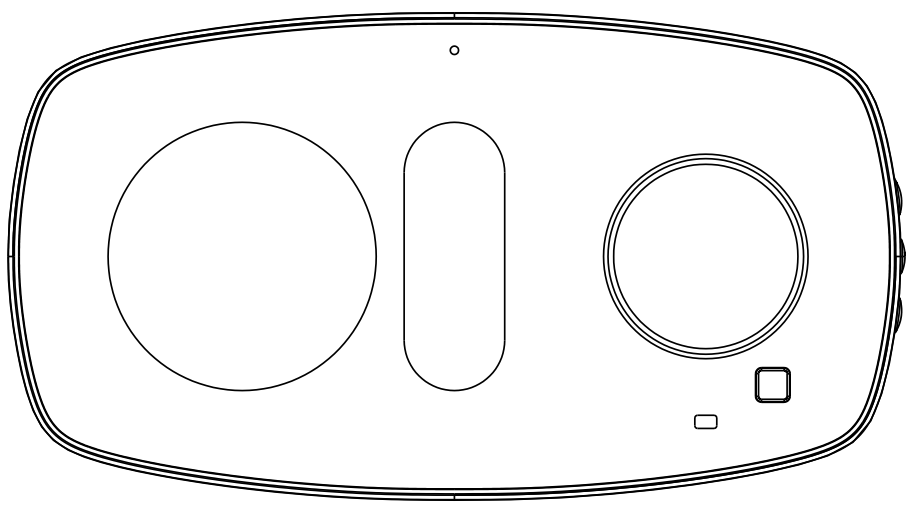
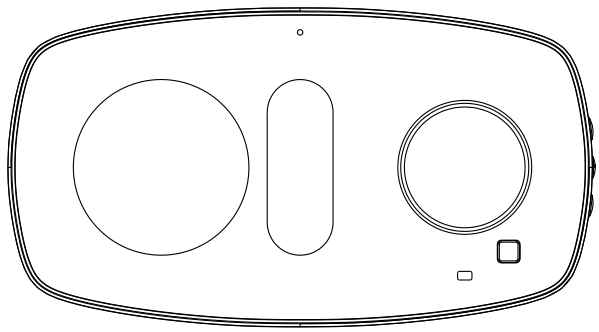


PCT503-W WiFi Multi-stage Thermostat

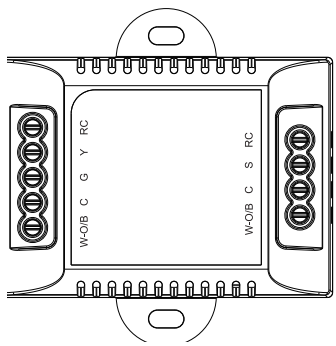
Installation Guide

1 In the box

PCT503 smart thermostat



Wiring Module SWB511 (Optional)



In the box

PCT503 smart thermostat

Installation guide

User guide

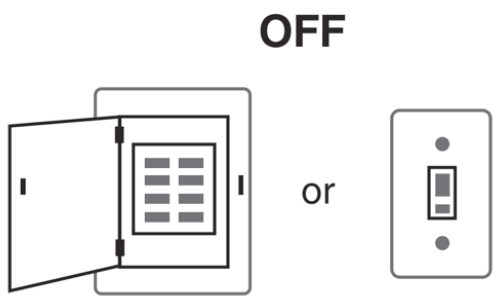
Wire labels

Screws

2 Installation

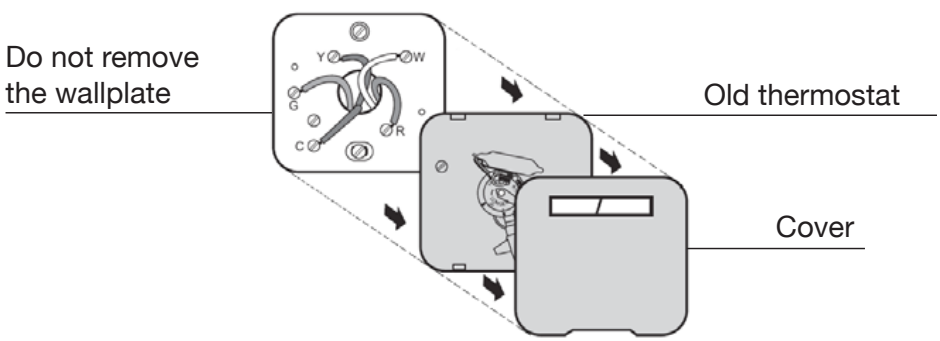
1. Switch off your HVAC system

Before you started, please switch off your HVAC system. Adjust the temperature in your old thermostat to double check the system is off.



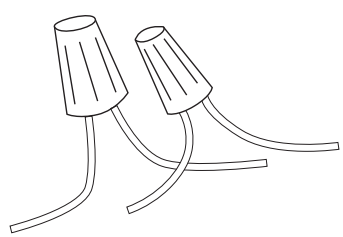
2. Remove the old thermostat

Remove the old thermostat but leave the wallplate with wires attached.



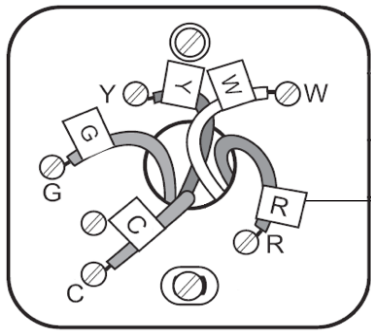
3. Check the old system

The PCT503 is designed for 24VAC with a 2A maximum current. If you find a thick wire with wire nuts, or if your old system is using 120v or higher voltage, it will not be compatibled with PCT503.



4. Label the Wires with Tags

Use the tags provided to label the wires to help you remember.



Label the wires using wire labels as you disconnect them

Terminal designation:

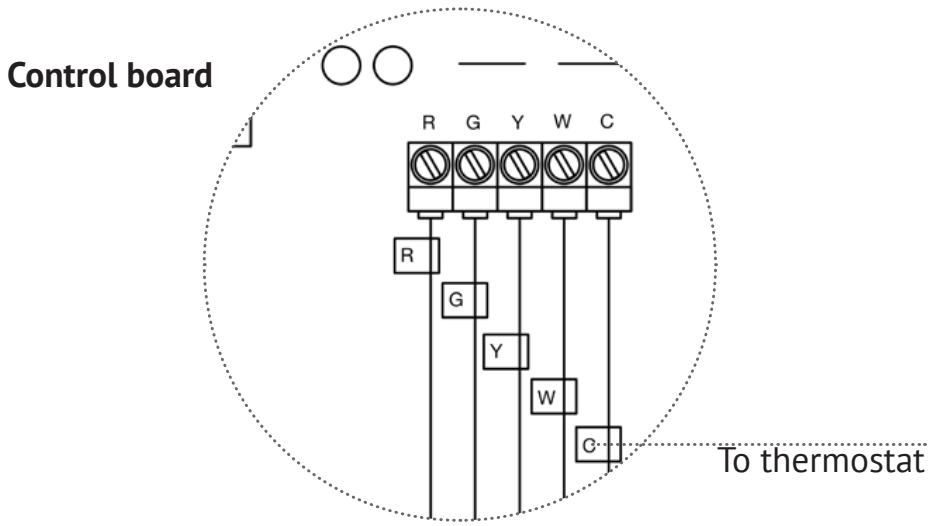
Terminals	What it means
RC	24VAC primary for cooling
RH	24VAC primary for heating
W1	1st stage Primary heating relay / Aux heat
W2	2nd stage Secondary heating relay / Aux heat
Y1	1st stage Primary cooling compressor contactor
Y2	2nd stage Secondary cooling compressor contactor
G	Fan relay
C	24VAC common*
O/B	Changeover valve for heat pumps
S	Wiring Module Connection
*	Multiple use reserved, including but not limited to: emergency heat line, humidifier control

Note: Check your wires, see if there's C-wire. If you have the C-wire, skip the step 5 and go to step 6 directly, if you don't have the C-wire, go to step 5.

