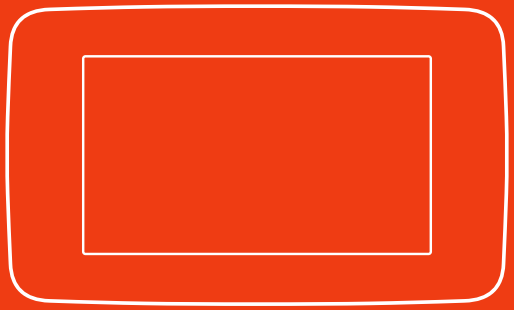


Basic Thermostat
Professional Installation

Designed by the pros for the pros

There are a lot of choices when it comes to buying a thermostat, but only one combines 100 years of HVAC experience and the latest connected home technology to empower your customers to take control of their comfort from anywhere. We proudly connect you to a professional-grade thermostat that you can offer your customers with confidence and that will keep you connected with them even after the initial install.

Easy to install and connect

This thermostat is designed to install like a standard thermostat. It gives you the flexibility to connect to Wi-Fi at installation or let your customer connect it later using the Sensi app.

MOBILE DEVICE COMPATIBILITY

OPERATING SYSTEM	COMPATIBILITY
iOS	Yes
Android	Yes
Amazon Fire	Yes

SMART HOME PLATFORM COMPATIBILITY

OPERATING SYSTEM	COMPATIBILITY
Amazon Alexa	Yes
Google Assistant	Yes
Samsung SmartThings	Yes

HVAC SYSTEM COMPATIBILITY

SYSTEM TYPE	COMPATIBILITY	MODIFICATIONS
Conventional heating and cooling • Gas furnace • Air conditioner • Electric furnace • Boiler	Yes	
Heat only • Gas furnace • Electric furnace • Boiler	Yes	
Cool only • Air conditioner	Yes	
Heat pump	Yes	
Communicating proprietary systems	No	Needs standard HVAC wiring
Line voltage	No	Requires low voltage (20-30VAC)
Millivolt systems	No	Requires 20-30VAC

ROUTER COMPATIBILITY

ROUTER TYPE	COMPATIBILITY
Single-band router with 2.4 GHz or 5.0 GHz band	Yes
Dual-band router with 2.4 & or 5.0 GHz bands	Yes

What's in the box?

- Smart thermostat
- Screws and anchors
- Installation guide
- Welcome guide
- Wire labels

Items needed for Wi-Fi connection:

- The homeowners compatible iOS or Android device
- Your customer's Wi-Fi network name (SSID) and password

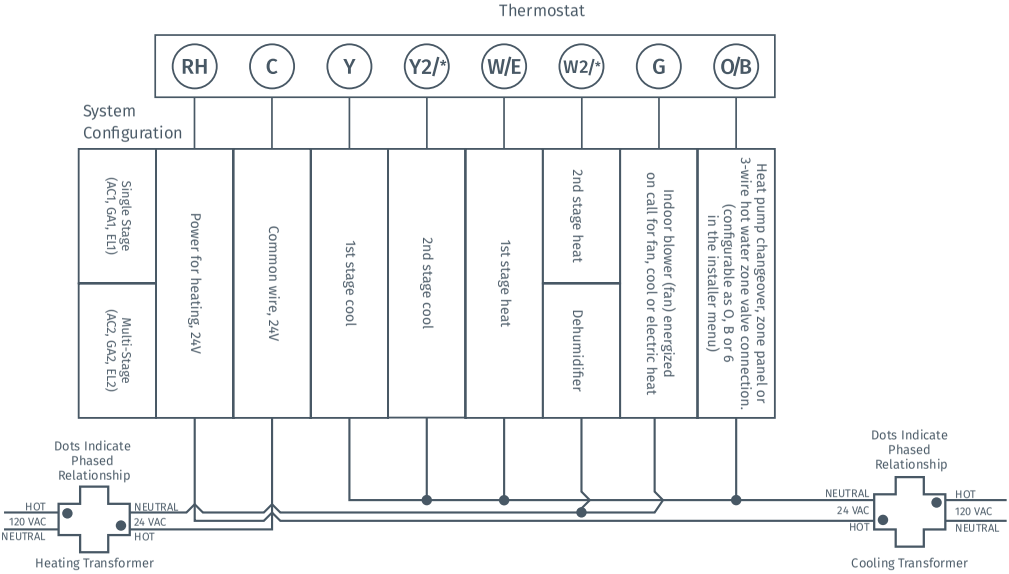
Installation

Install smart thermostat, referring to these terminal definitions, cross references and wiring diagrams as needed:

SENSI THERMOSTAT	CONVENTIONAL SYSTEM CONNECTION	HEAT PUMP SYSTEM CONNECTION
RC†	Power for cooling, 24V	
RH†	Power for heating, 24V	
C	Common wire, 24V	
Y	1st stage cool	1st stage heat and cool (compressor)
Y2/*	2nd stage cool	2nd stage heat and cool
W/E	1st stage heat	1st stage auxiliary/emergency heat (2nd stage heat)
W2/*	2nd stage heat	2nd stage auxiliary/emergency heat (3rd stage heat) Used for dehumidifers
G	Indoor blower (fan)	
O/B	Heat pump changeover, zone panel or 3-wire hot water zone valve connection. (configurable as O, B or 6 in the installer menu)	Heat pump changeover (reversing valve) connection (configure as O or B in the installer menu)
ACC (+/-)	Used for humidifiers	

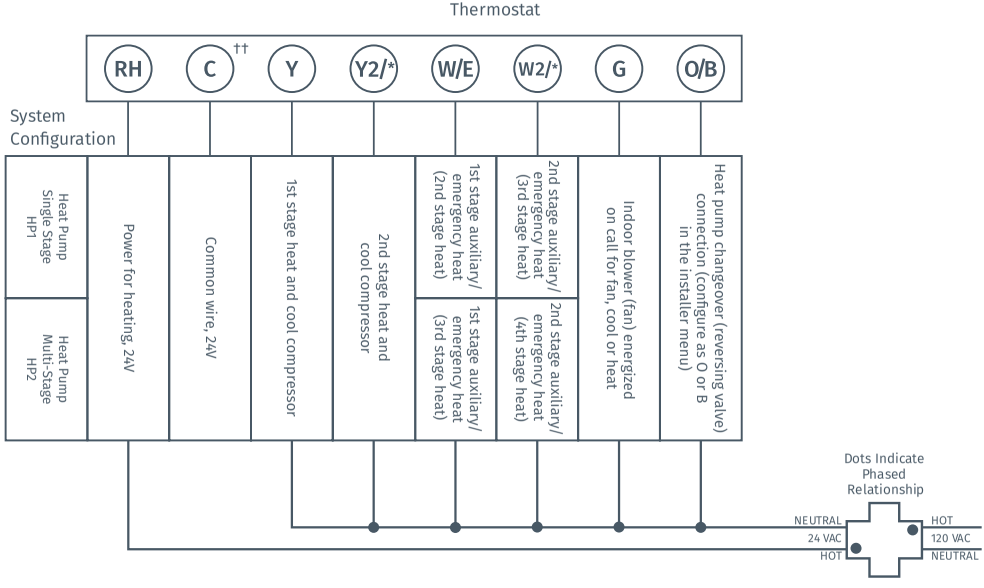
† Two transformer systems (separate RC and RH wires), clip jumper located on backplate to the right of the terminals.

CONVENTIONAL SINGLE STAGE OR MULTI-STAGE SYSTEMS (NO HEAT PUMP)



†Two transformers systems (separate RC and RH wires), clip internal RC/RH jumper, located on back of thermostat.

HEAT PUMP SYSTEMS



†Internal jumper between RC and RH, located on back of thermostat.
††Common connection required on Heat-only, Cool-only or Heat Pump systems.

