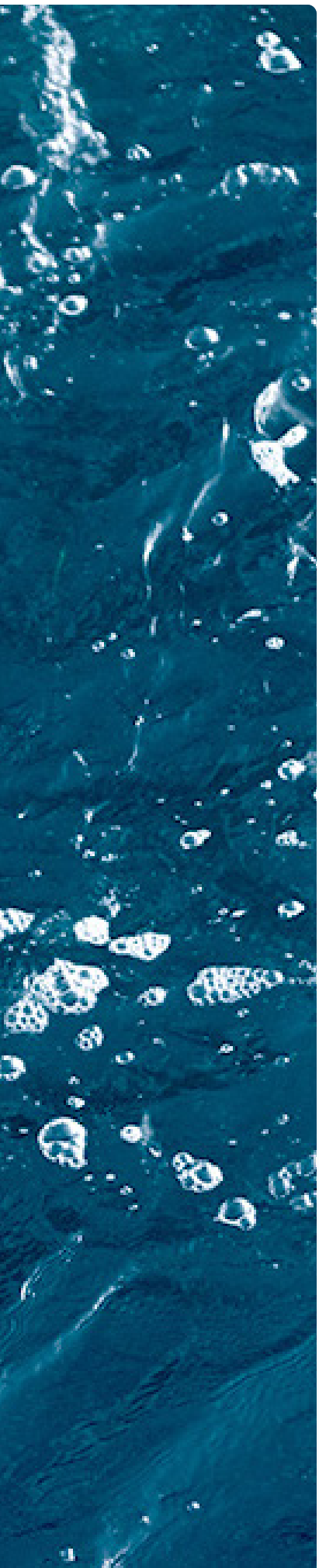


MITSUBISHI ELECTRIC
HEATING & AIR CONDITIONING

ecodan®

# Air-to-Water Heat Pump Applications Guide

Version 1.0.20260319



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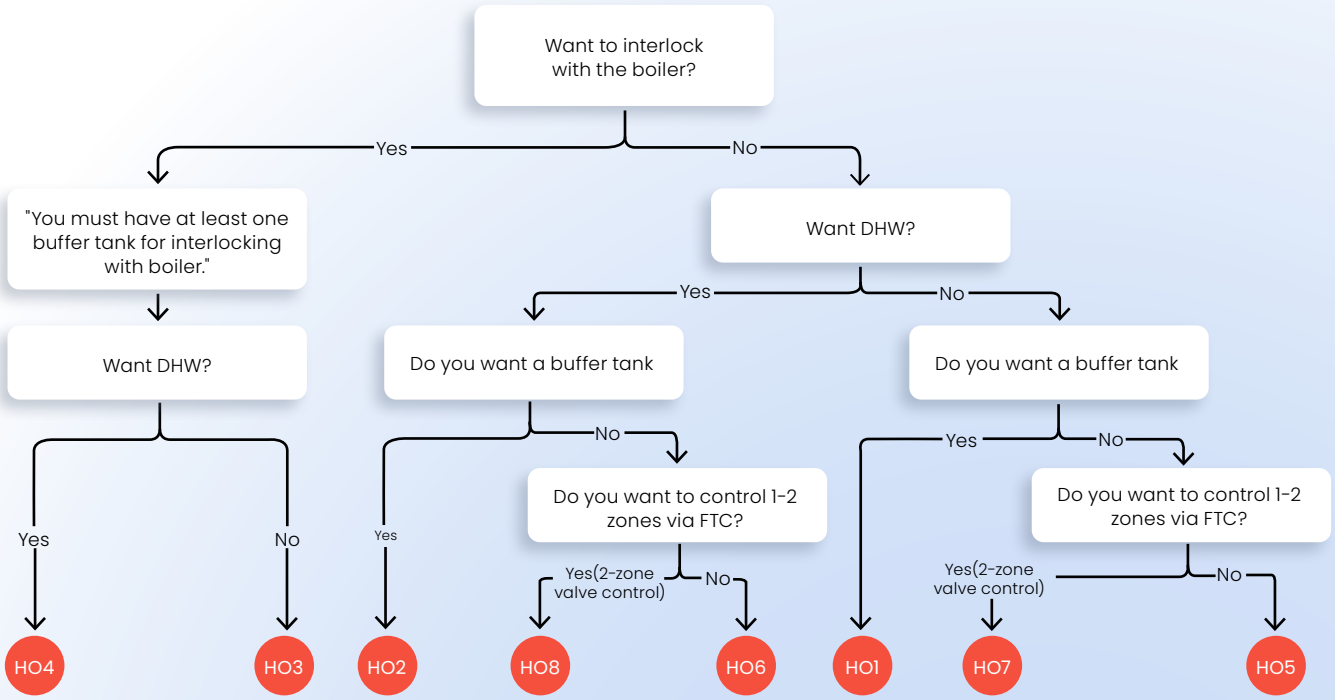
# Introduction



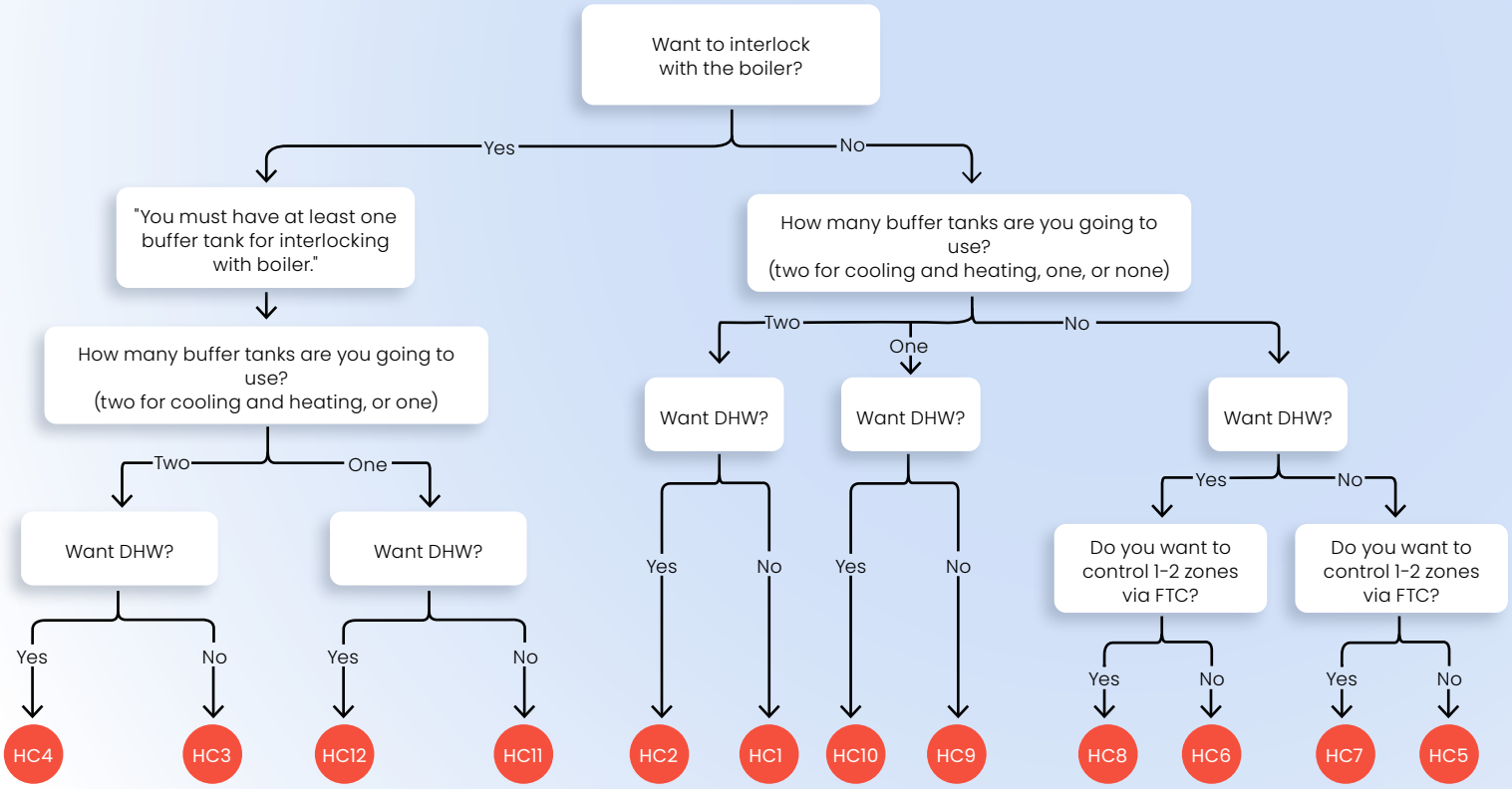

01

# Application Guide Selection Flowchart

## Heating Applications:




## Heating & Cooling Applications:



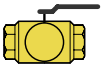


# Application Guide Index

| | 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.

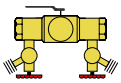
# Legend


Ball Valve


Drain Valve


Spring Check Valve


Purge Valve


Dual Port
Purge Valve


3-way Motorized
Ball Valve


2-Way Zone Valve

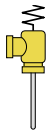

3-Way Zone Valve


Anti-condensation
Mixing Valve

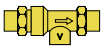

Balancing Valve

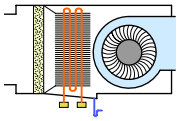

Anti-condensation
Mixing Valve

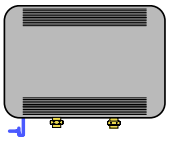

Pressure Relief Valve


Temperature &
Pressure Relief Valve


Pressure Reducing
Valve

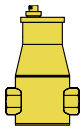

Back-flow Preventer

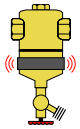

Air Handler


Console
Air Handler


Fin-tube
Baseboard

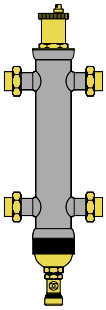

Float
Air Vent


Micro-Bubble
Air Separator


Dirt Separator
with Magnet

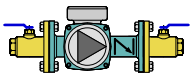

Air & Dirt Separator
with Magnet

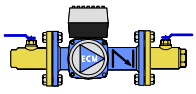

Reinforced Flexible
Connector

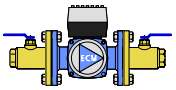

Hydraulic Separator
with Magnet

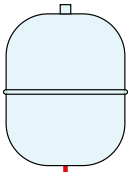

Tee

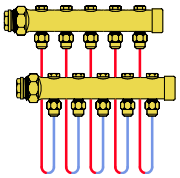

Union

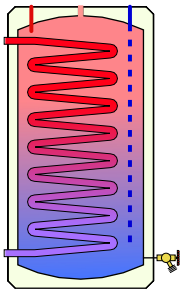

Circulator with
Internal Check Valve &
Isolation Flanges

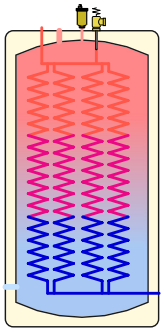

Variable Speed
Circulator with
Internal Check Valve &
Isolation Flanges

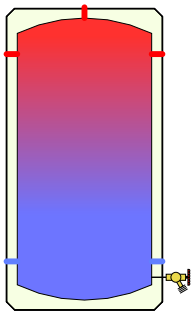

Variable Speed
Circulator with
Isolation Flanges

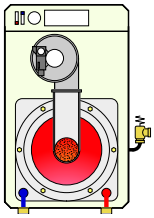

Expansion Tank

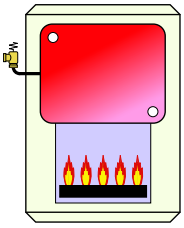

Radiant Panel
Manifold Station


Indirect water
heater (DHW)


Reverse Indirect
Water Heater


Buffer tank


Compact
Mod/Con Boiler


Gas-fired
Conventional
Cast-Iron Broiler



# System Overview

02

# System Overview




| Outdoor unit | Capacity |
|---|---|
| • WUZ-SA24NMZ | 24 kBtu/h |
| • WUZ-SA36NMZ | 36 kBtu/h |
| • WUZ-SA48NMZ | 48 kBtu/h |




**Hydrobox** (indoor unit)

- ERSF-NM6E




**Domestic hot water tank**

| | |
|---|---|
| • ME-60-HO | 60 gallons |
| • ME-60-HO-H | 60 gallons w/ heater |
| • ME-60-XHO | 85 gallons |
| • ME-60-XHO-H | 85 gallons w/ heater |

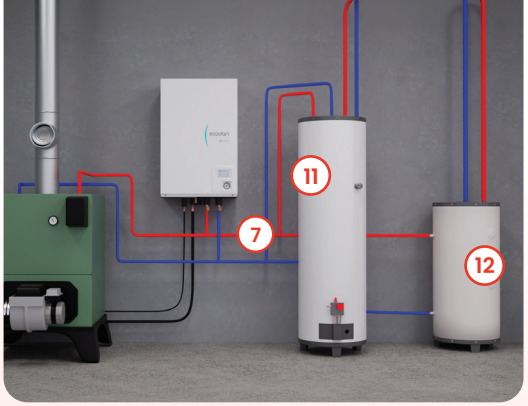


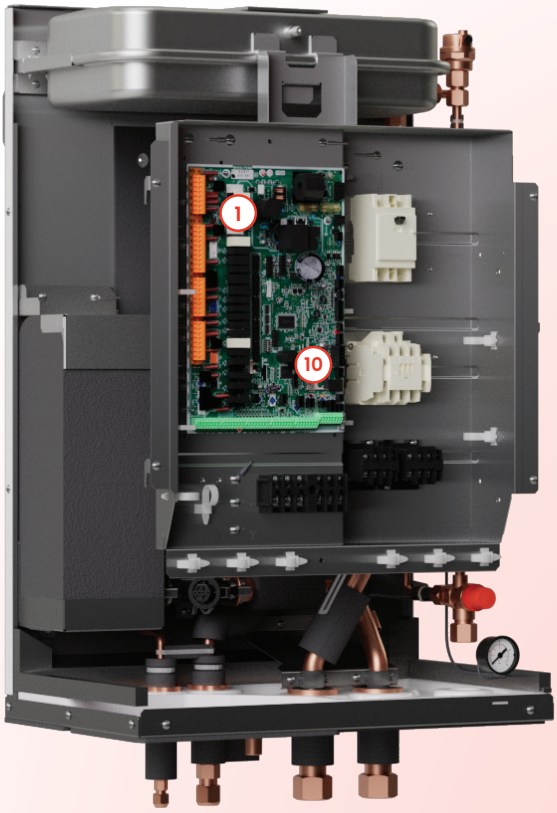
**Buffer tank**

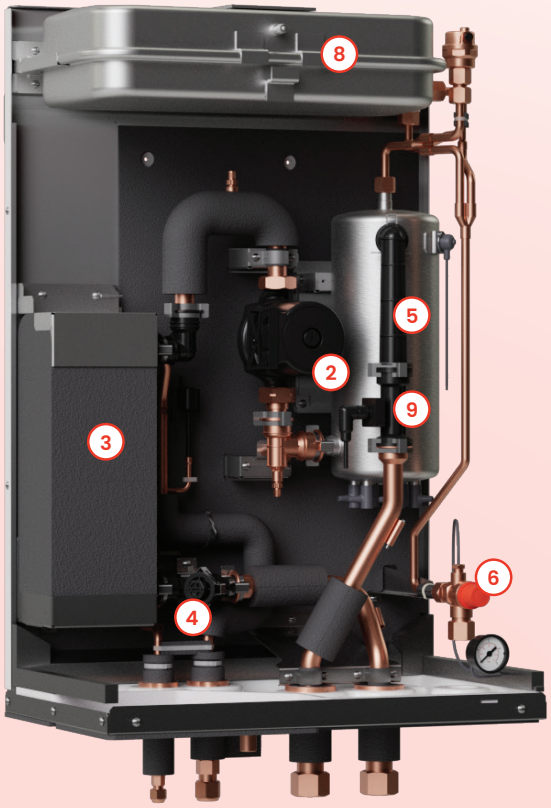
- Based on application needs
- Field supplied

# 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. 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.

# Key Components

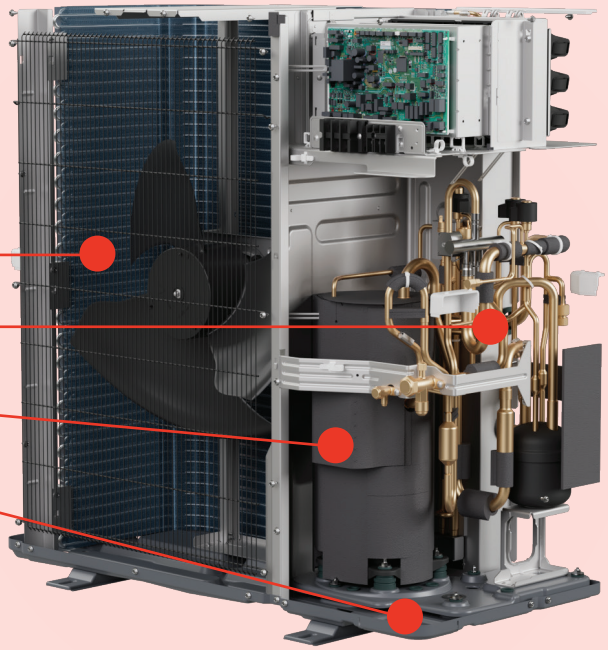
## Outdoor Unit



### Design and sound

The ecodan® 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.




## Designed for peace and quiet

ecodan 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.

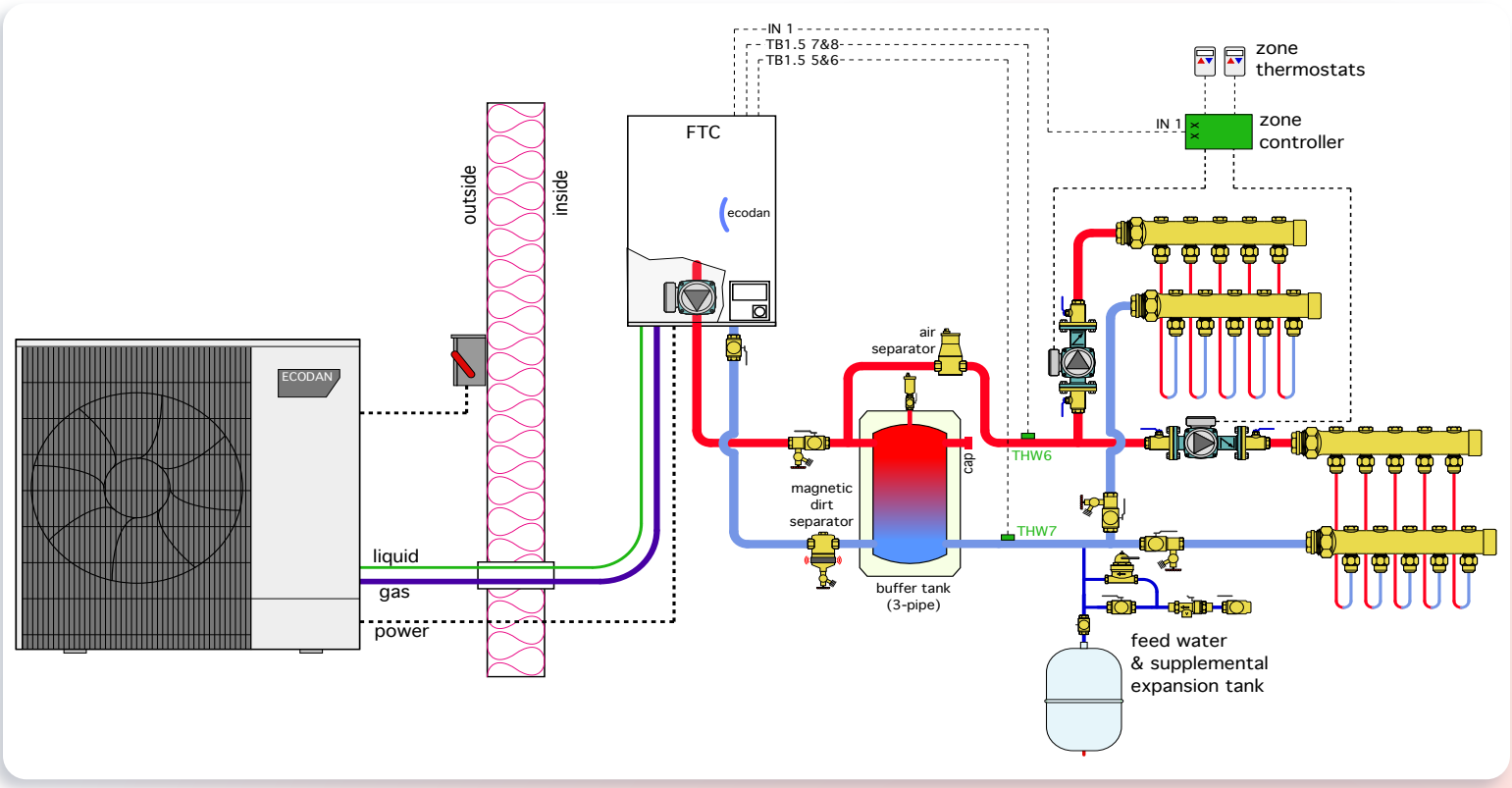
The outdoor unit features ultra-quiet operation as low as 41 - 45 dB(A) thanks to its reduced-vibration design. The unit also offers a three-stage low-noise mode that can lower the compressor frequency and fan speed to reduce noise levels if desired while house occupants are sleeping.



# Common Applications

# 03

# HO1: Heating with buffer tank and zone controller




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | Buffer Tank | Mandatory | Local Supply |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

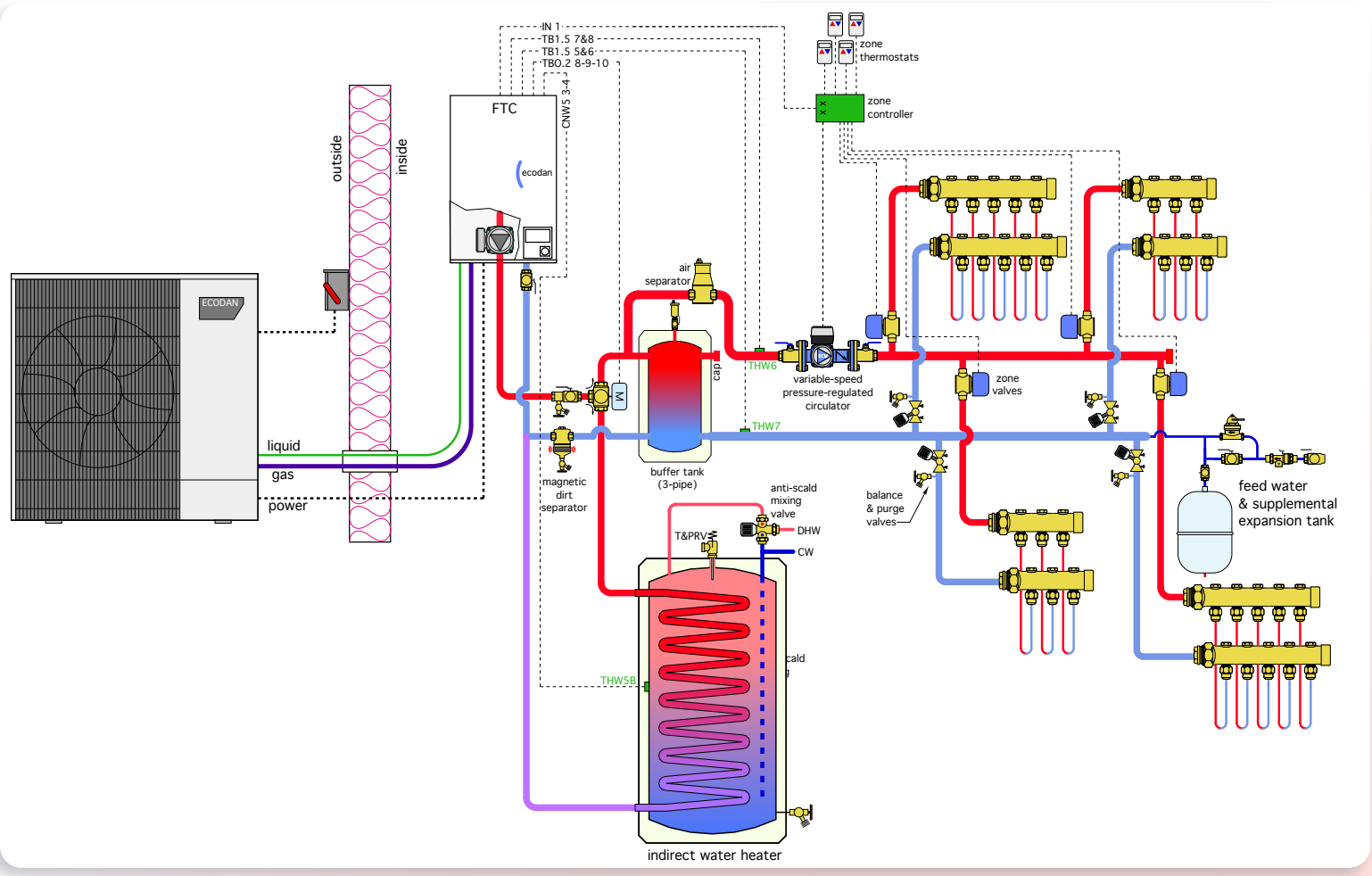
OFF ON

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 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 | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | DHW Temperature Sensor (THW5B) | Mandatory | METUS (In ERSF box) |
| 1 | 3-way Valve, 230VAC | Mandatory | Local Supply |
| 1 | Buffer Tank | Mandatory | Local Supply |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | Local Supply |
| 1 | Indirect Water Tank (DHW) | Mandatory | METUS or 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

