



(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 1139 X**

(4) Equipment: Heater, type 27-2.6.-..../..../....

(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 03-13195.

(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 bzw dm IIC T6, T5, T4, T3

Zertifizierungsstelle Explosionsschutz

Braunschweig, July 23, 2003

By order:

Dr.-Ing. M. Thedens



(13)

## SCHEDULE

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 03 ATEX 1139 X**

(15) Description of equipment

The heater HC, type 27-2.6.-.../.../... , 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:

- HCL...
- HCS...
- HCM...

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 03-13195

(17) Special conditions for safe use

1. The connecting cable shall be installed as fixed wiring and sufficiently protected 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/thermal protector, respectively, shall be mounted in an enclosure that meets the requirements specified in EN 50028:1987, section 5.2. The operating temperature range is limited to -20 ... +80 °C.
4. Installation shall be made such that due regard is given to the maximum permissible temperatures of adjacent components.
5. The instructions shall accompany each heater in a suitable form.

(18) Essential health and safety requirements

met by compliance with the standards mentioned above.

Zertifizierungsstelle Explosionschutz

By order:

Dr.-Ing. M. Thedens



Braunschweig, July 23, 2003

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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.


## 1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 03 ATEX 1139 X

(Translation)

Equipment: Heater, type 27-2.6.-..../..../....

Marking:  II 2 G/D EEx d IIC or dm IIC T6, T5, T4, T3  
IP 65 T 85°C, T 100 °C, T 135 °C, T 200 °C

Manufacturer: BARTEC GmbH

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

### Description of supplements and modifications

1. 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 is 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 is optionally used in the form of a 'BI' standard version.

Test report: PTB Ex 04-13302

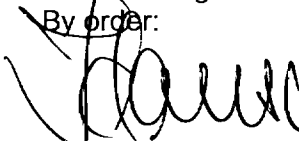
### Special conditions

The thermostat integrated in the connecting lead shall be mounted in an enclosure that meets the requirements specified in EN 50028, section 5.2. The operating temperature range is limited to -20 ... +80°C.

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

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Klausmeier  
Regierungsdirektor

Braunschweig, August 30, 2004

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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 03 ATEX 1139 X

(Translation)

Equipment: Heater HC. type 27-2.6.-...

Marking:  II 2G Ex d and dm IIC T4, T3  
II 2D Ex tD and tDmD A21 IP65 T135°C, T200°C

Manufacturer: BARTEC GmbH

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

### Description of supplements and modifications

Modifications of the HC. heater, type 27-2.6.-...

1. Certification in accordance with EN 60079 et seq. and EN 61241-0 et seq.  
With this modification, the heater is certified with a view to the series of standards EN 60079-0 et seq. and EN 61241-0 et seq.:
2. Modification of the thermostats  
The heater is optionally equipped with a thermostat that is integrated into the connecting cable. Another option is to use external thermostats with a separate EC Type Examination Certificate.
3. Adaptation of type code, marking and special conditions  
The type code, the marking and the special conditions - also with a view to the use of thermostats - have been adapted to the modifications.

### 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

Assessment and test report: PTB Ex 09-19179

## Special conditions for safe use

### 1. General

- 1.1 The connecting cable must 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 cable has to be connected with an enclosure that meets the requirements of one of the types of protection specified in EN 60079-0.
- 1.3 Installation must 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) must be considered in determining the working temperature (max. 180°C).
- 1.5 The manufacturer's instructions for operation must be followed.

### 2. In addition, when using the thermostat, type 27-6B11-24... (Ex m)

- 2.1 The thermostat has to be mounted in an enclosure that meets the requirements specified in EN 60079-0:2006 for metallic or non-metallic enclosures.
- 2.2 Every thermostat must be provided on the line side with a short-circuit protection in the form of a 16-A fuse complying with DIN 41571 or IEC 60127. This fuse may be accommodated in the corresponding power supply unit or it must be connected separately on the line side. The fuse voltage rating must be the same or greater than the voltage rating specified for the thermostat. The breaking capacity of the fuse link must be the same or greater than the maximum short-circuit current expected at the place of installation (normally 1500 A).
- 2.3 The working temperature range is limited to  $-50^{\circ}\text{C}$  ...  $+80^{\circ}\text{C}$ .
- 2.4 Equipotential bonding/earthing must be safeguarded by the way the thermostat is connected with the complete system.

Zertifizierungssektor Explosionsschutz

Braunschweig, January 25, 2010

By order:


Dr.-Ing. U. Klausmeyer  
Direktor und Professor



## 3rd SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 03 ATEX 1139 X

(Translation)

Equipment: Heater HC\*, type 27-2\*6\*-\*\*\*\*/\*\*\*\*/\*\*\*\*

Marking:  II 2G Ex d resp. dm IIC T4, T3  
 II 2D Ex tD resp. tDmD A21 IP65 T135°C, T200°C



Manufacturer: BARTEC GmbH

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

### Description of supplements and modifications

- Extension of temperature ranges
- Ambient temperatures: -60 °C to +60 °C  
Working temperatures (operation at rating) -60 °C to +180 °C
- Extension of the temperature classes
- The heater is, in addition, also manufactured for use in temperature classes T5 and T6.
- Cable gland screw locking element
- The screw locking element for the cable gland is no longer required.
- Certification in compliance with the latest version of standards  
With this supplement, the heater is certified with reference to the below mentioned standards.
- 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



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 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 14-13042

Zertifizierungssektor Explosionsschutz  
On behalf of PTB:

Braunschweig, July 15, 2014



Dipl.-Phys. U. Völkel

