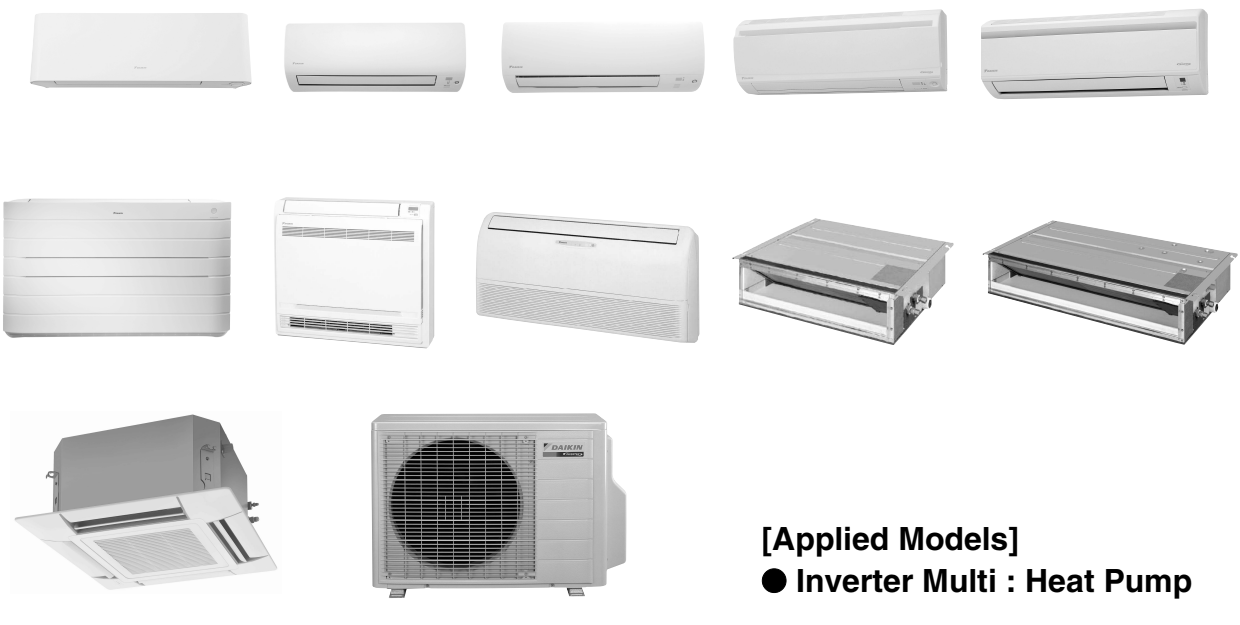
DAIKIN

SiBE121123_A

Service Manual

Inverter Multi for 2 Rooms
H-Series / G-Series



[Applied Models]

● **Inverter Multi : Heat Pump**

Inverter Multi for 2 Rooms H-Series / G-Series

●Heat Pump

Outdoor Unit	Indoor Unit	
2MXS40H2V1B	FTXG25JV1BW(S)(A)	FVXG25K2V1B
2MXS50H2V1B	FTXG35JV1BW(S)(A)	FVXG35K2V1B
	FTXG50JV1BW(S)(A)	FVXG50K2V1B
2MXS40H3V1B	CTXS15K2V1B	FVXS25FV1B
2MXS50H3V1B	CTXS35K2V1B	FVXS35FV1B
	FTXS20K2V1B	FVXS50FV1B
	FTXS25K2V1B	FLXS25BAVMB
	FTXS35K2V1B	FLXS35BAVMB
	FTXS42K2V1B	FLXS50BAVMB
	FTXS50K2V1B	FDXS25EAVMB
	FTXS20J2V1B	FDXS35EAVMB
	FTXS25J2V1B	FDXS50CVMB
	FTXS35J2V1B	FDXS25E7VMB
	FTXS42J2V1B	FDXS35E7VMB
	FTXS50J2V1B	FDXS50C7VMB
	FTX20JV1B	FFQ25B8V1B
	FTX25JV1B	FFQ35B8V1B
	FTX35JV1B	FFQ50B8V1B
	FTX20J2V1B	FFQ25B9V1B
	FTX25J2V1B	FFQ35B9V1B
	FTX35J2V1B	FFQ50B9V1B
2AMX40G2V1B	ATXS20G2V1B	
2AMX50G2V1B	ATXS25G2V1B	
	ATXS35G2V1B	
2AMX40G3V1B	ATXS42G2V1B	
2AMX50G3V1B	ATXS50G2V1B	
	ATX20JV1B	
	ATX25JV1B	
	ATX35JV1B	
	ATX20J2V1B	
	ATX25J2V1B	
	ATX35J2V1B	

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 shock. 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 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 2 m). Insufficient safety measures may cause a fall accident.	
In case of R-410A refrigerant models, be sure to use pipes, flare nuts and tools for the exclusive use of the R-410A refrigerant. The use of materials for R-22 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 may 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 (R-410A / R-22) 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 dispose 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. Functions

Category	Functions	FTXG25/35/50JV1BW(S)(A)	Category	Functions	FTXG25/35/50JV1BW(S)(A)
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	●
	Standby electricity saving	—			
Compressor	Oval scroll compressor	—		Air filter (prefilter)	●
	Swing compressor	—		Wipe-clean flat panel	●
	Rotary compressor	—		Washable grille	—
	Reluctance DC motor	—		MOLD PROOF operation	—
Comfortable Airflow	Power-airflow flap	—		Good-sleep cooling operation	—
	Power-airflow dual flaps	●	Timer	WEEKLY TIMER operation	●
	Power-airflow diffuser	—		24-hour ON/OFF TIMER	●
	Wide-angle louvers	●		NIGHT SET mode	●
	Vertical auto-swing (up and down)	●	Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●
	Horizontal auto-swing (right and left)	—		Self-diagnosis (digital, LED) display	●
	3-D airflow	—		Wiring error check function	—
	COMFORT AIRFLOW operation	●		Anti-corrosion treatment of outdoor heat exchanger	—
Comfort Control	Auto fan speed	●			
	Indoor unit quiet operation	●	Flexibility	Multi-split / split type compatible indoor unit	●
	NIGHT QUIET mode (automatic)	—			
	OUTDOOR UNIT QUIET operation (manual)	●		H/P, C/O compatible indoor unit	—
	INTELLIGENT EYE operation	●		Flexible power supply correspondence	—
	2-area INTELLIGENT EYE operation	—		High ceiling application	—
	Quick warming function (preheating operation)	—		Chargeless	—
	Hot-start function	●		Either side drain (right or left)	●
	Automatic defrosting	—		Power selection	—
Operation	Automatic operation	●	Remote Control	5-room centralized controller (option)	●
	RADIANT operation	—		Remote control adaptor (normal open pulse contact) (option)	●
	Program dry operation	●		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 (option)	●
	Priority-room setting	—			
	COOL / HEAT mode lock	—			
	HOME LEAVE operation	—			
	ECONO operation	●			
	Indoor unit [ON/OFF] button	●			
	Signal receiving sign	●			
	Multi-colored indicator lamp (multi-monitor lamp)	●			
	R/C with back light	●			
	Temperature display	—			

Note: ● : Holding Functions
— : No Functions

Category	Functions	CTXS15/35K2V1B	FTXS20/25K2V1B	FTXS35/42/50K2V1B	Category	Functions	CTXS15/35K2V1B	FTXS20/25K2V1B	FTXS35/42/50K2V1B
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	—	—	—					
	Standby electricity saving	—	—	—					
Compressor	Oval scroll compressor	—	—	—		Titanium apatite photocatalytic air-purifying filter	●	●	●
	Swing compressor	—	—	—					
	Rotary compressor	—	—	—		Air filter (prefilter)	●	●	●
	Reluctance DC motor	—	—	—		Wipe-clean flat panel	●	●	●
Comfortable Airflow	Power-airflow flap	●	●	—		Washable grille	—	—	—
	Power-airflow dual Flaps	—	—	●		MOLD PROOF operation	—	—	—
	Power-airflow diffuser	—	—	—		Good-sleep cooling operation	—	—	—
	Wide-angle louvers	●	●	●	Timer	WEEKLY TIMER operation	●	●	●
	Vertical auto-swing (up and down)	●	●	●		24-hour ON/OFF TIMER	●	●	●
	Horizontal auto-swing (right and left)	—	—	●		NIGHT SET mode	●	●	●
					Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●	●	●
	3-D airflow	—	—	●		Self-diagnosis (digital, LED) display	●	●	●
	COMFORT AIRFLOW operation	●	●	●					
Comfort Control	Auto fan speed	●	●	●		Wiring error check function	—	—	—
	Indoor unit quiet operation	●	●	●		Anti-corrosion treatment of outdoor heat exchanger	—	—	—
	NIGHT QUIET mode (automatic)	—	—	●					
	OUTDOOR UNIT QUIET operation (manual)	●	●	●	Flexibility	Multi-split / split type compatible indoor unit	—	●	●
	INTELLIGENT EYE operation	●	●	—		H/P, C/O compatible indoor unit	—	—	—
	2-area INTELLIGENT EYE operation	—	—	●		Flexible power supply correspondence	—	—	—
	Quick warming function (preheating operation)	—	—	—		High ceiling application	—	—	—
						Chargeless	—	—	—
	Hot-start function	●	●	●		Either side drain (right or left)	●	●	●
	Automatic defrosting	—	—	—		Power selection	—	—	—
Operation	Automatic operation	●	●	●	Remote Control	5-room centralized controller (option)	●	●	●
	RADIANT operation	—	—	—					
	Program dry operation	●	●	●		Remote control adaptor (normal open pulse contact) (option)	●	●	●
	Fan only	●	●	●					
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—	—		Remote control adaptor (normal open contact) (option)	●	●	●
	Inverter POWERFUL operation	●	●	●		DIII-NET compatible (adaptor) (option)	●	●	●
	Priority-room setting	—	—	—	Remote Controller	Wireless	●	●	●
	COOL / HEAT mode lock	—	—	—		Wired (option)	●	●	●
	HOME LEAVE operation	—	—	—					
	ECONO operation	●	●	●					
	Indoor unit [ON/OFF] button	●	●	●					
	Signal receiving sign	●	●	●					
	Multi-colored indicator lamp (multi-monitor lamp)	—	—	—					
	R/C with back light	●	●	●					
	Temperature display	—	—	—					

Note: ● : Holding Functions
— : No Functions

Category	Functions	FTXS20/25/35/42/50J2V1B	ATXS20/25/35/42/50G2V1B	Category	Functions	FTXS20/25/35/42/50J2V1B	ATXS20/25/35/42/50G2V1B
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	●	●
	Standby electricity saving	—	—				
Compressor	Oval scroll compressor	—	—		Air filter (prefilter)	●	●
	Swing compressor	—	—		Wipe-clean flat panel	●	●
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	—	—		MOLD PROOF operation	—	—
Comfortable Airflow	Power-airflow flap	—	—		Good-sleep cooling operation	—	—
	Power-airflow dual flaps	●	●	Timer	WEEKLY TIMER operation	●	●
	Power-airflow diffuser	—	—		24-hour ON/OFF TIMER	●	●
	Wide-angle louvers	●	●		NIGHT SET mode	●	●
	Vertical auto-swing (up and down)	●	●	Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●	●
	Horizontal auto-swing (right and left)	●	●		Self-diagnosis (digital, LED) display	●	●
	3-D airflow	●	●		Wiring error check function	—	—
	COMFORT AIRFLOW operation	●	●		Anti-corrosion treatment of outdoor heat exchanger	—	—
Comfort Control	Auto fan speed	●	●	Flexibility	Multi-split / split type compatible indoor unit	●	●
	Indoor unit quiet operation	●	●		H/P, C/O compatible indoor unit	●	—
	NIGHT QUIET mode (automatic)	—	—		Flexible power supply correspondence	—	—
	OUTDOOR UNIT QUIET operation (manual)	●	●		High ceiling application	—	—
	2-area INTELLIGENT EYE operation	●	—		Chargeless	—	—
	INTELLIGENT EYE operation	—	●		Either side drain (right or left)	●	●
	Quick warming function (preheating operation)	—	—		Power selection	—	—
	Hot-start function	●	●	Remote Control	5-room centralized controller (option)	●	●
	Automatic defrosting	—	—		Remote control adaptor (normal open pulse contact) (option)	●	●
Operation	Automatic operation	●	●		Remote control adaptor (normal open contact) (option)	●	●
	RADIANT operation	—	—		DIII-NET compatible (adaptor) (option)	●	●
	Program dry operation	●	●	Remote Controller	Wireless	●	●
	Fan only	●	●		Wired (option)	●	●
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—				
	Inverter POWERFUL operation	●	●				
	Priority-room setting	—	—				
	COOL / HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	●	●				
	Indoor unit [ON/OFF] button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	—	—				
	Temperature display	—	—				

Note: ● : Holding Functions
— : No Functions

Category	Functions	FTX20/25/35JV1B FTX20/25/35J2V1B	ATX20/25/35JV1B ATX20/25/35J2V1B	Category	Functions	FTX20/25/35JV1B FTX20/25/35J2V1B	ATX20/25/35JV1B ATX20/25/35J2V1B
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	●	●
	Standby electricity saving	—	—				
Compressor	Oval scroll compressor	—	—		Air filter (prefilter)	●	●
	Swing compressor	—	—		Wipe-clean flat panel	●	●
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	—	—		MOLD PROOF operation	—	—
Comfortable Airflow	Power-airflow flap	●	●		Good-sleep cooling operation	—	—
	Power-airflow dual flaps	—	—	Timer	WEEKLY TIMER operation	—	—
	Power-airflow diffuser	—	—		24-hour ON/OFF TIMER	●	●
	Wide-angle louvers	●	●		NIGHT SET mode	●	●
	Vertical auto-swing (up and down)	●	●	Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●	●
	Horizontal auto-swing (right and left)	—	—		Self-diagnosis (digital, LED) display	●	●
	3-D airflow	—	—		Wiring error check function	—	—
	COMFORT AIRFLOW operation	●	●		Anti-corrosion treatment of outdoor heat exchanger	—	—
Comfort Control	Auto fan speed	●	●	Flexibility	Multi-split / split type compatible indoor unit	●	●
	Indoor unit quiet operation	●	●		H/P, C/O compatible indoor unit	—	—
	NIGHT QUIET mode (automatic)	—	—		Flexible power supply correspondence	—	—
	OUTDOOR UNIT QUIET operation (manual)	—	—		High ceiling application	—	—
	2-area INTELLIGENT EYE operation	—	—		Chargeless	—	—
	INTELLIGENT EYE operation	—	—		Either side drain (right or left)	●	●
	Quick warming function (preheating operation)	—	—		Power selection	—	—
	Hot-start function	●	●	Remote Control	5-room centralized controller (option)	—	—
	Automatic defrosting	—	—		Remote control adaptor (normal open pulse contact) (option)	—	—
Operation	Automatic operation	●	●		Remote control adaptor (normal open contact) (option)	—	—
	RADIANT operation	—	—		DIII-NET compatible (adaptor) (option)	—	—
	Program dry operation	●	●	Remote Controller	Wireless	●	●
	Fan only	●	●		Wired (option)	●	●
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—				
	Inverter POWERFUL operation	●	●				
	Priority-room setting	—	—				
	COOL / HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	●	●				
	Indoor unit [ON/OFF] button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	—	—				
	Temperature display	—	—				

Note: ● : Holding Functions
— : No Functions

Category	Functions	FVXG25/35/50K2V1B	FVXS25/35/50FV1B	Category	Functions	FVXG25/35/50K2V1B	FVXS25/35/50FV1B
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	●	●
	Standby electricity saving	—	—				
Compressor	Oval scroll compressor	—	—		Air filter (prefilter)	●	●
	Swing compressor	—	—		Wipe-clean flat panel	—	●
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	—	—		MOLD PROOF operation	—	—
Comfortable Airflow	Power-airflow flap	—	—		Good-sleep cooling operation	—	—
	Power-airflow dual flaps	—	—	Timer	WEEKLY TIMER operation	●	●
	Power-airflow diffuser	—	—		24-hour ON/OFF TIMER	●	●
	Wide-angle louvers	●	●		NIGHT SET mode	●	●
	Vertical auto-swing (up and down)	●	●	Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●	●
	Horizontal auto-swing (right and left)	—	—		Self-diagnosis (digital, LED) display	●	●
	3-D airflow	—	—		Wiring error check function	—	—
	COMFORT AIRFLOW operation	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
Comfort Control	Auto fan speed	●	●	Flexibility	Multi-split / split type compatible indoor unit	●	●
	Indoor unit quiet operation	●	●		H/P, C/O compatible indoor unit	—	●
	NIGHT QUIET mode (automatic)	—	—		Flexible power supply correspondence	—	—
	OUTDOOR UNIT QUIET operation (manual)	●	●		High ceiling application	—	—
	2-area INTELLIGENT EYE operation	—	—		Chargeless	—	—
	INTELLIGENT EYE operation	—	—		Either side drain (right or left)	—	—
	Quick warming function (preheating operation)	—	—		Power selection	—	—
	Hot-start function	●	●	Remote Control	5-room centralized controller (option)	●	●
	Automatic defrosting	—	—		Remote control adaptor (normal open pulse contact) (option)	●	●
Operation	Automatic operation	●	●		Remote control adaptor (normal open contact) (option)	●	●
	RADIANT operation	●	—		DIII-NET compatible (adaptor) (option)	●	●
	Program dry operation	●	●	Remote Controller	Wireless	●	●
	Fan only	●	●		Wired (option)	●	—
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—				
	Inverter POWERFUL operation	●	●				
	Priority-room setting	—	—				
	COOL / HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	●	●				
	Indoor unit [ON/OFF] button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	●	●				
	Temperature display	—	—				

Note: ● : Holding Functions
— : No Functions

Category	Functions	FLXS25/35/50BAVMB	FDXS25/35EAVMB, FDXS25/35E7VMB FDXS50CVMB, FDXS50C7VMB	Category	Functions	FLXS25/35/50BAVMB	FDXS25/35EAVMB, FDXS25/35E7VMB FDXS50CVMB, FDXS50C7VMB
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	—	—
	Standby electricity saving	—	—				
Compressor	Oval scroll compressor	—	—		Air filter (prefilter)	●	●
	Swing compressor	—	—		Wipe-clean flat panel	—	—
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	—	—		MOLD PROOF operation	—	—
Comfortable Airflow	Power-airflow flap	—	—		Good-sleep cooling operation	—	—
	Power-airflow dual flaps	—	—	Timer	WEEKLY TIMER operation	—	—
	Power-airflow diffuser	—	—		24-hour ON/OFF TIMER	●	●
	Wide-angle louvers	—	—		NIGHT SET mode	●	●
	Vertical auto-swing (up and down)	●	—	Worry Free “Reliability & Durability”	Auto-restart (after power failure)	●	●
	Horizontal auto-swing (right and left)	—	—		Self-diagnosis (digital, LED) display	●	●
	3-D airflow	—	—		Wiring error check function	—	—
	COMFORT AIRFLOW operation	—	—		Anti-corrosion treatment of outdoor heat exchanger	—	—
Comfort Control	Auto fan speed	●	●	Flexibility	Multi-split / split type compatible indoor unit	●	●
	Indoor unit quiet operation	●	●		H/P, C/O compatible indoor unit	—	—
	NIGHT QUIET mode (automatic)	—	—		Flexible power supply correspondence	●	●
	OUTDOOR UNIT QUIET operation (manual)	●	●		High ceiling application	—	—
	2-area INTELLIGENT EYE operation	—	—		Chargeless	—	—
	INTELLIGENT EYE operation	—	—		Either side drain (right or left)	—	—
	Quick warming function (preheating operation)	—	—		Power selection	—	—
	Hot-start function	●	●	Remote Control	5-room centralized controller (option)	●	●
	Automatic defrosting	—	—		Remote control adaptor (normal open pulse contact) (option)	●	●
Operation	Automatic operation	●	●		Remote control adaptor (normal open contact) (option)	●	●
	RADIANT operation	—	—		DIII-NET compatible (adaptor) (option)	●	●
	Program dry operation	●	●	Remote Controller	Wireless	●	●
	Fan only	●	●		Wired (option)	—	●
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—				
	Inverter POWERFUL operation	●	●				
	Priority-room setting	—	—				
	COOL / HEAT mode lock	—	—				
	HOME LEAVE operation	●	●				
	ECONO operation	—	—				
	Indoor unit [ON/OFF] button	●	●				
	Signal receiving sign	●	●				
	R/C with back light	—	—				
	Temperature display	—	—				

Note: ● : Holding Functions
— : No Functions

Category	Functions	FFQ25/35/50B8V1B FFQ25/35/50B9V1B	Category	Functions	FFQ25/35/50B8V1B FFQ25/35/50B9V1B
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	—
	Standby electricity saving	—			
Compressor	Oval scroll compressor	—		Longlife filter	●
	Swing compressor	—		Wipe-clean flat panel	—
	Rotary compressor	—		Washable grille	●
	Reluctance DC motor	—		Filter cleaning indicator	●
Comfortable Airflow	Power-airflow flap	—		MOLD PROOF operation	—
	Power-airflow dual flaps	—		Good-sleep cooling operation	—
	Power-airflow diffuser	—	Timer	Schedule timer operation	● ★2
	Wide-angle louvers	—		72-hour ON/OFF TIMER	● ★1
	Vertical auto-swing (up and down)	●		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 operation	—		Wiring error check function	—
Comfort Control	Auto fan speed	—		Anti-corrosion treatment of outdoor heat exchanger	—
	Indoor unit quiet operation	—	Flexibility	Multi-split / split type compatible indoor unit	●
	NIGHT QUIET mode (automatic)	—		H/P, C/O compatible indoor unit	●
	OUTDOOR UNIT QUIET operation (manual)	—		Flexible power supply correspondence	—
	2-area INTELLIGENT EYE operation	—		High ceiling application	—
	INTELLIGENT EYE operation	—		Chargeless	—
	Quick warming function (preheating operation)	—		Either side drain (right or left)	—
	Hot-start function	●		Power selection	—
	Automatic defrosting	—	Remote Control	5-room centralized controller (option)	—
Operation	Automatic operation	●		Remote control adaptor (normal open pulse contact) (option)	—
	RADIANT operation	—		Remote control adaptor (normal open contact) (option)	—
	Program dry operation	●		DIII-NET compatible (adaptor) (option)	●
	Fan only	●	Remote Controller	Wireless (option)	●
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—		Wired (option)	●
	Inverter POWERFUL operation	—			
	Priority-room setting	—			
	COOL / HEAT mode lock	—			
	HOME LEAVE operation	—			
	ECONO operation	—			
	Indoor unit [ON/OFF] button	● ★1			
	Signal receiving sign	● ★1			
	R/C with back light	—			
	Temperature display	—			

Note: ● : Holding Functions
— : No Functions
★1: With wireless remote controller
★2: With wired remote controller

Category	Functions	2MXS40/50H2V1B 2AMX40/50G2V1B	2MXS40/50H3V1B 2AMX40/50G3V1B	Category	Functions	2MXS40/50H2V1B 2AMX40/50G2V1B	2MXS40/50H3V1B 2AMX40/50G3V1B
Basic Function	Inverter (with inverter power control)	●	●	Health & Clean	Air-purifying filter	—	—
	Operation limit for cooling (°CDB)	10 ~ 46	10 ~ 46		Photocatalytic deodorizing filter	—	—
	Operation limit for heating (°CWB)	–15 ~ 15.5	–15 ~ 15.5		Air-purifying filter with photocatalytic deodorizing function	—	—
	PAM control	●	●		Titanium apatite photocatalytic air-purifying filter	—	—
	Standby electricity saving	—	—				
Compressor	Oval scroll compressor	—	—		Longlife filter	—	—
	Swing compressor	●	●		Wipe-clean flat panel	—	—
	Rotary compressor	—	—		Washable grille	—	—
	Reluctance DC motor	●	●		Filter cleaning indicator	—	—
Comfortable Airflow	Power-airflow flap	—	—		MOLD PROOF operation	—	—
	Power-airflow dual flaps	—	—		Good-sleep cooling operation	—	—
	Power-airflow diffuser	—	—	Timer	Schedule timer operation	—	—
	Wide-angle louvers	—	—		72-hour ON/OFF TIMER	—	—
	Vertical auto-swing (up and down)	—	—		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 operation	—	—		Wiring error check function	—	—
Comfort Control	Auto fan speed	—	—		Anti-corrosion treatment of outdoor heat exchanger	●	●
	Indoor unit quiet operation	—	—	Flexibility	Multi-split / split type compatible indoor unit	—	—
	NIGHT QUIET mode (automatic)	—	—		H/P, C/O compatible indoor unit	—	—
	OUTDOOR UNIT QUIET operation (manual)	●	●		Flexible power supply correspondence	—	—
	2-area INTELLIGENT EYE operation	—	—		High ceiling application	—	—
	INTELLIGENT EYE operation	—	—		Chargeless	20 m	20 m
	Quick warming function (preheating operation)	●	●		Either side drain (right or left)	—	—
	Hot-start function	—	—		Power selection	—	—
	Automatic defrosting	●	●	Remote Control	5-room centralized controller (option)	—	—
Operation	Automatic operation	—	—		Remote control adaptor (normal open pulse contact) (option)	—	—
	RADIANT operation	—	—		Remote control adaptor (normal open contact) (option)	—	—
	Program dry operation	—	—		DIII-NET compatible (adaptor) (option)	—	—
	Fan only	—	—	Remote Controller	Wireless (option)	—	—
Lifestyle Convenience	New POWERFUL operation (non-inverter)	—	—		Wired (option)	—	—
	Inverter POWERFUL operation	—	—				
	Priority-room setting	—	—				
	COOL / HEAT mode lock	—	—				
	HOME LEAVE operation	—	—				
	ECONO operation	—	—				
	Indoor unit [ON/OFF] button	—	—				
	Signal receiving sign	—	—				
	R/C with back light	—	—				
	Temperature display	—	—				

