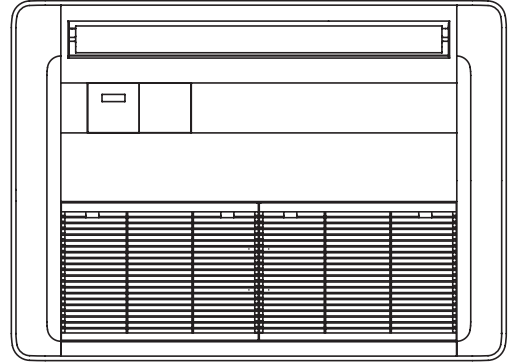


Installation Manual

For Decorative Panel

Model: P-AP36CNA
P-AP56CNA



IMPORTANT:

***READ AND UNDERSTAND
THIS MANUAL BEFORE
USING THIS DECORATIVE
PANEL. KEEP THIS MANUAL
FOR FUTURE REFERENCE.***

P5415470

1. Introduction

Read following sections carefully before installing this optional decorative panel.

Read over the "Installation and Maintenance Manual" for the outdoor and indoor units as well.

Provide this information, and the warranty to all installers and users. Ask end users to maintain copies for future reference.

(Unit Installation) > (Refrigerant Piping Work) > (Electrical Wiring Work) > (Test Run) > (User)



Important Notice

- Johnson Controls Inc. pursues a policy of continuing improvement in design and performance in its products. As such, Johnson Controls Inc. reserves the right to make changes at any time without prior notice.
- Johnson Controls Inc. cannot anticipate every possible circumstance that might involve a potential hazard.
- This heat pump air conditioning unit is designed for standard air conditioning applications only. Do not use this unit for anything other than the purposes for which it was intended for.
- The installer and system specialist shall safeguard against leakage in accordance with local pipefitter and electrical codes. The following standards may be applicable, if local regulations are not available. International Organization for Standardization: (ISO 5149 or European Standard, EN 378). No part of this manual may be reproduced in any way without the expressed written consent of Johnson Controls Inc..
- This heat pump air conditioning unit will be operated and serviced in the United States of America and comes with a full complement of the appropriate Safety, Danger, and Caution, Warnings.
- If you have questions, please contact your distributor or dealer.
- This manual provides common descriptions, basic and advanced information to maintain and service this heat pump air conditioning unit which you operate as well for other models.
- This manual should be considered as a permanent part of the air conditioning equipment and should remain with the air conditioning equipment.


Product Inspection upon Arrival

1. Upon receiving this product, inspect it for any damages incurred in transit. Claims for damage, either apparent or concealed, should be filed immediately with the shipping company.
2. Check the model number, electrical characteristics (power supply, voltage, and frequency rating), and any accessories to determine if they agree with the purchase order.
3. The standard utilization for this unit is explained in these instructions. Use of this equipment for purposes other than what it designed for is not recommended.
4. Please contact your local agent or contractor as any issues involving installation, performance, or maintenance arise. Liability does not cover defects originating from unauthorized modifications performed by a customer without the written consent of Johnson Controls, Inc.. Performing any mechanical alterations on this product without the consent of the manufacturer will render your warranty null and void.

2. Important Safety Instructions

Signal Words	
 WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates information considered important, but not hazard-related (for example, messages relating to property damage).

General Precautions

 WARNING	To reduce the risk of serious injury or death, read these instructions thoroughly and follow all warnings or cautions included in all manuals that accompanied the product and are attached to the unit. <i>Refer back to these safety instructions as needed.</i>
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- This system should be installed by personnel certified by Johnson Controls, Inc. Personnel must be qualified according to local, state and national building and safety codes and regulations. Incorrect installation could cause leaks, electric shock, fire or explosion. In areas where Seismic "Performance requirements are specified, the appropriate measures should be taken during installation to guard against possible damage or injury that might occur in an earthquake if the unit is not installed correctly, injuries may occur due to a falling unit.
- Use appropriate Personal Protective Equipment (PPE), such as gloves and protective goggles and, where appropriate, have a gas mask nearby. Also use electrical protection equipment and tools suited for electrical operation purposes. Keep a quenching cloth and a fire extinguisher nearby during brazing. Use care in handling, rigging, and setting of bulky equipment.
- When transporting, be careful when picking up, moving and mounting these units. Although the unit may be packed using plastic straps, do not use them for transporting the unit from one location to another. Do not stand on or put any material on the unit. Get a partner to help, and bend with your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut fingers, so wear protective gloves.
- Do not touch or adjust any safety devices inside the indoor or outdoor units. All safety features, disengagement, and interlocks must be in place and functioning correctly before the equipment is put into operation. If these devices are improperly adjusted or tampered with in any way, a serious accident can occur. Never bypass or jump-out any safety device or switch.
- Johnson Controls will not assume any liability for injuries or damage caused by not following steps outlined or described in this manual. Unauthorized modifications to Johnson Controls products are prohibited as they...
 - May create hazards which could result in death, serious injury or equipment damage;
 - Will void product warranties;
 - May invalidate product regulatory certifications;
 - May violate OSHA standards;

