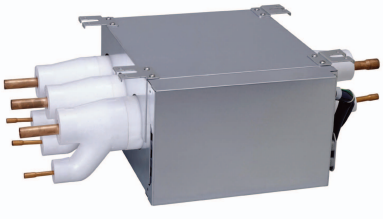
DAIKIN

Si18 - 525B

Service Manual

SUPER MULTI PLUS

D-Series



[Applied Models]

- Super Multi Plus : Cooling only
- Super Multi Plus : Heat Pump

SUPER MULTI PLUS
D-Series

●Cooling Only

Indoor Unit

<R-410A>

FTKS25DVM	FTKS20DVMA	FDKS25CVMB	FFQ25B7V1B
FTKS35DVM	FTKS25DVMA	FDKS35CVMB	FFQ35B7V1B
FTKS50BVMB	FTKS35DVMA	CDKS50CVMB	FFQ50B7V1B
FTKS60BVMB	FTKS50BVMA8	CDKS60CVMB	FFQ60B7V1B
FTKS71BVMB	FTKS60BVMA8	CDKS25CVMA	FCQ35BVE
FTK50AZVMB	FTKS71BVMA8	CDKS35CVMA	FCQ50BVE
FTK60AZVMB		CDKS50CVMA	FCQ60BVE
FTK71AZVMB		CDKS60CVMA	FCQ71BVE
			FBQ60BV1
			FBQ71BV1
			FHQ35BUV1B9
			FHQ50BUV1B9
			FHQ60BUV1B9

<R-22>

FTKD25DVM	FTK50AVM	CDKD25CVM	CDKD25EAVM
FTKD35DVM	FTK60AVM	CDKD35CVM	CDKD35EAVM
FTKD50FVM	FTK71AVM	CDKD50CVM	
FTKD60FVM		CDKD60CVM	
FTKD71FVM			

Outdoor Unit

<R-410A>

RMKS112DVM	RMKS112DV1A	BPMKS967A2	BPMKS967A2B
RMKS140DVM	RMKS140DV1A	BPMKS967A3	BPMKS967A3B
RMKS160DVM	RMKS160DV1A		

<R-22>

RMKD112DVM	BPMKD967A2
RMKD140DVM	BPMKD967A3
RMKD160DVM	

●Heat Pump

Indoor Unit

<R-410A>

FTXS20DVMA	CDXS25CVMA	FLXS25BVMA	FFQ25B7V1B
FTXS25DVMA	CDXS35CVMA	FLXS35BVMA	FFQ35B7V1B
FTXS35DVMA	CDXS50CVMA	FLXS50BVMA	FFQ50B7V1B
FTXS50BVMA8	CDXS60CVMA	FLXS60BVMA	FFQ60B7V1B
FTXS60BVMA8	CDXS25DVMT	FVXS35BVMA	FCQ35BVE
FTXS71BVMA8	CDXS35DVMT	FVXS50BVMA	FCQ50BVE
FTXS20DVMT	CDXS50DVMT		FCQ60BVE
FTXS25DVMT	CDXS60DVMT		FCQ71BVE
FTXS35DVMT			FBQ60BV1
FTXS50DVMT			FBQ71BV1
FTXS60DVMT			FBQ60BVL
FTXS71DVMT			FBQ71BVL
			FHQ35BUV1B9
			FHQ50BUV1B9
			FHQ60BUV1B9

Outdoor Unit

<R-410A>

RMXS112DVM	RMXS112DV1A	RMXS112DVLT	BPMKS967A2
RMXS140DVM	RMXS140DV1A	RMXS140DVLT	BPMKS967A3
RMXS160DVM	RMXS160DV1A	RMXS160DVLT	

1. Introduction

1.1 Safety Cautions

Cautions and Warnings

- Be sure to read the following safety cautions before conducting repair work.
- The caution items are classified into "⚠ **Warning**" and "⚠ **Caution**". The "⚠ **Warning**" items are especially important since they can lead to death or serious injury if they are not followed closely. The "⚠ **Caution**" items can also lead to serious accidents under some conditions if they are not followed. Therefore, be sure to observe all the safety caution items described below.
- About the pictograms

△ This symbol indicates the item for which caution must be exercised.
The pictogram shows the item to which attention must be paid.

◯ This symbol indicates the prohibited action.
The prohibited item or action is shown in the illustration or near the symbol.

● This symbol indicates the action that must be taken, or the instruction.
The instruction is shown in the illustration or near the symbol.

- After the repair work is complete, be sure to conduct a test operation to ensure that the equipment operates normally, and explain the cautions for operating the product to the customer.

1.1.1 Cautions Regarding Safety of Workers

⚠ Warning	
Be sure to disconnect the power cable plug from the plug socket before disassembling the equipment for repair. Working on the equipment that is connected to the power supply may cause an electrical shook. If it is necessary to supply power to the equipment to conduct the repair or inspecting the circuits, do not touch any electrically charged sections of the equipment.	
If the refrigerant gas is discharged during the repair work, do not touch the discharged refrigerant gas. The refrigerant gas may cause frostbite.	
When disconnecting the suction or discharge pipe of the compressor at the welded section, evacuate the refrigerant gas completely at a well-ventilated place first. If there is a gas remaining inside the compressor, the refrigerant gas or refrigerating machine oil discharges when the pipe is disconnected, and it may cause injury.	
If the refrigerant gas leaks during the repair work, ventilate the area. The refrigerant gas may generate toxic gases when it contacts flames.	
The step-up capacitor supplies high-voltage electricity to the electrical components of the outdoor unit. Be sure to discharge the capacitor completely before conducting repair work. A charged capacitor may cause an electrical shock.	
Do not start or stop the air conditioner operation by plugging or unplugging the power cable plug. Plugging or unplugging the power cable plug to operate the equipment may cause an electrical shock or fire.	

Warning	
Be sure to wear a safety helmet, gloves, and a safety belt when working at a high place (more than 2m). Insufficient safety measures may cause a fall accident.	
In case of R410A refrigerant models, be sure to use pipes, flare nuts and tools for the exclusive use of the R410A refrigerant. The use of materials for R22 refrigerant models may cause a serious accident such as a damage of refrigerant cycle as well as an equipment failure.	

Caution	
Do not repair the electrical components with wet hands. Working on the equipment with wet hands may cause an electrical shock.	
Do not clean the air conditioner by splashing water. Washing the unit with water may cause an electrical shock.	
Be sure to provide the grounding when repairing the equipment in a humid or wet place, to avoid electrical shocks.	
Be sure to turn off the power switch and unplug the power cable when cleaning the equipment. The internal fan rotates at a high speed, and cause injury.	
Be sure to conduct repair work with appropriate tools. The use of inappropriate tools may cause injury.	
Be sure to check that the refrigerating cycle section has cooled down enough before conducting repair work. Working on the unit when the refrigerating cycle section is hot may cause burns.	
Use the welder in a well-ventilated place. Using the welder in an enclosed room may cause oxygen deficiency.	

1.1.2 Cautions Regarding Safety of Users

Warning	
Be sure to use parts listed in the service parts list of the applicable model and appropriate tools to conduct repair work. Never attempt to modify the equipment. The use of inappropriate parts or tools may cause an electrical shock, excessive heat generation or fire.	
If the power cable and lead wires have scratches or deteriorated, be sure to replace them. Damaged cable and wires may cause an electrical shock, excessive heat generation or fire.	
Do not use a joined power cable or extension cable, or share the same power outlet with other electrical appliances, since it may cause an electrical shock, excessive heat generation or fire.	
Be sure to use an exclusive power circuit for the equipment, and follow the local technical standards related to the electrical equipment, the internal wiring regulations, and the instruction manual for installation when conducting electrical work. Insufficient power circuit capacity and improper electrical work may cause an electrical shock or fire.	
Be sure to use the specified cable for wiring between the indoor and outdoor units. Make the connections securely and route the cable properly so that there is no force pulling the cable at the connection terminals. Improper connections may cause excessive heat generation or fire.	
When wiring between the indoor and outdoor units, make sure that the terminal cover does not lift off or dismount because of the cable. If the cover is not mounted properly, the terminal connection section may cause an electrical shock, excessive heat generation or fire.	
Do not damage or modify the power cable. Damaged or modified power cable may cause an electrical shock or fire. Placing heavy items on the power cable, and heating or pulling the power cable may damage the cable.	
Do not mix air or gas other than the specified refrigerant (R410A / R22) in the refrigerant system. If air enters the refrigerating system, an excessively high pressure results, causing equipment damage and injury.	
If the refrigerant gas leaks, be sure to locate the leaking point and repair it before charging the refrigerant. After charging refrigerant, make sure that there is no refrigerant leak. If the leaking point cannot be located and the repair work must be stopped, be sure to perform pump-down and close the service valve, to prevent the refrigerant gas from leaking into the room. The refrigerant gas itself is harmless, but it may generate toxic gases when it contacts flames, such as fan and other heaters, stoves and ranges.	
When relocating the equipment, make sure that the new installation site has sufficient strength to withstand the weight of the equipment. If the installation site does not have sufficient strength and if the installation work is not conducted securely, the equipment may fall and cause injury.	

Warning	
Check to make sure that the power cable plug is not dirty or loose, then insert the plug into a power outlet securely. If the plug has dust or loose connection, it may cause an electrical shock or fire.	
Be sure to install the product correctly by using the provided standard installation frame. Incorrect use of the installation frame and improper installation may cause the equipment to fall, resulting in injury.	For unitary type only 
Be sure to install the product securely in the installation frame mounted on the window frame. If the unit is not securely mounted, it may fall and cause injury.	For unitary type only 
When replacing the coin battery in the remote controller, be sure to disposed of the old battery to prevent children from swallowing it. If a child swallows the coin battery, see a doctor immediately.	

Caution	
Installation of a leakage breaker is necessary in some cases depending on the conditions of the installation site, to prevent electrical shocks.	
Do not install the equipment in a place where there is a possibility of combustible gas leaks. If the combustible gas leaks and remains around the unit, it may cause a fire.	
Check to see if the parts and wires are mounted and connected properly, and if the connections at the soldered or crimped terminals are secure. Improper installation and connections may cause excessive heat generation, fire or an electrical shock.	
If the installation platform or frame has corroded, replace it. Corroded installation platform or frame may cause the unit to fall, resulting in injury.	
Check the grounding, and repair it if the equipment is not properly grounded. Improper grounding may cause an electrical shock.	

Caution	
Be sure to measure the insulation resistance after the repair, and make sure that the resistance is 1 MΩ or higher. Faulty insulation may cause an electrical shock.	
Be sure to check the drainage of the indoor unit after the repair. Faulty drainage may cause the water to enter the room and wet the furniture and floor.	
Do not tilt the unit when removing it. The water inside the unit may spill and wet the furniture and floor.	
Be sure to install the packing and seal on the installation frame properly. If the packing and seal are not installed properly, water may enter the room and wet the furniture and floor.	For unitary type only 

1.2 Used Icons

Icons are used to attract the attention of the reader to specific information. The meaning of each icon is described in the table below:

Icon	Type of Information	Description
Note:	Note	A “note” provides information that is not indispensable, but may nevertheless be valuable to the reader, such as tips and tricks.
Caution	Caution	A “caution” is used when there is danger that the reader, through incorrect manipulation, may damage equipment, loose data, get an unexpected result or has to restart (part of) a procedure.
Warning	Warning	A “warning” is used when there is danger of personal injury.
	Reference	A “reference” guides the reader to other places in this binder or in this manual, where he/she will find additional information on a specific topic.

Part 1
List of Functions

1. List of Functions

1.1 Cooling Only

1.1.1 R-410A Models

Category	Functions	RMKS112·140·160DVM	Category	Functions	RMKS112·140·160DVM
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	–5 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mold Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
				72-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		Night Set Mode	—
	3-D Airflow	—	Worry Free "Reliability & Durability"	Auto-Restart (after Power Failure)	—
	Comfort Airflow Mode	—		Self-Diagnosis (Digital, LED) Display	○
	3-Step Airflow (H/P Only)	—		Wiring-Error Check	—
Comfort Control	Auto Fan Speed	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Indoor Unit Quiet Operation	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Night Quiet Mode (Automatic)	○		Flexible Voltage Correspondence	—
	Outdoor Unit Quiet Operation (Manual)	○		High Ceiling Application	—
	Intelligent Eye	—		Chargeless	—
	Quick Warming Function	—		Either Side Drain (Right or Left)	—
	Hot-Start Function	—		Power-Selection	—
	Automatic Defrosting	—	Remote Control	5-Rooms Centralized Controller (Option)	—
Operation	Automatic Operation	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
	Fan Only	—		DIII-NET Compatible (Adaptor) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	Remote Controller	Wireless	—
	Inverter Powerful Operation	—		Wired	—
	Priority-Room Setting	—			
	Cooling / Heating Mode Lock	—			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	RMKS112·140·160DV1A	Category	Functions	RMKS112·140·160DV1A
BasicFunction	Inverter (with Inverter Power Control)	○	Health&Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	–5 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mold Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
				72-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		Night Set Mode	—
	3-D Airflow	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	—
	Comfort Airflow Mode	—		Self-Diagnosis (Digital, LED) Display	○
	3-Step Airflow (H/P Only)	—		Wiring-Error Check	—
Comfort Control	Auto Fan Speed	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Indoor Unit Quiet Operation	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Night Quiet Mode (Automatic)	○		Flexible Voltage Correspondence	—
	Outdoor Unit Quiet Operation (Manual)	○		High Ceiling Application	—
	Intelligent Eye	—		Chargeless	—
	Quick Warming Function	—		Either Side Drain (Right or Left)	—
	Hot-Start Function	—		Power-Selection	—
	Automatic Defrosting	—	Remote Control	5-Rooms Centralized Controller (Option)	—
Operation	Automatic Operation	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
	Fan Only	—		DIII-NET Compatible (Adaptor) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	Remote Controller	Wireless	—
	Inverter Powerful Operation	—		Wired	—
	Priority-Room Setting	—			
	Cooling / Heating Mode Lock	—			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTKS25-35DVM	FTKS50-71BVMB	Category	Functions	FTKS25-35DVM	FTKS50-71BVMB
Basic Function	Inverter (with Inverter Power Control)	○	○	Health & Clean	Air Purifying Filter	—	—
	Operation Limit for Cooling (°CDB)	—	—				
	Operation Limit for Heating (°CWB)	—	—		Photocatalytic Deodorizing Filter	—	—
	PAM Control	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	○
Compressor	Oval Scroll Compressor	—	—				
	Swing Compressor	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	○	—
	Rotary Compressor	—	—				
	Reluctance DC Motor	—	—		Longlife Filter (Option)	—	—
Comfortable Airflow	Power-Airflow Flap	—	—		Mold Proof Air Filter	○	○
	Power-Airflow Dual Flaps	○	○		Wipe-clean Flat Panel	○	○
	Power-Airflow Diffuser	—	—		Washable Grille	—	—
	Wide-Angle Louvers	○	○		Filter Cleaning Indicator	—	—
	Vertical Auto-Swing (Up and Down)	○	○		Mold Proof Operation	○	—
	Horizontal Auto-Swing (Right and Left)	—	○		Heating Dry Operation	—	—
	3-D Airflow	—	○		Good-Sleep Cooling Operation	—	—
	Comfort Airflow Mode	—	—	Timer	24-Hour On/Off Timer	○	○
	3-Step Airflow (H/P Only)	—	—		72-Hour On/Off Timer	—	—
Comfort Control	Auto Fan Speed	○	○		Night Set Mode	○	○
	Indoor Unit Quiet Operation	○	○	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○
	Night Quiet Mode (Automatic)	—	—		Self-Diagnosis (Digital, LED) Display	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—		Wiring Error Check	—	—
	Intelligent Eye	○	○		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—
	Quick Warming Function	—	—				
	Hot-Start Function	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○
	Automatic Defrosting	—	—		Flexible Voltage Correspondence	○	○
Operation	Automatic Operation	—	—		High Ceiling Application	—	—
	Programme Dry Function	○	○		Chargeless	—	—
	Fan Only	○	○		Either Side Drain (Right or Left)	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—		Power Selection	—	—
	Inverter Powerful Operation	○	○	Remote Control	5-Rooms Centralized Controller (Option)	○	○
	Priority-Room Setting	—	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○
	Cooling / Heating Mode Lock	—	—				
	Home Leave Operation	—	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○
	ECONO Mode	○	—				
	Indoor Unit On/Off Switch	○	○		DIII-NET Compatible (Adaptor) (Option)	○	○
	Signal Reception Indicator	○	○	Remote Controller	Wireless	○	○
	Temperature Display	—	—		Wired	—	—
	Another Room Operation	—	—				

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTK50-71AZVMB	Category	Functions	FTK50-71AZVMB
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	○
	Operation Limit for Cooling (°CDB)	—			
	Operation Limit for Heating (°CWB)	—		Photocatalytic Deodorizing Filter	○
	PAM Control	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—
Compressor	Oval Scroll Compressor	—			
	Swing Compressor	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
	Rotary Compressor	—			
	Reluctance DC Motor	—		Longlife Filter (Option)	—
Comfortable Airflow	Power-Airflow Flap	○		Mold Proof Air Filter	○
	Power-Airflow Dual Flaps	—		Wipe-clean Flat Panel	—
	Power-Airflow Diffuser	○		Washable Grille	○
	Wide-Angle Louvers	○		Filter Cleaning Indicator	—
	Vertical Auto-Swing (Up and Down)	○		Mold Proof Operation	—
	Horizontal Auto-Swing (Right and Left)	○		Heating Dry Operation	—
	3-D Airflow	○		Good-Sleep Cooling Operation	—
	Comfort Airflow Mode	—	Timer	24-Hour On/Off Timer	○
	3-Step Airflow (H/P Only)	—		72-Hour On/Off Timer	—
Comfort Control	Auto Fan Speed	○		Night Set Mode	○
	Indoor Unit Quiet Operation	○	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○
	Night Quiet Mode (Automatic)	—		Self-Diagnosis (Digital, LED) Display	○
	Outdoor Unit Quiet Operation (Manual)	—		Wiring-Error Check	—
	Intelligent Eye	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—
	Quick Warming Function	—			
	Hot-Start Function	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○
	Automatic Defrosting	—		Flexible Voltage Correspondence	○
Operation	Automatic Operation	—		High Ceiling Application	—
	Programme Dry Function	○		Chargeless	—
	Fan Only	○		Either Side Drain (Right or Left)	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—		Power-Selection	—
	Inverter Powerful Operation	○	Remote Control	5-Rooms Centralized Controller (Option)	○
	Priority-Room Setting	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○
	Cooling / Heating Mode Lock	—		Remote Control Adaptor (Normal Open Contact) (Option)	○
	Home Leave Operation	○		DIII-NET Compatible (Adaptor) (Option)	○
	ECONO Mode	—	Remote Controller	Wireless	○
	Indoor Unit On/Off Switch	○		Wired	—
	Signal Reception Indicator	○			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTKS20-35DVMA	FTKS50-71BVMA8	Category	Functions	FTKS20-35DVMA	FTKS50-71BVMA8
BasicFunction	Inverter (with Inverter Power Control)	○	○	Health&Clean	Air Purifying Filter	—	—
	Operation Limit for Cooling (°CDB)	—	—		Photocatalytic Deodorizing Filter	—	—
	Operation Limit for Heating (°CWB)	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	○
	PAM Control	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	○	—
Compressor	Oval Scroll Compressor	—	—		Longlife Filter (Option)	—	—
	Swing Compressor	—	—		Mold Proof Air Filter	○	○
	Rotary Compressor	—	—		Wipe-clean Flat Panel	○	○
	Reluctance DC Motor	—	—		Washable Grille	—	—
Comfortable Airflow	Power-Airflow Flap	—	—		Filter Cleaning Indicator	—	—
	Power-Airflow Dual Flaps	○	○		Mold Proof Operation	○	—
	Power-Airflow Diffuser	—	—		Heating Dry Operation	—	—
	Wide-Angle Louvers	○	○		Good-Sleep Cooling Operation	—	—
	Vertical Auto-Swing (Up and Down)	○	○	Timer	24-Hour On/Off Timer	○	○
					72-Hour On/Off Timer	—	—
	Horizontal Auto-Swing (Right and Left)	—	○		Night Set Mode	○	○
	3-D Airflow	—	○	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○
	Comfort Airflow Mode	—	—		Self-Diagnosis (Digital, LED) Display	○	○
	3-Step Airflow (H/P Only)	—	—		Wiring-Error Check	—	—
Comfort Control	Auto Fan Speed	○	○		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—
	Indoor Unit Quiet Operation	○	○	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○
	Night Quiet Mode (Automatic)	—	—		Flexible Voltage Correspondence	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—		High Ceiling Application	—	—
	Intelligent Eye	○	○		Chargeless	—	—
	Quick Warming Function	—	—		Either Side Drain (Right or Left)	○	○
	Hot-Start Function	—	—		Power-Selection	—	—
	Automatic Defrosting	—	—	Remote Control	5-Rooms Centralized Controller (Option)	○	○
Operation	Automatic Operation	—	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○
	Programme Dry Function	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○
	Fan Only	○	○		DIII-NET Compatible (Adaptor) (Option)	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	Remote Controller	Wireless	○	○
	Inverter Powerful Operation	○	○		Wired	—	—
	Priority-Room Setting	—	—				
	Cooling / Heating Mode Lock	—	—				
	Home Leave Operation	—	○				
	ECONO Mode	○	—				
	Indoor Unit On/Off Switch	○	○				
	Signal Reception Indicator	○	○				
	Temperature Display	—	—				
	Another Room Operation	—	—				

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FDKS25·35CVMB	CDKS50·60CVMB	Category	Functions	FDKS25·35CVMB	CDKS50·60CVMB
Basic Function	Inverter (with Inverter Power Control)	○	○	Health & Clean	Air Purifying Filter	—	—
	Operation Limit for Cooling (°CDB)	—	—				
	Operation Limit for Heating (°CWB)	—	—		Photocatalytic Deodorizing Filter	—	—
	PAM Control	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—
Compressor	Oval Scroll Compressor	—	—				
	Swing Compressor	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—
	Rotary Compressor	—	—				
	Reluctance DC Motor	—	—		Longlife Filter (Option)	—	—
Comfortable Airflow	Power-Airflow Flap	—	—		Mold Proof Air Filter	○	○
	Power-Airflow Dual Flaps	—	—		Wipe-clean Flat Panel	—	—
	Power-Airflow Diffuser	—	—		Washable Grille	—	—
	Wide-Angle Louvers	—	—		Filter Cleaning Indicator	—	—
	Vertical Auto-Swing (Up and Down)	—	—		Mold Proof Operation	—	—
	Horizontal Auto-Swing (Right and Left)	—	—		Heating Dry Operation	—	—
	3-D Airflow	—	—		Good-Sleep Cooling Operation	—	—
	Comfort Airflow Mode	—	—	Timer	24-Hour On/Off Timer	○	○
	3-Step Airflow (H/P Only)	—	—		72-Hour On/Off Timer	—	—
Comfort Control	Auto Fan Speed	○	○		Night Set Mode	○	○
	Indoor Unit Quiet Operation	○	○	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○
	Night Quiet Mode (Automatic)	—	—		Self-Diagnosis (Digital, LED) Display	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—		Wiring-Error Check	—	—
	Intelligent Eye	—	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—
	Quick Warming Function	—	—				
	Hot-Start Function	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	—
	Automatic Defrosting	—	—		Flexible Voltage Correspondence	○	○
Operation	Automatic Operation	—	—		High Ceiling Application	—	—
	Programme Dry Function	○	○		Chargeless	—	—
	Fan Only	○	○		Either Side Drain (Right or Left)	—	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—		Power-Selection	—	—
	Inverter Powerful Operation	○	○	Remote Control	5-Rooms Centralized Controller (Option)	○	○
	Priority-Room Setting	—	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○
	Cooling / Heating Mode Lock	—	—		Remote Control Adaptor (Normal Open Contact) (Option)	○	○
	Home Leave Operation	○	○		DIII-NET Compatible (Adaptor) (Option)	○	○
	ECONO Mode	—	—	Remote Controller	Wireless	○	○
	Indoor Unit On/Off Switch	○	○		Wired	—	—
	Signal Reception Indicator	○	○				
	Temperature Display	—	—				
	Another Room Operation	—	—				

Note: ○ : Holding Functions
— : No Functions

Category	Functions	CDKS25-60CVMA	FFQ25-60B7V1B	Category	Functions	CDKS25-60CVMA	FFQ25-60B7V1B
BasicFunction	Inverter (with Inverter Power Control)	○	○	Health&Clean	Air Purifying Filter	—	—
	Operation Limit for Cooling (°CDB)	—	—		Photocatalytic Deodorizing Filter	—	—
	Operation Limit for Heating (°CWB)	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—
	PAM Control	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—
Compressor	Oval Scroll Compressor	—	—		Longlife Filter (Option)	—	○
	Swing Compressor	—	—		Mold Proof Air Filter	○	○
	Rotary Compressor	—	—		Wipe-clean Flat Panel	—	—
	Reluctance DC Motor	—	—		Washable Grille	—	○
Comfortable Airflow	Power-Airflow Flap	—	—		Filter Cleaning Indicator	—	○
	Power-Airflow Dual Flaps	—	—		Mold Proof Operation	—	—
	Power-Airflow Diffuser	—	—		Heating Dry Operation	—	—
	Wide-Angle Louvers	—	—		Good-Sleep Cooling Operation	—	—
	Vertical Auto-Swing (Up and Down)	—	○	Timer	24-Hour On/Off Timer	○	—
					72-Hour On/Off Timer	—	○
	Horizontal Auto-Swing (Right and Left)	—	—		Night Set Mode	○	—
	3-D Airflow	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○
	Comfort Airflow Mode	—	—		Self-Diagnosis (Digital, LED) Display	○	○
	3-Step Airflow (H/P Only)	—	—		Wiring-Error Check	—	—
Comfort Control	Auto Fan Speed	○	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—
	Indoor Unit Quiet Operation	○	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—	○
	Night Quiet Mode (Automatic)	—	—		Flexible Voltage Correspondence	○	—
	Outdoor Unit Quiet Operation (Manual)	—	—		High Ceiling Application	—	—
	Intelligent Eye	—	—		Chargeless	—	—
	Quick Warming Function	—	—		Either Side Drain (Right or Left)	—	—
	Hot-Start Function	—	—		Power-Selection	—	—
	Automatic Defrosting	—	—	Remote Control	5-Rooms Centralized Controller (Option)	○	—
Operation	Automatic Operation	—	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	—
	Programme Dry Function	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	—
	Fan Only	○	○		DIII-NET Compatible (Adaptor) (Option)	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	Remote Controller	Wireless	○	○
	Inverter Powerful Operation	○	—		Wired	—	○
	Priority-Room Setting	—	—				
	Cooling / Heating Mode Lock	—	—				
	Home Leave Operation	○	—				
	ECONO Mode	—	—				
	Indoor Unit On/Off Switch	○	—				
	Signal Reception Indicator	○	—				
	Temperature Display	—	—				
	Another Room Operation	—	—				

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FCQ35-71BVE	FBQ60-71BV1	FHQ35-60BUV1B9	Category	Functions	FCQ35-71BVE	FBQ60-71BV1	FHQ35-60BUV1B9
BasicFunction	Inverter (with Inverter Power Control)	○	○	○	Health&Clean	Air Purifying Filter	—	—	—
	Operation Limit for Cooling (°CDB)	—	—	—		Photocatalytic Deodorizing Filter	—	—	—
	Operation Limit for Heating (°CWB)	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—	—
	PAM Control	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—	—
Compressor	Oval Scroll Compressor	—	—	—		Longlife Filter (Option)	○	○	○
	Swing Compressor	—	—	—		Mold Proof Air Filter	○	○	○
	Rotary Compressor	—	—	—		Wipe-clean Flat Panel	—	—	—
	Reluctance DC Motor	—	—	—		Washable Grille	○	—	○
Comfortable Airflow	Power-Airflow Flap	—	—	—		Filter Cleaning Indicator	○	○	○
						Mold Proof Operation	—	—	—
	Power-Airflow Dual Flaps	—	—	—		Heating Dry Operation	—	—	—
	Power-Airflow Diffuser	—	—	—		Good-Sleep Cooling Operation	—	—	—
	Wide-Angle Louvers	—	—	—	Timer	24-Hour On/Off Timer	—	—	—
	Vertical Auto-Swing (Up and Down)	○	—	○		72-Hour On/Off Timer	○	○	○
						Night Set Mode	—	—	—
	Horizontal Auto-Swing (Right and Left)	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
	3-D Airflow	—	—	—		Self-Diagnosis (Digital, LED) Display	○	○	○
	Comfort Airflow Mode	—	—	—		Wiring-Error Check	—	—	—
	3-Step Airflow (H/P Only)	—	—	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
Comfort Control	Auto Fan Speed	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○	○
	Indoor Unit Quiet Operation	—	—	—		Flexible Voltage Correspondence	—	—	—
	Night Quiet Mode (Automatic)	—	—	—		High Ceiling Application	○	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—	—		Chargeless	—	—	—
	Intelligent Eye	—	—	—		Either Side Drain (Right or Left)	—	—	—
	Quick Warming Function	—	—	—		Power-Selection	—	—	—
	Hot-Start Function	—	—	—	Remote Control	5-Rooms Centralized Controller (Option)	—	—	—
	Automatic Defrosting	—	—	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—	—	—
Operation	Automatic Operation	—	—	—		Remote Control Adaptor (Normal Open Contact) (Option)	—	—	—
	Programme Dry Function	○	○	○		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Fan Only	○	○	○	Remote Controller	Wireless	○	—	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—		Wired	○	○	○
	Inverter Powerful Operation	—	—	—					
	Priority-Room Setting	—	—	—					
	Cooling / Heating Mode Lock	—	—	—					
	Home Leave Operation	—	—	—					
	ECONO Mode	—	—	—					
	Indoor Unit On/Off Switch	—	—	—					
	Signal Reception Indicator	—	—	—					
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

1.1.2 R-22 Models

Category	Functions	RMKD112·140·160DVM	Category	Functions	RMKD112·140·160DVM
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	21 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mold Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
				72-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		Night Set Mode	—
	3-D Airflow	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	—
	Comfort Airflow Mode	—		Self-Diagnosis (Digital, LED) Display	○
	3-Step Airflow (H/P Only)	—		Wiring-Error Check	—
Comfort Control	Auto Fan Speed	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Indoor Unit Quiet Operation	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Night Quiet Mode (Automatic)	○		Flexible Voltage Correspondence	—
	Outdoor Unit Quiet Operation (Manual)	○		High Ceiling Application	—
	Intelligent Eye	—		Chargeless	—
	Quick Warming Function	—		Either Side Drain (Right or Left)	—
	Hot-Start Function	—		Power-Selection	—
	Automatic Defrosting	—	Remote Control	5-Rooms Centralized Controller (Option)	—
Operation	Automatic Operation	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
	Fan Only	—		DIII-NET Compatible (Adaptor) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	Remote Controller	Wireless	—
	Inverter Powerful Operation	—		Wired	—
	Priority-Room Setting	—			
	Cooling / Heating Mode Lock	—			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTKD25-35DVM	FTKD50-71FVM	Category	Functions	FTKD25-35DVM	FTKD50-71FVM
Basic Function	Inverter (with Inverter Power Control)	○	○	Health & Clean	Air Purifying Filter	○	—
	Operation Limit for Cooling (°CDB)	—	—		Photocatalytic Deodorizing Filter	○	—
	Operation Limit for Heating (°CWB)	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—
	PAM Control	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	○
Compressor	Oval Scroll Compressor	—	—		Longlife Filter (Option)	—	—
	Swing Compressor	—	—		Mold Proof Air Filter	○	○
	Rotary Compressor	—	—		Wipe-clean Flat Panel	○	○
	Reluctance DC Motor	—	—		Washable Grille	—	—
Comfortable Airflow	Power-Airflow Flap	—	—		Filter Cleaning Indicator	—	—
	Power-Airflow Dual Flaps	○	○		Mold Proof Operation	○	—
	Power-Airflow Diffuser	—	—		Heating Dry Operation	—	—
	Wide-Angle Louvers	○	○		Good-Sleep Cooling Operation	—	—
	Vertical Auto-Swing (Up and Down)	○	○	Timer	24-Hour On/Off Timer	○	○
	Horizontal Auto-Swing (Right and Left)	—	○		72-Hour On/Off Timer	—	—
	3-D Airflow	—	○		Night Set Mode	○	○
	Comfort Airflow Mode	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○
	3-Step Airflow (H/P Only)	—	—		Self-Diagnosis (Digital, LED) Display	○	○
Comfort Control	Auto Fan Speed	○	○		Wiring-Error Check	—	—
	Indoor Unit Quiet Operation	○	○		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—
	Night Quiet Mode (Automatic)	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—		Flexible Voltage Correspondence	○	○
	Intelligent Eye	○	○		High Ceiling Application	—	—
	Quick Warming Function	—	—		Chargeless	—	—
	Hot-Start Function	—	—		Either Side Drain (Right or Left)	○	○
	Automatic Defrosting	—	—		Power-Selection	—	—
Operation	Automatic Operation	—	—	Remote Control	5-Rooms Centralized Controller (Option)	○	○
	Programme Dry Function	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○
	Fan Only	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○
	Inverter Powerful Operation	○	○	Remote Controller	Wireless	○	○
	Priority-Room Setting	—	—		Wired	—	—
	Cooling / Heating Mode Lock	—	—				
	Home Leave Operation	—	○				
	ECONO Mode	○	—				
	Indoor Unit On/Off Switch	○	○				
	Signal Reception Indicator	○	○				
	Temperature Display	—	—				
	Another Room Operation	—	—				

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTK50-71AVM	CDKD25-60CVM	CDKD25/35EAVM	Category	Functions	FTK50-71AVM	CDKD25-60CVM	CDKD25/35EAVM
Basic Function	Inverter (with Inverter Power Control)	○	○	○	Health & Clean	Air Purifying Filter	○	—	—
	Operation Limit for Cooling (°CDB)	—	—	—					
	Operation Limit for Heating (°CWB)	—	—	—		Photocatalytic Deodorizing Filter	○	—	—
	PAM Control	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—	—
Compressor	Oval Scroll Compressor	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—	—
	Swing Compressor	—	—	—		Longlife Filter (Option)	—	—	—
	Rotary Compressor	—	—	—		Mold Proof Air Filter	○	—	—
	Reluctance DC Motor	—	—	—		Wipe-clean Flat Panel	—	—	—
Comfortable Airflow	Power-Airflow Flap	○	—	—		Washable Grille	○	—	—
	Power-Airflow Dual Flaps	—	—	—		Filter Cleaning Indicator	—	—	—
	Power-Airflow Diffuser	○	—	—		Mold Proof Operation	—	—	—
	Wide-Angle Louvers	○	—	—		Heating Dry Operation	—	—	—
	Vertical Auto-Swing (Up and Down)	○	—	—		Good-Sleep Cooling Operation	—	—	—
	Horizontal Auto-Swing (Right and Left)	○	—	—	Timer	24-Hour On/Off Timer	○	○	○
	3-D Airflow	○	—	—		72-Hour On/Off Timer	—	—	—
	Comfort Airflow Mode	—	—	—		Night Set Mode	○	○	○
	3-Step Airflow (H/P Only)	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
Comfort Control	Auto Fan Speed	○	○	○		Self-Diagnosis (Digital, LED) Display	○	○	○
	Indoor Unit Quiet Operation	○	○	○		Wiring Error Check	—	—	—
	Night Quiet Mode (Automatic)	—	—	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
	Outdoor Unit Quiet Operation (Manual)	—	—	—					
	Intelligent Eye	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	—	—
	Quick Warming Function	—	—	—					
	Hot-Start Function	—	—	—		Flexible Voltage Correspondence	○	○	○
	Automatic Defrosting	—	—	—		High Ceiling Application	—	—	—
Operation	Automatic Operation	—	—	—		Chargeless	—	—	—
	Programme Dry Function	○	○	○		Either Side Drain (Right or Left)	○	—	—
	Fan Only	○	○	○		Power Selection	—	—	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—	Remote Control	5-Rooms Centralized Controller (Option)	○	○	○
	Inverter Powerful Operation	○	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○	○
	Priority-Room Setting	—	—	—					
	Cooling / Heating Mode Lock	—	—	—		Remote Control Adaptor (Normal Open Contact) (Option)	○	○	○
	Home Leave Operation	○	○	○					
	ECONO Mode	—	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Indoor Unit On/Off Switch	○	○	○	Remote Controller	Wireless	○	○	○
	Signal Reception Indicator	○	○	○		Wired	—	—	—
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

1.2 Heat Pump

1.2.1 R-410A Models

Category	Functions	RMXS112·140·160DVM	Category	Functions	RMXS112·140·160DVM
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	–5 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	–15 ~ 15.5		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mould Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		72-Hour On/Off Timer	—
	3-D Airflow	—		Night Set Mode	—
	Comfort Airflow Mode	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	—
	3-Step Airflow (H/P Only)	—		Self-Diagnosis (Digital, LED) Display	○
Comfort Control	Auto Fan Speed	—		Wiring-Error Check	—
	Indoor Unit Quiet Operation	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Night Quiet Mode (Automatic)	○	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Outdoor Unit Quiet Operation (Manual)	○		Flexible Voltage Correspondence	—
	Intelligent Eye	—		High Ceiling Application	—
	Quick Warming Function	○		Chargeless	—
	Hot-Start Function	—		Either Side Drain (Right or Left)	—
	Automatic Defrosting	○		Power-Selection	—
Operation	Automatic Operation	—	Remote Control	5-Rooms Centralized Controller (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Fan Only	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—		DIII-NET Compatible (Adaptor) (Option)	—
	Inverter Powerful Operation	—	Remote Controller	Wireless	—
	Priority-Room Setting	—		Wired	—
	Cooling / Heating Mode Lock	○			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	RMXS112·140·160DV1A	Category	Functions	RMXS112·140·160DV1A
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	–5 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	–15 ~ 15.5		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mould Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		72-Hour On/Off Timer	—
	3-D Airflow	—		Night Set Mode	—
	Comfort Airflow Mode	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	—
	3-Step Airflow (H/P Only)	—		Self-Diagnosis (Digital, LED) Display	○
Comfort Control	Auto Fan Speed	—		Wiring-Error Check	—
	Indoor Unit Quiet Operation	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Night Quiet Mode (Automatic)	○	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Outdoor Unit Quiet Operation (Manual)	○		Flexible Voltage Correspondence	—
	Intelligent Eye	—		High Ceiling Application	—
	Quick Warming Function	○		Chargeless	—
	Hot-Start Function	—		Either Side Drain (Right or Left)	—
	Automatic Defrosting	○		Power-Selection	—
Operation	Automatic Operation	—	Remote Control	5-Rooms Centralized Controller (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Fan Only	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—		DIII-NET Compatible (Adaptor) (Option)	—
	Inverter Powerful Operation	—	Remote Controller	Wireless	—
	Priority-Room Setting	—		Wired	—
	Cooling / Heating Mode Lock	○			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	RMXS112·140·160DVLT	Category	Functions	RMXS112·140·160DVLT
Basic Function	Inverter (with Inverter Power Control)	○	Health & Clean	Air Purifying Filter	—
	Operation Limit for Cooling (°CDB)	–5 ~ 46		Photocatalytic Deodorizing Filter	—
	Operation Limit for Heating (°CWB)	–15 ~ 15.5		Air Purifying Filter with Photocatalytic Deodorizing Function	—
	PAM Control	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—
Compressor	Oval Scroll Compressor	○		Longlife Filter (Option)	—
	Swing Compressor	—		Mould Proof Air Filter	—
	Rotary Compressor	—		Wipe-clean Flat Panel	—
	Reluctance DC Motor	○		Washable Grille	—
Comfortable Airflow	Power-Airflow Flap	—		Filter Cleaning Indicator	—
	Power-Airflow Dual Flaps	—		Mold Proof Operation	—
	Power-Airflow Diffuser	—		Heating Dry Operation	—
	Wide-Angle Louvers	—		Good-Sleep Cooling Operation	—
	Vertical Auto-Swing (Up and Down)	—	Timer	24-Hour On/Off Timer	—
	Horizontal Auto-Swing (Right and Left)	—		72-Hour On/Off Timer	—
	3-D Airflow	—		Night Set Mode	—
	Comfort Airflow Mode	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	—
	3-Step Airflow (H/P Only)	—		Self-Diagnosis (Digital, LED) Display	○
Comfort Control	Auto Fan Speed	—		Wiring-Error Check	—
	Indoor Unit Quiet Operation	—		Anticorrosion Treatment of Outdoor Heat Exchanger	○
	Night Quiet Mode (Automatic)	○	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	—
	Outdoor Unit Quiet Operation (Manual)	○		Flexible Voltage Correspondence	—
	Intelligent Eye	—		High Ceiling Application	—
	Quick Warming Function	○		Chargeless	—
	Hot-Start Function	—		Either Side Drain (Right or Left)	—
	Automatic Defrosting	○		Power-Selection	—
Operation	Automatic Operation	—	Remote Control	5-Rooms Centralized Controller (Option)	—
	Programme Dry Function	—		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—
	Fan Only	—		Remote Control Adaptor (Normal Open Contact) (Option)	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—		DIII-NET Compatible (Adaptor) (Option)	—
	Inverter Powerful Operation	—	Remote Controller	Wireless	—
	Priority-Room Setting	—		Wired	—
	Cooling / Heating Mode Lock	○			
	Home Leave Operation	—			
	ECONO Mode	—			
	Indoor Unit On/Off Switch	—			
	Signal Reception Indicator	—			
	Temperature Display	—			
	Another Room Operation	—			

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTXS20-35DVMA	FTXS50-71BVMA8	FTXS20-35DVMT	Category	Functions	FTXS20-35DVMA	FTXS50-71BVMA8	FTXS20-35DVMT
Basic Function	Inverter (with Inverter Power Control)	○	○	○	Health & Clean	Air Purifying Filter	—	—	—
	Operation Limit for Cooling (°CDB)	—	—	—		Photocatalytic Deodorizing Filter	—	—	—
	Operation Limit for Heating (°CWB)	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	○	—
	PAM Control	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	○	—	○
Compressor	Oval Scroll Compressor	—	—	—		Longlife Filter (Option)	—	—	—
	Swing Compressor	—	—	—		Mold Proof Air Filter	○	○	○
	Rotary Compressor	—	—	—		Wipe-clean Flat Panel	○	○	○
	Reluctance DC Motor	—	—	—		Washable Grille	—	—	—
Comfortable Airflow	Power-Airflow Flap	—	—	—		Filter Cleaning Indicator	—	—	—
	Power-Airflow Dual Flaps	○	○	○		Mold Proof Operation	○	—	○
	Power-Airflow Diffuser	—	—	—		Heating Dry Operation	—	—	—
	Wide-Angle Louvers	○	○	○		Good-Sleep Cooling Operation	—	—	—
	Vertical Auto-Swing (Up and Down)	○	○	○	Timer	24-Hour On/Off Timer	○	○	○
	Horizontal Auto-Swing (Right and Left)	—	○	—		72-Hour On/Off Timer	—	—	—
	3-D Airflow	—	○	—		Night Set Mode	○	○	○
	Comfort Airflow Mode	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
	3-Step Airflow (H/P Only)	—	—	—		Self-Diagnosis (Digital, LED) Display	○	○	○
Comfort Control	Auto Fan Speed	○	○	○		Wiring-Error Check	—	—	—
	Indoor Unit Quiet Operation	○	○	○		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
	Night Quiet Mode (Automatic)	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—	—		Flexible Voltage Correspondence	○	○	○
	Intelligent Eye	○	○	○		High Ceiling Application	—	—	—
	Quick Warming Function	—	—	—		Chargeless	—	—	—
	Hot-Start Function	○	○	○		Either Side Drain (Right or left)	○	○	○
	Automatic Defrosting	—	—	—		Power-Selection	—	—	—
Operation	Automatic Operation	○	○	○	Remote Control	5-Rooms Centralized Controller (Option)	○	○	○
	Programme Dry Function	○	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○	○
	Fan Only	○	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Inverter Powerful Operation	○	○	○	Remote Controller	Wireless	○	○	○
	Priority-Room Setting	—	—	—		Wired	—	—	—
	Cooling / Heating Mode Lock	—	—	—					
	Home Leave Operation	—	○	—					
	ECONO Mode	○	—	○					
	Indoor Unit On/Off Switch	○	○	○					
	Signal Reception Indicator	○	○	○					
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FTXS50-71DVMT	CDXS25-60CVMA	CDXS25-60DVMT	Category	Functions	FTXS50-71DVMT	CDXS25-60CVMA	CDXS25-60DVMT
Basic Function	Inverter (with Inverter Power Control)	○	○	○	Health & Clean	Air Purifying Filter	—	—	—
	Operation Limit for Cooling (°CDB)	—	—	—		Photocatalytic Deodorizing Filter	—	—	—
	Operation Limit for Heating (°CWB)	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	○	—	—
	PAM Control	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—	—
Compressor	Oval Scroll Compressor	—	—	—		Longlife Filter	—	—	—
	Swing Compressor	—	—	—		Mold Proof Air Filter	○	○	○
	Rotary Compressor	—	—	—		Wipe-clean Flat Panel	○	—	—
	Reluctance DC Motor	—	—	—		Washable Grille	—	—	—
Comfortable Airflow	Power-Airflow Flap	—	—	—		Filter Cleaning Indicator	—	—	—
	Power-Airflow Dual Flaps	○	—	—		Mold Proof Operation	—	—	—
	Power-Airflow Diffuser	—	—	—		Heating Dry Operation	—	—	—
	Wide-Angle Louvers	○	—	—		Good-Sleep Cooling Operation	—	—	—
	Vertical Auto-Swing (Up and Down)	○	—	—	Timer	24-Hour On/Off Timer	○	○	○
	Horizontal Auto-Swing (Right and Left)	○	—	—		72-Hour On/Off Timer	—	—	—
	3-D Airflow	○	—	—		Night Set Mode	○	○	○
	Comfort Airflow Mode	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
	3-Step Airflow (H/P Only)	—	—	—		Self-Diagnosis (Digital, LED) Display	○	○	○
Comfort Control	Auto Fan Speed	○	○	○		Wiring-Error Check	—	—	—
	Indoor Unit Quiet Operation	○	○	○		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
	Night Quiet Mode (Automatic)	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	—	—
	Outdoor Unit Quiet Operation (Manual)	—	—	—		Flexible Voltage Correspondence	○	○	○
	Intelligent Eye	○	—	—		High Ceiling Application	—	—	—
	Quick Warming Function	—	—	—		Chargeless	—	—	—
	Hot-Start Function	○	○	○		Either Side Drain (Right or Left)	○	—	—
	Automatic Defrosting	—	—	—		Power-Selection	—	—	—
Operation	Automatic Operation	○	○	○	Remote Control	5-Rooms Centralized Controller (Option)	○	○	○
	Programme Dry Function	○	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○	○
	Fan Only	○	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○	○
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Inverter Powerful Operation	○	○	○	Remote Controller	Wireless	○	○	○
	Priority-Room Setting	—	—	—		Wired	—	—	—
	Cooling / Heating Mode Lock	—	—	—					
	Home Leave Operation	○	○	○					
	ECONO Mode	—	—	—					
	Indoor Unit On/Off Switch	○	○	○					
	Signal Reception Indicator	○	○	○					
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FLXS25-60BVMA	FVXS35-50BVMA	FFQ25-60B7V1B	Category	Functions	FLXS25-60BVMA	FVXS35-50BVMA8	FFQ25-60B7V1B
Basic Function	Inverter (with Inverter Power Control)	○	○	○	Health & Clean	Air Purifying Filter	○	○	—
	Operation Limit for Cooling (°CDB)	—	—	—		Photocatalytic Deodorizing Filter	○	○	—
	Operation Limit for Heating (°CWB)	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—	—
	PAM Control	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—	—
Compressor	Oval Scroll Compressor	—	—	—		Longlife Filter (Option)	—	—	○
	Swing Compressor	—	—	—		Mold Proof Air Filter	○	○	○
	Rotary Compressor	—	—	—		Wipe-clean Flat Panel	—	—	—
	Reluctance DC Motor	—	—	—		Washable Grille	—	○	○
Comfortable Airflow	Power-Airflow Flap	○	○	—		Filter Cleaning Indicator	—	—	○
	Power-Airflow Dual Flaps	—	—	—		Mold Proof Operation	—	—	—
	Power-Airflow Diffuser	—	—	—		Heating Dry Operation	—	—	—
	Wide-Angle Louvers	—	○	—		Good-Sleep Cooling Operation	—	—	—
	Vertical Auto-Swing (Up and Down)	○	○	○	Timer	24-Hour On/Off Timer	○	○	—
	Horizontal Auto-Swing (Right and Left)	—	—	—		72-Hour On/Off Timer	—	—	○
	3-D Airflow	—	—	—		Night Set Mode	○	○	—
	Comfort Airflow Mode	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
	3-Step Airflow (H/P Only)	—	○	—		Self-Diagnosis (Digital, LED) Display	○	○	○
Comfort Control	Auto Fan Speed	○	○	—		Wiring-Error Check	—	—	—
	Indoor Unit Quiet Operation	○	○	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
	Night Quiet Mode (Automatic)	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—	—		Flexible Voltage Correspondence	○	○	—
	Intelligent Eye	—	—	—		High Ceiling Application	—	—	—
	Quick Warming Function	—	—	—		Chargeless	—	—	—
	Hot-Start Function	○	○	○		Either Side Drain (Right or Left)	—	○	—
	Automatic Defrosting	—	—	—		Power-Selection	—	—	—
Operation	Automatic Operation	○	○	○	Remote Control	5-Rooms Centralized Controller (Option)	○	○	—
	Programme Dry Function	○	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	○	○	—
	Fan Only	○	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	○	○	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Inverter Powerful Operation	○	○	—	Remote Controller	Wireless	○	○	○
	Priority-Room Setting	—	—	—		Wired	—	—	○
	Cooling / Heating Mode Lock	—	—	—					
	Home Leave Operation	○	○	—					
	ECONO Mode	—	—	—					
	Indoor Unit On/Off Switch	○	○	—					
	Signal Reception Indicator	○	○	—					
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

Category	Functions	FCQ35-71BVE	FBQ60-71BV1(L)	FHQ35-60BUV1B9	Category	Functions	FCQ35-71BVE	FBQ60-71BV1(L)	FHQ35-60BUV1B9
Basic Function	Inverter (with Inverter Power Control)	○	○	○	Health & Clean	Air Purifying Filter	—	—	—
	Operation Limit for Cooling (°CDB)	—	—	—		Photocatalytic Deodorizing Filter	—	—	—
	Operation Limit for Heating (°CWB)	—	—	—		Air Purifying Filter with Photocatalytic Deodorizing Function	—	—	—
	PAM Control	—	—	—		Titanium Apatite Photocatalytic Air-Purifying Filter	—	—	—
Compressor	Oval Scroll Compressor	—	—	—		Longlife Filter (option)	○	○	○
	Swing Compressor	—	—	—		Mold Proof Air Filter	○	○	○
	Rotary Compressor	—	—	—		Wipe-clean Flat Panel	—	—	—
	Reluctance DC Motor	—	—	—		Washable Grille	○	—	○
Comfortable Airflow	Power-Airflow Flap	—	—	—		Filter Cleaning Indicator	○	○	○
	Power-Airflow Dual Flaps	—	—	—		Mold Proof Operation	—	—	—
	Power-Airflow Diffuser	—	—	—		Heating Dry Operation	—	—	—
	Wide-Angle Louvers	—	—	—		Good-Sleep Cooling Operation	—	—	—
	Vertical Auto-Swing (Up and Down)	○	—	○	Timer	24-Hour On/Off Timer	—	—	—
	Horizontal Auto-Swing (Right and Left)	—	—	—		72-Hour On/Off Timer	○	○	○
	3-D Airflow	—	—	—		Night Set Mode	—	—	—
	Comfort Airflow Mode	—	—	—	Worry Free “Reliability & Durability”	Auto-Restart (after Power Failure)	○	○	○
	3-Step Airflow (H/P Only)	—	—	—		Self-Diagnosis (Digital, LED) Display	○	○	○
Comfort Control	Auto Fan Speed	—	—	—		Wiring-Error Check	—	—	—
	Indoor Unit Quiet Operation	—	—	—		Anticorrosion Treatment of Outdoor Heat Exchanger	—	—	—
	Night Quiet Mode (Automatic)	—	—	—	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	○	○	○
	Outdoor Unit Quiet Operation (Manual)	—	—	—		Flexible Voltage Correspondence	—	—	—
	Intelligent Eye	—	—	—		High Ceiling Application	○	○	○
	Quick Warming Function	—	—	—		Chargeless	—	—	—
	Hot-Start Function	○	○	○		Either Side Drain (Right or Left)	—	—	—
	Automatic Defrosting	—	—	—		Power-Selection	—	—	—
Operation	Automatic Operation	○	○	○	Remote Control	5-Rooms Centralized Controller (Option)	—	—	—
	Programme Dry Function	○	○	○		Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	—	—	—
	Fan Only	○	○	○		Remote Control Adaptor (Normal Open Contact) (Option)	—	—	—
Lifestyle Convenience	New Powerful Operation (Non-Inverter)	—	—	—		DIII-NET Compatible (Adaptor) (Option)	○	○	○
	Inverter Powerful Operation	—	—	—	Remote Controller	Wireless	○	—	○
	Priority-Room Setting	—	—	—		Wired	○	○	○
	Cooling / Heating Mode Lock	—	—	—					
	Home Leave Operation	—	—	—					
	ECONO Mode	—	—	—					
	Indoor Unit On/Off Switch	—	—	—					
	Signal Reception Indicator	—	—	—					
	Temperature Display	—	—	—					
	Another Room Operation	—	—	—					

Note: ○ : Holding Functions
— : No Functions

Part 2
Specifications

1. Specifications

1.1 Cooling Only

1.1.1 Outdoor Units

50Hz 220-230V / 60Hz 220-230V

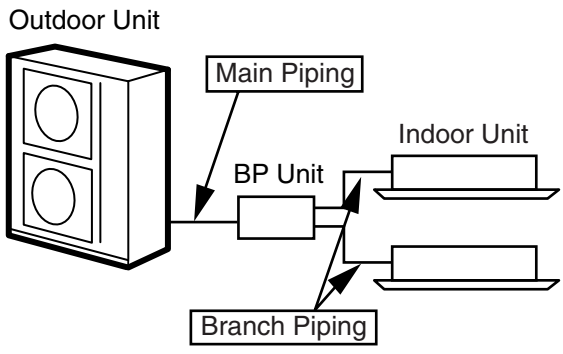
Model			RMKS112DVM	RMKS140DVM	RMKS160DVM
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FCVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE FVC68D		
	Charge	L	1.6		
Refrigerant	Type		R-410A		
	Charge	kg	5.1		
Air Flow Rate (H)	m³/min (cfm)		104 (3671)	106 (3742)	106 (3742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	15.3-14.5-14.3	21.1-20.1-19.8	24.2-23.9-23.6
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound		dBA	52	53	54
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.054 +Total length (m) of liquid piping size at ϕ6.4×0.022
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Cooling	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

50Hz 220-230-240V

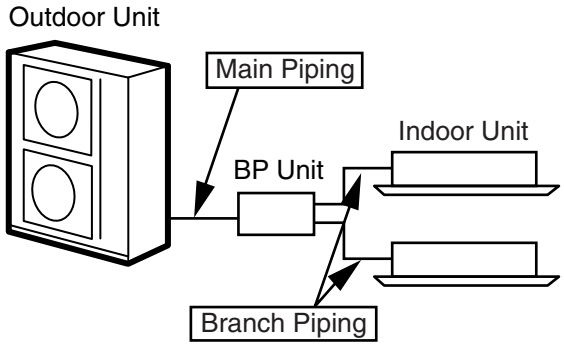
Model			RMKS112DV1A	RMKS140DV1A	RMKS160DV1A
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FCVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE FVC68D		
	Charge	L	1.6		
Refrigerant	Type		R-410A		
	Charge	kg	5.1		
Air Flow Rate (H)	m³/min (cfm)		104 (3671)	106 (3742)	106 (3742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	15.3-14.5-14.3	21.1-20.1-19.8	24.2-23.9-23.6
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound		dBA	52	53	54
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.054 +Total length (m) of liquid piping size at ϕ6.4×0.022
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Cooling	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

50Hz 220-230V / 60Hz 220-230V

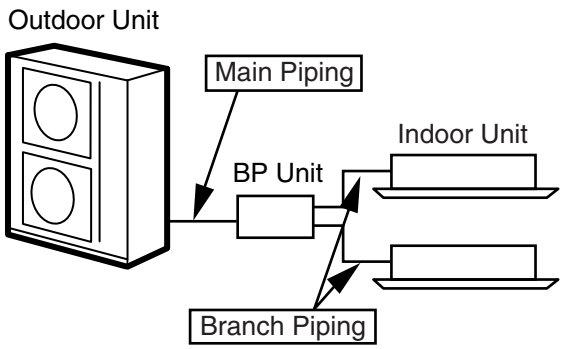
Model			RMKD112DVM	RMKD140DVM	RMKD160DVM
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FBVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE SE56P		
	Charge	L	1.5		
Refrigerant	Type		R-22		
	Charge	kg	5.1		
Air Flow Rate (H)	m³/min (cfm)		104 (3671)	106 (3742)	106 (3742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	15.3-14.5	19.7-18.7	24.2-23.9
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound		dBA	52	53	54
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.050 +Total length (m) of liquid piping size at ϕ6.4×0.025
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Cooling	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

1.1.2 BP Unit

50Hz 220-240V / 60Hz 220-230V

Model			BPMKS967A2			BPMKS967A3
Connectable Indoor Units			1~2 Units			1~3 Units
Casing Color			Paintingless			
Power Consumption		W	10			10
Running Current		A	0.05			0.05
Refrigerant Type			R-410A			
Dimension (H×W×D)		mm	180×294(650)*×350			
Package Dimension (H×W×D)		mm	257×738×427			
Machine Weight		kg	7.5			8
Gross Weight		kg	11			12
Number of Wiring Connections			4 for Interunit Wiring			
Piping Connection (Brazing)	Liquid	mm	Main : ϕ9.5×1 / Branch : ϕ6.4×2			Main : ϕ9.5×1 / Branch : ϕ6.4×3
	Gas	mm	Main : ϕ19.1×1 / Branch : ϕ15.9×2			Main : ϕ19.1×1 / Branch : ϕ15.9×3
	Drain	mm	Drain Processingless			
Heat Insulation			Both Liquid and Gas Pipes			
Max. Piping Length		m	—			
Amount of Additional Charge		g/m	—			
Max. Height Difference		m	—			
Max. Combination		kW	14.2			20.8
Min. Combination		kW	2.5			2.5
Accessories	Installation Manual	pc.	1			
	L Shape Reducer	pc.	For Main	Liquid	1 (For I.D. ϕ6.4)	
				Gas	1 (For I.D. ϕ12.7)	
				Gas	1 (For I.D. ϕ15.9, 19.1)	
			For Branch	Liquid	2 (For I.D. ϕ12.7, 9.5)	3 (For I.D. ϕ12.7, 9.5)
				Gas	1 (For I.D. ϕ9.5)	
	Hanger Metal	pc.	4			
	Screws	pc.	8 (M4×8)			
	Heat Insulation (2pc. is 1 set)		3 Set			4 Set
	Binding Band	pc.	2			
Drawing No.			4D050057B			

Note:

1. BP or Indoor Unit Max. Height - BP or Indoor Unit Min. Height → Max. 15m.
   Set up BP and indoor unit within 15m height difference.
2. The piping connection must be cut so as to suit the piping sizes of the indoor unit which will be connected.
   The same sizes should be used for the piping on the outdoor unit.
3. ( )* : including auxiliary piping length

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 230V

Model			**BPMKS967A2B**			**BPMKS967A3B**
Connectable Indoor Units			1~2 Units			1~3 Units
Casing Color			Paintingless			
Power Consumption		W	10			10
Running Current		A	0.05			0.05
Refrigerant Type			R-410A			
Dimension (H×W×D)		mm	180×294(650)*×350			
Package Dimension (H×W×D)		mm	257×738×427			
Machine Weight		kg	7.5			8
Gross Weight		kg	11			12
Number of Wiring Connections			4 for Interunit Wiring			
Piping Connection (Brazing)	Liquid	mm	Main : ϕ9.5×1 / Branch : ϕ6.4×2			Main : ϕ9.5×1 / Branch : ϕ6.4×3
	Gas	mm	Main : ϕ19.1×1 / Branch : ϕ15.9×2			Main : ϕ19.1×1 / Branch : ϕ15.9×3
	Drain	mm	Drain Processingless			
Heat Insulation			Both Liquid and Gas Pipes			
Max. Piping Length		m	—			
Amount of Additional Charge		g/m	—			
Max. Height Difference		m	—			
Max. Combination		kW	14.2			20.8
Min. Combination		kW	2.0			2.0
Accessories	Installation Manual	pc.	1			
	L Shape Reducer	pc.	For Main	Liquid	1 (For I.D. ϕ6.4)	
				Gas	1 (For I.D. ϕ12.7)	
				Gas	1 (For I.D. ϕ15.9, 19.1)	
			For Branch	Liquid	2 (For I.D. ϕ12.7, 9.5)	3 (For I.D. ϕ12.7, 9.5)
				Gas	1 (For I.D. ϕ9.5)	
	Hanger Metal	pc.	4			
	Screws	pc.	8 (M4×8)			
	Heat Insulation (2pc. is 1 set)		3 Set			4 Set
	Binding Band	pc.	2			
Drawing No.			4D050058B			

Note:

1. BP or Indoor Unit Max. Height - BP or Indoor Unit Min. Height → Max. 15m.
   Set up BP and indoor unit within 15m height difference.
2. The piping connection must be cut so as to suit the piping sizes of the indoor unit which will be connected.
   The same sizes should be used for the piping on the outdoor unit.
3. ( )* : including auxiliary piping length

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230V / 60Hz 220-230V

Model			BPMKD967A2			BPMKD967A3
Connectable Indoor Units			1~2 Units			1~3 Units
Casing Color			Paintingless			
Power Consumption		W	10			10
Running Current		A	0.05			0.05
Refrigerant Type			R22			
Dimension (H×W×D)		mm	180×294(650)*×350			
Package Dimension (H×W×D)		mm	257×738×427			
Machine Weight		kg	7.5			8
Gross Weight		kg	11			12
Number of Wiring Connections			3 for Power Supply (Including Earth Wiring), 2 for Interunit Wiring (Outdoor Unit-BP, BP-BP) 4 for Interunit Wiring (BP-Indoor Unit)			
Piping Connection (Brazing)	Liquid	mm	Main : ϕ9.5×1 / Branch : ϕ6.4×2			Main : ϕ9.5×1 / Branch : ϕ6.4×3
	Gas	mm	Main : ϕ19.1×1 / Branch : ϕ15.9×2			Main : ϕ19.1×1 / Branch : ϕ15.9×3
	Drain	mm	Drain Processingless			
Heat Insulation			Both Liquid and Gas Pipes			
Max. Piping Length		m	—			
Amount of Additional Charge		g/m	—			
Max. Height Difference		m	—			
Max. Combination		kW	14.2			20.8
Min. Combination		kW	2.5			2.5
Accessories	Installation Manual	pc.	1			
	L Shape Reducer	pc.	For Main	Liquid	1 (O.D. ϕ9.5 to I.D. ϕ6.4)	
				Gas	1 (O.D. ϕ15.9 to I.D. ϕ12.7)	
				Gas	1 (O.D. ϕ19.1 to I.D. ϕ15.9, 19.1)	
			For Branch	Gas	2 (O.D. ϕ15.9 to I.D. ϕ12.7, 9.5)	3 (O.D. ϕ15.9 to I.D. ϕ12.7, 9.5)
				Liquid	1 (O.D. ϕ6.4 to I.D. ϕ9.5)	
	Hanger Metal	pc.	4			
	Screws	pc.	8 (M4×8)			
	Heat Insulation (2pc. is 1 set)		3 Set			4 Set
	Binding Band	pc.	2			
Drawing No.			4D050451A			

Note:

1. BP or Indoor Unit Max. Height - BP or Indoor Unit Min. Height → Max. 15m.
   Set up BP and indoor unit within 15m height difference.
2. The piping connection must be cut so as to suit the piping sizes of the indoor unit which will be connected.
   The same sizes should be used for the piping on the outdoor unit.
3. ( )* : including auxiliary piping length

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

1.1.3 Indoor Units

Wall Mounted Type

50Hz 220-230V / 60Hz 220-230V

Model				FTKS25DVM	FTKS35DVM
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	8.7 (307)	8.9 (314)
			M	6.7 (237)	6.9 (242)
			L	4.7 (166)	4.8 (169)
			SL	3.9 (138)	4.0 (141)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	40	40
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.17-0.16 / 0.17-0.16	0.19-0.18 / 0.19-0.18
Power Consumption (Rated)			W	35-35 / 35-35	40-40 / 40-40
Power Factor			%	93.6-95.1 / 93.6-95.1	95.7-96.6 / 95.7-96.6
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	283×800×195	283×800×195
Packaged Dimensions (H×W×D)			mm	265×855×340	265×855×340
Weight			kg	9	9
Gross Weight			kg	12	12
Operation Sound	H/L/SL		dBA	37/25/22	39/26/23
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ 9.5
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D049321	3D049322

50Hz 230V

Model				FTKS50BVMB	FTKS60BVMB
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	11.4 (402)	16.2 (572)
			M	9.7 (342)	13.6 (480)
			L	8.0 (282)	11.4 (402)
			SL	7.1 (251)	10.2 (360)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	40	43
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.18	0.18
Power Consumption (Rated)			W	40	40
Power Factor			%	96.6	96.6
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	290×795×238	290×1,050×238
Packaged Dimensions (H×W×D)			mm	280×840×338	337×1,147×366
Weight			kg	9	12
Gross Weight			kg	13	17
Operation Sound	H/M/L/SL		dBA	44/40/35/32	45/41/36/33
Sound Power	H		dBA	63	63
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ12.7
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D040781A	3D040782A

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 230V

Model				FTKS71BVMB	FTK50AZVMB
Rated Capacity				7.1kW Class	5.0kW Class
Front Panel Color				White	Almond White
Air Flow Rates		m³/min (cfm)	H	16.7 (590)	12.3 (434)
			M	14.2 (501)	10.7 (378)
			L	11.6 (409)	9.1 (321)
			SL	10.6 (374)	8.0 (282)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	43	54
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removal-Washable-Mildew Proof
Running Current (Rated)			A	0.20	0.18
Power Consumption (Rated)			W	45	40
Power Factor			%	96.4	96.6
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	290×1,050×238	298×1,050×190
Packaged Dimensions (H×W×D)			mm	337×1,147×366	289×1,183×367
Weight			kg	12	12
Gross Weight			kg	17	17
Operation Sound	H/M/L/SL		dBA	46/42/37/34	44/40/35/32
Sound Power	H		dBA	63	60
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ15.9	ϕ12.7
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D040783A	3D034991

Model				FTK60AZVMB	FTK71AZVMB
Rated Capacity				6.0kW Class	7.1kW Class
Front Panel Color				Almond White	Almond White
Air Flow Rates		m³/min (cfm)	H	13.0 (459)	13.7 (484)
			M	11.5 (406)	11.8 (417)
			L	9.9 (349)	9.9 (349)
			SL	8.8 (311)	8.8 (311)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	54	54
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removal-Washable-Mildew Proof	Removal-Washable-Mildew Proof
Running Current (Rated)			A	0.20	0.22
Power Consumption (Rated)			W	45	50
Power Factor			%	97.8	98.8
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	298×1,050×190	298×1,050×190
Packaged Dimensions (H×W×D)			mm	289×1,183×367	289×1,183×367
Weight			kg	12	12
Gross Weight			kg	17	17
Operation Sound	H/M/L/SL		dBA	45/41/37/34	46/42/37/34
Sound Power	H		dBA	61	62
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ15.9
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D034992	3D034993

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230-240V

Model				FTKS20DVMA	FTKS25DVMA
Rated Capacity				2.0kW Class	2.5kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	8.7 (307)	8.7 (307)
			M	6.7 (237)	6.7 (237)
			L	4.7 (166)	4.7 (166)
			SL	3.9 (138)	3.9 (138)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	40	40
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.17-0.16-0.15	0.17-0.16-0.15
Power Consumption (Rated)			W	35-35-35	35-35-35
Power Factor			%	93.6-95.1-97.2	93.6-95.1-97.2
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	283×800×195	283×800×195
Packaged Dimensions (H×W×D)			mm	265×855×340	265×855×340
Weight			kg	9	9
Gross Weight			kg	12	12
Operation Sound	H/L/SL		dBA	37/25/22	37/25/22
Sound Power	H		dBA	—	—
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ 9.5
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D049754	3D049288

Model				FTKS35DVMA
Rated Capacity				3.5kW Class
Front Panel Color				White
Air Flow Rates		m³/min (cfm)	H	8.9 (314)
			M	6.9 (244)
			L	4.8 (169)
			SL	4.0 (141)
Fan	Type			Cross Flow Fan
	Motor Output		W	40
	Speed		Steps	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.19-0.18-0.17
Power Consumption (Rated)			W	40-40-40
Power Factor			%	95.7-96.6-98.0
Temperature Control				Microcomputer Control
Dimensions (H×W×D)			mm	238×800×195
Packaged Dimensions (H×W×D)			mm	265×855×340
Weight			kg	9
Gross Weight			kg	12
Operation Sound	H/L/SL		dBA	38/26/23
Sound Power	H		dBA	—
Heat Insulation				Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4
		Gas	mm	ϕ 9.5
		Drain	mm	ϕ18.0
Drawing No.				3D049289

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 240V

Model				FTKS50BVMA8	FTKS60BVMA8
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	11.4 (402)	16.2 (573)
			M	9.8 (346)	13.9 (490)
			L	8.7 (306)	11.9 (420)
			SL	7.7 (271)	10.7 (378)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	40	43
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.17	0.19
Power Consumption (Rated)			W	40	45
Power Factor			%	98	98.7
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	290×795×238	290×1,050×238
Packaged Dimensions (H×W×D)			mm	280×840×338	337×1,147×366
Weight			kg	9	12
Gross Weight			kg	13	17
Operation Sound	H/M/L/SL		dBA	44/40/35/32	45/41/36/33
Sound Power	H		dBA	63	63
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ12.7
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D047569	3D047570

Model				FTKS71BVMA8
Rated Capacity				7.1kW Class
Front Panel Color				White
Air Flow Rates		m³/min (cfm)	H	16.8 (593)
			M	14.2 (501)
			L	11.9 (420)
			SL	11.2 (394)
Fan	Type			Cross Flow Fan
	Motor Output		W	43
	Speed		Steps	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.21
Power Consumption (Rated)			W	50
Power Factor			%	99.2
Temperature Control				Microcomputer Control
Dimensions (H×W×D)			mm	290×1,050×238
Packaged Dimensions (H×W×D)			mm	337×1,147×366
Weight			kg	12
Gross Weight			kg	17
Operation Sound	H/M/L/SL		dBA	46/42/37/34
Sound Power	H		dBA	63
Heat Insulation				Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4
		Gas	mm	ϕ15.9
		Drain	mm	ϕ18.0
Drawing No.				3D047571

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230V / 60Hz 220-230V

Model				**FTKD25DVM**	**FTKD35DVM**
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	8.9 (314)	9.0 (318)
			M	7.3 (256)	7.4 (259)
			L	5.6 (198)	5.7 (201)
			SL	4.8 (169)	4.9 (173)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	18	18
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.17-0.16/0.19-0.18	0.19-0.18/0.21-0.20
Power Consumption (Rated)			W	35-35/40-40	40-40/45-45
Power Factor			%	93.6-95.1/95.7-96.6	96.6
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	283×800×195	283×800×195
Packaged Dimensions (H×W×D)			mm	265×855×340	265×855×340
Weight			kg	9	9
Gross Weight			kg	12	12
Operation Sound	H/L/SL		dBA	37/28/25	39/29/26
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ12.7
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D049308A	3D049309A

Model				**FTKD50FVM**	**FTKD60FVM**
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				White	White
Air Flow Rates		m³/min (cfm)	H	16.8 (593)	17.5 (618)
			M	14.0 (494)	14.6 (516)
			L	11.8 (417)	12.2 (431)
			SL	10.4 (367)	10.8 (381)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	43	43
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.19-0.18-0.17/0.19-0.18	0.21-0.20-0.19/0.21-0.20
Power Consumption (Rated)			W	40	45
Power Factor			%	95.7-96.6-98.0/95.7-96.6	97.4-97.8-98.7/97.4-97.8
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	290×1,050×238	290×1,050×238
Packaged Dimensions (H×W×D)			mm	337×1,147×366	337×1,147×366
Weight			kg	12	12
Gross Weight			kg	17	17
Operation Sound	H/M/L/SL		dBA	44/40/35/32	45/41/36/33
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ15.9
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D056204	3D056205

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230-240V / 60Hz 220-230V

Model				**FTKD71FVM**
Rated Capacity				7.1kW Class
Front Panel Color				White
Air Flow Rates		m³/min (cfm)	H	18.3 (646)
			M	15.3 (540)
			L	12.7 (448)
			SL	11.3 (399)
Fan	Type			Cross Flow Fan
	Motor Output		W	43
	Speed		Steps	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.23-0.22-0.21/0.23-0.22
Power Consumption (Rated)			W	50
Power Factor			%	98.8-98.8-99.2/98.8-98.8
Temperature Control				Microcomputer Control
Dimensions (H×W×D)			mm	290×1,050×238
Packaged Dimensions (H×W×D)			mm	337×1,147×366
Weight			kg	12
Gross Weight			kg	17
Operation Sound	H/M/L/SL		dBA	46/42/37/34
Heat Insulation				Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 9.5
		Gas	mm	ϕ15.9
		Drain	mm	ϕ18.0
Drawing No.				3D056206

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 230V

Model				**FTK50AVM**
Rated Capacity				5.0kW class
Front Panel Color				Almond White
Air Flow Rates		m³/min (cfm)	H	12.9 (455)
			M	11.4 (402)
			L	9.9 (349)
			SL	8.3 (293)
Fan	Type			Cross Flow Fan
	Motor Output		W	54
	Speed		Steps	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.18
Power Consumption (Rated)			W	40
Power Factor			%	96.6
Temperature Control				Microcomputer Control
Dimensions (H×W×D)			mm	298×1,050×190
Packaged Dimensions (H×W×D)			mm	289×1,183×367
Weight			kg	12
Gross Weight			kg	17
Operation Sound	H/M/L/SL		dBA	44/40/35/32
Heat Insulation				Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4
		Gas	mm	ϕ 12.7
		Drain	mm	ϕ18.0
Drawing No.				3D036711

Model				**FTK60AVM**	**FTK71AVM**
Rated Capacity				6.0kW Class	7.1kW Class
Front Panel Color				Almond White	White
Air Flow Rates		m³/min (cfm)	H	13.6 (480)	14.3 (505)
			M	12.0 (424)	12.3 (434)
			L	10.4 (367)	10.4 (367)
			SL	9.3 (328)	9.3 (328)
Fan	Type			Cross Flow Fan	Cross Flow Fan
	Motor Output		W	54	54
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.20	0.22
Power Consumption (Rated)			W	45	50
Power Factor			%	97.8	98.8
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	298×1,050×190	298×1,050×190
Packaged Dimensions (H×W×D)			mm	289×1,183×367	289×1,183×367
Weight			kg	12	12
Gross Weight			kg	17	17
Operation Sound	H/M/L/SL		dBA	45/41/37/34	46/42/37/34
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 9.5
		Gas	mm	ϕ15.9	ϕ15.9
		Drain	mm	ϕ18.0	ϕ18.0
Drawing No.				3D036712	3D036713

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Duct Connected Type

50Hz 230V

Model				FDKS25CVMB	FDKS35CVMB
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	9.5 (335)	10.0 (353)
			M	8.8 (311)	9.3 (328)
			L	8.0 (282)	8.5 (300)
			SL	6.7 (237)	7.0 (247)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	62	62
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.47	0.47
Power Consumption (Rated)			W	100	100
Power Factor			%	92.5	92.5
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	200×900×620	200×900×620
Packaged Dimensions (H×W×D)			mm	266×1,106×751	266×1,106×751
Weight			kg	25	25
Gross Weight			kg	31	31
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29
External Static Pressure			Pa	40	40
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ 9.5
		Drain	mm	VP20 (O.D. ϕ26 / I.D. ϕ20)	VP20 (O.D. ϕ26 / I.D. ϕ20)
Drawing No.				3D048947C	3D048948C

Model				CDKS50CVMB	CDKS60CVMB
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	12.0 (424)	16.0 (565)
			M	11.0 (388)	14.8 (523)
			L	10.0 (353)	13.5 (477)
			SL	8.4 (297)	11.2 (395)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	130	130
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.64	0.74
Power Consumption (Rated)			W	140	160
Power Factor			%	95.1	94.0
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	200×900×620	200×1,100×620
Packaged Dimensions (H×W×D)			mm	266×1,106×751	266×1,306×751
Weight			kg	27	30
Gross Weight			kg	34	37
Operation Sound	H/M/L/SL		dBA	37/35/33/31	38/36/34/32
External Static Pressure			Pa	40	40
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ12.7
		Drain	mm	VP20 (O.D. ϕ26 / I.D. ϕ20)	VP20 (O.D. ϕ26 / I.D. ϕ20)
Drawing No.				3D046067A	3D046068A

Note: The operating sound is based on the rear side suction inlet and the external static pressure 40 Pa.
Operating sound for under side suction inlet : [operating sound for rear side suction inlet] +5 dB.
However, when installation to which the external static pressure becomes low is carried out,
5 dB or more may go up.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 230V

Model				**CDKS25CVMA**	**CDKS35CVMA**
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	9.5 (335)	10.0 (353)
			M	8.8 (311)	9.3 (328)
			L	8.0 (282)	8.5 (300)
			SL	6.7 (237)	7.0 (247)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	62	62
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.47	0.47
Power Consumption (Rated)			W	100	100
Power Factor			%	92.5	92.5
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (HxWxD)			mm	200×900×620	200×900×620
Packaged Dimensions (HxWxD)			mm	266×1,106×751	266×1,106×751
Weight			kg	25	25
Gross Weight			kg	31	31
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29
Moisture Removal			L/h	1.2	1.9
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ 9.5
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)	VP20 (O.D ϕ 26 / I.D ϕ 20)
Drawing No.				3D049723	3D049724

Model				**CDKS50CVMA**	**CDKS60CVMA**
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	12.0 (424)	16.0 (565)
			M	11.0 (388)	14.8 (523)
			L	10.0 (353)	13.5 (477)
			SL	8.4 (297)	11.2 (395)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	130	130
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.64	0.74
Power Consumption (Rated)			W	140	160
Power Factor			%	95.1	94.0
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (HxWxD)			mm	200×900×620	200×1,100×620
Packaged Dimensions (HxWxD)			mm	266×1,106×751	266×1,306×751
Weight			kg	27	30
Gross Weight			kg	34	37
Operation Sound	H/M/L/SL		dBA	37/35/33/31	38/36/34/32
Moisture Removal			L/h	2.9	3.9
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ12.7
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)	VP20 (O.D ϕ 26 / I.D ϕ 20)
Drawing No.				3D049725	3D049726

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230V / 60Hz 220-230V

Model				CDKD25CVM	CDKD35CVM
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	9.5 (335)	10.0 (353)
			M	8.8 (311)	9.3 (328)
			L	8.0 (282)	8.5 (300)
			SL	6.7 (237)	7.0 (247)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	62	62
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Running Current (Rated)			A	0.47-0.47/0.52-0.53	0.47-0.48/0.53-0.54
Power Consumption (Rated)			W	97-100/108-113	97-100/110-113
Power Factor			%	93.8-92.5/94.4-92.7	93.8-90.6/94.3-91.0
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	200×900×620	200×900×620
Packaged Dimensions (H×W×D)			mm	266×1,106×751	266×1,106×751
Weight			kg	25	25
Gross Weight			kg	31	31
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29
External Static Pressure			Pa	40	40
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ12.7
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D046077A	3D046078A

Model				CDKD50CVM	CDKD60CVM
Rated Capacity				5.0kW Class	6.0kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	12.0 (424)	16.0 (565)
			M	11.0 (388)	14.8 (523)
			L	10.0 (353)	13.5 (477)
			SL	8.4 (297)	11.2 (395)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	130	130
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Running Current (Rated)			A	0.65-0.66/0.79-0.80	0.74-0.75/0.89-0.90
Power Consumption (Rated)			W	133-140/164-167	152-160/185-187
Power Factor			%	93.0-92.2/94.4-90.8	93.4-92.8/94.5-90.3
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	200×900×620	200×1,100×620
Packaged Dimensions (H×W×D)			mm	266×1,106×751	266×1,306×751
Weight			kg	27	30
Gross Weight			kg	33	36
Operation Sound	H/M/L/SL		dBA	37/35/33/31	38/36/34/32
External Static Pressure			Pa	40	40
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ15.9
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D046079A	3D046080A

Note: The operating sound is based on the rear side suction inlet and the external static pressure 40 Pa.
Operating sound for under side suction inlet : [operating sound for rear side suction inlet] +5 dB.
However, when installation to which the external static pressure becomes low is carried out,
5 dB or more may go up.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230-240V / 60Hz 220-230V

Model				CDKD25EAVM	CDKD35EAVM
Rated Capacity				2.5kW Class	3.5kW Class
Front Panel Color				—	—
Air Flow Rates		m³/min (cfm)	H	8.7 (307)	8.7 (307)
			M	8.0 (282)	8.0 (282)
			L	7.3 (258)	7.3 (258)
			SL	6.2 (219)	6.2 (219)
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	62	62
	Speed		Steps	5 Steps, Quiet, Auto	5 Steps, Quiet, Auto
Running Current (Rated)			A	0.47-0.48-0.49/0.52-0.53	0.47-0.48-0.49/0.52-0.53
Power Consumption (Rated)			W	70-71-72/72-73	70-71-72/72-73
Power Factor			%	67.7-64.3-61.2/62.9-59.9	67.7-64.3-61.2/62.9-59.9
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	200×700×620	200×700×620
Packaged Dimensions (H×W×D)			mm	274×906×751	274×906×751
Weight			kg	21	21
Gross Weight			kg	29	29
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29
External Static Pressure			Pa	35	35
Moisture Removal			L/h	1.2	1.9
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ12.7
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D052111	3D052112

Note: 1. The operating sound is based on the rear side suction inlet and the external static pressure 35 Pa. Operating sound for under side suction inlet : [operating sound for rear side suction inlet] +6 dB. However, when installation to which the external static pressure becomes low is carried out, 6 dB or more may go up.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Ceiling Mounted Cassette Type

50Hz 230V

Model				FFQ25B7V1B	FFQ35B7V1B
Rated Capacity				2.5kW Class	3.5kW Class
Decoration Panel	Color			White	White
	Dimensions (H×W×D)			55×700×700	55×700×700
Air Flow Rates		m³/min (cfm)	H	9.0 (318)	10.0 (353)
			M	—	—
			L	6.5 (230)	6.5 (230)
			SL	—	—
Fan	Type			Turbo Fan	Turbo Fan
	Motor Output		W	55	55
	Speed		Steps	2 Steps	2 Steps
Air Direction Control				Horizontal, Downward	Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.37	0.40
Power Consumption (Rated)			W	73	84
Power Factor			%	85.8	91.3
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D) ★			mm	260 (286)×575×575	260 (286)×575×575
Packaged Dimensions (H×W×D)			mm	370×687×674	370×687×674
Weight			kg	17.5	17.5
Gross Weight			kg	21	21
Operation Sound	H/L		dBA	29.5/24.5	32.0/25.0
Sound Power	H		dBA	46.5	49.0
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ 9.5	ϕ 9.5
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D040444A	3D040442A

50Hz 230-240V

Model				FFQ50B7V1B	FFQ60B7V1B
Rated Capacity				5.0kW Class	6.0kW Class
Decoration Panel	Color			White	White
	Dimensions (H×W×D)			55×700×700	55×700×700
Air Flow Rates		m³/min (cfm)	H	12.0 (424)-13.0 (459)	15.0 (530)-15.5 (547)
			M	—	—
			L	8.0 (283)	10.0 (353)-11.0 (388)
			SL	—	—
Fan	Type			Turbo Fan	Turbo Fan
	Motor Output		W	55	55
	Speed		Steps	2 Steps	2 Steps
Air Direction Control				Horizontal, Downward	Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Rated)			A	0.49-0.51	0.61-0.63
Power Consumption (Rated)			W	97-117	120-140
Power Factor			%	86.1-95.6	85.5-92.6
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D) ★			mm	260 (286)×575×575	260 (286)×575×575
Packaged Dimensions (H×W×D)			mm	370×687×674	370×687×674
Weight			kg	17.5	17.5
Gross Weight			kg	21	21
Operation Sound	H/L		dBA	36-38/27-28	41-42/32-34
Sound Power	H		dBA	53-55	58-59
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4	ϕ 6.4
		Gas	mm	ϕ12.7	ϕ12.7
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D040437, 3D040439	3D040431, 3D040434

★ ( ) : dimension including control box

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230V / 60Hz 220V

Model				**FCQ35BVE**	**FCQ50BVE**
Rated Capacity				3.5kW Class	5.0kW Class
Decoration Panel	Color			White	White
	Dimensions (H×W×D)			40×950×950	40×950×950
Air Flow Rates		m³/min (cfm)	H	14.0 (494)	15.0 (530)
			M	—	—
			L	10.0 (353)	11.0 (388.3)
			SL	—	—
Fan	Type			Turbo Fan	Turbo Fan
	Motor Output		W	45	45
	Speed		Steps	2 Steps	2 Steps
Air Direction Control				Horizontal, Downward	Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Max. Rated)			A	0.8	0.8
Power Consumption (Rated)			W	140/161	140/161
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	230×840×840	230×840×840
Packaged Dimensions (H×W×D)			mm	305×930×920	305×930×920
Weight			kg	24	24
Gross Weight			kg	32	32
Operation Sound	H/L		dBA	33/29	33/29
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)	ϕ 6.4 (Flare)
		Gas	mm	ϕ 9.5 (Flare)	ϕ 12.7 (Flare)
		Drain	mm	VP20 (O.D.ϕ 32 / I.D.ϕ 25)	VP20 (O.D.ϕ 32 / I.D.ϕ 25)
Drawing No.				3D049093A	3D049093A

Model				**FCQ60BVE**	**FCQ71BVE**
Rated Capacity				6.0kW Class	7.1kW Class
Decoration Panel	Color			White	White
	Dimensions (H×W×D)			40×950×950	40×950×950
Air Flow Rates		m³/min (cfm)	H	19.0 (670.7)	19.0 (670.7)
			M	—	—
			L	14.0 (494.2)	14.0 (494.2)
			SL	—	—
Fan	Type			Turbo Fan	Turbo Fan
	Motor Output		W	45	45
	Speed		Steps	2 Steps	2 Steps
Air Direction Control				Horizontal, Downward	Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Current (Max. Rated)			A	0.8	0.8
Power Consumption (Rated)			W	161/181	161/181
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	230×840×840	230×840×840
Packaged Dimensions (H×W×D)			mm	305×930×920	305×930×920
Weight			kg	24	24
Gross Weight			kg	32	32
Operation Sound	H/L		dBA	35/30	35/30
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)	ϕ 9.5 (Flare)
		Gas	mm	ϕ12.7 (Flare)	ϕ15.9 (Flare)
		Drain	mm	VP20 (O.D.ϕ 32 / I.D.ϕ 25)	VP20 (O.D.ϕ 32 / I.D.ϕ 25)
Drawing No.				3D049093A	3D049093A

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Ceiling Mounted Built-in Type

50Hz 220-230-240V

Model				FBQ60BV1	FBQ71BV1
Rated Capacity				6.0kW Class	7.1kW Class
Decoration Panel	Color			White	White
	Dimensions (H×W×D)			55×1,100×500	55×1,100×500
Air Flow Rates		m³/min (cfm)	H	17.0 (600)	19.0 (670)
			M	—	—
			L	13.0 (459)	14.0 (494)
			SL	—	—
Fan	Type			Sirocco Fan	Sirocco Fan
	Motor Output		W	110	12.5
	Speed		Steps	2 steps	2 steps
Air Filter				Resin Net (with mold resistant)	Resin Net (with mold resistant)
Running Current (Max. Rated)			A	0.9	1.1
Power Consumption (Rated)			W	165	184
Temperature Control				Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	300×1,000×800	300×1,000×800
Packaged Dimensions (H×W×D)			mm	400×1171×991	400×1171×991
Weight			kg	41	41
Gross Weight			kg	50	50
Operation Sound	H/L		dBA	41/35	41/35
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)	ϕ 9.5 (Flare)
		Gas	mm	ϕ 12.7 (Flare)	ϕ 15.9 (Flare)
		Drain	mm	VP25 (O.D.ϕ 32 / I.D.ϕ 25)	VP25 (O.D.ϕ 32 / I.D.ϕ 25)
Drawing No.				3D049097	3D049097

Ceiling Suspended Type

Model				FHQ35BUV1B9	FHQ50BUV1B9	FHQ60BUV1B9
Rated Capacity				3.5kW Class	5.0kW Class	6.0kW Class
Decoration Panel	Color			White	White	White
	Dimensions (H×W×D)			—	—	—
Air Flow Rates		m³/min (cfm)	H	13.0 (458)	13.0 (458)	17.0 (600)
			M	—	—	—
			L	10.0 (353)	10.0 (353)	13.0 (459)
			SL	—	—	—
Fan	Type			Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output		W	62	62	62
	Speed		Steps	2 Steps	2 Steps	2 Steps
Air Direction Control				Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Temperature Control				Microcomputer Control	Microcomputer Control	Microcomputer Control
Dimensions (H×W×D)			mm	195×960×680	195×960×680	195×1,160×680
Packaged Dimensions (H×W×D)			mm	279×1,046×818	279×1,046×818	279×1,246×818
Weight			kg	24	25	27
Gross Weight			kg	31	32	35
Operation Sound	H/L		dBA	37/32	38/33	39/33
Sound Power	H/L		dBA	53/48	54/49	55/49
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)	ϕ 6.4 (Flare)	ϕ 6.4 (Flare)
		Gas	mm	ϕ 9.5 (Flare)	ϕ12.7 (Flare)	ϕ12.7 (Flare)
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)	VP20 (O.D.ϕ 26 / I.D.ϕ 20)
Drawing No.				3D037992E	3D037992E	3D037992E

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

1.2 Heat Pump

1.2.1 Outdoor Units

50Hz 220-230V / 60Hz 220-230V

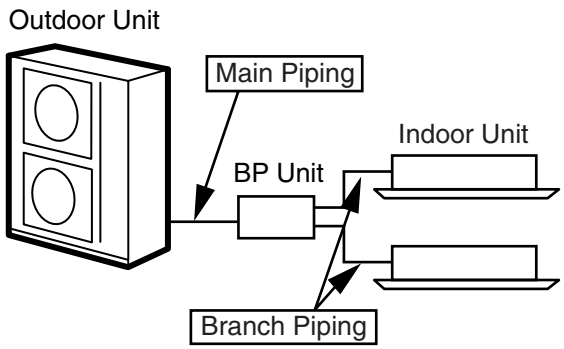
Model			RMXS112DVM	RMXS140DVM	RMXS160DVM
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Heating Capacity		kW (kcal/h)	12.5 (10,750)	16.0 (13,760)	17.5 (15,050)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FCVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE FVC68D		
	Charge	L	1.6		
Refrigerant	Type		R-410A		
	Charge	kg	5.1		
Air Flow Rate (H)	Cooling	m^3/min (cfm)	104 (3,671)	106 (3,742)	106 (3,742)
	Heating	m^3/min (cfm)	102 (3,600)	106 (3,742)	106 (3,742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	18.5-17.6-17.3	23.7-22.6-22.2	25.2-24.9-24.6
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound	Cooling	dBA	52	53	54
	Heating	dBA	54	55	56
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.054 + Total length (m) of liquid piping size at ϕ6.4×0.022
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m^3/min×35.3

Cooling	Heating	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Indoor ; 20°CDB Outdoor ; 7°CDB / 6°CWB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

50Hz 220-230-240V

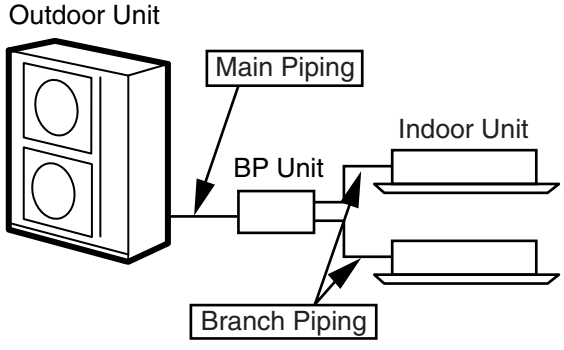
Model			RMXS112DV1A	RMXS140DV1A	RMXS160DV1A
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Heating Capacity		kW (kcal/h)	12.5 (10,750)	16.0 (13,760)	17.5 (15,050)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FCVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE FVC68D		
	Charge	L	1.6		
Refrigerant	Type		R-410A		
	Charge	kg	5.1		
Air Flow Rate (H)	Cooling	m^3/min (cfm)	104 (3,671)	106 (3,742)	106 (3,742)
	Heating	m^3/min (cfm)	102 (3,600)	106 (3,742)	106 (3,742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	18.5-17.6-17.3	23.7-22.6-22.2	25.2-24.9-24.6
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound	Cooling	dBA	52	53	54
	Heating	dBA	54	55	56
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.054 + Total length (m) of liquid piping size at ϕ6.4×0.022
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m^3/min×35.3

Cooling	Heating	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Indoor ; 20°CDB Outdoor ; 7°CDB / 6°CWB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

60Hz 220V

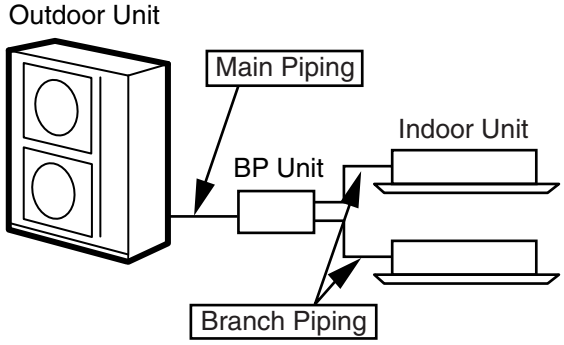
Model			RMXS112DVLT	RMXS140DVLT	RMXS160DVLT
			4HP	5HP	6HP
Cooling Capacity		kW (kcal/h)	11.2 (9,630)	14.0 (12,040)	15.5 (13,330)
Heating Capacity		kW (kcal/h)	12.5 (10,750)	16.0 (13,760)	17.5 (15,050)
Total Indoor Unit Capacity		kW	5.5~14.5	7.0~18.2	8.0~20.8
Power Consumption		W	—		
Running Current		A	—		
Casing Color			Ivory White		
Compressor	Type		Hermetically Sealed Scroll Type		
	Model		JT100FCVD		
	Motor Output (2.2kW/60rps)	kW	2.5	3.0	3.5
Refrigerant Oil	Model		DAPHNE FVC68D		
	Charge	L	1.6		
Refrigerant	Type		R-410A		
	Charge	kg	5.1		
Air Flow Rate (H)	Cooling	m^3/min (cfm)	104 (3,671)	106 (3,742)	106 (3,742)
	Heating	m^3/min (cfm)	102 (3,600)	106 (3,742)	106 (3,742)
Fan	Type		Propeller		
	Motor Output	W	70+70		
	Running Current	A	0.4+0.4		
	Power Consumption	W	88+88		
Starting Current		A	18.5-17.6-17.3	23.7-22.6-22.2	25.2-24.9-24.6
Dimensions (H×W×D)		mm	1,345×900×320		
Package Dimensions (H×W×D)		mm	1,475×925×390		
Weight		kg	136		
Gross Weight		kg	146		
Operation Sound	Cooling	dBA	52	53	54
	Heating	dBA	54	55	56
Piping Connection	Liquid	mm	ϕ9.5 (Flare Connection)		
	Gas	mm	ϕ19.1 (Brazing Connection)		
	Drain	mm	ϕ18		
Heat Insulation			Both Liquid and Gas Pipes		
No. of Wiring Connection			3 For Power Supply (Including Earth Wiring), 2 For Interunit Wiring (Outdoor Unit-BP)		
Max. Interunit Piping Length	Total main piping and branch piping	m	115	135	145
	Total main piping	m	55		
	Total branch piping	m	60	80	90
	Max. length for each room	m	15		
Necessity of Additional Charge ★		kg/m	Necessary		
Max. Installation Height Difference		m	30 (Between Indoor or BP Unit and Outdoor Unit), 15 (Both between Indoor Units and BP Units)		

Note:

1. ★ Refrigerant charge is required. (Chargeless piping length 0m)
   Formula for calculation charge : R (kg)
   R = Total length (m) of liquid pipe size at ϕ9.5×0.054 + Total length (m) of liquid piping size at ϕ6.4×0.022
2. The data are based on the conditions shown in the table below.

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m^3/min×35.3

Cooling	Heating	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Indoor ; 20°CDB Outdoor ; 7°CDB / 6°CWB	Main Piping : 5m Branch Piping : 3m Level difference:0m



(Q0143)

1.2.2 BP Units

50Hz 220-240V / 60Hz 220-230V

Model			BPMKS967A2			BPMKS967A3
Connectable Indoor Units			1~2 Units			1~3 Units
Casing Color			Paintingless			
Power Consumption		W	10			10
Running Current		A	0.05			0.05
Refrigerant Type			R-410A			
Dimension (H×W×D)		mm	180×294(650)*×350			
Package Dimension (H×W×D)		mm	257×738×427			
Machine Weight		kg	7.5			8
Gross Weight		kg	11			12
Number of Wiring Connections			4 for Interunit Wiring			
Piping Connection (Brazing)	Liquid	mm	Main : ϕ9.5×1 / Branch : ϕ6.4×2			Main : ϕ9.5×1 / Branch : ϕ6.4×3
	Gas	mm	Main : ϕ19.1×1 / Branch : ϕ15.9×2			Main : ϕ19.1×1 / Branch : ϕ15.9×3
	Drain	mm	Drain Processingless			
Heat Insulation			Both Liquid and Gas Pipes			
Max. Piping Length		m	—			
Amount of Additional Charge		g/m	—			
Max. Height Difference		m	—			
Max. Combination		kW	14.2			20.8
Min. Combination		kW	2.5			2.5
Accessories	Installation Manual	pc.	1			
	L Shape Reducer	pc.	For Main	Liquid	1 (For I.D. ϕ6.4)	
				Gas	1 (For I.D. ϕ12.7)	
				Gas	1 (For I.D. ϕ15.9, 19.1)	
			For Branch	Liquid	2 (For I.D. ϕ12.7, 9.5)	3 (For I.D. ϕ12.7, 9.5)
				Gas	1 (For I.D. ϕ9.5)	
	Hanger Metal	pc.	4			
	Screws	pc.	8 (M4×8)			
	Heat Insulation (2pc. is 1 set)		3 Set			4 Set
	Binding Band	pc.	2			
Drawing No.			4D050057B			

Note:

1. BP or Indoor Unit Max. Height - BP or Indoor Unit Min. Height → Max. 15m.
   Set up BP and indoor unit within 15m height difference.
2. The piping connection must be cut so as to suit the piping sizes of the indoor unit which will be connected.
   The same sizes should be used for the piping on the outdoor unit.
3. ( )* : including auxiliary piping length

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

1.2.3 Indoor Units

Wall Mounted Type

50Hz 220-230-240V

Model				FTXS20DVMA		FTXS25DVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				2.0kW Class		2.5kW Class	
Front Panel Color				White		White	
Air Flow Rates		m³/min (cfm)	H	8.7 (307)	9.4 (332)	8.7 (307)	9.4 (332)
			M	6.7 (237)	7.6 (268)	6.7 (237)	7.6 (268)
			L	4.7 (166)	5.8 (205)	4.7 (166)	5.8 (205)
			SL	3.9 (138)	5.0 (177)	3.9 (138)	5.0 (177)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	40		40	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.17-0.16-0.15	0.17-0.16-0.15	0.17-0.16-0.15	0.17-0.16-0.15
Power Consumption (Rated)			W	35-35-35	35-35-35	35-35-35	35-35-35
Power Factor			%	93.6-95.1-97.2	93.6-95.1-97.2	93.6-95.1-97.2	93.6-95.1-97.2
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	283×800×195		283×800×195	
Packaged Dimensions (H×W×D)			mm	265×855×340		265×855×340	
Weight			kg	9		9	
Gross Weight			kg	12		12	
Operation Sound	H/L/SL		dBA	37/25/22	37/28/25	37/25/22	37/28/25
Sound Power	H		dBA	—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D049290		3D049291	

Model				FTXS35DVMA	
				Cooling	Heating
Rated Capacity				3.5kW Class	
Front Panel Color				White	
Air Flow Rates		m³/min (cfm)	H	8.9 (314)	9.7 (342)
			M	6.9 (242)	7.9 (277)
			L	4.8 (169)	6.0 (212)
			SL	4.0 (141)	5.2 (184)
Fan	Type			Cross Flow Fan	
	Motor Output		W	40	
	Speed		Steps	5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.19-0.18-0.17	0.19-0.18-0.17
Power Consumption (Rated)			W	40-40-40	40-40-40
Power Factor			%	95.7-96.6-98.0	95.7-96.6-98.0
Temperature Control				Microcomputer Control	
Dimensions (H×W×D)			mm	283×800×195	
Packaged Dimensions (H×W×D)			mm	265×855×340	
Weight			kg	9	
Gross Weight			kg	12	
Operation Sound	H/L/SL		dBA	38/26/23	38/29/26
Sound Power	H		dBA	—	—
Heat Insulation				Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4	
		Gas	mm	ϕ 9.5	
		Drain	mm	ϕ18.0	
Drawing No.				3D049292	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 240V

Model				FTXS50BVMA8		FTXS60BVMA8	
				Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW Class		6.0kW Class	
Front Panel Color				White		White	
Air Flow Rates		m³/min (cfm)	H	11.4 (402)	12.6 (444)	16.2 (573)	17.4 (613)
			M	9.8 (346)	10.9 (385)	13.9 (490)	15.3 (539)
			L	8.7 (306)	9.3 (329)	11.9 (420)	13.1 (464)
			SL	7.7 (271)	8.2 (291)	10.7 (378)	11.7 (412)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	40		43	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.17	0.17	0.19	0.19
Power Consumption (Rated)			W	40	40	45	45
Power Factor			%	98.0	98.0	98.7	98.7
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	290×795×238		290×1,050×238	
Packaged Dimensions (H×W×D)			mm	280×840×338		337×1,147×366	
Weight			kg	9		12	
Gross Weight			kg	13		17	
Operation Sound	H/M/L/SL		dBA	44/40/35/32	42/38/33/30	45/41/36/33	44/40/35/32
Sound Power	H		dBA	63	60	63	62
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ12.7		ϕ12.7	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D047566		3D047567	

Model				FTXS71BVMA8	
				Cooling	Heating
Rated Capacity				7.1kW Class	
Front Panel Color				White	
Air Flow Rates		m³/min (cfm)	H	16.8 (592)	18.7 (660)
			M	14.2 (501)	16.1 (567)
			L	11.9 (420)	13.6 (481)
			SL	11.2 (394)	12.5 (441)
Fan	Type			Cross Flow Fan	
	Motor Output		W	43	
	Speed		Steps	5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.21	0.21
Power Consumption (Rated)			W	50	50
Power Factor			%	99.2	99.2
Temperature Control				Microcomputer Control	
Dimensions (H×W×D)			mm	290×1,050×238	
Packaged Dimensions (H×W×D)			mm	337×1,147×366	
Weight			kg	12	
Gross Weight			kg	17	
Operation Sound	H/M/L/SL		dBA	46/42/37/34	46/42/37/34
Sound Power	H		dBA	63	63
Heat Insulation				Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4	
		Gas	mm	ϕ15.9	
		Drain	mm	ϕ18.0	
Drawing No.				3D047568	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

60Hz 220V

Model				FTXS20DVMT		FTXS25DVMT	
				Cooling	Heating	Cooling	Heating
Capacity				2.0kW Class		2.5kW Class	
Front Panel Color				White		White	
Air Flow Rates		m³/min (cfm)	H	8.7 (307)	9.4 (332)	8.7 (307)	9.4 (332)
			M	6.7 (237)	7.6 (268)	6.7 (237)	7.6 (268)
			L	4.7 (166)	5.8 (205)	4.7 (166)	5.8 (205)
			SL	3.9 (138)	5.0 (177)	3.9 (138)	5.0 (177)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	40		40	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current			A	0.17	0.17	0.17	0.17
Power Consumption			W	35	35	35	35
Power Factor			%	93.6	93.6	93.6	93.6
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	283×800×195		283×800×195	
Packaged Dimensions (H×W×D)			mm	265×855×340		265×855×340	
Weight			kg	9		9	
Gross Weight			kg	12		12	
Operation Sound	H/L/SL		dBA	38/25/22	38/28/25	38/25/22	38/28/25
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D049891A		3D049892A	

Model				FTXS35DVMT		FTXS50DVMT	
				Cooling	Heating	Cooling	Heating
Capacity				3.5kW Class		5.0kW Class	
Front Panel Color				White		White	
Air Flow Rates		m³/min (cfm)	H	8.9 (314)	9.7 (342)	11.4 (402)	12.6 (445)
			M	6.9 (244)	7.9 (279)	9.7 (342)	10.8 (381)
			L	4.8 (169)	6.0 (212)	8.0 (282)	8.9 (314)
			SL	4.0 (141)	5.2 (184)	7.1 (251)	7.7 (272)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	40		40	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current			A	0.19	0.19	0.19	0.19
Power Consumption			W	40	40	40	40
Power Factor			%	95.7	95.7	95.7	95.7
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	283×800×195		290×795×238	
Packaged Dimensions (H×W×D)			mm	265×855×340		280×840×338	
Weight			kg	9		9	
Gross Weight			kg	12		13	
Operation Sound	H/M/L/SL		dBA	39/—/26/23	39/—/29/26	44/40/35/32	42/38/33/30
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ12.7	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D049893A		3D049983	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

60Hz 220V

Model				FTXS60DVMT		FTXS71DVMT	
				Cooling	Heating	Cooling	Heating
Capacity				6.0kW Class		7.1kW Class	
Front Panel Color				White		White	
Air Flow Rates		m^3/min (cfm)	H	16.2 (572)	17.4 (614)	16.7 (590)	18.5 (653)
			M	13.6 (480)	15.1 (533)	14.2 (501)	15.1 (533)
			L	11.4 (402)	12.7 (448)	11.6 (409)	13.5 (477)
			SL	10.2 (360)	11.4 (402)	10.6 (374)	12.1 (427)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	43		43	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current			A	0.21	0.21	0.23	0.23
Power Consumption			W	45	45	50	50
Power Factor			%	97.4	97.4	98.8	98.8
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (HxWxD)			mm	290×1,050×238		290×1,050×238	
Packaged Dimensions (HxWxD)			mm	337×1,147×366		337×1,147×366	
Weight			kg	12		12	
Gross Weight			kg	17		17	
Operation Sound	H/M/L/SL		dBA	45/41/36/33	44/40/35/32	46/42/37/34	46/42/37/34
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ12.7		ϕ15.9	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D049984		3D049985	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m^3/min×35.3

Duct Connected Type

50Hz 230V

Model				CDXS25CVMA		CDXS35CVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				2.5kW Class		3.5kW Class	
Front Panel Color				—		—	
Air Flow Rates		m³/min (cfm)	H	9.5 (335)	9.5 (335)	10.0 (353)	10.0 (353)
			M	8.8 (311)	8.8 (311)	9.3 (328)	9.3 (328)
			L	8.0 (282)	8.0 (282)	8.5 (300)	8.5 (300)
			SL	6.7 (237)	6.7 (237)	7.0 (247)	7.0 (247)
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	62		62	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.47	0.47	0.47	0.47
Power Consumption (Rated)			W	100	100	100	100
Power Factor			%	92.5	92.5	92.5	92.5
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	200×900×620		200×900×620	
Packaged Dimensions (H×W×D)			mm	266×1,106×751		266×1,106×751	
Weight			kg	25		25	
Gross Weight			kg	31		31	
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29	35/33/31/29	35/33/31/29
Moisture Removal			L/h	1.2	—	1.9	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)		VP20 (O.D ϕ 26 / I.D ϕ 20)	
Drawing No.				3D046469		3D046470	

Model				CDXS50CVMA		CDXS60CVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW Class		6.0kW Class	
Front Panel Color				—		—	
Air Flow Rates		m³/min (cfm)	H	12.0 (424)	12.0 (424)	16.0 (565)	16.0 (565)
			M	11.0 (388)	11.0 (388)	14.8 (523)	14.8 (523)
			L	10.0 (353)	10.0 (353)	13.5 (477)	13.5 (477)
			SL	8.4 (297)	8.4 (297)	11.2 (395)	11.2 (395)
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	130		130	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.64	0.64	0.74	0.74
Power Consumption (Rated)			W	140	140	160	160
Power Factor			%	95.1	95.1	94.0	94.0
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	200×900×620		200×1,100×620	
Packaged Dimensions (H×W×D)			mm	266×1,106×751		266×1,306×751	
Weight			kg	27		30	
Gross Weight			kg	34		37	
Operation Sound	H/M/L/SL		dBA	37/35/33/31	37/35/33/31	38/36/34/32	38/36/34/32
Moisture Removal			L/h	2.9	—	3.9	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ12.7		ϕ12.7	
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)		VP20 (O.D ϕ 26 / I.D ϕ 20)	
Drawing No.				3D046471		3D046472	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

60Hz 220V

Model				CDXS25DVMT		CDXS35DVMT	
				Cooling	Heating	Cooling	Heating
Capacity				2.5kW Class		3.5kW Class	
Front Panel Color				—		—	
Air Flow Rates		m³/min (cfm)	H	9.5 (335)		10.0 (353)	
			M	8.8 (311)		9.3 (328)	
			L	8.0 (282)		8.5 (300)	
			SL	6.7 (237)		7.0 (247)	
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	62		62	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.47		0.47	
Power Consumption (Rated)			W	100		100	
Power Factor			%	92.5		92.5	
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	200×900×620		200×900×620	
Packaged Dimensions (H×W×D)			mm	266×1,106×751		266×1,106×751	
Weight			kg	25		25	
Operation Sound	H/M/L/SL		dBA	35/33/31/29		35/33/31/29	
External Static Pressure			Pa	40		40	
Moisture Removal			l/h	1.2		1.9	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)		VP20 (O.D.ϕ 26 / I.D.ϕ 20)	
Drawing No.				3D049727		3D049728	

Model				CDXS50DVMT		CDXS60DVMT	
				Cooling	Heating	Cooling	Heating
Capacity				5.0kW Class		6.0kW Class	
Front Panel Color				—		—	
Air Flow Rates		m³/min (cfm)	H	12.0 (424)		16.0 (565)	
			M	11.0 (388)		14.8 (523)	
			L	10.0 (353)		13.5 (477)	
			SL	8.4 (297)		11.2 (395)	
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	130		130	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.64		0.74	
Power Consumption (Rated)			W	140		160	
Power Factor			%	95.1		94.0	
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	200×900×620		200×1,100×620	
Packaged Dimensions (H×W×D)			mm	266×1,106×751		266×1,306×751	
Weight			kg	27		30	
Operation Sound	H/M/L/SL		dBA	37/35/33/31		38/36/34/32	
External Static Pressure			Pa	40		40	
Moisture Removal			l/h	2.9		3.9	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ12.7		ϕ12.7	
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)		VP20 (O.D.ϕ 26 / I.D.ϕ 20)	
Drawing No.				3D049729		3D049730	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Floor / Ceiling Suspended Dual Type

50Hz 230V

Model				FLXS25BVMA		FLXS35BVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				2.5kW Class		3.5kW Class	
Front Panel Color				Almond White		Almond White	
Air Flow Rates		m³/min (cfm)	H	7.6 (268)	9.2 (325)	8.6 (304)	9.8 (346)
			M	6.8 (240)	8.3 (293)	7.6 (268)	8.9 (314)
			L	6.0 (212)	7.4 (261)	6.6 (233)	8.0 (282)
			SL	5.2 (184)	6.6 (233)	5.6 (198)	7.2 (254)
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	34		34	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.32	0.34	0.36	0.36
Power Consumption (Rated)			W	70	74	78	78
Power Factor			%	95.1	94.6	94.2	94.2
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	490×1,050×200		490×1,050×200	
Packaged Dimensions (H×W×D)			mm	280×1,100×566		280×1,100×566	
Weight			kg	16		16	
Gross Weight			kg	22		22	
Operation Sound	H/M/L/SL		dBA	37/34/31/28	37/34/31/29	38/35/32/29	39/36/33/30
Sound Power	H		dBA	—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D046600		3D046601	

Model				FLXS50BVMA		FLXS60BVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW Class		5.7kW Class	
Front Panel Color				Almond White		Almond White	
Air Flow Rates		m³/min (cfm)	H	11.4 (402)	12.1 (427)	12.0 (424)	12.8 (452)
			M	10.0 (353)	9.8 (346)	10.7 (378)	10.6 (374)
			L	8.5 (300)	7.5 (265)	9.3 (328)	8.4 (297)
			SL	7.5 (265)	6.8 (240)	8.3 (293)	7.5 (265)
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	34		34	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.45	0.45	0.47	0.45
Power Consumption (Rated)			W	96	96	98	96
Power Factor			%	92.8	92.8	90.7	92.8
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	490×1,050×200		490×1,050×200	
Packaged Dimensions (H×W×D)			mm	280×1,100×566		280×1,100×566	
Weight			kg	17		17	
Gross Weight			kg	24		24	
Operation Sound	H/M/L/SL		dBA	47/43/39/36	46/41/35/33	48/45/41/39	47/42/37/34
Sound Power	H		dBA	—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ12.7		ϕ12.7	
		Drain	mm	ϕ18.0		ϕ18.0	
Drawing No.				3D046571		3D046572	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Floor Standing Type

50Hz 230V

Model				FVXS35BVMA		FVXS50BVMA	
				Cooling	Heating	Cooling	Heating
Rated Capacity				3.5kW Class		5.0kW Class	
Front Panel Color				Almond White		Almond White	
Air Flow Rates		m^3/min (cfm)	H	8.3 (293)	9.2 (325)	10.8 (381)	13.2 (466)
			M	6.3 (222)	7.1 (251)	9.2 (325)	11.3 (399)
			L	4.3 (152)	5.0 (177)	7.7 (272)	9.4 (332)
			SL	3.4 (120)	3.6 (127)	6.7 (237)	8.3 (293)
Fan	Type			Cross Flow Fan		Cross Flow Fan	
	Motor Output		W	14+14		14+14	
	Speed		Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control				Right, Left, Horizontal, Upward		Right, Left, Horizontal, Upward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.14	0.14	0.26	0.32
Power Consumption (Rated)			W	32	32	55	70
Power Factor			%	99.4	99.4	92.0	95.1
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	600×650×195		600×650×195	
Packaged Dimensions (H×W×D)			mm	714×770×294		714×770×294	
Weight			kg	13		13	
Gross Weight			kg	19		19	
Operation Sound	H/M/L/SL		dBA	39/33/27/24	39/33/26/23	44/40/36/33	45/40/36/33
Sound Power	H		dBA	—	—	—	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ12.7	
		Drain	mm	ϕ20.0		ϕ20.0	
Drawing No.				3D046650		3D046661	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m^3/min×35.3

Ceiling Mounted Cassette Type

50Hz 230V

Model				FFQ25B7V1B		FFQ35B7V1B	
				Cooling	Heating	Cooling	Heating
Rated Capacity				2.5kW Class		3.5kW Class	
Decoration Panel	Color			White		White	
	Dimensions (H×W×D)			55×700×700		55×700×700	
Air Flow Rates		m³/min (cfm)	H	9.0 (318)	9.0 (318)	10.0 (353)	10.0 (353)
			M	—	—	—	—
			L	6.5 (230)	6.5 (230)	6.5 (230)	6.5 (230)
			SL	—	—	—	—
Fan	Type			Turbo Fan		Turbo Fan	
	Motor Output		W	55		55	
	Speed		Steps	2 Steps		2 Steps	
Air Direction Control				Horizontal, Downward		Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.37	0.32	0.40	0.36
Power Consumption (Rated)			W	73	64	84	76
Power Factor			%	85.8	87.0	91.3	91.8
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D) ★			mm	260(286)×575×575		260(286)×575×575	
Packaged Dimensions (H×W×D)			mm	370×687×674		370×687×674	
Weight			kg	17.5		17.5	
Gross Weight			kg	21		21	
Operation Sound	H/L		dBA	29.5/24.5	29.5/24.5	32.0/25.0	32.0/25.0
Sound Power	H		dBA	46.5	—	49.0	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 9.5		ϕ 9.5	
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)		VP20 (O.D ϕ 26 / I.D ϕ 20)	
Drawing No.				3D040445		3D040443	

50Hz 230-240V

Model				FFQ50B7V1B		FFQ60B7V1B	
				Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW Class		6.0kW Class	
Decoration Panel	Color			White		White	
	Dimensions (H×W×D)			55×700×700		55×700×700	
Air Flow Rates		m³/min (cfm)	H	12.0 (424)-13.0 (459)	12.0 (424)-13.0 (459)	15.0 (530)-15.5 (547)	15.0 (530)-15.5 (547)
			M	—	—	—	—
			L	8.0 (283)	8.0 (283)	10.0 (353)-11.0 (388)	10.0 (353)-11.0 (388)
			SL	—	—	—	—
Fan	Type			Turbo Fan		Turbo Fan	
	Motor Output		W	55		55	
	Speed		Steps	2 Steps		2 Steps	
Air Direction Control				Horizontal, Downward		Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.49-0.51	0.45-0.46	0.61-0.63	0.56-0.57
Power Consumption (Rated)			W	97-117	89-109	120-140	111-131
Power Factor			%	86.1-95.6	86.0-98.7	85.5-92.6	86.2-95.8
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D) ★			mm	260(286)×575×575		260(286)×575×575	
Packaged Dimensions (H×W×D)			mm	370×687×674		370×687×674	
Weight			kg	17.5		17.5	
Gross Weight			kg	21		21	
Operation Sound	H/L		dBA	36-38/27-28	36-38/27-28	41-42/32-34	41-42/32-34
Sound Power	H		dBA	53-55	—	58-59	—
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4		ϕ 6.4	
		Gas	mm	ϕ 12.7		ϕ 12.7	
		Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)		VP20 (O.D ϕ 26 / I.D ϕ 20)	
Drawing No.				3D040440, 3D040441		3D040435, 3D040436	

★ ( ) : dimension including control box

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

50Hz 220-230V / 60Hz 220V

Model				FCQ35BVE		FCQ50BVE	
				Cooling	Heating	Cooling	Heating
Rated Capacity				3.5kW Class		5.0kW Class	
Decoration Panel	Color			White		White	
	Dimensions (HxWxD)			40×950×950		40×950×950	
Air Flow Rates		m³/min (cfm)	H	14.0 (494)		15.0 (530)	
			M	—		—	
			L	10.0 (353)		11.0 (388.3)	
			SL	—		—	
Fan	Type			Turbo Fan		Turbo Fan	
	Motor Output		W	45		45	
	Speed		Steps	2 Steps		2 Steps	
Air Direction Control				Horizontal, Downward		Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Rated)			A	0.8		0.8	
Power Consumption (Max. Rated)			W	140/161	107/128	140/161	107/128
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (HxWxD)			mm	230×840×840		230×840×840	
Packaged Dimensions (HxWxD)			mm	305×930×920		305×930×920	
Weight			kg	24		24	
Gross Weight			kg	32		32	
Operation Sound	H/L		dBA	33/29		33/29	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)		ϕ 6.4 (Flare)	
		Gas	mm	ϕ 9.5 (Flare)		ϕ 12.7 (Flare)	
		Drain	mm	VP20 (O.D.ϕ 32 / I.D.ϕ 25)		VP20 (O.D.ϕ 32 / I.D.ϕ 25)	
Drawing No.				3D049093A		3D049093A	

Model				FCQ60BVE		FCQ71BVE	
				Cooling	Heating	Cooling	Heating
Rated Capacity				6.0kW Class		7.1kW Class	
Decoration Panel	Color			White		White	
	Dimensions (HxWxD)			40×950×950		40×950×950	
Air Flow Rates		m³/min (cfm)	H	19.0 (670.7)		19.0 (670.7)	
			M	—		—	
			L	14.0 (494.2)		14.0 (494.2)	
			SL	—		—	
Fan	Type			Turbo Fan		Turbo Fan	
	Motor Output		W	45		45	
	Speed		Steps	2 Steps		2 Steps	
Air Direction Control				Horizontal, Downward		Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Running Current (Max. Rated)			A	0.8		0.8	
Power Consumption (Rated)			W	161/181	128/148	161/181	128/148
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (HxWxD)			mm	230×840×840		230×840×840	
Packaged Dimensions (HxWxD)			mm	305×930×920		305×930×920	
Weight			kg	24		24	
Gross Weight			kg	32		32	
Operation Sound	H/L		dBA	35/30		35/30	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)		ϕ 9.5 (Flare)	
		Gas	mm	ϕ 12.7 (Flare)		ϕ 15.9 (Flare)	
		Drain	mm	VP20 (O.D.ϕ 32 / I.D.ϕ 25)		VP20 (O.D.ϕ 32 / I.D.ϕ 25)	
Drawing No.				3D049093A		3D049093A	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Ceiling Mounted Built-in Type

50Hz 220-230V

Model				FBQ60BV1		FBQ71BV1	
				Cooling	Heating	Cooling	Heating
Rated Capacity				6.0kW Class		7.1kW Class	
Decoration Panel	Color			White		White	
	Dimensions (H×W×D)			55×1100×500		55×1100×500	
Air Flow Rates		m³/min (cfm)	H	17.0 (600)		19.0 (670)	
			M	—		—	
			L	13.0 (459)		14.0 (494)	
			SL	—		—	
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	110		125	
	Speed		Steps	2 Steps		2 Steps	
Air Filter				Resin Net (with mold resistant)		Resin Net (with mold resistant)	
Running Current (Max. Rated)			A	0.9		1.1	
Power Consumption (Rated)			W	165	145	184	164
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	300×1000×800		300×1000×800	
Packaged Dimensions (H×W×D)			mm	400×1171×991		400×1171×991	
Weight			kg	41		41	
Gross Weight			kg	50		50	
Operation Sound	H/L		dBA	41/35		41/35	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)		ϕ 9.5 (Flare)	
		Gas	mm	ϕ 12.7 (Flare)		ϕ 15.9 (Flare)	
		Drain	mm	VP25 (O.D.ϕ 32 / I.D.ϕ 25)		VP25 (O.D.ϕ 32 / I.D.ϕ 25)	
Drawing No.				3D049097		3D049097	

60Hz 220V

Model				FBQ60BVL		FBQ71BVL	
				Cooling	Heating	Cooling	Heating
Rated Capacity				6.0kW Class		7.1kW Class	
Decoration Panel	Color			White		White	
	Dimensions (H×W×D)			55×1100×500		55×1100×500	
Air Flow Rates		m³/min (cfm)	H	19.0 (670)		19.0 (670)	
			M	—		—	
			L	14.0 (494)		14.0 (494)	
			SL	—		—	
Fan	Type			Sirocco Fan		Sirocco Fan	
	Motor Output		W	125		125	
	Speed		Steps	2 Steps		2 Steps	
Air Filter				Resin Net (with mold resistant)		Resin Net (with mold resistant)	
Running Current (Max. Rated)			A	0.9		1.1	
Power Consumption (Rated)			W	165	145	184	164
Temperature Control				Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	300×1000×800		300×1000×800	
Packaged Dimensions (H×W×D)			mm	400×1171×991		400×1171×991	
Weight			kg	41		41	
Gross Weight			kg	50		50	
Operation Sound	H/L		dBA	41/35		41/35	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)		ϕ 9.5 (Flare)	
		Gas	mm	ϕ 12.7 (Flare)		ϕ 15.9 (Flare)	
		Drain	mm	VP25 (O.D.ϕ 32 / I.D.ϕ 25)		VP25 (O.D.ϕ 32 / I.D.ϕ 25)	
Drawing No.				3D049097		3D049097	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Ceiling Suspended Type

Model				FHQ35BUV1B9		FHQ50BUV1B9		FHQ60BUV1B9	
				Cooling	Heating	Cooling	Heating	Cooling	Heating
Rated Capacity				3.5kW Class		5.0kW Class		6.0kW Class	
Decoration Panel	Color			White		White		White	
	Dimensions (H×W×D)			—		—		—	
Air Flow Rates		m³/min (cfm)	H	13.0 (458)	13.0 (458)	13.0 (458)	13.0 (458)	17.0 (600)	16.0 (565)
			M	—		—		—	
			L	10.0 (353)	10.0 (353)	10.0 (353)	10.0 (353)	13.0 (459)	13.0 (459)
			SL	—		—		—	
Fan	Type			Sirocco Fan		Sirocco Fan		Sirocco Fan	
	Motor Output		W	62		62		62	
	Speed		Steps	2 Steps		2 Steps		2 Steps	
Air Direction Control				Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward		Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof	
Temperature Control				Microcomputer Control		Microcomputer Control		Microcomputer Control	
Dimensions (H×W×D)			mm	195×960×680		195×960×680		195×1,160×680	
Packaged Dimensions (H×W×D)			mm	279×1,046×818		279×1,046×818		279×1,246×818	
Weight			kg	24		25		27	
Gross Weight			kg	31		32		35	
Operation Sound	H/L		dBA	37/32		38/33		39/33	
Sound Power	H/L		dBA	53/48		54/49		55/49	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ϕ 6.4 (Flare)		ϕ 6.4 (Flare)		ϕ 6.4 (Flare)	
		Gas	mm	ϕ 9.5 (Flare)		ϕ12.7 (Flare)		ϕ12.7 (Flare)	
		Drain	mm	VP20 (O.D.ϕ 26 / I.D.ϕ 20)		VP20 (O.D.ϕ 26 / I.D.ϕ 20)		VP20 (O.D.ϕ 26 / I.D.ϕ 20)	
Drawing No.				3D037992E		3D037992E		3D037992E	

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Part 3
Printed Circuit Board Connector Wiring Diagram

1. Printed Circuit Board Connector Wiring Diagram

1.1 Outdoor Unit

1.1.1 Control PCB (A1P)

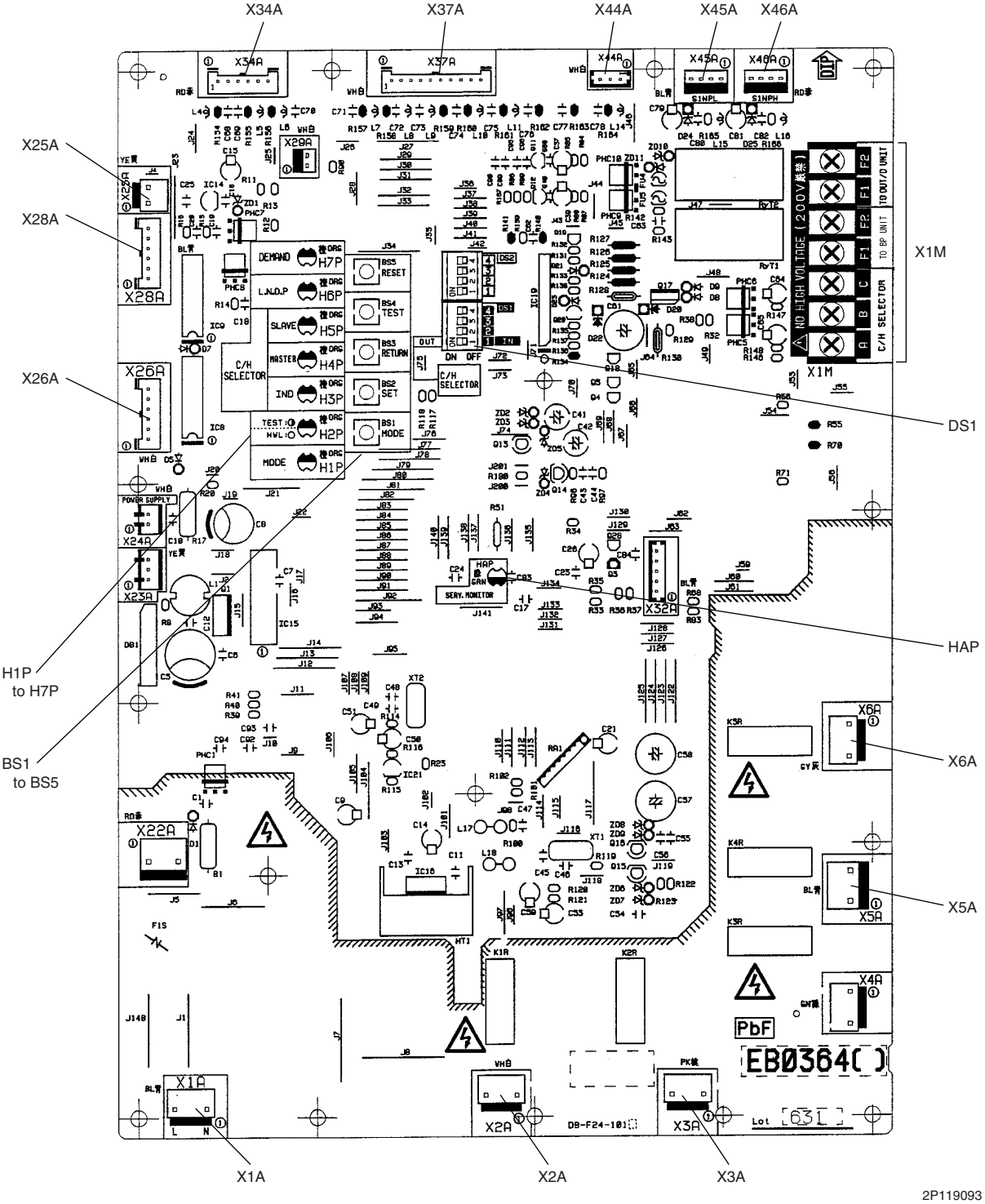
Connectors

1)	X1A	Connector to Filter PCB (A3P)
2)	X2A	Connector for SVP (Hot Gas Bypass Valve)
3)	X3A	Connector for SVG (Receiver Gas Discharging Valve)
4)	X5A	Connector for 4 Way Valve
5)	X6A	Connector for Crankcase Heater
6)	X25A	Connector for Inverter PCB (A2P)
7)	X26A	Connector for Electronic Expansion Valve (Main)
8)	X28A	Connector for Electronic Expansion Valve (Sub Cool)
9)	X34A	Connector for Discharge Pipe Thermistor
10)	X37A	Connector for Thermistors (Suction Pipe, Heat Exchanger and SC Heat Exchanger Gas Pipe)
11)	X44A	Connector for Outdoor Air Thermistor
12)	X45A	Connector for High Pressure Sensor
13)	X46A	Connector for Low Pressure Sensor

Note: Other Designation

1)	HAP	Service Monitor LED
2)	H1P to H7P	Service Monitor LED
3)	BS1 to BS5	Push Button Switch (for Mode Select, Field Setting and Test Operation)
4)	DS1	Dip Switch for Cool / Heat Selector
5)	X1M	Terminal for Cool / Heat Selector and Transmission to BP unit

PCB Detail

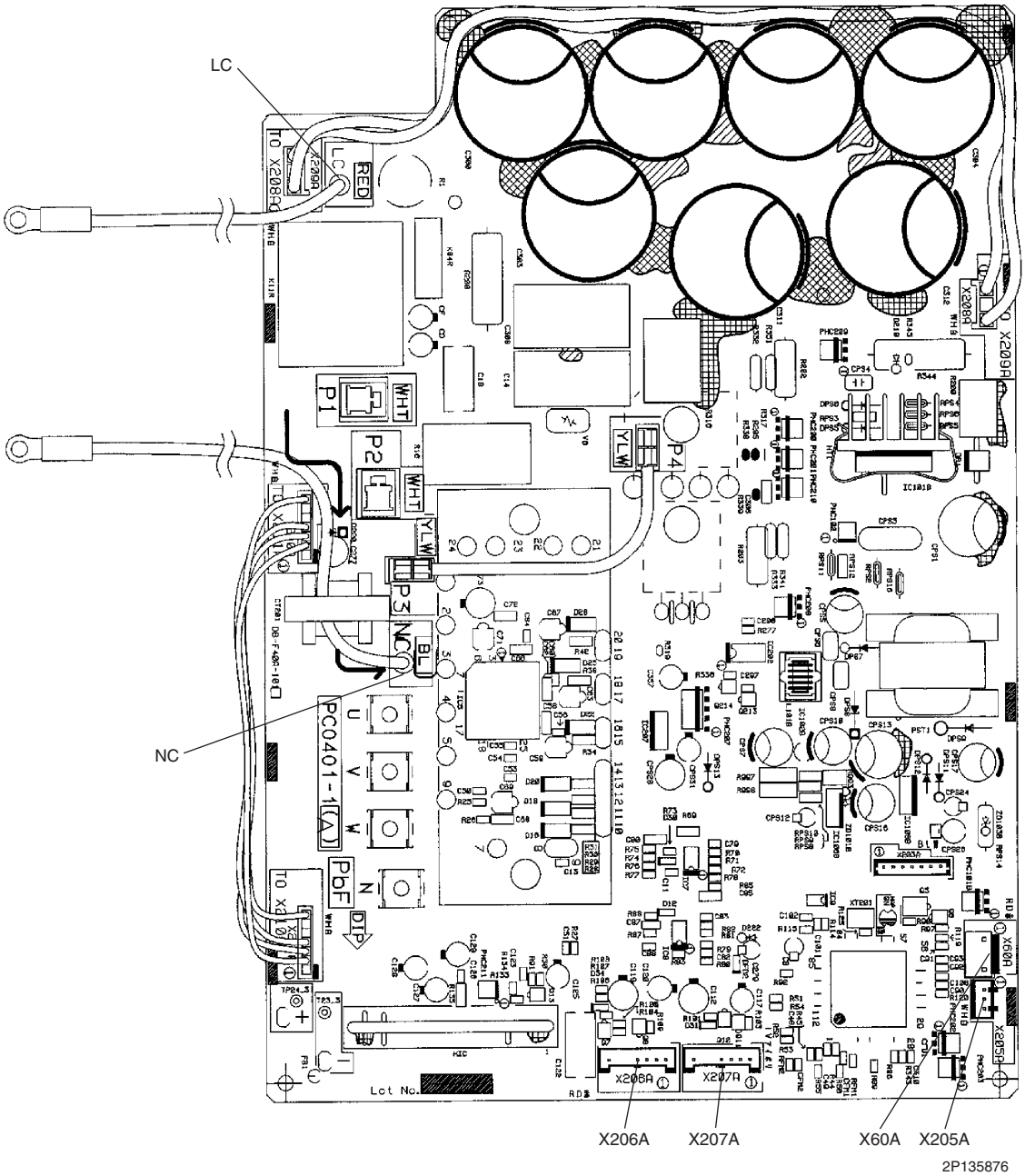

X34A
X37A
X44A
X45A
X46A
X25A
X28A
X26A
X1M
DS1
HAP
H1P
to H7P
BS1
to BS5
X6A
X5A
X1A
X2A
X3A
2P119093

1.1.2 Inverter PCB (A2P)

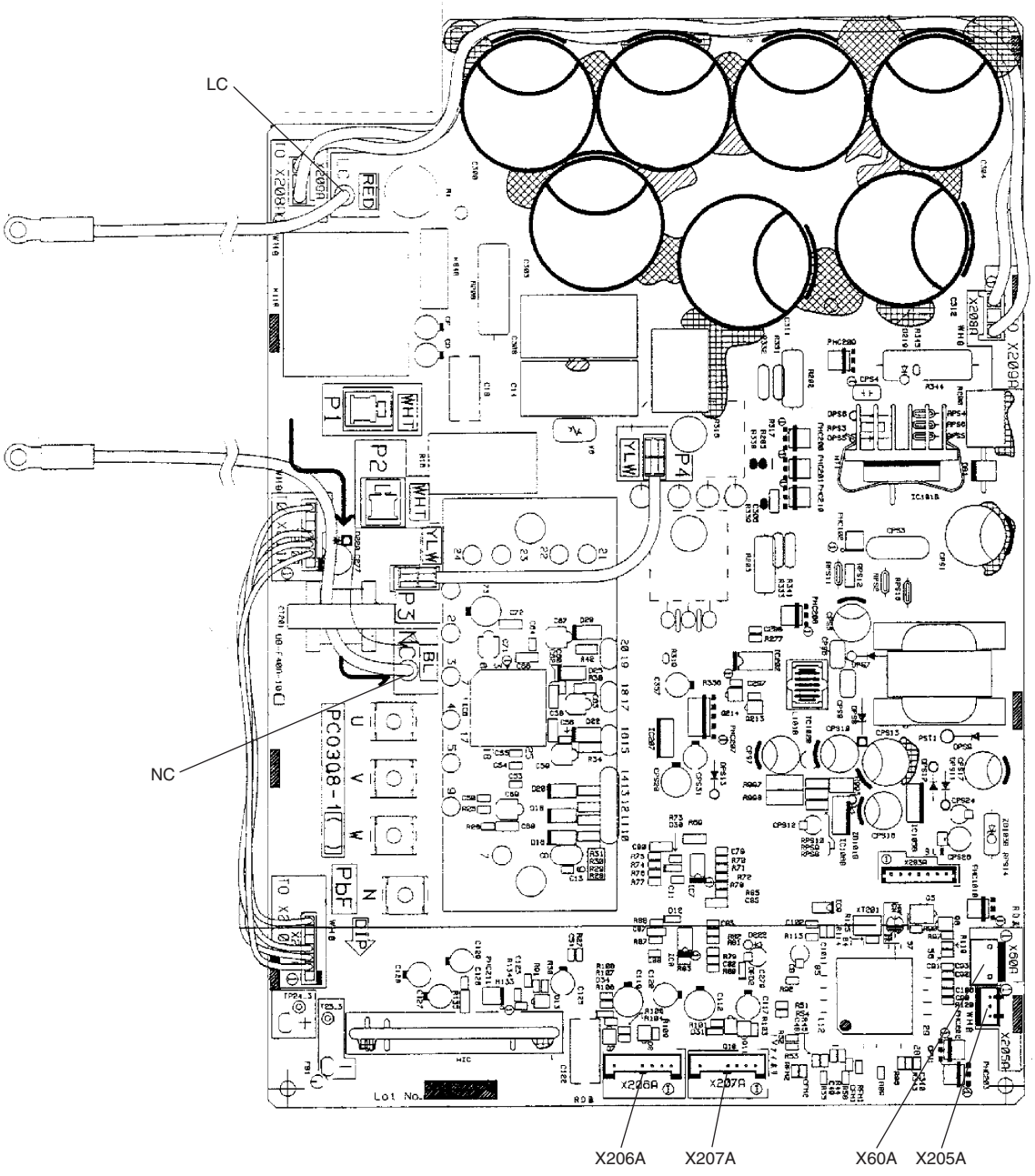
Connectors

1)	X60A	Connector for High Pressure Switch
2)	X205A	Connector for Control PCB (A1P)
3)	X206A	Connector for Fan Motor (Upper Side)
4)	X207A	Connector for Fan Motor (Lower Side)
5)	LC, NC	Terminal for Filter PCB (A3P)

RMX(K)S models



RMKD models



1.1.3 Filter PCB (A3P)

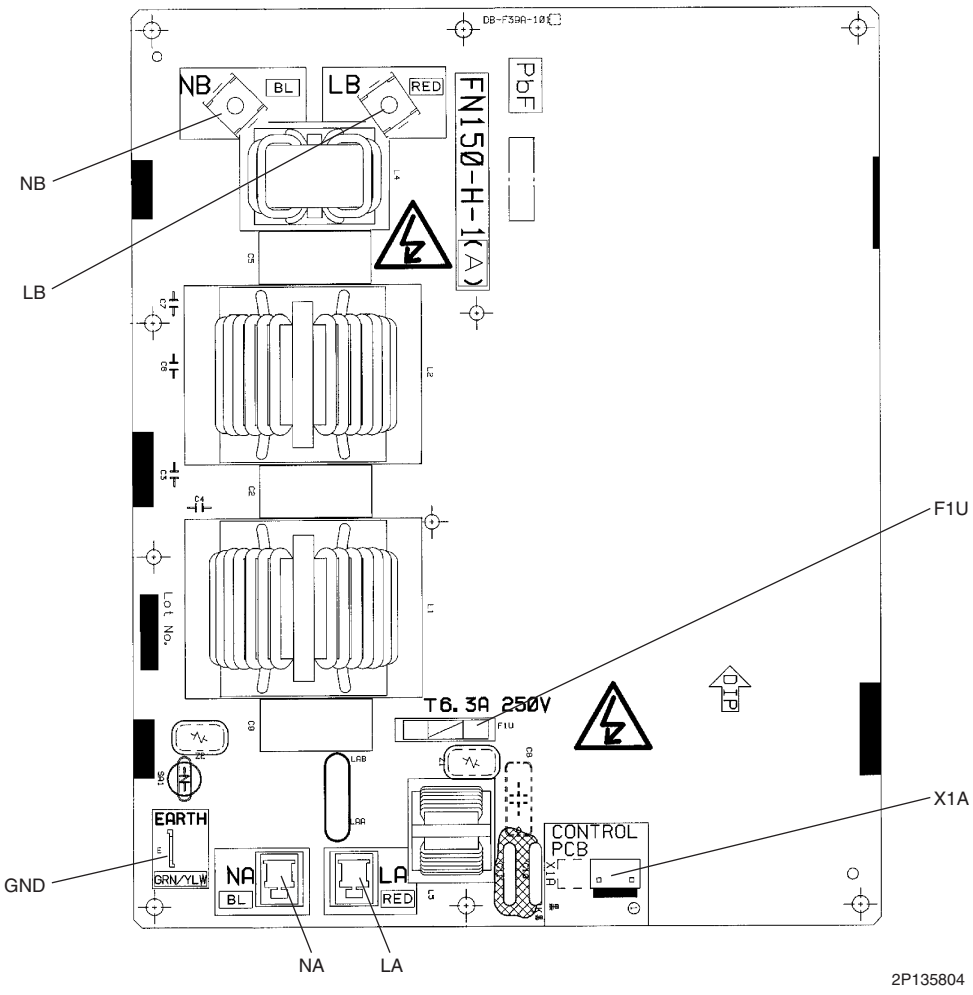
Connectors

1) X1A Connector for Control PCB (A1P)
2) LA, NA Terminal for X1M (Power Supply Terminal Strip)
3) LB, NB Terminal for Inverter PCB (A2P)

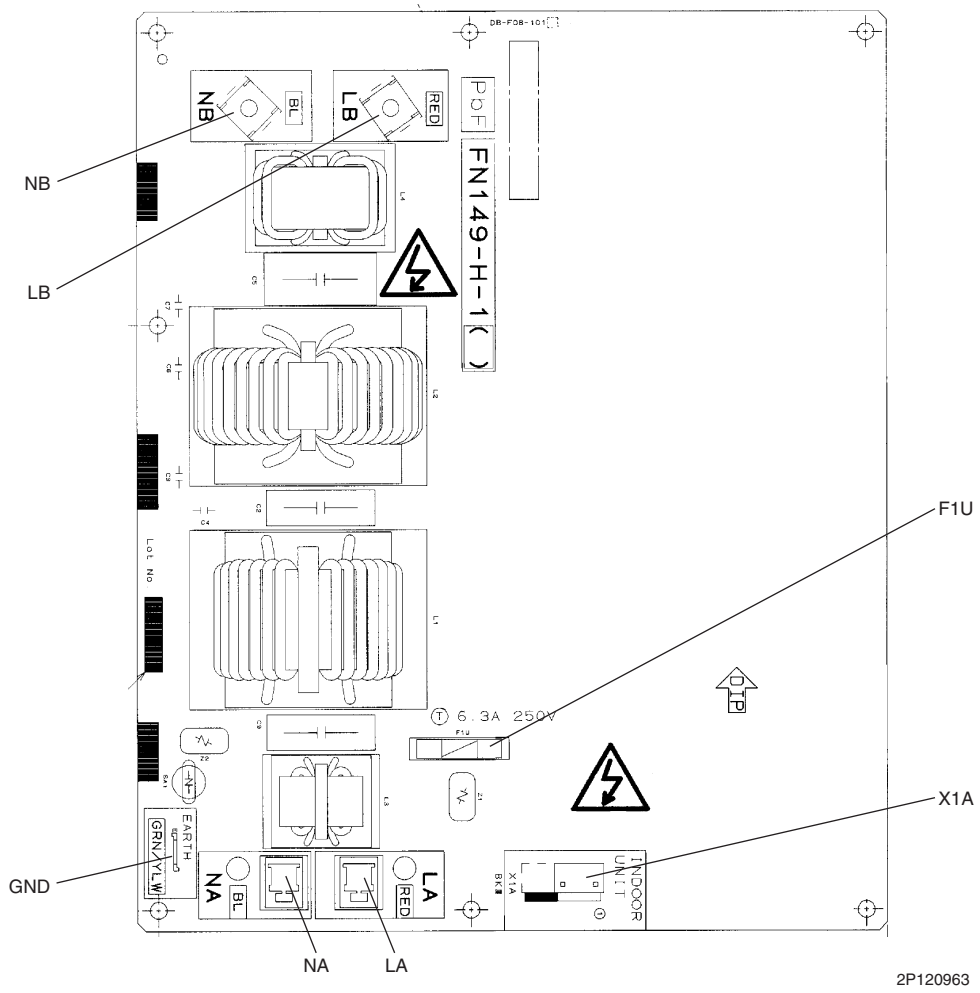
Note: Other Designation

1) F1U Fuse (250V 6.3A)
2) GND Earth Terminal

RMX(K)S models



RMKD models



1.2 Branch Provider Unit

Connectors

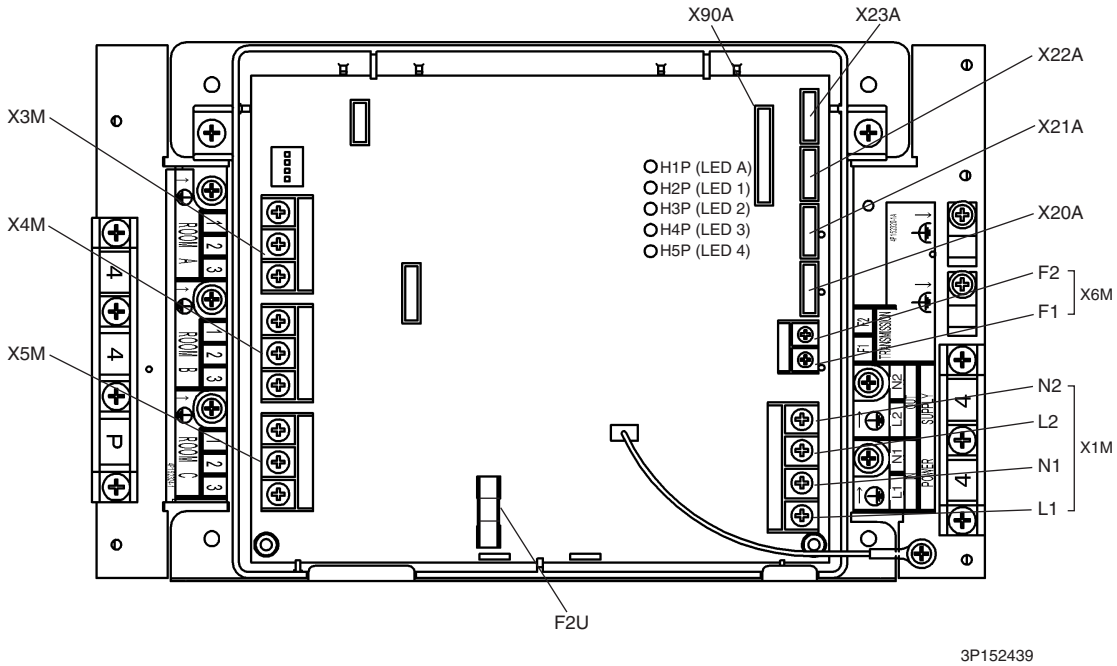
1) X20A	Connector for Bypass Electronic Expansion Valve
2) X21A to X23A	Connector for Electronic Expansion Valve to Room A, B and C
3) X90A	Connector for Thermistors

Note: Other Designations

1) F2U	Fuse (AC250V 3.15A)
2) X3M	Terminal for Inter Connecting Wire to Room A
3) X4M	Terminal for Inter Connecting Wire to Room B
4) X5M	Terminal for Inter Connecting Wire to Room C
5) F1, F2 (on X6M)	Terminal for Transmission to Outdoor Unit or Other BP units
6) L1, N1 (on X1M)	Terminal for Power Supply
7) L2, N2 (on X1M)	Terminal for Power Supply to other BP units
8) H1P(LED A)	LED for Service Monitor
9) H2P~H5P (LED 1 to 4)	LED for Fault Indication

X23A and X5M are not used for BPMKS967A2(B) and BPMKD967A2.