Configuration

Configure the thermostat to the appropriate system type. On the thermostat, press **Menu > Advanced Set Up > HVAC Equipment > Configure** Refer to these menu options as needed:

CONFIGURATION MENU ITEMS REFERENCE

Menu item	Description	Options
Outdoor Equipment	Select AC or Heat Pump equipment, as well as the number of stages. Set this to AC1 for single stage systems or HP1 or HP2 for single or multi-stage heat pumps	AC1/AC2/HP1/HP2/None
Indoor Equipment	Select whether the equipment is an electric or gas furnace, or fan only. Set this to EL1 for single stage electric or GA1 or GA2 for single or multi-stage gas systems.	GA1/GA2/EL1/EL2/Fan
Reversing Valve Position	When configured for O, reversing valve is energized in Cooling. This will cover most applications. Some manufacturers such as Rheem or Rhudd use the B terminal, which would energize in heating. For three-wire zone hydronic systems set this to 6.	O/B/6

CONFIGURATION MENU ITEMS REFERENCE

Menu item	Description	Options
Aux Heat Settings		
Balance Point (AUX Heat Only)	The heat pump will not be used when the weather outside (Registered Zipcode) is below the selected value and only aux heat will be used in this case.	Yes/No
AUX Lockout (Disables AUX Heat)	The auxiliary heat will not be used when the weather outside (Registered Zipcode) is above the selected value and only the heat pump will be used in this case.	Yes/No
Additional Accessories		
Humidifier (wired to thermostat)	If a humidifier is wired to the thermostat, change the Humidifier setting to YES	Yes/No
Dehumidifier (wired to thermostat)	If a dehumidifier is wired to the thermostat, change the Dehumidifier setting to YES.	Yes/No

Contractor Mode

Speed up install time and quickly add your digital branding to each thermostat you install. To use contractor mode, take the following steps:

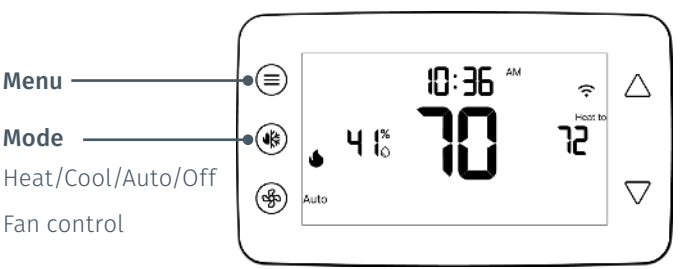
1. Download the mobile app
2. Create an account and password, then sign in
3. Press and hold the **logo** at the top of your screen for five seconds.
4. Enable Contractor Mode prompt by clicking **OK**
5. Select **Contractor Mode** at the top of your screen.
6. Enter the Phone Number registered to your account
7. Tap **Register Thermostat**
8. Scan the QR code on the back of each thermostat you install.

System Testing

Once the thermostat is installed and properly configured, you can test the equipment using the following steps.

Cooling System

- Press the **Mode** button on the thermostat and select the **Cool** position.
- Press ⊖ and adjust the setting to 1° below the current room temperature. The blower should come on immediately on high speed, followed by cold air circulation. The temperature display will turn blue. Note that there can be up to a 5 minute delay for this process. This is indicated by a flashing setpoint temperature.
- Press ⊕ and adjust the setting to 1° above the current room temperature. The cooling system should stop operating and the temperature display will go to a white color.
- If you encounter any issues while testing the equipment, refer to the troubleshooting actions on page 20.



Heating System

- Press the **Mode** button on the thermostat and select the **Heat** position.
- Press ⊕ on the thermostat and adjust the setting to 1° above the current room temperature. The heating system should begin to operate and the thermostat temperature display will turn orange indicating heating on the screen.
- For heat pumps with auxiliary, press ⊕ on the thermostat and adjust the setting to 3° above the current room temperature. The auxiliary heat should begin to operate and the thermostat will indicate “Heating Auxiliary” on the screen.
- Press ⊖ on the thermostat and adjust the setting to 1° below the current room temperature. The heating system should stop operating and the temperature will go back to a white color.

