Warmup

S-Series -
4 Zone Control Centre

WHS-C-B-MASTER01

Installation manual

WARMUP 2 YEAR LIMITED WARRANTY
2 YEAR LIMITED WARRANTY
Warmup

Warmup

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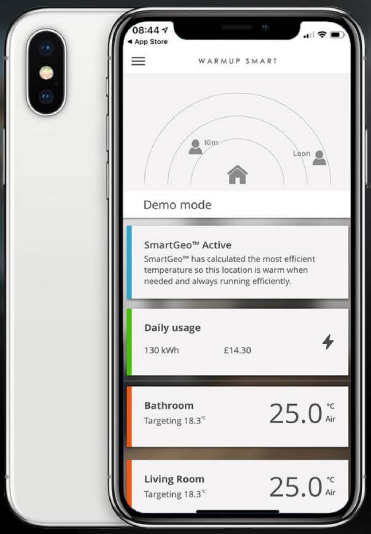

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6iE OB WiFi Thermostat

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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 Control Centre or connected devices. The Control 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.

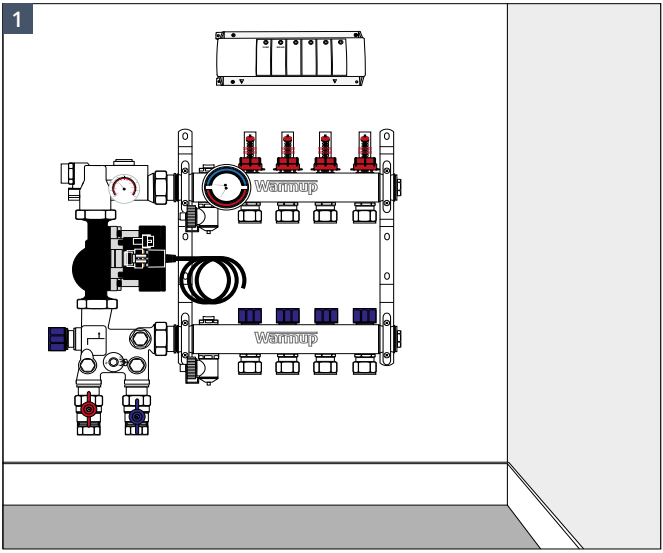
You may also find a copy of this manual, wiring instructions and other helpful information on our website:

www.warmup.co.uk

Installation summary

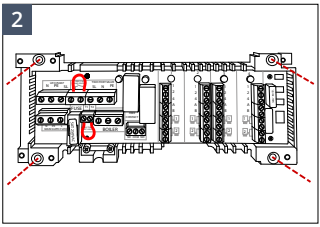
Please read the full installation instructions before proceeding.

1



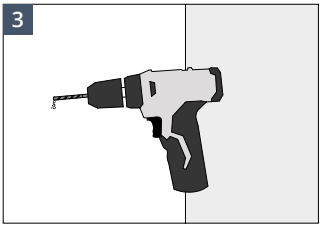
- Identify a suitable mounting location. Normally above the manifold.

2



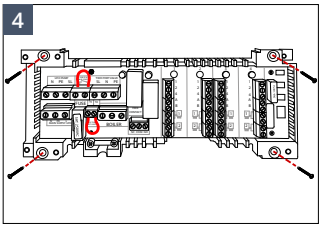
- Remove the front cover of the control centre and mark the screw positions on the mounting surface.

3



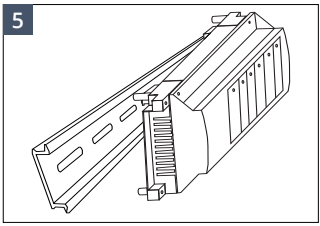
- Drill the pre-marked holes and insert a suitable wall plug (if required).

4



- Screw the control centre to the wall using 3x40mm screws (not supplied).

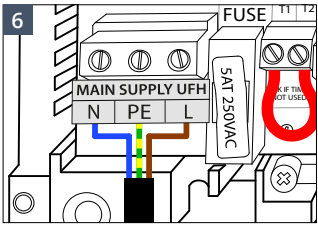
5



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

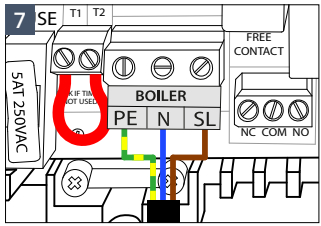
Installation summary

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



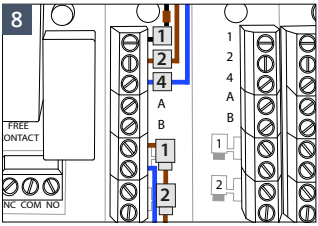
- Connect power supply wiring.

Power supply		
N	=	Neutral
PE	=	Earth
L	=	Live

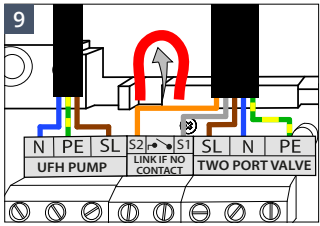


- Connect heat source wiring.

Heat source		
PE	=	Neutral
N	=	Earth
SL	=	Live



- Connect thermostat and actuator wiring.

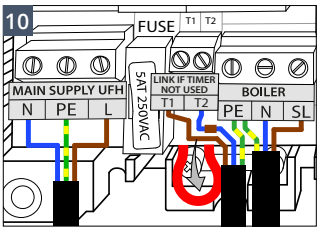


- If connecting zone valve, remove link wire. Connect circulator wiring.

Thermostat	
1 = Switched Live	
2 = Live	
4 = Neutral	
Time switch	
A = Time Channel	
B = Time Channel	

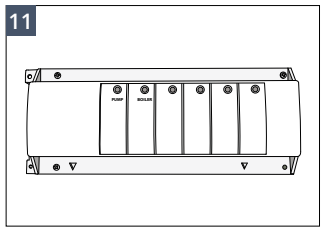
Actuator
1

Circulator	Zone Valve
N = Neutral	**S2** = Normally open
PE = Earth	**S1** = Common
SL = Switched Live	**SL** = Switched Live
	N = Neutral
	PE = Earth



- If connecting time switch, remove link wire.

