

GLAS

Installation Instructions

Preliminary - This is information may change

Support

If at any point you need assistance, we're here to help.

Visit glas.johnsoncontrol.com/support for how-to videos and frequently asked questions.

Can't find what you're looking for? Give us a call at 1-833-297-4527(GLAS) and our technical team can walk you through it.

Before you start, download the GLAS app for easy installation.



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Included in box



GLAS Thermostat



Wall Plate



4 to 5 Wire Adapter



4 Screws



4 Drywall Anchors



Quick Start Guide

Tools required

Screwdriver



Drill



Level



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Compatibility

GLAS is compatible with most 24 VAC heating and cooling systems. Use the compatibility checker to ensure your system will work with GLAS by going to glas.johnsoncontrols.com/compatibilitychecker.

Heating	One or two stages
Cooling	One or two stages
Heat Pump	One or two stages with one-or-two stage auxiliary heat
Fan	Single-speed fan
Auxiliary	Humidifier, dehumidifier, or ventilator (including HRV or ERV)

Preliminary - This information may change

Terminal descriptions

Note: If you have only one R wire, connect to RC.

Note: If you are replacing an existing thermostat, remove any jumper wires between R and RH or RC and RH.

- Y First stage of cooling or first stage heat pump
- Y2 Second stage of cooling command or second stage heat pump
- W First stage of conventional heating or first stage auxiliary heat for heat pump systems
- W2 Second stage of conventional heating or second stage of auxiliary heat for heat pump system

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Terminal descriptions

G	Fan
O/B	Heat pump reversing valve (supports both O type and B type)
AUX	Auxiliary - humidifier, dehumidifier, or ventilator
R	24 VAC Cool
Rh	24 VAC Hot
C	24 VAC Common

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IMPORTANT: If your thermostat is built into the wall and connected to thick wires with wire nuts, or if it is labeled 110, 120, or 240 volts, you have a high voltage system that is **not compatible** with the GLAS Thermostat. Do not connect your thermostat to these high voltage wires. GLAS is only compatible with 24VAC systems.



WARNING: Risk of Electric Shock.

Disconnect the power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electric shock and may result in severe personal injury or death. If you have any doubts about properly installing the device, please contact a professional installer.

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Turn off system power

1. **Turn off the power** to your heating or cooling system at the HVAC unit electrical switch or the breaker box for the building to avoid electrocution or shock.
2. If you want to check your system power, adjust the temperature on your current thermostat enough that the system switches into heating or cooling mode. If the system does not power on in a few minutes, it is off.



IMPORTANT: Never work with live voltage.

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Check old wiring

3. If you are replacing an existing thermostat, remove the front plate of your old thermostat and take a picture of the current wire colors and connections. This picture will come in handy when connecting your new thermostat.

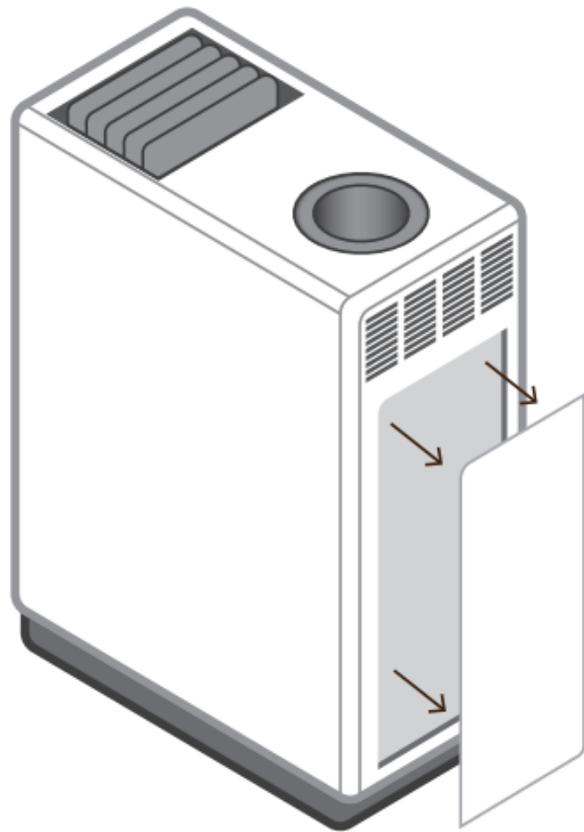
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Connect optional 4 to 5 wire adapter

Note: If you have a C-wire, skip to Step 8. If you do not have a C-wire to power your thermostat, use the included adapter to provide power.

4. Remove the cover of your furnace or air handling unit to access the control board.

5. In your HVAC equipment, disconnect any **R**, **G**, **Y**, or **W** wires that are currently connected to the control board.



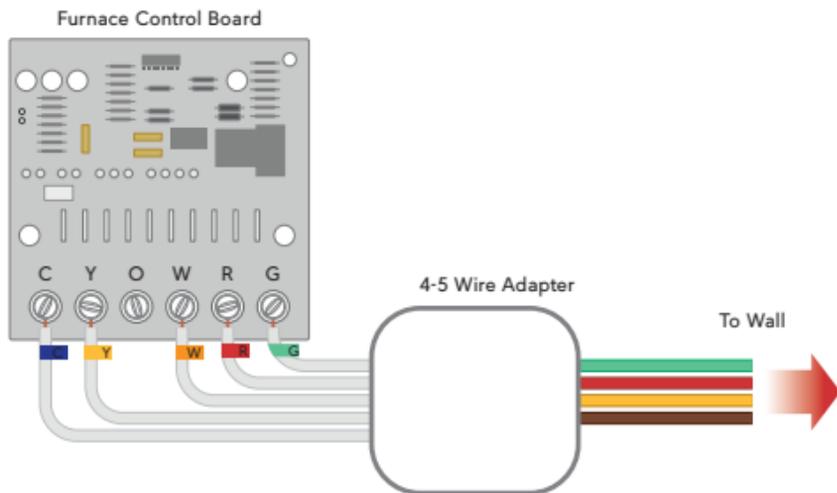
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Connect the adapter

6. Connect the **R**, **G**, **Y**, or **W** wires to the corresponding terminal on the 4 to 5 wire adapter.

7. Connect the five included wires on the other side of the adapter to the open terminals on the control board.

Note: The adapter includes a magnet for easy mounting after installation.



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Removing your old thermostat

8. Before removing the wires from your thermostat terminals, use the included wiring stickers to label your wires.

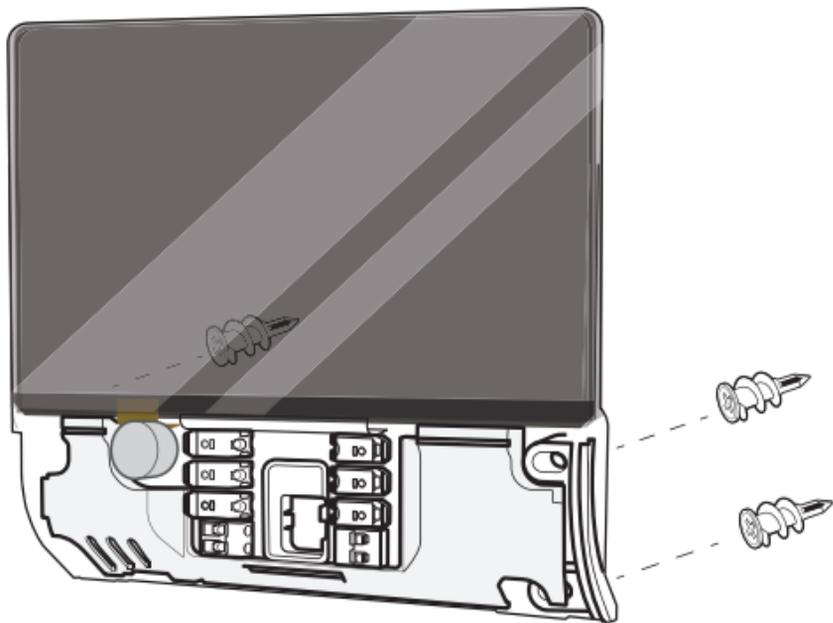
9. Disconnect your old thermostat and remove the backplate

Note: While disconnecting your old thermostat, use drywall-safe tape to secure the wires and keep them from falling back into the wall.

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Installing your GLAS

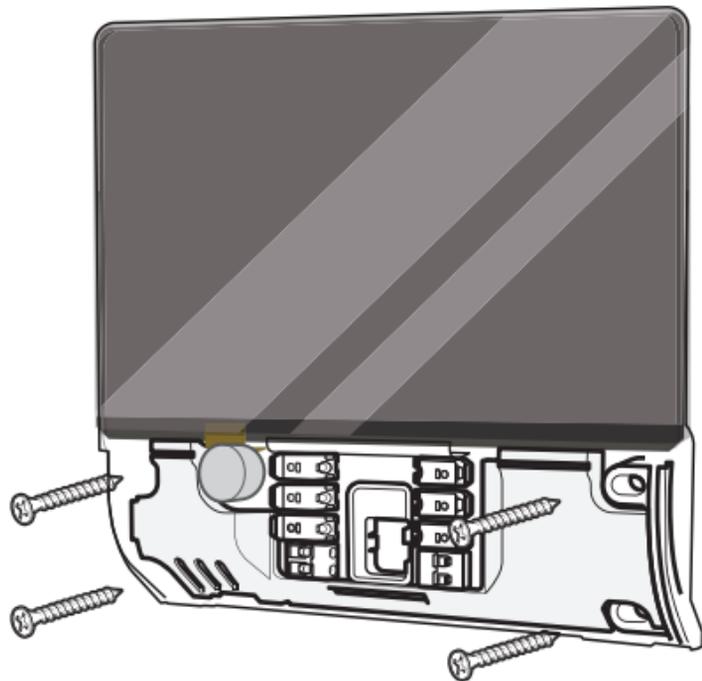
9. Remove the frontplate by pulling the top of the silver cover towards you.
10. Use a level to dry fit your GLAS and mark the wall where you plan to hang the thermostat. Then drill in the drywall anchors.
11. Pull all of the wires through the terminal opening in the GLAS thermostat.



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Attaching your GLAS

12. Loosely attach your GLAS to the wall using the included screws.
13. Use a level to straighten the thermostat and tighten the screws. Do not overtighten.



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Wiring your GLAS

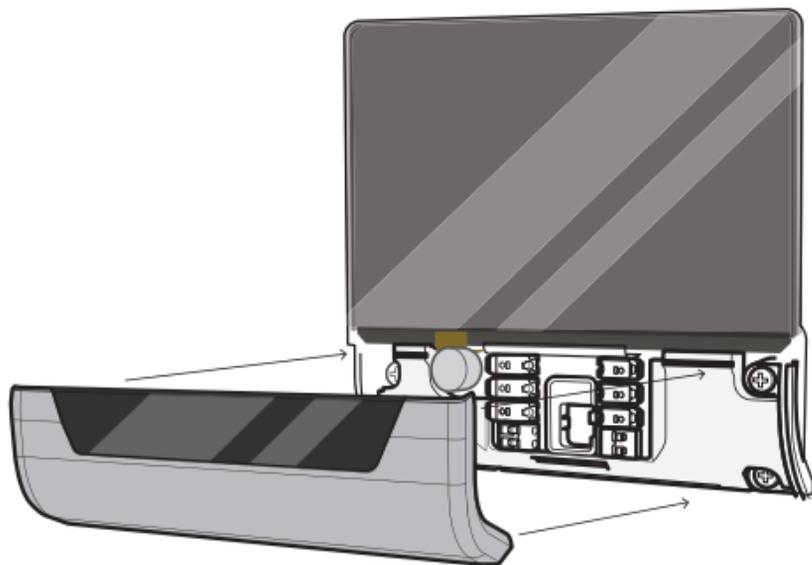
14. Use the picture you took of your old wiring as a reference and connect the wires to the corresponding terminals on your new GLAS. See pages 20-39 for wiring examples.

Note: You do not need to have a wire for every terminal.

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Attach the front plate

15. Make sure any access wire is flush against the wall and press the front plate until you hear a click.



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Powering on your HVAC system

16. Return to your system switch or breaker box to turn the power back on.
17. Once power has been switched on, a screen will appear on the device that shows the detected wiring. Confirm that the wiring is correct and tap on any terminals that may have been incorrectly identified.
18. Follow the instructions on the device screen to complete the setup for your HVAC equipment.

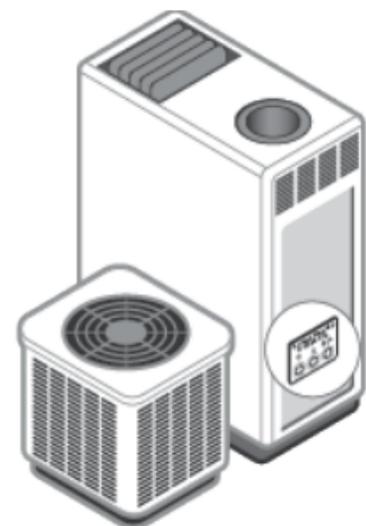
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WIRING DIAGRAMS

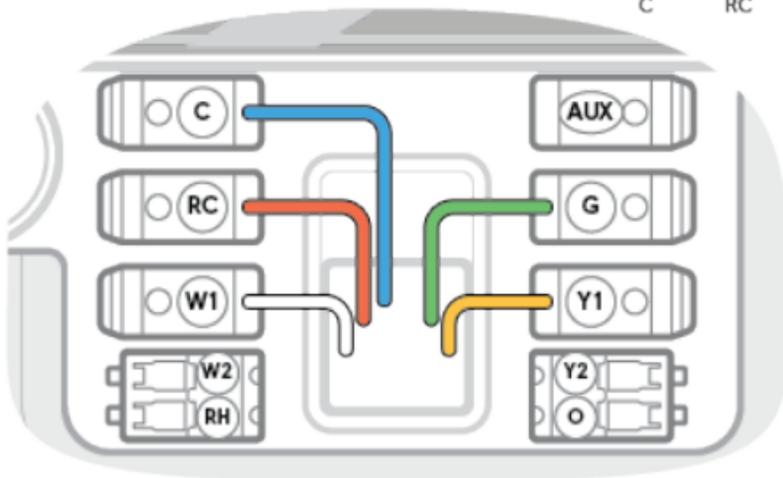
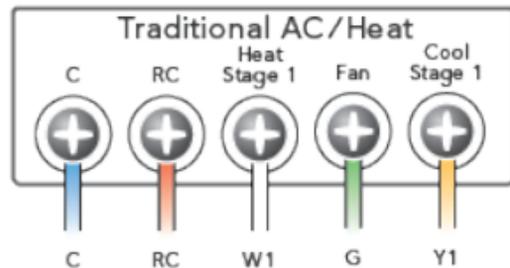
NOTE: Wire colors are for reference only. Not every installation will have wires of the same color. If you are unsure of how to properly install the unit, please contact a licensed electrician or a professional HVAC installer before attempting the installation.

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Traditional AC and Heat

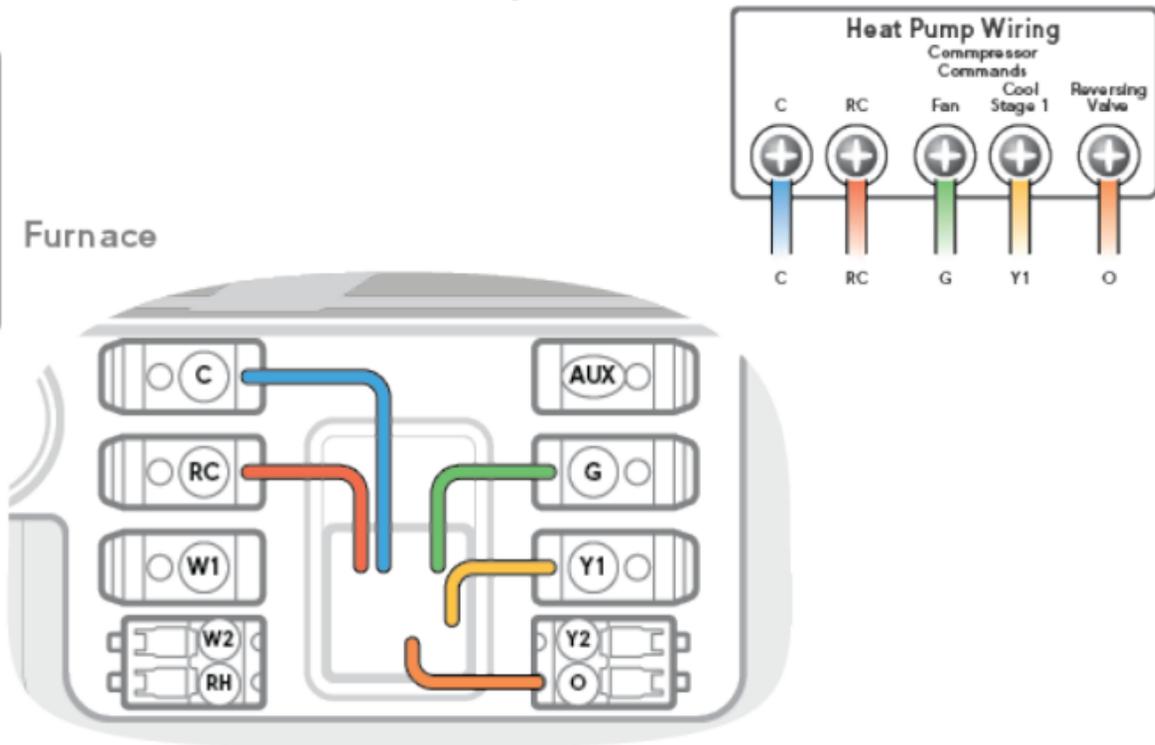
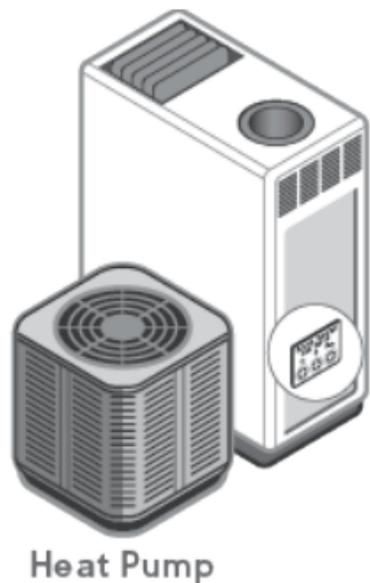


Outdoor AC Unit

Furnace



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Heat Pump

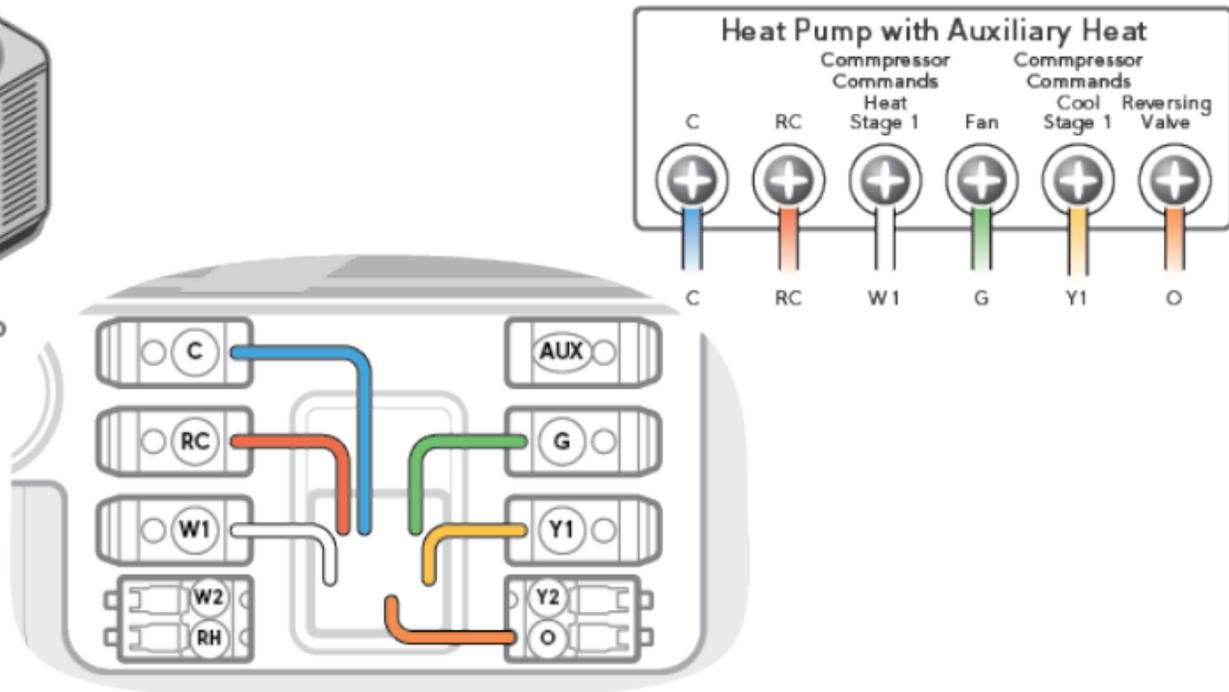


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One Stage Heat Pump with One Stage Auxiliary Heat



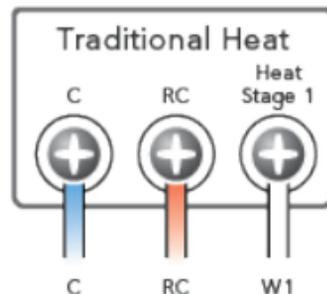
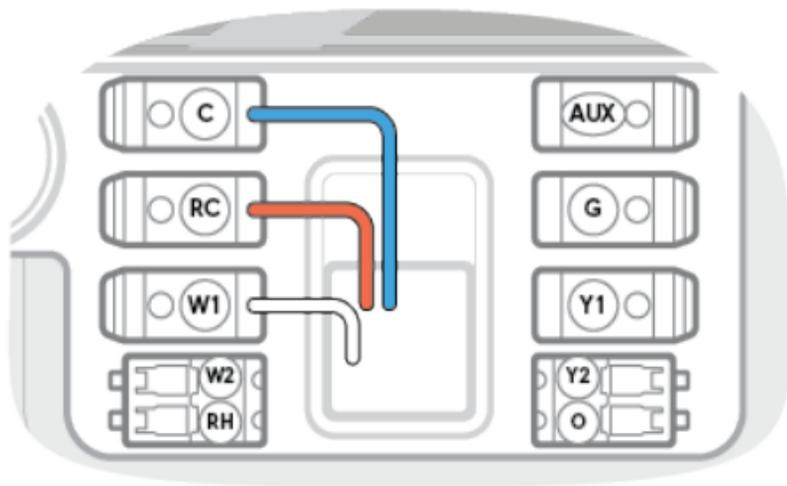
Heat Pump



Preliminary - This information may change
Traditional Heat



Furnace

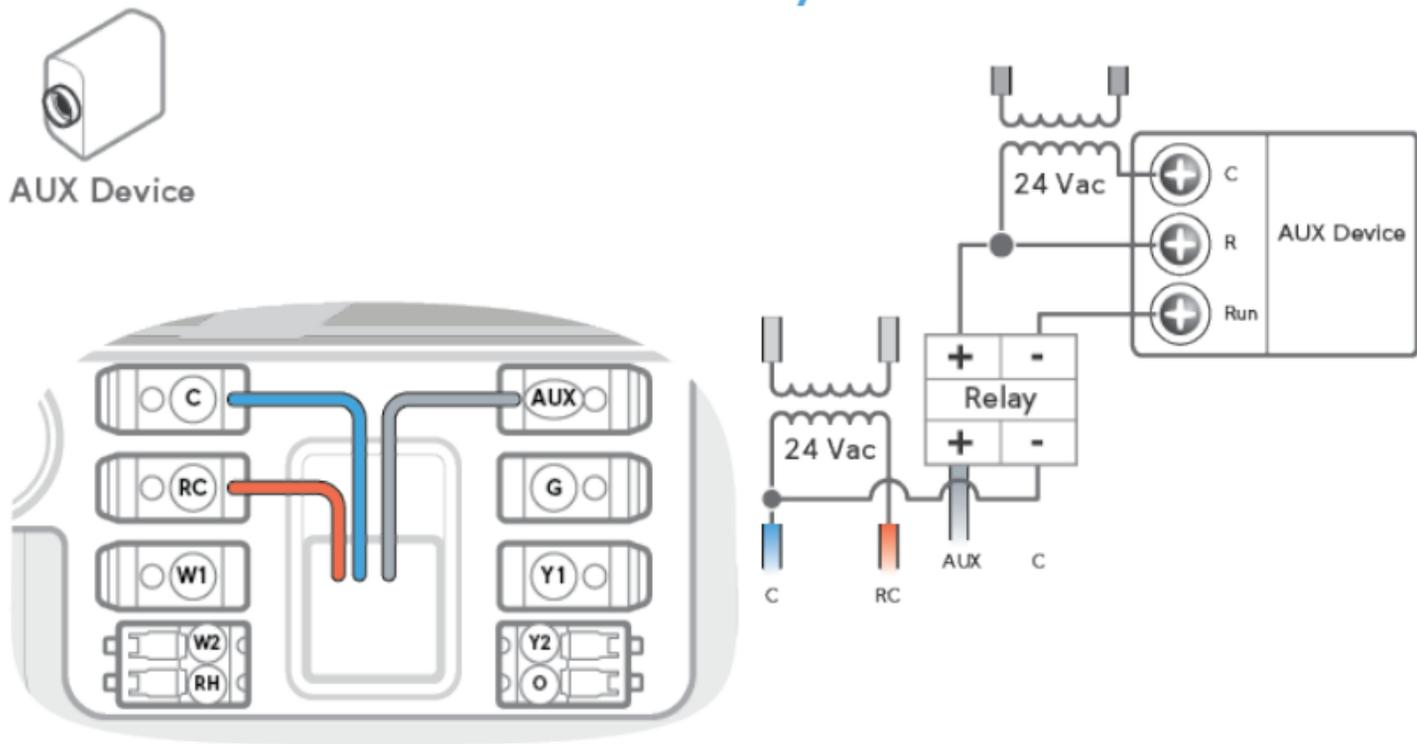


PLEASE NOTE: When there's only one transformer, the RC terminal is used.

Preliminary - This information may change
Traditional AC



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Self-Powered Auxiliary Device

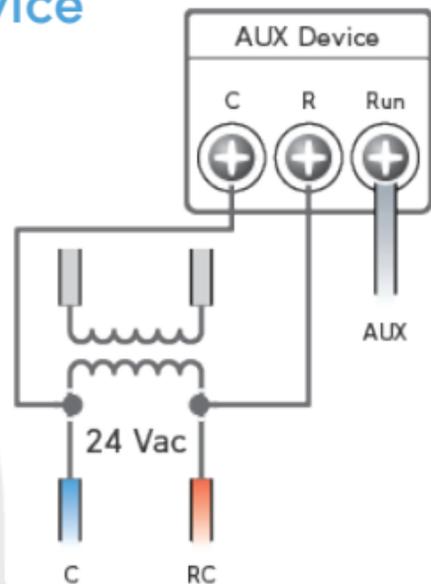
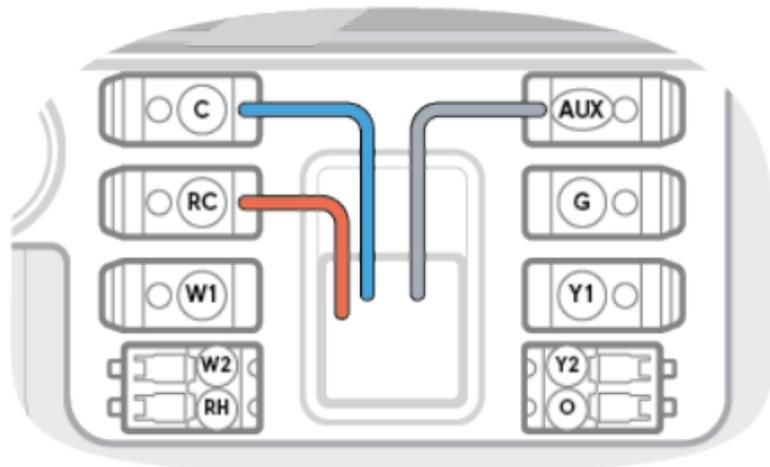


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Furnace-Powered Auxiliary Device

An integrated auxiliary system is built into a furnace or air handler that shares the same power supply as the rest of the system and only requires a single control wire.

