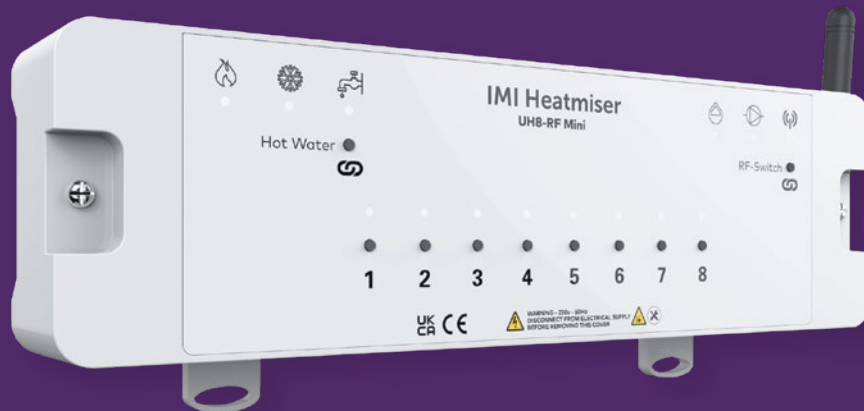




UH8-RF Mini

Multi-zone Wiring Centre



Proven quality...

heatmiser

...in a new look

IMI Heatmiser



UH8-RF Mini – Installation Manual

Description

The UH8-RF Mini is an 8-zone central wiring center designed for use with Heatmiser RF thermostats.

It can control any actuator or valve that requires a 230V AC signal to open. For mid-position valves or those needing a closing signal, a changeover relay is necessary. The UH8-RF Mini also features a volt-free output with changeover contacts to operate a boiler or other heat source, providing both "heat on" and "heat off" signals.

Additional outputs, such as pump and valve outputs for hot water or underfloor heating systems, are included as standard. These outputs typically control a manifold pump or manifold valve. Outputs that are not required can simply be ignored.

When direct wiring to the heat source is not feasible, a radio link enables remote activation via a separate receiver, the RF-Switch. The unit also includes test switches for installation engineers and optional features like creepage protection and pump delay.

Operation

Each channel on the UH8-RF Mini can be configured using toggle switches for either a radiator zone or an underfloor heating zone.

When the thermostat signals a heating demand, the UH8-RF Mini provides a 230V AC output on the paired zone while also activating the boiler/heat source output.

Simultaneously, it can send a radio signal to the RF-Switch if remote heat enable is required.

If the zone is configured as an underfloor heating zone, the UH8-RF Mini will also activate the pump and valve outputs.

If an enable signal is received from a hot water time clock on the system, only the H/W output will become active. This timed output is typically routed to a cylinder thermostat and then to a valve, but it can also be used for towel rails. In either case, the valve's auxiliary switch will trigger the boiler or another heat source.

Other Functions

Creepage

During hot weather, heating is used less frequently, which can cause valves and pumps that remain idle to seize and malfunction. The creepage function prevents this by automatically operating each valve or pump for 1 minute if they haven't been activated by a thermostat within the preceding 24 hours. This feature does not operate the boiler output.

Pump Delay

Some valves or actuators take over a minute to open. If the boiler and pump activate before the valve is fully open, it can cause the boiler to lock out and stop functioning. The pump delay feature prevents this by delaying the pump and boiler operation, allowing time for the valves and actuators to open fully.