Note: ● : Holding Functions
— : No Functions

★1: With wireless remote controller
★2: With wired remote controller

Part 2
Specifications

1. Indoor Unit

Wall Mounted Type

50 Hz, 220 - 230 - 240 V

Model			FTXG25JV1BW		FTXG25JV1BS	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		2.5 kW Class	
Front Panel Color			White		Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	8.8 (311)	9.6 (339)	8.8 (311)	9.6 (339)
	M		6.8 (240)	7.9 (279)	6.8 (240)	7.9 (279)
	L		4.7 (166)	6.2 (219)	4.7 (166)	6.2 (219)
	SL		3.8 (134)	5.4 (191)	3.8 (134)	5.4 (191)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	29		29	
	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	0.09 - 0.08 - 0.08	0.12 - 0.11 - 0.11	0.09 - 0.08 - 0.08	0.12 - 0.11 - 0.11
Power Consumption (Rated)		W	18 - 18 - 18	24 - 24 - 24	18 - 18 - 18	24 - 24 - 24
Power Factor (Rated)		%	90.9 - 97.8 - 93.8	90.9 - 94.9 - 90.9	90.9 - 97.8 - 93.8	90.9 - 94.9 - 90.9
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155		295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377		285 × 1,003 × 377	
Weight (Mass)		kg	11		11	
Gross Weight (Gross Mass)		kg	15		16	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 25 / 22	39 / 34 / 28 / 25	38 / 32 / 25 / 22	39 / 34 / 28 / 25
Sound Power Level		dB	56	57	54	55
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	ϕ 16.0 or ϕ 18.0		ϕ 16.0 or ϕ 18.0	
Drawing No.			3D080182		3D072844A	

Model			FTXG25JV1BA	
			Cooling	Heating
Rated Capacity			2.5 kW Class	
Front Panel Color			Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	8.8 (311)	9.6 (339)
	M		6.8 (240)	7.9 (279)
	L		4.7 (166)	6.2 (219)
	SL		3.8 (134)	5.4 (191)
Fan	Type		Cross Flow Fan	
	Motor Output	W	29	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.09 - 0.08 - 0.08	0.12 - 0.11 - 0.11
Power Consumption (Rated)		W	18 - 18 - 18	24 - 24 - 24
Power Factor (Rated)		%	90.9 - 97.8 - 93.8	90.9 - 94.9 - 90.9
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377	
Weight (Mass)		kg	11	
Gross Weight (Gross Mass)		kg	16	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 25 / 22	39 / 34 / 28 / 25
Sound Power Level		dB	56	57
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 9.5	
	Drain	mm	ϕ 16.0 or ϕ 18.0	
Drawing No.			3D080183	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FTXG35JV1BW		FTXG35JV1BS	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		3.5 kW Class	
Front Panel Color			White		Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	10.1 (357)	10.8 (381)	10.1 (357)	10.8 (381)
	M		7.3 (258)	8.6 (304)	7.3 (258)	8.6 (304)
	L		4.6 (162)	6.4 (226)	4.6 (162)	6.4 (226)
	SL		3.9 (138)	5.6 (198)	3.9 (138)	5.6 (198)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	29		29	
	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	0.13 - 0.12 - 0.12	0.16 - 0.15 - 0.14	0.13 - 0.12 - 0.12	0.16 - 0.15 - 0.14
Power Consumption (Rated)		W	26 - 26 - 26	32 - 32 - 32	26 - 26 - 26	32 - 32 - 32
Power Factor (Rated)		%	90.9 - 94.2 - 90.3	90.9 - 92.8 - 95.2	90.9 - 94.2 - 90.3	90.9 - 92.8 - 95.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155		295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377		285 × 1,003 × 377	
Weight (Mass)		kg	11		11	
Gross Weight (Gross Mass)		kg	15		16	
Sound Pressure Level	H / M / L / SL	dB(A)	42 / 34 / 26 / 23	42 / 36 / 29 / 26	42 / 34 / 26 / 23	42 / 36 / 29 / 26
Sound Power Level		dB	60	60	58	58
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	ϕ 16.0 or ϕ 18.0		ϕ 16.0 or ϕ 18.0	
Drawing No.			3D080185		C: 3D072845A	

Model			FTXG35JV1BA	
			Cooling	Heating
Rated Capacity			3.5 kW Class	
Front Panel Color			Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	10.1 (357)	10.8 (381)
	M		7.3 (258)	8.6 (304)
	L		4.6 (162)	6.4 (226)
	SL		3.9 (138)	5.6 (198)
Fan	Type		Cross Flow Fan	
	Motor Output	W	29	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.13 - 0.12 - 0.12	0.16 - 0.15 - 0.14
Power Consumption (Rated)		W	26 - 26 - 26	32 - 32 - 32
Power Factor (Rated)		%	90.9 - 94.2 - 90.3	90.9 - 92.8 - 95.2
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377	
Weight (Mass)		kg	11	
Gross Weight (Gross Mass)		kg	16	
Sound Pressure Level	H / M / L / SL	dB(A)	42 / 34 / 26 / 23	42 / 36 / 29 / 26
Sound Power Level		dB	60	60
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 9.5	
	Drain	mm	ϕ 16.0 or ϕ 18.0	
Drawing No.			3D080186	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FTXG50JV1BW		FTXG50JV1BS	
			Cooling	Heating	Cooling	Heating
Rated Capacity			5.0 kW Class		5.0 kW Class	
Front Panel Color			White		Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	10.3 (364)	11.4 (402)	10.3 (364)	11.4 (402)
	M		8.5 (300)	9.8 (346)	8.5 (300)	9.8 (346)
	L		6.7 (237)	8.1 (286)	6.7 (237)	8.1 (286)
	SL		5.7 (201)	7.1 (251)	5.7 (201)	7.1 (251)
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	0.16 - 0.15 - 0.14	0.19 - 0.18 - 0.17	0.16 - 0.15 - 0.14	0.19 - 0.18 - 0.17
Power Consumption (Rated)		W	32 - 32 - 32	38 - 38 - 38	32 - 32 - 32	38 - 38 - 38
Power Factor (Rated)		%	90.9 - 92.8 - 95.2	90.9 - 91.8 - 93.1	90.9 - 92.8 - 95.2	90.9 - 91.8 - 93.1
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155		295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377		285 × 1,003 × 377	
Weight (Mass)		kg	11		11	
Gross Weight (Gross Mass)		kg	15		16	
Sound Pressure Level	H / M / L / SL	dB(A)	44 / 40 / 35 / 32	44 / 40 / 35 / 32	44 / 40 / 35 / 32	44 / 40 / 35 / 32
Sound Power Level		dB	60	60	60	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	ϕ 12.7		ϕ 12.7	
	Drain	mm	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080642		3D072083A	

Model			FTXG50JV1BA	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			Brushed Aluminium Panel	
Airflow Rate	H	m³/min (cfm)	10.3 (364)	11.4 (402)
	M		8.5 (300)	9.8 (346)
	L		6.7 (237)	8.1 (286)
	SL		5.7 (201)	7.1 (251)
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	0.16 - 0.15 - 0.14	0.19 - 0.18 - 0.17
Power Consumption (Rated)		W	32 - 32 - 32	38 - 38 - 38
Power Factor (Rated)		%	90.9 - 92.8 - 95.2	90.9 - 91.8 - 93.1
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 915 × 155	
Packaged Dimensions (H × W × D)		mm	285 × 1,003 × 377	
Weight (Mass)		kg	11	
Gross Weight (Gross Mass)		kg	16	
Sound Pressure Level	H / M / L / SL	dB(A)	44 / 40 / 35 / 32	44 / 40 / 35 / 32
Sound Power Level		dB	60	60
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 18.0	
Drawing No.			3D080643	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			CTXS15K2V1B		CTXS35K2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			1.5 kW Class		3.5 kW Class	
Front Panel Color			White		White	
Airflow Rate	H	m³/min (cfm)	7.9 (279)	9.0 (318)	9.2 (325)	10.1 (357)
	M		6.3 (222)	7.5 (265)	7.2 (254)	8.1 (286)
	L		4.7 (166)	6.0 (212)	5.2 (184)	6.3 (222)
	SL		3.9 (138)	4.3 (152)	3.9 (138)	4.3 (152)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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 - 0.17	0.19 - 0.18 - 0.17	0.19 - 0.18 - 0.17
Power Consumption (Rated)		W	40 - 40 - 40	40 - 40 - 40	40 - 40 - 40	40 - 40 - 40
Power Factor (Rated)		%	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	289 × 780 × 215		289 × 780 × 215	
Packaged Dimensions (H × W × D)		mm	274 × 850 × 346		274 × 850 × 346	
Weight (Mass)		kg	8		8	
Gross Weight (Gross Mass)		kg	12		12	
Sound Pressure Level	H / M / L / SL	dB(A)	37 / 31 / 25 / 21	38 / 33 / 28 / 21	42 / 35 / 28 / 21	41 / 36 / 30 / 21
Sound Power Level		dB	55	56	59	58
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D074531A		3D074535A	

Model			FTXS20K2V1B		FTXS25K2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.0 kW Class		2.5 kW Class	
Front Panel Color			White		White	
Airflow Rate	H	m³/min (cfm)	8.8 (311)	9.5 (335)	9.1 (321)	10.0 (353)
	M		6.7 (237)	7.8 (275)	7.0 (247)	8.0 (282)
	L		4.7 (166)	6.0 (212)	5.0 (177)	6.0 (212)
	SL		3.9 (138)	4.3 (152)	3.9 (138)	4.3 (152)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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 - 0.17	0.19 - 0.18 - 0.17	0.19 - 0.18 - 0.17
Power Consumption (Rated)		W	40 - 40 - 40	40 - 40 - 40	40 - 40 - 40	40 - 40 - 40
Power Factor (Rated)		%	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0	95.7 - 96.6 - 98.0
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	289 × 780 × 215		289 × 780 × 215	
Packaged Dimensions (H × W × D)		mm	274 × 850 × 346		274 × 850 × 346	
Weight (Mass)		kg	8		8	
Gross Weight (Gross Mass)		kg	12		12	
Sound Pressure Level	H / M / L / SL	dB(A)	40 / 32 / 24 / 19	40 / 34 / 27 / 19	41 / 33 / 25 / 19	41 / 34 / 27 / 19
Sound Power Level		dB	58	58	58	58
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080188		3D080189	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FTXS35K2V1B		FTXS42K2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		4.2 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	11.2 (395)	12.1 (427)	11.2 (395)	12.4 (438)
	M		8.5 (300)	9.3 (328)	9.1 (321)	10.0 (353)
	L		5.8 (205)	6.5 (230)	7.0 (247)	7.8 (275)
	SL		4.1 (145)	4.2 (148)	4.1 (145)	5.2 (184)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	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	0.12 - 0.12 - 0.11	0.13 - 0.13 - 0.12	0.11 - 0.11 - 0.11	0.14 - 0.14 - 0.13
Power Consumption (Rated)		W	26 - 26 - 26	28 - 28 - 28	24 - 24 - 24	30 - 30 - 30
Power Factor (Rated)		%	98.5 - 94.2 - 98.5	97.9 - 93.6 - 97.2	99.2 - 94.9 - 90.9	97.4 - 93.2 - 96.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	298 × 900 × 215		298 × 900 × 215	
Packaged Dimensions (H × W × D)		mm	290 × 977 × 371		290 × 977 × 371	
Weight (Mass)		kg	11		11	
Gross Weight (Gross Mass)		kg	15		15	
Sound Pressure Level	H / M / L / SL	dB(A)	45 / 37 / 29 / 19	45 / 39 / 29 / 19	45 / 39 / 33 / 21	45 / 39 / 33 / 22
Sound Power Level		dB	59	59	59	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 9.5		ϕ 9.5	
	Drain	mm	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080619		3D080620	

Model			FTXS50K2V1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			White	
Airflow Rates	H	m³/min (cfm)	11.9 (420)	13.3 (470)
	M		9.6 (339)	10.8 (381)
	L		7.4 (261)	8.4 (297)
	SL		4.5 (159)	5.5 (194)
Fan	Type		Cross Flow Fan	
	Motor Output	W	23	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.12 - 0.12 - 0.11	0.15 - 0.14 - 0.14
Power Consumption (Rated)		W	26 - 26 - 26	32 - 32 - 32
Power Factor (Rated)		%	98.5 - 94.2 - 98.5	97.0 - 99.4 - 95.2
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	298 × 900 × 215	
Packaged Dimensions (H × W × D)		mm	290 × 977 × 371	
Weight (Mass)		kg	11	
Gross Weight (Gross Mass)		kg	15	
Sound Pressure Level	H / M / L / SL	dB(A)	46 / 40 / 34 / 23	47 / 40 / 34 / 24
Sound Power Level		dB	60	60
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 18.0	
Drawing No.			3D080621	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FTXS20J2V1B		FTXS25J2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.0 kW Class		2.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.4 (332)	9.9 (350)	10.8 (381)	11.9 (420)
	M		7.4 (261)	8.2 (290)	7.9 (279)	9.1 (321)
	L		5.5 (194)	6.6 (233)	5.2 (184)	6.4 (226)
	SL		4.1 (145)	6.2 (219)	3.7 (131)	5.9 (208)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	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	0.09 - 0.08 - 0.08	0.10 - 0.10 - 0.09	0.09 - 0.08 - 0.08	0.10 - 0.10 - 0.09
Power Consumption (Rated)		W	18 - 18 - 18	21 - 21 - 21	18 - 18 - 18	21 - 21 - 21
Power Factor (Rated)		%	90.9 - 97.8 - 93.8	95.5 - 91.3 - 97.2	90.9 - 97.8 - 93.8	95.5 - 91.3 - 97.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215		295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366		289 × 870 × 366	
Weight (Mass)		kg	9		9	
Gross Weight (Gross Mass)		kg	13		13	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 25 / 22	38 / 33 / 28 / 25	41 / 33 / 25 / 22	42 / 35 / 28 / 25
Sound Power Level		dB	54	54	57	58
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	I.D.ϕ 14.0, O.D. ϕ 18.0		ϕ 18.0	
Drawing No.			3D070564A		3D070565A	

Model			FTXS35J2V1B		FTXS42J2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		4.2 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	11.4 (403)	12.4 (438)	11.3 (399)	12.2 (431)
	M		8.7 (307)	9.5 (335)	9.0 (318)	9.7 (343)
	L		5.8 (205)	6.8 (240)	6.8 (240)	7.3 (258)
	SL		4.4 (155)	6.0 (212)	5.9 (208)	6.4 (228)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	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	0.12 - 0.12 - 0.11	0.13 - 0.13 - 0.12	0.11 - 0.11 - 0.11	0.14 - 0.14 - 0.13
Power Consumption (Rated)		W	26 - 26 - 26	28 - 28 - 28	24 - 24 - 24	30 - 30 - 30
Power Factor (Rated)		%	98.5 - 94.2 - 98.5	97.9 - 93.6 - 97.2	99.2 - 94.9 - 90.9	97.4 - 93.2 - 96.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215		295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366		289 × 870 × 366	
Weight (Mass)		kg	10		10	
Gross Weight (Gross Mass)		kg	14		14	
Sound Pressure Level	H / M / L / SL	dB(A)	45 / 37 / 29 / 23	45 / 39 / 29 / 26	45 / 39 / 33 / 30	45 / 39 / 33 / 30
Sound Power Level		dB	61	61	61	61
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	I.D. ϕ 14.0, O.D. ϕ 18.0		I.D. ϕ 14.0, O.D. ϕ 18.0	
Drawing No.			3D070566A		3D070567A	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FTXS50J2V1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			White	
Airflow Rates	H	m³/min (cfm)	11.6 (410)	12.1 (427)
	M		9.2 (325)	9.8 (346)
	L		7.0 (247)	7.6 (268)
	SL		6.0 (212)	6.7 (237)
Fan	Type		Cross Flow Fan	
	Motor Output	W	23	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.12 - 0.12 - 0.11	0.15 - 0.14 - 0.14
Power Consumption (Rated)		W	26 - 26 - 26	32 - 32 - 32
Power Factor (Rated)		%	98.5 - 94.2 - 98.5	97.0 - 99.4 - 95.2
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366	
Weight (Mass)		kg	10	
Gross Weight (Gross Mass)		kg	14	
Sound Pressure Level	H / M / L / SL	dB(A)	46 / 40 / 34 / 31	47 / 41 / 34 / 31
Sound Power Level		dB	62	63
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	I.D. ϕ 14.0, O.D. ϕ 18.0	
Drawing No.			3D070568A	

Model			ATXS20G2V1B		ATXS25G2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.0 kW Class		2.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.4 (332)	9.9 (350)	9.1 (321)	9.8 (346)
	M		7.4 (261)	8.2 (290)	7.1 (252)	7.9 (280)
	L		5.5 (194)	6.5 (230)	5.2 (182)	6.2 (217)
	SL		4.0 (141)	5.5 (194)	3.7 (130)	5.2 (183)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	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	0.09 - 0.08 - 0.08	0.10 - 0.10 - 0.09	0.09 - 0.08 - 0.08	0.10 - 0.10 - 0.09
Power Consumption (Rated)		W	18 - 18 - 18	21 - 21 - 21	18 - 18 - 18	21 - 21 - 21
Power Factor		%	90.9 - 97.8 - 93.8	95.5 - 91.3 - 97.2	90.9 - 97.8 - 93.8	95.5 - 91.3 - 97.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215		295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366		289 × 870 × 366	
Weight (Mass)		kg	9		9	
Gross Weight (Gross Mass)		kg	13		13	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 25 / 22	38 / 33 / 28 / 25	38 / 32 / 25 / 22	39 / 34 / 28 / 25
Sound Power Level	H	dB	54	54	54	55
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080178		3D080179	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			ATXS35G2V1B		ATXS42G2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		4.2 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	10.4 (367)	10.6 (374)	9.1 (321)	11.2 (395)
	M		7.7 (270)	8.5 (302)	7.7 (273)	9.4 (333)
	L		4.8 (170)	6.4 (226)	6.3 (221)	7.7 (271)
	SL		3.5 (125)	5.4 (191)	5.4 (190)	6.8 (240)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	23		23	
	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	0.12 - 0.12 - 0.11	0.13 - 0.13 - 0.12	0.11 - 0.11 - 0.10	0.14 - 0.14 - 0.13
Power Consumption (Rated)		W	26 - 26 - 26	28 - 28 - 28	24 - 24 - 24	30 - 30 - 30
Power Factor		%	98.5 - 94.2 - 98.5	97.9 - 93.6 - 97.2	99.2 - 94.9 - 100.0	97.4 - 93.2 - 96.2
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215		295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366		289 × 870 × 366	
Weight (Mass)		kg	10		10	
Gross Weight (Gross Mass)		kg	14		14	
Sound Pressure Level	H / M / L / SL	dB(A)	42 / 34 / 26 / 23	42 / 36 / 29 / 26	42 / 38 / 33 / 30	42 / 38 / 33 / 30
Sound Power Level	H	dB	59	59	59	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 9.5		ϕ 9.5	
	Drain	mm	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080180		3D080181	

Model			ATXS50G2V1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			White	
Airflow Rates	H	m³/min (cfm)	10.2 (360)	11.0 (388)
	M		8.6 (305)	9.3 (330)
	L		7.0 (246)	7.6 (267)
	SL		6.0 (212)	6.7 (236)
Fan	Type		Cross Flow Fan	
	Motor Output	W	23	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.12 - 0.12 - 0.11	0.15 - 0.14 - 0.14
Power Consumption (Rated)		W	26 - 26 - 26	32 - 32 - 32
Power Factor		%	98.5 - 94.2 - 98.5	97.0 - 99.4 - 95.2
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	295 × 800 × 215	
Packaged Dimensions (H × W × D)		mm	289 × 870 × 366	
Weight (Mass)		kg	10	
Gross Weight (Gross Mass)		kg	14	
Sound Pressure Level	H / M / L / SL	dB(A)	43 / 39 / 34 / 31	44 / 39 / 34 / 31
Sound Power Level	H	dB	60	61
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 18.0	
Drawing No.			3D081101	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 230 V

Model			FTX20JV1B		FTX25JV1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.0 kW Class		2.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.1 (321)	9.4 (331)	9.2 (325)	9.7 (342)
	M		7.4 (261)	7.8 (276)	7.6 (268)	8.0 (283)
	L		5.9 (208)	6.3 (222)	6.0 (212)	6.3 (222)
	SL		4.7 (166)	5.5 (194)	4.8 (169)	5.5 (194)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor (Rated)		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	263 × 840 × 344		263 × 840 × 344	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	39 / 33 / 25 / 22	39 / 34 / 28 / 25	40 / 33 / 26 / 22	40 / 34 / 28 / 25
Sound Power Level	H	dB	55	55	56	56
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D065930		3D065931	

Model			FTX35JV1B		ATX20JV1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		2.0 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.3 (328)	10.1 (356)	9.1 (321)	9.4 (331)
	M		7.7 (272)	8.4 (295)	7.4 (261)	7.8 (276)
	L		6.1 (215)	6.7 (235)	5.9 (208)	6.3 (222)
	SL		4.9 (173)	5.7 (201)	4.7 (166)	5.5 (194)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	263 × 840 × 344		263 × 840 × 344	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	41 / 34 / 27 / 23	41 / 35 / 29 / 26	39 / 33 / 25 / 22	39 / 34 / 28 / 25
Sound Power Level	H	dB	57	57	55	55
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D065932		3D065933	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 230 V

Model			ATX25JV1B		ATX35JV1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.2 (325)	9.7 (342)	9.3 (328)	10.1 (356)
	M		7.6 (268)	8.0 (283)	7.7 (272)	8.4 (295)
	L		6.0 (212)	6.3 (222)	6.1 (215)	6.7 (235)
	SL		4.8 (169)	5.5 (194)	4.9 (173)	5.7 (201)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	263 × 840 × 344		263 × 840 × 344	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	40 / 33 / 26 / 22	40 / 34 / 28 / 25	41 / 34 / 27 / 23	41 / 35 / 29 / 26
Sound Power Level	H	dB	56	56	57	57
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D065934		3D065935	

Model			FTX20J2V1B		FTX25J2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.0 kW Class		2.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.1 (321)	9.4 (331)	9.2 (325)	9.7 (342)
	M		7.4 (261)	7.8 (276)	7.6 (268)	8.0 (283)
	L		5.9 (208)	6.3 (222)	6.0 (212)	6.3 (222)
	SL		4.7 (166)	5.5 (194)	4.8 (169)	5.5 (194)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor (Rated)		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	266 × 846 × 345		266 × 846 × 345	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	39 / 33 / 25 / 22	39 / 34 / 28 / 25	40 / 33 / 26 / 22	40 / 34 / 28 / 25
Sound Power Level	H	dB	55	55	55	55
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080673		3D080674	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 230 V

Model			FTX35J2V1B		ATX20J2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			3.5 kW Class		2.0 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.3 (328)	10.1 (356)	9.1 (321)	9.4 (331)
	M		7.7 (272)	8.4 (295)	7.4 (261)	7.8 (276)
	L		6.1 (215)	6.7 (235)	5.9 (208)	6.3 (222)
	SL		4.9 (173)	5.7 (201)	4.7 (166)	5.5 (194)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	266 × 846 × 345		266 × 846 × 345	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	41 / 34 / 27 / 23	41 / 35 / 29 / 26	39 / 33 / 25 / 22	39 / 34 / 28 / 25
Sound Power Level	H	dB	58	58	55	55
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080675		3D080717	

Model			ATX25J2V1B		ATX35J2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	9.2 (325)	9.7 (342)	9.3 (328)	10.1 (356)
	M		7.6 (268)	8.0 (283)	7.7 (272)	8.4 (295)
	L		6.0 (212)	6.3 (222)	6.1 (215)	6.7 (235)
	SL		4.8 (169)	5.5 (194)	4.9 (173)	5.7 (201)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	16		16	
	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	0.18	0.18
Power Consumption (Rated)		W	40	40	40	40
Power Factor		%	96.6	96.6	96.6	96.6
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	283 × 770 × 198		283 × 770 × 198	
Packaged Dimensions (H × W × D)		mm	266 × 846 × 345		266 × 846 × 345	
Weight (Mass)		kg	7		7	
Gross Weight (Gross Mass)		kg	11		11	
Sound Pressure Level	H / M / L / SL	dB(A)	40 / 33 / 26 / 22	40 / 34 / 28 / 25	41 / 34 / 27 / 23	41 / 35 / 29 / 26
Sound Power Level	H	dB	55	55	58	58
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080718		3D080719	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

Floor Standing Type

50 Hz, 220 - 230 - 240 V

Model			FVXG25K2V1B		FVXG35K2V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	8.9 (314)	9.9 (350)	9.1 (321)	10.2 (360)
	M		7.0 (247)	7.8 (275)	7.2 (254)	8.0 (282)
	L		5.3 (187)	5.7 (201)	5.3 (187)	5.8 (205)
	SL		4.5 (159)	4.7 (166)	4.5 (159)	5.0 (177)
Fan	Type		Cross Flow Fan		Cross Flow Fan	
	Motor Output	W	32		32	
	Speed	Steps	5 Steps, Quiet, Auto		5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Upward		Right, Left, Upward	
Air Filter			Removable / Washable / Mildew Proof		Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.10 - 0.09 - 0.09	0.11 - 0.11 - 0.10	0.11 - 0.10 - 0.10	0.12 - 0.12 - 0.11
Power Consumption (Rated)		W	19 - 19 - 19	22 - 22 - 22	21 - 21 - 21	24 - 24 - 24
Power Factor (Rated)		%	86.4 - 91.8 - 88.0	90.9 - 87.0 - 91.7	86.8 - 91.3 - 87.5	90.9 - 87.0 - 90.9
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	600 × 950 × 215		600 × 950 × 215	
Packaged Dimensions (H × W × D)		mm	761 × 1,030 × 314		761 × 1,030 × 314	
Weight (Mass)		kg	22		22	
Gross Weight (Gross Mass)		kg	28		28	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 26 / 23	39 / 32 / 26 / 22	39 / 33 / 27 / 24	40 / 33 / 27 / 23
Sound Power Level		dB	52	53	52	53
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D080184		3D080187	

