

OWNER'S MANUAL

DC Inverter V5 X Series Outdoor Unit

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1. IMPORTANT SAFETY INFORMATION

To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring of instructions may cause harm or damage.

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.

WARNING
Failure to observe a warning may result in death. The appliance shall be installed in accordance with national wiring regulations.

CAUTION
Failure to observe a caution may result in injury or damage to the equipment.

WARNING

- Ask your dealer for installation of the air conditioner. Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.
- Ask your dealer for improvement, repair, and maintenance. Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

- In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off the power supply and call your dealer for instructions.
- Never replace a fuse with that of wrong rated current or other wires when a fuse blows out. Use of wire or copper wire may cause the unit to break down or cause a fire.
- Do not insert fingers, rods or other objects into the air inlet or outlet. When the fan is rotating at high speed, it will cause injury.

- Never use a flammable spray such as hair spray, lacquer paint near the unit. It may cause a fire.

- Never touch the air outlet or the horizontal blades while the swing flap is in operation. Fingers may become caught or the unit may break down.

- The appliance shall be installed in accordance with national wiring regulations.

- Never inspect or service the unit by yourself. Ask a qualified service person to perform this work.
- Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
- Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact you local government for information regarding the collection systems available.
- If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.
- Keep far away from high-frequency equipment.
- Keep away from the following places: a place where it is full of oil gas, a place where safety air surrounding or near the coast (except for the modes with corrosion-resistant fanring), a place where is caustic gases the surface is hot (spring). Location in the following places may cause malfunction or shorten the life span of the machine.
- In the case of extremely strong wind, please prevent the air from flowing backwards into the outdoor unit.
- Snow canopy is necessary in snowfall places on the outdoor unit. Please consult the local dealer for details.
- In the frequent thunderstruck place, lightningproof actions should be taken.

- The refrigerant in the air conditioner is safe and normally does not leak. If the refrigerant leaks in the room, contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
- Turn off any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit. Do not use the air conditioner until a service person confirms that the portion where the refrigerant leaks is repaired.

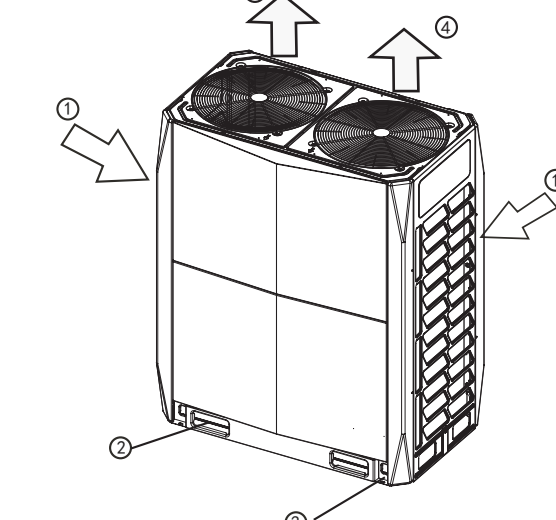


CAUTION

- The cooling/heating indoor unit is applicable for the cooling/heating and the cooling only outdoor unit/the heating capacity of the indoor unit will be effective only when the indoor unit connect to the cooling/heating outdoor unit.
- Do not use the air conditioner for other purposes. In order to avoid any quality deterioration, do not use the unit for cooling precision instruments, food, plants, animals or works of art.

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2. PARTS NAMES



The figure shown above is for reference only, the specific panel shall prevail.

- Air inlet (Both in Left and right sides, as well as in rear side.)
- Refrigerant pipe connective opening and wires outlet
- Fixed foot
- Air outlet (heat air to be blown out in the cooling operation, vice versa while the heating.)

NOTE

- All the pictures in this manual are for explanation purpose only. There may be slightly different from the air conditioner you purchased (depend on model). The actual shape shall prevail.
- To avoid danger, never put sticks or other objects into it.
- Please preheat the air conditioner for at least 12 hours before operation. Do not switch off the power if you need to stop the unit for 24h or shorter time. (This is to heat the crank case heater to avoid the compressive start of compressor.)
- Make sure the air inlet and outlet are not blocked, or it may degrade the performance of air conditioner or start up program which will stop the unit from running.

3. OPERATION AND PERFORMANCE

- Cooling and heating operation of inverter central DC

- The indoor unit in this air conditioner can be controlled solely and the indoor unit in the same system can not run cooling and heating at the same time.

- When the Cooling and Heating operation confront with each other, please determine the problem according to the settings of outdoor unit Mode dial code S5.

- When the Cooling Priority Mode has been set, the indoor unit in Heating Mode would stop and there will be Standby or No Priority displayed on the control panel. Those indoor units which are running on Heating Mode will run continuously.