Time switch		
T1	=	Time switch
T2	=	Time switch



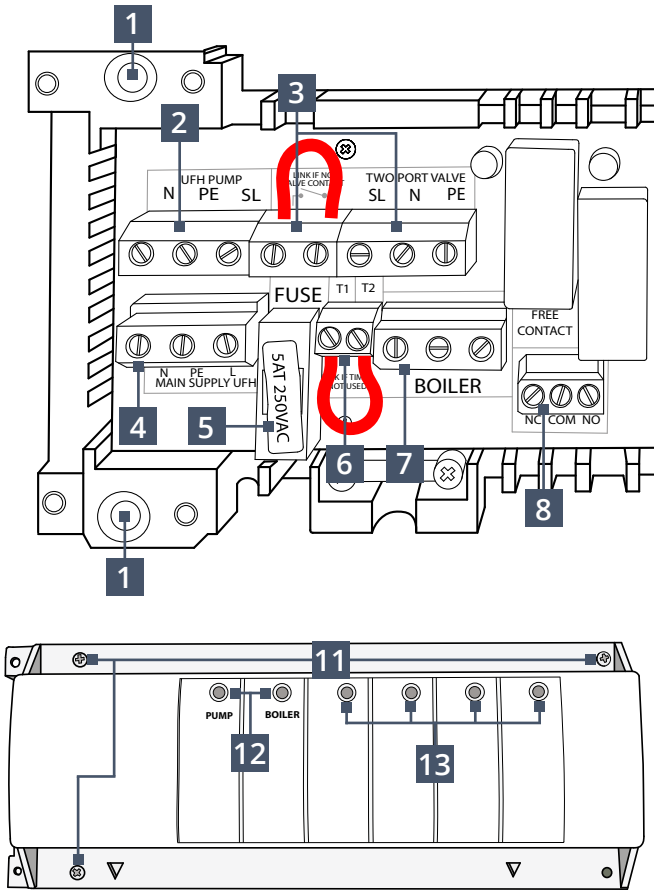
- Re-fit the control centre cover.

Important information

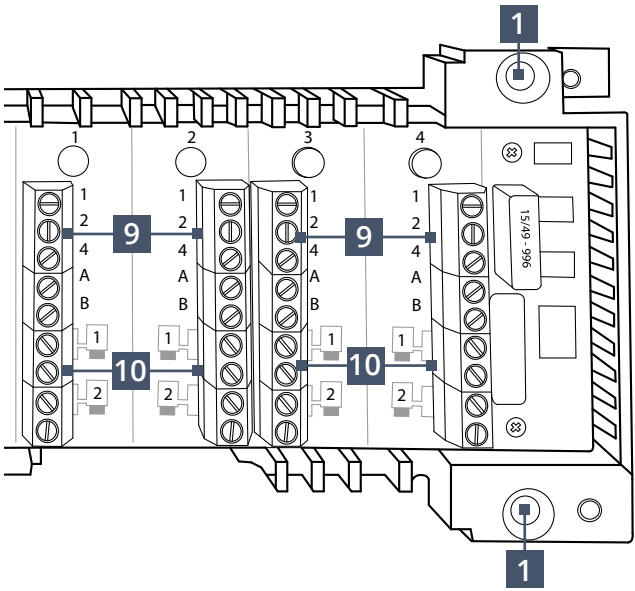
- Ensure the S-Series control centre (WHS-C-B-MASTER01) is mounted to a structurally sound wall.
- Precautions should be taken to reduce the risk of damaging any services within the walls when drilling.
- Ensure no loose strands wire are left outside of the terminal blocks during wiring.
- Ensure the wires are fully inserted into the terminals before tightening.
- Ensure the control centre is connected to the same 3A 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.

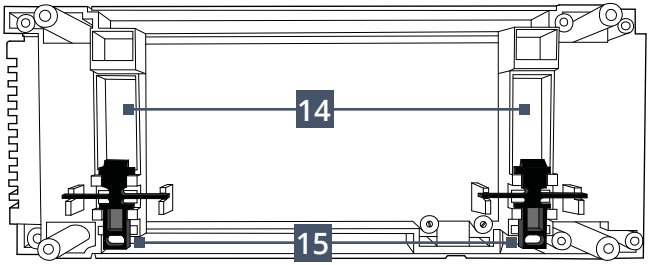
Components available from Warmup

Product Code	Description
Wired controls	
WHS-C-B-MASTER01	S-Series - 4 Zone control centre
WHS-S-SLV4Z	S-Series - 4 Zone control centre extension
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



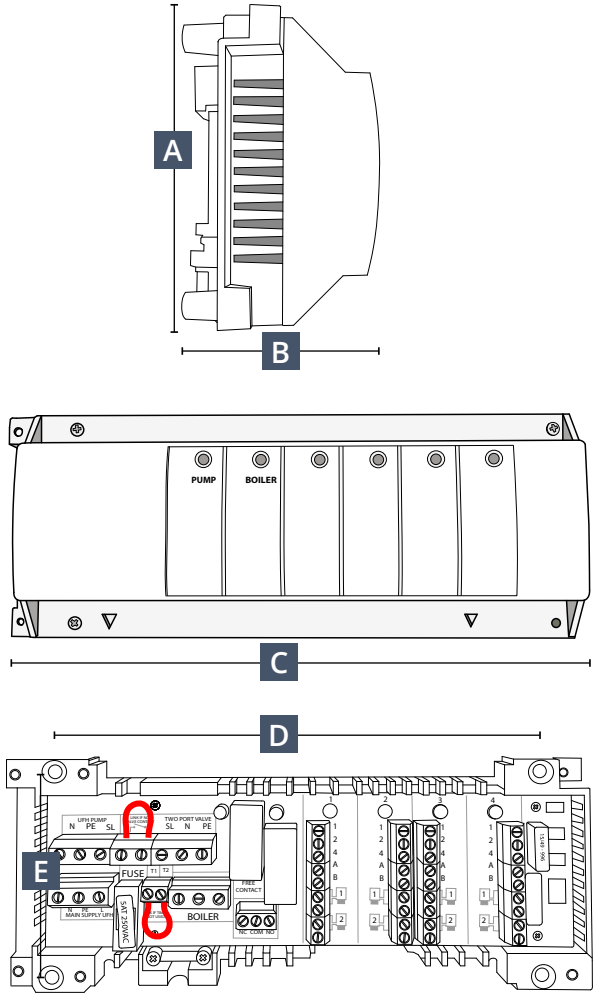
S-Series control centre - WHS-C-B-MASTER01	
1	Wall mounting screw holes
2	Connections for circulator
3	2 Port motorised zone valve terminals (remove link if used)
4	Power supply terminals
5	Fuse 5AT 250VAC
6	External time clock terminals (remove link if used)
7	Heat source switch (230V)
8	Heat source switch (Volt-free)





