EU - Type Examination Certificate

(1)

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 19 ATEX 1 040 U **Revision 0**

(4) Component: Heater enclosure type DH.**C1..-.

(5) Manufacturer: ELMESS-Thermosystemtechnik GmbH & Co. KG

(6) Address: Nodallee 1
29525 Uelzen
Germany

(7) This component and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this component 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 of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 19TH0153.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2018	**EN 60079-1:2014**	**EN 60079-7:2015+A1:2018**
EN 60079-0:2012+A11:2013	**EN 60079-31:2014**	**EN 60079-11:2012**

(10) The sign "U" placed behind the certificate number indicates that this certificate shall not be confounded with certificates issued for equipment or protective systems. This certificate is valid for a component without an autonomous function in sense of article 2 (3) and does not authorize for the CE-marking to be applied according to article 13 (3) of the Directive. This component certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EU - Type Examination Certificate relates only to the design and examination of the specified component in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this component and its placing on the market. Those requirements are not covered by this certificate.

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

See schedule

Certification department of explosion protection

H. Schaffer

Nuremberg, 2019-03-12

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(13) # Annex

(14) **EU - Type Examination Certificate EPS 19 ATEX 1 040 U** **Revision 0**

(15) Description of component:

The heater enclosures type DHF.C, type DHG.C and type DHK.C serve for heating under normal operating conditions non explosive liquids or gases. The heater enclosures may be used either in gas hazardous areas or in dust hazardous areas.

The heater enclosure type DHF.C, type DHG.C and type DHK.C consist of a enclosure in the type of protection flameproof enclosure "d", a terminal enclosure in the type of protection increased safety "e" and the heating elements, which are connected in the flameproof enclosure. In the flameproof enclosure temperature monitoring and control equipment can be installed.

The temperature sensors can be conducted intrinsically safe. In the case the electrical connection is made in an Ex i terminal enclosure.

If the electrical connection is made directly in the flameproof enclosure, the terminal enclosure in the type of protection increased safety "e" is omitted.

Type key:

D H . ** C1 . . - .

- Rated power in kW
- D — Optional direct cable entry in Ex d enclosure
  /. optional value without Ex relevance
- St — Steel
- V — Stainless Steel
- Enclosure type flamproof enclosure
  M0., A0., B01, B03, **C14, C15, C17**, G05
- Type according to intended use
- F — Liquid
- G — Gas/Air
- K — Contact (Solid body surrounds the heater)
- Heating device
- Ex-Equipment flameproof enclosure

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Technical data:

Permitted range of ambient temperature	Standard: -20 °C bis +40 °C Special temperature: -60 °C to +60 °C
Heating circuit	
Rated voltage	max. 690 V
Rated current	max. 160 A per heating group, max. 3 heating groups
Terminal cross-section	max. 95 mm ²
Control circuit	
Rated voltage	max. 440 V AC, max. 250 V DC
Rated current	max. 16 A AC, max. 0,25 A DC
Terminal cross-section	max. 6 mm²
Degree of protection	max. IP66
Cover screws M8xM15, M8xM18 and M10x23	Property class 8.8

Marking:

II 2 G Ex db eb IIB + H2 Gb

II 2 G Ex db IIB + H2 Gb

II 2 D Ex tb IIIC Db

II 2 G Ex db eb ib IIB + H2 Gb

II 2 G Ex db ib IIB + H2 Gb

II 2 D Ex tb ib IIIC Db

(16) Reference number: 19TH0153

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(17) Notes for manufacture, installation and operation:

1. The determination of the temperature class resp. the maximum surface temperature must be performed by a notified body. The thermal testing also includes the inspection for compliance with the permissible operating temperatures of the used components and materials.

2. The position of the temperature sensors of the temperature limiters must be include the changed operating conditions caused by a phase failure in three-phase systems.

3. The heater may only be operated in the specified mounting position.

4. The heater may only be operated in conjunction with a safety system. As safety devices for temperature, flow, and level must be used function – or reliability tested models according the relevant regulations.

5. The heating of liquids is only allowed with enough overlap. This can be fulfilled by a level monitoring device or comparable protective measures.

6. For flowing media can additionally a monitoring by a flow control device be required.

7. Dust deposits on the hot surfaces are to be avoided by appropriate measures.

8. Only the manufacturer is permitted to carry out repairs on the flameproof gaps. A repair according the values of table 2 and table 3 of the standard EN 60079-1 is not permitted.

9. The special conditions in the certificates of the separately certified intrinsically safe temperature transmitters and temperature sensors and the requirements of the standard EN 60079-14 must be complied with.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Nuremberg, 2019-03-12

i. A.

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