Auxiliary System (only for heat pumps with auxiliary)

- Press the **Mode** button on the thermostat and select the **Aux** position. This bypasses the heat pump and runs auxiliary-only heat.
- Press ⊕ on the thermostat and adjust the setting to 1° above the current room temperature. The auxiliary heating system should begin to operate.
- Press ⊖ on the thermostat and adjust the setting to 1° below the current room temperature. The auxiliary heating system should stop operating and “Heating Auxiliary” will disappear from the screen.

Fan Operation

- If your system does not have a “G” terminal connection, skip to “Heating System” below.
- Press the **Fan** button on the thermostat and select the **On** position. The blower should begin to operate.
- Press **Mode** (oval button on left side) to turn off the system. Then press the **Fan** button on the thermostat and select the **Auto** position. The blower should stop immediately.

Circulating Fan

- Press the **Mode** button on the thermostat then set Circulating fan to **On**
- Set the % run time from 10%-100% in 5% increments (default is OFF).
- The % run time is the percentage of time the fan shall run in a day. This calculation takes into account the amount of time the heating, cooling and continuous fan have run during the same day.

Humidification

- Press the **Mode** button on the thermostat and select the **Heat** position.
- Press ⊕ on the thermostat and adjust the setting to 1° above the current room temperature. The heating system should begin to operate and the temperature display will turn orange indicating heating on screen.
- Press **Menu > Advanced Setup > Humidify**
- Set Humidification to **On** and set the humidity set point higher than the current room humidity.
- Humidity can be adjusted from 5% to 50% in 5% increments.
- Check that the humidifier is running.
- Go back to the main screen.
- Press ⊖ on the thermostat and adjust the setting to 1° below the current room temperature. The heating and humidification system should stop operating and the temperature display will go back to a white color.

Dehumidification

- Press the **Mode** button on the thermostat and select the **Cool** position.
- Press ⊖ and adjust the setting to 1° below the current room temperature. The blower should come on immediately on high speed, followed by cold air circulation. The temperature display will turn blue. Note that there can be up to a 5 minute delay for this process. This is indicated by a flashing setpoint temperature.
- Press **Menu > Advanced Setup > Dehumidify**
- Set Dehumidification to **On** and set the humidity set point lower than the current room humidity. Humidity can be adjusted from 40% to 95% in 5% increments.
- Depending on installed equipment, check that the system fan speed has slowed, the dehumidifier is running, or the system cools up to 3° below temperature set point or until the humidity set point is reached.
- Go back to the home screen.
- Press ⊕ and adjust the setting to 1° above the current room temperature. The cooling system should stop operating and the temperature display will go back to a white color.

