LG
Life's Good

ENGLISH

QUICK GUIDE

V-NET™ ACS

- Make sure to read the cautions for safety before installation and use, and use it correctly.
- It is intended to keep protect the safety of the installer and user and to prevent the property damage, etc.
- After reading the user manual, please keep it at a place where user can access any time.
- For more information, please read the manual in the CD.

TYPE : ACP

MODEL : PQCPC22A0, PQCPC22A1, PQCPC22N0, PQCPC22N1

P/NO : MFL68006016

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TIPS FOR SAVING ENERGY

Here are some tips that will help you minimize the power consumption when you use the air conditioner. You can use your air conditioner more efficiently by referring to the instructions below:

- Do not cool excessively indoors. This may be harmful for your health and may consume more electricity.
- Block sunlight with blinds or curtains while you are operating the air conditioner.
- Keep doors or windows closed tightly while you are operating the air conditioner.
- Adjust the direction of the air flow vertically or horizontally to circulate indoor air.
- Speed up the fan to cool or warm indoor air quickly, in a short period of time.
- Open windows regularly for ventilation as the indoor air quality may deteriorate if the air conditioner is used for many hours.
- Clean the air filter once every 2 weeks. Dust and impurities collected in the air filter may block the air flow or weaken the cooling / dehumidifying functions.

NOTE

- The product images and descriptions included in this manual are stated based on ACP Premium-Free volt (Model Name: PQCPC22A0).
  ACP Premium-Free volt (PQCPC22A0)
  ACP Premium-24V (PQCPC22A1)
  ACP Standard-Free volt (PQCPC22N0)
  ACP Standard-24V (PQCPC22N1)

For your records

Staple your receipt to this page in case you need it to prove the date of purchase or for warranty purposes. Write the model number and the serial number here:

Model number :

Serial number :

You can find them on a label on the side of each unit.

Dealer's name :

Date of purchase :

IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE.

Always comply with the following precautions to avoid dangerous situations and ensure peak performance of your product

⚠ WARNING

It can result in serious injury or death when the directions are ignored

⚠ CAUTION

It can result in minor injury or product damage when the directions are ignored

⚠ WARNING

- Installation or repairs made by unqualified persons can result in hazards to you and others.
- Installation MUST conform with local building codes or, in the absence of local codes, with the Nation Electrical Code NFPA 70/ANSI C1-1003 or current edition and Canadian Electrical Code Part1 CSA C.22.1.
- The information contained in the manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.
- Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

Installation

- Any question about the product installation should be asked to the service center or the professional installation agency.
  - It may cause fire, electric shock, explosion or injury.
- Consult the service center or the professional installation agency about reinstalling the installed product.
  - It may cause fire, electric shock, explosion or injury.
- Please use the standardized parts.
  - It may cause fire, electric shock, explosion, injury, or failure.
- Do not keep or use combustible gas or inflammable material near the product.
  - IT may cause fire or electric shock.
- Do not disassemble, repair or modify the product at random.
  - It may cause failure of the product.
- Do not install where raindrop can fall.
  - It may cause failure of the product.
- Do not install the product at wet place.
  - It may cause failure of the product.
- Provided product and adaptor shall only be installed and used inside a building.
  - It may cause fire or failure of the product.
    *Do not install or use outside.
- Install stably in a place that can endure the weight of the ACP.
  - If the installation place is not strong enough, the ACP may fall and damaged.
- Make sure to enquire to the specialty store of the product purchase or service center for electric works.
  - It may cause fire or electric shock.
- Do not damage the power cord or bend it by force.
  - It may cause fire or electric shock.
- You need to use a safely insulated power supply which follows IEC61558-2-6 and NEC Class2
  - If you do not follow, It may cause fire, electric shock, explosion or injury.

- Do not connetion 220V power to 24V products
  - If you do not follow, It may cause fire, electric shock, explosion or injury.
- Do not connect power cord to the control signal connector.
  - It may cause fire or explosion.

