Installation Manual

# ZON-0600

Version 1.0.0


• Zone Control

# ZON-0600

HBX Control Systems Inc.

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Comfort Control Innovation

## HBX ZON-0600 ZONE MODULE

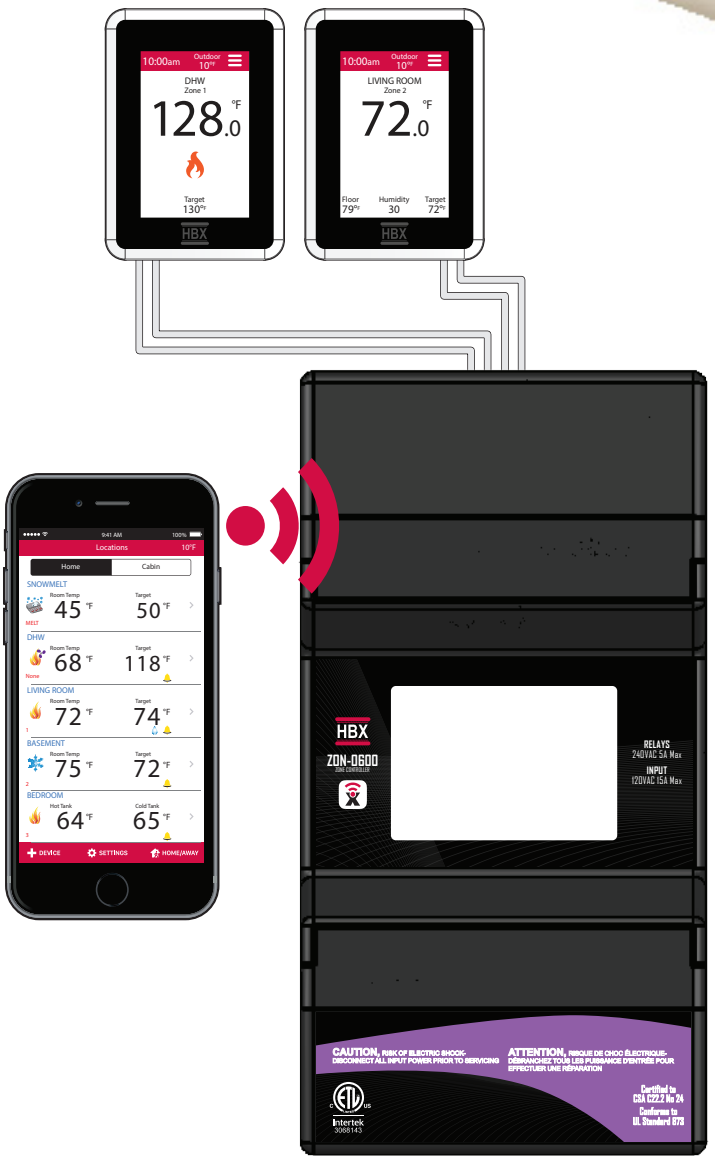
**HBX Control Systems** launches the latest generation of the Wi-Fi Zoning System: the ZON-0600. This revolutionary control allows you to customize exactly your needs and wants for any application including radiant floor and forced air system control or a combination of both.

The **ZON-0600** can operate zone valves or zone pumps the choice is yours. Each module allows control up to 4 additional zones with the ability of wireless expansion between modules.

Each controller is now Wi-Fi enabled eliminating the need to use the an external Wi-Fi module for online connection. Each zone can be viewed or configured from your smartphone or tablet devices, allowing you to control your comfort anytime or anywhere.

There are so many features integrated into the **ZON-0600** which allows for customized options including selectable pump and demand outputs, pre and post purge run times with exercising options, and the ability to tie in an auxiliary thermistor to run a setpoint directly off the **ZON-0600.** Each ZON-0600 can run one (1) fan coil each with humidity.

**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 with alarm email notification
- Control up to four (4) independent zones per control plus one Fancoil (W-Y-G) output
- Humidity Control (X Output)
- Wirelessly expandable to a maximum of twenty (20) zones within distance
- Provides pump, valve or damper control
- Three (3) demands outputs (TT1, TT2, TT3)
- 4 pipe geo systems

## SAFETY SYMBOLS

**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.

## SAFETY WARNINGS

**WARNING:** Non-serviceable product. Send to HBX Controls Inc. only for service.

**WARNING:** 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.

**EXTREME HAZARD:** The **HBX ZON-0600** 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.

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

**WARNING:** a) Use copper conductors only if the terminal is acceptable only for connections to copper wire; b) Use aluminum conductors only or use aluminum or copper-clad aluminum condctors only if the terminal is acceptable only for connection to aluminum wire; or c) use copper or aluminum conductors or use copper, copper-clad aluminum, or aluminum conductors if the terminal is acceptable for connection to either copper or aluminum wire.

**WARNING:** All circuits must have a common disconnect and be connected to the same pole of the disconnect.

**WARNING:** THM-0600 only for use with ZON-0600

## 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
- 1x HBX ZON-0600

# TECHNICAL DATA AND DIMENSIONS

## ZON-0600 TECHNICAL DATA


**Specifications:**
4 x THM-0600 Thermostat Communication inputs
3 x Fancoil outputs 24VAC 2A
1X Humidity output 24VAC 2A
3 x Demand output relays 24VAC 2A
4 x Zone Relay 120VAC 5A or 24VAC 5A
Input 120VAC 15A Max or 24VAC 5A
2 x Pump Relay 120VAC 5A
1x Auxiliary input 24VAC 2A Thermistor

**Combined relay power should not exceed 15A**

**Weight:**
0.75 kg

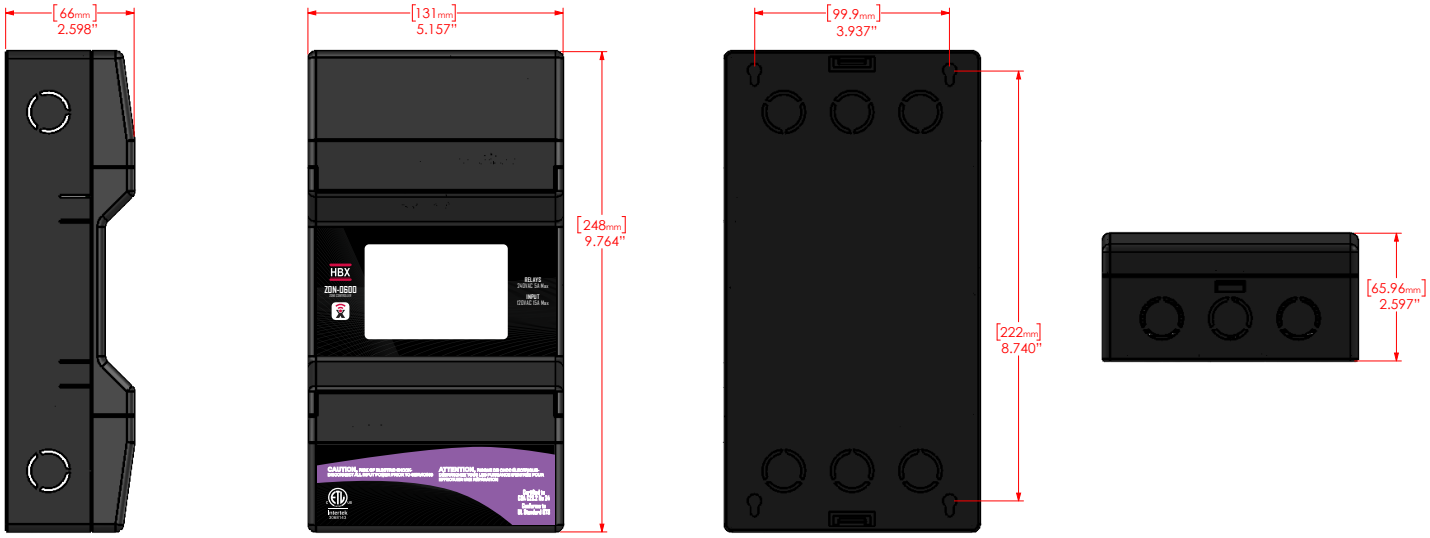
**Dimensions:**
131mm W x 246mm H x 66.71 D
5.16in W x 9.83in H x 2.64 D

**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-0600 RF Info:**
Contains FFC ID: 2AHMRESP12S
Frequency: 2.4GHz

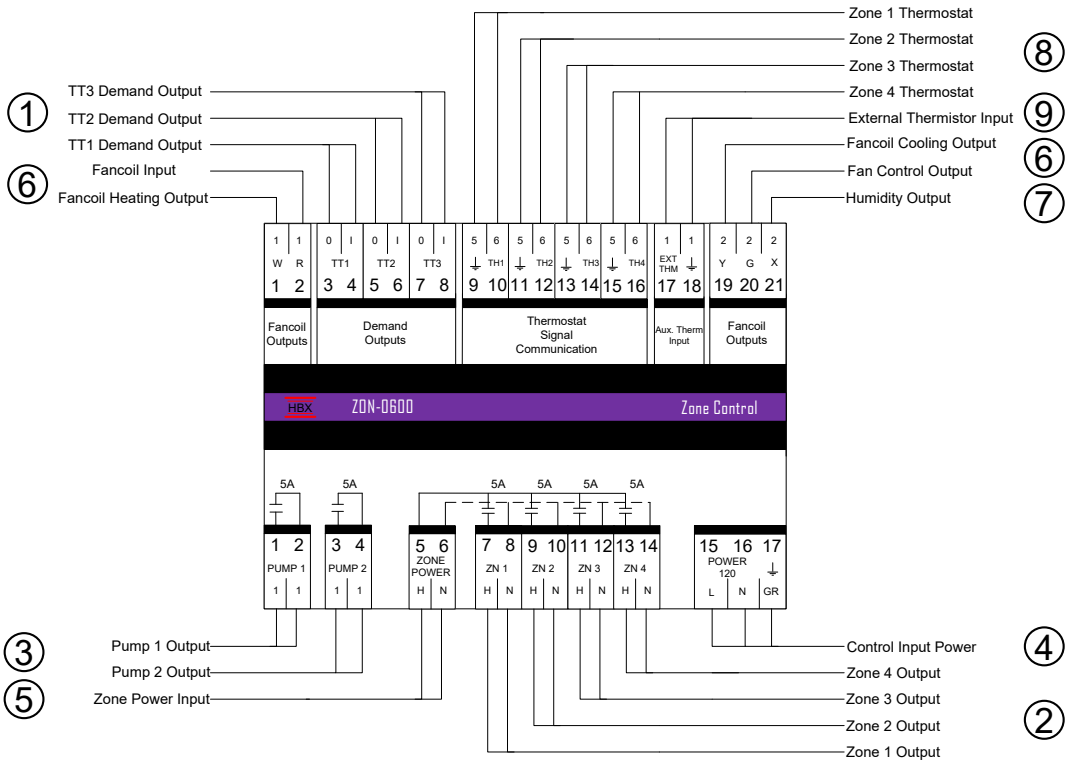
## DIMENSIONS



# 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, Cooling, Auxiliary, and App 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 or a valve depending on what power is supplied to terminals 5-6. These outputs can also be used for Damper Zones (terminals 1 & 3) or a 4 pipe system.

