The Combination Range of Electric Radiators

INSTALLATION
&
OPERATING INSTRUCTIONS

⚠ THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE.
BE SURE TO OBSERVE ALL LABELS AND WARNINGS ON THE APPLIANCE.

ehc
the electric heating company

CONTENTS

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Young children should be supervised to ensure that they do not play with the appliance;

Electrical Connections

IMPORTANT
The wires in the mains leads are coloured in accordance with the following code:

GREEN & YELLOW: EARTH

BLUE: NEUTRAL

BROWN: LIVE

WARNING – THIS APPLIANCE MUST BE EARTHED
The installation of this appliance should be carried out by a competent electrician in accordance with I.E.E. Regulations for Electrical Equipment.

The radiator is fitted with a standard UK 3 pin plug that can be directly connected to an electrical socket. Care must be taken when connecting radiators in this way not to overload the ring main circuit. **If you are unsure contact a qualified electrician**.

Alternatively, the mains cable can be cut to length by a Qualified Electrician and connected to a suitable 13A DP Switched Fuse Connection unit adjacent to the radiator. This connection unit should comply with BS 1364-4 having a contact separation of at least 3mm. Please ensure that the electricity supply is disconnected prior to using this installation method.

1. General Information

EHC Combination Electric radiators have been designed using the latest technology to create an elegant solution for all hard to heat situations. They can be installed in almost any location apart from the safety restrictions noted in this manual.

The range has been developed to provide a flexible solution for electric heating in Domestic properties, Conservatories, Holiday homes, Offices and any temporary heating situation.

Our unique patented 'Magmatic' heating tablets provide the heat source for your new radiator. Whilst the radiator is classed as a 100% efficient Direct Acting appliance, the heating tablets provide partial storage to prolong your heating comfort and to reduce running costs. The radiator has a robust body which incorporates a spot welded high fin surface area to ensure that there are no contraction noises during the heating cycle. The high fin design boasts 6 times the normal radiator surface area to provide a balance of Convection and Radiant heat for your added comfort.

The radiators can be simply plugged in to a Standard socket or Hard wired to an existing spur connection. The range has the flexibility of being Wall mounted or free standing on Castors or Feet.

For added versatility we can supply Conservatory radiators which are also ideal for use below windows with low sills.

Control types:

All our standard model sizes are supplied with a TEI 1 manual room thermostat. For a fully controllable central heating system, the radiators can be installed with our EHC Control Box, Single or twin Zone Programmer's and Room Thermostats to comply with the latest Building Regulations.

In addition to the above we also supply Radio Frequency controlled radiators which provide all the benefits of the standard version however the control wiring is eliminated. These models can be controlled by our T-Pod and T-Basic Programmers.

Also available is our TDI range of Electric Radiators. Simply plug in the radiator to a standard 13amp socket and control by TIME & TEMPERATURE using the TDI control located within the side of the radiator.

WiFi Control:

DSR WiFi Control is our easy to use App based control system. To take benefit of this feature you simply need to purchase and connect the radiators to our DSR Wifi Gateway.

The DSR WiFi App gives you total control of all your heaters independently or in groups should you choose. The system can be controlled from a computer,smart phone or tablet using our Free App. Additionally, adding an optional Power Meter to the system will give you further controllability over the total available power within your home. The Power Meter constantly monitors the whole house electrical demand. If the set demand is ever reached the system will temporarily disable your chosen heaters until the demand is reduced where they will be reactivated automatically.

All EHC radiators are manufactured to the highest safety and quality Standards. Each radiator is CE Marked and carries all the necessary European Approvals. Each radiator is fully checked and tested prior to leaving the factory and as such is packed with full Quality certification.

We hope you enjoy the comfort provided by this superior product and we look forward to being of assistance to you in the future.

2. Safety Information

Handling

This radiator is very heavy. Take adequate precautions when lifting and manoeuvring it. Always assess the load, and seek assistance with heavy or awkward loads that are beyond your capabilities.

Positioning

This radiator is very heavy. In order to maintain stability and to ensure its future safety in use, it is essential that the radiator is FIXED SOUNDLY TO A WALL and that the brackets are mounted on a FIRM, LEVEL SURFACE. Castors or Feet can be purchased as an accessory. Care should be taken to avoid irregular surfaces.

It is important that the following instructions are strictly followed.

Keep the following minimum safety distances to avoid fire risk due to high surface temperatures of the appliance during heating cycles:

Lateral heating walls – masonry .... 50 mm
Lateral heating walls – combustible matter .... 100 mm
Heating walls above floor .... 80 mm
Cover plate – combustible covering installed on top of it .... 150 mm
Cover plate – non-combustible covering installed on top of it .... 100 mm

Please note that our IPX4 rated models should be used in bathrooms.

Portable radiators must not be fitted in bathrooms or wet areas.

CAUTION – This radiator must not be located below or in front of a fixed socket outlet.

DO NOT POSITION under windows where curtains may contact the radiator.

DO NOT PLACE THE APPLIANCE in the vicinity of a swimming pool.

Installation

It is important that the fixing device chosen is appropriate to the wall material to which the radiator is being fixed. Some modern internal building materials are very low density block and require specialised fixing devices to provide a safe, secure installation.

Ongoing safety

CAUTION – If during any reassembly of the radiator, a part of the thermal insulation shows damage or deterioration which may impair safety, it should be replaced with an identical part.

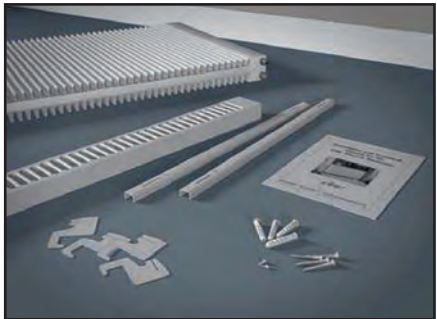**CAUTION** – In order to avoid overheating, do not cover the radiator.

DO NOT COVER OR OBSTRUCT the surfaces of the appliance.