- When the Priority Mode has been set, the first indoor unit will work in Heating Mode that is Heating Priority, please refer to the ITEM 1 for the control logic. If the first indoor unit is work in Cooling Mode, that is the Cooling Priority Mode, please refer to the ITEM 2 for the control logic.

- In terms of the settings only respond the Heating Mode, the indoor unit will run in Heating Mode normally, if unit be run in the Cooling Mode or air Supply Mode, the indoor unit will display Mode Conflicting.
- In terms of the settings only respond the Cooling Mode, the indoor unit will run in Cooling Mode or air supply mode normally, if unit be run in the Heating Mode, the indoor unit will display Mode Conflicting.

- Features of heating operation
 - Warm air will not be blown out immediately at the beginning of the heating operation, after 3~5minutes (depends on the indoor and outdoor temperature), until the indoor heat exchanger become hot, then blows out warm air.
 - During operation, the fan motor in the outdoor unit may stop running under high temperature.
 - During Fan operation, if other Indoor Units are running on heating mode, the fan may stop in order to prevent sending heat wind.

- Defrost in the heating operation
 - During heating operation, outdoor unit sometimes will frost. To increase efficiency, the unit will start defrosting automatically (about 2~10 minutes), and then water will be drained out from outdoor unit.
 - During defrosting, both the fan motors in the outdoor unit and indoor unit will stop running.

- Operation conditions
 - For proper performance, run the air conditioner under the following temperature conditions:

| Temperature Mode | Outdoor temperature | Indoor temperature | Room relative humidity |
|------------------------------------------|---------------------|--------------------|------------------------|
| Cooling mode | 5°C ~ 48°C | 17°C ~ 32°C | below 80% |
| Heating mode (Cooling only type without) | 20°C ~ 24°C | 52°C | |

NOTE
Protective device may start if running the unit outside the above condition, which will prevent the unit from operation.

- Protection Device
 - This protection device will stop the unit automatically in case the air conditioner is on forced running mode. When protection device is activated, running indicator light is lightened and query light flashes. Protection device may start under the following circumstances:

- cooling operation:
 - The air inlet or air outlet of outdoor unit is blocked.
 - Strong wind is continuously blowing to the air outlet of the outdoor unit.
- heating operation:
 - Too much dust and rubbish adhere to the dust filter in the indoor unit.

- Power out
 - If power is cut during operation, stop all the operation immediately.
 - Power comes again. The operation indicator on the wire controller flashes.
 - Push the ON/OFF button again if you want to restart the unit.

- Mishandling in operation
 - In case of mishandling caused by lighting or mobile wireless, please switch off the manual power. Off the manual power. Push ON/OFF again when restarting.

- Heating capacity
 - The heating process is absorb heat from outdoor, while expel heat to indoor by hot pump. Once the outdoor temperature stop down, heating capacity is degraded correspondingly.
 - It is command to equip with other warming facility, when outdoor temperature is low.

- It is better to equip with additional purchase indoor auxiliary heating device in parsons area where is in particularly low outdoor temperature (See Indoor Unit Operation Manual for detail information).

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4. TROUBLES AND CAUSES

CAUTION

- In case of the following malfunctions, please switch off the power and contact the local dealer/incorrect ON/OFF operation

- Fuse or leakage protector is frequently broken.

- Foreign matter or water falls in the unit.

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Please read the following illustration (before apply for servicing) Table 4-1

| Troubles | Causes |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outdoor unit <ul style="list-style-type: none">White mist or waterThe sound of "his" | <ul style="list-style-type: none">FAN function stop automatically to defrost. It is the start and stop sound of the solenoid valveAt the beginning and the end of the running process, sounds like water flow in valve occur, which will be amplified in 3~15 minutes, this is caused by defrosting process of refrigerant current.Slight hiss is caused by heat exchanger as temperature changes. |
| Indoor unit <ul style="list-style-type: none">Bad odorOperation lamp flashesNo priority of Standby on panel is lightened | <ul style="list-style-type: none">Pieces of the wall, carpet, furniture, cloth, cigarette, cosmetics and adhere to the unit.Switch on the power after the power out.Other equipment preheating process stops cooling operation.The operator sets an opposite mode against the fixed cooling and heating mode.FAN mode stops to avoid cold air blown out.The master unit with slave units for different purposes, when abnormal accident happens the director will illustrate. |
| Start or stop operation automatically | <ul style="list-style-type: none">Wrong operation on timer. |
| No operation | <ul style="list-style-type: none">Whether the power is out.Whether manual power switch is turned on.Whether the fuse is melted.Whether the protection device works (operation lamp is lightened)Whether it is the time set. |
| Check it again | <ul style="list-style-type: none">Whether the inlet and outlet of outdoor unit is blocked.Whether the door and window are open.Whether the air filter is blocked by dust.Whether the air deflector is in the right placeWhether fan speed is slight or whether it is in FAN mode.Whether the temperature is set properly.Whether setting COOL and HEAT simultaneously (Indicator light Standby or No Priority on panel is lightened) |
| Insufficient cooling | |
| Insufficient heating | |

