



THE TOTAL ELECTRIC HEATING SOLUTION



3.0kW High Level Fan Heater **Installation & Control Guide for**

Model

HSHL3000RF

All electrical appliances produced by the company are guaranteed for two years against faulty materials or workmanship. This applies only if the appliance has been used for purposes in accordance with the instructions provided and has not been connected to an unsuitable electricity supply, or subject to misuse, neglect, damage or modified or repaired by any person not authorised by us. This guarantee is offered to you as an extra benefit and does not affect your legal rights.

The correct electricity supply voltage is shown on the rating label attached to the appliance.

Reasonable care has been taken to ensure that this guide is accurate at the time of printing. In the interest of progress the company reserve the right to vary specifications from time to time without notice.

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1. General Information

1.1 Warnings

All installations must be in accordance with the regulations. These instructions must be handed to the user on completion of the installation. Installers and service engineers must be able to demonstrate competence and be suitably qualified in accordance with the regulations. To ensure continued and safe operation, it is recommended that the appliance is serviced annually. The heater's outlet/inlet grilles must not be obstructed during use. Any modifications made to the unit and not approved by Heatstore will void manufacturer's warranty and potentially create a hazard. The appliance is NOT intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience or knowledge unless they have been given instruction concerning use of the appliance by a person responsible for their safety.

1.2 Health and Safety

Please read these instructions thoroughly before installing the appliance. Sole liability rests with the installer to ensure that all site safety procedures are adhered to during installation. Sole liability rests with the installer to ensure that protective safety wear such as hand, eye, ear and head protection is used during installation of the product. Ensure that all anchoring points are suitable for the weight of the appliance.

Do not rest anything especially ladders against the product.

1.3 Electrical Supply

Electrical supply is 230/240V single phase, Neutral and Earth. The maximum cable inlet size is 4mm².

1.4 Location

These units are 488mm 3kW model heaters designed for mounting as a high-level fan heater.

1.5 Clearance Distance

The unit should be positioned so that the airflow is not obstructed in anyway. When installed the top of the heater case should be a minimum of 200mm from the ceiling.

1.6 Standards

The heater conforms to the following standards

Electrical Equipment (Safety) Regulations 2016 SI. 2016 1101

Electromagnetic Compatibility Regulations 2016 SI. 2016 No. 1091

Radio Equipment Regulations 2017 SI. 2017 No. 1206

The Ecodesign for Energy Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. SI. 2010 2617

The Restriction of use of Certain Hazardous Substances. SI. 2012 No. 3032

2. Introduction

2.1 Introduction

This instruction manual describes the Heatstore heater designed for mounting as a high-level fan heater.

The controllers aren't supplied with the heaters and have to be purchased separately.



This heater should not be installed where there is a corrosive atmosphere or excessive dust.



The heaters will not work without a controller.



2.2 RF controllers

The heater HSHL3000RF can be controlled by any Heatstore wireless controller. Each controller can control any number of heaters providing they are within the RF range. For more details please follow the instructions supplied with the controller.

2.3 Electrical connections

These units are suitable for connection to a 230/240 Volt 50 Hz single phase supply. The maximum cable inlet size is 4mm².

The appliance shall be connected to the supply via an appropriate switched fused double pole isolator having a contact separation of greater than 3mm. Test for correct operation and refit the cover.



There are no exceptions.



For connection to the mains supply it will be necessary to open the front cover of the unit to connect the supply from the mains prior to refitting the cover. Wire in accordance to the wiring diagrams.

For safety reasons, a sound earth connection must always be made to the unit before it is put to use. The unit should be wired in accordance with IEE Regulations for the Electrical Equipment of Buildings.

