



## **INSTALLATION OPERATION AND MAINTENANCE INSTRUCTIONS**

### **FAW, FAW-C & FAW-C-T TYPE AIR WARMERS**

### **FCR & FCR-A TYPE CONVECTORS**

### **STW & STW-T SAFE AREA AIR WARMERS**

### **HFT, AFT & SAT TYPE AIR THERMOSTATS**



**Please read these instructions thoroughly before installation and ensure they are passed on to the end-user**

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**To maintain the equipment warranty and the Hazardous Area Certification, the instructions contained within this manual must be complied with in full.**

## 1.0 GENERAL

- 1.1 All work should be carried out by suitable qualified personnel.
- 1.2 Carefully remove all protective packaging and visually inspect unit for any transit damage.
- 1.3 Heaters must be handled with care and stored in dry conditions.
- 1.4 **CAUTION** – Air warmers over 1m long are HEAVY and must be handled appropriately.
- 32kg FAW2000
  - 38kg FAW2500
  - 42kg FAW3000
  - up to 34kg FCR2
  - up to 49kg FCR3
- 1.5 Before connection ensure that the supply corresponds with that specified on the rating label.
- 1.6 Ensure that the sizes and types of cables to be used are suitably rated for the load and temperature of the unit.
- 1.7 Each heater must be protected by a suitably rated over current device.
- 1.8 All prevailing rules, regulations and bylaws in force at the time and place of installation must be observed.
- 1.9 The heater should be securely fixed in position and all terminal connections checked for tightness before energising.
- 1.10 Any modification not carried out by Exheat Industrial Ltd will invalidate certification and warranty.
- 1.11 Refer to the relevant code of practice for the equipment:
- *IEC/EN 60079-14* for selection and installation
  - *IEC/EN 60079-17* for inspection and maintenance of electric apparatus for use in potentially explosive atmospheres.
- 1.12 All electrical testing must be carried out in a non-hazardous area.
- 1.13 Precautions must be taken to prevent damage to machined surfaces and threads of flameproof enclosures.
- 1.14 Ensure that any special conditions for safe use detailed on the Hazardous Area Certification are complied with.

## 2.0 STORAGE

- 2.1 Store the equipment in an inside location that is dry, clean and well ventilated.
- 2.2 Suitable preservation materials, such as silica gel bags or equivalent, have been placed inside the packaging. Additionally, spare silica gel bags, or equivalent, can be supplied by contacting Exheat Industrial Ltd.
- 2.3 If the equipment is stored beyond 3 months, ensure that preservation materials are replaced.
- 2.4 **CAUTION** – It is the client's responsibility to ensure that, if the terminal enclosure is opened prior to installation, these bags are checked and replaced if necessary. When refitting terminal enclosure lid please ensure the gaskets are not damaged or moved in any way and for the HFT & AFT thermostats please refer to section 5.0 below.
- 2.5 **CAUTION** – The following preservation instructions must be adhered to. Failure to do so could result in the equipment warranty being invalidated:
- Store the equipment at between 0°C and +50°C.
  - Ensure that the equipment is not subjected to direct sunlight at ambient temperatures above +30°C.

### 3.0 PRE INSTALLATION INSPECTION AND CHECKS

3.1 Each heater and thermostat is manufactured to the highest standard with great care and quality materials. All the goods are thoroughly inspected and tested before leaving the manufacturing plant. They must be handled with care during storage and installation. Before the installation starts it is advised that the heater is checked to ensure the insulation resistance reading is above 2MΩ per element at 500 volts dc.

3.1.1 Should the heater fail this test, isolate the power and control circuits (if installed), and follow the steps below:

- Fill the terminal box with silica gel bags, and replace the terminal box lid.
- Leave for 24hrs to draw any moisture out of the heater elements.
- If you have a heated blanket, place this over the heater elements to help with the drying. Heater blankets are available to purchase from [www.exheat-industrial.com/contact/enquiry](http://www.exheat-industrial.com/contact/enquiry)
- If the insulation resistance has not been raised to a sufficient level after 24hrs, repeat the process above with replacement gel bags.
- Should the above not raise the insulation resistance to the required level please contact the technical help on our website. [www.exheat-industrial.com/contact/support](http://www.exheat-industrial.com/contact/support)

### 3.2 Insulation Resistance (Megger)

3.2.1 The 'Megger' should be applied between the phases and earth. A reading of greater than 2MΩ at 500 volts dc should be recorded. Should the whole heater be below this value each element would need to be checked to ascertain which one was low in resistance.

3.2.2 Use the continuity (Ohms) setting on the elements and check the resistance of each element matches or is approximately equal to the results as per the electrical test certificate that would have been sent with the heater.

### 4.0 INSTALLATION

4.1 Carefully remove the packaging from each item and check for damage. Immediately report any damage to Exheat Industrial Ltd.

4.2 The heater should be securely fixed in position using the pre-drilled fixing holes, and all terminal connections checked for tightness before energising.

4.3 The appliance must be securely fitted to a wall or floor using only the brackets provided.

4.3 The orientation of the heaters must be strictly adhered to with the feet facing down at all times.

4.4 The installer or end user shall ensure that the unit has free and unrestricted air flow to allow natural convection to occur at all times. **DO NOT COVER** the heater and do not allow anything to rest on or against it. This could lead to dangerous overheating and will invalidate the hazardous area certification.

4.5 At no time is the ambient temperature to be allowed to rise above +40°C (FAW & FAW-C T3 & T4 variants) Or +60°C (T2 variants). This can be achieved by the use of Exheat Industrial Ltd integral (if option available) or separate flameproof air sensing thermostats (HFT & AFT type).

4.6 The STW range may be regulated by an integral or separate industrial air sensing thermostat (SAT type)

## 5.0 ELECTRICAL SUPPLY CONNECTION

5.1 Refer to wiring diagrams in *APPENDIX A*.

- The cable entries (1 x M20) in the FAW & STW Ranges are positioned to the side of the terminal box.
- The cable entries (1 x M20) in the FCR are positioned on the bottom of the terminal box.
- The cable entries (2 x M20) within the HFT and AFT are pre drilled and pre tapped.

5.2 No additional cable entries are to be made within any of the terminal boxes. Only Exheat Industrial Ltd personnel can facilitate this.

5.3 The cables must enter the FAW, FAW-C, FCR and FCR-A heaters via the terminal box cable entries using Ex e cable glands and IP Washers. The cables glands installed to the HFT & AFT thermostats are to be Ex d rated. All cable glands are to be suitable for the rating and size of the supply cables. For the STW Range heaters please use cable glands suitable for the power supply.

5.4 Before connection ensure that the supply corresponds with that specified on the nameplate label.

5.5 Ensure that the sizes and types of cables to be used are suitably rated for the load and temperature of the unit.

5.6 Each heater must be protected by a suitably rated over current device and earth leakage circuit breaker device. See section 6 below for earthing connection details.

5.7 The cables must enter the heater terminal box via suitably certified cable glands and IP washers (not supplied) and be fitted by a qualified person. Any unused entries should remain plugged with the factory fitted certified Ex d plugs (if installed) or with suitably rated plugs and IP washers.

5.8 The covers of the HFT & AFT terminal boxes are removed after releasing the 3 (AFT) or 4 (HFT) socket head screws in the cover. When re-fitting ensure that the 'O' ring seal is in good condition and correctly located. The main cover mating and spigot faces **MUST** be kept clean and free from any debris at all times.

5.8.1 The covers of the STW and FCR ranges can be removed by the unscrewing of the screws.

5.8.2 The covers of the FAW range can be removed by unscrewing the bolts around the outside of the lids.

5.9 After re-fitting the lids on the HFT and AFT thermostats, the gap between the cover and the body must be checked to ensure that it does not exceed 0.15mm.

5.10 The installer or end user must connect to the Exheat Industrial Ltd supplied terminals within the terminal box - **DO NOT** connect to or disturb factory fitted wiring.

5.11 **WARNING – Silica gel bags must be removed before the heater is energised.**

## 6.0 EARTH CONNECTION

6.1 **WARNING – these heaters MUST BE EARTHED.**

6.2 The external earth connections for the FAW and FCR ranges are located underneath the protective guard in the same orientation as the elements. The external earth connections on the HFT & AFT ranges are on the lower corner.

6.3 An internal earth connection is provided inside the terminal box.

## 7.0 OPERATION

- 7.1 Heat is generated by means of electric heating elements. Once energized the air warmers will continue to operate until de-energized by an external (or integral) air thermostat.
- 7.2 To adjust the temperature settings on an integral thermostat (HFT), Remove the lid (as per section 5.0) and rotate the adjustable control knob clockwise to increase the desired set-point or anti-clockwise to reduce the set-point.
- 7.2.1 To adjust the temperature settings on an externally adjustable thermostat (AFT), Remove the lid (as per section 5.0) and rotate the adjuster clockwise (by use of a large flat blade screwdriver) to increase the desired set-point or anti-clockwise to reduce the set-point.
- 7.3 The FAW and FCR ranges are designed to operate in ambient temperatures of up to +40°C (T3 & T4 rated units) and +60°C (T2 rated units) and the user must ensure that this temperature is not exceeded at any time.
- 7.4 The STW air warmer range is designed to operate in ambient temperatures of up to +60°C. Where an integral adjustable thermostat is provided, this senses the ambient air temperature. Rotate the control knob clockwise to increase the set-point or anticlockwise to reduce the set-point.
- 7.5 **CAUTION** – Check that the voltage on the heater nameplate is compatible with the mains supply being used before energising the heater.

## 8.0 MAINTENANCE

- 8.1 All prevailing site safety regulations shall be adhered to at all times.
- 8.2 Equipment shall be checked regularly for any dust accumulation which must be removed from all surfaces.
- 8.3 Before and whilst any maintenance activity is carried out, it must be ensured that there are no hazardous gases or dusts present.
- 8.4 Equipment is to be fully isolated from the electrical supply before and whilst any work is being carried out.
- 8.5 Any damage or faults should be notified to Exheat Industrial Ltd immediately.
- 8.6 Any replacement parts required must be obtained directly from Exheat Industrial Ltd. The use of any other parts will void any certification and warranty.
- 8.7 Equipment is certified for use in a hazardous area and reference should be made to *IEC/EN 60079-14* for selection and installation.
- 8.7.1 *IEC/EN 60079-17* for inspection and maintenance of electric apparatus for use in potentially explosive atmospheres.

In addition to the following recommendations:

### 8.7.2 3 Monthly

- Generally inspect the equipment for external damage or leaks.
- Ensure that any spaces between the element fins, remains clear and that the airflow remains unrestricted.

### 8.7.3 6 Monthly

- Isolate the electrical supply and remove the cover (As section 5.0)
- Internals should be clean and dry.
- Ensure terminals are intact and secure.
- Heating element insulation resistance to be at least 2MΩ. Please refer to section 3.0 for further information
- Refit cover with new gasket or 'O' ring if required (refer to section 5) and re-tighten using only the socket head screws provided.

- Check the flamepath gap on the HFT & AFT Thermostats (As section 5.0)
- Earth continuity must be maintained between all earth points and main structure.

#### 8.7.4 Annually

- Carry out 3 monthly and 6 monthly checks as above.
- Check for element failure or low insulation resistance, as section 3.0

8.8 Only Exheat Industrial Ltd can carry out rod type element replacements in hazardous area heaters, any unauthorised modifications will invalidate the hazardous area certification and any warranty.

8.9 If equipment is being left unused for a period greater than 3 months, carry out 6 monthly maintenance before energizing.