NOTICE	Take the following precautions to reduce the risk of property damage.
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- Be careful that moisture, dust, or variant refrigerant compounds not enter the refrigerant cycle during installation work. Foreign matter could damage internal components or cause blockages.
- If air filters are required on this unit, do not operate the unit without the air filter set in place. If the air filter is not installed, dust may accumulate and breakdown may result.
- Do not install this unit in any place where silicon gases can coalesce. If the silicon gas molecules attach themselves to the surface of the heat exchanger, the finned surfaces will repel water. As a result, any amount of drainage moisture condensate can overflow from the drain pan and could run inside of the electrical box, possibly causing electrical failures.

- When installing the unit in a hospital or other facility where electromagnetic waves are generated from nearby medical and/or electronic devices, be prepared for noise and Electromagnetic Interference (EMI). Do not install where the waves can directly radiate into the electrical box, controller cable, or controller. Inverters, appliances, high-frequency medical equipment, and radio communications equipment may cause the unit to malfunction. The operation of the unit may also adversely affect these same devices. Install the unit at least 10 ft. (3m) away from such devices.
- When a wireless controller is used, locate at a distance of at least 3.3 ft. (1m) between the indoor unit and electric lighting. If not, the receiver part of the unit may have difficulty receiving operation commands.
- Do not install the unit in any location where animals and plants can come into direct contact with the outlet air stream. Exposure could adversely affect the animals and plants.
- Do not install the unit with any downward slope to the side of the drain adaptor. If you do, you may have drain water flowing back which may cause leaks.
- Be sure the drain hose discharges water properly. If connected incorrectly, it may cause leaks.
- Do not install the unit in any place where oil can seep onto the units, such as table or seating areas in restaurants, and so forth. For these locations or social venues, use specialized units with oil-resistant features built into them. In addition, use a specialized ceiling fan designed for restaurant use. These specialized oil-resistant units can be ordered for such applications. However, in places where large quantities of oil can splash onto the unit, such as a factory, even the specialized units cannot be used. These products should not be installed in such locations.

Installation Precautions



To reduce the risk of serious injury or death, the following installation precautions must be followed.

- When installing the unit into...
 - A wall: Make sure the wall is strong enough to hold the unit's weight. It may be necessary to construct a strong wood or metal frame to provide added support.
 - A room: Properly insulate any refrigerant tubing run inside a room to prevent "sweating" that can cause dripping and water damage to wall and floors.
 - Moist or uneven locations: Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the unit to prevent water damage and abnormal vibration.
 - An area with high winds: Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.
 - A snowy area: Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.
- Do not install the unit in the following places. Doing so can result in an explosion, fire, deformation, corrosion, or product failure.
 - Explosive or flammable atmosphere
 - Where a fire, oil, steam or powder can directly enter the unit, such as nearby or above a kitchen stove.
 - Where oil (including machinery oil) may be present.
 - Where corrosive gases such as chlorine, bromine or sulfide can accumulate, such as near a hot tub or hot spring.
 - Where dense, salt-laden airflow is heavy, such as in coastal regions.
 - Where the air quality is of high acidity.
 - Where harmful gases can be generated from decomposition.
- Do not position the drain pipe for the indoor unit near any sanitary sewers where corrosive gases may be present. If you do, toxic gases can seep into breathable air spaces and can cause respiratory injuries. If the drainpipe is installed incorrectly, water leakage and damage to the ceiling, floor, furniture, or other possessions may result. If the drain piping becomes clogged, water may drip from the indoor unit. Do not install the indoor unit where such dripping can cause moisture damage or uneven locations: Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the unit to prevent water damage and abnormal vibration.
- Before performing any brazing work, be sure that there are no flammable materials or open flames nearby.

- Perform a test run to ensure normal operation. Safety guards, shields, barriers, covers, and protective devices must be in place while the compressor/unit is operating. During the test run, keep fingers and clothing away from any moving parts.
- Clean up the site when finished, remembering to check that no metal scraps or bits of wiring have been left inside the unit being installed.

