



# HZ-THSTAT

## Horizon® Wireless Thermostat

Product Manual  
Crestron Electronics, Inc.

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**Regulatory Model:** M201911001

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# Overview

The Crestron® [HZ-THSTAT](#) is a versatile, wall-mounted heating and cooling thermostat with integrated humidistat capable of controlling two stage heat/cool systems, two stage heat pump systems with two auxiliary heat stages, floor warming systems, and humidity systems. A Wi-Fi® thermostat, the HZ-THSTAT delivers enhanced functionality when combined with a complete Crestron automation system.

The 3.5 in. LCD touch screen display is used to configure the system type, radiant floor, system performance, sensor setup, and thermostat control settings.

Integrated proximity and ambient light sensors ensure the thermostat display looks perfect in any room lighting condition. The RGB backlit status light bar indicates HVAC calls. The thermostat behavior can be customized separately for day and night operating modes.

With Crestron Toolbox® software, the thermostat can be configured and debugged remotely, and the thermostat configurations can be saved and accessed for reference. Detailed system logging offers the opportunity to diagnose HVAC, sensor, or network issues. Several HZ-THSTAT thermostats can be configured simultaneously or one at a time.

When the HZ-THSTAT is paired with the [HZA-CONV-THSTAT-2WIRE](#) Common Wire Adapter accessory (sold separately), the thermostat can be used in installations without a common wire. The HZ-THSTAT has local temperature and humidity sensors and accommodates up to four remote temperature sensors ([CHV-RTS](#), [CHV-RSS](#), [CHVI-RTS-1G-N-W](#), and [CHVI-RTS-1G-SM-W](#), sold separately) and up to two remote temperature/humidity sensors ([CHV-RTHS](#), sold separately) for optimized performance and flexibility. The HZ-THSTAT is also compatible with 10k thermistors.

## Supported Systems

The HZ-THSTAT can control the following heating and cooling systems with or without Humidity control:

- 1 or 2-stage heat
- 1 or 2-stage cool
- 1 or 2-stage heat, 1 or 2-stage cool
- 1 or 2-stage heat pump with 1 or 2 stage auxiliary heat
- 1 or 2-stage dual fuel heat pump with 1 or 2 stage auxiliary heat
- Radiant floor only (floor warming and or space heating)
- 1 or 2 stage heat (stage 1 radiant floor with or without floor warming), 1 or 2 stage cool
- 1, 2, or 3 stage heat (stage 1 radiant floor with or without floor warming), 1 or 2 stage cool heat pump with 1 stage aux heat

- 1, 2, or 3 stage heat (stage 1 radiant floor with or without floor warming), 1 or 2 stage cool dual fuel heat pump with 1 stage aux heat

#### NOTES:

- 2-stage heating: Unlike traditional furnaces that turn on and run at full capacity with each demand for heating, 2-stage heat operates like two separate furnaces to maintain a more consistent temperature in the home. The unit starts out running in its first stage, and operates at a fraction of its heating capacity. This reduced capacity is sufficient to warm the home on mild winter days. But when the temperature outside goes very low, the furnace adjusts to full capacity (second stage) to meet the demand for heat within the home.
- 2-stage cooling: In warm weather, the first stage of the cooling equipment operates at a fraction of the total cooling capacity. On very hot days, the second stage of the cooling equipment energizes, and the cooling system operates at full capacity.

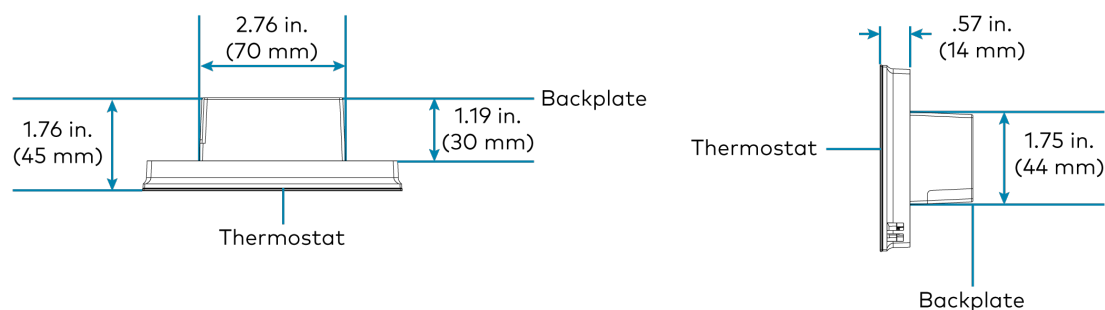
## Specifications

Specification	Details
<b>Measurement Range (Supplied by Remote Sensor)</b>	
Indoor Temperature	32° to 110°F (0° to 43°C)
Outdoor Temperature	-40° to 170°F (-40° to 77°C)
	<b>NOTE:</b> Outdoor temperature measurement is -30° to 120°F (-34° to 49°C) if thermistor sensors are used.
Humidity	0% to 100% RH
<b>Temperature Tolerance</b>	
	±1°F (±0.5°C)
<b>Humidity Tolerance</b>	
	± 5.0% RH
<b>Setpoint Range</b>	
Auto	38° to 99°F (3° to 37°C)
Heat	38° to 89°F (3° to 32°C)
Cool	38° to 99°F (3° to 37°C)
<b>Power Requirements</b>	
Power Consumption	3 W @ 24VAC
Max Current per Relay	1A
Max current Across All Relays	3A

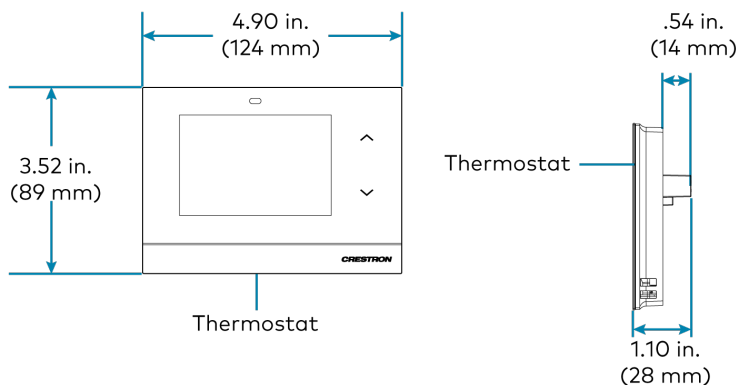
Specification	Details
<b>Communications</b>	
WiFi® communications	802.11/b/g/n (2.4 GHz)
<b>Buttons</b>	
Up	Raises the room's setpoint by 1°F, 1°C, or 0.5°C, depending on the active temperature scale
Down	Lowers the room's setpoint by 1°F, 1°C, or 0.5°C, depending on the active temperature scale
<b>Display</b>	
Type	Transflective LCD, backlit
Size	3.5 in. (89 mm)
Resolution	320 x 480
<b>Sensors</b>	
Ambient Light	Determines Day and Night mode, and sets auto dimming range for display and LED backlight  Backlight intensity is user adjustable
Proximity	Day: More sensitive  Night: Less sensitive
<b>Environmental</b>	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 95% RH (non-condensing)
<b>Construction</b>	
Housing	Plastic, surface-mountable to the front of a horizontally-oriented 1-gang electrical box
Surface Mounting	Mountable to dry wall with two anchors (included)  Cutout template provided
Electrical Box Mounting	Mountable to a horizontal US-style, 1-gang new or old work electrical box with two mounting screws (included)
Mounting Depth	1.50 in. (38 mm)
<b>Dimensions</b>	
Height	3.52 in. (89 mm)
Width	4.90 in. (124 mm)
Depth	1.76 in. (45 mm) overall, 0.57 in. (14 mm) from wall surface when installed
<b>Weight</b>	
	7.81 oz (221 g)

# Dimensions

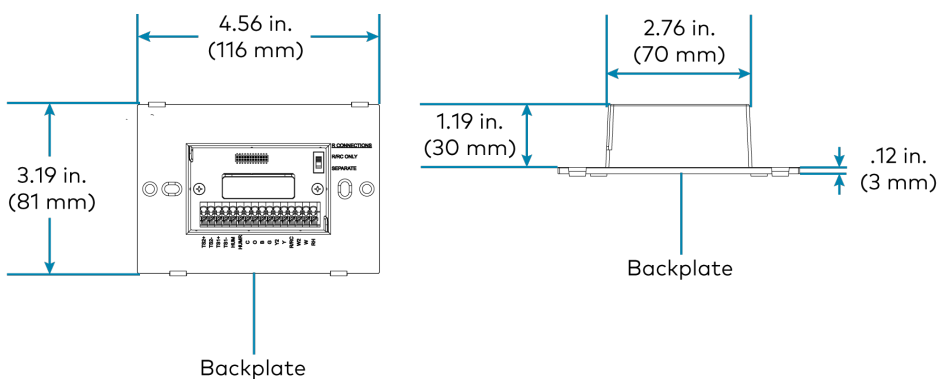
**Thermostat with Backplate Attached**



**Thermostat**



**Backplate**



# Installation

**NOTE:** Installers should have a strong working knowledge of HVAC systems.

The thermostat can be mounted directly to drywall, a low voltage mounting bracket (not included), or to an electrical box (not included) for new or old work applications.

## In the Box

- |   |   |
|---|---|
| 1 | HZ-THSTAT, Horizon® Wireless Thermostat |
|---|---|

### **Additional Items**

- |   |   |
|---|---|
| 2 | Anchor, Wall, Plastic, #6 x 1-1/4 in. (2043585)                             |
| 1 | Foam Insulation (2057585)   |
| 1 | Plate, Mounting with Terminal Block (4530666)                               |
| 2 | Screw, 6-32 x 3/4 in., Flat Head, Phillips (2055126)                        |
| 1 | Template, Cutout (4531679)  |
| 2 | Washer, Flat, Steel, #6 0.156 in. ID, 0.375 in. OD, 0.050 in. THK (2041707) |

## Determine the Mounting Location

Install the thermostat away from direct sunlight, drafts, doorways, skylights, and windows. Also, make sure that the thermostat is conveniently located for control access and setup.

Follow the mounting requirements below:

- Mount 60 in. (~1.6 m) above the finished floor; this is an HVAC industry standard.
- On each side of the thermostat, allow at least 12 in. of lateral clearance to any wall features, such as corners or molding.
- Do not mount on an exterior wall.

A cutout template is included and a mounting depth of 1.50 in. (38 mm) is required.

# Equipment Required

The following tools and hardware are required for mounting the thermostat.

## New Electrical Box or Low Voltage Mounting Bracket

### Equipment included:

- Mounting screws
- Washers (not needed for low voltage mounting bracket)

### Equipment not included:

- Electrical box or low voltage mounting bracket
- Utility knife
- Level
- Stud finder
- Phillips screwdriver

## Existing Electrical Box or Low Voltage Mounting Bracket

### Equipment included:

- Mounting screws
- Washers (not needed for low voltage mounting bracket)

### Equipment not included:

Phillips screwdriver

## Drywall

**NOTE:** A low voltage mounting bracket is recommended for retrofit drywall installations.

### Equipment included:

- Mounting screws
- Cutout template
- Drywall anchors

### Equipment not included:

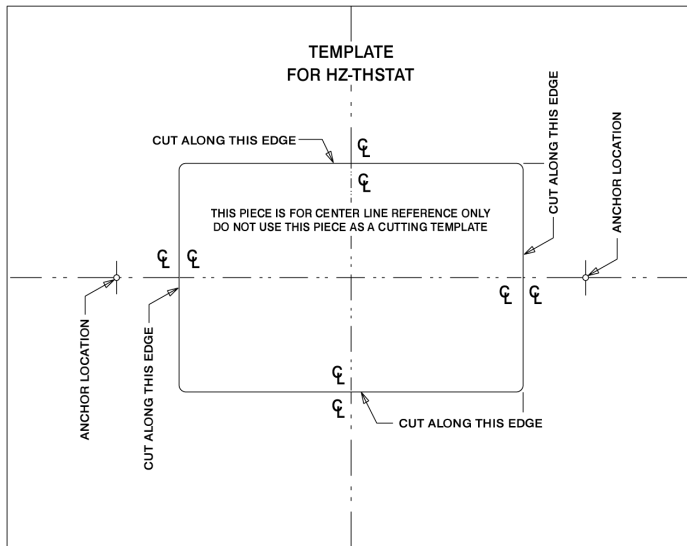
- Utility knife
- Level



- Stud finder
- Phillips screwdriver

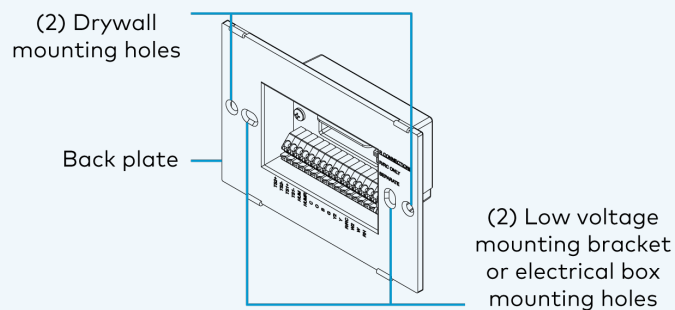
## Mount the HZ-THSTAT

When mounting directly to drywall, use the included cutout template, a level (not included), and a utility knife (not included) to cut the mounting hole in the drywall.



### Cutout Template

**NOTE:** For drywall installations, use the included drywall anchors. Make sure to use the outer screw holes on the back plate. For electrical box and low voltage mounting bracket (not included) installations, use the inner screw holes on the back plate.



## Mount to an Electrical Box or Low Voltage Mounting Bracket

For applications with an existing electrical box or low voltage mounting bracket:

1. Turn the HVAC system power off.
2. If there is an existing thermostat, take a picture or label the existing wire configuration before removing the old thermostat.
3. Skip to step 7 in the following procedure.

Mount the thermostat to an electrical box or low voltage mounting bracket:

**NOTE:** Use a stud finder to avoid any studs behind the wall.

1. Turn the HVAC system power off.
2. Level the box or bracket and draw a cutout template for the appropriate size.  
For an electrical box, trace the outside of the box  
For the low voltage mounting bracket, trace the inside of the bracket or use the corner holes for markings.
3. Use a utility knife to cut around the outline of the drawn template.
4. Keep retracing the outline cutting deeper until penetrating the back paper of the drywall. Clear away the excess drywall.

**NOTE:** Identify the wall type as Insulated (packed with insulation) or Non-Insulated (hollow). Assigning the wall type is necessary for Installer Settings configuration.

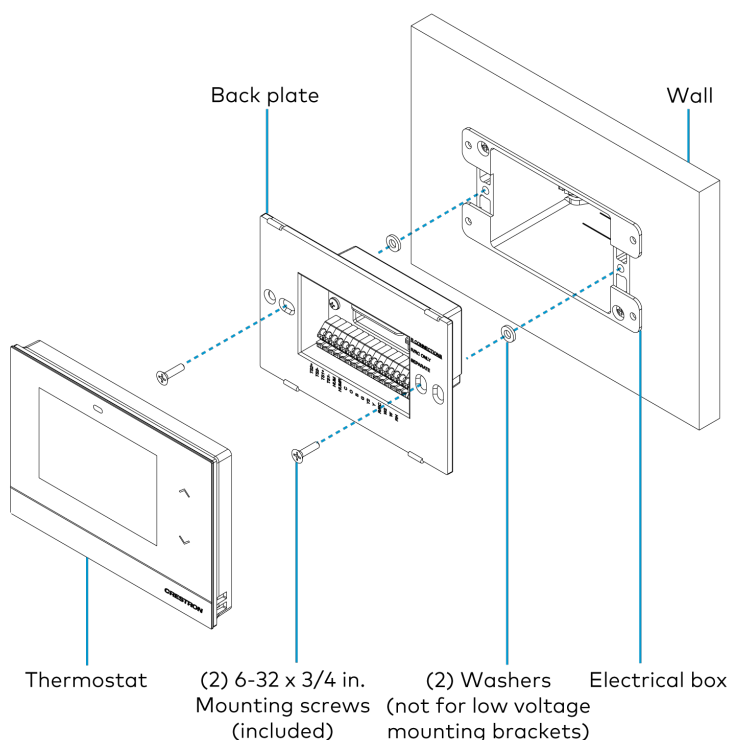
5. Push the box or bracket through the mounting hole.
6. Tighten the retaining screws until the box or bracket is held firmly in place.
7. Pull the wires through the thermostat backplate, and push the backplate into the box or bracket.

**NOTE:** Always use the backplate shipped with the thermostat. Do not reuse installed backplates from older thermostats.

8. Using the mounting screws (included), screw the backplate to the box or bracket. Do not overtighten.

**NOTE:** Use the included washers to prevent overtightening when installing to a new work electrical box.

9. Wire the backplate. Refer to [System Connections on page 11](#).
10. Plug the wire hole on the back of the thermostat with the included foam insulation. Refer to [Wiring Diagrams on page 14](#).
11. Attach the thermostat to the backplate.



## Mount to Drywall

For retrofit applications replacing an existing thermostat, turn the HVAC system power off and take a picture or label the current wire configuration before dismantling the current thermostat.

**NOTES:** When replacing a thermostat that was mounted to drywall with anchors, consider the following options:

- move the installation up or down 1 in. from the existing position to avoid interference between the new and old anchor positions
- or
- use a low voltage mounting bracket (not included)

Mount the thermostat to drywall:

**NOTE:** Use a stud finder to avoid any studs behind the wall.

1. Turn the HVAC system power off.
2. Cut out the center rectangle of the included cutout template.
3. Level the cutout template against the mounting surface, and trace the inside rectangle.
4. Mark the anchor locations.
5. Use a utility knife to cut around the outline of the drawn template.

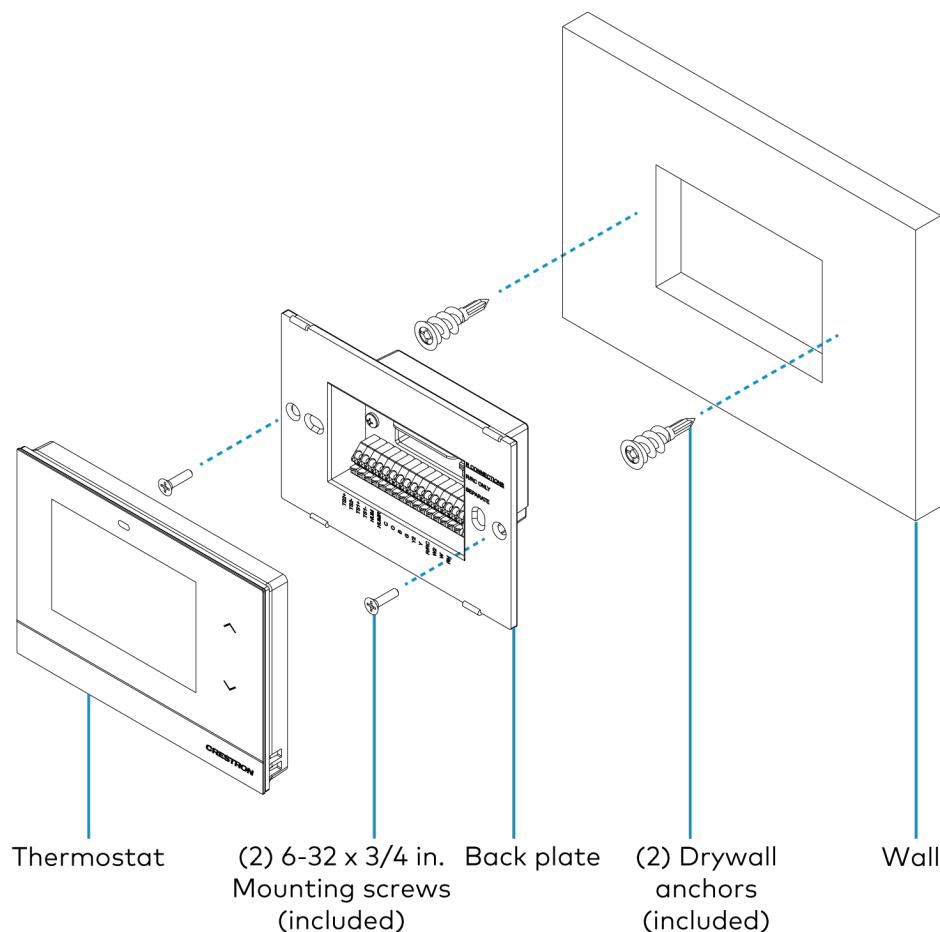
6. Keep retracing the outline cutting deeper until penetrating the back paper of the drywall. Clear away the excess drywall.

**NOTE:** Identify the wall type as Insulated (packed with insulation) or Non-Insulated (hollow). Assigning the wall type is necessary for Installer Settings configuration.

7. Screw in both self-tapping anchors (included) through the locations marked earlier.
8. Pull the wires through the thermostat backplate, and push the backplate into the mounting hole.

**NOTE:** Always use the backplate shipped with the thermostat. Do not reuse installed backplates from older thermostats.