PCB Detail



1.3 Wall Mounted Type

1.3.1 FTK(X)S 20~35 D

Connectors

PCB(1) (Control PCB)

1) S1 Connector for DC fan motor
2) S6 Connector for swing motor (horizontal blades)
3) S21 Connector for centralized control (HA)
4) S26 Connector for display PCB
5) S28 Connector for signal receiver PCB
6) S32 Connector for heat exchanger thermistor
7) S35 Connector for INTELLIGENT EYE sensor PCB

PCB(2) (Signal Receiver PCB)

1) S29 Connector for control PCB

PCB(3) (Display PCB)

1) S27 Connector for control PCB

PCB(4) (INTELLIGENT EYE sensor PCB)

1) S36 Connector for control PCB

Note: Other designations

PCB(1) (Control PCB)

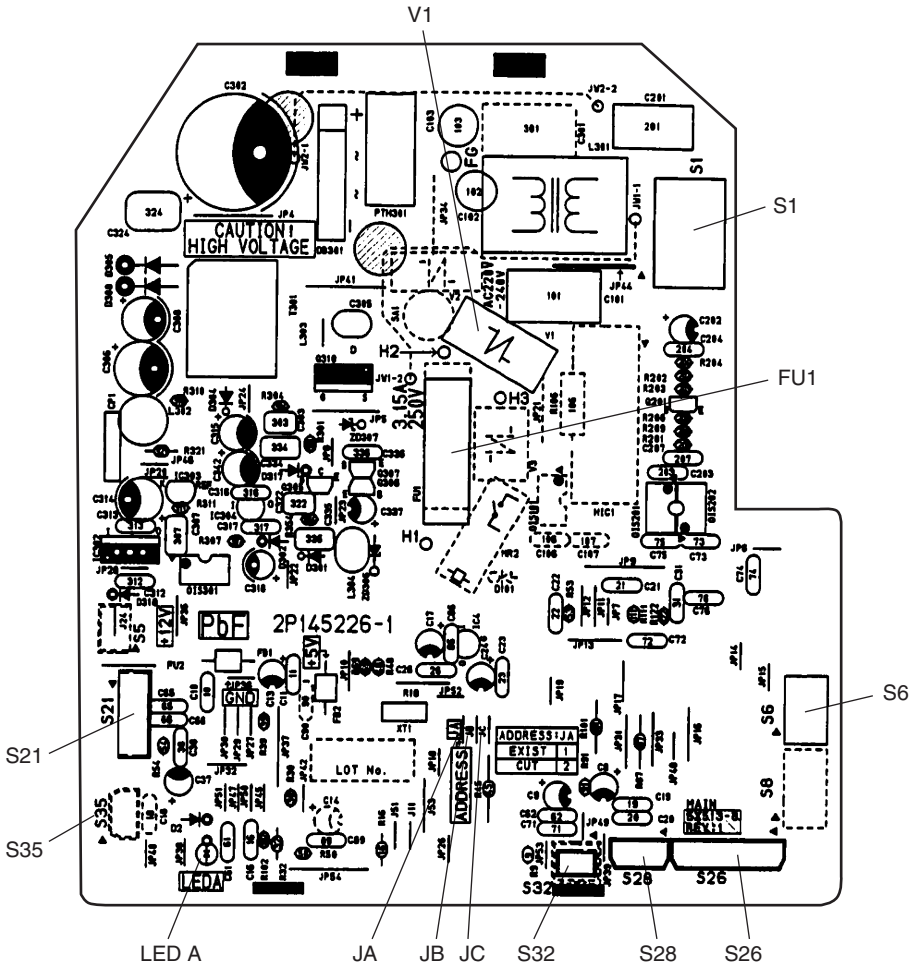
1) V1 Varistor
2) JA Address setting jumper
   JB Fan speed setting when compressor is OFF on thermostat
   JC Power failure recovery function (auto-restart)
   ∗ Refer to page 193 for detail.
3) LED A LED for service monitor (green)
4) FU1 Fuse (3.15A)

PCB(3) (Display PCB)

1) SW1 (S1W) Forced operation ON / OFF switch
2) LED1 LED for operation (green)
3) LED2 LED for timer (yellow)
4) LED3 LED for INTELLIGENT EYE (green)
5) RTH1 (R1T) Room temperature thermistor

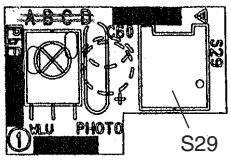
PCB Detail

PCB(1): Control PCB



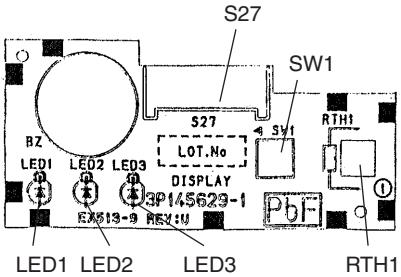
(R4288)

PCB(2): Signal Receiver PCB



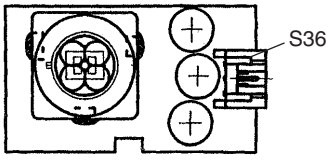
(R4289)

PCB(3): Display PCB



(R4290)

PCB(4): INTELLIGENT EYE sensor PCB



(R4291)

1.3.2 FTKD 25/35 D

Connectors

PCB(1) (Control PCB)

1)	S1	Connector for AC fan motor
2)	S6	Connector for swing motor (horizontal blades)
3)	S7	Connector for AC fan motor (Hall IC)
4)	S21	Connector for centralized control (HA)
5)	S26	Connector for display PCB
6)	S28	Connector for signal receiver PCB
7)	S32	Connector for heat exchanger thermistor
8)	S35	Connector for INTELLIGENT EYE sensor PCB

PCB(2) (Signal Receiver PCB)

1)	S29	Connector for control PCB

PCB(3) (Display PCB)

1)	S27	Connector for control PCB

PCB(4) (INTELLIGENT EYE sensor PCB)

1)	S36	Connector for control PCB

Note: Other designations

PCB(1) (Control PCB)

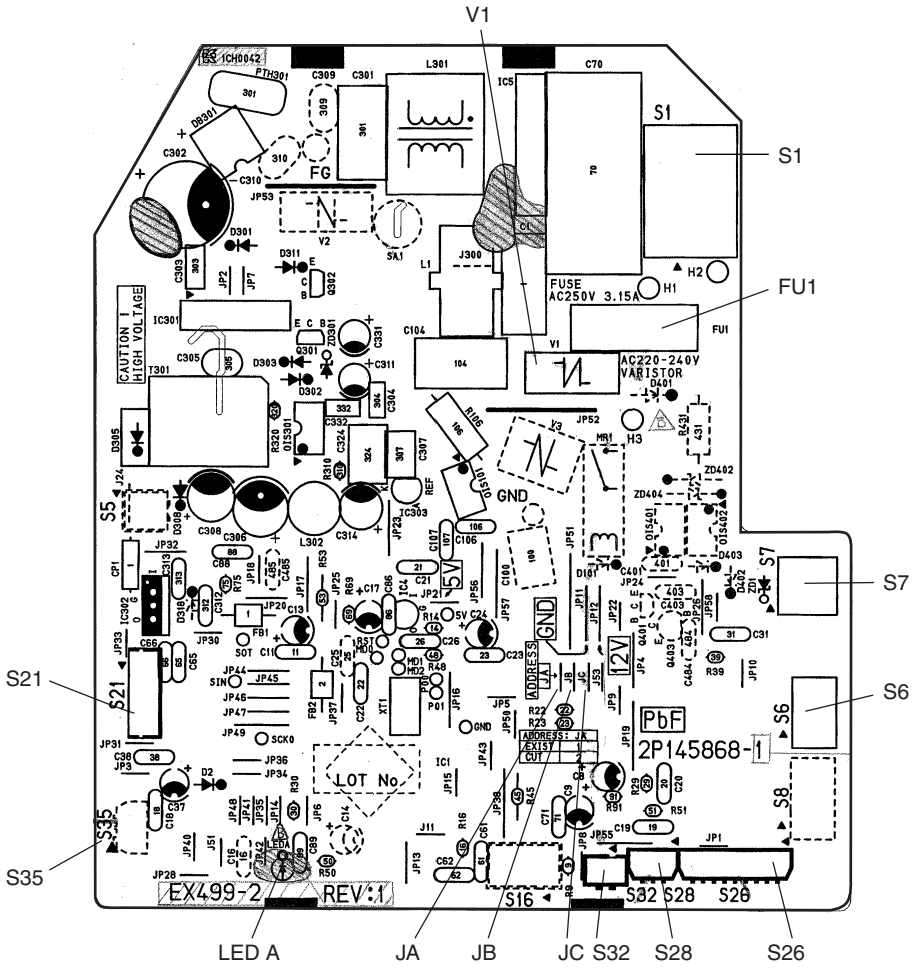
1)	V1	Varistor
2)	JA	Address setting jumper
	JB	Fan speed setting when compressor is OFF on thermostat
	JC	Power failure recovery function (auto-restart)
		∗ Refer to page 193 for detail.
3)	LED A	LED for service monitor (green)
4)	FU1	Fuse (3.15A)

PCB(3) (Display PCB)

1)	SW1 (S1W)	Forced operation ON / OFF switch
2)	LED1	LED for operation (green)
3)	LED2	LED for timer (yellow)
4)	LED3	LED for INTELLIGENT EYE (green)
5)	RTH1 (R1T)	Room temperature thermistor

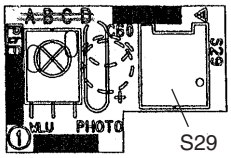
PCB Detail

PCB(1): Control PCB



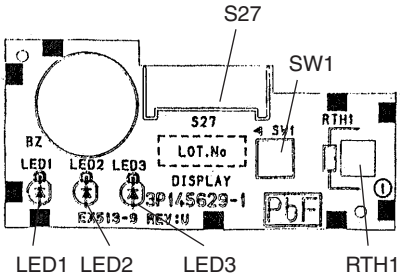
(R4779)

PCB(2): Signal Receiver PCB



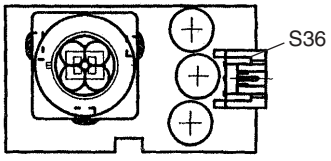
(R4289)

PCB(3): Display PCB



(R4290)

PCB(4): INTELLIGENT EYE sensor PCB



(R4547)

1.3.3 FTK(X)S 50~71 B, FTXS 50~71 D, FTKD 50~71 F

Connectors

PCB(1) (Control PCB)

1) S1 Connector for DC fan motor
2) S6 Connector for swing motor (horizontal blades)
3) S8 Connector for swing motor (vertical blades)
4) S21 Connector for centralized control (HA)
5) S26 Connector for buzzer PCB
6) S28 Connector for signal receiver PCB
7) S32 Connector for heat exchanger thermistor
8) S35 Connector for Intelligent Eye sensor PCB

PCB(2) (Signal Receiver PCB)

1) S29 Connector for control PCB

PCB(3) (Buzzer PCB)

1) S27 Connector for control PCB
2) S38 Connector for display PCB

PCB(4) (Display PCB)

1) S37 Connector for buzzer PCB

PCB(5) (INTELLIGENT EYE sensor PCB)

1) S36 Connector for control PCB

Note: Other designations

PCB(1) (Control PCB)

1) V1 Varistor
2) JA Address setting jumper
   JB Fan speed setting when compressor is OFF on thermostat
   JC Power failure recovery function
   ∗ Refer to page 193 for detail.
3) LED A LED A for service monitor (green)
4) FU1 Fuse (3.15A)

PCB(2) (Signal Receiver PCB)

1) SW1 (S1W) Forced operation ON/OFF switch

PCB(3) (Buzzer PCB)

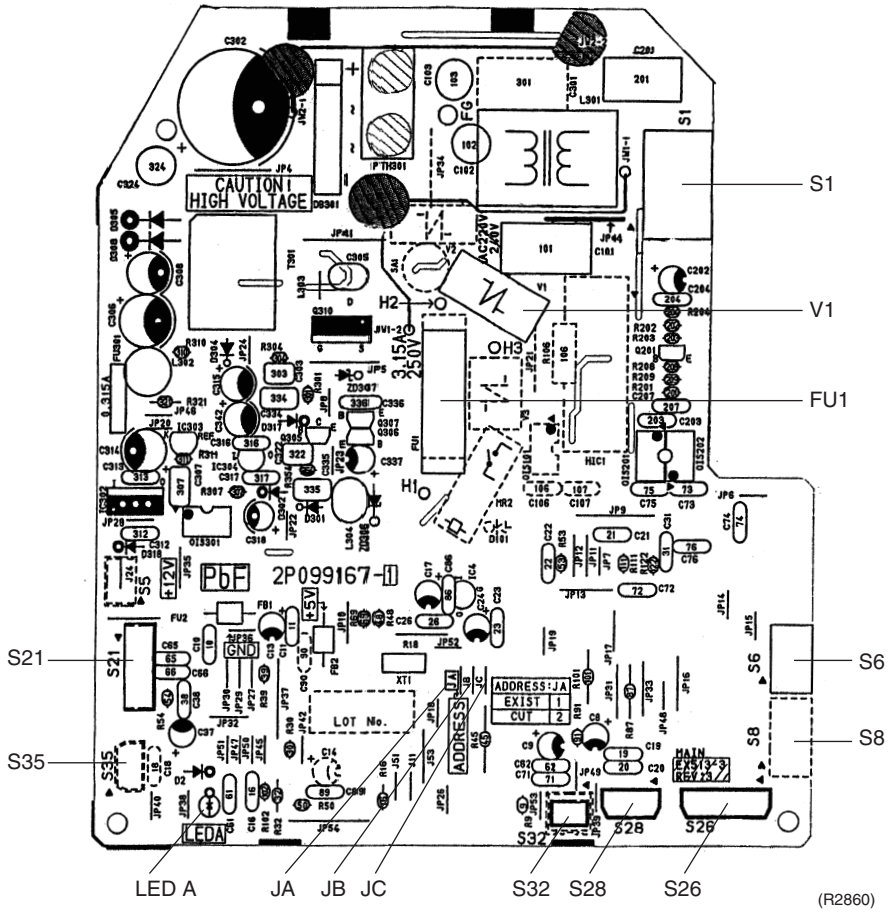
1) RTH1 (R1T) Room temperature thermistor

PCB(4) (Display PCB)

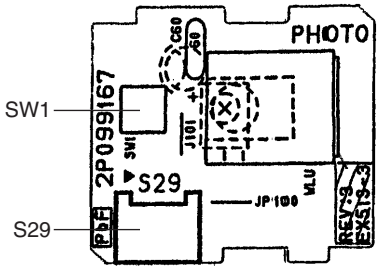
4) LED1 LED for operation (green)
5) LED2 LED for timer (yellow)
6) LED3 LED for HOME LEAVE operation (red)

PCB Detail

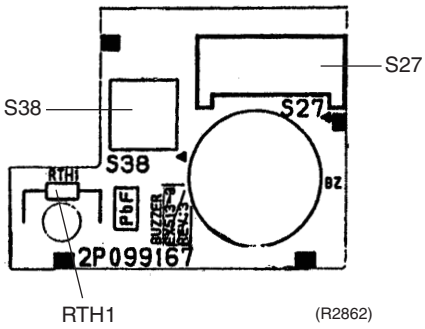
PCB(1): Control PCB (indoor unit)



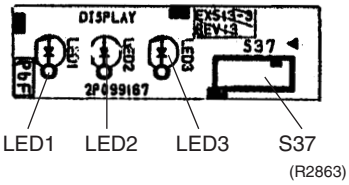
PCB(2): Signal Receiver PCB



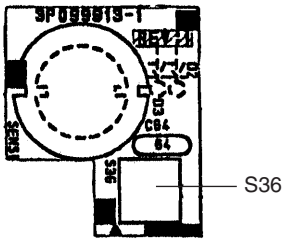
PCB(3): Buzzer PCB



PCB(4): Display PCB



PCB(5): Intelligent Eye sensor PCB



1.3.4 FTK 50-71 A

Connectors

PCB(1) (Control PCB)

1) S6 Connector for swing motor (horizontal swing)
2) S8 Connector for swing motor (vertical swing)
3) S21 Connector for centralized control
4) S24 Connector for display PCB
5) S26 Connector for signal receiver PCB
6) S32 Connector for heat exchanger thermistor
7) S37 Connector for power supply PCB

PCB(2) (Power Supply PCB)

1) S36 Connector for control PCB
2) S201 Connector for fan motor

PCB(3) (Display PCB)

1) S25 Connector for control PCB

PCB(4) (Signal Receiver PCB)

1) S31 Connector for room temperature thermistor
2) S27 Connector for control PCB

Note: Other designations

PCB(1) (Control PCB)

1) JA Address setting jumper
   JB Fan speed setting when compressor is OFF on thermostat.
   JC Power failure recovery function.
   ∗ Refer to page 193 for detail.
2) LED A LED for service monitor (green)

PCB(2) (Power Supply PCB)

1) V1 Varistor
2) FU1 Fuse (3.15A)

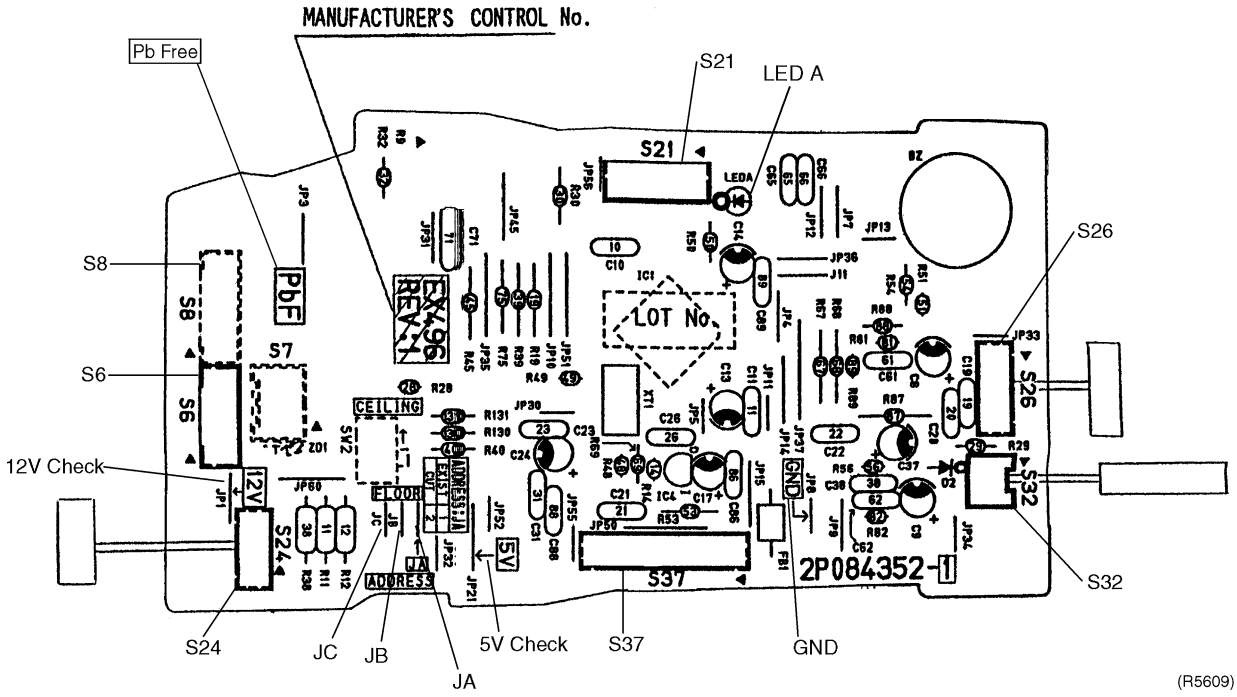
PCB(3) (Display PCB)

1) LED1 LED for operation (green)
2) LED2 LED for timer (yellow)
3) LED3 LED for HOME LEAVE operation (red)

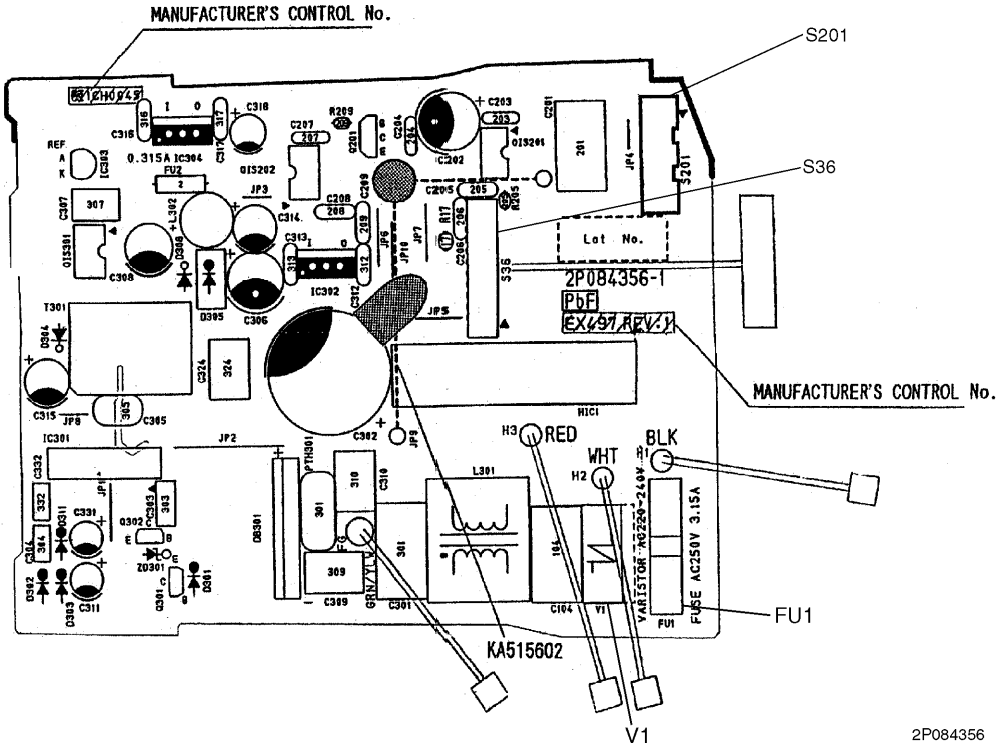
PCB(4) (Signal Receiver PCB)

1) SW1 (S1W) Operation switch

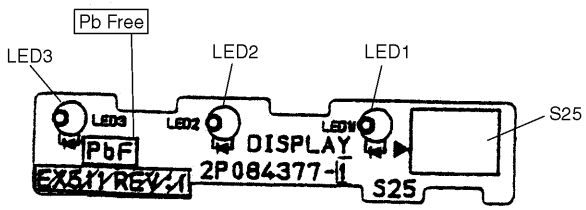
PCB Detail PCB(1): Control PCB



PCB Detail PCB(2): Power Supply PCB

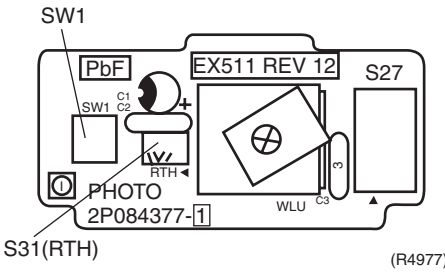


PCB Detail **PCB(3):Display PCB**



(R5611)

PCB Detail **PCB (4): Signal Receiver PCB**



(R4977)

1.4 Duct Connected Type

Connectors

PCB(1) (Control PCB)

1) S1 Connector for AC fan motor
2) S7 Connector for AC fan motor
3) S21 Connector for centralized control to 5 rooms
4) S26 Connector for display PCB
5) S32 Connector for heat exchanger thermistor

PCB(2) (Display PCB)

1) S1 Connector for control PCB

Note: Other designations

PCB(1) (Control PCB)

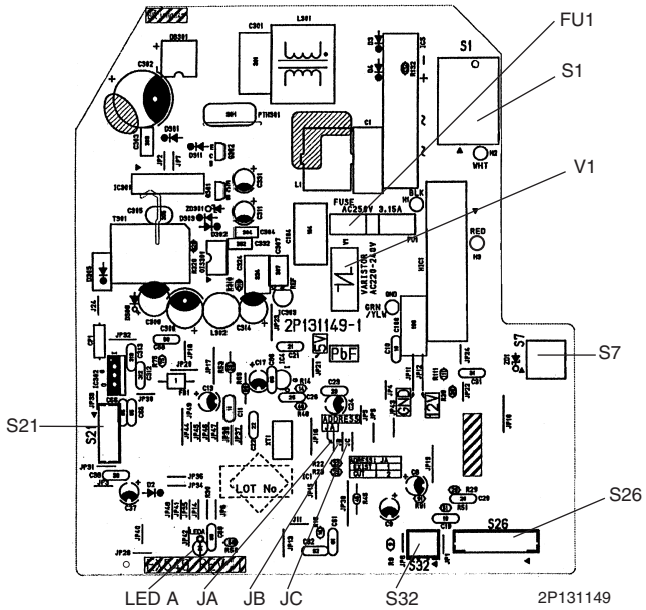
1) V1 Varistor
2) JA Address setting jumper
   JB Fan speed setting when compressor is OFF on thermostat
   JC Power failure recovery function
   * Refer to page 193 for more detail.
3) LED A LED for service monitor (green)
4) FU1 Fuse (3.15A)

PCB(2) (Display PCB)

1) SW1 (S1W) Forced operation ON/OFF switch
2) LED1 LED for operation (green)
3) LED2 LED for timer (yellow)
4) LED3 LED for HOME LEAVE operation (red)
5) RTH1 (R1T) Room temperature thermistor

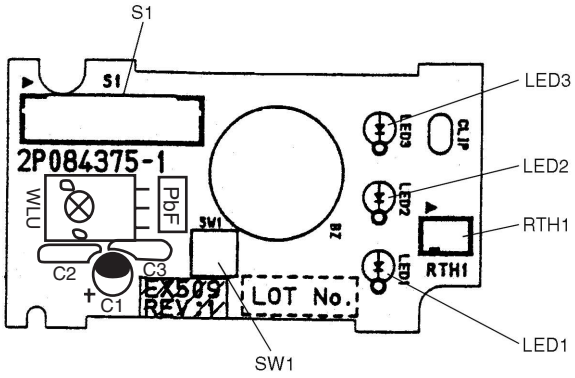
PCB Detail

PCB (1): Control PCB



PCB Detail

PCB (2): Display PCB



2P084375

1.5 Floor / Ceiling Suspended Dual Type

Connectors

PCB(1) (Control PCB)

1)	S6	Connector for swing motor (horizontal swing)
2)	S7	Connector for AC fan motor
3)	S21	Connector for centralized control
4)	S24	Connector for display PCB
5)	S26	Connector for signal receiver PCB
6)	S32	Connector for heat exchanger thermistor
7)	S37	Connector for power supply PCB

PCB(2) (Power Supply PCB)

1)	S36	Connector for control PCB

PCB(3) (Display PCB)

1)	S25	Connector for control PCB

PCB(4) (Signal Receiver PCB)

1)	S27	Connector for control PCB
2)	S31	Connector for room temperature thermistor

Note: Other designations

PCB(1) (Control PCB)

1)	JA	Address setting jumper
	JB	Fan speed setting when compressor is OFF on thermostat
	JC	Power failure recovery function
		∗ Refer to page 193 for detail.
2)	SW2	Select switch ceiling or floor
3)	LED A	LED for service monitor (green)

PCB(2) (Power Supply PCB)

1)	V1	Varistor
1)	FU1	Fuse (3.15A)

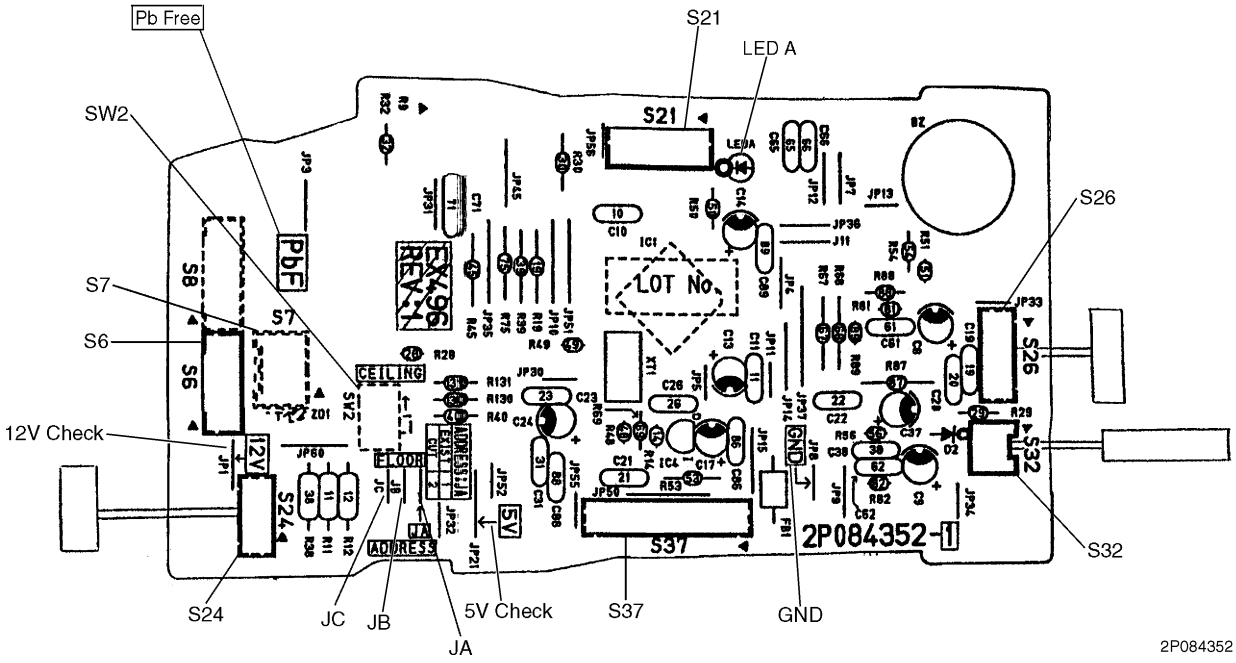
PCB(3) (Display PCB)

1)	LED1	LED for operation (green)
2)	LED2	LED for timer (yellow)
3)	LED3	LED for HOME LEAVE operation (red)

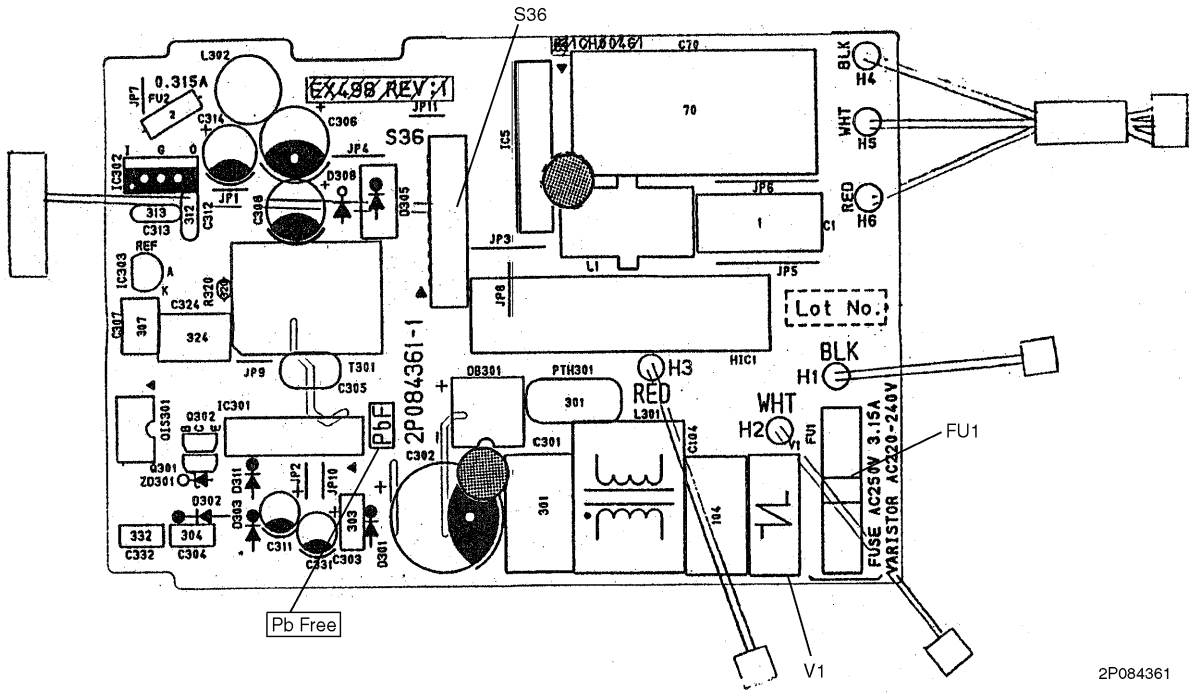
PCB(4) (Signal Receiver PCB)

1)	SW1 (S1W)	Forced operation ON/OFF switch

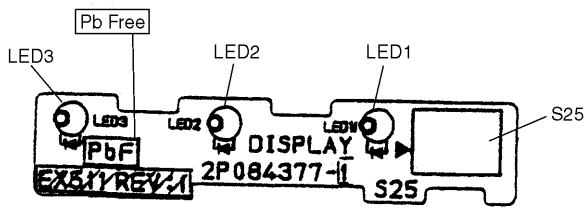
PCB Detail PCB (1): Control PCB



PCB Detail PCB (2): Power Supply PCB

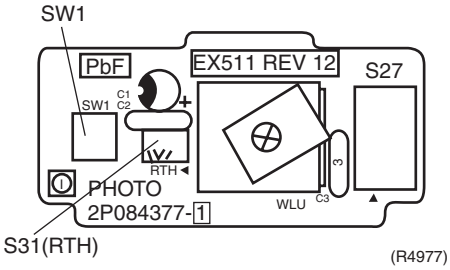


PCB (3): Display PCB



(R5611)

PCB (4): Signal Receiver PCB



(R4977)

1.6 Floor Standing Type

Connectors

PCB(1) (Power Supply PCB)

1)	S8, S202, S204	Connector for control PCB

PCB(2) (Control PCB)

1)	S6	Connector for swing motor and lower air outlet motor
2)	S21	Connector for centralized control
3)	S23	Connector for display PCB
4)	S31, S32	Connector for room temperature / heat exchanger thermistor
5)	S7, S201, S203	Connector for power supply PCB
6)	S25	Connector for signal receiver PCB
7)	S301, S302	Connector for DC fan motors

PCB(3) (Signal Receiver PCB)

1)	S26	Connector for control PCB

PCB(4) (Display PCB)

1)	S24	Connector for control PCB

Note: Other Designations

PCB(2) (Control PCB)

1)	V1	Varistor
2)	JA	Address setting jumper
	JB	Fan speed setting when compressor is OFF on thermostat
	JC	Power failure recovery function
		∗ Refer to page 193 for detail.
3)	FU	Fuse (3.15A)
4)	LED A	LED for service monitor (green)

PCB(3) (Signal Receiver PCB)

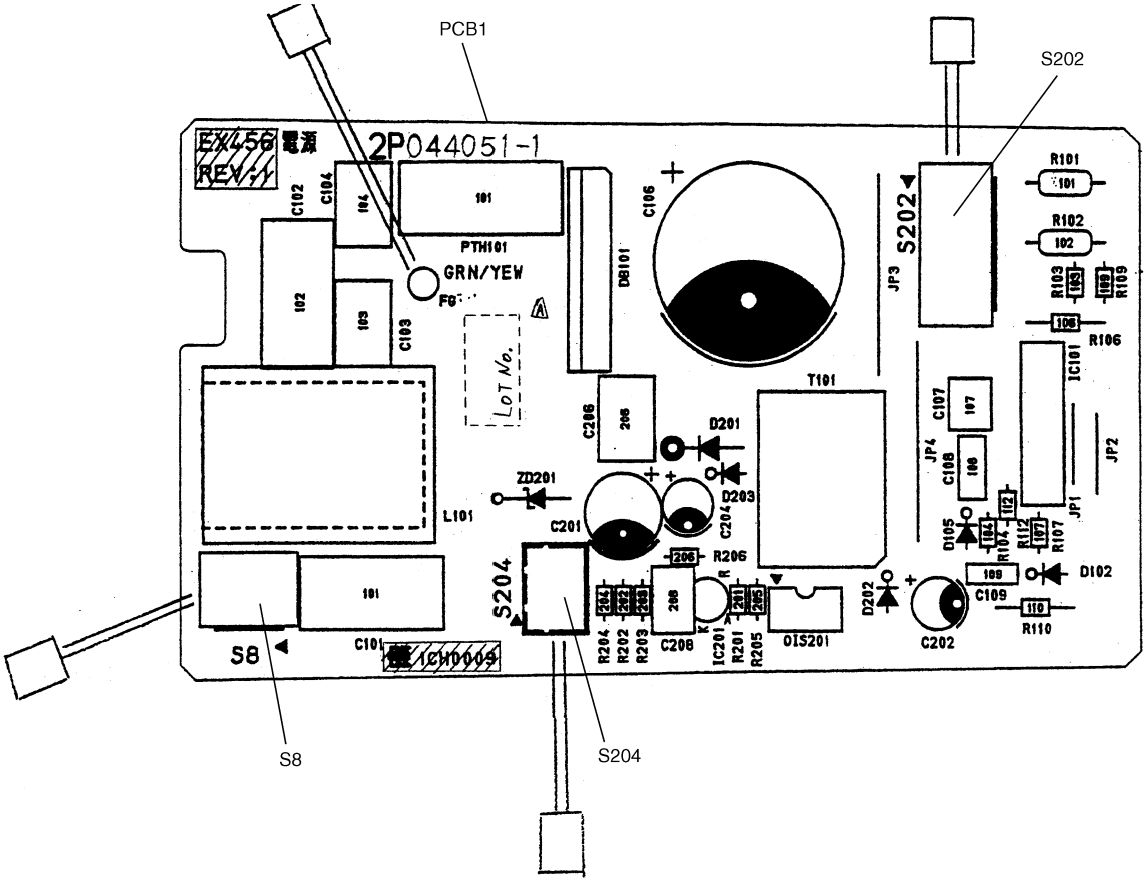
1)	SW2	Changing upward air flow limit switch
2)	SW4	Discharge changeover switch

PCB(4) (Display PCB)

1)	SW1 (S1W)	Forced operation ON/OFF switch
2)	LED11	LED for operation (green)
3)	LED12	LED for timer (yellow)
4)	LED14	LED for HOME LEAVE operation (red)

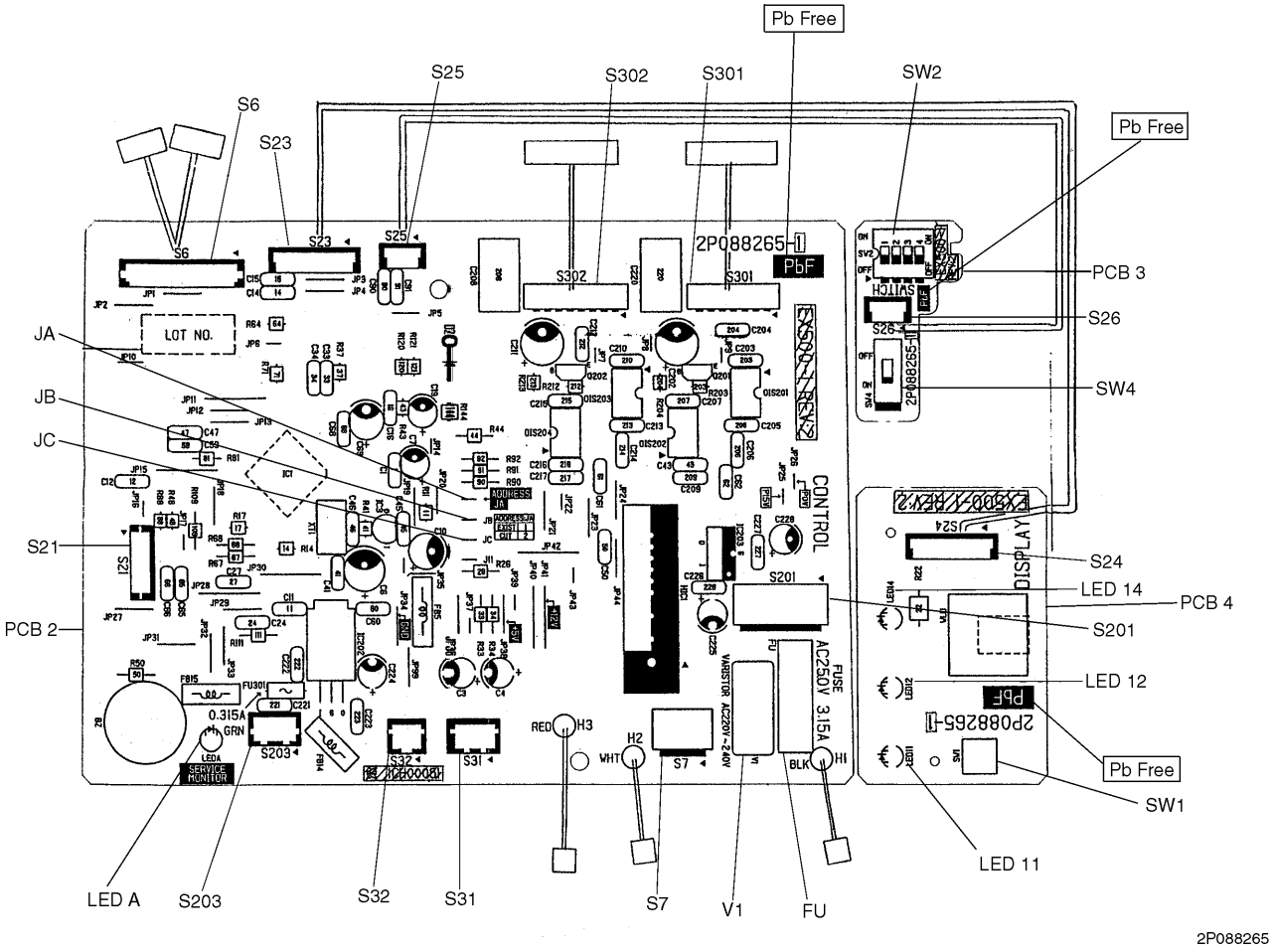
PCB Detail

PCB (1): Power Supply PCB



PCB Detail

PCB (2): Control PCB
PCB (3): Signal Receiver PCB
PCB (4): Display PCB



1.7 Ceiling Mounted Cassette Type (600×600)

Connectors

PCB(1)(Control PCB [A1P])

1)	X5A	Connector for terminal strip (for wired remote controller)
2)	X10A, X11A	Connector for transformer
3)	X15A	Connector for float switch
4)	X17A, X18A	Connector for heat exchanger thermistor
5)	X19A	Connector for room temperature thermistor
6)	X20A	Connector for fan motor
7)	X24A	Connector for signal receiver PCB (when the wireless remote controller is used)
8)	X25A	Connector for drain pump motor
9)	X27A	Connector for terminal strip (for inter unit wiring)
10)	X33A	Optional connector for wiring adaptor PCB
11)	X35A	Optional connector for group control adaptor
12)	X36A	Connector for swing motor
13)	X40A	Optional connector for ON/OFF input from outside
14)	X60A, X61A	Optional connector for interface adaptor

PCB(2)(Signal Receiver PCB [A3P])

1)	X1A	Connector for display PCB
2)	X2A	Connector for control PCB

PCB(3)(Display PCB [A4P])

1)	X1A	Connector for signal receiver PCB

Note: Other designation

PCB(1)(Control PCB [A1P])

1)	HAP	Service monitor LED

PCB(2)(Signal Receiver PCB [A3P])

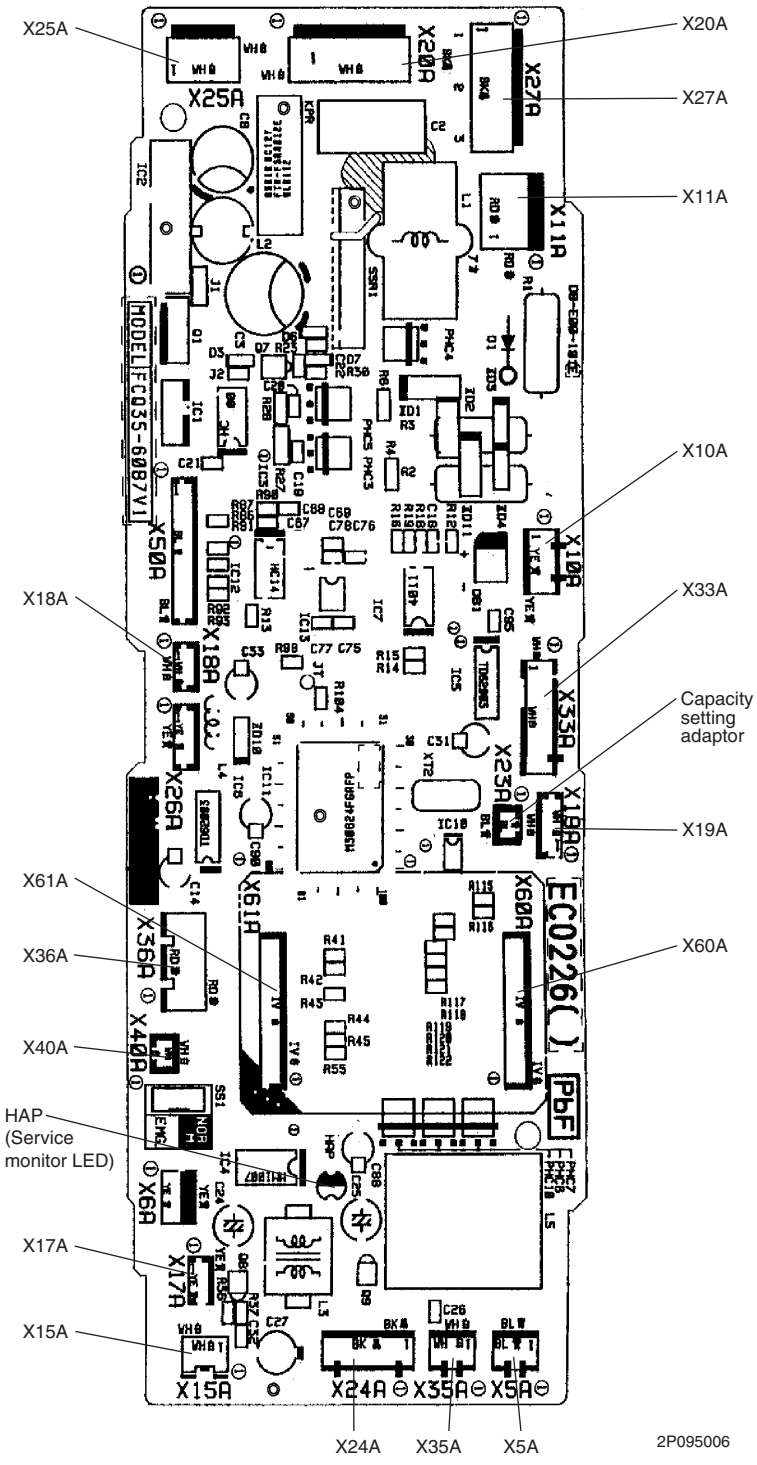
1)	SS2	Address setting switch

PCB(3)(Display PCB [A4P])

1)	BS1	Forced operation ON/OFF switch
2)	LED1(H1P)	LED for operation (red)
3)	LED2(H2P)	LED for timer (green)
4)	LED3(H3P)	LED for filter cleaning sign (red)
5)	LED4(H4P)	LED for defrost operation (orange)

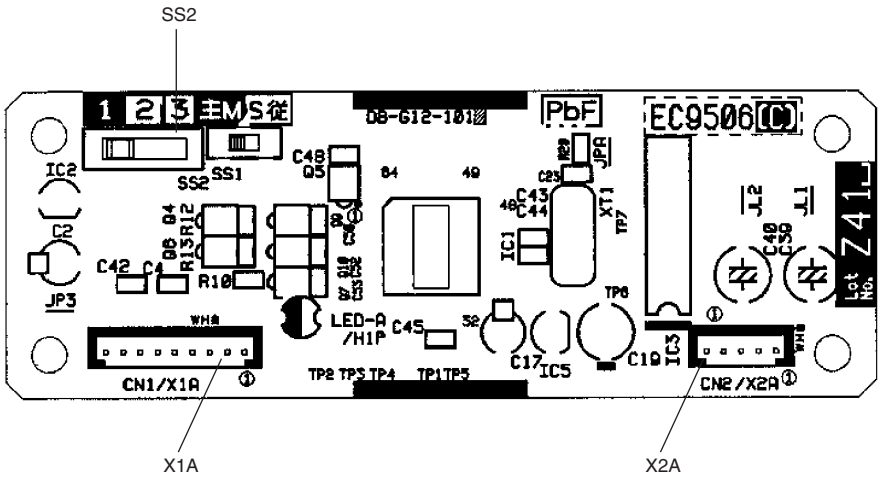
PCB Detail

PCB(1): Control PCB (A1P)



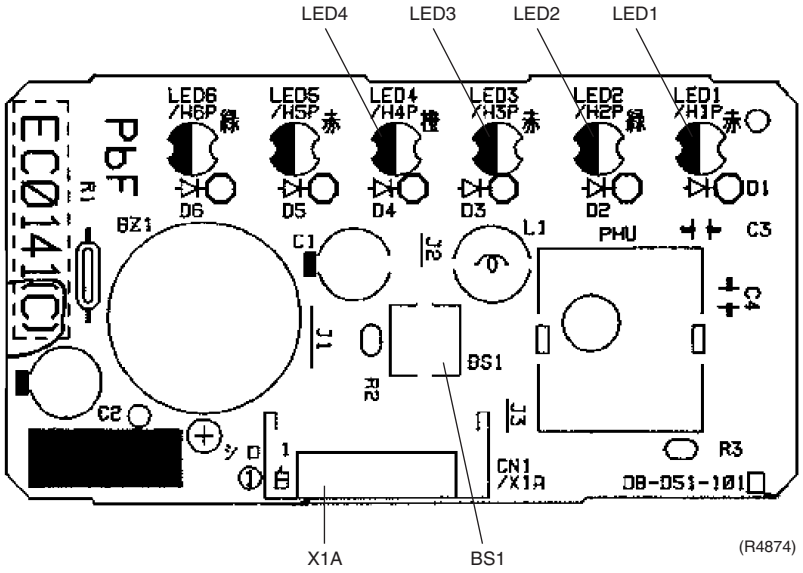
PCB Detail

PCB(2): Signal Receiver PCB (A3P)



(R4873)

PCB(3): Display PCB (A4P)



(R4874)

1.8 Ceiling Mounted Cassette Type (950×950)

Connectors

PCB(1)(Control PCB [A1P])

1)	X5A	Connector for terminal strip (for wired remote controller)
2)	X10A, X11A	Connector for transformer
3)	X15A	Connector for float switch
4)	X17A, X18A	Connector for heat exchanger thermistor
5)	X19A	Connector for room temperature thermistor
6)	X20A	Connector for fan motor
7)	X24A	Connector for signal receiver PCB (when the wireless remote controller is used)
8)	X25A	Connector for drain pump motor
9)	X27A	Connector for terminal strip (for inter unit wiring)
10)	X33A	Optional connector for wiring adaptor PCB
11)	X35A	Optional connector for group control adaptor
12)	X36A	Connector for swing motor
13)	X60A, X61A	Optional connector for interface adaptor

PCB(2)(Signal Receiver PCB [A2P])

1)	X1A	Connector for display PCB
2)	X2A	Connector for control PCB

PCB(3)(Display PCB [A3P])

1)	X1A	Connector for signal receiver PCB

Note: Other designation

PCB(1)(Control PCB [A1P])

1)	HAP	Service monitor LED

PCB(2)(Signal Receiver PCB [A2P])

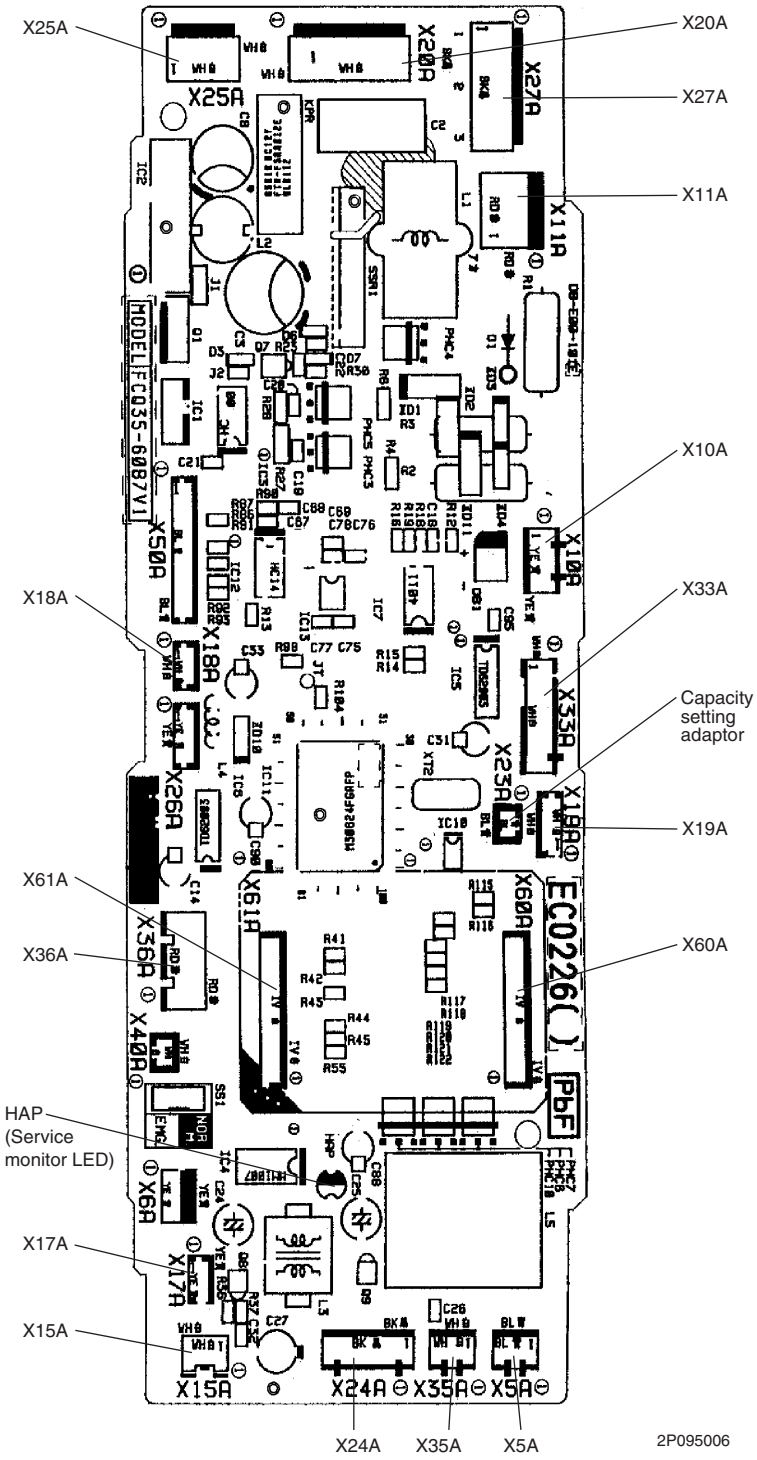
1)	SS2	Address setting switch

PCB(3)(Display PCB [A3P])

1)	BS1	Forced operation ON/OFF switch
2)	LED1(H1P)	LED for operation (red)
3)	LED2(H2P)	LED for timer (green)
4)	LED3(H3P)	LED for filter cleaning sign (red)
5)	LED4(H4P)	LED for defrost operation (orange)

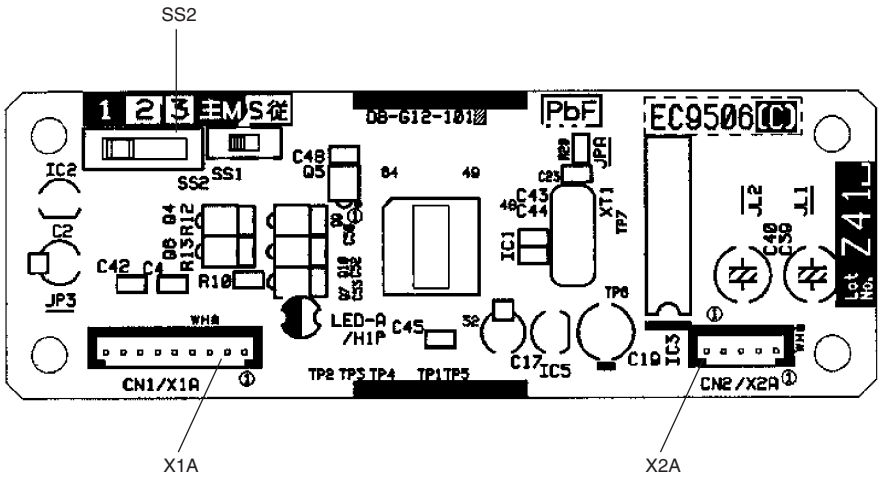
PCB Detail

PCB(1): Control PCB (A1P)



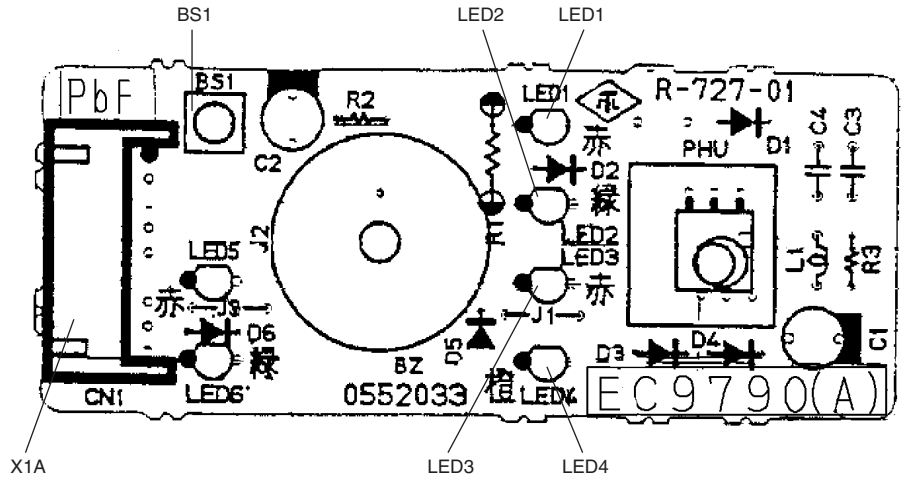
PCB Detail

PCB(2): Signal Receiver PCB (A2P)



(R4873)

PCB(3): Display PCB (A3P)



(R4955)

1.9 Ceiling Mounted Built-in Type

Connectors

Control PCB [A1P]

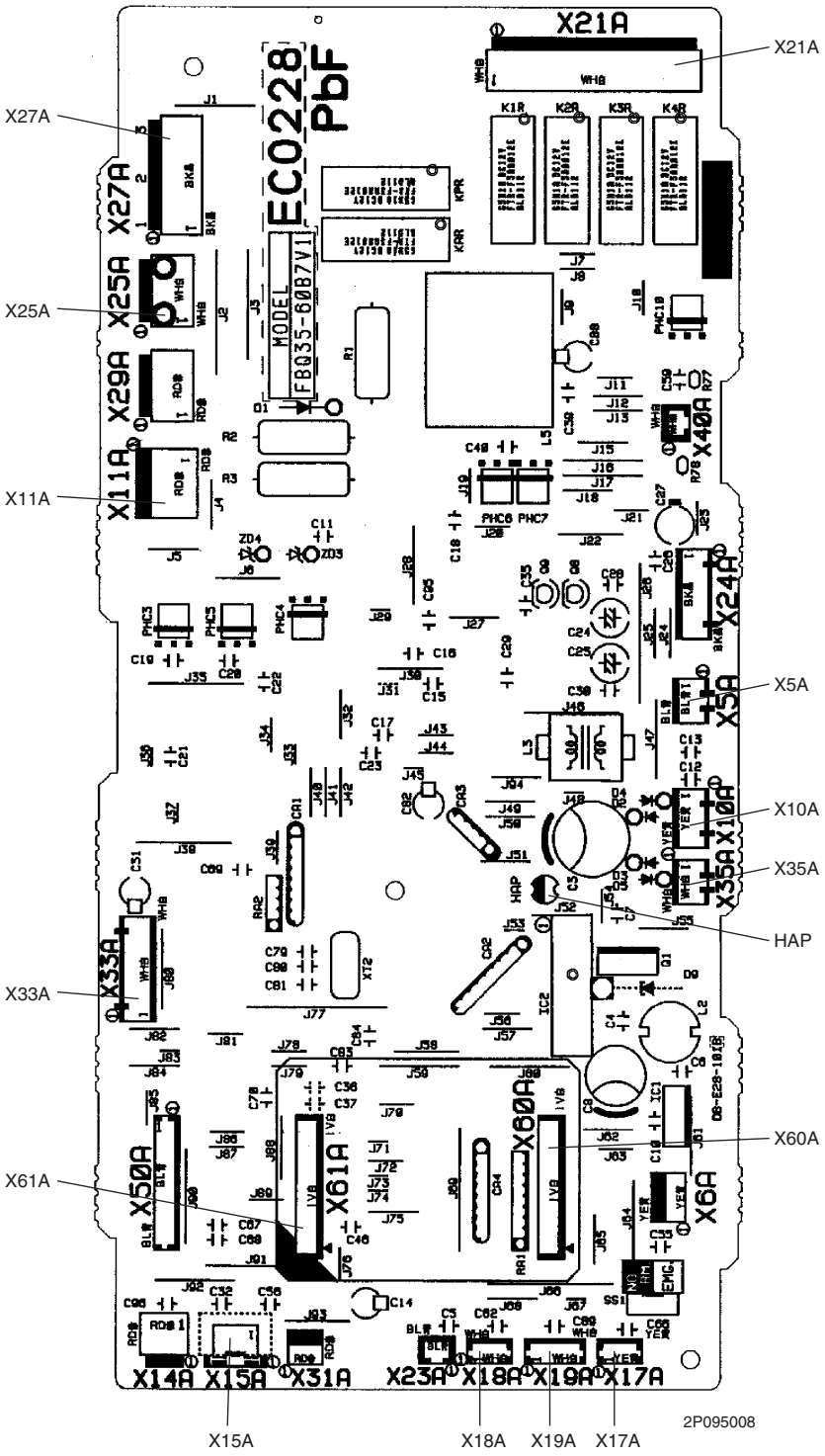
1)	X5A	Connector for terminal strip (for wired remote controller)
2)	X10A, X11A	Connector for transformer
3)	X15A	Connector for float switch
4)	X17A, X18A	Connector for heat exchanger thermistor
5)	X19A	Connector for room temperature thermistor
6)	X21A	Connector for fan motor
7)	X25A	Connector for drain pump motor
8)	X27A	Connector for terminal strip (for inter unit wiring)
9)	X33A	Optional connector for wiring adaptor PCB
10)	X35A	Optional connector for group control adaptor
11)	X60A, X61A	Optional connector for interface adaptor

Note: Other designation
Control PCB [A1P]

1)	HAP	Service monitor LED

PCB Detail

Control PCB (A1P)



1.10 Ceiling Suspended Type

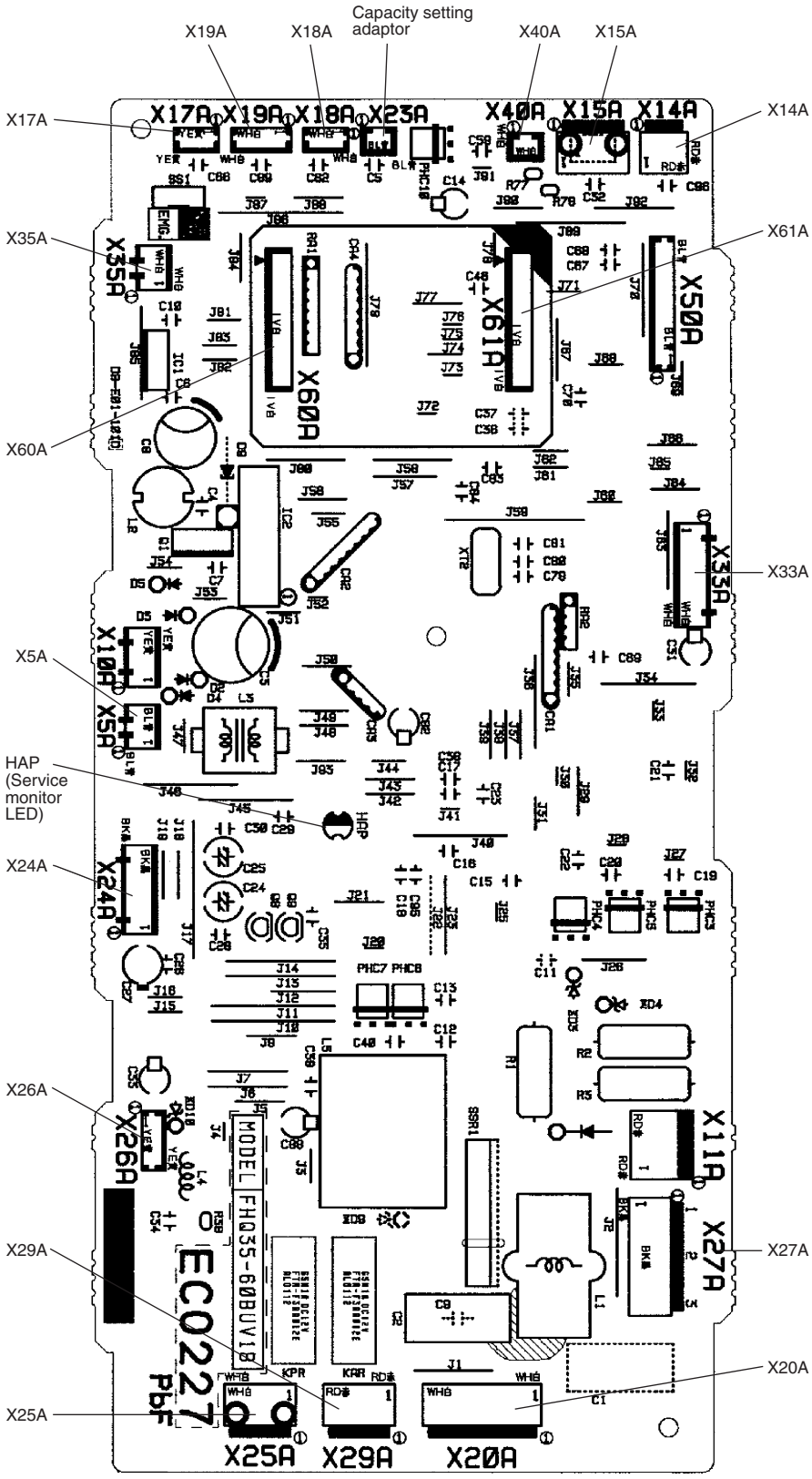
Connectors

1)	X5A	Connector for Terminal Strip (for Wired Remote Controller)
2)	X14A	Connector for Limit Switch (for Swing Flap)
3)	X15A	Connector for Drain Pump (Optional Accessory)
4)	X17A	Connector for Heat Exchanger Thermistor (2)
5)	X18A	Connector for Heat Exchanger Thermistor (1)
6)	X19A	Connector for Room Temperature Thermistor
7)	X20A, X26A	Connector for Fan Motor
8)	X24A	Connector for Wireless Remote Controller Receiver Unit
9)	X25A	Connector for Drain Pump Motor (Optional Accessory)
10)	X27A	Connector for Terminal Strip (for Inter Unit Wiring)
11)	X29A	Connector for Swing Motor
12)	X33A	Connector for Wring Adaptor PCB (Optional Accessory)
13)	X35A	Connector for Group Control Adaptor (Optional Accessory)
14)	X40A	Connector for ON/OFF Input from Outside (for Optional Accessory)
15)	X60A, X61A	Connector for Interface Adaptor (Optional Accessory)

Note: Other Designation

1)	HAP	Service Monitor LED

PCB Detail



2P095007

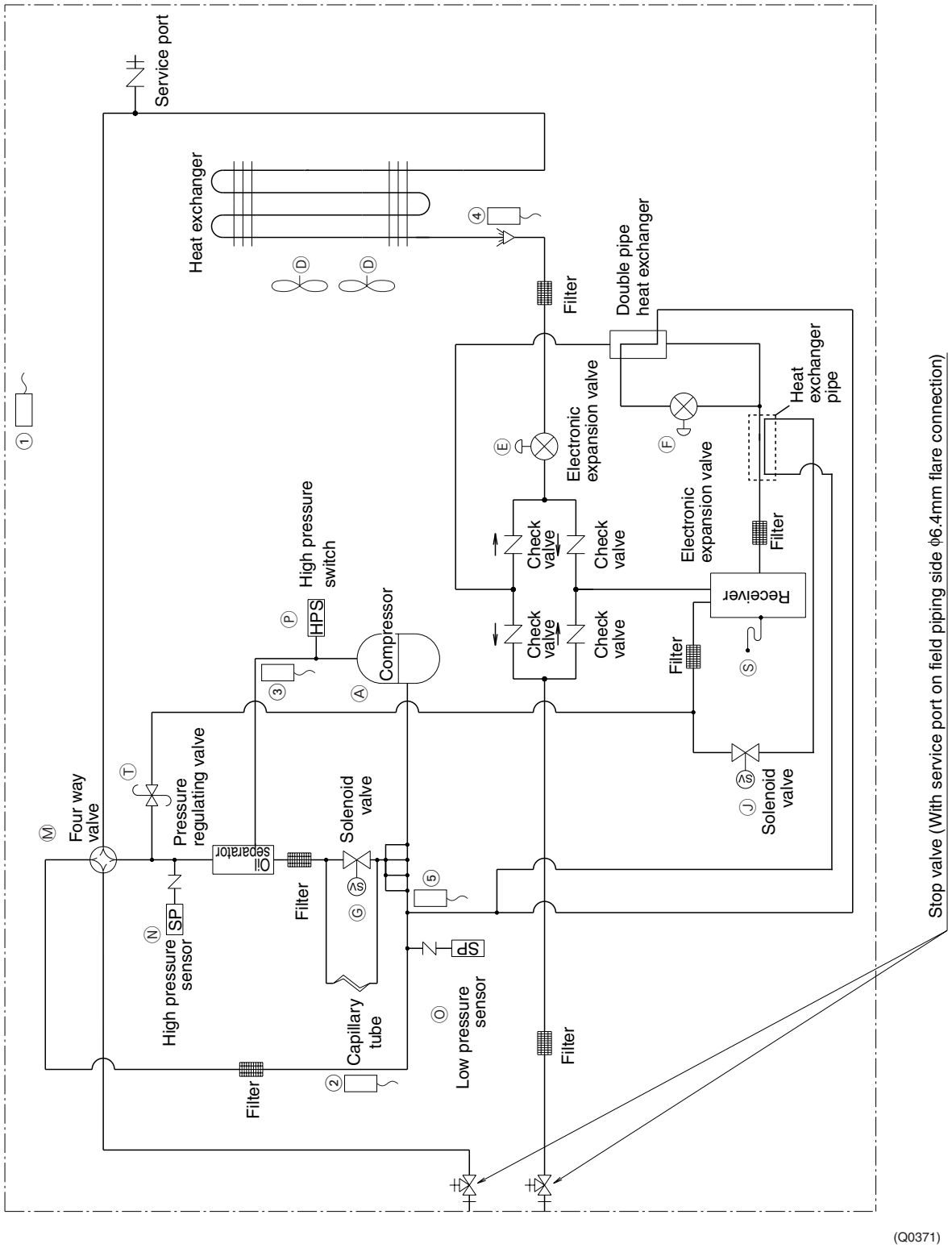
Part 4
Refrigerant Circuit

1. Refrigerant Circuit

1.1 Outdoor Units

No. in refrigerant system diagram	Symbol	Name	Major Function
A	M1C	Inverter compressor (INV)	Inverter compressor is operated on frequencies between 52 Hz and 190 Hz by using the inverter. 25 steps
D	M1F M2F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 8-step rotation speed by using the inverter.
E	Y1E	Electronic expansion valve (Main: EV1)	While in heating operation, PI control is applied to keep the outlet superheated degree of air heat exchanger constant.
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.
J	Y2S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.
M	Y3S	Four way valve	Used to switch the operation mode between cooling and heating.
N	S1NPH	High pressure sensor	Used to detect high pressure.
O	S1NPL	Low pressure sensor	Used to detect low pressure.
P	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 4.0 MPa or more to stop the compressor operation.
S	—	Fusible plug	In order to prevent the increase of pressure when abnormal heating is caused by fire or others, the fusible part of the plug is molten at a temperature of 70 to 75°C to release the pressure into the atmosphere.
T	—	Pressure regulating valve 1 (Receiver to discharge pipe)	This valve opens at a pressure of 2.0 to 2.7 MPa for prevention of pressure increase, thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature, keep the suction superheated degree constant in heating operation, and others.
3	R3T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
4	R4T	Thermistor (Heat exchanger deicer: Tb)	Used to detect liquid pipe temperature of air heat exchanger, determine defrosting operation, and others.
5	R5T	Thermistor (Subcooling heat exchanger gas pipe: Tsh)	Used to detect gas pipe temperature on the evaporation side of subcooling heat exchanger, keep the superheated degree at the outlet of subcooling heat exchanger constant, and others.

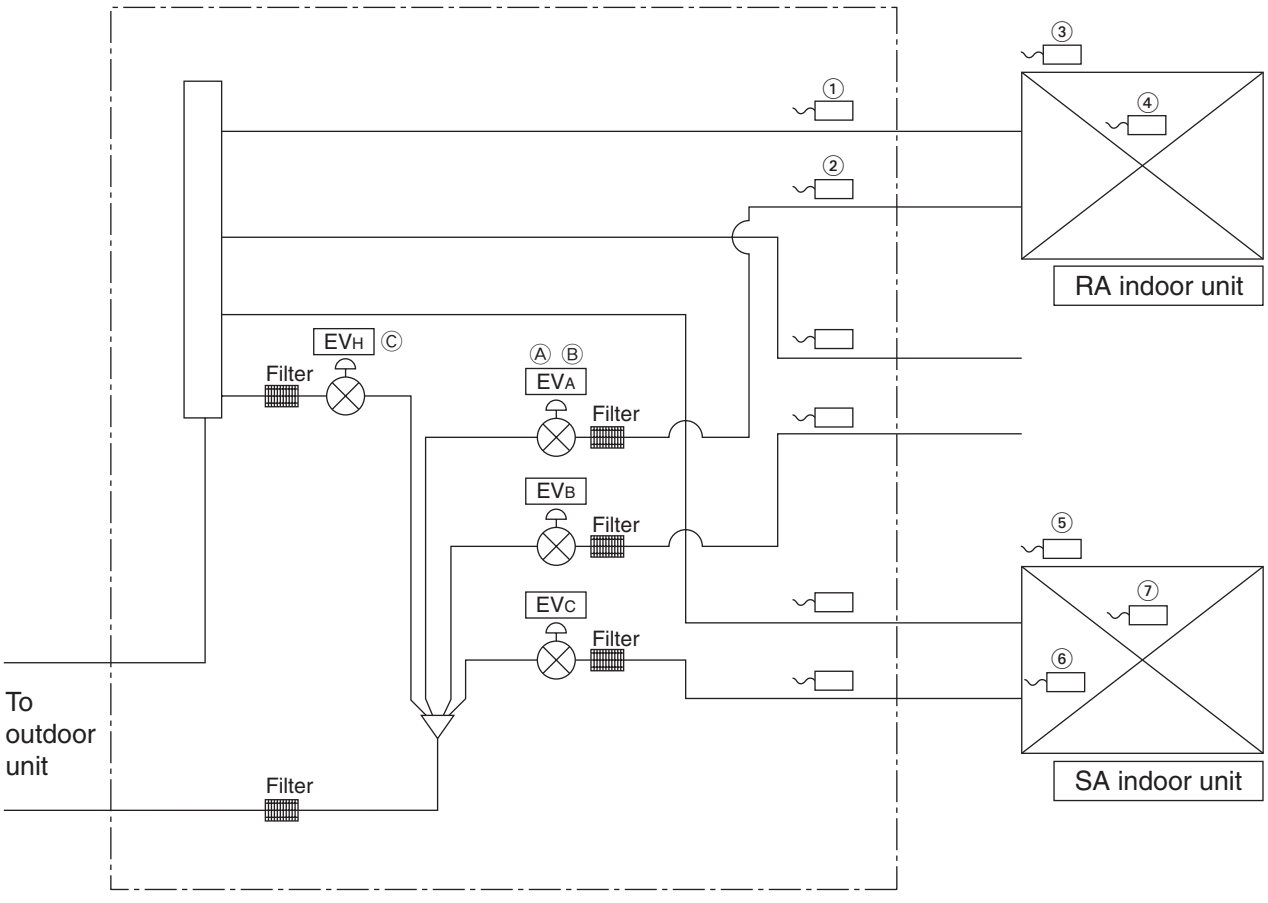
Refrigerant Circuit Diagram



(Q0371)

1.2 BP Units

No. in refrigerant system diagram	Symbol	Name	Major Function
A	EVU	Electronic expansion valve (for operating room)	Among EVA, EVB and EVC, the electronic expansion valve of operating room is called EVU.
B	EVT	Electronic expansion valve (for stopping room)	Among EVA, EVB and EVC, the electronic expansion valve of stopping room is called EVT.
C	EVH	Electronic expansion valve (Bypass)	While in oil return operation, used to adjust the refrigerant circulating rate of indoor unit.
1	DGA ~ DGC	Thermistor (Gas pipe)	While in cooling operation, used to carry out the indoor unit SH control and cooling gas pipe isothermal control.
2	DLA ~ DLC	Thermistor (Liquid pipe)	While in heating operation, used to carry out the indoor unit SC control.
3	R1T	Thermistor (Room temp.)	Used to detect room air temperature and instructs the capacity supply to BP unit.
4	R2T	Thermistor (Heat exchanger)	Used to detect heat exchanger temperature and carry out various protection functions and controls of capacity.
5	R1T	Thermistor (Room temp.)	Used to detect room air temperature and instructs the capacity supply to BP unit.
6	R2T	Thermistor (Heat exchanger 1)	Used to detect heat exchanger temperature and carry out various protection functions and controls of capacity.
7	R3T	Thermistor (Heat exchanger 2)	Used to detect heat exchanger temperature and carry out various protection functions and controls of capacity.

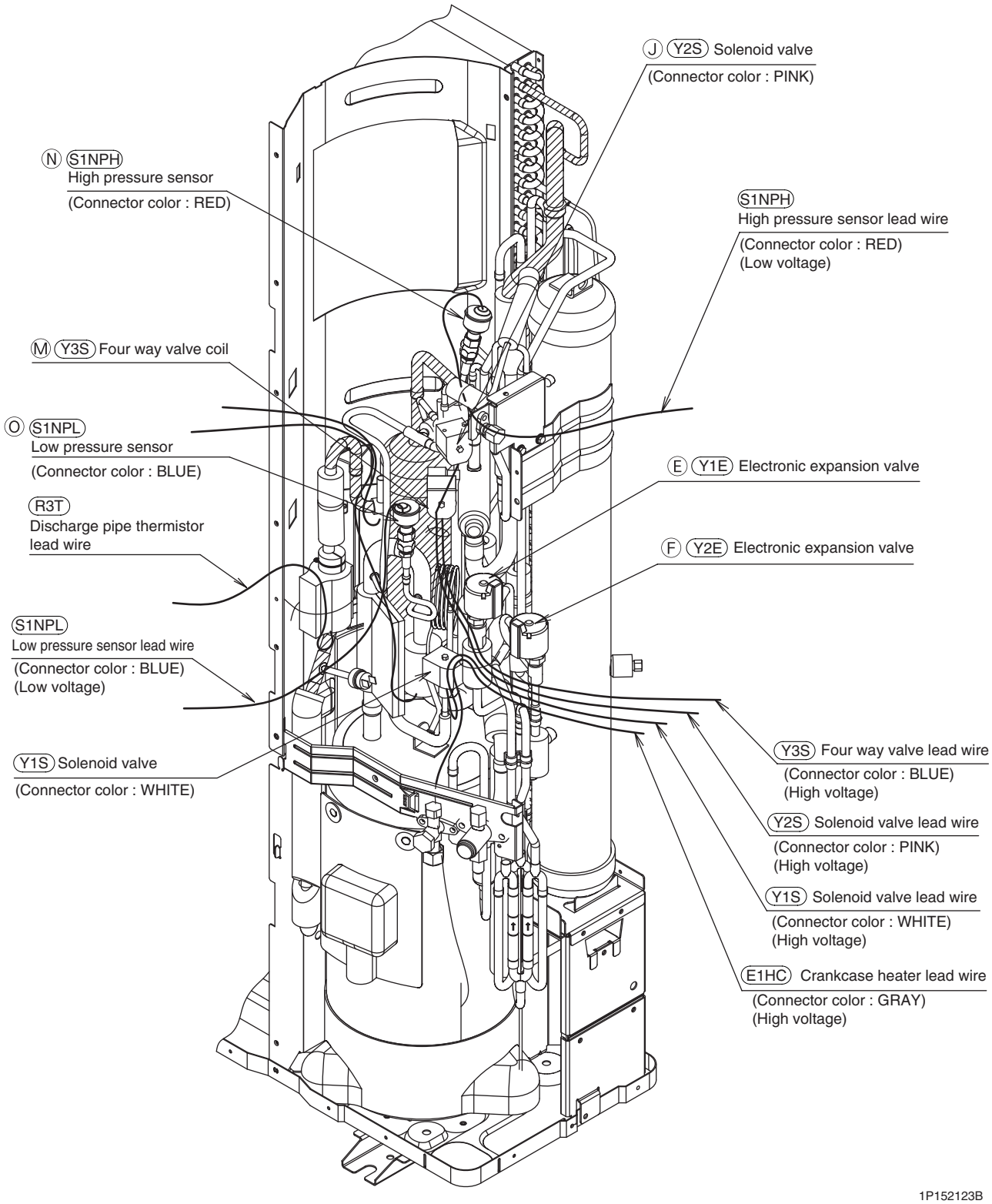


(Q0403)

2. Functional Parts Layout

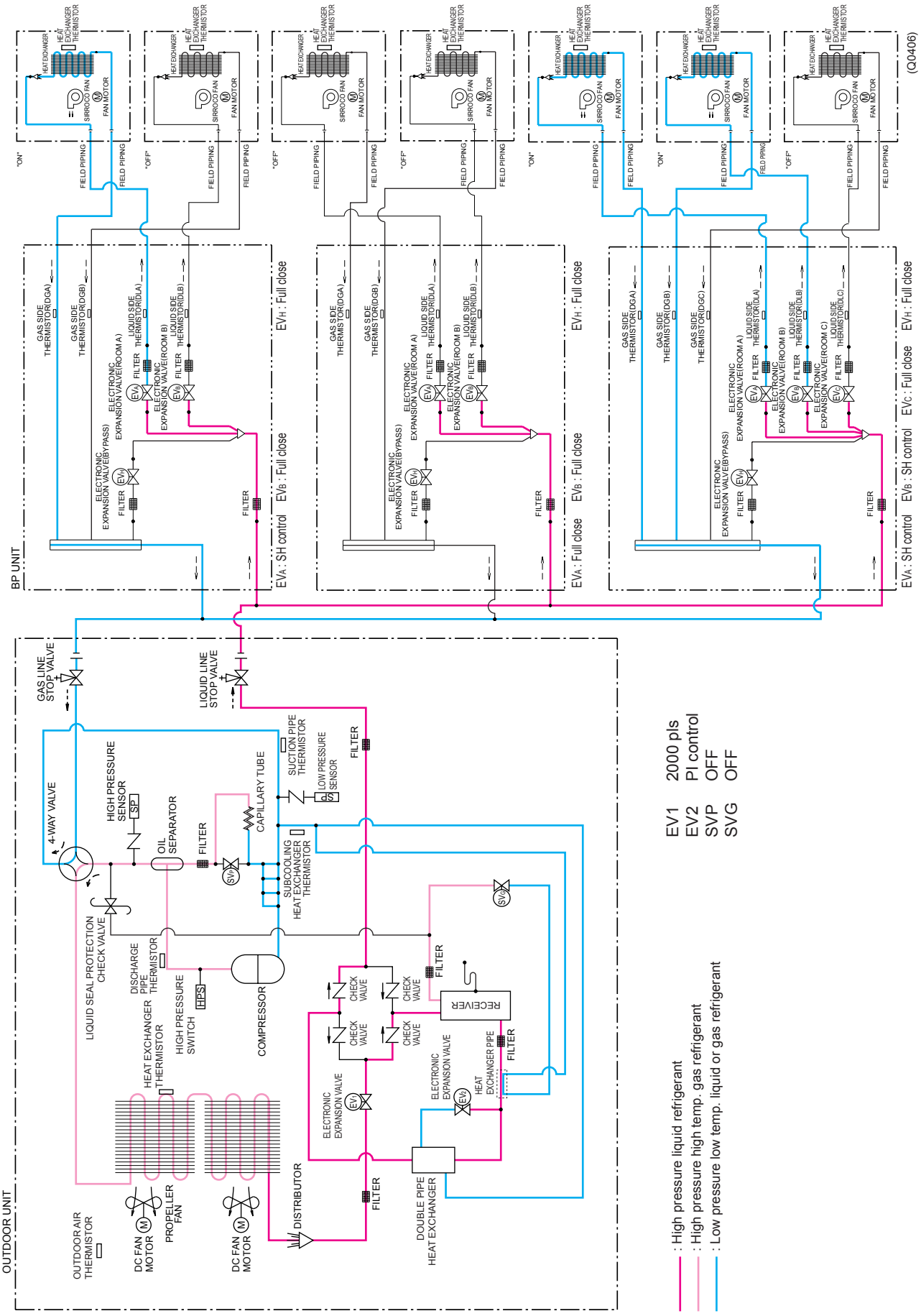
2.1 Outdoor Units

Birds-eye view

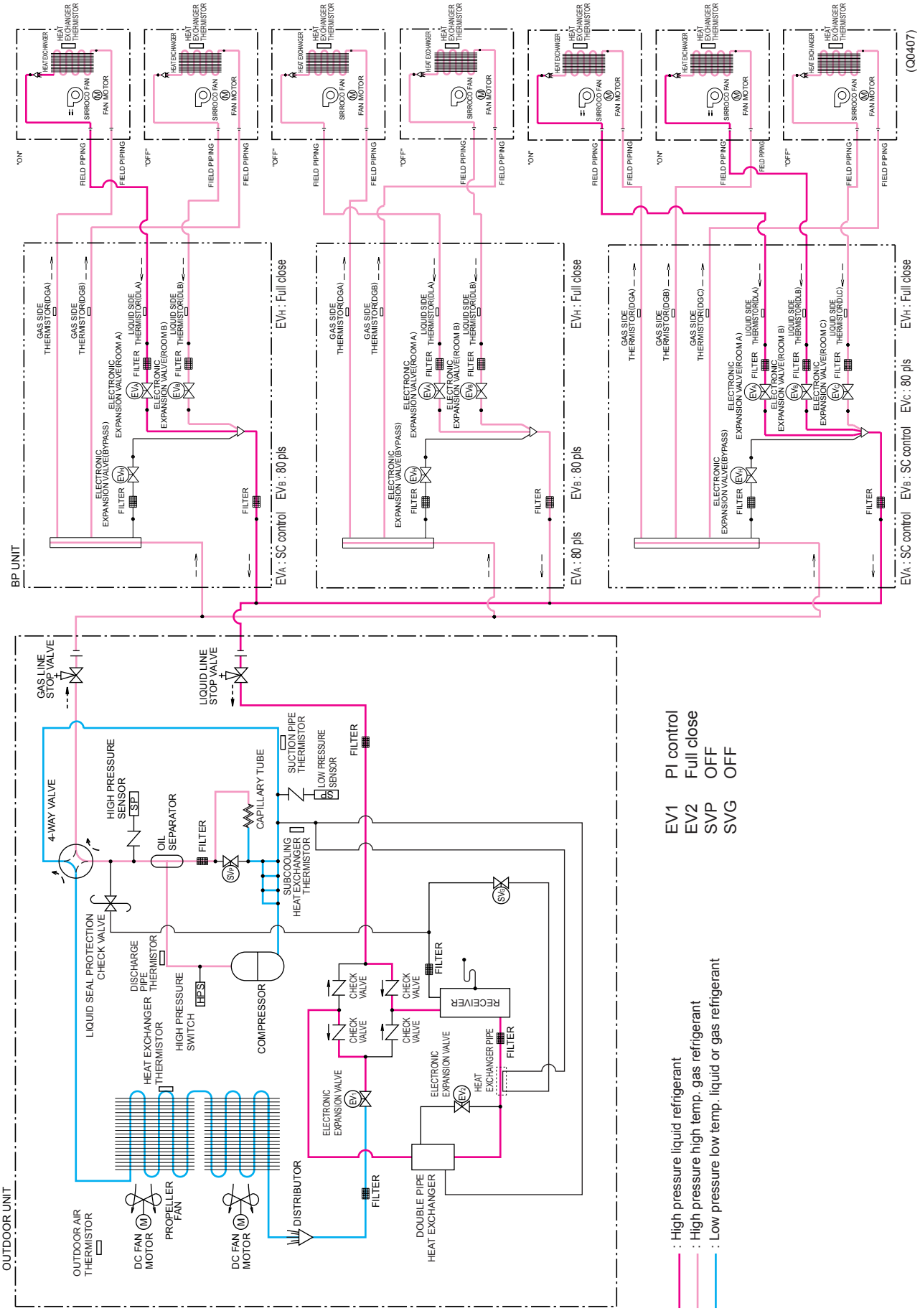


3. Refrigerant Flow for Each Operation Mode

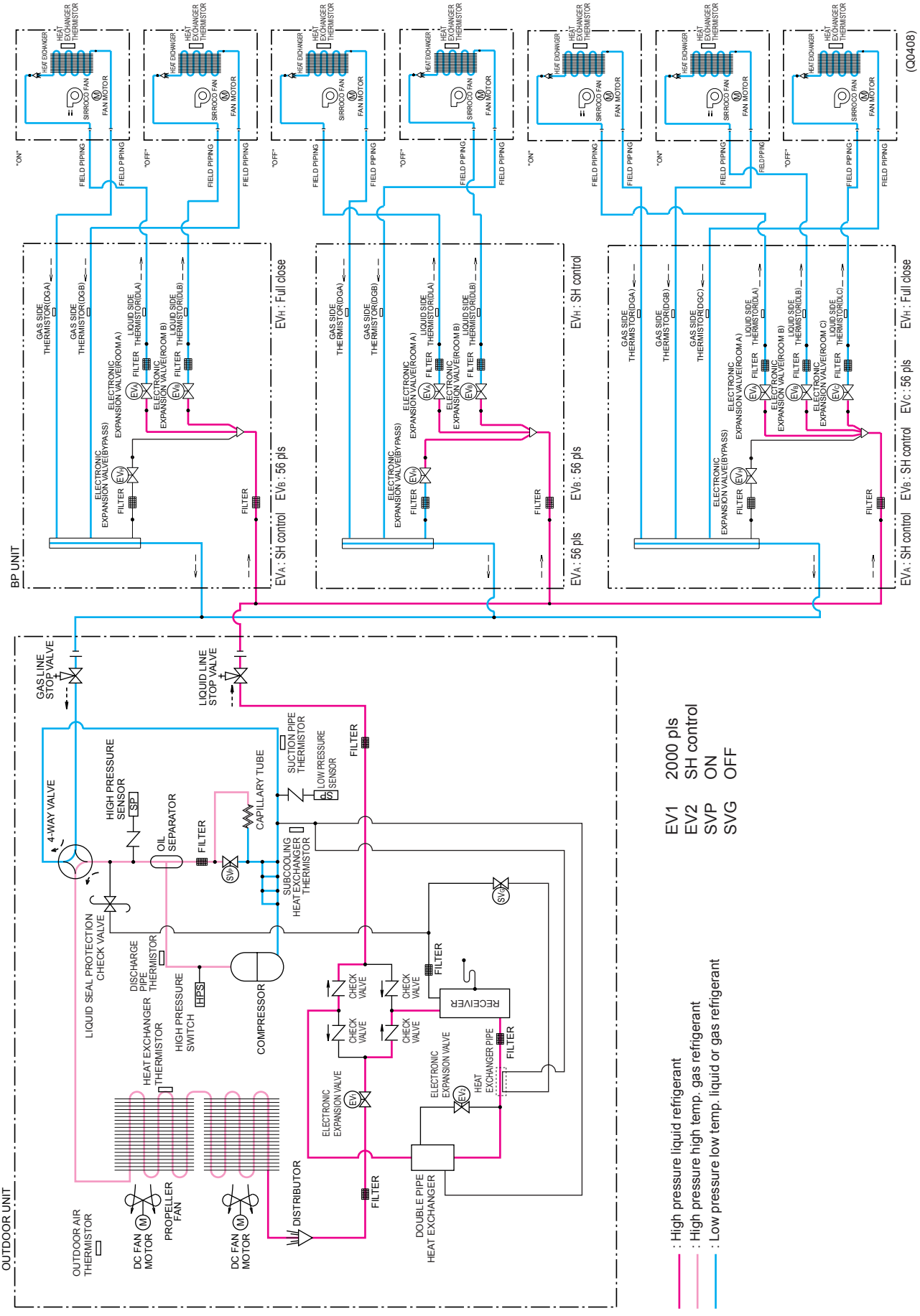
3.1 Cooling Operation



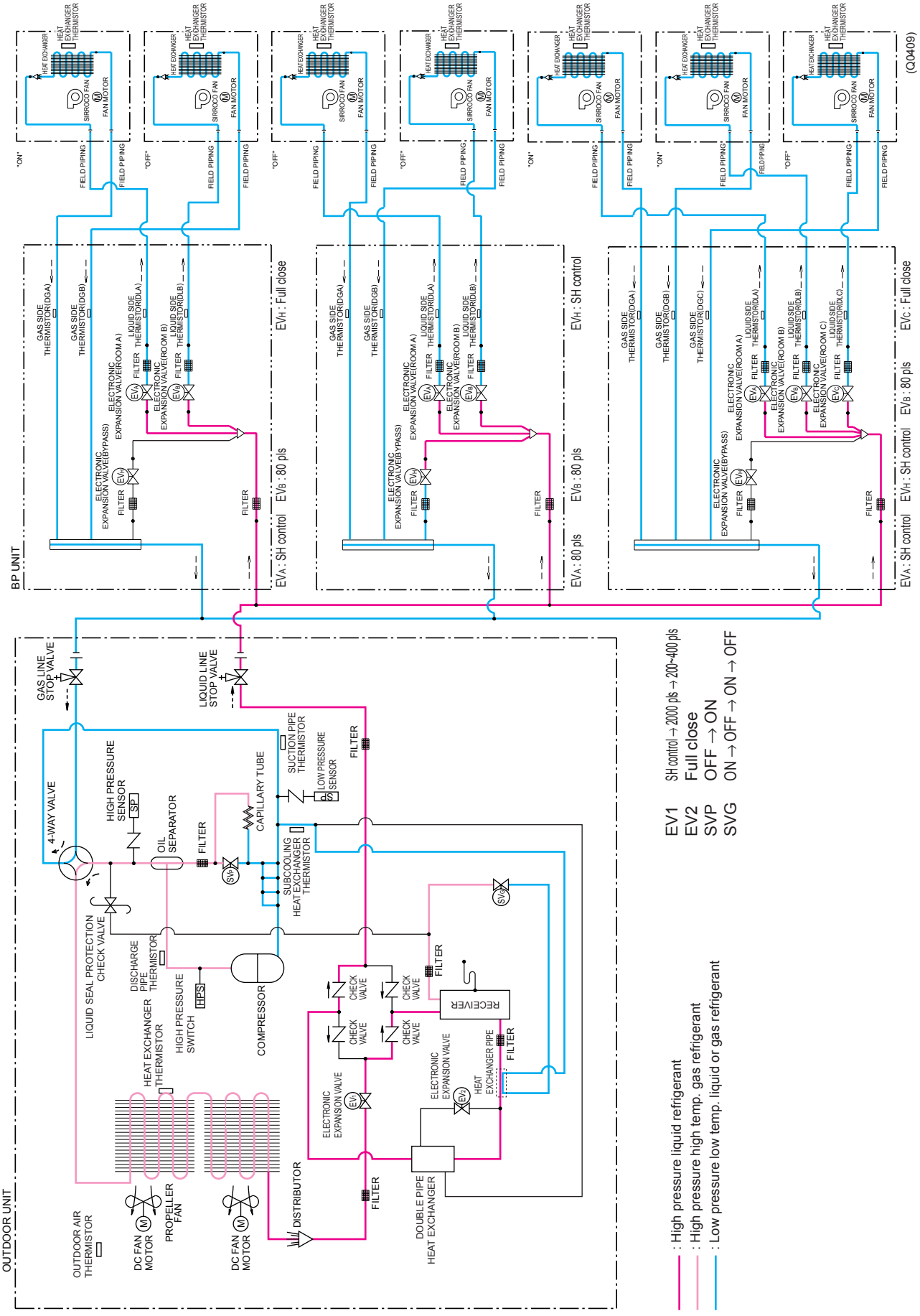
3.2 Heating Operation



3.3 Cooling Oil Return Operation

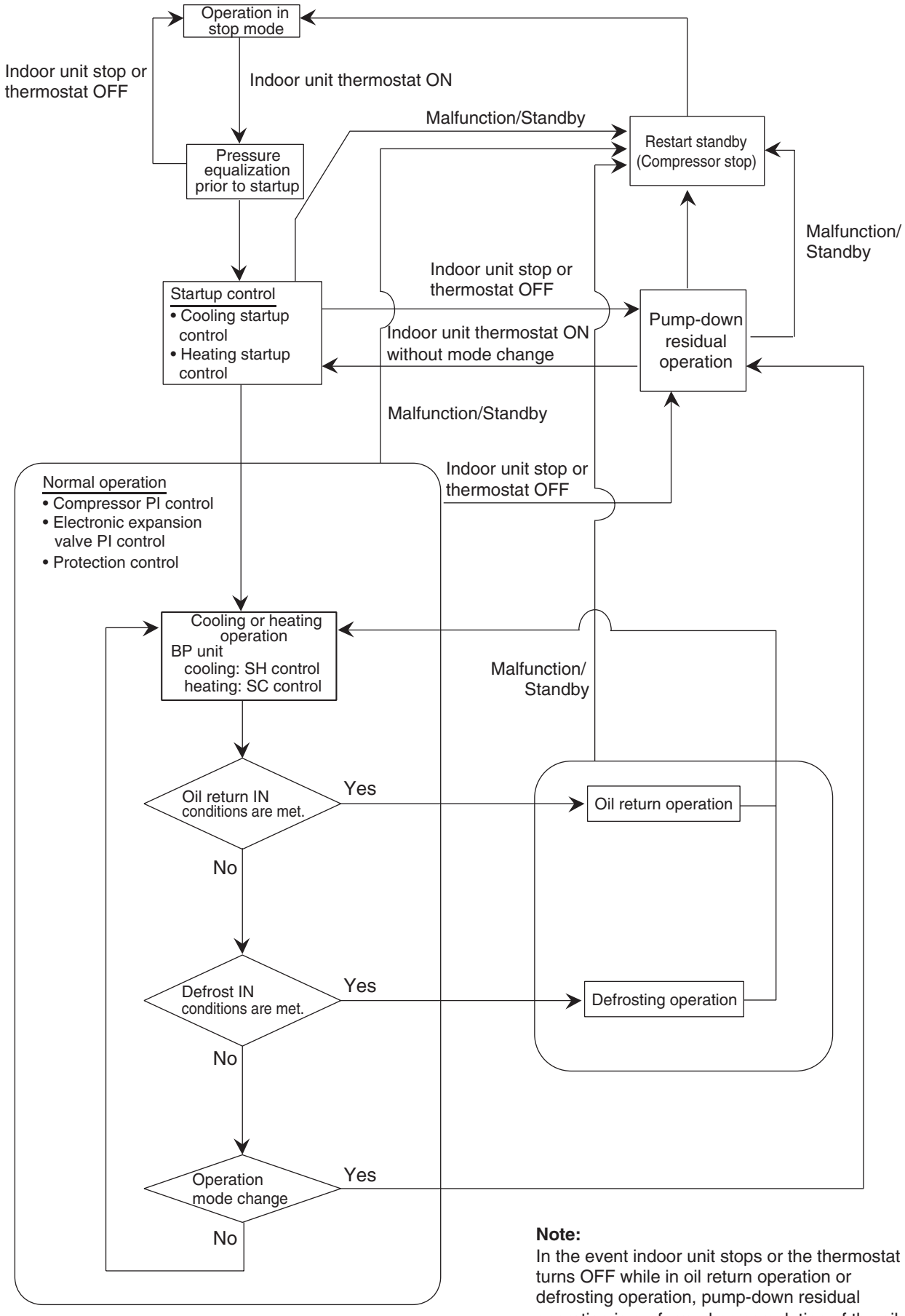


3.4 Heating Oil Return Operation & Defrost Operation



Part 5
Function

1. Operation Mode



Note:
In the event indoor unit stops or the thermostat turns OFF while in oil return operation or defrosting operation, pump-down residual operation is performed on completion of the oil return operation or defrosting operation.

(Q0372)

2. Basic Control

2.1 Normal Operation

■ Cooling Operation

Actuator	Operation	Remarks
Compressor	Compressor PI control	Used for high pressure protection control, low pressure protection control, discharge pipe temperature protection control, compressor operating frequency upper limit control with inverter protection control, dew prevention control, and freeze-up protection control.
Outdoor unit fan	Cooling fan control	—
Four way valve	OFF	—
Main electronic expansion valve (EV1)	2000 pls	—
Subcooling electronic expansion valve (EV2)	PI control	—
Hot gas bypass valve (SVP)	OFF	This valve turns on with low pressure protection control.
Receiver gas discharging valve (SVG)	OFF	This valve turns on with dew prevention control.
BP unit electronic expansion valve (operating room)	SH control	—
BP unit electronic expansion valve (stopping room)	0 pls	—

■ Heating Operation

Actuator	Operation	Remarks
Compressor	Compressor PI control	Used for high pressure protection control, low pressure protection control, discharge pipe temperature protection control, and compressor operating frequency upper limit control with inverter protection control.
Outdoor unit fan	STEP8	The fan step changes to STEP1 with high pressure > 3.2MPa.
Four way valve	ON	—
Main electronic expansion valve (EV1)	PI control	—
Subcooling electronic expansion valve (EV2)	0 pls	The opening of this valve changes with high pressure > 3.2MPa.
Hot gas bypass valve (SVP)	OFF	This valve turns on with low pressure protection control.
Receiver gas discharging valve (SVG)	OFF	—
BP unit electronic expansion valve (operating room)	SC control	—
BP unit electronic expansion valve (stopping room)	80 pls	The opening of this valve changes with insufficient gas control.

★Heating operation is not functional at an outdoor air temperature of 30°CDB or more.

2.2 Compressor PI Control

Compressor PI Control

Carries out the compressor capacity PI control to maintain Te at constant during cooling operation and Tc at constant during heating operation to ensure stable unit performance.

[Cooling operation]

Controls compressor capacity to adjust Te to achieve target value (TeS).

Te : Low pressure equivalent saturation temperature (°C)

TeS : Target Te value
(Varies depending on Te setting, operating frequency, etc.)

TeS initial value

Condition	L	M (Normal) (factory setting)	H
ΔD up	3	6	9
ΔD keep	12	12	12
ΔD down	12	12	13

Te changes corresponding to the capacity which indoor units require the above as the initial value. (However -7 ≤ Te ≤ 15)

[Heating operation]

Controls compressor capacity to adjust Tc to achieve target value (TcS).

Tc : High pressure equivalent saturation temperature (°C)

TcS : Target Tc value
(Varies depending on Tc setting, operating frequency, etc.)

TcS initial value

L	M (Normal) (factory setting)	H
43	46	49

Tc changes corresponding to the capacity which indoor units require the above as the initial value. (However 42 ≤ Tc ≤ 51)

RMK(X)S112 · 140 · 160D, RMKD112 · 140 · 160D

STEP	INV
1	52Hz
2	57Hz
3	62Hz
4	68Hz
5	74Hz
6	80Hz
7	86Hz
8	92Hz
9	98Hz
10	104Hz
11	111Hz
12	118Hz
13	124Hz
14	129Hz
15	134Hz

STEP	INV
16	140Hz
17	146Hz
18	152Hz
19	158Hz
20	164Hz
21	170Hz
22	175Hz
23	180Hz
24	185Hz
25	190Hz

* Compressors may operate in a pattern other than those listed in above tables subject to the operating conditions.

ΔD Control

Receiving the capacity request signal from the indoor unit, the outdoor unit corrects its target pressure for capacity control.

Controls ΔD signal from indoor unit as follows.

UP control: When the UP command come from more than one indoor unit among thermostat-ON indoor units.

Down control: When the down command come from all indoor units among thermostat-ON indoor units.

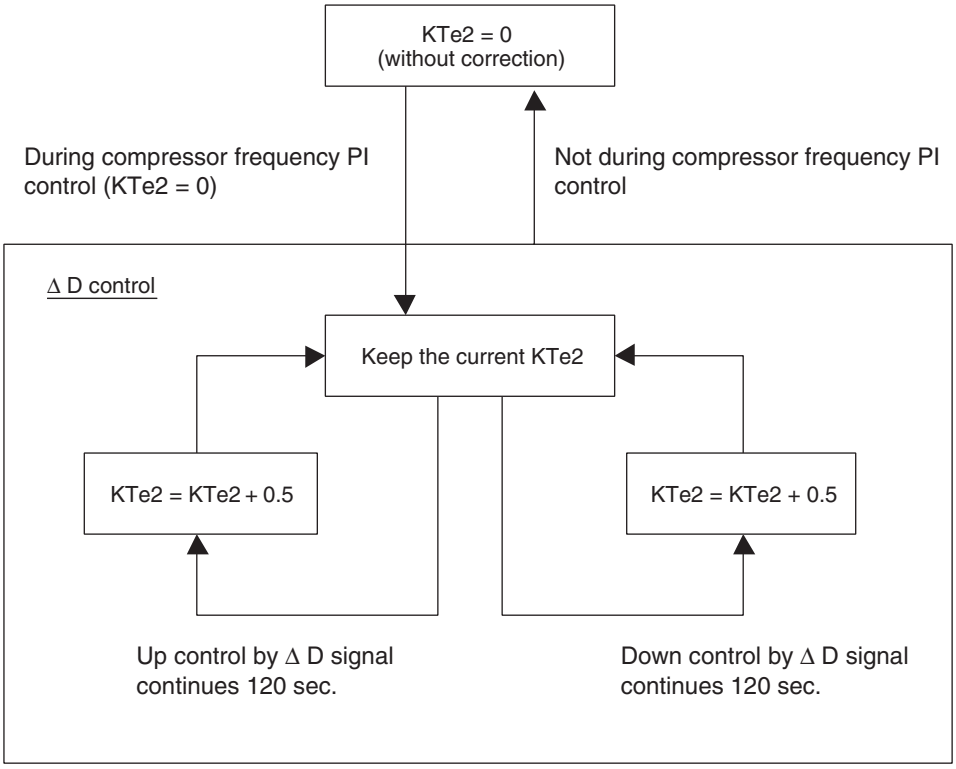
Keep control: Except for the above

About detail of ΔD signal, refer to P128

Cooling Operation

TeS = TeS initial value + KTe2

KTe2 : Correction value by ΔD signal in cooling.

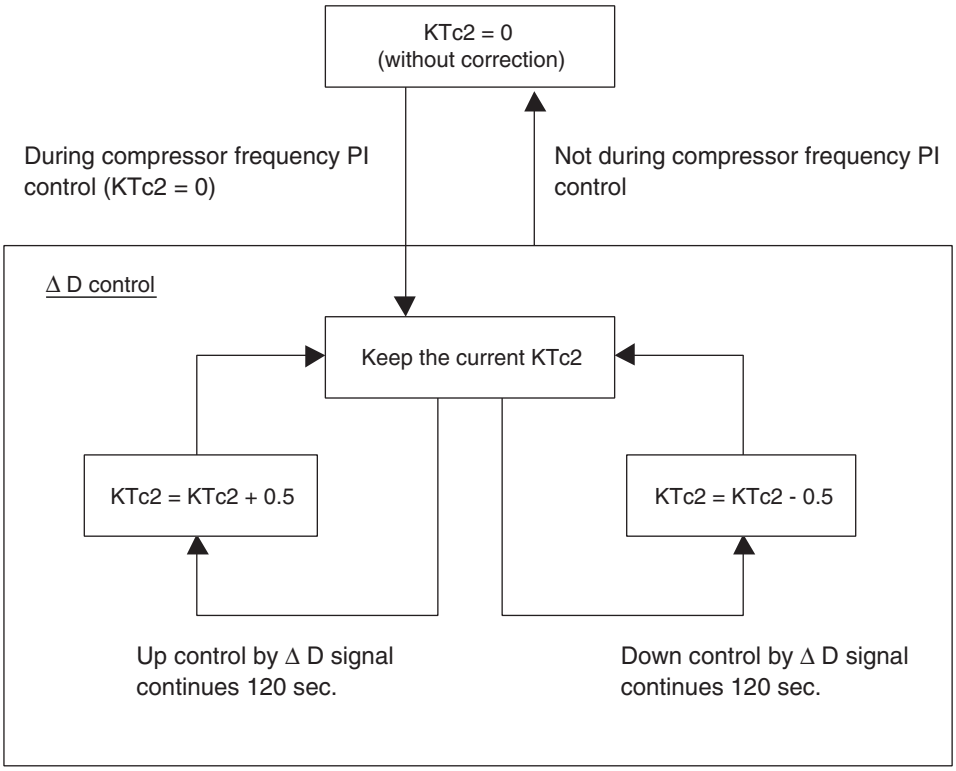


(Q0396)

Heating Operation

TcS = TcS initial value + KTc2

KTc2 : Correction value by ∆D signal in heating.



(Q0397)

2.3 Electronic Expansion Valve PI Control

Main Electronic Expansion Valve EV1 Control

Carries out the electronic expansion valve (Y1E) PI control to maintain the evaporator outlet superheated degree (SH) at constant during heating operation to make maximum use of the outdoor unit heat exchanger (evaporator).

SH = Ts - Te

SH : Evaporator outlet superheated degree (°C)

Ts : Suction pipe temperature detected by thermistor R2T (°C)

Te : Low pressure equivalent saturation temperature (°C)

The optimum initial value of the evaporator outlet superheated degree is 5°C, but varies depending on the discharge pipe superheated degree of inverter compressor.

Subcooling Electronic Expansion Valve EV2 Control

Makes PI control of the electronic expansion valve (Y2E) to keep the superheated degree (SH) of the outlet gas pipe on the evaporator side for the full use of the subcooling heat exchanger.

SH = Tsh -Te

SH : Outlet superheated degree of evaporator (°C)

Tsh : Suction pipe temperature detected with the thermistor R5T (°C)

Te : Low pressure equivalent saturation temperature (°C)

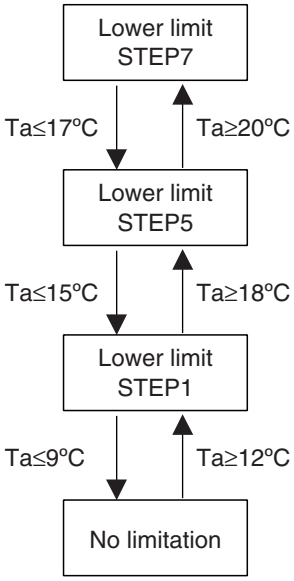
2.4 Cooling Operation Fan Control

In cooling operation with low outdoor air temperature, this control is used to provide the adequate amount of circulation air with liquid pressure secured by high pressure control using outdoor unit fan.

Outline

In cooling operation fan control, outdoor unit fans are controlled by PI control to come the cooling Tc to 34°C.
However in normal operation, the fan control restricts lower limit of the number of rotations according to outdoor air temperature.

Lower Limit Restriction for Cooling Operation Fan Control



Ta: Outdoor air temperature

Fan Steps

Cooling	M1F	M2F
STEP0	0 rpm	0 rpm
STEP1	250 rpm	0 rpm
STEP2	400 rpm	0 rpm
STEP3	285 rpm	250 rpm
STEP4	360 rpm	325 rpm
STEP5	445 rpm	410 rpm
STEP6	580 rpm	545 rpm
STEP7	715 rpm	680 rpm
STEP8	850 rpm	815 rpm

Reference

Heating	M1F	M2F
STEP1	250rpm	0 rpm
STEP8*	850 rpm	815rpm

There are 2 steps in heating operation.
* Depends on models

(Q0373)

3. Special Control

3.1 Startup Control

On activation, following control is performed to lighten load of the compressor by back liquid and the like. Also, the position of the four way valve is defined.

3.1.1 Startup Control in Cooling Operation

Actuator	Operation	Remarks
Compressor	Differential pressure control	Compressor operating frequency increases by 2 step / 20 sec until Pc - Pe>0.4 MPa.
Outdoor unit fan	High pressure control	Initial fan speed is set to STEP 0 (Ta<20°C), or STEP 7 (Ta≥).
Four way valve	OFF	—
Main electronic expansion valve (EV1)	2000 pls	—
Subcooling electronic expansion valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	ON	—
Receiver gas discharging valve (SVG)	OFF	—
Ending conditions	or [• 255 sec. &(• Pc - Pe>0.4 MPa • 75 sec]	
BP unit electronic expansion valve (operating room)	0 pls	—
BP unit electronic expansion valve (stopping room)	0 pls	—

3.1.2 Startup Control in Heating Operation

Actuator	Operation	Remarks
Compressor	Differential pressure control	Compressor operating frequency increases by 2 step / 20 sec until Pc - Pe>0.4 MPa.
Outdoor unit fan	STEP8	—
Four way valve	ON	—
Main electronic expansion valve (EV1)	180 pls	—
Subcooling electronic expansion valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	ON	—
Receiver gas discharging valve (SVG)	ON	—
Ending conditions	or [• 225 sec. &(• Pc - Pe>0.4 MPa • 40 sec]	
BP unit electronic expansion valve (operating room)	0 pls	—
BP unit electronic expansion valve (stopping room)	0 pls	—

3.2 Oil Return Operation

Oil flown from the compressor to the side of system is collected by oil-returning operation, in case of that oil in the compressor runs down.

3.2.1 Oil Return Operation in Cooling Operation

[Conditions to start]

The cooling oil-returning operation is started referring following conditions.

- Integrated amount of displaced oil
- Timer
  (After the power is turned on, integrated operating-time is 2 hours and subsequently every 8 hours.)
  In addition, integrated amount of displaced oil is derived from Tc, Te, and the compressor load.

Outdoor unit actuator	Oil return preparation operation	Oil return operation	Post-oil-return operation
Compressor	Upper limit control	124 Hz	124 Hz
Outdoor unit fan	Fan control	Fan control	Fan control
Four way valve	OFF	OFF	OFF
Main electronic expansion valve (EV1)	2000 pls	2000 pls	2000 pls
Subcooling electronic expansion valve (EV2)	SH control	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Ending conditions	20 sec.	or • 6 min. • Ts - Te<5	3 min.

Indoor actuator		Cooling oil return operation
Indoor unit fan	Thermostat ON unit	Set Air Volume
	Stopping unit	OFF
	Thermostat OFF unit	Set Air Volume
BP unit electronic expansion valve	Thermostat ON unit	SH control
	Stopping unit	56 pls
	Thermostat OFF unit	SH control

3.2.2 Oil Return Operation in Heating Operation

[Conditions to start]

The heating oil-returning operation is started referring following conditions.

- Integrated amount of displaced oil
- Timer
  (After the power is turned on, integrated operating-time is 2 hours and subsequently every 8 hours.)
  In addition, integrated amount of displaced oil is derived from Tc, Te, and the compressor load.

Outdoor Unit Actuator	Oil return preparation operation	Oil return operation	Post-oil-return operation
Compressor	Upper limit control	124 Hz	2-step increase from 52 Hz to (Pc - Pe>0.4 MPa) time
Outdoor unit fan	STEP8	High pressure control	STEP8
Four way valve	ON	OFF	ON
Main electronic expansion valve (EV1)	SH control	2000 pls	200~400 pls
Subcooling electronic expansion valve (EV2)	0 pls	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Receiver gas discharging valve (SVG)	ON → OFF	ON → OFF	ON → OFF
Ending conditions	130 sec.	or • Max. 735 sec. • Ts - Te<5	or • 160 sec. • Pc - Pe>0.4MPa

* From the preparing oil-returning operation to the oil-returning operation, and from the oil-returning operation to the operation after oil-returning, the compressor stops for 1 minute to reduce noise on changing of the four way valve.

Indoor actuator		Heating oil return operation
Indoor unit fan	Thermostat ON unit	OFF
	Stopping unit	OFF
	Thermostat OFF unit	OFF
BP unit electronic expansion valve	Thermostat ON unit	SH control
	Stopping unit	80 pls
	Thermostat OFF unit	SH control

3.3 Defrosting Operation

The defrost operation is performed to solve frost on the outdoor unit heat exchanger when heating, and the heating capacity is recovered.

[Conditions to start]

The defrost operation is started referring following conditions.

- Outdoor heat exchanger heat transfer co-efficiency
- Temperature of heat-exchange (Tb)
- Low pressure equivalent saturation temperature (Te)
- Timer (2 hours at the minimum)
  In addition, outdoor heat-exchange co-efficiency is derived from Tc, Te, and the compressor load.

Outdoor unit actuator	Defrost preparation operation	Defrost operation	Post Defrost operation
Compressor	Upper limit control	140 Hz	2-step increase from 52 Hz to (Pc - Pe>0.4 MPa) every 20 sec.
Outdoor unit fan	STEP8	OFF	STEP8
Four way valve	ON	OFF	ON
Main electronic expansion valve (EV1)	SH control	2000 pls	200~400 pls
Subcooling electronic expansion valve (EV2)	0 pls	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Receiver gas discharging valve (SVG)	ON → OFF	ON → OFF	ON → OFF
Ending conditions	130 sec.	or • Max. 18 min. • Tb >11°C	or • 160 sec. • Pc - Pe>0.4MPa

* From the preparing operation to the defrost operation, and from the defrost operation to the operation after defrost, the compressor stops for 110 sec. to reduce noise on changing of the four way valve.

Indoor actuator		During defrost
Indoor unit fan	Thermostat ON unit	OFF
	Stopping unit	OFF
	Thermostat OFF unit	OFF
BP unit electronic expansion valve	Thermostat ON unit	SH control
	Stopping unit	80 pls
	Thermostat OFF unit	SH control

3.4 Pump-down Residual Operation

When activating compressor, if the liquid refrigerant remains in the heat-exchanger, the liquid enters into the compressor and dilutes oil therein resulting in decrease of lubricity.
Therefore, the pump-down residual operation is performed to collect the refrigerant in the heat-exchanger when the compressor is down.

3.4.1 Pump-down Residual Operation in Cooling Operation

Actuator	Outdoor unit operation
Compressor	124 Hz
Outdoor unit fan	Fan control
Four way valve	OFF
Main electronic expansion valve (EV1)	2000 pls
Subcooling electronic expansion valve (EV2)	0 pls
Hot gas bypass valve (SVP)	OFF
Receiver gas discharging valve (SVG)	ON → OFF
Ending conditions	or • 30 sec. • Pe<0.5 MPa • Td>110°C

3.4.2 Pump-down Residual Operation in Heating Operation

Actuator	Outdoor unit operation
Compressor	52 → 124 Hz
Outdoor unit fan	STEP8
Four way valve	ON
Main electronic expansion valve (EV1)	0 pls
Subcooling electronic expansion valve (EV2)	0 pls
Hot gas bypass valve (SVP)	ON → OFF
Receiver gas discharging valve (SVG)	ON → OFF
Ending conditions	or • 3 min. • Pe<0.25 MPa • Td>110°C

3.5 Restart Standby

Restart is stood by force to prevent frequent power-on/off and to equalize pressure in the refrigerant system.

Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	OFF	—
Four way valve	Keep former condition.	—
Main electronic expansion valve (EV1)	0 pls	—
Subcooling electronic expansion valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF → ON	—
Receiver gas discharging valve (SVG)	OFF	—
Ending conditions	5 min.	—

3.6 Stopping Operation

3.6.1 When System is in Stop Mode

Actuator	Operation
Compressor	OFF
Outdoor unit fan	OFF
Four way valve	Keep former condition.
Main electronic expansion valve (EV1)	0 pls
Subcooling electronic expansion valve (EV2)	0 pls
Hot gas bypass valve (SVP)	OFF
Receiver gas discharging valve (SVG)	OFF
Ending conditions	Indoor unit thermostat is turned ON.

3.7 Pressure Equalization Prior to Startup

Before activating the compressor, the activation load is lightened by equalization across the compressor. In addition, inverters turn on electricity and capacitors are charged.

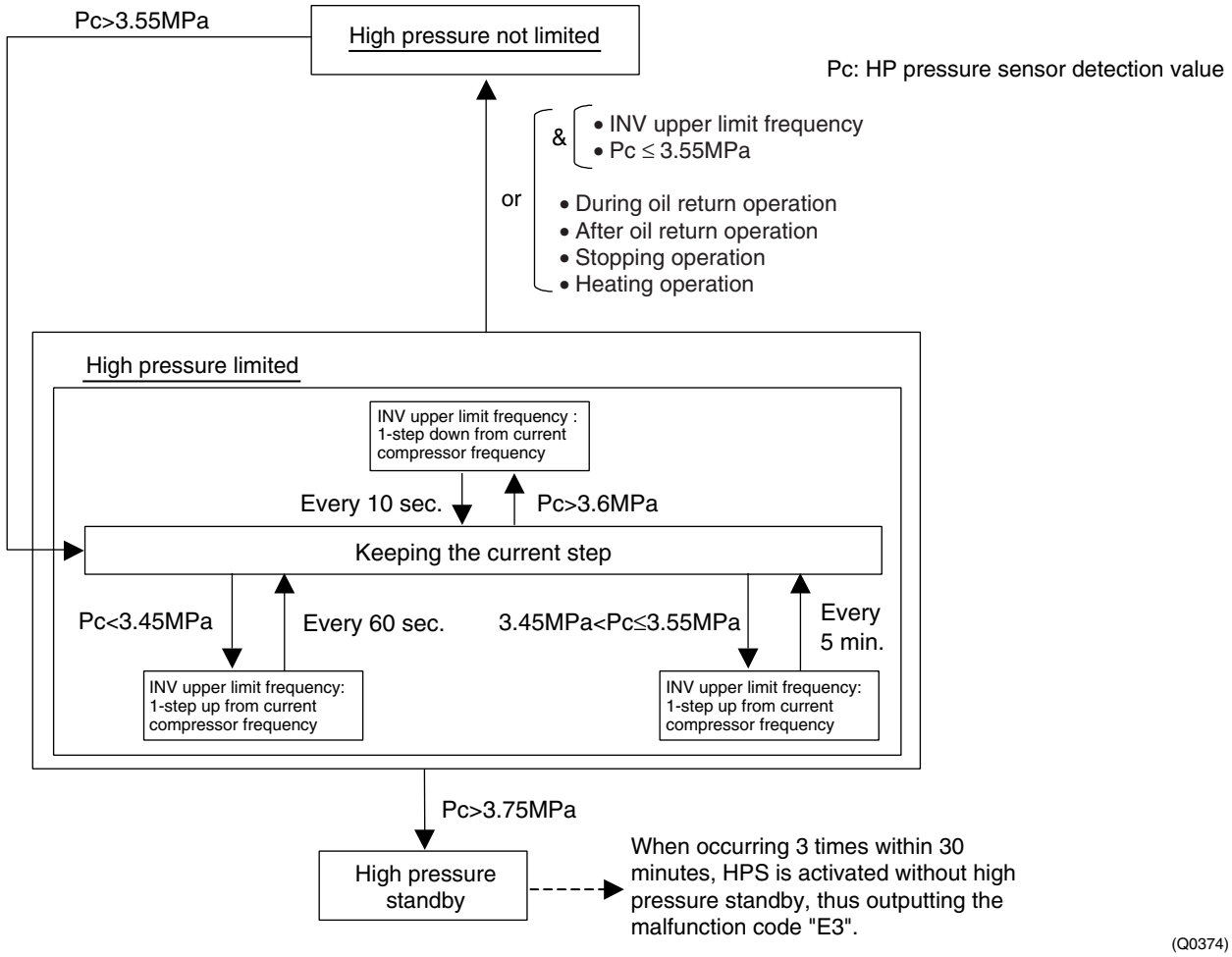
Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	Cooling: STEP7 Heating: Ta>26°C; STEP8, Ta≤26°C; OFF	—
Four way valve	Keep former condition.	—
Main electronic expansion valve (EV1)	0 pls	—
Subcooling electronic expansion valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	ON	—
Receiver gas discharging valve (SVG)	OFF	—
Ending conditions	or • 3 min. • Pc-Pe<0.2 MPa	—

4. Protection Control

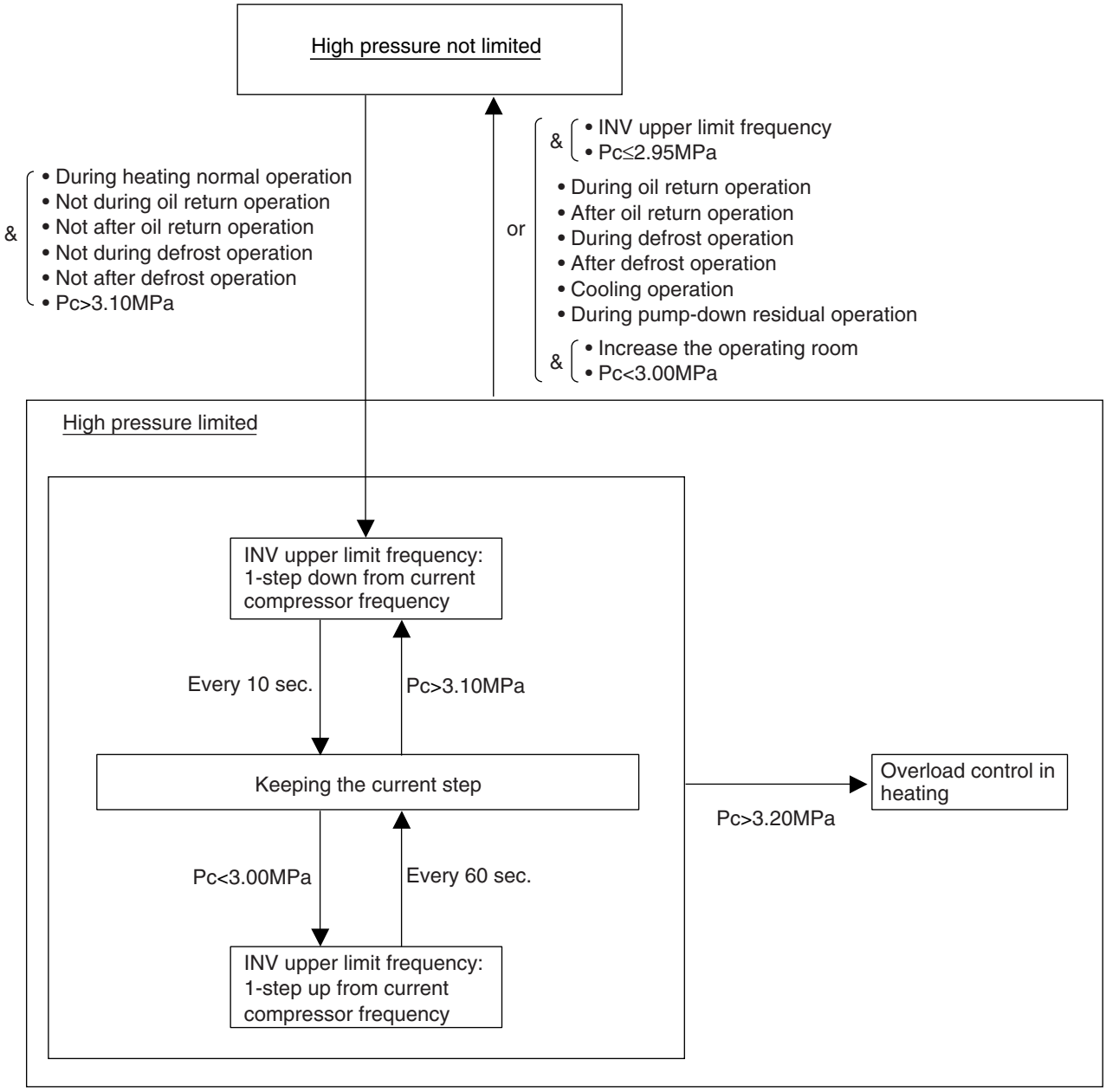
4.1 High Pressure Protection Control

This high pressure protection control is used to prevent the activation of protection devices due to abnormal increase of high pressure and to protect compressors against the transient increase of high pressure.

In cooling operation



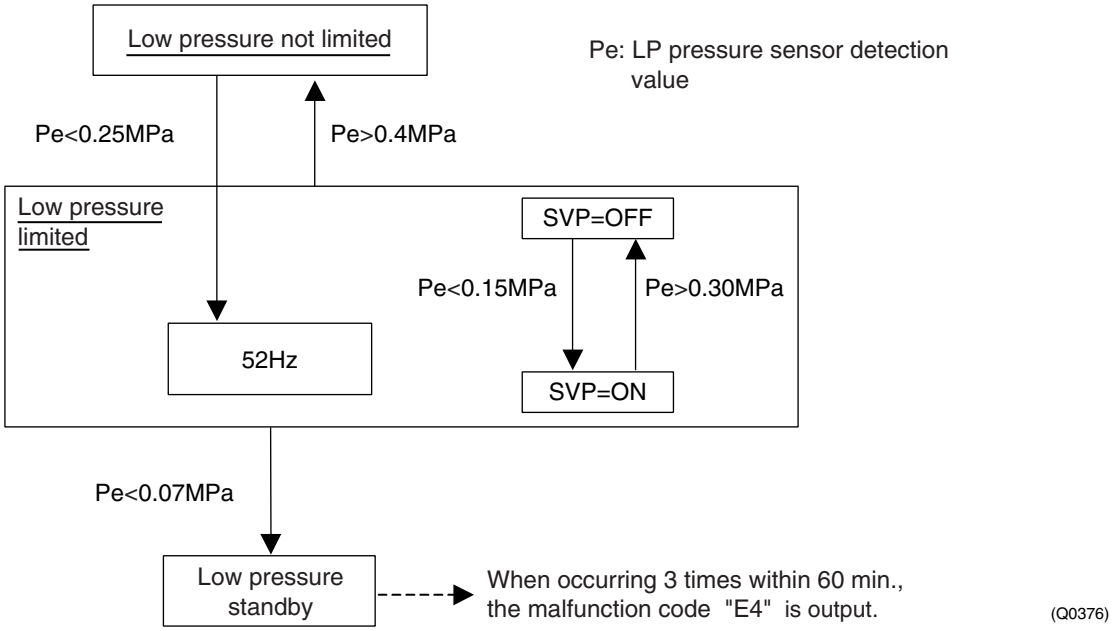
In heating operation



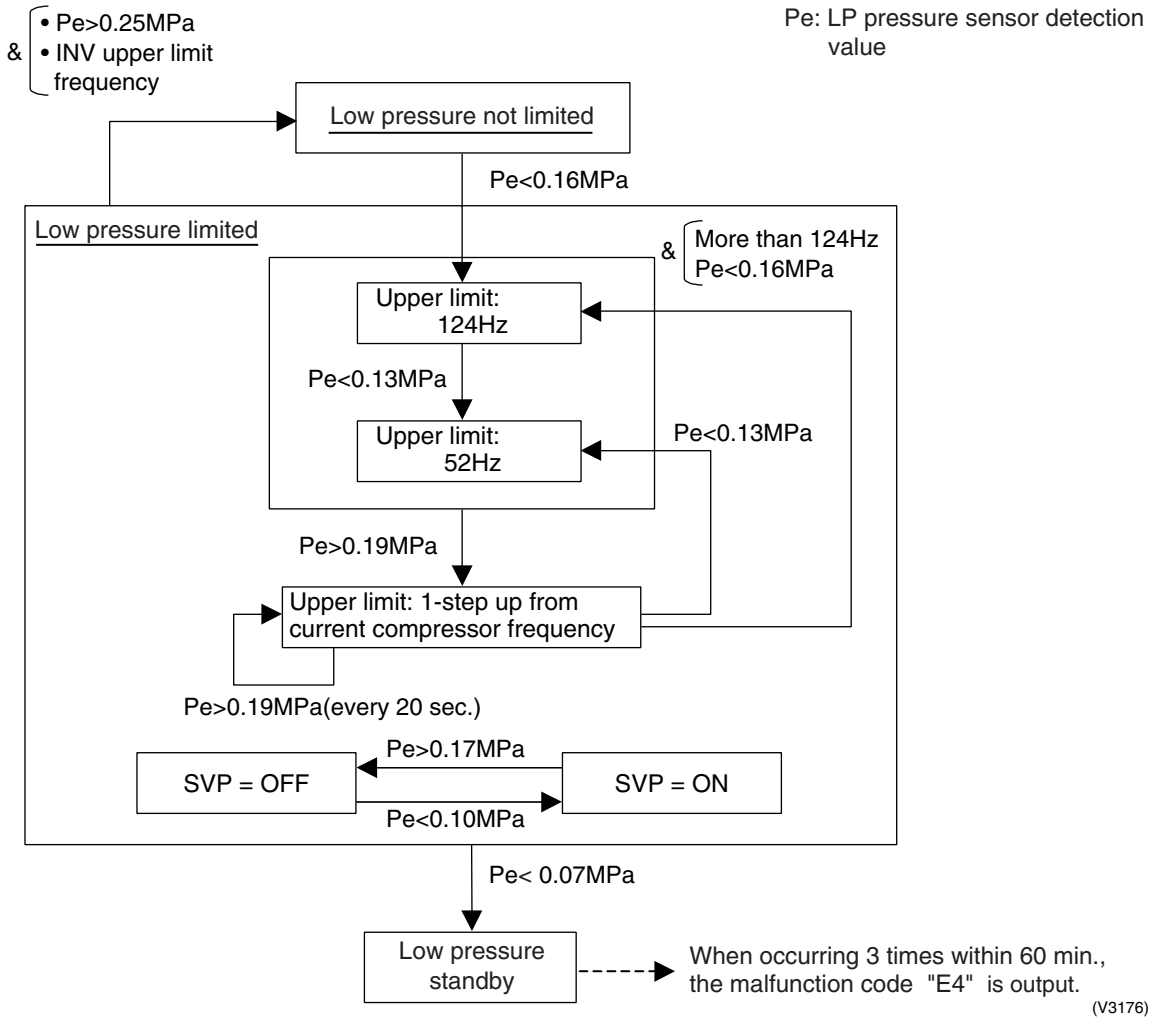
4.2 Low Pressure Protection Control

This low pressure protection control is used to protect compressors against the transient decrease of low pressure.

In cooling operation



In heating operation

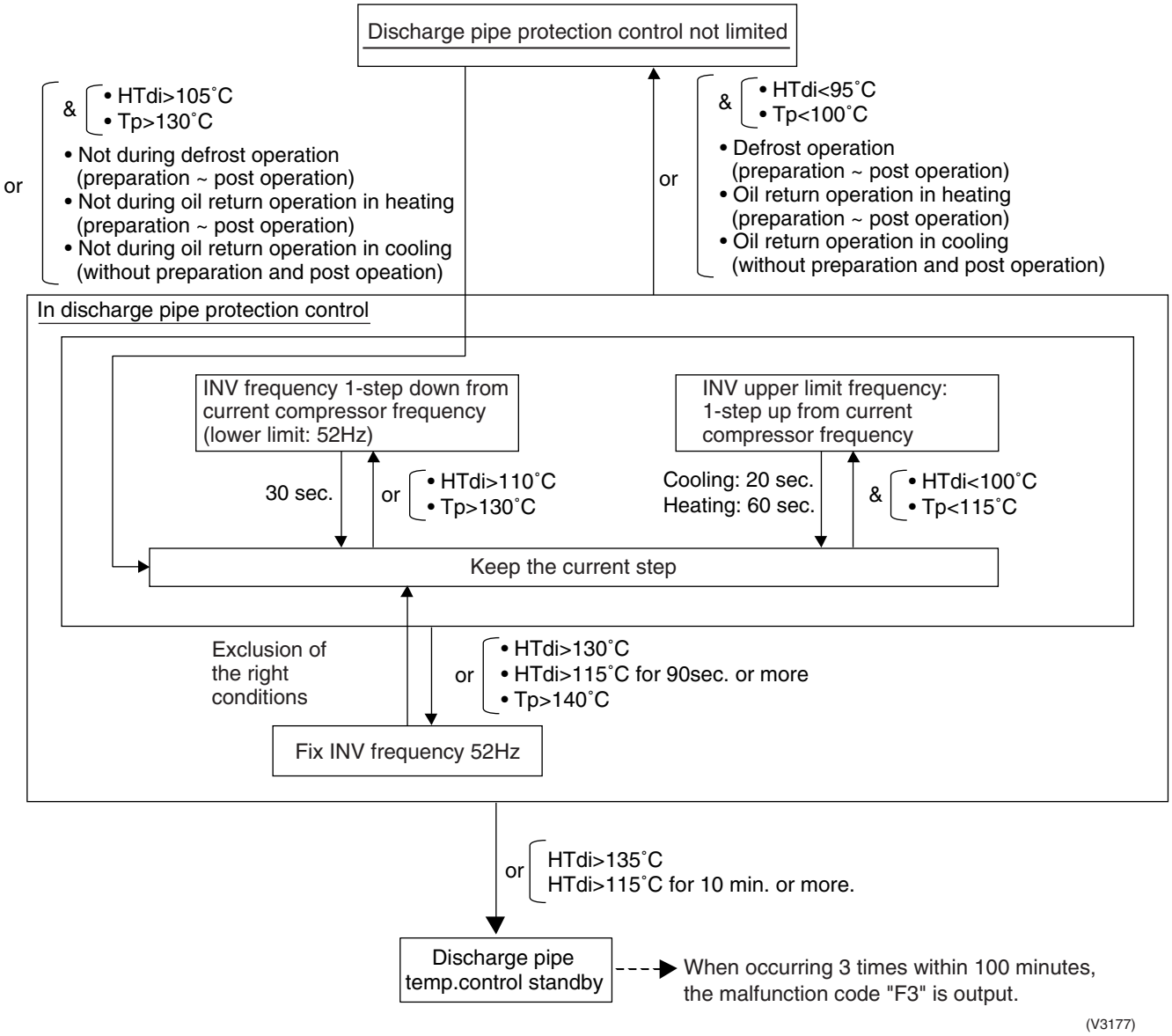


4.3 Discharge Pipe Protection Control

This discharge pipe protection control is used to protect the compressor internal temperature against a malfunction or transient increase of discharge pipe temperature.

INV compressor

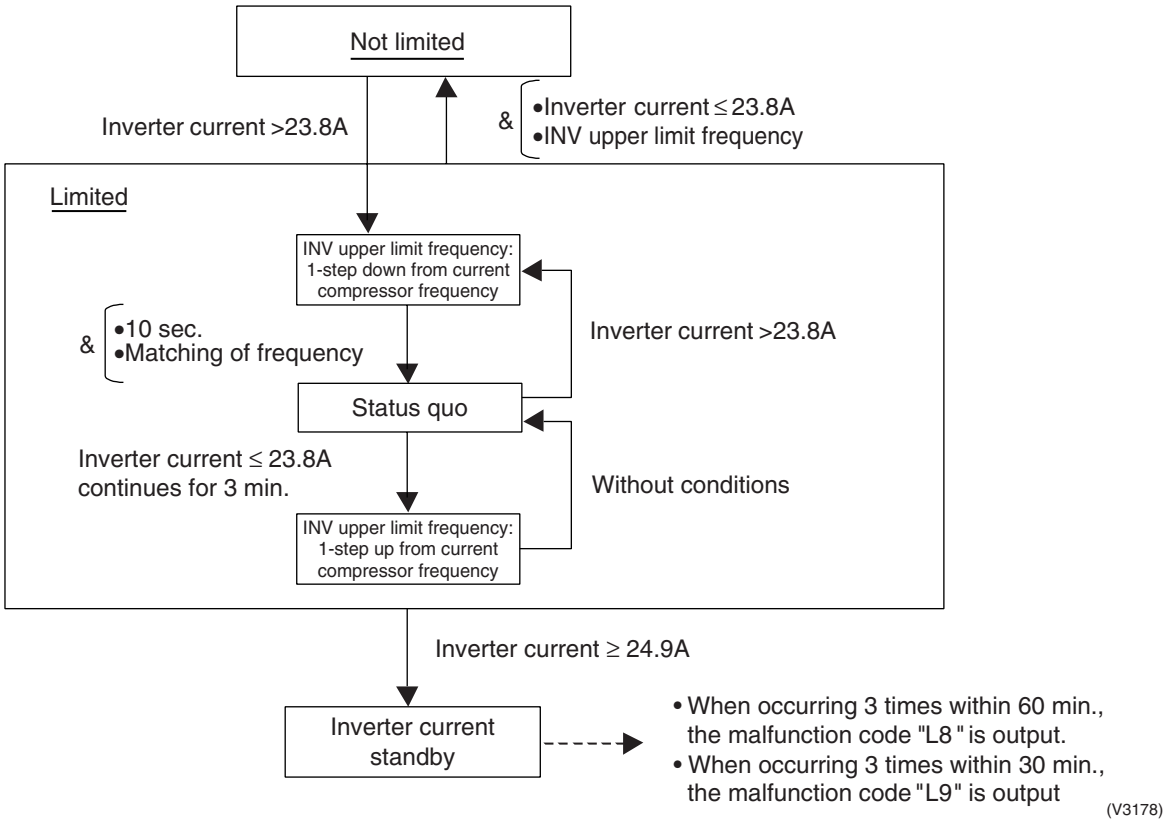
HTdi : Value of INV compressor discharge pipe temperature (Tdi) compensated with outdoor air temperature
Tp : Value of compressor port temperature calculated by Tc and Te, and suction superheated degree.



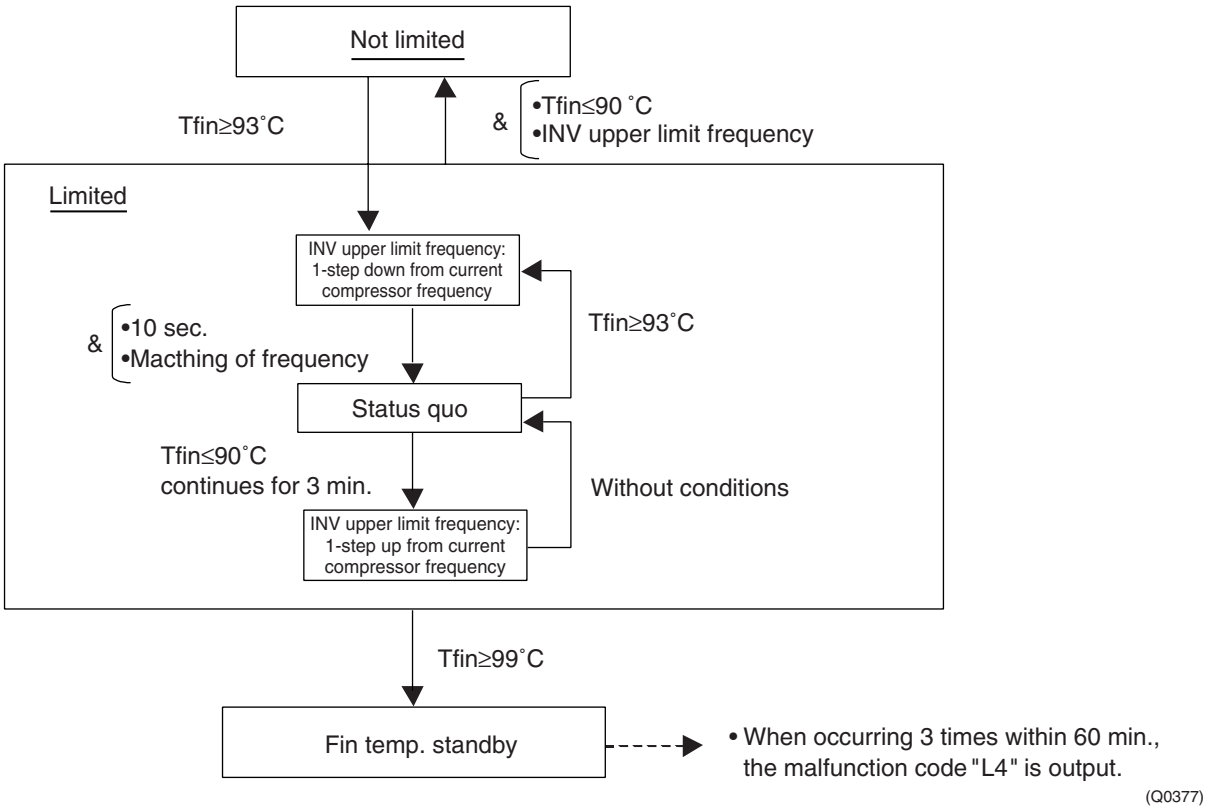
4.4 Inverter Protection Control

Inverter current protection control and inverter fin temperature control are performed to prevent tripping due to a malfunction, or transient inverter overcurrent, and fin temperature increase.

Inverter overcurrent protection control



Inverter fin temperature control



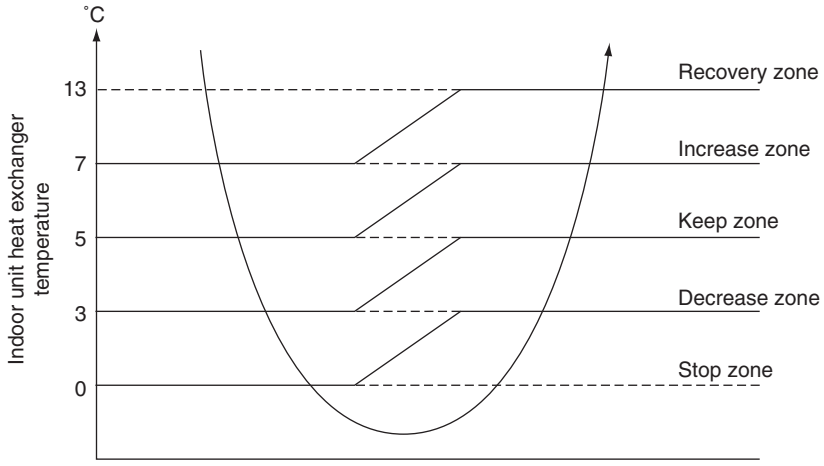
4.5 Freeze-up Protection Control

Outline

According to the freeze prevention status sent from the BP unit. The compressor output frequency is regulated to decrease the compressor capacity in order to prevent the indoor heat exchanger from freezing.

Detail

Zones are produced based on the freeze prevention status signal sent from the BP unit (Indoor unit), and the freeze prevention control prevents freezing of the indoor unit.



Recovery zone: Lift the control
Increase zone: 1 step up/60sec.
Keep zone: Frequency is not controlled
Decrease zone: 1 step down/60sec.
Stop zone: Thermostat-OFF (only the target indoor unit)

The temperature in above figure depends on models. (Reference value)

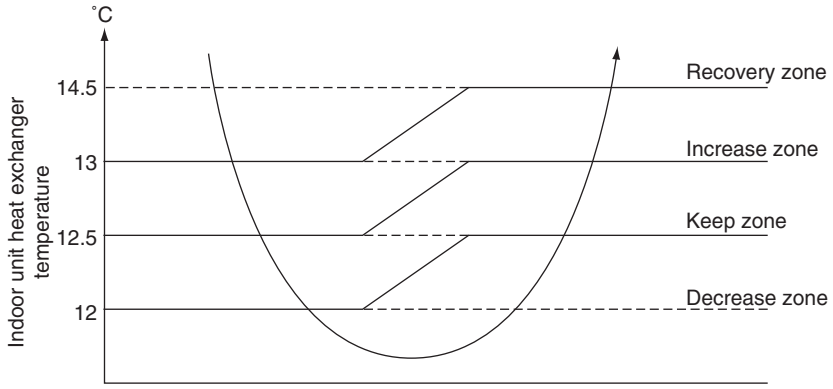
4.6 Dew Condensation Prevention Control

Outline

According to the dew condensation prevention status sent from the BP unit. The compressor output frequency is regulated to decrease the compressor capacity in order to prevent the indoor unit from dew condensation.

Detail

Zones are produced based on the dew condensation prevention status signal sent from the BP unit (Indoor unit), and the dew condensation prevention control prevents dew condensation of the indoor unit.



Recovery zone: Lift the control
Increase zone: 1 step up/60sec.
Keep zone: Frequency is not controlled
Decrease zone: 1 step down/60sec. SVG open at 52Hz

The temperature in above figure depends on models and actual room temperature. (Reference value)

5. Other Control

5.1 Demand Operation

In order to save the power consumption, the capacity of outdoor unit is saved with control forcibly by using “Demand 1 Setting” or “Demand 2 Setting”.
To operate the unit with this mode, additional setting of “Continuous Demand Setting” or external input by external control adaptor is required.

[Demand 1 setting]

Setting	Standard for upper limit of power consumption
Demand 1 setting 1	Approx. 60%
Demand 1 setting 2 (factory setting)	Approx. 70%
Demand 1 setting 3	Approx. 80%

[Demand 2 setting]

Setting	Standard for upper limit of power consumption
Demand 2 setting 1	Approx. 30%
Demand 2 setting 2 (factory setting)	Approx. 40%
Demand 2 setting 3	Approx. 50%

★ Other protection control functions have precedence over the above operation.

5.2 Heating Operation Prohibition

Heating operation is prohibited above 30°CDB outdoor air temperature.

6. BP Unit Control

6.1 BP Unit Command Conversion

1. ΔD (room temperature – temperature setting) signals from BP units are converted to capacity up / down signal.

ΔD signals from BP units are used as the capacity up / down signal in frequency commands (excludes when Powerful function is in operation).

ΔD Signal	Capacity up / down signal
0	Thermostat OFF
1	Down
2	
3	Keep
4	
5	Up
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

2. Processing during Powerful operation mode

(1) When Powerful command is received from indoor units (one or more units)

(2) Thermostats are not OFF in room units from which Powerful commands are issued

When the above conditions are met, the Powerful operation mode is activated, and the Powerful operation signal is sent to outdoor unit.

6.2 BP Unit Electronic Expansion Valve Control

Purpose of the Function

This function provides instructions regarding the absolute flow rate, relative flow rate and fully closing from the outdoor unit to the BP unit in order to ensure outdoor unit compressor safety and optimum refrigerating cycle of the system.
With the transmission a permit/prohibit flag for each distribution control in the BP unit, the distribution control startup timing is controlled by the outdoor unit.

6.2.1 Electronic Expansion Valve Initial Opening Setting

Outline

This function improves stability of the system to set initial opening of electronic expansion valve at starting operation.
When the EV opening command from outdoor unit is lifted, the following opening setting is performed.

During Cooling Operation

Target EV opening = 2.5 × (DA - 14) + P5 - KEVOPC × (DOA - DA) pls
DA: room temperature, DOA: outdoor air temperature

P5:

Indoor unit capacity	P5
2.0 to 3.5 kW class	140
5.0 kW class	156
6.0, 7.1 kW class	170

KEVOPC:

	KEVOPC
DOA≤DA	0
DA<DOA	2.5

During Heating Operation

Target EV opening = 350 pls

6.2.2 Electronic Expansion Valve Flow Rate Restriction

This function prevents the deviation from the electronic expansion valve specification range by restricting the electronic expansion valve flow rates of the operating and non-operating room units during compressor operation. It also prevents the generation of abnormal noise such as refrigerant flowing sound by restricting the circulation of refrigerant according to the operating conditions (unit ON/OFF) of room units.

Outline

Restriction of electronic expansion valve opening degrees of operating room units;
... Restriction of maximum and minimum flow rates based on constant
Restriction of electronic expansion valve opening degrees of non-heating room units;
... Restriction of minimum flow rate based on constant
... Maximum flow rate determined based on flow rates of operating room units

6.2.3 Full Closing of Electronic Expansion Valves

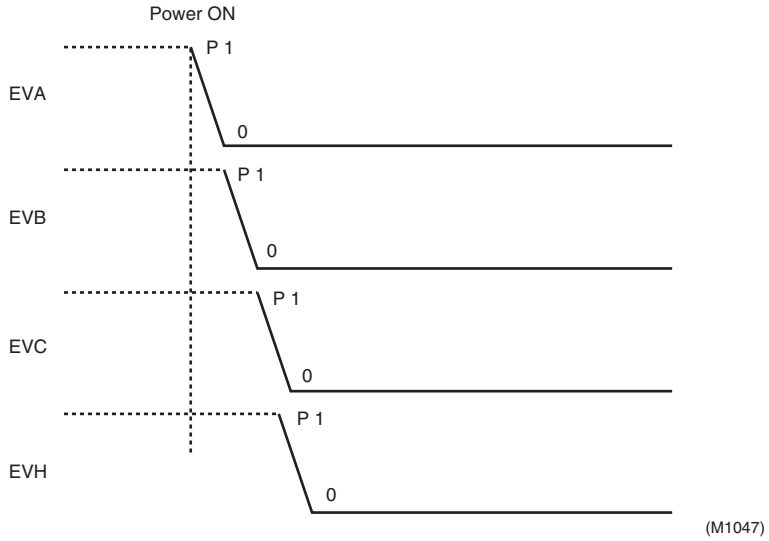
Purpose of the Function

The electronic expansion valves are initialized when the power is turned on.

Details

The following processes are conducted.

1. Conducts P1 pulses close when power is turned on, and sets current opening to 0 pulse (fully closing process).
2. Sends electronic expansion valve initialization signal to outdoor unit.
3. Closes the electronic expansion valve of each chamber (sets the electronic expansion valve pulse to 0).
4. Stops transmission of electronic expansion valve initialization signal when EVH retightening is completed.



6.2.4 Control Based on EV Opening Command from Outdoor Unit

Purpose of the Function

This function operates the electronic expansion valve based on EV opening command sent from the outdoor unit.

Outline

The electronic expansion valve operation based on EV opening command provides the following functions.

1) Pressure equalization prior to startup
2) Startup control
3) Restart standby
4) Pump-down residual operation
5) Oil return operation
6) Defrost operation

6.3 SH Control in Cooling Operation

Purpose of the Function

This function ensures appropriate refrigerant distribution when many room units are operating in the cooling mode.

Outline

The heat exchanger temperatures and gas pipe temperatures of operating room units are detected by the gas pipe thermistors, and the electronic expansion valves' flow rates are corrected so as to adjust the difference between heat exchanger temperature and gas pipe temperature of each room unit (hereafter referred to as SH) close to the target values.

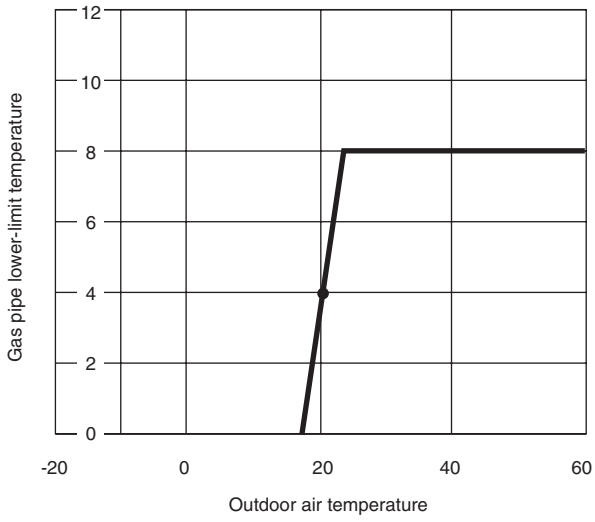
When SH is higher than target value → Opens the valve of that room unit
When SH is lower than target value → Closes the valve of that room unit

When the liquid pipe temperature is lower than the heat exchanger temperature, the electronic expansion valve is opened more than normal opening.
(Protection function to prevent rotor dew condensation)

The gas pipe temperature and indoor heat exchanger temperature are detected at the time of every sampling time of 40 sec for the cooling SH control.

In order to prevent dew condensation in connection pipe, gas pipe lower-limit temperature is set as follows.

Gas pipe lower-limit temperature = $\frac{240}{256}$ × DOA - 17 (however 8ºC or lower)
DOA:Outdoor air temperature



(Q0378)

Outdoor Temperature	Gas Pipe Lower-Limit Temperature
-5	-22
0	-17
5	-12
10	-6
15	-1
20	4
25	8
30	8
35	8
40	8
45	8

Note:
1. In Sky Air models, the indoor units are equipped with distribution capillary tubes ; therefore, the heat exchangers may superheat even when the condition is met.
2. In Sky Air models, the heat exchanger intermediate position is provided on the liquid connection pipe side; as a result, superheated condition is difficult to detect.

6.4 SC Control in Heating Operation

Purpose of the Function

This function ensures appropriate refrigerant distribution when many room units are operating in the heating mode.

Outline

The heat exchanger temperatures and liquid pipe temperatures of operating room units are detected by the liquid pipe thermistors, and the electronic expansion valves' flow rates are corrected so as to adjust the difference between heat exchanger temperature and liquid pipe temperature of each room unit (hereafter referred to as SC) close to the target values.

When SC is higher than target value → Opens the valve of that room unit
When SC is lower than target value → Closes the valve of that room unit

The liquid pipe temperature and indoor heat exchanger temperature are detected at the time of every sampling time of 20 sec for the heating SC control.

6.5 Heat Exchanger Isothermal Control in Heating Operation

Purpose of the Function

This function ensures appropriate refrigerant distribution when room units are operating in the heating mode.
It prevents abnormal increase of the high pressure and operation with gas shortage due to uneven refrigerant distribution (Protection function).

Outline

The indoor unit heat exchanger thermistors (of all connected indoor units to the same BP unit including non-operating room units) in heating operation are detected. Then, the highest heat exchanger temperature is compared with the heat exchanger temperature of each room unit. If the temperature difference exceeds the predetermined value, it is judged that the indoor unit heat exchanger thermistor position in subcooled zone, and the electronic expansion valves of room units with the temperature difference exceeding the predetermined level is opened to return to the saturation zone.
Since this is a protection function, it is effective for all connected room units in heating operation excluding those in defrosting operation. This function is inactive in room units with transmission problems.

Details

The heat exchanger temperature is detected at every sampling time of 20 sec of the heat exchanger isothermal control, and maximum value of each heat exchanger temperature is obtained.

If the temperature difference between the heat exchanger temperature and maximum heat exchanger temperature value exceeds 8°C, it is judged that the heat exchanger intermediate is in the subcooled zone, and the electronic expansion valve is opened.

7. Indoor Unit (RA Models)

7.1 Power-Airflow Dual Flaps, Wide Angle Louvers and Auto-Swing

Power-airflow Dual Flaps

The large flaps send a large volume of air downwards to the floor. The flap provides an optimum control area in cooling, heating and dry mode.

Heating Mode

During heating mode, the large flap enables direct warm air straight downwards. The flap presses the warm air above the floor to reach the entire room.

Cooling Mode

During cooling mode, the flap retracts into the indoor unit. Then, cool air can be blown far and pervaded all over the room.

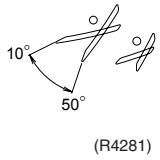
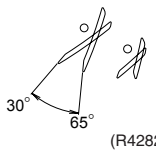
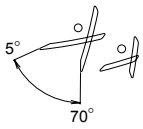
Wide-Angle Louvers

The louvres, made of elastic synthetic resin, provide a wide range of airflow that guarantees a comfortable air distribution.

Auto-Swing

In case of FTK(X)S20-35D

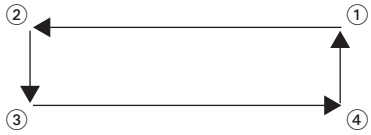
The following table explains the auto swing process for heating, cooling, dry and fan :

Vertical Swing (up and down)			Horizontal Swing (right and left: manual)
Cooling / Dry	Heating	Fan	
 (R4281)	 (R4282)	 (R4283)	 (R4284)

3-D Airflow

50-71 Class

- Alternative repetition of vertical and horizontal swing motions enables uniform air-conditioning of the entire room. This function is effective for starting the air conditioner.
- When the horizontal swing and vertical swing are both set to auto mode, the airflow become 3-D airflow and the horizontal swing and vertical swing motions are alternated. The order of swing motion is such that it turns counterclockwise, starting from the right upper point as viewed to the front side of the indoor unit.



(R1024)

7.2 Fan Speed Control for Indoor Units

Control Mode

The airflow rate can be automatically controlled depending on the difference between the set temperature and the room temperature. This is done through phase control and Hall IC control.

For more information about Hall IC, refer to the troubleshooting for fan motor on page 332.

Phase Steps

Phase control and fan speed control contains 9 steps: LLL, LL, SL, L, ML, M, MH, H and HH.

Step	Cooling	Heating	Dry mode
LLL	 (R2818)	 (R2818)	20 · 25 · 35kW class : 670 - 880 rpm (During powerful operation : 720 - 930 rpm) 50 · 60 · 71kW class : 750 - 1000 rpm (During powerful operation : 1050 rpm)
LL			
SL (Silent)			
L			
ML			
M			
MH			
H			
HH (Powerful)			

= Within this range the airflow rate is automatically controlled when the FAN setting button is set to automatic.

Note:

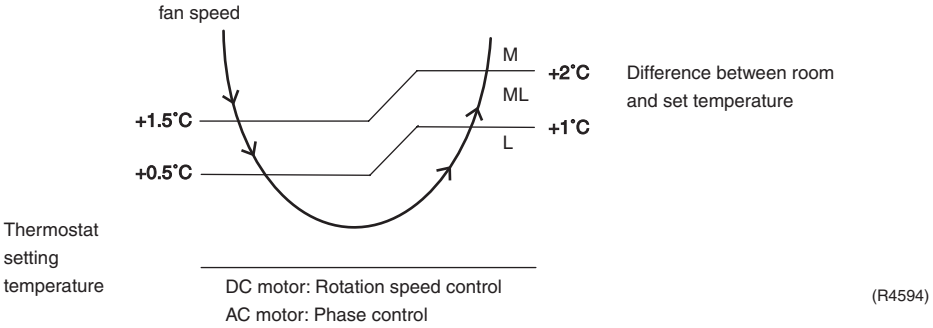
1. During powerful operation, fan rotates at H tap + 50 - 90 rpm.
2. Fan stops during defrost operation.

Automatic Air Flow Control for Heating

On heating mode, the indoor fan speed will be regulated according to the indoor heat exchanger temperature and the difference between the room temperature and the required set point.

Automatic Air Flow Control for Cooling

The following drawing explains the principle of fan speed control for cooling:



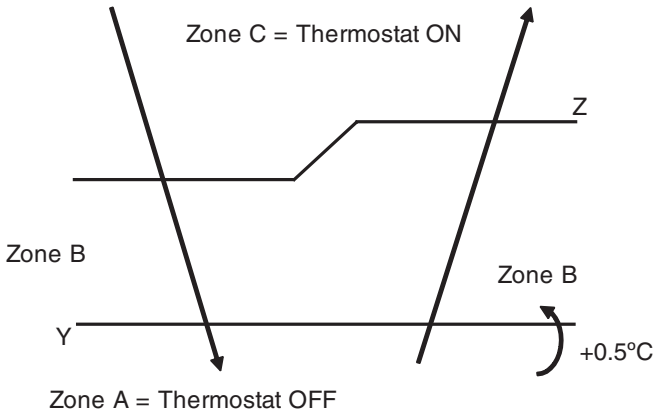
7.3 Programme Dry Function

Programme dry function removes humidity while preventing the room temperature from lowering.
Since the microcomputer controls both the temperature and air flow volume, the temperature adjustment and fan adjustment buttons are inoperable in this mode.

In Case of Inverter Units

The microcomputer automatically sets the temperature and fan settings. The difference between the room temperature at startup and the temperature set by the microcomputer is divided into two zones. Then, the unit operates in the dry mode with an appropriate capacity for each zone to maintain the temperature and humidity at a comfortable level.

Room temperature at startup	Set temperature X	Thermostat OFF point Y	Thermostat ON point Z
24°C or more	Room temperature at startup	X – 2.5°C	X – 0.5°C or Y + 0.5°C (zone B) continues for 10 min.
23.5°C ~ 18°C		X – 2.0°C	X – 0.5°C or Y + 0.5°C (zone B) continues for 10 min.
17.5°C ~	18°C	X – 2.0°C	X – 0.5°C = 17.5°C or Y + 0.5°C (zone B) continues for 10 min.



(R6841)

7.4 Automatic Operation

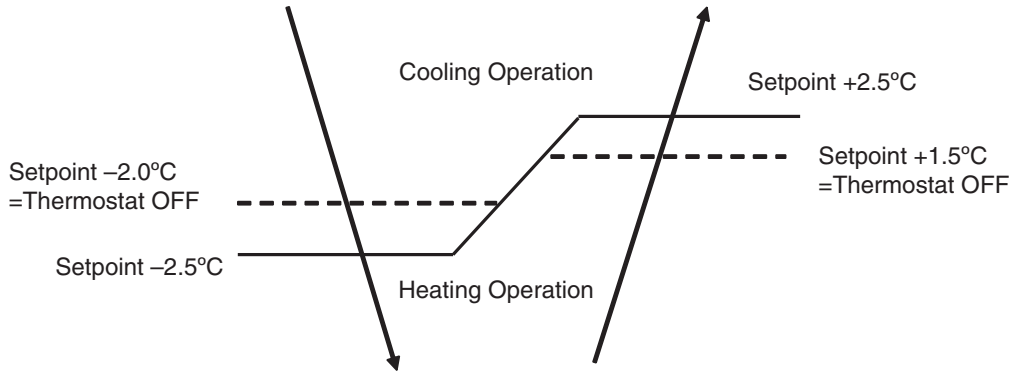
Automatic Cooling / Heating Function (Heat Pump Only)

When the AUTO mode is selected with the remote controller, the microcomputer automatically determines the operation mode from cooling and heating according to the room temperature and setting temperature at the time of the operation startup, and automatically operates in that mode.

The unit automatically switches the operation mode to cooling or heating to maintain the room temperature at the main unit setting temperature.

Detailed Explanation of the Function

1. Remote controller setting temperature is set as automatic cooling / heating setting temperature (18 to 30°C).
2. Main unit setting temperature equals remote controller setting temperature.
3. Mode switching point are as follows.
   ① Heating → Cooling switching point:
   Room temperature ≥ Main unit setting temperature +2.5 deg.
   ② Cooling → Heating switching point:
   Room temperature < Main unit setting temperature –2.5 deg.
   ③ Thermostat ON / OFF point is the same as the ON / OFF point of cooling or heating operation.
4. During initial operation
   Room temperature ≥ Remote controller setting temperature: Cooling operation
   Room temperature < Remote controller setting temperature: Heating operation



(R6842)

Ex: When the set point is 25°C

Cooling Operation → 23°C: Thermostat OFF → 22°C: Switch to Heating Operation
Heating Operation → 26.5°C: Thermostat OFF → 27.5°C: Switch to Cooling Operation

7.5 Thermostat Control

Thermostat control is based on the difference between the room temperature and the setpoint.

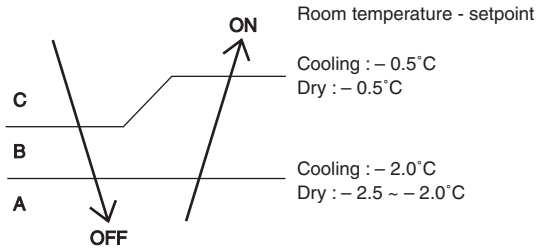
Thermostat OFF Condition

- The temperature difference is in the zone A.

Thermostat ON Condition

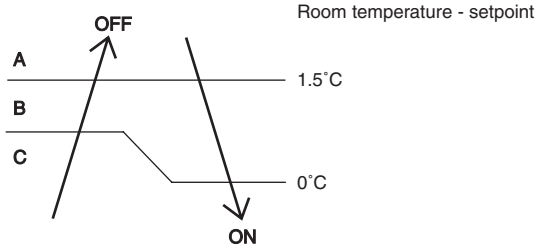
- The temperature difference is above the zone C after being in the zone A.
- The system resumes from defrost control in any zones except A.
- The operation turns on in any zones except A.
- The monitoring time has passed while the temperature difference is in the zone B. (Cooling / Dry : 10 minutes, Heating : 10 seconds)

Cooling / Dry



(R4668)

Heating



(R4669)

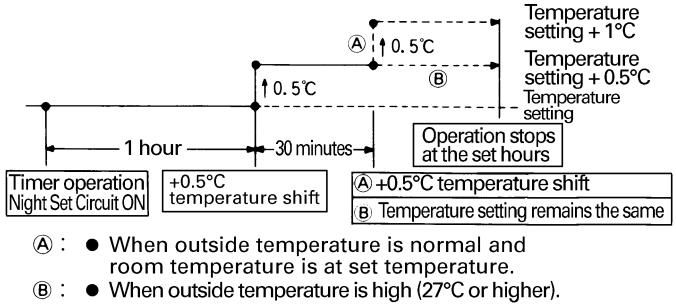
7.6 Night Set Mode

When the OFF timer is set, the Night Set circuit automatically activates.
The Night Set circuit maintains the airflow setting made by users.

The Night Set Circuit

The Night Set circuit continues heating or cooling the room at the set temperature for the first one hour, then automatically raises the temperature setting slightly in the case of cooling, or lowers it slightly in the case of heating, for economical operations. This prevents excessive heating in winter and excessive cooling in summer to ensure comfortable sleeping conditions, and also conserves electricity.

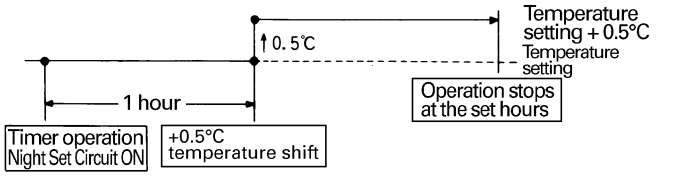
Cooling Operation



Ⓐ : ● When outside temperature is normal and room temperature is at set temperature.
Ⓑ : ● When outside temperature is high (27°C or higher).

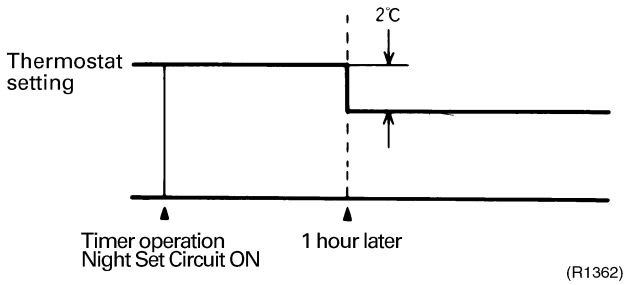
(R1361)

In case of FTK(X)S20-35D, the temperature rises once.



(R4421)

Heating Operation



(R1362)

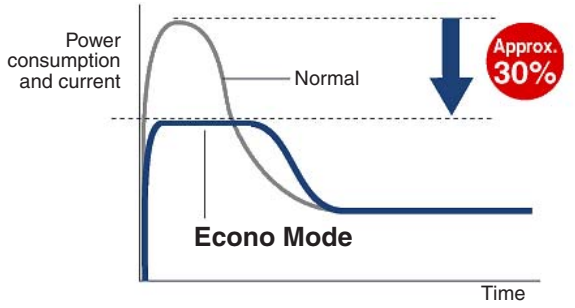
7.7 ECONO Mode

Outline

FTK(X)S20-35D, FTKD25-35D

The "ECONO mode" reduces the maximum operating current and power consumption by approx. 30% during start up etc..
This mode is particularly convenient for energy-saving-oriented users. It is also a major bonus for those whose breaker capacities do not allow the use of multiple electrical devices and air conditioners.
It is easily activated from the wireless remote controller by pushing the ECONO button.

- When this function is ON, the maximum capacity is also down. (Approx. 20%)
- This function can only be set when the unit is running. Pressing the operation stop button causes the settings to be canceled.
- This function and POWERFUL operation cannot be used at the same time. The latest command has the priority.



Details

- ECONO mode can be activated while the unit is running. The remote controller can send the ECONO command when the unit is in COOL, HEAT, DRY, or AUTO operation.
- When the ECONO command is valid, the upper limit of frequency is restricted.

7.8 MOLD PROOF Operation

FTK(X)S20-35D, FTKD25-35D

MOLD PROOF operation is a function which reduces the spread of mold by using Fan mode to lower the humidity inside the indoor unit.

Outline

MOLD PROOF operation starts when the following conditions are met.

1. MOLD PROOF is set on the remote controller.
2. Cooling or dry operation stops.

- MOLD PROOF operation will operate for approximately one hour after dry or cooling mode is turned off.
- The indoor fan rotates at 550 rpm.

Note:

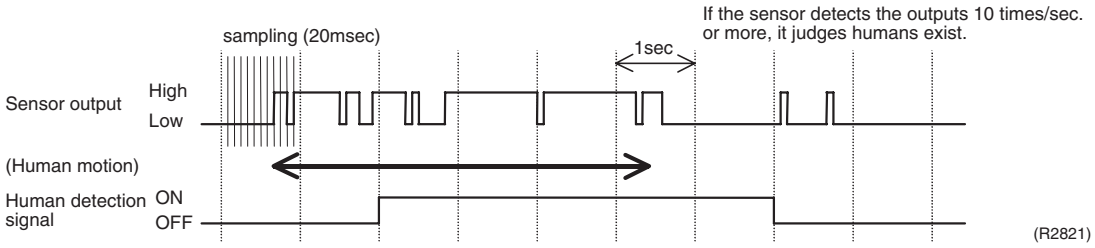
1. This function is not designed to remove existing dust or mold.
2. MOLD PROOF operation is not available when the unit is turned off using the OFF TIMER.

7.9 INTELLIGENT EYE

This is the function that detects existence of humans in the room by a human motion sensor (INTELLIGENT EYE) and reduces the capacity when there is no human in the room in order to save electricity.

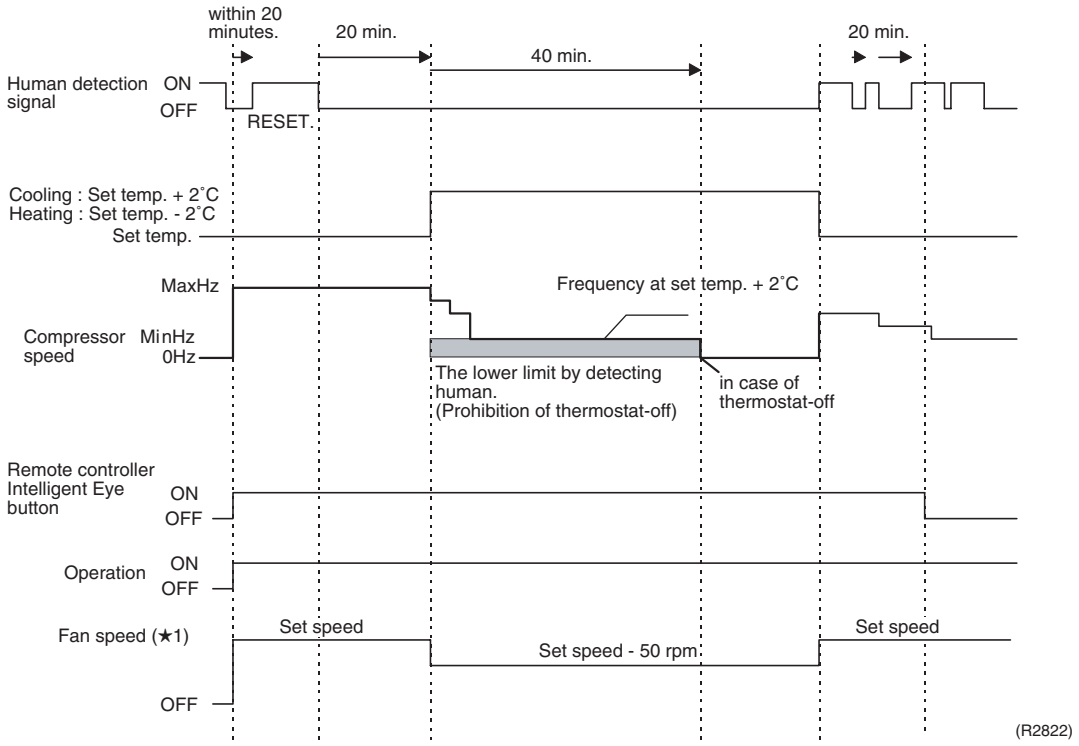
Processing

1. Detection method by Intelligent Eye



- This sensor detects human motion by receiving infrared rays and displays the pulse wave output.
- A microcomputer in an indoor unit carries out a sampling every 20 msec. and if it detects 10 cycles of the wave in one second in total (corresponding to 20msec.× 10 = 100msec.), it judges human is in the room as the motion signal is ON.

2. The motions (for example: in cooling)



- When a microcomputer doesn't have a signal from the sensor in 20 minutes, it judges that nobody is in the room and operates the unit in temperature shifted 2°C from the set temperature. (Cooling : 2°C higher, Dry: 1°C higher and Auto : according to the operation mode at that time.)

★1 In case of Fan mode, the fan speed reduces by 50 rpm.

- Since the set temperature is shifted by 2°C higher for 40 minutes, compressor speed becomes low and can realize energy saving operation. But as thermostat is prone to be off by the fact that the set temperature has been shifted, the thermostat-off action is prohibited in 40 minutes so as to prevent this phenomena.
  After this 40 minutes, the prohibition of the thermostat-off is cancelled and it can realize the conditions to conduct thermostat-off depending on the room temperature. In or after this 40 minutes, if the sensor detects human motion detection signal, it let the set temperature and the fan speed return to the original set point, keeping a normal operation.

Others

- The dry operation can't command the setting temperature with a remote controller, but internally the set temperature is shifted by 1°C.

7.10 HOME LEAVE Operation

Outline

In order to respond to the customer's need for immediate heating and cooling of the room after returning home or for house care, a measure to switch the temperature and air volume from that for normal time over to outing time by one touch is provided. (This function responds also to the need for keeping up with weak cooling or heating.)
This time, we seek for simplicity of operation by providing the special temperature and air volume control for outing to be set by the exclusive button.

Detail of the Control

1. Start of Function

The function starts when the [HOME LEAVE] button is pressed in cooling mode or heating mode (including stopping and powerful operation). If this button is pressed while the operation is stopped, the function becomes effective when the operation is started. If this button is pressed in powerful operation, the powerful operation is reset and this function becomes effective.

- The [HOME LEAVE] button is ineffective in dry mode and fan mode.

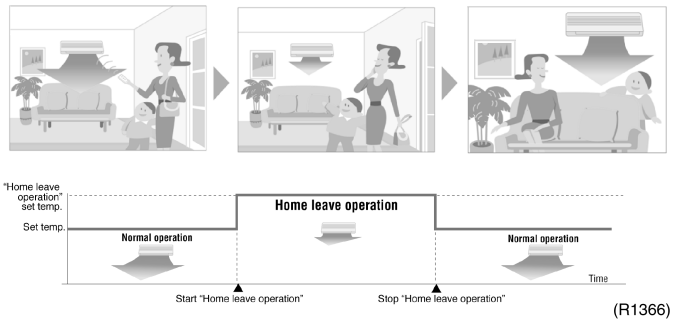
2. Details of Function

A mark representing [HOME LEAVE] is indicated on the liquid crystal display of the remote controller. The indoor unit is operated according to the set temperature and air volume for HOME LEAVE which were pre-set in the memory of the remote controller.
The LED (Red) of indoor unit representing [HOME LEAVE] lights up. (It goes out when the operation is stopped.)

3. End of Function

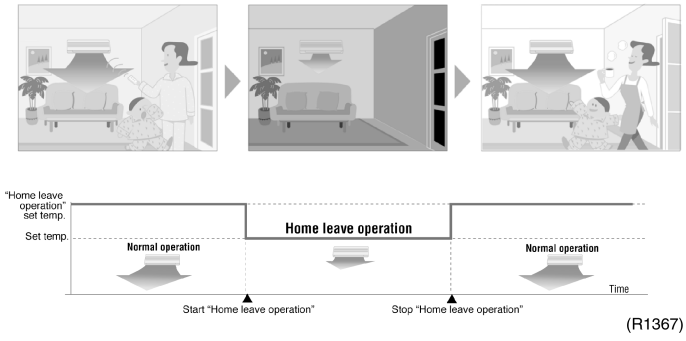
The function ends when the [HOME LEAVE] button is pressed again during [HOME LEAVE] operation or when the powerful operation button is pressed.

Scene <cooling>



(R1366)

Scene <Heating>



(R1367)

Others

The set temperature and set air volume are memorized in the remote controller. When the remote controller is reset due to replacement of battery, it is necessary to set the temperature and air volume again for [HOME LEAVE].

7.11 Inverter POWERFUL Operation

Outline

In order to exploit the cooling and heating capacity to full extent, operate the air conditioner by increasing the indoor fan rotating speed and the compressor frequency.

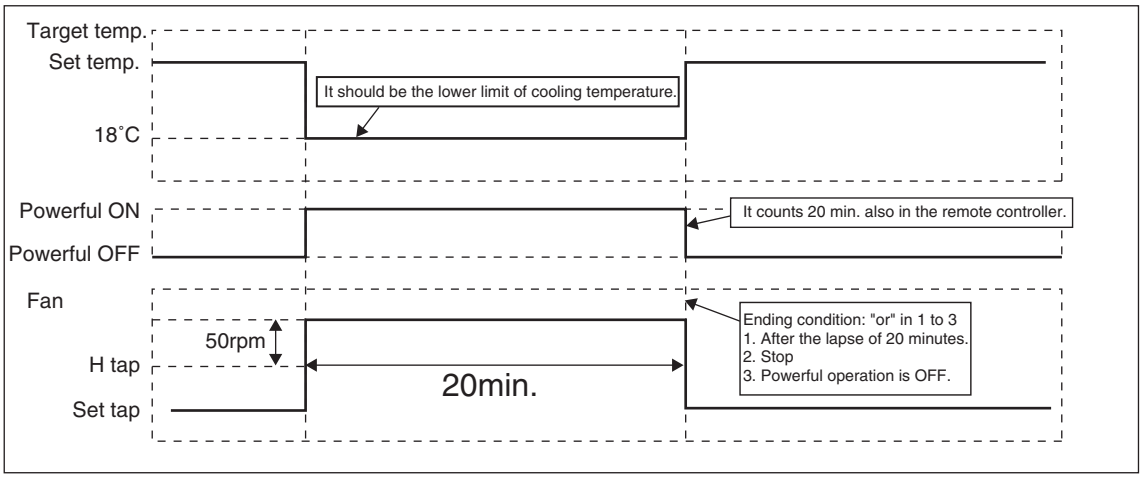
Details of the Control

When POWERFUL button is pushed in each operation mode, the fan speed / setting temperature will be converted to the following states in a period of twenty minutes.

In case of FTK(X)S20-35D

Operation mode	Fan speed	Target set temperature
COOL	H tap + 50 rpm	18°C
DRY	Dry rotating speed + 50 rpm	Normally targeted temperature in dry operation; Approx. –2°C
HEAT	H tap + 50 rpm	30°C
FAN	H tap + 50 rpm	—
AUTO	Same as cooling / heating in Powerful operation	The target is kept unchanged

Ex.) : Powerful operation in cooling mode.



(R4560)

7.12 Other Functions

7.12.1 Hot Start Function

Heat Pump Only

In order to prevent the cold air blast that normally comes when heating is started, the temperature of the heat exchanger of the indoor unit is detected, and either the air flow is stopped or is made very weak thereby carrying out comfortable heating of the room.
*The cold air blast is also prevented using a similar control when the defrosting operation is started or when the thermostat gets turned ON.

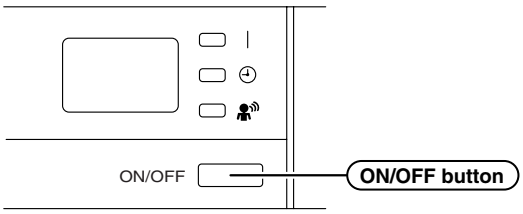
7.12.2 Signal Receiving Sign

When the indoor unit receives a signal from the remote controller, the unit emits a signal receiving sound.

7.12.3 ON/OFF Button on Indoor Unit

An ON/OFF button is provided on the front panel of the unit. Use this button when the remote controller is missing or if its battery has run out.
Every press of the button switches from ON to OFF or from OFF to ON.

In case of FTK(X)S20-35D, FTKD25-35D



- Push this button once to start operation. Push once again to stop it.
- This button is useful when the remote controller is missing.
- The operation mode refers to the following table.

	Mode	Temperature setting	Air flow rate
Cooling Only	COOL	22°C	AUTO
Heat Pump	AUTO	25°C	AUTO

- In the case of multi system operation, there are times when the unit does not activate with this button.

7.12.4 Titanium Apatite Photocatalytic Air-Purifying Filter

For FTK(X)S20-35D, FTKD50-71F

This filter combines the Air Purifying Filter and Titanium Apatite Photocatalytic Deodorizing Filter in a single highly effective unit. The filter traps microscopic particles, decompose odours and even deactivates bacteria and viruses. It lasts for three years without replacement if washed about once every six months.

7.12.5 Photocatalytic Deodorizing Filter

For FTKD25/35D, FTK50-71A, FLXS25-60B, FVXS35/50B

Photocatalytic Deodorizing Filter demonstrates powerful oxidation characteristics when subjected to harmless ultraviolet light. Photocatalytic deodorizing power is recovered simply by exposing the filter to the sun for 6 hours once every 6 months.

7.12.6 Air-Purifying Filter

For FTKD25/35D, FTK50-71A, FLXS25-60B, FVXS35/50B

A double structure made up of a bacteriostatic filter and an Air-Purifying Filter traps dust, mildew, mites, tobacco smoke, and allergy-causing pollen. Replace the Air-Purifying Filter once every 3 months.

7.12.7 Air Purifying Filter with Photocatalytic Deodorizing Function

For FTK(X)S50-71B, FTXS50-71D

This filter incorporates the benefits the Air Purifying Filter and Photocatalytic Deodorizing Filter in a single unit. Combining the two filters in this way increases the active surface area of the new filter. This larger surface area allows the filter to effectively trap microscopic particles, decompose odours and deactivate bacteria and viruses even for the high volume of air required to air-condition large living rooms. The filter can be used for approximately 3 years if periodic maintenance is performed.

7.12.8 Mold Proof Air Filter (Prefilter)

For all indoor units

The filter net is treated with mold resisting agent TBZ (harmless, colorless, and odorless). Due to this treatment, the amount of mold growth is much smaller than that of normal filters.

7.12.9 Self-Diagnosis Digital Display

The microcomputer continuously monitors main operating conditions of the indoor unit, outdoor unit and the entire system. When an abnormality occur, the LCD remote controller displays error code. These indications allow prompt maintenance operations.

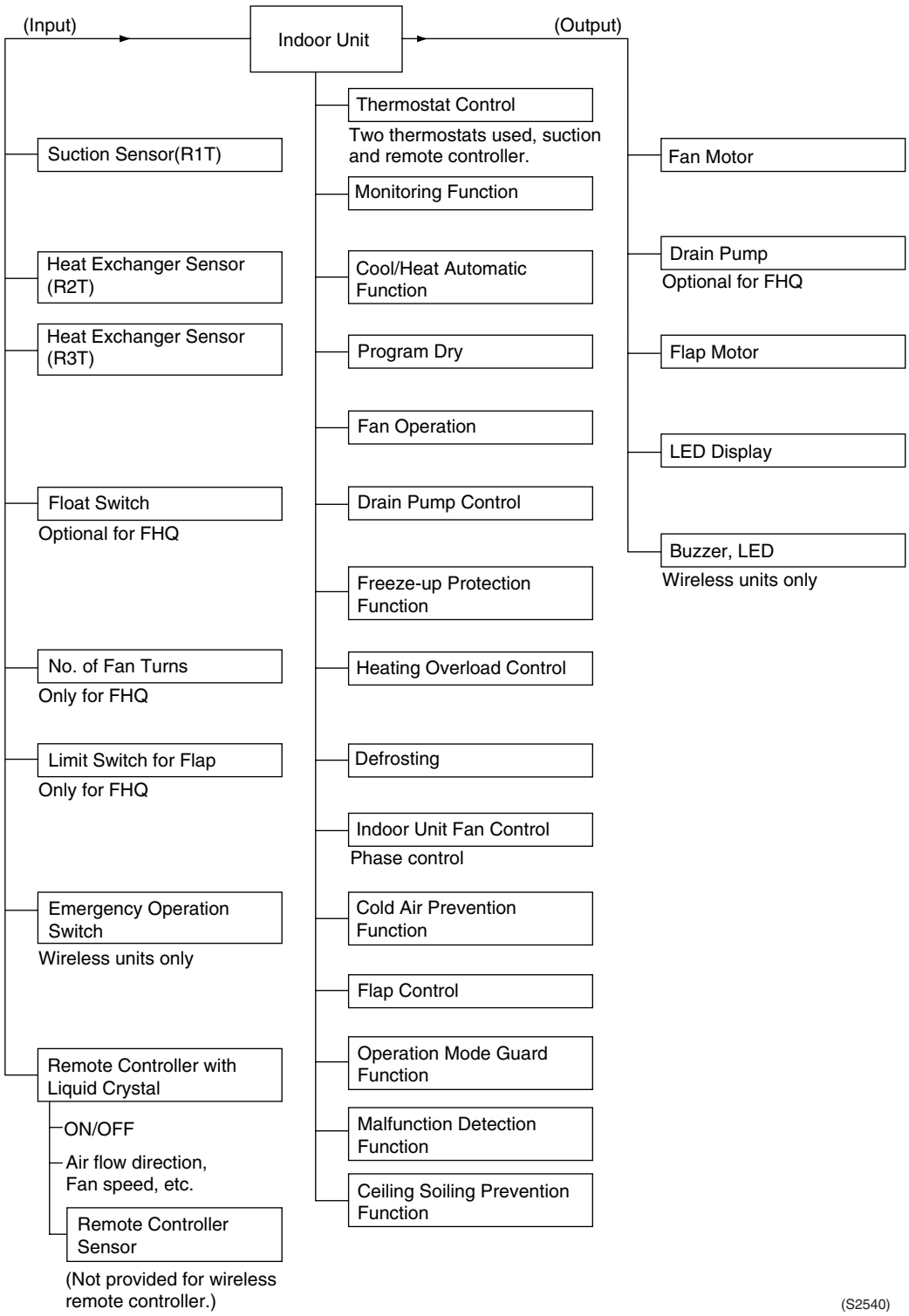
7.12.10 Auto-restart Function

Even if a power failure (including one for just a moment) occurs during the operation, the operation restarts in the condition before power failure automatically when power is restored. (Note) It takes 3 minutes to restart the operation because the 3 minute stand-by function is activated

8. Indoor Unit (SkyAir Models)

8.1 Function Outline

FFQ-B, FCQ-B
FBQ-B, FHQ-B



8.2 Electric Function Parts

FFQ – B

Capacity		25	35	50	60	Remarks
Wired remote controller		BRC1C61				Optional Accessory
Wireless remote controller	Heat pump	BRC7E530W				Optional Accessory
	Cooling only	BRC7E531W				
Electronic control unit		[2P095006-2] EC0226				
Fan motor		[3P104408-1] 4P 55W				
Fan motor capacitor		4.0μF AC440V				
Float switch		[3P079543-1] FS-0211B				
Drain pump		[3P103929-1] PLD-12230DM-17				

FCQ – B

Capacity		35	50	60	71	Remarks
Wired remote controller		BRC1C61				Optional accessory
Wireless remote controller	Heat pump	BRC7C612W				Optional accessory
	Cooling only	BRC7C613W				
Electronic control unit		[2P095006-6] EC0226				
Fan motor		[3P012316-1] 6P 45W				
Fan motor capacitor		3.5μF AC440V				
Float switch		[3P079543-1] FS-0211B				
Drain pump		[3P011376-1] PLD-12230DM-11				

FBQ – B

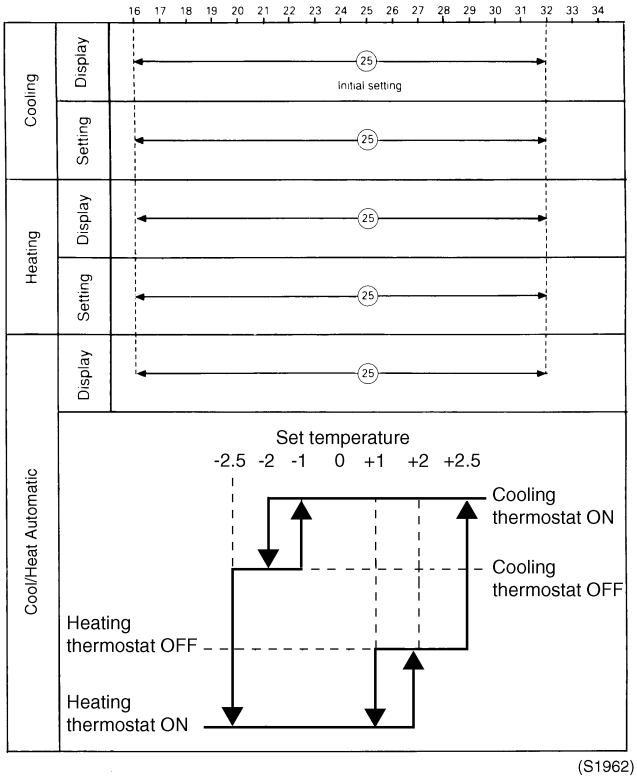
Capacity	60	71	Remarks
Wired remote controller	BRC1C61		Optional accessory
Electronic control unit	[2P095008-1] EC0228		
Fan motor capacitor	5.0μF AC440V		
Float switch	[3P079543-1] FS-0211B		
Drain pump	[3P016844-2] PJV-1403		

FHQ – B

Capacity		35	50	60	Remarks
Wired remote controller		BRC1C61			Optional Accessory
Wireless remote controller	Heat pump	BRC7E63W			Optional Accessory
	Cooling only	BRC7E66			
Electronic control unit		[2P095007-1] EC0227			
Fan motor		[3PN04213-1] 4P 62W			
Fan motor capacitor		3.0μF AC440V			
Swing motor		[3PN04208-1] MT8-L			

8.3 Function Details

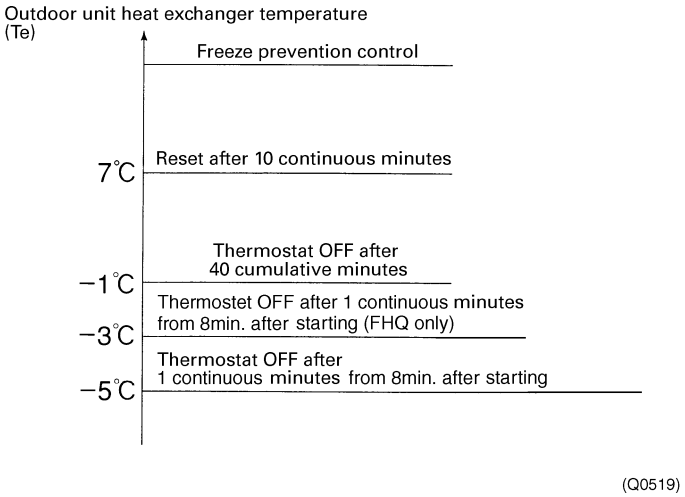
Thermostat Control



Freeze-up Protection Control

The thermostat turns OFF under the following temperature conditions to prevent freezing of the indoor unit heat exchanger.

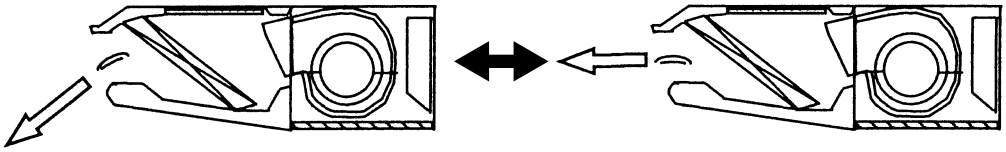
- The motorized valve is controlled to maintain the indoor unit heat exchanger temperature (Te) above 0°C.
- The outdoor unit fan speed is reduced to prevent freeze-up protection control from activating during cooling operation under low outside air temperature. (For details, see the section on cooling operation under low outside air temperature.)



Condensation Avoidance Control (FHQ Only)

Continuous 30 minutes operation of cooling

One hour drying



After continuous 30 minutes of operation with downward horizontal blade position, change the blade position to level, and after one hour, the unit operation can be reset.

The unit operation can be reset with changing operation mode into "heating" , changing air flow direction or turning "ON" or "OFF" the unit operation.

(S1117)

Note:

1. Regardless of thermostat ON or OFF, the control can be functioned with the operation mode of “cooling (automatic cooling)” or “programmed drying”.
2. The function is not provided for models other than FHQ models.

Outdoor Unit Identification Function

If the indoor unit is for both a heat pump and cooling only type, this function differentiates whether the outdoor unit is functioning as a heat pump or cooling only unit, and automatically decides the which operation modes can be set.

■ Operation modes which can be set

Heat pump : Fan / cool / dry / auto / heat

Drain Pump Control

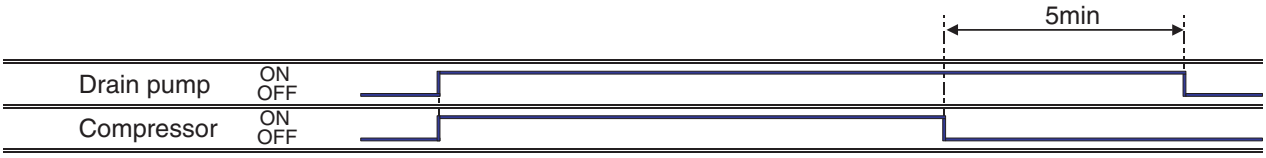
Time A shown in below diagram
(Period from occurrence of drain water level abnormality to compressor stop)

	A [sec]
FHQ	10
Other than FHQ	0

1 Cooling and dry operation

1-1 Basic operation

For cooling or dry operation mode, drain pump is turned ON on compressor starting while turned OFF when residual operation for 5 minutes is complete after compressor stopped.

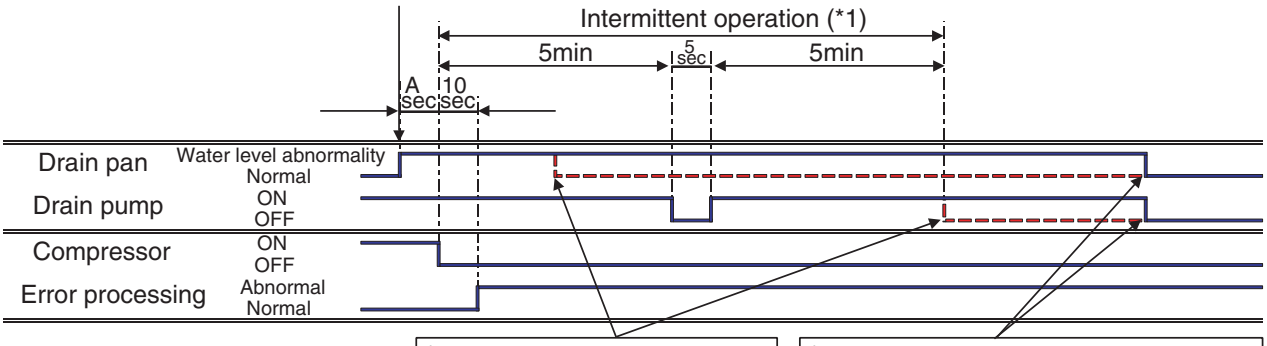


1-2 Operations when an occurrence of water level abnormality

1-2-a) Behavior between occurrence and recovery of water level abnormality

After compressor stops due to water level abnormality, drain pump is operated intermittently, i.e. 5 min ON, 5 sec OFF and 5 min ON. (*1) The intermittent operation is executed regardless of recovery of water level abnormality during the intermittent operation. (*2) When the water level abnormality can not be recovered, the latter 5 min ON operation is continued until recovery of the abnormality. (*3)

Occurrence of drain water level abnormality



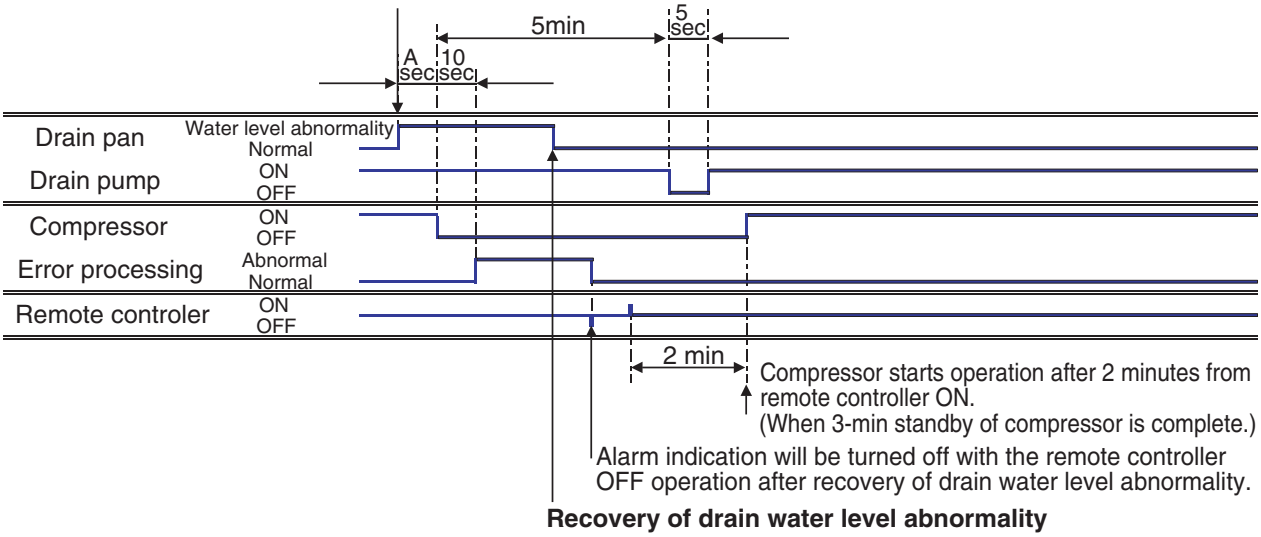
*2
Even though the water level abnormality could be recovered during intermittent operation, the operation shall be carried out without exception.

*3
If the abnormality could not be recovered during intermittent operation, the latter 5 min ON operation is continued until recovery of the abnormality.

1-2-b) Behavior when the unit restarts by remote controller after the water level abnormality is recovered

Water level abnormality shall be cancelled simultaneously when the unit is turned off with remote controller after recovery of the water level abnormality. When the unit is turned on with remote controller thereafter, compressor starts operation 2 minutes later from the remote controller ON. (Below diagram shows an example of the case that the water level abnormality is recovered during the former 5 min intermittent operation.)

Occurrence of drain water level abnormality



Recovery of drain water level abnormality

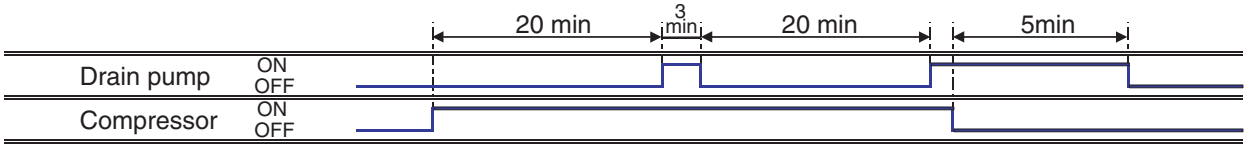
Note : (1 On the whole of cooling and dry operation)
Recovery operation for drain water level abnormality does not activate when the water level can be returned normal within A + 10 seconds.

2. Heating

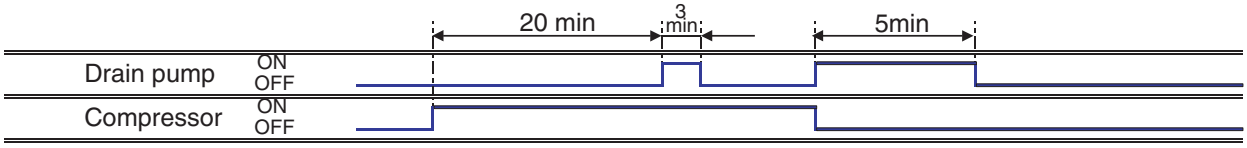
2-1 Basic operation

In heating operation of the unit equipped with a humidifier, when "Interlocking of drain pump / humidifier" (15(25)-3) is set to "yes" (02), the drain pump operates 20-min OFF and 3-min ON repeatedly during compressor is in operation.
After compressor stops, residual operation will be conducted for 5 minutes.

2-1-1 When compressor stops during drain pump ON after compressor operation started



2-1-2 When compressor stops during drain pump OFF after compressor operation started



2-2 Operations when an occurrence of drain water level abnormality

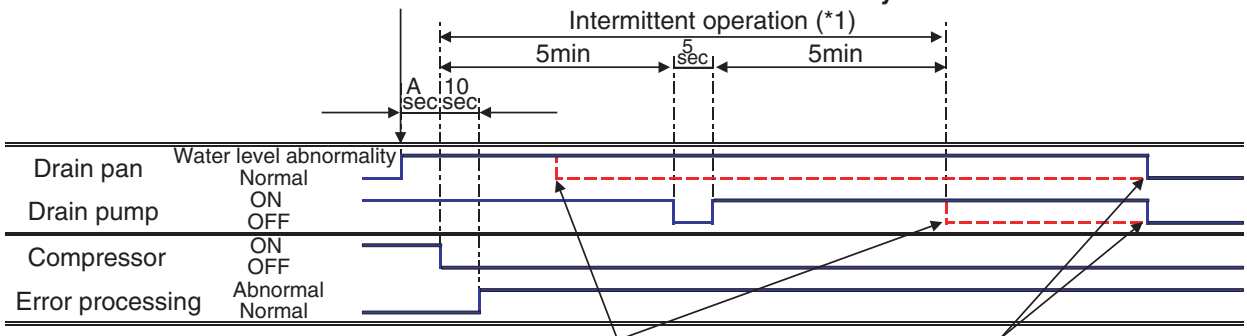
2-2-a) Behavior between occurrence and recovery of drain water level abnormality

After compressor stops due to water level abnormality, drain pump is operated intermittenly, i.e. 5 min ON, 5 sec OFF and 5 min ON. (*1) The intermittent operation is executed regardless of recovery of abn. Water level during the intermittent operation. (*2) When the abn. water level can not be recovered, the latter 5 min ON operation is continued until recovery of the abnormality. (*3) On above diagram, the system operation in the event of a water level abnormality occurrence differs between the drain pump ON and OFF. The details are as follows.

2-2-a)-1 When a water level abnormality occurs during drain pump ON

1 The same operation as 1-2-a) "Behavior between occurrence and recovery of drain water level abnormality" in the mode of cooling or dry.

Occurrence of drain water level abnormality



*2
Even though the water level abnormality could be recovered during intermittent operation, the operation shall be carried out without exception.

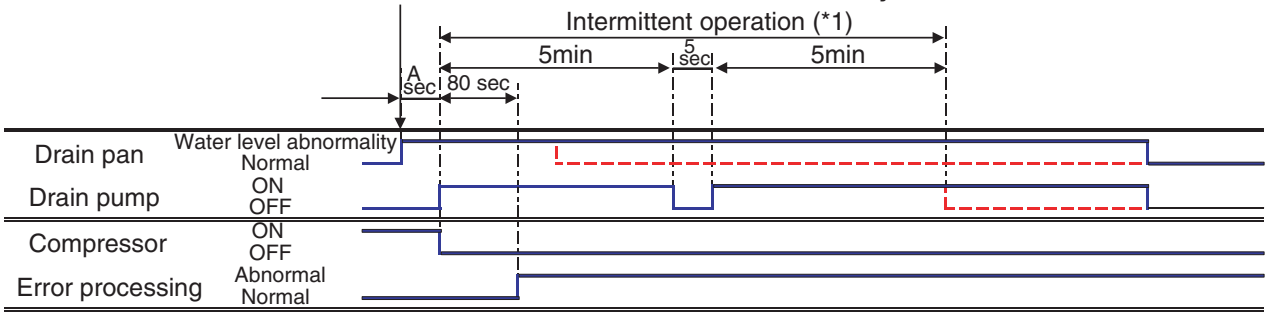
*3
If the abnormality could not be recovered during intermittent operation, the latter 5 min ON operation is continued until recovery of the abnormality.

Note : ((2-2-a)-1 When a water level abnormality occurs during drain pump ON)
Recovery operation for drain water level abnormality does not activate when the water level can be returned normal within A + 10 seconds.

2-2-a)-2 When a water level abnormality occurs during drain pump OFF

The abnormality is determined when 80 seconds elapse from compressor stop. Other than above, behavior is same as 2-2-a).

Occurrence of drain water level abnormality

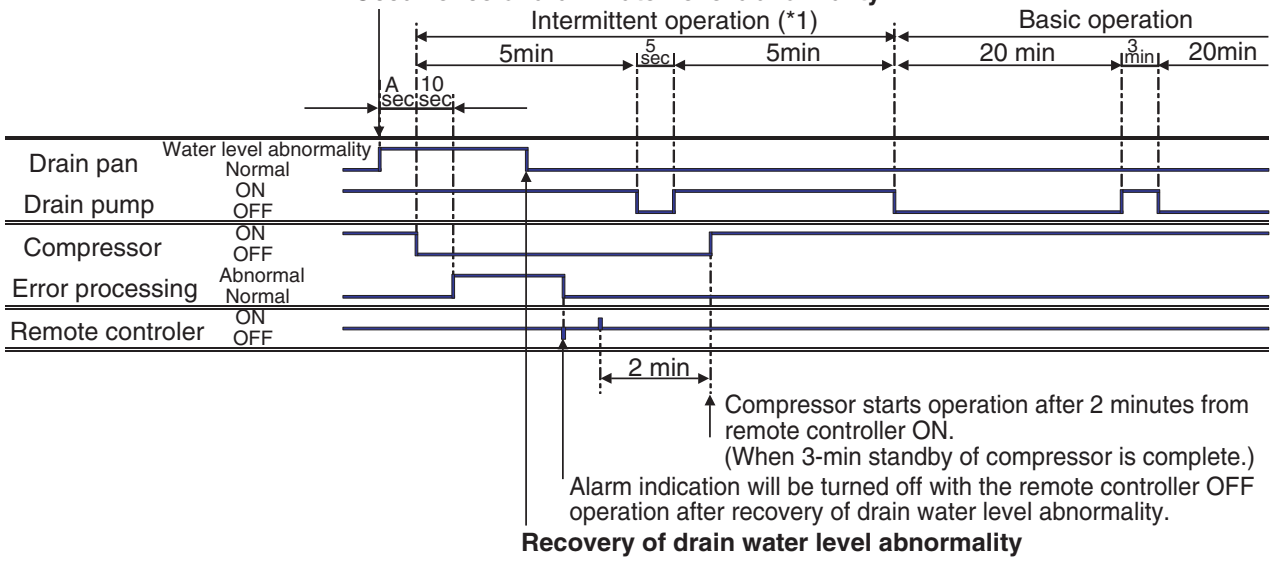


Note : ((2-2-a)-2 When a water level abnormality occurs during drain pump OFF)
Recovery operation for drain water level abnormality does not activate when the water level can be returned normal within A + 80 seconds.

2-2-b) Behavior when the unit restarts by remote controller after the water level abnormality is recovered

Abnormal water level shall be cancelled simultaneausly when the unit is turned off with remote controller after recovery of abnormal water level. When the unit is turned on with remote controller thereafter, compressor starts operation 2 minutes later from the remote controller ON. (Below diagram shows an example of the case that the water level abnormality is recovered during the former 5 min intermittent operation after the abnormality occurred during drain pump ON.)

Occurrence of drain water level abnormality

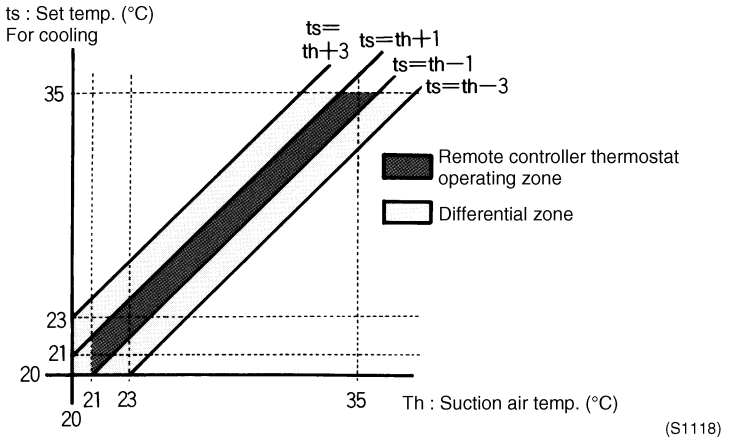


Recovery of drain water level abnormality

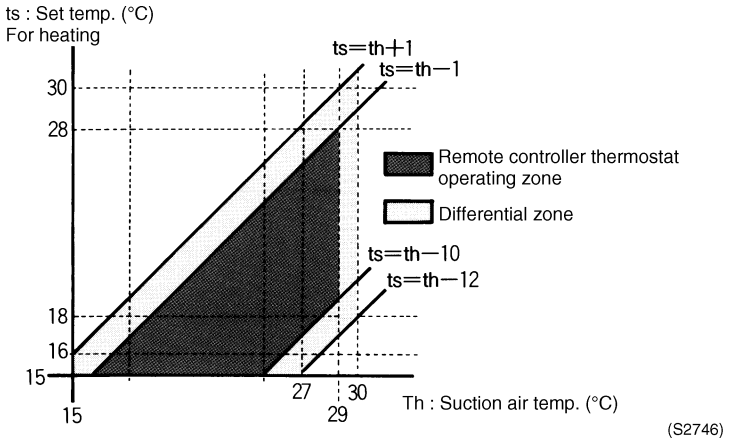
Using Conditions for Remote Controller Thermostat

Remote controller thermostat is equipped only in wired remote controller.
Even when “use remote controller thermostat” is selected in service mode, the remote controller thermostat may not be used.
< Conditions not to use >

1. When the remote controller thermostat malfunctions.
2. When the one remote controller group control is applied.
   (Excluding simultaneous ON/OFF operation)
3. When conditions relating set temperature with remote controller and suction air temperature are out of the operating zone of remote controller thermostat shown in below diagram.
   (Excluding when automatic operation mode is selected. Whenever operation is in the automatic mode, remote controller thermostat can be used.)



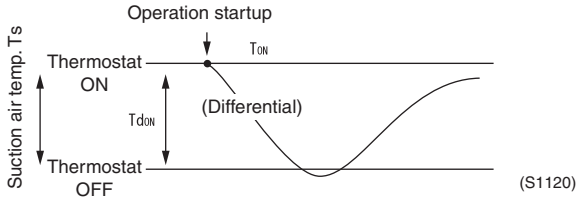
(S1118)



(S2746)

Program Dry Operation Function

The points of thermostat ON or OFF are determined according to the suction air temperature at the startup of unit operation.
The set temperature and flow rate are not displayed on remote controller.



1. Thermostat ON point (TON) according to suction air temp. (Ts).

Suction air temp	TON(°C)	TdON (°C)
Ts>24°C 24°C≥ Ts>16°C 16°C≥ Ts	Ts Ts 16°C	1.5 1.0 1.0

2. Operation condition

Compressor condition	ON	OFF
Setting of flow rate Angle of flap Air flow direction set with remote controller	L operation Set angle Set angle	OFF Set angle Set angle

Auto-restart Function

If there is a power cut when the unit is operating, it will automatically resume the same operating mode when the power is restored.

Caution

When performing maintenance and the power supply is to be shut off, be sure to turn the remote controller's ON/OFF switch OFF first.

Shutting the power supply switch off while the ON/OFF switch is still ON is dangerous because the "power failure automatic reset function" will cause the indoor fan to start turning immediately, or the outdoor unit fan to automatically start turning three minutes after the power supply is turned back on.

Fan and Flap Operations

			Fan	Flap	Remote Controller Indication
				FFQ, FCQ, FHQ	
Heating Operation	Hot Start from Defrost	In Swing Operation	OFF	Horizontal	Swing
		In Airflow Direction Setting	OFF	Horizontal	Set Position
	Defrost	In Swing Operation	OFF	Horizontal	Swing
		In Airflow Direction Setting	OFF	Horizontal	Set Position
	Thermostat OFF	In Swing Operation	LL	Horizontal	Swing
		In Airflow Direction Setting	LL	Horizontal	Set Position
	Hot Start from Thermostat OFF (Cold Air Prevention)	In Swing Operation	LL	Horizontal	Swing
		In Airflow Direction Setting	LL	Horizontal	Set Position
	Stop (Error)	In Swing Operation	OFF	Horizontal	—
		In Airflow Direction Setting	OFF	Horizontal	—
	Overload Thermostat OFF	In Swing Operation	LL	Horizontal	Swing
		In Airflow Direction Setting	LL	Horizontal	Set Position
Cooling Operation	Thermostat ON in Program Dry Mode	In Swing Operation	L	Swing	Swing
		In Airflow Direction Setting	L	Setting	Set Position
	Thermostat OFF in Program Dry Mode	In Swing Operation	OFF	Swing	Swing
		In Airflow Direction Setting	OFF	Setting	Set Position
	Cooling Thermostat OFF	In Swing Operation	Setting	Swing	Swing
		In Airflow Direction Setting	Setting	Setting	Set Position
	Stop (Error)	In Swing Operation	OFF	Horizontal	—
		In Airflow Direction Setting	OFF	Setting	—
	Freeze Prevention in Program Dry Mode (Including Cooling Operation)	In Swing Operation	L ★1	Swing	Swing
		In Airflow Direction Setting	L ★1	Setting	Set Position

★1: L or LL operation for FFQ, FCQ only.
(L for 4way outlet and LL for 2way or 3way outlet)

Mode Conflict

[Overview]
While the indoor unit for another room and the outdoor unit are operating, when the indoor unit for the own room is activated, the operation mode which can be selected in the own room has some restrictions as mentioned below.

i) In case an priority for operation mode selection is given to the own room by setting the dip switch of outdoor unit;
→The own room can be operated in any mode.

ii) In case an priority for operation mode selection is not given to the own room by setting the dip switch of outdoor unit;
→The unit can be operated as follows:

Outdoor unit operation mode when an operation mode for the own room is selected. (The outdoor unit is operated in the mode as mentioned below.)	Operation mode selected in the own room			
	Cooling or Automatic cooling (Note)	Dry	Blowing	Heating or Automatic heating (Note)
Cooling	○	○	○	×
Heating	×	×	×	○
Blowing	○	○	○	○*

○ : Operational ∗:The unit for another room is switched into non-operational condition.
× : Non-operational

* Operation of the indoor unit for the own room during non-operation.
- Fan = OFF
- Louver = becomes horizontal position.
- ON LED on the remote controller = blinks.
- Indication of "under central control" on the remote controller = displayed.

Note: During automatic operation, at the time of changing operation mode to Automatic cooling or Automatic heating, the unit is operated as the table shown above.

Non-operating Room Dew Prevention Fan Control

[Overview]
After operating an indoor unit for the own room in the cooling mode or dry mode, stop the unit using the remote controller. Under the condition, when an unit for another room is started operation in the heating mode, the fan in the own room may rotate in the LL mode even though the remote controller of the fan is in stop mode.

[Purpose]
On multiple units, when units of other rooms start heating operation after unit of the own room starts cooling or dry operation, high-temperature refrigerant flows to the unit of the own room, thus resulting in evaporation of condensate retained in heat exchanger or drain pan. At this time, if casing temperature is below dew point, dew gets condensed. In order to prevent the dew condensation, this control is used to operate the fan for a specified period of time, thus discharging the moisture from the indoor unit.

[Outline]
- The fan rotates in LL mode even though the unit is turned off by the use of remote controller.
- This control can be reset only by conducting the cooling or dry operation of the unit of the own room with thermostat ON.
- This control is enabled within 8 hours after the “Outdoor unit operation mode” has changed from cooling or dry operation to heating operation.
- During the 8 hours, this control is activated for a cumulative period of 40 minutes.

■ Emergency operation is not conducted.
The outdoor unit has no emergency function. Therefore, in the case of connecting to Split or Split Multi outdoor unit, only the fan operation is conducted even though the dip switch of indoor unit is set to EMERGENCY.

Part 6
Test Operation

1. Test Operation

1.1 Procedure and Outline

Follow the following procedure to conduct the initial test operation after installation.

1.1.1 Check work prior to turn power supply on

Check the below items.
- Power wiring
- Control transmission wiring between units
- Earth wire

- ○ Is the power supply single-phase 220-230V / 50Hz?
- ○ Have you finished a ductwork to drain?
- ○ Have you detach transport fitting?
- ○ Is the wiring performed as specified?
- ○ Are the designated wires used?
- ○ Is the grounding work completed?
  Use a 500V megger tester to measure the insulation.
  - Do not use a megger tester for other circuits than 200-230V circuit.
- ○ Are the setscrews of wiring not loose?
- ○ Is the electrical component box covered with an insulation cover completely?

Check on refrigerant piping

- ○ Is pipe size proper? (The design pressure of this product is 4.0MPa.)
- ○ Are pipe insulation materials installed securely?
  Liquid and gas pipes need to be insulated. (Otherwise causes water leak.)
- ○ Are respective stop valves on liquid and gas line securely open?

Check on amount of refrigerant charge

- ○ Is refrigerant charged up to the specified amount?
  If insufficient, charge the refrigerant from the service port of stop valve on the liquid side with outdoor unit in stop mode after turning power on.
- ○ Has the amount of refrigerant charge been recorded on “Record Chart of Additional Refrigerant Charge Amount”?

(V3180)

1.1.2 Turn power on

Turn outdoor unit power on.

Turn indoor unit power on.

Carry out field setting on outdoor PC board

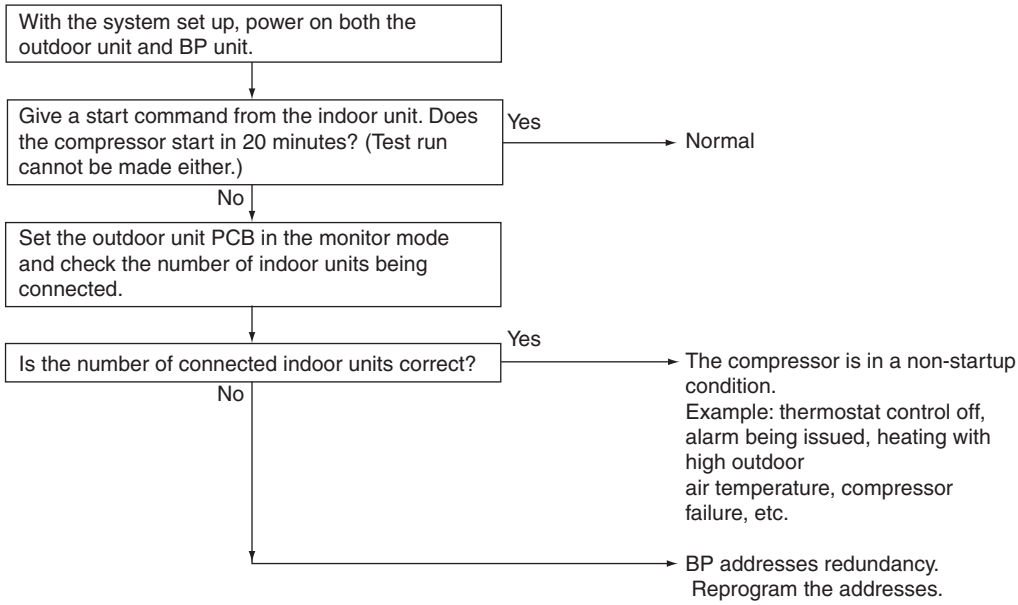
- ○ Be sure to turn the power on 6 hours before starting operation to protect compressors.

(Q0398)

1.1.3 Judging and reprogramming in case of redundant BP addresses

The BP unit of this system is provided with specific addresses in its production stage. These addresses are used to conduct various controls. If by any chance (on 3 out of 260000 units) these addresses are redundant, the system may get in trouble. When replacing the PCB of the BP unit too, these addresses may be used repeatedly.

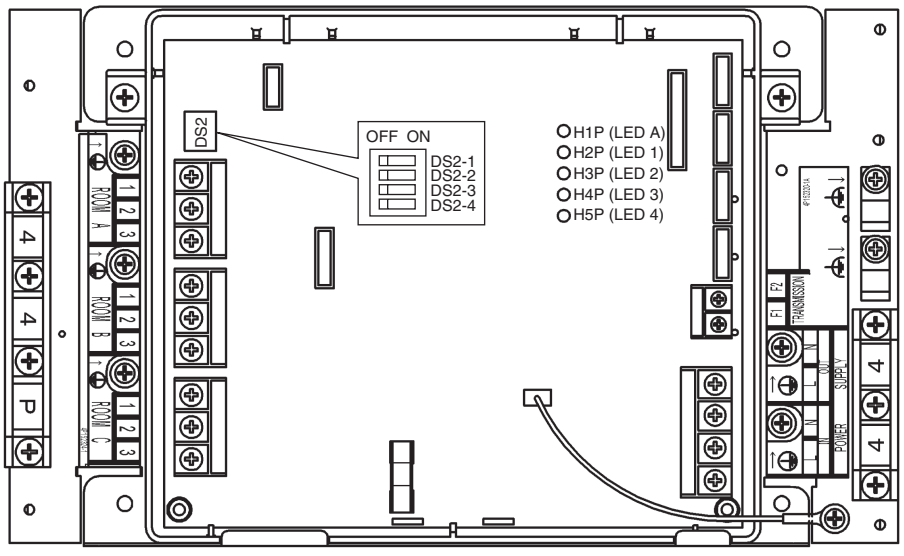
Address redundancy checking flowchart



(Q0517)

Reprogramming the PCB addresses of BP unit

Modify the DIP switch (DS2) settings on the BP unit's PCB in the following way.



(Q0444)

Example of DIP switch (DS2) settings on the BP unit's PCB

	DS2-1	DS2-2	DS2-3	DS2-4
BP unit 1	OFF	OFF	ON	OFF
BP unit 2	OFF	OFF	OFF	ON
BP unit 3	OFF	OFF	ON	ON

DS1~4 : Factory setting is OFF.
The BP unit 1 through 3 show the first through third unit, respectively. The order of these units is flexible.
The above table is just for your reference. The redundancy of addresses can be avoided when the DIP switch settings are individually specified.
With the DIP switch settings reprogrammed, power on the outdoor unit and BP unit again. Check for address redundancy.

Note: If an error display appears on the indoor unit, BP unit or outdoor unit, follow its code and description.

1.1.4 When Turning On Power First Time

The unit cannot be run for up to 12 minutes to automatically set address (indoor-outdoor address, etc.).

Status

Outdoor unit — Test lamp H2P .... Blinks
Can also be set during operation described above.

Indoor unit — If ON button is pushed during operation described above, the “UH” malfunction indicator blinks.
(Returns to normal when automatic setting is complete.)

1.1.5 When Turning On Power the Second Time and Subsequent

Tap the RESET(BS5) button on the outdoor unit PCB. Operation becomes possible for about 2 minutes. If not, the unit cannot be run for up to 10 minutes.

Status

Outdoor unit — Test lamp H2P .... Blinks
Can also be set during operation described above.

Indoor unit — If ON button is pushed during operation described above, the operation lamp lights but the compressor does not operate. (Returns to normal when automatic setting is complete.)

1.1.6 When the No. of Indoor Unit Has Been Changed, or Indoor (BP) or Outdoor Unit PC Board Has Been Changed, or the System is transferred

Be sure to push and hold the RESET button for 5 seconds. If not, the addition cannot be recognized. In this case, the unit cannot be run for up to 12 minutes to automatically set the address (indoor-outdoor address, etc.)

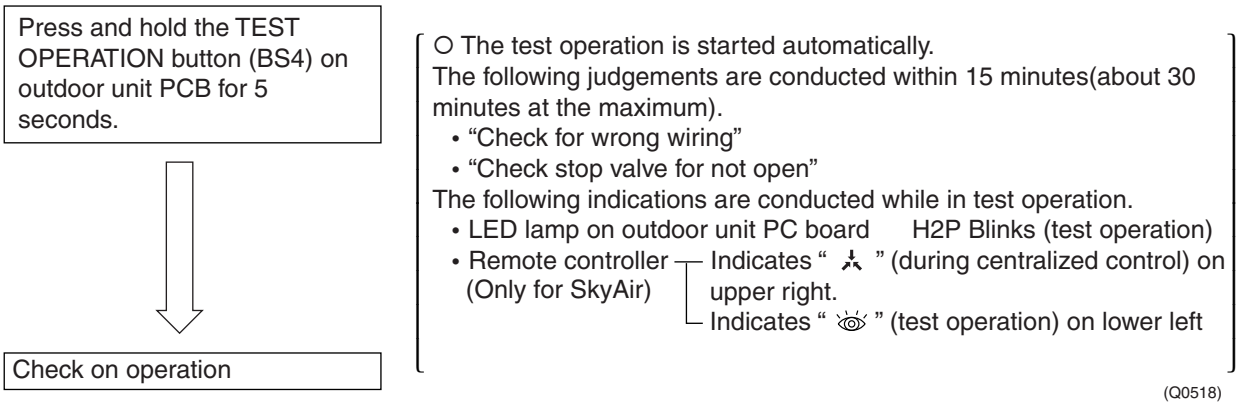
Status

Outdoor unit — Test lamp H2P .... ON
Can also be set during operation described above.

Indoor unit — If ON button is pushed during operation described above, the “UH” or “U4” malfunction indicator blinks. (Returns to normal when automatic setting is complete.)

1.1.7 Check Operation

* During check operation, mount front panel to avoid the misjudging.
* Check operation is mandatory for normal unit operation.
  (When the check operation is not executed, alarm code "U3" will be displayed.)



On completion of test operation, LED on outdoor unit PCB displays the following.
H3P ON: Normal completion
H2P and H3P ON: Abnormal completion → Check the indoor unit remote controller for abnormal display and correct it.

Malfunction code
In case of an alarm code displayed on remote controller:

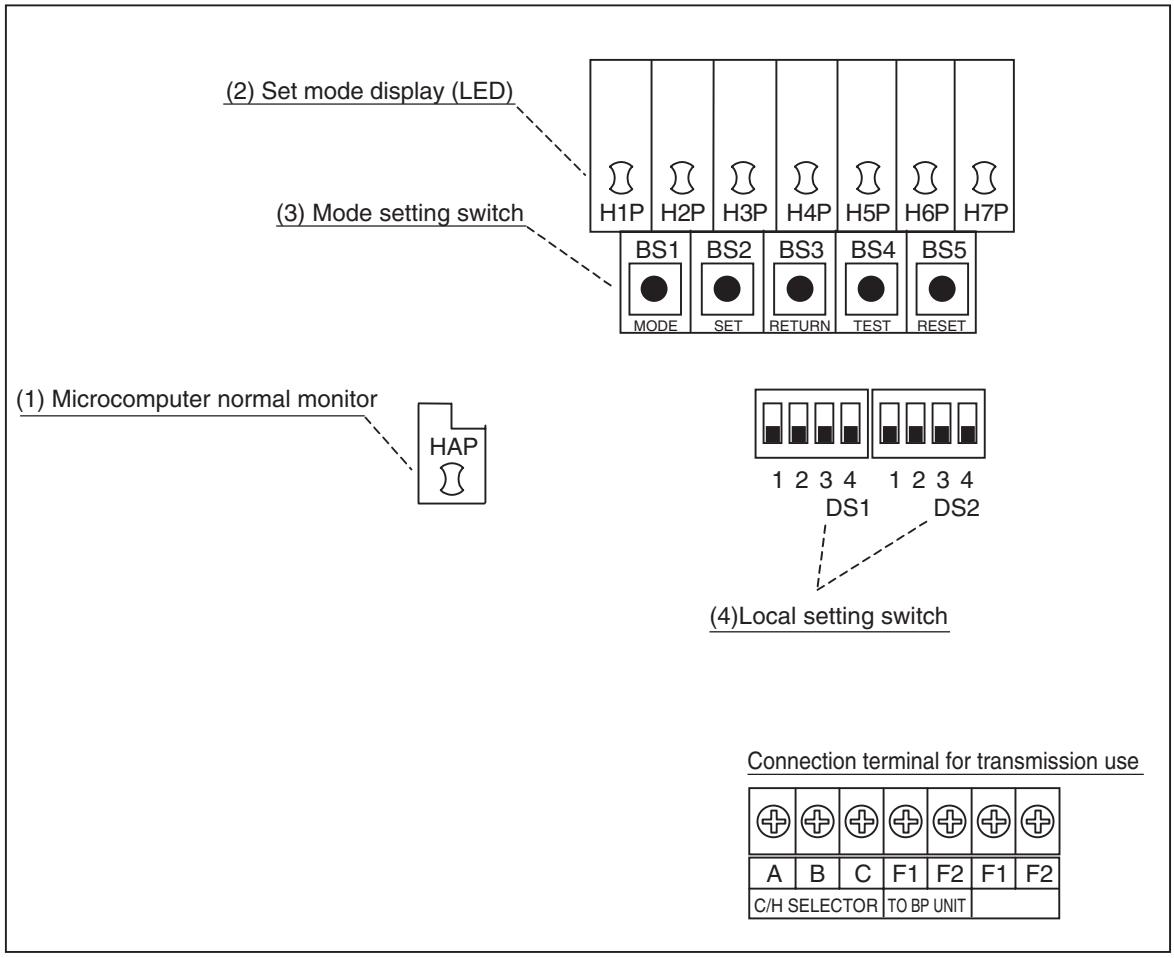
Malfunction code	Nonconformity during installation	Remedial action
E3	The stop valves in the outdoor unit remain closed.	Open the stop valve on both the gas side and liquid side.
E4 F3	The stop valves in the outdoor unit remain closed.	Open the stop valve on both the gas side and liquid side.
	The operation mode on the remote controller was changed before the check run.	Set the operating mode on all indoor unit remote controllers to “cooling”.
	The refrigerant is insufficient.	• Check whether additional refrigerant charge has been finished correctly. • Calculate again the required quantity of refrigerant to be charged based on the piping length, then charge additionally proper quantity of refrigerant.
U3	The check operation is not performed.	Perform the check operation.
U4	The power is not supplied to the outdoor unit.	Connect correctly the power cable of the outdoor unit.
UA	Improper type of indoor units or BP units are connected.	Check the type of indoor units and BP units currently connected. If they are not proper, replace them with proper ones.
UF	The stop valves in the outdoor unit remain closed.	Open the stop valve on both the gas side and liquid side.
	The piping and wiring of the specified indoor unit are not connected correctly to the outdoor unit.	Confirm that the piping and wiring of the specified indoor unit are connected correctly to the outdoor unit.
	The operation mode on the remote controller was changed before the check operation.	Set the operating mode on all indoor unit remote controllers to “cooling”.
UH	The unit-to-unit wirings are not connected correctly.	Connect correctly the unit-to-unit wirings to the F1 and F2(TO BP UNIT) terminals on the PC board (A1P) in the outdoor unit.

1.1.8 Confirmation on Normal Operation

- Conduct normal unit operation after the check operation has been completed.
  (When outdoor air temperature is 30°CDB or higher, the unit can not be operated with heating mode. See the installation manual attached.)
- Confirm that the indoor/outdoor units can be operated normally.
  (When an abnormal noise due to liquid compression by the compressor can be heard, stop the unit immediately, and turn on the crankcase heater to heat up it sufficiently, then start operation again.)
- Operate indoor unit one by one to check that the outdoor unit operates.
- Confirm that the indoor unit discharges cold air (or warm air).
- Operate the air direction control button and flow rate control button to check the function of the devices.

2. Outdoor Unit PCB Layout

Outdoor Unit PCB



(Q0404)

(1) Microcomputer normal monitor (LED Green)
This monitor blinks while in normal operation, and turns on or off when a malfunction occurs.

(2) Set mode display (LED Orange)
LEDs display mode according to the setting.

(3) Mode setting switch
Used to change mode.

(4) Local setting switch
Used to make local settings.

3. Field Setting

3.1 Field Setting from Outdoor Unit

3.1.1 Setting by dip switches

The following field settings are made by dip switches on PCB.

Dipswitch		Setting item	Description
No.	Setting		
DS1-1	ON	Cool / Heat change over setting	Used to set cool / heat change over setting by remote controller equipped with outdoor unit.
	OFF (Factory set)		
DS1-2 ~DS1-4	ON	Not used	Do not change the factory settings.
	OFF (Factory set)		
DS2-1 ~4	ON	Not used	Do not change the factory settings.
	OFF (Factory set)		

Caution

DIP switch Setting after changing the main PCB (A1P) to spare parts PCB.

When you change the main PCB (A1P) to spare parts PCB, please carry out the following setting.

The spare parts PCB is different from the PCB on factory shipment above in a way of setting. When you exchange to the spare parts PCB, make sure that you change setting referring the following table.

DIP Switch Detail

DS No.	Item	Contents	
DS1-1	Cool/Heat change over setting	ON	The Cool/Heat change over setting is carried out by COOL/HEAT changeover remote controller fitted to outdoor unit.
		OFF	The Cool/Heat change over setting is not carried out by COOL/HEAT changeover remote controller fitted to outdoor unit.
DS1-2	Cooling only/Heat-pump setting	ON	Cooling only
		OFF	Heat-pump
DS1-3	BP Unit	ON	Connect BP unit
		OFF	Not connect BP unit
DS1-4	Not used	Do not change the factory setting	
DS2-1	HP setting (Horse power)	The following setting is performed according to capability of the outdoor unit.	
DS2-2			
DS2-3			
DS2-4			

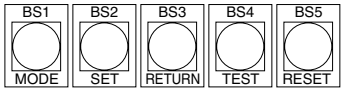
	4HP	5HP	6HP
DS2-1	ON	OFF	OFF
DS2-2	OFF	ON	OFF
DS2-3	OFF	OFF	ON
DS2-4	OFF	OFF	OFF

■ Setting by pushbutton switches

The following settings are made by pushbutton switches on PCB.

	H1P	H2P	H3P	H4P	H5P	H6P	H7P
LED indication	●	●	○	●	●	●	●

(Factory setting)



(V2760)

There are the following three setting modes.

① **Setting mode 1 (H1P off)**

Initial status (when normal) : Also indicates during “abnormal”.

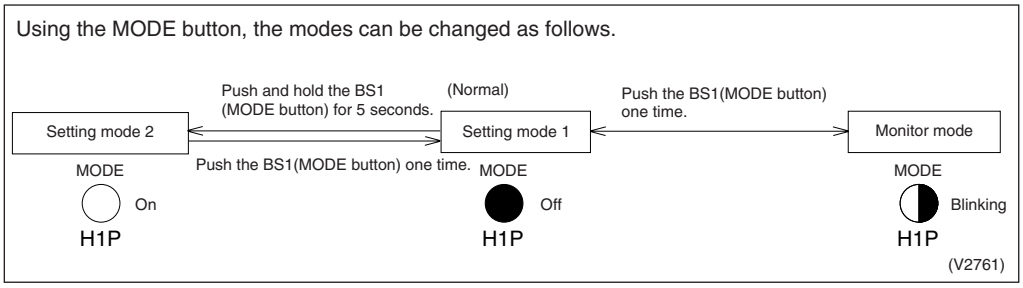
② **Setting mode 2 (H1P on)**

Used to modify the operating status and to set program addresses, etc. Usually used in servicing the system.

③ **Monitor mode (H1P blinks)**

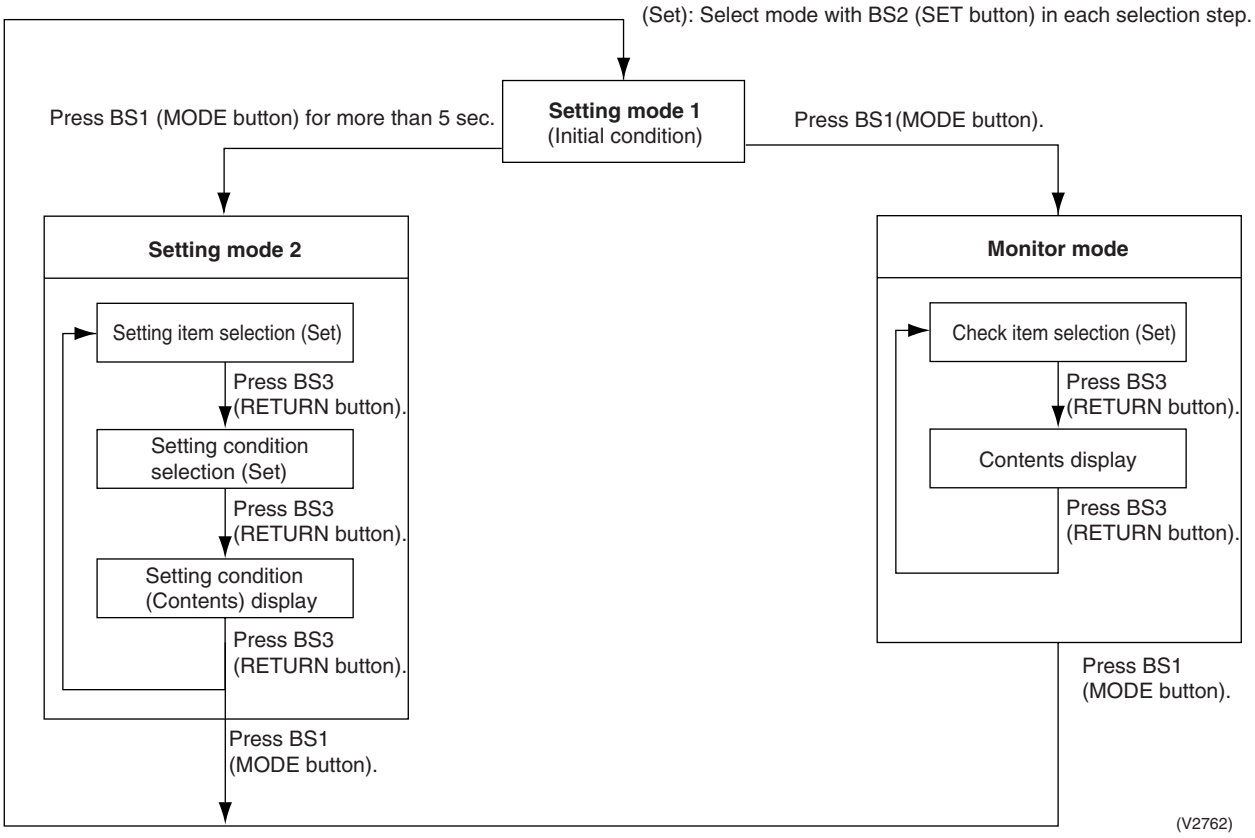
Used to check the program made in Setting mode 2.

■ Mode changing procedure



(V2761)

■ Mode changing procedure



(V2762)

a. “Setting mode 1”

“Normally, “Setting mode 1” is set. In case of other status, push MODE button (BS1) one time and set to “Setting mode 1”.

∗ The current state is displayed.

Display for malfunction/preparing/test-run

Setting (displaying) item	LED display example						
	H1P	H2P	H3P	H4P	H5P	H6P	H7P
Normal	●	●	○	●	●	●	●
Malfunction	●	○	○	●	●	●	●
Preparing/Test-run	●	◑	○	●	●	●	●

○ : ON
● : OFF
◑ : Blinking

b. “Setting mode 2”

Push and hold the MODE button (BS1) for 5 seconds and set to “Setting mode 2”.

<Selection of setting items>

Push the SET button (BS2) and set the LED display to a setting item shown in the table on the right.
↓
Push the RETURN button (BS3) and decide the item. (The present setting condition is blinked.)

<Selection of setting conditions>

Push the SET button (BS2) and set to the setting condition you want.
↓
Push the RETURN button (BS3) and decide the condition.

Push the RETURN button (BS3) and set to the initial status of “Setting mode 2”.

∗ If you become unsure of how to proceed, push the MODE button (BS1) and return to setting mode 1.

(V2764)

No.	Setting item	Description
5	Indoor unit forced fan H	Allows forced operation of indoor unit fan while unit is stopped. (H tap)
6	Indoor unit forced operation	Allows forced operation of indoor unit.
8	Te setting	Target evaporation temperature for cooling
9	Tc setting	Target condensation temperature for heating
10	Defrost changeover setting	Changes the temperature condition for defrost and sets to quick defrost or slow defrost.
21	Refrigerant collection mode setting	Sets to refrigerant collection mode.
22	Night quiet mode setting	Sets automatic Night quiet operation in a simple way. The operating time is based on “Starting set” and “Ending set”.
26	Night quiet mode control starting setting	Sets starting time of Night quiet operation. (Night quiet mode setting is also required.)
27	Night quiet mode control ending setting	Sets ending time of Night quiet operation. (Night quiet mode setting is also required.)
29	Capacity precedence setting	If the capacity control is required, the low noise control is automatically released by this setting during carrying out low noise operation and Night quiet operation.
30	Demand setting 1	Changes target value of power consumption when demand control 1 is input.
31	Demand setting 2	Changes target value of power consumption when demand control 2 is input.
32	Normal demand setting	Normally enables demand control 1 without external input. (Effective to prevent a problem that circuit breaker of small capacity is shut down due to large load.

No.	Setting item display								Setting condition display								
	Setting item	MODE H1P	TEST H2P	C/H selection			Low noise H6P	Demand H7P									∗ Factory set
				IND H3P	Master H4P	Slave H5P											
5	Indoor forced fan H	○	●	●	●	○	●	○	Normal operation	○	●	●	●	●	○	∗
									Indoor forced fan H	○	●	●	●	●	○	●	
6	Indoor forced operation	○	●	●	●	○	○	●	Normal operation	○	●	●	●	●	○	∗
									Indoor forced operation	○	●	●	●	●	○	●	
8	Te setting	○	●	●	○	●	●	●	High (H)	○	●	●	●	○	●	●	
									Normal (M)	○	●	●	●	●	○	●	∗
									Low (L)	○	●	●	●	●	●	○	
9	Tc setting	○	●	●	○	●	●	○	High (H)	○	●	●	●	○	●	●	
									Normal (M)	○	●	●	●	●	○	●	∗
									Low (L)	○	●	●	●	●	●	○	
10	Defrost setting	○	●	●	○	●	○	●	Quick defrost	○	●	●	●	○	●	●	
									Normal	○	●	●	●	●	○	●	∗
									Slow defrost	○	●	●	●	●	●	○	
21	Refrigerant recovery mode setting	○	●	○	●	○	●	○	Refrigerant recovery: OFF	○	●	●	●	●	●	○	∗
									Refrigerant recovery: ON	○	●	●	●	●	○	●	
22	Night quiet mode setting	○	●	○	●	○	○	●	OFF	○	●	●	●	●	●	●	∗
									Level 1	○	●	●	●	●	●	○	
									Level 2	○	●	●	●	●	○	●	
									Level 3	○	●	●	●	●	○	○	
26	Night quiet mode control start setting	○	●	○	○	●	○	●	About 20:00	○	●	●	●	●	●	○	
									About 22:00	○	●	●	●	●	○	●	∗
									About 24:00	○	●	●	●	○	●	●	
27	Night quiet mode control end setting	○	●	○	○	●	○	○	About 6:00	○	●	●	●	●	●	○	
									About 7:00	○	●	●	●	●	○	●	
									About 8:00	○	●	●	●	○	●	●	∗
29	Capacity precedence setting	○	●	○	○	○	●	○	OFF	○	●	●	●	●	●	○	∗
									ON	○	●	●	●	●	○	●	
30	Demand setting 1	○	●	○	○	○	○	●	60% demand	○	●	●	●	●	●	○	
									70% demand	○	●	●	●	●	○	●	∗
									80% demand	○	●	●	●	○	●	●	
31	Demand setting 2	○	●	○	○	○	○	○	30% demand	○	●	●	●	●	●	○	
									40% demand	○	●	●	●	●	○	●	∗
									50% demand	○	●	●	●	○	●	●	
32	Continuous demand setting	○	○	●	●	●	●	●	OFF	○	●	●	●	●	●	○	∗
									ON	○	●	●	●	●	○	●	

c. Monitor mode

To enter the monitor mode, push the MODE button (BS1) when in "Setting mode 1".

<Selection of setting item>

Push the SET button (BS2) and set the LED display to a setting item.

<Confirmation on setting contents>

Push the RETURN button (BS3) to display different data of set items.

Push the RETURN button (BS3) and switches to the initial status of "Monitor mode".

∗ Push the MODE button (BS1) and returns to "Setting mode 1".

(V2765)

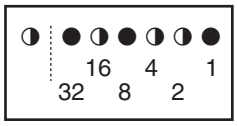
No.	Setting item	LED display							Data display
		H1P	H2P	H3P	H4P	H5P	H6P	H7P	
0	Various settings	◑	●	●	●	●	●	●	See below
5	Number of connected indoor units	◑	●	●	●	○	●	○	Lower 6 digits
14	Contents of malfunction (the latest)	◑	●	●	○	○	○	●	Malfunction code table
15	Contents of malfunction (1 cycle before)	◑	●	●	○	○	○	○	
16	Contents of malfunction (2 cycle before)	◑	●	○	●	●	●	●	
20	Contents of retry (the latest)	◑	●	○	●	○	●	●	
21	Contents of retry (1 cycle before)	◑	●	○	●	○	●	○	
22	Contents of retry (2 cycle before)	◑	●	○	●	○	○	●	

Setting item 0 Display contents of "Various settings"

Setting item		H1P	H2P	H3P	H4P	H5P	H6P	H7P
Defrost select setting	Short	◑	●	●	●	○	●	●
	Medium	◑	●	●	●	◑	●	●
	Long	◑	●	●	●	●	●	●
Te setting	H	◑	●	●	●	●	○	●
	M	◑	●	●	●	●	◑	●
	L	◑	●	●	●	●	●	●
Tc setting	H	◑	●	●	●	●	●	○
	M	◑	●	●	●	●	●	◑
	L	◑	●	●	●	●	●	●

Push the SET button and match with the LEDs No. 1 - 15, push the RETURN button, and enter the data for each setting.

★ Data such as addresses and number of units is expressed as binary numbers; the two ways of expressing are as follows:



The No. 5 cool/heat unified address is expressed as a binary number consisting of the lower 6 digits. (0 - 63)

In ① the address is 000110 (binary number), which translates to 4 + 2 = 6 (base 10 number). In other words, the address is 6.

3.2 Detail of Setting Mode

3.2.1 Cool / Heat Mode Switching

There are the following 2 cool/heat switching modes.

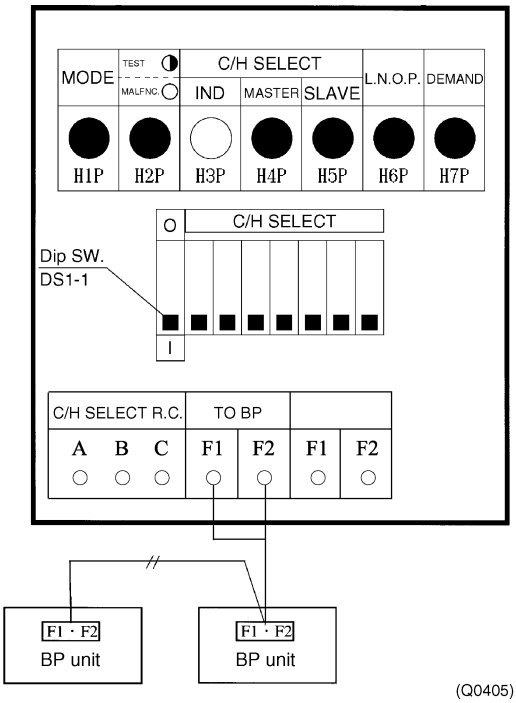
① Set cool/heat separately for each outdoor unit system by indoor unit remote controller.

② Set cool/heat separately for each outdoor unit system by cool/heat switching remote controller.

---

① Set Cool/Heat Separately for Each Outdoor System by Indoor Unit Remote Controller

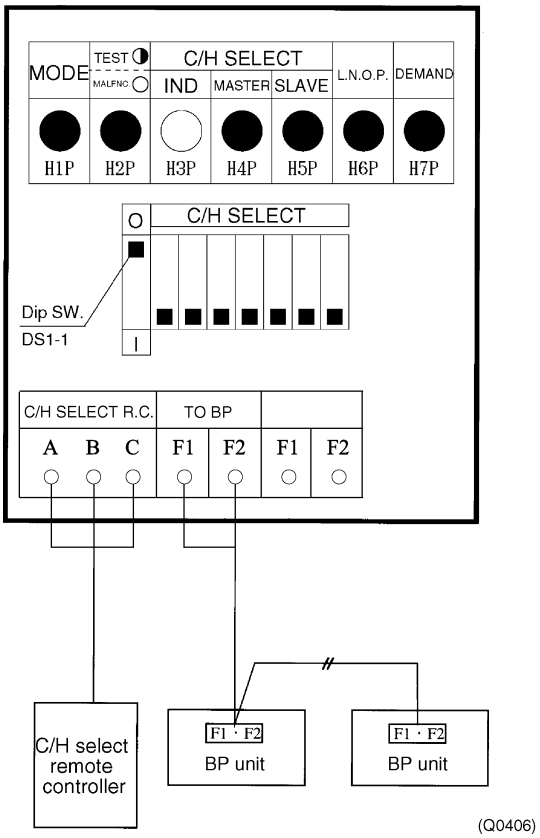
- ◆ Set outdoor unit PCB DS1-1 to “indoor” (factory set).
- ◆ Set cool/heat switching to “individual” for “Setting mode 1” (factory set).



(Q0405)

② **Set Cool / Heat Separately for Each Outdoor Unit System by Cool/Heat Switching Remote Controller**

- ◆ Set outdoor unit PCB DS1-1 to “outdoor” (factory set).
- ◆ Set cool/heat switching to “individual” for “Setting mode 1” (factory set).



3.2.2 Setting of Low Noise Operation and Demand Operation

Setting of Low Noise Operation

By connecting the external contact input to the low noise input of the outdoor unit external control adaptor (optional), you can lower operating noise by 2-3 dB.

A. When the low noise operation is carried out by external instructions (with the use of the outdoor unit external control adaptor)

1. Set “External low noise / Demand YES/NO setting” to “External low noise / Demand YES”. (Set by Setting Mode 2)
2. Set “External low noise level setting” on the outdoor unit PCB, as the need arises. (Lower noise operation can be carried out by “Mode 2” than by “Mode 1”, and by “Mode 3” than by “Mode 2”.)
3. Set “Capacity precedence setting” on the outdoor unit PCB, as the need arises. (If set to “ON”, when air conditioning load gets higher, the low noise instructions are neglected to switch to normal operation.) (Set by Setting Mode 2)

B. When the low noise operation is carried out automatically at night (The outdoor unit external control adaptor is not required)

1. Set “Night quiet mode setting” on the outdoor unit PCB. (Set by Setting Mode 2) (Lower noise operation can be carried out by “Mode 2” than by “Mode 1”, and by “Mode 3” than by “Mode 2”.)
2. Set “Night quiet mode start setting” on the outdoor unit PCB, as the need arises. (Set by Setting Mode 2) (Since the time is presumed in accordance with the outdoor temperature, the starting time is a target only.)
3. Set “Night quiet mode end setting” on the outdoor unit PCB, as the need arises. (Set by Setting Mode 2) (Since the time is presumed in accordance with the outdoor temperature, the ending time is a target only.)
4. Set “Capacity precedence setting” on the outdoor unit PCB, as the need arises. (Set by Setting Mode 2) (If set to “ON”, when air conditioning load gets higher, the status is switched to normal operation even at night.)

Image of operation in the case of A

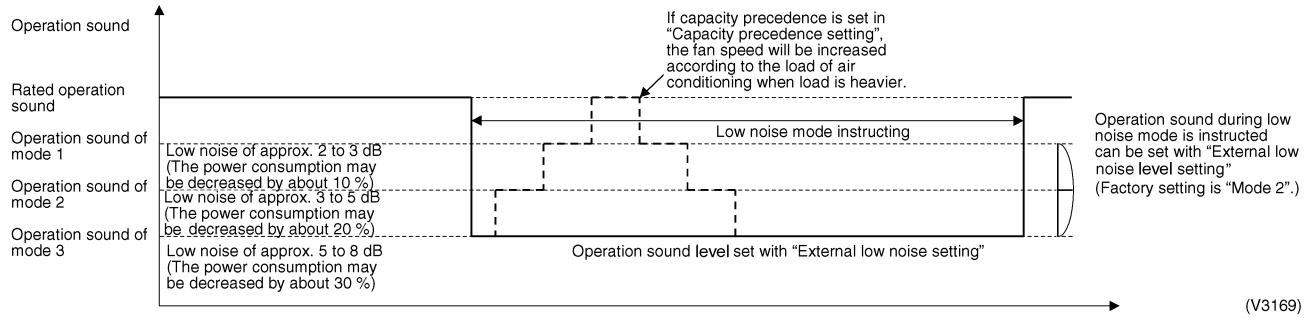


Image of operation in the case of B

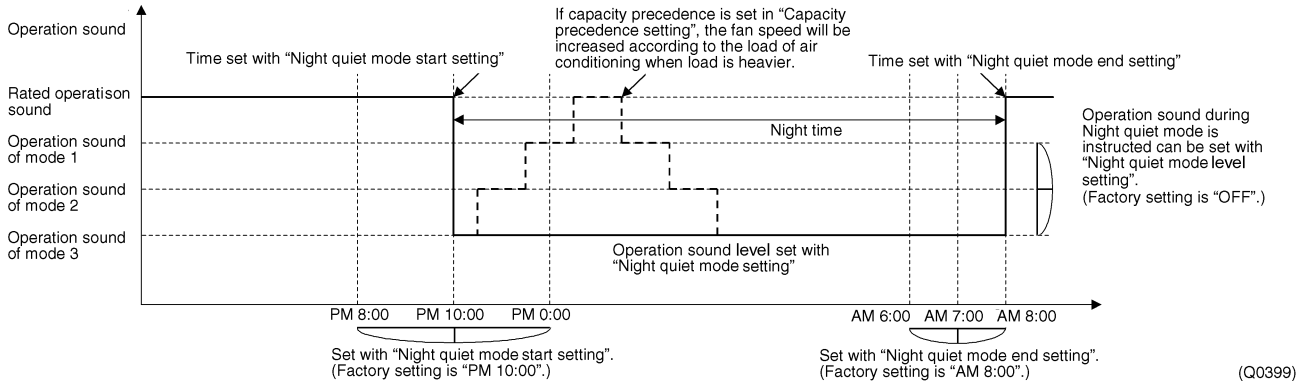
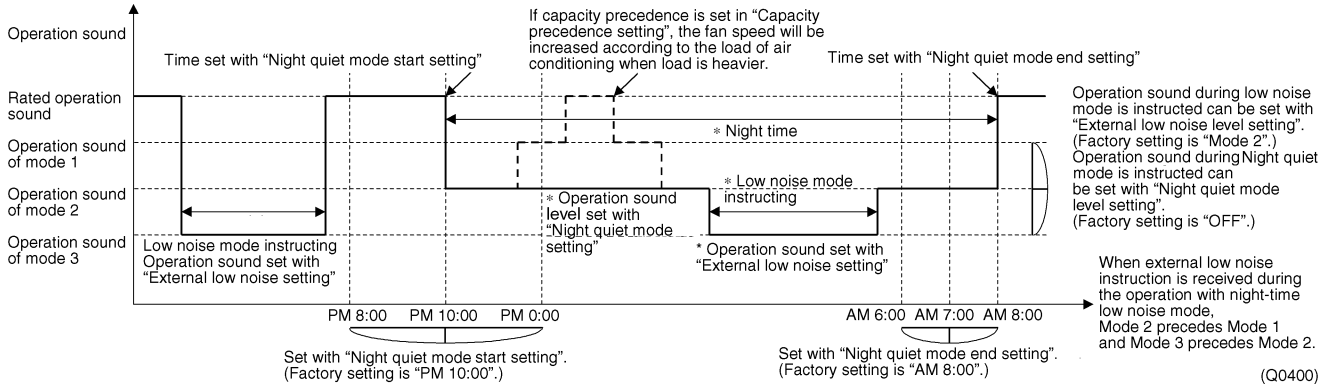


Image of operation in the case of A and B



Setting of Demand Operation

By connecting the external contact input to the demand input of the outdoor unit external control adaptor (optional), the power consumption of unit operation can be saved suppressing the compressor operating condition.

A. When the demand operation is carried out by external instructions (with the use of the outdoor unit external control adaptor).

- Set the "External low noise / Demand YES / NO setting" switch on the outdoor unit PCB to the "External low noise / Demand YES".
  (Set by Setting Mode 2)
- Set the "Demand 1 level setting" on the outdoor unit PCB, as the need arises.
  (During the demand level 1 instruction, the power consumption can be saved to 80%, 70% or 60% of the rated value respectively.)

B. When the continuous demand operation is carried out. (Use of the outdoor unit external control adaptor is not required.)

- Set the "Continuous demand setting" on the outdoor unit PCB.
- If the "Continuous demand setting" is set to the "Continuous demand 1 fixing", set the "Demand 1 setting" on the outdoor unit PCB, as the need arises.
  (During the continuous demand level 1 operation, the power consumption can be saved to 80%, 70% or 60% of the rated value respectively.)

Image of operation in the case of A

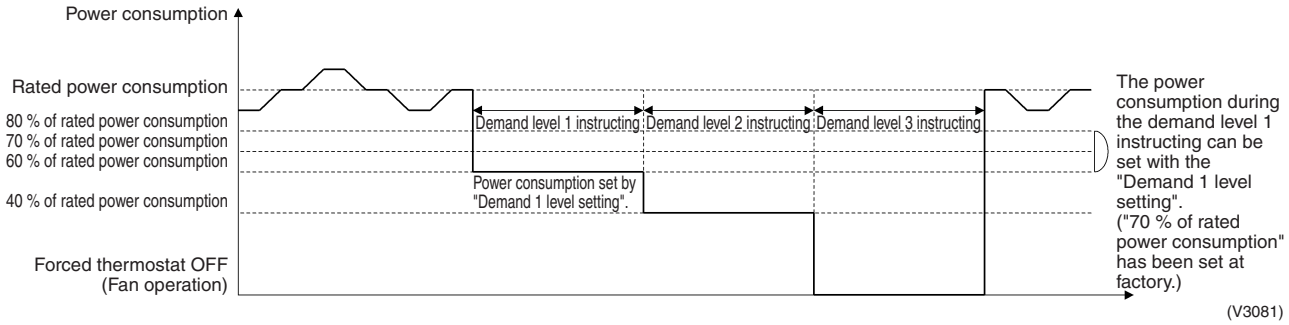


Image of operation in the case of B

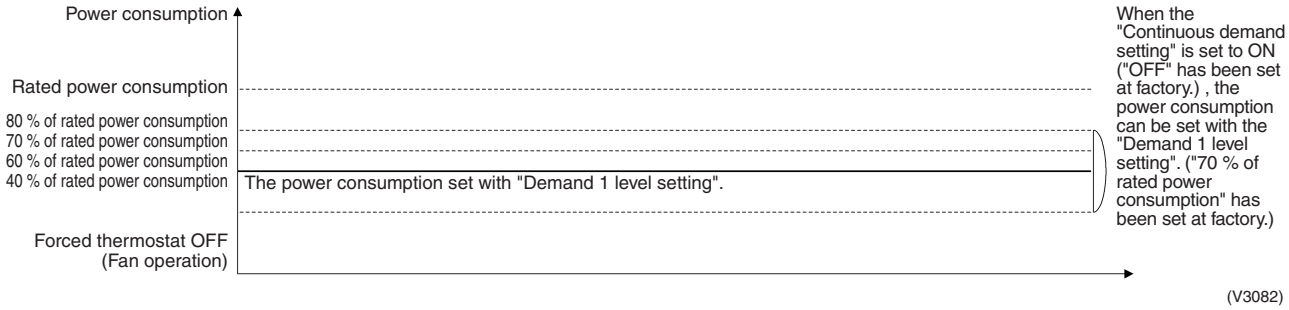
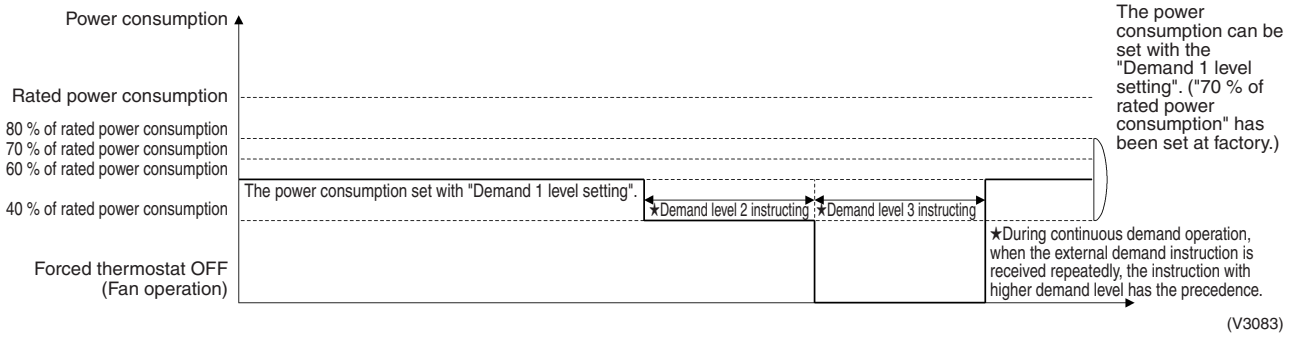


Image of operation in the case of A and B



Detailed Setting Procedure of Low Noise Operation and Demand Control

1. Setting mode 1 (H1P off)

① In setting mode 2, push the BS1 (MODE button) one time. → Setting mode 2 is entered and H1P lights.
During the setting mode 1 is displayed, “In low noise operation” and “In demand control” are displayed.

2. Setting mode 2 (H1P on)

① In setting 1, push and hold the BS1 (MODE button) for more than 5 seconds. → Setting mode 2 is entered and H1P lights.
② Push the BS2 (SET button) several times and match the LED display with the Setting No. you want.
③ Push the BS3 (RETURN button) one time, and the present setting content is displayed.
→ Push the BS2 (SET button) several times and match the LED display with the setting content (as shown below) you want.
④ Push the BS3 (RETURN button) two times. → Returns to ①.
⑤ Push the BS1 (MODE button) one time. → Returns to the setting mode 1 and turns H1P off.

		①							②								③						
Setting No.	Setting contents	Setting No. indication							Setting No. indication							Setting contents	Setting contents indication (Initial setting)						
		H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P		H1P	H2P	H3P	H4P	H5P	H6P	H7P
22	Night quiet mode setting	○	●	●	●	●	●	●	○	●	○	●	○	○	●	OFF (Factory setting)	○	●	●	●	●	●	●
																Mode 1	○	●	●	●	●	●	○
																Mode 2	○	●	●	●	●	○	●
																Mode 3	○	●	●	●	●	○	○
25	External low noise setting								○	●	○	○	●	●	○	Mode 1	○	●	●	●	●	●	○
																Mode 2 (Factory setting)	○	●	●	●	●	○	●
																Mode 3	○	●	●	●	○	●	●
26	Night quiet mode start setting								○	●	○	○	●	○	●	PM 8:00	○	●	●	●	●	●	○
																PM 10:00 (Factory setting)	○	●	●	●	●	○	●
																PM 0:00	○	●	●	●	○	●	●
27	Night quiet mode end setting								○	●	○	○	●	○	○	AM 6:00	○	●	●	●	●	●	○
																AM 7:00	○	●	●	●	●	○	●
																AM 8:00 (Factory setting)	○	●	●	●	○	●	●
29	Capacity precedence setting								○	●	○	○	○	●	○	Low noise precedence (Factory setting)	○	●	●	●	●	●	○
																Capacity precedence	○	●	●	●	●	○	●
30	Demand setting 1								○	●	○	○	○	○	●	60% of rated power consumption	○	●	●	●	●	●	○
																70% of rated power consumption (Factory setting)	○	●	●	●	●	○	●
																80% of rated power consumption	○	●	●	●	○	●	●
31	Demand setting 2								○	●	○	○	○	○	○	30% of rated power consumption	○	●	●	●	●	●	○
																40% of rated power consumption (Factory setting)	○	●	●	●	●	○	●
																50% of rated power consumption	○	●	●	●	○	●	●
32	Continuous demand setting								○	●	●	●	●	●	●	OFF (Factory setting)	○	●	●	●	●	●	○
																Continuous demand 1 fixed	○	●	●	●	●	○	●
12	External low noise / Demand setting								○	●	●	○	○	●	●	NO (Factory set)	○	●	●	●	●	●	○
																YES	○	●	●	●	●	○	●

Setting mode indication section Setting No. indication section Set contents indication section

3.2.3 Setting of Refrigerant Recovery Mode

When carrying out the refrigerant collection on site, fully open the respective expansion valve of BP and outdoor unit.
Both the outdoor unit and the indoor unit are forbidden to operation.

Operation Procedure

① In **setting mode 2** with units in stop mode, set “B Refrigerant Recovery / Vacuuming mode” to ON. The respective expansion valve of BP and outdoor units are fully opened. (H2P turns to display “ ” (test operation) (blinks), “ ” (test operation)” and “ ” (during contralized control) are displayed on the remote controller (only for SkyAir), and the operation is prohibited.
② Collect the refrigerant using a refrigerant recovery unit. (See the instruction attached to the refrigerant recovery unit for more detal.)
③ Press Mode button “BS1” once and reset “Setting Mode 2”.

3.2.4 Setting of Vacuuming Mode

In order to perform vacuuming operation at site, fully open the expansion valves of BP and outdoor units to turn on some solenoid valves.
Both the outdoor unit and the indoor unit are forbidden to operation.

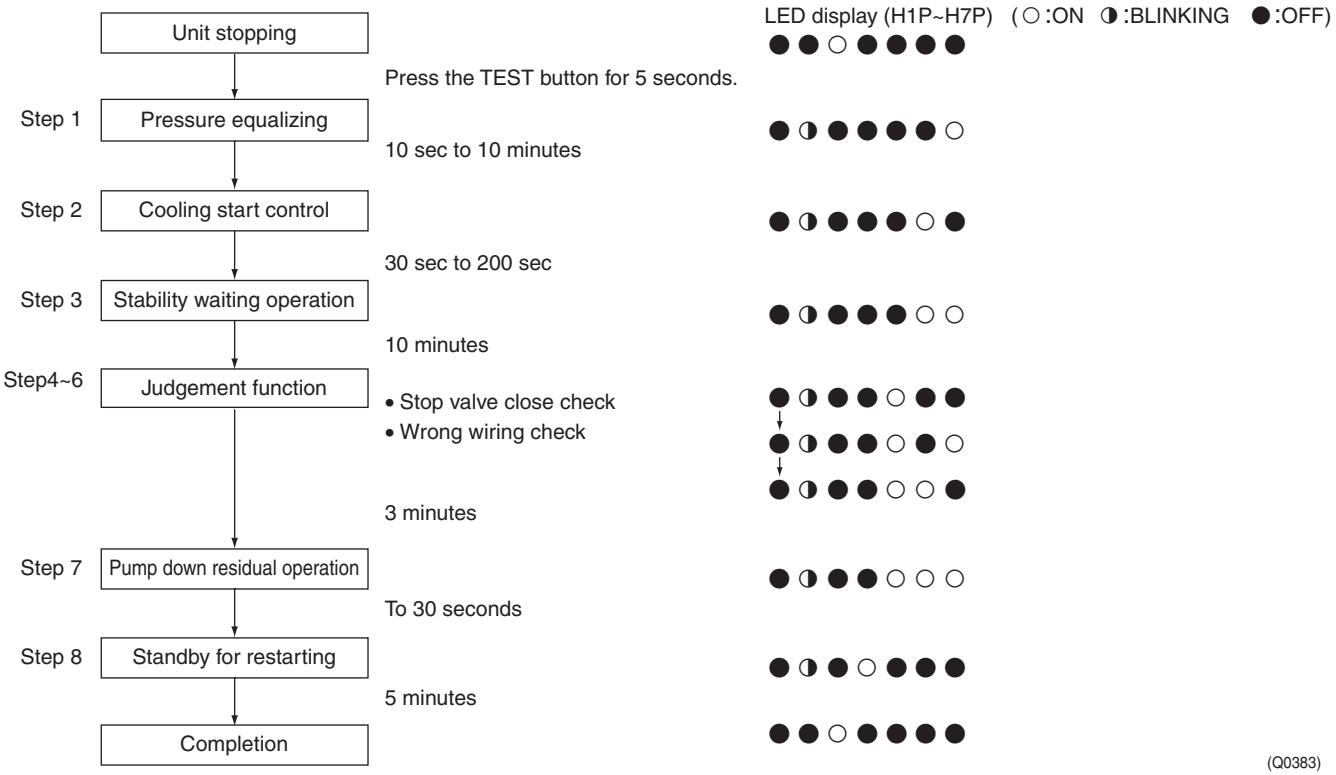
Operating procedure

① With **Setting Mode 2** while the unit stops, set (B) Refrigerant recovery / Vacuuming mode to ON. The expansion valves of BP and outdoor units fully open and some of solenoid valves open.
(H2P blinks to indicate the test operation, and the remote controller displays “ ” (test operation) and “ ” (during contralized control) (only for SkyAir), thus prohibiting operation.)
After setting, do not cancel “Setting Mode 2” until completion of Vacuuming operation.
② Use the vacuum pump to perform vacuuming operation.
③ Press Mode button “BS1” once and reset “Setting Mode 2”.

3.2.5 Check Operation

To prevent any trouble in the period of installation at site, the system is provided with a test operation mode enabling check for incorrect wiring, stop valve left in closed, and judgment of piping length.

CHECK OPERATION FUNCTION



4. Field Setting for SkyAir Indoor Unit

4.1 Explanation

Field set is carried out from the remote controller. At time of installation, or after maintenance inspection/repair, carry out field set according to the explanation below. Incorrect settings will cause a malfunction to occur. (The indoor unit settings are sometimes changed if optional accessories are mounted on the indoor unit. Refer to the optional accessory manual.)

4.2 Field Setting

4.2.1 Wired Remote Controller

Note: (Field setting must be made from the remote controller in accordance with the installation conditions.)

- Setting can be made by changing the “Mode number”, “FIRST CODE NO.”, and “SECOND CODE NO.”.
- Refer to the following procedures for Field setting.

Procedure

① When in the normal mode, press the “ TEST ” button for a minimum of four seconds, and the FIELD SET MODE is entered.

② Select the desired MODE NO. with the “ ” button.

③ During group control, when setting by each indoor unit (mode No. 20, 21 and 23 have been selected), push the “ ” button and select the INDOOR UNIT NO to be set. (This operation is unnecessary when setting by group.)

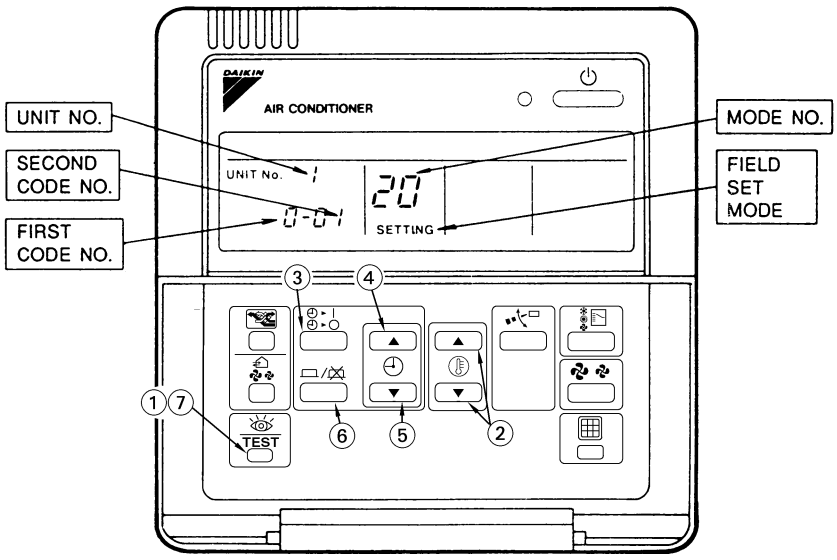
④ Push the “ ” upper button and select FIRST CODE NO.

⑤ Push the “ ” lower button and select the SECOND CODE NO.

⑥ Push the “ ” button once and the present settings are SET.

⑦ Push the “ TEST ” button for about one second to return to the NORMAL MODE.

(Example) If during group setting and the time to clean air filter is set to FILTER CONTAMINATION - HEAVY, SET MODE NO. to “10,” FIRST CODE NO. to “0,” and SECOND CODE NO. to “02.”



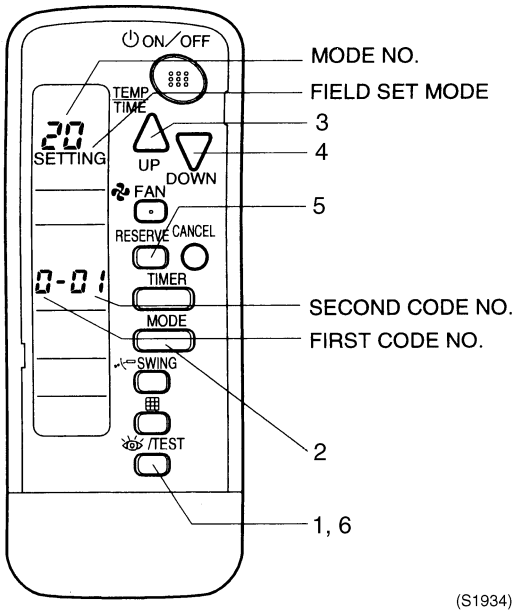
2P068938-1

4.2.2 Wireless Remote Controller

Note: If optional accessories are mounted on the indoor unit, the indoor unit setting may have to be changed. Refer to the instruction manual (optional hand book) for each optional accessory.

Procedure

1. When in the normal mode, push the " /TEST " button for a minimum of four seconds, and the FIELD SET MODE is entered.
2. Select the desired MODE NO. with the " MODE " button.
3. Push the " UP " button and select the FIRST CODE NO.
4. Push the " DOWN " button and select the SECOND CODE NO.
5. Push the " RESERVE " button and the present settings are SET.
6. Push the " /TEST " button to return to the NORMAL MODE.



4.3 Initial Setting Contents

Setting Contents / Indoor Models	Filter Sign	Filter Sign Estimation of Accumulated Operating Hours	High Air Outlet Velocity (for Application to Ceiling Higher than 2.7m)	Selection of Air Flow Direction F (4 way), T (3 way), W (2 way)	Air Flow Direction Adjust	Air Flow Direction Range Setting	Long Life Filter Type
Ceiling Mounted Cassette type 600×600 (FFQ)	○	○		○	○	○	○
Ceiling Mounted Cassette type 950×950 (FCQ)	○	○		○		○	○
Ceiling Mounted Built-in type (FBQ)	○	○					
Ceiling Suspended type (FHQ)	○	○	○				

4.4 Local Setting Mode Number

Example To set the filter sign time to “filter contamination - heavy” for all units in a group: Set mode No. to “10,” setting switch No. to “0,” and setting position No. to “02.”

