

Air-Conditioners
INDOOR UNIT

PEFY-MS20,25,32,40,50,63,71,80,100,125,140VMA-A1
PEFY-MS20,25,32,40,50,63,71,80,100,125,140VMAL-A1

OPERATION MANUAL
BEDIENUNGSHANDBUCH
MANUEL D'UTILISATION
BEDIENINGSHANDLEIDING
MANUAL DE INSTRUCCIONES
ISTRUZIONI DI FUNZIONAMENTO
ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΧΡΗΣΕΩΣ
MANUAL DE OPERAÇÃO
DRIFTSMANUAL
OPERATÖRSMANUAL
İŞLETME ELKİTABI
РУКОВОДСТВО ЗА ЕКСПЛОАТАЦИЯ
INSTRUKCJA OBSŁUGI
INSTRUKSJONSHEFTE
KÄYTTÖOPAS
РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ
ПОСІБНИК З ЕКСПЛУАТАЦІЇ
NÁVOD K OBSLUZE
NÁVOD NA POUŽITIE
HASZNÁLATI KÉZIKÖNYV
UPORABNIŠKI PRIROČNIK
MANUAL CU INTRUCȚIUNI DE FUNCȚIONARE
KASUTUSJUHEND
LIETOŠANAS ROKASGRĀMATA
NAUDOJIMO VADOVAS
PRIRUČNIK ZA RUKOVANJE
UPUTSTVO ZA RUKOVANJE

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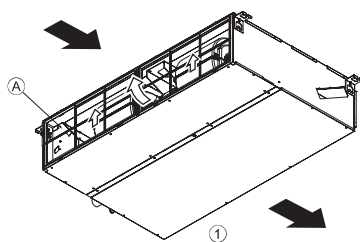
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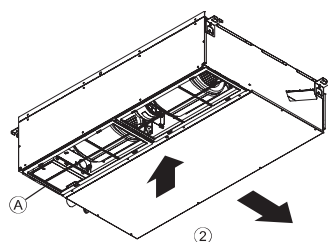
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sr

[Fig. A]



①: Air inlet on the rear
 Lufteinlass auf der Rückseite
 Admission d'air par l'arrière
 Luchtinlaat aan de achterkant
 Entrada de aire en la parte posterior
 Ingresso aria sul retro
 Είσοδος αέρα από πίσω
 Entrada de ar na parte posterior
 Luftindtag på bagsiden
 Luftintag på baksidan
 Arkadaki hava girişi
 Вход за въздух от задната страна
 Wlot powietrza z tyłu
 Luftinnløp på baksiden
 Ilmanotto takana
 Воздухозаборник сзади
 Задній отвір забору повітря
 Přívod vzduchu v zadní části
 Prívod vzduchu na zadnej strane
 Légbeömlő nyílás a hátoldalon
 Vstop zraka na zadnji strani
 Admisia aerului prin partea din spate
 Taga asuv õhu sisselase
 Gaisa ievads aizmugurē
 Oro įsiurbimo anga gale
 Ulaz za zrak straga
 Dovod vazduha sa zadnje strane



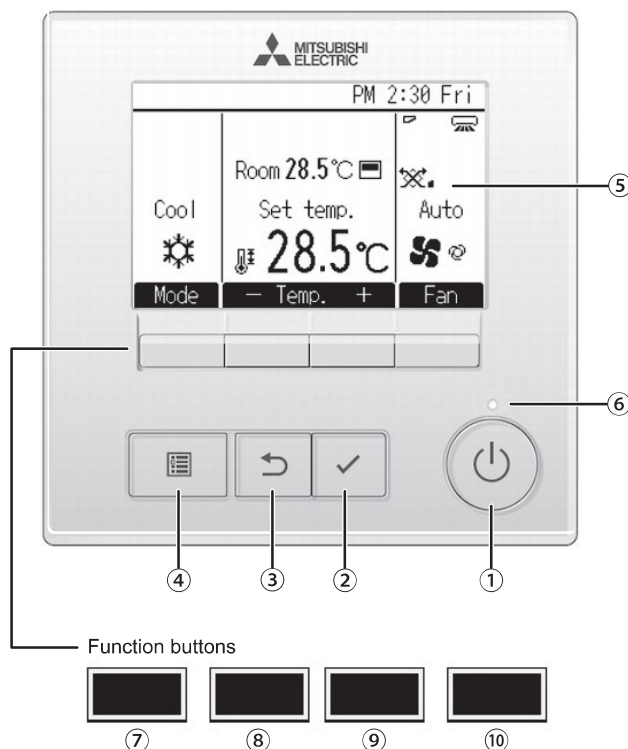
②: Air inlet at the bottom
 Lufteinlass auf der Unterseite
 Admission d'air par le bas
 Luchtinlaat aan de onderkant
 Entrada de aire en la parte inferior
 Ingresso aria nella parte inferiore
 Είσοδος αέρα από κάτω
 Entrada de ar na parte inferior
 Luftindtag i bunden
 Luftintag på undersidan
 Alttaki hava girişi
 Вход за въздух от долната страна
 Wlot powietrza z dołu
 Luftinnløp på undersiden
 Ilmanotto pohjassa
 Воздухозаборник внизу
 Нижній отвір забору повітря
 Přívod vzduchu ve spodní části
 Prívod vzduchu na spodnej strane
 Légbeömlő nyílás az alsó oldalon
 Vstop zraka na spodnji strani
 Admisia aerului prin partea inferioară
 All asuv õhu sisselase
 Gaisa ievads apakšā
 Oro įsiurbimo anga apačioje
 Ulaz za zrak na dnu
 Ulaz vazduha na dnu

Ⓐ: Filter
 Filter
 Filtre
 Filter
 Filtro
 Filtro
 Φίλτρο
 Filtro
 Filtre
 Filter
 Filtre
 Филтър
 Filtir
 Filter
 Suodatin
 Филтър
 Фільтр
 Filtir
 Filter
 Szűrő
 Filter
 Filtru
 Filter
 Filtras
 Filtar
 Filter



Air flow
 Luftfluss
 Flux d'air
 Richting van de luchtstroom
 Flujo de aire
 Flusso d'aria
 Ποή αέρα
 Fluxo de ar
 Luftstrøm
 Luftflöde
 Hava akışı
 Въздушен поток
 Przepływ powietrza
 Luftstrøm
 Ilmavirtaus
 Воздушный поток
 Потік повітря
 Průtok vzduchu
 Prúdenie vzduchu
 Légáramlás
 Pretok zraka
 Fluxul de aer
 Õhuvool
 Gaisa plūsma
 Oro srautas
 Protok zraka
 Protok vazduha

Controller interface



en

① [ON/OFF] button

Press to turn ON/OFF the indoor unit.