### 9.0 MARKINGS

9.1 FAW, FAW-C & FCR Range:

 Ex II 2 G

Ex e IIC T4 to T2 Gb

9.2 FAW-C-T and FCR-A (with Integral Thermostat):

 Ex II 2 G

Ex d e IIC T4 to T2 Gb

9.3 HFT Type Thermostat used with Integral Thermostat Option, or Stand Alone type:

 Ex II 2 G

Ex d IIC T6 Gb

9.4 AFT Type Thermostat. (Stand Alone Externally Adjustable):

 Ex II 2 G D

Ex d IIC T6 Gb

Ex t IIIC T85°C Db

### 10.0 CERTIFICATION

10.1 FAW, FAW-C & FCR Ranges

ATEX: LCIE 00 ATEX 6013 X

IECEX: IECEX LCI 07 0009 X

10.2 HFT Type Thermostat and AFT Type (Externally Adjustable)

ATEX: LCIE 99 ATEX 6017 X

IECEX: IECEX LCI 07 0003 X

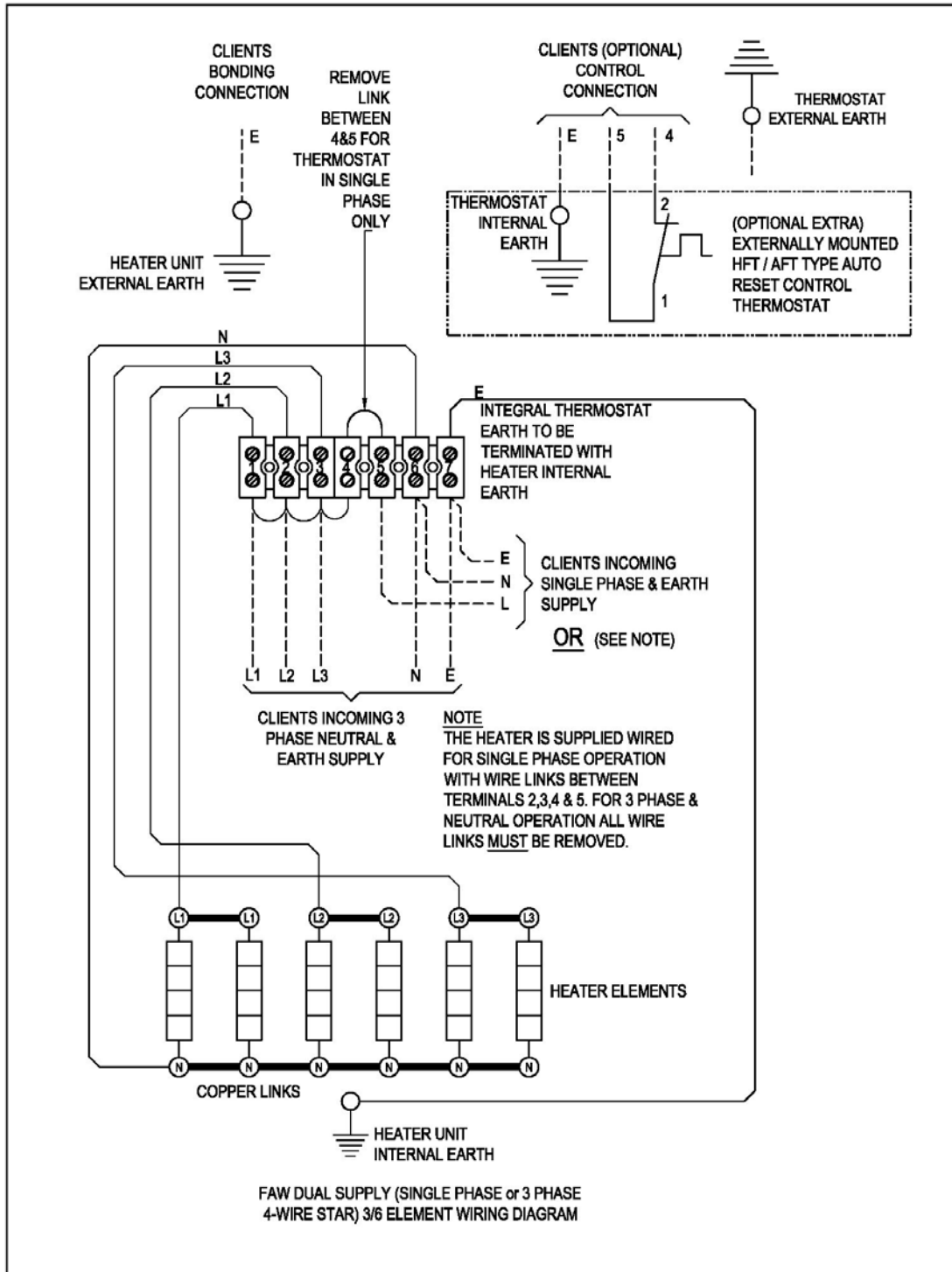
10.3 STW Range Air Warmers

No Certificates as these are Safe Area Heaters.

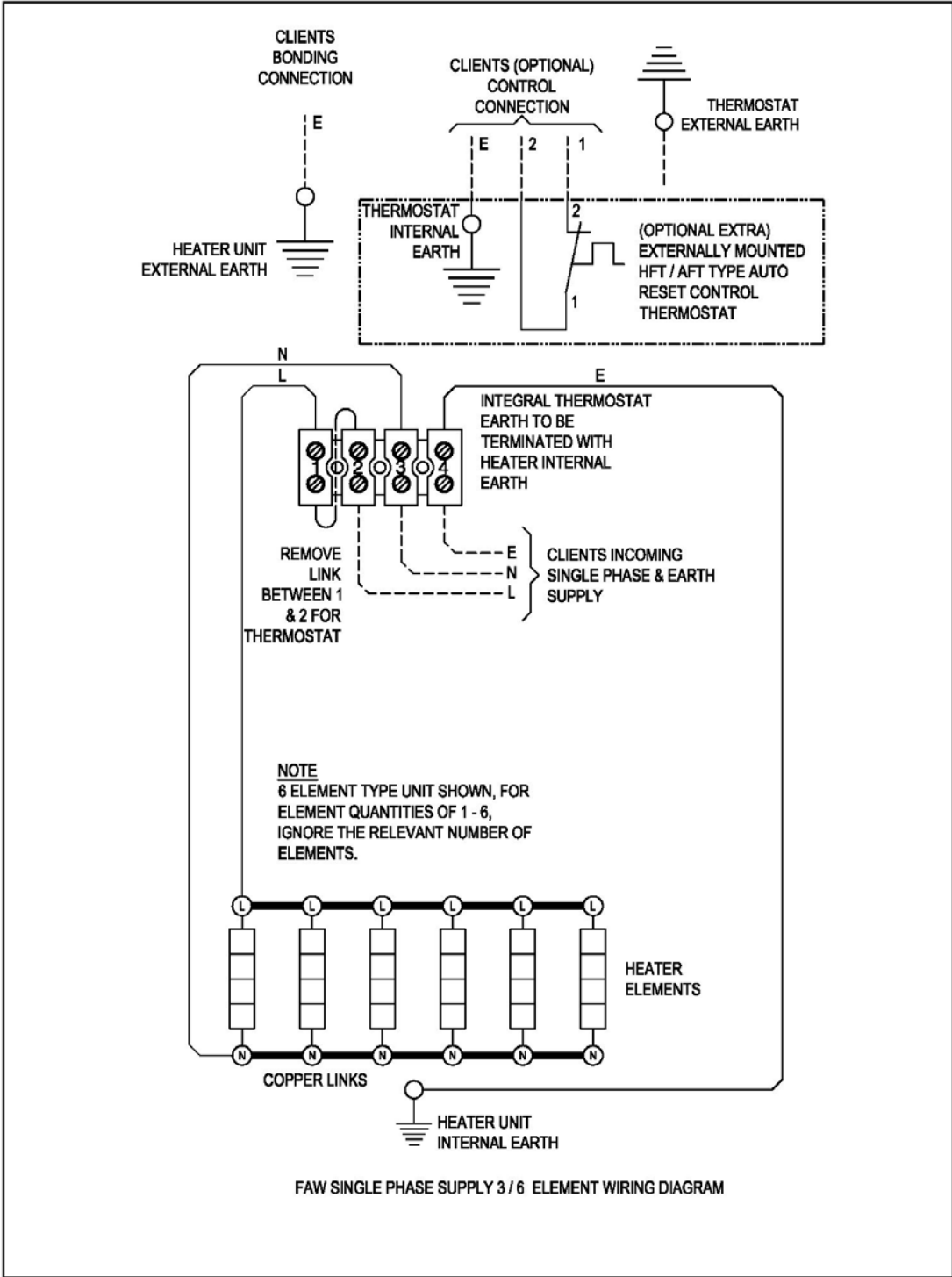
10.4 SAT40 & SAT60

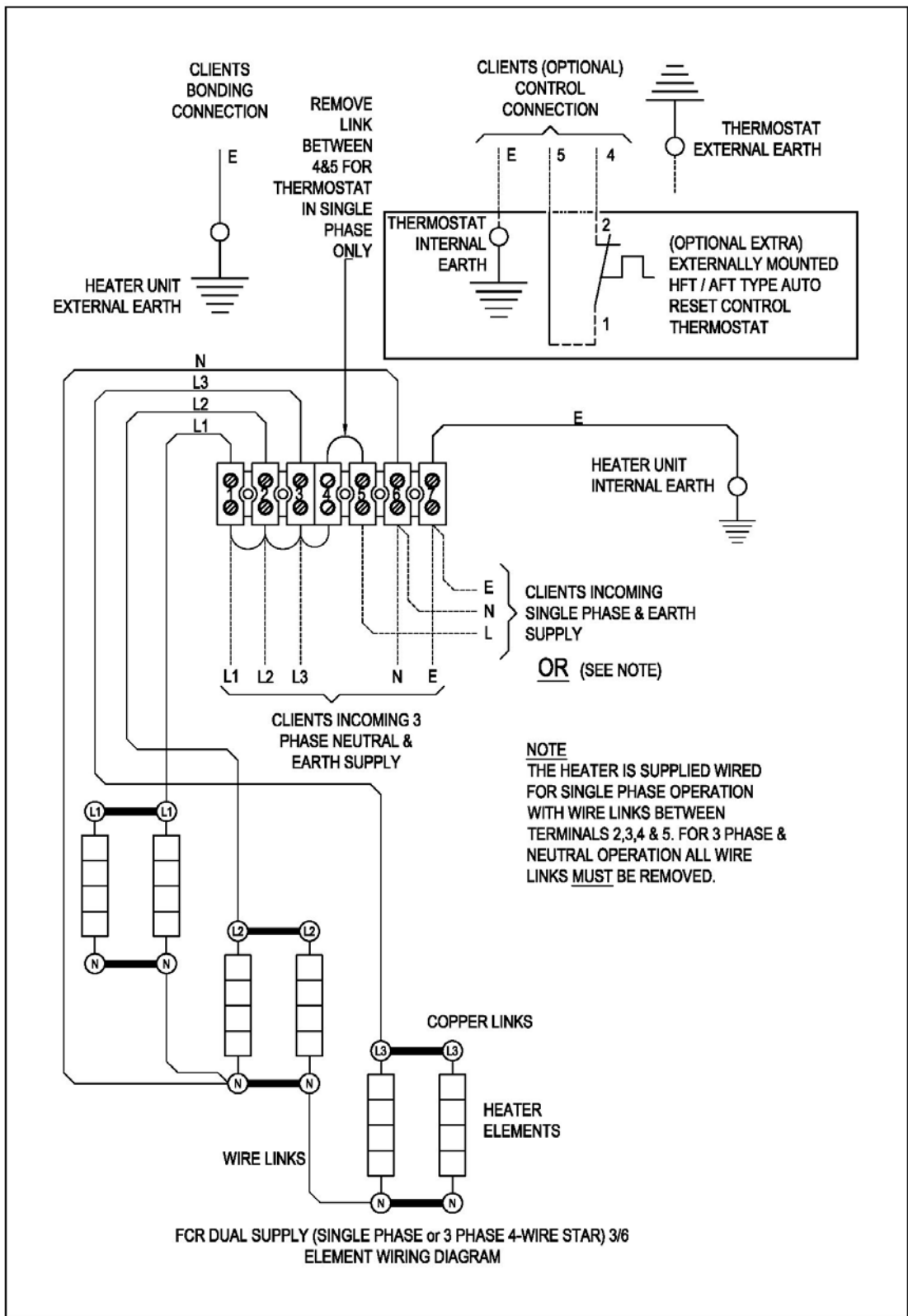
No Certificates as these are Safe Area Thermostats.

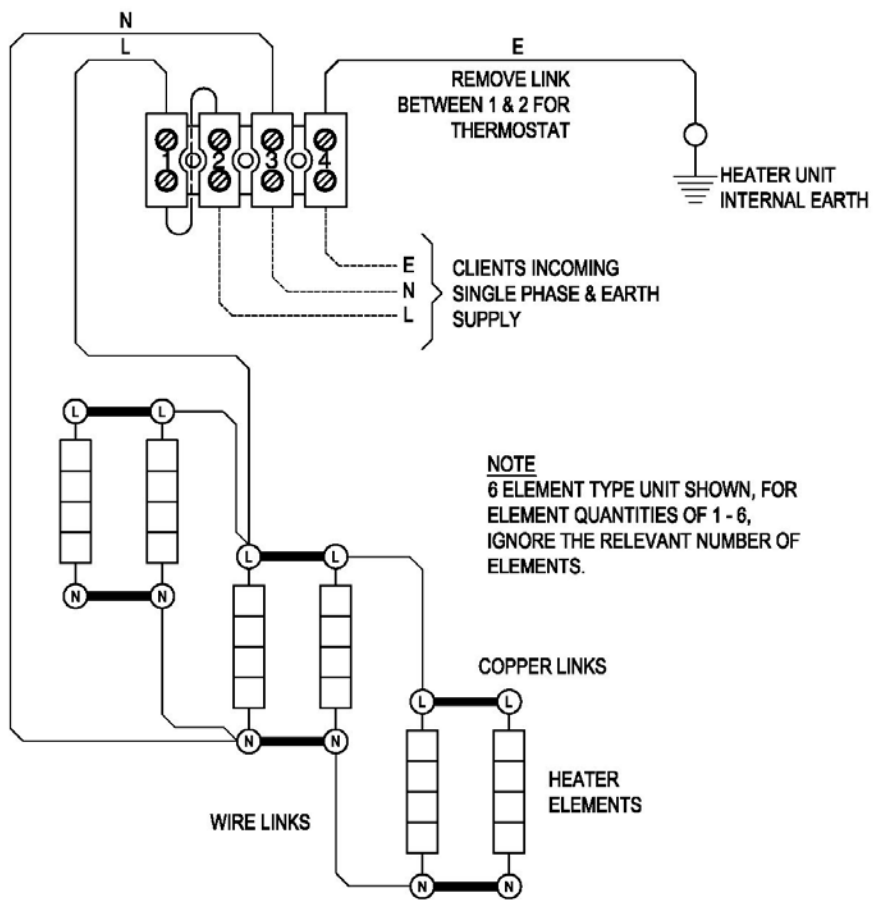
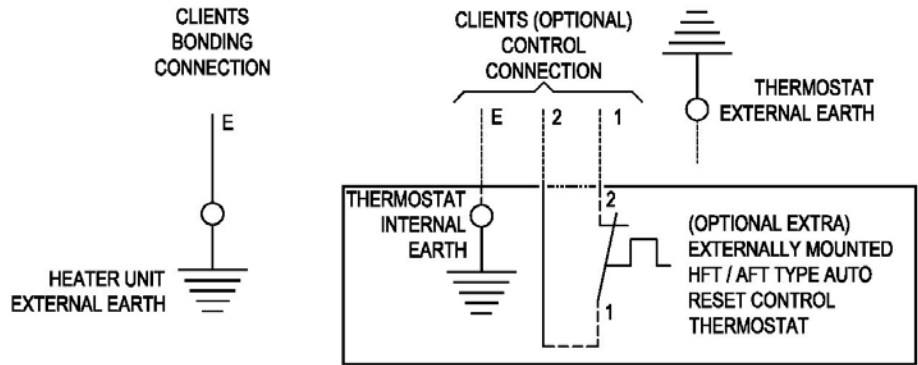
## APPENDIX A, WIRING DIAGRAMS





