housing components can be avoided by incorporating these components in the equipotential bonding.

**ATEX 2G**

Instruction

**Device category 2G**EC-Type Examination Certificate  
CE marking

ATEX marking

Directive conformity  
Standards

Appropriate type

Effective internal capacitance  $C_i$ Effective internal inductance  $L_i$ 

General

Ambient temperature

Installation, Commissioning

Maintenance

**Specific conditions**

Protection from mechanical danger

Electrostatic charging

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with gas, vapour and mist

TÜV 99 ATEX 1479 X

CE 0102

II 1G Ex ia IIC T6 Ga

94/9/EG

EN 60079-0:2009, EN 60079-11:2012

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

NCN3-F31-N4...

 $\leq 100 \text{ nF}$ ; a cable length of 10 m is considered. The value is applicable for one sensor circuit. $\leq 100 \mu\text{H}$ ; a cable length of 10 m is considered. The value is applicable for one sensor circuit.

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!

Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions.

The use in ambient temperatures of  $> 60^\circ\text{C}$  was tested with regard to hot surfaces by the mentioned certification authority.

If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.

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.**

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  $-20^\circ\text{C}$  the sensor should be protected from knocks by the provision of an additional housing.

Electrostatic charges must be avoided on the mechanical housing components. Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding.

**ATEX 3G (ic)**

Instruction

**Device category 3G (ic)**

Certificate of Compliance

CE marking

ATEX marking

Directive conformity

Standards

Effective internal capacitance  $C_i$ Effective internal inductance  $L_i$ 

General

Installation, Commissioning

Maintenance

**Specific conditions**Maximum permissible ambient temperature  $T_{Umax}$  at  $U_i = 20$  Vfor  $P_i=34$  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-T1

Protection from mechanical danger

Electrostatic charging

Connection parts

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with gas, vapour and mist

PF 13 CERT 2895 X

CE 0102

II 3G Ex ic IIC T6 Gc

94/9/EG

EN 60079-0:2009, EN 60079-11:2012 Ignition protection category "ic"

Use is restricted to the following stated conditions

 $\leq 100$  nF ; A cable length of 10 m is considered.

The value is applicable for one sensor circuit.

 $\leq 100$   $\mu$ H ; A cable length of 10 m is considered.

The value is applicable for one sensor circuit.

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 depends on the connected, energy-limited power supply circuits.

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

Each sensor circuit can be operated with the stated maximum values.

70 °C (158 °F)

67 °C (152.6 °F)

70 °C (158 °F)

70 °C (158 °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.

Electrostatic charges must be avoided on the mechanical housing components.  
Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding.

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