DO NOT PLACE OBJECTS in contact with the radiator.
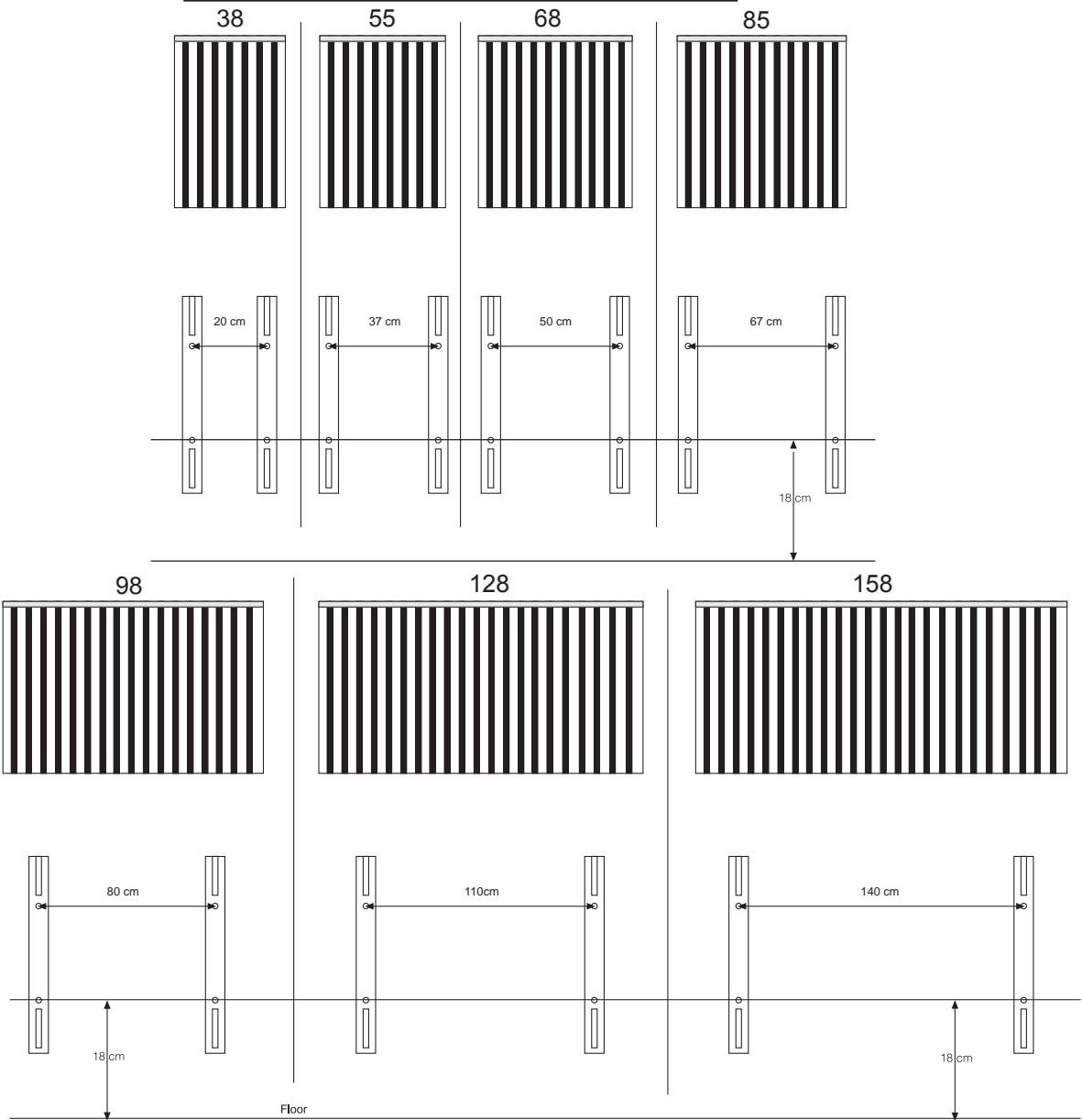
3. Installation

Preparation

1. Before beginning, remove the radiator and parts from the box and check everything is present and correct. In addition to the radiator body, there should be a top grille, a pair of mounting brackets, four suspension hooks, a set of mounting screws & plugs and an instruction manual.

Rad. Length(cm)	Bracketseparation(cm)
38	20
55	37
68	50
85	67
98	80
128	110
158	140

38   55   68   85

20 cm   37 cm   50 cm   67 cm

18 cm

98   128   158

80 cm   110cm   140 cm

18 cm   18 cm

Floor

Note: Setting the brackets to the Minimum recommended 18cm to the lower fixing point will leave a distance of approx 8.7cm from the floor to the bottom of the heater

3. Installation (cont.)

Wall fixture and fittings

2.　Drill, plug, and secure the brackets to the wall. Appropriate fixtures must be used depending on the wall material:

Solid brick/High density block walls
These must be drilled and plugged with the Rawlplug No. 10 size fibre inserts provided. The correct size of drill (5.5mm) should be used and the hole should be drilled to a depth of 8mm greater than the length of the Rawlplug so that the fixing is made below the plaster layer.

Low density block walls
A special fixing, such as Unifix LB70 should be employed, (following fixing instructions).

Panelled internal walls
It is preferable to locate the studding and use the No.10 size wood screws provided. Where it is not possible to locate the studding use Hollow wall anchors and securely fasten the brackets to the plasterboard when this method is used we recommend that radiator feet are used to take the full weight of the radiator. For other wall materials the wall panel manufacturer should be consulted for details of suitable wall fixing devices**.**

Note: Radiators will be set to an approximate height of 185mm from the floor when support feet are used.

3.　Fit two **Small suspension hooks** into the bottom slots in the brackets, and hang the bottom of the radiator on them. Make sure the radiator is sitting right back on the hooks and not just resting on the fins.
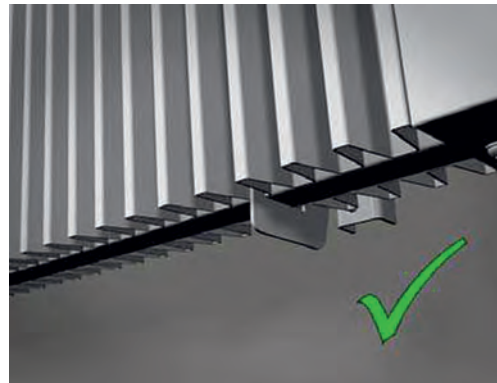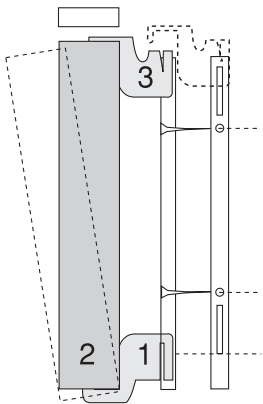
4.　Fit the other two **Large suspension hooks** in the top slots of the brackets, and lift them up. Push the radiator back against the wall and drop the suspension hooks back down to lock it in position.

5.　The top grille of the radiator can then be fitted and secured with the securing screws at each end.

3. Installation (cont.)

6. At the bottom of the radiator, next to the mains connection there is a small temperature sensor. Loosen the gland and pull the sensor down by approx 5 cm, then re-tighten the gland. This enables the radiator to gauge the room's temperature.

Electrical installation

- The appliance has been designed to be connected to 230 V (nominal) alternating current (AC); 50Hz supply and comes with a standard UK 13A 3 pin plug that can be directly connected to an electrical socket.

- All electrical installation work, in particular protective measures, must be carried out in compliance with the BS7671 regulations, statutory provisions and 'best industry practice' of the respective utilities provider.

- The electrical installation may only be carried out in compliance with the installation instructions and by a competent suitably qualified electrical engineer.
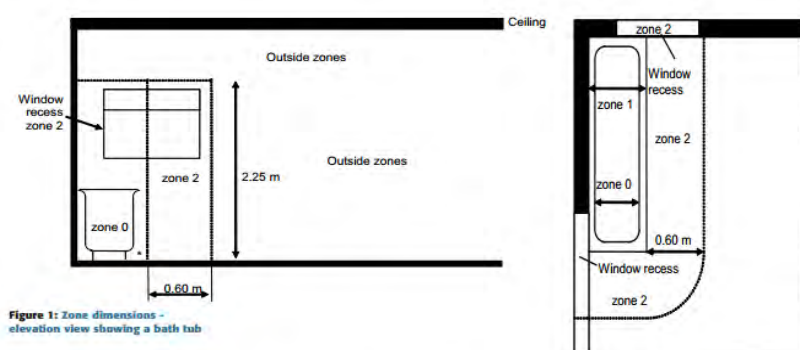
WARNING - THIS APPLIANCE MUST BE EARTHED

- For each supply, a means for disconnection must be incorporated in the fixed wiring by a double pole switch with a contact separation of a minimum of 3mm and in accordance with the current IEE Wiring Regulations.

- The heater must not be installed immediately below a fixed socket outlet or any combustible object.