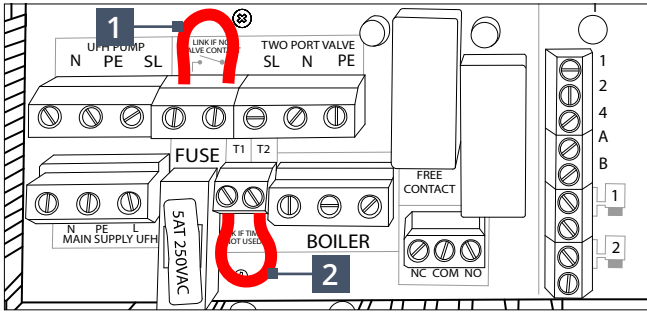
9	Thermostat terminals
10	Actuator terminals
11	Cover screws
12	Red LED indicators for heat source and circulator
13	Green LED indicators for zone actuator state
14	DIN rail mounting bracket
15	DIN rail release clips

Dimensions



S-Series Controls - Dimensions					
Product	Height (A)	Depth (B)	Width (C)	Mounting (D)	Mounting (E)
4-Zone Master	90	60	225	187	77
4-Zone Slave	90	60	160	123	77

All measurements are in millimetres (mm) unless otherwise stated.

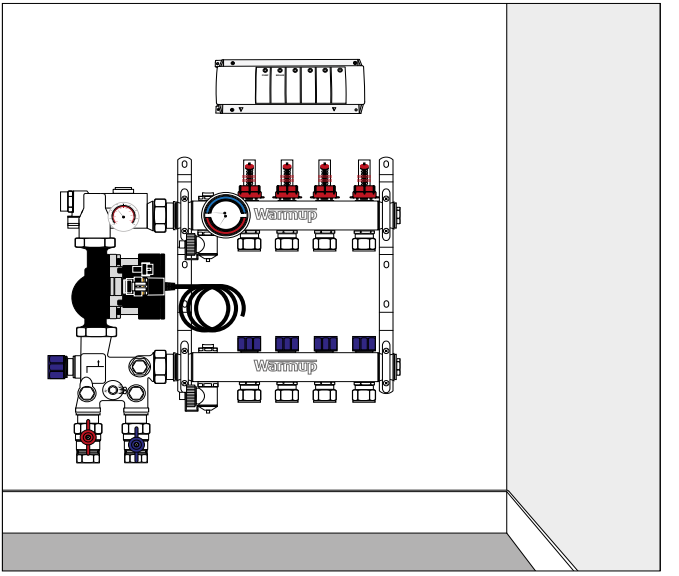


S-Series 4 Zone Control Centre - Link Wires	
1	2-port motorised zone valve link wire
2	External time switch link wire

- If the control centre is to be used with a 2-port zone valve, ensure the link wire is removed from terminals (no.1). If no zone valve is to be connected (and link wire connected) all devices (Circulator, valve and heat source) will work simultaneously.

- If the control centre is to be used with an external time switch, ensure the link wire is removed from terminals **T1** and **T2** (no.2) and connect the external switch in its place.

Step 1 - Location considerations



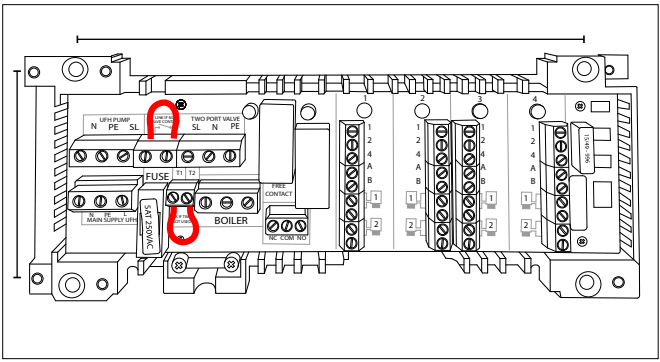
Identify a suitable mounting location for control centre.
The location should meet the following requirements;

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 50°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.

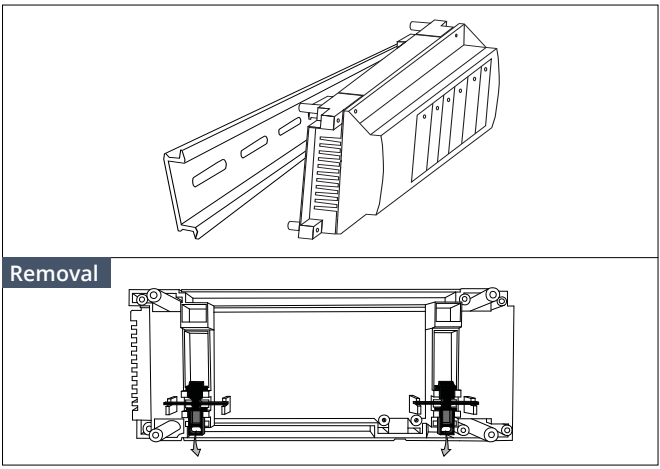
The control centre can be either mounted directly on to a wall or mounted on a DIN rail. It is recommended that walls are assessed prior to drilling to reduce the risk of damaging existing services in the wall. If slave units are to be used, these should be connected prior to mounting. Slave units are connected to the Master by aligning the two units and connecting together.

