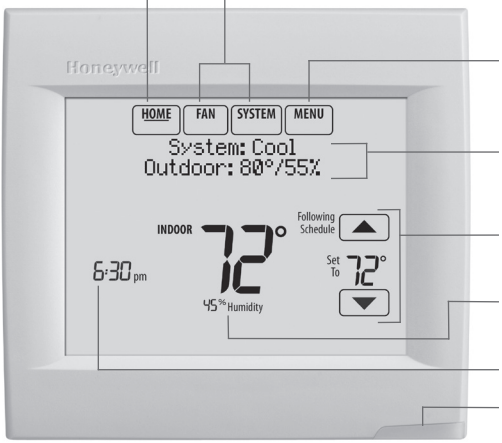
Honeywell

Wi-Fi VisionPRO® 8000

Installation Guide

PRO install

Reference to key features



Current display. Underlined label signifies the current display.

Mode control buttons. Use to change settings for Fan or System Heat/Cool.

Menu. Select options to: set schedules, view equipment status, change IAQ settings, access installer options*, etc.

Current status. Shows system mode (heat/cool), outdoor temperature and humidity.

Current schedule. Shows desired temperature and schedule status.

Indoor conditions. Shows indoor temperature and humidity.

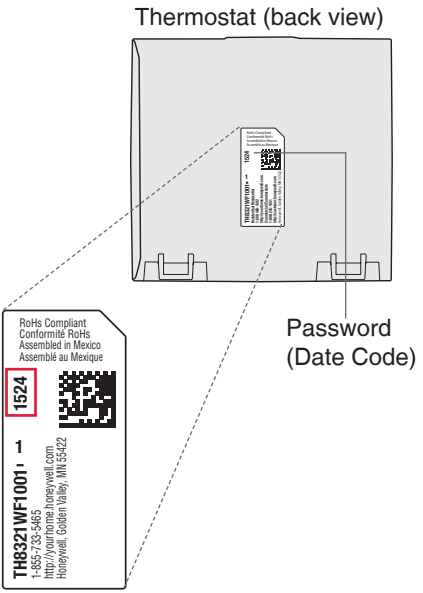
Current Time.

Alert Light. On when alert message is active or system is set to Em Heat.

* Password is the date code.

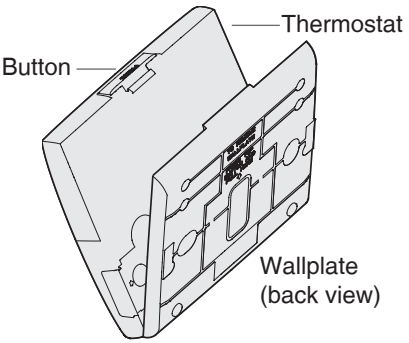
Getting started

Follow these basic steps to install this thermostat, set installer options, and connect to the Wi-Fi network.



Installing the thermostat

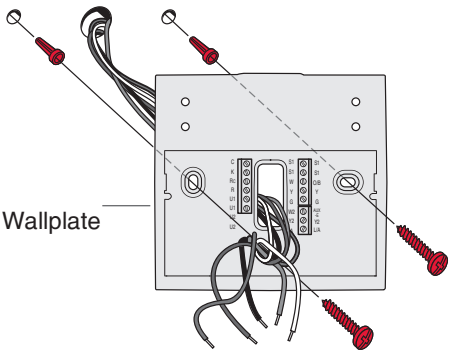
1 Separate wallplate from thermostat.
Press button on top and pull to remove the wallplate.



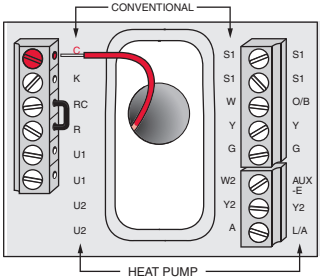
2 Mount wallplate as shown.
Mount new wallplate using screws and anchors included with the thermostat.

Drill 3/16-in holes for drywall.

Drill 7/32-in holes for plaster.

