

Installation Guide



Wiser Air™ Thermostat Guide for Residential Users



Safety Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this installation guide or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result** in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result** in death or serious injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Before You Start

Read the information in this section in its entirety before you begin the installation of Wiser Air.

REQUIRED TOOLS	PROVIDED MATERIALS
<ul style="list-style-type: none"> • Wire stripper • Drill • Screwdriver • Level 	<ul style="list-style-type: none"> • Wiser Air front • Wiser Air back plate • Wiser Air trim plate • Screws (x2) and anchors (x2) • Wire extender • Installation guide

Preparation

1. Ensure Wiser Air is suitable for the environment. Check the voltage compatibility. A thick wire (110V or 220V) is not compatible with Wiser Air, two thin wires (24V) are needed. Acceptable wire gauge for use with Wiser Air is solid 16 to 24 AWG (1.31 to 0.205mm²).
2. Disconnect power to the air conditioning and/or heating system.
3. Use a properly isolated voltage sensing device to confirm power is off.
4. Wiring must conform to all building codes, regulations, and ordinances as required by local and national code and regulation authorities.
5. Ensure all electrical loads (air conditioners, heating elements, etc.) that will be controlled by Wiser Air are connected to appropriate fuses to prevent overload.

Location

- If this is a new installation, install Wiser Air five feet above the floor surface in accordance with applicable building codes.
- Install Wiser Air in areas with frequent occupancy and airflow.
- Avoid installing Wiser Air in locations near heating/cooling devices.
- Avoid installing Wiser Air in areas with direct sunlight. The screen may become unreadable due to direct sunlight or reflection from windows, and temperature regulation may be affected.
- Never install Wiser Air behind doors, near corners, near air vents, or in areas with high dust concentration.

Mounting

1. Keep the front of Wiser Air separate from the back plate before mounting.
2. Align the Wiser Air back plate against a wall using a level and mark the placement of the mounting holes.
3. Drill holes and install wall anchors at the marked locations. If a stud is present no anchors are necessary. Always check for wires and pipes before drilling.

Cleaning and care

1. Use a soft, lint-free dry cloth for cleaning.
2. Avoid getting moisture in openings.
3. Do not use cleaning products or compressed air.
4. Never use tools directly on the touchscreen.
5. Never use paint on Wiser Air.
6. Do not drop or crush Wiser Air, or allow Wiser Air to come into contact with liquids.
7. Do not use a damaged device (such as one with a cracked screen) as it may cause injury.
8. Functionality guarantees are no longer valid if the glass on the screen is broken.

Wiser Air product support

The Customer Care Center (CCC) is your single point of contact for information about your Wiser Air. Qualified personnel are available to answer your customer service and technical support questions.
PHONE: 1-855-55WISER (1-855-559-4737)
E-Mail: wiser_support@schneider-electric.com
Web: www.wiserhome.com/support

Installation Procedure

⚠ WARNING

WARNING MERCURY HAZARD

If replacing an existing thermostat that uses a sealed tube of mercury, do not dispose of the tube in the trash. Contact local waste management authorities for information on the safe disposal or recycling of the mercury.

Failure to safely dispose of the mercury can result in exposure leading to serious health damage.

Optional trim plate mounting

If you are replacing an existing thermostat you have the option of using the provided Wiser Air trim plate. If the hole left by the removal of the existing unit is larger than the back plate of the Wiser Air thermostat, use the optional trim plate. Run the wires and anchor the mounting screws through it while attaching the back plate to the wall (Fig. 2). Make sure to attach the trim plate with the central hole oriented upwards.

Installing Wiser Air

1. Disconnect power to the HVAC system by turning off the breaker.
2. Remove the existing thermostat's panel from the wall without disconnecting the wiring.
3. Take a picture of the wiring of the terminal connections. If necessary label the wires to prevent confusion (Fig. 1).

