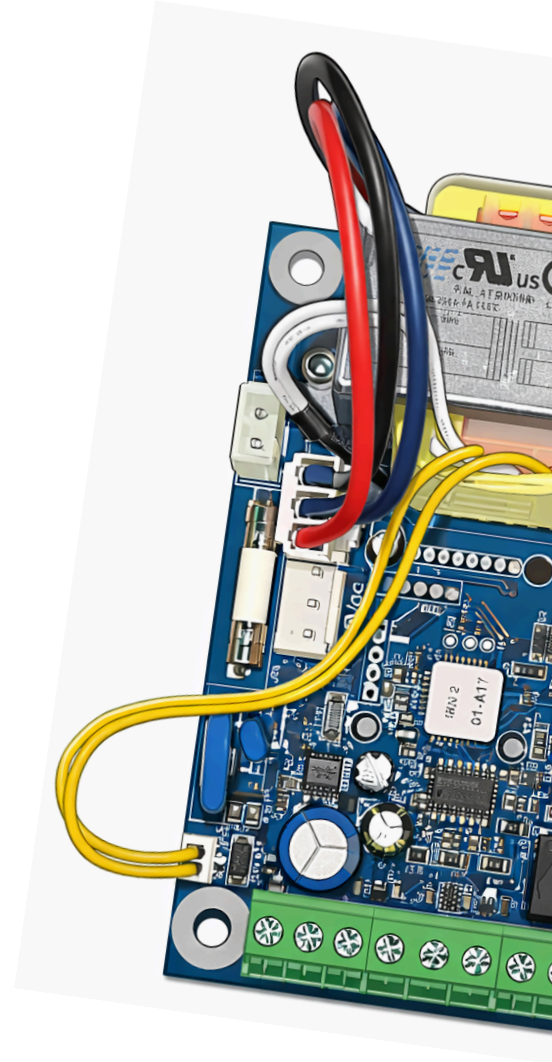


AIO™ Third Party Thermostat Gateway (TPG015) for AIO™ Heat Pumps

Installation Guide



CONTACT INFO

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Phone: [\(212\) 204-2700](tel:(212)204-2700)

DISCLAIMER



IMPORTANT – TRAINING IS REQUIRED PRIOR TO PERFORMING ANY INSTALLATION.

While this guide outlines the general installation requirements for the unit, it does not replace required installer training. Before commencing installation, the project manager must contact the INNOVA VIP Department at (212) 204-2700 to coordinate training for the installer.

Failure to ensure that installation is performed by INNOVA-trained personnel may result in improper operation or equipment damage, and may void the warranty.

Training may be conducted in person or remotely (online).

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Illustrations may not be to scale, and all information and dimensions stated herein are subject to change at any time at the sole discretion of INNOVA. Benefits described herein apply only to the extent that the product is installed correctly in the correct application and used for its intended purpose.

INNOVA is constantly innovating and improving its products and reserves the right to modify product design and specifications without notice and without incurring any obligations.

REVISION HISTORY

Rev	Date	
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1. ABOUT THIS GUIDE

This guide outlines the required procedures for safely installing the TPG015 gateway in an AIO™ heat pump unit and connecting it to a third-party thermostat. Following these instructions reduces the risk of equipment damage, improper installation, and potential safety hazards.

Important: Read the entire installation guide before beginning any installation tasks. Pay close attention to all safety warnings and notices.

Note: This guide is shipped with the gateway and is the property of the customer. Make sure this guide is left in the customer's possession.

1.1 Specific language

Some language and symbols in this guide have specific meanings.

Reference to the product

Any reference to "the unit" or "the AIO™ unit" is meant to refer to the specific AIO™ heat pump unit described in that section of the document.

Unit orientation

All directions in this guide (left, right, top, and bottom) are given from the perspective of facing the unit.

Role definitions

This guide is primarily intended for installers. The roles of end users and service technicians are also defined here for reference.

- **User:** A nonexpert who can safely operate the unit and perform basic diagnostics and maintenance.
- **Installer:** A trained and certified HVAC installation technician responsible for the correct installation of the unit as indicated in the installation guide and in accordance with all local and national codes.
- **Service technician:** An INNOVA-trained and qualified HVAC professional who performs service or maintenance in compliance with OSHA safety requirements, recognized industry best practices, and all applicable federal, state, and local codes and standards.
- **Trained HVAC technicians:** A group term for both installation and service technicians.

1.2 Safety notices, icons, and symbols

Warnings, Cautions, and Annotations are included throughout this guide. Read each carefully and follow the stated instructions.

Safety notices

Each safety notice represents the level and immediacy of risk. Each warning panel displays a background color and a signal word, and includes an icon to specify the topic.

DANGER

A red notice with the **DANGER** title indicates an imminently hazardous situation that could result in death or serious injury if not avoided.

WARNING

The orange notice with the **WARNING** title indicates a potential hazard that, if not avoided, could result in death or serious injury.

CAUTION

The yellow notice with the **CAUTION** title indicates a hazardous situation that, if not avoided, could result in minor to moderate injury or property damage.

Warning icons

The warning icons are used in conjunction with the warning notices.



The fire warning icon indicates a fire-related hazard.



The electrical warning icon indicates a hazard related to electricity.



The hand warning icon indicates a hazard related to body parts.



The general warning icon indicates a general hazard or danger.

Annotation icons

Annotations are provided throughout the guide to highlight important information. Read each annotation carefully and follow the stated instructions.



The gear annotation icon indicates important information related to installation.



The information annotation icon indicates important information or useful tips.

2. QUICK GUIDE – INSTALLING THE TPG015 GATEWAY IN AIO™ UNITS



IMPORTANT! Before beginning any installation, read the Safety Guidelines in [Section 4](#).

This Quick Guide provides links to the sections in this document that describe how to install a TPG015 gateway control board in each compatible type of AIO™ heat pump unit.

To install in an AIO™ Wall Mounted (Standard/Pro) unit (Gen 1)

To install in an AIO™ Ceiling Ducted unit (with or without ERV)

To install in an AIO™ Ceiling Suspended unit (with ERV option)

To install in an AIO™ Ceiling Suspended unit (without ERV option)

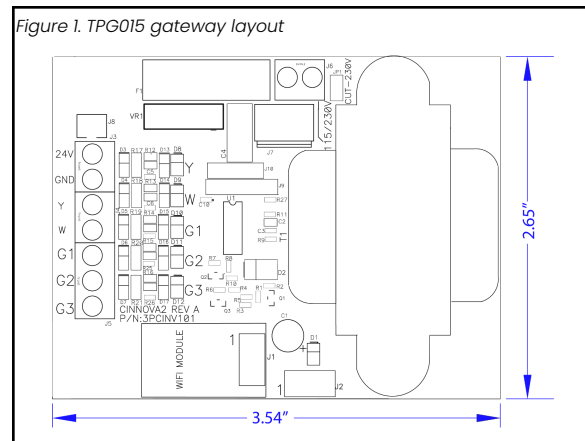
[To install in an AIO™ Vertical Stack unit](#)

To install in an AIO™ Vertical Stack XL unit

3. TPG015 THIRD PARTY THERMOSTAT GATEWAY OVERVIEW

The third-party thermostat gateway TPG015 enables the user to control AIO™ units with any standard or smart thermostat. The AIO™'s BLDC inverter compressor cannot be controlled by a regular or smart thermostat, which only sends an on/off signal. The Third-Party Gateway (TPG) sends signals from the connected standard or smart thermostat to the AIO™'s processor, which then controls the inverter compressor.

Figure 1 shows the TPG015 gateway layout:



3.1 AIO™ unit compatibility

The TPG015 gateway can be installed in the following AIO™ units:

- AIO™ Wall Mounted Standard/Pro (Gen 1 only)
- AIO™ Ceiling Ducted (with or without ERV)
- AIO™ Ceiling Suspended (with or without ERV option)
- AIO™ Vertical Stack (Gen 3 only)
- AIO™ Vertical Stack XL



- All references to the AIO™ Wall Mounted unit refer to both the Wall Mounted Standard and the Wall Mounted Pro units.
- The TPG015 gateway is not used with Wall Mounted Gen 2 and Gen 3 units. For these units, install the MOD-TPG third-party thermostat gateway. Refer to the [AIO™ Third-Party Thermostat Gateway MOD-TPG Installation Guide](#) for more information.
- The TPG015 gateway cannot be used with Gen 1 or 2 of the Vertical Stack unit. See [Section 9](#).

3.2 TPG015 ga

The following are the gateways:

- Relay Rating: 10 A
- Third-party third-party terminals.
- Operating temperature: 0 to 70°C (70°C).
- Storage temperature: -40 to 100°C (90% relative humidity).
- Power supply: 120 VAC, 50/60 Hz, selected by jumper on gateway board.
- Power consumption: 10 W
- Fuse: 0.315 A
- Dimensions: 3.5 x 3.5 x 38.1 mm)
- Weight: 0.5 lb



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4. SAFETY GUIDELINES – READ BEFORE INSTALLING

This guide details the steps required to safely install a TPG015 gateway in an AIO™ heat pump unit and connect it to a third-party thermostat. By following these instructions, the risk of equipment damage and personal injury can be significantly reduced.

Read the entire installation guide before installing the gateway. Pay careful attention to all safety notices and warnings.

Failure to apply the indicated rules may cause malfunctions in the appliances and relieve the manufacturer of any warranty and of any liability for damage to persons, animals, or property.

All safety regulations in force at the installation site, as well as common-sense precautions, must be followed.

The precautions listed in this installation guide are intended to supplement accepted safe practices. In case of a direct conflict between accepted safety practices and this guide, the more stringent precaution takes precedence.

Failure to follow the instructions in this guide can result in property damage, serious injury, or death.

4.1 Fire/explosion hazards

WARNING

- In the event of abnormal conditions (such as a strange or burning smell, noise, or smoke), turn off the unit and disconnect it from its power source immediately. Report the issue immediately to your INNOVA representative or distributor.
- Servicing shall be performed only as recommended by the manufacturer.

4.2 Electrical hazards

DANGER

- Only trained HVAC technicians may install this gateway. Improper modifications by an unqualified person can result in serious injury or death.
- When working on the equipment, observe all precautions in the guide and on labels attached to the equipment.
- Before installation, maintenance, or servicing, disconnect power to the entire system. Verify that power to the entire system is down, including any remote disconnects, peripherals, third-party devices, and devices operating on the unit's network.

DANGER

- Follow all OSHA-compliant Lockout/Tagout (LOTO) procedures.

WARNING

- All electrical connections, wiring, and grounding must be performed by a qualified electrician and must comply with the National Electrical Code (NEC/NFPA-70) and all local codes that hold jurisdiction. Improper wiring or loose connections may cause overheating, fire, or electric shock.
- Use only the supplied installation-specific components. Using different components could lead to water leakage, electric shock, or fire.
- Do not open access panels to the interior of the unit without first disconnecting the power and/or turning off the breaker.
- The unit contains capacitors that may retain an electrical charge after the power is disconnected. Thus, before beginning any installation or servicing, to avoid electrical shock or serious injury, be sure to:
 - Discharge all motor start-run capacitors.
 - Verify (using a voltmeter) that no power is running into the unit.
 - Wait at least five minutes for the AIO™ unit to cool down and for the capacitors inside the unit to discharge.

CAUTION

- In the event of a blackout or thunderstorm, turn the unit off and disconnect it from the power source immediately.

4.3 Moving parts hazards

DANGER

- Do not operate the equipment with panels, guards, or covers removed, except when specifically instructed by the procedures below (to test the installation).
- Ensure power is disconnected and components have come to a complete stop before accessing the interior. Internal fans, motors, and other moving components may start automatically when power is supplied.



- Keep hands, away from fan. Contact with fan may cause injury.
- Do not remove covers, guards, or panels.

4.4 General safety



- Do not modify the unit or its controller. Unauthorized modifications may compromise the unit's performance and safety.
- Wear appropriate personal protective equipment (PPE), including safety glasses during installation and servicing.
- Only a qualified professional should install, service, or bond this unit. The unit must be properly grounded and bonded, as required by applicable local regulations.



Install the INNOVA gateway by a professional.

4.5 Installer responsibilities

- Install the unit in accordance with applicable local and national electrical regulations.
- Ensure that you and the installer understand the installation process and the beginning installation steps, which may involve greater complexity than standard operation.
- Provide the customer with the necessary information for the installation.

The safety precautions in this guide supplement recognized safety practices. In the event of a conflict, the more stringent precaution always takes precedence.

5. PREPARING FOR INSTALLATION

5.1 Location considerations

The thermostat must be mounted indoors, where it is not exposed to the elements, on a wall that represents the average temperature of the space.

The thermostat should NOT be mounted in any of the following locations:

- Where it may be exposed to wind, rain, or mist, such as near doors or windows that are frequently opened.
- Near any heat source or heating vent.
- In direct sunlight.
- In areas prone to being dusty or dirty.
- Where it is not easily accessible.
- In areas where the temperature may be outside the range of 15°F (-9.4°C) - 120°F (48.9°C).
- In areas where the humidity can exceed 95%.
- Near machinery that produces electromagnetic interference (EMI).



The presence of EMI can disrupt the normal operation of the thermostat.