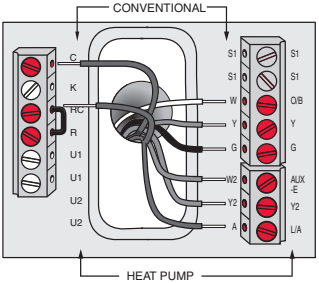


3 Connect power.
24VAC power is required. Connect common side of transformer to C terminal.

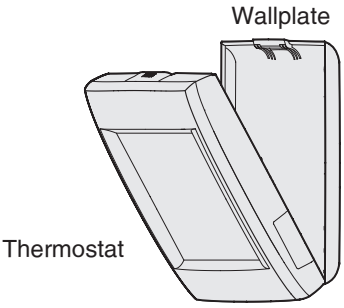


4 Wire the thermostat.
Refer to the table and wiring diagrams on the next page.

a Turn on 24VAC **NOW**.
24VAC (C wire) is required.



5 Mount thermostat on wallplate.
Align thermostat at bottom and snap into place as shown.



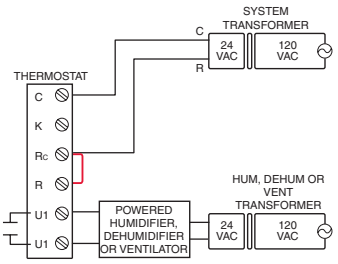
Terminal Designations

Conventional System		Heat Pump	
Terminal	**Description**	**Terminal**	**Description**
C	Common wire from secondary side of cooling transformer (if 2 transformers).	C	Common wire from secondary side of cooling transformer.
Rc*	Cooling power.	Rc	Cooling power.
R*	Heating power.	R	Heating power.
W	Heat Stage 1	O/B	Changeover valve for heat pumps.
W2	Heat Stage 2	AUX-E	Backup Heat/Emergency Heat
Y	Compressor Stage 1	Y	Compressor Stage 1
Y2	Compressor Stage 2	Y2	Compressor Stage 2
G	Fan Relay	G	Fan Relay
A	Connect to Economizer Module or Lighting Panel (TOD).	L/A	Connect to Compressor Monitor, Zone Panel, Economizer Module or Lighting Panel (TOD).
U1 / U1	Universal relay for humidification, dehumidification, ventilation, or a stage of heating/cooling.	U1 / U1	Universal relay for humidification, dehumidification, ventilation, or a stage of heating/cooling.
S1 / S1	Universal input for a wired indoor, outdoor or discharge sensor.	S1 / S1	Universal input for a wired indoor, outdoor or discharge sensor.
K**	Connect to K on Wire Saver module.	K**	Connect to K on Wire Saver module.

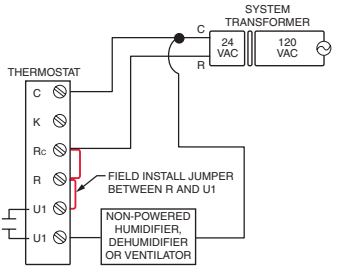
* Remove factory installed jumper for two transformer systems.

** The THP9045A1023 Wire Saver module is used on heat/cool systems when you only have four wires at the thermostat and you need a fifth wire for a common wire. Use the K terminal in place of the Y and G terminals on conventional or heat pump systems to provide control of the fan and the compressor through a single wire—the unused wire then becomes your common wire. See THP9045 instructions for more information.

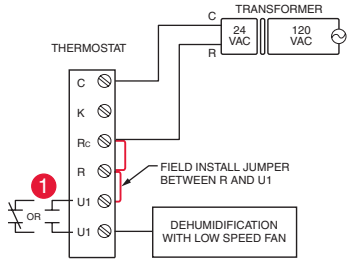
POWERED HUMIDIFIER, DEHUMIDIFIER OR VENTILATOR



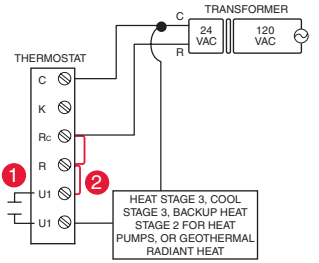
NON-POWERED HUMIDIFIER, DEHUMIDIFIER OR VENTILATOR



DEHUMIDIFICATION WITH LOW SPEED FAN



CONNECTING A HEAT OR COOL STAGE TO U1



1. Wire the thermostat universal relay to the low speed fan for dehumidification control at the equipment. The thermostat relay can be set to normally open or normally closed in the thermostat installer setup.

