



Smart thermostat

HVAC

# Installation and configuration guide

TH6500WF



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# Included in the box

Inside the box, you will find:



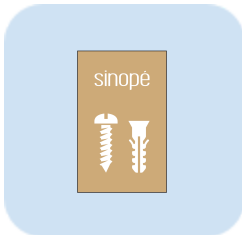
TH6500WF thermostat



Mounting plate



TB6500 connection module



4x screws  
4x anchors



Welcome guide

## Installation requirements

- Flathead or Phillips screwdriver for wall installation of the mounting plate and connection module – Philips #2/slot M7.0
- Screwdriver for connectors
  - Flathead screwdriver for the connection module wires – Slot M3.5 or 9/64", wire stripping length: 8-9mm
  - Flathead or Phillips screwdriver for thermostat wall plate wires – Philips #1/slot M2.5, wire stripping length: 8-9mm
- Optional for easier setup:
  - Wi-Fi connection
  - Smartphone or tablet
  - Neviweb account

# Connections

LED	Connection	Description
	<b>Th-Th</b>	Communication with the thermostat (non-polarized)
	<b>C</b>	24 Vac common power supply
	<b>R</b>	24 Vac power supply from the heat pump
	<b>Rh</b>	24 Vac power supply from the furnace
X	<b>G</b>	Circulation fan
X	<b>W1</b>	First stage of heating or first stage of auxiliary heating
X	<b>W2</b>	Second stage of heating or auxiliary heating
X	<b>O/B</b>	Reversing valve
X	<b>Y1</b>	First stage of the heat pump or air conditioner
X	<b>Y2</b>	Second stage of the heat pump or air conditioner
X	<b>ACC ACC</b>	Connection for accessories. Used to connect additional accessories or external equipment
X	<b>DE</b>	Dual-energy signal input
X	<b>C</b>	24 Vac common power supply
X	<b>HRV</b>	Signal input indicating the air exchanger is running

# System compatibility

#	Output / Input	Rh <sup>1</sup>	G	W1	W2	Y1	Y2	O/B	ACC	DE	HRV
Conventional system											
1	1H			X							
2	1H		X	X							
3	2H		X	X	X						
4	1C		X			X					
5	2C		X			X	X				
6	1H1C		X	X		X					
7	1H1C	X	X	X		X					
8	1H2C		X	X		X	X				
9	1H2C	X	X	X		X	X				
10	2H2C		X	X	X	X	X				
11	2H2C	X	X	X	X	X	X				
Heat Pump											
12	1H1C		X			X		X			
13	2H1C		X	X		X		X			
14	2H1C	X	X	X		X		X			
15	3H1C		X	X	X	X		X			
16	3H1C	X	X	X	X	X		X			
17	3H2C		X	X		X	X	X			
18	3H2C	X	X	X		X	X	X			
19	4H2C		X	X	X	X	X	X			
20	4H2C	X	X	X	X	X	X	X			
Additional system											
21	Humidifier / Dehumidifier								X		
22	Air exchanger								X		X
23	Dual-energy									X	

If the heating source is an **electric SSR** (modulating output, such as an electric baseboard or coil), please refer to the [wiring diagram #24](#).

<sup>1</sup> System with two transformers

# Installation and configuration

## Recommendations

It is highly recommended that you hire a qualified professional to ensure the safe and effective installation of the HVAC thermostat and the connection module to the HVAC system. Installing these components requires technical expertise and a thorough understanding of the applicable standards in your region.

- **Hire a qualified professional to install the HVAC system.**
- **Ensure system compatibility:** Before any installation, check that the components to be installed are compatible with your existing HVAC system. If in doubt, consult a professional for appropriate advice.
- **Follow applicable standards:** Ensure the installation complies with electrical and plumbing codes and regulations.

By following these recommendations and avoiding potential risks, you can ensure the safe and efficient installation of the HVAC thermostat and the connection module to your HVAC system. For your safety and those around you, hire a qualified professional.

# Installation – TB6500 Connection module

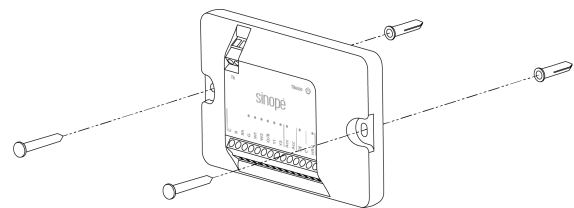
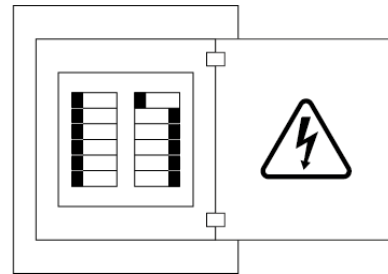
## Replacement of installation

The following steps aim to modernize an existing installation to enhance efficiency and performance.

- 1 Evaluate the existing system.**  
Assess the current HVAC system to understand its configuration and specifics.
- 2 Validate system compatibility.**  
Ensure that the existing system is compatible with the connections available on the TB6500. If necessary, refer to the [connections](#) table.
- 3 Turn off the power.**  
Before beginning the thermostat installation, make sure to power off the circuit from the electrical panel to avoid any risk of electrical shock.
- 4 Attach the connection module** to the HVAC equipment frame or nearby wall.

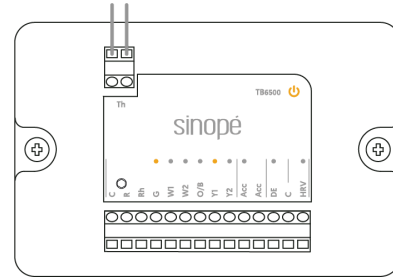
It's important to check the length of your wires to ensure they are long enough to reach the desired location.

Disconnect and/or cut the necessary wires to make the new connection to the connection module.



5

**Select and connect 2 of the existing wires** at the top of the connection module for communication with the thermostat.

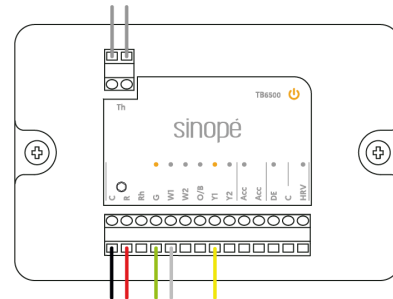


**Note:** Cable lengths should not exceed 30 meters (100 feet) to ensure optimum communication between the TH6500WF and TB6500.

6

Connect the wires of your HVAC system to the connection module. Please refer to the wiring diagrams in the [Appendices](#) if needed.

Wire range Min/Max (Solid): 18–22 AWG  
Wire range Min/Max (Stranded): 18–22 AWG

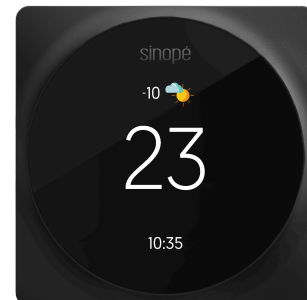


**Tip**

Take a photo of your wiring setup as a reference to simplify the installation and configuration of your thermostat.

7

Proceed with the installation of the [TH6500WF thermostat](#) for the next steps.



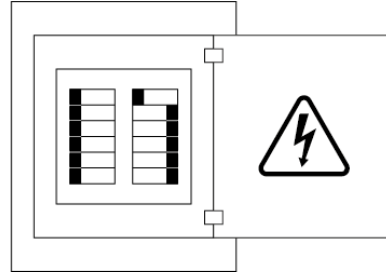
# Installation – Smart Wi-Fi thermostat

## TH6500WF

1

### Switch off the power supply.

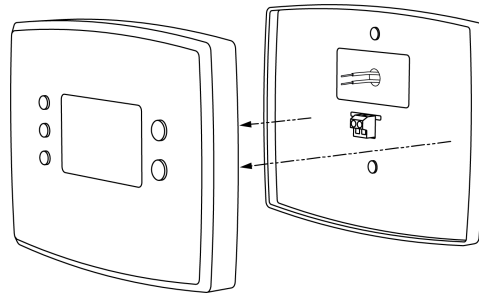
Before installing the thermostat, make sure that the breakers for your heating system are off at the electrical panel to avoid any risk of electric shock.



2

### Remove the cover of your old thermostat.

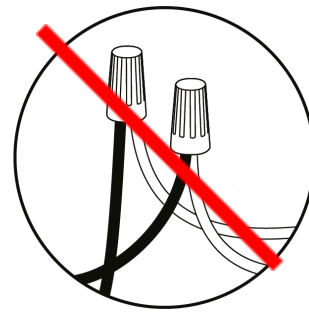
Some covers can be removed by hand, while others may need to be unscrewed.



## Warning

### Check your system's compatibility.

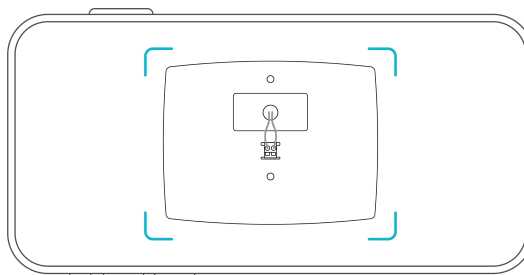
If your old thermostat has a 120 V or 240 V label or features thick wires with wire nuts, it is a high-voltage system. Your system is not compatible with the TH6500WF thermostat.



3

### Take a photo of the wiring of your old thermostat.

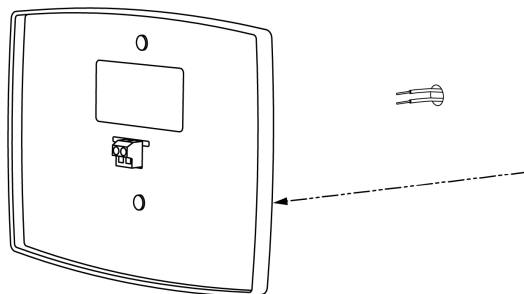
This photo can be handy when installing your new thermostat, especially if it is installed before the TB6500 connection module.



4

### Disconnect the wires and remove the base.

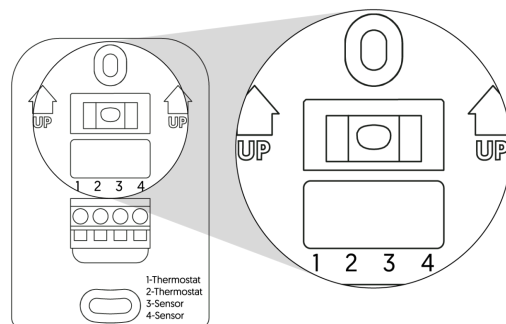
After removing the base, we recommend gently wrapping the wires around a pen or pencil to prevent them from falling into the wall hole.



5

### Mark screw locations.

Use the spirit level on the mounting plate to ensure the thermostat is straight.



#### Installation Tip

When using the decorative mounting plate ([AC6500-01](#) or [AC6500-02](#)) to cover holes or marks left by a previous thermostat, install the decorative plate on the wall first. Then, attach the thermostat's wall plate on top.

#### ⚠ Important note

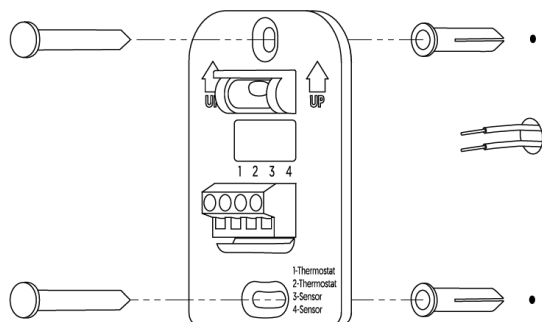
If the installation includes a junction box, the decorative plate is **mandatory** to ensure **proper and safe coverage**.



6

**Install the mounting plate.**

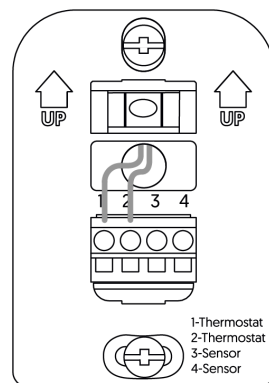
Guide the wires through the center of the base, then fasten it to the wall with the screws. Use anchors if necessary.



7

**Connect the wires.**

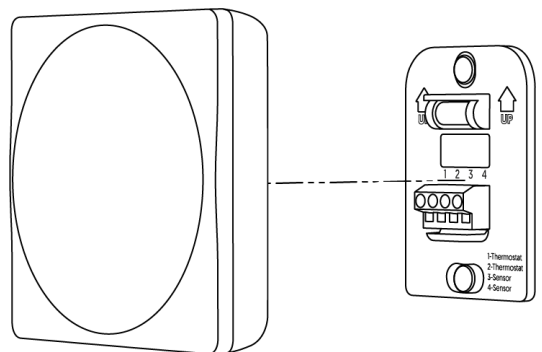
Once the wires are properly inserted into the connector terminals, tighten them carefully to ensure a secure and stable connection.



8

**Attach the screen.**

Press the screen onto the base until it clicks into place.



9

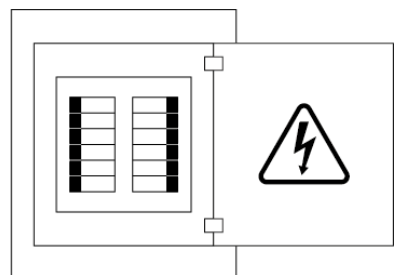
**Restore the power supply.**

**TB6500**

The power light will turn on to confirm that the connection module is powered. Depending on your system's state, the LEDs of some activated outputs may also light up.

**TH6500WF**

The start-up screen will appear for a few moments.



# Configuration – Smart Wi-Fi thermostat TH6500WF

Once your thermostat is powered on, the startup screen will briefly appear. Then, follow the steps below to configure it.

## Startup screen



1

### Language selection

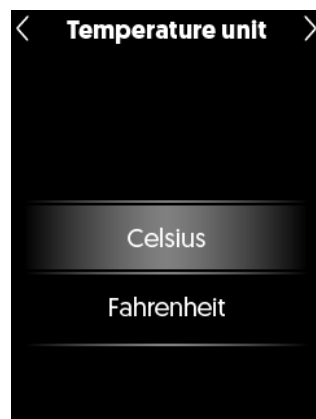
Select the language displayed on your thermostat.



2

### Temperature unit

Select the temperature format displayed on the thermostat screen.

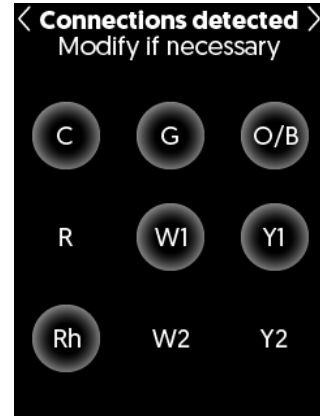


3

### Connections detected

Select the wires connected to the TB6500 connection module.

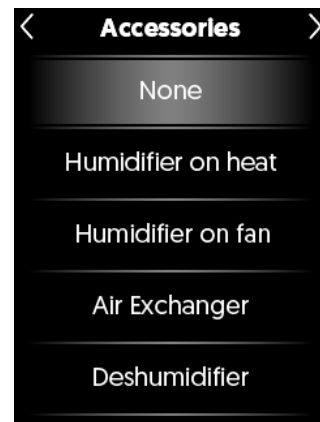
**Tip:** Refer to the photo taken when installing the connection module.



4

### Accessories

Select your accessory, if applicable.

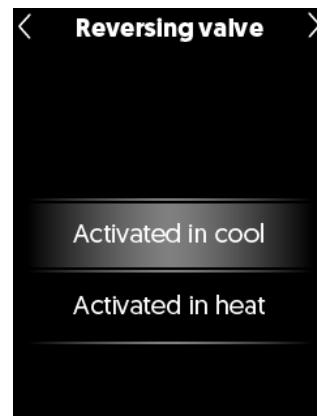


5

### Reversing valve\*

Determine whether the heat pump reversing valve is activated in cooling or heating mode.

\* This screen is only available if the O/B wire is connected.



6

**Balance point**

Select the outdoor temperature above which your heat pump becomes ineffective.



7

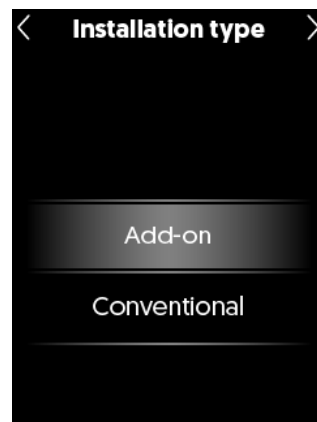
**Installation type \***

Select the type of installation for your equipment

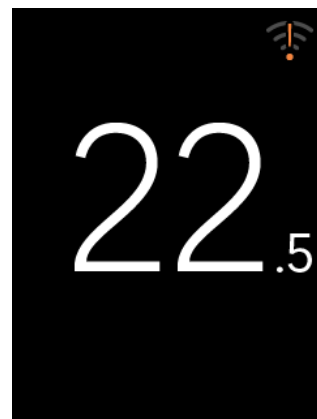
**Add-On:** If the auxiliary system is activated, the heat pump will be deactivated.

**Conventional:** The auxiliary system and heat pump can operate simultaneously.

\* This screen is only available if the O/B wire is connected.



8

**Your thermostat's basic configuration is now complete.**

**Two options are available for the next steps:**

- A. Download the Neviweb app to complete the configuration of your thermostat using your smartphone.



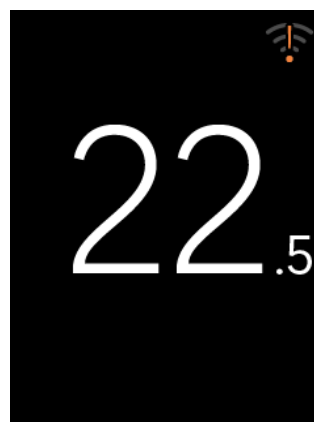
- B. Navigate the various equipment configuration menu settings to complete the installation.

## Configuration with Neviweb

The Neviweb app allows you to access all the features of your smart thermostat.

**1**

**Tap on the Wi-Fi icon displayed on the screen.**

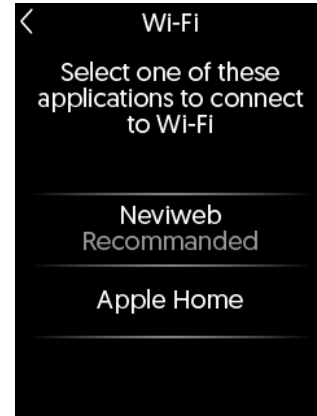


2

**Tap on 'Neviweb'.**

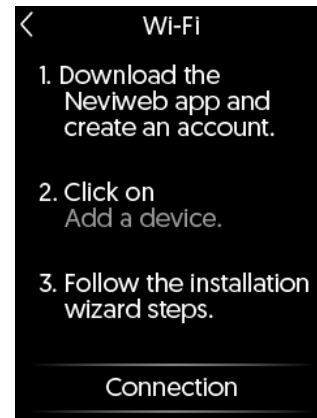
By choosing Neviweb, you can configure all the settings of your thermostat using your smartphone, benefit from features such as the weather displayed on the screen, and access several functionalities within the platform.

Additionally, you can add your device to Apple Home later.