② [SELECT] button

Press to save the setting.

③ [RETURN] button

Press to return to the previous screen.

④ [MENU] button

Press to bring up the Main menu.

⑤ Backlit LCD

Operation settings will appear. When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.

When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the [ON/OFF] button)

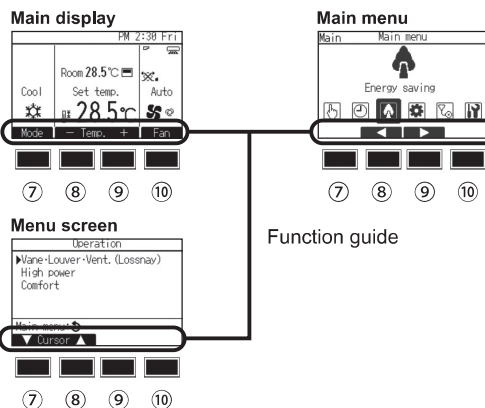
⑥ ON/OFF lamp

This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.

Note: The PAR-42MAAB remote control is compatible with the R32 refrigerant leak detection system, and is equipped with an alarm to notify you of refrigerant leaks. Please refer to IM of PAR-42MAAB for setting method of Supervisor remote controller to collectively monitor refrigerant leakage in the refrigerant system.

Note: The PAR-42MAAB will sound an alarm with 65 dB. The intensity of the alarm sound must be 15 dB larger than that of a background noise, so install the PAR-42MAAB into the room with a background noise of 50 dB or less.

The functions of the function buttons change depending on the screen. Refer to the button function guide that appears at the bottom of the LCD for the functions they serve on a given screen. When the system is centrally controlled, the button function guide that corresponds to the locked button will not appear.



⑦ Function button [F1]

Main display: Press to change the operation mode.
Menu screen: The button function varies with the screen.

⑧ Function button [F2]

Main display: Press to decrease temperature.
Main menu: Press to move the cursor left.
Menu screen: The button function varies with the screen.

⑨ Function button [F3]

Main display: Press to increase temperature.
Main menu: Press to move the cursor right.
Menu screen: The button function varies with the screen.

⑩ Function button [F4]

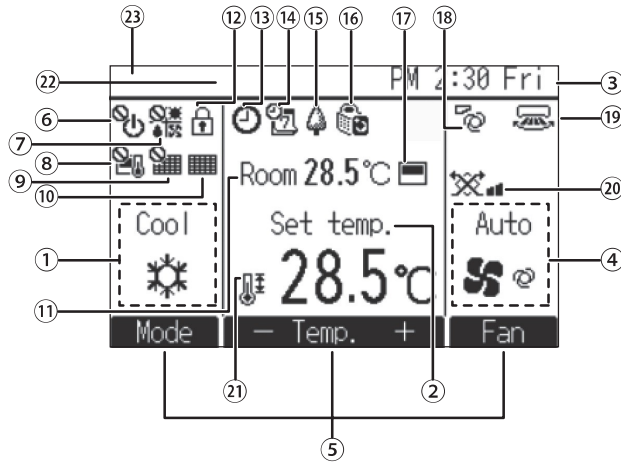
Main display: Press to change the fan speed.
Menu screen: The button function varies with the screen.

Display

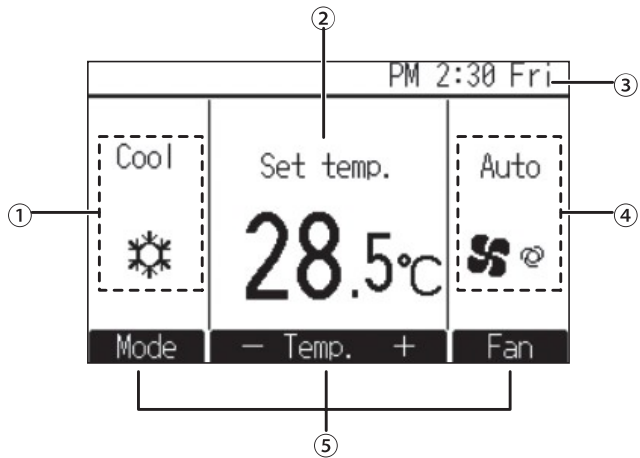
The main display can be displayed in two different modes: "Full" and "Basic." The factory setting is "Full." To switch to the "Basic" mode, change the setting on the Main display setting.

Full mode

* All icons are displayed for explanation.



Basic mode



① Operation mode

Indoor unit operation mode appears here.

② Set temperature

Set temperature appears here.

③ Clock

Current time appears here.

④ Fan speed

Fan speed setting appears here.

⑤ Button function guide

Functions of the corresponding buttons appear here.



Appears when the ON/OFF operation is centrally controlled.



Appears when the operation mode is centrally controlled.



Appears when the set temperature is centrally controlled.



Appears when the filter reset function is centrally controlled.



Indicates when filter needs maintenance.

⑪ Room temperature

Current room temperature appears here.



Appears when the buttons are locked.



Appears when the On/Off timer, Night setback, or Auto-off timer function is enabled.



appears when the timer is disabled by the centralized control system.



Appears when the Weekly timer is enabled.



Appears while the units are operated in the energy-save mode. (Will not appear on some models of indoor units)



Appears while the outdoor units are operated in the silent mode.



Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (⑪).



appears when the thermistor on the indoor unit is activated to monitor the room temperature.



Indicates the vane setting.



Indicates the louver setting.



Indicates the ventilation setting.



