

Installation Manual  
ZON-0550  
Version 2.2.2

The HBX logo is centered within a wide horizontal band. The band has a background of fine, wavy lines that create a sense of depth and movement. The letters 'HBX' are rendered in a bold, black, sans-serif font. The text is framed by two thick, horizontal red bars, one above and one below the letters.

- Zone Control

# ZON-0550

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HBX Control Systems Inc.

**TABLE OF CONTENTS**

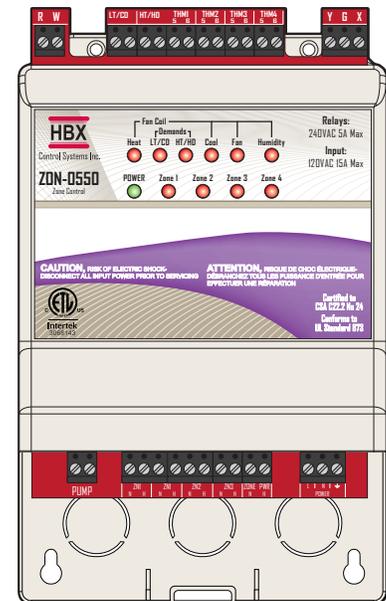
<b>Introduction .....</b>	<b>1-4</b>
Safety Symbols & Warnings .....	1
Receipt & Inspection .....	1
Description .....	2
User Interface Indicator LEDs.....	3
Technical Data and Dimensions .....	4-5
 <b>Wiring &amp; Installation .....</b>	 <b>6-25</b>
Wiring .....	6
Installation .....	7
Sequence of Operation.....	8
WiFi System Setup.....	9
Connect to a Wireless Network.....	10-11
Add Thermostats.....	12-13
ThermoLinx App Initial Setup.....	14
ThermoLinx App Alarms.....	15
ThermoLinx App Advanced Settings.....	16-17
Pairing Multiple Zone Controls.....	18-21
Application Drawing .....	18-28
 <b>Troubleshooting Guides.....</b>	 <b>29-30</b>
<b>Warranty Information .....</b>	<b>31</b>

Table of Contents

## HBX ZON-0550 ZONE MODULE

### INTRODUCTION

This manual will help with the installation, troubleshooting and general maintenance requirements for the controller. To guarantee the safe and reliable operation of this control, you must first read this manual in detail and take particular note to any and all warnings or caution directives prior to connecting to AC power.



**Only suitably qualified individuals with formal training in electrical and hydronic controls should attempt the installation of this equipment. Incorrect wiring and installation will affect the warranty provided with this unit. Wiring must be completed in accordance with the codes and practices applicable to the jurisdiction for the actual installation.**



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### SAFETY SYMBOLS & WARNINGS



#### Extreme Hazard

This action poses a serious threat that could result in personal injury or death, as well as permanent damage to the equipment. Proceed with caution.



#### Moderate Hazard

This action may cause personal injury or have adverse effects on the installation process if handled incorrectly.



#### Disconnect Power Source

The presence of low voltage(24VAC) or high voltage(120VAC) could result in personal injury or permanent damage to components or equipment.



#### Point of Interest

This point clarifies pertinent information, or brings your attention to an action that may have adverse effects on the installation process.



#### Drawing Reference

Refer to the specified electrical or mechanical drawing at the back of the manual.



The HBX ZON-0550 is a microprocessor based controller and as such is not to be regarded as a safety (limit) control. Please consult and install the heating or cooling appliance in accordance with the manufacturer's recommendations.



Use only copper conductor supply wire suitable for at least 105 °C



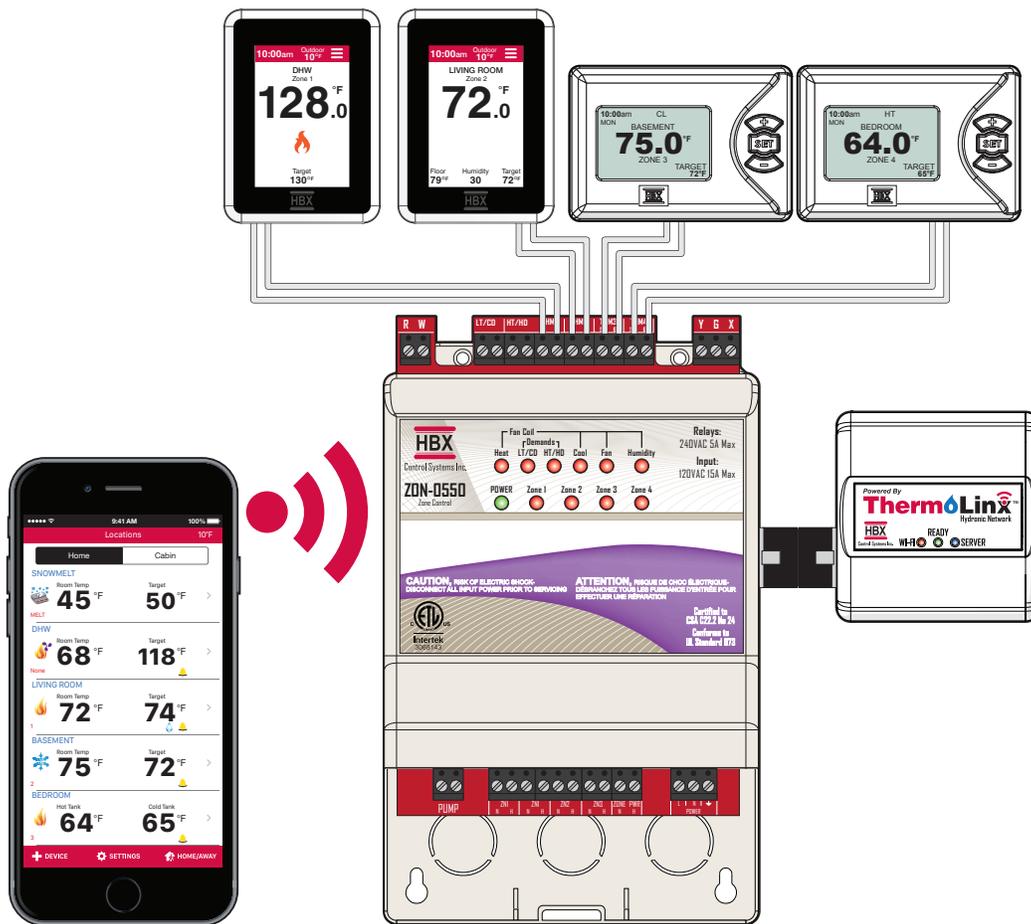
All circuits must have a common disconnect and be connected to the same pole of the disconnect

### RECEIPT & INSPECTION

After receiving, inspect the unit for any possible physical damage that may have occurred during transportation.

After unpacking the unit make sure the box contains:

- 1 x Terminal Screwdriver (2.5 mm)
- 1 x Manual



## HBX ZON-0550 ZONE CONTROL DESCRIPTION

The ZON-0550 is a Wi-Fi enabled zone control that has capability to control up to four (4) THM-0300/THM-0500 thermostats in any combination per controller plus one fancoil (W-Y-G) control and Humidity Control (X), with expansion up to four (4) additional units that communicate wirelessly, for a maximum of twenty (20) zones within distance. This controller allows for pump or valve control and is also capable of controlling up to 4 dampers. In Geothermal applications the system can control 2 or 4 pipe systems.



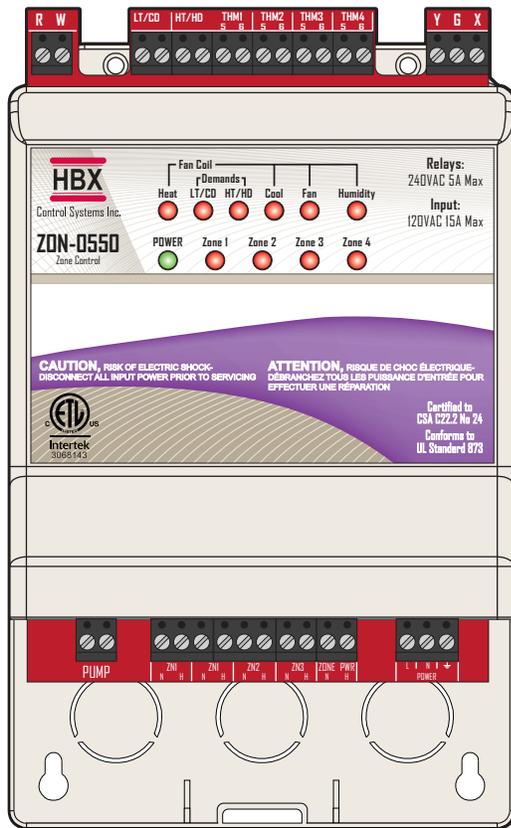
This control can also function as a stand alone system without WiFi capabilities.

## FEATURES

- App for Android or Apple Smartphone/tablet device for remote access
- Control up to four (4) independent zones per control plus one Fancoil (W-Y-G) output
- Wirelessly expandable to a maximum of twenty (20) zones within distance
- Provides pump, valve or damper control
- Humidity Control (X Output)
- Two (2) demands outputs (Heat/Cool) or (LT / HT)
- Geo Mode (2 or 4 pipe systems)
- Alarm email notification

## TECHNICAL DATA AND DIMENSIONS

### ZON-0550 TECHNICAL DATA



#### Specifications:

- 4 x THM-0300/THM-0500 Thermostat Communication inputs
- 3 x Fancoil outputs 24VAC 2A
- 2 x Demand output relays 24VAC 2A
- 4 x Zone Relay 120VAC 5A
- Input 120VAC 15A Max**
- 1 x Pump Relay 120VAC 5A
- 1 x Humidity Output 24VAC 2A

Combined relay power should not exceed 15A

#### Weight:

0.408Kg

#### Dimensions:

121mm W x 188mm H x 66mm  
4.76in W x 7.40in H x 2.60in

#### ETL Listings:

- Meets CSA C22.2 No. 24
- Meets UL Standard 873
- ETL Control No. 3068143

#### Storage:

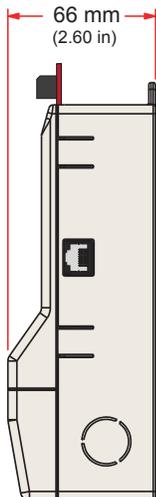
50°F to 104°F (10°C to 40°C)

#### ZON-0550 RF Info:

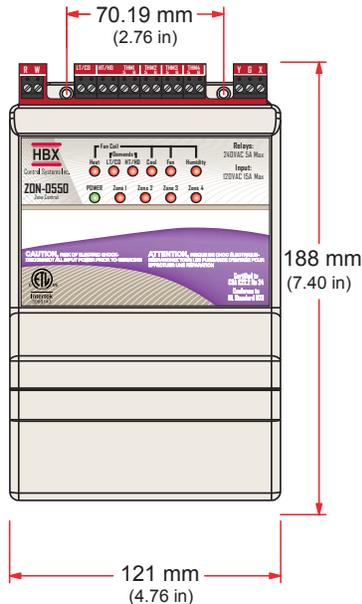
- Contains IC: 7693A-24J40MB
- Contains FFC ID: 0A3MRF24J40MB

## DIMENSIONS

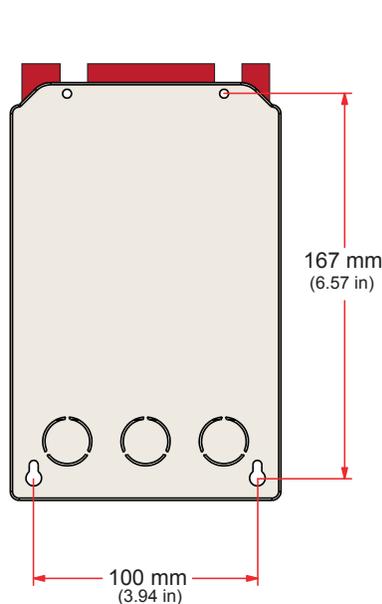
Side View



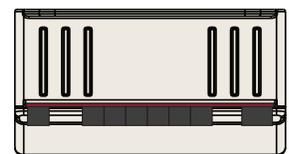
Front View



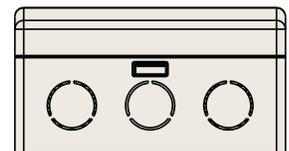
Rear View



Top View

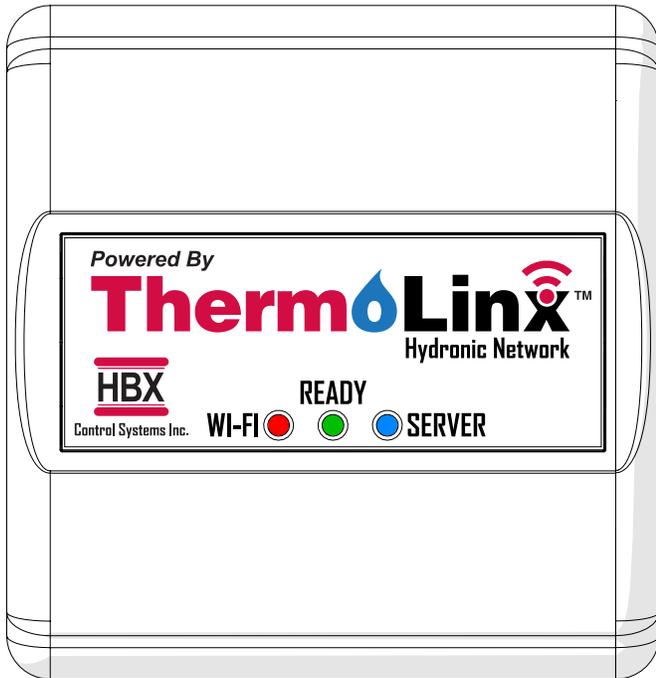


Bottom View



## TECHNICAL DATA AND DIMENSIONS

### TMX-0100 TECHNICAL DATA



**Specifications:**

1 x 5VDC input  
Wi-Fi 2.4Ghz network only

**Weight:**

0.1Kg

**Dimensions:**

60mm W x 62mm H x 28.24mm

**ETL Listings:**

Meets CSA C22.2 No. 24  
Meets UL Standard 873  
ETL Control No. 3068143

**Storage:**

50°F to 104°F (10°C to 40°C)