Fig.1 Heater with front cover open

To open heater:
Remove 2 screws
Cover hinges up

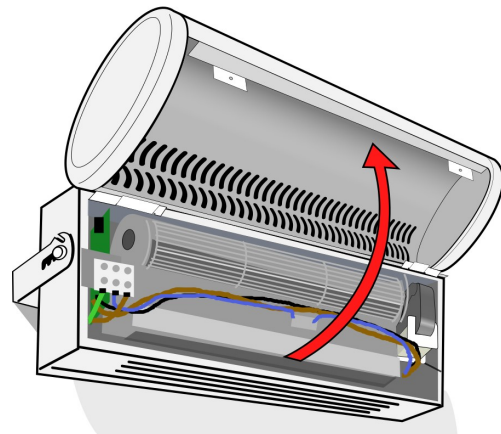
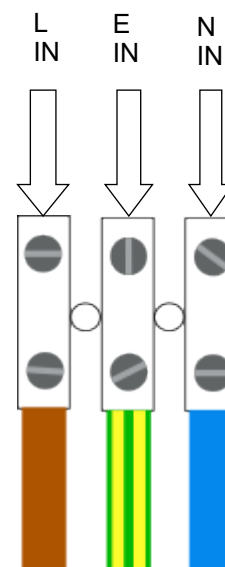
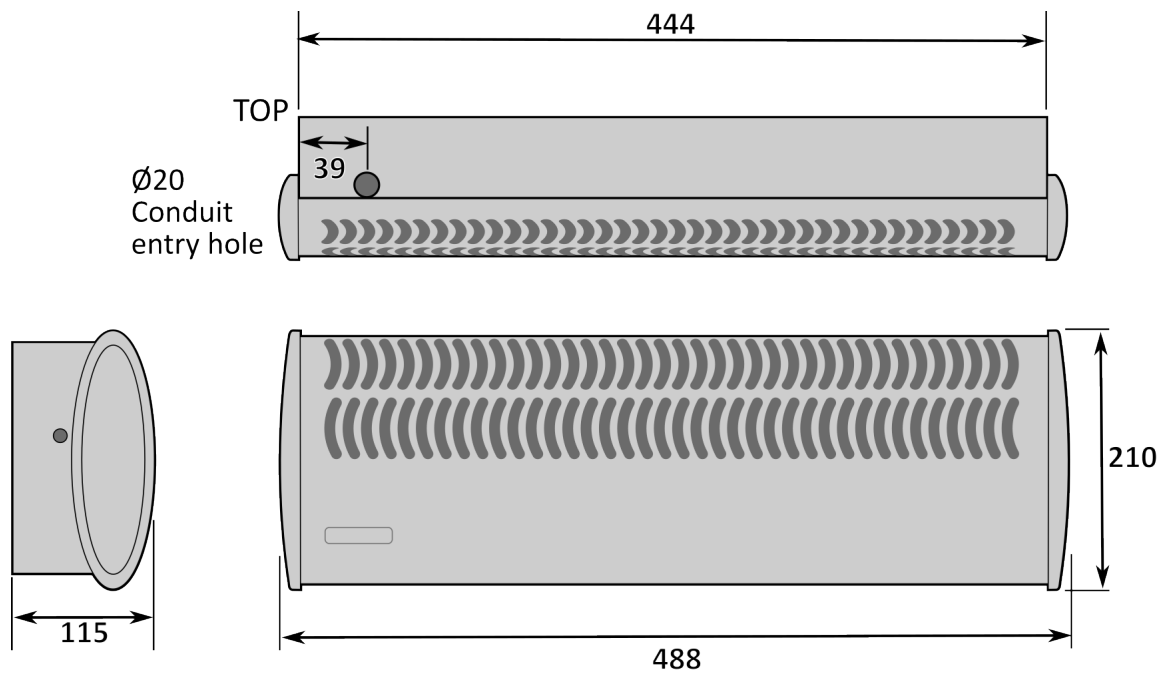