Operation

- Do not change or extend the power cord with your own discretion.
  - It may cause fire or electric shock
- Do not place any heating device near the product.
  - It may cause fire.
- Do not use any heating device near the power cord.
  - It may cause fire or electric shock.
- Do not let water flow into the product.
  - It may cause electric shock or failure.
- Do not put heavy weight on the power cord.
  - It may cause fire or electric shock.
- Do not put heavy weight on the product.
  - It may cause the failure of the product.
- If the product is flooded, consult the service center or the professional installation agency.
  - It may cause fire or electric shock.
- Let the children or the old and the weak be controlled by the guardian to use.
  - It may cause accident or failure.
- Do not give any shock to the product.
  - Any shock to the product may cause failure.
- Grab the head of the plug of the power cord to pull when disconnecting the plug, and do not touch the plug with wet hands.
  - It may cause fire or to deform the product.
- Do not use the product in certain environments as follows.
  - If the product is used in a place with oil, steam, or sulfuric acid gas, performance may be degraded or product may be damaged.
- Do not press the switch or button with sharp objects.
  - It may cause electric shock or failure of the product.
- Please check the operation temperature.
  - If the product is used in an environment with the temperature exceeding the operation boundary, it may cause a severe damage.
    Please check the usage temperature boundary in the manual. If there is no specified temperature, please use the product within the boundary of 0~40°C.
- Do not put a container, etc. with water on the product.
  - It may cause fire or electric shock.
- Do not touch the switch with wet hand.
  - It may cause electric shock or failure of the product.
- Please read installation and user manual for connection with PC or peripheral devices.
  - It may cause fire or failure of the product.
- If a warning window appears on PC, product stops, or it does not work, immediately stop the usage.
  - It may cause fire or failure of the product.

⚠ CAUTION

Operation

- Do not use strong detergent such as solvent, but a soft cloth.
  - It may cause fire or to deform the product.
- Please check the rated capacity of the power.
  - It may cause fire or failure of the product.

Installing ACP

Installing ACP

This chapter describes how to install the ACP to use.

In order to use the ACP, the installation should be performed by the following order.

STEP 1. Check the cautions during the ACP installation

Before installing the ACP, check the cautions.

STEP 2. Study the cable connections diagram of the entire system

Study the cable connection diagram of the site where the ACP is installed.

STEP 3. Set the indoor unit address

Set the address of the ACP not to be overlapped with the connecting indoor unit.

STEP 4. Set PI485 and connect cables

Set DIP switch of PI485 correctly, and connect RS-485 communication cable.

STEP 5. Install ACP and connect cables

Install the ACP, and set network and other settings.

STEP 6. Set ACP network address

Set the network address to be able to access the ACP through internet.

STEP 7. Set ACP functions

Set language, peak/demand, whether to use schedule, whether to use power display, etc.

STEP 8. Set web GUI access environment

Set the access environment in web GUI, which is the operation program of the ACP.

STEP 9. Input indoor unit and ventilator information

Set the access environment in web GUI, which is the operation program of the ACP.

STEP 10. Verify and check ACP installation

Verify and check whether the ACP is properly installed.

⚠ CAUTION

Installing the ACP

- The ACP installation work needs the professional technique. Therefore, the installation described in this chapter should be performed by the certified installation professional.
- Consult the service center or the professional installation agency certified by us about any question or request related to the installation.

Check points during the ACP installation

- The number of PI485 connected to one RS-485 communication line
  ACP provides 4 RS-485 ports for indoor unit connection. (CH 1~4)
  Up to 16 PI485 for outdoor unit can be connected to one RS-485 port, and up to 31 PI485 for SINGLE/ERV can be connected.
- The number of the indoor units that can be connected to one ACP
  One ACP can be connected up to 256 indoor units. To one RS-485 port, all of 256 indoor units, which is the maximum number that can be connected to the ACP, may be connected.
  But, to improve the communication performance of RS-485, it is recommended to be divided and connected to 4 ports.
- RS-485 communication cable connection
  There is a polarity in RS-485 communication cable connection, so be careful not to reverse the connection of the two cables.
  Do not let the length of RS-485 communication cable exceed total of 1 Km.
  RS-485 communication cable must be connected with BUS type.
- IP address of the ACP
  IP address of the ACP, address of Gateway, and Net mask must be requested to the person in charge of the network of the corresponding site.

⚠ CAUTION

RS-485 Connection of the ERV equipment

- To connect ERV equipment, it is recommended to use the ports other than RS-485 communication ports which are connected to air conditioners.

