

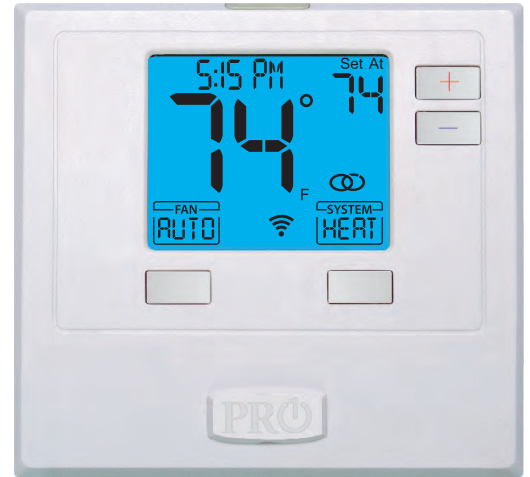
# PRO<sup>1</sup> T701i

**Pro1 Technologies, Inc.**

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**Hours of Operation:** M-F 9AM - 6PM Eastern



## Thermostat Applications Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (with Aux. or Emergency Heat)	No
Multi-stage Systems	No
Heat Only Systems	Yes
Cool Only Systems	Yes
Millivolt	No

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## Power Type

Hardwire (24 VAC Common Wire)

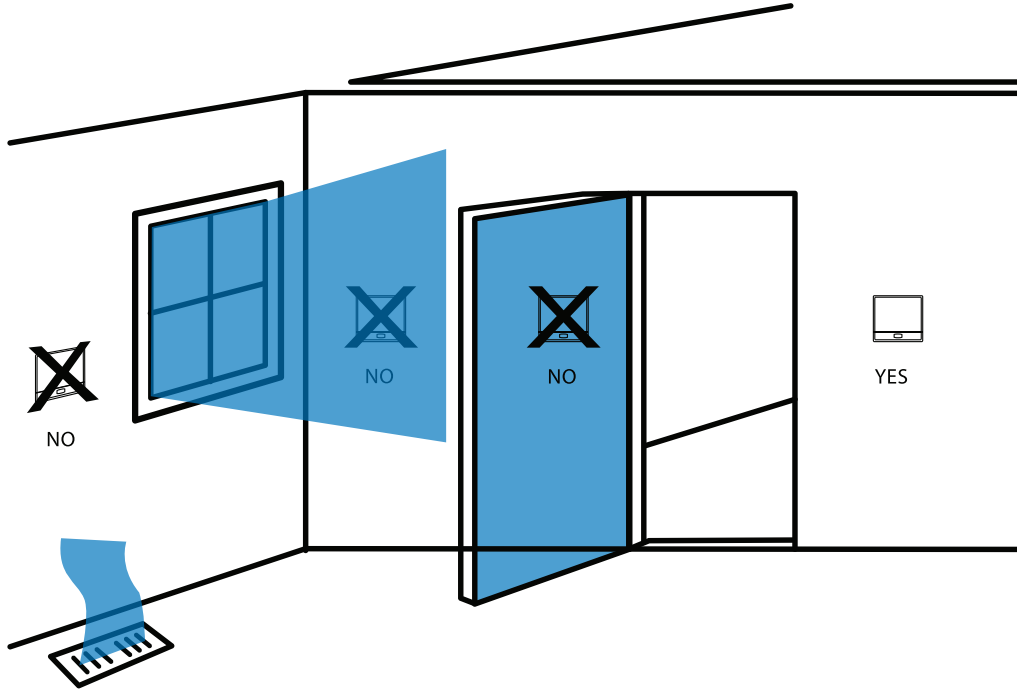
**A trained, experienced technician must install this product.**

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una versión en español de este manual se puede descargar en la página web de la compañía.

### Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.



