MITSUBISHI ELECTRIC

Air to Water Heat Pump
Тепловой насос с передачей тепла от воздуха к воде
PUHZ-W • AA series

INSTALLATION MANUAL
FOR INSTALLER

For safe and correct use, read this manual and the indoor unit installation manual thoroughly before installing the outdoor unit. English is original. The other languages versions are translation of the original.

English

INSTALLATIONSHANDBUCH
FÜR INSTALLATEURE

Aus Sicherheitsgründen und zur richtigen Verwendung vor der Installation der Außenanlage das vorliegende Handbuch und die Installationsanleitung der Innenanlage gründlich durchlesen. Das Original ist in Englisch. Die anderen Sprachversionen sind vom Original übersetzt.

Deutsch

MANUEL D'INSTALLATION
POUR L'INSTALLATEUR

Avant d'installer l'appareil extérieur, lire attentivement ce manuel, ainsi que le manuel d'installation de l'appareil intérieur pour une utilisation sûre et correcte. L'anglais est l'original. Les versions fournies dans d'autres langues sont des traductions de l'original.

Français

INSTALLATIEHANDLEIDING
VOOR DE INSTALLATEUR

Lees voor een veilig en juist gebruik deze handleiding en de installatiehandleiding van het binnenapparaat zorgvuldig door voordat u met het installeren van het buitenapparaat begint. Het Engels is het origineel. De andere taalversies zijn vertalingen van het origineel.

Nederlands

MANUAL DE INSTALACIÓN
PARA EL INSTALADOR

Para un uso correcto y seguro, lea detalladamente este manual y el manual de instalación de la unidad interior antes de instalar la unidad exterior. El idioma original del documento es el inglés. Las versiones en los demás idiomas son traducciones del original.

Español

MANUALE DI INSTALLAZIONE
PER L'INSTALLATORE

Per un uso sicuro e corretto, leggere attentamente il presente manuale ed il manuale d'installazione dell'unità interna prima di installare l'unità esterna. Il testo originale è redatto in lingua Inglese. Le altre versioni linguistiche rappresentano traduzioni dell'originale.

Italiano

ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΕΓΚΑΤΑΣΤΑΣΗΣ
ΓΙΑ ΑΥΤΟΝ ΠΟΥ ΚΑΝΕΙ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ

Για σωστή και ασφαλή χρήση, διαβάστε προσεκτικά αυτό το εγχειρίδιο καθώς και το εγχειρίδιο εγκατάστασης της εσωτερικής μονάδας, προτού εγκαταστήσετε την εξωτερική μονάδα. Η γλώσσα του πρωτοτύπου είναι η αγγλική. Οι εκδόσεις άλλων γλωσσών είναι μεταφράσεις του πρωτοτύπου.

Ελληνικά

MANUAL DE INSTALAÇÃO
PARA O INSTALADOR

Para uma utilização segura e correcta, leia atentamente este manual e o manual de instalação da unidade interior antes de instalar a unidade exterior. O idioma original é o inglês. As versões em outros idiomas são traduções do idioma original.

Português

INSTALLATIONSMANUAL
TIL INSTALLATØREN

Læs af sikkerhedshensyn denne manual samt manualen til installation af indendørsenheden grundigt, før du installerer udendørsenheden. Engelsk er originalsproget. De andre sprogversioner er oversættelser af originalen.

Dansk

INSTALLATIONSMANUAL
FÖR INSTALLATÖREN

Läs bruksanvisningen och inomhusenhetens installationshandbok noga innan du installerar utomhusenhet för säker och korrekt användning. Engelska är originalspråket. De övriga språkversionerna är översättningar av originalet.

Svenska

MONTAJ ELKİTABI
MONTÖR İÇİN

Emniyetli ve doğru kullanım için, dış üniteyi monte etmeden önce bu kılavuzu ve iç ünite montaj kılavuzunu tamamıyla okuyun. Aslı İngilizce'dir. Diğer dillerdeki sürümler aslının çevirisidir.

Türkçe

РУКОВОДСТВО ПО УСТАНОВКЕ
ДЛЯ УСТАНОВИТЕЛЯ

Для обеспечения безопасной и надлежащей эксплуатации внимательно прочтите данное руководство и руководство по установке внутреннего прибора перед установкой наружного прибора. Языком оригинала является английский. Версии на других языках являются переводом оригинала.

Русский

INSTALLASJONSHÅNDBOK
FOR MONTØR

For å sikre trygg og riktig bruk skal denne håndboken samt installasjonshåndboken for innendørsenheten leses grundig igjennom før enheten installeres. Engelsk er originalspråket. De andre språkversjonene er oversettelser av originalen.

Norsk

ASENNUSOPAS
ASENTAJALLE

Turvallisen ja asianmukaisen käytön varmistamiseksi lue tämä opas sekä sisäyksikön asennusopas huolellisesti ennen ulkoyksikön asentamista. Alkuperäiskieli on englanti. Muut kieliversiot ovat alkuperäisen käännöksiä.

