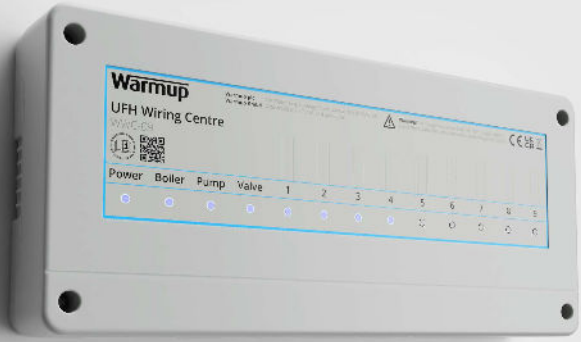
Warmup



UFH Wiring Centre

WWC-09

Installation manual

12 YEAR LIMITED WARRANTY
Warmup

Warmup

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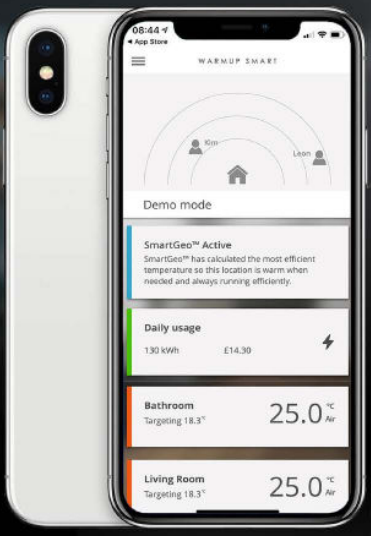

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6iE OB WiFi Thermostat

www.warmup.co.uk

Table of contents

This product uses mains voltage electricity and work should only be carried out by a qualified electrician. You should always isolate the power supply before attempting to install or repair the Wiring Centre or connected devices. The Wiring Centre should not be put into operation unless you are certain that the entire heating installation has been completed in accordance with latest IEE Wiring Regulations and appropriate statutory Regulations.

It is important that before, during and after installation that all requirements are met and understood. If the instructions are followed, you should have no problems. If you require help at any stage, please contact our helpline.

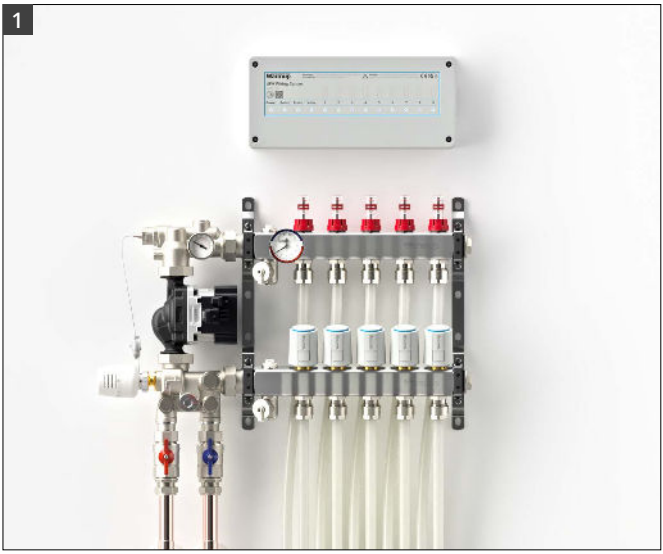
You may also find a copy of this manual, wiring instructions and other helpful information on our website:

www.warmup.co.uk

Installation summary

Please read the full installation instructions before proceeding.

1



- Identify a suitable mounting location. Normally above the manifold.

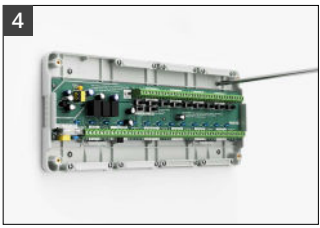
2

- Remove the front cover of the Wiring Centre and mark the screw positions on the mounting surface.

3

- Drill the pre-marked holes and insert a suitable wall plug (if required).

4



- Screw the Wiring Centre to the wall using M4x30mm screws.

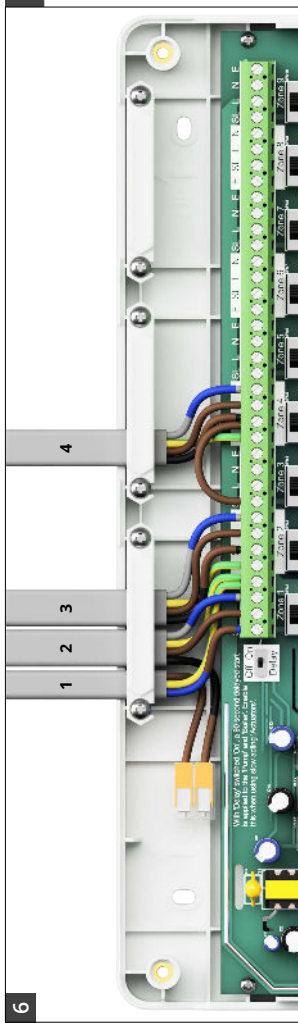
5

- If Wiring Centre is being DIN rail mounted, hook onto the rail and click in place.

Installation summary

Do not switch on the power supply until all wiring connections have been terminated and front cover re-fitted.

6



Legend

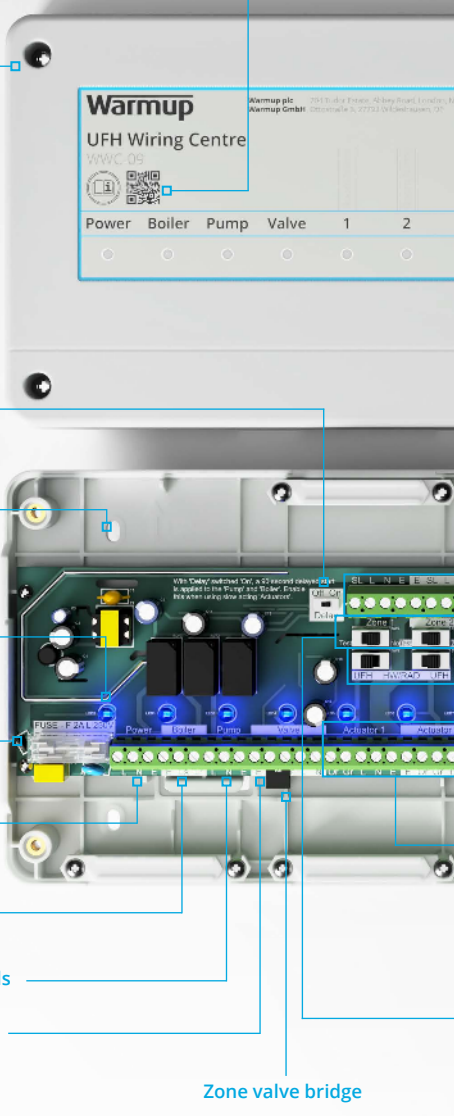
1. Cylinder thermostat
2. Single channel programmer
3. Radiator thermostat
4. UFH Thermostat (Shown with 2 zones bridged)
5. Power supply and interlock (5-core HR Flex) 230V AC; 50Hz
6. Circulator
7. UFH zone valve (optional)
8. Hot water zone valve
9. Radiator zone valve
10. UFH actuators

Important information

- Ensure the Wiring Centre is mounted to a structurally sound wall.
- Precautions should be taken to reduce the risk of damaging any services within the walls when drilling.
- Ensure no loose strands wire are left outside of the terminal blocks during wiring.
- Ensure the wires are fully inserted into the terminals before tightening.
- Ensure the Wiring Centre is connected to the same supply circuit as the rest of the heating system, so as to keep everything to a single point of isolation.
- Do not exceed specification - failure to do so will void the warranty.
- Do not use excessive force when tightening screw terminals.