- If multiple heaters are to be installed and plugged into the domestic socket ring circuit then considerations should be made in regards to the total circuit loading.
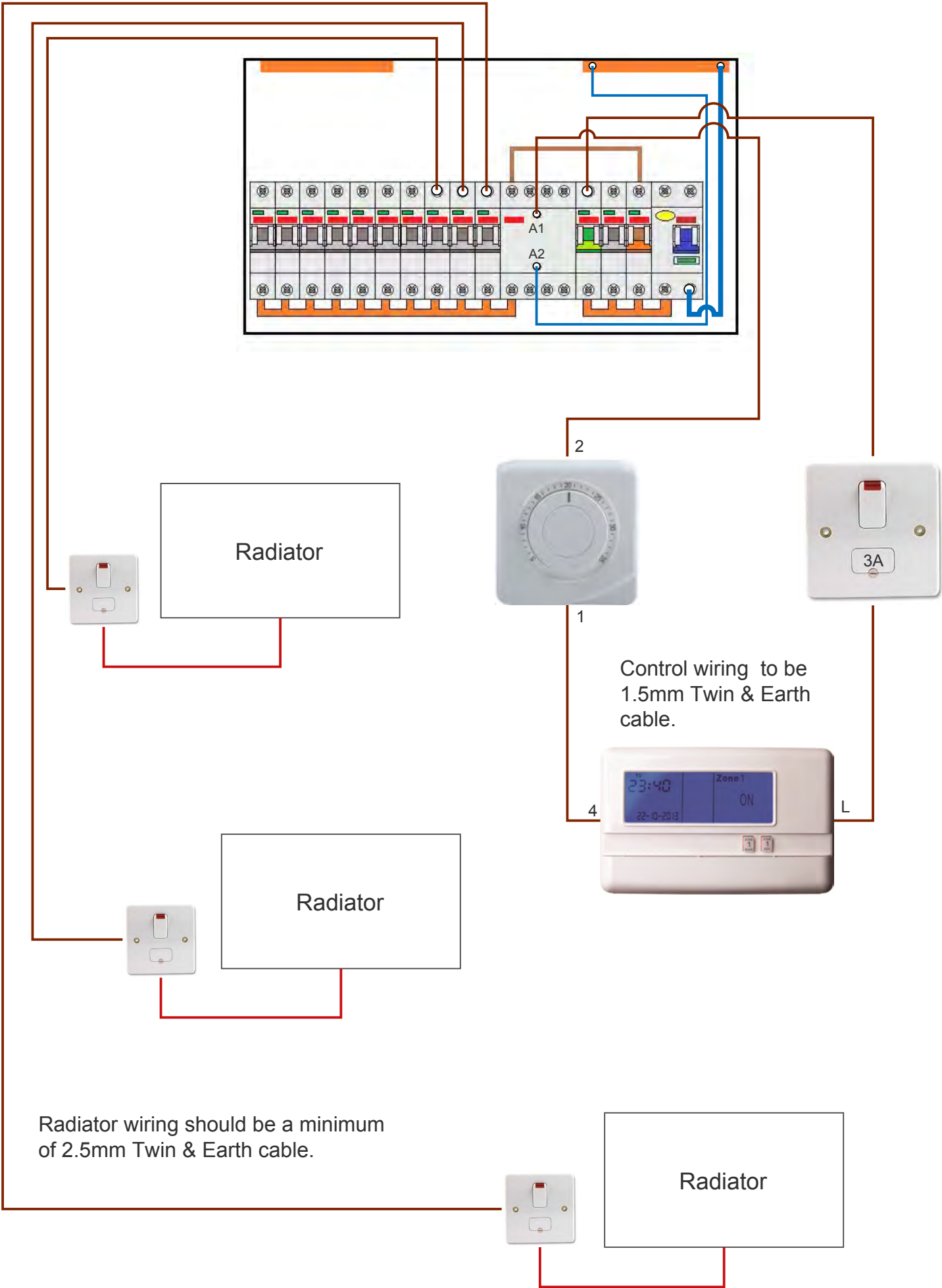
Bathroom Zones

Note: Only IPX4 radiators are suitable for installation in bathrooms which allows for the heater to be installed within Zone 2 as per regulation 701.32.4. Regulation 701.411.3.3 of BS7671 means that all circuits within a location containing a bath or shower will require RCD protection not exceeding 30 mA and have the characteristics specified in regulation 415.1. Local isolation should be provided for the heater however the isolation device must be installed out with all zones and in compliance with regulation 701.512.3 and Section 53 of BS7671.

'Bathroom Zones for Radiator installation' Zone 2

Figure 1: Zone dimensions - elevation view showing a bath tub

3. Installation (Single Zone Wiring)

A1

A2

2

Radiator

1

3A

Control wiring to be
1.5mm Twin & Earth
cable.

4

23:40
22-10-2013

Zone 1

ON

L

Radiator

Radiator wiring should be a minimum
of 2.5mm Twin & Earth cable.

Radiator

3. Installation (Twin Zone Wiring)

Control wiring to be
1.5mm Twin & Earth
cable.

2

2

3A

3

4

L

ZONE 2
RADIATOR

ZONE 2
RADIATOR

Radiator wiring should be a minimum
of 2.5mm Twin & Earth cable.

ZONE 1
RADIATOR

ZONE 1
RADIATOR

3. Installation (cont.)

Control cabling – RF models

All Radio Frequency radiators come complete with a pre-wired receiver in T-RF which is controlled by either the T-Pod or T Basic Thermostat.

9. **T-Pod installations**

   a   Follow the instructions outlined in section 7 for single radiator installations.

   b   Locate the T-Pod programmer on a suitable wall in the same room as the radiator. Configure the T-Pod programmer and receiver in T-RF located on the radiator. According to the instructions included in the T-Pod packaging. Set the required program times and temperatures.

10. **T-Basic installations**

   a   Follow the instructions outlined in section 7 for single radiator installations.

   b   Locate the T-Basic digital room thermostat on a suitable wall in the same room as the radiator.

   c   Configure the T-Basic digital room thermostat and receiver in T-RF located on the radiator according to the instructions included in the T-Basic packaging.

   d   Set the required temperature by adjusting the +/- buttons.

11. **TDI Installations**

   a   Follow the instructions outlined in section 7 for single radiator installations

   b   Configure the TDI Digital Control Display according to the instructions on page 12 & 13 of this manual. Set the to set the radiator setting the required time and temperature.

CAUTION - After completion of works all electrical connections should be tested for tightness.Additionally an electrical safety check should be carried out ie: short circuit, earth continuity, resistance to earth and polarity check and all the relevant test certificates produced

Installing castors and feet

12 .   All radiators are supplied with wall mounting brackets, however with the exception of the Towel Rail & Tall heaters, optional feet or castors can be purchased.
Consult the information leaflet that comes with castors or feet for fixing instructions.

4. Operating Instructions TE1(e4)

Instructions E4 manual Electronic Thermostat

Technical Details:

- Easy to use
- Temperature range from 5°C till 30°C
- Integrated temperature sensor
- Frost protection setting
- 2 x LED display lights
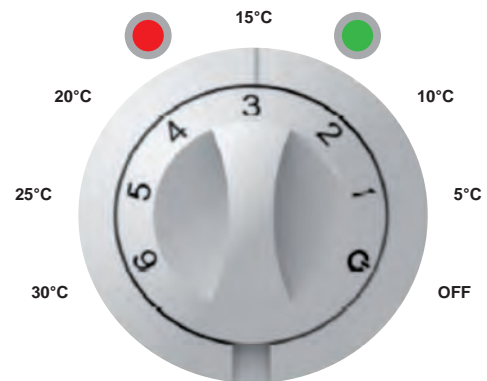
Operating display lights

Radiator is "ON"
Power going to
the tablets.