5. Install the Wiring Module (Optional)

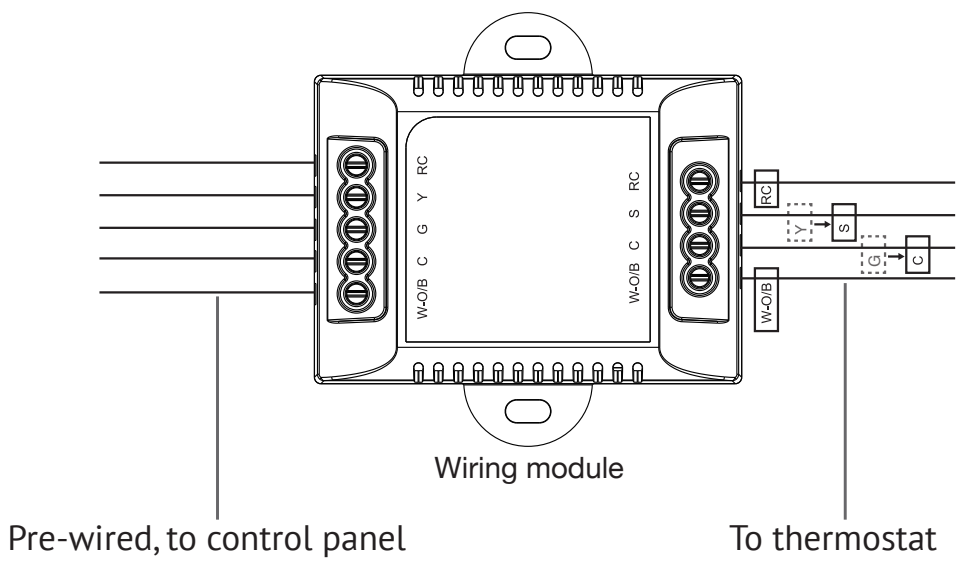
The C-wire provides power to the smart thermostat, if you don't have a C-wire in your old system, you need to install the wiring module to use the exiting wires to power your thermostat.

1. Find the control board of your HVAC system, use the tags provided to label the wires from the control board to the thermostat.