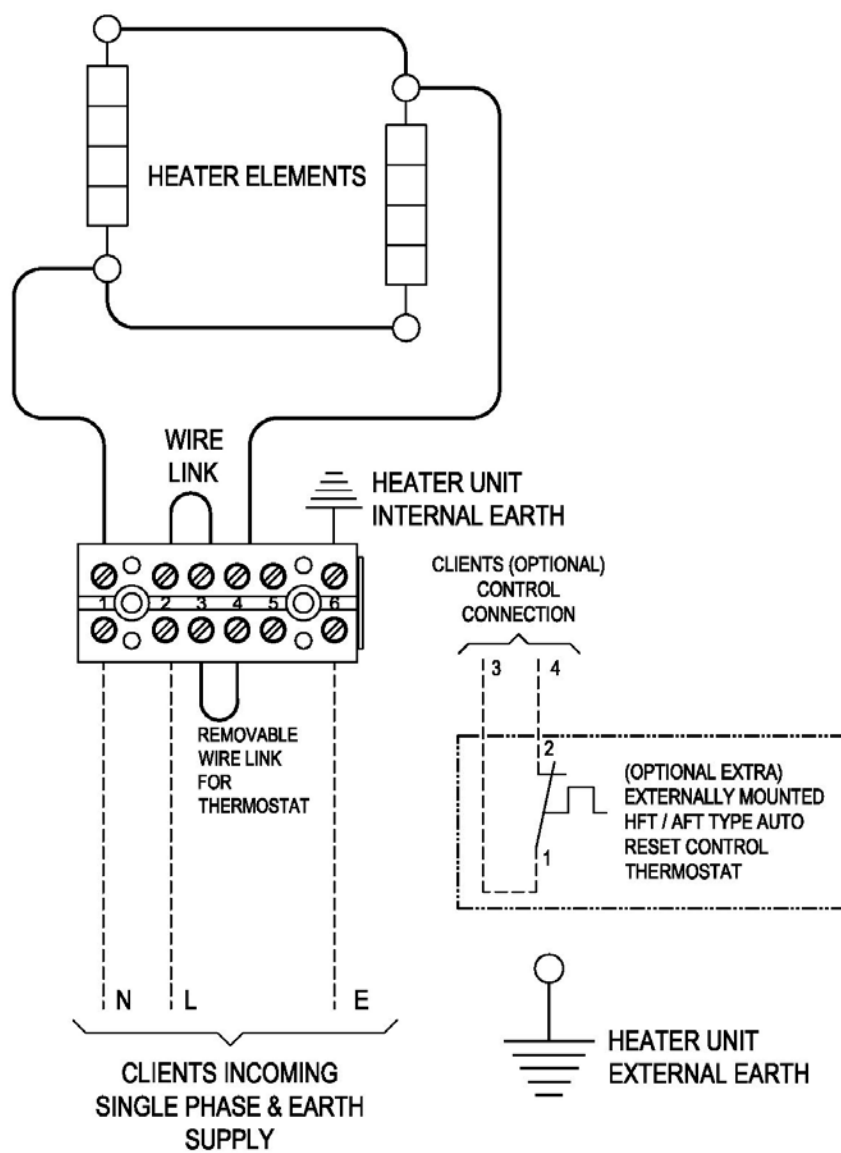




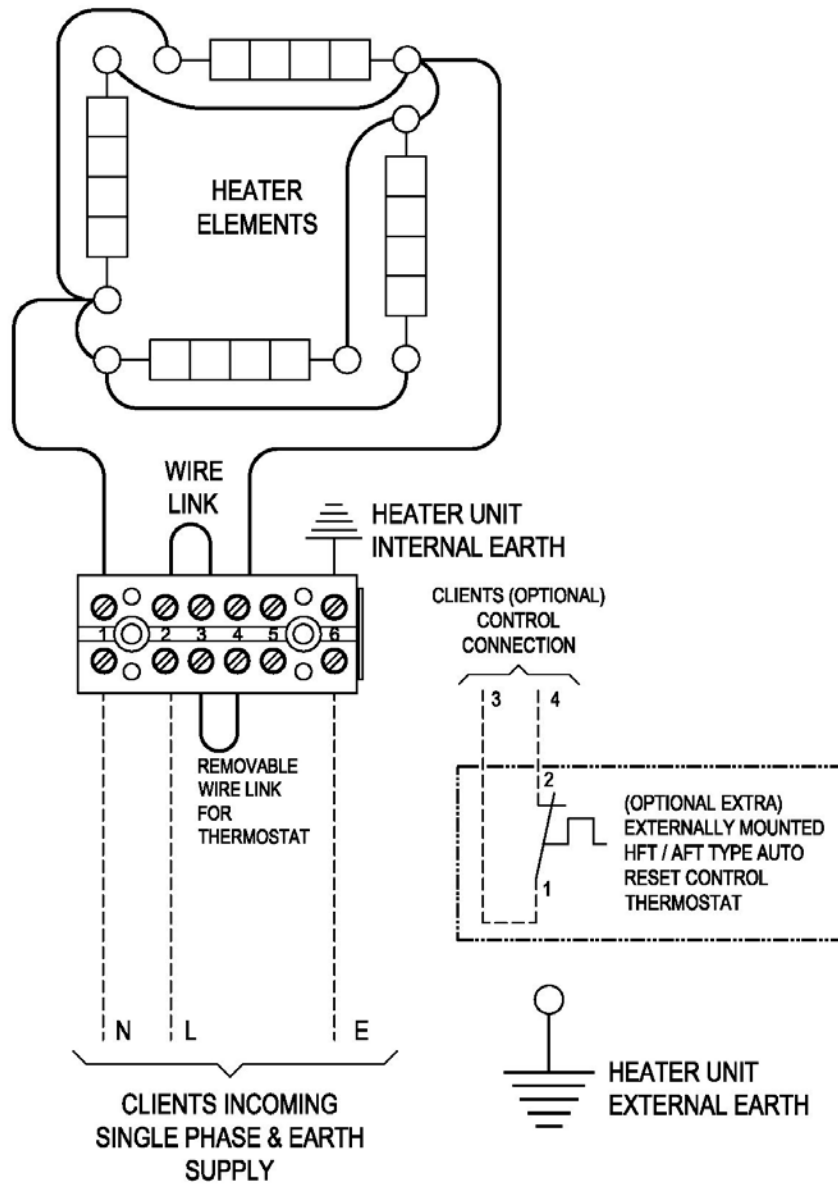


FCR SINGLE PHASE SUPPLY 3 / 6 ELEMENT WIRING DIAGRAM

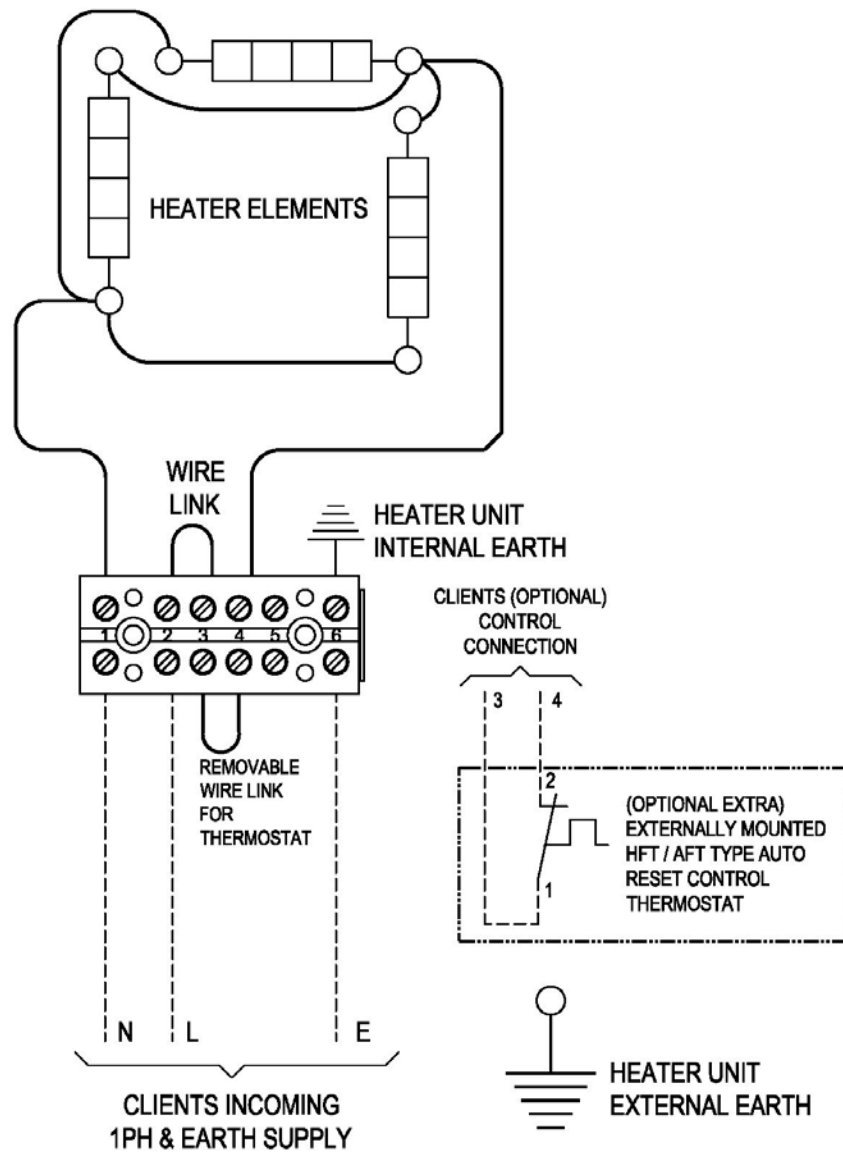
# FAW -C250



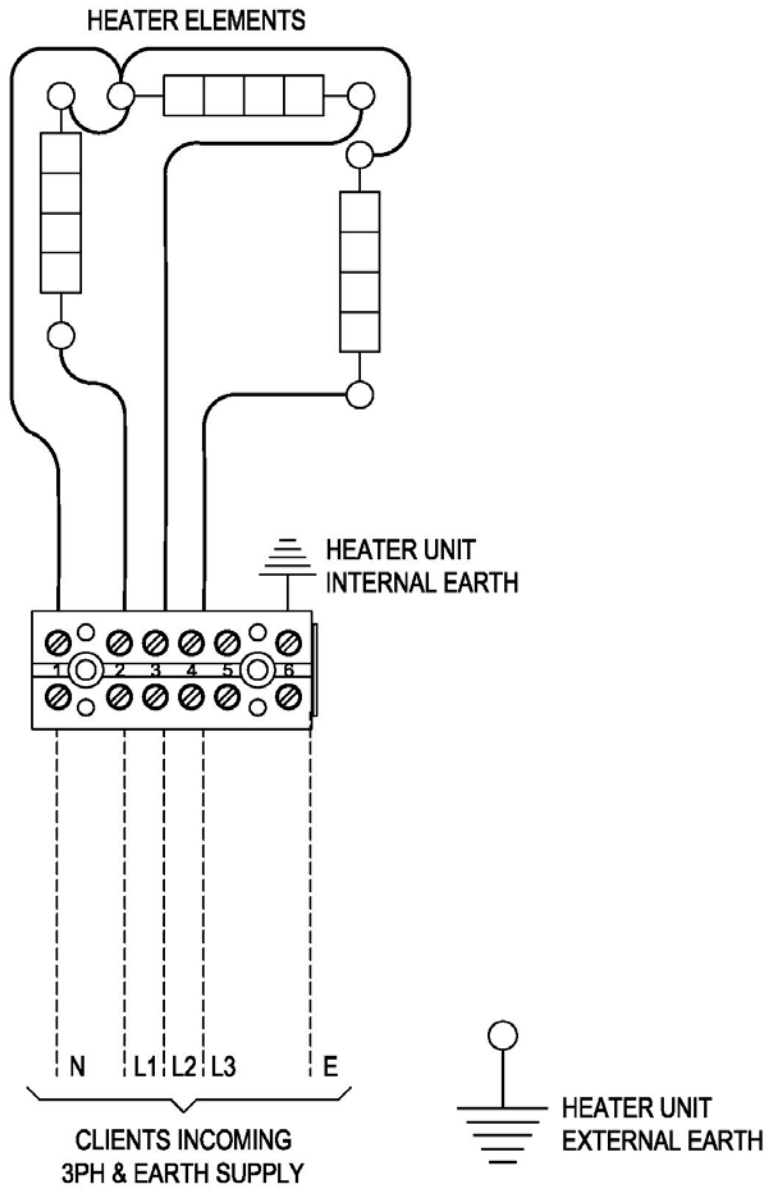
## FAW-C500 & FAW-C1000



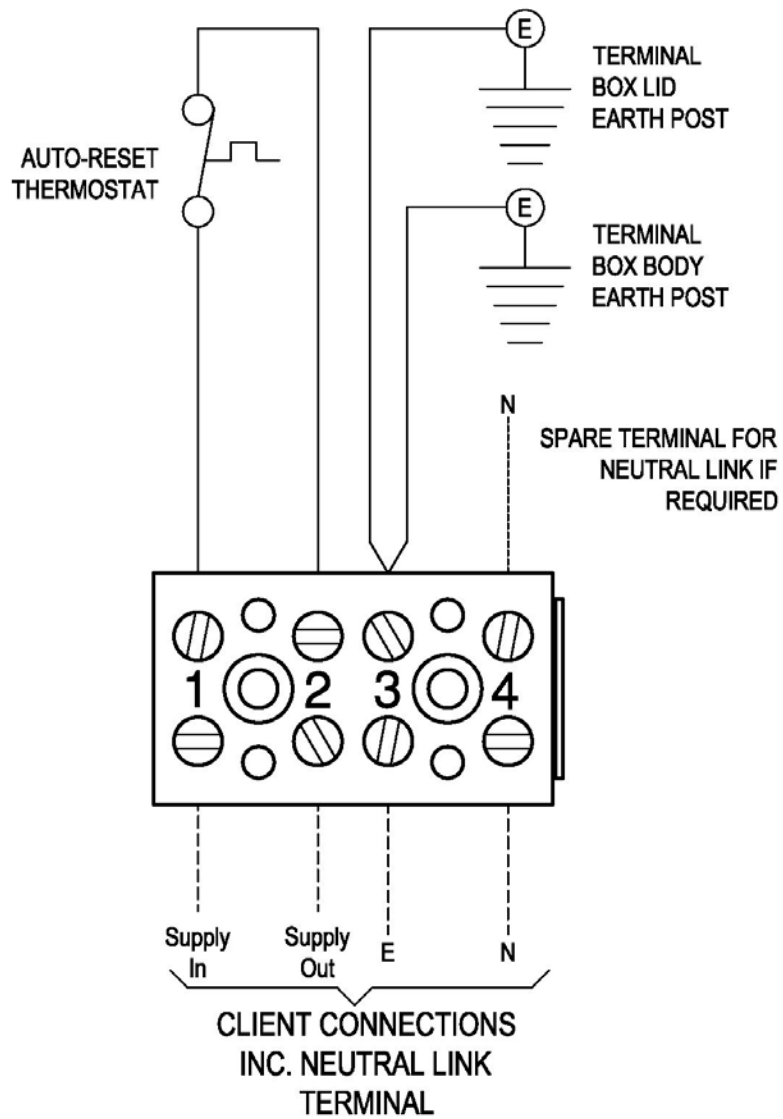
# FAW-C750



## FAW-C750 3 PHASE SUPPLY

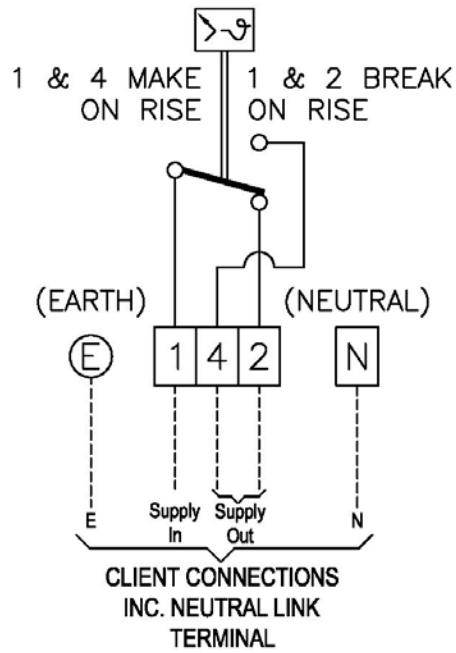


# AFT40 & AFT60 THERMOSTAT

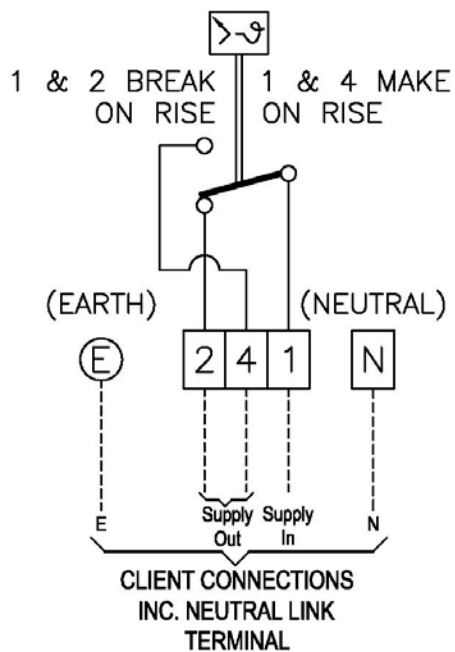




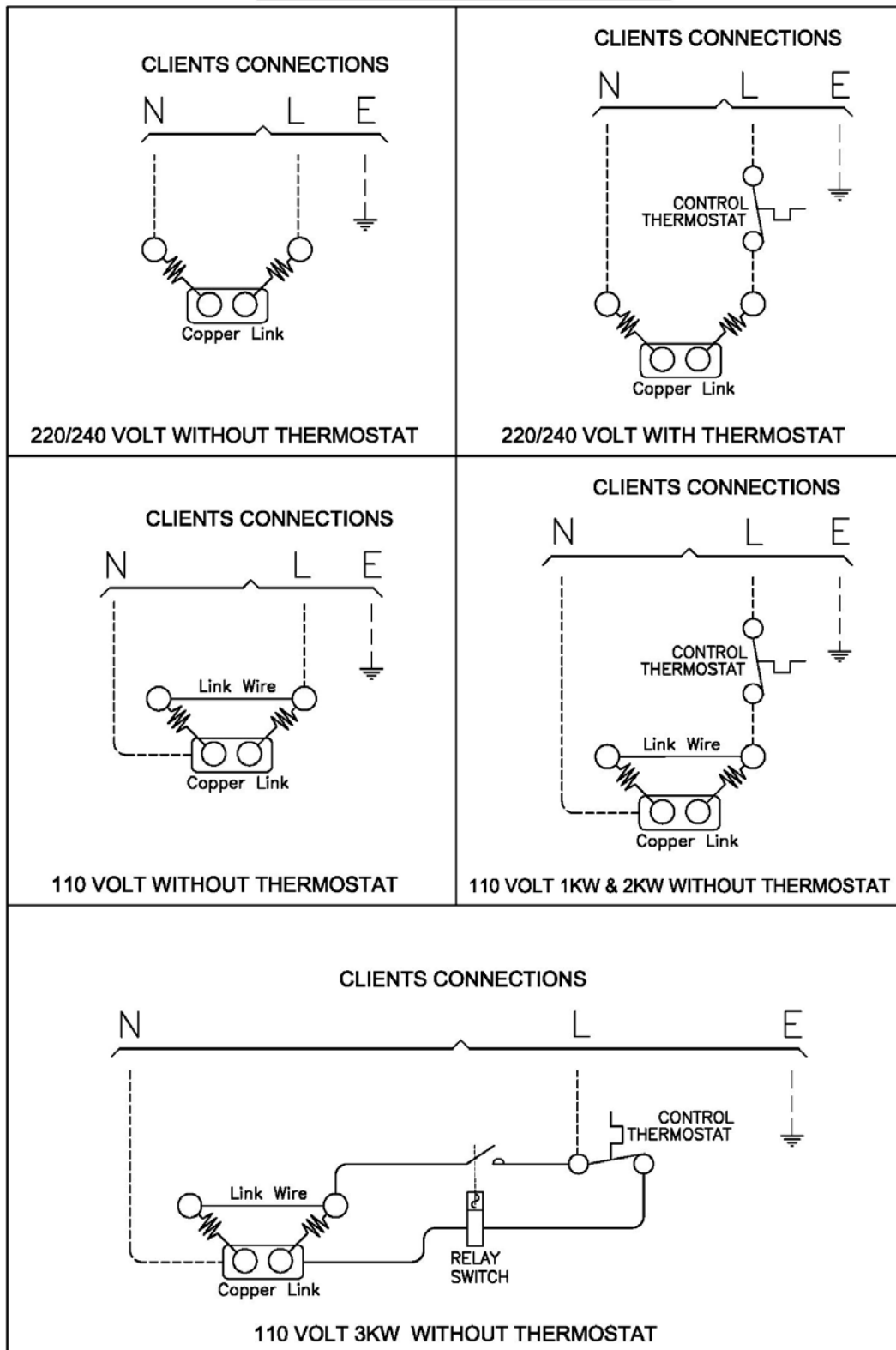
# HFT / SAT 40 THERMOSTAT



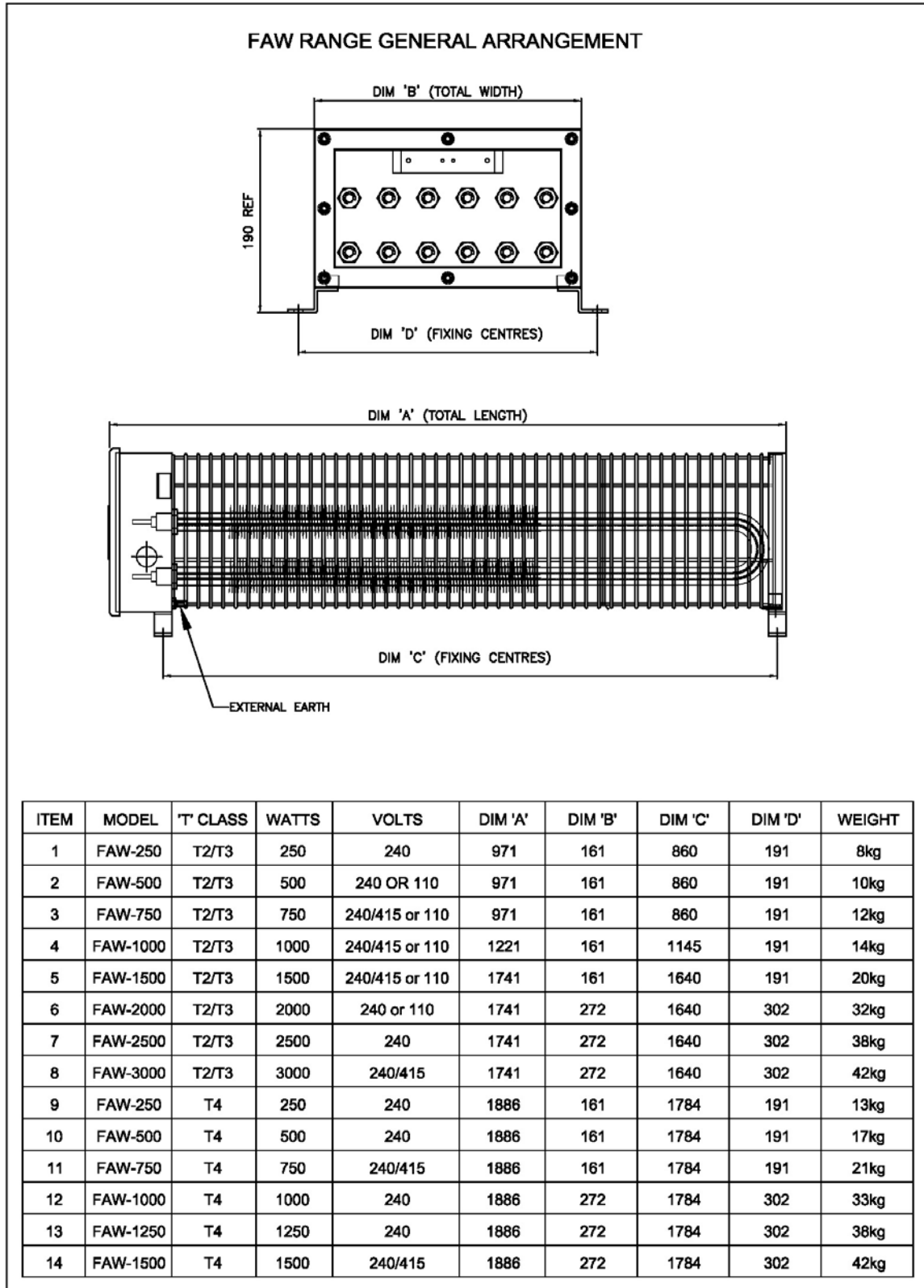
# HFT / SAT 60 THERMOSTAT



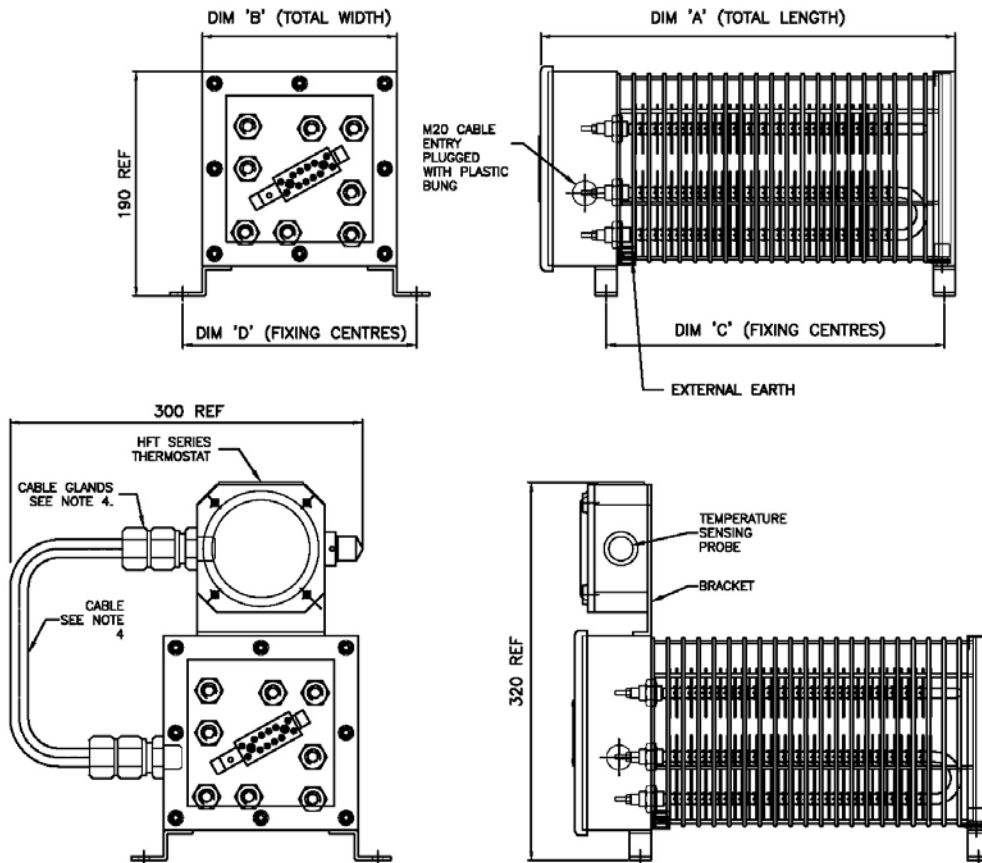
## STW WIRING DIAGRAMS



## APPENDIX B, HEATER GENERAL ARRANGEMENT DRAWINGS.



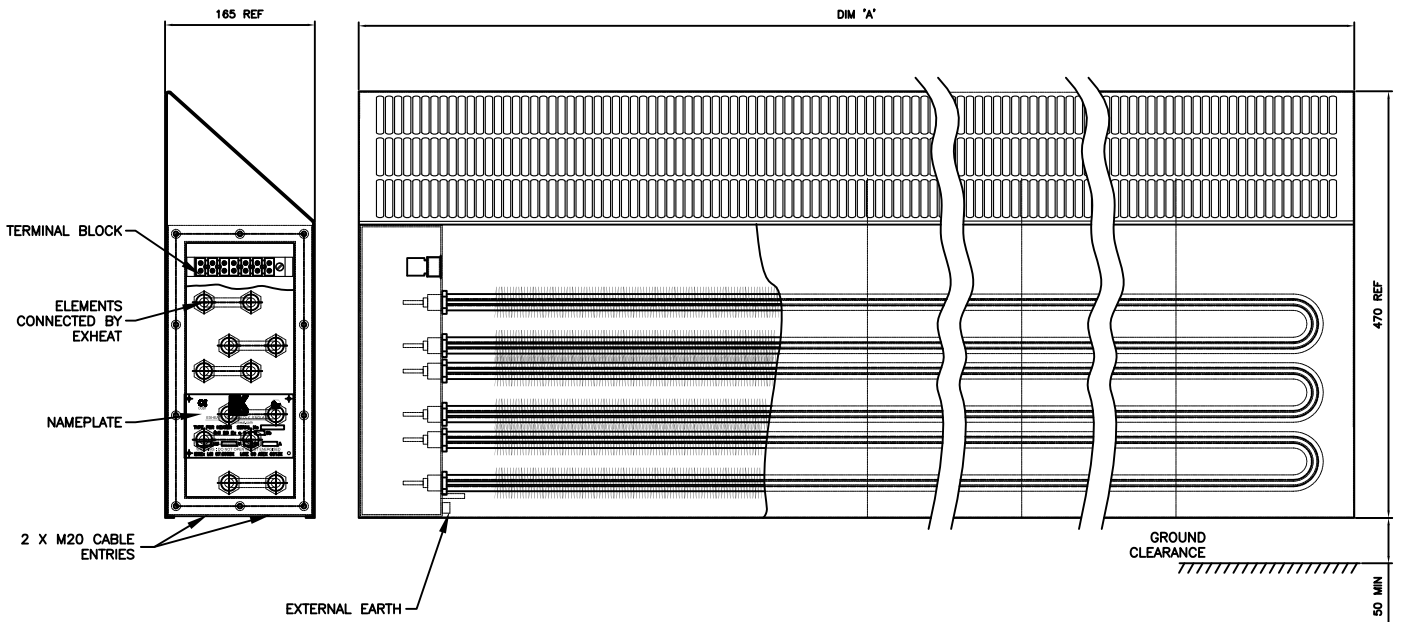