After installation work for the system has been completed, explain the “Safety Precautions,” use, and maintenance of the unit to the customer according to the information in all manuals that accompanied the system. All manuals and warranty information must be given to the user or left near the Indoor Unit.

Refrigerant Precaution



To reduce the risk of serious injury or death, the following refrigerant precautions must be followed.

- As originally manufactured, this unit contains refrigerant installed by Johnson Controls. Johnson Controls uses only refrigerants that have been approved for use in the unit's intended home country or market. Johnson Controls distributors similarly are only authorized to provide refrigerants that have been approved for use in the countries or markets they serve. The refrigerant used in this unit is identified on the unit's faceplate and/or in the associated manuals. Any additions of refrigerant into this unit must comply with the country's requirements with regard to refrigerant use and should be obtained from Johnson Controls distributors. Use of any non-approved refrigerant substitutes will void the warranty and will increase the potential risk of injury or death.
- If installed in a small room, take measures to prevent the refrigerant from exceeding the maximum allowable concentration in the event that refrigerant gases should escape. Refrigerant gases can cause asphyxiation (0.026 lbs/ft³ (0.42 kg/m³) based on ISO 5149 for R410A). Consult with your distributor for countermeasures (ventilation system and so on). If refrigerant gas has leaked during the installation work, ventilate the room immediately.
- Before installation is complete, make sure that the refrigerant leak test has been performed. If refrigerant gases escape into the air, turn OFF the main switch, extinguish any open flames and contact your service contractor. Refrigerant (Fluorocarbon) for this unit is odorless. If the refrigerant should leak and come into contact with open flames, toxic gas could be generated. Also, because the fluorocarbons are heavier than air, they settle to the floor, which could cause asphyxiation.
- When installing the unit, and connecting refrigerant piping, keep all piping runs as short as possible, and make sure to securely connect the refrigerant piping before the compressor starts operating. If the refrigerant piping is not connected and the compressor activates with the stop valve opened, the refrigerant cycle will become subjected to extremely high pressure, which can cause an explosion or fire.
- Tighten the flare nut with a torque wrench in the specified manner. Do not apply excessive force to the flare nut when tightening. If you do, the flare nut can crack and refrigerant leakage may occur.
- A compressor/unit comprises a pressurized system. Never loosen threaded joints while the system is under pressure and never open pressurized system parts.
- When maintaining, relocating, and disposing of the unit, dismantle the refrigerant piping after the compressor stops.

Electrical Precautions



Take the following precautions to reduce the risk of electric shock, fire or explosion resulting in serious injury or death.

- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause serious injury or death.
- Before servicing, open and tag all disconnect switches. Never assume electrical power is disconnected. Check with meter and equipment and tools suited for this installation.

- Only use electrical protection equipment.
- Use specified cables between units.
- Communication cable shall be a minimum of AWG18 (0.82mm²), 2-Conductor, Stranded Copper. Shielded cable must be considered for applications and routing in areas of high EMI and other sources of potentially excessive electrical noise to reduce the potential for communication errors. When shielded cable is applied, proper bonding and termination of the cable shield is required as per Johnson Controls guidelines. Plenum and riser ratings for communication cables must be considered per application and local code requirements.
- Use an exclusive power supply for the air conditioner at the unit's rated voltage.
- Be sure to install circuit breakers (ground fault interrupter, isolating switch, molded case circuit breaker and so on), with the specified capacity. Ensure that the wiring terminals are tightened securely to recommended torque specifications.
- Clamp electrical wires securely with a cable clamp after all wiring is connected to the terminal block. In addition, run wires securely through the wiring access channel.
- When installing the power lines, do not apply tension to the cables. Secure the suspended cables at regular intervals, but not too tightly.
- Make sure that the terminals do not come into contact with the surface of the electrical box. If the terminals are too close to the surface, it may lead to failures at the terminal connection.
- Turn OFF and disconnect the unit from the power supply when handling the service connector. Do not open the service cover or access panel to the indoor or outdoor units without turning OFF the main power supply.
- After stopping operation, be sure to wait at least five minutes before turning off the main power switch. Otherwise, water leakage or electrical breakdown may result. Disconnect the power supply completely before attempting any maintenance for electrical parts. Check to ensure that no residual voltage is present after disconnecting the power supply.
- Do not clean with, or pour water into, the controller as it could cause electric shock and/or damage the unit. Do not use strong detergent such as a solvent. Clean with a soft cloth.
- Check that the ground wiring is securely connected. Do not connect ground wiring to gas piping, water piping, lighting conductor, or telephone ground wiring.
- If a circuit breaker or fuse is frequently activated, shut down the system and contact your service contractor.

3. Applicable Model

This decorative panel is applicable to the following indoor unit models.



Decorative Panel	Indoor Unit Model
P-AP36CNA	(H,Y,C)IC1006B21S, (H,Y,C)IC1008B21S
P-AP56CNA	(H,Y,C)IC1012B21S, (H,Y,C)IC1015B21S

4. Transporting and Handling

- Avoid unpackaging the decorative panel until it has arrived at the installation site.
- Mount the decorative panel as soon as possible after unpacking.
- When the decorative panel is placed on the floor after unpacking, position it with the rear surface facing downward; (the surface that faces the unit when installed), or upon soft packing insulation material. Any superficial damage to this item can compromise its moisture sealing qualities. Be careful not to come into contact or place with the louver side down as the louver is fragile and is easily damaged by contact with any horizontal or floor surfaces.
- Do not attempt to move the louver manually. The louver auto-swing mechanism can be damaged.

5. Before Installation

Check to ensure that the following accessories are packed with the decorative panel.

Name	Qty.	Purpose
Long Screw (M6 Cross Screw) 	4	For Securing the Decorative Panel
Logo Label 	1	Logo Label for HITACHI Brand
Logo Label 	1	Logo Label for YORK Brand

If any of these accessories are not included in the packing, please contact your contractor.

6. Installation

CAUTION

Exercise caution when performing installation work from an elevated position using a stepladder. The hazard for serious injury exists.

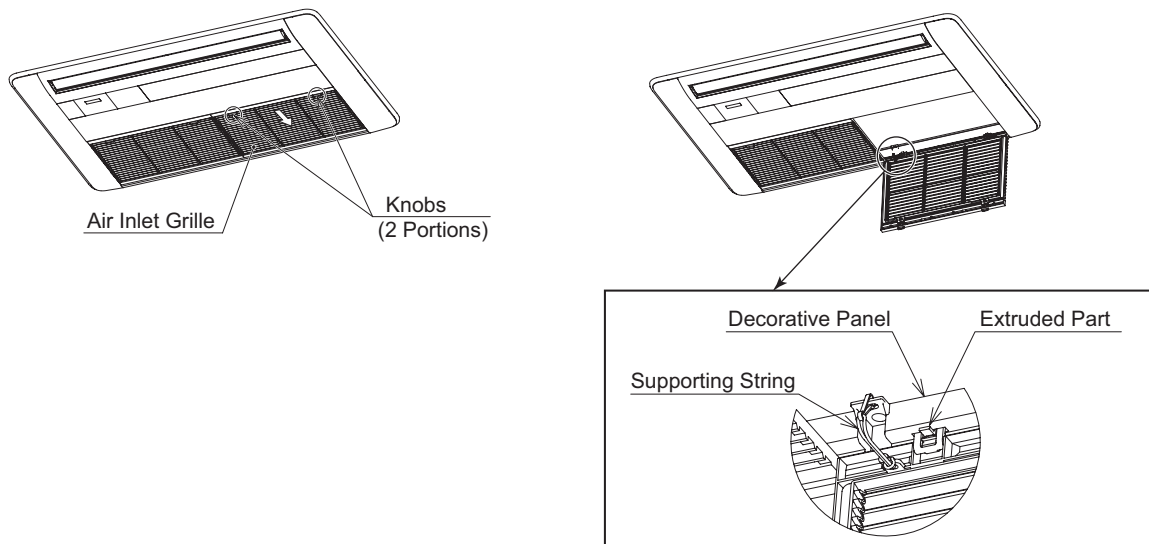
NOTICE

Do not attempt to move any louver manually. The louver auto-swing mechanism can be damaged. Similarly, do not apply excessive force to the air discharge vent as it will also be damaged.

- 1) Refer to the "Installation and Maintenance Manual" for the indoor unit to determine the proper mounting height of the product.
- 2) Do not touch the louver during the installation work.

