



Reliance Water Controls Ltd  
Worcester Road,  
Evesham,  
Worcester,  
WR11 4RA,  
UK

Tel: +44 (0)1386 712 400

Fax: +44 (0)1895 712 401

[www.rwc.co.uk](http://www.rwc.co.uk)

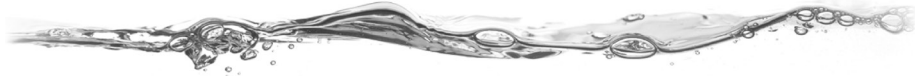
Installation and Maintenance Instructions



## UFH Wiring Centre

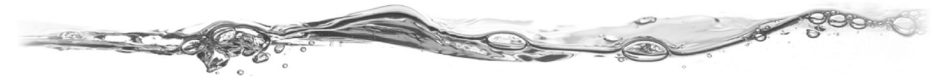


8 Zone Wiring Centre designed to connect all the elements  
of an Underfloor Heating System.



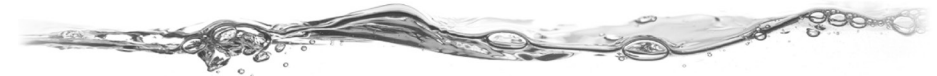
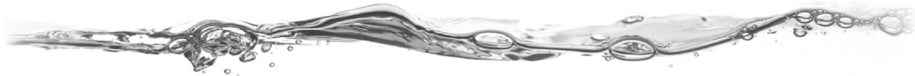
# Contents

- Reliance Water Controls.....2
- General Function.....3
- Installation; Location.....4
- Wiring Diagram.....5
- Installation; Mounting.....7
- Installation; Wiring.....8
- Troubleshooting.....10



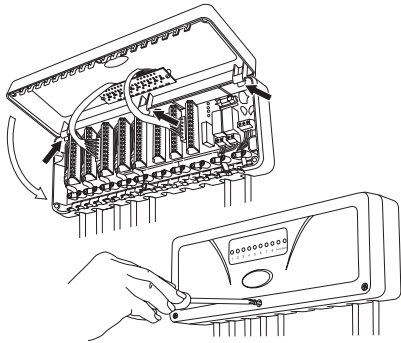
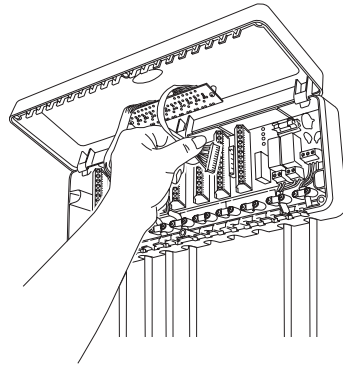
# Troubleshooting

Symptom	Cause	Action
No heat	No electrical power to connection box	Check programmer or time clock is set to "on" period, or that the fused spur is switched on
		Check electrical supply to programmer or time clock, or check fuse in fused spur
		Check fuse on UFH wiring centre PCB.
	Room thermostat not set correctly	Set the thermostat to a high setting to "demand" heat
	Room thermostat not wired correctly	Check "Live" and "Common" terminals are linked on volt free thermostats
		Check that the "Demand" terminal of the room thermostat is connected to the Switched Live (in) terminal on the correct terminal block of the UFH wiring centre
	Thermal actuators not wired correctly	Check that the thermal actuators are connected to the "Act Live" and "Act Neutral" terminals on the correct terminal block of the UFH wiring centre
	Boiler and pump not wired correctly	Check that the boiler and pump are connected to the connection box in accordance with the boiler manufacturers installation instructions and that these have an external live feed as the relays supplied in the UFH wiring centre are volt free
Boiler and pump not set correctly	Check boiler is switched "on" and controls correctly set	
	Check boiler system pressure gauge to ensure system has been filled correctly	