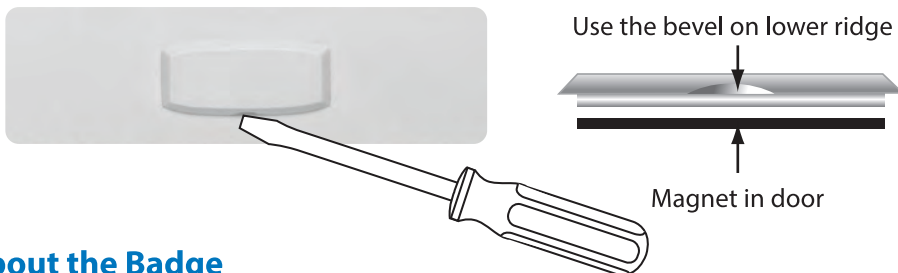
**Do not install** thermostat in locations:

- Close to hot or cold air ducts
- In areas that do not require conditioning
- With an outside wall behind the thermostat
- Where there might be concealed chimneys or pipes
- Where there are dead spots or drafts (in corners or behind doors)
- That are in direct sunlight

### Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

### Removing the private label badge

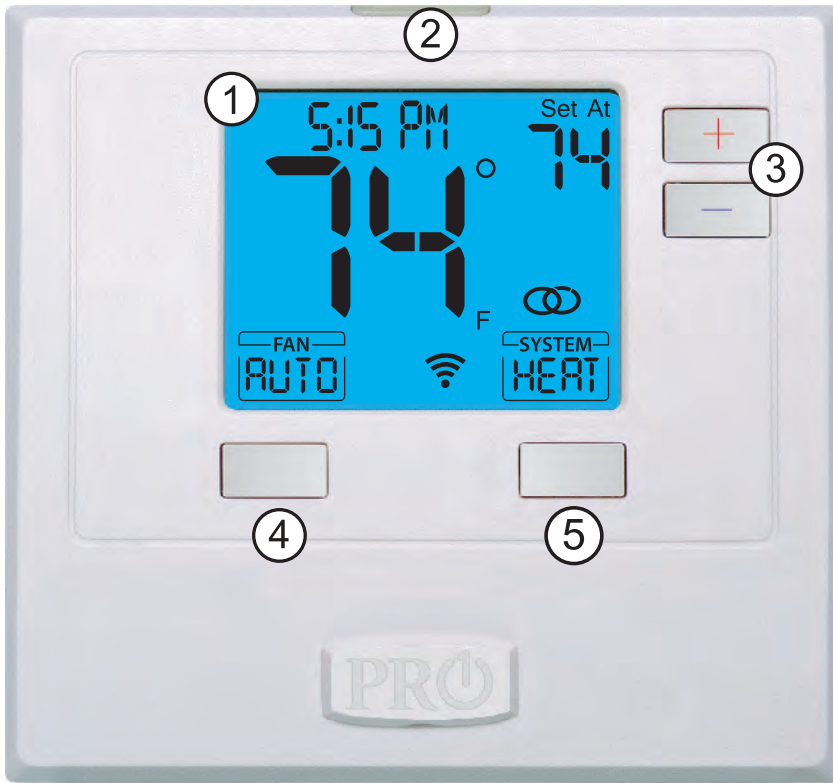


Gently slide a screwdriver into the bottom edge of the badge. Gently turn the screwdriver counter clockwise. The badge is held on by a magnet. The badge should pry off easily. Do not use force.

### About the Badge

All our thermostats use the same universal magnetic badge. Visit our website to learn more about our free private label program.

### Getting to know your thermostat



- ① LCD Display
- ② Glow in the Dark Light Button
- ③ Temperature Set Point Buttons
- ④ Fan/User Button
- ⑤ System/User Button

**Top Text Field**  
Used in programming, will also show Time of Day when a schedule program is being used.

Indicates the current room temperature.

Displays the user selectable Setpoint temperature.

Indicates mode of system running.