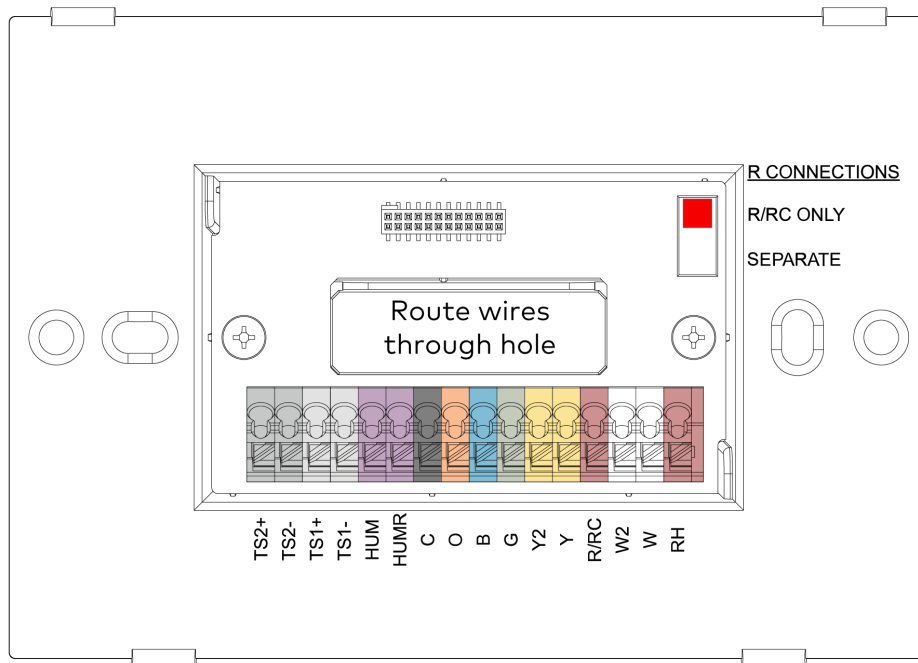
9. Using the mounting screws (included), screw the backplate to the anchors. Do not overtighten.
10. Wire the backplate. Refer to [System Connections on page 11](#).
11. Plug the wire hole on the back of the thermostat with the included foam insulation. Refer to [Wiring Diagrams on page 14](#).
12. Attach the thermostat to the backplate.



# System Connections

Use the connections on the backplate to wire the thermostat to the HVAC system.

Connections and Controls	Description
C	(1) Common from HVAC system 24VAC transformer. Used to power the device.
RH	(1) Reference for heat calls (W/W2) when using two separate reference connections. Used to power the device.
R/RC	(1) Reference for compressor/cooling/fan calls (Y/Y2/G/O/B). For single reference systems where the Reference Connections switch is set to R/RC ONLY, R/RC is also the reference for heat calls (W/W2). R/RC is also used to power the thermostat.
W	(1) Heat stage 1 call. Energized to R/RC during a call for stage 1 heat (stage 2 heat when Radiant Floor is set to Space Heating) or aux heat 1 when Reference Connections switch is set to R/RC ONLY. If the Reference Connections switch is set to SEPARATE, W is energized to RH instead of R/RC ONLY.
W2	(1) Heat stage 2 call. Energized to R/RC during a call for stage 2 heat, aux heat 2, or radiant floor when the Reference Connections switch is set to R/RC ONLY. If the Reference Connections switch is set to SEPARATE, W2 is energized to RH instead of R/RC ONLY.
Y	(1) Compressor stage 1 call. Energized to R/RC during a call for stage 1 compressor when the Reference Connections switch is set to R/RC ONLY.
Y2	(1) Compressor stage 2 call. Energized to R/RC during a call for stage 2 compressor when the Reference Connections switch is set to R/RC ONLY.
O	(1) Changeover, active in cool mode. Energized to R/RC during cooling modes when the Reference Connections switch is set to R/RC ONLY.
B	(1) Changeover, active in non-cool modes. Energized to R/RC during non-cooling calls when the Reference Connections switch is set to R/RC ONLY.
G	(1) Fan call. Energized to R/RC during a fan call when the Reference Connections switch is set to R/RC ONLY.
HUM	(1) Humidistat call. Energized to HUMR during a humidity call.
HUMR	(1) Reference, humidistat calls.
TS1+ and TS1-	(2) From remote temperature sensor ( <a href="#">CHV-RTS</a> , <a href="#">CHVI-RTS-1G-N-W</a> , and <a href="#">CHVI-RTS-1G-SM-W</a> ), remote slab sensor ( <a href="#">CHV-RSS</a> ), or remote temperature and humidity sensor ( <a href="#">CHV-RTHS</a> ). Remote sensors sold separately.
TS2+ and TS2-	(2) From remote temperature sensor ( <a href="#">CHV-RTS</a> , <a href="#">CHVI-RTS-1G-N-W</a> , and <a href="#">CHVI-RTS-1G-SM-W</a> ), remote slab sensor ( <a href="#">CHV-RSS</a> ), or remote temperature and humidity sensor ( <a href="#">CHV-RTHS</a> ). Remote sensors sold separately.
USB	(1) Micro B female, USB 2.0 computer console port for firmware upload, temporary power, and device configuration.



**CAUTION:** To avoid a possible short circuit, ensure excess wire is pushed back through the hole in the backplate.

#### NOTES:

- This device is rated for 24VAC operation.
- For installations without a common wire, the [HZA-CONV-THSTAT-2WIRE](#) 2-wire power adapter (sold separately) may be used. Refer to [Wiring Diagrams on page 14](#) for wiring details.
- A miniature flathead screwdriver (not supplied) may be required to attach thinner gauged wires to the backplate terminals. Press the terminal release with the flathead screwdriver while inserting the wires.

# R CONNECTIONS Switch

The thermostat pulls power from both R terminals and the C terminal. The position of the R Connections switch decides which R connection is routed to the heat calls (W/W2).

## NOTES:

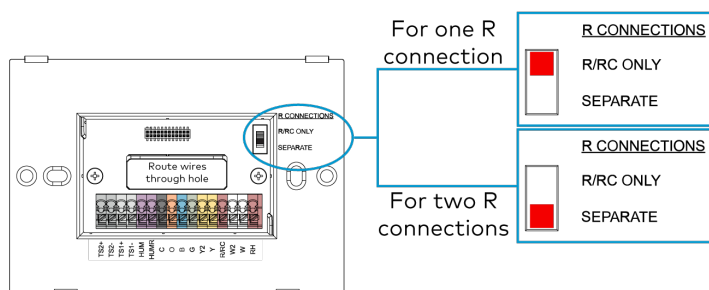
- When using the HZA-CONV-THSTAT-2WIRE, always make connections to the R/RC terminals and set the switch to R/RC ONLY.
- When power is not available from the HVAC system, a separate 24VAC transformer can be connected between the RH and C terminals to provide power to the thermostat. Set the R Connections switch to R/RC ONLY to ensure all calls use the R/RC reference.

Before attaching the thermostat, note the position of the R CONNECTIONS switch.

- For one R connection (24VAC reference), wire to the R/RC terminal and set the switch to R/RC ONLY.
- For two R connections (24VAC reference), wire to the R/RC and RH terminals and set the switch to SEPARATE.

The thermostat pulls power from both R connections and the C connection. The R Connections switch dictates which R connection is routed to the heat calls (W/W2). When power is not available from the HVAC system, a separate 24VAC transformer can be connected between the RH and C terminals to provide power to the thermostat, and the R Connection must be set to R/RC ONLY to ensure all calls use the R/RC reference.

**NOTE:** When using the HZA-CONV-THSTAT-2WIRE, always use R/RC terminal and set the R Connections switch to R/RC ONLY.



# Thermistor Curve

The thermostat is compatible with Crestron remote sensors and 10K thermistors. Refer to the table for information on the supported thermistor temperature curve.

Temperature	k-ohm
-30°F (-34.4°C)	185.42
0°F (-17.8°C)	81.72
40°F (4.4°C)	26.11
80°F (26.7°C)	9.37
90°F (32.2°C)	7.41
110°F (37.8°C)	4.75
120°F (48.9°C)	3.98

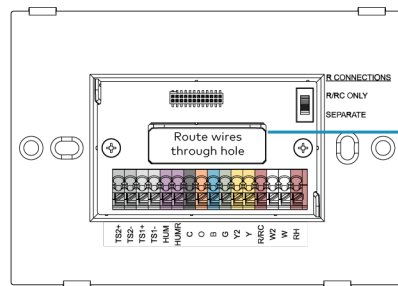
## Wiring Diagrams

The following diagrams are a sampling of possible wiring solutions and do not represent all wiring options.

- [Single Stage Heat-Only System without Common Wire on page 16](#)
- [Single Stage Heat/Cool System without Common Wire on page 17](#)
- [Single Stage Heat/Cool System on page 18](#)
- [Single Stage Heat Pump with Aux Heat on page 19](#)
- [2 Stage Heat Pump with 2 Stage Aux Heat on page 20](#)
- [Dual Stage Heat/Cool System with Separate References and Humidification on page 21](#)
- [Wiring a Local Power Source on page 22](#)
- [Radiant Floor Only \(Floor Warming and/or Space Heating\) on page 23](#)
- [2 Stage Heat \(Stage 1 Radiant Floor\)/1 Stage Cool or 1 Stage Heat/1 Stage cool with Floor Warming on page 24](#)
- [2 Stage Heat \(Stage 1 Radiant Floor\)/1 Stage Cool Heat Pump with 1 Stage Aux Heat or 1 Stage Heat/1 Stage Cool Heat Pump with 1 Stage Aux Heat and Floor Warming on page 25](#)
- [3 Stage Heat \(Stage 1 Radiant Floor\)/2 Stage Cool Heat Pump with 1 Stage Aux Heat or 2 Stage Heat/2 Stage Cool Heat Pump with 1 Stage Aux Heat and Floor Warming on page 26](#)



After wiring the thermostat, plug the wire hole on the back of the thermostat with the included foam insulation. The insulation prevents drafts and ensures accurate temperature readings.



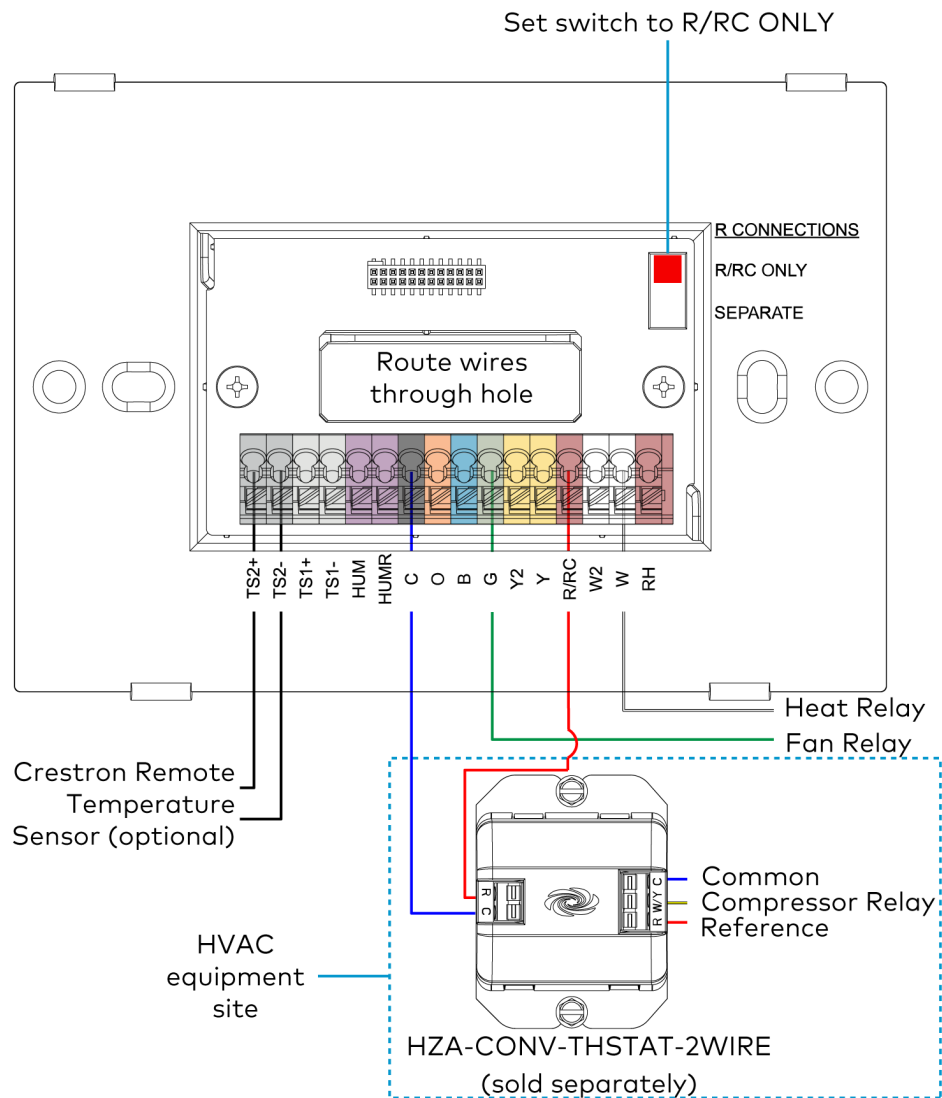
After routing the wires, plug the back of the hole with the foam insulation (included).

**NOTE:** For Radiant Floor, if the Radiant type is Floor Warming, Space Heating, or Floor Warm/Space Heat, always connect the radiant floor call wire to W2. Space Heating or Floor Warm/Space Heat will always use the radiant floor as the first stage of heat.

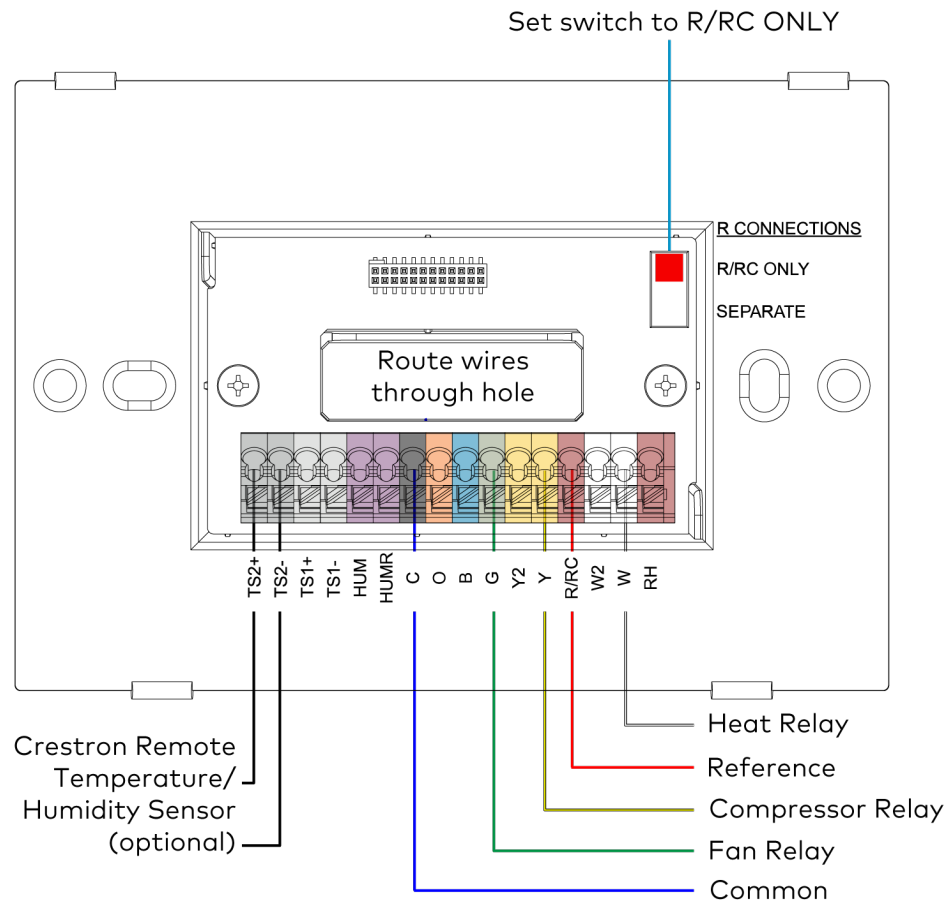
**NOTE:** This wiring is also applicable for a Radiant Floor Only (Floor Warming and/or Space Heating) system without Common Wire.



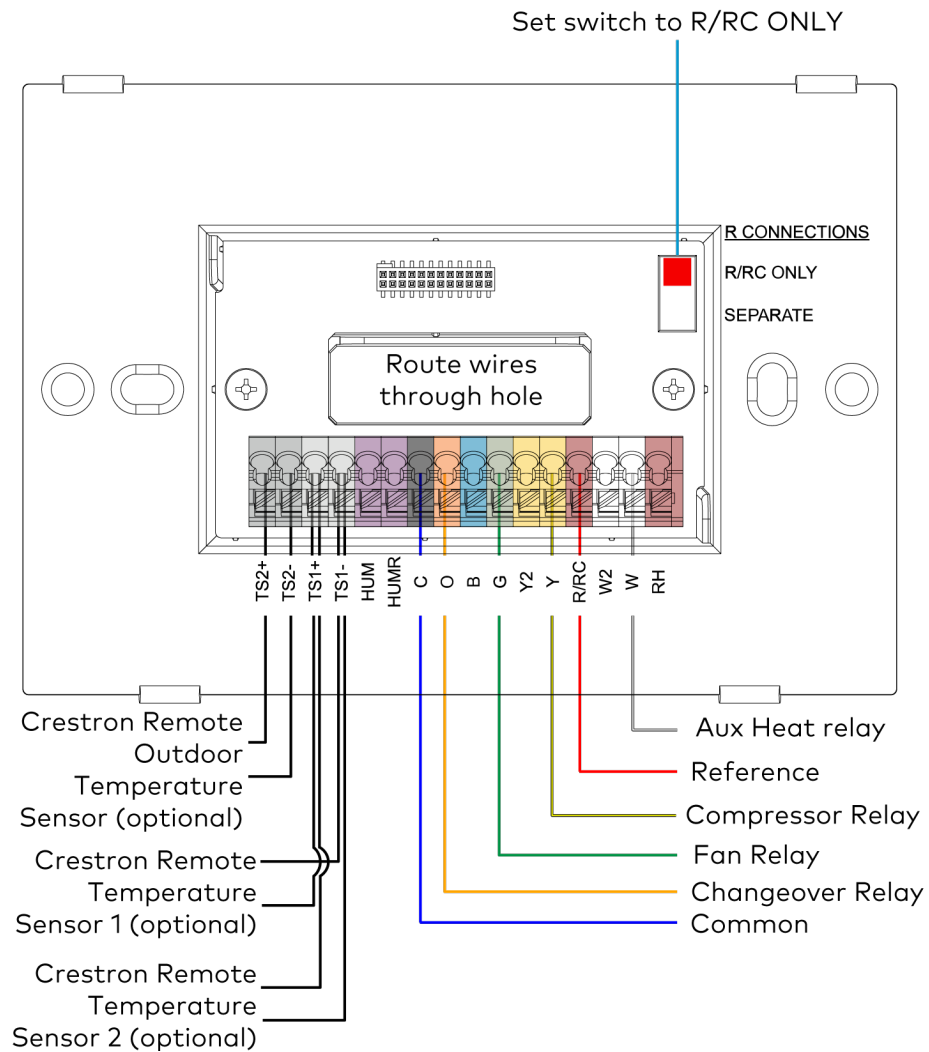
# Single Stage Heat/Cool System without Common Wire



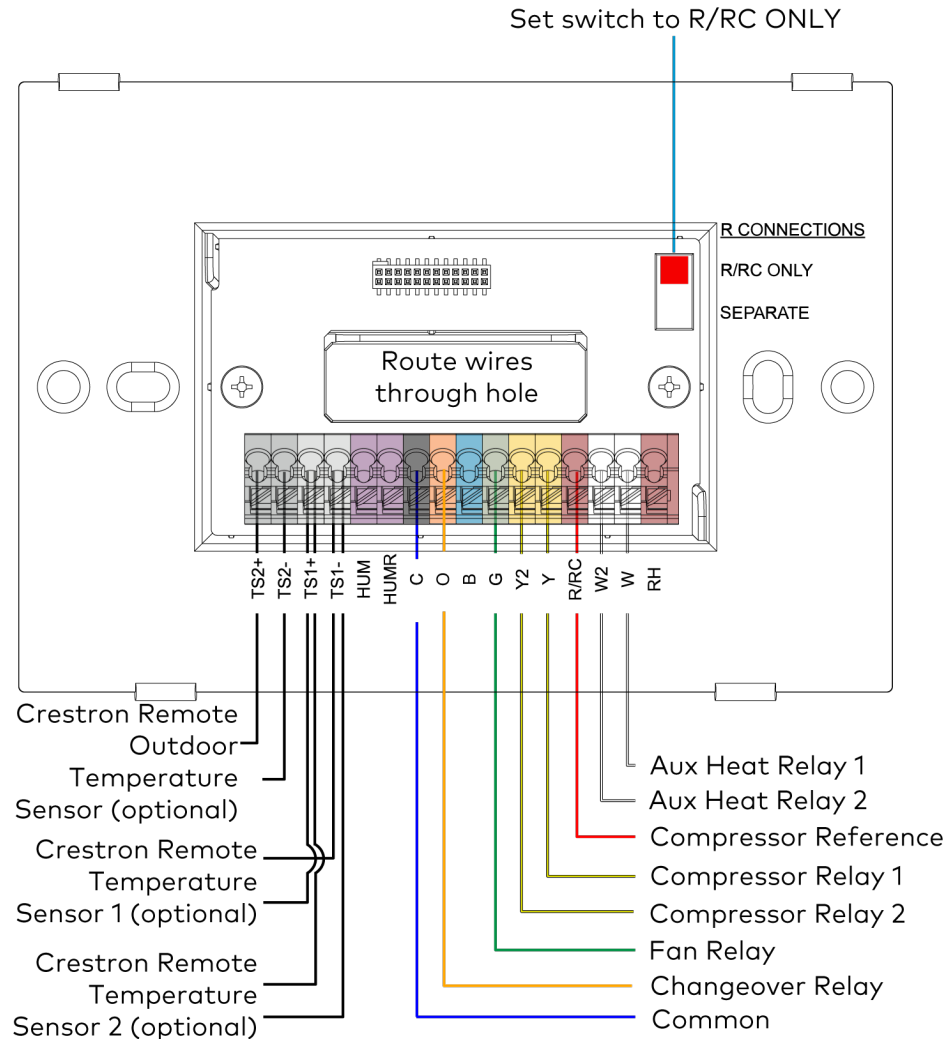
# Single Stage Heat/Cool System



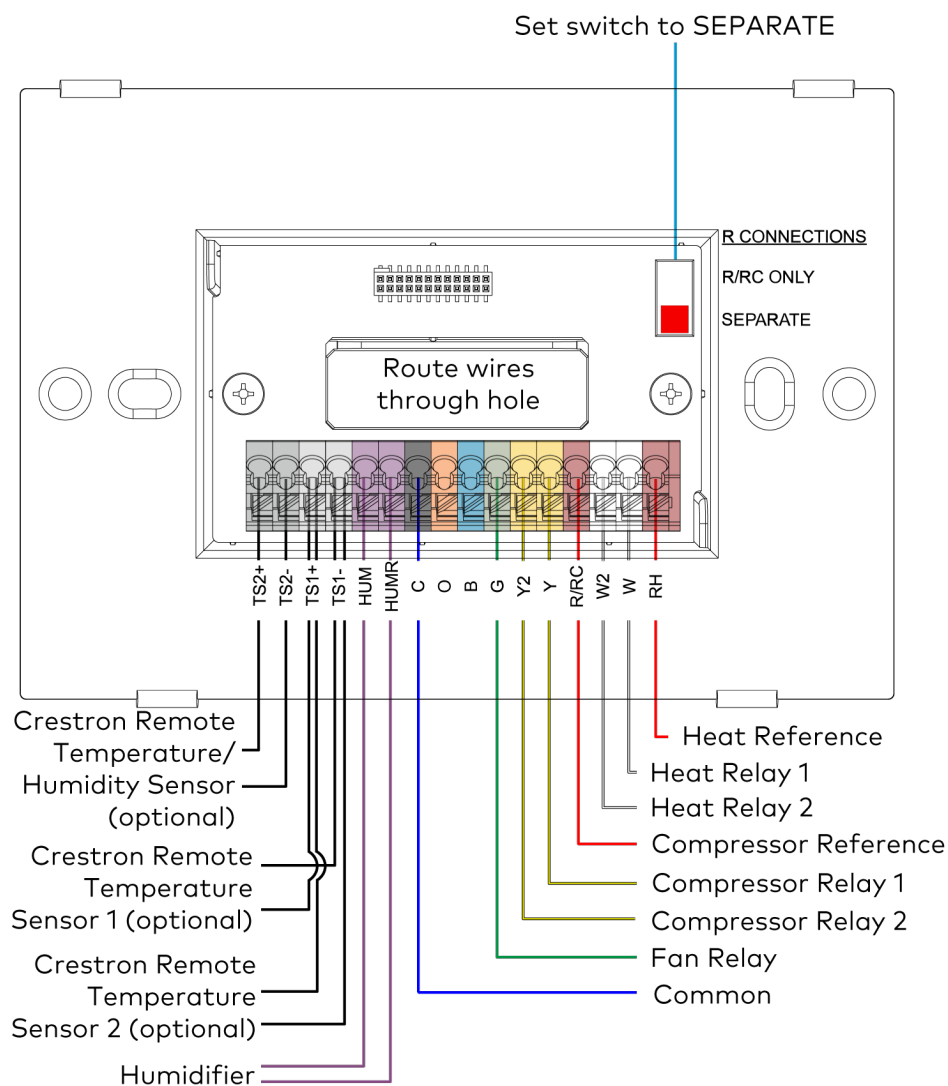
# Single Stage Heat Pump with Aux Heat



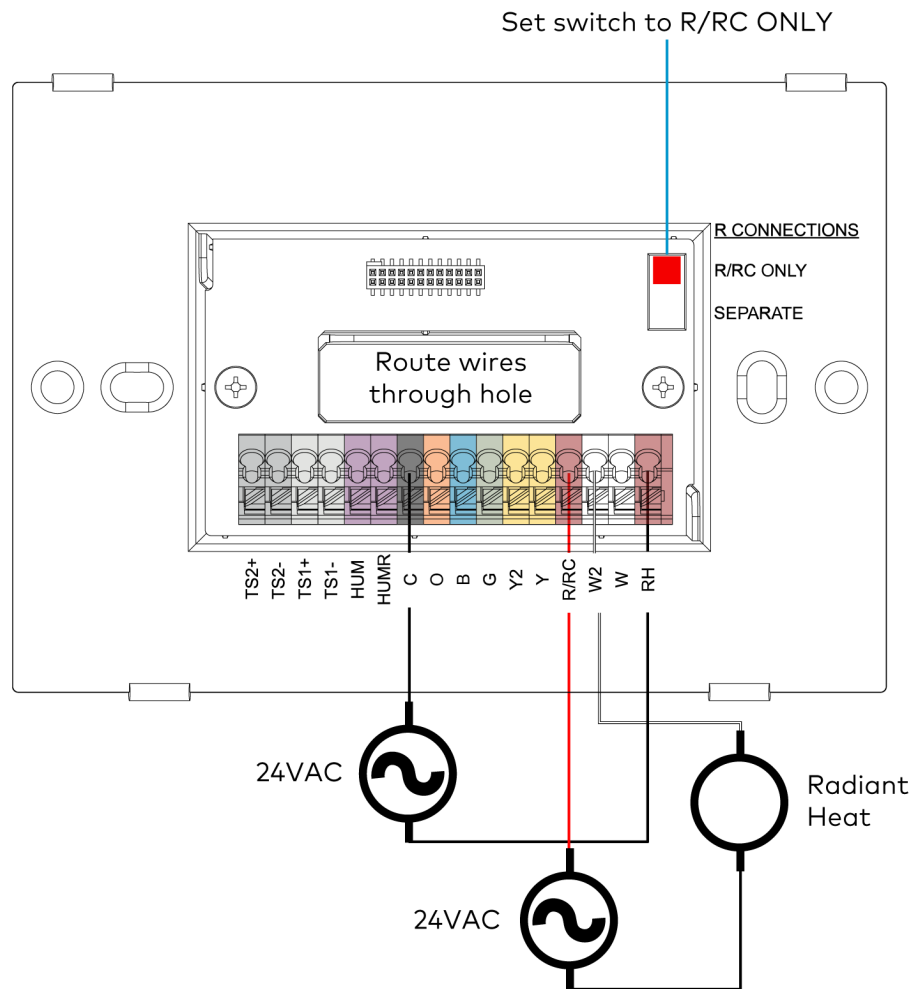
## 2 Stage Heat Pump with 2 Stage Aux Heat



# Dual Stage Heat/Cool System with Separate References and Humidification



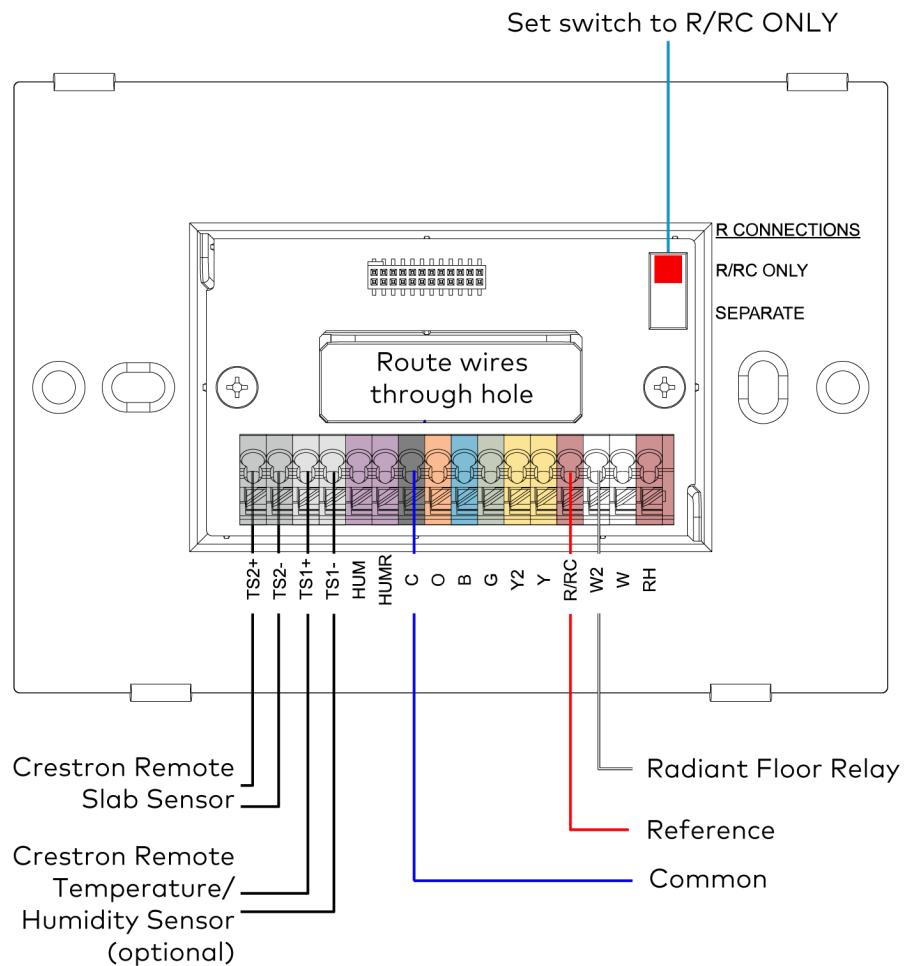
## Wiring a Local Power Source



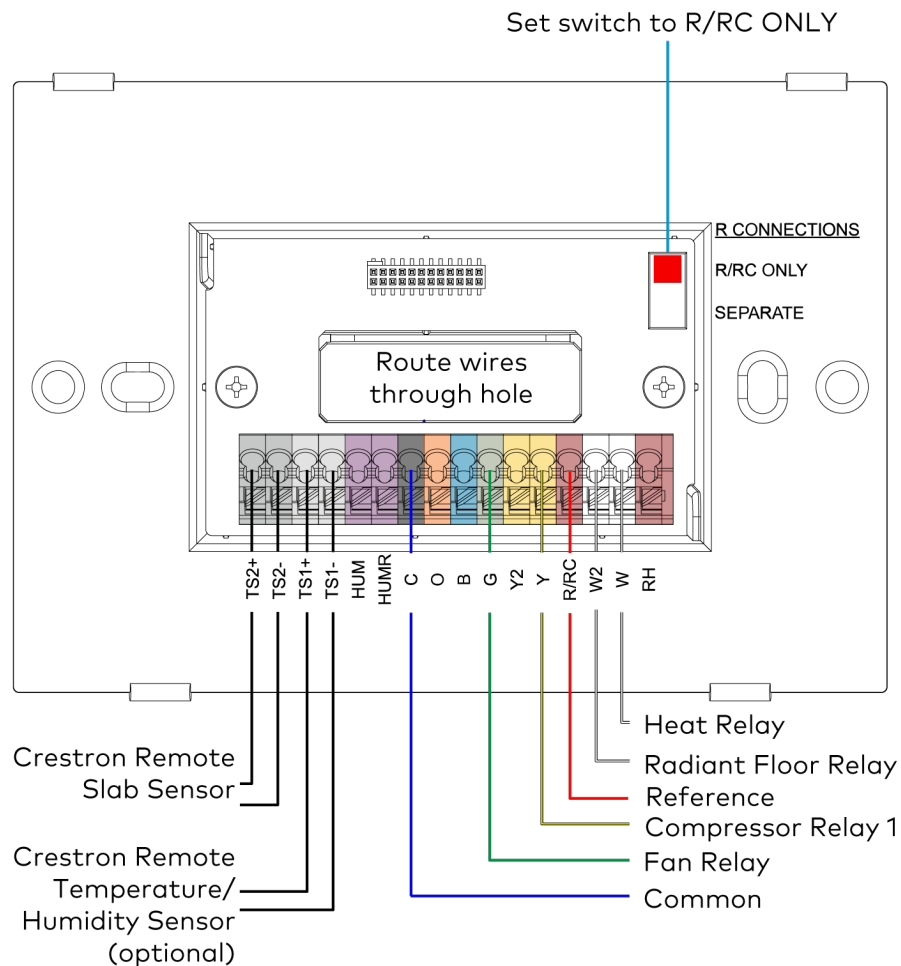
**NOTE:** If the HVAC system only requires one reference, a 24VAC power source can be used to power the device locally.



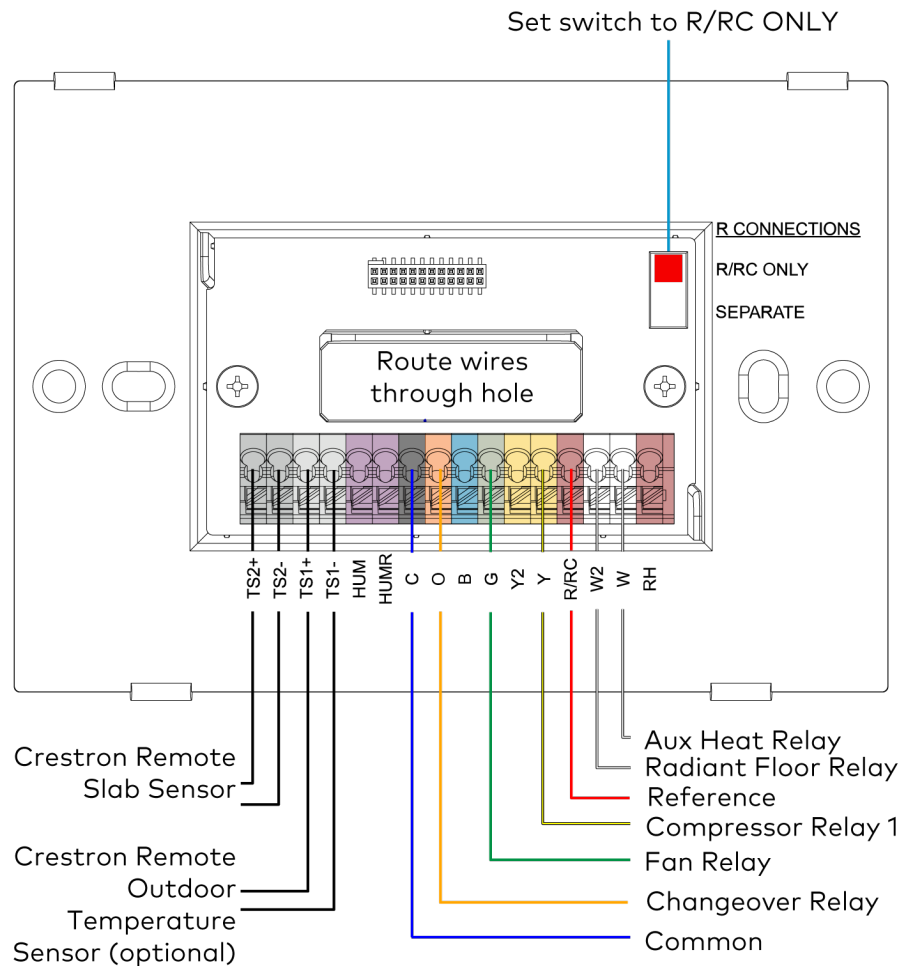
## Radiant Floor Only (Floor Warming and/or Space Heating)



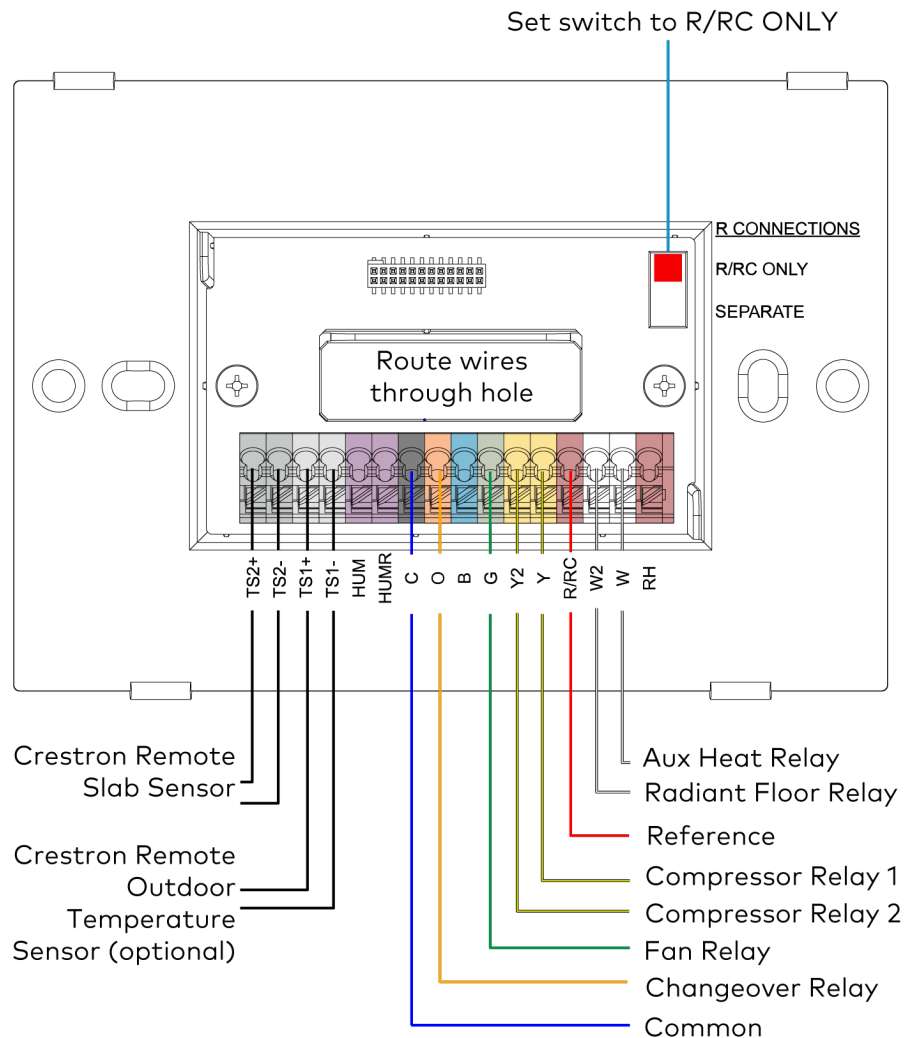
## 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool or 1 Stage Heat/1 Stage cool with Floor Warming



## 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool Heat Pump with 1 Stage Aux Heat or 1 Stage Heat/1 Stage Cool Heat Pump with 1 Stage Aux Heat and Floor Warming



# 3 Stage Heat (Stage 1 Radiant Floor)/2 Stage Cool Heat Pump with 1 Stage Aux Heat or 2 Stage Heat/2 Stage Cool Heat Pump with 1 Stage Aux Heat and Floor Warming



# Remote Thermostat Setup

Setup, configure, and update the thermostat remotely via Crestron Toolbox™ software, which provides the same configuration options as the HZ-THSTAT. Create template configurations to easily setup multiple thermostats at one time. Crestron Toolbox software provides access to detailed logs

## NOTES:

- Before using the thermostat, ensure it is using the latest firmware. Check for the latest firmware at [www.crestron.com/firmware](http://www.crestron.com/firmware). Load the firmware onto the thermostat using Crestron Toolbox™ software or web-based user interface.
- The USB port on the back of the thermostat can be used to connect the thermostat with Crestron Toolbox software.

The web-based user interface also provides remote access to reboot, restore, update, and diagnose the thermostat. To access the web-based user-interface:

1. Open a web browser.
2. Type the IP address.
3. Enter the login and password. Create a username and password if they have not already been created.

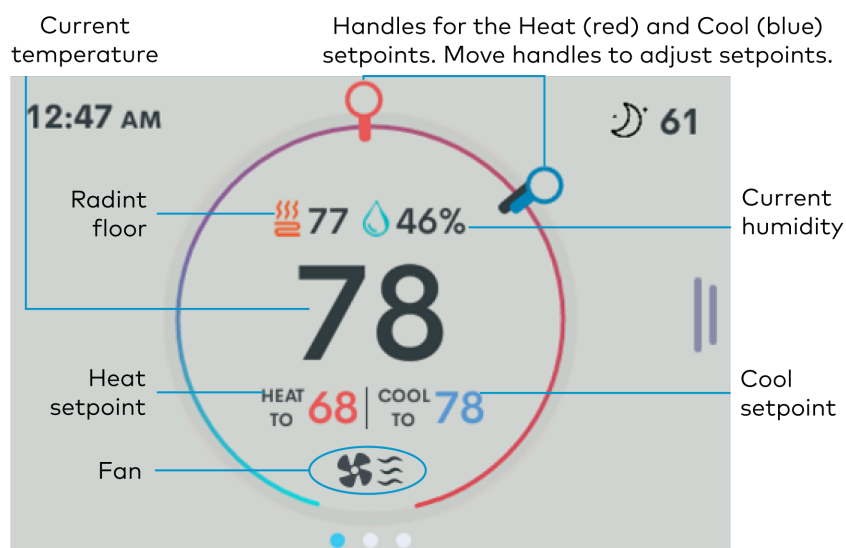
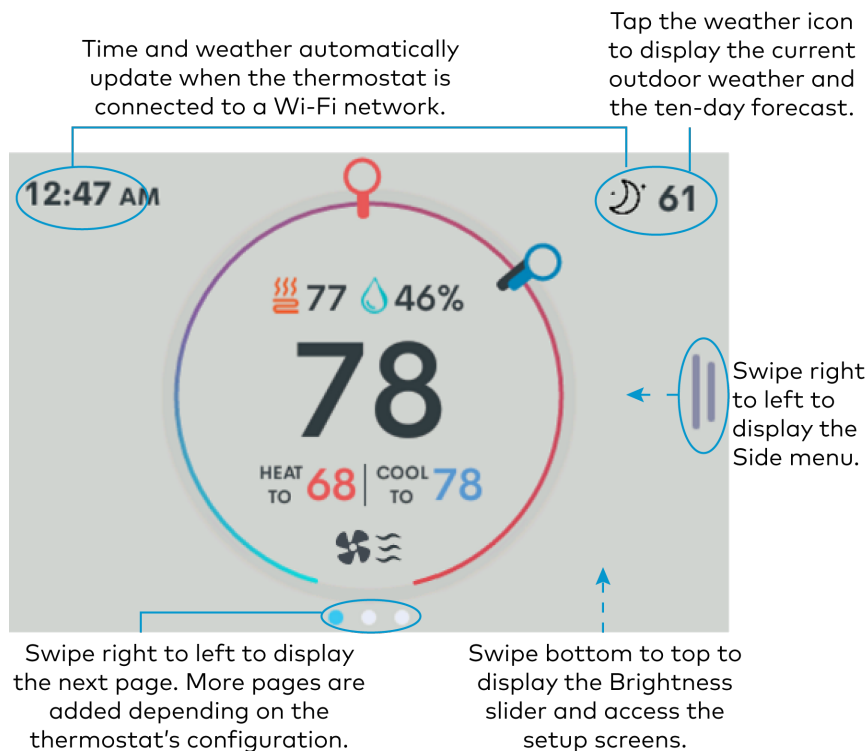
**NOTE:** If the thermostat had previously been added to Crestron Home™ OS:

- "chdevice" is automatically populated in the username field.
- The Common Device Password set in Crestron Home OS is automatically populated in the password field.

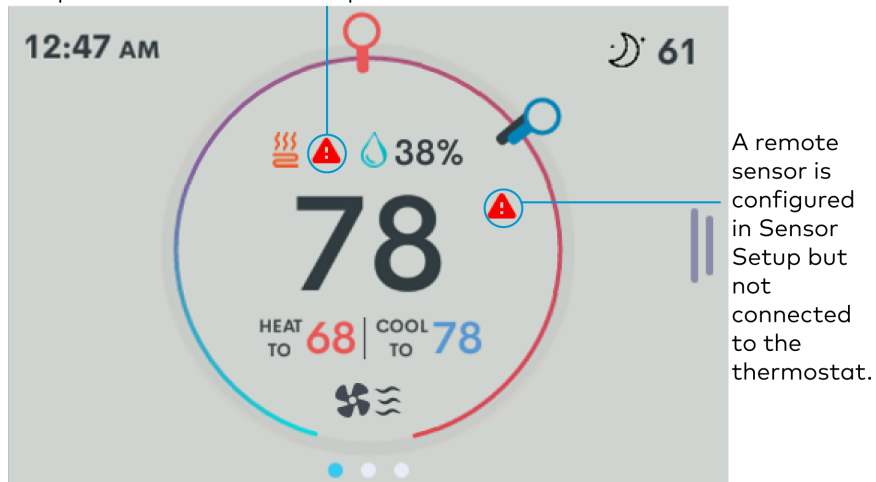
# Thermostat Operation

The HZ-THSTAT has a 3.5 in. LCD touchscreen display used for configuring the thermostat to the HVAC system and monitoring the temperature and humidity.

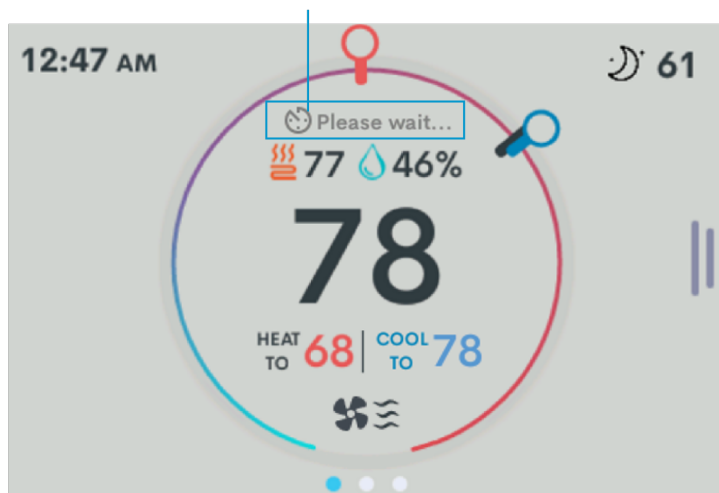
**NOTE:** The screenshots below show the thermostat with the Wi-Fi® network connected.



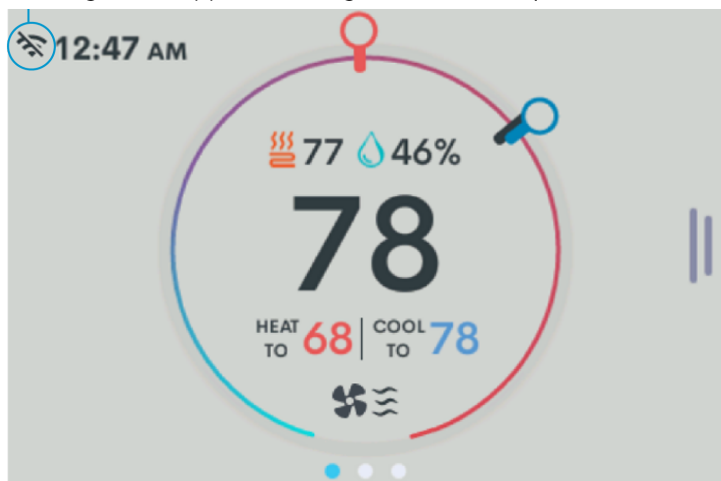
Radiant Floor is configured but no slab sensor is set up or a slab sensor is set up and is not connected.



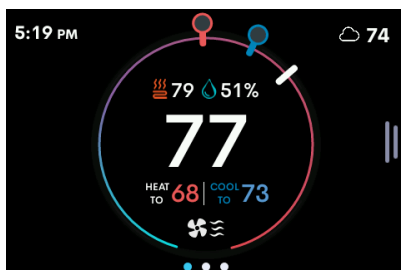
When the thermostat attempts making a call during the Short Cycle time out, "Please Wait" appears on the display.



When the Wi-Fi network is not connected or not working, a line appears through the wireless symbol.



The previous screenshots were taken from a white thermostat in day mode. Almond and Black thermostats have Almond and Dark themes, respectively. In night mode, White and Almond thermostats switch to a dark theme and appear as shown below.



## Lightbar and Up/Down Buttons

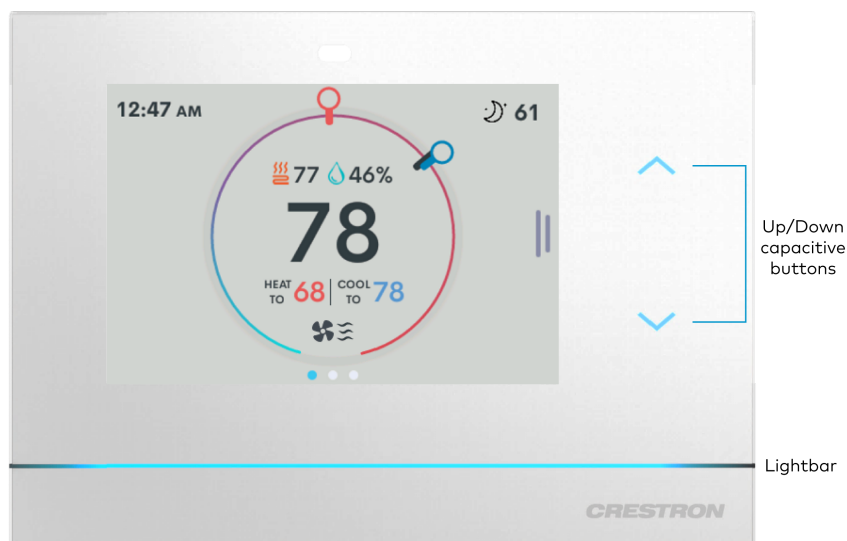
The RGB lightbar and capacitive Up/Down buttons change colors based on the call:

- Pulsing amber for heat calls
- Pulsing cyan for cool calls
- Pulsing white for fan-only calls
- Solid white for no calls



The Up/Down buttons are used to change the heat and cool setpoints and to access the Installer Settings.

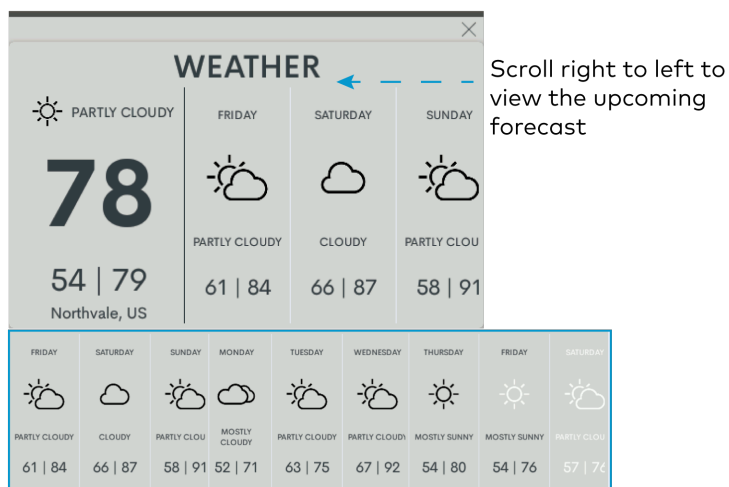
When using the Up/Down buttons in Dual Setpoint mode, the thermostat attempts to assume which setpoint the user wants to adjust. To adjust a different setpoint, use the gauge or tap the desired setpoint handle and tap the Up/Down buttons to move it.



Day and Night themes for the LCD display also affect the lightbar and Up/Down buttons. Refer to [Display on page 36](#) settings.

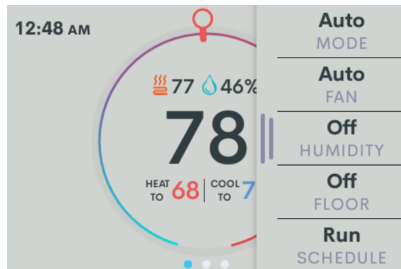
## Weather

Once connected to a Wi-Fi network and the location data is set on the [Location on page 42](#) screen, the weather icon reports the outdoor temperature. Tap the weather icon to open the current forecast and three days out of the ten-days forecast. Swipe right to left to scroll through the remaining six days.



# Side Menu

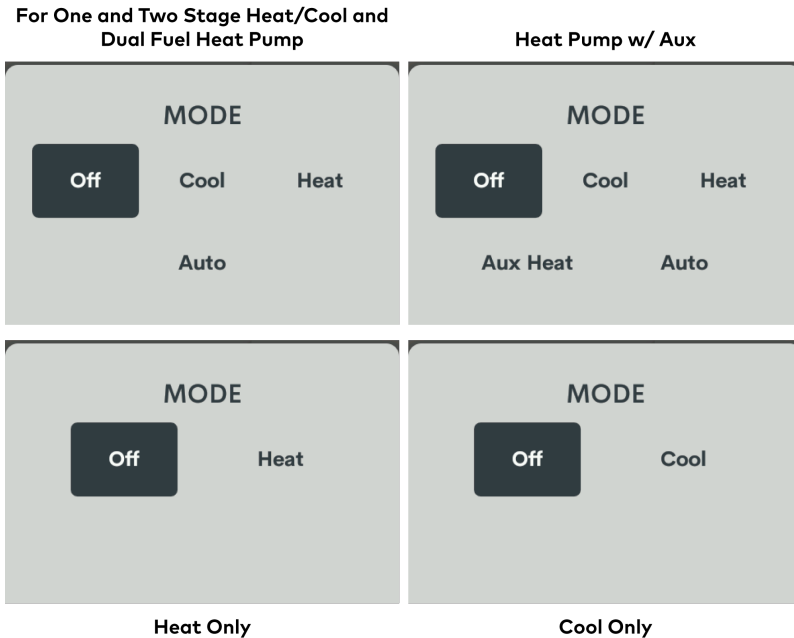
The Side menu provides the end user easy access to system controls. To open the Side menu, swipe the screen from the right side of the screen toward the center, and tap the desired menu option.



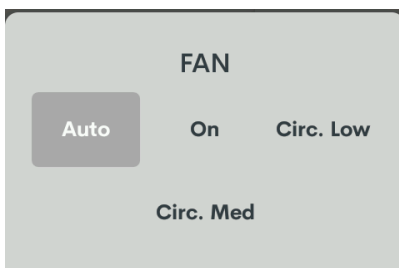
The Side menu options shown by default are MODE, FAN, and HUMIDITY. FLOOR appears as a menu item if Radiant Floor is set to **Floor Warming** or **Floor Warm/Space Heat**. SCHEDULE appears as a menu item when the thermostat is connected to a control system. If Humidistat Setup is set to off or Radiant Floor is set to None, HUMIDITY and FLOOR are not shown in the Side menu. To remove FAN, HUMIDITY, and FLOOR from the Side menu even if they are configured systems, refer to [End User Access on page 41](#).

**NOTE:** To exit a screen, swipe down or make a selection.

- **MODE:** Select the desired Mode for the configured system.



- Select **Cool** to control the cooling system.
- Select **Heat** to control the heating system.
- Select **Aux Heat** (only for Heat Pump systems) to shut off the Heat Pump and force heat only mode using the Auxiliary Heat stages.
- Select **Auto** (if Auto mode is configured) to allow the thermostat to automatically switch between heating and cooling systems using a Single Setpoint or Dual Setpoints depending on the User Controls settings. Auto only appears if Auto mode is configured in User Controls.
- Select **Off** to stop the thermostat from controlling the heating and cooling systems.
- **FAN:** Select the desired mode for the Fan operation.



- **Auto:** Select **Auto** to enable cool or heat calls and Fan In Heat settings to turn on the fan automatically.
- **On:** Select **On** to turn on the fan.
- **Circulation Medium and Circulation Low:** Select **Circulation Medium** or **Circulation Low** to ensure the fan is on for a minimum duty cycle.

- **HUMIDITY:** Tap **HUMIDITY** to turn the Humidistat on or off. Either Humidify or Dehum (dehumidify) will show depending on whether Humidification or Dehumidification is set in Humidistat Setup.
- **FLOOR:** Tap **FLOOR** to turn the Floor Warming system on or off. FLOOR only appears if Radiant Floor is set to Floor Warming or Floor Warm/Space Heat.
- **SCHEDULE:** Tap **SCHEDULE** to Run or Hold (pause) a control system schedule. SCHEDULE only appears when the thermostat is connected to a control system.

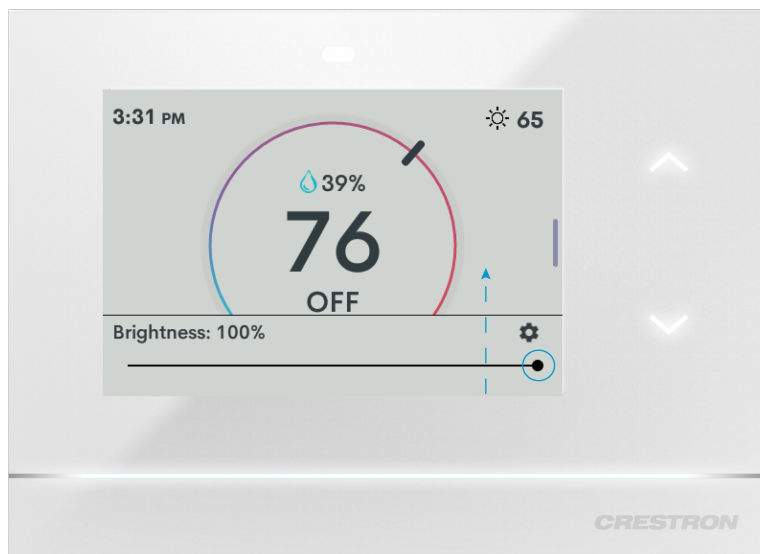
## Brightness Slider, Settings, and Installer Settings

To open the Brightness slider:

1. Swipe up from the bottom of the screen. The Brightness slider appears.
2. Use the slider to brighten or dim the thermostat's screen.

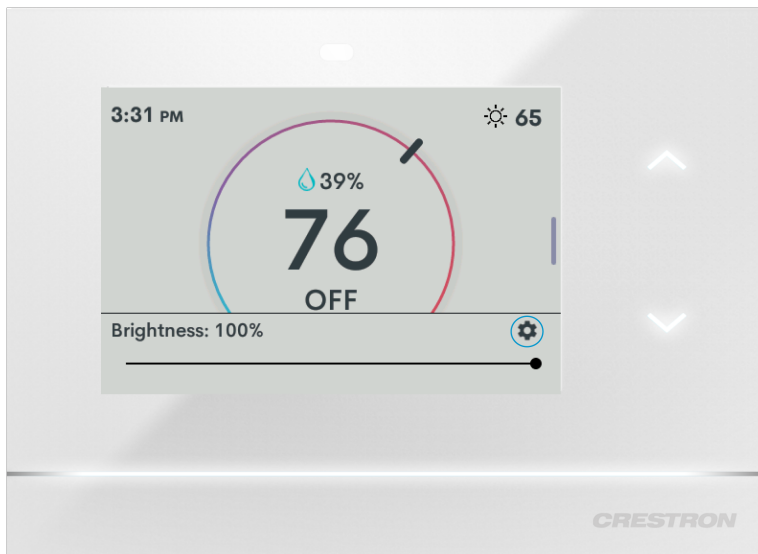
**NOTE:** Set the thermostat's autodim curve by adjusting the slider for the desired brightness in both a dim room condition and a full dark condition.

- Adjusting in a dim room ensures that the thermostat's local sensor is not saturated and accurately adjusts the dim curve.
- Adjusting in a fully dark room while the thermostat is in night mode sets the minimum brightness for the thermostat.