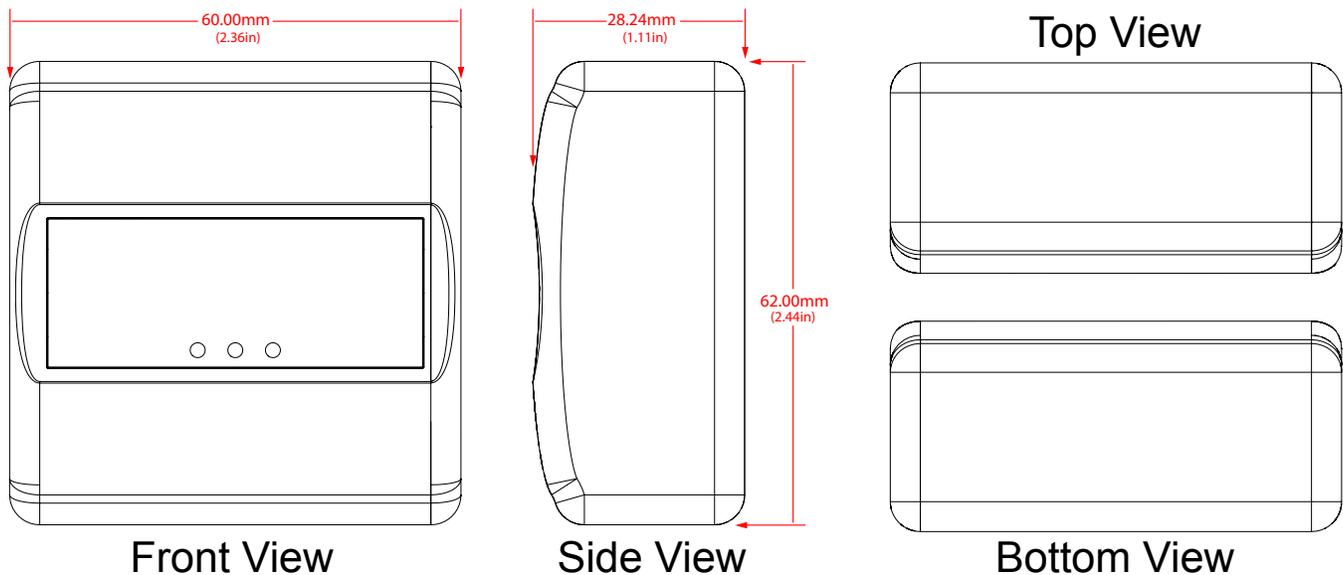
**TMX-0100 RF Info:**

Contains IC: 8169A-G2M5477  
Contains FCC ID: U3O-G2M5477

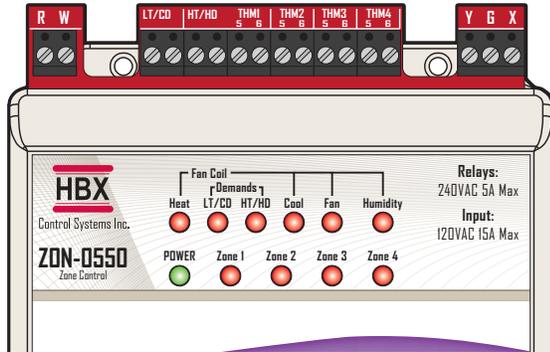
**LEDs:**

Red - Unit is connected to a WiFi Network  
Green - Unit is powered  
Blue - Unit is communicating with the server

## DIMENSIONS



## USER INTERFACE INDICATOR LEDS



### POWER

**On** - when 120VAC power applied

**Off** - when power is disconnected or transformer fuse is blown

### FANCOIL

**Heat** - Thermostat is calling for heating (thermostat is set for fancoil demand or 2nd stage heating)

**Cool** - Thermostat is calling for cooling (thermostat is set for fancoil demand, 2nd stage cooling)

**Fan** - Thermostat is calling for fan (thermostat is set for manual on/off, fan on with W, Y, X call)

**Humidity** - Thermostat is calling for humidity (thermostat is set for humidify or dehumidify, THM-0500 only)



**When a fancoil demand is made in heating, the HT/HD demand will call as well.**

### DEMANDS

**LT/CD is On** - The thermostat is calling for heating or cooling when the thermostat demand is set for a low temperature demand (LT), or the thermostat is calling for cooling (CD) when the thermostat is set for Geo mode.

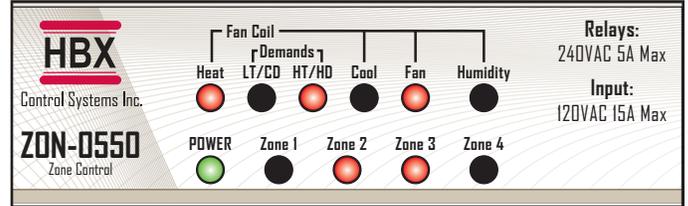
**HT/HD is On** - The thermostat is calling for heating or cooling when the thermostat is set for a high temperature or DHW demand (HT), or the thermostat is calling for heating (HD) when the thermostat is set for Geo Mode.

## ZONES 1-4 (RADIANT HEATING & COOLING)

**On** - When the corresponding thermostat calls for heating or cooling, the zone output will stay on after the demand for 60 seconds for post purge.

**Off** - When the corresponding thermostat stops calling for heating or cooling.

## ZONES 1-4 (DAMPERS)



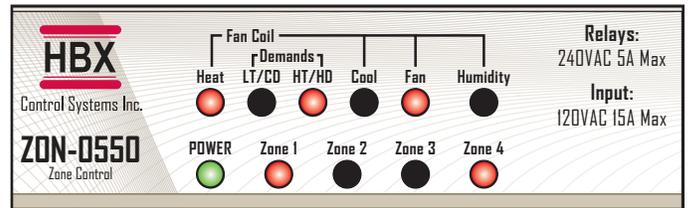
*EX. Normally Open - Zone 1 + Zone 4 - Calling Heat with Fan*

**On (Normally Open Damper)** - Zone with no call for heat/cool. Power is applied to close the damper because other zones are calling for heat/cool.



**There is a 1 minute delay to close the damper when another zone calls for heat/cool**

**Off (Normally Open Damper)** - When the corresponding thermostat calls for heating, cooling, fan or humidity.



*EX. Normally Open - Zone 1 + Zone 4 - Calling Heat with Fan*

**On (Normally Closed Dampers)** - When the corresponding thermostat calls for heating, cooling, fan or humidity. When all of the thermostats on the corresponding zone control stop calling for heating or cooling. Power is applied to all zone outputs to have them open and acts as a failsafe.

**Off (Normally Closed Dampers)** - Zone with no call for heat/cool. No power is applied to leave the damper closed, because other zones are calling for heat/cool.



**There is a 1 minute delay to close the damper when another zone calls for heat/cool**

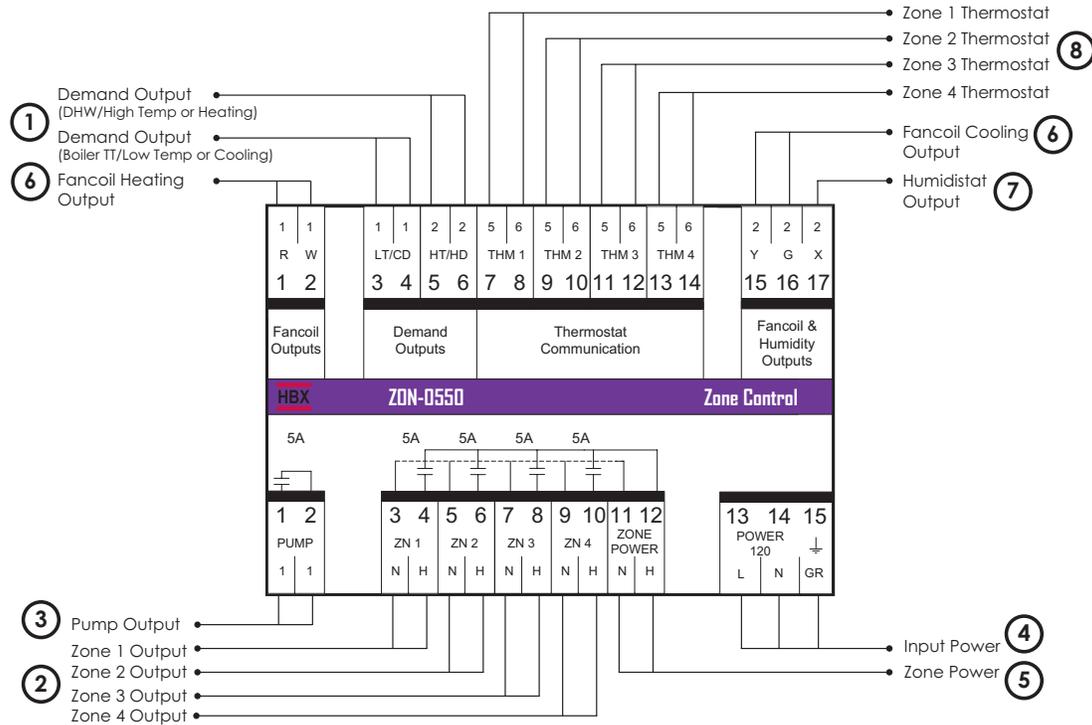


**The ZON-0550 can not communicate damper information to another ZON-0550 this means that we can only operate a total of 4 dampers per Air Handler.**

## WIRING AND INSTALLATION

### WIRING

We recommend all signal wiring to be a minimum of 18AWG shielded wire at a maximum of 500ft.



### 1. DEMAND OUTPUTS

These are the outputs for the demands. These can be a Heating and Cooling demand, 24VAC contact, dry contact TT/Low Temperature demand for a boiler, or DHW/High Temperature demand.

### 2. ZONE 1 - 4 OUTPUT

These are the outputs for the zone device. This can be a pump, damper or a valve depending on what power is supplied to terminals 11-12.

### 3. SYSTEM PUMP OUTPUT

This is a dry contact output that can be used for a system pump. This contact will activate any time a zone comes on. Pump will not activate in damper zones and in cooling zones in a mixed system in Geo Mode. When using zone valves or actuators there is a 60 second delay to turn on the system pump.

### 4. INPUT POWER

This input is to power the ZON-0550. 0.5 Amps at 120 VAC is required to power this device. It is important to protect the control from inconsistent power sources, which could be caused by lightning, inadequate power grids, generators and other such causes.

### 5. ZONE POWER

This input is used to power the zone outputs and is rated for 240VAC, 120VAC or 24VAC.

### 6. FANCOIL OUTPUT

These are the outputs for the Fancoil demands. These can be a Fan Demand or an HRV Demand.

### 7. HUMIDITY OUTPUT

This output is used for a humidity demand. This can be used to humidify or dehumidify.

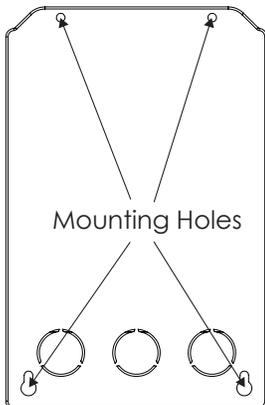
### 8. THERMOSTAT INPUT 1 - 4

These terminals are used for power and communication for thermostat inputs. Only THM-0300/THM-0500 thermostats are compatible with this control.



**THM-0300 and THM-0500 wiring is Polarity Sensitive**

## INSTALLATION

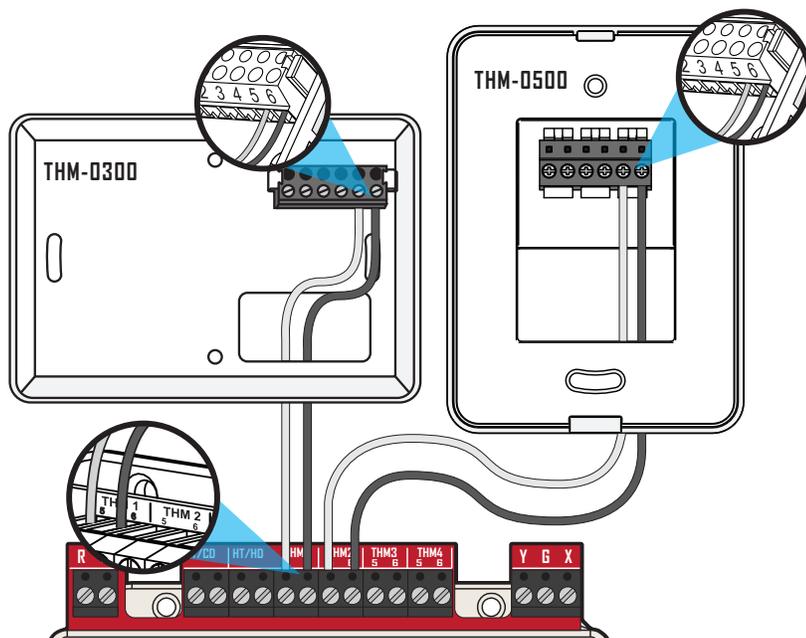


### ZON-0550 Installation

The ZON-0550 is designed to be wall mounted or installed in a separate electrical enclosure. The unit should be installed inside and protected from falling water and high humidity conditions. With all the covers in place, it is designed to protect any individual from accidental electrical shock. It is not suitable for installation in hazardous locations and should not be close to any electromagnetic fields.

- Identify the four mounting holes on the ZON-0550, mark on the wall the desired location of mounting
- Pre-drill, anchor and fasten the two bottom screws for mounting
- Hang ZON-0550 and fasten the top two screws then tighten the bottom screws
- Complete wiring connections in accordance with local area electrical codes

## STAND ALONE SYSTEM SETUP



**Thermostats are powered by the ZON-0550. Do not supply external power to the thermostat.**



**Wiring polarity is important. Match the numbers on the THM-0300 or THM-0500 to the numbers on the pin connectors on the ZON-0550 control.**

The unit should be installed inside and protected from falling water and high humidity conditions. With all the covers in place, it is designed to protect any individual from accidental electrical shock. It is not suitable for installation in hazardous locations and should not be close to any electromagnetic fields.

### Installation

Connect the THM-0300 or THM-0500 Thermostat to the control. If you are using a single thermostat, ensure it is connected to THM 1 on the control. Match the numbers on the THM-0300 or THM-0500 Pin Connectors to the numbers on the ZON-0550 Control. It is normal for the thermostat screen to blink upon startup. Please ensure that the thermostat signal wire does not run parallel to other power and communication wiring, as this can affect the functionality of the thermostat.

### Thermostat field signal wiring installation

The signal wiring that connects the ZON-0550 to each thermostat can not run parallel for any lengths with any other wires. This will damage the capacitors and will cause the thermostat to eventually flash and then go blank over time. If this is a retrofit installation and the Thermostat signal wiring installation can not be verified it is recommended that the thermostats to be installed in the mechanical room with remote room and/or floor sensors.

## SEQUENCE OF OPERATION

### Thermostat type: 1 Heat (Special Functions)

Demand: Low (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (LT/CD) will close to signal the low temp heating. If Demand is set to High then the demand outputs (HT/HD) will close to signal the high temp heating.

### Thermostat type: 1 Heat/1 Cool (Special Functions)

Demand: Fancoil (Zone Setup)

Thermostat calls for heating

Fancoil (R-W) will activate

Fan will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

Corresponding zone output will activate if ZONE ON DEMAND is set to Y (Fancoil Settings)

System pump will activate if ZONE ON DEMAND is set to Y. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal the heating demand.

