



**INSTALLATION OPERATION  
AND MAINTENANCE INSTRUCTIONS FOR  
EXHEAT FUH TYPE  
FAN-ASSISTED AIR HEATERS**

## **1.0 GENERAL**

- 1.1 All work should be carried out by suitable qualified personnel.
- 1.2 Carefully remove all packaging and visually inspect unit for any transit damage.
- 1.3 Before connection ensure that the supply corresponds with that specified on the rating label.
- 1.4 Each heater must be protected by a suitably rated over current device.
- 1.5 All prevailing rules, regulations and bylaws in force at the time and place of installation must be observed.
- 1.6 Any modification not carried out by Exheat Limited or its approved agent will invalidate certification and warranty.
- 1.7 The heat exchanger unit is factory sealed and contains a mixture glycol and water. If a leak occurs, it must be isolated and Exheat contacted for further advice.
- 1.8 No user serviceable components are contained within the motor loading, any attempt to disassemble the motor will void warranty and certification.

## **2.0 INSTALLATION**

- 2.1 The Heater must be mounted upright using only the suspension points at the top of the unit (fig.1) and appropriate mounting brackets
- 2.2 The heater must be positioned to allow unrestricted entry of air at the back and exit at the front via the adjustable louvers. A minimum of 2 metres clearance must be maintained in front of the heater.
- 2.3 The unit must be checked for leakage after mounting in position and before making electrical connections.

## **3.0 ELECTRICAL SUPPLY CONNECTIONS**

- 3.1 Refer to the electrical wiring diagram (fig.2) and make all connections in accordance with it.
- 3.2 All external connections are made in the main heater terminal box, which is accessed by removing the bottom cover of the heater.
- 3.3 To remove the bottom cover, undo the bolts securing it (fig.1) and slide the cover down.
- 3.4 The terminal box cover is removed by slacking the locking grub screw and then unscrewing the cover.
- 3.5 Re-fitting is the reverse of 3.3 and 3.4 ensuring that the locking grub screw is re-tightened after re-fitting the cover.
- 3.6 The electrical supply must be via a suitable isolator and suitable high temperature cable must enter the terminal box via a certified Ex d IIC cable gland (not supplied)
- 3.7 External control may be installed via terminal 1 and 2.
- 3.8 Any unused cable entries must be plugged using an Ex d certified plug.

## **4.0 EARTH CONNECTION**

- 4.1 **WARNING - this equipment MUST BE EARTHED**
- 4.2 Earth termination points are incorporated both internally and externally to the main heater terminal box

## **5.0 OPERATION**

- 5.1 Ensure that all connection and covers are secure and that any dirt, debris and loose objects have been removed.
- 5.2 Check correct rotation of fan (clockwise viewed from motor,) if it is incorrect check and change the supply phase sequence.
- 5.3 If no external control is fitted, connect the wire link between terminals 1 and 2.
- 5.4 Once energized, the heater will operate continuously unless optional external controls are connected.
- 5.5 The heater is certified for operation in an ambient temperature of up to 40° C and the user must ensure that this is not exceeded at any time. Exheat can supply from a suitable range of hazardous area thermostats if required. Please contact our sales engineers for advice.

## **6.0 MAINTENANCE**

- 6.1 All prevailing site safety regulations shall be adhered to at all times.
- 6.2 Before and whilst any maintenance activity is carried out, it must be ensured that there are no hazardous gases present.
- 6.3 Equipment is to be fully isolated from the electrical supply before and whilst any work is being carried out.
- 6.4 Any damage or faults should be notified to Exheat Limited immediately.
- 6.5 For equipment certified for use in hazardous areas reference should be made to EN60079-17 (especially table 1) in addition to the following recommendations.
- 6.6 The motor must be cleaned at regular intervals (depending on the environment) especially the motor fan, empty debris to guarantee sufficient cooling air flow through the motor cooling system.
- 6.7 Any replacement parts required must be obtained directly from Exheat. The use of any other parts will void any certification and warranty.