Appears when the set temperature range is restricted.

②② Centrally controlled

Appears for a certain period of time when a centrally-controlled item is operated.

②③ Preliminary error display

An error code appears during the preliminary error.

Most settings (except ON/OFF, mode, fan speed, temperature) can be made from the Main menu.

Contents

1. Safety precautions.....	5	4. The smart way to use.....	9
1.1. Installation.....	5	5. Caring for the machine.....	9
1.2. During operation.....	6	6. Troubleshooting.....	10
1.3. Disposing of the unit.....	7	7. Installation, transferring works, and checking.....	11
2. Names and functions of various parts.....	7	8. Inspection and maintenance.....	12
3. How to operate.....	7	8.1. Guideline for preventive maintenance.....	12
3.1. Turning ON/OFF.....	7	9. Specifications.....	13
3.2. Operation mode.....	7		
3.3. Set temperature.....	8		
3.4. Fan speed.....	8		

Note



Fig. 1

This symbol mark is for related countries only.

This symbol mark is according to the directive 2012/19/EU Article 14 Information for users and Annex IX, and/or to the directive 2006/66/EC Article 20 Information for end-users and Annex II.

Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and/or reused. This symbol means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste. If a chemical symbol is printed beneath the symbol (Fig. 1), this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration.

This will be indicated as follows: Hg: mercury (0.0005%), Cd: cadmium (0.002%), Pb: lead (0.004%)

In the European Union there are separate collection systems for used electrical and electronic products, batteries and accumulators.

Please, dispose of this equipment, batteries and accumulators correctly at your local community waste collection/recycling centre.

Please, help us to conserve the environment we live in!

en

1. Safety precautions

- ▶ Before operating the unit, make sure you read all the "Safety precautions".
- ▶ "Safety precautions" lists important points about safety. Please be sure to follow them.

MEANINGS OF SYMBOLS ON THE UNIT

	A2L WARNING (Risk of fire)	This symbol is only for R32 refrigerant. The type of the refrigerant used is written on the nameplate on the outdoor unit. R32 refrigerant is flammable. If the refrigerant leaks, or comes in contact with fire or parts that generate heat, it may create harmful gas and pose a risk of fire.
		Read the OPERATION MANUAL carefully before operation.
		Service personnel are required to carefully read the OPERATION MANUAL and INSTALLATION MANUAL before operation.
		Further information is available in the OPERATION MANUAL, INSTALLATION MANUAL, and the like.

Symbols used in the text

Warning:

Describes precautions that should be observed to avoid the risk of injury or death to the user.

Caution:

Describes precautions that should be observed to prevent damage to the unit.

Symbols used in the illustrations

-  : Indicates an action that must be avoided.
-  : Indicates that important instructions must be followed.
-  : Indicates a part which must be grounded.
-  : Indicates that caution should be taken with rotating parts. (This symbol is displayed on the main unit label.) <Color: yellow>
-  : Beware of electric shock. (This symbol is displayed on the main unit label.) <Color: yellow>

Warning:

Carefully read the labels affixed to the main unit.

1.1. Installation

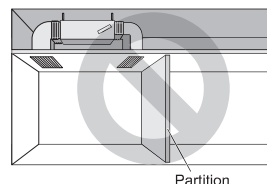
- ▶ After you have read this manual, keep it and the Installation Manual in a safe place for easy reference whenever a question arises. If the unit is going to be operated by another person, make sure that this manual is given to him or her.

Warning:

- Do not install the unit in a place where smoke, gas, or chemicals may fill. The refrigerant sensor mounted in the indoor unit may react to it, and display an error of refrigerant leakage.
- Do not bring any active ignition sources (e.g., open flame, gas appliances, electric stoves) into a space that falls below the minimum required floor

area. Make sure that there is a minimum required floor space that does not include the area occupied by furniture and other items.

- Do not use any potential ignition sources to find the location of a refrigerant leak.
- Do not install partitions that enclose outlets or inlets and seal off the space.



- These appliances are not accessible to the general public.
- The unit should not be installed by the user. Ask the dealer or an authorized company to install the unit. If the unit is installed improperly, water leakage, electric shock or fire may result.
- Use only accessories authorized by Mitsubishi Electric and ask your dealer or an authorized company to install them. If accessories are installed improperly, water leakage, electric shock or fire may result.
- The Installation Manual details the suggested installation method. Any structural alteration necessary for installation must comply with local building code requirements.
- Never repair the unit or transfer it to another site by yourself. If repair is performed improperly, water leakage, electric shock or fire may result. If you need to have the unit repaired or moved, consult your dealer.
- Keep the electric parts away from water (washing water) etc.
- It might result in electric shock, catching fire or smoke.

Note 1: When washing the Heat Exchanger and Drain Pan, ensure the Control Box, Motor, Refrigerant sensor and LEV remain dry, using a water proof covering.

Note 2: Never drain the washing water for the Drain Pan and the Heat Exchanger using the Drain Pump. Drain separately.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.
- Do not use a leak detection additive.
- When installing, relocating, or servicing the air conditioner, use only the specified refrigerant written on the outdoor unit to charge the refrigerant lines. Do not mix the refrigerant with any other refrigerant, and do not allow air to remain in the lines.
 - If air is mixed with the refrigerant, then it may cause abnormal high pressure in the refrigerant lines, resulting in an explosion and other hazards.
 - The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
 - It may also be in violation of applicable laws.
 - MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.
- This indoor unit should be installed in a room which is equal to or larger than the floor space specified in the outdoor unit installation manual. Refer to the outdoor unit installation manual.

1) Outdoor unit

Warning:

- The outdoor unit must be installed on a stable, level surface, in a place where there is no accumulation of snow, leaves or rubbish.
- Do not stand on, or place any items on the unit. You may fall down or the item may fall, causing injury.

Caution:

- The outdoor unit should be installed in a location where air and noise emitted by the unit will not disturb the neighbours.

2) Indoor unit

Warning:

- The indoor unit should be securely installed. If the unit is loosely mounted, it may fall, causing injury.

3) Remote controller

Warning:

- The remote controller should be installed in such a way that children cannot play with it.