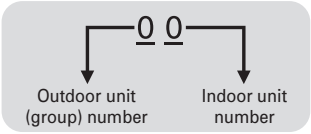
Setting the indoor unit address

By considering the entire installation configuration connecting to one ACP, set the address to each indoor unit not to be overlapped. 00~FF in hexadecimal can be set to the indoor unit address.

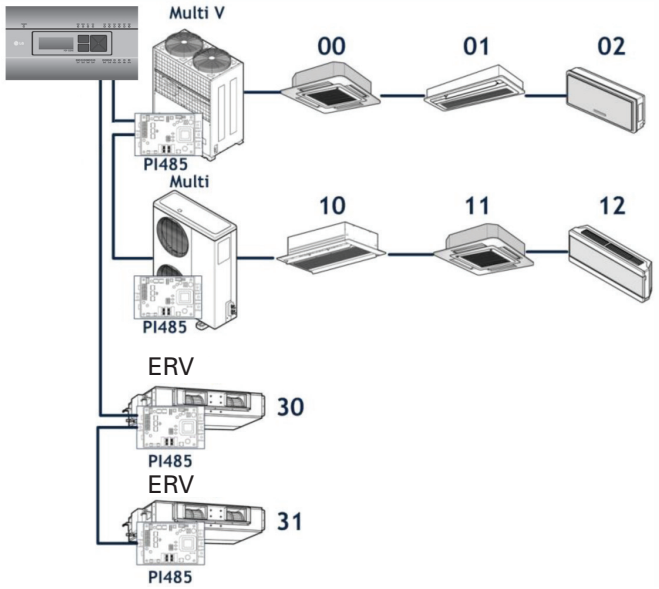
NOTE

Assigning indoor and outdoor unit number

- If the outdoor unit product is Multi V, it is recommended to assign the address by setting the first digit of the address as the number of the outdoor unit, and classifying the second digit as the number or the indoor unit, for easy composition and classification of the system.



The following example sets the address to the indoor unit.



When the ACP is interconnected with the AC Manager, the ERV can be installed together and controlled.

The above figure shows the example that sets the addresses of 30 and 31 to the ERV and connects to the ACP.

NOTE

How to set the central control address of the indoor unit

- The central control address setting method may be different for each indoor unit product or remote control type, so set the address by referring to the manual of the indoor unit product or wired remote controller.

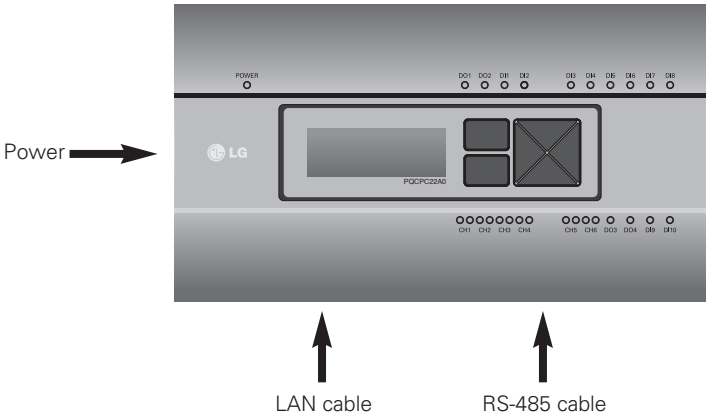
Installing ACP and connecting cables

After setting PI485, the ACP shall be installed in an adequate place, and RS-485 cable shall be connected for the communication with PI485.

And, Ethernet cable (LAN cable) shall be connected for the connection with internet or AC Manager.

To fix the ACP, the following 2 methods may be used.

Install in DIN RAIL or fix to the wall considering the environment of the site.



CAUTION

If four times the power connector for the connection, as shown by using the right connection, but please note that an electric shock.

Use the designated parts must be connected to a power source.

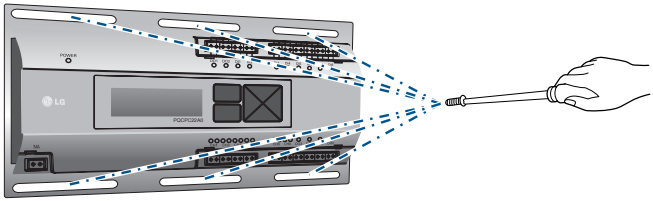
※ Connector manufacturers: PHOENIX CONTACT
PartNo: MVSTBR 2,5 / 2-ST-5, 08 2P 5.00MM



Fixing the ACP to the wall

ACP can be installed by fixing to the wall. To install the ACP in an adequate place, proceed according to the following explanation. It explains here on how to install the ACP with the example of installing the ACP on the wall.