Radiator is "ON"
No power going to
tablets.

Radiator is
"OFF"

4. Operation Instructions DTi

DTi Instructions Digital Thermostat

The Keyboard consists of four buttons:

(+)   Adjustment increase
(−)   Adjustment decrease
Mode selection button
⏻   Power 'on/off' button

Mode button:
The Mode button has four stages of operation **'Comfort' 'Economy' 'Frost Protection'** and **'OFF'**:

> **Comfort Mode**: The sun icon ☀ is displayed and this is normally used for day time setting.

> **Economy Mode**:   The moon icon 🌙 is displayed and this is normally used for a night time setting.

> **Frost Protection Mode:**   The frost icon is displayed ❄ and this is normally used for periods of absence from the house during winter months. This is a factory pre-set mode and is set to 7ºC

> **OFF:** The digital display will show two small horizontal bars in-line with each other denoting that the radiator is still switched on but that no other program mode is required.

⚠

Note.
There will be a 2 deg C difference between Comfort and Economy settings as default.

Normal Operation:
Switch the radiator on by pressing the ⏻ icon and select either the **Comfort** or **Economy** Mode of operation. This is achieved by briefly pressing the Mode button until the desired icon is showing on the digital display. The digital display will also show the current temperature of the room. To check or set the desired room temperature briefly press the + or – button and the digital display will show the thermostat temperature setting. If you require the room thermostat temperature setting to be increased or decreased, briefly press the + or – button until the desired room thermostat temperature setting is showing. The digital display will flash approximately 4 times at 1 second intervals and then the digital display will stop flashing and display the current room temperature. If the current room temperature is lower than the room thermostat temperature setting you set as above, then the digital display will show **'on'** in the upper right section of the display. This indicates that the radiator is calling for heat and after a few seconds you will be able to feel the heat emitting from the top of the radiator.

Note: **The digital display will also show a clock** 🕐 **icon periodically; however this function is not installed in this radiator and therefore should be ignored.**

Keypad Locking:

To lock the keypad, simultaneously press the + and – buttons for 5 seconds. After 5 seconds the **'LO'** message will be displayed indicating the keypad is now locked. Once the keypad has been locked pressing on any button will display '**LO'** on the digital display.
To unlock the keypad, simultaneously press the + and - buttons for 5 seconds, LO message will disappear and the digital display will revert back to normal display.

4. Operation Instructions TDi

TDi Instructions for use.

Setting the Time and Day

Step 1:   Ensure the radiator is in OFF Mode. The ⏻ symbol will be on the top left of the display.

Step 2:   Push the Right Hand Side mode button once to access the Time and Day Setting. The days down the right hand side will flash.

Step 3:   Press the + or – buttons to set the day (1 is Monday, 2 is Tuesday, etc), then press the OK button to confirm.

Step 4:   Press the + or – buttons to set the hour then press **OK** to confirm.

Step 5:   Press the + or – buttons to set the minutes then press **OK** to confirm.

Step 6:   Press the Left Hand Side On/Off button once to exit the setting mode.

Setting Temperatures and Program

Sun –   The sun setting is indicated by the sun symbol ☼ and is the setting the user typically uses during the day. The sun setting is normally set between 18 and 20° Celsius.

Moon –   The moon setting is indicated by the moon symbol ☽ and is the setting the user typically uses during the night or when the property is vacated for a short period of time. The moon setting is normally set between 15° and 17° Celsius.

Frost –   The frost setting is indicated by the snowflake symbol ❄ and is the setting the user typically uses to have the radiator turn off. The frost setting is normally set at 5° Celsius.

STEP 1 – Setting the Desired Room Temperature (Sun Setting)

Push the On/Off button ⏻ so that the symbol disappears and you can see the sun symbol at the top of the display. ☼

Press + or – button to set the desired temperature.

Press the small information button below the **i** symbol on the display to see the actual current room temperature.

STEP 2 – Setting the Frost Protection Temperature (Frost setting)

Push the Right Hand Side mode button so that the sun symbol ☼ disappears and the snowflake symbol ❄ appears.

Press the + or – button to set the frost protection temperature.

This will be the protection temperature that the room will not drop below, even when the radiator is off. Normally 5° or 7° Celsius.

STEP 3 – Setting the Set Back Temperature (Moon Symbol)

Push the mode button so that the frost symbol disappears and the moon symbol ☽

appears Press the + or – button to set the set-back temperature.

Set-back temperature is a lower temperature that is usually applied when the property is vacated for a short period of time (when people are at work), or during the night time (when people are in bed).

If the set-back temperature is being used then the heater will start to work when the room temperature drops below the chosen setting.

4. Operation Instructions TDi

STEP 4 – Auto Mode

Push the mode button so that the moon symbol ☽ disappears and the **auto** symbol appears.

In this mode the heater will now follow the temperatures that have been selected for specific times of the day. The heater has a default profile already displayed.

Choosing a program:

Step 1 –   Push the small button below the PROG symbol.

There will be 00:00 hrs in the middle of the screen, a block flashing on the left hand side and a triangle pointing to the number 1 (top right hand side of the screen).

The heater is asking what the temperature / time selection should be chosen from midnight on Monday.

Across the bottom of the screen there are Sun ☼, Moon ☽ and Frost ❄ symbols.

Step 2 –   Choose the temperature setting you would like at midnight on a Monday by pressing the small button under the corresponding symbol.

E.g. most people will use the moon setting while sleeping or when they are away from home.

The screen will now show 01:00 in the middle of the screen, it is now asking what temperature / time setting you require from 01:00 hrs onwards on that day.

Step 3 –   Continue to choose which temperature / time setting you require to be used for each hour of that day. E.g. if you wanted the radiator to turn on at 06:00 hrs you would press the comfort setting ☼ Sun when the display is showing 06:00 hrs and so forth.

Step 4 –   If you want to copy your temperature / time settings from one day to another, this can simply be done by pressing and holding the small OK button on the RHS. You will see the triangle pointer moving to the next day. (Your previous settings are now copied to the next day)

Auto Program Overrides

1. Timer Mode

A set temperature can be selected for a certain period of time.

Step 1 –   In the auto mode press the button below the hour glass once.

Step 2 –   Set the desired temperature with the buttons below the + and – symbols, then press the OK button to confirm.

Step 3 –   Set how long the heater is required to be on with the buttons below the + and – symbols, then press the OK button to confirm.

The timer will now countdown the time you have set. To cancel the timer mode, press the OK button.

2. Holiday Mode

You can set the radiator to be off if you are going to be absent from the property.

Step 1 –   Press the suitcase button to select this mode.

Step 2 –   Set the number of days of absence by pressing the + or – buttons, then confirm by pressing OK.

