UFH5

Wiring Centre



Installation and Operation Guide

EPH CONTROLS

Table of contents

Factory Default Settings	2
Specifications	2
Mounting and Installation	2
Wiring Centre Terminals	3
Power Supply	3
Programmer	3
Thermostat (Zone 1)	3
Thermostats (Zone 2 to Zone 4)	3
Thermostat (Zone 5)	3
Heat Enable (Boiler / Heat Pump On)	4
UFH Pump (Underfloor Heating Pump)	4
UFH Valve (Underfloor Heating Valve)	4
Actuators (Zone 1 to Zone 3)	4
Actuators (Zone 4 and Zone 5)	4
Operation of Zone 4 & 5 UFH – RAD / HW switches	4
Wiring UFH5 - 5 x Underfloor Heating Zones	5
With Mains Operated Programmable Thermostats - CDTP2, CP4M & RDTP	5
With Mains Operated Non - Programmable Thermostats - CDT2, HDT & RDT	6
With Mains Operated Non - Programmable Thermostats c/w Setback HDT, RDT & 3 Zone Programmer	7
Wiring UFH5 - 3 x Underfloor Heating Zones, 1 Radiator Zone and 1 Hot Water Zone	8
With Mains Operated Non - Programmable Thermostats CDT2, HDT, RDT & CDC2 Electronic Cylinder Thermostat & 3 Zone Programmer	8

Factory Default Settings

Zone 4 Switch: UFH Zone 5 Switch: UFH

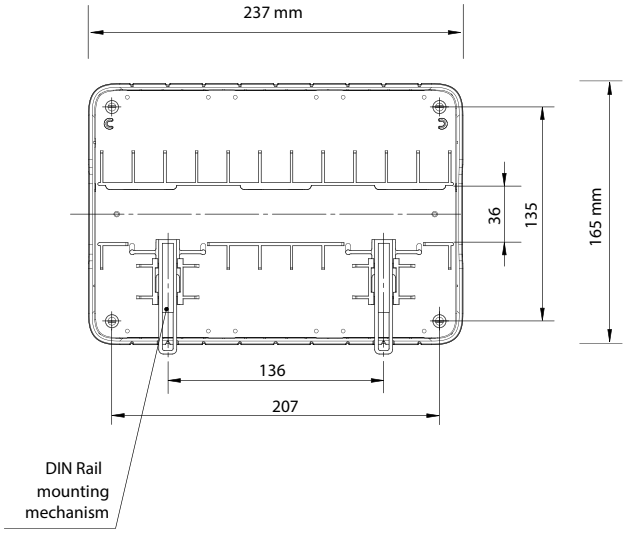
Grey and Orange terminals of the UFH valve are electrically linked. If UFH valve is fitted, remove this link.

Specifications

Power supply:	230Vac 50-60Hz
Number of Zones:	5
Power Supply Indication:	Yes
Heat Enable Indication:	Yes
UFH Valve Indication:	Yes
Zone 1 to Zone 5 Indication:	Yes
Ambient temperature:	0…45°C
Admissible ambient humidity:	5-95%RH
Dimensions:	237 x 165 x 50 mm
Heat Enable contact rating:	3(1)A
UFH Pump contact rating:	3(1)A
IP rating:	IP20
Max. No. of actuators per zone	4
Max. Permissible Load	5A Resistive

Mounting and Installation

1. Remove the UFH5 from its packaging.
2. The UFH5 can be directly mounted on a wall using the fixing holes on the base of the unit or it can be directly mounted on DIN rail.



Wiring Centre Terminals

Power Supply

L 230Vac Live
⏚ Earth
N Neutral

Programmer

L 230Vac to the programmer.
⏚ Earth to the programmer.
N Neutral to the programmer.
1 Zone 1 output from programmer to the wiring centre.
2 Zone 2 output from programmer to the wiring centre.
3 Zone 3 output from programmer to the wiring centre.

Thermostat (Zone 1)

L Live supply to the thermostat.
1 Timed switch live to room stat from programmer zone 1.
⏚ Earth.
N Neutral supply to the thermostat.
S/L Switch live from the thermostat to the wiring centre.

Note: With thermostat 1, you have one time input.

Thermostats (Zone 2 to Zone 4)

L Live supply to the thermostat.
1 Timed switch live to room stat from programmer zone 1
2 Timed switch live to room stat from programmer zone 2
⏚ Earth.
N Neutral supply to the thermostat.
S/L Switch live from the thermostat to the wiring centre.

Note: With thermostats 2, 3 & 4 you have an option of; one of two time inputs.