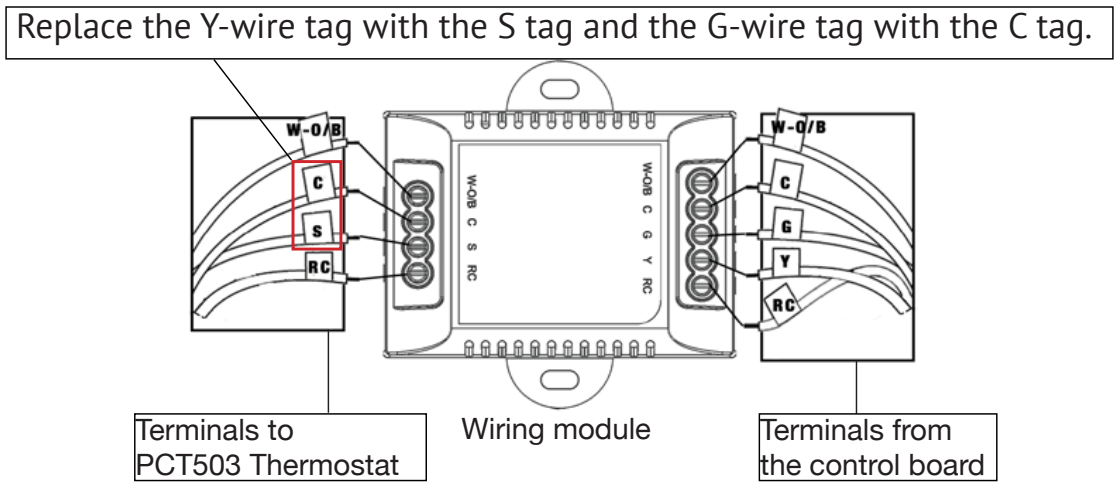


2. Disconnect the R/RC, W-O/B, Y, G wires from the control board and reconnect them correspondingly to the 4 terminals side of the wiring module. For Y-wire and G-wire, you can connect the Y-wire to S-terminal, G-wire to C terminal, then change the label of the Y-wire to the S-wire, the G-wire to the C-wire. Take a picture of your wires with new label to help you remember.

3. Generally the control board will have R, G, Y, W, C terminal, connect the pre-wired side of the wiring module (5 terminals) to the corresponding terminals.



4. Put back your control board.

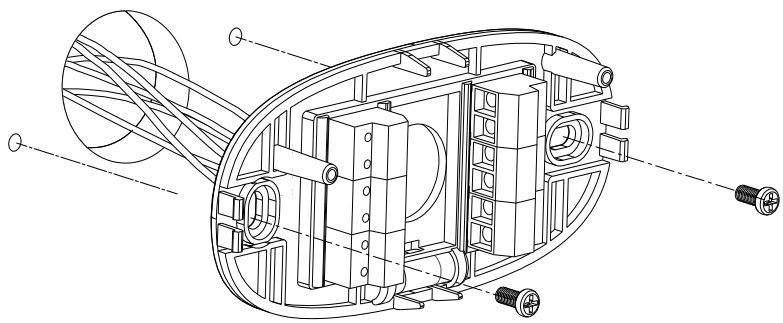


6. Remove the old thermostat base

Unscrewing the old thermostat base from the wall, gently pull it out and ensure wires not fall back into the hole in the wall.

7. Attach the base of PCT503 to the wall

Bundle and insert wires through the hole in the base of the PCT503, then attach the base to the wall with the screws.

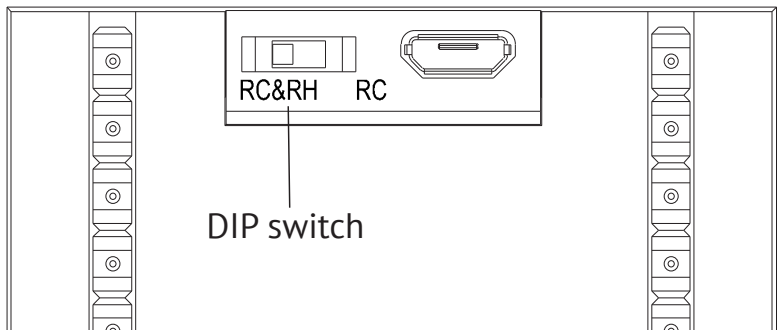


8. Connect Wires

Connect wires to the corresponding terminal in the base. If you have installed a wiring module in step 5, use the picture to help you remember the name of wires. Take a picture of the wires when you done to help you remember, you will be asked for the wirings in the setup wizard.

9. Switch the DIP switch

Switch the DIP switch in the back of the thermostat to RC if you have connected both RC-wire and RH-wire to the wallplate, otherwise switch it to the RC&RH side.



10. Setup the mobile app

1. Connect your mobile phone to your home Wi-Fi network.
2. Install OwonThermostat mobile App from Google play store or Apple app store,
3. Register an account using the mobile app:
   i. Launch the Owonthermostat mobile app,
   ii. Tap "Configuration Wizard" on the bottom right,
   iii. Fill in the required field and tap "start" to complete the register process,
   iv. Use the link sent to your email address to activate your account,
   v. Now you have successfully registered your account.
4. Prepare for the network configuration:
   i. Login to your account in the mobile app,
   ii. Tap the "+" icon on the main interface,
   iii. Tap the 'scan' ( ) icon and scan the QR code on the back of the thermostat, the MAC address will be filled in automatically on the screen, then tap 'OK',
   iv. follow the instruction and proceed to the 'network configuration' interface, enter the password of the Wi-Fi network, then wait for the setup of the thermostat to the network session.