5.2 Shipping configuration

The TPG015 third-party thermostat gateway board is shipped in a single package containing the TPG015 gateway board with the black power cable and flat gray communication cable preconnected, and two double-sided adhesive foam strips preattached to the back of the board.

5.3 Inspecting the package

When the shipment is received, inspect it thoroughly before proceeding to installation:

1. Ensure that the contents match the order and shipping documents.
2. Inspect the entire gateway board and any accessories for any damage that may have occurred during shipping.
3. If the package or contents appear damaged:
 - a. Photograph all damage and all sides of the component to support a damage claim.
 - b. Clearly document the damage on the freight bill.
 - c. Notify your INNOVA representative or distributor.



Report all damage within two weeks of delivery to be eligible for a claim.

5.4 Required tools and supplies

- #2 Phillips-head screwdriver
- Mini (1/8" [3.2 mm]) flathead screwdriver
- Alcohol pad
- Four or five white plastic spacer (stand-up) clips (optional)
- Thermostat from a third-party manufacturer
- Multi-conductor (5 or 7, see below) control cable with solid copper conductors, of sufficient length to run between the unit and the thermostat:
 - For cable lengths of less than 30 feet (9 m), an unshielded twisted-pair cable may be used in low-noise environments.
 - For cable lengths of 30 ft (9 m) or more, an overall 18 AWG shielded twisted-pair cable is required.



Note: The total wire run may not exceed 40 feet. (12.1 meters)



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6. INSTALLING THE TPG015 GATEWAY IN THE AIO™ WALL MOUNTED (GEN 1) UNIT

To install the TPG015 gateway in an AIO™ Wall Mounted (Gen 1) unit and connect it to a third-party thermostat:

1. [Open the unit.](#)
2. [Attach the gateway to the unit.](#)
3. [Connect the power and communication cables between the gateway and the unit.](#)
4. [Connect the gateway to the thermostat.](#)
5. [Close the unit.](#)



The instructions and illustrations in this section refer to Gen 1 only of the AIO™ Wall Mounted units.

For Wall Mounted Gen 2 and Gen 3 units, use the MOD-TPG third-party thermostat gateway. Refer to the [AIO™ Third Party Thermostat Gateway MOD-TPG Installation Guide](#) for more information.

6.1 Opening the unit

To open the AIO™ Wall Mounted (Gen 1) unit:

1. **Disconnect the power supply.**
Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the return air filter and grille.**
Lift the top grille off the unit, and then gently pull up on the plastic around the return air filter and carefully lift the filter to remove it.

Figure 2. Lift off the top grille

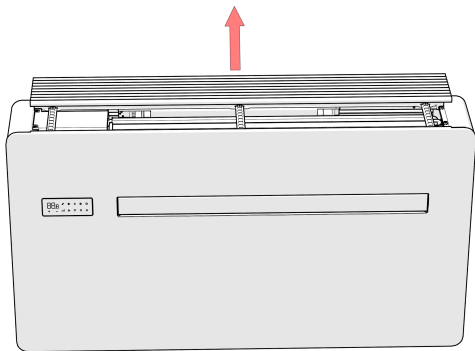
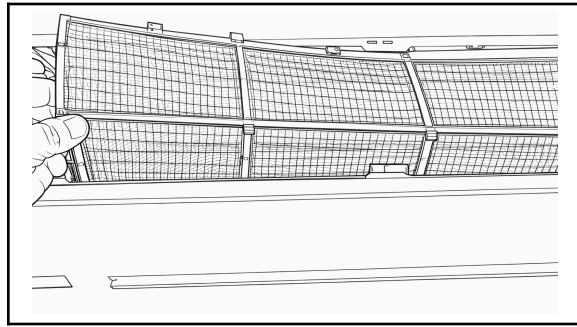


Figure 3. Remove the filter



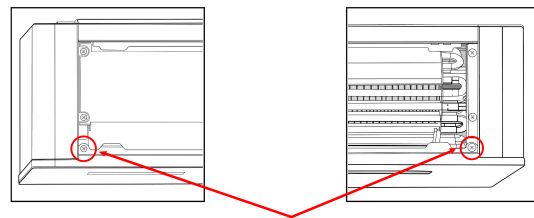
3. Remove the front panel.

Remove the two front screws on the top of the unit, and gently lift and pull the front panel forward to remove it.



Keep the screws removed in each step separate.

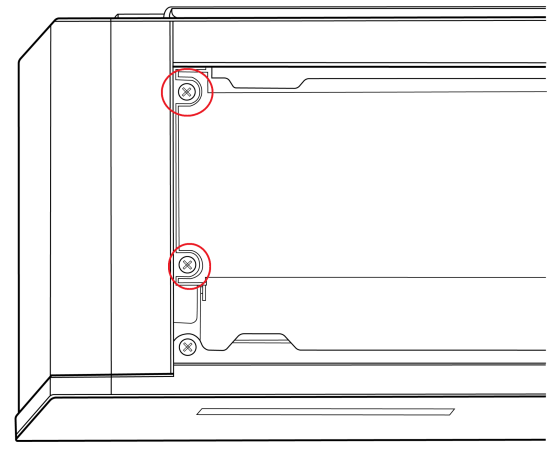
Figure 4. Remove the front top screws



4. Remove the electrical protective cover.

- a. Remove the two screws on the top left that hold the black plastic electrical protective cover in place on the frame.

Figure 5. Remove the left screws from the electrical cover



- b. Remove the black plastic electrical protective cover from the unit, and

Figure 6. Remove the electrical protective cover

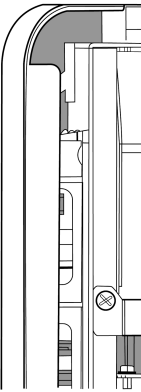


Figure 7. Inside of the electrical protective cover



6.2 Attaching the TPG015 gateway to the unit

⚠ CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the TPG015 third-party thermostat gateway to the AIO™ Wall Mounted (Gen 1) unit:

1. Mount the TPG015 gateway to the unit.

- Clean the mounting location on the underside of the black plastic electrical protective cover with an alcohol pad to ensure proper adhesion. The mounting location is shown in Figure 9 below.
- Remove the backing from the two adhesive foam strips that are attached to the back of the gateway board.



The foam in the adhesive strips provides insulation to prevent short-circuits.

Figure 8. Adhesive strips on the TPG015 gateway board



- Mount the TPG015 gateway board on the underside of the electrical protective cover, placing it one inch (2.5 cm) from the right side, as shown. Press firmly to ensure it is securely attached.

⚠ CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 9. Mount the gateway board



2. Set the correct voltage

The TPG015 gateway board is designed for 230V. If the AIO™ Wall Mounted (Gen 1) unit is being installed in a 115V environment, remove the cover and place it into the correct position.

Figure 10. Set the gateway board to 115 V

115 V



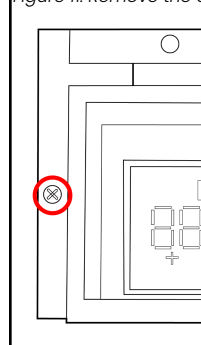
6.3 Connecting the gateway board

To connect the power supply between the TPG015 gateway board and the AIO™ Wall Mounted (Gen 1) unit:

1. Access the power supply

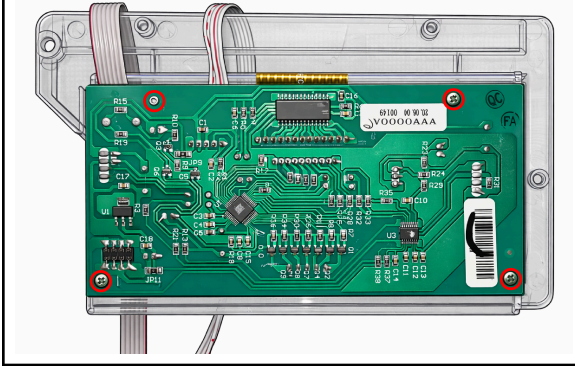
- Remove the cover of the power supply.

Figure 11. Remove the cover of the power supply



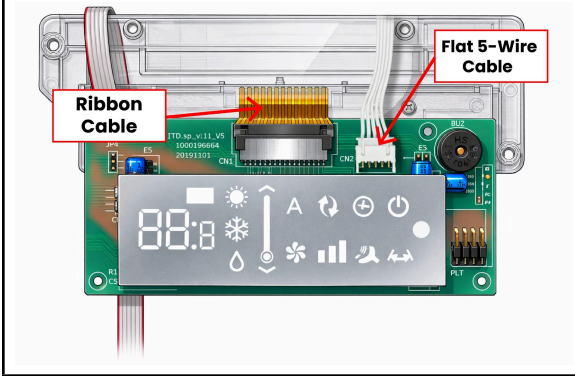
- b. Remove the four screws that secure the controller circuit board to its clear plastic housing.

Figure 12. Remove the screws from the controller housing



- c. Carefully open the controller housing and remove the controller circuit board from the housing.
- d. Gently remove the white, flat, 5-wire cable connector from the controller circuit board.

Figure 13. Remove the 5-wire cable connector



⚠ CAUTION

The ribbon cable connecting the touchscreen controller to the housing is fragile and must be handled with extreme care to avoid damage.

2. Remove the Wi-Fi module (if present) from the unit.

If a Wi-Fi module is installed in the Wi-Fi socket on the right side of the controller, gently pry the module out of the socket and put it aside.



Do not install any Wi-Fi module on the TPG015 gateway, as this can interfere with its correct operation.

Figure 14. Locate the Wi-Fi module

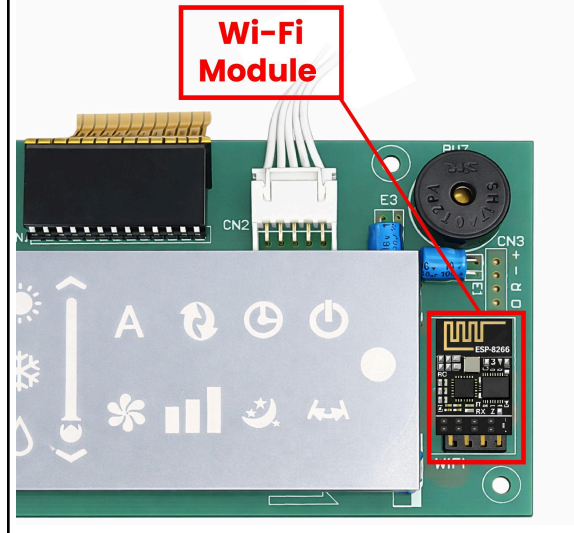
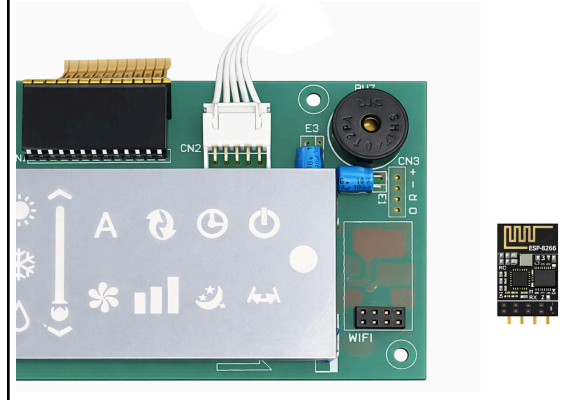


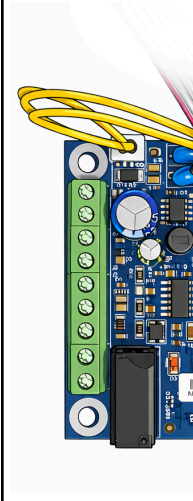
Figure 15. Remove the Wi-Fi module from its socket



3. Connect the communication cable.

- a. On the TPG015 gateway board, the flat grey communication cable is preconnected to the communication port.

Figure 16. TPG015 gateway



The free end of the cable has an edge connector. The black end of the cable is connected to the black end of the cable.

Figure 17. Communication cable header



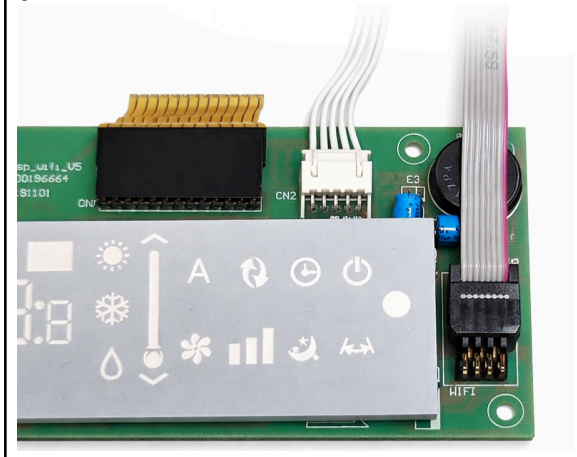
- b. Connect the communication cable to the communication port as follows:



Ensure the communication cable is inserted correctly, facing the correct direction.

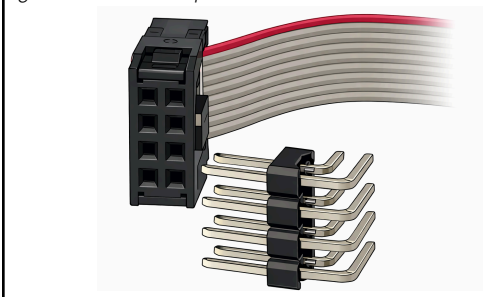
- the white end of the cable is inserted into the white communication port as shown.

