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Product Manual

# CHV-THSTAT-PIR-10

## Heating/Cooling Thermostat, 0-10V or Relay Control, with Occupancy Sensor

Crestron Electronics, Inc.

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The original language version of this document is U.S. English.
All other languages are a translation of the original document.

**Regulatory Model:** M202349001

# Contents

# CHV-THSTAT-PIR-10

The CHV-THSTAT-PIR-10 thermostat enables precision control of two stage heat/cool systems, two stage heat pump systems with an auxiliary heat stage, 2-pipe and 4-pipe FCU systems, and humidity systems. Achieve variable heating, cooling, and fan speed control in hotels, apartments, or other multi-dwelling residences with 0-10V or relay control options. A built-in passive infrared (PIR) sensor detects room occupancy for energy efficiency. Whether used as a standalone unit or as part of a complete Crestron control system, the CHV-TSTAT-PIR-10 delivers complete functionality in a stylish wall mount design.

> **Refer to Getting Started for important information on using your product and this document.**

This section provides the following information:

- Features
- Physical Description

# Features

Key features include:

- Compatible with conventional heat/cool 2H/2C systems, heat pump 2H/2C systems with auxiliary heat, dual-fuel heat pump, 2-Pipe FCU, 4-Pipe FCU, and humidity control
- Supports 0-10V or relay control for heating, cooling, and fan speed
- Backlit LCD display
- Large, backlit push buttons for heating, cooling, fan speed, temperature scale, and temperature adjustments
- Built-in passive infrared (PIR) sensor to detect room occupancy for energy efficiency
- Designate up to four setpoints based on occupancy and hospitality room booking status
- External temperature/humidity sensor input enables the use of an extra, alternative, or auto-changeover sensor
- Control system integration via the Cresnet® network
- Utilizes built-in temperature and humidity sensors
- Wall-mount installation
- Available in white and black finishes


## Simple Operation

The backlit LCD display with a simple user interface and intuitive push buttons make this thermostat easy to use and ideal for hospitality installs. The screen displays useful information such as the current setpoint, mode, fan setting, and (optionally) the current room temperature. The thermostat provides buttons for raising or lowering the temperature, changing the climate mode, adjusting the fan speed, and toggling between Fahrenheit and Celsius.

## Complete Climate Control

Climate control features include separate heating and cooling setpoints, with an optional automatic changeover between heating and cooling modes. Adjustable anticipators and staging parameters ensure a comfortable space. Continuous fan operation can be selected when needed for increased circulation.

## Occupancy Sensing

Built with versatility and energy efficiency in mind, the CHV-THSTAT-PIR-10 features a built-in PIR sensor to ensure that energy spent on climate control is never wasted on a vacant room.

## Automation System Integration

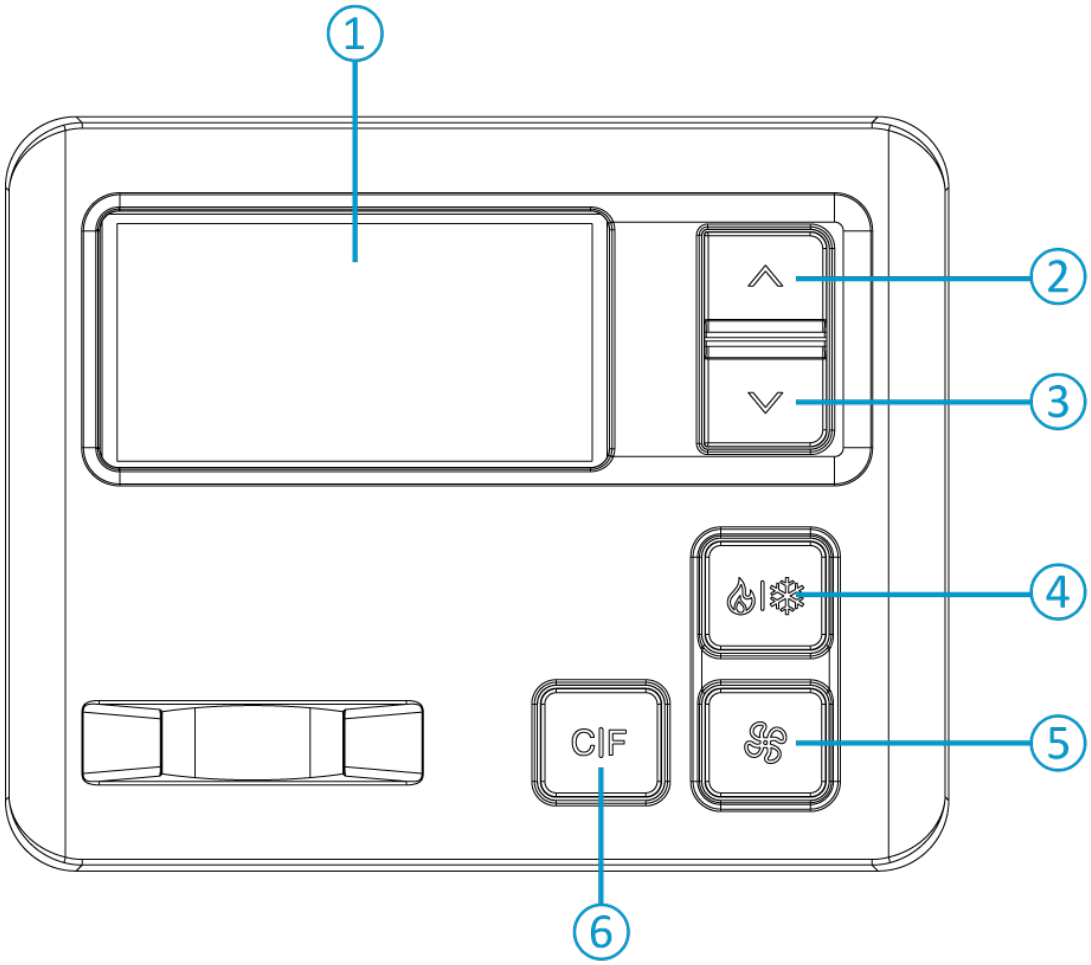
Multiple Crestron thermostats may be networked via Cresnet wired communications, a simple 4-wire network bus that acts as the communications backbone for Crestron lighting dimmers, keypads, shades, thermostats, and other devices. Integrate the thermostat network with a Crestron control system to enable global temperature and humidity adjustments from any thermostat in the system.

# Physical Description

The CHV-THSTAT-PIR-10 provides the following connectors, controls, and indicators.

## Front

The following illustration shows the front of the CHV-THSTAT-PIR-10




① **LCD Display**

② **Up:** Raises the room's setpoint by 1.0°F or 0.5°C, depending on the active temperature scale

③ **Down:** Lowers the room's setpoint by 1.0°F or 0.5°C, depending on the active temperature scale

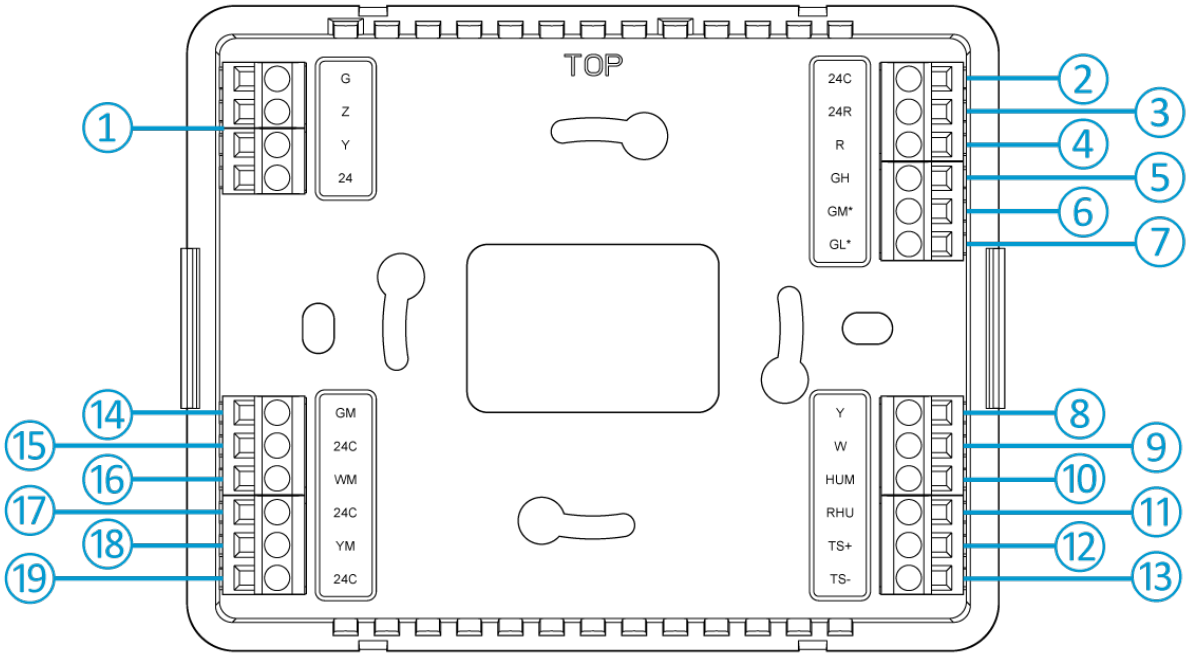
④ **Mode:** Switches between Heat, Cool, Auto, and Off modes

⑤ **Fan:** Cycles through Auto, High, Medium, and Low fan settings

⑥ **C|F:** Switches between Fahrenheit and Celsius temperature scales

# Rear

The following illustration shows the rear of the CHV-THSTAT-PIR-10.




① **G, Z, Y, 24:** Cresnet connections

② **24C:** Common for 24VAC/VDC device power connection

③ **24R:** 24VAC/VDC device power connection

④ **R:** Reference voltage for heat, cool, compressor and fan relay calls.

⑤ **GH:** Fan High

⑥ **GM*:** Fan Medium

⑦ **GL*:** Fan Low

⑧ **Y:** Cool or compressor stage 1 call
FCU (4-Pipe): Cool valve call
FCU (2-Pipe C): Cool valve call

⑨ **W:** Non-FCU: (1) Heat call
FCU (4-Pipe): Heat valve call
FCU (2-Pipe H/C): Valve call
FCU (2-Pipe H): Heat valve call

⑩ **HUM:** Humidity

⑪ **RHU:** Hum/Dehum return

⑫ **TS+:** Remote temperature sensor input

⑬ **TS-:** Remote temperature sensor return

⑭ **GM:** 0-10V Fan control

⑮ **24C:** Common for WM (Connected to 24VAC/VDC common)

⑯ **WM:**
FCU (4-Pipe): Heat valve call
FCU (2-Pipe H/C): Valve call
FCU (2-Pipe H): Heat valve call

⑰ **24C:** Common for 24VAC/VDC device power connection

⑱ **YM:**
FCU (4-Pipe): (1) Cool valve call
FCU (2-Pipe C): (1) Cool valve call

⑲ **24C:** Common for YM (Connected to 24VAC/VDC common)

# CHV-THSTAT-PIR-10 Specifications

Product specifications for the CHV-THSTAT-PIR-10 are provided below.

## Product Specifications

### Measurement Range

0° to 110°F (-18-43°C)

### Temperature and Humidity Tolerance

| | |
|---|---|
| **Over Full Range** | ±1°F (±0.5°C) |
| **Humidity** | ±5% |

### Setpoint Range

| | |
|---|---|
| **Heat** | 38° to 89°F (3° to 32°C) |
| **Cool** | 59° to 99°F (15° to 37°C) |

### Relay Rating

1A @ 40VDC or 24VAC (nominal)

### Power Requirements

| | |
|---|---|
| **Cresnet® Network** | 24VDC |
| **HVAC Unit** | 24VAC |
| **Power Consumption** | Approximately 1.5 W |

> **NOTE:** The device can be powered entirely via Cresnet 24VDC by placing a jumper between the Cresnet 24/G and HVAC 24R/24C connections and setting the POWER jumper to 24R. If possible, power the CHV-THSTAT-PIR-10 from the HVAC system.

