Drayton

by Schneider Electric

Wiser™

Wiser Thermostat Kit 1
Wiser Thermostat Kit 2
Wiser Thermostat Kit 3

Wiser Multi-zone Kit 1
Wiser Multi-zone Kit 2

Phone: 0333 6000 622*
Website: wiser.draytoncontrols.co.uk
E-mail: customer.care@draytoncontrols.co.uk
@DraytonHome
/DraytonHome

*Please note that international call charges may apply to those calling from outside of the UK.

Installer Guide 06490238001 IssH

CE

Introduction

Welcome!

Save this guide for future reference.

If you are replacing an existing controller/ programmer and don't need to make any wiring changes that's great news. All you need to do is remove the old product and fit your new Wiser Heat Hub^{R} to the existing wallplate.

If you are fitting a new system or require re-wiring please contact an installer.

⚠ IMPORTANT:

Do not attempt to install this product if you are not familiar with how to install mains-powered electrical appliances.

Always switch off the mains before removing a controller and never fit it to a live wallplate.

Step 1: Mounting the wallplate

Step 1 Continued...

Option 1: Fitting a new wallplate

The ideal location should have reasonable lighting, good access, no condensation, no extremes of temperature and a supporting surface that fully covers the back of the unit. Position with 70mm clearance to the right, 25mm above and sufficient room to access the securing screws underneath. Fix, with terminals at the top, either direct to a flat wall using wall plugs and No. 6 x 1" (25mm) woodscrews, or on a flush mounting single conduit box type UA1 (BS4662) using M3.5 x 14 bolts. Now fit the Wiser Heat Hub^{R} onto the wallplate and tighten the securing screws. Check the 3A fuse, and switch on the mains.

Option 2: Using an existing industry standard wallplate

Loosen the securing screws on the old controller/ programmer and unplug it. Check that there is 70mm clearance to the right of the wallplate and 25mm above it. Check the wiring diagram for your product model to compare terminals and, if necessary, change the wiring of the wallplate to suit. Now fit the Wiser Heat Hub^{R} onto the wallplate and tighten the securing screws.

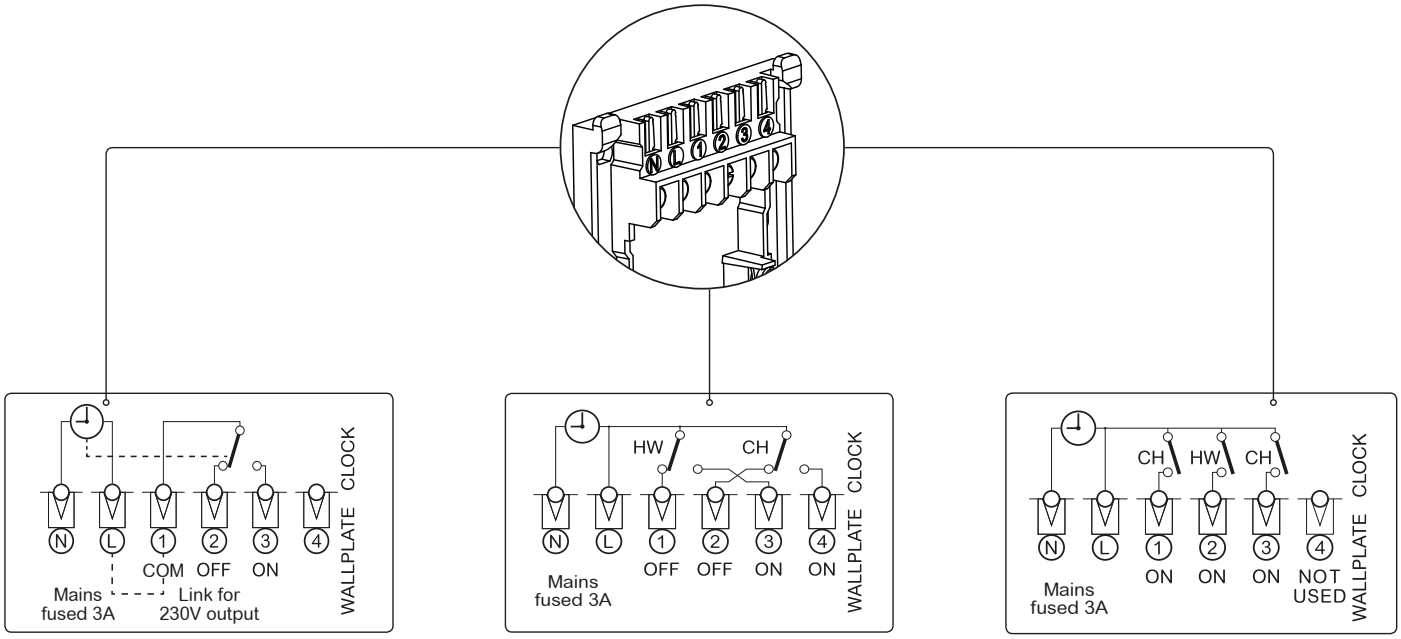
Check the 3A fuse, and switch on the mains.

⚠ DO NOT use a surface mounting box as the wallplate is not designed for this purpose.

Note: Ensure the Heat Hub^{R} is installed in a position with WiFi coverage.

Step 2a: Wiring - wallplate

Make sure mains input has a 3 amp fuse.
CAUTION! Before installation, make sure the mains supply is switched off!



One Channel: WT714R and WV714R

Two Channel: WT724R and WV724R

Three Channel: WT734R

One channel only: Note that the output contacts are voltage-free*, so power needs to be put on to Terminal 1 either by linking from Terminal L or from a separate supply with a 3A fuse.

* Not SELV - Fixed wiring only, to comply with current IET regulations.