## FAW-C & FAW-C-T GENERAL ARRANGEMENT



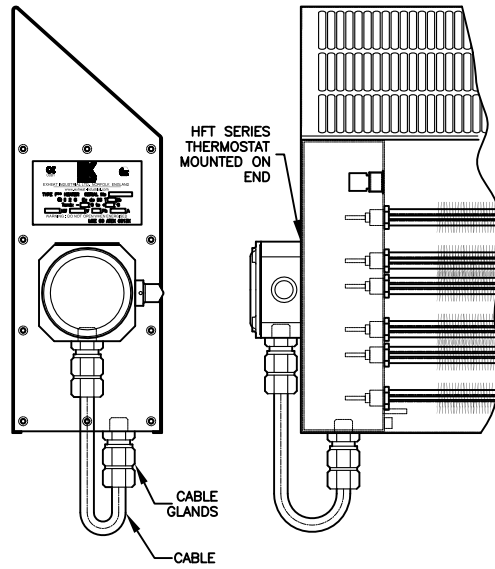
ALL DIMENSIONS OF HEATER AS PER BELOW

ITEM	MODEL	T' CLASS	WATTS	VOLTS	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	WEIGHT
1	FAW-C-250	T2/T3	250	110/240	350	161	282	193	5kg
2	FAW-C-500	T2/T3	500	110/240	350	161	282	193	6kg
3	FAW-C-750	T2/T3	750	110/240	615	161	545	193	8kg
4	FAW-C-1000	T2/T3	1000	110/240	615	161	545	193	9kg
5	FAW-C-250-T	T3	250	110/240	350	161	282	193	7kg
6	FAW-C-500-T	T3	500	110/240	350	161	282	193	8kg
7	FAW-C-750-T	T3	750	110/240	615	161	545	193	10kg
8	FAW-C-1000-T	T3	1000	110/240	615	161	545	193	11kg

# FCR GENERAL ARRANGEMENT



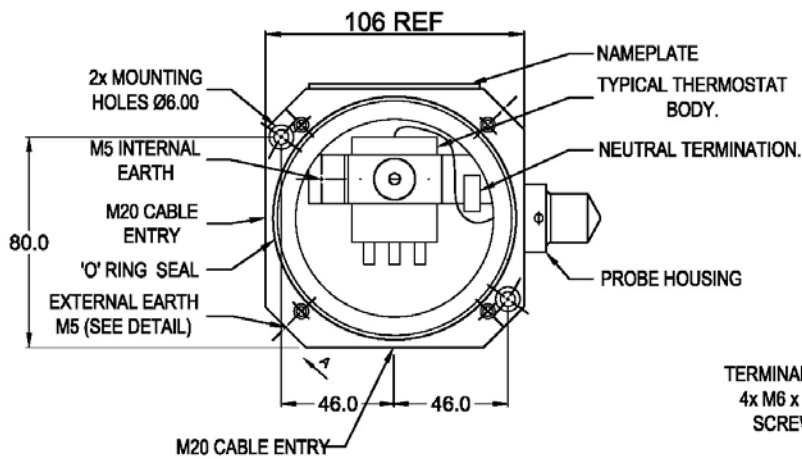
VIEW WITH OPTIONAL HFT



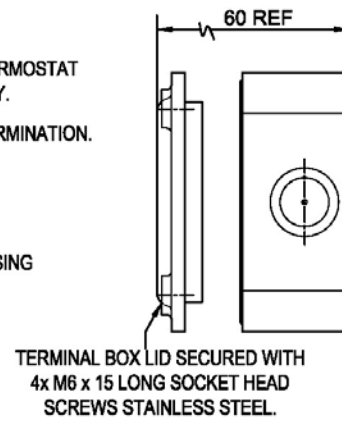
ITEM	MODEL	WATTS	No OF ELEMENTS	VOLTS	WEIGHT	DIM 'A'
1	FCR-1-110	1000	3	110	17kg	1240mm