## 3. PUMP OUTPUTS

These are dry contact outputs that can be used to control a pump for the following: System pump, Heating pump, Colding pump, Auxiliary pump (DHW), App demand pump, Fancoil Heat/Cool pump, Fancoil heat, Fancoil cool

## 4. INPUT POWER

This input is to power the ZON-0600. 0.5 Amps at 120 VAC is required to power this device.

## 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.

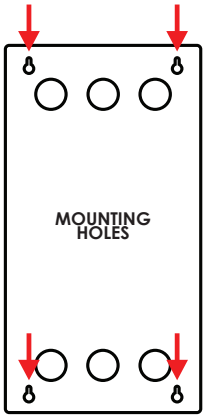
## 8. THERMOSTAT INPUT 1 - 4

These terminals are used for power and communication for thermostat inputs. Only THM-0600 thermostats are compatible with this control.

## 9. AUXILIARY INPUT

This terminal is an input for an external thermistor to monitor any temperature or read outdoor temperature, or run a heating setpoint.

## INSTALLATION



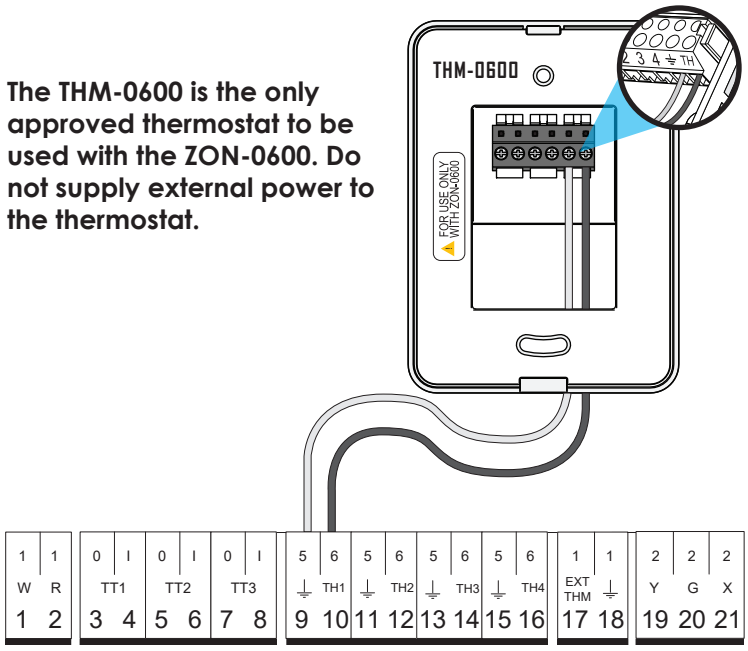

**ZON-0600 Installation**

The ZON-0600 is designed to be wall mounted or installed in a separate electrical enclosure. The unit should be installed indoors 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-0600, mark on the wall the desired location of mounting
- Pre-drill, anchor and fasten the two bottom screws for mounting
- Hang ZON-0600 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

**The THM-0600 is the only approved thermostat to be used with the ZON-0600. Do not supply external power to the thermostat.**




**Wiring polarity is important. Match the ground and TH on the THM-0600 to the ZON-0600 control.**

### Installation

Connect the THM-0600 thermostat to the control. If you are using a single thermostat, ensure it is connected to TH1 on the control. It is normal for the thermostat to take up to two (2) minutes to startup. The THM-0600 should not be installed in a high humidity location or where falling water is located.

### Thermostat field signal wiring installation

The signal wiring that connects the ZON-0600 to each thermostat should not run parallel for any lengths with any other wires. 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 (029-0022, not provided) and/or floor sensors (029-0045).

## ZON-0600 MAIN SCREEN

1 The ZON-0600 features a full LCD screen that will display each zone and what their current states are. Each THM-0600 will be displayed with their respective zone number, their name, current temp and if they have a demand for heating, cooling, fan or humidity. If the zone output is activated that zone will be bordered with a green box, and the associate zone output in the lower wiring chamber will be closed.

2 **Fancoil** - here you will see if the fancoil has any calls and which ones they are. The wiring contacts associated with this are in the upper wiring chamber. If there is a flame signal then contacts R-W will be closed, a snowflake then R-Y will be closed, a fan then R-G will be closed, and finally a water drop humidity then contacts R-X will be closed.

3 **Auxiliary Thermistor** - here you will see either the Auxiliary setpoint, or Outdoor Temp or Aux temperature for a displayed only temp. When the setpoint is being used the actual temp will be displayed in blue on the left, and the target will be on the right. When the Auxiliary setpoint is calling it will be bordered with a green box.

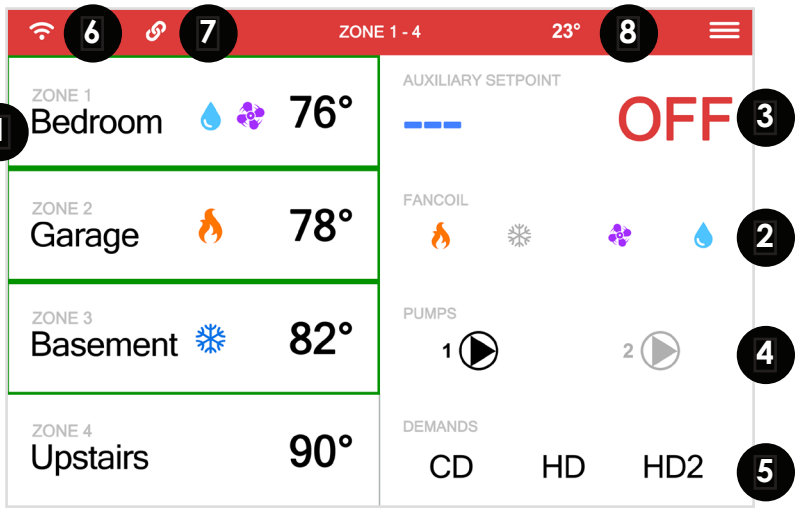
4 **Pumps** - when a pump is activated by a call you will see the first pump (P1) and or the second pump (P2) light up in respect to their classification, their associated contacts PUMP 1 or PUMP2 that can be found in the lower wiring chamber will be closed.

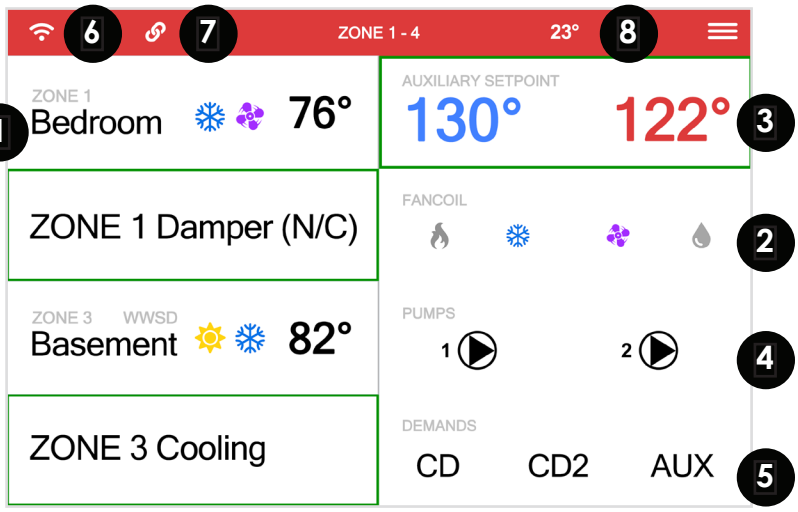
5 **Demands** - when one of the demands that a user has chosen activates it will be highlighted in this location

6 **WiFi** - when the **ZON-0600** is connected to WiFi it will show a WIFI symbol at the top left of the main screen

7 **Sequence Link** - when two or more **ZON-0600** devices are LINKED a Sequence Link symbol will appear at the top left of the main screen

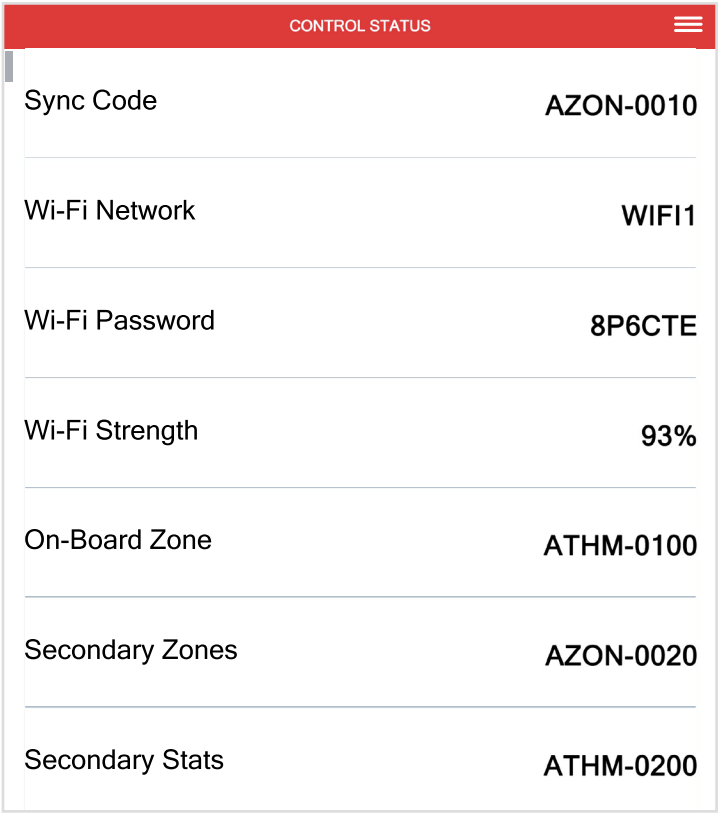
8 **Outdoor Temperature** - The outdoor temperature will be displayed in the upper left part of the Main Screen




THM 4/Zone 4 can not do this function as there is no sequential zone on the same zone controller.