Model			FVXG50K2V1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			White	
Airflow Rates	H	m³/min (cfm)	10.6 (374)	12.2 (431)
	M		8.9 (314)	10.0 (353)
	L		7.3 (258)	7.8 (275)
	SL		6.0 (212)	6.8 (240)
Fan	Type		Cross Flow Fan	
	Motor Output	W	32	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Upward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.17 - 0.16 - 0.15	0.18 - 0.17 - 0.17
Power Consumption (Rated)		W	32 - 32 - 32	35 - 35 - 35
Power Factor (Rated)		%	85.6 - 87.0 - 88.9	88.4 - 89.5 - 85.8
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	600 × 950 × 215	
Packaged Dimensions (H × W × D)		mm	761 × 1,030 × 314	
Weight (Mass)		kg	22	
Gross Weight (Gross Mass)		kg	28	
Sound Pressure Level	H / M / L / SL	dB(A)	44 / 40 / 36 / 32	46 / 40 / 34 / 30
Sound Power Level		dB	58	60
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 18.0	
Drawing No.			3D080644	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

50 Hz, 220 - 230 - 240 V

Model			FVXS25FV1B		FVXS35FV1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Front Panel Color			White		White	
Airflow Rates	H	m³/min (cfm)	8.2 (290)	8.8 (311)	8.5 (300)	9.4 (332)
	M		6.5 (230)	6.9 (244)	6.7 (237)	7.3 (258)
	L		4.8 (169)	5.0 (177)	4.9 (173)	5.2 (184)
	SL		4.1 (145)	4.4 (155)	4.5 (159)	4.7 (166)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	48		48	
	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	0.14 - 0.13 - 0.12	0.15 - 0.14 - 0.13	0.14 - 0.13 - 0.12	0.15 - 0.14 - 0.13
Power Consumption (Rated)		W	15 - 15 - 15	17 - 17 - 17	15 - 15 - 15	17 - 17 - 17
Power Factor (Rated)		%	48.7 - 50.2 - 52.1	51.5 - 52.8 - 54.5	48.7 - 50.2 - 52.1	51.5 - 52.8 - 54.5
Temperature Control			Microcomputer Control		Microcomputer Control	
Dimensions (H × W × D)		mm	600 × 700 × 210		600 × 700 × 210	
Packaged Dimensions (H × W × D)		mm	696 × 786 × 280		696 × 786 × 280	
Weight (Mass)		kg	14		14	
Gross Weight (Gross Mass)		kg	18		18	
Sound Pressure Level	H / M / L / SL	dB(A)	38 / 32 / 26 / 23	38 / 32 / 26 / 23	39 / 33 / 27 / 24	39 / 33 / 27 / 24
Sound Power Level		dB	52	52	52	52
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	ϕ 20.0		ϕ 20.0	
Drawing No.			3D080190		3D080877	

Model			FVXS50FV1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			White	
Airflow Rates	H	m³/min (cfm)	10.7 (378)	11.8 (417)
	M		9.2 (325)	10.1 (357)
	L		7.8 (275)	8.5 (300)
	SL		6.6 (233)	7.1 (251)
Fan	Type		Turbo Fan	
	Motor Output	W	48	
	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 - 0.17 - 0.16	0.17 - 0.17 - 0.16
Power Consumption (Rated)		W	27 - 27 - 27	34 - 34 - 34
Power Factor (Rated)		%	68.2 - 69.1 - 70.3	90.9 - 87.0 - 88.5
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	600 × 700 × 210	
Packaged Dimensions (H × W × D)		mm	696 × 786 × 280	
Weight (Mass)		kg	14	
Gross Weight (Gross Mass)		kg	18	
Sound Pressure Level	H / M / L / SL	dB(A)	44 / 40 / 36 / 32	45 / 40 / 36 / 32
Sound Power Level		dB	60	61
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 20.0	
Drawing No.			3D080878	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

Floor / Ceiling Suspended Dual Type

50 Hz, 220 - 230 - 240 V

Model			FLXS25BAVMB		FLXS35BAVMB	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Front Panel Color			Almond White		Almond White	
Airflow Rates	H	m³/min (cfm)	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	0.33 - 0.32 - 0.31	0.36 - 0.34 - 0.33	0.38 - 0.36 - 0.35	0.38 - 0.36 - 0.35
Power Consumption (Rated)		W	70 - 70 - 70	74 - 74 - 74	78 - 78 - 78	78 - 78 - 78
Power Factor (Rated)		%	96.4 - 95.1 - 94.1	93.4 - 94.6 - 93.4	93.3 - 94.2 - 92.9	93.3 - 94.2 - 92.9
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 (Mass)		kg	16		16	
Gross Weight (Gross Mass)		kg	22		22	
Sound Pressure Level	H / M / L / SL	dB(A)	37 / 34 / 31 / 28	37 / 34 / 31 / 29	38 / 35 / 32 / 29	39 / 36 / 33 / 30
Sound Power Level		dB	51	51	53	54
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	ϕ 18.0		ϕ 18.0	
Drawing No.			3D081090		3D081091	

Model			FLXS50BAVMB	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Front Panel Color			Almond White	
Airflow Rates	H	m³/min (cfm)	11.4 (403)	12.1 (427)
	M		10.0 (353)	9.8 (346)
	L		8.5 (300)	7.5 (265)
	SL		7.5 (265)	6.8 (240)
Fan	Type		Sirocco Fan	
	Motor Output	W	34	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Direction Control			Right, Left, Horizontal, Downward	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.48 - 0.45 - 0.43	0.47 - 0.45 - 0.44
Power Consumption (Rated)		W	96 - 96 - 96	96 - 96 - 96
Power Factor (Rated)		%	90.9 - 92.8 - 93.0	92.8 - 92.8 - 90.9
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	490 × 1,050 × 200	
Packaged Dimensions (H × W × D)		mm	280 × 1,100 × 566	
Weight (Mass)		kg	17	
Gross Weight (Gross Mass)		kg	24	
Sound Pressure Level	H / M / L / SL	dB(A)	47 / 43 / 39 / 36	46 / 41 / 35 / 33
Sound Power Level		dB	60	59
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	ϕ 18.0	
Drawing No.			3D081092	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

Duct Connected Type

50 Hz, 230 V

Model			FDXS25EAVMB, FDXS25E7VMB		FDXS35EAVMB, FDXS35E7VMB	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Airflow Rates	H	m³/min (cfm)	8.7 (307)	8.7 (307)	8.7 (307)	8.7 (307)
	M		8.0 (282)	8.0 (282)	8.0 (282)	8.0 (282)
	L		7.3 (258)	7.3 (258)	7.3 (258)	7.3 (258)
	SL		6.2 (219)	6.2 (219)	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	
Air Filter			Removable / Washable / Mildew Proof		Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.48	0.48	0.48	0.48
Power Consumption (Rated)		W	71	71	71	71
Power Factor (Rated)		%	64.3	64.3	64.3	64.3
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 (Mass)		kg	21		21	
Gross Weight (Gross Mass)		kg	29		29	
Sound Pressure Level	H / M / L / SL	dB(A)	35 / 33 / 31 / 29	35 / 33 / 31 / 29	35 / 33 / 31 / 29	35 / 33 / 31 / 29
Sound Power Level		dB	53	53	53	53
External Static Pressure		Pa	30		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		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.			3D060029		3D060030	

Model			FDXS50CVMB, FDXS50C7VMB	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Airflow Rates	H	m³/min (cfm)	12.0 (424)	12.0 (424)
	M		11.0 (388)	11.0 (388)
	L		10.0 (353)	10.0 (353)
	SL		8.4 (297)	8.4 (297)
Fan	Type		Sirocco Fan	
	Motor Output	W	130	
	Speed	Steps	5 Steps, Quiet, Auto	
Air Filter			Removable / Washable / Mildew Proof	
Running Current (Rated)		A	0.64	0.64
Power Consumption (Rated)		W	140	140
Power Factor (Rated)		%	95.1	95.1
Temperature Control			Microcomputer Control	
Dimensions (H × W × D)		mm	200 × 900 × 620	
Packaged Dimensions (H × W × D)		mm	266 × 1,106 × 751	
Weight (Mass)		kg	27	
Gross Weight (Gross Mass)		kg	34	
Sound Pressure Level	H / M / L / SL	dB(A)	37 / 35 / 33 / 31	37 / 35 / 33 / 31
Sound Power Level		dB	55	55
External Static Pressure		Pa	40	
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	VP20 (O.D. ϕ 26 / I.D. ϕ 20)	
Drawing No.			3D060033	

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

Ceiling Mounted Cassette Type

50 Hz, 230 V

Model			FFQ25B8V1B, FFQ25B9V1B		FFQ35B8V1B, FFQ35B9V1B	
			Cooling	Heating	Cooling	Heating
Rated Capacity			2.5 kW Class		3.5 kW Class	
Decoration Panel	Model		BYFQ60B8W1		BYFQ60B8W1	
	Color		White		White	
	Dimensions (H × W × D)	mm	55 × 700 × 700		55 × 700 × 700	
	Weight (Mass)	kg	2.7		2.7	
Airflow Rates	H	m³/min (cfm)	9.0 (318)	9.0 (318)	10.0 (353)	10.0 (353)
	L		6.5 (230)	6.5 (230)	6.5 (230)	6.5 (230)
Fan	Type		Turbo Fan		Turbo Fan	
	Motor Output	W	55		55	
	Speed	Steps	2 Steps		2 Steps	
Air Direction Control			Horizontal, Downward		Horizontal, Downward	
Running Current (Rated)		A	0.37	0.32	0.40	0.36
Power Consumption (Rated)		W	73	64	84	76
Power Factor (Rated)		%	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 (Mass)		kg	17.5		17.5	
Gross Weight (Gross Mass)		kg	21		21	
Sound Pressure Level	H / L	dB(A)	29.5 / 24.5		32.0 / 25.0	
Sound Power Level		dB	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.			3D060405		3D060407	

Model			FFQ50B8V1B, FFQ50B9V1B	
			Cooling	Heating
Rated Capacity			5.0 kW Class	
Decoration Panel	Model		BYFQ60B8W1	
	Color		White	
	Dimensions (H × W × D)	mm	55 × 700 × 700	
	Weight (Mass)	kg	2.7	
Airflow Rates	H	m³/min (cfm)	12.0 (424)	12.0 (424)
	L		8.0 (283)	8.0 (283)
Fan	Type		Turbo Fan	
	Motor Output	W	55	
	Speed	Steps	2 Steps	
Air Direction Control			Horizontal, Downward	
Running Current (Rated)		A	0.49	0.45
Power Consumption (Rated)		W	97	89
Power Factor (Rated)		%	86.1	86.0
Temperature Control			Microcomputer Control	
Dimensions (H × W × D) ★		mm	260 (286) × 575 × 575	
Packaged Dimensions (H × W × D)		mm	370 × 687 × 674	
Weight (Mass)		kg	17.5	
Gross Weight (Gross Mass)		kg	21	
Sound Pressure Level	H / L	dB(A)	36.0 / 27.0	
Sound Power Level		dB	53.0	—
Heat Insulation			Both Liquid and Gas Pipes	
Piping Connection	Liquid	mm	ϕ 6.4	
	Gas	mm	ϕ 12.7	
	Drain	mm	VP20 (O.D ϕ 26 / I.D ϕ 20)	
Drawing No.			3D060409	

Note: ★ ( ) : dimension including control box

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m³/min × 35.3

2. Outdoor Unit

50 Hz, 220 - 240 V

Model			2MXS40H2V1B, 2MXS40H3V1B 2AMX40G2V1B, 2AMX40G3V1B		2MXS50H2V1B, 2MXS50H3V1B 2AMX50G2V1B, 2AMX50G3V1B	
			Cooling	Heating	Cooling	Heating
Casing Color			Ivory White		Ivory White	
Compressor	Type		Hermetically Sealed Swing Type		Hermetically Sealed Swing Type	
	Model		1YC23AGXD		2YC36BXD	
	Motor Output	W	600		1,100	
Refrigerant Oil	Model		FVC50K		FVC50K	
	Charge	L	0.45		0.65	
Refrigerant	Type		R-410A		R-410A	
	Charge	kg	1.20		1.60	
Airflow Rate	H	m^3/min	36	32	37	34
	M		33	32	34	34
	L		30	32	34	34
	H	cfm	1,271	1,130	1,306	1,200
	M		1,165	1,130	1,200	1,200
	L		1,059	1,130	1,200	1,200
Fan	Type		Propeller		Propeller	
	Motor Output	W	50		50	
Starting Current		A	4.6		6.3	
Dimension (H × W × D)		mm	550 × 765 × 285		550 × 765 × 285	
Packaged Dimension (H × W × D)		mm	612 × 906 × 364		612 × 906 × 364	
Weight (Mass)		kg	38		42	
Gross Weight (Gross Mass)		kg	43		47	
Sound Pressure Level		dB(A)	47	48	48	50
Sound Power Level		dB	62	—	63	—
Piping Connection	Liquid	mm	ϕ 6.4 × 2		ϕ 6.4 × 2	
	Gas	mm	ϕ 9.5 × 2		ϕ 9.5 × 1, ϕ 12.7 × 1	
	Drain	mm	ϕ 16.0		ϕ 16.0	
Heat Insulation			Both Liquid & Gas Pipes		Both Liquid and Gas Pipes	
No. of Wiring Connection			3 for Power Supply, 4 for Interunit Wiring		3 for Power Supply, 4 for Interunit Wiring	
Max. Piping Length		m	30 (for Total of Each Room)		30 (for Total of Each Room)	
			20 (for One Room)		20 (for One Room)	
Min. Piping Length		m	3 (for One Room)		3 (for One Room)	
Amount of Additional Charge		g/m	20 (20 m or more)		20 (20 m or more)	
Max. Installation Height Difference		m	15 (between Indoor Unit and Outdoor Unit)		15 (between Indoor Unit and Outdoor Unit)	
			7.5 (between Indoor Units)		7.5 (between Indoor Units)	
Drawing No.			3D063350A		3D063351A	

Note: The data are based on the conditions shown in the table below.

Cooling	Heating	Piping Length
Indoor ; 27°CDB / 19°CWB Outdoor ; 35°CDB	Indoor ; 20°CDB Outdoor ; 7°CDB / 6°CWB	5 m

Conversion Formulae
kcal/h = kW × 860 Btu/h = kW × 3412 cfm = m^3/min × 35.3

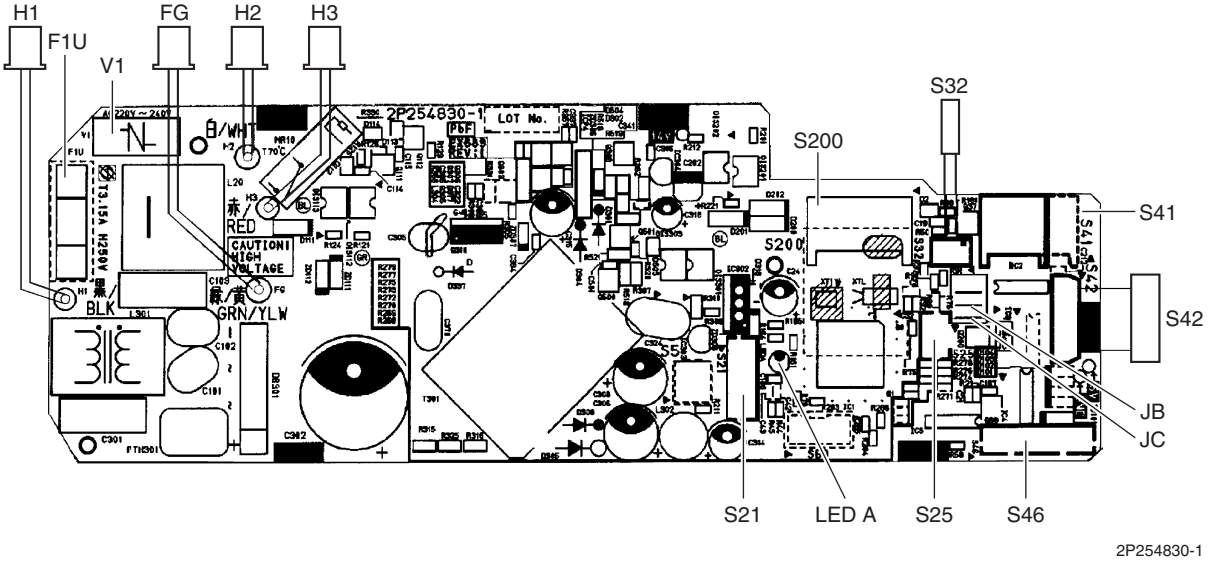
Part 3
Printed Circuit Board Connector Wiring Diagram

1. Indoor Unit

1.1 FTXG25/35/50JV1BW(S)(A)

Control PCB

1)	S21	Connector for centralized control (HA)
2)	S25	Connector for INTELLIGENT EYE sensor PCB
3)	S32	Indoor heat exchanger thermistor
4)	S41	Connector for swing motors
5)	S42	Connector for reduction motor (front panel mechanism) and limit switch
6)	S46	Connector for signal receiver / display PCB
7)	S200	Connector for fan motor
8)	H1, H2, H3, FG	Connector for terminal board
9)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function (auto-restart)
		∗ Refer to page 230 for detail.
10)	LED A	LED for service monitor (green)
11)	F1U	Fuse (3.15 A, 250 V)
12)	V1	Varistor

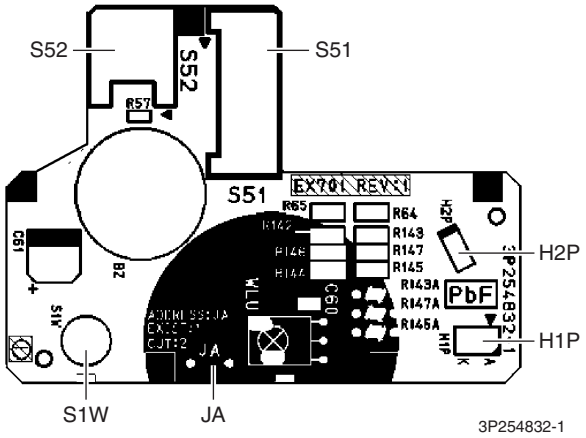


Caution **Replace the PCB if you accidentally cut the jumpers other than JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Signal Receiver / Display PCB

1) S51 Connector for control PCB
2) S52 Connector for room temperature thermistor
3) S1W Forced operation [ON/OFF] button
4) H1P LED for operation (multi-color)
5) H2P LED for INTELLIGENT EYE (green)
6) JA Address setting jumper

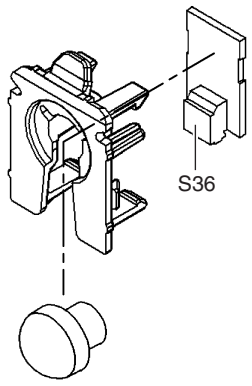
∗ Refer to page 226 for detail.



Caution **Replace the PCB if you accidentally cut the jumpers other than JA.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

INTELLIGENT EYE Sensor PCB

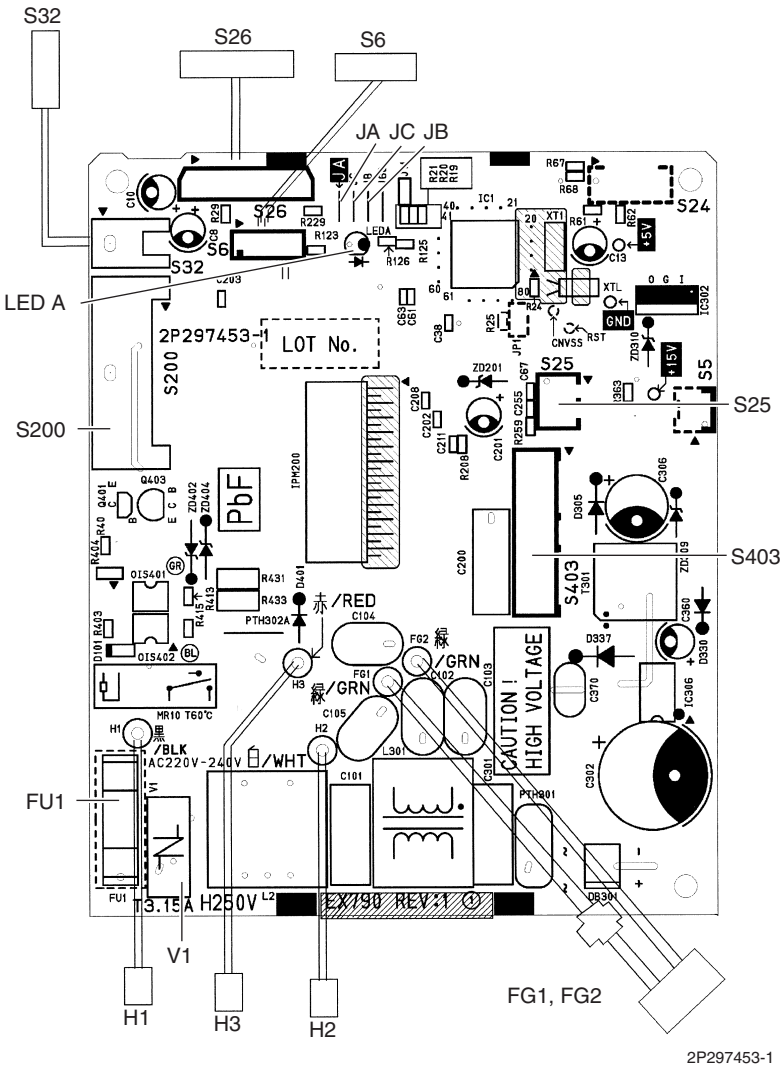
1) S36 Connector for control PCB



1.2 CTXS15/35K2V1B, FTXS20/25K2V1B

Control PCB

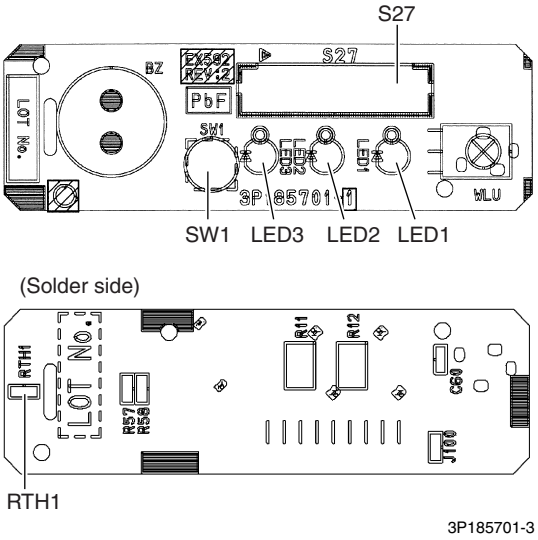
1) S6	Connector for swing motor (horizontal blade)
2) S25	Connector for INTELLIGENT EYE sensor PCB
3) S26	Connector for display PCB
4) S32	Connector for indoor heat exchanger thermistor
5) S200	Connector for fan motor
6) S403	Connector for adaptor PCB (option)
7) FG1, FG2	Connector for terminal board (frame ground)
8) H1, H2, H3	Connector for terminal board (indoor - outdoor transmission)
9) V1	Varistor
10) JA	Address setting jumper ∗ Refer to page 226 for detail.
11) JB JC	Fan speed setting when compressor stops for thermostat OFF Power failure recovery function (auto-restart) ∗ Refer to page 230 for detail.
12) LED A	LED for service monitor (green)
13) FU1 (F1U)	Fuse (3.15 A, 250 V)



Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB, and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

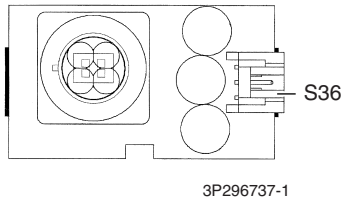
Display PCB

1) S27 Connector for control PCB
2) SW1 (S1W) Forced cooling operation [ON/OFF] button
3) LED1 (H1P) LED for operation (green)
4) LED2 (H2P) LED for timer (yellow)
5) LED3 (H3P) LED for INTELLIGENT EYE (green)
6) RTH1 (R1T) Room temperature thermistor