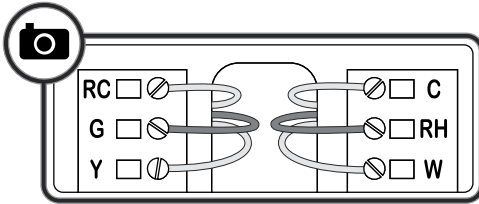
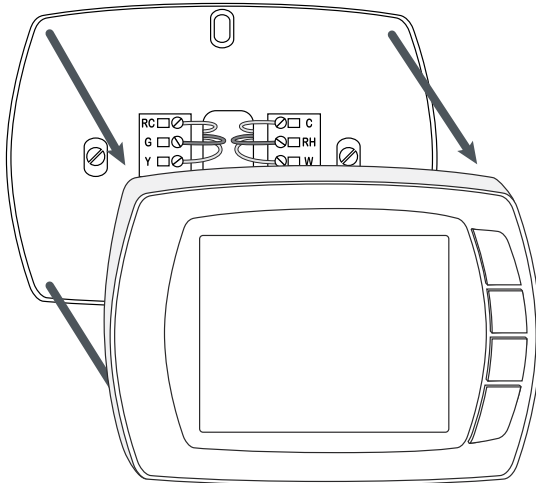


Figure 1. Removal of existing thermostat and photograph of wiring.

TIP: To verify the compatibility of your unit – please visit www.wiserhome.com/compatibility

TIP: Before proceeding further determine if you require the optional trim plate.

TIP: Before proceeding further check if you require a wire extender (see Appendix).

4. Disconnect the wiring of the existing thermostat and remove the back plate.
5. Pull the wires 6in (15cm) out of the wall if they are not already pulled out.
6. Insert the wires through the central hole in Wiser Air back plate.
7. If required, strip each wire 0.25in (0.6cm) from the end (does not apply to replacing pre-existing units).
8. Connect the wiring to the Wiser Air back plate, matching the terminal connections to those in the photograph of the existing thermostat's wiring or according to the wiring requirements of your HVAC system.

TIP: See the Wiring terminals section (p.9) in this guide before going further, or contact Wiser Product Support for assistance if necessary.

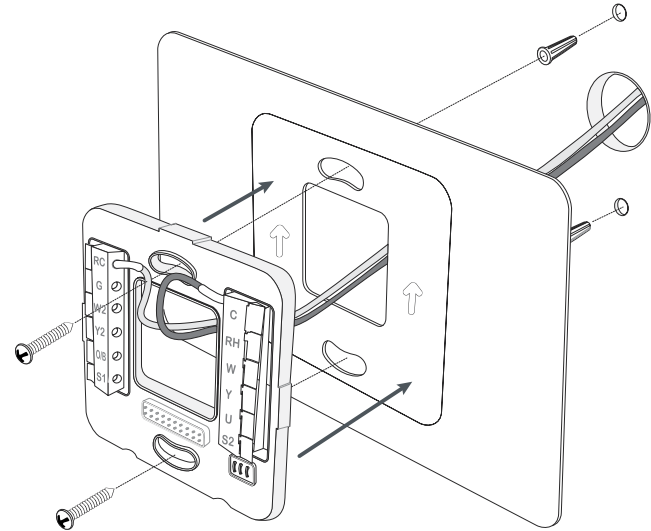


Figure 2. Wiring connection and back plate attachment (optional trim plate shown).

9. Gently push the wiring back into the hole.
10. Attach the Wiser Air back plate to the wall using the provided screws in the mounting holes in the top and bottom (Fig. 2).
11. Attach the front of Wiser Air to the back plate, making sure that the front is oriented correctly so that the terminal pins on the front panel match the pins on the back plate. Do not use excessive force on the Wiser Air as this can damage the terminal pins (Fig. 3).