Thermostat (Zone 5)

L Live supply to the thermostat.
1 Timed switch live to room stat from programmer zone 1
2 Timed switch live to room stat from programmer zone 2
3 Timed switch live to room stat from programmer zone 3
⏚ Earth.
N Neutral supply to the thermostat.
S/L Switch live from the thermostat to the wiring centre.

Note: With thermostat 5, you have an option of; one of three time inputs.

Heat Enable (Boiler / Heat Pump On)

LS Live supply
⏚ Earth
LR Live return

This is a volt free relay which is switched on when there is a call for heat. If 230V is applied to terminal LS and there is a call for heat, 230V will come back on terminal LR.

UFH Pump (Underfloor Heating Pump)

L 230Vac Live
⏚ Earth
N Neutral

When an underfloor heating zone calls for heat, 230V is sent to the underfloor heating manifold pump.

Best practice is to wire the underfloor heating manifold pump through a high limit thermostat which is mounted on the manifold.

UFH Valve (Underfloor Heating Valve)

GR Grey Switch Live
OR Orange Permanent Live
L Live
⏚ Earth
N Neutral

When an underfloor heating zone calls for heat, 230V is sent to the Underfloor heating valve.

The valves auxiliary contacts are wired to the GR and OR terminals.

Note: Please refer to factory default settings on page 2.

Actuators (Zone 1 to Zone 3)

L 230V Live supply to the actuator.
N Neutral supply to the actuator.

There are two terminals marked L & N for each zone.

Actuators (Zone 4 and Zone 5)

L 230V Live supply to the actuator.
N Neutral supply to the actuator.

There are two terminals marked L and two terminals marked N for each zone.

Both zones 4 and 5 have a switch associated with each zone.

This allows the installer to use these zones as underfloor heating zones or radiator / hot water zones.

Operation of Zone 4 & 5 UFH – RAD / HW switches

If set to UFH – When the thermostat calls for heat, the actuator, boiler and pump / valve outputs are enabled.

If set to RAD / HW – When the thermostat calls for heat, the actuator is enabled.

To enable the boiler output, the actuator auxiliary contacts (Grey and Orange wires) must be connected to the LS & LR terminals of the Heat Enable.

SWITCH SELECTED	HEAT ENABLE	UFH PUMP	UFH VALVE	ZONE VALVE ACTUATOR
UFH	On	On	On	On
RAD	Off	Off	Off	On

UFH5 - 5 x Underfloor Heating Zones

c/w Mains Operated Programmable Thermostats.

Options:



CDTP2



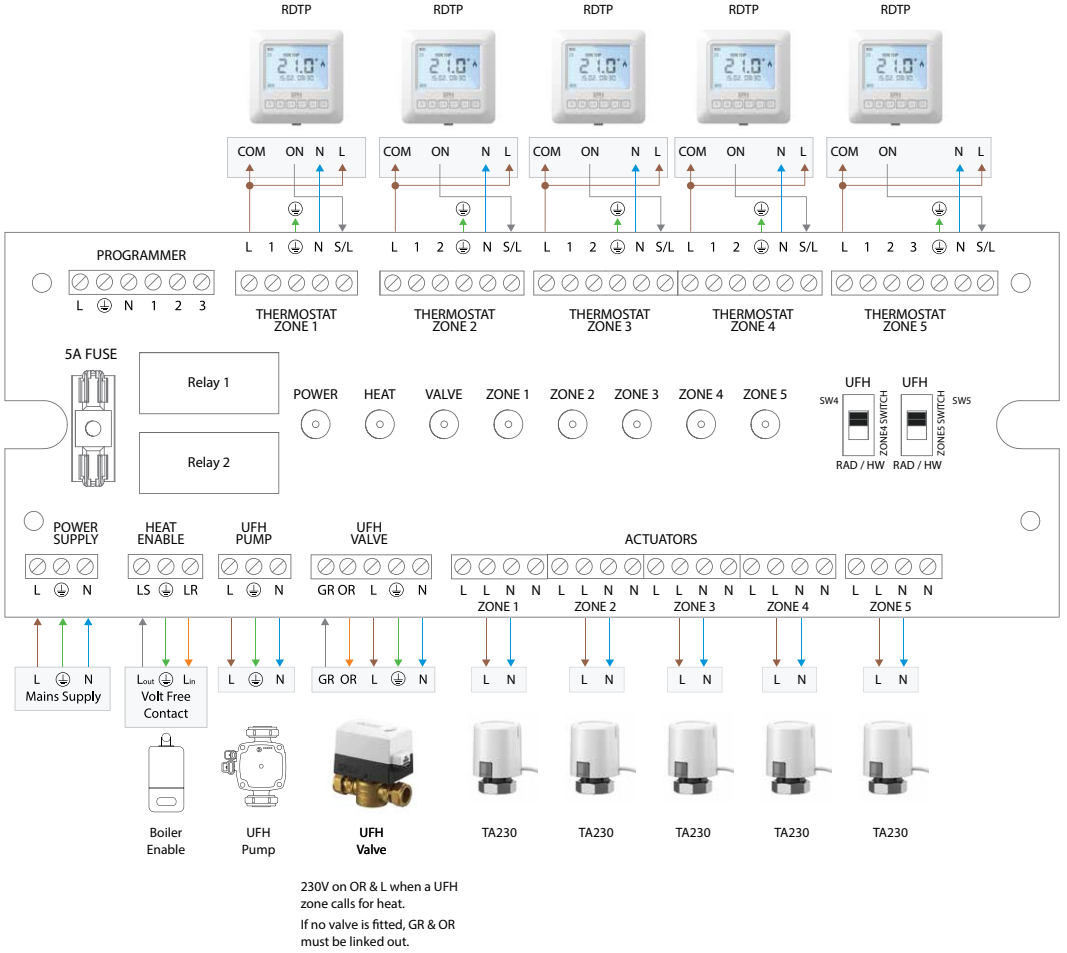
CP4M



RDTP

Note: Please refer to individual thermostat wiring diagrams.

CONTROLS	INSTALLED
UFH Pump	Yes
UFH Valve	Yes
UFH Actuators	Yes
Programmer	-
RAD Valve	-
HW Valve	-



230V on OR & L when a UFH zone calls for heat.

If no valve is fitted, GR & OR must be linked out.

UFH5 - 5 x Underfloor Heating Zones

c/w Mains Operated Non - Programmable Thermostats.

Options:



CDT2



HDT



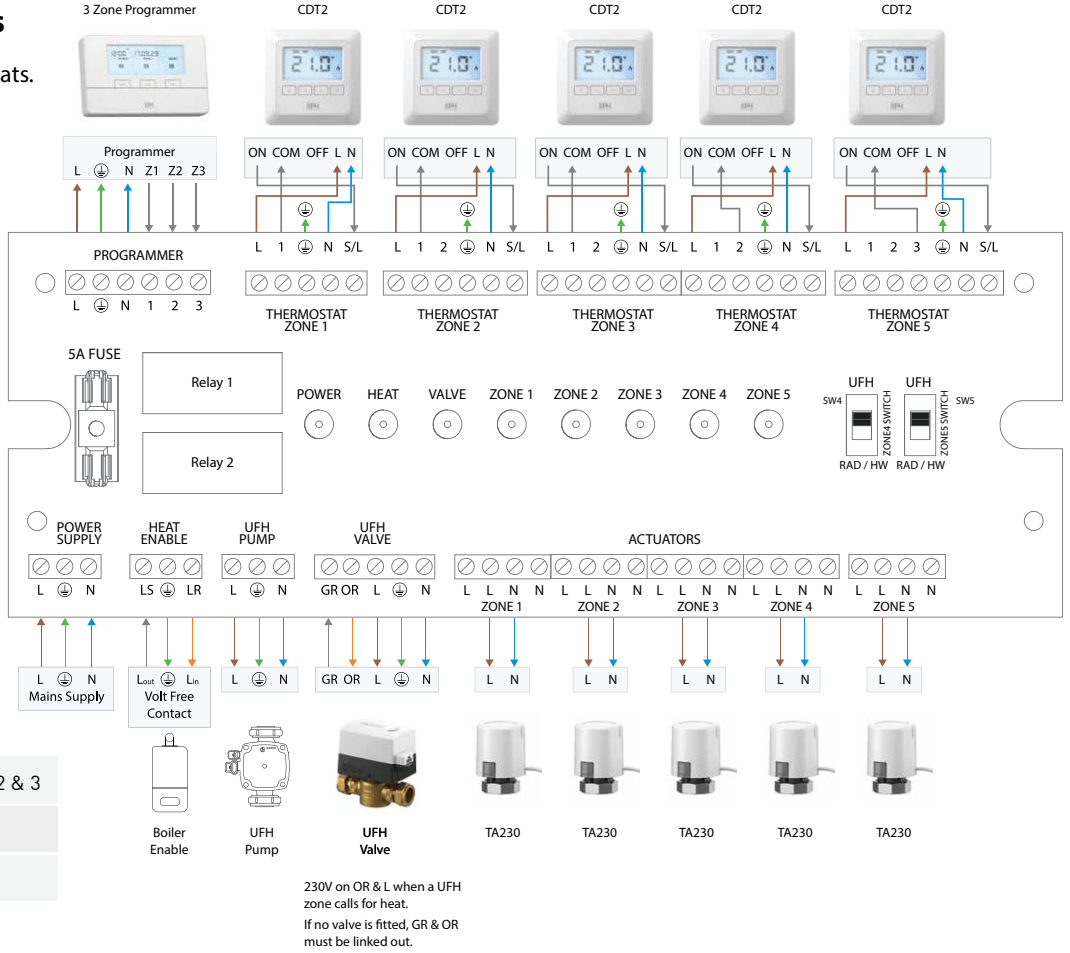
RDT

Note: Please refer to individual thermostat wiring diagrams.