Thermostat calls for cooling

Fan coil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

Corresponding zone output will activate if ZONE ON DEMAND is set to Y (Fancoil Settings)

System pump will activate if ZONE ON DEMAND is set to Y. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

No demand will signal for the cool call

### **Thermostat type: 2 Heat (Special Functions)**

Demand : Low (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demands outputs (LT/CD) will close to signal the low temp heating

2nd Stage heating calls after time delay (System setup)

Fan coil R-W will activate

The (G) fan will activate if FAN ON WITH DEMANDS is set to Y (Fancoil Settings)

The demands outputs (HT/HD) will close to signal the high temp heating

**Thermostat type: 2 Heat/1 Cool (Special Functions)**

Demand : Low (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (LT/CD) will close to signal the low temp heating. If the THM-1 is set to GEO MODE (Special Functions) the demand outputs (HT/HD) will close to signal a heating demand. Note that Demand (Zone Setup) will now automatically change to GEO

2nd Stage heating calls after time delay (System setup)

Fan coil (R-W) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The demand outputs (HT/HD) will close to signal the high temp heating. If the THM-1 is set to GEO MODE (Special Functions) the 2nd stage heat will not generate a demand.

Thermostat calls for cooling

Fan coil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

**GEO MODE**

If the THM-1 is set to GEO MODE (Special Functions) the demand outputs (LT/CD) will close to signal a cooling demand. Note that Demand Type (Zone Setup) will now automatically change to GEO.

**Thermostat type: 1 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

Demand: GEO automatically set (Zone Setup)

Thermostat calls for cooling

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode)

The demand outputs (LT/CD) will close to signal a cooling demand.

**Thermostat type: 1 Heat/1 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

Thermostat calls for cooling

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode)

The demand outputs (LT/CD) will close to signal a cooling demand.

**Thermostat type: 2 Heat/1 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

2nd Stage heating calls after time delay (System setup)

Fan coil (R-W) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage heat will not generate a demand.

Thermostat calls for cooling

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (LT/CD) will close to signal a cooling demand.

**Thermostat type: 2 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

Demand: GEO automatically set (Zone Setup)

Thermostat calls for cooling

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (LT/CD) will close to signal a cooling demand.

2nd Stage cooling calls after time delay (System setup)

Fancoil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

**Thermostat type: 1 Heat/2 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

Thermostat calls for cooling

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (LT/CD) will close to signal a cooling demand.

2nd Stage cooling calls after time delay (System setup)

Fan coil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage cool will not generate a demand.

## 4 PIPE GEO MODE

4 Pipe Geo Zone applications: When 4 pipe is selected the controlling thermostat either THM-1 and or THM-3 operate the Zone output 2 and or 4 respectively for cooling purposes. Note that the THM-2 and THM-4 thermostat outputs are switched off and if a thermostat is connected to one of these it will power down.

### **Thermostat type: 2 Heat/1 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

4 Pipe Zone: Y (Zone Setup) THM-1 & THM-3 locations only

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

2nd Stage heating calls after time delay (System setup)

Fan coil (R-W) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage heat will not generate a demand.

Thermostat calls for cooling

Corresponding zone output will activate (zone 2 or 4 output)

System pump will not activate for a cool call.

The demand outputs (LT/CD) will close to signal a cooling demand.

4 Pipe Geo Zone applications: When 4 pipe is selected the controlling thermostat either THM-1 and or THM-3 operate the Zone output 2 and or 4 respectively for cooling purposes. Note that the THM-2 and THM-4 thermostat outputs are switched off and if a thermostat is connected to one of these it will power down.

### **Thermostat type: 1 Heat/2 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

4 Pipe Zone: Y (Zone Setup) THM-1 & THM-3 locations only

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

Thermostat calls for cooling

Corresponding zone output will activate (zone 2 or 4 output)

System pump will not activate for a cool call.

The demand outputs (LT/CD) will close to signal a cooling demand.

2nd Stage cooling calls after time delay (System setup)

Fan coil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage cool will not generate a demand.

4 Pipe Geo Zone applications: When 4 pipe is selected the controlling thermostat either THM-1 and or THM-3 operate the Zone output 2 and or 4 respectively for cooling purposes. Note that the THM-2 and THM-4 thermostat outputs are switched off and if a thermostat is connected to one of these it will power down.

### **Thermostat type: 2 Heat/2 Cool (Special Functions)**

GEO Mode: Y (Special Functions)

4 Pipe Zone: Y (Zone Setup) THM-1 & THM-3 locations only

Demand: GEO automatically set (Zone Setup)

Thermostat calls for heating

Corresponding zone output will activate

System pump will activate. There is a 60 second delay when the THM-1 is set for Zone Valves (Mode).

The demand outputs (HT/HD) will close to signal a heating demand.

2nd Stage heating calls after time delay (System setup)

Fan coil (R-W) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage heat will not generate a demand.

Thermostat calls for cooling

Corresponding zone output will activate (zone 2 or 4 output)

System pump will not activate for a cool call.

The demand outputs (LT/CD) will close to signal a cooling demand.

2nd Stage cooling calls after time delay (System setup)

Fan coil (R-Y) will activate

The fan (G) will activate if FAN ON DEMAND is set to Y (Fancoil Settings)

The 2nd stage cool will not generate a demand.

## DAMPER SEQUENCES

Damper Zone (Zone Setup) dampers can not be used in conjunction with GEO mode. Damper theory is only 1 ZON-0550 controller specific, 4 dampers per fancoil max.

### Single normally open (N/O) damper operation

In a no heat or no cool situation there is no power to any of the dampers so they all remain in an open state. A call for heat or cool from a thermostat the corresponding zone output will not power as the damper is already open, any other N/O dampers on this zone controller will power to close them if they are not calling. If another zone damper calls as well the power to the corresponding zone output will be shut off, causing the damper to open. Once the heat or cool demand is gone power is dropped to all dampers so that they will all open. If there is a just a fan call or humidity all dampers remain open to allow ventilation/circulation.

### Single normally closed (N/C) damper operation

In a no heat or no cool situation all of the dampers are powered so they all remain in an open state. A call for heat or cool from a thermostat the corresponding zone output will remain powered and any other dampers on the zone controller will power down thus closing them. If another zone damper calls as well the corresponding zone output will be powered causing the damper to open. Once the heat or cool demand is gone all dampers are powered so that they will all open. If there is a just a fan call or humidity all dampers remain open to allow ventilation/circulation.

### 2 stage normally open (N/O) damper operation

Please note that whichever thermostat is set to 2 stage N/O they take over the next zone output, for example the THM-1 is set to 2 stage N/O then the damper operates on the zone 2 output, also the THM-2 thermostat output will switch off and if a thermostat is connected to this location it will power down.

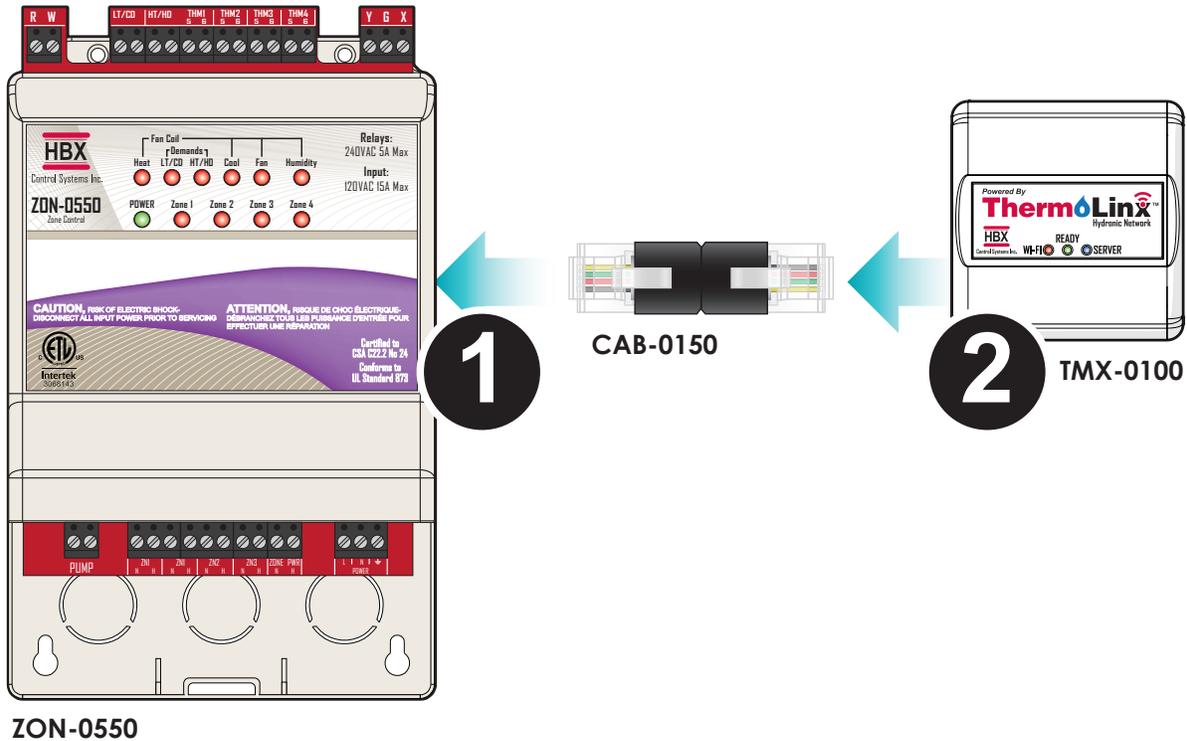
In a no heat or no cool situation there is no power to any of the dampers so they all remain in an open state. A call for heat or cool from a thermostat the corresponding zone output will not power as the damper is already open, any other N/O dampers on this zone controller will power to close them if they are not calling. If another zone damper calls as well the power to the corresponding zone output will be shut off, causing the damper to open. Once the heat or cool demand is gone power is dropped to all dampers so that they will all open. If there is a just a fan call or humidity all dampers remain open to allow ventilation/circulation.

### 2 stage normally open (N/C) damper operation

Please note that whichever thermostat is set to 2 stage N/O they take over the next zone output, for example the THM-1 is set to 2 stage N/C then the damper operates on the zone 2 output, also the THM-2 thermostat output will switch off and if a thermostat is connected to this location it will power down.

In a no heat or no cool situation all of the dampers are powered so they all remain in an open state. A call for heat or cool from a thermostat the corresponding zone output will remain powered and any other dampers on the zone controller will power down thus closing them. If another zone damper calls as well the corresponding zone output will be powered causing the damper to open. Once the heat or cool demand is gone all dampers are powered so that they will all open. If there is a just a fan call or humidity all dampers remain open to allow ventilation/circulation.

## WIFI SYSTEM SETUP



### TMX-0100 (ThermoLinx™ Wi-Fi Module) Procedure Installation

The TMX-0100 is designed to be used with the ZON-0550 and ThermoLinx App for remote access. The operational status of the TMX-0100 is indicated by lights (LEDs). The TMX-0100 has three (3) lights on the front (Red for Wi-Fi, Green for Ready, Blue for Server). Information is communicated by the color of the lights and whether they are steady or flashing.

The unit should be installed inside and protected from falling water and high humidity conditions. With all the covers in place, it is designed to protect any individual from accidental electrical shock. It is not suitable for installation in hazardous locations and should not be close to any electromagnetic fields.

**Please see our YouTube channel “HBX Control Systems” for a thorough step by step video to assist you in the Wi-Fi set up.**

### Installation

1. Connect the CAB-0150 connector to the Wi-Fi port of the ZON-0550 on the right side of the control.



**The CAB-0150 is manufactured specifically for HBX, the connector length cannot be extended and no other connector can be used for this installation.**

2. Connect the TMX-0100 to the CAB-0150 connector.



**The HBX ThermoLinx is only compatible with your 2.4GHz network and not 5GHz.**

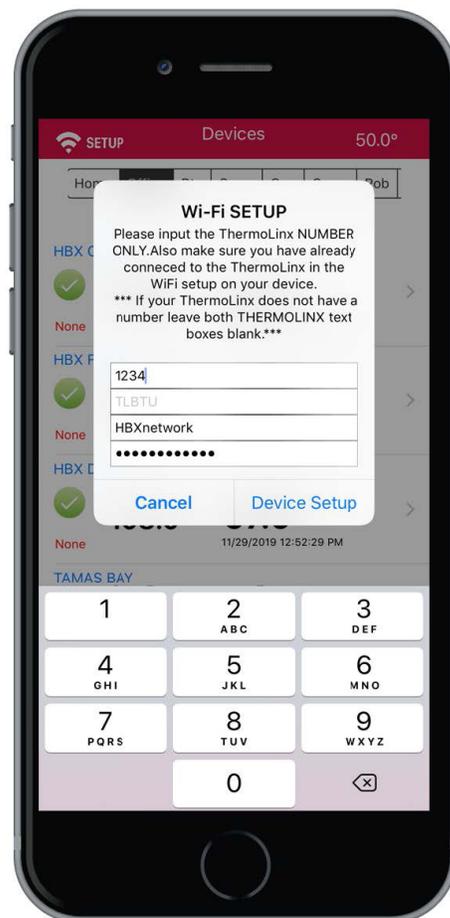
## IOS THERMOLINX APP TMX-0100

Below are instructions for IOS Wi-Fi setup process for the external ThermoLinX TMX-0100

These steps will guide you through the installation and configuration of the ThermoLinX Network. Before you start download/update the free ThermoLinX App from the App store, and ensure that your Wi-Fi network is active.

### Connecting to ThermoLinX™

1. Press and hold the reset button on the TMX-0100 for 10 seconds, all the lights will go out for a quick second. The red light will then start to flash letting you know that the unit is ready to be connected. At this time un-plug the TMX-0100 for 5-10 seconds then plug it back in.
2. Go into your Apple devices Wi-Fi settings, search for the ThermoLinX Network, there will be a 4 digit number beside it, please take note of this number, older Generation 1 ThermoLinX units will not have a number. Select this network. If you are trying to set up the Wi-Fi from a previously failed attempt please forget the ThermoLinX network, now turn off your Wi-Fi and back on again, the 4 digit ThermoLinX number will have changed now. When selecting the ThermoLinX network, it may say that there is no internet available or this is an unstable connection - this is normal and continue with the setup.
3. Open the ThermoLinX app and select Wi-Fi Setup. Please input the 4 digit ThermoLinX number that you noted when selecting the ThermoLinX network in the top line now. Do not input anything for TLBTU. In Network SSID please enter your network name that you are connecting the TMX-0100 to ensuring that it does not exceed 24 characters, it is also case sensitive and cannot have any special characters in the name. Make sure that your Wi-Fi network that you are going to connect is the 2.4ghz and not the 5ghz as the ThermoLinX is only compatible with the 2.4 network. If you are not familiar with your Wi-Fi network please contact your internet provider. In Password please enter your network SSID password, again case sensitive with no special characters. Once you have completed this, select device setup. The app will send the SSID and the password. It will inform you if they have been accepted, and then a 120 second timer will begin to establish a network connection.
4. After the timer has finished all three lights on the TMX-0100 will be solid this means that you were successful in connecting it to the Wi-Fi. If the lights are not all solid, please unplug the TMX-0100 for 5-10 seconds then plug it back in, wait to see if all three lights have become solid.
  - If only the green light is solid, this means that you have inputted the incorrect password for the network that you have selected.
  - If the green light and the red light are on then you will need to open port 1314 of your router to allow the ThermoLinX to communicate with our server. If you need assistance with this please contact your internet provider.
5. If at this time the connection was not made please start the process over, ensuring that all the steps and notes in the instructions are followed.