Please note that if a THM-0600 has been setup to have a 2nd stage damper or if the 4 pipe geo ability has been selected that zone will now utilize the next sequential zone output on the same ZON-0600. The ZON-0600 will note this on the screen and it will turn off the power output to that thermostat associated with the extra zone that was now utilized.




## CONTROL STATUS

**Sync Code** - Sync Code of the ZON-0600

**Wi-Fi Network** – displays current SSID network connected to

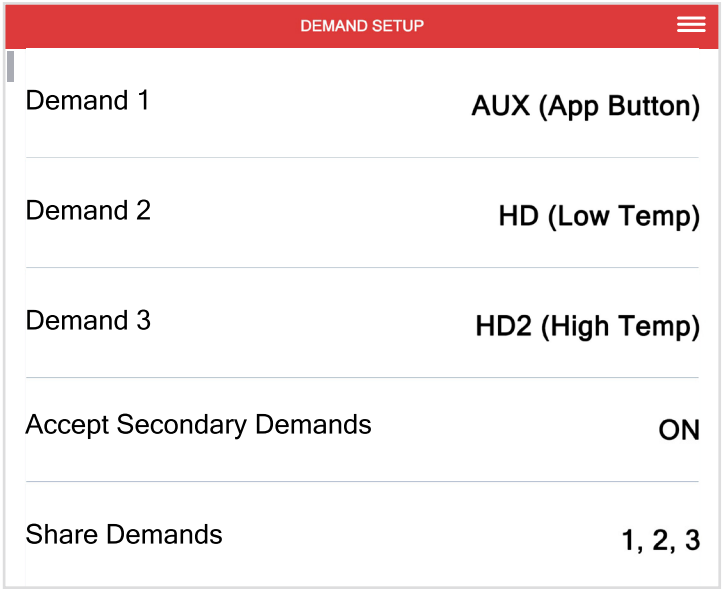
**Wi-Fi Password** – displays password of current network connected to

**Wi-Fi Strength** – displays Signal strength of the network connected to

**On-board Zone 1-4 (5-20)** – Sync code of the connected thermostat to the associated zone. If no thermostat is connected to a zone, that zone will not be displayed.

**Secondary Zones** – Sync code of any LINKED ZON-0600's to this primary ZON-0600. This will only show up if this is the primary ZON-0600 and other ZON-0600's have been LINKED.

**Secondary Stats** – Sync code of any thermostats from LINKED ZON-0600's. This will only show up if this is the primary ZON-0600 and other ZON-0600's have been LINKED.




## DEMAND SETUP

**Demand 1** – This chosen demand will close the contact TT1 in the upper wiring chamber

**Demand 2** – This chosen demand will close the contact TT2 in the upper wiring chamber

**Demand 3** – This chosen demand will close the contact TT3 in the upper wiring chamber

These demand ports are dry contacts which are rated for 24VAC and will close when there is a respective call

**Accept Secondary Demands** – When two or more ZON-0600's are LINKED there is the option to turn on Accept Secondary Demands. When Accept Secondary Demands is turned to on, all Share Demands enabled on any of the Non-Primary ZON-0600's will go through the Primary controller.

**Share Demands 1,2,3** – The Non-Primary controllers will have the option for Share Demand under each of its three demands. Turning any of these Share Demands on in combination with Accept Secondary Demands will allow for demands to be shared between the Primary and Non-Primary ZON-0600's.

## DEMAND SELECTIONS

**HD (Low Temp)** – Heat demand low temperature such as radiant in-floor

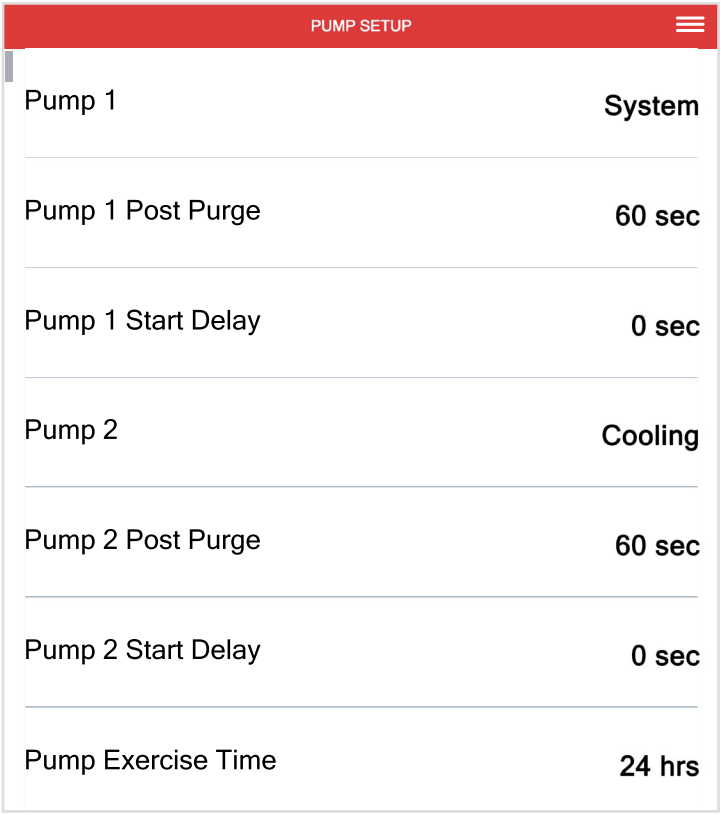
**HD2 (High Temp)** – Heat demand high temperature such as a fancoil or baseboard heaters (2nd stage fan coil)

**AUX (Aux. Setpoint)** – Demand from the auxiliary setpoint thermistor, which will close when there is a call from this thermistor

**APP (App Button)** – Demand from a virtual switch in the ThermoLinx app, this is a dry switch that can be used to run anything, such as a 24volt/dry switch for a fireplace, or a zone valve to shut off your water supply

**CD (Cool)** – Cool demand first stage

**CD2 (Cool Stage 2)** – Cool demand second stage, or fancoil




## PUMP SETUP

**Pump 1** - The chosen pump type will close the lower contact at 1-2 (PUMP1) Pump choice options explained below

**Pump 1 Post Purge** – (0 -240 seconds) the amount of time if necessary for Pump 1 to run after the call associated with it has been removed

**Pump 1 Start Delay** – (0 -240 seconds) the amount of time if necessary for Pump 1 be delayed to run after the call associated with it has been activated

**Pump 2** - The chosen pump type will close the lower contact at 1-2 (PUMP2) Pump choice options explained below

**Pump 2 Post Purge** – (0 -240 seconds) the amount of time if necessary for Pump 2 to run after the call associated with it has been removed

**Pump 2 Start Delay** – (0 -240 seconds) the amount of time if necessary for Pump 2 be delayed to run after the call associated with it has been activated

**Pump Exercise Time** – (0 -240 hours) the amount of time that need to pass before the pumps will exercise the system pumps. (0 = no exercising)

## PUMP OPTIONS

**Heating** – If there are any heating calls other than a fancoil heating call the pump contact will close

**Cooling** – If there are any cooling calls the pump contact will close

**AUX** – If the Auxiliary thermistor calls this pump contact will close

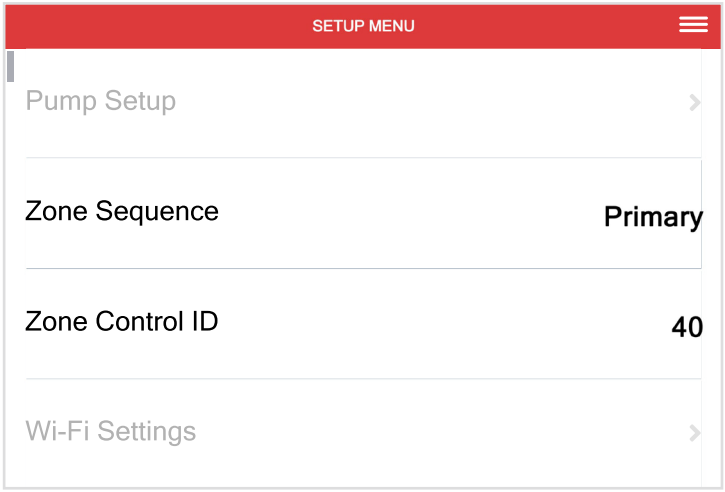
**APP** – If the virtual app switch is activated this pump contact will close

**Fancoil Heat/Cool** – If there are any heating or cooling calls from the fancoil the pump contact will close

**Fancoil Heat** – If there is a heating call from the fancoil the pump contact will close

**Fancoil Cool** – If there is a cooling call from the fancoil the pump contact will close

**System** – If there are any heating or cooling calls the pump contact will close



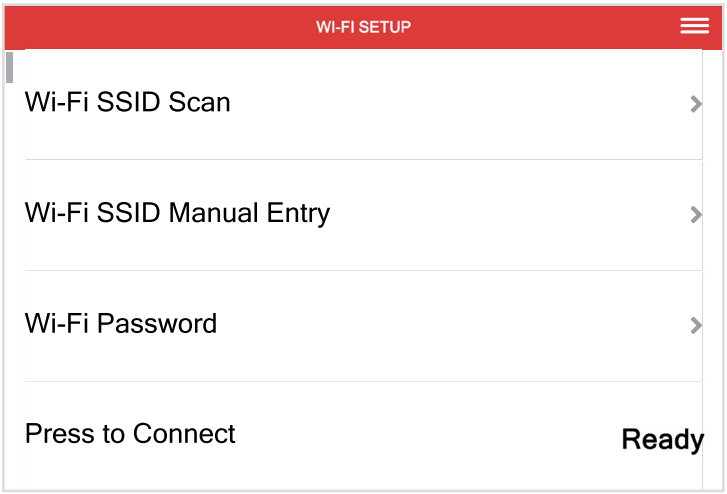

## ZONE SEQUENCE SETUP

When using more than one ZON-0600, to allow them to communicate wirelessly between each other, they will need to follow a sequential order. This specifically matters in relation to dampers, demands and priorities. Each Zone Sequence represents 4 possible thermostats (THM-0600) per zone controller with a maximum of 5 ZON-0600's in total that can communicate. The first sequence is labelled Primary and represents sequence 1-4.