11. Attach the PCT503 to the base

Gently push the PCT503 to the base until it clicks.

12. Power on your system

Congratulation, you are now finished with the installation. Please power on your HVAC system.

13. Setup the thermostat

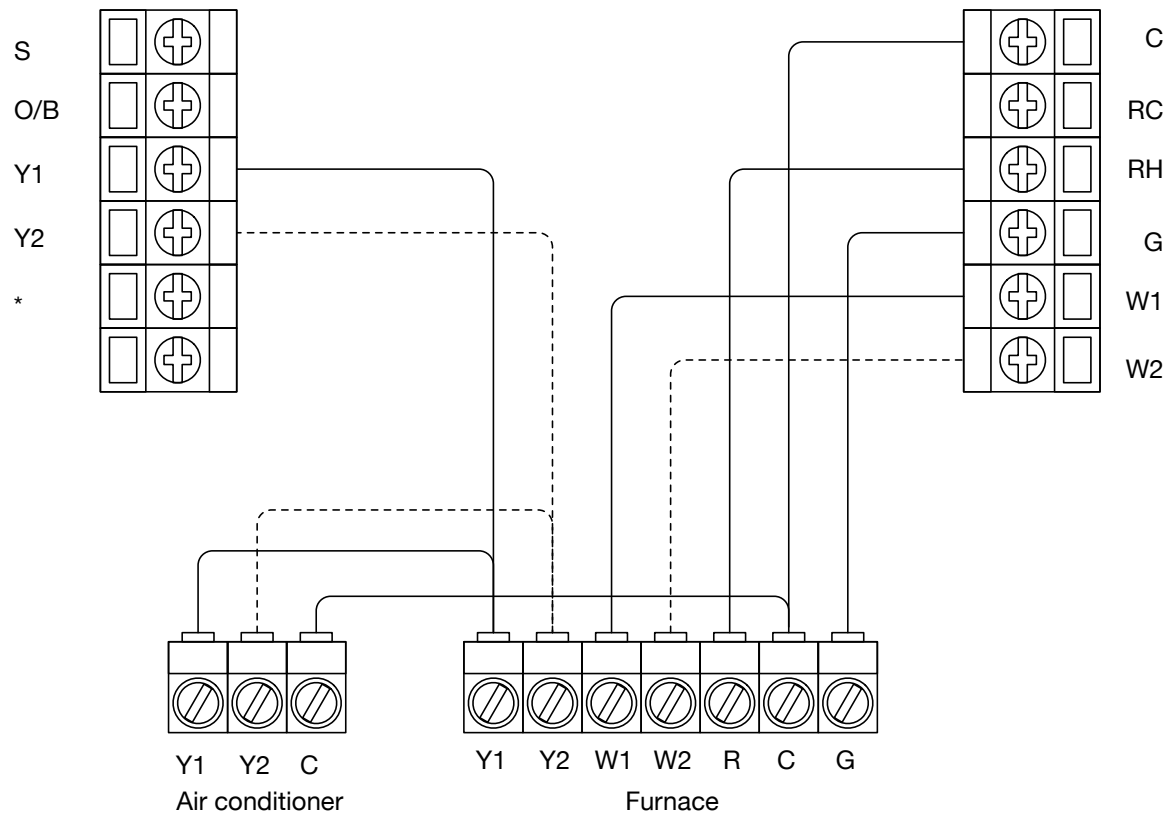
1. Follow the wizard to set up your smart thermostat. You can use the picture you take to help you remember the wiring when asked.
2. In ‘Wi-Fi config’ interface, select "Start," and in the meanwhile, tap 'Start' on the mobile app side. The thermostat will obtain the SSID and password information automatically and connect to the Wi-Fi network.
3. Tap OK to complete the process.