Components available from Warmup

Product Code	Description
Wired controls	
WWC-09	Warmup UFH Wiring Centre - 9 Zone Wiring Centre
6IE-01-OB-DC 6IE-01-BP-LC	Warmup 6iE
RSW-01-WH-RG (ELM-01-WH-RG) RSW-01-OB-DC (ELM-01-OB-DC)	Warmup Element
ELT PW (ELT-01-PW-01) ELT PB (ELT-01-PB-01)	Warmup tempo
Manifold components	
WHS-M-S3-XX	Warmup S3 Manifold *XX = No.of ports; 2-12*
WHS-M-S3-MIX	Mixing Unit - For S3 Manifold with 3 port valve - Capillary thermostat - Grundfos UPM3 circulator
WHS-M-S3-VALVES	1" Isolation valves (pair) - For S3 Manifold - 1" M Union to 22mm compression
WHS-M-S3-ACT230	230V Electrothermic actuator
Additional components	
WHS-ZONE VALVE 2 PORT	2-Port Zone Valve



Installation manual QR-Code
Links to landing page
for country specific manuals

Captive case screws x 4
Prevents lost screws

90 second delayed start function
Allows time for slow acting actuators to fully open

Wall mounting location x 4
Includes 4 wall screws & plugs
(+ extra set)

LED indicators
Shows each output(s) activity for easier diagnostics

Fuse
F 2A L 250V
(+ 1 extra)

Power supply terminals
230 V AC; 50Hz

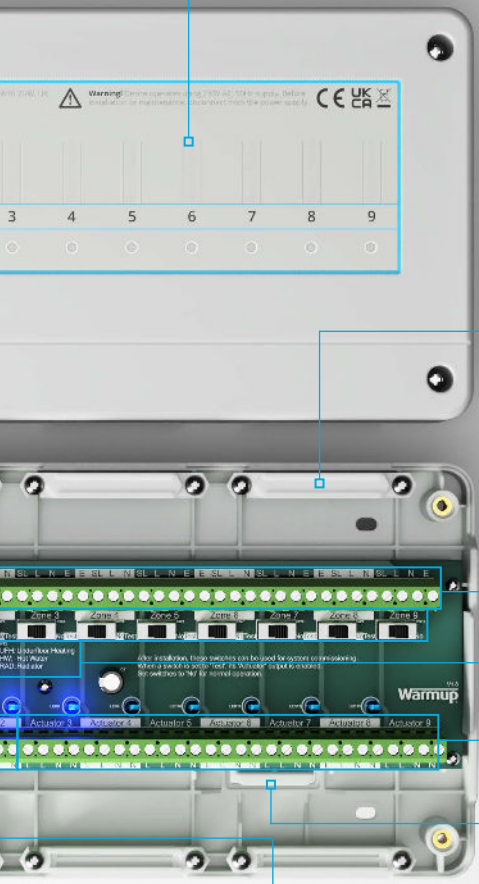
Heat source terminals

Circulator terminals

Zone valve terminals
Remove zone valve bridge
if connecting a zone valve

Zone valve bridge

Room name markers
Allows each zone to be labelled during installation



Reversible cable strain relief clamps x7

Zones 1-9 thermostat / programmer terminals
Thermostat connections for underfloor heating / radiators or programmer for hot water

Zone 1/2 mode selects
Switch between underfloor heating, hot water / radiator

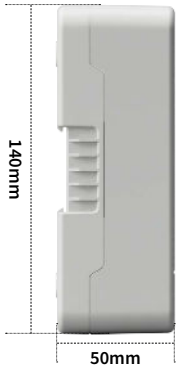
Actuator 3-9 terminals
For connection to underfloor heating actuators

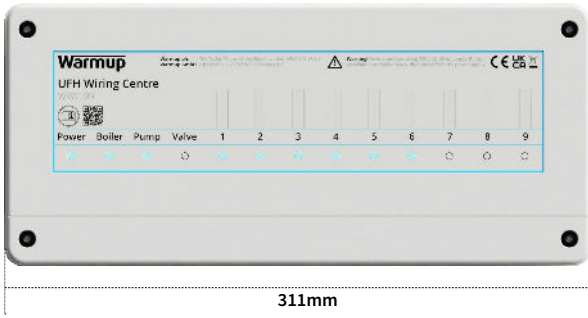
Actuator 1/2 terminals
Can be used to control underfloor heating, hot water / radiator circuits

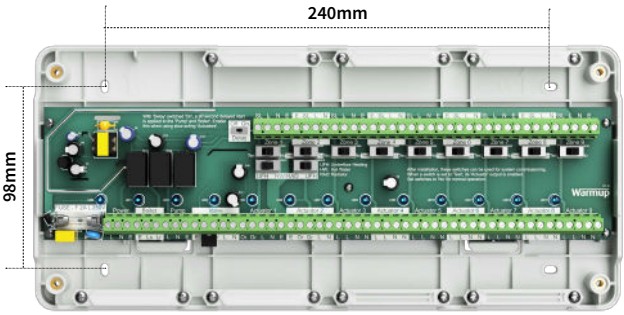
DIN rail clips x2

Zone test switches
Simulates a call for heat in this zone to check the status of the actuator, valve, circulator and heat source

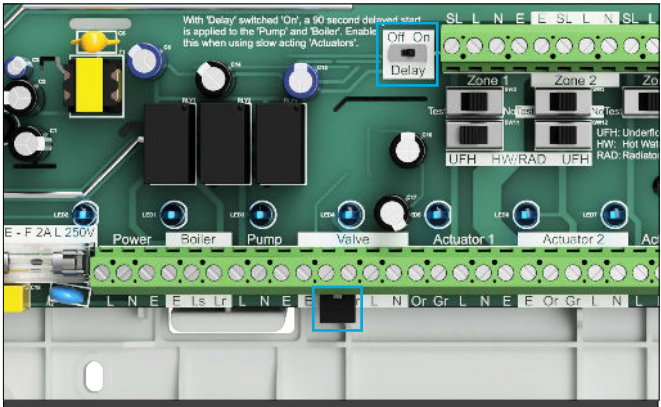
Dimensions


140mm
50mm


Warmup
UFH Wiring Centre
Power
Boiler
Pump
Valve
1
2
3
4
5
6
7
8
9
311mm


240mm
98mm
Warmup

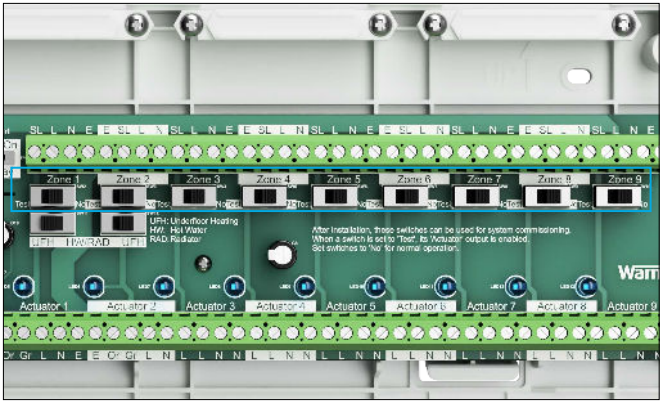
Delayed start & zone valve bridge



Zone Valve Bridge	
Or, Gr	2-port motorised zone valve bridge

- If using slow acting actuators there is an optional 90 second “delayed start” feature for the heat source, allowing the UFH actuators to open fully, which prevents short cycling and energy wastage.
- If the manifold has a dedicated zone valve on its supply, remove the bridge and connect the zone valves end switch in its place. If no zone valve is used the bridge can remain in place.

Zone test switches

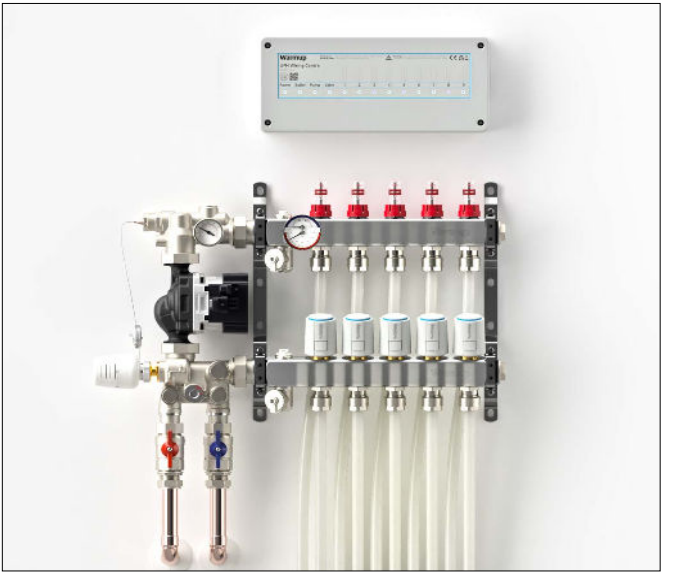


- Warmup actuators are supplied latched open for easy mounting on the manifold. They need to powered on for at least 2 minutes to fully open them and disengage their latches so that they can close the valves.

  The test switches can also be used for this and commissioning the manifold, ensuring the flow rates are correct on each port and the pump is set to its correct operating mode.

  This negates the need to go to each zones thermostat to call for heat. All switches must be set to NO (normal operation) after commissioning.

Step 1 - Location considerations



Identify a suitable mounting location for Wiring Centre.
The location should meet the following requirements;

The surface on to which it is to be mounted should be:

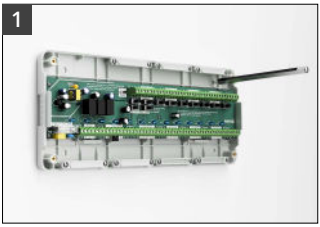
- Mounted where it will not be exposed to temperatures less than 0°C or greater than 45°C.
- In a dry, indoor environment with a relative humidity of no more than 70%.
- Close to the manifold, within cable reach of valve actuators and circulator on the manifold/mixing unit.

Step 2 - Assembly & mounting

The Wiring Centre can be either mounted directly on to a wall or mounted on a DIN rail. It is recommended that walls are assessed prior to drilling to reduce the risk of damaging existing services in the wall.