4) Drain hose

Caution:

- Make sure that the drain hose is installed so that drainage can go ahead smoothly. Incorrect installation may result in water leakage, causing damage to furniture.

5) Power line, fuse or circuit breaker

Warning:

- Make sure that the unit is powered by a dedicated supply. Other appliances connected to the same supply could cause an overload.
- Make sure that there is a main power switch.
- Be sure to adhere to the unit's voltage and fuse or circuit breaker ratings. Never use a piece of wire or a fuse with a higher rating than the one specified.

6) Grounding

Caution:

- The unit must be properly grounded. Never connect the grounding wire to a gas pipe, water pipe, lightning conductor or telephone grounding wire. If the unit is not grounded properly, electric shock may result.
- Check frequently that the ground wire from the outdoor unit is properly connected to both the unit's ground terminal and the grounding electrode.

1.2. During operation

Warning:

- Do not turn the breaker OFF except the case of burning smell, or when performing maintenance or inspection. The power cannot be supplied to the refrigerant sensor mounted in the indoor unit, and the sensor cannot detect the refrigerant leakage. This may cause a fire.
- Do not splash water over the unit and do not touch the unit with wet hands. An electric shock may result.
- Do not spray combustible gas close to the unit. Fire may result.
- Do not place a gas heater or any other open-flame appliance where it will be exposed to the air discharged from the unit. Incomplete combustion may result.

- Do not remove the front panel or the fan guard from the outdoor unit when it is running. You could be injured if you touch rotating, hot or high-voltage parts.
- Never insert fingers, sticks etc. into the intakes or outlets, otherwise injury may result, since the fan inside the unit rotates at high speed. Exercise particular care when children are present.
- If you detect odd smells, stop using the unit, turn off the power switch and consult your dealer. Otherwise, a breakdown, electric shock or fire may result.
- When you notice exceptionally abnormal noise or vibration, stop operation, turn off the power switch, and contact your dealer.
- Do not over-cool. The most suitable inside temperature is one that is within 5 °C of the outside temperature.
- Do not leave handicapped people or infants sitting or standing in the path of the airflow from the air-conditioner. This could cause health problems.
- Only use means recommended by the manufacturer to accelerate the defrosting process or to clean.
- This indoor unit shall be stored in a room that has no continuously-operating ignition device such as open flame, gas appliance, or electrical heater.
- Do not pierce a hole in or burn this indoor unit or refrigerant lines.
- Be aware that the refrigerant might be odour-free.

Caution:

- Do not use any sharp object to push the buttons, as this may damage the remote controller.
- Do not twist or tug on the remote controller cord as this may damage the remote controller and cause malfunction.
- Never remove the upper case of the remote controller. It is dangerous to remove the upper case of the remote controller and touch the printed circuit boards inside. Doing so can result in fire and failure.
- Never wipe the remote controller with benzene, thinner, chemical rags, etc. Doing so can result in discoloration and failure. To remove heavy stains, soak a cloth in neutral detergent mixed with water, wring it out thoroughly, wipe the stains off, and wipe again with a dry cloth.
- Never block or cover the indoor or outdoor unit's intakes or outlets. Tall items of furniture underneath the indoor unit, or bulky items such as large boxes placed close to the outdoor unit will reduce the unit's efficiency.
- Do not direct the airflow at plants or caged pets.
- Ventilate the room frequently. If the unit is operated continuously in a closed room for a long period of time, the air will become stale.
- When the breaker is turned on, the fan may suddenly go into operation. Note that the fan will automatically go into operation when a refrigerant leak is detected by the refrigerant sensor. Keep a safe distance from the fan to avoid injury.

In case of failure

Warning:

- Replace the refrigerant sensor when the remote controller displays refrigerant leakage error "1521 or 1522" or refrigerant sensor failure "5558". Please contact the store where you purchased the product. Continuing to use a refrigerant sensor that cannot detect refrigerant leaks can cause a fire in the event of a refrigerant leak.
- Never remodel the air conditioner. Consult your dealer for any repair or service. Improper repair work can result in water leakage, electric shock, fire, etc.
- If the remote controller displays an error indication, the air conditioner does not run, or there is any abnormality, stop operation and contact your dealer. Leaving the unit as it is under such conditions can result in fire or failure.
- If the power breaker is frequently activated, get in touch with your dealer. Leaving it as it is can result in fire or failure.
- This air conditioner is NOT intended for use by children or infirm persons without supervision.
- Young children must be supervised to ensure that they do not play with the air conditioner.
- If the refrigeration gas blows out or leaks, stop the operation of the air conditioner, thoroughly ventilate the room, and contact your dealer. Leaving the unit as it is can result in accidents due to oxygen deficiency.

When the air conditioner is not to be used for a long time

- If the air conditioner is not to be used for a long time due to a seasonal change, etc., run it for 4 - 5 hours with the air blowing until the inside is completely dry. Failing to do so can result in the growth of unhygienic, unhealthy mold in scattered areas throughout the room.
- When it is not to be used for an extended time, keep the power supply turned OFF. If the power supply is kept on, several watts or several tens of watts will be wasted. Also, the accumulation of dust, etc., can result in fire.
- Keep the power switched ON for more than 12 hours before starting operation. Do not turn the power supply OFF during seasons of heavy use. Doing so can result in failure.

1.3. Disposing of the unit

⚠ Warning:

- When you need to dispose of the unit, consult your dealer. If pipes are removed incorrectly, refrigerant (fluorocarbon gas) may blow out and come into contact with your skin, causing injury. Releasing refrigerant into the atmosphere also damages the environment.

2. Names and functions of various parts

Attachment and detachment of filter

[Fig. A] (P.2)

⚠ Caution:

- In removing the filter, precautions must be taken to protect your eyes from dust. Also, if you have to climb up on a stool to do the job, be careful not to fall.
- Turn off the power supply when the filter is changed.

3. How to operate

3.1. Turning ON/OFF

ON



Press the [ON/OFF] button.
The ON/OFF lamp will light up in green, and the operation will start.