Suomi

NÁVOD K MONTÁŽI
PRO MONTÉRA

Kvůli zajištění bezpečného a správného používání si před montáží vnější jednotky pečlivě přečtěte tento návod i návod k montáži vnitřní jednotky. Verze v angličtině je originál. Ostatní jazykové verze jsou překladem originálu.

Čeština

INSTRUKCJA MONTAŻU
DLA INSTALATORA

Aby zapewnić bezpieczne i prawidłowe korzystanie z urządzenia, przed montażem jednostki zewnętrznej należy dokładnie zapoznać się z treścią niniejszej instrukcji oraz instrukcji montażu jednostki wewnętrznej. Oryginalną instrukcję sporządzono w języku angielskim. Pozostałe wersje językowe zostały przetłumaczone z oryginału.

Polski

РЪКОВОДСТВО ЗА МОНТАЖ
ЗА ИНСТАЛАТОРА

За безопасно и правилно използване, прочетете внимателно това ръководство и ръководството за монтаж на вътрешното тяло, преди да монтирате външното тяло. Версията на английски език е оригинал. Версиите на други езици са превод от оригинала.

Български

Contents

Note: This symbol mark is for EU countries only.
This symbol mark is according to the directive 2012/19/EU Article 14 Information for users and Annex IX.
Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

⚠ Caution:
- **Do not vent R410A into the Atmosphere:**

■ Heat pumps certification
The mark "NF Heat pumps" is an independent certification program proving that heat pumps' performances and production quality of the factory are conformed with the certification reference NF-414. The combinations of indoor units and outdoor units, and their applications allowed to use the NF PAC mark can be consulted on the website www.marque-nf.com

1. Safety precautions

►Before installing the unit, make sure you read all the "Safety precautions".
►Please report to or take consent by the supply authority before connection to the system.
►Equipment complying with IEC/EN 61000-3-12 (PUHZ-W112VAA)

⚠ Warning:
Describes precautions that must be observed to prevent danger of injury or death to the user.

⚠ Caution:
Describes precautions that must be observed to prevent damage to the unit.

After installation work has been completed, explain the "Safety Precautions," use, and maintenance of the unit to the customer according to the information in the Operation Manual and perform the test run to ensure normal operation. Both the Installation Manual and Operation Manual must be given to the user for keeping. These manuals must be passed on to subsequent users.

⏚ : Indicates a part which must be grounded.

⚠ Warning:
Carefully read the labels affixed to the main unit.

⚠ Warning:
- **The unit must not be installed by the user. Ask a dealer or an authorized technician to install the unit. If the unit is installed incorrectly, water leakage, electric shock, or fire may result.**
- **For installation work, follow the instructions in the Installation Manual and use tools and pipe components specifically made for use with R410A refrigerant. The R410A refrigerant in the HFC system is pressurized 1.6 times the pressure of usual refrigerants. If pipe components not designed for R410A refrigerant are used and the unit is not installed correctly, the pipes may burst and cause damage or injuries. In addition, water leakage, electric shock, or fire may result.**
- **The unit must be installed according to the instructions in order to minimize the risk of damage from earthquakes, typhoons, or strong winds. An incorrectly installed unit may fall down and cause damage or injuries.**
- **The unit must be securely installed on a structure that can sustain its weight. If the unit is mounted on an unstable structure, it may fall down and cause damage or injuries.**
- **If the outdoor unit is installed in a small room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage. Consult a dealer regarding the appropriate measures to prevent the allowable concentration from being exceeded. Should the refrigerant leak and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.**
- **Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.**

1. Safety precautions

- All electric work must be performed by a qualified technician according to local regulations and the instructions given in this manual. The units must be powered by dedicated power lines and the correct voltage and circuit breakers must be used. Power lines with insufficient capacity or incorrect electrical work may result in electric shock or fire.
- Use C1220 copper phosphorus, for copper and copper alloy seamless pipes, to connect the refrigerant pipes. If the pipes are not connected correctly, the unit will not be properly grounded and electric shock may result.
- Use only specified cables for wiring. The wiring connections must be made securely with no tension applied on the terminal connections. Also, never splice the cables for wiring (unless otherwise indicated in this document).
  Failure to observe these instructions may result in overheating or a fire.
- The terminal block cover panel of the outdoor unit must be firmly attached. If the cover panel is mounted incorrectly and dust and moisture enter the unit, electric shock or fire may result.
- When installing or relocating, or servicing the outdoor unit, use only the specified refrigerant (R410A) to charge the refrigerant lines. Do not mix it with any other refrigerant and do not allow air to remain in the lines.
  If air is mixed with the refrigerant, then it can be the cause of abnormal high pressure in the refrigerant line, and may result in an explosion and other hazards.
  The use of any refrigerant other than that specified for the system will cause mechanical failure or system malfunction or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
- Use only accessories authorized by Mitsubishi Electric and ask a dealer or an authorized technician to install them. If accessories are incorrectly installed, water leakage, electric shock, or fire may result.
- Do not alter the unit. Consult a dealer for repairs. If alterations or repairs are not performed correctly, water leakage, electric shock, or fire may result.
- The user should never attempt to repair the unit or transfer it to another location. If the unit is installed incorrectly, water leakage, electric shock, or fire may result. If the outdoor unit must be repaired or moved, ask a dealer or an authorized technician.
- After installation has been completed, check for refrigerant leaks. If refrigerant leaks into the room and comes into contact with the flame of a heater or portable cooking range, poisonous gases will be released.