Wall mounting

1

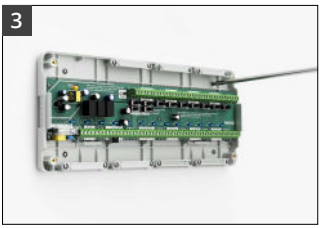


- Remove the front cover of the Wiring Centre and mark the screw positions on the mounting surface.

2

- Drill the pre-marked holes and insert a suitable wall plug (if required).

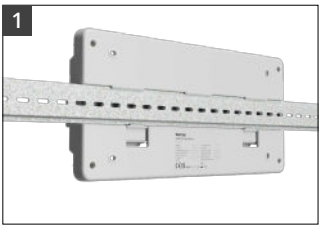
3



- Screw the Wiring Centre to the wall using M4x30mm screws.

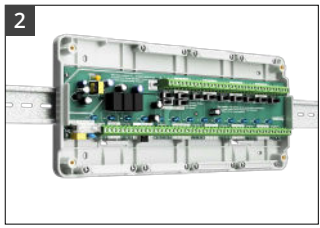
DIN rail mounting

1



- Align the groove on the back of the Wiring Centre with the DIN rail, hook the Wiring Centre over the DIN rail and gently press the bottom in until it clicks into place.

2



- To remove the Wiring Centre from the DIN rail, remove the front cover and gently pull on the two release clips.

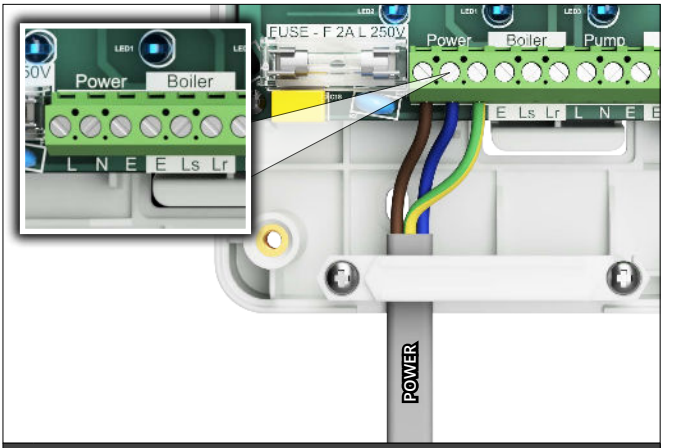
Step 3 - Wiring - Power supply

The Wiring Centre requires a 230V AC; 50Hz power supply.

The power supply should not be livened until all electrical connections within the Wiring Centre and its interconnected devices have been made and their covers re-fitted.

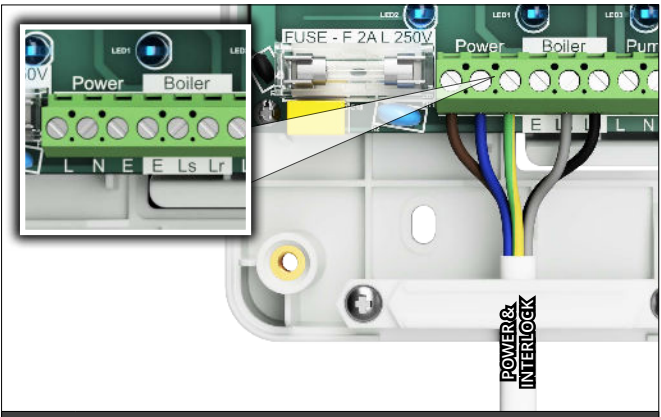
The Wiring Centre and connected devices must be supplied from a single point of isolation. The power supply can be taken directly from the systems switched fused spur or from the heat source if provisions exist.

The Wiring Centre has a replaceable fuse located adjacent to the power supply terminals (F 2A L 250 VAC)



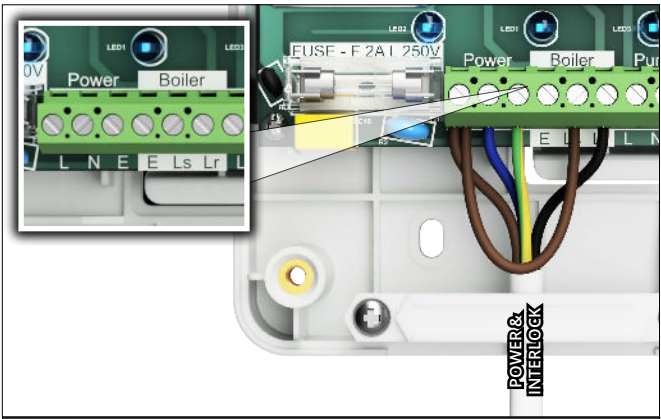
230V AC; 50Hz Power supply		
L	=	Live
N	=	Neutral
E	=	Earth

Connecting a heat source using a volt-free, 3A Switched e.g. Combi boiler



230V AC; 50Hz Power supply and interlock (5-core HR Flex)		
L	=	Live
N	=	Neutral
E	=	Earth
Ls	=	Live supply
Lr	=	Live return (Switched live to heat source)

Connecting a heat source using 230V AC; 50Hz, 3A switched live e.g. System Boiler



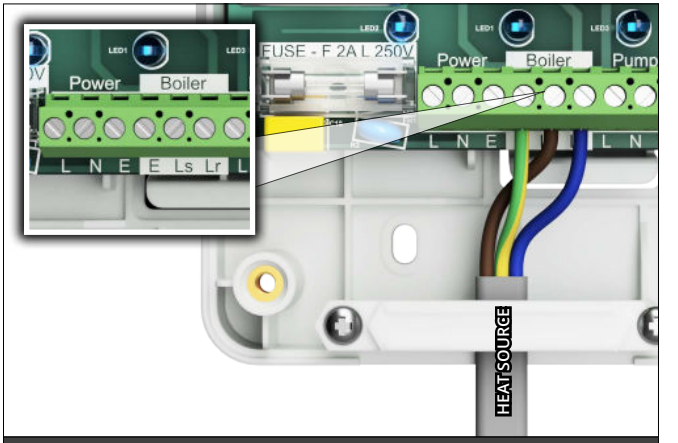
230V AC; 50Hz Power supply and interlock (4-core HR Flex)		
L	=	Live
N	=	Neutral
E	=	Earth
Ls	=	Live supply (Bridge wire)
Lr	=	Live return (Switched live to heat source)

Step 3 - Wiring - Heat source

The heat source terminals provide a switched power supply. The heating interlock is enabled whenever a demand signal is received. It is recommended that the 90 second delayed start is enabled. This will allow the actuators to open before the heat source is energised.

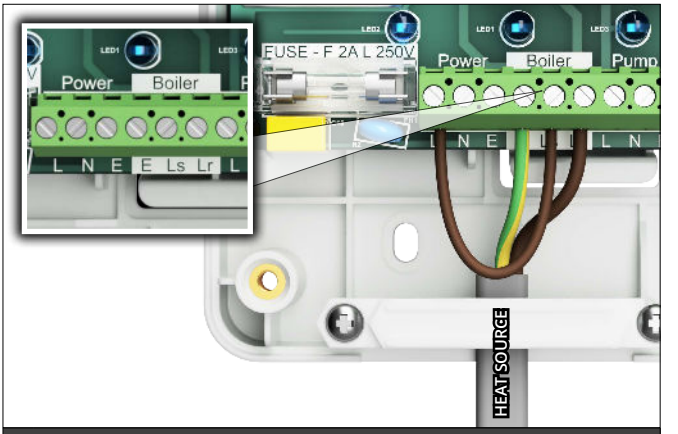
The maximum operating current when connecting a heat source using the Live return contact is 3 amps. For the Boiler circuit, make sure to use this product together with 3A circuit breaker in the upstream