- Primary (1-4)
- 5-8
- 9-12
- 13-16
- 17-20

## ZONE CONTROL ID/PRIMARY ZONE ID (1-255)

If the Zone Sequence was set to the Primary then the number under Zone Control ID will represent this ZON-0600's ID. If the Zone Sequence was set to any sequence other than Primary, that ZON-0600's Zone Control ID can be set to match the value of the Primary Zone Control ID and the ZON-0600's will then LINK automatically. The ZON-0600's will be LINKED when the Sequence Link symbol appears on the top left of the Main Screen for both controllers.




If the connection is successful the option will display "Server". If the connection is not successful the option will display ready. If it displays "Wi-Fi" you may need to open port 1400 on your network router.

## WI-FI SETTINGS

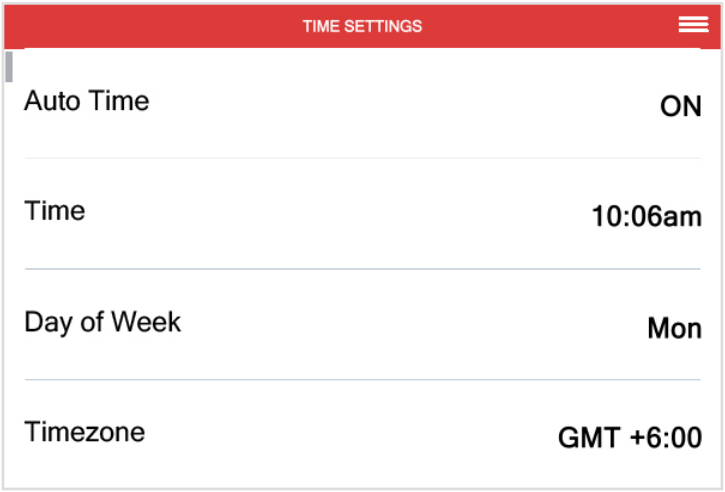
Once you have selected the appropriate network and you have entered the correct password for that 2.4GHz network, pressing Ready will establish a connection to the Wi-Fi network. Attempting to connect to Wi-Fi the display will say Updating Settings, before showing Connecting to Wi-Fi, Please Wait. The controller is now trying to connect to Wi-Fi and it may take upwards of 120 seconds. If the controller backs out of the WI-FI Settings then just re-enter the page and wait. After it has counted down it will display either Now Connected to, Server. It is now connected to its 2.4GHz network and the Wi-Fi symbol on the Main Screen will appear soon after. If the connection was unsuccessful it will display Press to Connect, Ready. Click on Ready and begin the connection process again. If Now Connected to, Wi-Fi is displayed you may need to open port 1400 on your network router.

**Wi-Fi Password** - Input the password for the 2.4 GHz SSID network that you are connecting to. (capital letters, special characters, numbers and lower case characters all available).

**Wi-Fi SSID Manual Entry** – This is where you can manually input the 2.4GHz SSID network that you want to connect to, use this method if the network does not auto populate when you perform the Wi-Fi SSID Scan. Ensure that you input this network exactly how it would appear, including spaces, numbers, capital or lowercase letters and or special characters.

**Wi-Fi SSID Scan** – Pressing this will allow the ZON-0600 to actively scan for all available networks that you can choose from, and then you may select the 2.4 GHz network that you wish to connect to.

**Press to Connect** - Once you have selected the appropriate network and you have entered the correct password for that 2.4GHz network, pressing Connect Now will establish a connection to the Wi-Fi network.




## TIME SETTINGS

**Auto Time** - When connected to a 2.4 GHz Network the time displayed on the THM-0600's will be associated with the time zone you have chosen.

**Time** – Manual time input (24 hour clock)

**Day of the Week** – Manual day input (Mon, Tue, Wed, Thur, Fri, Sat, Sun).

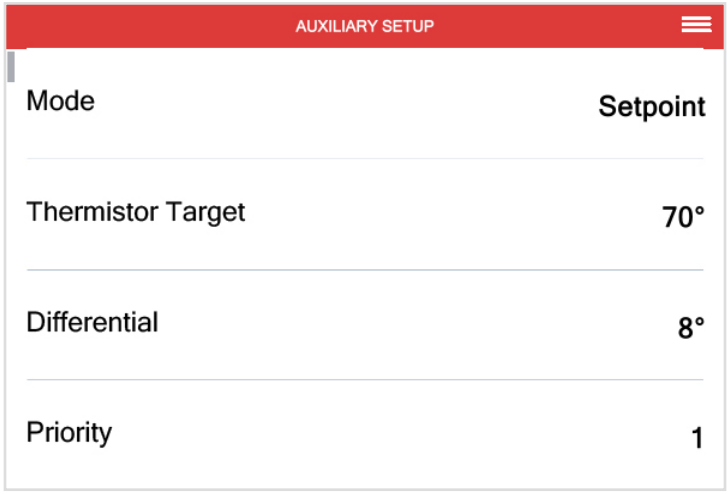
**Time Zone** - Select the time zone for your area.

## STANDARD TIMEZONES

| | | |
|---|---|---|
| Atlantic Standard Time | AST | GMT-4 |
| Eastern Standard Time | EST | GMT-5 |
| Central Standard Time | CST | GMT-6 |
| Mountain Standard Time | MST | GMT-7 |
| Pacific Standard Time | PST | GMT-8 |
| Alaskan Standard Time | AST | GMT-9 |
| Hawaiian Standard Time | HST | GMT-10 |

## DAYLIGHT SAVINGS

| | | |
|---|---|---|
| Atlantic Daylight Time | ADT | GMT-3 |
| Eastern Daylight Time | EDT | GMT-4 |
| Central Daylight Time | CDT | GMT-5 |
| Mountain Daylight Time | MDT | GMT-6 |
| Pacific Daylight Time | PDT | GMT-7 |




## AUXILIARY SETUP

**Mode** - Function of the auxiliary thermistor port at originate from the upper contacts EXT. THM. You can choose from 3 options: Setpoint, Outdoor , Display.

If you choose Setpoint, the ZON-0600 will display the following:

- **Thermistor Target** (Off, 35-200°F) this will be a heating only target for the Auxiliary thermistor input
- **Differential** (2-100) the differential selected will be split above and below the target. For example a differential set for 8 and a target set for 120 would mean that AUX Setpoint will call for heat at 116 and then shut off at 124.
- **Priority** (Shield, None, 1-7) Priority for this Auxiliary Thermistor

  **Shield:** not affected by another zones priority

  **None:** No priority for this zone, any other zone with priority will pause this call

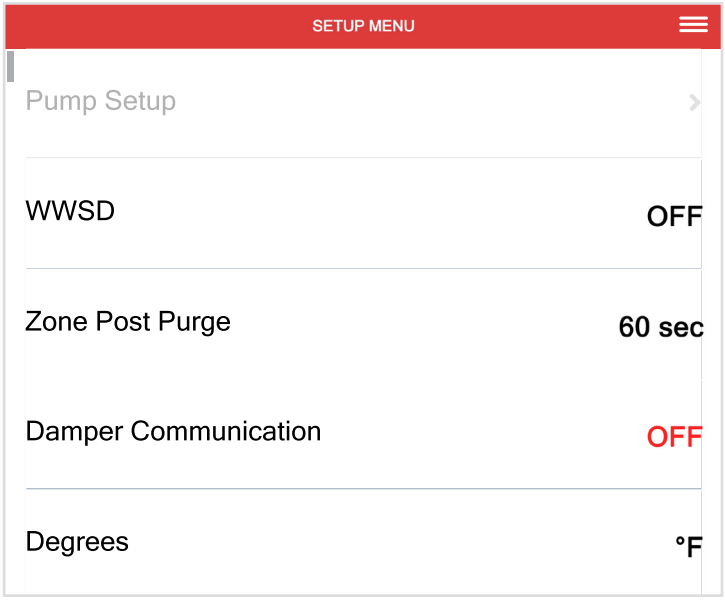
  **1:** 60 min priority over zones set to (none, 2-7)

  **2-7:** Priority over zones that are next in line, for example 2 has a greater priority than 3, 4, 5, 6, 7 and None

Any zone that is being affected by a priority will have it's current call greyed out.

If you choose Outdoor, this will be for an actual outdoor sensor (OUT-0100) connected to the ZON-0600 for exact location temperature and used for WWSD

If you choose Display Only, this will be an external thermistor to only monitor a temperature of the users choosing (ie: chiller, cold room, humidor, pool, etc)




## WWSD

When the ZON-0600 is hooked up to the local Wi-Fi network, the control will use the local weather station associated with the area to shutdown any heating zones when the WWSD temp is reached or exceeded. (Off, 35-150)

## ZONE POST PURGE

(0 -240 seconds) the amount of time if necessary for the zone outputs to run after the call associated with it has been removed.

## DAMPER COMMUNICATION

(On, Off) Communication between ZON-0600's in respect to dampers associated with one fancoil. For example if you have one fan coil but multiple other damper zones they will now communicate the damper logic between the 2 -5 other ZON-0600's in respect to the heating or cooling calls.

## DEGREES

Adjust temperatures in Farenheit or Celcius

## DAMPER SEQUENCES

Damper Zone (Zone Setup) dampers can not be used in conjunction with 4-pipe mode. Damper theory can be shared between linked **ZON-0600** devices.

**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.

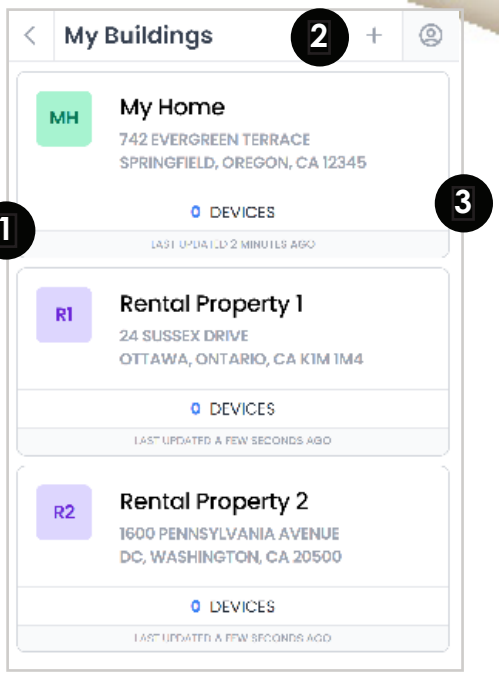
In a no heat or no cool situation all of the dampers are powered so they all remain in an open state. A call for heat or cool from a thermostat the corresponding zone output will remain powered and any other dampers on the zone controller will power down thus closing them. If another zone damper calls 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.

# SensorLinx™ Mobile App

The Sensorlinx™ mobile app is available for Apple iOS (APP Store) and Android® devices (Google Play). The mobile app allows for remote monitoring and control for HBX Controls devices.

**Now available on the Apple App Store and Google Play**

For detailed instructions on setting up the SensorLinx mobile app please refer to the SensorLinx app manual

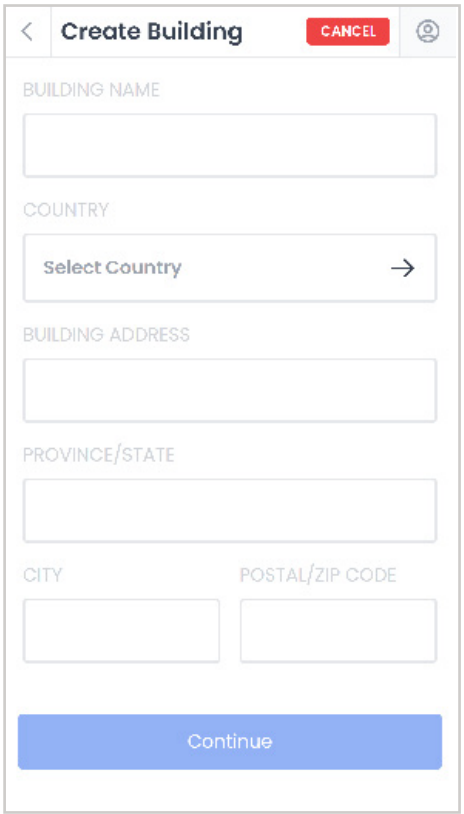



## Creating & Managing Buildings

1. Under My Buildings will be a list of the available Building locations to choose from. Each building will have the total number of HBX devices linked to that building, name, and address.

2. To add a Building, go to the Plus Symbol on the right of My Buildings and this will go to the Create Building page. Each of the fields under Create Building must be filled out to proceed, but they can be altered later under the Building Icon. Pressing Cancel or hitting the back button will delete the previous information on the page and will go back to My Buildings.

3. Once a Building has been created you will be redirected to the Devices page. This page will show all the devices linked to the Building as well as the outside temperature and current forecast based on the address information you've entered. If no devices have been added yet it will say No devices and provide a button to Link Devices.



## Creating & Managing Devices

Link Devices will go to a page that will say Scan Device QR Code, Enter Manually and Finished. The QR Code on the physical device can be scanned under this screen to enter in the device's information or it can be entered in manually by using the Sync Code and Device PIN. Both the Sync Code and Device PIN will be on the device itself. Once the information has been added click Add Device and then Finish. The device added and any devices linked together will populate under Devices. If any of the devices do not appear under this page then go to the Plus Symbol next to the outside weather to add further devices.

Each device will have its targets, sensor readings and demands displayed on this page. Clicking on any device will allow for these targets and demands to be changed.

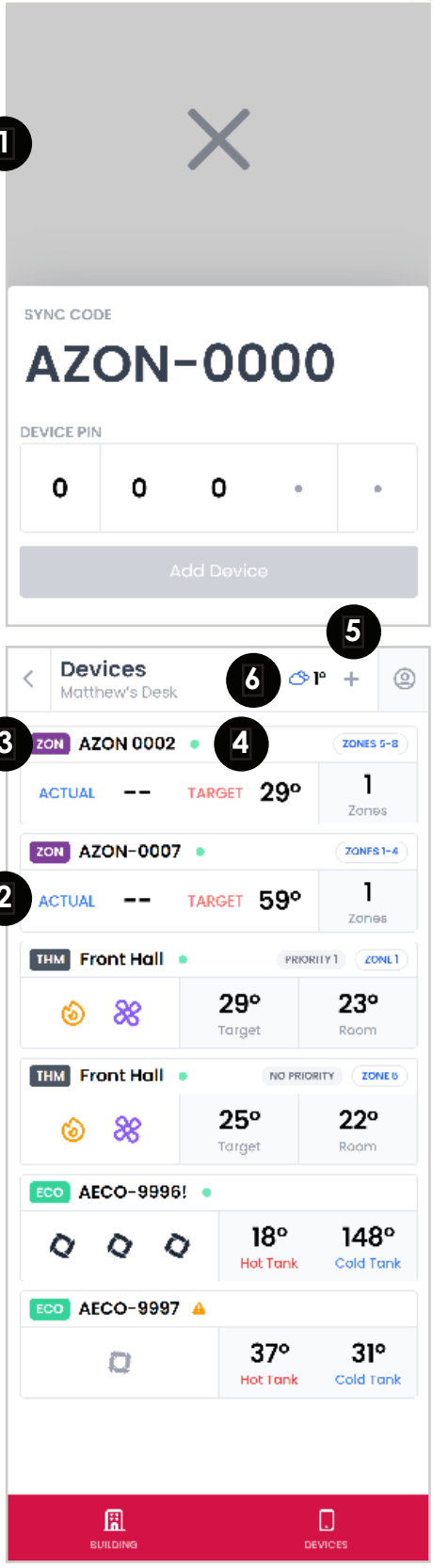
The name and type of the device

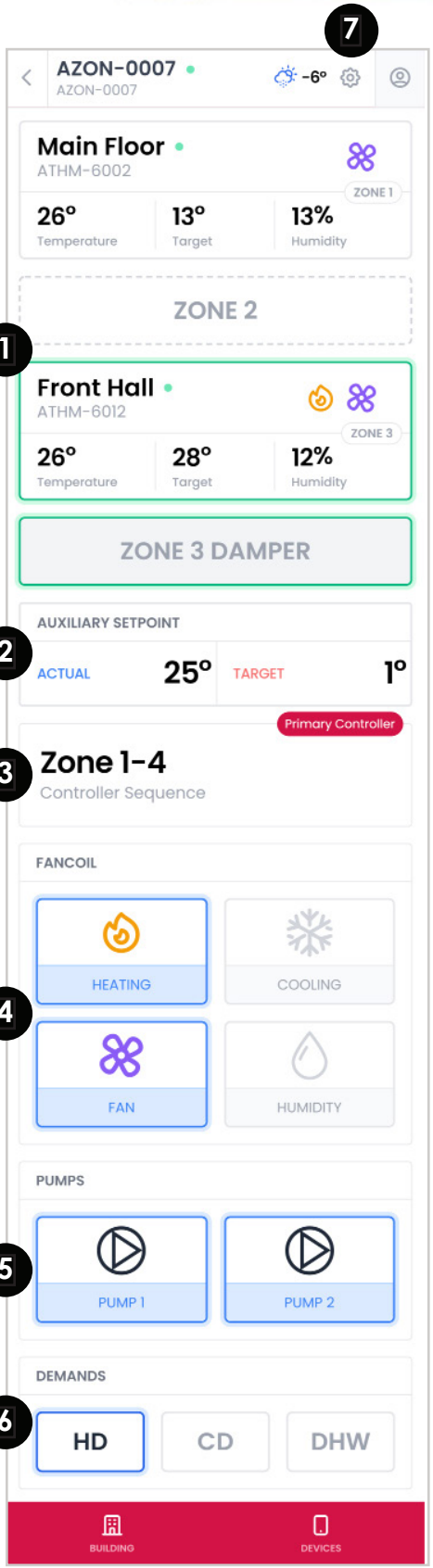
A green dot next to the device name will indicate that the device is connected and communicating to the network. A caution symbol next to the device name will indicate that the device is no longer communicating to the network.

This will bring up with the Create Building page or the Link Device page to add additional buildings and devices.

This shows the outdoor temperature.

Goes to Account Settings. Changes to a user's account are made here.






## Controlling a ZON-0600 with the SensorLinx mobile app

1. Each of the zones and any devices associated with that zone is shown here. If 4- Pipe Geo or Dampers is selected for a zone then the next associated zone will show. When a zone is in demand it will be highlighted by a green outline. Clicking on any of the zones with devices on it will go to the settings on that device.

2. The Auxiliary Setpoint will be shown here. If it is in demand and priority then it will be highlighted with a green outline.

