



(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 02 ATEX 1041 X

(4) Equipment: Heater, type ...therm..

(5) Manufacturer: INTERTEC-Hess GmbH

(6) Address: Raffineriestraße 8, 93333 Neustadt, 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 02-11287.

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

EN 50014:1997 + A1 + A2

EN 50018:2000

EN 50028:1987

(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 d IIC or dm IIC T6, T5, T4, T3**

Zertifizierungsstelle Explosionsschutz

Braunschweig, 11 July 2002

By order:



Dr.-Ing. H. Wehinger
Direktor und Professor



SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1041 X**

(15) Description of equipment

The heater, type ...therm.. , is used in zone 1 for heating switch and control cubicles by convection and for direct heating of valves etc.

Three heater series are available:

- Varitherm
- Microtherm
- Multitherm

Technical data

Rated voltage	max. 250 V
Admissible operating voltage	max. 275 V
Rated current	max. 10 A
Rated power	max. 600 W
Ambient temperature range	-50 ... +60 °C
Operating temperatures (rated service)	-50 ... +180 °C
Mounting position	optional (with ribs: vertical)
Temperature classes	T6, T5, T4 or T3

(16) Test report PTB Ex 02-11287

(17) Special conditions for safe use

1. The connecting lead shall be installed to provide for permanent wiring and adequate protection against mechanical damage.
2. If connection is in the potentially explosive area, the connecting lead shall be connected by means of an enclosure that meets the requirements of a type of protection specified in EN 50014, section 1.2.
3. The external thermostat of type TS.. and TSE.. shall be mounted in an IP 54 enclosure. The operating temperature range is limited to -20 ... +80 °C.
4. Installation shall be made with due regard to the maximum permissible temperatures of neighbouring components.
5. The instructions shall accompany each heater in a suitable form.


(18) Essential health and safety requirements

Met by compliance with the aforementioned Standards.

Zertifizierungsstelle Explosionsschutz

Braunschweig, 11 July 2002

By order:


Dr.-Ing. H. Wehinger
Direktor und Professor



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1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1041 X

(Translation)

Equipment: Heater, type ...therm..

Marking:  II 2 G/D EEx d IIC or dm IIC T3...T6
IP 65 T85 °C, T100 °C, T135 °C, T200 °C

Manufacturer: INTERTEC-Hess GmbH

Address: Raffineriestraße 8, 93333 Neustadt, Germany

Description of supplements and modifications

1. The heater and thermostat are optionally also employed in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form.
The marking will be changed accordingly.
2. The Special Conditions in point 3 of the EC type-examination certificate are revised
- 3.1 The clamping area of the flameproof cable entry is extended.
- 3.2 The flameproof cable entry may optionally be used in the form of a 'BI' standard version.

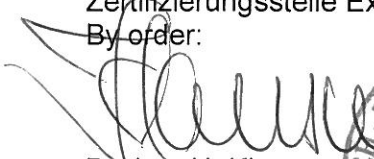
Test report: PTB Ex 02-12365

Special conditions

The external thermostat, type TS.. or TSE.., shall be mounted in an enclosure that meets the requirements set forth in EN 50028:1987, section 5.2.

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Klausmeyer
Regierungsdirektor



Braunschweig, 13 February 2003

Sheet 1/1

EC-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.

2nd SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1041 X

(Translation)

Equipment: Heater, type ...THERM...

Marking:  II 2 G EEx d IIC or dm IIC T4, T3
II 2 D IP 65 T135°C, T200°C

Manufacturer: INTERTEC-Hess GmbH

Address: Raffineriestraße 8, 93333 Neustadt, Germany

Description of supplements and modifications

1. The product line is extended.
2. The heater is given a new type designation: **CP ...THERM D.. ... T. ...**
3. The temperature class is defined on the basis of a thermal routine test.
4. The heaters are optionally provided with an external thermostat, type TS... or type TAI... , which is integrated into the incoming line.
5. For use in connection with the thermostat type TS... , the type of protection of the heater is EEx dm IIC.
6. The Special Conditions are revised to reflect the changes.

Test report: PTB Ex 04-14224

Special conditions

1. General

- 1.1 The connecting lead shall be installed to provide for permanent wiring and adequate protection against mechanical damage.
- 1.2 If connection is made in the potentially explosive area, the connecting lead shall be connected by means of an enclosure that meets the requirements of a type of protection specified in EN 50014, section 1.2.
- 1.3 Installation shall be made with due regard to the maximum permissible temperatures of neighbouring components.

