



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System 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** Page 1 of 4 **Certificate history:**  
Status: **Current** Issue No: 1 **Issue 0 (2014-05-26)**  
Date of Issue: **2021-10-12**  
Applicant: **BARTEC GmbH**  
**Max-Eyth-Straße 16**  
**97980 Bad Mergentheim**  
**Germany**  
Equipment: **Heater HS\* type 27-2\*\*\*-7\*\*\*j\*\*\*\*j\*\*\*\***  
Optional accessory:  
Type of Protection: **Flameproof enclosure "d", Protection by enclosure "t"**  
Marking: **Ex db IIC T4, T3 Gb**  
**Ex tb IIIC T135°C, T200°C Db**

Approved for issue on behalf of the IECEX  
Certification Body:

**Dr.-Ing. Detlev Markus**

Position:

**Head of Department "Explosion Protection in Energy Technology"**

Signature:  
(for printed version)

*D. Markus*

Date:

*12.10.21*

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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





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

Additional  
manufacturing  
locations:

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 equipment 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

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

This Certificate **does not** indicate compliance with 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/ExTR14.0021/01](#)

Quality Assessment Report:

[DE/TUN/QAR06.0017/13](#)





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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The self-limiting electrical heater HS\* type 27-2\*\*\*-7\*\*\*/\*\*\*\*/\*\*\*\*\* is designed for direct heating through flange-mounting (conduction) or for room heating (convection) in small enclosures or cabinets where measuring instruments, control valves or similar equipment in hazardous areas must be heated.

It consists of the body made of metal, alternatively with fins, the cartridge, optional - separately certified - thermostat used as an alarm device, the - separately certified - cable gland and the connection lead.

The heaters are optionally provided with an - separately certified - external temperature controller or temperature switch which is integrated into the incoming line.

The principle of the 'stabilized design' is applied for protection against temperatures in excess of the limit temperature. The operating conditions have been defined in conjunction with a self-limiting (PTC) cartridge heating element which is associated with the required temperature class. The corresponding parameters are determined under 'worst-case' conditions by thermal type testing in compliance with EN IEC 60079-0 regulations. The maximum permissible operating temperatures of the components used are not exceeded.

## Technical data

Rated voltage	max. 265 V
Permitted operating voltage	max. 275 V
Rated current	max. 10 A
Ambient temperature	-60 °C to +60 °C
Service temperature range	-60 °C to +180 °C
Mounting position	without fins: optional with fins: vertical / horizontal
Switch capacity of fault alarm	10 A / 275 V
Protection class	IP66 / IP68 (1bar/30min)

Nomenclature see Annex

## SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The connecting lead shall be installed to provide for permanent wiring and adequate protection against mechanical damage. The operating instructions shall inform the user of any special conditions for installation and operation, and the user shall comply with these conditions.
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 IEC 60079-0, section 1. Installation shall be made with due regard to the maximum permissible temperatures of neighboring components.
3. External thermostats with a separate Certificate of Conformity that meet the requirements set forth in the applied standards may optionally be used.



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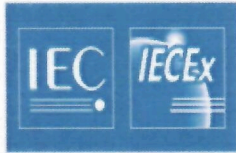
Issue No: 1

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**  
Update to the current standards

**Annex:**

[COCA\\_PT14X\\_I1.pdf](#)





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

**Electrical Apparatus:** Heater HS\* Type 7-2\*\*\*-7\*\*\*/\*\*\*\*/\*\*\*\*

**Nomenclature**

27	-	2	*	*	*	-	7	*	*	*	/	*	*	*	*	/	*	*	*	*
A		B	C	D	E		F	G	H	I		J	K	L	M		N	O	P	R

- A) 27 = Heater components and devices
- B) 2 = Heater
- C)
  - A = Coreblock ≥ 90 mm Cartridge ≥ 55 mm
  - B = Coreblock ≥ 220 mm Cartridge ≥ 160 mm
  - C = Coreblock ≥ 105 mm Cartridge ≥ 55 mm
  - D = Coreblock ≥ 120 mm Cartridge ≥ 95 mm
  - E = Coreblock ≥ 155 mm Cartridge ≥ 95 mm
  - F = Coreblock ≥ 170 mm Cartridge ≥ 135 mm
  - G = Coreblock ≥ 220 mm Cartridge ≥ 175 mm
  - H = Coreblock ≥ 250 mm Cartridge ≥ 215 mm
  - J = Coreblock ≥ 290 mm Cartridge ≥ 255 mm
  - K = Coreblock ≥ 330 mm Cartridge ≥ 295 mm
- D) Heater block-material
  - 5 = Aluminium for sea water
  - 6 = Stainless steel
- E) Design
  - 3 = Temperature class T3
  - 4 = Temperature class T4
- F) Rated voltage
  - 7 = max 265 V
- L) Special design
  - 0 = without thermostat
  - 1 = with integrated thermostat
  - 2 = with integrated thermostat
- M) Profile
  - HS\* e.g. BARTEC – HSR ...
  - Various models with ribs factory or custom designation e.g. HSF or HSL
- G - K)
- N - R) Number or letter for characteristics without influence on the explosion protection