### Communications

| | |
|---|---|
| **Cresnet Wired** | Control system integration or networking;<br>Unit is a fully functional standalone thermostat and does not require a connection to the Cresnet network |

### Buttons

| | |
|---|---|
| **Mode** | Switches between Off, Heat, Cool, and Auto modes |

| | |
|---|---|
| **FAN** | Controls fan speed;<br>Cycles through Auto, High, Medium, and Low settings |
| **UP** | Raises the room's setpoint by 1.0°F, 1.0°C, or 0.5°C, depending on the active temperature scale and device settings |
| **Down** | Lowers the room's setpoint by 1.0°F, 1.0°C, or 0.5°C, depending on the active temperature scale and device settings |
| **C\|F** | Switches between Fahrenheit and Celsius temperature scales |

## Motion Sensor

On-board passive infrared sensor;
Enables thermostat to switch between four previously defined setpoints based on occupancy and hospitality room booking status;
When motion is detected, the Occupied setpoint is used;
When the room is vacant, the Unoccupied setpoint is used

## Display

Displays current room temperature, current setpoint, current Heat or Cool mode, thermostat's call for heating or cooling, and current fan setting

| | |
|---|---|
| **Type** | Transflective LCD, backlit |
| **Size** | 2.75 in. (70 mm) |
| **Resolution** | 128 x 64 |
| **Viewing Angle** | ±50° horizontal at 0° vertical;<br>±50° vertical at 0° horizontal |

## Connections

| | |
|---|---|
| **24C** | (3) Common for 24VAC/VDC device power connection |
| **24R** | (1) 24VAC/VDC Device Power Connection |
| **R** | (1) Reference voltage for heat, cool, compressor and fan relay calls. |
| **GH** | Non-FCU: (1) Fan call<br>FCU: (1) Fan call (high) |
| **GM*** | Non-FCU: (1) W2 or O call;<br>FCU: (1) Fan call (medium) |
| **GL*** | Non-FCU: (1) Y2 (compressor stage 2) call;<br>FCU: (1) Fan call (low) |
| **Y** | Non-FCU: (1) Cool or compressor stage 1 call;<br>FCU (4-Pipe): (1) Cool valve call;<br>FCU (2-Pipe C): (1) Cool valve call |
| **W** | Non-FCU: (1) Heat call;<br>FCU (4-Pipe): (1) Heat valve call;<br>FCU (2-Pipe H/C): (1) Valve call;<br>FCU (2-Pipe H): (1) Heat valve call |
| **HUM** | (1) Humidistat call |

| | |
|---|---|
| **RHU** | (1) Reference, humidistat call |
| **TS+ and TS-** | (2) Remote sensor inputs, comprised of TS1+ and TS1- terminals;<br>For remote temperature sensors (CHV-RTS, CHVI-RTS-1G-N-W, and CHVI-RTS-1G-SM-W), remote slab sensor (CHV-RSS), remote temperature and humidity sensors (CHV-RTHS), and 10k thermistors (all sensors and thermistors are sold separately);<br>Using CAT5 or similar low-capacitance wire, connect up to (2) Crestron temperature sensors, (1) Crestron temperature/humidity sensor, or (1) 10k thermistor;<br>Can also be designated as an autochangeover sensor for an FCU 2-pipe heat/cool system |

**NOTES:**

- **TS1+** and **TS1-** connections are non-polarized. The + and - designations are provided to simplify wiring.
- Use a seperate run of wire for each sensor.
- Sensor lines should not be run parallel to any other wiring. Lines should cross other cables at right angles.
- CAT5 lengths should not exceed 500 ft (152 m).

| | |
|---|---|
| **GM** | (1) 0-10V fan control |
| **WM** | FCU (4-Pipe): (1) Heat valve call<br>FCU (2-Pipe H/C): (1) Valve call<br>FCU (2-Pipe H): (1) Heat valve call |
| **YM** | FCU (4-Pipe): (1) Cool valve call<br>FCU (2-Pipe C): (1) Cool valve call |
| **Cresnet Network (G, Z, Y, 24)** | (1) 4-position terminal block;<br>Cresnet device port, connects to Cresnet control network |

## Environmental

| | |
|---|---|
| **Humidity** | 10% to 95% RH (noncondensing) |
| **Temperature** | 32° to 122°F (0° to 50°C) |

## Construction

White or black plastic, surface-mountable to the front of a horizontally-oriented 1-gang electrical box

## Dimensions

| | |
|---|---|
| **Height** | 4.00 in. (102 mm) |
| **Width** | 5.00 in. (127 mm) |
| **Depth** | 1.10 in. (28 mm) |

## Weight

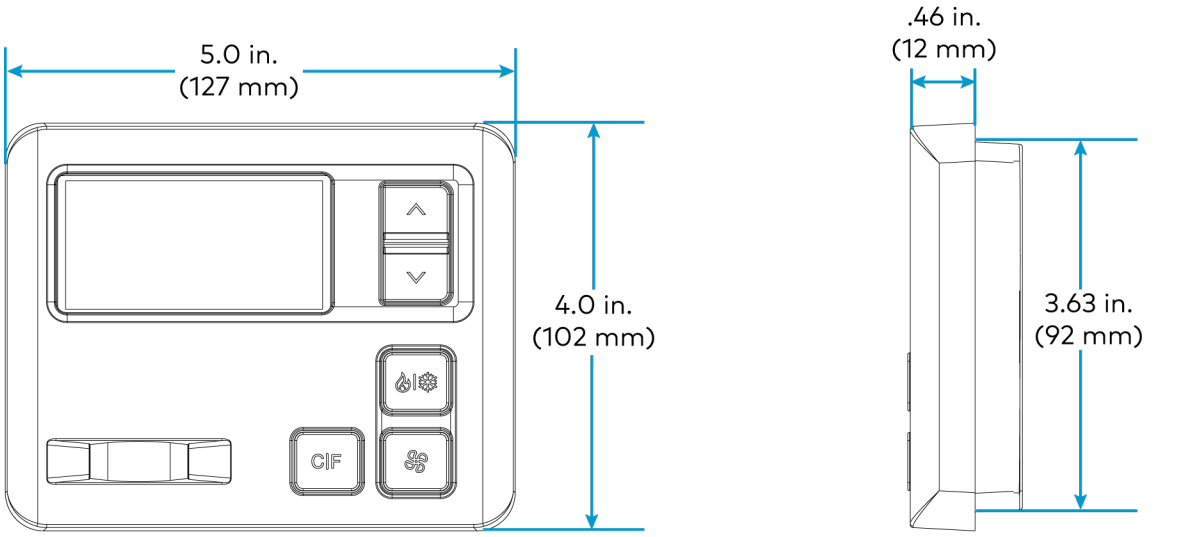
5.80 oz (165 g)

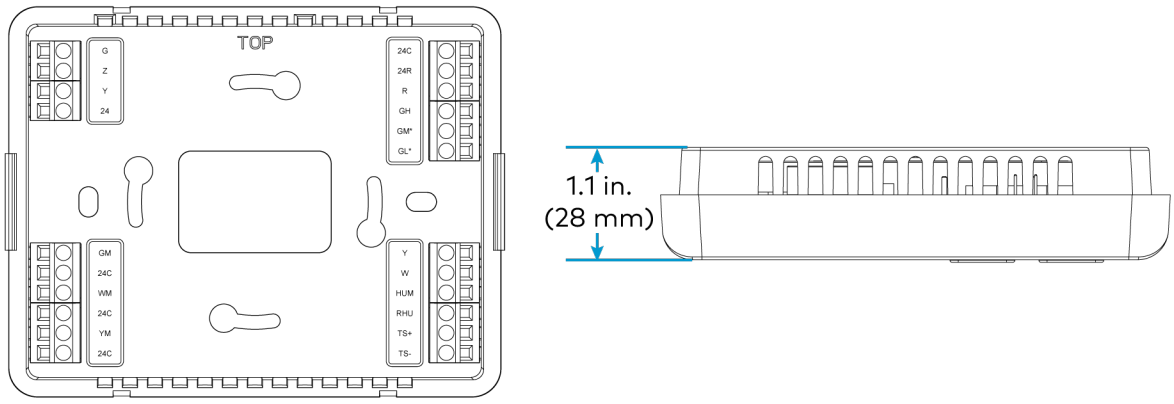
## Compliance

**Regulatory Model: M202349001**

FCC Part 15 Class B, IC Class B, CE, Intertek® Listed for US and Canada

# Dimension Drawings



# Installation

Use the following procedures to install the CHV-THSTAT-PIR-10.

This section provides the following information:

# In the Box

| Qty. | Description |
|---|---|
| 1 | CHV-THSTAT-PIR-10, Heating/Cooling Thermostat, 0-10V or Relay Control, with Occupancy Sensor |
| | |
| | **Additional Items** |
| 2 | Screw, M3 x 16 mm, Flat Head, Phillips (2013788) |
| 2 | Screw, 6-32 x 3/4 in., Combo Head, Truss (2009211) |

# Equipment Required

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

- Mounting screws (included)
- Phillips screwdriver (not included)
- If mounting into drywall, anchors (not included)

# 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.

# Mount the Thermostat

The CHV-THSTAT-PIR-10 can be mounted in an electrical box or directly to drywall.

## Mount to an Electrical Box

To mount the CHV-THSTAT-PIR-10 to an electrical box:

1. Turn the HVAC system power off.
2. Separate the thermostat front plate from the rear plate. It may be necessary to carefully exert force when removing the front plate.
3. Feed the HVAC wiring from the electrical box through the hole in the center of the rear plate.
4. Make HVAC connections. For details, refer to Connect the Device on page 20.

   **CAUTION:** To avoid a possible short circuit, ensure excess wire is inside the electrical box and not pinched between the box and the device.

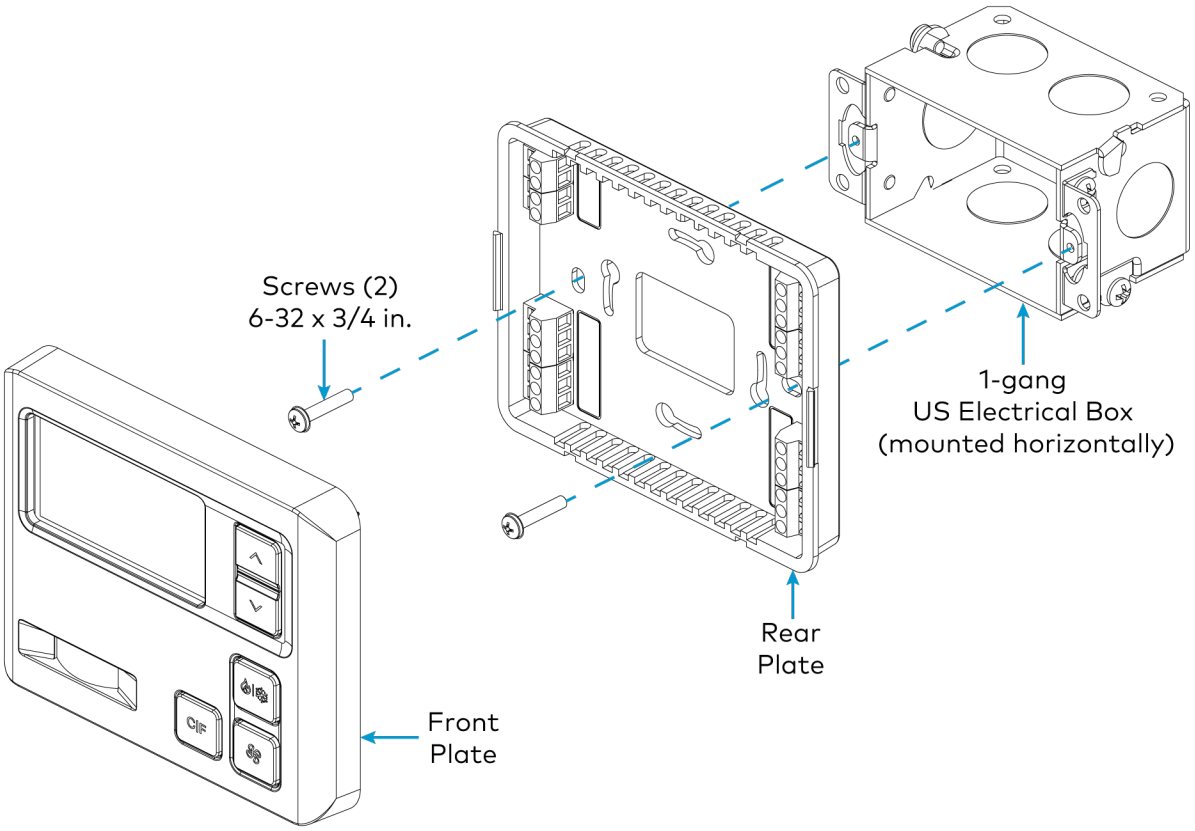
   **NOTE:** To ensure accurate temperature readings, plug the wire hole with insulation to prevent drafts in the back of the unit.

5. Attach the thermostat rear plate to the electrical box using the included screws. For U.S.-style installations, use the 6-32 x 3/4 in. screws. For U.K.-style installations, use the M3 x 16 mm screws.
6. Attach the front plate.

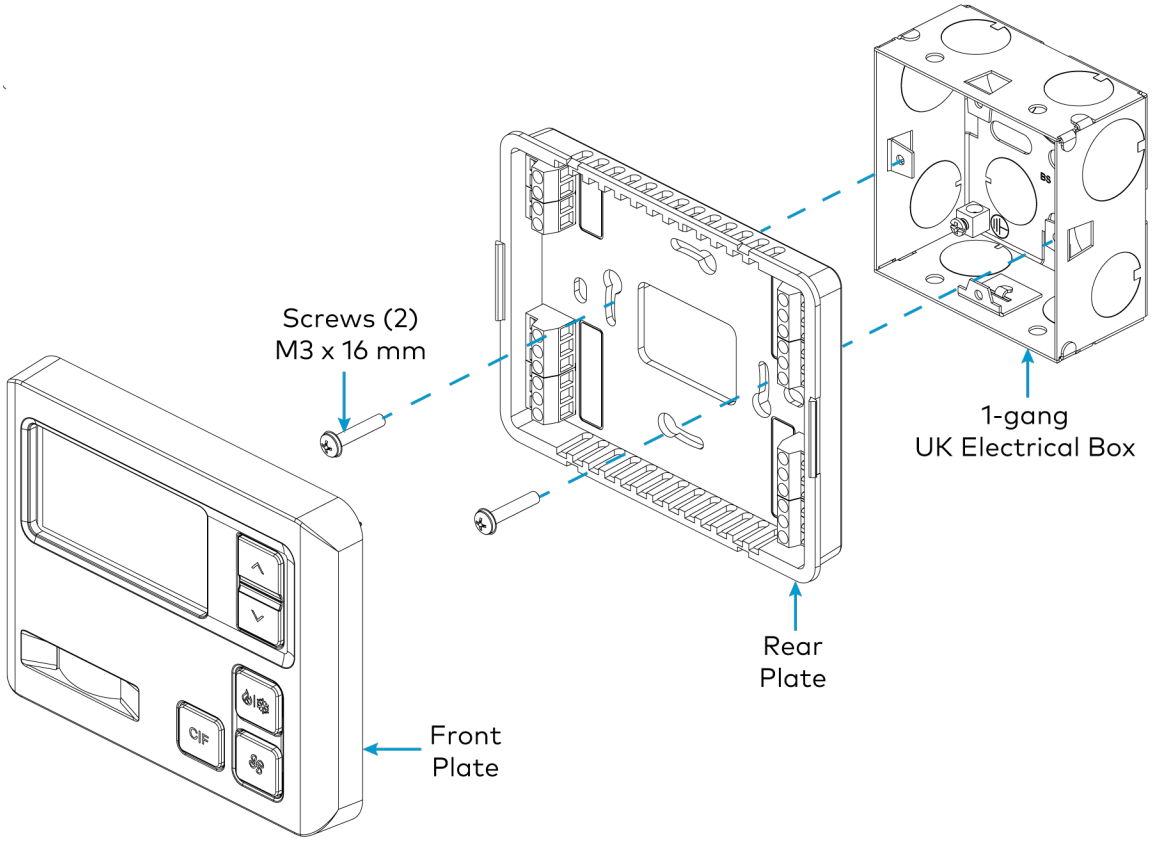
   **CAUTION:** Do not press the LCD display during mounting, as this may cause the screen to crack.

