TRIGON L PLUS

- Commercial floor standing boiler
- Single boiler range 60 to 200 kW
- Cascade solution up to 8 boilers
- Cascade solution up to 1600 kW
- Boiler pump(s) and cascade controller integrated
- External controls (accessory) by on/off, 0-10V or eBus to: Modbus,BACnet, KNX, LONworks

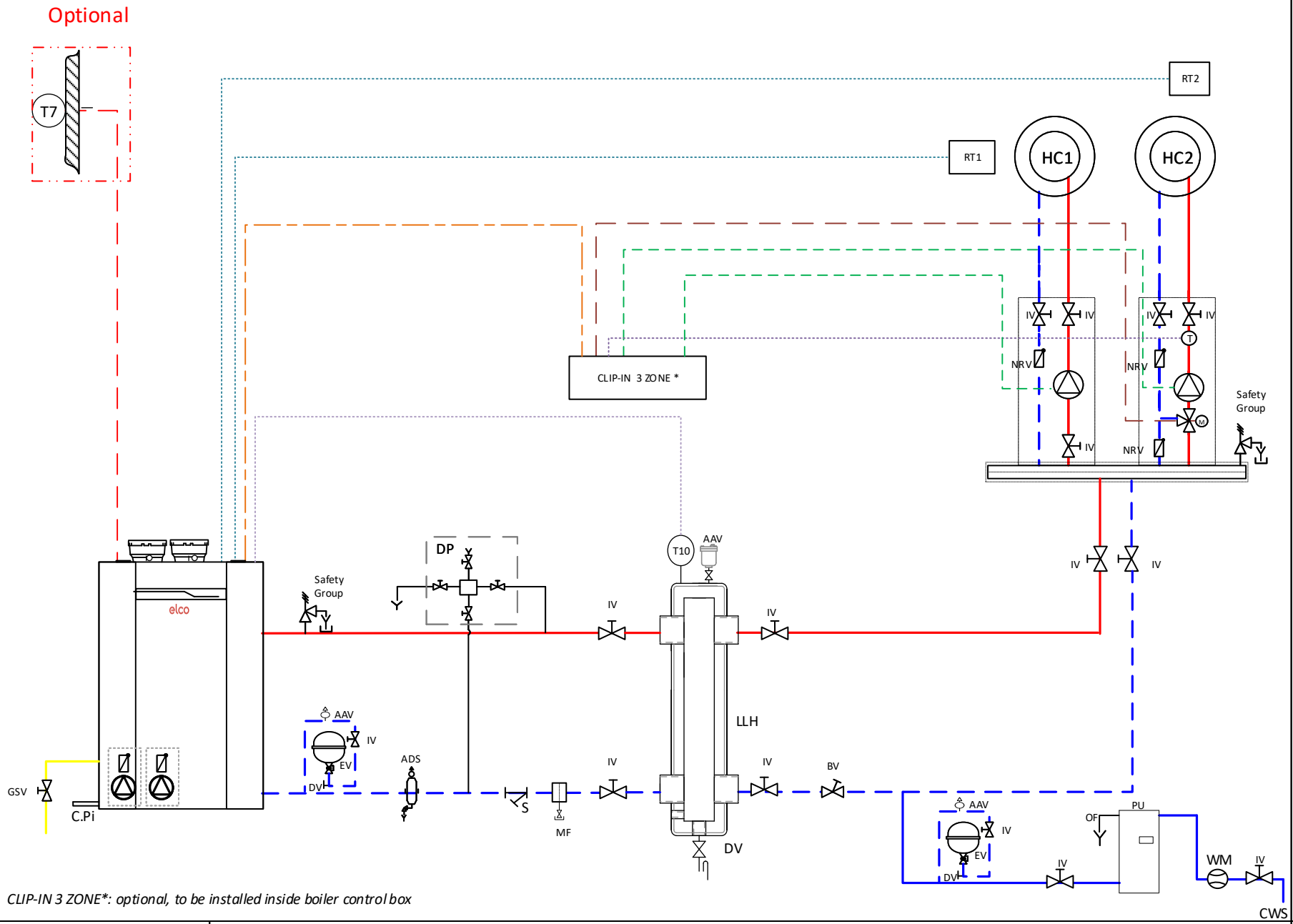
System TRIGON L Plus with one variavle temperature heating circuit, one constant temperature circuit control with Clip In 3 Zone.