3. Indicates what sequence this controller is in and whether it is the primary or secondary

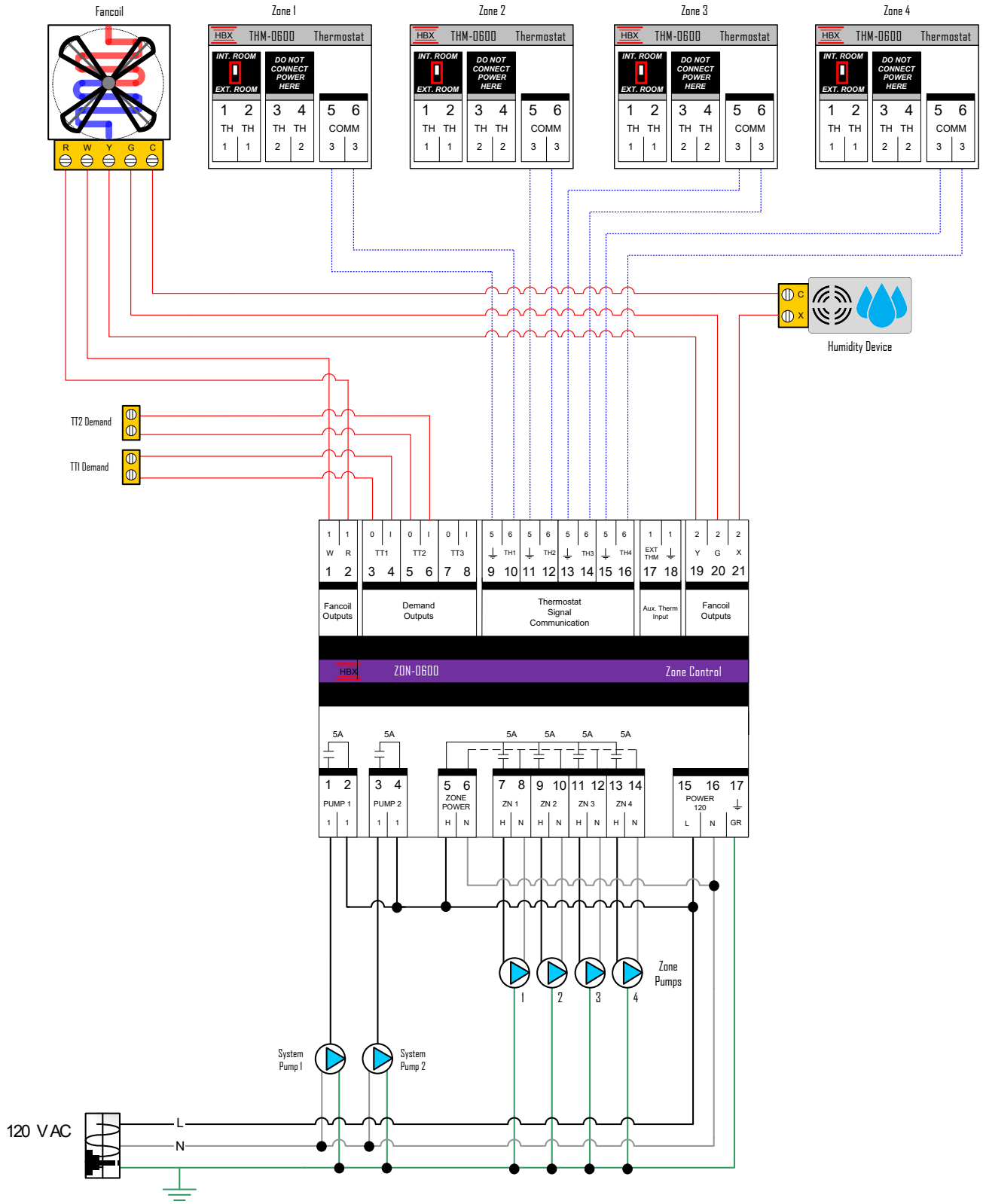
4. The fancoil outputs that are in demand will be shown with colour and be outlined in blue.

5. The pump outputs will be shown here. When activated the pump will be solid black and outlined in blue.

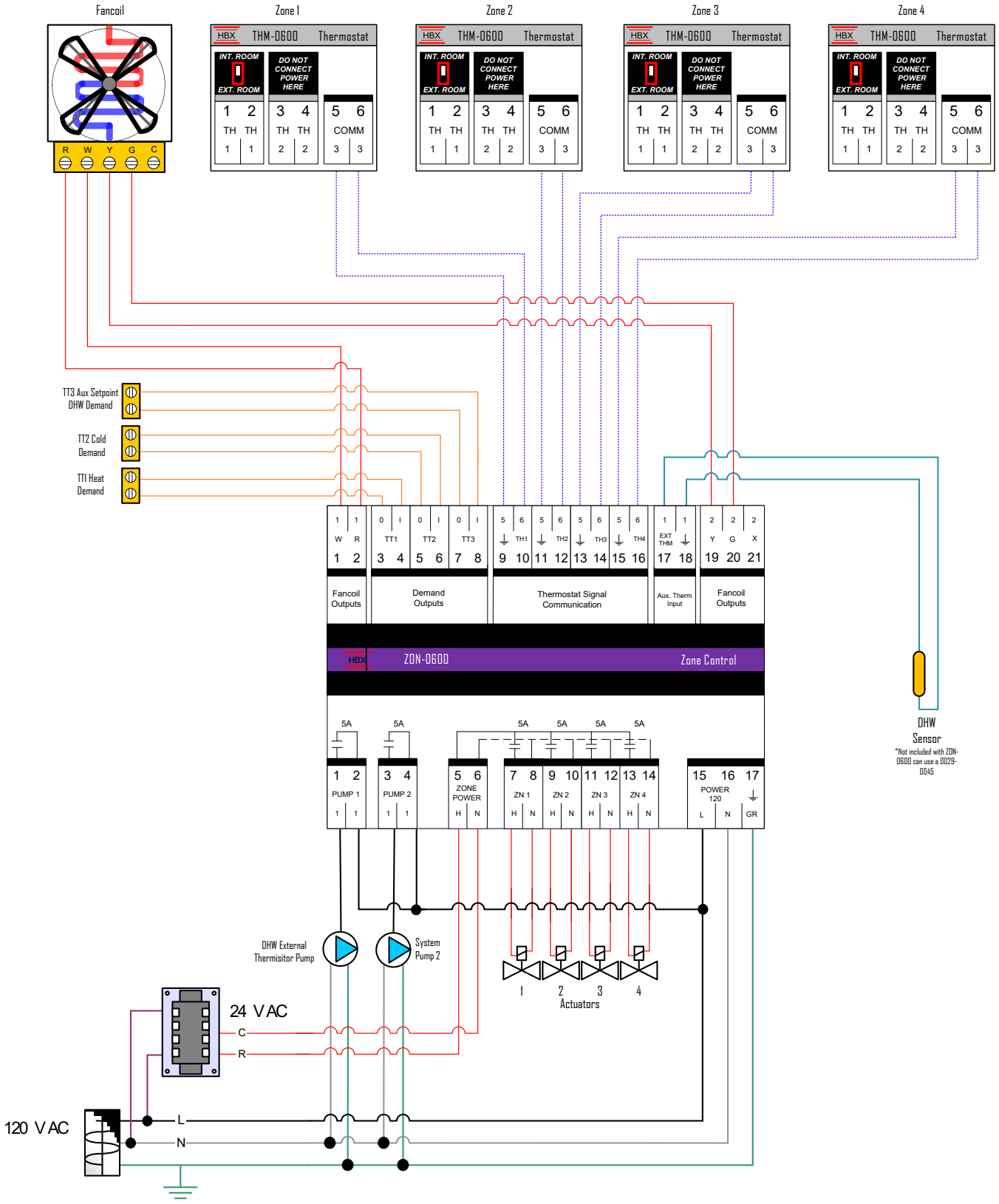
6. Each of the demands TT1, TT2 and TT3 will be shown here. When a demand is activated it will show here as solid black and outlined in blue.

7. This will go into advanced options for the ZON-0600

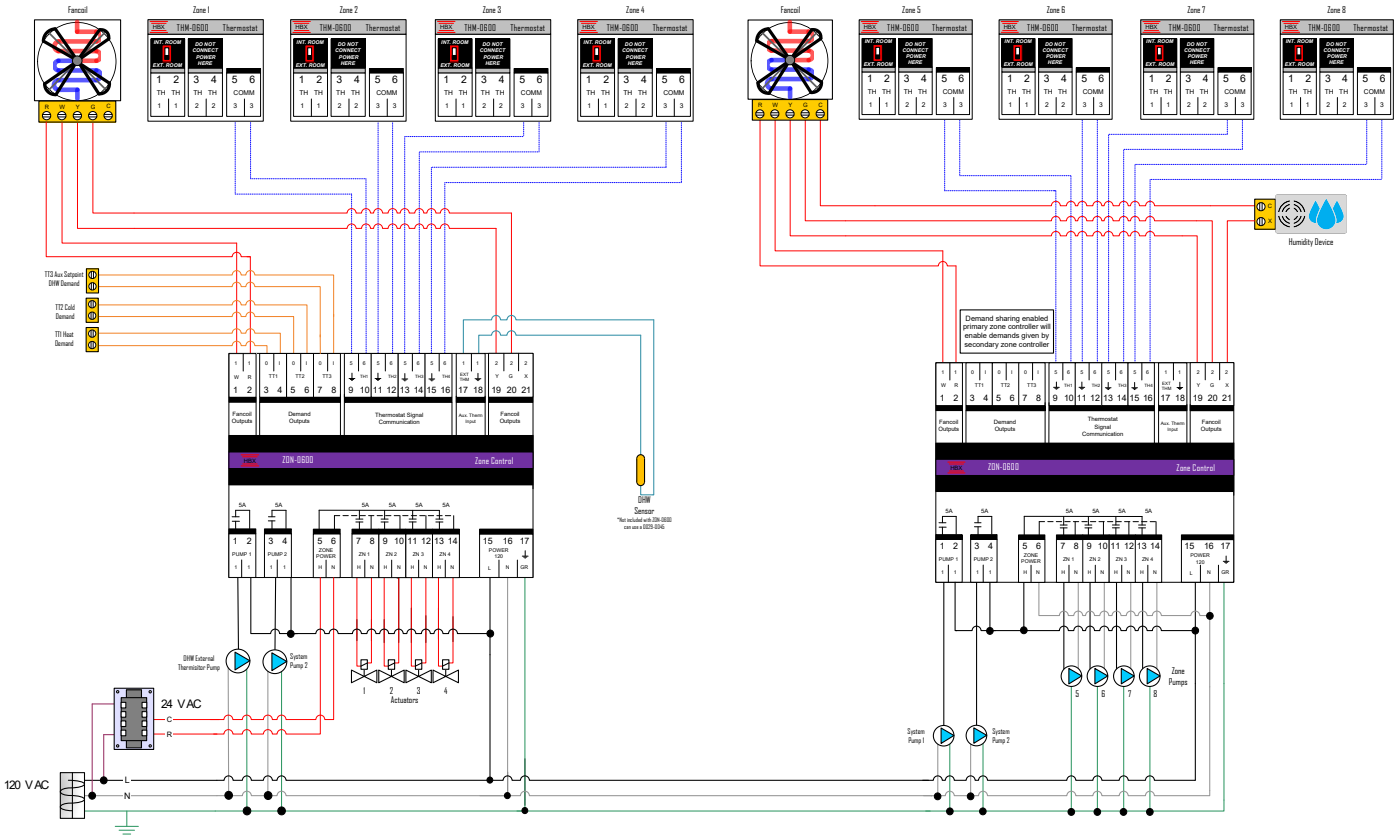
## 1) Standalone with THM-0600 and Zone Pumps



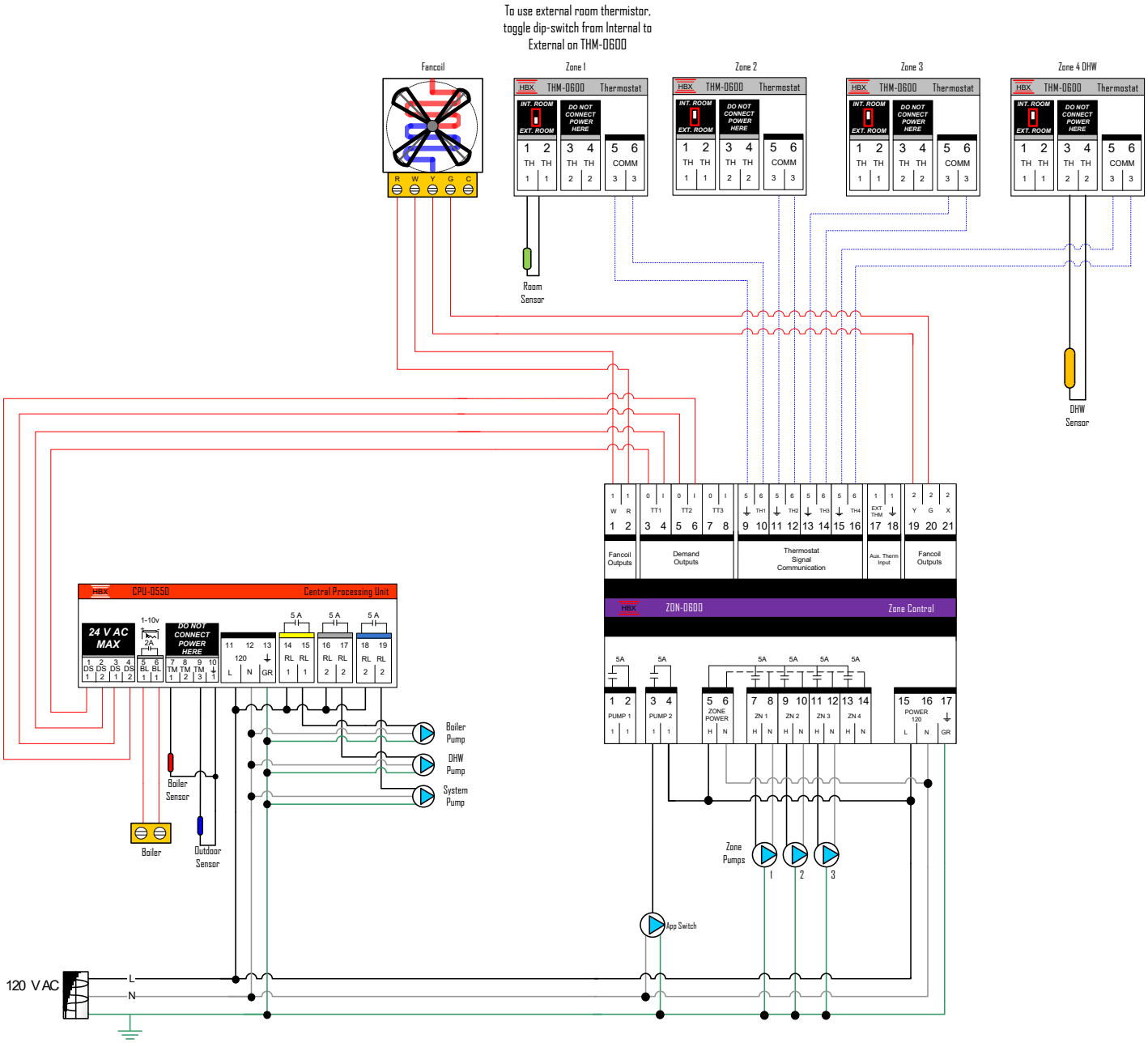
## 2) Standalone with THM-0600 and Zone Valves/Actuators



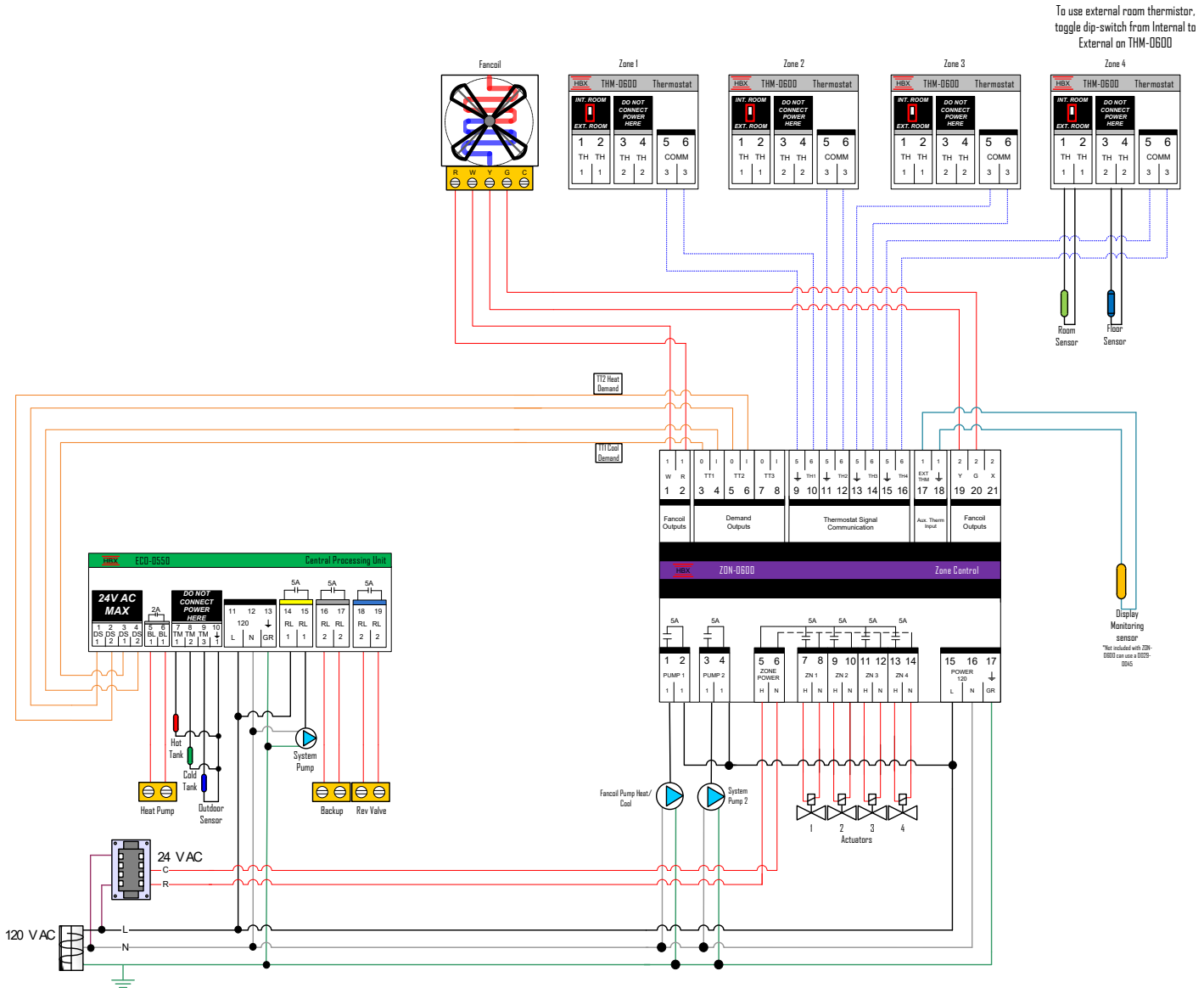
## 3) 2 Linked ZON-0600 Controls with THM-0600 and Zone Pumps and Valves



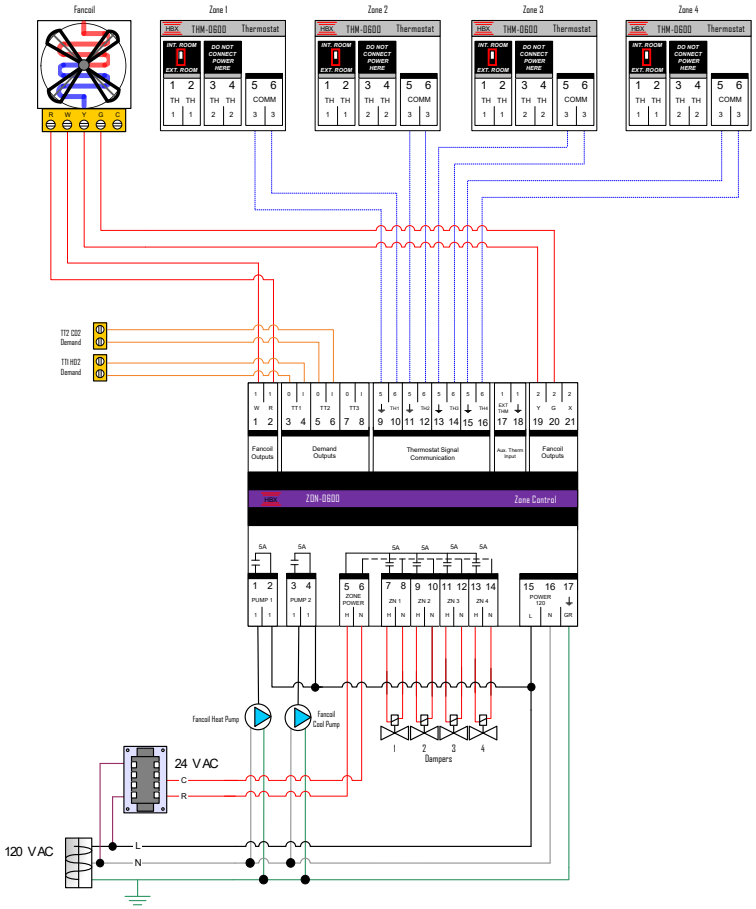
# 4) ZON-0600 and CPU-0550 with THM-0600 and Zone Pumps

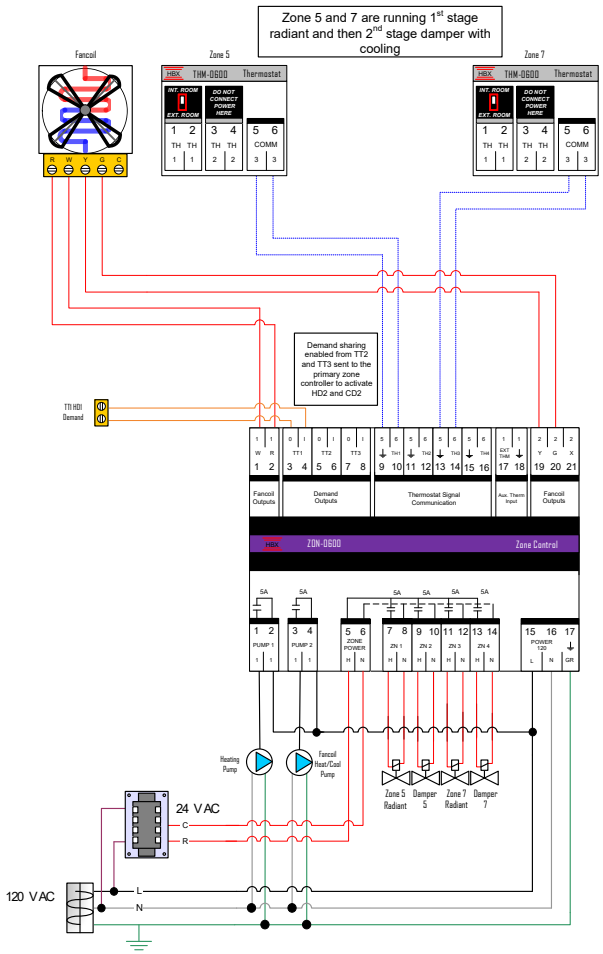


## 5) ZON-0600 and ECO-0550 with THM-0600 and Zone Valves

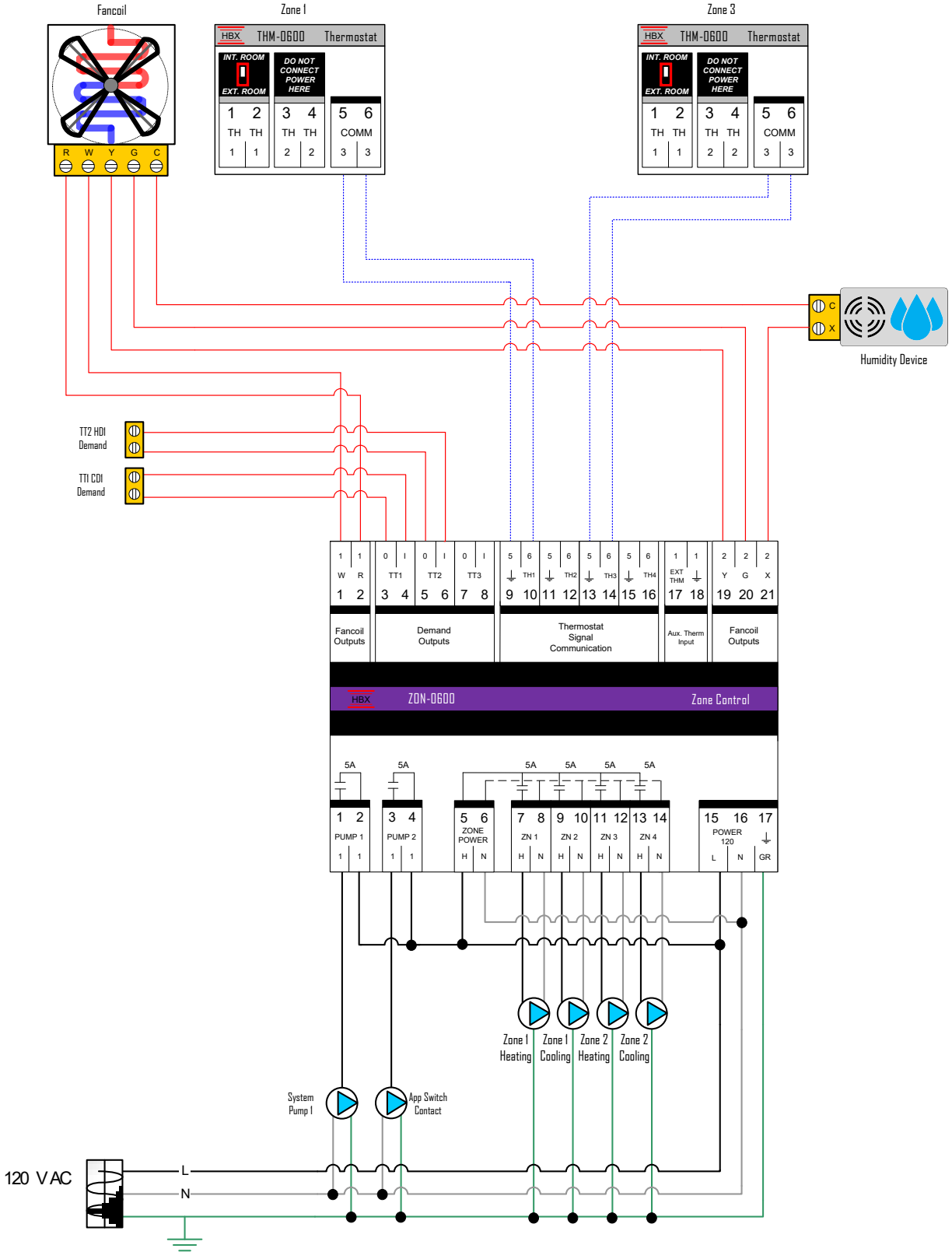


## 6) ZON-0600 with Zone Valves and Dampers



## 7) ZON-0600 Utilizing 4-Pipe and THM-0600



## ZON-0600 TROUBLESHOOTING GUIDE

| ISSUE | POSSIBLE CAUSES & RESOLUTIONS |
|---|---|
| **No Power** | • Verify that a 120VAC is present on pins 15-16-17. |
| **Zone output won't turn on** | • Verify that the appropriate power is connected to pins 5-6.<br>• If the zone is not outlined in green ensure a demand is present at the thermostat.<br>• Ensure the proper demand type on the thermostat is correct on the THM-0600 (see manual). A fancoil demand will only turn the zone output on if zone on demand is set to yes (see THM-0600 manual)<br>• Check priorities settings |
| **System pump output won't turn on** | • Verify wiring<br>• A zone demand needs to be made for the system pump to turn on.<br>• Ensure the pump type is correct.<br>• 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.<br>• Check priorities settings |
| **Fancoil outputs won't turn on** | • Verify wiring<br>• Check the demand settings. See THM-0600 manual<br>• Check priorities settings |
| **Demand outputs won't turn on/ wrong demands turning on** | • Verify proper demand is selected.<br>• In special functions on the THM-0600, make sure you have correctly set your demand options. |
| **Thermostat won't power** | • Verify wiring.<br>• Check wiring polarity in pins 5-6.<br>• Check zone setup options that the damper zones are set correctly (see THM-0600 manual)<br>• Check that four-pipe is activated.<br>• THM-0600 thermostat(s) will take up 120 seconds to power up. |
| **Zones modules not linking** | • Check zone sequence on each module.<br>• On any secondary ZON-0600, verify the primary ID is set correctly.<br>• Ensure the zones modules are withing range. |

**For additional assistance with the ZON-0600, 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.

## NOTES

## NOTES

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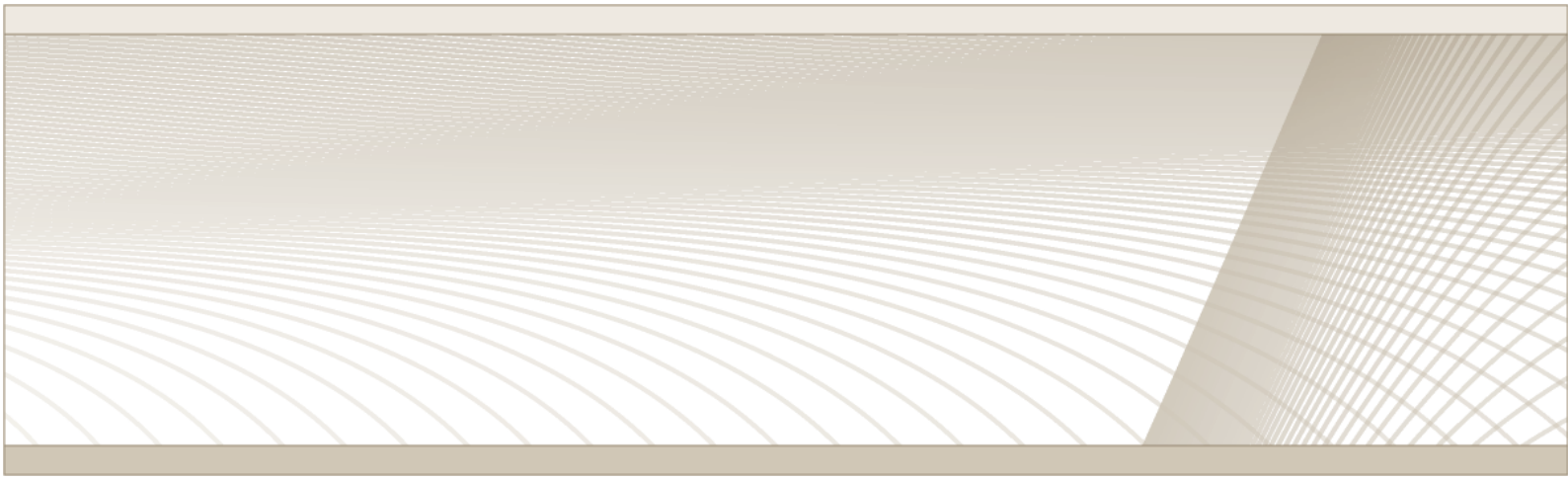
Email: info@hbxcontrols.com  Web: www.hbxcontrols.com

Toll Free Technical Support: +1 (855) 410 2341



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