Table

Mode No. Note 1	Setting Switch No.	Setting Description		Setting Position No. *Note 2				
				01		02		03
10 (20)	0	Filter contamination - heavy / light (Setting of operating hours for filter sign indication) (Change setting when reducing filter sign indication time to half due to quick soiling of filter)	Long-Life Type	Light	Approx. 2,500 hours	Heavy	Approx. 1,250 hours	—
	1	Long-life filter type (Setting of filter sign indication time) (Change setting when Ultra-long-life filter is installed)		Long-Life Filter		—		—
	2	Remote control thermostat (Set when remote control thermostat sensor is used.)		Use		Not use		
	3	Estimation of filter operating hour (Change setting when filter sign indication is not used)		ON		OFF		—
11 (21)	2	Indoor unit fan OFF when thermostat OFF in cooling/heating		—		Fan OFF		—
12 (22)	5	Automatic restart after power failure reset *Note 4		OFF		ON		—
13 (23)	0	High Ceiling	Ceiling-suspended type (FHQ only)	2.7 m or Lower		2.7~3.5 m		—
	1	Air flow direction selection (Change setting when blocking kit is installed) *Note 3		F		T		W
	4	Setting of air flow direction adjustment range		Upward		Standard		Downward

Note:
1. Setting is made in all units in a group. To set for individual indoor units or to check the setting, use the mode Nos. (with “2” in upper digit) in parentheses ( ).
2. The setting position No. is set to “01” at the factory, except for the following cases in which “02” is set.
   - Setting of air flow direction adjustment range 13(23)-4
   - Automatic restart after power outage. 12(22)-5
   - Remote control thermostat 10(20)-2
   - Filter sign indication (only for ceiling-mounted duct type) 10(20)-3
3. Since drafts may result, carefully select the installation location.
4. When power returns, units resume the settings made before the power failure.

Caution When “auto restart after power failure reset” is set, be sure to turn off air conditioners, then cut off the power supply before conducting maintenance, inspection and other work. If the power supply is cut off with the power switch left ON, air conditioners will automatically start operating when the power supply is turned on.

5. Do not set any items other than those listed in the above table.
6. Functions that indoor units are not equipped with will not be displayed.
7. When returning to normal mode, “88” may be displayed on the LCD section of the remote controller due to initialization operation.

4.5 Detailed Explanation of Setting Modes

4.5.1 Air Flow Direction Setting (FFQ, FCQ)

Set the air flow direction of indoor units as given in the table below. (Set when optional air outlet blocking pad has been installed.) The second code No. is factory set to “01.”

Setting Table

Mode No.	First Code No.	Second Code No.	Setting
13 (23)	1	01	F : 4-direction air flow
		02	T : 3-direction air flow
		03	W : 2-direction air flow

4.5.2 Filter Sign Setting

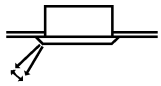
If switching the filter sign ON time, set as given in the table below.

Set Time

Filter Specs. / Setting		Long Life
Contamination Light	01	2,500
Contamination Heavy	02	1,250

4.5.3 Range of Air Flow Direction Setting (FFQ, FCQ)

Make the following air flow direction setting according to the respective purpose.



(S2537)

Mode No.	First Code No.	Second Code No.	Setting
13 (23)	4	01	Upward (Draft prevention)
		02	Standard
		03	Downward (Ceiling soiling prevention)

4.5.4 Fan Speed OFF When Thermostat is OFF

When the cool/heat thermostat is OFF, you can stop the indoor unit fan by switching the setting to “Fan OFF.”

∗ Used as a countermeasure against odor for barber shops and restaurants.

Setting Table

Mode No.	First Code No.	Second Code No.	Setting
11(21)	2	01	—
		02	Fan OFF

4.5.5 Fan Speed Changeover When Thermostat is OFF

By setting to “Set Fan Speed,” you can switch the fan speed to the set fan speed when the heating thermostat is OFF.

∗ Since there is concern about draft if using “fan speed up when thermostat is OFF,” you should take the setup location into consideration.

Setting Table

Mode No.	First Code No.	Second Code No.	Setting
12(22)	3	01	LL Fan Speed
		02	Set Fan Speed

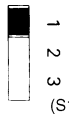
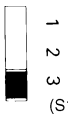
4.5.6 Wireless Setting (Address and MAIN/SUB Setting)

Explanation

If several wireless remote controller units are used together in the same room (including the case where both group control and individual remote controller control are used together), be sure to set the addresses for the receiver and wireless remote controller. (For group control, see the attached installation manual for the indoor unit.) If using together with a wired remote controller, you have to change the main/sub setting or the receiver.

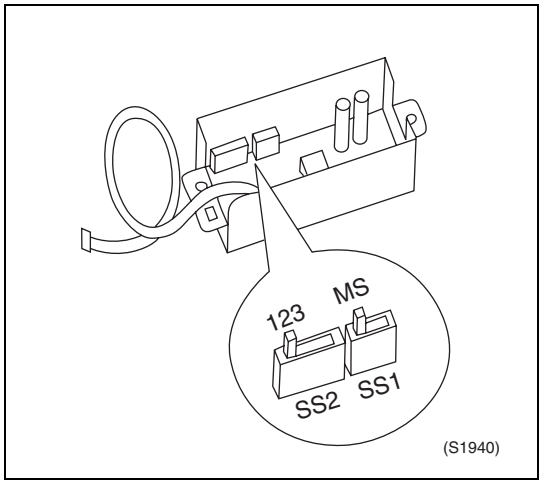
Receiver Setting

Set the wireless address switch (SS2) on the transmitter board according to the table below.

Unit No.	No.1	No.2	No.3
Wireless Address Switch (SS2)	 (S1935)	 (S1936)	 (S1937)

When using both a wired and a wireless remote controller for 1 indoor unit, the wired controller should be set to MAIN. Therefore, set the MAIN/SUB switch (SS1) of the transmitter board to SUB.

	MAIN	SUB
MAIN/SUB Switch (SS1)	 (S1938)	 (S1939)



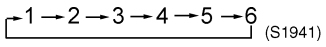
(S1940)

After completing setting, seal off the opening of the address switch and the MAIN/SUB switch with the attached sealing pad.

Address Setting (It is Factory Set to "1")

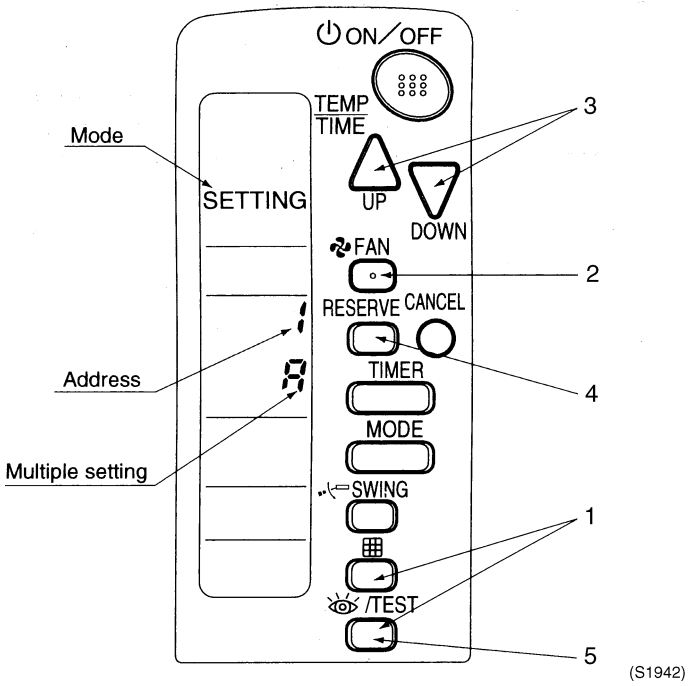
<Setting from the remote controller>

1. Hold down the " ▦ " button and the " /TEST " button for at least 4 seconds, to get the FIELD SET MODE. (Indicated in the display area in the figure at below).
2. Press the " FAN " button and select a multiple setting (A/b). Each time the button is pressed the display switches between "A" and "b".
3. Press the " UP " button and " DOWN " button to set the address.



Address can be set from 1 to 6, but set it to 1 ~ 3 and to same address as the receiver. (The receiver does not work with address 4 ~ 6.)

4. Press the " RESERVE " button to enter the setting.
5. Hold down the " /TEST " button for at least 1 second to quit the FIELD SET MODE and return to the normal display.



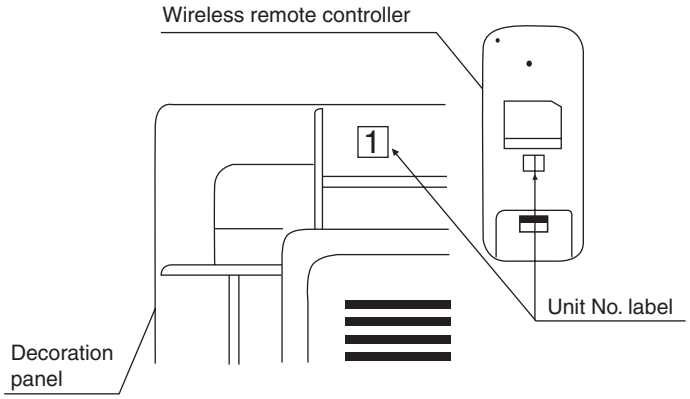
Multiple Settings A/b

When the indoor is being operating by outside control (central remote controller, etc.), it sometimes does not respond to ON/OFF and temperature setting commands from this remote controller. Check what setting the customer wants and make the multiple setting as shown below.

Remote Controller		Indoor Unit	
Multiple Setting	Remote Controller Display	Controlled by other Air Conditioners and Devices	For other than on Left
A: Standard	All items Displayed.	Commands other than ON/OFF and Temperature Setting Accepted. (1 LONG BEEP or 3 SHORT BEEPS Emitted)	
b: Multiple display	Operations set only is displayed shortly after execution.	All Commands Accepted (2 SHORT BEEPS)	

After Setting

Stick the Unit No. label at decoration panel air discharge outlet as well as on the back of the wireless remote controller.



PRECAUTIONS

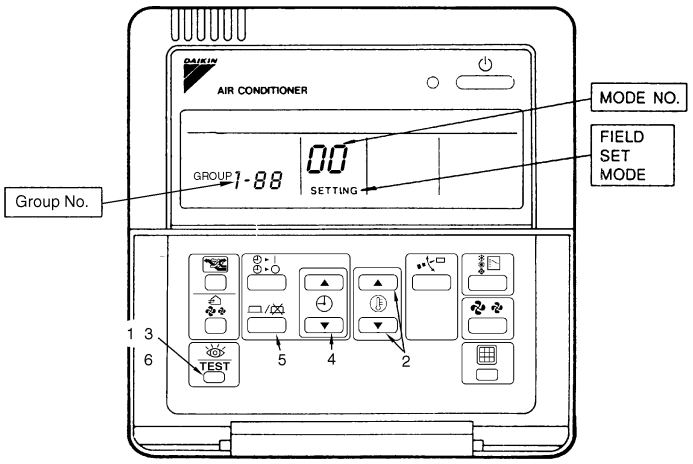
Set the Unit No. of the receiver and the wireless remote controller to be equal. If the settings differ, the signal from the remote controller cannot be transmitted.

4.6 Centralized Group No. Setting

- If carrying out centralized control with a central remote controller and unified ON/OFF controller, you have to set the group No. for each group by remote controller.
- To set the group No., first turn on the power supply of the central remote controller, unified ON/OFF controller and indoor unit.

Centralized Group No. Setting by Remote Controller

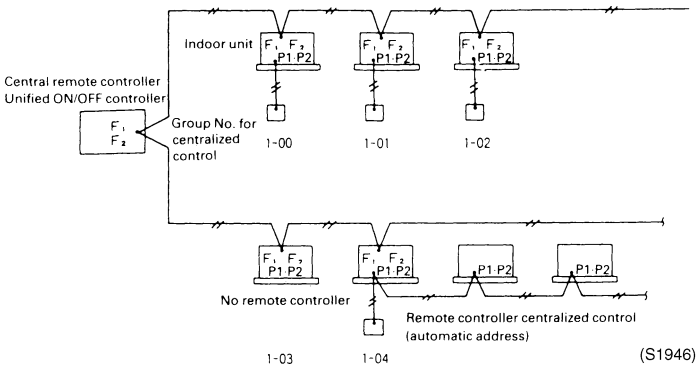
1. If the inspection/test button is pushed for 4 seconds or more when in the normal mode, operation enters the “field set mode.”
2. Using the temperature control buttons, set the mode No. to “00.”
3. Push the inspection/test button to inspect the group No. display.
4. Using the programming time button, set the group No. for each group. (Group No. rises in the order of 1-00, 1-01, ...1-15, 2-00 ...4-15, etc. The unified ON/OFF controller however displays only the range of group numbers selected by the switch for setting each address.)
5. Push the timer ON/OFF button and enter the selected group No.
6. Push the inspection/test button and return to the normal mode.



(S1095)

∗ If the address has to be set individually for each unit for power consumption counting, etc., set the mode No. to “30.”

Group No. Setting Example



(S1946)

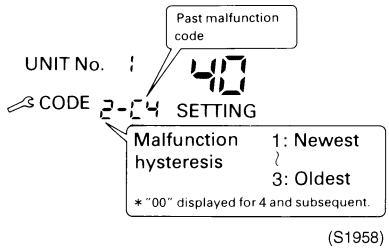
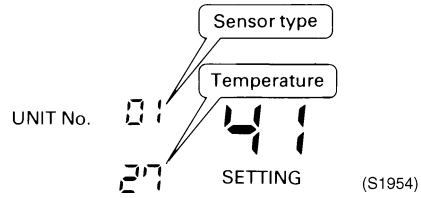
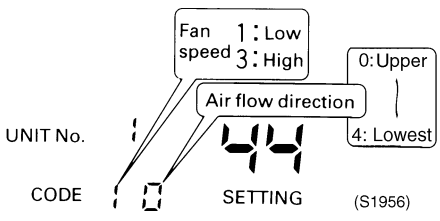
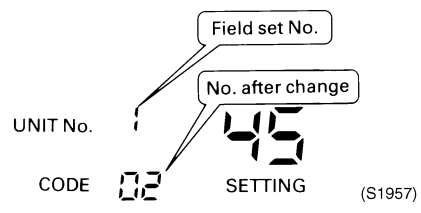
Note:
1. “F1,F2” indicates interface adaptor for SkyAir series.
2. If not using remote controllers, temporarily connect a remote controller to set the group No., set the group No. for centralized control, and then disconnect the controller.

4.7 Maintenance Mode Setting

Procedure

1. Enter the field set mode.
   Continue to push the inspection / test operation button for a minimum of 4 seconds.
2. Enter the maintenance mode.
   After having entered the field set mode, continue to push the inspection / test operation button for a minimum of 4 seconds.
3. Select the mode No.
   Set the desired mode No. with the up/down temperature setting button.
4. Select the unit No.
   Select the indoor unit No. set with the time mode START/STOP button.
5. Carry out the necessary settings for each mode. (Modes 41, 44 and 45)
   See the table below for details.
6. Enter the setting contents. (Modes 44 and 45)
   Enter by pushing the timer ON/OFF button.
7. Return to the normal operation mode.
   Tap the inspection / test operation button one time.

Table

Mode No.	Function	Content and Operation Method	Example of Remote Controller Display
40	Malfunction Hysteresis	You can change the history with the programming time up-down button.	
41	Sensor Data Display	Select the display sensor with the programming time up-down button Display sensor 00 Remote control sensor 01 Suction (R1T) 02 Heat exchange(R2T) 03 Heat exchange(R3T)	
43	Forced Fan ON	Turns the fan ON for each unit individually.	
44	Individual Setting	Sets fan speed and air flow direction for each unit individually when using group control. Settings are made using the "air flow direction adjust" and "fan speed adjust" buttons.	
45	Unit No. Change	Changes unit No. Set the unit No. after changing with the programming time up-down button.	

Operation is not reset by malfunction code reset for inspection.
(Cannot be reset because the count is updated each time a malfunction occurs.)

5. Test Operation and Field Setting for RA Indoor Unit

5.1 Test Operation from the Remote Controller

For Heat pump

In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.

- Trial operation may be disabled in either mode depending on the room temperature.
- After trial operation is complete, set the temperature to a normal level. (26°C to 28°C in cooling mode, 20°C to 24°C in heating mode)
- For protection, the system disables restart operation for 3 minutes after it is turned off.

For Cooling Only

Select the lowest programmable temperature.

- Trial operation in cooling mode may be disabled depending on the room temperature. Use the remote control for trial operation as described below.
- After trial operation is complete, set the temperature to a normal level (26°C to 28°C).
- For protection, the machine disables restart operation for 3 minutes after it is turned off.

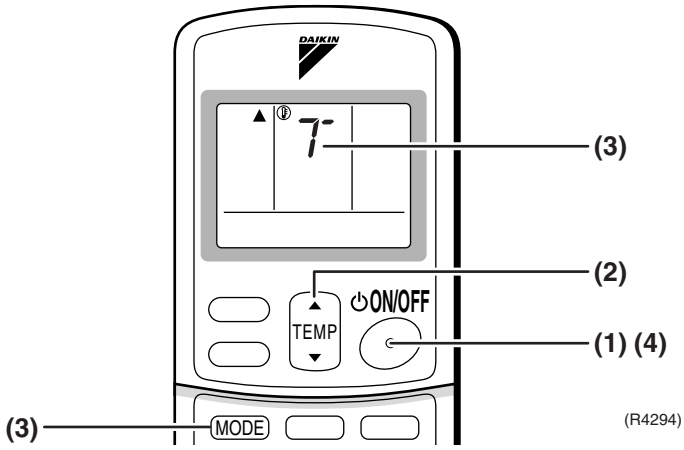
Trial Operation and Testing

1. Measure the supply voltage and make sure that it falls in the specified range.
2. Trial operation should be carried out in either cooling or heating mode.
3. Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, such as louver movement, are working properly.

- The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from Remote Controller

(1) Press ON/OFF button to turn on the system.
(2) Simultaneously press center of TEMP button and MODE buttons.
(3) Press MODE button twice.
("TEST" will appear on the display to indicate that Trial Operation mode is selected.)
(4) Trial run mode terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press ON/OFF button.



5.2 Jumper Settings

5.2.1 When Two Units are Installed in One Room

When two indoor units are installed in one room, the two wireless remote controllers can be set for different addresses.

How to set the different addresses

■ Control PCB of the indoor unit

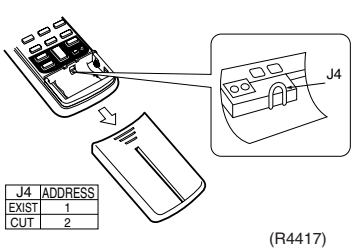
(1) Remove the electrical box.

(2) Cut the address jumper JA on the control PCB.

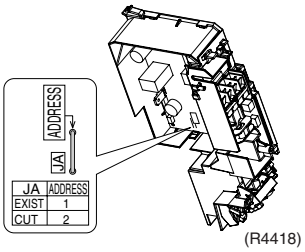
■ Wireless remote controller

(1) Slide the front cover and take it off.

(2) Cut the address jumper J4.



(R4417)



(R4418)

5.2.2 Jumper Setting

Jumper (On indoor PCB)	Function	When connected (factory set)	When cut
JC	Power failure recovery function	Auto start	Unit does not resume operation after recovering from a power failure. Timer ON-OFF settings are cleared.
JB	Fan speed setting when compressor is OFF on thermostat. (effective only at cooling operation)	Fan speed setting ; Remote controller setting	Fan rpm is set to “0” <Fan stop>

Part 7
Operation Manual

1. System Configuration

1.1 Operation Instructions

After the installation and test operation of the room air conditioner have been completed, it should be operated and handled as described below. Every user would like to know the correct method of operation of the room air conditioner, to check if it is capable of cooling (or heating) well, and to know a clever method of using it.
In order to meet this expectation of the users, giving sufficient explanations taking enough time can be said to reduce about 80% of the requests for servicing. However good the installation work is and however good the functions are, the customer may blame either the room air conditioner or its installation work because of improper handling. The installation work and handing over of the unit can only be considered to have been completed when its handling has been explained to the user without using technical terms but giving full knowledge of the equipment.

2. Instruction

2.1 Outdoor Units

Note: The instruction is for RMK(X)S series as representative.

REGARDING USE
Super Multi Plus System air conditioner

POINTS THE CUSTOMER SHOULD BE AWARE OF

■ COMFORT

At startup

- After the power is initially turned on, it will take approx. 10 minutes until startup. Usually the unit will start in 5 minutes.

At startup of heating operation

- The colder it is outside or the greater the number of indoor units, the longer the time required from the start of operation until the emission of warm air (around 35˚C). When the outside temperature is -5 to 2˚C, the inside temperature is 5 to 10˚C, and total indoor unit combination is 100% capacity, the first start-up of all indoor units in the morning will take approximately 20 to 30 minutes.
- Oil return operation will be performed once every 8 hours to preserve the lubrication of oil to the compressor.
  Since operation is switched to cooling cycle during heating operation in order to return the oil, heating operation will not be possible for around 5 to 10 minutes.

Heating operation

- When the outside temperature is 28˚C or higher, the unit will be set to the standby mode for protection.

■ OPERATING NOISE

At startup

- During startup, in order to emit warm or cool air as quickly as possible, the sound of refrigerant flowing will be heard for a short time (1 to 2 minutes) from the outdoor unit.

At shutdown

- In order to ensure smooth startup the next time this unit is operated, the outdoor unit will continue to operate for around 2 to 5 minutes after shutdown. (The time of continued operation depends on the outside temperature, capacity of connected indoor units, and connection pipe length.)

Defrost

- When the outside unit is performing defrosting operation, the fan of the indoor unit will stop temporarily, and the slight sound of refrigerant flowing will be heard.

Cooling at low outside temperatures

- During cooling operation when the outside temperature is 20˚C or less, the fan of the outdoor unit will operate at low speed to preserve capacity and the outdoor unit valve will be opened depending on the pressure conditions, making it more likely that the sound of refrigerant flowing will be heard.

Excessive heating load

- During heating operation when the outside temperature is high (15 to 24˚C), the fan of the outdoor unit will be operated at low speed, making it more likely that the sound of refrigerant flowing will be heard from the outdoor unit.

3PN00286-13U

2.2 Wall Mounted, Duct, Floor/Ceiling, Floor Standing, Wall Built-in Type

2.2.1 Manual Contents and Reference Page

Model Series	Wall Mounted Type			
	FTK(X)S20-35D FTKD25/35D	FTK(X)S50~71B	FTKD50-71F	FTK50-71A
Read before Operation				
Safety Precautions	199	199	199	199
Names of Parts	201	204	207	210
Preparation before Operation ★	222	222	222	222
Operation				
AUTO, DRY, COOL, HEAT, FAN Operation ★	225	225	225	225
Adjusting the Air Flow Direction	227	229	231	233
POWERFUL Operation ★	239	239	239	239
OUTDOOR UNIT QUIET Operation ★	240	240	240	240
ECONO Operation	241	—	—	—
MOLD PROOF Operation	242	—	—	—
HOME LEAVE Operation ★	—	243	243	243
INTELLIGENT EYE Operation	245	247	249	—
TIMER Operation ★	251	251	251	251
Note for Multi System	253	253	253	253
Care				
Care and Cleaning	255	258	261	264
Trouble Shooting				
Troubleshooting	275	275	275	275
Drawing No.	3P194550-4 3P194550-5 3P194539-2 3P142638-1L	C : 3P098595-11P C : 3P098586-1J	3P192025-2	3P077961-12K 3P077963-2G

Model Series	Duct Connected Type		Floor/Ceiling Suspended Dual Type	Floor Standing Type
	FDKS25/35C CDK(X)S25~60C CDKD25~60C	CDKD25/35E	FLXS25-60B	FVXS35/50B
Read before Operation				
Safety Precautions	199	199	199	199
Names of Parts	213	213	216	219
Preparation before Operation ★	222	222	222	222
Operation				
AUTO, DRY, COOL, HEAT, FAN Operation ★	225	225	225	225
Adjusting the Air Flow Direction	—	—	235	237
POWERFUL Operation ★	239	239	239	239
OUTDOOR UNIT QUIET Operation ★	240	240	240	240
ECONO Operation	—	—	—	—
MOLD PROOF Operation	—	—	—	—
HOME LEAVE Operation ★	243	243	243	243
INTELLIGENT EYE Operation	—	—	—	—
TIMER Operation ★	251	251	251	251
Note for Multi System	253	253	253	253
Care				
Care and Cleaning	267	268	269	272
Trouble Shooting				
Trouble Shooting	275	275	275	275
Drawing No.	3P141308-5G 3P196326-5 3P196326-2	3P196326-4	3P194537-7	C : 3P141308-2F

★ : Illustrations are for wall mounted type FTKD50-71F as representative.

2.2.2 Safety Precautions

Safety precautions

- Keep this manual where the operator can easily find them.
- Read this manual attentively before starting up the unit.
- For safety reason the operator must read the following cautions carefully.
- This manual classifies precautions into WARNINGS and CAUTIONS. Be sure to follow all precautions below: they are all important for ensuring safety.

⚠ WARNING	⚠ CAUTION
If you do not follow these instructions exactly, the unit may cause property damage, personal injury or loss of life.	If you do not follow these instructions exactly, the unit may cause minor or moderate property damage or personal injury.

Never do.

Be sure to follow the instructions.

Be sure to earth the air conditioner.

Never cause the air conditioner (including the remote controller) to get wet.

Never touch the air conditioner (including the remote controller) with a wet hand.

⚠ WARNING

- In order to avoid fire, explosion or injury, do not operate the unit when harmful, among which flammable or corrosive gases, are detected near the unit.
- It is not good for health to expose your body to the air flow for a long time.
- Do not put a finger, a rod or other objects into the air outlet or inlet. As the fan is rotating at a high speed, it will cause injury.
- Do not attempt to repair, relocate, modify or reinstall the air conditioner by yourself. Incorrect work will cause electric shocks, fire etc.
  For repairs and reinstallation, consult your Daikin dealer for advice and information.

- The refrigerant used in the air conditioner is safe. Although leaks should not occur, if for some reason any refrigerant happens to leak into the room, make sure it does not come in contact with any flame as of gas heaters, kerosene heaters or gas range.
- If the air conditioner is not cooling (heating) properly, the refrigerant may be leaking, so call your dealer.
  When carrying out repairs accompanying adding refrigerant, check the content of the repairs with our service staff.
- Do not attempt to install the air conditioner by your self. Incorrect work will result in water leakage, electric shocks or fire. For installation, consult the dealer or a qualified technician.
- In order to avoid electric shock, fire or injury, if you detect any abnormally such as smell of fire, stop the operation and turn off the breaker. And call your dealer for instructions.

⚠ CAUTION

- The air conditioner must be earthed. Incomplete earthing may result in electric shocks. Do not connect the earth line to a gas pipe, water pipe, lightning rod, or a telephone earth line.

- In order to avoid any quality deterioration, do not use the unit for cooling precision instruments, food, plants, animals or works of art.
- Never expose little children, plants or animals directly to the air flow.
- Do not place appliances which produce open fire in places exposed to the air flow from the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the heat.
- Do not block air inlets nor outlets. Impaired air flow may result in insufficient performance or trouble.

- Do not stand or sit on the outdoor unit. Do not place any object on the unit to avoid injury, do not remove the fan guard.
- Do not place anything under the indoor or outdoor unit that must be kept away from moisture. In certain conditions, moisture in the air may condense and drip.
- After a long use, check the unit stand and fittings for damage.
- Do not touch the air inlet and aluminum fins of outdoor unit. It may cause injury.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children shuld be supervised to ensure that they do not play with the appliance.

- To avoid oxygen deficiency, ventilate the room sufficiently if equipment with burner is used together with the air conditioner.

- Before cleaning, be sure to stop the operation, turn the breaker off or pull out the supply cord.
- Do not connect the air conditioner to a power supply different from the one as specified. It may cause trouble or fire.
- Depending on the environment, an earth leakage breaker must be installed. Lack of an earth leakage breaker may result in electric shocks.
- Arrange the drain hose to ensure smooth drainage. Incomplete draining may cause wetting of the building, furniture etc.
- Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit.
  Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.

- Do not operate the air conditioner with wet hands.

- Do not wash the indoor unit with excessive water, only use a slightly wet cloth.
- Do not place things such as vessels containing water or anything else on top of the unit. Water may penetrate into the unit and degrade electrical insulations, resulting in an electric shock.

Installation site

■ To install the air conditioner in the following types of environments, consult the dealer.
- Places with an oily ambient or where steam or soot occurs.
- Salty environment such as coastal areas.
- Places where sulfide gas occurs such as hot springs.
- Places where snow may block the outdoor unit.

The drain from the outdoor unit must be discharged to a place of good drainage.

Consider nuisance to your neighbours from noises

■ For installation, choose a place as described below.
- A place solid enough to bear the weight of the unit which does not amplify the operation noise or vibration.
- A place from where the air discharged from the outdoor unit or the operation noise will not annoy your neighbours.

Electrical work

- For power supply, be sure to use a separate power circuit dedicated to the air conditioner.

System relocation

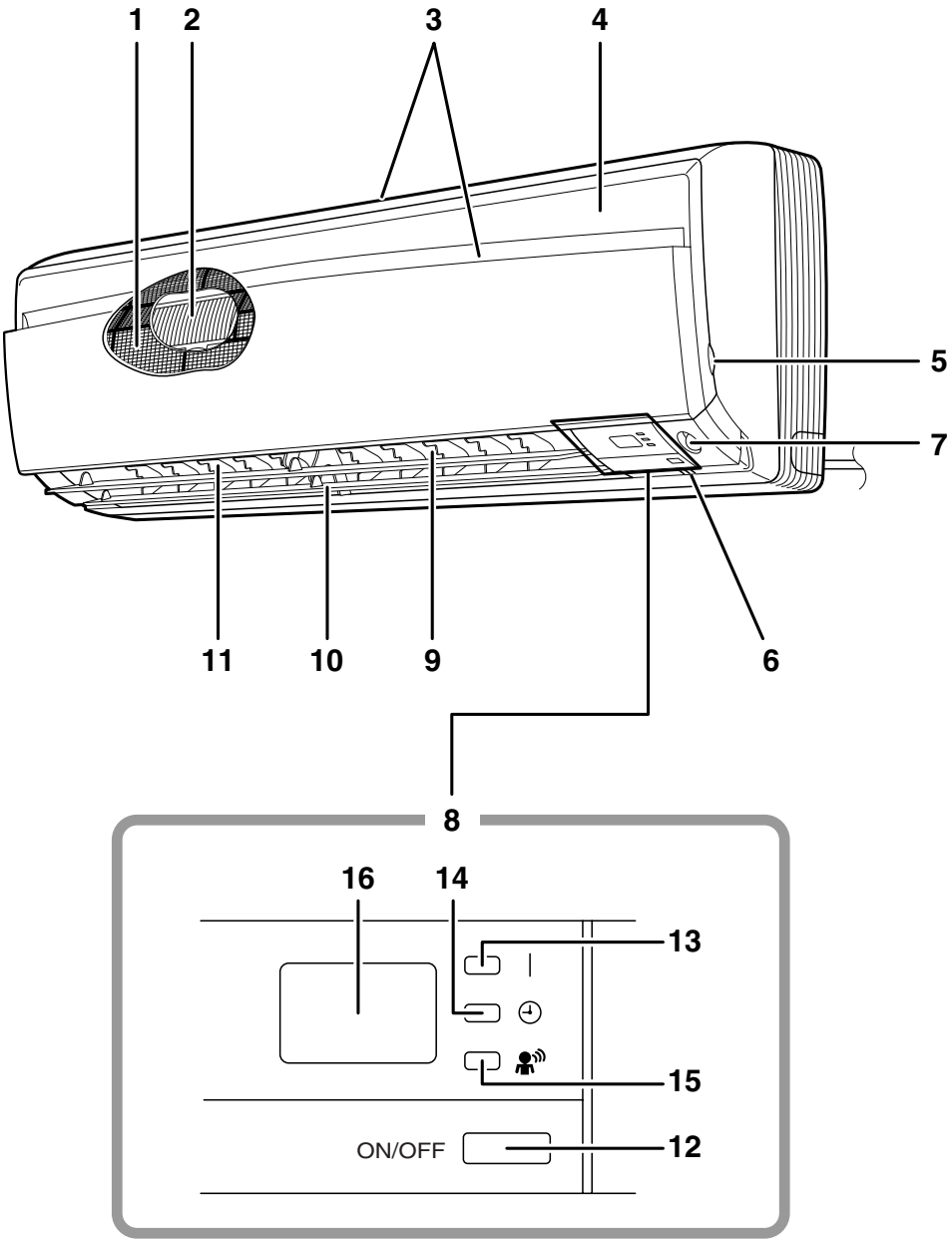
- Relocating the air conditioner requires specialized knowledge and skills. Please consult the dealer if relocation is necessary for moving or remodeling.

2.2.3 Names of Parts

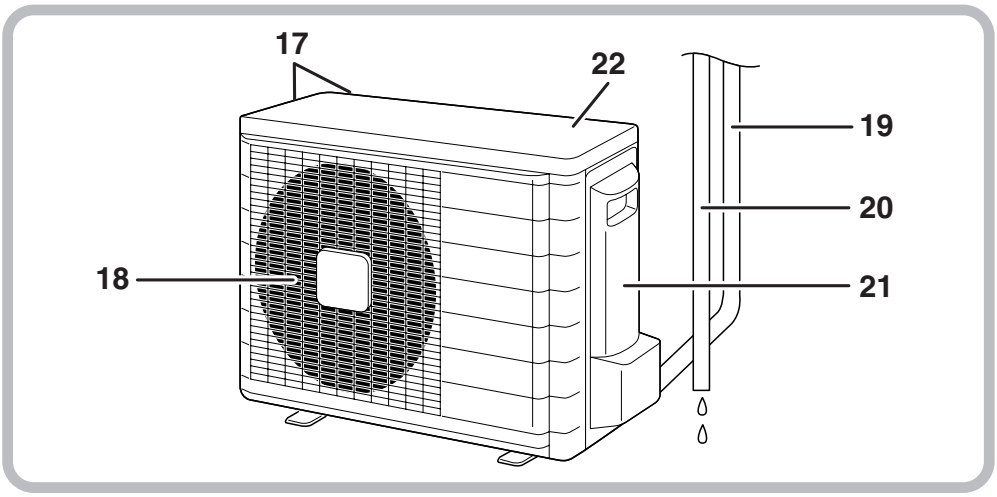
FTK(X)S 20/25/35 D, FTKD 25/35 D

Names of parts

■ Indoor Unit



■ Outdoor Unit



■ Indoor Unit

1. **Air filter**
2. **Titanium Apatite Photocatalytic Air-Purifying Filter:**
   - These filters are attached to the inside of the air filters.
3. **Air inlet**
4. **Front panel**
5. **Panel tab**
6. **Room temperature sensor:**
   - It senses the air temperature around the unit.
7. **INTELLIGENT EYE sensor:**
   - It detects the movements of people and automatically switches between normal operation and energy saving operation.
8. **Display**
9. **Air outlet**
10. **Flaps (horizontal blades)**
11. **louvers (vertical blades):**
    - The louvers are inside of the air outlet.
12. **Indoor Unit ON/OFF switch:**
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refers to the following table.

	Mode	Temperature setting	Air flow rate
FTK	COOL	22˚C	AUTO
FTX	AUTO	25˚C	AUTO

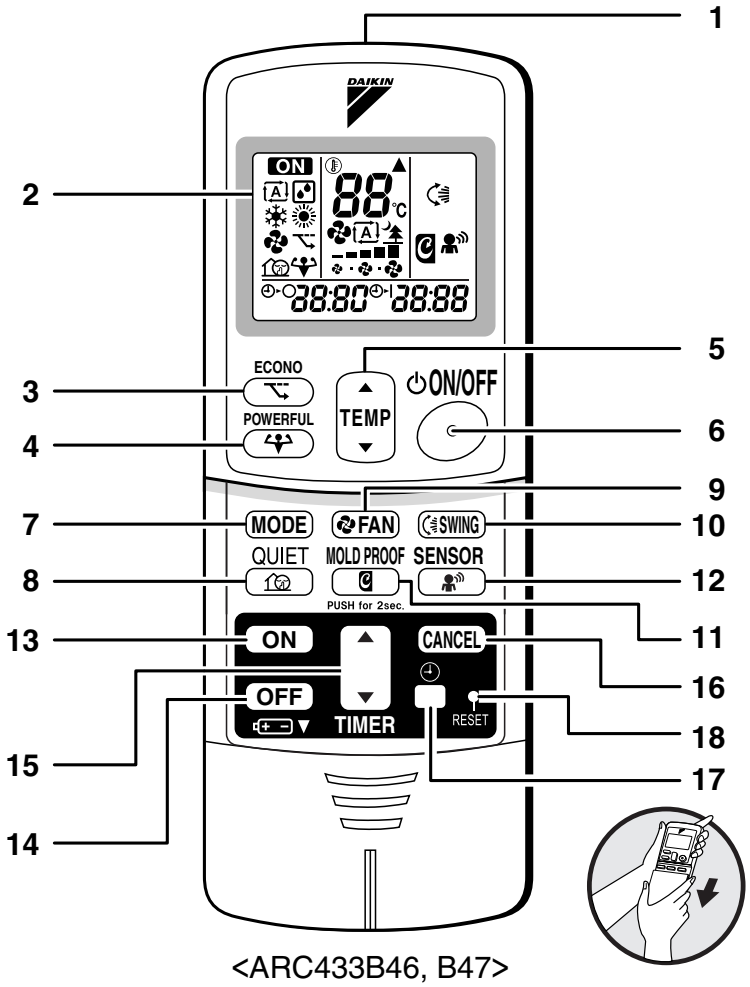
    - This switch is useful when the remote controller is missing.
13. **Operation lamp (green)**
14. **TIMER lamp (yellow)**
15. **INTELLIGENT EYE lamp (green)**
16. **Signal receiver:**
    - It receives signals from the remote controller.
    - When the unit receives a signal, you will hear a short beep.
      - Operation start .....beep-beep
      - Settings changed.....beep
      - Operation stop .....beeeeep

■ Outdoor Unit

17. **Air inlet:** (Back and side)
18. **Air outlet**
19. **Refrigerant piping and inter-unit cable**
20. **Drain hose**
21. **Earth terminal:**
    - It is inside of this cover.
22. **Outside air temperature sensor:**
    - It senses the ambient temperature around the unit.

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



<ARC433B46, B47>

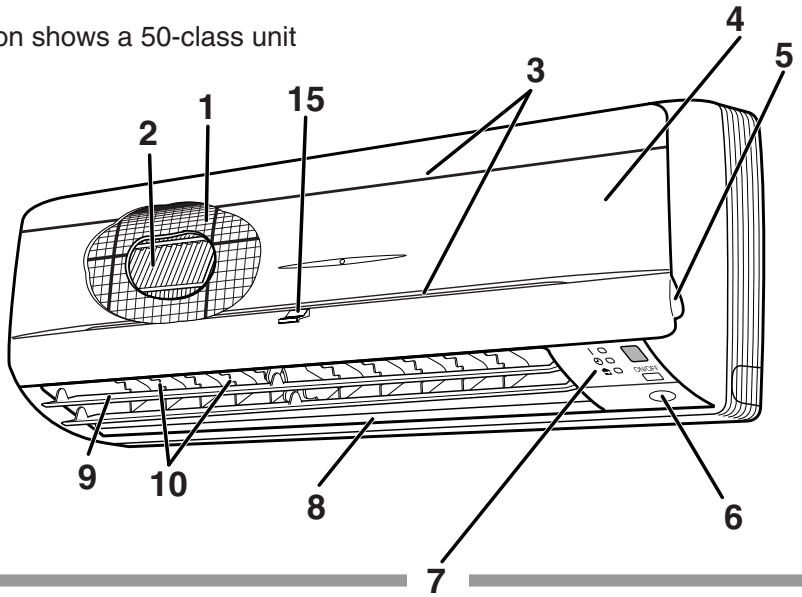
1. **Signal transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **ECONO button:** ECONO operation
4. **POWERFUL button:** POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button:** OUTDOOR UNIT QUIET operation
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **SWING button**
11. **MOLD PROOF button:** MOLD PROOF operation
12. **SENSOR button:** INTELLIGENT EYE operation
13. **ON TIMER button**
14. **OFF TIMER button**
15. **TIMER Setting button:**
    - It changes the time setting.
16. **TIMER CANCEL button:**
    - It cancels the timer setting.
17. **CLOCK button**
18. **RESET button:**
    - Restart the unit if it freezes.
    - Use a thin object to push.

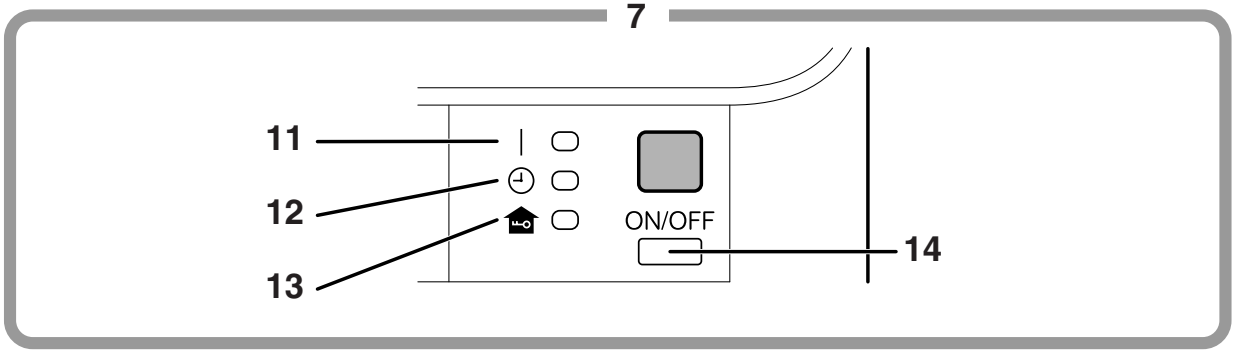
FTK(X)S 50/60/71 B

Names of parts

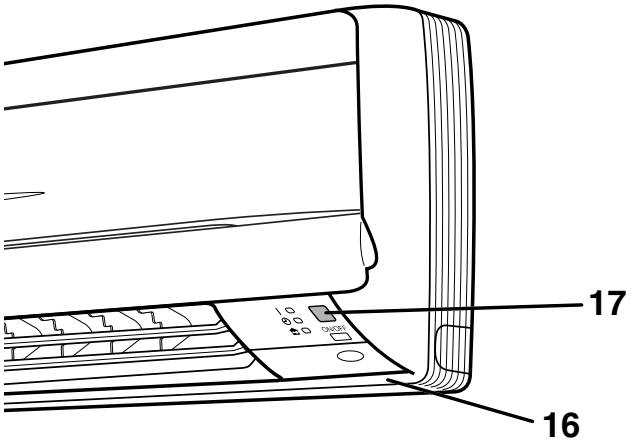
■ Indoor Unit

The illustration shows a 50-class unit

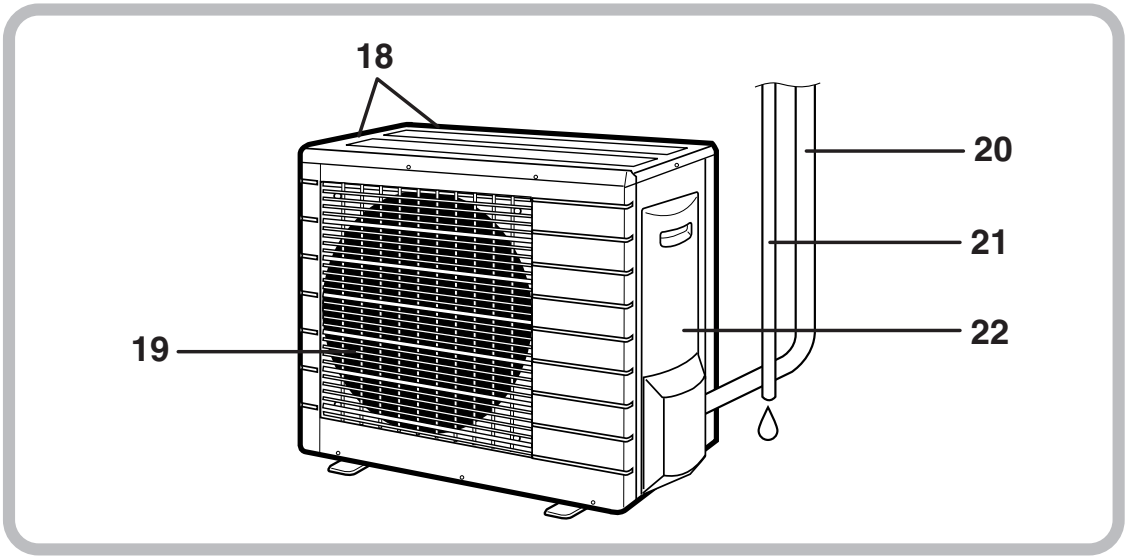




■ Main unit control panel



■ Outdoor Unit



■ Indoor Unit

1. **Air filter**
2. **Air purifying filter with photocatalytie deodorizing function:**
   - These filters are attached to the inside of the air filters.
3. **Air inlet**
4. **Front grille**
5. **Grille tab**
6. **INTELLIGENT EYE sensor:**
   - It detects the movements of people and automatically switches between normal operation and energy saving operation.
7. **Display**
8. **Air outlet**
9. **Flap (horizontal blade)**
10. **Louvers (vertical blades):**
    - The Louvers are inside of the air outlet.
11. **Operation lamp (green)**
12. **TIMER lamp (yellow)**
13. **HOME LEAVE lamp (red):**
    - Lights up when you use HOME LEAVE Operation.
14. **Indoor Unit ON/OFF switch:**
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refer to the following table.

	Mode	Temperature setting	Air flow rate
FTKS	COOL	22°C	AUTO
FTXS	AUTO	25°C	AUTO

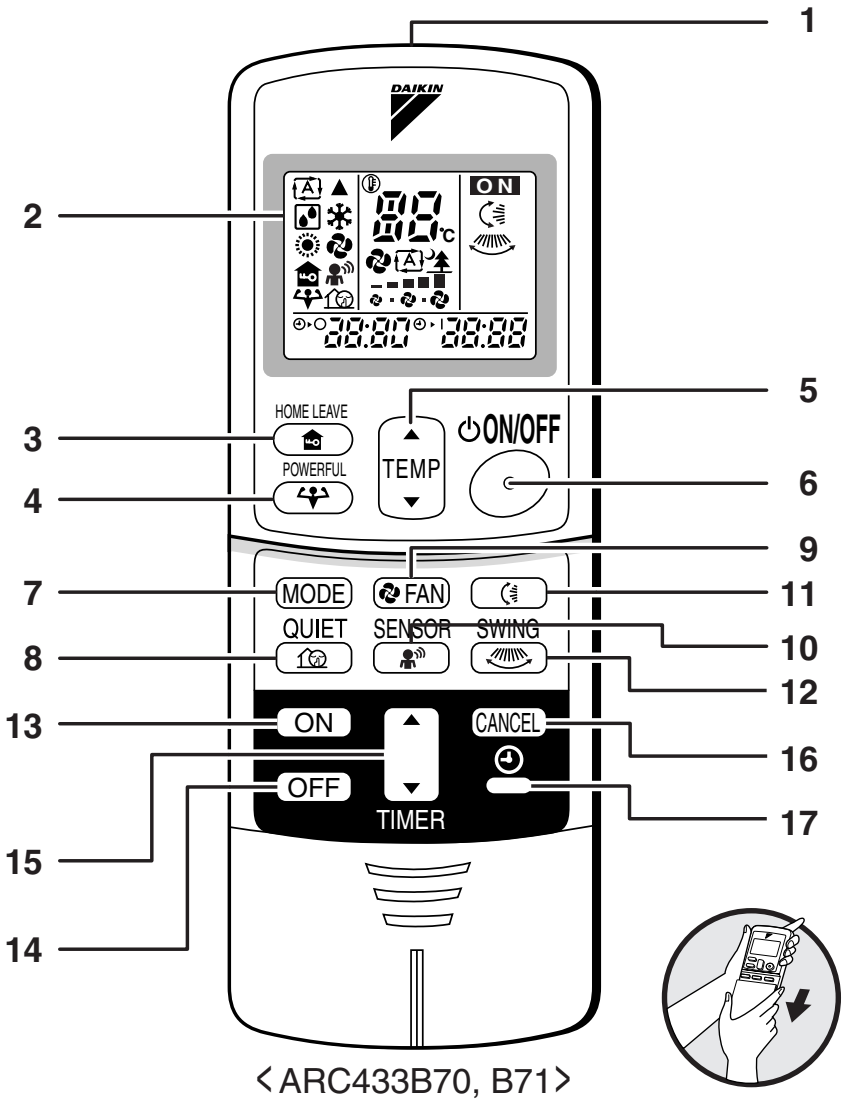
    - This switch is useful when the remote controller is missing.
15. **Packaging materials:** 50 class only
    - If any packaging materials are included, please remove before operating.
16. **Room temperature sensor:**
    - It senses the air temperature around the unit.
17. **Signal receiver:**
    It receives signals from the remote controller. When the unit receives a signal, you will hear a short beep.
    - Operation start .....beep-beep
    - Settings changed.....beep
    - Operation stop .....beeeeep

■ Outdoor Unit

18. **Air inlet:** (Back and side)
19. **Air outlet**
20. **Refrigerant piping and inter-unit cable**
21. **Drain hose**
22. **Earth terminal:**
    - It is inside of this cover.

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



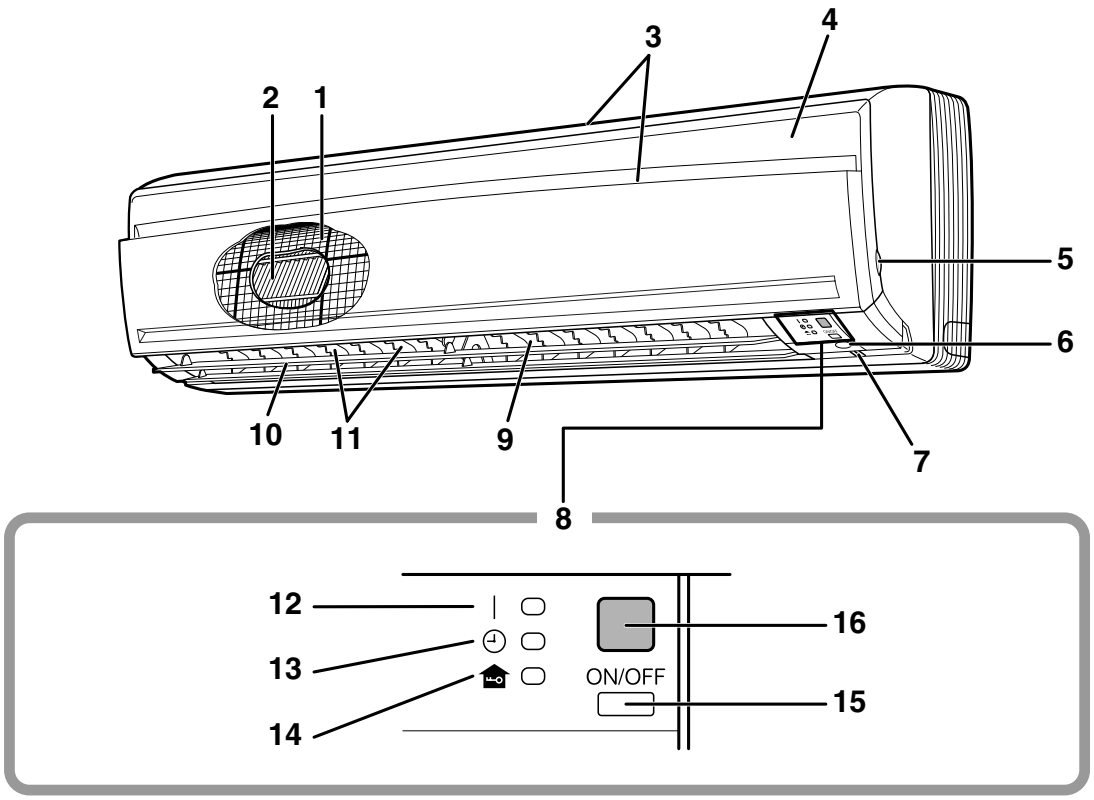
<ARC433B70, B71>

1. **Signal transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **HOME LEAVE button:** for HOME LEAVE operation
4. **POWERFUL button:** for POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature of time setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button:** for OUTDOOR UNIT QUIET operation
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **SENSOR button:** for INTELLIGENT EYE operation
11. **SWING button**
    - Flap (Horizontal blade)
12. **SWING button**
    - Louver (Vertical blades)
13. **ON TIMER button**
14. **OFF TIMER button**
15. **TIMER Setting button:**
    - It changes the time setting.
16. **TIMER CANCEL button:**
    - It cancels the timer setting.
17. **CLOCK button**

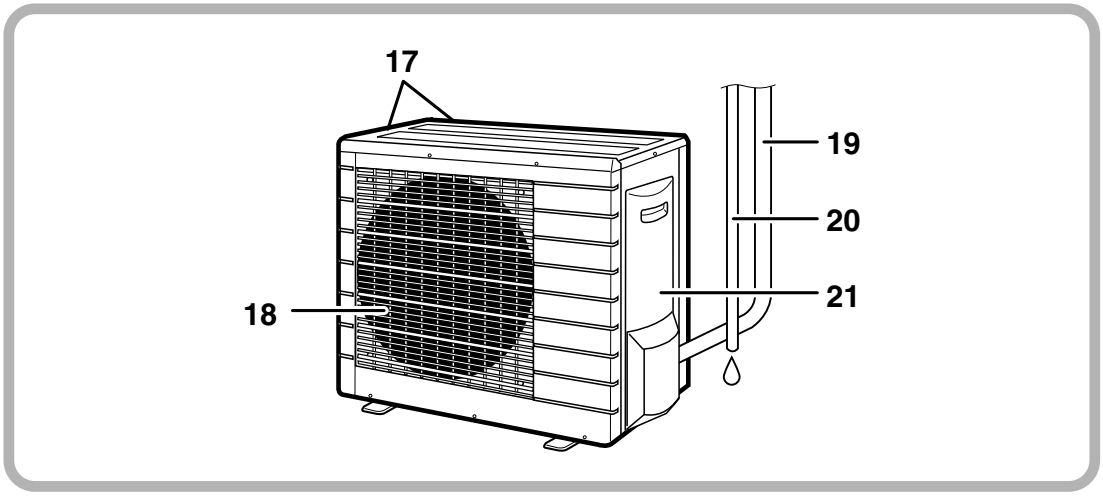
FTK(X)D 50/60/71 F

Names of parts

■ Indoor Unit



■ Outdoor Unit



■ Indoor Unit

1. **Air filter**
2. **Titanium Apatite Photocatalytic Air-Purifying Filter**
3. **Air inlet**
4. **Front panel**
5. **Panel tab**
6. **INTELLIGENT EYE sensor:**
   - It detects the movements of people and automatically switches between normal operation and energy saving operation.
7. **Room temperature sensor:**
   - It senses the air temperature around the unit.
8. **Display**
9. **Air outlet**
10. **Flap (horizontal blade)**
11. **Louvers (vertical blades):**
    - The Louvers are inside of the air outlet.
12. **Operation lamp (green)**
13. **TIMER lamp (yellow)**
14. **HOME LEAVE lamp (red):**
    - Lights up when you use HOME LEAVE Operation.
15. **Indoor Unit ON/OFF switch:**
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refer to the following table.

	Mode	Temperature setting	Air flow rate
FTKD	COOL	22°C	AUTO
FTXD	AUTO	25°C	AUTO

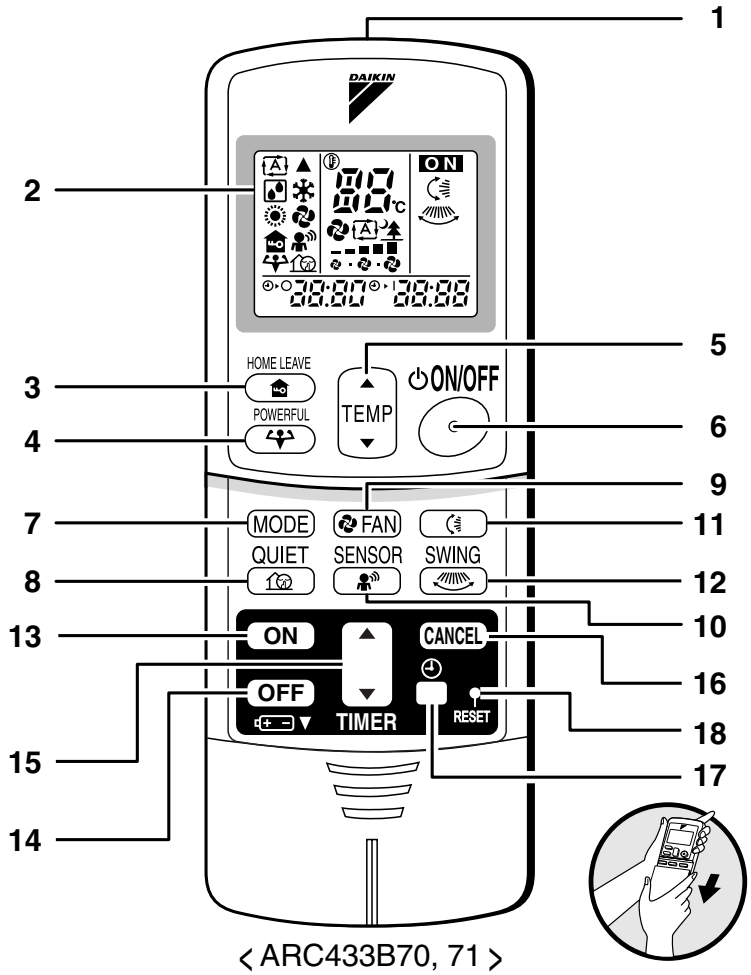
    - This switch is useful when the remote controller is missing.
16. **Signal receiver:**
    - It receives signals from the remote controller.
    - When the unit receives a signal, you will hear a short beep.
      - Operation start .....beep-beep
      - Settings changed.....beep
      - Operation stop .....beeeeep

■ Outdoor Unit

17. **Air inlet:** (Back and side)
18. **Air outlet**
19. **Refrigerant piping and inter-unit cable**
20. **Drain hose**
21. **Earth terminal:**
    - It is inside of this cover.

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



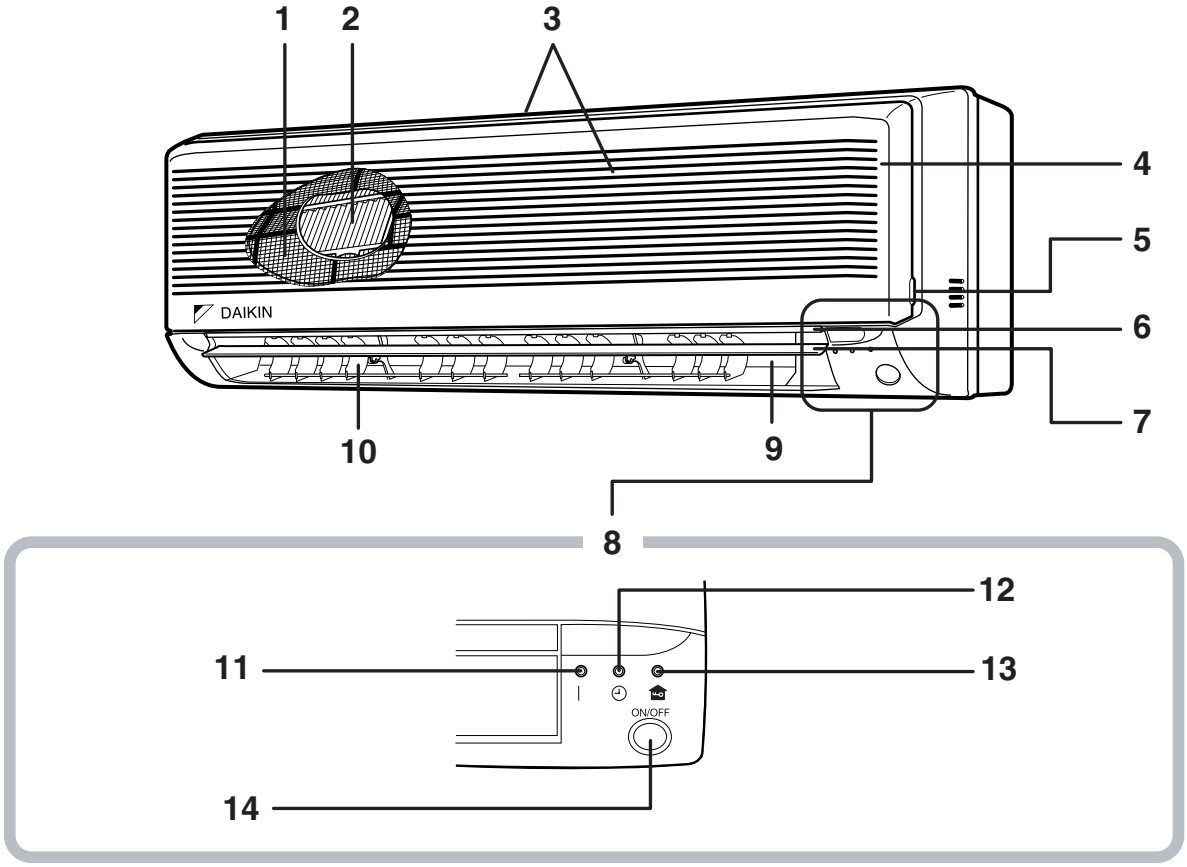
< ARC433B70, 71 >

1. **Signal transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **HOME LEAVE button:** HOME LEAVE operation
4. **POWERFUL button:** POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button:** OUTDOOR UNIT QUIET operation
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **SENSOR button:** INTELLIGENT EYE operation
11. **SWING button:**
    - Flap (Horizontal blade)
12. **SWING button:**
    - Louver (Vertical blades)
13. **ON TIMER button**
14. **OFF TIMER button**
15. **TIMER Setting button:**
    - It changes the time setting.
16. **TIMER CANCEL button:**
    - It cancels the timer setting.
17. **CLOCK button**
18. **RESET button:**
    - Restart the unit if it freezes.
    - Use a thin object to push.

FTK 50/60/71 A

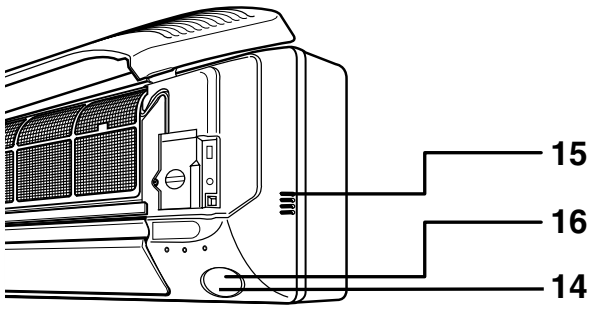
Names of parts

■ Indoor Unit



■ Opening the front grille

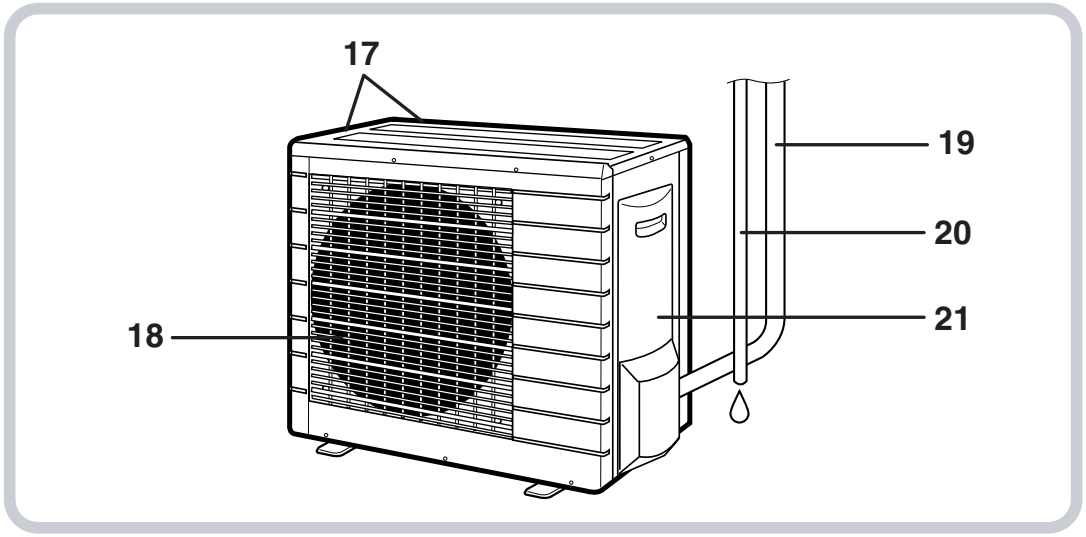
How to open the front grille



⚠ CAUTION

Before opening the front grille, be sure to stop the operation and turn the breaker OFF.
If the power is on, the fan may rotate inside and may cause injury.

■ Outdoor Unit



■ Indoor Unit

1. **Air filter**
2. **Photocatalytic deodorizing filter or Air purifying filter:**
   - These filters are attached to the inside of the air filters.
3. **Air inlet**
4. **Front grille**
5. **Grille tab**
6. **Diffuser**
7. **Flap (horizontal blade)**
8. **Display**
9. **Air outlet**
10. **Louvres (vertical blades)**
    - The louvres are inside of the air outlet.
11. **Operation lamp (green)**
12. **TIMER lamp (yellow):**
13. **HOME LEAVE lamp (red)**
    - Lights up when you use HOME LEAVE Operation.
14. **Indoor Unit ON/OFF switch**
    - Push this switch once to start operation. Push once again to stop it.
    - This switch is useful when the remote controller is missing.
15. **Room temperature sensor:**
    - It senses the air temperature around the unit.
16. **Signal receiver:**
    - It receives signals from the remote controller.
    - When the unit receives a signal, you will hear a short beep.
      - Operation start .....beep-beep
      - Settings changed.....beep
      - Operation stop .....beeeeep

- **The operation mode refer to the following table.**

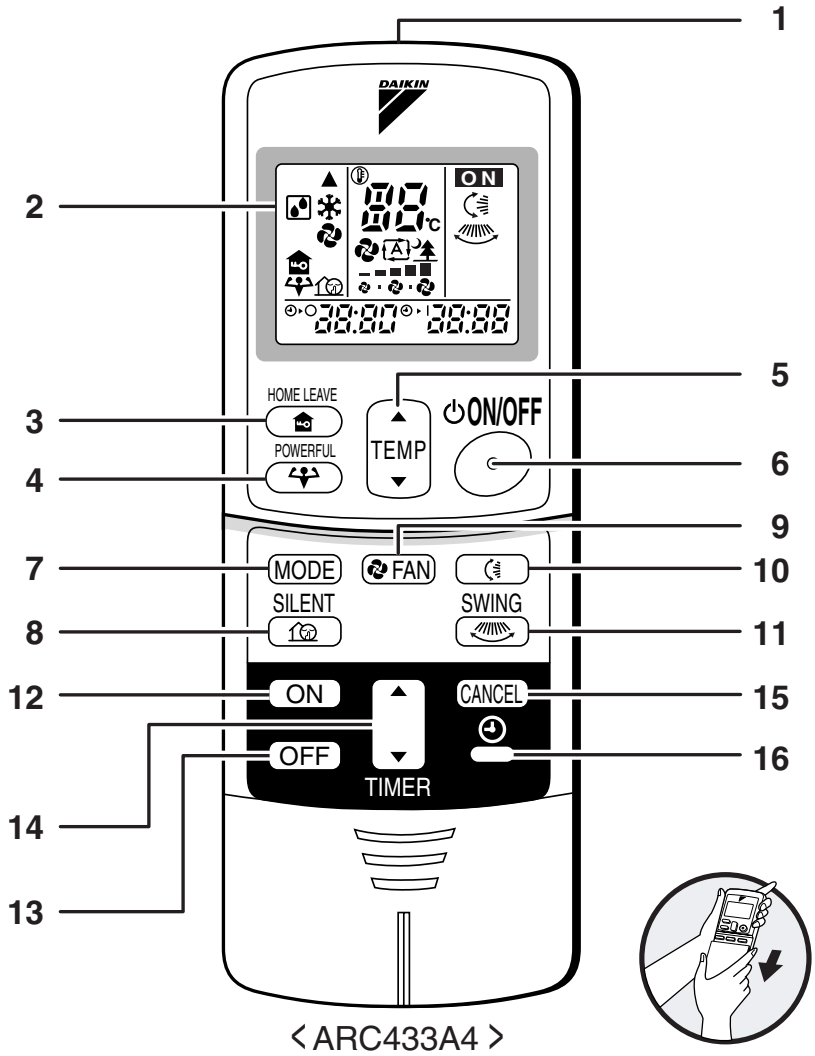
	Mode	Temperature setting	Air flow rate
FTK	COOL	22°C	AUTO

■ Outdoor Unit

17. **Air inlet:** (Back and side)
18. **Air outlet**
19. **Refrigerant piping and inter-unit cable**
20. **Drain hose**
21. **Earth terminal:**
    - It is inside of this cover.

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



< ARC433A4 >

1. Signal transmitter:
- It sends signals to the indoor unit.

2. Display:
- It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)

3. HOME LEAVE button: for HOME LEAVE operation

4. POWERFUL button: for POWERFUL operation

5. TEMPERATURE adjustment buttons:
- It changes the temperature of time setting.

6. ON/OFF button:
- Press this button once to start operation. Press once again to stop it.

7. MODE selector button:
- It selects the operation mode. (DRY/COOL/FAN)

8. SILENT button: for OUTDOOR UNIT SILENT operation

9. FAN setting button:
- It selects the air flow rate setting.

10. SWING button:
- Flap (Horizontal blade)

11. SWING button:
- Louvre (Vertical blades)

12. ON TIMER button:

13. OFF TIMER button:

14. TIMER Setting button:
- It changes the time setting.

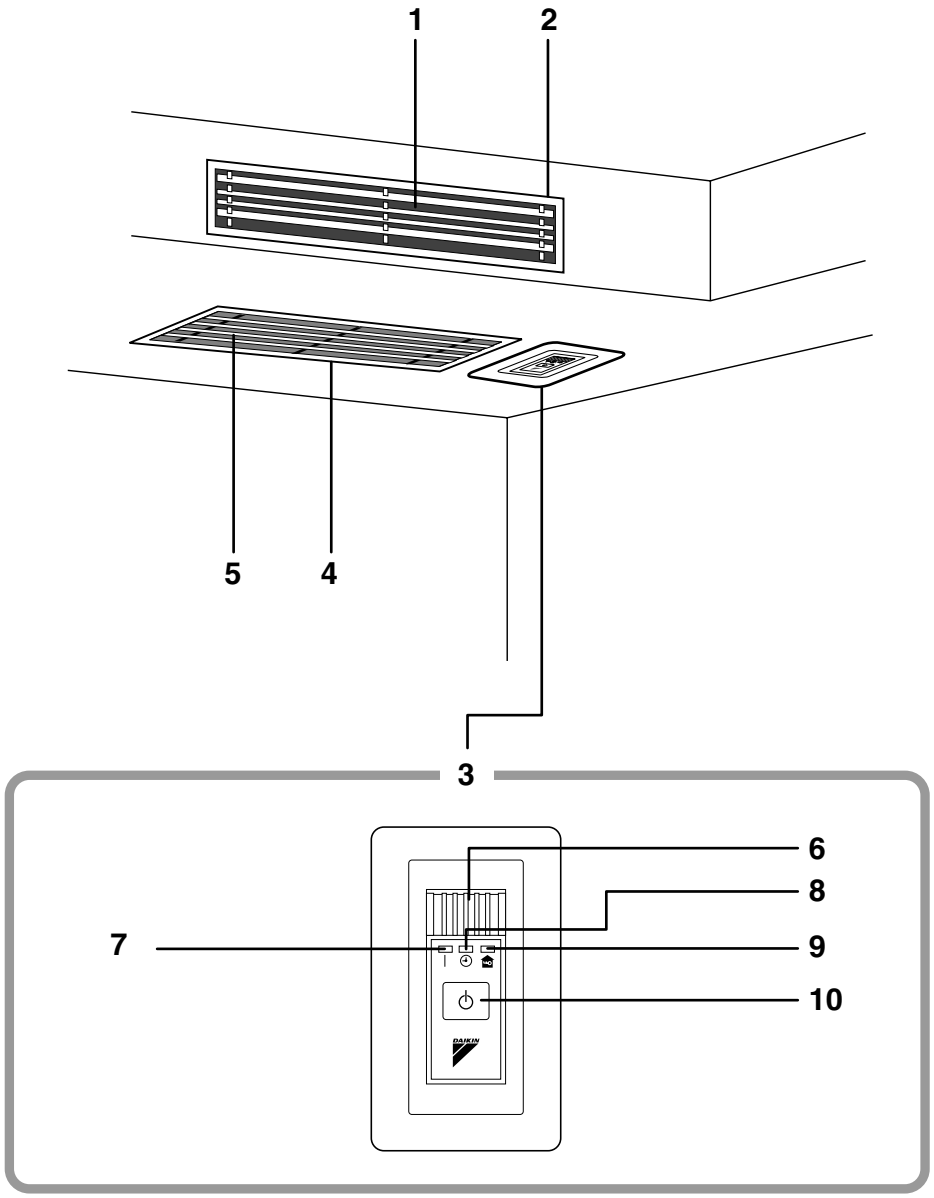
15. TIMER CANCEL button:
- It cancels the timer setting.

16. CLOCK button

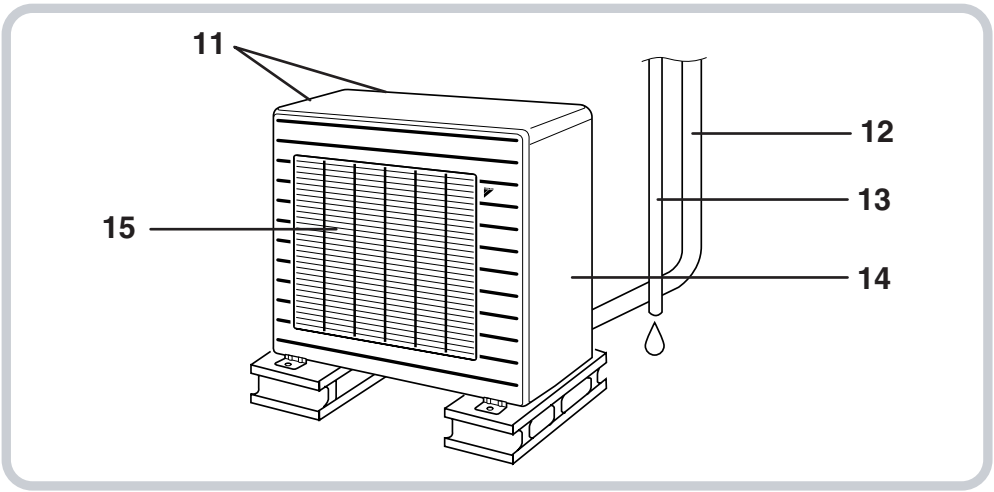
FDKS 25/35 C, CDK(X)S 25/35/50/60 C, CDKD 25/35/50/60 C, CDKD 25/35 E

Names of parts

■ Indoor Unit



■ Outdoor Unit



■ Indoor Unit

1. **Air outlet**
2. **Air outlet grille** (Field supply)
   - Appearance of the Air outlet grille and Air inlet grille may differ with some models.
3. **Display, Control panel**
4. **Suction grille** (Option)
   - Appearance of the suction grille and Air inlet grille may differ with some models.
5. **Air inlet**
6. **Room temperature sensor:**
   - It senses the air temperature around the unit.
7. **Operation lamp (green)**
8. **TIMER lamp (yellow)**
9. **HOME LEAVE lamp (red)**
   - LIghts up when you use HOME LEAVE operation.
10. **Indoor Unit ON/OFF switch**
    - Push this switch once to start operation. Push once again to stop it.
    - This switch is useful when the remote controller is missing.

- **The operation mode refers to the following table.**

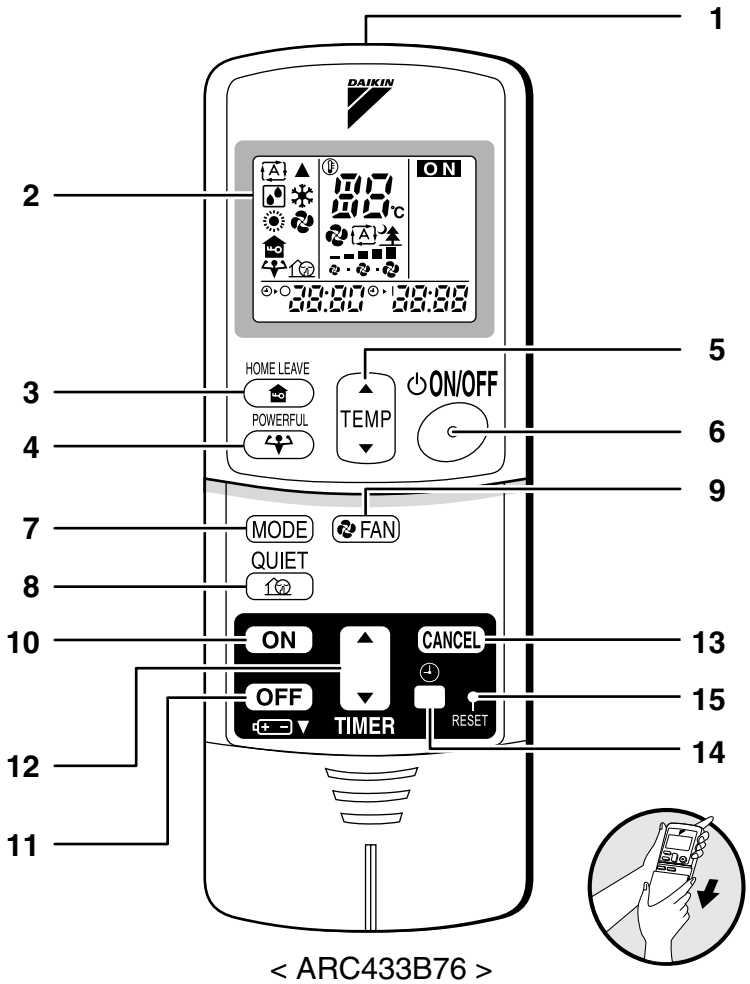
	Mode	Temperature setting	Air flow rate
CDKD	COOL	22°C	AUTO

■ Outdoor Unit

11. **Air inlet:** (Back and side)
12. **Refrigerant piping and inter-unit cable**
13. **Drain hose**
14. **Earth terminal:**
    - It is inside of this cover.
15. **Air outlet**

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



< ARC433B76 >

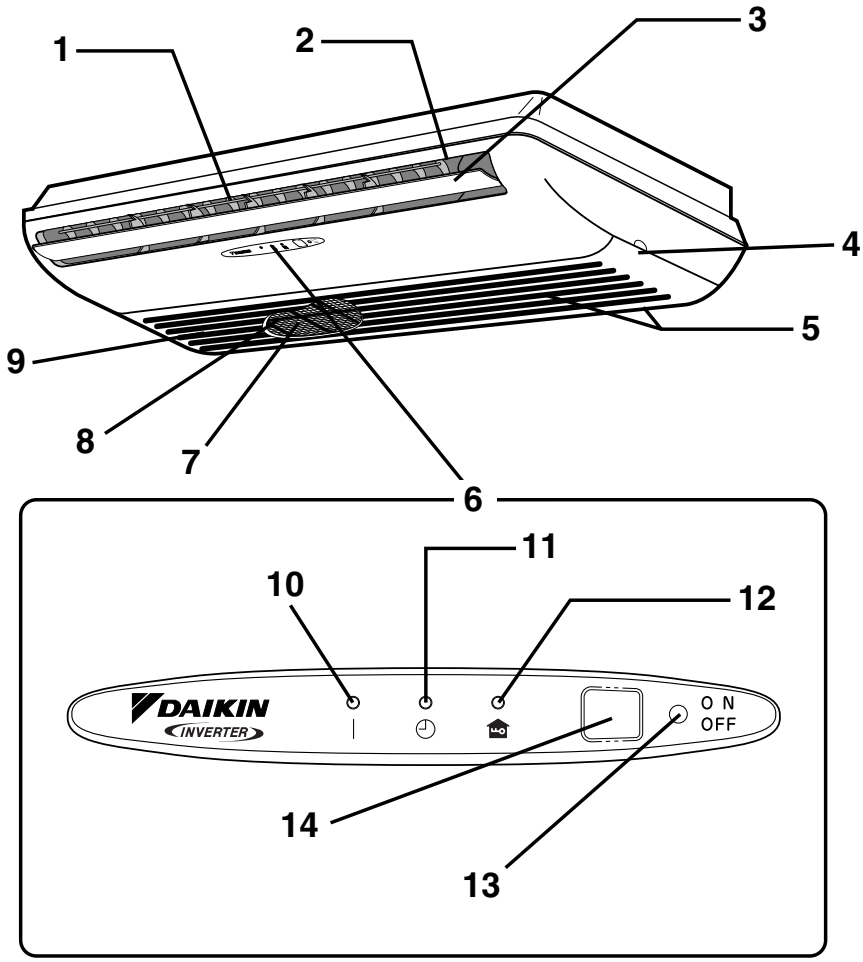
1. **Signal transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **HOME LEAVE button:** HOME LEAVE operation
4. **POWERFUL button:** POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button:** OUTDOOR UNIT QUIET operation
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **ON TIMER button:**
11. **OFF TIMER button:**
12. **TIMER Setting button:**
    - It changes the time setting.
13. **TIMER CANCEL button:**
    - It cancels the timer setting.
14. **CLOCK button**
15. **RESET button:**
    - Restart the unit if it freezes.
    - Use a thin object to push.

FLXS 25/35/50/60 B

Names of parts

■ Indoor Unit

The indoor unit can be installed either to the ceiling or to a wall. The descriptions contained in this manual show the case when installation is being carried out to the ceiling. (The methods of operation used are the same when installing to a wall.)



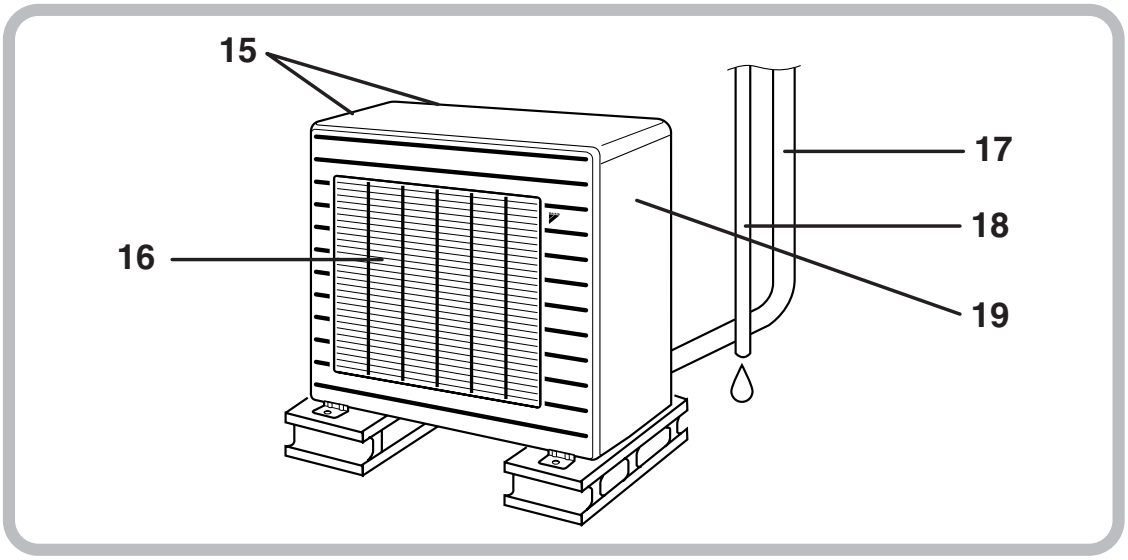
■ Opening the front grille

How to open the front grille :

⚠ CAUTION

- Before opening the front grille, be sure to stop the operation and turn the breaker OFF.

■ Outdoor Unit



■ Indoor Unit

1. **Louvers (vertical blades):**
   The louvers are inside of the air outlet.
2. **Air outlet**
3. **Flap (horizontal blade)**
4. **Grille tab**
5. **Air inlet**
6. **Display**
7. **Air filter**
8. **Photocatalytic deodorizing filter or Air purifying filter:**
   - These filters are attached to the inside of the air filters.
9. **Front grille**
10. **Operation lamp (green)**
11. **TIMER lamp (yellow)**
12. **HOME LEAVE lamp (red):**
    Lights up when you use HOME LEAVE Operation.
13. **Indoor unit ON/OFF switch:**
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refers to the following table.

Mode	Temperature setting	Air flow rate
AUTO	25°C	AUTO

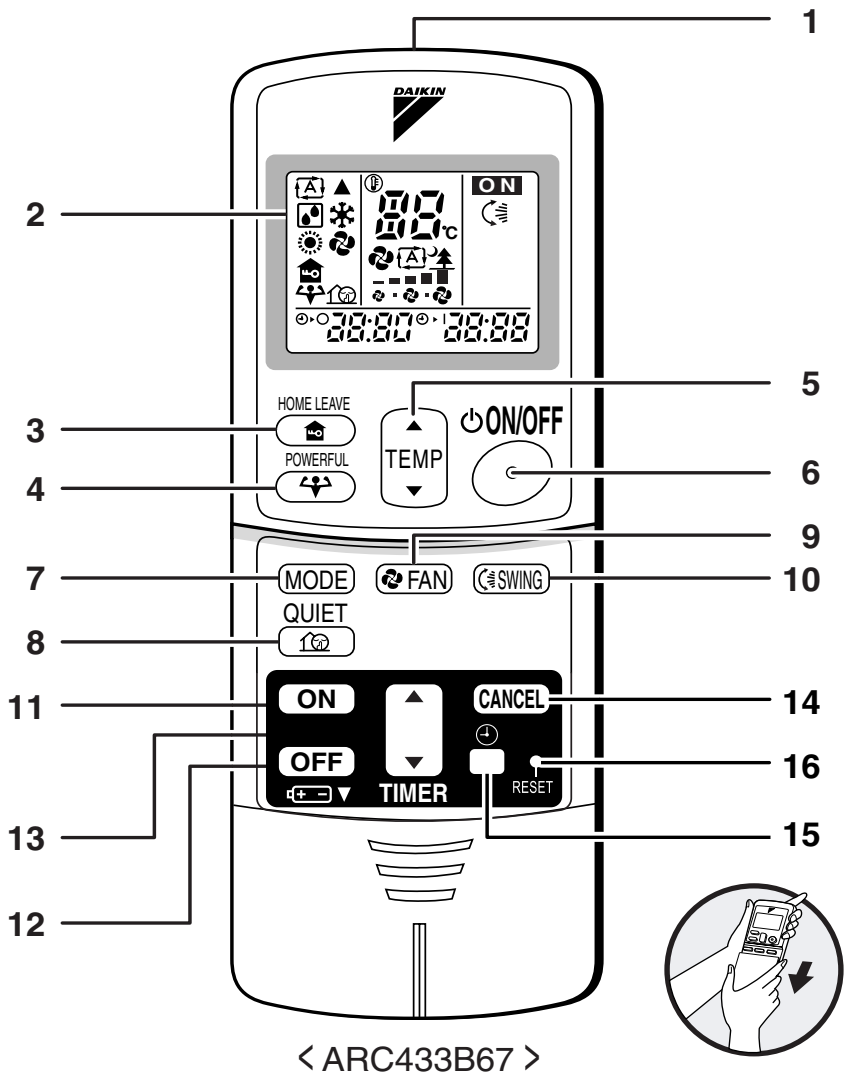
    - Push the switch using an object with a sharp tip, such as a pen.
    - This switch is useful when the remote controller is missing.
14. **Signal receiver:**
    - It receives signals from the remote controller.
    - When the unit receives a signal, you will hear a short beep.
      - Operation start .....beep-beep
      - Settings changed.....beep
      - Operation stop .....beeeeep

■ Outdoor Unit

15. **Air inlet:** (Back and side)
16. **Air outlet**
17. **Refrigerant piping and inter-unit cable**
18. **Drain hose**
19. **Earth terminal:**
    - It is inside of this cover.

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



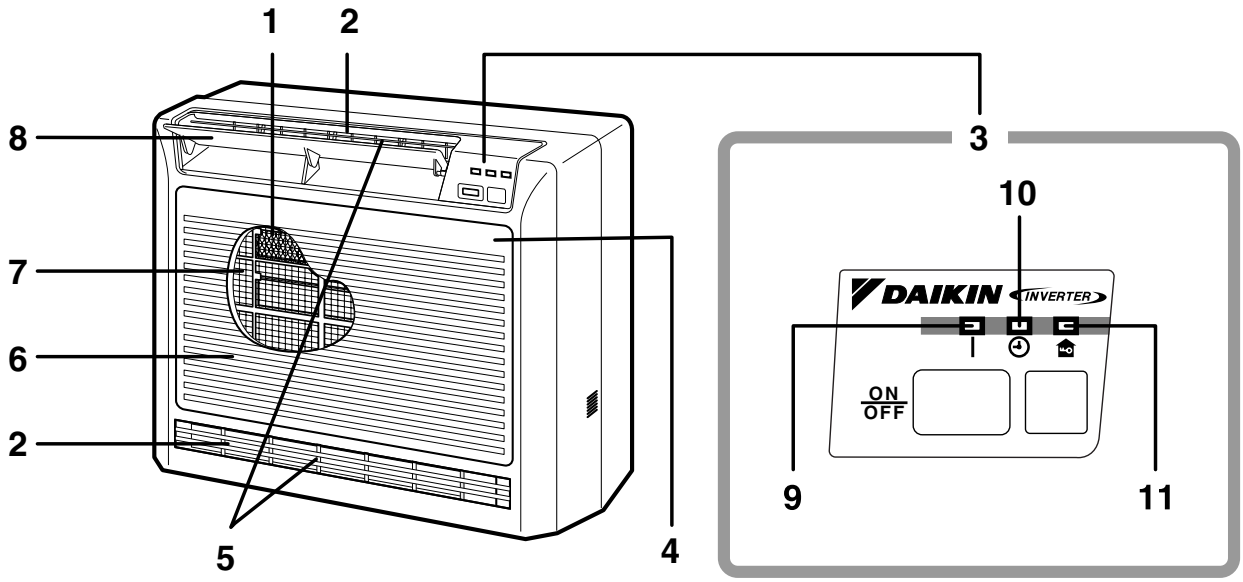
< ARC433B67 >

1. **Signal Transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **HOME LEAVE button:** for HOME LEAVE operation
4. **POWERFUL button:** for POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button**
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **SWING button**
11. **ON TIMER button**
12. **OFF TIMER button**
13. **TIMER Setting button:**
    - It changes the time setting.
14. **TIMER CANCEL button:**
    - It cancels the timer setting.
15. **CLOCK button**
16. **RESET button:**
    - Restart the unit if it freezes.
    - Use a thin object to push.

FVXS 35/50 B

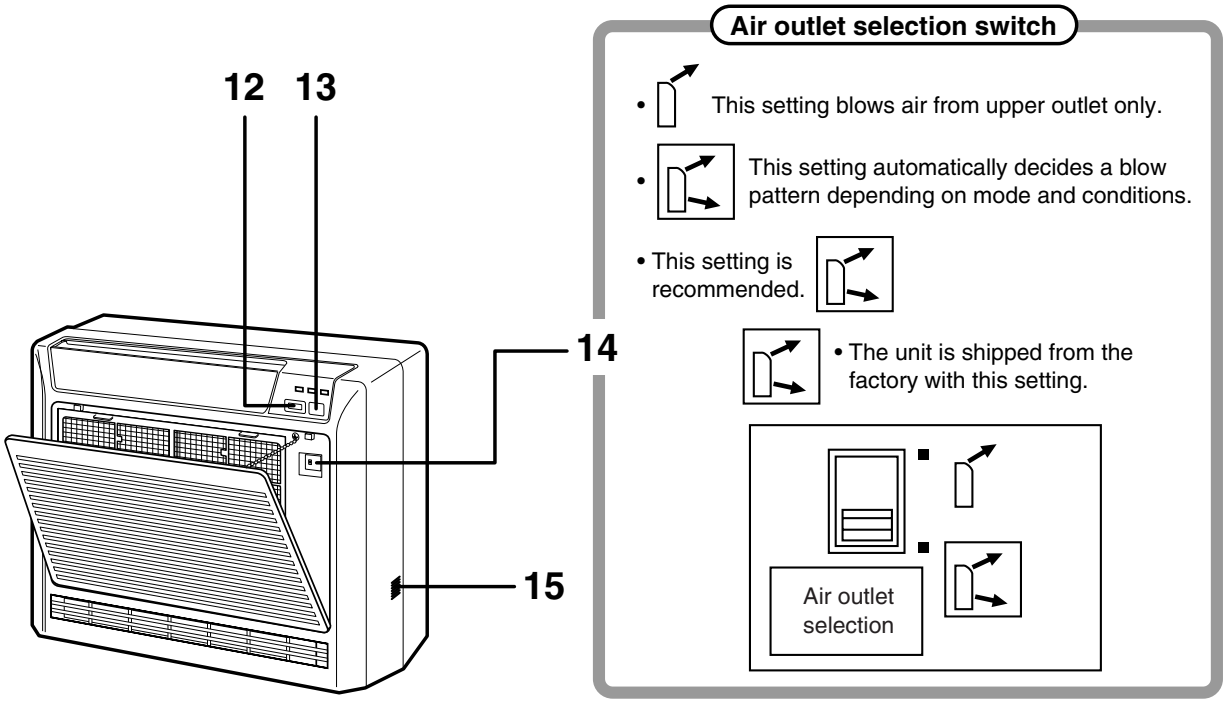
Names of parts

■ Indoor Unit



■ Opening the front grille

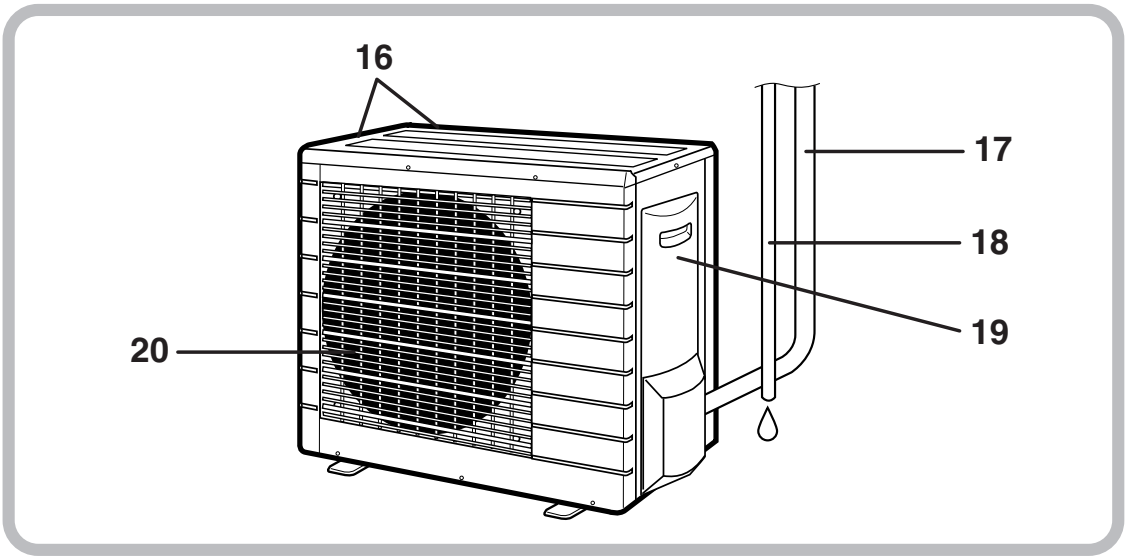
How to open the grille:



⚠ CAUTION

Before opening the front grille, be sure to stop the operation and turn the breaker OFF.
Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.

■ Outdoor Unit



■ Indoor Unit

1. **Photocatalytic deodorizing filter and Air purifying filter:**
   - These filters are attached to the inside of the air filters.
2. **Air outlet**
3. **Display**
4. **Front grille**
5. **Louvers (vertical blades):**
   - The louvers are inside of the air outlet.
6. **Air inlet**
7. **Air filter**
8. **Flap (horizontal blade)**
9. **Operation lamp (green)**
10. **TIMER lamp (yellow)**
11. **HOME LEAVE lamp (red)**
12. **Indoor Unit ON/OFF switch:**
    - Push this switch once to start operation. Push once again to stop it.
    - The operation mode refers to the following table.

Mode	Temperature setting	Air flow rate
AUTO	25˚C	AUTO

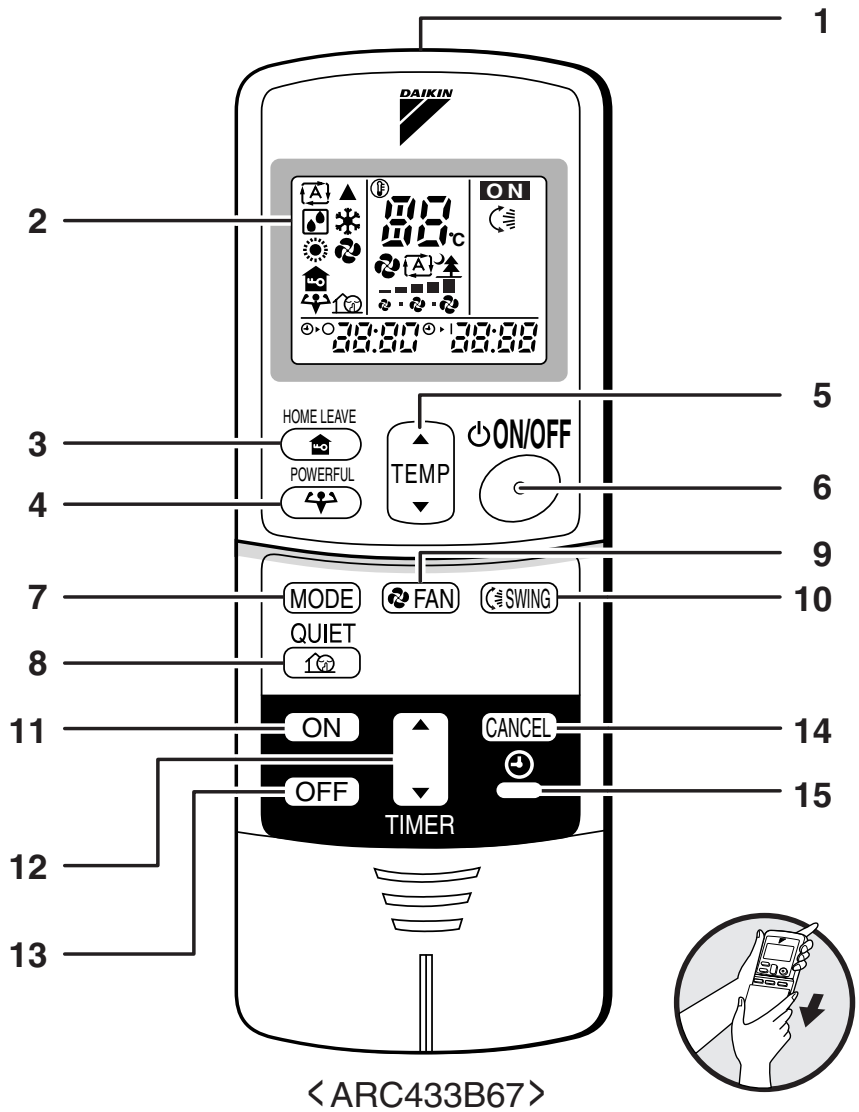
    - This switch is useful when the remote controller is missing.
13. **Signal receiver:**
    - Signals are received from the remote controller .
    - When the unit receives a signal, you will hear a short beep.
      - Operation start .....beep-beep
      - Settings changed.....beep
      - Operation stop .....beeeeep
14. **Air outlet selection switch**
15. **Room temperature sensor:**
    - It senses the air temperature around the unit.

■ Outdoor Unit

16. **Air inlet:** (Back and side)
17. **Refrigerant piping and inter-unit cable**
18. **Drain hose**
19. **Earth terminal:**
    - It is inside of this cover.
20. **Air outlet**

Appearance of the outdoor unit may differ from some models.

■ Remote Controller



<ARC433B67>

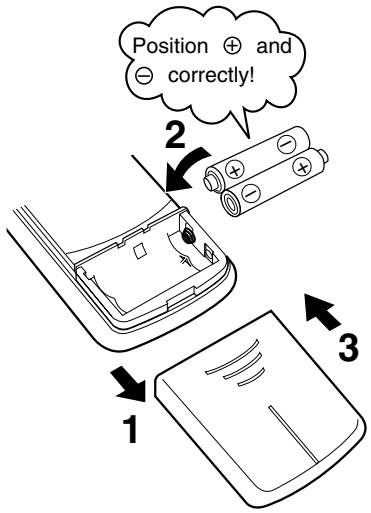
1. **Signal transmitter:**
   - It sends signals to the indoor unit.
2. **Display:**
   - It displays the current settings. (In this illustration, each section is shown with all its displays ON for the purpose of explanation.)
3. **HOME LEAVE button:** for HOME LEAVE operation
4. **POWERFUL button:** for POWERFUL operation
5. **TEMPERATURE adjustment buttons:**
   - It changes the temperature setting.
6. **ON/OFF button:**
   - Press this button once to start operation. Press once again to stop it.
7. **MODE selector button:**
   - It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
8. **QUIET button:** for OUTDOOR UNIT QUIET operation
9. **FAN setting button:**
   - It selects the air flow rate setting.
10. **SWING button**
11. **ON TIMER button**
12. **TIMER Setting button:**
    - It changes the time setting.
13. **OFF TIMER button**
14. **TIMER CANCEL button:**
    - It cancels the timer setting.
15. **CLOCK button**

2.2.4 Preparation before Operation

Preparation Before Operation

■ To set the batteries

1. **Slide the front cover to take it off.**
2. **Set two dry batteries (AAA).**
3. **Set the front cover as before.**



ATTENTION

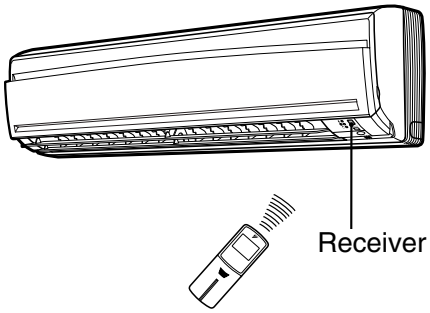
■ **About batteries**

- When replacing the batteries, use batteries of the same type, and replace the two old batteries together.
- When the system is not used for a long time, take the batteries out.
- We recommend replacing once a year, although if the remote controller display begins to fade or if reception deteriorates, please replace with new alkali batteries. Using manganese batteries reduces the lifespan.
- The attached batteries are provided for the initial use of the system.
  The usable period of the batteries may be short depending on the manufactured date of the air conditioner.

Preparation Before Operation

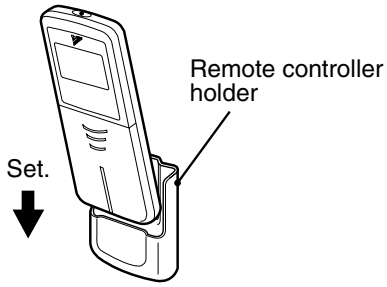
■ To operate the remote controller

- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- Do not drop the remote controller. Do not get it wet.
- The maximum distance for communication is about 7m.



■ To fix the remote controller holder on the wall

1. **Choose a place from where the signals reach the unit.**
2. **Fix the holder to a wall, a pillar, or similar location with the screws procured locally.**
3. **Place the remote controller in the remote controller holder.**



• To remove, pull it upwards.

ATTENTION

■ **About remote controller**

- Never expose the remote controller to direct sunlight.
- Dust on the signal transmitter or receiver will reduce the sensitivity. Wipe off dust with soft cloth.
- Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult the shop if that is the case.
- If the remote controller signals happen to operate another appliance, move that appliance to somewhere else, or consult the shop.

■ To set the clock

1. **Press "CLOCK button".**

   0:00 is displayed.

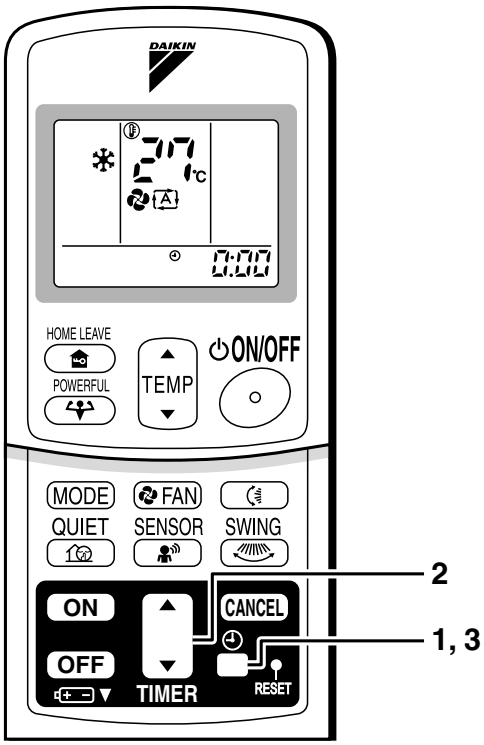
   ◷ blinks.

2. **Press "TIMER setting button" to set the clock to the present time.**

   Holding down "▲" or "▼" button rapidly increases or decreases the time display.

3. **Press "CLOCK button".**

   : blinks.



■ Turn the breaker ON

- Turning ON the breaker opens the flap, then closes it again. (This is a normal procedure.)

NOTE

■ Tips for saving energy

- Be careful not to cool (heat) the room too much.
  Keeping the temperature setting at a moderate level helps save energy.
- Cover windows with a blind or a curtain.
  Blocking sunlight and air from outdoors increases the cooling (heating) effect.
- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every two weeks.

Recommended temperature setting
For cooling:26°C – 28°C For heating:20°C – 24°C

■ Please note

- The air conditioner always consumes 15-35 watts of electricity even while it is not operating.
- If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn the breaker OFF.
- Use the air conditioner in the following conditions.

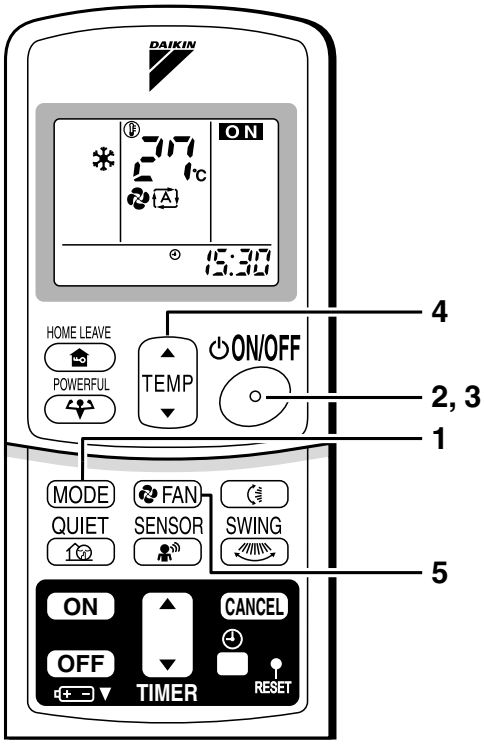
Mode	Operating conditions	If operation is continued out of this range
COOL	Outdoor temperature: <2/3/4MKD> 10 to 46˚C <3/4MXD> –10 to 46˚C <RK(X)D> –5 to 46˚C Indoor temperature: 18 to 32˚C Indoor humidity: 80% max.	• A safety device may work to stop the operation. (In multi system, it may work to stop the operation of the outdoor unit only.) • Condensation may occur on the indoor unit and drip.
HEAT	Outdoor temperature: <3/4MXD> –15 to 15.5˚C <RXD> –15 to 18˚C Indoor temperature: 10 to 30˚C	• A safety device may work to stop the operation.
DRY	Outdoor temperature: <2/3/4MKD> 10 to 46˚C <3/4MXD> –10 to 46˚C <RK(X)D> –5 to 46˚C Indoor temperature: 18 to 32˚C Indoor humidity: 80% max.	• A safety device may work to stop the operation. • Condensation may occur on the indoor unit and drip.

- Operation outside this humidity or temperature range may cause a safety device to disable the system .

2.2.5 AUTO · DRY · COOL · HEAT · FAN Operation

AUTO · DRY · COOL · HEAT · FAN Operation

The air conditioner operates with the operation mode of your choice.
From the next time on, the air conditioner will operate with the same operation mode.



■ To start operation

1. Press “MODE selector button” and select a operation mode.

- Each pressing of the button advances the mode setting in sequence.

: AUTO

: DRY

: COOL

: HEAT

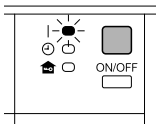
: FAN

<FTKD>

<FTXD>

2. Press “ON/OFF button”.

- The OPERATION lamp lights up.



■ To stop operation

3. Press “ON/OFF button” again.

- Then OPERATION lamp goes off.

■ To change the temperature setting

4. Press “TEMPERATURE adjustment button”.

DRY or FAN mode	AUTO or COOL or HEAT mode
The temperature setting is not variable.	Press “▲” to raise the temperature and press “▼” to lower the temperature.
	Set to the temperature you like. 

■ To change the air flow rate setting

5. Press “FAN setting button”.

DRY mode	AUTO or HEAT or COOL or FAN mode
The air flow rate setting is not variable.	Five levels of air flow rate setting from “ ” to “ ” plus “ ” “ ” are available. 

- Indoor unit quiet operation

  When the air flow is set to “ ”, the noise from the indoor unit will become quieter. Use this when making the noise quieter.

  The unit might lose capacity when the air flow rate is set to a weak level.

NOTE

■ **Note on HEAT operation**
- Since this air conditioner heats the room by taking heat from outdoor air to indoors, the heating capacity becomes smaller in lower outdoor temperatures. If the heating effect is insufficient, it is recommended to use another heating appliance in combination with the air conditioner.
- The heat pump system heats the room by circulating hot air around all parts of the room. After the start of heating operation, it takes some time before the room gets warmer.
- In heating operation, frost may occur on the outdoor unit and lower the heating capacity. In that case, the system switches into defrosting operation to take away the frost.
- During defrosting operation, hot air does not flow out of indoor unit.

■ **Note on COOL operation**
- This air conditioner cools the room by blowing the hot air in the room outside, so if the outside temperature is high, performance drops.

■ **Note on DRY operation**
- The computer chip works to rid the room of humidity while maintaining the temperature as much as possible. It automatically controls temperature and fan strength, so manual adjustment of these functions is unavailable.

■ **Note on AUTO operation**
- In AUTO operation, the system selects a temperature setting and an appropriate operation mode (COOL or HEAT) based on the room temperature at the start of the operation.
- The system automatically reselects setting at a regular interval to bring the room temperature to user-setting level.
- If you do not like AUTO operation, you can manually select the operation mode and setting you like.

■ **Note on air flow rate setting**
- At smaller air flow rates, the cooling (heating) effect is also smaller.

2.2.6 Adjusting the Air Flow Direction

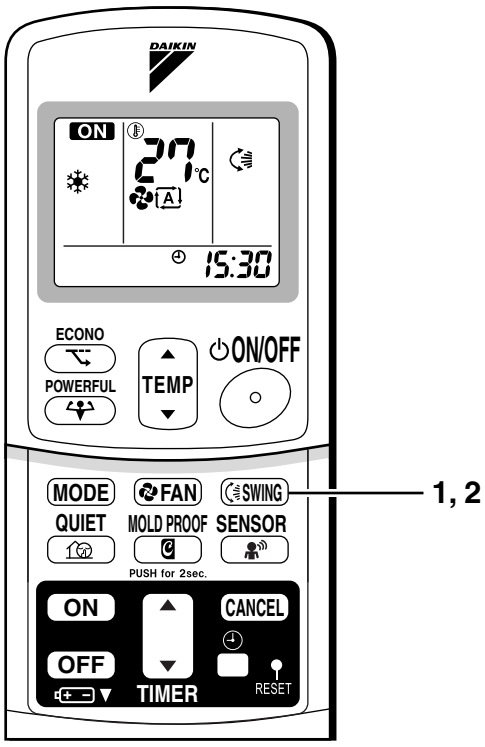
FTK(X)S 20/25/35 D, FTKD 25/35 D

Adjusting the Air Flow Direction

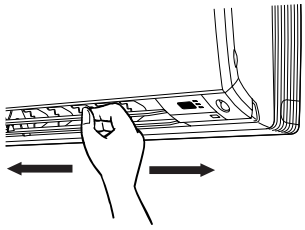
You can adjust the air flow direction to increase your comfort.

■ To adjust the horizontal blades (flaps)

1. **Press “SWING button”.**
   - “ ” is displayed on the LCD and the flaps will begin to swing.
2. **When the flaps have reached the desired position, press “SWING button” once more.**
   - The flaps will stop moving.
   - “ ” disappears from the LCD.



■ To adjust the vertical blades (louvres)



Hold the knob and move the louvres.
(You will find a knob on the left-side and the right-side blades.)

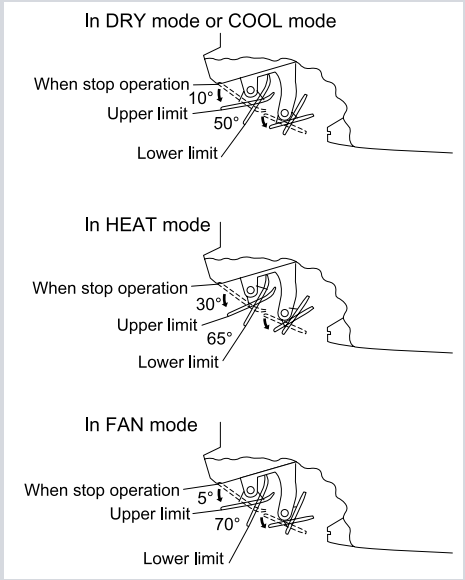
- When the unit is installed in the corner of a room, the direction of the louvers should be facing away from the wall.
  If they face the wall, the wall will block off the wind, causing the cooling (or heating) efficiency to drop.

Notes on flaps and louvres angles

- When " **SWING button** " is selected, the flaps swinging range depends on the operation mode. (See the figure.)
- If the unit is operated after being stopped with the flaps pointed down in cooling or dry operation, the flaps will automatically move to a horizontal position after about one hour to prevent condensation from forming on them.

■ **ATTENTION**

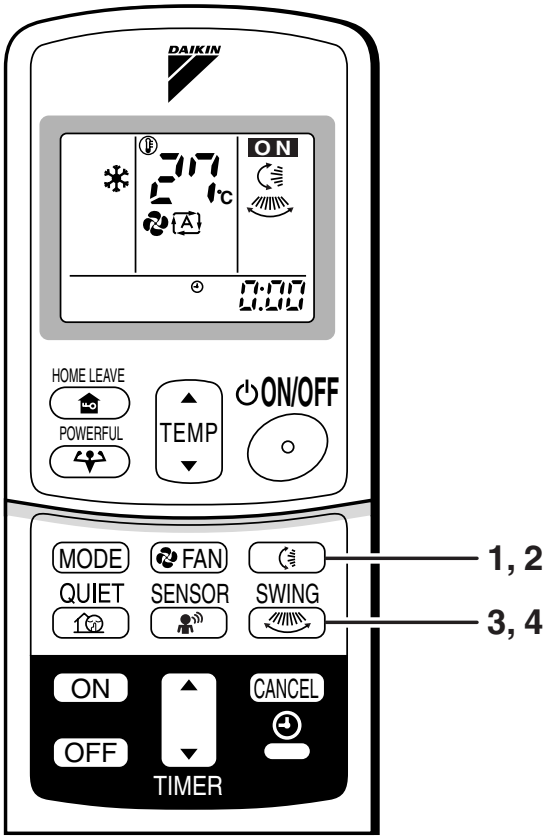
- Always use a remote controller to adjust the flaps angle. If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.
- Be careful when adjusting the louvres. Inside the air outlet, a fan is rotating at a high speed.



FTK(X)S 50/60/71 B

Adjusting the Air Flow Direction

You can adjust the air flow direction to increase your comfort.



■ To adjust the horizontal blade (flap)

1. **Press "SWING button ".**
   - " " is displayed on the LCD.
2. **When the flap has reached the desired position, press "SWING button " once more.**
   - The flap will stop moving.

■ To adjust the vertical blades (louvers)

3. **Press "SWING button ".**
   - " " is displayed on the LCD.
4. **When the louvers have reached the desired position, press the "SWING button " once more.**
   - The louvers will stop moving.

■ To 3-D Airflow

1. 3. Press the "SWING button" and the "SWING button": the "" and "" display will light up and the flap and louvers will move in turn.

■ To cancel 3-D Airflow

2. 4. Press either the "SWING button" or the "SWING button"

Notes on louvers angles

■ **ATTENTION**

- Always use a remote controller to adjust the louvers angles. In side the air outlet, a fan is rotating at a high speed.

Notes on flap angle

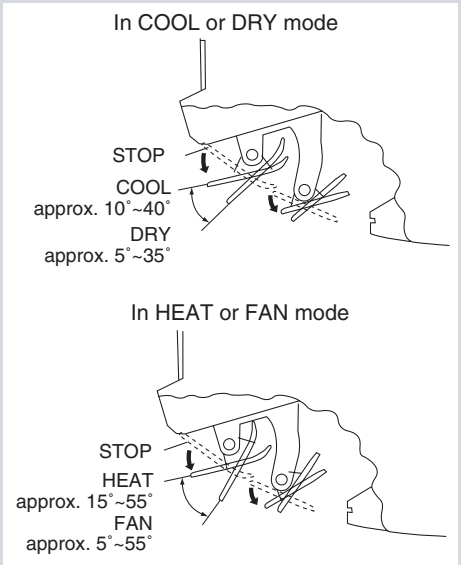
- When "**SWING button**" is selected, the flaps swinging range depends on the operation mode. (See the figure.)

Three-Dimensional (3-D) Airflow

- Using three-dimensional airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ **ATTENTION**

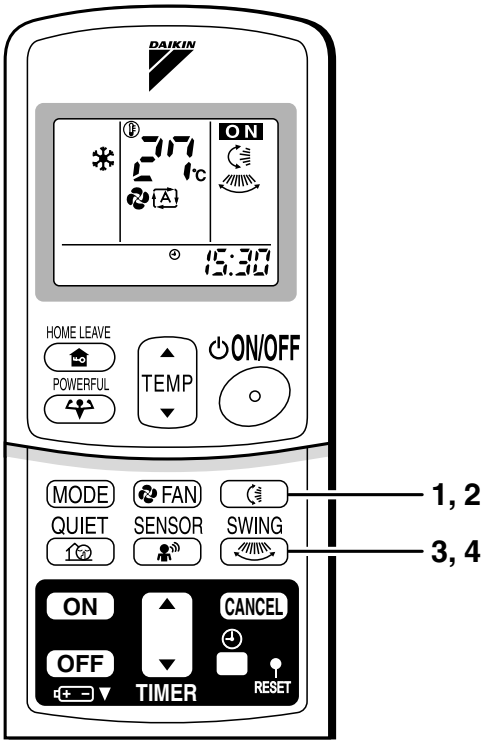
- Always use a remote controller to adjust the flaps angle. If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.



FTK(X)D 50/60/71 F

Adjusting the Air Flow Direction

You can adjust the air flow direction to increase your comfort.



■ To adjust the horizontal blade (flap)

1. **Press "SWING button".**
   - "" is displayed on the LCD and the flaps will begin to swing.
2. **When the flap has reached the desired position, press "SWING button" once more.**
   - The flap will stop moving.
   - "" disappears from the LCD.

■ To adjust the vertical blades (louvers)

3. **Press "SWING button".**
   - "" is displayed on the LCD.
4. **When the louvers have reached the desired position, press the "SWING button" once more.**
   - The louvers will stop moving.
   - "" disappears from the LCD.

■ To 3-D Airflow

1. 3. Press the "SWING button" and the "SWING button": the "" and "" display will light up and the flap and louvers will move in turn.

■ To cancel 3-D Airflow

2. 4. Press either the "SWING button" or the "SWING button".

Notes on louvers angles

■ **ATTENTION**

- Always use a remote controller to adjust the louvers angles. In side the air outlet, a fan is rotating at a high speed.

Notes on flap angle

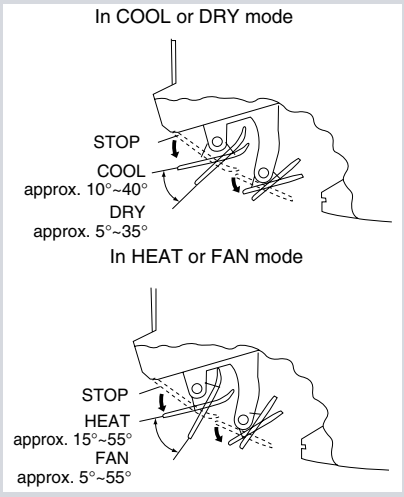
- When "**SWING button**" is selected, the flaps swinging range depends on the operation mode. (See the figure.)

Three-Dimensional (3-D) Airflow

- Using three-dimensional airflow circulates cold air, which tends to collected at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ **ATTENTION**

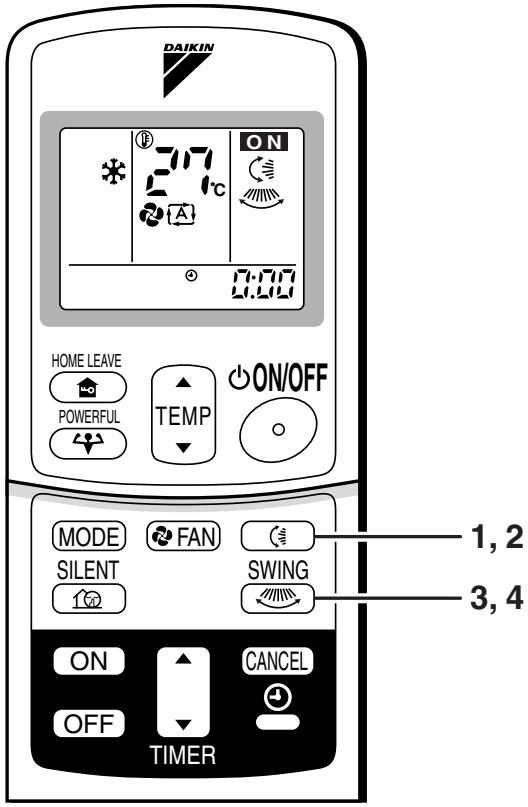
- Always use a remote controller to adjust the flaps angle. If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.
- Be careful when adjusting the louvers. Inside the air outlet, fan is rotating at a high speed.



FTK 50/60/71 A

Adjusting the Air Flow Direction

You can adjust the air flow direction to increase your comfort.



■ To adjust the horizontal blade (flap)

1. **Press “SWING button”.**

   The display will light up and the flap will begin to swing.

2. **When the flap have reached the desired position, press “SWING” button once more.**

   The display will go blank.
   The flap will stop moving.

■ To adjust the vertical blades (louvres)

3. Press “SWING button”.

The display will light up and the louvres will begin to swing.

4. When the louvres have reached the desired position, press the “SWING” button once more.

The display will go blank.
The louvres will stop moving.

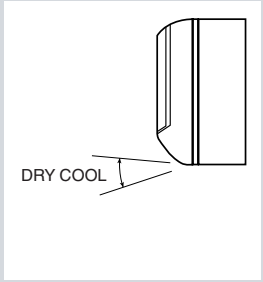
Notes on louvres angles

■ **ATTENTION**

- Always use a remote controller to adjust the louvres angles. In side the air outlet, a fan is rotating at a high speed.

Notes on flap angle

- When [SWING] is selected, the flap swinging range depends on the operation mode. (See the figure.)
- The diffuser is kept open in DRY or COOL mode.



■ **NOTE**

- Unless [SWING] is selected, you should set the flap at a nearhorizontal angle in COOL or DRY mode to obtain the best performance.

■ **ATTENTION**

- Always use a remote controller to adjust the flap angle. If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.

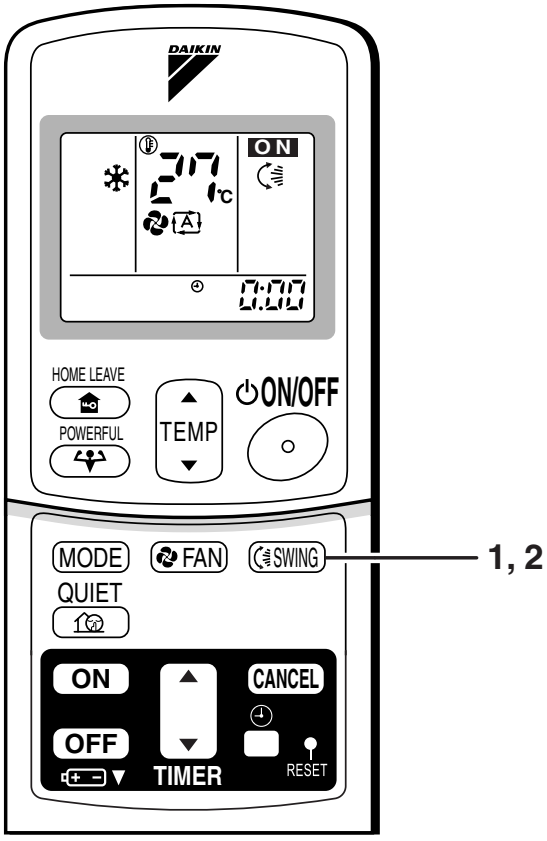
FLXS 25/35/50/60 B

Adjusting the Air Flow Direction

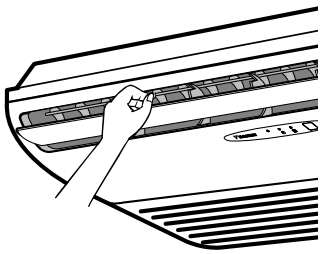
You can adjust the air flow direction to increase your comfort.

■ To adjust the horizontal blade (flap)

1. **Press “SWING button”.**
   - “ is displayed on the LCD.
2. **When the flaps have reached the desired position, press “SWING button” once more.**
   The flaps will stop moving.



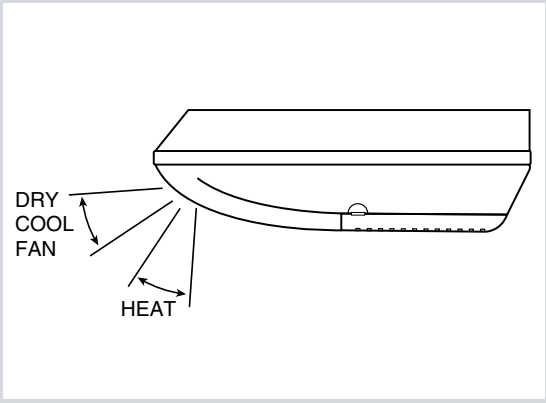
■ To adjust the vertical blades (louvers)



- When adjusting the louver, use a robust and stable stool and watch your steps carefully.
  Hold the knob and move the louvers.
  (You will find a knob on the left side and the right side blades.)

Notes on flap and louvers angles

- Unless [SWING] is selected, you should set the flap at a near- horizontal angle in COOL or DRY mode to obtain the best performance.
- In COOL or DRY mode, if the flap is fixed at a downward position, the flap automatically moves in about 60 minutes to prevent condensation on it.



■ **ATTENTION**

- Always use a remote controller to adjust the flap angle.
  If you attempt to move it forcibly with hand when it is swinging, the mechanism may be broken.
- Be careful when adjusting the louvers. Inside the air outlet, a fan is rotating at a high speed.

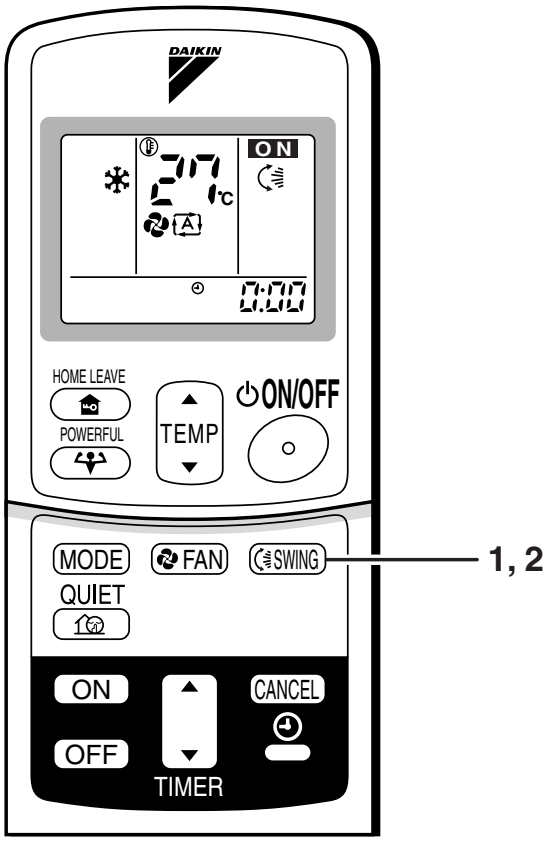
FVXS 35/50 B

Adjusting the Air Flow Direction

You can adjust the air flow direction to increase your comfort.

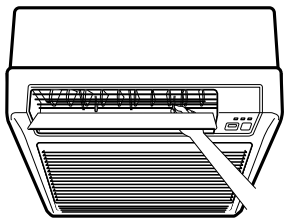
■ To adjust the horizontal blade (flap)

1. **Press "SWING button".**
   - "" is displayed on the LCD.
2. **When the flaps have reached the desired position, press "SWING button" once more.**
   The display will go blank.
   The flaps will stop moving.



■ To adjust the vertical blades (louvers)

Hold the knob and move the louver.
(You will find a knob on the left-side and the right-side blades.)

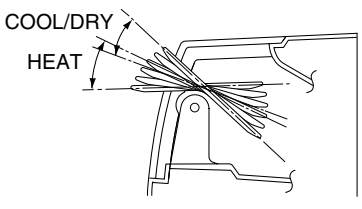


Notes on flap and louvers angle

- Unless [SWING] is selected, you should set the flap at a near-horizontal angle in HEAT mode and at a upward position in COOL or DRY mode to obtain the best performance.

■ **ATTENTION**

- When adjusting the flap by hand, turn off the unit, and use the remote controller to restart the unit.
- Be careful when adjusting the louvers. Inside the air outlet, a fan is rotating at a high speed.

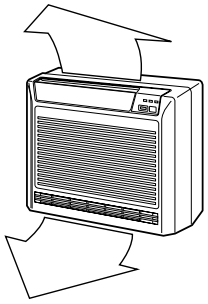


■ Air flow selection

- Make air flow selection according to what suits you.

When setting the air flow selection switch to .

- Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode/situation.

Operating mode	Situation	Blowing pattern
COOL mode	• When the room has become fully cool, or when one hour has passed since turning on the air conditioner.	• So that air does not come into direct contact with people, air is blown upper air outlet, room temperature is equlised.
	• At start of operation or other times when the room is not fully cooled.	 • Air is blown from the upper and lower air outlets for high speed cooling during COOL mode, and for filling the room with warm air during HEAT mode.
HEAT mode	• At times other than below. (Normal time.)	
	• At start or when air temperature is low.	• So that air does not come into direct contact with people. Air is blown upper air outlet.

- During Dry mode, so that cold air does not come into direct contact with people, air is blown upper air outlet.

When setting the air outlet selection switch to .

- Regardless of the operating mode or situation, air blows from the upper air outlet.
- Use this switch when you do not want air coming out of the lower air outlet. (While sleeping etc..)

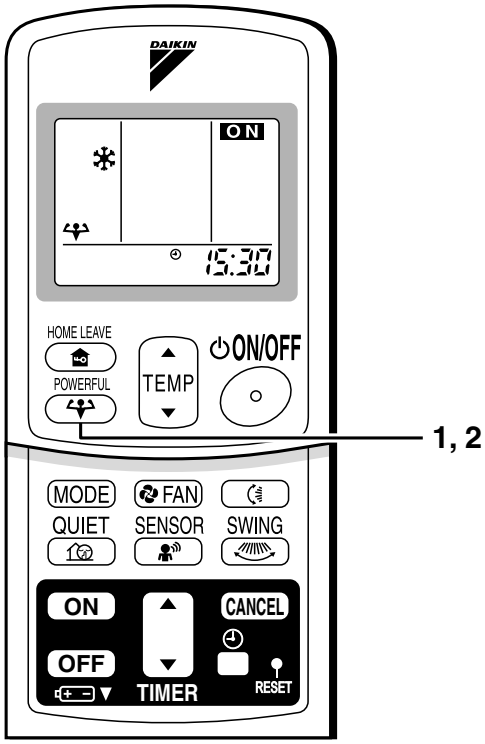
⚠ CAUTION

- Do not try to adjust the flap by hand.
- When adjusting by hand, the mechanism may not operate properly or condensation may drip from air outlets.

2.2.7 POWERFUL Operation

POWERFUL Operation

POWERFUL operation quickly maximizes the cooling (heating) effect in any operation mode. You can get the maximum capacity.



■ To start POWERFUL operation

1. **Press “POWERFUL button”.**
   - POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the settings which were used before POWERFUL operation.
   - When using Powerful operation, there are some functions which are not available.
   - “ ” is displayed on the LCD.

■ To cancel POWERFUL operation

2. **Press “POWERFUL button” again.**
   - “ ” disappears from the LCD.

NOTE

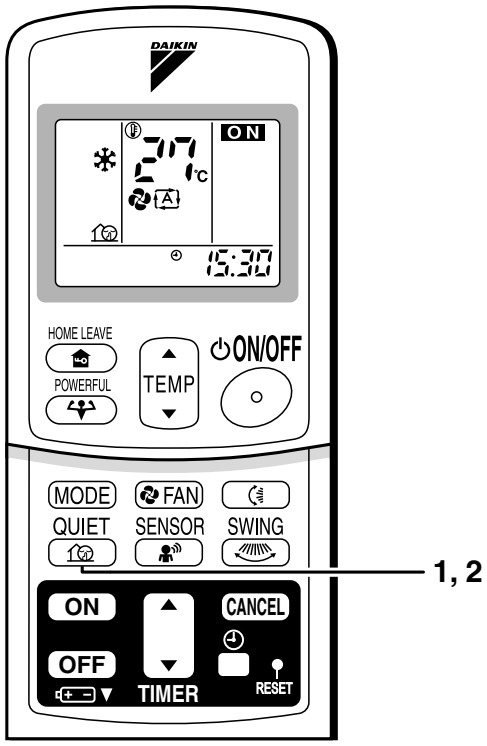
■ **Notes on POWERFUL operation**

- POWERFUL Operation cannot be used together with QUIET Operation. Priority is given to the function of whichever button is pressed last.
- POWERFUL Operation can only be set when the unit is running. Pressing the operation stop button causes the settings to be canceled, and the “ ” disappears from the LCD.
- **In COOL and HEAT mode**
  To maximize the cooling (heating) effect, the capacity of outdoor unit must be increased and the air flow rate be fixed to the maximum setting.
  The temperature and air flow settings are not variable.
- **In DRY mode**
  The temperature setting is lowered by 2.5°C and the air flow rate is slightly increased.
- **In FAN mode**
  The air flow rate is fixed to the maximum setting.
- **When using priority-room setting**
  See “Note for multi system”

2.2.8 OUTDOOR UNIT QUIET Operation

OUTDOOR UNIT QUIET Operation

OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during night.



■ To start OUTDOOR UNIT QUIET operation

1. **Press “QUIET button”.**
   - “ ” is displayed on the LCD.

■ To cancel OUTDOOR UNIT QUIET operation

2. **Press “QUIET button” again.**
   - “ ” disappears from the LCD.

NOTE

■ **Note on OUTDOOR UNIT QUIET operation**

- If using a multi system, this function will work only when the OUTDOOR UNIT QUIET operation is set on all operated indoor units.
  However, if using priority-room setting, see “Note for multi system”
- This function is available in COOL, HEAT, and AUTO modes.
  (This is not available in FAN and DRY mode.)
- POWERFUL operation and OUTDOOR UNIT QUIET operation cannot be used at the same time.
  Priority is given to the function of whichever button is pressed last.
- If operation is stopped using the remote controller or the main unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, “ ” will remain on the remote controller display.

2.2.9 ECONO Operation

ECONO Operation

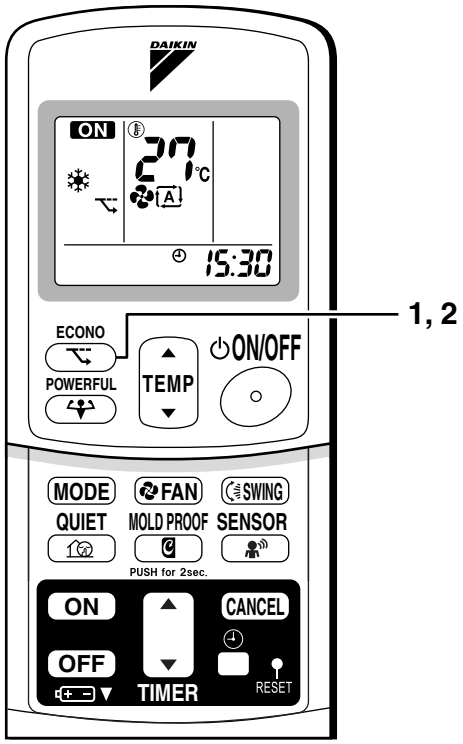
ECONO operation is a function which enables efficient operation by lowering the maximum power consumption value.

■ To start ECONO operation

1. **Press “ECONO button” .**
   - “ ” is displayed on the LCD.

■ To cancel ECONO operation

2. **Press “ECONO button” again.**
   - “ ” disappears from the LCD.



NOTE

- ECONO Operation can only be set when the unit is running. Pressing the operation stop button causes the settings to be canceled, and the “ ” disappears from the LCD.
- ECONO operation is a function which enables efficient operation by limiting the power consumption of the outdoor unit (operating frequency).
- ECONO operation functions in AUTO, COOL, DRY, and HEAT modes.
- POWERFUL operation and ECONO operation cannot be used at the same time. Priority is given to the function of whichever button is pressed last.
- Power consumption may not drop even if ECONO operation is used, when the level of power consumption is already low.

2.2.10 MOLD PROOF Operation

MOLD PROOF Operation

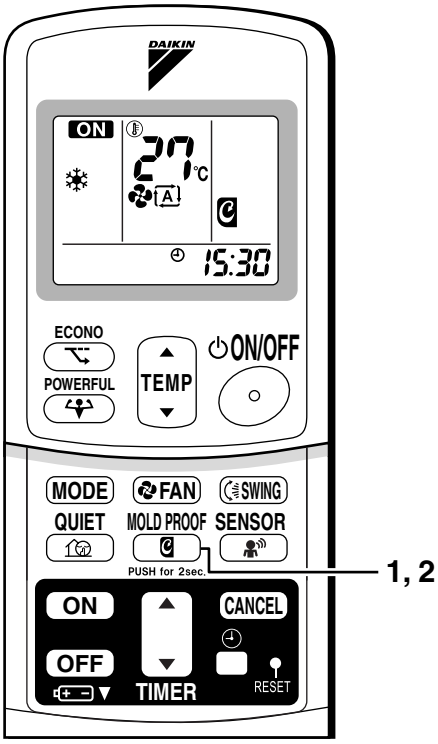
MOLD PROOF operation is a function which reduces the spread of mold by using Fan mode to lower the humidity inside the indoor unit.

■ To set MOLD PROOF operation

1. **Press and hold the MOLD PROOF button for two seconds.**
   - "" is displayed on the LCD.

■ To cancel MOLD PROOF operation

2. **Press and hold the MOLD PROOF button for two seconds one more time.**
   - "" disappears from the LCD.



NOTE

- MOLD PROOF operation will operate for approximately one hour after dry or cooling mode is turned off.
- This function is not designed to remove existing dust or mold.
- MOLD PROOF operation is not available when the unit is turned off using the OFF TIMER.

2.2.11 HOME LEAVE Operation

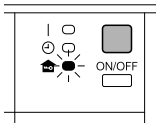
HOME LEAVE Operation

HOME LEAVE operation is a function which allows you to record your preferred temperature and air flow rate settings.

■ To start HOME LEAVE operation

1. Press “HOME LEAVE button”.

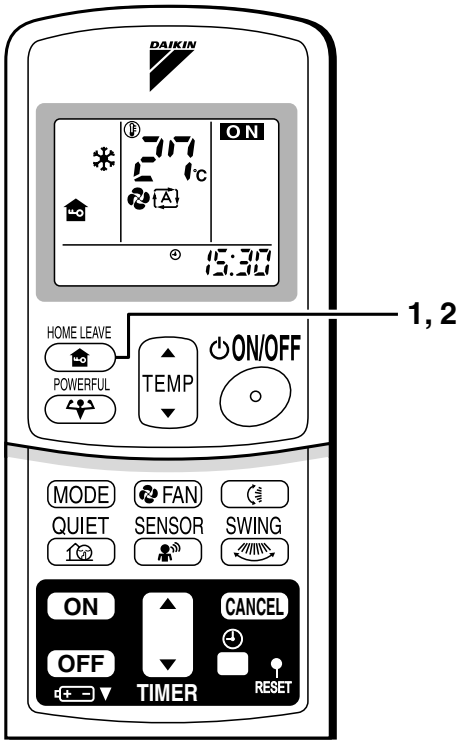
- “ ” is displayed on the LCD.
- The HOME LEAVE lamp lights up.



■ To cancel HOME LEAVE operation

2. Press “HOME LEAVE button” again.

- “ ” disappears from the LCD.
- The HOME LEAVE lamp goes off.



Before using HOME LEAVE operation.

■ **To set the temperature and air flow rate for HOME LEAVE operation**

When using HOME LEAVE operation for the first time, please set the temperature and air flow rate for HOME LEAVE operation. Record your preferred temperature and air flow rate.

	Initial setting		Selectable range	
	temperature	Air flow rate	temperature	Air flow rate
Cooling	25°C	“A”	18-32°C	5 step, “A” and “ ”
Heating	25°C	“A”	10-30°C	5 step, “A” and “ ”

1. Press “HOME LEAVE button”. Make sure “ ” is displayed in the remote controller display.

2. Adjust the set temperature with “ ▲ ” or “ ▼ ” as you like.

3. Adjust the air flow rate with “FAN” setting button as you like.

Home leave operation will run with these settings the next time you use the unit. To change the recorded information, repeat steps 1 – 3.

■ What's the HOME LEAVE operation?

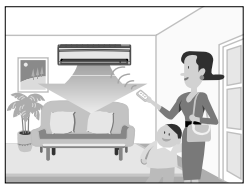
Is there a set temperature and air flow rate which is most comfortable, a set temperature and air flow rate which you use the most? HOME LEAVE operation is a function that allows you to record your favorite set temperature and air flow rate. You can start your favorite operation mode simply by pressing the HOME LEAVE button on the remote controller. This function is convenient in the following situations.

■ Useful in these cases

1.Use as an energy-saving mode.

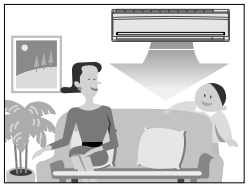
Set the temperature 2-3°C higher (cooling) or lower (heating) than normal. Setting the fan strength to the lowest setting allows the unit to be used in energy-saving mode. Also convenient for use while you are out or sleeping.

