



Translation

## (1) EC-TYPE EXAMINATION CERTIFICATE

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - **Directive 94/9/EC**
- (3) EC-Type Examination Certificate Number



### TÜV 04 ATEX 2431

- (4) Equipment: Transducer type O<sub>2</sub> 4100/2XH
- (5) Manufacturer: Mettler Toledo GmbH  
Process Analytics
- (6) Address: CH-8902 Urdorf, Im Hackacker 15
- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system 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 N° 04 YEX 551230.

- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 50014:1997    EN 50020:2002    EN 50284:1999**
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment or protective system must include the following:



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

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TÜV CERT-Certification Body  
Am TÜV 1  
D-30519 Hannover  
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Hanover, 2004-02-09



**TÜV NORD CERT**

Head of the  
Certification Body

## SCHEDULE

- (13)
- (14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 04 ATEX 2431**
- (15) Description of equipment

The transducer type O<sub>2</sub> 4100/2XH is preferable intended for the detection and processing of electrochemical parameters of fluids. For this purpose the transducer is equipped with one input for the oxygen measurement and one for temperature measurement.

The maximum permissible ambient temperature is 55°C.

### Electrical data

<p>Loop measuring circuit (KL 10, 11)</p>	<p>in type of protection Intrinsic Safety EEx ib IIC only for the connection of certified intrinsically safe circuit with the following maximum values:  <math>U_i = 30 \text{ V}</math>  <math>I_i = 100 \text{ mA}</math>  <math>P_i = 0,8 \text{ W}</math>            effective internal capacitance <math>C_i = 20 \text{ nF}</math>            effective internal inductance <math>L_i = 0,2 \text{ mH}</math></p>
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<p>Oxygen measuring circuit (KL 1, 2, 4, 5, 6)</p>	<p>in type of protection Intrinsic Safety EEx ia IIC Maximum values:  <math>U_o = 10 \text{ V}</math>  <math>I_o = 10 \text{ mA}</math>  <math>P_o = 13 \text{ mW}</math>            Characteristic line: linear            effective internal capacitance <math>C_i = 15 \text{ nF}</math>            The internal inductance is negligibly small.            max. permissible outer capacitance <math>C_o = 1,5 \text{ }\mu\text{F}</math>            max. permissible outer inductance <math>L_o = 1,0 \text{ mH}</math></p>
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<p>Temperature measuring circuit (KL 7, 8)</p>	<p>in type of protection Intrinsic Safety EEx ia IIC Maximum values:  <math>U_o = 5 \text{ V}</math>  <math>I_o = 1 \text{ mA}</math>  <math>P_o = 2 \text{ mW}</math>            Characteristic line: linear            effective internal capacitance <math>C_i = 120 \text{ nF}</math>            The internal inductance is negligibly small.            max. permissible outer capacitance <math>C_o = 1,38 \text{ }\mu\text{F}</math>            max. permissible outer inductance <math>L_o = 1,0 \text{ mH}</math></p>
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<p>Oxygene/temperature measuring circuit (Circuits interconnected) (KL 1, 2, 4, 5, 6, 7, 8)</p>	<p>in type of protection Intrinsic Safety EEx ia IIC Maximum values:  <math>U_o = 10 \text{ V}</math>  <math>I_o = 11 \text{ mA}</math>  <math>P_o = 14 \text{ mW}</math></p>
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characteristic line: linear  
effective internal capacitance  $C_i = 135 \text{ nF}$   
The internal inductance is negligibly small.  
max. permissible outer capacitance  $C_o = 1,38 \text{ }\mu\text{F}$   
max. permissible outer inductance  $L_o = 1,0 \text{ mH}$

or

for the connection of the oxygen sensors type InPro  
6XXX/\*\*/\*\*/\*\* according to SNCH 01 ATEX 3277 X

PA  
(KL 9)

for the connection to the equipotential bonding system

The loop measuring circuit is safely galvanically separated from all other measuring circuits up to a voltage of 60 V. The oxygen measuring circuit and the temperature measuring circuit are galvanically connected.

(16) Test documents are listed in the test report No.: 04 YEX 551230.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones