

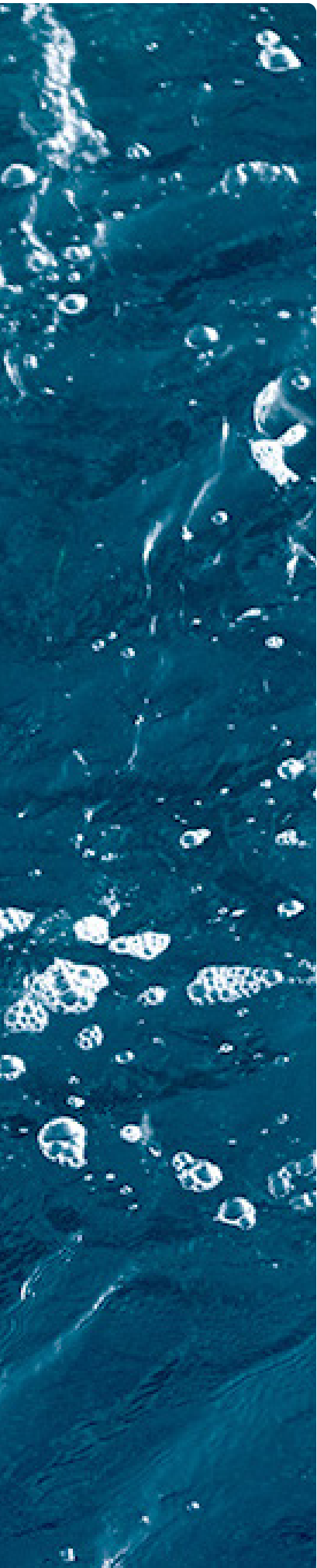


 **MITSUBISHI
ELECTRIC**
Heating and Cooling

ecodan[®] WUZ

Air-to-Water Heat Pump Applications Guide

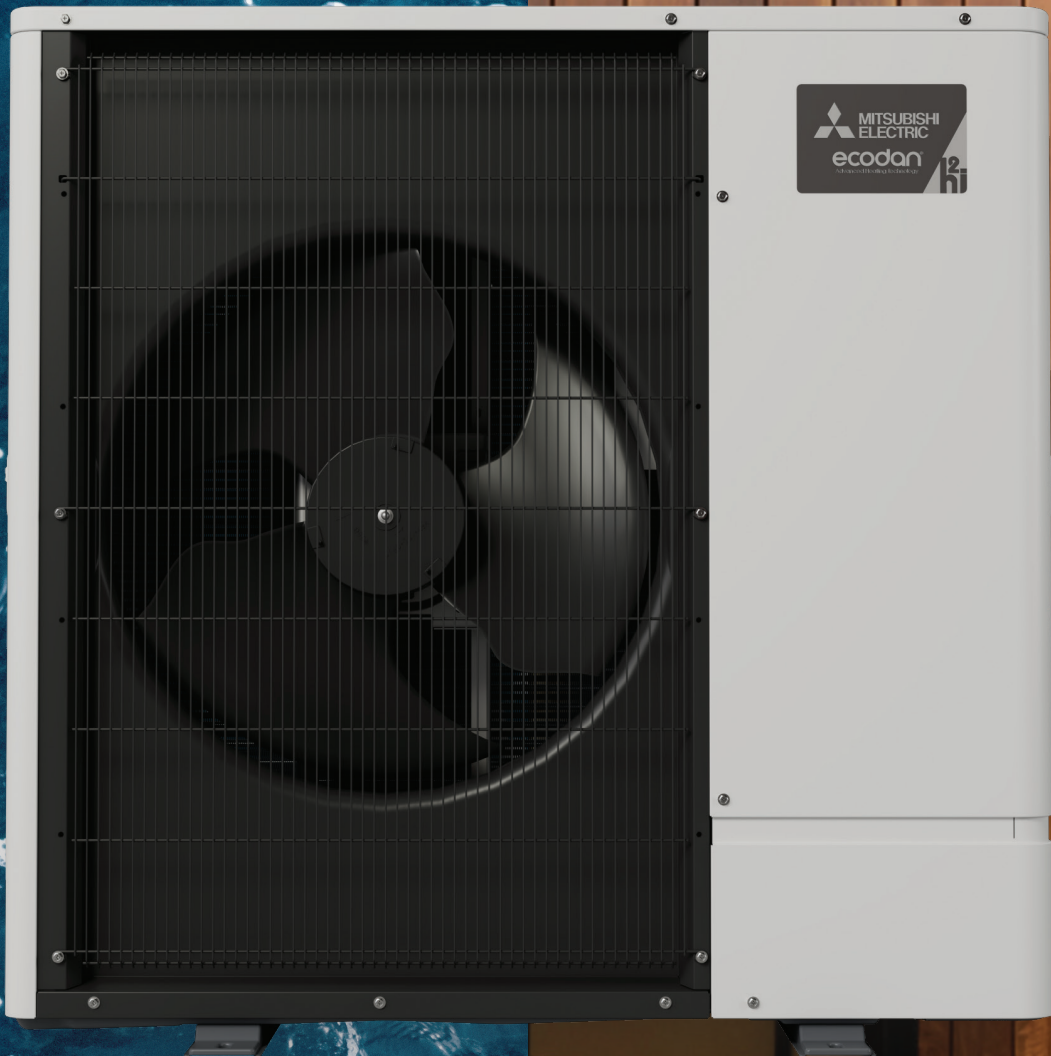
Version 1.0.20260605



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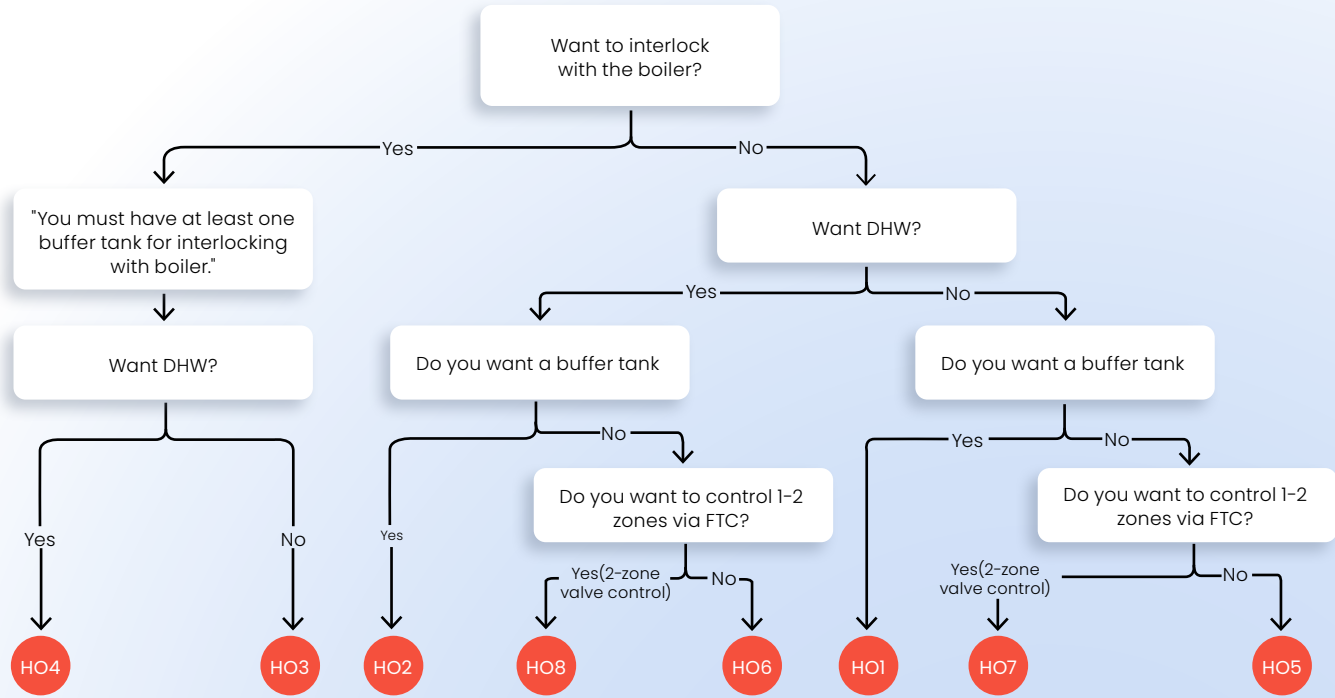
Introduction



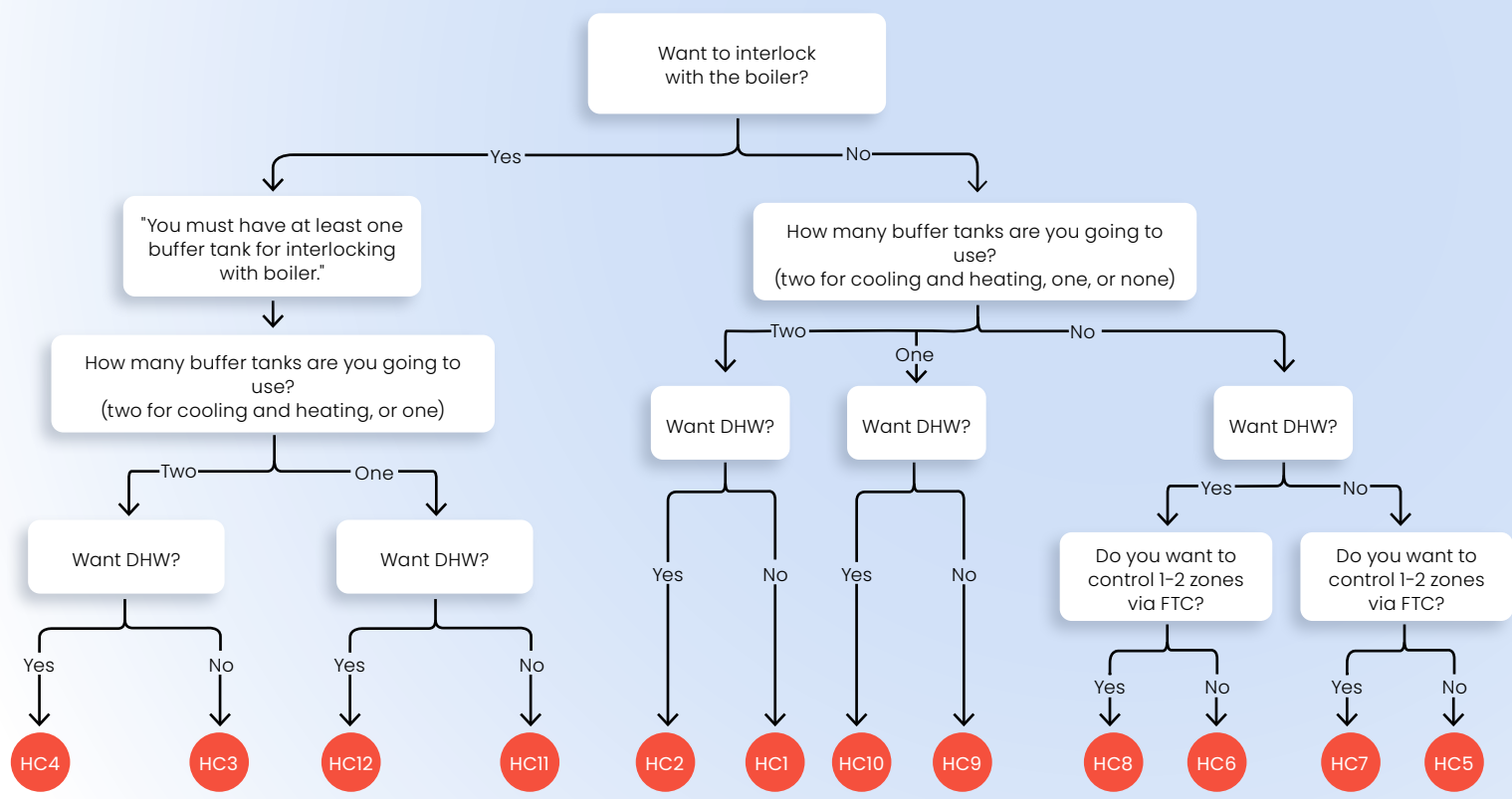
01

Application Guide Selection Flowchart

Heating Applications:



Heating & Cooling Applications:



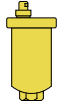
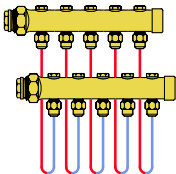
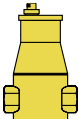
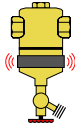
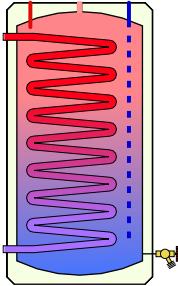
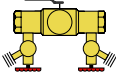
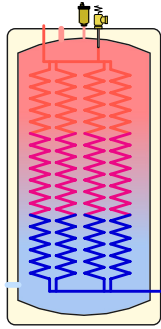
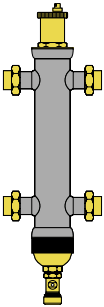
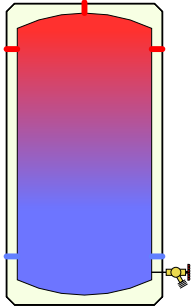
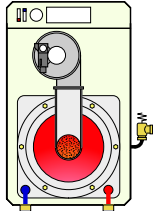
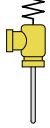
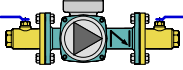
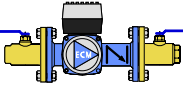
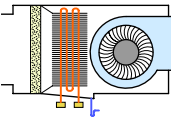
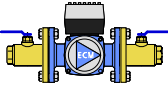
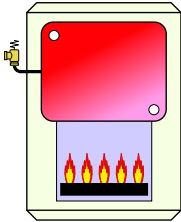
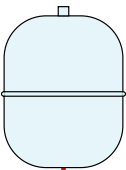
Application Guide Index



	ID	Description of application
Heating only	HO1	Heating with buffer tank and zone controller
	HO2	Heating with buffer tank, DHW, and zone controller
	HO3	Heating with buffer tank, boiler, and zone controller
	HO4	Heating with buffer tank, boiler, DHW, and zone controller
	HO5	Heating with zone controller
	HO6	Heating with buffer tank, DHW, and zone controller
	HO7	Heating with buffer tank and 2-zone FTC control
	HO8	Heating with buffer tank, DHW, 2-zone FTC control
Heating & Cooling	HC1	Heating & Cooling with 2 buffer tanks and zone controller
	HC2	Heating & Cooling with 2 buffer tanks, DHW, and zone controller
	HC3	Heating & Cooling with 2 buffer tanks, boiler, and zone controller
	HC4	Heating & Cooling with 2 buffer tanks, boiler, DHW, and zone controller
	HC5	Heating & Cooling with zone controller
	HC6	Heating & Cooling with DHW and zone controller
	HC7	Heating & Cooling with 2-zone FTC control
	HC8	Heating & Cooling with DHW and 2-zone FTC control
	HC9	Heating & Cooling with buffer tank and zone controller
	HC10	Heating & Cooling with buffer tank, DHW, and zone controller
	HC11	Heating & Cooling with buffer tank, boiler, and zone controller
	HC12	Heating & Cooling with buffer tank, DHW, boiler, and zone controller

NOTE: The configurations and settings shown in this document are based on generalized applications, and they are only intended to provide assistance with the design. The applications guide should not be used as a substitute for the factory installation and service manuals. It is the responsibility of the installer to review the installation manual and adjust the system settings based on field application at their discretion.

Legend

	Ball Valve		Float Air Vent		Radiant Panel Manifold Station
	Drain Valve		Micro-Bubble Air Separator		
	Spring Check Valve		Dirt Separator with Magnet		Indirect water heater (DHW)
	Purge Valve		Air & Dirt Separator with Magnet		
	Dual Port Purge Valve				Reverse Indirect Water Heater
	3-way Motorized Ball Valve		Reinforced Flexible Connector		
	2-Way Zone Valve		Hydraulic Separator with Magnet		Buffer tank
	3-Way Zone Valve		Tee		
	Anti-condensation Mixing Valve		Union		
	Balancing Valve				Compact Mod/Con Boiler
	Anti-condensation Mixing Valve				
	Pressure Relief Valve				
	Temperature & Pressure Relief Valve				
	Pressure Reducing Valve		Circulator with Internal Check Valve & Isolation Flanges		
	Back-flow Preventer		Variable Speed Circulator with Internal Check Valve & Isolation Flanges		
	Air Handler		Variable Speed Circulator with Isolation Flanges		Gas-fired Conventional Cast-Iron Boiler
	Console Air Handler		Expansion Tank		
	Fin-tube Baseboard				



System

Overview

02

System Overview



Outdoor unit

- WUZ-SA24NMZ
- WUZ-SA36NMZ
- WUZ-SA48NMZ

Capacity

- 24 kBtu/h
- 36 kBtu/h
- 48 kBtu/h



Hydrobox (indoor unit)

- ERSF-NM6E



Domestic hot water tank

- Based on application needs
- Field supplied



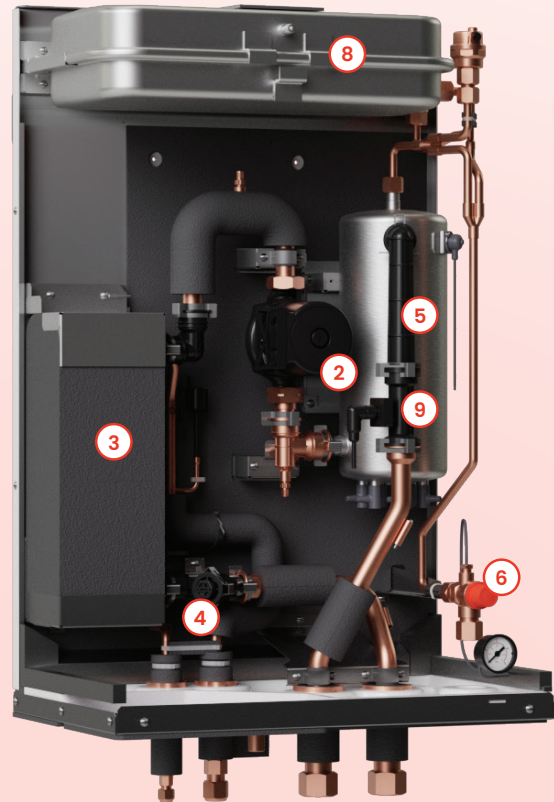
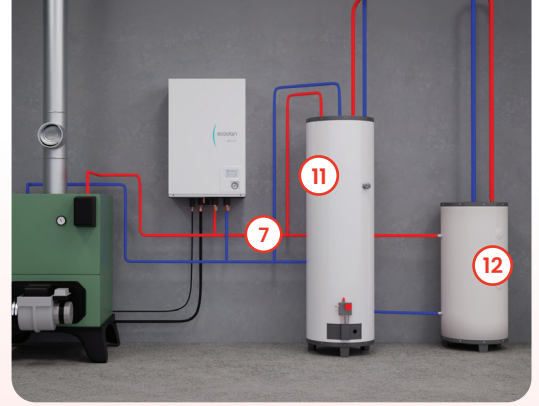
Buffer tank

- Based on application needs
- Field supplied

System Overview continued

Key Components

Hydrobox Indoor Unit



- 1 Flow Temperature Controller (FTC)** - The Flow Temperature Controller is the control board inside the Hydrobox. It manages the system, including the indoor and outdoor units and the water circuit based on ambient and flow temperatures. It can be integrated or interlocked with external controllers for greater application flexibility.
- 2 Water pump/Circulator** - This component is built-in and equipped with sensors for energy efficient water circulation in a closed loop. The pump adjusts the speed of the water flow to maintain comfort.
- 3 Plate heat exchanger** - The plate heat exchanger is designed and optimized for the efficient transfer of heat between the refrigerant and water.
- 4 Magnetic filter** - The magnetic filter catches large debris, sediment, and iron particles before they can impact the plate heat exchanger, pump, or other piping, supporting system longevity and easier maintenance.
- 5 Booster heater** - When the set point deviates beyond a selected temperature for a specified amount of time, the electric booster heater provides additional heating to raise the water temperature.
- 6 Pressure relief valves** - The pressure relief valve is automatically activated when the water pressure is above 43.5 psi (3 bar).
- 7 Three-way valve** - The three-way valve diverts water to switch between space conditioning and DHW.
- 8 Expansion vessel** - The built-in expansion vessel absorbs the water volume expansion due to heating, protecting piping and its components.
- 9 Flow sensor** - The flow sensor maintains water pressure by monitoring the flow rate and automatically adjusting the inverter output for maximum efficiency.
- 10 MicroSD Card** - Installers can copy settings onto an included SD card to use for future installs. They can also easily save and refer to system operation data.
- 11 Indirect tank** - This tank stores domestic hot water indirectly heated using hot water supplied by ecodan® WUZ. Available in 60 and 85 gallon capacities with and without an integrated heater.
- 12 Buffer tank** - The optional buffer tank serves as a thermal energy battery, storing hot or cold water and reducing short cycling.