Preliminary - This is information may change
Furnace-Powered Auxiliary Device



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Two Wire Auxiliary Device without C Terminal

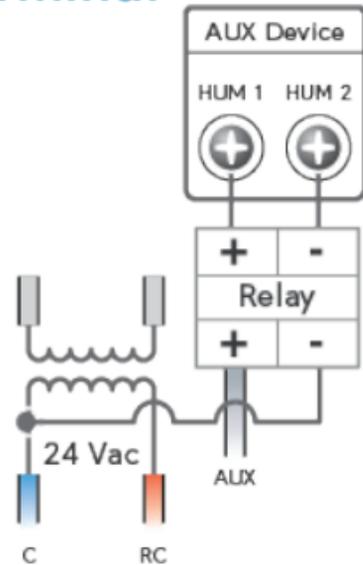
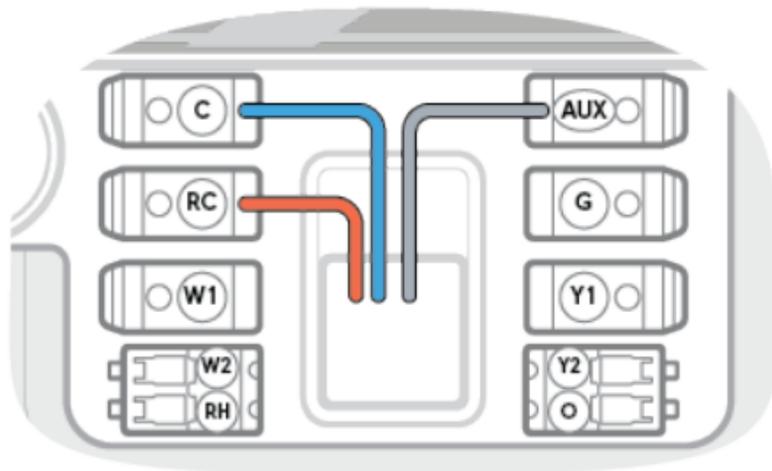
An auxiliary device that has two terminals with the same label (HUM, DEHUM, or AUX) and no C terminal requires a relay pack for operation.

1. Connect the relay pack coil between the auxiliary device and C terminal on your GLAS device.
2. Connect the switch side of the relay pack to the two terminals on the AUX device.

Preliminary - This is information may change
Two Wire Auxiliary Device without C Terminal



Humidifier



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Two Wire Auxiliary Device with C Terminal

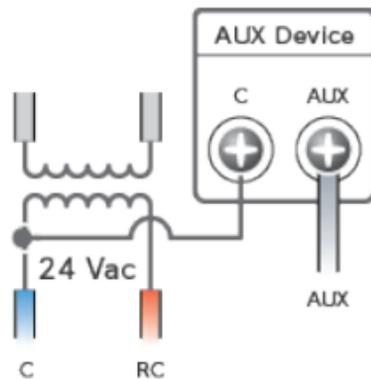
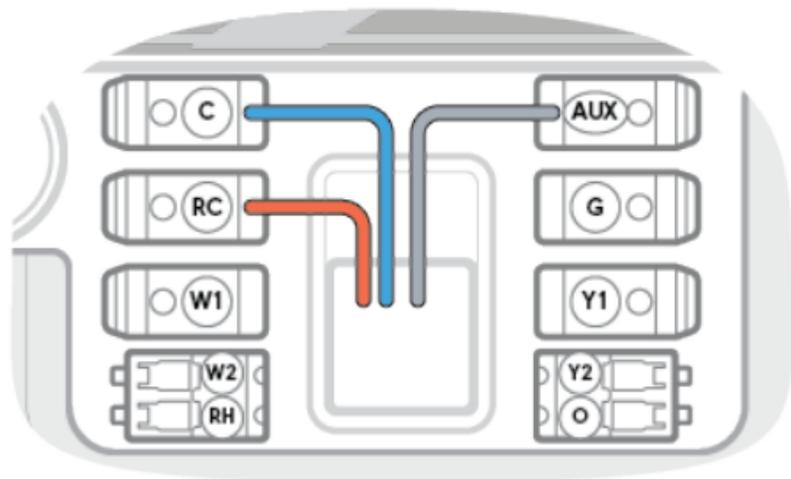
An auxiliary device with one C terminal that does not require a relay pack for operation.

1. Connect the C terminal of the device to the C terminal on the furnace or air handler.
2. Connect the AUX terminal of your GLAS device to the control terminal on the auxiliary device.

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Two Wire Auxiliary Device with C Terminal



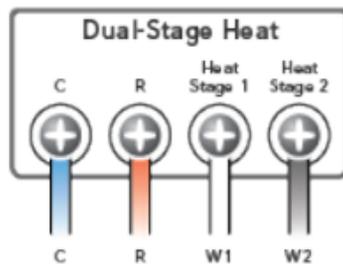
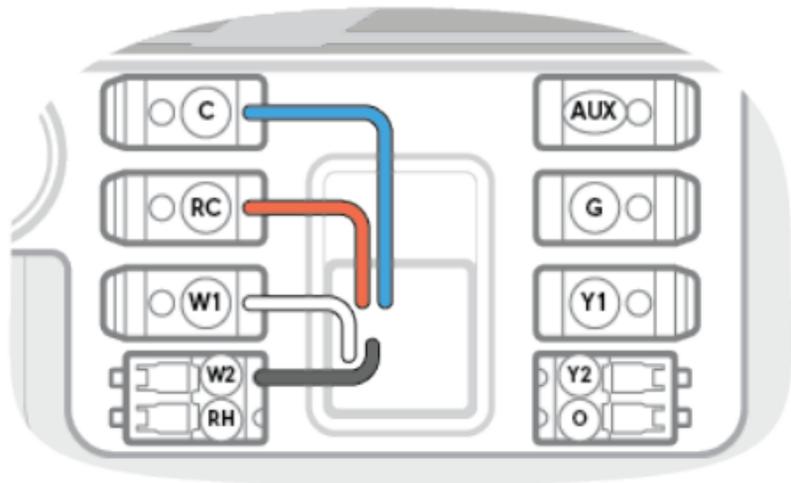
2-Wire AUX Device