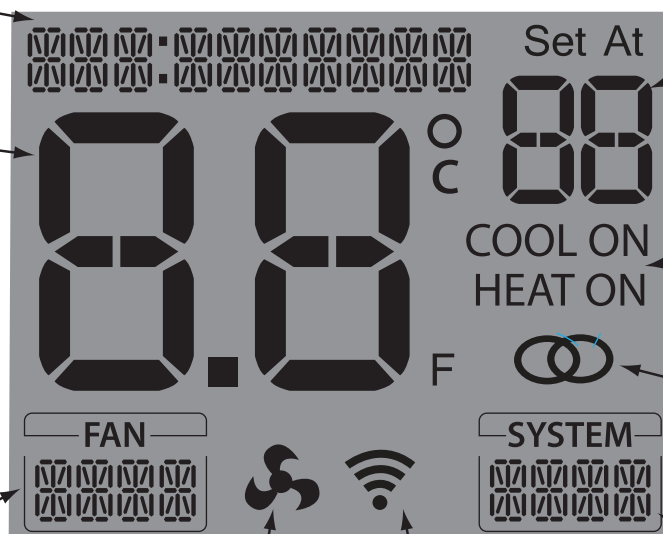
WIFI Connection Indicator

**Bottom Left Text Field** Used in programming and Hold functions. Will also show current Fan setting.

Fan Indicator

WIFI Signal Strength

**Bottom Right text field** Used in programming and Hold functions. Will also show current System setting.





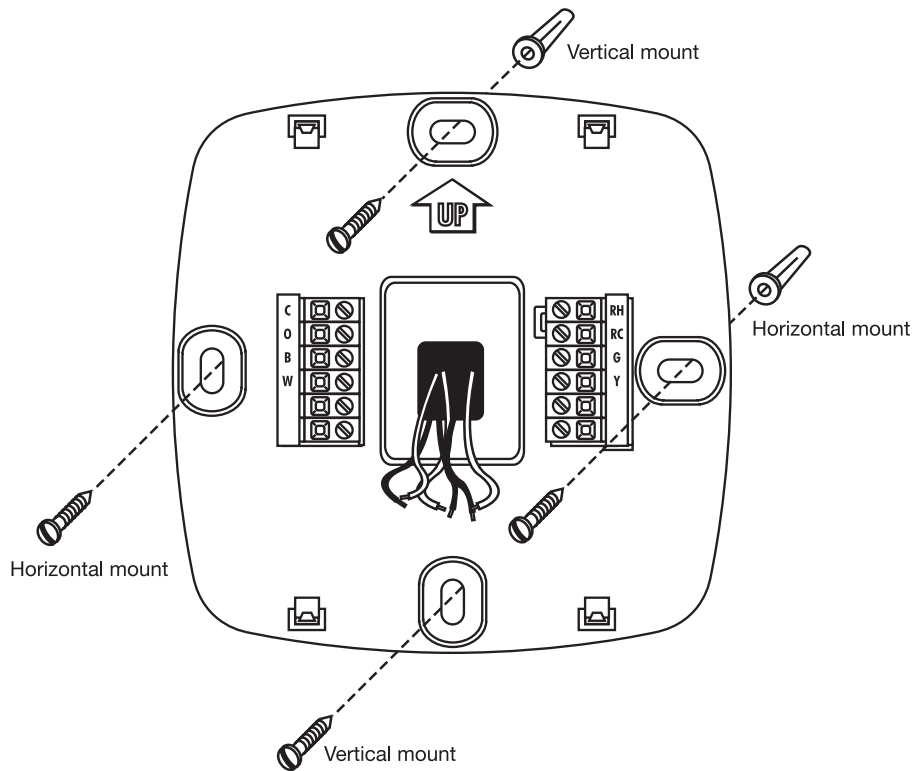
## Caution: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electric shock or equipment damage.



## Caution Mercury Notice:

All of our thermostats are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.



For vertical mount put one screw on top and one screw on bottom.

For horizontal mount put one screw left and one screw right.

## Installation Tip

Prior to installing subbase place non-flammable insulation into wall opening to prevent drafts.

## Mount Thermostat

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.

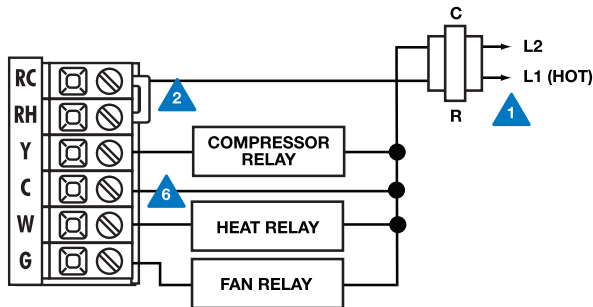
**Note:** To insure a solid fit between the thermostat and the subbase:

1. Mount subbase to a flat wall
2. Use screws provided
3. Drywall anchors should be flush with the wall
4. Wires should be pushed into the wall