The condensing gas boiler TRIGON L PLUS operates on the heating circuit with adapted flow temperature corresponding to the outside temperature.

A plate heat exchanger or low loss header provide hydraulic separation between the primary and the secondary circuits.

The TRIGON L PLUS can control the constant temperature heating zone and variable temperature zone by the Clip-In 3 zone manager.

Hydraulic Schematic



CLIP-IN 3 ZONE: optional, to be installed inside boiler control box*

Legend:

- Gas
- Return
- Flow
- Sensor
- BUS connection cable
- Pump cable
- Optional components
- Mixing valve cable

AAV	Automatic air vent
ADS	Air dirt separator
BV	Balancing valve
C.Pi	Condensing pipe
CWS	Cold water supply
DP	Dosing pot
DV	Drain valve
EV	Expansion vessel
GSV	Gas shut off valve
HC	Heating Circuit
IV	Isolation valve
LLH	Low loss header
MF	Dirt separator magnetic filter
NRV	Non return valve
OF	Overflow pipe
PU	Pressurization unit
RT1/RT2	Room thermostat (on/off)
S	Strainer
T	Flow sensor
T10	Common sensor flow
T7	Outdoor sensor
WM	Water meter

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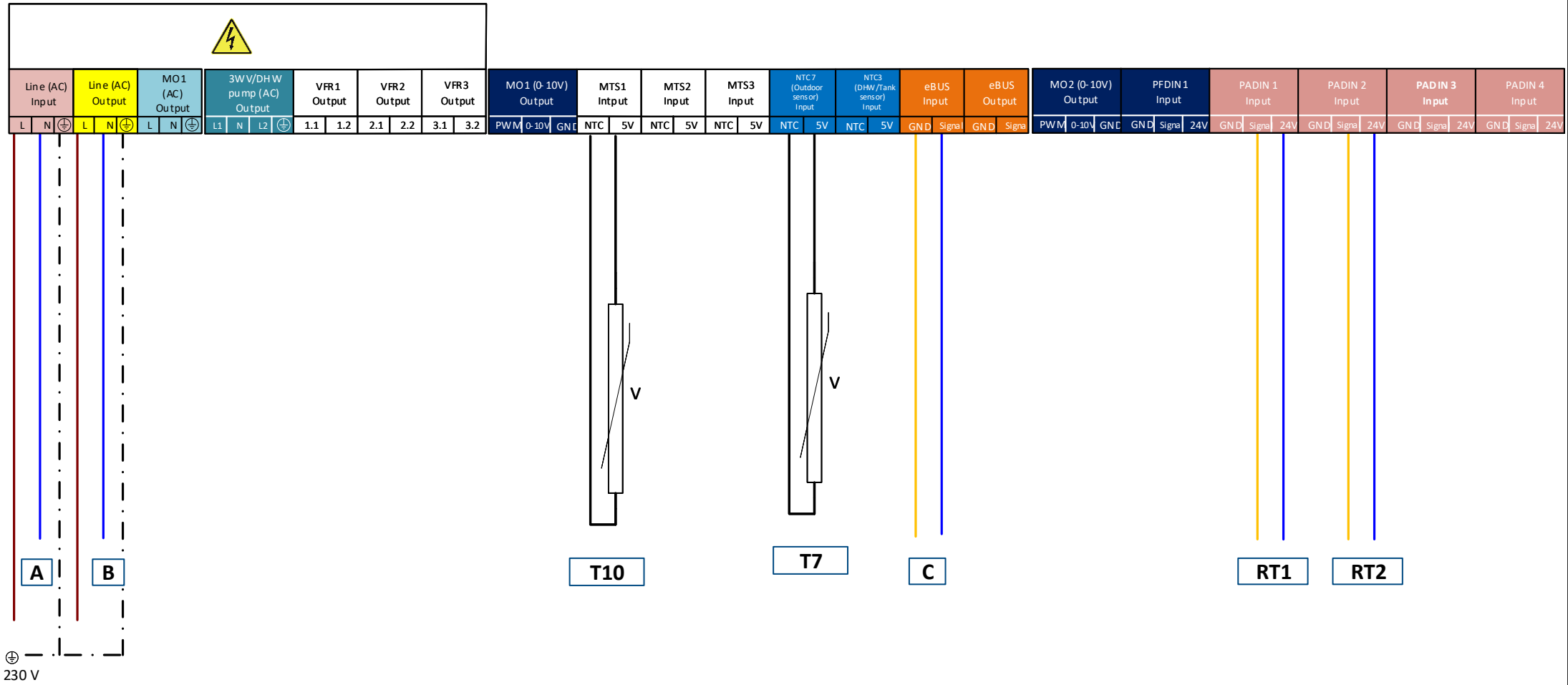
Electrical connections