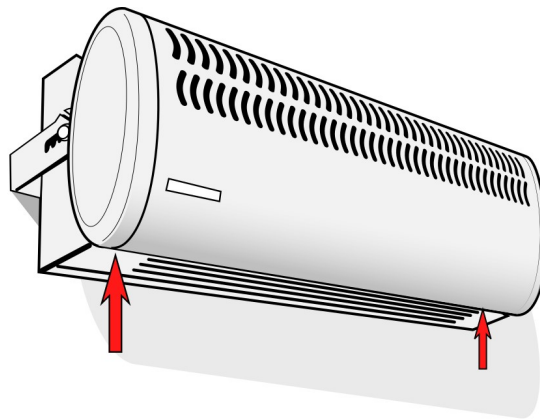
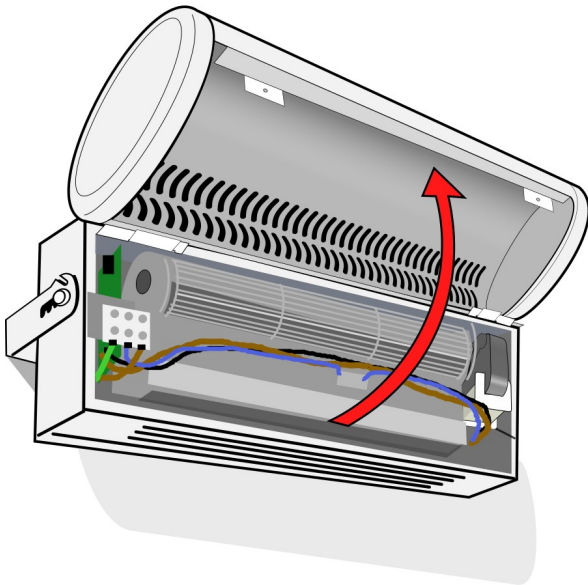
Fig.2 Terminal wiring detail



3. Dimensions & Fixing locations



To open heater:
Remove 2 screws
Cover hinges up



4. Installation Details

Step 1

Carefully unpack the heater. Loosen the mounting screws, allowing the mounting bracket to be removed from the unit. Making sure that the mounting bracket is horizontal; fix the bracket to the wall using appropriate screws.

Step 2

Remove the front cover by loosening the 2 screws at the bottom of the heater, as shown in section 3

Step 3

For wall mounting:

The unit should be positioned so that the air flow is not obstructed, the minimum clearances are shown in the diagram below.

The normal mounting height is 2.3m above the floor, although this will depend to some extent on the situation. The unit should be mounted at least 200mm below ceiling. The heater can be arranged to blow air at any angle, from horizontal to vertically downwards, subject to the conditions mentioned below. It is suggested that an angle of 45 degrees is a convenient starting point when setting up the unit. It must always be installed with the axis of the motor horizontal. Failure to ensure this will result in excessive bearing wear and premature failure.

The heater should not be mounted in situations where it may be subject to conditions of excessive humidity or the atmosphere is corrosive.

Step 4

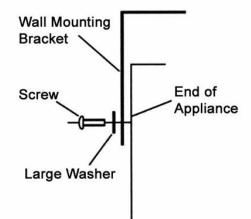
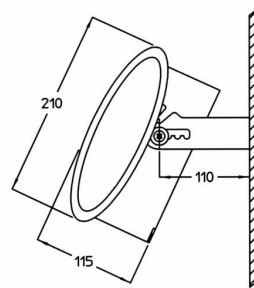
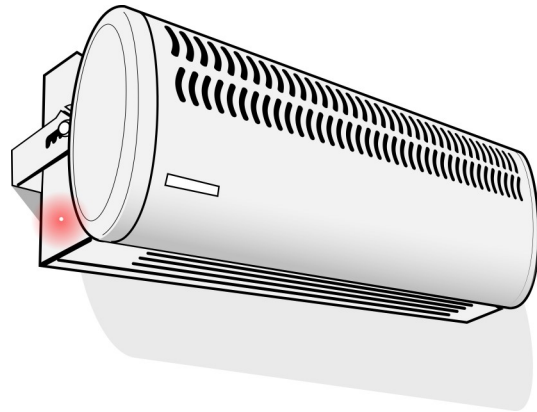
Connect electrical supply to appropriate terminals.