Figure 18. Connect the communication cable to the unit



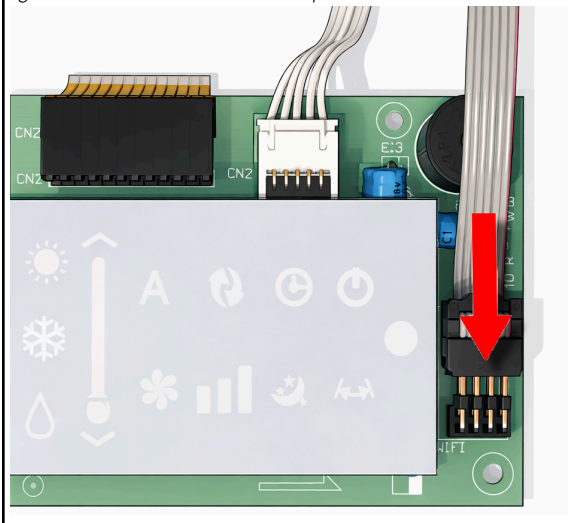
- If there is already a right-angle pin header in the Wi-Fi socket:
 - i. Remove the right-angle pin header from the cable connector.

Figure 19. Remove the pin header from the connector



- ii. Push the cable connector securely onto the pins in the Wi-Fi socket as shown.

Figure 20. Connect the cable to the pin header in the Wi-Fi socket



4. Reattach the onboard touch controller.

- a. Gently reconnect the flat, white 5-wire cable connector to the controller circuit board (see Step 1d above).

- b. Carefully replace the touch controller in the clear plastic housing and close the housing (see Step 1c above).
- c. Reattach the controller circuit board to its housing using the four screws removed in Step 1b above.
- d. Reattach the plastic cover of the controller to the unit using the two screws removed in Step 1a above.

5. Connect the power cable.

On the TPG015 gateway board, the black power cable is preconnected to the power connector as shown below.

The wiring has the following configuration:

- Black is Live
- Blue is Neutral.

Make sure the wires are connected as specified – black (live on the gateway) to brown (live on the unit) and blue to blue – and that they are securely fastened.

Figure 21. TPG015 gateway board power connection



Hardwire the power cable to the power supply terminal block (CONN1) that is located on the back left side of the electrical compartment of the unit.

The wiring should be connected to the locations shown below.

Figure 22. Wiring location





For 230 V units, the wiring locations are L1 (instead of Hot) and L2 (instead of Neutral).

6.4 Connecting the thermostat

To connect the third-party thermostat to the TPG015 gateway:

1. Connect the control cable to the gateway.

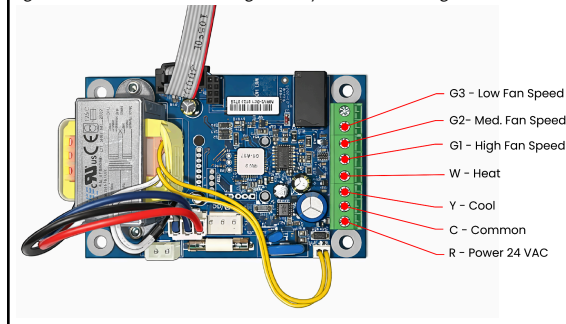
With the power remaining disconnected, connect the seven* wires of the control cable through the back of the AIO™ Wall Mounted unit to the following terminals on the MOD-TPG gateway board:

- R - Power 24 VAC
- C - Common
- Y - Cool
- W - Heat
- G1 - High Fan Speed
- G2 - Medium Fan Speed
- G3 - Low Fan Speed



If using a thermostat that has only a single fan speed, use only five wires. In this case, you must choose the fan speed at which you want the AIO™ unit to operate by attaching the wire for the fan to either G1 for high fan, G2 for medium fan, or G3 for low fan. We recommend using the G2 for medium fan speed.

Figure 23. Terminals on the gateway for connecting the wires



⚠ CAUTION

When using a third-party thermostat with this gateway, you must use both the R and C wires, even if it is a smart thermostat. Do not use any workarounds to the C-wire that steal or bleed power from the R or the Y1 wire.

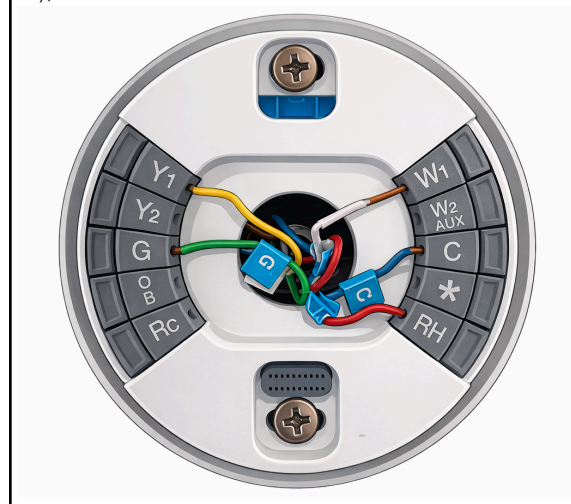
2. Connect the control cable to the thermostat.

Follow the manufacturer's instructions for the thermostat you are using to connect the wires of the control cable from the TPG015 gateway board to the corresponding inputs on the thermostat.

Where the inputs do not match the terminal labels exactly, refer to the following table:

If the thermostat has:	Connect this gateway wire:	To this thermostat input:
RC and RH	R	Either one (RC and RH use the same transformer)
Y1 and Y2	Y	Y1
W1 and W2	W	W1
Only one G	G2	G
	G1, G3	Not used

Figure 24. Connect the wires to the thermostat (for reference only)



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3. Close the unit

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- b. Secure the top of the electrical cover to the frame of the unit using the two screws removed in section 6.1, Step 4a.
- c. Replace the front panel and secure it to the unit using the two screws removed in section 6.1, Step 3.
- d. Reinstall the return air filter and the grille into the unit (see section 6.1, Step 2).

4. Reconnect the power supply to the unit.

7. INSTALLING THE TPG015 GATEWAY IN THE AIO™ CEILING DUCTED / CEILING SUSPENDED (WITH ERV OPTION) UNIT

To install the TPG015 gateway in an AIO™ Ceiling Ducted / Ceiling Suspended (with ERV option) unit and connect it to a third-party thermostat:

1. [Open the unit.](#)
2. [Attach the gateway to the unit.](#)
3. [Connect the power and communication cables between the gateway and the unit.](#)
4. [Connect the gateway to the thermostat.](#)
5. [Close the unit.](#)



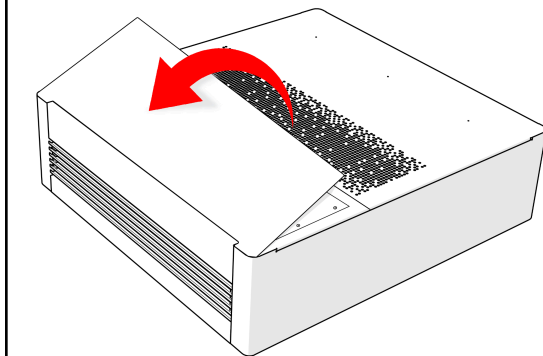
- The instructions in this section describe Gen 3 of the AIO™ Ceiling Ducted (with and without ERV) and the Ceiling Suspended (with ERV option), but the procedure is similar for Gen 1 and Gen 2 of both unit types.
- The illustrations in this section show the AIO™ Ceiling Suspended (with ERV option) unit, but the installation is very similar for the Ceiling Ducted units.

7.1 Opening the unit

To open the AIO™ Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. **Disconnect the power supply.**
Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **For Ceiling Suspended units only: Open the decorative bottom panel.**
The Ceiling Suspended units have a decorative bottom panel. Pull this panel open as shown to expose the metal panel that covers the electrical panel.

Figure 25. Open the decorative bottom panel



3. Open the electrical panel.

Remove all the screws that secure the metal

panel, and re-

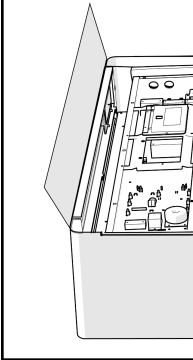
electrical pan



Keep th

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Figure 26. Access the



7.2 Attaching the unit



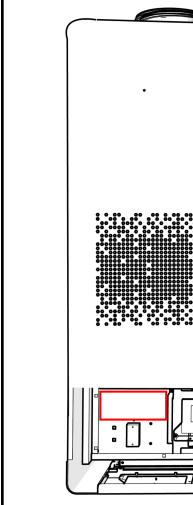
Handle the contr

components wit

To attach the TPG015 gateway to the AIO™ Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. **Mount the TPG015 gateway.**
The electrical terminal block

Figure 27. Mounting loc



Mount the gat

- If there are any metal parts, remove them before mounting the gateway.

- a. Insert four or five LCD-6 plastic spacer (stand-up) clips into the holes.
- b. Mount the gateway board on top of the clips.



- It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board $\frac{1}{4}$ " (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.
- If the lower row of holes does not line up with the holes in the panel, or is covered by the foam strip, use spacer clips in the upper holes and a thick foam strip (or several layers of double-sided tape) at the lower end.

- If there are no mounting holes on the panel:
 - a. Clean the mounting location with an alcohol pad to ensure proper adhesion.
 - b. Remove the backing from the two adhesive foam strips that are attached to the back of the gateway board.



The foam in the adhesive strips provides insulation to prevent short-circuits.

Figure 28. Adhesive strips on the TPG015 gateway board



- c. Mount the TPG015 gateway board in the indicated location, and press firmly to ensure it is securely attached.



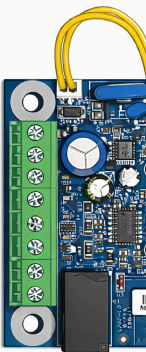
Make sure there is no contact between the gateway board and the metal chassis.

2. Set the correct voltage

The TPG015 gateway board is designed for 230V. If the AIO™ Heat Pump has a 115V socket, the 115V socket must be used.

Figure 29. Set the gateway board voltage

115 V

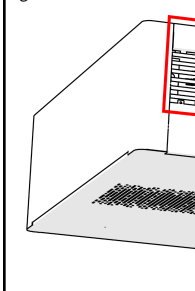


7.3 Connecting the gateway board

To connect the gateway board to the AIO™ Heat Pump, follow these steps:

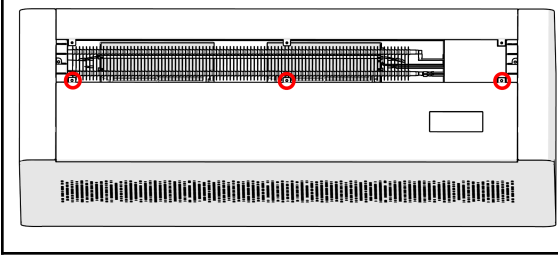
1. Access the gateway board
 - a. Remove the gateway board cover.

Figure 30. Grille on front of gateway board



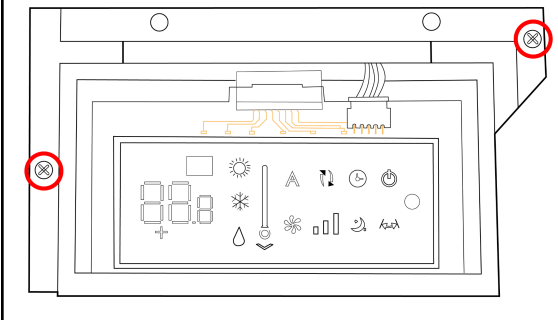
- b. **For Ceiling Suspended units only:** Remove the three screws from the decorative front panel to access the onboard touch controller.

Figure 31. Remove the front panel



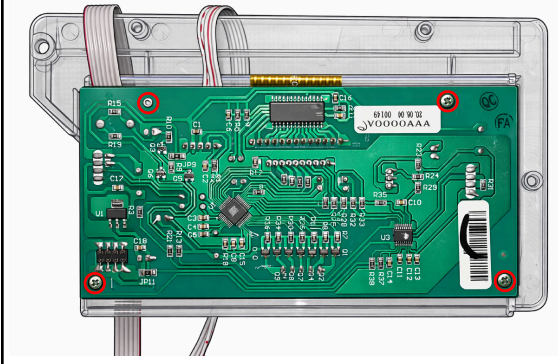
- c. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 32. Detach the controller housing



- d. Remove the four screws to remove the controller from the housing.

Figure 33. Open the controller housing



2. **Remove the Wi-Fi module (if present) from the unit.**
If a Wi-Fi module is installed in the Wi-Fi socket on the right side of the controller, gently pry the module out of the socket and put it aside.



Do not install any Wi-Fi module on the TPG015 gateway, as this can interfere with its correct operation.

Figure 34. Locate the Wi-Fi module

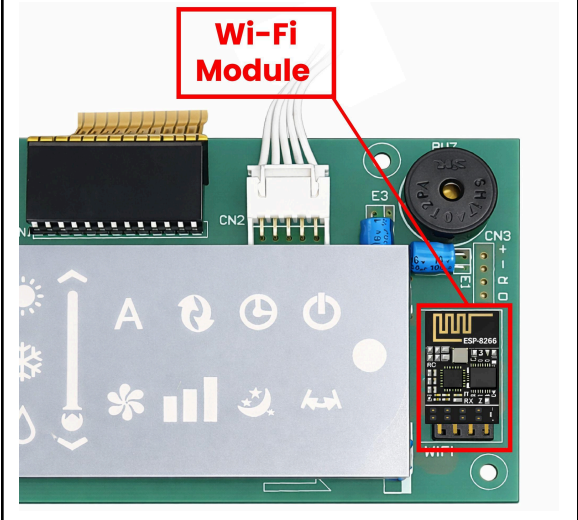
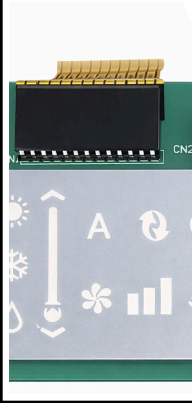
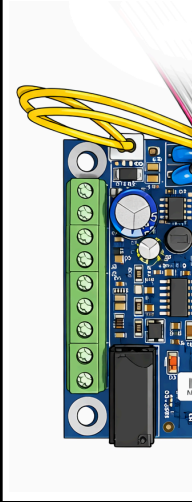


Figure 35. Remove the



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Figure 36. TPG015 gate



The free e
has an ei
the black

Figure 37. Communica
header

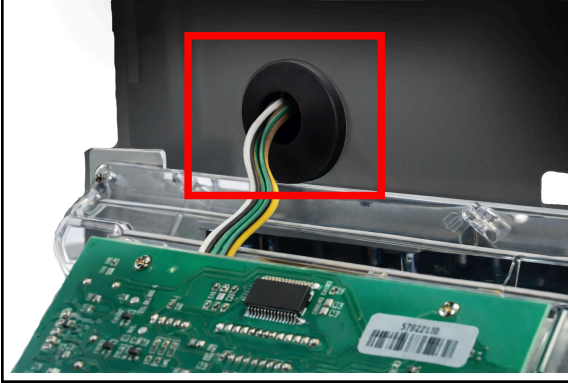


- b. Route the
cable thr
the contr
the contr

⚠ CAUTION

Be careful not to damage the colored wires (shown below) that are already routed through the grommet.

Figure 38. Rubber grommet in the controller housing



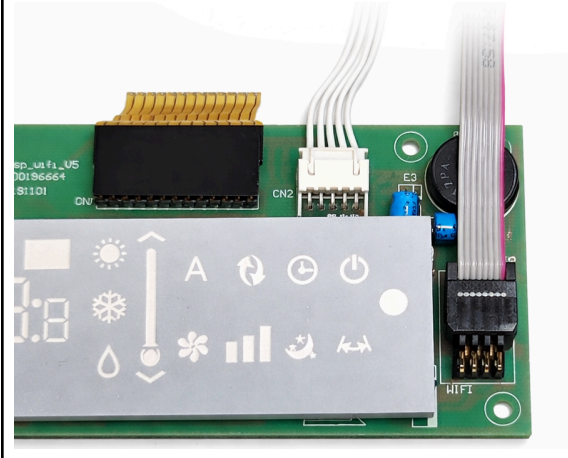
c. Connect the cable to the Wi-Fi socket as follows:



Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

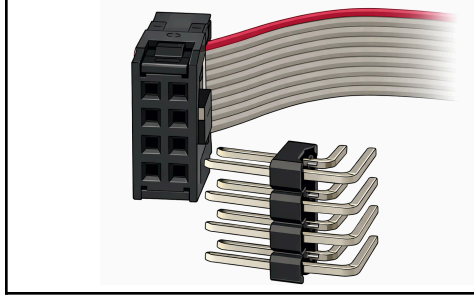
- If the Wi-Fi socket is empty:
Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 39. Connect the communication cable to the unit



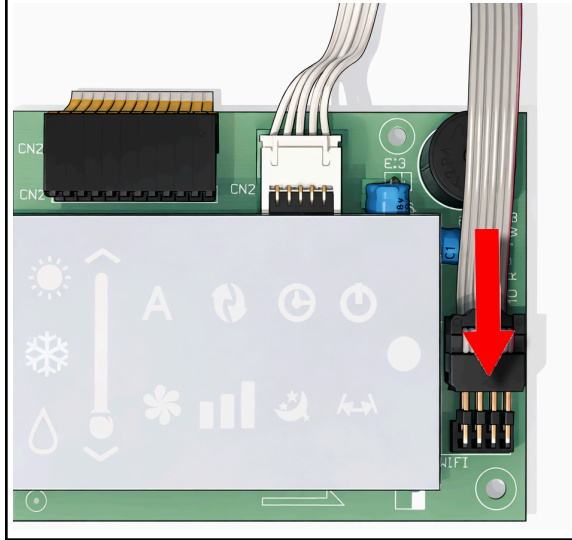
- If there is already a right-angle pin header in the Wi-Fi socket:
 - Remove the right-angle pin header from the cable connector.

Figure 40. Remove the pin header from the connector



- Push the cable connector securely onto the pins in the Wi-Fi socket as shown.

Figure 41. Connect the cable to the pin header in the Wi-Fi socket



4. Reattach the onboard touch controller.

- Replace the controller in its housing and secure it using the four screws removed in Step 1d above.
- Reattach the controller housing to the unit using the two screws removed in Step 1c above.

5. Connect the power cable.

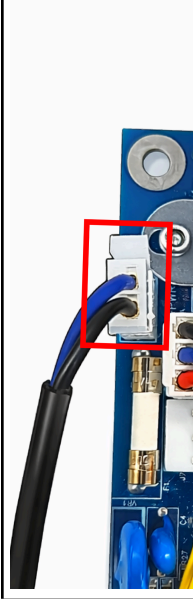
- On the TPG015 gateway board, the black power cable is preconnected to the power terminal as shown below.

The wiring has the following configuration:

- Black is Live
- Blue is Neutral.

- Make sure the wires are connected as specified – black (live on the gateway) to brown (live on the unit) and blue to blue – and that they are securely fastened.

Figure 42. TPG015 gateway



c. The Ceiling come with

- If the cable the g from
- If the pre-hard gate

7.4 Connecting

To connect the thi gateway:

1. Connect the c

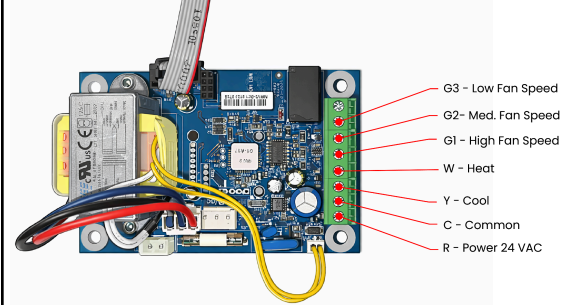
With the power the seven* wi back of the AI following term board:

- R - Power
- C - Comm
- Y - Cool
- W - Heat
- G1 - High
- G2 - Med
- G3 - Low



If using single f this cas at whic operate to eithe fan, or using th

Figure 43. Terminals on the gateway for connecting the wires



The image above illustrates a particular type of third-party thermostat for reference only. The appearance of the thermostat and the connections required may vary from the illustration.

⚠ CAUTION

When using a third-party thermostat with this gateway, you must use both the R and C wires, even if it is a smart thermostat. Do not use any workarounds to the C-wire that steal or bleed power from the R or the Y1 wire.

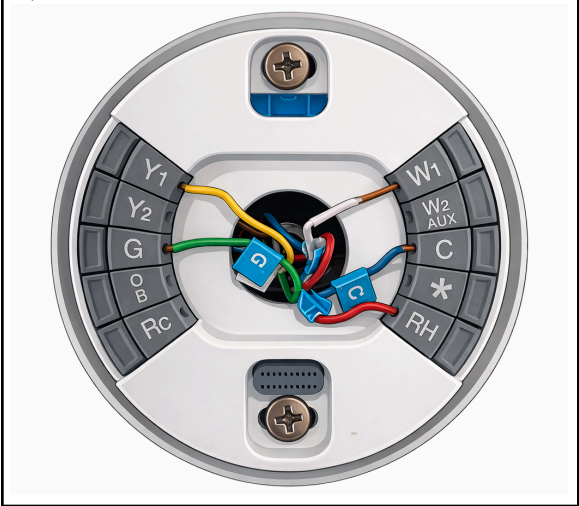
2. Connect the control cable to the thermostat.

Follow the manufacturer's instructions for the thermostat you are using to connect the wires of the control cable from the TPG015 gateway board to the corresponding inputs on the thermostat.

Where the inputs do not match the terminal labels exactly, refer to the following table:

If the thermostat has:	Connect this gateway wire:	To this thermostat input:
RC and RH	R	Either one (RC and RH use the same transformer)
Y1 and Y2	Y	Y1
W1 and W2	W	W1
Only one G	G2	G
	G1, G3	Not used

Figure 44. Connect the wires to the thermostat (for reference only)



Ensure that all wires are properly connected and that there are no exposed wires that could cause short circuits.

7.5 Closing the unit

To close the AIO™ unit (with ERV option) use the following steps:

1. Test the on-board wiring

- Reconnect the power to the unit and test the unit to ensure that it charges and operates in the modes of operation. For more information, see the [AIO™ Ceiling Unit](#) user manual.
- If the power is not working, check the wiring and the unit's internal components.
- If the unit is not working, check the wiring and the unit's internal components.



The thermostat unit. When the unit is closed, the thermostat will not appear on the electrical panel.

2. Close the unit

- For Ceiling Mount:** Remove the front cover of the unit (see Step 1a).
- Replace the thermostat unit (see Step 1a).
- Replace the thermostat unit (see Step 1a).
- For Ceiling Mount:** Replace the decorative cover (see Step 2).

3. Reconnect the power

8. INSTALLING THE TPG015 GATEWAY IN THE AIO™ CEILING SUSPENDED (WITHOUT ERV OPTION) UNIT

To install the TPG015 gateway in an AIO™ Ceiling Suspended (without ERV option) unit and connect it to a third-party thermostat:

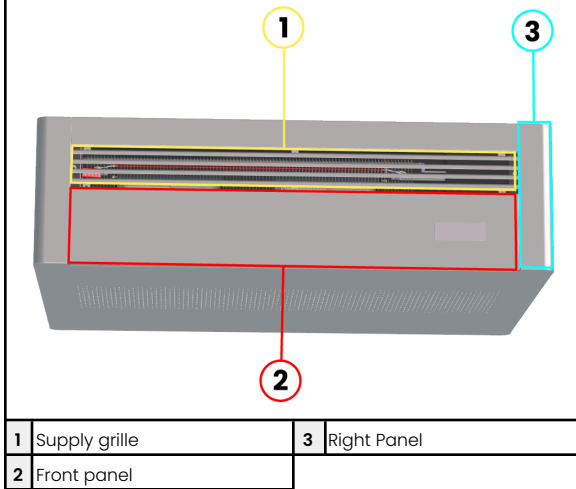
1. [Open the unit.](#)
2. [Attach the gateway to the unit.](#)
3. [Connect the power and communication cables between the gateway and the unit.](#)
4. [Connect the gateway to the thermostat.](#)
5. [Close the unit.](#)



The instructions and illustrations in this section refer to Gen 3 of the AIO™ Ceiling Suspended (without ERV option), but the procedure is similar for Gen 1 and Gen 2.

8.1 Opening the unit

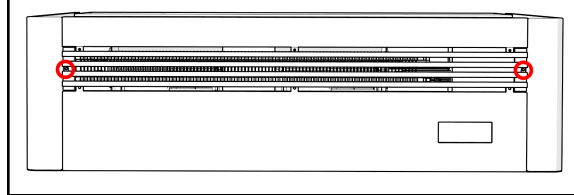
Figure 45. Open the Ceiling Suspended (without ERV) unit



To open the AIO™ Ceiling Suspended (without ERV option) unit:

1. **Disconnect the power supply.**
Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the supply grille, front panel, and right panel.**
 - a. Remove the two screws from the supply grille, and remove the supply grille.

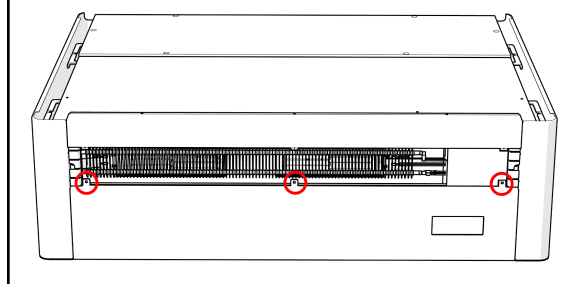
Figure 46. Remove the supply grille



Keep the screws removed in each step separate.

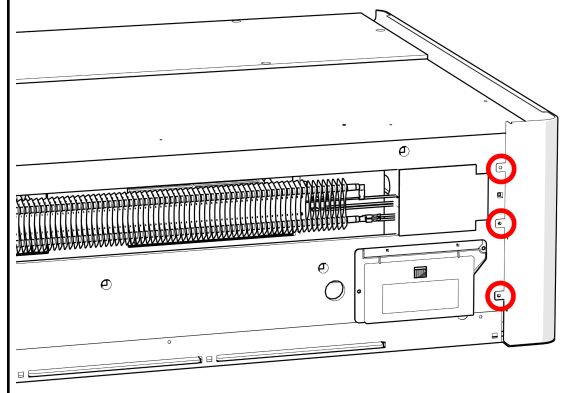
- b. Remove the three screws from the front panel, and remove the front panel.

Figure 47. Remove the front panel



- c. Remove the three screws from the right side panel, and remove the right side panel (the side next to the display).

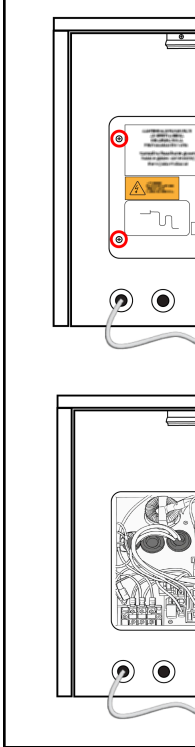
Figure 48. Remove the right side panel



3. Open the electrical panel.

On the side of the unit next to the display, remove the four screws from the electrical panel cover, and remove the cover to expose the electrical panel.

Figure 49. Open the electrical panel



8.2 Attaching the unit



Handle the controller components with care.

To attach the TPG015 gateway to the AIO™ Ceiling Suspended unit:

1. Mount the TPG015 gateway.

The electrical panel is the location for mounting the gateway below.

Mount the gateway as follows:

- If there are no pre-drilled holes in the metal panel, use the following steps:
 - a. Insert the screws into the panel (start from the top).
 - b. Mount the gateway using the screws and clips.



- It is recommended to use a screwdriver to raise the screws above the panel.

- If the lower row of holes does not line up with the holes in the panel, or is covered by the foam strip, use spacer clips in the upper holes and a thick foam strip (or several layers of double-sided tape) at the lower end.
- If there are no mounting holes on the panel:
 - a. Clean the mounting location with an alcohol pad to ensure proper adhesion.
 - b. Remove the backing from the two adhesive foam strips that are attached to the back of the gateway board.



The foam in the adhesive strips provides insulation to prevent short-circuits.

Figure 50. Adhesive strips on the TPG015 gateway board

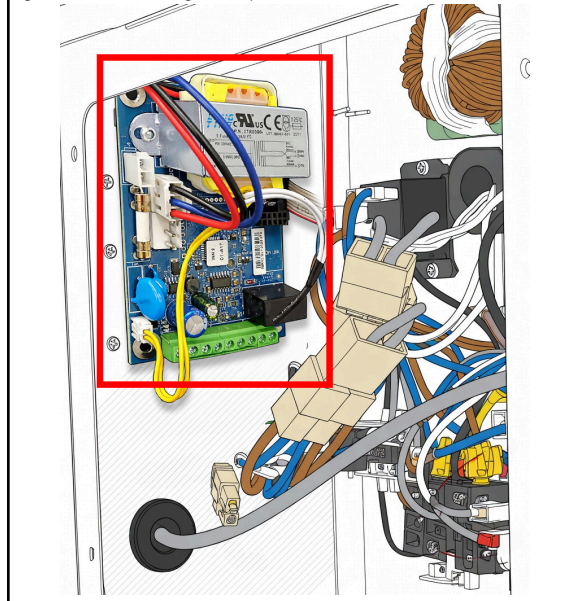


- c. Mount the TPG015 gateway board in the indicated location, and press firmly to ensure it is securely attached.

CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

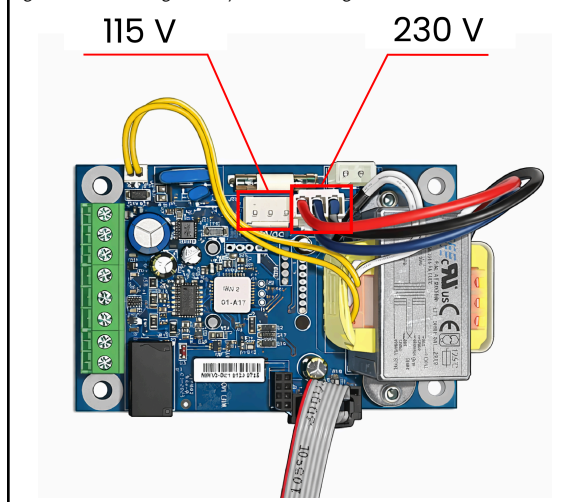
Figure 51. Mount the gateway board



2. Set the correct voltage.

The TPG015 gateway board is set at the factory to 230V. If the AIO™ unit uses 115V, remove the connector from the 230V socket and place it into the 115V socket as shown below.

Figure 52. Set the gateway board voltage



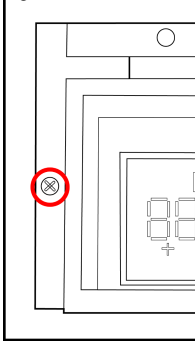
8.3 Connecting the gateway cables

To connect the power and communication cables between the TPG015 gateway and the AIO™ Ceiling Suspended (without ERV option) unit:

1. Access the onboard touch controller.

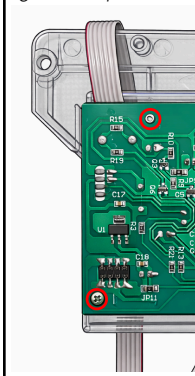
- a. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 53. Detach the



- b. Remove the
- controller

Figure 54. Open the co



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Figure 55. Locate the Wi-Fi module

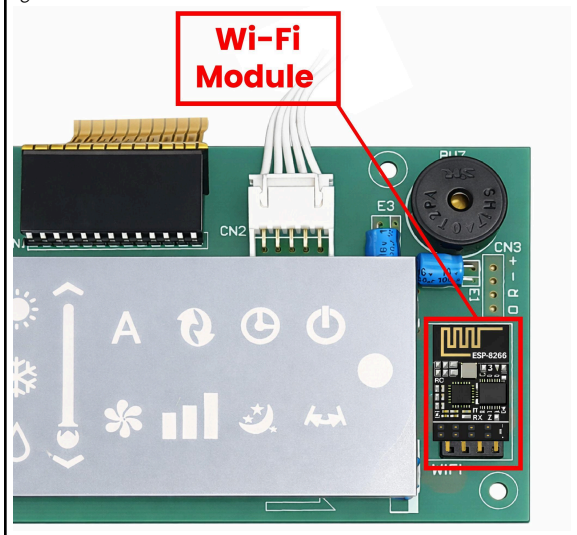
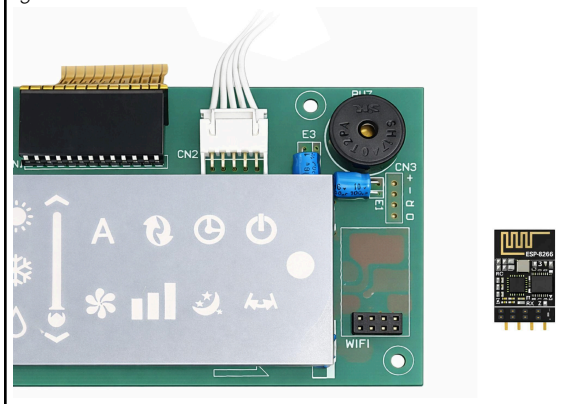


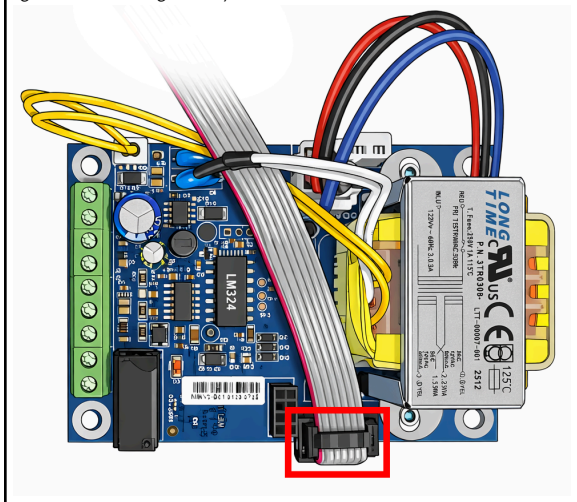
Figure 56. Remove the Wi-Fi module from its socket



3. Connect the communication cable.

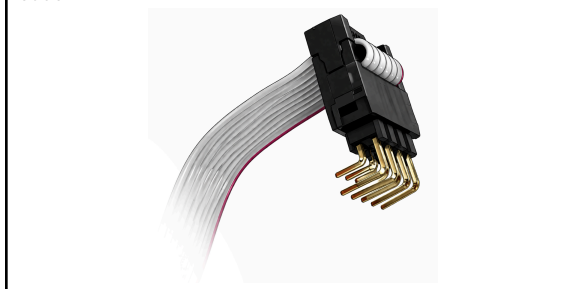
- On the TPG015 gateway board, the flat grey communication cable is preconnected to the communication port.

Figure 57. TPG015 gateway communication cable connection



The free end of the communication cable has an eight-pin right-angle pin header in the black connector.

Figure 58. Communication cable connector with right-angle pin header

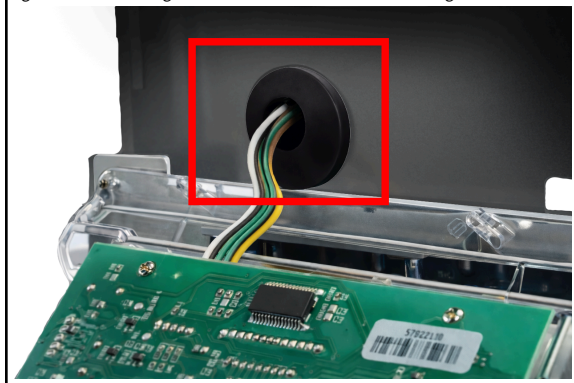


- Route the free end of the communication cable through the rubber grommet behind the controller housing to enable it to reach the controller board.

CAUTION

Be careful not to damage the colored wires (shown below) that are already routed through the grommet.

Figure 59. Rubber grommet in the controller housing



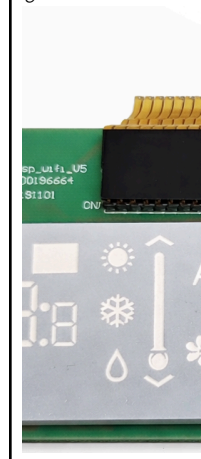
- Connect the cable to the Wi-Fi socket as follows:



Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

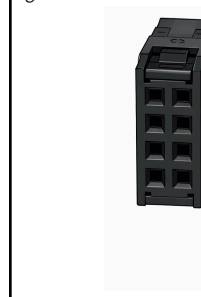
- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 60. Connect the



- If the head i.

Figure 61. Remove the



- ii.

Figure 62. Connect the



4. Reattach the

- Replace the secure it Step 1b a

- b. Reattach the controller housing to the unit using the two screws removed in Step 1a above.

5. Connect the power cable.

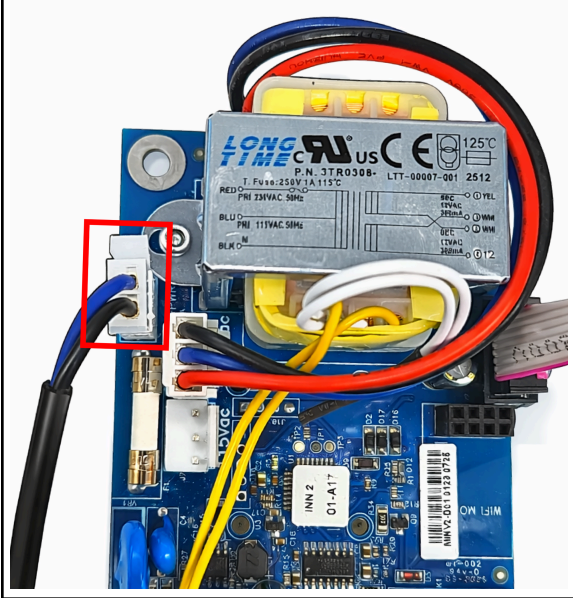
- a. On the TPG015 gateway board, the black power cable is preconnected to the power terminal as shown below.

The wiring has the following configuration:

- Black is Live
- Blue is Neutral.

- b. Make sure the wires are connected as specified – black (live on the gateway) to brown (live on the unit) and blue to blue – and that they are securely fastened.

Figure 63. TPG015 gateway board power connection



- c. The Ceiling Suspended unit may come with a black power cable pre-installed.
 - If the unit has a pre-installed power cable, disconnect the power cable on the gateway, and insert the power cable from the unit into the gateway instead.
 - If the unit does not have a power cable pre-installed, the installer must hard-wire the power cable from the gateway to the unit.