### **6.7.1 3 MONTHLY**

- a. Generally, inspect the equipment for external damage.
- b. Ensure that the spaces between the element fins remain clear and that the airflow remains unrestricted.
- c. Remove bottom cover and ensure that there are no signs of fluid leakage from the heat exchanger (see 1.7 above.)
- d. Check front louvers to ensure they have not been damaged or become loose. Should they become loose they may be tightened individually after removing their support frame, which is secured with 4 screws (fig.1.)


### **6.7.2 6 MONTHLY**

- a. Carry out checks as 6.7.1 above.
- b. Isolate the electrical supply and remove the bottom cover, heater terminal box cover and motor.
- c. Internals should be clean and dry.
- d. Ensure terminals are intact and secure.
- e. Heating element insulation resistance to be at least 2 megohm.
- f. Refit covers with new 'O' ring if required.

### **6.7.3 ANNUALLY**

- a. Carry out checks as 6.7.1 and 6.7.2 above.
  - b. Check for element failure or low insulation resistance.
- 6.8 Only Exheat Ltd or its approved agent may carry out repairs to the heater otherwise the Hazardous Area certification will be invalidated.
- 6.9 If heaters are being left unused for a period greater than 3 months, carry out 6 monthly maintenance before energizing.

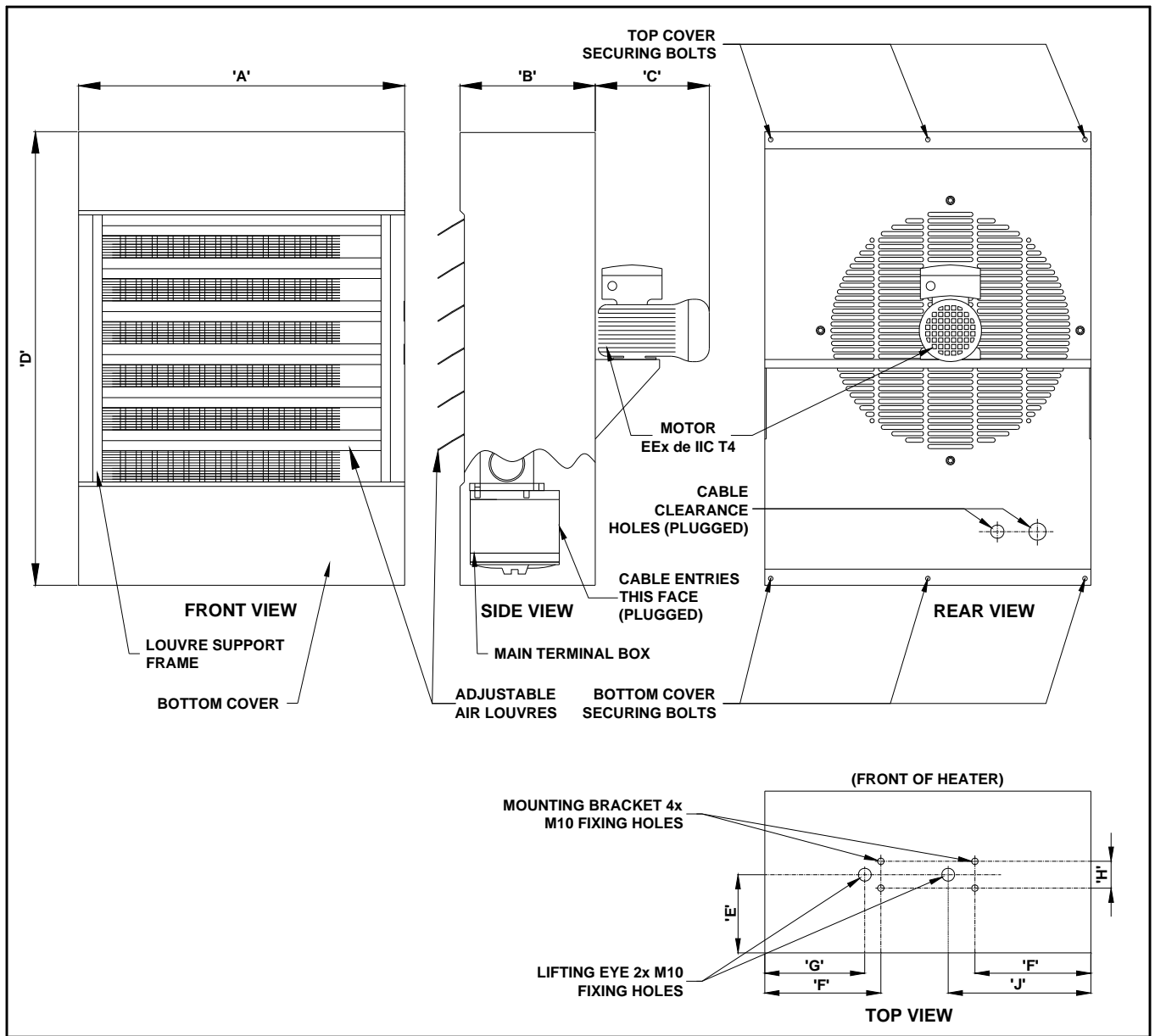
## **7.0 Marking**

- 7.1  II 2 G  
Ex d IIC T3

## **8.0 Certification**

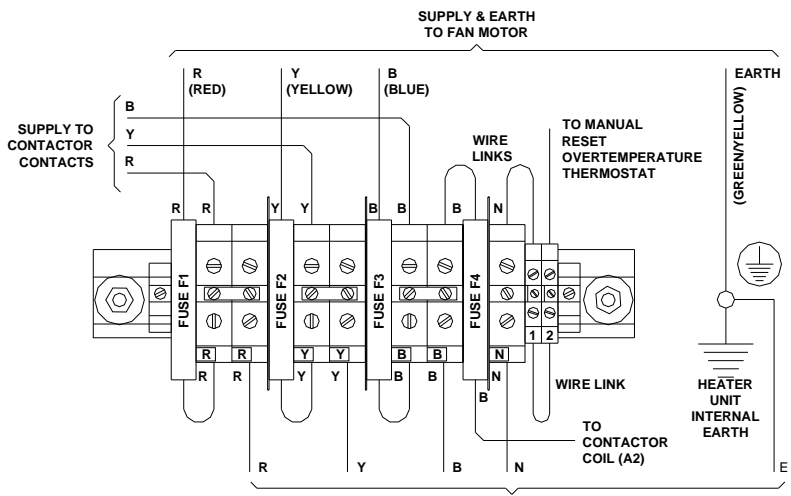