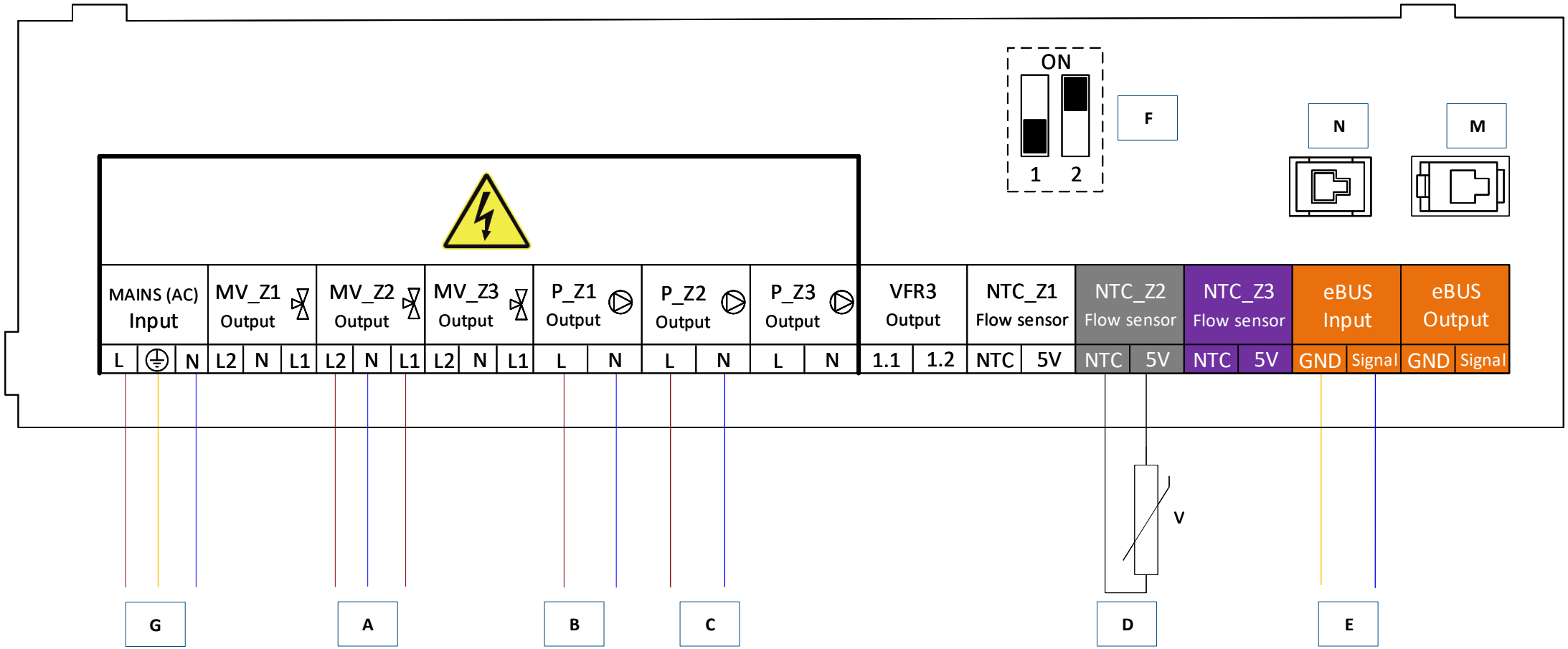


Legend:

A : Main power supply (230V @50Hz)
B : Clip In power (230V @50Hz)
T10: Common flow temperature sensor (10KΩ)