Step 5

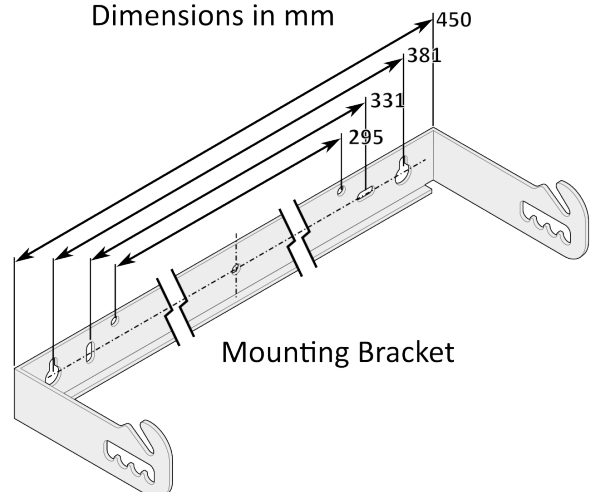
Test the heater.

Step 6

Refit the heater front cover.



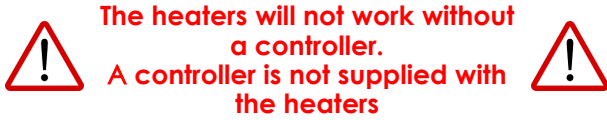
All mounting holes will accommodate up to Ø6 fixings.
Dimensions in mm



5. Heater operation and Status light

5.1 Models for wireless controls

The HSHL3000RF heater can only be controlled by Heatstore wireless controller. The maximum range of controller is 10m.



Each controller has a unique identification code, can control an unlimited number of heaters in the same room and will not interfere with other controllers within the building. For more details, please follow the instructions supplied with the controller.

5.2 Status lights on the heater

The heater will display a status light depending on what the heater is doing. These are the options below.

Light colour	Heater status
	Heater is in stand-by mode/ not receiving signal from controller. Heater is ready for pairing with controller.
	Heater paired successfully - two cyan light flashes.
	Full power heat output.
	If the status is flashing white, there is a fault. The unit will continue to function in restricted mode. However, in specific circumstances, the unit will stop

5.3 Controller location

It is essential the controller is positioned in the same room as the heater. It should be where its temperature will not be changed by local effects. Avoid:

- Draughty places near windows or doors
- Places near the heater itself or any other heat sources in the room
- Places where the sun will shine on it
- Places where it may get wet

5.4 Pairing heater to controller

To pair the heaters to a controller will require cycling the power to the heater then, depending on the controller in use, the pairing sequence buttons should be pressed within 20 seconds of cycling power.

Heaters have to be paired with the controller otherwise they will not work.

1. Ensure controller is powered
2. Cycle power to the heater (wait until status light disappears before reenergising the heater)
3. Within 20 seconds of powering the heater, depending on controller; press and hold the pairing button/buttons
4. The heater status light should display a cyan light followed by red
5. Heater is now ready to use.

5.5 Noise Levels

Sound pressure levels dBA are measured at a 3m distance with a single heater mounted at its maximum mounting height, operating in a room with average acoustic characteristics as defined in CIBSE Guide B5 (reverberation time 0.7s at 1kHz) and a room size equivalent to 8 air changes per hour (ac/h).

The dB meter must not be in the direct airflow of the heater. Care needs to be taken when selecting heater for installation as noise levels can be several dB higher if the mounting height is reduced, if the room is more 'live' (i.e. hard surfaces, no furnishings or absorbent materials), if the room is smaller than 8 ac/h equivalent or a combination of these factors.

Noise levels will also increase if more than one heater is in the room.

6. Fault detection / indication

6.1 Fault Indication

Heaters are equipped with electronic fault detection. In the event of a fault being detected, the heater will show the nature of the fault by a flashing status light located at the bottom of the heater. The status light will flash one of the sequences as shown in the table below. The sequence is repeated every few seconds.

Number of flashes	Fault
1	<u>Overheating detected</u> And heater has stopped it has detected overheating and is cooling down. After 10 minutes, it will return to normal operation.
2	<u>Temperature measurement fault</u> Cause: Faulty temperature sensor. Response: Will operate as normal. However, overheating protection will not work.
3	<u>Low power detected</u> Cause: low supply voltage, TOC tripped, blow fuse, faulty heating element, faulty PCB, power measurement fault. Response: Heater inoperative.
4	<u>Problem with motor</u> Cause: Faulty motor, RPM sensor fault, low supply voltage (following power-cut). Response: Heater inoperative.
5	<u>High power detected</u> Cause: Stuck relay, overvoltage. Response: Heater inoperative.