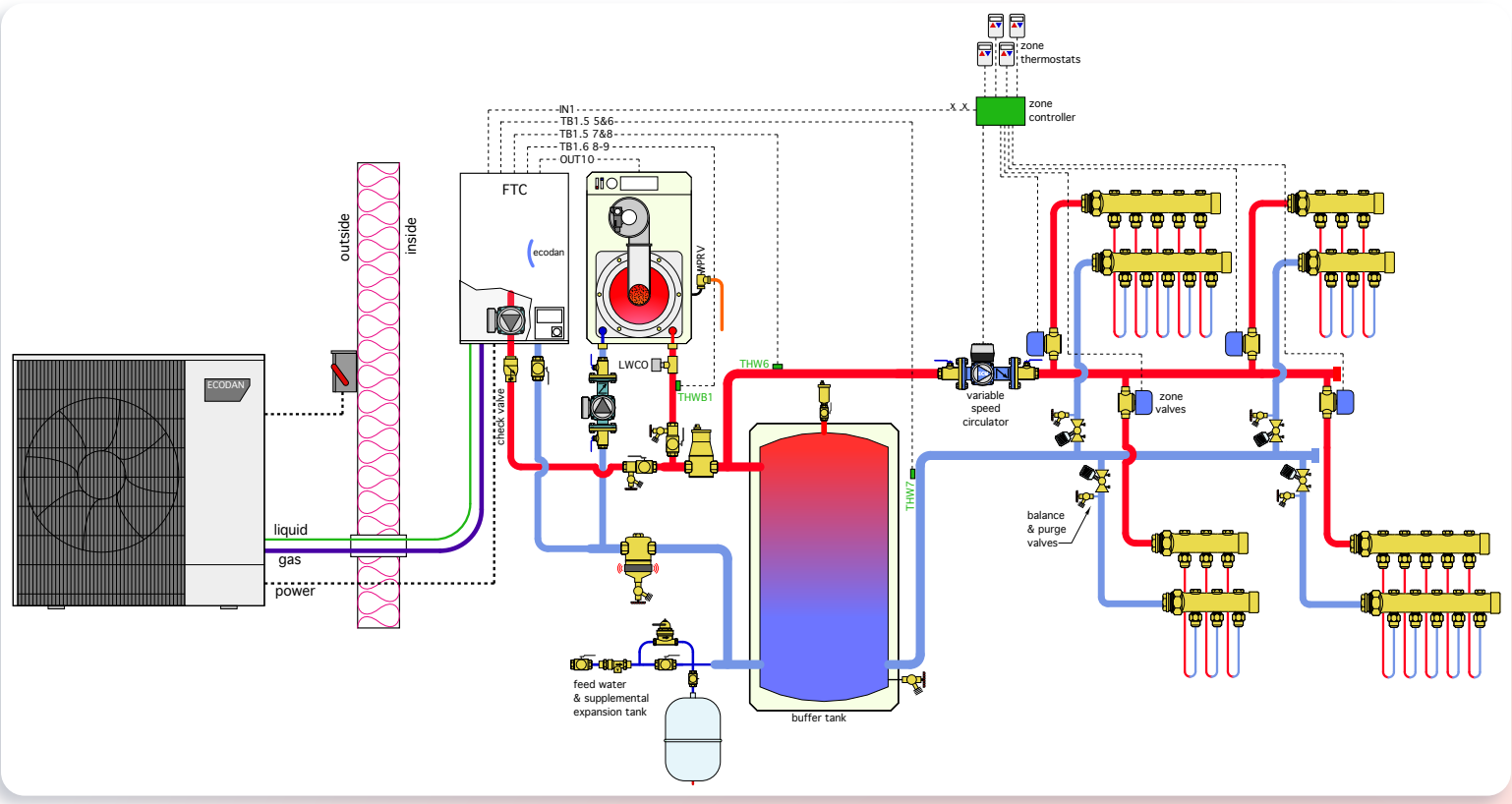
OFF ON

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) |
| 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | Boiler Temperature Sensor (THWB1) | Mandatory | METUS (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 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

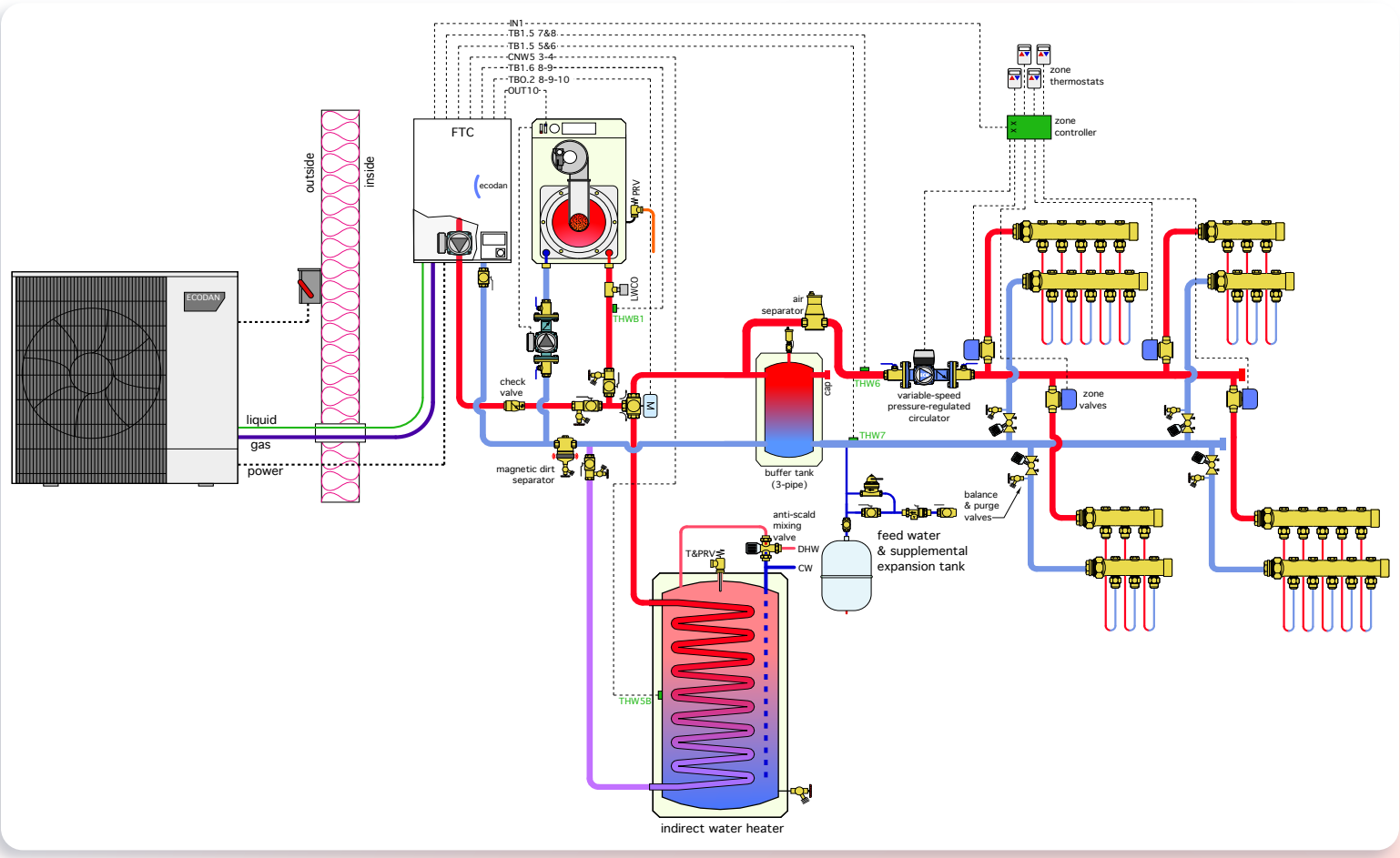
OFF ON

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 | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | DHW Temperature Sensor (THW5B) | Mandatory | METUS (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 | METUS or Local Supply |
| 1 | Anti-scald mixing valve | Optional | Local Supply |
| 1 | Buffer Tank | Mandatory | Local Supply |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion 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 |

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

## DIP Switch and Remote Controller settings

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

DIP switch in **BLACK** : default position

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

**SW4**

OFF ON

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

**SW5**

OFF ON

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

**SW6**

OFF ON

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

**SW3**

OFF ON

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

**SW2**

OFF ON

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

**SW1**

OFF ON

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. ---

**SW7**

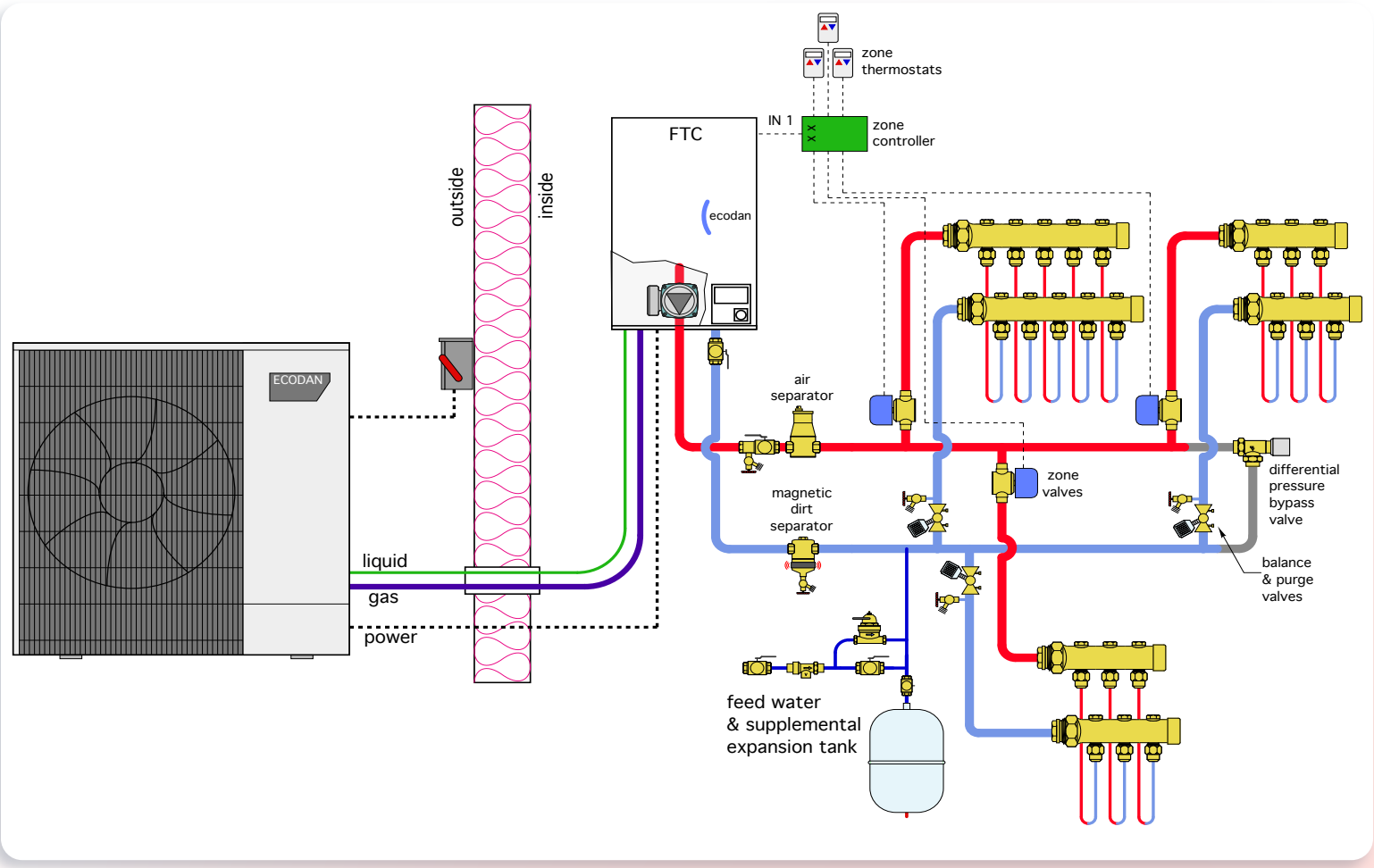
OFF ON

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 |
| | 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 | 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.

# HO5: Heating with zone controller




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

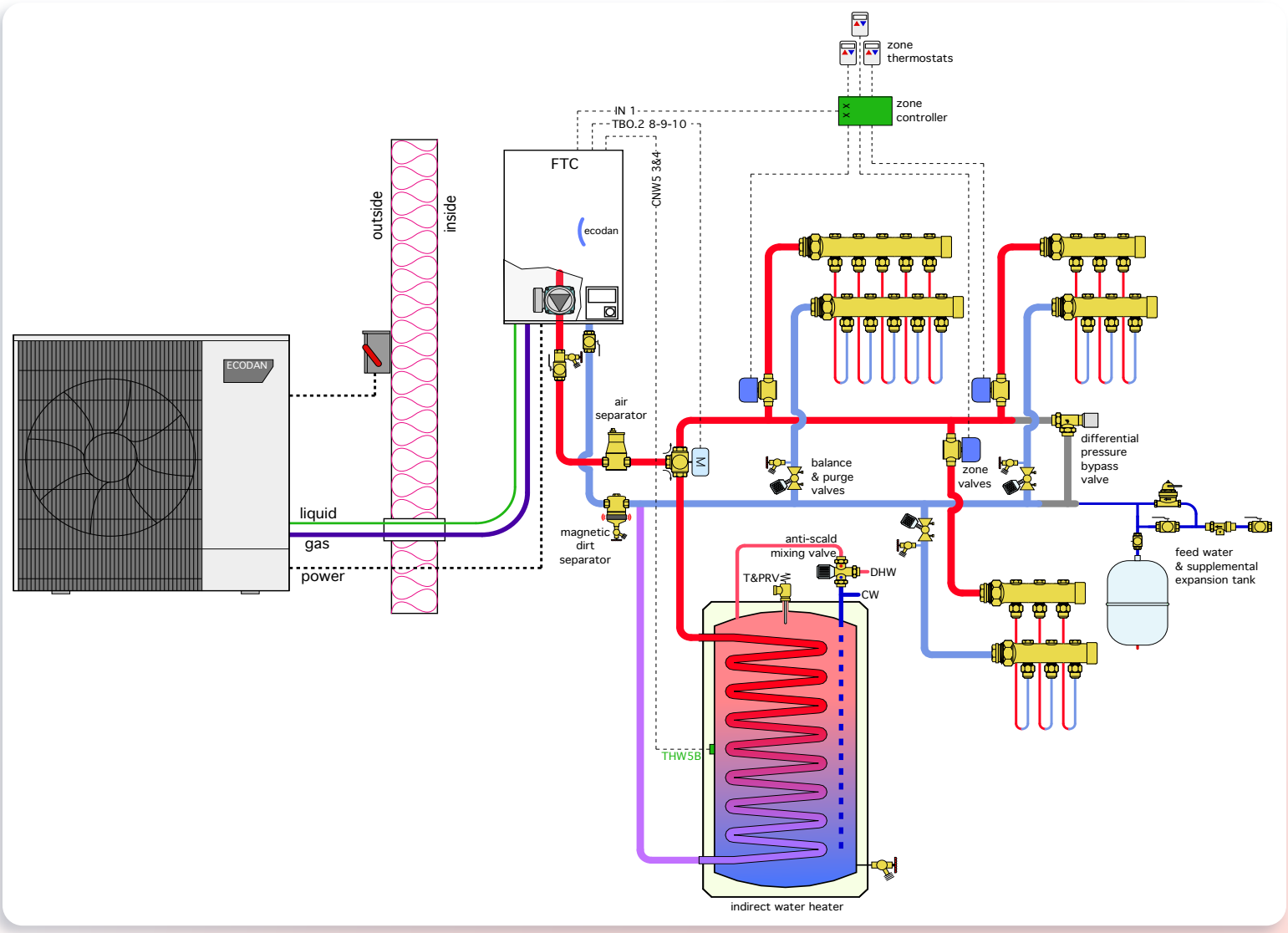
OFF ON

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 | 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.

