



(1) **EU-TYPE EXAMINATION CERTIFICATE**  
(Translation)

(2) Equipment or Protective Systems Intended for Use in  
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

**PTB 22 ATEX 2002**

**Issue: 0**

- (4) Product: Cable resistance thermometers and cable thermocouples,  
types 294, 394, KxT and KxW
- (5) Manufacturer: electrotherm Gesellschaft für Sensorik und thermische Messtechnik mbH
- (6) Address: Gewerbepark 6, 99331 Geratal OT Geraberg, Germany
- (7) This product and any acceptable variation thereto is 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 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

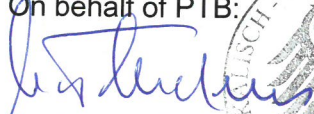
The examination and test results are recorded in the confidential Test Report PTB Ex 22-22001.

- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0:2018**                      **EN 60079-11:2012**                      **EN 60079-26:2015**
- (10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 **II 1/2 G Ex ia IIC T6...T1 Ga/Gb**    bzw.    **II 2 G Ex ia IIC T6...T1 Gb**

Konformitätsbewertungsstelle, Sektor Explosionsschutz  
On behalf of PTB:

Braunschweig, December 14, 2022

  
Dr.-Ing. M. Thedens  
Regierungsdirektor



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EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

## SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 22 ATEX 2002, Issue: 0**

(15) Description of Product

The temperature sensors with connection cable are used for installation in vessels, pipelines, apparatus and plants. For temperature measurement either resistance thermometers (type 394 and type series KxW) or thermocouples (type 294 and type series KxT) are used. The temperature sensors can be either used as a device with category separation or as a pure category 2 device. The number of resistance thermometers or thermocouples and the type of measuring circuit can vary.

The following values shall apply to the relation between temperature class and the maximum permissible ambient temperature range:

temperature class	max. permissible ambient temperature $T_{amb}$
T1...T4	-40 °C ... +70 °C
T5	-40 °C ... +70 °C
T6	-40 °C ... +55 °C

### Category-1/2-device

The ends of the connecting cables are located in hazardous areas requiring category 2 equipment and the sensor tips reach into the hazardous area requiring category 1. For the use of category 1/2 equipment, additional fasteners may be required depending on the design. The permissible process pressure shall be between 0.8 and 1.1 bar for applications requiring category 1/2 equipment.

### Electrical Data

Supply circuit .....level of protection intrinsic safety Ex ia IIC

only for connection to a certified intrinsically safe circuit

Maximum values:

$U_i = 30 \text{ V}$

$I_i = 50 \text{ mA}$

$P_i = 200 \text{ mW}$

$C_i$  negligibly low

$L_i$  negligibly low

Cable reactances per meter:

$C_c = 200 \text{ pF/m}$

$L_c = 1 \text{ µH/m}$

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**SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 22 ATEX 2002, Issue: 0**

(16) Test Report PTB Ex 22-22001

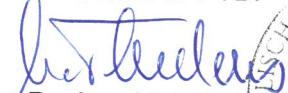
(17) Specific conditions of use  
none

(18) Essential health and safety requirements  
Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz

Braunschweig, December 14, 2022

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