Air Inlet Grille:

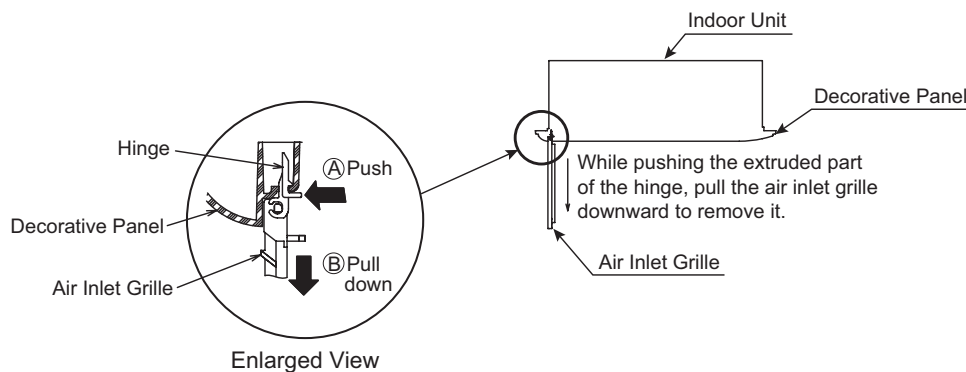
- (a) The air inlet grille can be opened by pushing the knob at the air inlet grille backward.
- (b) Remove the hook of the supporting string from the decorative panel.



- (c) Open the air inlet grille. The air inlet grille can be removed by pushing the extruded part of the grille toward arrow direction, and pulling the air inlet grille downward as shown in the figure below.

NOTE:

When removing the air inlet grille after installing the decorative panel on the ceiling, follow the directions above.



NOTICE

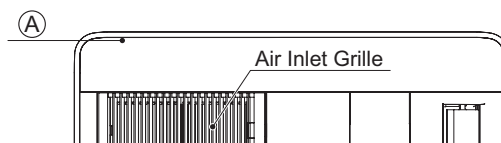
When installing and removing the air inlet grille, do not twist the air inlet grille forcibly. Otherwise, hooking part at the air inlet grille can be easily damaged.

- 3) Remove the side pocket covers.

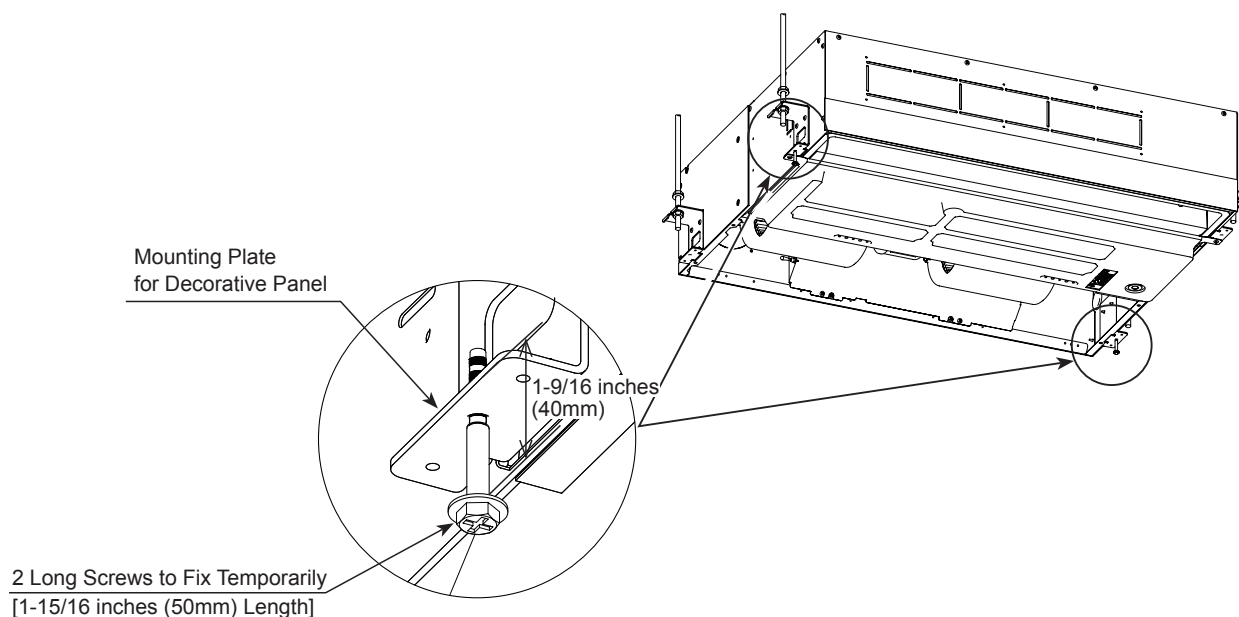
The side pocket covers can be removed pulling (A) in the figure below.

NOTICE

Do not apply excessive force to remove the side pocket cover. Otherwise, it may cause deformation or breakage of the fixing hook of the side pocket cover as well as cause injury.