INTELLIGENT EYE Sensor PCB

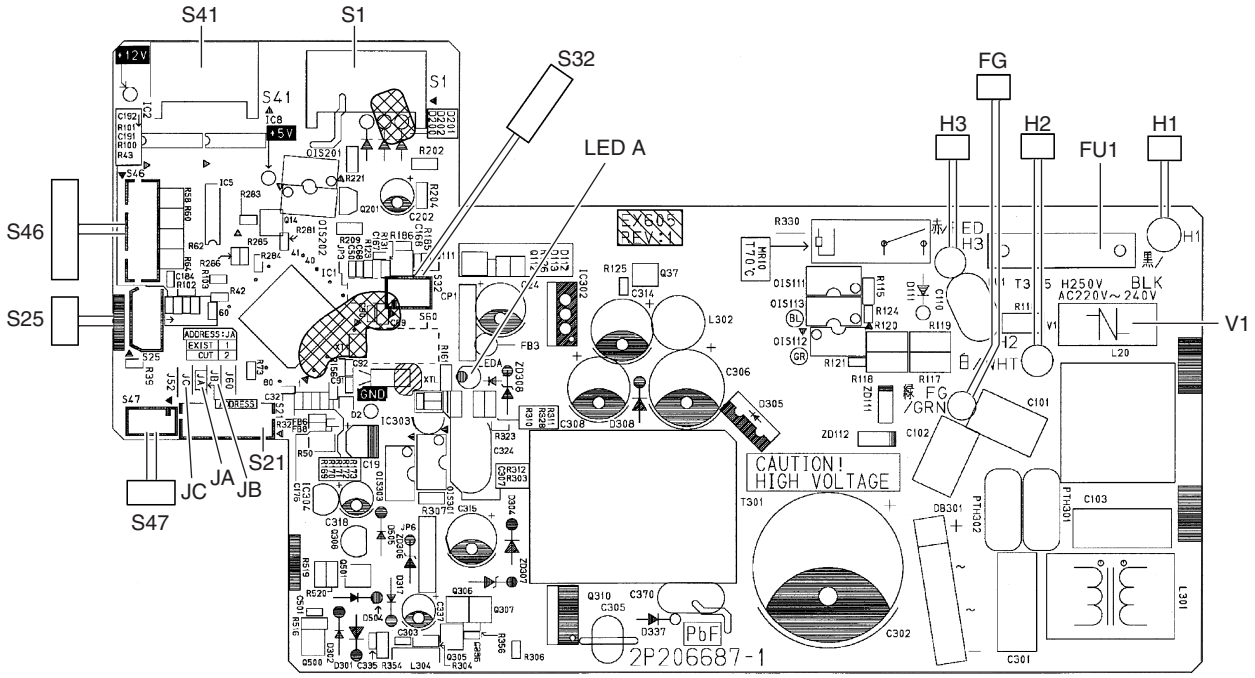
1) S36 Connector for control PCB



1.3 FTXS35/42/50K2V1B, FTXS20/25/35/42/50J2V1B, ATXS20/25/35/42/50G2V1B

Control PCB

1)	S1	Connector for DC fan motor
2)	S21	Connector for centralized control (HA)
3)	S25	Connector for INTELLIGENT EYE sensor PCB
4)	S32	Indoor heat exchanger thermistor
5)	S41	Connector for swing motors
6)	S46	Connector for display PCB
7)	S47	Connector for signal receiver PCB
8)	H1, H2, H3, FG	Connector for terminal board
9)	JA	Address setting jumper
		∗ Refer to page 226 for detail.
10)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function (auto-restart)
		∗ Refer to page 230 for detail.
11)	LED A	LED for service monitor (green)
12)	FU1 (F1U)	Fuse (3.15 A, 250 V)
13)	V1	Varistor

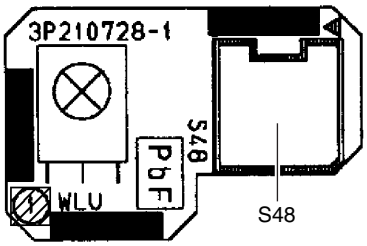


2P206687-1
2P206687-5

Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Signal Receiver PCB

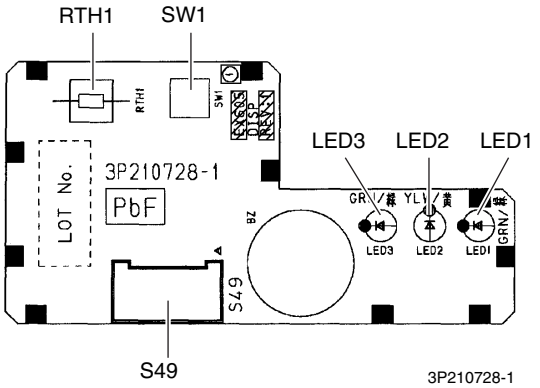
1) S48 Connector for control PCB



3P210728-1

Display PCB

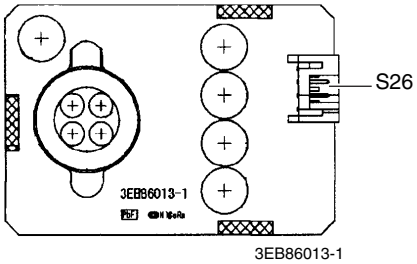
1) S49 Connector for control PCB
2) SW1 Forced operation [ON/OFF] button
3) LED1 (H1P) LED for operation (green)
4) LED2 (H2P) LED for timer (yellow)
5) LED3 (H3P) LED for INTELLIGENT EYE (green)
6) RTH1 (R1T) Room temperature thermistor



3P210728-1

INTELLIGENT EYE Sensor PCB

1) S26 Connector for control PCB

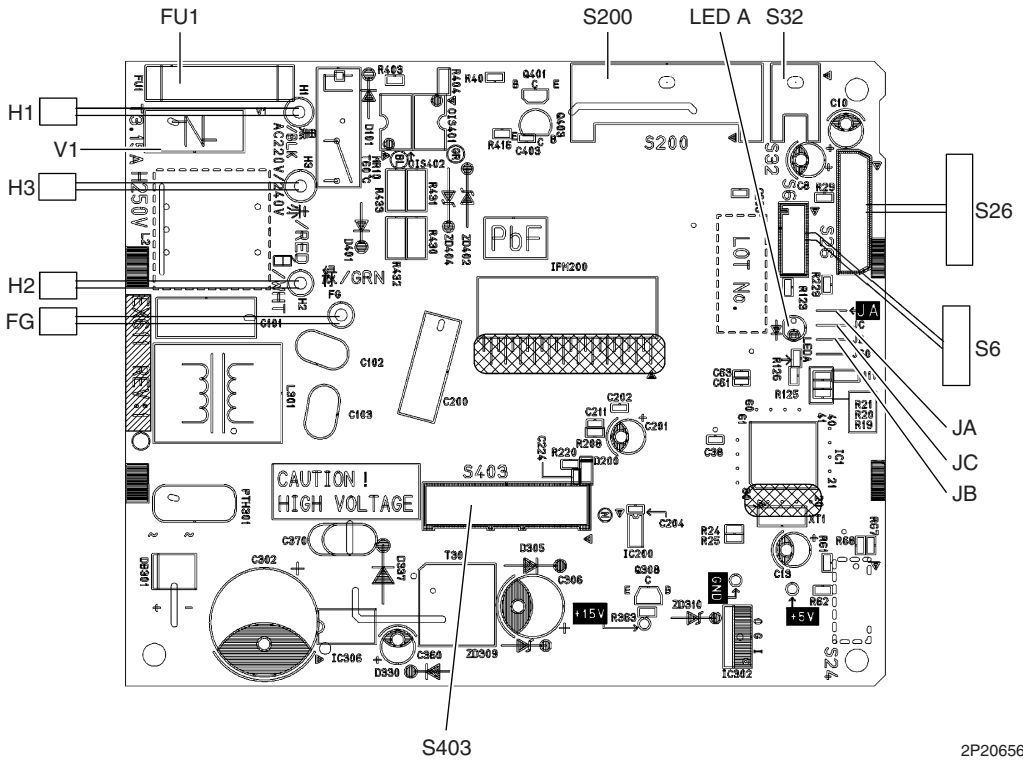


3EB86013-1

1.4 FTX20/25/35JV1B, FTX20/25/35J2V1B, ATX20/25/35JV1B, ATX20/25/35J2V1B

Control PCB

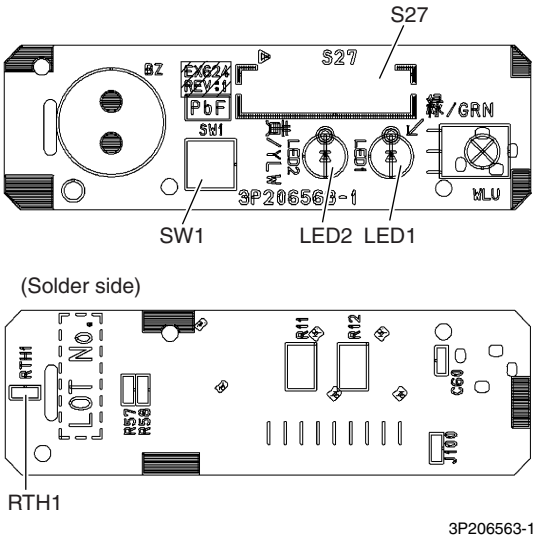
1)	S6	Connector for swing motor (horizontal blade)
2)	S26	Connector for display PCB
3)	S32	Connector for indoor heat exchanger thermistor
4)	S200	Connector for fan motor
5)	S403	Connector for adaptor PCB (option)
6)	H1, H2, H3, FG	Connector for terminal board
7)	V1	Varistor
8)	JA	Address setting jumper
		∗ Refer to page 226 for detail.
9)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function (auto-restart)
		∗ Refer to page 230 for detail.
10)	LED A	LED for service monitor (green)
11)	FU1 (F1U)	Fuse (3.15 A, 250 V)



Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Display PCB

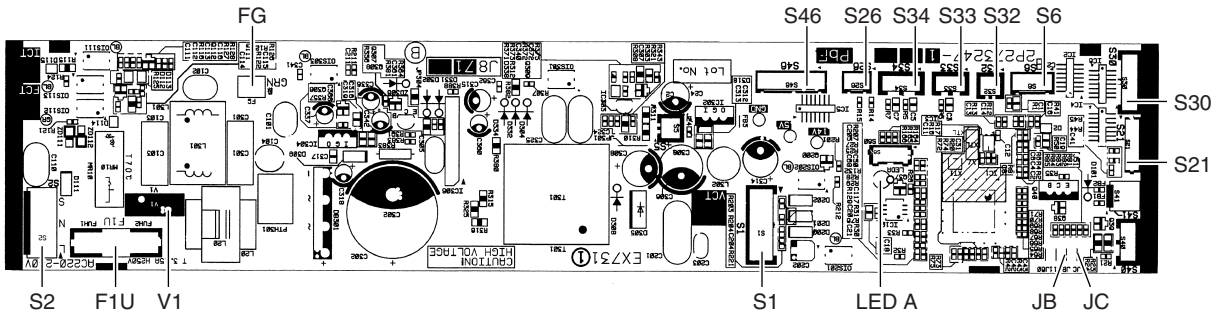
1) S27 Connector for control PCB
2) SW1 (S1W) Forced operation [ON/OFF] button
3) LED1 (H1P) LED for operation (green)
4) LED2 (H2P) LED for timer (yellow)
5) RTH1 (R1T) Room temperature thermistor



1.5 FVXG25/35/50K2V1B

Main PCB

1)	S1	Connector for fan motor
2)	S2	Connector for terminal board
3)	S6	Connector for swing motor
4)	S21	Connector for centralized control (HA)
5)	S26	Connector for service PCB
6)	S30	Connector for indoor electronic expansion valve coil (motor operated valve coil)
7)	S32	Connector for indoor heat exchanger thermistor
8)	S33	Connector for room temperature thermistor
9)	S34	Connector for radiant panel thermistors
10)	S46	Connector for display PCB
11)	FG	Connector for earth
12)	V1	Varistor
13)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function * Refer to page 230 for detail.
14)	F1U	Fuse (3.15A, 250V)
15)	LED A	LED for service monitor (green)

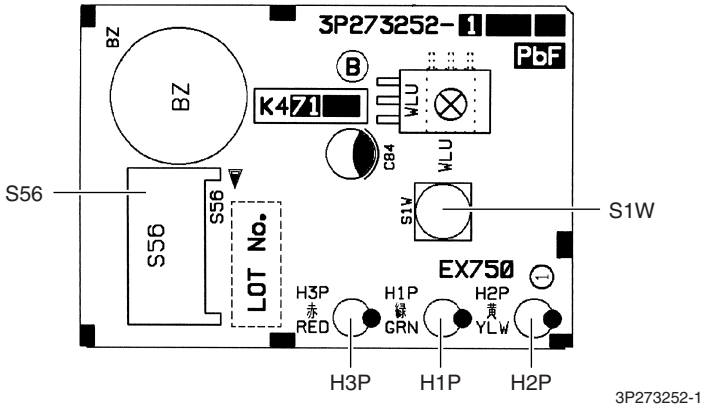


2P273247-1

Caution **Replace the PCB if you accidentally cut the jumpers other than JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

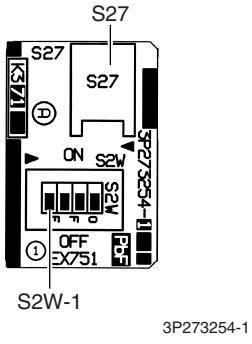
Display PCB

1) S56 Connector for main PCB
2) S1W Forced cooling operation [ON/OFF] button
3) H1P LED for operation (green)
4) H2P LED for timer (yellow)
5) H3P LED for RADIANT operation (red)



Service PCB

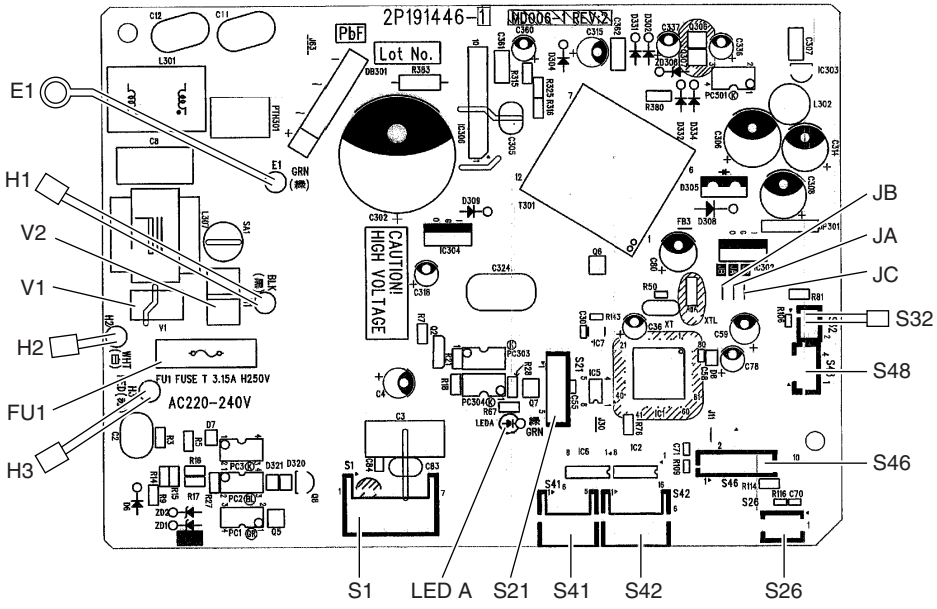
1) S27 Connector for main PCB
2) S2W-1 Address setting switch
   * Refer to page 226 for detail.
   * Keep the other switches as factory setting.



1.6 FVXS25/35/50FV1B

Control PCB

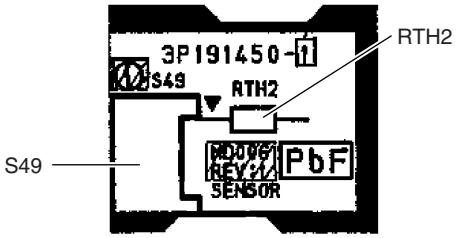
1)	S1	Connector for fan motor
2)	S21	Connector for centralized control (HA)
3)	S26	Connector for service PCB
4)	S32	Indoor heat exchanger thermistor
5)	S41	Connector for lower air outlet motor
6)	S42	Connector for swing motor
7)	S46	Connector for display PCB
8)	S48	Connector for sensor PCB
9)	H1, H2, H3	Connector for terminal board
10)	E1	Terminal for earth
11)	V1, V2	Varistor
12)	JA	Address setting jumper ∗ Refer to page 226 for detail.
13)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function ∗ Refer to page 230 for detail.
14)	FU1 (F1U)	Fuse (3.15A, 250V)
15)	LED A	LED for service monitor (green)



Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Sensor PCB

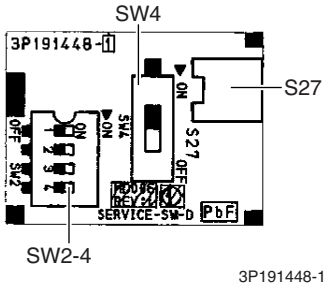
1) S49 Connector for control PCB
2) RTH2 (R1T) Room temperature thermistor



3P191450-1

Service PCB

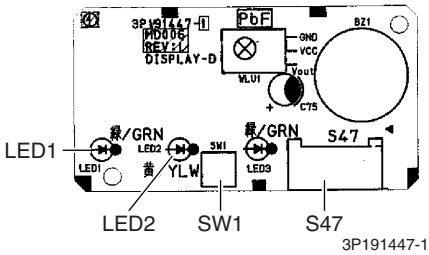
1) S27 Connector for control PCB
2) SW2-4 Switch for upward airflow limit setting
   * Refer to page 230 for detail.
   * Keep the other switches as factory setting.
3) SW4 (S4W) Switch for airflow selection
   * Refer to page 57 for detail.



3P191448-1

Display PCB

1) S47 Connector for control PCB
2) SW1 (S1W) Forced operation [ON/OFF] button
3) LED1 (H1P) LED for operation (green)
4) LED2 (H2P) LED for timer (yellow)



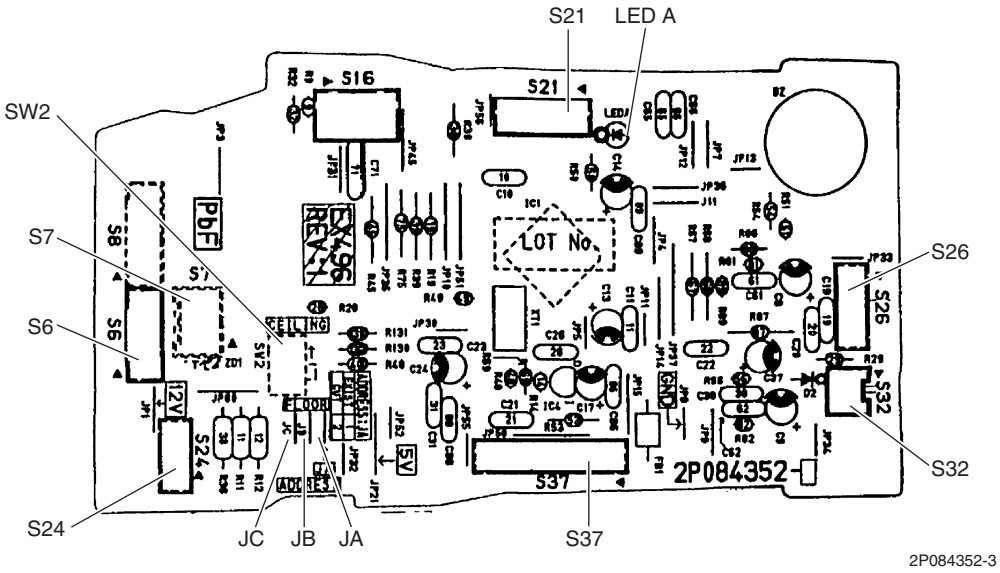
3P191447-1

★ LED3 does not function.

1.7 FLXS25/35/50BAVMB

Control PCB

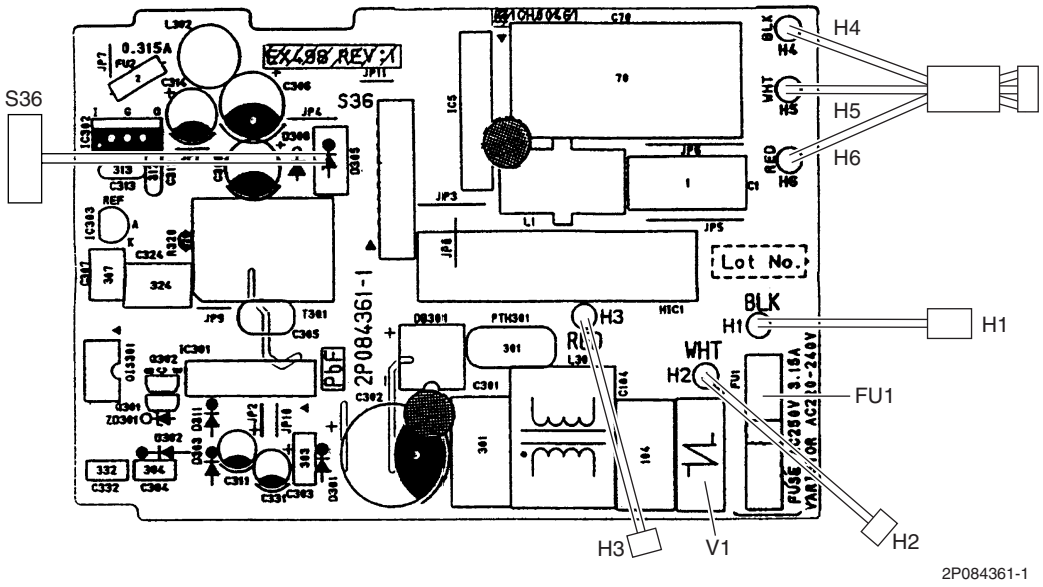
1)	S6	Connector for swing motor (horizontal swing)
2)	S7	Connector for AC fan motor
3)	S21	Connector for centralized control (HA)
4)	S24	Connector for display PCB
5)	S26	Connector for signal receiver PCB
6)	S32	Connector for indoor heat exchanger thermistor
7)	S37	Connector for power supply PCB
8)	JA	Address setting jumper
		∗ Refer to page 226 for detail.
9)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function
		∗ Refer to page 230 for detail.
10)	SW2	Select switch for installation (ceiling or floor)
		∗ Refer to page 230 for detail.
11)	LED A	LED for service monitor (green)



Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

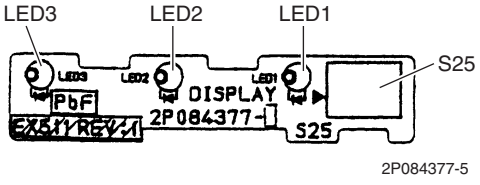
Power Supply PCB

1) S36 Connector for control PCB
2) H1, H2, H3 Connector for terminal board
3) H4, H5, H6 Connector for AC fan motor
4) V1 Varistor
5) FU1 Fuse (3.15A, 250V)



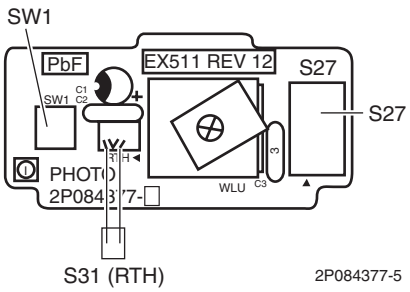
Display PCB

1) S25 Connector for control PCB
2) LED1 (H1P) LED for operation (green)
3) LED2 (H2P) LED for timer (yellow)
4) LED3 (H3P) LED for HOME LEAVE operation (red)



Signal Receiver PCB

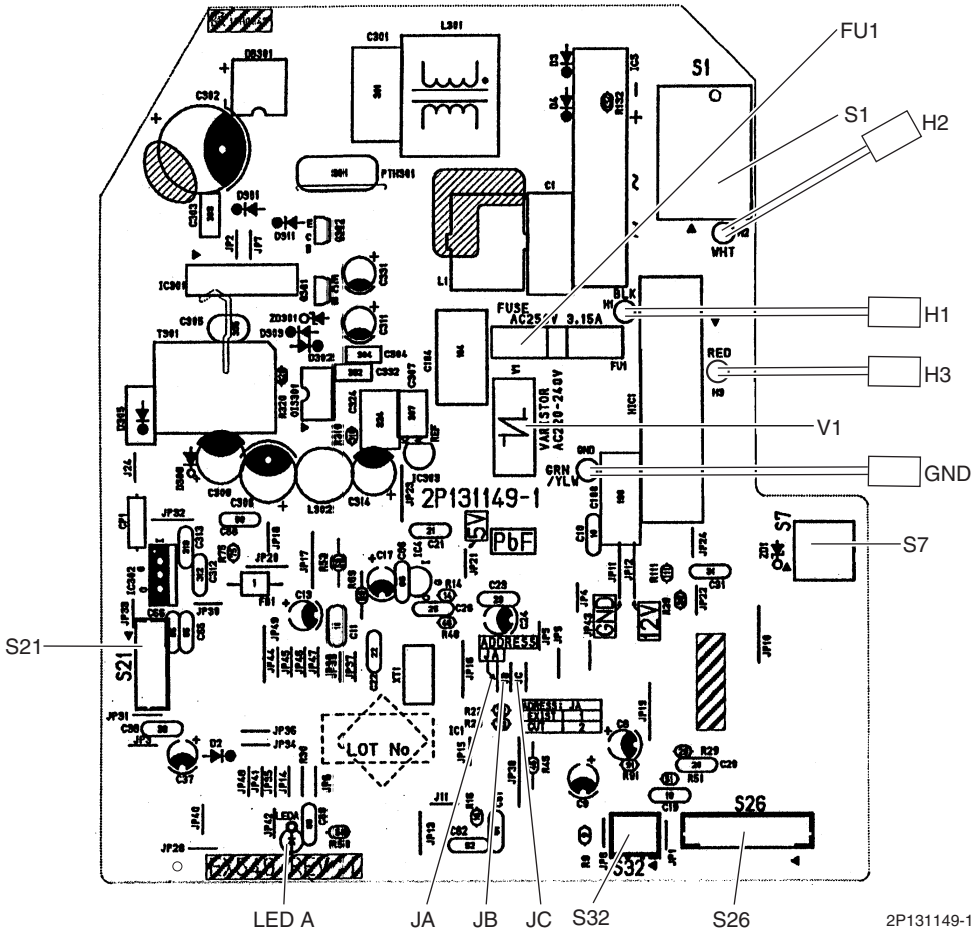
1) S27 Connector for control PCB
2) S31 (RTH) Room temperature thermistor
3) SW1 (S1W) Forced operation [ON/OFF] button