7. Carefully remove the warning label from the LCD display on the front plate.
8. Turn the HVAC system power on.

**US Electrical Box**



**UK Electrical Box**



# Mount into Drywall

To install the CHV-THSTAT-PIR-10 directly to the drywall:

1. Turn the HVAC system power off.
2. Separate the thermostat front plate from the rear plate. It may be necessary to carefully exert force when removing the front plate.
3. Feed the HVAC wiring from the drywall through the hole in the center of the rear plate.
4. Make HVAC connections. For details, refer to Connect the Device on page 20.

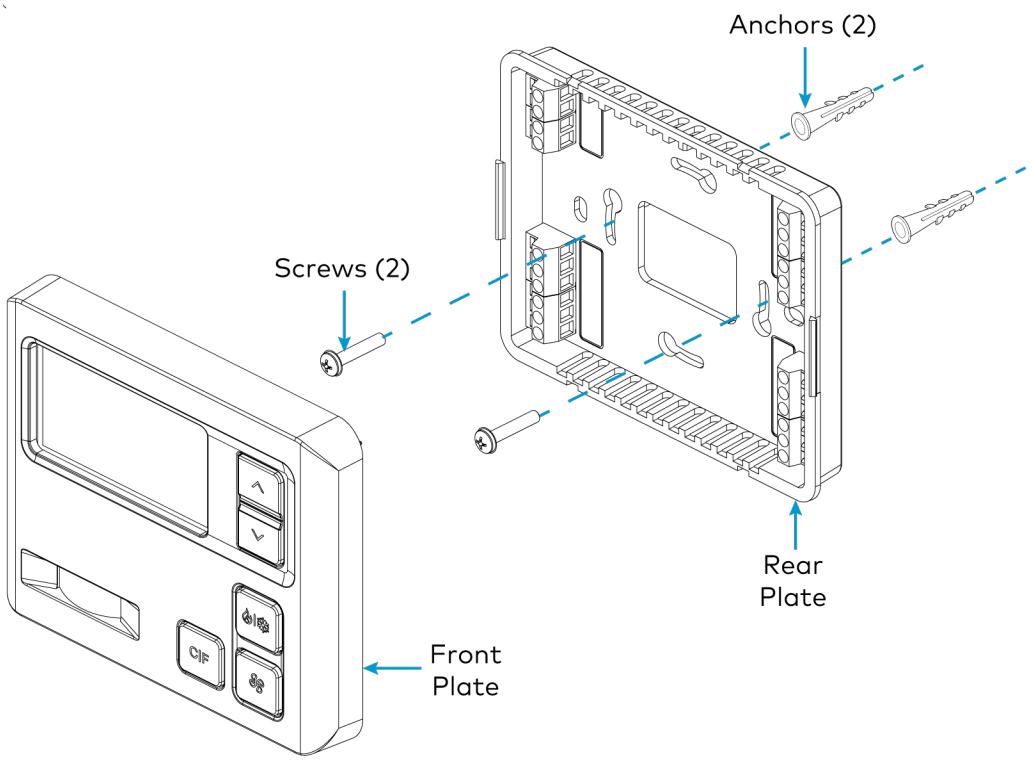
   **CAUTION:** To avoid a possible short circuit, ensure excess wire is inside the wall and not pinched between the box and the device.

   **NOTE:** To ensure accurate temperature readings, plug the wire hole with insulation to prevent drafts in the back of the unit.

5. Attach the thermostat rear plate to the drywall using anchors (not included) and mounting screws.
6. Attach the front plate.

   **CAUTION:** Do not press the LCD display during mounting, as this may cause the screen to crack.

7. Carefully remove the warning label from the LCD display on the front plate.
8. Turn the HVAC system power on.


Anchors (2)
Screws (2)
Rear
Plate
Front
Plate

# Connect the Device

Make the necessary connections as called out in the following illustrations. A miniature flathead screwdriver (not supplied) is required to attach the control wires from the HVAC system.

Apply power after all connections have been made.

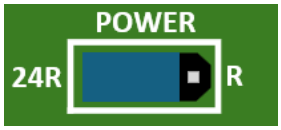
## Power Jumper

The CHV-THSTAT-PIR-10 utilizes a preinstalled power jumper. This jumper can be set one of two ways:

### Same Power Source


This is the default factory setting for the device. Use this setting when the device is powered up via the power source connected to **R**. This prevents needing to physically wire a jumper between **24R** and **R**.

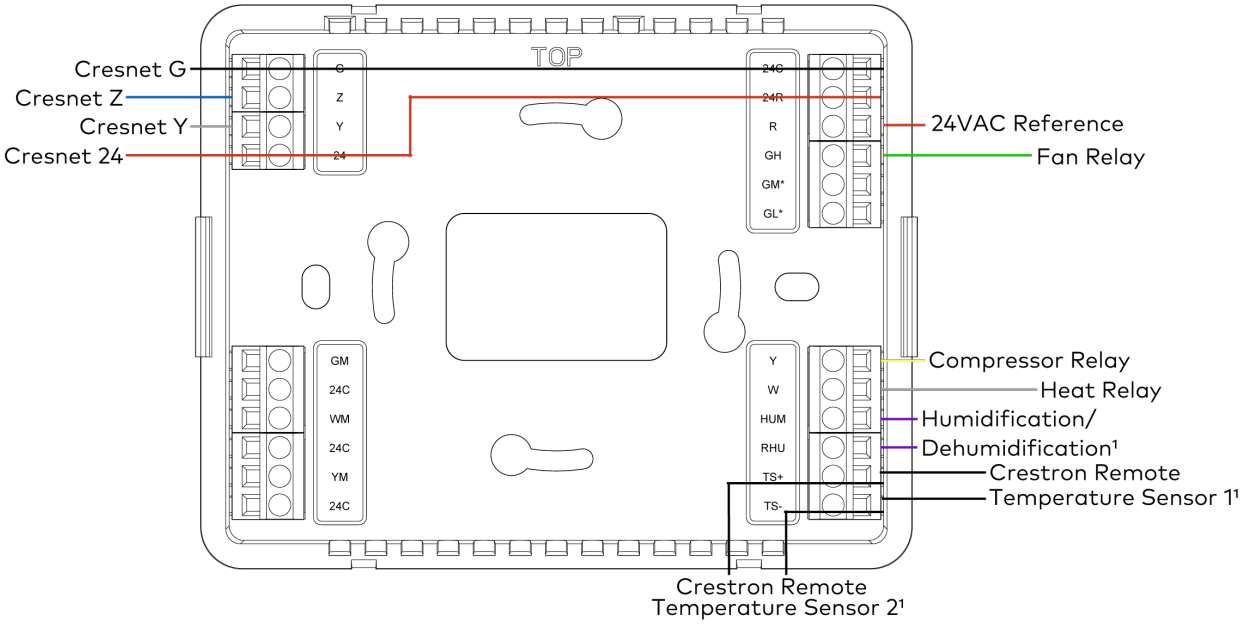
### Separate Power Source



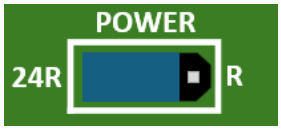

Move the jumper to this position when the device is powered up via a separate power source (such as Cresnet 24VDC or another 24VAC transformer) that is connected to **R**.

> **NOTE: 24R** and **24C** are always used to power the 0-10V connection.

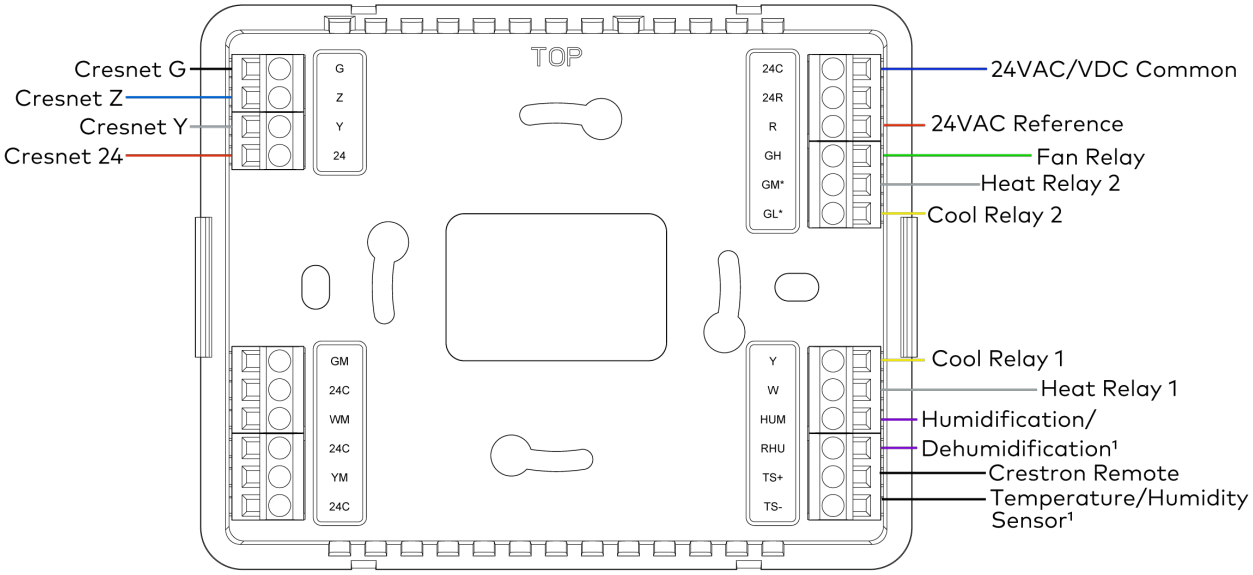
# Single Stage Heat/Cool System Powered from Cresnet




1: This connection is optional.

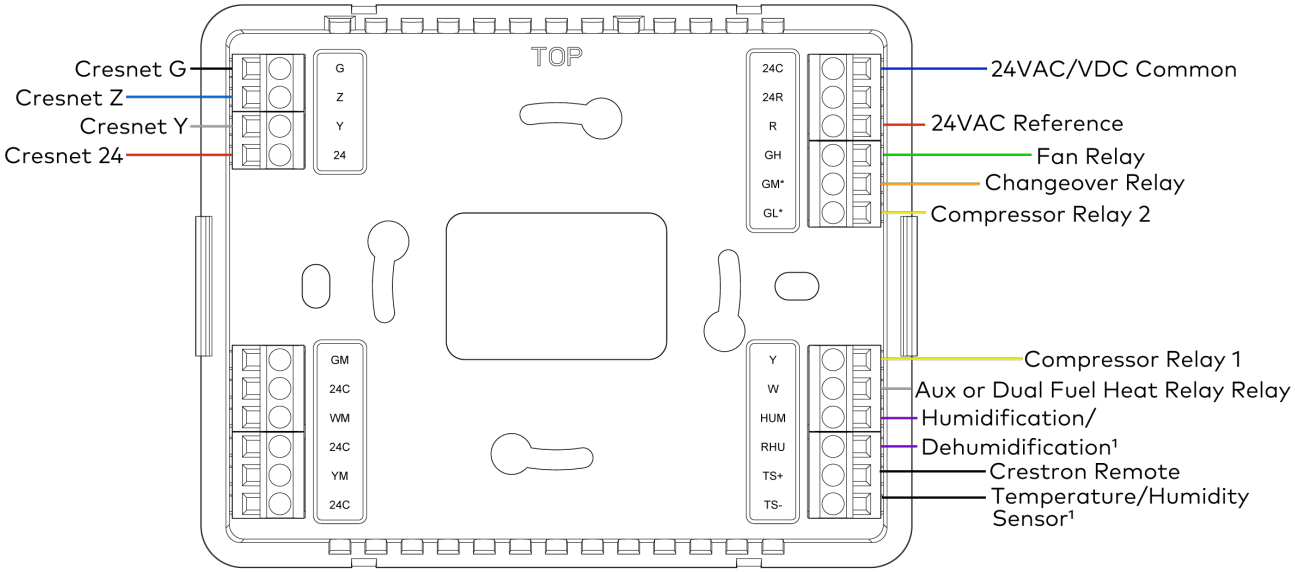


# 2 Stage Heat/Cool



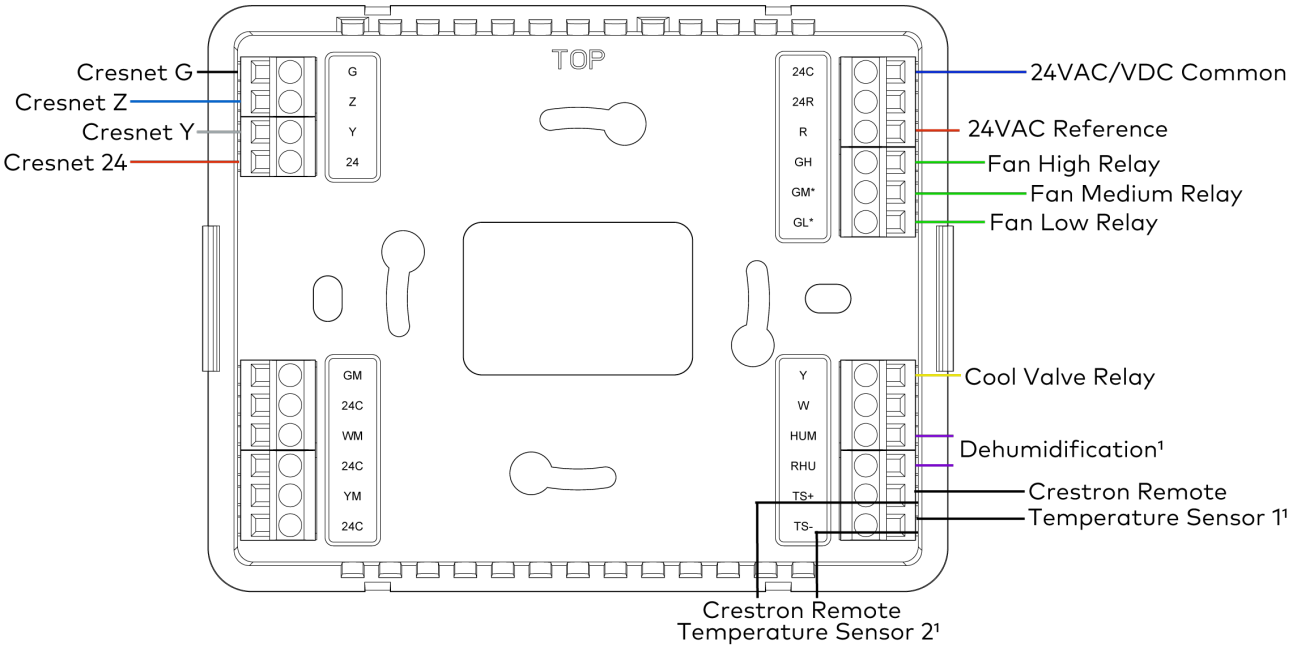

1: This connection is optional.