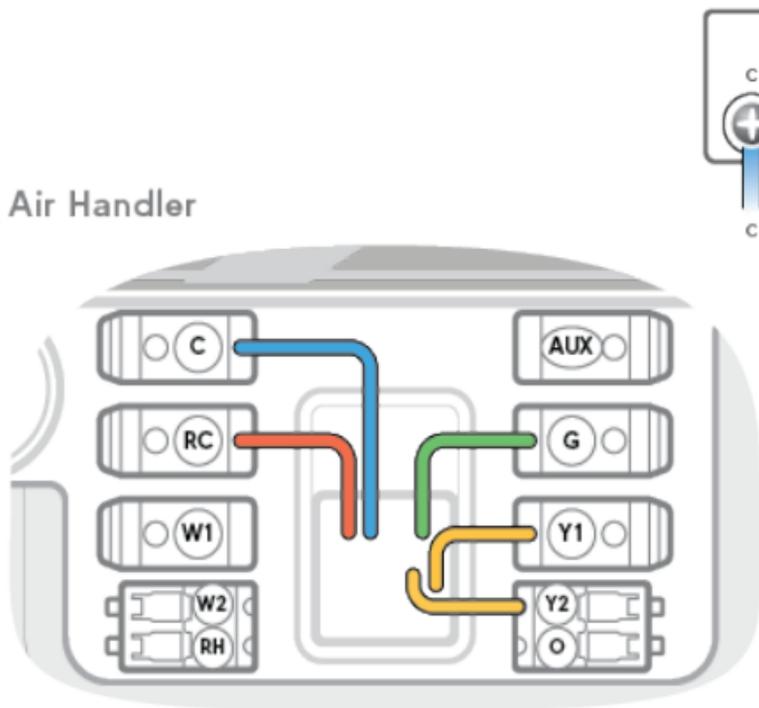
Preliminary - This is information may change
Dual-Stage Heat



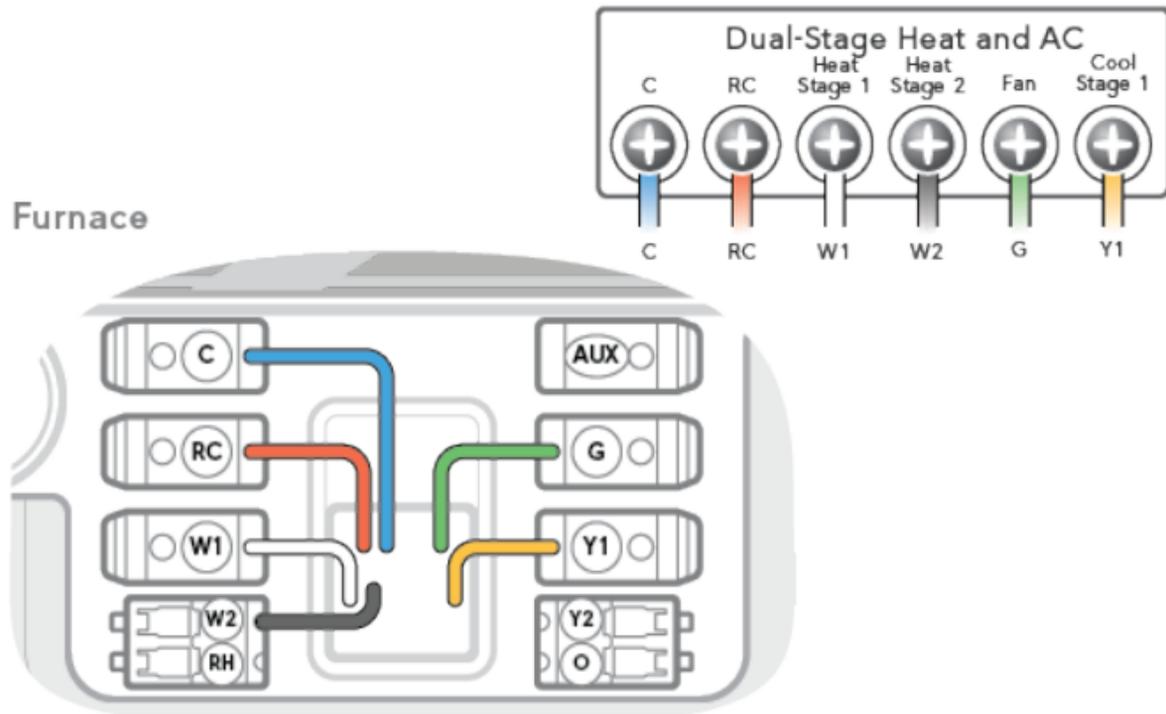
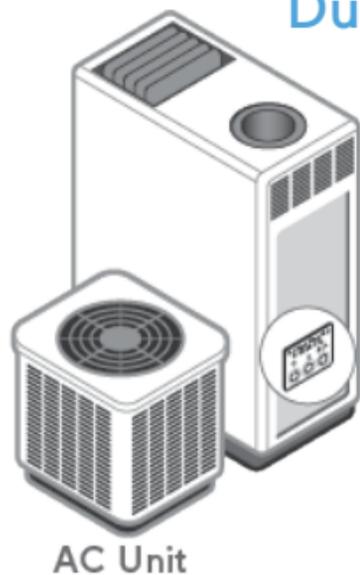
Furnace