While in holiday mode the heaters will keep the room temperature above the frost setting temperature.
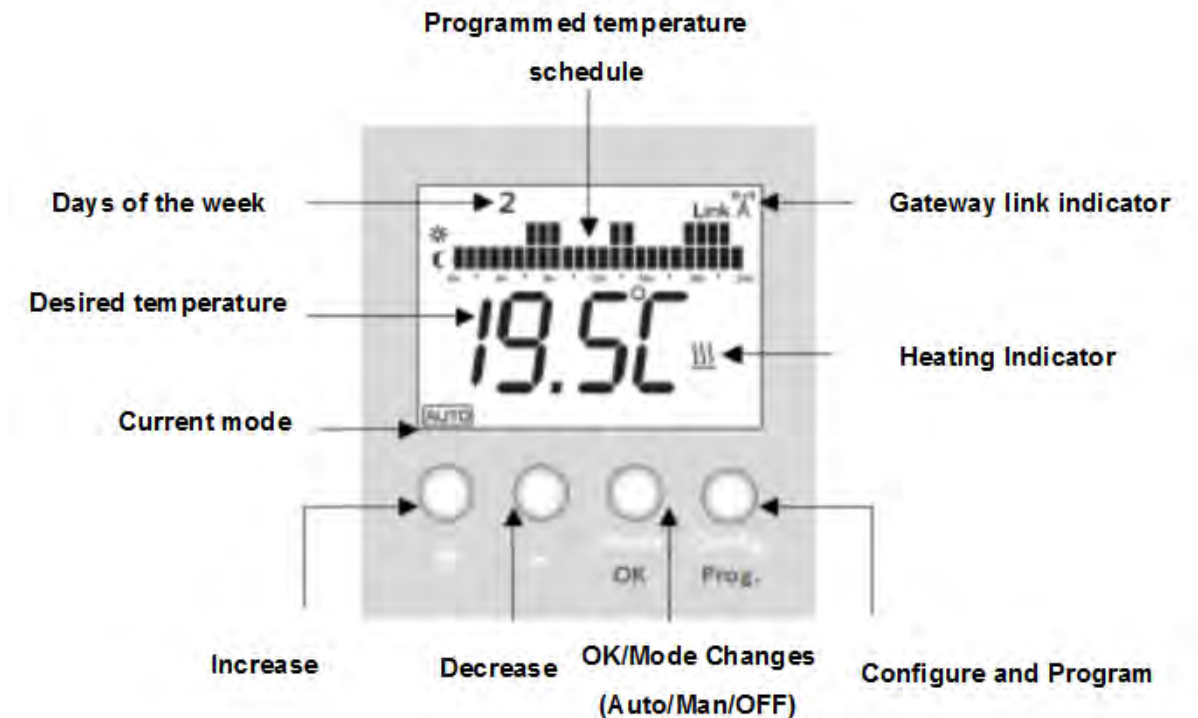
To cancel this mode, press on the OK button again.

3. Locking the keypad

Press the – and + button for 5 sec., than a key symbol appears briefly on the display. If you want to unlock the TDI, press the – and + button again.

4. Operation Instructions DSR Wifi

**DSR Temperature Setting, Programming and Wifi Setup**

1.0 Manual Instructions

Modes

The radiator can work in 3 different modes by pressing the "Mode" button

- **Auto Mode**
  The set temperature varies automatically following the Programmed Schedule, based on the 3 custom temperatures selected. Each LCD Block indicates what temperature is active at that time.

- **Manual Mode**
  The "Set Temperature" only changes if the user modifies it by pressing the + and - buttons.

- **OFF**.
  The radiator will not heat, but can receive remote instructions if linked to a gateway that is connected to the internet.

| Auto Mode | Manual Mode | Off |
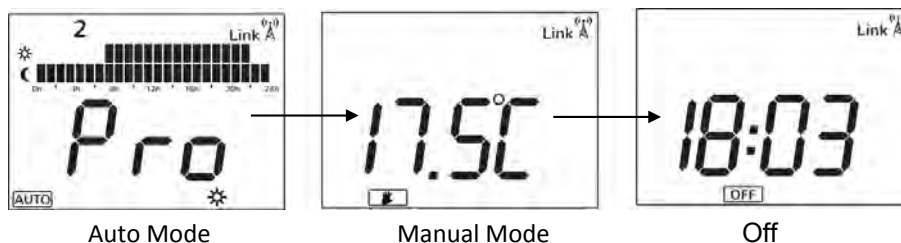
Note:
When in "Auto Mode" manually adjusting the temperature will Activate the heater for 1.5 hours, after this time period has lapsed the heater will automatically revert back to the original program settings.

4. Operation Instructions DSR Wifi

2.0 Setting Temperatures

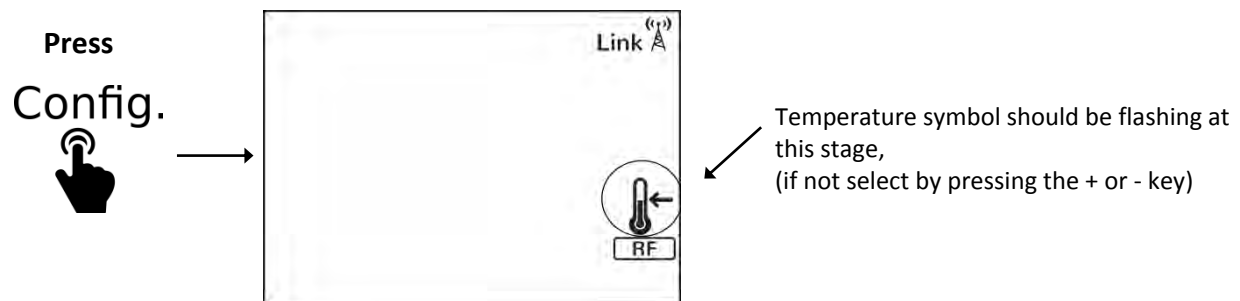|		
At Home	Sleeping	At Work / Away

The DSR controller has 3 temperature ranges,

-**Comfort** ( ) Normally when at home.

-**Economy** ( ) Normally used at night or for brief absence periods

-**Frost Protection** ( ) Normally used when away from home.

To Set Temperatures

Press

Config.

Temperature symbol should be flashing at this stage,
(if not select by pressing the + or - key)

Now Press OK Select your temperature, change by pressing the + - buttons then press OK to confirm .

Config.
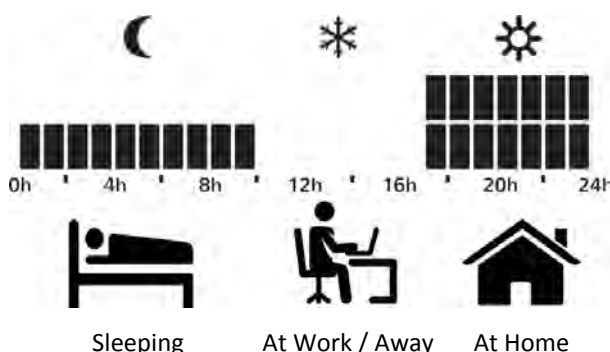Once you have chosen your temperature ranges press   to exit.

4. Operation Instructions DSR Wifi

3.0 Setting Program Time and Day

Symbol Indication

Sleeping   At Work / Away   At Home

To start programming.

Day of the week

Temperature/hour bar

1. Press   3s. Config.   and hold for 3 seconds**.**

Hour

2. Press OK   To select your temperature range
followed by + to set your times by hour.

3. To change the temperature range during programming, Press OK   Select
temperature then program again using the + button.

Temperature Range
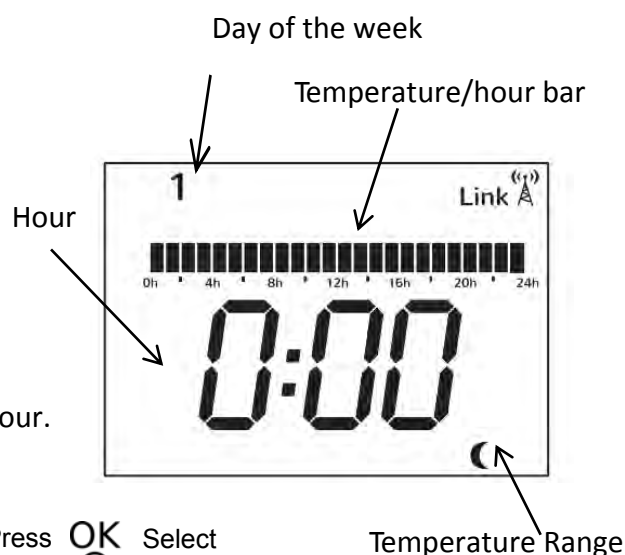
4. Once you have programmed a 24 hour period   0h   4h   8h   12h   16h   20h   24h   the controller
will automatically move onto the the next day.   Now program all 7 days
in this way.