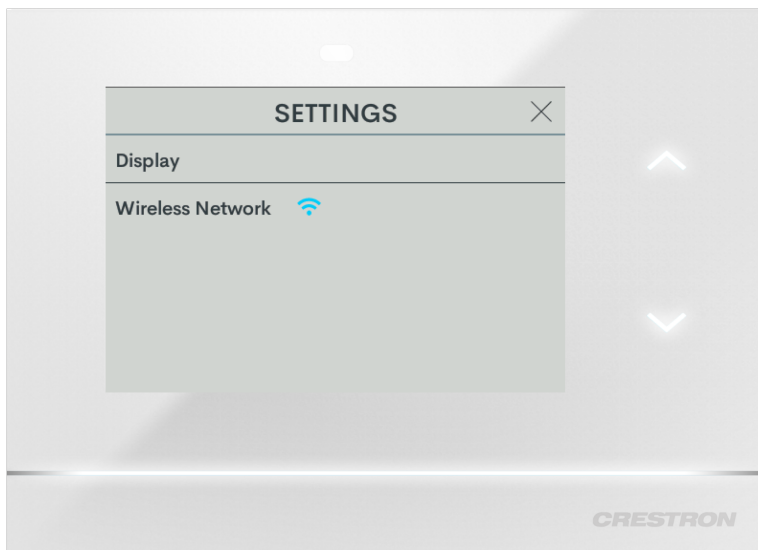


To open the SETTINGS screen:

1. On the Brightness slider, tap the gear icon.

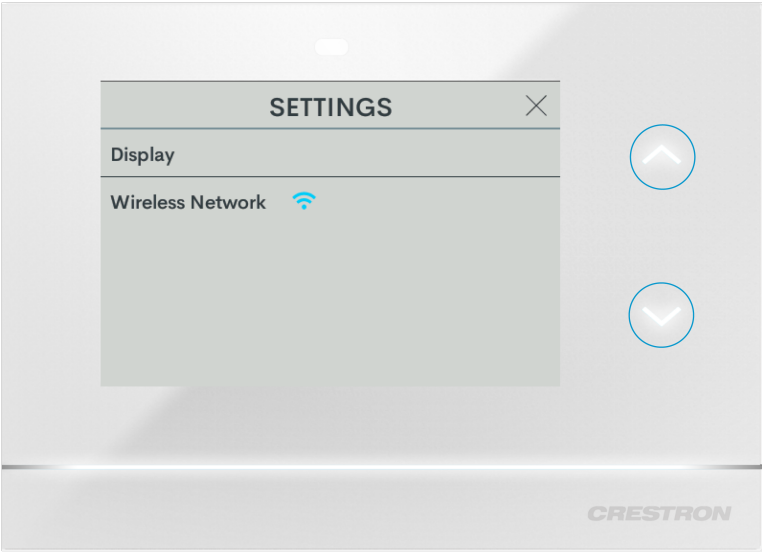


2. Tap **Display** or **Wireless Network** to adjust the settings. These are easy-to-access settings for the end user. Refer to [Display on page 36](#) and [Wireless Network on page 38](#) for details.



To open INSTALLER SETTINGS:


From the SETTINGS screen, tap the following sequence on the Up/Down button: **Up, Up, Down, Down**. Refer to [Installer Settings on page 39](#) for details.

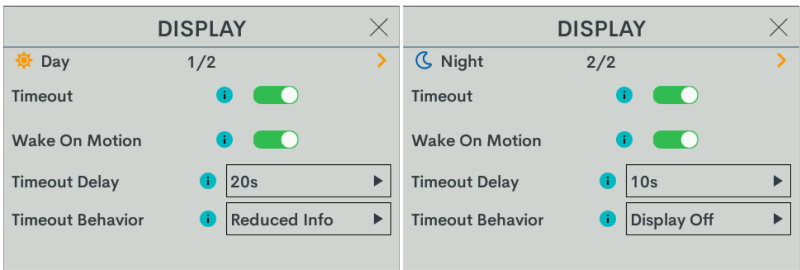


# Display

Use the DISPLAY screens to adjust the display and backlight settings for both day and night themes. The thermostat's local sensor determines day and night based on the ambient light level. When the sensor detects low light levels, the thermostat switches to the night theme.

**NOTES:**

- The Help icon (  ) provides descriptions of settings throughout the setup screens. Tap the Help icon to open the Help window. To close the Help window, tap **Done**.
- Tap the orange arrow in the upper right-hand corner to move to the next screen.
- To close a setting screen, click the X or swipe the screen top to bottom.



### Day and Night Display settings:

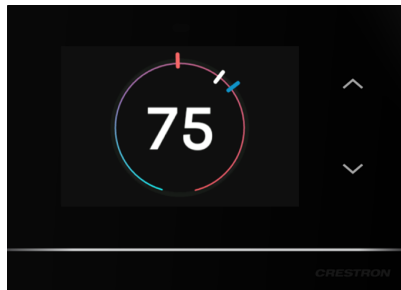
- **Timeout:** Tap to enable or disable timeout settings for the Display, Lightbar, and capacitive buttons when there is no user interaction.
- **Wake On Motion:** Tap to enable or disable the Wake on Motion feature. Enable to wake the thermostat from timeout when motion or proximity to the sensor is detected.
- **Timeout Delay:** From the drop-down menu, select the amount of time the thermostat must not detect motion, proximity, or touch to time out.

Drop-down menu timeout delay options: 5 seconds, 10 seconds, 20 seconds, 40 seconds, 1 minute, 5 minutes, 10 minutes, 20 minutes, 40 minutes, or 1 hour.

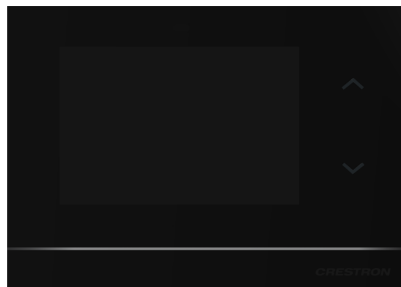
- **Timeout Behavior:** From the drop-down menu, select the desired behavior for when the thermostat times out.

Drop-down menu timeout behavior options:

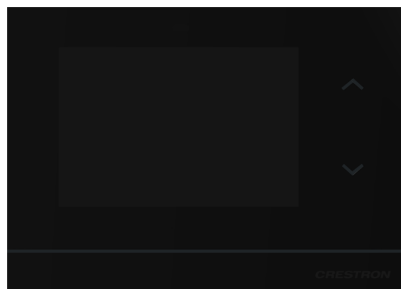
- **Reduced Info:** Removes extra items on the screen for a clean look.



- **Display Off:** Turns off the screen and the Up/Down buttons.

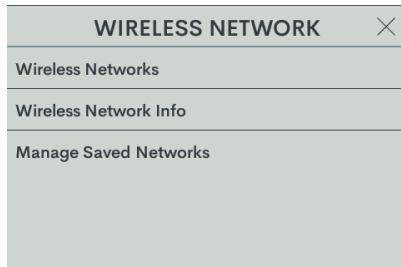


- **All Off:** Turns off the screen, the Up/Down buttons, and the lightbar.

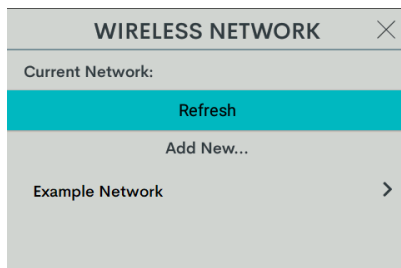


# Wireless Network

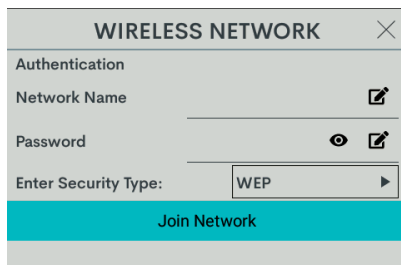
The WIRELESS NETWORK provides quick access to limited network settings and information. For more wireless network settings, refer to [Installer Settings on page 39](#).



- Wireless Networks: Lists the available networks.



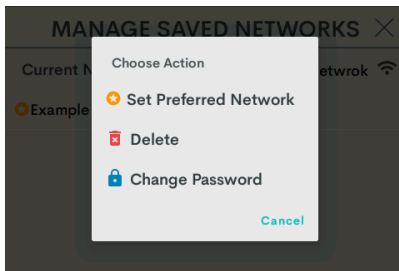
- Tap **Refresh** to update the list of available networks.
- Tap on the desired wireless network to edit the Network Name or enter the Password. Tap the eye icon to show the password and click the eye icon a second time to hide the password.
- Tap **Join Network** to join the wireless network.
- To add a network not listed, tap **Add New**.
  - Enter the wireless network information.
  - Select the Network Security Type: WEP, WEP-128, WPA AES, WPA TKIP, WPA2 AES, or WPA2 TKIP.
  - Tap Join Network when all of the information is entered.



- Wireless Network Info: Displays the following data: MAC Address, IP Address, Subnet Mask, Def Router, Primary DNS, Secondary DNS, Hostname, Domain, RSSI, and LQI.
- Manage Saved Networks: Lists saved networks.



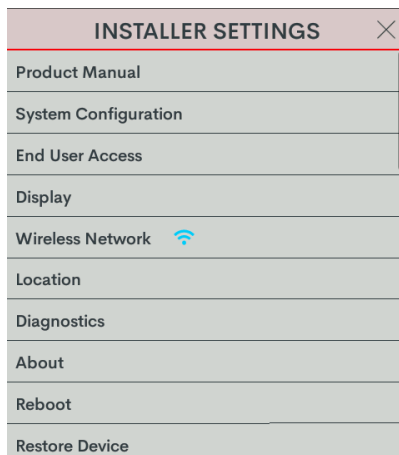
Tap on a listed network to set it as the preferred network, change the password, or delete the network.



## Installer Settings

Installer Settings provides in-depth settings data for configuring the thermostat. The topics include:

- [Product Manual on page 40](#)
- [System Configuration on page 40](#)
- [End User Access on page 41](#)
- [Display on page 41](#)
- [Wireless Network on page 41](#)
- [Location on page 42](#)
- [Diagnostics on page 43](#)
- [About on page 44](#)
- [Reboot on page 44](#)
- [Restore Device on page 45](#)



# Product Manual

PRODUCT MANUAL provides a QR code to this Product Manual. Scan the QR code with a smart device to access the Product Manual at any time.



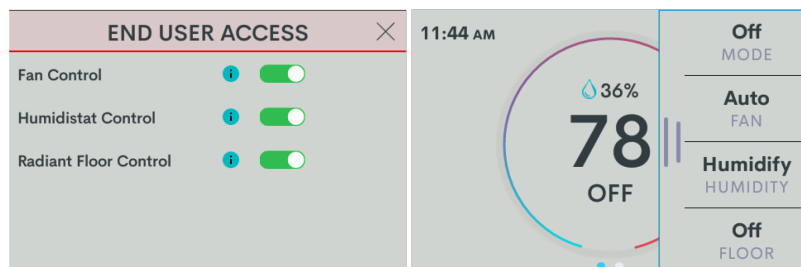
## System Configuration

Use SYSTEM CONFIGURATION to configure the thermostat to work with the connected HVAC system. The topics include System Type, System Performance, Radiant Floor, User Controls, Humidistat Setup, and Sensor Setup. Refer to the following systems for detailed thermostat configurations:

- [Heat/Cool, 1 or 2 Stages, Forced Air or Radiant on page 49](#)
- [Heat Pump, 1 or 2 Stages, Aux Heat or Dual Fuel on page 61](#)
- [Radiant Floor Only \(Floor Warming\) on page 73](#)
- [Radiant Floor Only \(Space Heating\) on page 81](#)
- [Radiant Floor Only \(Floor Warming/Space Heating\) on page 89](#)
- [2 Stage Heat \(Stage 1 Radiant Floor\)/1 Stage Cool on page 97](#)
- [2 Stage Heat \(Stage 1 Radiant Floor\)/1 Stage Cool Heat Pump with 1 Stage Aux Heat on page 110](#)
- [2 Stage Heat \(Stage 1 Radiant Floor Warming/Space Heating\)/1 Stage Cool on page 123](#)
- [2 Stage Heat \(Stage 1 Radiant Floor Warming/Space Heating\)/1 Stage Cool Heat Pump with 1 Stage Aux Heat on page 136](#)

## End User Access

END USER ACCESS allows the installer to limit access to the Fan Control, Humidistat Control, and Radiant Floor menu options available on the home screen Side menu and the Radiant Floor or Humidistat pages on the home screen. Tap the toggle beside Fan Control, Humidistat Control, or Radiant Floor Control to remove it from the Side menu. MODE always remains on the menu.

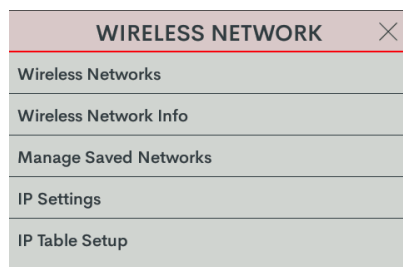


## Display

Provides the same settings as the end user [Display on page 36](#) screen.

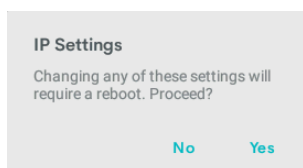
## Wireless Network

Provides the same settings as the end user [Wireless Network on page 38](#) screen but also includes IP Settings and IP Table Setup.



- IP Settings: Switch between DHCP and static IP, and manually set the hostname and static IP settings

When opening IP Settings, a warning appears:



Tap **No** to go back to WIRELESS NETWORK. Tap **Yes** to continue to IP SETTINGS. When continuing to edit the IP Setting, consider the following:

- Tap on the editable fields, such as Hostname, to initiate the keyboard.
- Disable the DHCP toggle to edit the following settings: Static IP Address, Static IP Mask, Static Default Router, Static IP Primary DNS, and Static IP Secondary DNS.

**NOTE:** Changing any of these settings will prompt a reboot warning in the INSTALLER SETTINGS. The changes will not go into effect until the thermostat reboots.

- IP Table Setup allows the thermostat to be connected to a control system. An IP Table is a lookup table used by Crestron Ethernet devices to map between IP IDs and IP addresses. Refer to the control system documentation for details.

- Network IP ID: Match the Network IP ID stated in control system's program.
- Control System: Set the IP to the control system's IP address or Hostname.

**NOTE:** When used with Crestron Home™ OS this section will be auto populated when added to the Crestron Home control processor.

## Location

The thermostat utilizes the data entered in the LOCATION screen to provide accurate weather information on the home screen.

LOCATION		✕
Use Postal Code	<input checked="" type="checkbox"/>	
Country:	United States (US)	▶
Enter Zip Code	07647	
Enter Latitude	41	
Enter Longitude	-74	

**NOTE:** United States residents only can enter the Postal Code. Residents outside the United States can enter the latitude and longitude.

## Diagnostics

Use DIAGNOSTICS to test the HVAC system calls, review call log summaries, sensor log summaries, or review system settings.

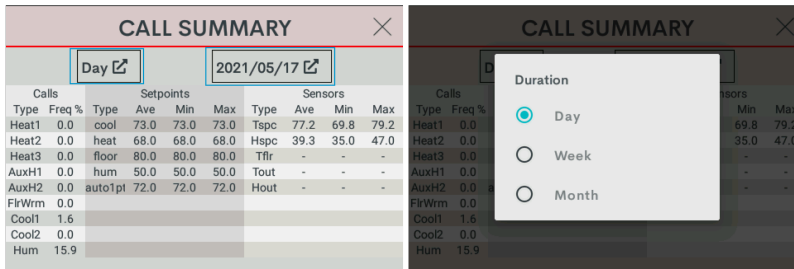
DIAGNOSTICS	✕
Test Call	
Call Summary	
Sensor Summary	
Overview	

- Test Call: The system type and the configured settings determine the test call options available.

Tap the toggle next the desired option to perform a test call.

TEST CALL	✕	TEST CALL	✕	TEST CALL	✕
<b>Heat</b> 1/3 > Heat Stage 1: <input checked="" type="checkbox"/> Heat Stage 2 (1+2): <input type="checkbox"/> Heat Stage 3 (1+2+3): <input type="checkbox"/> Aux Heat 1: <input type="checkbox"/> Aux Heat 2 (Aux 1+2): <input type="checkbox"/>		<b>Cool</b> 2/3 > Cool Stage 1: <input checked="" type="checkbox"/> Cool Stage 2 (1+2): <input type="checkbox"/>		<b>Fan System</b> 3/3 > Fan: <input checked="" type="checkbox"/> <b>Radiant Floor</b> Warm Floor: <input type="checkbox"/> <b>Humidity</b> Humidistat: <input checked="" type="checkbox"/>	

- Call Summary: Provides HVAC Call Frequencies, Min/Max/Average setpoint history, and Min/Max/Average sensor history. Information can be filtered by Day, Week, or Month and specific days, weeks, or months. For a more detailed sensor summary, refer to the Sensor Summary screen.



- **Sensor Summary:** Provides more details about the local and remote sensors. As with Min/Max/Average temperature/humidity and error counts, information can be filtered by Day, Week, or Month and specific days, weeks, or months.

The 'SENSOR SUMMARY' screen displays a table of sensor data, filtered by 'Day' and '2021/05/17'. The table includes columns for Sensor, Type, Temperature (Ave, Min, Max), Humidity % (Ave, Min, Max), and ErrCnt.

Sensor	Type	Temperature			Humidity %			ErrCnt
		Ave	Min	Max	Ave	Min	Max	
local	space	77.2	69.8	79.2	39.3	35.0	47.0	-
TS1A	omit	-	-	-	-	-	-	-
TS1B	omit	-	-	-	-	-	-	-
TS2A	omit	-	-	-	-	-	-	-
TS2B	omit	-	-	-	-	-	-	-
p. Ind	omit	-	-	-	-	-	-	-
p. Out	outdoor	-	-	-	-	-	-	-

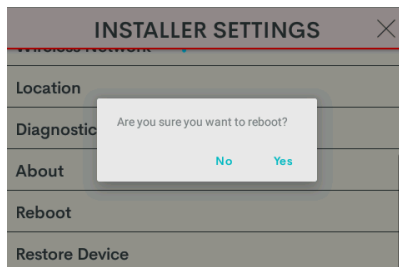
- **System Overview:** Details System Configuration at a glance.

## About

Displays firmware version, update methods, and product information.

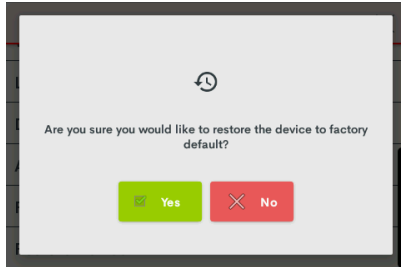
## Reboot

To force the thermostat to reboot, tap **Yes**. Tap **No** to return to INSTALLER SETTINGS.



## Restore Device

To restore the thermostat to factory settings, tap **Yes**. Tap **No** to return to INSTALLER SETTINGS.



# System Setup

The following are system type and radiant floor definitions.

## System Type Definitions

### One or Two Stage Heat/Cool Systems

Unlike traditional furnaces that turn on and run at full capacity with each demand for heating, 2-stage furnaces operate like two separate furnaces. The unit begins to run in its first stage, and operates at a fraction of its heating capacity. This reduced capacity is sufficient on mild winter days. On very cold days, the furnace adjusts to full capacity (second stage) to meet the demand for heat.

- **Heat/Cool:** Separate heat and cool systems. Heat calls are on W/W2 and Cool calls are on Y/Y2.
- **Heat Only:** Heat-only systems. Heat calls are on W/W2.
- **Cool Only:** Cool-only systems. Cool calls are on Y/Y2.

### Heat Pump Systems

A heat pump extracts available heat from one area and transfers it to another. Even cold air contains some heat, and heat pumps can extract heat from the outside air on a cold day and transfer it indoors to maintain a comfortable temperature. A heat pump also works in reverse during the summer, extracting heat from indoors and transferring it outdoors.

- **Aux (Auxiliary) Heat:** When the a heat pump can no longer efficiently transfer heat from the outside air, the thermostat automatically turns on a secondary heat source, such as electric resistive heat.
- **Dual Fuel:** A Dual Fuel Heat pump system combines an energy efficient air source heat pump with a new or existing oil, gas or propane furnace. The furnace runs in place of the heat pump in cold weather.

## Radiant Floor Heating Definitions

Radiant floor heating works from the ground up. The heating components are installed below the floor or are embedded in a concrete slab. Heat radiates from the floor to warm the space above.

- **Floor Warming:** Operates the radiant floor heat to maintain a particular floor temperature. Radiant floor heat is maintained at the radiant floor setpoint temperature value. Connection to the radiant floor output relay is terminal W2.



- **Space Heating:** Maintains a particular air temperature using the radiant floor heat to heat the space. Does not heat over the radiant floor maximum temperature even if this results in the space being under-heated. Connection to the radiant floor output relay is terminal W2.
- **Floor Warming/Space Heating:** Performs the same operation as Space Heating and also keeps the slab at least as warm as slab setpoint when Floor Warming is set to Heat. This may result in the space being overheated to maintain the radiant floor minimum temperature. Connection to the radiant floor output relay is terminal W2.