Wall mounting



- Remove the front cover of the control centre and mark the screw positions on the mounting surface.
- Drill the pre-marked holes and insert a suitable wall plug (if required).
- Screw the control centre to the wall using 3x40mm screws (not supplied).

DIN rail mounting



- Hook the bracket on the top of the DIN rail and press the arrows marked on the front cover and wait for the “click”
- To remove, insert a No.2 slotted screwdriver into the black release tab and gently lever the tabs to release the unit from the DIN rail.

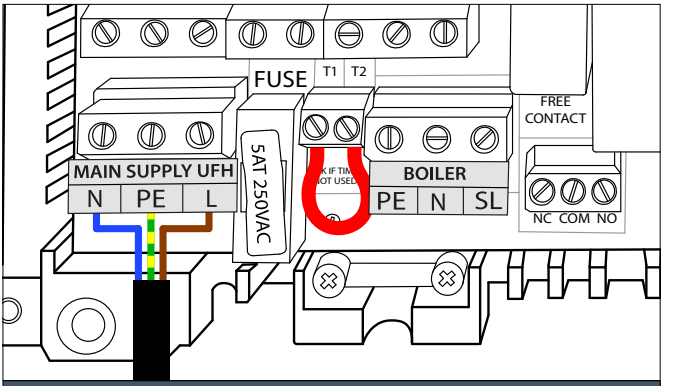
Step 3 - Wiring - Power supply

The control centre requires a 230 V AC 50Hz power supply.

The power supply should not be livened until all wiring within the control centre and front cover re-fitted and any interconnected devices has been completed.

The power supply for all interconnected devices, including the heat source and any 3rd party controls, should only be able to be isolated from a single point to ensure the system is only connected to a single phase and to prevent the risk of electric shock.

The control centre has a replaceable fuse located adjacent to the power supply terminals (5AT 250VAC)



Power supply

N = Neutral
PE = Earth
L = Live

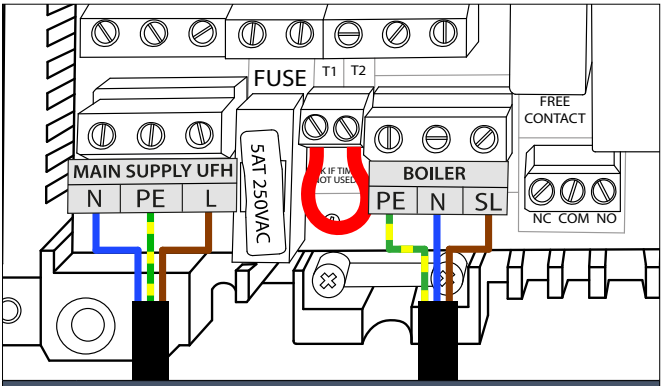
Step 3 - Wiring - Heat source

The boiler terminals provide a switched power supply. The heating interlock is enabled whenever a demand signal is received. For systems which require a delayed start, a third party time delay relay should be fitted as required.

When volt-free switching is required for the heat source 'Free Contact' terminals should be used.

The maximum operating current when connecting a heat source using the volt-free contacts is 3 amps

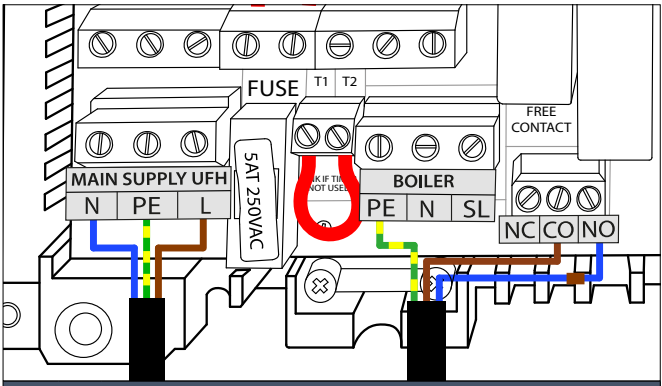
Connecting a heat source using 230V, 3A switched live
e.g. System Boiler



Heat source

PE = Earth
N = Neutral
SL = Switched Live OUT

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



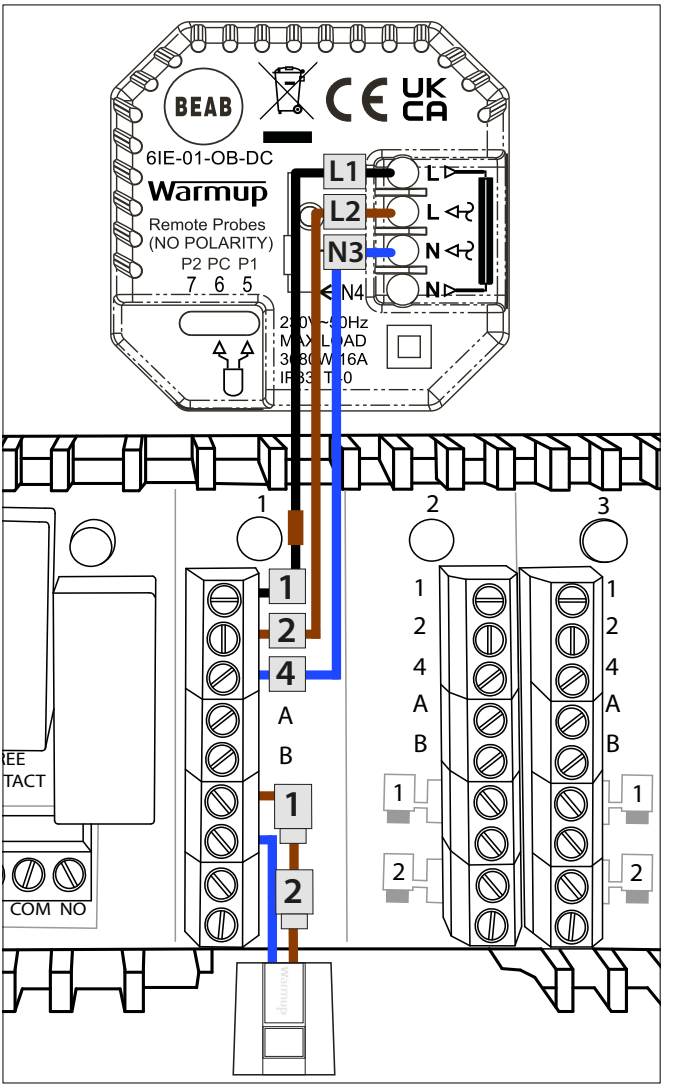
Heat source (Volt free)