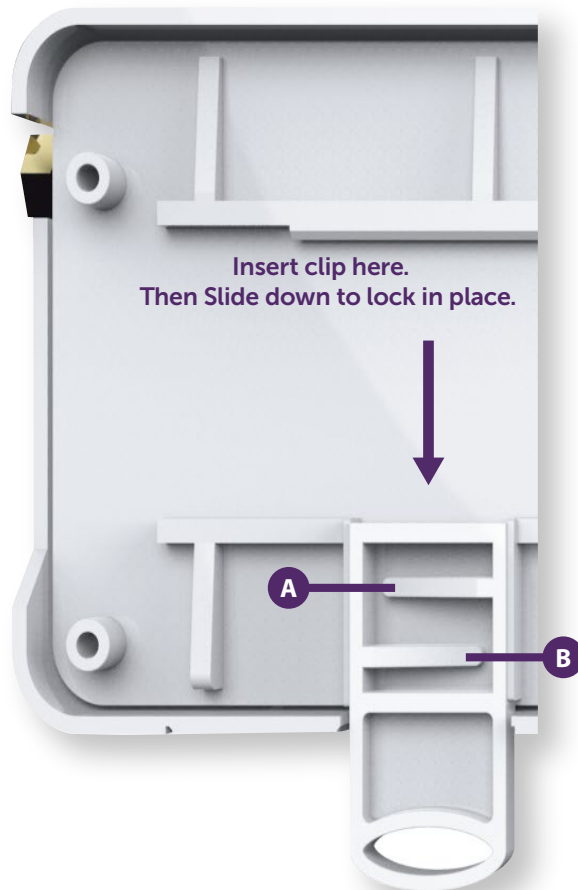
Installation

The UH8-RF Mini can be installed directly onto a wall using four screws or mounted onto a DIN rail.

For DIN rail mounting, start by attaching the two provided clips to the back of the UH8-RF Mini, as shown in the image to the right.

- On the back of the UH8-RF Mini, position the clip in the middle and slide down.
- Points A and B locate in the corresponding holes and locking into place.
- Locate the UH8-RF Mini onto the DIN rail from the top.
- Pull the clip down and push the bottom of the UH8-RF Mini onto the DIN rail.
- Releasing the clip will lock the UH8-RF Mini in place on the DIN rail.

To remove the UH8-RF Mini, pull both clips down and remove from the DIN rail.





Wiring

The UH8-RF Mini should be installed as close as possible to the equipment it controls. However, it must not be placed inside a metal enclosure. If installation within a metal enclosure is unavoidable, an extension antenna (EA1) must be used and positioned outside the enclosure to avoid signal issues.

Connections

Main Supply

The power supply to the UH8-RF Mini should be fused at 5 amps. These connections are clearly marked;

L = live or phase 230v AC 50/60Hz

N = Neutral

E = Earth

Heat/Cool Enable

This is the main call for heat for the system, there are 3 connections;

C = common

NO = normally open

NC = normally closed

Electrically, this is a two-way switch. The supply connected to the C (common) terminal is routed to the NC (normally closed) terminal when there is no call for heat. When a call for heat occurs, the connection switches to the NO (normally open) terminal. In most systems, the C (common) and NO (normally open) terminals are utilised.

Hot Water

This output is used to control a hot water cylinder thermostat

C = common

NO = normally open

NC = normally closed

Electrically, this is a two-way switch. The supply connected to the common terminal is directed to the NC (normally closed) terminal when there is no call for hot water. When a call for hot water is made, the connection switches to the NO (normally open) terminal.

Hot Water Continued

Typically, the NO (normally open) connection is wired to the hot water cylinder thermostat, which then connects to the hot water valve. The valve's auxiliary switch subsequently activates the boiler or another heat source. In most systems, the common and normally open connections are used.

Zones 1...8

Zones outputs are clearly marked.

L = live out to actuator or valve

N = neutral to actuator or valve

There are two connections: live (L) and neutral (N). Both terminals labeled L are interconnected, as are both terminals labeled N. Each zone output is numbered: Zone 1 responds to radio signals from the thermostat paired with Zone 1, Zone 2 responds to thermostat 2, and so on.

Manifold Pump/Valve

Used for an underfloor heating manifold pump and or valve.