1.8 FDXS25/35EAVMB, FDXS25/35E7VMB, FDXS50CVMB, FDXS50C7VMB

Control PCB

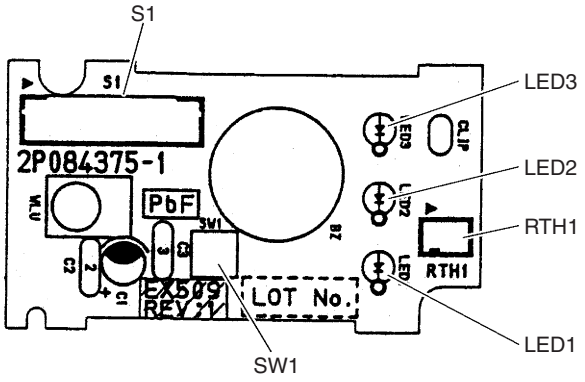
1)	S1	Connector for AC fan motor
2)	S7	Connector for AC fan motor (Hall IC)
3)	S21	Connector for centralized control (HA)
4)	S26	Connector for display PCB
5)	S32	Connector for indoor heat exchanger thermistor
6)	H1, H2, H3	Connector for terminal board
7)	GND	Connector for terminal board (earth)
8)	JA	Address setting jumper ∗ Refer to page 226 for detail.
9)	JB	Fan speed setting when compressor stops for thermostat OFF
	JC	Power failure recovery function (auto-restart) ∗ Refer to page 230 for detail.
10)	LED A	LED for service monitor (green)
11)	FU1 (F1U)	Fuse (3.15A, 250V)
12)	V1 (V1TR)	Varistor



Caution **Replace the PCB if you accidentally cut the jumpers other than JA, JB and JC.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Display PCB

1) S1 Connector for control PCB
2) SW1 (S1W) Forced operation [ON/OFF] button
3) LED1 (H1P) LED for HOME LEAVE operation (red)
4) LED2 (H2P) LED for timer (yellow)
5) LED3 (H3P) LED for operation (green)
6) RTH1 (R1T) Room temperature thermistor

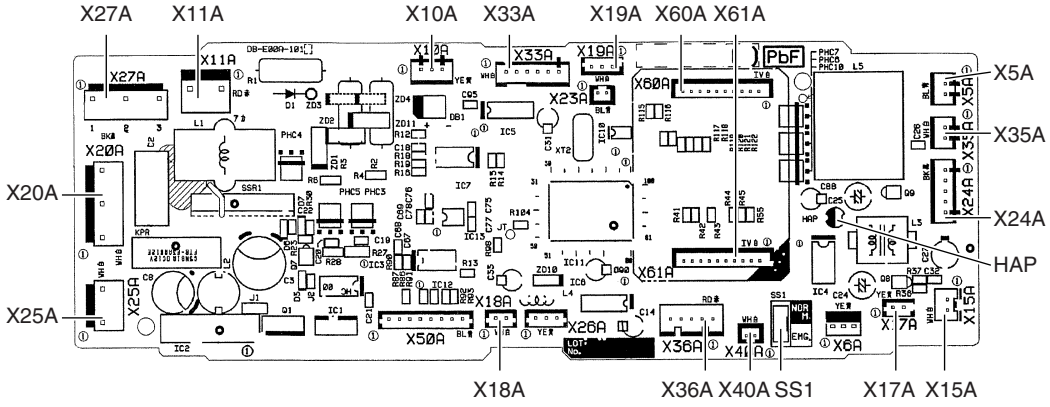


2P084375-1

1.9 FFQ25/35/50B8V1B, FFQ25/35/50B9V1B

Control PCB

1)	X5A	Connector for terminal board (for wired remote controller)
2)	X10A, X11A	Connector for transformer
3)	X15A	Connector for float switch
4)	X17A, X18A	Connector for indoor 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 board (for inter-unit wiring)
10)	X33A	Connector for wiring adaptor PCB (option)
11)	X35A	Connector for group control adaptor (option)
12)	X36A	Connector for swing motor
13)	X40A	Connector for ON/OFF input from outside (option)
14)	X60A, X61A	Connector for interface adaptor (option)
15)	HAP	LED for service monitor (green)
16)	SS1	Selector switch for emergency



2P095006-8
2P197080-6

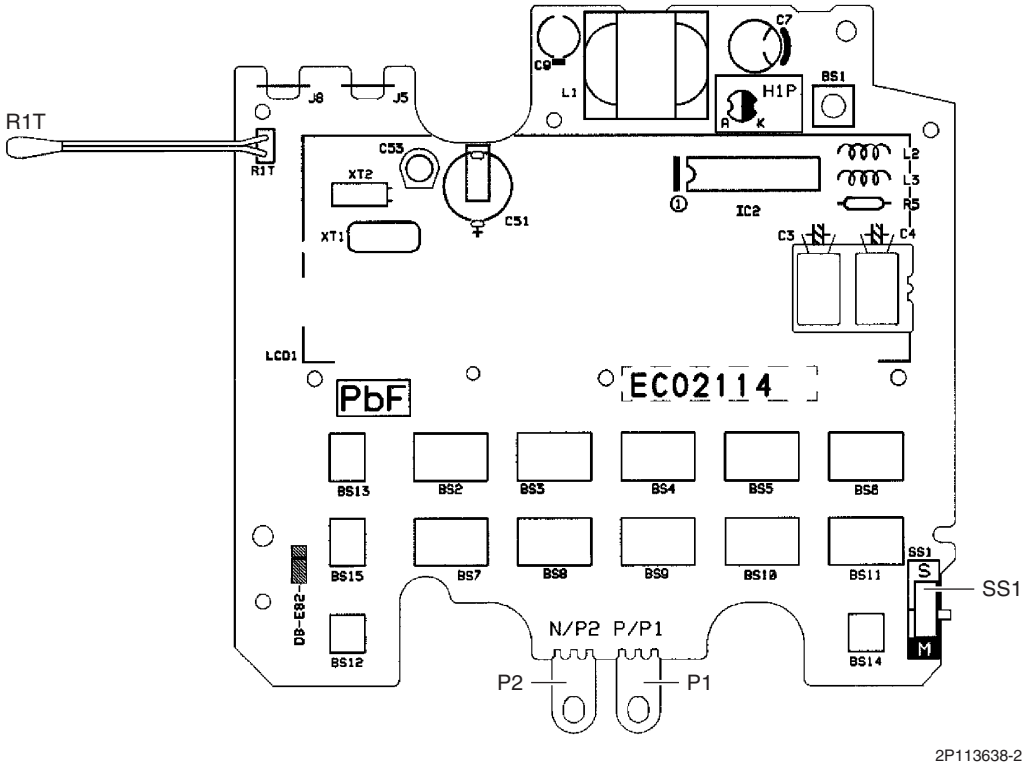
2. Wired Remote Controller

2.1 BRC1D528

PCB Detail

1) P1, P2 Terminal for indoor unit
2) R1T Room temperature thermistor
3) SS1 MAIN / SUB setting switch

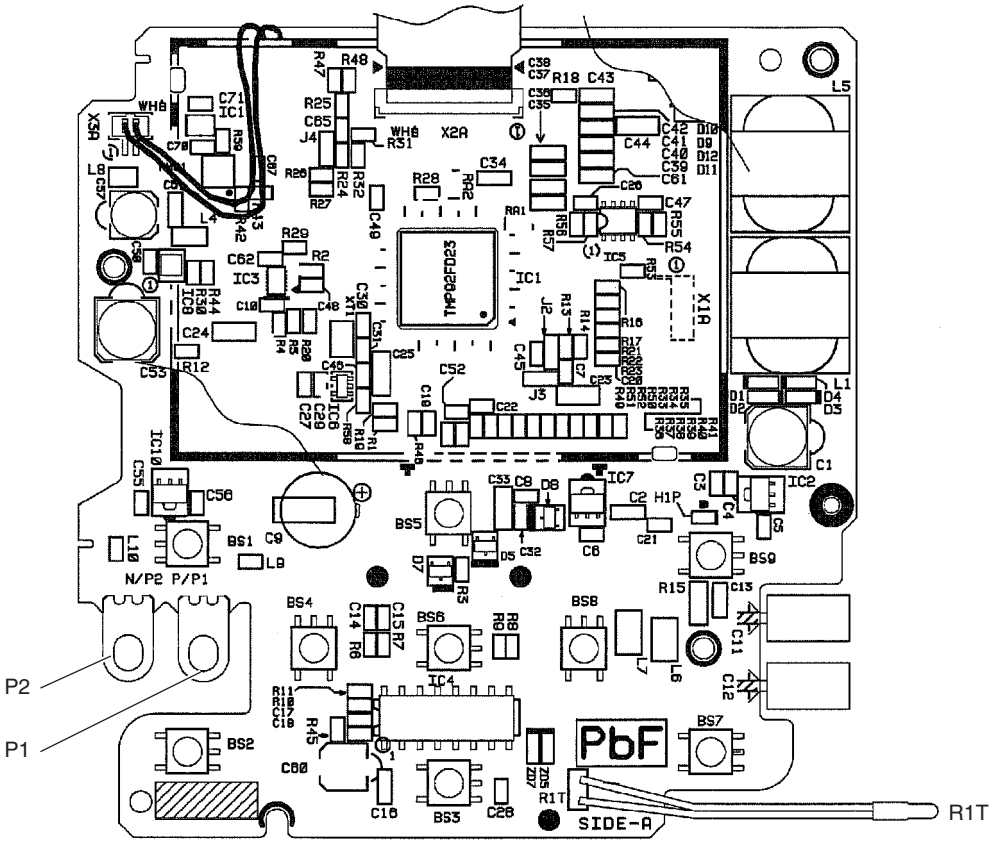
∗ Refer to page 235 for detail.



2.2 BRC1E51A7

PCB Detail

1) P1, P2 Terminal for indoor unit
2) R1T Room temperature thermistor



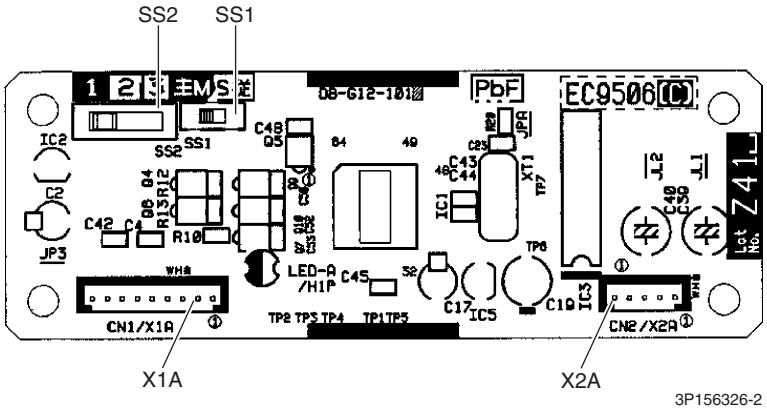
2P243326-1

3. Wireless Remote Controller

3.1 BRC7E530W

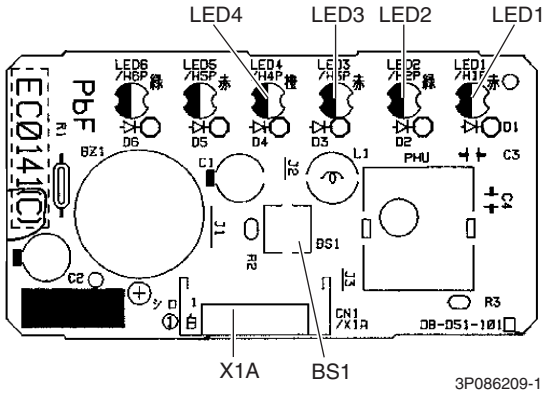
Signal Receiver PCB

1) X1A Connector for display PCB
2) X2A Connector for control PCB
3) SS1 MAIN / SUB setting switch
   SS2 Address setting switch
   ∗ Refer to page 236 for detail.



Display PCB

1) X1A Connector for signal receiver PCB
2) BS1 Forced operation [ON/OFF] button
3) LED1 (H1P) LED for operation (red)
4) LED2 (H2P) LED for timer (green)
5) LED3 (H3P) LED for filter cleaning sign (red)
6) LED4 (H4P) LED for defrost operation (orange)



★ LED5 and LED6 do not function.

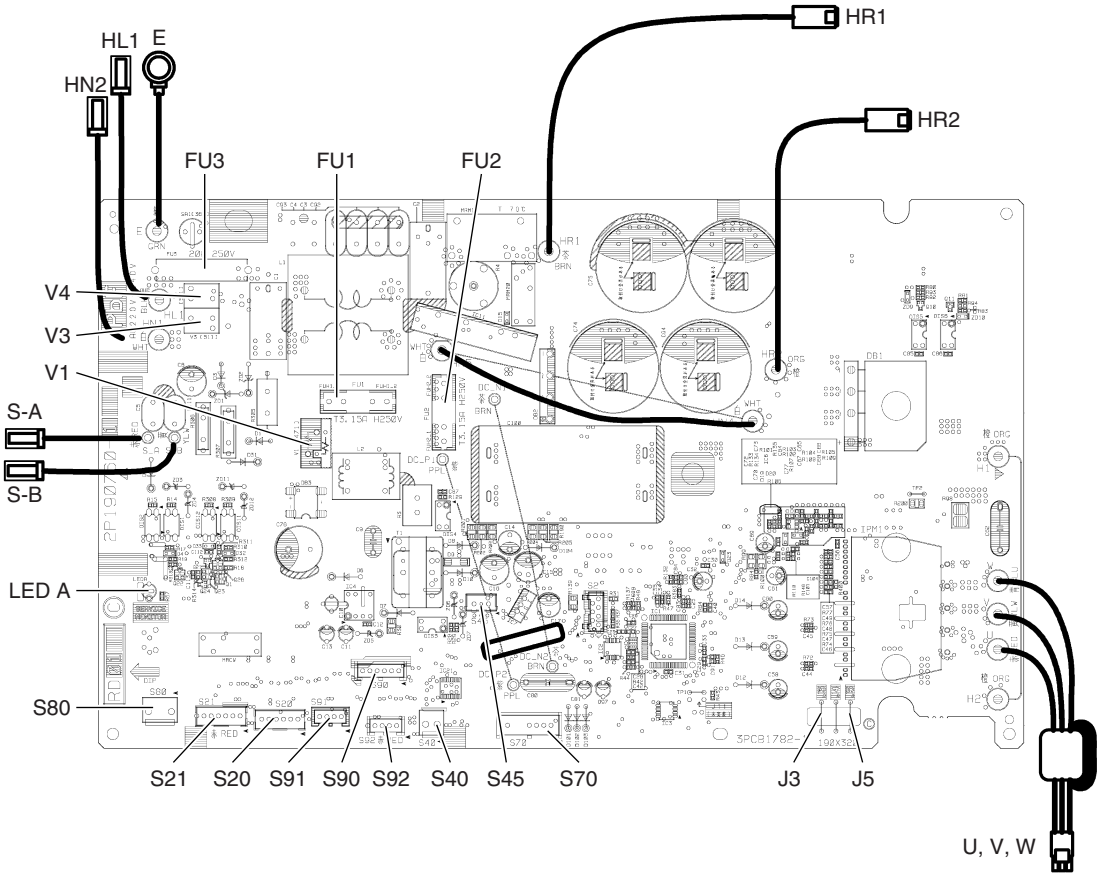
4. Outdoor Unit

PCB Detail

1)	S20	Connector for outdoor electronic expansion valve coil A port
2)	S21	Connector for outdoor electronic expansion valve coil B port
3)	S40	Connector for overload protector
4)	S45	Connector for terminal board (thermal fuse)
5)	S70	Connector for fan motor
6)	S80	Connector for four way valve coil
7)	S90	Connector for thermistors (outdoor temperature, outdoor heat exchanger, discharge pipe)
8)	S91	Connector for thermistors (gas pipe)
9)	S92	Connector for thermistors (liquid pipe)
10)	E	Terminal for earth (40 class)
	E2	Terminal for earth (50 class)
11)	HL1, HN1	Connector for terminal board (power supply)
12)	HR1, HR2	Connector for reactor
13)	S-A	Connector for terminal board (room A - outdoor transmission)
14)	S-B	Connector for terminal board (room B - outdoor transmission)
15)	U, V, W	Connector for compressor
16)	LED A	LED for service monitor (green)
17)	FU1, FU2	Fuse (3.15 A / 250 V)
18)	FU3	Fuse (30 A / 250 V)
19)	J3	Jumper for ECONO operation prohibition setting * Refer to page 239 for detail.
20)	J5	Jumper for improvement of defrost performance * Refer to page 239 for detail.
21)	V1, V3, V4	Varistor

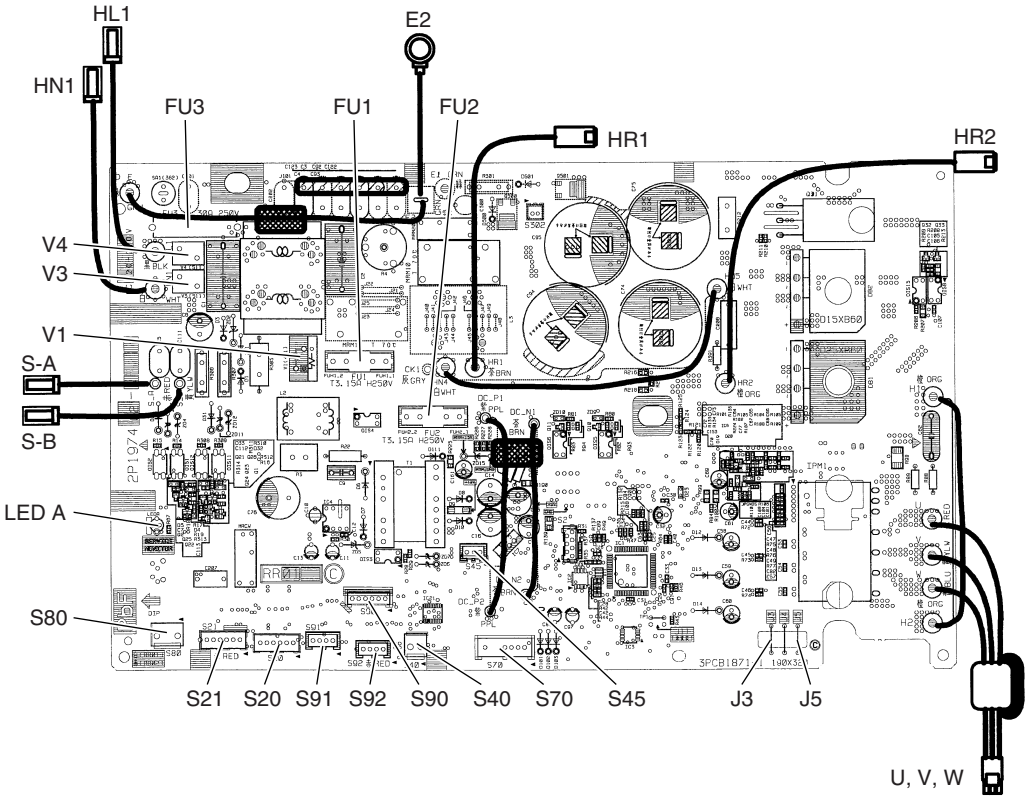
Caution **Replace the PCB if you accidentally cut the jumpers other than J3 and J5.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

40 class



2P190760-2
2P190760-3

50 class



2P197402-1
2P197402-3

Part 4
Function and Control

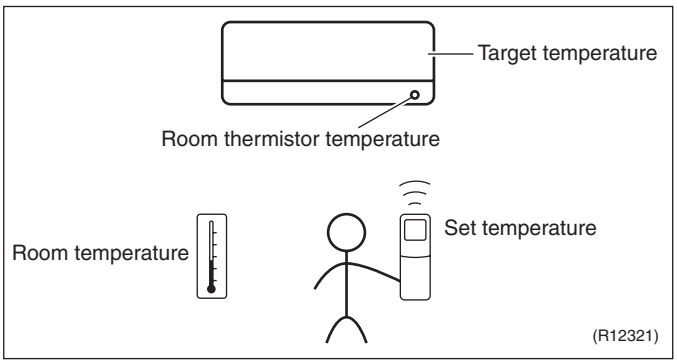
1. Function of RA Indoor Unit

1.1 Temperature Control

Definitions of Temperatures

The definitions of temperatures are classified as following.

- Room temperature: temperature of lower part of the room
- Set temperature: temperature set by remote controller
- Room thermistor temperature: temperature detected by room temperature thermistor
- Target temperature: temperature determined by microcomputer



★The illustration is for wall mounted type as representative.

Temperature Control

The temperature of the room is detected by the room temperature thermistor. However, there is difference between the “temperature detected by room temperature thermistor” and the “temperature of lower part of the room”, depending on the type of the indoor unit or installation condition. Practically, the temperature control is done by the “target temperature appropriately adjusted for the indoor unit” and the “temperature detected by room temperature thermistor”.

1.2 Frequency Principle

Main Control Parameters

The frequency of the compressor is controlled by the following 2 parameters:

- The load condition of the operating indoor unit
- The difference between the room thermistor temperature and the target temperature

Additional Control Parameters

The target frequency is adapted by additional parameters in the following cases:

- Frequency restrictions
- Initial settings
- Forced cooling operation

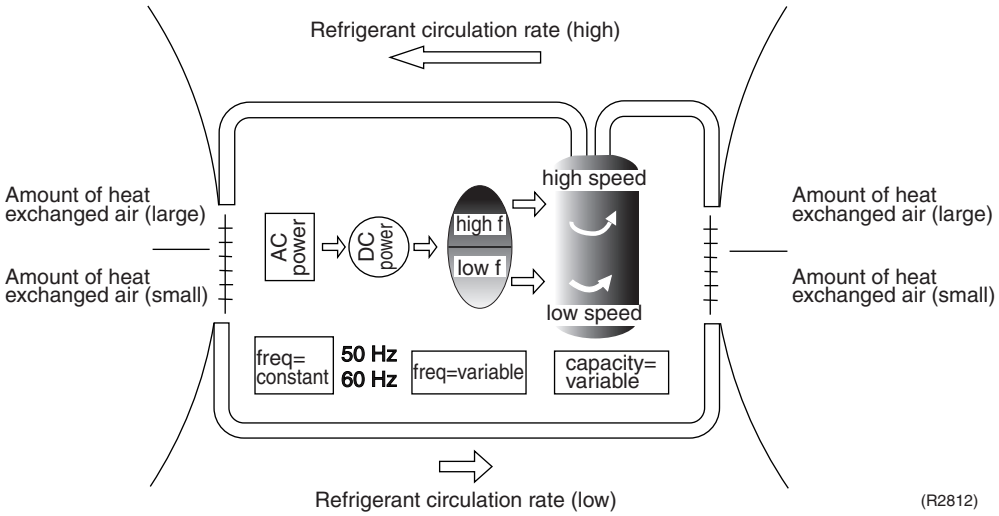
Inverter Principle

To regulate the capacity, a frequency control is needed. The inverter makes it possible to vary the rotation speed of the compressor. The following table explains the conversion principle:

Phase	Description
1	The supplied AC power source is converted into the DC power source for the present.
2	The DC power source is reconverted into the three phase AC power source with variable frequency. ■ When the frequency increases, the rotation speed of the compressor increases resulting in an increased refrigerant circulation. This leads to a higher amount of the heat exchange per unit. ■ When the frequency decreases, the rotation speed of the compressor decreases resulting in a decreased refrigerant circulation. This leads to a lower amount of the heat exchange per unit.

Drawing of Inverter

The following drawing shows a schematic view of the inverter principle:



Inverter Features

The inverter provides the following features:

- The regulating capacity can be changed according to the changes in the outdoor temperature and cooling / heating load.
- Quick heating and quick cooling
  The rotation speed of the compressor is increased when starting the heating (or cooling). This enables to reach the set temperature quickly.
- Even during extreme cold weather, high capacity is achieved. It is maintained even when the outdoor temperature is 2°C.
- Comfortable air conditioning
  A fine adjustment is integrated to keep the room temperature constant.
- Energy saving heating and cooling
  Once the set temperature is reached, the energy saving operation enables to maintain the room temperature at low power.

Frequency Limits

The following functions regulate the minimum and maximum frequency:

Frequency	Functions
Low	■ Four way valve operation compensation. Refer to page 94.
High	■ Compressor protection function. Refer to page 95. ■ Discharge pipe temperature control. Refer to page 95. ■ Input current control. Refer to page 96. ■ Freeze-up protection control. Refer to page 96. ■ Heating peak-cut control. Refer to page 97. ■ Defrost control. Refer to page 99.

Forced Cooling Operation

Refer to page 220 for detail.