2	FCR-1-110-A	1000	3	110	17kg	1240mm
3	FCR-1-240	1000	3	240/415	17kg	1240mm
4	FCR-1-240-A	1000	3	240 ONLY	17kg	1240mm
5	FCR-2-110	2000	6	110	32kg	1240mm
6	FCR-2-110-A	2000	6	110	32kg	1240mm
7	FCR-2-240	2000	6	240/415	32kg	1240mm
8	FCR-2-240-A	2000	6	240 ONLY	32kg	1240mm
9	FCR-3-240	3000	6	240/415	47kg	1750mm
10	FCR-3-240-A	3000	6	240 ONLY	47kg	1750mm

# HFT TYPE THERMOSTAT GENERAL ARRANGEMENT

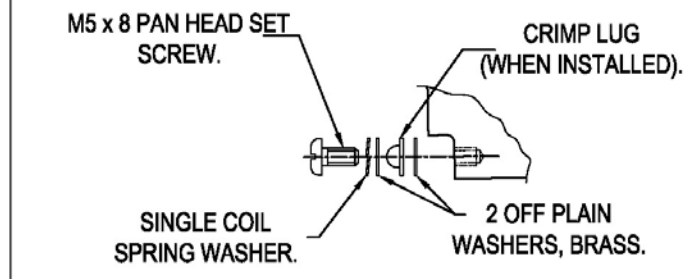
**VIEW WITH TERMINAL BOX LID REMOVED**



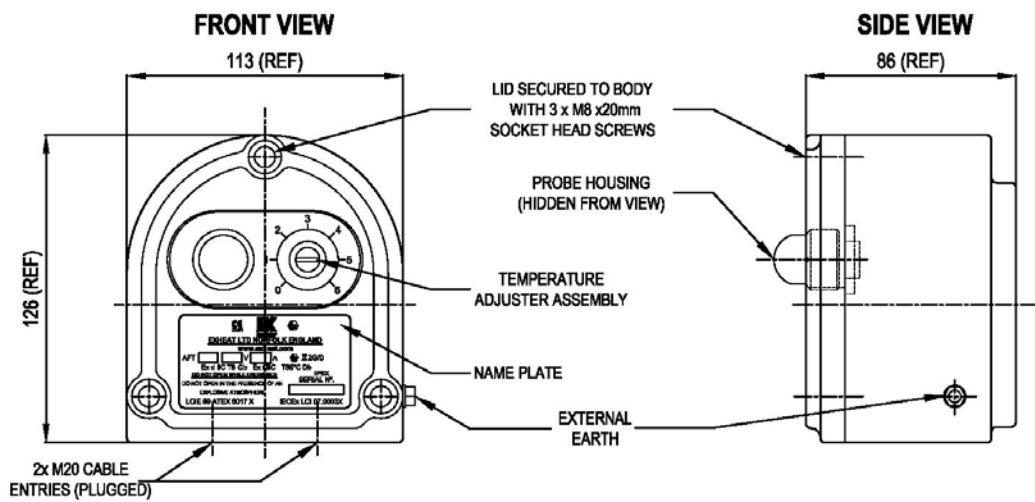
**SIDE VIEW WITH TERMINAL BOX LID REMOVED**



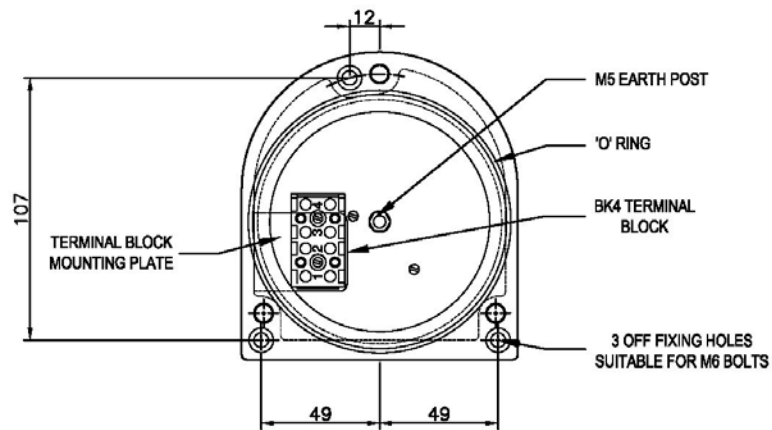
**VIEW IN DIRECTION 'A' SHOWING  
EXTERNAL EARTH.**



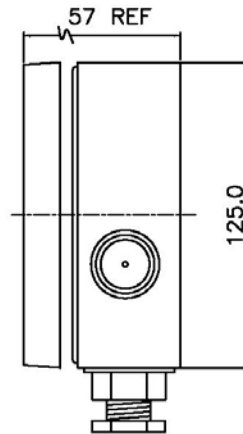
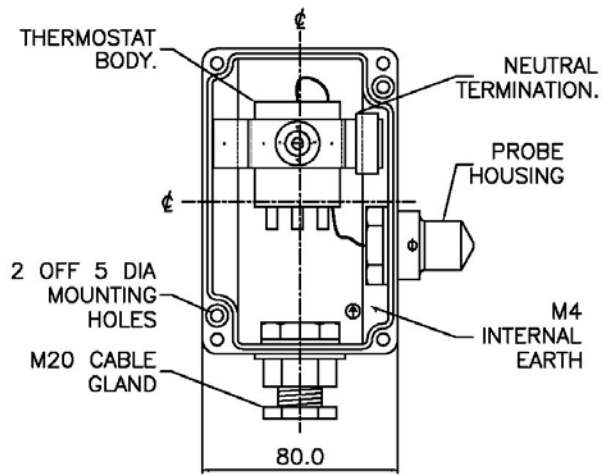
## AFT TYPE THERMOSTAT GENERAL ARRANGEMENT