# 2 Stage Heat Pump with Aux or Dual Fuel Heat



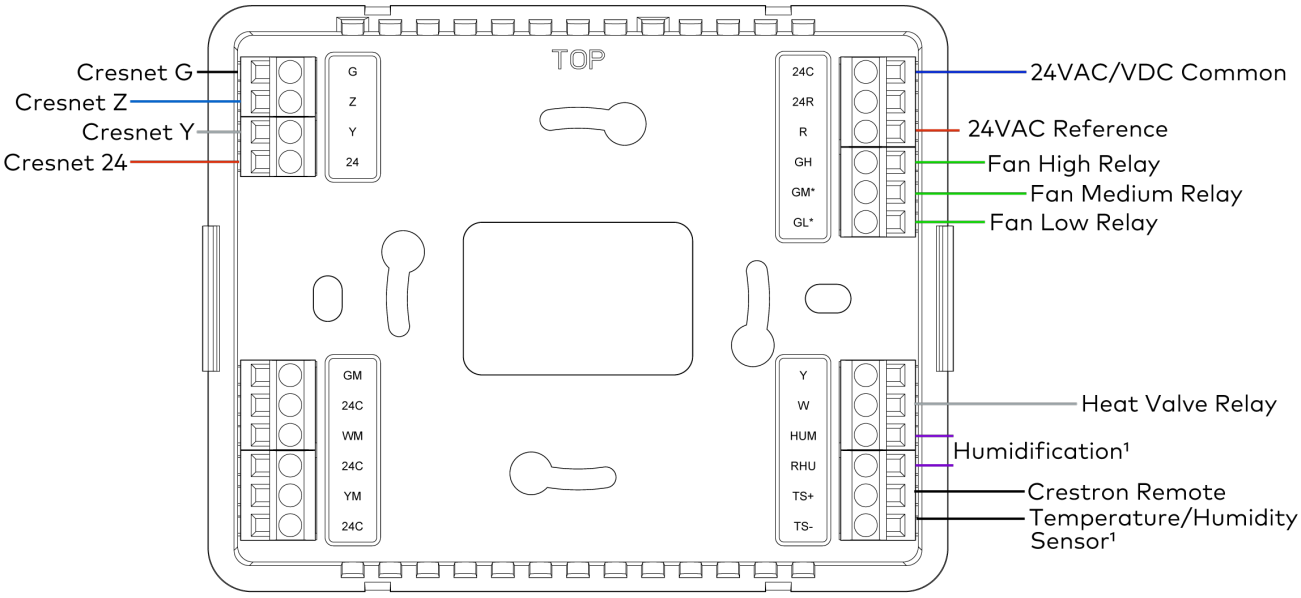

1: This connection is optional.

# 2-Pipe FCU Cool Only (Relay Controlled)



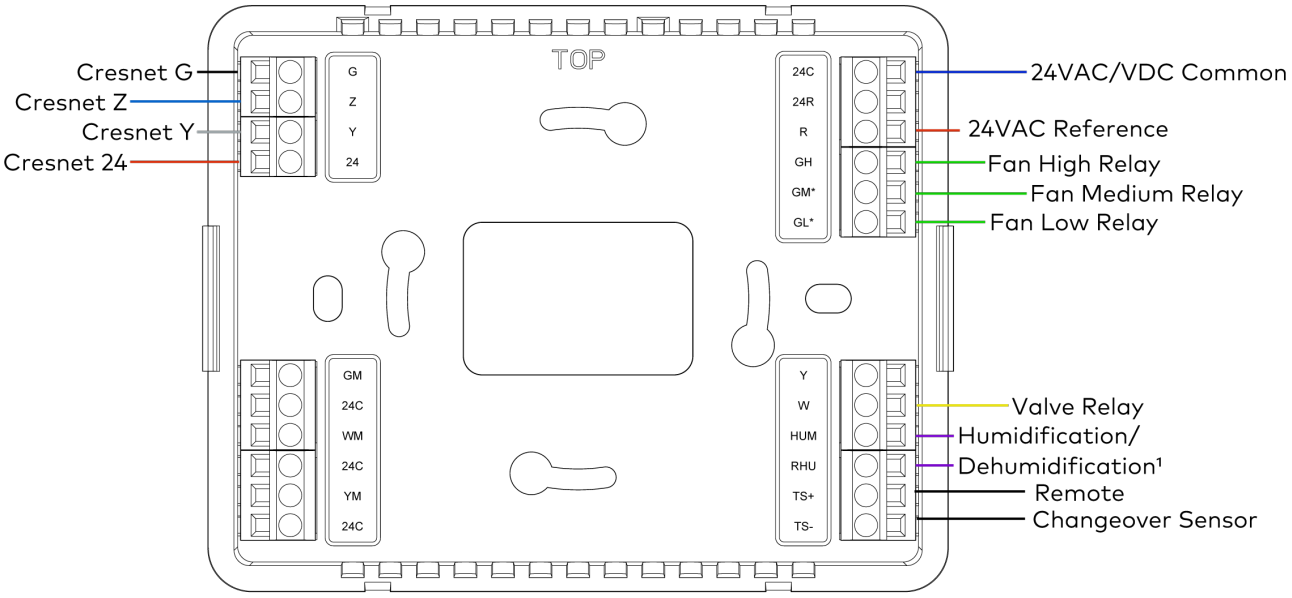

1: This connection is optional.

# 2-Pipe FCU Heat Only (Relay Controlled)



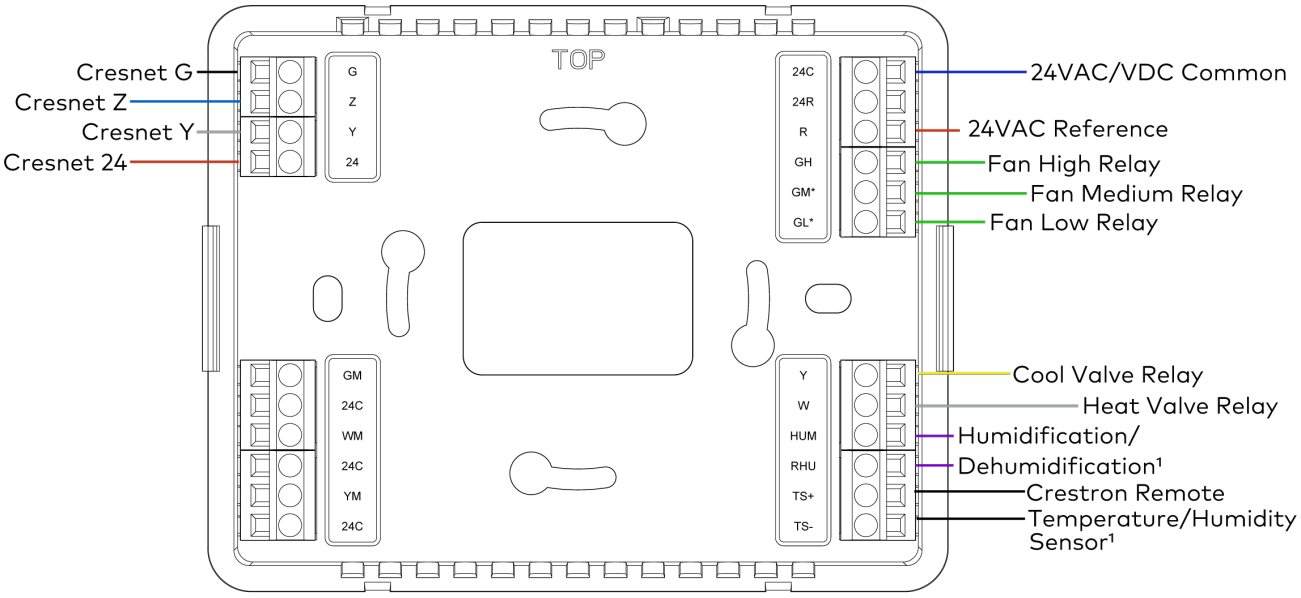

1: This connection is optional.

# 2-Pipe FCU Heat/Cool (Relay Controlled)



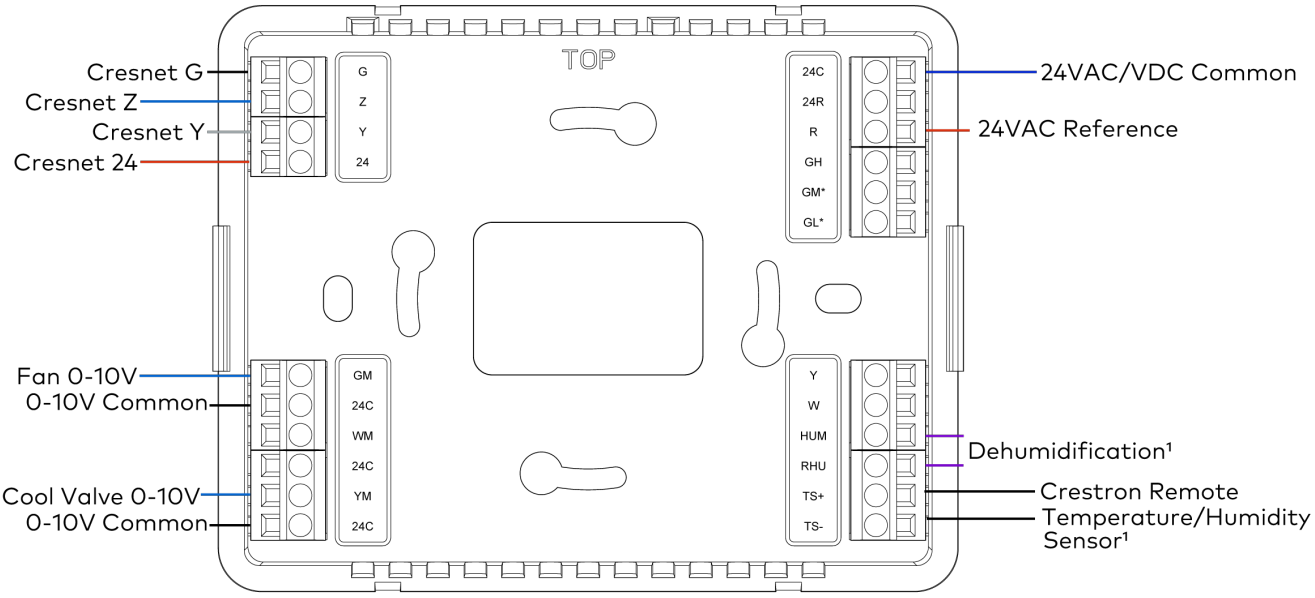

1: This connection is optional.

# 4-Pipe FCU Heat/Cool (Relay Controlled)



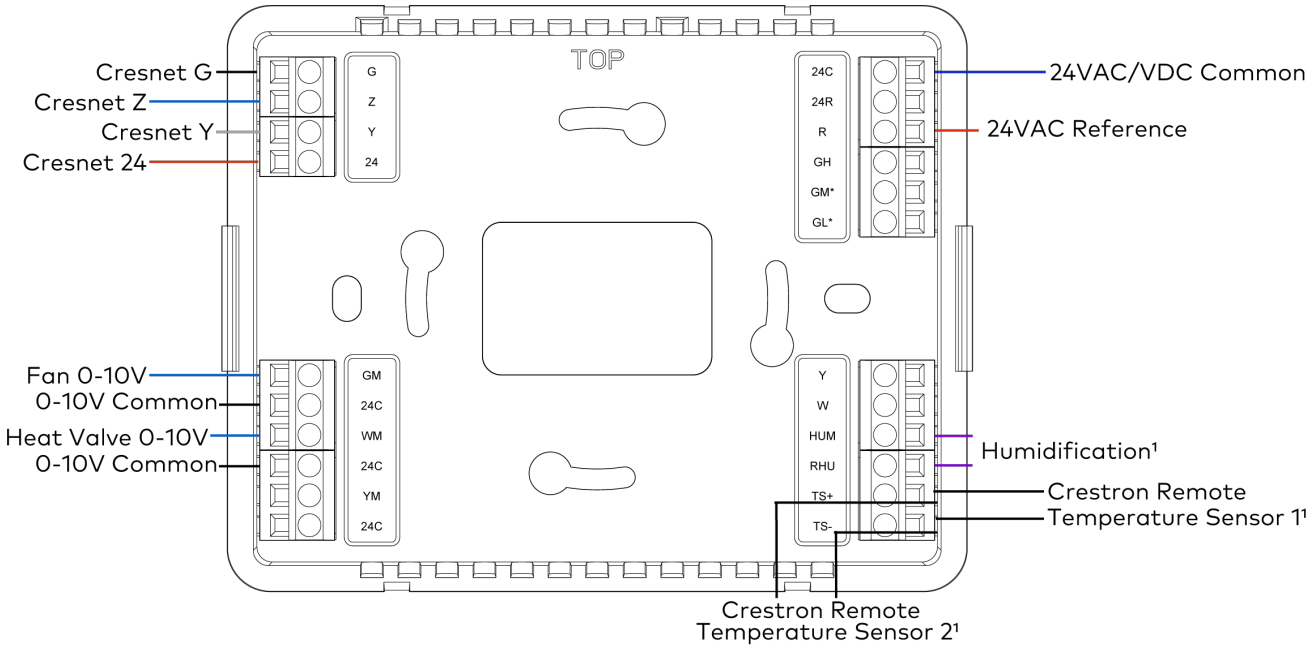

1: This connection is optional.