Note: If there is an existing wired thermostat connected via the wallplate, this must be disconnected, i.e. remove the thermostat wires from the wallplate.

Three channel only: Make a note of which circuit is connected to CH1 and CH3 respectively as this information is needed later, during commissioning, when room thermostats are added to the system.

Note: After wiring, fit the Wiser Heat Hub^{R} onto the wallplate and tighten the securing screws. Check the 3A fuse and switch on the mains.

Step 2b:
Wiring – boiler with OpenTherm® interface

If your boiler supports OpenTherm, please follow the instructions under this step.

Existing OpenTherm installation

1. Remove the OpenTherm cables from the existing controller or thermostat.
2. Remove the OpenTherm module from the rear of the Wiser Heat Hub^{R}.
3. Wire in the OpenTherm cables into the OpenTherm module. It does not matter which way the cables are wired.
4. Replace the OpenTherm module into the Heat Hub^{R}.
5. Wire L & N on the wallplate from a separate supply with a 3A fuse.
6. Mount the Hub^{R} on the wallplate.

The Wiser Heat HubR is an OpenTherm certified product and will therefore operate with OpenTherm certified boilers. Currently The Heat Hub^{R} is not compatible with boilers that require a temperature for domestic hot water to be provided by the external heating controls. For more information about wiring options please consult the digital user guide found on **wiser.draytoncontrols.co.uk/support**

Step 3: Testing the system

Heating and Hot Water buttons

Hot Water override button (WV724R , WT724R & WT734R only)

Pressing & holding the Hot Water button for >3s will turn on the Hot Water for 1 hour. In this state the hot water will be regulated by a cylinder thermostat or the boiler. When the Hot Water override is active, the Hot Water LED will flash green. To turn off the override press the Hot Water button again. This will put the hot water back under system control. Depending on the system settings the hot water may stay on which will be indicated by a solid green LED.

Tip: This feature can be used to 'test' an installation prior to adding any devices.

Note: The heating and hot water button override states are not shown in the app. These act as a fall back state in the event that other controls are unavailable.

Heating override button

Pressing & holding the Heating button for >3s will turn on the heating for 2 hours. In this state the boiler will self-regulate its temperature. When the Heating override is active, the Heating LED will flash green. To turn off the override press the Heating button again. This will put the heating back under system control. Depending on the system settings the heating may stay on which will be indicated by a solid green LED.

Connection Charts

Always switch off the mains before removing the Wiser Heat Hub^{R} – and never fit it to a live wallplate!

Make the wiring connections, as shown in the connection charts, for the appropriate system. For surface wiring, snap out the cable entry strip on the bottom edge of the wallplate. The Wiser Heat Hub^{R} is double-insulated and needs no earth connection, but an earthing continuity (loop) terminal is provided for convenience.

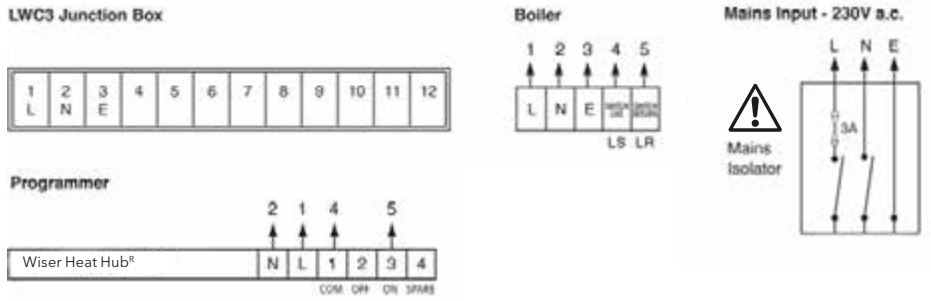
Note: If there is an existing wired thermostat, it must be completely disconnected, i.e. remove the thermostat wires from the wiring centre - a link must be inserted between the terminals where the thermostat common and call for heat wires are located in the wiring centre.

Arrowed numbers relate to the junction box.

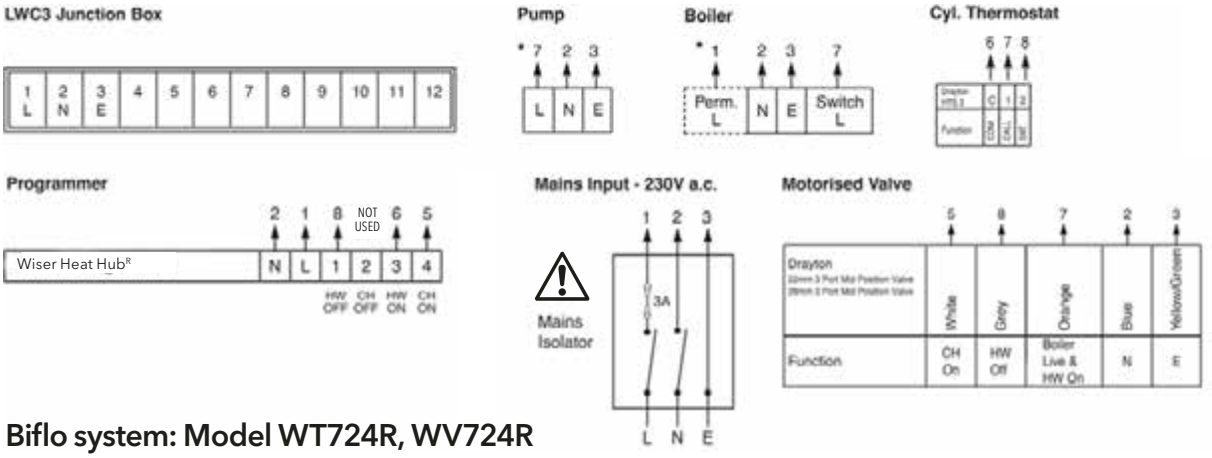
*** Consult boiler handbook for details of pump overrun wiring.**

After wiring, clip on the unit and tighten the securing screws. Check the mains input has a 3A fuse, and switch on the mains.