### TERMINAL BOX FRONT VIEW (WITH LID REMOVED) SHOWING TERMINAL BLOCK ASSEMBLY AND FIXING HOLES



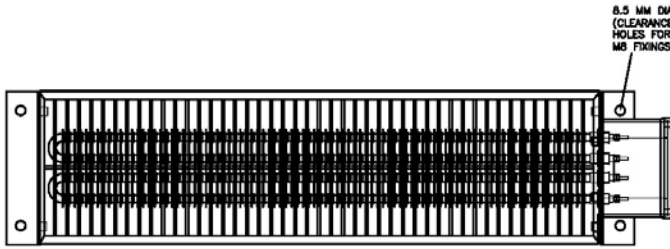
# SAT TYPE SAFE AREA THERMOSTAT GENERAL ARRANGEMENT



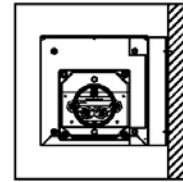


### STW & STW-T GENERAL ARRANGEMENT

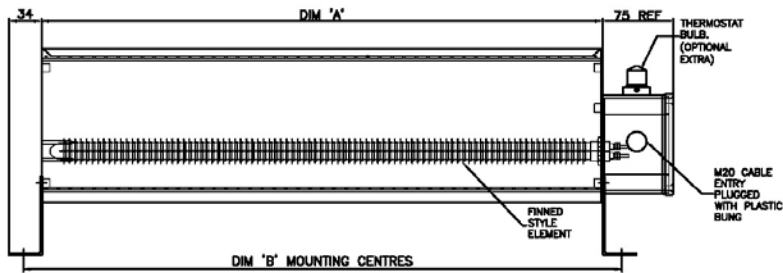
TOP VIEW



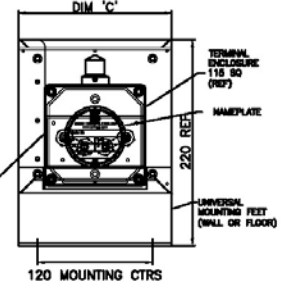
WALL MOUNTED



SIDE VIEW



END VIEW



ITEM	MODEL	WATTS	VOLTS	DIM 'A'	DIM 'B'	DIM 'C'	WEIGHT
1	STW1	1000	110/240	500	540	160	6kg
2	STW2	2000	110/240	1000	1040	160	12kg
3	STW3	3000	240 ONLY	1500	1540	160	18kg
4	STW1T	1000	110/240	500	540	160	6kg
5	STW2T	2000	110/240	1000	1040	160	12kg
6	STW3T	3000	240 ONLY	1500	1540	160	18kg

**APPENDIX C, ATEX/IECE<sub>x</sub> HAZARDOUS AREA CERTIFICATES.**



# 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 LCI 07.0009X issue No.:0 Certificate history:

Status: Current

Date of Issue: 2007-12-19 Page 1 of 3

Applicant: **EXHEAT**  
Threxton Road Industrial Estate  
Watton, Thetford, Norfolk  
IP25 6NG, UNITED KINGDOM  
**United Kingdom**

Electrical Apparatus: **Heater**  
Optional accessory:

Type of Protection: **Increased safety 'e'**

Marking: **EXHEAT**  
**Type F\*\* Heater**  
**Serial number**  
**Ex e II T2, T3 or T4**  
**Tamb = -20°C to +60°C (for T2 heaters only)**  
**IECEx LCI 07.0009 X**  
**WARNING : DO NOT OPEN WHILST ENERGISED**  
**Power ratings**

Approved for issue on behalf of the IECEx  
Certification Body:

Marc GILLAUX

Position:

Certification manager

Signature:  
(for printed version)

Date: January 18<sup>th</sup>, 2008

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.

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
**33 Avenue du General Leclerc**  
**FR-92260 Fontenay-aux-Roses**  
**France**





# IECEX Certificate of Conformity

Certificate No.: IECEx LCI 07.0009X

Date of Issue: 2007-12-19

Issue No.: 0

Page 2 of 3

Manufacturer: **EXHEAT**  
Threxton Road Industrial Estate  
Watton, Thetford, Norfolk  
IP25 6NG, UNITED KINGDOM  
**United Kingdom**

Manufacturing location(s):

**EXHEAT**  
Threxton Road Industrial  
Estate  
Watton, Thetford, Norfolk  
IP25 6NG, UNITED  
KINGDOM  
United Kingdom

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 : 2004** Electrical apparatus for explosive gas atmospheres - Part 0: General requirements  
Edition: 4.0

**IEC 60079-7 : 2001** Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety 'e'  
Edition: 3

*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:

[FR/LCI/ExTR07.0007/00](#)

Quality Assessment Report:

[FR/LCI/QAR06.0005/00](#)



# IECEX Certificate of Conformity

Certificate No.: IECEx LCI 07.0009X

Date of Issue: 2007-12-19

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

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

The FAW and FCR type air heaters are convector heaters comprising up to 6-off tubular metal sheathed finned elements terminated in an integral Ex e terminal enclosure, rated at up to 4kW, 660V, single or polyphase. There are three variants : the FAW, the FAW-C (compact version) and FCR (wall-mounted convector). This equipment is designed to operate in an ambient temperature of -60°C to +60°C. The enclosure is made of stainless or mild steel, natural or painted. All external electrical connections are terminated in the terminal enclosure. The maximum rating is established to ensure that whilst continuously energised at its rated voltage a given temperature class cannot be exceeded in a given ambient.

FAW & FCR : based on a maximum power density at the element sheath surface of 3.01 W/cm<sup>2</sup> at its rated supply voltage these heaters have a temperature class of T3 in an ambient of up to +40°C and T2 in an ambient of up to +60°C.

FAW & FCR : based on a maximum power density at the element sheath surface of 1.35 W/cm<sup>2</sup> at its rated supply voltage these heaters have a temperature class of T4 in an ambient of up to +40°C. FAW-C : based on a maximum power density at the element sheath surface of 1.1 W/cm<sup>2</sup> at its rated supply voltage these heaters have a temperature class of T3 in an ambient of up to +40°C and T2 in an ambient of up to +60°C.

### CONDITIONS OF CERTIFICATION: YES as shown below:

#### Power ratings

FAW and FCR : 4kW single or polyphase up to 660V

FAW-C : 4kW single or polyphase up to 550V

Ambient operating temperature

FAW & FCR (power density at element surface of 3.01 W/cm<sup>2</sup>) :

-60°C to +40°C for T3

-60°C to +60°C for T2

FAW & FCR (power density at element surface of 1.35W/cm<sup>2</sup>) :

-60°C to +40°C for T4

FAW-C (power density at element surface of 1.1 W/cm<sup>2</sup>) :

-60°C to +40°C for T3

-60°C to +60°C for T2

**1 ATTESTATION D'EXAMEN CE DE TYPE**

2 Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles  
**Directive 94/9/CE**

3 Numéro de l'attestation CE de type  
**LCIE 00 ATEX 6013 X**

4 Appareil ou système de protection

Appareil de chauffage  
Type : FAW

5 Demandeur : HEATEX LIMITED

6 Adresse : Threxton Road Industrial Estate  
Watton, Thetford, Norfolk, IP25 6NG  
UNITED KINGDOM

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées est décrit dans l'annexe de la présente attestation et dans les documents descriptifs cités en annexe.


8 Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que cet appareil ou système de protection est conforme aux exigences essentielles en ce qui concerne la sécurité et la santé pour la conception et la construction d'appareils et de systèmes de protection destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive. Les vérifications et épreuves figurent dans notre rapport confidentiel N° 21 455 010.

9 Le respect des exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux documents suivants :  
- EN 50014 (1992)  
- EN 50019 (1994)

10 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que ce matériel ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 Cette attestation d'examen CE de type concerne uniquement la conception et la construction de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE. Des exigences supplémentaires de cette directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection.

12 Le marquage de l'appareil ou du système de protection devra comporter, entre autres indications utiles, les mentions suivantes :

 II 2 G  
EEx e II T4 à T2

**1 EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or Protective System Intended for use in Potentially explosive atmospheres  
**Directive 94/9/CE**

3 EC type Examination Certificate number  
**LCIE 00 ATEX 6013 X**

4 Equipment or Protective system

Heater  
Type : FAW

5 Applicant : HEATEX LIMITED

6 Address : Threxton Road Industrial Estate  
Watton, Thetford, Norfolk, IP25 6NG  
UNITED KINGDOM

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 LCIE, notified body number 0081 in accordance with article 9 of the directive 94/9/CE of the European Parliament and Council of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmospheres, given in Annex II to the directive. The examination and test results are recorded in confidential report No 21 455 010

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with :  
- EN 50014 (1992)  
- EN 50019 (1994)

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

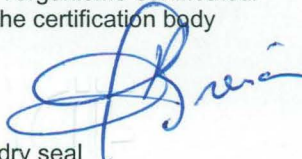
11 This EC Type examination certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of Directive applies to the manufacture and supply of this equipment or protective system.

12 The marking of the equipment or protective system shall include the following :

 II 2 G  
EEx e II T4 to T2

Fontenay-aux-Roses, le 23 juin 2000

Le Directeur de l'organisme certificateur  
Manager of the certification body



Par délégation  
**Michel BRÉNON**  
Directeur adjoint  
à la Certification

Timbre sec/dry seal

(A1) **ANNEXE**

(A2) **ATTESTATION D'EXAMEN CE DE TYPE**

**LCIE 00 ATEX 6013 X**

(A3) **Description de l'équipement ou du système de protection**

L'appareil de chauffage type FAW, de tension nominale jusqu'à 660 V et de puissance nominale jusqu'à 4 kW, comprend une boîte de raccordement avec un montage de protection et jusqu'à 6 éléments chauffants métalliques.

L'appareil est construit en 2 versions :

- version "normale",
- version "compact".

**Le marquage sera le suivant :**

HEATEX LIMITED

Adresse

Type : FAW

N° de fabrication

Année de fabrication

 II 2 G

EEx e II T4 à T2

LCIE 00 ATEX 6013 X

Ne pas ouvrir sous tension

Caractéristiques électriques

Le marquage CE est accompagné du numéro d'identification de l'organisme notifié responsable de la surveillance du système de qualité (0081 pour le LCIE).

(A4) **Documents descriptifs**

Dossier technique du Rév. 1 du 24/05/2000.

Ce document comprend 7 rubriques (8 pages).

(A5) **Conditions spéciales pour une utilisation sûre**

- Conditions d'alimentation :

. Version "normale" : 4 kW par élément ou tension polyphasée jusqu'à 660 V

. Version "compact" : 4 kW par élément ou tension polyphasée jusqu'à 550 V

- Classement en température :

. Version "normale" : pour une puissance maximale à la surface de l'élément de 3,01 W/cm<sup>2</sup> à sa tension nominale :

T3 jusqu'à + 40 °C

T2 jusqu'à + 60 °C

. Version "compact" : pour une puissance maximale à la surface de l'élément de 1,1 W/cm<sup>2</sup> à sa tension nominale :

T3 jusqu'à + 40 °C

T2 jusqu'à + 60 °C

(A6) **Exigences essentielles en ce qui concerne la sécurité et la santé**

La conception de cet équipement satisfait aux normes européennes EN 50014 et EN 50019.

Epreuve individuelle :

Chaque exemplaire du matériel devra subir une épreuve de rigidité diélectrique conformément aux dispositions du paragraphe 7 de la norme EN 50019.

(A1) **SCHEDULE**

(A2) **EC TYPE EXAMINATION CERTIFICATE**

**LCIE 00 ATEX 6013 X**

(A3) **Description of Equipment or Protective System**

The type FAW heater, rated at up to 660 V and 4 kW, comprises a terminal enclosure with integral mounting frame and guard and up to 6 finned tubular metal heating elements.

The equipment is manufactured in 2 models :

- "normal" model,
- "compact" model.

**The marking will be the following :**

HEATEX LIMITED

Address

Type : FAW

Serial number

Year of construction :

 II 2 G

EEx e II T4 to T2

LCIE 00 ATEX 6013 X

Do not open while energized

Electrical characteristics.

The CE marking shall be accompanied by the identification number of the notified body responsible for surveillance of the quality system (0081 for the LCIE).

(A4) **Descriptive documents :**

Technical file Rev. 1 dated 24/05/2000.

This file includes 7 items (8 pages).

(A5) **Special conditions for safe use**

- Power rating :

. "Normal" model : 4 kW single or polyphase up to 660 V

. "Compact" model : 4 kW single or polyphase up to 550 V

- Temperature classification :

. "Normal" model : based on a maximum power density at the element surface of 3,01 W/cm<sup>2</sup> at its rated voltage :

T3 up to + 40 °C

T2 up to + 60 °C

. "Compact" model : based on a maximum power density at the element surface of 1,1 W/cm<sup>2</sup> at its rated voltage :

T3 up to + 40 °C

T2 up to + 60 °C

(A6) **Essential Health and Safety Requirements**

The design of the equipment complies to European standards EN 50014 and EN 50019.

Routine test :

Each single electrical apparatus must be submitted to a dielectric strength test as set forth by the dispositions of paragraph 7 of EN 50019 standard.



(A1) **ATTESTATION D'EXAMEN CE DE TYPE  
LCIE 00 ATEX 6013 X du 23 juin 2000**

**AVENANT 00 ATEX 6013 X/01**

(A1) **EC TYPE EXAMINATION CERTIFICATE  
LCIE 00 ATEX 6013 X dated June 23, 2000**

**VARIATION 00 ATEX 6013 X/01**

(A2) **DÉSIGNATION DE L'ÉQUIPEMENT OU DU  
SYSTÈME DE PROTECTION :**

Appareil de chauffage  
Types : FAW et FCR  
Construit par : HEATEX LIMITED

(A2) **NAME OF EQUIPMENT OR PROTECTIVE SYSTEM :**

Heater  
Type : FAW et FCR  
Manufactured by : HEATEX LIMITED

(A3) **OBJET DE L'AVENANT, DESCRIPTION DE  
L'APPAREIL OU DU SYSTÈME DE PROTECTION :**

- Création du type FCR.