CONTROLS	INSTALLED
UFH Pump	Yes
UFH Valve	Yes
UFH Actuators	Yes
Programmer	R37
RAD Valve	-
HW Valve	-

In this example:

Zone 1 on the programmer is controlling thermostats 1, 2 & 3
Zone 2 on the programmer is controlling thermostat 4
Zone 3 on the programmer is controlling thermostat 5



UFH5 - 5 x Underfloor Heating Zones

c/w Mains Operated Non - Programmable Setback Thermostats.

Options:



HDT



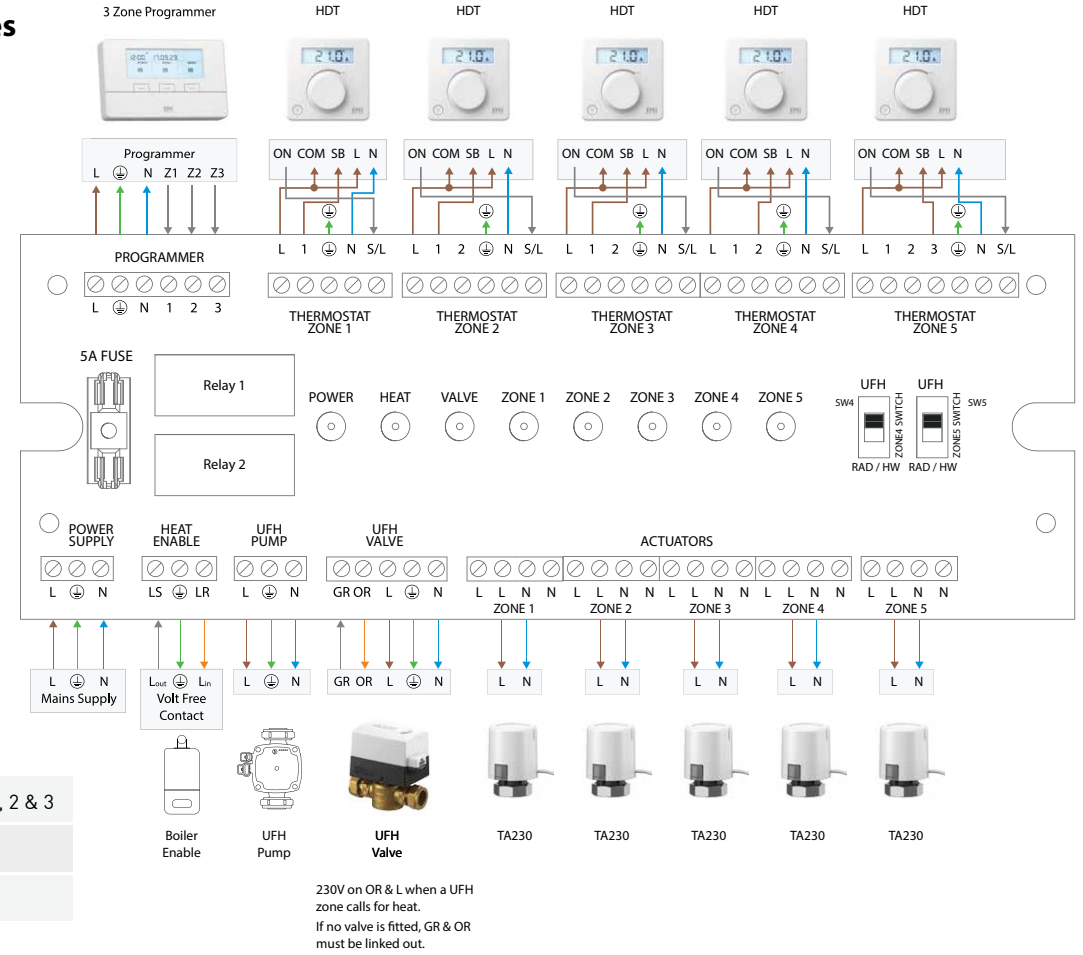
RDT

Note: Please refer to individual thermostat wiring diagrams.