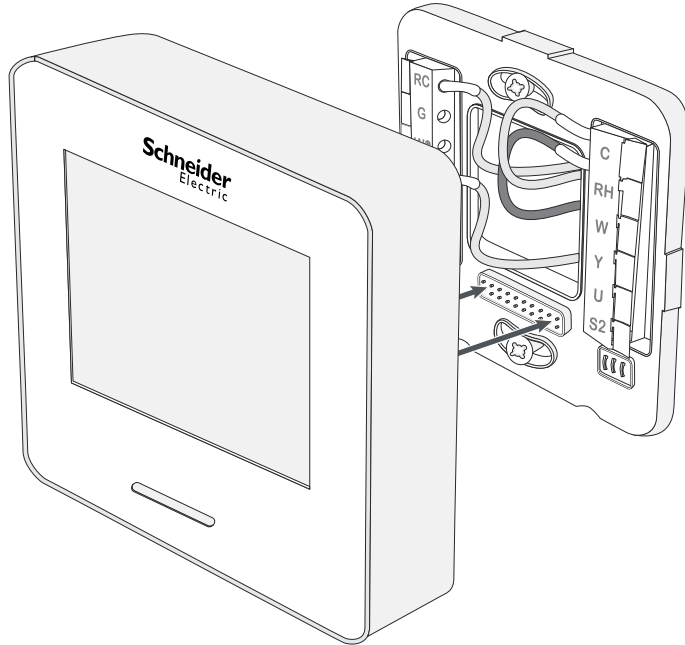


Figure 3. Front to back plate mounting.

12. Remove the protective plastic cover from the LCD touchscreen.
13. Reconnect power to the HVAC system.

Wiring terminals

This section describes the procedure for connecting the wiring to the back plate. Figure 4 shows the Wiser Air backplate configuration.

When replacing an older thermostat, refer to the photograph of the original wiring taken in **Step 3** of the installation procedure to connect the wiring to the correct terminals. See the caution below.

For a new installation, consult the documentation for your HVAC system to determine the correct wiring terminal connections. Match the wiring labels to the terminal labels. For more information or assistance in determining the correct wiring for your HVAC system, see the HVAC wiring help sections on the Wiser Air website (www.wiserhome.com/support) or contact Wiser Air Product Support.

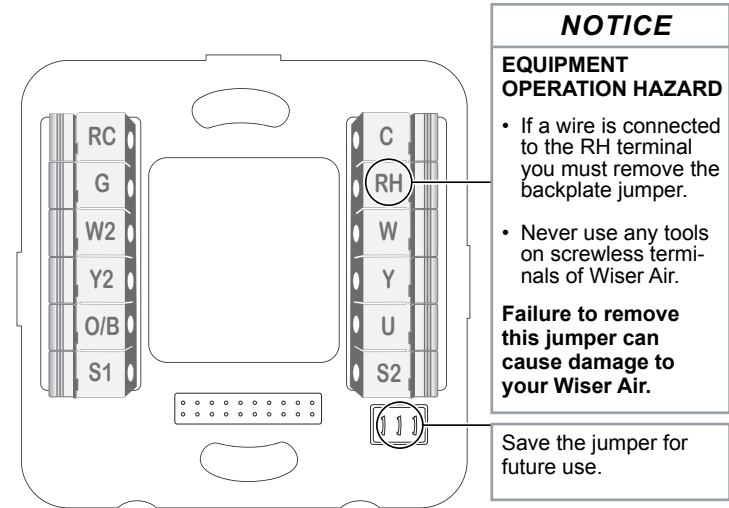


Figure 4. Wiring terminals and jumper.

TIP: If you are unsure whether your wiring requires the use of the Wisier Air jumper, remove the jumper and test the system to see if the heating comes on. If it does, your installation is complete. If it does not, contact Wisier Air customer support.

Troubleshooting

If you experience difficulties with your Wisier Air thermostat setup, proceed as follows:

- Disconnect power.
- Check that the front plate of Wisier Air is properly connected to the back plate.
- Check that the wires connected to the terminals on the back plate are properly attached.

Terminal Descriptions

Connection	Specification	Notes
RC	Cool 24V power supply	Required
G	Fan relay	
W2	Heating relay (Stage 2)	
Y2	Compressor relay (Stage 2)	
O/B	Cool / Heat active reversing valve	
S1	Outside air sensor	
C	Common	Required
RH	Heat 24V power supply	Only if RC is connected
W	Heating relay	
Y	Compressor relay	
U	Universal (W3)	
S2	Outside air sensor	

Touchscreen Display

Installation wizard

When installing a new Wisier Air for the first time, an installation wizard will launch to guide you through the initial configuration and registration of the device as soon as the device is connected. Follow the instructions shown. For more information, go to: www.wiserhome.com/support.