System Overview continued

Key Components

Outdoor Unit

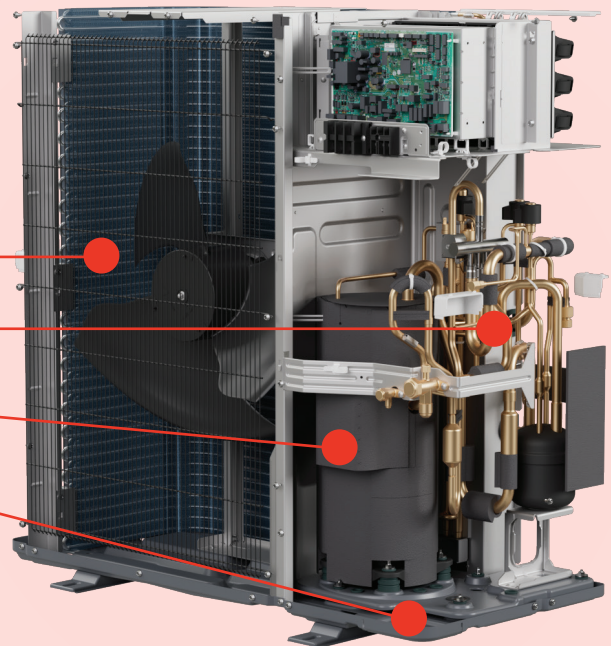


Design and sound

The ecodan® WUZ heat pump outdoor unit features an elegant design which seamlessly blends in with the design and functionality of any outdoor space.

Outdoor units can be “tucked away” due to their small size and are adaptable to many spaces. The compact, attractive design is further emphasized by the rounded edges of the unit, which gives a softer look and feel.

- Aerodynamic design
- Flash injection technology
- 6-layer sound jacket
- Dual layer vibration isolators



Designed for peace and quiet

ecodan® WUZ units feature a dual vibration isolation structure to reduce noise and vibrations as well as a six-layer sound insulation and a larger low-speed fan. These designs are incorporated to reduce noise and achieve quiet operation.

The outdoor unit features ultra-quiet operation as low as 41 - 45 dB(A) thanks to its reduced-vibration design. The unit also offers a three-stage low-noise mode that can lower the compressor frequency and fan speed to reduce noise levels if desired while house occupants are sleeping.

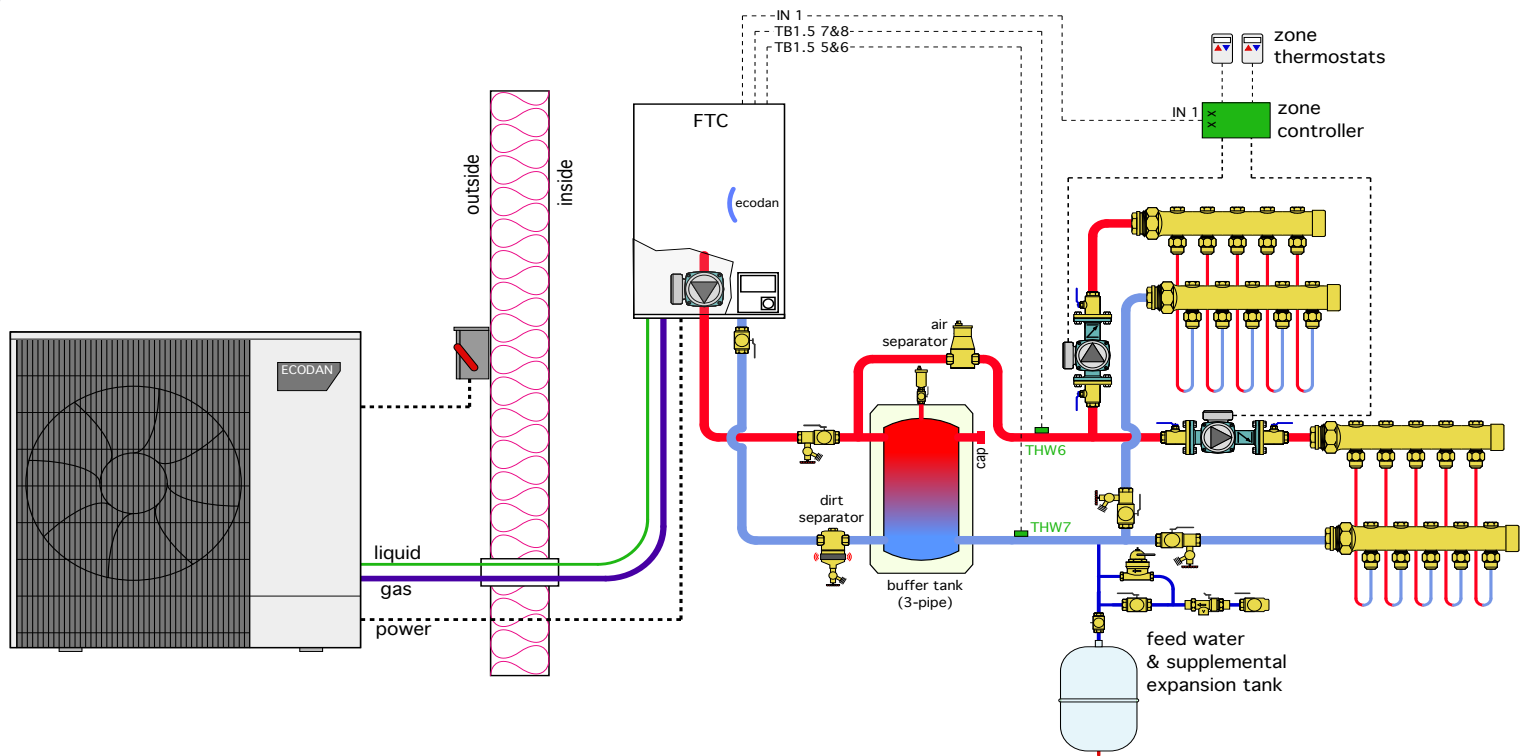


Common

Applications

03

HO1: Heating with buffer tank and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	Buffer Tank	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
2	Zone Thermostat	Mandatory	Local Supply
2	Zone Circulator	Mandatory	Local Supply
2	Zone balance & purge valve	Mandatory	Local Supply

HO1: Heating with buffer tank and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

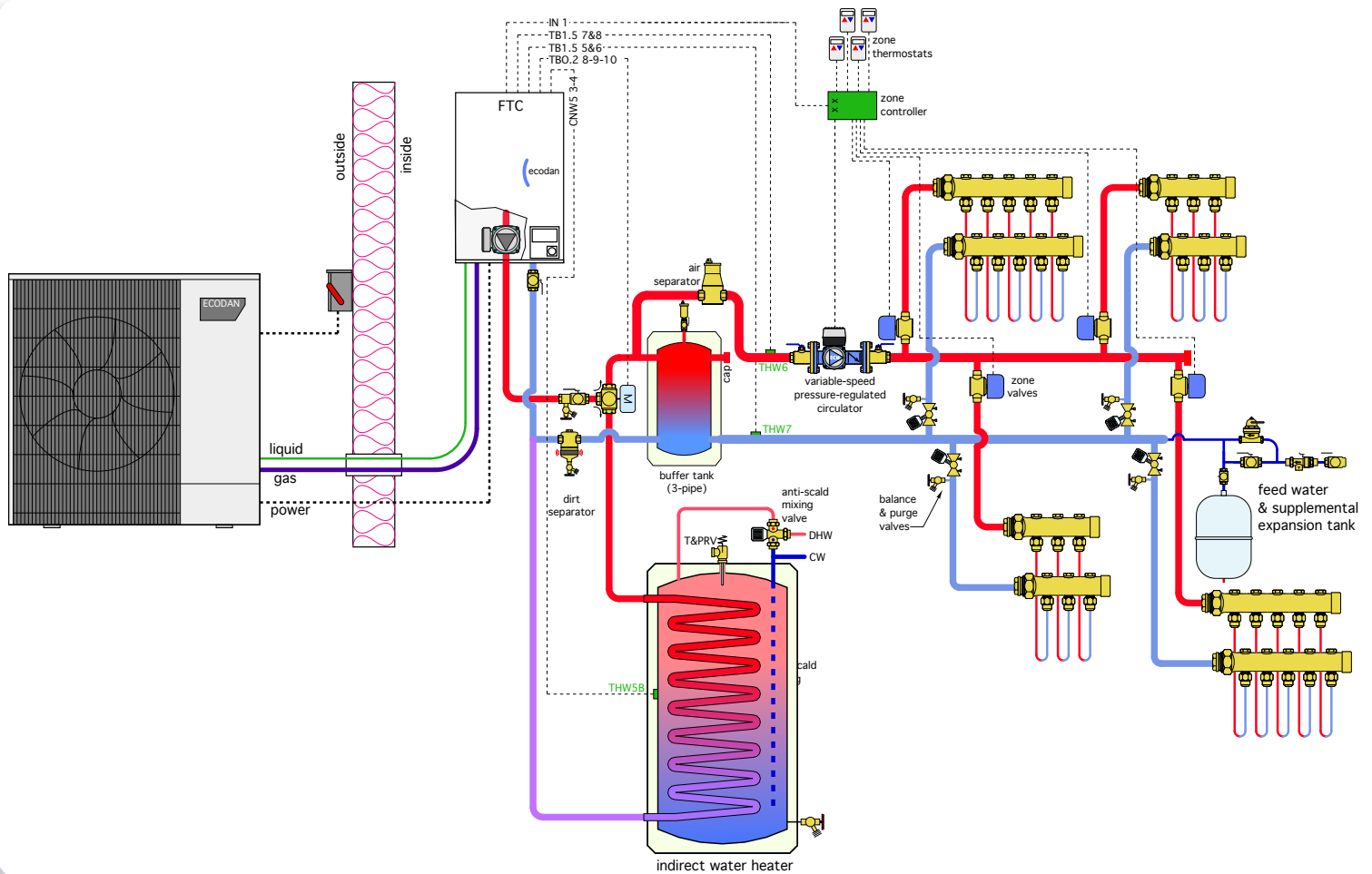
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen					Parameters		Default setting			
Heating / Cooling*3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve			
			Auto change over		On/Off		Off			
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)			
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		122°F (50°C)			
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)			
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		77°F (25°C)			
Menu	Settings		Display		Temp. (°C) → (°F)		On/Off		Off	
	Service	Pump Speed		Heating / Cooling		Pump speed (1 to 5)		5		
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])		1.4 GPM			
					Maximum (0 to 26.4 GPM [0 to 100 L/min])		26.4 GPM			
		Operation settings	Heating operation		Heat pump thermo diff.	On/Off *8		On		
						Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)		
						Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)		
			Freeze stat function *13			Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)		
			Cold weather function			On/Off *8		Off		
	Ambient temp. (-22 to 14°F [-30 to -10°C]) *5				5°F (-15°C)					

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO2: Heating with buffer tank, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Indirect Water Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostats	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
4	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply

HO2: Heating with buffer tank, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

SW4 •

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

SW5 •

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

SW6 •

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

SW3 •

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

SW2 •

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

SW1 •

1. ☐ Boiler integration
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

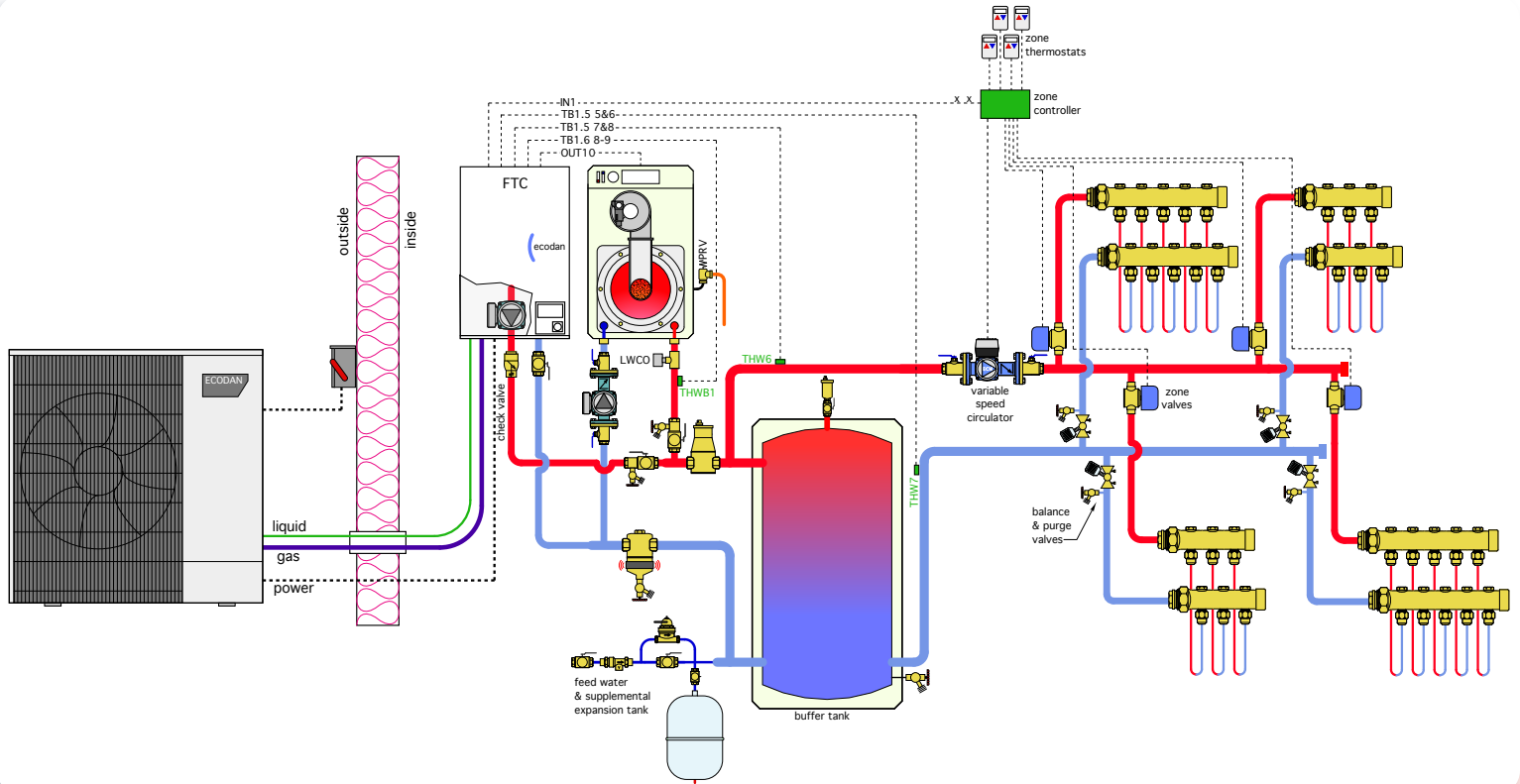
SW7 •

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen					Parameters		Default setting	
DHW	DHW *3		Eco		On/Off		Off	
			DHW max. temp.		104 to 158°F (40 to 70°C) *4		122°F (50°C)	
			Max. temp. drop		9 to 72°F (5 to 40°C)		18°F (10°C)	
			Max. operation time		30 to 120 min.		60 min.	
			Interval		30 to 120 min.		30 min.	
			Volume		Large / Standard		Standard	
	Legionella prevention *3		Legionella		On/Off		On	
Hot water temp.			140 to 158°F (60 to 70°C) *4		149°F (65°C)			
Heating / Cooling*3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve	
			Auto change over		On/Off		Off	
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)	
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		122°F (50°C)	
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)	
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		77°F (25°C)	
		Settings	Display	Temp. (°C) → (°F)		On/Off		Off
Menu	Service	Pump speed	DHW		Pump speed (1 to 5)		5	
			Heating / Cooling		Pump speed (1 to 5)		5	
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])		1.4 GPM	
					Maximum (0 to 26.4 GPM [0 to 100 L/min])		26.4 GPM	
		Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8		On	
					Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)	
					Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)	
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)	
			"Simultaneous operation (DHW/ Heating)"		On/Off *8		Off	
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5		5°F (-15°C)	
		Cold weather function		Ambient temp. (-22 to 14°F [-30 to -10°C]) *5		5°F (-15°C)		

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO3: Heating with buffer tank, boiler, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	Boiler Temperature Sensor (THWB1)	Mandatory	MESCA (In ERSF box)
1	Check Valve	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostats	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
4	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply

HO3: Heating with buffer tank, boiler, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

SW4 •

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

SW5 •

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

SW6 •

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

SW3 •

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

SW2 •

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ **Auto switch over to backup heat source**
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

SW1 •

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

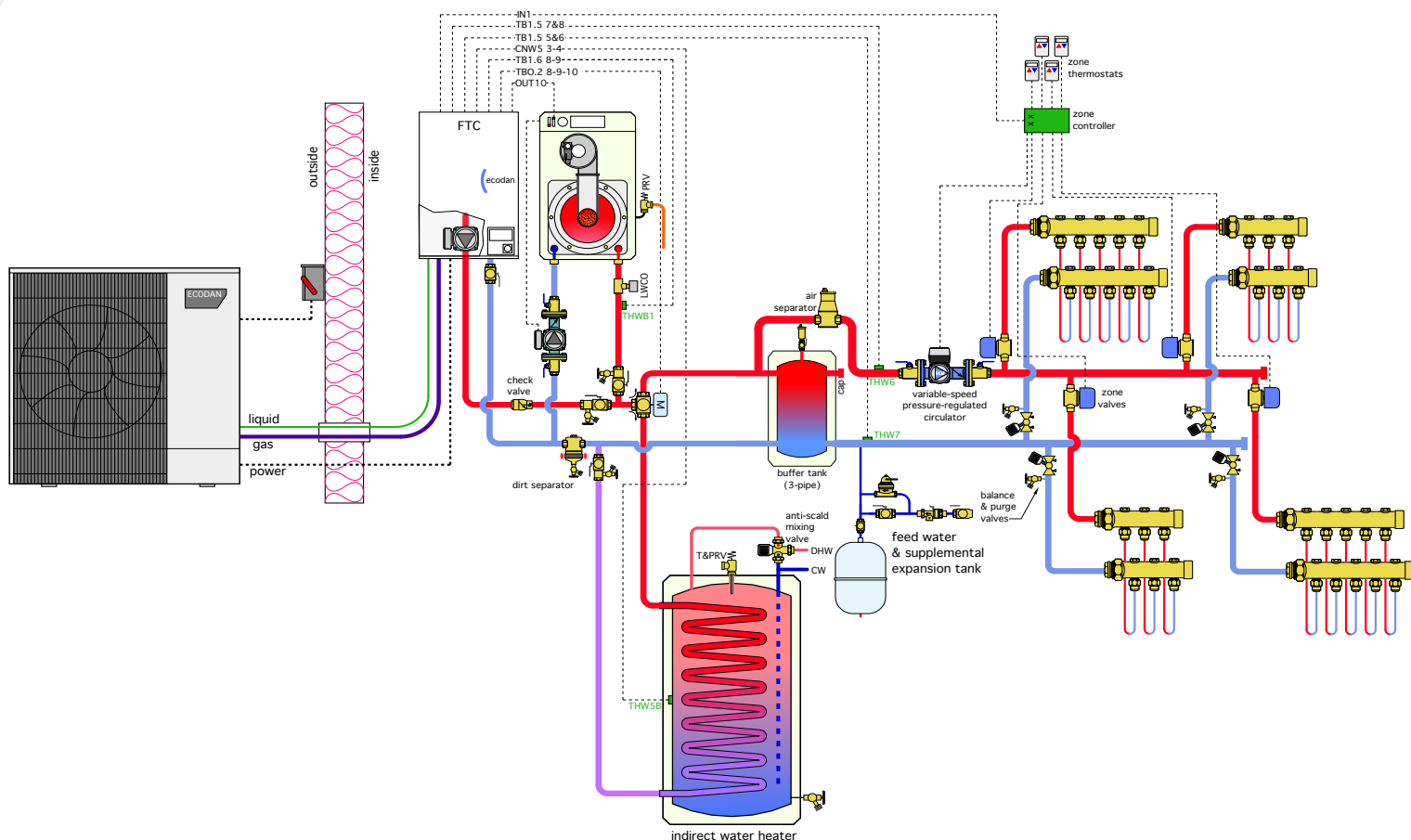
SW7 •

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting			
Heating / Cooling ³	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve		
			Auto change over		On/Off	Off		
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)		
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)	122°F (50°C)		
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6	68°F (20°C)		
		Zone 1 flow temp.		68 to 158°F (20 to 70°C)	77°F (25°C)			
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off	Off		
	Service	Pump speed	Heating / Cooling		Pump speed (1 to 5)	5		
		Heat source setting			Standard / Heater / Boiler / Hybrid *10	Standard		
		Heat pump settings	Heat pump flow rate range			Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM	
						Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM	
		Operation settings	Heating operation		Heat pump thermo diff.	On/Off *8		On
						Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)
						Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)
			Freeze stat function *13			Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)
			Cold weather function			On/Off *8		Off
						Ambient temp. (-22 to 14°F [-30 to -10°C]) *5		5°F (-15°C)
			Boiler settings		Hybrid settings	"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."		5°F (-15°C)
						"Priority mode (Ambient/Cost/CO2)"		Ambient
						Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])		+5°F (+3°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO4: Heating with buffer tank, boiler, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	Boiler Temperature Sensor (THWB1)	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Check Valve	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostats	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
4	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply

HO4: Heating with buffer tank, boiler, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ **Auto switch over to backup heat source**
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

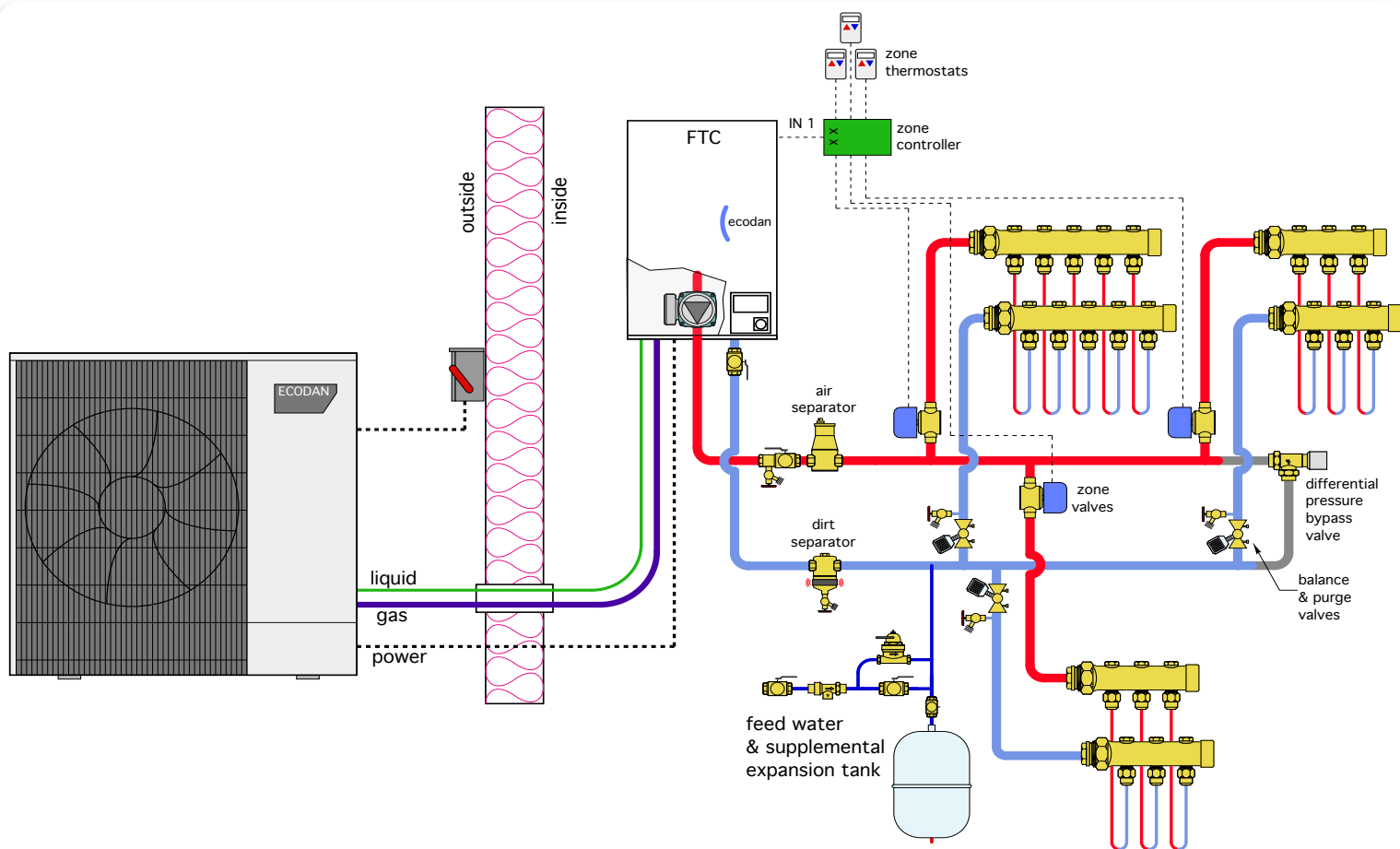
(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting	
DHW	DHW *3		Eco	On/Off	Off	
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)	
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)	
			Max. operation time	30 to 120 min.	60 min.	
			Interval	30 to 120 min.	30 min.	
			Volume	Large / Standard	Standard	
	Legionella prevention *3		Legionella	On/Off	On	
Hot water temp.			140 to 158°F (60 to 70°C) *4	149°F (65°C)		
Heating / Cooling*3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)	
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)	
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)	
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)	
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off	Off
	Pump speed		DHW	Pump speed (1 to 5)		5
			Heating / Cooling	Pump speed (1 to 5)		5
	Heat source setting		Standard / Heater / Boiler / Hybrid *10			Standard
	Heat pump settings				Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
		Heat pump flow rate range			Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
	Service	Heating operation	Heat pump thermo diff.	On/Off *8		On
				Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)
				Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			"Simultaneous operation (DHW/ Heating)"		On/Off *8	Off
				Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	5°F (-15°C)	
		Cold weather function		On/Off *8	Off	
				Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)	
		Boiler settings	Hybrid settings	"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."		5°F (-15°C)
				"Priority mode (Ambient/Cost/CO2)"		Ambient
			Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])		+5°F (+3°C)	

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO5: Heating with zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
3	Zone Thermostat	Mandatory	Local Supply
3	Zone balance & purge valve	Mandatory	Local Supply

HO5: Heating with zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN**: position to be
modified on a case-by-case basis

OFF ON

(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

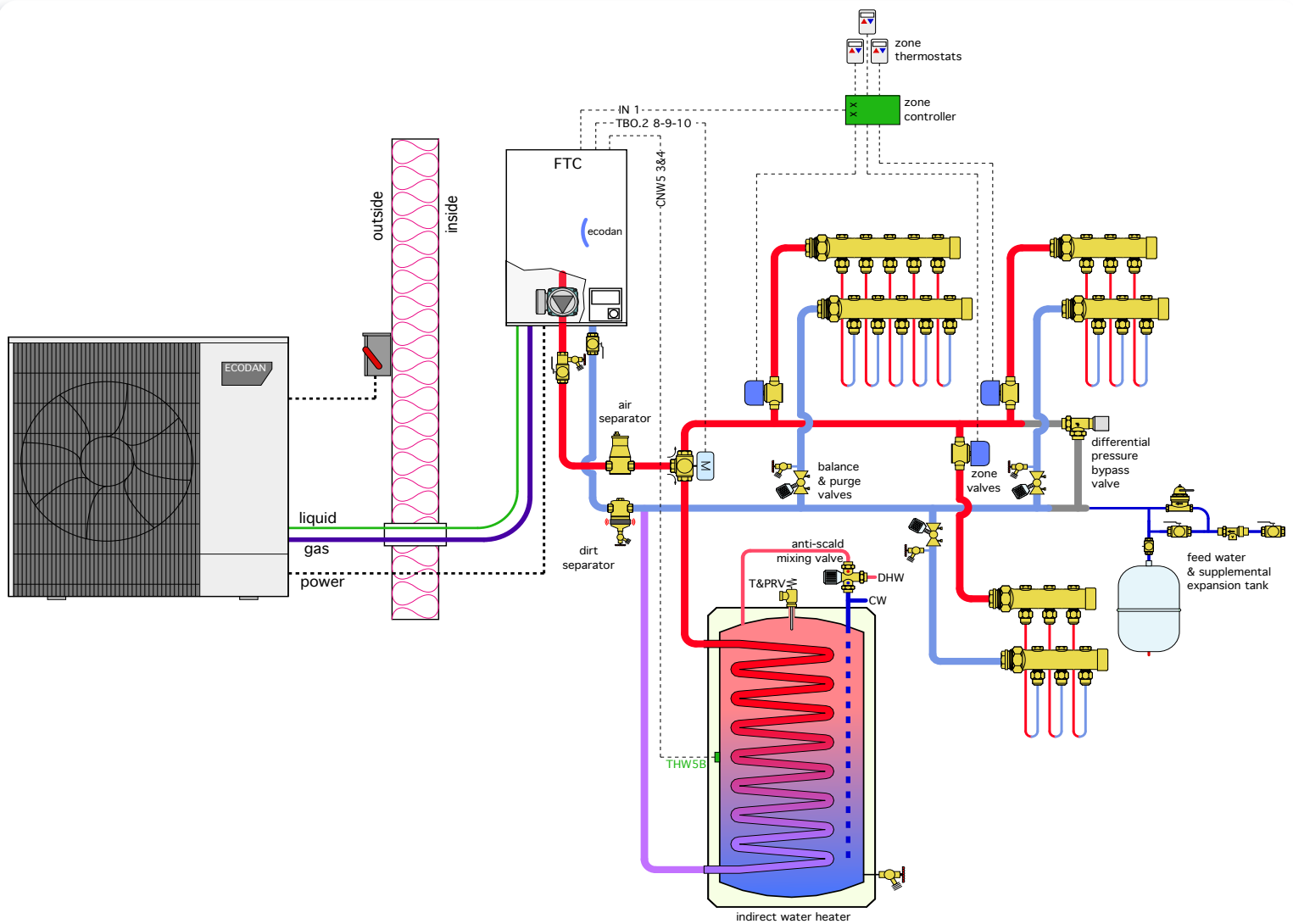
(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen					Parameters	Default setting
Heating / Cooling*3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)	122°F (50°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off	Off
		Pump speed	Heating / Cooling		Pump speed (1 to 5)	5
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
	Maximum (0 to 26.4 GPM [0 to 100 L/min])				26.4 GPM	
	Operation settings		Heating operation	Heat pump thermo diff.	On/Off *8	On
					Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
					Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
		Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)
		Cold weather function				On/Off *8
					Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO6: Heating with DHW and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Heater (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
3	Zone Thermostat	Mandatory	Local Supply
3	Zone Valve	Mandatory	Local Supply
3	Zone balance & purge valve	Mandatory	Local Supply

HO6: Heating with DHW and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☒ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☒ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

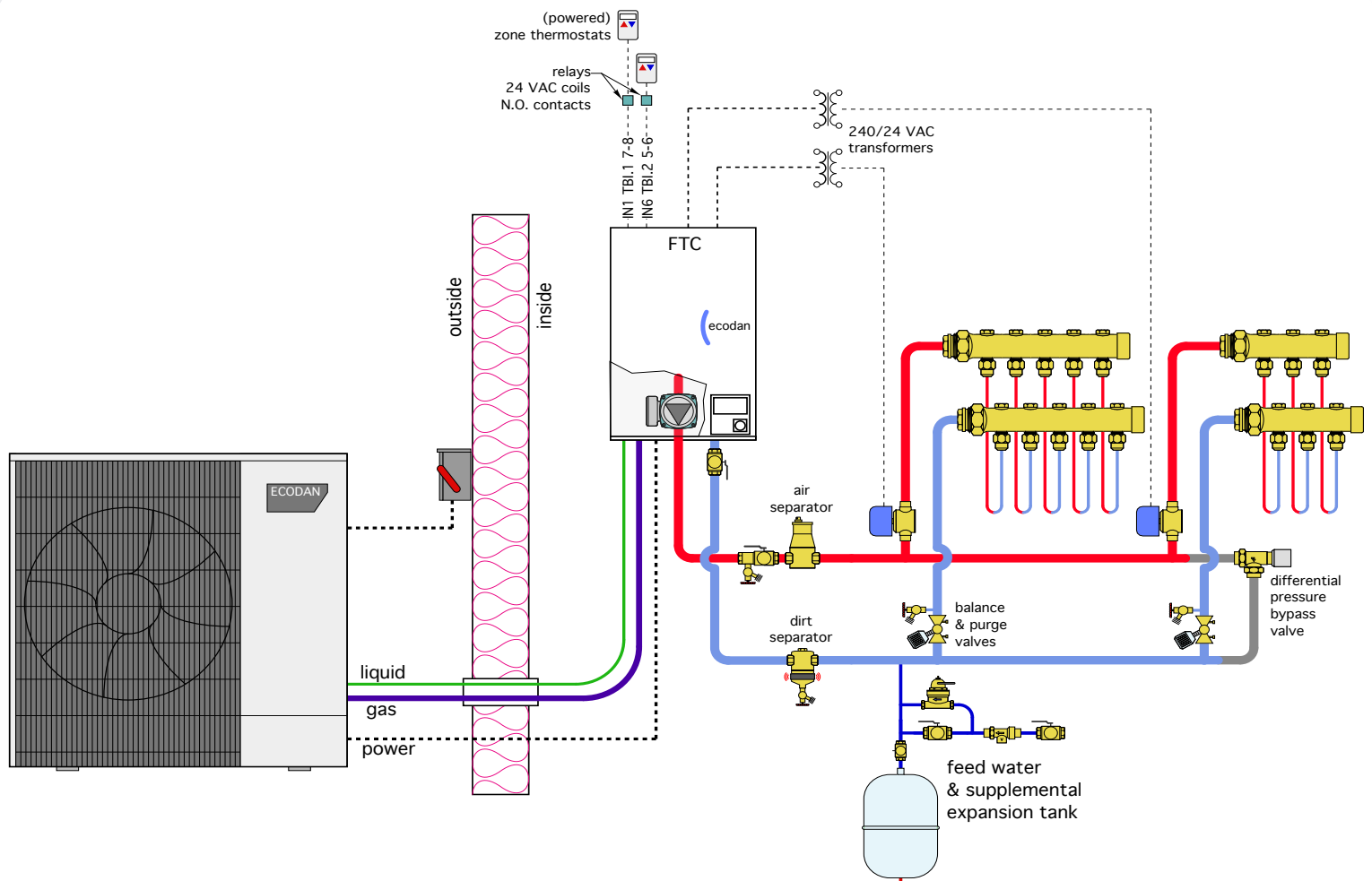
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☒ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
DHW	DHW *3		Eco	On/Off	Off
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)
			Max. operation time	30 to 120 min.	60 min.
			Interval	30 to 120 min.	30 min.
			Volume	Large / Standard	Standard
	Legionella prevention *3		Legionella	On/Off	On
Heating / Cooling*3	Weather compensation curve (Heating)	Hi flow temp. set point Lo flow temp. set point	Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)
			Zone 1 control logic	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
			Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
			Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
			Pump speed	Pump speed (1 to 5)	5
			Heat pump settings	Pump speed (1 to 5)	5
			Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min]) Maximum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM 26.4 GPM
			Heating operation	On/Off *8 Lower (-16 to -2°F [-9 to -1°C]) Upper (+5 to +9°F [+3 to +5°C])	On -9°F (-5°C) +9°F (+5°C)
	Operation settings	Heat pump thermo diff.	Freeze stat function *13	Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			"Simultaneous operation (DHW/ Heating)"	On/Off *8 Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	Off 5°F (-15°C)
			Cold weather function	On/Off *8 Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	Off 5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO7: Heating with 2-zone FTC control



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
2	Zone Thermostat	Mandatory	Local Supply
2	Zone Valve	Mandatory	Local Supply
2	Zone balance & purge valve	Mandatory	Local Supply
2	24V Relay (For Thermostats)	Mandatory	Local Supply
2	240V Relay (For Zone Valve)	Mandatory	Local Supply

HO7: Heating with 2-zone FTC control

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3 •)

1. ☐ **Room thermostat 2 logic change**
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ **Direct valve control from FTC (1-2 valves)**
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

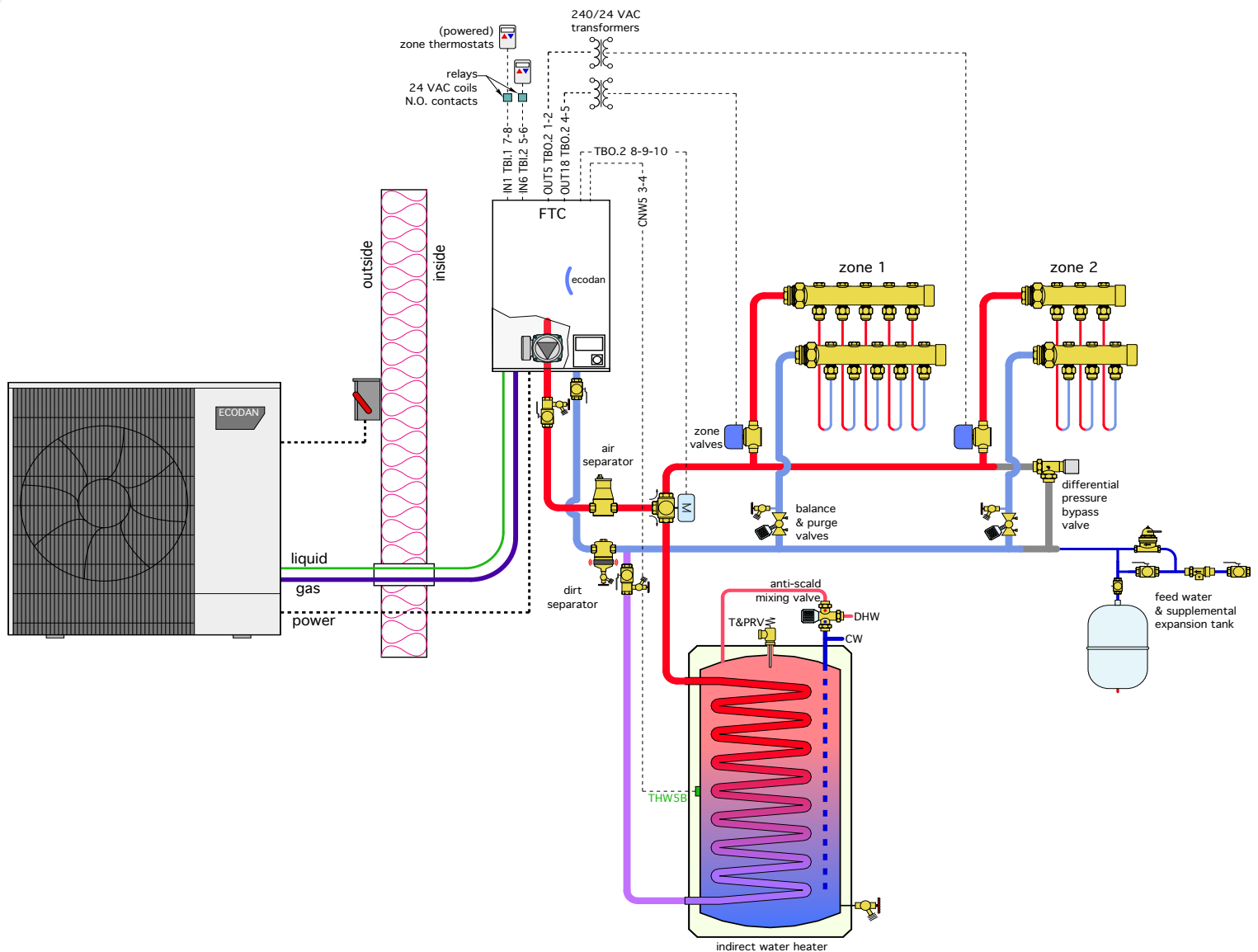
(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
Heating / Cooling*3	Heating / Cooling	Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
		Zone 2 control logic *2		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
			Zone 2 outdoor ambient temp. *2	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)	104°F (40°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
			Zone 2 outdoor ambient temp. *2	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
	Service	Pump speed	Heating / Cooling	Pump speed (1 to 5)	5
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
				Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
		Operation settings	Heating operation	On/Off *8	On
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
			Freeze stat function *13	Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
				Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
		Cold weather function		On/Off *8	Off
				Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HO8: Heating with DHW and 2-zone FTC control