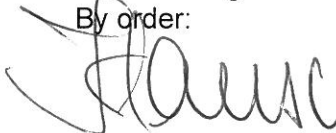
- 1.4 The maximum admissible ambient temperature, the self-heating rate and, if required, the thermal conduction (medium) shall be considered in determining the operating temperature (max. 180°C).
- 1.5 The manufacturer's operating manual shall be observed.

2. Additional conditions for use of thermostat, type TS:

- 2.1 The thermostat shall be mounted in an enclosure that meets the requirements set forth in EN 50028:1987, sections 5.1 and 5.2.
- 2.2 Each thermostat shall be provided on the line side with a short-circuit protection in the form of a 16-A-fuse in compliance with DIN 41571 or IEC 60127. This fuse may be accommodated in the corresponding power supply unit or it shall be separately connected on the line side. The fuse voltage rating shall be the same or greater than the voltage rating specified for the thermostat. The breaking capacity of the fuse link shall be the same or greater than the maximum short-circuit current expected at the place of installation (normally 1500 A).
- 2.3 The operating temperatures are limited to -50°C ... $+80^{\circ}\text{C}$.
- 2.4 Equipotential bonding and earthing shall be safeguarded by the way the thermostat is connected with the complete system.

Zertifizierungsstelle Explosionsschutz

By order:



Dr.-Ing. U. Klausmeyer
Regierungsdirektor



Braunschweig, 10. September 2004


3rd SUPPLEMENT


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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1041 X

(Translation)

Equipment: Heater type CP... THERM D.. T...

Marking:  II 2 G Ex d IIC or dm IIC T4, T3

 II 2 D Ex tD or tDmD A21 IP65 T135°C, T200°C

Manufacturer: INTERTEC-HESS GmbH

Address: Raffineriestraße 8, 93333 Neustadt/Donau, Germany

Description of modifications

1. Supplementation with reference to the series of standards EN 60079-0 and EN 61241-0.
The heater, type CP...THERM D.. T..., conforms with the requirements set out in the above-mentioned standards.
2. Adaptation of marking
The marking for the equipment and for the documentation is adapted as required.

<u>Applied standards</u>	EN 60079-0:2006	EN 60079-1:2004	EN 60079-18:2004
	EN 61241-0:2006	EN 61241-1:2004	EN 61241-18:2004

Assessment and Test Report: PTB Ex 08-18102

Special conditions for safe use

1. External thermostats with a separate EC Type Examination Certificate that meet the requirements set forth in the above standards may optionally be used.
2. The special conditions in the EC Type Examination Certificate must be followed.

Zertifizierungssektor Explosionsschutz

Braunschweig, June 10, 2008

By order:

(signature)

Dr.-Ing. U. Klausmeyer
Direktor und Professor

1 pages, correct and complete as regards content.

By order:

Dr.-Ing. Klausmeyer Braunschweig, September 7, 2010
Direktor und Professor

Sheet 1/1

EC-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.

4th SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1041X

(Translation)

Equipment: Heater, type CP...THERM D..T...

Marking:  II 2G Ex db IIC T6, T5, T4, T3
 II 2D Ex tb IIIC T85°C, T100°C, T135°C, T200°C

Manufacturer: INTERTEC-HESS GmbH

Address: Raffineriestraße 8, 93333 Neustadt, Germany

Description of supplements and modifications

1. Extension of temperature ranges
Ambient temperatures: -60 °C to +60 °C
Working temperatures (operation at rating) -60 °C to +180 °C
2. Extension of the temperature classes
The heater is, in addition, also manufactured for use in temperature classes T5 and T6.
3. Cable gland screw locking element
The screw locking element for the cable gland is no longer required.
4. Certification in compliance with the latest version of standards
With this supplement, the heater is certified with reference to the below mentioned standards.
5. Adaptation of marking
The marking for the equipment and the documentation is adapted as required.
II 2G Ex db IIC T6, T5, T4, T3
II 2D Ex tb IIIC T85°C, T100°C, T135°C, T200°C
Degree of protection: IP68

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Special conditions for safe use

1. External thermostats with a separate EC-Type Examination Certificate that meet the requirements set forth in the applied standards may optionally be used.
2. Regarding connection cable: The operating instructions shall inform the user of any special conditions for installation and operation, and the user shall comply with these conditions.
3. For use in the explosive dust atmosphere, the relevant requirements of EN 60079-14, EN 60079-17 and EN 60079-19 shall be complied with.

Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-31:2009

Test report: PTB Ex 13-13094

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, August 21, 2013

(signature)

Dr.-Ing. U. Klausmeyer
Direktor und Professor

2 pages, correct and complete as regards content.

On behalf of PTB:



Dipl.-Phys. U. Völkel Braunschweig, October 8, 2013