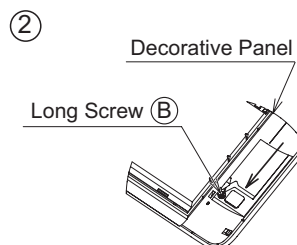
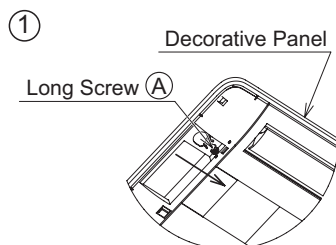


- 4) Fix the accessory long screws (1-15/16 inches (50mm)) temporarily to the mounting plate as shown in the figure. (Remaining nominal length approx. 1-9/16 inches (40mm))



- 5) Mount the decorative panel temporarily to the unit as shown.

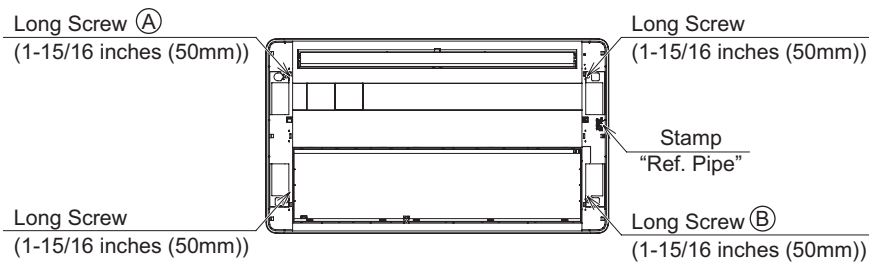
- Insert the accessory long screw (A) through the decorative panel hole as shown in the figure (1).
- Slide the decorative panel toward the arrow direction shown to hang it.
- Rotate the decorative panel toward the arrow direction shown and hang it to the accessory long screw (B) as shown in figure (2).



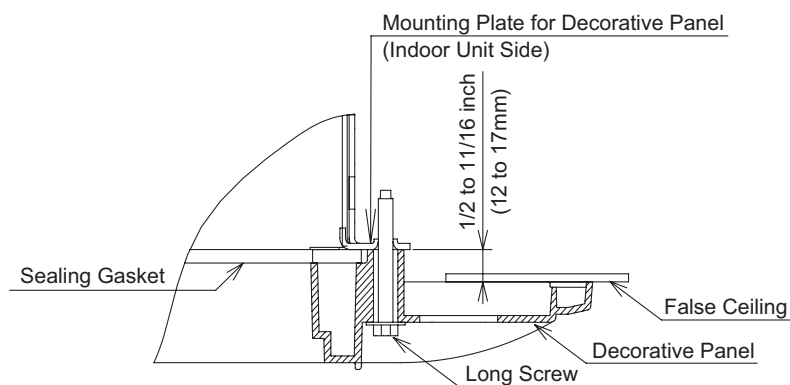
NOTICE

Adjust the stamp "Ref. Pipe" at the corner of the decorative panel with the refrigerant piping connection part of the indoor unit. If not adjusted, it may cause air leakage.

- 6) Mount the decorative panel to the mounting plate of the indoor unit by the rest of the accessory long screws and the other screws (A) and (B) which were affixed temporarily on the indoor unit. The positions of the long screws are as shown in the figure below.



- 7) Check to ensure that the distance between the indoor unit under surface and the false ceiling under surface is 1/2 to 11/16 inch (12 to 17mm) as shown in the figure below. Make sure the long screws are well tightened. When tightening the long screws to prevent air leakage and to be no gaps between the false ceiling surface and the indoor unit, the inner circumference of the panel (the position to attach the air inlet grille) may be slightly deformed. However, it is not an abnormality.

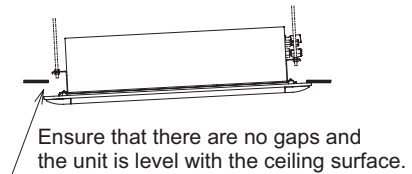
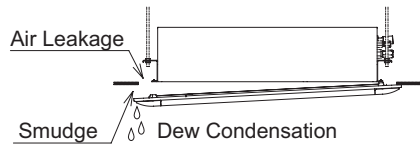


NOTICE

The standard installation dimension between the indoor unit under surface and the false ceiling surface is 9/16 inch (15mm). If the suspended unit is not consistently level and the position is not correct, the decorative panel can not be installed correctly.

NOTICE

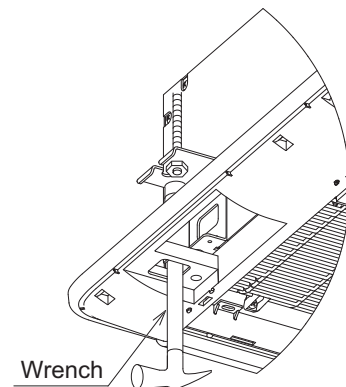
- Firmly tighten the long screws. Failure to tighten and seal sufficiently will allow moisture and condensation to spread, and cause damage to the unit.
- If a gap is still remains after securing all screws, readjust the height of the unit.