Connecting a heat source using a volt-free, 3A Switched e.g. Combi boiler

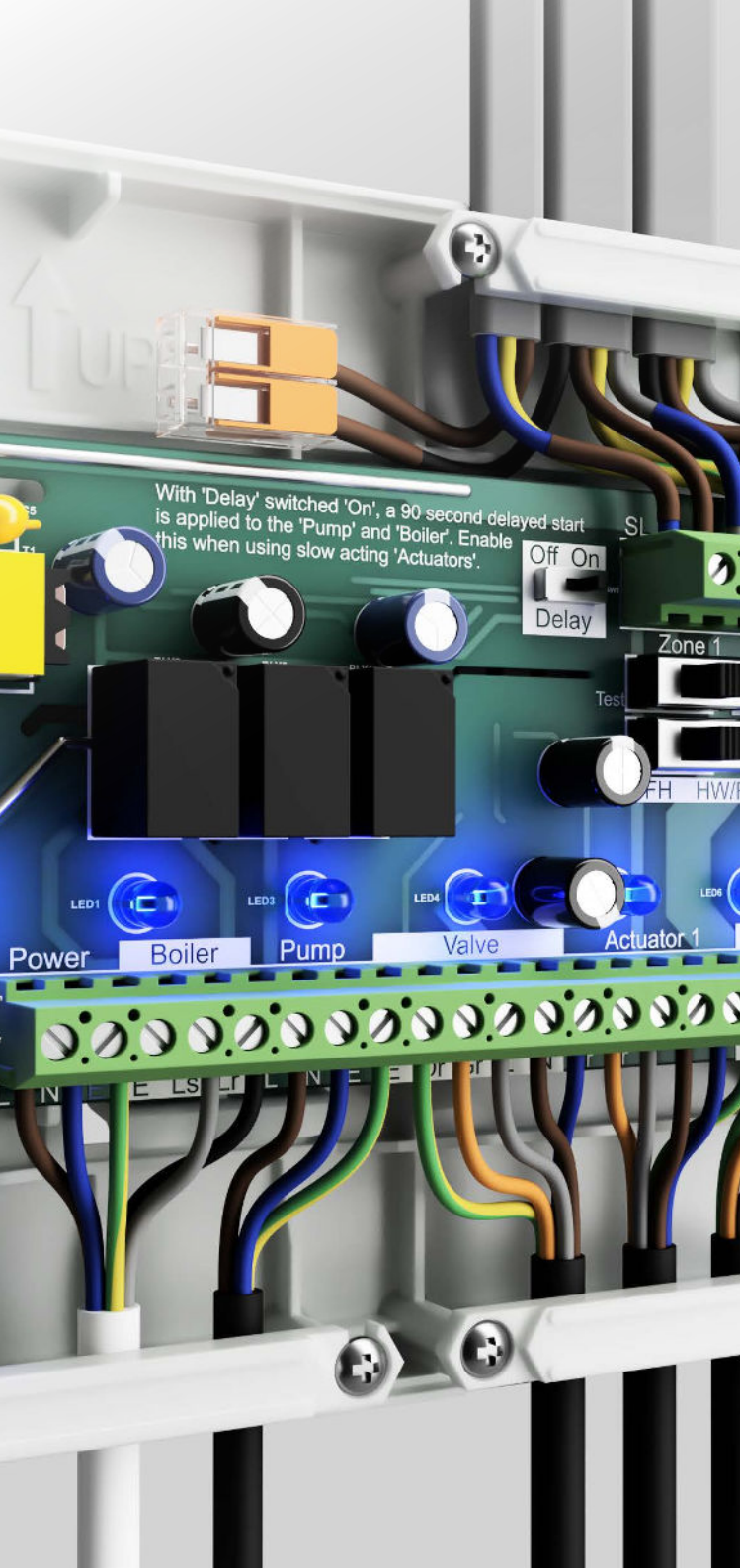


Heat source (Volt free)		
E	=	Earth
Ls	=	Live supply
Lr	=	Live return (Switched live to heat source)

Connecting a heat source using 230V AC; 50Hz, 3A switched live e.g. System Boiler

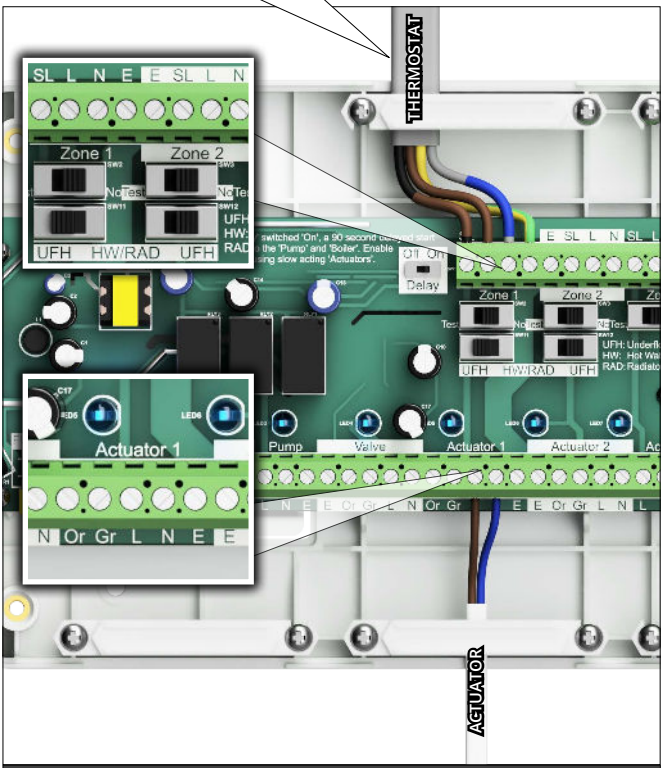


Heat source		
E	=	Earth
Ls	=	Live supply (Bridge wire)
Lr	=	Live return (Switched live to heat source)


With 'Delay' switched 'On', a 90 second delayed start is applied to the 'Pump' and 'Boiler'. Enable this when using slow acting 'Actuators'.
Off On
Delay
Zone 1
LED1
LED3
LED4
Power
Boiler
Pump
Valve
Actuator 1

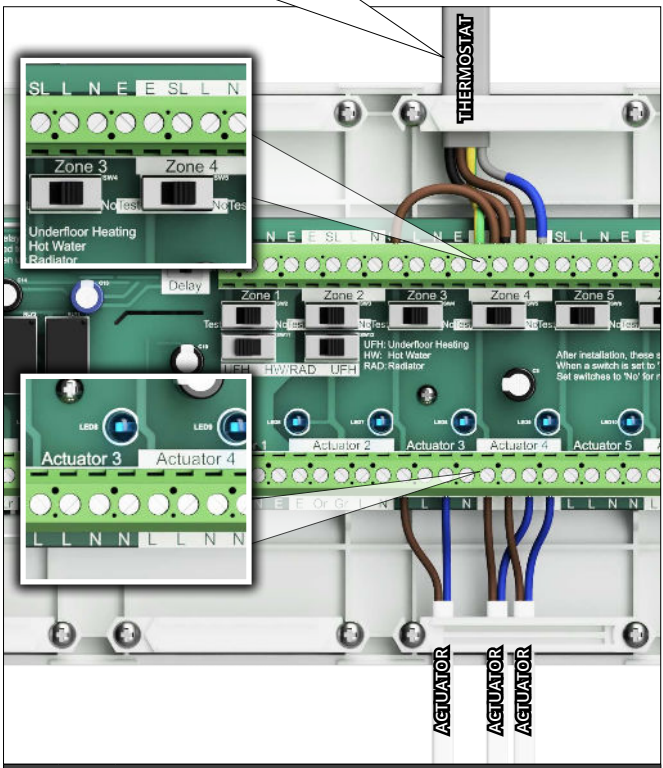
Step 3 - Wiring - Thermostat & actuators

Up to 4 actuators can be connected to a single zone by connecting two into each pair of terminals.



Thermostat connection on Wiring Centre		
SL	=	Switched live
L	=	Live
N	=	Neutral
E	=	Earth
Actuators		
L	=	Live
N	=	Neutral

If a zone requires more than 4 actuators, two or more zones can be bridged together.



Thermostat connection on Wiring Centre		
E	=	Earth
SL	=	Switched live & bridge wire
L	=	Live
N	=	Neutral
Actuators		
L	=	Live
N	=	Neutral

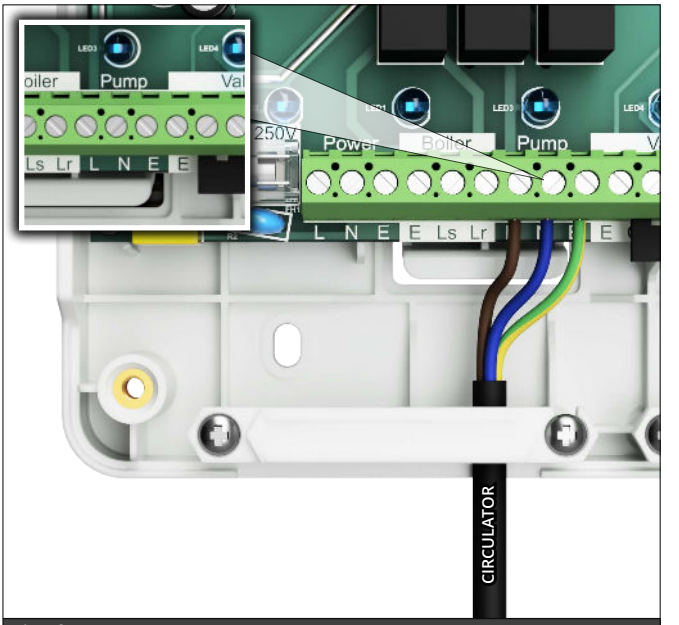
Step 3 - Wiring - Circulator

The Wiring Centre provides a switched power supply out to a circulator that activates when any underfloor heating channel has demand.