# 2-Pipe FCU Cool Only (0-10V Controlled)



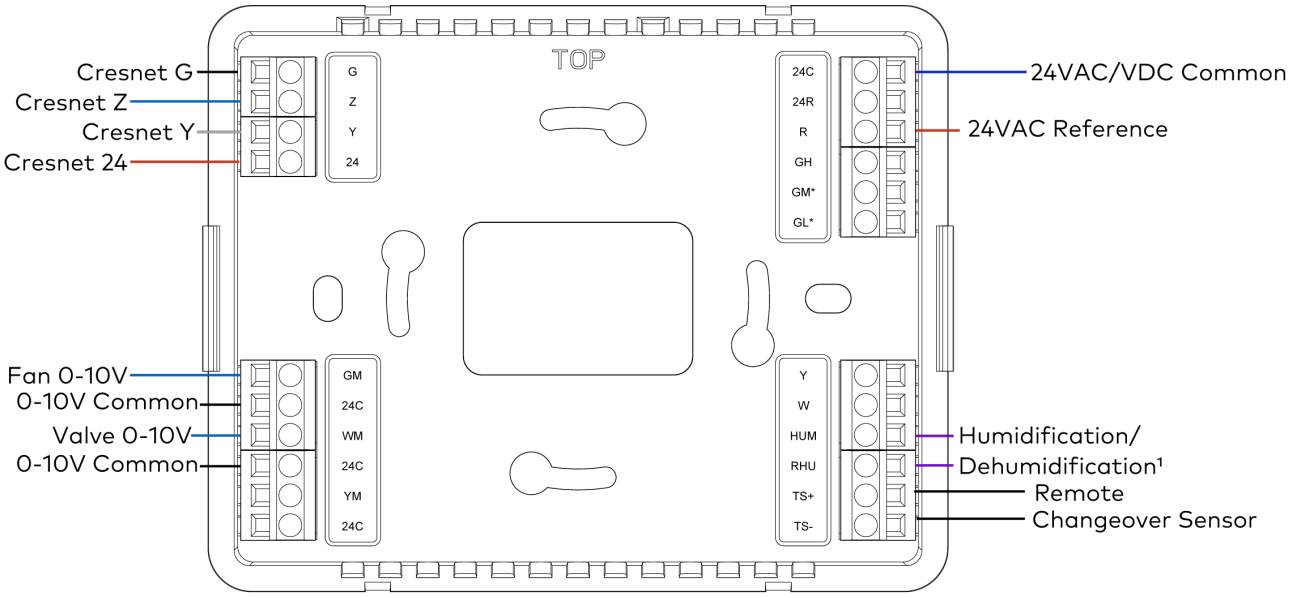

1: This connection is optional.

# 2-Pipe FCU Heat Only (0-10V Controlled)



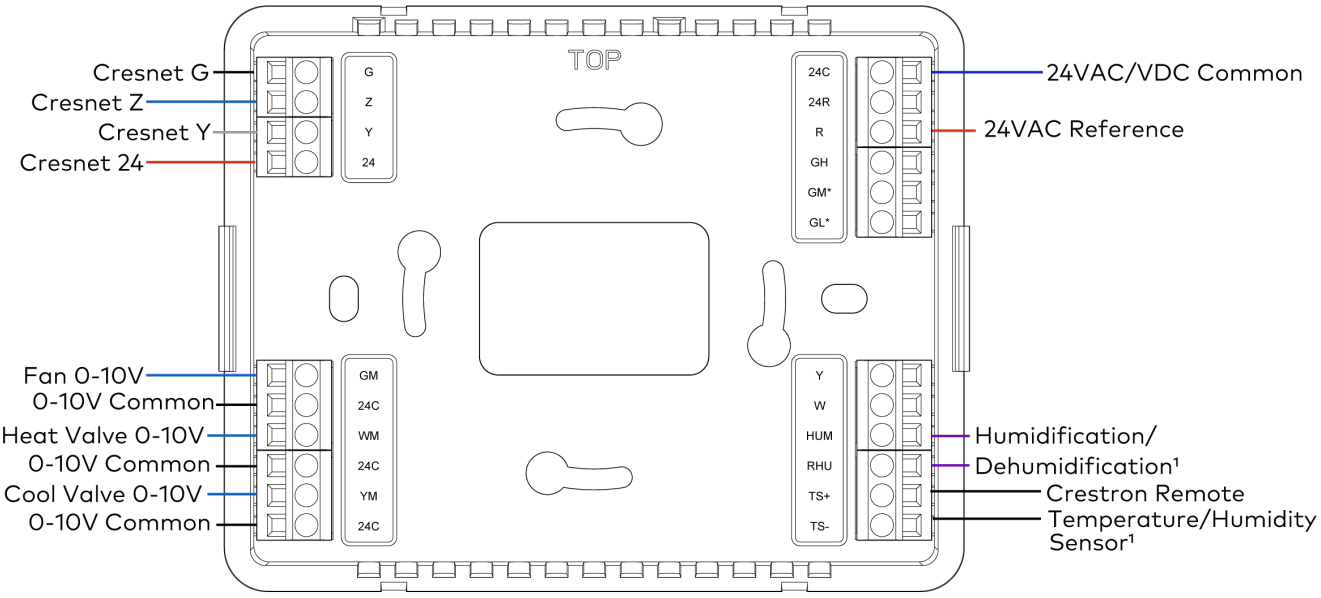

1: This connection is optional.

# 2-Pipe FCU Heat/Cool (0-10V Controlled)



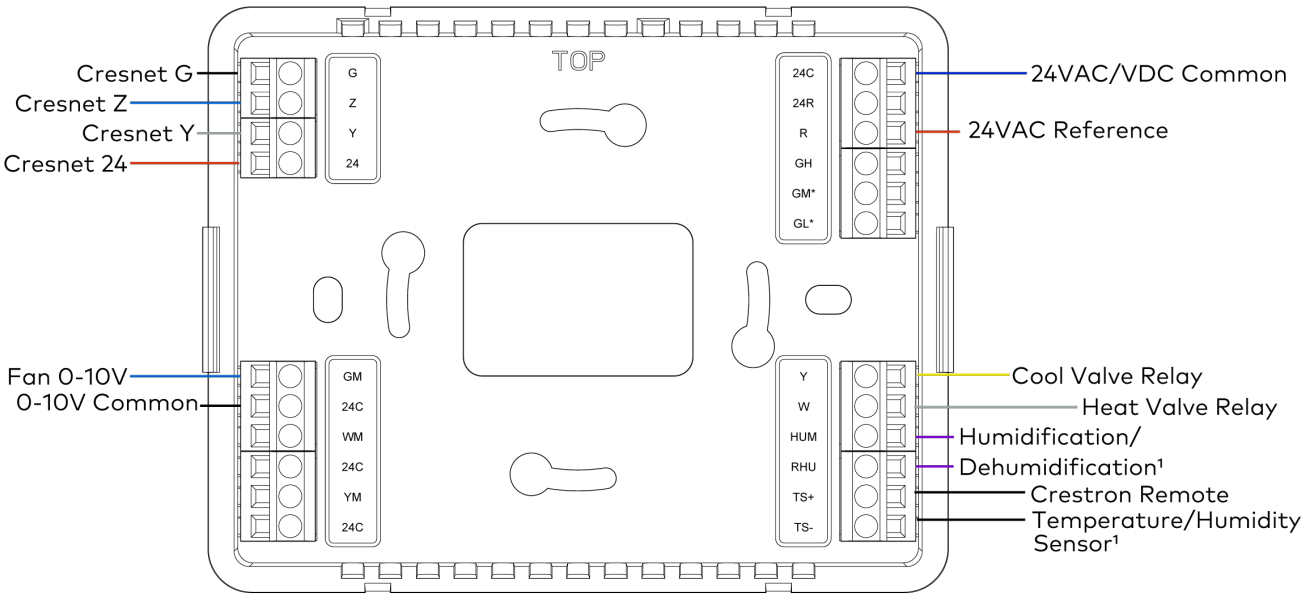

1: This connection is optional.

# 4-Pipe FCU Heat/Cool (0-10V Controlled)




1: This connection is optional.

# 4-Pipe FCU Heat/Cool with 0-10V Fan (Relay Controlled)




1: This connection is optional.

# 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 | kΩ |
|---|---|
| 30° (-1.1°C) | 34.6 |
| 40°F (4.4°C) | 26.1 |
| 50°F (10°C) | 19.9 |
| 60°F (15.5°C) | 15.3 |
| 70°F (21.1°C) | 11.9 |
| 80°F (26.6°C) | 9.4 |
| 90°F (32.2°C) | 7.4 |
| 100°F (37.7°C) | 5.9 |

# Configuration

**Prior to configuration, ensure the device is running the latest firmware. Refer to Update Firmware on page 35.**

This section provides the following information:

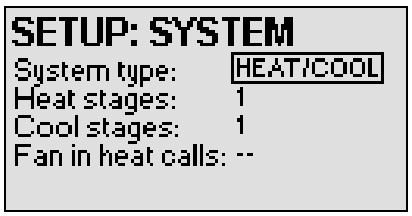
- Initial Setup
- Heat Only, 1 or 2 Stages, Forced Air or Radiant
- Cool Only, 1 or 2 Stages, Forced Air or Radiant
- Heat/Cool, 1 or 2 Stages, Forced Air or Radiant
- Heat Pump with Aux, 1 or 2 stages
- Heat Pump with Dual Fuel, 1 or 2 Stages
- 2-Pipe FCU with Heat Only
- 2-Pipe FCU with Cool Only
- 2-Pipe FCU with Heat and Cool
- 4-Pipe FCU with Heat and Cool

# Initial Setup

Use the following procedures to set up the CHV-THSTAT-PIR-10 prior to regular operation.

## Access Setup Mode

To enter Setup mode, press and hold the **Down** button. While holding the **Down** button, simultaneously press and hold the **Mode** and **Fan** buttons until the **SETUP: SYSTEM** screen is displayed.




## Navigate Setup Mode

When the device is in Setup mode, use the following controls:

- **Mode** button: Advance to the next screen.
- **Fan** button: Scroll vertically through the setup options on the screen.
- **Up** and **Down** buttons: Change the value for the selected item.

## Exit Setup Mode

To exit Setup mode, press and hold the **Down** button. While holding the **Down** button, simultaneously press and hold the **Mode** and **Fan** buttons until the home screen is displayed.

## Update Firmware

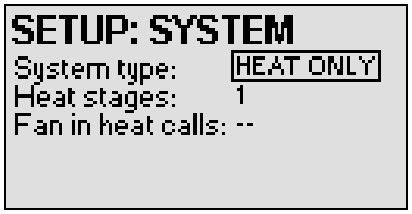
The CHV-THSTAT-PIR-10 firmware should always be updated to the latest version. Firmware can be loaded to the CHV-THSTAT-PIR-10 via Crestron Toolbox™ software. For more information on updating the device firmware in Crestron Toolbox, refer to the Crestron Toolbox Help File.

# Heat Only, 1 or 2 Stages, Forced Air or Radiant

To configure a system for Heat Only, 1 or 2 Stages, Forced Air or Radiant, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

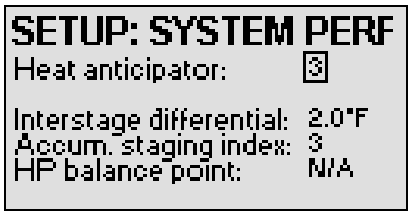
On the **System** page, configure the following:




- **System Type:** Select **HEAT ONLY**.
- **Heat Stages:** Number of heat pump compressor stages present. Choose **1** or **2**. Default setting: **1**.
- **Fan in Heat Calls:** Indicates the Heat stage(s) that also trigger a Fan call. Select **--** (no fan in heat, default), **W2**, or **W1W2**.

## Setup: System Performance

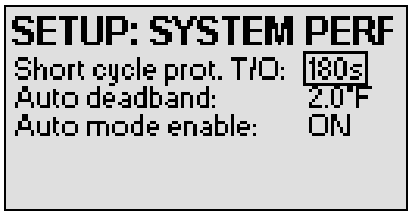
On the **System Perf** pages, configure the following:




- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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.
- **Interstage Differential:** Sets the temperature difference in degrees between the setpoint and ambient temperature that triggers immediate stage-up (for multistage systems). Select **0.5 -8.0** for Fahrenheit or **0.2** - **4.5** for Celsius. The default setting is **2.0** for Fahrenheit and **1.0** for Celsius.
- **Accum. Staging Index:** Triggers the next stage to meet temperature demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint. Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

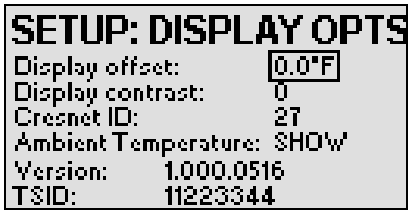
  Select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting **6** disables this feature altogether.
- **HP Balance Point:** Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius).




- **Short Cycle Prot T/O:** The minimum off time between system calls. Select **30** seconds, **60** seconds, or **180** seconds (default).
- **Auto Deadband:** No effect for this system type.
- **Auto Mode Enable:** No effect for this system type.

## Setup: Display Options

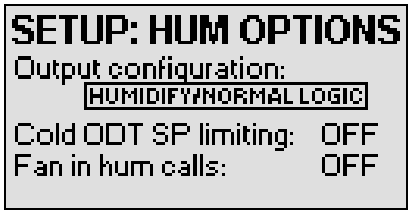
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

## Setup: Humidity Options

On the **HUM Options** page, configure the following:




- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.

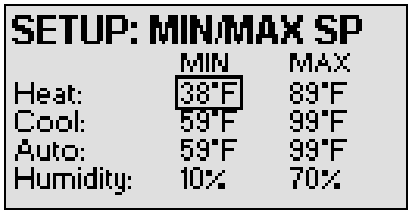
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

## Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

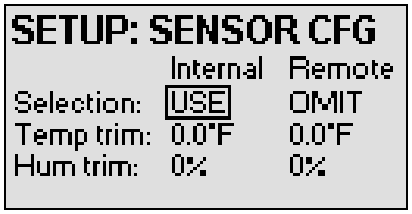
> **NOTE: Cool** and **Auto** have no effect for this system type.




- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.
- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal temperature and humidity sensors for the space. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote temperature and humidity sensor(s) for the space. Select **Omit** to disable them. **OUTDOOR** and **AXVR** settings have no effect for this system type.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

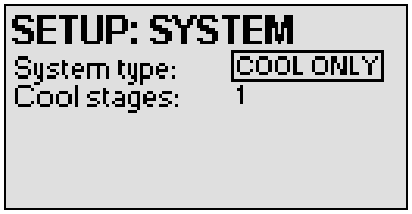

- **Heat Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

# Cool Only, 1 or 2 Stages, Forced Air or Radiant

To configure a system for Cool Only, 1 or 2 Stages, Forced Air or Radiant, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

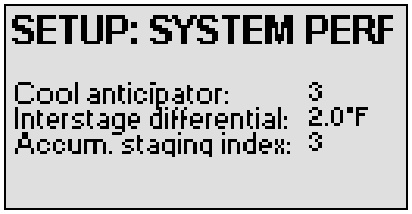
On the **System** page, configure the following:




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

## Setup: System Performance

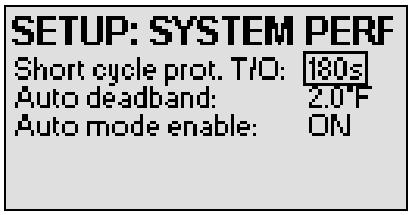
On the **System Perf** pages, configure the following:




- **Cool Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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:** Sets the temperature difference in degrees between the setpoint and ambient temperature that triggers immediate stage-up (for multistage systems). Select **0.5 -8.0** for Fahrenheit or **0.2** - **4.5** for Celsius. The default setting is **2.0** for Fahrenheit and **1.0** for Celsius.
- **Accum. Staging Index:** Triggers the next stage to meet temperature demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint. Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

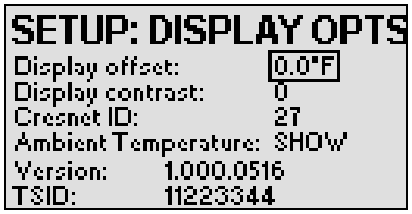
  Select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting **6** disables this feature altogether.




- **Short Cycle Prot T/O:** The minimum off time between system calls. Select **30** seconds, **60** seconds, or **180** seconds (default).
- **Auto Deadband:** No effect for this system type.
- **Auto Mode Enable:** No effect for this system type.

# Setup: Display Options

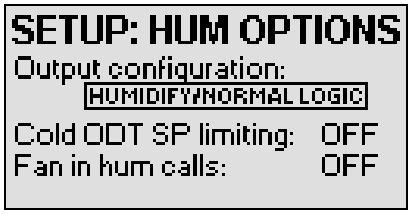
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:




- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.

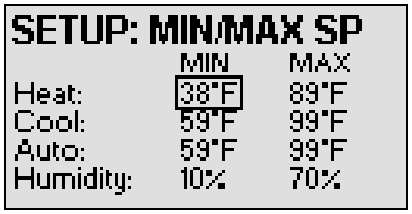
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

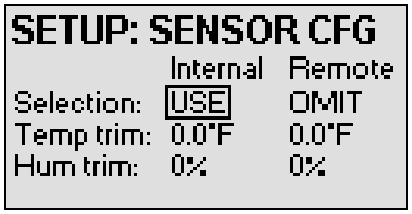
> **NOTE: Heat**and **Auto** have no effect for this system type.




- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.
- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal temperature and humidity sensors for the space. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote temperature and humidity sensor(s) for the space. Select **Omit** to disable them. **OUTDOOR** and **AXVR** settings have no effect for this system type.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

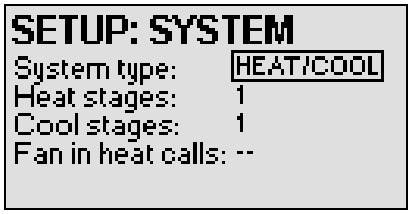

- **Cool Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

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

To configure a system for Heat/Cool, 1 or 2 Stage, Forced Air or Radiant systems, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

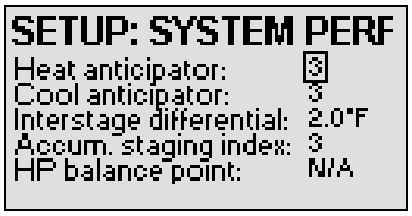
On the **System** page, configure the following:




- **System Type:** Select **HEAT/COOL**.
- **Heat Stages:** Number of heat-only stages present. Select **1** (default) or **2**.
- **Cool Stages:** Number of cool-only stages present. Select **1** (default) or **2**.
- **Fan in Heat Calls:** Indicates the Heat stage(s) that also trigger a Fan call. Select **--** (no fan in heat, default), **W2**, or **W1W2**.

## Setup: System Performance

On the **System Perf** pages, configure the following:



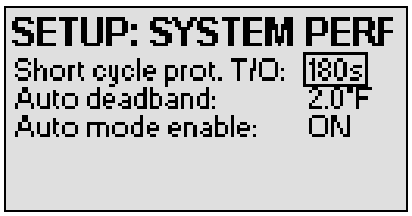

- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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** (default), **4**, **5**, or **6**.

  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:** Sets the temperature difference in degrees between the setpoint and ambient temperature that triggers immediate stage-up (for multistage systems). Select **0.5 -8.0** for Fahrenheit or **0.2** - **4.5** for Celsius. The default setting is **2.0** for Fahrenheit and **1.0** for Celsius.

- **Accum. Staging Index:** Triggers the next stage to meet temperature demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint. Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

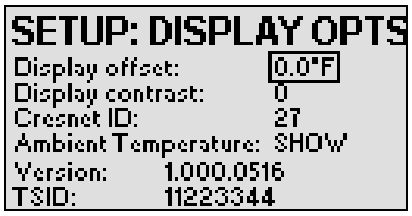
  Select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting **6** disables this feature altogether.
- **HP Balance Point:** Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius).




- **Short Cycle Prot T/O:** The minimum off time between system calls. Select **30** seconds, **60** seconds, or **180** seconds (default).
- **Auto Deadband:** This sets the separation between the heat and cool setpoints in **Auto** mode. Select **2.0** (default), **3.0**, **4.0**, **5.0**, or **6.0** for Fahrenheit or **1.0** (default), **2.0**, or **3.0** for Celsius.
- **Auto Mode Enable:** Select **On** (default) to enable Auto mode. Select **Off** to disable it.

## Setup: Display Options

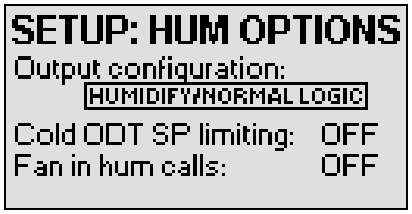
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:

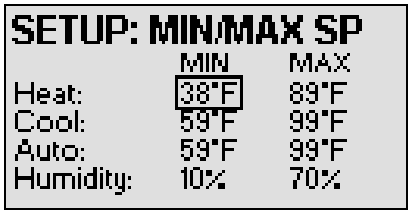



- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

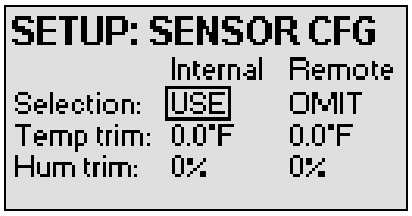



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.
- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.

- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal temperature and humidity sensors for the space. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote temperature and humidity sensor(s) for the space. Select **Omit** to disable them. **OUTDOOR** and **AXVR** settings have no effect for this system type.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.


- **Heat Call:** Select **Off** (default) or **On**.
- **Cool Call:** Select **Off** (default) or **On**.

- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

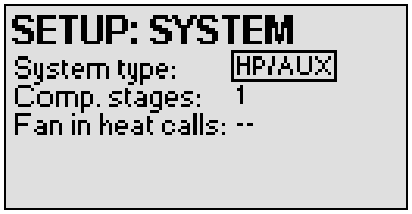
# Heat Pump with Aux, 1 or 2 stages

A heat pump with aux can stage the heat when required to improve performance. 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.

To configure a system for Heat Pump with Aux, 1 or 2 stages, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

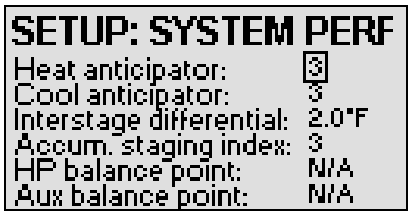
On the **System** page, configure the following:




- **System Type:** Select **HP/AUX**.
- **Comp. Stages:** Number of heat pump compressor stages present. Choose **1** or **2**. Default setting: **1**.
- **Fan in Heat Calls:** Indicates the Heat stage that also triggers a Fan call. Select **--** (no fan in heat, default) or **W1**.

## Setup: System Performance

On the **System Perf** pages, configure the following:



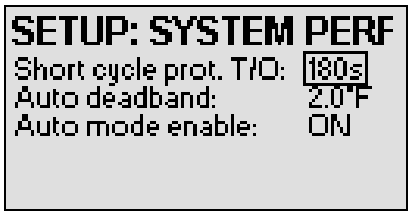

- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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** (default), **4**, **5**, or **6**.

  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:** Sets the temperature difference in degrees between the setpoint and ambient temperature that triggers immediate stage-up (for multistage systems). Select **0.5 -8.0** for Fahrenheit or **0.2** - **4.5** for Celsius. The default setting is **2.0** for Fahrenheit and **1.0** for Celsius.

- **Accum. Staging Index:** Triggers the next stage to meet temperature demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint. Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

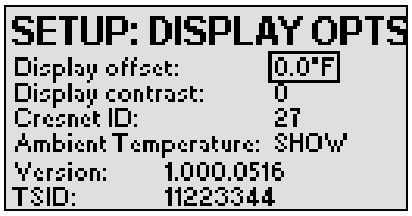
  Select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting **6** disables this feature altogether.
- **HP Balance Point:** Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius).
- **Aux Balance Point:** Maximum outdoor temperature at which Auxiliary heat system supplements the heat pump (requires an outdoor temperature sensor). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius). The **Aux Balance Point** must be at least 1° higher than the **HP Balance Point**.




- **Short Cycle Prot T/O:** The minimum off time between system calls. Select **30** seconds, **60** seconds, or **180** seconds (default).
- **Auto Deadband:** This sets the separation between the heat and cool setpoints in **Auto** mode. Select **2.0** (default), **3.0**, **4.0**, **5.0**, or **6.0** for Fahrenheit or **1.0** (default), **2.0**, or **3.0** for Celsius.
- **Auto Mode Enable:** Select **On** (default) to enable Auto mode. Select **Off** to disable it.

## Setup: Display Options

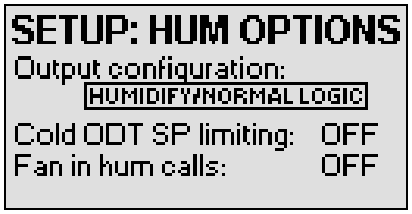
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:

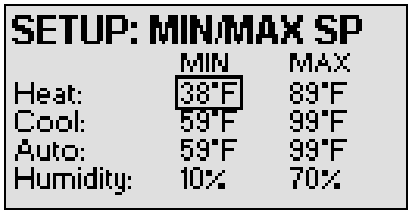



- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

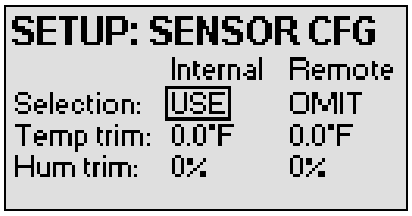



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.
- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.

- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

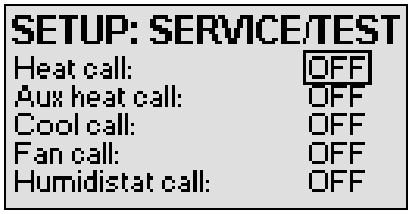
On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal temperature and humidity sensors for the space. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote temperature and humidity sensor(s) for the space. Select **Omit** to disable them. **OUTDOOR** and **AXVR** settings have no effect for this system type.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.




- **Heat Call:** Select **Off** (default) or **On**.
- **Aux Heat Call:** Select **Off** (default) or **On**.
- **Cool Call:** Select **Off** (default) or **On**.

- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

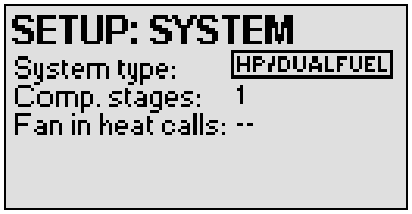
# Heat Pump with Dual Fuel, 1 or 2 Stages

The Heat Pump with Dual Fuel runs either the heat pump or the auxiliary heat, depending on outdoor temperature. 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.

To configure a system for Heat Pump with Dual Fuel, 1 or 2 stages, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

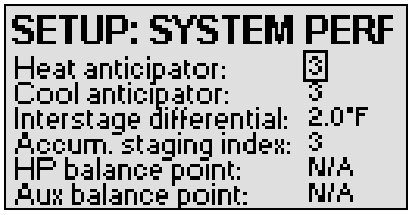
On the **System** page, configure the following:




- **System Type:** Select **HP/DUALFUEL**.
- **Comp. Stages:** Number of heat pump compressor stages present. Choose **1** or **2**. Default setting: **1**.
- **Fan in Heat Calls:** Indicates the Heat stage that also triggers a Fan call. Select **--** (no fan in heat, default) or **W1**.

## Setup: System Performance

On the **System Perf** pages, configure the following:



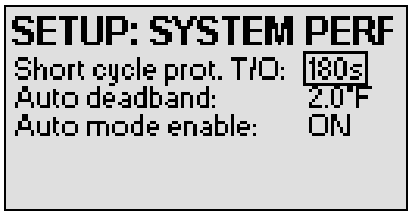

- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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** (default), **4**, **5**, or **6**.