1.1. Before installation

⚠ Caution:

- Do not use the unit in an unusual environment. If the outdoor unit is installed in areas exposed to steam, volatile oil (including machine oil), or sulfuric gas, areas exposed to high salt content such as the seaside, or areas where the unit will be covered by snow, the performance can be significantly reduced and the internal parts can be damaged.
- Do not install the unit where combustible gases may leak, be produced, flow, or accumulate. If combustible gas accumulates around the unit, fire or explosion may result.
- The outdoor unit produces condensation during the heating operation. Make sure to provide drainage around the outdoor unit if such condensation is likely to cause damage.
- Remove the compressor's fixing component in accordance with the NOTICE attached to the unit. Running the unit with the fixing component mounted will result in increased noise.
- When installing the unit in a hospital or communications office, be prepared for noise and electronic interference. Inverters, home appliances, high-frequency medical equipment, and radio communications equipment can cause the outdoor unit to malfunction or breakdown. The outdoor unit may also affect medical equipment, disturbing medical care, and communications equipment, harming the screen display quality.
- When the unit is running, vibrations or the noise of refrigerant running may be heard from the extension piping. Try to avoid installing the piping to thin walls, etc. as much as possible and provide sound insulation with the piping cover, etc.

1. Safety precautions

1.2. Before installation (relocation)

⚠ **Caution:**

- **Be extremely careful when transporting or installing the units. Two or more persons are needed to handle the unit, as it weighs 20 kg or more. Do not grasp the packaging bands. Wear protective gloves to remove the unit from the packaging and to move it, as you can injure your hands on the fins or the edge of other parts.**
- **Be sure to safely dispose of the packaging materials. Packaging materials, such as nails and other metal or wooden parts may cause stabs or other injuries.**
- **The base and attachments of the outdoor unit must be periodically checked for looseness, cracks or other damage. If such defects are left uncorrected, the unit may fall down and cause damage or injuries.**
- **Do not clean the outdoor unit with water. Electric shock may result.**
- **Tighten all flare nuts to specification using a torque wrench. If tightened too much, the flare nut can break after an extended period and refrigerant can leak out.**

1.3. Before electric work

⚠ **Caution:**

- **Be sure to install circuit breakers. If not installed, electric shock may result.**
- **For the power lines, use standard cables of sufficient capacity. Otherwise, a short circuit, overheating, or fire may result.**
- **When installing the power lines, do not apply tension to the cables. If the connections are loosened, the cables can snap or break and overheating or fire may result.**
- **Be sure to ground the unit. Do not connect the ground wire to gas or water pipes, lightning rods, or telephone grounding lines. If the unit is not properly grounded, electric shock may result.**
- **Use circuit breakers (ground fault interrupter, isolating switch (+B fuse), and molded case circuit breaker) with the specified capacity. If the circuit breaker capacity is larger than the specified capacity, breakdown or fire may result.**

1.4. Using R410A refrigerant outdoor units

⚠ **Caution:**

- **Do not use refrigerant other than R410A refrigerant. If another refrigerant is used, the chlorine will cause the oil to deteriorate.**
- **Use the following tools specifically designed for use with R410A refrigerant. The following tools are necessary to use R410A refrigerant. Contact your nearest dealer for any questions.**
- **Be sure to use the correct tools. If dust, debris, or moisture enters the refrigerant lines, refrigeration oil deterioration may result.**
- **Do not use a charging cylinder. If a charging cylinder is used, the composition of the refrigerant will change and the efficiency will be lowered.**

Tools (for R410A)	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adapter
Torque wrench	Electronic refrigerant charging scale

2. Installation location

(mm)