The HZ-THSTAT offers many Radiant Floor configurations, including, but not limited to, the following options:

- **2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool:** Maintains the air temperature using the radiant floor for heat, up to the radiant floor maximum. Augments the air heating by using a second stage of heat (generally a forced air system). Allows the second stage to operate by itself should the radiant floor reach its maximum temperature and shut off. Cools the space with cooling call. Intended for heat-cool type forced air systems, with relay output connections to terminal W2 for radiant floor heat, terminal W1 for second stage heat, and terminal Y1 for cooling.
- **2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool Heat Pump with 1 Stage Aux Heat:** Performs the same operation as 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool but for a Heat pump second stage. Relay output connections are terminal W2 for radiant floor heat, with heat pump-type connections on terminals Y1/O/G for cooling and heating calls. Aux heat is on terminal W1.
- **2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool:** Combines the operation of a space heating/cooling thermostat with a floor-warming thermostat. Maintains the radiant floor heat at radiant floor setpoint, and maintains the space at the heat, cool, or auto setpoints. Systems effectively operate independently. Heat/Cool/Auto/Off sets the space control modes, and Floor Warming HEAT/OFF sets the slab mode. Intended for heat-cool style systems, with radiant floor connection on terminal W2, space heat on terminal W1, and space cool on terminal Y1.
- **2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool Heat Pump with 1 Stage Aux Heat:** Performs the same operations as 2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool but for heat pump space systems, with radiant floor heat on terminal W2, and space heat/cool on terminals Y1/O/G. Aux heat is on terminal W1.

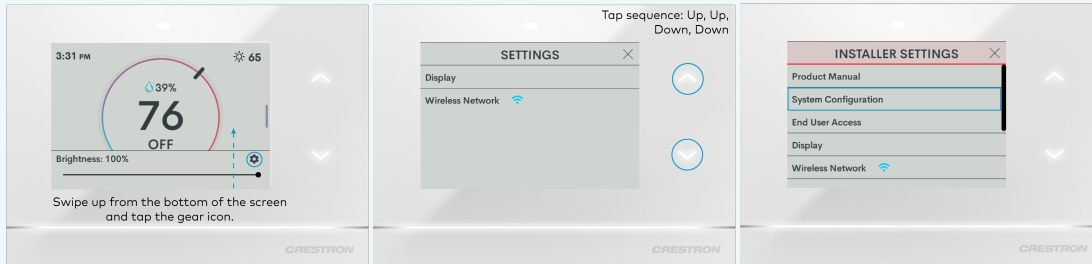
The following sections describe the setup screen options for configuring the thermostat to the HVAC system.

- [Heat/Cool, 1 or 2 Stages, Forced Air or Radiant on page 49](#)
- [Heat Pump, 1 or 2 Stages, Aux Heat or Dual Fuel on page 61](#)
- [Radiant Floor Only \(Floor Warming\) on page 73](#)
- [Radiant Floor Only \(Space Heating\) on page 81](#)
- [Radiant Floor Only \(Floor Warming/Space Heating\) on page 89](#)
- [2 Stage Heat \(Stage 1 Radiant Floor\)/1 Stage Cool on page 97](#)

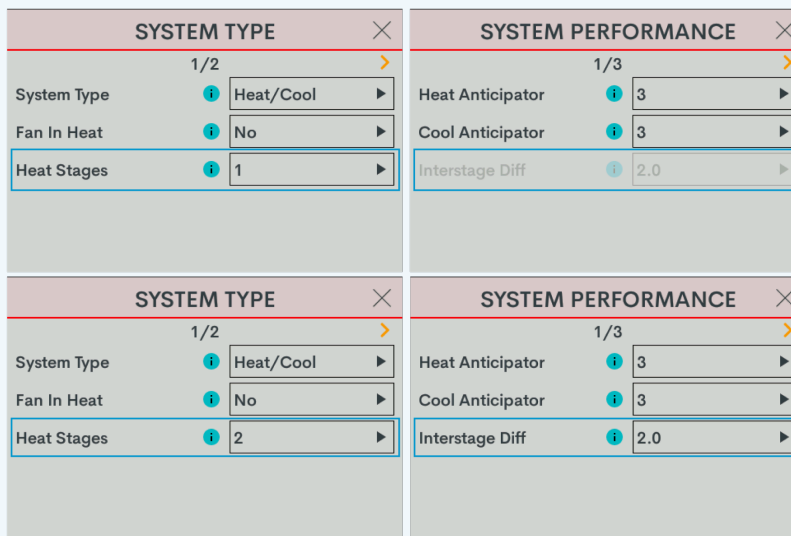
- 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool Heat Pump with 1 Stage Aux Heat on page 110
- 2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool on page 123
- 2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool Heat Pump with 1 Stage Aux Heat on page 136

#### NOTES:

- To access the System Configuration screen:



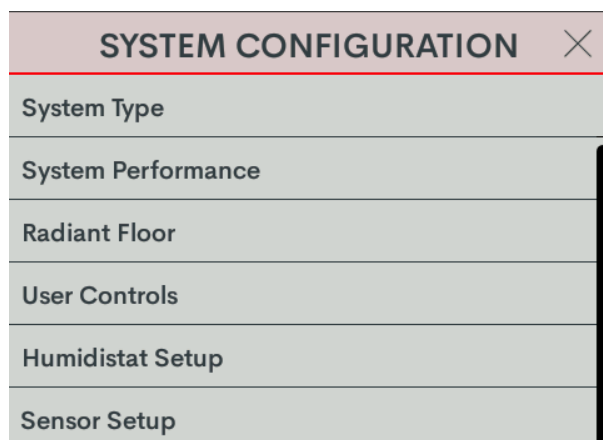
- As the thermostat is configured to match the HVAC system, settings options become active or inactive. The examples below illustrate how the active setting options can change depending on the options set by the user. For example, setting the Heat Stages or Cool Stages to 2 enables the Interstage Differential setting.



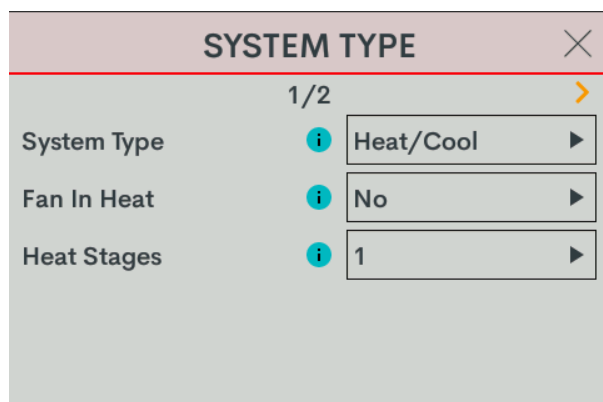
- The Help icon (i) provides descriptions of settings throughout the setup screens. Tap the Help icon to open the Help window. To close the Help window, tap **Done**.
- Tap the orange arrow in the upper right-hand corner to move to the next screen.
- To close a setting screen, click the X or swipe the screen top to bottom.

# Heat/Cool, 1 or 2 Stages, Forced Air or Radiant

Navigate to the SYSTEM CONFIGURATION settings.



## System Type



- System Type: Select **Heat/Cool**




**NOTE:** There are Heat Only and Cool Only options for a Heat Only or Cool Only system type.

- Fan In Heat: Select **Yes** or **No**. Default setting: No.

Fan In Heat options change if **Heat Stages** is set to 2. Select one of the following options:




- Yes: Fan called for first and second stage (W/W2).
- W2 Only: Fan called for second stage (W2) only.
- No: Disable fan call operation for heat calls.

- Heat Stages: Select **1** or **2**. Default setting: 1.  
Number of heat-only stages present.

SYSTEM TYPE		×
2/2		
Cool Stages	 1	▶
H.Pump Comp Stages	 1	▶
H.Pump Aux Stages	 1	▶

- Cool Stages: Select **1** or **2**. Default setting: 1.  
Number of cool-only (air conditioning) stages present.

## System Performance

SYSTEM PERFORMANCE		×
1/3		
Heat Anticipator	 3	▶
Cool Anticipator	 3	▶
Interstage Diff	 2.0	▶

- Heat Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).  
The proportional temperature error to trigger the next stage.

**SYSTEM PERFORMANCE** ✕

2/3 >

Accum. Staging Index ⓘ 3 ▶

H.Pump Balance Point ⓘ 0

Accumulated Staging Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.

Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.

For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.

**SYSTEM PERFORMANCE** ✕

3/3 >

Short Cycle Timeout ⓘ 180 sec. ▶

Aux Heat Balance Point ⓘ N/A

Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.

The minimum off time between system calls.

# User Controls

The screenshot shows a 'USER CONTROLS' menu with a close button (X) in the top right corner. Below the title bar, there is a '1/5' indicator and a right arrow. The menu contains three settings:

- Auto Setpoint:** A dropdown menu currently set to 'Disabled'. To its left is a blue information icon (i).
- Setpoint Units:** A dropdown menu currently set to '1F'. To its left is a blue information icon (i).
- Temp Display Offset:** A numeric input field set to '0.0'. To its left is a blue information icon (i). The input field has a range from -1.0 to 1.0, indicated by horizontal lines and numbers above and below the field.

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.

Defines Auto mode.

- Dual: Auto mode uses heat and cool setpoints.
- Single: Auto mode uses single (auto) setpoint.
- Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.

Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

USER CONTROLS

×

Heat

2/5

>

Lower Setpoint

i

38

39

88

Upper Setpoint

i

89

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38** - **79** for Fahrenheit (**3** - **27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48** - **89** for Fahrenheit (**8** - **32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)  
Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.

USER CONTROLS

×

❄️

Cool

3/5

>

Lower Setpoint

i

59

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).  
Limits minimum cool setpoint the end user can set.
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).  
Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

×

🔥❄️

Auto

4/5

>

Lower Setpoint

i

59

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).  
Limits minimum auto setpoint the end user can set.



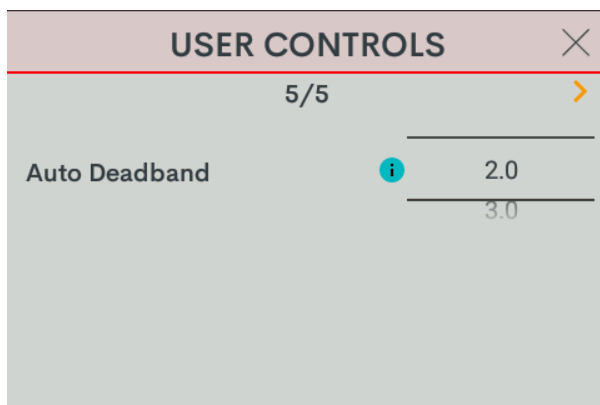
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

## Sensor Setup

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' with a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim i -1.0  
0.0  
1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim i -1.0  
0.0  
1.0

TS2 Temperature Trim i -1.0  
0.0  
1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.

# Humidistat Setup

**HUMIDISTAT SETUP** ✕

1/2 >

Invert Call Logic ⓘ ☐


Humidistat Setup ⓘ Humidification ▶

Fan In Humidistat ⓘ Yes ▶

Cool Hum Setpt Lim ⓘ No ▶

- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

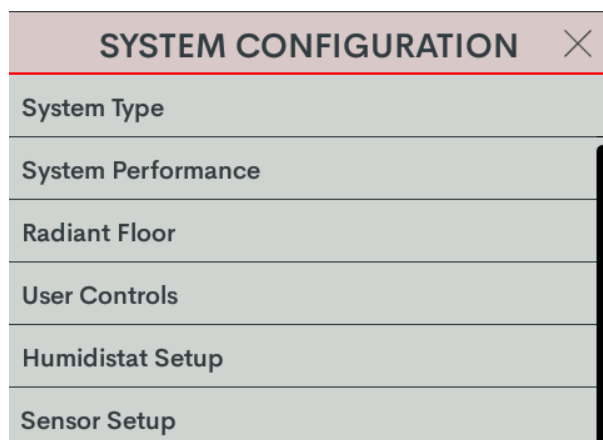
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

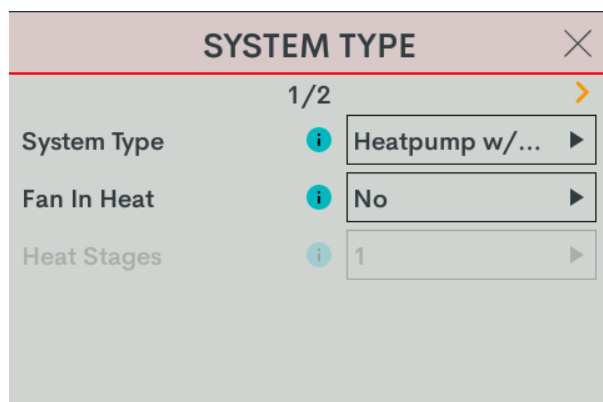
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# Heat Pump, 1 or 2 Stages, Aux Heat or Dual Fuel

Navigate to the SYSTEM CONFIGURATION settings.



## System Type



- System Type: Select **Heatpump w/ Aux** or **Dual Fuel Heatpump**

**Heat Pump w/ Aux or Dual Fuel Heat Pump:** Dual Fuel runs either the heat pump or the aux output, depending on outdoor temperature. The heat pump with aux can stage the heat when required to improve performance.

- Dual Fuel: A dual fuel system combines an energy efficient air source heat pump with a new or existing oil, gas or propane furnace. The furnace runs in place of the heat pump in cold weather.
  - Aux (Auxiliary) Heat: When the a heat pump can no longer efficiently transfer heat from the outside air, the thermostat automatically turns on a secondary heat source, such as electric resistive heat.
- Fan In Heat: Select **Yes** or **No**. Default setting: No.

Fan In Heat options change if **Heat Stages** is set to 2. Select one of the following options:

- Yes: Fan called for first and second stage (W/W2).
- W2 Only: Fan called for second stage (W2) only.
- No: Disable fan call operation for heat calls.

SYSTEM TYPE	
2/2	
Cool Stages	1
H.Pump Comp Stages	1
H.Pump Aux Stages	1

- Heat Pump Compressor Stages: Choose **1** or **2**. Default setting: 1.  
Number of heat pump compressor stages present
- Heat Pump Auxiliary Stages: Choose **1** or **2**. Default setting: 1.  
Number of Auxiliary Heat stages present.

## System Performance

SYSTEM PERFORMANCE	
1/3	
Heat Anticipator	3
Cool Anticipator	3
Interstage Diff	2.0

- Heat Anticipator: Select **1**, **2**, **3**, **4**, **5**, or **6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1**, **2**, **3**, **4**, **5**, or **6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.



- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

The proportional temperature error to trigger the next stage.

**SYSTEM PERFORMANCE** ✕

2/3 >

Accum. Staging Index ⓘ 3 ▶

H.Pump Balance Point ⓘ N/A

0

- Accumulated Staging Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.  
For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.
- Heat Pump Balance Point: Select N/A or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius). Default setting: N/A.  
Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source).

**SYSTEM PERFORMANCE** ✕

3/3 >

Short Cycle Timeout ⓘ 180 sec. ▶

Aux Heat Balance Point ⓘ N/A

0

- Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.

The minimum off time between system calls.

- Auxiliary Heat Balance Point: Select **N/A** or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius). Default setting: N/A.  
Maximum outdoor temperature at which Auxiliary heat system supplements the heat pump (requires an outdoor temperature sensor).

**NOTES:** Auxiliary Heat Balance Point:

- Must be at least 1° higher than the Heat Pump Balance Point.
- Cannot be accessed for Dual Fuel systems.

## User Controls

The screenshot shows a 'USER CONTROLS' menu with a close button (X) in the top right corner. Below the title bar, there is a page indicator '1/5' and a right arrow. The menu contains three settings:

- Auto Setpoint:** A dropdown menu currently set to 'Disabled' with an information icon (i) to its left.
- Setpoint Units:** A dropdown menu currently set to '1F' with an information icon (i) to its left.
- Temp Display Offset:** A numeric input field set to '0.0' with an information icon (i) to its left. The field has a range from -1.0 to 1.0 indicated by horizontal lines and numbers.

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.  
Defines Auto mode.
  - Dual: Auto mode uses heat and cool setpoints.
  - Single: Auto mode uses single (auto) setpoint.
  - Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.  
Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0 - +3.0** for Celsius). Default setting: 0.  
Adjusts an offset between the space temperature displayed and the temperature sensed.

USER CONTROLS

×

Heat

2/5

>

Lower Setpoint

i

38

39

88

Upper Setpoint

i

89

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 79** for Fahrenheit (**3 - 27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48 - 89** for Fahrenheit (**8 - 32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)  
Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.

USER CONTROLS

×

❄️ Cool

3/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum cool setpoint the end user can set.

- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

×

🔥❄️ Auto

4/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum auto setpoint the end user can set.

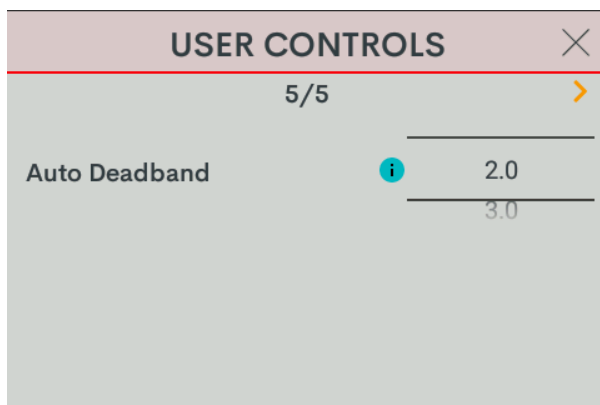
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

## Sensor Setup

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

**SENSOR SETUP** ✕

4/5 >

Local Sensor Humidity Trim ⓘ 0

-1  
1

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

**SENSOR SETUP** ✕

5/5 >

TS1 Humidity Trim ⓘ 0

-1  
1

TS2 Humidity Trim ⓘ 0

-1  
1

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.



## Humidistat Setup

HUMIDISTAT SETUP

1/2

Invert Call Logic ☐


Humidistat Setup Humidification

Fan In Humidistat Yes

Cool Hum Setpt Lim No

- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

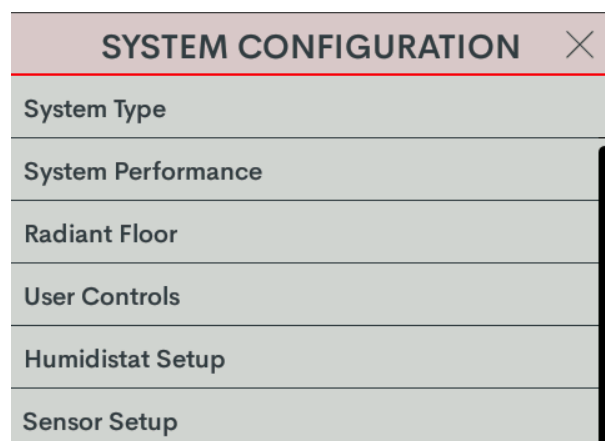
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

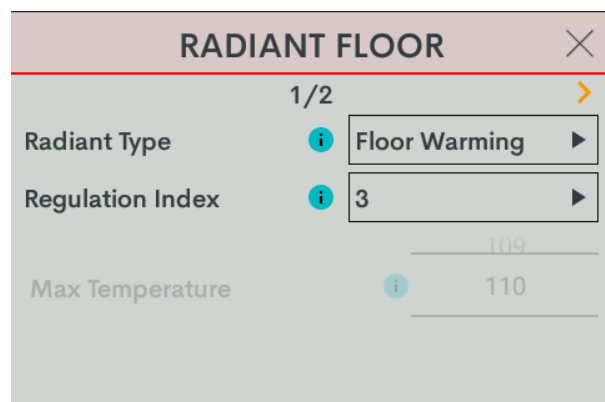
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# Radiant Floor Only (Floor Warming)

Navigate to the SYSTEM CONFIGURATION settings.



## Radiant Floor



- Radiant Type: Select **Floor Warming**
- Regulation Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

**RADIANT FLOOR**
✕

2/2 >

**Lower Setpoint**

**Upper Setpoint**  
(must be 10° Greater than Lower Setpoint)

i

38

i

110

- Lower Setpoint: Select **38 - 100** for Fahrenheit (**3 - 38** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius).  
Limits minimum floor warming setpoint.
- Upper Setpoint : Select **48 - 110** for Fahrenheit (**8 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).  
Limits maximum floor warming setpoint.

**NOTE:** The Upper Setpoint must be 10° higher than the Lower Setpoint.

## System Type

**SYSTEM TYPE**
✕

1/2 >

**System Type**

Fan In Heat

Heat Stages

i

None
▶

i

No
▶

i

1
▶

System Type: Select **None**

**NOTE:** When System Type is set to **None**, the following SYSTEM CONTROL settings cannot be accessed: Fan In Heat, Heat Stages, Cool Stages, Heat Pump Compressor Stages, and Heat Pump Auxiliary Stages.

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Product Manual — Doc. 8622D

## User Controls

The screenshot shows a control panel titled "USER CONTROLS" with a close button (X) in the top right corner. Below the title bar, there is a "1/5" indicator and a right arrow. The panel contains three settings:

- Auto Setpoint:** A dropdown menu showing "Dual" with a right arrow and an information icon (i).
- Setpoint Units:** A dropdown menu showing "1F" with a right arrow and an information icon (i).
- Temp Display Offset:** A numeric input field showing "0.0" with a range from -1.0 to 1.0 indicated by horizontal lines and arrows.

