



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx PTB 14.0019X Issue No: 0 Certificate history:  
Issue No. 0 (2014-05-26)

Status: Current Page 1 of 3

Date of Issue: 2014-05-26

Applicant: **BARTEC GmbH**  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany

Electrical Apparatus: **Heater HS\* type 27-2\*\*\*-7\*\*\*/\*\*\*\*/\*\*\*\***  
*Optional accessory:*

Type of Protection: **Flameproof enclosure "d", Protection by enclosure "t"**

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

Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing. U. Klausmeyer

Position:

Head of Department Explosion Protection in Energy Technology

Signature:  
(for printed version)

  
04 JUN. 2014

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)  
Bundesallee 100  
38116 Braunschweig  
Germany



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Page 2 of 3

Manufacturer: **BARTEC GmbH**  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany

Additional Manufacturing  
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

[DE/PTB/ExTR14.0021/00](#)

#### Quality Assessment Report:

[DE/TUN/QAR06.0017/05](#)



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Certificate No: IECEx PTB 14.0019X

Issue No: 0

Date of Issue: 2014-05-26

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description of equipment

The heater HS\* type 27-2\*\*\*-7\*\*\*/\*/\*/\*/\* is used in zone 1 and also in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form for heating switch and control cubicles by convection and for direct heating of valves.

For nomenclature and technical data see Annex.

**CONDITIONS OF CERTIFICATION: YES as shown below:**

For Special conditions for save use see Annex.

#### Annex:

[IECEx14.0019X\\_Annex.pdf](#)



Applicant: BARTEC GmbH  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany

Electrical Apparatus: Heater HS\* type 27-2\*\*\*-7\*\*\*/\*\*\*\*/\*\*\*\*

### Description of equipment

The heater HS\*, type 27-2\*\*\*-7\*\*\*/\*\*\*\*/\*\*\*\*, is used in zone 1 and also in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form for heating switch and control cubicles by convection and for direct heating of valves.

### Technical Data

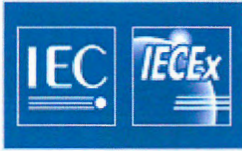
Rated voltage	max. 250 V
Admissible operating voltage	max. 265 V
Rated current	max. 10 A
Ambient temperature	-60°C to + 60 °C
Operating temperature range	-60°C to +180 °C
Temperature class	T6, T5, T4 or T3

### Nomenclature

Type no.	27	-	2	*	*	*	-	7	*	*	*	/	*	*	*	*	/	*	*	*	*
Key no.	A		B	C	D	E		F	G	H	I		J	K	L	M		N	O	P	R

### Explanation key numbers:

<u>Key no.</u>	<u>Code for:</u>	<u>Variations:</u>	<u>Description</u>
A	Heaters and whose parts	27	Heaters components and devices
B	Heater	2	Heater
C		A	Coreblock >= 90mm <u>Cartridge</u> >= 55mm
		B	Coreblock >= 220mm <u>Cartridge</u> >= 160mm
		C	Coreblock >= 105mm <u>Cartridge</u> >= 55mm
		D	Coreblock >= 120mm <u>Cartridge</u> >= 95mm
		E	Coreblock >= 155mm <u>Cartridge</u> >= 95mm
		F	Coreblock >= 170mm <u>Cartridge</u> >= 135mm
		G	Coreblock >= 220mm <u>Cartridge</u> >= 175mm
		H	Coreblock >= 250mm <u>Cartridge</u> >= 215mm
		J	Coreblock >= 290mm <u>Cartridge</u> >= 255mm
		K	Coreblock >= 330mm <u>Cartridge</u> >= 295mm



<b>D</b>	Heater block material	5	Aluminium for sea water
		6	Stainless steel
<b>E</b>	Design	3	Temperature class T3
		4	Temperature class T4
<b>F</b>	Rated voltage	7	Maximum 250 V
<b>L</b>	Special design	0	Without thermostat
		1	With thermostats type 27-6B11-24**/****/****
		2	With thermostats type 27-6B11-54**/****/****
<b>M</b>	Profile	HS* e.g. BARTEC – HSR Various models with ribs factory or custom designation e.g. HSF or HSL	
<b>G-K, N-R</b>	Number or letter for characteristics without influence on the explosion protection		

### 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 adequate 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 IEC 60079-0, section 1.
4. Installation shall be made with due regard to the maximum permissible temperatures of neighbouring components, the minimum clearances and, when required, the mounting position.
5. The a.m. thermostats are not included in the assessment of this Certificate of Conformity. Additional conditions for alternate use of thermostats see concerning test certificates. They have to be separately certified to the same standards.
6. Special conditions for some connecting cables have to be included in the manual instructions and have to be noticed by the installer.
7. If used in dust-ex-areas the concerning requirements of IEC 60079-14, of IEC 60079-17 and IEC 60079-19 have to be considered.
8. The notes shall accompany each heater in an adequate form.