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Heating Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
2	Zone Thermostat	Mandatory	Local Supply
2	Zone Valve	Mandatory	Local Supply
2	Zone Balance & Purge Valve	Optional	Local Supply
2	24V Relay (For Thermostat)	Mandatory	Local Supply
2	240V Relay (For Zone Valve)	Mandatory	Local Supply

HO8: Heating with DHW and 2-zone FTC control

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ **Room thermostat 2 logic change**
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ **Direct valve control from FTC (1-2 valves)**
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ **Cooling operation**
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN**: position to be
modified on a case-by-case basis

OFF ON

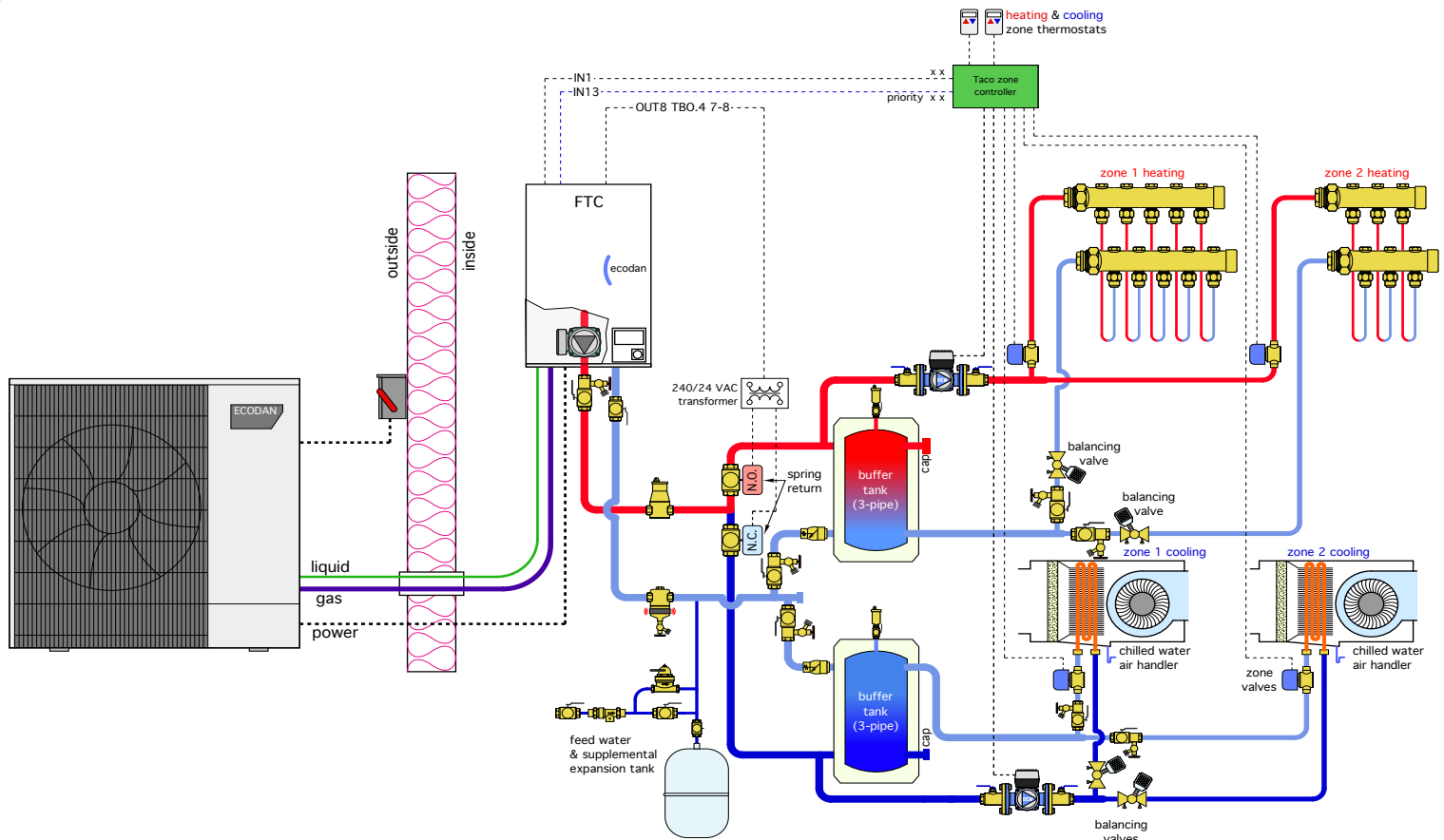
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters		Default setting	
DHW	DHW *3		Eco		On/Off		Off
			DHW max. temp.		104 to 158°F (40 to 70°C) *4		122°F (50°C)
			Max. temp. drop		9 to 72°F (5 to 40°C)		18°F (10°C)
			Max. operation time		30 to 120 min.		60 min.
			Interval		30 to 120 min.		30 min.
			Volume		Large / Standard		Standard
	Legionella prevention *3		Legionella		On/Off		On
Hot water temp.			140 to 158°F (60 to 70°C) *4		149°F (65°C)		
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve
			Zone 2 control logic *2		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		122°F (50°C)
			Zone 2 outdoor ambient temp. *2		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)
			Zone 2 flow temp. *2		68 to 158°F (20 to 70°C)		104°F (40°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		77°F (25°C)
			Zone 2 outdoor ambient temp. *2		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)
			Zone 2 flow temp. *2		68 to 158°F (20 to 70°C)		77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off		Off
	Service	Pump speed	DHW		Pump speed (1 to 5)		5
			Heating / Cooling		Pump speed (1 to 5)		5
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])		1.4 GPM
					Maximum (0 to 26.4 GPM [0 to 100 L/min])		26.4 GPM
		Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8		On
					Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)
					Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)
			"Simultaneous operation (DHW/ Heating)"		On/Off *8		Off
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5		5°F (-15°C)
			Cold weather function		On/Off *8		Off
	Ambient temp. (-22 to 14°F [-30 to -10°C]) *5				5°F (-15°C)		

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC1: Heating & Cooling with 2 buffer tanks and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
2	Buffer Tank	Mandatory	Local Supply
2	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostat	Mandatory	Local Supply
2	Zone Circulator	Mandatory	Local Supply
6	Zone Valve	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC1: Heating & Cooling with 2 buffer tanks and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

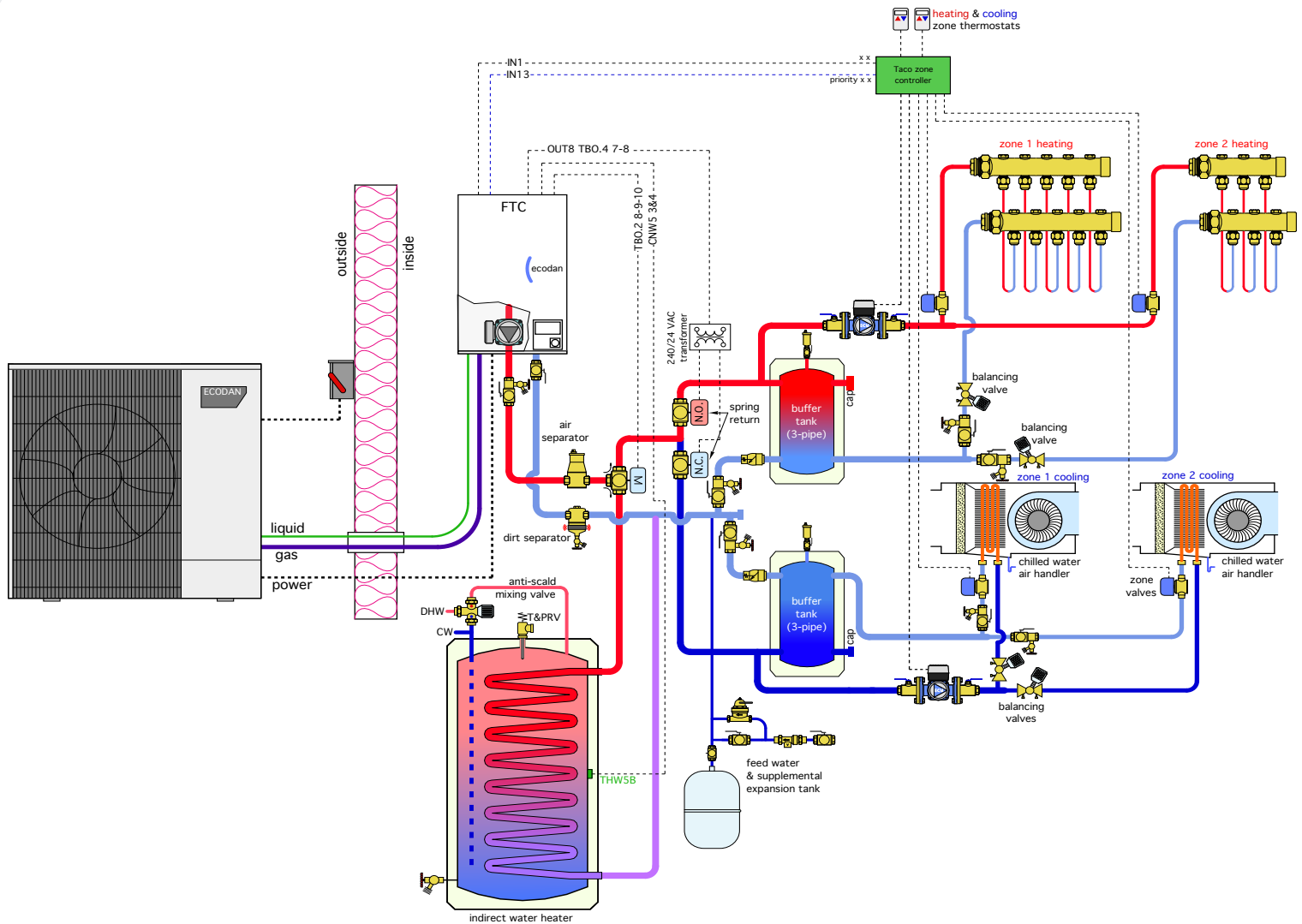
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
Heating / Cooling *3	Heating / Cooling	Zone 1 control logic		Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
		Auto change over		On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
		Hi flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
	Service	Pump speed	Heating / Cooling	Pump speed (1 to 5)	5
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
				Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
		Operation settings	Heating operation	On/Off *8	On
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
			Freeze stat function *13	Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
				Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			Cold weather function	On/Off *8	Off
				Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC2: Heating & Cooling with 2 buffer tanks, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF Box)
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Heater (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
2	Buffer Tank	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostat	Mandatory	Local Supply
2	Zone Circulator	Mandatory	Local Supply
6	Zone Valve	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC2: Heating & Cooling with 2 buffer tanks, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☒ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

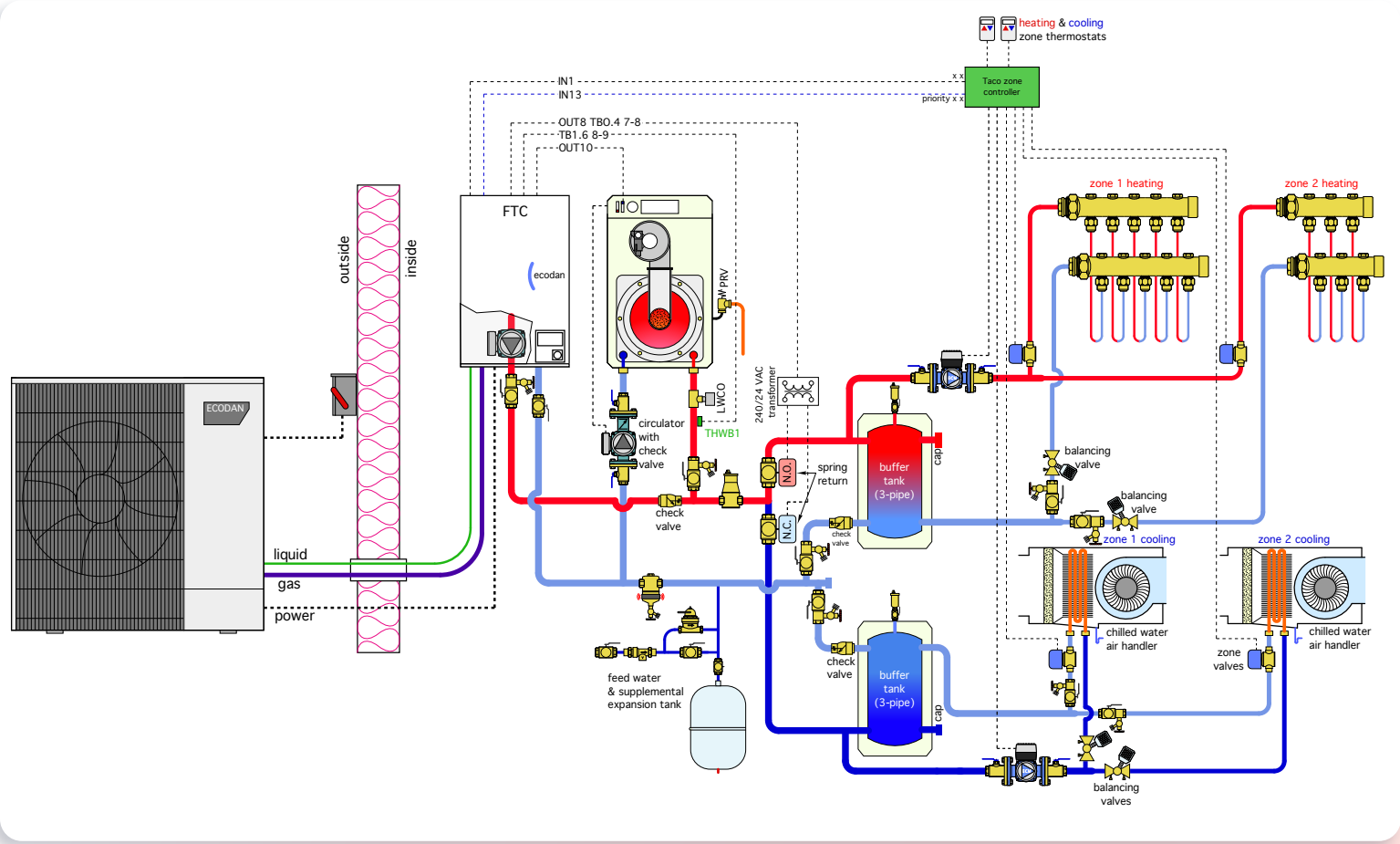
(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
DHW	DHW *3		Eco	On/Off	Off
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)
			Max. operation time	30 to 120 min.	60 min.
			Interval	30 to 120 min.	30 min.
			Volume	Large / Standard	Standard
	Legionella prevention *3	Legionella	On/Off	On	On
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic	Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
			Auto change over	On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
		Weather compensation curve (Cooling)	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
		Lo flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Operation settings	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
	Service	Pump speed	DHW	Pump speed (1 to 5)	5
		Heat pump settings	Heating / Cooling	Pump speed (1 to 5)	5
			Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
		Operation settings	Heating operation	Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
				On/Off *8	On
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
				Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
			Freeze stat function *13	Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			"Simultaneous operation (DHW/Heating)"	On/Off *8	Off
		Cold weather function		Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	5°F (-15°C)
				On/Off *8	Off
				Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC3: Heating & Cooling with 2 buffer tanks, boiler, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Boiler Temperature Sensor (THWB1)	Mandatory	MESCA (In ERSF box)
1	Check Valve	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
2	Buffer Tank	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
2	Zone Circulator	Mandatory	Local Supply
6	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC3: Heating & Cooling with 2 buffer tanks, boiler, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

SW4 •

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

SW5 •

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

SW6 •

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

SW3 •

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

SW2 •

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ **Auto switch over to backup heat source**
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

SW1 •

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

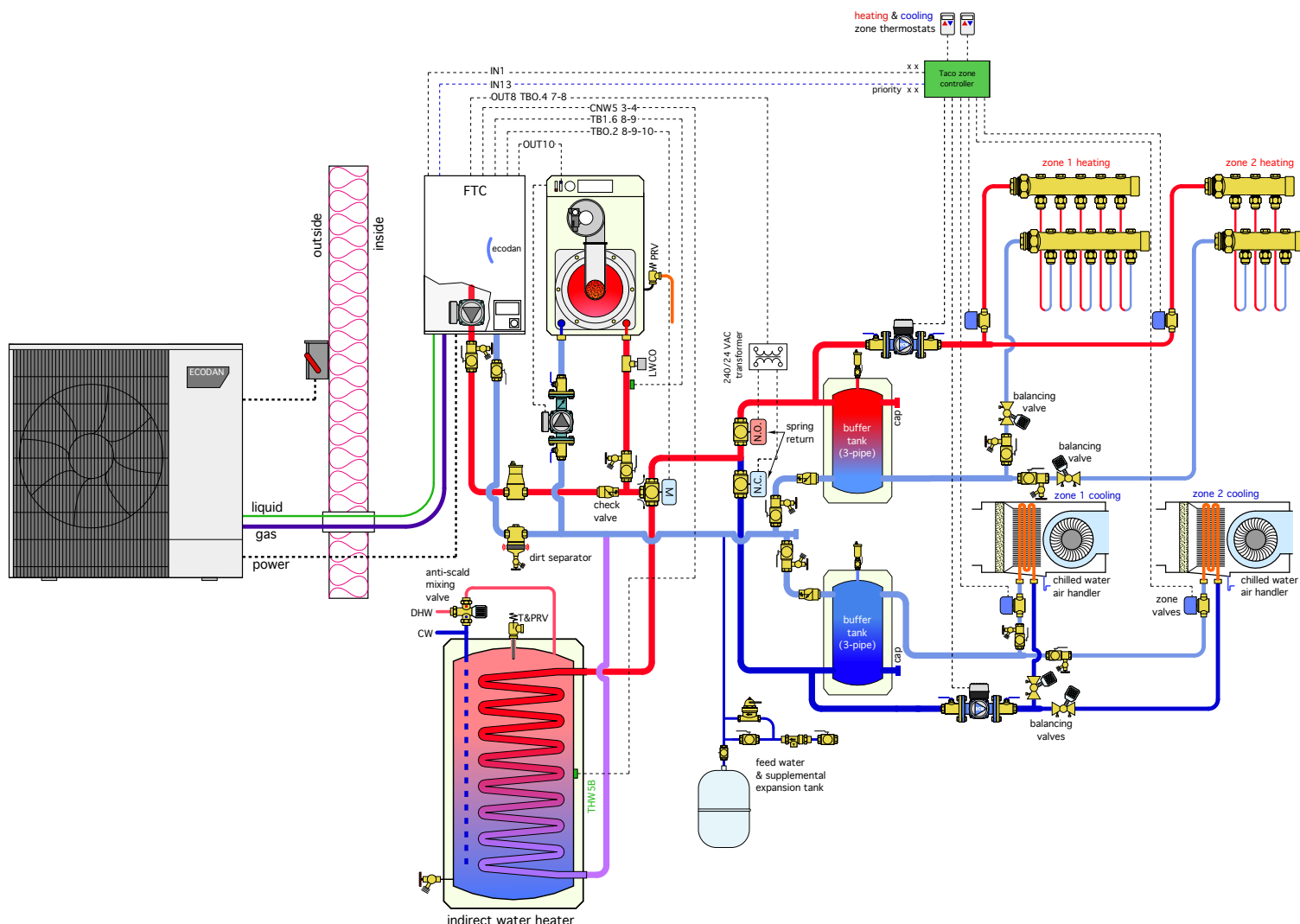
SW7 •

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
Heating / Cooling *3	Heating / Cooling	Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
		Auto change over		On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
	Service	Pump speed	Heating / Cooling	Pump speed (1 to 5)	5
		Heat source setting		Standard / Heater / Boiler / Hybrid *10	Standard
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
				Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
				On/Off *8	On
		Operation settings	Heating operation	Heat pump thermo diff.	
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
				Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
			Freeze stat function *13	Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
				On/Off *8	Off
		Cold weather function	Boiler settings	Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)
				"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."	5°F (-15°C)
				"Priority mode (Ambient/Cost/CO2)"	Ambient
		Boiler settings	Hybrid settings	Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])	+5°F (+3°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC4: Heating & Cooling with 2 buffer tanks, boiler, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	MESCA / Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Boiler Temperature Sensor (THWB1)	Mandatory	MESCA (In ERSF box)
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	Check Valve	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply

Qty	Type of component	Mandatory / Optional	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
2	Buffer Tank	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
2	Zone Circulator	Mandatory	Local Supply
6	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC4: Heating & Cooling with 2 buffer tanks, boiler, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ **Auto switch over to backup heat source**
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

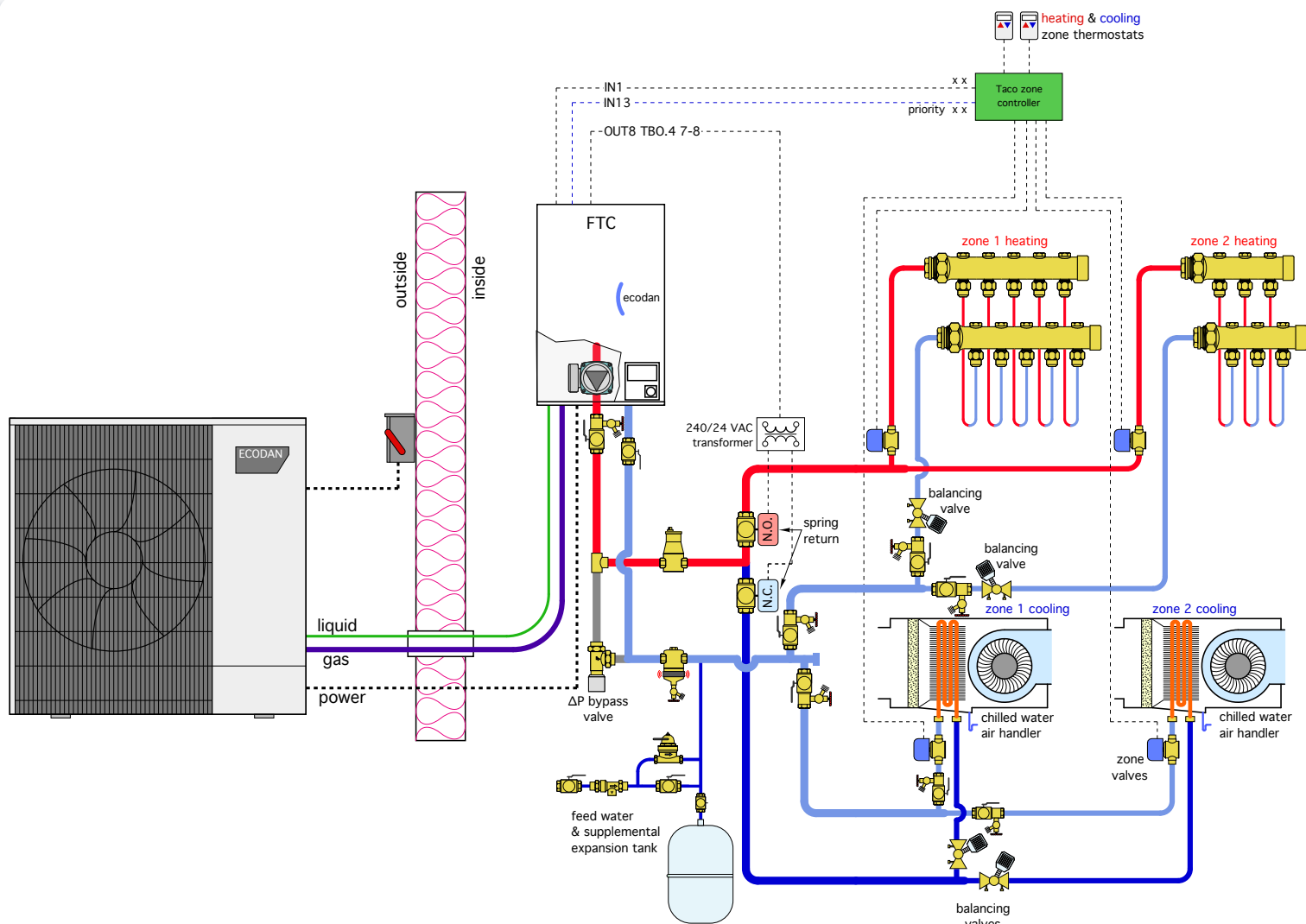
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting	
DHW	DHW *3		Eco	On/Off	Off	
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)	
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)	
			Max. operation time	30 to 120 min.	60 min.	
			Interval	30 to 120 min.	30 min.	
			Volume	Large / Standard	Standard	
	Legionella prevention *3		Legionella	On/Off	On	
		Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)		
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve	
			Auto change over	On/Off	Off	
			Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)	
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)	
			Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)	
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)	
			Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)	
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)	
			Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)	
		Lo flow temp set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)	
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off	
		Pump speed	DHW	Pump speed (1 to 5)	5	
			Heating / Cooling	Pump speed (1 to 5)	5	
		Heat source setting		Standard / Heater / Boiler / Hybrid *10	Standard	
	Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM		
			Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM		
	Service	Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8	On
					Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
					Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			"Simultaneous operation (DHW/ Heating)"		On/Off *8	Off
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	5°F (-15°C)
			Cold weather function		On/Off *8	Off
					Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)
					"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."	5°F (-15°C)
	Boiler settings	Hybrid settings	"Priority mode (Ambient/Cost/CO2)"		Ambient	
			Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])		+5°F (+3°C)	

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC5: Heating & Cooling with zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
6	Zone Valves	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC5: Heating & Cooling with zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

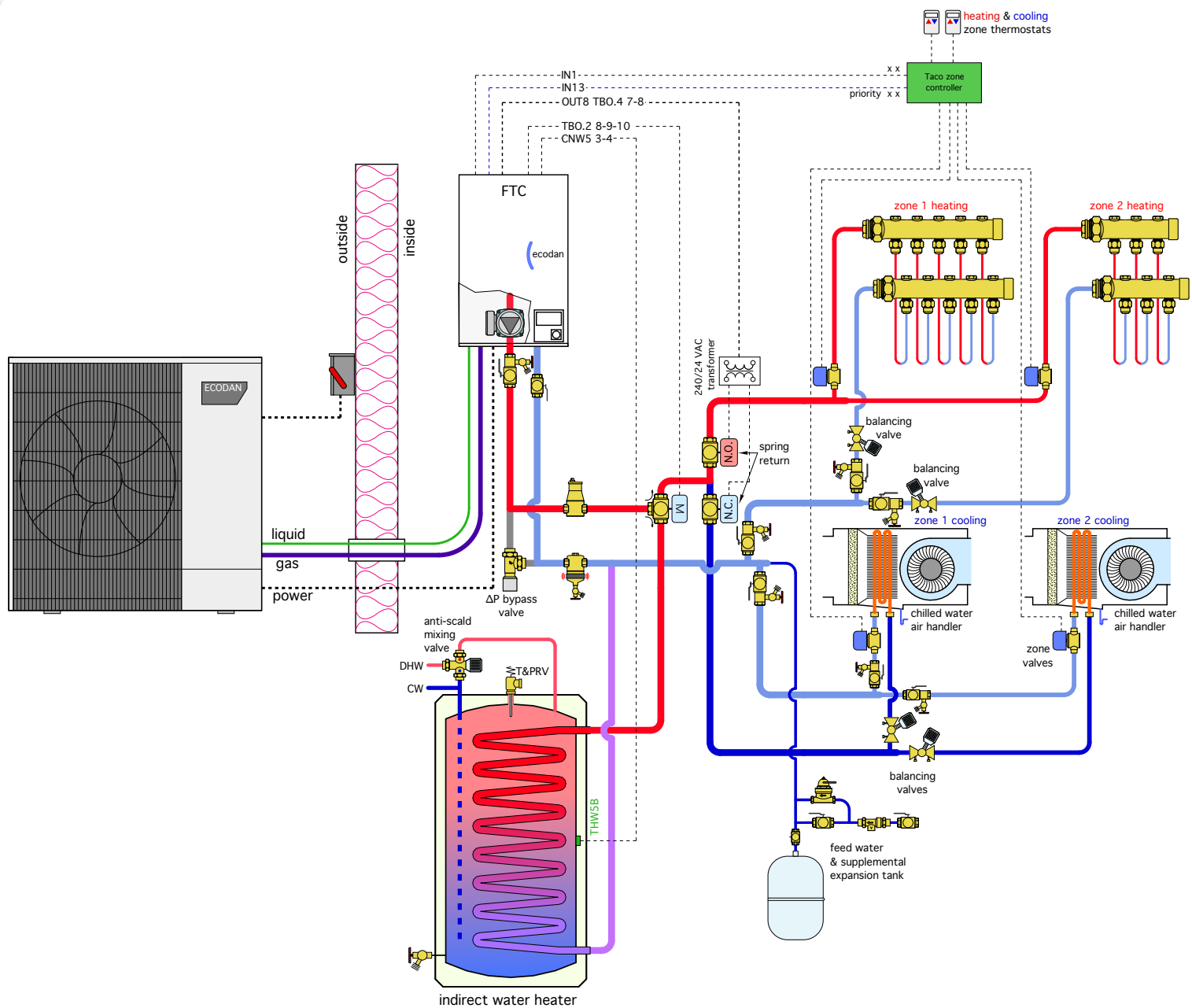
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
Heating / Cooling *3	Heating / Cooling	Zone 1 control logic		Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
		Auto change over		On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
		Hi flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
		Lo flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
Menu	Service	Pump speed	Heating / Cooling	Pump speed (1 to 5)	5
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
				Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
		Operation settings	Heating operation	On/Off *8	On
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
				Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
			Freeze stat function *13	Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
				On/Off *8	Off
			Cold weather function	Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC6: Heating & Cooling with DHW and zone controller



Qty	Type of component	Mandatory / Optional	MESCA / Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF Box)
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Heater (DHW)	Mandatory	Local Supply

Qty	Type of component	Mandatory / Optional	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostat	Mandatory	Local Supply
6	Zone Valve	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC6: Heating & Cooling with DHW and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☒ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

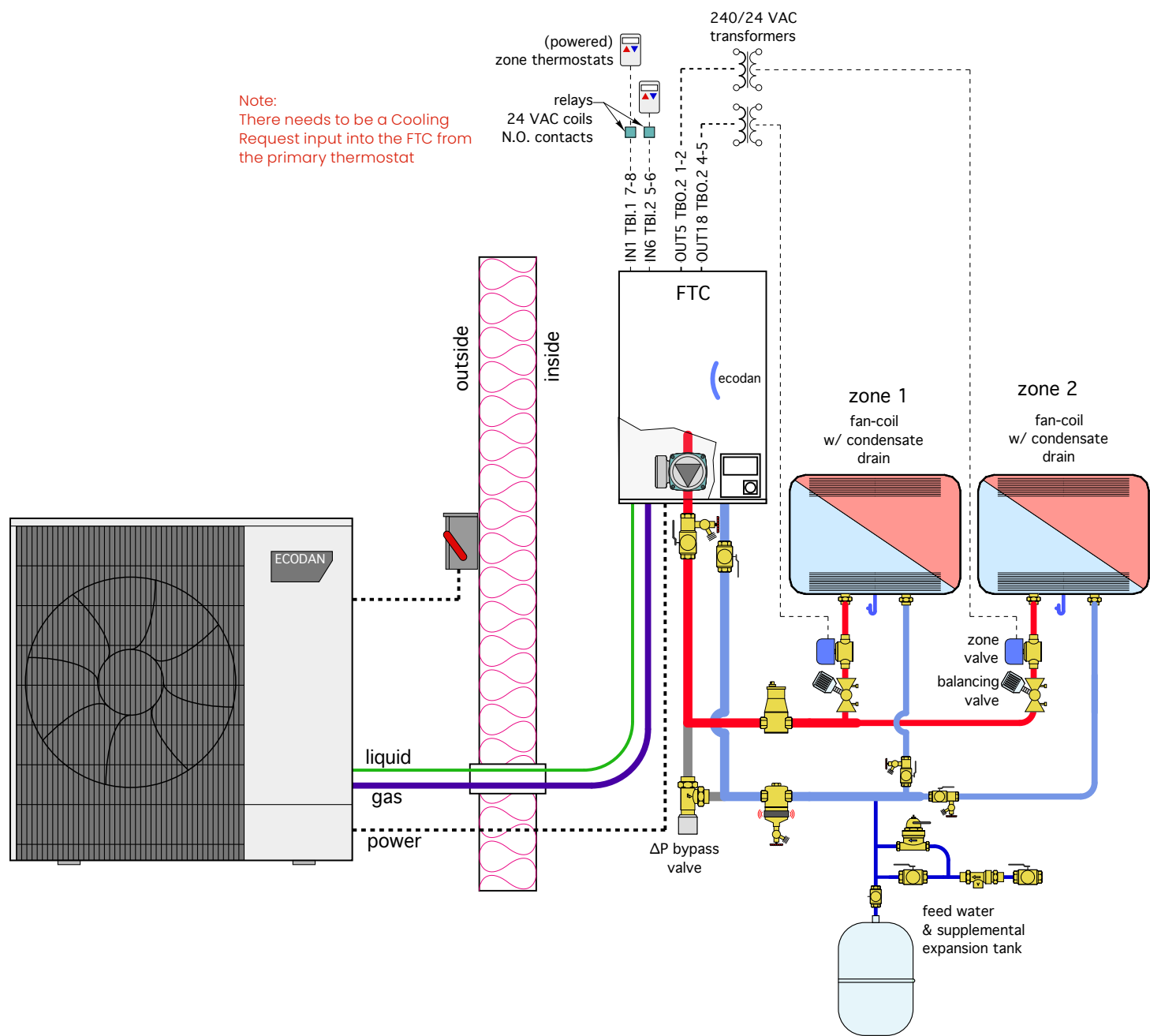
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☒ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting	
DHW	DHW *3		Eco	On/Off	Off	
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)	
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)	
			Max. operation time	30 to 120 min.	60 min.	
			Interval	30 to 120 min.	30 min.	
			Volume	Large / Standard	Standard	
	Legionella prevention *3		Legionella	On/Off	On	
		Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)		
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve	
			Auto change over	On/Off	Off	
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)	
		Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)		
	Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)		
		Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)		
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)	
		Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)		
	Lo flow temp set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)		
		Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)		
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off	
	Service	Pump speed	DHW	Pump speed (1 to 5)	5	
			Heating / Cooling	Pump speed (1 to 5)	5	
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM	
				Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM	
		Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8	On
					Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
					Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
			"Simultaneous operation (DHW/ Heating)"		On/Off *8	Off
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	5°F (-15°C)
					On/Off *8	Off
			Cold weather function		Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC7: Heating & Cooling with 2-zone FTC control



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
2	Zone Thermostat	Mandatory	Local Supply
2	Zone Valve	Mandatory	Local Supply
2	Zone balance & purge valve	Mandatory	Local Supply
2	24V Relay (For Thermostats)	Mandatory	Local Supply
2	240V Relay (For Zone Valve)	Mandatory	Local Supply

HC7: Heating & Cooling with 2-zone FTC control

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3)

1. ☐ **Room thermostat 2 logic change**
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ **Direct valve control from FTC (1-2 valves)**
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

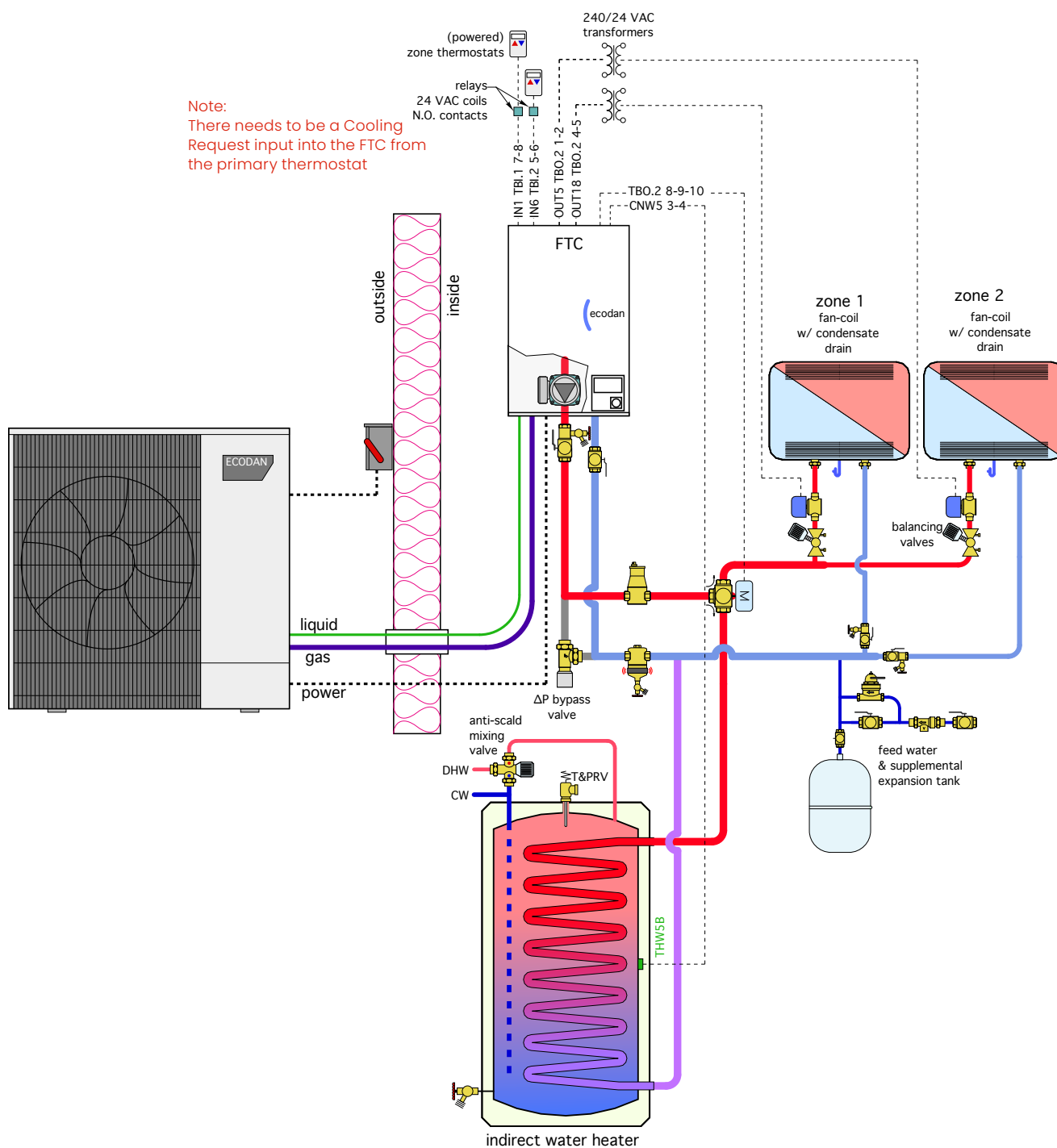
(SW7)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters		Default setting		
Heating / Cooling *3	Heating / Cooling			Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve
				Zone 2 control logic *2		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve
				Auto change over		On/Off		Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)	
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		122°F (50°C)	
			Zone 2 outdoor ambient temp. *2		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)	
			Zone 2 flow temp. *2		68 to 158°F (20 to 70°C)		104°F (40°C)	
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)	
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		77°F (25°C)	
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 2 outdoor ambient temp. *2		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)	
			Zone 2 flow temp. *2		68 to 158°F (20 to 70°C)		77°F (25°C)	
			Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)		95°F (35°C)	
			Zone 1 flow temp.		41 to 77°F (5 to 25°C)		59°F (15°C)	
		Lo flow temp set point	Zone 2 outdoor ambient temp. *2		50 to 115°F (10 to 46°C)		95°F (35°C)	
			Zone 2 flow temp. *2		41 to 77°F (5 to 25°C)		68°F (20°C)	
			Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)		77°F (25°C)	
Zone 1 flow temp.			41 to 77°F (5 to 25°C)		77°F (25°C)			
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off	Off		
	Pump speed	Heating / Cooling		Pump speed (1 to 5)		5		
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])		1.4 GPM	
					Maximum (0 to 26.4 GPM [0 to 100 L/min])		26.4 GPM	
	Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8		On		
				Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)		
				Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)		
		Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)		
		Cold weather function		On/Off *8		Off		
			Ambient temp. (-22 to 14°F [-30 to -10°C]) *5		5°F (-15°C)			

