



(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 1116 X

(4) Equipment: Heater, type MINITHERM D...

(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 02-19271.

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

EN 50014:1997+A1+A2

EN 50018:2000

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 d IIC T4 or T3

II 2 D IP 65 T135°C or T200°C

Zertifizierungsstelle Explosionsschutz

Braunschweig, 22 January 2003

By order:



Dipl.-Phys. U. Völkel



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1116 X

(15) Description of equipment

The heater, type MINITHERM D... , is used in zone 1 for direct heating of valves, etc., and for indirect heating of switch and control cubicles by convection. It may also be employed in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form.

Technical data

Rated voltage	max. 250 V
Admissible operating voltage	max. 265 V
Rated current	max. 1 A
Ambient temperatures	-50 ... +60 °C
Operating temperatures (rated service)	-50 ... +180 °C
Mounting position	optional (with ribs: vertical)

(16) Test report PTB Ex 02-19271

(17) Special conditions for safe use

1. The heater may only be installed and operated in enclosures whose absolute heat transfer coefficient is not less (not better) than 0.5 W/K.
2. The connecting lead shall be installed to provide for permanent wiring and protection against mechanical damage.
3. 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.
4. Installation shall be made with due regard to the maximum permissible temperatures of neighbouring components, the minimum clearances and, where required, the mounting position.
5. These notes shall accompany each heater in an adequate form.

(18) Essential health and safety requirements

Met by compliance with the aforementioned Standards.

Zertifizierungsstelle Explosionsschutz

By order:



Dipl.-Phys. U. Völkel



Braunschweig, 22 January 2003

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1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1116 X

(Translation)

Equipment: Heater, type MINITHERM D ...

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 range is extended.
2. The heater is given a new type designation: **SL ...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 m IC.

Test report: PTB Ex 04-13402

Special conditions

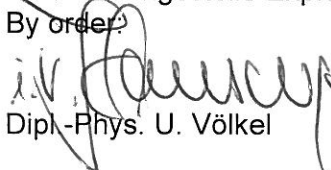
The external thermostat, type TS... , shall be mounted in an enclosure that meets the requirements set forth in EN 50028:1987, section 5.2.

The other notes and details specified in the EC type examination certificate remain unchanged.

Zertifizierungsstelle Explosionsschutz

Braunschweig, 27 May 2004

By order:


Dipl.-Phys. U. Völkel



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2nd SUPPLEMENT
according to Directive 94/9/EC Annex III.6

To EC-TYPE-EXAMINATION CERTIFICATE
PTB 02 ATEX 1116X

(Translation)

Equipment: Heater Type SL...THERM D.. T...

Applied Standards: EN 60079-0:2006 EN 60079-1: 2004 EN 60079-18:2004
EN 61241-0:2006 EN 61241-1:2004 EN 61241-18:2004

Marking: **Ex II 2 G** **Ex d IIC or dm IIC T4, T3**
 Ex 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 Supplements and Modifications

1. Change of rated current
The rated current is respecified to a maximum value of 10 A.
2. Supplement relating to Standards EN 60079-0 ff and EN 61241-0 ff
The heater Type SL ... THERM D .. T... meets the requirements of the above standards.
3. Adaptation of the marking
The marking of the devices and the documentation will be adapted accordingly.

Test Report: PTB Ex 08-17311

Special Conditions

1. External thermostats that have a separate EC-type examination certificate and meet the requirements of the above standards may optionally be used.
2. The special conditions set forth in the EC-type examination certificate must be observed.

Certification Body For Explosion Protection
By Order

Braunschweig, 12th March 2008

Dr.-Ing. M. Thedens
Regierungsdirektor (Government Director)

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EC-type examination Certificates without signature and official stamp are not 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.

3rd SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1116X

(Translation)

Equipment: Heater, type SL...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 or
II 2D Ex tb IIIC T85°C, T100°C, T135°C, T200°C
Degree of protection: IP68

ZSEx10101e.dotm

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.
1. 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.
2. For use in explosive dust atmospheres, 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 13-13015

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



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