TRIGON L PLUS

- Commercial floor standing boiler

- Single boiler 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
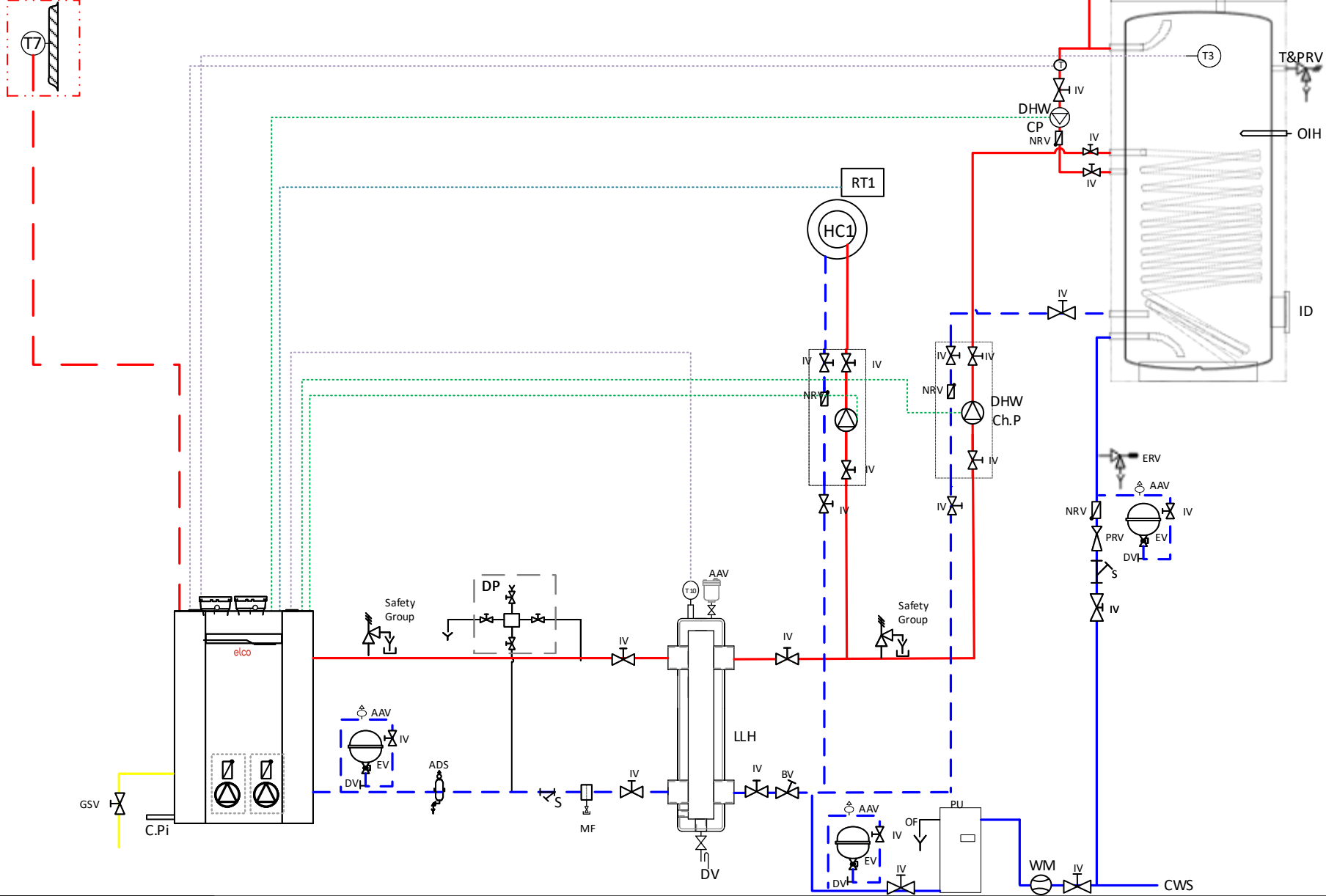
System TRIGON L Plus with one constant temperature heating circuit and one DHW circuit

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.