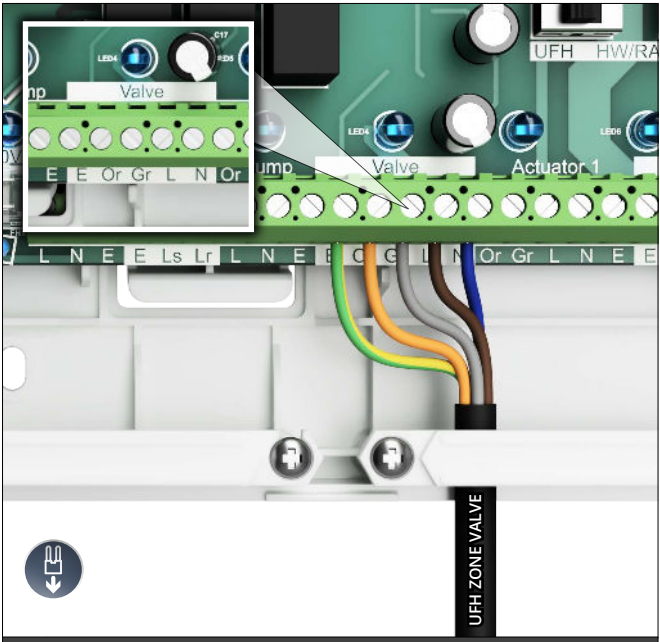
If a mixing unit is fitted to the controlled manifold, it should be this secondary circulator that is connected.

If there is a dedicated primary circulator to this manifold or if the connected manifold is the only emitter on the heat source, then these terminals can provide power to that primary circulator.

When enabled there is a 90 second delay on the circulator supply to allow the actuators to fully open. This can be disabled if required.



Circulator		
L	=	Live
N	=	Neutral
E	=	Earth



Zone valve		
E	=	Earth
Or	=	Switched live to Wiring Centre
Gr	=	Live
L	=	Switched live to zone valve
N	=	Neutral

- Where installed on the manifold supply, remove the bridge between Or and Gr.
- If a 2-Port motorised zone valve is used it must have an end switch and be connected as above.
- The underfloor heating circulator and heat source will be energised through the end switch. This is so that in the event of the valves failure, the heat source will not be activated by the Wiring Centre.

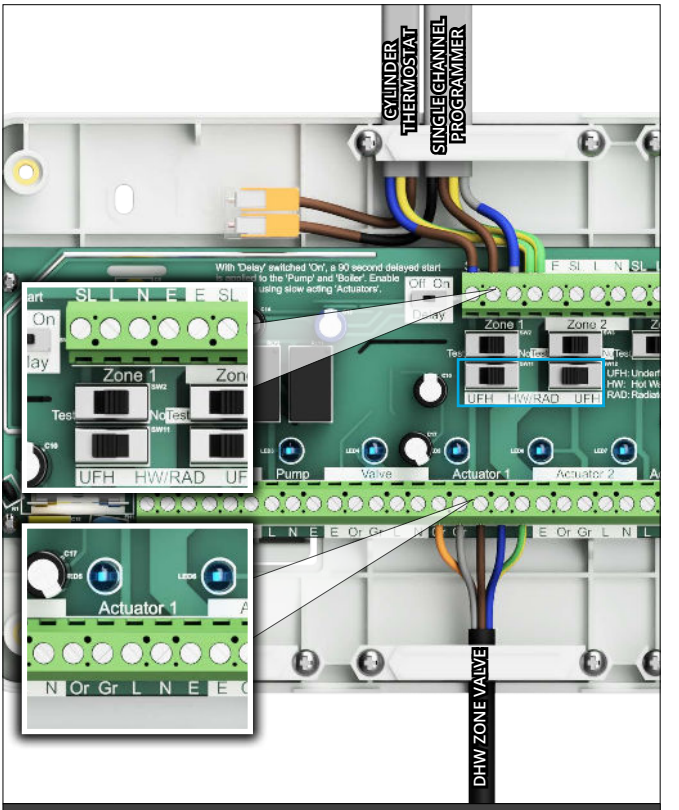
2-Port motorised zone valves without an end switch must not be used

Step 3 - Wiring - Hot water

Zones 1 and/or 2 can be used to control hot water circuits by selecting HW/RAD on the mode switches. In this mode when the programmer and the cylinder thermostat call for heat, the zone valve will be energised. The heat source will be energised when the zone valve end switch closes.

Delayed start function does not apply to hot water circuits.

The UFH circulator and valve outputs are not energised by Zones 1 and/or 2 when they are set to HW/RAD.



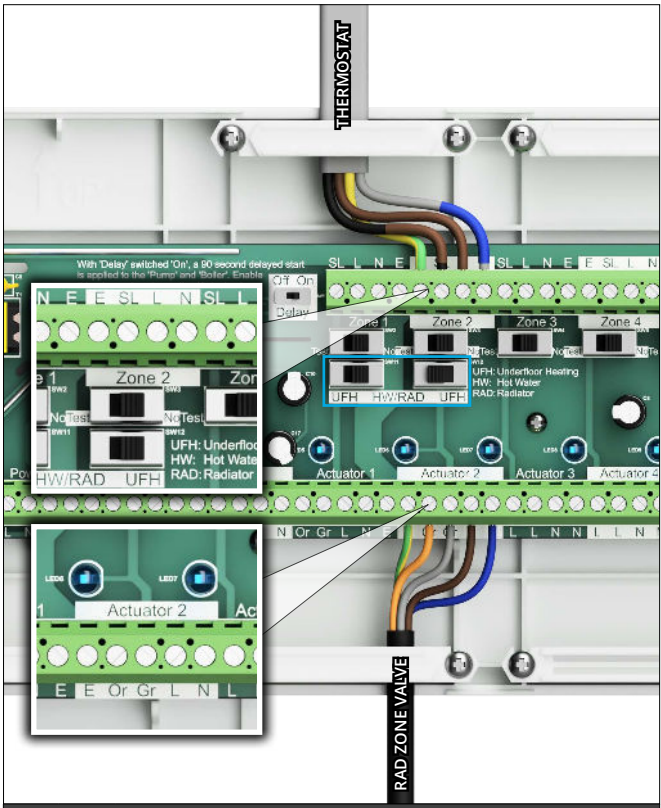
Programmer & cylinder thermostat connection on Wiring Centre		
SL	=	Switched live
L	=	Live
N	=	Neutral
E	=	Earth
Programmer & cylinder thermostat connection on junction block		
SL	=	Switched live in from programmer
SL	=	Switched live out to cylinder thermostat
Zone valve (Hot water)		
Or	=	Switched live to Wiring Centre
Gr	=	Live
L	=	Switched live to zone valve
N	=	Neutral
E	=	Earth

Step 3 - Wiring - Radiators

Zones 1 and/or 2 can be used to control conventional radiator circuits by selecting HW/RAD on the mode switches. In this mode when the radiator thermostat calls for heat, the zone valve will be energised. The heat source will be energised when the zone valve end switch closes.

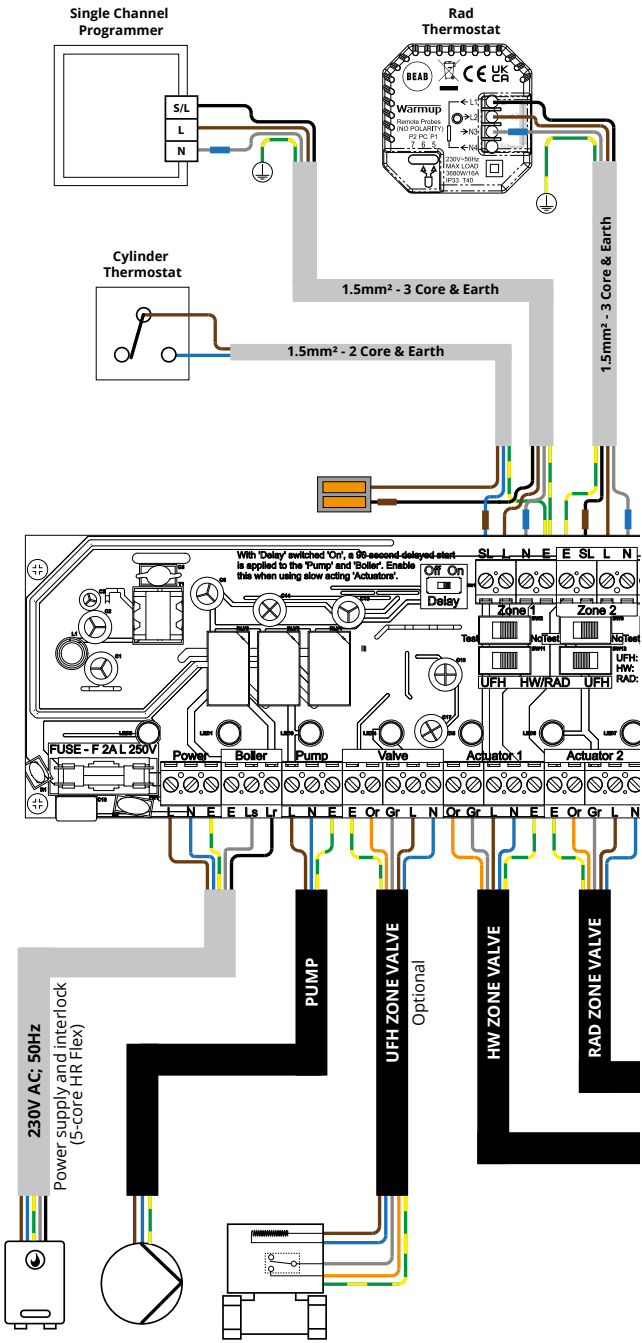
Delayed start function does not apply to radiator circuits.