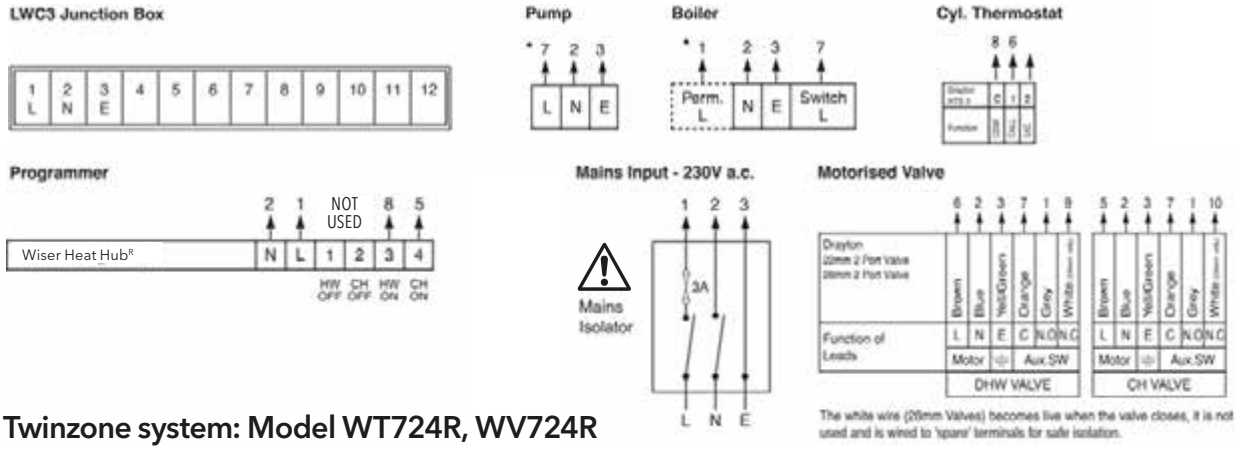
LS = Live Supply
LR = Live Return



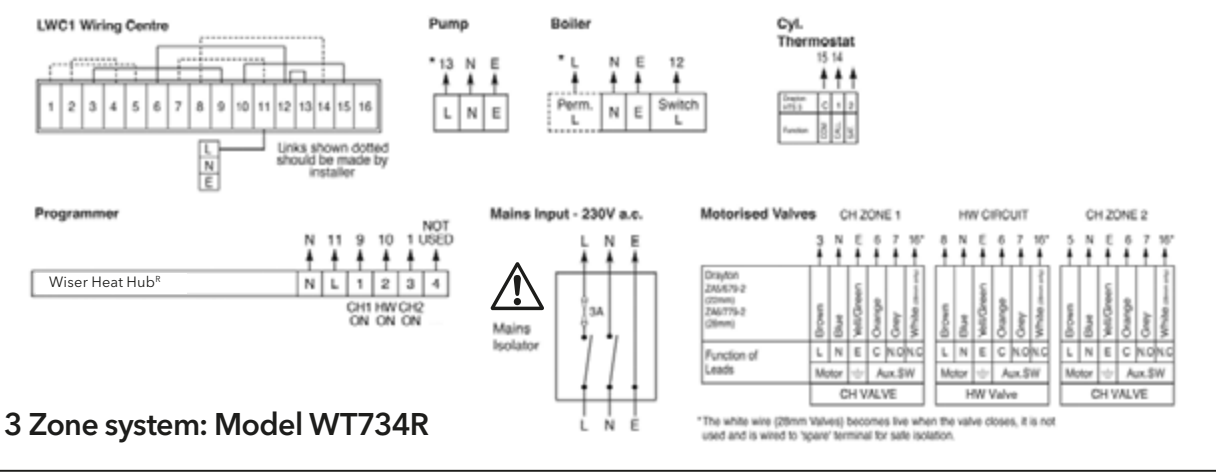
Single Zone CombiBoiler: Model WT714R, WV714R



Biflo system: Model WT724R, WV724R



Twinzone system: Model WT724R, WV724R



3 Zone system: Model WT734R

Step 4: Download the app

Adding Room Thermostats and Radiator Thermostats

In order to continue the installation of your Wiser Room Thermostat(s) or Wiser Radiator Thermostat(s) you will now need to download the Wiser Heat app for your smartphone. The Wiser Heat app is available from the App Store or Google Play. Please ensure you download the app named **'Wiser Heat'**.

Download on the App Store

GET IT ON Google Play

The app guides you through the setup and installation process which connects your Room Thermostat(s) and Radiator Thermostats with the Wiser Heat Hub^{R} and thereafter connects the Heat Hub^{R} to the internet. Please note that when connecting the Heat Hub^{R} to the internet you will be prompted for your e-mail and address. A verification e-mail will be sent to you to confirm your e-mail address before the app can be used to control your Wiser system. If the email does not arrive please check your junk email.

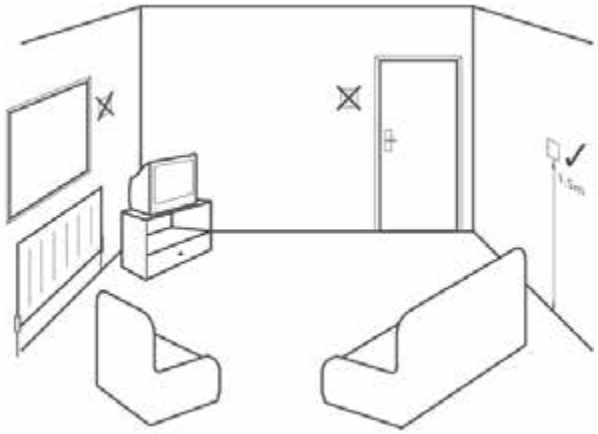
Once the Room Thermostat (and Radiator Thermostats) have been added to the system and you have confirmed your email, Wiser is ready to control your heating and hot water.