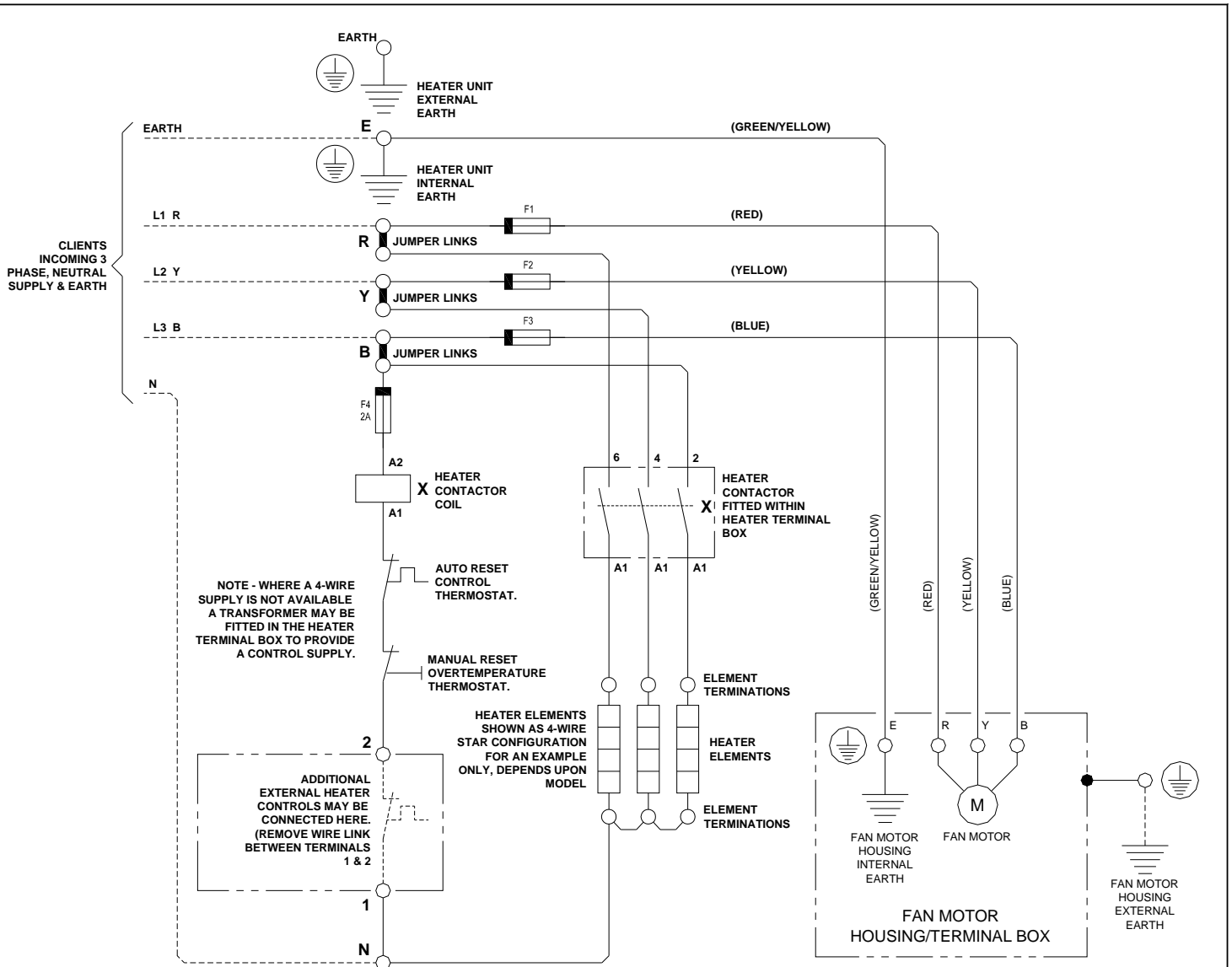
- 8.1 LCIE 02 ATEX 6235

fig.1



Model	Fuses F1-F3	KW/Voltage				Dimensions (mm)										Weight kG
		380V	415V	440V	480V	'A'	'B'	'C'	'D'	'E'	'F'	G	'H'	'J'		
FUH 9	3A	7	9	10	12	610	290	235	900	146	217	187	50	267	120	
FUH12	3A	10	12	13	16	610	290	235	900	146	217	187	50	267	120	
FUH15	5A	13	15	17	20	760	300	260	1052	156	242	192	50	304	145	
FUH20	5A	27	20	23	27	760	300	260	1052	156	242	192	50	304	145	
FUH30	5A	25	30	-	-	760	300	260	1052	156	242	192	50	304	145	

fig.2



CLIENTS INCOMING 3 PHASE, NEUTRAL SUPPLY & EARTH  
**TERMINAL RAIL ARRANGEMENT**  
**FUH SERIES HEATER WIRING DIAGRAM**

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**94/9/EC**

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