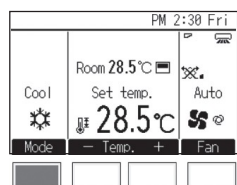
* The unit will operate with the previously-set operation mode, set temperature, and fan speed.

OFF

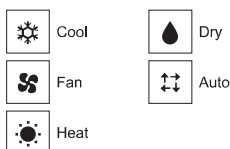


Press the [ON/OFF] button again.
The ON/OFF lamp will come off, and the operation will stop.

3.2. Operation mode



Press the [F1] button to go through the operation modes in the order of "Cool, Dry, Fan, Auto, and Heat."
Select the desired operation mode.



* Operation modes that are not available for the connected indoor unit will not appear on the display.

* Depending on the indoor unit model, either one or two set temperatures (single or dual set point(s)) can be set for Auto mode.

What the blinking mode icon means

The mode icon will blink when other indoor units in the same refrigerant system (connected to the same outdoor unit) are already operated in a different mode. In this case, the rest of the units in the same group can only be operated in the same mode.

Dry mode

- The indoor fan turns to the low-speed operation, disabling the change of fan speed.
- Dry operation cannot be carried out at room temperature of less than 18°C.

- The dry is a microcomputer-controlled dehumidifying operation which controls excessive air-cooling according to the room temperature of your choice. (Not usable for heating.)

1. Until reaching room temperature of your choice
The compressor and indoor fan function is linked motion according to the change of the room temperature and automatically repeat ON/OFF.
2. When reaching room temperature of your choice
Both the compressor and indoor fan stop.
When stop continues for 10 minutes, the compressor and indoor fan are operated for 3 minutes to keep the humidity low.

Heat mode

"DEFROST" display

Displayed only during the defrosting operation.

"STAND BY" display

Displayed from the start of heating operation until the moment warm air blows out.

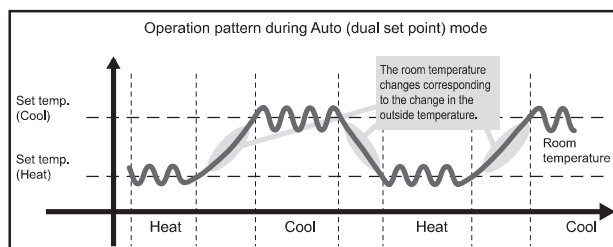
⚠ Caution:

- **Never expose your body directly to cool air for a long time. Excessive exposure to cool air is bad for your health, and should therefore be avoided.**
- **When the air-conditioner is used together with burners, thoroughly ventilate the area. Insufficient ventilation can result in accidents due to oxygen deficiency.**
- **Never place a burner at a place where it is exposed to the airflow from the air-conditioner. Doing so can result in imperfect combustion of the burner.**
- **The microcomputer functions in the following cases:**
 - Air does not blow out when heating starts.
 - To prevent any cool air from escaping, the indoor fan is gradually switched in sequence from faint airflow/weak airflow/set airflow according to the temperature rise of the blown out air. Wait a moment until the airflow comes out naturally.
 - The fan is not moving at the set speed.
 - In some models, the system switches over to faint airflow when the temperature of the room reaches the set temperature. In other cases, it stops to prevent any cool air from escaping during the defrosting operation.
 - Air flows out even if operation is stopped.
 - Approximately 1 minute after the stop of operation, the indoor fan sometimes rotates to eliminate extra heat generated by the electric heater, etc. The fan speed comes to low or high.

Auto (dual set point) mode

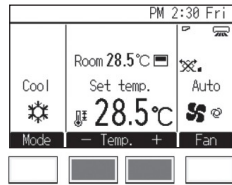
When the operation mode is set to the Auto (dual set point) mode, two set temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the cooling or heating mode and keep the room temperature within the preset range.

The set temperatures that are specified for the Cool/Dry mode and the Heat mode will be used to automatically control the room temperature to stay within the set temperatures. This mode is especially effective during the in-between seasons, when the temperature difference between the highest and the lowest is large and both heating and cooling modes are used within the same day.



3.3. Set temperature

<Cool, Dry, Heat, and Auto (single set point)>



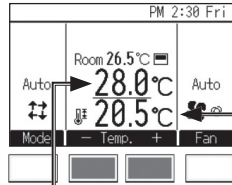
Press the **[F2]** button to decrease the set temperature, and press the **[F3]** button to increase.

* Refer to the table below for the settable temperature range for different operation modes.

* Set temperature cannot be set for the Fan mode.

* Depending on the Temperature unit setting, temperatures will decrease or increase by 0.5°C, 1°C, 1°F, or 2°F increments.

<Auto (dual set point) mode>



Set temperature for cooling

Set temperature for heating

The current set temperatures will appear. Press the **[F2]** or **[F3]** button to display the Settings screen.

Set temperature range

Operation mode	Set temperature range
Cool/Dry	19°C–30°C/67°F–87°F *1
Heat	17°C–28°C/63°F–83°F *1
Auto (single set point)	19°C–28°C/67°F–83°F *1*2
Auto (dual set points)	Cool: Same as the set temperature range for Cool mode Heat: Same as the set temperature range for Heat mode *2*3*4
Fan	Not settable

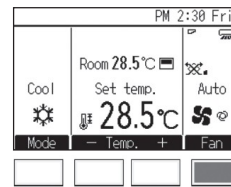
*1 The settable temperature ranges vary, depending on the indoor unit model.

*2 The set temperature for Auto mode (either single or dual set point(s)) will appear depending on the indoor unit model.

*3 The same values are used for the set temperature for Cool/Dry mode and the cooling set temperature for Auto mode (dual set points). Likewise, the same values are used for the set temperature for Heat mode and the heating set temperature for Auto mode (dual set points).

*4 The cooling and heating set temperatures can be set under the following conditions.
- The cooling set temperature is greater than the heating set temperature.
- The difference between the cooling and heating set temperatures is equal or greater than the minimum temperature difference that varies with the indoor unit model.

3.4. Fan speed



Press the **[F4]** button to go through the fan speeds in the following order.



* The number of available fan speeds depends on the indoor unit model.



*1 This setting can be adjusted only with MA remote controller.