After the network is successfully connected, please finish the rest set up wizard to start using the thermostat. Have fun!

3 Wiring diagrams

Below will show your the wiring diagrams for common HVAC equipments.

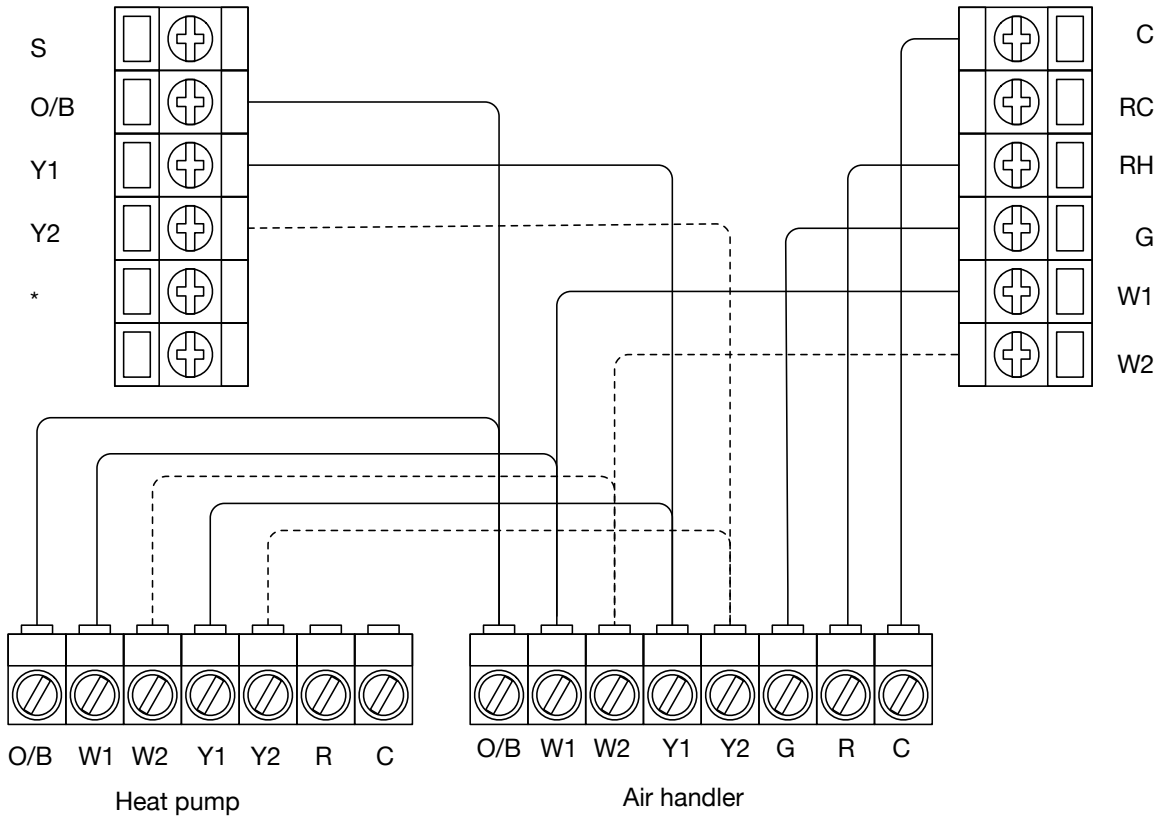
Conventional heating and cooling system



- - - - - - - - - - - - - - - For 2 heat and cool if applicable.

Remove the jumper for RC or RH, switch the DIP switch in the back of the thermostat to RC if you have connected both RC-wire and RH-wire to the wallplate, otherwise switch it to the RC&RH side.