- The indoor unit can be leveled by accessing the adjustment at the both sides of the corner hole of the panel.

NOTE:

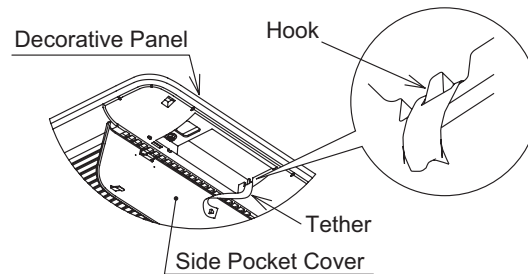
Over-adjustment for height will cause moisture leakage from the drain pan.



CAUTION

If leak detection foam is used after installation, make sure it does not contact the decorative panel. If the leak detection foam contacts the decorative panel, completely wipe it off.

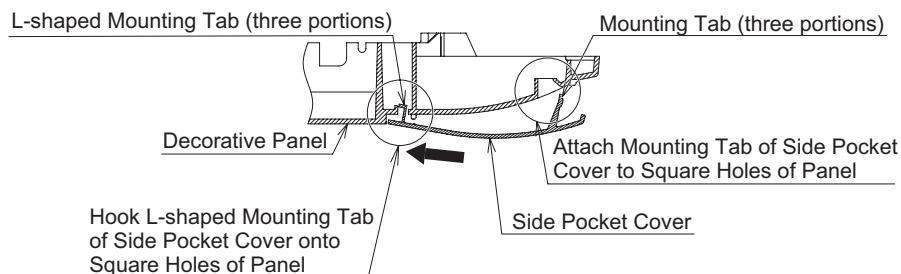
- 8) After mounting the decorative panel, attach the side pocket covers (two portions). The side pocket cover shapes are different between the right cover (R) and the left cover (L). Be careful not to incorrectly attach them.
- (a) Attach the tether at the rear side of the side pocket cover to the hook at the decorative panel as shown in the figure below.



CAUTION

Securely attach the tether to the hook. Failure to secure the corner cover can cause it to drop to the floor with possible injury to those nearby.

- (b) Hook the L-shaped mounting tabs (three portions) of the side pocket cover into the square holes of the decorative panel. Push the side pocket cover toward the arrow direction shown below to attach it to the square holes of the panel by the mounting tabs (three portions).



NOTICE

Firmly hook the L-shaped mounting tabs of the side pocket cover to the decorative panel. If not firmly hooked, the L-shaped mounting tabs will be damaged.

7. Electrical Wiring

WARNING

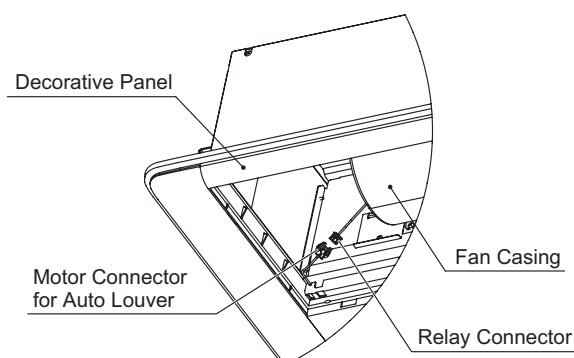
- All electrical installation work must be performed by certified personnel and all work must be complete and conform to local and NEC (National Electrical Code) standards. Failure to uphold these standards can result in damage, flame, electrical shock, and serious or fatal injury.
- Cables at the terminals should be tightened only to recommended torque specs. Excessive force can fracture the terminal connections and can result in electrical short and fire at the terminal connection.
- Communication cable shall be a minimum of AWG18 (0.82mm²), 2-Conductor, Stranded Copper. Shielded cable must be considered for applications and routing in areas of high EMI and other sources of potentially excessive electrical noise to reduce the potential for communication errors. When shielded cable is applied, proper bonding and termination of the cable shield is required as per Johnson Controls guidelines. Plenum and riser ratings for communication cable must be considered per application and local code requirements.

- 1) The following connectors are used in the decorative panel. Remove the tape fixing the wiring connector (motor connector for auto louver) on the decorative panel and pull it out as shown in the figure below.
- 2) Connect the motor connector for the auto louver to the relay connector on the indoor unit.

