



(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 03 ATEX 2152 X

- (4) Equipment: Sheathed resistance thermometer, type PT-100 Ex Typ 27-71...-3..I...
- (5) Manufacturer: BARTEC GmbH
- (6) Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany
- (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 03-22160 .

- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014:1997 + A1 + A2 EN 50028:1987 EN 50281-1-1:1998
- (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, 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 shall include the following:

II 2 G EEx m II T6 and II 2D IP65 T80 °C

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, September 17, 2003

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 03 ATEX 2152 X**

(15) Description of equipment

The sheathed resistance thermometer consists of a flexible mineral insulated cable of different lengths. A Pt-100 measuring resistor inside a rigid protective tube and a potted entry fitting with flexible connecting line are arranged at the cable ends. The temperature at the entry fitting shall not exceed 70 °C.

Electrical data

Maximum values of the signal circuit:

U = 6 V

I = 10 mA

P = 60 mW

Rated voltage:

max. 60 V

Lowest bending radius of the sheathed cable:

20 mm

(16) Test report PTB Ex 03-22160

(17) Special conditions for safe use

The sheathed resistance thermometer shall be operated in the signal circuit of an automatic electrical control unit.

It shall be guaranteed that the maximum permissible ambient temperature at the potted entry fitting is not exceeded.

For connection in the hazardous area, the connecting line shall be connected inside an enclosure which meets the requirements of an acknowledged type of protection in accordance with EN 50014 section 1.2 .

The resistance thermometer shall be included in the equipotential bonding measures of the system by using the yellow/green marked conductor.

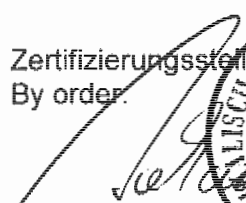
The permissible range of the ambient temperature of -40 °C up to +70 °C depends on the type of the connecting line used.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

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Regierungsdirektor



Braunschweig, September 17, 2003

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1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 03 ATEX 2152 X

(Translation)

Equipment: Sheathed resistance thermometer PT-100 Ex type 27-71**.*3**/****

Marking:  II 2 G Ex mb II T6 and II 2 D Ex mbD 21 T80 °C

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The EC-type examination certificate for the sheathed resistance thermometer PT-100 Ex type 27-71**.*3**/**** is supplemented as follows:

1. Depending on the applied type of the connecting cable and its anti-kink device the permissible range of the ambient temperature is extended
to -50 °C up to +70 °C
or to -55 °C up to +70 °C respectively.
2. The metallic anti-kink device is connected firmly and electrically conductive with the body of resistance thermometer.
3. Instead of the marking label, a thermally shrinking marking sleeve may be affixed to the connecting cable alternatively.

All further specifications of the EC-type examination certificate as well as the "Special Conditions" apply without changes.

Applied standards

EN 60079-0:2004

EN 60079-18:2004

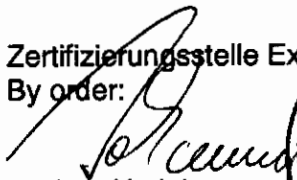
EN 61241-18:2004

prEN 61241-0:2004

Test report: PTB Ex 06-26105

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, November 15, 2006

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