# HO6: Heating with DHW and zone controller




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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

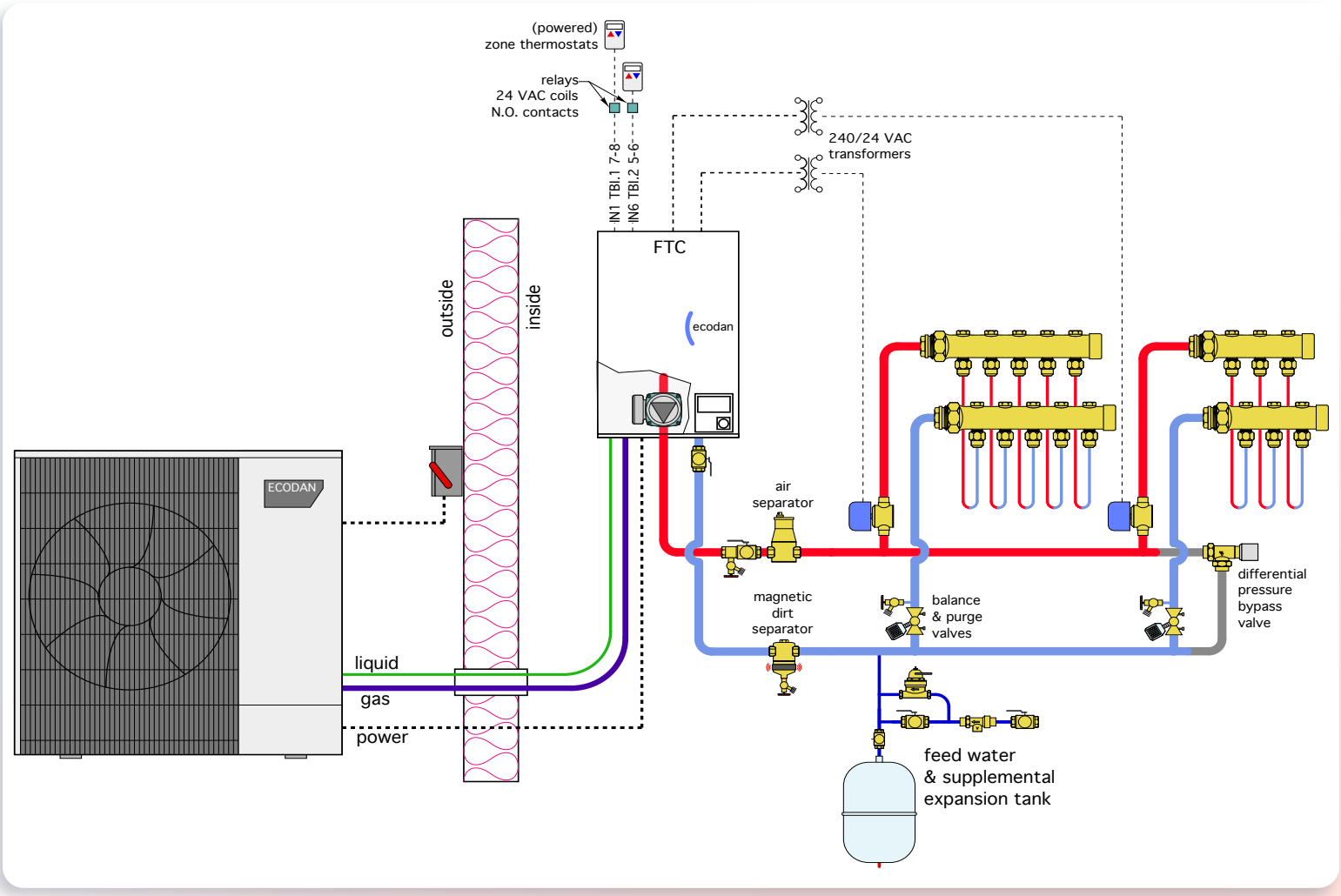
OFF ON

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 |
| | 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 | 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 | On/Off *8 | On |
| | | | 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) |
| | | | "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.

# HO7: Heating with 2-zone FTC control




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Optional | 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

DIP switch in **BLACK** : default position

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

### 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 SW5

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

### 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. ---

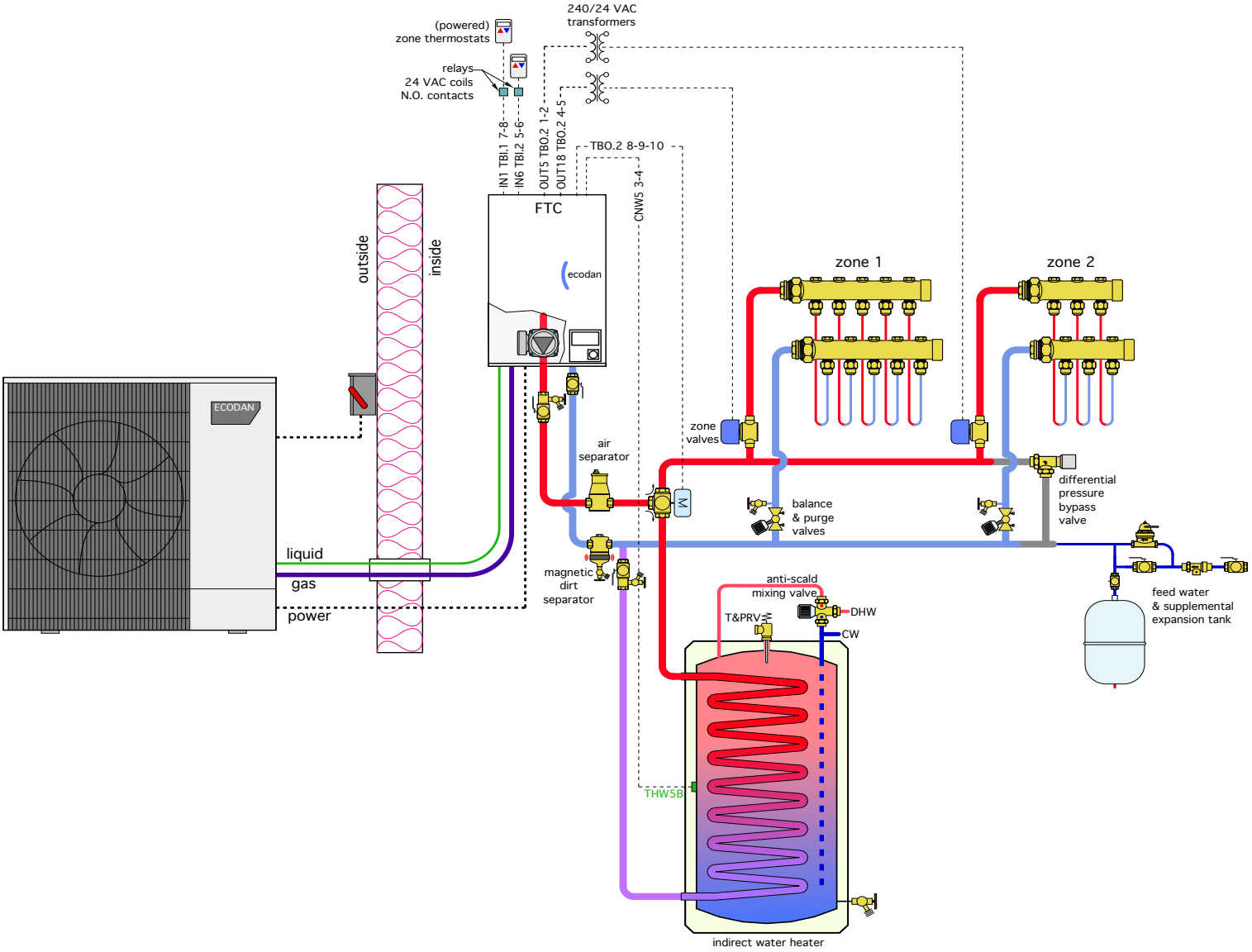
### OFF ON SW7

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 | 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.

# HO8: Heating with DHW and 2-zone FTC control




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

DIP switch in **BLACK** : default position

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

**SW4**

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

**SW5**

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

**SW6**

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

**SW3**

OFF ON
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

**SW2**

OFF ON
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

**SW1**

OFF ON
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. ---

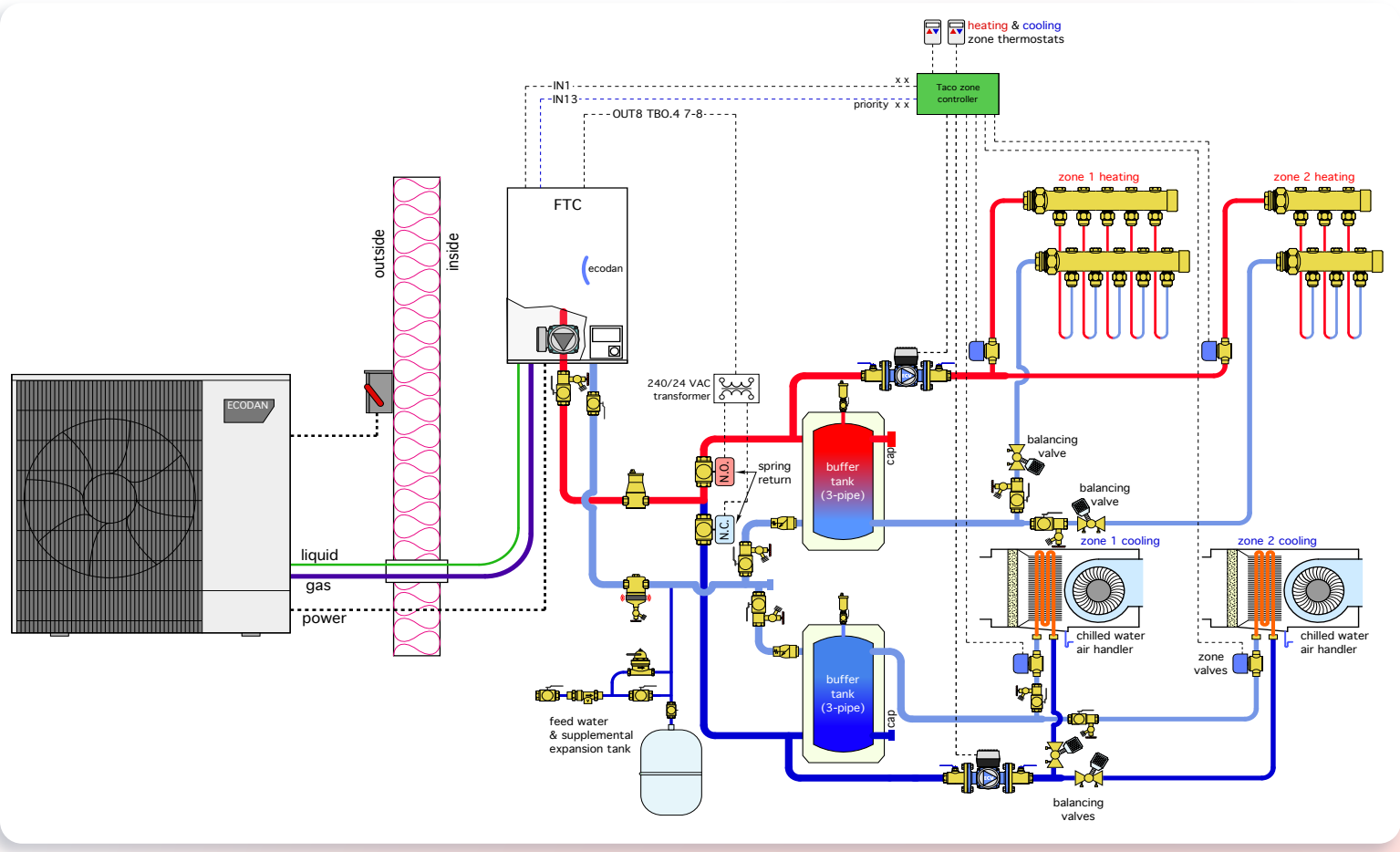
**SW7**

OFF ON
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 |
| | | | 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 | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 2 | Buffer Tank | Mandatory | Local Supply |
| 2 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