- **Every day before you leave the house...**



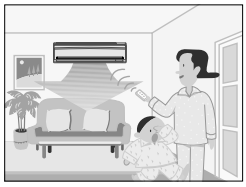
When you go out, push the "HOME LEAVE Operation" button, and the air conditioner will adjust capacity to reach the preset temperature for HOME LEAVE Operation.

When you return, you will be welcomed by a comfortably air conditioned room.

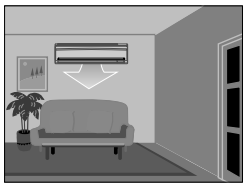


Push the "HOME LEAVE Operation" button again, and the air conditioner will adjust capacity to the set temperature for normal operation.

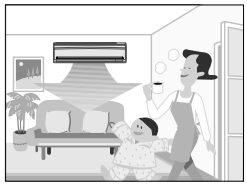
- **Before bed...**



Set the unit to HOME LEAVE Operation before leaving the living room when going to bed.



The unit will maintain the temperature in the room at a comfortable level while you sleep.



When you enter the living room in the morning, the temperature will be just right. Disengaging HOME LEAVE Operation will return the temperature to that set for normal operation. Even the coldest winters will pose no problem!

2.Use as a favorite mode.

Once you record the temperature and air flow rate settings you most often use, you can retrieve them by pressing HOME LEAVE button. You do not have to go through troublesome remote control operations.

NOTE

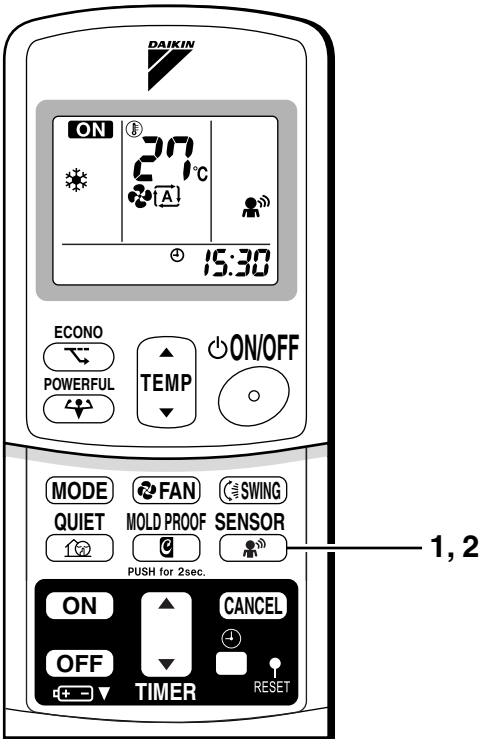
- Once the temperature and air flow rate for HOME LEAVE operation are set, those settings will be used whenever HOME LEAVE operation is used in the future. To change these settings, please refer to the "Before using HOME LEAVE operation" section above.
- HOME LEAVE operation is only available in COOL and HEAT mode. Cannot be used in AUTO, DRY, and FAN mode.
- HOME LEAVE operation runs in accordance with the previous operation mode (COOL or HEAT) before using HOME LEAVE operation.
- HOME LEAVE operation and POWERFUL operation cannot be used at the same time. Last button that was pressed has priority.
- The operation mode cannot be changed while HOME LEAVE operation is being used.
- When operation is shut off during HOME LEAVE operation, using the remote controller or the indoor unit ON/OFF switch, " " will remain on the remote controller display.

2.2.12 INTELLIGENT EYE Operation

FTK(X)S 20/25/35 D, FTKD 25/35 D

INTELLIGENT EYE Operation

"INTELLIGENT EYE" is the infrared sensor which detects the human movement.



■ To start INTELLIGENT EYE operation

1. **Press "SENSOR button".**
   - "" is displayed on the LCD.

■ To cancel the INTELLIGENT EYE operation

2. **Press "SENSOR button" again.**
   - "" disappears from the LCD.

[EX.]

When somebody in the room
- **Normal operation**

⇩

When nobody in the room
- **20 min. after, start energy saving operation.**

⇩

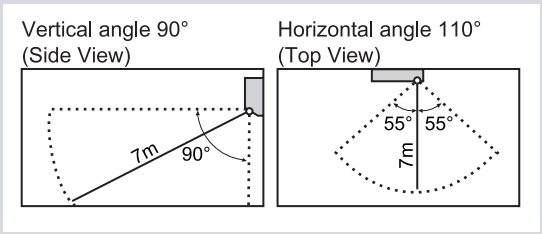
Somebody back in the room
- **Back to normal operation.**

“INTELLIGENT EYE” is useful for Energy Saving

■ **Energy saving operation**
- Change the temperature –2°C in heating / +2°C in cooling / +2°C in dry mode from set temperature.
- Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on “INTELLIGENT EYE”

- Application range is as follows.



- Sensor may not detect moving objects further than 7m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operatipon will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.

⚠ CAUTION

- Do not place large objects near the sensor.
  Also keep heating units or humidifiers outside the sensor’s detection area. This sensor can detect objects it shouldn’t as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

FTK(X)S 50/60/71 B

INTELLIGENT EYE Operation

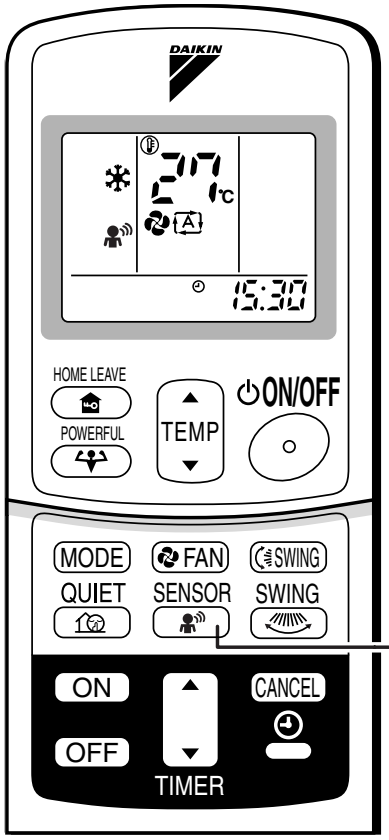
"INTELLIGENT EYE" is the infrared sensor which detects the human movement.

■ To start INTELLIGENT EYE operation

1. Press "SENSOR button".

■ To cancel the INTELLIGENT EYE operation

2. Press "SENSOR button" again.



[EX.]

When somebody in the room

- **Normal operation**

⇩

When nobody in the room

- **20 min. after, start energy saving operation.**

⇩

Somebody back in the room

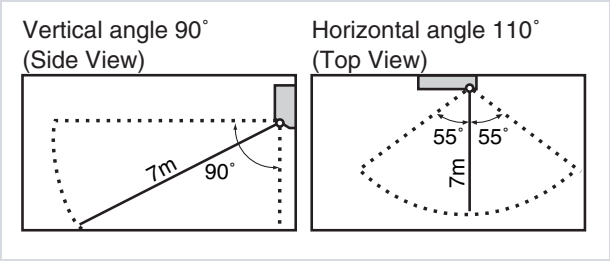
- **Back to normal operation.**

“INTELLIGENT EYE” is useful for Energy Saving

■ **Energy saving operation**
- Change the temperature –2°C in heating / +2°C in cooling / +1°C in dry mode from set temperature.
- Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on “INTELLIGENT EYE”

- Application range is as follows.



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- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
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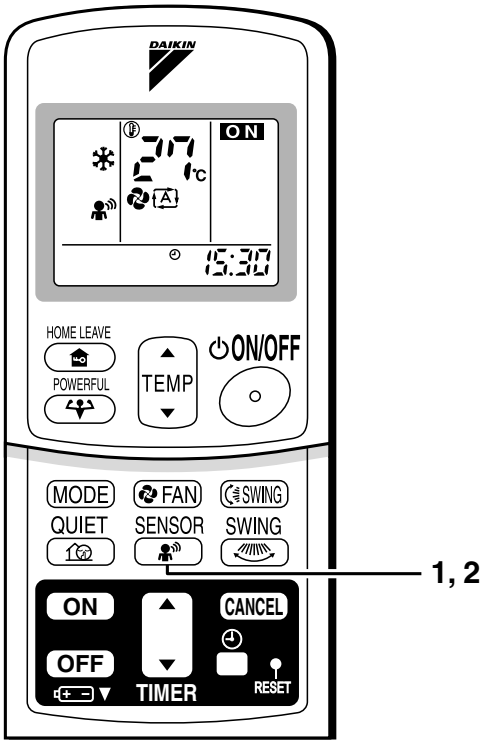
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

FTK(X)D 50/60/71 F

INTELLIGENT EYE Operation

"INTELLIGENT EYE" is the infrared sensor which detects the human movement.



■ To start INTELLIGENT EYE operation

1. **Press "SENSOR button".**
   - "" is displayed on the LCD.

■ To cancel the INTELLIGENT EYE operation

2. **Press "SENSOR button" again.**
   - "" disappears from the LCD.

[EX.]

When somebody in the room
- **Normal operation**

⇩

When nobody in the room
- **20 min. after, start energy saving operation.**

⇩

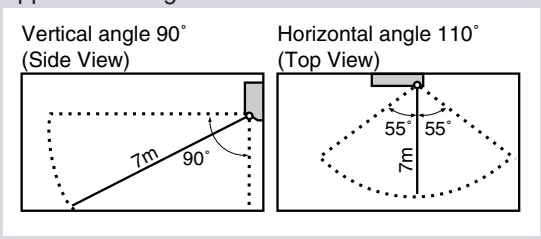
Somebody back in the room
- **Back to normal operation.**

“INTELLIGENT EYE” is useful for Energy Saving.

■ **Energy saving operation**
- Change the temperature –2°C in heating / +2°C in cooling / +1°C in dry mode from set temperature.
- Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on “INTELLIGENT EYE”

- Application range is as follows.



- Sensor may not detect moving objects further than 7m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.

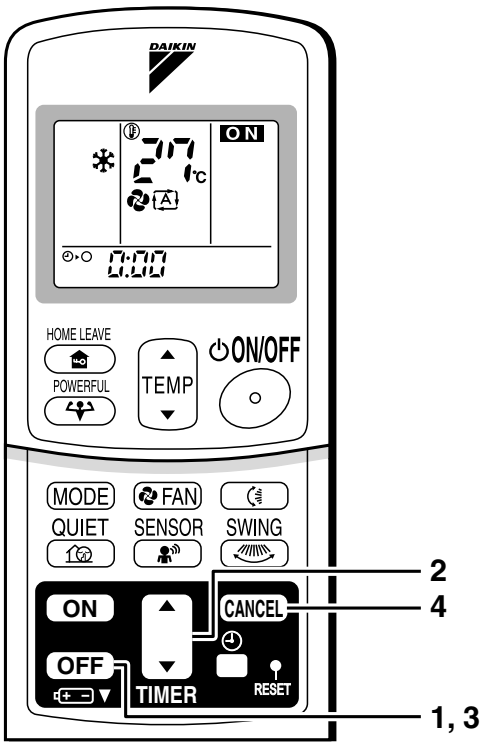
⚠ CAUTION

- Do not place large objects near the sensor.
  Also keep heating units or humidifiers outside the sensor’s detection area. This sensor can detect objects it shouldn’t as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.

2.2.13 TIMER Operation

TIMER Operation

Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use OFF TIMER and ON TIMER in combination.



■ To use OFF TIMER operation

- Check that the clock is correct.
  If not, set the clock to the present time.

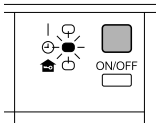
1. **Press “OFF TIMER button”.**

   0:00 is displayed.

   ⏲ blinks.

2. **Press “TIMER Setting button” until the time setting reaches the point you like.**
   - Every pressing of either button increases or decreases the time setting by 10 minutes. Holding down either button changes the setting rapidly.

3. **Press “OFF TIMER button” again.**
   - The TIMER lamp lights up.



■ To cancel the OFF TIMER Operation

4. **Press “CANCEL button”.**
   - The TIMER lamp goes off.

NOTE

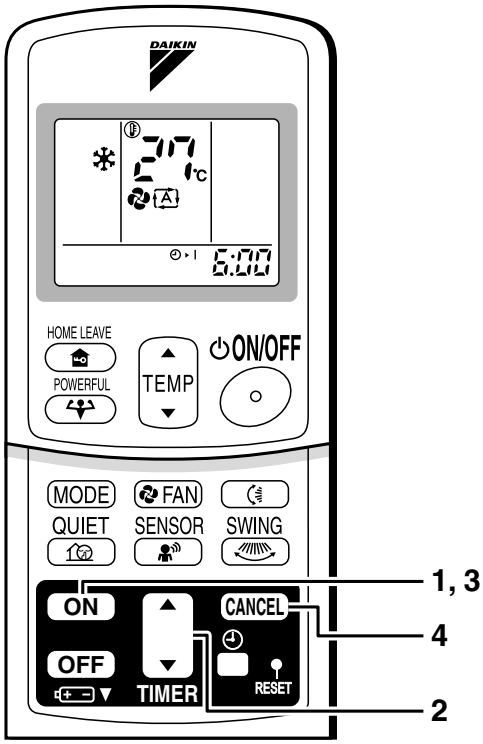
- When TIMER is set, the present time is not displayed.
- Once you set ON, OFF TIMER, the time setting is kept in the memory. (The memory is canceled when remote controller batteries are replaced.)
- When operating the unit via the ON/OFF Timer, the actual length of operation may vary from the time entered by the user. (Maximum approx. 10 minutes)

■ **NIGHT SET MODE**

When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.5°C up in COOL, 2.0°C down in HEAT) to prevent excessive cooling (heating) for your pleasant sleep.

■ To use ON TIMER operation

- Check that the clock is correct. If not, set the clock to the present time.



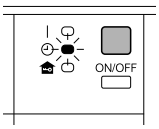
1. **Press "ON TIMER button".**

   6:00 is displayed.

   ⏲▸| blinks.

2. **Press "TIMER Setting button" until the time setting reaches the point you like.**
   - Every pressing of either button increases or decreases the time setting by 10 minutes. Holding down either button changes the setting rapidly.

3. **Press "ON TIMER button" again.**
   - The TIMER lamp lights up.



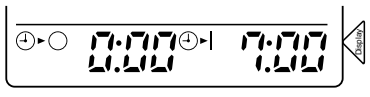
■ To cancel ON TIMER operation

4. **Press "CANCEL button".**
   - The TIMER lamp goes off.

■ To combine ON TIMER and OFF TIMER

- A sample setting for combining the two timers is shown below.

(Example)
Present time: 11:00 p.m.
(The unit operating)
OFF TIMER at 0:00 a.m.) Combined
ON TIMER at 7:00 a.m.)



ATTENTION

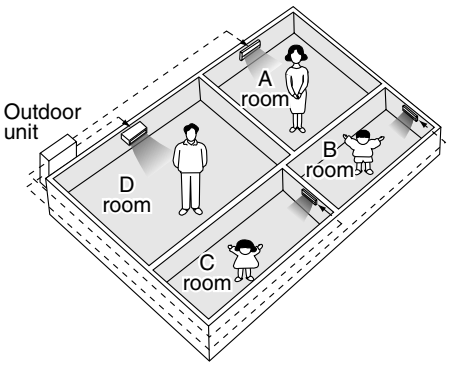
■ **In the following cases, set the timer again.**
- After a breaker has turned OFF.
- After a power failure.
- After replacing batteries in the remote controller.

2.2.14 Note for Multi System

Note for Multi System

〈〈 **What is a "Multi System"?** 〉〉

This system has one outdoor unit connected to multiple indoor units.



■ Selecting the Operation Mode

1. With the Priority Room Setting present but inactive or not present.

When more than one indoor unit is operating, priority is given to the first unit that was turned on.
In this case, set the units that are turned on later to the same operation mode (*1) as the first unit.
Otherwise, they will enter the Standby Mode, and the operation lamp will flash; this does not indicate malfunction.

(*1)

- COOL, DRY and FAN mode may be used at the same time.
- AUTO mode automatically selects COOL mode or HEAT mode based on the room temperature. Therefore, AUTO mode is available when selecting the same operation mode as that of the room with the first unit to be turned on.

〈**CAUTION**〉

Normally, the operation mode in the room where the unit is first run is given priority, but the following situations are exceptions, so please keep this in mind.
If the operation mode of the first room is **FAN Mode**, then using **Heating Mode** in any room after this will give priority to **heating.** In this situation, the air conditioner running in FAN Mode will go on standby, and the operation lamp will flash.

2. With the Priority Room Setting active.

See "Priority Room Setting" on the next page.

■ NIGHT QUIET Mode (Available only for cooling operation)

NIGHT QUIET Mode requires initial programming during installation. Please consult your retailer or dealer for assistance. NIGHT QUIET Mode reduces the operation noise of the outdoor unit during the night time hours to prevent annoyance to neighbors.

- The NIGHT QUIET Mode is activated when the temperature drops 5°C or more below the highest temperature recorded that day. Therefore, when the temperature difference is less than 5°C, this function will not be activated.
- NIGHT QUIET Mode reduces slightly the cooling efficiency of the unit.

■ OUTDOOR UNIT QUIET Operation

1. With the Priority Room Setting present but inactive or not present.

When using the OUTDOOR UNIT QUIET operation feature with the Multi system, set all indoor units to OUTDOOR UNIT QUIET operation using their remote controllers.
When clearing OUTDOOR UNIT QUIET operation, clear one of the operating indoor units using their remote controller. However OUTDOOR UNIT QUIET operation display remains on the remote controller for other rooms. We recommend you release all rooms using their remote controllers.

2. With the Priority Room Setting active.

See "Priority Room Setting" on the next page.

■ Cooling / Heating Mode Lock (Available only for heat pump models)

The Cooling / Heating Mode Lock requires initial programming during installation.Please consult your retailer or dealer for assistance. The Cooling / Heating Mode Lock sets the unit forcibly to either Cooling or Heating Mode. This function is convenient when you wish to set all indoor units connected to the Multi system to the same operation mode.

■ Priority Room Setting

The Priority Room Setting requires initial programming during installation. Please consult your retailer or dealer for assistance.
The room designated as the Priority Room takes priority in the following situations;

1. Operation Mode Priority.

As the operation mode of the Priority Room takes precedence, the user can select a different operation mode from other rooms.
〈Example〉
* Room A is the Priority Room in the examples.
When COOL mode is selected in Room A while operating the following modes in Room B,C and D:

Operation mode in Room B, C and D	Status of Room B, C and D when the unit in Room A is in COOL mode
COOL or DRY or FAN	Current operation mode maintained
HEAT	The unit enters Standby Mode. Operation resumes when the Room A unit stops operating.
AUTO	If the unit is set to COOL mode, operation continues. If set to HEAT mode, it enters Standby Mode. Operation resumes when the Room A unit stops operating.

2. Priority when POWERFUL operation is used.

〈Example〉
* Room A is the Priority Room in the examples.
The indoor units in Rooms A,B,C and D are all operating. If the unit in Room A enters POWERFUL operation, operation capacity will be concentrated in Room A. In such a case, the cooling (heating) efficiency of the units in Rooms B,C and D may be slightly reduced.

3. Priority when using OUTDOOR UNIT QUIET operation.

〈Example〉
* Room A is the Priority Room in the examples.
Just by setting the unit in Room A to QUIET operation, the air conditioner starts OUTDOOR UNIT QUIET operation.
You don't have to set all the operated indoor units to QUIET operation.

■ When the simultaneous operational capacity is exceeded

If the simultaneous operational capacity is exceeded for outdoor unit capacity, the indoor unit enters Standby Mode, and the operation light flashed; this is not a malfunction.
<Example>
When the units in rooms A, B, and C are being used, and the D is used, causing an overload: The room (from A to D) which is closest to the set temperature will go into standby mode. The room in standby mode will resume operation once operation in the other rooms is stopped.

2.2.15 Care and Cleaning

FTK(X)S 20/25/35 D, FTKD 25/35 D

Care and Cleaning

⚠ CAUTION **Before cleaning, be sure to stop the operation and turn the breaker OFF.**

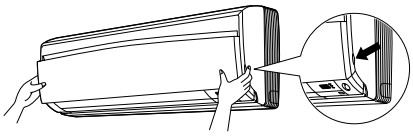
Units

■ Indoor unit, Outdoor unit and Remote controller

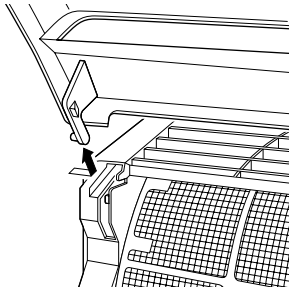
1. **Wipe them with dry soft cloth.**

■ Front panel

1. **Open the front panel.**
   - Hold the panel by the tabs on the two sides and lift it unitl it stops with a click.

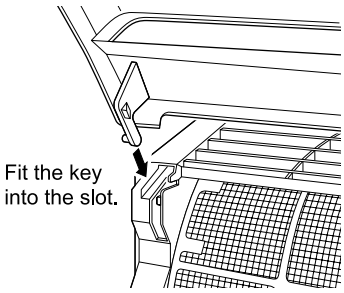


2. **Remove the front panel.**
   - Lift the front panel up, slide it slightly to the right, and remove it from the horizontal axle.



3. **Clean the front panel.**
   - Wipe it with a soft cloth soaked in water.
   - Only neutral detergent may be used.
   - In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

4. **Attach the front panel.**
   - Set the 2 keys of the front panel into the slots and push them in all the way.
   - Close the front panel slowly and push the panel at the 3 points.
     (1 on each side and 1 in the middle.)

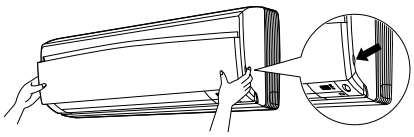


⚠ CAUTION

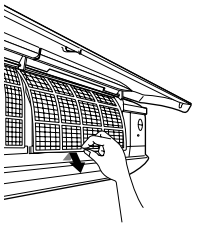
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40˚C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

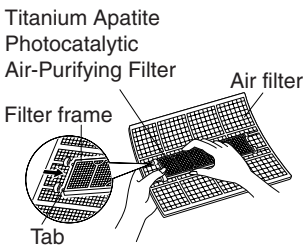
Filters

1. **Open the front panel.**
2. **Pull out the air filters.**
   - Push a little upwards the tab at the center of each air filter, then pull it down.

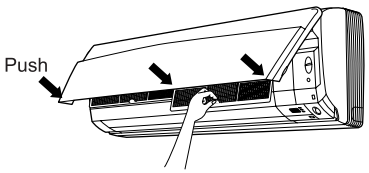


3. **Take off the Titanium Apatite Photocatalytic Air-Purifying Filter.**
   - Hold the recessed parts of the frame and unhook the four claws.
4. **Clean or replace each filter.**
   See figure.



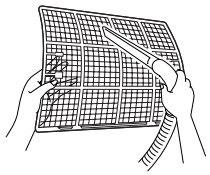


5. **Set the air filter and Titanium Apatite Photocatalytic Air-Purifying Filter as they were and close the front panel.**
   - Insert claws of the filters into slots of the front panel. Close the front panel slowly and push the panel at the 3 points. (1 on each side and 1 in the middle.)

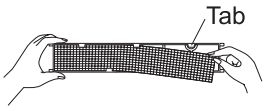


■ Air Filter

1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Titanium Apatite Photocatalytic Air-Purifying Filter.



The Titanium Apatite Photocatalytic Air-Purifying Filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

[Maintenance]

1. **Remove dust with a vacuum cleaner and wash lightly with water.**
2. **If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.**
3. **Do not remove filter from frame when washing with water.**
4. **After washing, shake off remaining water and dry in the shade.**
5. **Since the material is made out of paper, do not wring out the filter when removing water from it.**

[Replacement]

1. **Remove the tabs on the filter frame and replace with a new filter.**
   - Dispose of the old filter as flammable waste.

NOTE

- Operation with dirty filters:
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- To order Titanium Apatite Photocatalytic Air-Purifying Filter contact to the service shop there you bought the air conditioner.
- Dispose of old filters as burnable waste.

Item	Part No.
Titanium Apatite Photocatalytic Air-Purifying Filter. (without frame) 1 set	KAF970A46

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the “Fan only” for several hours on a fine day to dry out the inside.**
   - Press “MODE selector button” and select “Fan”operation.
   - Press “ON/OFF button” and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**
   - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

FTK(X)S 50/60/71 B

Care and Cleaning

⚠ CAUTION **Before cleaning, be sure to stop the operation and turn the breaker OFF.**

Units

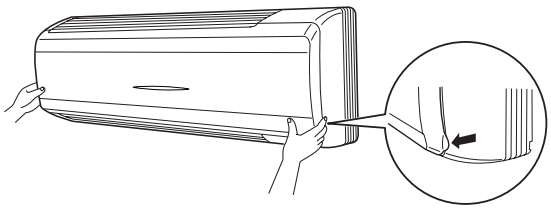
■ Indoor unit, Outdoor unit and Remote controller

1. Wipe them with dry soft cloth.

■ Front grille

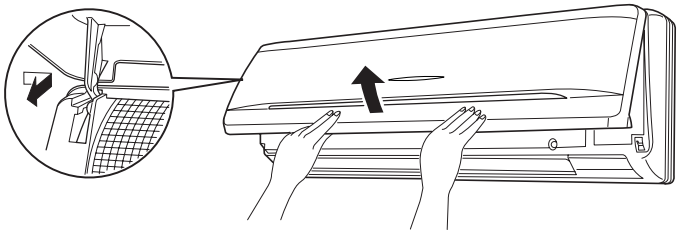
1. Open the front grille.

- Hold the grille by the tabs on the two sides and lift it until it stops with a click.



2. Remove the front grille.

- Open the front panel further while sliding it to either the left or right and pulling it toward you. This will disconnect the rotation dowel on one side. Then disconnect the rotation dowel on the other side in the same manner.

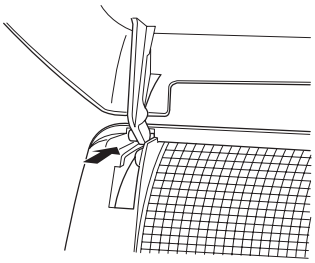


3. Clean the front grille

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the grille with water, dry it with cloth, dry it up in the shade after washing.

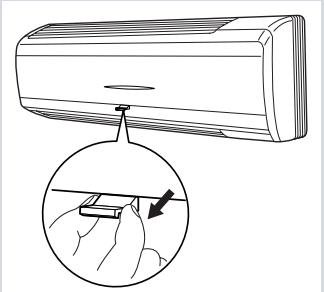
4. Attach the front grille

- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way in.
- Close the front panel slowly. (Press the panel at both sides and the center.)



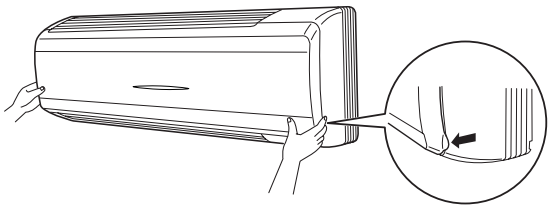
⚠ CAUTION

- When the packaging materials are attached to the front panel, please remove them.
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front grille, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front grille, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front grille is securely fixed.

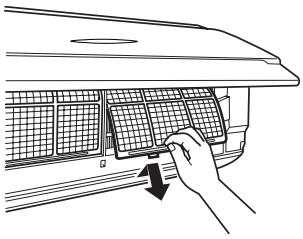


Filters

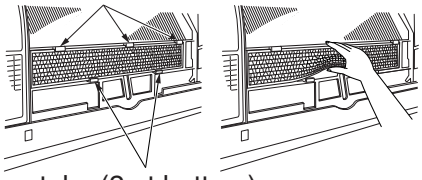
1. **Open the front grille.**
2. **Pull out the air filters.**
   - Push a little upwards the tab at the center of each air filter, then pull it down.



3. **Take off the air purifying filter with photocatalytic deodorizing function.**
   - Press the top of the air-cleaning filter onto the tabs (3 tabs at top). Then press the bottom of the filter up slightly, and press it onto the tabs (2 at bottom)(3 at bottom).

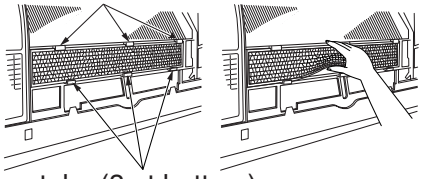


tabs (3 tabs at top)



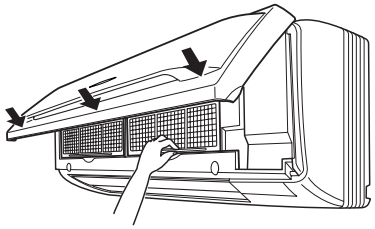
tabs (2 at bottom)
50class

tabs (3 tabs at top)



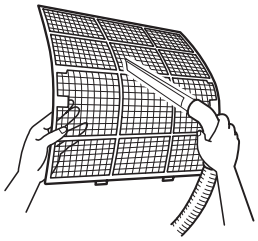
tabs (3 at bottom)
60,71class

4. **Clean or replace each filter.**
   See below.
5. **Set the air filter, air purifying filter with photocalytic deodorizing function as they were and close the front grille.**
   - Press the front panel at both sides and the center.



■ Air Filter

1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Air purifying filter with photocatalytic deodorizing function. (gray)

The air purifying filter with photocatalytic deodorizing function can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

[Maintenance]

1. **Remove dust with a vacuum cleaner and wash lightly with water.**
2. **If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.**
3. **After washing, shake off remaining water and dry in the shade.**
4. **Since the material is made out of paper, do not wring out the filter when removing water from it.**

[Replacement]

1. **Remove the tabs on the filter frame and replace with a new filter.**
   - Dispose of the old filter as flammable waste.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the "FAN only" for several hours on a fine day to dry out the inside.**
   - Press "MODE" button and select "FAN" operation.
   - Press "ON/OFF" button and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**

NOTE

- Operation with dirty filters:
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- To order air purifying filter with photocatalytic deodorizing function contact to the service shop there you bought the air conditioner.
- Dispose of old air filter as non-burnable and photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Air purifying filter with photocatalytic deodorizing function. (without frame) 1 set	KAF952A42

FTK(X)D 50/60/71 F

Care and Cleaning

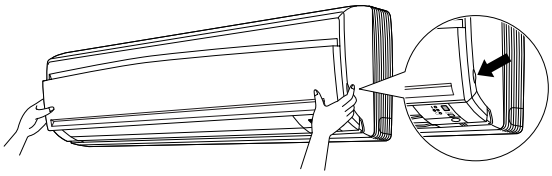
⚠ CAUTION **Before cleaning, be sure to stop the operation and turn the breaker OFF.**

Units

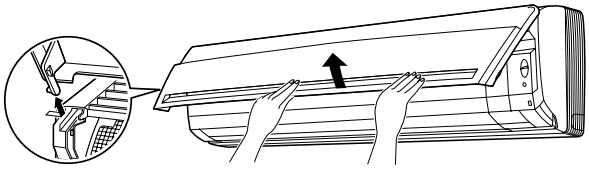
■ Indoor unit, Outdoor unit and Remote controller

1. Wipe them with dry soft cloth.

■ Front panel



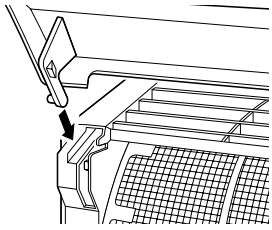
1. Open the front panel.
- Hold the panel by the tabs on the two sides and lift it until it stops with a click.



2. Remove the front panel.
- Open the front panel further while sliding it to either the left or right and pulling it toward you. This will disconnect the rotation dowel on one side. Then disconnect the rotation dowel on the other side in the same manner.

3. Clean the front panel.
- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel.
- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way in.
- Close the front panel slowly. (Press the panel at both sides and the center.)

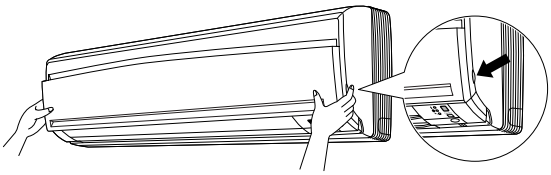


⚠ CAUTION

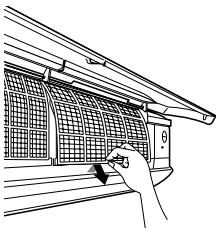
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40°C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

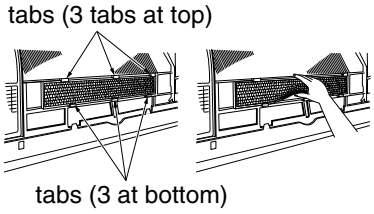
Filters

1. **Open the front panel.**

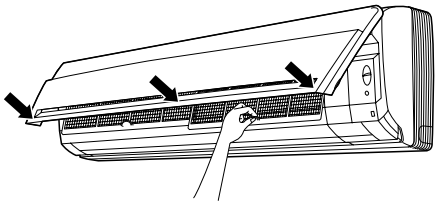


2. **Pull out the air filters.**
   - Push a little upwards the tab at the center of each air filter, then pull it down.
3. **Take off the Titanium Apatite Photocatalytic Air-Purifying Filter.**
   - Press the top of the air-cleaning filter onto the tabs (3 tabs at top). Then press the bottom of the filter up slightly, and press it onto the tabs (3 at bottom).



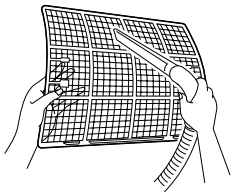


4. **Clean or replace each filter.**
   See figure.
5. **Set the air filter and the Titanium Apatite Photocatalytic Air-Purifying Filter as they were and close the front panel.**
   - Press the front panel at both sides and the center.



■ Air Filter

1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Titanium Apatite Photocatalytic Air-purifying Filter

The Titanium Apatite Photocatalytic Air-Purifying Filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

[Maintenance]

1. **Remove dust with a vacuum cleaner and wash lightly with water.**
2. **If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.**
3. **After washing, shake off remaining water and dry in the shade.**
4. **Since the material is made out of polyester, do not wring out the filter when removing water from it.**

[Replacement]

1. **Remove the tabs on the filter frame and replace with a new filter.**
   - Dispose of the old filter as non-flammable waste.

NOTE

- Operation with dirty filters:
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- To order Titanium Apatite Photocatalytic Air-Purifying Filter contact to the service shop there you bought the air conditioner.
- Dispose of old filters as non-flammable waste.

Item	Part No.
Titanium Apatite Photocatalytic Air-Purifying Filter (without frame) 1 set	KAF952B42

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the "FAN only" for several hours on a fine day to dry out the inside.**
   - Press "MODE" button and select "FAN" operation.
   - Press "ON/OFF" button and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**

- NOTE) When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

FTK 50/60/71 A

Care and Cleaning

⚠ CAUTION **Before cleaning, be sure to stop the operation and turn the breaker OFF.**

Units

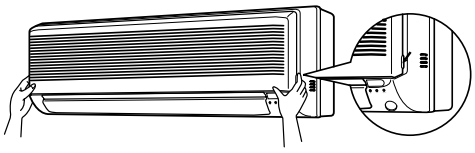
■ Indoor unit, Outdoor unit and Remote controller

1. Wipe them with dry soft cloth.

■ Front grille

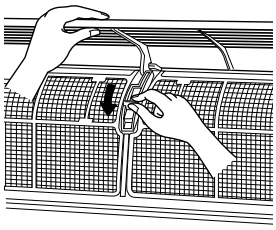
1. Open the front grille.

- Hold the grille by the tabs on the two sides and lift it unitl it stops with a click.



2. Remove the front grille.

- Supporting the front grille with one hand, release the lock by sliding down the knob with the other hand.
- To remove the front grille, pull it toward yourself with both hands.

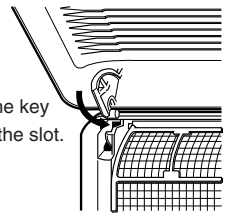


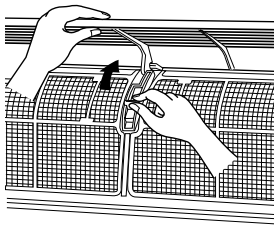
3. Clean the front grille

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the grille with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front grille

- Set the 4 keys of the front grille into the slots and push them in all the way.
- Close the front grille slowly and push the grille at the 4 points.
  (1 on each side and 2 in the middle.)
- Check to see if the rotating axis in the upper center section is moving.





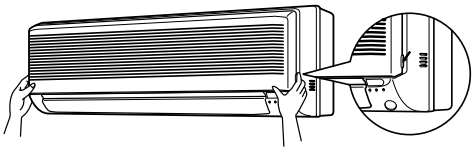
Slide up the knob.

⚠ CAUTION

- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front grille, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front grille, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front grille is securely fixed.

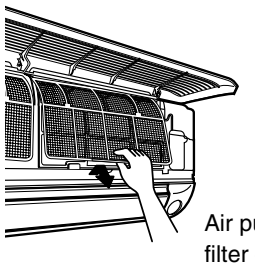
Filters

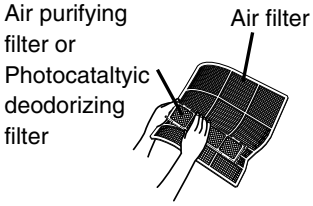
1. **Open the front grille.**
2. **Pull out the air filters.**
   - Push a little upwards the tab at the center of each air filter, then pull it down.



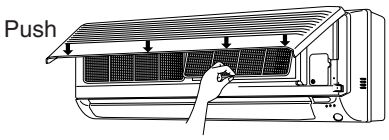
3. **Take off the air purifying filter, photocatalytic deodorizing filter.**
   - Hold the recessed parts of the frame and unhook the four claws.
4. **Clean or replace each filter.**

   See below.



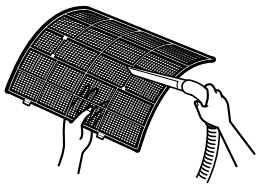


5. **Set the air filter, air purifying filter and photocatalytic deodorizing filter as they were and close the front grille.**
   - Insert claws of the filters into slots of the front grille. Close the front grille slowly and push the grille at the 4 points. (1 on each side and 2 in the middle.)



■ Air Filter

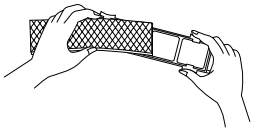
1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Air Purifying Filter (green)

(Replace approximately once every 3 months.)

1. **Detach the filter element and attach a new one.**
   - Insert with the green side up.
   - It is recommended to replace the air purifying filter every three months.



■ Photocatalytic Deodorizing Filter (gray)

[Maintenance]

1. **Dry the photocatalytic deodorizing filter in the sun.**
   - After removing the dust with a vacuum cleaner, place the filter in the sun for approximately 6 hours. By drying the photocatalytic deodorizing filter in the sun, its deodorizing and antibacterial capabilities are regenerated.
   - Because the filter material is paper, it can not be cleaned with water.
   - It is recommended dry the filter once every 6 months.

[Replacement]

1. **Detach the filter element and attach a new one.**

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the earth wire is not disconnected or broken.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the "fan only" for several hours on a fine day to dry out the inside.**
   - Press "MODE" button and select "fan"operation.
   - Press "ON/OFF" button and start operation.
2. **Clean the air filters and set them again.**
3. **Take out batteries from the remote controller.**
4. **Turn OFF the breaker for the room air conditioner.**
   - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Operation with dirty filters :
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- The air purifying filter and Photocatalytic deodorizing filter cannot be reused, even if washed.
- In principle, there is no need to replace the photocatalytic deodorizing filter. Remove the dust periodically with a vacuum cleaner. However, it is recommended to replace the filter in the following cases.
  (1) The paper material is torn or broken during cleaning.
  (2) The filter has become extremely dirty after long use.
- To order air purifying filter or Photocatalytic deodorizing filter, contact to the service shop where you bought the air conditioner.
- Dispose of old air filters as non-burnable waste and Photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Photocatalytic deodorizing filter (with frame)	KAZ917B41
Photocatalytic deodorizing filter (without frame)	KAZ917B42
Air purifying filter (with frame)	KAF925B41
Air purifying filter (without frame)	KAF925B42

FDKS 25/35 C, CDK(X)S 25/35/50/60 C, CDKD 25/35/50/60 C

Care and Cleaning

⚠ CAUTION Before cleaning, be sure to stop the operation and turn the breaker OFF.

■ Cleaning the air filter and suction grille (Option)

- Be sure always to clean the unit before use at the beginning of summer and winter.
  (Dirt and dust caught in the air filter cause a drop in airflow, which leads to a decline in performance.)
- When using the unit in a location where dirt may easily accumulate, clean the unit more frequently.
  Once every 2 weeks is recommended.
- Ask your DAIKIN dealer how to clean them.

Cleaning the drain pan

- Clean the drain pan periodically, or drain piping may be clogged with dust and may result in water leakage.
  Ask your DAIKIN dealer how to clean them.
- If the ambient air of indoor unit is so dusty, install the optional Dust Cover which prevent dust from falling into drain pan.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the “Fan only” for several hours on a fine day to dry out the inside.**
   - Press “MODE” button and select “Fan”operation.
   - Press “ON/OFF” button and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**
   - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide, It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Operation with dusty air filters lowers the cooling and heating capacity and wastes energy.
- The air filter and the suction grille are option.
- Ask your DAIKIN dealer how to clean them.

CDKD 25/35 E

Care and Cleaning

⚠ CAUTION

- **Only a qualified service person is allowed to perform maintenance.**
- **Before cleaning, be sure to stop the operation and turn the breaker OFF.**

■ Cleaning the air filter and suction grille (Option)

- Be sure always to clean the unit before use at the beginning of summer and winter.
  (Dirt and dust caught in the air filter cause a drop in airflow, which leads to a decline in performance.)
- When using the unit in a location where dirt may easily accumulate, clean the unit more frequently.
  Once every 2 weeks is recommended.
- Ask your DAIKIN dealer how to clean them.

■ Cleaning the drain pan

- Clean the drain pan periodically, or drain piping may be clogged with dust and may result in water leakage.
  Ask your DAIKIN dealer to clean them.
- Prepare a cover locally to prevent any dust in the air around the indoor unit from getting in the drain pan, if there is a great deal of dust present.

CAUTION

- Do not operate the air conditioner without filters, this to avoid dust accumulation inside the unit.
- Do not remove the air filter except when cleaning.
  Unnecessary handling may damage the filter.
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide. It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Operation with dusty air filters lowers the cooling and heating capacity and wastes energy.
- Do not use water or air of 50˚C or higher for cleaning air filters and outside panels.
- The air filter and the suction grille are option.
- Ask your DAIKIN dealer how to clean them.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the “FAN only” for several hours on a fine day to dry out the inside.**
   - Press “MODE selector button” and select “FAN” operation.
     Press “ON/OFF button” and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**
   - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

FLXS 25/35/50/60 B

Care and Cleaning

⚠ CAUTION Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

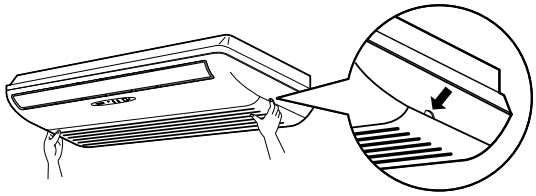
■ Indoor unit, Outdoor unit and Remote controller

1. Wipe them with dry soft cloth.

■ Front grille

1. Open the front grille.

- Hold the grille by the tabs on the two sides and lift it unitl it stops.

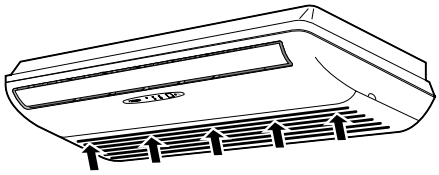


2. Clean the front grille

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the grille with water, dry it with cloth, dry it up in the shade after washing.

3. Close the front grille

- Push the grille at the 5 points indicated by ⬆.
- Operation without air filters may result in troubles as dust will accumulate inside the indoor unit.

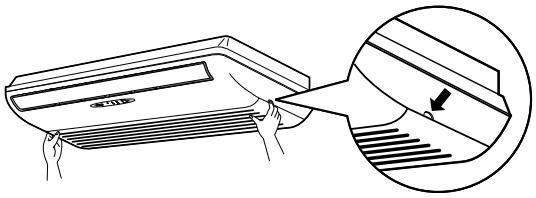


⚠ CAUTION

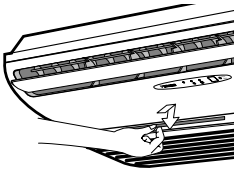
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When opening and closing the front grille, use a robust and stable stool and watch your steps carefully.
- When opening and closing the front grille, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front grille is securely fixed.

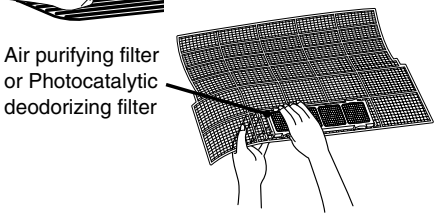
Filters

1. **Open the front grille.**
2. **Pull out the air filters.**
   - Push upwards the tab at the center of each air filter, then pull it down.

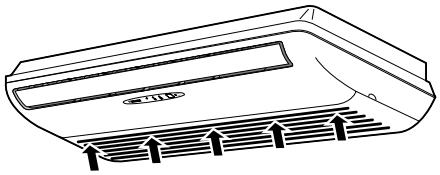


3. **Take off the air purifying filter, photocatalytic deodorizing filter.**
   - Hold the recessed parts of the frame and unhook the four claws.
4. **Clean or replace each filter.**
   See figure.



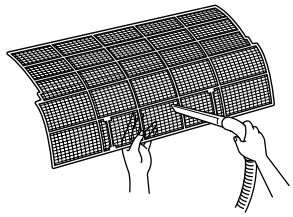


5. **Set the air filter, air purifying filter and photocatalytic deodorizing filter as they were and close the front grille.**
   - Insert claws of the filters into slots of the front grille.
   - Push the grille at the 5 points.



■ Air Filter

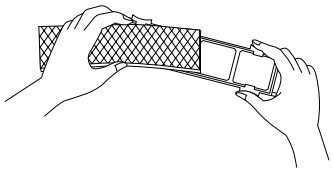
1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Air Purifying Filter (green)

(Replace approximately once every 3 months.)

1. **Detach the filter element and attach a new one.**
   - Insert with the green side up.
   - It is recommended to replace the air purifying filter every three months.



■ Photocatalytic Deodorizing Filter (gray)

[Maintenance]

1. **Dry the photocatalytic deodorizing filter in the sun.**
   - After removing the dust with a vacuum cleaner, place the filter in the sun for approximately 6 hours. By drying the photocatalytic deodorizing filter in the sun, its deodorizing and antibacterial capabilities are regenerated.
   - Because the filter material is paper, it can not be cleaned with water.
   - It is recommended dry the filter once every 6 months.

[Replacement]

1. **Detach the filter element and attach a new one.**

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. **Operate the "FAN only" for several hours on a fine day to dry out the inside.**
   - Press "MODE selector button" and select "FAN" operation.
   - Press "ON/OFF button" and start operation.
2. **After operation stops, turn off the breaker for the room air conditioner.**
3. **Clean the air filters and set them again.**
4. **Take out batteries from the remote controller.**
   - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Operation with dirty filters :
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- The air purifying filter and Photocatalytic deodorizing filter cannot be reused, even if washed.
- In principle, there is no need to replace the photocatalytic deodorizing filter. Remove the dust periodically with a vacuum cleaner. However, it is recommended to replace the filter in the following cases.
  (1) The paper material is torn or broken during cleaning.
  (2) The filter has become extremely dirty after long use.
- To order air purifying filter or Photocatalytic deodorizing filter, contact to the service shop where you bought the air conditioner.
- Dispose of old air filters as non-burnable waste and Photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Photocatalytic deodorizing filter (with frame)	KAZ917B41
Photocatalytic deodorizing filter (without frame)	KAZ917B42
Air purifying filter (with frame)	KAF925B41
Air purifying filter (without frame)	KAF925B42

FVXS 35/50 B

Care and Cleaning

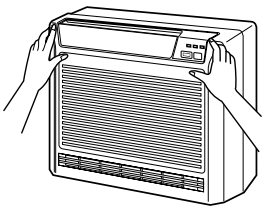
⚠ CAUTION Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

■ Indoor unit, Outdoor unit and Remote controller

1. Wipe them with dry soft cloth.

■ Front grille

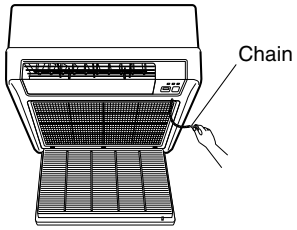


1. Open the front grille.

- Press the two PUSH places on the left and right of the front grille.

2. Remove the front grille.

- Remove the chain.
- Allowing the grille to fall forward will enable you to remove it.

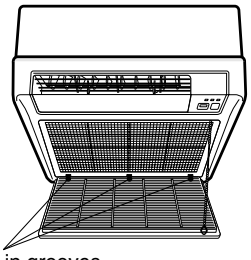


3. Clean the front grille

- Wipe softly with a damp cloth.
- Only neutral detergent may be used.
- In case of washing the grille with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front grille.

- Insert the front grille into the grooves of the unit (3 places).
- Attach the chain to the right, inner-side of the front grille.
- Close the grille slowly.



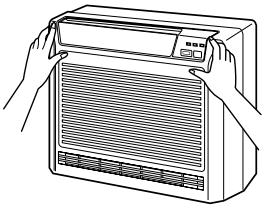
Place front grille in grooves.

⚠ CAUTION

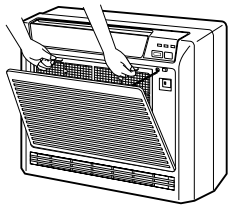
- Hold the front grille firmly so that it does not fall.
- Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.
- When removing or attaching the front grille, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front grille, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front grille is securely fixed.

Filters

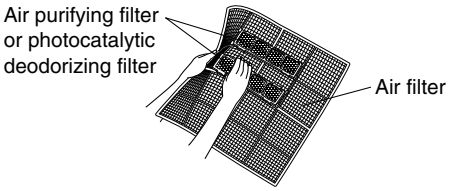
1. **Open the front grille.**



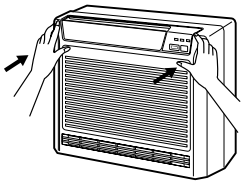
2. **Remove the air filter.**
   - Press the claws on the right and left of the air filter down slightly, then pull upward.



3. **Take off the air purifying filter, Photocatalytic deodorizing filter.**
   - Hold the tabs of the frame, and remove the claws in 4 places.
4. **Clean or replace each filter.**
   See below.

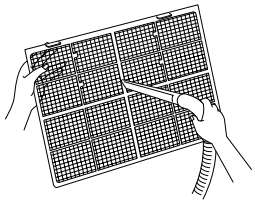


5. **Set the air filter, air purifying filter and photocatalytic deodorizing filter as they were and close the front grille.**
   - Operation without air filters may result in troubles as dust will accumulate inside the indoor unit.



■ Air Filter

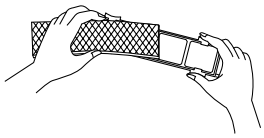
1. **Wash the air filters with water or clean them with vacuum cleaner.**
   - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
   - It is recommended to clean the air filters every two weeks.



■ Air Purifying Filter (green)

(Replace approximately once every 3 months.)

1. **Detach the filter element and attach a new one.**
   - Insert with the green side up.
   - It is recommended to replace the air purifying filter every three months.



■ Photocatalytic Deodorizing Filter (gray)

[Maintenance]

1. **Dry the photocatalytic deodorizing filter in the sun.**
   - After removing the dust with a vacuum cleaner, place the filter in the sun for approximately 6 hours. By drying the photocatalytic deodorizing filter in the sun, its deodorizing and antibacterial capabilities are regenerated.
   - Because the filter material is paper, it can not be cleaned with water.
   - It is recommended dry the filter once every 6 months.

[Replacement]

1. **Detach the filter element and attach a new one.**

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
Check that the drain comes smoothly out of the drain hose during COOL or DRY operation. • If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

1. Operate the "FAN only" for several hours on a fine day to dry out the inside.

- Press "MODE selector button" and select "FAN" operation.
- Press "ON/OFF button" and start operation.

2. After operation stops, turn off the breaker for the room air conditioner.

3. Clean the air filters and set them again.

4. Take out batteries from the remote controller.

- When a multi outdoor unit is connected, make sure the heating operation is not used at the other room befure you use the fan operation.

NOTE

- Operation with dusty air filters lowers the cooling (heating) capacity and wastes energy. Air is also prevented from flowing smoothly through the unit creating a noise.
- Operation with dirty filters :
  (1) cannot deodorize the air. (2) cannot clean the air.
  (3) results in poor heating or cooling. (4) may cause odour.
- The air purifying filter and Photocatalytic deodorizing filter cannot be reused, even if washed.
- In principle, there is no need to replace the photocatalytic deodorizing filter. Remove the dust periodically with a vacuum cleaner. However, it is recommended to replace the filter in the following cases.
  (1) The paper material is torn or broken during cleaning.
  (2) The filter has become extremely dirty after long use.
- To order air purifying filter or Photocatalytic deodorizing filter, contact to the service shop where you bought the air conditioner.
- Dispose of old air filters as non-burnable waste and Photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Photocatalytic deodorizing filter (with frame)	KAZ917B41
Photocatalytic deodorizing filter (without frame)	KAZ917B42
Air purifying filter (with frame)	KAF925B41
Air purifying filter (without frame)	KAF925B42

2.2.16 Troubleshooting

Trouble Shooting

These cases are not troubles.

The following cases are not air conditioner troubles but have some reasons. You may just continue using it.

Case	Explanation
Operation does not start soon. • When ON/OFF button was pressed soon after operation was stopped. • When the mode was reselected.	• This is to protect the air conditioner. You should wait for about 3 minutes.
Hot air does not flow out soon after the start of heating operation.	• The air conditioner is warming up. You should wait for 1 to 4 minutes. (The system is designed to start discharging air only after it has reached a certain temperature.)
The heating operation stops suddenly and a flowing sound is heard.	• The system is taking away the frost on the outdoor unit. You should wait for about 3 to 8 minutes.
The outdoor unit emits water or steam.	■ In HEAT mode • The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation. ■ In COOL or DRY mode • Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.
Mists come out of the indoor unit.	■ This happens when the air in the room is cooled into mist by the cold air flow during cooling operation.
The indoor unit gives out odour.	■ This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the air flow. (If this happens, we recommend you to have the indoor unit washed by a technician. Consult the service shop where you bought the air conditioner.)
The outdoor fan rotates while the air conditioner is not in operation.	■ After operation is stopped: • The outdoor fan continues rotating for another 60 seconds for system protection. ■ While the air conditioner is not in operation: • When the outdoor temperature is very high, the out door fan starts rotating for system protection.
The operation stopped suddenly. (OPERATION lamp is on)	■ For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.

Check again.

Please check again before calling a repair person.

Case	Check
The air conditioner does not operate. (OPERATION lamp is off)	• Hasn't a breaker turned OFF or a fuse blown? • Isn't it a power failure? • Are batteries set in the remote controller? • Is the timer setting correct?
Cooling (Heating) effect is poor.	• Are the air filters clean? • Is there anything to block the air inlet or the outlet of the indoor and the outdoor units? • Is the temperature setting appropriate? • Are the windows and doors closed? • Are the air flow rate and the air direction set appropriately? • Is the unit set to the INTELLIGENT EYE mode?
Operation stops suddenly. (OPERATION lamp flashes.)	• Are the air filters clean? • Is there anything to block the air inlet or the outlet of the indoor and the outdoor units? Clean the air filters or take all obstacles away and turn the breaker OFF. Then turn it ON again and try operating the air conditioner with the remote controller. If the lamp still flashes, call the service shop where you bought the air conditioner. • Are operation modes all the same for indoor units connected to outdoor units in the **multi system?** If not, set all indoor units to the same operation mode and confirm that the lamps flash. Moreover, when the operation mode is in "AUTO", set all indoor unit operation modes to "COOL" or "HEAT" for a moment and check again that the lamps are normal. If the lamps stop flashing after the above steps, there is no malfunction.
An abnormal functioning happens during operation.	• The air conditioner may malfunction with lightning or radio waves. Turn the breaker OFF, turn it ON again and try operating the air conditioner with the remote controller.

Call the service shop immediately.

⚠ WARNING

■When an abnormality (such as a burning smell) occurs, stop operation and turn the breaker OFF.
Continued operation in an abnormal condition may result in troubles, electric shocks or fire.
Consult the service shop where you bought the air conditioner.

■Do not attempt to repair or modify the air conditioner by yourself.
Incorrect work may result in electric shocks or fire.
Consult the service shop where you bought the air conditioner.

If one of the following symptoms takes place, call the service shop immediately.

■ **The power cord is abnormally hot or damaged.** ■ **An abnormal sound is heard during operation.** ■ **The safety breaker, a fuse, or the earth leakage breaker cuts off the operation frequently.** ■ **A switch or a button often fails to work properly.** ■ **There is a burning smell.** ■ **Water leaks from the indoor unit.**	▶ Turn the breaker OFF and call the service shop.

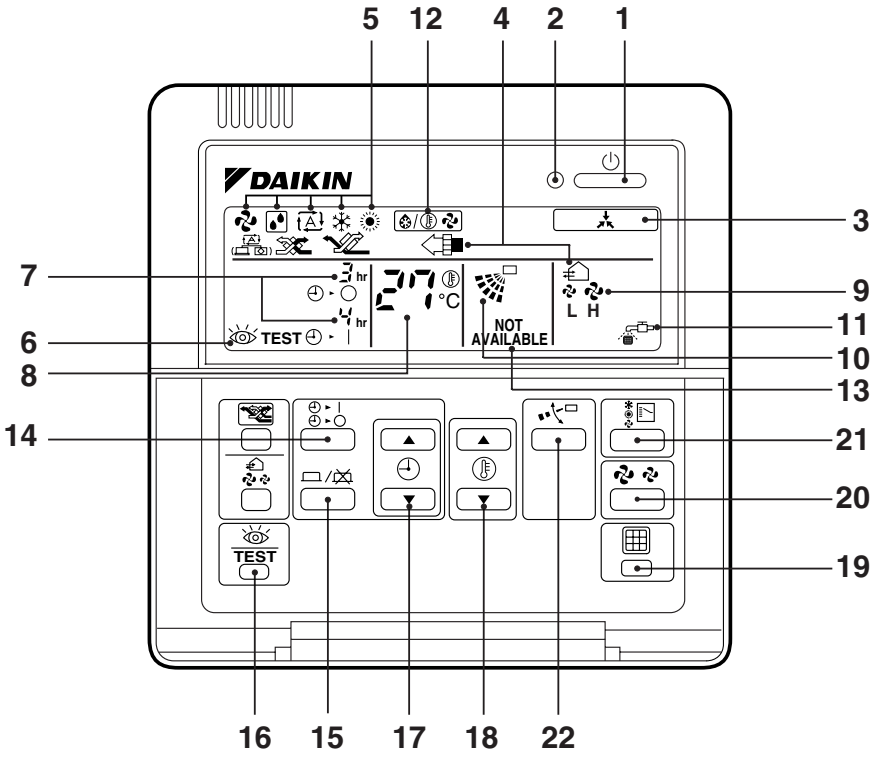
■ After a power failure The air conditioner automatically resumes operation in about 3 minutes. You should just wait for a while.	■ Lightning If lightning may strike the neighbouring area, stop operation and turn the breaker OFF for system protection.

We recommend periodical maintenance.

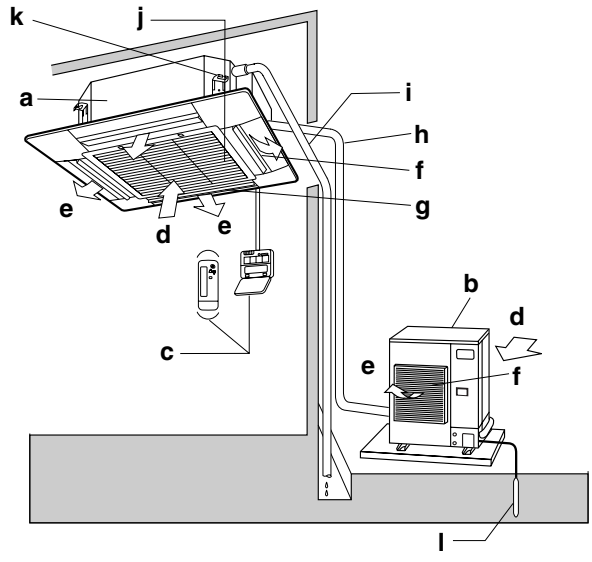
In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist aside from regular cleaning by the user. For specialist maintenance, contact the service shop where you bought the air conditioner.
The maintenance cost must be born by the user.

2.3 Ceiling Mounted Cassette Type

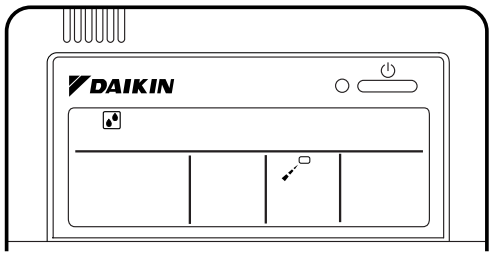
Note: The instruction is for FFQ25/35/50/60B as representative.



1



2



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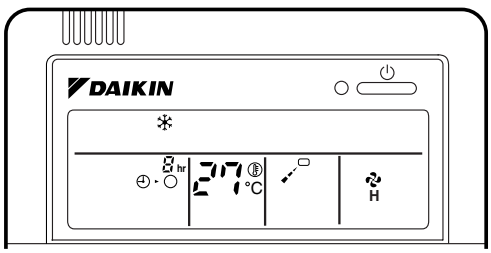


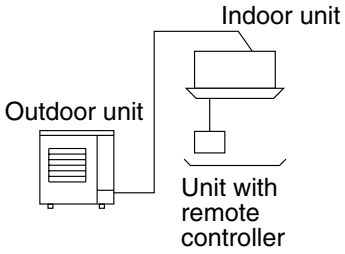
4

[1]

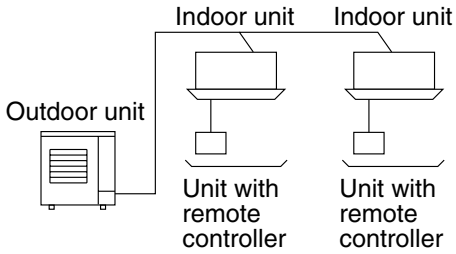
1. WHAT TO DO BEFORE OPERATION

This operation manual is for the following systems with standard control. Before initiating operation, contact your Daikin dealer for the operation that corresponds to your sysem.

• Pair system



• Multi system



NOTE

• If the unit you purchased is controlled by a wireless remote controller, also refer to the wireless remote controller's operation manual.

If your installation has a customized control system, ask your Daikin dealer for operation that corresponds to your system.

• Heat pump type
This system provides cooling, heating, automatic, program dry, and fan operation modes.
• Cooling only type
This system provides cooling, program dry, and fan operation modes.

PRECAUTIONS FOR GROUP CONTROL SYSTEM OR TWO REMOTE CONTROLLER CONTROL SYSTEM

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm the following if your unit is of the following control system type.

• **Group control system**
One remote controller controls up to 16 indoor units.
All indoor units are equally set.

• **Two remote controllers control system**
Two remote controllers control one indoor unit (In case of group control system, one group of indoor units)
The unit is individually operated.

NOTE

• Contact your Daikin dealer in case of changing the combination or setting of group control and two remote controllers control system.

Names and functions of parts

Refer to figure 2 on page [1]

a	Indoor unit
b	Outdoor unit • The external appearance of the outdoor unit varies depending on its capacity class. The outdoor unit shown in the figure is for reference to indicate features. Contact your Daikin Dealer and verify which outdoor unit you have.
c	Remote controller
d	Inlet air
e	Discharged air
f	Air outlet
g	Air flow flap (at air outlet)
h	Refrigerant piping, connection electric wire
i	Drain pipe
j	Air inlet The built-in air filter removes dust and dirt.
k	Drain pumping out device (built-in) Drains water removed from the room during cooling.
l	Ground wire Wire to ground from the outdoor unit to prevent electrical shocks.

2. SAFETY CONSIDERATIONS

We recommend that you read this instruction manual carefully before use to gain full advantage of the function of the air conditioner, and to avoid malfunction due to erroneous handling.
This air conditioner comes under the term “appliances not accessible to the general public”.

- **The precautions described below are WARNING and CAUTION. These are very important precautions concerning safety. Be sure to observe all of them without fail.**

⚠ **WARNING**.. These are the matters with possibilities leading to serious consequences such as death or serious injury due to erroneous handling.

⚠ **CAUTION**... These are the matters with possibilities leading to injury or material damage due to erroneous handling including probabilities leading to serious consequences in some cases.

- **After reading, keep this manual at a place where any user can read at any time. Furthermore, make certain that this operation manual is handed to a new user when he takes over the operation.**

⚠ WARNING

Avoid exposure of your body directly to the cold air for a long time, or avoid excessive exposure of your body to the cold air.
Otherwise, your physical condition may be deteriorated and/or your health may be ruined.
When the air conditioner is in abnormal conditions (smell of something burning, etc), unplug the power cord from the outlet, and contact the dealer where you purchased the air conditioner.
Continued operation under such circumstances may result in a failure, electric shock, and fire.
Ask your dealer for installation of the air conditioner.
Incomplete installation performed by yourself may result in a failure, a water leakage, electric shock, and fire.
Ask your dealer for improvement, repair, and maintenence.
Incomplete improvement, repair, and maintenance may result in a failure, a water leakage, electric shock, and fire.
Do not insert your finger, a stick, etc., into the air inlet, outlet, and fan blades.
A fan in high-speed running may result in injury.
For refrigerant leakage, consult your dealer.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant dose not exceed the limiting concentration even when it leaks. If the refrigerant leaks exceeding the level of limiting concentration, an oxygen deficiency accident may happen.
For installation of separately sold component parts, ask a specialist.
Be sure to use the separately sold component parts designated by our company.
Incomplete installation performed by yourself may result in a failure, a water leakage, electric shock, and fire.
Ask your dealer to move and reinstall the air conditioner.
Incomplete installation may result in a failure, a water leakage, electric shock, and fire.
The refrigerant in the air conditioner is safe and normally does not leak. If the refrigerant leaks inside the room, the contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
Do not use the air conditioner until when a service person confirms to finish repairing the portion where the refrigerant leaks.

⚠ CAUTION

Do not use the air conditioner for other purposes.
Do not use the air conditioner for a special application such as the storage of foods, animals and plants, precision machines, and art objects as otherwise the deterioration of quality may result.
Do not remove the air outlet of the outdoor unit.
The fan may get exposed and result in injury.
When the air conditioner is used in combination with burners or heaters, perform sufficient ventilation.
Insufficient ventilation may result in an oxygen deficiency accident.
Check and make sure that foundation blocks are not damaged after a long use.
If they are left in a damaged condition, the unit may fall and result in injury.
Neither place a flammable spray bottle near the air conditioner not perform spraying.
Doing so may result in a fire.
To clean the air conditioner, stop operation, and unplug the power cord from the outlet.
Otherwise, an electric shock and injury may result.
Do not operate the air conditioner with a wet hand.
An electric shock may result.
Do not use any fuse with improper capacity.
The use of piece of wire and whatnot may result in a failure and fire.
Do not place a burner or heater at a place directly exposed to the wind from the air conditioner.
Incomplete combustion of the burner or heater may result.
Do not allow a child to mount on the outdoor unit or avoid placing any object on it.
Falling or tumbling may result in injury.

Do not expose animals and plants directly to the wind from the air conditioner.
Adverse influence to animals and plants may result.
Do not wash the air conditioner with water.
An electric shock may result.
Do not install the air conditioner at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.
Be sure to install an earth leakage breaker.
Unless it is installed, an electric shock may result.
Be sure the air conditioner is electrically grounded.
Do not connect the grounding conductor to a gas pipe, water pipe, lightning arrester, and the grounding conductor for a telephone.
Imperfect grounding work may result in an electric shock.
Execute complete drain piping for perfect drainage.
Incomplete piping may result in a water leakage.
The appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.

3. OPERATION RANGE

If the temperature or the humidity is beyond the following conditions, safety devices may work and the air conditioner may not operate, or sometimes, water may drop from the indoor unit.

COOLING

OUTDOOR UNIT	INDOOR			OUTDOOR TEMPERATURE	
	TEMPERATURE		HUMIDITY		
RS50 · 60 RKS25 · 35 · 50 · 60 RXS25 · 35 · 50 · 60	DB	21 to 32	80% or below	DB	-10 to 46 (-5)
	WB	14 to 23			
3MKS50 4MKS58 · 75 · 90 3MXS52 4MXS68 · 80	DB	21 to 32	80% or below	DB	-10 to 46
	WB	14 to 23			

HEATING

OUTDOOR UNIT	INDOOR TEMPERATURE		OUTDOOR TEMPERATURE	
RXS25 · 35	DB	10 to 30	DB	-14 to 24
			WB	-15 to 20
RXS50 · 60	DB	10 to 30	DB	-14 to 24
			WB	-15 to 18
3MXS52 4MXS68 · 80	DB	10 to 30	DB	-14 to 21
			WB	-15 to 15.5

DB: Dry bulb temperature (˚C)
WB: Wet bulb temperature (˚C)
The setting temperature range of the remote controller is 16˚C to 32˚C.
The numerical value in a parenthesis shows the operation range of the model for Australia.

4. INSTALLATION SITE

Regarding places for installation

- **Is the air conditioner installed at a well-ventilated place where there are no obstacles around?**
- **Do not use the air conditioner in the following places.**
  a. Filled with much mineral oil such as cutting oil
  b. Where there is much salt such as a beach area
  c. Where sulfured gas exists such as a hot-spring resort.
  d. Where there are considerable voltage fluctuations such as a factory or plant
  e. Vehicles and vessels
  f. Where there is much spray of oil and vapor such as a cookery, etc.
  g. Where there are machines generating electromagnetic waves.
  h. Filled with acid and/or alkaline steam or vapor
- **Is a snow protection measure taken?**
  For details, consult your dealer.

Regarding wiring

- **All wiring must be performed by an authorized electrician.**
  To do wiring, ask your dealer. Never do it by yourself.
- **Make sure that a separate power supply circuit is provided for this air conditioner and that all electrical work is carried out by qualified personnel according to local laws and regulations.**

Pay attention to running noises, too

- **Are the following places selected?**
  a. A place that can sufficiently withstand the weight of the air conditioner with less running noises and vibrations.
  b. A place where the hot wind discharged from the air outlet of outdoor unit and the running noises.
- **Are you sure that there are no obstacles near the air outlet of the outdoor unit?**
  Such obstacles may result in declined performance and increased running noises.
- **If abnormal noises occur in use, stop the operation of the air conditioner, and then consult your dealer or our service station.**

Regarding drainage of drain piping

- **Is the drain piping executed to perform complete drainage?**
  If proper drainage is not carried out from the out-

door drain pipes during air-conditioning operation, chances are that dust and dirt are clogged in the pipe. This may result in a water leakage from the indoor unit. Under such circumstances, stop the operation of the air conditioner, and then con sult your dealer or our service station.

5. NAME AND FUNCTION OF EACH SWITCH AND DISPLAY ON THE REMOTE CONTROLLER

Refer to figure 1 on page [1]

1	**ON/OFF BUTTON**
	Press the button and the system will start. Press the button again and the system will stop.
2	**OPERATION LAMP (RED)**
	The lamp lights up during operation.
3	**DISPLAY " " (UNDER CENTRALIZED CONTROL)**
	When this display shows, the system is UNDER CENTRALIZED CONTROL.
4	**DISPLAY " " " " " " " (VENTILATION/AIR CLEANING)**
	This display shows that the total heat exchange and the air cleaning unit are in operation (These are optional accessories).
5	**DISPLAY " " " " " " " " " (OPERATION MODE)**
	This display shows the current OPERATION MODE. For cooling only type, " " (Auto) and " " (Heating) are not installed.
6	**DISPLAY " TEST " (INSPECTION/TEST OPERATION)**
	When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.
7	**DISPLAY " " (PROGRAMMED TIME)**
	This display shows the PROGRAMMED TIME of the system start or stop.
8	**DISPLAY " " (SET TEMPERATURE)**
	This display shows the set temperature.
9	**DISPLAY " " (FAN SPEED)**
	This display shows the set fan speed.
10	**DISPLAY " " (AIR FLOW FLAP)**
	Refer to "AIR FLOW DIRECTION ADJUST".
11	**DISPLAY " " (TIME TO CLEAN AIR FIL-TER)**
	Refer to "HOW TO CLEAN THE AIR FILTER".
12	**DISPLAY " " (DEFROST)**
	Refer to "DEFROST OPERATION".
13	**NON-FUNCTIONING DISPLAY**
	If that particular function is not available, pressing the button may display the words "NOT AVAILABLE" for a few seconds. When running multiple units simultaneously The "NOT AVAILABLE" message will only be appear if none of the indoor units is equipped with the function. If even one unit is equipped with the function, the display will not appear.
14	**TIMER MODE START/STOP BUTTON**
	Refer to "PROGRAM TIMER OPERATION".
15	**TIMER ON/ OFF BUTTON**
	Refer to "PROGRAM TIMER OPERATION"
16	**INSPECTION/TEST OPERATION BUT-TON**
	This button is used only by qualified service persons for maintenance purposes.
17	**PROGRAMMING TIME BUTTON**
	Use this button for programming "START and/ or STOP" time.
18	**TEMPERATURE SETTING BUTTON**
	Use this button for SETTING TEMPERA-TURE.
19	**FILTER SIGN RESET BUTTON**
	Refer to "HOW TO CLEAN THE AIR FILTER".
20	**FAN SPEED CONTROL BUTTON**
	Press this button to select the fan speed, HIGH or LOW, of your choice.
21	**OPERATION MODE SELECTOR BUTTON**
	Press this button to select OPERATION MODE.
22	**AIR FLOW DIRECTION ADJUST BUTTON**
	Refer to "AIR FLOW DIRECTION ADJUST".

NOTE

- For the sake of explanation, all indications are shown on the display in figure 1 contrary to actual running situations.

6. OPERATION PROCEDURE

Refer to figure 1 on page [1]

- Operating procedure varies with heat pump type and cooling only type. Contact your Daikin dealer to confirm your system type.
- To protect the unit, turn on the main power switch 6 hours before operation.

- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

COOLING, HEATING, AUTOMATIC, FAN, AND PROGRAM DRY OPERATION

Operate in the following order.

1 OPERATION MODE SELECTOR

Press OPERATION MODE SELECTOR button several times and select the OPERATION MODE of your choice as follows.

- COOLING OPERATION ..... " "
- HEATING OPERATION ..... " "
- AUTOMATIC OPERATION..... " "
  - In this operation mode,COOL/HEAT changeover is automatically conducted.
- FAN OPERATION ..... " "
- DRY OPERATION..... " "
  - The function of this program is to decrease the humidity in your room with the minimum temperature decrease.
  - Micro computer automatically determines TEMPERATURE and FAN SPEED.
  - This system dose not go into operation if the room temperature is below 16˚C.

Refer to figure 3 on page [1]

- For cooling only type, " COOLING ", " FAN " and " DRY " operation are able to select.

2 ON/OFF

Press ON/OFF button
OPERATION lamp lights up or goes off and the system starts or stops OPERATION.

[EXPLANATION OF HEATING OPERATION]

DEFROST OPERATION

- As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into DEFROST OPERATION.
- The indoor unit fan stops and the remote controller display shows" ".
- After 6 to 8 minutes (maximum 10 minutes) of DEFROST OPERATION, the system returns to HEATING OPERATION.

Regarding outside air temperature and heating capacity

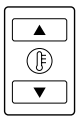
- The heating capacity of the air conditioner declines as the outside air temperature falls. In such a case, use the air conditioner in combination with other heating systems.
- A warm air circulating system is employed, and therefore it takes some time until the entire room is warmed up after the start of operation.
- An indoor fan runs to discharge a gentle wind automatically until the temperature inside the air conditioner reaches a certain level. At this time, the remote controller displays" ". Leave it as it stands and wait for a while.
- When the warm air stays under the ceiling and your feet are cold, we recommend that you use a circulator (a fan to circulate the air inside the room). For details,consult your dealer.

ADJUSTMENT

For programming TEMPERATURE, FAN SPEED and AIR FLOW DIRECTION, follow the procedure shown below.

TEMPERATURE SETTING

Press TEMPERATURE SETTING button and program the setting temperature.



Each time this button is pressed,setting temperature rises 1˚C.

Each time this button is pressed, setting temperature lowers 1˚C.

- The setting is impossible for fan operation.

NOTE

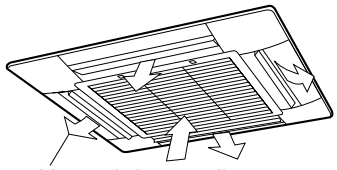
- The setting temperature range of the remote controller is 16˚C to 32˚C.

FAN SPEED CONTROL

Press FAN SPEED CONTROL button.
High or Low fan speed can be selected.
Micro computer may sometimes control the fan speed in order to protect the unit.

AIR FLOW DIRECTION ADJUST

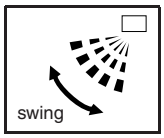
Press the AIR FLOW DIRECTION ADJUST button to adjust the air flow angle.



Up and down adjustment

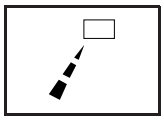
- The movable limit of the flap is changeable. Contact your Daikin dealer for details.

Press the AIR FLOW DIRECTION ADJUST button to select the air direction as following.



The AIR FLOW FLAP display swings as shown left and the air flow direction continuously varies. (Automatic swing setting)

Press AIR FLOW DIRECTION ADJUST button to select the air direction of your choice.



The AIR FLOW FLAP display stops swinging and the air flow direction is fixed (Fixed air flow direction setting).

MOVEMENT OF THE AIR FLOW FLAP

For the following conditions, micro computer controls the air flow direction so it may be different from the display.

Operation mode	Heating
Operation condition	• When starting operation • When room temperature is higher than the set temperature • At defrost operation (Air is blown horizontally to prevent the cool air from being blown directly onto anyone in the room.)

Operation mode includes automatic operation.

PROGRAM TIMER OPERATION

Operate in the following order.

- The timer is operated in the following two ways.
- Programming the stop time (◷ ▸ ◯) .... The system stops operating after the set time has elapsed.
- Programming the start time (◷ ▸ \|) .... The system starts operating after the set time has elapsed.
- The timer can be programmed a maximum of 72 hours.
- The start and the stop time can be simultaneously programmed.

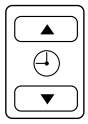
1 TIMER MODE START/STOP

Press the TIMER MODE START/STOP button several times and select the mode on the display.

The display flashes.
For setting the timer stop .... " ◷ ▸ ◯ "
For setting the timer start .... " ◷ ▸ \| "

2 PROGRAMMING TIME

Press the PROGRAMMING TIME button and set the time for stopping or starting the system.



When this button is pressed, the time advances by 1 hour.

When this button is pressed, the time goes backward by 1 hour.

3 TIMER ON/OFF

Press the TIMER ON/OFF button.

The timer setting procedure ends.
The display " ◷ ▸ ◯ or ◷ ▸ \| " changes from flashing light to a constant light.

Refer to figure 4 on page [1]

NOTE

- When setting the timer Off and On at the same time, repeat the above procedure from **1** to **3** once again.

When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and then 1 hour later the system will start.

- After the timer is programmed, the display shows the remaining time.
- Press the TIMER ON/OFF button once again to cancel programming. The display vanishes.

7. OPTIMUM OPERATION

Observe the following precautions to ensure the system operates.

- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling.
- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate the room regularly.
  Using the unit for long periods of time requires attentive ventilation of the room.
- Do not place items that might be damaged by water under the indoor unit.
  Water may condensate and drip if the humidity reaches 80% or if the drain exit gets clogged.
- Keep doors and windows closed. If the doors and windows remain open, room air will flow out and cause to decrease the effect of cooling and heating.

- Do not place other heaters directly below the indoor unit.
  They may deform due to the heat.
- Never place objects near the air inlet and the air outlet of the unit. It may cause deterioration in the effect or stop in the operation.
- Turn off the main power supply switch when it is not used for long periods of time. When the main power switch is turned on, some watts of electricity is being used even if the system is not operating. Turn off the main power supply switch for saving energy. When reoperating, turn on the main power supply switch 6hours before operation for smooth running (Refer to MAINTENANCE).
- When the display shows " " (TIME TO CLEAN AIR FILTER), ask a qualified service person to clean the filters (Refer to MAINTENANCE).

8. MAINTENANCE (FOR SERVICE PERSONNEL)

ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE

IMPORTANT!

- **BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED**
- To clean the air conditioner, be sure to stop operation, and turn the power switch off. Otherwise, an electric shock and injury may result.
- Do not wash the air conditioner with water
  Doing so may result in an electric shock.
- Be careful with a scaffold or staging
  Caution must be exercised because of work at a high place.

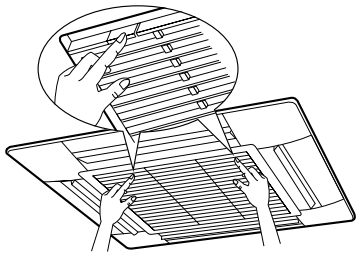
HOW TO CLEAN THE AIR FILTER

Clean the air filter when the display shows " " (TIME TO CLEAN AIR FILTER).

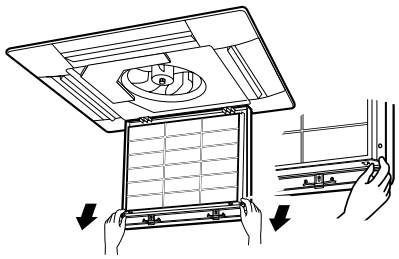
It will display that it will operate for a set amount of time.
Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.
If the dirt becomes impossible to clean, change the air filter (Air filter for exchange is optional)

1. **Open the suction grille.**
   Push it downward slowly while pressing horizontally the buttons provided on two spots.
   (Follow the same procedure for closing).

Fig. 1



2. **Detach the air filter**
   Pull the hook of the air filter out diagonally downward, and remove the filter.
   Fig. 2



3. **Clean the air filter.**
   Use vacuum cleaner **A)** or wash the air filter with water **B).**
   A) Using a vacuum cleaner

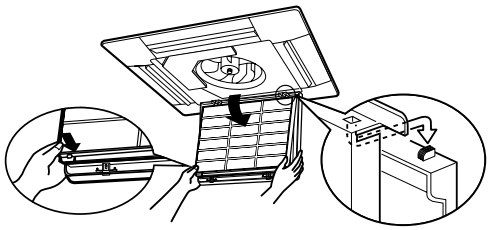
   B) Washing with water
   When the air filter is very dirty, use soft brush and neutral detergent.

   Remove water and dry in the shade.

NOTE

- Do not wash the air conditioner with hot water of more than 50˚C, as doing so may result in discoloration and/or deformation.
- Do not expose it to fire, as doing so may result in burning.

4. **Fix the air filter**
   (1) Hook the air filter to a protrusion on the suction grille.
   (2) Push the lower part of the air filter onto the protrusion at the lower part of the suction grille, and fix the air filter there.
   Fig. 3



5. **Shut the suction grille.**
   Refer to item No.1.
6. **After turning on the power, press FILTER SIGN RESET button.**
   The “TIME TO CLEAN AIR FILTER” display vanishes.

HOW TO CLEAN AIR OUTLET AND OUTSIDE PANELS

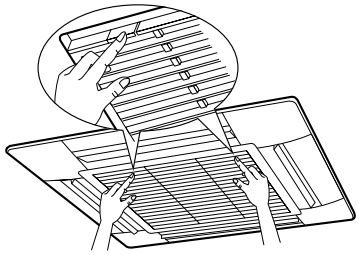
- Clean with soft cloth.
- When it is difficult to remove stains, use water or neutral detergent.

NOTE

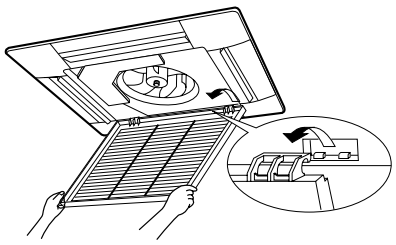
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide. It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Do not use water or air of 50˚C or higher for cleaning air filters and outside panels.

HOW TO CLEAN THE SUCTION GRILLE

1. **Open the suction grille.**
   Push it downward slowly while pressing horizontally the buttons provided on two spots. (Follow the same procedure for closing.)
   Fig. 4



2. **Detach the suction grille.**
   Open the suction grille 45 degrees and lift it upward.
   Fig. 5



3. **Detach the air filter.**
   Refer to “HOW TO CLEAN THE AIR FILTER”.
   (Refer to Fig. 2)
4. **Clean the suction grille.**
   Wash with a soft bristle brush and neutral detergent or water, and dry throughly.
   When very grimy

   Directly apply the type of detergent used for cleaning ventilation fans or ovens, wait 10 minutes, and then rinse with water.
5. **Fix the air filter.**
   Refer to “HOW TO CLEAN THE AIR FILTER”.
   (Refer to Fig. 3)
6. **Fix the suction grille.**
   Refer to item No. 2.
7. **Shut the suction grille.**
   Refer to item No. 1.

START UP AFTER A LONG STOP

Confirm the following

- Check that the air inlet and outlet are not blocked. Remove any obstacle.
- Check if the earth is connected.
  Might there be a broken wire somewhere?
  Contact your dealer if there are any problems.

Clean the air filter and outside panels

- After cleaning the air filter, make sure to attach it.

Turn on the main power supply switch

- The display on the remote controller will be shown when the power is turned on.
- To protect the unit, turn on the main power switch at least 6 hours before operation.

WHAT TO DO WHEN STOPPING THE SYSTEM FOR A LONG PERIOD

Turn on FAN OPERATION for a half day and dry the unit.

- Refer to **“6.OPERATION PROCEDURE”**.

Cut off the power supply.

- When the main power switch is turned on, some watts of electricity is being used even if the system is not operating.
  Turn off the main power supply switch for saving energy.
- The display on the remote controller will vanish when the main power switch is turned off.

Clean the air filter and the exterior.

- Be sure to replace the air filter to its original place after cleaning. Refer to “MAINTENANCE”.

9. NOT MALFUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction

I. THE SYSTEM DOES NOT OPERATE

- **The system does not restart immediately after the ON/OFF button is pressed.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the sys-

tem. After 3 minutes, the system will turn on again automatically.

- **The system does not restart immediately when TEMPERATURE SETTING button is returned to the former position after pushing the button.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- **The system does not start when the display shows "[人]" (UNDER CENTRALIZED CONTROL) and it flashes for few seconds after pressing an operation button.**
  This is because the system is under centralized control. Flashes on the display indicates that the system cannot be controlled by the remote controller.
- **The system does not start immediately after the power supply is turned on.**
  Wait one minute until the micro computer is prepared for operation.
- **The outdoor unit is stopped**
  This is because the room temprerature has reached the set temprerature. The indoor unit switches to fan operation.

II. The display shows "[人]" (UNDER CENTRALIZED CONTROL) and the unit operates in a mode different to what is shown on the remote controller display.
When using a unit in a multi system, the operation condition of that unit is controlled by a micro computer as described below, according to the operation condition of other indoor units connected to the system.

- If the operation mode does not match other indoor units that are already running, the indoor unit will assume the STANDBY state (the fan is stopped and the air flow flap is positioned horizontally).
  If HEATING mode is set together with COOLING, DRY or FAN mode, the above mentioned condition will occur.

NOTE

- Normally, the operation mode in the room where the unit is first run is given priority, but the following situations are exceptions, so please keep this in mind.
  a. If the operation mode of the first room is **FAN Mode**, then using **Heating Mode** in any room after this will give priority to heating. In this situation, the air conditioner running in FAN Mode will go on standby.
  b. With the Priority Room Setting active. Contact your Daikin dealer for the operation that corresponds to your system.
- If the total capacity of operating indoor units exceeds the limit, the indoor unit will assume the STANDBY state (FAN and AIR FLOW DIRECTION will be left as set). (This only applies to cooling only type.)
- If another indoor unit commences a HEATING operation after this indoor unit is running in COOLING mode, this indoor unit may switch to DRY operation (fan on low, air flow flap set at horizontal).

III. The fan speed is different from the setting.

- **Pressing the fan speed control button does not change the fan speed.**
  When the room temperature reaches the set temperature in heating mode, the power supply from the outdoor unit is stopped and the indoor unit will operate on the low fan setting. (If using the multi system, the fan will alternate between off and low.)
  This is to prevent the cool air from being blown directly onto anyone in the room.

IV. AIR BLOW DIRECTION IS NOT AS SPECIFIED.

- **Actual air blow direction is not as shown on the remote contoller.**
- **Automatic swing setting does not work.**
  Refer to "AIR FLOW DIRECTION ADJUST."

V. WHITE MIST COMES OUT OF A UNIT

- **When humidity is high during cooling operation (In oily or dusty places)**
  If the inside of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the inside of the indoor unit. Ask your Daikin dealer for details on cleaning the unit. This operation requires a qualified service person.
- **When the system is changed over to HEATING OPERATION after DEFROST OPERATION.**
  Moisture generated by DEFROST becomes steam and exists.

VI. NOISE OF AIR CONDITIONERS

A ringing sound after the unit is started.
This sound is generated by the temperature regulator working.
It will quiet down after about a minute.

- **A continuous flow "Shuh" sound is heard when the systems is in COOLING or DEFROST OPERATION.**
  This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- **A "Shuh" sound which is heard at the start or immediately after the stop of operation or which is heard at the start or immediately after the stop of DEFROST OPERATION.**
  This is the noise of refrigerant caused by flow stop and flow change.
- **A continuous flowing sound "Shah"or a trickling sound "Jyuru Jyuru"are heard when the system is in COOLING OPERATION or at a stop.**
  The noise is heard when the drain pump is in operation.

- **A "Pishi-pishi" squeaking sound is heard when the system is in operation or after the stop of operation.**
  Expansion and contraction of plastic parts caused by temperature change makes this noise.

VII. DUST FROM THE UNITS

- **Dust may blow out from the unit after starting operation from long resting time.**
  Dust absorbed by the unit blows out.

VIII. THE UNITS GIVE OFF ODORS

The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.

IX. THE LIQUID CRYSTAL OF THE REMOTE CONTROLLER SHOW "88"

- **It happens immediately after the main power supply switch is turned on.**
  This shows that the remote controller is in normal condition.
  This continues temporary.

10. TROUBLE SHOOTING

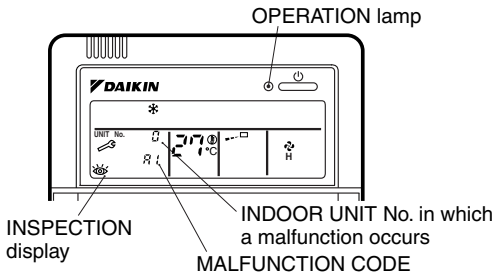
I. If one of the following malfunctions occurs, take the measures shown below and contact your Daikin dealer.

The system must be repaired by a qualified service person.

⚠ WARNING

When the air conditioner is in abnormal conditions (smell of something burning, etc), unplug the power cord from the outlet, and contact your dealer
Continued operation under such circumstances may result in a failure, electric shock, and fire.

- If a safety device such as a fuse, a breaker, or an earth leakage breaker frequently actuates, or ON/OFF switch does not properly work.
  Measure: Turn off the main power switch
- If water leaks from unit.
  Measure: Stop the operation.
- If the display " " (INSPECTION), "UNIT No.", and the OPERATION lamp flash and the "MALFUNCTION CODE" appears.



Measure: Notify and inform the model name and what the malfunction code indicates to your Daikin dealer.

II. If the system does not properly operate except for the above mentioned case, and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

1. If the system does not operate at all.

- Check if there is a power failure.
  Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after the power supply recovers.
- Check if the fuse has blown or breaker has worked.
  Change the fuse or set the breaker.

2. If the system stops operating after operating the system.

- Check if the air inlet or outlet of outdoor or indoor unit is blocked by obstacles.
  Remove the obstacle and make it well-ventilated.
- Check if the air filter is clogged.
  Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).

3. The system operates but it does not sufficiently cool or heat.

- If the air inlet or outlet of the indoor or the outdoor unit is blocked with obstacles.
  Remove the obstacle and make it well-ventilated.
- If the air filter is clogged.
  Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).
- If the set temperature is not proper (Refer to ADJUSTMENT).
- If the FAN SPEED button is set to LOW SPEED (Refer to ADJUSTMENT).
- If the air flow angle is not proper (Refer to AIR FLOW DIRECTION ADJUST).
- If the doors or the windows are open.
  Shut doors or windows to prevent wind from coming in.
- If direct sunlight enters the room (when cooling).
  Use curtains or blinds.
- When there are too many inhabitants in the room (when cooling).
  Cooling effect decreases if heat gain of the room is too large.
- If the heat source of the room is excessive (when cooling).
  Cooling effect decreases if heat gain of the room is too large.

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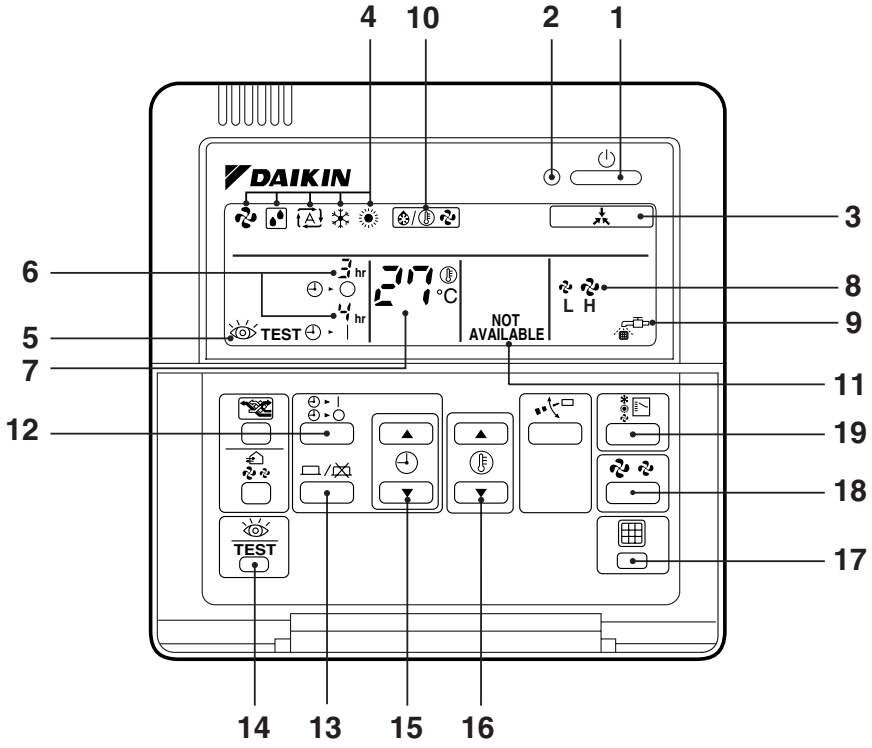
2.4 Ceiling Mounted Built-in Type



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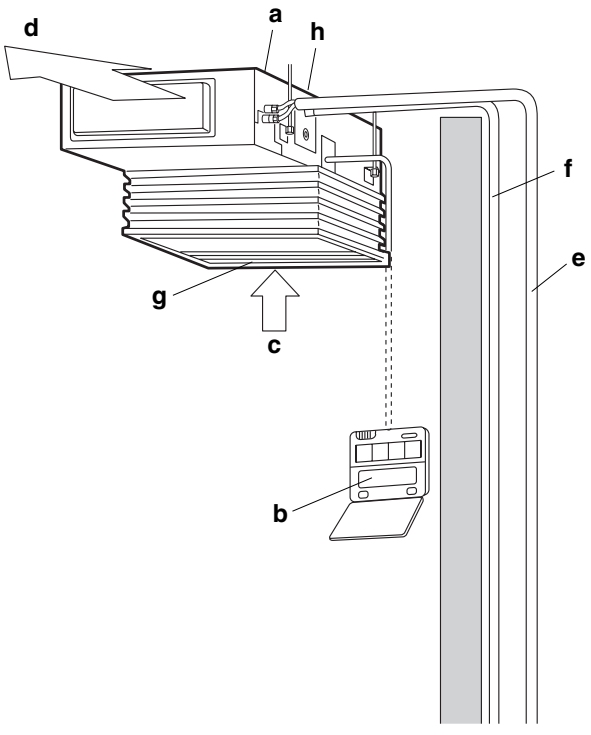
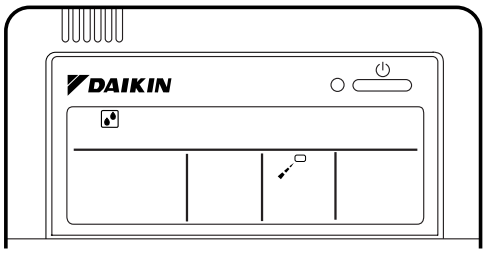


2



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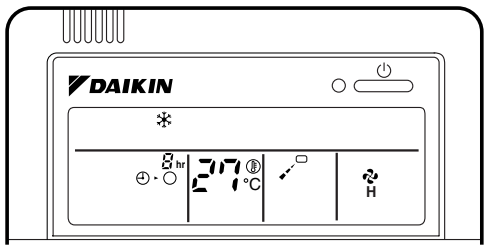


4

[1]

1. WHAT TO DO BEFORE OPERATION

This operation manual is for the system with standard control. Before initiating operation, contact your Daikin dealer for the operation that corresponds to your system.

If your installation has a customized control system, ask your Daikin dealer for the operation that corresponds to your system.

- Heat pump type
  This system provides cooling, heating, automatic, program dry, and fan operation modes.
- Cooling only type
  This system provides cooling, program dry, and fan operation modes.

PRECAUTIONS FOR GROUP CONTROL SYSTEM OR TWO REMOTE CONTROLLERS CONTROL SYSTEM

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm the following if your unit is of the following control system type.

- **Group control system**
  One remote controller controls up to 16 indoor units. All indoor units are equally set.

- **Two remote controllers control system**
  Two remote controllers control one indoor unit (In case of group control system, one group of indoor units) The unit is individually operated.

NOTE
- Contact your Daikin dealer in case of changing the combination or setting of group control and two remote controllers control system.

Names and functions of parts

Refer to figure 2 on page [1]

a	Indoor unit
b	Remote controller
c	Inlet air
d	Discharge air
e	Refrigerant piping, connection electric wire
f	Drain pipe
g	Suction panel (optional) Equipped with an air filter that removes dust and dirt.
h	Drain pumping out device (built-in) Drains water removed from the room during cooling.

2. SAFETY CONSIDERATIONS

We recommend that you read this instruction manual carefully before use to gain full advantage of the function of the air conditioner, and to avoid malfunction due to mishandling.
This air conditioner comes under the term “appliances not accessible to the general public”.

- **The precautions described below are WARNING and CAUTION. These are very important precautions concerning safety. Be sure to observe all of them without fail.**

⚠ **WARNING** .. These are the matters with possibilities leading to serious consequences such as death or serious injury due to erroneous handling.

⚠ **CAUTION** ... These are the matters with possibilities leading to injury or material damage due to erroneous handling including probabilities leading to serious consequences in some cases.

- **After reading, keep this manual at a place where any user can read at any time. Furthermore, make certain that this operation manual is handed to a new user when he takes over the operation.**

⚠ WARNING

Avoid exposure of your body directly to the cold air for a long time, or avoid excessive exposure of your body to the cold air.
Otherwise, your physical condition may be deteriorated and/or your health may be ruined.
When the air conditioner is in abnormal conditions (smell of something burning, etc), turn off power, and contact the dealer where you purchased the air conditioner.
Continued operation under such circumstances may result in a failure, electric shock, and fire.
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.
Do not insert your finger, a stick, etc., into the air inlet, outlet, and fan blades.
A fan in high-speed running may result in injury.
The refrigerant in the air conditioner is safe and normally does not leak. If the refrigerant leaks inside the room, the contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
Do not use the air conditioner until when a service person confirms to finish repairing the portion where the refrigerant leaks.
For refrigerant leakage, consult your dealer.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the limiting concentration even when it leaks. If the refrigerant leaks exceeding the level of limiting concentration, an oxygen deficiency accident may happen.
For installation of separately sold component parts, ask a specialist.
Be sure to use the separately sold component parts designated by our company.
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.
Ask your dealer to move and reinstall the air conditioner.
Incomplete installation may result in a water leakage, electric shock, and fire.
Do not use any fuse with improper capacity.
The use of a piece of wire and whatnot may result in a failure and fire.

⚠ CAUTION

Do not use the air conditioner for other purposes.
Do not use the air conditioner for a special application such as the storage of foods, animals and plants, precision machines, and art objects as otherwise the deterioration of quality may result.
Do not remove the air outlet of the outdoor unit.
The fan may get exposed and result in injury.
Do not place items that might be damaged by water under the indoor unit.
Water may condensate and drip if the humidity reaches 80% or if the drain exit gets clogged.
When the air conditioner is used in combination with burners or heaters, perform sufficient ventilation.
Insufficient ventilation may result in an oxygen deficiency accident.
Check and make sure that foundation blocks are not damaged after a long use.
If they are left in a damaged condition, the unit may fall and result in injury.
Neither place a flammable spray bottle near the air conditioner nor perform spraying.
Doing so may result in a fire.
To clean the air conditioner, stop operation, and unplug the power cord from the outlet.
Otherwise, an electric shock and injury may result.
Do not operate the air conditioner with a wet hand.
An electric shock may result.
Do not place a burner or heater at a place directly exposed to the wind from the air conditioner.
Incomplete combustion of the burner or heater may result.
Do not allow a child to mount on the outdoor unit or avoid placing any object on it.
Falling or tumbling may result in injury.
Never expose little children, plants or animals directly to the air flow.
Adverse influence to little children, plants or animals may result.
Do not wash the air conditioner with water.
Electric shock or fire may result.
Do not install the air conditioner at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.
Be sure to install an earth leakage breaker.
Unless it is installed, an electric shock or fire may result.
Be sure the air conditioner is electrically grounded.
Do not connect the grounding conductor to a gas pipe, water pipe, lightning arrester, and the grounding conductor for a telephone.
Imperfect grounding work may result in an electric shock.
Execute complete drain piping for perfect drainage.
Incomplete piping may result in a water leakage.
The appliance is not intended for use by young children or infirm persons without supervision.
Young children should be supervised to ensure that they do not play with the appliance.

3. OPERATION RANGE

If the temperature or the humidity is beyond the following conditions, safety devices may work and the air conditioner may not operate, or sometimes, water may drop from the indoor unit.

COOLING ONLY TYPE

TEMPERATURE[˚C]	
OUTDOOR	INDOOR
–5 to 46(DB)	21 to 32(DB)/ 14 to 23(WB)

HEAT PUMP TYPE

OPERATION	TEMPERATURE[˚C]	
	OUTDOOR	INDOOR
COOLING	–5 to 46(DB)	21 to 32(DB)/ 14 to 23(WB)
HEATING	–14 to 21(DB)/ –15 to 15.5(WB)	14 to 28(DB)

D B: Dry bulb temperature
WB: Wet bulb temperature

The setting temperature range of the remote controller is 16˚C to 32˚C.

4. INSTALLATION SITE

Regarding places for installation

- **Is the air conditioner installed at a well-ventilated place where there are no obstacles around?**
- **Do not use the air conditioner in the following places.**
  a. Filled with much mineral oil such as cutting oil
  b. Where there is much salt such as a beach area
  c. Where sulfured gas exists such as a hot-spring resort
  d. Where there are considerable voltage fluctuations such as a factory or plant
  e. Vehicles and vessels
  f. Where there is much spray of oil and vapor such as a cookery, etc.
  g. Where there are machines generating electromagnetic waves
  h. Filled with acid and/or alkaline steam or vapor
- **Is a snow protection measure taken?**
  For details, consult your dealer.

Regarding wiring

- **All wiring must be performed by an authorized electrician.**
  To do wiring, ask your dealer. Never do it by yourself.
- **Make sure that a separate power supply circuit is provided for this air conditioner and that all electrical work is carried out by qualified personnel according to local laws and regulations.**

Pay attention to running noises, too

- **Are the following places selected?**
  a. A place that can sufficiently withstand the weight of the air conditioner with less running noises and vibrations.
  b. A place where the hot wind discharged from the air outlet of the outdoor unit and the running noises.
- **Are you sure that there are no obstacles near the air outlet of the outdoor unit?**
  Such obstacles may result in declined performance and increased running noises.
- **If abnormal noises occur in use, consult your dealer.**

Regarding drainage of drain piping

- **Is the drain piping executed to perform complete drainage?**
  If proper drainage is not carried out from the outdoor drain pipes during air-conditioning operation, chances are that dust and dirt are clogged in the pipe. This may result in a water leakage from the indoor unit. Under such circumstances, stop the operation of the air conditioner, and then consult your dealer or our service station.

5. NAME AND FUNCTION OF EACH SWITCH AND DISPLAY ON THE REMOTE CONTROLLER

Refer to figure 1 on page [1]

The illustrations in this operating manual correspond to the remote control format BRC1C type. Although the display and shape of the buttons on the BRC1B type are slightly different, they may be operated in the same manner.

1	**ON/OFF BUTTON**
	Press the button and the system will start. Press the button again and the system will stop.
2	**OPERATION LAMP (RED)**
	The lamp lights up during operation.
3	**DISPLAY " " (UNDER CENTRALIZED CONTROL)**
	When this display shows, the system is UNDER CENTRALIZED CONTROL.
4	**DISPLAY " " " " " " " " " " (OPERATION MODE)**
	This display shows the current OPERATION MODE. For cooling only type, " " (Auto) and " " (Heating) are not installed.
5	**DISPLAY " TEST" (INSPECTION/TEST OPERATION)**
	When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.
6	**DISPLAY " " (PROGRAMMED TIME)**
	This display shows the PROGRAMMED TIME of the system start or stop.
7	**DISPLAY " " (SET TEMPERATURE)**
	This display shows the set temperature.
8	**DISPLAY " " (FAN SPEED)**
	This display shows the set fan speed.
9	**DISPLAY " " (TIME TO CLEAN AIR FILTER)**
	Refer to "HOW TO CLEAN THE AIR FILTER".
10	**DISPLAY " " (DEFROST)**
	Refer to "DEFROST OPERATION".
11	**NON-FUNCTIONING DISPLAY**
	If that particular function is not available, pressing the button may display the words "NOT AVAILABLE" for a few seconds. When running multiple units simultaneously The "NOT AVAILABLE" message will only be appear if none of the indoor units is equipped with the function. If even one unit is equipped with the function, the display will not appear.
12	**TIMER MODE START/STOP BUTTON**
	Refer to "PROGRAM TIMER OPERATION".
13	**TIMER ON/OFF BUTTON**
	Refer to "PROGRAM TIMER OPERATION".
14	**INSPECTION/TEST OPERATION BUTTON**
	This button is used only by qualified service persons for maintenance purposes.
15	**PROGRAMMING TIME BUTTON**
	Use this button for programming "START and/or STOP" time.
16	**TEMPERATURE SETTING BUTTON**
	Use this button for SETTING TEMPERATURE.
17	**FILTER SIGN RESET BUTTON**
	Refer to "HOW TO CLEAN THE AIR FILTER".
18	**FAN SPEED CONTROL BUTTON**
	Press this button to select the fan speed, HIGH or LOW, of your choice.
19	**OPERATION MODE SELECTOR BUTTON**
	Press this button to select OPERATION MODE.

NOTE

- For the sake of explanation, all indications are shown on the display in figure 1 contrary to actual running situations.

6. OPERATION PROCEDURE

Refer to figure 1 on page [1]

- Operating procedure varies with heat pump type and cooling only type. Contact your Daikin dealer to confirm your system type.
- To protect the unit, turn on the main power switch 6 hours before operation.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

COOLING, HEATING, AUTOMATIC, FAN, AND PROGRAM DRY OPERATION

Operate in the following order.

1 OPERATION MODE SELECTOR

Press OPERATION MODE SELECTOR button several times and select the OPERATION MODE of your choice as follows.

- ■COOLING OPERATION ..... " ❄ "
- ■HEATING OPERATION ..... " ☀ "
- ■AUTOMATIC OPERATION ..... " A "
  - In this operation mode, COOL/HEAT changeover is automatically conducted.
- ■FAN OPERATION ..... " 🌀 "
- ■DRY OPERATION ..... " 💧 "
  - The function of this program is to decrease the humidity in your room with the minimum temperature decrease.
  - Micro computer automatically determines TEMPERATURE and FAN SPEED.
  - This system does not go into operation if the room temperature is below 16˚C.

Refer to figure 3 on page [1]

- For cooling only type, "COOLING", "FAN" and "DRY" operation are able to select.

2 ON/OFF

Press ON/OFF button

OPERATION lamp lights up or goes off and the system starts or stops OPERATION.

[EXPLANATION OF HEATING OPERATION]

DEFROST OPERATION

- As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into DEFROST OPERATION.
- The indoor unit fan stops and the remote controller display shows " ⚙/🌀 ".
- After 6 to 8 minutes (maximum 10 minutes) of DEFROST OPERATION, the system returns to HEATING OPERATION.

Regarding outside air temperature and heating capacity

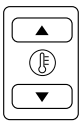
- The heating capacity of the air conditioner declines as the outside air temperature falls. In such a case, use the air conditioner in combination with other heating systems.
- A warm air circulating system is employed, and therefore it takes some time until the entire room is warmed up after the start of operation.
- An indoor fan runs to discharge a gentle wind automatically until the temperature inside the air conditioner reaches a certain level. At this time, the remote controller displays " ⚙/🌀 ". Leave it as it stands and wait for a while.
- When the warm air stays under the ceiling and your feet are cold, we recommend that you use a circulator (a fan to circulate the air inside the room). For details, consult your dealer.

ADJUSTMENT

For programming TEMPERATURE, FAN SPEED and AIR FLOW DIRECTION, follow the procedure shown below.

TEMPERATURE SETTING

Press TEMPERATURE SETTING button and program the setting temperature.



Each time this button is pressed, setting temperature rises 1˚C.

Each time this button is pressed, setting temperature lowers 1˚C.

- The setting is impossible for fan operation.

NOTE

- The setting temperature range of the remote controller is 16˚C to 32˚C.

FAN SPEED CONTROL

Press FAN SPEED CONTROL button.

High or Low fan speed can be selected.
The microchip may sometimes control the fan speed in order to protect the unit.

PROGRAM TIMER OPERATION

Operate in the following order.

- The timer is operated in the following two ways.
- Programming the stop time (🕘 ▸ ○) .... The system stops operating after the set time has elapsed.
- Programming the start time (🕘 ▸ |) .... The system starts operating after the set time has elapsed.
- The timer can be programmed a maximum of 72 hours.
- The start and the stop time can be simultaneously programmed.

1 TIMER MODE START/STOP

Press the TIMER MODE START/STOP button several times and select the mode on the display.

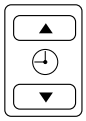
The display flashes.

For setting the timer stop .... "◷▸◯"

For setting the timer start .... "◷▸ |"

2 PROGRAMMING TIME

Press the PROGRAMMING TIME button and set the time for stopping or starting the system.



When this button is pressed, the time advances by 1 hour.

When this button is pressed, the time goes backward by 1 hour.

3 TIMER ON/OFF

Press the TIMER ON/OFF button.

The timer setting procedure ends.

The display "◷▸◯ or ◷▸ |" changes from flashing light to a constant light.

Refer to figure 4 on page [1]

NOTE

- When setting the timer Off and On at the same time, repeat the above procedure from **1** to **3** once again.

When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and then 1 hour later the system will start.

- After the timer is programmed, the display shows the remaining time.
- Press the TIMER ON/OFF button once again to cancel programming. The display vanishes.

7. OPTIMUM OPERATION

Observe the following precautions to ensure the system operates.

- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling.
- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate the room regularly.
  Using the unit for long periods of time requires attentive ventilation of the room.
- Keep doors and windows closed. If the doors and windows remain open, room air will flow out and cause to decrease the effect of cooling and heating.
- Do not place other heaters directly below the indoor unit.
  They may deform due to the heat.
- Never place objects near the air inlet and the air outlet of the unit. It may cause deterioration in the effect or stop in the operation.
- Turn off the main power supply switch when it is not used for long periods of time. When the main power switch is turned on, some watts of electricity is being used even if the system is not operating. Turn off the main power supply switch for saving energy. When reoperating, turn on the main power supply switch 6hours before operation for smooth running (Refer to MAINTENANCE).
- When the display shows "🧹" (TIME TO CLEAN AIR FILTER), ask a qualified service person to clean the filters (Refer to MAINTENANCE).

8. MAINTENANCE (FOR SERVICE PERSONNEL)

ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE

IMPORTANT!

- **BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED**
- To clean the air conditioner, be sure to stop operation, and turn the power switch off. Otherwise, an electric shock and injury may result.
- Do not wash the air conditioner with water. Doing so may result in an electric shock.
- Be careful with a scaffold or staging. Caution must be exercised because of work at a high place.

HOW TO CLEAN THE AIR FILTER

Clean the air filter when the display shows "🧹" (TIME TO CLEAN AIR FILTER).

It will display that it will operate for a set amount of time.

Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.

If the dirt becomes impossible to clean, change the air filter. (For changing air filter, please contact your dealer.)

1. **Open the suction grille.**
   Slide both knobs simultaneously as shown and then pull them downward.
   (Do the same procedure for closing.)
   (Refer to Fig.1)

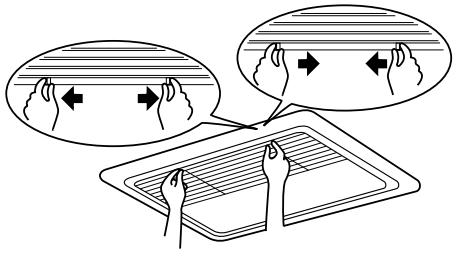


Fig. 1

(**If chains are present.** Unhook the chains.)
(Refer to Fig.2)

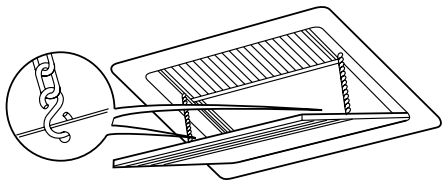


Fig. 2

2. **Remove the air filters.**
   Remove the air filters by pulling its cloth forward.
   (Refer to Fig.3)

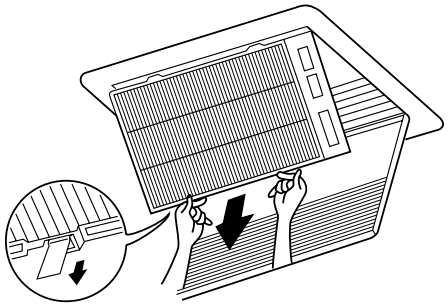


Fig. 3

3. **Clean the air filter.**
   Use vacuum cleaner **A)** or wash the air filter with water **B)**.
   A)Using a vacuum cleaner

   B)Washing with water
   When the air filter is very dirty, use soft brush and neutral detergent.

   Remove water and dry in the shade.

NOTE
- Do not wash the air conditioner with hot water of more than 50˚C, as doing so may result in discoloration and/or deformation.
- Do not expose it to fire, as doing so may result in burning.

4. **Fix the air filter.**
   Align the two hangers and push the air filter up.
   Confirm that four hangers are fixed.
   (Refer to Fig.4)

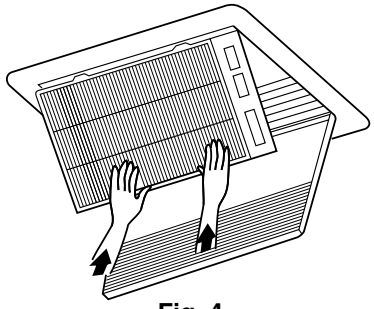


Fig. 4

5. **Close the suction grille.**
   Refer to item No. 1.
6. **After turning on the power, press FILTER SIGN RESET button.**
   The display “ ”(TIME TO CLEAN AIR FILTER) vanishes.

HOW TO CLEAN AIR OUTLET, SUCTION GRILLE AND OUTSIDE PANELS

- Clean with soft cloth.
- When it is difficult to remove stains, use water or neutral detergent.
- Clean the suction grille when it is shut.

NOTE
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide. It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Do not use water or air of 50˚C or higher for cleaning air filters and outside panels.

START UP AFTER A LONG STOP

Confirm the following
- Check that the air inlet and outlet are not blocked. Remove any obstacle.
- Check if the earth is connected.
  Might there be a broken wire somewhere?
  Contact your dealer if there are any problems.

Clean the air filter and outside panels
- After cleaning the air filter, make sure to attach it.

Turn on the main power supply switch
- The display on the remote controller will be shown when the power is turned on.
- To protect the unit, turn on the main power switch at least 6 hours before operation.

WHAT TO DO WHEN STOPPING THE SYSTEM FOR A LONG PERIOD

Turn on FAN OPERATION for a half day and dry the unit.
- Refer to "FAN OPERATION".

Cut off the power supply.
- When the main power switch is turned on, some watts of electricity is being used even if the system is not operating.
  Turn off the main power supply switch for saving energy.
- The display on the remote controller will vanish when the main power switch is turned off.

Clean the air filter and the exterior.
- Be sure to replace the air filter to its original place after cleaning. Refer to "MAINTENANCE".

9. NOT MALFUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction

I. THE SYSTEM DOES NOT OPERATE
- **The system does not restart immediately after the ON/OFF button is pressed.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- **The system does not restart immediately when TEMPERATURE SETTING button is returned to the former position after pushing the button.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- **The system does not start when the display shows " " (UNDER CENTRALIZED CONTROL) and it flashes for few seconds after pressing an operation button.**
  This is because the system is under centralized control. Flashes on the display indicates that the system cannot be controlled by the remote controller.
- **The system does not start immediately after the power supply is turned on.**
  Wait one minute until the micro computer is prepared for operation.

II. WHITE MIST COMES OUT OF A UNIT
- **When humidity is high during cooling operation (In oily or dusty places)**
  If the inside of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the inside of the indoor unit. Ask your Daikin dealer for details on cleaning the unit. This operation requires a qualified service person.
- **When the system is changed over to HEATING OPERATION after DEFROST OPERATION.**
  Moisture generated by DEFROST becomes steam and exists.

III. NOISE OF AIR CONDITIONERS
- **A ringing sound after the unit is started.**
  This sound is generated by the temperature regulator working.
  It will quiet down after about a minute.
- **A continuous flow "Shuh" sound is heard when the systems is in COOLING or DEFROST OPERATION.**
  This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- **A "Shuh" sound which is heard at the start or immediately after the stop of operation or which is heard at the start or immediately after the stop of DEFROST OPERATION.**
  This is the noise of refrigerant caused by flow stop and flow change.
- **A continuous low "Shah" sound is heard when the system is in COOLING OPERATION or at a stop.**
  The noise is heard when the drain pump is in operation.
- **A "Pishi-pishi" squeaking sound is heard when the system is in operation or after the stop of operation.**
  Expansion and contraction of plastic parts caused by temperature change makes this noise.

IV. DUST FROM THE UNITS
- **Dust may blow out from the unit after starting operation from long resting time.**
  Dust absorbed by the unit blows out.

V. THE UNITS GIVE OFF ODORS
The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.

VI. THE LIQUID CRYSTAL OF THE REMOTE CONTROLLER SHOW " 88 "
- **It happens immediately after the main power supply switch is turned on.**
  This shows that the remote controller is in normal condition.
  This continues temporary.

10. TROUBLE SHOOTING

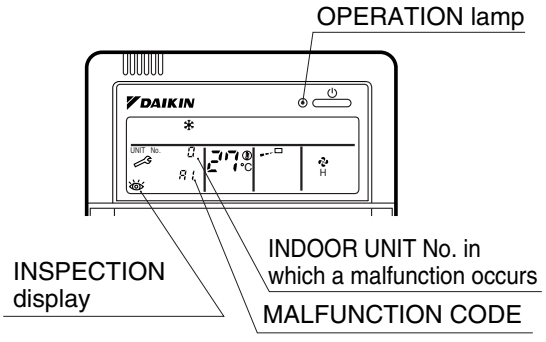
I. If one of the following malfunctions occurs, take the measures shown below and contact your Daikin dealer.

The system must be repaired by a qualified service person.

⚠ WARNING

When the air conditioner is in abnormal conditions (smell of something burning, etc), turn off power, and contact your dealer
Continued operation under such circumstances may result in a failure, electric shock, and fire.

- If a safety device such as a fuse, a breaker, or an earth leakage breaker frequently actuates, or ON/OFF switch does not properly work.
  Measure: Turn off the main power switch
- If water leaks from unit.
  Measure: Stop the operation.
- If the display " 👁 " (INSPECTION), "UNIT No.", and the OPERATION lamp flash and the MALFUNCTION CODE appears.



Measure: Notify your Daikin dealer and inform him/her of the display.

II. If the system does not properly operate except for the above mentioned case, and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

1. **If the system does not operate at all.**
   - Check if there is a power failure.
     Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after the power supply recovers.
   - Check if the fuse has blown or breaker has worked.
     Change the fuse or set the breaker.
2. **If the system stops operating after operating the system.**
   - Check if the air inlet or outlet of outdoor or indoor unit is blocked by obstacles.
     Remove the obstacle and make it well-ventilated.
   - Check if the air filter is clogged.
     Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).
3. **The system operates but it does not sufficiently cool or heat.**
   - If the air inlet or outlet of the indoor or the outdoor unit is blocked with obstacles.
     Remove the obstacle and make it well-ventilated.
   - If the air filter is clogged.
     Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).
   - If the set temperature is not proper (Refer to ADJUSTMENT).
   - If the FAN SPEED button is set to LOW SPEED (Refer to ADJUSTMENT).
   - If the doors or the windows are open. Shut doors or windows to prevent wind from coming in.
   - If direct sunlight enters the room (when cooling).
     Use curtains or blinds.
   - When there are too many inhabitants in the room (when cooling).
     Cooling effect decreases if heat gain of the room is too large.
   - If the heat source of the room is excessive (when cooling).
     Cooling effect decreases if heat gain of the room is too large.

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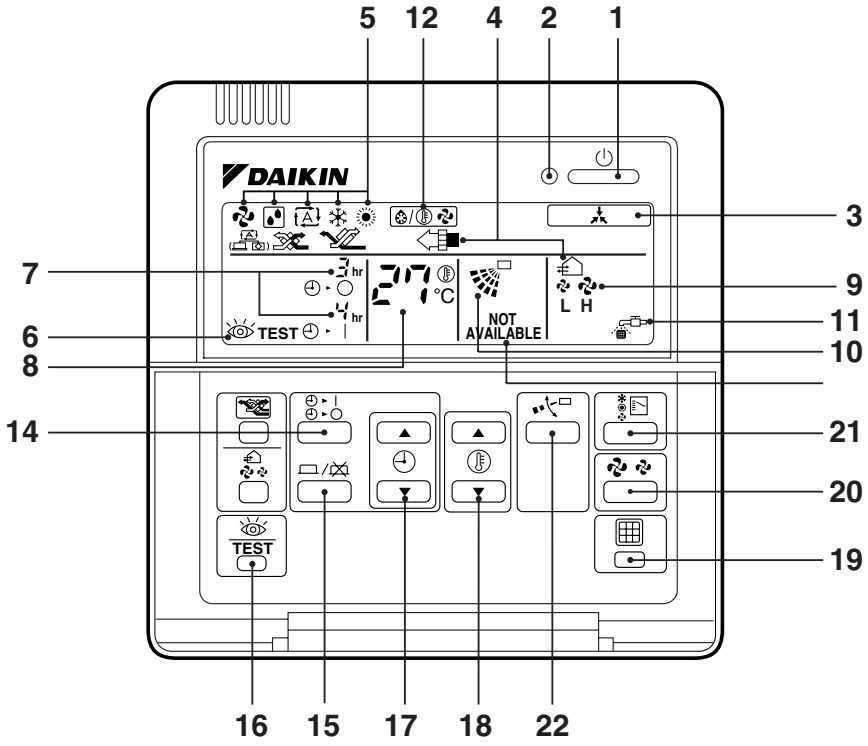
2.5 Ceiling Suspended Type



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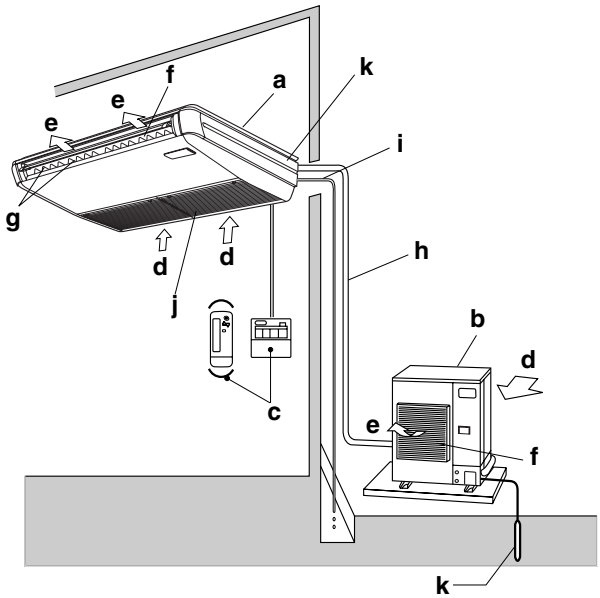

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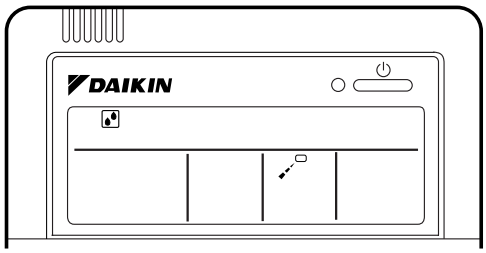

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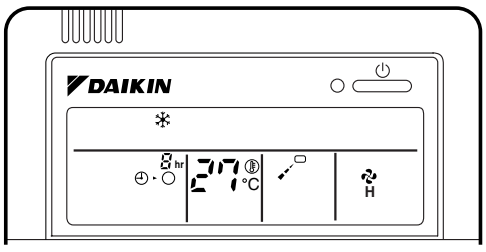


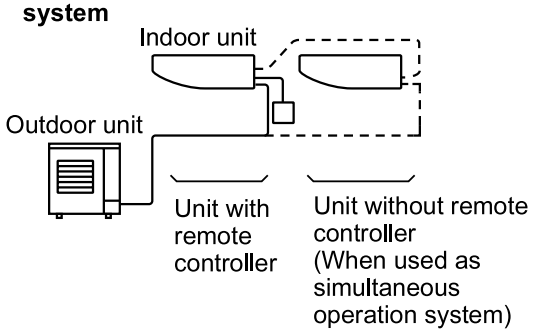
4

[1]

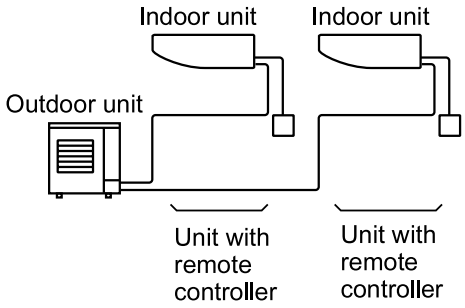
1. WHAT TO DO BEFORE OPERATION

This operation manual is for the following systems with standard control. Before initiating operation, contact your Daikin dealer for the operation that corresponds to your system.

- **Pair system or Simultaneous operation system**



- **Multi system**



NOTE

- If the unit you purchased is controlled by a wireless remote controller, also refer to the wireless remote controller's operation manual.

If your installation has a customized control system, ask your Daikin dealer for the operation that corresponds to your system.

- Heat pump type
  This system provides cooling, heating, automatic, program dry, and fan operation modes.
- Cooling only type
  This system provides cooling, program dry, and fan operation modes.

PRECAUTIONS FOR GROUP CONTROL SYSTEM OR TWO REMOTE CONTROLLER CONTROL SYSTEM

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm the following if your unit is of the following control system type.

- **Group control system**
  One remote controller controls up to 16 indoor units. All indoor units are equally set.
- **Two remote controllers control system**
  Two remote controllers control one indoor unit (In case of group control system, one group of indoor units) The unit is individually operated.

NOTE

- Contact your Daikin dealer in case of changing the combination or setting of group control and two remote controllers control system.

Names and functions of parts

Refer to figure 2 on page [1]

a	Indoor unit
b	Outdoor unit The external appearance of the outdoor unit varies depending on its capacity class. The outdoor unit shown in the figure is for reference to indicate features. Contact your Daikin Dealer and verify which outdoor unit you have.
c	Remote controller
d	Inlet air
e	Discharged air
f	Air outlet
g	Air flow flap (at air outlet)
h	Refrigerant piping, connection electric wire
i	Drain pipe
j	Suction grille The built-in air filter removes dust and dirt.
k	Ground wire Wire to ground from the outdoor unit to prevent electrical shocks.

2. SAFETY CONSIDERATIONS

We recommend that you read this instruction manual carefully before use to gain full advantage of the function of the air conditioner, and to avoid malfunction due to erroneous handling.
This air conditioner comes under the term appliances not accessible to the general public.

- **The precautions described below are WARNING and CAUTION. These are very important precautions concerning safety. Be sure to observe all of them without fail.**

⚠ **WARNING** .. These are the matters with possibilities leading to serious consequences such as death or serious injury due to erroneous handling.

⚠ **CAUTION** ... These are the matters with possibilities leading to injury or material damage due to erroneous handling including probabilities leading to serious consequences in some cases.

- **After reading, keep this manual at a place where any user can read at any time. Furthermore, make certain that this operation manual is handed to a new user when he takes over the operation.**

⚠ WARNING

Avoid exposure of your body directly to the cold air for a long time, or avoid excessive exposure of your body to the cold air.
Otherwise, your physical condition may be deteriorated and/or your health may be ruined.
When the air conditioner is in abnormal conditions (smell of something burning, etc), unplug the power cord from the outlet, and contact the dealer where you purchased the air conditioner.
Continued operation under such circumstances may result in a failure, electric shock, and fire.
Ask your dealer for installation of the air conditioner.
Incomplete installation performed by yourself may result in a failure, a water leakage, electric shock, and fire.
Ask your dealer for improvement, repair, and maintenance.
Incomplete improvement, repair, and maintenance may result in a failure, a water leakage, electric shock, and fire.
Do not insert your finger, a stick, etc., into the air inlet, outlet, and fan blades.
A fan in high-speed running may result in injury.
For refrigerant leakage, consult your dealer.
When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the limiting concentration even when it leaks. If the refrigerant leaks exceeding the level of limiting concentration, an oxygen deficiency accident may happen.
For installation of separately sold component parts, ask a specialist.
Be sure to use the separately sold component parts designated by our company.
Incomplete installation performed by yourself may result in a failure, a water leakage, electric shock, and fire.
Ask your dealer to move and reinstall the air conditioner.
Incomplete installation may result in a failure, a water leakage, electric shock, and fire.
Do not use any fuse with improper capacity.
The use of a piece of wire and whatnot may result in a failure and fire.
The refrigerant in the air conditioner is safe and normally does not leak. If the refrigerant leaks inside the room, the contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
Do not use the air conditioner until when a service person confirms to finish repairing the portion where the refrigerant leaks.

⚠ CAUTION

Do not use the air conditioner for other purposes.
Do not use the air conditioner for a special application such as the storage of foods, animals and plants, precision machines, and art objects as otherwise the deterioration of quality may result.
Do not remove the air outlet of the outdoor unit.
The fan may get exposed and result in injury.
When the air conditioner is used in combination with burners or heaters, perform sufficient ventilation.
Insufficient ventilation may result in an oxygen deficiency accident.
Check and make sure that foundation blocks are not damaged after a long use.
If they are left in a damaged condition, the unit may fall and result in injury.
Neither place a flammable spray bottle near the air conditioner nor perform spraying.
Doing so may result in a fire.
To clean the air conditioner, stop operation, and unplug the power cord from the outlet.
Otherwise, an electric shock and injury may result.
Do not operate the air conditioner with a wet hand.
An electric shock may result.
Do not place items that might be damaged by water under the indoor unit.
Water may condensate and drip if the humidity reaches 80% or if the drain exit gets clogged.
Do not place a burner or heater at a place directly exposed to the wind from the air conditioner.
Incomplete combustion of the burner or heater may result.
Do not allow a child to mount on the outdoor unit or avoid placing any object on it.
Falling or tumbling may result in injury.
Do not expose animals and plants directly to the wind from the air conditioner.
Adverse influence to animals and plants may result.
Do not wash the air conditioner with water.
Electric shock or fire may result.
Do not install the air conditioner at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.
Be sure to install an earth leakage breaker.
Unless it is installed, an electric shock or fire may result.

Be sure the air conditioner is electrically grounded.
Do not connect the grounding conductor to a gas pipe, water pipe, lightning arrester, and the grounding conductor for a telephone.
Imperfect grounding work may result in an electric shock.
Execute complete drain piping for perfect drainage.
Incomplete piping may result in a water leakage.
The appliance is not intended for use by young children or infirm persons without supervision.
Young children should be supervised to ensure that they do not play with the appliance.

3. OPERATION RANGE

If the temperature or the humidity is beyond the following conditions, safety devices may work and the air conditioner may not operate, or sometimes, water may drop from the indoor unit.

COOLING

OUTDOOR UNIT	INDOOR			OUTDOOR TEMPERATURE	
	TEMPERATURE		HUMIDITY		
R35 · 45 · 60	DB	18 to 33	80% or below	DB	– 15 to 46
	WB	12 to 24			
RY35 · 45 · 60	DB	18 to 33	80% or below	DB	– 5 to 46
	WB	12 to 24			
R71 · 100 · 125 RP71 · 100 · 125 REP71 · 100 · 125	DB	21 to 35	80% or below	DB	– 15 to 46
	WB	14 to 25			
RY71 · 100 · 125 RYP71 · 100 · 125 RYEP71 · 100 · 125	DB	18 to 35	80% or below	DB	– 5 to 46
	WB	12 to 25			
RZP71 · 100 · 125	DB	21 to 35	80% or below	DB	– 5 to 50
	WB	14 to 25			
RQ71 · 100 · 125	DB	18 to 37	80% or below	DB	– 5 to 46
	WB	12 to 28			
RR71 · 100 · 125	DB	18 to 37	80% or below	DB	– 15 to 46
	WB	12 to 28			
RZQ71 · 100 · 125 · 140	DB	18 to 37	80% or below	DB	– 15 to 50
	WB	12 to 28			
RS50 · 60 RKS35 · 50 · 60 RXS35 · 50 · 60	DB	21 to 32	80% or below	DB	– 10 to 46
	WB	14 to 23			
3MKS50 4MKS58 · 75 · 90 3MXS52 · 2MXS52 4MXS68 · 80	DB	21 to 32	80% or below	DB	– 10 to 46
	WB	14 to 23			
RMKS112 · 140 · 160 RMXS112 · 140 · 160	DB	21 to 32	80% or below	DB	– 5 to 46
	WB	14 to 23			

HEATING

OUTDOOR UNIT	INDOOR TEMPERATURE		OUTDOOR TEMPERATURE	
RY35 · 45 · 60	DB	15 to 27	DB	– 9 to 21
			WB	– 10 to 15.5
RY71 · 100 · 125 RYP71 · 100 · 125 RYEP71 · 100 · 125	DB	15 to 27	DB	– 9 to 21
			WB	– 10 to 15.5
RZP71 · 100 · 125	DB	15 to 27	DB	– 14 to 21
			WB	– 15 to 15.5
RQ71 · 100 · 125	DB	10 to 27	DB	– 9 to 21
			WB	– 10 to 15
RZQ71 · 100 · 125 · 140	DB	10 to 27	DB	– 19.5 to 21
			WB	– 20 to 15.5
RXS35 · 50 · 60	DB	10 to 30	DB	– 14 to 24
			WB	– 15 to 18
3MXS52 · 2MXS52 4MXS68 · 80	DB	10 to 30	DB	– 14 to 21
			WB	– 15 to 15.5
RMXS112 · 140 · 160	DB	10 to 30	DB	– 14 to 21
			WB	– 15 to 15.5

DB: Dry bulb temperature (˚C)
WB: Wet bulb temperature (˚C)

The setting temperature range of the remote controller is 16˚C to 32˚C.

4. INSTALLATION SITE

Regarding places for installation

- **Is the air conditioner installed at a well-ventilated place where there are no obstacles around?**
- **Do not use the air conditioner in the following places.**
  a. Filled with much mineral oil such as cutting oil
  b. Where there is much salt such as a beach area
  c. Where sulfured gas exists such as a hot-spring resort
  d. Where there are considerable voltage fluctuations such as a factory or plant
  e. Vehicles and vessels
  f. Where there is much spray of oil and vapor such as a cookery, etc.
  g. Where there are machines generating electromagnetic waves
  h. Filled with acid and/or alkaline steam or vapor
- **Is a snow protection measure taken?**
  For details, consult your dealer.

Regarding wiring

- **All wiring must be performed by an authorized electrician.**
  To do wiring, ask your dealer. Never do it by yourself.

- **Make sure that a separate power supply circuit is provided for this air conditioner and that all electrical work is carried out by qualified personnel according to local laws and regulations.**

Pay attention to running noises, too

- **Are the following places selected?**
  a. A place that can sufficiently withstand the weight of the air conditioner with less running noises and vibrations.
  b. A place where the hot wind discharged from the air outlet of the outdoor unit and the running noises.
- **Are you sure that there are no obstacles near the air outlet of the outdoor unit?**
  Such obstacles may result in declined performance and increased running noises.
- **If abnormal noises occur in use, stop the operation of the air conditioner, and then consult your dealer or our service station.**

Regarding drainage of drain piping

- **Is the drain piping executed to perform complete drainage?**
  If proper drainage is not carried out from the outdoor drain pipes during air-conditioning operation, chances are that dust and dirt are clogged in the pipe. This may result in a water leakage from the indoor unit. Under such circumstances, stop the operation of the air conditioner, and then consult your dealer or our service station.

5. NAME AND FUNCTION OF EACH SWITCH AND DISPLAY ON THE REMOTE CONTROLLER

Refer to figure 1 on page [1]

1	**ON/OFF BUTTON**
	Press the button and the system will start. Press the button again and the system will stop.
2	**OPERATION LAMP (RED)**
	The lamp lights up during operation.
3	**DISPLAY " " (UNDER CENTRALIZED CONTROL)**
	When this display shows, the system is UNDER CENTRALIZED CONTROL.
4	**DISPLAY " " " " " " " " (VENTILATION/AIR CLEANING)**
	This display shows that the total heat exchange and the air cleaning unit are in operation (These are optional accessories).
5	**DISPLAY " " " " " " " " " (OPERATION MODE)**
	This display shows the current OPERATION MODE. For cooling only type, " " (Auto) and " " (Heating) are not installed.
6	**DISPLAY " TEST" (INSPECTION/TEST OPERATION)**
	When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.
7	**DISPLAY " " (PROGRAMMED TIME)**
	This display shows the PROGRAMMED TIME of the system start or stop.
8	**DISPLAY " " (SET TEMPERATURE)**
	This display shows the set temperature.
9	**DISPLAY " " (FAN SPEED)**
	This display shows the set fan speed.
10	**DISPLAY " " (AIR FLOW FLAP)**
	Refer to "AIR FLOW DIRECTION ADJUST".
11	**DISPLAY " " (TIME TO CLEAN AIR FILTER)**
	Refer to "HOW TO CLEAN THE AIR FILTER".
12	**DISPLAY " " (DEFROST)**
	Refer to "DEFROST OPERATION".
13	**NON-FUNCTIONING DISPLAY**
	If that particular function is not available, pressing the button may display the words "NOT AVAILABLE" for a few seconds. When running multiple units simultaneously The "NOT AVAILABLE" message will only be appear if none of the indoor units is equipped with the function. If even one unit is equipped with the function, the display will not appear.
14	**TIMER MODE START/STOP BUTTON**
	Refer to "PROGRAM TIMER OPERATION".
15	**TIMER ON/OFF BUTTON**
	Refer to "PROGRAM TIMER OPERATION".
16	**INSPECTION/TEST OPERATION BUTTON**
	This button is used only by qualified service persons for maintenance purposes.
17	**PROGRAMMING TIME BUTTON**
	Use this button for programming "START and/or STOP" time.
18	**TEMPERATURE SETTING BUTTON**
	Use this button for SETTING TEMPERATURE.
19	**FILTER SIGN RESET BUTTON**
	Refer to HOW TO CLEAN THE AIR FILTER.

20	**FAN SPEED CONTROL BUTTON**
	Press this button to select the fan speed, HIGH or LOW, of your choice.
21	**OPERATION MODE SELECTOR BUTTON**
	Press this button to select OPERATION MODE.
22	**AIR FLOW DIRECTION ADJUST BUTTON**
	Refer to “AIR FLOW DIRECTION ADJUST ”.

NOTE
- For the sake of explanation, all indications are shown on the display in Figure 1 contrary to actual running situations.

6. OPERATION PROCEDURE

Refer to figure 1 on page [1]

- Operating procedure varies with heat pump type and cooling only type. Contact your Daikin dealer to confirm your system type.
- To protect the unit, turn on the main power switch 6 hours before operation.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

COOLING, HEATING, AUTOMATIC, FAN, AND PROGRAM DRY OPERATION

Operate in the following order.

1 OPERATION MODE SELECTOR

Press OPERATION MODE SELECTOR button several times and select the OPERATION MODE of your choice as follows.

■COOLING OPERATION..... “ ❄ ”
■HEATING OPERATION..... “ ☀ ”
■AUTOMATIC OPERATION..... “ A ”
- In this operation mode, COOL/HEAT changeover is automatically conducted.

■FAN OPERATION ..... “ ”
■DRY OPERATION..... “ ”
- The function of this program is to decrease the humidity in your room with the minimum temperature decrease.
- Micro computer automatically determines TEMPERATURE and FAN SPEED.
- This system does not go into operation if the room temperature is below 16˚C.

Refer to figure 3 on page [1]

- For cooling only type, “COOLING” , “FAN” and “DRY” operation are able to select.

2 ON/OFF

Press ON/OFF BUTTON
OPERATION lamp lights up or goes off and the system starts or stops OPERATION.

[EXPLANATION OF HEATING OPERATION]

DEFROST OPERATION

- As the frost on the coil of an outdoor unit increase, heating effect decreases and the system goes into DEFROST OPERATION.
- The indoor unit fan stops and the remote controller display shows “ ”.
- After 6 to 8 minutes (maximum 10 minutes) of DEFROST OPERATION, the system returns to HEATING OPERATION.

Regarding outside air temperature and heating capacity

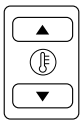
- The heating capacity of the air conditioner declines as the outside air temperature falls. In such a case, use the air conditioner in combination with other heating systems.
- A warm air circulating system is employed, and therefore it takes some time until the entire room is warmed up after the start of operation.
- An indoor fan runs to discharge a gentle wind automatically until the temperature inside the air conditioner reaches a certain level. At this time, the remote controller displays “ ”. Leave it as it stands and wait for a while.
- When the warm air stays under the ceiling and your feet are cold, we recommend that you use a circulator (a fan to circulate the air inside the room). For details, consult your dealer.