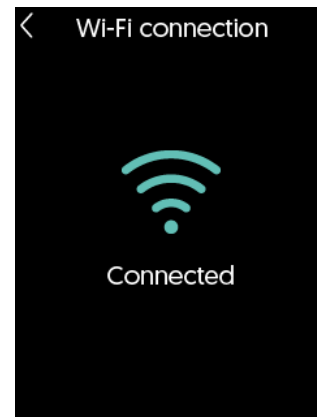
3

**Follow the steps displayed on the screen.**




4

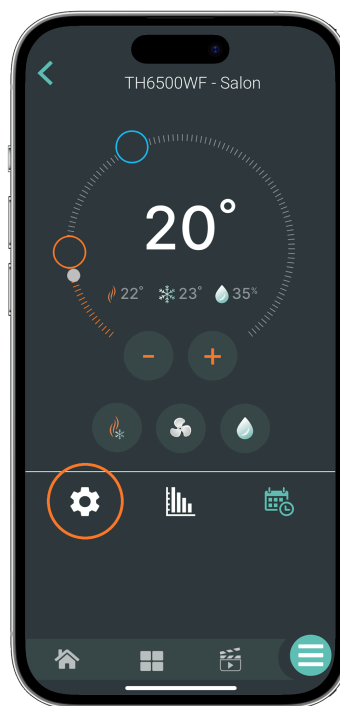
Once the Wi-Fi connection is complete, **tap on the tile corresponding to your thermostat in the Neviweb app.**



5

## Setting Configuration

Tap on  to access the device settings. Continue configuring your system preferences in the various configuration menus.

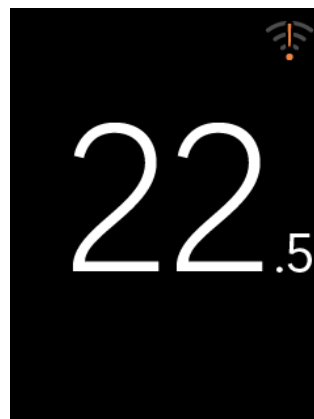



## Configuration without Wi-Fi

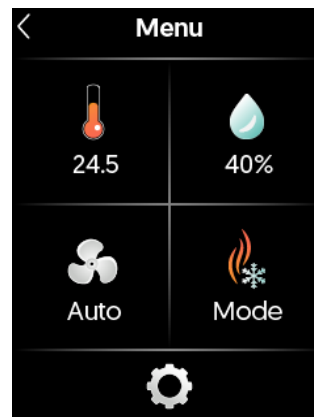
Several settings of your new thermostat can be configured directly from its interface.

1

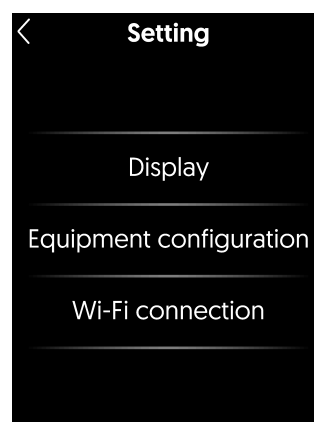
**Press on the screen**, except for the Wi-Fi icon, which is a shortcut to the Wi-Fi connection menu.



2 Press on  to access your thermostat's **settings**.



3 Press on one of the **Settings submenus** of your choice to customize your device.



## Settings

### Display options

Default value in **bold**.

Settings	Description	Options
Temperature unit	Temperature format featured on the thermostat display.	<b>Celsius</b> Fahrenheit
Language	Language displayed on your thermostat.	Français <b>English</b>



## Equipment configuration option

Some settings may not be available on your thermostat. Access to these settings varies depending on your system.

**Warning:** We recommend that the configuration be performed by a professional.

Default value in **bold**.

Settings	Description	Options
<b>Heating source W1</b>	Type of energy used for heating source W1. <ul style="list-style-type: none"> <li>• <b>Electric:</b> System powered by electricity.</li> <li>• <b>Fossil:</b> System powered by a fossil fuel, such as gas or fuel oil.</li> <li>• <b>VRF:</b> Heating, fan, and cooling system that uses a variable speed compressor.</li> </ul>	<b>Electric</b> Fossil VRF
<b>Heating source W2</b>	Type of energy used for heating source W2. <ul style="list-style-type: none"> <li>• <b>Electric:</b> System powered by electricity.</li> <li>• <b>Fossil:</b> System powered by a fossil fuel, such as gas or fuel oil.</li> <li>• <b>SSR:</b> Heating system using a semiconductor relay.</li> </ul>	<b>Electric</b> Fossil Electric SSR
<b>Auxiliary heating source</b>	Type of energy used for the auxiliary heating source <ul style="list-style-type: none"> <li>• <b>Electric:</b> System powered by electricity.</li> <li>• <b>Fossil:</b> System powered by a fossil fuel, such as gas or fuel oil.</li> <li>• <b>SSR:</b> Heating system using a semiconductor relay.</li> </ul>	Fossil <b>Electric</b> Electric SSR
<b>Reversing valve</b>	Determine if the heat pump reversing valve is activated in cooling or heating mode.	<b>Activated in cool</b> Activated in heat
<b>Accessories</b>	Select your accessory, if applicable.	<b>None</b> Humidifier on heat Humidifier on fan Air exchanger Dehumidifier
<b>Heat dissipation time</b>	Delay that allows hot air remaining in the ducts to be evacuated after the system has been shut down.	<b>1 min</b> 2 min 3 min 4 min 5 min Off

Settings	Description	Options
<b>Cool dissipation time</b>	Delay that allows cold air remaining in the ducts to be evacuated after the system has been shut down.	<b>1 min</b> 2 min 3 min 4 min 5 min Off
<b>Cooling cycle length in Y</b>	The thermostat adjusts the control band to achieve the desired cooling cycle length. A shorter cycle will increase your comfort but will also increase the wear of your equipment.	25 min <b>20 min</b> 15 min 10 min
<b>Heat pump cycle length</b>	The thermostat adjusts the control band to achieve the desired cycle length of your heat pump. A shorter cycle increases your comfort but accelerates wear and tear on your equipment.	25 min <b>20 min</b> 15 min 10 min
<b>Heat cycle length in W1</b>	The thermostat adjusts the control band to achieve the desired heating cycle length. A shorter cycle will increase your comfort but will also increase the wear of your equipment.	25 min <b>20 min</b> 15 min 10 min <sup>2*</sup>
<b>Auxiliary cycle length</b>	<p>The thermostat adjusts the control band to achieve the desired heating cycle length. A shorter cycle will increase your comfort but will also increase the wear of your equipment.</p> <p>If you use an SSR heating source and select a 15-second delay, ventilation will not be activated (e.g. baseboard). If you select a 1-second delay, ventilation will be activated according to the requested mode (e.g. duct heater).</p>	25 min <b>20 min</b> 15 min 10 min* 1 sec ** 15 sec **
<b>Heat cycle length in W2</b>	<p>The thermostat adjusts the control band to achieve the desired heating cycle length. A shorter cycle will increase your comfort but will also increase the wear of your equipment.</p> <p>If you use an SSR heating source and select a 15-second delay, ventilation will not be activated (e.g. baseboard). If you select a 1-second delay, ventilation will be activated according to the requested mode (e.g. duct heater).</p>	25 min <b>20 min</b> 15 min 10 min* 1 sec ** 15 sec **

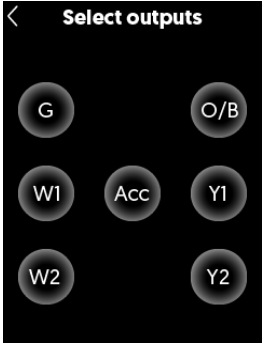
<sup>2\*</sup>Not available if heating source is fossil fuel

\*\* Available for SSR heating source only

Settings	Description	Options
<b>Heating/Cooling setpoint Delta T°</b>	The minimum temperature delta authorized between the heating and cooling setpoints. Only applies in AUTO mode.	1 °C <b>2 °C</b> 3 °C 4 °C 5 °C
<b>Balance point</b>	Outdoor temperature at which the heat pump is no longer efficient.	-30 °C to 0 °C Off Default: <b>-15 °C</b>
<b>Air curtain<sup>3</sup></b>	Adjust the output of SSR heating systems (e.g. electric baseboard) according to the outdoor temperature — the colder it is, the higher the output — to avoid the sensation of cold near windows.  <b>Outdoor temperature Activation:</b> Outdoor temperature at which the SSR heating source activates at minimum output.  <b>Outdoor temperature Maximum power:</b> Outdoor temperature at which the SSR heating source reaches full power.	<b>Off</b> Outdoor T° Activation: 0°C  Outdoor T° Max. power: -50°C  Option: 10°C to -50°C
<b>Installation type</b>	Installation type of your equipment  <b>Add-On:</b> If the auxiliary system is activated, the heat pump will be deactivated. <b>Conventional:</b> The auxiliary system and heat pump can operate simultaneously.	<b>Add-On</b> Conventional
<b>Temperature calibration</b>	Temperature offset needed to compensate for the inaccuracies between the thermostat temperature reading and the ambient temperature.	2 °C 1.5 °C 1 °C 0.5 °C <b>0 °C</b> -0.5 °C -1 °C -1.5 °C -2 °C
<b>Compressor min. run time</b>	Minimum time for which the compressors will be active before they can be switched off.	2 min 3 min <b>4 min</b> 5 min 10 min

<sup>3</sup> Available if an SSR heating source is selected.

Settings	Description	Options
<b>Compressor min. off time</b>	Minimum time the compressor must be switched off before restarting.	2 min 3 min <b>4 min</b> 5 min 10 min
<b>Auxiliary heating min. run time</b>	Minimum time the auxiliary heater will run before it can be switched off.	2 min 3 min <b>4 min</b> 5 min 10 min
<b>Heating min. off time</b>	Minimum time the main heater must remain off.	2 min 3 min <b>4 min</b> 5 min 10 min
<b>Auxiliary heating min. off time</b>	Minimum time the main heater must remain off.	2 min 3 min <b>4 min</b> 5 min 10 min
<b>Heat pump try time</b>	The period for which the heat pump is used to regulate the temperature before the auxiliary heat stage can be activated.	30 min 1 h 2 h 3 h <b>4 h</b> 5 h 6 h 7 h 8 h
<b>W1 Try time</b>	The period for which the output W1 is used to regulate the temperature before the output W2 can be activated.	15 min 30 min 45 min 1 h 2 h 3 h <b>4 h</b> 5 h 6 h 7 h 8 h

Settings	Description	Options
<b>Equipment testing</b>	<p>This tool allows the installer to test the equipment. Testing should be conducted by a <b>qualified professional</b>. Improper testing could damage the equipment.</p> <p>By pressing '<b>Continue</b>', the thermostat will display the available outputs. The professional can then select one or more outputs. The system will activate automatically based on the selected outputs. To end the test, press the output again to deactivate it.</p>	
<b>Diagnostic</b>	<p>This page displays various information that may be useful if you need to contact our Technical Support team. No configuration is possible from this screen.</p>	
<b>Factory reset</b>	<p>Two possible options:</p> <p><b>Equipment configuration:</b> Resets equipment-specific parameters and wire configuration. Other parameters, such as temperature format, setpoints, schedules, and Wi-Fi connection, will remain unchanged.</p> <p><b>Device Reset:</b> Resets all custom data and previous settings, allowing the user to restart the installation process from scratch.</p>	

## Summary of settings

	TH6500WF	Neviweb
<b>Display</b>		
Temperature unit	X	
Language	X	
<b>Device Configuration</b>		
Temperature unit		X
Language		X
Time format		X
Screen brightness		X
Screen access		X
Filter change reminder		X
Away heating setpoint		X
Away cooling setpoint		X
Dual-energy optimization - Éco Sinopé		X
Accessory optimization - Éco Sinopé		X
Maximum setpoint heating		X
Minimum setpoint heating		X
Maximum setpoint cooling		X
Minimum setpoint cooling		X
Early start		X
Do not allow heating if the outside temperature is above X°C.		X
Do not allow cooling if the outside temperature is below X°C.		X
<b>Equipment configuration</b>		
Heating source W1	X	X
Heating source W2	X	X
Auxiliary heating source	X	X
Reversing valve	X	X
Accessories	X	X
Heat dissipation time	X	X
Cool dissipation time	X	X
Cooling cycle length Y	X	X
Heat pump cycle length	X	X

	TH6500WF	Neviweb
Heating cycle length W1	X	X
Auxiliary heating cycle length	X	X
Heating cycle length W2	X	X
Heating/Cooling setpoint Delta	X	X
Installation type	X	X
Balance point	X	X
Air curtain	X	X
Temperature calibration	X	X
Compressor min. run time	X	X
Compressor min. off time	X	X
Auxiliary heating min. run time	X	X
Heating min. off time	X	X
Auxiliary heating min. off time	X	X
Heat pump try time	X	X
W1 try time	X	X
Minimum delay before activation of an additional heating stage	X	X
Minimum delay before activation of an additional cooling stage	X	X
Equipment testing	X	
Diagnostic	X	
Factory reset	X	

# System definition

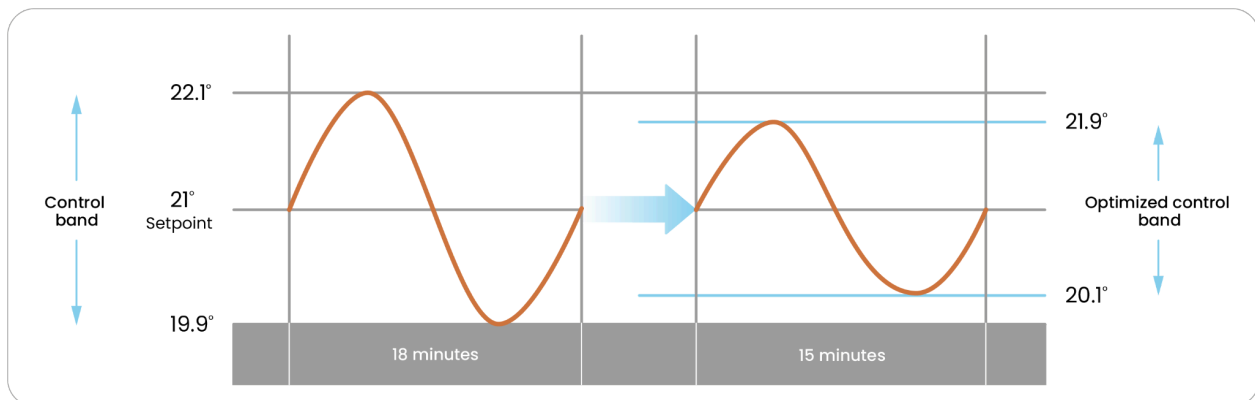
## Temperature controller

The TH6500WF uses an adaptive deadband controller with a programmable cycle length. The thermostat's control band adjusts automatically to achieve the desired cycle length for controlling your system.

**Note:** The control band represents the variation between the maximum and minimum temperatures reached in the room when the system operates at 50% power, directly impacting comfort.

Since different cycle lengths can be set for primary heating, auxiliary heating, and cooling, the thermostat adjusts to optimize each of the three modes. The thermostat may require several control cycles before adjusting to optimal values. Once optimized, the thermostat saves the optimal value to immediately know which control band to use upon mode change or product restart. The cycle length is 15 minutes by default, but this setting can be changed in the advanced configuration menu.

For example, a thermostat set to a 15-minute cycle may initially only achieve an 18-minute cycle at startup. The thermostat will adjust the control band until the desired cycle time is reached.



While setting a very short control cycle to increase comfort may be tempting, this approach should not be prioritized. It is essential to set the control cycle according to the installed equipment. Subsequently, the thermostat will automatically optimize the control band to maximize comfort.



# Conventional heating/cooling systems

Conventional heating systems supported include furnaces (gas, oil, or electric), air conditioners, hydronic heating systems, radiant floors, fan coils, and electric heaters<sup>4</sup>.

The thermostat can manage up to 2 stages of heating, 2 stages of cooling, a fan, and an accessory. When changing setpoints, the thermostat waits for the **'Minimum delay before activation of an additional heating stage'** before activating an additional stage.

Two different heating sources can be used. To prioritize one source over the other, connect the primary source to W1 and the auxiliary source to W2 and configure them as different types of heating sources. W2 will be used either in the event of a significant temperature drop or within a dual-energy system. The **'W1 try time'** setting determines how long W1 will be used before switching to W2 to bring the temperature back to the setpoint.

## Heat pump

The thermostat supports up to 4 stages of heating (2 stages of heat pump and 2 stages of auxiliary heating), 2 stages of cooling, a fan, and an accessory.

The thermostat activates the auxiliary heating stage only if the room temperature exceeds twice the control band (calculated by the adaptive controller of the thermostat; see "Temperature controller" section) for longer than the **'Heat Pump Try Time'**, an adjustable parameter in the advanced settings. This feature prioritizes heat pump use while providing freeze protection in case of failure. If the outdoor temperature drops below the adjustable 'Balance Point' in advanced settings, the heating switches to auxiliary heating, and the heat pump is stopped.

## Electric heating source SSR

To avoid wide temperature variations, the thermostat can be configured with a rapid control cycle for secondary heating, either for an electric baseboard (15 seconds) or a coil (1 second). This type of installation requires the use of an SSR-type electronic relay. Refer to the [wiring diagram #24](#).

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<sup>4</sup> A high-voltage relay is required to activate a load powered by a voltage higher than 24V.

## Dual-energy

The 'DE' dual-energy input can be connected to a dry contact from a dual-register electric meter or any other device requiring auxiliary heating.

An auxiliary heating output is required to access this feature. When the dual-energy input is activated, the thermostat will exclusively use the heating connected to the auxiliary heating stage.

## Accessories

If you connect an accessory to the 'ACC' output, it is important to select the thermostat control mode correctly during the installation process. You can always adjust it later in the equipment configuration menu.

## Humidifier

If you have a bypass humidifier, whether pad or drum type, you must select '**Humidifier on Heat**' in the accessory settings. The thermostat will activate the humidifier water valve only when the heating is running and humidification is needed. This ensures proper water vapor distribution and prevents condensation in the ducts.

If you have a steam humidifier, select '**Humidifier on Fan**' in the accessory settings. The thermostat will activate the humidifier only if heating ventilation is activated and humidification is necessary.

The thermostat offers two humidity management modes: **Automatic** and **Manual**.

- **Manual mode:** This mode allows you to manually select the desired humidity level (in %). The system will maintain this level regardless of the outside temperature.
- **Automatic mode:** In Auto mode, the humidity level is automatically adjusted based on the outside temperature. This approach optimizes comfort while reducing the risk of condensation, particularly on windows during cold periods. The curve used to determine the humidity percentage in automatic mode is based on the following reference: *ASHRAE HVAC Handbook, Chapter 22 – Table 1: Maximum Relative Humidity in a Space for No Condensation on Windows*<sup>5</sup>.

You can also apply an offset in **Auto mode** to lower the target humidity level further, helping to prevent excessive condensation.

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<sup>5</sup> [https://www.ashrae.org/file%20library/technical%20resources/covid-19/si\\_s20\\_ch22.pdf](https://www.ashrae.org/file%20library/technical%20resources/covid-19/si_s20_ch22.pdf)

**Auto** and **Manual** mode management is also available for **dehumidification** and with the **air exchanger**.

## Dehumidifier

A dehumidifier can be connected to the thermostat to control the humidity level in the home. The ventilation and dehumidifier will activate automatically at the same time. The option of manual or automatic control applies, as for the humidifier.

## Air exchanger

After selecting this accessory, you can force air exchange from the home menu by choosing one of the following options:

Option	Description
OFF	No air exchange
<b>20 min/h</b> (default)	20 min air exchange every hour
40min/h	40 min air exchange every hour
Continuous	Continuous air exchange

The air exchanger can also be used to **control humidity levels**. If the humidity inside the home is too high and outdoor conditions allow, the exchanger will be activated to dehumidify the air based on the set point defined in the parameters—either in automatic or manual mode, as mentioned above.