- The actual fan speed will differ from the fan speed displayed on the LCD when one of the following conditions is met.
 - While "STAND BY" or "DEFROST" is displayed
 - When the room temperature is higher than the set temperature during the heating mode
 - Immediately after the heating operation (during stand by for switching the operation mode)
 - During the Dry mode
- The operation mode is set to Auto at factory shipment.
- If you feel uncomfortable with the direct wind from the indoor unit, switch the fan speed.

4. The smart way to use

Even minimal steps to care for your air conditioner can help make its use far more effective in terms of air-conditioning effect, electricity charges, etc.

Set the right room temperature

- In cooling operation, a temperature difference of about 5°C between indoors and outdoors is optimum.
- If the room temperature is raised by 1°C during air-cooling operation, about 10% electric power can be saved.
- Excessive cooling is bad for health. It also results in the waste of electric power.

Clean the filter thoroughly

- If the screen of the air filter becomes clogged, the airflow and air-conditioning effect can be significantly reduced. Further, if the condition is left unattended, failure can result. It is particularly important to clean the filter at the beginning of

the cooling and heating seasons. (When profuse dust and dirt have accumulated, clean the filter thoroughly.)

Prevent intrusion of heat during air-cooling

- To prevent the intrusion of heat during cooling operation, provide a curtain or a blind on the window to block out direct sunlight. Also, do not open the entrance or exit except in cases of dire necessity.

Carry out ventilation sometimes

- Since the air periodically gets dirty in a room that is kept closed for a long time, ventilation is sometimes necessary. When gas appliances are used together with the air conditioner, special precautions must be taken. If the "LOSSNAY" ventilation unit developed by our company is used, you can perform ventilation with less waste. For details on this unit, consult with your dealer.

5. Caring for the machine

Always have filter maintenance performed by a service person. Before care-taking, turn the power supply OFF.

Caution:

- Before you start cleaning, stop operation and turn OFF the power supply. Remember that the fan is rotating inside at high speed, posing a serious risk of injury.
- Indoor units are equipped with filters to remove the dust of sucked-in air. Clean the filters following the procedures below. (The standard filter should normally be cleaned once a week, and the long-life filter at the beginning of each season.)
- The life of the filter depends on where the unit is installed and how it is operated.

How to clean

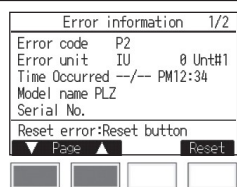
- Clear dust away lightly or clean it up with a vacuum cleaner. In the case of severe staining, wash the filter in lukewarm water mixed with dissolved neutral detergent or water, and then rinse off the detergent completely. After washing, dry it and fix it back into place.

Caution:

- Do not dry the filter by exposing it to direct sunlight or warming it using fire, etc. Doing so can result in the deformation of the filter.
- Washing it in hot water (more than 50°C) can also result in deformation.
- Never pour water or flammable sprays onto the air conditioner. Cleaning using these methods can result in the failure of the air conditioner, electric shock, or fire.

6. Troubleshooting

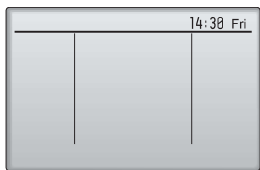
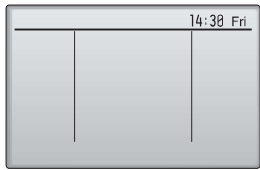
When an error occurs, the following screen will appear and the operation LED will blink. Check the error status, stop the operation, and consult your dealer.



Error code, error unit, refrigerant address, unit model name, and serial number will appear. The model name and serial number will appear only if the information have been registered.

Press the [F1] or [F2] button to go to the next page.

Before you ask for repair service, check the following points:

State of Machine	Remote Controller	Cause	Troubleshooting
It does not run.	Ruled line and clock are not displayed. No display appears even when the [ON/OFF] button is pressed.	Power failure	Press the [ON/OFF] button after power restoration.
		The power supply is turned OFF.	Turn the power supply ON.
		The fuse in the power supply is gone.	Replace fuse.
		The earth leakage breaker is gone.	Put in the earth leakage breaker.
Air flows out but it does not cool enough or heat enough.	The liquid crystal display shows that it is in the state of operation.	Improper temperature adjustment	After checking the set temperature and inlet temperature on the liquid crystal display, refer to section 3.3 "Set temperature", and operate the adjustment button.
		The filter is filled with dust and dirt.	Clean up the filter. (Refer to section 5 "Caring for the machine".)
		There are some obstacles at the air inlet and outlet of the indoor and outdoor units.	Remove.
		Windows and doors are open.	Close.
Cool air or warm air does not come out.	The liquid crystal display shows that it is in operation.	The restart-preventing circuit is in operation for 3 minutes.	Wait for a while. (To protect the compressor, a 3- minute restart-preventing circuit is built into the indoor unit. Therefore, there are occasions sometimes when the compressor does not start running immediately. There are cases when it does not run for as long as 3 minutes.)
		Indoor unit operation was restarted during the heating and defrosting operation.	Wait for a while. (Heating operation starts after ending defrosting operation.)
It runs briefly, but soon stops.	The "CHECK" and check code flash on the liquid crystal display.	There are some obstacles at the air inlet and outlet of the indoor and outdoor units.	Rerun after removal
		The filter is filled with dust and dirt.	Rerun after cleaning the filter. (Refer to section 5 "Caring for the machine".)
The sound of the exhaust and rotation of the motor can still be heard after stop of running.	All lights are out except the ruled line and clock. 	When other indoor units are engaged in cooling operation, the machine stops after running a drain-up mechanism for 3 minutes when air-cooling operation is stopped.	Wait for 3 minutes.
The sound of the exhaust and the rotation of the motor can be heard intermittently after stop of running.	All lights are out except the ruled line and clock. 	When other indoor units are engaged in cooling operation, drained water is brought in. If the drain water is collected, the drain-up mechanism initiates a draining operation.	It soon stops. (If the noise occurs more than 2-3 times in an hour, ask for repair service.)
Warm air comes out intermittently when the thermostat is OFF or during fan operation.	The liquid crystal display shows that it is in the state of operation.	When other indoor units are engaged in heating operation, the control valves are opened and closed from time to time to maintain the stability of the system.	It soon stops. (If the room temperature rises uncomfortably high in a small room, stop operation.)