Connections are clearly marked

L = Live

E = Earth

N = Neutral

When an underfloor heating zone calls for heat, the UH8-RF Mini provides a 230V live and neutral output to power the manifold pump or valve. It is recommended to route this through a high-limit switch installed on the heating manifold to safeguard against mechanical failure of the manifold's temperature control system.



Wiring

Dew Point Sensor (Cooling Mode Only)



Dew Point sensing helps minimize the risk of condensation during cooling operations. When activated, the sensor signals the UH8-RF Mini to shut down cooling to the manifold. During this period, the dew point indicator light will illuminate.

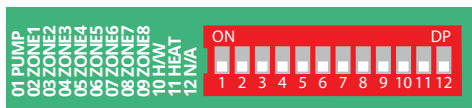
Connections (24 Volt DC)

+ = Positive
- = Negative
SL = Input

Engineers test switches

This is a block of 12 dip switches used for testing each zone, as well as the boiler, pump, and hot water outputs. To activate any output, set the corresponding switch to the ON position. Once installation is complete, all switches MUST be returned to the OFF position.

Be sure to record the room names associated with each zone and their corresponding zone numbers, as this information will be required when pairing the thermostats.



Fuses

5amp, 20mm anti-surge fuse, this fuse supplies power to all 230v outputs from the board, it protects the zone, pump and valve outputs.



Operation

Zones 1 to 8 Buttons and indicators

Each Zone has an indicator light and button associated with it.

Light functions:

1. Light on when the zone output is on.
2. Light flashes when the zone is in pairing mode.

Button functions:

1. Single press to manually turn output On/Off.
2. Hold down for 5 seconds to start pairing mode, (Indicator steady flash.)
3. Hold down for 15 seconds to delete pairing, (indicator rapid flash).

System indicators

When lights are on:

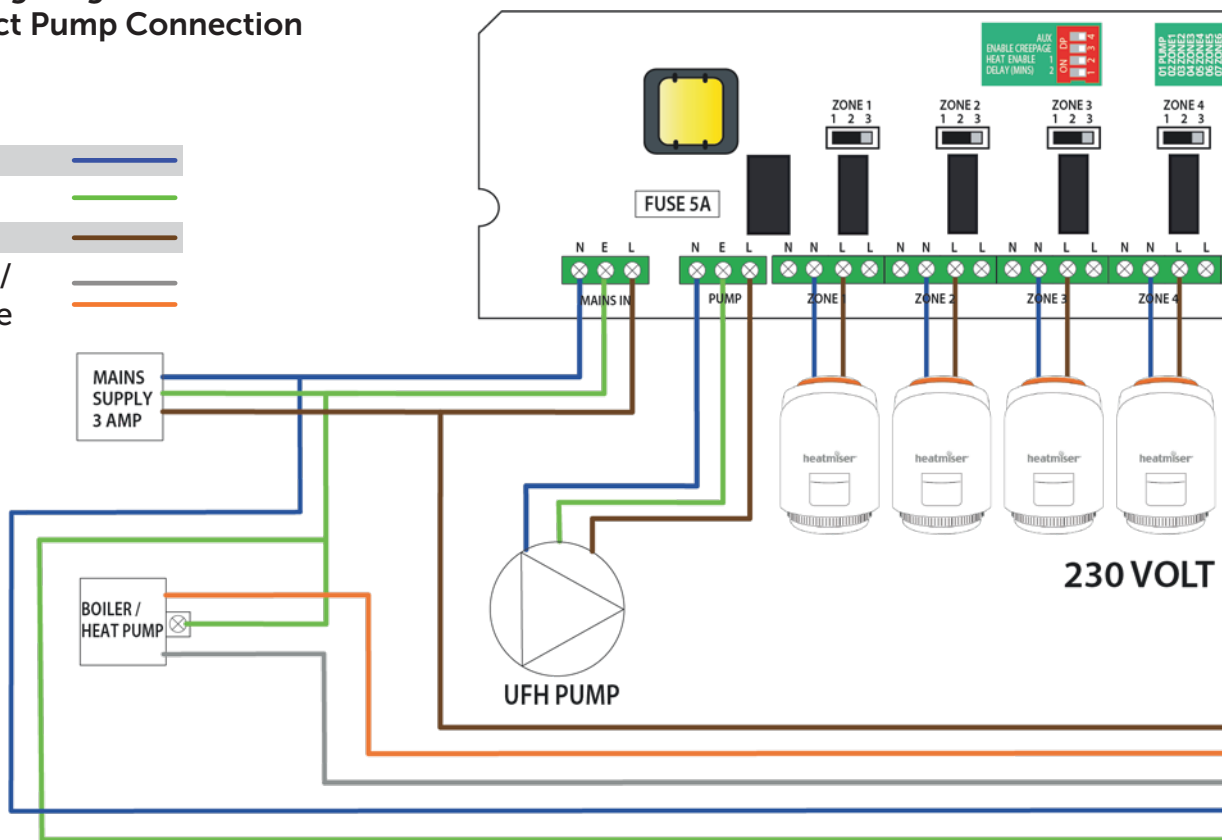
- | | |
|--|--|
| 1. Dew Point - Informs you that cooling has been shut off to prevent condensation. | |
| 2. Hot Water- Output is On. | |
| 3. Pump Output is On. | |
| 4. System is cooling. | |
| 5. System is heating. | |
| 6. Flashes continous in pairing mode (RF Switch Pairing). Intermittent flashing to indicate communication. | |