ADJUSTMENT

For programming TEMPERATURE, FAN SPEED and AIR FLOW DIRECTION, follow the procedure shown below.

TEMPERATURE SETTING

Press TEMPERATURE SETTING button and program the setting temperature.



Each time this button is pressed, setting temperature rises 1˚C.

Each time this button is pressed, setting temperature lowers 1˚C.

- The setting is impossible for fan operation.

NOTE

- The setting temperature range of the remote controller is 16˚C to 32˚C.

FAN SPEED CONTROL

Press FAN SPEED CONTROL button.

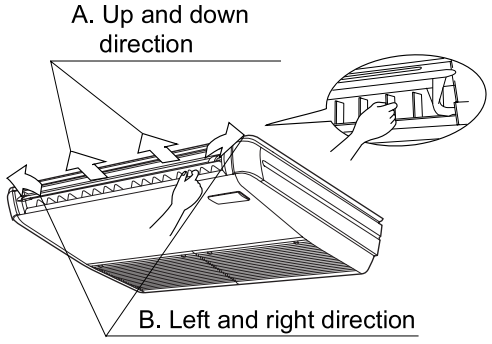
High or Low fan speed can be selected.

The micro computer may sometimes control the fan speed in order to protect the unit.

AIR FLOW DIRECTION ADJUST

- There are 2 ways of adjusting the air discharge angle.
  1. A. Up and down adjustment
  2. B. Left and right direction

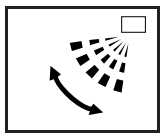
Fig. 1



A. UP AND DOWN DIRECTION

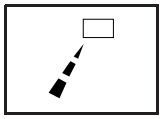
- The movable limit of the flap is changeable. Contact your Daikin dealer for details.

Press the AIR FLOW DIRECTION ADJUST button to select the air direction as following.



The AIR FLOW FLAP display swings as shown the left and the air flow direction continuously varies. (Automatic swing setting)

Press AIR FLOW DIRECTION ADJUST button to select the air direction of your choice.



The AIR FLOW FLAP display stops swinging and the air flow direction is fixed (Fixed air flow direction setting).

MOVEMENT OF THE AIR FLOW FLAP

For the following conditions, micro computer controls the air flow direction so it may be different from the display.

Operation mode	Cooling	Heating
Operation condition	• When room temperature is lower than the set temperature	• When room temperature is higher than the set temperature • At defrost operation
	• When operating continuously at downward air flow direction	

Operation mode includes automatic operation.

B. LEFT AND RIGHT DIRECTION

- Adjusting air flow direction in the left and right direction. **(Refer to Fig. 1)**

NOTE

- Only make adjustments after you have stopped the air flow direction swing in a position where adjustments are possible. Your hand may get caught if you attempt to make adjustments while the unit is swinging.

PROGRAM TIMER OPERATION

Operate in the following order.

- The timer is operated in the following two ways.
- Programming the stop time (◷ ▸ ○)
  .... The system stops
  operating after the set time has elapsed.
- Programming the start time (◷ ▸ |)
  .... The system starts
  operating after the set time has elapsed.
- The timer can be programmed a maximum of 72 hours.
- The start and the stop time can be simultaneously programmed.

1 TIMER MODE START/STOP

Press the TIMER MODE START/STOP button several times and select the mode on the display.

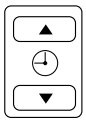
The display flashes.

For setting the timer stop .... " ◷ ▸ ○ "

For setting the timer start .... " ◷ ▸ | "

2 PROGRAMMING TIME

Press the PROGRAMMING TIME button and set the time for stopping or starting the system.



When this button is pressed, the time advances by 1 hour.

When this button is pressed, the time goes backward by 1 hour.

3 TIMER ON/OFF

Press the TIMER ON/OFF BUTTON.

The timer setting procedure ends.

The display " ◷ ▸ ○ or ◷ ▸ | " changes from flashing light to a constant light.

Refer to figure 4 on page [1]

NOTE

- When setting the timer Off and On at the same time, repeat the above procedure from **1** to **3** once again.

When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and then 1 hour later the system will start.

- After the timer is programmed, the display shows the remaining time.
- Press the TIMER ON/OFF BUTTON once again to cancel programming. The display vanishes.

7. OPTIMUM OPERATION

Observe the following precautions to ensure the system operates.

- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling.
- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate the room regularly.
  Using the unit for long periods of time requires attentive ventilation of the room.
- Keep doors and windows closed. If the doors and windows remain open, room air will flow out and cause to decrease the effect of cooling and heating.
- Do not place other heaters directly below the indoor unit.
  They may deform due to the heat.
- Never place objects near the air inlet and the air outlet of the unit. It may cause deterioration in the effect or stop in the operation.
- Turn off the main power supply switch when it is not used for long periods of time. When the main power switch is turned on, some watts of electricity is being used even if the system is not operating. Turn off the main power supply switch for saving energy. When reoperating, turn on the main power supply switch 6hours before operation for smooth running (Refer to MAINTENANCE).
- When the display shows " " (TIME TO CLEAN AIR FILTER), ask a qualified service person to clean the filters (Refer to MAINTENANCE).

8. MAINTENANCE (FOR SERVICE PERSONNEL)

ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE

IMPORTANT!

- **BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED**
- To clean the air conditioner, be sure to stop operation, and turn the power switch off. Otherwise, an electric shock and injury may result.
- Do not wash the air conditioner with water Doing so may result in an electric shock.
- Be careful with a scaffold or staging Caution must be exercised because of work at a high place.

Fig. 2

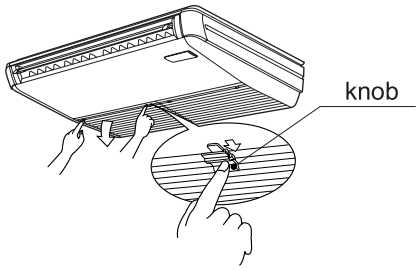


Fig. 3

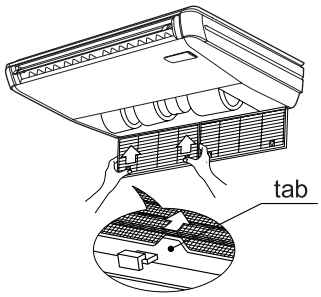


Fig. 4

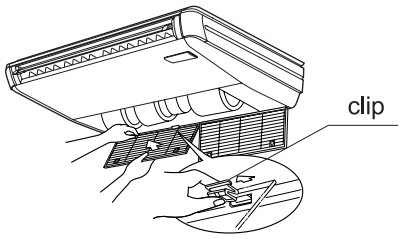
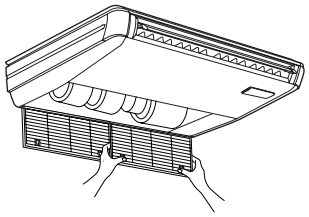


Fig. 5



HOW TO CLEAN THE AIR FILTER

Clean the air filter when the display shows " " (TIME TO CLEAN AIR FILTER).
It will display that it will operate for a set amount of time.
Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.
If the dirt becomes impossible to clean, change the air filter (Air filter for exchange is optional).

1. **Open the suction grille.**
   Slide both knobs simultaneously as shown and then pull them downward.
   (Do the same procedure for closing.)
   (Refer to Fig. 2)
2. **Remove the air filters.**
   Push the 2 tabs up, and slowly lower the grille.
   (Refer to Fig. 3)
3. **Clean the air filter.**
   Use vacuum cleaner **A)** or wash the air filter with water **B).**
   A)Using a vacuum cleaner

   B)Washing with water
   When the air filter is very dirty, use soft brush and neutral detergent.

   Remove water and dry in the shade.

NOTE

- Do not wash the air conditioner with hot water of more than 50˚C, as doing so may result in discoloration and/or deformation.
- Do not expose it to fire, as doing so may result in burning.

4. **Fix the air filter.**
   Set the hatch of the air filter to the fook of the suction grille, and fix the air filter.
   (Refer to Fig. 5)
5. **Close the suction grille.**
   Refer to item No. 1.
6. **After turning on the power, press FILTER SIGN RESET BUTTON.**
   The "TIME TO CLEAN AIR FILTER" display vanishes.

HOW TO CLEAN AIR OUTLET AND OUTSIDE PANELS

- Clean with soft cloth.
- When it is difficult to remove stains, use water or neutral detergent.

NOTE

- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide. It may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Do not use water or air of 50˚C or higher for cleaning air filters and outside panels.

HOW TO CLEAN THE SUCTION GRILLE

1. **Open the suction grille.**
   Slide both knobs and then pull them downward. (Do the same procedure for closing.)
2. **Remove the air filter.**
   Refer to “HOW TO CLEAN THE AIR FILTER”. **(Refer to Fig. 3)**
3. **Remove the suction grille.**
   Open the suction grille and pull the clips on the back of the suction grille forward. **(Refer to Fig. 4)**
4. **Clean the suction grille.**
   Wash with a soft bristle brush and neutral detergent or water, and dry throughly.

   - **When very grimy**

   Directly apply the type of detergent used for cleaning ventilation fans or ovens, wait 10 minutes, and then rinse with water.

NOTE

- Do not wash the air conditioner with hot water of more than 50˚C, as doing so may result in discoloration and/or deformation.

5. **Fix the air filter.**
   Refer to “HOW TO CLEAN THE AIR FILTER ”.
6. **Fix the suction grille.**
   Refer to item No. 3.
7. **Close the suction grille.**
   Refer to item No. 1.

START UP AFTER A LONG STOP

Confirm the following

- Check that the air inlet and outlet are not blocked. Remove any obstacle.
- Check if the earth is connected.
  Might there be a broken wire somewhere?
  Contact your dealer if there are any problems

Clean the air filter and outside panels

- After cleaning the air filter, make sure to attach it.

Turn on the main power supply switch

- The display on the remote controller will be shown when the power is turned on.
- To protect the unit, turn on the main power switch at least 6 hours before operation.

WHAT TO DO WHEN STOPPING THE SYSTEM FOR A LONG PERIOD

Turn on FAN OPERATION for a half day and dry the unit.

- Refer to “**6. OPERATION PROCEDURE**”.

Cut off the power supply.

- When the main power switch is turned on, some watts of electricity is being used even if the system is not operating.
  Turn off the main power supply switch for saving energy.
- The display on the remote controller will vanish when the main power switch is turned off.

Clean the air filter and the exterior.

- Be sure to replace the air filter to its original place after cleaning. Refer to “MAINTENANCE”.

9. NOT MALFUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction

I. THE SYSTEM DOES NOT OPERATE

- **The system does not restart immediately after the ON/OFF BUTTON is pressed.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- **The system does not restart immediately when TEMPERATURE SETTING button is returned to the former position after pushing the button.**
  If the OPERATION lamp lights, the system is in normal condition.
  It does not restart immediately because a safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.

- **The system does not start when the display shows " " (UNDER CENTRALIZED CONTROL) and it flashes for few seconds after pressing an operation button.**
  This is because the system is under centralized control. Flashes on the display indicates that the system cannot be controlled by the remote controller.
- **The system does not start immediately after the power supply is turned on.**
  Wait one minute until the micro computer is prepared for operation.
- **The outdoor unit is stopped**
  This is because the room temperature has reached the set temperature. The indoor unit switches to fan operation.

II. WHEN " " (UNDER CENTRALIZED CONTROL) IS DISPLAYED AND OPERATION IS DIFFERENT FROM THE REMOTE CONTROL DISPLAY.
This is because operating mode is controlled by a micro computer, as shown below, depending on the operating mode of the other connected indoor units when using in a multi system.

- **If the operating mode does not match that of the other indoor units which are already running, the indoor unit goes into standby mode (the fan stops and the air flow flaps become horizontal).**
  The unit will go into the above mode if either cooling, dry, or fan operation mode are set together with heating mode.

NOTE

- Normally, the operation mode in the room where the unit is first run is given priority, but the following situations are exceptions, so please keep this in mind.
  a If the operation mode of the first room is FAN Mode, then using Heating Mode in any room after this will give priority to heating. In this situation, the air conditioner running in FAN Mode will go on standby.
  b With the Priority Room Setting active
  Contact your Daikin dealer for the operation that corresponds to your system.
- **If the total capacity of all the indoor units running exceeds the limit, the indoor unit will go into standby mode (fan and air flow direction remain as set). (Only for cooling-only type.)**
- **If another indoor unit goes into heating mode after cooling, the unit may go into dry mode (fan operates whisper and the air flow flaps become horizontal).**

III. THE FAN SPEED IS DIFFERENT FROM THE SETTING.

- **Pressing the fan speed control button does not change the fan speed.**
  When the room temperature reaches the set temperature in heating mode, the power supply from the outdoor unit stops and the indoor unit goes into whisper mode (in a multi system, the fan goes back and forth between stop and whisper).
  This is to prevent the cool air from being blown directly onto anyone in the room.

IV. AIR BLOW DIRECTION IS NOT AS SPECIFIED.

- **Actual air blow direction is not as shown on the remote controller.**
- **Automatic swing setting does not work.**
  Refer to "AIR FLOW DIRECTION ADJUST".

V. WHITE MIST COMES OUT OF A UNIT

- **When humidity is high during cooling operation (In oily or dusty places)**
  If the inside of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the inside of the indoor unit. Ask your Daikin dealer for details on cleaning the unit. This operation requires a qualified service person.
- **When the system is changed over to HEATING OPERATION after DEFROST OPERATION.**
  Moisture generated by DEFROST becomes steam and exists.

VI. NOISE OF AIR CONDITIONERS

- **A ringing sound after the unit is started. This sound is generated by the temperature regulator working.**
  It will quiet down after about a minute.
- **A continuous flow "Shuh" sound is heard when the systems is in COOLING or DEFROST OPERATION.**
  This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- **A "Shuh" sound which is heard at the start or immediately after the stop of operation or which is heard at the start or immediately after the stop of DEFROST OPERATION.**
  This is the noise of refrigerant caused by flow stop and flow change.
- **A continuous flow "Shah" sound is heard when the system is in COOLING OPERATION or at a stop.**
  The noise is heard when the drain pump is in operation.
- **A "Pishi-pishi" squeaking sound is heard when the system is in operation or after the stop of operation.**
  Expansion and contraction of plastic parts caused by temperature change makes this noise.

VII.DUST FROM THE UNITS

- **Dust may blow out from the unit after starting operation from long resting time.**
  Dust absorbed by the unit blows out.

VIII.THE UNITS GIVE OFF ODORS

The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.

IX.THE LIQUID CRYSTAL OF THE REMOTE CONTROLLER SHOW " 88 "

- **It happens immediately after the main power supply switch is turned on.**
  This shows that the remote controller is in normal condition.
  This continues temporary.

10. TROUBLE SHOOTING

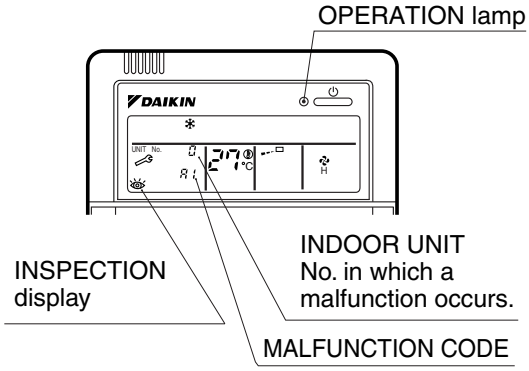
I. If one of the following malfunctions occurs, take the measures shown below and contact your Daikin dealer.

The system must be repaired by a qualified service person.

⚠ WARNING

When the air conditioner is in abnormal conditions (smell of something burning, etc), unplug the power cord from the outlet, and contact your dealer
Continued operation under such circumstances may result in a failure, electric shock, and fire.

- If a safety device such as a fuse, a breaker, or an earth leakage breaker frequently actuates, or ON/OFF switch does not properly work.
  Measure: Turn off the main power switch
- If water leaks from unit.
  Measure: Stop the operation.
- If the display " 👁 " (INSPECTION), "UNIT No.", and the OPERATION lamp flash and the "MALFUNCTION CODE" appears.



Measure: Notify your Daikin dealer and inform him/her of the display.

II. If the system does not properly operate except for the above mentioned case, and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

1. If the system does not operate at all.
- Check if there is a power failure.
  Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after the power supply recovers.
- Check if the fuse has blown or breaker has worked.
  Change the fuse or set the breaker.

2. If the system stops operating after operating the system.
- Check if the air inlet or outlet of outdoor or indoor unit is blocked by obstacles.
  Remove the obstacle and make it well-ventilated.
- Check if the air filter is clogged.
  Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).

3. The system operates but it does not sufficiently cool or heat.
- If the air inlet or outlet of the indoor or the outdoor unit is blocked with obstacles.
  Remove the obstacle and make it well-ventilated.
- If the air filter is clogged.
  Ask a qualified service person to clean the air filters (Refer to MAINTENANCE).
- If the set temperature is not proper (Refer to ADJUSTMENT).
- If the FAN SPEED button is set to LOW SPEED (Refer to ADJUSTMENT).
- If the air flow angle is not proper (Refer to AIR FLOW DIRECTION ADJUST).
- If the doors or the windows are open.
  Shut doors or windows to prevent wind from coming in.
- If direct sunlight enters the room (when cooling).
  Use curtains or blinds.
- When there are too many inhabitants in the room (when cooling).
  Cooling effect decreases if heat gain of the room is too large.
- If the heat source of the room is excessive (when cooling).
  Cooling effect decreases if heat gain of the room is too large.

3PN05140-1T

Part 8
Troubleshooting

1. Caution for Diagnosis

1.1 Troubleshooting with Operation Lamp

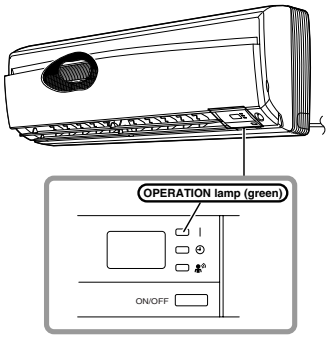
The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.
2. When a signal transmission error occurs between the indoor and outdoor units.

In either case, conduct the diagnostic procedure described in the following pages.

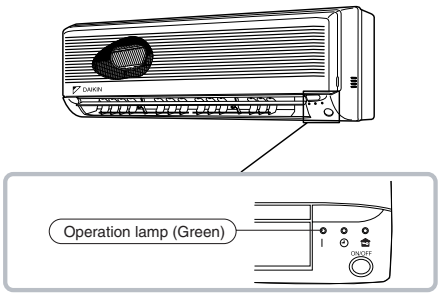
Location of Operation Lamp

In case of
FTK(X)S 20/25/35 D Series
FTKD 25/35 D Series



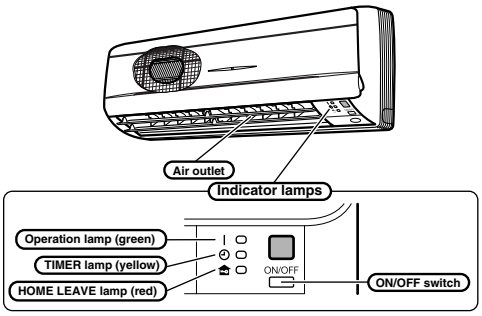
(R4298)

In case of
FTK 50/60/71 A Series



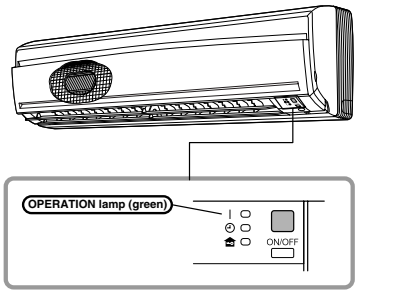
(R4791)

In case of
FTK(X)S 50/60/71 B(D) Series



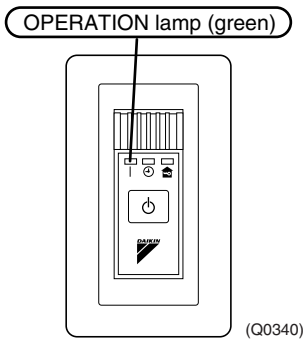
(R2837)

In case of
FTXS 50/60/71 F Series



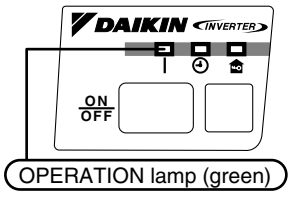
(R6332)

In case of
FDKS 25/35 C Series
CDK(X)S 25/35/50/60 C(D) Series
CDKD 25/35/50/60 C Series
CDKD 25/35 E Series



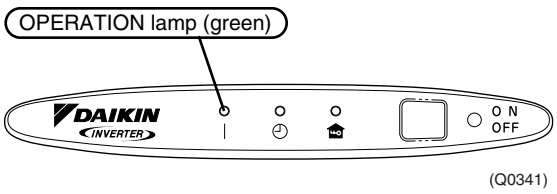
(Q0340)

In case of
FVXS 35/50 B Series



(Q0342)

In case of
FLK 25/35/50/60 A Series
FLXS 25/35/50/60 B Series



(Q0341)

Caution: Operation stops suddenly. (Operation lamp blinks.)
Cause of above trouble could be "Operation mode butting".
Check followings;
Are the operation modes all the same for indoor units connected to Multi system outdoor unit?
If not set all indoor units to the same operation mode and confirm that the operation lamp is not blinking.
Moreover, when the operation mode is in "Auto", set all indoor unit operation mode to "Cool" or "Heat" and check again if the operation lamp is normal.
If the lamp stops blinking after the above steps, there is no malfunction.

★Operation stops and operation lamp blinks only for indoor unit which the different operation mode is set later. (The first set operation mode has priority.)

1.2 Troubleshooting with the LED on the SkyAir Indoor Unit

Foreword

Troubleshooting can be carried out by service monitor LED (green). (Blinks when normal)
☼ : LED on ● : LED off ◑ : LED blinks — : No connection with troubleshooting

Microcomputer Normal Monitor HAP	Contents/Processing
◑	Incorrect wiring between indoor and outdoor unit If outdoor unit's HAP is off, proceed outdoor unit's trouble shooting. If outdoor unit's HAP blinks, failure of wiring or indoor or outdoor unit P.C board ass'y. (Note 4)
☼	Failure of indoor unit PC board ass'y (Note 5)
●	Malfunction of power supply or failure of PC board ass'y or broken transmission wire between indoor and outdoor unit. (Note 5)

Note:

1. When the INSPECTION/TEST button of remote controller is pushed, **INSPECTION** display blinks entering **INSPECTION** mode.
2. In the **INSPECTION** mode, when the ON/OFF button is pushed and held for 5 seconds or more, the aforementioned malfunctioning history display is off. In this case, after the malfunction code blinks 2 times, the code display turns to "00" (=Normal) and the unit No. turns to "0". The INSPECTION mode automatically switches to the normal mode (set temperature display).
3. Operation halts due to malfunction depending on the model or condition.
4. The wiring between indoor and outdoor unit may be incorrect or disconnected. Before performing the previously described troubleshooting, check the wiring. If the outdoor unit is inverter unit, the outdoor unit fuse may be blown.
5. Troubleshoot by turning off the power supply for a minimum of 5 seconds, turning it back on, and then rechecking the LED display.

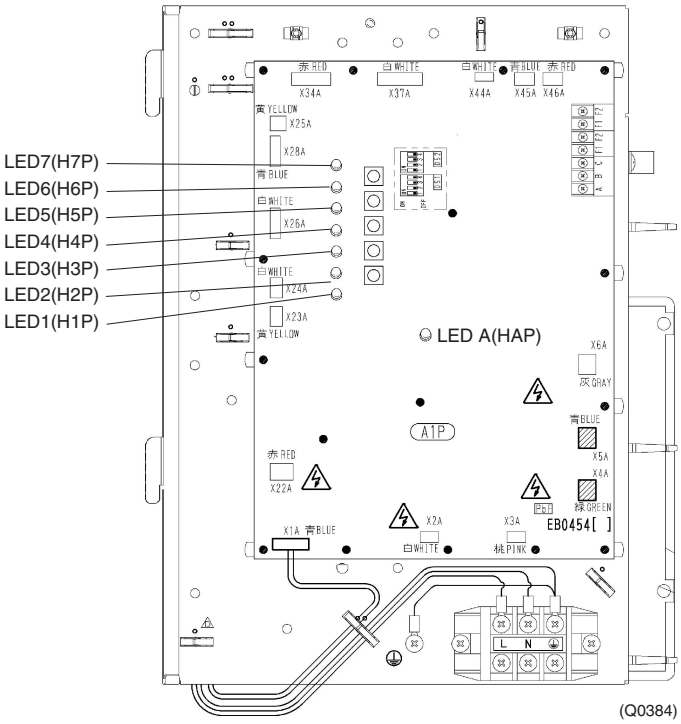
1.3 Troubleshooting with the LED on the Outdoor Unit

There are green and orange LEDs on the PCB. The blinking green LED indicates normal equipment condition, and the OFF condition of the orange LED indicates normal equipment condition.

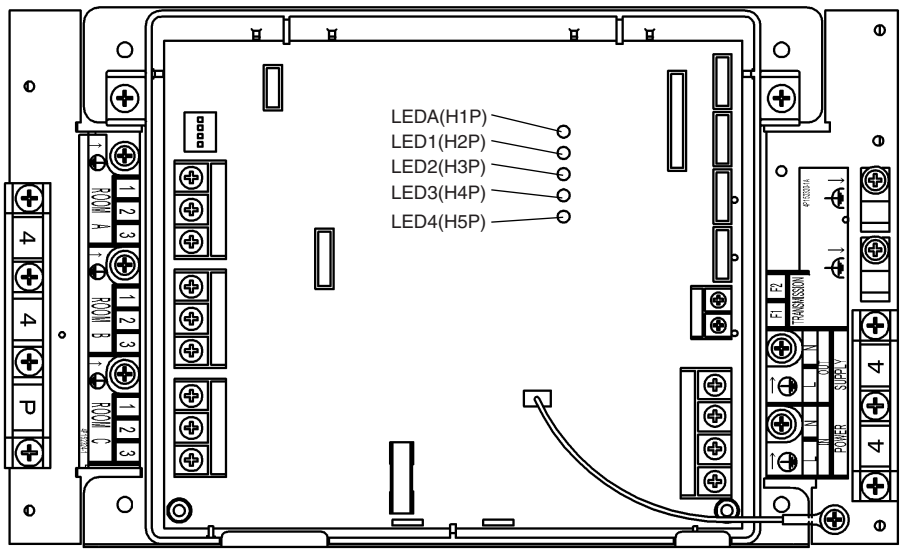
(Troubleshooting with the green LED)

The LED A (green) of the outdoor unit indicate microcomputer operation condition.

Even after the error is cancelled and the equipment operates in normal condition, the LED indication remains.



1.4 Troubleshooting with the LED on the BP Unit



(Q0395)

LED-B (GREEN)	
INTERCOMMNICATION TO OUTDOOR UNIT :NORMAL	DIAGNOSIS
◑	NORMAL
☼	ABNORMALITY → CHECK INTER-UNIT WIRING
●	ABNORMALITY → CHECK INTER-UNIT WIRING

GREEN	NORMALLY FLASHING
RED	NORMALLY OFF
☼	ON
◑	FLASH
●	OFF
–	IRRELEVANT

GREEN	RED				
MICROCOMPUTER :NORMAL LED-A	MALFUNTION DETECTION				DIAGNOSIS
	LED-1	LED-2	LED-3	LED-4	
◑	●	●	●	●	NORMAL → CHECK INDOOR OR OUTDOOR UNIT
◑	☼	☼	●	●	THERMISTOR ABNORMALITY
◑	☼	●	☼	☼	HIGH PRESSURE PROTECTOR WORKED, OR FREEZE-UP IN OPERATING UNIT OR STAND-BY UNIT
◑	☼	●	●	●	ELECTRONIC EXPANSION VALVE ABNORMALITY
☼	—	—	—	—	[NOTE 1]
●	—	—	—	—	POWER SUPPLY FAULT OR [NOTE 2]

NOTES 1. TURN THE POWER OFF THEN ON AGAIN, IF THE LED DISPLAY RECURS, THE BRANCH PROVIDER UNIT PCB IS FAULTY.
2. TURN THE POWER OFF AND THEN ON AGAIN, IF THE LED DISPLAY RECURS, TURN THE POWER OFF AND DISCONNECT LINE 2 OF INTER-UNIT WIRING FOR ALL UNITS, THEN TURN THE POWER ON AGAIN.

<IF LED-A IS OFF :>
THE BRANCH PROVIDER UNIT PCB IS FAULTY.
<IF LED-A IS FLASHING :>
THE INDOOR UNIT PCB IS FAULTY. TURN THE RECONNECT LINE 2 OF ALL INTER-UNIT WIRING AND CHECK THE DAIGNOSIS BY LEDS ON INDOOR UNIT PCB.

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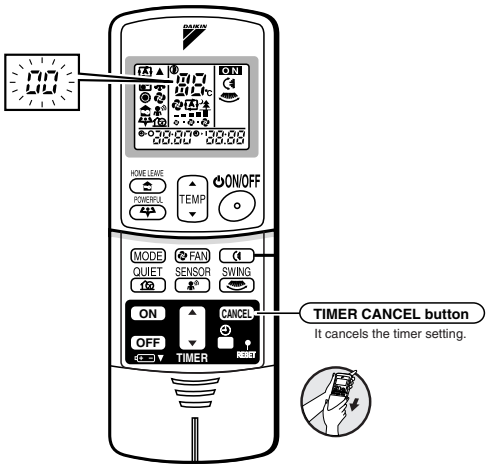
2. Service Check Function

2.1 RA Indoor Unit Wireless Remote Controller

In the ARC433 series remote controller, the temperature display sections on the main unit indicate corresponding codes.

Check Method 1

1. When the timer cancel button is held down for 5 seconds, a “00” indication flashes on the temperature display section.



<ARC433B70, 71>

(R4794)

2. Press the timer cancel button repeatedly until a continuous beep is produced.

■ The code indication changes in the sequence shown below, and notifies with a long beep.

No.	Code	No.	Code	No.	Code
1	00	12	C7	23	H0
2	U4	13	H8	24	E1
3	F3	14	J3	25	P4
4	E6	15	A3	26	L3
5	L5	16	A1	27	L4
6	A6	17	C4	28	H6
7	E5	18	C5	29	H7
8	F6	19	H9	30	U2
9	C9	20	J6	31	UH
10	U0	21	UA	32	EA
11	E7	22	A5	33	AH

<In case of ARC433A46, 47>

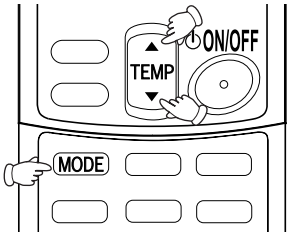
No.	Code	No.	Code	No.	Code
1	00	12	F6	23	A1
2	U4	13	C7	24	E1
3	L5	14	A3	25	UA
4	E6	15	H8	26	UH
5	H6	16	H9	27	P4
6	H0	17	C9	28	L3
7	A6	18	C4	29	L4
8	E7	19	C5	30	H7
9	U0	20	J3	31	U2
10	F3	21	J6	32	EA
11	A5	22	E5	33	AH

Note:

1. A short beep and two consecutive beeps indicate non-corresponding codes.
2. To cancel the code display, hold the timer cancel button down for 5 seconds. The code display also cancels itself if the button is not pressed for 1 minute.

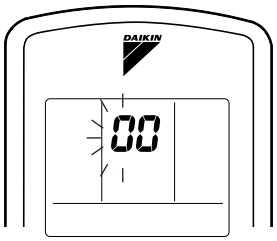
Check Method 2

1. Enter the diagnosis mode.
   Press the 3 buttons (TEMP▲,TEMP▼, MODE) simultaneously.



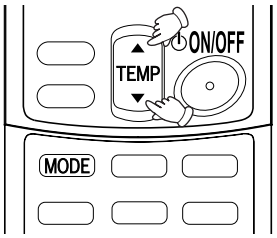
(R4272)

   The digit of the number of tens blinks.
   ★Try again from the start when the digit does not blink.



(R4273)

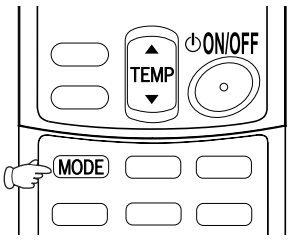
2. Press the TEMP button.
   Press TEMP▲ or TEMP▼ and change the digit until you hear the sound of “beep” or “pi pi”.



(R4274)

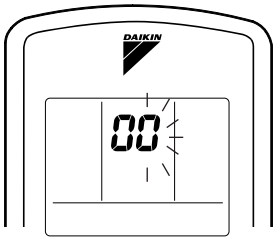
3. Diagnose by the sound.
   ★“pi” : The number of tens does not accord with the error code.
   ★“pi pi” : The number of tens accords with the error code.
   ★“beep” : The both numbers of tens and units accord with the error code. (→See 7.)

4. Enter the diagnosis mode again.
   Press the MODE button.



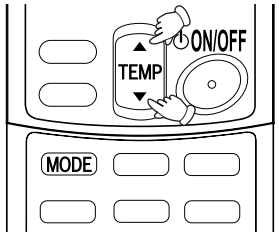
(R4275)

   The digit of the number of units blinks.



(R4276)

5. Press the TEMP button.
   Press TEMP▲ or TEMP▼ and change the digit until you hear the sound of “beep”.

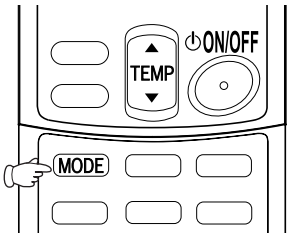


(R4277)

6. Diagnose by the sound.
   ★“pi” : The both numbers of tens and units do not accord with the error code.
   ★“pi pi” : The number of tens accords with the error code.
   ★“beep” : The both numbers of tens and units accord with the error code.

7. Determine the error code.
   The digits indicated when you hear the “beep” sound are error code.

8. Exit from the diagnosis mode.
   Press the MODE button.



(R4278)

Error Code List in Relation to RA Indoor Units

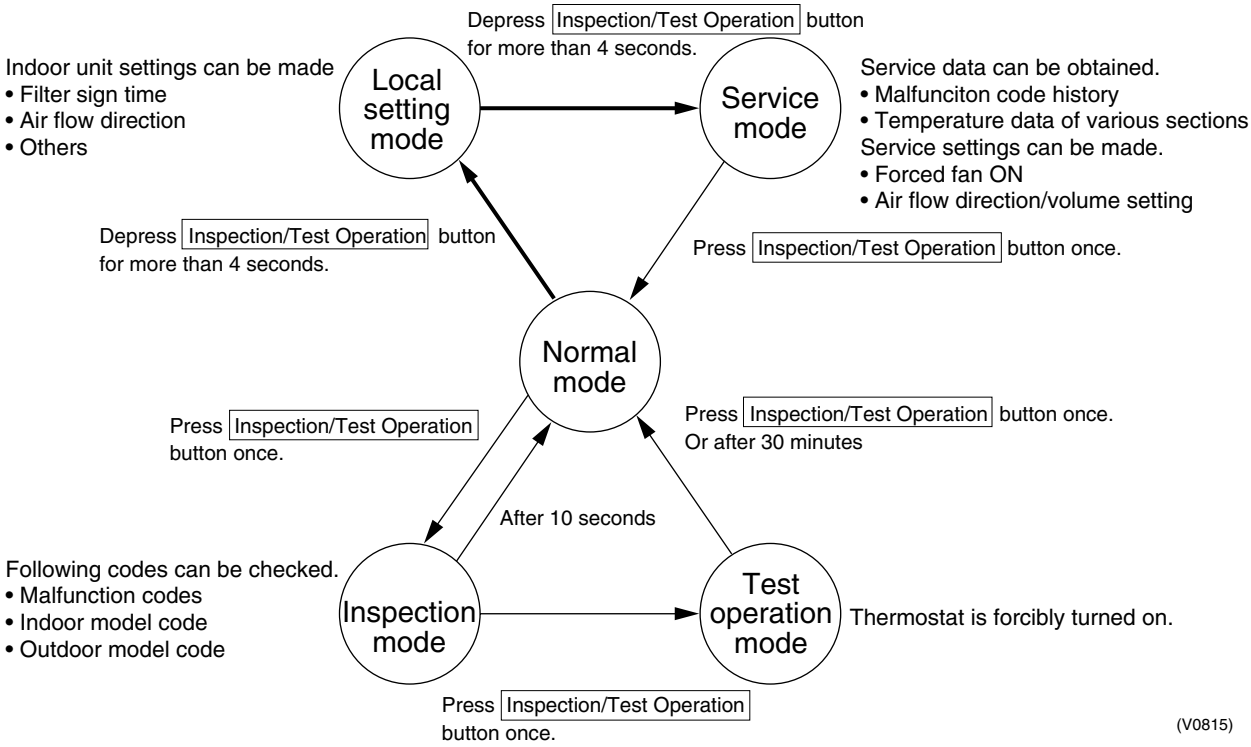
- : Not used for troubleshooting

Indication on the remote controller	Description of the Fault		Details of fault (Refer to the indicated page.)
00	Indoor unit in normal condition (Conduct a diagnosis of the outdoor unit.)		—
A1	Indoor unit PCB abnormality		329
A5	Freeze-up protection control or high pressure control (heat pump model only)		330
A6	Fan motor or related abnormality	AC motor (Wall : FTKD25/35D series Duct, Floor / Ceiling)	332
		DC motor (Wall FTK(X)S20~35 D series, 50~71 class, Floor)	333
C4	Heat exchanger thermistor or related abnormality		335
C7	Shutter drive motor / shutter limit switch abnormality		336
C9	Room temperature thermistor abnormality		335

2.2 SkyAir Indoor Unit INSPECTION/TEST Button

Explanation The following modes can be selected by using the [Inspection/Test Operation] button on the remote control.

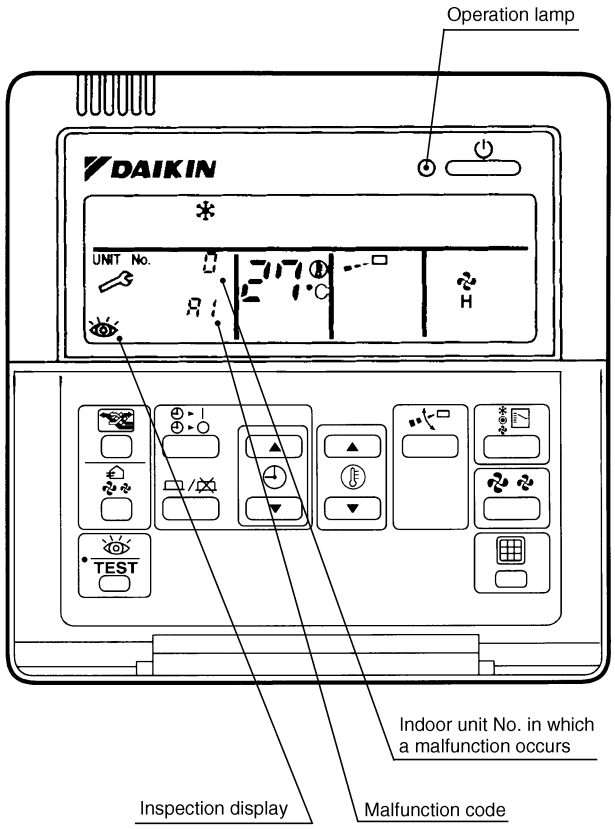
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



2.3 SkyAir Indoor Unit Wired Remote Controller

Explanation

If operation stops due to malfunction, the remote controller's operation LED blinks, and malfunction code is displayed. (Even if stop operation is carried out, malfunction contents are displayed when the inspection mode is entered.) The malfunction code enables you to tell what kind of malfunction caused operation to stop. See page 325 for malfunction code and malfunction contents.



(S2001)

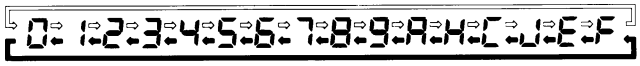
2.4 SkyAir Indoor Unit Wireless Remote Controller

If equipment stops due to a malfunction, the operation indicating LED on the light reception section flashes.
The malfunction code can be determined by following the procedure described below. (The malfunction code is displayed when an operation error has occurred. In normal condition, the malfunction code of the last problem is displayed.)

Procedure

1. Press the INSPECTION/TEST button to select “Inspection.”
   The equipment enters the inspection mode. The “Unit” indication lights and the Unit No. display shows flashing “0” indication.
2. Set the Unit No.
   Press the UP or DOWN button and change the Unit No. display until the buzzer (*1) is generated from the indoor unit.
   ∗1 Number of beeps
   3 short beeps : Conduct all of the following operations.
   1 short beep : Conduct steps 3 and 4.
   Continue the operation in step 4 until a buzzer remains ON. The continuous buzzer indicates that the malfunction code is confirmed.
   Continuous beep : No abnormality.
3. Press the MODE selector button.
   The left “0” (upper digit) indication of the malfunction code flashes.
4. Malfunction code upper digit diagnosis
   Press the UP or DOWN button and change the malfunction code upper digit until the malfunction code matching buzzer (*2) is generated.

■ The upper digit of the code changes as shown below when the UP and DOWN buttons are pressed.



⇨ ″ UP ″ button ⇦ ″ DOWN ″ button

(S2002)

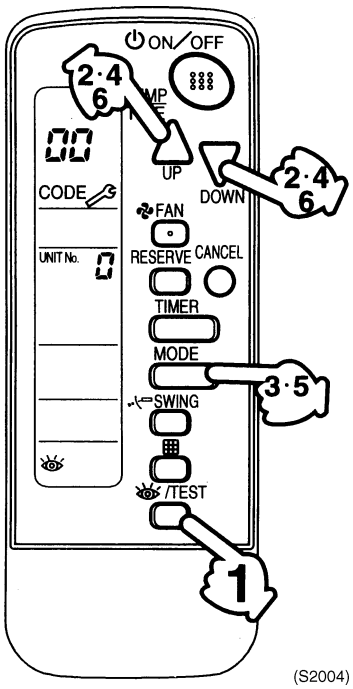
∗2 Number of beeps
Continuous beep : Both upper and lower digits matched.(Malfunction code confirmed)
2 short beeps: Upper digit matched.
1 short beep : Lower digit matched.

5. Press the MODE selector button.
   The right “0” (lower digit) indication of the malfunction code flashes.
6. Malfunction code lower digit diagnosis
   Press the UP or DOWN button and change the malfunction code lower digit until the continuous malfunction code matching buzzer (*2) is generated.

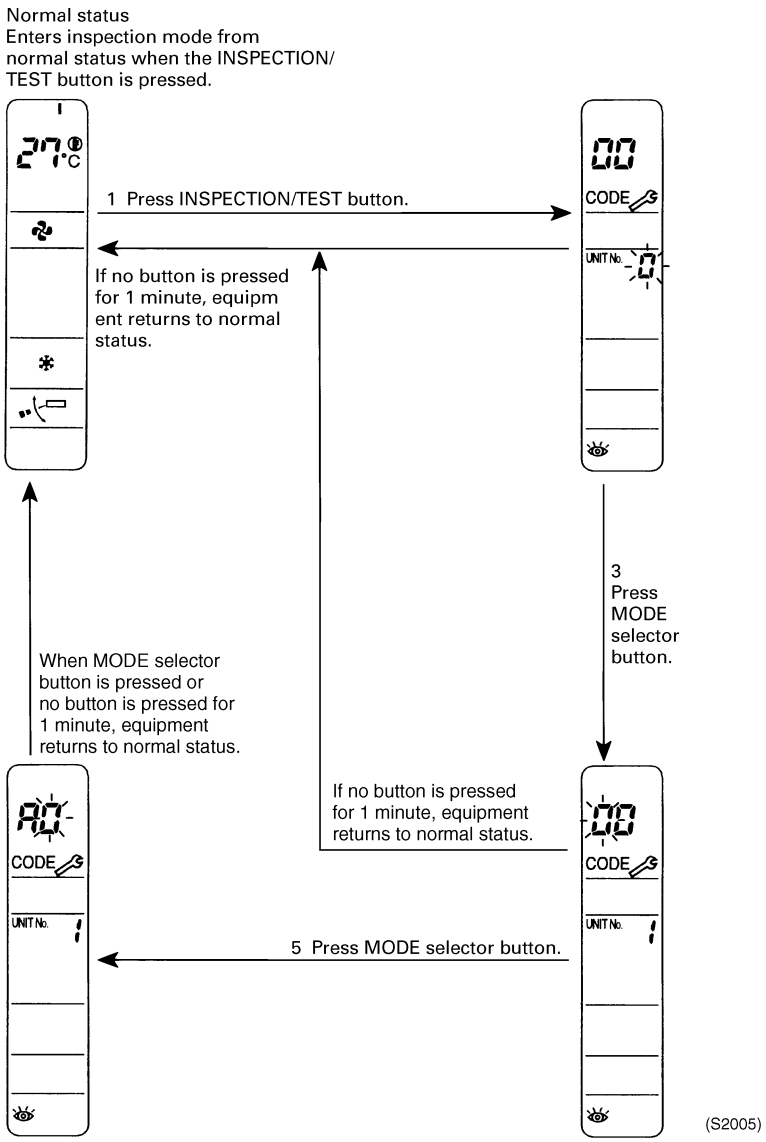
■ The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.

⇨ ″ UP ″ button ⇦ ″ DOWN ″ button

(S2003)


ON/OFF
2·4
6
UP
DOWN
2·4
6
CODE
FAN
UNIT No.
RESERVE
CANCEL
TIMER
MODE
3·5
SWING
/TEST
1

(S2004)


Normal status
Enters inspection mode from normal status when the INSPECTION/ TEST button is pressed.
1 Press INSPECTION/TEST button.
If no button is pressed for 1 minute, equipm ent returns to normal status.
CODE
UNIT No.
3 Press MODE selector button.
When MODE selector button is pressed or no button is pressed for 1 minute, equipment returns to normal status.
If no button is pressed for 1 minute, equipment returns to normal status.
5 Press MODE selector button.

(S2005)

2.5 Sky Air Indoor Unit Error Codes and LED Indication

Symbols

◑ : Blinks ☼ : On ● : Off — : No connection with troubleshooting

◎ : High probability of malfunction
○ : Possibility of malfunction
□ : Low probability of malfunction
— : No possibility of malfunction (do not replace)

System

Remote Controller Display	Location of Malfunction				Contents of Malfunction	Details of Malfunction (Reference Page)
	Other than PC Board	PC Board				
		Outdoor Unit	Indoor Unit	Remote Controller		
U5	◎	—	○	○	Transmission error (between indoor and remote controller)	354
U8	◎	—	○	○	Transmission error between “main” remote controller and “sub” remote controller	355
UA	◎	—	○	—	Excessive indoor units connected to this system.	356

Indoor Unit

Indoor Unit LED Display (H1P)	Remote Controller Display	Location of Malfunction				Contents of Malfunction	Details of Malfunction (Reference Page)
		Other than PC Board	PC Board				
			Outdoor Unit	Indoor Unit	Remote Controller		
◑		—	—	—	—	Normal → to outdoor unit	—
◑ ☼ ●	A1	—	—	○	—	Failure of indoor unit PC board (For self-diagnosis by LED, refer to p.314.)	340
◑	A3	◎	—	—	—	Malfunction of drain water level system	341
◑	AF	◎	—	—	—	Float switch operation during compressor stop	343
◑	A6 (FHQ only)	◎	—	□	—	Indoor unit fan motor overload / overcurrent / lock	344,345
◑	A7	◎	—	□	—	Swing flap motor Malfunction / Lock	347
◑	AJ	◎	—	○	—	Failure of capacity setting	349
◑	C4	◎	—	□	—	Malfunction of heat exchanger temperature sensor system (R2T)	350
◑	C5	◎	—	□	—	Malfunction of heat exchanger temperature sensor system (R3T)	351
◑	C9	◎	—	□	—	Malfunction of suction air temperature sensor system	352
◑	CJ	—	—	□	—	Malfunction of remote control air temperature sensor system	353

2.6 Malfunction Code Indication by Outdoor Unit PCB

<Monitor mode>

To enter the monitor mode, push the MODE button (BS1) when in “Setting mode 1”.

<Selection of setting item>

Push the SET button (BS2) and set the LED display to a setting item.

<Confirmation of malfunction 1>

Push the RETURN button (BS3) once to display "First digit" of malfunction code.

<Confirmation of malfunction 2>

Push the SET button (BS2) once to display "Second digit" of malfunction code.

<Confirmation of malfunction 3>

Push the SET button (BS2) once to display "master or slave1 or slave2" and "malfunction location".

Detail description on the right.

Push the RETURN button (BS3) and switches to the initial status of “Monitor mode”.

∗ Push the MODE button (BS1) and returns to “Setting mode 1”.

Contents of malfunction		Malfunction code
Abnormal discharge pressure	HPS activated	E3
Abnormal suction pressure	Abnormal Pe	E4
Compressor lock	Detection of INV compressor lock	E5
Over load, over current,	Instantaneous over current of DC fan motor	E7
abnormal lock of outdoor unit fan motor	Detection of DC fan motor lock	
Malfunction of electronic expansion valve	EV1	E9
	EV2	
Faulty sensor of outdoor air temperature	Faulty Ta sensor	H9
Abnormal discharge pipe temperature	Abnormal Td	F3
Faulty sensor of discharge pipe temperature	Faulty Tdi sensor	J3
Faulty sensor of suction pipe temperature	Faulty Ts sensor	J5
Faulty sensor of heat exchanger temperature	Faulty Tb sensor	J6
Faulty sensor of subcool heat exchanger temperature	Faulty Tsh sensor	J9
Faulty sensor of discharge pressure	Faulty Pc sensor	JA
Faulty sensor of suction pressure	Faulty Pe sensor	JC
Inverter radiation fin temperature rise	Inverter radiation fin over heated	L4
DC output over current	Inverter instantaneous over current	L5
Electronic thermal switch	Electronic thermal switch 1	L8
	Electronic thermal switch 2	
	Out-of-step	
	Speed down after startup	
	Lightening detection	
Stall prevention (Limit time)	Stall prevention (Current increasing)	L9
	Stall prevention (Faulty startup)	
	Abnormal wave form in startup	
	Out-of-step	
Transmission error between inverter and outdoor unit	Inverter transmission error	LC
Faulty temperature sensor of inverter radiation fin	Faulty thermistor of inverter fin	P4
Incorrect combination of inverter and fan driver	Incorrect combination of inverter and fan driver	PJ
Gas shortage	Gas shortage alarm	U0
Abnormal power supply voltage	Insufficient inverter voltage	U2
	Inverter open phase (phase T)	
	Charging error of capacitor in inverter main circuit	
Abnormal SP-PAM	Over voltage	
	Over current/Over voltage (Hard detection)	
Abnormal latch circuitry		
No implementation of test-run		U3
Transmission error between indoor and outdoor unit	I/O transmission error	U4
Transmission error of other system	Indoor unit system malfunction in other system or other unit of own system	U9
Erroneous on-site setting	Conflict of refrigerant type in indoor units	UA
Faulty system function	Incorrect wiring (Auto address error)	UH
Transmission error in accessory devices, conflict in wiring and piping, no setting for system	Malfunction of multi level converter, abnormality in conflict check	UF

(V3167)

Malfunction code	Confirmation of malfunction 1							Confirmation of malfunction 2							Confirmation of malfunction 3						
	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED1	LED2	LED3	LED4	LED5	LED6	LED7
E3	◑	●	○	●	●	◑	◑	◑	○	●	●	●	◑	◑	◑	○	○	●	●	●	●
E4								◑	○	●	●	◑	●	●	◑	○	○	●	●	●	●
E5								◑	○	●	●	◑	●	◑	◑	○	○	●	●	●	●
E7								◑	○	●	●	◑	◑	◑	◑	○	○	●	●	●	◑
															◑	○	○	●	●	◑	●
E9								◑	○	●	◑	●	●	◑	◑	○	○	●	●	●	◑
															◑	○	○	●	●	◑	◑
H9	◑	●	○	●	◑	●	●	◑	○	●	◑	●	●	◑	◑	○	○	●	●	●	●
F3	◑	●	○	●	◑	●	◑	◑	○	●	●	●	◑	◑	◑	○	○	●	●	●	●
J3	◑	●	○	●	◑	◑	●	◑	○	●	●	●	◑	◑	◑	○	○	●	●	●	◑
J5								◑	○	●	●	◑	●	◑	◑	○	○	●	●	●	●
J6								◑	○	●	●	◑	◑	●	◑	○	○	●	●	●	●
J9								◑	○	●	◑	●	●	◑	◑	○	○	●	●	●	●
JA								◑	○	●	◑	●	◑	●	◑	○	○	●	●	●	●
JC								◑	○	●	◑	◑	●	●	◑	○	○	●	●	●	●
L4	◑	●	○	●	◑	◑	◑	◑	○	●	●	◑	●	●	◑	○	○	●	●	●	●
L5								◑	○	●	●	◑	●	◑	◑	○	○	●	●	●	●
L8								◑	○	●	◑	●	●	●	◑	○	○	●	●	●	●
L9								◑	○	●	◑	●	●	◑	◑	○	○	●	●	●	●
LC								◑	○	●	●	●	◑	◑	◑	○	○	●	●	●	●
P4	◑	●	○	◑	●	●	●	◑	○	●	●	◑	●	●	◑	○	○	●	●	●	●
PJ								◑	○	●	◑	◑	●	◑	◑	○	○	●	●	●	●
U0	◑	●	○	◑	●	●	◑	◑	○	●	●	●	●	●	◑	○	○	●	●	●	●
U2								◑	○	●	●	●	◑	●	◑	○	○	●	●	●	●
U3								◑	○	●	●	●	◑	◑	◑	○	○	●	●	●	●
U4								◑	○	●	●	◑	●	●	◑	○	○	●	●	●	●
U9								◑	○	●	◑	●	●	◑ ●	◑	○	○	●	●	●	●
UA								◑	○	●	◑	●	◑	●	◑	○	○	●	●	●	●
UH								◑	○	●	◑	●	◑	◑	◑	○	○	●	●	●	●
UF								◑	○	●	◑	◑	◑	◑	◑	○	○	●	●	●	●

○ : ON
◑ : Blink
● : OFF

Malfunction code 1st digit display section

○ : ON
◑ : Blink
● : OFF

Malfunction code 2nd digit display section

Master	●	●
Slave 1	●	◑
Slave 2	◑	●

Malfunction location

(V3168)

3. List of Malfunction Code

◑: Blink ○: ON ●: OFF

	Malfunction code	Malfunction contents	Page Referred			
			RA Indoor Unit	SkyAir Indoor Unit	BP Unit	Outdoor Unit
Indoor Unit	A0	Error of external protection device	—	—	—	—
	A1	PC board defect, E^2 PROM defect	329	340	—	—
	A3	Malfunction of drain level control system (33H)	—	341	—	—
	A5	Freeze-up protection or high pressure control	330	—	—	—
	A6	Fan motor (MF) lock, overload	332, 333	344, 345	—	—
	A7	Malfunction of swing flap motor (MA)	—	347	—	—
	A9	Malfunction of electronic expansion valve (20E)	—	—	359	—
	AF	Drain pump error	—	343	—	—
	AJ	Malfunction of capacity setting	—	349	—	—
	C4	Malfunction of thermistor (R2T) for heat exchanger (loose connection, disconnection, short circuit, failure)	335	350	—	—
	C5	Malfunction of thermistor (R3T) for heat exchanger (loose connection, disconnection, short circuit, failure)	—	351	—	—
	C7	Shutter drive motor / shutter limit switch abnormality	336	—	—	—
	C9	Malfunction of thermistor (R1T) for air inlet (loose connection, disconnection, short circuit, failure)	335	352	—	—
	CA	Malfunction of thermistor for air outlet (loose connection, disconnection, short circuit, failure)	—	—	—	—
	CJ	Malfunction of thermostat sensor in remote controller	—	353	—	—
Outdoor Unit	E1	PC board defect, E^2 PROM defect	—	—	—	366
	E2	Faulty BP unit PCB	—	—	360	—
	E3	Actuation of high pressure switch	—	—	—	367
	E4	Actuation of low pressure switch	—	—	—	368
	E5	Compressor motor lock	—	—	—	369
	E6	Standard compressor lock or over current	—	—	—	—
	E7	Malfunction of outdoor unit fan motor	—	—	—	370
	E9	Malfunction of moving part of electronic expansion valve (Y1E~2E)	—	—	—	371
	F3	Abnormal discharge pipe temperature	—	—	—	372
	F6	Refrigerant overcharged	—	—	—	—
	H3	Malfunction of high pressure switch	—	—	—	—
	H4	Actuation of low pressure switch	—	—	—	—
	H7	Abnormal outdoor fan motor signal	—	—	—	—
	H9	Malfunction of thermistor (R1T) for outdoor air (loose connection, disconnection, short circuit, failure)	—	—	—	373
	J0	Faulty BP liquid or gas pipe thermistor	—	—	361	—
	J2	Current sensor malfunction	—	—	—	—
	J3	Malfunction of discharge pipe thermistor (R3T) (loose connection, disconnection, short circuit, failure)	—	—	—	374
	J5	Malfunction of thermistor (R2T) for suction pipe (loose connection, disconnection, short circuit, failure)	—	—	—	375
	J6	Malfunction of thermistor (R4T) for heat exchanger (loose connection, disconnection, short circuit, failure)	—	—	—	376
	J7	Malfunction of header thermistor	—	—	—	—
	J8	Malfunction of thermistor (R7T) for oil equalizing pipe. (loose connection, disconnection, short circuit, failure)	—	—	—	—
	J9	Malfunction of receiver gas pipe thermistor (R5T)	—	—	—	377
	JA	Malfunction of discharge pipe pressure sensor	—	—	—	378
	JC	Malfunction of suction pipe pressure sensor	—	—	—	379
	L0	Inverter system error	—	—	—	—

◑: Blink ○: ON ●: OFF

	Malfunction code	Malfunction contents	Page Referred			
			RA Indoor Unit	SkyAir Indoor Unit	BP Unit	Outdoor Unit
Outdoor Unit	L4	Malfunction of inverter radiating fin temperature rise	—	—	—	380
	L5	Inverter compressor motor grounding, short circuit	—	—	—	381
	L6	Compressor motor coil grounding on short circuit	—	—	—	—
	L8	Inverter current abnormal	—	—	—	382
	L9	Inverter start up error	—	—	—	383
	LA	Malfunction of power unit	—	—	—	—
	LC	Malfunction of transmission between inverter and control PC board	—	—	—	384
	P1	Inverter over-ripple protection	—	—	—	—
	P4	Malfunction of inverter radiating fin temperature rise sensor	—	—	—	386
	PJ	Faulty combination inverter and fan driver, Malfunction of capacity setting	—	—	—	387
System	U0	Low pressure drop due to refrigerant shortage or electronic expansion valve failure	—	—	—	388
	U1	Reverse phase / open phase	—	—	—	—
	U2	Power supply insufficient or instantaneous failure	—	—	—	389
	U3	Check operation is not conducted.	—	—	—	391
	U4	Malfunction of transmission between indoor and BP units	—	—	362	—
	U5	Malfunction of transmission between remote controller and indoor unit	—	354	—	—
	U5	Failure of remote controller PC board or setting during control by remote controller	—	—	—	—
	U7	Malfunction of transmission between outdoor units	—	—	—	—
	U8	Malfunction of transmission between master and slave remote controllers (malfunction of slave remote controller)	—	355	—	—
	U9	Malfunction of transmission between indoor unit and outdoor unit in the same system	—	—	—	392
	UA	Mismatching of indoor unit, BP unit and outdoor unit etc.	—	356	—	393
	UC	Address duplication of central remote controller	—	—	—	—
	UE	Malfunction of transmission between central remote controller and indoor unit	—	—	—	—
	UF	Refrigerant system not set, incompatible wiring / piping	—	—	—	394
	UH	Malfunction of system, refrigerant system address undefined	—	—	—	395
	UJ	Transmission error between outdoor unit and BP unit	—	—	364	—

The system operates for malfunction codes indicated in black squares, however, be sure to check and repair.

4. Troubleshooting for RA Indoor Unit

4.1 Indoor Unit PCB Abnormality

Remote Controller Display

A1

Method of Malfunction Detection

Evaluation of zero-cross detection of power supply by indoor unit.

Malfunction Decision Conditions

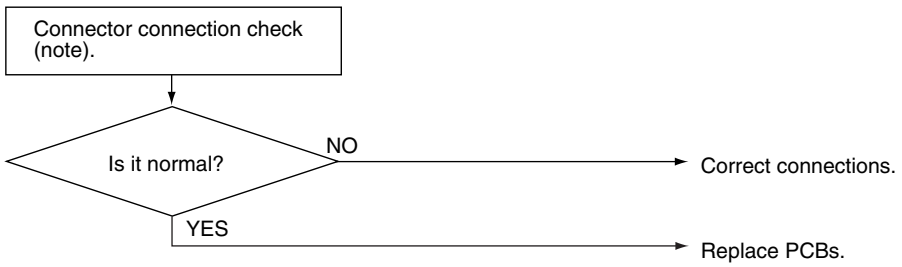
When there is no zero-cross detection in approximately 10 continuous seconds.

Supposed Causes

- Faulty indoor unit PCB
- Faulty connector connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(R1400)

Note: Connector Nos. vary depending on models.
Control connector

Model Type	Connector No.
Wall Mounted Type 20 / 25 / 35 class	Terminal strip ~ Control PCB
Wall Mounted Type 50 / 60 / 71 class	Terminal strip ~ Control PCB
Duct Connected Type	Terminal strip ~ Control PCB
Floor / Ceiling Suspended Dual Type	S37
Floor Standing Type	Control PCB : S7, S201, S203 Power Supply PCB : S8, S202, S204

4.2 Freeze-up Protection Control or High Pressure Control

Remote Controller Display

Method of Malfunction Detection

- High pressure control (heat pump model only)
  During heating operations, the temperature detected by the indoor heat exchanger thermistor is used for the high pressure control (stop, outdoor fan stop, etc.)
- The freeze-up protection control (operation halt) is activated during cooling operation according to the temperature detected by the indoor unit heat exchanger thermistor.

Malfunction Decision Conditions

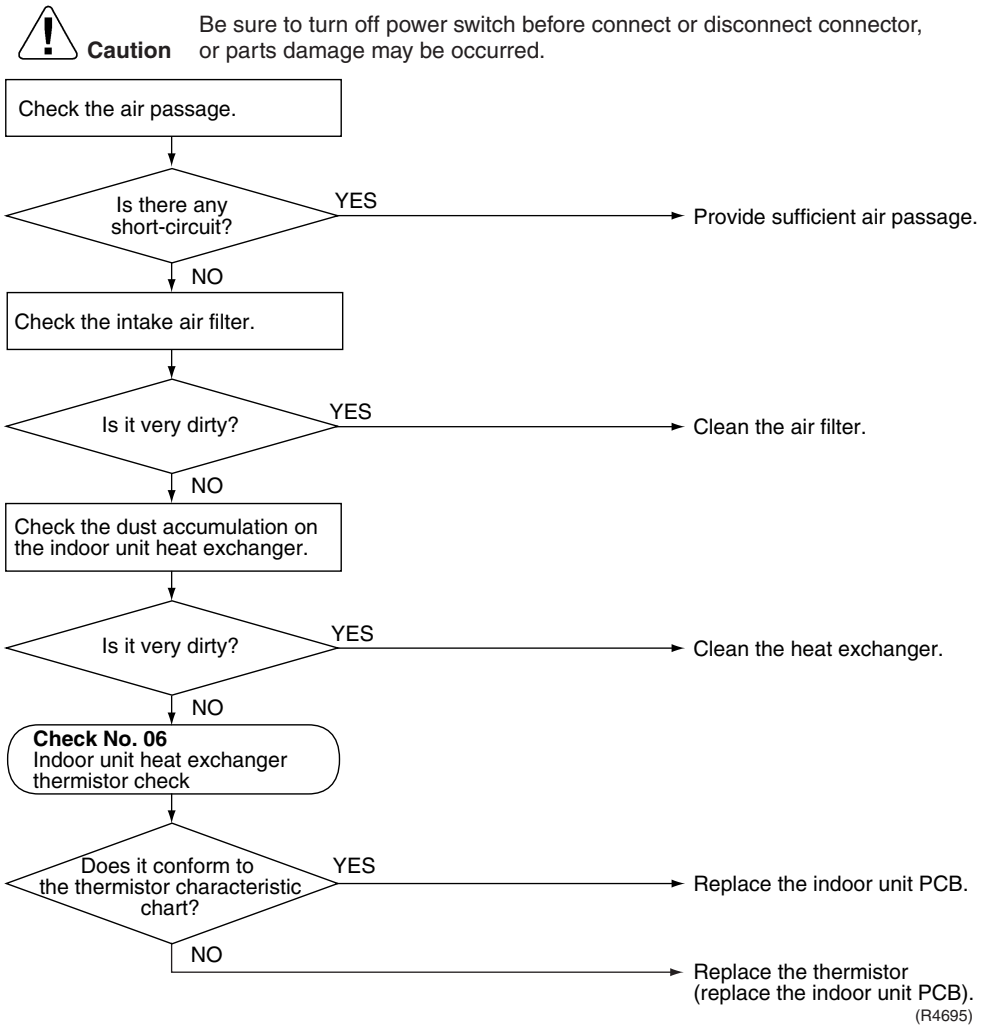
- High pressure control
  During heating operations, the temperature detected by the indoor heat exchanger thermistor is above 65°C
- Freeze-up protection
  When the indoor unit heat exchanger temperature is below 0°C during cooling operation.

Supposed Causes

- Operation halt due to clogged air filter of the indoor unit.
- Operation halt due to dust accumulation on the indoor unit heat exchanger.
- Operation halt due to short-circuit.
- Detection error due to faulty indoor unit heat exchanger thermistor.
- Detection error due to faulty indoor unit PCB.

Troubleshooting

Check No.06
Refer to P.338



4.3 Fan Motor or Related Abnormality

4.3.1 AC Motor (Wall FTKD 25/35 D series, Duct, Floor / Ceiling)

Remote Controller Display

Method of Malfunction Detection

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

Malfunction Decision Conditions

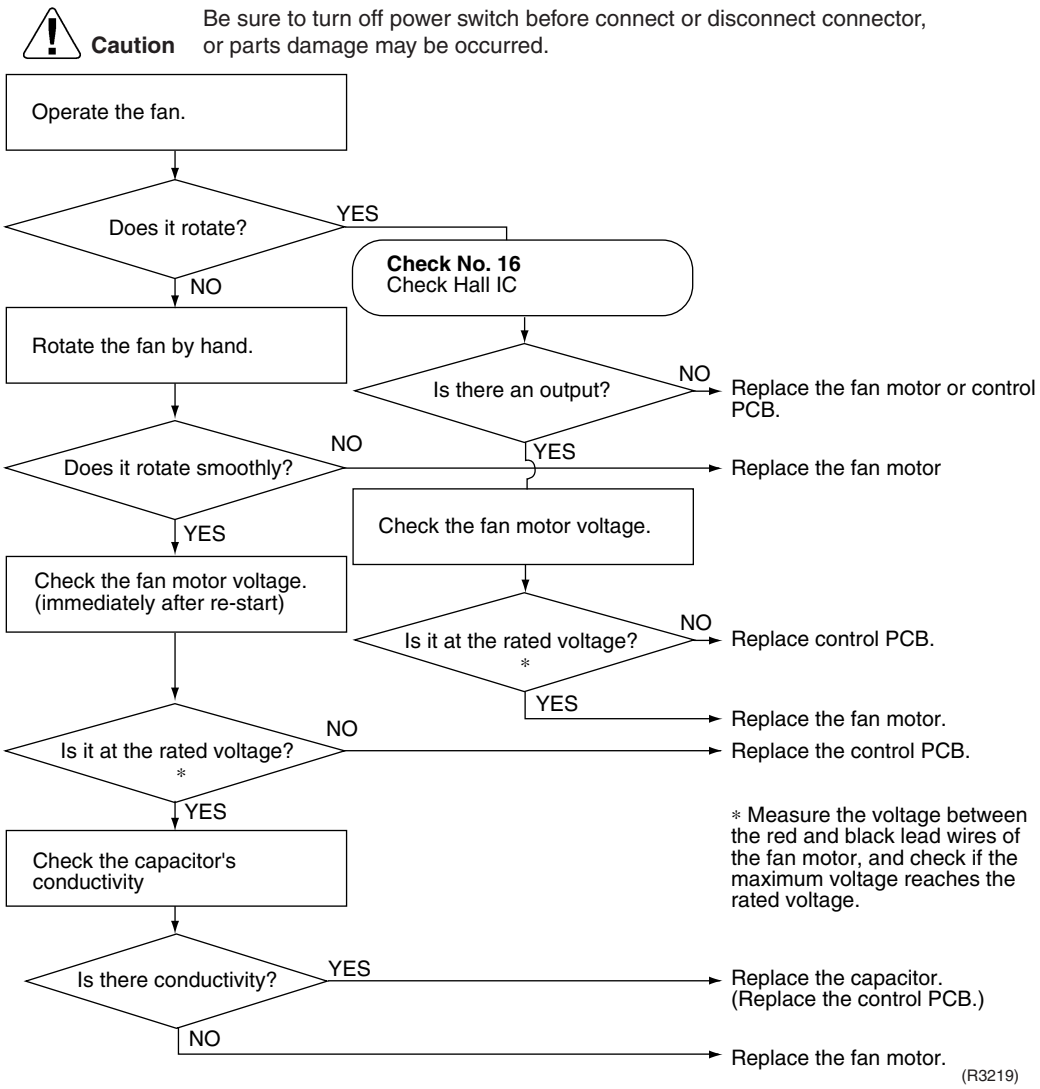
When the detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

Supposed Causes

- Operation halt due to short circuit inside the fan motor winding.
- Operation halt due to breaking of wire inside the fan motor.
- Operation halt due to breaking of the fan motor lead wires.
- Operation halt due to faulty capacitor of the fan motor.
- Detection error due to faulty control PCB.

Troubleshooting

Check No.16
Refer to P.339



4.3.2 DC Motor (Wall FTK(X)S 20~35 D series and 50~71 class, Floor)

Remote Controller Display

Method of Malfunction Detection

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

Malfunction Decision Conditions

When the detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

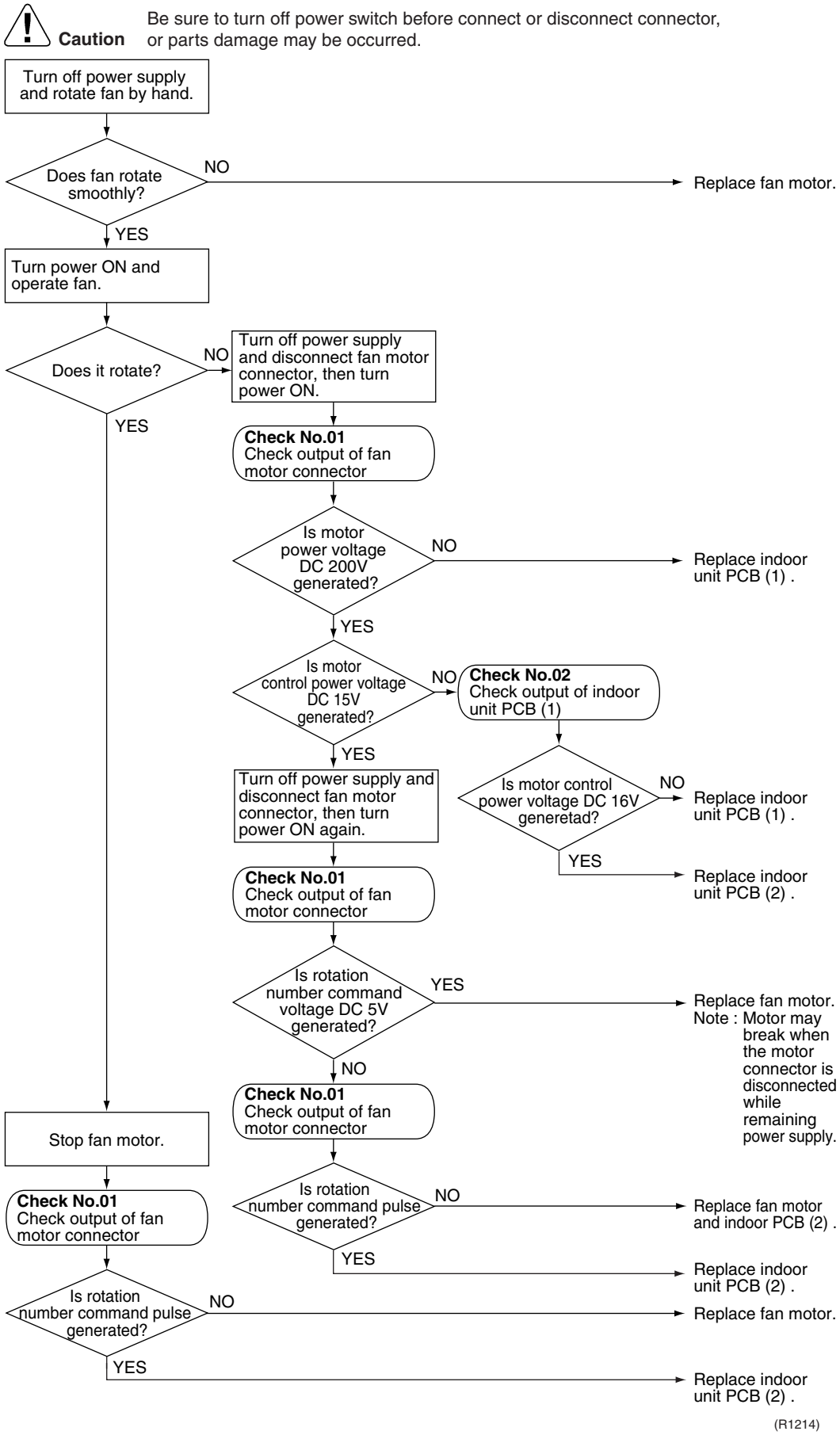
Supposed Causes

- Operation halt due to short circuit inside the fan motor winding.
- Operation halt due to breaking of wire inside the fan motor.
- Operation halt due to breaking of the fan motor lead wires.
- Operation halt due to faulty capacitor of the fan motor.
- Detection error due to faulty indoor unit PCB (1).

Troubleshooting

Check No.01
Refer to P.337

Check No.02
Refer to P.337



4.4 Thermistor or Related Abnormality (Indoor Unit)

Remote Controller Display

C4, C9

Method of Malfunction Detection

The temperatures detected by the thermistors are used to determine thermistor errors.

Malfunction Decision Conditions

When the thermistor input is more than 4.96 V or less than 0.04 V during compressor operation*.
* (reference)
When above about 212°C (less than 120 ohms) or below about -50°C (more than 1,860 kohms).

Note: The values vary slightly in some models.

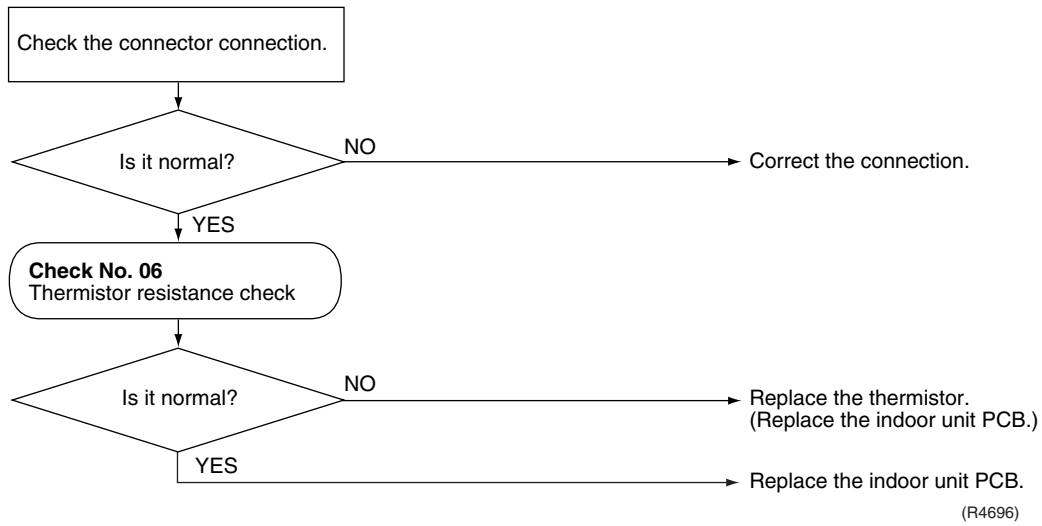
Supposed Causes

- Faulty connector connection
- Faulty thermistor
- Faulty PCB

Troubleshooting

Check No.06
Refer to P.338

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



C4 : Heat exchanger temperature thermistor
C9 : Room temperature thermistor

4.5 Shutter Drive Motor / Shutter Limit Switch Abnormality

Remote Controller Display

C7

Method of Malfunction Detection

The shutter open / close performance is detected by the limit switch attached on its structure. In this way, the shutter drive motor and the shutter limit switch are checked for failure.

Malfunction Decision Conditions

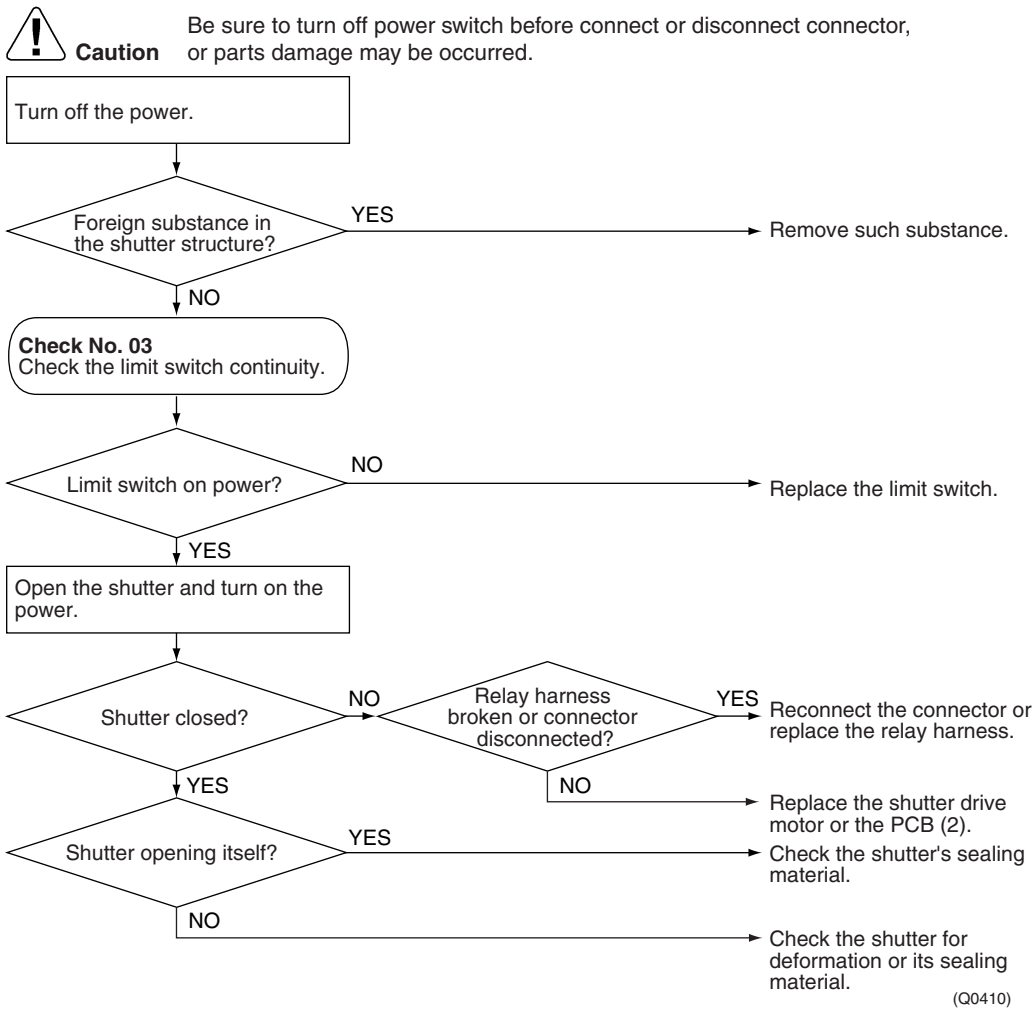
When the shutter is open, the limit switch is closed.

Supposed Causes

- Shutter drive motor defective
- Shutter limit switch defective
- Shutter itself deformed (warped)
- Shutter's sealing material too thick
- Detection error by broken relay harness or disconnected connector
- Detection error due to defective PCB (2)
- Foreign substance in blow port

Troubleshooting

Check No.03
Refer to P.337

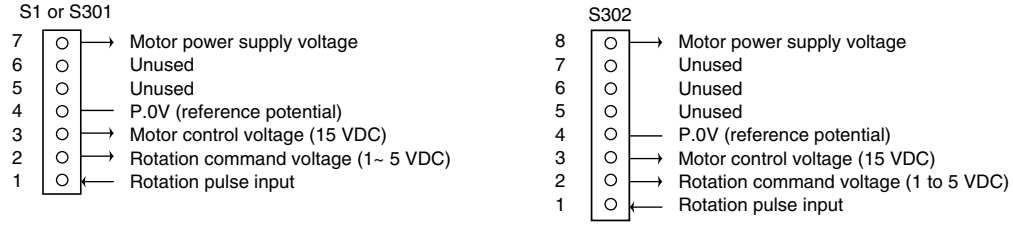


4.6 Check

4.6.1 Fan Motor Connector Output Check

Check No.01

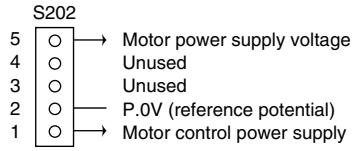
1. Check connector connection.
2. Check motor power supply voltage output (pins 4-7 and 4-8).
3. Check motor control voltage (pins 4-3).
4. Check rotation command voltage output (pins 4-2).
5. Check rotation pulse input (pins 4-1).



(R4684)

Check No.02

1. Check connector connection.
2. Check motor control voltage output (pins 2-1).

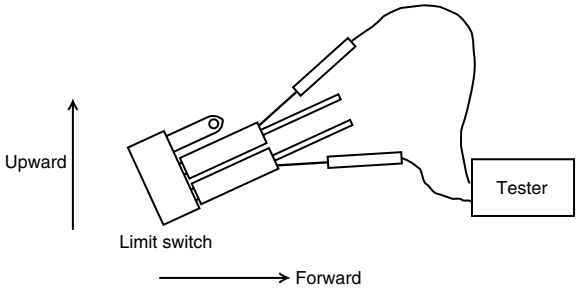


(R1073)

4.6.2 Limit Switch Continuity Check

Check No.03

Remove the front grille. The limit switch is located at the left side of the drain pan assembly. Check the continuity of the switch connection.



Shutter status	Open	Closed
Continuity	Continuity	No continuity

(Q0363)

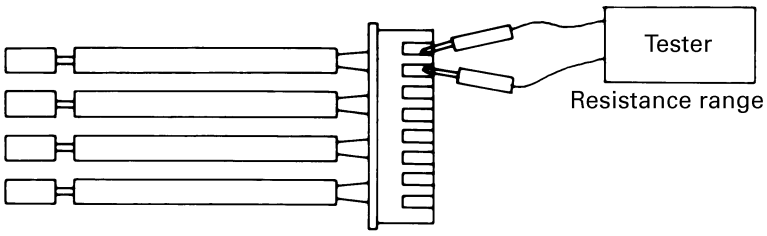
* The shutter can be opened and closed with hand. Keep the shutter open and closed all the way for each continuity check steps.

4.6.3 Thermistor Resistance Check

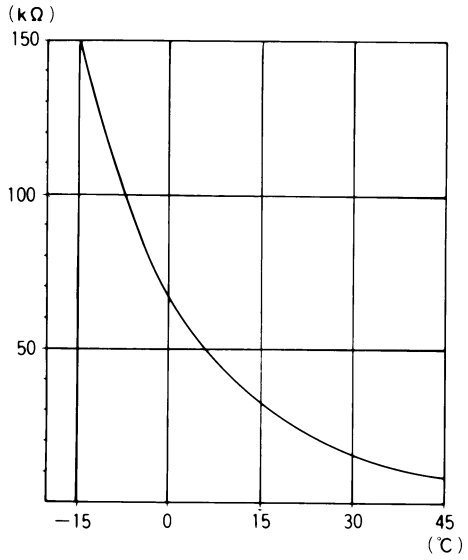
Check No.06

Remove the connectors of the thermistors on the PCB, and measure the resistance of each thermistor using tester.
The relationship between normal temperature and resistance is shown in the graph and the table below.

Thermistor / Temperature (°C)	R25°C=20kΩ B=3950
-20	211.0 (kΩ)
-15	150
-10	116.5
-5	88
0	67.2
5	51.9
10	40
15	31.8
20	25
25	20
30	16
35	13
40	10.6
45	8.7
50	7.2



（R25＝20kΩ、B＝3950）



(R1437)

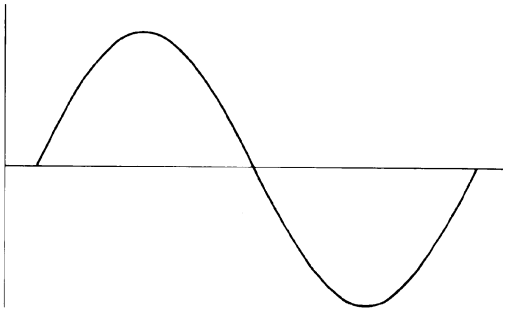
4.6.4 Power Supply Waveforms Check

Check No.10

Measure the power supply waveform between pins 1 and 3 on the terminal board, and check the waveform disturbance.

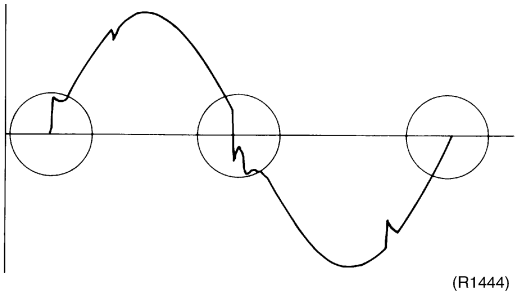
- Check to see if the power supply waveform is a sine wave (Fig.1).
- Check to see if there is waveform disturbance near the zero cross (sections circled in Fig.2)

[Fig.1]



(R1736)

[Fig.2]



(R1444)

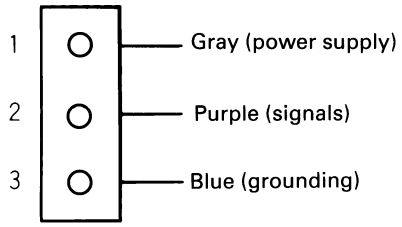
4.6.5 Hall IC Check

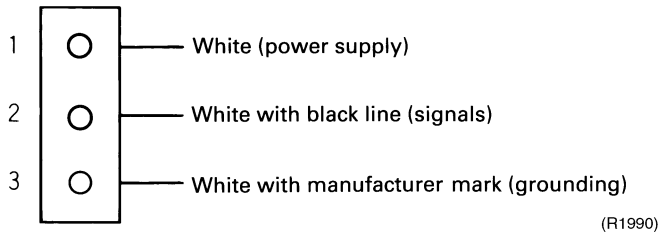
Check No.16

1. Check the connector connection.
2. With the power ON, operation OFF, and the connector connected, check the following.
   ∗Output voltage of about 5 V between pins 1 and 3.
   ∗Generation of 3 pulses between pins 2 and 3 when the fan motor is operating.

Failure of (1) → faulty PCB → Replace the PCB.
Failure of (2) → faulty Hall IC → Replace the fan motor.
Both (1) and (2) result → Replace the PCB.

The connector has 3 pins, and there are two patterns of lead wire colors.





(R1990)

5. Troubleshooting for SkyAir Indoor Unit

5.1 Indoor Unit PCB Abnormality

Remote Controller Display

A1

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Check data from E²PROM.

Malfunction Decision Conditions

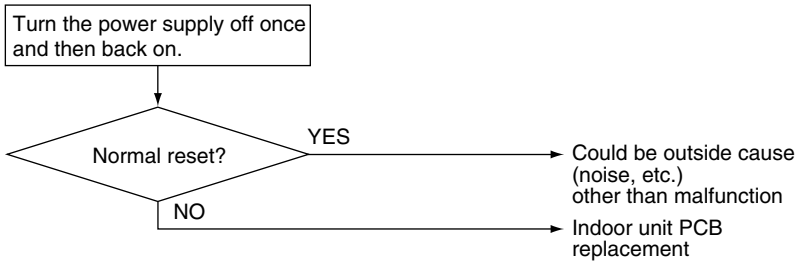
When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Failure of PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



5.2 Malfunction of Drain Water Level System (Float Type)

Remote Controller Display

A3

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

By float switch OFF detection

Malfunction Decision Conditions

When rise of water level is not a condition and the float switch goes OFF.

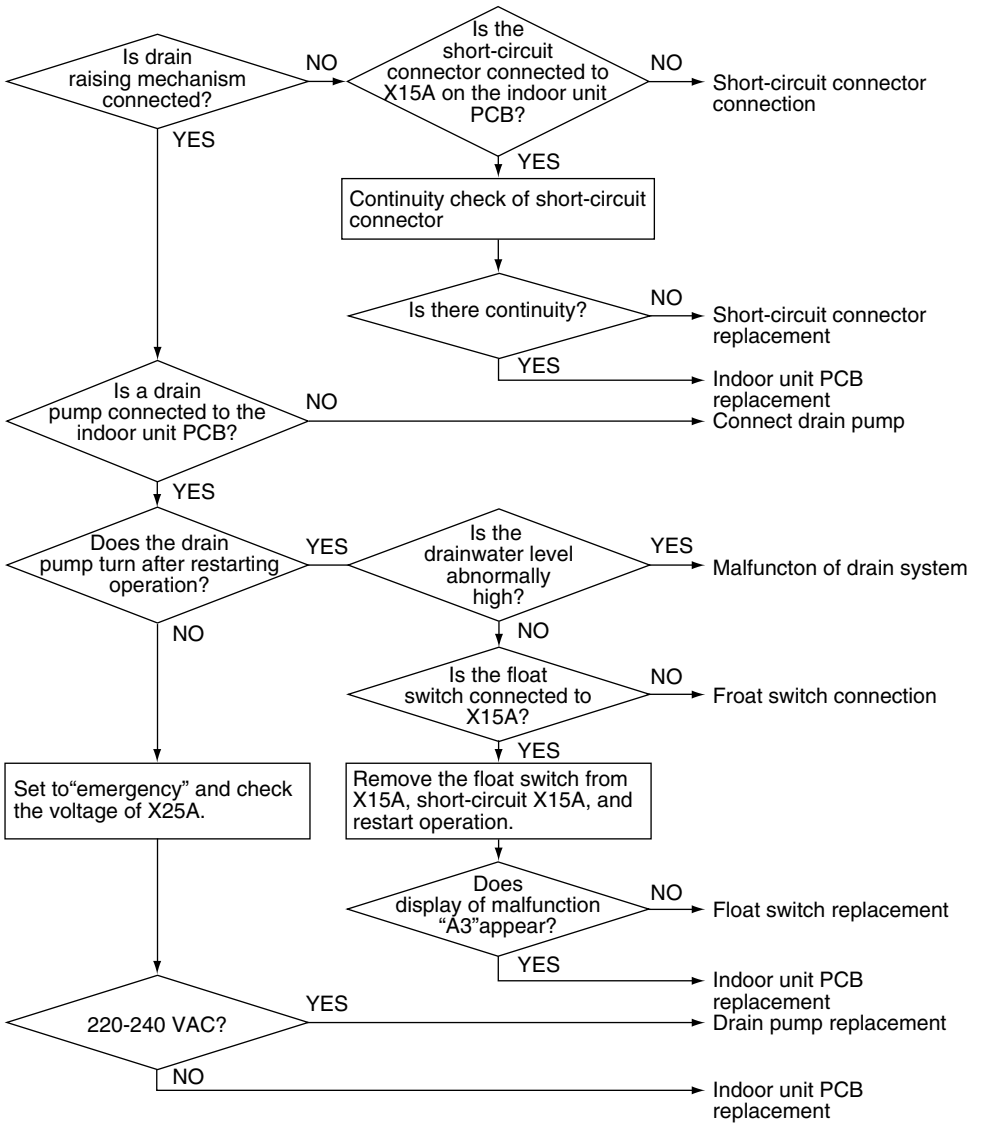
Supposed Causes

- Failure of drain pump
- Improper drain piping work
- Drain piping clogging
- Failure of float switch
- Failure of indoor unit PCB
- Failure of short-circuit connector

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

If “A3” is detected by a PC board which is not mounted with X15A, the PC board is defective.



(Q0412)

5.3 Malfunction of Drain System

Remote Controller Display

Applicable Models

FHQ-BU

Method of Malfunction Detection

Water leakage is detected based on float switch ON/OFF operation while the compressor is in non-operation.

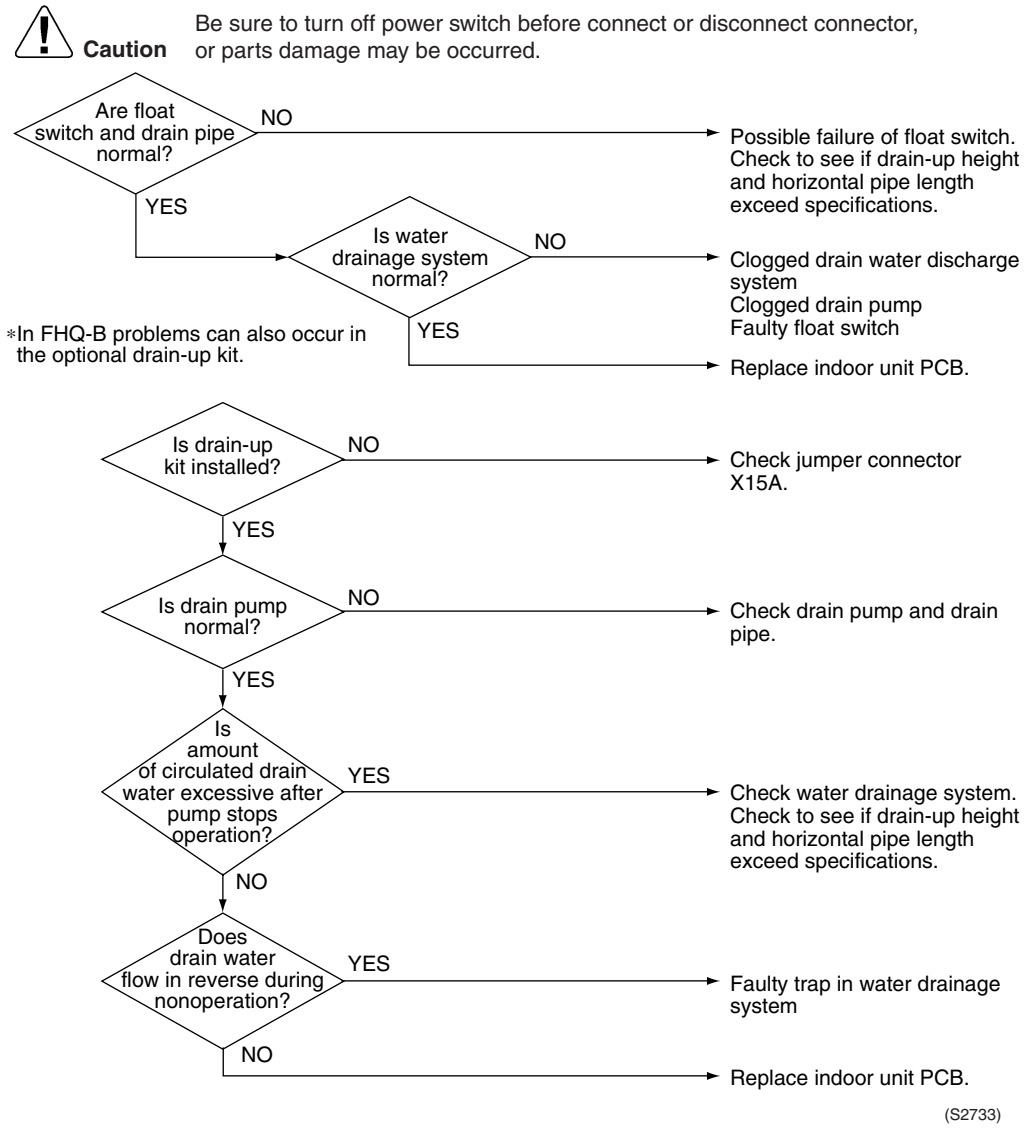
Malfunction Decision Conditions

When the float switch changes from ON to OFF while the compressor is in non-operation.

Supposed Causes

- Error in drain pipe installation
- Faulty float switch
- Faulty indoor unit PCB

Troubleshooting



5.4 Indoor Unit Fan Motor Lock

Remote Controller Display

A6

Applicable Models

FHQ-BU

Method of Malfunction Detection

Detection by failure of signal for detecting number of turns to come from the fan motor

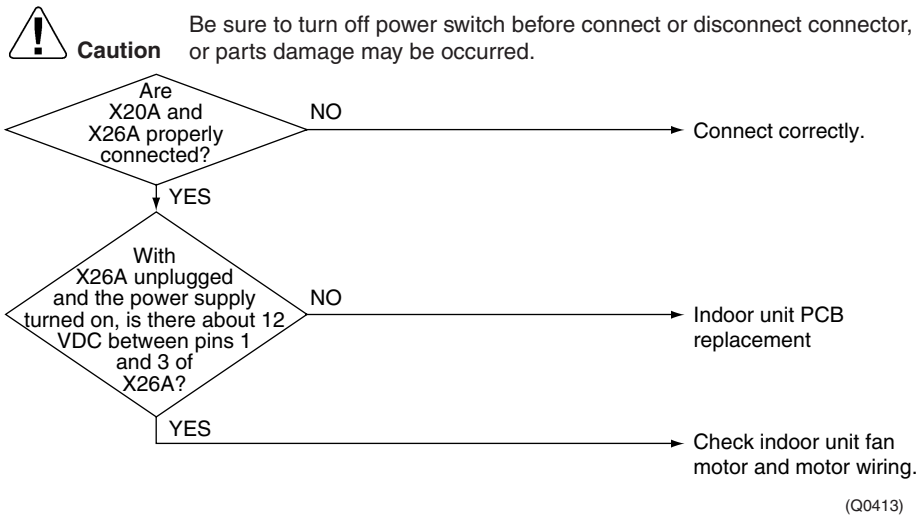
Malfunction Decision Conditions

When number of turns can't be detected even when output voltage to the fan is maximum

Supposed Causes

- Failure of indoor unit fan motor
- Broken or disconnected wire
- Failure of contact
- Failure of indoor unit PCB

Troubleshooting



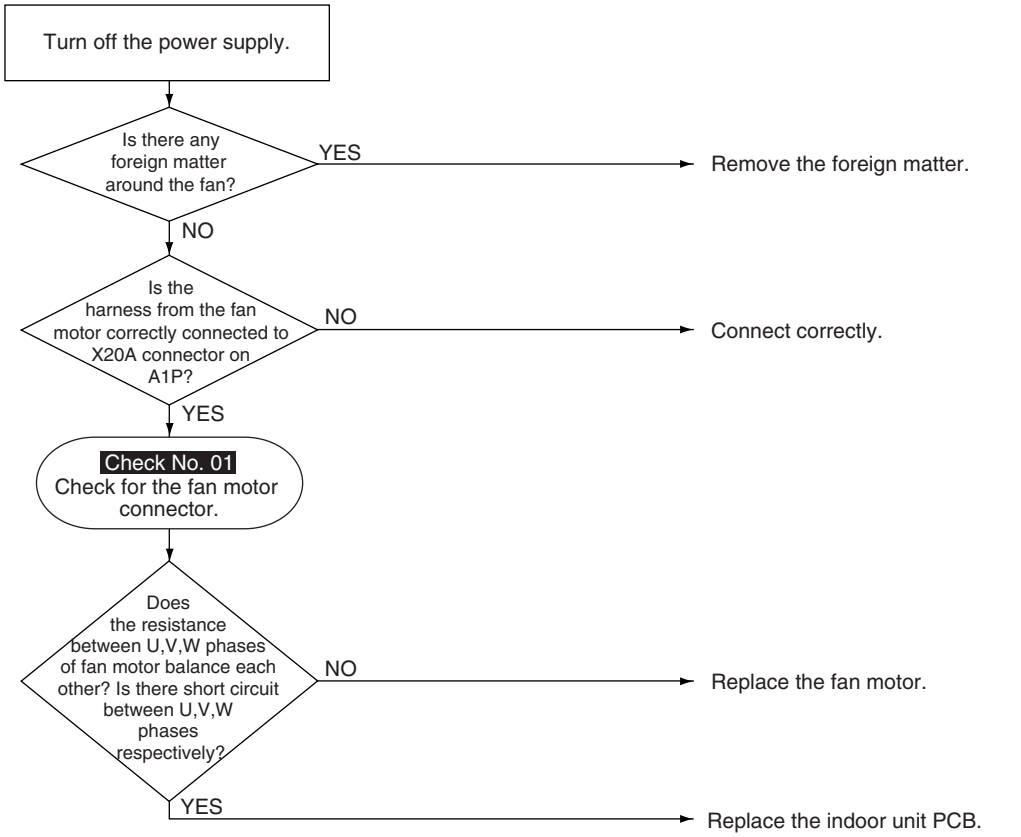
5.5 Malfunction of Indoor Unit Fan Motor

Remote Controller Display	
Applicable Models	FFQ, FCQ, FBQ
Method of Malfunction Detection	Detection of abnormal fan speed by signal from the fan motor
Malfunction Decision Conditions	When fan speed does not increase
Supposed Causes	■ Disconnection, short circuit or disengagement of connector in fan motor harness ■ Faulty fan motor (disconnection, poor insulation) ■ Abnormal signal from fan motor (faulty circuit) ■ Faulty PCB ■ Instantaneous fluctuation of power supply voltage ■ Fan motor lock (Caused by motor or other external factors) ■ Fan does not turn due to a tangle of foreign matters.

Troubleshooting

Check No.01
Refer to P.357

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0414)

5.6 Swing Flap Motor Malfunction / Lock

Remote Controller Display

Applicable Models

FHQ-BU

Method of Malfunction Detection

Utilizes ON/OFF of the limit switch when the motor turns.

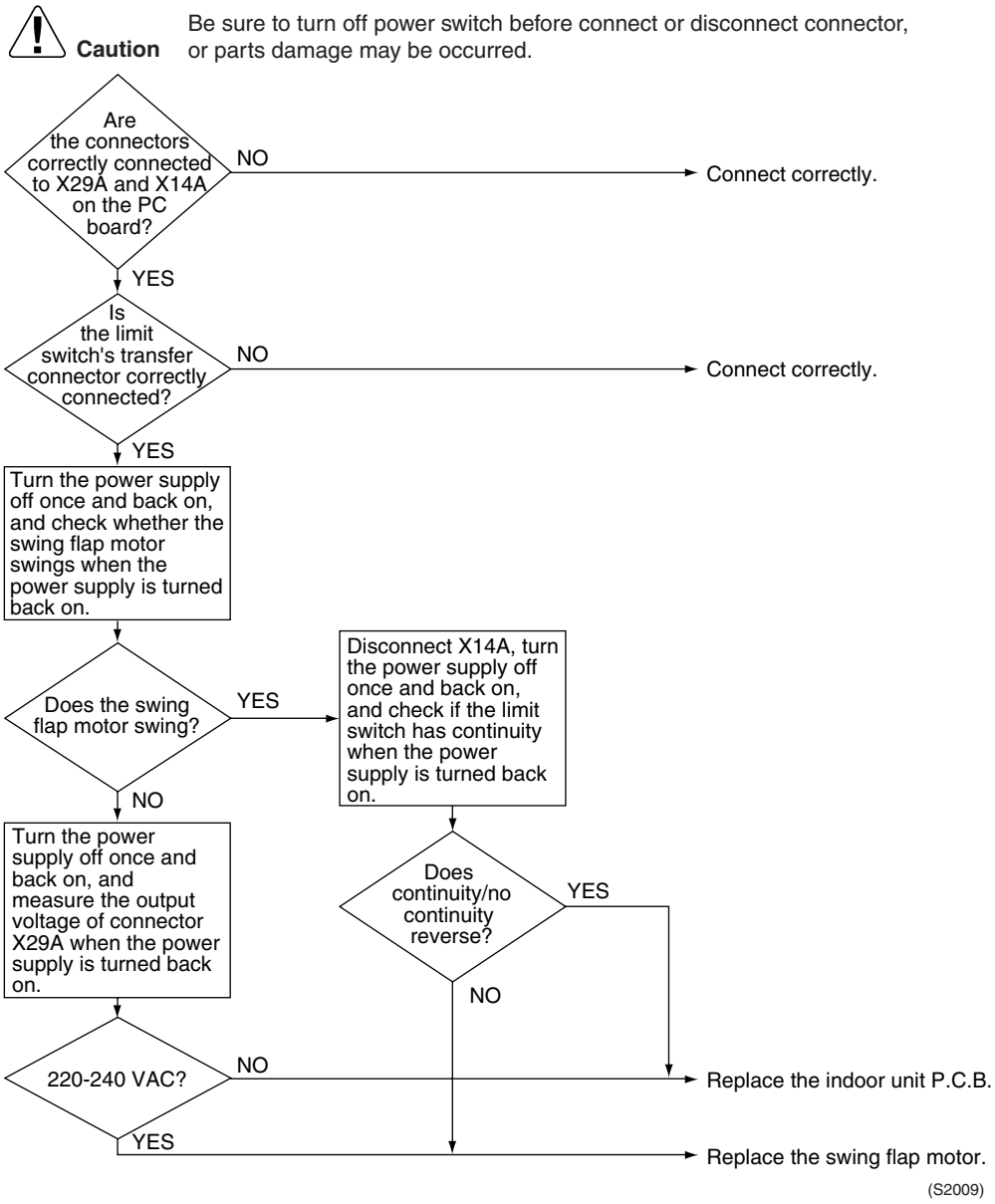
Malfunction Decision Conditions

When ON/OFF of the microswitch for positioning cannot be reversed even though the swing flap motor is energized for a specified amount of time (about 30 seconds).

Supposed Causes

- Failure of motor
- Failure of microswitch
- Failure of connector connection
- Failure of indoor unit PCB

Troubleshooting



5.7 Malfunction of Capacity Setting

Remote Controller Display

AJ

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Capacity is determined according to resistance of the capacity setting adaptor and the memory inside the IC memory on the indoor unit PCB, and whether the value is normal or abnormal is determined.

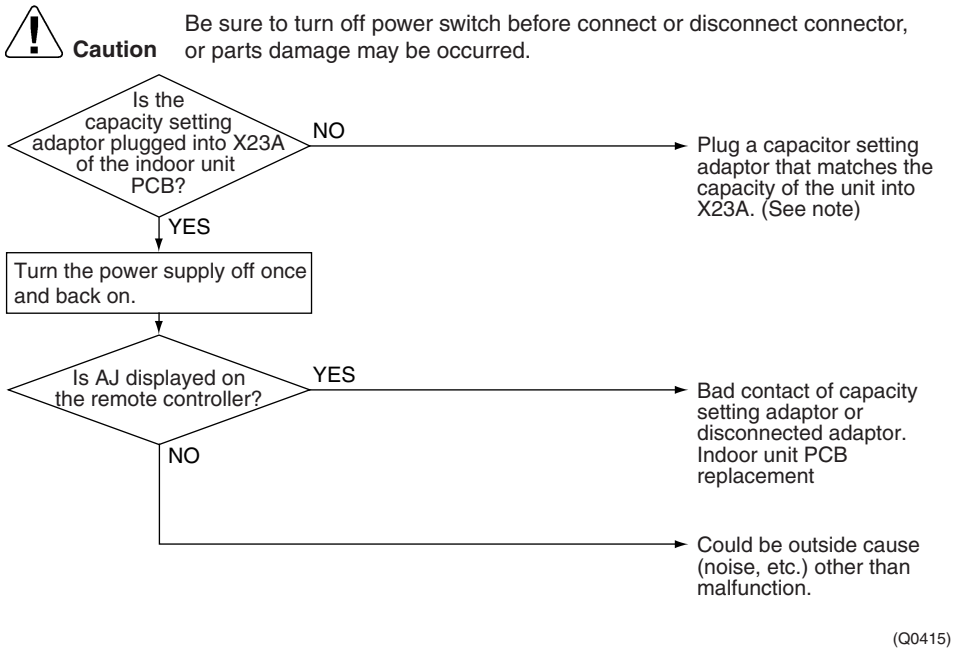
Malfunction Decision Conditions

Operation and:
(1)When the capacity code is not contained in the PCB's memory, and the capacity setting adaptor is not connected.
(2)When a capacity that doesn't exist for that unit is set.

Supposed Causes

- Failure of capacity setting adaptor connection
- Failure of indoor unit PCB

Troubleshooting



(Q0415)

Note: Capacity is factory set in the data IC on the PCB. A capacity setting adaptor that matches the capacity of the unit is required in the following case.
If the indoor PCB installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PCB.
If you connect a capacity setting adaptor to a PCB in which the capacity is memorized, the capacity setting for the PCB will become the capacity setting of the adaptor. (Priority of capacity setting adaptor)

5.8 Malfunction of Heat Exchanger Thermistor (R2T)

Remote Controller Display

C4

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by heat exchanger sensor.

Malfunction Decision Conditions

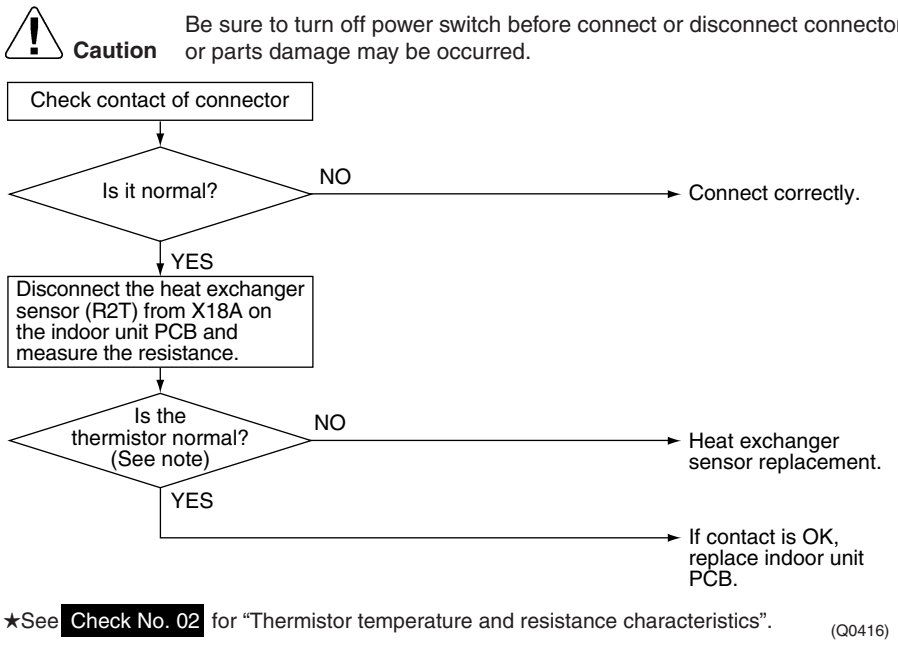
When the heat exchanger thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Failure of the sensor itself
- Broken or disconnected wire
- Failure of electronic circuitry (indoor unit PCB)
- Failure of connector contact

Troubleshooting

Check No.02
Refer to P.358



★See Check No. 02 for “Thermistor temperature and resistance characteristics”. (Q0416)

5.9 Malfunction of Heat Exchanger Thermistor (R3T)

Remote Controller Display

C5

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by heat exchanger sensor (R3T).

Malfunction Decision Conditions

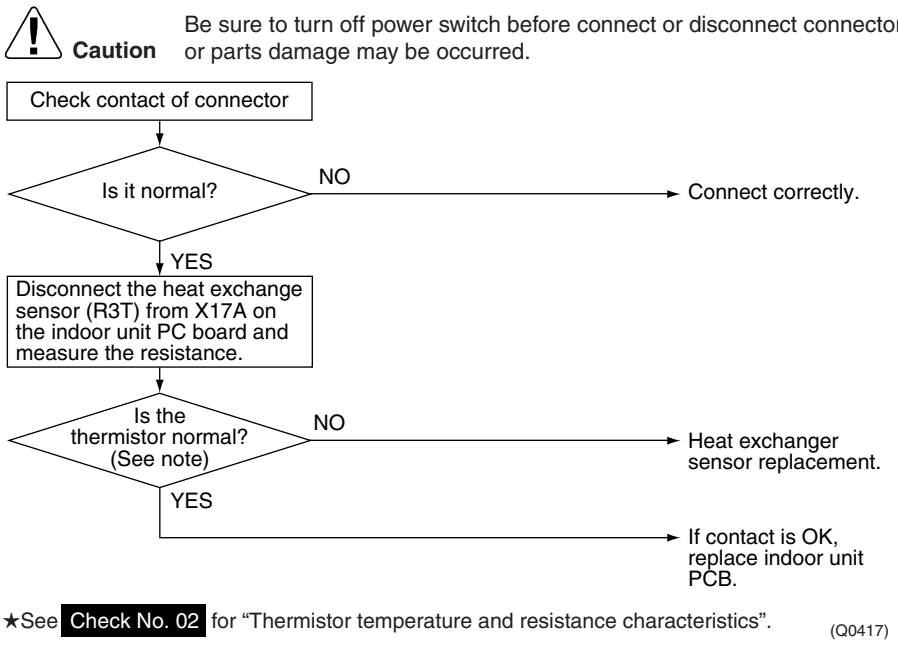
When the heat exchanger thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Failure of the sensor itself
- Broken or disconnected wire
- Failure of electronic circuitry (indoor unit PCB)
- Failure of connector contact

Troubleshooting

Check No.02
Refer to P.358



★See Check No. 02 for “Thermistor temperature and resistance characteristics”.

(Q0417)

5.10 Malfunction of Suction Air Thermistor

Remote Controller Display

C9

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by suction air temperature sensor.

Malfunction Decision Conditions

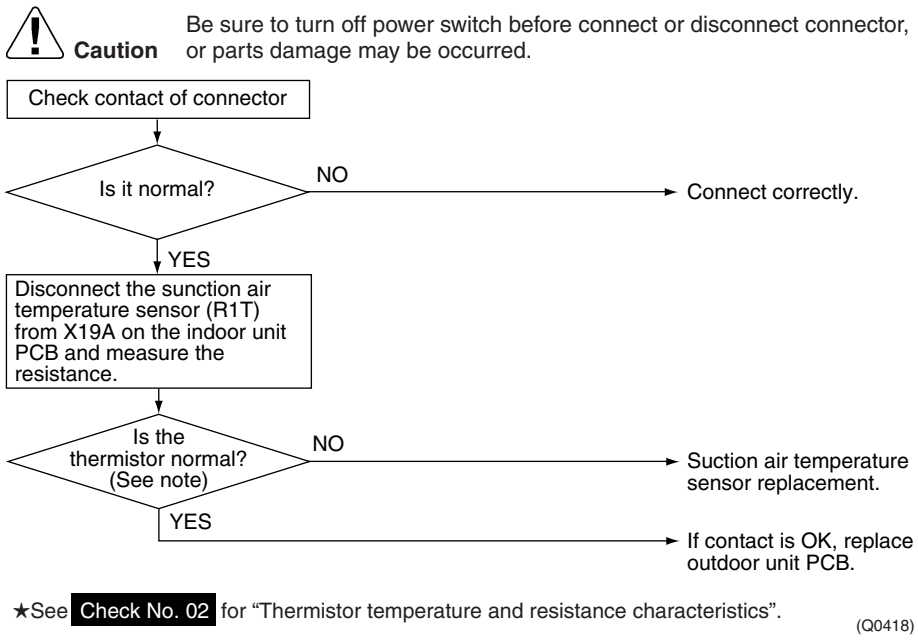
When the suction air temperature sensor's thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Failure of the sensor itself
- Broken or disconnected wire
- Failure of indoor unit PCB
- Failure of connector contact

Troubleshooting

Check No.02
Refer to P.358



★See Check No. 02 for "Thermistor temperature and resistance characteristics".

(Q0418)

5.11 Malfunction of Remote Controller Thermistor

Remote Controller Display

CJ

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Even if remote controller thermistor is faulty, system is possible to operate by system thermistor. Malfunction detection is carried out by temperature detected by remote controller thermistor.

Malfunction Decision Conditions

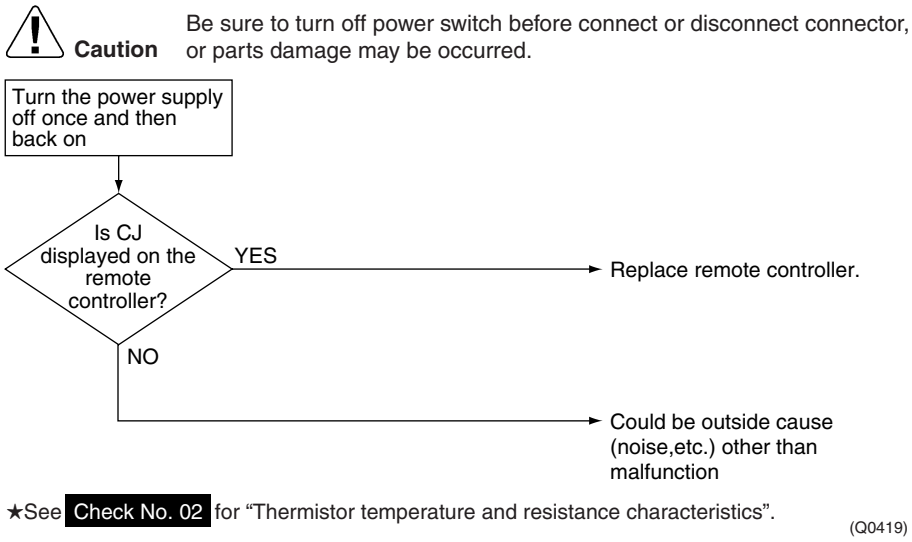
When the remote controller thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Failure of sensor itself
- Broken wire

Troubleshooting

Check No.02
Refer to P.358



★See Check No. 02 for “Thermistor temperature and resistance characteristics”.

(Q0419)

5.12 Transmission Error (between Indoor Unit and Remote Controller)

Remote Controller Display

U5

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Microcomputer checks if transmission between indoor unit and remote controller is normal.

Malfunction Decision Conditions

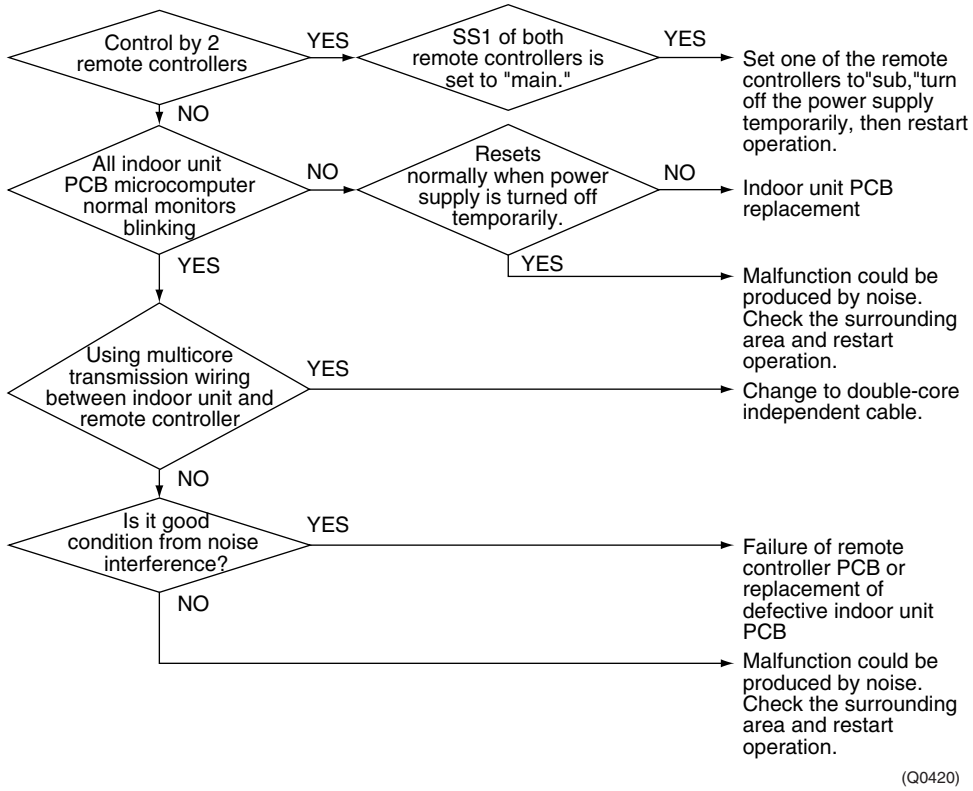
When transmission is not carried out normally for a certain amount of time

Supposed Causes

- Failure of remote controller
- Failure of indoor PCB
- Outside cause (noise, etc.)
- Connection of 2 master remote controllers (When using 2 remote controllers)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0420)

5.13 Transmission Error (between Main and Sub Remote Controller)

Remote Controller Display

U8

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

In case of controlling with 2- remote controller, check the system using microcomputer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Malfunction Decision Conditions

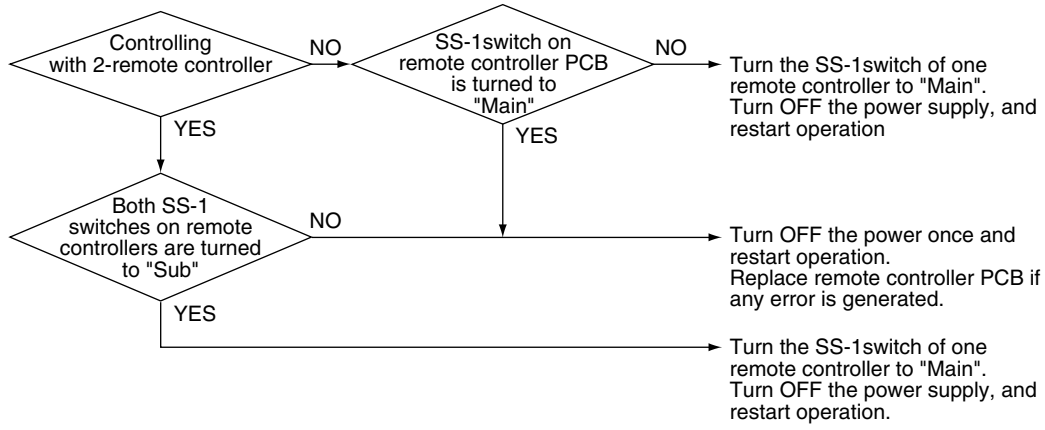
Normal transmission does not continue for specified period.

Supposed Causes

- Transmission error between Main remote controller and Sub remote controller
- Connection among “Sub” remote controllers
- Faulty remote controller PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(S2042)

5.14 Malfunction of Field Setting Switch

Remote Controller Display

UP

Applicable Models

FFQ, FCQ, FBQ, FHQ

Method of Malfunction Detection

Malfunction Decision Conditions

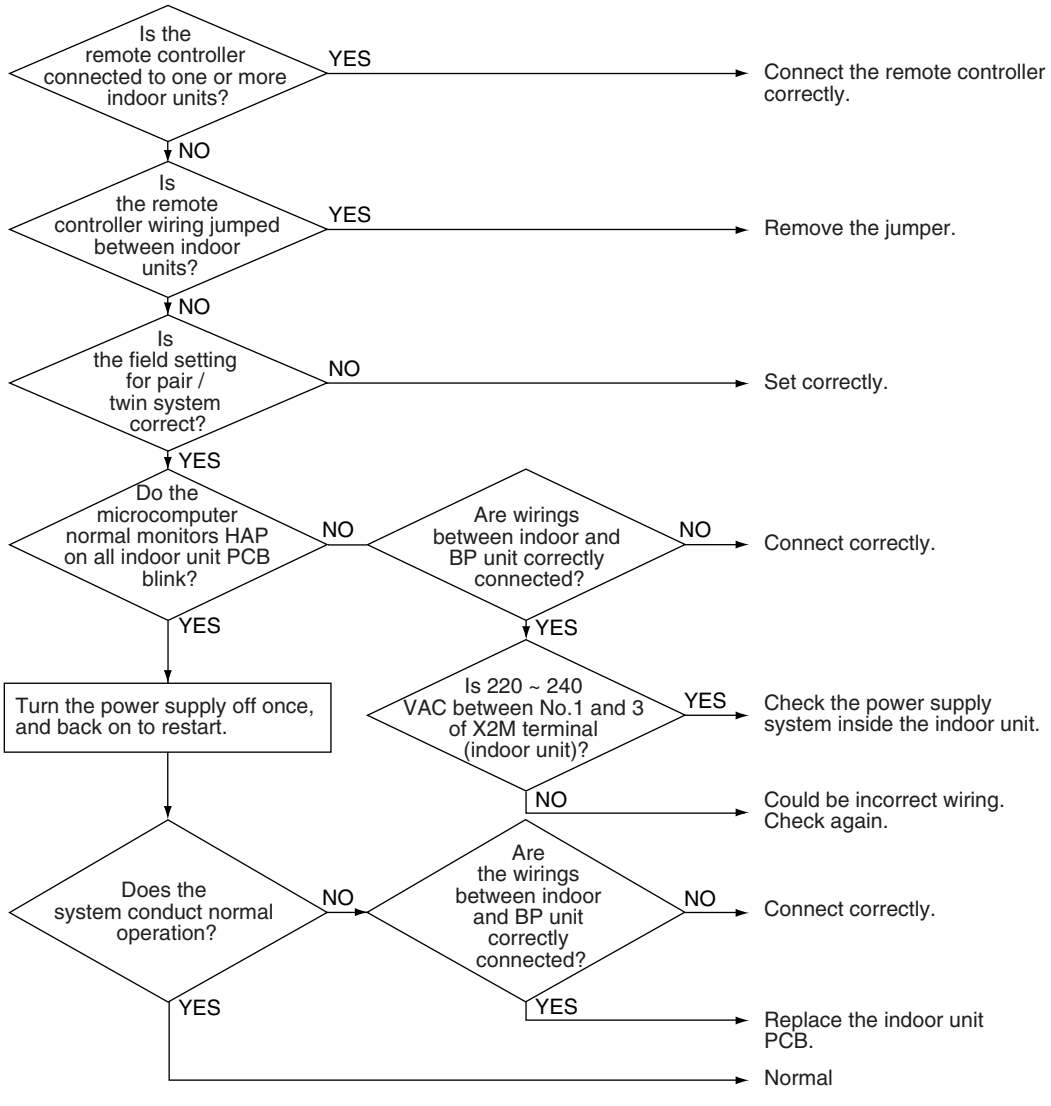
Incorrect field setting

Supposed Causes

- Indoor-Outdoor (BP) transmission line
- Faulty remote controller wiring

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



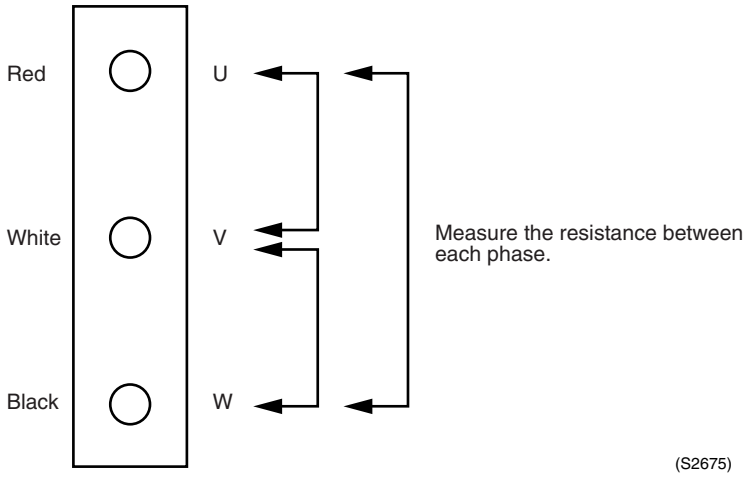
(Q0401)

5.15 Check

Check No. 01 **Check for Fan Motor Connector (Power Supply Line)**

(1) Turn the power supply off.

With the relay connector disconnected, measure the resistance between UVW phases of the connector (3 cores) at the motor side, then make sure that the resistance between each phase is balanced and not short-circuited.



Check No. 02 **Check for Thermistors**

Disconnect the thermistor connector from PCB, then measure the resistance by using a tester.

Thermistor temperature and resistance characteristics Unit : kΩ

Temperature °C	A	B
-6.0	90.8	88.0
-4.0	81.7	79.1
-2.0	73.5	71.1
0.0	66.3	64.1
2.0	59.8	57.8
4.0	54.1	52.3
6.0	48.9	47.3
8.0	44.3	42.9
10.0	40.2	38.9
12.0	36.5	35.3
14.0	33.2	32.1
16.0	30.2	29.2
18.0	27.5	26.6
20.0	25.1	24.3
22.0	23.0	22.2
24.0	21.0	20.3
26.0	19.2	18.5
28.0	17.6	17.0
30.0	16.2	15.6
32.0	14.8	4.2
34.0	13.6	13.1
36.0	12.5	12.0
38.0	11.5	11.1
40.0	10.6	10.3
42.0	9.8	9.5
44.0	9.1	8.8
46.0	8.4	8.2
48.0	7.8	7.6
50.0	7.2	7.0
52.0	6.9	6.7
54.0	6.2	6.0
56.0	5.7	5.5
58.0	5.3	5.2
Application	● Heat exchanger (Indoor/Outdoor units) ● Suction air ● Remote controller ● Air ● Outdoor air ● Suction pipe	●Radiator fin

6. Troubleshooting for BP Unit

6.1 Malfunction of Electronic Expansion Valve

Remote Controller Display

P9

Method of Malfunction Detection

Detection by checking continuity and lack of connector.

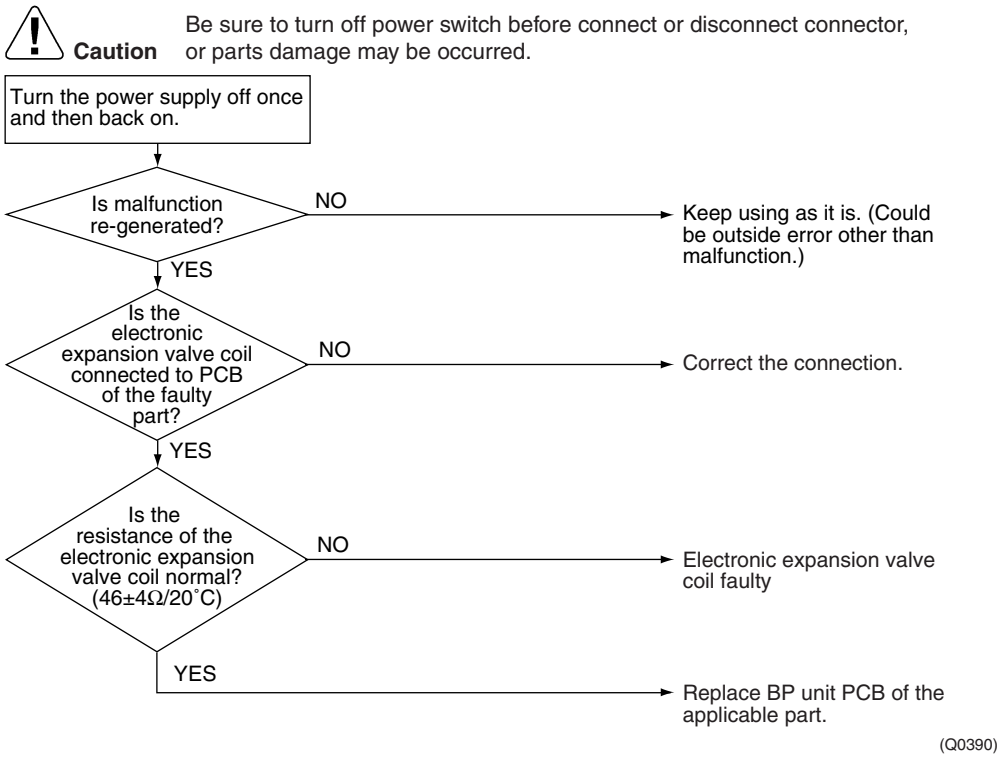
Malfunction Decision Conditions

Malfunction is determined by no common voltage applied when turning the power supply on.

Supposed Causes

- Faulty harness of electronic expansion valve
- Incorrect connectors connection of electronic expansion valve

Troubleshooting



6.2 Faulty BP Unit PCB

Remote Controller Display

E2

Method of Malfunction Detection

Check data from E²PROM

Malfunction Decision Conditions

When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Defect of BP unit PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

(Q0391)

6.3 Faulty BP Liquid or Gas Pipe Thermistor

Remote Controller Display

J10

Method of Malfunction Detection

Malfunction Decision Conditions

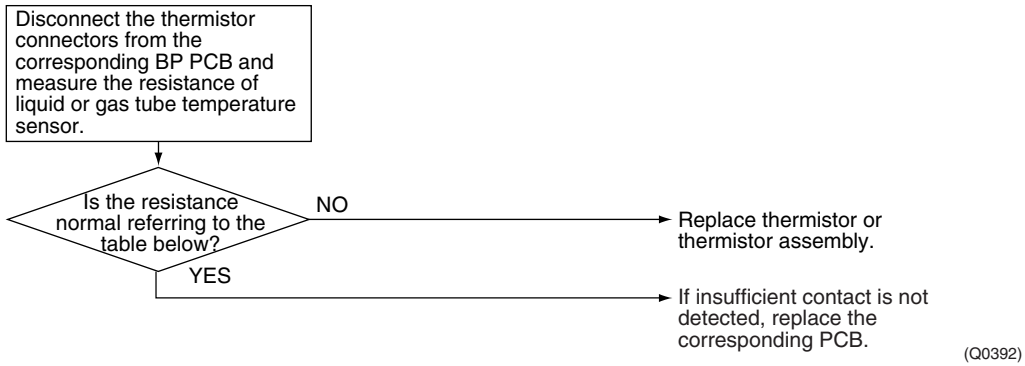
When the BP liquid or gas pipe temperature sensor became short-circuited or open.

Supposed Causes

- Faulty BP liquid or gas pipe temperature sensor
- Faulty connectors connection of BP liquid or gas pipe temperature sensor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Temp.	Resistance
-10°C	117kΩ
0°C	67kΩ
10°C	40kΩ
20°C	25kΩ
30°C	16kΩ
40°C	10kΩ
50°C	7kΩ
60°C	5kΩ
70°C	3kΩ

6.4 Transmission Error between Indoor Unit and BP Unit

Outdoor Unit Indication

U4

Method of Malfunction Detection

The data received from the BP unit in indoor unit-BP unit signal transmission is checked whether it is normal.

Malfunction Decision Conditions

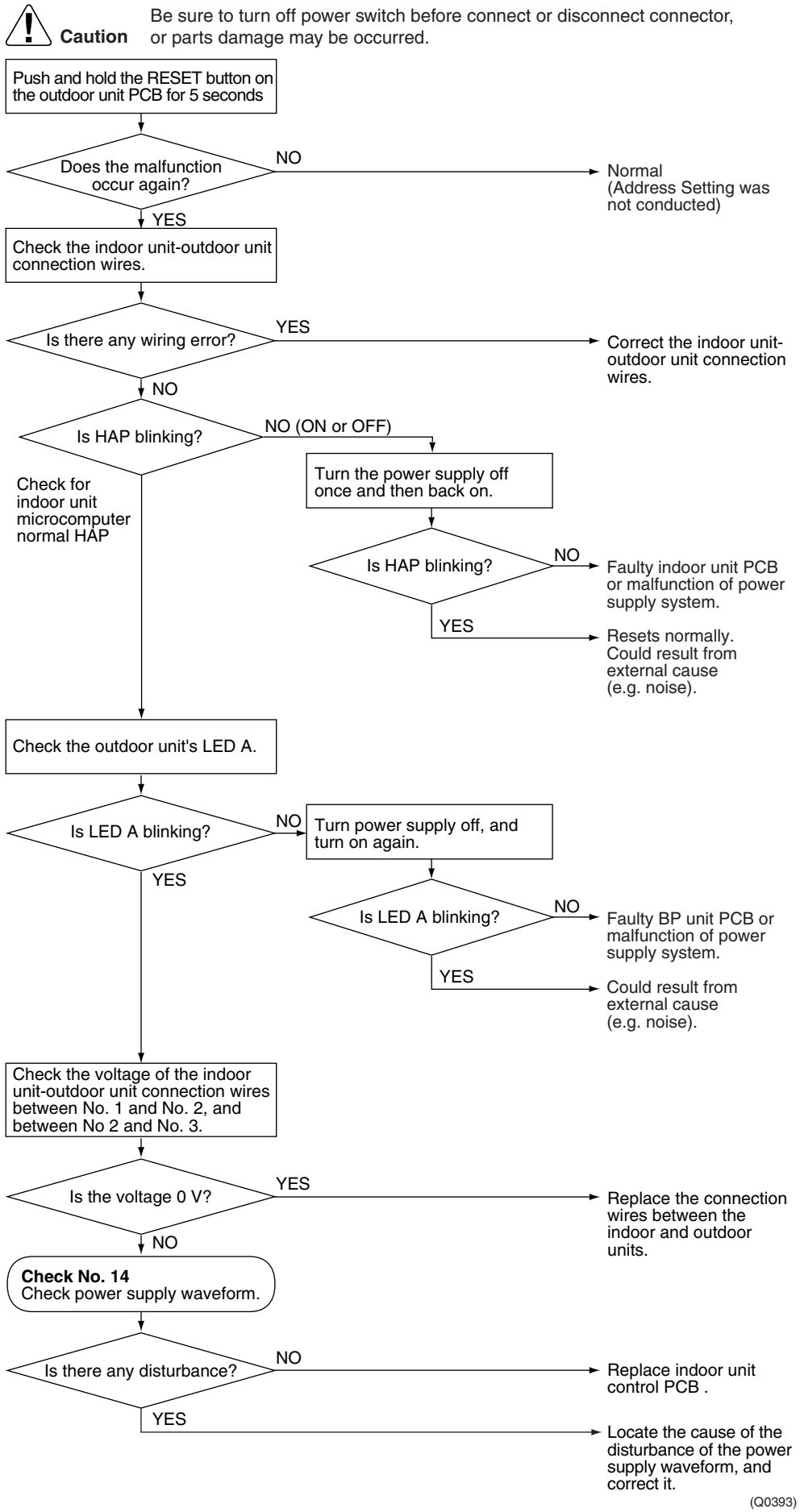
When the data sent from the BP unit cannot be received normally, or when the content of the data is abnormal.

Supposed Causes

- Faulty BP unit PCB.
- Faulty indoor unit PCB.
- Indoor unit-BP unit signal transmission error due to wiring error.
- Indoor unit-BP unit signal transmission error due to disturbed power supply waveform.
- Indoor unit-BP unit signal transmission error due to breaking of wire in the connection wires between the indoor and BP units (wire No. 2).

Troubleshooting

Check No.14
Refer to P.365



6.5 Transmission Error between Outdoor Unit and BP Unit

Outdoor Unit Indication

UJ

Method of Malfunction Detection

Transmission error is detected when the outdoor unit could not received the data from BP unit correctly.

Malfunction Decision Conditions

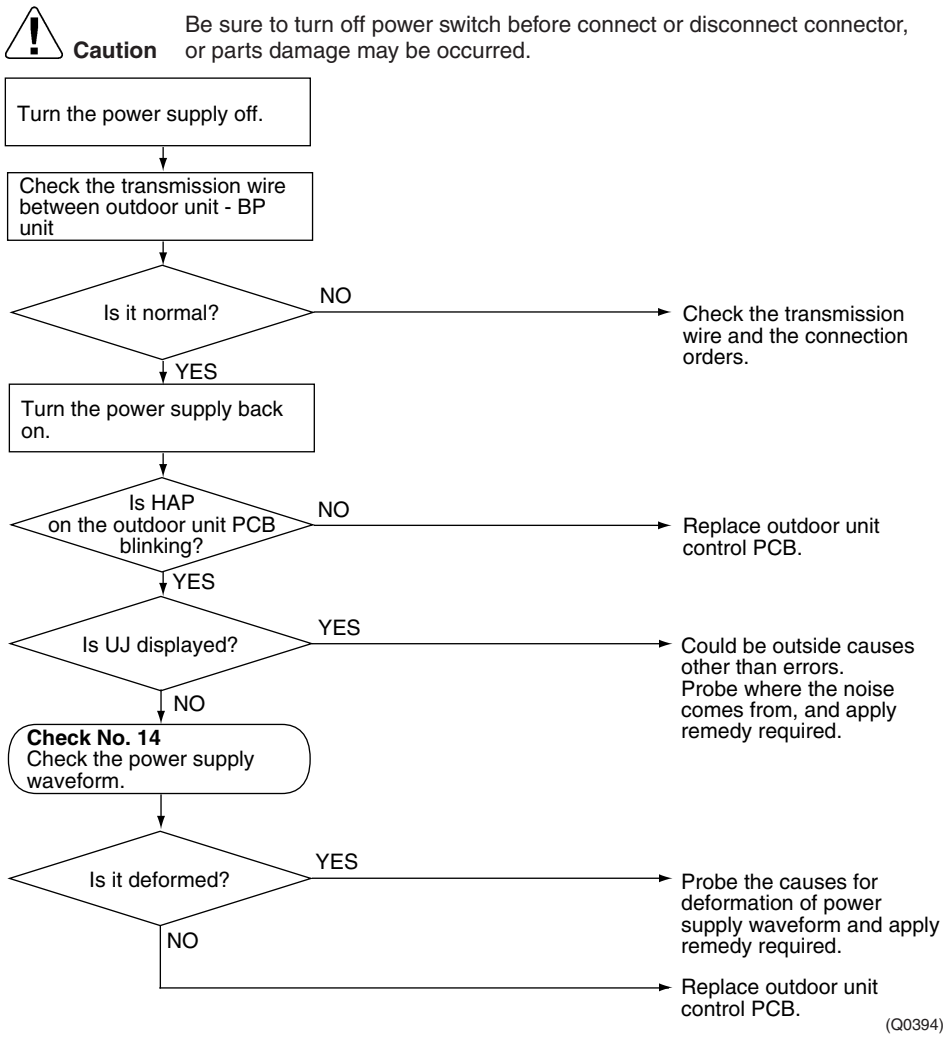
When the data from BP unit could not be correctly received continuously for 10 minutes

Supposed Causes

- Incorrect connection of transmission wire
- Faulty outdoor unit power supply
- Faulty BP unit PCB
- Faulty outdoor unit PCB
- Distortion of power supply wave

Troubleshooting

Check No.14
Refer to P.365



6.6 Check

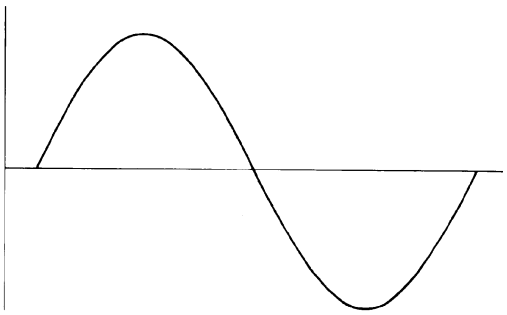
6.6.1 Power Supply Waveforms Check

Check No.14

Measure the power supply waveform between pins 1 and 3 on the terminal board, and check the waveform disturbance.