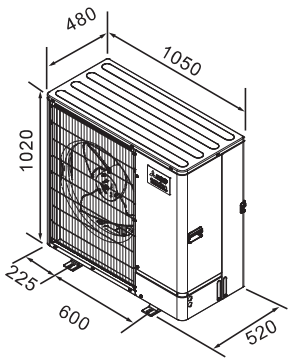


Fig. 2-1

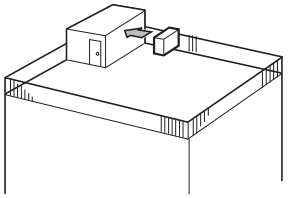


Fig. 2-2

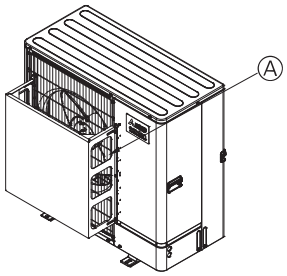


Fig. 2-3

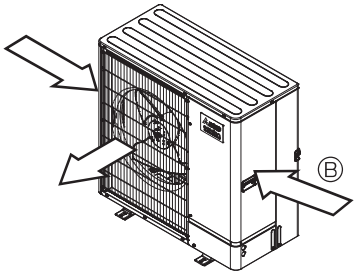


Fig. 2-4

2.1. Choosing the outdoor unit installation location

- Avoid locations exposed to direct sunlight or other sources of heat.
- Select a location from which noise emitted by the unit will not inconvenience neighbors.
- Select a location permitting easy wiring and pipe access to the power source and indoor unit.
- Avoid locations where combustible gases may leak, be produced, flow, or accumulate.
- Note that water may drain from the unit during operation.
- Select a level location that can bear the weight and vibration of the unit.
- Avoid locations where the unit can be covered by snow. In areas where heavy snow fall is anticipated, special precautions such as raising the installation location or installing a hood on the air intake must be taken to prevent the snow from blocking the air intake or blowing directly against it. This can reduce the airflow and a malfunction may result.
- Avoid locations exposed to oil, steam, or sulfuric gas.
- Use the transportation handles of the outdoor unit to transport the unit. If the unit is carried from the bottom, hands or fingers may be pinched.

2.2. Outline dimensions (Outdoor unit) (Fig. 2-1)

2.3. Ventilation and service space

2.3.1. Windy location installation

When installing the outdoor unit on a rooftop or other location unprotected from the wind, situate the air outlet of the unit so that it is not directly exposed to strong winds. Strong wind entering the air outlet may impede the normal airflow and a malfunction may result.

The following shows three examples of precautions against strong winds.

① Face the air outlet towards the nearest available wall about 35 cm away from the wall. (Fig. 2-2)

② Install an optional air guide if the unit is installed in a location where strong winds from a typhoon, etc. may directly enter the air outlet. (Fig. 2-3)

Ⓐ Air outlet guide

③ Position the unit so that the air outlet blows perpendicularly to the seasonal wind direction, if possible. (Fig. 2-4)

Ⓑ Wind direction

2.3.2. When installing a single outdoor unit (Refer to the last page)

Minimum dimensions are as follows, except for Max., meaning Maximum dimensions, indicated.

Refer to the figures for each case.

① Obstacles at rear only (Fig. 2-5)

② Obstacles at rear and above only (Fig. 2-6)

- Do not install the optional air outlet guides for upward airflow.

③ Obstacles at rear and sides only (Fig. 2-7)

④ Obstacles at front only (Fig. 2-8)

⑤ Obstacles at front and rear only (Fig. 2-9)

⑥ Obstacles at rear, sides, and above only (Fig. 2-10)

- Do not install the optional air outlet guides for upward airflow.

2.3.3. When installing multiple outdoor units (Refer to the last page)

Leave 50 mm space or more between the units.

Refer to the figures for each case.

① Obstacles at rear only (Fig. 2-11)

② Obstacles at rear and above only (Fig. 2-12)

- No more than 3 units must be installed side by side. In addition, leave space as shown.
- Do not install the optional air outlet guides for upward airflow.

③ Obstacles at front only (Fig. 2-13)

④ Obstacles at front and rear only (Fig. 2-14)

⑤ Single parallel unit arrangement (Fig. 2-15)

* When using an optional air outlet guide installed for upward airflow, the clearance is 500 mm or more.

⑥ Multiple parallel unit arrangement (Fig. 2-16)

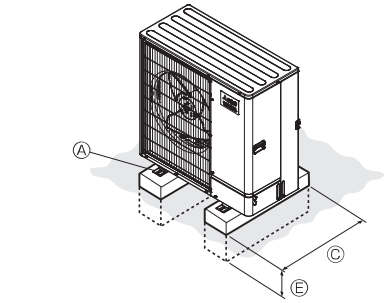
* When using an optional air outlet guide installed for upward airflow, the clearance is 1000 mm or more.

⑦ Stacked unit arrangement (Fig. 2-17)

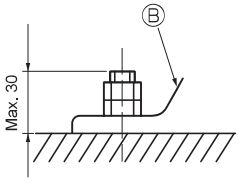
- The units can be stacked up to two units high.
- No more than 2 stacked units must be installed side by side. In addition, leave space as shown.

Note: The space should be provided for optimizing the performance of the unit. Provide the proper space for water piping.