To control your Wiser system from additional smartphones simply download and install the app and login using the same e-mail address and password.

Wiser Room Thermostat

Mounting Options

Care should be taken to mount the Room Thermostat in a position which is not subject to direct sunlight or draughts. Preferably it should be mounted on an inside wall about 1.2m (4ft) above the floor in a position where it can respond to room temperature but away from the direct influence of radiators or other appliances giving off heat.



Once the best position has been identified, the Wiser Room Thermostat should be fixed to the wall using the wall bracket as shown. It can also be positioned using the table stand included. It has to be positioned in a location where it will be able to control the room temperature.

Wiser Room Thermostat

Thermostat Kits 1, 2 & 3:

For room thermostat only systems the positioning is important as this will control the boiler to your entire home. In these systems mechanical TRVs should be used as a minimum to provide a level of room heating control.

For optimum comfort and savings, each radiator in your home should be fitted with a Wiser Radiator Thermostat. These can be purchased and installed individually.

Signal Strength

The signal strength of a Wiser Room Thermostat is displayed on screen and can also be viewed in the Wiser Heat app from the 'Rooms & Devices' list, which is found in the 'Settings' menu. If the Room Thermostat has no signal this will be indicated by a red exclamation mark through the signal strength icon. The Room Thermostat will also indicate no signal while the screen is off by flashing the LED red 4 times periodically. If this occurs in all of the preferred locations, a range extender is needed. These are available through Drayton, please call Customer Services on the number indicated on the front page of this guide.

Boost

Feeling a bit cool?

1. Go to the Room Thermostat and touch any button to wake it up.
2. Touch the centre button again to activate boost
   1st touch = 30 minutes,
   2nd touch = 1 hour
   3rd touch = 2 hours,
   4th touch = 3 hours
   5th touch = Cancel
3. Shortly after the room will start to warm.

Note: A boost will increase the setpoint to 2˚C above the ambient temperature for the time period selected. You can still adjust the setpoint when boosted.

Wiser Radiator Thermostat

Multi-zone System:

Economy use:

- Place the Room Thermostat in a room which is heated most of the time, typically the lounge/ hallway.
- Place the Radiator Thermostat(s) in rooms that are not used all day such as bedrooms.
- The room with Radiator Thermostats can now be scheduled separately to avoid heating them with the rest of the rooms.

For optimum comfort and savings, each radiator in your home should be fitted with a Wiser Radiator Thermostat. These can be purchased and installed individually.

Mounting Options

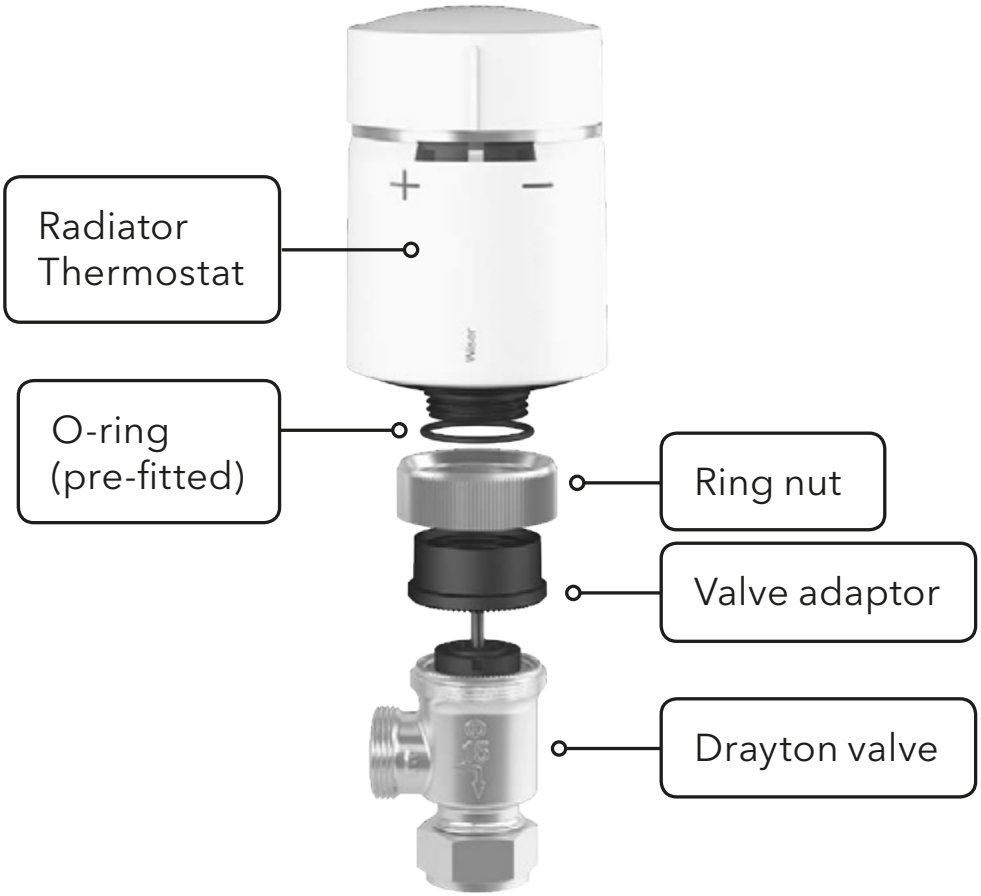
As radiator valve bodies are not all the same, Wiser Radiator Thermostats come with two valve adapters; M30x1.5mm and Danfoss RA (If however, neither work with your radiator valves, consult the Valve Adapter Guide on the Drayton website).