- **Setpoint Units:** Select **1F**, **1C**, or **0.5C**. Default setting: 1F.

Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- **Temp Display Offset:** Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

**NOTE:** When System Type is set to **None**, the following USER CONTROL settings cannot be accessed: Auto Setpoint, Heat Lower Setpoint, Heat Upper Setpoint, Cool Lower Setpoint, Cool Upper Setpoint, Auto Lower Setpoint, Auto Upper Setpoint, and Auto Deadband.

# Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The screen lists four settings, each with an information icon (i) and a dropdown menu:

- Local Sensor Usage:** The dropdown menu is set to 'Space'.
- TS1 Usage:** The dropdown menu is set to 'Space'.
- TS2 Usage:** The dropdown menu is set to 'Outdoor'.
- Wall Type:** The dropdown menu is set to 'Non-Insulated'.

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim i -1.0  
0.0  
1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim i -1.0  
0.0  
1.0

TS2 Temperature Trim i -1.0  
0.0  
1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.



# Humidistat Setup

**HUMIDISTAT SETUP** ✕

1/2 >

Invert Call Logic ⓘ ☐


Humidistat Setup ⓘ Humidification ▶

Fan In Humidistat ⓘ Yes ▶

Cool Hum Setpt Lim ⓘ No ▶

- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

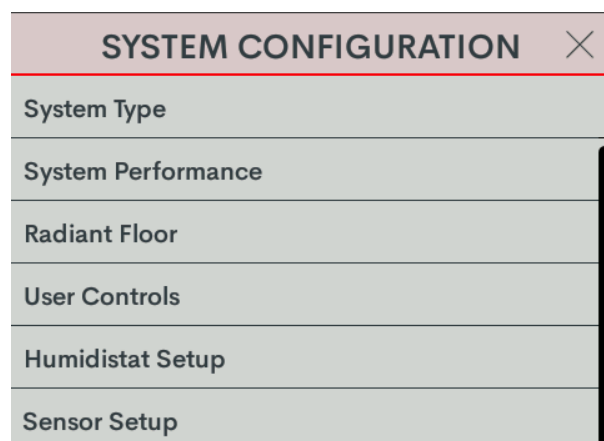
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

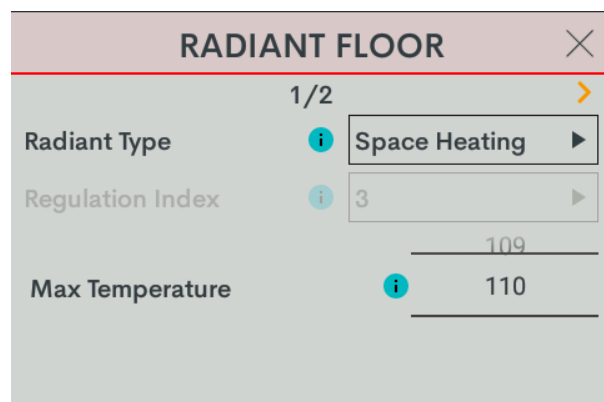
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# Radiant Floor Only (Space Heating)

Navigate to the SYSTEM CONFIGURATION settings.



## Radiant Floor



- Radiant Type: Select **Space Heating**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.  
For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

RADIANT FLOOR

×

2/2

Lower Setpoint

i

38

39

Upper Setpoint

i

48

49

(must be 10° Greater than Lower Setpoint)

**NOTE:** These settings cannot be accessed for Space Heating.

## System Type

SYSTEM TYPE

×

1/2

System Type

i

None

▶

Fan In Heat

i

No

▶

Heat Stages

i

1

▶

System Type: Select **None**

**NOTE:** When System Type is set to **None**, the following SYSTEM CONTROL settings cannot be accessed: Fan In Heat, Heat Stages, Cool Stages, Heat Pump Compressor Stages, and Heat Pump Auxiliary Stages.

## User Controls

The screenshot shows a control panel titled "USER CONTROLS" with a close button (X) in the top right corner. Below the title bar, there is a "1/5" indicator and a right arrow. The panel lists three settings:

- Auto Setpoint:** A dropdown menu showing "Dual" with an information icon (i) to its left and a right arrow to its right.
- Setpoint Units:** A dropdown menu showing "1F" with an information icon (i) to its left and a right arrow to its right.
- Temp Display Offset:** A numeric input field showing "0.0" with an information icon (i) to its left. Above and below the input field are horizontal lines with values "-1.0" and "1.0" respectively, indicating a range.

- **Setpoint Units:** Select **1F**, **1C**, or **0.5C**. Default setting: 1F.

Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- **Temp Display Offset:** Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

**NOTE:** When System Type is set to **None**, the following USER CONTROL settings cannot be accessed: Auto Setpoint, Heat Lower Setpoint, Heat Upper Setpoint, Cool Lower Setpoint, Cool Upper Setpoint, Auto Lower Setpoint, Auto Upper Setpoint, and Auto Deadband.

## Sensor Setup

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

**SENSOR SETUP** ✕

4/5 >

Local Sensor Humidity Trim ⓘ 0

-1  
1

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

**SENSOR SETUP** ✕

5/5 >

TS1 Humidity Trim ⓘ 0

-1  
1

TS2 Humidity Trim ⓘ 0

-1  
1

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.




# Humidistat Setup

The image shows a 'HUMIDISTAT SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a page indicator '1/2' and a right arrow. The screen contains four settings, each with an information icon (i) to its left:

- Invert Call Logic:** A toggle switch is currently in the 'off' position (white circle on the left).
- Humidistat Setup:** A dropdown menu showing 'Humidification' with a right arrow.
- Fan In Humidistat:** A dropdown menu showing 'Yes' with a right arrow.
- Cool Hum Setpt Lim:** A dropdown menu showing 'No' with a right arrow.

- **Invert Call Logic:** Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- **Humidistat Setup:** Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - **Humidification:** Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - **Dehumidification:** Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - **Off:** Disable humidistat
- **Fan In Humidistat:** Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- **Cool Humidistat Setpoint Limit:** Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

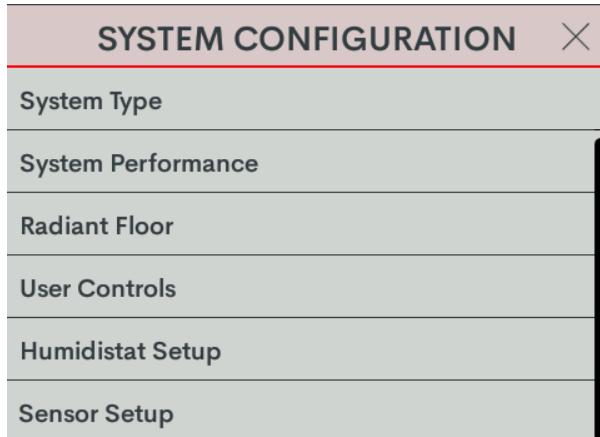
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

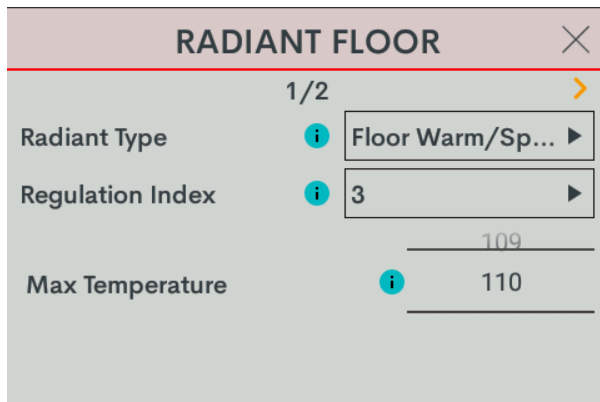
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# Radiant Floor Only (Floor Warming/Space Heating)

Navigate to the SYSTEM CONFIGURATION settings.



## Radiant Floor



- Radiant Type: Select **Floor Warm/Space Heat**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.

For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

- Lower Setpoint: Select **38 - 100** for Fahrenheit (**3 - 38** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius).

Limits minimum floor warming setpoint.

- Upper Setpoint : Select **48 - 110** for Fahrenheit (**8 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Limits maximum floor warming setpoint.

**NOTE:** The Upper Setpoint must be 10° higher than the Lower Setpoint.

## System Type

System Type: Select **None**

**NOTE:** When System Type is set to **None**, the following SYSTEM CONTROL settings cannot be accessed: Fan In Heat, Heat Stages, Cool Stages, Heat Pump Compressor Stages, and Heat Pump Auxiliary Stages.

## User Controls

The screenshot shows a control interface titled "USER CONTROLS" with a close button (X) in the top right corner. Below the title bar, there is a page indicator "1/5" and a right arrow. The interface lists three settings, each with an information icon (i) to its left:

- Auto Setpoint:** The value is "Dual" with a right arrow button.
- Setpoint Units:** The value is "1F" with a right arrow button.
- Temp Display Offset:** The value is "0.0" between two horizontal lines. The top line is labeled "-1.0" and the bottom line is labeled "1.0".

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.

Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

**NOTE:** When System Type is set to **None**, the following USER CONTROL settings cannot be accessed: Auto Setpoint, Heat Lower Setpoint, Heat Upper Setpoint, Cool Lower Setpoint, Cool Upper Setpoint, Auto Lower Setpoint, Auto Upper Setpoint, and Auto Deadband.

## Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The screen lists four settings, each with an information icon (i) and a dropdown menu:

- Local Sensor Usage: Space
- TS1 Usage: Space
- TS2 Usage: Outdoor
- Wall Type: Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim i -1.0  
0.0  
1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim i -1.0  
0.0  
1.0

TS2 Temperature Trim i -1.0  
0.0  
1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.



## Humidistat Setup

HUMIDISTAT SETUP

1/2

Invert Call Logic ☐


Humidistat Setup Humidification

Fan In Humidistat Yes

Cool Hum Setpt Lim No

- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

### HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

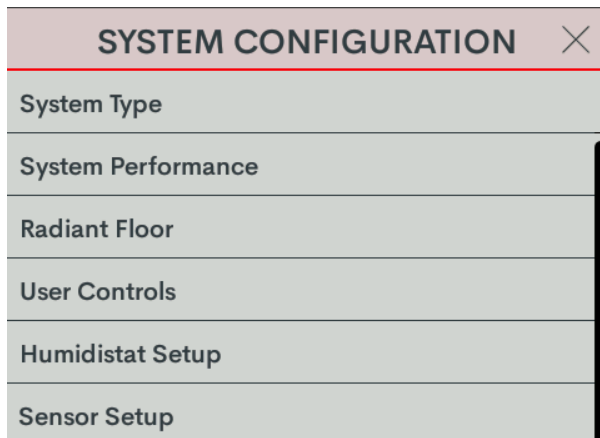
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

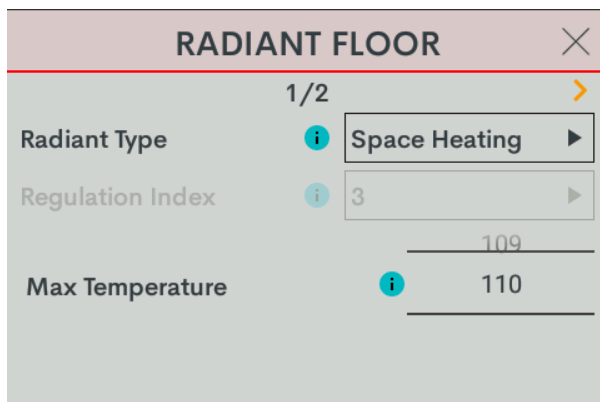
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool

Navigate to the SYSTEM CONFIGURATION settings.



## Radiant Floor



- Radiant Type: Select **Space Heat**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.

For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

**NOTE:** These settings cannot be accessed for Space Heating.

## System Type

- System Type: Select **Heat/Cool**

**NOTE:** There are Heat Only and Cool Only options for a Heat Only or Cool Only system type.

- Fan In Heat: Select **Yes** or **No**. Default setting: No.
  - Yes: Fan called for second stage (W).
  - No: Disable fan call operation for heat calls.
- Heat Stages: Select **1**.  
Number of heat-only stages present.

SYSTEM TYPE

2/2

Cool Stages

1

H.Pump Comp Stages

1

H.Pump Aux Stages

1

Cool Stages: Select **1**.

Number of cool-only (air conditioning) stages present.

## System Performance

SYSTEM PERFORMANCE

1/3

Heat Anticipator

3

Cool Anticipator

3

Interstage Diff

2.0

- Heat Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).  
The proportional temperature error to trigger the next stage.

**SYSTEM PERFORMANCE** ✕

2/3 >

Accum. Staging Index ⓘ 3 ▶

H.Pump Balance Point ⓘ 0

N/A

Accumulated Staging Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.

Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.

For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.

**SYSTEM PERFORMANCE** ✕

3/3 >

Short Cycle Timeout ⓘ 180 sec. ▶

Aux Heat Balance Point ⓘ N/A

0

Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.

The minimum off time between system calls.

# User Controls

The screenshot shows a control interface titled "USER CONTROLS" with a close button (X) in the top right corner. Below the title bar, there is a page indicator "1/5" and a right arrow. The interface lists three settings, each with an information icon (i) to its left:

- Auto Setpoint:** A dropdown menu currently showing "Disabled".
- Setpoint Units:** A dropdown menu currently showing "1F".
- Temp Display Offset:** A numeric input field showing "0.0". Above the field is a minus sign and "-1.0", and below the field is a plus sign and "1.0", indicating a range.

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.

Defines Auto mode.

- Dual: Auto mode uses heat and cool setpoints.
- Single: Auto mode uses single (auto) setpoint.
- Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.

Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

USER CONTROLS

×

Heat

2/5

>

Lower Setpoint

i

38

39

88

Upper Setpoint

i

89

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 79** for Fahrenheit (**3 - 27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48 - 89** for Fahrenheit (**8 - 32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)  
Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.



USER CONTROLS

❄️

Cool

3/5

>

Lower Setpoint

58

59

60

98

99

Upper Setpoint

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum cool setpoint the end user can set.

- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

🔥❄️

Auto

4/5

>

Lower Setpoint

58

59

60

98

99

Upper Setpoint

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum auto setpoint the end user can set.

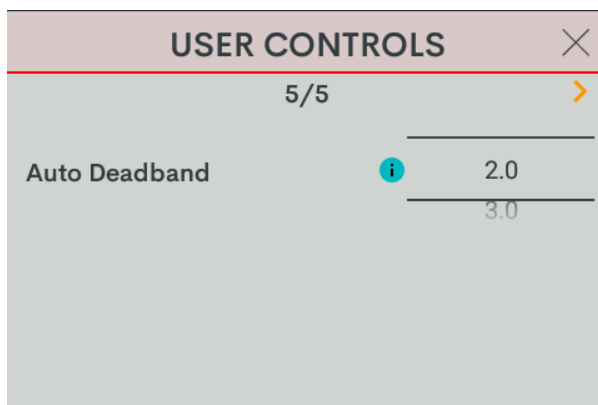
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

# Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

**SENSOR SETUP** ✕

4/5 >

Local Sensor Humidity Trim ⓘ 0

-1  
1

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

**SENSOR SETUP** ✕

5/5 >

TS1 Humidity Trim ⓘ 0

-1  
1

TS2 Humidity Trim ⓘ 0

-1  
1

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.

## Humidstat Setup

**HUMIDISTAT SETUP** ✕

1/2 >

Invert Call Logic ⓘ ☐


Humidistat Setup ⓘ Humidification ▶

Fan In Humidistat ⓘ Yes ▶


Cool Hum Setpt Lim ⓘ No ▶

- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).


HUMIDISTAT SETUP

 Humidity

2/2



Lower Setpoint




9

10

11

Upper Setpoint



69

70

71

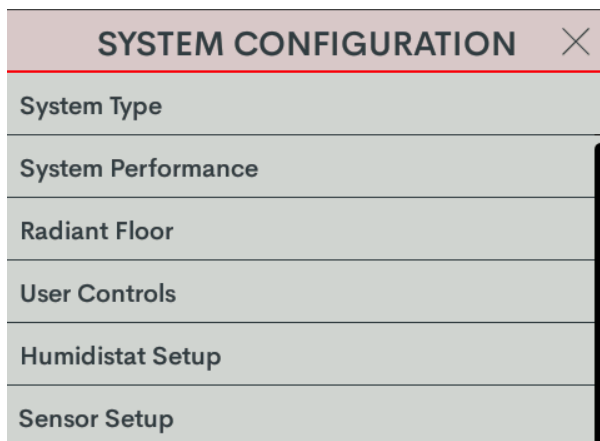
(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

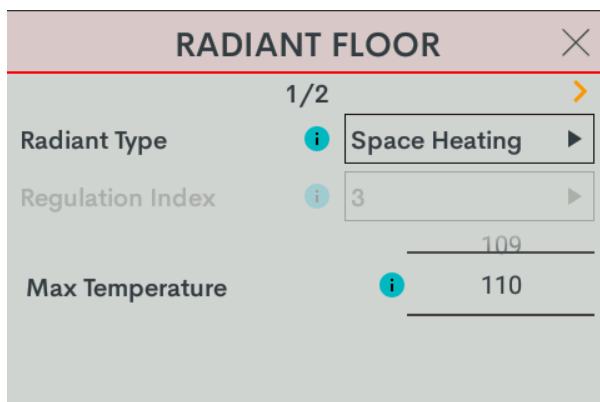
**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# 2 Stage Heat (Stage 1 Radiant Floor)/1 Stage Cool Heat Pump with 1 Stage Aux Heat

Navigate to the SYSTEM CONFIGURATION settings.



## Radiant Floor



- Radiant Type: Select **Space Heat**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.

For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.



- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

**RADIANT FLOOR**
✕

2/2 >

Lower Setpoint

i

38

39

Upper Setpoint  
(must be 10° Greater than Lower Setpoint)

i

48

49

**NOTE:** These settings cannot be accessed for Space Heating.

## System Type

**SYSTEM TYPE**
✕

1/2 >

System Type

i

Heatpump w/...

▶

Fan In Heat

i

No

▶

Heat Stages

i

1

▶

- System Type: Select **Heatpump w/ Aux**
- Fan In Heat: Select **Yes** or **No**. Default setting: No.
  - Yes: Fan called for second stage (W).
  - No: Disable fan call operation for heat calls.

SYSTEM TYPE		✕
2/2 >		
Cool Stages	i	1 ▶
H.Pump Comp Stages	i	1 ▶
H.Pump Aux Stages	i	1 ▶

**NOTE:** With Radiant Floor set to Space heat, the Heat Pump Compressor Stages does not need to be set.

- Heat Pump Compressor Stages: Choose **1**.  
Number of heat pump compressor stages present
- Heat Pump Auxiliary Stages: Choose **1**.  
Number of Auxiliary Heat stages present.

## System Performance

SYSTEM PERFORMANCE		✕
1/3 >		
Heat Anticipator	i	3 ▶
Cool Anticipator	i	3 ▶
Interstage Diff	i	2.0 ▶

- Heat Anticipator: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).  
The proportional temperature error to trigger the next stage.

SYSTEM PERFORMANCE

2/3

Accum. Staging Index

3

H.Pump Balance Point

N/A

- Accumulated Staging Index: Select **1**, **2**, **3**, **4**, **5**, or **6**. Default setting: 3.  
 Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.  
 For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.
- Heat Pump Balance Point: Select N/A or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius).  
 Default setting: N/A.  
 Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source).

SYSTEM PERFORMANCE

3/3

Short Cycle Timeout

180 sec.

Aux Heat Balance Point

N/A

- Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.  
 The minimum off time between system calls.

- Auxiliary Heat Balance Point: Select **N/A** or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius). Default setting: N/A.  
Maximum outdoor temperature at which Auxiliary heat system supplements the heat pump (requires an outdoor temperature sensor).

**NOTES:** Auxiliary Heat Balance Point:

- Must be at least 1° higher than the Heat Pump Balance Point.
- Cannot be accessed for Dual Fuel systems.

## User Controls

The screenshot shows a 'USER CONTROLS' menu with a close button (X) in the top right corner. Below the title bar, there is a page indicator '1/5' and a right arrow. The menu contains three settings:

- Auto Setpoint:** A dropdown menu currently set to 'Disabled' with an information icon (i) to its left.
- Setpoint Units:** A dropdown menu currently set to '1F' with an information icon (i) to its left.
- Temp Display Offset:** A numeric input field set to '0.0' with an information icon (i) to its left. The field has a range from -1.0 to 1.0 indicated by horizontal lines and numbers.

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.  
Defines Auto mode.
  - Dual: Auto mode uses heat and cool setpoints.
  - Single: Auto mode uses single (auto) setpoint.
  - Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.  
Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0 - +3.0** for Celsius). Default setting: 0.  
Adjusts an offset between the space temperature displayed and the temperature sensed.

USER CONTROLS

×

Heat

2/5

>

Lower Setpoint

i

38

39

88

Upper Setpoint

i

89

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38** - **79** for Fahrenheit (**3** - **27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48** - **89** for Fahrenheit (**8** - **32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)  
Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.