TIP: For on-the-go control of your Wisier Air thermostat, download the app from the App Store or Google Play.



Figure 5. Wisier Air welcome screen.

Smart Sense Display

Wisier Air has a built-in advanced motion sensor. When it detects a person in proximity, it will show a limited display.

In order to conserve energy, the display is inactive when no presence is detected by the sensor.

Interactive display

When a user interacts with Wisir Air's touchscreen, the display will change to show the following information.

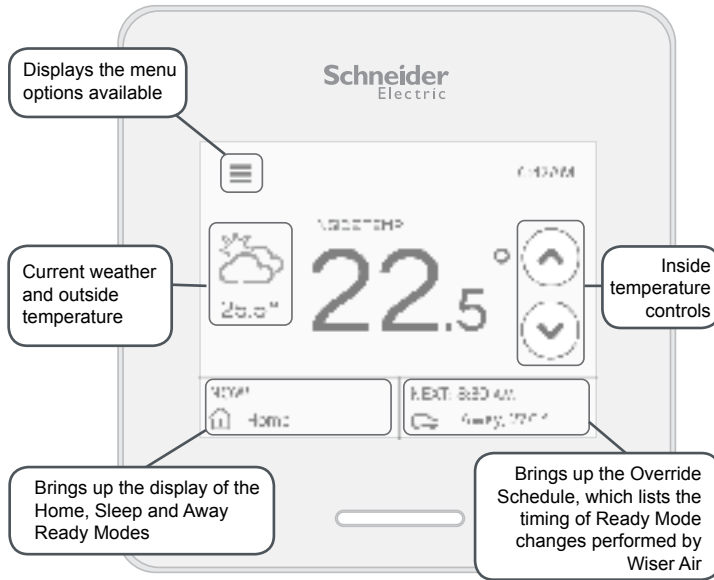


Figure 6. Interactive display.

For more information on Wisir Air's functionality, please consult the online user guide at: <https://www.wiserhome.com/support>

Appendix Wiser Wire Extender Kit

Introduction

The Wiser Wire Extender Kit is intended for use when a common wire (C) from the HVAC control board is not available. If you are unsure whether you have the HVAC wire present, refer to the picture taken in **Step 3** of the Installation procedure for Wisir Air. The picture can also help you determine whether you have a 4 or 5-wire system in place.

The wire extender kit contains a diode pair and a Printed Control Board (PCB) assembly. To open the board pinch and pull (Fig. 7).

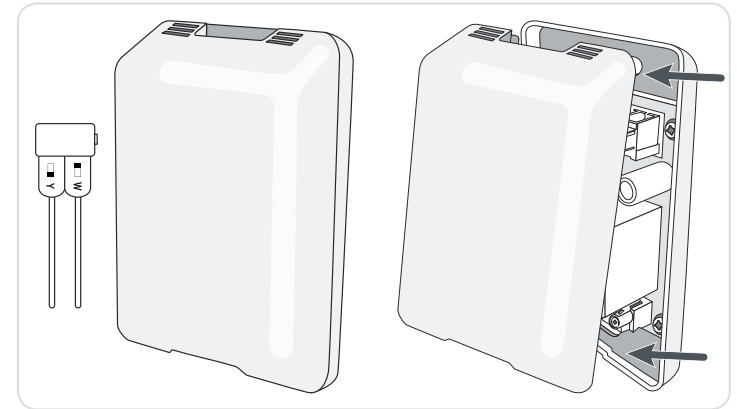


Figure 7. Wire Extender Kit.

⚠ WARNING

HAZARD OF ELECTRICAL SHOCK


The following installation procedure should be performed by qualified personnel:

- Knowledgeable about and licensed in accordance with local electrical installation code requirements.
- Able to read, interpret, and follow the instructions and precautions provided.
- Trained on the operation and fundamentals of residential HVAC apparatus, and familiar with the associated hazards.

Failure to follow these instructions can result in personal injury and/or damage to Wiser Air.

Installation

⚠ ⚠ DANGER



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Disconnect all power before working on equipment.

Failure to follow these instructions will result in death or serious injury.