   Normally open, dry contacts

   Normally closed, dry contacts

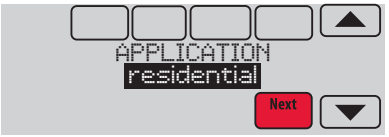
1. U1 terminals are normally open dry contacts when set up for a stage of heating or cooling.
2. You must install a field jumper if the stage of heating or cooling is powered by system transformer. Do NOT install a field jumper if the stage of heating has its own transformer.

Performing installer setup

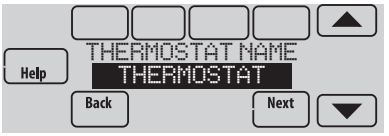
Setup options define the type of system you are installing and preferences for the display.

1 Follow prompts on the screen to select the appropriate options. Among the screens you might see wil be options for:

1.1 Application, either Residential or Commercial.

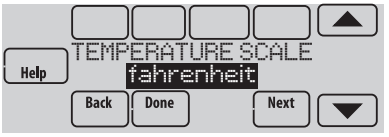


1.2 Thermostat Name, which will enable you to identify it if you're installing more than one thermostat (for a zoned HVAC application, for instance).

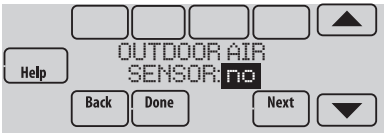


1.3 Thermostat Type, either programmable or not, depending on preference.

1.4 Temperature scale, either Fahrenheit or Celsius.



1.5 Any Outdoor Air Sensors installed.



NOTE: If you are using a Wired Outdoor Sensor or the outdoor temperature from the Wi-Fi connection to lockout the compressor or Auxiliary heat, select **Yes** to see the installer options for lockout temperatures.

1.6 The type of heating system.

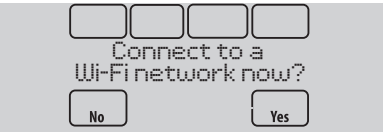
1.7 For all installer options, press the ▲ or ▼ buttons to change the option.

1.8 Press **Next** to move to the next setting, and **Done** when setup is complete.

Connecting to Wi-Fi

After installer setup, you will be prompted to connect to a Wi-Fi network.

NOTE: If you select **No**, the homeowner can connect to the Wi-Fi network later. (See "Connecting to Wi-Fi later" on page 8 or in the User's Guide.) The thermostat will display its Home screen and thermostat setup is complete.



1 Connect to the Wi-Fi network now.

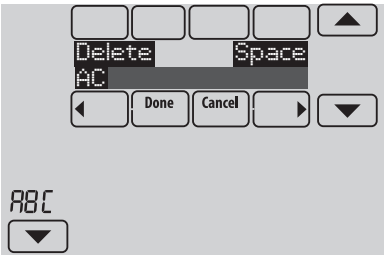
1.1 Press **Yes**.
The thermostat will scan for available Wi-Fi networks.

1.2 Use the arrow buttons to scroll up/down or left/right. Press the Wi-Fi network name, then press **Select**.

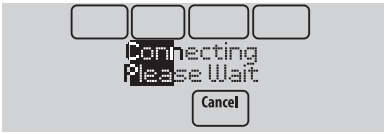
NOTE: If the Wi-Fi network name is hidden, see "Connecting to a hidden Wi-Fi network" on page 10.

1.3 When prompted, press the screen to edit the password (if necessary).

1.4 Enter the password.
Press the ▲ or ▼ buttons to change the letter or number.
Press the ▶ button to move to the next character, or the ◀ button to move to the previous character.
Use the ▲ or ▼ buttons at the bottom to change letter case.
Press **Done** when complete.



1.5 The screen will let you know when the connection is successful. Press **Done** when the connection is successful.
If the connection is not successful, the screen will explain why not. See "Unsuccessful connection" on page 9. Follow instructions on the screen to try again.



NOTE: Press the **Help** button for more information about an unsuccessful connection.

