



## (1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**



(3) EC-type-examination Certificate Number:

**PTB 00 ATEX 2168**

(4) Equipment: Measuring transducer, type 2100/2X\*

(5) Manufacturer: Mettler Toledo GmbH

(6) Address: Im Hackacker 15, CH-8902 Urdorf

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 00-20406.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50014:1997**

**EN 50020:1994**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

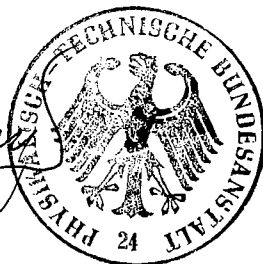
**II 2 (1) G EEx ib [ia] IIC T6**

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 28, 2000

By order:

Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor



(13)

## SCHEDULE

(14)

### EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 2168

(15) Description of equipment

The measuring transducer, type Typ 2100/2X\* is used to detect and process electrochemical quantities.

The maximum permissible ambient temperature is 55 °C.

#### Electrical data

Loop measuring circuit  
(terminals 10, 11,  
or 14, 15)

type of protection "Intrinsic Safety" EEx ib IIC

only for connection to a certified  
intrinsically safe circuit

Max. values:

$$U_i = 30 \text{ V}$$

$$I_i = 100 \text{ mA}$$

$$P_i = 0.8 \text{ W}$$

$$L_i = 0.2 \text{ mH}$$

$$C_i = 20 \text{ nF}$$

pH-measuring circuit  
(terminals 1/2, 4, 5)

type of protection "Intrinsic Safety" EEx ia IIC

Max. values:

$$U_o = 10 \text{ V}$$

$$I_o = 12 \text{ mA}$$

$$P_o = 15 \text{ mW}$$

Characteristic linear

$$L_i = \text{negligibly low}$$

$$C_i = 50 \text{ nF}$$

$$L_o = 200 \text{ mH}$$

$$C_o = 3 \text{ }\mu\text{F}$$

Temperature measuring circuit  
(terminals 7, 8)

type of protection "Intrinsic Safety" EEx ia IIC

Max. values:

$$U_o = 5 \text{ V}$$

$$I_o = 3 \text{ mA}$$

$$P_o = 4 \text{ mW}$$

Characteristic linear

$$L_i = \text{negligibly low}$$

$$C_i = 250 \text{ nF}$$

$$\begin{aligned}L_o &= 1 \text{ H} \\C_o &= 100 \text{ }\mu\text{F}\end{aligned}$$

Equipotential bonding  
(terminal 9 or 16)

for connection to the equipotential bonding

The loop measuring circuit is safely electrically isolated from the measuring circuits up to a voltage of 60 V. The ph-measuring circuit and the temperature measuring circuit are electrically interconnected.

(16) Test report PTB Ex 00-20406

(17) Special conditions for safe use

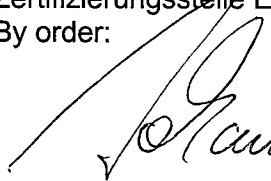
None

(18) Essential health and safety requirements

Covered by the above standards

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