6.2 General

If the fan heater does not operate after switching on, then a suitably competent service engineer should be called to identify the nature of the fault.

All fan heaters are fitted thermal cut-outs and motor thermal protection.

Other faults in relation to the element, motor and wiring should be identified using conventional fault finding techniques.

In the event that electrical components are replaced, please ensure that electrical safety checks in accordance with the regulations in force in the country of use are undertaken.

6.3 Thermal and Fault Protection

The units are protected by thermal cut-outs from overheating in the event of fan failure or an obstruction of the free airflow by thermal cut-outs.

If this happens, the thermal cut-outs effectively switch off the appliance by disconnecting power to the control circuit. The appliance will not operate until the thermal cut-outs have been disconnected from power, then allowed to cool for 10 minutes. This should be done by a competent electrician.

The heaters are also protected by thermal fuses to prevent catastrophic failure. The thermal fuse will trip and disconnect power to the affected heater. Thermal fuses are not resettable.



THE CAUSE OF CUT-OUTS OPERATING SHOULD BE INVESTIGATED BEFORE RESETTING



6.4 Maintenance



ALWAYS ENSURE THAT THE MAIN EXTERNAL ELECTRICITY SUPPLY IS SWITCHED OFF BEFORE COMMENCING ANY MAINTENANCE ON THIS HEATER.



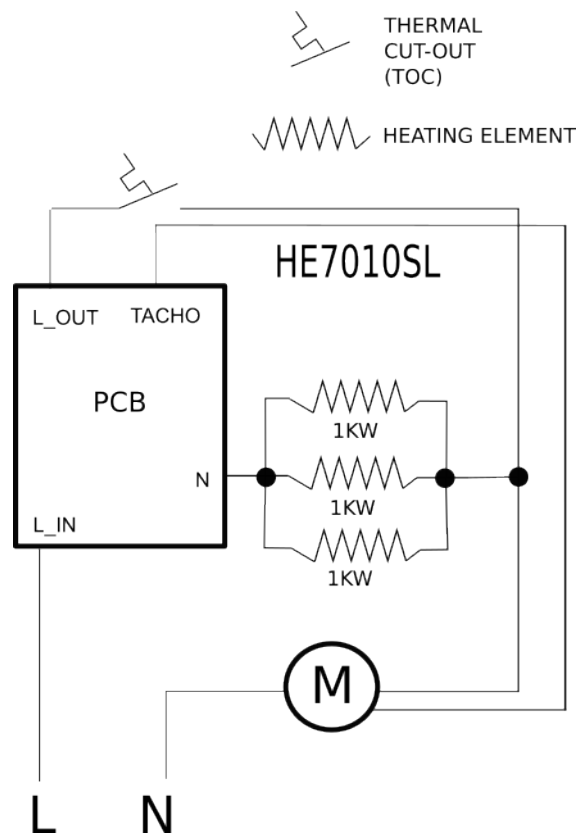
To obtain the best results from the heater, it is essential to avoid the accumulation of dust and dirt within the unit on the air inlet and discharge grilles. For this reason regular cleaning is necessary, paying particular attention to the removal of dirt build up on the rotor blades.

Cleaning of the fan is best carried out with a soft brush. The product should be serviced annually. Servicing shall be undertaken by a competent person.