First remove the old thermostatic head from the valve body. Water should not leak from the valve whilst doing this. (Refer to the manufacturer's instructions if needed.) You are now ready to install your new Wiser Radiator Thermostat.

Note: Turning the head to the highest position/ number will simplify de-installation

Once you have set up your Radiator Thermostat(s) through the app, you will be asked to select and fit the required adapter. When fitting and tightening the adapter to the Radiator Thermostat, please make sure that the O-ring is firmly seated above the thread as to avoid damaging the O-ring. Tighten by hand only.

Fitting M30x1.5mm



Place the small black plastic adapter serrated face down onto the valve. Position the metal ring nut over the black plastic adapter and screw it onto the valve. Now screw the Radiator Thermostat onto the black plastic adapter until tight. If the Radiator Thermostat is not facing the right direction, slacken the metal ring nut and rotate the Radiator Thermostat as required and re-tighten the metal ring nut.

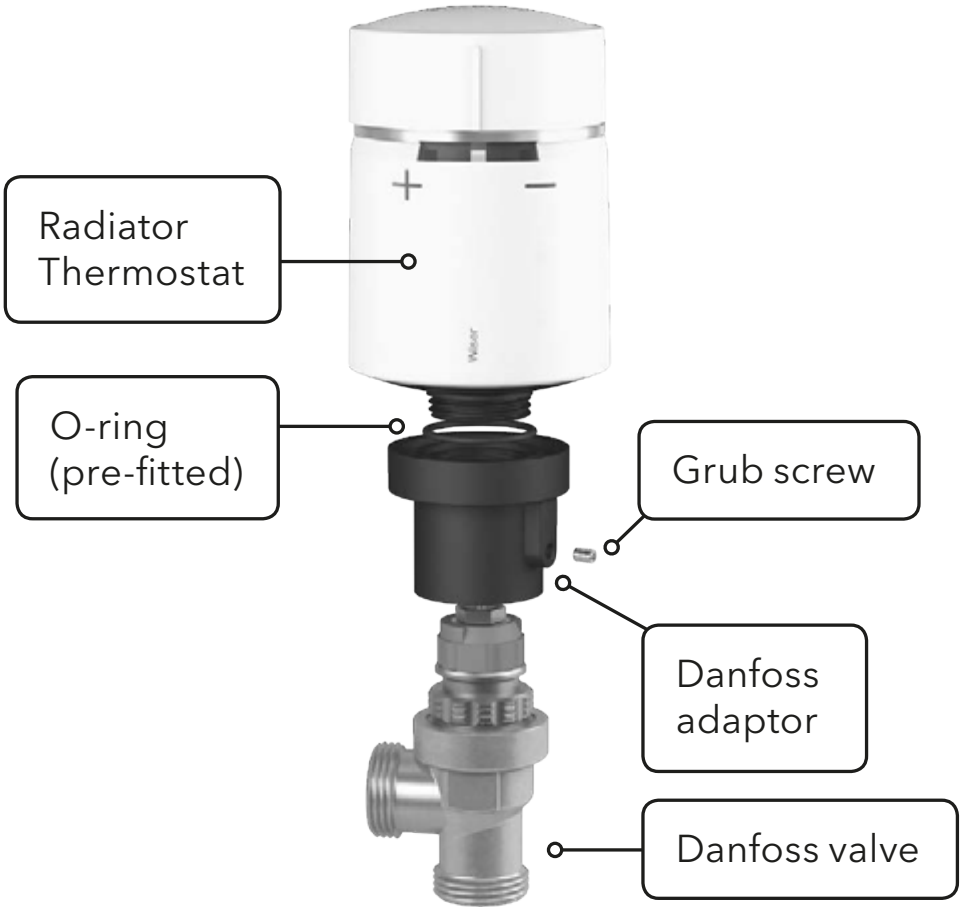
Thermostatic head calibration

Upon fitting of the relevant valve adapter, twist the cap of the Radiator Thermostat in the – direction for 2 seconds until the right LED shows a solid blue.

⚠ IMPORTANT:

To limit temperature in other rooms use existing thermostatic radiator heads. We suggest regulating these according to manufacturer's documentation to provide either economy or comfort use

Fitting the Danfoss RA



Slide the larger black plastic adapter small end first over the valve. Make sure that the hole containing the grub screw is facing away from you. This way, once its mounted, the markings of the Radiator Thermostat will be in the required position. Use an appropriate size Allen key to tighten the grub screw. Now screw the Radiator Thermostat onto the larger black plastic adapter until tight.

Thermostatic head calibration

Upon fitting of the relevant valve adapter, twist the cap of the Radiator Thermostat in the – direction for 2 seconds until the right LED shows a solid blue.

⚠ IMPORTANT:

To limit temperature in other rooms use existing thermostatic radiator heads. We suggest regulating these according to manufacturer's documentation to provide either economy or comfort use

Signal Strength

The signal strength of a Wiser Radiator Thermostat can be viewed by means of a signal strength icon visible in the Wiser Heat app in 'Rooms & Devices', which is found in the 'Settings' menu. If a Radiator Thermostat has no wireless signal this will be indicated by a red exclamation mark through the signal strength icon. In this case a range extender will be needed. These are available through Drayton. Please call Customer Services on the number indicated on the front page in this guide.

Note: If a Radiator Thermostat has been successfully joined to the Heat Hub^{R} but has thereafter lost the signal to it, the red or the blue LED of the Radiator Thermostat will flash rapidly for 5 seconds when the cap is twisted in the corresponding direction.

Boost

Feeling a bit cool?

