

# UFH10

## Wiring Centre



Installation and Operation Guide



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## Factory Default Settings

Zone 9 Switch: UFH

Zone 10 Switch: UFH

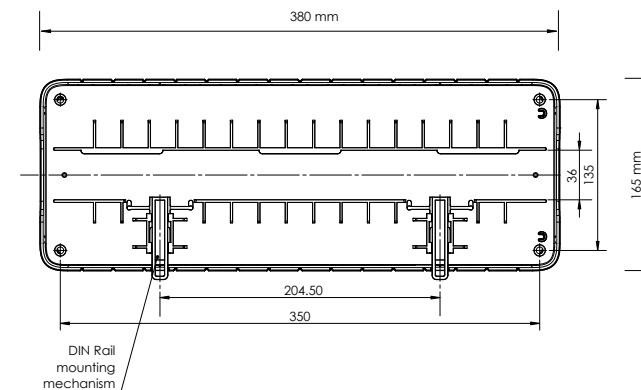
Grey and Orange terminals of the UFH valve are electrically linked. If UFH valve is fitted, remove this link.

## Specifications

Power supply:	230Vac 50-60Hz	Admissible ambient humidity:	5-95%RH
Number of Zones:	10	Dimensions:	380 x 165 x 50 mm
Power Supply Indication:	Yes	Heat Enable contact rating:	3(1)A
Heat Enable Indication:	Yes	UFH Pump contact rating:	3(1)A
UFH Valve Indication:	Yes	IP rating:	IP20
Zone 1 to Zone 10 Indication:	Yes	Max. No. of actuators per zone	4
Ambient temperature:	0...45°C	Max. Permissible Load	5A Resistive

## Mounting and Installation

1. Remove the UFH10 from its packaging.
2. The UFH10 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
- E** Earth
- N** Neutral

### Programmer

- L** 230Vac to the programmer.
- E** 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.
- 4** Zone 4 output from programmer to the wiring centre.

### Thermostats (Zone 1 to Zone 8)

- 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.
- E** Earth.
- N** Neutral supply to the thermostat.
- S/L** Switch live from the thermostat to the wiring centre.

Note: With thermostats 1 to 8, you have an option of; one of two time inputs.

### Thermostats (Zone 9 and Zone 10)

- 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
- 4** Timed switch live to room stat from programmer zone 4
- E** Earth.
- N** Neutral supply to the thermostat.
- S/L** Switch live from the thermostat to the wiring centre.

Note: With thermostats 9 & 10, you have an option of; one of four time inputs.

### Heat Enable (Boiler / Heat Pump On)

- LS** Live supply
- E** 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
- E** 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
- E** 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 1.

### Actuators (Zone 1 to Zone 8)

- 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 9 and Zone 10)

- L** 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 9 and 10 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 9 & 10 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

# UFH10 - 10 x Underfloor Heating Zones

c/w Mains Operated Programmable Thermostats.

Options:



CDTP2



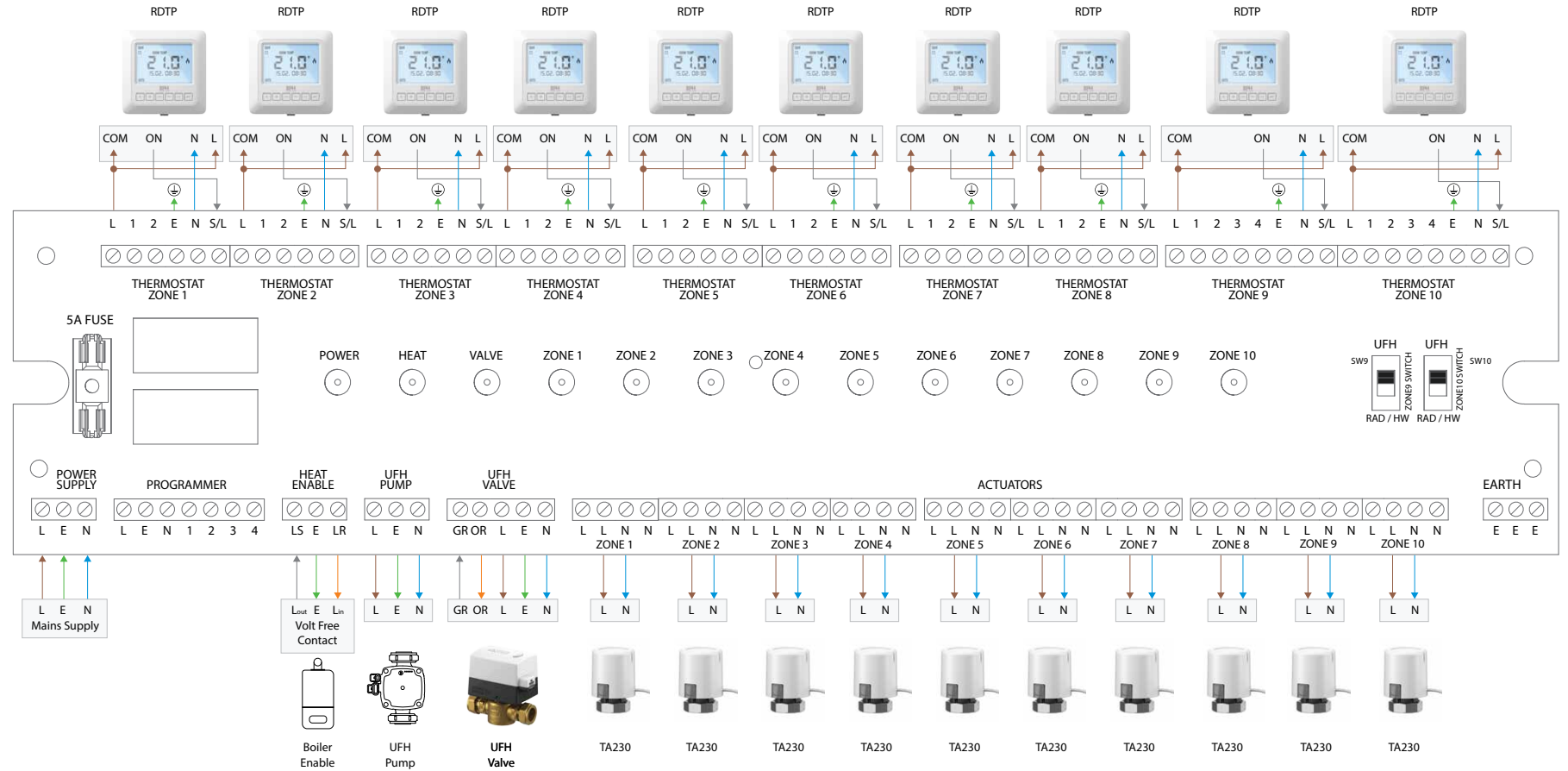
CP4M



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.