CONTROLS	INSTALLED
UFH Pump	Yes
UFH Valve	Yes
UFH Actuators	Yes
Programmer	R37
RAD Valve	-
HW Valve	-

In this example:

Zone 1 on the programmer is controlling thermostats 1, 2 & 3
Zone 2 on the programmer is controlling thermostat 4
Zone 3 on the programmer is controlling thermostat 5



UFH5 - 3 x Underfloor Heating Zones
- 1 x Radiator Zone
- 1 x Hot Water Zone

c/w Mains Operated Non - Programmable Thermostats. Options:



CDT2 **HDT** **RDT** **CDC2**

Note: Please refer to individual thermostat wiring diagrams.

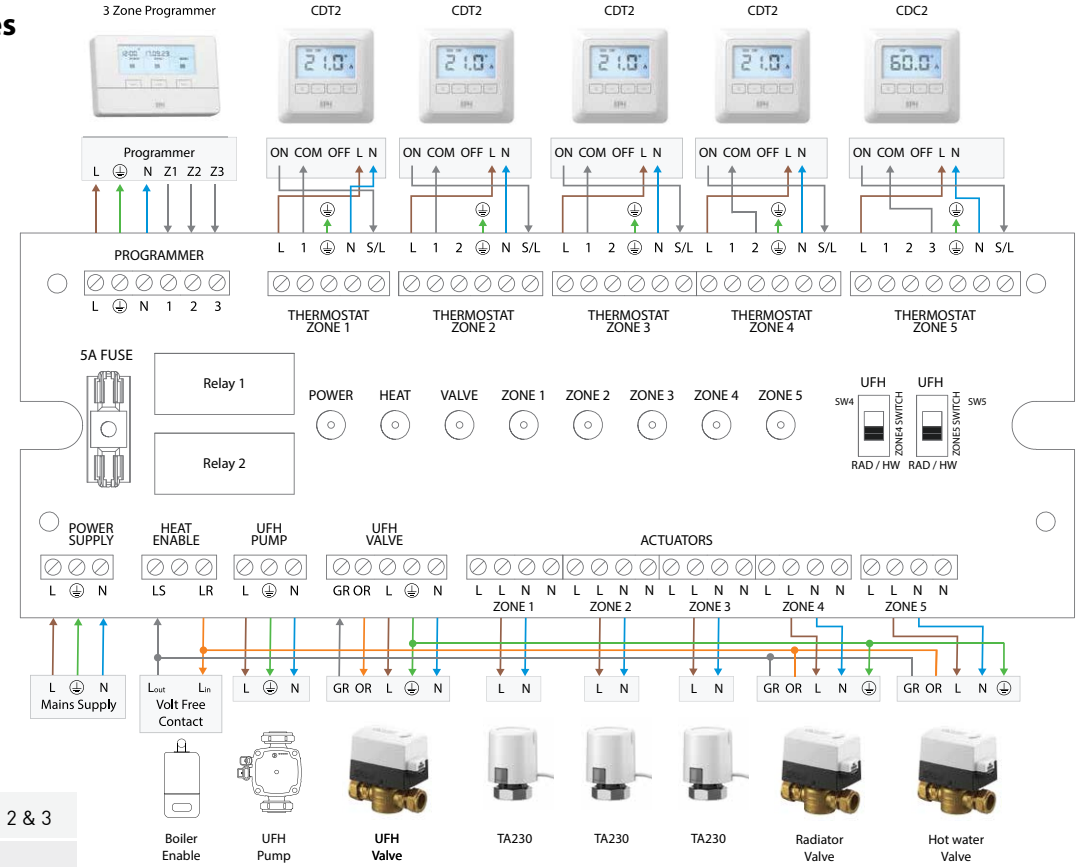
CONTROLS	INSTALLED
UFH Pump	Yes
UFH Valve	Yes
UFH Actuators	Yes
Programmer	R37
RAD Valve	V22_P
HW Valve	V22_P

In this example:

Zone 1 on the programmer is controlling thermostats 1, 2 & 3

Zone 2 on the programmer is controlling thermostat 4

Zone 3 on the programmer is controlling thermostat 5



Notes

Notes

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UFH5 is compatible with the following EPH thermostats

Electro - Mechanical Thermostats


CM2


CM3


CMT


CM2S


CM3S

Programmable Thermostats


CDTP2


CRTP2


RDTP


CP4B


CP4M

Non Programmable Thermostats


CDT2


CRT2


RDT


HDT


HRT

Cylinder Thermostats


EDBS


CDC2


WRP


WRP-IM


WRP-IM-TP

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