## Air exchanger with integrated ventilation control

If your air exchanger includes a ventilation control output, it can be connected to the **HRV** input to activate the HVAC system's ventilation.

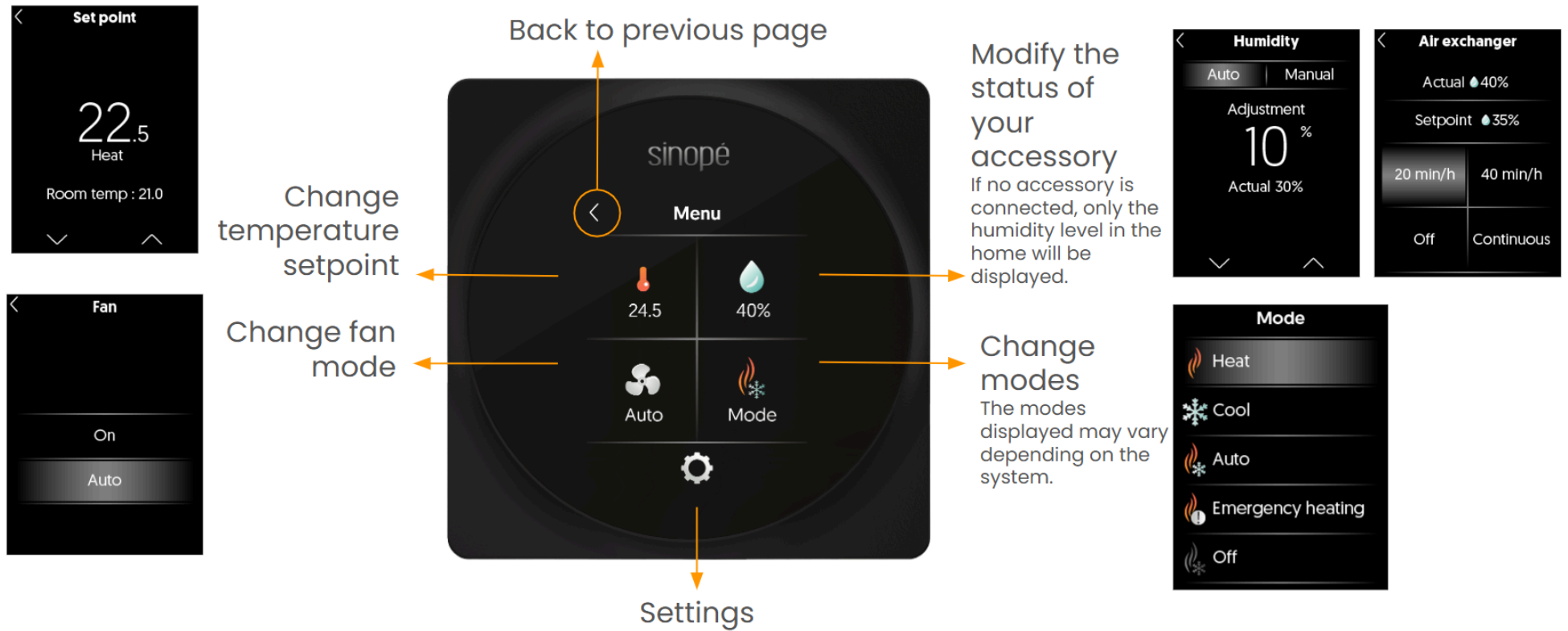
# User guide

## Main screen



**Note:** The outdoor temperature, weather conditions, and time are available if the thermostat has been added to the Neviweb application.

# Menu



# Interface



Your system is currently cooling



Your system is currently heating



Your system is in auxiliary heating mode



Your system is in dual-energy mode



Your device takes part in a peak event



Your device is not connected to Wi-Fi



An error is detected, press the screen to obtain details



Outdoor temp. settings prevent system activation

# Wi-Fi connection

You can connect your thermostat to Wi-Fi in two ways:

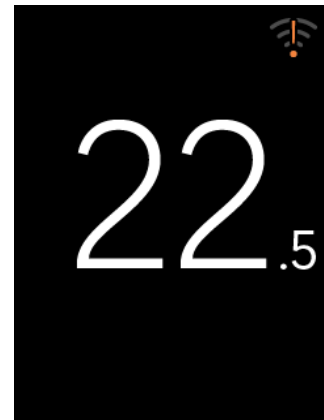
- Setup with the **Neviweb** app
- Setup with **Apple Home**

We recommend starting the setup with the Neviweb app. This platform allows you to configure all your thermostat settings easily using your smartphone. Additionally, Neviweb provides the option to display weather conditions on the screen and access various features within the platform. Later on, you can also add your device to Apple Home.

## Wi-Fi connection with Neviweb

1

**Tap on the Wi-Fi icon displayed on the screen.**



2

**Tap on 'Neviweb'.**

By choosing Neviweb, you can configure all the settings of your thermostat using your smartphone, benefit from features such as the weather displayed on the screen, and access several functionalities within the platform.

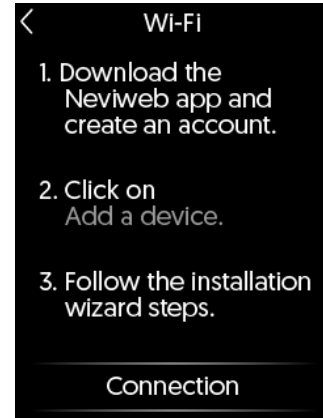
Additionally, you can add your device to Apple Home later.





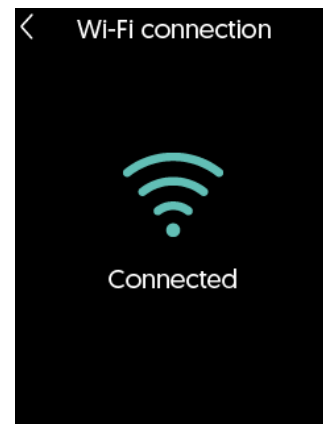
3

Follow the steps displayed on the screen.




4

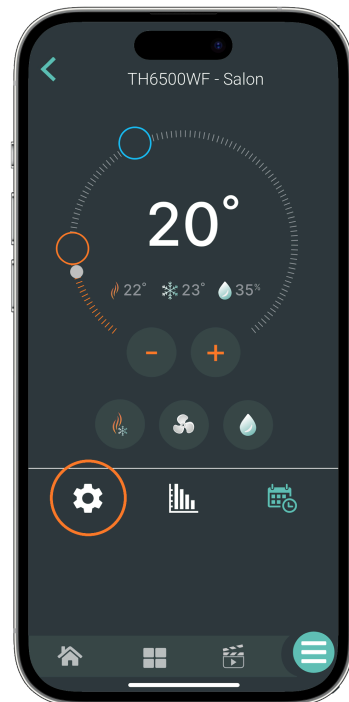
Once the Wi-Fi connection is complete, **tap the tile corresponding to your thermostat** in the Neviweb app.



5

### Setting configuration

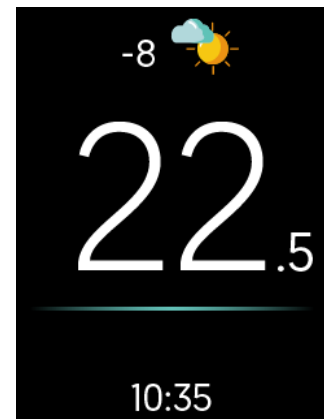
Tap on  to access the device settings. Continue configuring your system preferences in the various configuration menus.



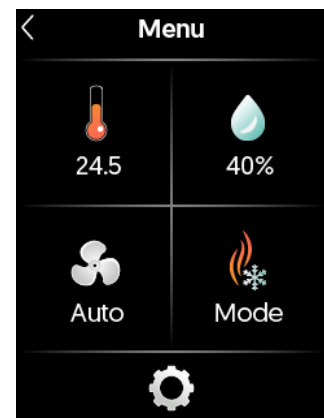
# Association with Apple Home

If you have already connected your device via Neviweb and now want to add it to Apple Home, please follow the steps below:

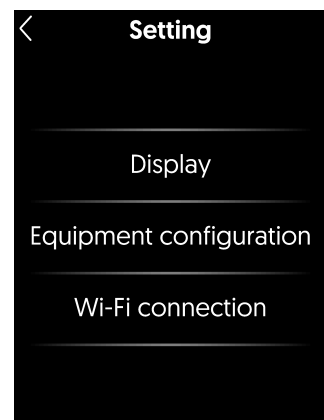
- 1 Tap on the main screen to access the menu.



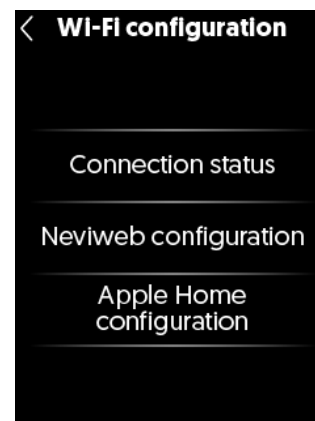
- 2 Tap on  to access settings.



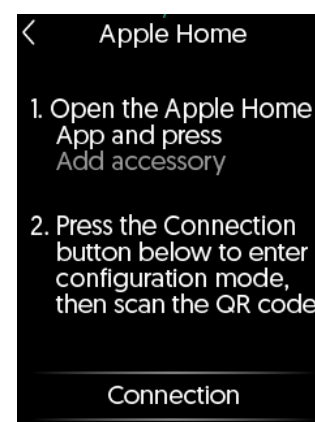
- 3 Tap on 'Wi-Fi Connection'.



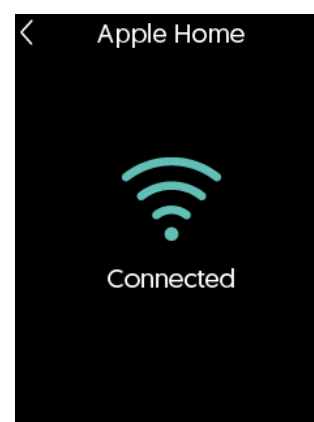
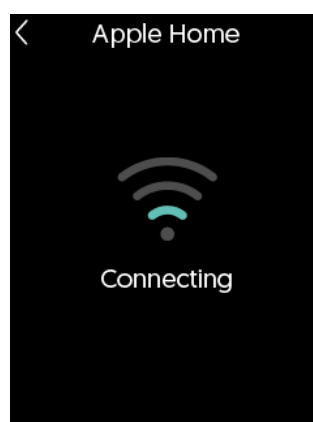
**4** Then tap on '**Apple Home Configuration**'.



**5** Follow the on-screen steps and tap '**Connection**'.

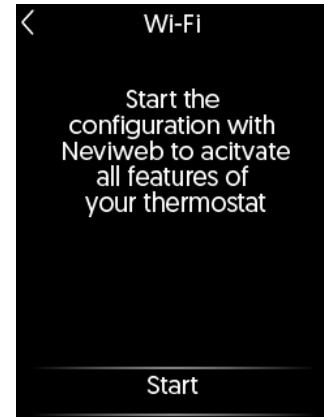


**6** Follow the steps displayed on the screen.



7

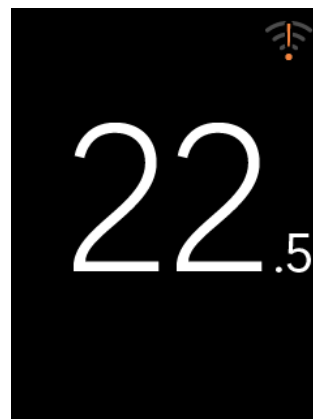
Tap the arrow in **the top left corner** to exit the connection menu.



# Wi-Fi connection via Apple Home

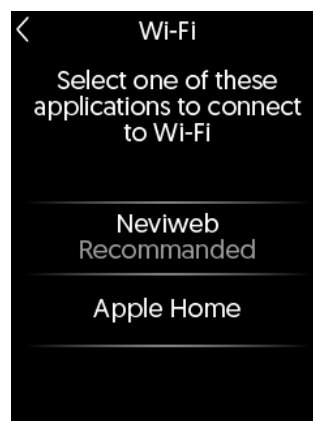
1

Tap on the '**Wi-Fi icon**' displayed on the screen.



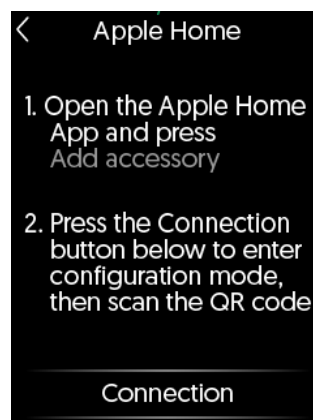
2

Tap on '**Apple Home.**'

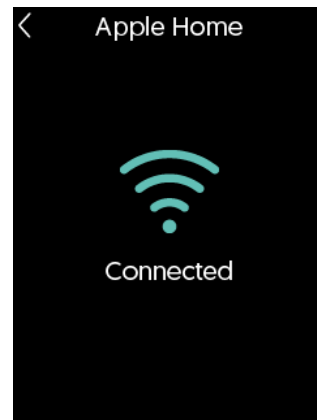


3

Follow the on-screen steps and tap '**Connection**'.



## 4 Follow the steps displayed on the screen.



## 5

We recommend continuing the setup and adding your thermostat to the **Neviweb** application.

This platform lets you easily adjust **all thermostat settings** directly from your smartphone.

Additionally, Neviweb offers the ability to display weather conditions on the screen and access various additional features.

Tap '**Get Started**' and follow the on-screen instructions.

To return to the main page, tap the arrow in the top left corner.



Automatic and away-from-home control of this HomeKit-compatible accessory requires a HomePod, Apple TV, or iPad set up as a Home Hub. It is recommended that the software and operating system be updated.

Using the *Works with Apple* badge means that an accessory has been designed to work specifically with the technology identified in the badge and has been certified by the developer to meet Apple's performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

HomeKit is a trademark of Apple Inc.

# Explore more with Neviweb!

The Neviweb application, developed by Sinopé Technologies, a company specializing in smart devices design and the largest Canadian manufacturer of such devices for residential and multi-residential sectors, offers comprehensive management of your smart devices.

Neviweb is a consumer application for managing various devices, including other thermostats, switches, dimmers, and water damage protection systems.

Discover additional features available in Neviweb for the **smart thermostat**:

- **Set filter replacement reminders:** Ensure the air quality in your home.
- **Adjust screen brightness:** Tailor the screen's responsiveness to your preferences.
- **Screen access control:** Explore different access levels to restrict use for your children or customers and employees in a business setting.
- **Change the time display format.**
- **Customize setpoints:** Adjust settings based on your schedules and geofencing.
- **View energy consumption graphs.**
- **Add your devices to Éco Sinopé:** Optimize your energy use during peak events.

# Troubleshooting and support

If you encounter any difficulties during the installation or operation of the thermostat, the Neviweb application, or when connecting to other platforms, we invite you to consult Sinopé's support website by visiting <https://support.sinopetech.com/en/>.

**Call us at :**

1 (855) 741-7701

**Write to us at:**

support@sinopetech.com

**Find us at :**

705 Montrichard Avenue  
Saint-Jean-sur-Richelieu  
Quebec, Canada (J2X 5K8)

**Opening hours :**

Monday to Friday - 8:00 am to 4:30 pm (EST)

Saturday & Sunday - Closed



## 3-year Limited Warranty

SINOPE TECHNOLOGIES INC. ("Sinopé") warrants the components of their products against defects in material and workmanship for a 3-year period from the date of purchase, under normal use and service, when proof of purchase of such is provided to the manufacturer. If, at any time during the warranty period, the product is determined to be defective, SINOPE TECHNOLOGIES INC. will replace it. This warranty does not cover any transportation costs that may be incurred by the consumer. Nor does it cover a product that has been improperly installed, misused, or accidentally damaged. The obligation of SINOPE TECHNOLOGIES INC., under the terms of this warranty, will be to supply a new unit, and this releases the manufacturer from paying the installation costs or other secondary charges linked to replacing the unit or the components. The manufacturer shall not be liable for incidental, consequential, or special damages arising at or in connection with product use or performance.

## 5-Year Extended Pro Warranty

### Extended Pro Warranty Terms for Sinopé Pro Products

SINOPE TECHNOLOGIES INC. ("Sinopé") offers an Extended Pro Warranty for select Sinopé Pro products, subject to the following terms and conditions.

1. **Eligibility:** The Extended Pro Warranty applies exclusively to Sinopé Pro products that are (i) sold by authorized Sinopé Pro installers, and (ii) installed by such authorized Sinopé Pro installers, within the United States and Canada. Products purchased or installed through any other channels or by unauthorized parties are not eligible for this warranty extension.
2. **Activation:** The Extended Pro Warranty is automatically activated upon the successful addition of the eligible Sinopé Pro product to the purchaser's Sinopé account. Activation requires that the product be purchased and installed by an authorized Sinopé Pro installer. If these conditions are not met, the Extended Pro Warranty will not apply.
3. **Standard Warranty:** Sinopé Pro products purchased from channels other than authorized Sinopé Pro installers, or installed by non-authorized parties, are covered only by the standard three (3) year warranty, which commences from the date of purchase.

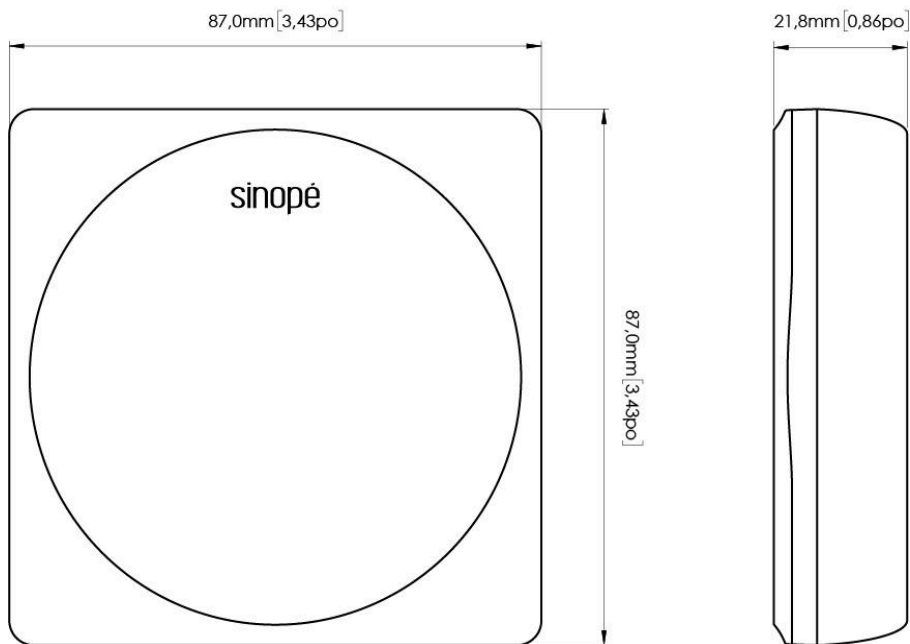
4. **General Provisions:** This Extended Pro Warranty is subject to the same limitations, exclusions, and conditions as outlined in Sinopé's standard warranty terms, unless otherwise specified in these terms. All other terms and conditions not expressly modified herein shall remain in full force and effect.

By purchasing and installing Sinopé Pro products through authorized channels, you agree to the terms and conditions outlined in this Extended Pro Warranty.