1. Go to the Radiator Thermostat and twist the cap in the + direction.
2. The left LED will show a solid red for 5 seconds and then disappear.
3. Shortly after the room will start to warm.

Note: A boost + will increase the setpoint by 2˚C above the ambient temperature for 1 hour.

Feeling a bit warm?

1. Go to the Radiator Thermostat and twist the cap in the – direction.
2. The right LED will show a solid blue for 5 seconds and then disappear.
3. Shortly after the Radiator Thermostat will close the valve and stop the hot water flow to the radiator.

Note: A boost – will decrease the setpoint by 2˚C below the ambient temperature for 1 hour.

LED Behaviour for Radiator Thermostat and Heat Hub^{R}

Table 1: Radiator Thermostat - Calibration

State	User Interaction	Left LED	Centre LED	Right LED	Behaviour
Start up	Insert the batteries	Red	Green	Blue	Single quick flash
Opening the valve	Automatic upon inserting batteries **OR** Twist and hold the cap in + direction for 8 seconds (For changing batteries)	Red			Solid until the valve is open
Ready to install on the valve	The Radiator Thermostat is ready to install when the valve is fully Open (see above)	Red	Orange (not joined) **OR** Green (joined)	Blue	Red/Blue LED Flash for up to 5 minutes - the centre LED is solid
Closing the valve	Twist and hold the cap in the – direction for 2 seconds			Blue	Solid until the valve is closed
Joining	Twist and hold the cap in the + direction for 3 seconds		Green		Pulses for up to 2 minutes
Join success	N/A		Green		Solid for 5 seconds
Joining failed	If no network is found after 2 minutes		Orange		Flash for 5 seconds

Table 2: Radiator Thermostat - Normal Use

State	User Interaction	Left LED	Centre LED	Right LED	Duration
Boost up	Twist the cap in the + direction	Red			Solid for 5 seconds
Boost down	Twist the cap in the - direction			Blue	Solid for 5 seconds

Table 3: Radiator Thermostat - Error States

State	User Interaction	Left LED	Centre LED	Right LED	Duration
Low battery	N/A		Red		Solid for 1 second (Repeated every hour)
Critical battery	N/A		Red		Fast flash for 5 seconds (Repeated every minute)
No network	Twist the cap in the + or - direction to start a boost		Orange		Solid with fade-out after 2 seconds (In this event the Radiator Thermostat has not joined the Wiser system and must either join the Heat Hub^{R} or be re-installed)
No signal	Twist the cap in the + direction to start a boost	Red			Fast flash for 5 seconds (in this event the Radiator Thermostat has been joined to the Heat Hub^{R} but has thereafter lost the RF signal. Refer to 'Signal Strength' in the section 'Wiser Radiator Thermostat' of this guide.)
No signal	Twist the cap in the - direction to start a boost			Blue	Fast flash for 5 seconds (in this event the Radiator Thermostat has been joined to the Heat Hub^{R} but has thereafter lost the RF signal. Refer to 'Signal Strength' in the section 'Wiser Radiator Thermostat' of this guide.)