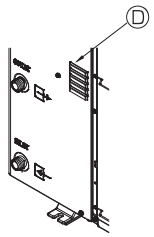
3. Installing the outdoor unit



(mm)



Ⓐ M10 (3/8") bolt
Ⓑ Base
Ⓒ As long as possible.
Ⓓ Vent
Ⓔ Set deep in the ground



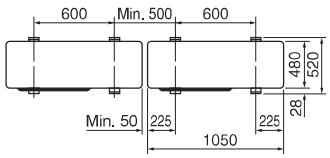


Fig. 3-1

- Be sure to install the unit in a sturdy, level surface to prevent rattling noises during operation. (Fig. 3-1)

<Foundation specifications>

Foundation bolt	M10 (3/8")
Thickness of concrete	120 mm
Length of bolt	70 mm
Weight-bearing capacity	320 kg

- Make sure that the length of the foundation bolt is within 30 mm of the bottom surface of the base.
- Secure the base of the unit firmly with four-M10 foundation bolts in sturdy locations.

Installing the outdoor unit

- Do not block the vent. If the vent is blocked, operation will be hindered and breakdown may result.
- In addition to the unit base, use the installation holes on the back of the unit to attach wires, etc., if necessary to install the unit. Use self-tapping screws (ø5 × 15 mm or less) and install on site.

⚠ Warning:

- **The unit must be securely installed on a structure that can sustain its weight. If the unit is mounted on an unstable structure, it may fall down and cause damage or injuries.**
- **The unit must be installed according to the instructions in order to minimize the risk of damage from earthquakes, typhoons, or strong winds. An incorrectly installed unit may fall down and cause damage or injuries.**

⚠ Caution:

- **Install be unit on a rigid structure to prevent excessive operation sound or vibration.**

4. Drainage piping work

Outdoor unit drainage pipe connection

When drain piping is necessary, use the drain socket or the drain pan (option).

Drain socket	PAC-SG61DS-E
Drain pan	PAC-SJ83DP-E

5. Water piping work

5.1. Water piping connection (Fig. 5-1)

- Connect the water pipes to the outlet and inlet pipes.
  (Parallel male screw for 1-inch water pipe (ISO 228/1-G1B))
- Inlet and outlet pipes position is shown on the Fig. 5-1.
- Install the hydraulic filter at the water intake.
- Maximum allowable torque at the water piping connection is 50 N•m.
- Check if water leaks after installation.
- Inlet water gauge pressure must be between 0-0.3 MPa.
- Use the inlet water with a temperature lower than 55 °C.

Note:

- **The water velocity in pipes should be kept within certain limits of material to avoid erosion, corrosion and excessive noise generation. Be aware, and take care of, that local velocities in small pipes, bends and similar obstructions can exceed the values above.**
  e.g.) Copper : 1.5 m/s
- **When connecting metal pipes made of different materials, be sure to insulate the joint to prevent electrolytic etching.**
- **Set up a field system so that the inlet water temperature and water flow rate can be within the allowable range specified in our technical data, etc.**
  If the unit is used out of the allowable range, the parts of unit might be damaged.

5.2. Water quality condition

- The water in a system should be clean and with a pH value of 6.5-8.0.
- The followings are the maximum values;
  Calcium : 100 mg/L
  Chlorine : 100 mg/L
  Iron/manganese : 0.5 mg/L

[Fig. 5-1]
Ⓐ Water outlet
Ⓑ Water inlet

5.3. Minimum water quantity

Following water quantity is required in the water circuit.

Model	Minimum water quantity (L)
W85	37
W112	48

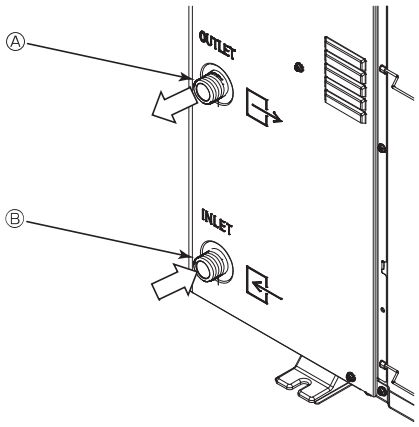


Fig. 5-1

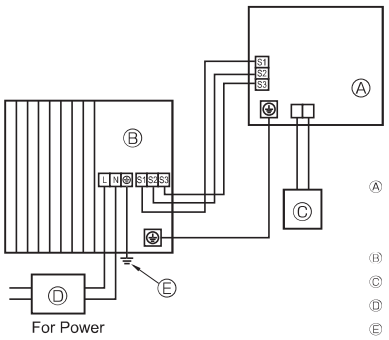
Note: Make sure to perform the frozen prevention measure for water pipe system. (Water piping insulation, back-up pump system, using of a certain % ethylene glycol instead of normal water)
Insulate the water piping properly. The performance can be poor if the insulation is insufficient.