TIP: Take a photograph of the initial wiring of the HVAC system to use as a reference and to help prevent wiring mishaps during the installation process.

1. Disconnect the wires from the Y and W terminals on the thermostat.
2. Connect the diode pair to the Y and W terminals (Fig. 8). Ensure that the diode pair's Y terminal is connected to the thermostat's Y terminal and the diode pair's W terminal is connected to the thermostat's W terminal.
3. Connect both wires that were disconnected from the thermostat base in **Step 1** to their corresponding points on the diode pair.
4. Connect the other wire that was disconnected from the thermostat base to the C terminal on the thermostat.

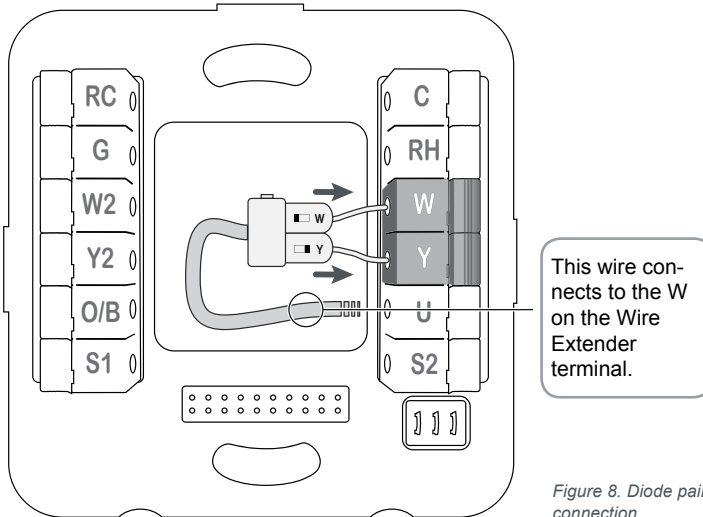


Figure 8. Diode pair connection.

Installing the wire extender kit in a 4-wire system

1. Isolate power from the HVAC system.
2. Familiarize yourself with the HVAC control board located inside the air handler system.
3. Relocate the wire from the R terminal on the HVAC control board to the RC or RH terminal on the STAT side of the PCB assembly. Ensure that the jumper between the RC and RH terminals is installed.
4. Relocate the wire from the G terminal on the HVAC control board to the G terminal on the STAT side of the PCB assembly.
5. Connect the wire at the C terminal of the thermostat to the C terminal on the STAT side of the PCB assembly.
6. Connect the wire from the common point of the diode pair to either the W or Y terminal on the STAT side of the PCB assembly. Ensure that the jumper between the W and Y terminals is installed.
7. Connect the wires between terminals RC, Y, W, C, and G on the HVAC control board and the EQUIP side of the PCB assembly.
8. Connect RC, Y, W, C, and G on the HVAC control board to RC, Y, W, C, and G on the EQUIP side of the wire extender respectively.
9. Mount the PCB assembly near the HVAC control board.

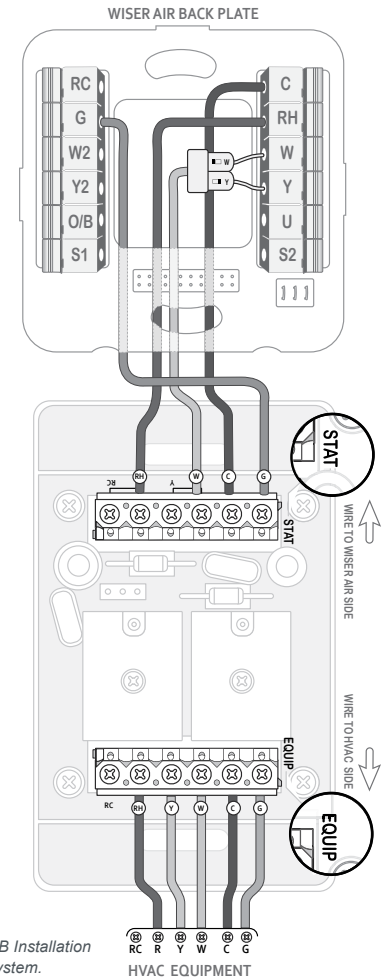


Figure 9. PCB Installation in a 4-wire system.