## **Technical information**

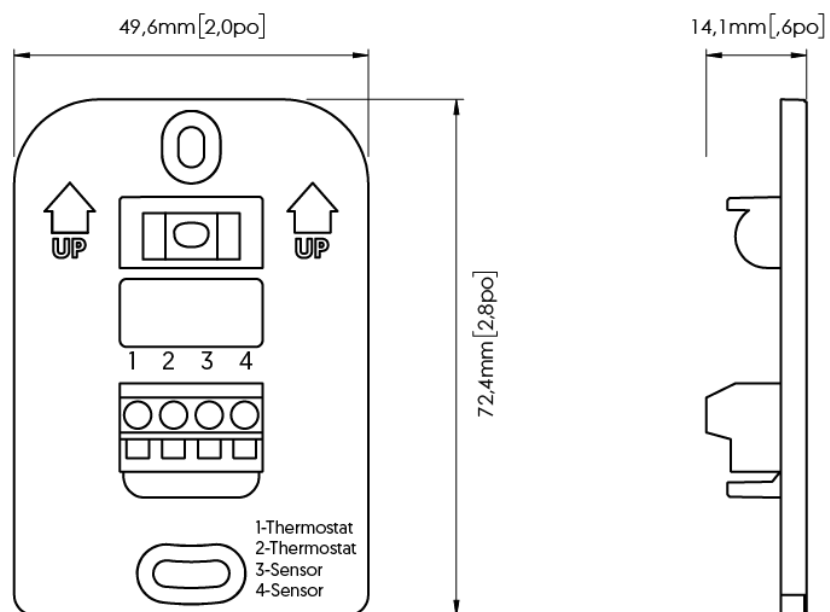
TH6500WF

Smart Wi-Fi thermostat for central system



<b>Connectors</b>	See the information on the mounting plate
<b>Power supply</b>	24V AC
<b>Screen</b>	2.4" color TFT touchscreen 240 px * 320 px
<b>Dimensions(W x H x D)</b>	87 mm (3.43 in) X 87 mm (3.43 in) X 21.8 mm (0.86 in)
<b>Operating temperature</b>	0 °C to 50 °C (32 °F to 122 °F)
<b>Storage temperature</b>	-20 °C to 50 °C (-4 °F to 122 °F)
<b>Sensors</b>	Humidity sensor Proximity sensor Light sensor for adaptive display
<b>Communication protocol</b>	Protocol: Wi-Fi Standard: IEEE 802.11 b/g/n Frequency: 2.4 GHz Encryption key: WPA2
<b>Communication module</b>	IC: 21098-ESPC6WROOM1 FCC ID: 2AC7Z-ESPC6WROOM1
<b>Warranty</b>	Basic - 3 years Pro - 5 years

# Mounting plate



## Dimensions (W x H x D)

49.6 mm (1.95 in) x 72.4 mm (2.85 in) x 14.1 mm (0.55 in)

## Connectors

4 connectors

Wire range (Solid): 18-22 AWG

Wire range (Stranded): 18-22 AWG

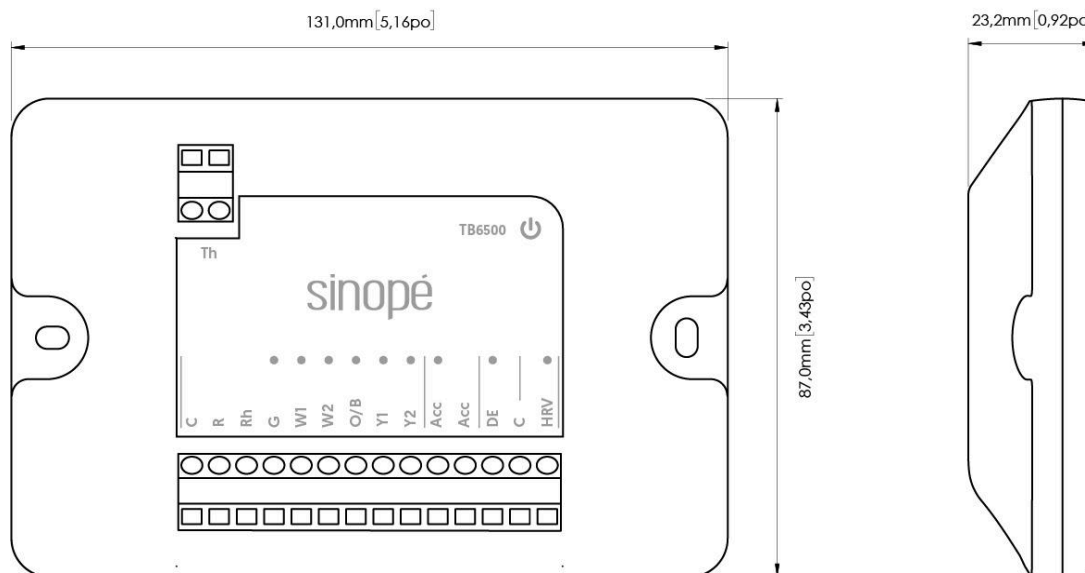
**Connectors 1 and 2:** Thermostat power supply

**Connectors 3 and 4:** Optional temperature sensor<sup>6</sup>

<sup>6</sup> These connectors are not yet supported in the current version of the thermostat software. Their support is planned for an upcoming update.

## TB6500

### Central system connection module



<b>Connectors</b>	Wire range: 18-24 AWG
<b>Power supply</b>	RC from heat pump / HVAC (24 Vac)
<b>Current per output</b>	0.5A, total 2A Current for one output used (G, Y1, Y2, W1, W2, O/B): <b>Minimum:</b> 0.0025 A. <b>Maximum:</b> 0.5 A. Total current for all outputs used (G, Y1, Y2, W1, W2, O/B): 2 A. <b>Acc output:</b> independent, accepts between <b>0 and 2 A at 24 Vac</b> . <b>HRV and DE inputs:</b> designed for dry contacts, but tolerate resistance up to 10 kΩ.
<b>Dimensions (W x H x D)</b>	131 mm (5.16 in) x 87 mm (3.43 in) x 23.2 mm (0.92 in)
<b>Operating temperature</b>	0 °C to 50 °C (32 °F to 122 °F)
<b>Storage temperature</b>	-20 °C to 50 °C (-4 °F to 122 °F)
<b>Warranty</b>	Basic - 3 years Pro - 5 years

Controlling this HomeKit-enabled accessory automatically and away from home requires a HomePod, Apple TV, or iPad set up as a home hub. It is recommended that you update to the latest software and operating system. Use of the Works with Apple badge means that an accessory has been designed to work specifically with the technology identified in the badge and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. HomeKit is a trademark of Apple Inc.

Neviweb® is a registered trademark of Sinopé Technologies Inc. in Canada and the United States.

Apple and the Apple logo are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc., registered in the U.S. and other countries.

Google Play and the Google Play logo are trademarks of Google Inc.

The Wi-Fi CERTIFIED™ Logo is a certification mark of Wi-Fi Alliance®.

## ISED Canada compliance statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device.

## FCC compliance statement

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.

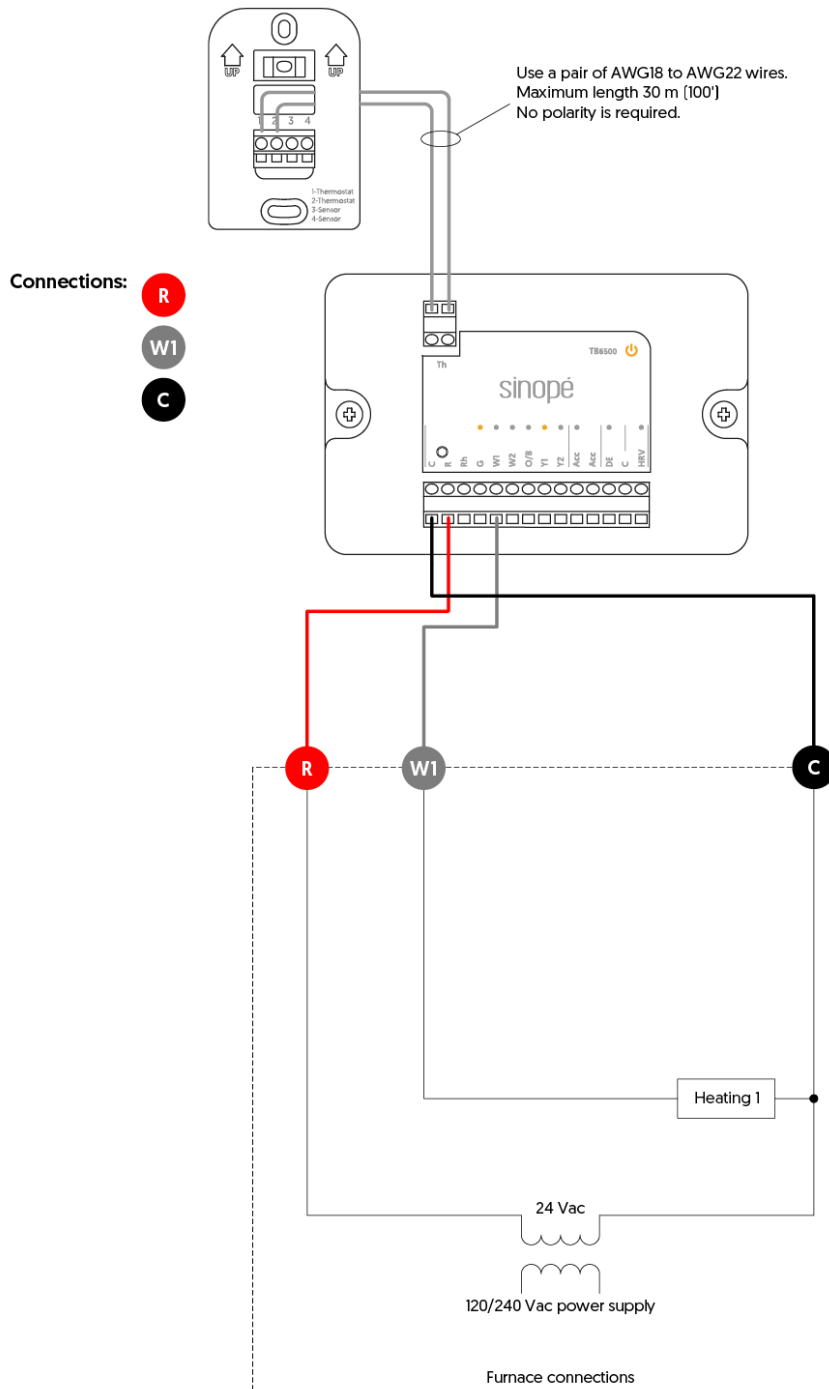
# Wiring diagrams



# Conventional system

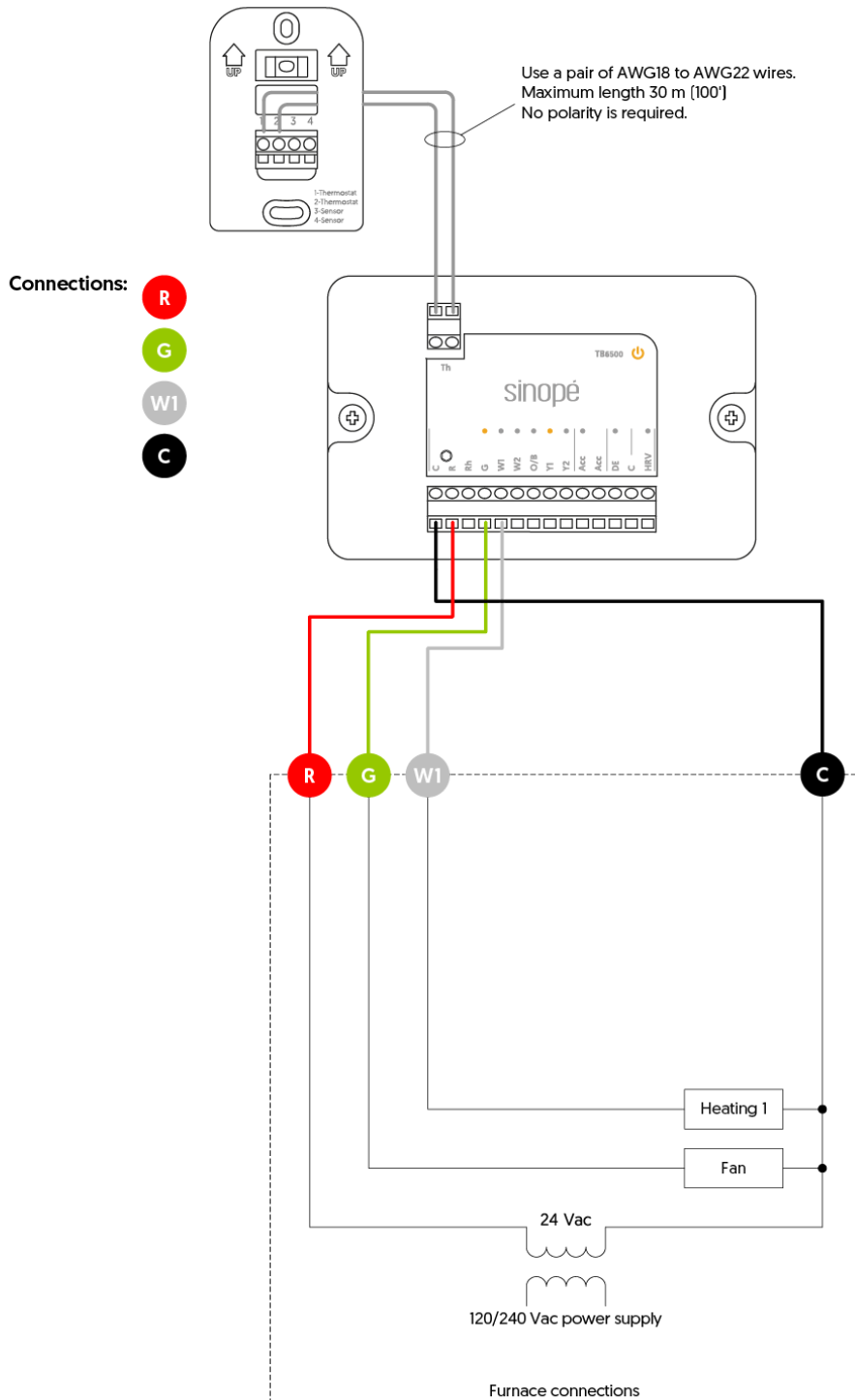
## Wiring 1: 1H

This system refers to a single-stage heating system without ventilation. Standard connection for furnaces.



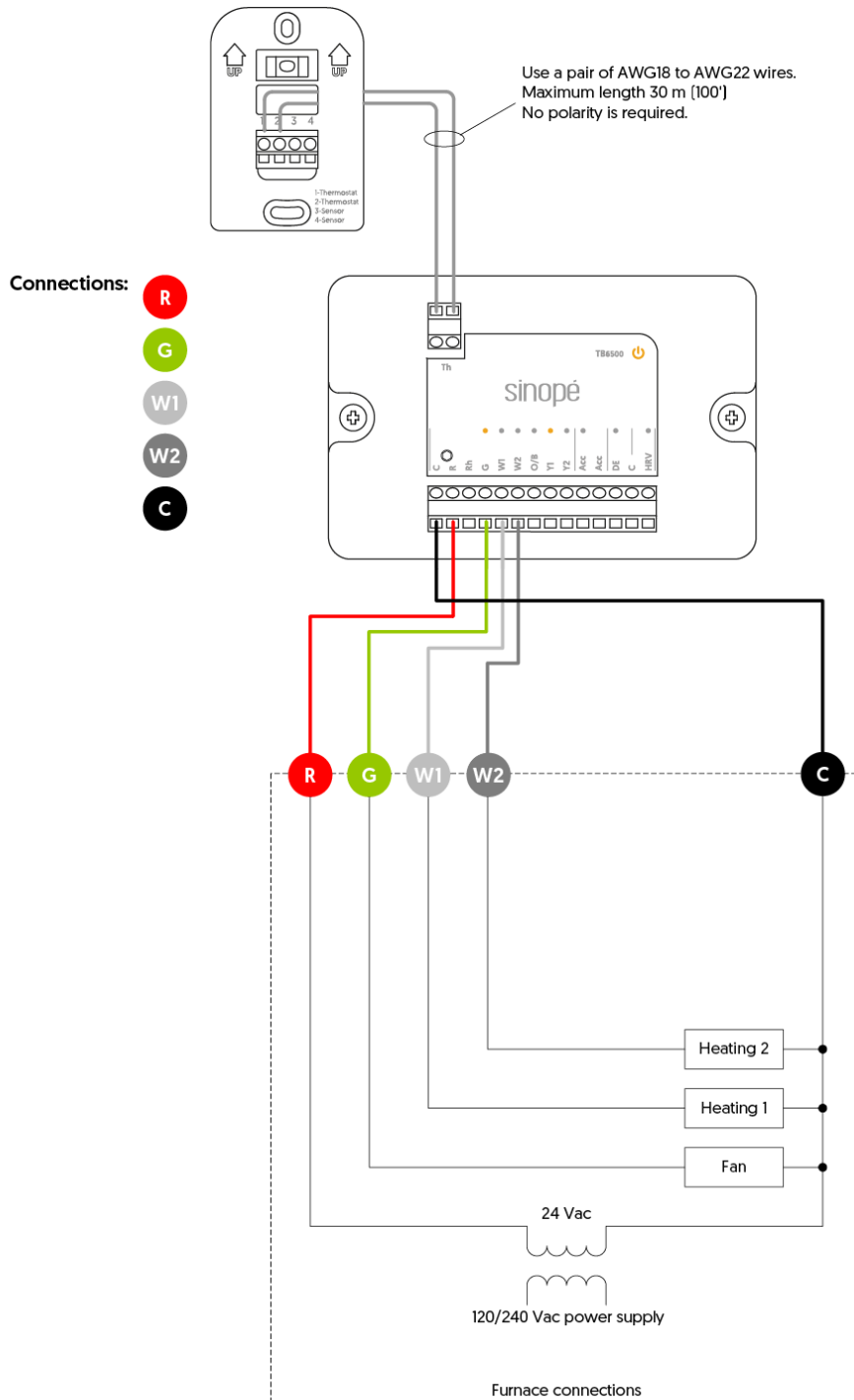
## Wiring 2: 1H

This system refers to a single-stage heating system with ventilation control. Standard connection for furnaces.