⚠ Warning:
As the outlet water temperature can reach 60 °C at maximum, do not touch the water piping directly with a bare hand.

6. Electrical work

6.1. Outdoor unit (Fig. 6-1, Fig. 6-2)

① Remove the service panel.
② Wire the cables referring to the Fig. 6-1 and the Fig. 6-2.



Ⓐ Indoor unit
(Interface unit/
Flow temp. controller)
Ⓑ Outdoor unit
Ⓒ Remote controller
Ⓓ Main switch (Earth leakage breaker)
Ⓔ Earth

Fig. 6-1

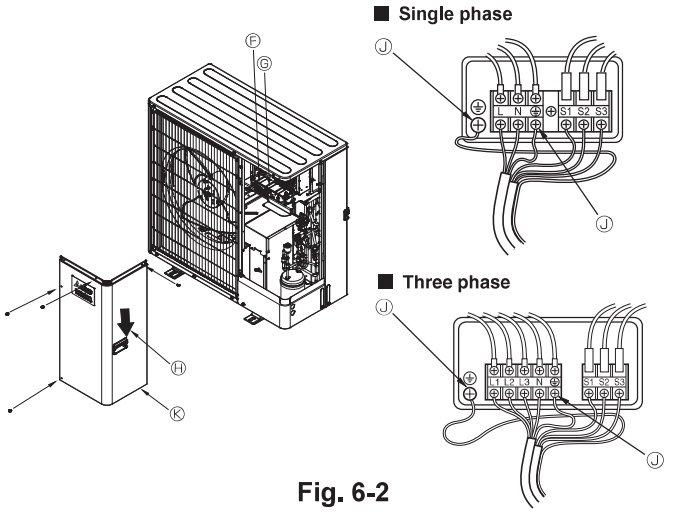


Fig. 6-2

Ⓕ Terminal block
Ⓖ Indoor/Outdoor connection terminal block (S1, S2, S3)
Ⓗ Service panel
Ⓙ Earth terminal
Ⓚ Wire the cables so that they do not contact the center of the service panel.

Note :
If the protective sheet for the electrical box is removed during servicing, be sure to reinstall it.

⚠ Caution:
Be sure to install N-Line. Without N-Line, it could cause damage to unit.

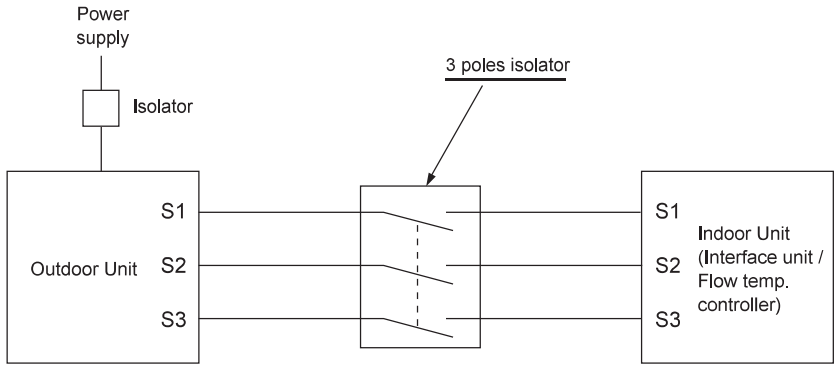
6. Electrical work

6.2. Field electrical wiring

Outdoor unit model			W85V	W112V	W85, 112Y
Outdoor unit power supply			~/N (single), 50 Hz, 230 V	~/N (single), 50 Hz, 230 V	3N~ (3 ph 4-wires), 50 Hz, 400 V
Outdoor unit input capacity Main switch (Breaker)		*1	25 A	32 A	16 A
Wiring Wire No. × size (mm^2)	Outdoor unit power supply		3 × Min. 2.5	3 × Min. 4	5 × Min. 1.5
	Indoor unit-Outdoor unit	*2	3 × 1.5 (Polar)	3 × 1.5 (Polar)	3 × 1.5 (Polar)
	Indoor unit-Outdoor unit earth	*2	1 × Min. 1.5	1 × Min. 1.5	1 × Min. 1.5
	Remote controller-Indoor unit	*3	2 × 0.3 (Non-polar)	2 × 0.3 (Non-polar)	2 × 0.3 (Non-polar)
Circuit rating	Outdoor unit L-N (single) Outdoor unit L1-N, L2-N, L3-N (3 phase)	*4	230 VAC	230 VAC	230 VAC
	Indoor unit-Outdoor unit S1-S2	*4	230 VAC	230 VAC	230 VAC
	Indoor unit-Outdoor unit S2-S3	*4	24 VDC	24 VDC	24 VDC
	Remote controller-Indoor unit	*4	12 VDC	12 VDC	12 VDC