**SW4**

OFF ON

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

**SW5**

OFF ON

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

**SW6**

OFF ON

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

**SW3**

OFF ON

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

**SW2**

OFF ON

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

**SW1**

OFF ON

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. ---

**SW7**

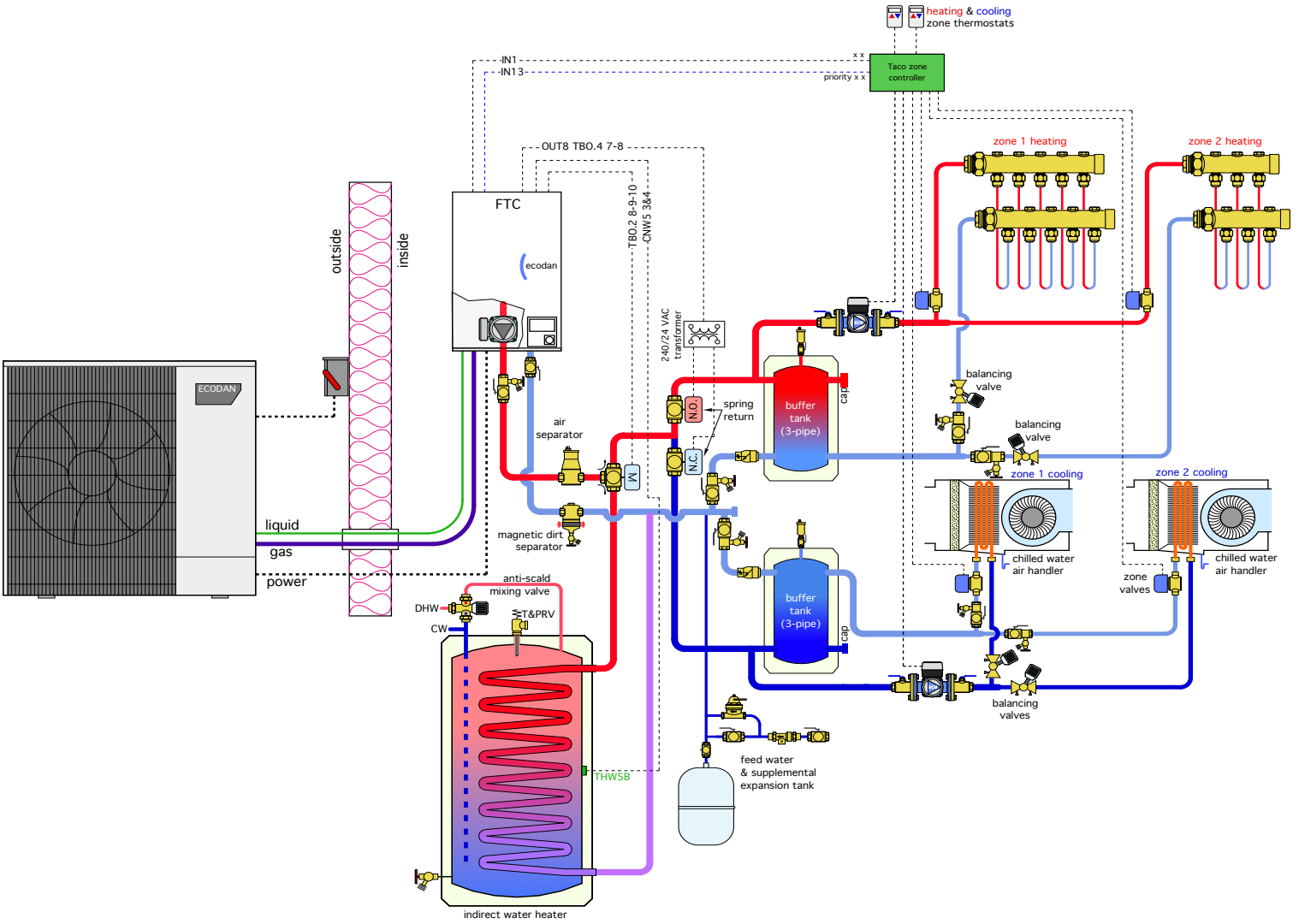
OFF ON

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 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | DHW Temperature Sensor (THW5B) | Mandatory | METUS (In ERSF Box) |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | 3-way Valve, 230VAC | Mandatory | Local Supply |
| 1 | Indirect Water Heater (DHW) | Mandatory | METUS or Local Supply |
| 1 | Anti-scald mixing valve | Optional | Local Supply |
| 2 | Buffer Tank | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### 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 SW5

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

### 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. ---

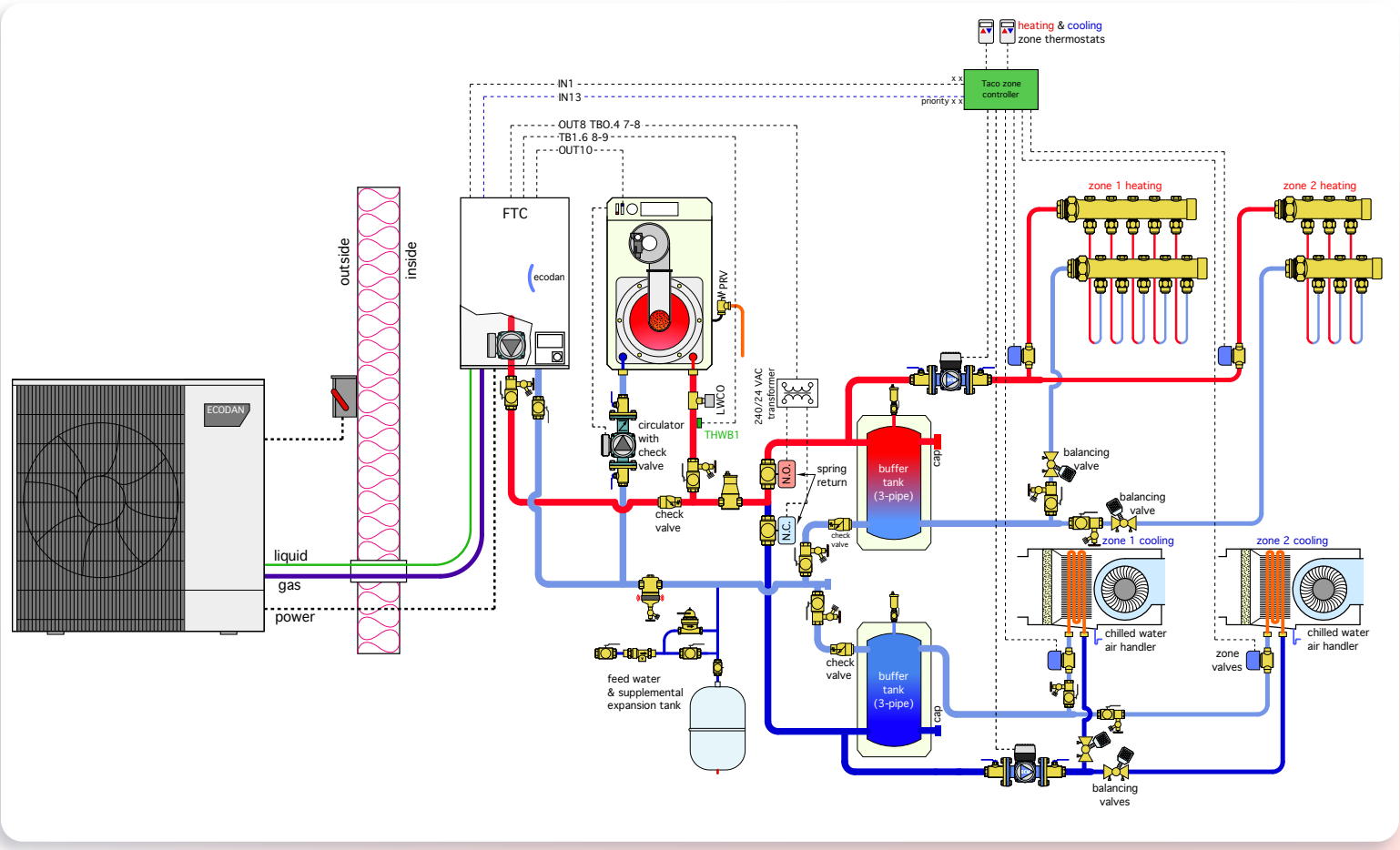
### OFF ON SW7

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 com-pensation 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 com-pensation 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 |
| | | Operat-ion 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Boiler Temperature Sensor (THWB1) | Mandatory | METUS (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 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

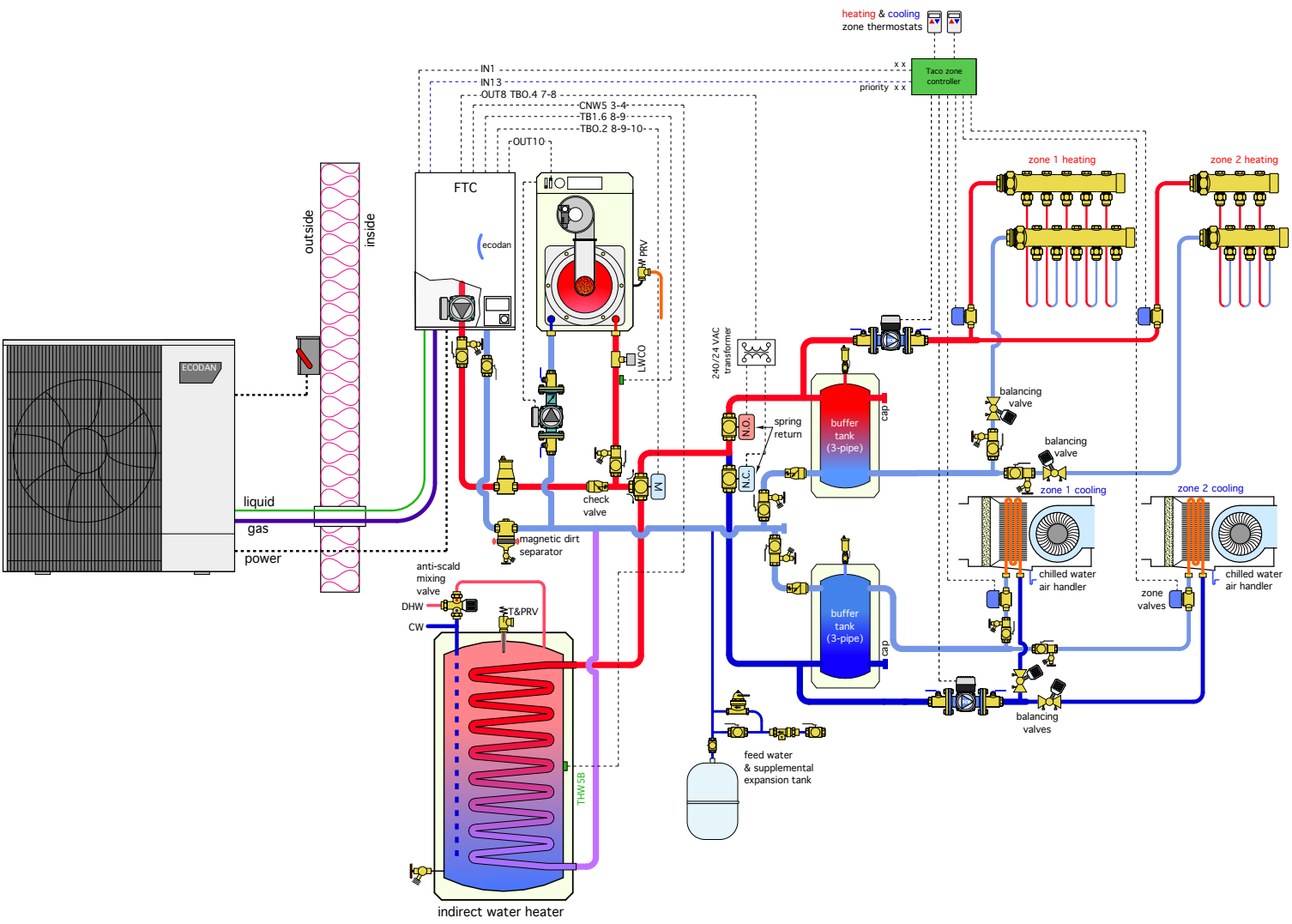
OFF ON

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 | 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Boiler Temperature Sensor (THWB1) | Mandatory | METUS (In ERSF box) |
| 1 | DHW Temperature Sensor (THW5B) | Mandatory | METUS (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 | Magnetic Dirt Separator | Mandatory | Local Supply |

| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | 3-way Valve, 230VAC | Mandatory | Local Supply |
| 1 | Indirect Water Tank (DHW) | Mandatory | METUS or Local Supply |
| 1 | Anti-scald mixing valve | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