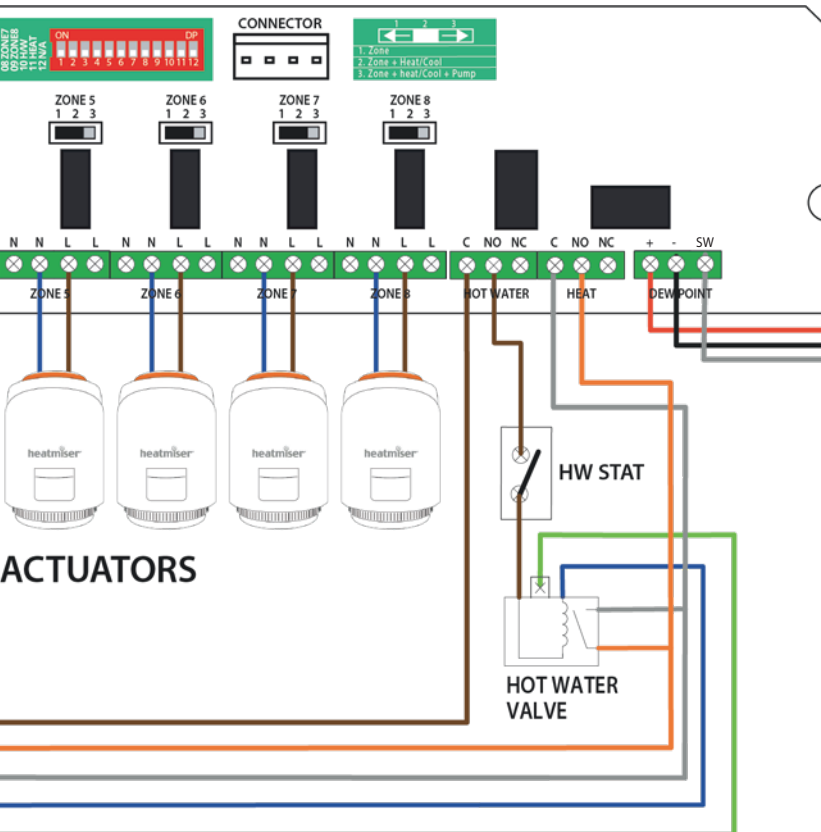
Wiring Diagram UH8-RF Direct Pump Connection

Wiring Key

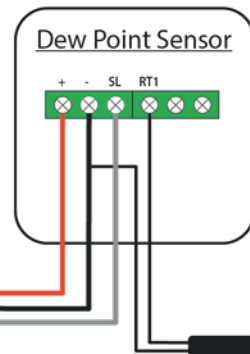
Neutral	
Earth	
Live	
End Switch/ Heat Enable	



Front Panel Connection



Recommended cable for
Dew Point Sensor: Multi-core Screened.