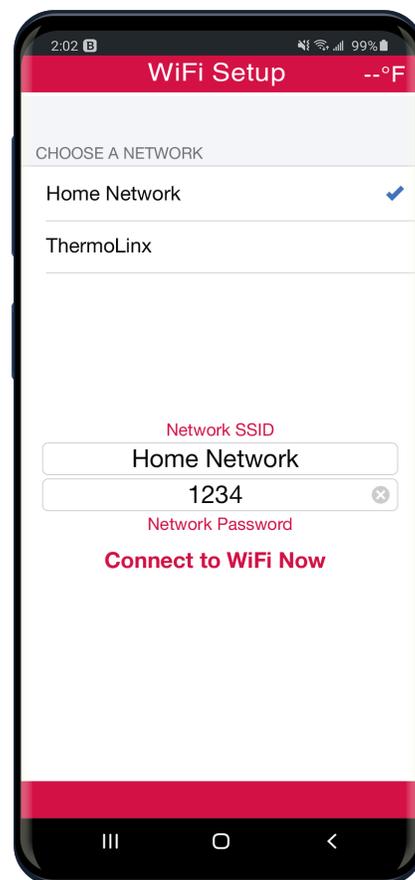


## ANDROID THERMOLINX APP TMX-0100

Below are instructions for Android Wi-Fi setup process for the external ThermoLinX TMX-0100. These steps will guide you through the installation and configuration of the ThermoLinX™ Network. Ensure that your Wi-Fi network is active. Before you start download/update the free ThermoLinX App from the Play store.

### Connecting to ThermoLinX™

1. After updating/installing the ThermoLinX app, please go to the settings page on your device. Scroll down to Apps or Apps/Notifications, and select it. Some devices you will need to click SEE ALL APPS then go through all your downloaded apps to find and then select the ThermoLinX app, click on Permission, then allow. Please also ensure that your location on your phone is turned on.
2. Press and hold the reset button on the TMX-0100 for 10 seconds, all the lights will go out for a quick second. The red light will then start to flash letting you know that the unit is ready to be connected. At this time unplug the TMX-0100 for 5-10 seconds then plug it back in.
3. Open the Wi-Fi settings on your device and find the ThermoLinX network, and select it. (If you are repeating these steps from a previously failed attempt please forget the ThermoLinX network prior to rejoining it, now turn off your Wi-Fi and back on again, the 4 digit ThermoLinX number will have changed now.). Once you have connected to this network please open up the ThermoLinX app for the first time or ensure that it was completely closed prior to this step. The app will have a popup saying "Contacting ThermoLinX this will help with the setup process" if this popup does not appear, close down the app and reopen it, you can do this multiple times.
4. You will be directed to select your network. Please make sure that your Wi-Fi network that you are going to connect is the 2.4ghz and not the 5ghz as the ThermoLinX is only compatible with the 2.4 network. If you are not familiar with your Wi-Fi network please contact your internet provider. After entering all the required information please select "Connect to Wi-Fi Now". The control will now attempt to establish a connection to your Wi-Fi network; a 120 second timer will appear.
5. After the timer has finished all three lights on the TMX-0100 will be solid this means that you were successful

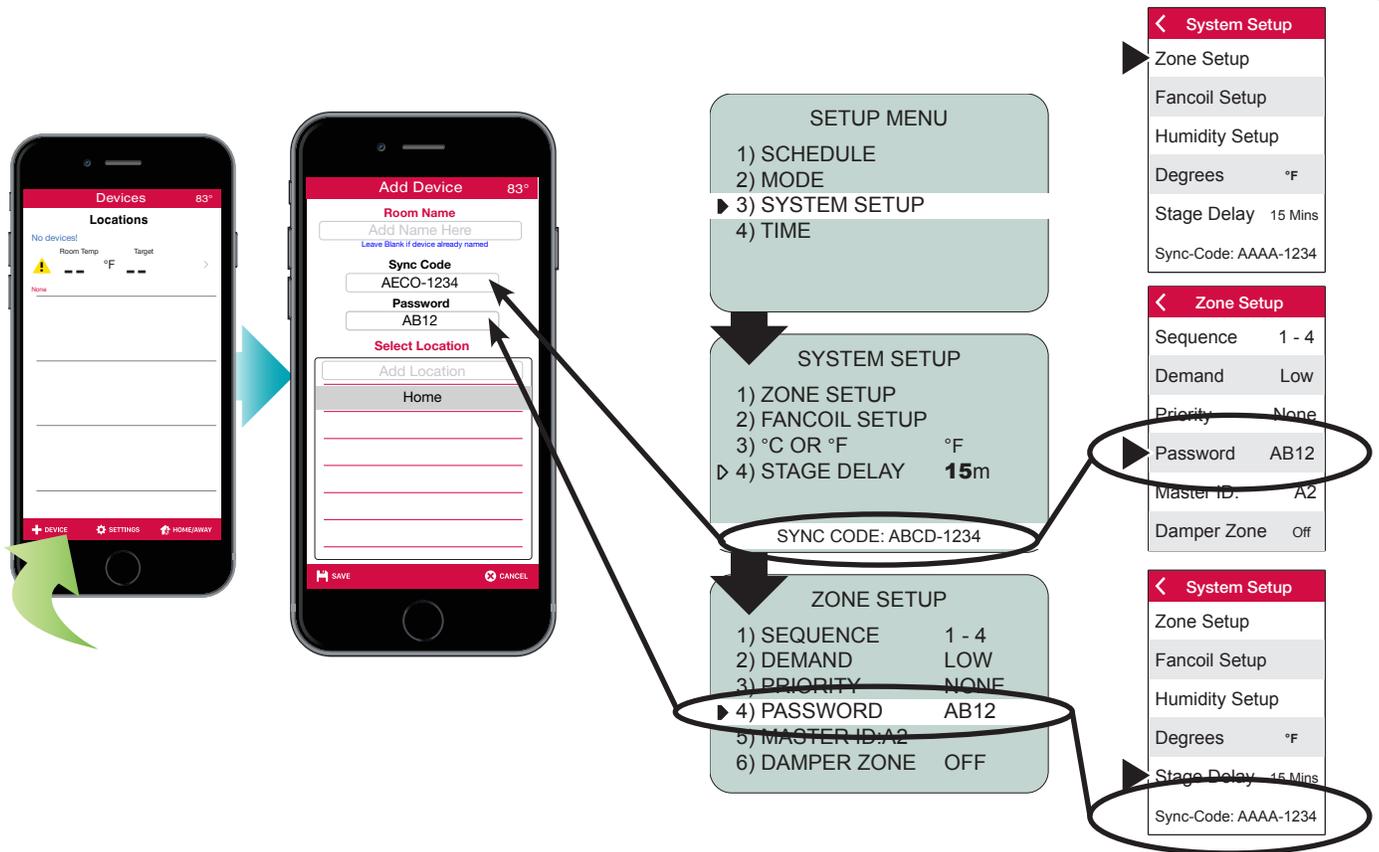


**Network name cannot contain more than 24 characters. The password should not contain any special characters and is case sensitive. If using WEP 64bit or 128bit security must not be in Shared Mode. If using WEP 128bit, the password/key must be 26 characters long.characters long.**

in connecting it to the Wi-Fi. If the lights are not all solid, please unplug the TMX-0100 for 5-10 seconds then plug it back in, wait to see if all three lights have become solid.

- If only the green light is solid, this means that you have inputted the incorrect password for the network that you have selected.
  - If the green light and the red light are on then you will need to open port 1314 of your router to allow the ThermoLinX to communicate with our server. If you need assistance with this please contact your internet provider.
6. If at this time the connection was not made please start the process over, ensuring that all the steps and notes in the instructions are followed.

## ADDING THERMOSTATS



### Adding thermostats to the HBX ThermoLinx App

1. On the home screen, select "+ Device".
2. Add the room name of your thermostat. Leave this option blank if the thermostat itself is already displaying a name.
3. Enter sync code for THM-0300/THM-0500 thermostat. The sync code can be found in the System Setup Menu on the thermostat. Any THM-0300/THM-0500 thermostat in your system can be used for set up.



**The Sync Code must be separated with a "-". (Ex. ABCD-1234)**

4. Enter password for THM-0300/THM-0500 thermostat. The password can be found in the Zone Setup Menu on the thermostat.
5. Enter a system location name and select done/enter. (Ex. Home, Office, Cabin, etc.) **This is the name of the system location, not the thermostat you added.**



**Symbols and numbers cannot be used in location name**

6. After you have entered the system location name, select the location so it is highlighted, and select save.

7. The thermostats connected to your system will all automatically populate on the main page. If they do not, confirm that the sync code and password you specified are correct.
  - Depending on which thermostat is added, the thermostats may not appear on the app in zone order from 1 – 20.
  - To delete a thermostat:
    - Iphone:** swipe the zone to the left and select delete.
    - Android:** press and hold until the delete option appears.

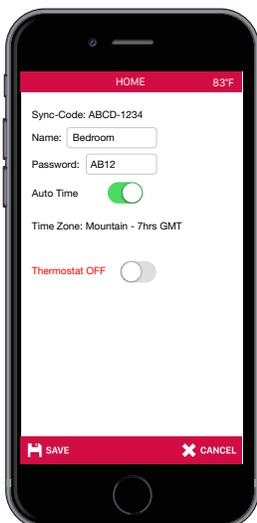


### Lost Internet Connection

If all devices on the ThermoLinX app are displayed with warning icons, then the system has lost internet connection. You will need to reconnect the system to your network by following the steps outlined on pages 10-11.



**If internet connection is lost, it may take up to 15 minutes for the thermostats to check in once internet connection is restored**



### Changing Thermostat Names

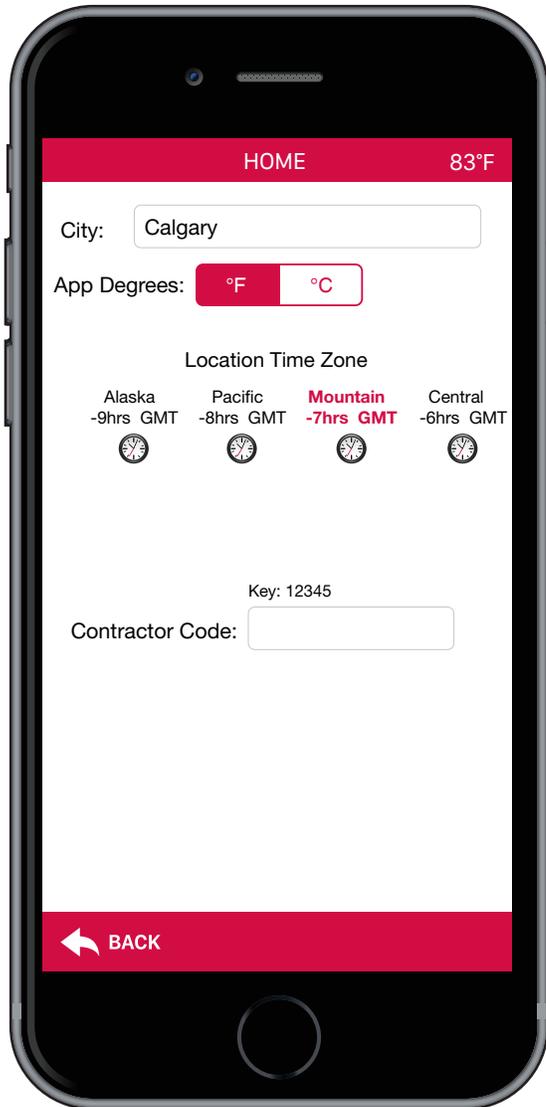
1. On the home screen, select the zone you would like to give a customize name too.
2. Select "settings" on the zone home screen.
3. Name: Enter the zone name that you would like to appear on the thermostat and app.



**Do not use symbols (#, &, ect.) for thermostat name.**

4. Select "back" to return to the zone home screen and select save.

## THERMOLINX APP INITIAL SETUP



### Location Settings

1. On the home screen, select "settings".
2. Enter the system location by city or zip/postal code.



**Do not use spaces in Zip/Postal Code**

3. Change the app from Fahrenheit (°F) to Celsius (°C).
4. Scroll and select the system location time zone.



**Setting time zone will automatically adjust the time on your thermostats and will automatically adjust for daylight savings.**

5. Enter a contractor code to unlock advanced settings options.



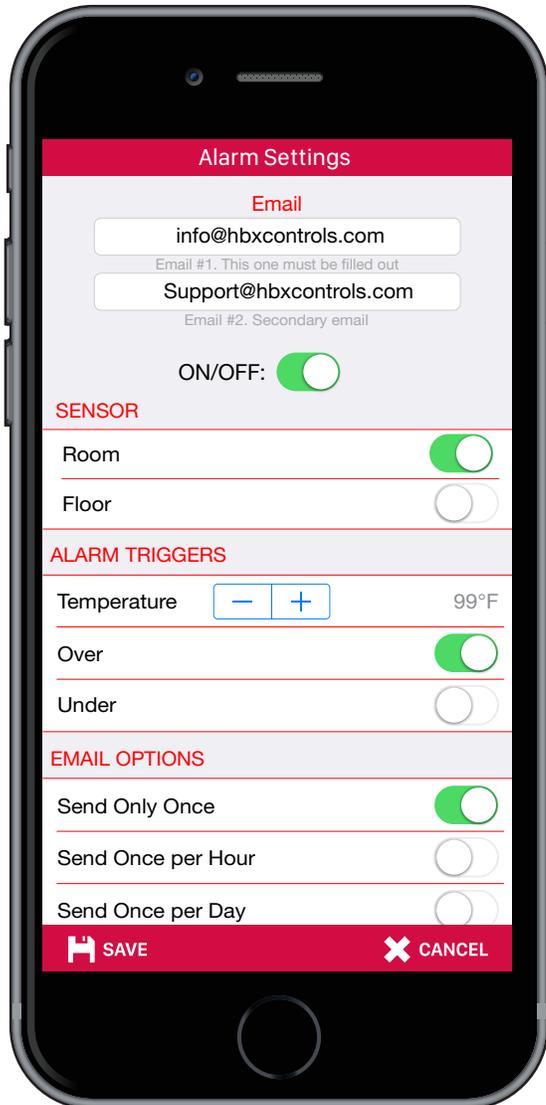
**Contact HBX Tech Support for contractor code**

#### Technical Support

Toll Free Phone: +1 (855) 410-2341

[support@hbxcontrols.com](mailto:support@hbxcontrols.com)

## THERMOLINX APP ALARMS



### Email

The ThermoLinx App allows you to receive alarm by email notification (up to 2 emails) from the HBX server. Email #1 must be filled out to receive an alarm notification. Email #2 is a secondary email.

### Sensor Type

This option allows you to select a room, floor or tank sensor in a zone for alarm setup.

1. If thermostat is setup as a DHW Aquastat, Floor Sensor will automatically change to Tank Sensor.
2. Only one sensor can be monitored at a time.

### Alarm Triggers

These options allow you to select a set temperature for an alarm trigger. If the temperature falls below or rises above the set temperature an alarm email notification from the HBX server will be sent out to the email entered in Email #1 and Email #2.

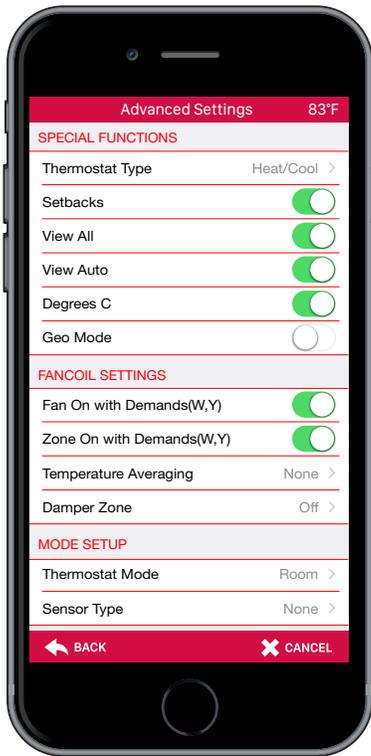
This can only be set to Over or Under. Both cannot be active at the same time.

### Email options

This options allows you to set the frequency of alarm email notifications you receive per day. This option can be set to once, once per hour or once per day.



**The Alarm will automatically reset once the alarm condition is no longer met.**



## Advanced Settings

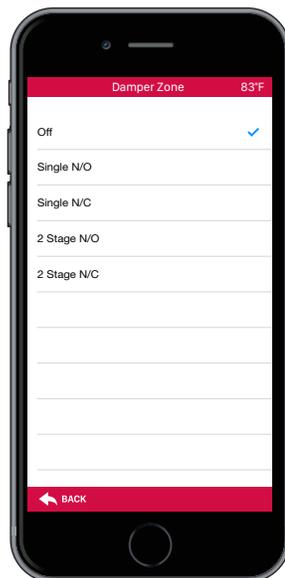
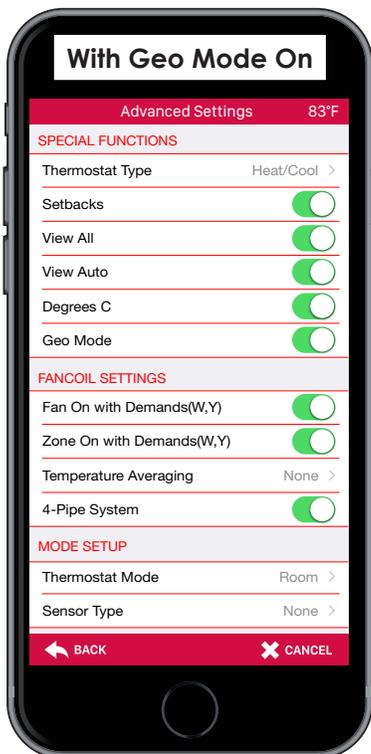
Enter the contractor code in location settings from the home screen menu to unlock advanced settings. Contact HBX Tech Support for contractor code.

## Special Functions

1. Thermostat Type: select between multiple heating, cooling and a variety of combined modes: 1H, 1C, H/C, 2H, 2C, 2H/1C, 2C/1H, 2H/2C.
2. Setbacks: This option allows you to turn on/off setbacks.
3. Geo Mode: This option allows you to turn on Geo Mode to control 2 pipe systems for geothermal applications. This will change the demand outputs for a heat (HD) and cool (CD) demand.

## Fancoil Settings

1. Fan On With Demands (W,Y): This option will turn on the fan with any fancoil demand.
2. Zone On with Demands (W,Y): This option will turn the corresponding zone pump on with any fancoil demand.
3. Temperature Averaging: This option will average the temperature between thermostats.
4. Damper Zone: This option allows you to set the selected zone as a damper or second stage damper. **Can not be used in GEO mode.**



**Damper - Off:** No damper being utilized in current setup.

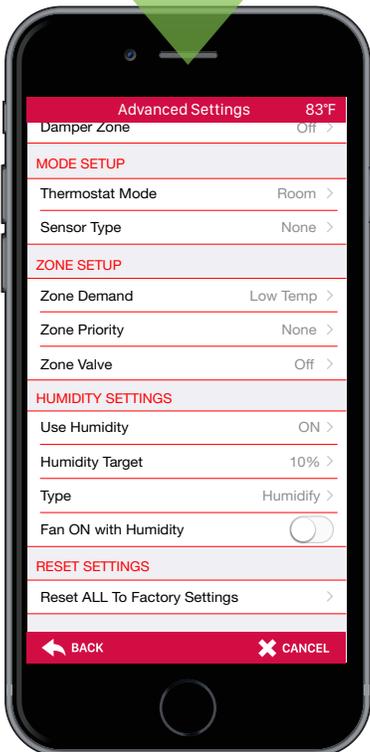
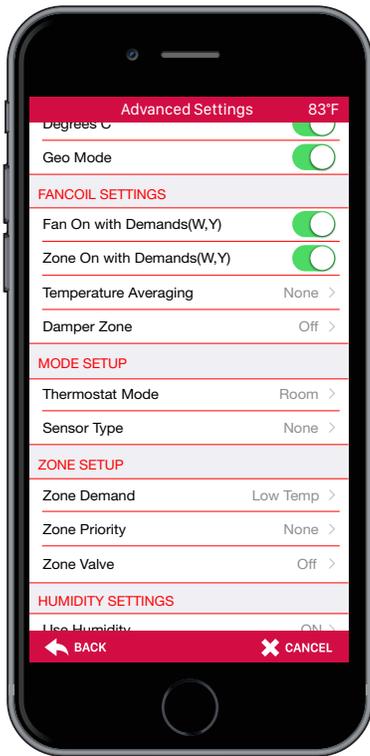
**Damper - Single N/O:** Corresponding zone output is utilizing normally open dampers.

**Damper - Single N/C:** corresponding zone output is utilizing normally closed dampers.

**Dampers - 2 Stage N/O:** 1st stage is radiant and the second stage is utilizing a normally open damper. Utilizing this option will require to use the next corresponding zone output to accommodate for the second stage damper. This option is only available for Zones 1 and Zone 3.

**Dampers - 2 Stage N/C:** 1st stage is radiant and the second stage is utilizing a normally closed damper. Utilizing this option will require to use the next corresponding zone output to accommodate for the second stage damper. This option is only available for Zone 1 and Zone 3.

5. 4-Pipe System: This option is displayed when Geo Mode is turned on. This allows you to control a 4 pipe system for geothermal applications.



### Mode Setup

1. Thermostat Mode: This option allows you to select between Room, Floor and Dual Mode.
2. Sensor Type: This option allows you to select between Floor, Room, Outdoor and Room Average sensor types.

### Zone Setup

1. Zone Demand: This option allows you to select between a Low Temperature, High Temperature, Domestic Hot Water or Fancoil Demand.
2. Zone Priority: This option allows the user to set a priority on a zone(s) over other zone(s). Priorities range from 1 (highest) to 7 (lowest). Higher priorities will lock out lowest priorities until the demand has been satisfied. Multiple zones can be given the same numbered priorities. The Priority Shield option allows a zone to ignore other priorities from other zones.



**Priority 1 is a timed priority of 60 minutes, generally used for DHW Humidity Settings**



**Humidity Settings are only available on zones using the THM-0500 Touch Screen Thermostat.**

3. Zone Valve: When set to ON, The zone will be utilizing a zone valve or actuator. There will be a 60 second delay for the system pump to turn on when there is a heat or cool demand.

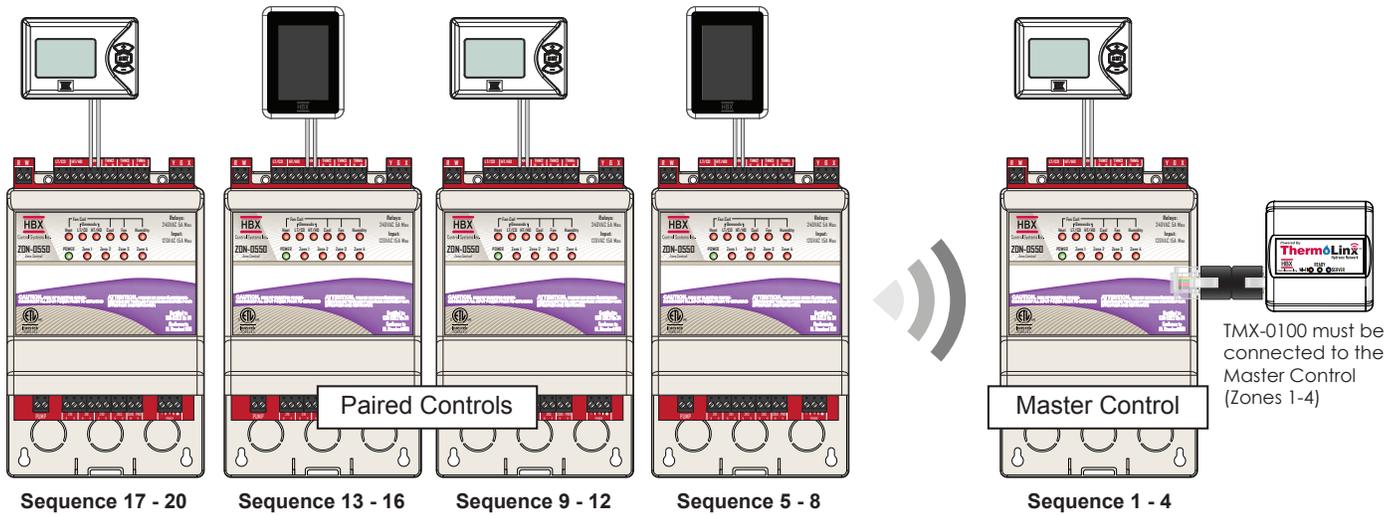
### Humidity Setup

1. Use Humidity:
  - ON** – Enables the thermostat to humidify or dehumidify.
  - OFF** – Disables the thermostat to humidify or dehumidify.
  - Auto** – Enables the thermostat to humidify or dehumidify to the target % automatically based on the outdoor temperature. No manual adjustment is required. The zoning system must be connected to a wifi network for this feature to be applicable or the thermostat must utilize an external sensor monitoring the outdoor temperature.
2. Humidity Target: When humidity is set to ON, manually adjust your humidity target.
3. Type: This option allows you the option to humidify or dehumidify.
4. Fan ON Humidity: This option will turn your fan on when there is a humidity demand.

### Reset ALL to Factory Settings

This setting will reset the zone device to its original factory settings. This process cannot be undone.

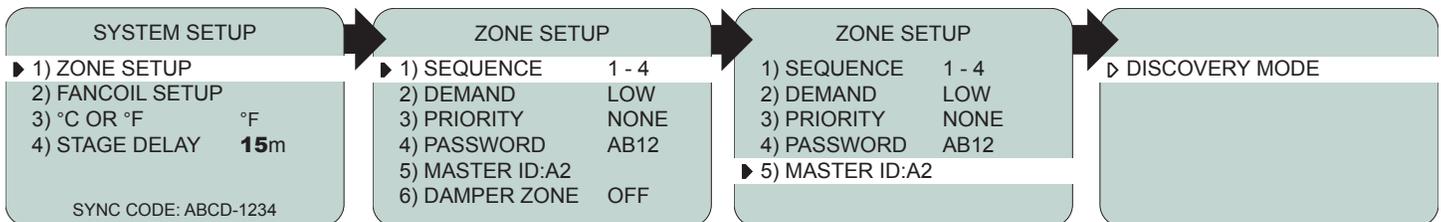
## PAIRING MULTIPLE ZONE CONTROLS WITH THE THM-0300



The ZON-0550 can be expanded to control up to 20 zones per system. The ZON-0550 controls communicate to the Master control wirelessly on an RF network. No wires are needed to pair. Pairing can be done with or without the ThermoLinX Wi-Fi module, no internet connection is required.

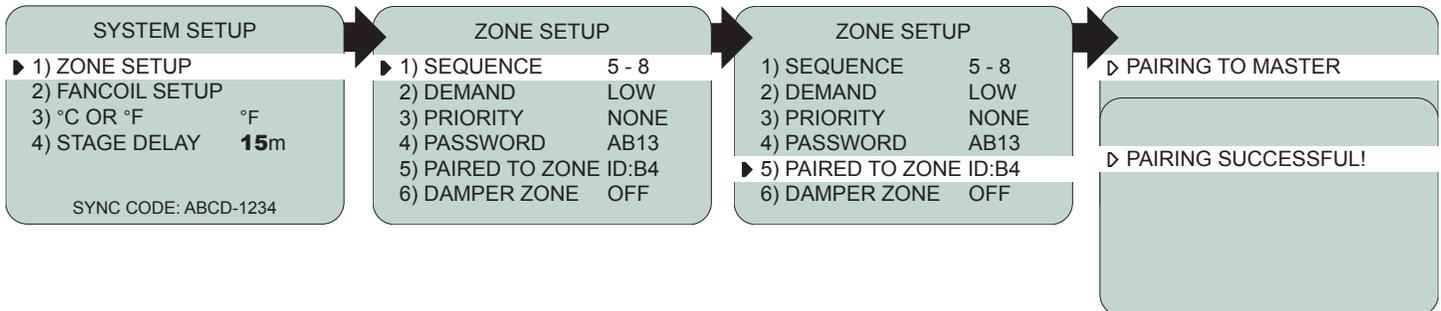
You will need to have all of your THM-0300 Thermostats connected to the zone controls you are pairing. **All pairing programming steps are done using the first THM-0300 Thermostat (zone 1) on the zone control.** Pressing and holding down the set button for 2 seconds will direct you to the Setup Menu. To select the desired option, use the and buttons to toggle and the button to select.

### Master Control Steps



- Go to the **first THM-0300 (zone 1)** on the ZON-0550 zone control that is connected to the TMX-0100 module. This is indicated on the screen on the thermostat as **"Zone 1"**. This will be your master zone control.
- On the first THM-0300 thermostat (zone 1) of the master zone control, enter the **Setup Menu** by pressing and holding down the button for 2 seconds. Select **▶3) System Setup** and then select **▶1) Zone Setup**.
- In **Zone Setup**, go to **▶1) Sequence**. This setting allows you to set your zone control sequence order.
- In **Sequence**, set your zone control to **1-4**. This will set your zone control as the "master".
- Stay in **Zone Setup** and toggle down the menu options to **▶5) Master ID**.
- Select **▶5) Master ID**. This will put the master zone control into "Discovery Mode". The LED lights on the zone control will flash to indicate that the control is in "Discovery Mode", and will stay in this mode for 300 seconds (5 minutes).

### Paired Control Steps



1. Go to the **first THM-0300 Thermostat (zone 1)** of the additional zone controls you would like to pair to the master. Enter the **Setup Menu** by holding the button for 2 seconds. Select **►3) System Setup** and then select **►1) Zone Setup** using the button.
2. In Zone Setup, go to **►1) Sequence**. Select the sequence you would like to set up for the control (5-8, 9-12, 13-16, 17-20).
3. Stay in **Zone Setup** and toggle down the menu options to **►5) Paired to Zone ID**.
4. Select **►5) Paired to Zone ID**. This will put the control into “Pairing Mode”. When pairing is successful after the completion of the timer, it will indicate the ID of the master control it is paired to. The control will stay in this mode for 300 seconds (5 minutes).



**If you are paired to a module and change zone sequence, this will un-pair the module**



**Make sure the master control is in “Discovery Mode” when pairing**

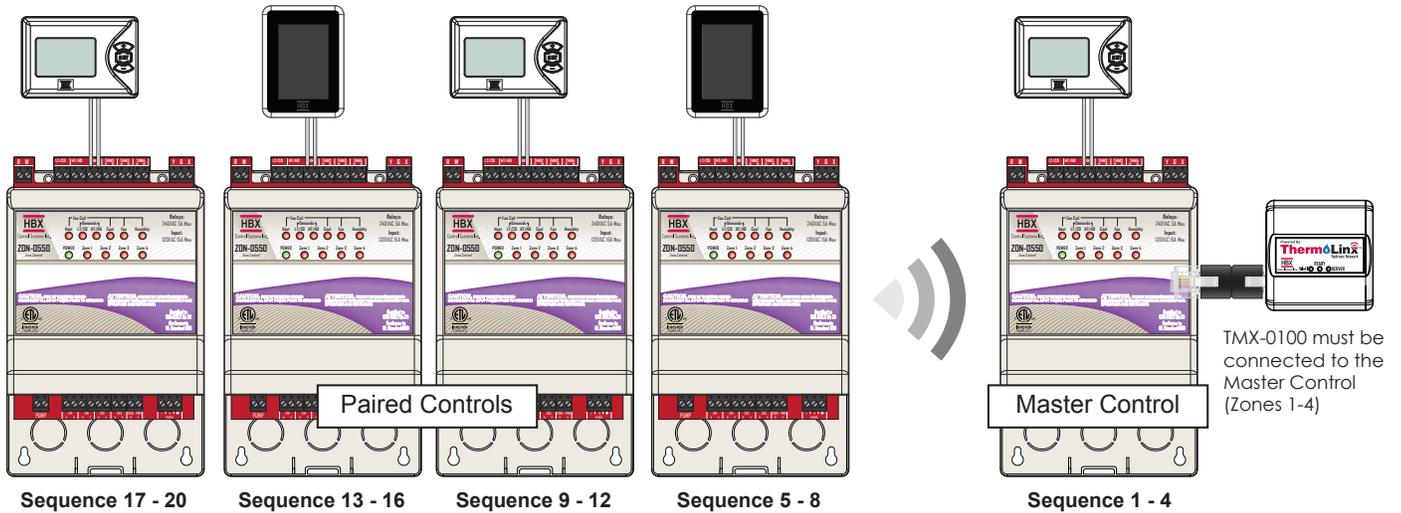


**Do not press any buttons on the thermostat when the control is pairing to master mode**



**TMX-0100 must be connected only to the master zone control (Zones 1-4)**

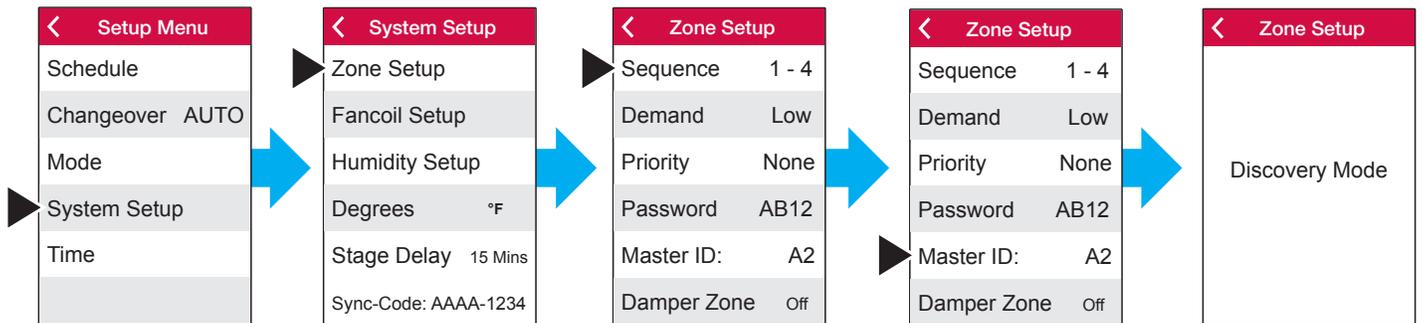
## PAIRING MULTIPLE ZONE CONTROLS WITH THE THM-0500



The ZON-0550 can be expanded to control up to 20 zones per system. The ZON-0550 controls communicate to the Master Control wirelessly on an RF network. No wires are needed to pair.

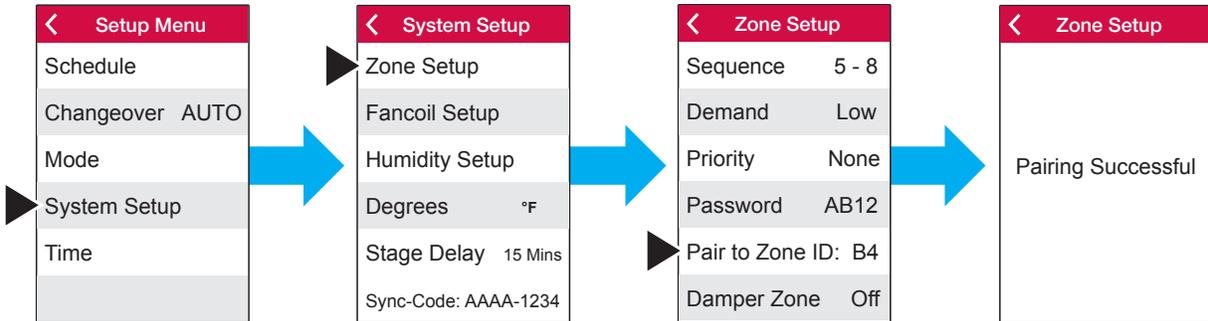
You will need to have all of your THM-0500 thermostats connected to the zone controls you are pairing. All pairing programming steps are done using first THM-0500 thermostat (zone 1) on the zone control. Pressing the menu icon on the top right corner allows you to view the main "setup menu" options. To select the desired option, simply touch any item to enter or adjust it's setting.

### Master Control Steps



1. Go to the first THM-0500 (zone 1) on the ZON-0550 zone control that is connected to the TMX-0100 module.
2. On the first THM-0500 thermostat (zone 1) of the master zone control, enter the setup menu by pressing the menu icon on the top right corner. Select system setup and then select zone setup.
3. In zone setup, select sequence. This setting allows you to set your zone control sequence order.
4. In sequence, set your zone control to 1-4. This will set your zone control as the "master".
5. Stay in zone setup and select Master ID.
6. Select Master ID. This will put the master zone control into "Discovery Mode". The LED lights on the zone control will flash to indicate that the control is in "Discovery Mode", and will stay in this mode for 300 seconds (5 minutes).

### Paired Control Steps



1. Go to the first THM-0500 thermostat (zone 1) of the additional zone controls you would like to pair to the master. Enter the setup menu by pressing the menu icon on the top right corner. Select system setup and then select zone setup.
2. In Zone Setup, select the sequence you would like to set up for the control (5-8, 9-12, 13-16, 17-20).
3. Stay in Zone Setup and select the Paired to Zone ID.
4. Select Paired to Zone ID. This will put the control into "Pairing Mode". When pairing is successful after completion of the timer, it will indicate the ID of the master control it is paired to.