Elco_Tr_UK_EN_489: Elco Trigon L Plus + 1 Direct circuit +1 Domestic hot water + Low loss header

This schematic is designed to be used for general guidance and not to be considered as a design drawing.

elco heating solutions

Hydraulic Schematic

Legend:

———	Gas
– – –	Return
———	Flow
·········	Sensor
– – –	BUS connection cable
– – –	Pump cable
– – –	Optional components
– – –	Mixing valve cable

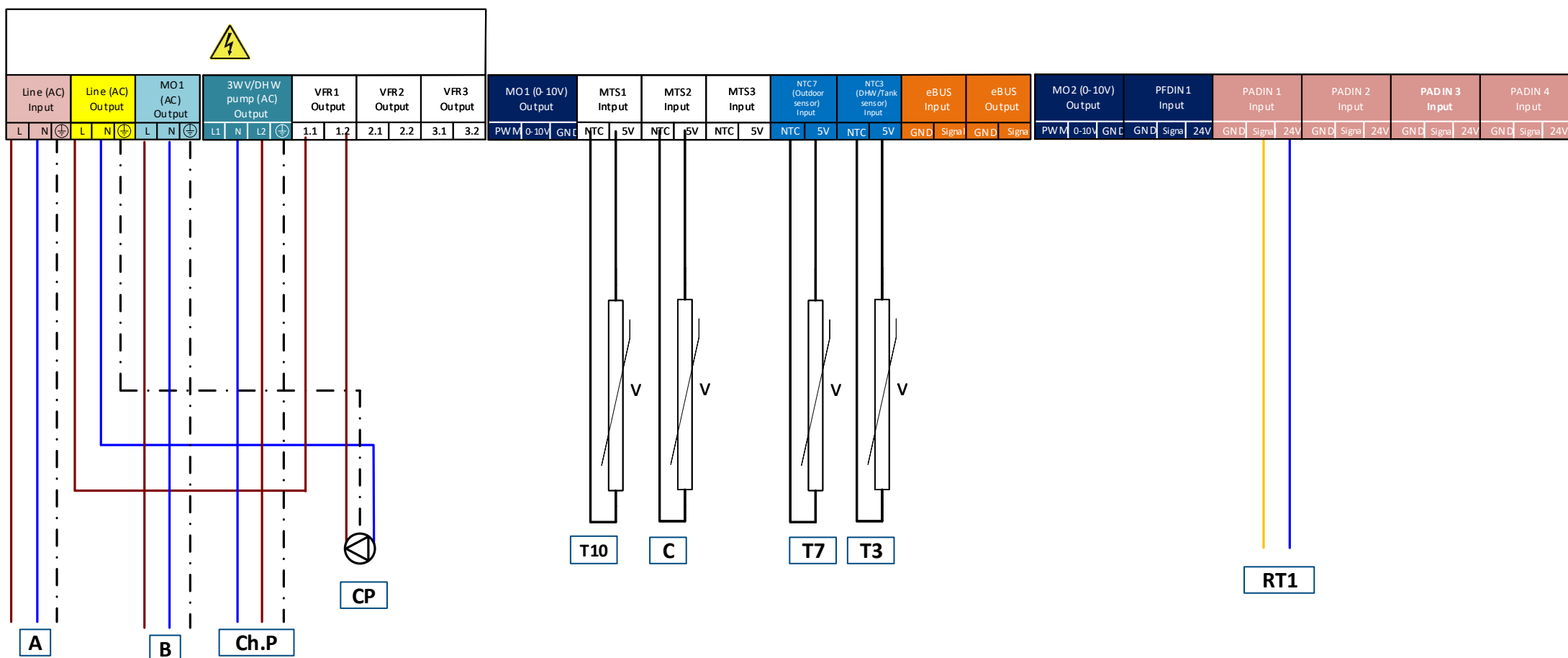|	
AAV	Automatic air vent
ADS	Air dirt separator
BV	Balancing valve
C.Pi	Condensing pipe
Ch.P	DHW Charging Pump
CP	DHW Re-circulating Pump
CWS	Cold water supply
DP	Dosing pot
DV	Drain valve
ERV	Expansion relief valve
EV	Expansion vessel
GSV	Gas shut off valve
HC	Heating Circuit
ID	Inspection door
IV	Isolation valve
LLH	Low loss header
MF	Dirt separator magnetic filter
NRV	Non return valve
OF	Overflow pipe
OIH	Optional immersion heater
PU	Pressurisation unit
RT1	Room thermostat (on/off)
S	Strainer
T&PRV	Temperature and pressure relief valve
T	Flow sensor
T10	Common sensor flow
T7	Outdoor sensor
WM	Water meter