  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:** Sets the temperature difference in degrees between the setpoint and ambient temperature that triggers immediate stage-up (for multistage systems). Select **0.5 -8.0** for Fahrenheit or **0.2** - **4.5** for Celsius. The default setting is **2.0** for Fahrenheit and **1.0** for Celsius.
- **Accum. Staging Index:** Triggers the next stage to meet temperature demand in instances where the previous stage cannot reach the Interstage Differential or achieve the desired setpoint. Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

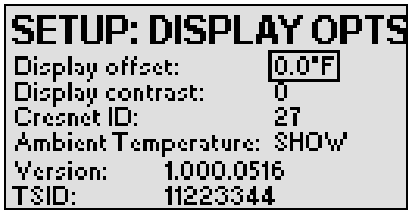
  Select **1** for a faster trigger to the next stage or **5** for a slower trigger to the next stage. Setting **6** disables this feature altogether.
- **HP Balance Point:** Minimum outdoor temperature at which the heat pump runs (requires an outdoor temperature source). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius).
- **Aux Balance Point:** Maximum outdoor temperature at which Auxiliary heat system supplements the heat pump (requires an outdoor temperature sensor). Select **N/A** (default) or **0** - **90** for Fahrenheit (**-18** - **31** for Celsius). The **Aux Balance Point** must be at least 1° higher than the **HP Balance Point**.




- **Short Cycle Prot T/O:** The minimum off time between system calls. Select **30** seconds, **60** seconds, or **180** seconds (default).
- **Auto Deadband:** This sets the separation between the heat and cool setpoints in **Auto** mode. Select **2.0** (default), **3.0**, **4.0**, **5.0**, or **6.0** for Fahrenheit or **1.0** (default), **2.0**, or **3.0** for Celsius.
- **Auto Mode Enable:** Select **On** (default) to enable Auto mode. Select **Off** to disable it.

## Setup: Display Options

On the **Display Opts** page, configure the following:

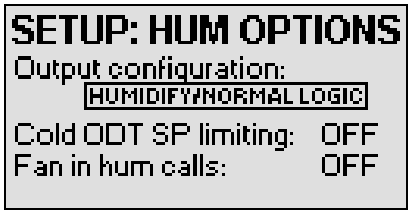



- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).

- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

## Setup: Humidity Options

On the **HUM Options** page, configure the following:

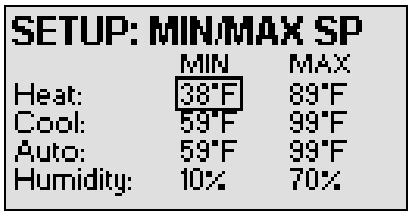



- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

## Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

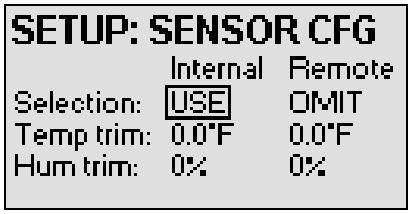



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.

- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal temperature and humidity sensors for the space. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote temperature and humidity sensor(s) for the space. Select **Omit** to disable them. **OUTDOOR** and **AXVR** settings have no effect for this system type.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

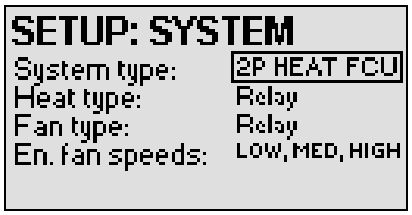

- **Heat Call:** Select **Off** (default) or **On**.
- **Aux Heat Call:** Select **Off** (default) or **On**.
- **Cool Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

# 2-Pipe FCU with Heat Only

To configure a system for 2-Pipe Fan Coil Unit (FCU) with Heat Only, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

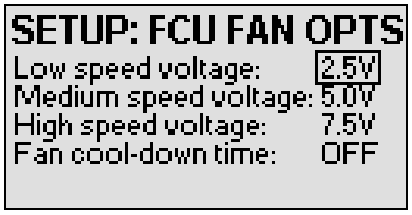
On the **System** page, configure the following:




- **System Type:** Select **2P HEAT FCU**.
- **Heat Type:** Select **Relay** (default) or **0-10V**.
- **Fan Type:** Select **Relay** (default) or **0-10V**.
- **En. Fan Speeds:** Select **Low**, **Low, Med**, or **Low, Med, High** (default).

## Setup: FCU Fan Options

On the **FCU Fan Opts** page, configure the following:

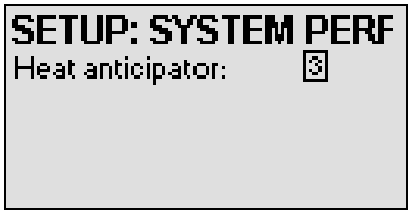



> **NOTE:** Voltage settings only have an effect if **Fan Type** is set to **0-10V**.

- **Low Speed Voltage:** Select from **0.2V** to 0.1V less than the **Medium Speed Fan Voltage**. **2.5V** is the default.
- **Medium Speed Voltage:** Select from 0.1V more than **Low Speed Fan Voltage** to 0.1V less than **High Speed Fan Voltage**. **5V** is the default.
- **High Speed Voltage:** Select from 0.1V more than **Medium Speed Fan Voltage** to **10V**. **7.5V** is the default.
- **Fan Cool-Down Time:** Select **Off** (default), **30s**, **45s**, **1m**, **1.5m**, **2m**, or **3m**.

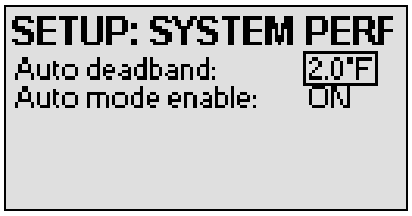
# Setup: System Performance

On the **System Perf** pages, configure the following:




- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

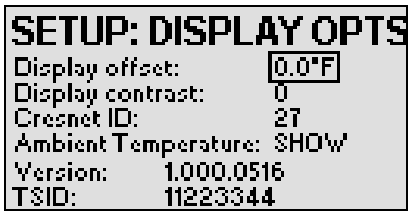
  To adjust space heating system cycling characteristics, select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.




- **Auto Deadband:** No effect for this system type.
- **Auto Mode Enable:** No effect for this system type.

# Setup: Display Options

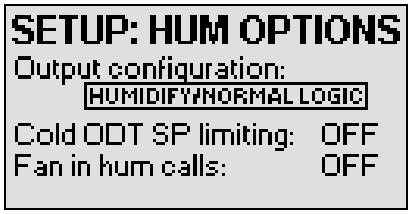
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:



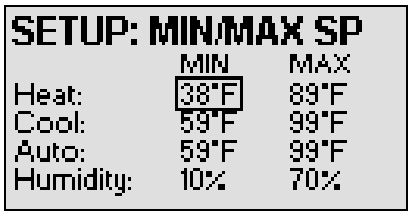

- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

> **NOTE: Cool** and **Auto** have no effect for this system type.

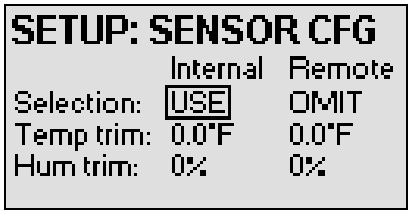



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.

- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal sensors. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote sensors. Select **Omit** to disable them.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

For relay-based FCU systems:

- **Heat Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

For 0-10V FCU systems:

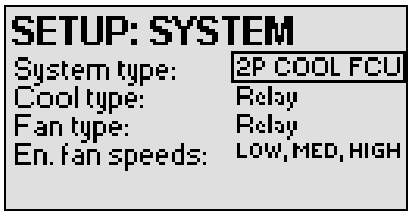
- **Heat Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Fan Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Humidistat Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.

# 2-Pipe FCU with Cool Only

To configure a system for 2-Pipe Fan Coil Unit (FCU) with Cool Only, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

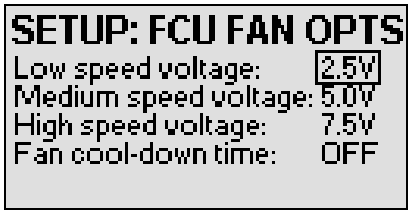
On the **System** page, configure the following:




- **System Type:** Select **2P COOL FCU**.
- **Cool Type:** Select **Relay** (default) or **0-10V**.
- **Fan Type:** Select **Relay** (default) or **0-10V**.
- **En. Fan Speeds:** Select **Low**, **Low, Med**, or **Low, Med, High** (default).

## Setup: FCU Fan Options

On the **FCU Fan Opts** page, configure the following:

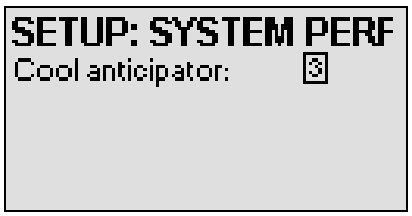



> **NOTE:** Voltage settings only have an effect if **Fan Type** is set to **0-10V**.

- **Low Speed Voltage:** Select from **0.2V** to 0.1V less than the **Medium Speed Fan Voltage**. **2.5V** is the default.
- **Medium Speed Voltage:** Select from 0.1V more than **Low Speed Fan Voltage** to 0.1V less than **High Speed Fan Voltage**. **5V** is the default.
- **High Speed Voltage:** Select from 0.1V more than **Medium Speed Fan Voltage** to **10V**. **7.5V** is the default.
- **Fan Cool-Down Time:** Select **Off** (default), **30s**, **45s**, **1m**, **1.5m**, **2m**, or **3m**.

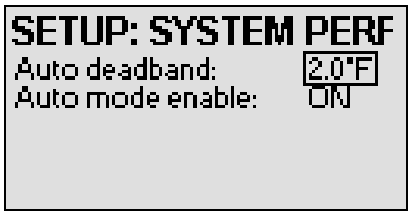
# Setup: System Performance

On the **System Perf** pages, configure the following:




- **Cool Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

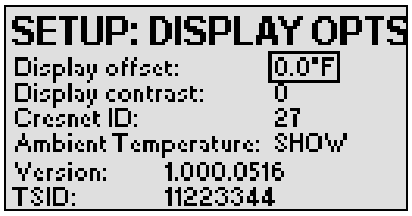
  To adjust cooling system cycling characteristics, select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.




- **Auto Deadband:** No effect for this system type.
- **Auto Mode Enable:** No effect for this system type.

# Setup: Display Options

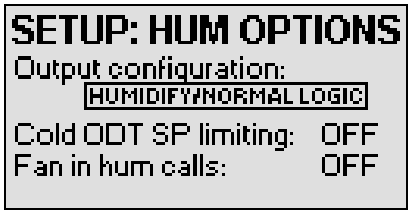
On the **Display Opts** page, configure the following:




- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).
- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:



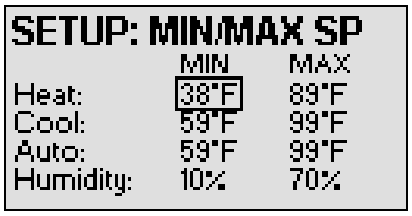

- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

> **NOTE: Heat**and **Auto** have no effect for this system type.

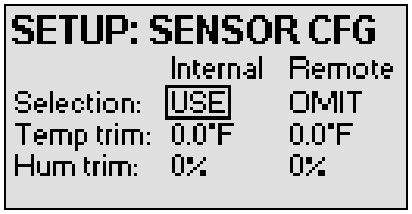



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.

- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal sensors. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote sensors. Select **Omit** to disable them.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

For relay-based FCU systems:

- **Cool Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

For 0-10V FCU systems:

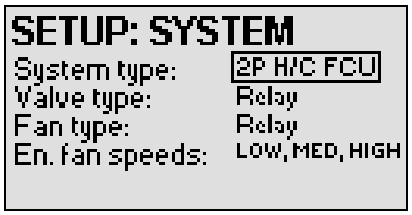
- **Cool Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Fan Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Humidistat Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.

# 2-Pipe FCU with Heat and Cool

To configure a system for 2-Pipe Fan Coil Unit (FCU) with Heat and Cool, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

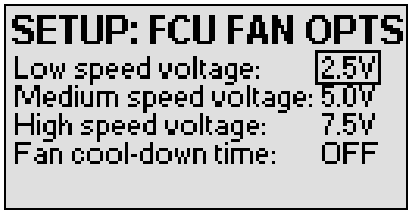
On the **System** page, configure the following:




- **System Type:** Select **2P H/C FCU**.
- **Valve Type:** Select **Relay** (default) or **0-10V**.
- **Fan Type:** Select **Relay** (default) or **0-10V**.
- **En. Fan Speeds:** Select **Low**, **Low, Med**, or **Low, Med, High** (default).

## Setup: FCU Fan Options

On the **FCU Fan Opts** page, configure the following:

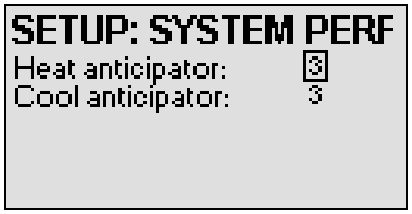



> **NOTE:** Voltage settings only have an effect if **Fan Type** is set to **0-10V**.

- **Low Speed Voltage:** Select from **0.2V** to 0.1V less than the **Medium Speed Fan Voltage**. **2.5V** is the default.
- **Medium Speed Voltage:** Select from 0.1V more than **Low Speed Fan Voltage** to 0.1V less than **High Speed Fan Voltage**. **5V** is the default.
- **High Speed Voltage:** Select from 0.1V more than **Medium Speed Fan Voltage** to **10V**. **7.5V** is the default.
- **Fan Cool-Down Time:** Select **Off** (default), **30s**, **45s**, **1m**, **1.5m**, **2m**, or **3m**.

# Setup: System Performance

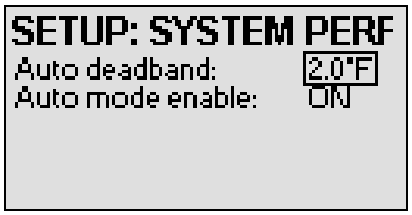
On the **System Perf** pages, configure the following:




- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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** (default), **4**, **5**, or **6**.

