



(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 15 ATEX 0123**

(4) Equipment: Conductivity sensor  
Type InPro 725X/\*/\*/\*

(5) Manufacturer: METTLER-TOLEDO AG, 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. 15-Ex-0019.01.

(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:

 **1/2G    Ex ia IIC T6/T5/T4/T3 Ga/Gb**

**Electrosuisse**  
**Notified Body ATEX**

Martin Plüss  
Product Certification



(13)

## Appendix

(14)

### EC-Type Examination Certificate

(15) Description of the equipment

The InPro 725X/\*\*/\*\* conductivity sensor with integrated temperature sensor is used for the measurement of conductivities and substance concentrations in solutions. The sensors are designed for the measurement of medium and high conductivities.

The principle function of the sensors is based on inductive conductivity measurement. These sensors consist out of two toroidal coils which are totally encapsulated in a plastic material. When a current passes through the sensor transmitter coil, a voltage is induced in the measuring solution. This causes a flow of current in the measuring solution, which induces a voltage in the receiver coil. The current is directly proportional to the conductivity of the measuring solution.

The sensors can be installed with different process adapters (flange, threaded bushes) permanently in pipes or tanks.

#### Ratings:

Classification of installation and use: stationary  
 Ingress protection: IP20  
 Rated ambient temperature range (°C): refer to condition of use for details.

Conductivity measuring circuit, and temperature measuring circuit

in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit.

Maximum values:

$$U_i \leq 16 \text{ V}$$

$$I_i \leq 150 \text{ mA}$$

$$P_i \leq 155 \text{ mW}$$

$$L_i = 0 \text{ (the internal inductance is ineffective towards the outside)}$$

$$C_i = 900 \text{ pF (effective internal capacitance)}$$

The above values are each the total of all individual circuits of the associated intrinsically safe power supply and transmitter.

#### Notes:

1. For use/installation, the requirements of EN/IEC 60079-14 must be observed.
2. The conductivity measuring circuit and temperature measuring circuit are part of a common intrinsically safe system and are for operation connected to a separately certified transmitter.
3. The conductivity measuring circuit and temperature measuring circuit as part of an intrinsically safe system are isolated from conductive housing parts up to a maximum rated voltage of 30 V.

(16) Test Report

15-Ex-0019.01

(17) Special conditions for safe use

1. The maximum permissible process temperatures are in accordance with the temperature classes shown in the table below:

| Temperature class | Maximum permissible process temperature |
|-------------------|---|
| T6                | 68 °C                                   |
| T5                | 80 °C                                   |
| T4                | 108 °C                                  |
| T3                | 130 °C                                  |

2. The InPro 725X/\*\*/\* conductivity sensor may only be used in suitable process terminals of METTLER TOLEDO or other manufacturers in potentially explosive atmospheres.
3. The capacitance and inductance of the connecting cable must be taken into account in the design.
4. The independent process terminal used for installation of the conductivity sensors must be connected to the equipotential bonding system of the installation.
5. The independent process terminal used for installation of the conductivity sensors must be included in the recurring pressure test of installation if necessary.

The minimum conductivity of the media for safe working in potentially explosive atmospheres must be higher than 1 nS/cm.

(18) Fundamental essential health and safety requirements

Fulfilled by the standards applied.