1.3 Operation Starting Control

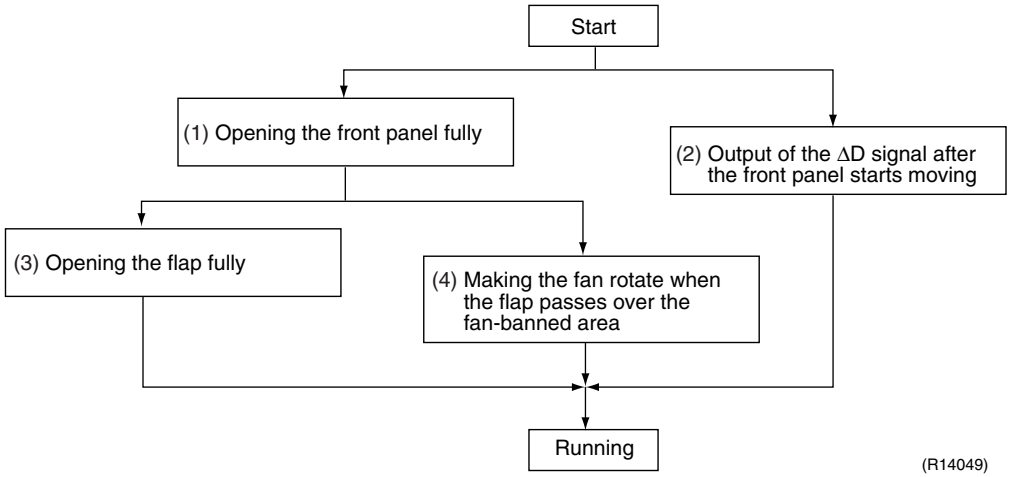
Outline

Wall Mounted Type: FTXG Series

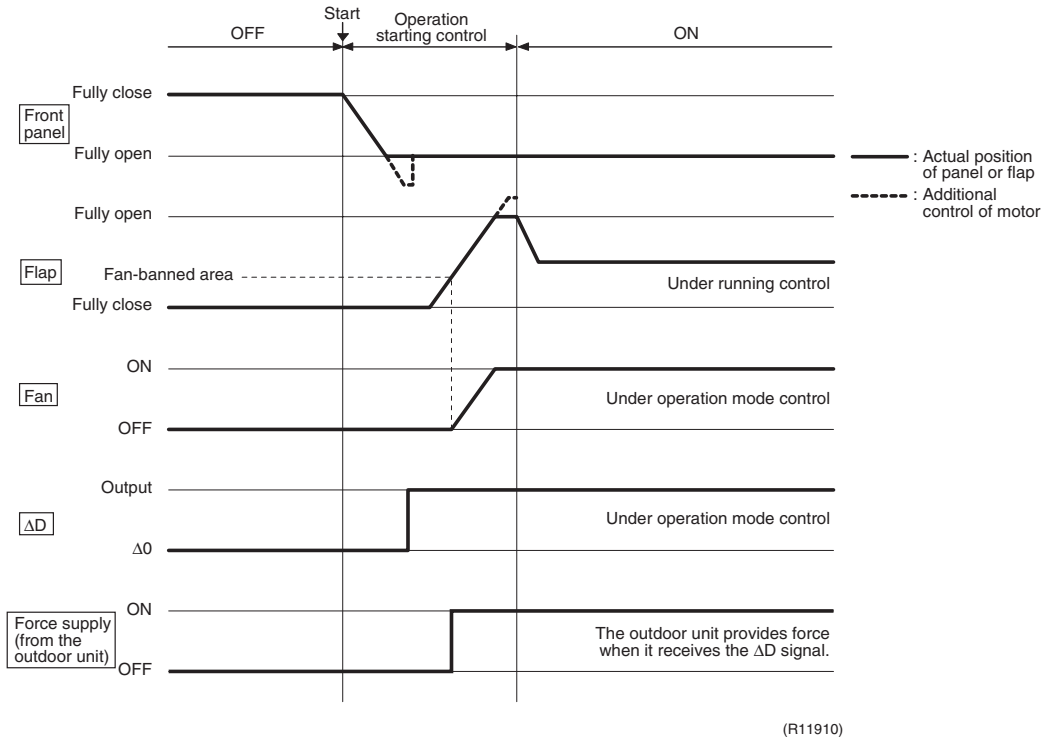
The system carries out the following control at the beginning to conduct every functional parts properly.

1. Opening the front panel fully
2. Output of the ΔD signal after the front panel starts moving
3. Opening the flap fully after the front panel opens fully
4. Making the fan rotate when the flap passes over the fan-banned area

Control Flow



Timing Chart



1.4 Airflow Direction Control

Power-Airflow Dual Flaps

The large flap sends a large volume of air downward to the floor and provides an optimum control in cooling, dry, and heating operation.

<Cooling / Dry>
During cooling or dry operation, the flap retracts into the indoor unit. Then, cool air can be blown far and distributed all over the room.

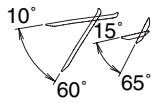
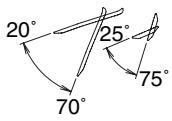
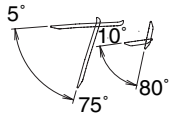
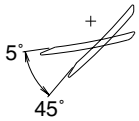
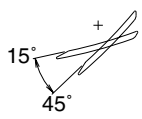
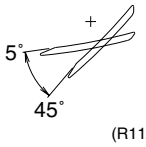
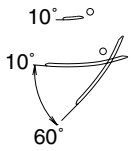
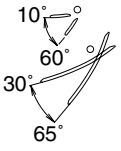
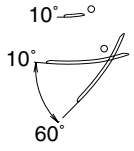
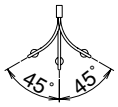
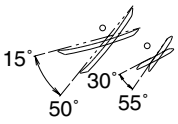
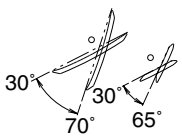
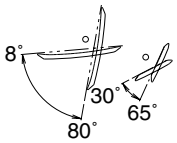
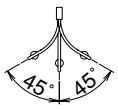
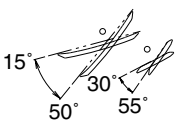
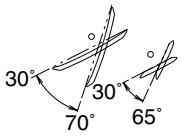
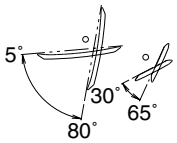
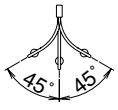
<Heating>
During heating operation, the large flap directs airflow downward to spread the warm air to the entire room.

Wide-Angle Louvers

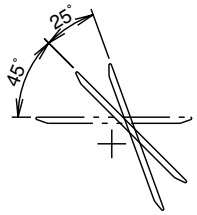
The louvers, made of elastic synthetic resin, provide a wide range of airflow that guarantees a comfortable air distribution.

Auto-Swing

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

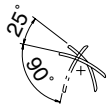
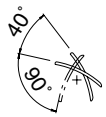
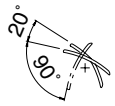
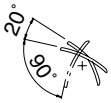
Series	Vertical Swing (up and down)			Horizontal Swing (right and left)
	Cooling / Dry	Heating	Fan	
FTXG	 (R11662)	 (R11664)	 (R11663)	—
CTXS FTXS20/25K FTX, ATX	 (R11256)	 (R11257)	 (R11256)	—
FTXS35/42/ 50K	 (R18422)	 (R18423)	 (R18422)	 (R11404)
FTXS-J	 (R12182)	 (R11402)	 (R14208)	 (R11404)
ATXS	 (R12182)	 (R11402)	 (R11403)	 (R11404)

Floor Standing Type: FVXG Series
The swinging range of the flap is the same in any operation mode.

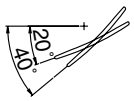
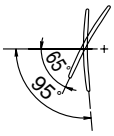
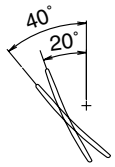
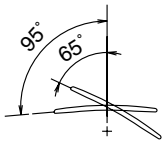


(R14634)

Floor Standing Type: FVXS Series

	Vertical Swing (up and down)	
	Cooling / Dry	Heating
Upward airflow limit OFF	 (R6831)	 (R6829)
Upward airflow limit ON	 (R6832)	 (R6830)

Floor / Ceiling Suspended Dual Type

	Vertical Swing (up and down)	
	Cooling / Dry / Fan	Heating
Ceiling	 (R2964)	 (R2963)
Floor	 (R2967)	 (R2966)

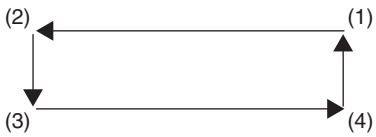
3-D Airflow

Wall Mounted Type: FTXS35/42/50K, FTXS-J, ATXS Series

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 automatic mode, the airflow becomes 3-D airflow. The horizontal and vertical swing motions are alternated and the airflow direction changes in the order shown in the following diagram.

(1): The vertical blades (louvers) move from the right to the left.
(2): The horizontal blades (flaps) move downward.
(3): The vertical blades (louvers) move from the left to the right.
(4): The horizontal blades (flaps) move upward.



(R13554)

COMFORT AIRFLOW Operation

Wall Mounted Type

The vertical swing flap is controlled not to blow the air directly on the person in the room.

Cooling / Dry	Heating
 (R18417)	 (R18418)

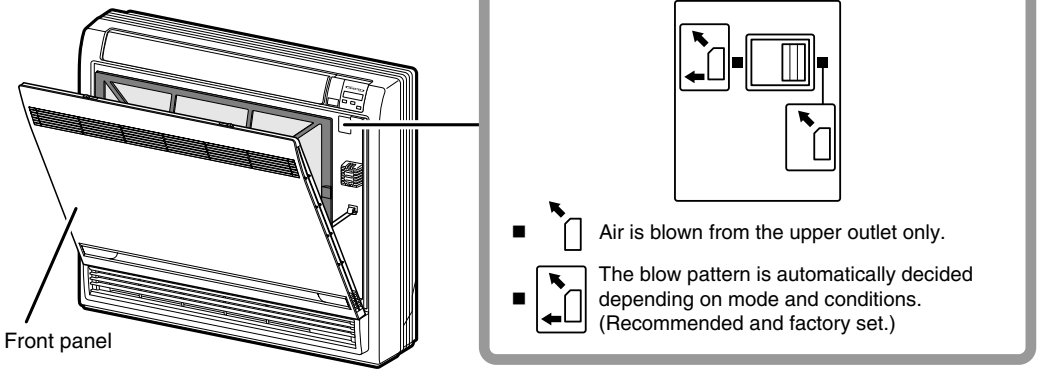
	A	B
FTXG	5°	75°
CTXS FTXS20/25K FTX ATX	0°	50°
FTXS35/42/ 50K	5°	70°
FTXS-J	8°	80°
ATXS	5°	80°

Airflow Selection Setting

Floor Standing Type: FVXS Series

Airflow direction can be set with the airflow selection switch.

- Open the front panel.



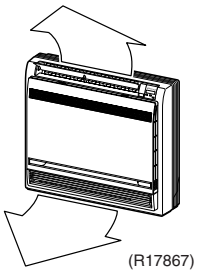
⚠ CAUTION

Before opening the front panel, be sure to stop the operation and turn the breaker off. Do not touch the aluminum fins (indoor heat exchanger) inside of the indoor unit, as it may result in injury.

(R17866)

When setting the airflow selection switch to .

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

Operating mode	Situation	Blowing pattern
Cooling operation	• When the room has become fully cool, or when 1 hour has passed since turning on the air conditioner.	• Air is blown from the upper air outlet, so that air does not come into direct contact with people, and room temperature is equalized.
	• At the start of operation or when the room is not fully cooled.	 (R17867) • Air is blown from the upper and lower air outlets for high speed cooling during cooling operation, and for filling the room with warm air during heating operation.
Heating operation	• Normal time	
	• At the start or when air temperature is low.	• Air is blown from the upper air outlet, so that air does not come into direct contact with people.

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

When setting the airflow selection switch to .

- Regardless of the operating mode or situation, air is blown from the upper air outlet.
- Use this switch when you do not want air coming out of the lower air outlet. (e.g., while sleeping)

1.5 Fan Speed Control for Indoor Unit

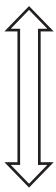
Outline

Phase control and fan speed control contains 9 steps: LLL, LL, SL, L, ML, M, MH, H, and HH. The airflow rate can be automatically controlled depending on the difference between the room thermistor temperature and the target 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 161, 164.

Automatic Fan Speed Control

In automatic fan speed operation, the step “SL” is not available.

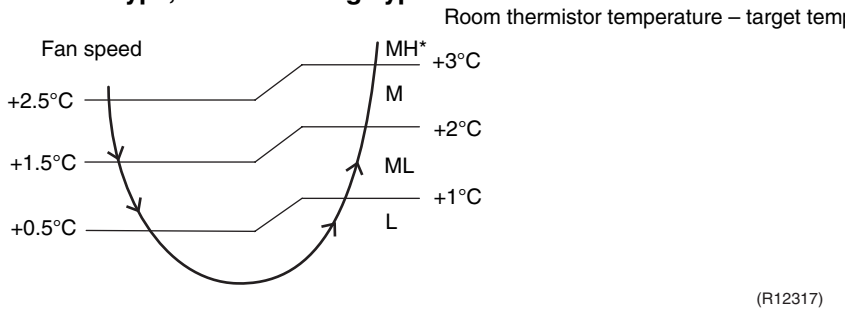
	Wall Mounted Type Floor Standing Type		Floor / Ceiling Suspended Dual Type Duct Connected Type	
Step	**Cooling**	**Heating**	**Cooling**	**Heating**
LLL	 (R11681)	 (R6834)	 (R6833)	 (R6834)
LL				
L				
ML				
M				
MH				
H				
HH (POWERFUL)				

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

<Cooling>

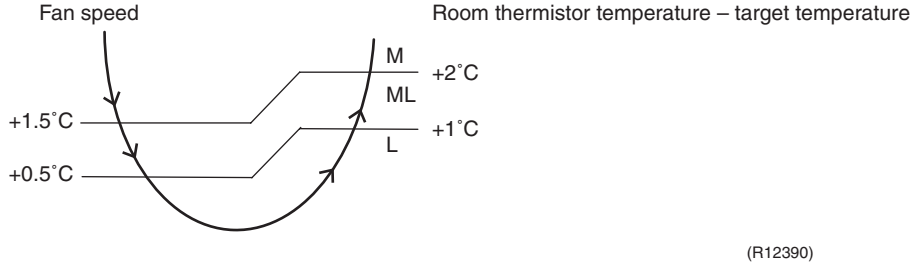
The following drawing explains the principle of fan speed control for cooling.

Wall Mounted Type, Floor Standing Type



*The upper limit is M tap in 30 minutes from the operation start.

Floor / Ceiling Suspended Dual Type, Duct Connected Type



<Heating>

On heating operation, the fan speed is regulated according to the indoor heat exchanger temperature and the difference between the room thermistor temperature and the target temperature.

Note:
1. During POWERFUL operation, the fan rotates at H tap + 40 ~ 80 rpm.
2. The fan stops during defrost operation.

COMFORT AIRFLOW Operation

Wall Mounted Type

- The fan speed is controlled automatically.
- The latest command has the priority between POWERFUL and COMFORT AIRFLOW.

1.6 RADIANT Operation

Outline

Floor Standing Type: FVXG Series
The RADIANT operation has 2 operation modes.

- RADIANT 1: RADIANT operation with heating
- RADIANT 2: RADIANT operation only

1.6.1 Indoor Electronic Expansion Valve (Motor Operated Valve) Control

Initializing with Power ON

The indoor electronic expansion valve is initialized when turning on the power.

Opening Limit Control

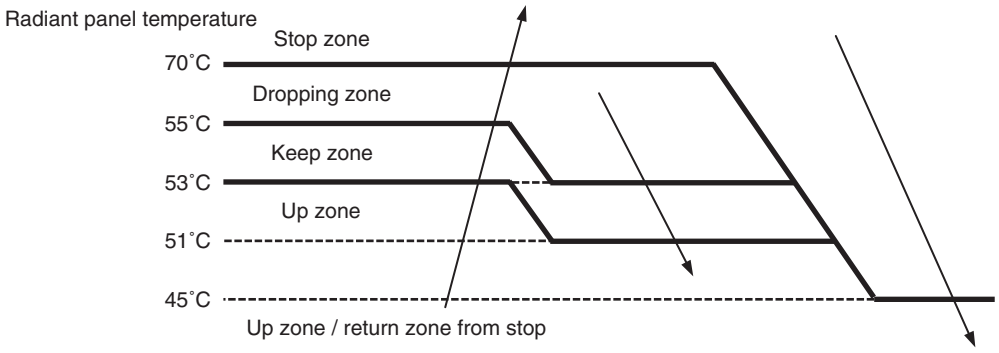
Opening limit control limits the opening of the indoor electronic expansion valve in order to keep a specified range during RADIANT operation.

Starting Operation Control

Starting operation control opens the indoor electronic expansion valve to a certain degree when starting RADIANT operation. The indoor electronic expansion valve is kept open for a certain period.

Target Panel Temperature Control

When the starting operation control finishes, the target panel temperature control starts and adjusts the opening of the indoor electronic expansion valve to achieve the target panel temperature. The panel temperature is categorized into stop, dropping, keep, up, and return zones.
(The target panel temperature is 55°C at maximum but it may be lower depending on the condition.)



Stop zone	Operation stops, the radiant panel temperature control is carried out.
Dropping zone	The opening of indoor electronic expansion valve decreases.
Keep zone	The opening of indoor electronic expansion valve is kept.
Up zone	The opening of indoor electronic expansion valve increases.
Return zone	Starting operation control is carried out.

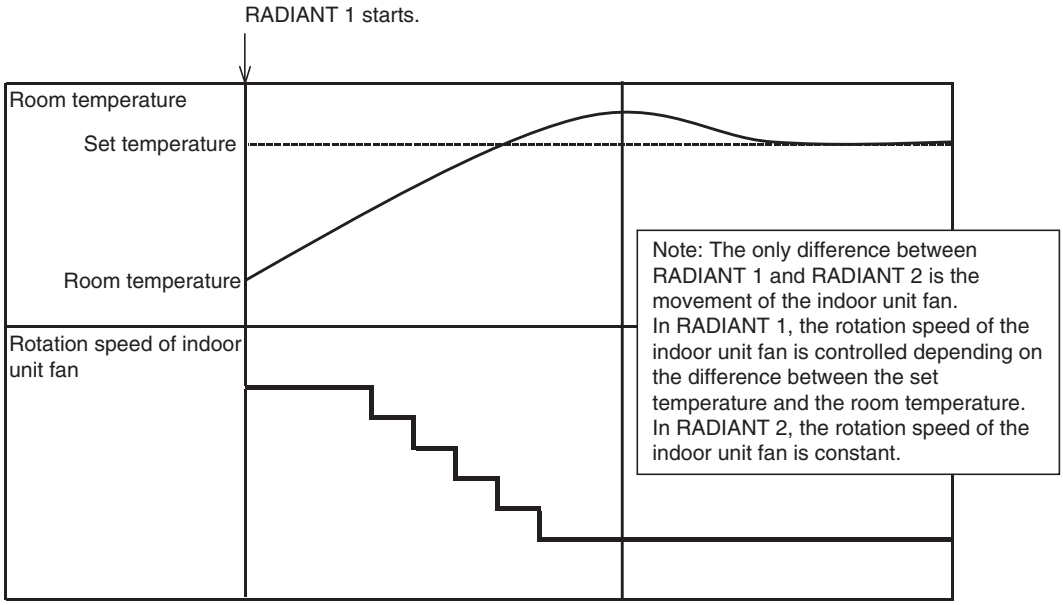
Operation Stop Control

■ **In case operation stops during RADIANT operation (including thermostat off)**
In case any of the following events occur while the indoor electronic expansion valve is open, the operation stop control makes the indoor electronic expansion valve close completely.

- Operation ON → OFF
- RADIANT 1 or RADIANT 2 is canceled.
- Thermostat off
- Defrost control

1.6.2 Indoor Unit Fan Control

The movement of the indoor unit fan is different whether in RADIANT 1 or RADIANT 2.



(R14637)

1.6.3 RADIANT Operation and Optional Function

Some optional function cannot be used with RADIANT 1 or RADIANT 2 at the same time.

Function	RADIANT 1	RADIANT 2
POWERFUL operation	available	not available
ECONO operation	not available	not available
OUTDOOR UNIT QUIET operation	not available	not available

1.7 Program Dry Operation

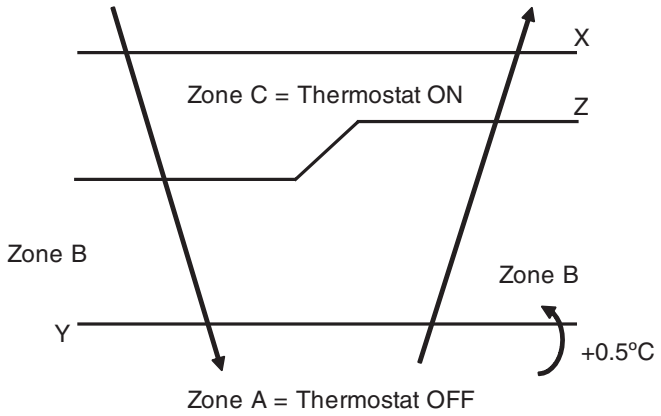
Outline

Program dry operation removes humidity while preventing the room temperature from lowering. Since the microcomputer controls both the temperature and airflow rate, the temperature adjustment and [FAN] adjustment buttons are inoperable.

Detail

The microcomputer automatically sets the temperature and airflow rate. The difference between the room thermistor temperature at start-up and the target temperature is divided into two zones. Then, the unit operates with an appropriate capacity for each zone to maintain the temperature and humidity at a comfortable level.

Room thermistor temperature at start-up	Target temperature X	Thermostat OFF point Y	Thermostat ON point Z
24°C or more	Room thermistor temperature at start-up	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.



(R11581)

1.8 Automatic Operation

Outline

Automatic Cooling / Heating Function

When the automatic operation is selected with the remote controller, the microcomputer automatically determines the operation mode as cooling or heating according to the room temperature and the set temperature at start-up.

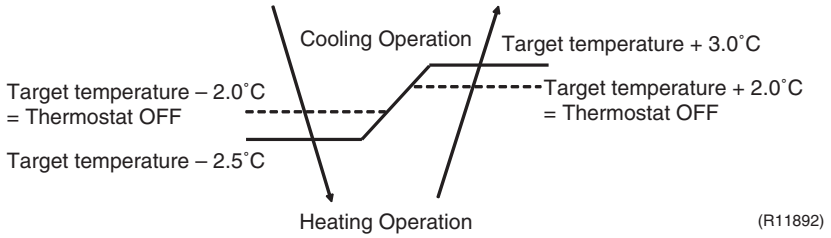
The unit automatically switches the operation mode to maintain the room temperature at the set temperature.

Detail

Ts: set temperature (set by remote controller)
Tt: target temperature (determined by microcomputer)
Tr: room thermistor temperature (detected by room temperature thermistor)
C: correction value

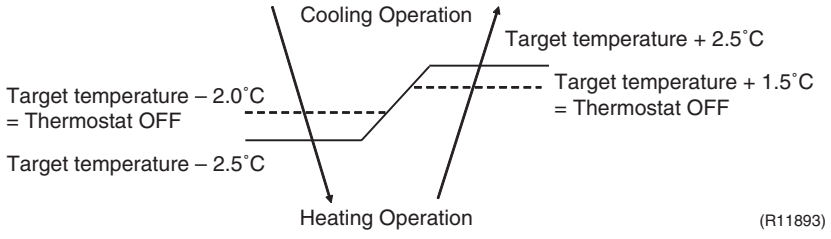
1. The set temperature (Ts) determines the target temperature (Tt).
   (Ts = 18 ~ 30°C).
2. The target temperature (Tt) is calculated as;
   Tt = Ts + C
   where C is the correction value.
   C = 0°C
3. Thermostat ON/OFF point and operation mode switching point are as follows.
   Tr means the room thermistor temperature.
   (1) Heating → Cooling switching point:
   Tr ≥ Tt + 3.0°C (FTXG, FTXS35/42/50K, FVXG series)
   Tr ≥ Tt + 2.5°C (other models)
   (2) Cooling → Heating switching point:
   Tr < Tt – 2.5°C
   (3) Thermostat ON/OFF point is the same as the ON/OFF point of cooling or heating operation.
4. During initial operation
   Tr ≥ Ts: Cooling operation
   Tr < Ts: Heating operation

FTXG, FTXS35/42/50K, FVXG Series



Ex: When the target temperature is 25°C
Cooling → 23°C: Thermostat OFF → 22°C: Switch to heating
Heating → 27°C: Thermostat OFF → 28°C: Switch to cooling

Other Models



Ex: When the target temperature is 25°C
Cooling → 23°C: Thermostat OFF → 22°C: Switch to heating
Heating → 26.5°C: Thermostat OFF → 27.5°C: Switch to cooling

1.9 Thermostat Control

Outline

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

Detail

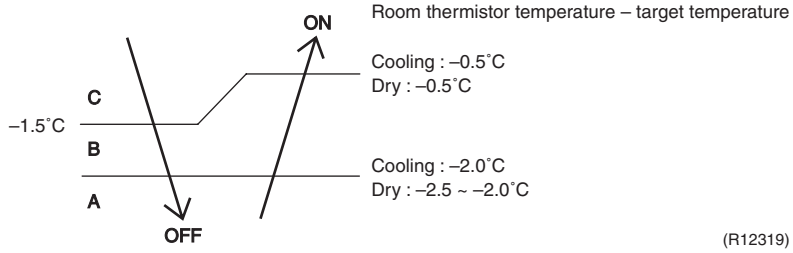
Thermostat OFF Condition

- The temperature difference is in the zone A.