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC8: Heating & Cooling with DHW and 2-zone FTC control



Qty	Type of component	Mandatory / Optional	MESCA / Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Heating Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply

Qty	Type of component	Mandatory / Optional	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Differential Pressure Bypass Valve	Mandatory	Local Supply
2	Zone Thermostat	Mandatory	Local Supply
2	Zone Valve	Mandatory	Local Supply
2	Zone Balance & Purge Valve	Optional	Local Supply
2	24V Relay (For Thermostat)	Mandatory	Local Supply
2	240V Relay (For Zone Valve)	Mandatory	Local Supply

HC8: Heating & Cooling with DHW and 2-zone FTC control

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ **Room thermostat 2 logic change**
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ **Direct valve control from FTC (1-2 valves)**
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☐ Buffer tank
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

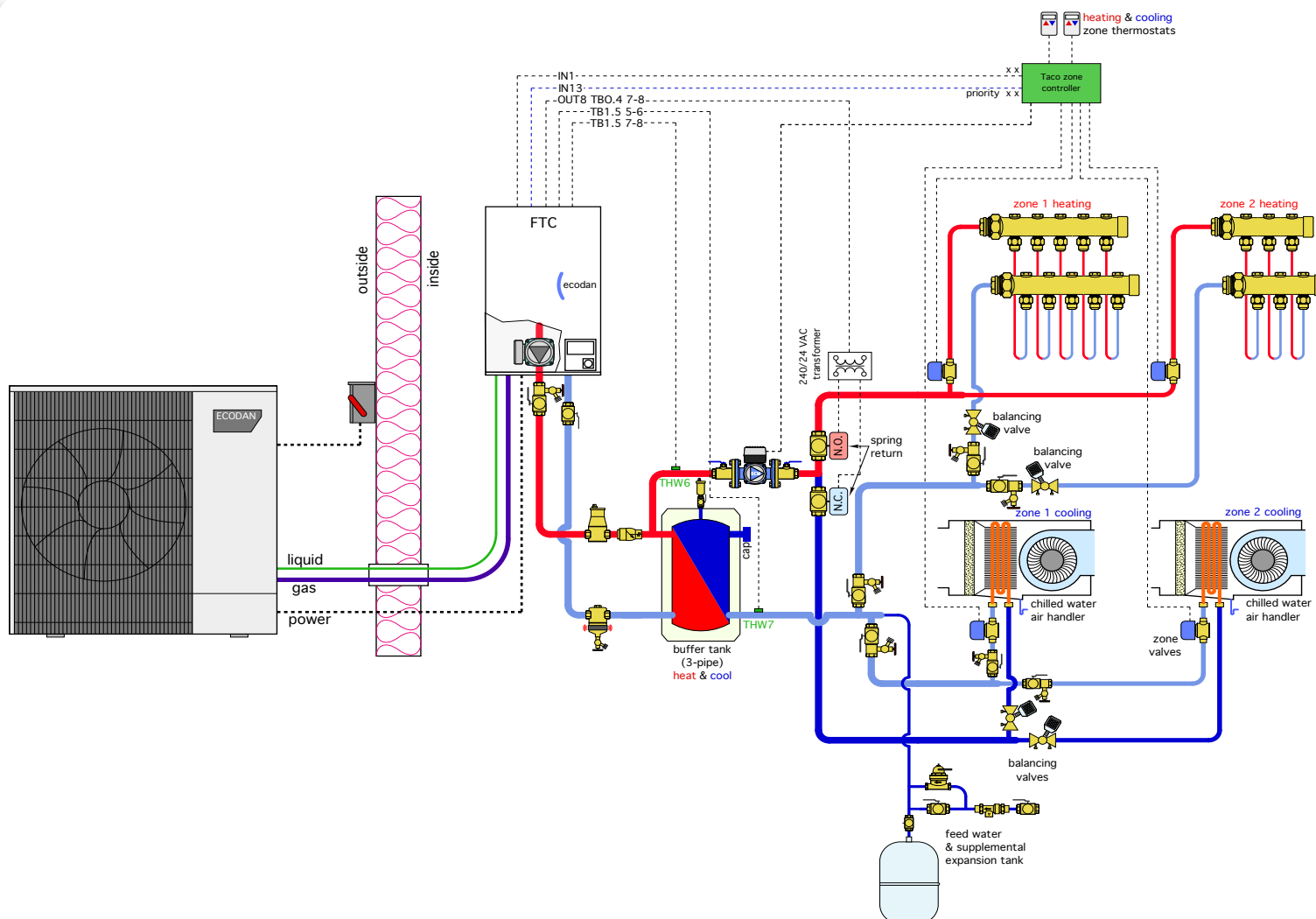
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
DHW	DHW *3		Eco	On/Off	Off
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)
			Max. operation time	30 to 120 min.	60 min.
			Interval	30 to 120 min.	30 min.
			Volume	Large / Standard	Standard
Heating / Cooling *3	Legionella prevention *3		Legionella	On/Off	On
			Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)
	Heating / Cooling		Zone 1 control logic	Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
			Zone 2 control logic *2	Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
			Auto change over	On/Off	Off
			Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
			Zone 2 outdoor ambient temp. *2	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)	104°F (40°C)
			Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
			Zone 2 outdoor ambient temp. *2	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)	77°F (25°C)
			Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
			Zone 2 outdoor ambient temp. *2	50 to 115°F (10 to 46°C)	95°F (35°C)
			Zone 2 flow temp. *2	41 to 77°F (5 to 25°C)	68°F (20°C)
			Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
		Lo flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
			Zone 2 outdoor ambient temp. *2	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 2 flow temp. *2	41 to 77°F (5 to 25°C)	77°F (25°C)
			Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
			DHW	Pump speed (1 to 5)	5
		Pump speed	Heating / Cooling	Pump speed (1 to 5)	5
			Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min]) Maximum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM 26.4 GPM
	Service	Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8
					On
			Freeze stat function *13		Lower (-16 to -2°F [-9 to -1°C])
					-9°F (-5°C)
			"Simultaneous operation (DHW/Heating)"		Upper (+5 to +9°F [+3 to +5°C])
					+9°F (+5°C)
		Cold weather function			Ambient temp. (37 to 68°F [3 to 20°C]) / **
					41°F (5°C)
					On/Off *8
					Off
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5
					5°F (-15°C)
					On/Off *8
					Off
					Ambient temp. (-22 to 14°F [-30 to -10°C]) *5
					5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC9: Heating & Cooling with buffer tank and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostat	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
6	Zone Valve	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC9: Heating & Cooling with buffer tank and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☒ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN**: position to be
modified on a case-by-case basis

OFF ON

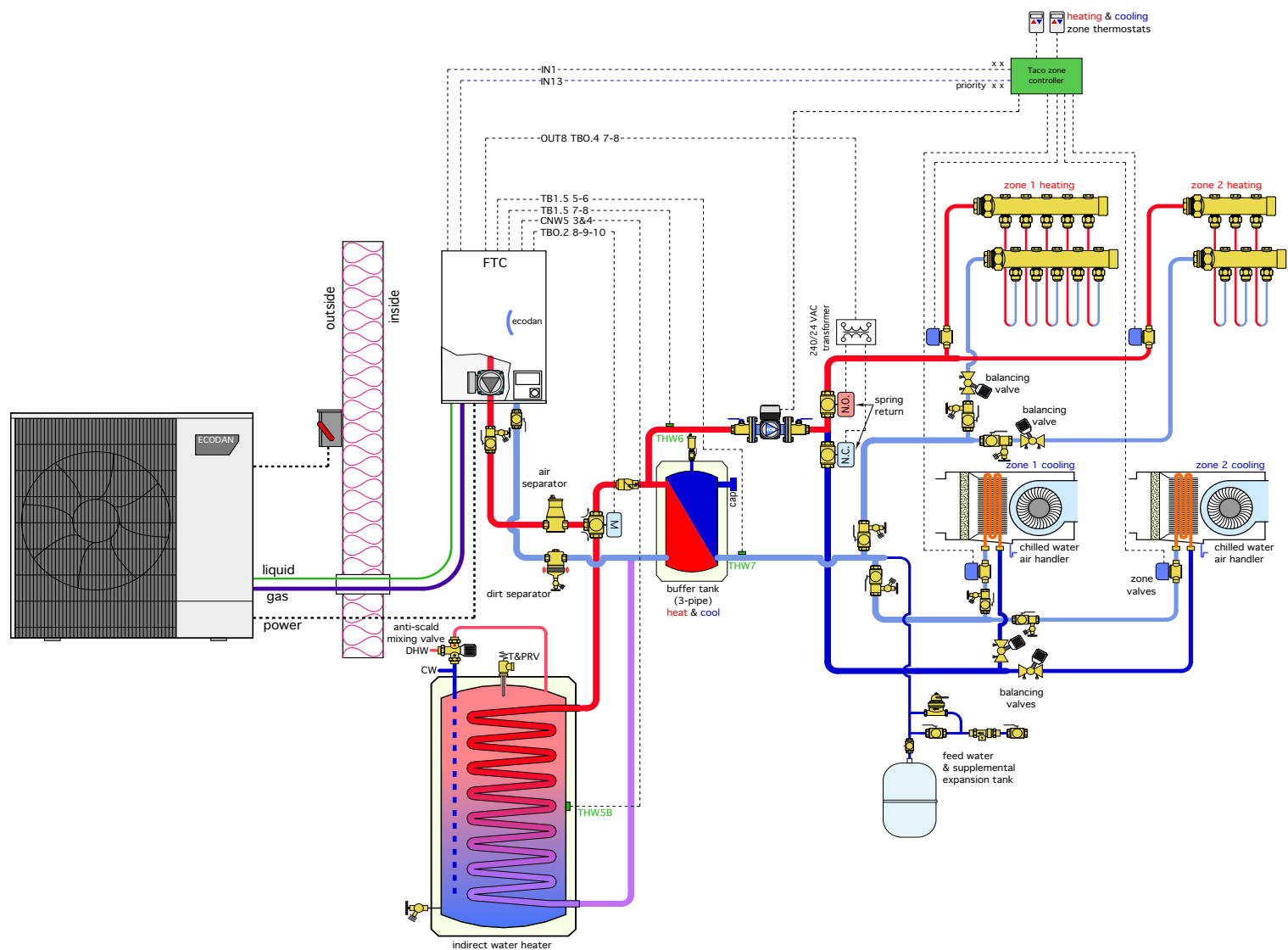
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting
Heating / Cooling *3	Heating / Cooling	Zone 1 control logic		Heating room temp. / Heating flow temp. / Heating weather compensation curve / Cooling flow temp. / Cooling weather compensation curve	Heating weather compensation curve
		Auto change over		On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
		Lo flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)
		Hi flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off
	Pump speed	Heating / Cooling	Heat pump flow rate range	Pump speed (1 to 5)	5
				Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
		Heat pump settings	Heat pump thermo diff.	Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
				On/Off *8	On
	Operation settings	Heating operation	Freeze stat function *13	Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)
				Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)
		Cold weather function	Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
				On/Off *8	Off
				Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC10: Heating & Cooling with buffer tank, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	MESCA / Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF Box)
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Heater (DHW)	Mandatory	Local Supply

Qty	Type of component	Mandatory / Optional	Local Supply
1	Anti-scald mixing valve	Optional	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostat	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
6	Zone Valve	Mandatory	Local Supply
4	Zone Balance & Purge Valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC10: Heating & Cooling with buffer tank, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☒ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☒ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ Auto switch over to backup heat source
6. ☒ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ Boiler integration
2. ☐ ---
3. ☒ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☒ **Booster heater deactivation**
6. ☒ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

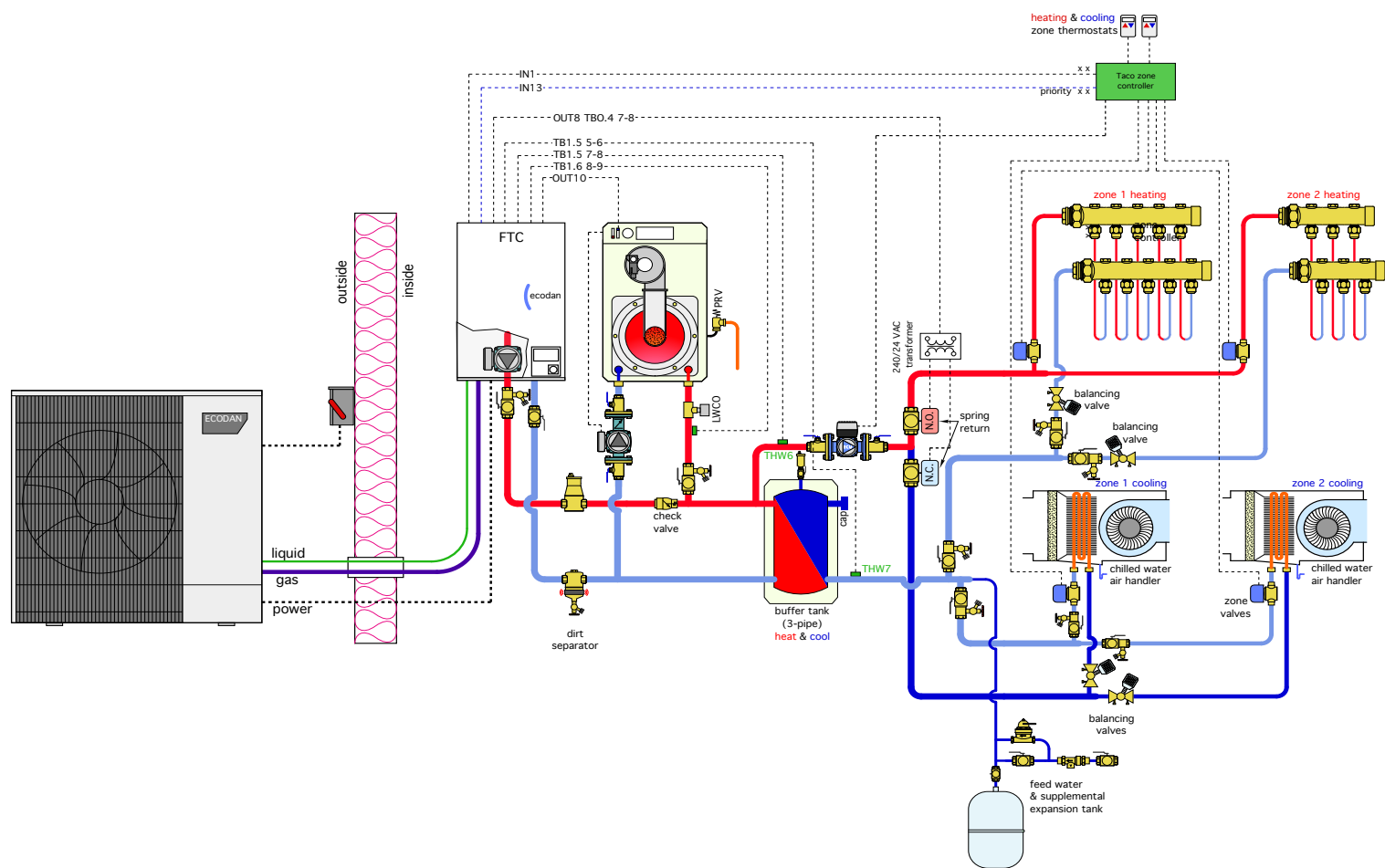
(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☒ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☒ ---

Main remote controller screen				Parameters		Default setting	
DHW	DHW *3		Eco		On/Off		Off
			DHW max. temp.		104 to 158°F (40 to 70°C) *4		122°F (50°C)
			Max. temp. drop		9 to 72°F (5 to 40°C)		18°F (10°C)
			Max. operation time		30 to 120 min.		60 min.
			Interval		30 to 120 min.		30 min.
			Volume		Large / Standard		Standard
	Legionella prevention *3		Legionella		On/Off		On
		Hot water temp.		140 to 158°F (60 to 70°C) *4		149°F (65°C)	
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve		Heating weather compensation curve
			Auto change over		On/Off		Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5		5°F (-15°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		122°F (50°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6		68°F (20°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)		77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)		95°F (35°C)
			Zone 1 flow temp.		41 to 77°F (5 to 25°C)		59°F (15°C)
		Lo flow temp set point	Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)		77°F (25°C)
			Zone 1 flow temp.		41 to 77°F (5 to 25°C)		77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off		Off
	Pump speed	Pump speed	DHW		Pump speed (1 to 5)		5
			Heating / Cooling		Pump speed (1 to 5)		5
	Heat pump settings		Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])		1.4 GPM
					Maximum (0 to 26.4 GPM [0 to 100 L/min])		26.4 GPM
	Service				On/Off *8		On
					Lower (-16 to -2°F [-9 to -1°C])		-9°F (-5°C)
					Upper (+5 to +9°F [+3 to +5°C])		+9°F (+5°C)
					Ambient temp. (37 to 68°F [3 to 20°C]) / **		41°F (5°C)
		Operation settings	Freeze stat function *13		On/Off *8		Off
			"Simultaneous operation (DHW/ Heating)"		Ambient temp. (-22 to 50°F [-30 to 10°C]) *5		5°F (-15°C)
					On/Off *8		Off
			Cold weather function		Ambient temp. (-22 to 14°F [-30 to -10°C]) *5		5°F (-15°C)

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC11: Heating & Cooling with buffer tank, boiler, and zone controller



Qty	Type of component	Mandatory / Optional	Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	Boiler Temperature Sensor (THWB1)	Mandatory	MESCA (In ERSF box)
1	Check Valve	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostats	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
6	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC11: Heating & Cooling with buffer tank, boiler, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

DIP switch in **BLACK** :
default position

OFF ON

(SW5)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

OFF ON

(SW3)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ **Auto switch over to backup heat source**
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1)

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ DHW (Domestic Hot Water)
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