**SW4**

OFF ON

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

**SW5**

OFF ON

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

**SW6**

OFF ON

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

**SW3**

OFF ON

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

**SW2**

OFF ON

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

**SW1**

OFF ON

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. ---

**SW7**

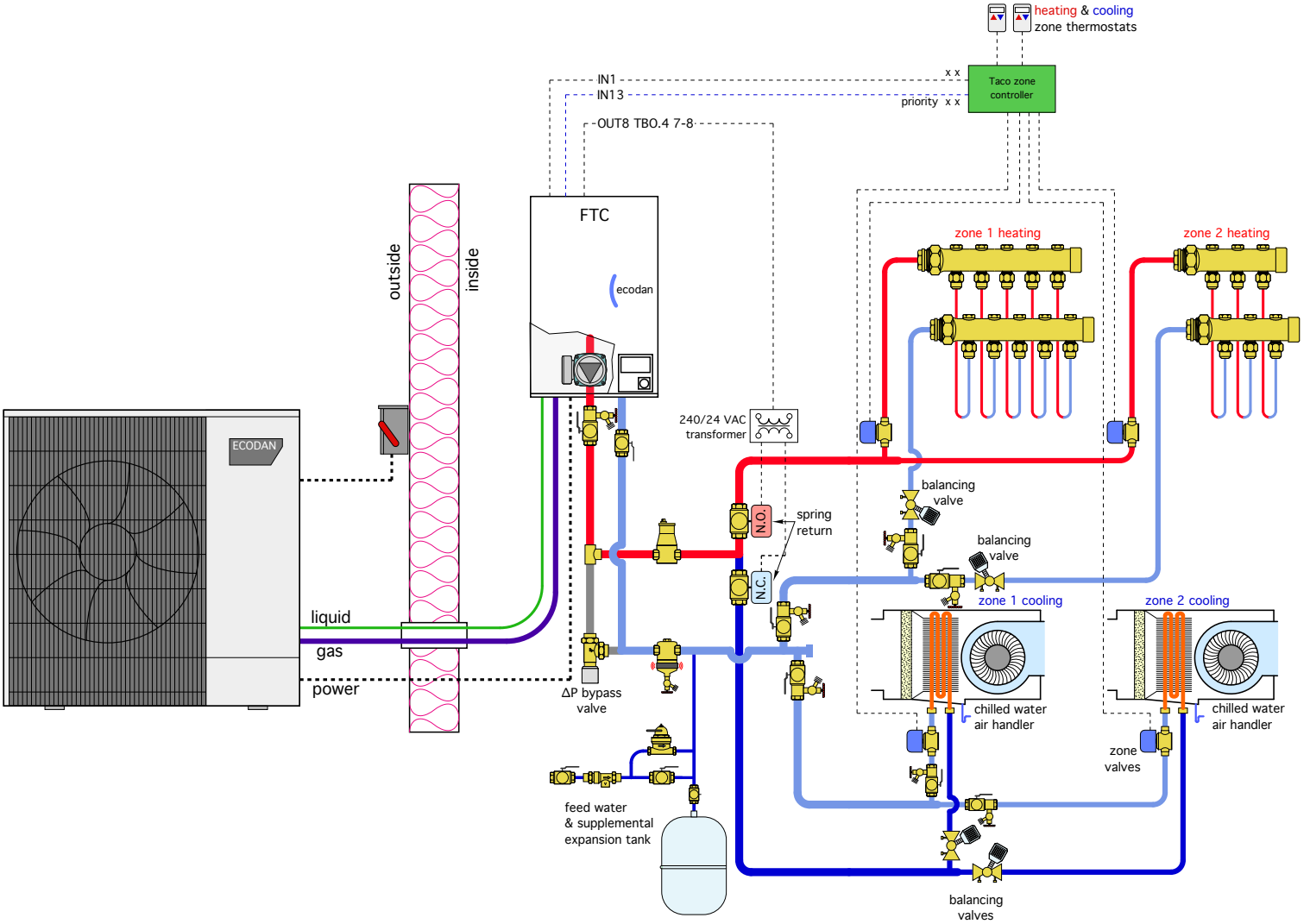
OFF ON

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) |
| | 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 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.

# HC5: Heating & Cooling with zone controller




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Differential Pressure Bypass Valve | Mandatory | Local Supply |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

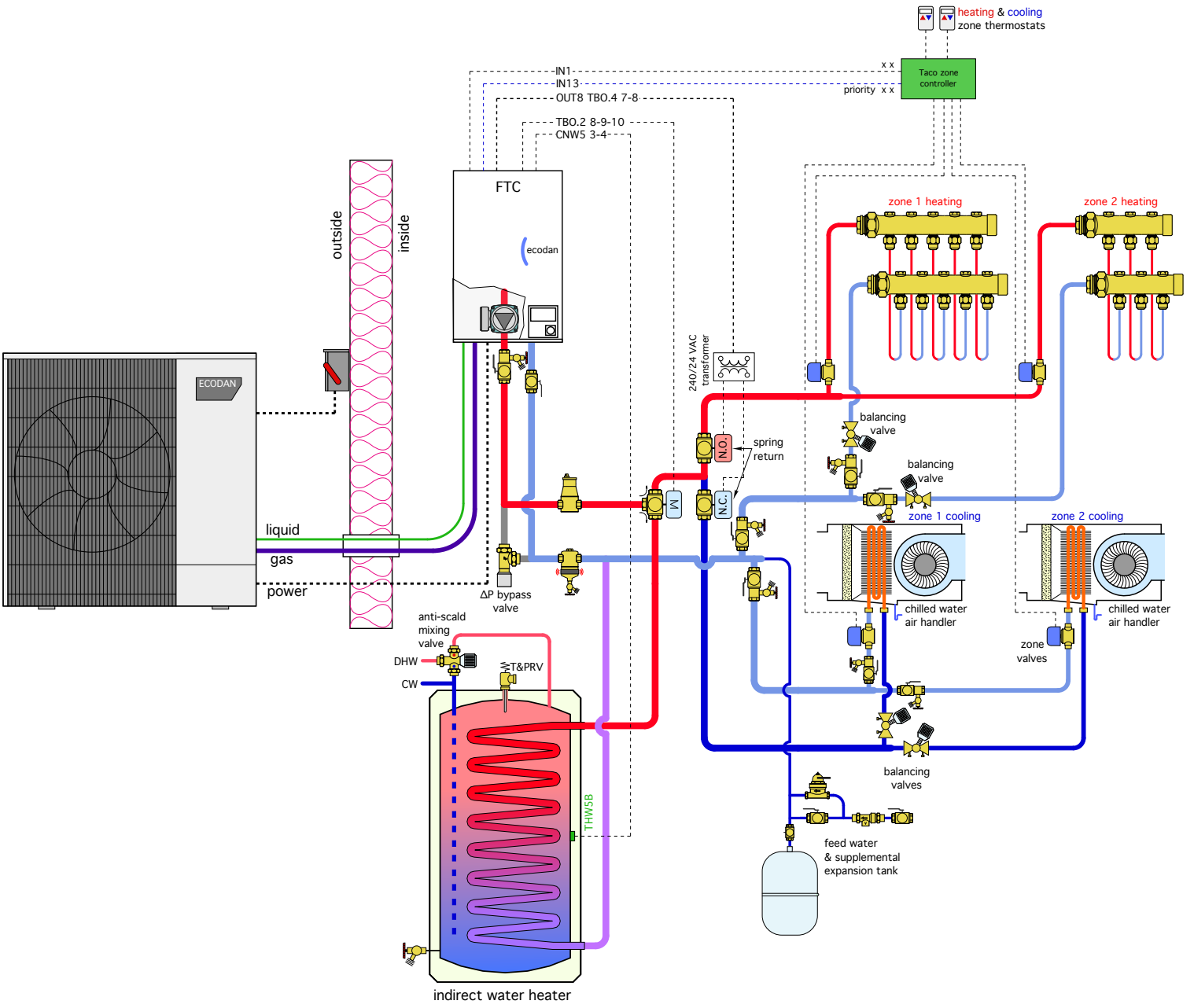
OFF ON

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 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.

# HC6: Heating & Cooling with DHW and zone controller




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

| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | Anti-scald mixing valve | Optional | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

**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** SW5
1. ---
2. Advanced auto adaptation logic
3. ---
4. ---
5. ---
6. ---
7. ---
8. ---

**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

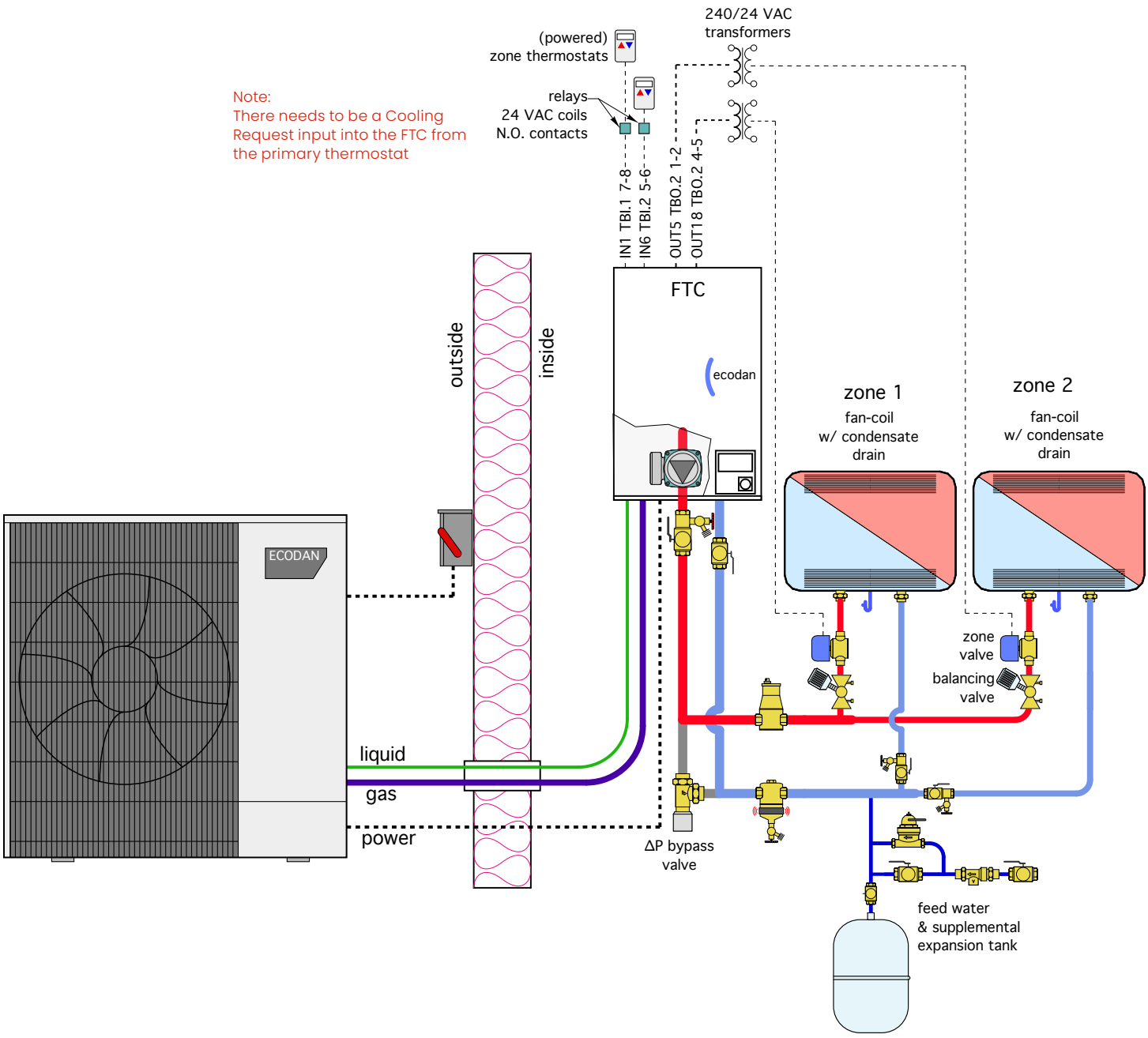
**OFF ON** SW1
1. Boiler integration
2. ---
3. **DHW (Domestic Hot Water)**
4. ---
5. Booster heater deactivation
6. Booster heater scope of operation
7. Outdoor unit type
8. ---

**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 com-pensation 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 com-pensation 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 |
| | | Operat-ion 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.

# HC7: Heating & Cooling with 2-zone FTC control




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Optional | 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