**If you are paired to a module and change zone sequence, this will un-pair the module**



**Make sure the master control is in "Discovery Mode" when pairing**

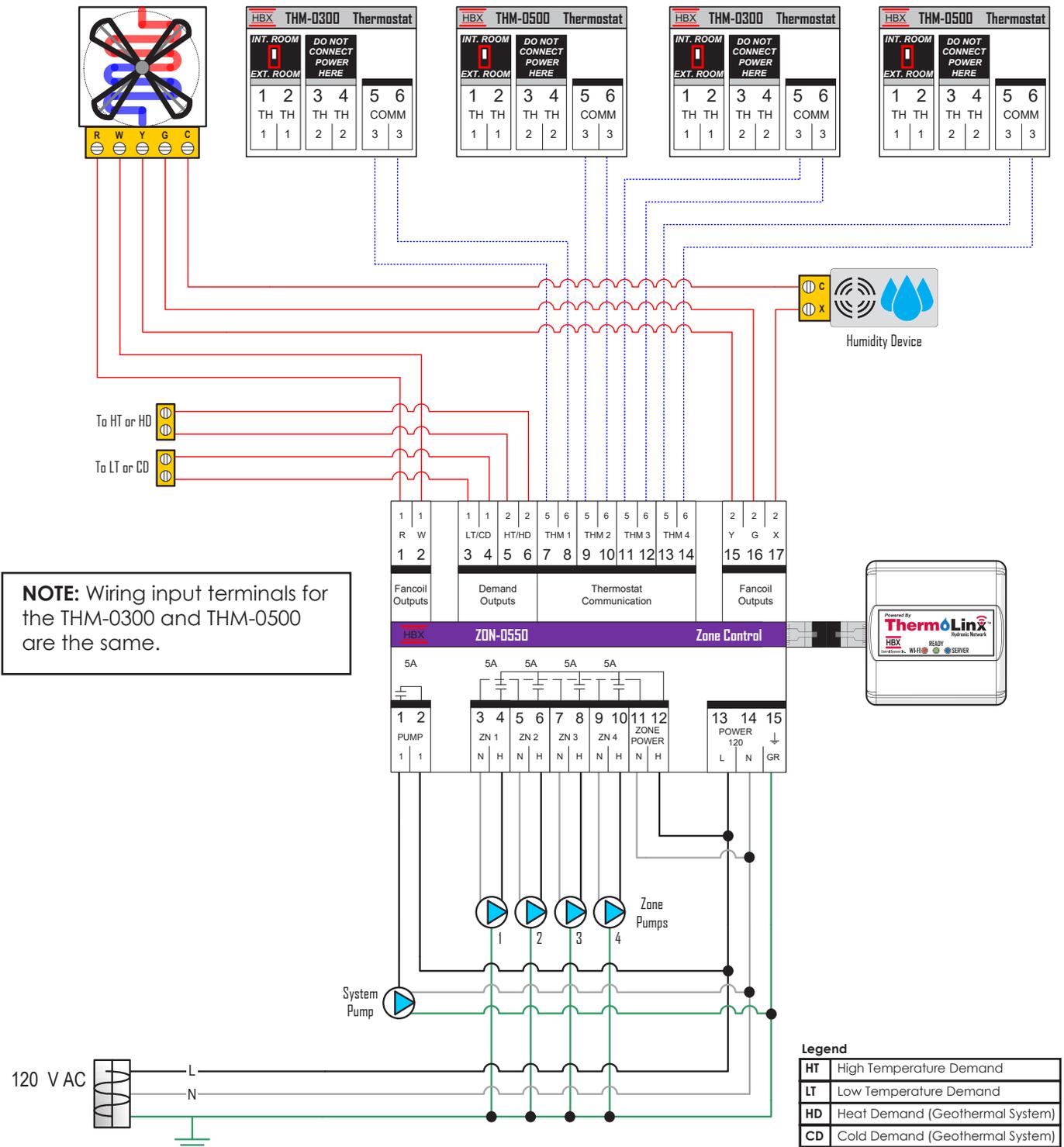


**Do not press any buttons on the thermostat when the control is pairing to master mode**

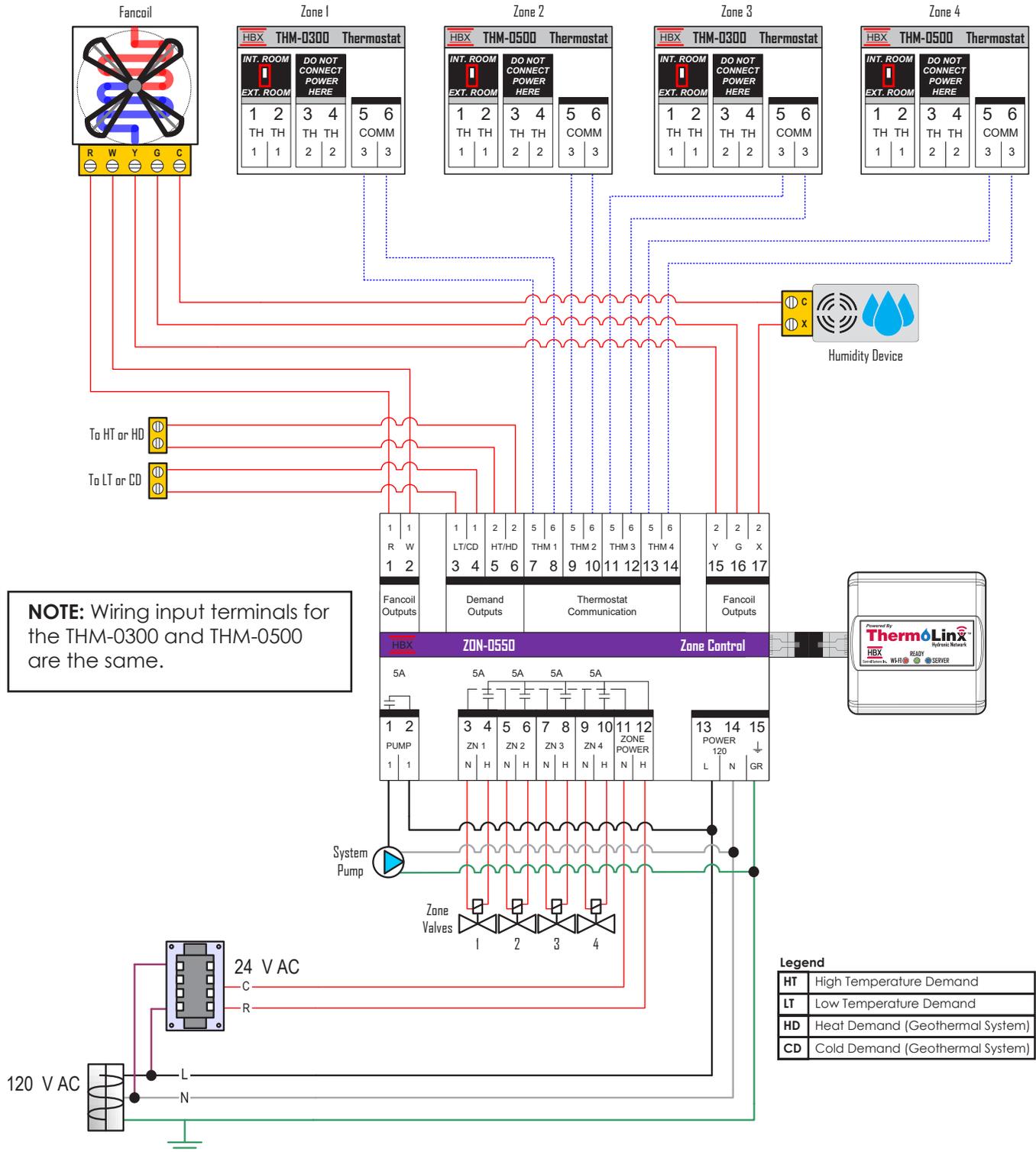


**TMX-0100 must be connected only to the master zone control (Zones 1-4)**

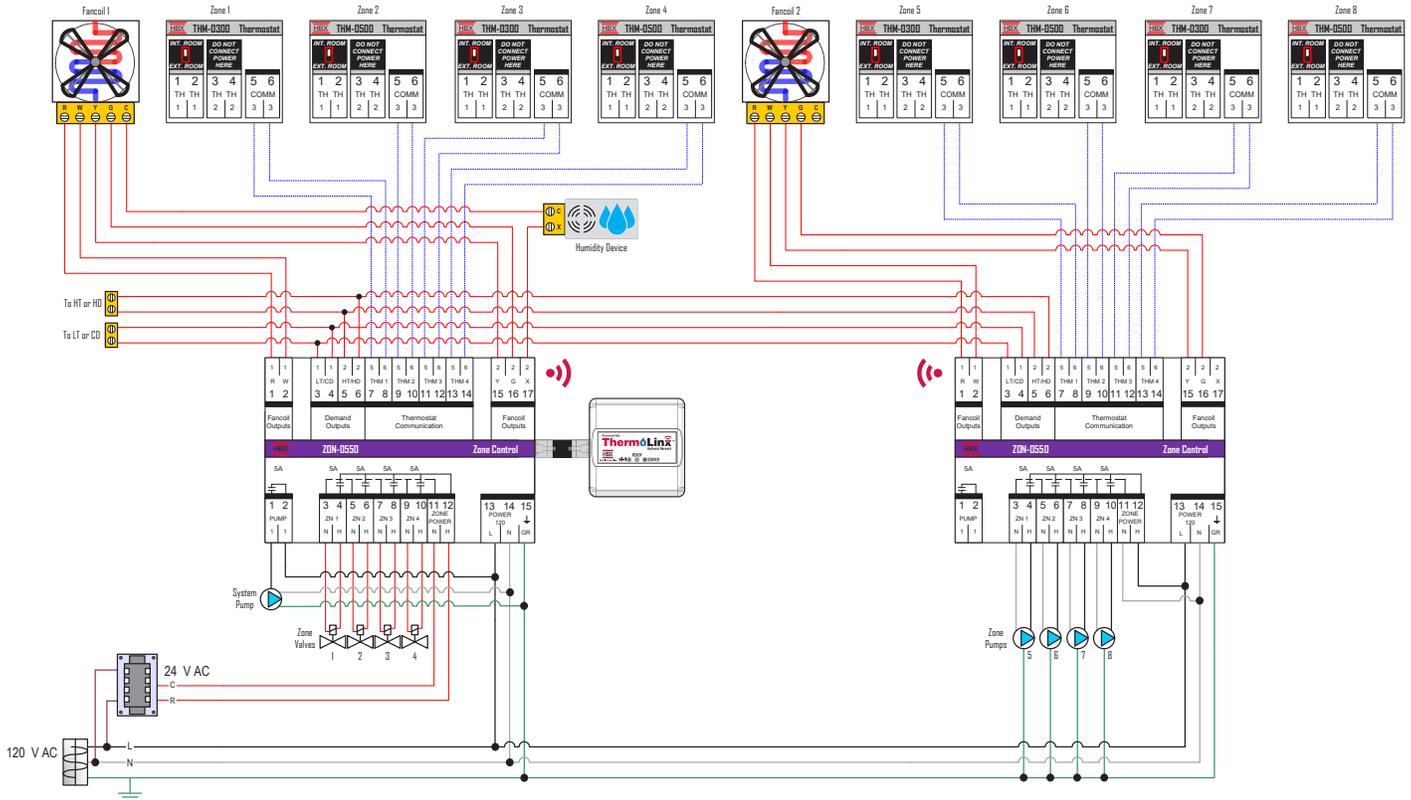
## 1) Standalone with THM-0300/THM-0500 and Zone Pumps



## 2) Standalone with THM-0300/THM-0500 and Zone Valves



### 3) 2 Paired ZON-0550 Controls with THM-0300/THM-0500 and Zone Pumps and Valves



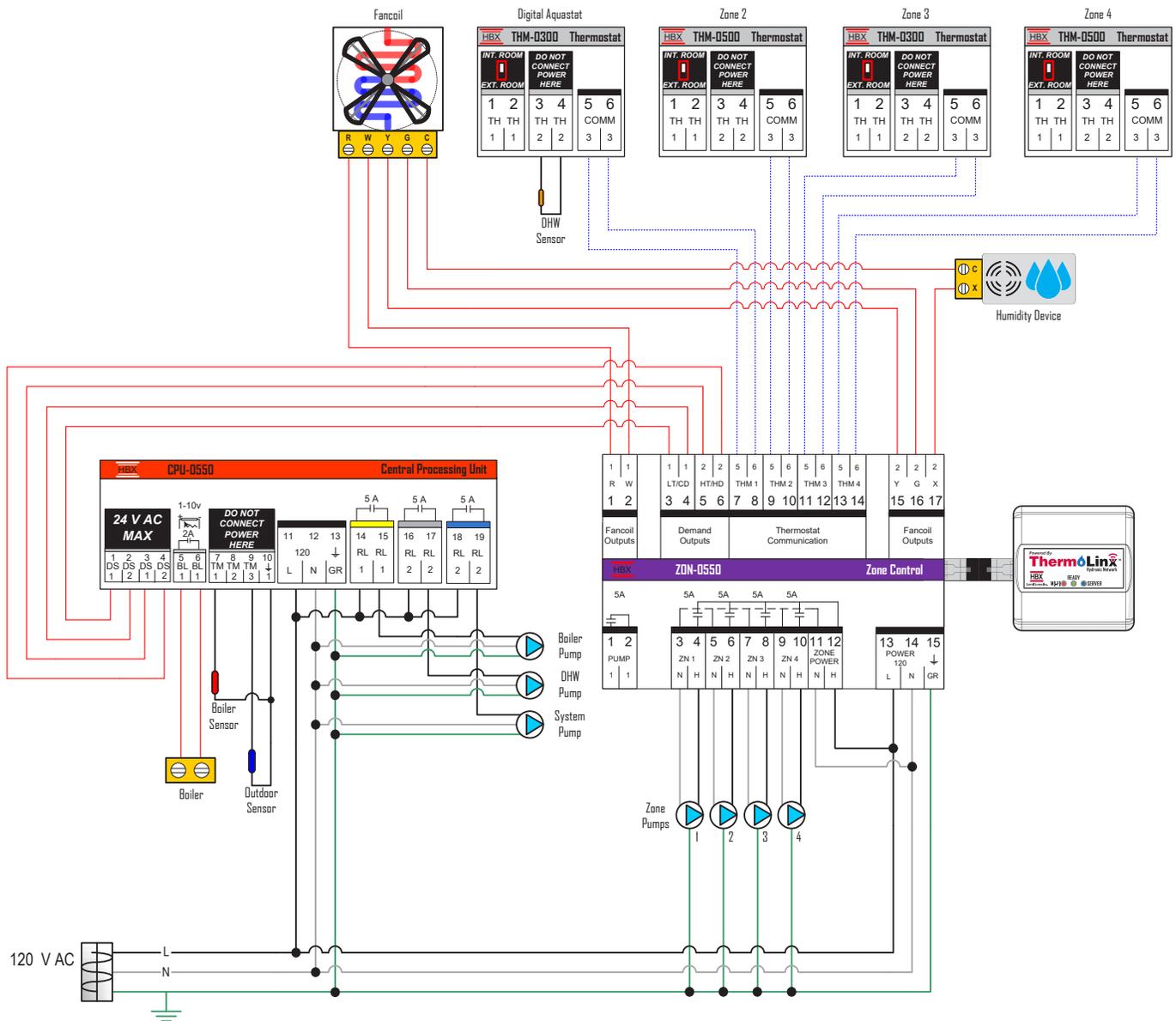
**NOTE:** Wiring input terminals for the THM-0300 and THM-0500 are the same.

Legend	
HT	High Temperature Demand
LT	Low Temperature Demand
HD	Heat Demand (Geothermal System)
CD	Cold Demand (Geothermal System)



For each zone control, demands are individually given to the control device. If multiple zone controls are giving demands to the same control device, the demands must be wired in parallel.

## 4) ZON-0550 and CPU-0550 with THM-0300/THM-0500 and Zone Pumps



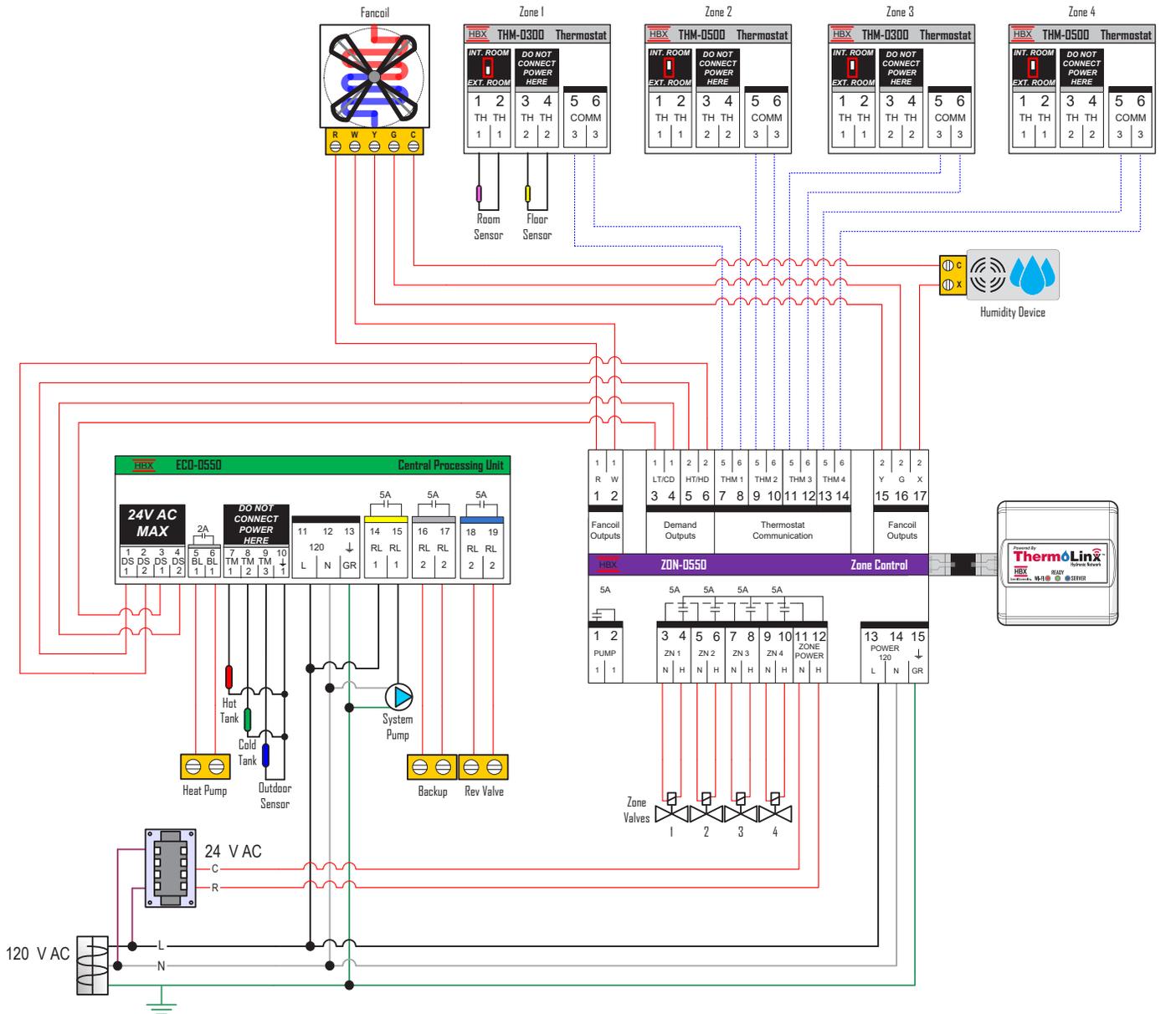
### Legend

HT	High Temperature Demand
LT	Low Temperature Demand
HD	Heat Demand (Geothermal System)
CD	Cold Demand (Geothermal System)

**NOTE:** Wiring input terminals for the THM-0300 and THM-0500 are the same.

## 5) ZON-0550 and ECO-0550 with THM-0300/THM-0500 and Zone Valves

To use external room thermistor, toggle dipswitch from Internal to External on THM-0300/THM-0500