Version: 01-06.2020

Page(s): 2 of 4

Elco_Tr_UK_EN_489: Elco Trigon L Plus + 1 Direct circuit +1 Domestic hot water + Low loss header

This schematic is designed to be used for general guidance and not to be considered as a design drawing.

elco heating solutions

Electrical connections

Line (AC) Input			Line (AC) Output			MO1 (AC) Output			3WV/DHW pump (AC) Output				VFR1 Output		VFR2 Output		VFR3 Output		MO1 (0-10V) Output			MTS1 Intput		MTS2 Input		MTS3 Input		NTC7 (Outdoor sensor) Input		NTC3 (DHW/Tank sensor) Input		eBUS Input		eBUS Output		MO2 (0-10V) Output			PFDIN1 Input			PADIN 1 Input			PADIN 2 Input			PADIN 3 Input			PADIN 4 Input		
L	N	⏚	L	N	⏚	L	N	⏚	L1	N	L2	⏚	1.1	1.2	2.1	2.2	3.1	3.2	PWM	0-10V	GND	NTC	5V	NTC	5V	NTC	5V	NTC	5V	NTC	5V	GND	Signal	GND	Signal	PWM	0-10V	GND	GND	Signal	24V	GND	Signal	24V	GND	Signal	24V	GND	Signal	24V	GND	Signal	24V

Sensors: T10 · C · T7 · T3

CP · RT1

A · B · Ch.P

Legend:

A : Main power supply (230V @50Hz)

B : Heating circuit pump HC1(230V @50Hz)

Ch.P : DHW Charging pump(230/120 VAC, 1A max)

CP: DHW Re-circulating pump (230 VAC, 2A max)

T10: Common flow temperature sensor (10KΩ)

C: DHW re-circulating temperature sensor(10KΩ)

T3: DHW temperature sensor(10KΩ)

RT1: Room thermostat (On/Off)

T7 : Outdoor sensor (optional)(1KΩ)

Elco_Tr_UK_EN_489: Elco Trigon L Plus + 1 Direct circuit +1 Domestic hot water + Low loss header

This schematic is designed to be used for general guidance and not to be considered as a design drawing.

elco heating solutions

Parameter List

	Menü	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
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
DHW Parameter	DHW comfort Function	24.5.1	0= Disable 1 = Time based 2= always Active	up to user	0-2	0
	System DHW mode	24.5.2	0= CH only 1= Storage with NTC 2= Storage with Thermostat	1	0-2	0
	VFR1 output	24.7.1	DHW re-circulating pump	4	0-11	0
	Boiler DHW Re-Circulating Pump Release	24.5.7	Release Time Program Special time program	up to user	0-2	0
	DHW Priorty	24.5.9	Absolute Shifting None	up to user	0-2	0
	MTS2 input	24.6.1	DHW re-circulation sensor	4	0-8	0
	Other	24.20.0	DHW modulation set point	up to user	50 - 85 °C	70°C

Elco_Tr_UK_EN_489: Elco Trigon L Plus + 1 Direct circuit +1 Domestic hot water + Low loss header

This schematic is designed to be used for general guidance and not to be considered as a design drawing.

elco heating solutions