Marquage : Inchangé. Complété par le type FCR.

(A3) **SUBJECT OF THE VARIATION, DESCRIPTION OF  
EQUIPMENT OR PROTECTIVE SYSTEM :**

- Creation of FCR type.

Marking : Unchanged. Completed by FCR type.

(A4) **DOCUMENTS DESCRIPTIFS :**

Dossier technique Rév. 1 du 08/06/2001.  
Ce dossier comprend 4 rubriques (5 pages).

(A4) **DESCRIPTIVE DOCUMENTS :**

Technical file Rev. 1 dated 08/06/2001.  
This file includes 4 items (5 pages).

(A5) **CONDITIONS SPÉCIALES POUR UNE UTILISATION  
SÛRE :**

Inchangées.

(A5) **SPECIAL CONDITIONS FOR SAFE USE :**

Unchanged.

(A6) **EXIGENCES ESSENTIELLES EN CE QUI  
CONCERNE LA SÉCURITÉ ET LA SANTÉ :**

Inchangées.

(A6) **ESSENTIAL HEALTH AND SAFETY  
REQUIREMENTS :**

Unchanged.

Fontenay-aux-Roses, le 27 juillet 2001

Le Directeur de l'organisme certificateur  
Manager of the certification body

Timbre sec/Dry seal

**Par délégation  
Michel BRÉNON  
Directeur adjoint  
à la Certification**

Page 1/1

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**LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES**

Société anonyme à Directoire et Conseil de surveillance au capital de 15 745 984 euros - RCS Nanterre B 408 363 174

33, avenue du Général Leclerc - BP n° 8 - F 92266 FONTENAY-AUX-ROSES CEDEX - Tél. : +33 1 40 95 60 60





LCIE

(A1) ATTESTATION D'EXAMEN CE DE TYPE  
LCIE 00 ATEX 6013 X du 23 Juin 2000.

AVENANT 00 ATEX 6013X/02

(A1) EC TYPE EXAMINATION CERTIFICATE  
LCIE 00 ATEX 6013 X dated June 23<sup>rd</sup>, 2000.

VARIATION 00 ATEX 6013X/02

(A2) DESIGNATION DE L'EQUIPEMENT OU DU  
SYSTEME DE PROTECTION :

Appareil de chauffage  
Type : FAW, FCR  
Construit par : HEATEX LIMITED

(A2) NAME OF EQUIPMENT OR PROTECTIVE SYSTEM :

Heater  
Type : FAW, FCR  
Manufactured by : HEATEX LIMITED

(A3) OBJET DE L'AVENANT, DESCRIPTION DE  
L'APPAREIL OU DU SYTEME DE PROTECTION :

Abaissement de la température minimale d'utilisation  
à -60°C.

Le marquage est inchangé.

(A3) SUBJECT OF THE VARIATION, DESCRIPTION OF  
EQUIPMENT OR PROTECTIVE SYSTEM :

Lowering of the minimal operating temperature  
to -60°C.

The marking is unchanged.

(A4) DOCUMENTS DESCRIPTIFS :

Dossier technique n° 2004-17-TF rév. 3 du 20 Avril 2004.

Ce dossier comprend 2 rubriques (3 pages).

(A4) DESCRIPTIVE DOCUMENTS :

Certification file No. 2004-17-TF rev. 3 dated April 20<sup>th</sup>,  
2004.

This file includes 2 items (3 pages).

(A5) CONDITIONS SPECIALES POUR UNE  
UTILISATION SURE :

Le classement en température est modifié comme suit :

(A5) SPECIAL CONDITIONS FOR SAFE USE :

The temperature classification is modified as follows .

Version / Model	Puissance maximale à la surface de l'élément à sa tension nominale / Maximal power of the element at surface under nominal voltage	Température ambiante d'utilisation / Ambient operating temperature	Classement en température / Temperature classification
Normale / Normal	3,01 W/cm <sup>2</sup>	- 60 °C ≤ T <sub>amb</sub> ≤ + 40°C	T3
	1,35 W/cm <sup>2</sup>	- 60 °C ≤ T <sub>amb</sub> ≤ + 60°C	T2
Compacte / Compact	1,1 W/cm <sup>2</sup>	- 60 °C ≤ T <sub>amb</sub> ≤ + 40°C	T4
		- 60 °C ≤ T <sub>amb</sub> ≤ + 60°C	T3
		- 60 °C ≤ T <sub>amb</sub> ≤ + 60°C	T2

(A6) EXIGENCES ESSENTIELLES EN CE QUI  
CONCERNE LA SECURITE ET LA SANTE :

Inchangées.

(A6) ESSENTIAL HEALTH AND  
SAFETY REQUIREMENTS :

Unchanged.

Fontenay-aux-Roses, le 30 septembre 2004

Le Directeur de l'organisme certificateur  
Manager of the certification body

Michel BRÉNON  
Timbre sec/Dry seal

Page 1/1

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LCIE

1 AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE

2 Appareil ou système de protection destiné à être utilisé en atmosphères explosibles (Directive 94/9/CE)

3 Numéro de l'avenant : LCIE 00 ATEX 6013 X / 03

4 Appareil ou système de protection : Appareil de chauffage
Type : FAW, FCR

5 Demandeur : EXHEAT LIMITED

15 DESCRIPTION DE L'AVENANT

- Changement de raison sociale : HEATEX devient EXHEAT
- Mise à jour normative selon les normes EN 60079-0 (2004) et EN 60079-7 (2003)

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 77473-566020-02.

Paramètres spécifiques du ou des modes de protection concerné(s) : inchangés

Le marquage doit être modifié comme suit :

EXHEAT au lieu de HEATEX

Ex e II T2, T3 ou T4

AVERTISSEMENT - NE PAS OUVRIR SOUS TENSION

16 DOCUMENTS DESCRIPTIFS

Lettre de changement de raison sociale du 25/05/07.

17 CONDITIONS SPECIALES POUR UNE UTILISATION SURE

-60°C ≤ Tamb ≤ +40 °C ou +60°C (pour les réchauffeurs classés T2)

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE

Couvertes par les normes européennes EN 60079-0 (2004) et EN 60079-7 (2003).

19 VERIFICATIONS ET ESSAIS INDIVIDUELS

Chaque exemplaire du matériel devra subir une épreuve de rigidité diélectrique conformément au paragraphe 6.1 de la norme EN 60079-7 (2003).

Fontenay-aux-Roses, le 30 mai 2008

1 SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE

2 Equipment or protective system intended for use in potentially explosive atmospheres (Directive 94/9/EC)

3 Supplementary certificate number : LCIE 00 ATEX 6013 X / 03

4 Equipment or protective system : Heater
Type : FAW, FCR

5 Applicant : EXHEAT LIMITED

15 DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE

- Change of company name : HEATEX becomes EXHEAT
- Normative update according to the standards EN 60079-0 (2004) and EN 60079-7 (2003)

The examination and test results are recorded in confidential report N° 77473-566020-02.

Specific parameters of the mode(s) of protection concerned: unchanged

The marking shall be modified as follows :

EXHEAT instead of HEATEX

Ex e II T2, T3 or T4

WARNING - DO NOT OPEN WHEN ENERGIZED

16 DESCRIPTIVE DOCUMENTS

Certificate of incorporation on change of name dated 25/05/07.

17 SPECIAL CONDITIONS FOR SAFE USE

-60°C ≤ Tamb ≤ +40 °C ou +60°C (For T2 Heaters)

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by the European standards EN 60079-0 (2004) and EN 60079-7 (2003).

19 ROUTINE VERIFICATIONS AND TESTS

Each single electrical apparatus shall be submitted to a dielectric strength test in accordance with clause 6.1 of EN 60079-7 (2003).

Le responsable de certification ATEX
ATEX certification manager



Henri CERVELLO

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## EC DECLARATION OF CONFORMITY

Issued in accordance with the

**ATEX Directive 94/9/EC**

***EXHEAT LIMITED***

of

*Thrextan Road Industrial Estate, Watton, Norfolk, IP25 6NG, UK.*

Declare that, in compliance with the above Directive, the product detailed below has been manufactured in conformity with

EC Type Examination Certificate Number LCIE 00 ATEX 6013 X

Issued by LCIE (Notified Body Number 0081)

of 33, Avenue du Général Leclerc, 92260 Fontenay-aux-Roses, France

<b>Product description:</b>	<b>FAW.../FCR Type Air Heater</b>
<b>Protection concept(s):</b>	Increased Safety 'e'
<b>Marking:</b>	⊕ II 2 G Ex e IIC T4 to T2 Gb
<b>Harmonised standards applied:</b>	EN 60079-0: 2009 EN 60079-7: 2007
<b>Other applicable Directives:</b>	2004/108/EC Electromagnetic Compatibility Directive
<b>Other standards applied:</b>	EN 60519-2: 2006 (Safety) EN 61000-6-4: 2007 (Emissions) EN 61000-6-2: 2005 (Immunity)

Authorised signature:



Name:

P Alford

Date:

27 March 2014



# 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 LCI 07.0003X issue No.: 1  
Status: Current  
Date of Issue: 2008-11-17 Page 1 of 4

Certificate history:  
Issue No. 1 (2008-11-17)  
Issue No. 0 (2007-5-11)

Applicant: **EXHEAT LIMITED**  
Threxton Road Industrial Estate  
Watton, Thetford, Norfolk  
IP25 6NG  
**United Kingdom**

Electrical Apparatus: ...FT Flameproof thermostat  
*Optional accessory:*

Type of Protection: Flameproof 'd' and Dust 'tD' (AFT model only)

Marking: **EXHEAT LIMITED**  
Type : HFT or AFT  
Ex d IIC T6  
Ex tD IP6X A21 T85°C (AFT only)  
Serial Number  
Year of construction  
LCI 07.0003 X  
WARNING - DO NOT OPEN WHILE ENERGIZED  
WARNING - DO NOT OPEN WHEN AN EXPLOSIVE DUST ATMOSPHERE IS PRESENT


Approved for issue on behalf of the IECEx  
Certification Body:

Marc GILLAUX

Position:

Certification manager

Signature:  
(for printed version)

  
21-11-2008

Date:

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.

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)**  
33 Avenue du General Leclerc  
FR-92260 Fontenay-aux-Roses  
France





# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 07.0003X

Date of Issue: 2008-11-17

Issue No.: 1

Page 2 of 4

Manufacturer: **EXHEAT LIMITED**  
Thrextan Road Industrial Estate  
Watton, Thetford, Norfolk  
IP25 6NG  
**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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2003</b> Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*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:

FR/LCI/ExTR07.0003/01

Quality Assessment Report:

FR/LCI/QAR06.0005/00



# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 07.0003X

Date of Issue: 2008-11-17

Issue No.: 1

Page 3 of 4

## Schedule

### EQUIPMENT:

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

Thermostat contained in a flameproof enclosure with an external air temperature sensing probe contained in a suitable housing. An optional externally adjustable version is included. This equipment is designed to operate in an ambient temperature of -60°C to +60°C.  
The enclosure is a flameproof enclosure with a spigot flamepath lid to body joint, made of stainless steel (HFT model) or aluminium (AFT model). The maximum total capacity of components included is rated to 20A up to 300V. There are 2 models of enclosures. Each model is equipped with a probe housing. One model can be equipped by an optional external adjuster.  
HFT model is suitable for a use in gas explosive atmospheres.  
AFT model is suitable for a use in gas and dust explosive atmospheres.  
Refer to the manufacturer technical documents for complete description.

### CONDITIONS OF CERTIFICATION: YES as shown below:

The calorific transfer of sensor shall not transmit, in any case a heating above 80°C, including ambient temperature, to all thermostat part directly in contact with explosive atmosphere.



# IECEx Certificate of Conformity

Certificate No.: IECEx LCI 07.0003X

Date of Issue: 2008-11-17

Issue No.: 1

Page 4 of 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- Change of company name : EXHEAT instead of HEATEX
- Compliance for low ambient temperature -60°C.
- Tamb : -60°C up to +60°C



1 **ATTESTATION D'EXAMEN CE DE TYPE**

2 Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles  
**Directive 94/9/CE**

3 Numéro de l'attestation CE de type  
**LCIE 99 ATEX 6017 X**

4 Appareil ou système de protection

Thermostat antidéflagrant  
Type : HFT

5 Demandeur : HEATEX LIMITED

6 Adresse : Threxton Road Industrial Estate  
Watton, Thetford, Norfolk, IP25 6NG  
UNITED KINGDOM

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées est décrit dans l'annexe de la présente attestation et dans les documents descriptifs cités en annexe.

8 Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que cet appareil ou système de protection est conforme aux exigences essentielles en ce qui concerne la sécurité et la santé pour la conception et la construction d'appareils et de systèmes de protection destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive. Les vérifications et épreuves figurent dans notre rapport confidentiel N° 11 320 010.

9 Le respect des exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux documents suivants :

- EN 50014 (1992)
- EN 50018 (1994)

10 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que ce matériel ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 Cette attestation d'examen CE de type concerne uniquement la conception et la construction de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE. Des exigences supplémentaires de cette directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection.