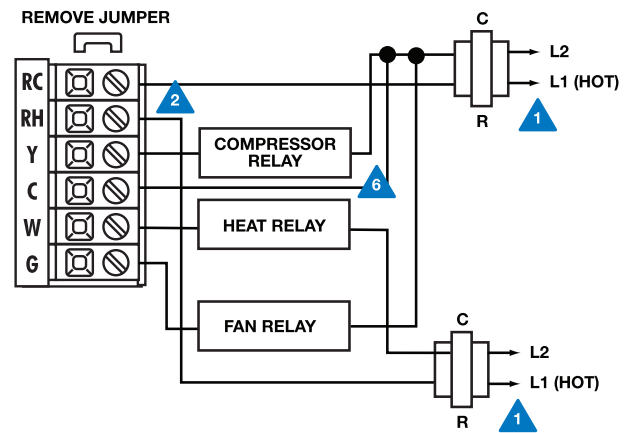


- ▲ 1 Power supply
- ▲ 2 Factory-installed jumper. Remove only when installing on 2-transformer systems.
- ▲ 3 Use either O or B terminals for changeover valve
- ▲ 4 Use a small piece of wire (not supplied) to connect W and Y terminals
- ▲ 5 Set fan operation to electric
- ▲ 6 A 24 VAC common connection is required with this thermostat.

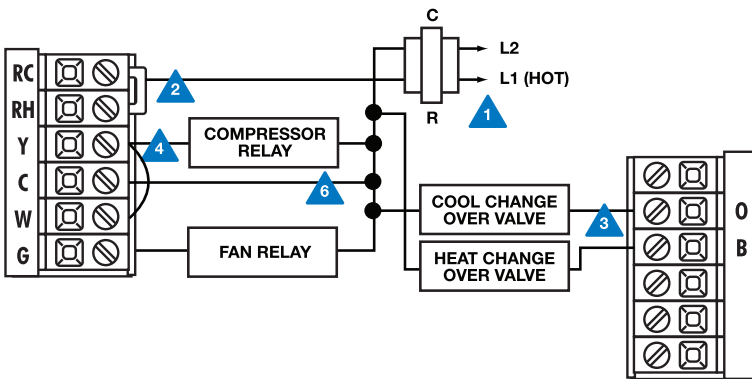
### Typical 1H/1C system: 1 transformer



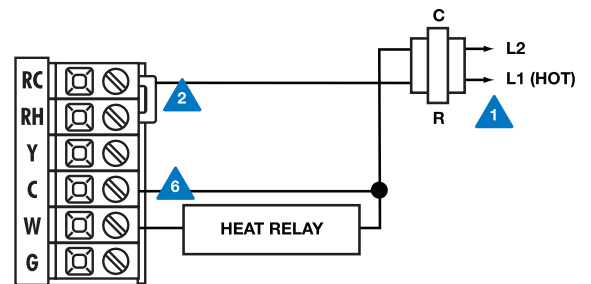
### Typical 1H/1C system: 2 transformer



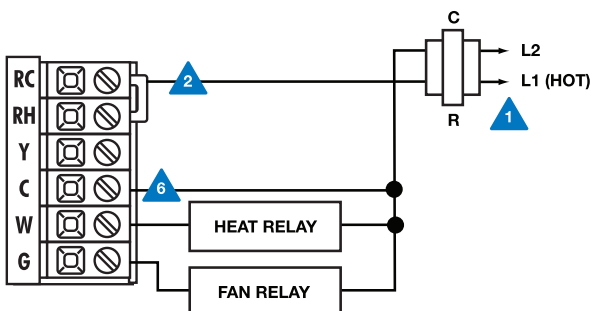
### Typical 1H/1C heat pump system



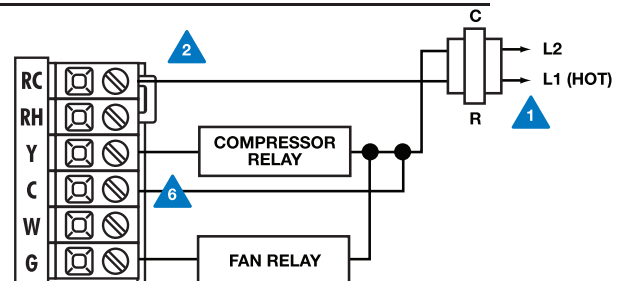
### Typical heat-only system



### Typical heat-only system with fan



### Typical cool-only system



## Replacement Thermostat Wiring

1. If you are replacing a thermostat, make note of the terminal connections on the thermostat that is being replaced. In some cases the wiring connections will not be color-coded. For example, the green wire may not be connected to the **G** terminal.
2. Loosen the terminal block screws. Insert wires then retighten terminal block screws.
3. Place nonflammable insulation into wall opening to prevent drafts.