2 The homeowner must have a Total Connect Comfort account.

2.1 Have the homeowner go to www.mytotalconnectcomfort.com and follow the instructions to login or create an account.

2.2 Press the ▼ button to display Wi-Fi signal strength, status, IP address, MAC and CRC.

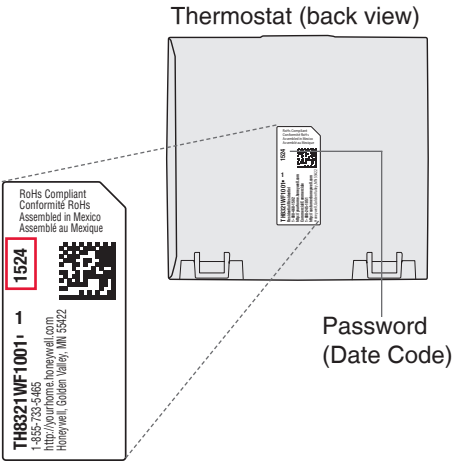
2.3 Note the Thermostat MAC and CRC; they will be needed during registration. Or, refer to the User's Guide.

Finding the password (Date Code)

- To make changes to Installer Setup
- To perform an Installer Test

Finding the password

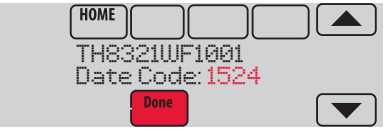
You can find the date code on the back of the thermostat, or touch **Menu**, select **Dealer Information**, and scroll to the bottom to see Date Code.



1 Touch **Menu**.

2 Select **Dealer Information**.

3 Scroll down to see the Date Code.

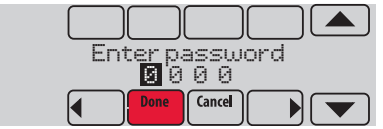


Making changes to Installer Setup and performing an Installer Test

1 Touch **Menu**.

2 Select **Installer Options**.

3 Enter password (date code) and touch **Done**. See “Finding the password” on page 7 to find the date code.

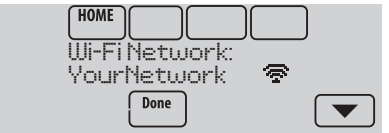


4 Select **Installer Setup** or **Installer Test**.

5 Follow prompts on the screen to select the desired setup options or to perform an equipment test.

Checking signal strength

After you successfully connect to the Wi-Fi network (see “Connecting to Wi-Fi” step 1.5), the thermostat will display signal strength. The signal strength symbols have the following meanings:



- Signal strength is 75%–100%
- Signal strength is 50%–75%
- Signal strength is 0%–50%

You can also check signal strength at any time after the thermostat is connected to the Wi-Fi network by pressing **MENU** then **Wi-Fi Setup**.

Connecting to Wi-Fi later

1 Press **MENU**, then **Wi-Fi Setup**.

2 Follow the prompts on-screen (and in “Connecting to Wi-Fi”) to select the Wi-Fi network and enter the password.

NOTE: To view and set the Wi-Fi thermostat remotely, the homeowner **must** have a Total Connect Comfort account. See “Connecting to Wi-Fi” step 2.

Unsuccessful connection

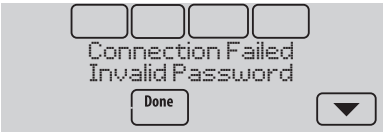
If you are unsuccessful in connecting the thermostat to the Wi-Fi network, you will see a Connection Failed screen. Press the ▼ button for other tips about this failed connection. Here are three specific reasons the connection might be unsuccessful.

For all Connection Failed screens, pressing **Done** will return to the Menu screen.

Invalid Password

The password you entered is invalid. Check that you have the right password and try again.

Press **Back** to return to “Connecting to Wi-Fi” step 1.3 on page 6.



No IP Address

The thermostat was unable to obtain an IP address from the router. Verify the router is correctly set up to automatically assign IP addresses. This connection can take several minutes. If there is still no connection, remove the thermostat from the wallplate for 10 seconds, then snap it back into place.

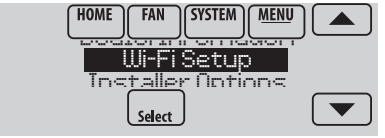
No Internet Link

The thermostat connected to the Wi-Fi network but was unable to establish a connection to the internet. Check the router settings and try again. Make sure the Ethernet cable is plugged into the router and try rebooting the router if necessary.