DIP switch in **BLACK** : default position

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

**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** SW5

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

**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. ---

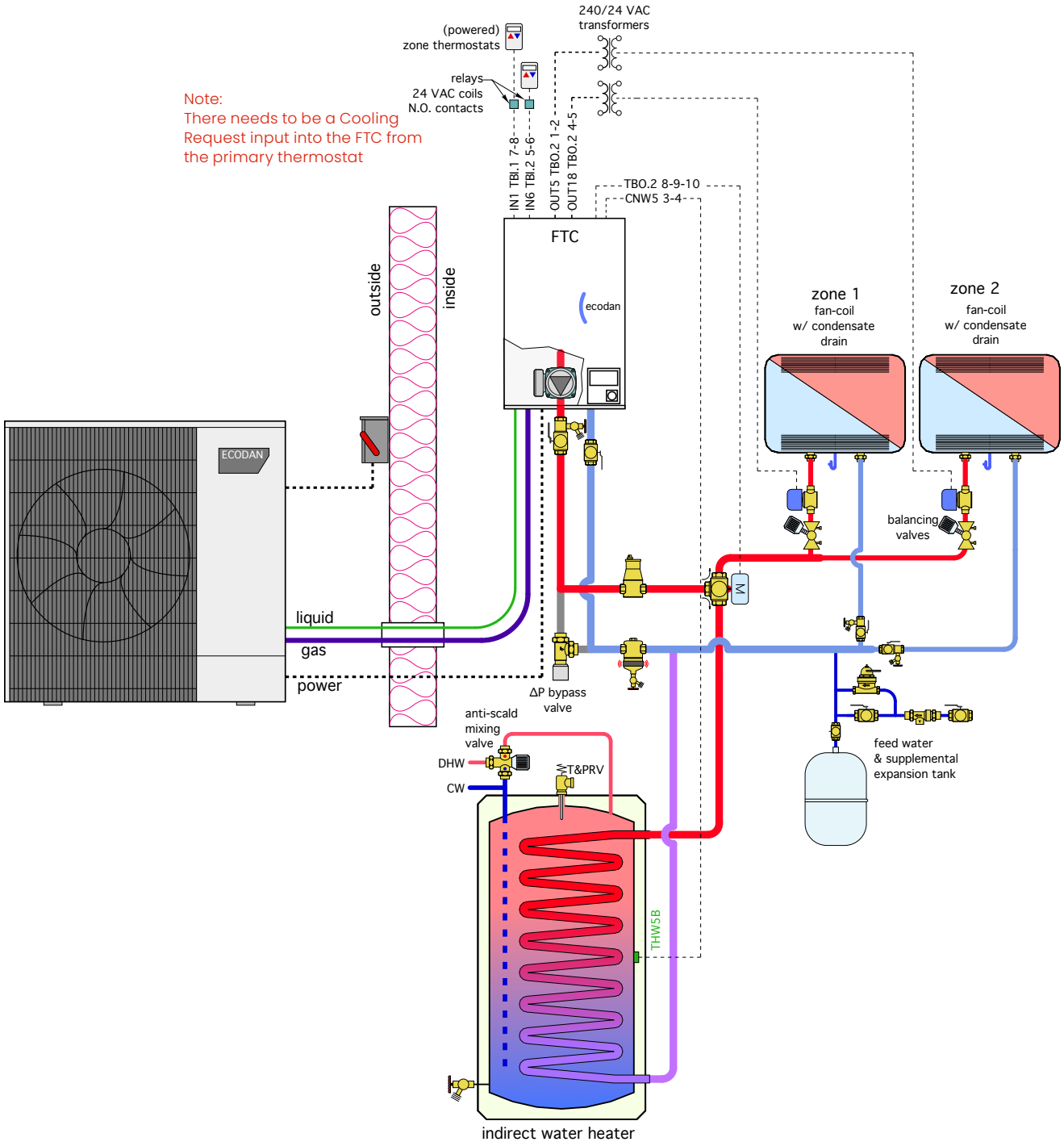
**OFF ON** SW7

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

| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

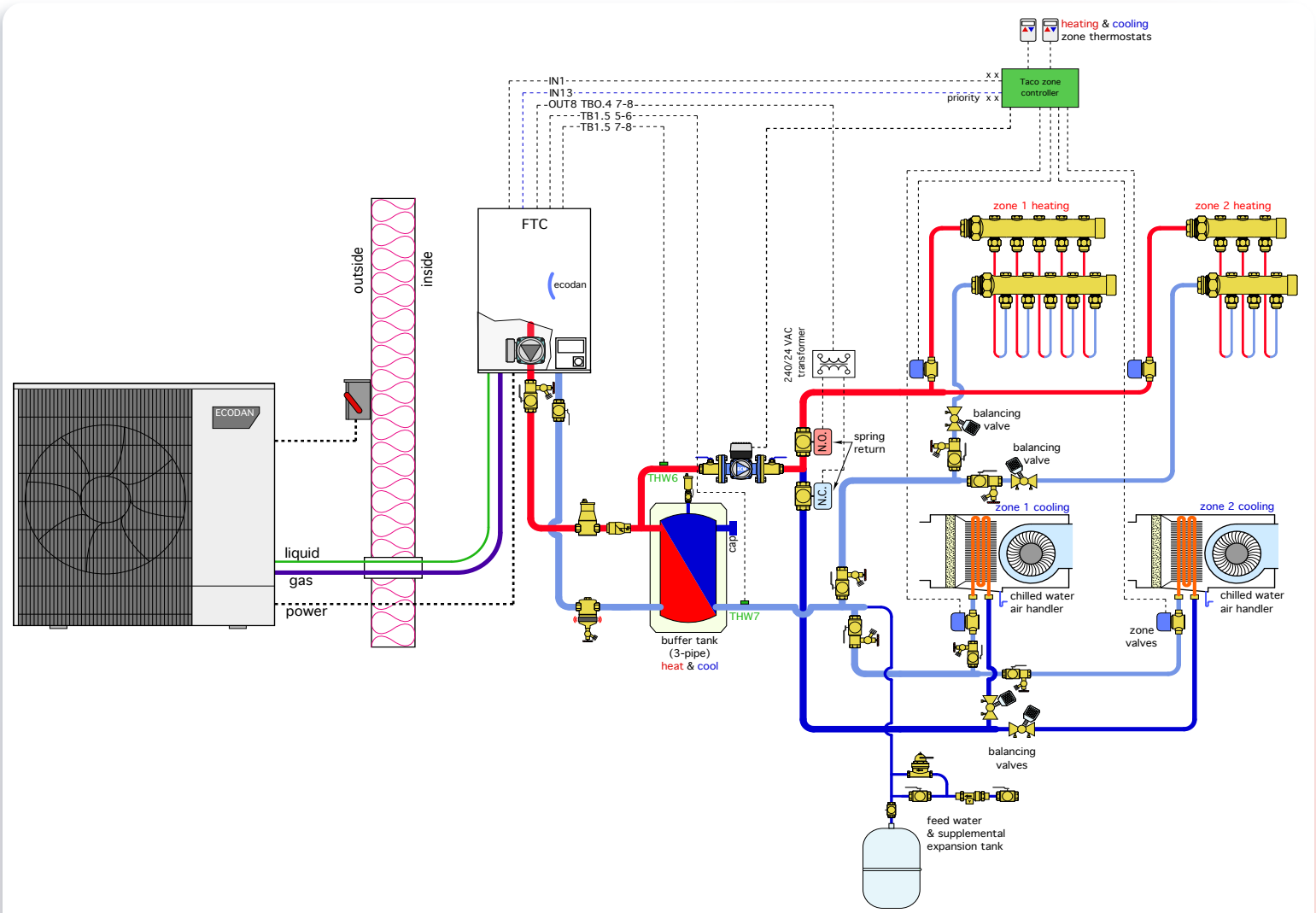
OFF ON

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 |
| | | | 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) |
| | | | 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) |
| | 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) |
| | | | 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) |
| | | 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) |
| | | | 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) |
| 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 | On/Off *8 | On |
| | | | 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) |
| | | | "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.

# HC9: Heating & Cooling with buffer tank and zone controller




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | Air Separator | Optional | Local Supply |
| 1 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Buffer Tank | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

**SW4**

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

**SW5**

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

**SW6**

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

**SW3**

OFF ON
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

**SW2**

OFF ON
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

**SW1**

OFF ON
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. ---

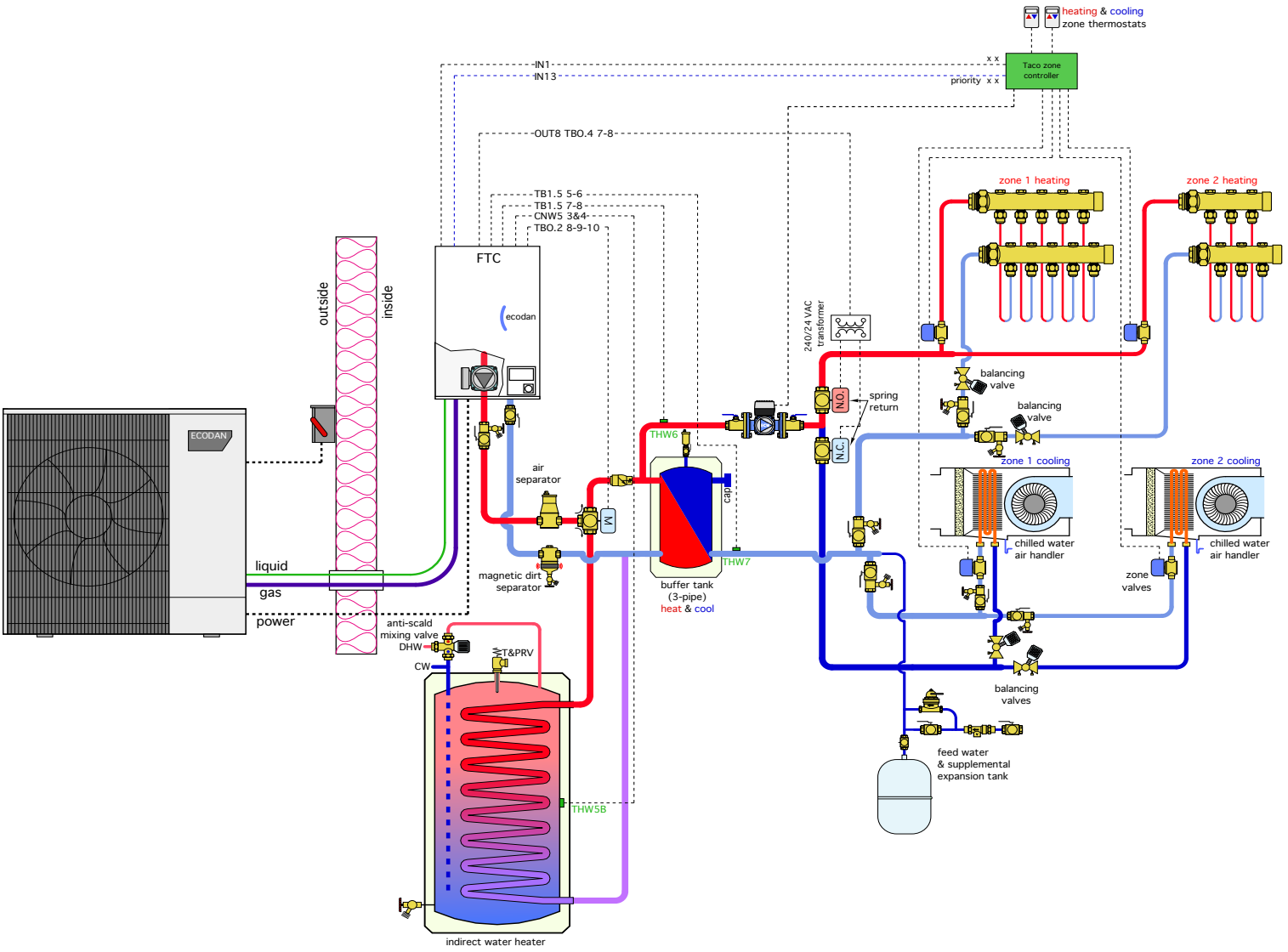
**SW7**

OFF ON
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 |
| | | 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.

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




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

| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | Anti-scald mixing valve | Optional | Local Supply |
| 1 | Buffer Tank | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

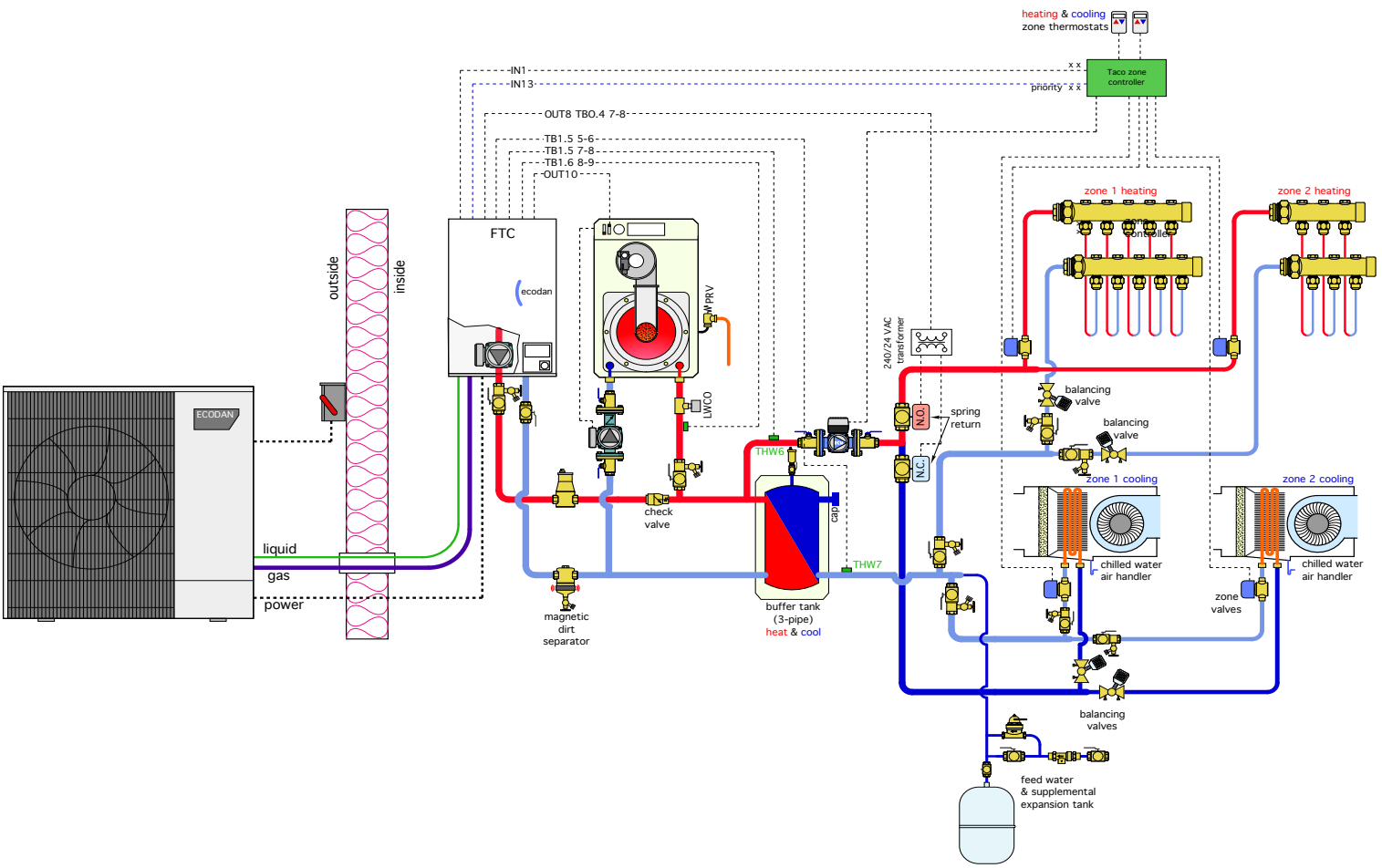
OFF ON

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) |
| | 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) |
| | | | 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | Boiler Temperature Sensor (THWB1) | Mandatory | METUS (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 | Magnetic Dirt Separator | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