Flow Sensor
Not to exceed 20 meters
in cable length!

Ratings

Supply	230v AC 50Hz
Power consumption	7W
Max load on boiler output	3A 230v AC resistive.
Max load on H/W output	3A 230v AC resistive.
Max load for zone outputs	3A 230v AC resistive.
Max Total load	5 Amps

Optional Accessories

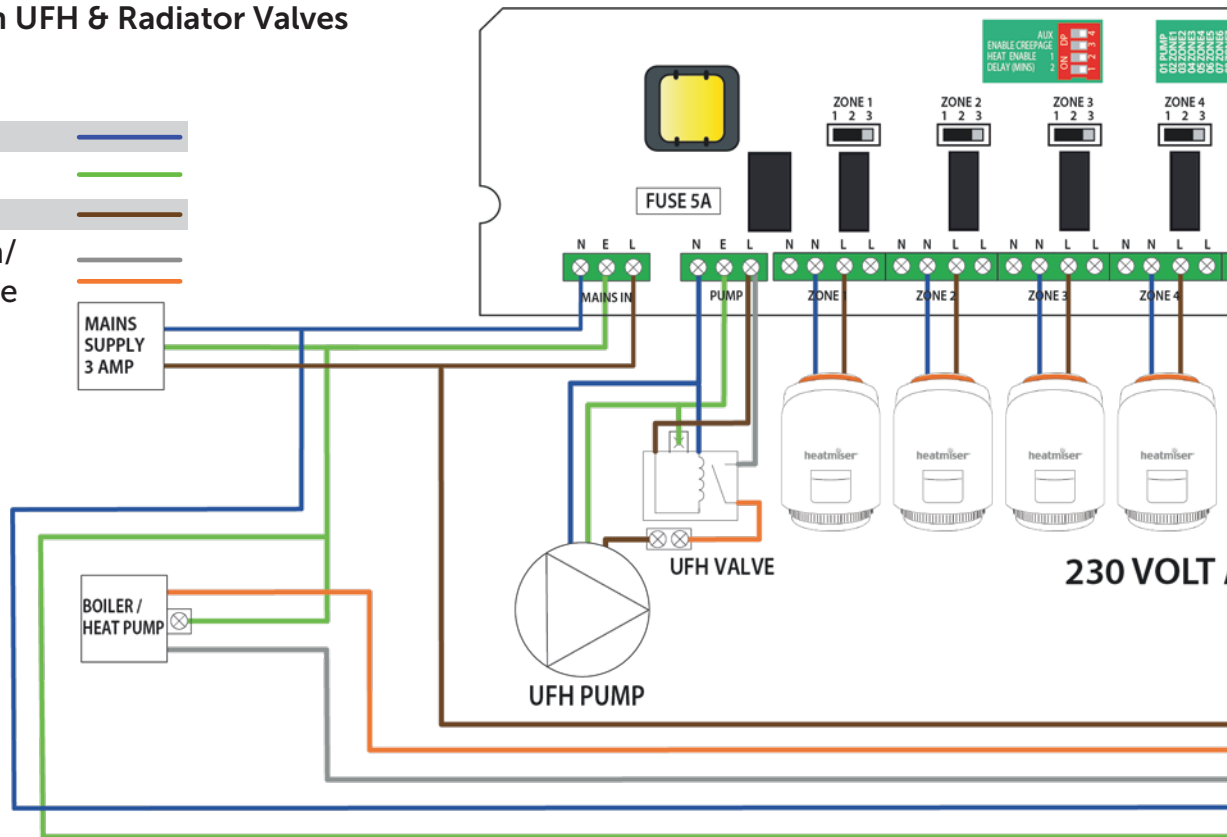
RF-Switch	(Remote Boiler enable)
Boost	(Repeater)
neoPlug	(Repeater)
Extension Antenna (included)	(EA1)