Installing the wire extender kit in a 5-wire system

In order to complete this procedure, ensure that the RC/RH jumper on the STAT side of the PCB is unscrewed and removed.

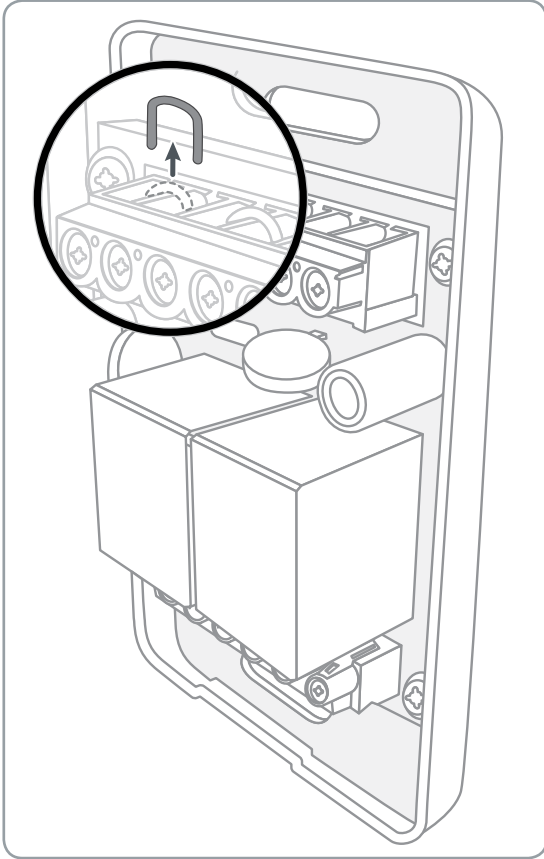


Figure 10. Wire extender jumper removal.

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Installing the wire extender kit in a 5-wire system

1. Isolate power from the HVAC system.
2. Familiarize yourself with the HVAC control board located inside the air handler system.
3. Relocate the wire from the RC terminal on the HVAC control board to the RC terminal on the STAT side of the PCB assembly.
4. Connect the wire relocated from terminal RH on the HVAC control board to terminal RH on the STAT side of the PCB assembly.
5. Relocate the wire from the G terminal on the HVAC control board to the G terminal on the STAT side of the PCB assembly.
6. Connect the wire at the C terminal of the thermostat to the C terminal of the PCB assembly.
7. Mount the PCB assembly near the HVAC control board.
8. Connect the wire from the common point of the diode pair to either the W or Y terminal on the STAT side of the PCB assembly. Ensure that the jumper between the W and Y terminals is installed.
9. Connect the wires between the RC, RH, Y, W, C, and G terminals on the HVAC control board to RC, RH, Y, W, C and G on the EQUIP side of the wire extender respectively.

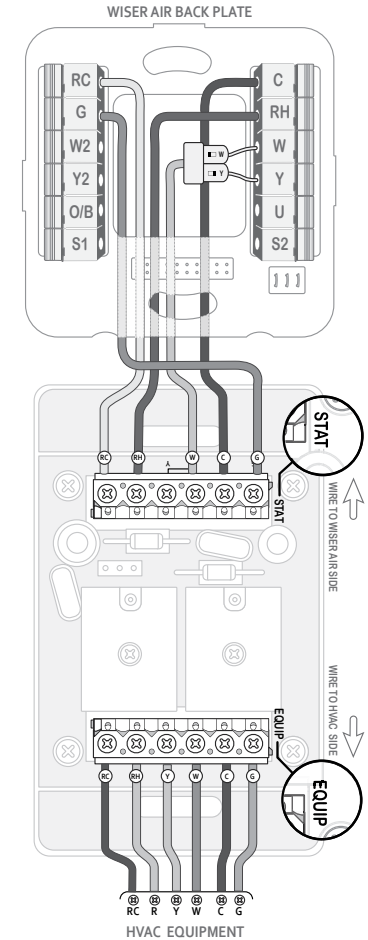


Figure 11. PCB Installation in a 5-wire system.

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