



(1) **EU-TYPE EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 03 ATEX 1221 X

Issue: 1

(4) Product: Heater HS* type 27-2***-7***/****/****

(5) Manufacturer: BARTEC GmbH

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

(7) This product and any acceptable variation thereto is 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 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 21-11106.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex db IIC T4, T3 Gb**

 **II 2 D Ex tb IIIC T135°C, T200°C Db**

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 12, 2021


Dr.-Ing. D. Markus
Direktor und Professor



sheet 1/4

EU-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.



(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 03 ATEX 1221 X, Issue: 1**

(15) Description of Product

The self-limiting electrical heater 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
Switching capacity of fault alarm (AM)	10 A / 275 V
Protection class	IP66 / IP68 1bar/30min

sheet 2/4

EU-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.



SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 03 ATEX 1221 X, Issue: 1

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 \geq 90 mm Cartridge \geq 55 mm
 B = Coreblock \geq 220 mm Cartridge \geq 160 mm
 C = Coreblock \geq 105 mm Cartridge \geq 55 mm
 D = Coreblock \geq 120 mm Cartridge \geq 95 mm
 E = Coreblock \geq 155 mm Cartridge \geq 95 mm
 F = Coreblock \geq 170 mm Cartridge \geq 135 mm
 G = Coreblock \geq 220 mm Cartridge \geq 175 mm
 H = Coreblock \geq 250 mm Cartridge \geq 215 mm
 J = Coreblock \geq 290 mm Cartridge \geq 255 mm
 K = Coreblock \geq 330 mm Cartridge \geq 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 = Maximum 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

Modification

Update to the current standards EN IEC 60079-0:2018 (Ed. 7), EN 60079-1:2014 (Ed. 7) and EN 60079-31:2013 (Ed. 2)

(16) Test Report PTB Ex 21-11106



SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 03 ATEX 1221 X, Issue: 1

(17) Specific conditions of use

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.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 12, 2021


Dr.-Ing. D. Markus
Direktor und Professor