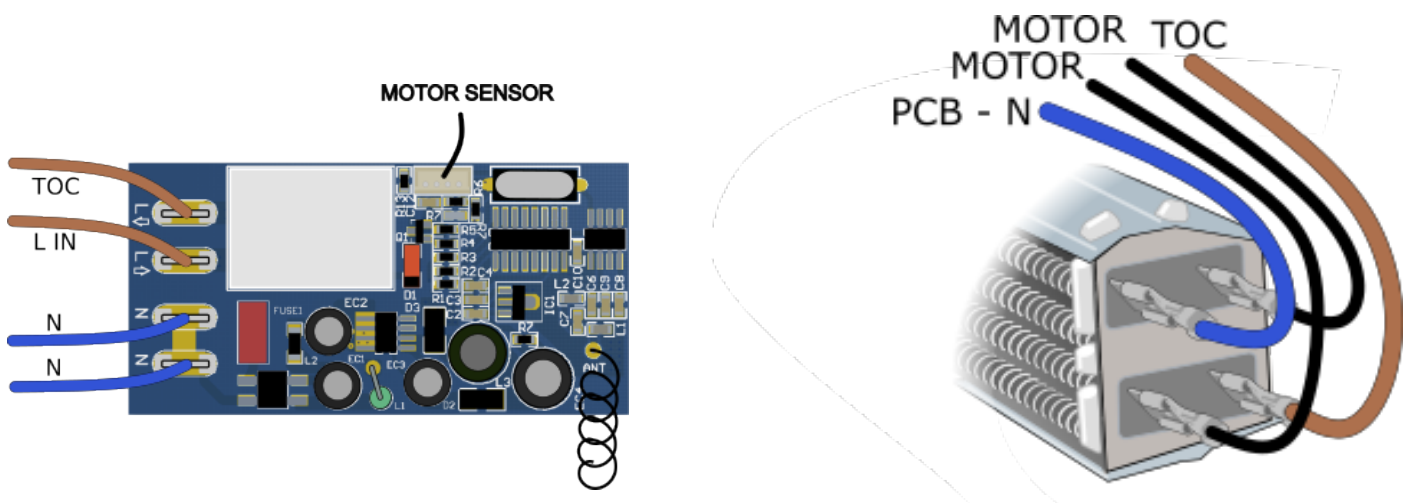
6.5 Replacing the heater fan

1. Remove the cover.
2. Disconnect the internal wiring from the main terminal block.
3. Remove the four nuts and washers fixing the heater fan assembly to the back of the case.
4. The heater fan assembly can now be eased forward and removed from the heater case.
5. Fit replacement heater fan and reassemble in reverse order.

7.1 Wiring Diagrams



7.2 Heater Connections



Declaration Of Conformity

In accordance with UK Government Guidance.
WE HEREBY CERTIFY THAT THE APPLIANCES DETAILED HEREON HAVE BEEN
INSPECTED AND TESTED, AND CONFORM TO THE REQUIREMENTS OF THE
FOLLOWING UK STATUTORY INSTRUMENTS WHERE APPLICABLE:

Electrical Equipment (Safety) Regulations 2016 SI. 2016 1101

Electromagnetic Compatibility Regulations 2016 SI. 2016 No. 1091

Radio Equipment Regulations 2017 SI. 2017 No. 1206

The Ecodesign for Energy Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. SI. 2010 2617

The Restriction of use of Certain Hazardous Substances. SI. 2012 No. 3032

The Waste Electrical and Electronic Equipment Regulations 2013. SI. 2013 No. 3113

Security Requirements for 'Connectable Products' PTSI Acts 2022

The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023

Transposed standards used:

- | | |
|----------------------------------|---|
| • BS EN 55014 (2006) | • EN 50663 (2017) |
| • BS EN 301489.1 & .3 | • EN 60730-2-9 (2010) |
| • BS EN 300220.1 & .2 | • EN 60730-1 (2011) |
| • BS EN 60730.2.9 | • ETSI EN 300 220-1 V3.1.1 (2017-02) |
| • BS EN 60335.1 (2012) | • ETSI EN 300 220-2 V3.2.1 (2018-06) |
| • BS EN 60335.2.30 (2009) | • ETSI EN 301 489-1 V2.2.2 (2019) |
| • ETSI BS EN 303645 | • ETSI EN 301 489-3 V2.1.1 (2019) |

PART NUMBER AND DESCRIPTION OF APPLIANCE: HSHL3000RF

NAME OF RESPONSIBLE PERSON:

Christopher Earl

POSITION:

Technical Services Manager

DATE:

21/01/26

Heatstore Technical Department
Telephone: 0117 923 5375 Email - Enquiries@heatstore.co.uk
8.30 am - 5.00 pm Monday to Friday
Unit 12, Access 18, Bristol, BS11 8HT
<http://www.heatstore.co.uk>