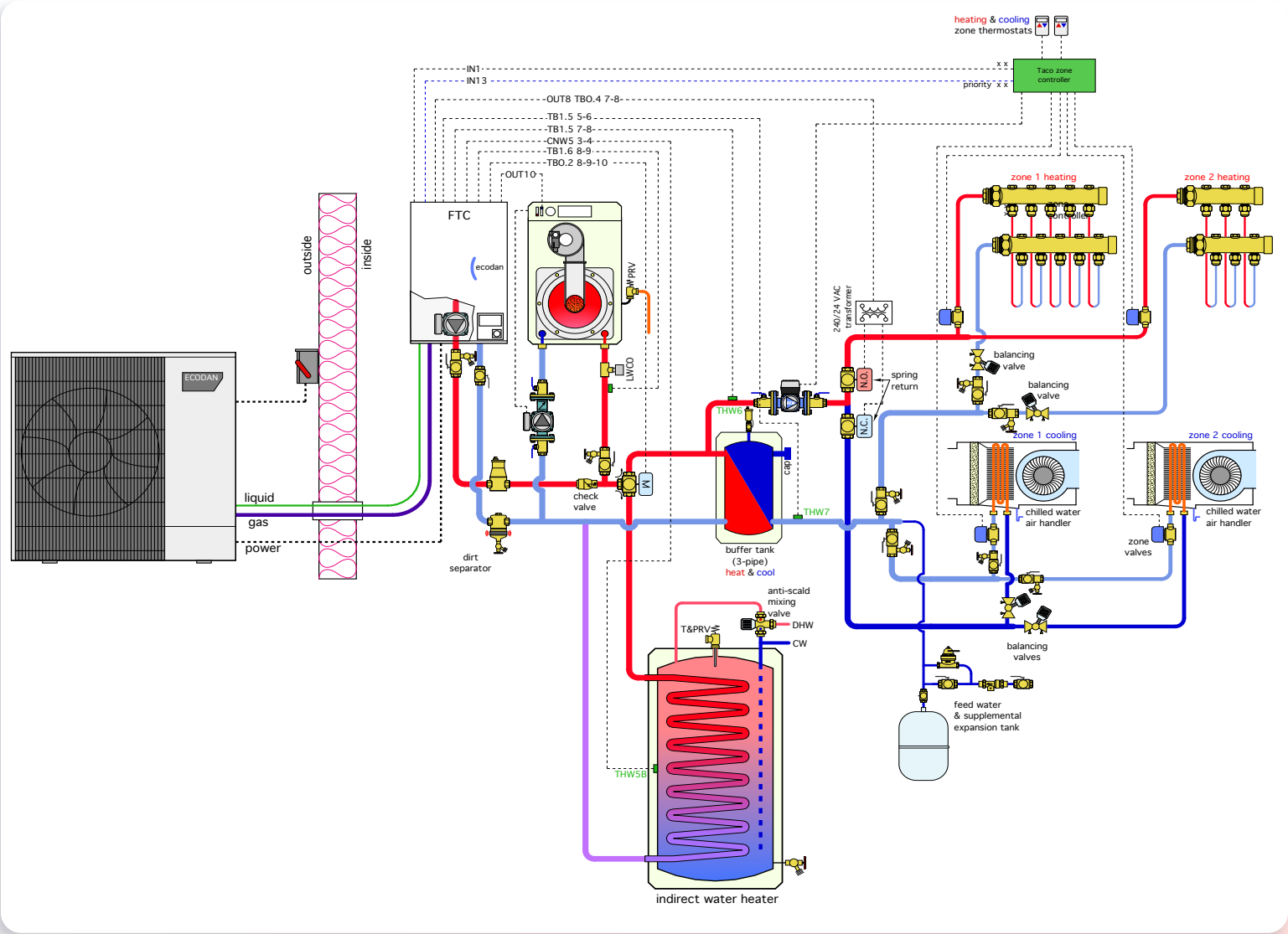
(SW7)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting	
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic		Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
			Auto change over		On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)	122°F (50°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.		-18 to +95°F (-28 to +35°C) *6	68°F (20°C)
			Zone 1 flow temp.		68 to 158°F (20 to 70°C)	77°F (25°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)	95°F (35°C)
			Zone 1 flow temp.		41 to 77°F (5 to 25°C)	59°F (15°C)
		Lo flow temp set point	Zone 1 outdoor ambient temp.		50 to 115°F (10 to 46°C)	77°F (25°C)
			Zone 1 flow temp.		41 to 77°F (5 to 25°C)	77°F (25°C)
Menu	Settings	Display	Temp. (°C) → (°F)		On/Off	Off
	Service	Pump speed	Heating / Cooling		Pump speed (1 to 5)	5
			Heat source setting		Standard / Heater / Boiler / Hybrid *10	Standard
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM
					Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM
		Operation settings	Heating operation	Flow temperature range *11	Minimum temp. (68 to 113°F [20 to 45°C])	87°F (30°C)
					Maximum temp. (95 to 158°F [35 to 70°C])	122°F (50°C)
				Room temperature control *11	Mode (Auto/Quick/Normal/Slow)	Auto
					Interval (10 to 60 min.)*12	10 min.
			Heat pump thermo diff.	On/Off *8	On	
				Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)	
				Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)	
		Freeze stat function *13			Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)
					On/Off *8	Off
			Cold weather function		Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)
			Boiler settings	Hybrid settings	"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."	
		"Priority mode (Ambient/Cost/CO2)"			Ambient	
		Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])			+5°F (+3°C)	

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.

HC12: Heating & Cooling with buffer tank, boiler, DHW, and zone controller



Qty	Type of component	Mandatory / Optional	MESCA / Local Supply
1	ecodan WUZ Outdoor Unit	Mandatory	MESCA
1	ecodan ERSF Indoor Unit	Mandatory	MESCA
1	Supply Temperature Sensor (THW6)	Mandatory	MESCA (In ERSF box)
1	Return Temperature Sensor (THW7)	Mandatory	MESCA (In ERSF box)
1	Boiler Temperature Sensor (THWB1)	Mandatory	MESCA (In ERSF box)
1	DHW Temperature Sensor (THW5B)	Mandatory	MESCA (In ERSF box)
1	Check Valve	Mandatory	Local Supply
1	Boiler	Mandatory	Local Supply
1	Boiler pump	Mandatory	Local Supply
1	Low Water Cut-Off (LWCO)	Mandatory	Local Supply
1	Air Separator	Optional	Local Supply
1	Dirt Separator	Mandatory	Local Supply

Qty	Type of component	Mandatory / Optional	Local Supply
1	3-way Valve, 230VAC	Mandatory	Local Supply
1	Indirect Water Tank (DHW)	Mandatory	Local Supply
1	Anti-scald mixing valve	Mandatory	Local Supply
1	Expansion Tank	Depending on application	Local Supply
1	Buffer Tank	Mandatory	Local Supply
1	Zone Controller	Mandatory	Local Supply
4	Zone Thermostats	Mandatory	Local Supply
1	Zone Circulator	Mandatory	Local Supply
6	Zone Valves	Mandatory	Local Supply
4	Zone balance & purge valve	Mandatory	Local Supply
1	240V Relay (For Hot and Cold Valves)	Mandatory	Local Supply

HC12: Heating & Cooling with buffer tank, boiler, DHW, and zone controller

DIP Switch and Remote Controller settings

DIP switch in **RED** :
position to be changed

OFF ON

(SW4 •)

1. ☐ ---
2. ☐ ---
3. ☐ ---
4. ☐ Service: Indoor unit only operation
5. ☐ Service: Emergency heater-only operation
6. ☐ Service: Emergency boiler-only operation

OFF ON

(SW3 •)

1. ☐ Room thermostat 2 logic change
2. ☐ External flow switch 2&3 logic change
3. ☐ ---
4. ☐ Aux energy meter connection
5. ☐ ---
6. ☐ Direct valve control from FTC (1-2 valves)
7. ☐ ---
8. ☐ Aux heat meter connection

OFF ON

(SW2 •)

1. ☐ **Room thermostat 1 logic change**
2. ☐ External flow switch 1 logic change
3. ☐ **Booster heater capacity limit**
4. ☐ Cooling operation
5. ☐ **Auto switch over to backup heat source**
6. ☐ **Buffer tank**
7. ☐ 2-zone temp control (MELCO thermistor)
8. ☐ Flow sensor

OFF ON

(SW1 •)

1. ☐ **Boiler integration**
2. ☐ ---
3. ☐ **DHW (Domestic Hot Water)**
4. ☐ ---
5. ☐ **Booster heater deactivation**
6. ☐ **Booster heater scope of operation**
7. ☐ Outdoor unit type
8. ☐ ---

OFF ON

(SW7 •)

1. ☐ Mixing valve (2-zone temperature mode)
2. ☐ Forced cooling mode input (TBI.4 3-4)
3. ☐ Cooling limit temp. Input (IN15)
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **BLACK** :
default position

OFF ON

(SW5 •)

1. ☐ ---
2. ☐ Advanced auto adaptation logic
3. ☐ ---
4. ☐ ---
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

DIP switch in **GREEN** : position to be
modified on a case-by-case basis

OFF ON

(SW6 •)

1. ☐ ---
2. ☐ ---
3. ☐ Pressure sensor
4. ☐ Analog output
5. ☐ ---
6. ☐ ---
7. ☐ ---
8. ☐ ---

Main remote controller screen				Parameters	Default setting		
DHW	DHW *3		Eco	On/Off	Off		
			DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)		
			Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)		
			Max. operation time	30 to 120 min.	60 min.		
			Interval	30 to 120 min.	30 min.		
			Volume	Large / Standard	Standard		
	Legionella prevention *3		Legionella	On/Off	On		
		Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)			
Heating / Cooling *3	Heating / Cooling		Zone 1 control logic	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve		
			Auto change over	On/Off	Off		
			Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5	5°F (-15°C)		
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	122°F (50°C)		
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6	68°F (20°C)		
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 flow temp.	68 to 158°F (20 to 70°C)	77°F (25°C)		
		Lo flow temp set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	95°F (35°C)		
		Hi flow temp. set point	Zone 1 flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)		
		Lo flow temp set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)	77°F (25°C)		
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)	77°F (25°C)		
	Menu	Settings	Display	Temp. (°C) → (°F)	On/Off	Off	
Service		Pump speed	DHW	Pump speed (1 to 5)	5		
			Heating / Cooling	Pump speed (1 to 5)	5		
		Heat source setting		Standard / Heater / Boiler / Hybrid *10	Standard		
		Heat pump settings	Heat pump flow rate range		Minimum (0 to 26.4 GPM [0 to 100 L/min])	1.4 GPM	
					Maximum (0 to 26.4 GPM [0 to 100 L/min])	26.4 GPM	
		Operation settings	Heating operation	Heat pump thermo diff.	On/Off *8	On	
					Lower (-16 to -2°F [-9 to -1°C])	-9°F (-5°C)	
					Upper (+5 to +9°F [+3 to +5°C])	+9°F (+5°C)	
			Freeze stat function *13		Ambient temp. (37 to 68°F [3 to 20°C]) / **	41°F (5°C)	
			"Simultaneous operation (DHW/ Heating)"		On/Off *8	Off	
					Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	5°F (-15°C)	
			Cold weather function		On/Off *8	Off	
					Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	5°F (-15°C)	
			Boiler settings	Hybrid settings	"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."		5°F (-15°C)
					"Priority mode (Ambient/Cost/CO2)"		Ambient
				Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])		+5°F (+3°C)	

Note: Please refer to the end of the Remote Controller Settings Overview section for the details on each of the footnote indicators listed in the above table for Remote Controller Settings table.



Appendix

Tables

04

Remote Controller Setting Overview

Main remote controller screen			Parameters	Default setting
DHW	DHW *3	Eco	On/Off	Off
		Boost	On/Off	—
		DHW max. temp.	104 to 158°F (40 to 70°C) *4	122°F (50°C)
		Max. temp. drop	9 to 72°F (5 to 40°C)	18°F (10°C)
		Max. operation time	30 to 120 min.	60 min.
		Interval	30 to 120 min.	30 min.
		Volume	Large / Standard	Standard
		Schedule	On/Off	Off
		Always off	On/Off	Off
	Legionella prevention *3	Legionella	On/Off	On
		Hot water temp.	140 to 158°F (60 to 70°C) *4	149°F (65°C)
		Start time	AM12:00 - PM11:00	AM03:00
		Duration	1 to 120 min.	30 min.
		Frequency	1 to 30 days	15 days
		Max. operation time	1 to 5 h	3 h
Heating / Cooling*3	Heating / Cooling	Zone 1 heating room temp.	50 to 87°F (10 to 30°C)	68°F (20°C)
		Zone 2 heating room temp. *1	50 to 87°F (10 to 30°C)	68°F (20°C)
		Zone 1 heating flow temp.	68 to 158°F (20 to 70°C)	113°F (45°C)
		Zone 2 heating flow temp. *2	68 to 158°F (20 to 70°C)	95°F (35°C)
		Zone 1 cooling flow temp.	41 to 77°F (5 to 25°C)	59°F (15°C)
		Zone 2 cooling flow temp.	41 to 77°F (5 to 25°C)	68°F (20°C)
		"Zone 1 heating weather compensation curve"	-16 to +16°F (-9 to +9°C)	+0°F (0°C)
		"Zone 2 heating weather compensation curve *2"	-16 to +16°F (-9 to +9°C)	+0°F (0°C)
		"Zone 1 cooling weather compensation curve"	-16 to +16°F (-9 to +9°C)	+0°F (0°C)
		"Zone 2 cooling weather compensation curve *2"	-16 to +16°F (-9 to +9°C)	+0°F (0°C)
		Schedule	On/Off	Off
		Always off	On/Off	Off
		Heating / Cooling	Heating / Cooling	Heating
		Zone 1 control logic	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
		Zone 2 control logic *2	Heating room temp./ Heating flow temp./ Heating weather compensation curve / Cooling flow temp./ Cooling weather compensation curve	Heating weather compensation curve
		Auto change over	On/Off	Off
	Weather compensation curve (Heating)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	-22 to +91°F (-30 to +33°C) *5
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)
			Zone 2 outdoor ambient temp. *2	-22 to +91°F (-30 to +33°C) *5
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	-18 to +95°F (-28 to +35°C) *6
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)
			Zone 2 outdoor ambient temp. *2	-18 to +95°F (-28 to +35°C) *6
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)
		Adjust	Zone 1 outdoor ambient temp.	-20 to +93°F (-29 to +34°C) *7
			Zone 1 flow temp.	68 to 158°F (20 to 70°C)
			Zone 2 outdoor ambient temp. *2	-20 to +93°F (-29 to +34°C) *7
			Zone 2 flow temp. *2	68 to 158°F (20 to 70°C)
	Weather compensation curve (Cooling)	Hi flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)
			Zone 2 outdoor ambient temp. *2	50 to 115°F (10 to 46°C)
			Zone 2 flow temp. *2	41 to 77°F (5 to 25°C)
		Lo flow temp. set point	Zone 1 outdoor ambient temp.	50 to 115°F (10 to 46°C)
			Zone 1 flow temp.	41 to 77°F (5 to 25°C)
			Zone 2 outdoor ambient temp. *2	50 to 115°F (10 to 46°C)
			Zone 2 flow temp. *2	41 to 77°F (5 to 25°C)

Remote Controller Setting Overview continued

Main remote controller screen			Parameters	Default setting
Menu	Energy		Energy monitor	Consumed electrical energy/Delivered energy
	Vacation	Schedule	On/Off/Set time	—
		DHW *3	On/Off	Off
		Heating / Cooling	On/Off	On
	Setting	Language	EN/CZ/DA/DE/ET/ES/FR/HR/IT/LV/LT/HU/NL/NO/PL/PT/RO/SK/SI/EI/SE/ITR/EL/BG	EN
		Room sensors	Zone sensor selection *2	Zone 1/Zone 2
			Zone 1 program	TH1/Main RC/"Time/Zone"
			Zone 2 program *2	TH1/Main RC/"Time/Zone"
		Display	Temp. (°C) → (°F)	On/Off
		Touch screen	Clean screen	On/Off
			Calibrate screen	On/Off
			Brightness	Low / Mid / Hi
			Backlight time	5sec./10sec./20sec./30sec./60sec./Always on
	Service	Thermistor adjustment	THW1	-18 to +18°F (-10 to +10°C)
			THW2	-18 to +18°F (-10 to +10°C)
			THW5B	-18 to +18°F (-10 to +10°C)
			THW6	-18 to +18°F (-10 to +10°C)
			THW7	-18 to +18°F (-10 to +10°C)
			THW8	-18 to +18°F (-10 to +10°C)
			THW9	-18 to +18°F (-10 to +10°C)
			THW10	-18 to +18°F (-10 to +10°C)
		Auxiliary settings	Economy settings for pump.	On/Off *8
				Delay (3 to 60 min.)
			Electric heater (heating)	Space heating: On (used)/Off (not used)
				Electric heater delay timer (5 to 180 min.)
			Electric heater (DHW) *3	Booster heater
				Immersion heater
			Mixing valve 1 control	Running (10 to 240 sec.)
				Interval (1 to 30 min.)
			Mixing valve 2 control	Running (10 to 240 sec.)
				Interval (1 to 30 min.)
			Flow sensor *9	0 to 26.4 GPM
				0 to 26.4 GPM
			Analog output	Interval (1 to 30 min.)
				Priority (Normal / High)
			Electric heater schedule *15	Daily schedule (Schedule 1/Schedule 2)
				Time schedule 1 (Always/Start-Stop/Never)
				Time schedule 2 (Always/Start-Stop/Never)
		Pump speed	DHW	Pump speed (1 to 5)
			Heating / Cooling	Pump speed (1 to 5)
		Heat source setting		Standard / Heater / Boiler / Hybrid *10
		Heat pump settings	Heat pump flow rate range	Minimum (0 to 26.4 GPM [0 to 100 L/min])
				Maximum (0 to 26.4 GPM [0 to 100 L/min])
			Quiet mode	Day (Mon to Sun)
				Time
				Quiet level (Normal/ Level1/ Level2/ Level3)
				Day (Mon to Sun)
			Cooling	Time
				Quiet level (Normal/ Level1/ Level2/ Level3)
		Operation settings	Flow temperature range *11	Minimum temp. (68 to 113°F [20 to 45°C])
				Maximum temp. (95 to 158°F [35 to 70°C])
			Room temperature control *11	Mode (Auto/Quick/Normal/Slow)
				Interval (10 to 60 min.) *12
			Heat pump thermo diff.	On/Off *8
				Lower (-16 to -2°F [-9 to -1°C])
				Upper (+5 to +9°F [+3 to +5°C])
				+9°F (+5°C)
			Freeze stat function *13	
			"Simultaneous operation (DHW/ Heating)"	
			On/Off *8	
			Ambient temp. (-22 to 50°F [-30 to 10°C]) *5	
			5°F (-15°C)	
			On/Off *8	
			Off	
			Ambient temp. (-22 to 14°F [-30 to -10°C]) *5	
			5°F (-15°C)	

Remote Controller Setting Overview continued

Main remote controller screen					Parameters		Default setting	
Menu	Service	Operation settings	Boiler settings	Hybrid settings		"Outdoor ambient temp. (-22 to 50°F [-30 to 10°C]) *5."	5°F (-15°C)	
						"Priority mode (Ambient/Cost/CO2)"	Ambient	
						Outdoor ambient temp. rise (+2 to +9°F [+1 to +5°C])	+5°F (+3°C)	
			Intelligent settings	Energy price *14	Electricity (0.001 to 999 */kWh)	0.5 */kWh		
					Boiler (0.001 to 999 */kWh)	0.5 */kWh		
				CO2 emission	"Electricity 0.002 to 999 lb•CO2/kWh (0.001 to 454 kg•CO2/kWh)"	"1.10 lb•CO2/kWh (0.5 kg•CO2/kWh)"		
					"Boiler 0.002 to 999 lb•CO2/kWh (0.001 to 454 kg•CO2/kWh)"	0.5 kg -CO2/kWh		
				Heat source	"Heat pump capacity (4.0 to 68.0 (1 to 19.9 kW))"	38.2 kBtu/h		
					"Boiler efficiency (25 to 150%)"	80%		
					"Booster heater 1 capacity (0 to 30 kW)"	2 kW		
					"Booster heater 2 capacity (0 to 30 kW)"	4 kW		
		Energy monitor settings	Electric heater capacity	Booster heater 1		0 to 30 kW	2 kW	
				Booster heater 2		0 to 30 kW	4 kW	
				Immersion heater		0 to 30 kW	0 kW	
				Analog output		0 to 30 kW	0 kW	
			Delivered energy adjustment		-50 to +50%	0%		
			Water pump input	Pump 1		0 to 200 W or *** (factory fitted pump)	***	
				Pump 2		0 to 200 W	0 W	
				Pump 3		0 to 200 W	0 W	
				Pump 4		0 to 200 W	72 W	
			Electric energy meter		0.1/1/10/100/1000 pulse/kWh	1000 pulse/kWh		
			Heat meter		0.1/1/10/100/1000 pulse/kWh	1000 pulse/kWh		
			External input settings	Demand control (IN4)		Heat source OFF/Boiler operation	Boiler operation	
				Outdoor thermostat (IN5)		Heater operation/Boiler operation	Boiler operation	
				Cooling limit temp. (IN15)	Zone selection		Zone 1/Zone 2/Zone 1&2	Zone 1
					Zone 1 lowest temperature		41 to 77°F (5 to 25°C)	65°F (18°C)
					Zone 2 lowest temperature		41 to 77°F (5 to 25°C)	65°F (18°C)
			Thermo on output			Zone 1/Zone 2/Zone 1&2	Zone 1&2	

*1 The settings related to Zone 2 can be switched only when 2-zone temperature control or 2-zone valve ON/OFF control is active.