PE = Earth
COM = Live IN
NO = Switched Live OUT (normally open contact)

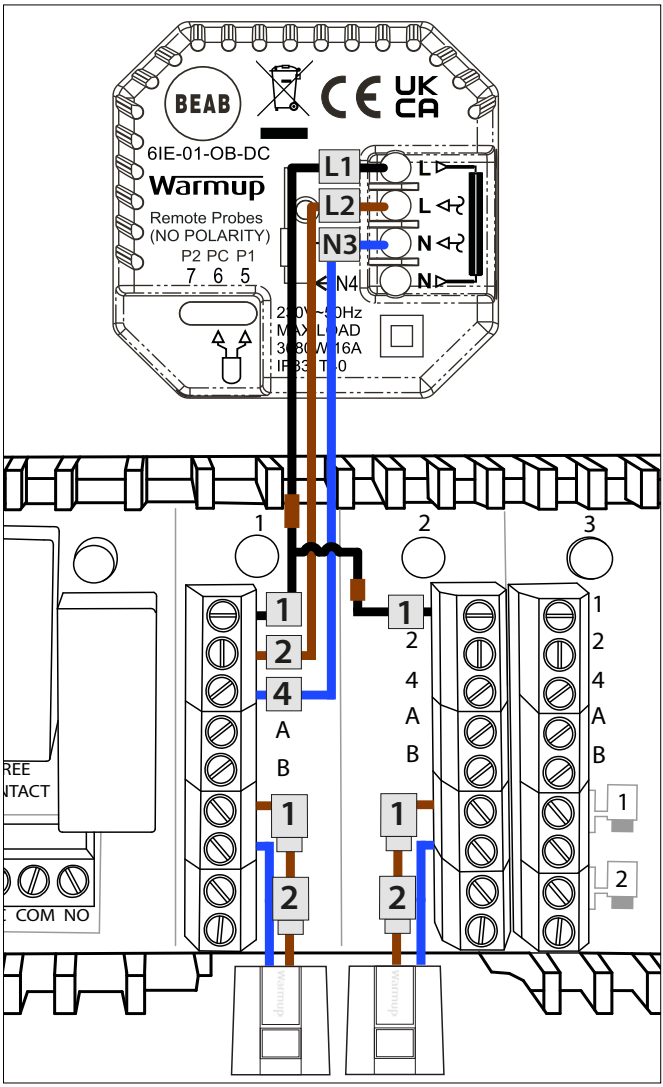
Step 3 - Wiring - Thermostat & actuators

Thermostat connection on control centre		
1	=	Switched Live IN
2	=	Live
4	=	Neutral

Actuators	
1 2	**Up to 4 actuators can be connected to a single zone by connecting two into each pair of terminals.**



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

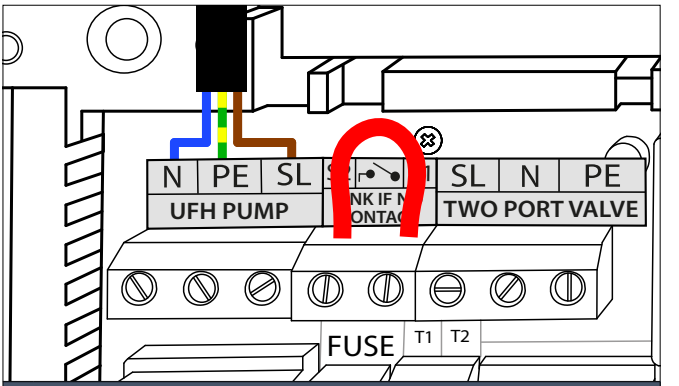


Step 3 - Wiring - Circulator

The S-Series 4-Zone master control centre provides a switched power supply out to a circulator that activates when any underfloor heating channel has demand.

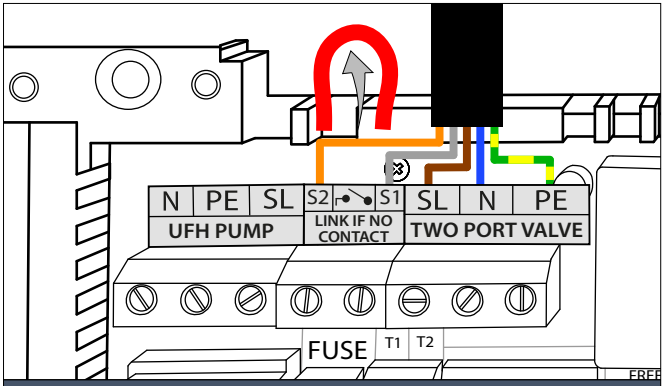
If a mixing unit is fitted to the controlled manifold, it should be this secondary circulator that is connected.

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.