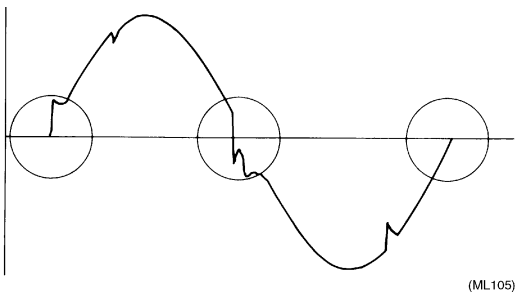
- Check to see if the power supply waveform is a sine wave (Fig.1).
- Check to see if there is waveform disturbance near the zero cross (sections circled in Fig.2)

[Fig.1]



(ML104)

[Fig.2]



(ML105)

7. Troubleshooting for Outdoor Unit

7.1 Faulty Outdoor Unit PCB

Remote Controller Display

E1

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Check data from E²PROM

Malfunction Decision Conditions

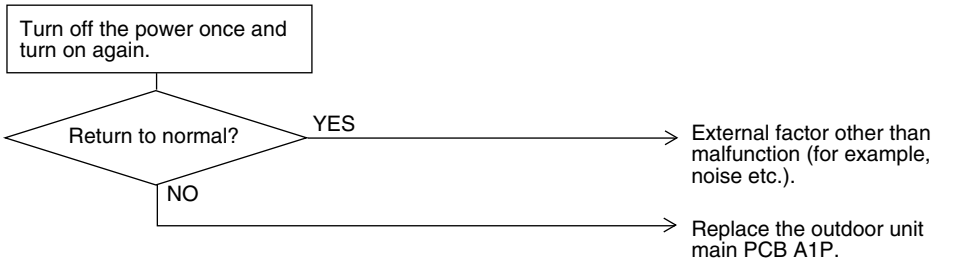
When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0421)

7.2 Actuation of High Pressure Switch

Remote Controller Display

E3

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Abnormality is detected when the contact of the high pressure protection switch opens.

Malfunction Decision Conditions

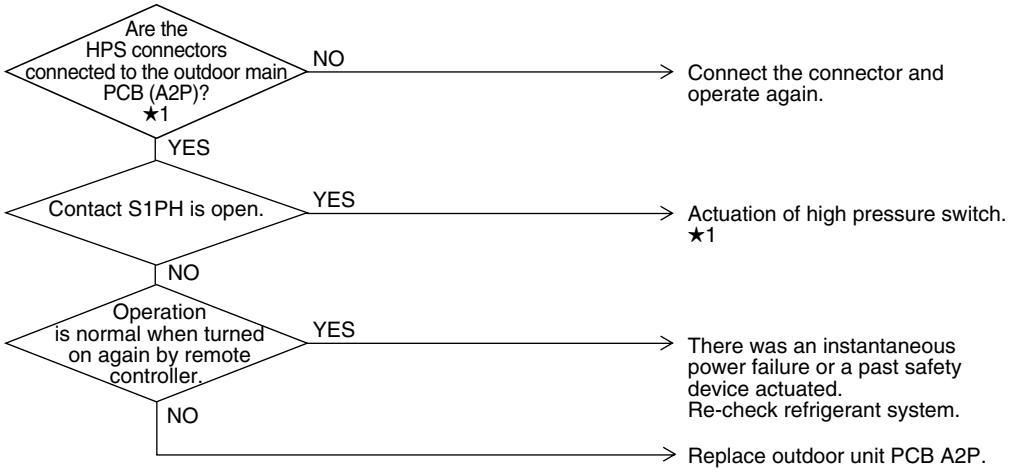
Error is generated when the HPS activation count reaches the number specific to the operation mode.

Supposed Causes

- Actuation of outdoor unit high pressure switch
- Defect of High pressure switch
- Defect of outdoor unit PCB
- Instantaneous power failure
- Faulty high pressure sensor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0422)

★1: Actuation of high pressure switch (HPS)

- Is the outdoor unit heat exchanger dirty?
- Defect of outdoor fan
- Is the refrigerant over-charged?
- Faulty high pressure sensor

7.3 Actuation of Low Pressure Switch

Remote Controller Display

E4

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction Decision Conditions

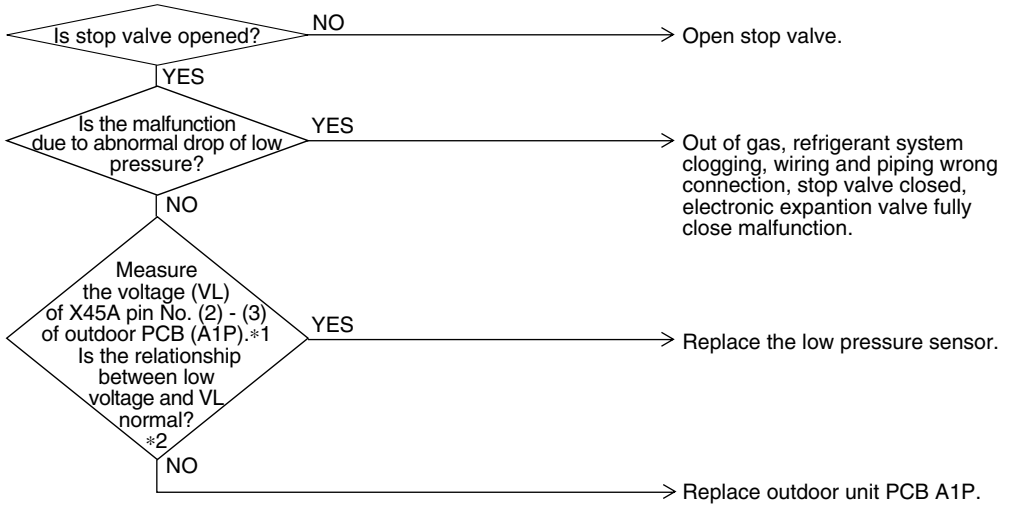
Error is generated when the low pressure is dropped under specific pressure.

Supposed Causes

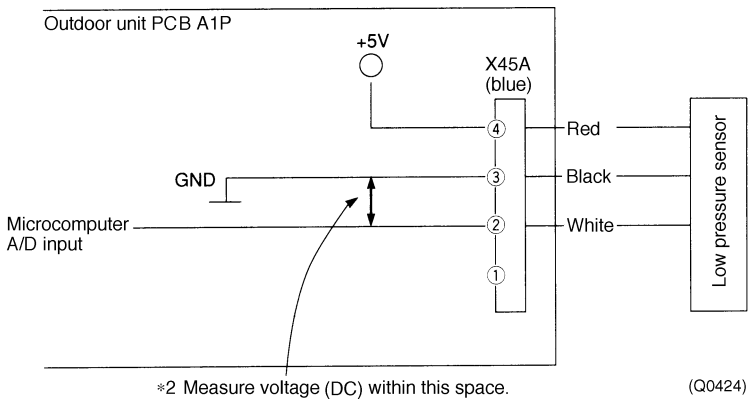
- Abnormal drop of low pressure
- Defect of low pressure sensor
- Defect of outdoor unit PCB
- Stop valve is not opened.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1: Voltage measurement point



*2: Refer to pressure sensor, pressure / voltage characteristics table on P400.

7.4 Compressor Motor Lock

Remote Controller Display

E5

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Inverter PC board takes the position signal from UVWN line connected between the inverter and compressor, and detects the position signal pattern.

Malfunction Decision Conditions

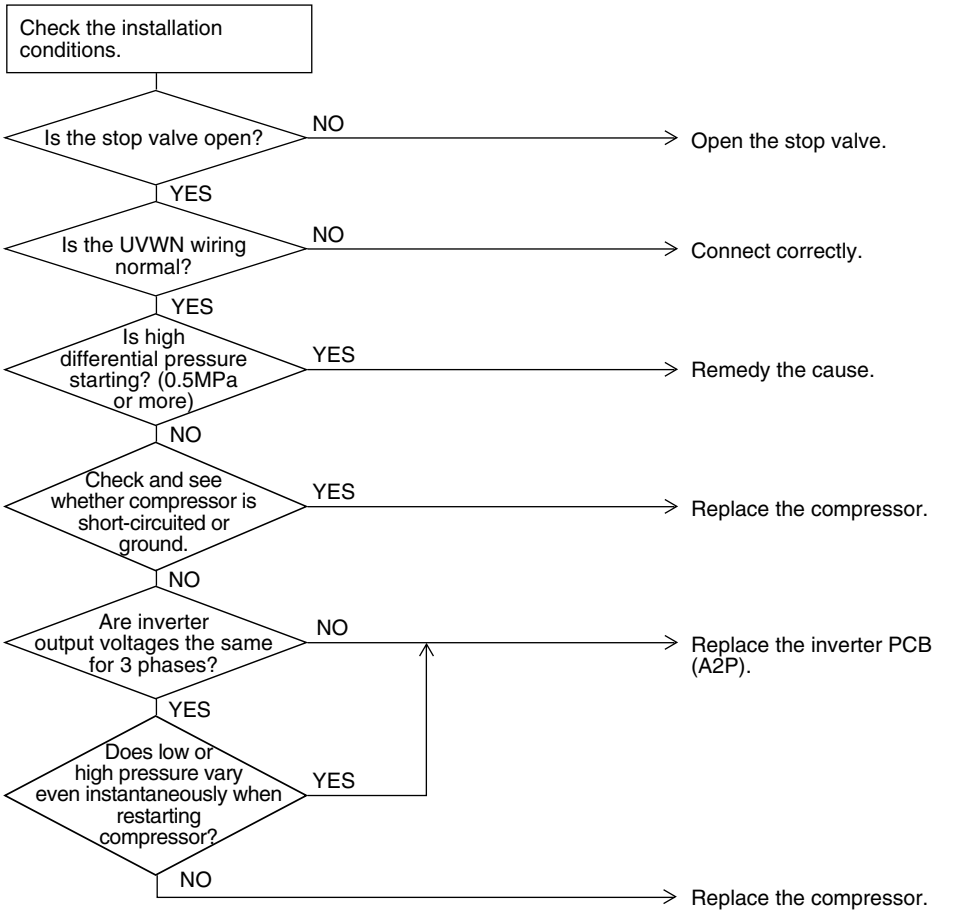
The position signal with 3 times cycle as imposed frequency is detected when compressor motor operates normally, but 2 times cycle when compressor motor locks. When the position signal in 2 times cycle is detected.

Supposed Causes

- Compressor lock
- High differential pressure (0.5MPa or more)
- Incorrect UVWN wiring
- Faulty inverter PCB
- Stop valve is left in closed.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0425)

7.5 Malfunction of Outdoor Unit Fan Motor

Remote Controller Display

E7

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction of fan motor system is detected according to the fan speed detected by Hall IC when the fan motor runs.

Malfunction Decision Conditions

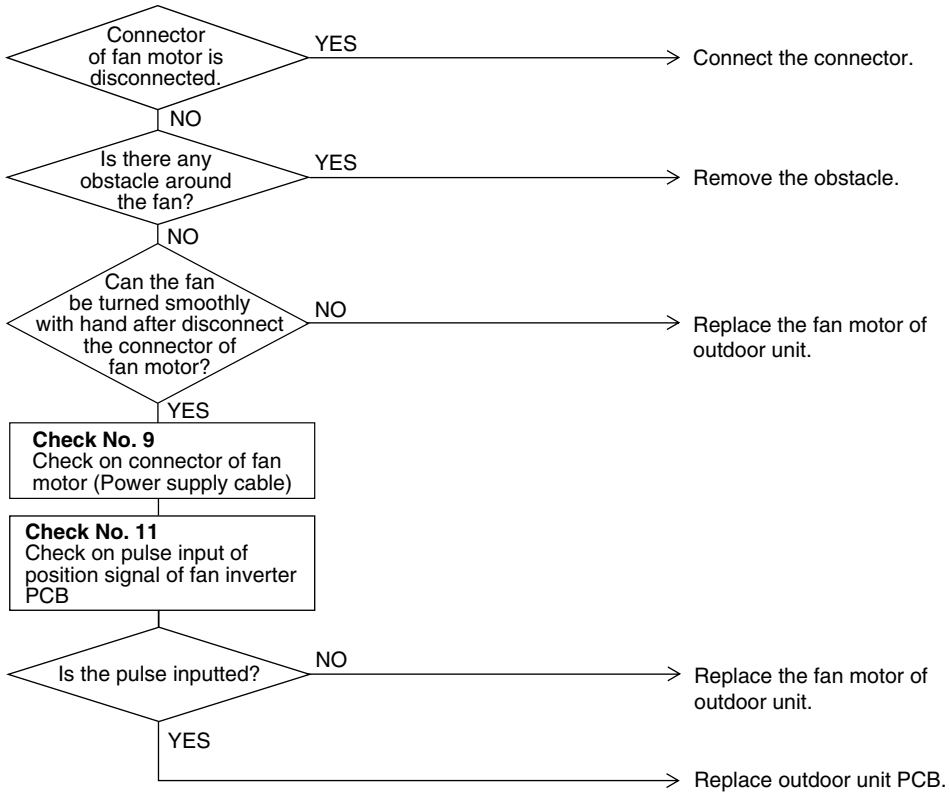
- When the fan runs with speed less than a specified one for 14.5 seconds or more when the fan motor running conditions are met
- When malfunction is generated 4 times, the system shuts down.

Supposed Causes

- Malfunction of fan motor
- The harness connector between fan motor and PCB is left in disconnected, or faulty connector
- Fan does not run due to foreign matters tangled
- Clearing condition: Operate for 5 minutes (normal)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0385)

7.6 Malfunction of Moving Part of Electronic Expansion Valve

Remote Controller Display

E9

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Check disconnection of connector
Check continuity of expansion valve coil

Malfunction Decision Conditions

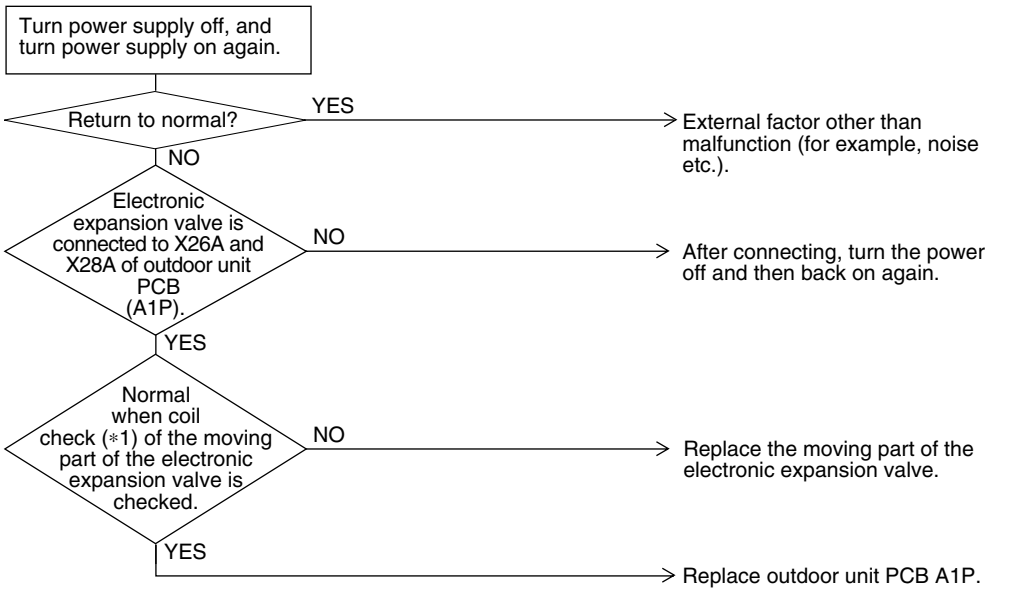
Error is generated under no common power supply when the power is on.

Supposed Causes

- Defect of moving part of electronic expansion valve
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0426)

*1 Coil check method for the moving part of the electronic expansion valve
Disconnect the electronic expansion valve from the PCB and check the continuity between the connector pins.

Normal condition

Pin No.	1. White	2. Yellow	3. Orange	4. Blue	5. Red	6. Brown
1. White		×	◎	×	○	×
2. Yellow			×	◎	×	○
3. Orange				×	○	×
4. Blue					×	○
5. Red						×
6. Brown						

◎: Continuity Approx. 300Ω, ○: Continuity Approx. 150Ω, ×: No continuity

7.7 Abnormal Discharge Pipe Temperature

Remote Controller Display

F3

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.

Malfunction Decision Conditions

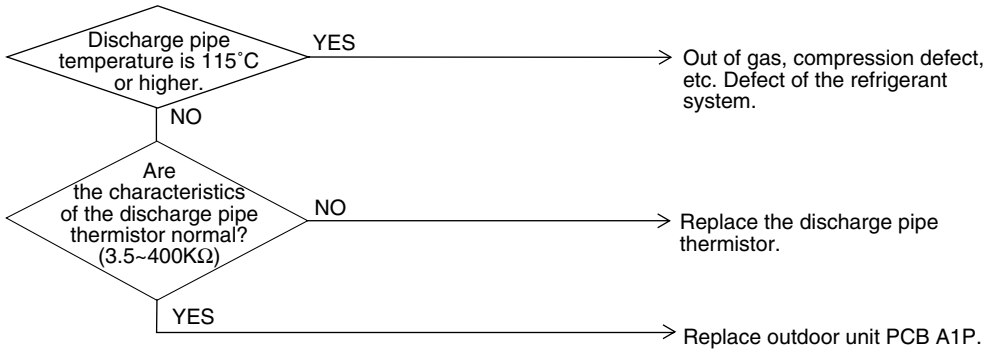
- When the discharge pipe temperature rises to an abnormally high level
- When the discharge pipe temperature rises suddenly

Supposed Causes

- Faulty discharge pipe temperature
- Faulty connection of discharge pipe thermistor
- Faulty outdoor unit PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0427)

∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.8 Malfunction of Thermistor for Outdoor Air (R1T)

Remote Controller Display

H9

Applicable Models

All outdoor unit models

Method of Malfunction Detection

The abnormal detection is based on current detected by current sensor.

Malfunction Decision Conditions

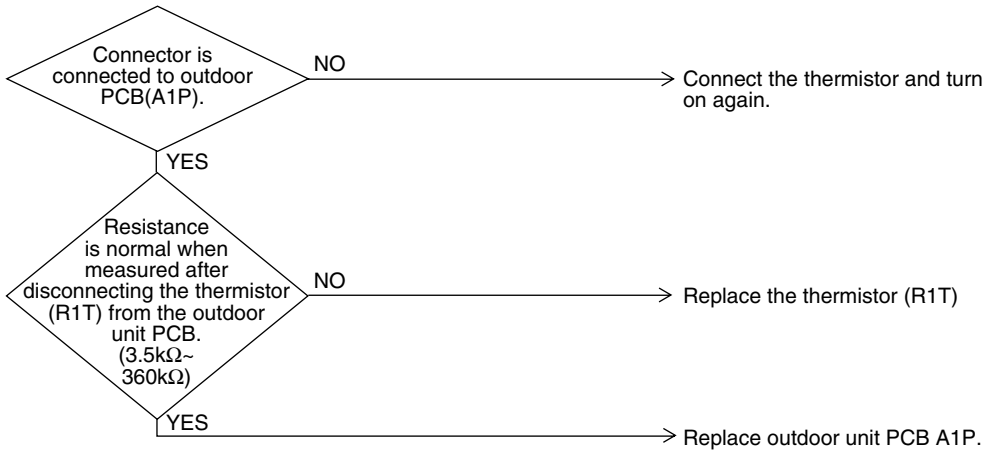
When the outdoor air temperature sensor has short circuit or open circuit.

Supposed Causes

- Defect of thermistor (R1T) for outdoor air
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0428)

The alarm indicator is displayed when the fan only is being used also.

∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.9 Malfunction of Discharge Pipe Thermistor (R3T)

Remote Controller Display

J3

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from the temperature detected by discharge pipe temperature thermistor.

Malfunction Decision Conditions

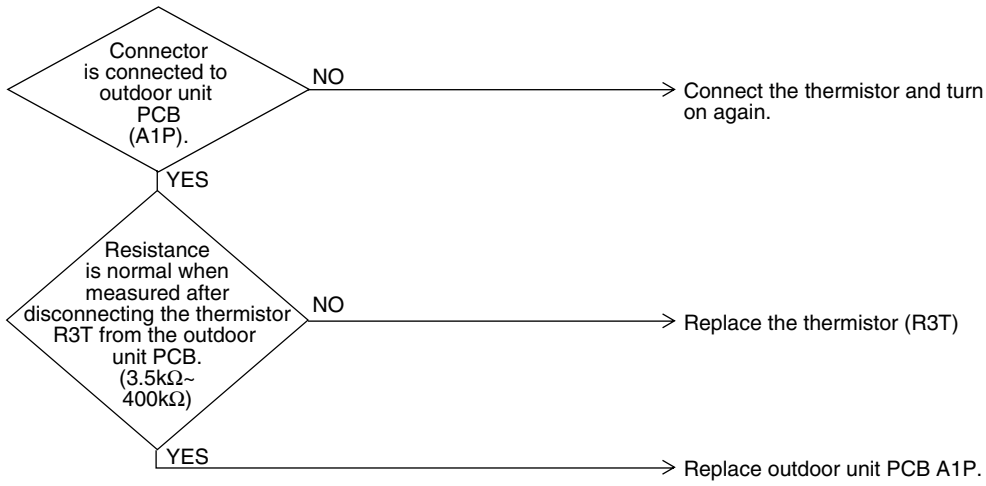
When a short circuit or an open circuit in the discharge pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R3T) for outdoor unit discharge pipe
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0429)

∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.10 Malfunction of Thermistor (R2T) for Suction Pipe

Remote Controller Display

U5

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the suction pipe temperature thermistor.

Malfunction Decision Conditions

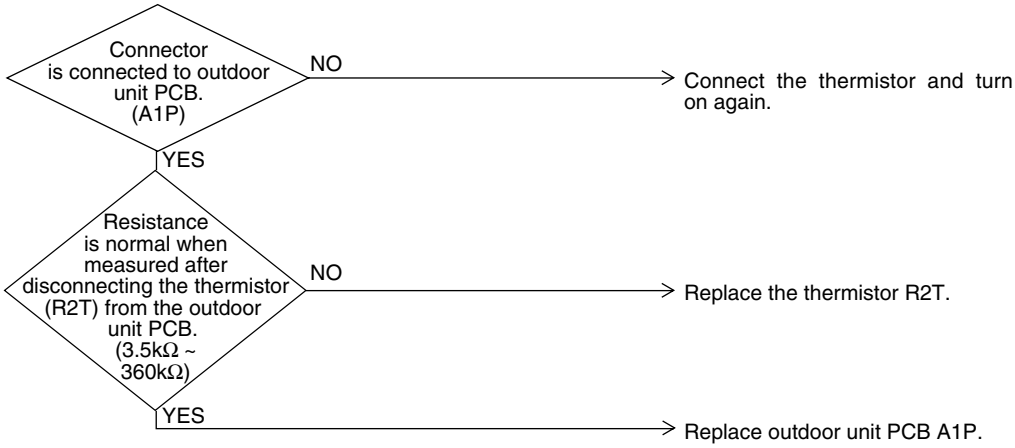
When a short circuit or an open circuit in the suction pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R2T) for outdoor unit suction pipe
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.11 Malfunction of Thermistor (R4T) for Outdoor Unit Heat Exchanger

Remote Controller Display

U5

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the heat exchanger thermistor.

Malfunction Decision Conditions

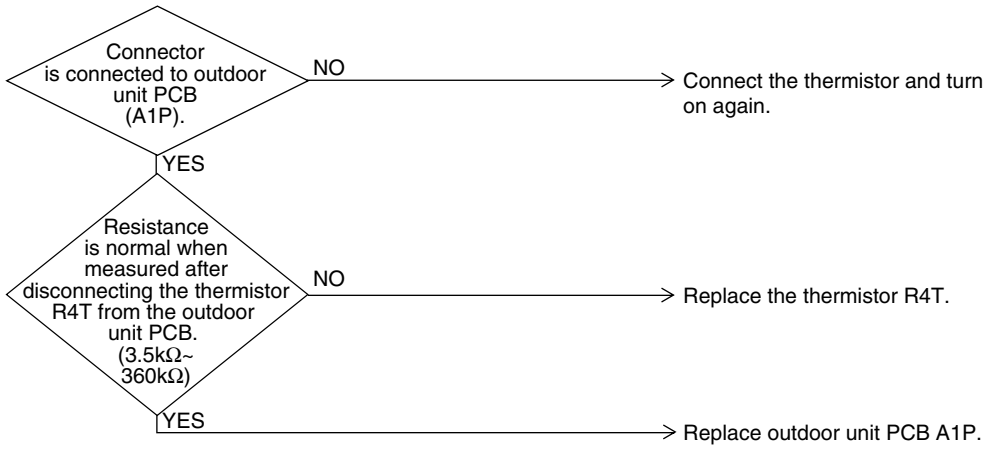
When a short circuit or an open circuit in the heat exchange thermistor is detected.

Supposed Causes

- Defect of thermistor (R4T) for outdoor unit heat exchanger
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0431)

∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.12 Malfunction of Receiver Gas Pipe Thermistor (R5T)

Remote Controller Display

J9

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by receiver gas pipe thermistor (= Subcooling heat exchanger gas pipe thermistor).

Malfunction Decision Conditions

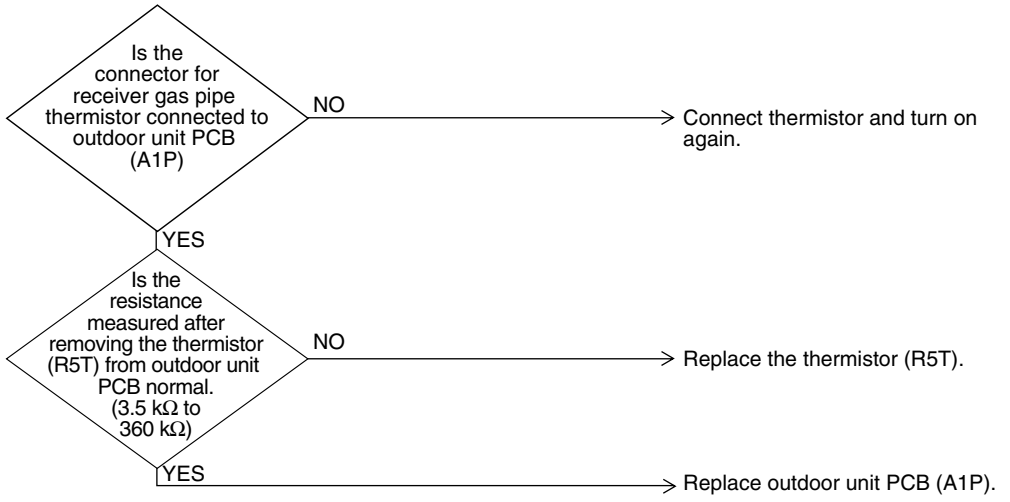
When the receiver gas pipe thermistor is short circuited or open.

Supposed Causes

- Faulty receiver gas pipe thermistor (R5T)
- Faulty outdoor unit PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0445)

∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.13 Outdoor Unit: Malfunction of High Pressure Sensor

Remote Controller Display

UP

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from the pressure detected by the high pressure sensor.

Malfunction Decision Conditions

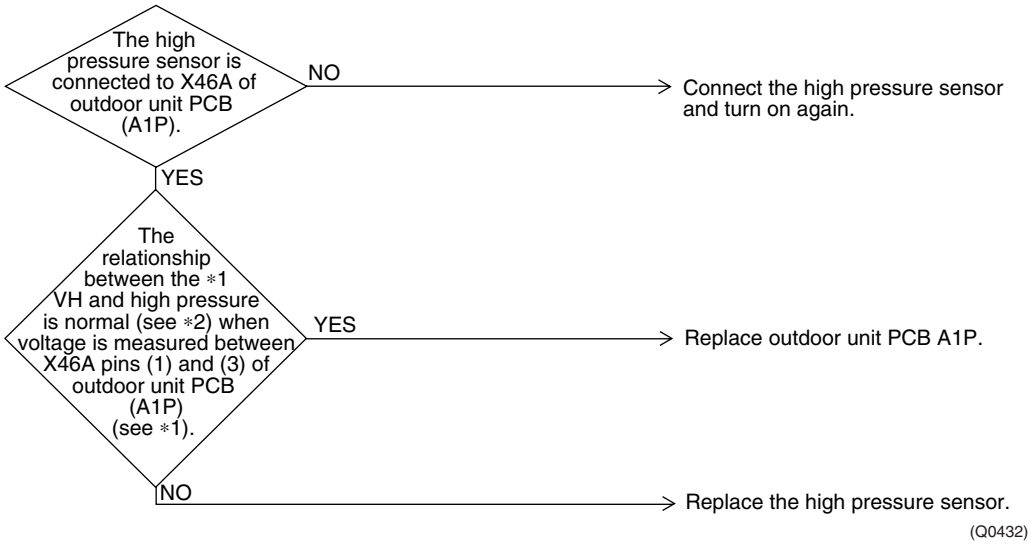
When the high pressure sensor is short circuit or open circuit.

Supposed Causes

- Defect of high pressure sensor
- Connection of low pressure sensor with wrong connection.
- Defect of outdoor unit PCB.

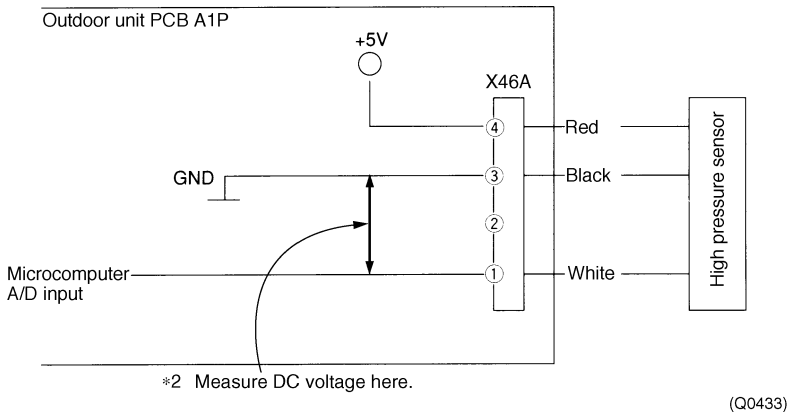
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0432)

∗1: Voltage measurement point



(Q0433)

∗2: Refer to pressure sensor, pressure / voltage characteristics table on P400.

7.14 Malfunction of Low Pressure Sensor

Remote Controller Display

LC

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from pressure detected by low pressure sensor.

Malfunction Decision Conditions

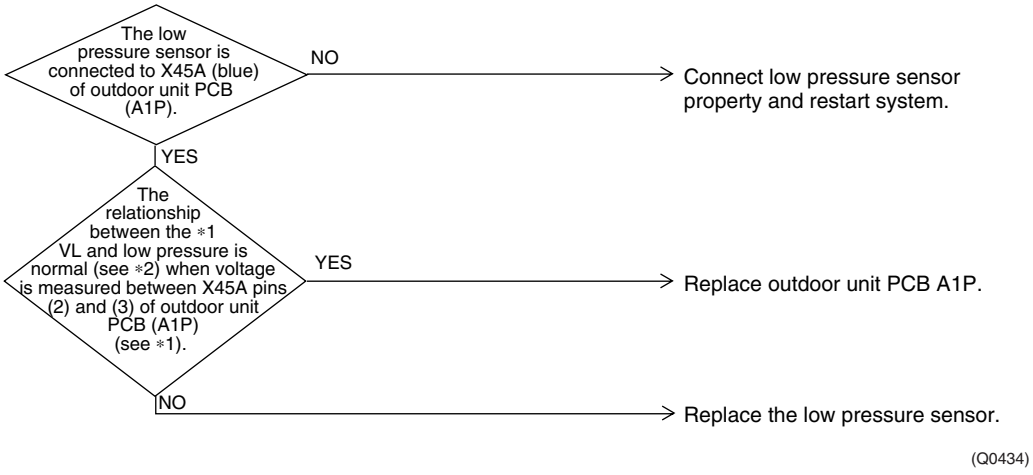
When the low pressure sensor is short circuit or open circuit.

Supposed Causes

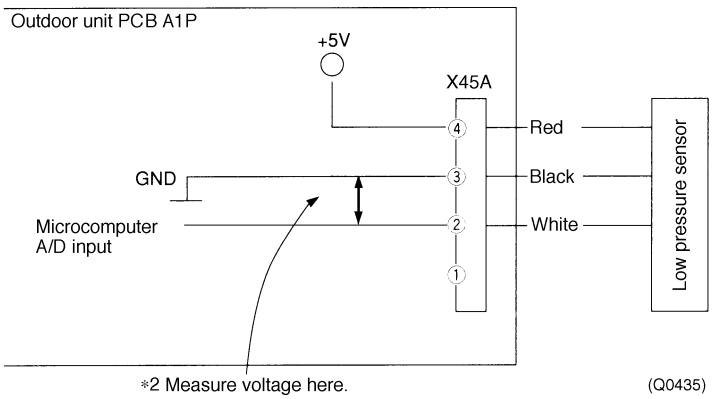
- Defect of low pressure sensor
- Connection of high pressure sensor with wrong connection.
- Defect of outdoor unit PCB.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗1: Voltage measurement point



∗2: Refer to pressure sensor, pressure/voltage characteristics table on P400.

7.15 Malfunction of Inverter Radiating Fin Temperature Rise

Remote Controller Display

L4

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Fin temperature is detected by the thermistor of the radiation fin.

Malfunction Decision Conditions

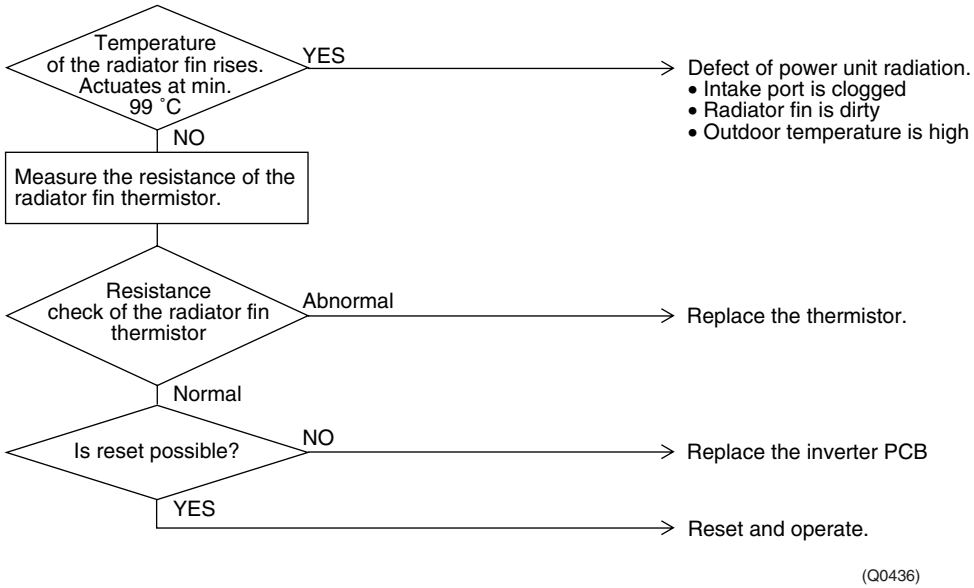
When the temperature of the inverter radiation fin increases above 99°C.

Supposed Causes

- Actuation of fin thermal (Actuates above 99°C)
- Defect of inverter PCB
- Defect of fin thermistor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0436)

* Refer to thermistor resistance / temperature characteristics table on P398.

7.16 Inverter Compressor Abnormal

Remote Controller Display

L5

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from current flowing in the power transistor.

Malfunction Decision Conditions

When an excessive current flows in the power transistor.
(Instantaneous overcurrent also causes activation.)

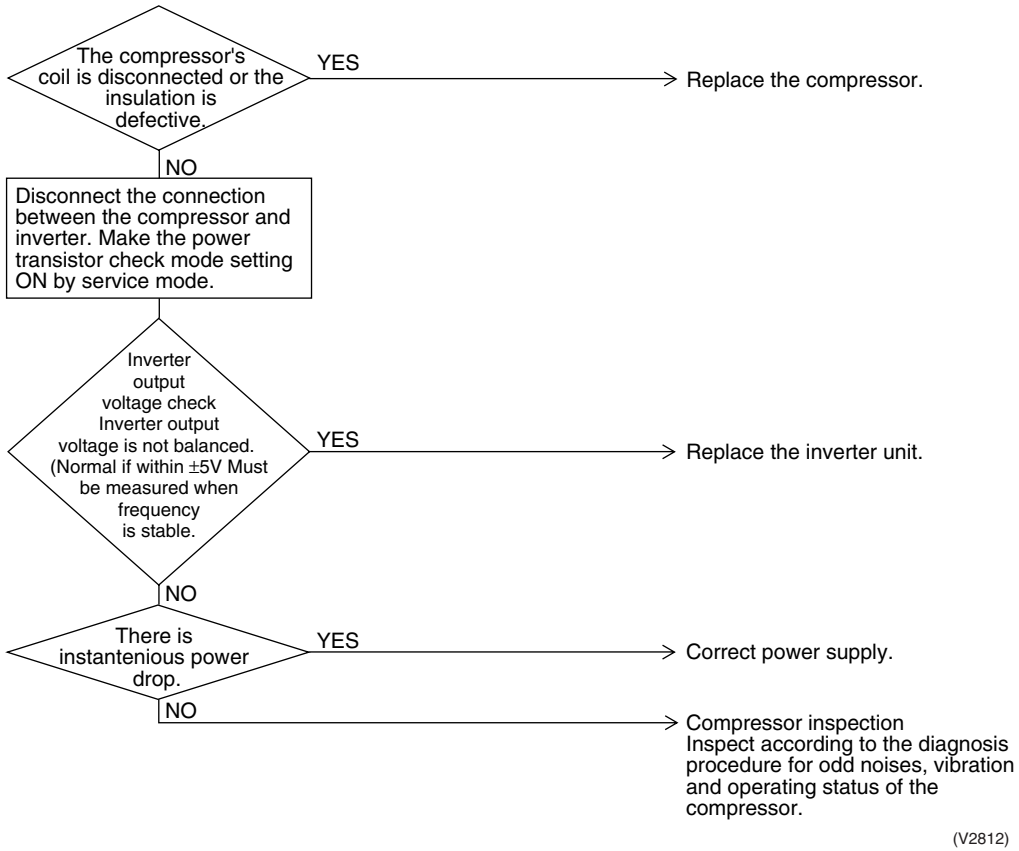
Supposed Causes

- Defect of compressor coil (disconnected, defective insulation)
- Compressor start-up malfunction (mechanical lock)
- Defect of inverter PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Compressor inspection



(V2812)

Higher voltage than actual is displayed when the inverter output voltage is checked by tester.

7.17 Inverter Current Abnormal

Remote Controller Display

L8

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected by current flowing in the power transistor.

Malfunction Decision Conditions

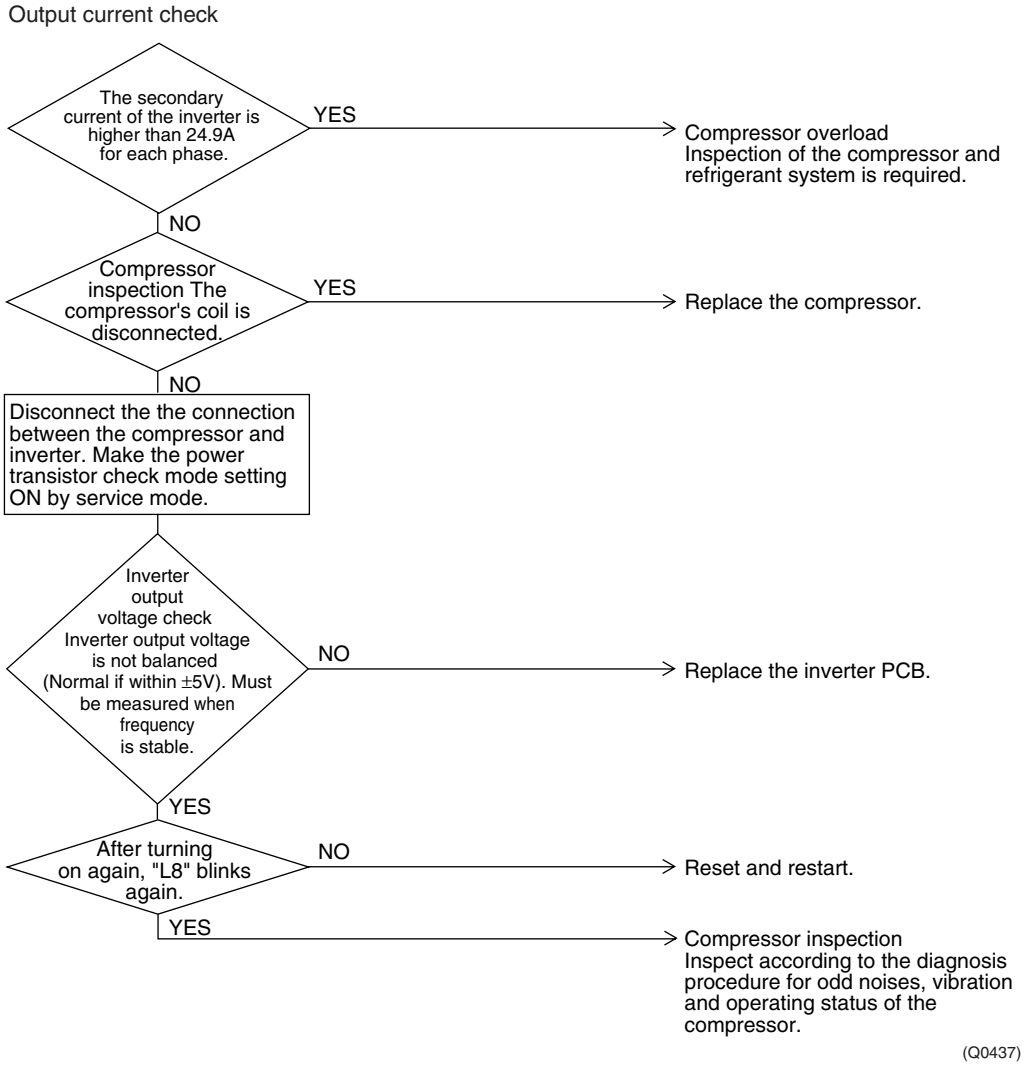
When overload in the compressor is detected.

Supposed Causes

- Compressor overload
- Compressor coil disconnected
- Defect of inverter PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



7.18 Inverter Start up Error

Remote Controller Display

L9

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Malfunction is detected from current flowing in the power transistor.

Malfunction Decision Conditions

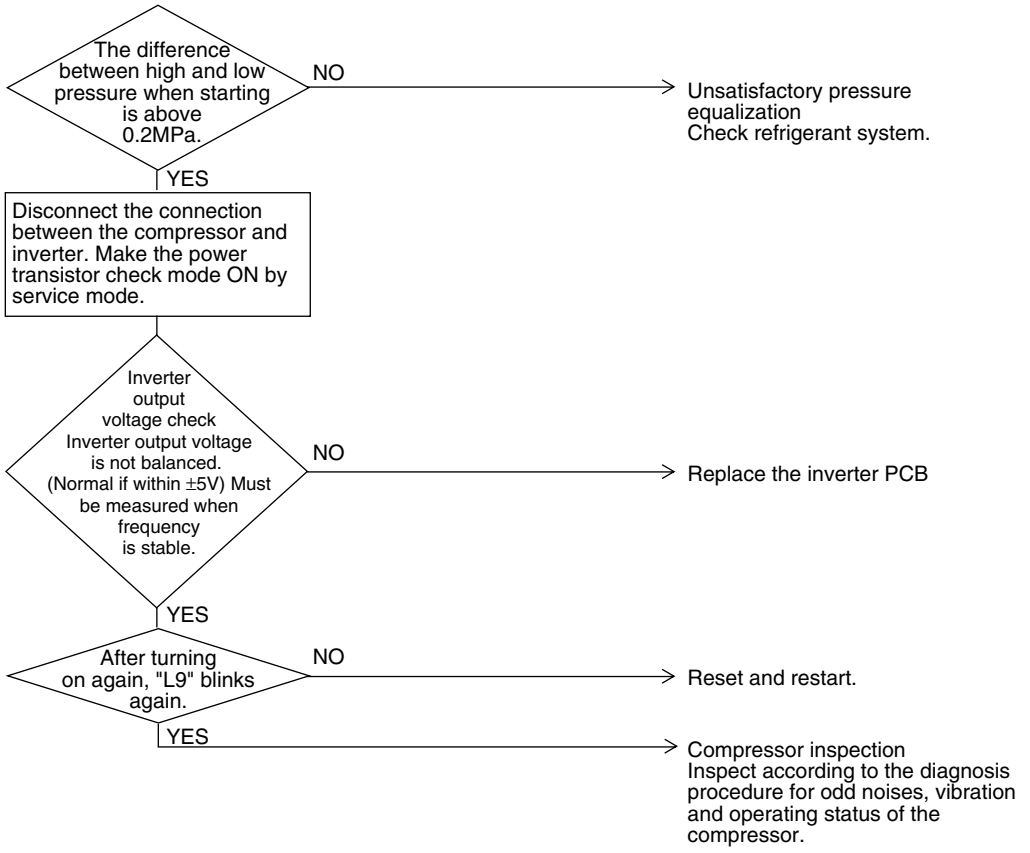
When overload in the compressor is detected during startup

Supposed Causes

- Defect of compressor
- Pressure differential start
- Defect of inverter PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0438)

7.19 Malfunction of Transmission between Inverter and Control PCB

Remote Controller Display

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Check the communication state between inverter PCB and control PCB by micro-computer.

Malfunction Decision Conditions

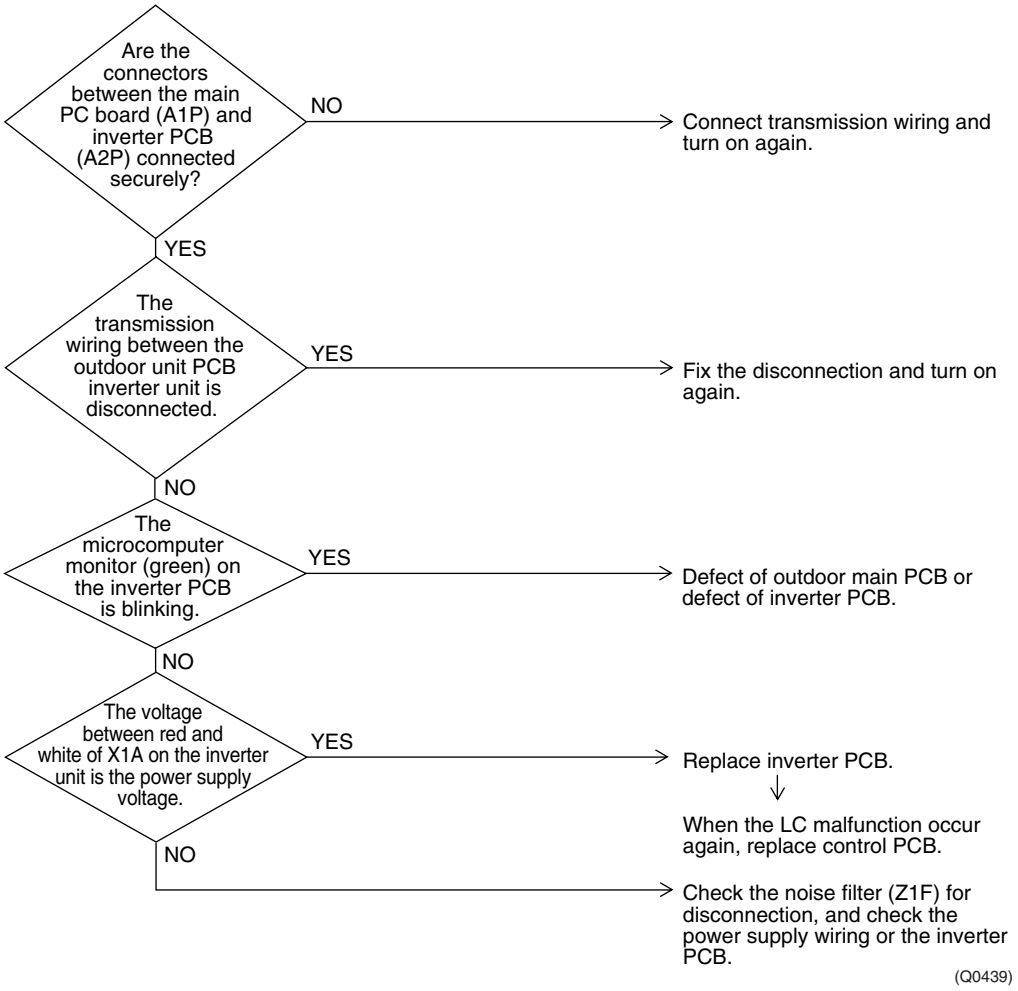
When the correct communication is not conducted in certain period.

Supposed Causes

- Malfunction of connection between the inverter PCB and outdoor control PCB
- Defect of outdoor control PCB (transmission section)
- Defect of inverter PCB
- Defect of noise filter
- External factor (Noise etc.)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



7.20 Malfunction of Inverter Radiating Fin Temperature Rise Sensor

Remote Controller Display

P4

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Resistance of radiation fin thermistor is detected when the compressor is not operating.

Malfunction Decision Conditions

When the resistance value of thermistor becomes a value equivalent to open or short circuited status.

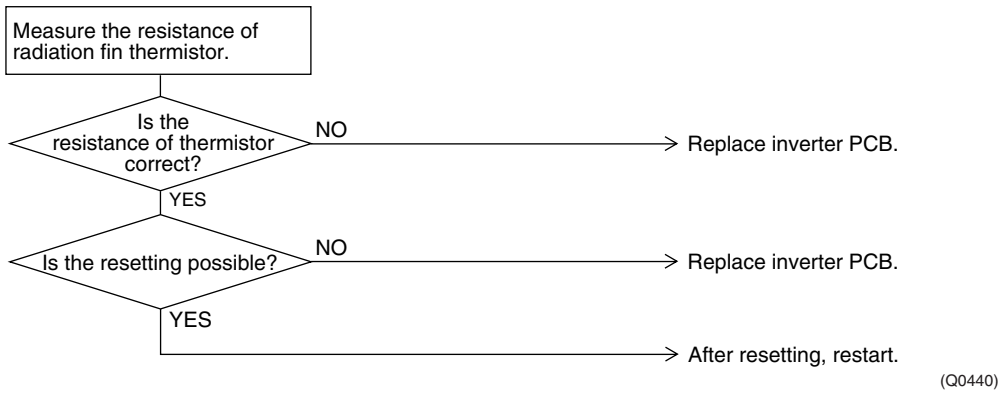
- Malfunction is not decided while the unit operation is continued.
  "P4" will be displayed by pressing the inspection button.

Supposed Causes

- Defect of radiator fin temperature sensor
- Defect of inverter PCB

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to thermistor resistance / temperature characteristics table on P398.

7.21 Faulty Combination of Inverter and Fan Driver

Remote Controller Display

P1

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Check the communication state between inverter PCB and control PCB by micro-computer.

Malfunction Decision Conditions

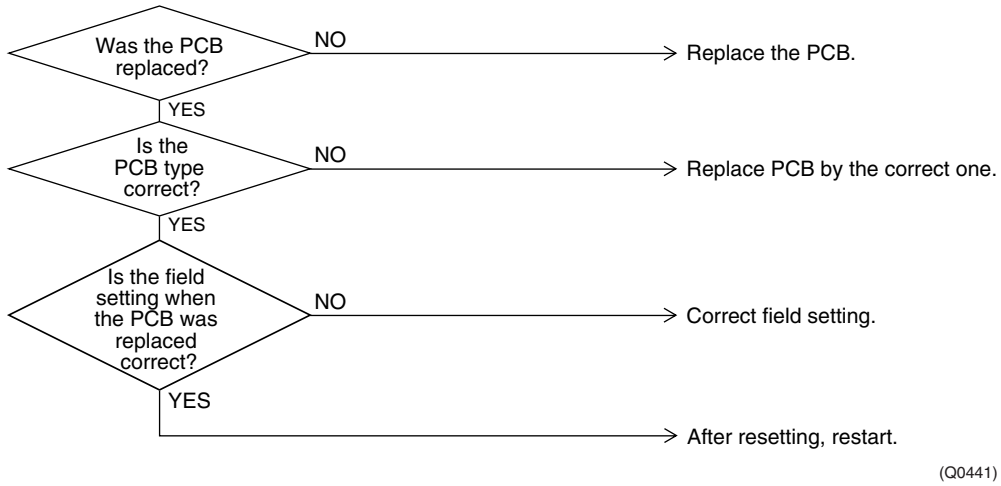
When the communication data about inverter PCB type is incorrect.

Supposed Causes

- Mismatching of inverter PCB
- Faulty field setting

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0441)

∗ Refer to “Field Setting from Outdoor Unit” on P166.

7.22 Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure

Remote Controller Display

LC1

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Short of gas malfunction is detected by discharge pipe temperature thermistor.

Malfunction Decision Conditions

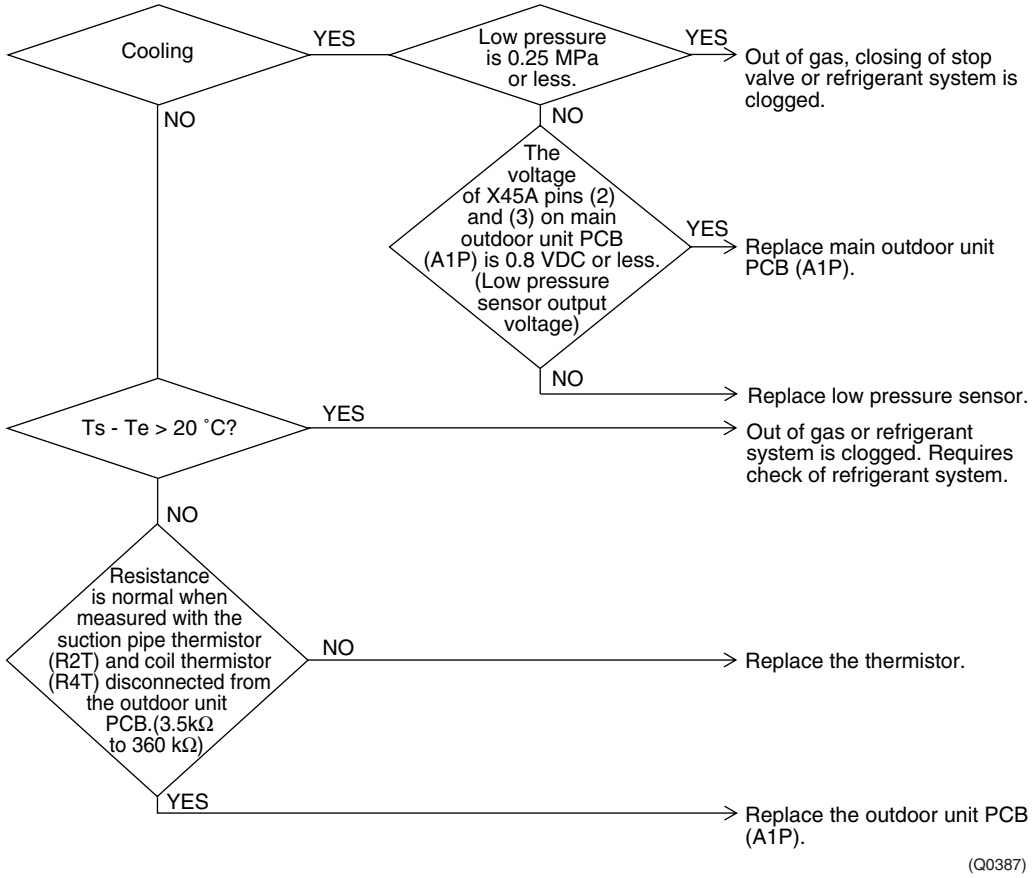
Microcomputer judge and detect if the system is short of refrigerant.
★Malfunction is not decided while the unit operation is continued.

Supposed Causes

- Out of gas or refrigerant system clogging (incorrect piping)
- Defect of thermistor R2T or R4T
- Defect of pressure sensor
- Defect of outdoor unit PCB (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0387)

7.23 Power Supply Insufficient or Instantaneous Failure

Remote Controller Display

U2

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.

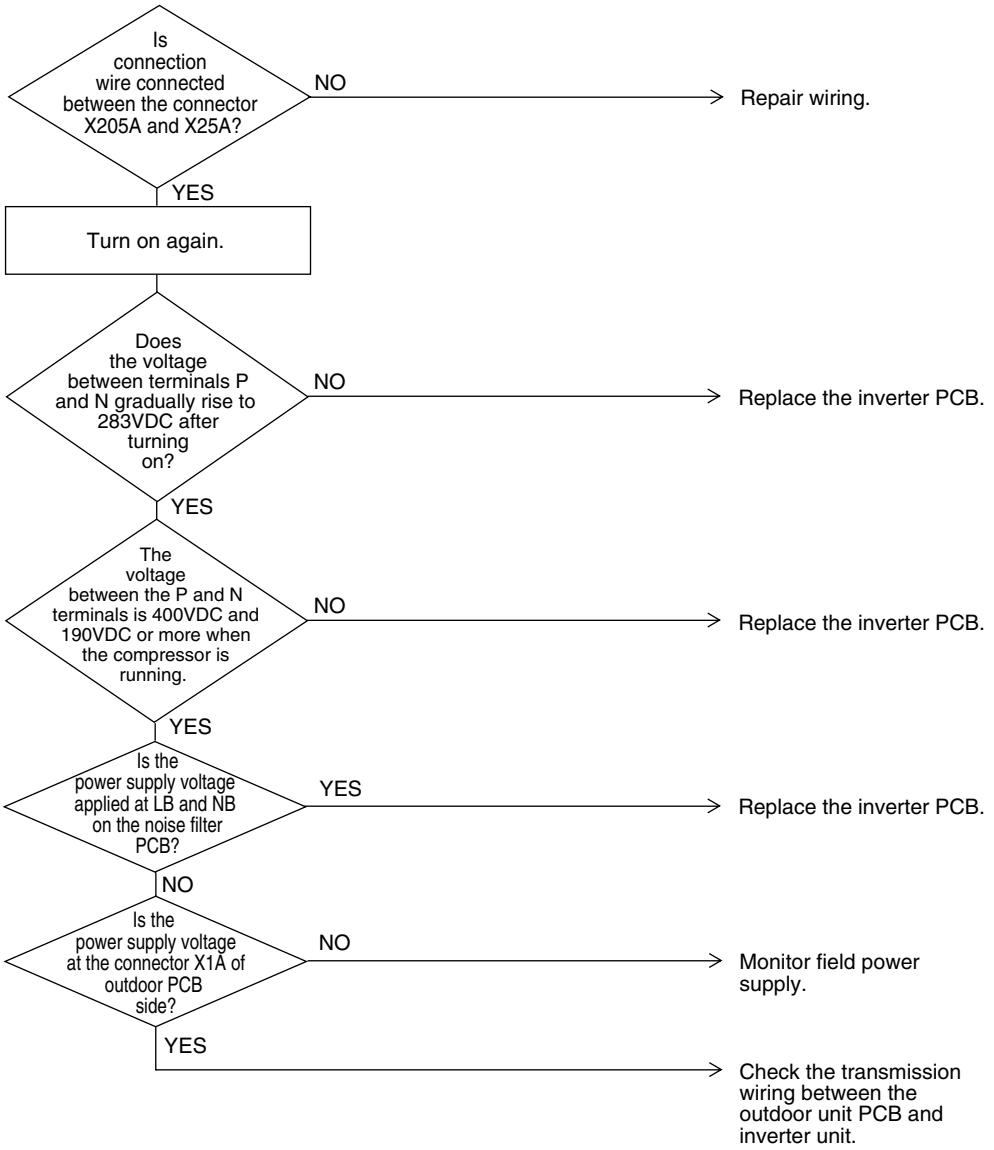
Malfunction Decision Conditions

Supposed Causes

- Power supply insufficient
- Instantaneous failure
- Defect of inverter PCB
- Defect of outdoor control PCB
- Main circuit wiring defect

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0442)

7.24 Check Operation not Executed

Remote Controller Display

U3

Applicable Models

All outdoor unit models

Method of Malfunction Detection

Check operation is executed or not

Malfunction Decision Conditions

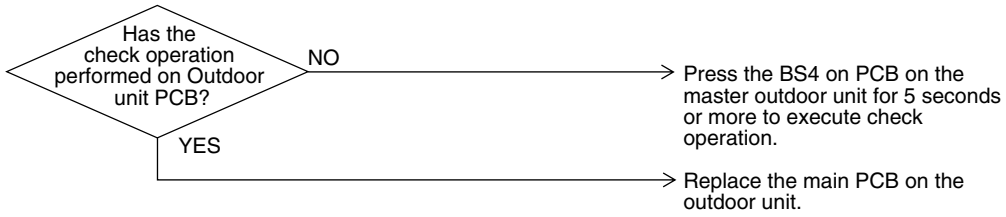
Malfunction is decided when the unit starts operation without check operation.

Supposed Causes

- Check operation is not executed.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0443)

7.25 Malfunction in other Indoor Unit or other BP Unit

Remote Controller Display

U9

Applicable Models

All indoor unit models

Method of Malfunction Detection

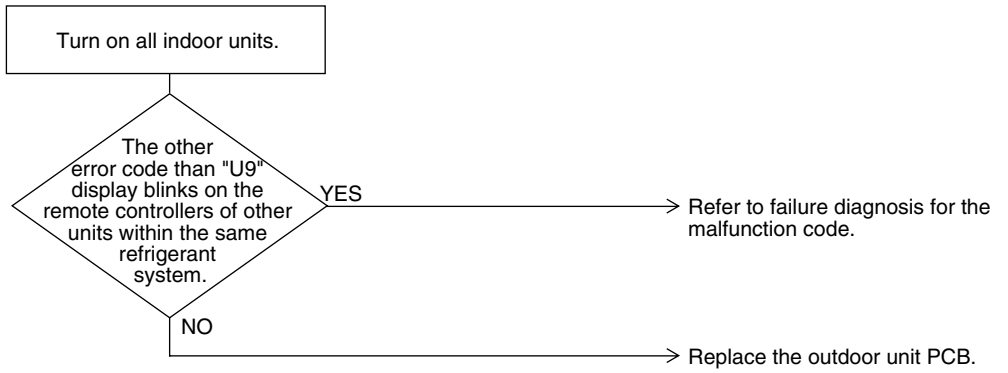
Malfunction Decision Conditions

Supposed Causes

- Malfunction of electronic expansion valve in other BP unit
- Defect of PCB of other indoor unit or other BP unit

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0386)

7.26 Mismatching of Indoor Unit, BP Unit and Outdoor Unit

Remote Controller Display

UP

Applicable Models

All indoor unit models

Method of Malfunction Detection

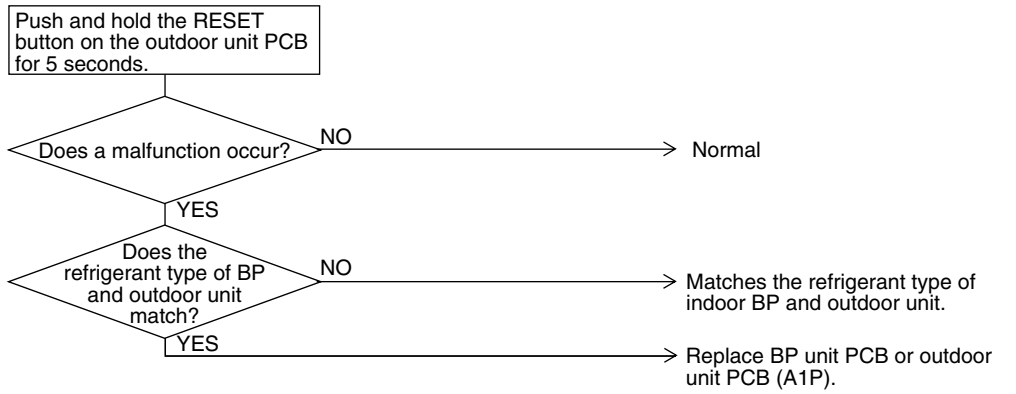
Malfunction Decision Conditions

Supposed Causes

- Defect of outdoor unit PCB (A1P)
- Mismatching of the refrigerant type of indoor and outdoor unit.
- Setting of outdoor PCB was not conducted after replacing to spare parts PCB.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



* The number of indoor units that can be connected to a single outdoor unit system depends on the type of outdoor unit.

7.27 Refrigerant System not Set, Incompatible Wiring/Piping

Remote Controller Display

UF

Applicable Models

All BP unit models
All outdoor unit models

Method of Malfunction Detection

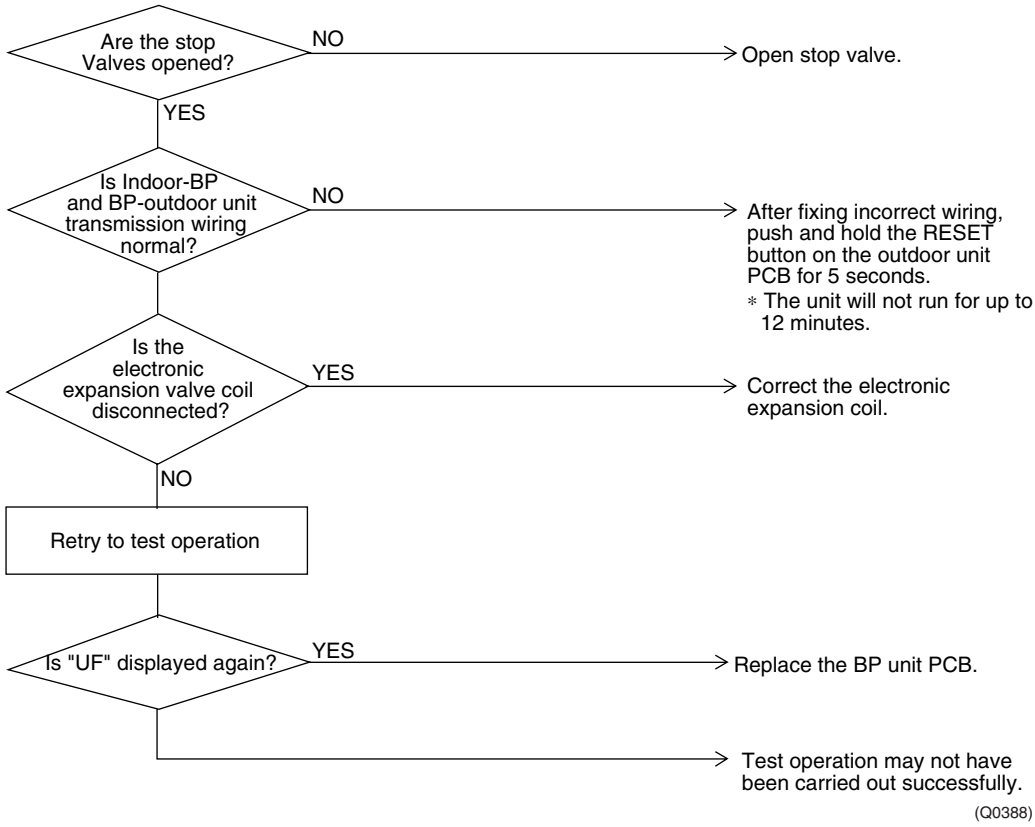
Malfunction Decision Conditions

Supposed Causes

- Failure to execute wiring check operation
- Defect of BP unit PCB
- Failure to open the stop valve

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(Q0388)

Note: Test operation may not be successful if carried out after the outdoor unit has been off for more than 12 hours, or if it is not carried out after running all connected indoor units in the fan mode for at least an hour.

7.28 Malfunction of System, Refrigerant System Address Undefined

Remote Controller Display

UH

Applicable Models

All indoor unit models
All BP unit models
All outdoor unit models

Method of Malfunction Detection

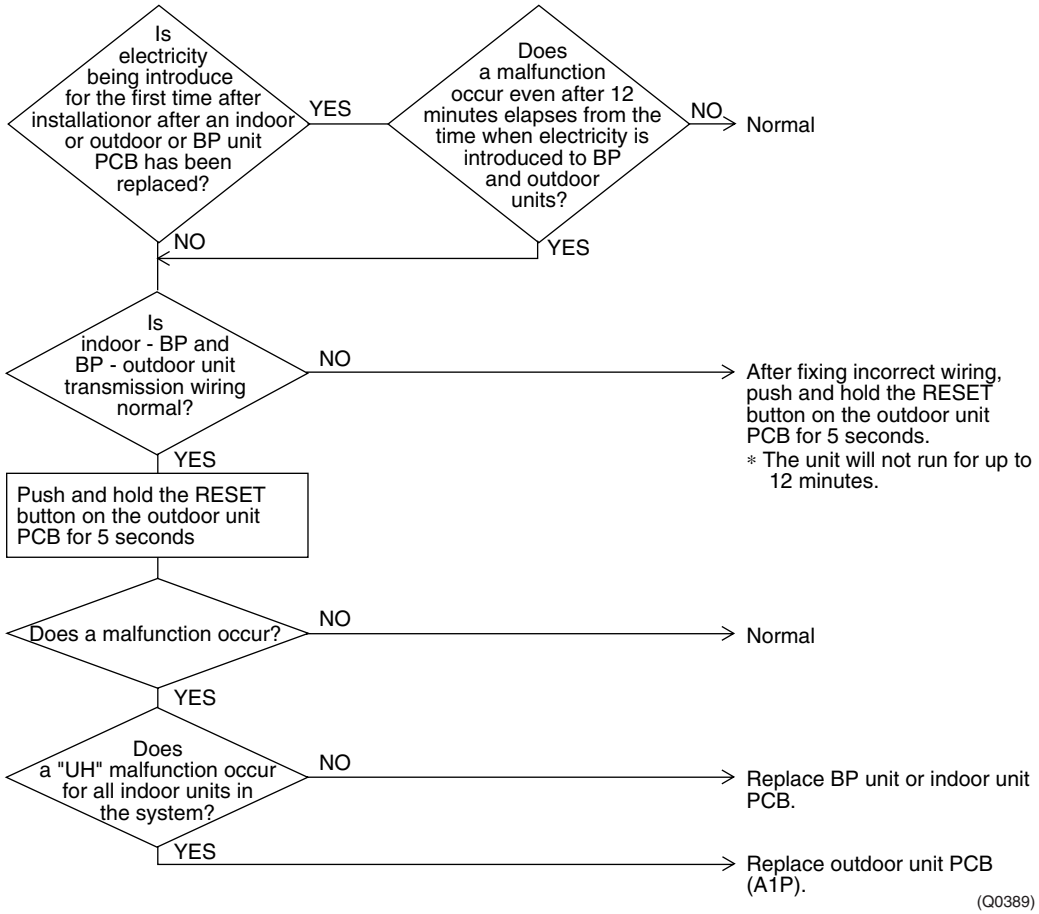
Malfunction Decision Conditions

Supposed Causes

- Defect of indoor unit PCB
- Defect of BP unit PCB
- Defect of outdoor unit PCB (A1P)

Troubleshooting

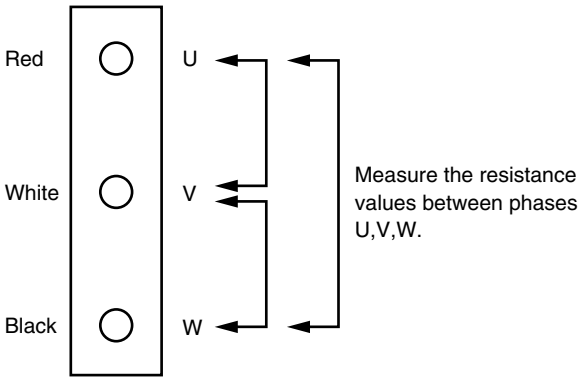
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



8. Check

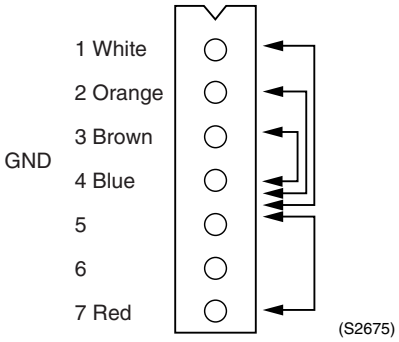
Check No. 08 **Check on connector of fan motor (Power supply cable)**

(1) Turn off the power supply.
Measure the resistance between phases of U,V,W at the motor side connectors (three-core wire) to check that the values are balanced and there is no short circuit, while connector or relay connector is disconnected.



Check No. 09 **Check for Fan Motor Connector (Signal Line)**

(1) Turn the power supply off.
(2) With the fan motor connector disconnected, measure the resistance between each pin, then make sure that the resistance is more than the value mentioned in the following table.

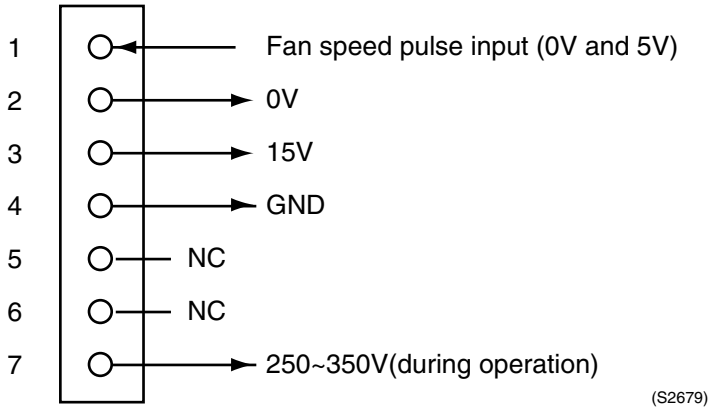


Measurement point	Judgment
1 - 4	1MΩ or more
2 - 4	100kΩ or more
3 - 4	100Ω or more
4 - 7	100kΩ or more

Check No. 11 **Check for Fan Speed Pulse Input on Outdoor Unit PCB**

(1) Disconnect the connector X206A with the power supply OFF and Operation OFF.
(2) Is the voltage between pins 4 and 3 of X206A about 15 VDC after turning the power supply on?
(3) Is the voltage between pins 4 and 1 of X206A about 5 VDC?
(4) Connect the connector X206A with the power supply OFF and Operation OFF.
(5) When making one turn of the upper fan motor by hand after turning the power supply on, is a pulse (0 and 5 V) generated 4 times between pins 4 and 1 of X206A? (Measure at the contact terminal on the harness side with the connector connected.)
(6) Disconnect the connector X207A with the power supply OFF and Operation OFF.
(7) Is the voltage between pins 4 and 3 of X207A about 15 VDC after turning the power supply on?
(8) Is the voltage between pins 4 and 1 of X207A about 5 VDC?
(9) Connect the connector X207A with the power supply OFF and Operation OFF.
(10)When making one turn of the lower fan motor by hand after turning the power supply on, is a pulse (0 and 5 V) generated 4 times between pins 4 and 1 of X207A?

(2) (7): NO → Faulty PCB → Replace the PCB.
(3) (8): NO → Faulty PCB → Replace the PCB.
(5)(10): NO → Faulty Hall IC → Replace the DC fan motor.
(2) (3) (5) (7) (8) (10): YES → Replace the PCB.



9. Thermistor Resistance / Temperature Characteristics

Indoor unit	For air suction	R1T
	For liquid pipe	R2T
	For gas pipe	R3T
Outdoor unit	For outdoor air	R1T
	For coil	R2T
	For suction pipe	R4T
	For Receiver gas pipe	R5T

(kΩ)

T°C	0.0	0.5	T°C	0.0	0.5
-20	197.81	192.08	30	16.10	15.76
-19	186.53	181.16	31	15.43	15.10
-18	175.97	170.94	32	14.79	14.48
-17	166.07	161.36	33	14.18	13.88
-16	156.80	152.38	34	13.59	13.31
-15	148.10	143.96	35	13.04	12.77
-14	139.94	136.05	36	12.51	12.25
-13	132.28	128.63	37	12.01	11.76
-12	125.09	121.66	38	11.52	11.29
-11	118.34	115.12	39	11.06	10.84
-10	111.99	108.96	40	10.63	10.41
-9	106.03	103.18	41	10.21	10.00
-8	100.41	97.73	42	9.81	9.61
-7	95.14	92.61	43	9.42	9.24
-6	90.17	87.79	44	9.06	8.88
-5	85.49	83.25	45	8.71	8.54
-4	81.08	78.97	46	8.37	8.21
-3	76.93	74.94	47	8.05	7.90
-2	73.01	71.14	48	7.75	7.60
-1	69.32	67.56	49	7.46	7.31
0	65.84	64.17	50	7.18	7.04
1	62.54	60.96	51	6.91	6.78
2	59.43	57.94	52	6.65	6.53
3	56.49	55.08	53	6.41	6.53
4	53.71	52.38	54	6.65	6.53
5	51.09	49.83	55	6.41	6.53
6	48.61	47.42	56	6.18	6.06
7	46.26	45.14	57	5.95	5.84
8	44.05	42.98	58	5.74	5.43
9	41.95	40.94	59	5.14	5.05
10	39.96	39.01	60	4.96	4.87
11	38.08	37.18	61	4.79	4.70
12	36.30	35.45	62	4.62	4.54
13	34.62	33.81	63	4.46	4.38
14	33.02	32.25	64	4.30	4.23
15	31.50	30.77	65	4.16	4.08
16	30.06	29.37	66	4.01	3.94
17	28.70	28.05	67	3.88	3.81
18	27.41	26.78	68	3.75	3.68
19	26.18	25.59	69	3.62	3.56
20	25.01	24.45	70	3.50	3.44
21	23.91	23.37	71	3.38	3.32
22	22.85	22.35	72	3.27	3.21
23	21.85	21.37	73	3.16	3.11
24	20.90	20.45	74	3.06	3.01
25	20.00	19.56	75	2.96	2.91
26	19.14	18.73	76	2.86	2.82
27	18.32	17.93	77	2.77	2.72
28	17.54	17.17	78	2.68	2.64
29	16.80	16.45	79	2.60	2.55
30	16.10	15.76	80	2.51	2.47

Outdoor Unit Thermistors for Discharge Pipe (R3T)

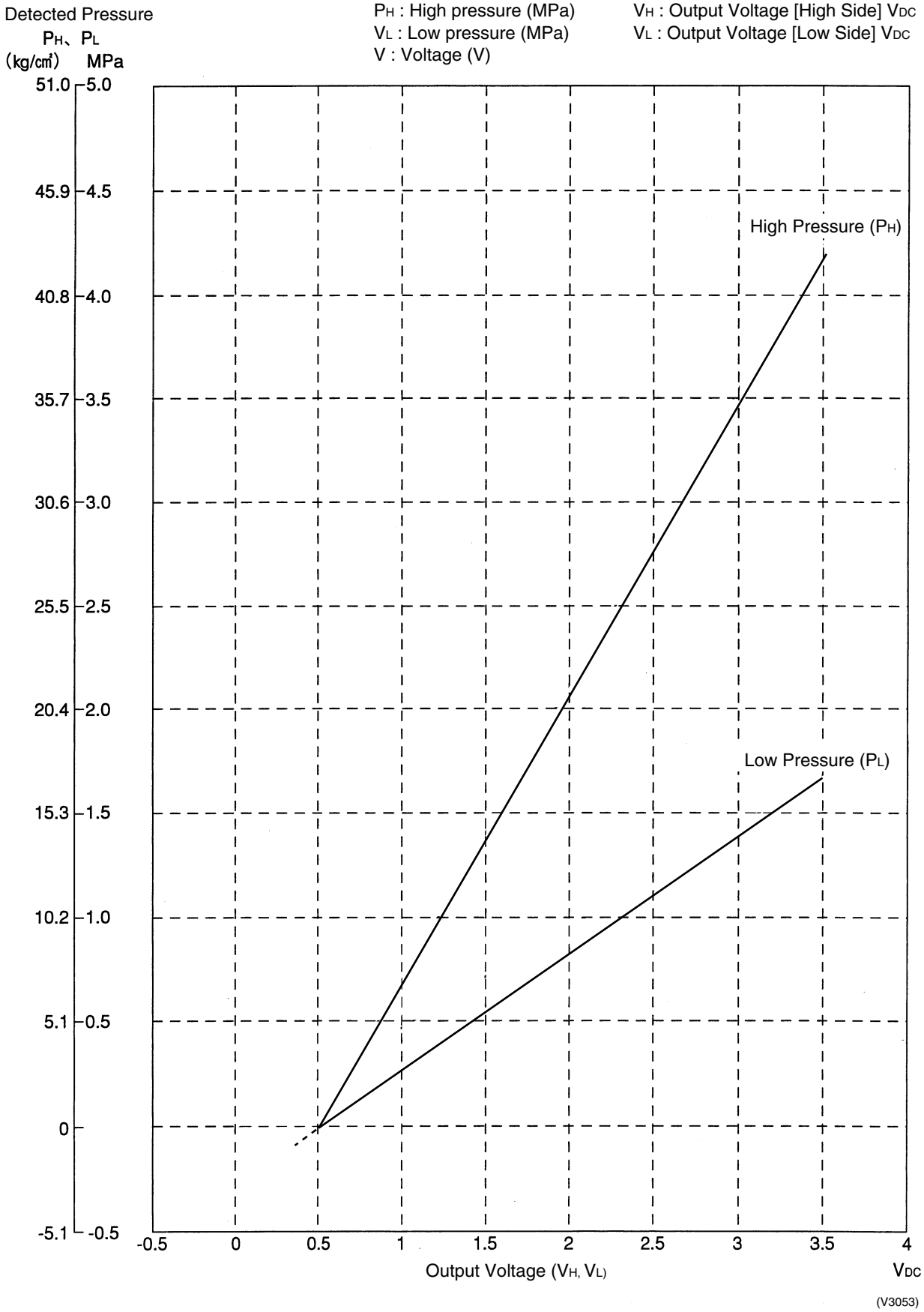
(kΩ))

T°C	0.0	0.5	T°C	0.0	0.5	T°C	0.0	0.5
0	640.44	624.65	50	72.32	70.96	100	13.35	13.15
1	609.31	594.43	51	69.64	68.34	101	12.95	12.76
2	579.96	565.78	52	67.06	65.82	102	12.57	12.38
3	552.00	538.63	53	64.60	63.41	103	12.20	12.01
4	525.63	512.97	54	62.24	61.09	104	11.84	11.66
5	500.66	488.67	55	59.97	58.87	105	11.49	11.32
6	477.01	465.65	56	57.80	56.75	106	11.15	10.99
7	454.60	443.84	57	55.72	54.70	107	10.83	10.67
8	433.37	423.17	58	53.72	52.84	108	10.52	10.36
9	413.24	403.57	59	51.98	50.96	109	10.21	10.06
10	394.16	384.98	60	49.96	49.06	110	9.92	9.78
11	376.05	367.35	61	48.19	47.33	111	9.64	9.50
12	358.88	350.62	62	46.49	45.67	112	9.36	9.23
13	342.58	334.74	63	44.86	44.07	113	9.10	8.97
14	327.10	319.66	64	43.30	42.54	114	8.84	8.71
15	312.41	305.33	65	41.79	41.06	115	8.59	8.47
16	298.45	291.73	66	40.35	39.65	116	8.35	8.23
17	285.18	278.80	67	38.96	38.29	117	8.12	8.01
18	272.58	266.51	68	37.63	36.98	118	7.89	7.78
19	260.60	254.72	69	36.34	35.72	119	7.68	7.57
20	249.00	243.61	70	35.11	34.51	120	7.47	7.36
21	238.36	233.14	71	33.92	33.35	121	7.26	7.16
22	228.05	223.08	72	32.78	32.23	122	7.06	6.97
23	218.24	213.51	73	31.69	31.15	123	6.87	6.78
24	208.90	204.39	74	30.63	30.12	124	6.69	6.59
25	200.00	195.71	75	29.61	29.12	125	6.51	6.42
26	191.53	187.44	76	28.64	28.16	126	6.33	6.25
27	183.46	179.57	77	27.69	27.24	127	6.16	6.08
28	175.77	172.06	78	26.79	26.35	128	6.00	5.92
29	168.44	164.90	79	25.91	25.49	129	5.84	5.76
30	161.45	158.08	80	25.07	24.66	130	5.69	5.61
31	154.79	151.57	81	24.26	23.87	131	5.54	5.46
32	148.43	145.37	82	23.48	23.10	132	5.39	5.32
33	142.37	139.44	83	22.73	22.36	133	5.25	5.18
34	136.59	133.79	84	22.01	21.65	134	5.12	5.05
35	131.06	128.39	85	21.31	20.97	135	4.98	4.92
36	125.79	123.24	86	20.63	20.31	136	4.86	4.79
37	120.76	118.32	87	19.98	19.67	137	4.73	4.67
38	115.95	113.62	88	19.36	19.05	138	4.61	4.55
39	111.35	109.13	89	18.75	18.46	139	4.49	4.44
40	106.96	104.84	90	18.17	17.89	140	4.38	4.32
41	102.76	100.73	91	17.61	17.34	141	4.27	4.22
42	98.75	96.81	92	17.07	16.80	142	4.16	4.11
43	94.92	93.06	93	16.54	16.29	143	4.06	4.01
44	91.25	89.47	94	16.04	15.79	144	3.96	3.91
45	87.74	86.04	95	15.55	15.31	145	3.86	3.81
46	84.38	82.75	96	15.08	14.85	146	3.76	3.72
47	81.16	79.61	97	14.62	14.40	147	3.67	3.62
48	78.09	76.60	98	14.18	13.97	148	3.58	3.54
49	75.14	73.71	99	13.76	13.55	149	3.49	3.45
50	72.32	70.96	100	13.35	13.15	150	3.41	3.37

10.Pressure Sensor

P_H = 1.38V-0.69
P_L = 0.57V-0.28
P_H : High pressure (MPa)
V_L : Low pressure (MPa)
V : Voltage (V)

P_H : Detected Pressure [High Side] MPa
P_L : Detected Pressure [Low Side] MPa
V_H : Output Voltage [High Side] V_{DC}
V_L : Output Voltage [Low Side] V_{DC}



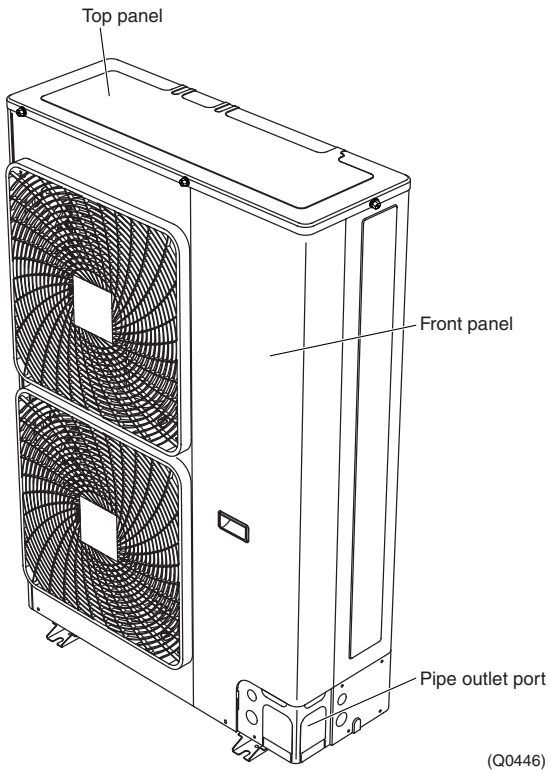
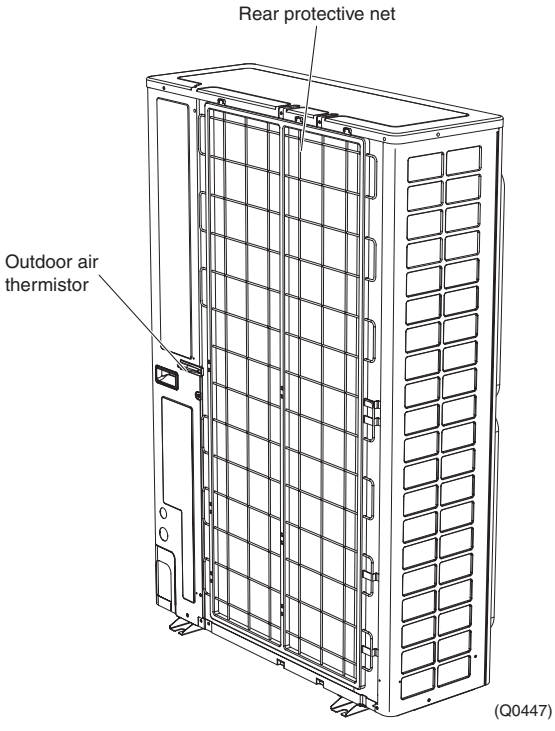
Part 9
Removal Procedure

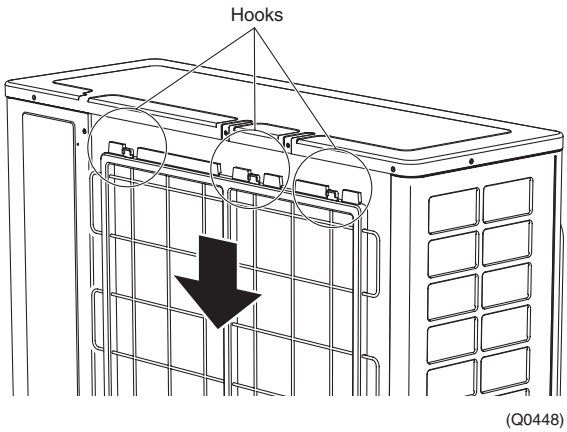
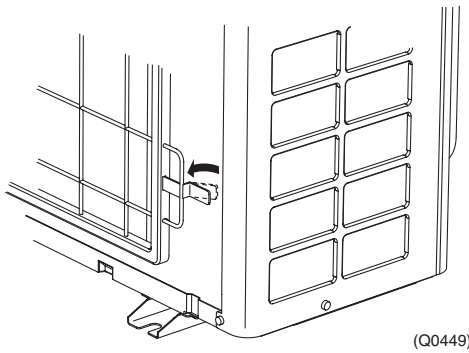
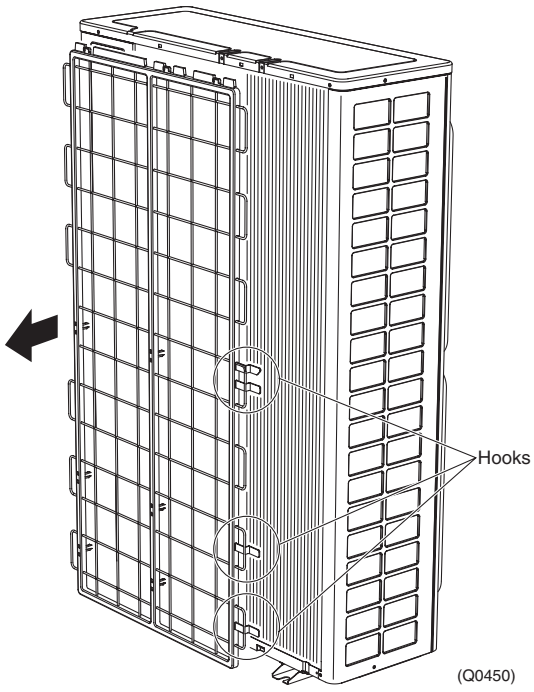
1. Outdoor Unit

1.1 Removal of Outer Panels

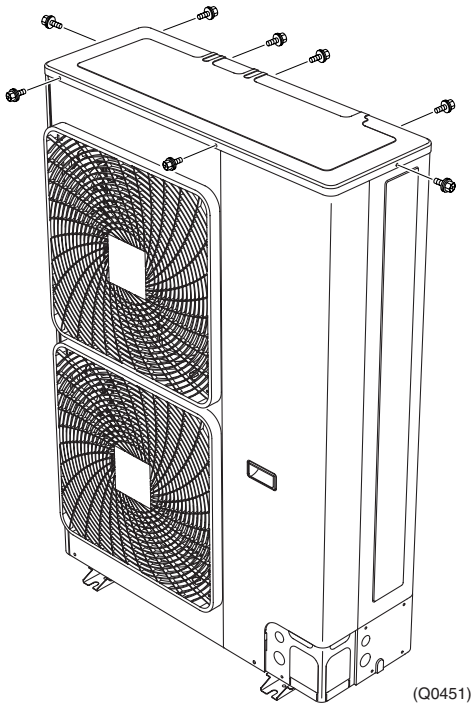
Procedure

Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

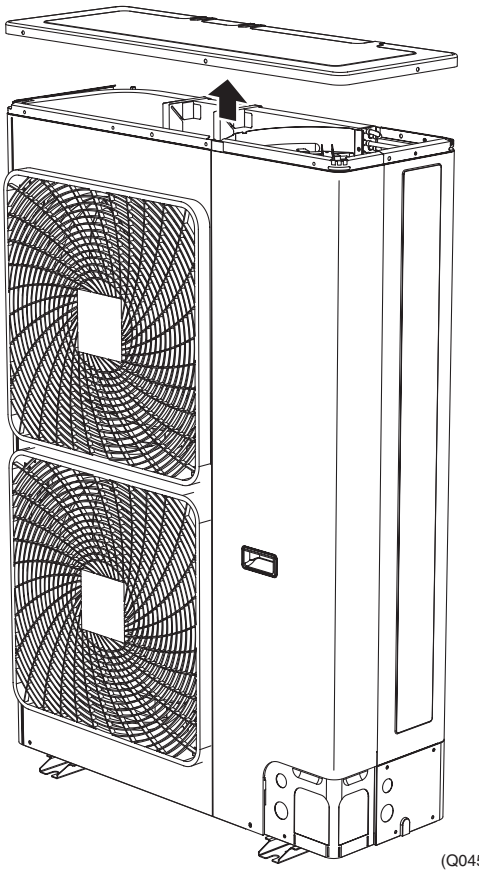
Step	Procedure	Points
1. Appearance.	 	

Step	Procedure	Points
2. Removing the rear protective net.	 (Q0448)	Bend the rear protective net slightly for easy removal.
1 Undo the 3 top hooks first.		
2 Next, undo the 4 right-side hooks. (See the figure at bottom.)	 (Q0449)	
3 Remove the rear protective net.	 (Q0450)	

Step	Procedure	Points
3. Removing the top panel.		
1	Remove the 8 screws.	
2	Lift and remove the top panel.	

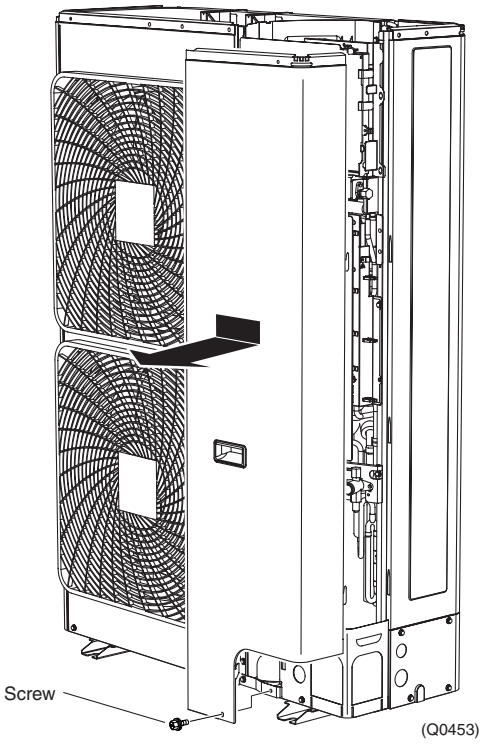


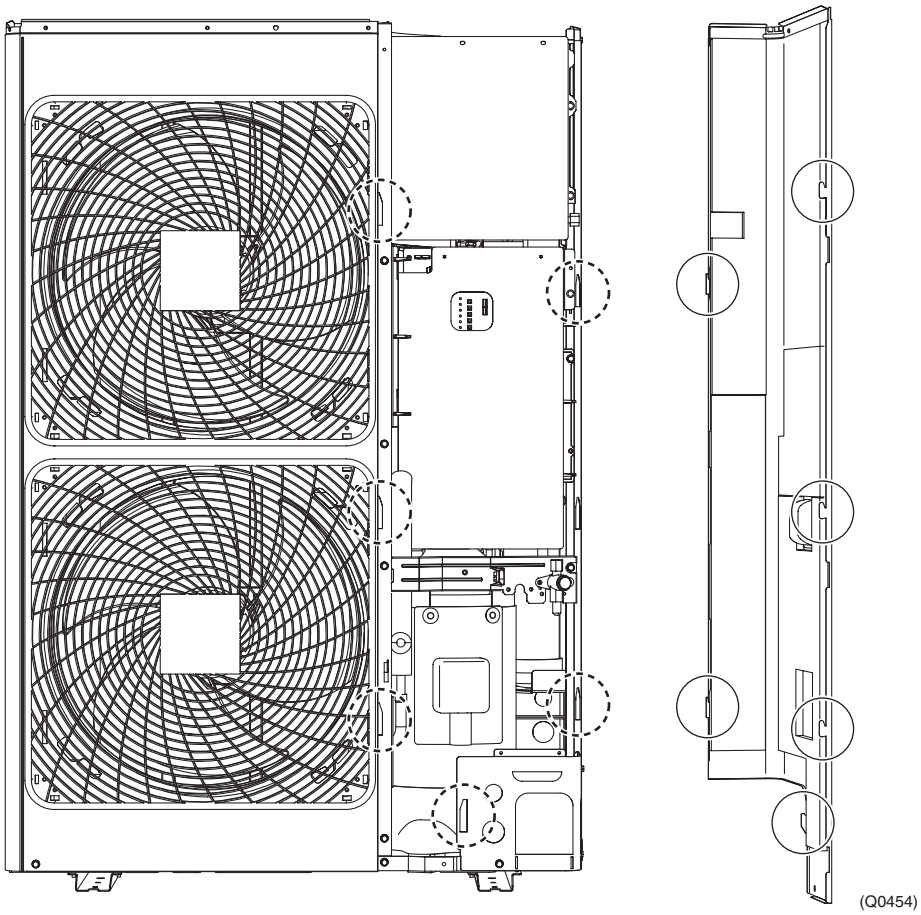
(Q0451)



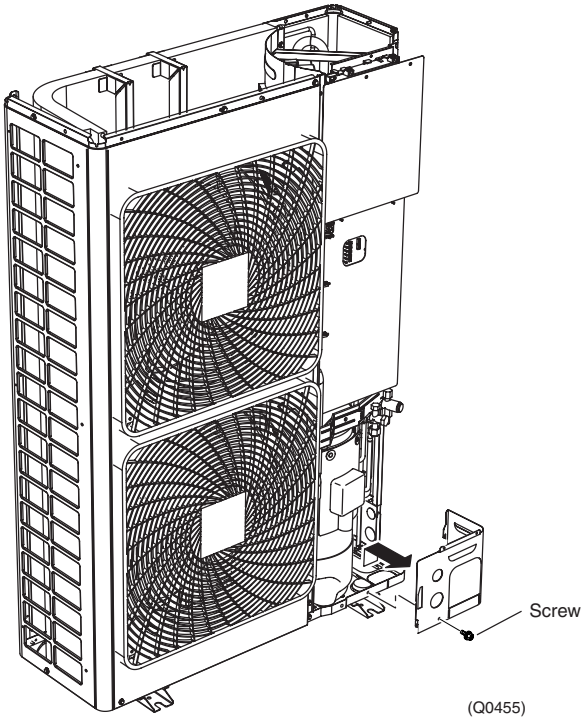
(Q0452)

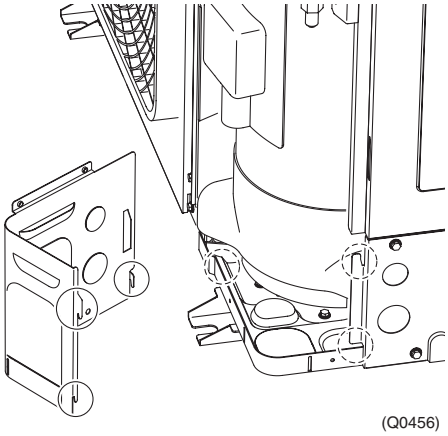
Step	Procedure	Points
4. Removing the front panel.		
1	Remove the screw.	
2	Pull the front panel toward yourself.	
3	There are 6 hooks on the front panel. Slide the front panel downward to remove it.	



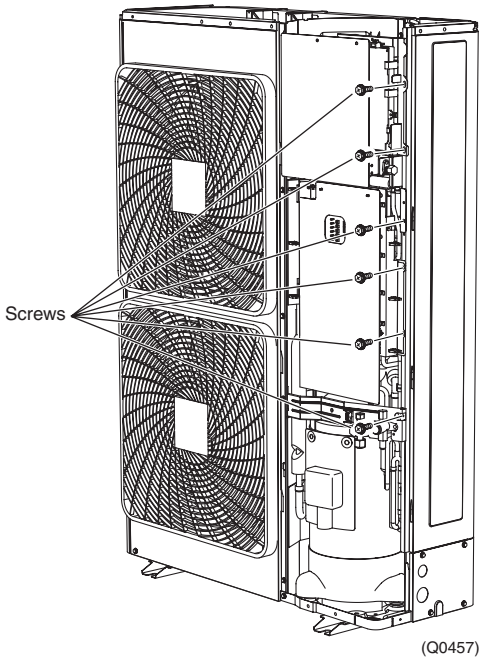


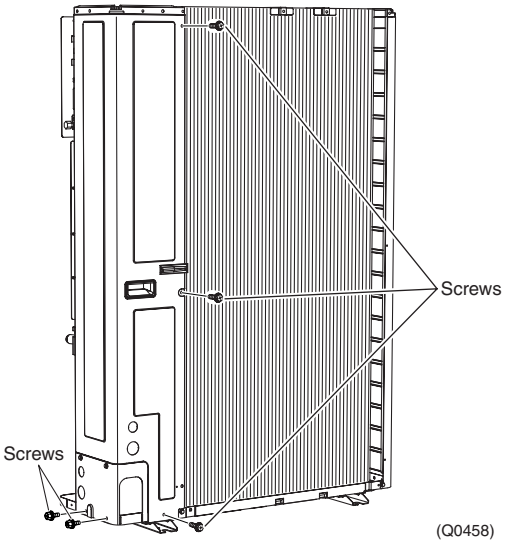
Step	Procedure	Points
5. Removing the pipe cover.		
1	Remove the screw.	
2	Pull the pipe cover toward yourself.	
3	There are 3 hooks on the pipe cover. Slide the pipe cover upward to remove it.	

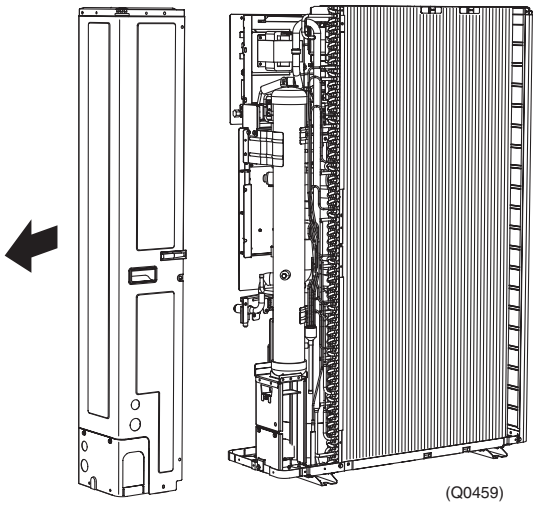




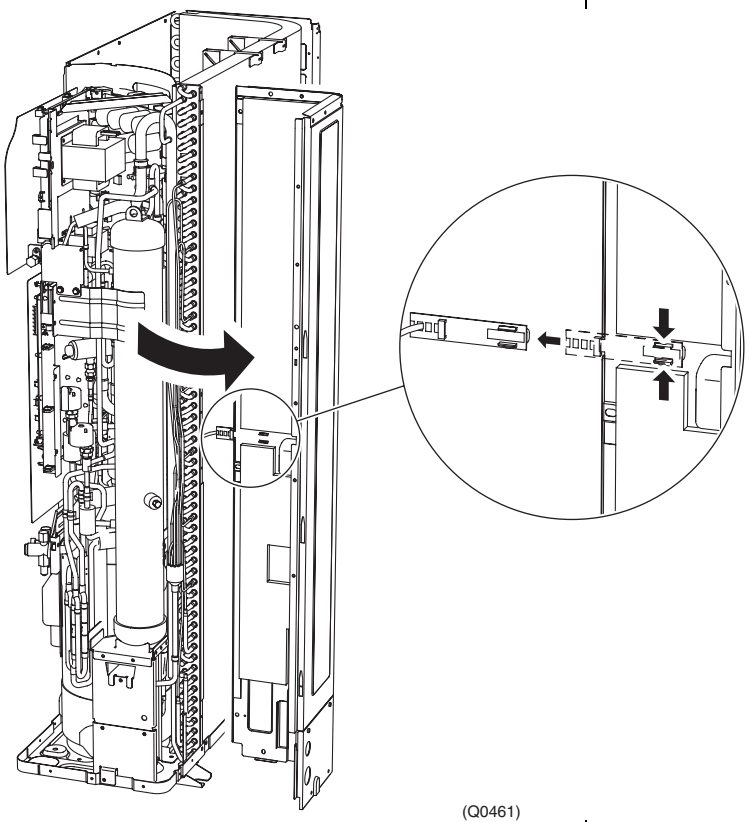
Step	Procedure	Points
6. Right side panel.		
1	Remove the 6 screws off the panel's front.	
2	Remove the 3 screws off the panel's back and the 2 screws off the panel's side.	
3	Remove the right side panel.	



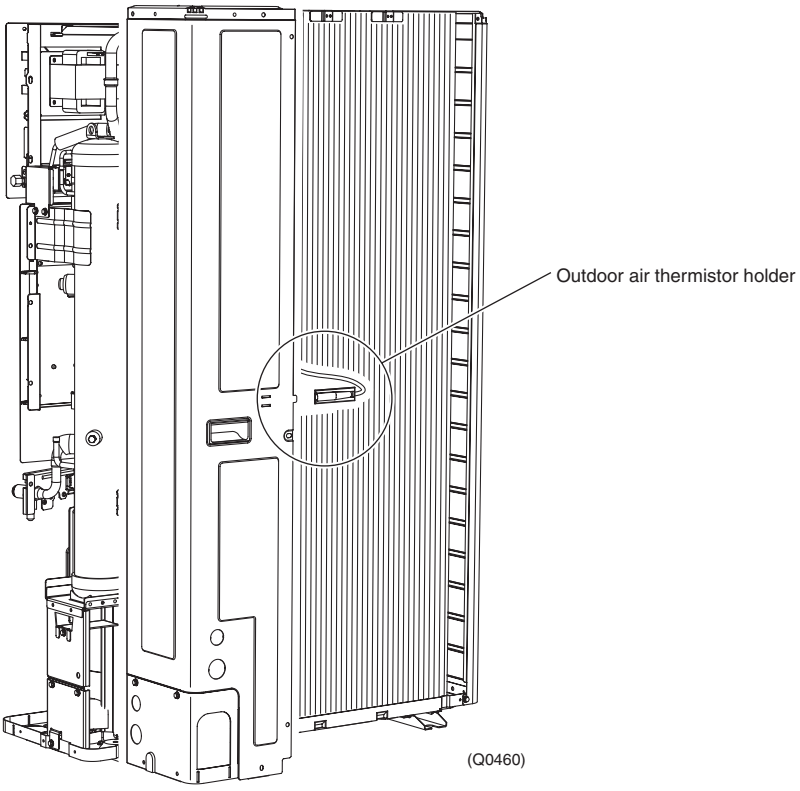




Step	Procedure	Points
7. Removing the outdoor air thermistor.		
1	Disconnect the outdoor air thermistor holder. Unhook the holder from inside of the right side panel for easy removal.	
2	The figure shows the state after disconnection.	



(Q0461)

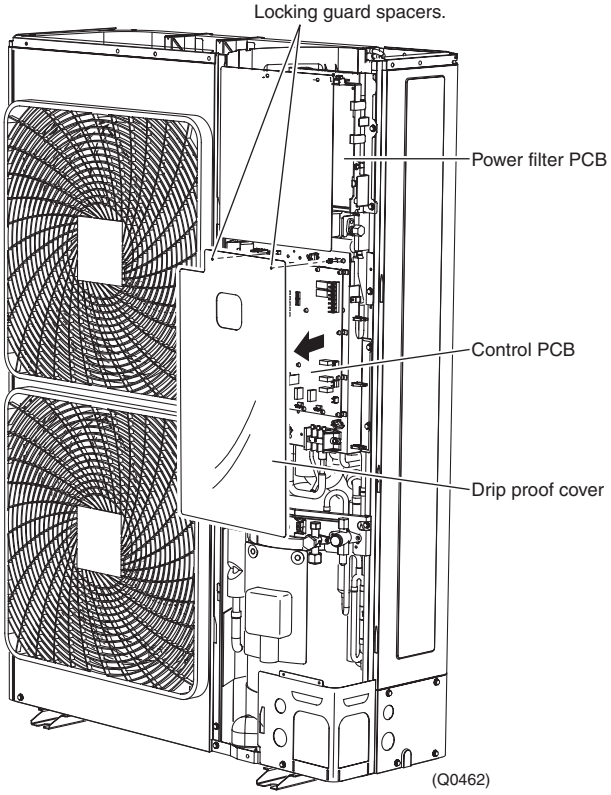


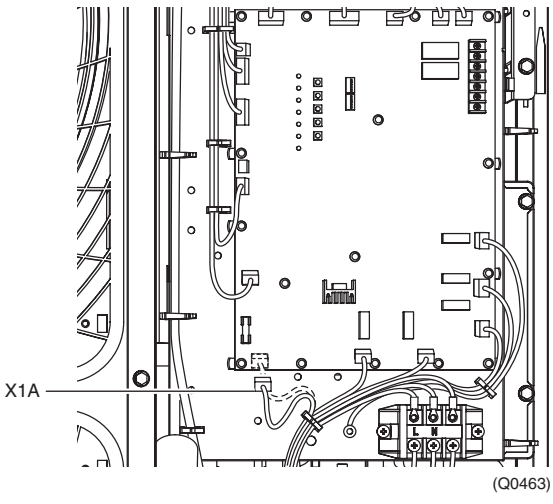
(Q0460)

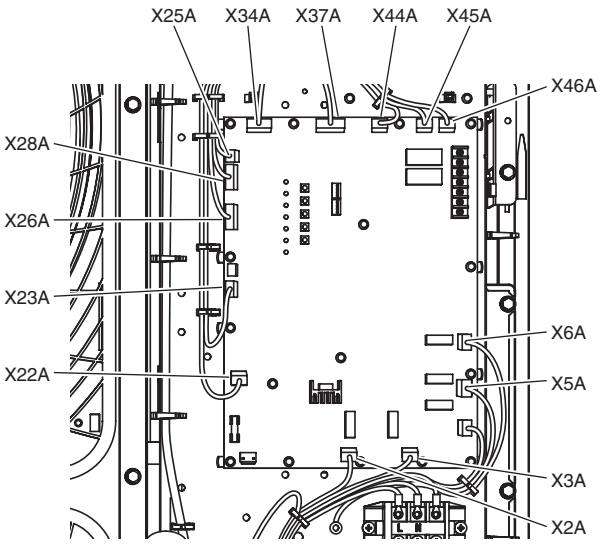
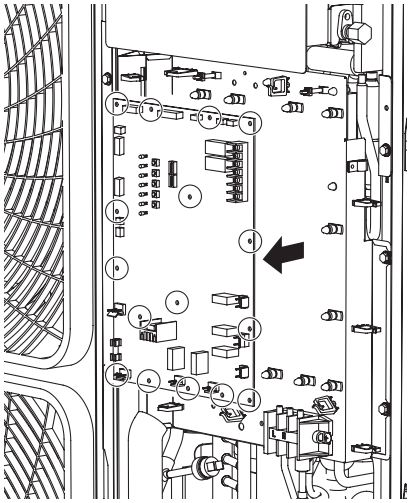
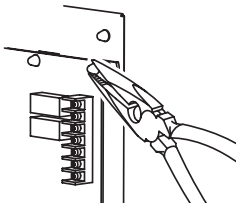
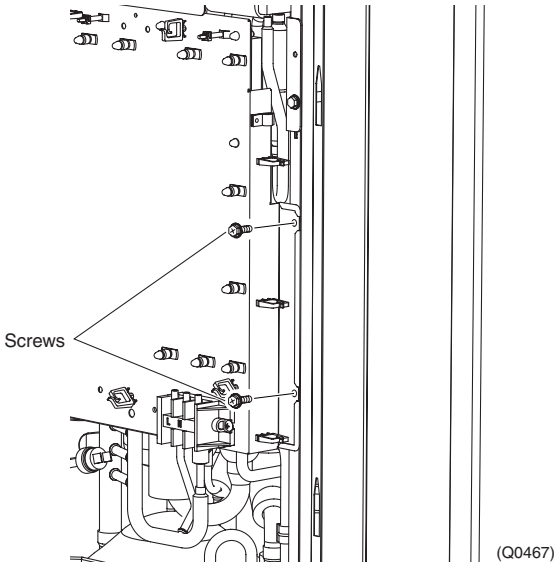
1.2 Removal of PCB

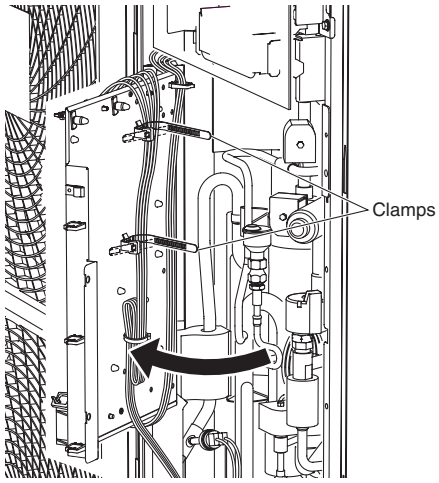
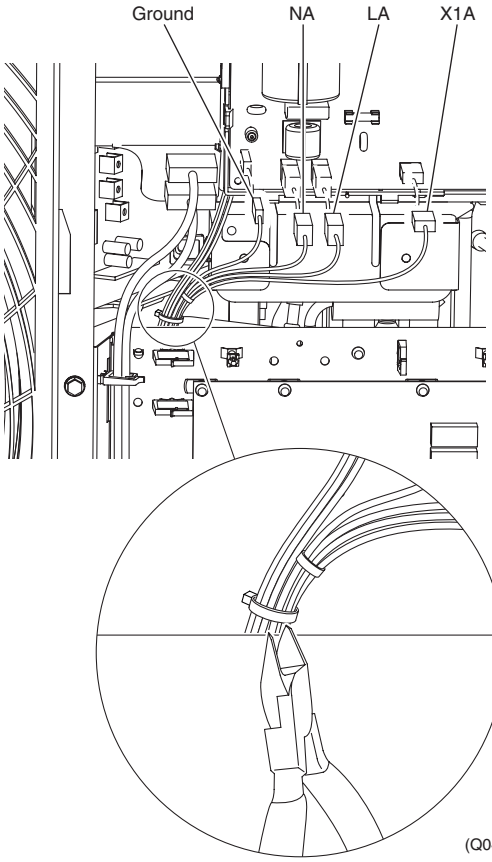
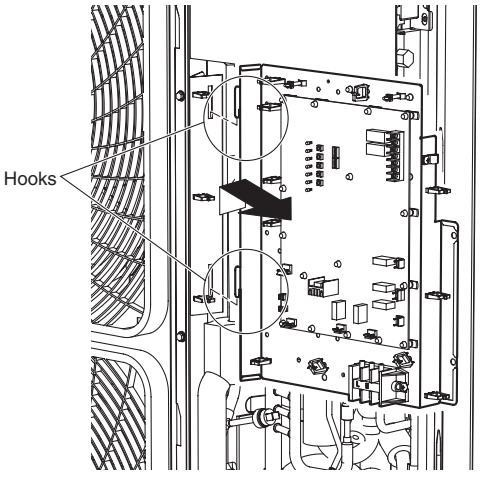
Procedure **Warning** **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

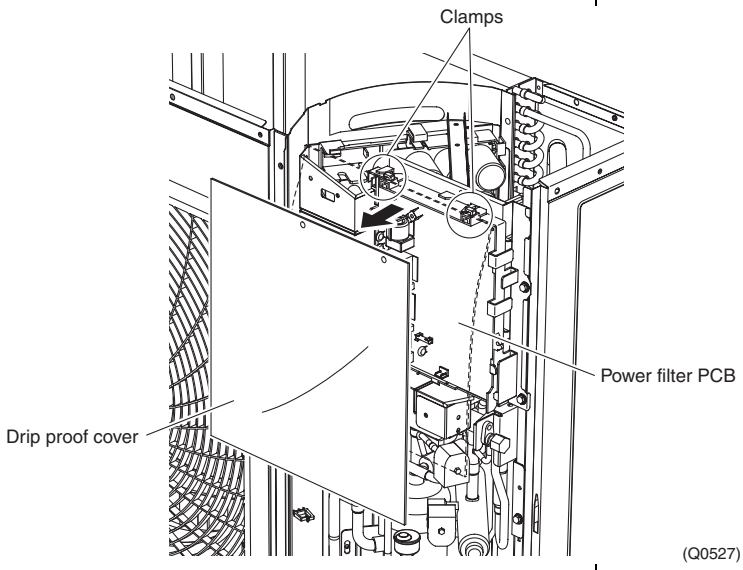
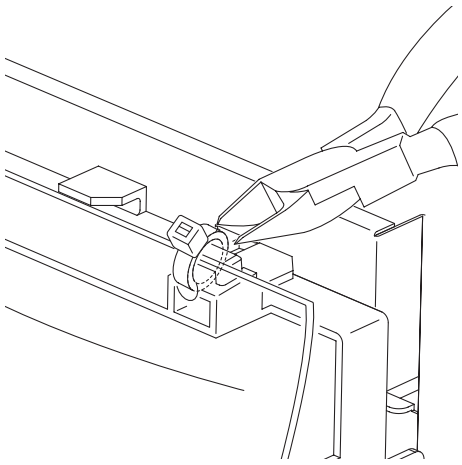
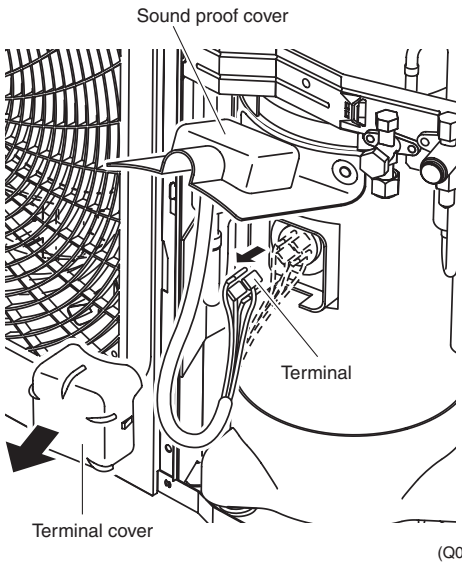
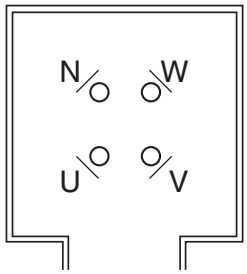
Step	Procedure	Points
1. Removing the control PCB.		
1	Detach the 2 top locking guard spacers.	
2	Remove the drip proof cover.	
3	Disconnect the power relay connector. (X1A)	



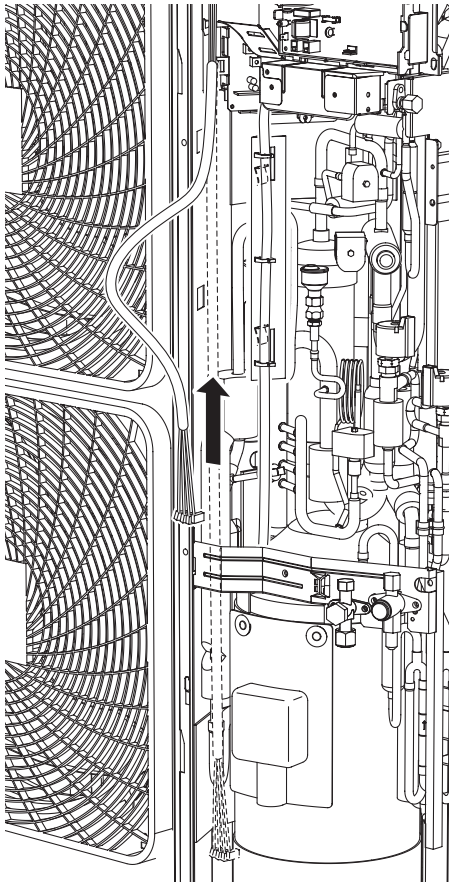


Step	Procedure		Points
4	Disconnect the connectors one by one.	 (Q0464)	X2A Solenoid valve (Hot gas) X3A Solenoid valve (Receiver gas purge) X5A Solenoid valve (4 way valve) X6A Crankcase heater X22A Transformer X23A Transformer X25A Connector for [X250A] X26A Electronic expansion valve(Main) X28A Electronic expansion valve(Sub cool) X34A Discharge pipe thermistor X37A Heat exchanger thermistor X44 Air thermistor X45A Pressure sensor (Low) X46A Pressure sensor (High)
5 6	Detach the 16 locking guard spacers. Remove the control PCB.	 (Q0465)	Preferably use long nose pliers in removing the locking guard spacers.  (Q0466)
2. Removing the control PCB mounting plate.			
1	Remove the 2 screws.	 (Q0467)	

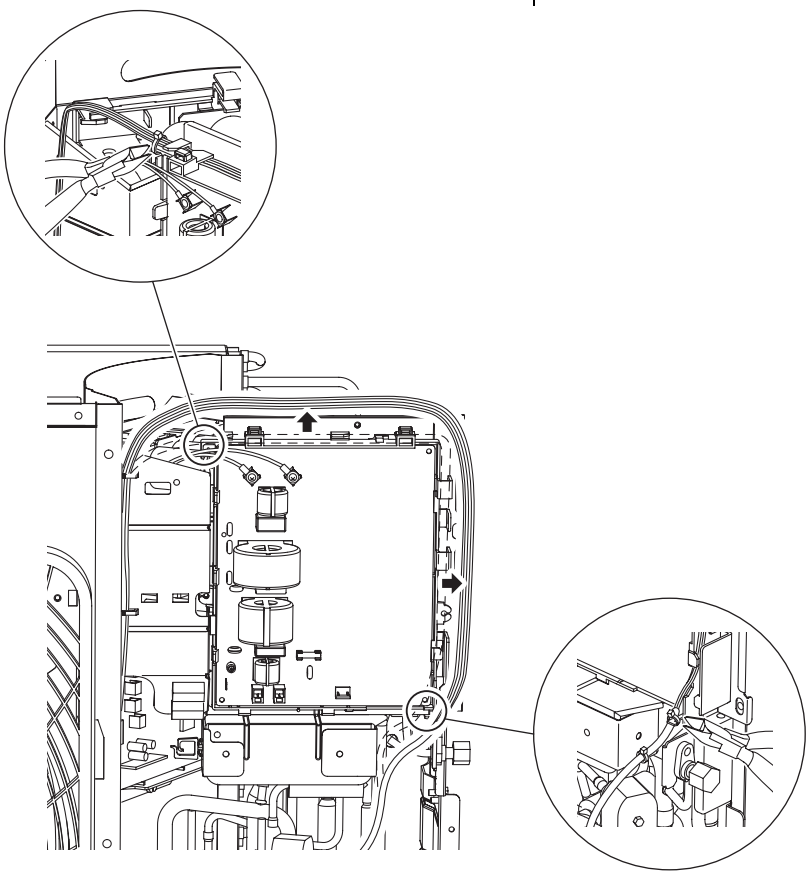
Step	Procedure		Points
2 3	Open the mounting plate's right side toward yourself. Remove the 2 clamps from behind the mounting plate.	 (Q0526)	
4	Disconnect the connectors from the power filter PCB and cut off the clamps.	 (Q0469)	Ground, Power terminals NA (white) / LA (red) / X1A (black) The clamps are to be kept in stock.
5	Lift the mounting plate and undo the 2 left side hooks to remove it.	 (Q0470)	

Step	Procedure	Points
3. Removing the power filter PCB.		
1 Cut off the 2 top clamps and remove the drip proof cover.		
		Cut off with nippers. The clamp is to be kept in stock.
2 Tilt up the compressor's sound proof cover. 3 Remove the terminal cover. 4 Disconnect the compressor lead connector (terminal).		Using long nose pliers, pull out the following. U: Red V: White W: Blue N: Brown 

Step	Procedure	Points
5	Release the compressor lead out of the groove.	
6	Remove the 2 clamps.	Cut off with nippers.

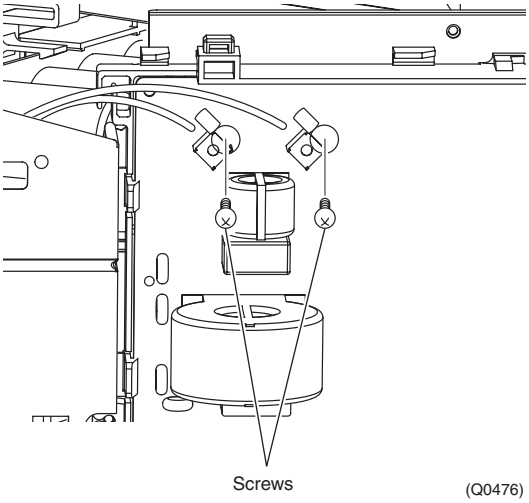


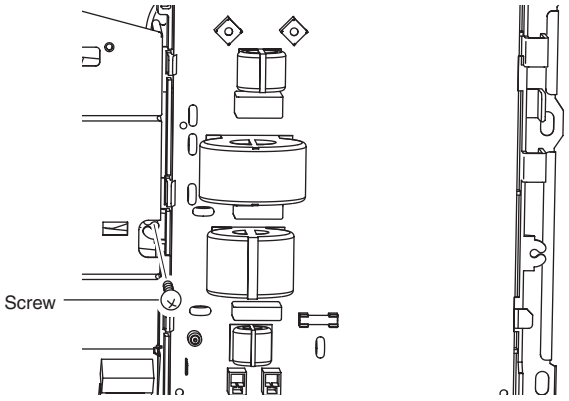
(Q0474)

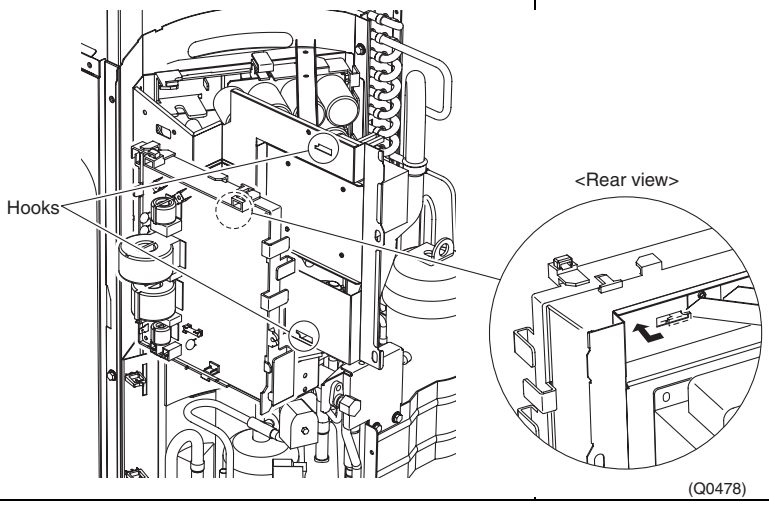


(Q0475)

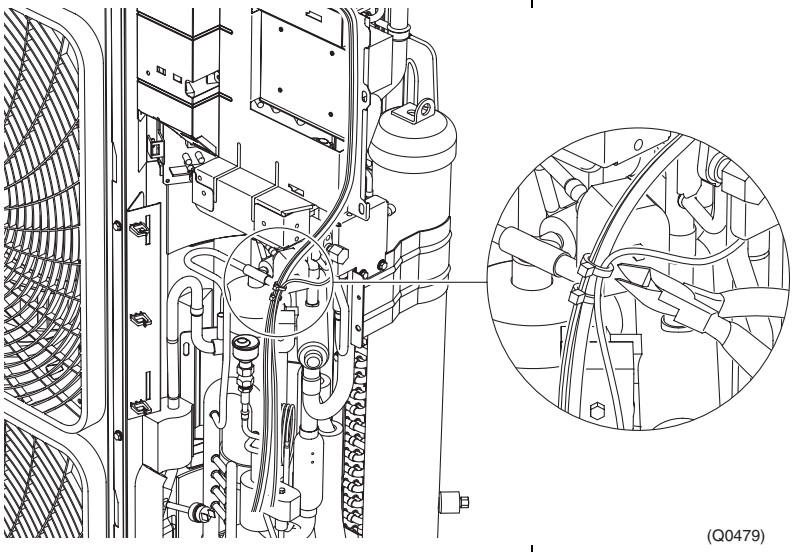
Step	Procedure	Points
7	Remove the screws of the reactor leads.	
8	Remove the screw.	
9	The power filter PCB is provided with 2 hooks. Slide the PCB to the right to unhook it.	

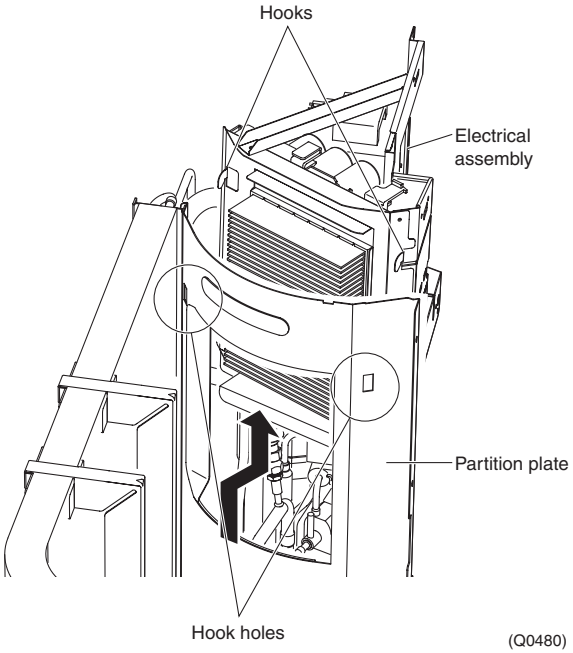




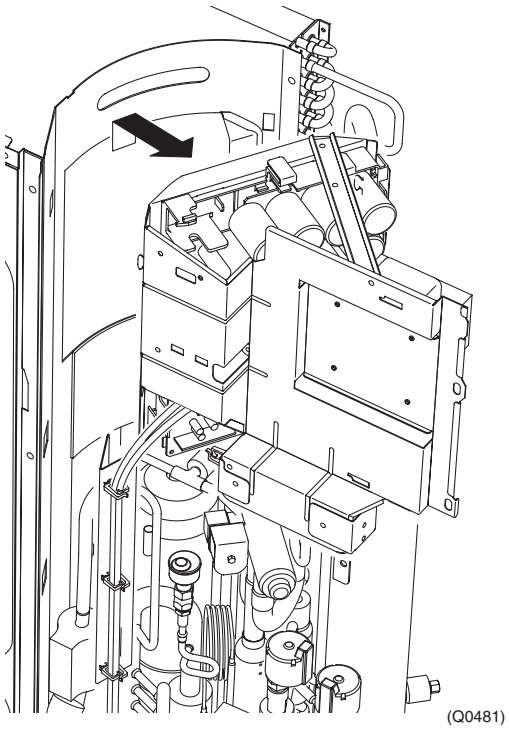
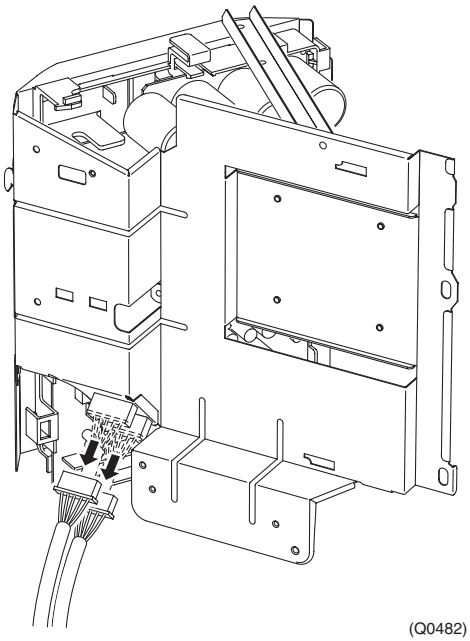


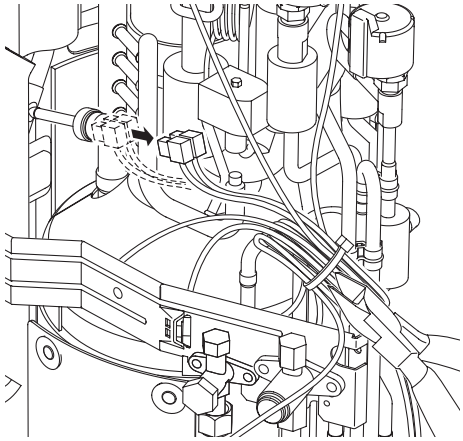
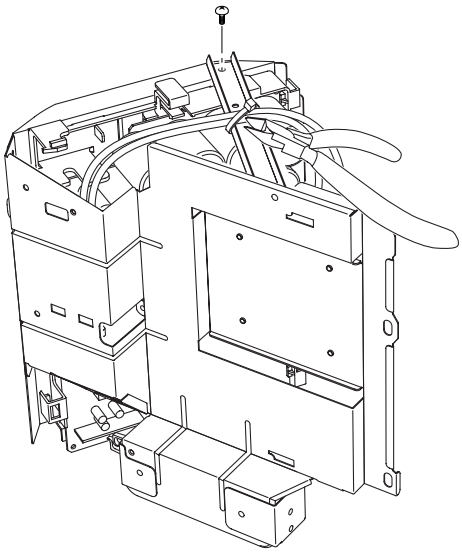
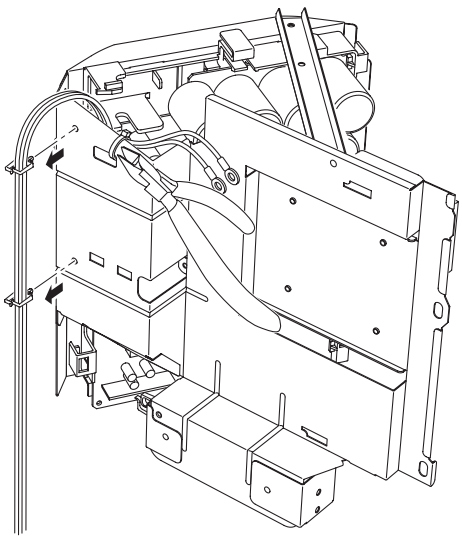
Step	Procedure	Points
4. Removing the electrical assembly.		
1	Remove the clamp.	Cut off with nippers. The clamp is to be kept in stock.
2	Lift the electrical assembly to unhook it.	

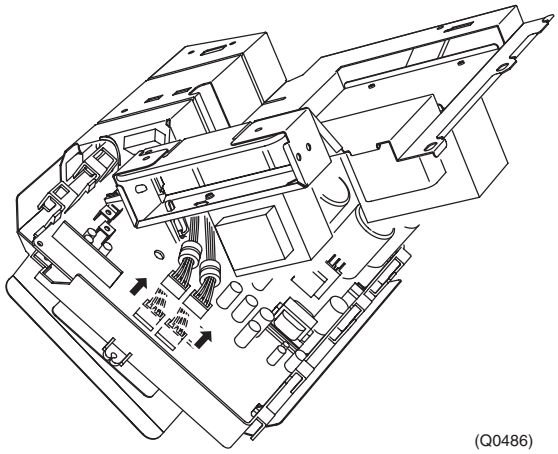
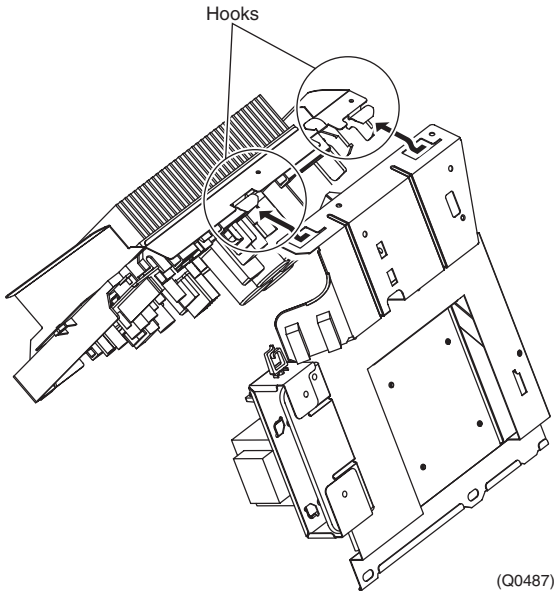
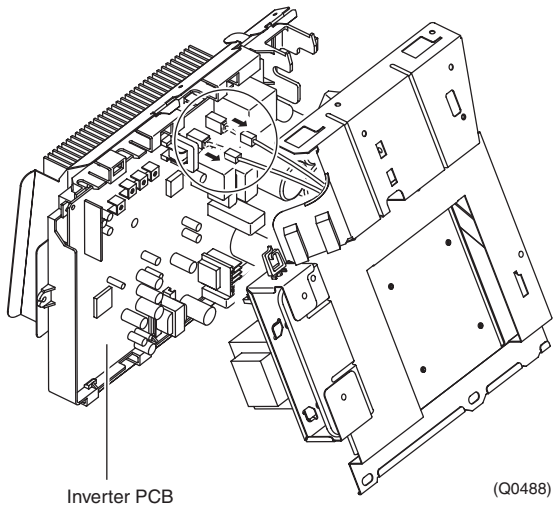

(Q0479)

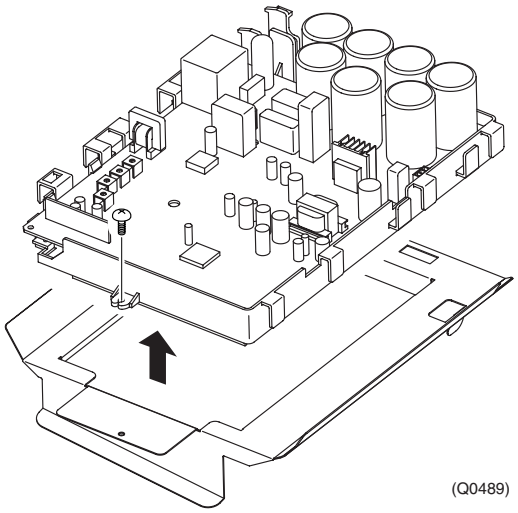
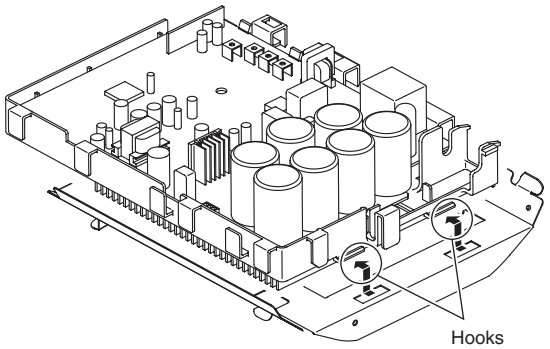


(Q0480)

Step	Procedure		Points
3	Disconnect the fan motor relay connector.	 (Q0481)  (Q0482)	pcs.: Red and white

Step	Procedure		Points
4	Disconnect the HPS connector and the electrical box connector from each other.	 (Q0483)	HPS connector: Red Electrical box connector: White
5	Remove the clamp and unbind the leads.		Cut off with nippers. The clamp is to be kept in stock.
6	Remove the clamp (reactor lead).		Cut off with nippers.
7	Remove the screw.	 (Q0484)	
8	Remove the clamp (reactor lead).		Cut off with nippers.
9	Remove the two clamps and disconnect the compressor lead.	 (Q0485)	

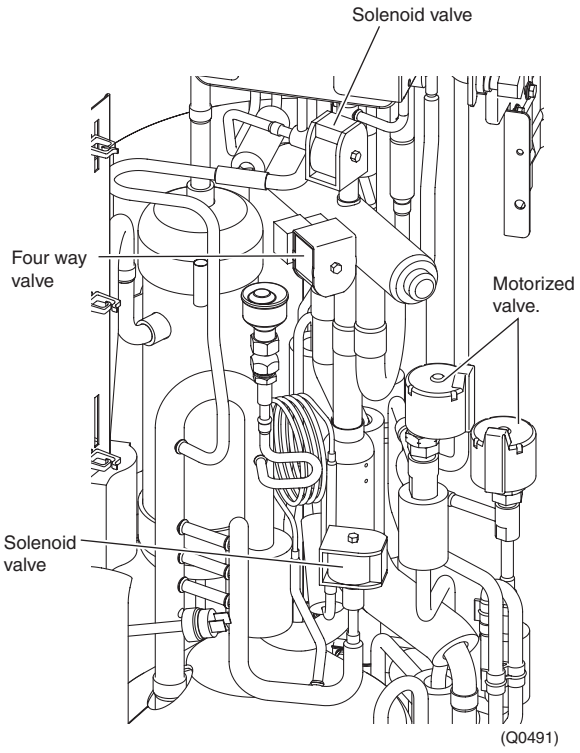
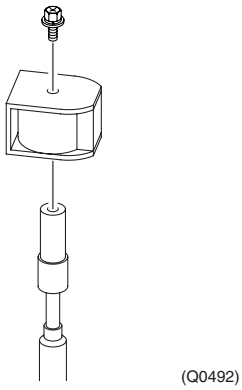
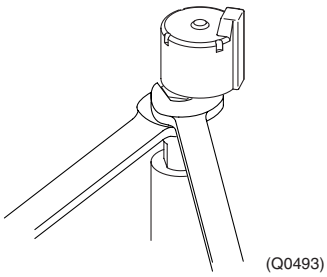
Step	Procedure		Points
10	Disconnect the fan motor electrical box relay connector.	 (Q0486)	Connector X206A: Red Connector X207A: White
5. Removing the inverter PCB.			
1	Separate the power filter PCB mounting plate from the electrical assembly.	 (Q0487)	There are two hooks. Slide the plate to unhook it.
2	Remove the reactor connectors P1 and P2.	 (Q0488)	P1: White, P2: White

Step	Procedure		Points
3	Remove the screw and detach the inverter PCB.	 (Q0489)	
4	There are 2 hooks at the far side (condenser side). When reassembling, catch these hooks first.	 Hooks (Q0490)	

1.3 Removal of Solenoid Valve, Four Way Valve and Motorized Valve

Procedure

Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

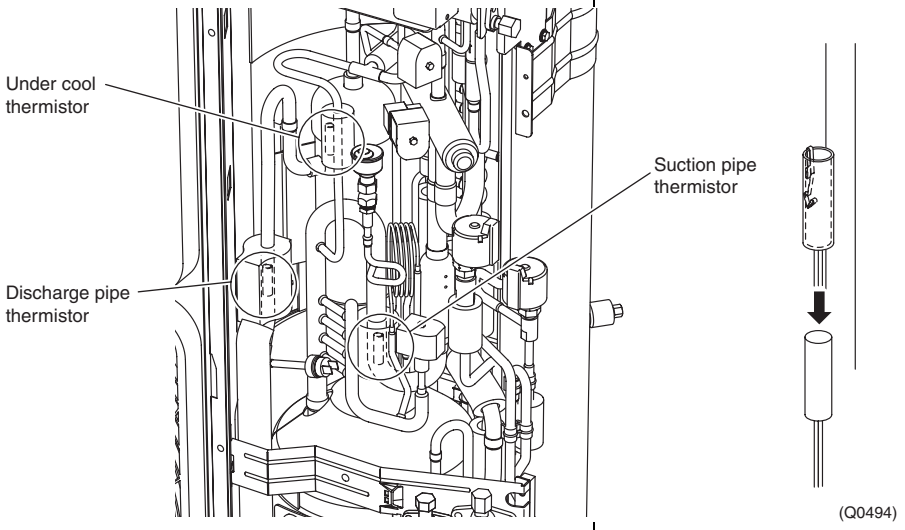
Step	Procedure	Points
1. Removing the solenoid valve coil, motorized valve coil and four way valve coil.		
1 Remove the solenoid valve and four way valve. 2 Remove the motorized valve.		Remove the screw.  Use two open end wrenches for disassembling. 