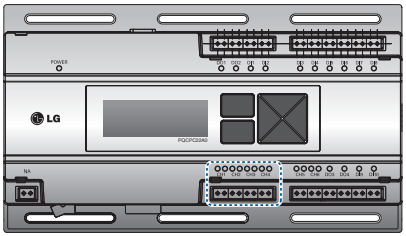
- Decide the space to install the ACP.
  Before installing the ACP, check if it is the adequate place to connect the ACP with the power, RS-485, and LAN cable.
- Fix to the wall using the driver. It can be fixed as in the following figure according to the location to install.



Connecting RS-485 cable to the ACP

After fixing the ACP in the installation place, RS-485 cable that was connected to PI485 shall be connected to the ACP. To connect RS-485 cable to the ACP, proceed as the following order.

- First, among the connectors that can be connected to the ACP, connect the end of RS-485 cable connected to BUS-A of PI485 to Tx part. Next, connect the end of RS-485 cable connected to BUS-B of PI485 to Rx part.
- RS-485 cable that was connected to PI485 shall be connected to CH port (RS-485 port) of the ACP.
  Plug the connector connecting RS-485 cable into one of CH1 ~ CH4 ports.
  There are 1~6 CH ports, and it must be plugged into one of 1~4 ports for use.



Setting the ACP network address

After connecting the ACP to various devices via the cable, the network environment of the ACP should be set by driving the ACP. The following information should be set for using the ACP.

- IP address of the ACP
- Gateway address
- Net mask

CAUTION

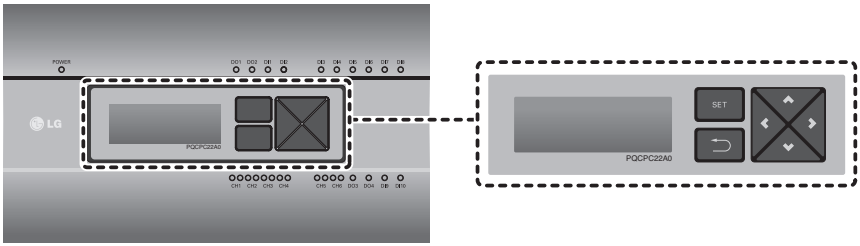
Setting the network environment information

- If the above information is not entered, the communication error may be occurred or it may be impossible to control by the ACP. So, be careful to correctly input.

Before configuring the ACP environment

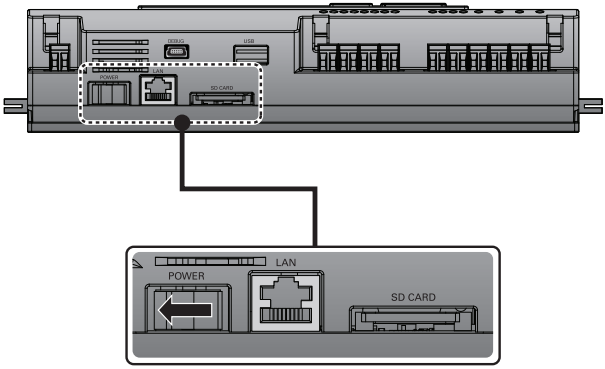
The network environment of the ACP can be set by the LCD and the buttons at the front side of the ACP.

The current ACP information and the menu are displayed on the LCD, and the menu can be changed and selected by pressing SET and button and Up/Down/Left/Right (▲, ▼, ◀, ▶) buttons.



Turning on the ACP

Turn on the ACP to set the network environment of the ACP.



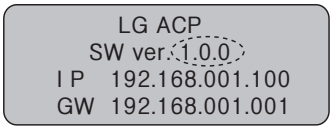
When the power switch is turned on, the ACP booting screen is displayed on the LCD as shown at the following figure, and when booting is completed, the initial ACP screen is displayed.



NOTE

Software version

- The software version of the current ACP is displayed at the initial ACP screen.
  Also, the software version may be different according to the manufacturing date of the ACP.



Class A device

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to pro-vide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION

Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.



Ver.1.0.1