*1. A breaker with at least 3.0 mm contact separation in each poles shall be provided. Use earth leakage breaker (NV).
Make sure that the current leakage breaker is one compatible with higher harmonics.
Always use a current leakage breaker that is compatible with higher harmonics as this unit is equipped with an inverter.
The use of an inadequate breaker can cause the incorrect operation of inverter.
*2. Max. 45 m
If 2.5 mm^2 used, Max. 50 m
If 2.5 mm^2 used and S3 separated, Max. 80 m
*3. The 10 m wire is attached in the remote controller accessory.
*4. The figures are NOT always against the ground.
S3 terminal has 24 VDC against S2 terminal. However between S3 and S1, these terminals are NOT electrically insulated by the transformer or other device.

Notes:
1. **Wiring size must comply with the applicable local and national codes.**
2. **Power supply cables and the cables between Interface unit/Flow temp. controller and outdoor unit shall not be lighter than polychloroprene sheathed flexible cables. (Design 60245 IEC 57)**
3. **Be sure to connect the cables between Interface unit/Flow temp. controller and outdoor unit directly to the units (no intermediate connections are allowed).**
   Intermediate connections may result in communication errors. If water enters at the intermediate connection point, it may cause insufficient insulation to ground or a poor electrical contact.
   (If an intermediate connection is necessary, be sure to take measures to prevent water from entering the cables.)
4. **Install an earth longer than other cables.**
5. **Do not construct a system with a power supply that is turned ON and OFF frequently.**
6. **Use self-extinguishing distribution cables for power supply wiring.**
7. **Properly route wiring so as not to contact the sheet metal edge or a screw tip.**



⚠ Warning:

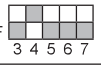
- **In case of A-control wiring, there is high voltage potential on the S3 terminal caused by electrical circuit design that has no electrical insulation between power line and communication signal line. Therefore, please turn off the main power supply when servicing. And do not touch the S1, S2, S3 terminals when the power is energized. If isolator should be used between indoor unit and outdoor unit, please use 3-pole type.**

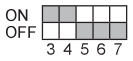
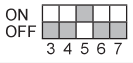
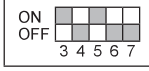
Never splice the power cable or the indoor-outdoor connection cable, otherwise it may result in a smoke, a fire or communication failure.

7. System control

Set the refrigerant address using the DIP switch of the outdoor unit.

SW1 Function Setting

SW1 Setting	Refrigerant address
	00
	01
	02

SW1 Setting	Refrigerant address
	03
	04
	05

Note:
a) Up to 6 units can be connected.
b) Select one single model for all units.
c) For Dip switch setting for indoor unit, refer to the indoor unit's installation manual.

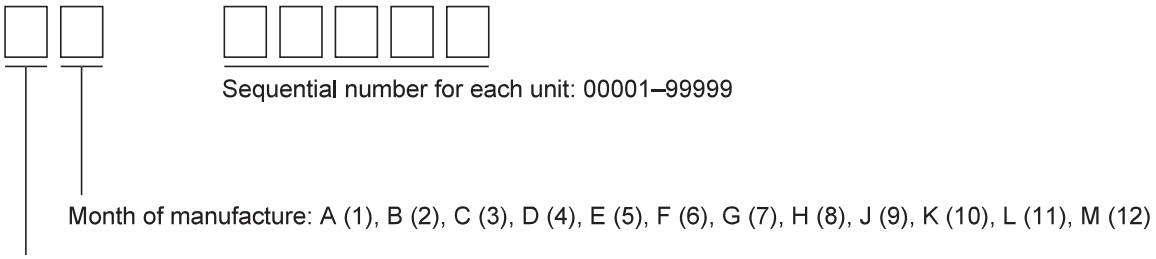
8. Specifications

Outdoor model		PUHZ-W85VAA	PUHZ-W112VAA	PUHZ-W85YAA	PUHZ-W112YAA
Power supply	V / Phase / Hz	230 / Single / 50		400 / Three / 50	
Dimensions (W x H x D)	mm	1050 x 1020 x 480			
Sound Power Level *1 (Heating)	dB(A)	58	60	58	60

*1 Measured under rated operation frequency.

9. Serial number

■ The serial number is indicated on the SPEC NAME PLATE.