State of Machine	Remote Controller	Cause	Troubleshooting
-	An error code (1521, 1522, 1524, 5558) is displayed.	Error code 1521, 1522, 1524: Refrigerant leakage Error code 5558: Possible sensor failure or broken wire	• Never repair it yourself. • Without turning off the breaker of the air conditioner, contact the store where you purchased the product and inform them of the product name and the content displayed on the remote controller. (If the display is 1521, 1524, or 5558*, the circulation operation will be performed. In this case, there is a risk of refrigerant leakage, so do not turn off the power breaker, ventilate the room, and contact the store where you purchased the product.) * The circulation operation is performed when the EN 378-compliant setting is enabled and error code 5558 is displayed.

- If operation stops due to a power failure, the **[restart-preventing circuit at power failure]** operates and disables unit operation even after power restoration. In this case, press the **[ON/OFF]** button again and start operation.

If malfunctions persist after you have checked the above, turn the power supply OFF and contact your dealer with information about the product name, the nature of the malfunction, etc. If the display of error information flashes, tell the dealer contents of the display (error code). Never attempt to repair by yourself.

The following symptoms are not air conditioner failures:

- The air blown out from the air conditioner can sometimes give off odors. This is due to cigarette smoke contained in the air of the room, the smell of cosmetics, the walls, furniture, etc., absorbed in the air conditioner.
- A hissing noise can be heard immediately after the air conditioner is started or stopped. This is the sound of the refrigeration flowing inside the air conditioner. This is normal.
- The air conditioner sometimes snaps or clicks at the beginning or end of

cooling/heating operation. This is the sound of friction on the front panel and other sections due to expansion and contraction caused by temperature change. This is normal.

- The fan speed changes in spite of not changing the setting. Not to blow out cold air at the beginning of heating operation, the air conditioner automatically adjusts the fan speed gradually from lower to the set speed. It also adjust its fan speed to protect the fan motor when return air temperature or fan speed excessively rises.

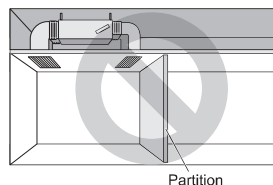
7. Installation, transferring works, and checking

Regarding place for installation

Consult with your dealer for details on installation and transferring the installation.

⚠ Warning:

- Do not install partitions that enclose outlets or inlets and seal off the space.



⚠ Caution:

- Never install the air conditioner where there is a risk of leakage of flammable gas. If gas leaks and accumulates around the unit, fire can result.
- Never install the air conditioner at the following place:
 - where there is a lot of machine oil
 - near the ocean and beach areas where there is salt air.
 - where humidity is high
 - where there are hot springs nearby
 - where there is sulphurous gas
 - where there is a high-frequency processing machinery (a high-frequency welder, etc.)
 - where acid solution is frequently used
 - where special sprays are frequently used.
- Install the indoor unit horizontally. Otherwise, water leakage can result.
- Take sufficient measures against noise when installing the air conditioners at hospitals or communication-related businesses.

If the air conditioner is used in any of the above-mentioned environments, frequent operational failure can be expected. It is advisable to avoid these types of installation sites.

For further details, consult with your dealer.

Regarding electrical work

⚠ Caution:

- The electrical work must be undertaken by a person who is qualified as an electrical engineer according to the [technical standard respecting electrical installation], [internal wiring rules], and the installation instruction manual with the absolute use of exclusive circuits. The use of other products with the power source can result in burnt-out breakers and fuses.
- Never connect the grounding wire to a gas pipe, water pipe, arrester, or telephone grounding wire. For details, consult with your dealer.
- In some types of installation sites, the installation of an earth leakage breaker is mandatory. For details, consult with your dealer.

Regarding transfer of installation

- When removing and reinstalling the air conditioner when you enlarge your home, remodel, or move, consult with your dealer in advance to ascertain the cost of the professional engineering work required for transferring the installation.

⚠ Caution:

- When moving or reinstalling the air conditioner, consult with your dealer. Defective installation can result in electric shock, fire, etc.

Regarding noise

- In installing work, choose a place that can fully bear the weight of the air conditioner, and where noise and vibration can be reduced.
- Choose a place where cool or warm air and noise from the outdoor air outlet of the air conditioner does not inconvenience the neighbors.
- If any alien object is placed near the outdoor air outlet of the air conditioner, decreased performance and increased noise can result. Avoid placing any obstacles adjacent to the air outlet.
- If the air conditioner produces any abnormal sound, consult with your dealer.

Maintenance and inspection

- If the air conditioner is used throughout several seasons, the insides can get dirty, reducing the performance. Depending upon the conditions of usage, foul odors can be generated and drainage can deteriorate due to dust and dirt, etc.

8. Inspection and maintenance

8.1. Guideline for preventive maintenance

The following maintenance intervals indicate the estimated intervals of parts replacement and repair to be required as a result of periodic inspections. They do not necessarily mean that replacement is required at the maintenance intervals.

The maintenance intervals do not indicate the warranty period.

Parts	Inspection interval	Maintenance interval*
Motor (Fan, drain pump)	1 year	20,000 hours
Bearing		15,000 hours
Electrical box		25,000 hours
Heat exchanger		5 years
Electronic expansion valve		20,000 hours
Sensor (Thermistor, refrigerant sensor, etc)		5 years
Drain pan		8 years

- The table above shows the main parts. Check the maintenance contract for details.
- This maintenance interval is an estimated period until the day when the maintenance should be conducted to use the product safely for a long time. Make use of the table above for maintenance planning (such as planning budget for maintenance inspection cost). Depending on the contents of the maintenance contract, the actual inspection and maintenance intervals may shorter than those in the table above.
- The maintenance and inspection items may differ depending on maintenance providers. Please check with your maintenance provider when concluding a maintenance contract.

* The following usage conditions are assumed.