Once all 7 days are programmed the controller will then ask you to select the Day of the week (1 being
Monday). Select by pressing the **+** and **-** buttons, Save by pressing the **OK** button. The next stage is to
set the real time. Use the **+** and **-** buttons to select the **Hour's** and **Min's,** save by pressing **OK.**

Tip: Quick Real Time Setting.

To change the real time clock without having to go through previous settings.

Press and hold   3s. Config.   for 3 seconds to show this screen   0:00   release and press Config
once again to enter Quick Real time settings.

4.0 Keypad Locking

LOCK

Press and Hold the **+** and **-** buttons for 3 seconds to Lock the key pad. All theÁ
buttons will be disabled if pressed. (LocH will be displayed) Á/[Á}|[&\Á¦^••Á
a}åÁ@|åÁo@Á£Áæ}åÁÄÄÓˇ œ{}•Áor 3 seconds.

Note: Advanced settings should only ever be changed by a fully qualified
engineer or with advice from EHC.
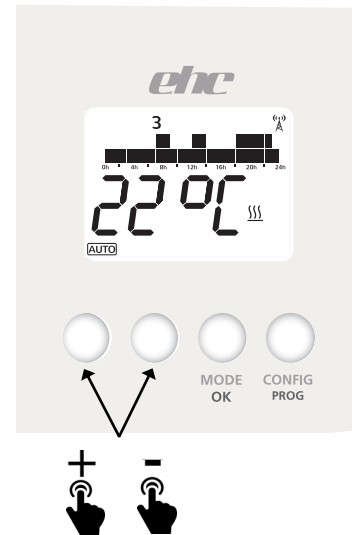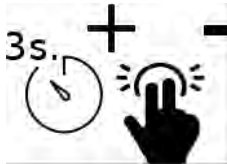
5.0 Advanced Engineer Settings

To enter advance settings,

1. Press the Config button Once to show this screen

2. Now press and hold the Config button for 5 seconds, C1 will now Appear

3. Change Configuration Number by pressing the **+** or **-**buttons, then press **OK**

4. Change the Configuration by pressing the + or - button,Then **OK** to save.

C1
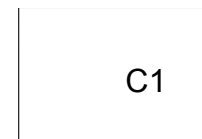
Configuration Settings

C1: Temperature unit adjustment ºF/ ºC
C2: Heating control type adjustment
PID15min or PID30min (Factory Set Do
Not Change)
C3: Temperature compensation
adjustment
C4: Firmware version
C5:Open window detection activation
(stops the heating for 30 if a fall of 2,4ºC
is detected over a period of 4 minutes)

Factory Defaults

Mode: OFF
Tª comfort: 19ºC
Tª eco: 17ºC
Tª freeze: 5ºC
Tª mode manual: 19ºC
Temperature compensation Offset: 0ºC No
RF link
Temperature units ºC
Open window detection: OFF
Control mode: PID -TRIAC-, PID15 -Relay-
Program: All hours Eco

Reset Heater to Factory Settings

Press and Hold **Config** & **OK together** for 10
Seconds, **rES** will show on display, Confirm by
pressing **OK**

Config. OK

10s.

rES
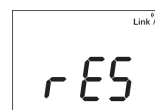
4. Operation Instructions DSR Wifi

6.0 Account Registration

To create an account and activate your gateway go to: **www.electric-heatingcompany.co.uk/ download/dsr**

Click on, **"New user,sign up here "**   Follow the Online instructions to create your account.

⚠️ **Note:**
Once registered, you will be sent a Confirmation email. Click on the link to confirm the email to activate your account then sign in. (If you don't receive an email, check your Spam folder) You can also setup an account using the free App's that are downloadable from The Apple App Store & Google Play.

7.0 Setting Up DSR Gateway

1. Attach the Gateway to your internet router using the Ethernet cable provided.
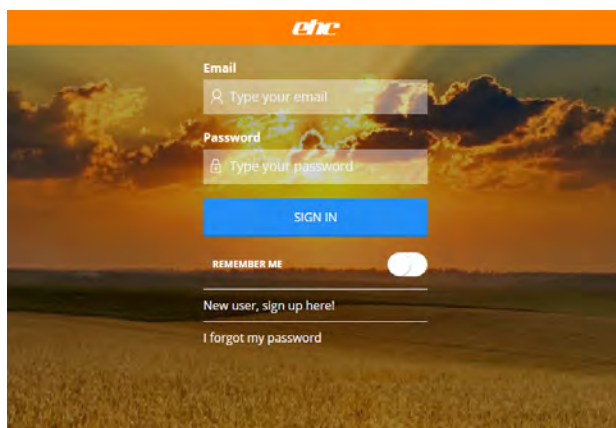
2. Connect the power supply to the gateway using the micro USB cable.

3. When energised the Gateways LED's will begin to flash, Orange ON alternating Green every 5seconds means you are connected.
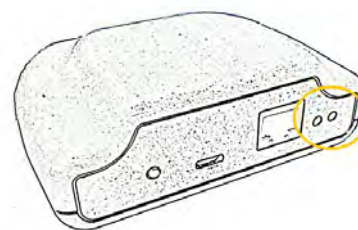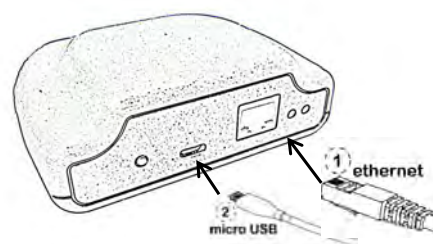
⚠️ **Note:** If this doesn't happen check LED sequence list below.

Gateway LEDs Status

Green off, Orange flashing one second: discovery status (device pairing).

Orange on, Green flashing 0.2 seconds: the router has not assigned an IP address to the gateway.

Orange on, Green flashing briefly every 5 seconds: the router has assigned an IP address to the gateway correctly, but there is no communication with the server.

Orange on, alternating with green flashing briefly every 5 seconds: the Gateway has connected to the router correctly and has internet connection.

⚠️ **Note:** It is preferable to register your account and gateway before installing it. If it is registered after installation it may take a few minutes to become accessible via the web, if you do not want to wait, disconnect and reconnect the power supply to the gateway to reset.

4. Operation Instructions DSR Wifi

8.0 Pairing

Once the DSR Gateway is connected to the Internet and fully registered, you can now pair it with your Heaters.

There are 2 ways to put the DSR Gateway into pairing mode.

Option 1.

You can simply press button on the gateway as shown below, the gateway will now
begin searching for external devices.

Option 2.

On your Computer, Smart Phone, or Tablet, select the **+ install** icon at the bottom of the screen, then select the device you want to install. This will puts the DSR Gateway into pairing mode. An Orange LED will start to flash on the Gateway, you have 1 minute to add a device at this stage. For each additional new device that is added the available time increases as you go through the pairing process.

Pairing a Heater with the Gateway

When the Gateway is in pairing mode. Simply press and hold the OK $\quad$ MODE OK $\quad$ button on the heater for 3 seconds until the Link symbol appears: $Link$ your heater is now connected and ready to program through the App.