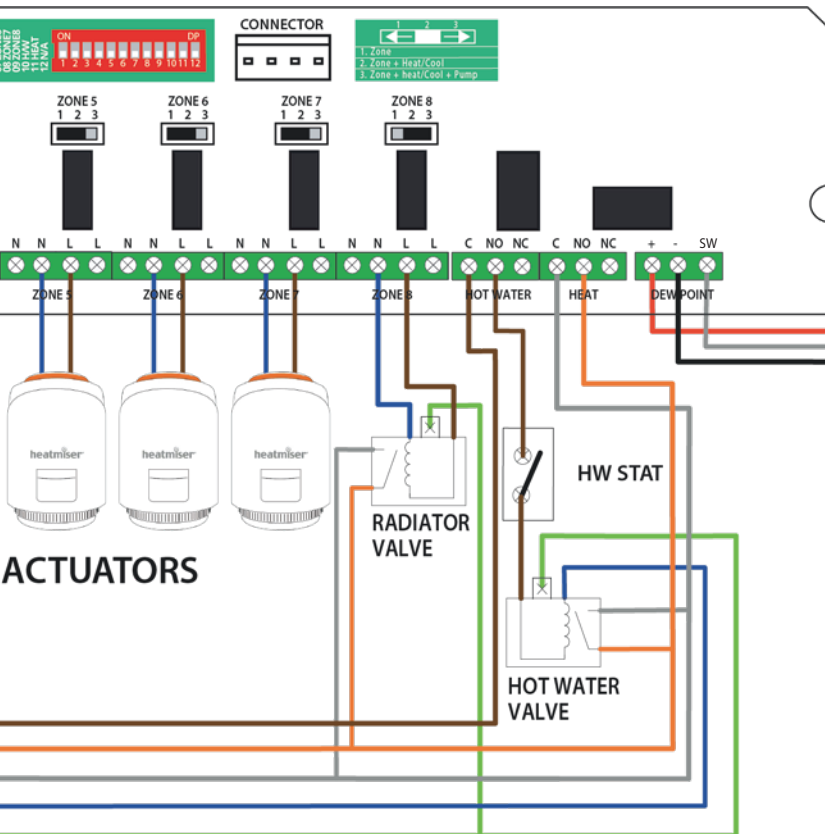
Wiring Diagram UH8-RF with UFH & Radiator Valves

Wiring Key

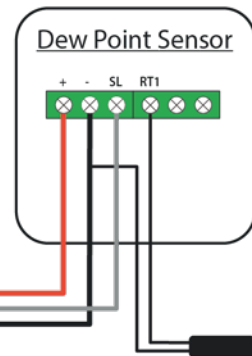
Neutral	— (Blue line) —
Earth	— (Green line) —
Live	— (Brown line) —
End Switch/ Heat Enable	— (Orange line) —



Front Panel Connection



Recommended cable for
Dew Point Sensor: Multi-core Screened.



Flow Sensor
Not to exceed 20 meters
in cable length!

Ratings

Supply

Power consumption

Max load on boiler output

Max load on H/W output

Max load for zone outputs

Max Total load

230v AC 50Hz

7W

3A 230v AC resistive.

3A 230v AC resistive.

3A 230v AC resistive.

5 Amps

Optional Accessories

RF-Switch

Boost

neoPlug

Extension Antenna (included)

(Remote Boiler enable)

(Repeater)

(Repeater)

(EA1)



System Setup

Zone Type Toggle Switches

There is a 3 position toggle switch above each zone. This switch allows 3 different switched outputs when the thermostat demands heat.