Troubleshooting

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No Heat/ No Cool/ No Fan (common problem)	1. Blown fuse or tripped circuit breaker 2. Furnace power switch to OFF 3. Furnace blower compartment door panel loose 4. Loose connection to thermostat or system	1. Replace fuse or reset breaker 2. Turn switch to ON 3. Replace door panel in proper position to engage safety interlock or door switch 4. Tighten connections
No Heat	1. Thermostat not set to Heat 2. Loose connection to thermostat or system 3. Heating system requires service or thermostat requires replacement	1. Set thermostat to Heat. 2. Verify thermostat and system wires are securely attached. 3. Diagnostic: Set Mode to Heat and raise the setpoint above room temperature. Within five minutes the thermostat should make a soft click sound and the temperature display should turn orange. This sound indicates the thermostat is operating properly. If the thermostat does not click, try resetting the thermostat. If the thermostat does not click after being reset, contact your heating and cooling service person or place of purchase for a replacement. If the thermostat clicks, verify the heating system is operating correctly.
No Cool	1. Thermostat not set to Cool 2. Loose connection to thermostat or system 3. Cooling system requires service or thermostat requires replacement	1. Set thermostat to Cool. 2. Verify thermostat and system wires are securely attached. 3. Diagnostic: Set Mode to Cool and lower setpoint below room temperature. Same procedures as diagnostic for “No Heat” condition except set the thermostat to Cool and lower the setpoint below the room temperature. There may be up to a five minute delay before the thermostat clicks in Cooling if the AC Protection feature is on.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Heat, Cool or Fan Runs Constantly	Possible short in wiring, thermostat, heat, cool or fan system	Check each wire connection to verify they are not shorted or touching other wires. Try resetting the thermostat.
Thermostat Display & Thermometer Disagree	Thermostat display requires adjustment	Display can be adjusted +/-5° using the Temperature Offset in Sensi app.
Humidity Display & Hygrometer Disagree	Humidity display requires adjustment	Display can be adjusted in 5% increments +/-25% using the Humidity Offset in the Sensi app.
Display is Blank	The display could be turned off or you need a common wire (c- wire)	Attach a common wire (c-wire) or turn on the display.
Furnace (Air Conditioner) Cycles Too Fast or Slow	The location of the thermostat and/ or the size of the Heating System may be influencing the cycle rate	Digital thermostats provide precise control and cycle faster than older mechanical models. The system turns on and off more frequently, but runs for a shorter time. If you would like to increase cycle time, choose Slow for the Cycle Rate in the Sensi app.
"Call for Service" appears on the screen	1. Heating or Cooling system is not able to heat/cool the space to within 5 degrees of the setpoint within 2 hours 2. If "--" is displayed for the Room Temperature, a replacement thermostat is needed 3. None of the buttons operate on the thermostat	1. See corrective action for "No Heat" or "No Cool" 2. Replace thermostat 3. Make sure keypad lockout is not turned on. If it's OFF, try resetting the thermostat. Reset: Turn the power to your system off, wait 5 seconds and turn it back on.

Warnings

INSTALLER INFORMATION
FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PERSONAL INJURY AND/OR PROPERTY DAMAGE.

⚠ WARNING

WARNING: OUT OF PHASE TRANSFORMERS
On two transformer systems, the transformers MUST be in phase. Measure the voltage across RC and RH. If more than 12 Volts AC is present between RC and RH, then the transformers are NOT in phase.

To correct this condition, reverse the secondary low voltage connections at either the Heating or Cooling transformer.

⚠ CAUTION

To prevent electrical shock and/or equipment damage, disconnect electric power to system at main circuit breaker box until installation is complete.

⚠ WARNING

FOR CALIFORNIA RESIDENTS: WARNING:
This product contains a chemical known to the state of California to cause cancer and birth defects and other reproductive harm.

⚠ WARNING

VOLTAGE REQUIREMENTS
Do not use on circuits exceeding specified voltage. Higher voltage will damage control and could cause shock or fire hazard.

Thermostat installation and all components of the control system shall conform to Class II circuits per the NEC code.

⚠ CAUTION

CAUTION: E5 Alert
If "Call For Service" is displayed on your Sensi thermostat, and E4 or E5 appears where the room temperature should be displayed or the backlight is flashing, please call our support team immediately at 888.605.7131

ATTENTION: MERCURY NOTICE
This product does not contain mercury. However, this product may replace a product that contains mercury. Mercury and products containing mercury must not be discarded in household trash. Refer to **thermostat-recycle.org** for location to send product containing mercury.

FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter and must be installed to provide a separation distance of at least 20cm from all persons.

The FCC grant can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on FCC ID: 2A4JN-1F88U42.

IC Notice

This device complies with Innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. This Class B digital apparatus complies with Canadian ICES-003.

IC: 28229-1F88U42

IC Radiation Exposure Statement

This device complies with IC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the IC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.

Avis IC

Cet appareil est conforme à la (aux) norme(s) RSS exemptée(s) de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférences, et (2) cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

Cet appareil numérique de classe B est conforme

à la norme canadienne ICES-003.

IC: 28229-1F88U42

Déclaration d'exposition aux radiations

Cet appareil est conforme aux limites d'exposition aux radiations fixées par l'IC pour un environnement non contrôlé. Afin d'éviter la possibilité de dépasser les limites d'exposition aux radiofréquences de l'IC, la proximité humaine de l'antenne ne doit pas être inférieure à 20 cm pendant le fonctionnement normal de l'appareil.

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