1.4 Removal of Thermistor Assembly

Procedure

Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

Step	Procedure	Points
1. Removing the thermistors.		
1	Remove the under cool thermistor.	
2	Remove the suction pipe thermistor.	
3	Remove the discharge pipe thermistor.	

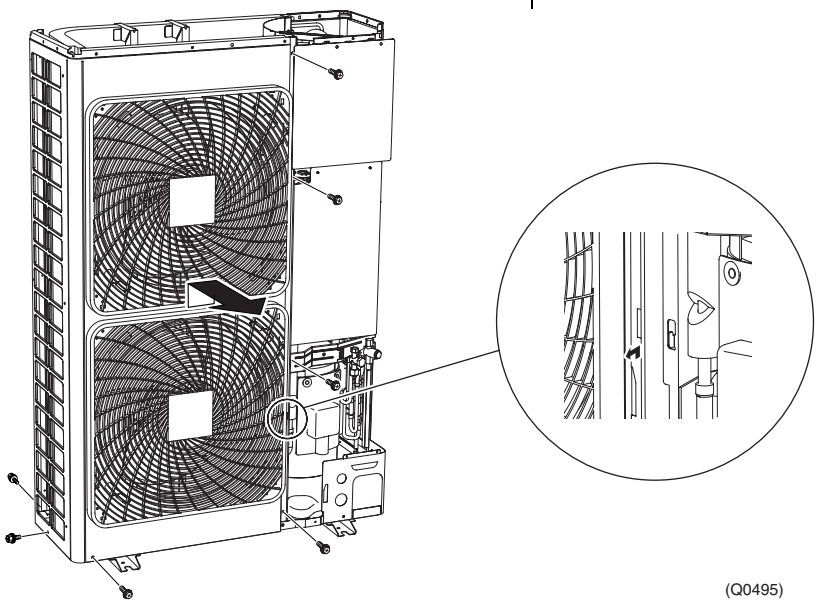


1.5 Removal of Fan Motor

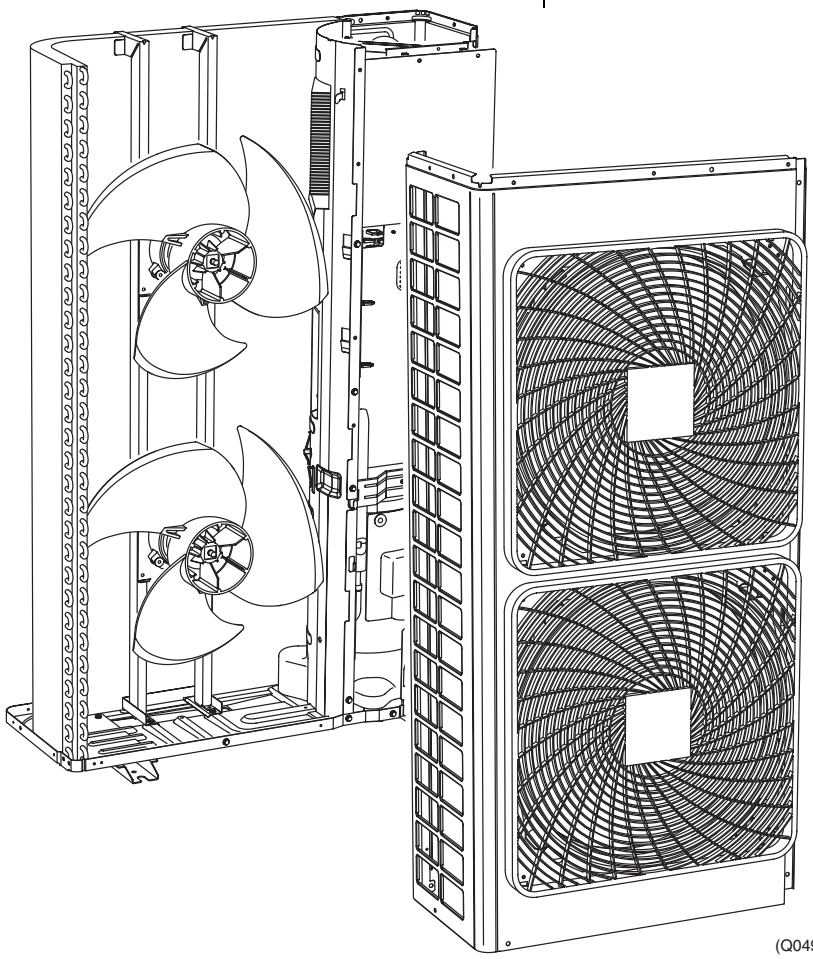
Procedure

Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

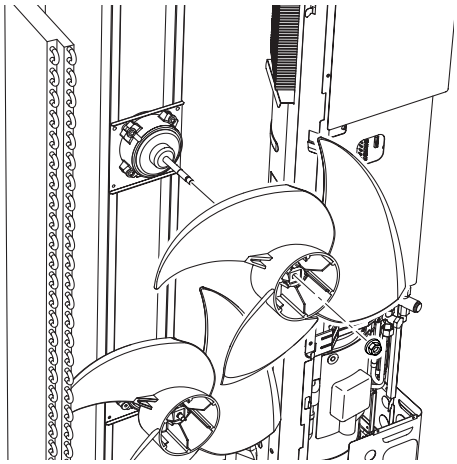
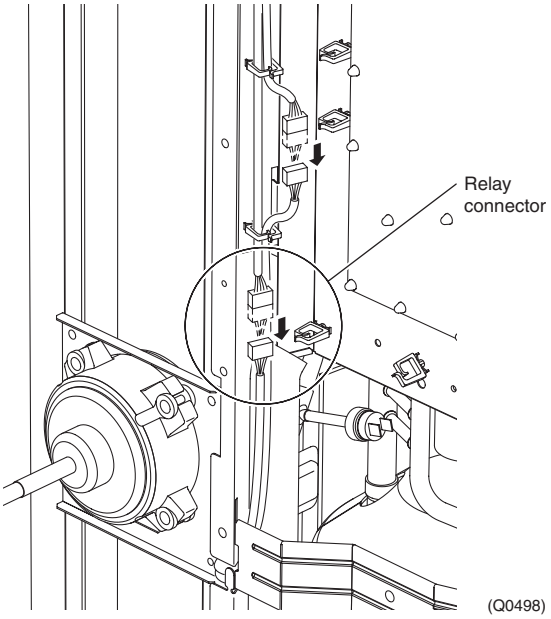
Step	Procedure	Points
1. Removing the front cover.		
1	Remove the 7 screws.	
2	Slide up the front cover to unhook and detach it.	

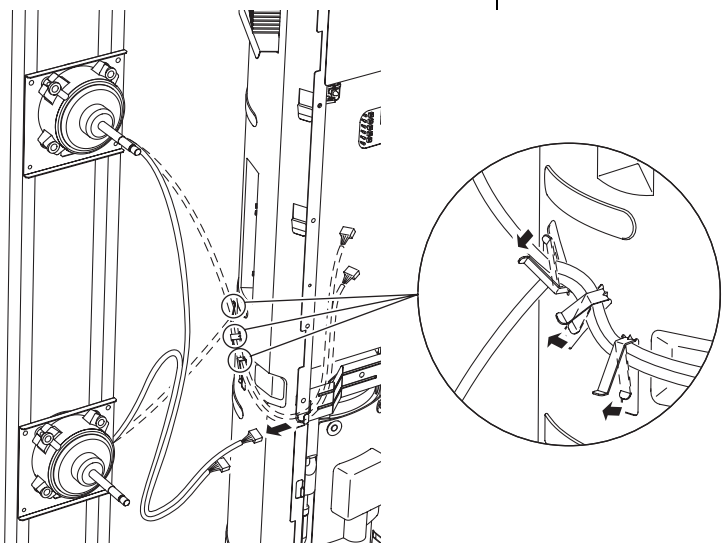
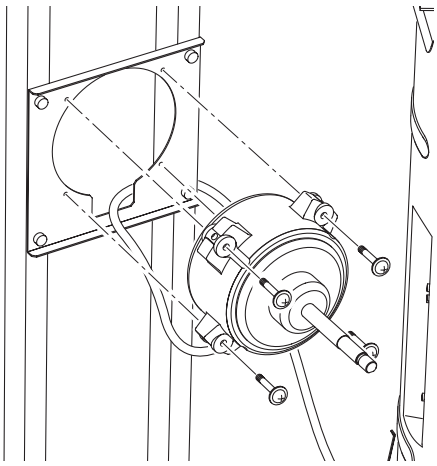


(Q0495)



(Q0496)

Step	Procedure	Points
2. Removing the propeller fan.		
1 Remove the nut and detach the propeller fan.	 (Q0497)	
2 Disconnect the fan motor lead's relay connector.	 (Q0498)	

Step	Procedure		Points
3	Open the fan motor lead fixture.	 (Q0499)	When reassembling, make sure the lead wires are fastened by the fixtures.
4	Remove the 4 screws and take out the fan motor.	 (Q0500)	Remove the 2 bottom screws first. If the top two screws are removed first, the fan motor may tilt down or fall by gravity, getting you injured.

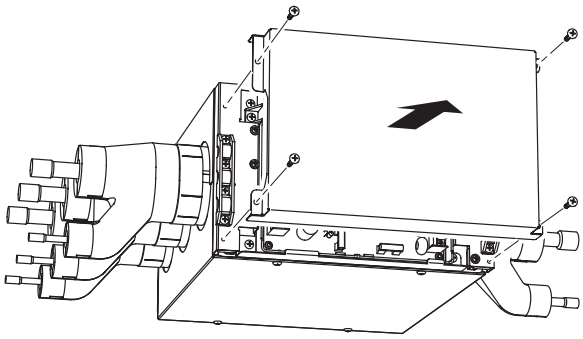
2. BP Unit

2.1 Removal of PCB

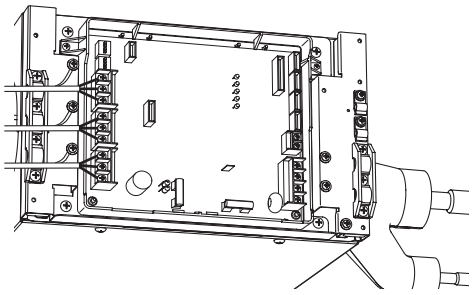
Procedure

Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

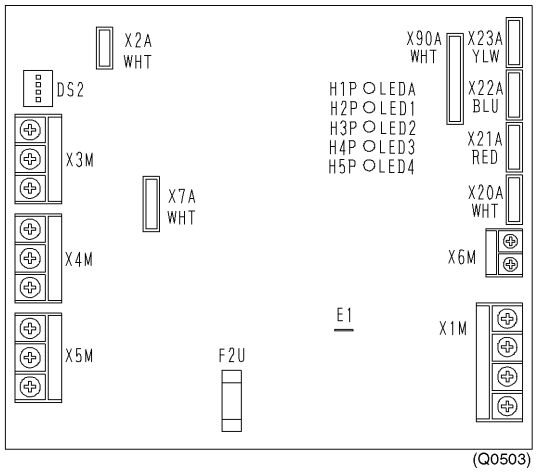
Step	Procedure	Points
1. Removing the PCB.		
1	Remove the 4 screws from the electrical box cover. Detach the cover.	
2	The PCB is as shown at right. Disconnect all the relay cables.	The PCB is coated resistant to moisture. This means that the fuse and varistor cannot be replaced. When reassembling, have test operation for checking wrong wiring.



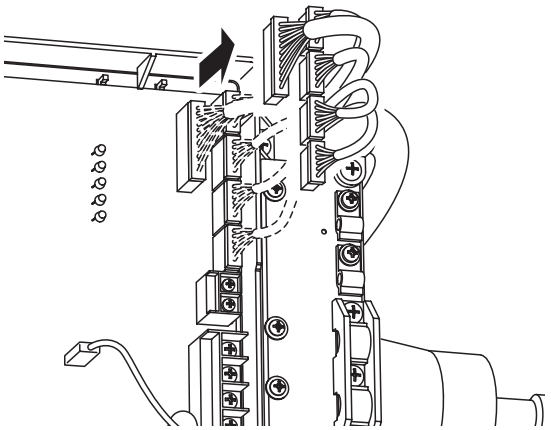
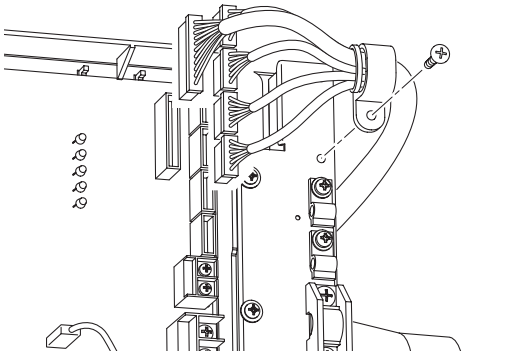
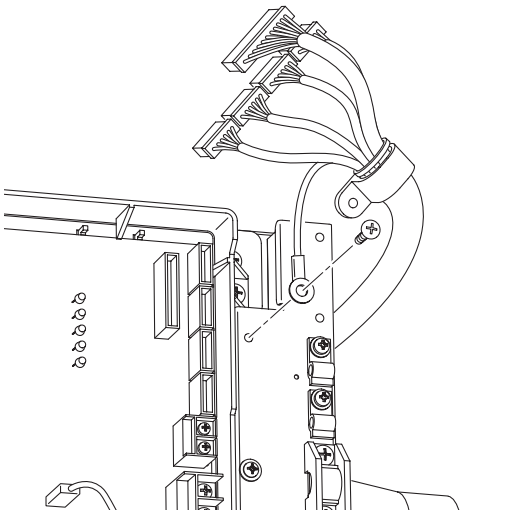
(Q0501)

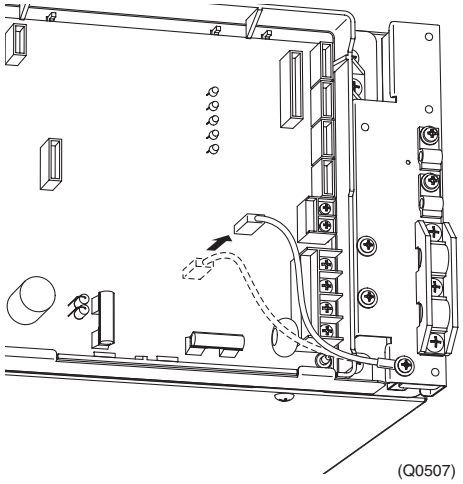
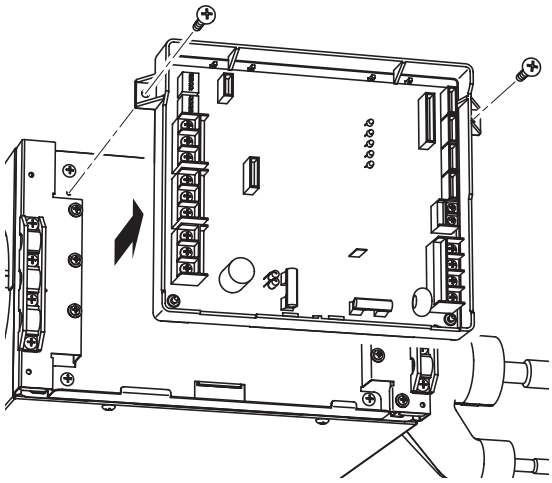


(Q0502)



(Q0503)

Step	Procedure		Points
3	Disconnect the solenoid valve connector and the thermistor connector.	 (Q0504)	
4	Remove the screw off the wire harness band.	 (Q0505)	
5	Remove the screw off the grounding lug.	 (Q0506)	

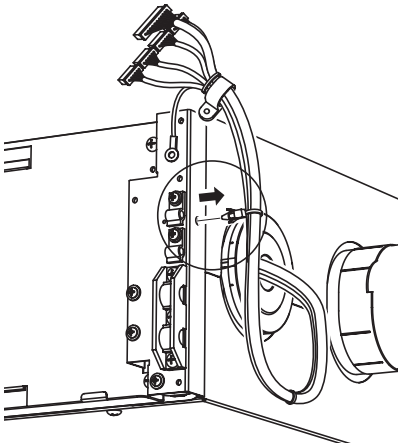
Step	Procedure		Points
6	Disconnect the Faston terminal of the grounding cable.	 (Q0507)	
7	Remove the 2 screws and take out the PCB.	 (Q0508)	

2.2 Removal of Solenoid Valve Coil

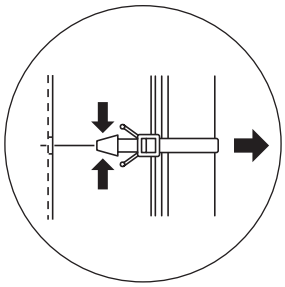
Procedure

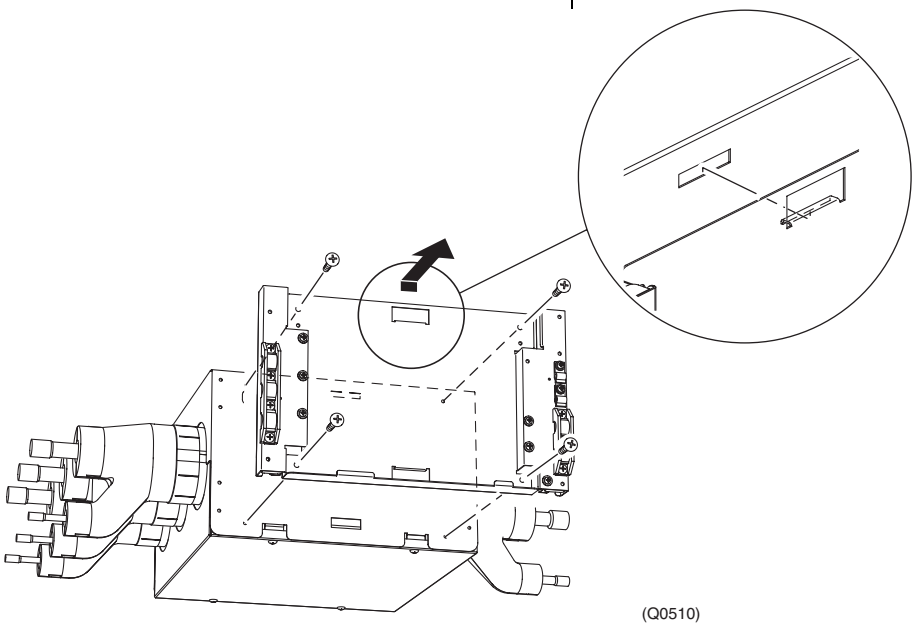
Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

Step	Procedure	Points
1. Removing the PCB.		Preparations Take the steps for removing the PCB.
1	Remove the legged clamp from the wire harness.	Press the fixture between your fingers to unhook.
2	Remove the 4 screws off the electrical box mounting plate. Lift the plate up to detach it.	
3	Remove the 4 screws off the bottom plate.	

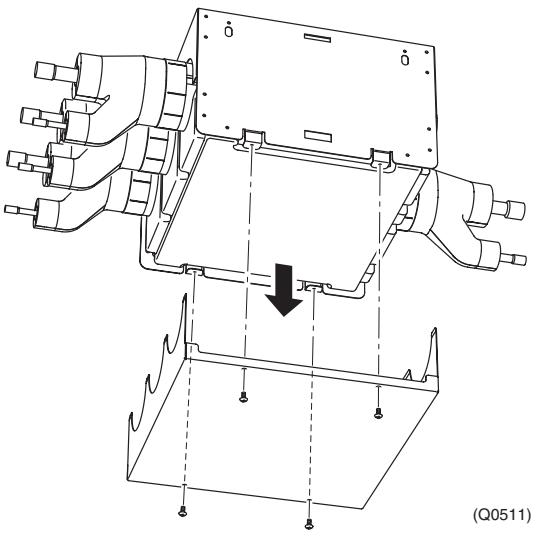


(Q0509)

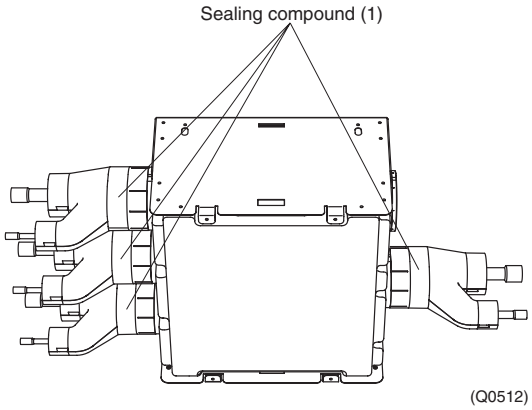
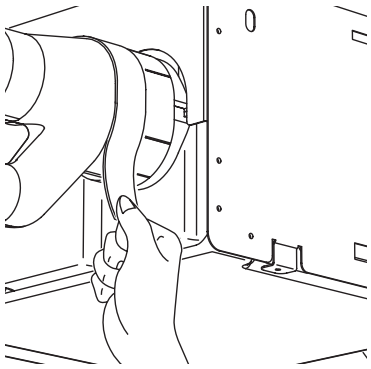
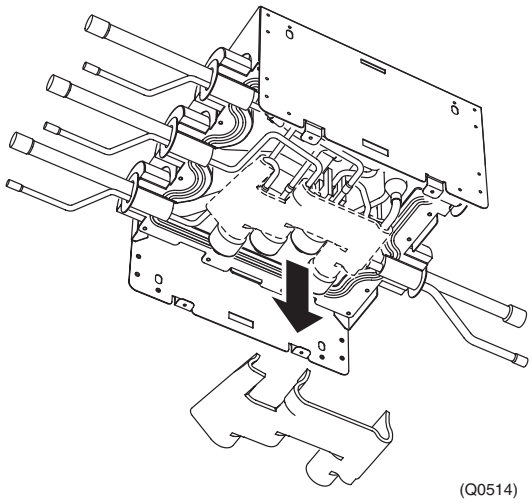
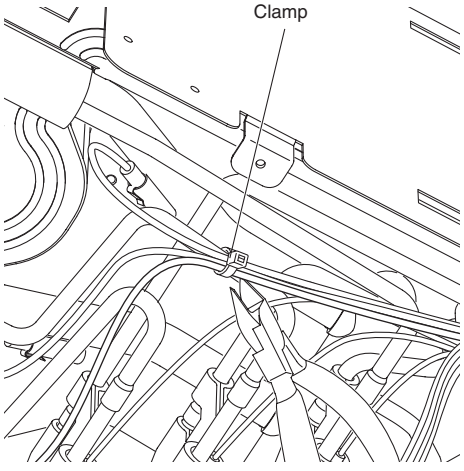


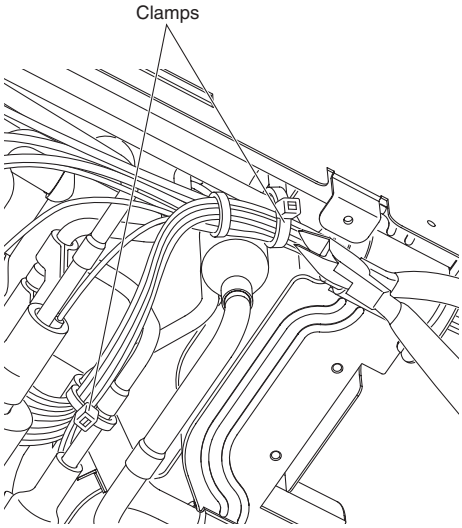


(Q0510)



(Q0511)

Step	Procedure		Points
4	Remove the sealing compound (1) of the pipe insulation sleeves.	 (Q0512)  (Q0513)	The sealing compound (1) is a servicing part.
5	Remove the putty.	 (Q0514)	
6	Cut off the clamp.	 (Q0528)	The clamp is to be kept in stock.

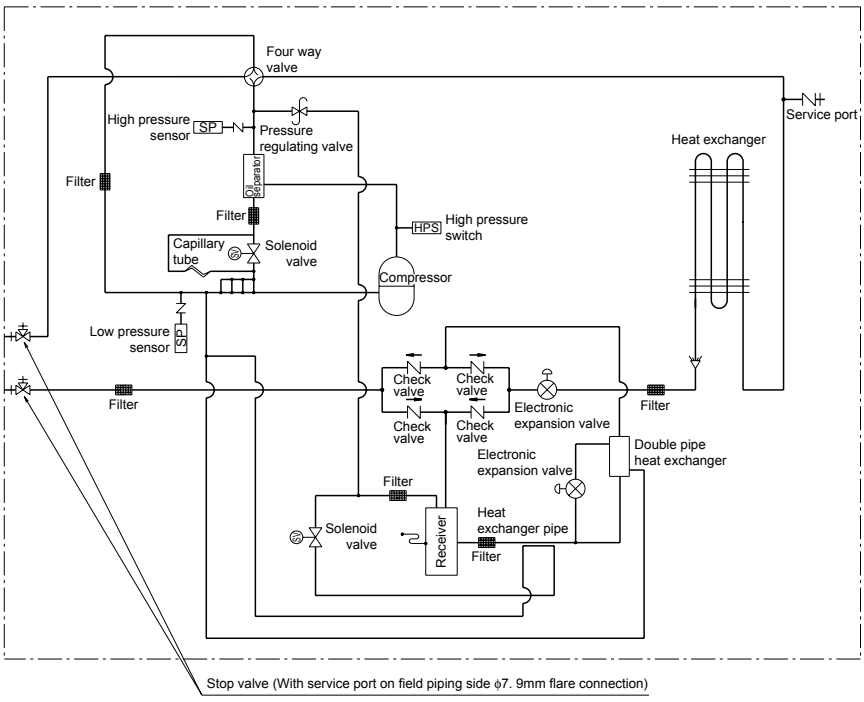
Step	Procedure		Points
			The clamps are to be kept in stock.

Part 10
Appendix

1. Piping Diagrams

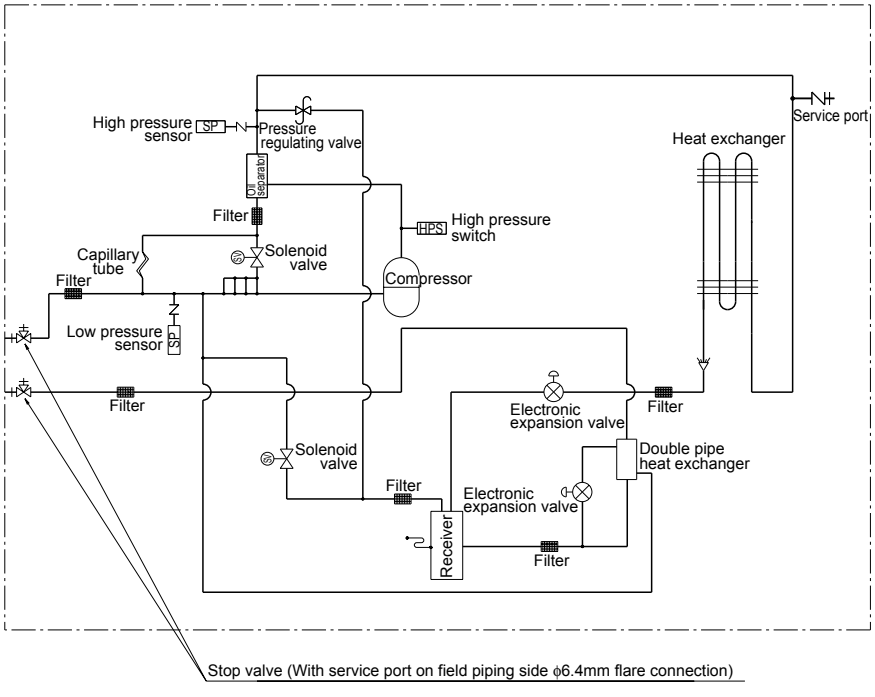
1.1 Outdoor Units

RMK(X)S112/140/160DVM, RMK(X)S112/140/160DV1A, RMXS112/140/160DVLT



3D048787A

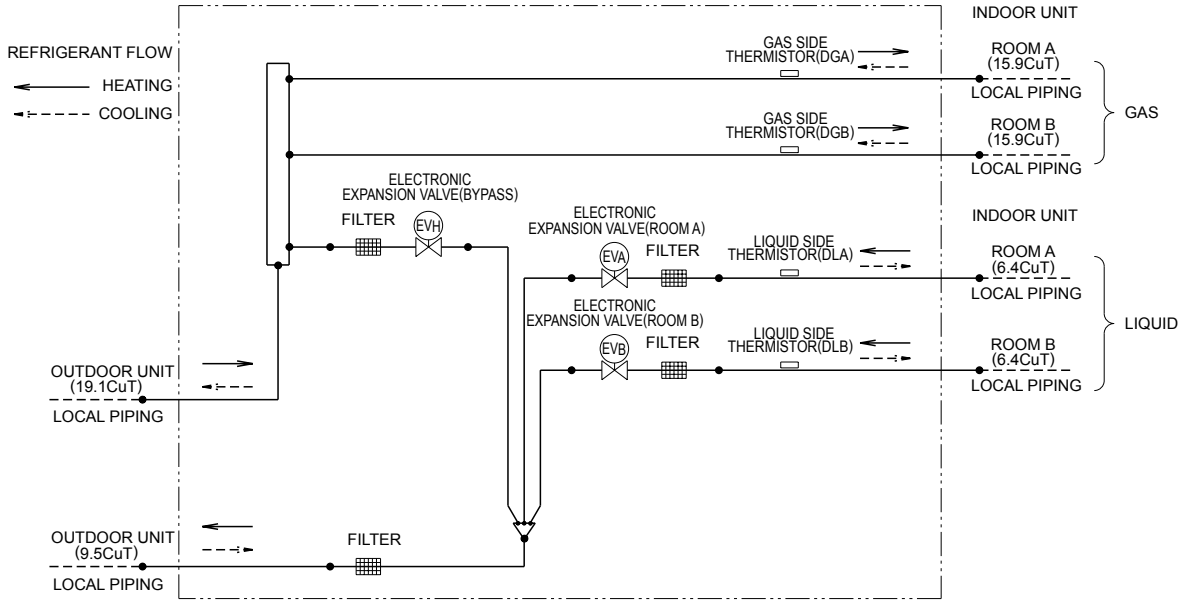
RMKD112/140/160DVM



3D044920A

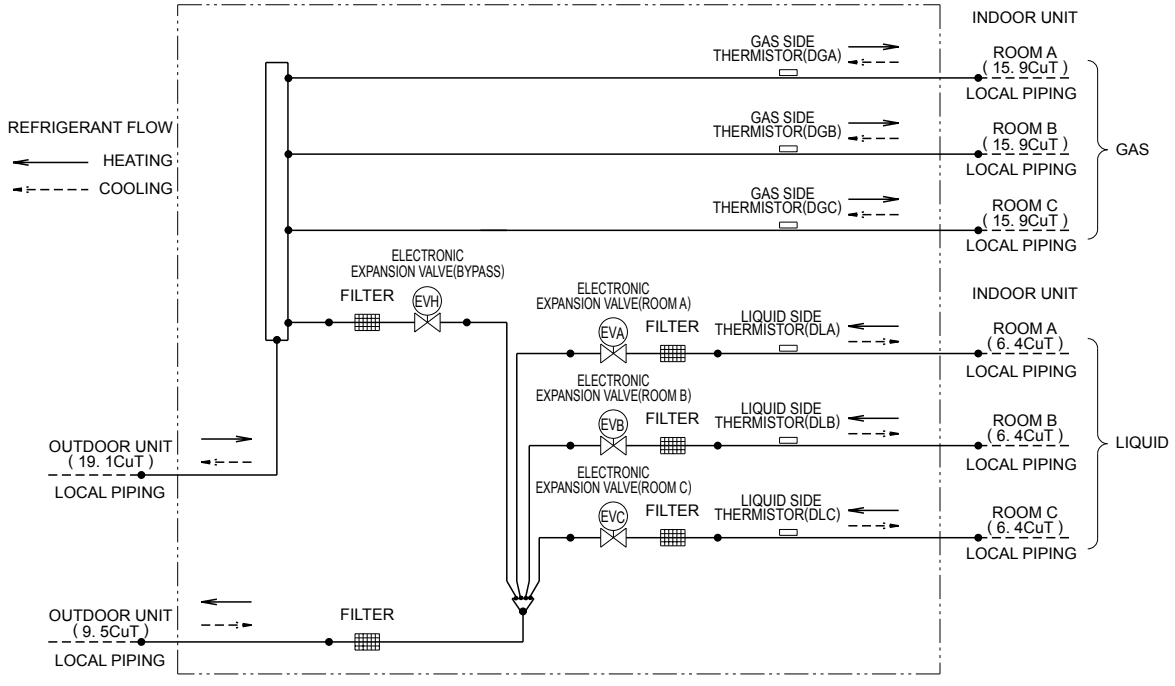
1.2 BP Units

BPMKS967A2(B), BPMKD967A2



3D048286B

BPMKS967A3(B), BPMKD967A3

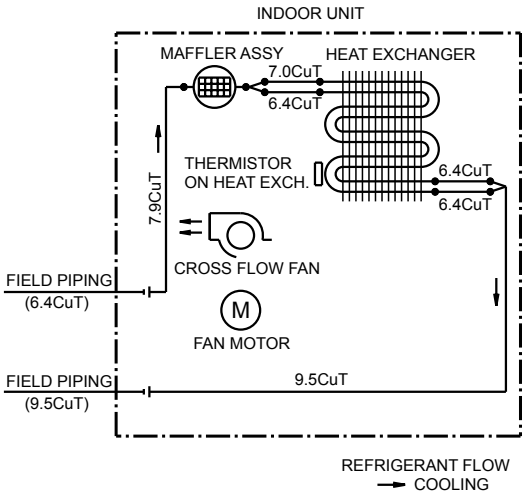


3D048285A

1.3 Indoor Units

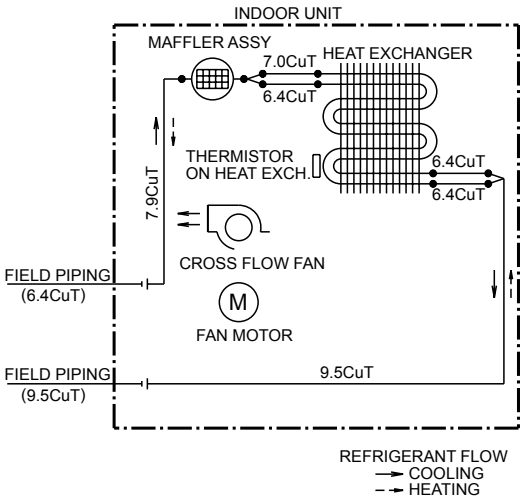
1.3.1 Wall Mounted Type

FTKS25/35DVM, FTKS20/25/35DVMA



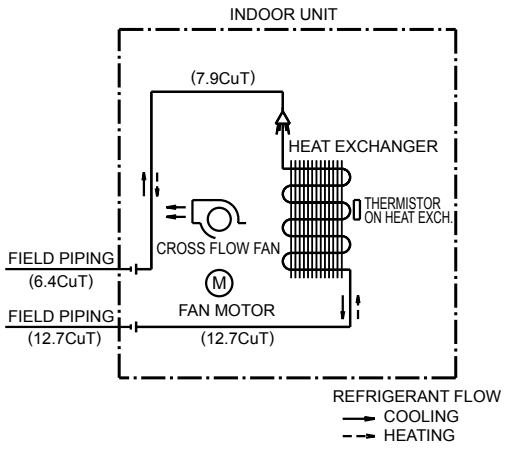
4D050757A

FTXS20/25/35DVMA, FTXS20/25/35DVMT



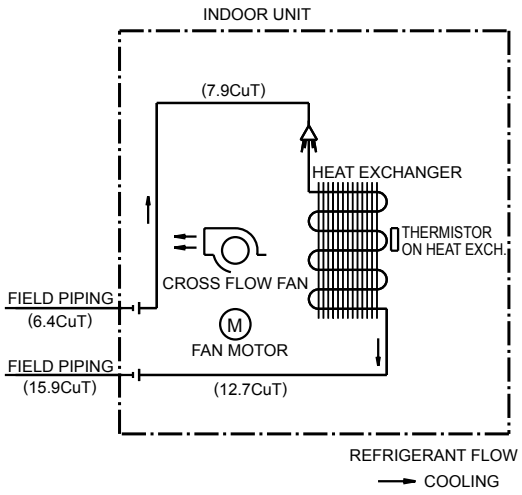
4D047912F

FTKS50/60BVMB, FTK(X)S50/60BVMA8, FTXS50/60DVMT



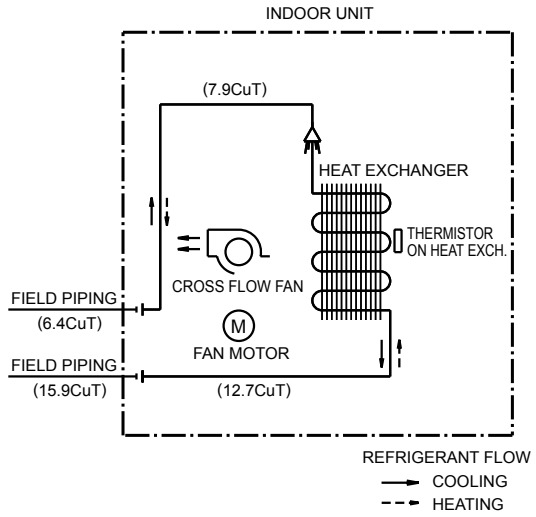
4D040081Q

FTKS71BVMB, FTKS71BVMA8, FTKD60FVM



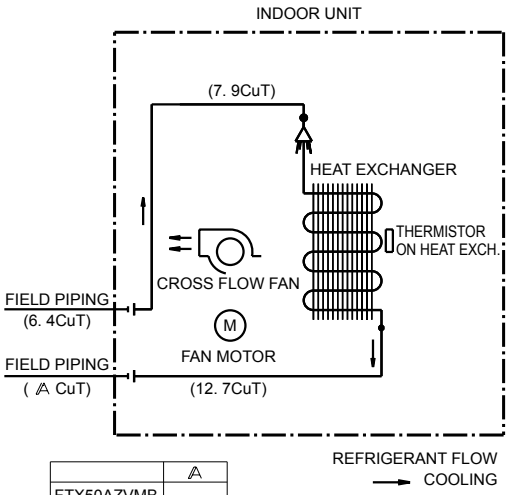
4D050919E

FTXS71BVMA8, FTXS71DVMT



4D040082P

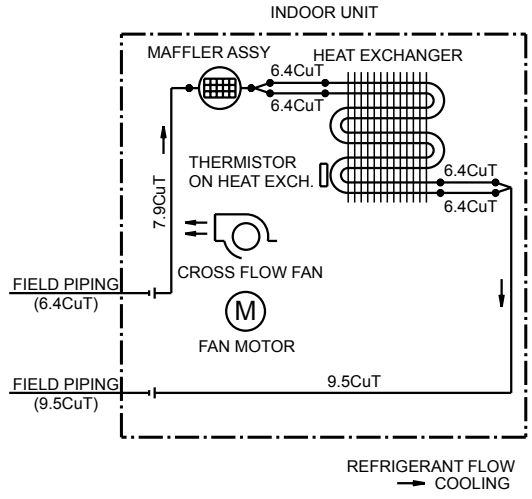
FTK50AZVMB, FTK60AZVMB, FTK71AZVMB



	A
FTX50AZVMB FTK50AZVMB FTX60AZVMB FTK60AZVMB	12. 7
FTX71AZVMB FTK71AZVMB	15. 9

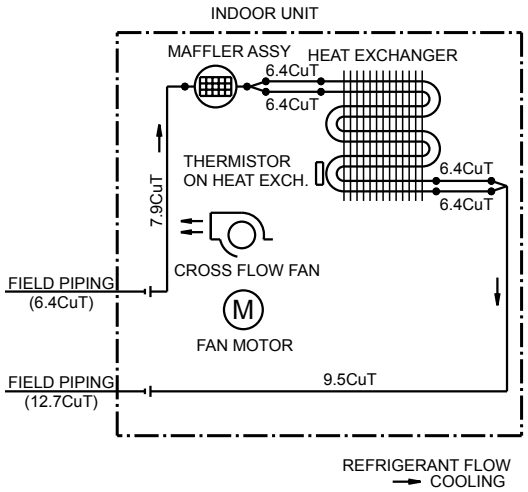
C : 4D033700

FTKD25DVM



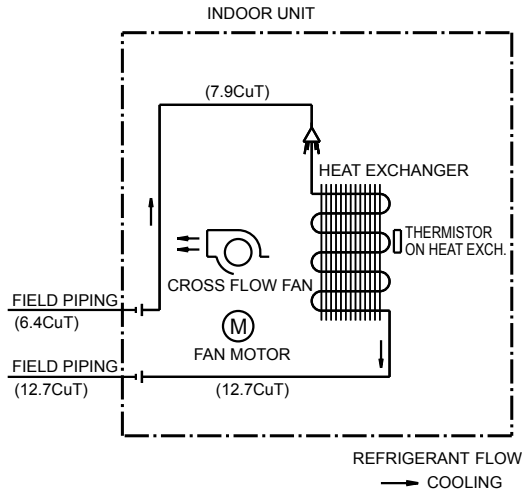
4D051578B

FTKD35DVM



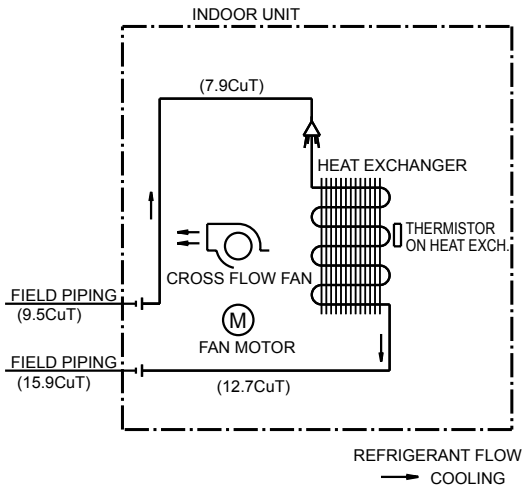
4D051579B

FTKD50FVM



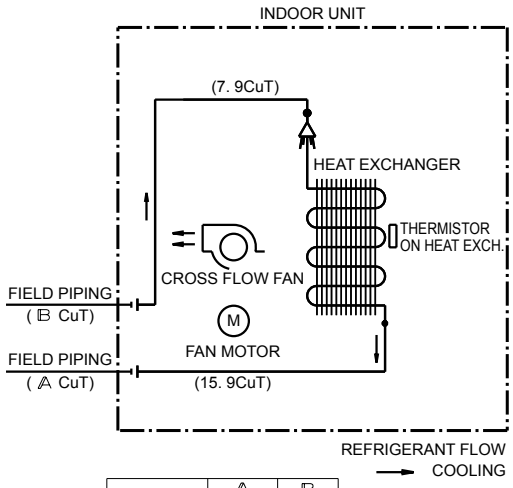
4D054932A

FTKD71FVM



4D053131A

FTK50AVM, FTK60AVM, FTK71AVM

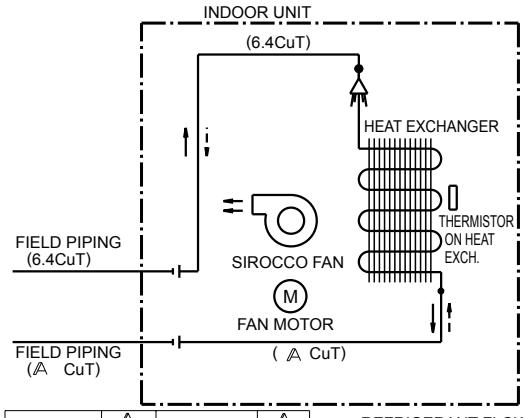


	A	B
FTK50--	12. 7	6. 4
FTK60--	15. 9	6. 4
FTK71--	15. 9	9. 5

C: 4D032970

1.3.2 Duct Connected Type

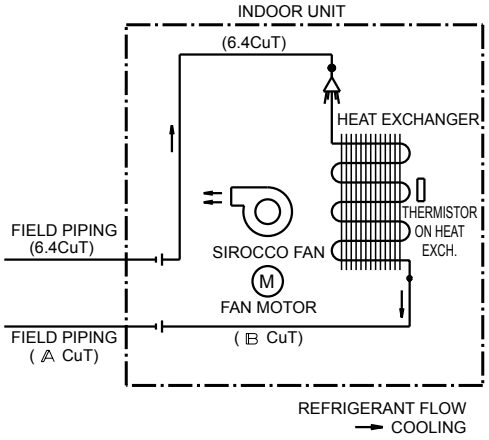
FDKS25/35CVMB, CDKS50/60CVMB, CDK(X)S25/35/50/60CVMA, CDXS25/35/50/60DVMT



	Ⓐ
CDXS25CVMB CDKS25CVMB CDXS35CVMB CDKS35CVMB CDXS25CVMA CDXS35CVMA FDXS25CVMB FDXS35CVMB FDXS35CVMA FDXS25EAVMB FDXS35EAVMB FDKS25CVMB FDKS35CVMB FDKS25EAVMB FDKS35EAVMB CDKS25CVMA CDKS35CVMA CDXS25DVMT CDXS35DVMT CDKS25DVMT CDKS35DVMT FDXS25CAVMB FDXS35CAVMB FDKS25CAVMB FDKS35CAVMB CDXS25EAVMA CDXS35EAVMA CDKS25EAVMA CDKS35EAVMA CDXS25EAVMT CDXS35EAVMT CDKS25EAVMT CDKS35EAVMT CDXS25EV2C CDXS35EV2C FDXS25CVMA	9.5
CDXS50CVMB CDKS50CVMB CDXS60CVMB CDKS60CVMB CDXS50CVMA CDXS60CVMA CDKS50CVMA CDKS60CVMA CDXS50DVMT CDXS60DVMT CDKS50DVMT CDKS60DVMT FDXS50CVMB FDXS60CVMB FDKS50CVMB FDKS60CVMB CDXS50EV2C CDXS60EV2C FDXS50CVMA FDXS60CVMA	12.7

4D045449J

CDKD25/35/50/60CVM, CDKD25/35EAVM

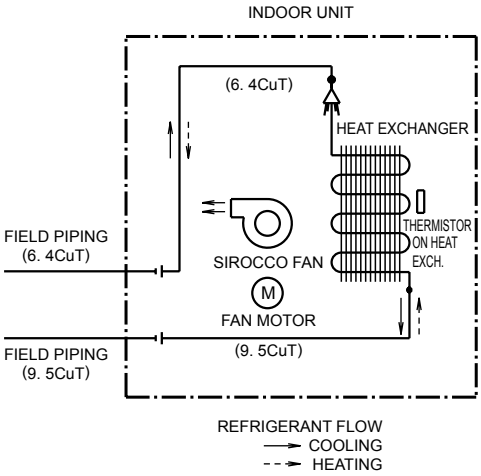


		Ⓐ	Ⓑ
CDKD25CVM	CDKD25EAVM	9.5	9.5
CDKD35CVM CDKD50CVM	CDKD35EAVM	12.7	12.7
CDKD60CVM		15.9	15.9

C : 4D045450B

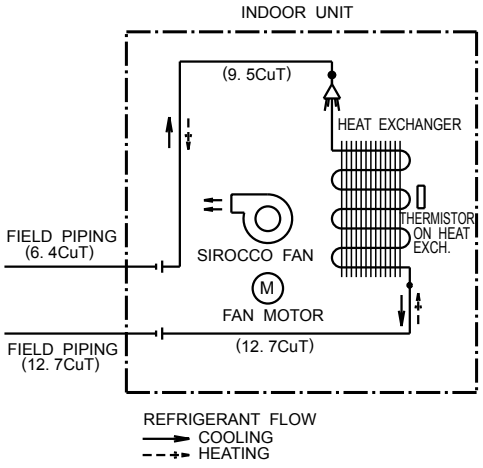
1.3.3 Floor / Ceiling Suspended Dual Type

FLXS25/35BVMA



4D048722A

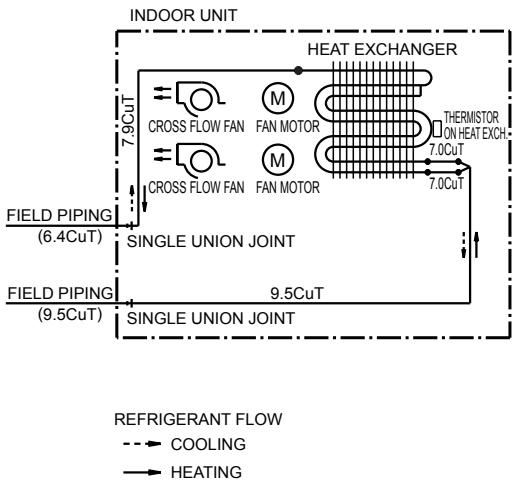
FLXS50/60BVMA



4D048724A

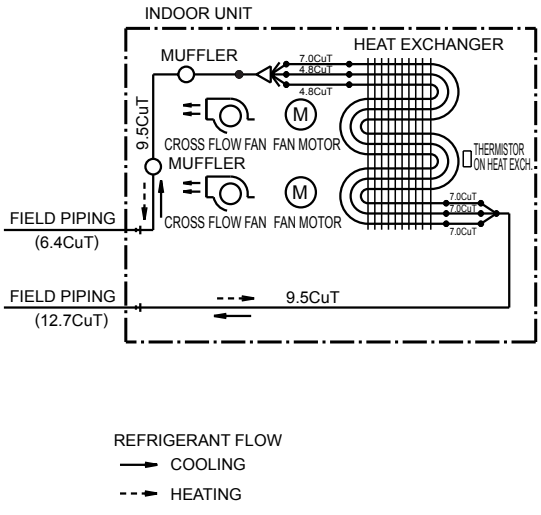
1.3.4 Floor Standing Type

FVXS35BVMA



4D034714C

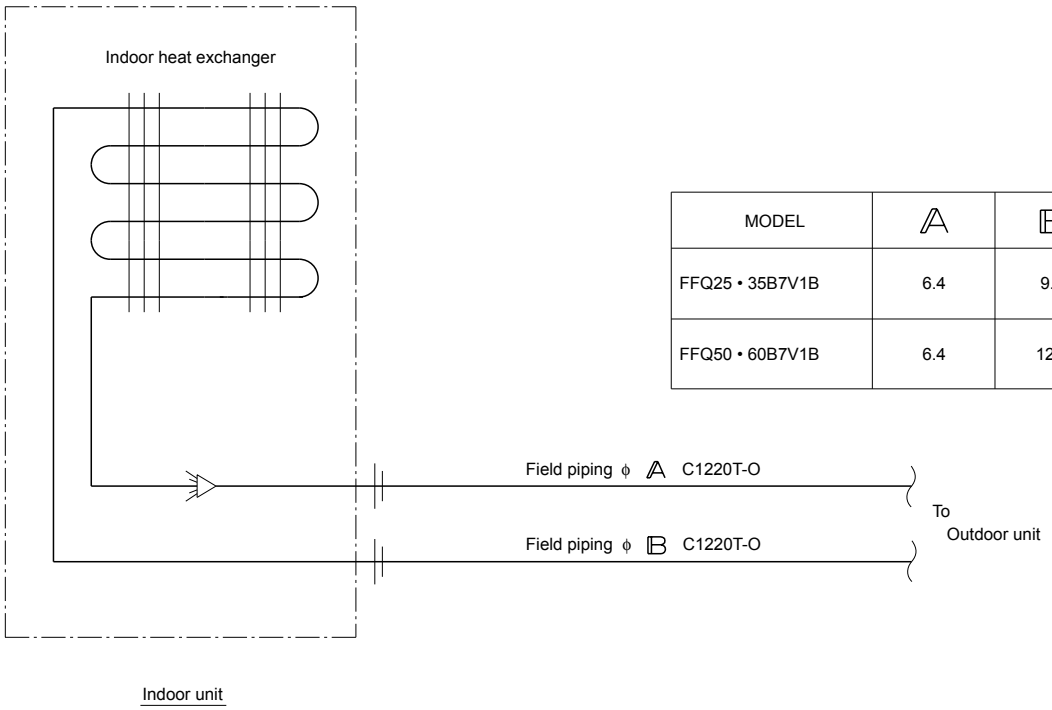
FVXS50BVMA



4D020911D

1.3.5 Ceiling Mounted Cassette Type

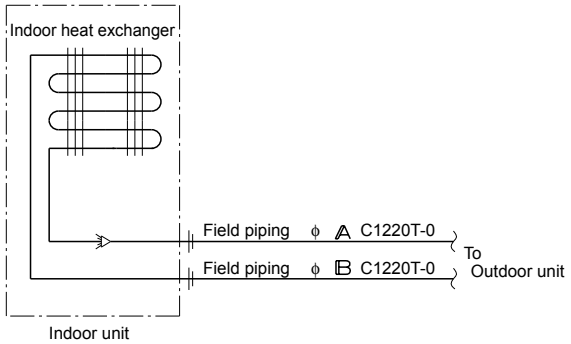
FFQ25/35/50/60B7V1B



MODEL	A	B
FFQ25 • 35B7V1B	6.4	9.5
FFQ50 • 60B7V1B	6.4	12.7

C : 4D039335

FCQ35/50/60/71BVE

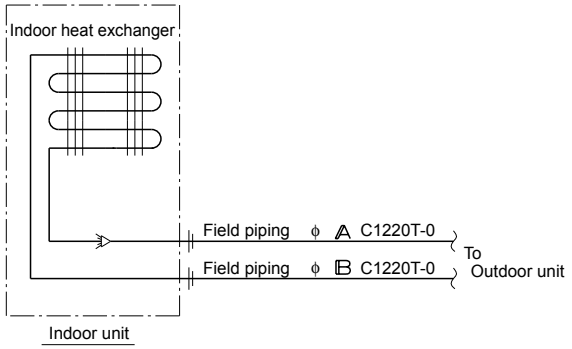


MODEL	A	B
FHQ35BUV1B FHQ35BVV1B FCQ35BVE FCQ35C7VEB	6.4	9.5
FHQ50, 60BUV1B FHQ50, 60BVV1B FCQ50, 60BVE FBQ60BV1 FBQ60BVL FCQ50, 60C7VEB	6.4	12.7
FUQ71, 100, 125BUV1B FUQ71, 100, 125BVV1B FHQ71, 100, 125BUV1B FHQ71, 100, 125BVV1B FAQ71, 100BUV1B FAQ71, 100BVV1B FXUQ70, 100, 125MV1 FHQ71, 100, 125BAV3B FCQ71, 100, 125, 140DV3B FCQ71, 100, 125, 140DAV3B FCQ71BVE FBQ71BV1 FBQ71BVL FCQ71, 100, 125, 140C7VEB FCQH71, 100, 125, 140C7VEB	9.5	15.9

4D037995G

1.3.6 Ceiling Mounted Built-in Type

FBQ60/71BV1, FBQ60/71BVL

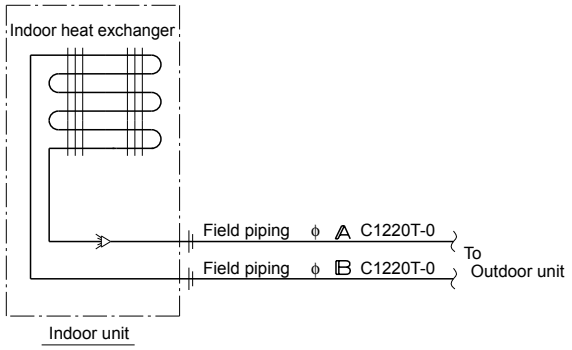


MODEL	A	B
FHQ35BUV1B FHQ35BVV1B FCQ35BVE FCQ35C7VEB	6.4	9.5
FHQ50, 60BUV1B FHQ50, 60BVV1B FCQ50, 60BVE FBQ60BV1 FBQ60BVL FCQ50, 60C7VEB	6.4	12.7
FUQ71, 100, 125BUV1B FUQ71, 100, 125BVV1B FHQ71, 100, 125BUV1B FHQ71, 100, 125BVV1B FAQ71, 100BUV1B FAQ71, 100BVV1B FXUQ70, 100, 125MV1 FHQ71, 100, 125BAV3B FCQ71, 100, 125, 140DV3B FCQ71, 100, 125, 140DAV3B FCQ71BVE FBQ71BV1 FBQ71BVL FCQ71, 100, 125, 140C7VEB FCQH71, 100, 125, 140C7VEB	9.5	15.9

4D037995G

1.3.7 Ceiling Suspended Type

FHQ35/50/60BUV1B9



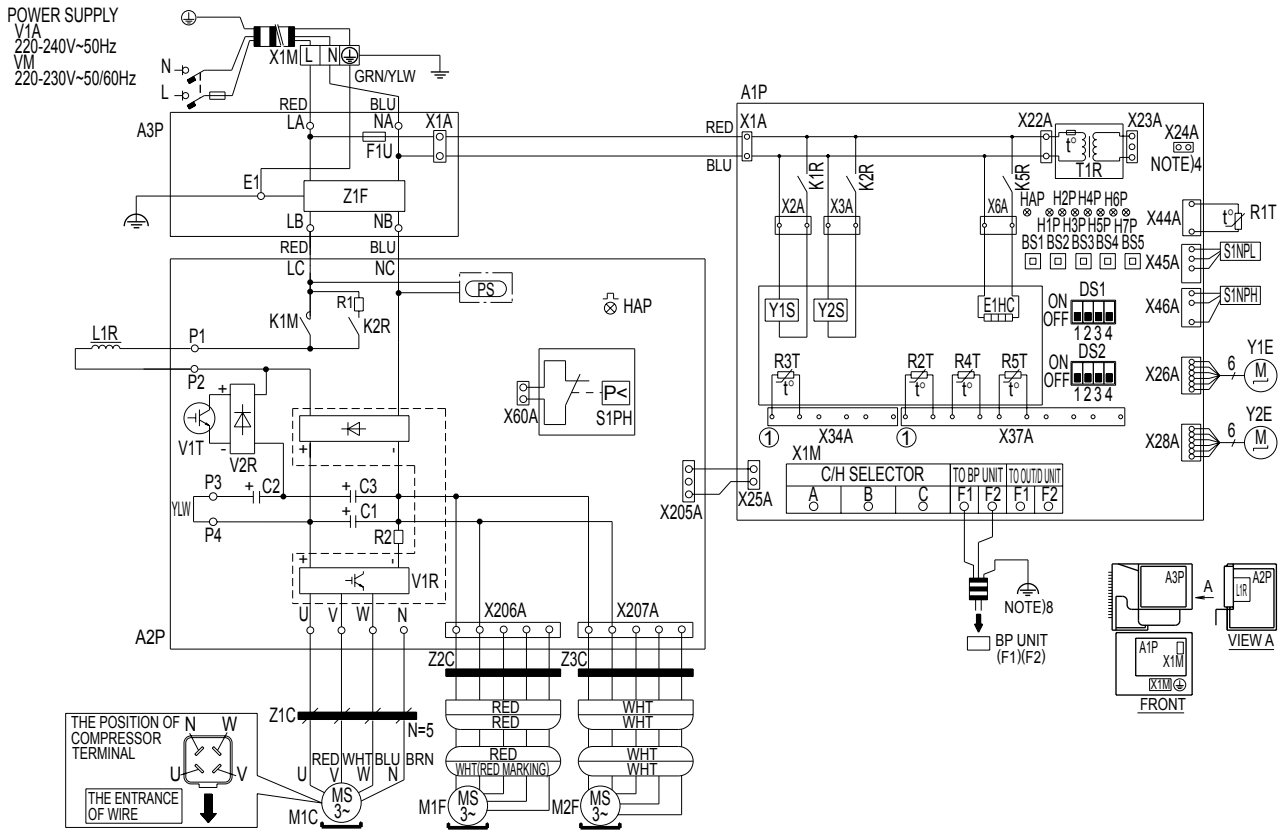
MODEL	A	B
FHQ35BUV1B FHQ35BVV1B FCQ35BVE FCQ35C7VEB	6.4	9.5
FHQ50, 60BUV1B FHQ50, 60BVV1B FCQ50, 60BVE FBQ60BV1 FBQ60BVL FCQ50, 60C7VEB	6.4	12.7
FUQ71, 100, 125BUV1B FUQ71, 100, 125BVV1B FHQ71, 100, 125BUV1B FHQ71, 100, 125BVV1B FAQ71, 100BUV1B FAQ71, 100BVV1B FXUQ70, 100, 125MV1 FHQ71, 100, 125BAV3B FCQ71, 100, 125, 140DV3B FCQ71, 100, 125, 140DAV3B FCQ71BVE FBQ71BV1 FBQ71BVL FCQ71, 100, 125, 140C7VEB FCQH71, 100, 125, 140C7VEB	9.5	15.9

4D037995G

2. Wiring Diagrams

2.1 Outdoor Units

RMKS112/140/160DVM, RMKS112/140/160DV1A

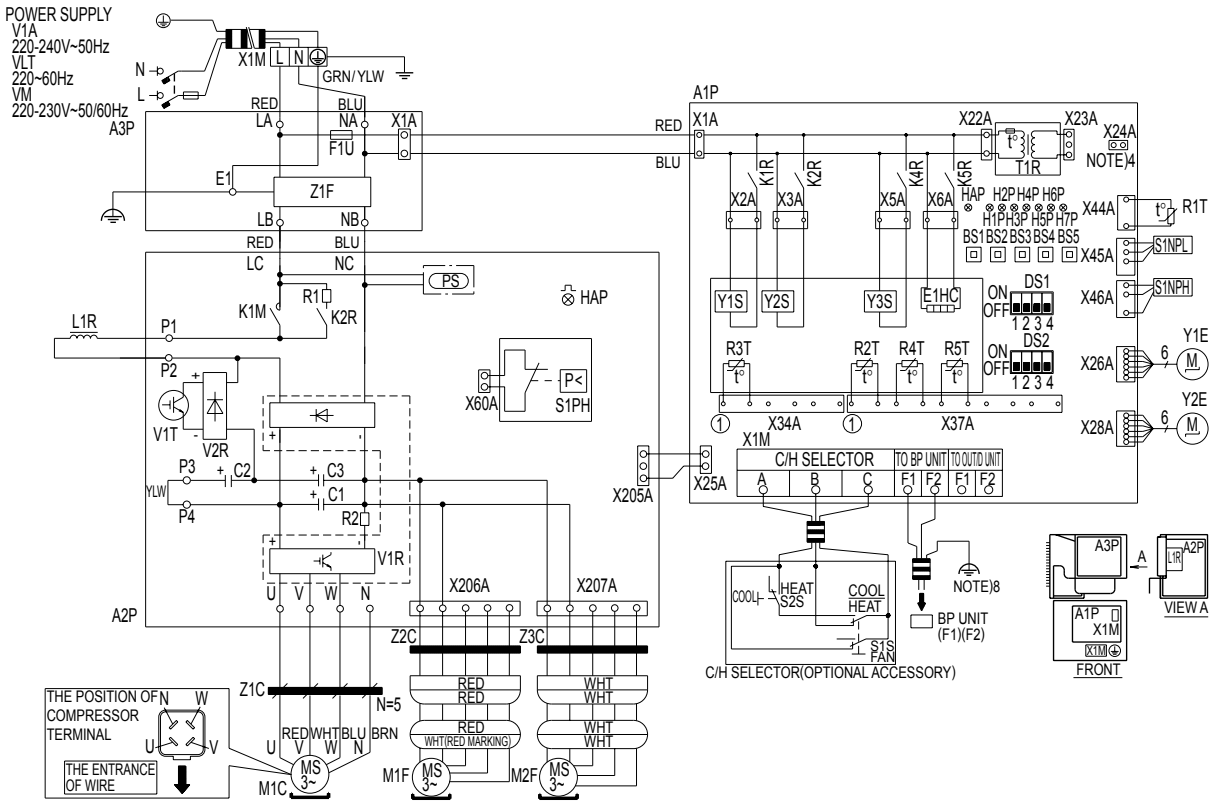


NOTES)1.THIS WIRING DIAGRAM IS APPLIED ONLY TO THE OUTDOOR UNIT.
2.: :FIELD WIRING.
3. :TERMINAL STRIP , :MOVABLE CONNECTOR :FIXED CONNECTOR :TERMINAL
:PROTECTIVE EARTH (SCREW) :NOISELESS EARTH
4.WHEN USING THE OPTION ADAPTOR, REFER TO THE INSTALLATION MANUAL.
5.REFER TO"OPERATION CAUTION LABEL"(ON BACK OF FRONT PLATE), HOW TO USE BS1~BS5 AND DS1•2 SWITCH.
6.WHEN OPERATING, DON'T SHORT CIRCUIT FOR PROTECTION DEVICE. (S1PH)
7.COLORS BLU:BLUE BRN:BROWN GRN:GREEN RED:RED WHT:WHITE YLW:YELLOW.
8.REFER TO THE INSTALLATION MANUAL, FOR CONNECTION WIRING TO BP UNIT-OUTDOOR TRANSMISSION F1 F2.

L-RED	N-BLU
A1P	PRINTED CIRCUIT BOARD (MAIN)
A2P	PRINTED CIRCUIT BOARD (INV)
A3P	PRINTED CIRCUIT BOARD (NOISE FILTER)
BS1~5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)
C1.2.3	CAPACITOR
DS1.2	DIP SWITCH
E1HC	CRANKCASE HEATER
F1U	FUSE(T)6.3A/250V)
H1P~7P	PILOT LAMP(SERVICE MONITOR-ORANGE) [H2P]PREPARE, TEST ---------- FLICKERING MALFUNCTION DETECTION --- LIGHT UP
HAP	PILOT LAMP(SERVICE MONITOR-GREEN) (A1P)
HAP	PILOT LAMP(SERVICE MONITOR-GREEN) (A2P)
K1M	MAGNETIC CONTACTOR (M1C)
K2R	MAGNETIC RELAY (K1M)
K1R	MAGNETIC RELAY (Y1S)
K2R	MAGNETIC RELAY (Y2S)
K5R	MAGNETIC RELAY (E1HC)
L1R	REACTOR
M1C	MOTOR (COMPRESSOR)
M1F	MOTOR (FAN)
M2F	MOTOR (FAN)
PS	SWITCHING POWER SUPPLY
R1	RESISTOR (CURRENT LIMITING)
R2	RESISTOR (CURRENT SENSOR)
R1T	THERMISTOR (AIR)
R2T	THERMISTOR (SUCTION)
R3T	THERMISTOR (M1C DISCHARGE)
R4T	THERMISTOR (HEAT EXC. DEICER)
R5T	THERMISTOR (HEAT EXC. OUTLET)
S1NPH	PRESSURE SENSOR (HIGH)
S1NPL	PRESSURE SENSOR (LOW)
S1PH	PRESSURES WITCH (HIGH)
T1R	TRANSFORMER(220-240V/24V)
V1R. V2R	POWER MODULE (A2P)
V1T	IGBT (A2P)
X1M	TERMINAL STRIP (POWER SUPPLY)
X1M	TERMINAL STRIP (CONTROL) (A1P)
Y1E	ELECTRONIC EXPANSION VALVE (MAIN)
Y2E	ELECTRONIC EXPANSION VALVE (SUB COOL)
Y1S	SOLENOID VALVE (HOT GAS)
Y2S	SOLENOID VALVE (RECEIVER GAS PURGE)
Z1C~3C	NOISE FILTER (FERRITE CORE)
Z1F	NOISE FILTER (WITH SURGE ABSORBER)

3D048943

RMXS112/140/160DVM, RMXS112/140/160DV1A, RMXS112/140/160DVLT

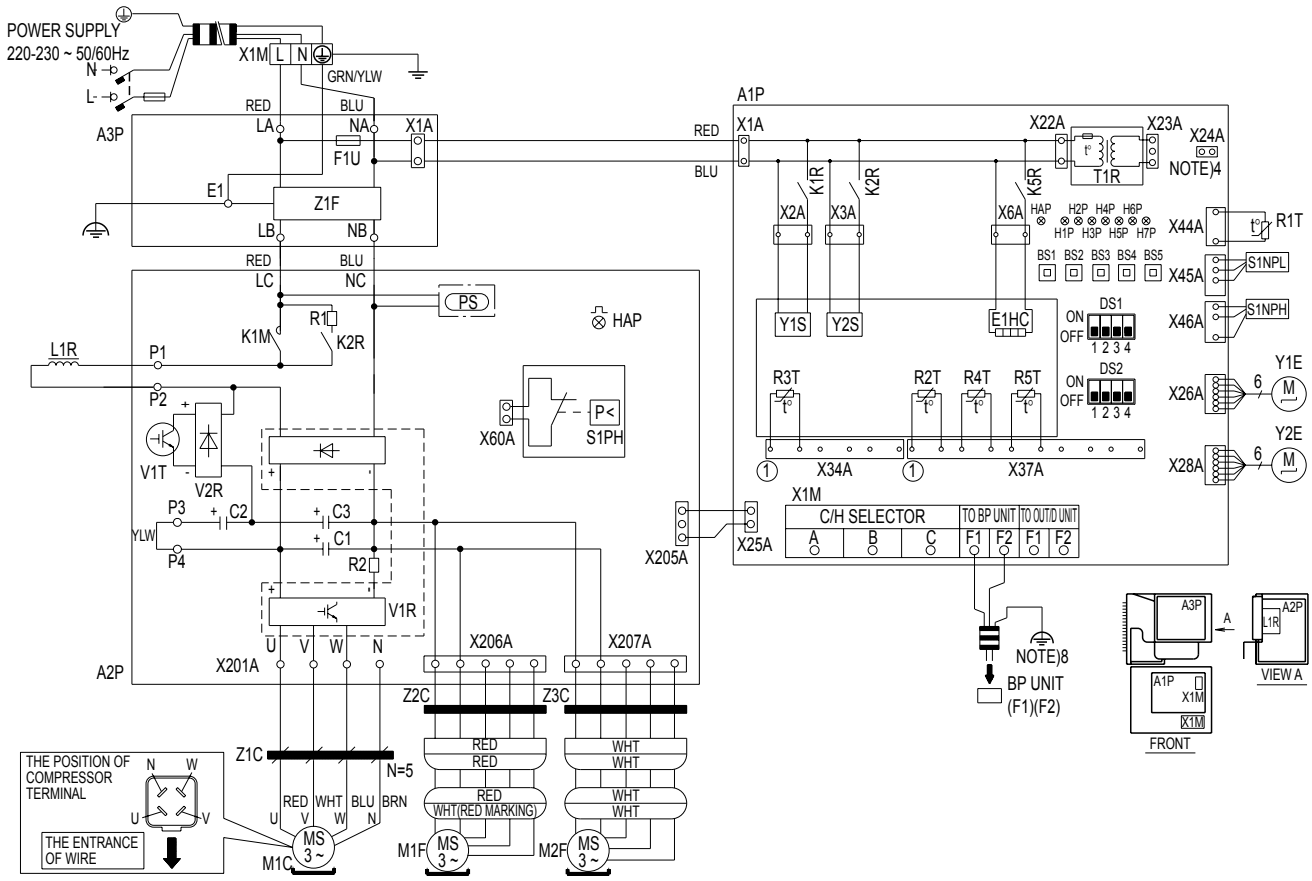


NOTES)1.THIS WIRING DIAGRAM IS APPLIED ONLY TO THE OUTDOOR UNIT.
2. :FIELD WIRING.
3. :TERMINAL STRIP , :MOVABLE CONNECTOR :FIXED CONNECTOR :TERMINAL
:PROTECTIVE EARTH (SCREW) :NOISELESS EARTH
4.WHEN USING THE OPTION ADAPTOR, REFER TO THE INSTALLATION MANUAL.
5.REFER TO"OPERATION CAUTION LABEL"(ON BACK OF FRONT PLATE), HOW TO USE BS1~BS5 AND DS1•2 SWITCH.
6.WHEN OPERATING, DON'T SHORT CIRCUIT FOR PROTECTION DEVICE. (S1PH)
7.COLORS BLU:BLUE BRN:BROWN GRN:GREEN RED:RED WHT:WHITE YLW:YELLOW.
8.REFER TO THE INSTALLATION MANUAL, FOR CONNECTION WIRING TO BP UNIT-OUTDOOR TRANSMISSION F1 F2.

L-RED	N-BLU
A1P	PRINTED CIRCUIT BOARD (MAIN)
A2P	PRINTED CIRCUIT BOARD (INV)
A3P	PRINTED CIRCUIT BOARD (NOISE FILTER)
BS1~5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)
C1.2.3	CAPACITOR
DS1.2	DIP SWITCH
E1HC	CRANKCASE HEATER
F1U	FUSE(T)6.3A/250V)
H1P~7P	PILOT LAMP(SERVICE MONITOR-ORANGE) [H2P] PREPARE,TEST ---------- FLICKERING MALFUNCTION DETECTION --- LIGHT UP
HAP	PILOT LAMP (SERVICE MONITOR-GREEN)(A1P)
HAP	PILOT LAMP (SERVICE MONITOR-GREEN)(A2P)
K1M	MAGNETIC CONTACTOR (M1C)
K2R	MAGNETIC RELAY (K1M)
K1R	MAGNETIC RELAY (Y1S)
K2R	MAGNETIC RELAY (Y2S)
K4R	MAGNETIC RELAY (Y3S)
K5R	MAGNETIC RELAY (E1HC)
L1R	REACTOR
M1C	MOTOR (COMPRESSOR)
M1F	MOTOR (FAN)
M2F	MOTOR (FAN)
PS	SWITCHING POWER SUPPLY
R1	RESISTOR (CURRENT LIMITING)
R2	RESISTOR (CURRENT SENSOR)
R1T	THERMISTOR (AIR)
R2T	THERMISTOR (SUCTION)
R3T	THERMISTOR (M1C DISCHARGE)
R4T	THERMISTOR (HEAT EXC. DEICER)
R5T	THERMISTOR (HEAT EXC. OUTLET)
S1NPH	PRESSURE SENSOR (HIGH)
S1NPL	PRESSURE SENSOR (LOW)
S1PH	PRESSURE SWITCH (HIGH)
T1R	TRANSFORMER (220-240V/24V)
V1R, V2R	POWER MODULE (A2P)
V1T	IGBT (A2P)
X1M	TERMINAL STRIP (POWER SUPPLY)
X1M	TERMINAL STRIP (CONTROL) (A1P)
Y1E	ELECTRONIC EXPANSION VALVE (MAIN)
Y2E	ELECTRONIC EXPANSION VALVE (SUBCOOL)
Y1S	SOLENOID VALVE (HOT GAS)
Y2S	SOLENOID VALVE (RECEIVER GAS PURGE)
Y3S	SOLENOID VALVE (4 WAY VALVE)
Z1C~3C	NOISE FILTER (FERRITE CORE)
Z1F	NOISE FILTER (WITH SURGE ABSORBER)
	C/H SELECTOR (KRC19-26A)
S1S	SELECTOR SWITCH (FAN/COOL•HEAT)
S2S	SELECTOR SWITCH (COOL/HEAT)

3D048789

RMKD112/140/160DVM



NOTES)

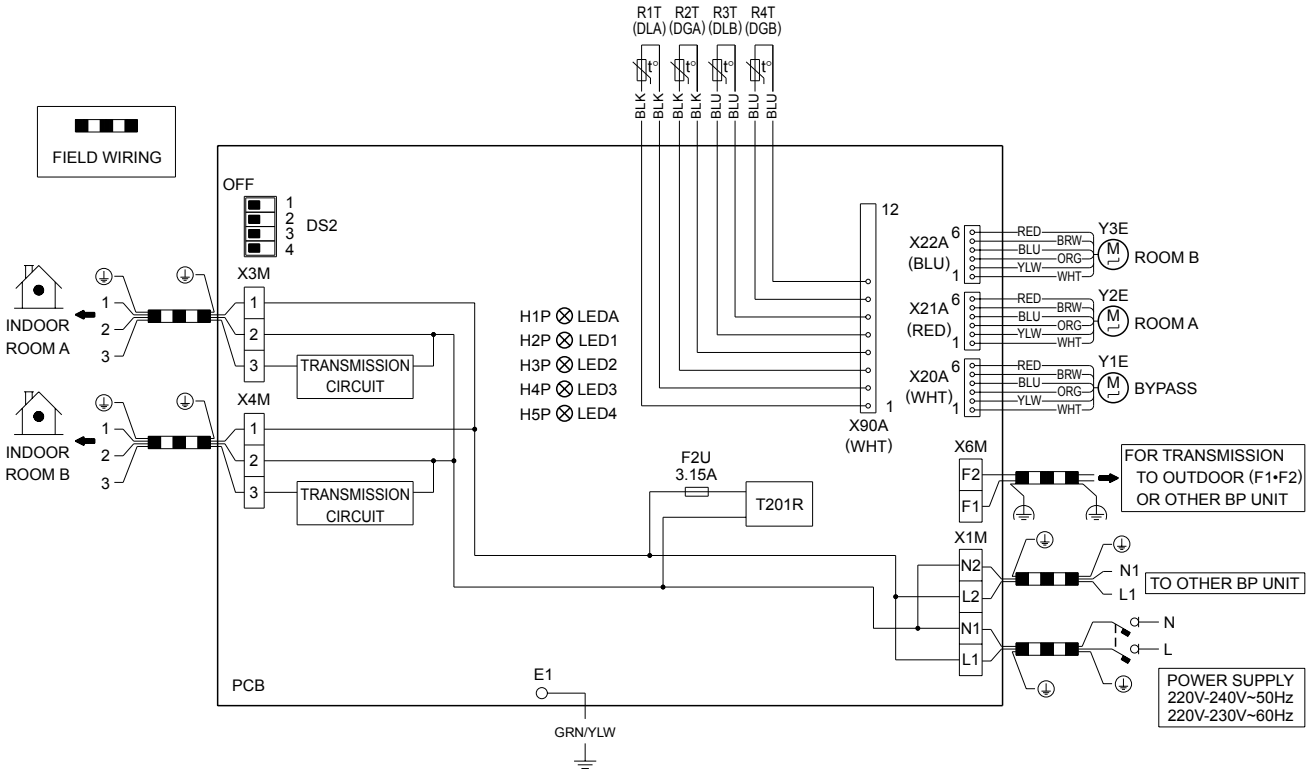
1. THIS WIRING DIAGRAM IS APPLIED ONLY TO THE OUTDOOR UNIT.
2. : FIELD WIRING.
3. : TERMINAL STRIP , : MOVABLE CONNECTOR : FIXED CONNECTOR : TERMINAL : PROTECTIVE EARTH (SCREW) : NOISELESS EARTH
4. WHEN USING THE OPTION ADAPTOR, REFER TO THE INSTALLATION MANUAL.
5. REFER TO "OPERATION CAUTION LABEL "(ON BACK OF FRONT PLATE), HOW TO USE BS1 ~ BS5 AND DS1 • 2 SWITCH.
6. WHEN OPERATING, DON'T SHORT CIRCUIT FOR PROTECTION DEVICE. (S1PH)
7. COLORS BLU : BLUE BRN : BROWN GRN : GREEN RED : RED WHT : WHITE YLW : YELLOW.
8. REFER TO THE INSTALLATION MANUAL, FOR CONNECTION WIRING TO BP UNIT-OUTDOOR TRANSMISSION F1 • F2."

L-RED	N-BLU
A1P	PRINTED CIRCUIT BOARD (MAIN)
A2P	PRINTED CIRCUIT BOARD (INV)
A3P	PRINTED CIRCUIT BOARD (NOISEFILTER)
BS1 ~ 5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)
C1, 2, 3	CAPACITOR
DS1, 2	DIP SWITCH
E1HC	CRANKCASE HEATER
F1U	FUSE(T 6.3A/250V)
H1P ~ 7P	PILOT LAMP(SERVICE MONITOR-ORANGE) [H2P]PREPARE,TEST ----------:FLICKERING MALFUNCTION DETECTION ----:LIGHT UP
HAP	PILOT LAMP(SERVICE MONITOR-GREEN)(A1P)
HAP	PILOT LAMP(SERVICE MONITOR-GREEN)(A2P)
K1M	MAGNETIC CONTACTOR (M1C)
K2R	MAGNETIC RELAY (K1M)
K1R	MAGNETIC RELAY (Y1S)
K2R	MAGNETIC RELAY (Y2S)
K5R	MAGNETIC RELAY (E1HC)
L1R	REACTOR
M1C	MOTOR (COMPRESSOR)
M1F	MOTOR (FAN)
M2F	MOTOR (FAN)
PS	SWITCHING POWER SUPPLY
R1	RESISTOR (CURRENT LIMITING)
R2	RESISTOR (CURRENT SENSOR)
R1T	THERMISTOR (AIR)
R2T	THERMISTOR (SUCTION)
R3T	THERMISTOR (M1C DISCHARGE)
R4T	THERMISTOR (HEAT EXC.DEICER)
R5T	THERMISTOR (HEAT EXC.OUTLET)
S1NPH	PRESSURE SENSOR (HIGH)
S1NPL	PRESSURE SENSOR (LOW)
S1PH	PRESSURE SWITCH (HIGH)
T1R	TRANSFORMER (220-230V/20V)
V1R,V2R	POWER MODULE (A2P)
V1T	IGBT (A2P)
X1M	TERMINAL STRIP (POWER SUPPLY)
X1M	TERMINAL STRIP (CONTROL)(A1P)
Y1E	ELECTRONIC EXPANSION VALVE (MAIN)
Y2E	ELECTRONIC EXPANSION VALVE (SUBCOOL)
Y1S	SOLENOID VALVE (HOT GAS)
Y2S	SOLENOID VALVE (RECEIVER GAS PURGE)
Z1C ~ 3C	NOISE FILTER (FERRITE CORE)
Z1F	NOISE FILTER (WITH SURGE ABSORBER)

3D049709A

2.2 BP Units

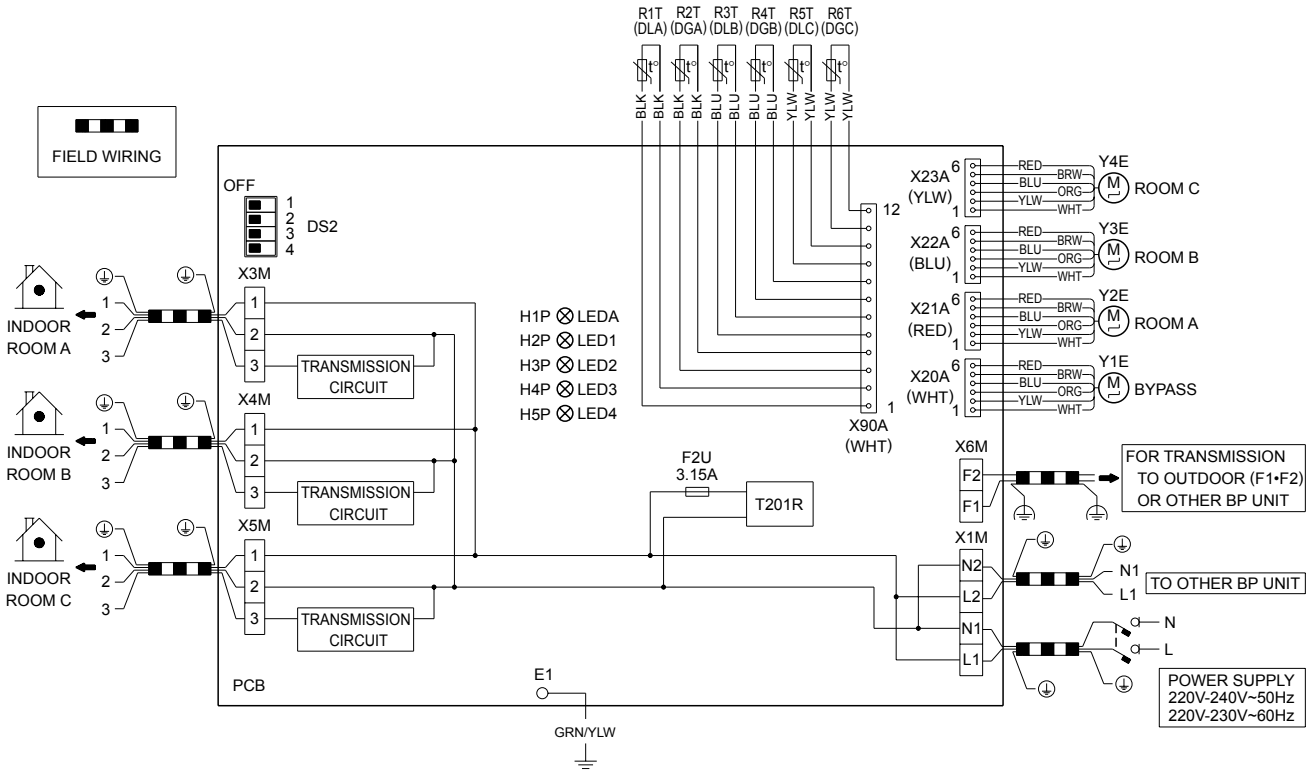
BPMKS967A2, BPMKD967A2



X20A~X22A, X90A : CONNECTOR
PCB : PRINTED CIRCUIT BOARD
F2U : FUSE
H1P~H5P : PILOT LAMP
R1T~R4T : THERMISTOR
DS2 : DIP SWITCH
T201R : TRANSFORMAR
X1M, X3M, X4M, X6M : TERMINAL STRIP
Y1E~Y3E : MOTOR OPERATED VALVE COIL

3D048438

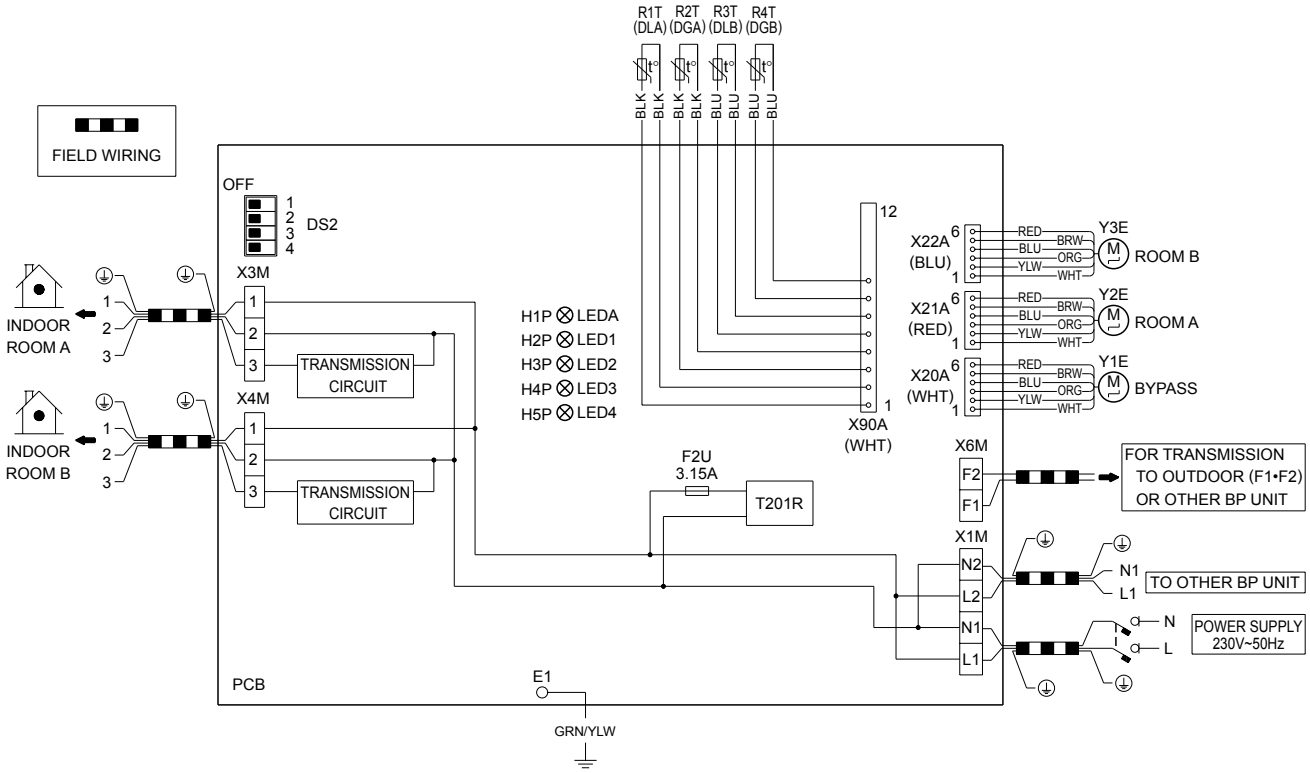
BPMKS967A3, BPMKD967A3



X20A~X23A, X90A : CONNECTOR
PCB : PRINTED CIRCUIT BOARD
F2U : FUSE
H1P~H5P : PILOT LAMP
R1T~R6T : THERMISTOR
DS2 : DIP SWITCH
T201R : TRANSFORMAR
X1M, X3M~X6M : TERMINAL STRIP
Y1E~Y4E : MOTOR OPERATED VALVE COIL

3D048288

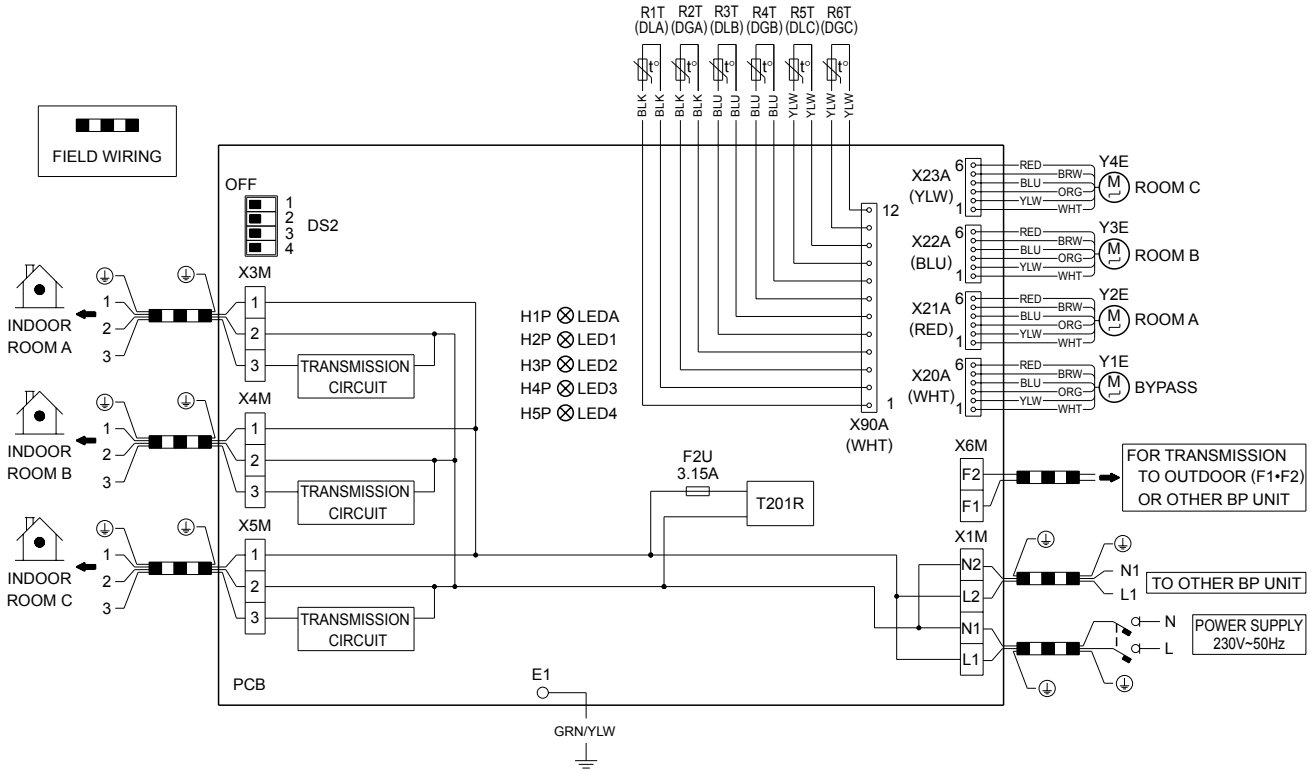
BPMKS967A2B



X20A~X22A, X90A	: CONNECTOR	H1P~H5P	: PILOT LAMP	T201R	: TRANSFORMAR		
PCB	: PRINTED CIRCUIT BOARD	R1T~R4T	: THERMISTOR	X1M, X3M, X4M, X6M	: TERMINAL STRIP		
F2U	: FUSE	DS2	: DIP SWITCH	Y1E~Y3E	: MOTOR OPERATED VALVE COIL		

3D048565B

BPMKS967A3B



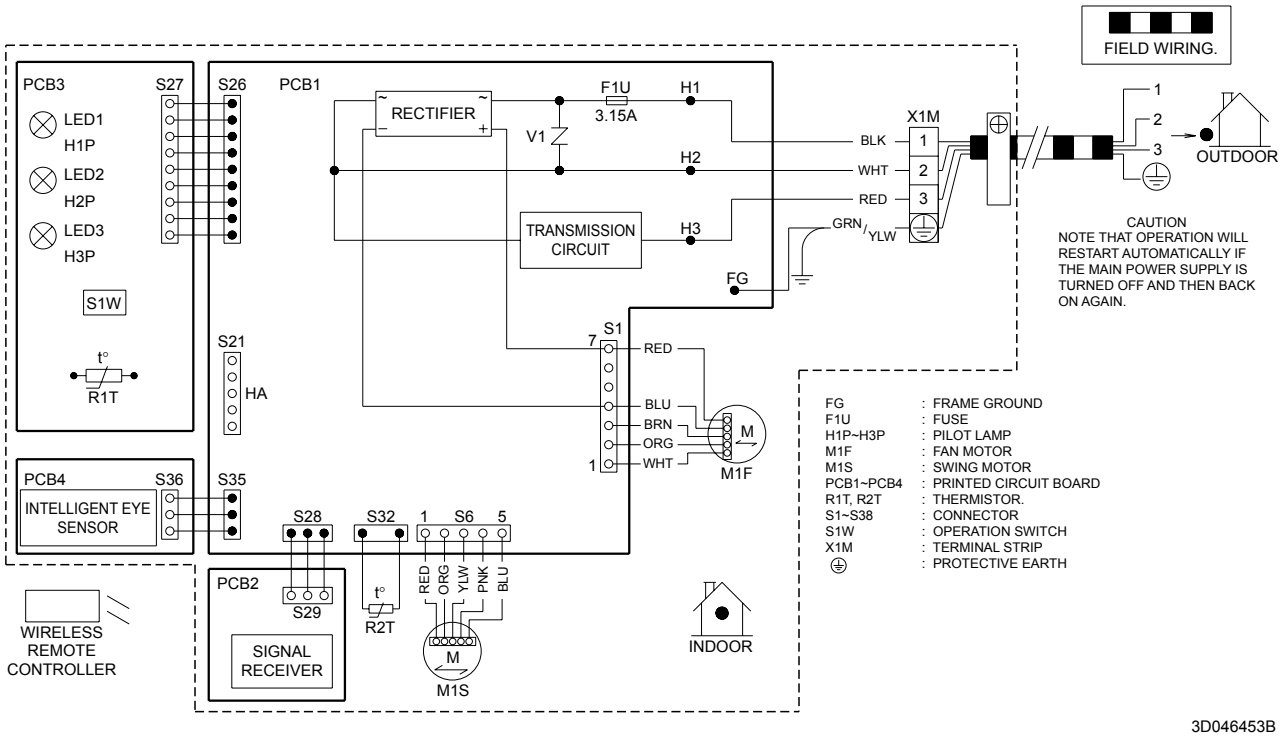
X20A~X23A, X90A	: CONNECTOR	H1P~H5P	: PILOT LAMP	T201R	: TRANSFORMAR		
PCB	: PRINTED CIRCUIT BOARD	R1T~R6T	: THERMISTOR	X1M, X3M~X6M	: TERMINAL STRIP		
F2U	: FUSE	DS2	: DIP SWITCH	Y1E~Y4E	: MOTOR OPERATED VALVE COIL		

3D048566A

2.3 Indoor Units

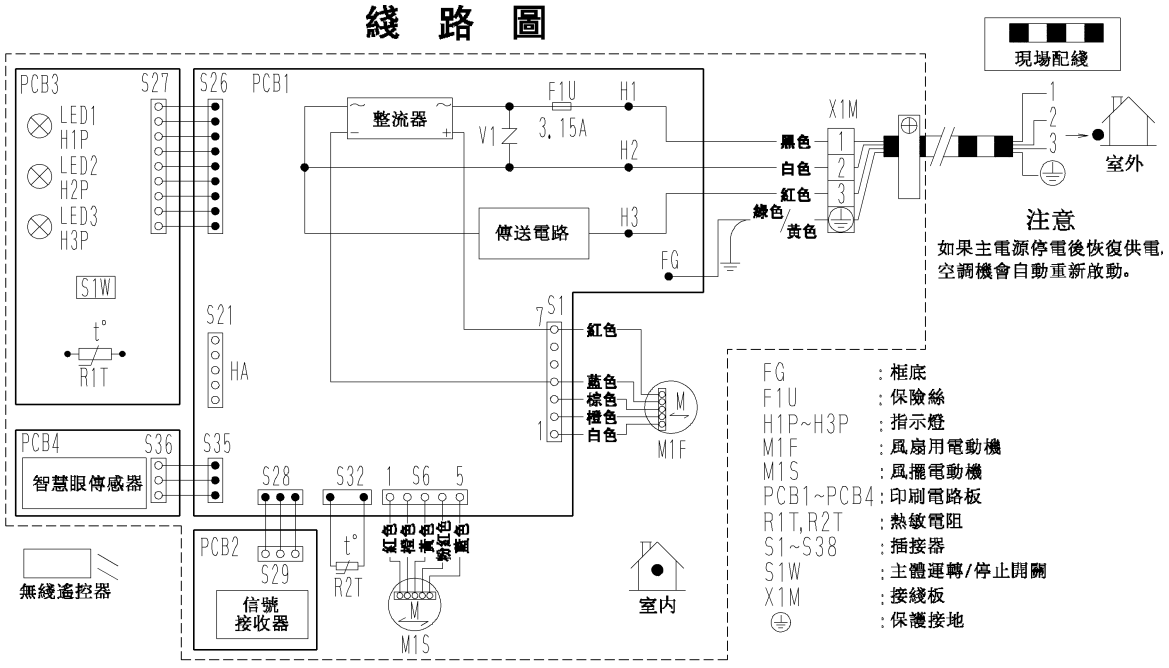
2.3.1 Wall Mounted Type

FTKS25/35DVM, FTK(X)S20/25/35DVMA



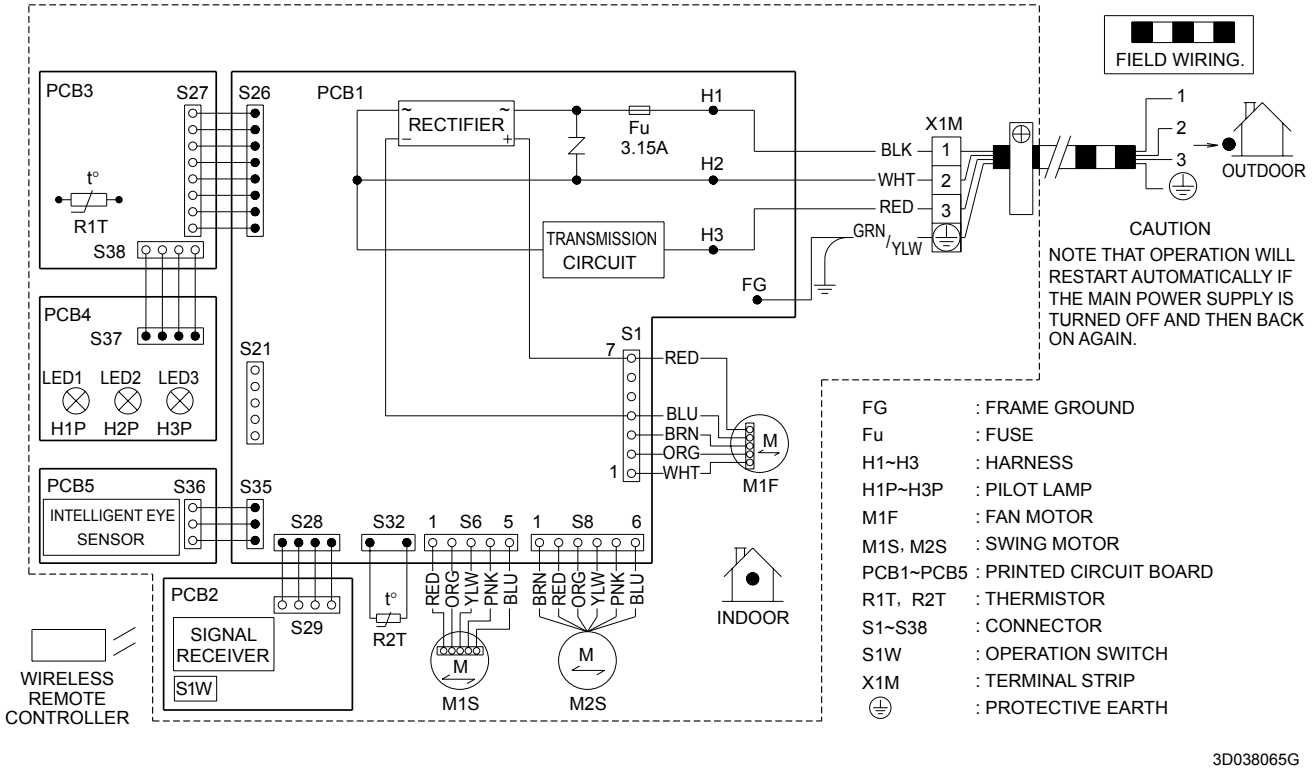
3D046453B

FTXS20/25/35DVMT



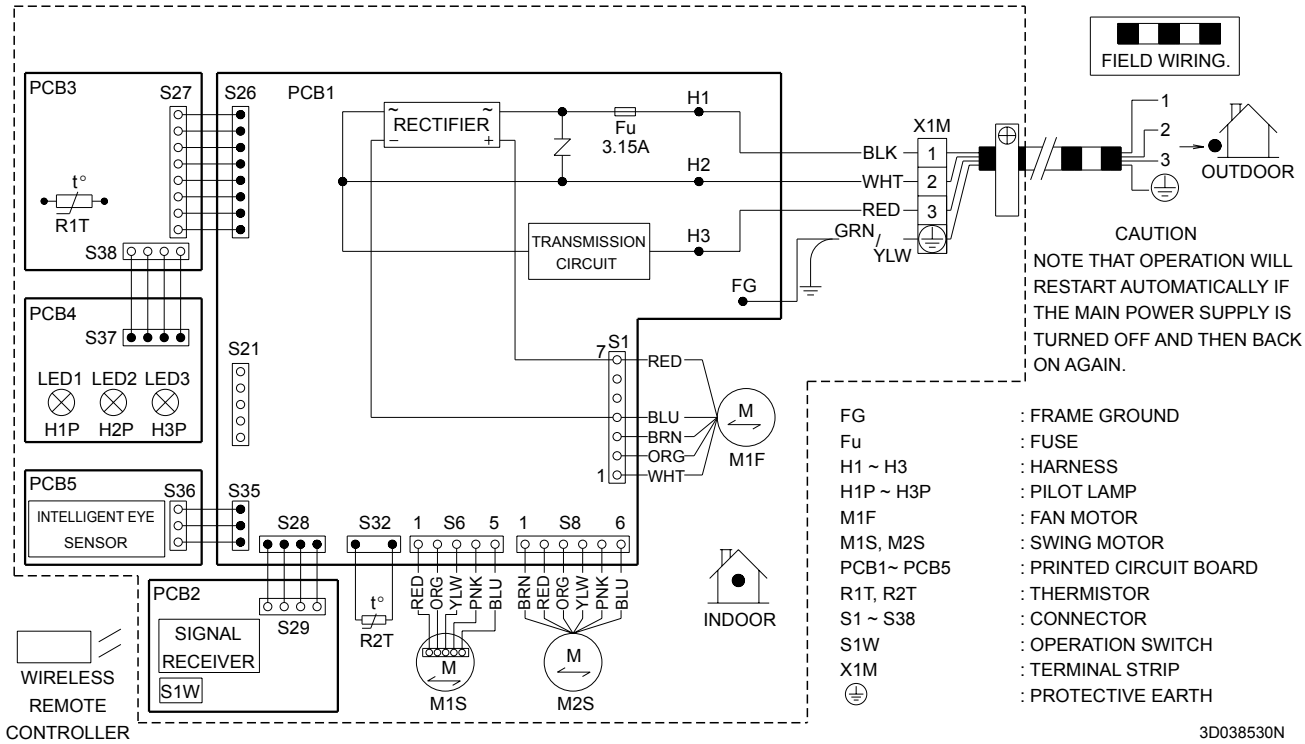
3D046489

FTKS50BVMB, FTK(X)S50BVMA8, FTXS50DVMT



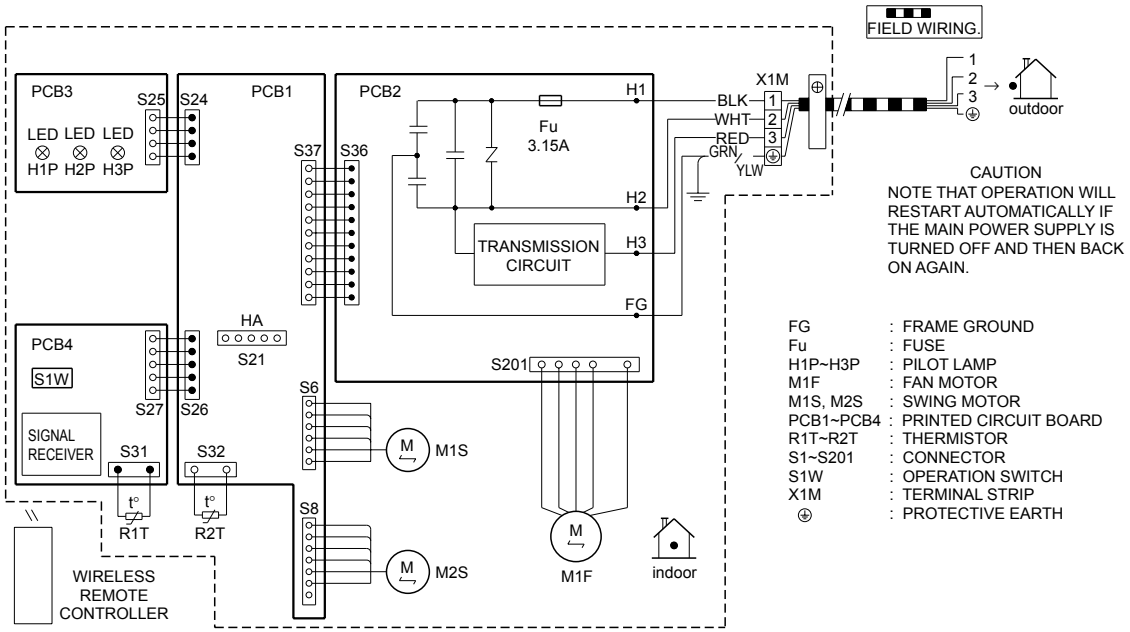
3D038065G

FTKS60/71BVMB, FTK(X)S60/71BVMA8, FTXS60/71DVMT



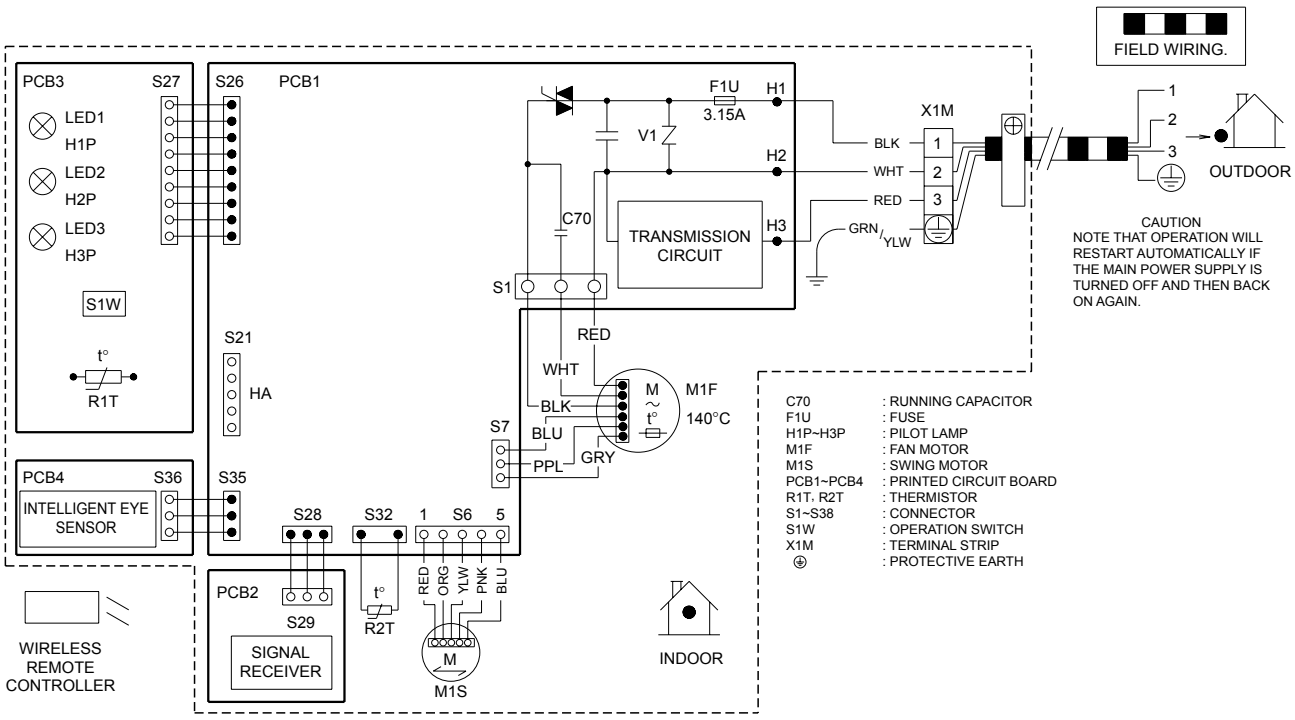
3D038530N

FTK50/60/71AZVMB, FTK50/60/71AVM



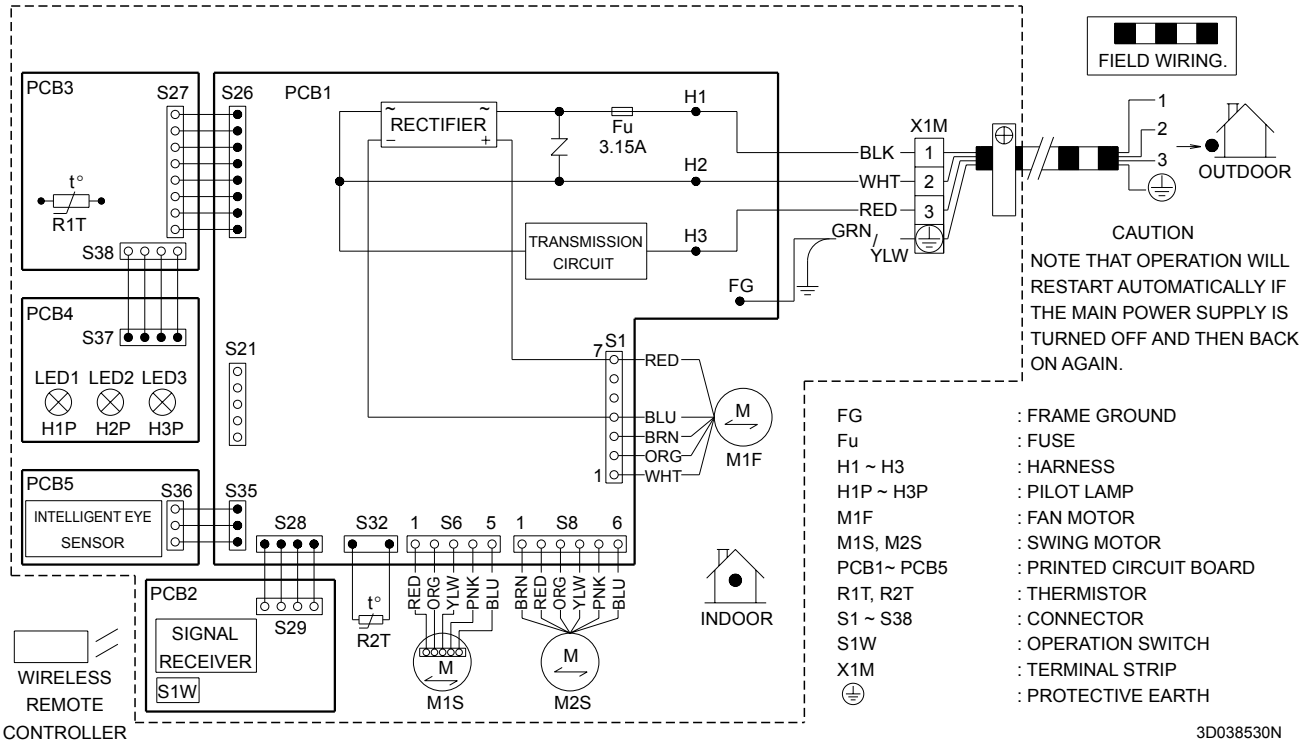
3D033597

FTKD25/35DVM



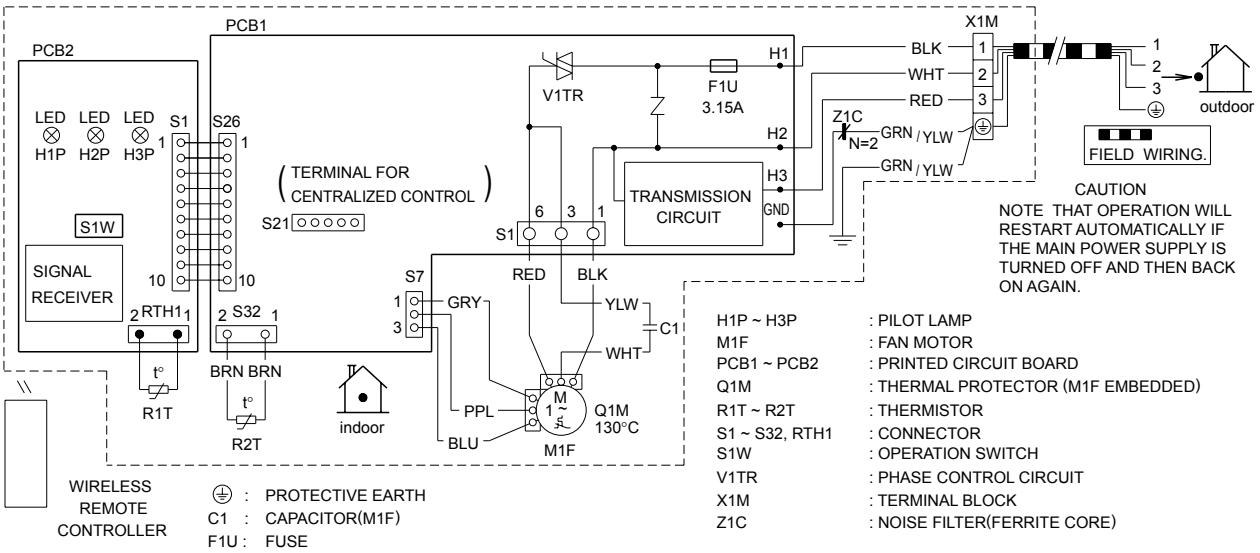
3D046468A

FTKD50/60/71FVM



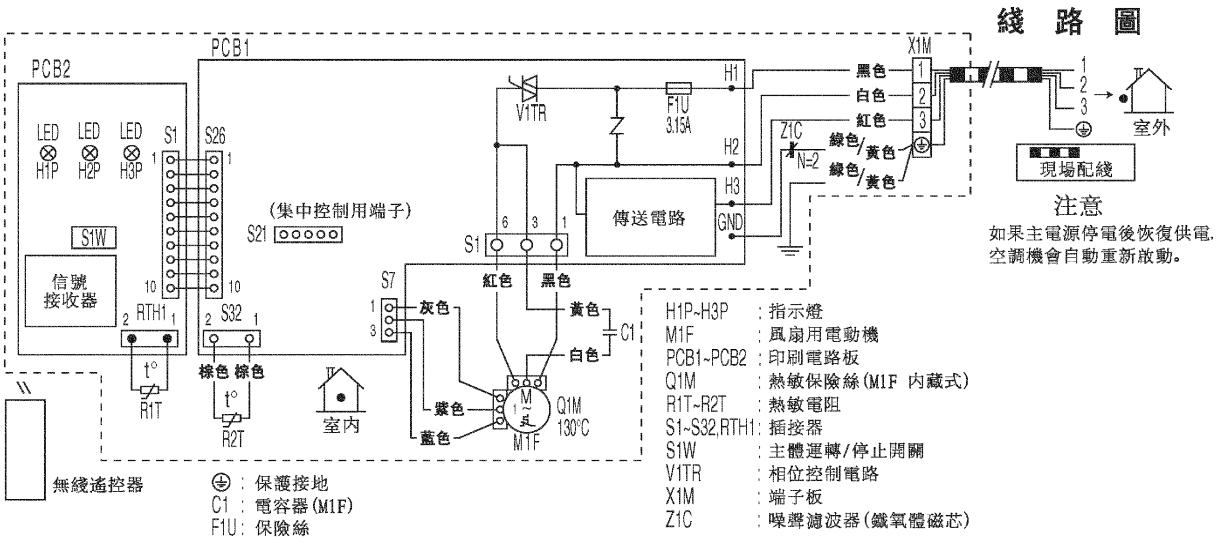
2.3.2 Duct Connected Type

FDKS25/35CVMB, CDKS50/60CVMB, CDK(X)S25/35/50/60CVMA, CDKD25/35/50/60CVM, CDKD25/35EAVM



3D045012K

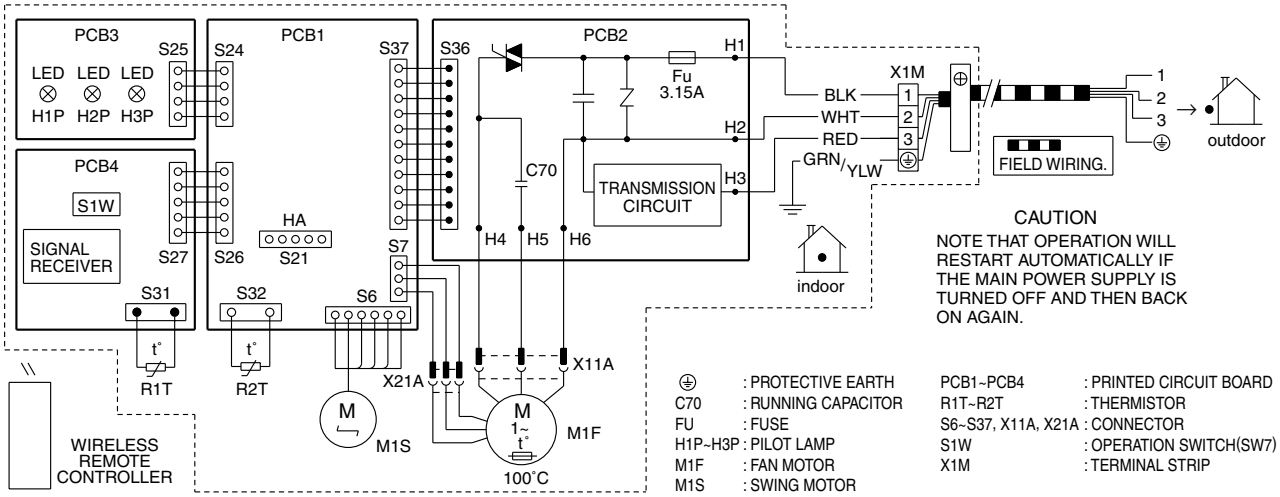
CDXS25/35/50/60DVMT



3D049284A

2.3.3 Floor / Ceiling Suspended Dual Type

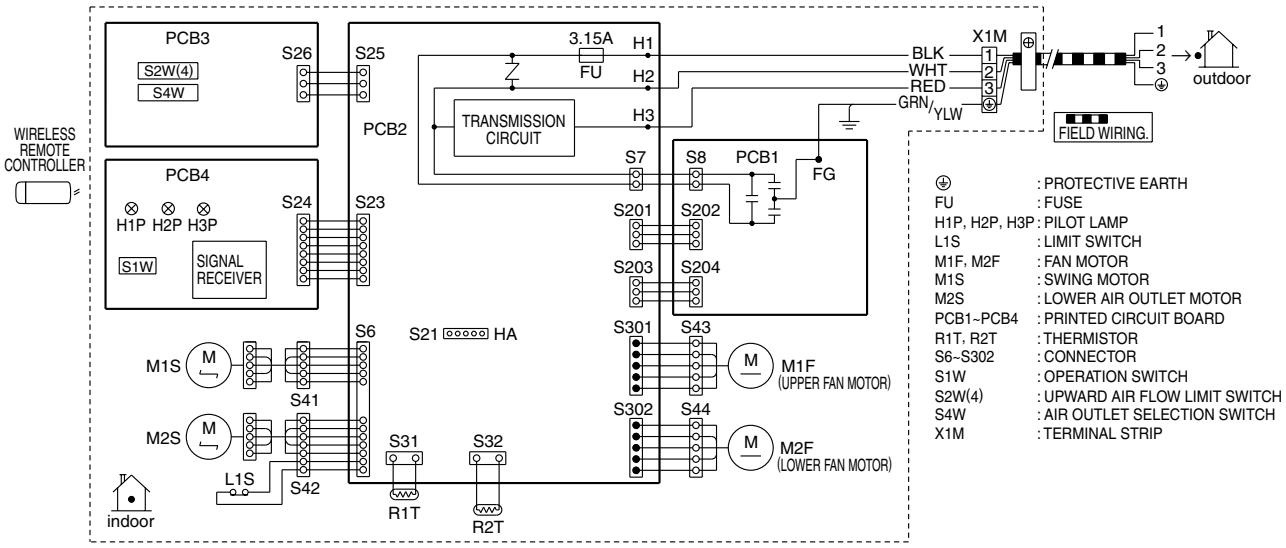
FLXS25/35/50/60BVMA



3D033909E

2.3.4 Floor Standing Type

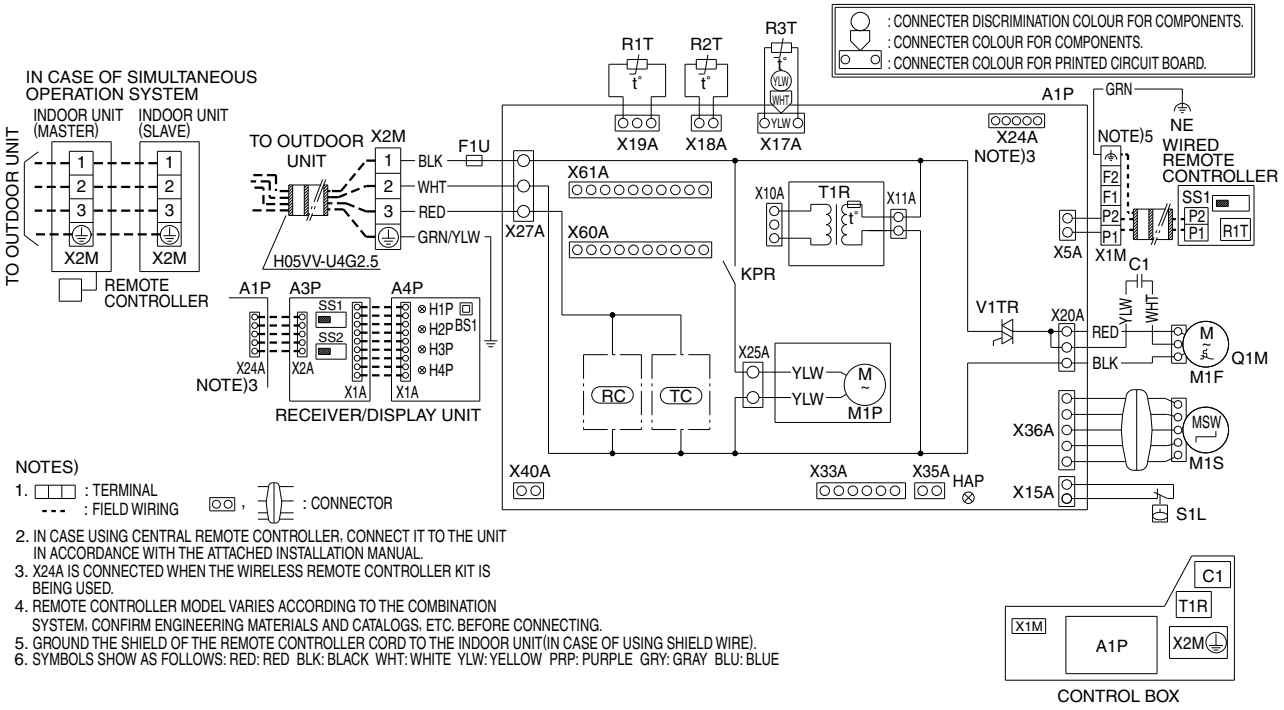
FVXS35/50BVMA



3D034713C

2.3.5 Ceiling Mounted Cassette Type

FFQ25/35/50/60B7V1B



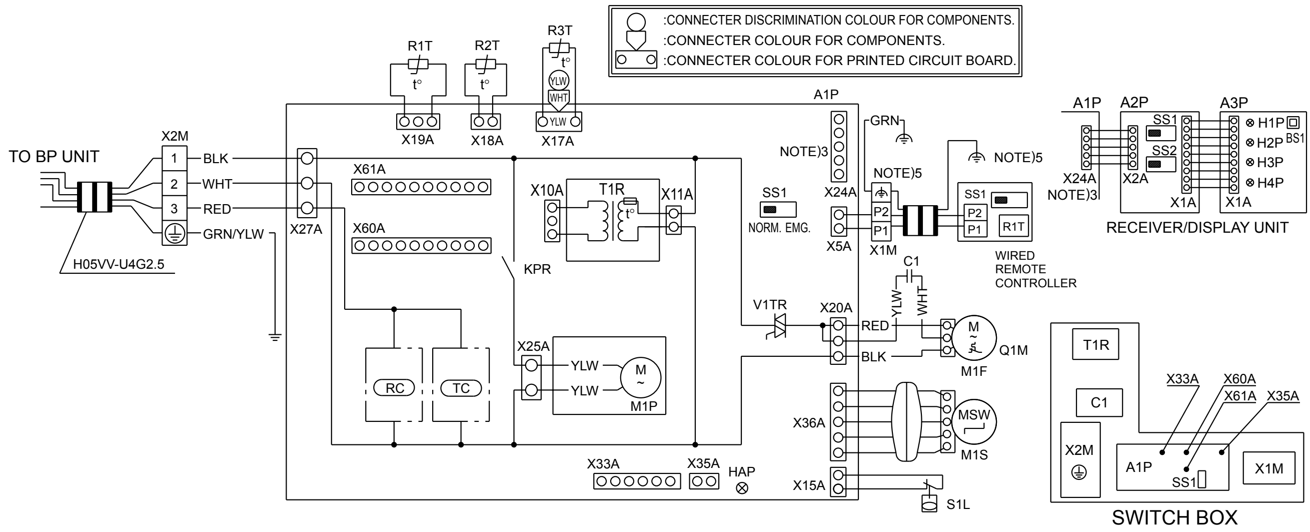
NOTES)

1. □□□ : TERMINAL
   --- : FIELD WIRING
   ○○ , : CONNECTOR
2. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTALLATION MANUAL.
3. X24A IS CONNECTED WHEN THE WIRELESS REMOTE CONTROLLER KIT IS BEING USED.
4. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM ENGINEERING MATERIALS AND CATALOGS, ETC. BEFORE CONNECTING.
5. GROUND THE SHIELD OF THE REMOTE CONTROLLER CORD TO THE INDOOR UNIT(IN CASE OF USING SHIELD WIRE).
6. SYMBOLS SHOW AS FOLLOWS: RED: RED BLK: BLACK WHT: WHITE YLW: YELLOW PRP: PURPLE GRY: GRAY BLU: BLUE

A1P	PRINTED CIRCUIT BOARD	BS1	PUSH BUTTON(ON/OFF)
C1	CAPACITOR(M1F)	H1P	LIGHT EMITTING DIODE (ON-RED)
F1U	FUSE(F5A 250V)		
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
KPR	MAGNETIC RELAY(M1P)	H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
M1F	MOTOR(INDOOR FAN)		
M1P	MOTOR(DRAIN PUMP)	H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
M1S	MOTOR(SWING FLAP)		
Q1M	THERMO SWITCH(M1F EMBEDDED)	SS1	SELECTOR SWITCH (MAIN/SUB)
R1T	THERMISTOR(AIR)		
R2T	THERMISTOR(COIL-1)	SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
R3T	THERMISTOR(COIL-2)		
S1L	FLOAT SWITCH	CONNECTOR FOR OPTIONAL PARTS	
T1R	TRANSFORMER(220-240V/22V)	X33A	CONNECTOR (ADAPTOR FOR WIRING)
V1TR	PHASE CONTROL CIRCUIT		
X1M	TERMINAL STRIP	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
X2M	TERMINAL STRIP		
(RC)	SIGNAL RECEIVER CIRCUIT	X40A	CONNECTOR (ON/OFF INPUT FROM OUTSIDE)
(TC)	SIGNAL TRANSMISSION CIRCUIT		
WIRED REMOTE CONTROLLER		X60A	CONNECTOR (INTERFACE ADAPTOR FOR SKYAIR SERIES)
R1T	THERMISTOR(AIR)	X61A	
SS1	SELECTOR SWITCH(MAIN/SUB)		
WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)			
A3P	PRINTED CIRCUIT BOARD		
A4P	PRINTED CIRCUIT BOARD		

3D038357B

FCQ35/50/60/71BVE



NOTES)

1. ▭▭▭ : TERMINAL, ◎◎, ⫴ : CONNECTOR
   ▬▮▮▬ : FIELD WIRING
2. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTALLATION MANUAL.
3. X24A IS CONNECTED WHEN THE WIRELESS REMOTE CONTROLLER KIT IS BEING USED.
4. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM ENGINEERING MATERIALS AND CATALOGS, ETC. BEFORE CONNECTING.
5. GROUND THE SHIELD OF THE REMOTE CONTROLLER CORD TO THE INDOOR UNIT (IN CASE OF USING SHIELD WIRE).
6. SYMBOLS SHOW AS FOLLOWS: RED:RED BLK:BLACK WHT:WHITE YLW:YELLOW PRP:PURPLE GRY:GRAY BLU:BLUE
7. CONFIRM THE METHOD OF SETTING THE SELECTOR SWITCH(SS1,SS2) BY INSTALLATION MANUAL AND ENGINEERING DATA, ETC.

A1P	PRINTED CIRCUIT BOARD
C1	CAPACITOR(M1F)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)
KPR	MAGNETIC RELAY(M1P)
M1F	MOTOR(INDOOR FAN)
M1P	MOTOR(DRAIN PUMP)
M1S	MOTOR(SWING FLAP)
Q1M	THERMO SWITCH(M1F EMBEDDED)
R1T	THERMISTOR(AIR)
R2T	THERMISTOR(LIQUID)
R3T	THERMISTOR(COIL)
S1L	FLOAT SWITCH
SS1	SELECTOR SWITCH(EMERGENCY)
T1R	TRANSFORMER(220-240V/22V)
V1TR	PHASE CONTROL CIRCUIT
X1M	TERMINAL STRIP
X2M	TERMINAL STRIP
(RC)	SIGNAL RECEIVER CIRCUIT
(TC)	SIGNAL TRANSMISSION CIRCUIT
WIRED REMOTE CONTROLLER	
R1T	THERMISTOR(AIR)
SS1	SELECTOR SWITCH(MAIN/SUB)
WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)	
A2P	PRINTED CIRCUIT BOARD
A3P	PRINTED CIRCUIT BOARD

BS1	PUSH BUTTON(ON/OFF)
H1P	LIGHT EMITTING DIODE (ON-RED)
H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
SS1	SELECTOR SWITCH (MAIN/SUB)
SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
CONNECTOR FOR OPTIONAL PARTS	
X33A	CONNECTOR (ADAPTOR FOR WIRING)
X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
X60A X61A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)

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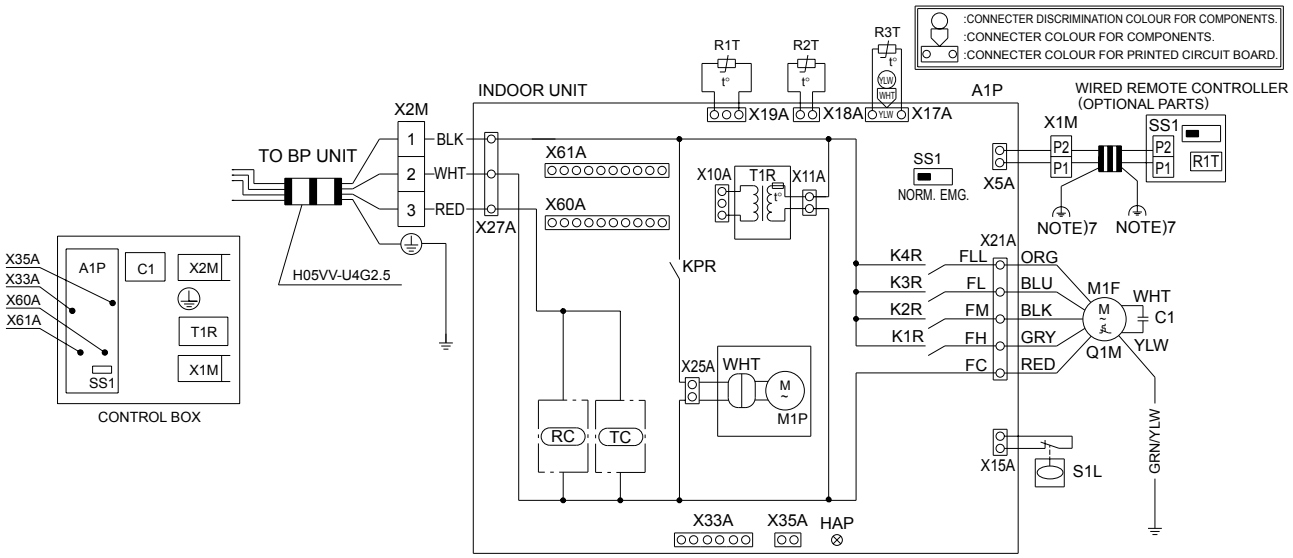
2.3.6 Ceiling Mounted Built-in Type

FBQ60/71BV1, FBQ60/71BVL



NOTES) 1. :TERMINAL , :CONNECTOR
2. :FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTALLATION MANUAL.
4. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM ENGINEERING MATERIALS AND CATALOGS, ETC. BEFORE CONNECTING.
5. SYMBOLS SHOW AS FOLLOWS: RED:RED BLK:BLACK WHT:WHITE YLW:YELLOW GRN:GREEN GRY:GRAY BLU:BLUE ORG:ORANGE
6. CONFIRM THE METHOD OF SETTING THE SELECTOR SWITCH(SS1) BY INSTALLATION MANUAL AND ENGINEERING MATERIALS, ETC.
7. GROUND THE SHIELD OF THE REMOTE CONTROLLER CORD TO THE INDOOR UNIT (IN CASE OF USING SHIELD WIRE).

A1P	PRINTED CIRCUIT BOARD	CONNECTOR FOR OPTIONAL PARTS	
C1	CAPACITOR(M1F)	X33A	CONNECTOR (ADAPTOR FOR WIRING)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
K1R~4R	MAGNETIC RELAY(M1F)	X60A X61A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)
KPR	MAGNETIC RELAY(M1P)		
M1F	MOTOR(INDOOR FAN)		
M1P	MOTOR(DRAIN PUMP)		
Q1M	THERMO SWITCH(M1F EMBEDDED)		
R1T	THERMISTOR(AIR)		
R2T	THERMISTOR(LIQUID)		
R3T	THERMISTOR(COIL)		
SS1	SELECTOR SWITCH (EMERGENCY)		
S1L	FLOAT SWITCH		
T1R	TRANSFORMER(220-240V/22V)		
X1M	TERMINAL STRIP		
X2M	TERMINAL STRIP		
(RC)	SIGNAL RECEIVER CIRCUIT		
(TC)	SIGNAL TRANSMISSION CIRCUIT		
WIRED REMOTE CONTROLLER			
R1T	THERMISTOR(AIR)		
SS1	SELECTOR SWITCH(MAIN/SUB)		

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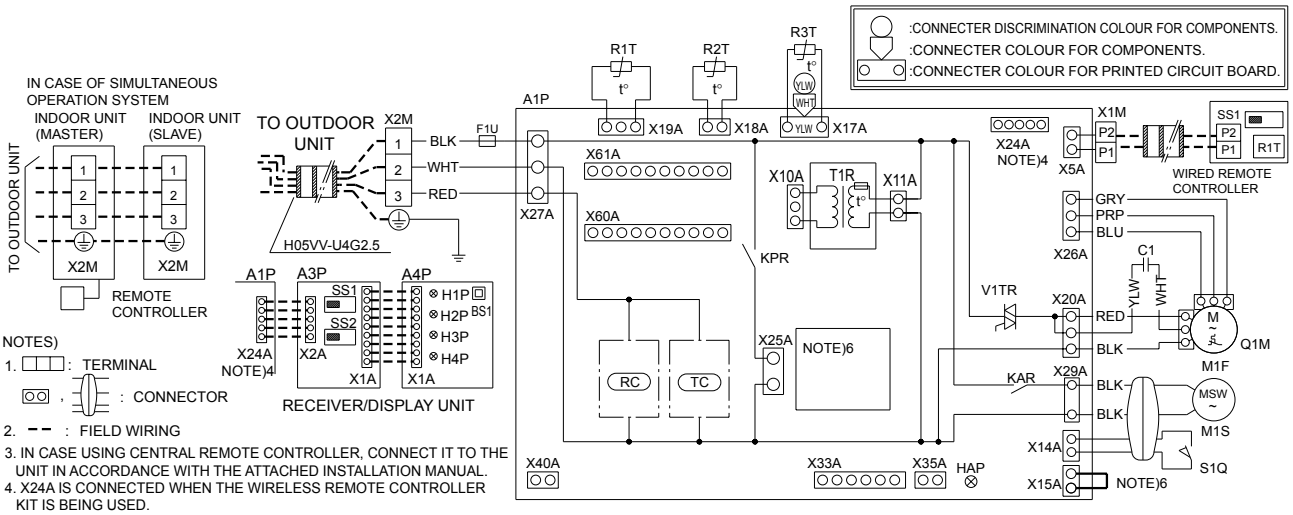
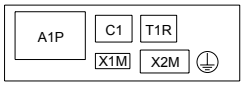
2.3.7 Ceiling Suspended Type

FHQ35/50/60BUV1B9



A1P	PRINTED CIRCUIT BOARD	BS1	PUSH BUTTON(ON/OFF)
C1	CAPACITOR(M1F)	H1P	LIGHT EMITTING DIODE (ON-RED)
F1U	FUSE(F5A 250V)		
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
KAR	MAGNETIC RELAY(M1S)	H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
KPR	MAGNETIC RELAY(M1P)		
M1F	MOTOR(INDOOR FAN)	H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
M1S	MOTOR(SWING FLAP)		
Q1M	THERMO SWITCH(M1F EMBEDDED)	SS1	SELECTOR SWITCH (MAIN/SUB)
R1T	THERMISTOR(AIR)		
R2T	THERMISTOR(COIL-1)	SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
R3T	THERMISTOR(COIL-2)		
S1Q	LIMIT SWITCH(SWING FLAP)	CONNECTOR FOR OPTIONAL PARTS	
T1R	TRANSFORMER(220-240V/22V)	X15A	CONNECTOR(FLOAT SWITCH)
V1TR	PHASE CONTROL CIRCUIT	X25A	CONNECTOR(DRAIN PUMP)
X1M	TERMINAL BLOCK	X33A	CONNECTOR (ADAPTOR FOR WIRING)
X2M	TERMINAL BLOCK		
RC	SIGNAL RECEIVER CIRCUIT	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
TC	SIGNAL TRANSMISSION CIRCUIT		
WIRED REMOTE CONTROLLER		X40A	CONNECTOR (ON/OFF INPUT FROM OUTSIDE)
R1T	THERMISTOR(AIR)		
SS1	SELECTOR SWITCH(MAIN/SUB)	X60A X61A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)
WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)			
A3P	PRINTED CIRCUIT BOARD		
A4P	PRINTED CIRCUIT BOARD		



CONTROL BOX

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Warning

- Daikin Industries, Ltd.'s products are manufactured for export to numerous countries throughout the world. Daikin Industries, Ltd. does not have control over which products are exported to and used in a particular country. Prior to purchase, please therefore confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

JMI-0107

JQA-1452

About ISO 9001

ISO 9001 is a plant certification system defined by the International Organization for Standardization (ISO) relating to quality assurance. ISO 9001 certification covers quality assurance aspects related to the "design, development, manufacture, installation, and supplementary service" of products manufactured at the plant.

EC99J2044

About ISO 14001

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

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