Circulator

N = Neutral
PE = Earth
SL = Switched Live OUT



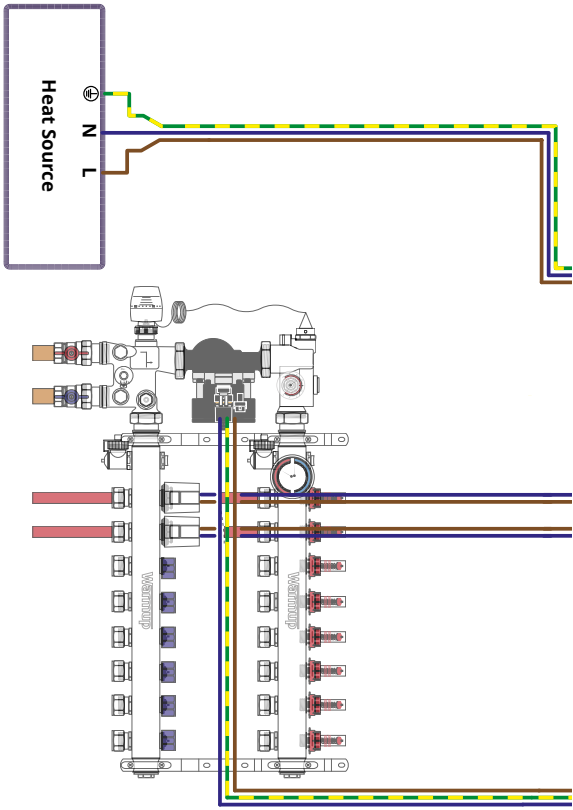
Zone valve

S2 = Switched Live IN
S1 = Live
SL = Switched Live OUT
N = Neutral
PE = Earth

- Where installed on the manifold supply, remove the link wire between S1 and S2.
- A 2-Port Motorised Zone Valve with end switch should be connected as above.
- The underfloor heating circulator and heat source will be energised through the end switch so, in the event of the valves failure, the heat source will not be activated by the control centre.

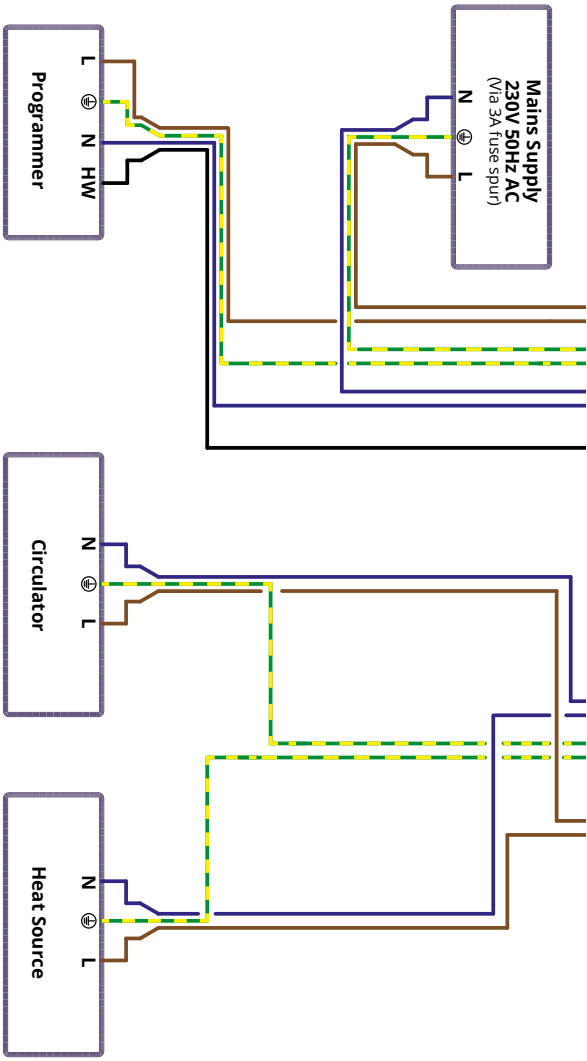
2-Port Motorised Zone Valves without an end switch must not be used

Schematic - Typical installation



Schematic - Typical installation

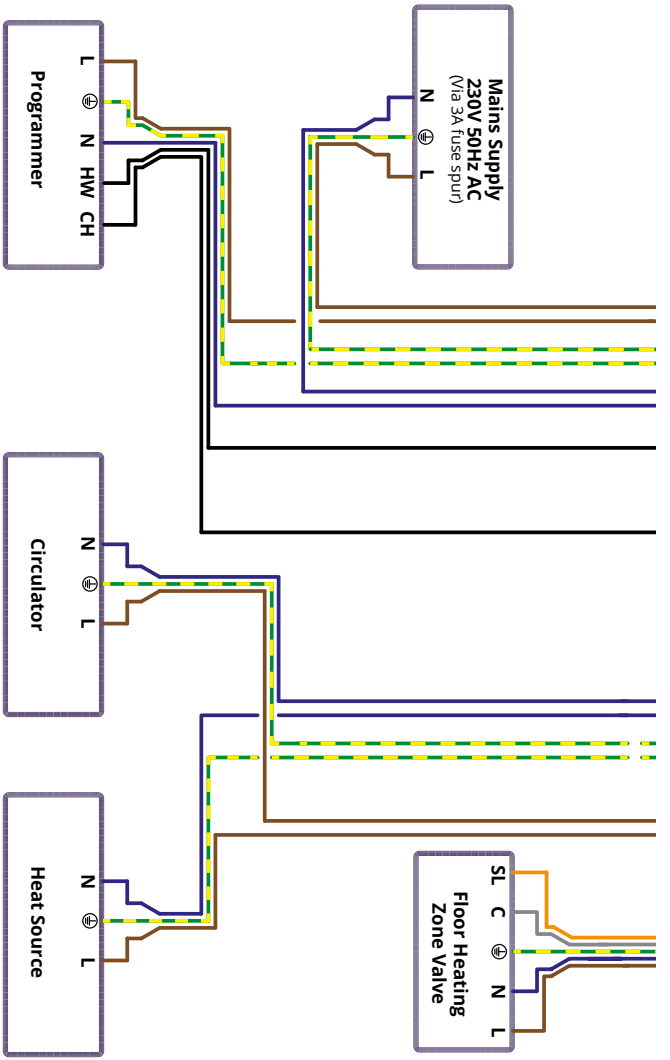
Schematic - Typical S-Plan integration



Schematic - Typical S-Plan integration

Wiring diagram legend			
	L	=	Live
	PE	=	Earth
	N	=	Neutral
	SL	=	Switched Live
	SL	=	Switched Live
	C	=	Common
	HW	=	Hot Water
	CH	=	Central Heating