*2 The settings related to Zone 2 can be switched only when 2-zone temperature control is enabled (when DIP SW 2-6 and SW 2-7 are ON).

*3 Only available if DHW tank is present in system.

*4 For the model without both booster, it may not reach the set temperature depending on the outside ambient temperature.

*5 The lower limit is 5°F (-15°C) depending on the connected outdoor unit.

*6 The lower limit is 9°F (-13°C) depending on the connected outdoor unit.

*7 The lower limit is 7°F (-14°C) depending on the connected outdoor unit.

*8 On: the function is active; Off: the function is inactive.

*9 Do not change the setting since it is set according to the specification of flow sensor attached to the indoor unit.

*10 When DIP SW1-1 is set to OFF "WITHOUT Boiler" or SW2-6 is set to OFF "WITHOUT Mixing tank", neither Boiler nor Hybrid can be selected.

*11 Valid only when operating in Heating room temperature.

*12 When DIP SW5-2 is set to OFF, the function is active.

*13 If asterisk (**) is chosen freeze stat function is deactivated. (i.e. primary water freeze risk)

14 "" of "*/kWh" represents currency unit (e.g. €, £, or the like)

*15 Valid only during heating mode

*16 To enable this function in the outdoor unit of WUZ-SHWM, switch the [Mode 7] in [Function settings] to "2".

Input Dictionary

Input ID	Terminal / Connector	Application Required?	Related Function	Interface Type	Notes
IN1	TBI.1 7-8	Yes	Room thermostat 1 input *1	Dry contact (via relay)	Must connect a room thermostat (24V) via relay to dry contact when controlling Zone Valve 1 directly from FTC triggered by thermostat 1. Recommended to connect an external zoned controller when a buffer tank is present to prevent outdoor unit short cycling. Keep ON/OFF cycle time ≥ 10 min; otherwise the compressor may be damaged.
IN2	TBI.1 5-6	No	Flow switch 1 input	Dry contact	Connect the flow switch in the primary circuit. OFF=open $\rightarrow$ failure detection at close. ON=short $\rightarrow$ failure detection at open.
IN3	TBI.1 3-4	No	Flow switch 2 input (Zone 1)	Dry contact	Connect the flow switch in Zone 1 of the secondary circuit. OFF=open $\rightarrow$ failure detection at close. ON=short $\rightarrow$ failure detection at open.
IN4	TBI.1 1-2	No	Demand control input	Dry contact	Connect auxiliary input to receive a demand signal from the utility. OFF=Normal. ON=Heat source OFF / Boiler operation. (Function optimized for EU; not recommended for other applications.)
IN5	TBI.2 7-8	No	Outdoor thermostat input *2	Dry contact	Connect an outdoor thermostat to control the unit by auxiliary thermostat, overriding the built-in outdoor thermostat. Standard=OFF. ON=Heater/Boiler operation. Using outdoor thermostat may reduce heater/related parts lifespan.
IN6	TBI.2 5-6	Yes	Room thermostat 2 input *1	Dry contact (via relay)	Must connect a room thermostat (24V) via relay to dry contact when controlling Zone Valve 2 directly from FTC triggered by thermostat 2. Same caution as IN1.
IN7	TBI.2 3-4	Yes	Flow switch 3 input (Zone 2)	Dry contact	Connect the flow switch in Zone 2 of the secondary circuit. OFF=open $\rightarrow$ failure detection at close. ON=short $\rightarrow$ failure detection at open.
IN13	TBI.4 3-4	Yes	Forced cooling mode input	Dry contact	Connect an external relay or controller capable of outputting a cooling signal. When IN13 receives an ON signal during heating, the system switches immediately to cooling.
IN15	TBI.4 1-2	No	Cooling limit temp. input	Dry contact	Connect dew point temperature sensor or a controller output via relay. When IN15 receives a signal, the system automatically raises the lower limit of water flow temperature to prevent condensation (useful in high-humidity environments).
INA1	TBI.6 3-5 / CN1A	Yes	Flow sensor	Built-in sensor	Built-in flow sensor connected through CN1A.

*1 Set the ON/OFF cycle time of the room thermostat for 10 minutes or more; otherwise the compressor may be damaged.

*2 If using outdoor thermostat for controlling operation of heaters, the lifetime of the heaters and related parts may be reduced.

*3 To turn on the boiler operation, use the main remote controller to select "Boiler" in "External input setting" screen in the service menu.

Thermistor Dictionary

Input ID	Terminal / Connector	Application Required?	Related Function	Interface Type	Notes
TH1	CN20	Yes	Room temperature	Thermistor (built-in)	Built-in sensor for indoor room temperature.
TH2	CN21	Yes	Refrigerant liquid temperature	Thermistor (built-in)	Built-in sensor for refrigerant liquid line.
THW1	CNW12 1-2	Yes	Flow water temperature	Thermistor (built-in)	Built-in sensor for water flow temperature in Ecodan ERSF-NM6E.
THW2	CNW12 3-4	Yes	Return water temperature	Thermistor (built-in)	Built-in sensor for return water temperature in Ecodan ERSF-NM6E.
THW5B	CNW5 3-4	Yes	DHW tank water temperature *1	Thermistor (NTC, external)	Connect and insert the gray thermistor into the indirect DHW tank when using DHW. Supplied length = 16 ft (5 m). Optional thermistor with 98 ft (30 m) cable available.
THW6	TBI.5 7-8	Yes	Zone 1 flow temperature (buffer tank use)	Thermistor (NTC, external)	Connect the yellow thermistor to the supply piping outlet when a buffer tank is used.
THW7	TBI.5 5-6	Yes	Zone 1 return temperature (buffer tank use)	Thermistor (NTC, external)	Connect the blue thermistor to the return piping outlet when a buffer tank is used.
THWB1	TBI.6 8-9	Yes	Boiler flow temperature	Thermistor (NTC, external)	Connect the thermistor to the supply piping of the boiler when boiler integration is applied.

*1 The length of the thermistor wire supplied with the unit is 16 ft (5 m). If you need a longer one, use an optional thermistor with a wire of 98 ft (30 m).

External Thermistors Visuals

THW6	THW7	THW5B	THWB1
			
Supply temperature from Buffer tank	Return temperature from Buffer tank	DHW tank temperature	Boiler supply temperature
16 ft (5m)	16 ft (5 m)	16 ft (5m)	16 ft (5m)
		98 ft (30m) optional part is available: PAC-TH01ITKL2-U	98 ft (30m) optional part is available: PAC-TH012HTL-U

Output Dictionary

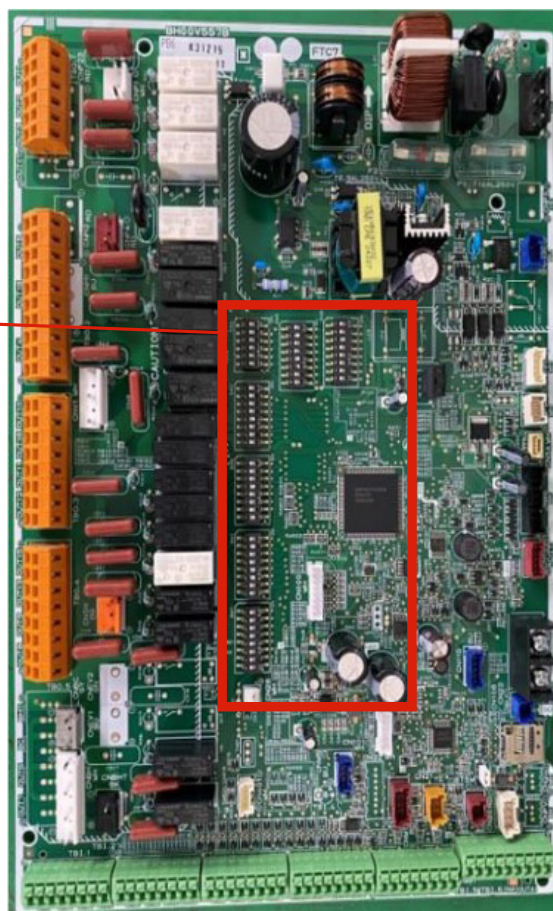
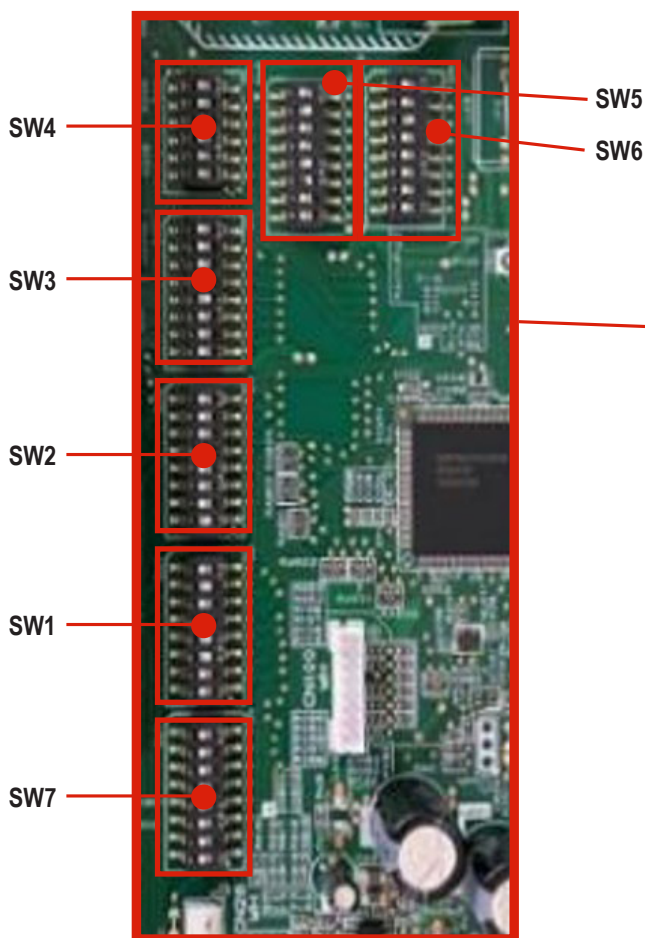
Out-put ID	Detail (Terminal / Connector)	Application Required?	Related Function	Notes
OUT1	TBO.1 1-2 / CNP1	No	-	No Function
OUT2	TBO.1 3-4	No	Water circulation pump 2(Space heating/cooling for Zone 1)	Connect auxiliary pump if second pump is used. Operates independently from hydrobox built-in pump.
OUT3	TBO.1 5-6	Yes	Water circulation pump 3(Space heating/cooling for Zone 2) OR 2-way valve 2b	Connect one of the following: • Zone 2 pump for 2-zone temp. control (Not supported in the US Market) • 2-way valve for Zone 2 ON/OFF
OUT4	TBO.2 7-9	Yes	3-way valve SPST (2-way valve 1)	Connect 230V SPST 3-way valve to switch between DHW and space conditioning.
OUT4	TBO.2 8-10 / CNV1	Yes	3-way valve SPDT	Connect 230V SPDT 3-way valve to switch between DHW and space conditioning.
OUT4	CN851	No	3-way valve jumper	Factory jumper. DO NOT CHANGE THIS JUMPER.
OUT5	TBO.2 1-2	No	Zone 2 mixing valve (ON: close)	Connect Zone-2 mixing valve for 2-zone temp. control. This output is not supported in the US Market.
OUT5	TBO.2 2-3	No	Zone 2 mixing valve (ON: open)	Connect Zone-2 mixing valve for 2-zone temp. control. This output is not supported in the US Market.
OUT6	CNBH 1-3	No	Booster heater 1	Built-in booster heater (internal connection).
OUT7	CNBH 5-7	No	Booster heater 2	Built-in booster heater (internal connection).
OUT8	TBO.4 7-8	Yes	Cooling signal output	Connect relay to indicate Ecodan ERSF-NM6E operating mode (ON =cooling / OFF =heating).
OUT9	TBO.4 5-6 / CNIH	No	—	No function
OUT10	TBO.3 1-2	Yes	Boiler control output	Connect to boiler control circuit for start/stop via dry contact. Recommended: install surge absorber between OUT10 and boiler control.
OUT11	TBO.3 5-6	No	Error signal output	Connect to external controller or alarm circuit via dry contact.
OUT12	TBO.3 7-8	No	Defrost signal output	Connect to external controller to indicate defrost mode via dry contact.
OUT13	TBO.4 3-4	Yes	2-way valve 2a (Zone 1) OR 2-thread 3-way valve	Connect one of the following: • 2-way valve for Zone 1 ON/OFF • 2-thread 3-way valve for switching between DHW and space conditioning. If using direct ON/OFF for DHW, use OUT4 instead.
OUT14	CNP4	No	—	No function
OUT15	TBO.4 1-2	No	Compressor ON signal	Connect to controller to send compressor ON signal.
OUT16	TBO.3 3-4	No	Heating/Cooling thermostat ON signal	For thermostat or fan-coil ON/OFF control. Non-voltage contact. 220–240 VAC (30 VDC), 0.5 A max. Requires ≥10 mA at 5VDC.
OUT18	TBO.2 4-5	No	Zone 1 mixing valve (ON: close)	Connect Zone-1 mixing valve for 2-zone temp. control. This output is not supported in the US Market.
OUT18	TBO.2 5-6	No	Zone 1 mixing valve (ON: open)	Connect Zone-1 mixing valve for 2-zone temp. control. This output is not supported in the US Market.
OUTA1	Analog output (0–10V)	No	Analog signal	Provides analog output 0–10V (max 5 mA).

DIP Switch Dictionary

DIP Switch	Application required?	Related Function	Setting Effect (ON / OFF)	Notes	Default
SW1-1	Yes	Boiler integration	ON: Boiler integration for hydronic heating / OFF: No boiler integration	Must ON for boiler integrated application	OFF
SW1-3	Yes	DHW (Domestic Hot Water)	ON: When using DHW tank / OFF: When not using DHW	Must ON for DHW application	OFF
SW1-5	No	Booster heater deactivation	ON: Maintain the booster heater / OFF: Deactivate the booster heater	Those who would like to prioritize the reduction of electricity usage to comfort may change this setting.	ON
SW1-6	No	Booster heater scope of operation	ON: Booster heater operates both heating and DHW / OFF: Booster heater operates only for heating mode	Those who would like to prioritize the reduction of electricity usage to comfort may change this setting.	ON
SW1-7	No	Outdoor unit type	ON: — / OFF: Refrigerant split type outdoor unit	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	OFF
SW2-1	Yes	Room thermostat 1 logic change	ON: Stop Zone 1 operation at thermostat open / OFF: Stop Zone 1 operation at thermostat close	When you connect TBI.1 5-6 with thermostat, check this setting depending on the connected wiring type.	OFF
SW2-2	No	External flow switch 1 logic change	ON: Failure detection at open / OFF: Failure detection at close	When you connect external flow switch on the primary circuit to detect flow failure, check this setting depending on the connected flow switch type.	OFF
SW2-3	No	Booster heater capacity limit	ON: Limit the booster heater capacity to 2 kW / OFF: No limit (6 kW max)	Those who would like to prioritize the reduction of electricity usage to comfort may change this setting.	OFF
SW2-4	Yes	Cooling operation	ON: Enable cooling (heating and cooling system) / OFF: Disable cooling (heating only system)	It is recommended to OFF this setting in heating-only application with baseboards, panel radiator and floor heating operation.	ON
SW2-5	Yes	Auto switch over to backup heat source	ON: Auto switch to backup heat source if outdoor unit fails / OFF: No auto switch	If Boiler Backup for heating="Yes", then ON.	OFF
SW2-6	Yes	Buffer tank	ON: When using a buffer tank/ OFF: When not using a buffer tank	Must ON for a buffer tank application	OFF
SW2-7	No	2-zone temp control (MELCO thermistor)	ON: 2-zone temperature control ON / OFF: 2-zone temperature control OFF	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	OFF
SW2-8	No	Flow sensor	ON: Setting active / OFF: —	This setting is implemented to comply with UL standards. DO NOT CHANGE THE SETTING	ON
SW3-1	Yes	Room thermostat 2 logic change	ON: Stop Zone 2 operation at thermostat open / OFF: Stop Zone 2 operation at thermostat close	When you connect TBI.2 5-6 for 2-way valve control with thermostat, check this setting depending on the connected wiring type.	OFF
SW3-2	No	External flow switch 2&3 logic change	ON: Failure detection at open / OFF: Failure detection at close	When you connect external flow switch on Zone 1 and 2 in secondary circuit to detect flow failure, check this setting depending on the connected flow switch type.	OFF
SW3-4	No	Aux energy meter connection	ON: Having auxiliary energy meter / OFF: No auxiliary energy meter	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	OFF
SW3-6	Yes	Direct valve control from FTC (up to 2 valves)	ON: Direct valve control / OFF: No direct valve control	Open/close signal sent directly from FTC. No need for an external zoned controller.	OFF
SW3-8	No	Aux heat meter connection	ON: Having auxiliary heat meter / OFF: No auxiliary heat meter	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	OFF

DIP Switch Dictionary continued

DIP Switch	Application required?	Related Function	Setting Effect (ON / OFF)	Notes	Default
SW4-4	No	Service: Indoor unit only operation	ON: Activate backup heat source (booster heater or backup boiler) for indoor-only operation / OFF: Reset after outdoor unit installation	Note: Turn this SW to support "without outdoor unit" operation. Must turn on SW4-5 or SW4-6 as well. Connect power to S1/S2 instead of L1/L2. Prolonged use may reduce electric heater lifespan. Check and reset all settings after outdoor unit is connected.	OFF
SW4-5	No	Service: Emergency heater-only operation	ON: Booster heater only operation / OFF: Normal operation with outdoor unit	Must turn on SW4-4 as well	OFF
SW4-6	No	Service: Emergency boiler-only operation	ON: Boiler only operation / OFF: Normal operation with outdoor unit	Must turn on SW4-4 as well	OFF
SW5-2	No	Advanced auto adaptation logic	ON: Activate advanced auto adaptation / OFF: Normal auto adaptation	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	ON
SW6-3	No	Pressure sensor	ON: Active / OFF: —	This setting is implemented to comply with regulation. DO NOT CHANGE THE SETTING	ON
SW6-4	No	Analog output	ON: Activate analog output / OFF: Disabled	This setting is not supported in the US Market. DO NOT CHANGE THE SETTING	OFF
SW7-1	No	Mixing valve (2-zone temperature mode)	ON: Apply mixing valve control for both Zone 1 and Zone 2 / OFF: Disabled	Check this switch only when the application requires 2-zone temperature control	OFF
SW7-2	Yes	Forced cooling mode input (TBI.4 3-4)	ON: Forced cooling active at open / OFF: Forced cooling active at close	—	OFF
SW7-3	No	Cooling limit temp. input (IN15)	ON: Cooling limit active when IN15 receives dew point thermostat signal at close / OFF: Cooling limit active when IN15 receives signal at open	—	OFF





For questions, contact
your local distributor at
www.EcodanWUZ.ca