8.4 Connecting the thermostat

To connect the third-party thermostat to the TPG015 gateway:

1. Connect the control cable to the gateway.

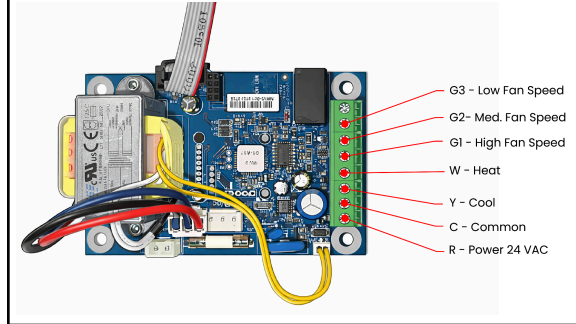
With the power remaining disconnected, connect the seven* wires of the control cable through the back of the AIO™ Wall Mounted unit to the following terminals on the MOD-TPG gateway board:

- R – Power 24 VAC
- C – Common
- Y – Cool
- W – Heat
- G1 – High Fan Speed
- G2 – Medium Fan Speed
- G3 – Low Fan Speed



* If using a thermostat that has only a single fan speed, use only five wires. In this case, you must choose the fan speed at which you want the AIO™ unit to operate by attaching the wire for the fan to either G1 for high fan, G2 for medium fan, or G3 for low fan. We recommend using the G2 for medium fan speed.

Figure 64. Terminals on the gateway for connecting the wires



When using a thermostat with a single fan speed, you must choose the fan speed at which you want the AIO™ unit to operate by attaching the wire for the fan to either G1 for high fan, G2 for medium fan, or G3 for low fan. We recommend using the G2 for medium fan speed.

2. Connect the thermostat control cable to the gateway.

Follow the manufacturer's instructions for connecting the thermostat control cable to the gateway. Where the instructions and labels exactly match, use the labels exactly.

If the thermostat has:

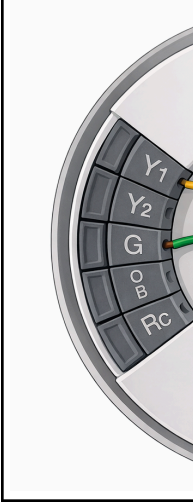
RC and RH

Y1 and Y2

W1 and W2

Only one G

Figure 65. Connect the thermostat control cable to the gateway (only)





The image above illustrates a particular type of third-party thermostat for reference only. The appearance of the thermostat and the connections required may vary from the illustration.

CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

3. Reconnect the power supply to the unit.

8.5 Closing the unit

To close the AIO™ Ceiling Suspended (without ERV option) unit:

1. Test the onboard touch controller.

- Reconnect the power supply to the unit and power it on.
- Test the onboard touch controller to verify that it changes the temperature setting and modes of operation as selected. Refer to the [AIO™ Ceiling Ducted User Guide](#) for more information (since the Ceiling Suspended units use the same controller).
 - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
 - If the test fails, repeat the applicable steps in sections 8.1 through 8.3 to verify that all connections are secure, and then repeat the test. If the test still fails, contact an INNOVA-trained service technician.



The thermostat is powered by the AIO™ unit. Whenever power is supplied to the unit, the controller is also powered. If, after closing the unit, the controller does not appear to be energized, check the electrical supply to the unit.

2. Close the unit.

- Replace the electrical panel cover using the four screws removed in Section 8.1, Step 3.
- Replace the right side panel using the three screws removed in section 8.1, Step 2c.
- Replace the front panel using the three screws removed in section 8.1, Step 2b.
- Replace the supply grille using the two screws removed in section 8.1, Step 2a.

9. INSTALLING THE TPG015 THERMOSTAT GATEWAY VERTICAL



The TPG015 is a Vertical Thermostat Gateway. It is located between the unit and the thermostat.

To install the TPG015 (Gen 3) unit and thermostat:

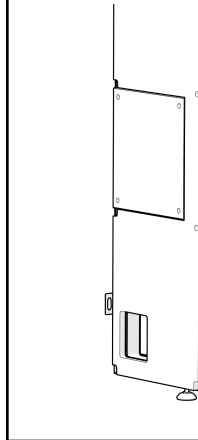
- [Open the unit](#)
- [Attach the gateway](#)
- [Connect the power between the gateway and the thermostat](#)
- [Connect the thermostat](#)
- [Close the unit](#)

9.1 Opening the unit

To open the AIO™ unit:

- 1. Disconnect the power.**
Disconnect the power to the unit and wait at least five minutes for the capacitors to discharge.
- 2. Open the electrical panel.**
Open the electrical panel by turning the knobs.

Figure 66. Remove the electrical panel cover.



9.2 Attaching the unit



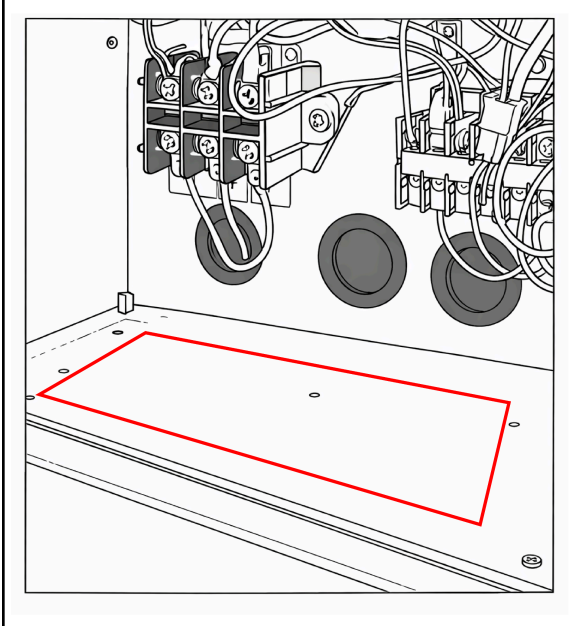
Handle the controller components with care.

To attach the TPG015 third-party thermostat gateway to the AIO™ Vertical Stack unit:

1. Mount the TPG015 gateway to the unit.

The electrical panel has a space at the bottom, near the terminal block, for mounting a gateway.

Figure 67. Gateway board mounting location



Mount the gateway board as follows:

- If there are mounting holes on the inner metal panel:
 - a. Insert four or five LCD-6 plastic spacer (stand-up) clips into the holes.
 - b. Mount the gateway board on top of the clips.



- It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.
- If the lower row of holes does not line up with the holes in the panel, or is covered by the foam strip, use spacer clips in the upper holes and a thick foam strip (or several layers of double-sided tape) at the lower end.

- If there are no mounting holes on the panel:
 - a. Clean the mounting location with an alcohol pad to ensure proper adhesion.
 - b. Remove the backing from the two adhesive foam strips that are attached to the back of the gateway board.



The foam in the adhesive strips provides insulation to prevent short-circuits.

Figure 68. Adhesive strips on the TPG015 gateway board

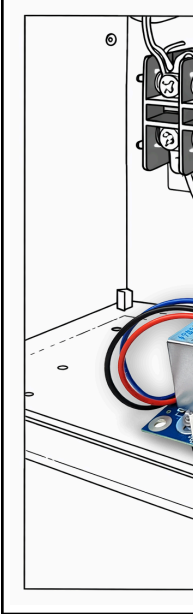


- c. Mount the TPG015 gateway board in the indicated location, and press firmly to ensure it is securely attached.

⚠ CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 69. Mount the g

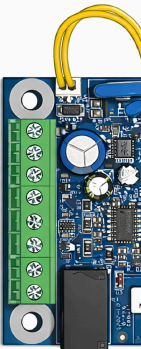


2. Set the correct

The TPG015 gateway board is configured for 230V. If the AIO™ Vertical Stack unit has a 115V socket, the 115V socket must be used.

Figure 70. Set the gateway board voltage

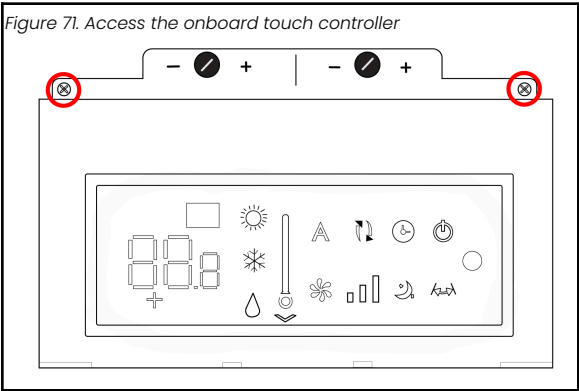
115 V



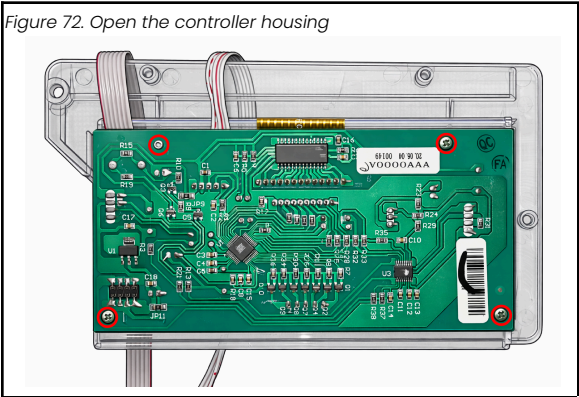
9.3 Connecting the gateway cables

To connect the power and communication cables between the TPG015 gateway and the AIO™ Vertical Stack unit:

- 1. Access the onboard touch controller.
 - a. Remove the two screws to detach the onboard touch controller housing from the unit.



- b. Remove the four screws to remove the controller from the housing.



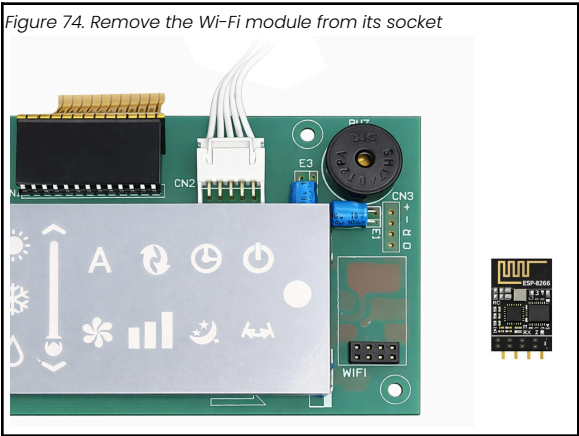
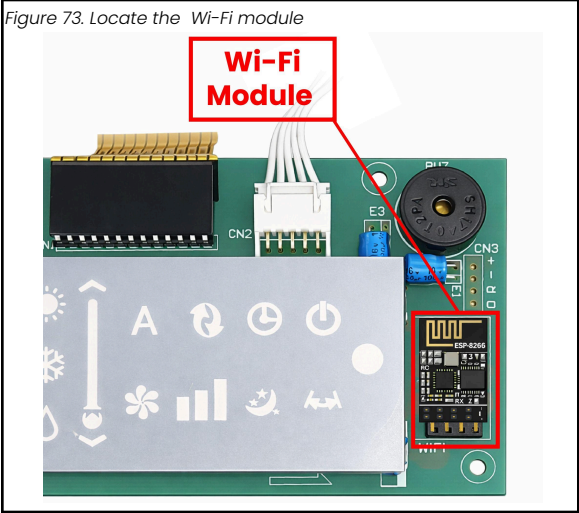
 **CAUTION**

Handle the control board and all electronic components with care to avoid damage.

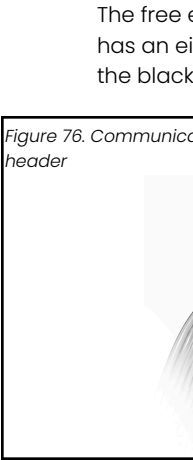
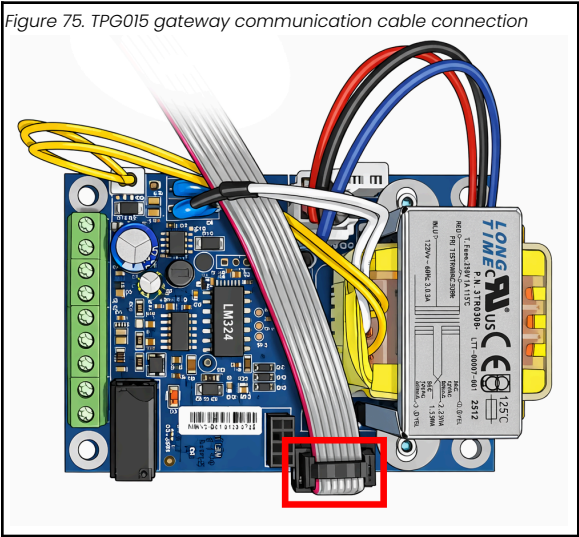
- 2. Remove the Wi-Fi module (if present) from the unit.
 - If a Wi-Fi module is installed in the Wi-Fi socket on the right side of the controller, gently pry the module out of the socket and put it aside.



Do not install any Wi-Fi module on the TPG015 gateway, as this can interfere with its correct operation.



- 3. Connect the communication cable.
 - a. On the TPG015 gateway board, the flat grey communication cable is preconnected to the communication port.

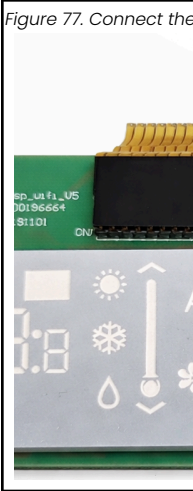


- b. Connect the communication cable as follows:



Ensure the RJ45 connector is inserted correctly, facing the correct direction.