9.0 Optional Power Meter.
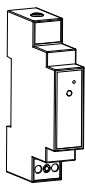
Note:
Installation of this device must be carried out by a competent electrician in accordance with I.E.E. Regulations for Electrical Equipment. BS:7671

Power Meter
The Power Meter is a device that monitors and helps to protect the main power supply to the property. From a Computer, Smart phone or Tablet you are able to access and view your total home or heating systems electrical consumption at any given time.

4. Operation Instructions DSR Wifi

Installation of Power Meter

The power meter should be connected to a spare 6 amp Mcb or Rcbo within the properties Consumer Unit. This supply should then be taken and connected to a fused switched spur with a minimum contact of 3mm and fuse rated to 3amps. From the fused spur take a supply cable to the Power Meter that should be mounted within a mini enclosure. Live and Neutral connections are cleatly marked at the bottom of the device.

(Take care not to damage the Terminals when connecting the power cable to the Meter)

Typical Layout:

Consumer Unit   **Fused Spur**   **Mini Enclosure**

TEST

6

3A
FUSE

L N

Earth not shown for clarity

Main Cable to Property
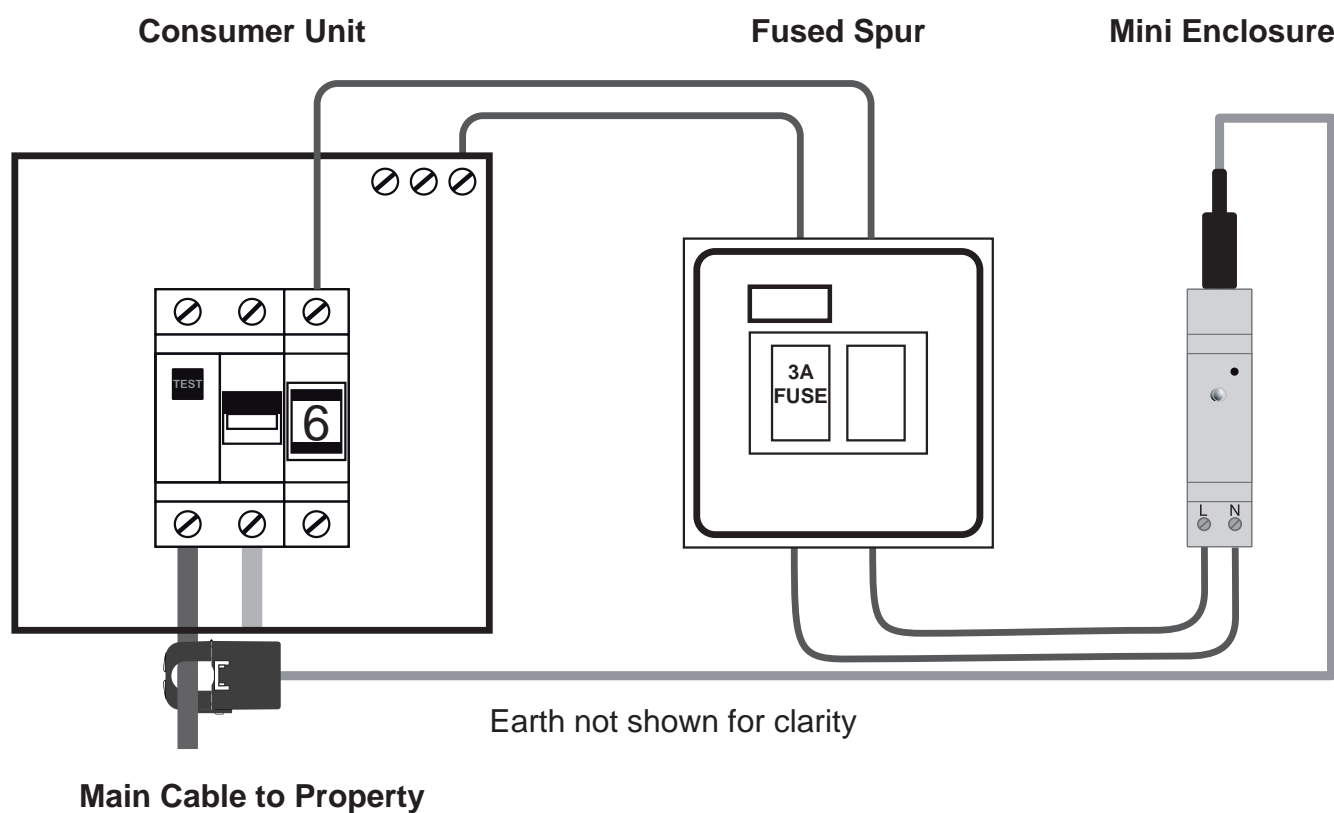
Pairing the Power Meter

You can simply pair the power meter in the same way as you would a heater by putting the gateway into Pairing

Mode. Once the Gateway has been activated and is in the Pairing Mode, press the small button on the front of the

power meter for 3 seconds until it can be seen in the App.

The power meter will now begin recording the total amount of electricity used in the property, you can also set the

maximum usable power avalable to protect the incoming supply preventing overlaoding of the system.

4. DSR Technical

Radiator Controller

- LCD STN with backlight
- 4 buttons
- RF 868Mhz
- 1PCB for control, 1PCB for Power
- 3 temperatures
    - Comfort
    - Economy
    - Frost
- Measured temperature resolution: 0.1ºC
- Setting temperature resolution: 0.5ºC
- Measured temperature range: 0-45ºC
- Setting temperature range: 5-35ºC
- Schedule programming resolution 1h
- PCB operating temperature <80ºC
- External NTC probe
- Electric self consumption metering <3%error
- Transformer less power stage
- Max power: (16A)

Gateway

- External Power Supply Voltage, 5V 500mA
- Consumption 300mA
- Connector Type RJ45 Ethernet connector
- LED indicator conditions
- 868Mhz RF, integrated PCB antenna
- Micro USB Adaptor included
- Ethernet 0,5m cable included

Power Meter

- DIN Rail Mount mini enclosure required.
- External current sensor, 3.5 mm jack connector for easy installation.
- Supply 200-260V, 50Hz –no batteries-
- Consumption 0.65 – 0.9W
- RF 868Mhz integrated antenna
- Calculates active power & energy
- Direct measurement of voltage
- 100A/80A current sensor
- Error <3%

5. Operating safety

IMPORTANT SAFETY INFORMATION

This appliance complies with the European Standards EN 60 335-1, EN 60 335-2-61, EN 61000-3-2, EN 61000-3-3, EN 55014 and EN55104 for Safety & Electromagnetic Compatibility.

These standards cover the requirement of the EMC Directives 89/336 & 73/23

CAUTION - THE SURFACE OF THIS RADIATOR CAN BE HOT.

The surface temperatures of this radiator are within the requirements of EN60-335 the European Standard covering the safety requirements of electric heating appliances, and momentary contact with any part of the radiator should not cause injury. Radiators of any type do get hot, especially around the air outlet grille, therefore if aged or infirm persons, young children, are likely to be left unsupervised in the vicinity of a radiator precautions should be taken to ensure that prolonged contact with the radiator cannot occur. We recommend that a guard is fitted around the radiator, as is normal with some types of heating appliances in similar circumstances.