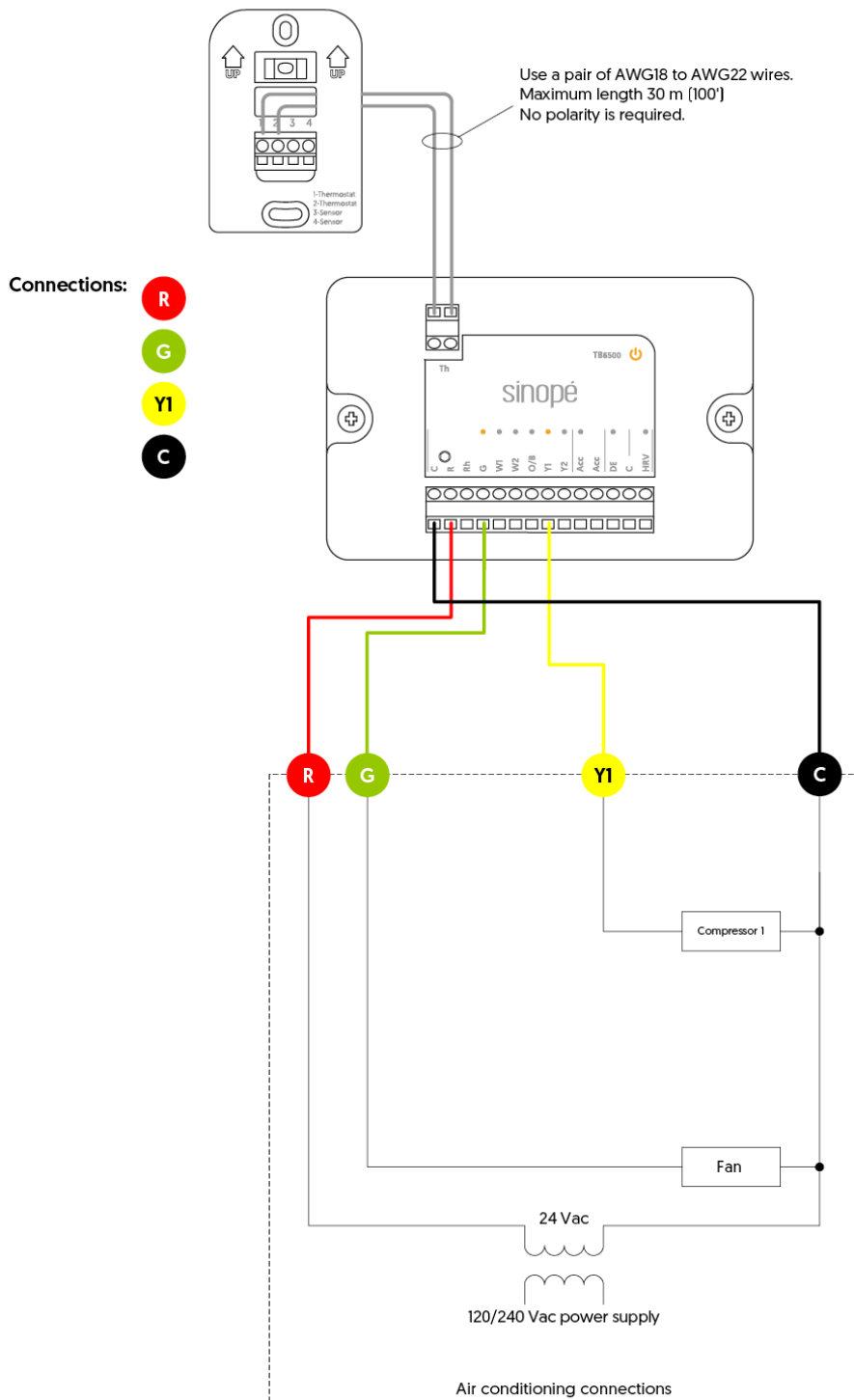
## Wiring 3: 2H

This system refers to a heating and ventilation system designed to handle two stages of heating. Standard connection for furnaces.



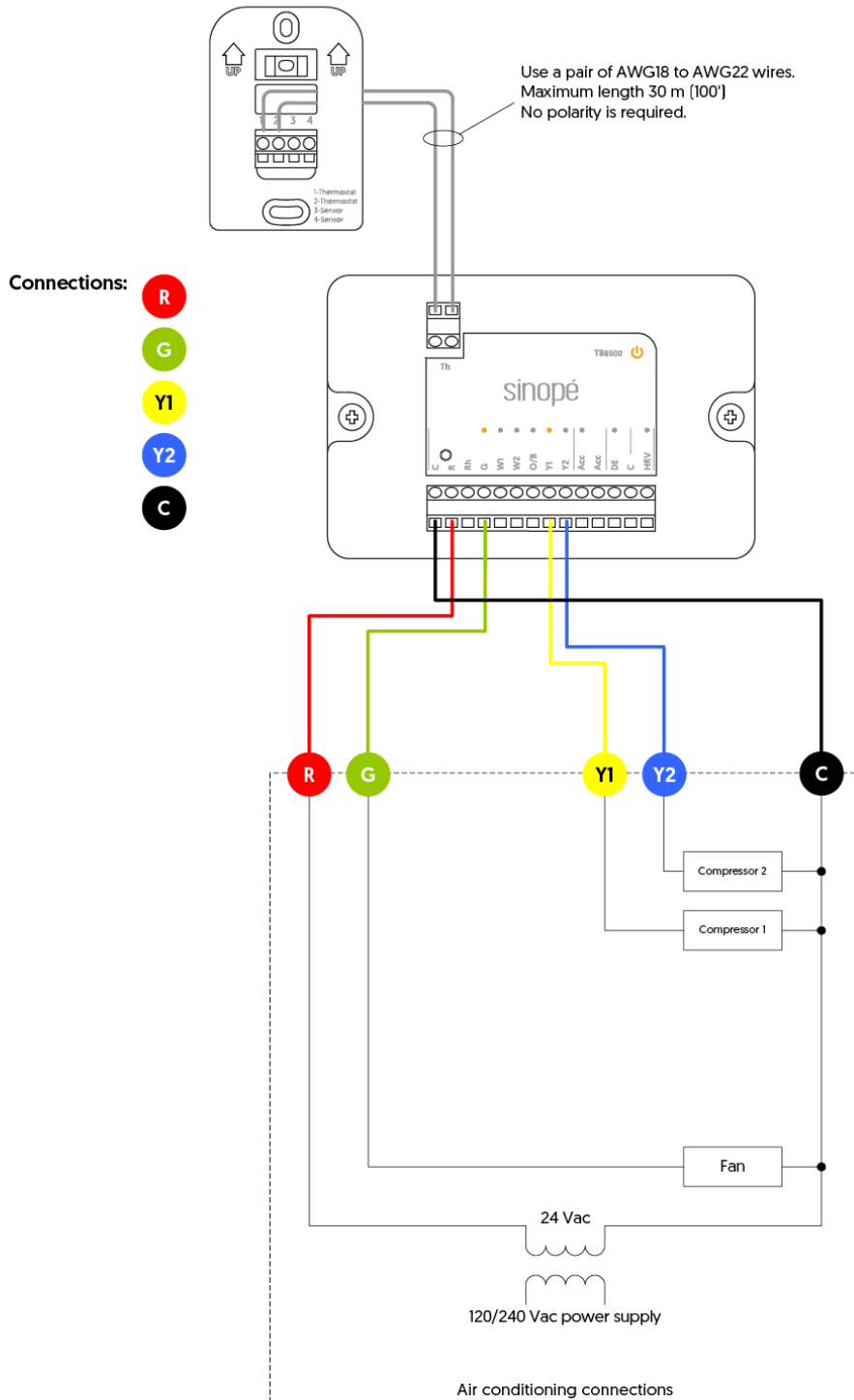
## Wiring 4: 1C

This system refers to a single-stage air conditioning system with ventilation control. Standard connection for air conditioners.



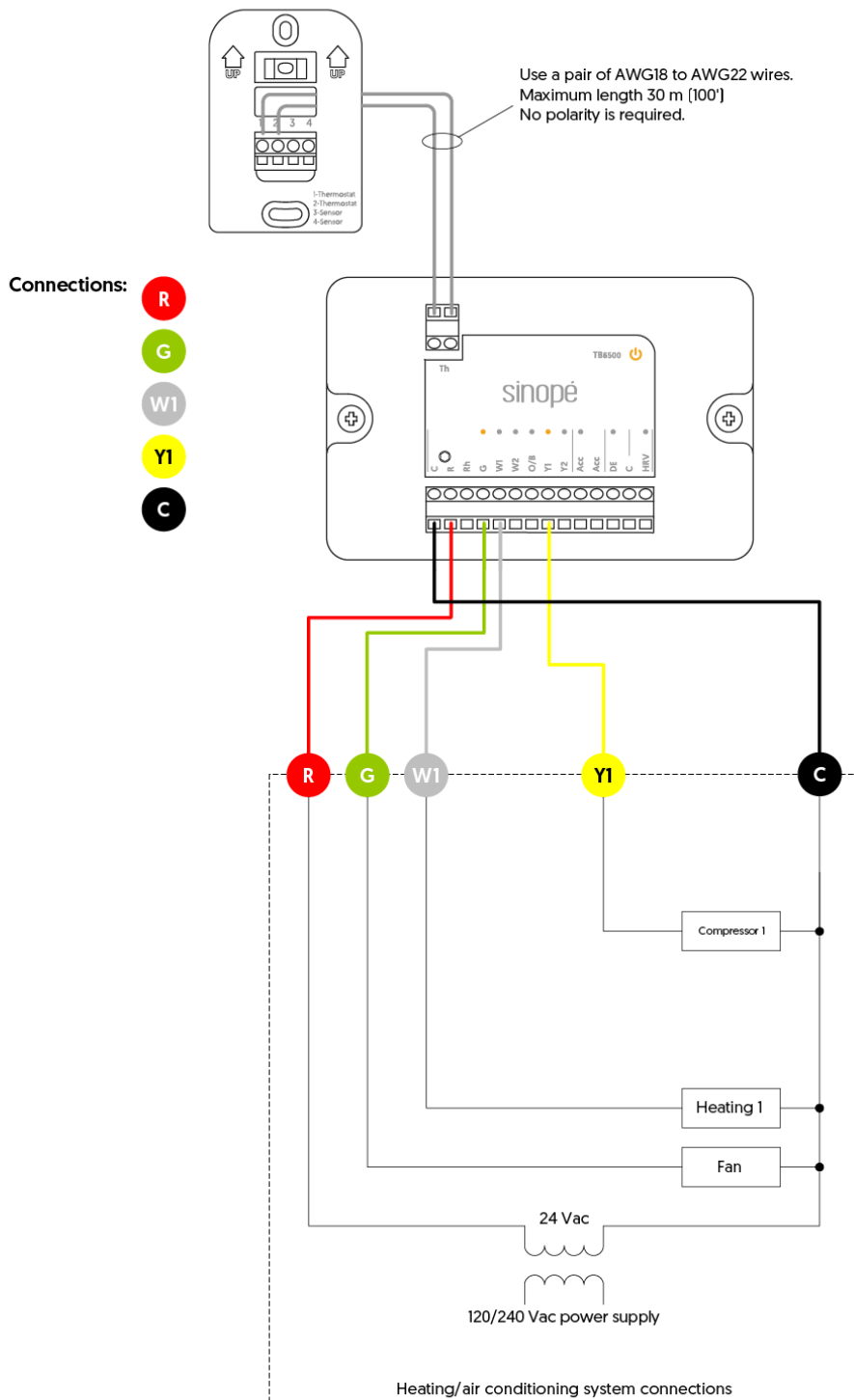
## Wiring 5: 2C

This system refers to an air conditioning and ventilation system designed to handle two stages of air conditioning. Standard connection for air conditioners.



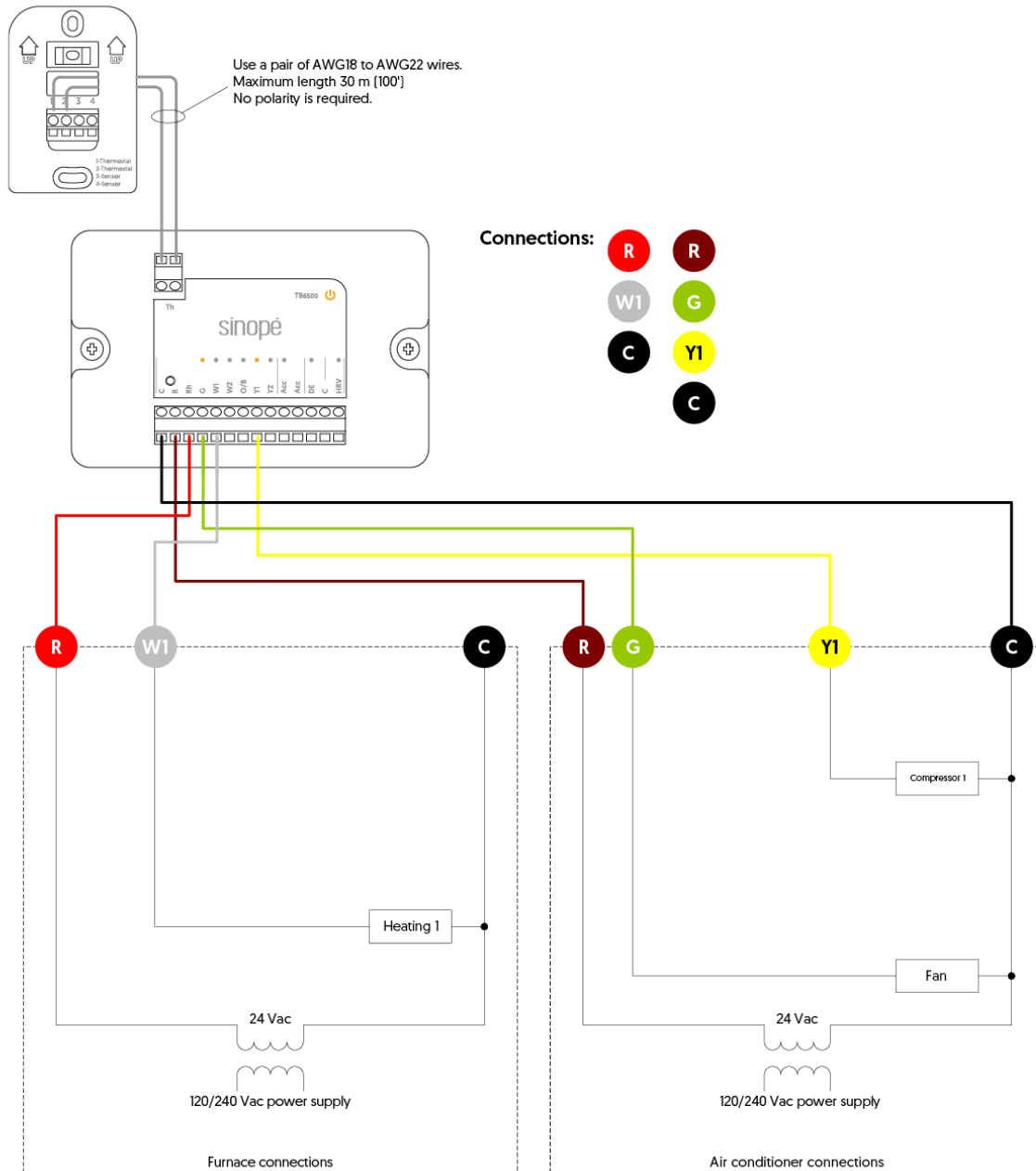
## Wiring 6: 1H1C

This system refers to a heating, ventilation, and air conditioning system designed for one heating and one cooling stage.



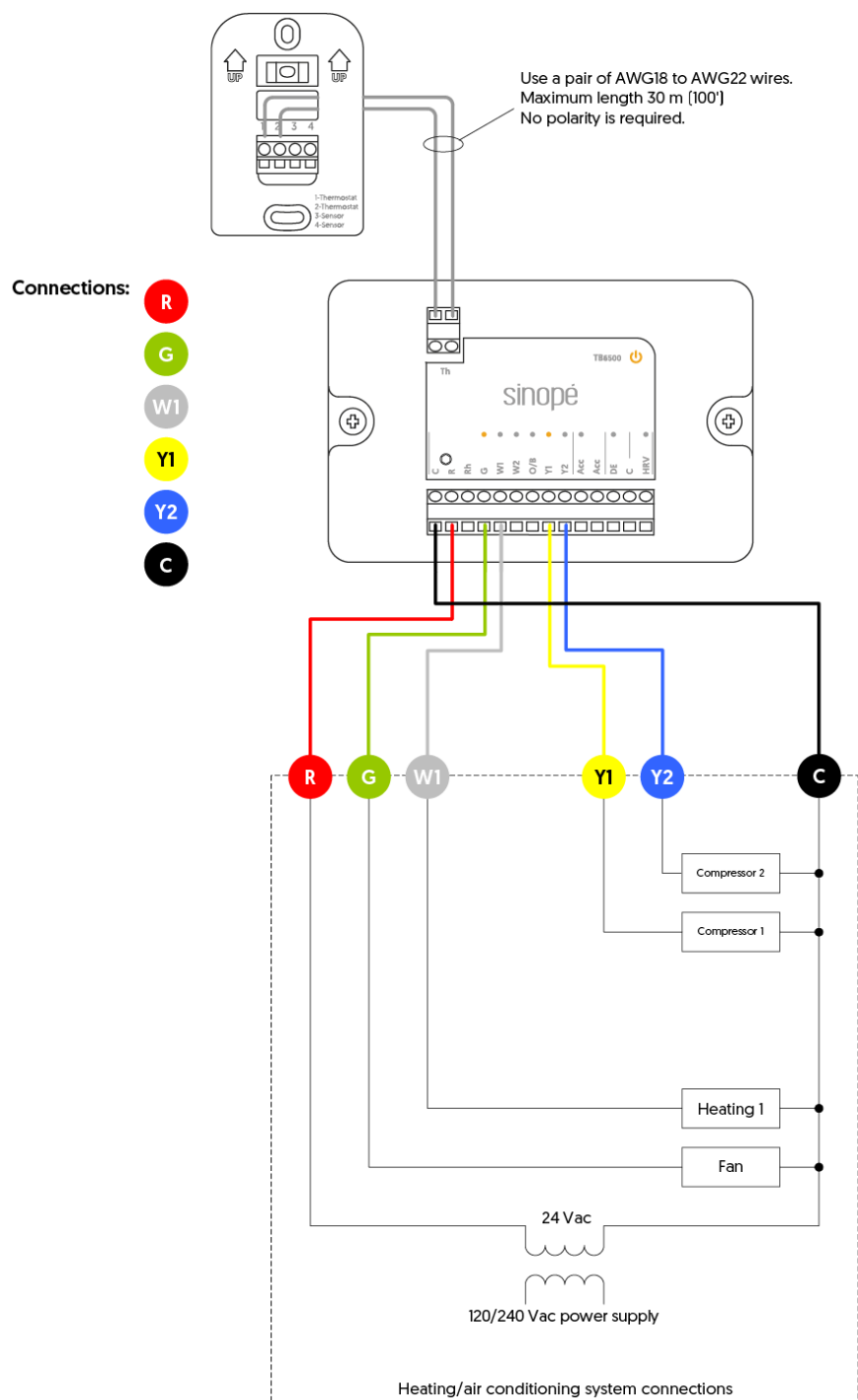
## Wiring 7: 1H1C

This system refers to a heating, ventilation, and air conditioning system designed for one heating and one cooling stage, with separate power for dual-part systems.



