



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

Certificate No.: **IECEx IBE 13.0012X**

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Certificate history:

Status: **Current**

Issue No: 3

[Issue 2 \(2022-08-04\)](#)

[Issue 1 \(2015-03-18\)](#)

[Issue 0 \(2013-05-10\)](#)

Date of Issue: 2023-04-25

Applicant: **eltherm production GmbH**
Ernst-Heinkel-Str. 6-10
57299 Burbach
Germany

Equipment: **Cable Joint Ex-Con 22/4, Ex-Con 22/4 Si, Ex-Con 25/7, Ex-Con 36/4 and Ex-Con-SR**

Optional accessory:

Type of Protection: **increased safety "e", dust ignition protection by enclosure "t"**

Marking: Ex eb IIC T6...T3 Gb

Ex tb IIIC T85 °C...T200 °C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Peter Cimalla

Position:

Deputy Head of department Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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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 www.iecex.com or use of this QR Code.



Certificate issued by:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany





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Manufacturer: **eltherm production GmbH**
Ernst-Heinkel-Str. 6-10
57299 Burbach
Germany

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

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Reports:

DE/IBE/ExTR13.0012/00
DE/IBE/ExTR13.0012/03

DE/IBE/ExTR13.0012/01

DE/IBE/ExTR13.0012/02

Quality Assessment Report:

FR/INE/QAR12.0007/07



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The cable joint is used for the connection of polymer insulated trace heaters in hazardous areas Zone 1 and 21.

Nominal Voltage: 550 V

Operating temperature range of the used materials:

-32 °C to +200 °C (Ex-Con 22/4, 25/7, 36/4 and Ex-Con-SR)

-60 °C to +200 °C (Ex-Con 22/4 Si)

Current per cross section: must not exceed 30A/mm²

Cable joint Ex-Con*	Heater type	Heater diameter min/max (mm)	Heater width min/max (mm)	Heater thickness min/max (mm)	Heater jacket material	Max. current (A)	Comment
22/4 22/4 Si 25/7	Single core, series	3.5 / 5.5	n.a.	n.a.	Fluor polymer	20	See table below for max. currents in specific T-classes
36/4	Single core, series	5 / 13.5	n.a.	n.a.	Fluor polymer	145	Refer to manufacturer's guidelines to obtain max. currents in specific T-classes
-SR	Self regulating	n.a.	11 / 13.5	4 / 5	Fluor polymer, TP(E)	145	none

The maintain temperature depends on the actual current as well as on the temperature class and the maximum surface temperature. The following maximum maintain temperatures must be observed:

	Ex-Con 22/4 , 22/4 Si and 25/7			Ex-Con 36/4	Ex-Con-SR
Current	10 A	15 A	20 A	Refer to manufacturer's guidelines to obtain max. currents related to those T-classes, depending on the actual maintain temperatures	T-class is determined by T-class of the connected self regulating trace heater.
T6	60°C	45°C	25°C	70 °C	80 °C
T5	75°C	60°C	40°C	85 °C	95 °C
T4	110°C	95°C	75°C	120 °C	130 °C
T3	170°C	155°C	135°C	185 °C	195 °C
Dust	TX-10K	TX-15K	TX-20K	TX-10K	TX

TX: maximum permissible surface temperature for dust explosion hazardous areas 85 °C to 200 °C.

The connected heating cable shall be limited in a suitable way, e.g. by choosing either a stabilized or a controlled design according to IEC 60079-30-2.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The cable joint type Ex-Con may be used only for fixed installation. The operating company has to ensure an appropriate clamping.

The maximum permissible maintain temperature for the respective temperature class and maximum surface temperature, as specified in the manufacturer's guidelines, clause temperature range, must not be exceeded.

The cable joint must be installed protected from light.

The cable joint type Ex-Con 22/4 , Ex-Con 22/4 Si, Ex-Con 36/4 and Ex-Con-SR must be installed and operated mechanically protected in accordance with IEC 60079-0 according to the low risk of mechanical danger.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Adaption of maximum surface temperature marking