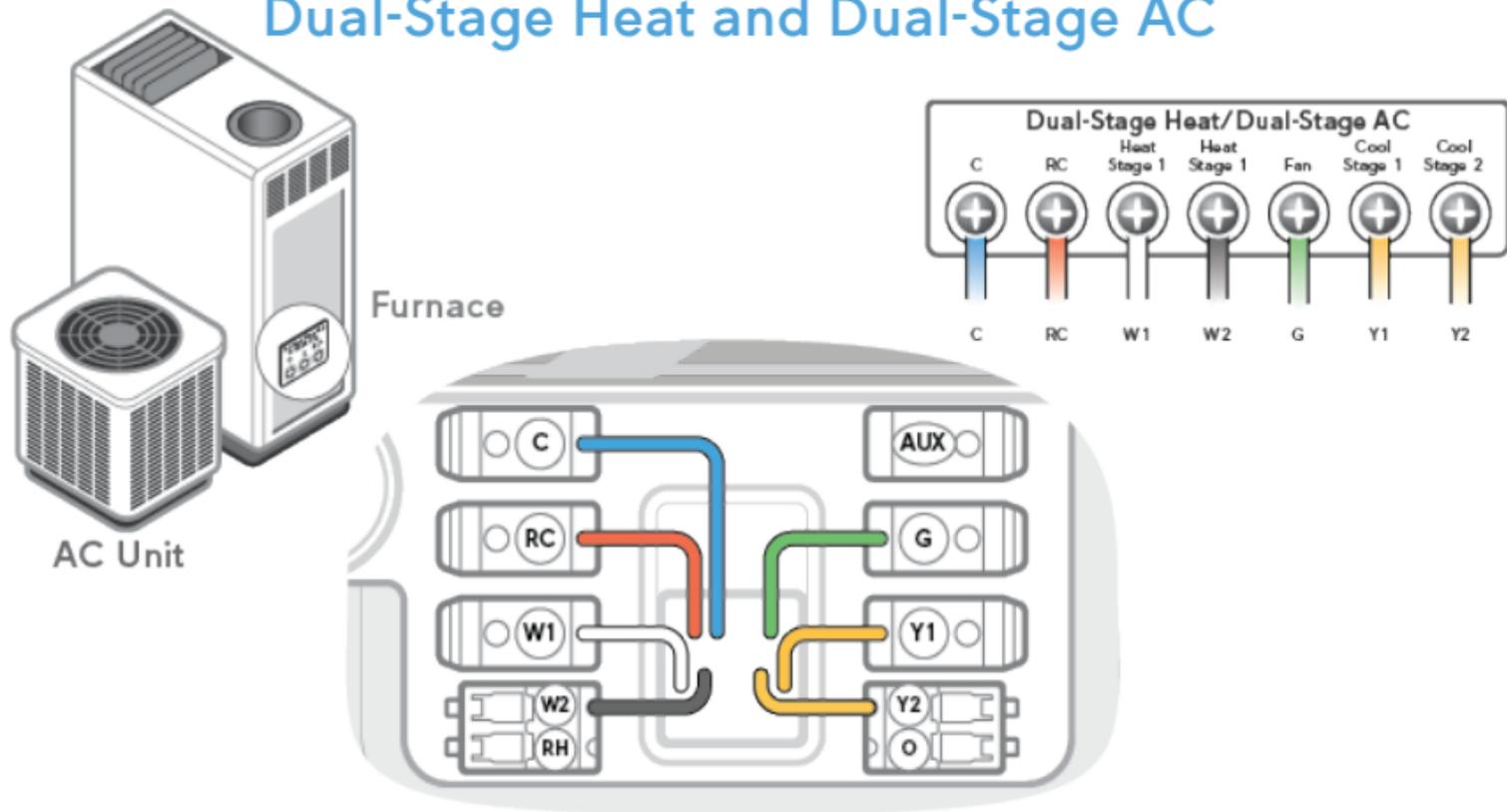
Preliminary - This information may change
Dual-Stage AC



Preliminary - This information may change
Dual-Stage Heat and Traditional AC



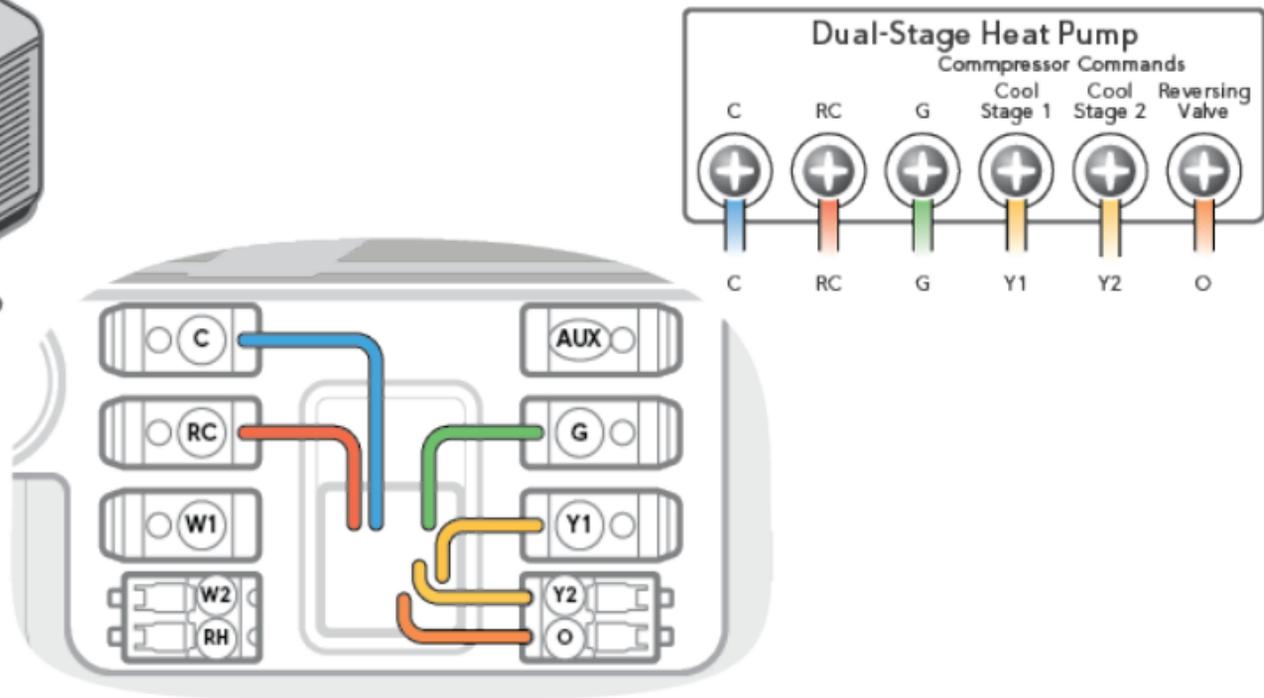
Preliminary - This is information may change
Dual-Stage Heat and Dual-Stage AC