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5. MALFUNCTION

Malfunction display of outdoor unit's DSP1 Table 5-1

| No. | Error code | Error or protection type | Note |
|-----|------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 1 | E0 | Outdoor unit COMM Error | Only display in slave unit |
| 2 | E1 | Phase protection | |
| 3 | E2 | COMM Error with indoor unit | 20 minutes after first power on or indoor and outdoor communication break off over 2 minutes after first power on 20 minutes |
| 4 | E3 | Reserve | |
| 5 | E4 | Outdoor unit itself capacity | |
| 6 | E5 | Voltage protection | |
| 7 | E6 | Reserve | |
| 8 | E7 | Discharge Temp sensor error | |
| 9 | E8 | Outdoor unit address error | |
| 10 | xE9 | Alarm of drive model | |
| 11 | xH0 | COMM Error between IR341 and main chip | X represents for a system, 1 is A system, 2 is B system |
| 12 | H1 | COMM Error between 0537 and main chip | |
| 13 | H2 | City of outdoor unit decreases error | Only main unit will display |
| 14 | H3 | City of outdoor unit increases error | Only main unit will display |
| 15 | xH4 | Unrecoverable module protection (stage/P4) | X represents for a system, 1 is A system, 2 is B system, but recoverable until re-power on |
| 16 | H5 | 3 times of P2 protection in 60 minutes | Not recoverable until re-power on |
| 17 | H6 | 3 times of P4 protection in 100 minutes | Not recoverable until re-power on |
| 18 | H7 | City of indoor units decreases error | Indoor unit test for over 3 minutes, not recoverable, until the unit city decoder |
| 19 | H8 | High pressure sensor error | Air discharging pressure P100.3MPa |
| 20 | H9 | 3 times of P9 protection in 60 minutes | Not recoverable until re-power on |
| 21 | H6 | Reserve | |
| 22 | FD | 3 times of PP protection in 150 minutes | Not recoverable until re-power on |
| 23 | CF | 3 times of PL protection in 100 minutes | Not recoverable until re-power on |
| 24 | yHd | Auxiliary unit error (y=1,2,3 e.g. THd stands for auxiliary unit) | Y represents for a unit which is not No. 0 |
| 25 | PO | Inverter compressor top Temp protection | |
| 26 | P1 | High pressure protection | |
| 27 | P2 | Low pressure protection | After 3 times P2 protection in 60 minutes will report H5 |
| 28 | xP3 | Compressor current protection | X represents for a system, 1 is A system, 2 is B system |
| 29 | PA | Discharge Temp Protection | After 3 times P6 protection in 100 minutes will report H6 |
| 30 | PS | High condenser Temp protection | |
| 31 | xP6 | Inverter module protection | X represents for a system, 1 is A system, 2 is B system, until report H4 |
| 32 | PP | DC fan protection | After 3 times P5 protection in 60 minutes will report H9 |
| 33 | PL | Inverter module Temp sensor error | After 3 times P5 protection in 150 minutes will report CF |
| 34 | PP | Protection of insufficient in degree of superheat of compressor discharging | After 3 times PP protection in 150 minutes will report FD |
| 35 | xL0 | DC compressor module error | X represents for a system, 1 is A system, 2 is B system |
| 36 | xL1 | DC bus low pressure protection | X represents for a system, 1 is A system, 2 is B system |
| 37 | xL2 | DC bus high pressure protection | X represents for a system, 1 is A system, 2 is B system |
| 38 | xL3 | Reserve | X represents for a system, 1 is A system, 2 is B system |
| 39 | xL4 | NACE error/synchronization/closed loop | X represents for a system, 1 is A system, 2 is B system |
| 40 | xL5 | Zero speed protection | X represents for a system, 1 is A system, 2 is B system |
| 41 | xL6 | Reserve | X represents for a system, 1 is A system, 2 is B system |
| 42 | xL7 | Phase error protection | X represents for a system, 1 is A system, 2 is B system |
| 43 | xL8 | Protection of the speed change between a moment before and after is >10% | X represents for a system, 1 is A system, 2 is B system |
| 44 | xL9 | Protection of the speed change between the setting speed and the actual speed >10% | X represents for a system, 1 is A system, 2 is B system |

If the problem still existing, please contact the sales distributor or the service center, tell us your model No. and the detail of the error.

