



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx SIR 11.0121 issue No.:0 Certificate history: \_\_\_\_\_

Status: **Current**

Date of Issue: 2012-03-09 Page 1 of 4

Applicant: **Heat Trace Limited**  
Meres Edge,  
Chester Road,  
Helsby,  
Frodsham  
WA6 0DT  
United Kingdom

Electrical Apparatus: **Freezstop Regular (FSR) Self Regulating Heating Cables**  
Optional accessory:

Type of Protection: **Trace Heating, Increased Safety and Dust**

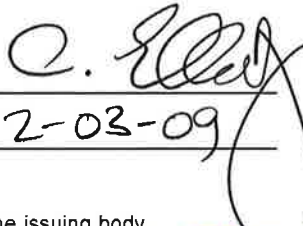
Marking: Applicable for products rated up to 40 W/m and for nominally rated 230 V products up to 31 W/m powered up to a maximum 277 V  
Ex e IIC T6 Gb  
Ex tb IIIC T85°C Db IP67  
Applicable for products rated above 40 W/m and for nominally rated 230 V products above 31 W/m powered up to a maximum 277 V  
Ex e IIC T4 Gb  
Ex tb IIIC T135°C Db IP67

Approved for issue on behalf of the IECEx Certification Body: C Ellaby

Position: Deputy Certification Manager

Signature:  
(for printed version)

Date:

  
2012-03-09

1. This certificate and schedule may only be reproduced in full.
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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:  
**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **Heat Trace Limited**  
Meres Edge,  
Chester Road,  
Helsby,  
Frodsham  
WA6 0DT  
**United Kingdom**

Manufacturing location(s):

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 electrical apparatus 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 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition: 6.0

**IEC 60079-30-1 : 2007-01** Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements  
Edition: 1

**IEC 60079-31 : 2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'  
Edition: 1

*This Certificate **does not** indicate compliance with electrical 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:

[GB/SIR/ExTR11.0301/00](#)

#### Quality Assessment Report:

[GB/SIR/QAR11.0008/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Freezstop Regular (FSR) Self Regulating Heating Cables utilise two parallel buswires housed within a semi-conductive self-limiting matrix. The semi-conductive self-limiting matrix is covered with a jacket which is then protected by an aluminium sheath or a metallic braid of either tinned copper or nickel plated copper. An optional outer jacket of TPE, PE, PVDF, MFA or PFA. The cables are rated at up to 50W/m and 277V.

The equipment is designed to be connected to a supply by means of suitable certified cable entries and junction boxes (i.e. Ex e or Ex d) in accordance with the manufacturer's installation instructions. Termination can be made using any suitably certified type termination kit, which fully isolate, insulate and seal the conductive cores.

The heat trace cable is also allowed to be used with the termination kits (IECEx SIR 11.0135X, IECEx SIR 11.0136U and IECEx SIR 11.0137X).

See EQUIPMENT (continued) for additional information and Conditions of Manufacture

### CONDITIONS OF CERTIFICATION: NO



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## EQUIPMENT(continued):

Description	Temperature
Max. continuous exposure temperature (Power ON)	85°C
Max. permissible exposure temperature (Power OFF)	85°C
Minimum installation temperature	-40°C

### Conditions of manufacture

The Manufacturer shall comply with the following:

1. An electric strength test of  $\sqrt{2} U + 1000$  V rms shall be applied between the conductors and the outer braid or jacket as appropriate for 60 seconds as required by clause 5.1.2 of IEC 60079-30-1:2007.
2. An electric strength test of the polymeric sheath (overjacket) used for corrosion resistance shall be carried out in accordance with the requirements of IEC 60079-30-1:2007 clause 5.2.1.
3. The manufacturer shall verify the output rating for each cable manufactured in accordance with IEC 60079-30-1-2007 clause 5.2.2.
4. The manufacturer shall demonstrate, through their quality program, the thermal safety of the trace heating cable with respect to time as per EN 60079-30-1:2007 clause 5.1.12.