C : Clip-In 3 zone
RT1: Room thermostat (On/Off)
RT2: Room thermostat (On/Off)
T7 : Outdoor sensor (optional)(1KΩ)

Clip-in 3 zone manager connection



Legend:

A : Mixing Valve HC2
B : Heating circuit pump HC1
C : Heating circuit pump HC2

D: Flow sensor HC2
E: Clip In connection to boiler Ebus Input
F: DIP-switch 2 must be set in ON position
G: Main power connection to boiler board

MV: Mixing valves
P_Z: Heating Circuit Pumps
NTC: Zone flow sensor
M: Main PCB Servicetool *(only for Service)*
N: Connection Clip-in *(only for Service)*

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Parameter list

	Menu	Parameter	Description	To be adjusted	Range	Factory setting
Boiler Parameter	Boiler configuration	0.2.0	Undefined Single boiler Master boiler + cascade Slave boiler 1 Slave boiler 2 Slave boiler 3 Slave boiler 4 Slave boiler 5 Slave boiler 6 Slave boiler 7	Single boiler	0-10	0
	MTS1 input	24.6.0	Common flow sensor (T10)	1	0-8	1
	PADIN1 input	24.6.4	Room thermostat HC1	1	0-9	0
	PADIN2 input	24.6.5	Room thermostat HC2	2	0-9	0
	Thermoregulation	24.4.0	0 = OFF, 1 = ON	up to user	0-1	1
	Hydraulic scheme	7.2.0	20= Undefined 21= 1 mix zone 22= 2 direct zone 23= 1 direct zone + 1 mix 24= 2 mix zone 25= 3 direct zone 26= 2 direct zone + 1 mix zone 27= 1 direct zone + 2 mix zone 28= 3 mix zone	23	20-28	20
Zone 1 Parameter	T Day	4.0.0	Room temperature set point for day period	up to user	10- 30 °C	21
	T Night	4.0.1	Room temperature set point for night period	up to user	10- 30 °C	16
	T set Z1	4.0.2	Temperature setpoint zone 1	up to user	40°C to 90°C 20°C to 45°C	85 20
	Zone temperature range	4.2.0	0 = Low Temp (LT) 1 = High Temp (HT)	1	0-1	1
	Thermoregulation	4.2.1	0 = Fix Flow T 1 = Basic Thermoregulation 2 = Room T Only 3 = Outdoor T Only 4 = Room+Outdoor T	3	0-4	0
	Slope	4.2.2		up to user	LT: From 0.2 - 1.0 HT: From 1.0 - 3.5	0.6LT 1.3HT
	Max T	4.2.5	Zone 1 Maximum Flow Temperature	up to user	LT: From 20°C to 45°C HT: From 20°C to 90°C	45°C 85°C
	Min T	4.2.6	Zone 1 Minimum Flow Temperature	up to user	LT: From 20°C to 45°C HT: From 40°C to 90°C	25°C 40°C
	Quick night setback	4.2.8	0 = OFF, 1 = ON	up to user	0-1	0
Zone 2 Parameter	T Day	5.0.0	Room temperature set point for day period	up to user	10- 30 °C	21
	T Night	5.0.1	Room temperature set point for night period	up to user	10- 30 °C	16
	T set Z2	5.0.2	Temperature setpoint zone 2	up to user	40°C to 90°C 20°C to 45°C	85 20
	Zone temperature range	5.2.0	0 = Low Temp (LT) 1 = High Temp (HT)	1	0-1	1
	Thermoregulation	5.2.1	0 = Fix Flow T 1 = Basic Thermoregulation 2 = Room T Only 3 = Outdoor T Only 4 = Room+Outdoor T	3	0-4	0
	Slope	5.2.2		up to user	LT: From 0.2 - 1.0 HT: From 1.0 - 3.5	0.6LT 1.3HT
	Max T	5.2.5	Zone 2 Maximum Flow Temperature	up to user	LT: From 20°C to 45°C HT: From 20°C to 90°C	45°C 85°C
	Min T	5.2.6	Zone 2 minimum Flow Temperature	up to user	LT: From 20°C to 45°C HT: From 40°C to 90°C	25°C 40°C