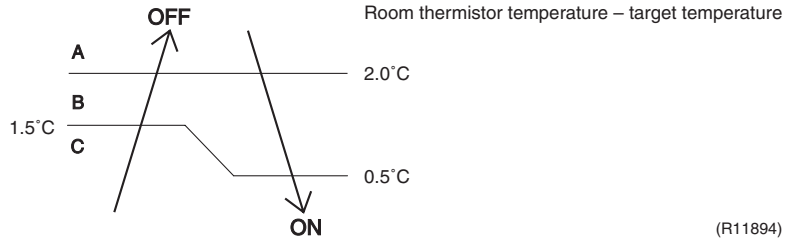
Thermostat ON Condition

- The temperature difference returns to 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 / Radiant : 10 seconds)

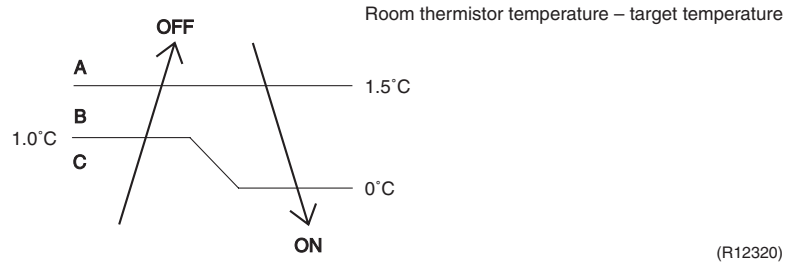
<Cooling / Dry>



<Heating / Radiant>
FTXG, FTXS35/42/50K, FVXG Series



Other Models



Refer to “Temperature Control” on page 52 for detail.

1.10 NIGHT SET Mode

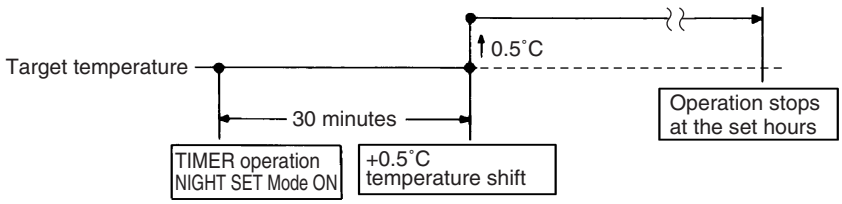
Outline

When the OFF timer is set, the NIGHT SET Mode is automatically activated. The NIGHT SET Mode keeps the airflow rate setting.

Detail

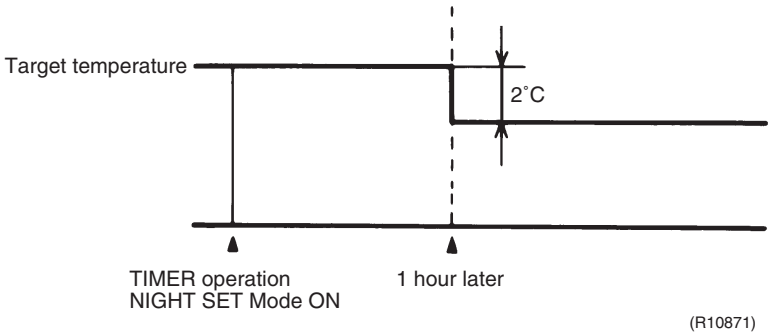
The NIGHT SET Mode continues operation at the target temperature for the first one hour, then automatically raises the target temperature slightly in the case of cooling, or lowers it slightly in the case of heating. This prevents excessive cooling in summer and excessive heating in winter to ensure comfortable sleeping conditions, and also conserves electricity.

<Cooling>



(R18034)

<Heating / Radiant>



(R10871)

1.11 ECONO Operation

Outline

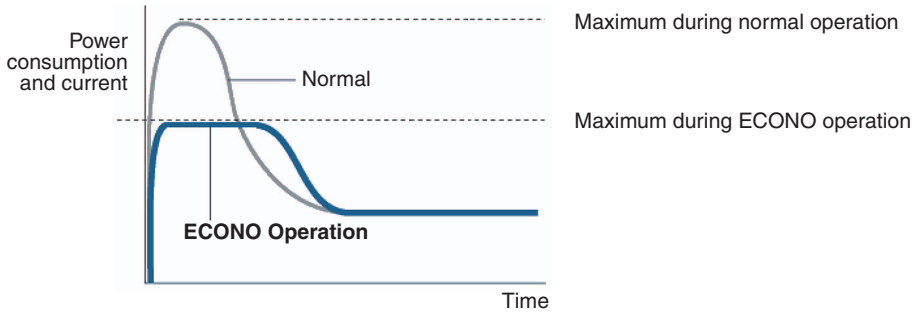
Wall Mounted Type, Floor Standing Type

The "ECONO operation" reduces the maximum operating current and the power consumption. This operation 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.

Detail

- When this function is activated, the maximum capacity also decreases.
- ECONO operation can only be set when the unit is running. Pressing the [ON/OFF] button on the remote controller cancels the function.
- ECONO operation is available when the unit is in cooling, heating, dry, or automatic operation and not available in RADIANT or FAN operation.
- ECONO operation and POWERFUL operation cannot be used at the same time. The latest command has the priority.



(R9288)

1.12 HOME LEAVE Operation

Outline

Floor / Ceiling Suspended Dual Type, Duct Connected Type

HOME LEAVE operation is a function that allows you to record your favorite set temperature and airflow rate. You can start your favorite operation mode simply by pressing the [HOME LEAVE] button on the remote controller.

Detail

1. Start of Function

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

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

2. Details of Function

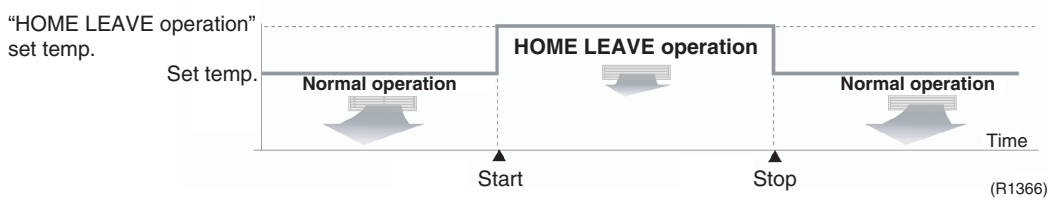
A mark representing HOME LEAVE is indicated on the display of the remote controller. The indoor unit is operated according to the set temperature and airflow rate for HOME LEAVE which were pre-set in the memory of the remote controller.

The LED (red) of indoor unit representing HOME LEAVE lights up. (It goes out when the operation is stopped.)

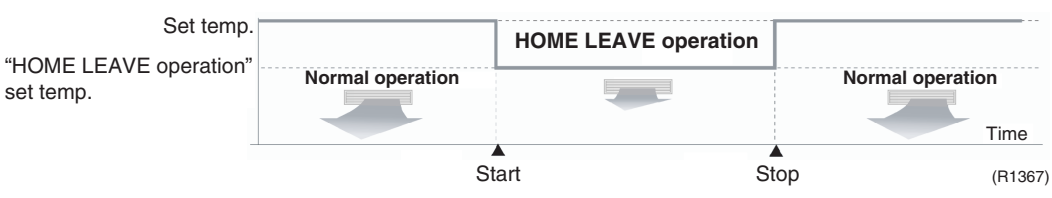
3. End of Function

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

<Cooling>



<Heating>



How to Set the Temperature and Airflow Rate

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

	Initial setting		Selectable range	
	Temperature	Airflow rate	Temperature	Airflow rate
Cooling	25°C	A	18 ~ 32°C	5 steps, A ,
Heating	25°C	A	10 ~ 30°C	5 steps, A ,

1. Press the [HOME LEAVE] button.
   Make sure [ ] is displayed on the remote controller display.
2. Adjust the temperature with ▲ or ▼ as you like.
3. Adjust the airflow rate with the [FAN] setting button as you like.

HOME LEAVE operation will run with these settings the next time you start HOME LEAVE operation. To change the recorded information, repeat steps 1 – 3.

Others

- The set temperature and airflow rate 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 airflow rate again for HOME LEAVE operation.
- The operation mode cannot be changed while HOME LEAVE operation is being used.

1.13 2-Area INTELLIGENT EYE Operation

Outline

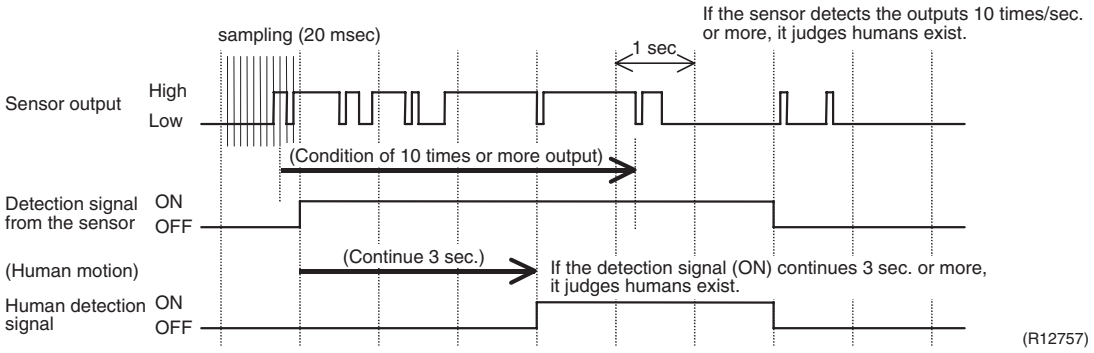
Wall Mounted Type: FTXS35/42/50K, FTXS-J Series

The following functions can be performed by a motion sensor (INTELLIGENT EYE).

1. Reduction of the capacity when there is nobody in the room in order to save electricity (energy saving operation)
2. Dividing the room into plural areas and detecting existence of humans in each area. Moving the airflow direction to the area with no human automatically to avoid direct airflow on humans.

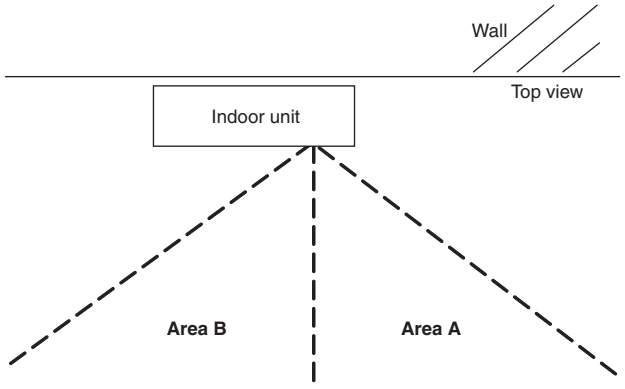
Detail

1. Detection method of INTELLIGENT EYE



- This sensor detects human motion by receiving infrared rays and displays the pulse wave output.
- The microcomputer in the 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 20 msec. × 10 = 200 msec.), and when the ON signal continues 3 sec., it judges human is in the room as the motion signal is ON
- 2-area INTELLIGENT EYE sensor is divided into 2 areas and detects humans in each area.

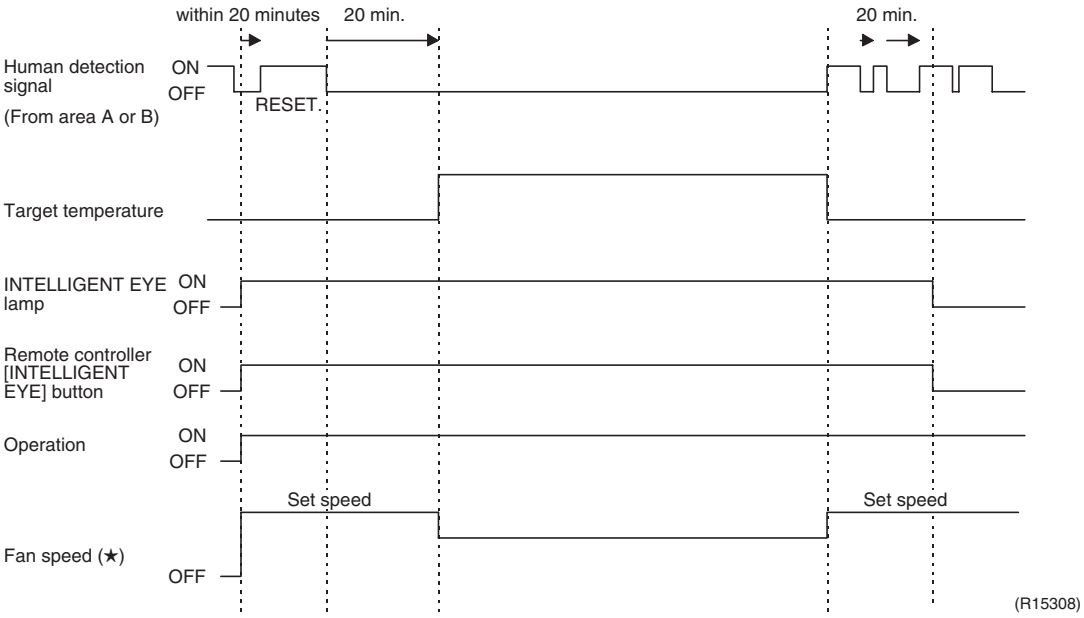
- Image of 2-area INTELLIGENT EYE



· A microcomputer judges human existence by the sensor signal from each area A and B.

(R12276)

2. Motions (for example: in cooling)

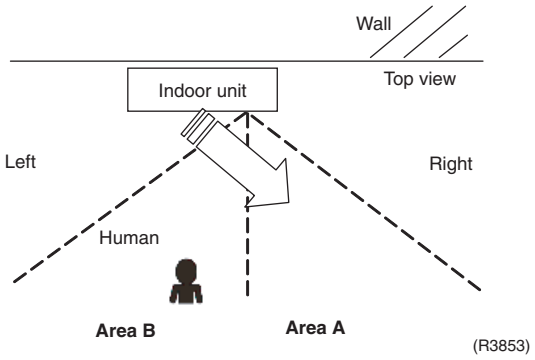


- When the microcomputer does not have a signal from the sensor in 20 minutes, it judges that nobody is in the room and operates the unit in temperature shifted from the target temperature. (Cooling / Dry : 2°C higher, Heating : 2°C lower, Auto : according to the operation mode at that time.)

★ In case of FAN operation, the fan speed reduces by 60 rpm.

3. Airflow direction in 2-area INTELLIGENT EYE operation

- Detection method: The opposite area of detected area is set as the target direction.



1. Detection signal ON in both area A and B: Shift the airflow direction to area B (left side)
2. Detection signal ON in area A: Shift the airflow direction to area B (left side)
3. Detection signal ON in area B: Shift the airflow direction to area A (right side)
4. Detection signal OFF in both area A and B: No change

* When the detection signal is OFF for 20 minutes in both area A and B, the unit starts energy saving operation.

Others

- For dry operation, you cannot set the temperature with remote controller, but internally the target temperature is shifted.

1.14 INTELLIGENT EYE Operation

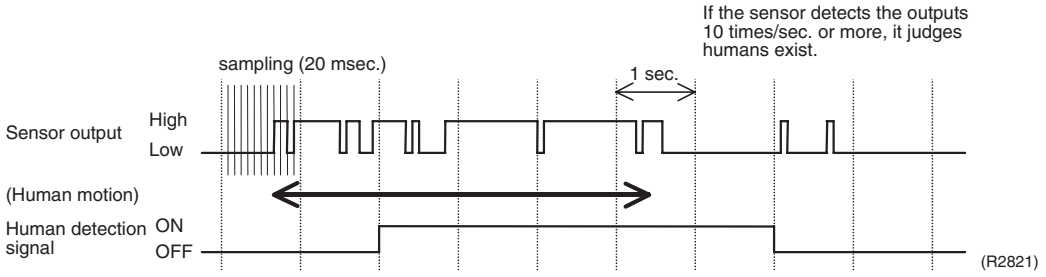
Outline

Wall Mounted Type: FTXG, CTXS, FTXS20/25K, ATXS Series

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 nobody in the room in order to save electricity.

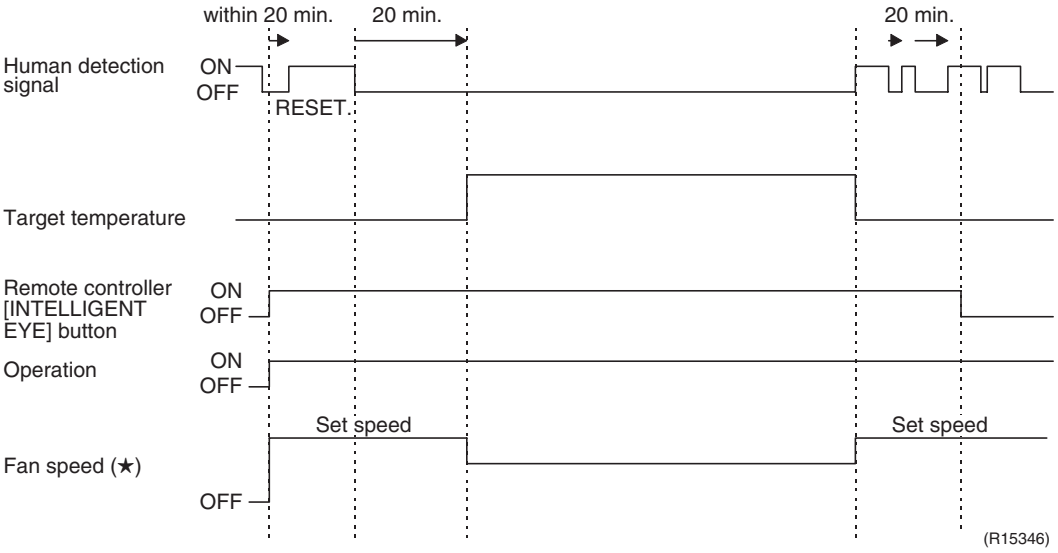
Detail

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 20 msec. × 10 = 200 msec.), it judges human is in the room as the motion signal is ON.

2. The motions (for example: in cooling)



- When a microcomputer does not have a signal from the sensor in 20 minutes, it judges that nobody is in the room and operates the unit in temperature shifted from the target temperature. (cooling / dry : 1 ~ 2°C higher, heating : 2°C lower, automatic : according to the operation mode at that time.)

★ In case of FAN operation, the fan speed reduces by 60 rpm.

Others

- For dry operation, you cannot set the temperature with a remote controller, but internally the target temperature is shifted.

1.15 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.

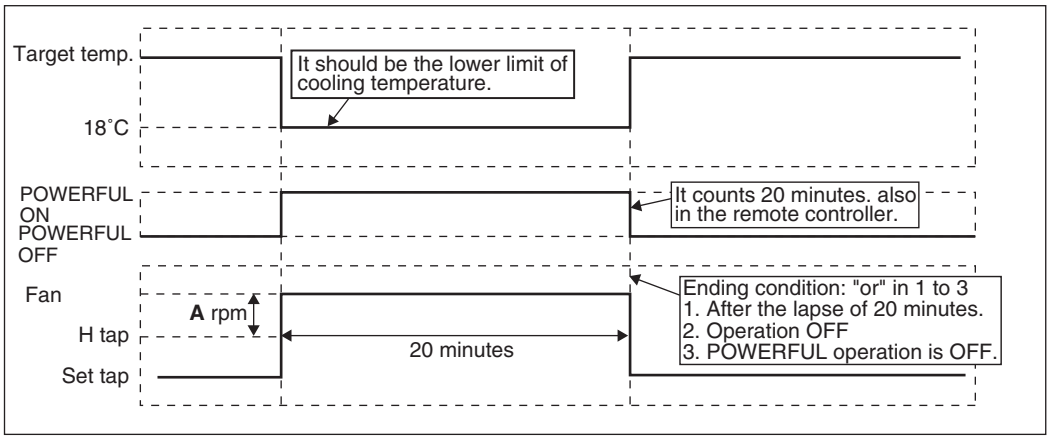
Detail

When [POWERFUL] button is pressed, the fan speed and target temperature are converted to the following states for 20 minutes.

Operation mode	Fan speed	Target temperature
COOL	H tap + **A** rpm	18°C
DRY	Dry rotating speed + **A** rpm	Lowered by 2 ~ 2.5°C
HEAT / RADIANT 1	H tap + **A** rpm	30 ~ 32°C
FAN	H tap + **A** rpm	—
AUTO	Same as cooling / heating in POWERFUL operation	The target temperature is kept unchanged.

A = 40 ~ 80 rpm (depending on the model)

Ex: POWERFUL operation in cooling



(R13571)

Note: **For Floor Standing Type: FVXG Series**

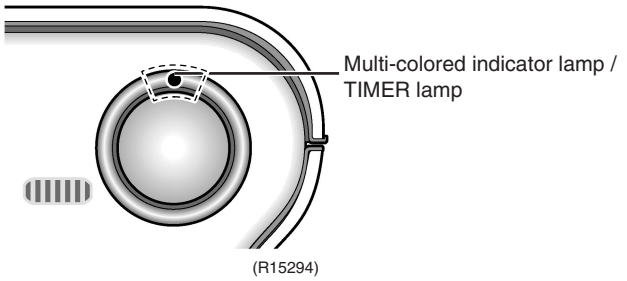
POWERFUL operation is only available in RADIANT 1 (RADIANT operation with heating), it is not available in RADIANT 2 (RADIANT operation only).

1.16 Multi-Colored Indicator Lamp / TIMER Lamp

Features

Wall Mounted Type: FTXG Series

Current operation mode is displayed in color of the lamp of the indoor unit. Operating status can be monitored even in automatic operation in accordance with the actual operation mode.



(R15294)

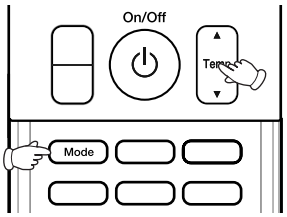
The lamp color changes according to the operation.

- AUTO.....Red / Blue
- DRY.....Green
- COOL.....Blue
- HEAT.....Red
- FAN.....White
- TIMER.....Orange

Brightness Setting

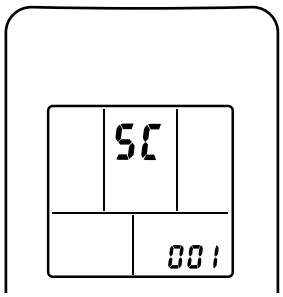
The brightness of the multi-colored indicator lamp can be adjusted L (low), H (high), or OFF.

1. Press the center of the [Temp] button and the [Mode] button at the same time.



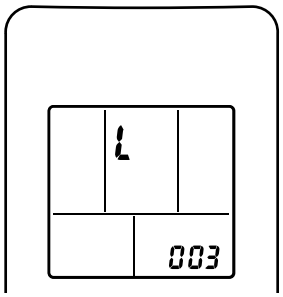
(R11669)

SC is displayed on the LCD.



(R11911)

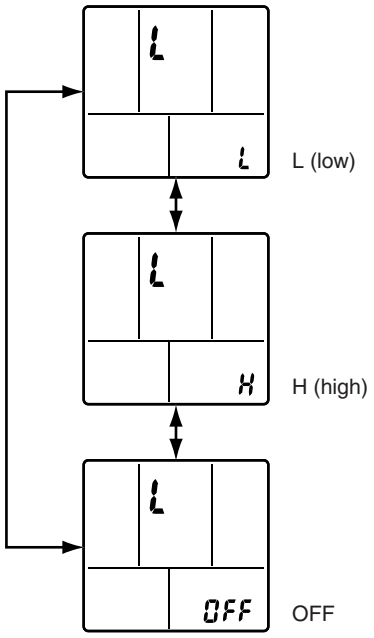
2. Select L (light) with the [Temp] ▲ or ▼ button.



(R11912)

3. Press the [Mode] button to enter the brightness setting mode.

4. Press the [Temp] ▲ or ▼ button to adjust the brightness of the multi-colored indicator lamp.



(R11913)

5. Press the [Mode] button for 5 seconds to exit from the brightness setting mode.
   (When the remote controller is left untouched for 60 seconds, it returns to the normal mode also.)

1.17 Brightness Setting of Indoor Unit Display

Wall Mounted Type: FTXS35/42/50K2V1B
Floor Standing Type: FVXG Series

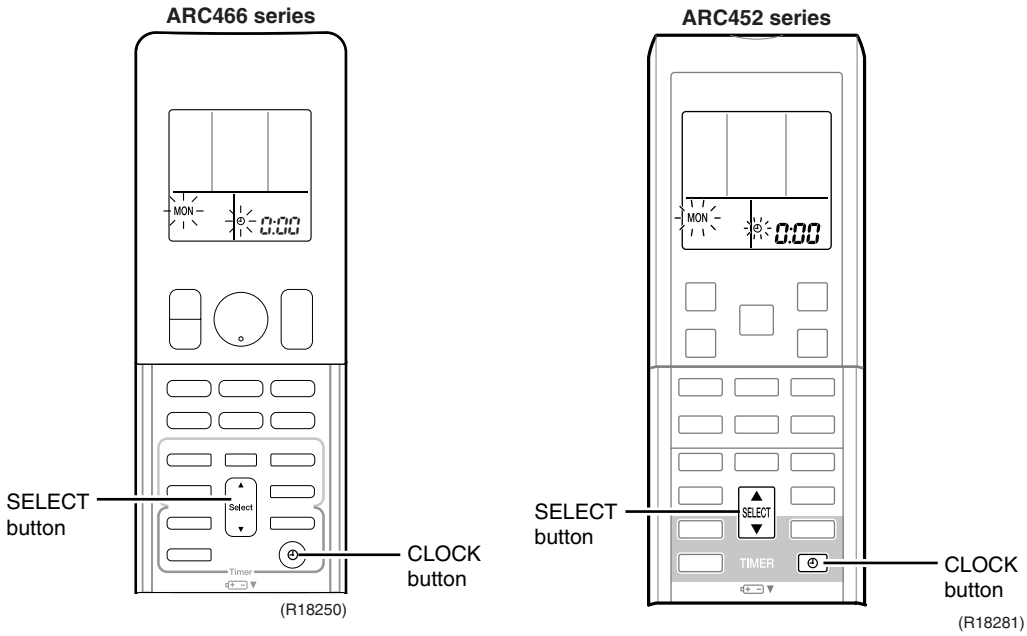
Each time you press the [Brightness] button on the remote controller, the brightness of the indoor unit display changes to “high”, “low”, or “off”.