## Wiring 8: 1H2C

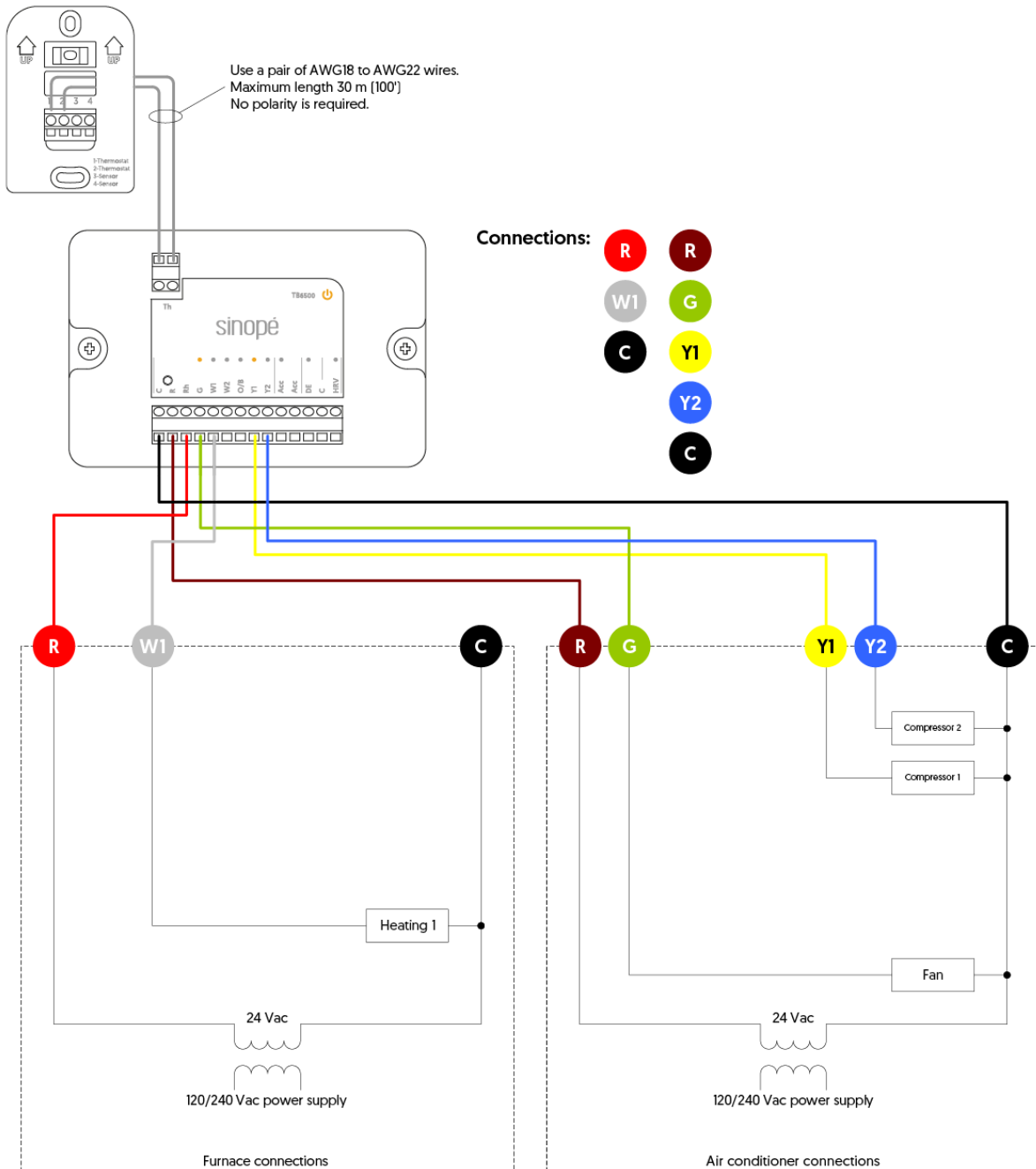
Refers to an HVAC system with one heating stage and two air conditioning stages with ventilation control.





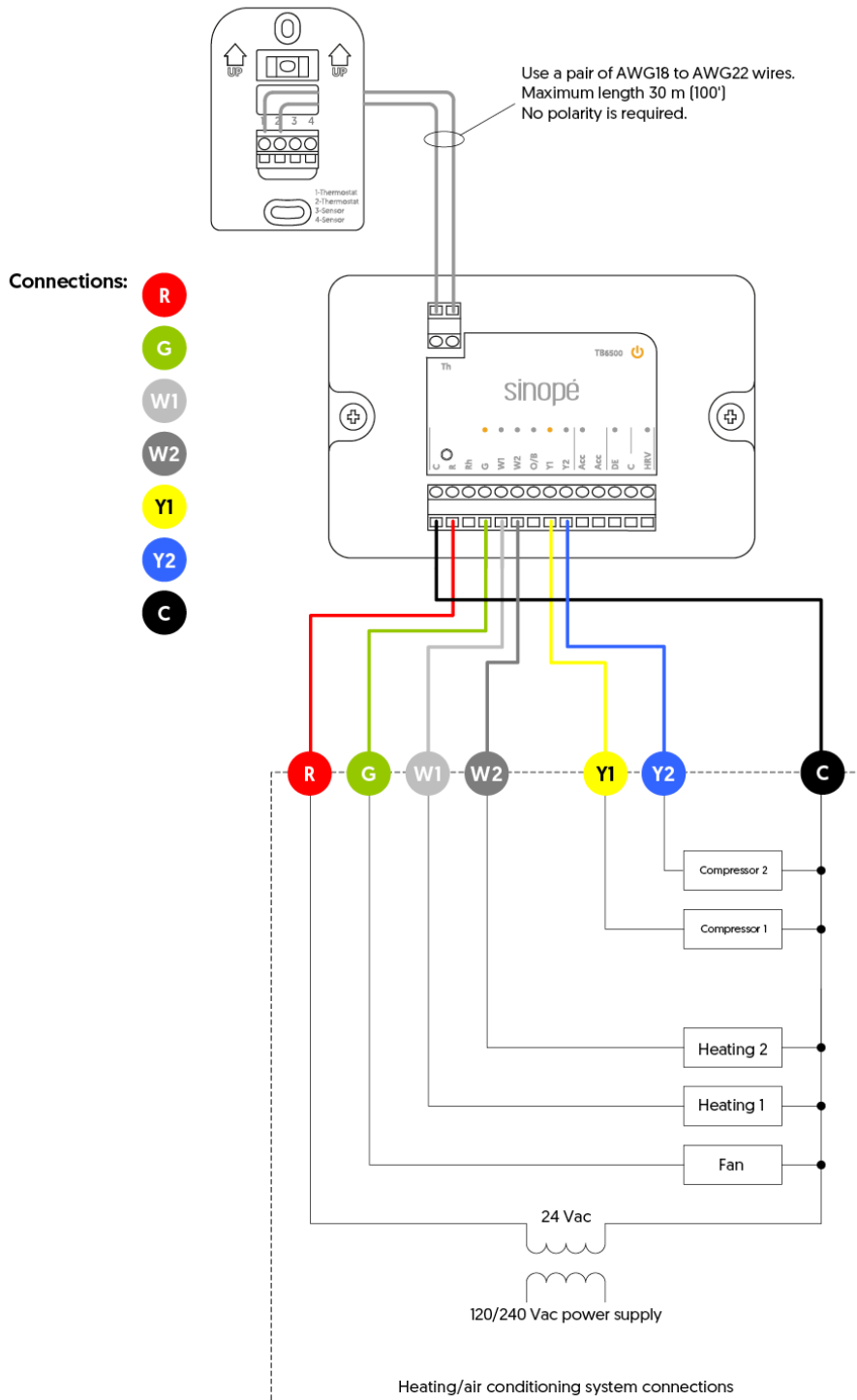
## Wiring 9: 1H2C

Refers to an HVAC system with one heating stage and two air conditioning stages with ventilation control. Separate power for heating and cooling. Standard connection for a furnace combined with an air conditioner.



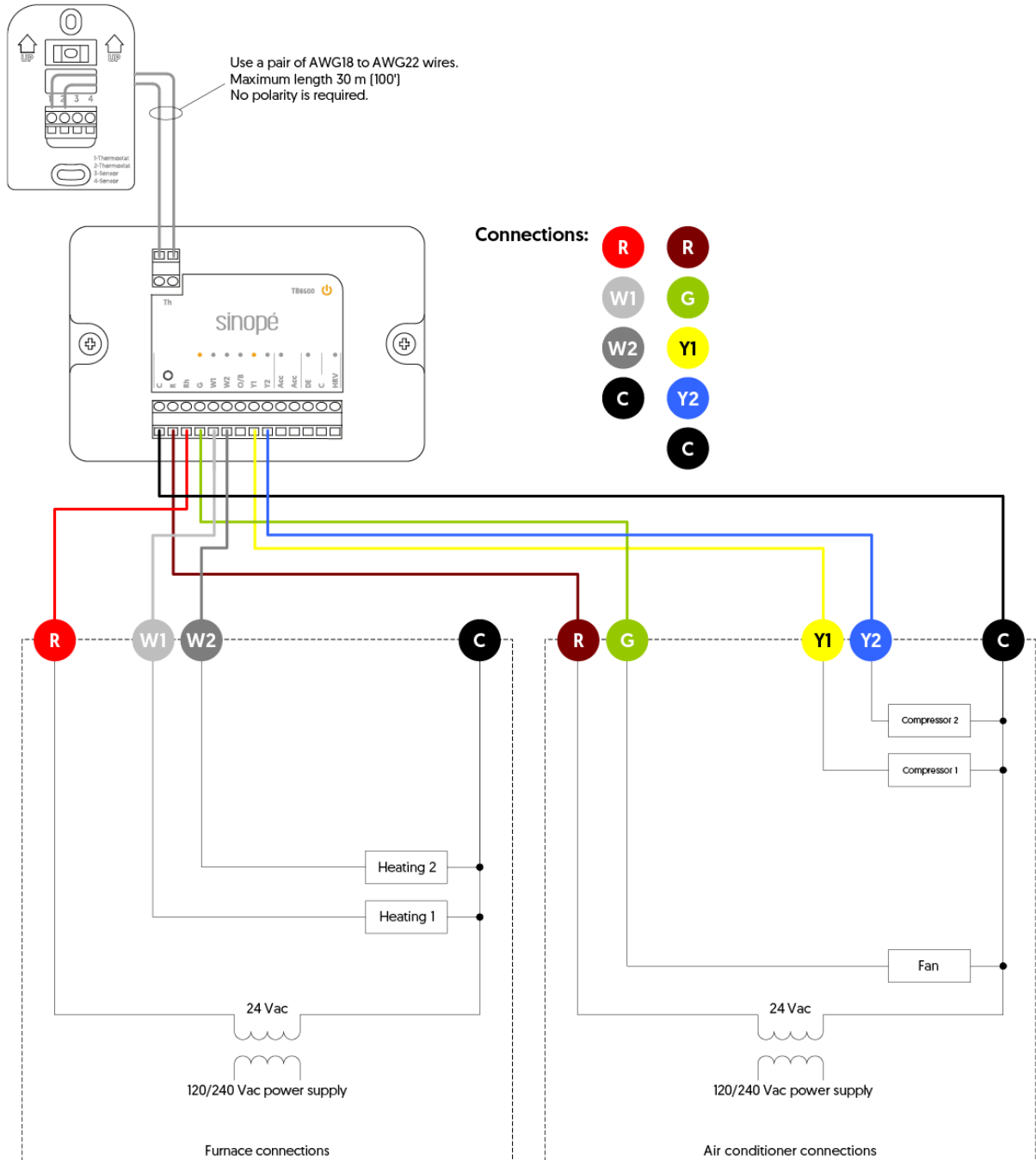
## Wiring 10: 2H2C

This system refers to a heating, ventilation, and air conditioning system designed for two heating and two cooling stages.



# Wiring 1I: 2H2C

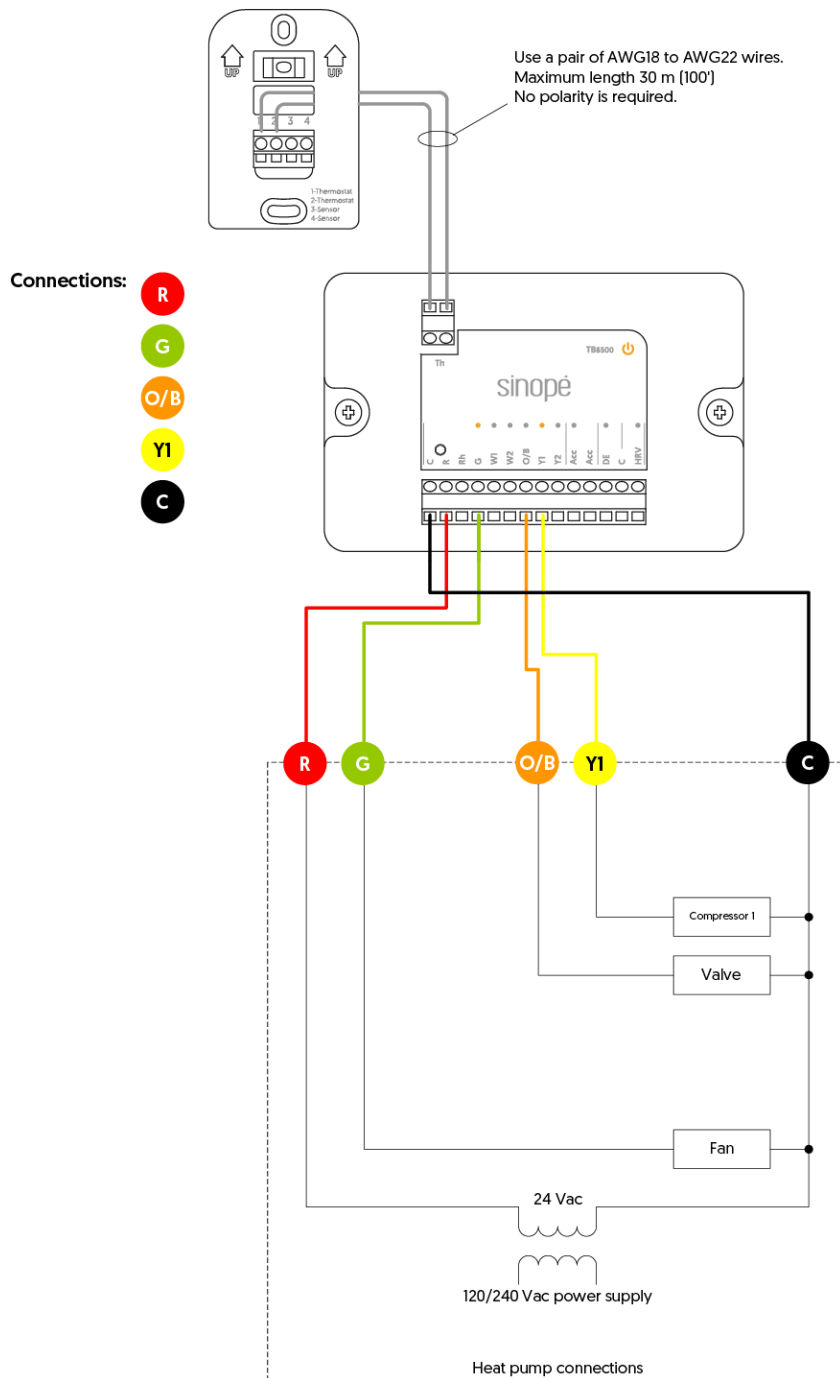
This system refers to a heating, ventilation, and air conditioning system designed for two heating and two cooling stages, with separate power for dual-part systems.



# Heat pump

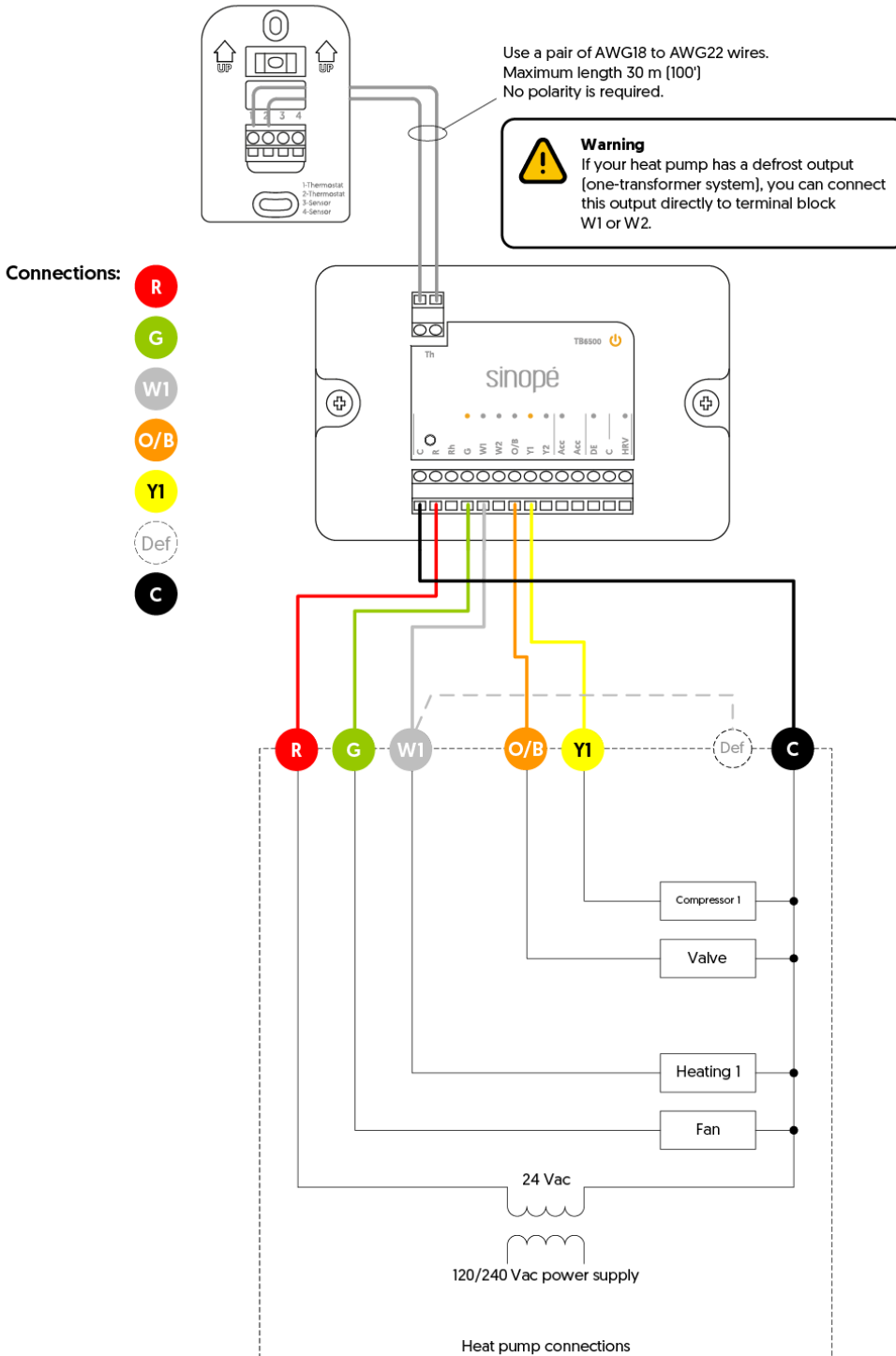
## Wiring 12: 1H1C

System to control heating and cooling functions, as well as fan operation, at a single stage.  
Standard connection for heat pumps.