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6. CONSTRAINT COOLING AND QUIRY

- Constraint Cooling
 - Once pressing the constraint cooling button (see the chart on the right), all the indoor unit will be on forced cooling mode and the wind speed is HIGH.

- Use application of the SW2 spot check Table 6-1

| No. | Display content (Normal display) | Note |
|-----|---------------------------------------------------------------|-----------------------------------------------------------------|
| 1 | Outdoor unit address | 0, 1, 2, 3 |
| 2 | Outdoor unit itself capacity | 4, 10, 12, 14, 16, 18, 20, 22 |
| 3 | Modular outdoor unit city | Available for main unit |
| 4 | City setting of indoor units | Available for main unit |
| 5 | Total capacity of outdoor unit | Capacity requirement |
| 6 | Total requirement of indoor unit capacity | Capacity requirement |
| 7 | Total requirement of main unit corrected capacity | Available for main unit |
| 8 | Operation mode | 0, 2, 3, 4 |
| 9 | This outdoor unit actual operation capacity | Capacity requirement |
| 10 | Speed of fan A | |
| 11 | Speed of fan B | |
| 12 | T2B/T2 average temp. | Actual value |
| 13 | T3 pipe temp. | Actual value |
| 14 | ambient temp. | Actual value |
| 15 | Discharge Temp of inverter compressor A | Actual value |
| 16 | Discharge Temp of inverter compressor B | Actual value |
| 17 | Heat sink Temp. | Actual value |
| 18 | Discharge pressure corresponding to the operation temperature | Actual value +30 |
| 19 | Current of inverter compressor A | Actual value |
| 20 | Current of inverter compressor B | Actual value |
| 21 | Opening angle of EXV A | |
| 22 | Opening angle of EXV B | |
| 23 | High pressure | Display value +10 kPa |
| 24 | Low pressure(Reserve) | |
| 25 | City of indoor units | That can communicate with indoor units |
| 26 | City of the working indoor units | Actual value |
| 27 | Priority mode | 0, 1, 2, 3, 4 |
| 28 | Night noise control mode | 0, 1, 2, 3 |
| 29 | Static pressure mode | 0, 1, 2, 3 |
| 30 | DC voltage A | |
| 31 | DC voltage B | |
| 32 | Reserve | |
| 33 | The last-time error or the protection code | If there is no protection or error the panel will display 8.8.8 |
| 34 | Times of error clearance | |
| 35 | | Check end |

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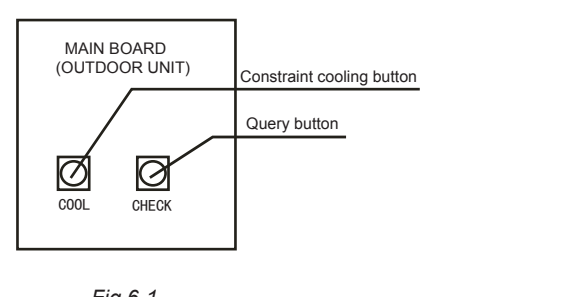


Fig 6-1

The display contents as follows:
(1) Normal display (When standby, the high position displays, the address of the outdoor unit, and the low position displays the City of indoor units that can communicate with outdoor unit. When it is operating, it will display the rotation frequency of the compressor.
(2) Operation mode: 0-OFF; 2-Cooling; 3-Heating; 4-Constraint cooling.
(3) Fan speed: 0-stop; 1-15: speed increase sequentially, 15 is the max fan speed.
(4) EXV opening angle: Pulse count=display value*4.
(5) Priority mode: 0-heating priority mode; 1-cooling priority mode; 2-Number 03 & the more operating mode first; 3-preset the heating mode only; 4-request the cooling mode only.
(6) Night noise control mode: 0-Night noise control mode; 1-silent mode; 2-most silent mode; 3-no priority.
(7) Static pressure mode: 0-Static pressure is 0 Mpa; 1-Static pressure mode is low pressure; 2-Static pressure mode is medium pressure; 3-high static pressure mode is high pressure.

7. AFTER-SALE SERVICE

If the air conditioner was operate abnormally, please plug off the power supply firstly, and contact with After-sales Center or Special Distributor. For detail please refer to the attached accessory Consumer Service Instruction.

此页不做印刷，仅做变更说明：
A升级到B：更改第2页操作和性能描述中，A/C改为DC，SW2改为S5；更改说明书的第5页表5-1的第21、22、33、34行内容；更改说明书的第18页点检附加说明中模式优先的说明内容，由原来的先开优先，改为63号机和多开优先。
B升级到C：更改第三页表3-1的制热温度范围。
C升级到D：第三页增加面板仅供参考描述。

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