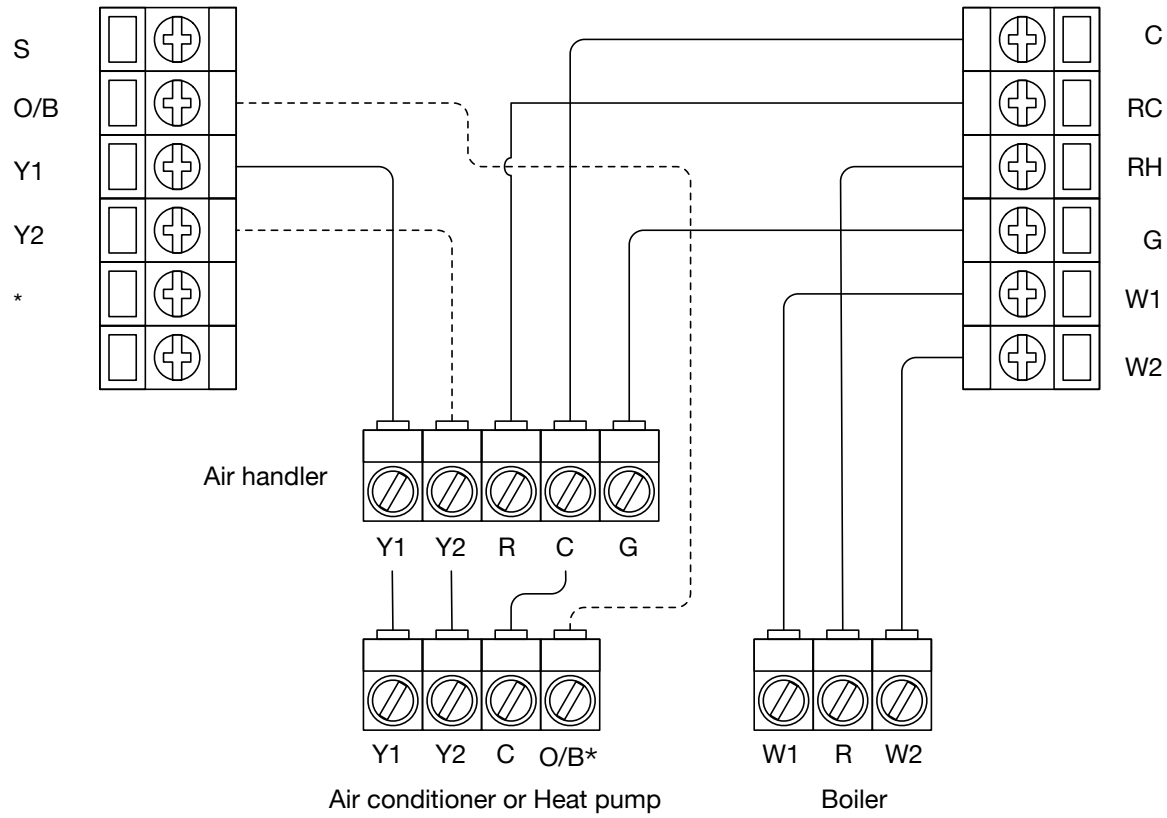
Heat pump (air or geothermal) with auxiliary heat



- - - - - - - - - - - - - - - For 2 heat and cool if applicable.

Remove the jumper for RC or RH, switch the DIP switch in the back of the thermostat to RC if you have connected both RC-wire and RH-wire to the wallplate, otherwise switch it to the RC&RH side.

Boiler or radiant system with air handler and conventional cooling or heat pump



- - - - - - - - - - - - - - - For 2 heat and cool if applicable.

* For heat pump only.

Remove the jumper for RC or RH, switch the DIP switch in the back of the thermostat to RC if you have connected both RC-wire and RH-wire to the wallplate, otherwise switch it to the RC&RH side.