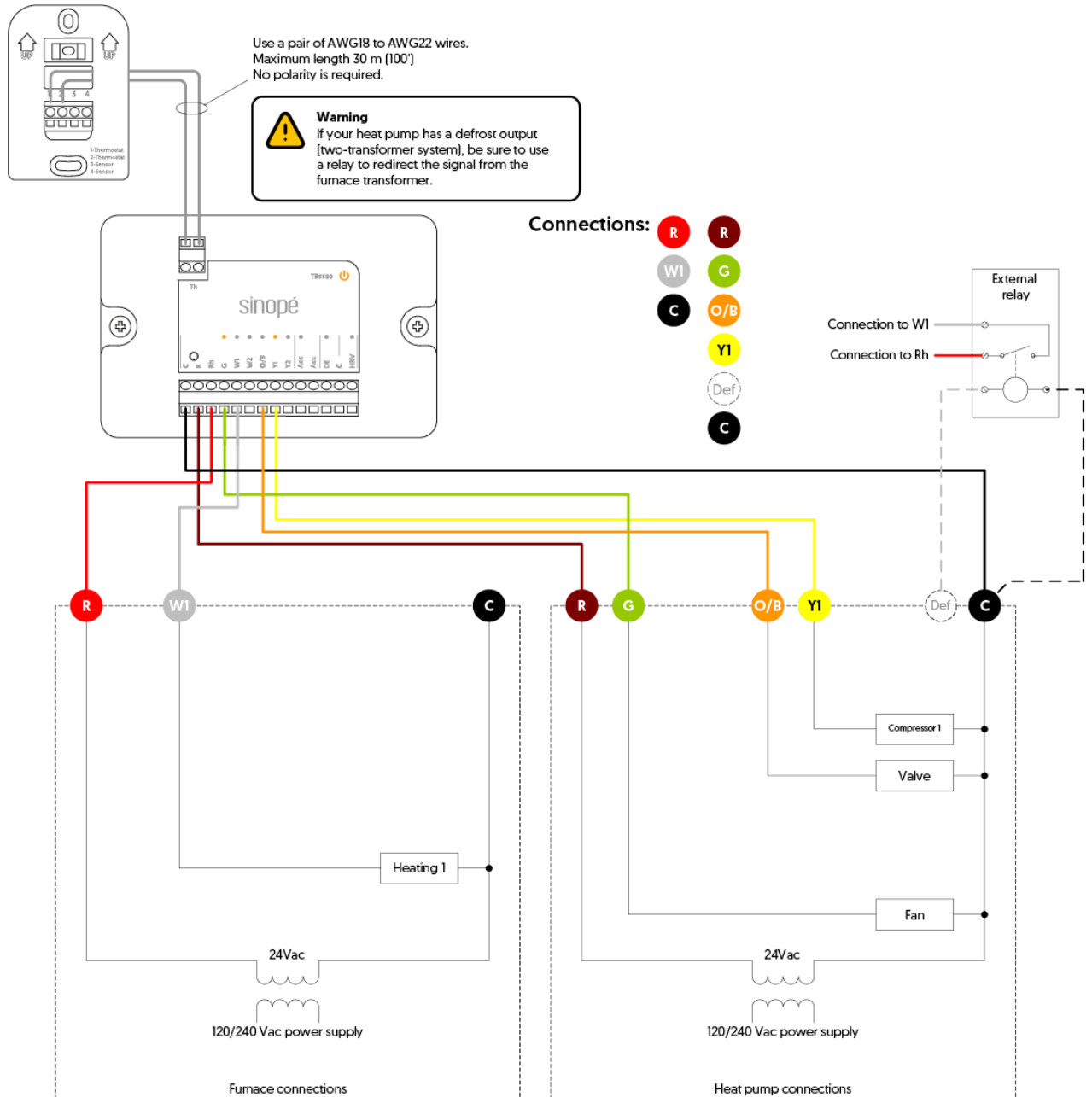
## Wiring 13: 2H1C

Refers to an HVAC system with two heating stages and one air conditioning stage with ventilation control. Standard connection for heat pumps.



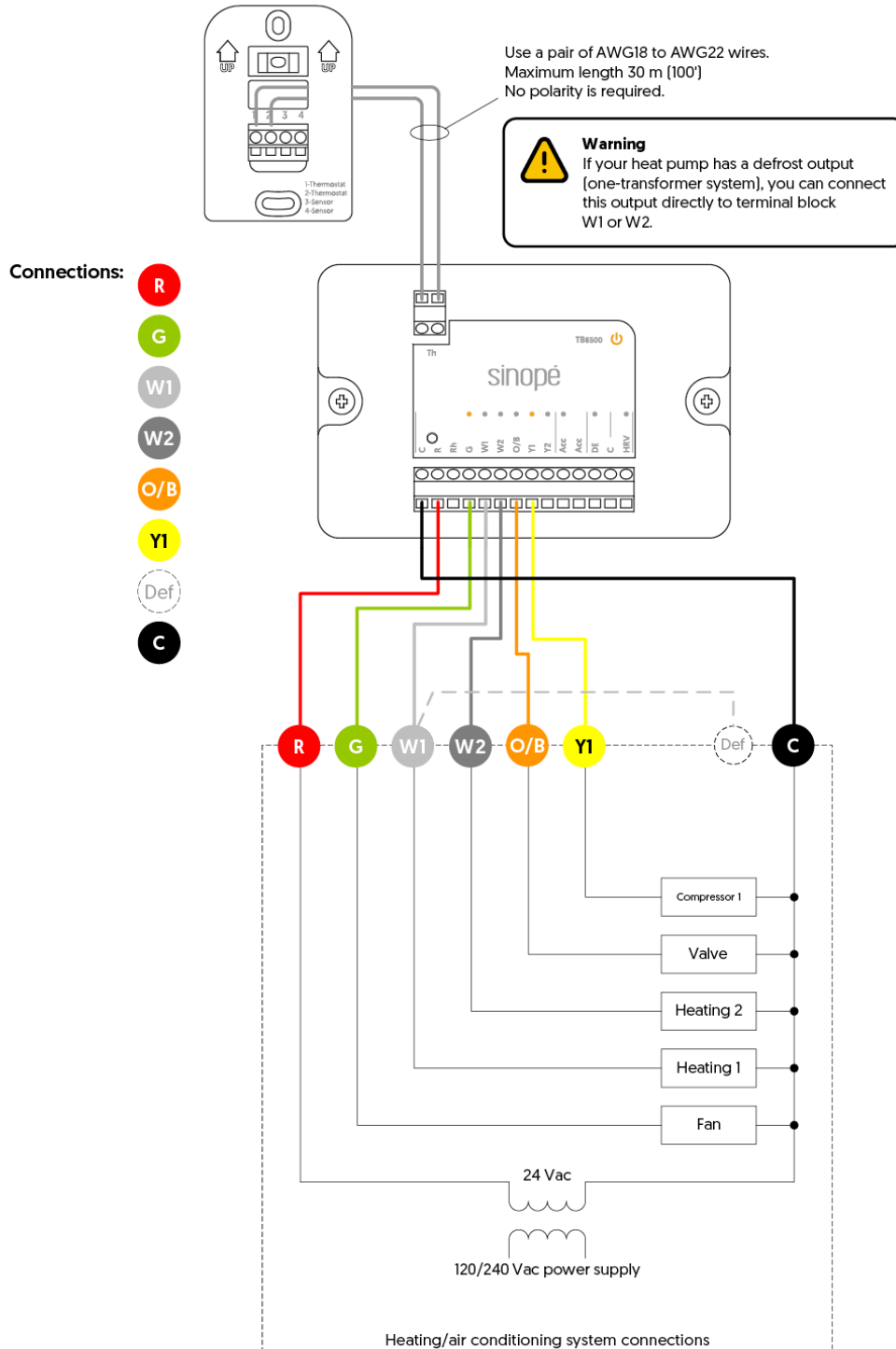
# Wiring 14: 2H1C

Refers to an HVAC system with two heating stages and one air conditioning stage with ventilation control. Separate power for heating and cooling. Standard connection for a heat pump combined with a furnace.



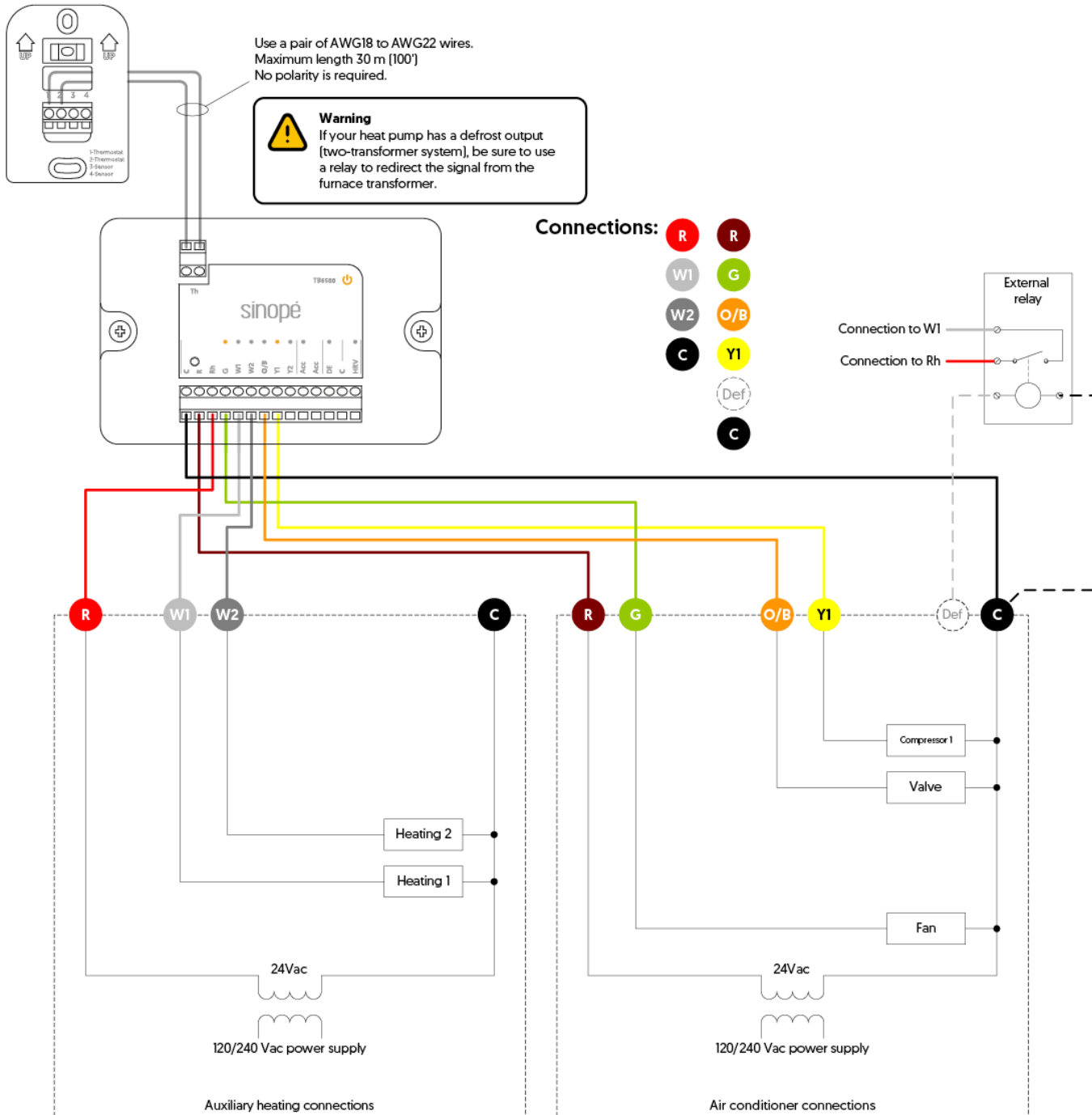
## Wiring 15: 3H1C

Refers to an HVAC system with three heating stages and one air conditioning stage with ventilation control. Standard connection for a heat pump with dual-stage auxiliary heating.



# Wiring 16: 3H1C

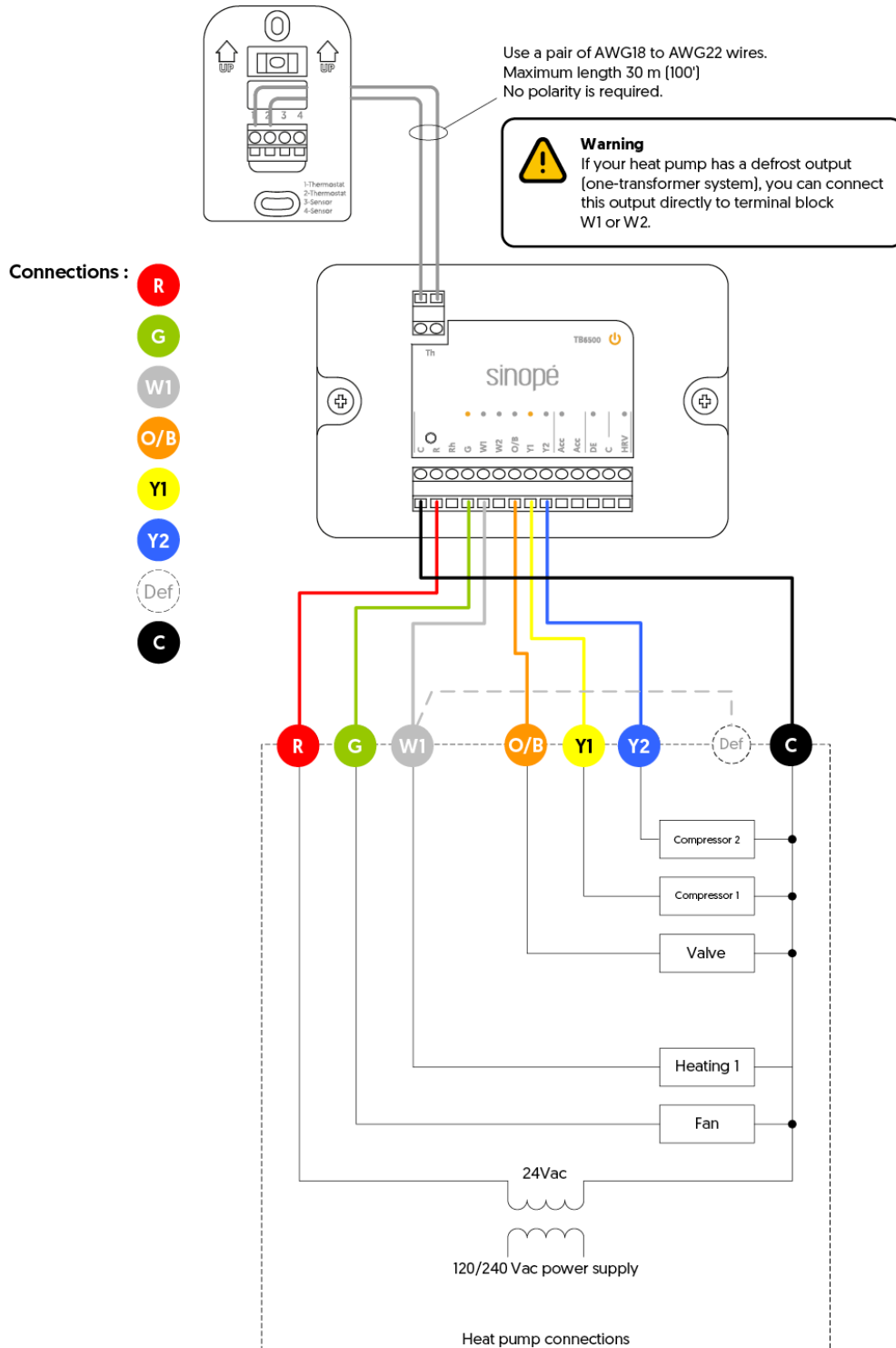
Refers to an HVAC system with three heating stages and one air conditioning stage with ventilation control. Separate power for heating and cooling. Standard connection for a heat pump with dual-stage auxiliary heating.





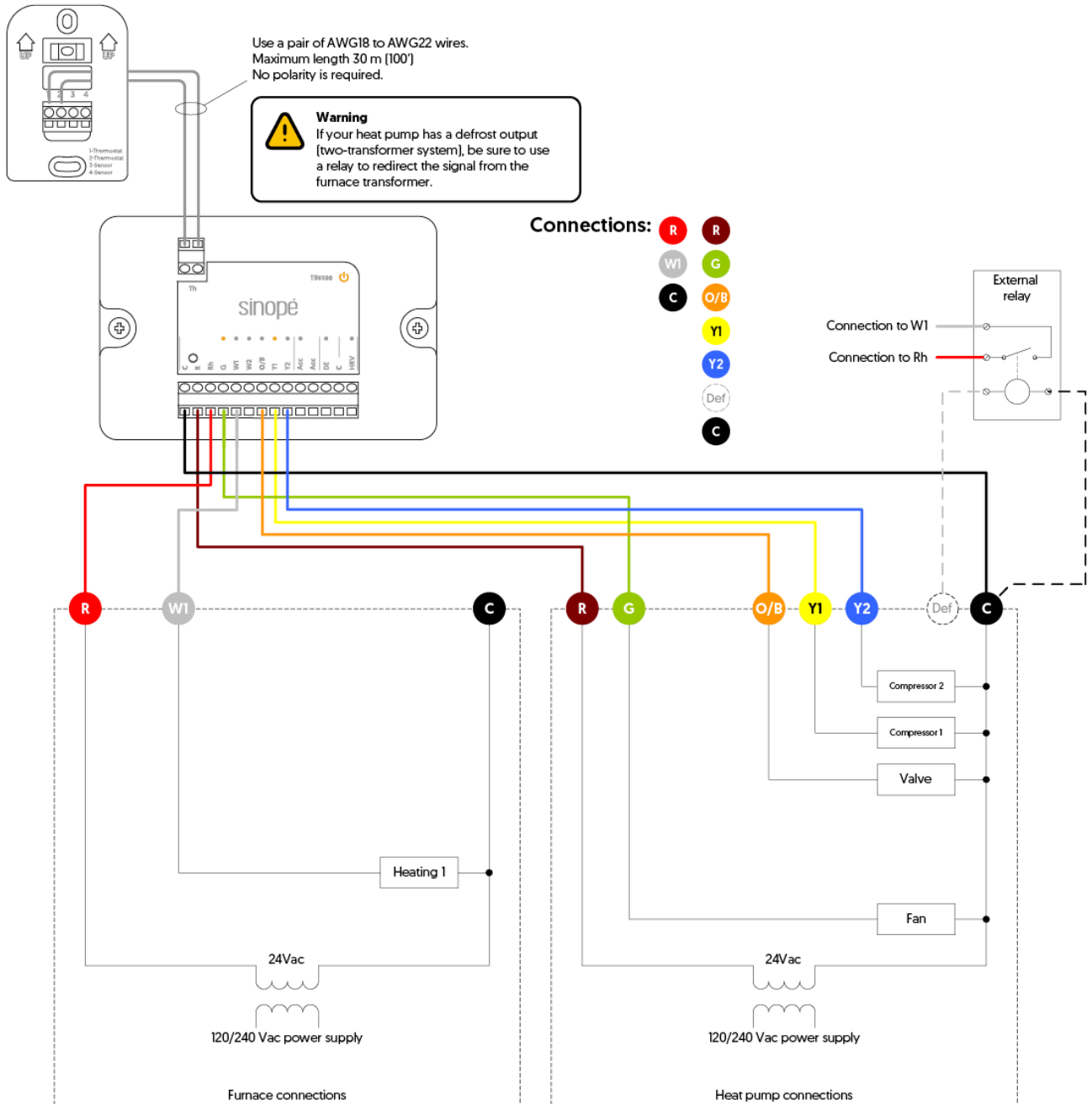
## Wiring 17: 3H2C

Refers to an HVAC system with three heating stages and two air conditioning stages with ventilation control. Standard connection for heat pumps.



