



(1) **EC-Type Examination Certificate**

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 94/9/EC**

(3) Examination certificate number: **SEV 14 ATEX 0129 X**

(4) Equipment: Conductivity sensor  
Type InPro700X\*-VP and InPro710X\*/\*-VP/\*/\*\*

(5) Manufacturer: Mettler-Toledo GmbH, Process Analytics

(6) Address: Im Hackacker 15, 8902 Urdorf, SWITZERLAND

(7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Electrosuisse SEV, notified body No. 1258 in accordance with article 9 of the Council Directive of the European Communities of 23 March 1994 (94/9/EC), certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment or protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The results of the examination are recorded in confidential report no. 14-Ex-0045.01 + .01 E1

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

**EN 60079-0:12 + A11:13      EN 60079-11:12      EN 60079-26:15**

(10) If the sign «X» is placed after the certificate number, it indicates that the equipment or protective system is subjected to special conditions for safe use specified in the schedule to this certificate.

(11) This examination certificate relates only to design and construction of the specified equipment in accordance with the directive 94/9/EC. Further requirements of this directive apply to the manufacturing process and the placing on the market of the equipment.

(12) The marking of the equipment shall include the following:

 **II 1/2 G Ex ia IIB T3/T4/T5/T6 Ga/Gb  
(plastic sensors)**

 **II 1/2 G Ex ia IIC T3/T4/T5/T6 Ga/Gb  
(metallic sensors/metallic sensors with plastic surface)**

**Electrosuisse  
Notified Body ATEX**

Martin Plüss  
Product Certification



(13)

## Appendix

(14)

### EC-Type Examination Certificate

(15) Description of the equipment

The intrinsically safe conductivity sensors, type InPro700X \*-VP \*\* 2 electrode sensor or InPro710X \* / \*-VP / \* / \*\* 4 electrode sensor are intended for accurate measurement of conductivity in aqueous solutions in industrial applications.

The sensors can be connected to the associated transmitter using the appropriate cables. The sensors may be mounted using fitting InFit76 \* - \*\*\* or InTrac7 \*\* - \*\*\* , or other appropriate fitting.

#### Note:

The conductivity sensors (type InPro700X \*-VP \*\* 2 electrode sensor or InPro710X \* / \*-VP / \* / \*\* 4 electrode sensor) were previously evaluated for category 1/2G protection intrinsic safety "Ex ia IIC/IIB" according to EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007, test report No. 03-IK-0255.01, certificate SNCH 04 ATEX 3637 X.

#### Type designation

The Points X and \* in the type designation may be replaced by mark of variants, which have no effect on the explosion protection and overall safety.

#### Electrical ratings

Conductivity measuring circuit and temperature sensing circuit in type of protection intrinsic safety Ex ia IIC only for connection to a certified intrinsically safe circuit.

#### Maximum values:

$U_i \leq 16 \text{ V}$   
 $I_i \leq 190 \text{ mA}$   
 $P_i \leq 200 \text{ mW}$

The effective internal inductance and capacitance are negligible.

The values above apply, each as the sum of all the individual circuits of the associated intrinsically safe supply and evaluation unit.

#### Notes

1. The conductivity sensors made of plastic are according to Directive 94/9/EC (ATEX 95) Annex I equipment group II, category 1/2G after RL 99/92/EC (ATEX 137) in the zones 0/1 or 0 / 2 or 1/2 and gas groups IIA and IIB, explosion hazards due to flammable substances in the field of temperature classes T1 to T6, may be used.
2. The conductivity sensors made of metal or metal coated with plastic to Directive 94/9/EC (ATEX 95) Annex I to equipment group II, category 1/2G after RL 99/92/EC (ATEX 137) in zones 0/1 or 0/2 or 1/2 and gas groups IIA, IIB and IIC explosion hazards due to flammable substances in the field of temperature classes T1 to T6, may be used.
3. For use/installation, the requirements according to EN 60079-14 must be observed.

(16) Test Report 14-Ex-0045.01 + .01 E1

(17) Special conditions for safe use

1. The relationship between the maximum permissible ambient or media temperature and temperature class is shown in the following table:  
For  $U_i = 16 \text{ V}$ ,  $I_i = 190 \text{ mA}$ ,  $P_i = 200 \text{ mW}$ ;  
Conductivity measuring circuit and temperature measurement circuit:

temperature class	maximum ambient or media temperature
T6	51 °C
T5	63 °C
T4	91 °C
T3	143 °C

2. For installation, the system drawings and wiring diagrams of the measurement systems should be observed.
3. The capacitance and inductance of the connecting cable has to be considered.
4. The metal body of the conductivity sensors, or the safety weld-in socket , or the fitting InFit76 \* - \*\*\* or InTrac7 \*\* - \*\*\* , or other appropriate fitting must be electrically connected to the equipotential bonding system.
5. The metal body of the conductivity sensors, or the safety weld-in socket , or the fitting InFit76 \* - \*\*\* or InTrac7 \*\* - \*\*\* , or other appropriate fitting is optionally included in the routine pressure test of the system.

(18) Fundamental essential health and safety requirements

Fulfilled by the standards applied.