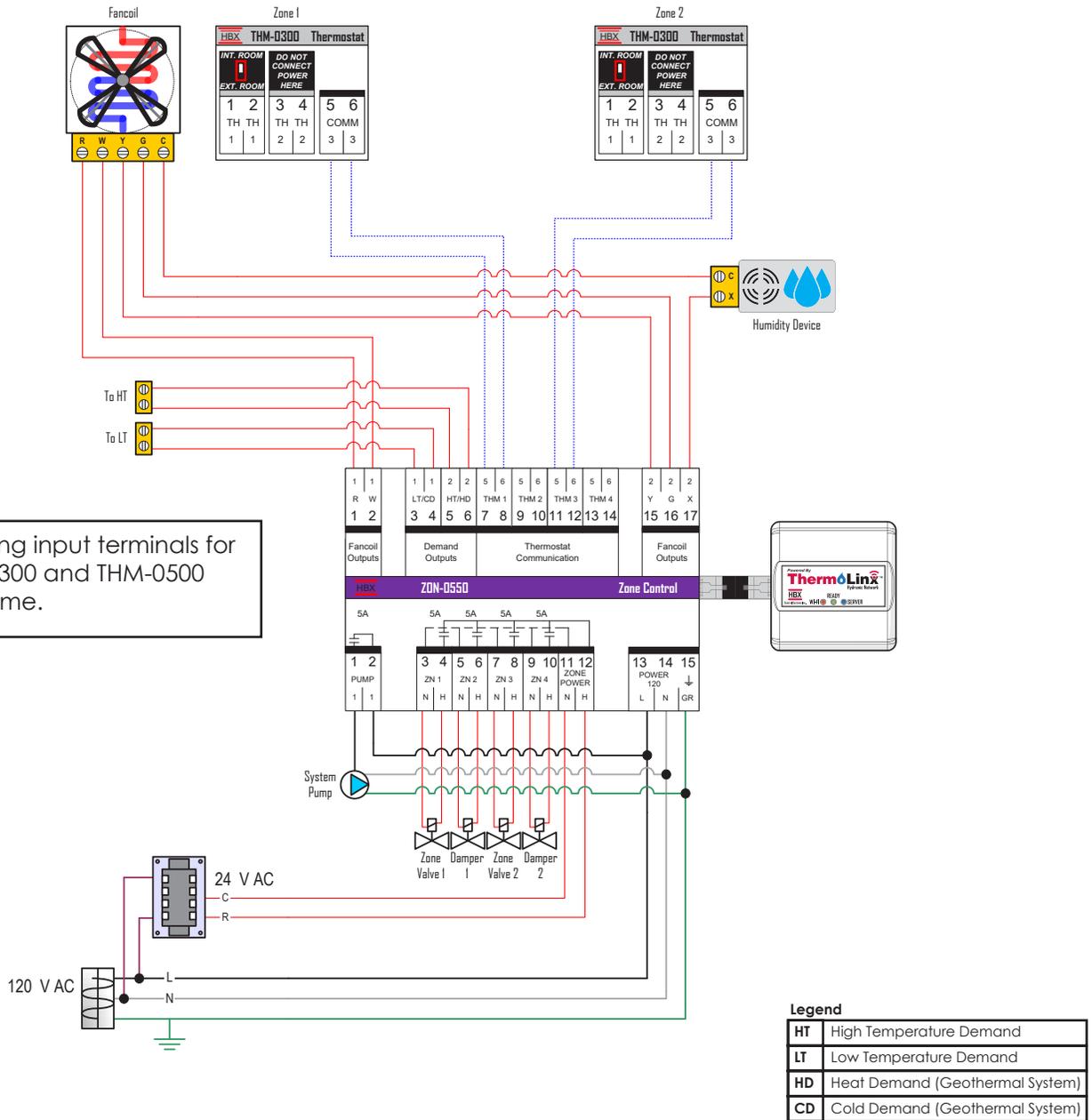


**NOTE:** Wiring input terminals for the THM-0300 and THM-0500 are the same.

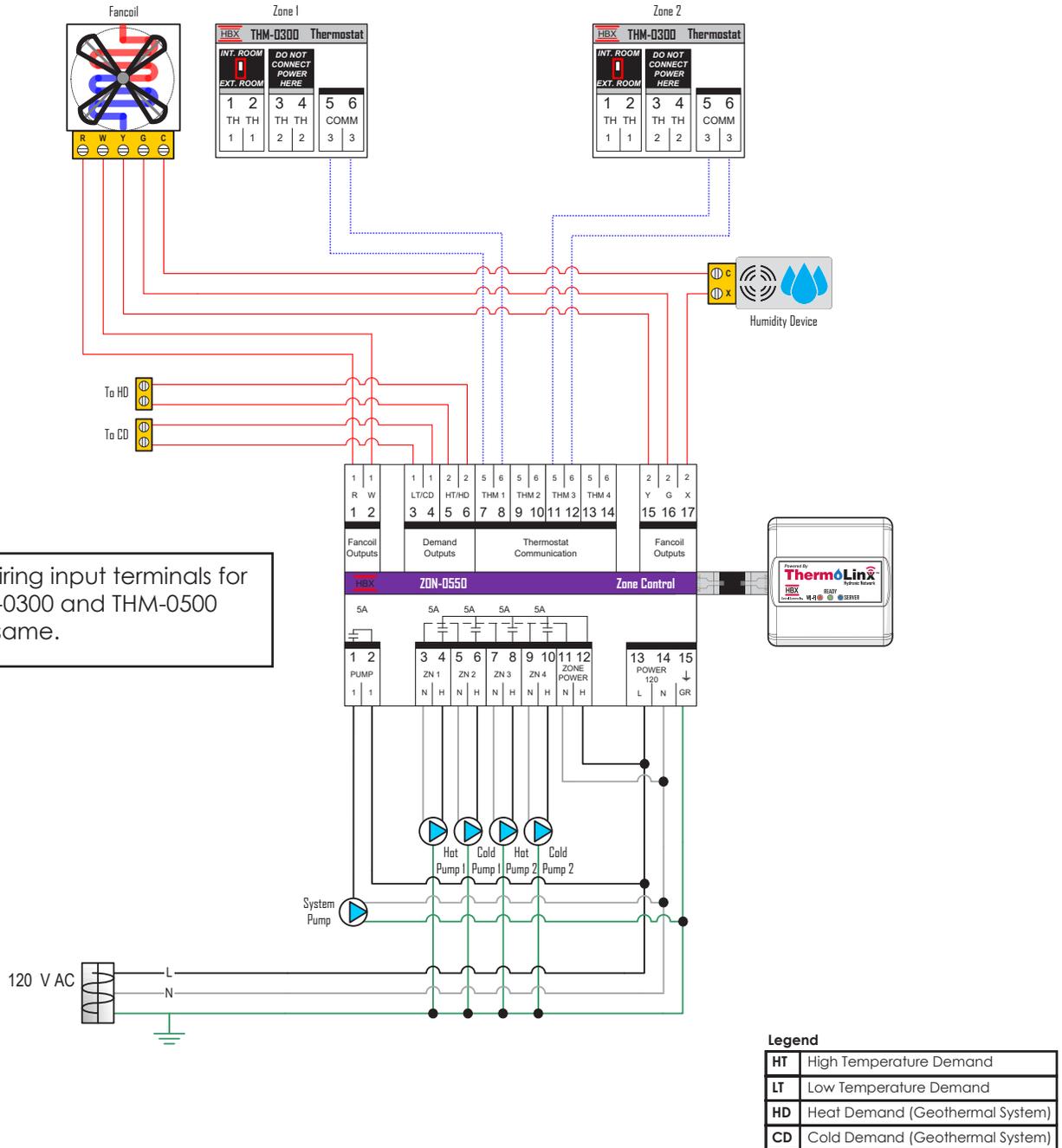
**Legend**

HT	High Temperature Demand
LT	Low Temperature Demand
HD	Heat Demand (Geothermal System)
CD	Cold Demand (Geothermal System)

## 6) ZON-0550 with Zone Valves and Dampers



## 7) ZON-0550 with Zone Pumps and Tank Pumps



## ZON-0550 TROUBLESHOOTING GUIDE

ISSUE	POSSIBLE CAUSES & RESOLUTIONS
<b>No Power</b>	<ul style="list-style-type: none"> <li>• Verify that a 120VAC is present on pins 13-14-15.</li> </ul>
<b>Zone output won't turn on</b>	<ul style="list-style-type: none"> <li>• Verify that the appropriate power is connected to pins 11-12.</li> <li>• If the LED for that zone is not illuminated ensure a demand is present at the thermostat. P.I.D algorithm may take up to 5 minutes to initialize a demand.</li> <li>• Ensure the proper demand type on the thermostat is correct on the THM-0300/0500 (see manual). A fancoil demand will only turn the zone output on if zone on demand is set to yes (See THM-0300/0500 manual, or page 14.)</li> <li>• Check priorities settings</li> </ul>
<b>System pump output won't turn on</b>	<ul style="list-style-type: none"> <li>• Verify wiring</li> <li>• A zone demand needs to be made for the system pump to turn on.</li> <li>• The system pump output is on each zone control is only associated with those 4 zones if multiple zone modules are controlling the same system pump, then the system pump outputs should be wired in parallel.</li> <li>• Check priorities settings</li> </ul>
<b>Fancoil outputs won't turn on</b>	<ul style="list-style-type: none"> <li>• Verify wiring</li> <li>• Check the demand settings. See THM-0300/0500 manual</li> <li>• A zone demand needs to be made for the fancoil output to turn on.</li> <li>• Check priorities settings</li> </ul>
<b>Zone lights flashing</b>	<ul style="list-style-type: none"> <li>• The ZON-0550 is in Discovery mode or Pairing mode</li> </ul>
<b>Demand outputs won't turn on/ wrong demands turning on</b>	<ul style="list-style-type: none"> <li>• Verify wiring</li> <li>• Verify wiring when using multiple modules.</li> <li>• In zone setup on the THM-0300/0500, make sure you have correctly set your demand options.</li> </ul>
<b>Thermostat won't power</b>	<ul style="list-style-type: none"> <li>• Verify wiring.</li> <li>• Check wiring polarity in pins 5-6.</li> <li>• Check zone setup options that the damper zones is set correctly (See THM-0300/0500 manual)</li> <li>• THM-0500 thermostat(s) will take up 120 seconds to power up.</li> </ul>
<b>Zones modules not pairing</b>	<ul style="list-style-type: none"> <li>• Check zone sequence on each module</li> <li>• Ensure you are pairing the zones module using the THM 1 thermostat on the zone module.</li> </ul>

**THERMOLINX TROUBLESHOOTING GUIDE**

<b>ISSUE</b>	<b>POSSIBLE CAUSES &amp; RESOLUTIONS</b>
<b>Green Light Flashing</b>	<ul style="list-style-type: none"><li>• No communication between modules</li><li>• CAB-0150 connector is not connected properly to the control</li><li>• Disconnect the Thermolinx module and power down the ZON-0550 control. Power it up and reconnect the Thermolinx module. If issue persists contact HBX tech support</li></ul>
<b>No Communication with Thermostats</b>	<ul style="list-style-type: none"><li>• Blue light (server) is off and red light is on: possible firewall issue or router configuration (open port 1314) – contact HBX technical support.</li><li>• Blue light (server) is off and red light off: check network name and password for special characters. Check for correct network name and password: possible network strength issue. If there is not network password use three spaces.</li><li>• Red light flashing: Thermolinx was not initially set up.</li><li>• No light at all: Connector not setup properly, no power on the ZON-0550.</li></ul>

For additional assistance with the ZON-0550, please contact our  
Technical Support Department toll free at:

**+1 (855) 410-2341**

### **Limited Warranty**

HBX Controls warrants each of its products to be free from defects in workmanship and materials under normal use and service for a period of 24 months from date of manufacture or 12 months from date of purchase from an HBX Authorized Dealer, if within the above documented period after date of manufacture.

If the product proves to be defective within the applicable warranty period, HBX on its sole discretion will repair or replace said product. Replacement product may be new or refurbished of equivalent or better specifications, relative to the defective product. Replacement product need not be of identical design or model. Any repair or replacement product pursuant to this warranty shall be warranted for not less than 90 days from date of such repair, irrespective of any earlier expiration of original warranty period. When HBX provides replacement, the defective product becomes the property of HBX Controls.

Warranty Service, within the applicable warranty period, may be obtained by contacting your nearest HBX Controls office via the original Authorized Agent and requesting a Return Material Authorization Number (RMA #). Proof of purchase in the form a dated invoice/receipt must be provided to expedite the issuance of a Factory RMA.

After an RMA number has been issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit. The RMA number must be visible on the outside of the package and a copy included inside the package. The package must be mailed or otherwise shipped back to HBX with all costs of mailing/shipping/insurance prepaid by the warranty claimant.

Any package/s returned to HBX without an approved and visible RMA number will be rejected and shipped back to purchaser at purchaser's expense. HBX reserves the right, if deemed necessary, to charge a reasonable levy for costs incurred, additional to mailing or shipping costs.

### **Limitation of Warranties**

If the HBX product does not operate as warranted above the purchasers sole remedy shall be, at HBX's option, repair or replacement. The foregoing warranties and remedies are exclusive and in lieu of all other warranties, expressed or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose/application. HBX neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale, installation maintenance or use of HBX Controls products.

HBX shall not be liable under this warranty; if its testing and examination discloses that the alleged defect in the product does not exist or was caused by the purchasers or third persons misuse, neglect, improper installation or testing, unauthorized attempts to repair or any other cause beyond the range of intended use, or by accident, fire, lightning or other hazard.

### **Limitation of Liability**

In no event will HBX be liable for any damages, including loss of data, loss of profits, costs of cover or other incidental, consequential or indirect damages arising out of the installation, maintenance, commissioning, performance, failure or interruption of an HBX product, however caused and on any theory of liability. This limitation will apply even if HBX has been advised of the possibility of such damage.

### **Local Law**

This limited warranty statement gives the purchaser specific legal rights. The purchaser may also have other rights which vary from state to state in the United States, from Province to Province in Canada and from Country to Country elsewhere in the world.

To the extent this Limited Warranty Statement is inconsistent with local law, this statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this statement may not apply to the purchaser. For example, some states in the United States, as well as some governments outside the United States (including Canadian Provinces), may:

Preclude the disclaimers and limitations in this statement from limiting the statutory rights of a consumer (e.g. United Kingdom);

Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations; or

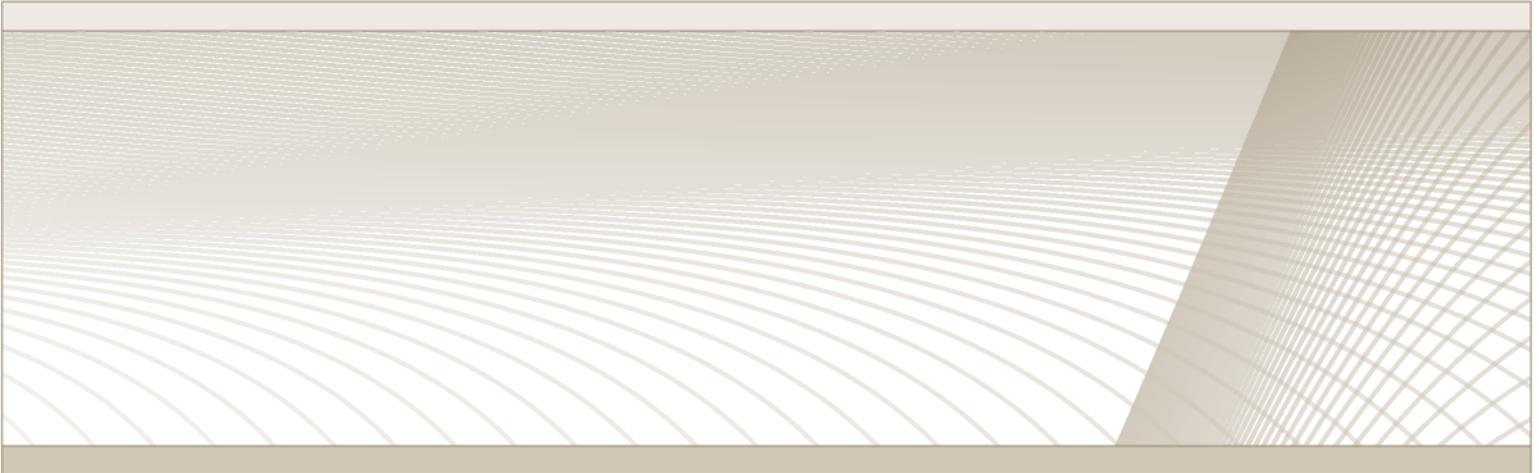
Grant the purchaser additional warranty rights which the manufacturer cannot disclaim, or not allow limitations on the duration of implied warranties.





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