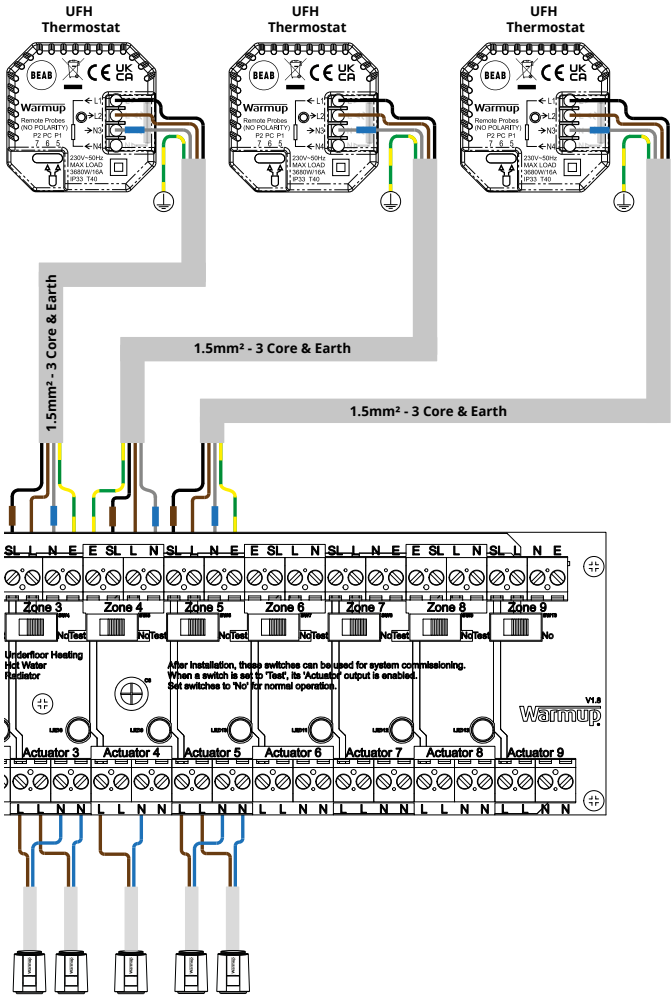
The UFH circulator and valve outputs are not energised by Zones 1 and/or 2 when they are set to HW/RAD.

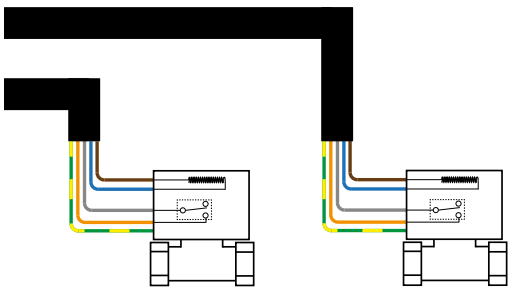


Thermostat connection on Wiring Centre		
E	=	Earth
SL	=	Switched live
L	=	Live
N	=	Neutral
Zone valve (Radiators)		
E	=	Earth
Or	=	Switched live to Wiring Centre
Gr	=	Live
L	=	Switched live to zone valve
N	=	Neutral

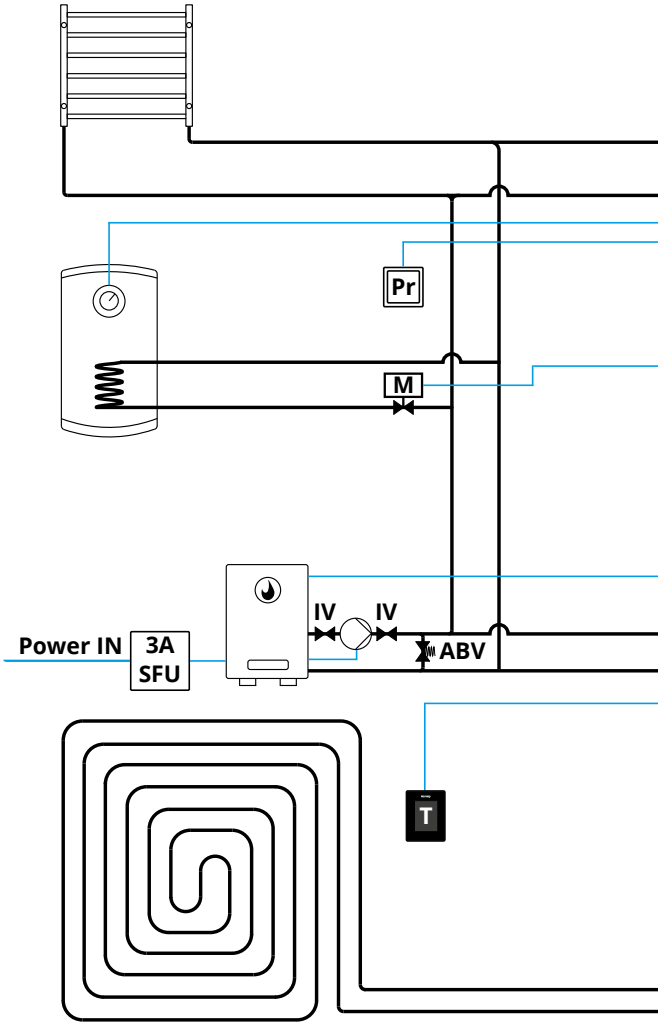
Wiring schematic - Typical installation




UFH Thermostat
UFH Thermostat
UFH Thermostat
1.5mm² - 3 Core & Earth
1.5mm² - 3 Core & Earth
1.5mm² - 3 Core & Earth
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7
Zone 8
Zone 9
Underfloor Heating
Hot Water
Radiator
After installation, these switches can be used for system commissioning.
When a switch is set to 'Test', its 'Actuator' output is enabled.
Set switches to 'No' for normal operation.
Actuator 3
Actuator 4
Actuator 5
Actuator 6
Actuator 7
Actuator 8
Actuator 9

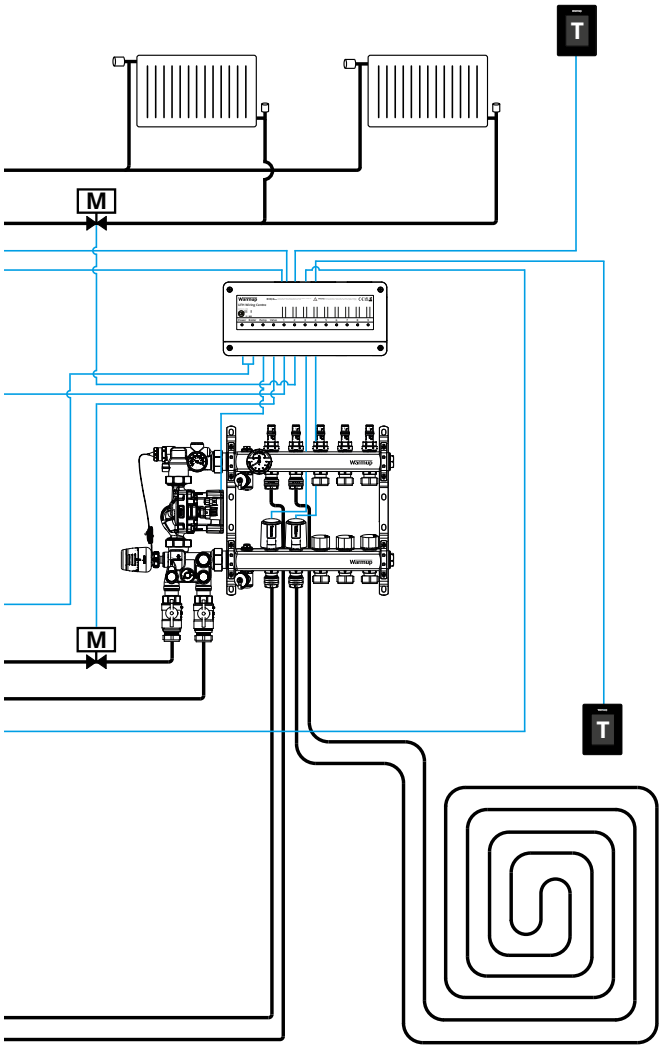


Plumbing schematic - Typical installation



Legend

Heated towel rail	Heat source
Cylinder thermostat	Isolation Valve
Hot water cylinder	Circulator
3A Switched Fuse Spur	Hot water programmer
Underfloor heating	Motorised zone valve



