



[1] **EU-TYPE EXAMINATION CERTIFICATE - TRANSLATION**

[2] Equipment and protective systems intended for use in potentially explosive atmospheres, directive 2014/34/EU

[3] EU-Type Examination Certificate Number **IBExU18ATEX1045 X** | Issue 0

[4] Equipment: **Temperature monitoring device**  
Type: DST.60...-T. and IST.60...-T.

[5] Manufacturer: **ELMESS Thermosystemtechnik GmbH & Co. KG**

[6] Address: **Nordallee 1  
29525 Uelzen  
GERMANY**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of 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 IB-18-3-0009.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:  
**EN 60079-0:2012+A11:2013      EN 60079-1:2014      EN 60079-7:2015      EN 60079-11:2012**  
Except in respect of those requirements listed at item [18] of the annex.

[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. 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:

**Ex II 2G Ex db eb IIB T6 or T5 Gb**      or      **Ex II 2G Ex db eb IIC T6 or T5 Gb**  
-55 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

**Ex II 2G Ex db IIB T6 or T5 Gb**      or      **Ex II 2G Ex db IIC T6 or T5 Gb**  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

**Ex II 2G Ex ib IIB T6 or T5 Gb**      or      **Ex II 2G Ex ib IIC T6 or T5 Gb**  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

IBExU Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7  
09599 Freiberg, GERMANY

Phone: +49 (0)3731 3805-0  
Fax: +49 (0)3731 3805-10

By order

Dipl.-Ing. (FH) Henker



- Seal -  
(Notified Body number 0637)

Certificates without seal and signature are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail

Freiberg, 29 June 2018

[13]

## Schedule

[14]

**Certificate Number IBExU18ATEX1045 X | Issue 0**

[15] **Description of product**

The Temperature monitoring devices type DST.60...-T. and IST.60...-T. serves for limiting, monitoring or control of temperatures in hazardous areas of category 2G and 3G. The control box consists of a flameproof enclosure made of aluminium or stainless steel with operating elements. The electric connection is carried out either with an additional equipped Ex e terminal box (separately certified) or with a direct flameproof cable gland or bushing.

The Temperature monitoring device type IST.60...-T. can also be marketed in the same design with type of protection Ex ib.

The flameproof cable bushing in the Ex e terminal box consists of a threaded bush made of brass with encapsulated wire line and capillary tube sensor.

The Temperature monitoring devices can be designed as temperature limiters or safety temperature limiters or as temperature controllers or monitors. They are equipped with capillary tube temperature switches; the capillary tube sensor is led into the flameproof enclosure via a flameproof cable gland.

Technical data:

Control circuit Ex d

|                            |                                    |
|----------------------------|------------------------------------|
| - Rated voltage:           | maximum 440 V AC; maximum 250 V DC |
| - Rated current:           | maximum 0.25 A DC and              |
| type DST.60..E... (+40 °C) | maximum 16 A AC1                   |
| type DST.60..E... (+60 °C) | maximum 12 A AC1                   |
| all other types (+60 °C)   | maximum 16 A AC1                   |

Control circuit Ex i

|                         |                     |
|-------------------------|---------------------|
| - Rated voltage $U_i$ : | maximum 60 V AC/DC  |
| - Rated current $I_i$ : | maximum 0.1 A AC/DC |

Ambient temperature range

|                                |                     |
|--------------------------------|---------------------|
| - Standard:                    | -20 °C up to +40 °C |
| - Special design:              | -55 °C up to +60 °C |
| - Special design DST.60..D...: | -60 °C up to +60 °C |

Connection

|                                  |                                    |
|----------------------------------|------------------------------------|
| - Rated cross section terminals: | maximum 4 mm <sup>2</sup>          |
| - Cable:                         | maximum 7 x 1.5 mm <sup>2</sup>    |
| - Degree of protection:          | maximum IP66 according to EN 60529 |

[16] **Test report**

The examination and test results are recorded in the confidential test report IB-18-3-0009 of 29 June 2018. The test documents are part of the test report and they are listed there.