- Normal use without frequent START/STOPS (The number of START/STOPS is assumed to be less than 6 times per hour in normal use)
- Operating hours are assumed to be 10 hours per day/2500 hours per year.

When the equipment is used under the following conditions, the maintenance interval may be shortened.

- When equipment is used in an environment where temperature and humidity are high or change dramatically
- When equipment is used in an environment where power supply fluctuations (the distortion of voltage, frequency, and waveform) are large (only within the allowable range)
- When equipment is used in an environment where the equipment may receive vibration or mechanical shock
- When equipment is used in an environment where dust, salt, toxic gases such as sulfur dioxide and hydrogen sulfide, and oil mist are present
- When equipment starts/stops frequently and operates for long periods (24-hour air-conditioning operation)

9. Specifications

PEFY-MS-VMA(L)-A1 series

		PEFY-MS20VMA-A1 PEFY-MS20VMAL-A1	PEFY-MS25VMA-A1 PEFY-MS25VMAL-A1	PEFY-MS32VMA-A1 PEFY-MS32VMAL-A1
Power source		~220-240 V 50Hz		
Cooling capacity ¹ /Heating capacity ¹	kW	2.2/2.5	2.8/3.2	3.6/4.0
Dimension (Height/Width/Depth)	mm	250/700/732	250/700/732	250/700/732
Net weight	kg	21.0(20.0)	21.0(20.0)	21.0(20.5)
Fan	Airflow rate	Cooling m ³ /min	6.0-7.0-8.5-10.0	6.0-7.0-8.5-10.0
	(Low-Middle2-Middle1-High)	Heating m ³ /min	6.0-7.0-8.5-10.0	6.0-7.0-8.5-10.0
	External static pressure	Pa	35/50/70/100/150 ²	35/50/70/100/150 ²
Sound pressure level ⁵ (Low-Middle2-Middle1-High)	Cooling	dB(A)	21.5-23.0-26.5-30.0	21.5-23.0-26.5-30.0
	Heating	dB(A)	21.5-23.0-26.5-30.0	21.5-23.0-26.5-30.0
Filter		Standard filter		

		PEFY-MS40VMA-A1 PEFY-MS40VMAL-A1	PEFY-MS50VMA-A1 PEFY-MS50VMAL-A1	PEFY-MS63VMA-A1 PEFY-MS63VMAL-A1
Power source		~220-240 V 50Hz		
Cooling capacity ¹ /Heating capacity ¹	kW	4.5/5.0	5.6/6.3	7.1/8.0
Dimension (Height/Width/Depth)	mm	250/900/732	250/1100/732	250/1100/732
Net weight	kg	25.0(24.5)	30.0(29.0)	30.0(29.0)
Fan	Airflow rate	Cooling m ³ /min	10.0-11.5-13.5-19.0	12.0-14.5-16.5-25.6
	(Low-Middle2-Middle1-High)	Heating m ³ /min	10.0-11.5-13.5-19.0	12.0-14.5-16.5-25.6
	External static pressure	Pa	35/50/70/100/150 ²	35/50/70/100/150 ²
Sound pressure level ⁵ (Low-Middle2-Middle1-High)	Cooling	dB(A)	23.5-25.5-28.5-37.0	22.0-24.0-26.5-37.0
	Heating	dB(A)	23.5-25.5-28.5-37.0	22.0-24.0-26.5-37.0
Filter		Standard filter		

		PEFY-MS71VMA-A1 PEFY-MS71VMAL-A1	PEFY-MS80VMA-A1 PEFY-MS80VMAL-A1	PEFY-MS100VMA-A1 PEFY-MS100VMAL-A1
Power source		~220-240 V 50Hz		
Cooling capacity ¹ /Heating capacity ¹	kW	8.0/9.0	9.0/10.0	11.2/12.5
Dimension (Height/Width/Depth)	mm	250/1400/732	250/1400/732	250/1400/732
Net weight	kg	37(36)	37(36)	37(36)
Fan	Airflow rate	Cooling m ³ /min	14.5-18.0-21.0-33.1	14.5-18.0-21.0-33.1
	(Low-Middle2-Middle1-High)	Heating m ³ /min	14.5-18.0-21.0-36.6	14.5-18.0-21.0-36.6
	External static pressure	Pa	40/50/70/100/150 ³	40/50/70/100/150 ³
Sound pressure level ⁵ (Low-Middle2-Middle1-High)	Cooling	dB(A)	22.0-25.0-27.5-38.5	22.0-25.0-27.5-38.5
	Heating	dB(A)	22.0-25.0-27.5-40.5	22.0-25.0-27.5-40.5
Filter		Standard filter		

		PEFY-MS125VMA-A1 PEFY-MS125VMAL-A1	PEFY-MS140VMA-A1 PEFY-MS140VMAL-A1
Power source		~220-240 V 50Hz	
Cooling capacity ¹ /Heating capacity ¹	kW	14.0/16.0	16.0/18.0
Dimension (Height/Width/Depth)	mm	250/1400/732	250/1600/732
Net weight	kg	38(37)	42(41)
Fan	Airflow rate	Cooling m ³ /min	25.5-31.0-34.0-37.0
	(Low-Middle2-Middle1-High)	Heating m ³ /min	25.5-31.0-34.0-37.0
	External static pressure	Pa	40/50/70/100/150 ⁴
Sound pressure level ⁵ (Low-Middle2-Middle1-High)	Cooling	dB(A)	31.5-36.5-38.5-40.5
	Heating	dB(A)	31.5-36.5-38.5-40.5
Filter		Standard filter	

Notes: * Operation temperature of indoor unit.
Cooling mode: 15 °C WB - 24 °C WB
Heating mode: 15 °C DB - 27 °C DB

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
<Cooling> Indoor: 27 °C DB/19 °C WB Outdoor: 35 °C DB
<Heating> Indoor: 20 °C DB Outdoor: 7 °C DB/6 °C WB

*2 The external static pressure is set to 35 Pa at factory shipment.

*3 The external static pressure is set to 40 Pa at factory shipment.

*4 The external static pressure is set to 50 Pa at factory shipment.

*5 The operating noise is the data that was obtained in an anechoic room.