# UFH10 - 10 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	R47
RAD Valve	-
HW Valve	-

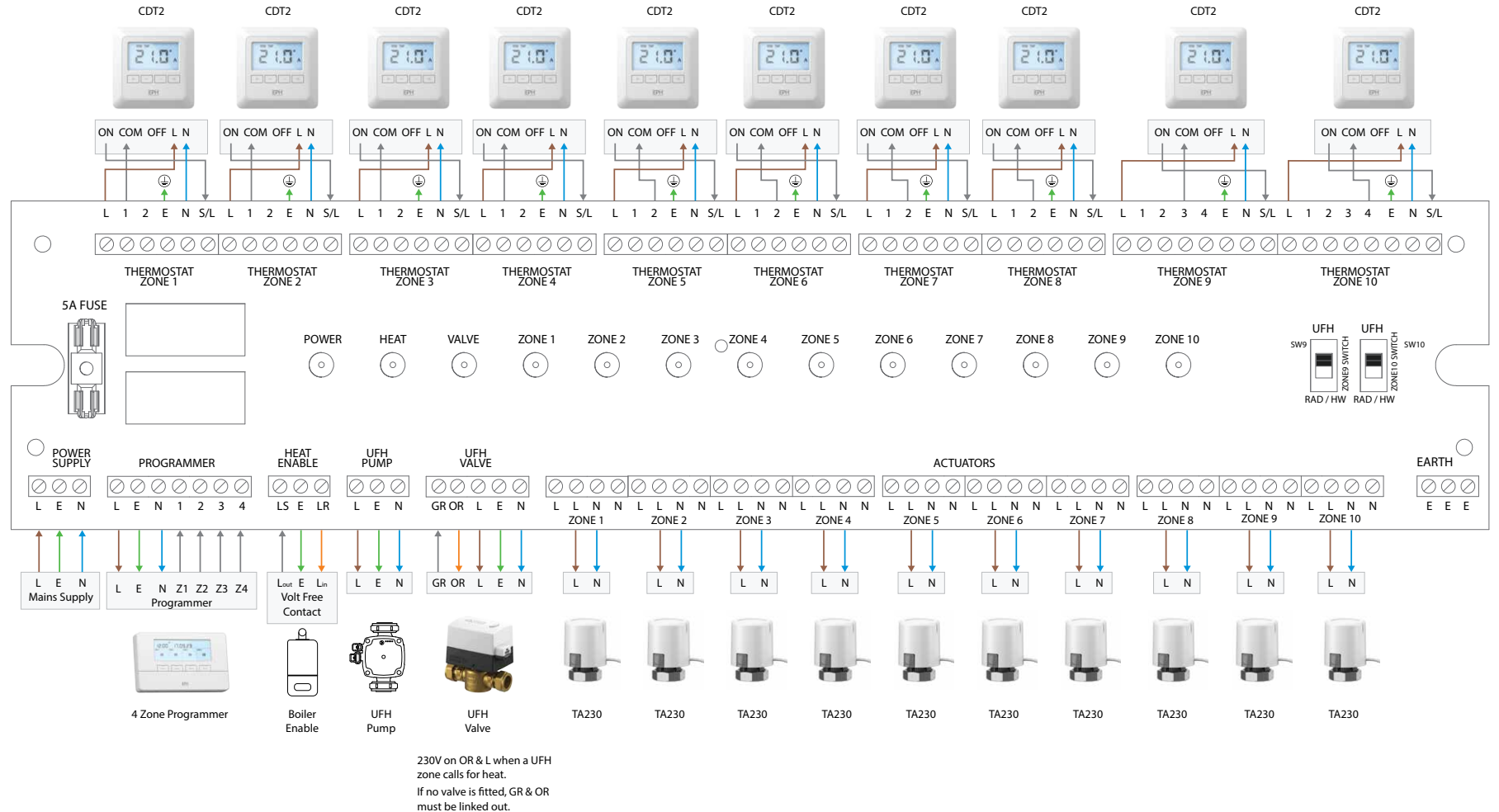
In this example:

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

Zone 2 on the programmer is controlling thermostats 5, 6, 7 & 8

Zone 3 on the programmer is controlling thermostat 9

Zone 4 on the programmer is controlling thermostat 10



# UFH10 - 10 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	R47
RAD Valve	-
HW Valve	-

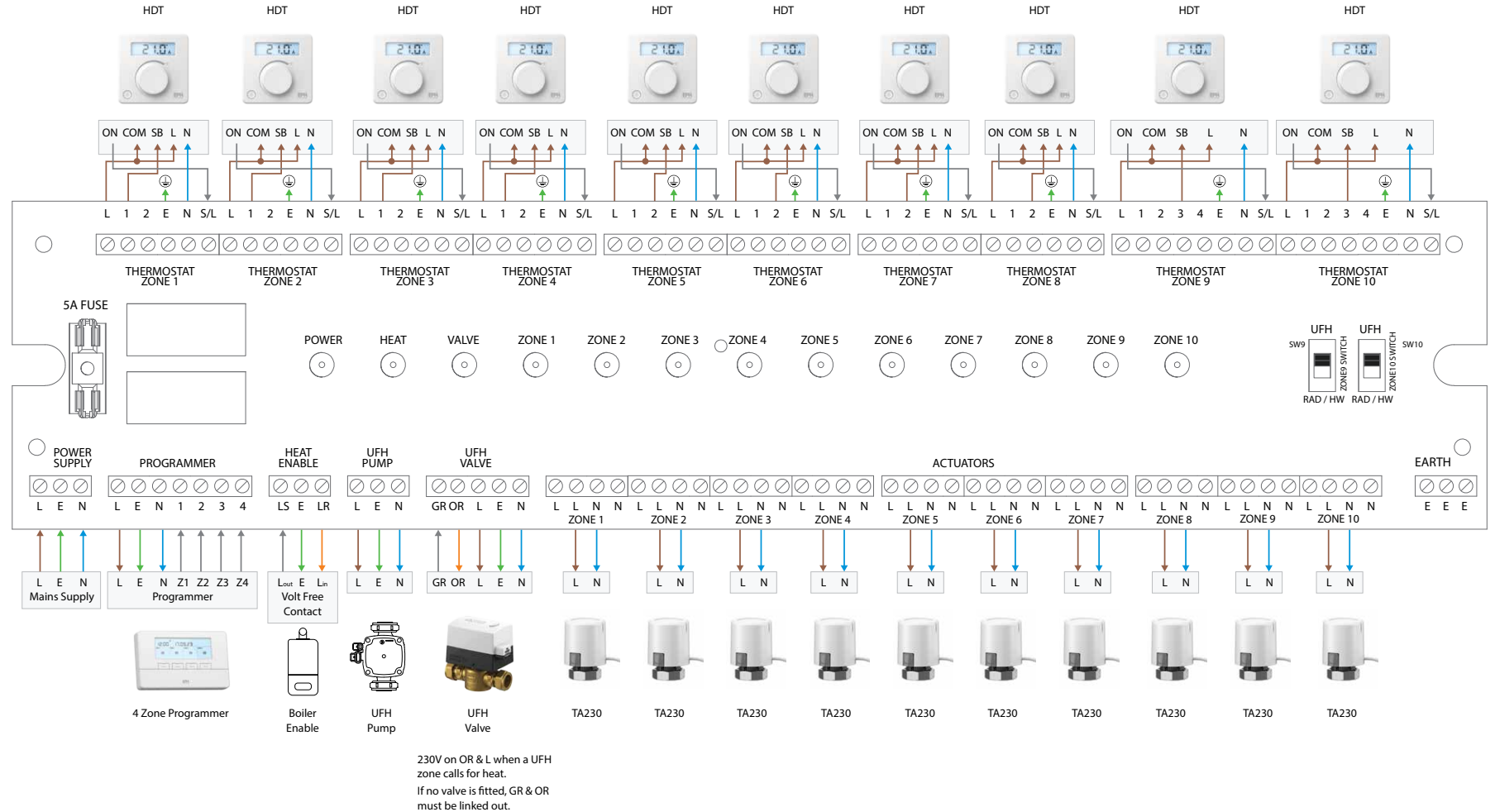
In this example:

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

Zone 2 on the programmer is controlling thermostats 5, 6, 7 & 8

Zone 3 on the programmer is controlling thermostat 9

Zone 4 on the programmer is controlling thermostat 10



230V on OR & L when a UFH zone calls for heat.  
If no valve is fitted, GR & OR must be linked out.

# UFH10 - 8 x Underfloor Heating Zones - 1 x Radiator Zone - 1 x Hot Water Zone

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



**CDT2**      **HDT**      **RDT**      **EDBS**

Note: Please refer to individual thermostat wiring diagrams.