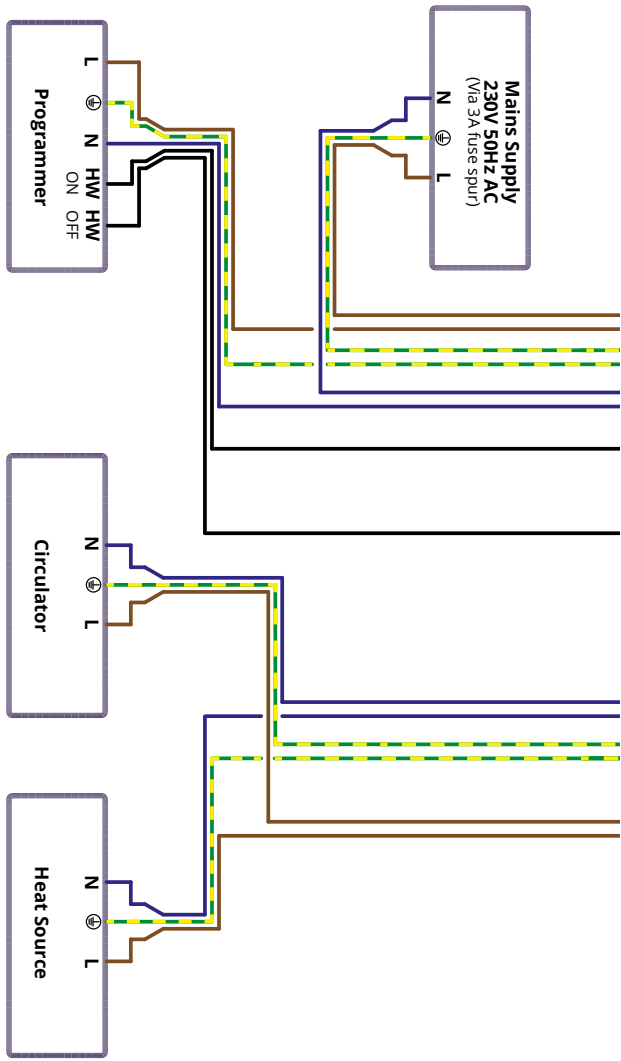
Schematic - Typical S-Plan+ integration



Schematic - Typical S-Plan+ integration

Wiring diagram legend	
L	= Live
PE	= Earth
N	= Neutral
SL	= Switched Live
SL	= Switched Live
C	= Common
HW	= Hot Water
CH	= Central Heating

Schematic - Typical Y-Plan integration

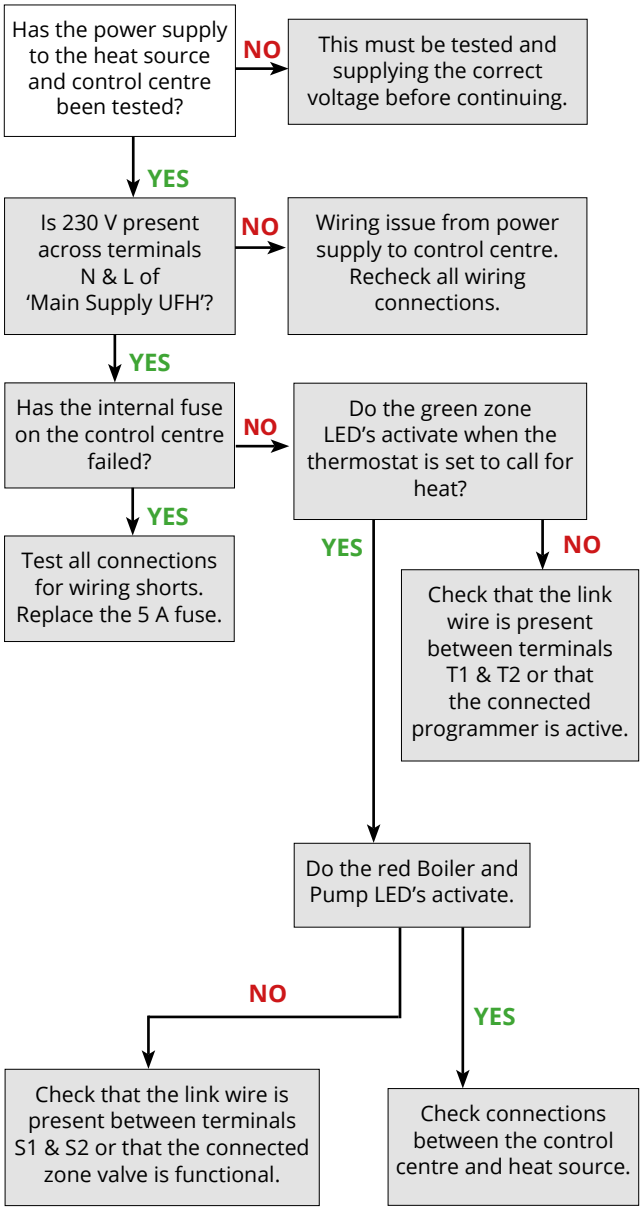


Schematic - Typical Y-Plan integration

Wiring diagram legend		
L	=	Live
PE	=	Earth
N	=	Neutral
SL	=	Switched Live
SL	=	Switched Live
HW OFF	=	Hot Water Off
CH ON	=	Central Heating On
HW	=	Hot Water
CH	=	Central Heating