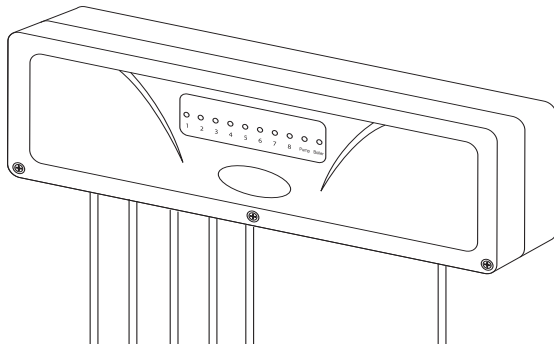


**For the complete wiring installation, please refer to the wiring diagram provided on page 5.**

Once the wiring is completed, position the cover and attach the two pre-wired plugs for the LED display.



Rotate the cover down and close, securing with the 3 screws on the bottom of the cover.



## Reliance Water Controls

Reliance Water Controls are part of the Australian based group of companies collectively known as Reliance Worldwide Corporation.

Reliance Water Controls is a specialist in the design, distribution and technical support for temperature and flow controls.

With group offices and manufacturing plants throughout the world Reliance offers a wealth of knowledge and expertise which is reflected throughout our products. Being part of many specialised trade associations and having our own UKAS accredited laboratory, makes us at the forefront of any new regulations or changes which impact the industry, and allows for continuous product development and innovation, within our specialised product area.

## General Function

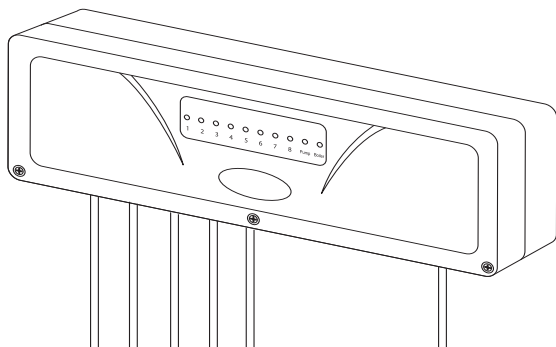
The 8-zone wiring centre is designed to connect all the elements of an underfloor heating system.

On demand from any zone a switch live is provided to the actuators, and automatically turns on the pump and boiler. The wiring centre contains two voltage free relays one for the boiler and the other for the UFH pump, this solution allows for the boiler to be used for conventional heating and hot water distribution without the need for additional relays.

Easily identifiable connections with markings on the PCB board, each zone allows for the connection of two actuators which allows for a maximum of 16 actuators to be connected to this wiring centre.

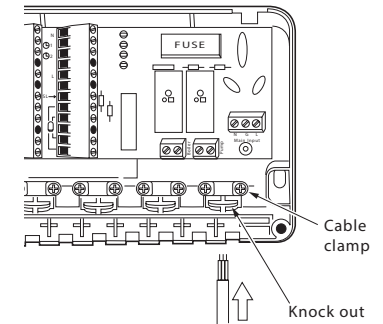
The compact design enables a tidy installation to house all of the wiring required for the UFH controls, with a clear LED display on the front, to allow the user to see when the zones, boiler and pump are activated.

- Extra large terminals for the connection of actuator heads allows for control up to 16 circuits
- Connections for the boiler, pump and programmer included
- LED lights indicate when each of the 8 zones, and pump or boiler are energised

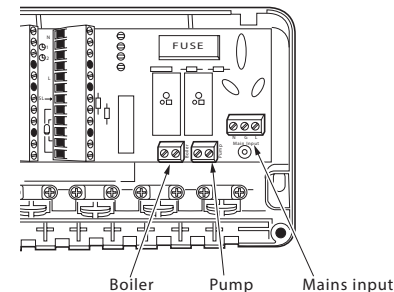


## Wiring

Cable access can be via the turrets or by knocking through the lower cable entries on the bottom of the case, or alternatively by knocking through the rectangular access point on the back of the case.