This thermostat requires a 24V Common Wire to the C terminal.



### Warning

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

### Wire Specifications

Use shielded or non-shielded 18-22 gauge thermostat wire.



### Warning

**DO NOT OVER TIGHTEN TERMINAL BLOCKS. DOING SO CAN CAUSE DISTORTIONS AND MALFUNCTIONS.**

## Wiring Chart:

For all systems, the following terminals are wired according to whether you have a single or dual transformer system as shown:

	RH	RC	C	G
<b>SINGLE TRANSFORMER SYSTEM</b>	24 VAC Hot JUMPER SHOULD REMAIN INSTALLED		24 VAC Common	Blower / Fan
<b>DUAL TRANSFORMER SYSTEM</b>	24 VAC - Heat *REMOVE PROVIDED JUMPER	24 VAC - Cool *REMOVE PROVIDED JUMPER	24 VAC Common *FROM COOL TRANSFORMER	Blower / Fan

\* FAILURE TO REMOVE PROVIDED JUMPER ON DUAL TRANSFORMER INSTALLATIONS COULD CAUSE SEVERE DAMAGE TO HVAC SYSTEMS.

<b>O Terminal</b>	Heat Pump changeover valve--Energized during Cooling
<b>B Terminal</b>	Heat Pump changeover valve--Energized during Heating

If using in Heat Pump without Auxiliary or Emergency heat application, please see wiring diagram on previous page.

**Note:** Devices such as a float switch that mechanically break circuits should be installed so that they break the control wire (Y) not the power (R). Interrupting the power circuit will shut off power to the thermostat completely and not allow it to operate.

## To Enter Tech Setup

1. Press and hold the + and - buttons for 3 seconds.
2. Then press TECH button at lower left.
3. Configure the installer options as desired using the table below. Use the + or - buttons to change setting and the PREV and NEXT buttons to move from one step to another.
4. To exit Tech Setup: Press and hold the + and - buttons for 3 seconds, or wait 20 seconds.

Tech Setup Steps						
Room Temperature Calibration	Compressor Short Cycle Delay	Cooling Swing	Heating Swing	°F or °C	12 or 24 Hour Clock	Display Light
This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° and you would like it to read 72° then select 2.	The compressor short cycle delay protects the compressor from "short cycling". This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off.	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	This feature allows you to display temperatures in either Fahrenheit or Celsius.	You can select either a 12 or 24 hour clock setting.	The display light can be configured to operate 3 different ways. To come on only when the Light Key is pressed, when Any Key is pressed, or stay on ALL of the time.
LCD Will Show						
Adjustment Options						
You can adjust the room temperature display to read 4°F above or 4°F below the factory calibrated reading.	Selecting "On" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was on. Select "Of" to remove this delay.	The cooling swing setting is adjustable from ±0.2°F to ±2°F. For example: A swing setting of 0.5°F will turn the cooling on at approximately 0.5°F above the setpoint and turn the cooling off at approximately 0.5°F below the setpoint.	The heating swing setting is adjustable from ±0.2°F to ±2°F. For example: A swing setting of 0.5°F will turn the heating on at approximately 0.5°F below the setpoint and turn the heating off at approximately 0.5°F above the setpoint.	°F for Fahrenheit °C for Celsius	Use the <b>+</b> or <b>-</b> key to select 12 or 24 hour clock.	AUTO "AU" - Any key ON ON "On" - Always ON OFF "Of" - Only light key ON.
Factory Default Setting						
0 °F	ON	0.5 °F	0.4 °F	°F	12 Hour Clock	AUTO

## Swing Setting Tip

Temperature swing, sometimes called differential or cycle rate, can be customized for this individual application. For most applications choose a swing setting that is as long as possible without making the occupants uncomfortable.