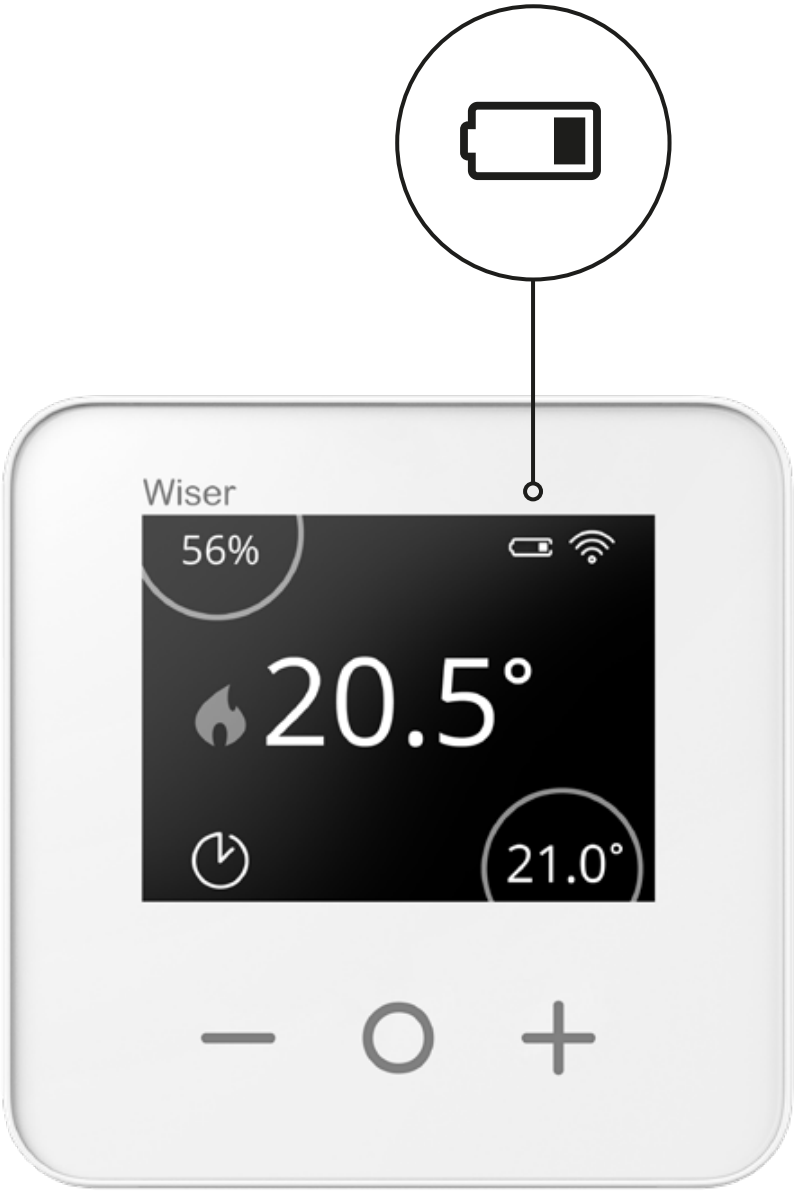
Table 4: Heat Hub^{R} - Setup

State	Button Press	LED	Description
Normal		Solid Green	Indicates that the Heat Hub^{R} is powered On and operating as normal
Setup	Single press	Flashing Green	This is the Setup state, in this mode it is possible to connect directly to the Heat Hub^{R} via WiFi and make changes to the system
Adding a Device	Press and hold for >2s (or initiate from the App)	Cycle between Green/Orange	Indicates that the Heat Hub^{R} is open to new devices joining the network
WiFi Error		Flashing Red	The Heat Hub^{R} is unable to connect to your WiFi Network, check that your WiFi router is powered on and connected to the internet. If you've changed you WiFi credentials (e.g. password), or if you have a new router you will need to connect to your Heat Hub^{R} in Setup mode and update your WiFi network details.
Firmware upgrade		Flashing Red for a few seconds	During a firmware upgrade cycle, the hub will disconnect from the internet for a number of seconds to switch firmware.
Cloud Connection Lost		Solid Red	The Heat Hub^{R} is currently unable to contact the Wiser Cloud service. You will still be able to use the app at home when connected to the same WiFi network as your Heat Hub^{R}

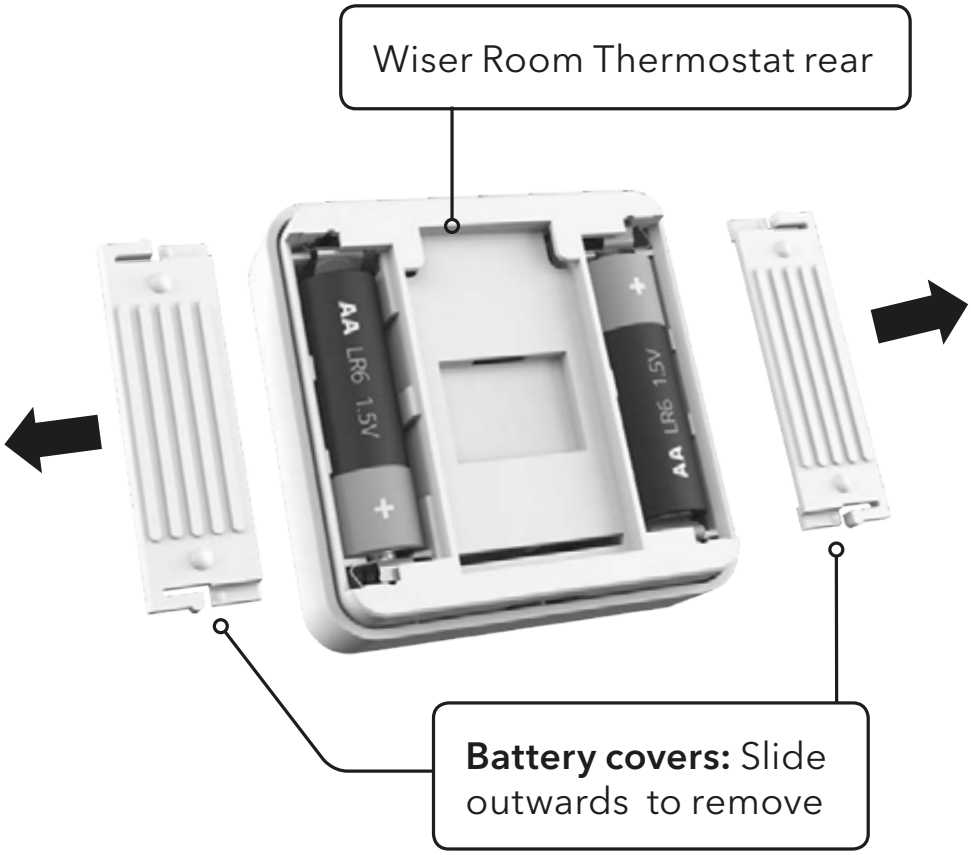
How do I know when to change the batteries?

Room Thermostat

For the majority of time you will see three bars indicated for battery life. When the batteries reach 5% capacity two bars will be shown. One bar will be shown at 2% capacity. At 1% there will be no bars and the battery icon will be red. At this point the batteries are exhausted and must be replaced or the Room Thermostat will cease to function. When a Room Thermostat has low batteries this will be indicated by an LED flashing red once.



1. Remove the battery covers as shown below.
2. Replace the exhausted batteries with 2 x 1.5V IEC LR6 (AA) alkaline batteries ensuring correct orientation. Do not use rechargeable batteries.
3. Replace the battery covers pressing fully home.



Radiator Thermostat

When the batteries are low (2%) the centre LED will flash red once every hour. For critical batteries (1%) the centre LED will flash red every minute until the batteries are replaced or exhausted.

Low or critical battery level will also be shown by flashing the centre LED red when the cap is twisted.

Battery life indication is shown in the app under “Rooms and Devices”. Low or critical battery level will also be notified in the app.

1. Remove the battery cover as shown. You may need to unscrew the Radiator Thermostat slightly to access the battery cover - if the ring nut is very tight, it will be necessary to open the valve first by twisting the Radiator thermostat cap in the + direction for 8 seconds (the left LED will be red until the valve is open).
2. Replace the exhausted batteries with 2 x 1.5V IEC LR6 (AA) alkaline batteries ensuring correct orientation. Do not use rechargeable batteries.
3. Replace the battery cover and wait for the valve to fully open.
4. Screw on the Radiator Thermostat if loosened or removed.
5. Twist the cap in the minus direction for 2 second

NB. For full details/LED behaviour, see Table 1: Radiator Thermostat - Calibration.