12 Le marquage de l'appareil ou du système de protection devra comporter, entre autres indications utiles, les mentions suivantes :

II 2 G  
EEx d IIC T6

1 **EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or Protective System Intended for use in Potentially explosive atmospheres  
**Directive 94/9/CE**

3 EC type Examination Certificate number  
**LCIE 99 ATEX 6017 X**

4 Equipment or Protective system

Flameproof Thermostat  
Type : HFT

5 Applicant : HEATEX LIMITED

6 Address : Threxton Road Industrial Estate  
Watton, Thetford, Norfolk, IP25 6NG  
UNITED KINGDOM

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 LCIE, notified body number 0081 in accordance with article 9 of the directive 94/9/CE of the European Parliament and Council of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmospheres, given in Annex II to the directive. The examination and test results are recorded in confidential report No 11 320 010.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with :

- EN 50014 (1992)
- EN 50018 (1994)

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC Type examination certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of Directive applies to the manufacture and supply of this equipment or protective system.

12 The marking of the equipment or protective system shall include the following :

II 2 G  
EEx d IIC T6

Fontenay-aux-Roses, le 22 septembre 1999

Le Directeur de l'organisme certificateur  
Manager of the certification body

**Michel VIEILLEFOSSE**  
Président et directeur général

Timbre sec/dry seal

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**LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES**

Société anonyme à Directoire et Conseil de surveillance au capital de 103 592 000 Francs - RCS Nanterre B 408 363 174

Siège social : 33, avenue du Général Leclerc - F 92260 Fontenay-aux-Roses - Tél. : +33 (0)1 40 95 60 60



(A1) **ANNEXE**

(A2) **ATTESTATION D'EXAMEN CE DE TYPE**  
**LCIE 99 ATEX 6017 X**

(A4) **Description de l'équipement ou du système de protection**

Appareil de forme carrée, d'un volume interne libre de 384 cm<sup>3</sup> qui contient un thermostat et une sonde de température.

**Le marquage sera le suivant :**

- HEATEX LTD NORFOLK ENGLAND
- Type : HFT
- N° de fabrication
- Année de fabrication
-  II 2 G
- EEx d IIC T6
- LCIE 99 ATEX 6017 X
- NE PAS OUVRIR SOUS TENSION

Le marquage CE est accompagné du numéro d'identification de l'organisme notifié responsable de la surveillance du système de qualité (0081 pour le LCIE).

(A4) **Documents descriptifs**

Dossier technique N° 2004.15.01 Rév. 1 du 24.03.1999.  
Ce document comprend 6 rubriques (7 pages).

(A5) **Conditions spéciales pour une utilisation sûre**

Le transfert calorifique de l'élément de mesure ne devra en aucun cas transmettre un échauffement de plus de 80 °C, température ambiante incluse, à toute partie du thermostat susceptible d'être directement en contact avec une atmosphère explosive.

(A6) **Exigences essentielles en ce qui concerne la sécurité et la santé**

La conception de cet équipement satisfait aux normes européennes EN 50014 et EN 50018 (seconde édition).

**Épreuve individuelle**

Le matériel est dispensé d'épreuve individuelle.


(A1) **SCHEDULE**

(A2) **EC TYPE EXAMINATION CERTIFICATE**  
**LCIE 99 ATEX 6017 X**

(A4) **Description of Equipment or Protective System**

Apparatus square form, 384 cm<sup>3</sup> internal free volume who contain a thermostat and temperature probe.

**The marking will be the following :**

- HEATEX LTD NORFOLK ENGLAND
- Type : HFT
- Serial number
- Year of construction
-  II 2 G
- EEx d IIC T6
- LCIE 99 ATEX 6017 X
- DO NOT OPEN WHILE ENERGIZED

The CE marking shall be accompanied by the identification number of the notified body responsible for surveillance of the quality system (0081 for the LCIE).

(A4) **Descriptive documents :**

Technical file N° 2004.15.01 Rev 1 dated 24.03.1999.  
This file includes 6 items (7 pages).

(A5) **Special conditions for safe use**

The calorific transfer of sensor shall not transmit, in any case a heating above 80 °C, including ambient temperature, to all thermostat part directly in contact with explosive atmosphere.

(A6) **Essential Health and Safety Requirements**

The design of the equipment complies to European Standards EN 50014 and EN 50018 (second edition).

**Routine test**

The equipment is exempt from individual test.



LCIE

(A1) **ATTESTATION D'EXAMEN CE DE TYPE  
LCIE 99 ATEX 6017X du 22 septembre 1999**

**AVENANT 99 ATEX 6017X /01**

(A2) DESIGNATION DE L'EQUIPEMENT OU DU  
SYSTEME DE PROTECTION :

Thermostat antidéflagrant  
Type : HFT  
Construit par : HEATEX LIMITED.

(A3) OBJET DE L'AVENANT, DESCRIPTION DE  
L'APPAREIL OU DU SYTEME DE PROTECTION :

- Possibilité d'utiliser un boîtier antidéflagrante alternative  
équipée d'un thermostat ajustable.

Le marquage de ce nouveau modèle est le suivant :

HEATEX LTD NORFOLK ENGLAND

Type : HFT

n° de fabrication

Année de fabrication

Ex II 2 G/D

EEx d IIC T6

IP6X, T85°C pour D

LCIE 99 ATEX 6017X

NE PAS OUVRIR SOUS TENSION.

Ne pas ouvrir en présence d'atmosphère poussière.

(A4) DOCUMENTS DESCRIPTIFS :

Dossier technique N°2004-15-TF Rev 4 du 13/06/2003

Ce dossier comprend 10 rubriques (11 pages).

(A5) CONDITIONS SPECIALES POUR UNE UTILISATION  
SURE :

Inchangées.

(A6) EXIGENCES ESSENTIELLES EN CE QUI  
CONCERNE LA SECURITE ET LA SANTE :

Complétées par :

Conformité à la norme européenne EN 50281-1-1 (1998).

Fontenay-aux-Roses, le 18 septembre 2003

(A1) **EC TYPE EXAMINATION CERTIFICATE  
LCIE 99 ATEX 6017X dated September 22, 1999**

**VARIATION 99 ATEX 6017X /01**

(A2) NAME OF EQUIPMENT OR PROTECTIVE SYSTEM :

Flameproof thermostat  
Type : HFT  
Manufactured by : HEATEX LIMITED.

(A3) SUBJECT OF THE VARIATION, DESCRIPTION OF  
EQUIPMENT OR PROTECTIVE SYSTEM :

- Optional thermostat adjuster added with an alternative  
enclosure.

The marking of this new model is the following :

HEATEX LTD NORFOLK ENGLAND

Type : HFT

Serial number

Year of construction

Ex II 2 G/D

EEx d IIC T6

IP6X, T85°C for D

LCIE 99 ATEX 6017X

DO NOT OPEN WHILE ENERGIZED

Do not open in presence of dust atmosphere.

(A4) DESCRIPTIVE DOCUMENTS :

Technical file N°2004-15-TF Rev 5 dated June 13<sup>th</sup>, 2003

This file includes 10 items (11 pages).

(A5) SPECIAL CONDITIONS FOR SAFE USE :

Unchanged.

(A6) ESSENTIAL HEALTH AND SAFETY REQUI-  
REMENTS :

Supplemented by :

Conformity to the European standard EN 50281-1-1 (1998).

Le Directeur de l'organisme certificateur  
Manager of the certification body

Timbre sec/Dry seal

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LCIE

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Société anonyme à directoire

et conseil de surveillance

au capital de 15 745 984 €

RCS Nanterre B 408 363 174

L-01



LCIE

1 AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE

2 Appareil ou système de protection destiné à être utilisé en atmosphères explosibles (Directive 94/9/CE)

3 Numéro de l'avenant : LCIE 99 ATEX 6017 X / 02

4 Appareil ou système de protection : Thermostat antidéflagrant
Type : HFT, AFT

5 Demandeur : EXHEAT LIMITED

15 DESCRIPTION DE L'AVENANT

- Mise à jour selon les normes EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2006) et EN 61241-1 (2004)
- Température ambiante minimale : -60°C
- Nouveau type : AFT (gaz et poussières)
- Changement de raison sociale

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 77475-566018/02.

Paramètres spécifiques du ou des modes de protection concerné(s) : Inchangés

Le marquage doit être modifié comme suit :

EXHEAT au lieu de HEATEX

HFT : Ex II 2G Ex d IIC T6 AFT : Ex II 2GD Ex d IIC T6 Ex tD A21 IP6X T85°C

AVERTISSEMENT - NE PAS OUVRIR SOUS TENSION NE PAS OUVRIR EN PRESENCE D'UNE ATMOSPHERE POUSSIEREUSE EXPLOSIVE

16 DOCUMENTS DESCRIPTIFS

Dossier de certification 2004-15-TF rév. 03 du 01/08/08. Ce dossier comprend 15 rubriques (16 pages).

17 CONDITIONS SPECIALES POUR UNE UTILISATION SURE

-60°C ≤ Tamb ≤ +60°C

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE

Conformité aux normes européennes EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2006) et EN 61241-1 (2004).

19 VERIFICATIONS ET ESSAIS INDIVIDUELS

Néant

Fontenay-aux-Roses, le 1er octobre 2008

1 SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE

2 Equipment or protective system intended for use in potentially explosive atmospheres (Directive 94/9/EC)

3 Supplementary certificate number : LCIE 99 ATEX 6017 X / 02

4 Equipment or protective system : Flameproof Thermostat
Type : HFT, AFT

5 Applicant : EXHEAT LIMITED

15 DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE

- Normative update according to EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2006) and EN 61241-1 (2004) standards
- Minimum ambient temperature : -60°C
- New type : AFT (gas and dust)
- Change of company name

The examination and test results are recorded in confidential report N° 77475-566018/02.

Specific parameters of the mode(s) of protection concerned: Unchanged

The marking shall be modified as follows :

EXHEAT instead of HEATEX

HFT : Ex II 2G Ex d IIC T6 AFT : Ex II 2GD Ex d IIC T6 Ex tD A21 IP6X T85°C

WARNING - DO NOT OPEN WHEN ENERGIZED DO NOT OPEN WHEN AN EXPLOSIVE DUST ATMOSPHERE IS PRESENT

16 DESCRIPTIVE DOCUMENTS

Certification file 2004-15-TF rev. 03 dated 01/08/08. This file includes 15 items (16 pages).

17 SPECIAL CONDITIONS FOR SAFE USE

-60°C ≤ Tamb ≤ +60°C

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

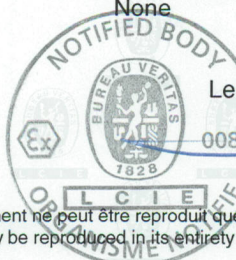
Conformity to the European standards EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2006) and EN 61241-1 (2004).

19 ROUTINE VERIFICATIONS AND TESTS

None

Le responsable de certification ATEX ATEX certification manager

Marc GILLAUX



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**EC DECLARATION OF CONFORMITY**

Issued in accordance with the

**ATEX Directive 94/9/EC**

***EXHEAT LIMITED***

of

*Threxton Road Industrial Estate, Watton, Norfolk, IP25 6NG, UK.*

Declare that, in compliance with the above Directive, the product detailed below has been manufactured in conformity with

EC Type Examination Certificate Number LCIE 99 ATEX 6017 X

Issued by LCIE (Notified Body Number 0081)

of 33, Avenue du Général Leclerc, 92260 Fontenay-aux-Roses, France

**Product description:**

**HFT Type Flameproof Thermostat  
(Aluminium / externally adjustable variant)**

**Protection concept(s):**

Flameproof 'd'  
Enclosure 't'

**Marking:**

⊕ II 2 G D  
Ex d IIC T6 Gb  
Ex t IIIC T85°C Db  
IP6X

**Harmonised standards applied:**

EN 60079-0: 2009  
EN 60079-1: 2007  
EN 60079-31: 2009

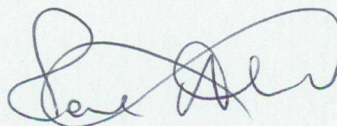
**Other applicable Directives:**

2004/108/EC Electromagnetic Compatibility Directive

**Other standards applied:**

EN 60519-2: 2006 (Safety)  
EN 61000-6-4: 2007 (Emissions)  
EN 61000-6-2: 2005 (Immunity)

Authorised signature:



Name:

P Alford

Date:

20 December 2012

## EC DECLARATION OF CONFORMITY

Issued in accordance with the

**ATEX Directive 94/9/EC**

***EXHEAT LIMITED***

of

*Threxton Road Industrial Estate, Watton, Norfolk, IP25 6NG, UK.*

Declare that, in compliance with the above Directive, the product detailed below has been  
manufactured in conformity with

EC Type Examination Certificate Number LCIE 99 ATEX 6017 X

Issued by LCIE (Notified Body Number 0081)

of 33, Avenue du Général Leclerc, 92260 Fontenay-aux-Roses, France

<b>Product description:</b>	<b>HFT Type Flameproof Thermostat</b>
<b>Protection concept(s):</b>	Flameproof 'd'
<b>Marking:</b>	⊕ II 2 G Ex d IIC T6 Gb
<b>Harmonised standards applied:</b>	EN 60079-0: 2009 EN 60079-1: 2007
<b>Other applicable Directives:</b>	2004/108/EC Electromagnetic Compatibility Directive
<b>Other standards applied:</b>	EN 60519-2: 2006 (Safety) EN 61000-6-4: 2007 (Emissions) EN 61000-6-2: 2005 (Immunity)

Authorised signature:



Name:

P Alford

Date:

20 December 2012

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# EXHEAT INDUSTRIAL LTD

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For sales and new product information see our website

[www.exheat-industrial.com](http://www.exheat-industrial.com)



2006/95/EC

89/336/EEC

(As amended by 92/31/EEC & 93/68/EEC)

94/9/EC

Author: P. Bumstead

Issue Date: Feb. 2015

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