CAUTION - IN ORDER TO AVOID OVERHEATING, DO NOT COVER THE SURFACES OF THE RADIATOR AND DO NOT OBSTRUCT AIR OUTLET GRILLES. Surfaces of the radiator should not be covered or obstructed as this can cause excessive temperatures that can be hazardous and may cause safety cut-outs to operate. For example, do not put clothes, fabrics or any combustible materials on the radiator or allow curtains to come within 75mm (3") of the top and ends of the radiator. Do not allow furniture to be pushed up against the radiator. A minimum clearance of 150mm is critical for safety, however to ensure radiator performance is not affected a clearance of 250mm is recommended.

DO NOT PLACE OBJECTS IN CONTACT WITH THE RADIATOR

CAUTION – The radiator must not be located below or of in front of a socket outlet.

PLEASE NOTE: THIS RADIATOR IS HEAVY AND MUST BE SECURELY FIXED TO A SOUND WALL. No attempt should be made to move the radiator without first seeking specialist advice. If you are not happy that the radiator has been securely fixed, please inform your installer.

UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO MOVE THE RADIATOR OR LOOSEN WALL FIXINGS WITHOUT TAKING THE NECESSARY ADVICE.

DO NOT SIT OR STAND ON THE RADIATOR.
DO NOT SPILL LIQUIDS ONTO THE APPLIANCE. IF YOU DO, SWITCH THE RADIATOR OFF AND GET A QUALIFIED ELECTRICIAN TO CHECK IT.
DO NOT POKE OBJECTS THROUGH THE GRILLE.
DO NOT PLACE OBJECTS IN THE SPACE BEHIND THE RADIATOR.
DO NOT USE POLISHES ON THE RADIATOR OR ON FURNITURE NEAR TO IT.

IMPORTANT - Due to the newness of the materials the radiator will produce a slight smell for the first few days of operation.

ROOMS MUST BE WELL VENTILATED AND YOUNG CHILDREN, CAGED BIRDS OR PERSONS WITH RESPIRATORY COMPLAINTS MUST NOT REMAIN IN CLOSE PROXIMITY TO THE RADIATOR DURING THE FIRST 48 HOURS OF THE COMMISSIONING PERIOD. Running the radiator at maximum temperature for the first few days will help to dispel any smells more quickly.

Please note that at high setting the room temperature will be warmer with a corresponding increase in running costs.

5. Operating safety (cont.)

Safety - Overheat Protection

For your safety, this appliance is fitted with thermal cut-outs. In the event that the product overheats, the cut-outs switch the radiator off automatically. In the event of these safety cut-outs activating please inform the installer or the EHC Help Desk.

Cleaning

To maintain the external appearance of the radiator it need only be wiped over occasionally with a dry duster. During the summer months, or at other times when the appliance is not is use and is completely cold, the opportunity should be taken to wipe over with a damp cloth. Do not use abrasive cleaning powders or furniture polish.
Discoloration of wall finishes can sometimes occur immediately above a radiator due to the properties of some paints and decorating materials or the presence of environmental impurities in the air (such as soot or incense generated from the burning of candles etc.).

After Sales Service

Your EHC Combination Electric radiator is guaranteed for two years for the electronics and fifteen years for the radiator body from the date of purchase. We undertake to exchange or repair free of charge within this period any part found to be defective due to a manufacturing fault. This guarantee in no way prejudices your rights under common law.

Should you require after sales assistance, please contact the EHC Help Desk on 01698 820533.

Conditions of Guarantee
EHC Electric Radiators

We are pleased to offer a 15 year guarantee on your recent purchase of EHC Electric Radiators. The 15 year guarantee applies to the heating elements and body of the radiator. A 2 year guarantee is applicable to the electronics.

The period of guarantee commences with the day of delivery. If within the guarantee period the radiator is defective due to faulty components we undertake to repair the radiator free of charge.

The guarantee shall not apply to damages caused by natural wear and tear, intentional misuse, non-observance of the operational instructions, connection to incorrect supply voltage, damages caused by corrosion or rust or use of aggressive cleaning agents.

The purchaser shall not be entitled to any rights and/or remedies under this guarantee if the radiator has been repaired, or attempted to be repaired, without written authorisation from us or if a part or parts not supplied by us have been used in a repair.

Any claims for compensation of damages beyond the scope of this guarantee are excluded.

The period of guarantee shall not be renewed or extended by repair or substitute radiator.

The guarantee shall not be transferrable without approval.

All guarantee claims must be accompanied by a relevant test certificate which is supplied with every EHC Electric Radiator

6. Technical Data

Manual

Model No.	Description	Colour	Rating BTUs	Width mm	Height mm	Depth mm	Weight kg
EH500.38.63	500W ELECTRIC RADIATOR	White	1706	380	630	70	22
EH800.38.63	800W ELECTRIC RADIATOR	White	2730	380	630	70	22
EH1000.68.63	1000W ELECTRIC RADIATOR	White	3412	680	630	70	36
EH1200.68.63	1200W ELECTRIC RADIATOR	White	3412	680	630	70	36
EH1500.98.63	1500W ELECTRIC RADIATOR	White	5118	980	630	70	50
EH1800.98.63	1800W ELECTRIC RADIATOR	White	5118	980	630	70	50
EH2000.128.63	2000W ELECTRIC RADIATOR	White	6824	1280	630	70	62
EH2400.128.63	2400W ELECTRIC RADIATOR	White	8189	1280	630	70	62

Conservatory radiators

Model No.	Description	Colour	Rating BTUs	Width mm	Height mm	Depth mm	Weight kg
EH500.68.34	500W ELECTRIC CONSERVATORY RAD	White	1706	680	340	70	21
EH1000.85.34	1000W ELECTRIC CONSERVATORY RAD	White	3412	850	340	70	24.5
EH1600.128.34	1600W ELECTRIC CONSERVATORY RAD	White	5459	1280	340	70	34.5
EH2000.158.34	2000W ELECTRIC CONSERVATORY RAD	White	6824	1580	340	70	38

Tall radiators

Model No.	Description	Colour	Rating BTUs	Width mm	Height mm	Depth mm	Weight kg
EH1200.38.124	1200W ELECTRIC RADIATOR	White	4094	380	1240	70	35
EH1800.55.124	1800W ELECTRIC RADIATOR	White	6142	550	1240	70	58
EH1200.38.124IPX4R	1200W ELECTRIC RADIATOR	White	4094	380	1240	70	35
EH1800.55.124IPX4R	1800W ELECTRIC RADIATOR	White	6142	550	1240	70	58

Bathroom radiators (IPX4)

Model No.	Description	Colour	Rating BTUs	Width mm	Height mm	Depth mm	Weight kg
EH 600.38.63IPX4	600W ELECTRIC BATHROOMRADIATOR*	White	2047	380	630	70	22
EH1000.68.63IPX4	1000W ELECTRIC BATHROOM RADIATOR*	White	3412	680	630	70	36

Accessories and controls

Model No.		Model No.	
CAST/1	RADIATOR CASTORS	E10SS	SUPREME SAVER HOT WATER CONTROLLER
FEET/1	RADIATOR FEET	EHC 6 Way	6 WAY CONTROL BOX
RADSUPP	RADIATOR FEET SUPPORTS	EHC 10 Way	10 WAY CONTROL BOX
S/PACK/1	SINGLE CHANNEL HEATPACK	DSRGW	DSR SMART GATEWAY KIT
TPod	7 DAY DIGITAL PROGRAMMABLE THERMOSTAT	DSRPM	DSR POWER METER
TBasic	R/F THERMOSTAT		

The above Models are for EHC Standard Radiators with TEI 1 Control. Following details should be prefixed to the Manual Model Number when ordering a different type of control:
TEi1 - TDi - TDEi - RF - DSR - R

⚠ **Note: (***) DSR Models are not available as IPX4

Notes:

Notes:

the electric heating company

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