Preliminary - This information may change
Dual-Stage Heat Pump



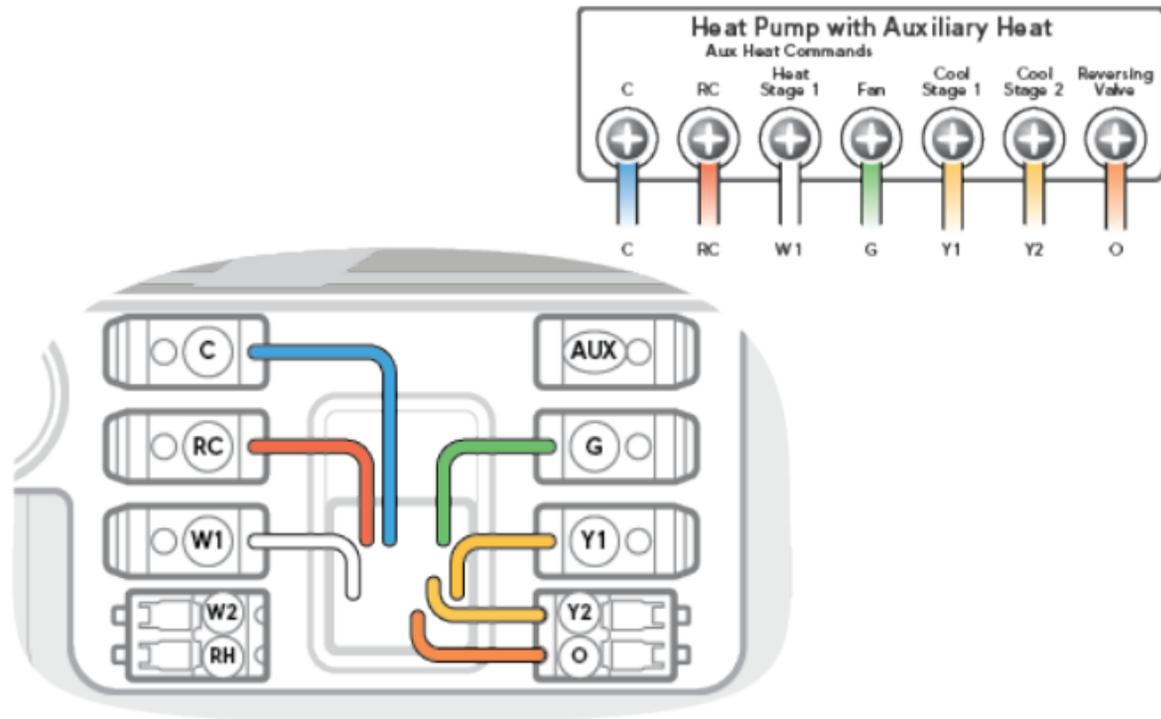
Heat Pump



Preliminary - This is information may change
Dual-Stage Heat Pump with Auxiliary Heat



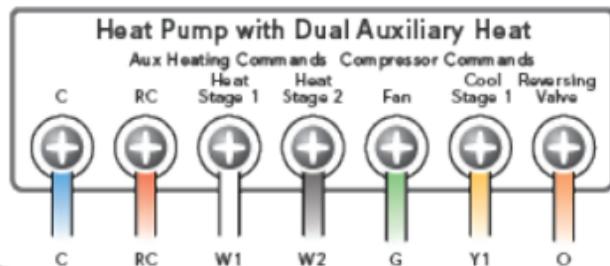
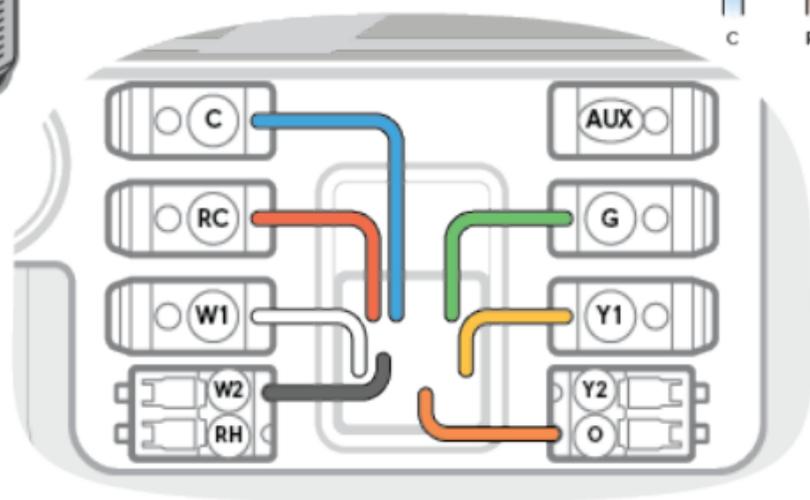
Heat Pump



Preliminary - This information may change
Heat Pump with Dual-Stage Auxiliary Heat



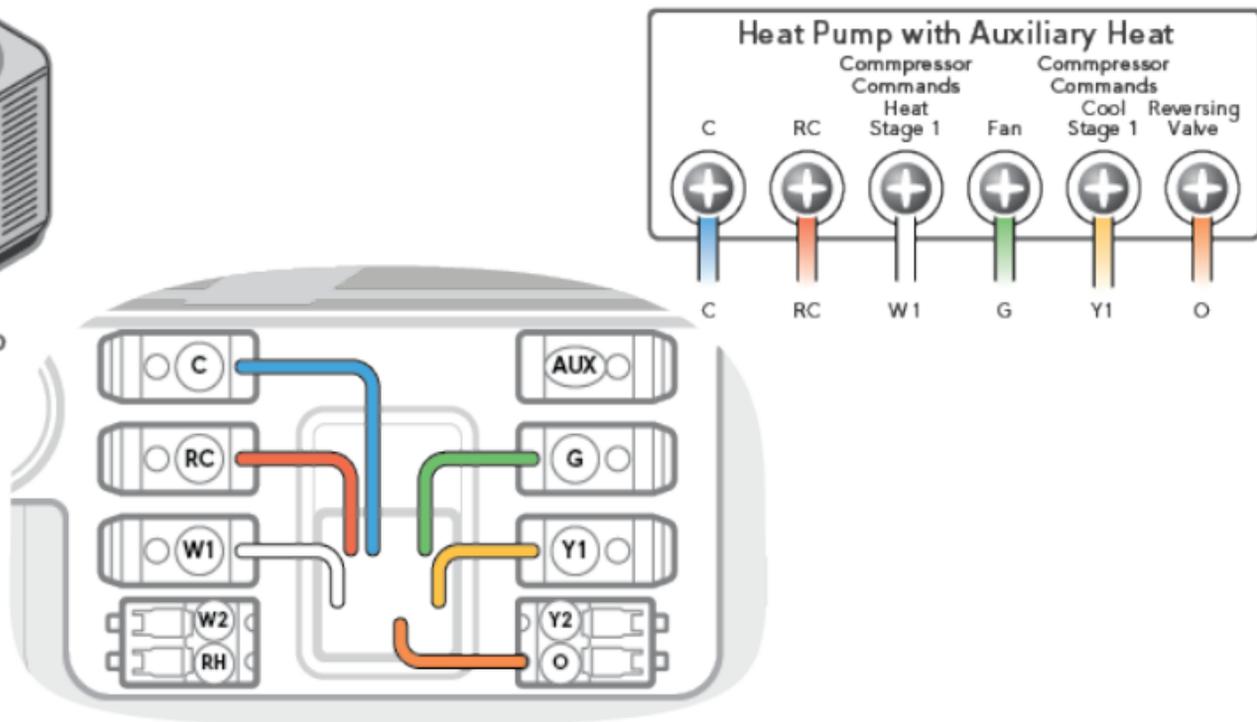
Heat Pump



Preliminary - This is information may change
Heat Pump with Auxiliary Heat



Heat Pump



Preliminary - This information may change

Regulatory information to user

FCC Part 15C

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

2. This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux flux RSS exemptés de licence d'Industrie Can-ada. L'opération est soumise aux deux conditions suivantes:

(1) Cet appareil ne doit pas provoquer d'interférence; et

(2) Cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable de l'appareil.

CAN ICES-3 (B)/NMB-3(B)

RF Safety Statement

· This device complies with the RF safety requirements for Canada and the USA as per RSS-102 and FCC Part 1.1310, RF Exposure radiation limits for the General Population / Uncontrolled Exposure.

· This device shall be installed to maintain a separation distance of 20 cm from the general population.

Changes or modifications not expressly approved by Johnson Controls would void your authority to operate this device.

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LIT-12012975