Battery Handling

Batteries, rechargeable or not, should not be disposed of into ordinary household waste. Instead, they must be recycled properly to protect the environment and cut down the waste of precious resources.

Your local waste management authority can supply details concerning the proper disposal of batteries.

In compliance with the EC Directive 2006/66/EC, the button cell battery located on the printed circuit board inside the Wiser Heat Hub^{R}, can be removed at the end of the product life, by professional personnel only.

Removing devices and factory reset

Removing devices from the Wiser system

Devices can be removed from the Wiser system using the Wiser Heat app. Login to the system and navigate to 'Rooms and Devices' found on the 'Settings' page. Locate the device you want to remove and select 'Remove Device'.

Note: this process will remove the device from the system and will no longer be visible in the App, but if a device is out of range, or is switched off when the request is made it will need to be factory reset separately (see Device Factory Reset below)

1 Remove the battery cover as shown. You may

Where a Radiator Thermostat has to be taken off a radiator valve following removal from the system, take the following steps:

- Open the valve as indicated in table 1 (Radiator Thermostat – Calibration).
- Unscrew the radiator Thermostat from the radiator valve.

Device Factory Reset

Devices can be reset manually at any time e.g. if the Heat Hub^{R} is replaced. This will remove the device binding to a Wiser system allowing it to be joined to another system. Take the following steps:

- Room Thermostat: Remove the batteries and re-insert them. When the 'Wiser Thermostat' splash screen is displayed press and hold the + and – buttons for 20 seconds until 'Join a network' is displayed.
- Radiator Thermostat: Twist and hold the cap of the Radiator Thermostat in the '-' direction, after a few seconds the centre LED will begin to flash Red, keep holding the cap in the '-' direction until all 3 LEDs flash once to indicate the device is resetting.

Hub Factory Reset

The Heat Hub^{R} can be reset to factory settings, which will remove all devices from the system and remove the WiFi connection settings.

Note: this will not remove your Cloud account so you will either need to call customer services to remove your account or register with a different e-mail address.

To factory reset the Heat Hub^{R} take the following steps:

- Press and hold the 'Setup' button for more than 20 seconds, Note: the LED will go through a few LED sequences but the reset warning is indicated by solid Red, this is the final LED sequence and upon extinguishing it will implement the reset.

Note: to re-use devices you may also need to perform Device Factory Resets on individual products in accordance with the instructions in this section.

ErP Rating

	ErP Class with Modulating boiler	ErP rating	ErP Class with on/off boiler	ErP rating
Wiser Thermostat Kit 1	VI	4%	VII	3.5%
Wiser Thermostat Kit 2	VI	4%	VII	3.5%
Wiser Thermostat Kit 3	VI	4%	VII	3.5%
Wiser Multi-zoning Kit 1	VIII	5%	VII	3.5%
Wiser Multi-zoning Kit 2	VIII	5%	VII	3.5%

Technical Data

	Wiser Heat Hub[R]	Wiser Room Thermostat	Wiser Radiator Thermostat
Dimensions	93mm(w), 148mm(h), 31mm(d)	76mm(w), 76mm(h), 25mm(d)	93mm(h), 51mm(dia)
Power Supply	230V a.c. ±10% 50Hz	2x1.5V IEC LR6 (AA) alkaline batteries	
Switch Rating	2(1)A 230V a.c. each switch Total load must not exceed 2.5A	N/A	
Wiring	Fixed wiring only, to comply with current IET regulations (BS7671)	No wiring required	
Interfaces	User: Push Button/LED; I/O: Mains Relays (1-3), Digital Boiler Interface	User: TFT display, touch buttons; I/O: None	User: Twist Cap, LED; I/O: None
Operating Temperature	0°C to 45°C		
Storage Temperature	-10°C to 55°C		
Maximum Mounting Surface Temperature	N/A		93°C
Maximum Water Temperature	N/A		73°C continuous and 110°C max
Ingress Protection	IP 30	IP 20	IP 30
Ambient Humidity (non-condensing)	Operating 25% to 90%, Storage 15% to 95%		
Set-point Range	5°C to 30°C		
Control Accuracy	<0.6°C at 4°C/hour (with Room Thermostat)	N/A	
	<0.8°C at 4°C/hour (with Radiator Thermostat)	N/A	
Timing Resolution	1 minute		
Temperature Resolution	0.5°C		
Ball Pressure Test Temperature	92°C	75°C	
Pollution Degree	2		
Software Class	A		
Without Mains Power	Display: LEDs off; Time: always kept; Program times: always preserved	N/A	
Rated Impulse Voltage	2.5kV	N/A	
Radio Technology/Frequency	2.4GHz (Bi-directional, Mesh)		
Radio Signal Range	30m Free Space		
Maximum Radio-Frequency Power Transmitted	+17dBm (50mW)	+13dBm (20mW)	+13dBm (20mW)
Mounting	Industry standard wall plate	Wall bracket or desk stand	Radiator Valve
Relevant Directives	Radio Equipment Directive (RED) 2014/53/EU, Batteries Directive 2006/66/EC, RoHS Directive 2011/65/EU		
Applied Standards	EN60730-1; EN60730-2-7; EN60730-2-9, EN 300 328		

Hereby, Schneider Electric Controls UK Ltd, declares that these products are in compliance with the essential requirements and other relevant provisions of RED 2014/53/EU. Declaration of Conformity can be downloaded from: **www.draytoncontrols.co.uk**

Schneider Electric Controls UK Ltd
401 Southway Drive
Plymouth
PL6 6QT
United Kingdom