CONTROLS	INSTALLED
UFH Pump	Yes
UFH Valve	Yes
UFH Actuators	Yes
Programmer	R47
RAD Valve	V22_P
HW Valve	V22_P

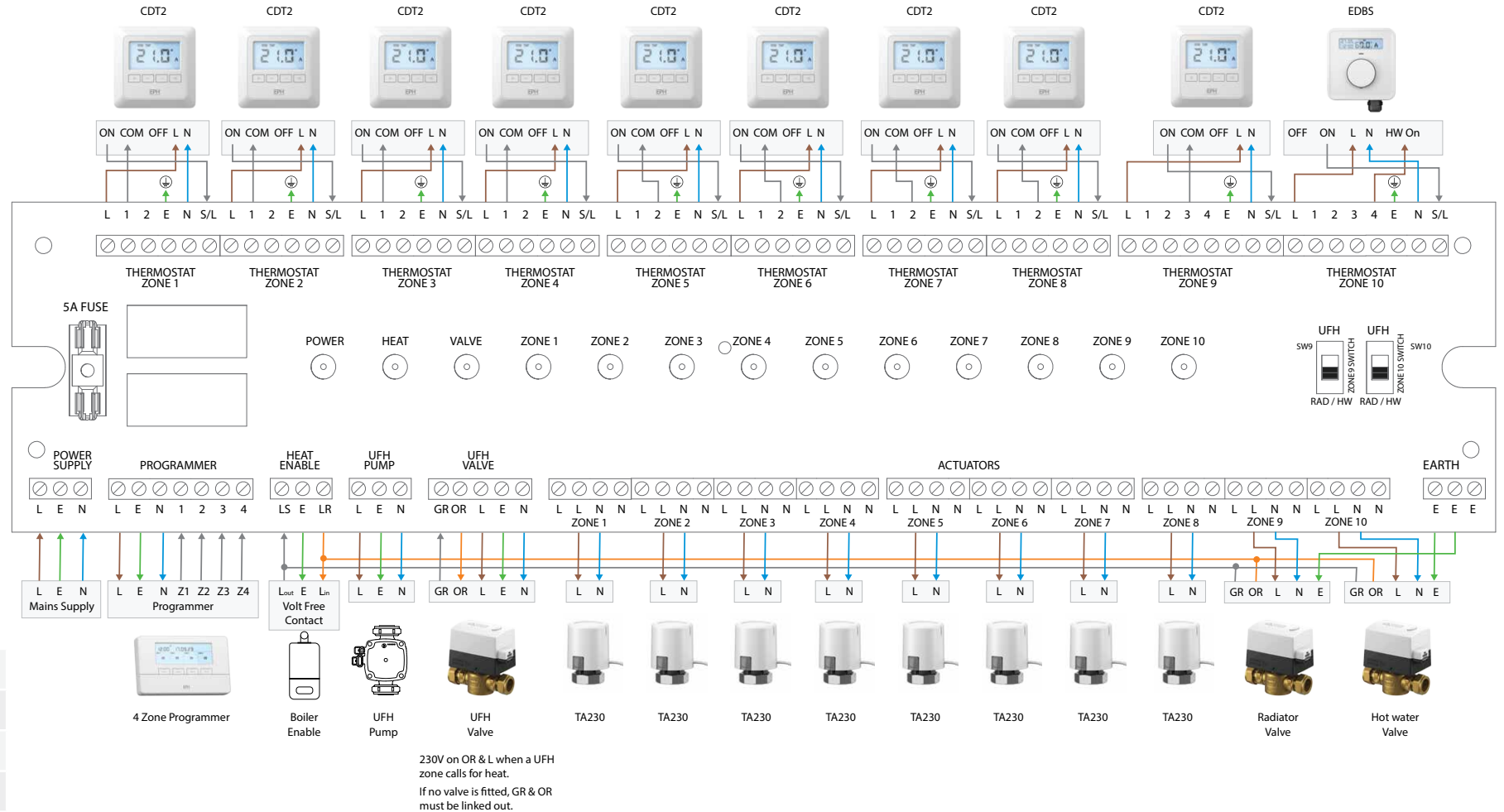
In this example:

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

Zone 2 on the programmer is controlling thermostats 5, 6, 7 & 8

Zone 3 on the programmer is controlling thermostat 9

Zone 4 on the programmer is controlling thermostat 10



## UFH10 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



WRP



WRP-TP



WRP-IM



WRP-IM-TP



CDC2

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