Connecting to a hidden Wi-Fi network

If the Wi-Fi network name is hidden and it doesn't show up in the list in "Connecting to Wi-Fi" follow these steps to connect to it.

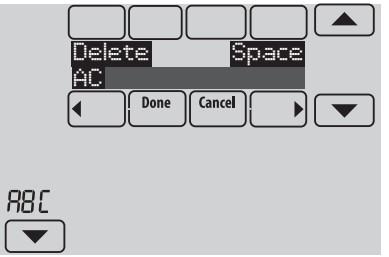
1 Press **MENU**, then **Wi-Fi Setup**.



2 Press **Other**, then press **Select**.

3 When prompted, press the screen to edit the network name.

4 Enter the network name.
Press the ▲ or ▼ buttons to change the letter or number.
Press the ▶ button to move to the next character, or the ◀ button to move to the previous character.
Use the ▲ or ▼ buttons at the bottom to change letter case.
Press **Done** when complete.



5 Select the appropriate network security setting, then press **Select**.

6 Enter the Wi-Fi network password as shown in "Connecting to Wi-Fi" step 1.4.

Specifications and replacement parts

Operating Ambient Temperature
Thermostat: 32 to 120° F (0 to 48.9° C)

Operating Relative Humidity
Thermostat: 5% to 90% (non-condensing)

Physical Dimensions (height, width, depth)
Thermostat: 4-15/16 x 4-5/8 x 1-1/8 inches (126 mm x 118 mm x 29 mm)

Wi-Fi Communication
Supports 802.11 B/G/N home wireless router
Frequency: 2.4 Ghz

Electrical ratings

Terminal	Voltage (50/60 Hz)	Max. Current Rating
W - OB	18 to 30 VAC and 750 mVDC	1.00A
Y (cooling)	18 to 30 VAC	1.00A
G (fan)	18 to 30 VAC	0.50A
W2 - Aux (heating)	18 to 30 VAC	0.60A
Y2 (cooling)	18 to 30 VAC	0.60A
A-L/A (output)	18 to 30 VAC	1.00A
U1/U1	30 VAC max.	0.50A

Accessories and replacement parts

Accessories / Replacement Parts	Part Number
Wired Outdoor Sensor 10k ohm NTC	C7089U1006
Wired Wall-mount Indoor Sensor 10k ohm NTC	C7189U1005
Wired Flush-mount Indoor Sensor 20k ohm NTC	C7772A1004, C7772A1012
Wired Wall-mount Indoor Sensor 20k ohm NTC	TR21
Wired Wall-mount Indoor Sensor 10k ohm NTC	TR21-A
Cover Plate (covers marks left by old thermostats)	THP2400A1019
Wire Saver Module	THP9045A1023

Model Numbering	TH8321WF	TH8321R	TH8320R	TH8110R
RedLINK™ or Wi-Fi	Wi-Fi	RedLINK™	RedLINK™	RedLINK™
Stages	3H/2C HP 2H/2C CONV	3H/2C HP 2H/2C CONV	3H/2C HP 2H/2C CONV	1H/1C HP 1H/1C CONV
Residential or Commercial	✓	✓	✓	✓
Dual Powered - C Wire or Battery	C Wire only	✓	✓	✓
Onboard Humidity Sensor	✓	✓		
Number of Universal Relays	1	1	0	0
Number of Universal Sensor Inputs	1	1	1	1
Economizer / TOD Output	✓	✓	✓	
Works with Optional Equipment Interface Module*		✓	✓	✓
Works with Optional TrueZONE Wireless Adapter*		✓	✓	✓

* The relay outputs and inputs on the thermostat do not function when used with an Equipment Interface Module or the TrueZONE Wireless Adapter.

DISCONNECT POWER BEFORE INSTALLATION. Can cause electrical shock or equipment damage.

MERCURY NOTICE: If this product is replacing a control that contains mercury in a sealed tube, do not place the old control in the trash. Contact the Thermostat Recycling Corporation at www.thermostat-recycle.org or 800-238-8192 for information on how and where to properly and safely dispose of your old thermostat.

PRO install **Must be installed by a trained, experience technician.** Read these instructions carefully. Failure to follow these instructions can damage the product or cause a hazardous condition.

Need Help?

For assistance please visit **http://customer.honeywell.com**
or call toll-free: **1-855-733-5465**

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