Position 1 - Zone output only.

When a thermostat is in demand, the UH8-RF will activate the Zone output to actuators only, PUMP and HEAT outputs will remain off.



Position 2 - Zone output with heat demand.

When a thermostat is in demand the UH8-RF will activate the zone output to the actuators and heat demand to the boiler.



Position 3 - Zone output with heat demand and manifold pump.

When a thermostat is in demand, the UH8-RF will activate the zone output to the actuators, the heat demand to the boiler and the manifold pump.



Pairing the UH8-RF Mini to the RF-Switch V2

- On the RF-Switch, press and hold the CH1 pairing button for 5 seconds.
The CH1 status LED will start to flash.
- Press and release the pairing button on the UH8-RF.....
When the RF-Switch detects the pairing signal from the UH8-RF, the CH1 LED will stop flashing.

Pairing a Time Clock with the Hot Water Channel.

Follow the wireless thermostat instruction manual to switch the mode to time clock, then activate pairing mode as directed.

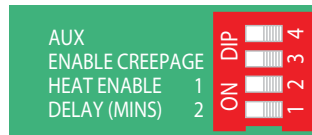
- Once pairing is active, press and release the Hot Water pairing button on the UH8-RF.....

Dip Switches

There is a 4 way dip switch responsible for 3 functions;

- Aux (Not Used)
- Enable Creepage
- Heat Enable Delay 1 minute.
- Heat Enable Delay 2 minutes

In normal use these DIP switches can be ignored and should be left in the off position.



Heat Enable Delay, Dip Switches 1 & 2

Switch 2 ON, Switch 1 OFF = Will delay the heat output for 1 minute.
Switch 2 OFF, Switch 1 ON = Will delay the heat output for 2 minutes.
Switch 2 ON, Switch 1 ON = Will delay the heat output for 3 minutes.

Creepage Protection, Dip Switch 3

To enable creepage protection, put switch 3 to the ON position



Slimline-RF V3 Pairing

Step 1, On the UH8-RF Mini:

- Press and hold the pairing button on the desired channel until the output indicator LED flashes. Pairing mode is now active on the UH8-RF Mini.

Once the UH8-RF Mini detects the pairing signal from the Slimline-RF V3 the output light will turn off.

Step 2, On the Slimline-RF V3:

- Turn Off the thermostat by, holding down the Power button for 3 seconds..... 
- Now hold down the H button for 3 seconds until you see P1 in the top right hand corner of the display*..... 

- Tap the H button once while P1 is shown to start a 99 second countdown**..... 
- During the countdown the thermostat will transmit a signal and flash the RF icon at the top left hand corner of the display..... 

If pairing is successful, the countdown will jump straight to 00 followed by a blank screen.

- Press the Power button on the thermostat once to turn the unit back On..... 

If in mode 02, the hot water timer will automatically be paired to the HW channel.

If pairing is unsuccessful, eliminate a possible signal issue by repositioning the thermostat closer to the receiver and repeat the pairing process again.

**Pairing Menu*



***Active Pairing*





Slimline-RF V1\V2 Setup & Pairing

Step 1 Setup. With the thermostat turned **OFF**:

- Press & hold the Clock button until you see two sets of numbers appear *..... 
- The small number 01 in the top right corner of the LCD is the feature number.*
- Press Clock repeatedly until you see feature 06 (Receiver Type) 
- Use the Up/Down keys to set feature 06 to 01 
- Press Clock again until you see feature 07 (Receiver Address) 
- You can now select a zone number from 01-08. To save confusion, set this address to the same zone number you will be pairing to on the UH8-RF Mini. If you have a second UH8-RF Mini, you would choose numbers 9 to 16 and so on for each additional wiring centre.*
- Use the Up/Down keys to set feature 07 to 01 
- (You must set a unique zone number address for each thermostat installed).*
- Press A to confirm settings and the display will go blank 
- If in mode 02, the secondary timer will automatically be paired to Hot Water channel.*

Step 2 Pairing.