*Summary of the test results*

The Temperature monitoring devices fulfil the requirements of explosion protection for equipment of Group II, Category 2G in type of protection flameproof enclosure „db“ and increased safety „eb“ (type DST.60...-T.) or type of protection intrinsic safety „ib“ (type IST.60...-T.).

**[17] Special conditions for use**

1. Repairs of the flameproof joints must be made in compliance with the constructive specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 2 and 3 of EN 60079-1.
2. The cable glands supplied by the manufacturer are suitable only for fixed installation, the operating company has to ensure an adequately strain relief.
3. For type DST.60..E... the selection of cable glands and connecting cables depends on the minimum ambient temperature. The cable glands must be suitable and certified for this temperature range. Unused openings for cable entries have to be closed durably with suitable screw plugs, which are confirmed for the respective type of protection.
4. The enclosure of the Temperature monitoring device has to be connected constructively in the equipotential bonding system according to EN 60079-14, Paragraph 6.3.
5. For type IST.60...-T., the interconnection and connection of intrinsically safe circuits must be tested separately.
6. Temperature monitoring devices with single wires (type DST.60..Z...) must be installed in an additional enclosure, which meets the requirements of EN 60079-0.

**[18] Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

- not applicable -

**[19] Drawings and documents**

The documents are listed in the test report.

By order



Dipl.-Ing. (FH) Henker

Freiberg, 29 June 2018

[1] **EU-TYPE EXAMINATION CERTIFICATE - TRANSLATION**



[2] Equipment and protective systems intended for use in potentially explosive atmospheres, directive 2014/34/EU

[3] EU-Type Examination Certificate Number **IBExU18ATEX1045 X** | Issue 1

[4] Equipment: **Temperature monitoring device**  
Type: DST.60...-T. and IST.60...-T.

[5] Manufacturer: **ELMESS Thermosystemtechnik GmbH & Co. KG**

[6] Address: **Nordallee 1  
29525 Uelzen  
GERMANY**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of 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 IB-18-3-0009/2.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:  
**EN 60079-0:2012+A11:2013      EN 60079-1:2014      EN 60079-7:2015      EN 60079-11:2012  
EN 60079-31:2014**

Except in respect of those requirements listed at item [18] of the annex.

[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. 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:

Type DST.60...-T.:

**⊕Ex II 2G Ex db eb IIB T6 or T5 Gb**      or      **⊕Ex II 2G Ex db eb IIC T6 or T5 Gb**  
-55 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

**⊕Ex II 2G Ex db IIB T6 or T5 Gb**      or      **⊕Ex II 2G Ex db IIC T6 or T5 Gb**  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

**⊕Ex II 2D Ex tb IIIC T85 °C or T100 °C Db**  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

**IBExU Institut für Sicherheitstechnik GmbH**  
An-Institut der TU Bergakademie Freiberg

Type IST.60...-T.:

⊕ II 2G Ex ib IIB T6 or T5 Gb or ⊕ II 2G Ex ib IIC T6 or T5 Gb  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

⊕ II 2D Ex ib IIC T85 °C or T100 °C Db  
-60 °C ... -20 °C ≤ T<sub>a</sub> ≤ +40 °C ... +60 °C

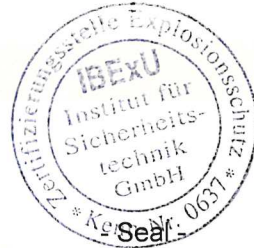
IBExU Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7  
09599 Freiberg, GERMANY

Phone: +49 (0)3731 3805-0  
Fax: +49 (0)3731 3805-10

By order



Dipl.-Ing. (FH) Henker



(Notified Body number 0637)

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Freiberg, 07 December 2018

[13] **Schedule**

[14] **Certificate Number IBExU18ATEX1045 X | Issue 1**

[15] **Description of product**

The Temperature monitoring devices type DST.60...-T. and IST.60...-T. serve for limiting, monitoring or control of temperatures in hazardous areas of category 2G and 3G as well as 2D and 3D. The control box consists of a flameproof and dust-tight enclosure made of aluminium or stainless steel with operating elements. The electric connection is carried out either with an additional equipped terminal box (separately certified) or with a direct flameproof cable gland or bushing.