UNIT : mm

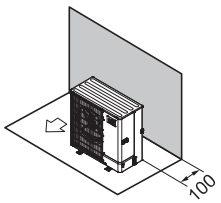


Fig. 2-5

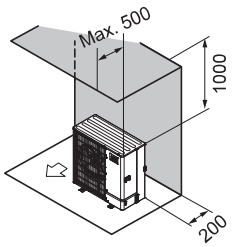


Fig. 2-6

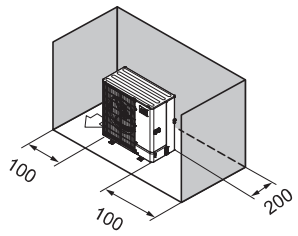


Fig. 2-7

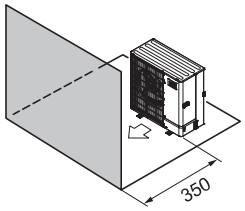


Fig. 2-8

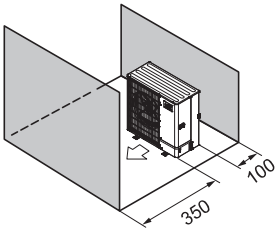


Fig. 2-9

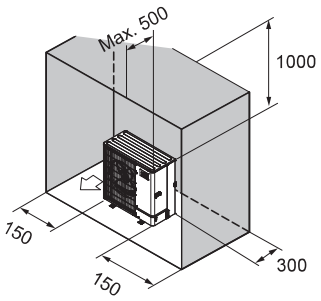


Fig. 2-10

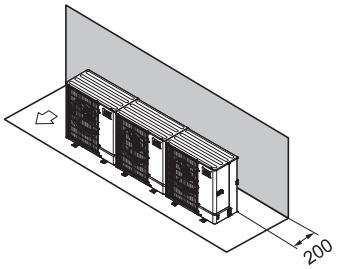


Fig. 2-11

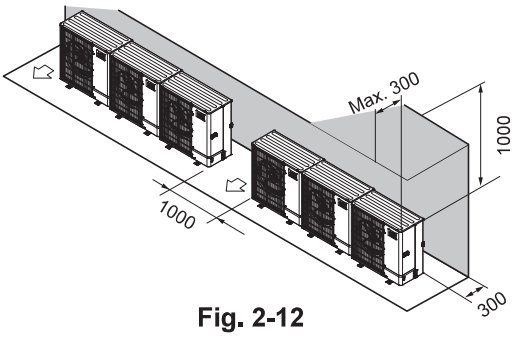


Fig. 2-12

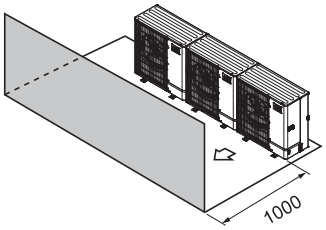
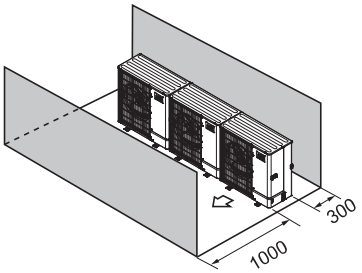


Fig. 2-13



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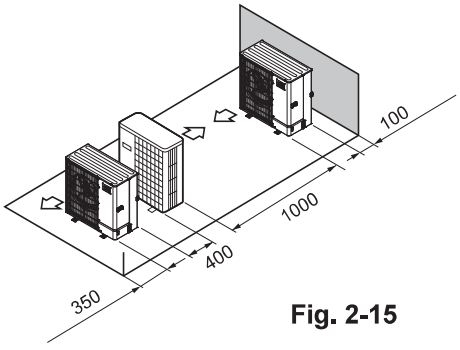

Fig. 2-15

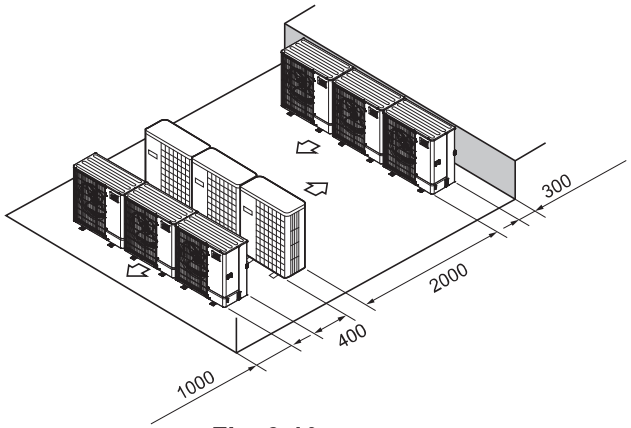

Fig. 2-16

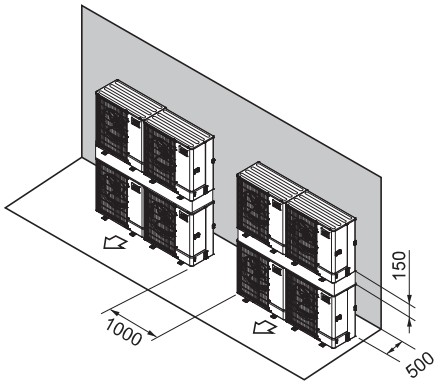

Fig. 2-17

This product is designed and intended for use in the residential, commercial and light-industrial environment.

MITSUBISHI ELECTRIC CORPORATION

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