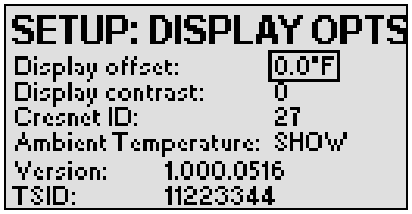
  To adjust cooling system cycling characteristics, select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.




- **Auto Deadband:** This sets the separation between the heat and cool setpoints in **Auto** mode. Select **2.0** (default), **3.0**, **4.0**, **5.0**, or **6.0** for Fahrenheit or **1.0** (default), **2.0**, or **3.0** for Celsius.
- **Auto Mode Enable:** Select **On** (default) to enable Auto mode. Select **Off** to disable it.

# Setup: Display Options

On the **Display Opts** page, configure the following:

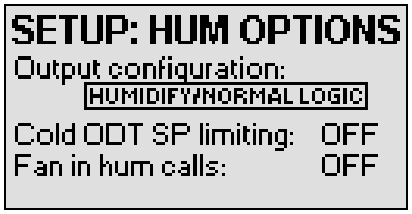



- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).

- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

# Setup: Humidity Options

On the **HUM Options** page, configure the following:

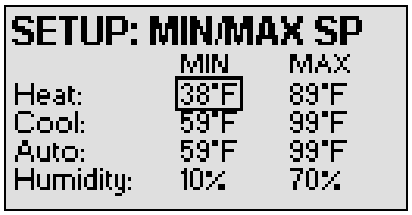



- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

# Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

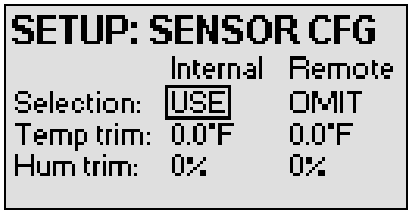



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.

- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal sensors. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote sensors. Select **Omit** to disable them.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.

  **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

For relay-based FCU systems:

- **Heat/Cool Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

For 0-10V FCU systems:

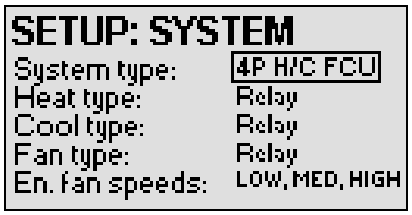
- **Heat/Cool Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Fan Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Humidistat Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.

# 4-Pipe FCU with Heat and Cool

To configure a system for 4-Pipe Fan Coil Unit (FCU) with Heat and Cool, enter Setup Mode and set the options as described below. For instructions on Setup Mode, refer to Initial Setup on page 35.

## Setup: System

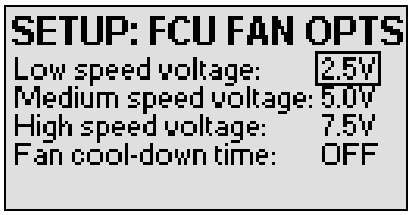
On the **System** page, configure the following:




- **System Type:** Select **4P H/C FCU**.
- **Heat Type:** Select **Relay** (default) or **0-10V**.
- **Cool Type:** Select **Relay** (default) or **0-10V**.
- **Fan Type:** Select **Relay** (default) or **0-10V**.
- **En. Fan Speeds:** Select **Low**, **Low, Med**, or **Low, Med, High** (default).

## Setup: FCU Fan Options

On the **FCU Fan Opts** page, configure the following:

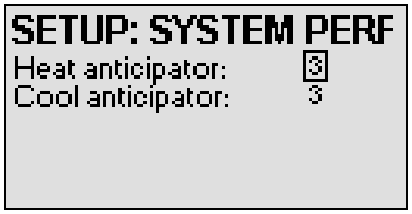



> **NOTE:** Voltage settings only have an effect if **Fan Type** is set to **0-10V**.

- **Low Speed Voltage:** Select from **0.2V** to 0.1V less than the **Medium Speed Fan Voltage**. **2.5V** is the default.
- **Medium Speed Voltage:** Select from 0.1V more than **Low Speed Fan Voltage** to 0.1V less than **High Speed Fan Voltage**. **5V** is the default.
- **High Speed Voltage:** Select from 0.1V more than **Medium Speed Fan Voltage** to **10V**. **7.5V** is the default.
- **Fan Cool-Down Time:** Select **Off** (default), **30s**, **45s**, **1m**, **1.5m**, **2m**, or **3m**.

# Setup: System Performance

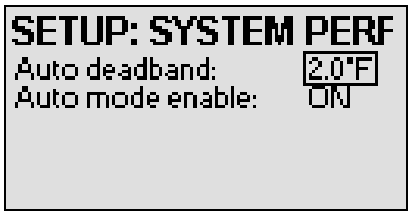
On the **System Perf** pages, configure the following:




- **Heat Anticipator:** Select **1**, **2**, **3** (default), **4**, **5**, or **6**.

  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** (default), **4**, **5**, or **6**.

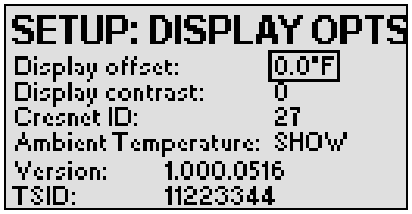
  To adjust cooling system cycling characteristics, select **1** for more frequent cycles and faster responses or **6** for less frequent cycles and slower responses.




- **Auto Deadband:** This sets the separation between the heat and cool setpoints in **Auto** mode. Select **2.0** (default), **3.0**, **4.0**, **5.0**, or **6.0** for Fahrenheit or **1.0** (default), **2.0**, or **3.0** for Celsius.
- **Auto Mode Enable:** Select **On** (default) to enable Auto mode. Select **Off** to disable it.

# Setup: Display Options

On the **Display Opts** page, configure the following:

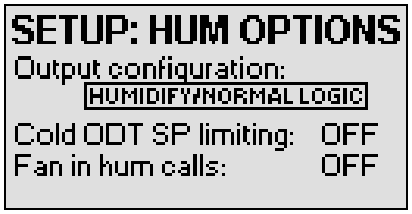



- **Display Offset:** Adjusts an offset between the space temperature displayed and the temperature sensed. Select **-6** to **+6** for Fahrenheit or **-3.0** - **+3.0** for Celsius. The default setting is **0**.
- **Display Contrast:** Adjust the contrast of the display to improve visibility. Select **-6** to **+9**. The default setting is **0**.
- **Cresnet ID:** Displays the thermostat's **Cresnet ID**.
- **Version:** Displays the firmware version.
- **TSID:** Displays the thermostat's Touch-Settable ID (unique, factory-assigned digital identifier).

- **Ambient Temperature:** Select **SHOW** to display the ambient temperature on the front panel or **HIDE** to conceal it. When hidden, the current setpoint will be shown in its place.

## Setup: Humidity Options

On the **HUM Options** page, configure the following:

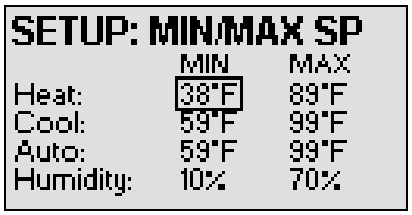



- **Output Configuration:** Select **Humidify/Normal Logic** (default), **Dehumidify/Inverted Logic**, or **None** (disables feature).
- **Cold ODT SP Limiting:** Select **Off** (default) or **On**. When set to **On**, the maximum humidity will be limited to prevent window condensation in cold weather.
- **Fan in Hum Calls:** Select **Off** (default) or **On**.

  If **On**, 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.

## Setup: Minimum/Maximum Setpoints

On the **Min/Max SP** page, configure the minimum and maximum setpoints.

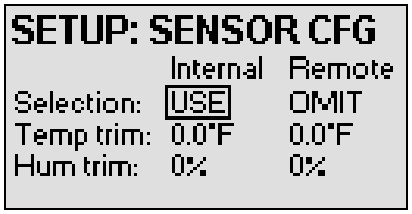



- **Heat**
  - **Min:** Select from **38** to 10 less than the Heat Max for Fahrenheit or **3** to 5 less than the Heat Max for Celsius. The default setting is **38** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Heat Min to **89** (default) for Fahrenheit. Select from 5 more than the Heat Min to **32** (default) for Celsius.
- **Cool**
  - **Min:** Select from **38** to 10 less than the Cool Max for Fahrenheit or **3** to 5 less than the Cool Max for Celsius. The default setting is **59** (Fahrenheit) or **3** (Celsius).
  - **Max:** Select from 10 more than the Cool Min to **99** (default) for Fahrenheit. Select from 5 more than the Cool Min to **37** (default) for Celsius.

- **Auto**
  - **Min:** Select from **38** to 10 less than the Auto Max for Fahrenheit or **3** to 5 less than the Auto Max for Celsius. The default setting is **59** (Fahrenheit) or **15** (Celsius).
  - **Max:** Select from 10 more than the Auto Min to **99** (default) for Fahrenheit. Select from 5 more than the Auto Min to **37** (default) for Celsius.
- **Humidity:**
  - **Min:** Select from **10%** (default) to 10% less than the Humidity Max.
  - **Max:** Select from 10% more than the Humidity Min to **70%** (default).

# Setup: Sensor Configuration

On the **Sensor CFG** page, configure settings for the internal CHV-THSTAT-PIR-10 sensors and any external sensors (not included) in the space.




- **Selection**
  - **Internal:** Select **Use** to utilize the internal sensors. Select **Omit** to disable them.
  - **Remote:** Select **Use** to utilize remote sensors. Select **Omit** to disable them.
- **Temp Trim**
  - **Internal:** Adjusts temperature sensed by the internal temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
  - **Remote:** Adjusts temperature sensed by a remote temperature sensor. Select **-6** to **+6** for Fahrenheit (**-3.0** to **+3.0** for Celsius). The default setting is **0**.
- **Hum Trim**
  - **Internal:** Adjusts humidity percentage sensed by the internal humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.
  - **Remote:** Adjusts humidity percentage sensed by a remote humidity sensor. Select **-9.0** to **+9.0**. The default setting is **0**.

# Setup: Service/Test

Use the **Service/Test** page to force calls for testing purposes.

For relay-based FCU systems:

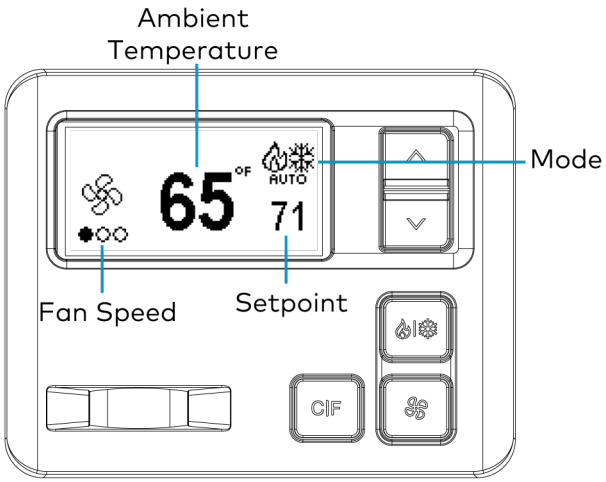
- **Heat Call:** Select **Off** (default) or **On**.
- **Cool Call:** Select **Off** (default) or **On**.
- **Fan Call:** Select **Off** (default) or **On**.
- **Humidistat Call:** Select **Off** (default) or **On**.

For 0-10V FCU systems:

- **Heat Call:** Select **Off** (default) or **On**.
- **Cool Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Fan Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.
- **Humidistat Call:** Select **0.0V** (default), **2.5V**, **5.0V**, **7.5V**, or **10V**.

# Operation

To operate the CHV-THSTAT-PIR-10 locally, use the front panel buttons. Refer to Physical Description on page 4 for more information.




**NOTE:** Ambient temperature can be hidden in **Display Options**. When hidden, the ambient temperature is replaced by the setpoint.

- Press the **Up** or **Down** buttons to raise or lower the heat, cool, and auto setpoints.
  - While in Fahrenheit, the **Up** and **Down** buttons will adjust the system setpoint by 1°F per press.
  - While in Celsius, the **Up** and **Down** buttons will adjust the system setpoint by 0.5°C per press.
- Press the **Mode** button to cycle through **Heat**, **Cool**, **Auto**, and **Off** mode.

  **NOTE:** The availability of some modes depends on the system configuration.

  - **Heat** : Controls only the heating system.
  - **Cool** : Controls only the cooling system.
  - **AUTO:** (if enabled): Allows the thermostat to automatically switch between the heating and cooling systems.
  - **OFF:** No heating or cooling.
- Press the **Fan** button to cycle through the **Auto**, **High**, **Medium**, and **Low** fan speed settings. The three dots below the fan icon indicate the fan mode. One dot is for **Low**, two for **Medium** and three for **High**.
- Press the **C|F** button to switch between Fahrenheit or Celsius temperature scales.

**NOTES:**

- Turning the humidistat on/off or adjusting the humidistat setpoint can only be accomplished via programming.
- The device features the following setpoint presets controlled via the PIR sensor and programming:
    - **Booked Occupied**
    - **Booked Vacant**
    - **Booked Unoccupied**
    - **Unbooked Vacant**
- Adjustments made through the local UI overwrite the **Booked Occupied** setpoint and must be reasserted in programming to default values after a guest checks out of the room.
- For details on programming the CHV-THSTAT-PIR-10, refer to the SIMPL help file.

# Resources

The following resources are provided for the CHV-THSTAT-PIR-10.

> **NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

## Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Online Help (OLH)
- Crestron Technical Institute (CTI) Portal

## Programmer and Developer Resources

- help.crestron.com: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- developer.crestron.com: Provides developer documentation for Crestron APIs, SDKs, and other development tools

## Product Certificates

To search for product certificates, refer to the Product Certificates section of the Crestron Resource Library.

## Related Documentation

- Crestron Technical Documentation

**Crestron Electronics, Inc.**
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Tel: 888.CRESTRON
Fax: 201.767.7656
www.crestron.com

Product Manual — Doc. 9561A
07/01/26
Specifications subject to
change without notice.