### SW4

OFF ON

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

### SW5

OFF ON

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

### SW6

OFF ON

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

### SW3

OFF ON

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

### SW2

OFF ON

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

### SW1

OFF ON

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. ---

### SW7

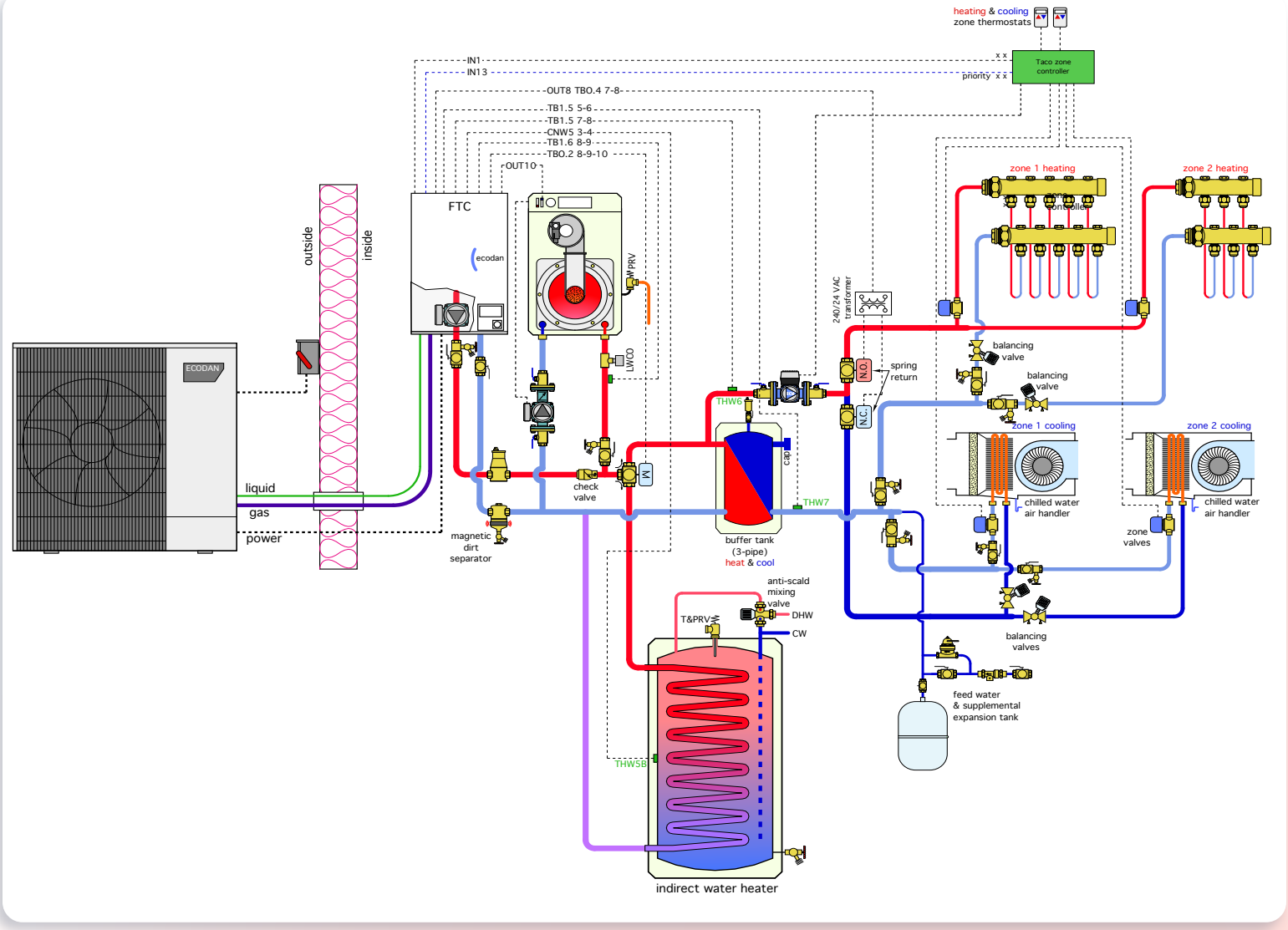
OFF ON

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) |
| | | | 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.

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




| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | ecodan WUZ Outdoor Unit | Mandatory | METUS |
| 1 | ecodan ERSF Indoor Unit | Mandatory | METUS |
| 1 | Supply Temperature Sensor (THW6) | Mandatory | METUS (In ERSF box) |
| 1 | Return Temperature Sensor (THW7) | Mandatory | METUS (In ERSF box) |
| 1 | Boiler Temperature Sensor (THWB1) | Mandatory | METUS (In ERSF box) |
| 1 | DHW Temperature Sensor (THW5B) | Mandatory | METUS (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 | Magnetic Dirt Separator | Mandatory | Local Supply |

| Qty | Type of component | Mandatory / Optional | METUS / Local Supply |
|---|---|---|---|
| 1 | 3-way Valve, 230VAC | Mandatory | Local Supply |
| 1 | Indirect Water Tank (DHW) | Mandatory | METUS or Local Supply |
| 1 | Anti-scald mixing valve | Mandatory | Local Supply |
| 1 | Expansion Tank | Mandatory | 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

DIP switch in **BLACK** : default position

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

**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** SW5

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

**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 com-pensation 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 com-pensation 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 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 |
| | | Operat-ion 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 | 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) |
| | | 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) | 95°F (35°C) |
| | | | 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) |
| | | 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) |
| | | | 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) |

# 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/FI/SV/TR/EL/BG | EN |
| | | Room sensors | Zone sensor selection *2 | | Zone 1/Zone 2 | Zone 1 |
| | | | Zone 1 program | | TH1/Main RC/"Time/Zone" | TH1 |
| | | | Zone 2 program *2 | | TH1/Main RC/"Time/Zone" | TH1 |
| | | Display | Temp. (°C) → (°F) | | On/Off | Off |
| | | Touch screen | Clean screen | | On/Off | Off |
| | | | Calibrate screen | | On/Off | Off |
| | | | Brightness | | Low / Mid / Hi | Mid |
| | | | Backlight time | | 5sec./10sec./20sec./30sec./60sec./Always on | 30sec. |
| | Service | Thermistor adjustment | THW1 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW2 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW5B | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW6 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW7 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW8 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW9 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THW10 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | | THWB1 | | -18 to +18°F (-10 to +10°C) | +0°F (0°C) |
| | | Auxiliary settings | Economy settings for pump. | | On/Off *8 | On |
| | | | | | Delay (3 to 60 min.) | 10 min. |
| | | | Electric heater (heating) | | Space heating: On (used)/Off (not used) | On |
| | | | | | Electric heater delay timer (5 to 180 min.) | 30 min. |
| | | | Electric heater (DHW) *3 | Booster heater | DHW: On (used)/Off (not used) | On |
| | | | | Immersion heater | DHW: On (used)/Off (not used) | On |
| | | | Mixing valve 1 control | | Running (10 to 240 sec.) | 120 sec. |
| | | | | | Interval (1 to 30 min.) | 2 min. |
| | | | Mixing valve 2 control | | Running (10 to 240 sec.) | 120 sec. |
| | | | | | Interval (1 to 30 min.) | 2 min. |
| | | | Flow sensor *9 | | 0 to 26.4 GPM | 1.4 GPM |
| | | | | | 0 to 26.4 GPM | 26.4 GPM |
| | | | Analog output | | Interval (1 to 30 min.) | 5 min. |
| | | | | | Priority (Normal / High) | Normal |
| | | | Electric heater schedule *15 | | Daily schedule (Schedule 1/Schedule 2) | Schedule 1 |
| | | | | | Time schedule 1 (Always/Start-Stop/Never) | Always |
| | | | | | Time schedule 2 (Always/Start-Stop/Never) | Always |
| | | 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 |
| | | | Quiet mode | Heating | Day (Mon to Sun) | — |
| | | | | | Time | AM12:00 to PM11:45 |
| | | | | | Quiet level (Normal/ Level1/ Level2/ Level3) | Normal |
| | | | | Cooling | Day (Mon to Sun) | — |
| | | | | | Time | AM12:00 to PM11:45 |
| | | | | | Quiet level (Normal/ Level1/ Level2/ Level3) | Normal |
| | | 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) |
| | | | "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) |

# 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 → failure detection at close. ON=short → 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 → failure detection at close. ON=short → 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 → failure detection at close. ON=short → 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. |
| THW2 | CNW12 3-4 | Yes | Return water temperature | Thermistor (built-in) | Built-in sensor for return water temperature in Ecodan. |
| 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-TH011TKL2-U | 98 ft (30m) optional part is available: PAC-TH012HTL-U |

# Output Dictionary

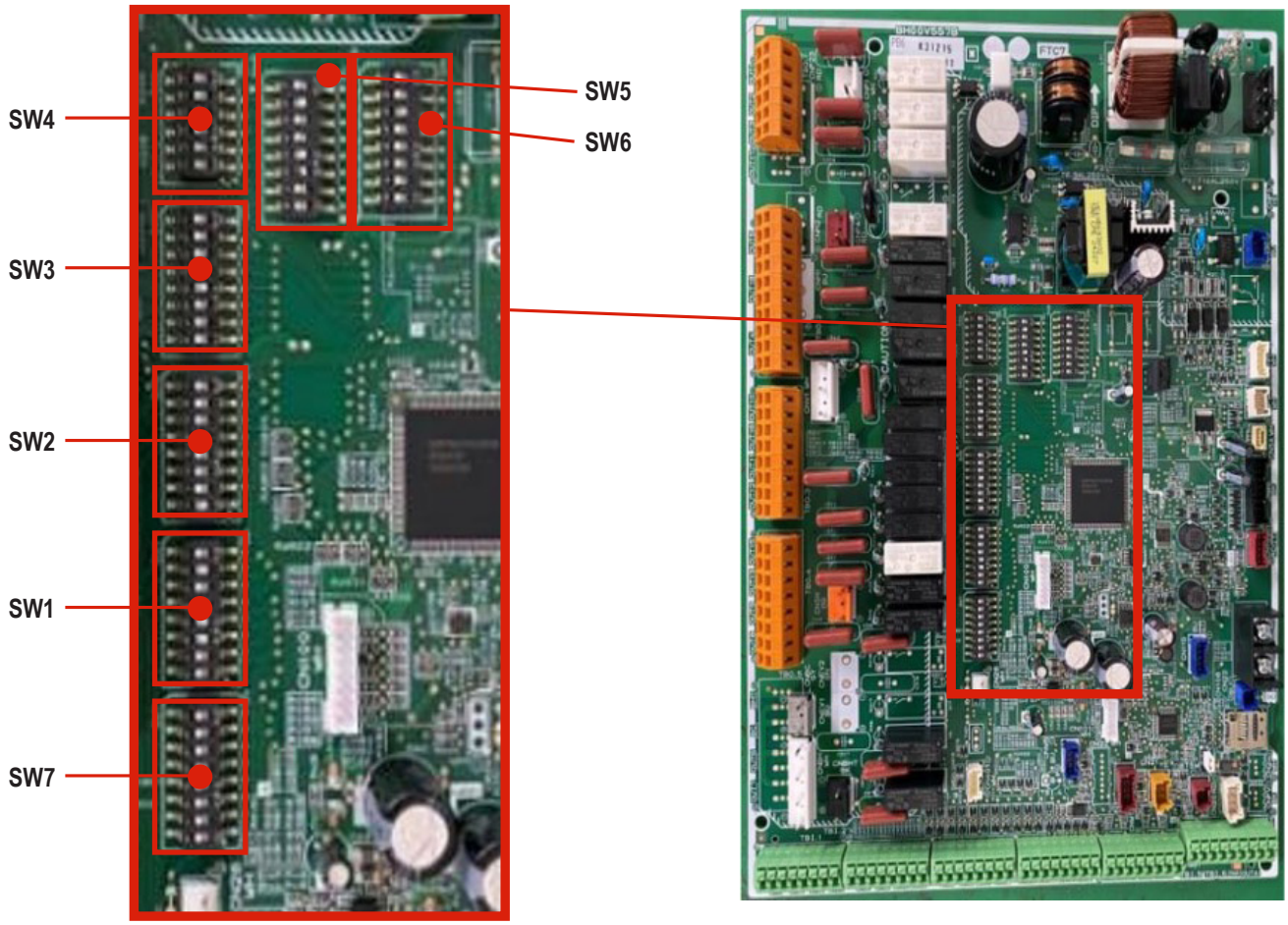
| Output ID | Detail (Terminal / Connector) | Application Required? | Related Function | Notes |
|---|---|---|---|---|
| OUT1 | TBO.1 1-2 / CNP1 | No | - | No Function |
| OUT2 | TBO.1 3-4 | No | Water circulation pump 2(Space heating/ cooling for Zone 1) | Connect auxiliary pump if second pump is used. Operates independently from hydrobox built-in pump. |
| OUT3 | TBO.1 5-6 | Yes | Water circulation pump 3(Space heating/ cooling for Zone 2)<br>OR 2-way valve 2b | Connect one of the following:<br>• Zone 2 pump for 2-zone temp. control (**Not supported in the US Market)**<br>• 2-way valve for Zone 2 ON/OFF |
| OUT4 | TBO.2 7-9 | Yes | 3-way valve SPST<br>(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.<br>**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.<br>**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 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:<br>• 2-way valve for Zone 1 ON/OFF<br>• 2-thread 3-way valve for switching between DHW and space conditioning.<br>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.<br>**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.<br>**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 |



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