TECH SETUP  
STEPS CONTINUED  
ON THE NEXT PAGE



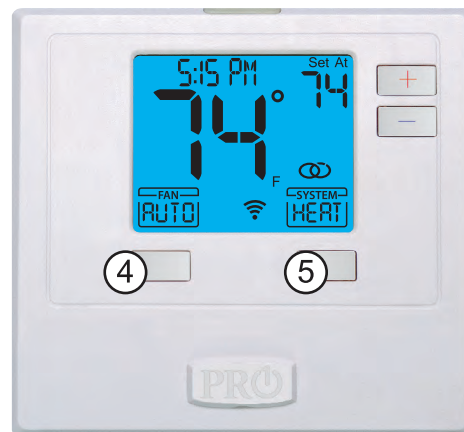
Tech Setup Steps		
Programmable	System Set	Fan Operation
You can configure this thermostat to accept a programmed schedule from the mobile App, if it's WiFi communication is set up through your home network.	You can configure the system for your particular application.  HEAT - OFF - COOL HEAT - OFF COOL - OFF	Select GAS for <b>systems</b> that control the fan during a call for heat. Select ELEC to have the <b>thermostat</b> control the fan during a call for heat. Select OFF to have no appearance or control of fan.
LCD Will Show		
Adjustment Options		
Select "OF" to configure the thermostat for NON-Programmable. (Time of day will NOT appear on display)  Select "On" to configure the thermostat for programmable operation, from the app.	Use the <b>+</b> or <b>-</b> key until the desired application is flashing.  HC - Heat-OFF-Cool H - Heat Only C - Cool Only	GAS - "GS"  ELEC - "EL" or OFF - "OF"  OFF is available if heat only was selected in previous step.
Factory Default Setting		
OFF	Heat - Off - Cool	GAS

### Operation of ④ fan button & ⑤ system button when connected to WIFI and running a programmed schedule from the app.

When the Set At temperature is changed while an app schedule is running, the thermostat will enter a temporary hold, and the Fan and System buttons change to RUN and HOLD for 5 seconds. If you wish to enter PERMANENT HOLD press the HOLD button at this time.

If you don't press the HOLD button within the 5 seconds, it will remain in temporary hold for 4 hours.

When connected to WIFI you may also have the ability to turn programming ON or OFF by pressing and holding the FAN button for 3 seconds, while the FAN BOX appears.





These WIFI Technician steps/options used for information and trouble-shooting. They are not used for installation or initial setup.

The only normal function you would use this step for would be to RESET WIFI provisioning. For example: If you replaced your home WIFI router and needed to connect through a different network.

Follow these steps to enter the WIFI-technical information menu.

Follow these steps to reset the thermostats WIFI provisioning.

1. Press and hold the + and - buttons together for 3 seconds.
2. Then press WIFI button at lower right.
3. Top of display will show:  
  
**“WIFI NOTOK”** if **NOT** connected to WIFI  
**“WIFI OK”** if connected to WIFI
4. If the **NEXT** button is pressed, top of display will show:  
  
 The firmware and software versions that are installed on the thermostat. You can scroll through them with the + and - buttons.
5. If the **NEXT** button is pressed again, top display shows:  
  
 The SSID # of the thermostat. If **NEXT** is pressed again, you will return to step 4.

1. Go through steps 1 and 2 from the WIFI menu at the left.
2. Then press and hold the TECH button at lower left for 3 seconds.
3. Top of display will show:  
  
**“RESET WIFI”**
4. Press the **YES** button at lower left.  
  
 After a 5 second countdown, the thermostat will reset.  
  
 Or press **NO** to exit.

Specifications

The display range of temperature	41°F to 95°F (5°C to 35°C)
The control range of temperature	44°F to 90°F (7°C to 32°C)
Load rating	1 amp per terminal, 1.5 amp maximum all terminals combined
Display accuracy	± 1 °F
Swing (cycle rate or differential)	Heating is adjustable from 0.2°F to 2.0°F Cooling is adjustable from 0.2°F to 2.0°F
Power source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire)
Operating ambient	32°F to +105°F (0° to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.8 "W x 4.4"H x 1"D

WIFI

Frequency Range	2.4 GHz ISM radio band
WIFI Module	Supporting 802.11 B/G/N Standards