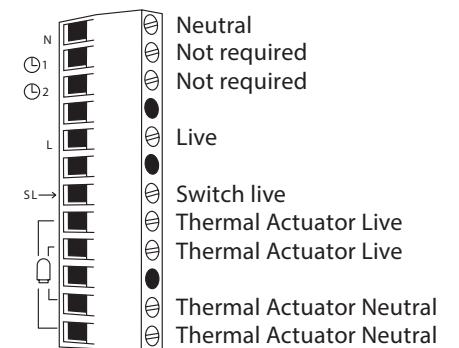


It is suggested to use the the turrets for the smaller actuator cables, and the cable entries or rectangular knock out points for the mains cable, room thermostat cables and cables to the boiler and pump.



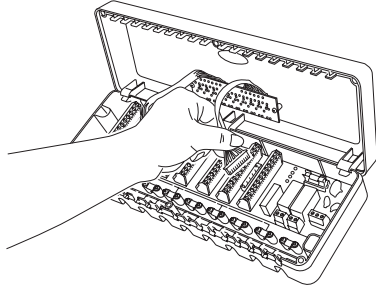
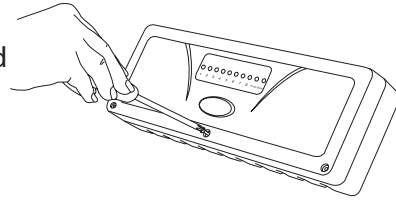
Ensure all cables are securely clamped using the internal cable clamps, please note the clamps can be reversed to allow for different size cables.

Each terminal block is clearly labelled on the PCB and allows for two thermal actuators to be installed.



## Mounting

Remove the front cover from the UFH wiring centre by unscrewing the three screws along the bottom on the cover and rotate the cover upwards.



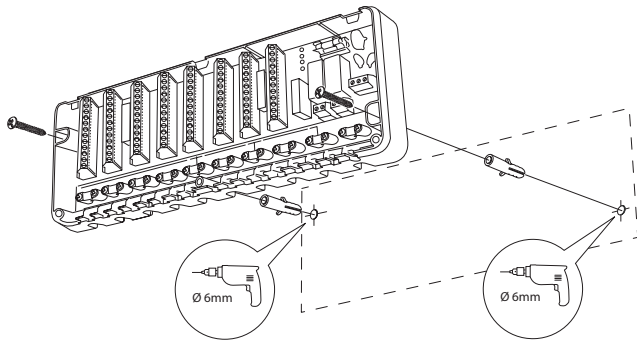
Disconnect the two pre-wired plugs from the unit and completely remove the front cover .

Ensure there is 100mm minimum clearance above the unit to allow the cover to be refitted and that the thermal actuators can be connected without exerting strain on the cables.

Position the unit to the wall and mark the positions on either side of the unit ready to drill the holes.

Drill 6mm holes in the marked position, and insert wall plugs.

Securely mount the unit directly to the wall using the screws provided.



## Installation

This installation guide is provided to give instruction on the best installation practices that should be observed to ensure the correct functioning of the UFH Wiring Centre.

This product should only be installed by a qualified electrician, and should be in accordance with the current edition of the IEEE wiring regulations and any relevant standard or building regulation.