- If the cable is not inserted correctly, the communication will fail as shown.

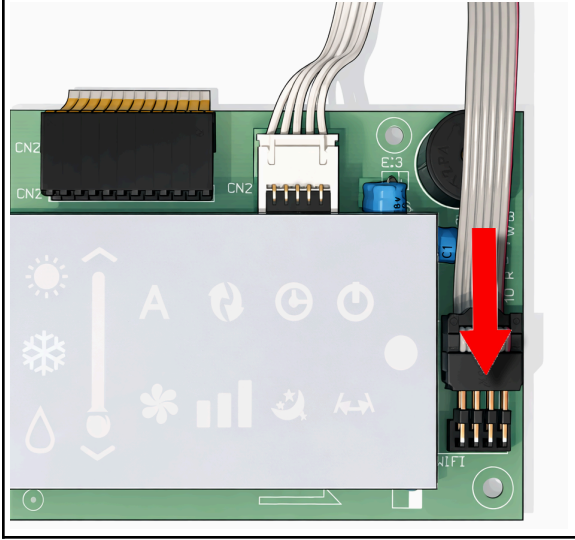


- If the cable is not inserted correctly, the communication will fail as shown.



- ii. Push the cable connector securely onto the pins in the Wi-Fi socket as shown.

Figure 79. Connect the cable to the pin header in the Wi-Fi socket



4. Reattach the onboard touch controller.

- a. Replace the controller in its housing and secure it using the four screws removed in Step 1b above.
- b. Reattach the controller housing to the unit using the two screws removed in Step 1a above.

5. Connect the power cable.

- a. On the TPG015 gateway board, the black power cable is preconnected to the power terminal as shown below.

The wiring has the following configuration:

- Black is Live
- Blue is Neutral.

- b. Make sure the wires are connected as specified – black (live on the gateway) to brown (live on the unit) and blue to blue – and that they are securely fastened.

Figure 80 TPG015 gateway board power connection



- c. The Vertical Stack unit may come with a black power cable pre-installed.

- If the unit has a pre-installed power cable, disconnect the power cable on the gateway, and insert the power cable from the unit into the gateway instead.
- If the unit does not have a power cable pre-installed, the installer must hard-wire the power cable from the gateway to the unit.

9.4 Connecting the thermostat

To connect the third-party thermostat to the TPG015 gateway:

1. Connect the control cable to the gateway.

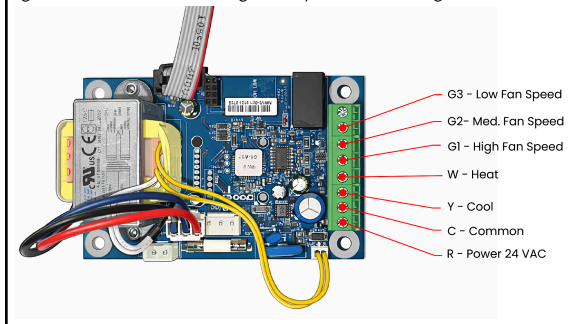
With the power remaining disconnected, connect the seven* wires of the control cable through the back of the AIO™ Wall Mounted unit to the following terminals on the MOD-TPG gateway board:

- R - Power 24 VAC
- C - Common
- Y - Cool
- W - Heat
- G1 - High Fan Speed
- G2 - Medium Fan Speed
- G3 - Low Fan Speed



* If using a thermostat that has only a single fan speed, use only five wires. In this case, you must choose the fan speed at which you want the AIO™ unit to operate by attaching the wire for the fan to either G1 for high fan, G2 for medium fan, or G3 for low fan. We recommend using the G2 for medium fan speed.

Figure 81. Terminals on the gateway for connecting the wires



⚠ CAUTION

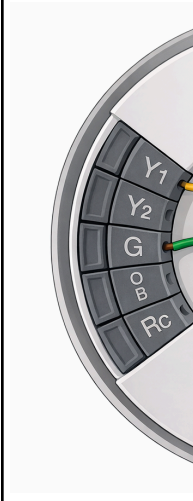
When using a third-party thermostat with this gateway, you must use both the R and C wires, even if it is a smart thermostat. Do not use any workarounds to the C-wire that steal or bleed power from the R or the Y1 wire.

2. Connect the thermostat

Follow the manufacturer's instructions for the thermostat you are installing. Connect the control cable to the corresponding terminals on the thermostat. Where the instructions are not clear, refer to the labels exactly.

If the thermostat has:
RC and RH
Y1 and Y2
W1 and W2
Only one G

Figure 82. Connect the thermostat wires (only)



The information type of reference thermostat may vary.

⚠ CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

9.5 Closing the unit

To close the AIO™ Vertical Stack unit:

1. Test the onboard touch controller.

- Reconnect the power supply to the unit and power it on.
- Test the onboard touch controller to verify that it changes the temperature setting and modes of operation as selected. Refer to the [AIO™ Vertical Stack User Guide](#) for more information.
 - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
 - If the test fails, repeat the applicable steps in sections 9.1 through 9.3 to verify that all connections are secure, and then repeat the test. If the test still fails, contact an INNOVA-trained service technician.



The thermostat is powered by the AIO™ unit. Whenever power is supplied to the unit, the controller is also powered. If, after closing the unit, the controller does not appear to be energized, check the electrical supply to the unit.

2. Close the unit.

Close the electrical panel by replacing and tightening the four knobs removed in section 9.1, Step 2.

3. Reconnect the power supply to the unit.

10. INSTALLING THE TPG015 GATEWAY IN THE AIO™ VERTICAL STACK XL UNIT

To install the TPG015 gateway in an AIO™ Vertical Stack XL unit and connect it to a third-party thermostat:

- [Open the unit.](#)
- [Attach the gateway to the unit.](#)
- [Connect the power and communication cables between the gateway and the unit.](#)
- [Connect the gateway to the thermostat.](#)
- [Close the unit.](#)



The instructions and illustrations in this section refer to Gen 3 of the AIO™ Vertical Stack XL, but the procedure is similar for Gen 1 and Gen 2.

10.1 Opening the unit

To open the AIO™ Vertical Stack XL unit:

1. Disconnect the power supply.

Disconnect the unit from the power supply and wait at least five minutes after it was last operated.

2. Remove the decorative panel.

Remove the eight knobs from the decorative panel. Then remove the decorative panel.

Figure 83. Remove the knobs

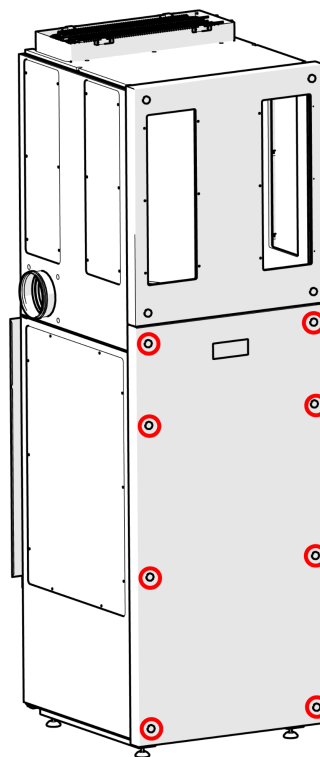
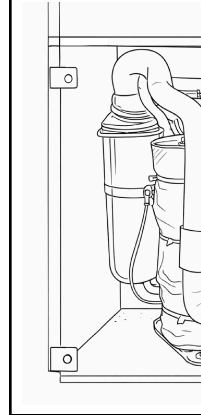


Figure 84. Remove the



3. Open the electrical panel.

Remove the four screws and the two metal panels to access the electrical panel.

Figure 85. Remove the metal panels

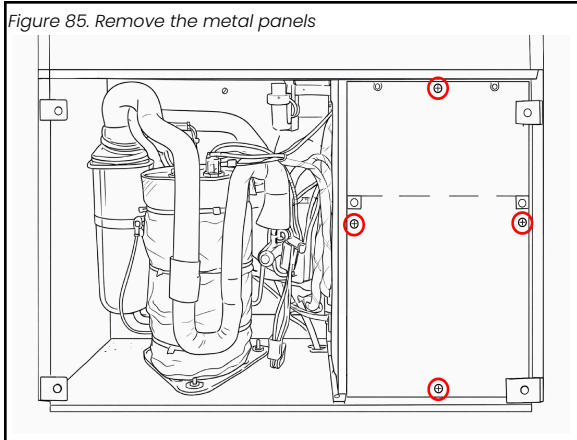
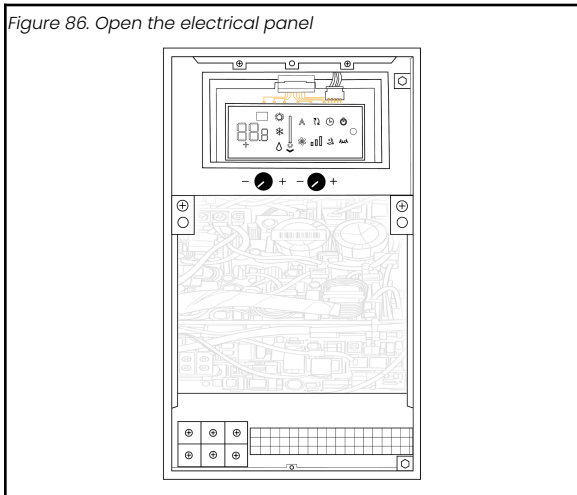


Figure 86. Open the electrical panel



10.2 Attaching the TPG015 gateway to the unit

⚠ CAUTION

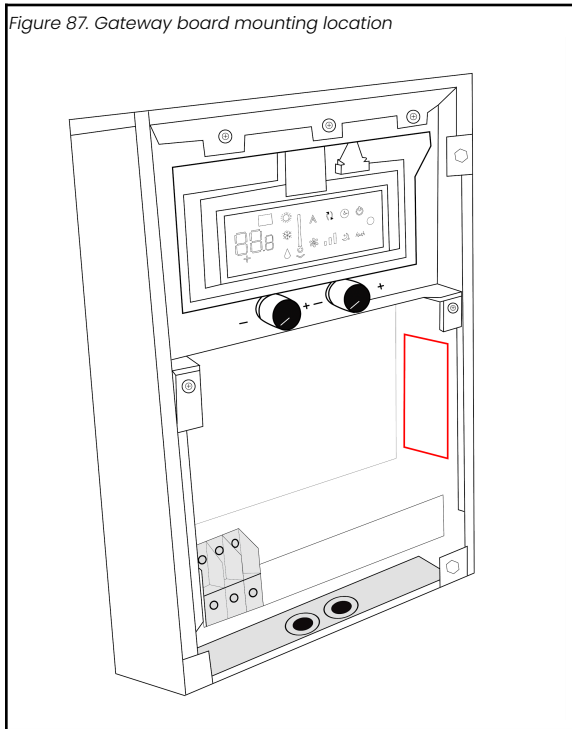
Handle the control board and all electronic components with care to avoid damage.

To attach the TPG015 third-party thermostat gateway to the AIO™ Vertical Stack XL unit:

1. Mount the TPG015 gateway to the unit.

The electrical panel has a space on the side wall for mounting the gateway.

Figure 87. Gateway board mounting location



Mount the gateway to the unit.

- If there are any metal panels, remove them.
 - Insert the screws (star head) into the unit.
 - Mount the gateway clips.



- It is recommended to raise the unit about 10 cm (4 in) from the wall.
 - If the unit is not covered by a foam board, use the foam board to cover the unit.

- If there are any metal panels, remove them.
 - Clear the area around the unit.
 - Remove the adhesive from the unit.



The foam board is used for insulation.

Figure 88. Adhesive strips on the TPG015 gateway board

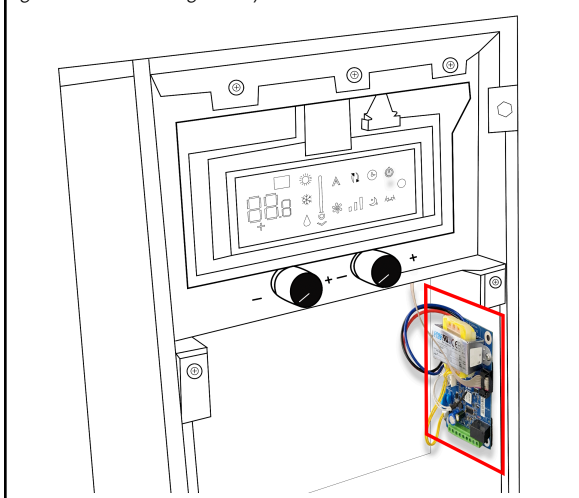


- c. Mount the TPG015 gateway board in the indicated location, and press firmly to ensure it is securely attached.

CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

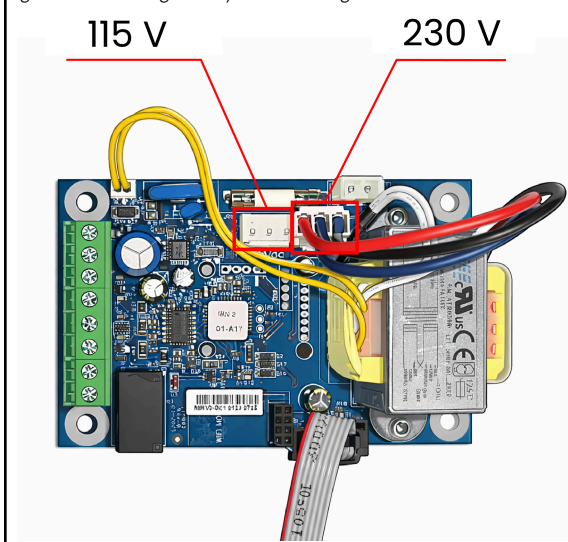
Figure 89. Mount the gateway board



2. Set the correct voltage.

The TPG015 gateway board is set at the factory to 230V. If the AIO™ unit uses 115V, remove the connector from the 230V socket and place it into the 115V socket as shown below.

Figure 90. Set the gateway board voltage



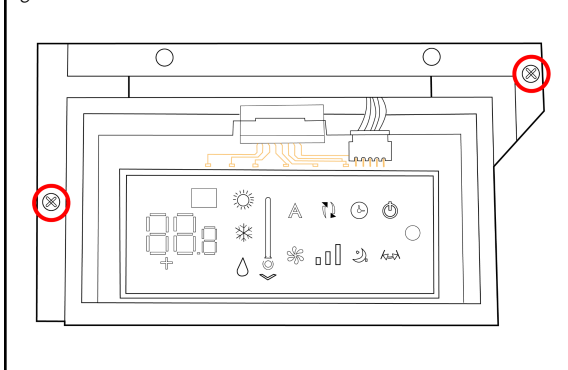
10.3 Connecting the gateway cables

To connect the power and communication cables between the TPG015 gateway and the AIO™ Vertical Stack XL unit:

1. Access the onboard touch controller.

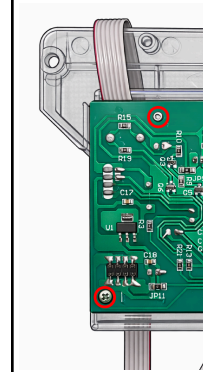
- a. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 91. Access the onboard touch controller



- b. Remove the...

Figure 92. Open the co...



Handle the contr... components with...

2. Remove the V... unit.

If a Wi-Fi mod... the right side... module out of...



Do not... TPG015... its corre...

Figure 93. Locate the

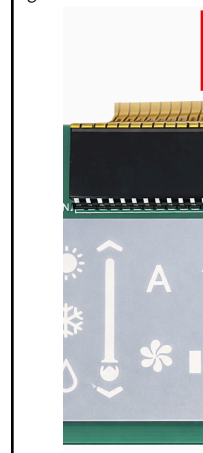
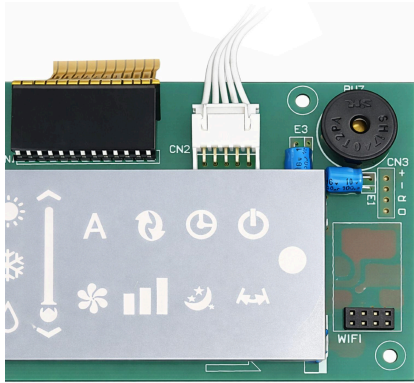


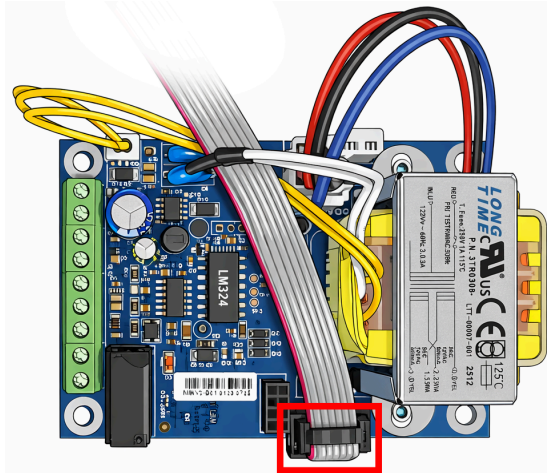
Figure 94. Remove the Wi-Fi module from its socket



3. Connect the communication cable.

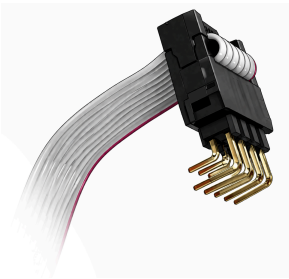
- On the TPG015 gateway board, the flat grey communication cable is preconnected to the communication port.

Figure 95. TPG015 gateway communication cable connection



The free end of the communication cable has an eight-pin right-angle pin header in the black connector.

Figure 96. Communication cable connector with right-angle pin header



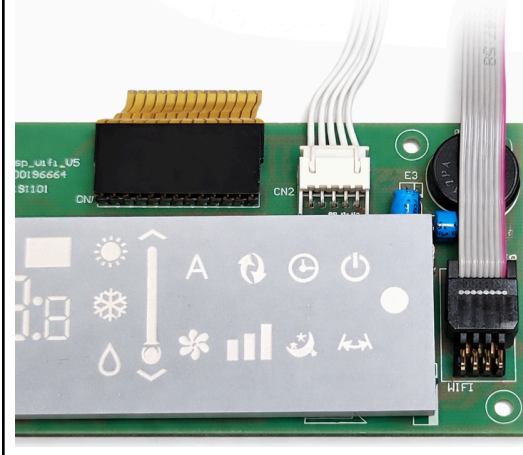
- Connect the cable to the Wi-Fi socket as follows:



Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

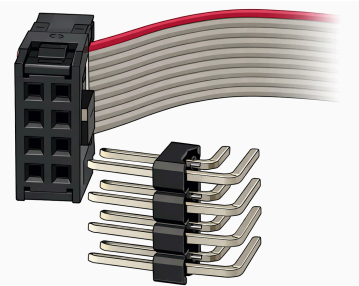
- If the Wi-Fi socket is empty:
Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 97. Connect the communication cable to the unit



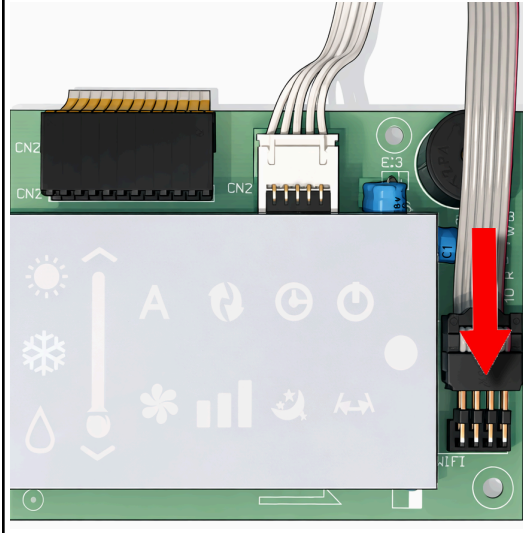
- If there is already a right-angle pin header in the Wi-Fi socket:
 - Remove the right-angle pin header from the cable connector.

Figure 98. Remove the pin header from the connector



- Push the cable connector securely onto the pins in the Wi-Fi socket as shown.

Figure 99. Connect the cable to the pin header in the Wi-Fi socket



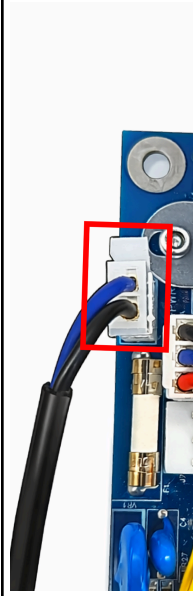
4. Reattach the

- Replace the Wi-Fi module and secure it with the screw. See Step 1b above.
- Reattach the display using the screws above.

5. Connect the power

- On the TPG015 gateway board, the power connector is located on the terminal block. The wiring is as follows:
 - Black wire to the positive terminal.
 - Blue wire to the negative terminal.
- Make sure the power is connected as specified. The brown (live) wire and that the

Figure 100. TPG015 gateway power connection



- The Vertical power connector is located on the black power connector.

- If the cable is connected to the gateway from the front, the cable should be connected to the front of the gateway.
- If the cable is connected to the gateway from the back, the cable should be connected to the back of the gateway.

10.4 Connect

To connect the third-party thermostat gateway:

- Connect the cable to the gateway.**
With the power off, connect the seven* wire to the back of the AIO™ Third Party Thermostat Gateway (TPG015) for AIO™ Heat Pumps.

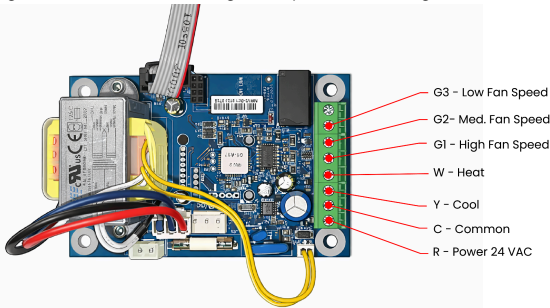
following terminals on the MOD-TPG gateway board:

- R - Power 24 VAC
- C - Common
- Y - Cool
- W - Heat
- G1 - High Fan Speed
- G2 - Medium Fan Speed
- G3 - Low Fan Speed



* If using a thermostat that has only a single fan speed, use only five wires. In this case, you must choose the fan speed at which you want the AIO™ unit to operate by attaching the wire for the fan to either G1 for high fan, G2 for medium fan, or G3 for low fan. We recommend using the G2 for medium fan speed.

Figure 101 Terminals on the gateway for connecting the wires



⚠ CAUTION

When using a third-party thermostat with this gateway, you must use both the R and C wires, even if it is a smart thermostat. Do not use any workarounds to the C-wire that steal or bleed power from the R or the Y1 wire.

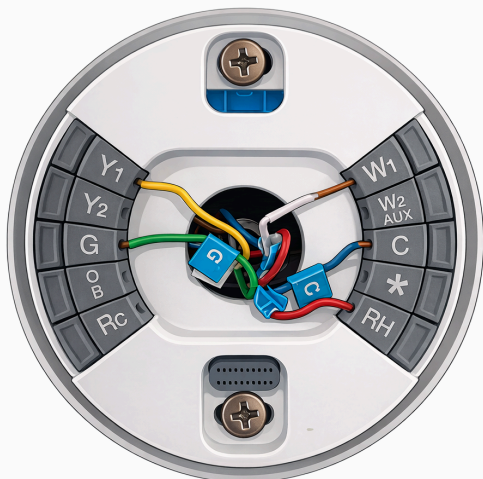
2. Connect the control cable to the thermostat.

Follow the manufacturer's instructions for the thermostat you are using to connect the wires of the control cable from the TPG015 gateway board to the corresponding inputs on the thermostat.

Where the inputs do not match the terminal labels exactly, refer to the following table:

If the thermostat has:	Connect this gateway wire:	To this thermostat input:
RC and RH	R	Either one (RC and RH use the same transformer)
Y1 and Y2	Y	Y1
W1 and W2	W	W1
Only one G	G2	G
	G1, G3	Not used

Figure 102. Connect the wires to the thermostat (for reference only)



The image above illustrates a particular type of third-party thermostat for reference only. The appearance of the thermostat and the connections required may vary from the illustration.

⚠ CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

10.5 Closing the unit

To close the AIO™ Vertical Stack XL unit:

1. Test the onboard touch controller.

- Reconnect the power supply to the unit and power it on.
- Test the onboard touch controller to verify that it changes the temperature setting and modes of operation as selected. Refer to the [AIO™ Vertical Stack User Guide](#) for more information (since the Vertical Stack XL uses the same controller).
 - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
 - If the test fails, repeat the applicable steps in sections 10.1 through 10.3 to verify that all connections are secure, and then repeat the test. If the test still fails, contact an INNOVA-trained service technician.



The thermostat is powered by the AIO™ unit. Whenever power is supplied to the unit, the controller is also powered. If, after closing the unit, the controller does not appear to be energized, check the electrical supply to the unit.

2. Close the unit.

- Replace the cover with the four screws removed in step 3.
- Replace the thermostat by replacing any wires removed in step 3.

3. Reconnect the power.

11. WARRANTY TERMS AND CONDITIONS

Controllers and gateways carry a two-year warranty.

11.1 Exclusions and limitations

The above-noted warranty shall not cover:

- Any damage resulting from improper voltage supplied to the AIO™ unit.
- Damage to a controller or gateway where there is a corrosive atmosphere containing any damaging chemical, such as chlorine or fluorine.
- Failure of the controller or gateway due to acts of God, natural disasters, power failures, interruptions, brownouts or power spikes, or due to incorrect or inadequate electrical service, or failure of internet services or home networks.
- Damages or personal injury caused directly or indirectly by failure or malfunction of the controller or gateway as a result of any cause, including natural disasters, accidents, misuse, improper wiring, or installation.

For additional information and any product inquiries, contact:

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With over 20 years of experience in the climate comfort sector, we have a clear goal: growth through innovation. Our team is laser-focused on the conception, development, and production of innovative heating, ventilation, and air conditioning solutions. This mission has developed through bringing together technical skills, creativity, technology, design, Italian passion, and a global vision to achieve the best energy efficiency and performance.

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Revised August 03, 2026

AIO™ Third Party Thermostat Gateway (TPG015) for
AIO™ Heat Pumps **Installation Guide**