The Temperature monitoring device type IST.60...-T. can also be marketed in the same design with type of protection Ex ib.

The flameproof cable bushing in the Ex e terminal box consists of a threaded bush made of brass with encapsulated wire line and capillary tube sensor.

The Temperature monitoring devices can be designed as temperature limiters or safety temperature limiters or as temperature controllers or monitors. They are equipped with capillary tube temperature switches; the capillary tube sensor is led into the flameproof enclosure via a flameproof cable gland.

Technical data:

Control current circuit Ex d / Ex t

|                            |                                    |
|----------------------------|------------------------------------|
| - Rated voltage:           | maximum 440 V AC; maximum 250 V DC |
| - Rated current:           | maximum 0.25 A DC and              |
| Type DST.60..E... (+40 °C) | maximum 16 A AC1                   |
| Type DST.60..E... (+60 °C) | maximum 12 A AC1                   |
| all other types (+60 °C)   | maximum 16 A AC1                   |

Control current circuit Ex i

|                         |                     |
|-------------------------|---------------------|
| - Rated voltage $U_i$ : | maximum 60 V AC/DC  |
| - Rated current $I_i$ : | maximum 0.1 A AC/DC |

Ambient temperature range

|                                |                     |
|--------------------------------|---------------------|
| - Standard:                    | -20 °C up to +40 °C |
| - Special design:              | -55 °C up to +60 °C |
| - Special design DST.60..D...: | -60 °C up to +60 °C |

Connection

|                                  |                                    |
|----------------------------------|------------------------------------|
| - Rated cross section terminals: | maximum 4 mm <sup>2</sup>          |
| - Cable:                         | maximum 7 x 1.5 mm <sup>2</sup>    |
| - Degree of protection:          | maximum IP66 according to EN 60529 |

[16] **Test report**

The examination and test results are recorded in the confidential test report IB-18-3-0009/2 of 06 December 2018.

The test documents are part of the test report and they are listed there.

*Summary of the test results*

The Temperature monitoring device type DST.60...-T. fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection flameproof enclosure "db" and increased safety „eb“ and Category 2D, type of protection dust ignition protection by enclosure "tb".

The Temperature monitoring device type IST.60...-T. fulfils the requirements of explosion protection for equipment of Group II, Category 2G and Category 2D, type of protection intrinsic safety "ib".

*Variations compared to issue 0 of this certificate:*

- Addition of type of protection dust ignition protection by enclosure "tb".

**[17] Special conditions for use**

1. Repairs of the flameproof joints must be made in compliance with the constructive specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 2 and 3 of EN 60079-1.
2. The cable glands supplied by the manufacturer are suitable only for fixed installation, the operating company has to ensure an adequately strain relief.
3. For type DST.60..E... the selection of cable glands and connecting cables depends on the minimum ambient temperature. The cable glands must be suitable and certified for this temperature range. Unused openings for cable entries have to be closed durably with suitable screw plugs, which are confirmed for the respective type of protection.
4. The enclosure of the Temperature monitoring device has to be connected constructively in the equipotential bonding system according to EN 60079-14, Paragraph 6.3.
5. For type IST.60...-T., the interconnection and connection of intrinsically safe circuits must be tested separately.
6. Temperature monitoring devices with single wires (type DST.60..Z...) must be installed in an additional enclosure, which meets the requirements of EN 60079-0.
7. Coated enclosures may not be operated in the near of high-charging processes.

**[18] Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

- not applicable -

**[19] Drawings and documents**

The documents are listed in the test report.

By order



Dipl.-Ing. (FH) Henker

Freiberg, 06 December 2018