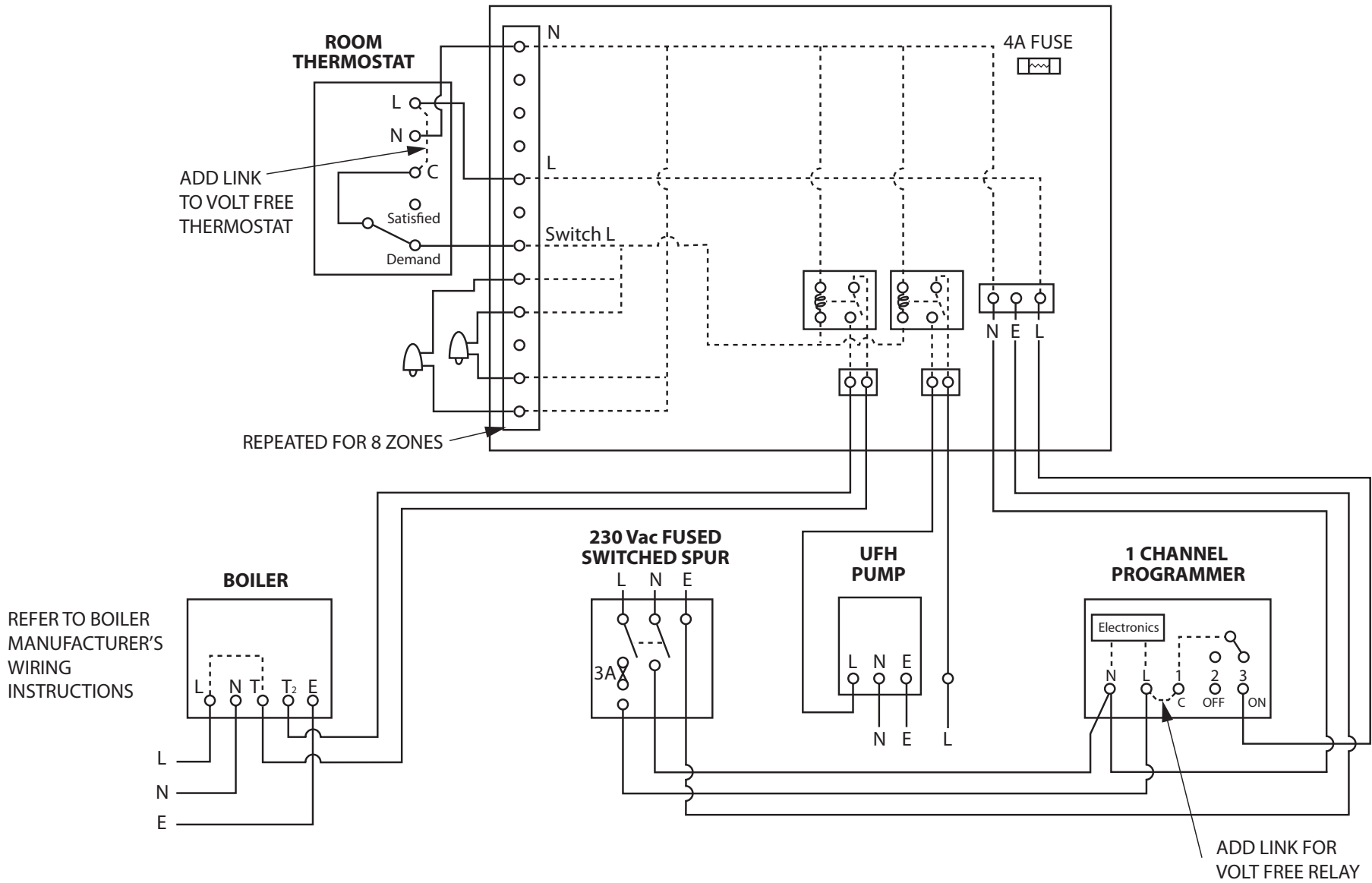
## Location

The UFH wiring centre is for use in either a domestic or commercial environment and should be mounted indoors in a convenient location where access is good and within reach of the cables from the thermal actuators connected to the UFH manifold, these cables should not be put under strain to reach the wiring centre.

Ensure there is adequate clearance (100mm minimum) above the wiring centre to allow the cover to be easily removed for any maintenance which may be required in the future.

Areas of high temperature (50°C maximum) and humidity (95% maximum) should be avoided.

# Wiring Diagram



REFER TO BOILER  
MANUFACTURER'S  
WIRING  
INSTRUCTIONS

ADD LINK FOR  
VOLT FREE RELAY