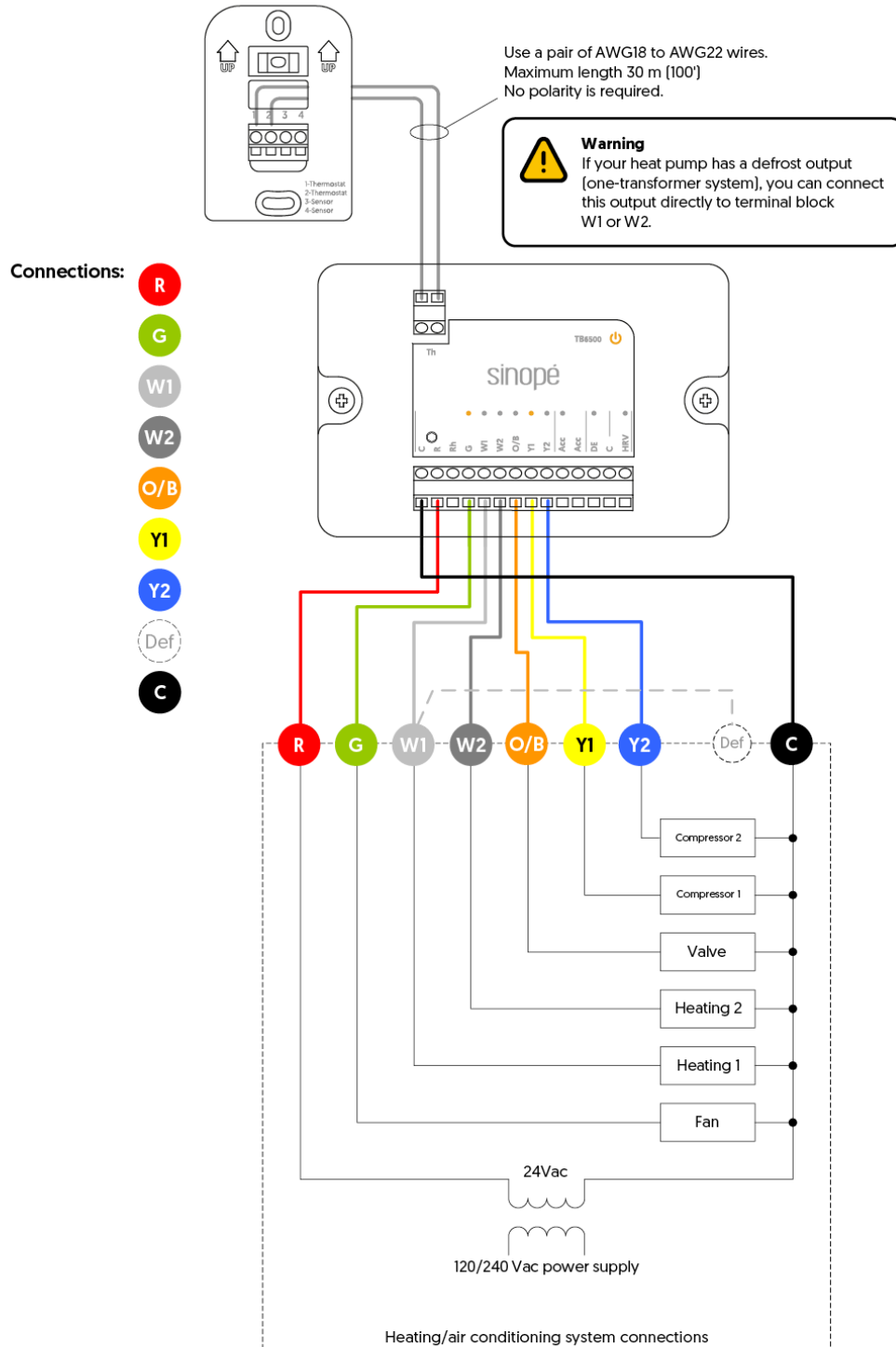
## Wiring 18: 3H2C

Refers to an HVAC system with three heating stages and two air conditioning stages with ventilation control. Separate power for heating and cooling. Standard connection for a heat pump combined with a furnace.



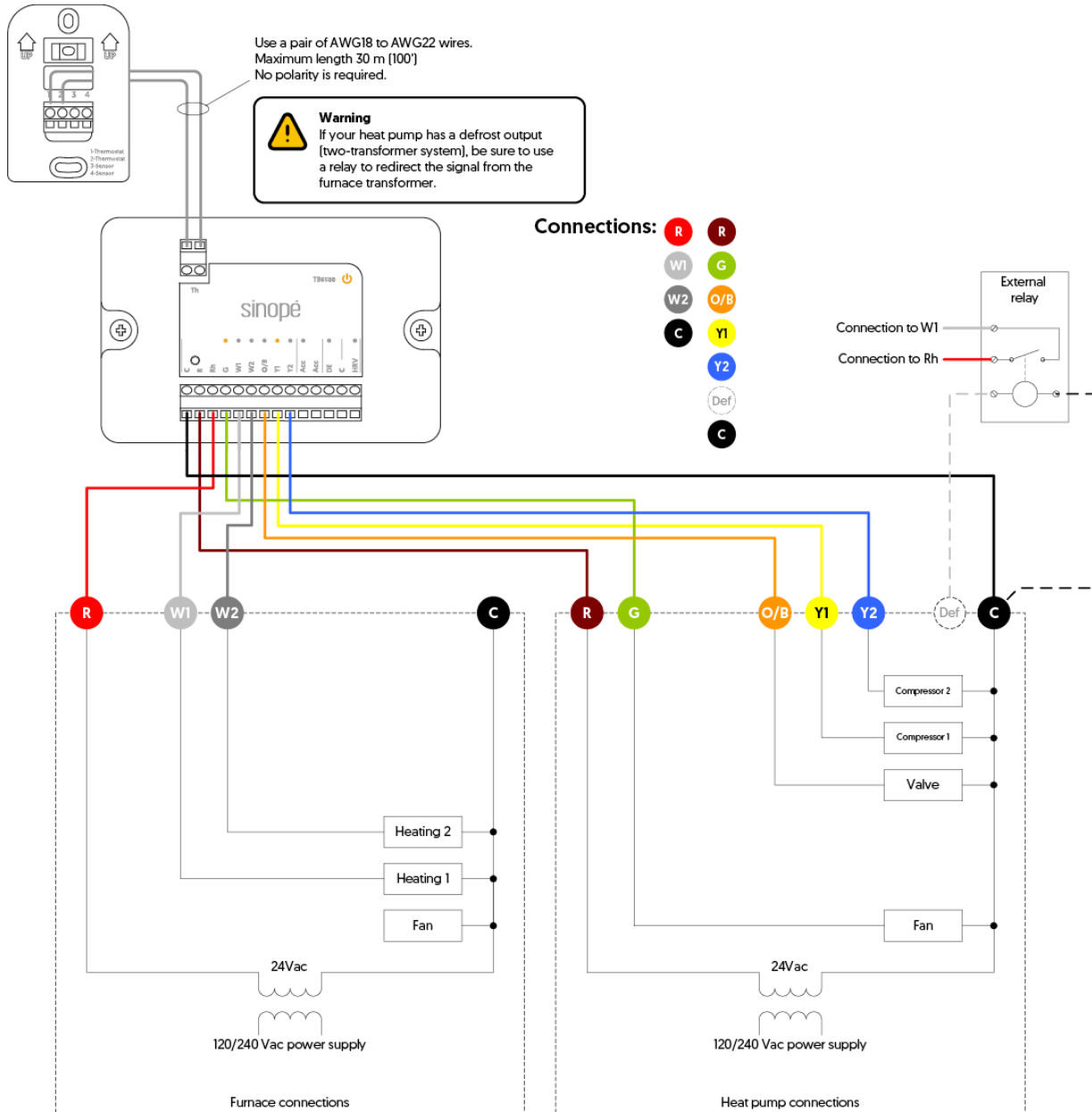
# Wiring 19: 4H2C

Refers to an HVAC system with four heating stages and two air conditioning stages with ventilation control. Standard connection for heat pumps.



## Wiring 20: 4H2C

Refers to an HVAC system with four heating stages and two air conditioning stages with ventilation control. Separate power for heating and cooling. Standard connection for a heat pump combined with a furnace.

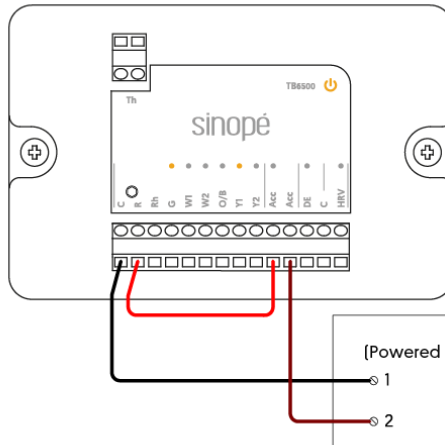


# Additional system

## Wiring 21: Humidifier / Dehumidifier

Humidifier or dehumidifier powered by the HVAC system.

Connections:



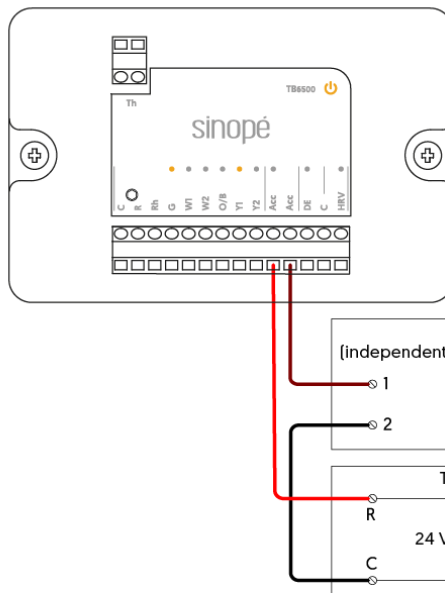
The TB6500 must be powered by the ventilation system.

Check that the ventilation system's 24 Vac transformer has sufficient power to supply the accessory.

## Wiring 21.1: Humidifier / Dehumidifier

Humidifier or dehumidifier with independent external power.

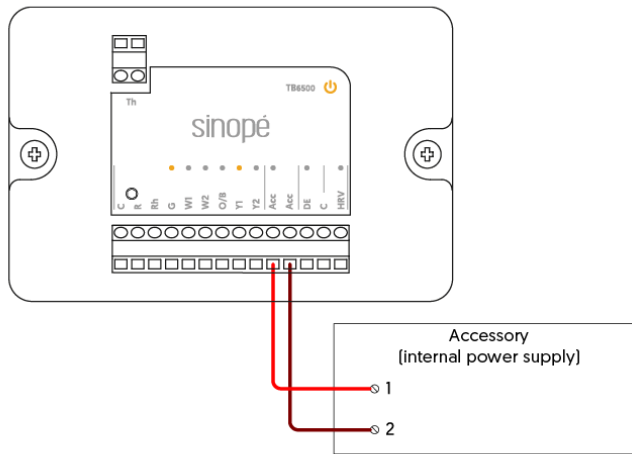
Connections:



## Wiring 21.2: Humidifier

Humidifier or dehumidifier with internal power.

Connections:



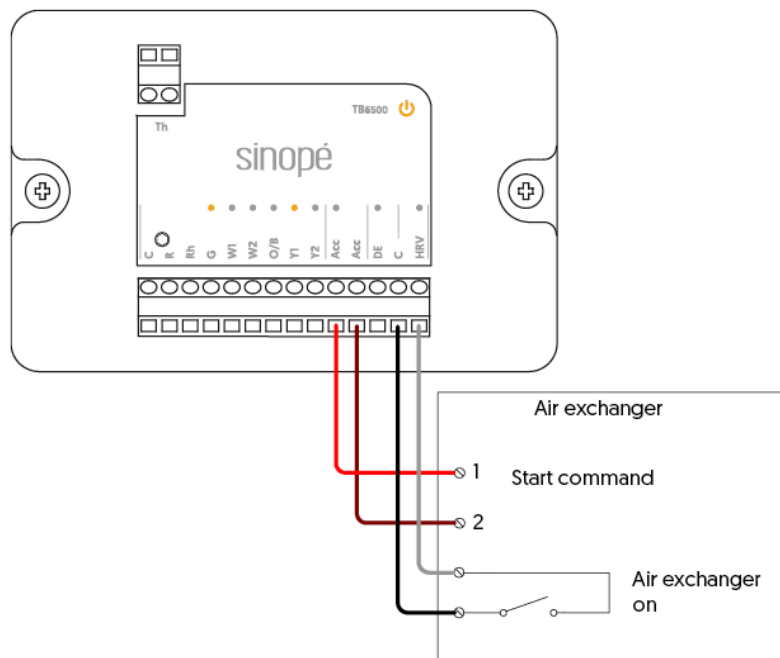
## Wiring 22: Air exchanger

Connection for an air exchanger.

The **ACC-ACC** input is a dry contact used to start the air exchanger. The **HRV** input activates air exchanger ventilation when a dry contact is established between **HRV** and **C**. It is **not necessary** to connect both **HRV** and **ACC**: only one of these connection options can be used, depending on the application.

Possible connection options:

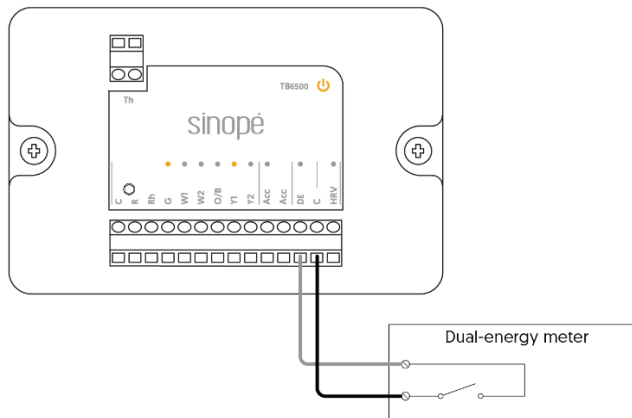
- C HRV
- ACC ACC
- ACC ACC C HRV



## Wiring 23: Dual-energy

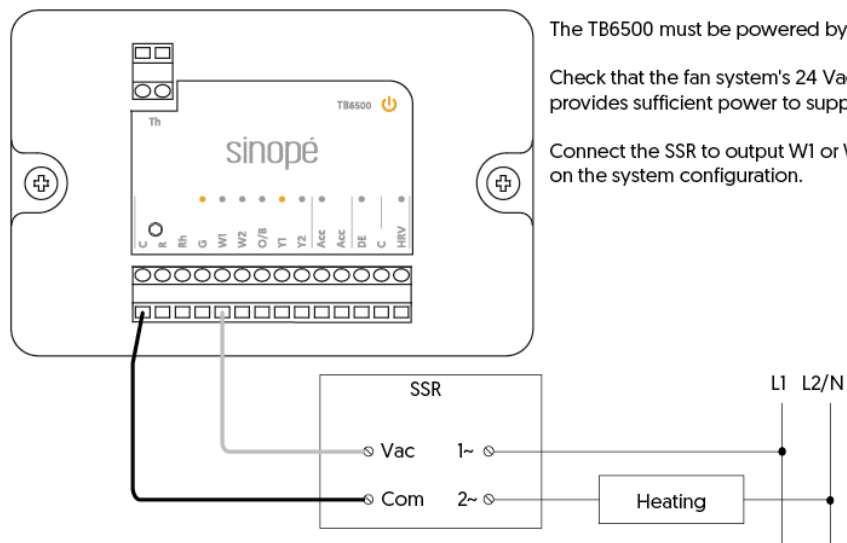
Connection for dual-energy signal.

Connections:



## Wiring 24: SSR

Connections:



Note: SSR consumption on the output must be at least 20 mA [AC] when the system configuration uses the TB6500 Rh terminal.

# Additional accessories

## Decorative mounting plates

Designed to cover wall imperfections left by the previous thermostat, they also include a steel plate for installing the thermostat above an electrical box.



### AC6500-01 Decorative Mounting Plate (sold separately)

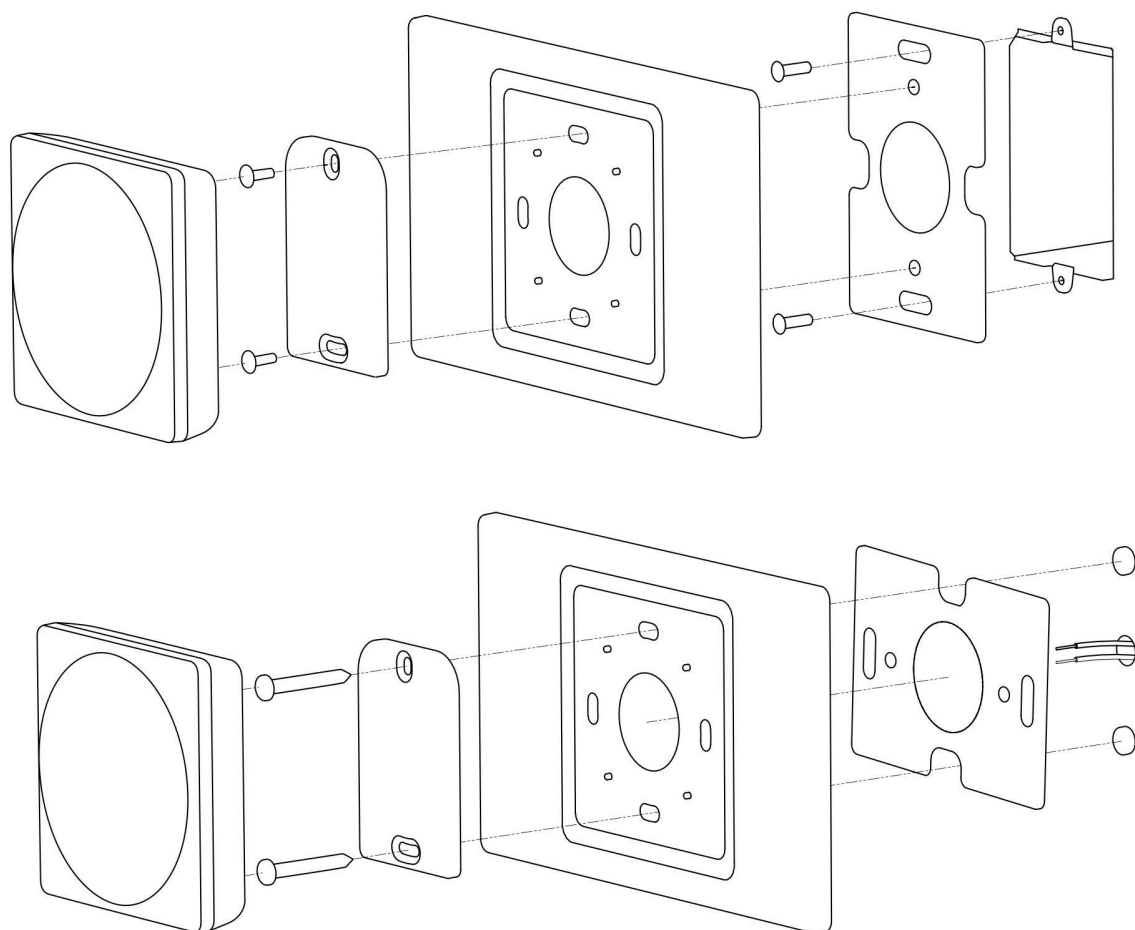
**Dimensions (W x H x D):** 180.5 mm (7.11 in) X 112.5 mm (4.43 in) X 5 mm (0.20 in)

**Included in the box:**

- Decorative mounting plate
- Steel plate, installation sheet
- 2x screws for the decorative plate
- 2x screws for the steel plate



**Installation diagrams for the AC6500-01 decorative mounting plate:**





## AC6500-02 Decorative Mounting Plate (sold separately)

**Dimensions (W x H x D):** 114.3 mm (4.5 in) X 114.3 mm (4.5 in) X 4.8 mm (0.19 in)

**Included in the box:**

- Decorative mounting plate
- Steel plate, installation sheet
- 2x screws for the decorative plate
- 2x screws for the steel plate

**Installation diagrams for the AC6500-02 decorative mounting plate:**