ABV Automatic by-pass valve

Thermostat

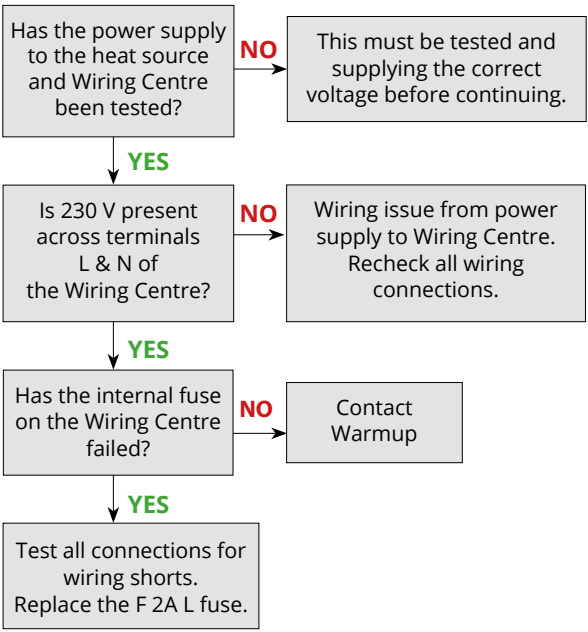
Radiators

UFH Wiring centre (WWC-09)

S3 Manifold, mixing unit and isolation valves

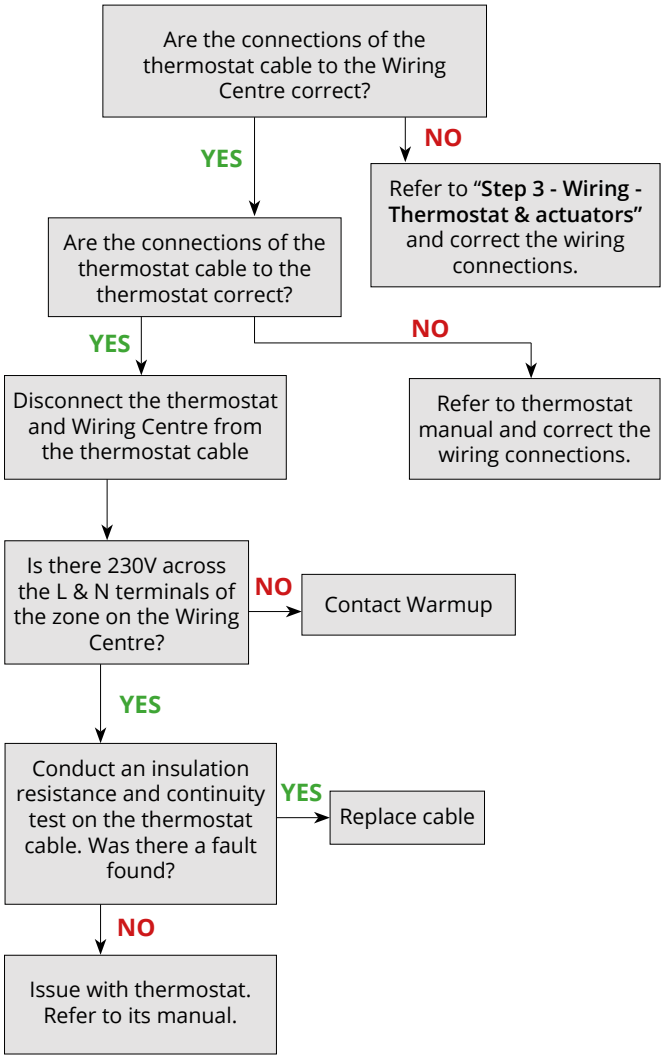
ISSUE 1 - Power LED not activated

Must completed by a qualified and competent electrician



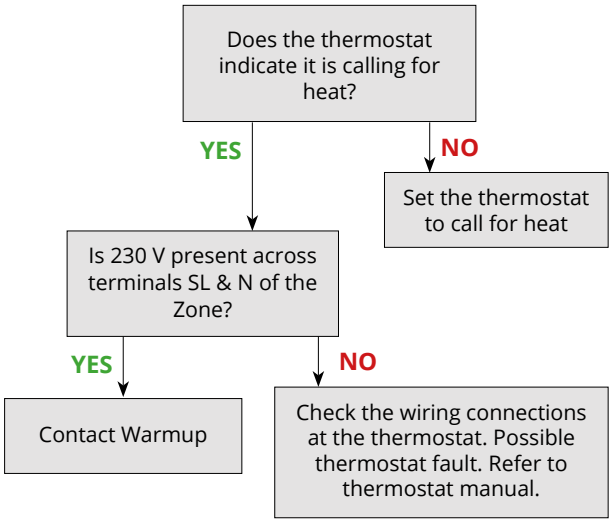
ISSUE 2 - Thermostat does not have power
Must completed by a qualified and competent electrician

Ensure issue 1 has been ruled out first



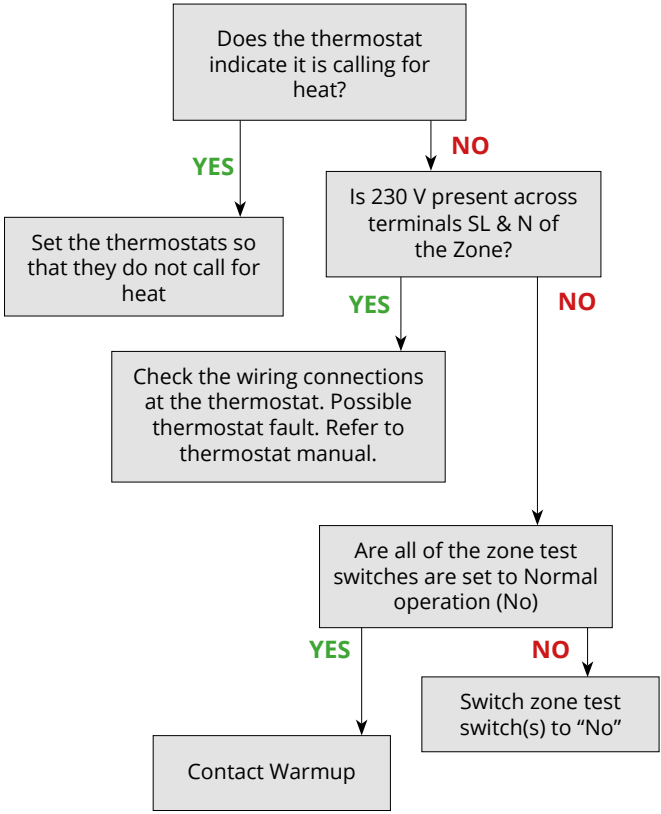
ISSUE 3 - Zone LED(s) not activating
Must completed by a qualified and competent electrician.

Ensure issues 1-2 have been ruled out first



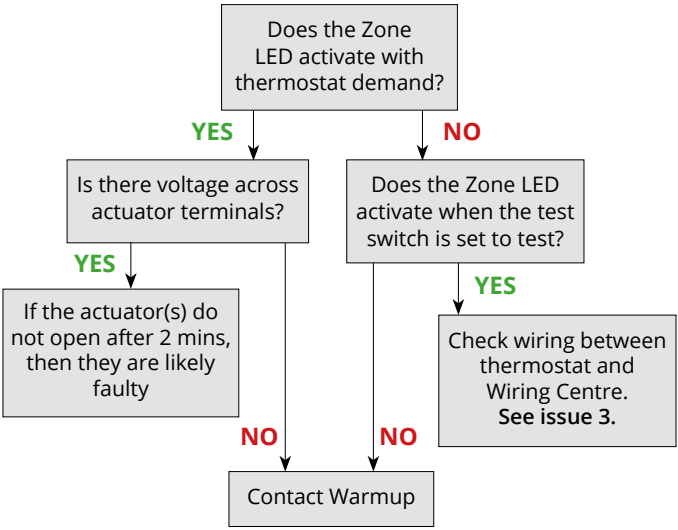
ISSUE 4 - Zone LED(s) always active
Must completed by a qualified and competent electrician.