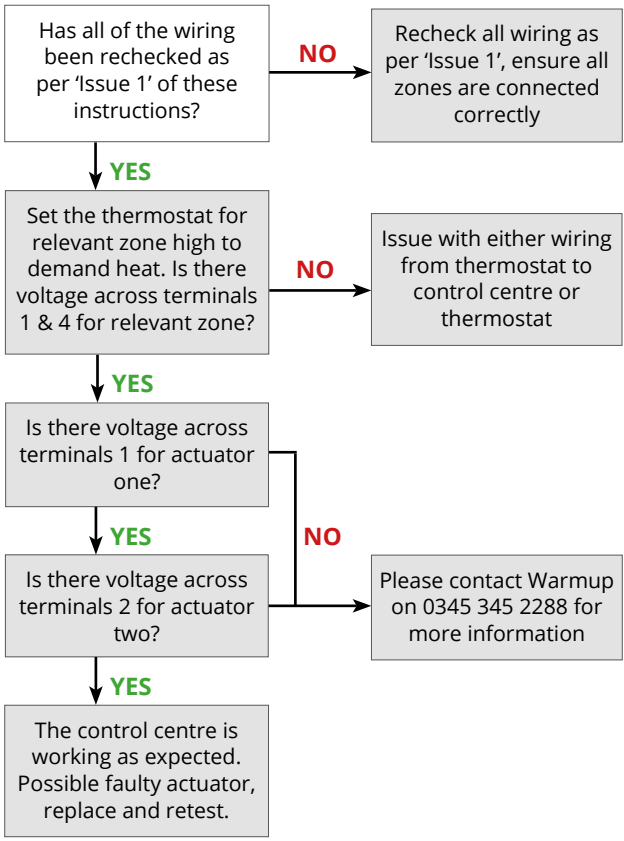
ISSUE 1 - No operation of heat source

Instructions which are shaded grey must completed by a qualified electrician



ISSUE 2 - No operation of zone actuator

Instructions which are shaded grey must completed by a qualified electrician



ISSUE 1 - The control centre fuse blows as soon as any zone activates	
SOLUTION	
1	Check all wiring is connected correctly
2	Check the 'Mains Supply UFH', to ensure there are no short circuits across any of the terminals
3	Ensure a 5AT 250VAC fuse is fitted
4	Check all thermostat connections for short circuits
ISSUE 2 - The control 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 the wiring for the time switch (if fitted) is connected correctly
5	Check all wiring for any short circuits
ISSUE 3 - The control centre fuse blows only when 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
ISSUE 4 - A specific zone seems to have patchy heat across the floor	
SOLUTION	
1	The subfloor must be the same throughout the installation. A difference in subfloor make up will result in a variation of temperatures due to the heat up times.
2	The floor covering must be the same throughout the installation. A difference in the floor covering will result in a variation of temperatures due to the heat up times.
3	Ensure all zone actuators are connected to the correct zones
4	Check all zone actuators are operating correctly

Technical specifications

S-Series 4-Zone master control centre (WHS-C-B-MASTER01)	
Operating voltage	230 VAC +/- 10%
Fuse	5AT 5x20mm
Protection	Class I
IP Rating	IP20
Operating temperature	0 - 50°C
Outputs	Relay: 2 free contact Max.3A 250VAC **Relay 1 -** 230V Switched Live to zone valve and pump **Relay 2 -** 230V Switched Live or volt-free switch to boiler
	4 zones; max. 4 actuators per zone
Max. total load	5A
Overload protection	5A (Use external 5A MCB's, RCBO's or fuses for this purpose)
Standards	BS EN 60730-1
	BS EN IEC 60730-2-9
	BS EN IEC 61000-6-1
	BS EN 61000-6-3

Warmup plc limited warranty –
S Series Controls

Registration can be completed online at **www.warmup.co.uk**. In the event of a claim, proof of purchase is required in the form of an invoice or receipt.

THIS WARRANTY DOES NOT EXTEND TO ELECTRICAL COMPONENTS OR TO COMPONENTS WHICH ARE COVERED BY SEPARATE WARRANTIES.
THIS WARRANTY DOES NOT AFFECT YOUR STATUTORY RIGHTS.

Limited warranty:
Warmup® S Series Controls are warranted by Warmup plc ("Warmup") to be free from defects in manufacturing under normal use and maintenance, and is warranted to remain so subject to the limitations and conditions described below.

This warranty period begins on the date of purchase. The warranty only applies if the product is registered with Warmup within 30 days after purchase and registered online at www.warmup.co.uk. Registration is confirmed only when confirmation of receipt is forwarded by Warmup plc.

Warranty duration
- S Series Controls are warranted for a period of 2 years from date of purchase, except as provided below; your attention is drawn to the exclusions listed at the end of this warranty.

Notification of a suspected failure must be received in writing by Warmup within thirty (30) days of the suspected failure. Products believed to be defective must be made available to Warmup for testing and determination of cause.

Upon acceptance of any warranty claim, Warmup shall have ninety (90) business days in which to investigate and determine whether it recognises responsibility for any believed defects in material or workmanship and determines the appropriate course of action to be taken.

It is expressly agreed that the sole remedies under this limited warranty shall be at the discretion of Warmup plc to either: issue a refund, repair or replace any article which is proven to be defective. Any and all allowances made to customers for transportation, labour, repairs or all other work, are at the exclusive discretion of Warmup and shall be authorised in writing, in advance, by Warmup. Such cost does not extend to any cost other than direct costs of repair or replacement by Warmup and does not extend to costs of relaying or repairing any floor covering or floor.

The warranty applies to the product(s) if they:

1.	Are registered with Warmup within 30 days after purchase.
2.	Are selected, designed and installed by a qualified contractor according to installation instructions provided by Warmup which are current as of the applicable installation date.
3.	Are connected to appropriate power and water supplies.
4.	Are installed according to all applicable building code requirements.
5.	Are not exposed to pressures and/or temperatures that exceed any limitations printed on the warranted product or in the applicable Warmup product installation manual.
6.	Remain in their original installed location.
7.	Do not show evidence of accidental damage, misuse, lack of care, tampering, or repair or modification without the prior written approval of Warmup plc.

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

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