- On the UH8-RF Mini, press and hold the desired zone pairing button for 5 seconds or until the zone light flashes steadily.
- With the thermostat turned OFF, press & hold the A button for 5 seconds..... 
- The thermostat will send a signal for 1 minute and will flash the RF signal icon**..... 
- If pairing is successful, the flashing light on the UH8-RF Mini will go out almost immediately.*

If pairing is unsuccessful, check features 06 to 07 have been configured correctly. To eliminate a possible signal issue, reposition the thermostat closer to the receiver and repeat the pairing process again.

Note: the maximum number of Slimline-RF thermostats on this system is 32.

**Feature Menu*



***Active Pairing*





NeoAir Pairing

Applies to NeoAir/NeoAir V2/NeoAir V2M & V3

Step 1, On the UH8-RF Mini:

- Press and hold the pairing button on the desired channel until the output indicator LED flashes. Pairing mode is now active on the UH8-RF Mini.

Once the neoAir has successfully paired to the UH8-RF Mini, the zone light will stop flashing.

Step 2, On the NeoAir V2/V2M/V3:

- Use the Left / Right keys to scroll to the power icon   
- Press and hold the Tick key for 3 seconds..... 
- SETUP will be highlighted*, now press the tick key once..... 
- The display will show 01 in the top right hand corner.*
- Press the Down arrow key once. The display will now show P1..... 
- Press Tick again to start 99 second countdown**..... 
- The thermostat will send a signal for 99 seconds and flash the RF signal icon..... 
- UH8-RF Mini: Confirm that the zone light has stopped flashing.*
- When pairing is complete, cancel the countdown on the thermostat by pressing the tick key once 

Step 2, On the NeoAir V1:

- Use the Left/Right arrow keys to scroll to SETUP and press tick key once.....   
- The display will show 01 in the top right hand corner.*
- Press the Down arrow key once. The display will now show P1..... 
- Press Tick again to start 99 second countdown**..... 
- The thermostat will send a signal for 99 seconds and flash the mesh symbol..... 
- UH8-RF Mini: Confirm that the zone light has stopped flashing.*
- When pairing is complete, cancel the countdown on the thermostat by pressing the tick key once 

If in mode 03, the hot water timer will automatically be paired to the HW channel.

If pairing is unsuccessful, eliminate a possible signal issue by repositioning the thermostat closer to the receiver and repeat the pairing process again.

*Setup Menu Entry Point



**Active pairing mode





System Configuration

PLEASE COMPLETE DURING INSTALLATION

UH8-RF Mini Title:

	In Use	Zone Type		Zone Title
		Under-Floor	Radiator	
Zone 1	☐	☐	☐	
Zone 2	☐	☐	☐	
Zone 3	☐	☐	☐	
Zone 4	☐	☐	☐	
Zone 5	☐	☐	☐	
Zone 6	☐	☐	☐	
Zone 7	☐	☐	☐	
Zone 8	☐	☐	☐	
Hot Water	☐			



Notes

[illegible]



Want More Information?

Call our support team on: +44 (0)1254 669090

Or view technical specifications directly on our website: www.heatmiser.com



PDF



FAQ

IMI Heatmiser
Units 1-5 Hurstwood Court, Mercer Way
Shadsworth Business Park, Blackburn,
Lancashire, BB1 2QU, United Kingdom.

Products Commonly used with the UH8-RF Mini wiring centre.



Slimline-RF



neoAir



RF-Switch/RF-Switch V2



neoPlug (Signal Booster)



TA 230 Actuator

Hereby, IMI Heatmiser declares that the radio equipment type UH8-RF Mini is in compliance with Directive 2014/53/EU. RF frequency: 868MHz. Max e.r.p 10.72 dBm. For full declaration of conformity visit www.heatmiser.com.