Ensure issues 1-3 have been ruled out first



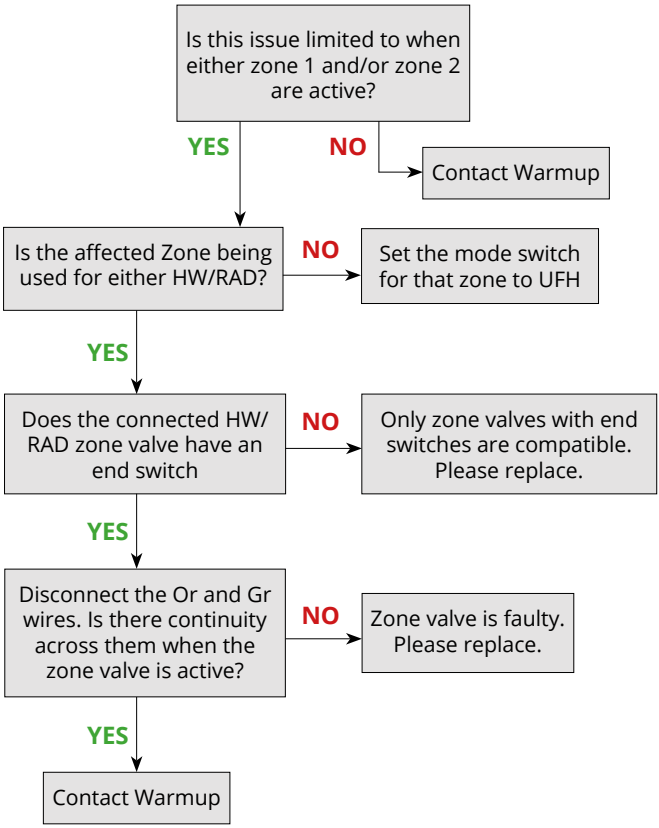
ISSUE 5 - Actuator(s) or HW/RAD zone valve not activating
Must completed by a qualified and competent electrician.

Ensure issues 1-4 have been ruled out first



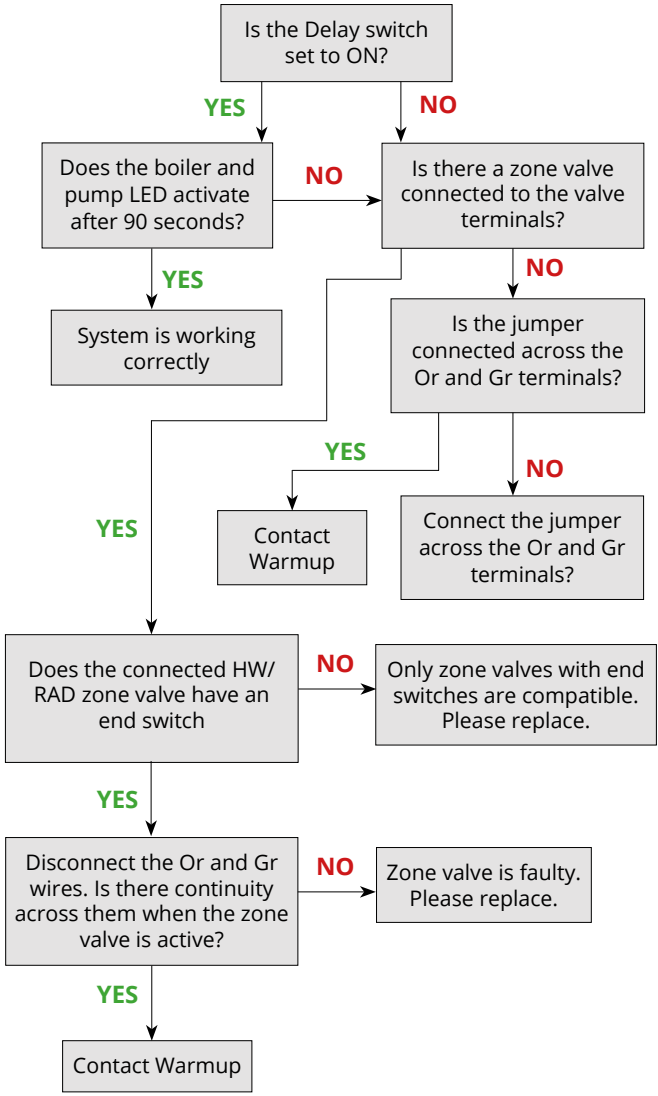
ISSUE 6 - Valve LED not activating when Zone LED(s) do
Must completed by a qualified and competent electrician.

Ensure issues 1-5 have been ruled out first



ISSUE 7 - Boiler and Pump LED's not activating
Must completed by a qualified and competent electrician.

Ensure issues 1-6 have been ruled out first

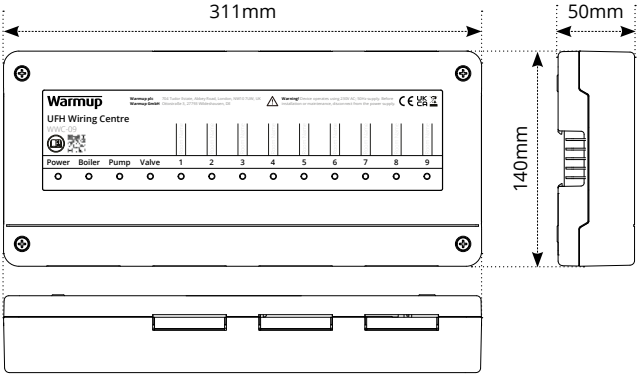


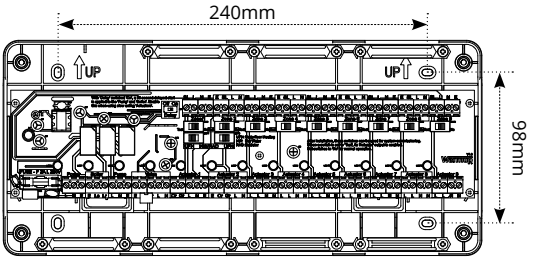
ISSUE 1 - The Wiring Centre fuse blows as soon it activates	
SOLUTION	
1	Check all wiring is connected correctly
2	Check the power supply to ensure there are no short circuits across any of the terminals
3	Ensure a F 2A L 250VAC fuse is fitted
4	Check all thermostat connections for short circuits
ISSUE 2 - The Wiring Centre fuse blows as soon as any zone activates	
SOLUTION	
1	Check the wiring for the circulator is connected correctly
2	Check the wiring for the heat source is connected correctly
3	Check the wiring for the zone valve (if fitted) is connected correctly
4	Check all wiring for any short circuits
ISSUE 3 - The Wiring Centre fuse blows when only one zone activates	
SOLUTION	
1	Check the wiring to the thermostat for a short circuit
2	Check the wiring to the zone actuators for a short circuit

UFH Wiring Centre (WWC-09)	
Operating voltage	230V AC; 50Hz
Max. total load	2A resistive
Supply overload protection	3A (Use external 3A MCB's, RCBO's or fuses for this purpose)
Fuse	F 2A L 250V 5x20mm
Classification of control according to protection against electric shock	Class I
No. of cycles of actuation (M)	10000
Type of disconnection	Micro-disconnection
Additional features of actions	1.B
Pollution degree	2
Glow wire temperature	550 / 850°C
Rated impulse voltage	4KV
Period of electric stress across insulating parts	Long period
IP rating	IP20
Operating temperature	0 - 45°C, T45
Wire size	1.0 - 2.5mm²
Max. number of zones	9
Max. of hybrid zones	2 (HW/RADS)
Max. Load Outputs	**Boiler -** 3A Resistive (Supply MUST be protected by 3A MCB/RCBO)
	Pump - 0.6A Resistive (0.6A inductive resistance of the motor)
	Valve - 0.2A Resistive
	Actuators - 0.1A Resistive
DIN-rail mounting	Yes
Commissioning switches	9
Delayed start	90 seconds; switchable

Warmup plc ▪ 704 Tudor Estate ▪ Abbey Road ▪ London ▪ NW10 7UW ▪ UK
Warmup GmbH ▪ Ottostraße 3 ▪ 27793 Wildeshausen ▪ DE

Instructions for Disposal
Do not dispose of the device with regular domestic waste! Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with the Waste Electrical and Electronic Equipment Directive.


311mm
50mm
140mm
Warmup
UFH Wiring Centre
Power
Boiler
Pump
Valve
1
2
3
4
5
6
7
8
9


240mm
UP
UP
98mm

Warmup plc limited warranty –
UFH Wiring Centre - WWC-09

Warmup plc warrants this product, to be free from defects in the workmanship or materials, under normal use and service, for a period of twelve (12) years from the date of purchase by the consumer when installed with Warmup thermostats, actuators and manifold mixing unit where applicable.

If at any time during the warranty period the product is determined to be defective, Warmup shall repair or replace it, at Warmup's option. If the product is defective, please either;

Return it, with a bill of sale or other dated proof of purchase, to the place from which you purchased it, or

Contact Warmup. Warmup will determine whether the product should be returned or replaced.

The twelve (12) year warranty only applies if the product is registered with Warmup within 30 days after purchase. Registration can be completed online at www.warmup.co.uk

This warranty does not cover removal or re-installation costs and shall not apply if it is shown by Warmup that the defect or malfunction was caused by failure to follow the instruction manuals, incorrect installation or damage which occurred while the product was in the possession of a consumer. Warmup's sole responsibility shall be to repair or replace the product within the terms stated above. If the WWC-09 is installed with any non-Warmup thermostats, actuators or manifold mixing unit a three (3) year warranty will apply.

WARMUP SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY WARMUP MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE TWELVE-YEAR DURATION OF THIS WARRANTY.

This warranty does not affect your statutory rights.

Warmup plc
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Please scan the QR code to provide feedback on your installation

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