USER CONTROLS

×

❄️

Cool

3/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum cool setpoint the end user can set.

- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

×

🔥❄️

Auto

4/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum auto setpoint the end user can set.

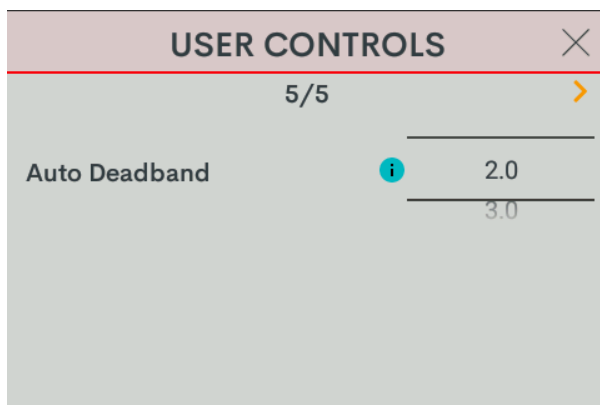
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

# Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The screen lists four settings, each with an information icon (i) and a dropdown menu:

- Local Sensor Usage: Space
- TS1 Usage: Space
- TS2 Usage: Outdoor
- Wall Type: Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.



**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

**SENSOR SETUP** ✕

4/5 >

Local Sensor Humidity Trim ⓘ 0

-1  
1

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

**SENSOR SETUP** ✕

5/5 >

TS1 Humidity Trim ⓘ 0

-1  
1

TS2 Humidity Trim ⓘ 0

-1  
1

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.


# Humidistat Setup

The image shows a 'HUMIDISTAT SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a page indicator '1/2' and a right arrow. The screen contains four settings, each with an information icon (i) to its left:

- Invert Call Logic:** A toggle switch is shown in the 'off' position (white circle on the left).
- Humidistat Setup:** A dropdown menu is set to 'Humidification' with a right arrow.
- Fan In Humidistat:** A dropdown menu is set to 'Yes' with a right arrow.
- Cool Hum Setpt Lim:** A dropdown menu is set to 'No' with a right arrow.

- **Invert Call Logic:** Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- **Humidistat Setup:** Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - **Humidification:** Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - **Dehumidification:** Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - **Off:** Disable humidistat
- **Fan In Humidistat:** Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- **Cool Humidistat Setpoint Limit:** Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

 Humidity

2/2

>

Lower Setpoint

i

10

Upper Setpoint

i

70

(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# 2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool

Navigate to the SYSTEM CONFIGURATION settings.

A screenshot of the 'SYSTEM CONFIGURATION' menu. The menu has a title bar with the text 'SYSTEM CONFIGURATION' and a close button (X). Below the title bar, there is a list of settings categories: 'System Type', 'System Performance', 'Radiant Floor', 'User Controls', 'Humidistat Setup', and 'Sensor Setup'. A vertical scrollbar is visible on the right side of the list.

## Radiant Floor

A screenshot of the 'RADIANT FLOOR' settings screen. The screen has a title bar with the text 'RADIANT FLOOR' and a close button (X). Below the title bar, there is a '1/2' indicator with a right arrow. The settings are as follows: 'Radiant Type' is set to 'Floor Warm/Sp...' with an information icon (i) to its left; 'Regulation Index' is set to '3' with an information icon (i) to its left; and 'Max Temperature' is set to '110' with an information icon (i) to its left. A horizontal line separates the 'Max Temperature' setting from a value of '109' above it.

- Radiant Type: Select **Floor Warm/Space Heat**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.

For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

**RADIANT FLOOR** ✕

2/2 >

**Lower Setpoint** ⓘ 38  
39  
109

**Upper Setpoint** ⓘ 110  
(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 100** for Fahrenheit (**3 - 38** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius).

Limits minimum floor warming setpoint.

- Upper Setpoint : Select **48 - 110** for Fahrenheit (**8 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Limits maximum floor warming setpoint.

**NOTE:** The Upper Setpoint must be 10° higher than the Lower Setpoint.

## System Type

SYSTEM TYPE		×
1/2 >		
System Type	i	Heat/Cool ▶
Fan In Heat	i	No ▶
Heat Stages	i	1 ▶

- System Type: Select **Heat/Cool**

**NOTE:** There are Heat Only and Cool Only options for a Heat Only or Cool Only system type.

- Fan In Heat: Select **Yes** or **No**. Default setting: No.
  - Yes: Fan called for second stage (W).
  - No: Disable fan call operation for heat calls.
- Heat Stages: Select **1**.  
Number of heat-only stages present.

SYSTEM TYPE		×
2/2 >		
Cool Stages	i	1 ▶
H.Pump Comp Stages	i	1 ▶
H.Pump Aux Stages	i	1 ▶

Cool Stages: Select **1**.

Number of cool-only (air conditioning) stages present.

## System Performance

SYSTEM PERFORMANCE ✕

1/3 >

Heat Anticipator ⓘ 3 ▶

Cool Anticipator ⓘ 3 ▶

Interstage Diff ⓘ 2.0 ▶

- Heat Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).  
The proportional temperature error to trigger the next stage.

SYSTEM PERFORMANCE ✕

2/3 >

Accum. Staging Index ⓘ 3 ▶

H.Pump Balance Point ⓘ 0

Accumulated Staging Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.

Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.

For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.



Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.

The minimum off time between system calls.

## User Controls

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.  
Defines Auto mode.
  - Dual: Auto mode uses heat and cool setpoints.
  - Single: Auto mode uses single (auto) setpoint.
  - Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.  
Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0** - **+3.0** for Celsius). Default setting: 0.

Adjusts an offset between the space temperature displayed and the temperature sensed.

The screenshot shows a mobile app interface titled "USER CONTROLS" with a close button (X). Below the title, there's a section for "Heat" mode, indicated by a flame icon and a "2/5" status. A yellow arrow points to the right. Under "Heat", there are two setpoint controls. The "Lower Setpoint" is currently set to 38, with a range of 39 to 88 shown below it. The "Upper Setpoint" is currently set to 89, with a note below it stating "(must be 10° Greater than Lower Setpoint)". Both setpoint controls have an information icon (i) to their left.

- Lower Setpoint: Select **38** - **79** for Fahrenheit (**3** - **27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48** - **89** for Fahrenheit (**8** - **32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)

Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.

USER CONTROLS

×

❄️ Cool

3/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum cool setpoint the end user can set.

- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

×

🔥❄️ Auto

4/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).

Limits minimum auto setpoint the end user can set.

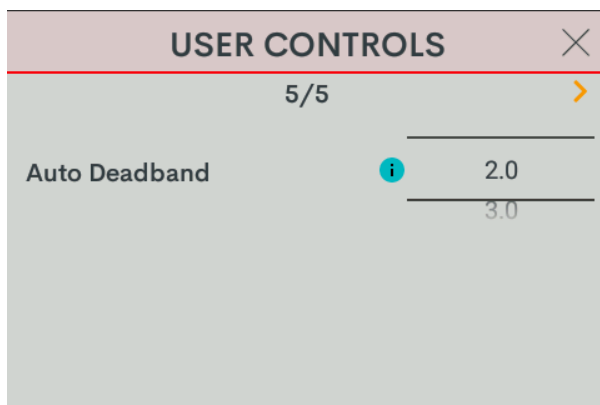
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

# Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

**SENSOR SETUP** ✕

4/5 >

Local Sensor Humidity Trim ⓘ 0

-1  
1

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

**SENSOR SETUP** ✕

5/5 >

TS1 Humidity Trim ⓘ 0

-1  
1

TS2 Humidity Trim ⓘ 0

-1  
1

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.

## Humidistat Setup

HUMIDISTAT SETUP

1/2

Invert Call Logic ☐

Humidistat Setup Humidification


Fan In Humidistat Yes

Cool Hum Setpt Lim No


- Invert Call Logic: Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- Humidistat Setup: Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - Humidification: Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - Dehumidification: Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - Off: Disable humidistat
- Fan In Humidistat: Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- Cool Humidistat Setpoint Limit: Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).




HUMIDISTAT SETUP

 Humidity

2/2



Lower Setpoint



9

10


11

69

70

71

Upper Setpoint



69

70

71

(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

# 2 Stage Heat (Stage 1 Radiant Floor Warming/Space Heating)/1 Stage Cool Heat Pump with 1 Stage Aux Heat

Navigate to the SYSTEM CONFIGURATION settings.

A screenshot of the 'SYSTEM CONFIGURATION' menu. The menu has a title bar with the text 'SYSTEM CONFIGURATION' and a close button (X). Below the title bar, there is a list of settings categories: 'System Type', 'System Performance', 'Radiant Floor', 'User Controls', 'Humidistat Setup', and 'Sensor Setup'. A vertical scrollbar is visible on the right side of the list.

## Radiant Floor

A screenshot of the 'RADIANT FLOOR' settings screen. The screen has a title bar with the text 'RADIANT FLOOR' and a close button (X). Below the title bar, there is a page indicator '1/2' with a right arrow. The settings are as follows: 'Radiant Type' with a dropdown menu showing 'Floor Warm/Sp...' and a right arrow; 'Regulation Index' with a dropdown menu showing '3' and a right arrow; and 'Max Temperature' with a slider control showing '109' and '110'.

- Radiant Type: Select **Floor Warm/Space Heat**
- Regulation Index: Select **1, 2, 3, 4, 5, or 6**. Default setting: 3.

For example, to adjust Floor Warming system cycling characteristics, select 1 for a narrow temperature regulation or 6 for a wide temperature regulation.

**NOTE:** Regulation Index cannot be accessed for Space Heating.

- Max Temperature: Select **50 - 110** for Fahrenheit (**10 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Used to prevent the floor from becoming too hot on long heat calls.

**NOTE:** Max Temperature cannot be accessed for Floor Warming.

- Lower Setpoint: Select **38 - 100** for Fahrenheit (**3 - 38** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius).

Limits minimum floor warming setpoint.

- Upper Setpoint : Select **48 - 110** for Fahrenheit (**8 - 43** for Celsius). Default setting: 110 for Fahrenheit (43 for Celsius).

Limits maximum floor warming setpoint.

**NOTE:** The Upper Setpoint must be 10° higher than the Lower Setpoint.

## System Type

- System Type: Select **Heatpump w/ Aux**
- Fan In Heat: Select **Yes** or **No**. Default setting: No.

- Yes: Fan called for second stage (W).
- No: Disable fan call operation for heat calls.

**SYSTEM TYPE**
✕

2/2 ➤

Cool Stages
i

1 ➤

H.Pump Comp Stages
i

1 ➤

H.Pump Aux Stages
i

1 ➤

**NOTE:** With Radiant Floor set to Space heat, the Heat Pump Compressor Stages does not need to be set.

- Heat Pump Compressor Stages: Choose **1**.  
Number of heat pump compressor stages present
- Heat Pump Auxiliary Stages: Choose **1**.  
Number of Auxiliary Heat stages present.

## System Performance

**SYSTEM PERFORMANCE**
✕

1/3 ➤

Heat Anticipator
i

3 ➤

Cool Anticipator
i

3 ➤

Interstage Diff
i

2.0 ➤

- Heat Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust space heating system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.
- Cool Anticipator: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
For example, to adjust cooling system cycling characteristics., select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.

- Interstage Differential: Select **0.5 - 8.0** for Fahrenheit or **0.2 - 4.5** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

The proportional temperature error to trigger the next stage.

**SYSTEM PERFORMANCE** ✕

2/3 >

Accum. Staging Index ⓘ 3 ▶

H.Pump Balance Point ⓘ N/A

0

- Accumulated Staging Index: Select **1, 2, 3, 4, 5**, or **6**. Default setting: 3.  
Triggers next stage to meet demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint.  
For example, select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting 6 disables this feature altogether.
- Heat Pump Balance Point: Select **N/A** or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius). Default setting: N/A.  
Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source).

**SYSTEM PERFORMANCE** ✕

3/3 >

Short Cycle Timeout ⓘ 180 sec. ▶

Aux Heat Balance Point ⓘ N/A

0

- Short Cycle Timeout: Select **30 seconds**, **60 seconds**, or **180 seconds**. Default setting: 180 seconds.

The minimum off time between system calls.

- Auxiliary Heat Balance Point: Select **N/A** or **0 - 90** for Fahrenheit (**-18 - 31** for Celsius). Default setting: N/A.  
Maximum outdoor temperature at which Auxiliary heat system supplements the heat pump (requires an outdoor temperature sensor).

**NOTES:** Auxiliary Heat Balance Point:

- Must be at least 1° higher than the Heat Pump Balance Point.
- Cannot be accessed for Dual Fuel systems.

## User Controls

The screenshot shows a 'USER CONTROLS' menu with a close button (X) in the top right corner. Below the title bar, there is a '1/5' indicator and a right arrow. The menu contains three settings:

- Auto Setpoint:** A dropdown menu currently set to 'Disabled' with an information icon (i) to its left.
- Setpoint Units:** A dropdown menu currently set to '1F' with an information icon (i) to its left.
- Temp Display Offset:** A numeric input field currently set to '0.0' with an information icon (i) to its left. The field has a range from -1.0 to 1.0 indicated by horizontal lines.

- Auto Setpoint: Select **Dual**, **Single**, or **Disabled**. Default setting: Dual.  
Defines Auto mode.
  - Dual: Auto mode uses heat and cool setpoints.
  - Single: Auto mode uses single (auto) setpoint.
  - Disabled: Auto mode is disabled.

**NOTE:** Auto Setpoint cannot be accessed in Heat Only or Cool Only system.

- Setpoint Units: Select **1F**, **1C**, or **0.5C**. Default setting: 1F.  
Defines the temperature scale as Fahrenheit or Celsius, and determines the setpoint incrementation by 1°F, 1°C, or 0.5°C.

**NOTE:** The Setpoint Units setting will also be applied to the sensor readings.

- Temp Display Offset: Select **-6** to **+6** for Fahrenheit (**-3.0 - +3.0** for Celsius). Default setting: 0.  
Adjusts an offset between the space temperature displayed and the temperature sensed.

USER CONTROLS

×

Heat

2/5

>

Lower Setpoint

i

38

39

88

Upper Setpoint

i

89

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38** - **79** for Fahrenheit (**3** - **27** for Celsius). Default setting: 38 for Fahrenheit (3 for Celsius)  
Limits minimum heat setpoint the end user can set.
- Upper Setpoint: Select **48** - **89** for Fahrenheit (**8** - **32** for Celsius). Default setting: 89 for Fahrenheit (32 for Celsius)  
Limits the maximum heat setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Cool Only systems.

USER CONTROLS

×

❄️

Cool

3/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).  
Limits minimum cool setpoint the end user can set.
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).  
Limits the maximum cool setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed for Heat Only systems.

USER CONTROLS

×

🔥❄️

Auto

4/5

>

Lower Setpoint

i

58

59

60

98

Upper Setpoint

i

99

(must be 10° Greater than Lower Setpoint)

- Lower Setpoint: Select **38 - 89** for Fahrenheit (**3 - 32** for Celsius). Default setting: 59 for Fahrenheit (15 for Celsius).  
Limits minimum auto setpoint the end user can set.



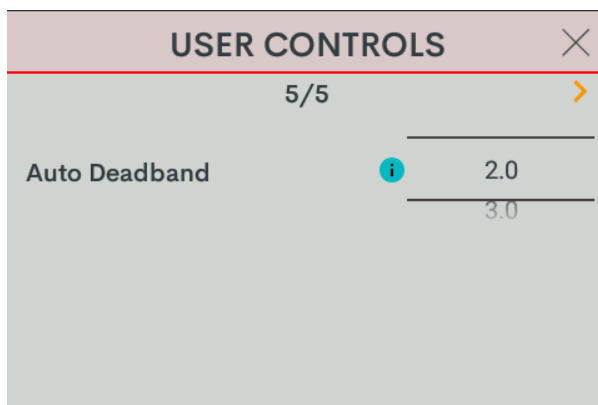
- Upper Setpoint: Select **48 - 99** for Fahrenheit (**8 - 37** for Celsius). Default setting: 99 for Fahrenheit (37 for Celsius).

Limits the maximum auto setpoint the end user can set.

**NOTE:** The Upper Setpoint must be at least 10°F (5°C) higher than the Lower Setpoint.

**NOTE:** These settings cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable or Dual.



Auto Deadband: Select **2.0, 3.0, 4.0, 5.0, or 6.0** for Fahrenheit (**1.0, 2.0, or 3.0** for Celsius). Default setting: 2.0 for Fahrenheit (1.0 for Celsius).

This sets the separation between the heat and cool setpoints in Auto mode. In Dual Mode, this is the minimum separation allowed.

**NOTE:** Auto Deadband cannot be accessed in the following instances:

- Heat Only systems
- Cool Only systems
- Auto Setpoint is set to Disable.

## Sensor Setup

**NOTE:** Requires a slab remote sensor (CHV-RSS, sold separately).

The screenshot shows a 'SENSOR SETUP' window with a close button (X) in the top right corner. Below the title bar, there is a progress indicator '1/5' and a right arrow. The settings are as follows:

Setting	Value
Local Sensor Usage	Space
TS1 Usage	Space
TS2 Usage	Outdoor
Wall Type	Non-Insulated

- Local Sensor Usage: Select **Omit** or **Space**. Default setting: Space.

Defines how the local sensor is used by the thermostat.

- Omit: Omits channel from thermostat operation

**NOTE:** Sensor temperature and humidity can be output to the network even if Omit is selected.

- Space: Adds channel to space temperature/humidity average

- TS1 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 1 is used by the thermostat.

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- TS2 Usage: Select **Omit**, **Space**, **Outdoor**, or **Floor**. Default setting: Omit.

Defines how remote sensor channel 2 is used by the thermostat

- Omit: Omits channel from thermostat operation
- Space: Adds channel to space temperature/humidity average
- Outdoor: Adds channel to outdoor temperature/humidity average
- Floor: Adds channel to slab (floor) temperature average

- Wall Type: Select **Non-Insulated** or **Insulated**.

For more accurate temperature readings, define the wall type that the thermostat is installed into: Non-Insulated (hollow) or Insulated.

**SENSOR SETUP** ✕

2/5 >

Local Sensor Temperature Trim ⓘ

-1.0

0.0

1.0

Local Sensor Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts local sensor temperature measurement.

**SENSOR SETUP** ✕

3/5 >

TS1 Temperature Trim ⓘ

-1.0

0.0

1.0

TS2 Temperature Trim ⓘ

-1.0

0.0

1.0

- TS1 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS1 input.

- TS2 Temperature Trim: Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). Default setting: 0.

Adjusts temperature sensed by temperature sensor(s) attached to TS2 input.

Local Sensor Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.

Adjusts local sensor humidity percentage.

- TS1 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS1 input.
- TS2 Humidity Trim: Select **-9.0** to **+9.0**. Default setting: 0.  
Adjusts humidity percentage sensed by temperature/humidity sensor attached to TS2 input.

## Humidistat Setup

The image shows a 'HUMIDISTAT SETUP' screen with a close button (X) in the top right corner. Below the title bar, there is a page indicator '1/2' and a right arrow. The screen contains four settings, each with an information icon (i) to its left:

- Invert Call Logic:** A toggle switch is currently in the 'off' position (white circle on the left).
- Humidistat Setup:** A dropdown menu is set to 'Humidification' with a right arrow.
- Fan In Humidistat:** A dropdown menu is set to 'Yes' with a right arrow.
- Cool Hum Setpt Lim:** A dropdown menu is set to 'No' with a right arrow.

- **Invert Call Logic:** Tap the toggle to invert the call logic. Default: No.  
Reverses the logic controlling the switching of the HUM relay (NO/NC).
- **Humidistat Setup:** Select **Humidification**, **Dehumidification**, or **Off**. Default setting: Humidification.  
Sets the operating mode of the HUM relay.
  - **Humidification:** Calls HUM relay when sensed humidity is below the humidistat setpoint.
  - **Dehumidification:** Calls HUM relay when sensed humidity is above the humidistat setpoint.
  - **Off:** Disable humidistat
- **Fan In Humidistat:** Select **No** or **Yes**. Default setting: No.  
If Yes, the thermostat will make a fan call when a humidistat call is triggered instead of waiting for a heat or cool call to trigger the fan.
- **Cool Humidistat Setpoint Limit:** Select **No** or **Yes**. Default setting: No.  
Limits internal humidistat setpoint to prevent window condensation when it's cold outside (displayed setpoint will not change).

HUMIDISTAT SETUP

Humidity

2/2

>

Lower Setpoint

i

10

9

11

69

70

71

Upper Setpoint

i

70

69

71

(must be 10% Greater than Lower Setpoint)

- Lower Setpoint: Select **5 - 80**. Default setting: 10.  
Limits minimum humidistat setpoint percentage.
- Upper Setpoint: Select **15 - 90**. Default setting: 70.  
Limits maximum humidistat setpoint percentage.

**NOTE:** The Upper Setpoint must be 10% higher than the Lower Setpoint.

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