NOTE:

When the one-way type indoor unit is installed at, or adjacent to, a sloped ceiling, disconnect the discharge louver motor from the relay connector (see diagram) to prevent undesirable drafts.

One-Way Airflow Type: One of the installing types. Refer to Section 8 for details.



- 3) After completing the wiring connection of the decorative panel, attach the air inlet grille. (Refer to Section 6)

NOTE:

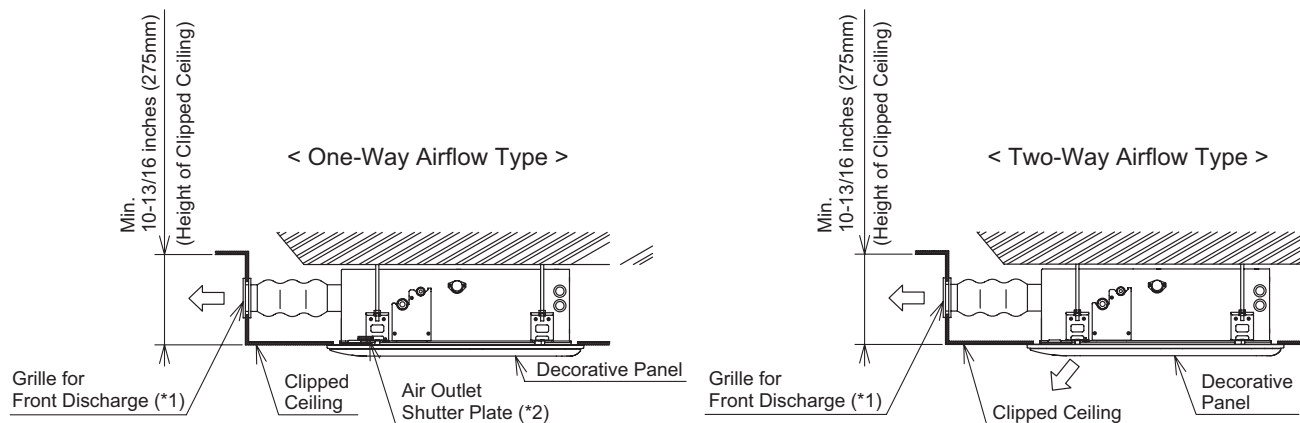
Make sure to install the swivel of the supporting string to the decorative panel.

8. Installing to Clipped Ceiling

This indoor unit can be installed to a clipped ceiling as shown below.

When installing this indoor unit to a clipped ceiling, prepare the optional parts according to the selected installation type as shown in the table at the right. The installation details for optional parts are according to the each "Installation Manual".

Type	Model	
	Grille for Front Discharge (*1)	Air Outlet Shutter Plate (*2)
One-Way Airflow Type	DG-56SW1 x 1	PIS-56LS x 1
Two-Way Airflow Type	DG-56SW1 x 1	-



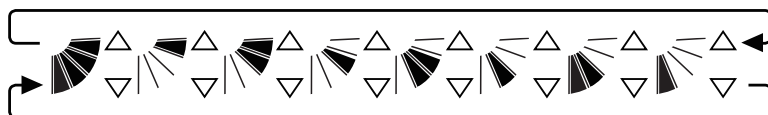
NOTE:

In the case of one-way airflow type, the optional parts "Grille for Front Discharge (*1)" and "Air Outlet Shutter Plate (*2)" are required.

9. Test Run

- 1) After completing installation of the decorative panel, Test Run should be performed according to "Installation and Maintenance Manual" for the indoor unit.
- 2) Perform the louver operation during Test Run. Do not move the louver manually or damage will occur.
 - a. Press "⏻ On/Off", and the unit operation is started. Select airflow direction by pressing the "◀" or "▶" buttons on the controller.
 - b. The louver angle is changed by pressing "△" or "▽" buttons on the controller.

< LCD Display Indicator >



Auto swing operation is started by selecting "🌀" (auto-swing). When Auto Swing is selected, the LCD indicator displays the swing operation repeatedly.

NOTICE

- Adequate and optimal airflow is dependent on application and installation practices which include positioning of office equipment, room structure, and office cubicle or furniture layout. Adjust airflow for maximum comfort.
- The position of the louver may not coincide with the louver position indicator on the LCD during auto swing operation. When adjusting the louver angle, set it according to the louver position on the LCD.
- Even if the "△" or "▽" are pressed to stop the auto swing function, the louver is not stopped immediately.
- If the cooling operation is performed with greater than 80% relative humidity, condensation may form on the decorative panel or louver surfaces.

After installation is complete, hand over this manual, as well as the warranty information to the building owner or tenant.