1.18 Clock Setting

ARC466 Series
ARC452 Series

The clock can be set by taking the following steps:

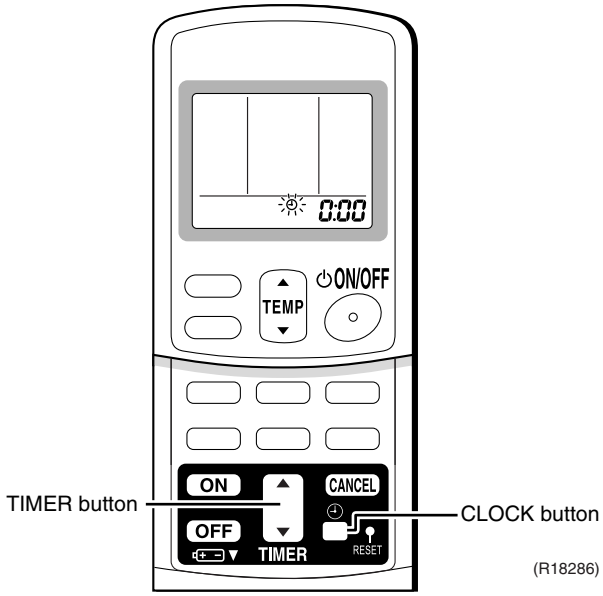
1. Press the [CLOCK] button.
   → 0:00 is displayed and **MON** and ⏲ blink.
2. Press the [SELECT] ▲ or ▼ button to set the clock to the current day of the week.
3. Press the [CLOCK] button.
   → ⏲ blinks.
4. Press the [SELECT] ▲ or ▼ button to set the clock to the present time.
   Holding down the [SELECT] ▲ or ▼ button increases or decreases the time display rapidly.
5. Press the [CLOCK] button. (Point the remote controller at the indoor unit when pressing the button.)
   → : blinks and clock setting is completed.



ARC433 Series

The clock can be set by taking the following steps:

1. Press the [CLOCK] button.
   → 0:00 is displayed and ⏲ blinks.
2. Press the [TIMER] ▲ or ▼ button to set the clock to the present time.
   Holding down the [TIMER] ▲ or ▼ button increases or decreases the time display rapidly.
3. Press the [CLOCK] button again.
   → : blinks and clock setting is completed.



1.19 WEEKLY TIMER Operation

Outline

FTXG, CTXS, FTXS, FVXG, FVXS series

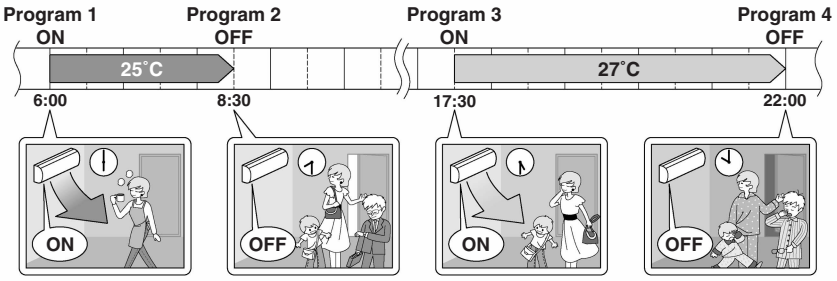
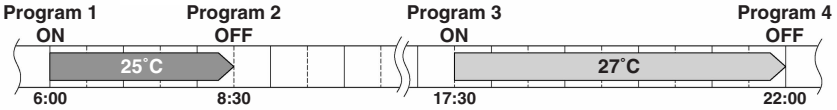
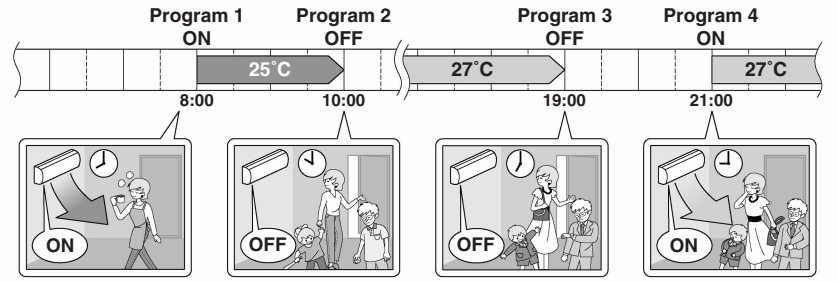
Up to 4 timer settings can be saved for each day of the week (up to 28 settings in total).
The 3 items: “ON/OFF”, “temperature”, and “time” can be set.

Detail

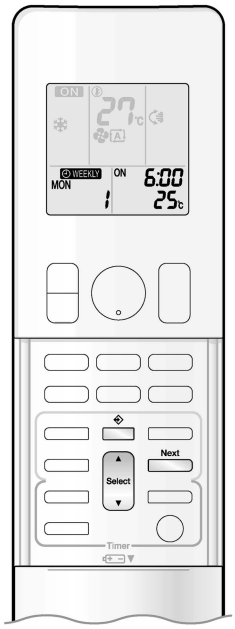
★ The illustrations are for FTXG series as representative.

■ Using in these cases of WEEKLY TIMER

Example: The same timer settings are made for the week from Monday through Friday while different timer settings are made for the weekend.

[Monday]	Make timer settings up to programs 1-4. 
[Tuesday] to [Friday]	Use the copy mode to make settings for Tuesday to Friday, because these settings are the same as those for Monday. 
[Saturday]	No timer settings
[Sunday]	Make timer settings up to programs 1-4. 

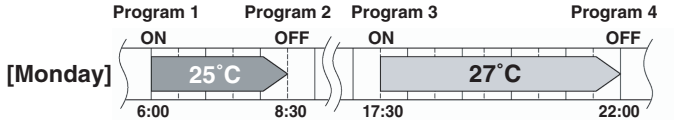
- Up to 4 reservations per day and 28 reservations per week can be set in the WEEKLY TIMER. The effective use of the copy mode ensures ease of making reservations.
- The use of ON-ON-ON-ON settings, for example, makes it possible to schedule operating mode and set temperature changes. Furthermore, by using OFF-OFF-OFF-OFF settings, only the turn off time of each day can be set. This will turn off the air conditioner automatically if the user forgets to turn it off.



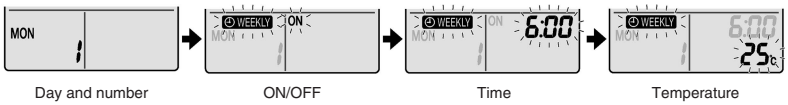
■ To use WEEKLY TIMER operation

Setting mode

• Make sure the day of the week and time are set. If not, set the day of the week and time.



Setting Displays



1. Press [◈].

• The day of the week and the reservation number of the current day will be displayed.
• 1 to 4 settings can be made per day.

2. Press [Select] to select the desired day of the week and reservation number.

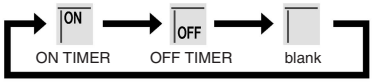
• Pressing [Select] changes the reservation number and the day of the week.

3. Press [Next].

• The day of the week and reservation number will be set.
• "WEEKLY" and "ON" blink.

4. Press [Select] to select the desired mode.

• Pressing [Select] changes "ON" or "OFF" setting in sequence.
Pressing ▲ alternates the following items appearing on the LCD in rotational sequence.



• In case the reservation has already been set, selecting "blank" deletes the reservation.
• Go to step **9** if "blank" is selected.
• To return to the day of the week and reservation number setting, press [Back].

5. Press [Next].

• The ON/OFF TIMER mode will be set.
• "WEEKLY" and the time blink.

6. Press Select to select the desired time.

- The time can be set between 0:00 and 23:50 in 10 minute intervals.
- To return to the ON/OFF TIMER mode setting, press Back.
- Go to step **9** when setting the OFF TIMER.

7. Press Next.

- The time will be set.
- "WEEKLY" and the temperature blink.

8. Press Select to select the desired temperature.

- The temperature can be set between 10˚C and 32˚C.
  COOL or AUTO: The unit operates at 18˚C even if it is set at 10 to 17˚C.
  HEAT or AUTO: The unit operates at 30˚C even if it is set at 31 to 32˚C.
- To return to the time setting, press Back.
- The set temperature is only displayed when the mode setting is on.

9. Press Next.

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and flashing the multi-monitor lamp.
- The temperature is set while in ON TIMER operation, and the time is set while in OFF TIMER operation.
- The next reservation screen will appear.
- To continue further settings, repeat the procedure from step **4**.
- The multi-monitor lamp blinks twice.
  The TIMER lamp periodically lights orange.
  The multi-monitor lamp will not blink orange if all the reservation settings are deleted.

Display

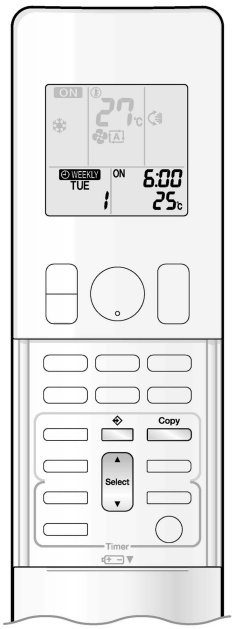
10. Press ◈ to complete the setting.

- "WEEKLY" is displayed on the LCD and WEEKLY TIMER operation is activated.
- A reservation made once can be easily copied and the same settings used for another day of the week. Refer to copy mode.

NOTE

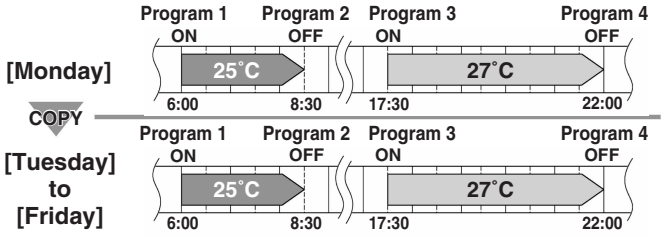
■ **Notes on WEEKLY TIMER operation**

- Do not forget to set the clock on the remote controller first.
- The day of the week, ON/OFF TIMER mode, time and set temperature (only for ON TIMER mode) can be set with WEEKLY TIMER. Other settings for ON TIMER are based on the settings just before the operation.
- Both WEEKLY TIMER and ON/OFF TIMER operation cannot be used at the same time. The ON/OFF TIMER operation has priority if it is set while WEEKLY TIMER is still active. The WEEKLY TIMER will go into standby state, and "WEEKLY" will disappear from the LCD. When ON/OFF TIMER is up, the WEEKLY TIMER will automatically become active.
- Shutting the breaker off, power failure, and other similar events will render operation of the indoor unit's internal clock inaccurate. Reset the clock.

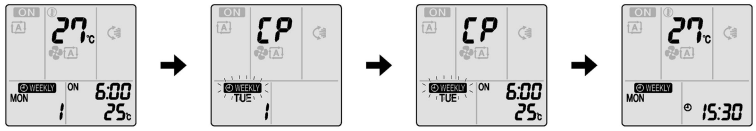


Copy mode

• A reservation made once can be copied to another day of the week. The whole reservation of the selected day of the week will be copied.



Setting Displays



1. Press [◈].

2. Press [Select] to confirm the day of the week to be copied.

3. Press [Copy].

• The whole reservation of the selected day of the week will be copied.

4. Press [Select] to select the destination day of the week.

5. Press [Copy].

• Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and flashing the multi-monitor lamp.
• The reservation will be copied to the selected day of the week. The whole reservation of the selected day of the week will be copied.
• To continue copying the settings to other days of the week, repeat step ***4*** and step ***5***.
• The multi-monitor lamp blinks twice. The TIMER lamp periodically lights orange.

6. Press [◈] to complete the setting.

• "WEEKLY" is displayed on the LCD and WEEKLY TIMER operation is activated.

NOTE

■ **Note on copy mode**

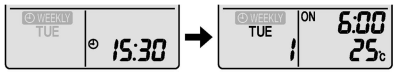
• The entire reservation of the source day of the week is copied in the copy mode.

In the case of making a reservation change for any day of the week individually after copying the content of weekly reservations, press [◈] and change the settings in the steps of setting mode.

■ Confirming a reservation

• The reservation can be confirmed.

Setting Displays



1. Press [ ].

• The day of the week and the reservation number of the current day will be displayed.

2. Press [Select] to select the day of the week and the reservation number to be confirmed.

• Pressing [Select] displays the reservation details.

• To change the confirmed reserved settings, select the reservation number and press [Next].
The mode is switched to setting mode. Go to setting mode step ***2***.

3. Press [ ] to exit confirming mode.

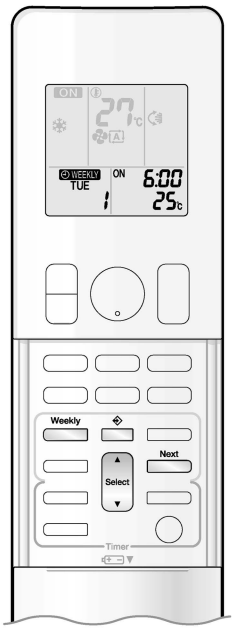
■ To deactivate WEEKLY TIMER operation

Press [Weekly] while "WEEKLY" is displayed on the LCD.

• The "WEEKLY" will disappear from the LCD.
• The TIMER lamp goes off.
• To reactivate the WEEKLY TIMER operation, press [Weekly] again.
• If a reservation deactivated with [Weekly] is activated once again, the last reservation mode will be used.

⚠ CAUTION

• If not all the reservation settings are reflected, deactivate the WEEKLY TIMER operation once. Then press [Weekly] again to reactivate the WEEKLY TIMER operation.



■ To delete reservations

The individual reservation

1. Press [◈].

• The day of the week and the reservation number will be displayed.

2. Press [Select] to select the day of the week and the reservation number to be deleted.

3. Press [Next].

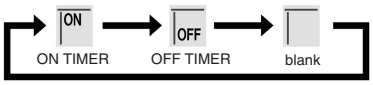
• "WEEKLY" and "ON" or "OFF" blink.

4. Press [Select] and select "blank".

• Pressing [Select] changes ON/OFF TIMER mode.

Pressing ▲ alternates the following items appearing on the LCD in rotational sequence.

• The reservation will be no setting with selecting "blank".



5. Press [Next].

• The selected reservation will be deleted.

6. Press [◈].

• If there are still other reservations, WEEKLY TIMER operation will be activated.

The reservations for each day of the week

• This function can be used for deleting reservations for each day of the week.
• It can be used while confirming or setting reservations.

1. Press [Select] to select the day of the week to be deleted.

2. Hold [Weekly] for 5 seconds.

• The reservation of the selected day of the week will be deleted.

All reservations

Hold [Weekly] for 5 seconds while normal display.

• Be sure to direct the remote controller toward the indoor unit and check for a receiving tone.
• This operation is not effective while WEEKLY TIMER is being set.
• All reservations will be deleted.

1.20 Other Functions

1.20.1 Hot-Start Function

In order to prevent the cold air blast that normally comes when heating operation is started, the temperature of the indoor heat exchanger is detected, and either the airflow 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 is turned ON.

1.20.2 Signal Receiving Sign

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

1.20.3 Indoor Unit ON/OFF Button

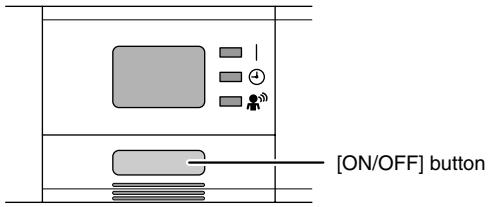
An [ON/OFF] button is provided on the display of the unit.

- Press this button once to start operation. Press once again to stop it.
- This button is useful when the remote controller is missing or the battery has run out.
- The operation mode refers to the following table.

Operation Mode	Temperature setting	Airflow rate
AUTO	25°C	Automatic

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

Ex: Wall mounted type FTXS-J series



(R8302)

1.20.4 Titanium Apatite Photocatalytic Air-Purifying Filter

Wall Mounted Type, Floor Standing Type

This filter combines the Air-Purifying Filter and Titanium Apatite Photocatalytic Deodorizing Filter as a single highly effective filter. The filter traps microscopic particles, decomposes odors and even deactivates bacteria and viruses. It lasts for 3 years without replacement if washed about once every 6 months.

1.20.5 Photocatalytic Deodorizing Filter

Floor / Ceiling Suspended Dual Type

The photocatalytic deodorizing filter powerfully decomposes odor of tobacco, pet, etc. The deodorizing power is regenerated simply by being exposed to the sunshine. It is recommended to dry the filter in the sun for about 6 hours (after vacuuming the filter) every 6 months.

1.20.6 Air-Purifying Filter

Floor / Ceiling Suspended Dual Type

The air-purifying filter collects tobacco smoke, pollen, etc. with electrostatic agency.
This filter includes a deodorizing active carbon filter that removes minute particles of odor.
Replace the air-purifying filter every 3 months.

1.20.7 Auto-restart Function

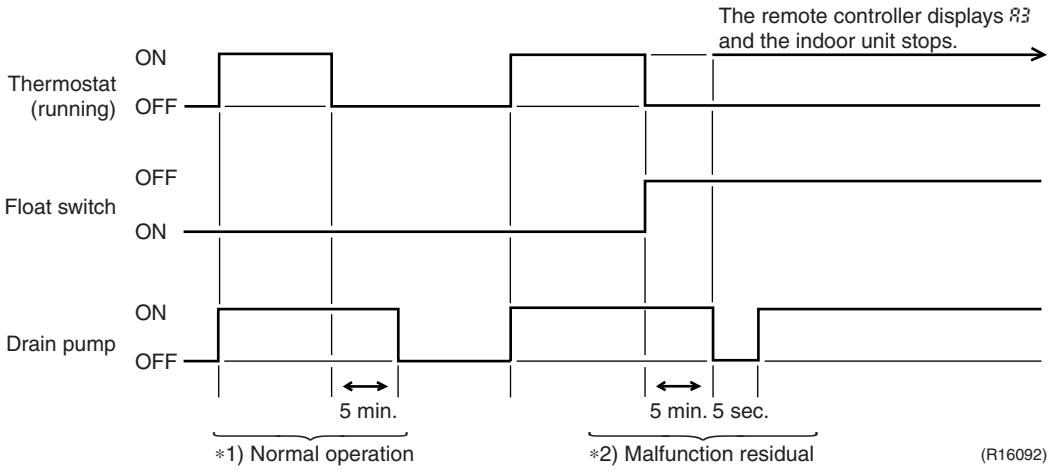
If a power failure (including one for just a moment) occurs during the operation, the operation restarts automatically when the power is restored in the same condition as before the power failure.

Note: It takes 3 minutes to restart the operation because the 3-minute standby function is activated.

2. Function of SA Indoor Unit

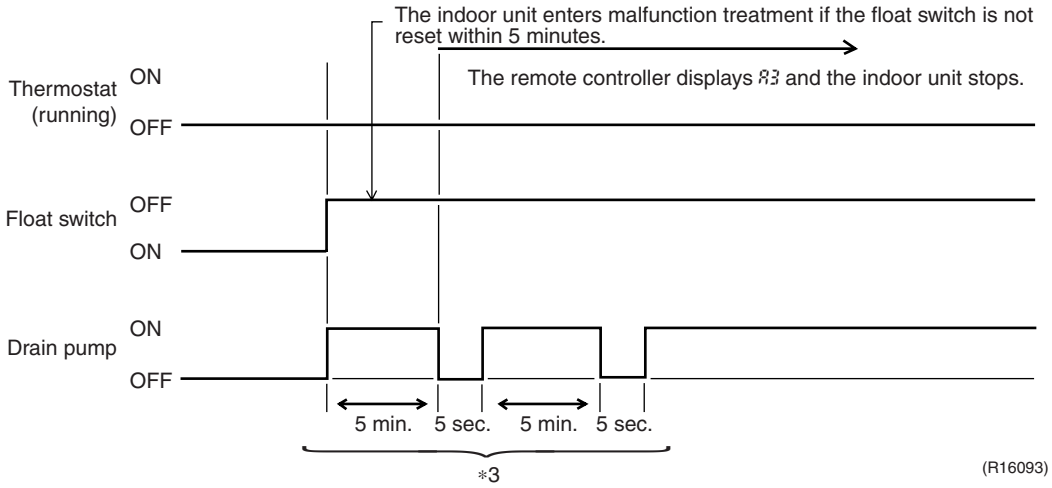
2.1 Drain Pump Control

2.1.1 When the Float Switch is Tripped While the Cooling Thermostat is ON:



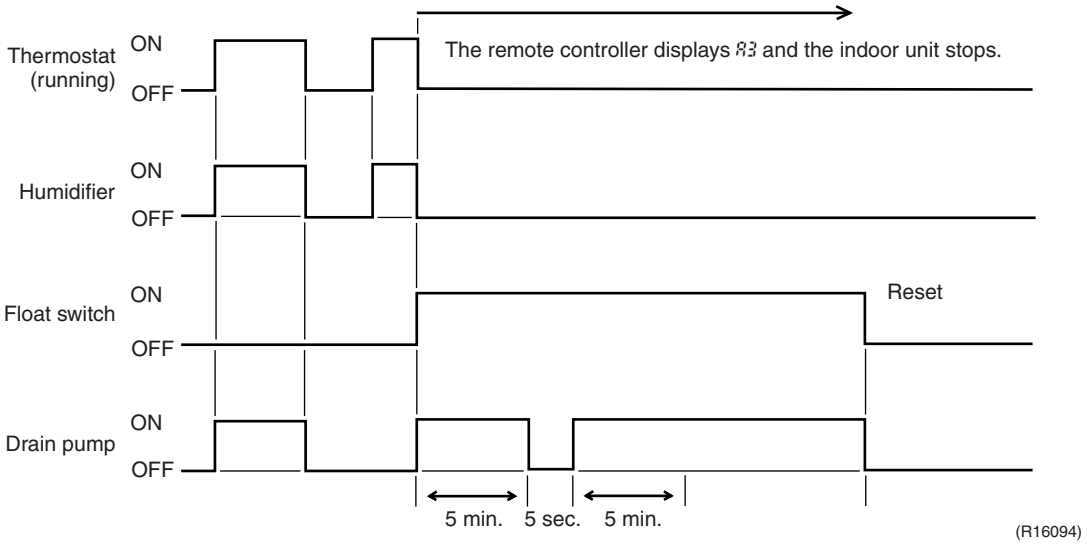
∗1. (Normal operation):
The purpose of residual operation is to completely drain any moisture adhering to the fin of the indoor heat exchanger when the thermostat goes off during cooling operation.
∗2. (Malfunction residual):
The remote controller displays "83" and the air conditioner comes to an abnormal stop in 5 minutes if the float switch is turned OFF while the cooling thermostat is ON.

2.1.2 When the Float Switch is Tripped While the Cooling Thermostat is OFF:



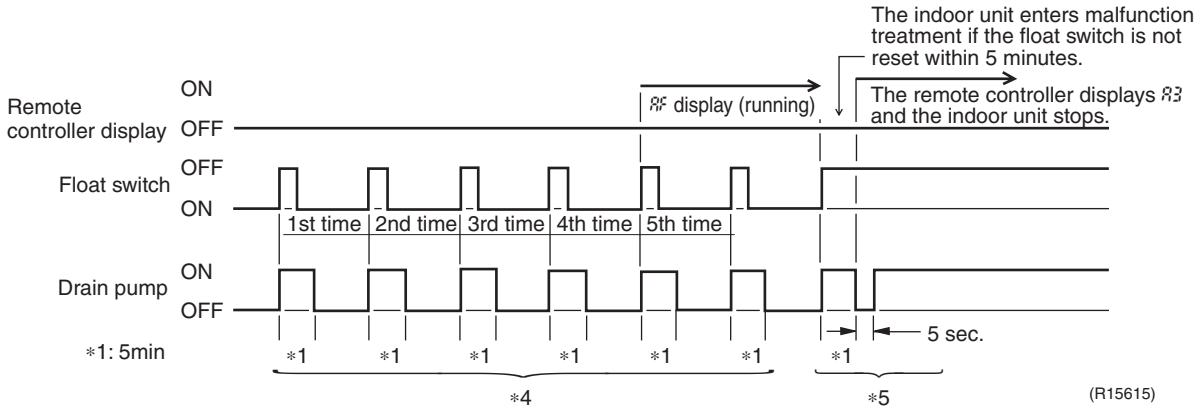
∗3. (Malfunction residual):
The remote controller displays "83" and the air conditioner comes to an abnormal stop if the float switch is turned OFF and not turned ON again within 5 minutes while the cooling thermostat is OFF.

2.1.3 When the Float Switch is Tripped During Heating Operation:



During heating operation, if the float switch is not reset even after the 5 minutes operation, 5 seconds stop, 5 minutes operation cycle ends, operation continues until the switch is reset.

2.1.4 When the Float Switch is Tripped and "8F" is Displayed on the Remote Controller:



∗4. (Malfunction residual):
If the float switch is tripped 5 times in succession, a drain malfunction is determined to have occurred. "8F" is then displayed as operation continues.
∗5. (Malfunction residual):
The remote controller displays "83" and the air conditioner comes to an abnormal stop if the float switch is OFF for more than 5 minutes in the case of ∗4.

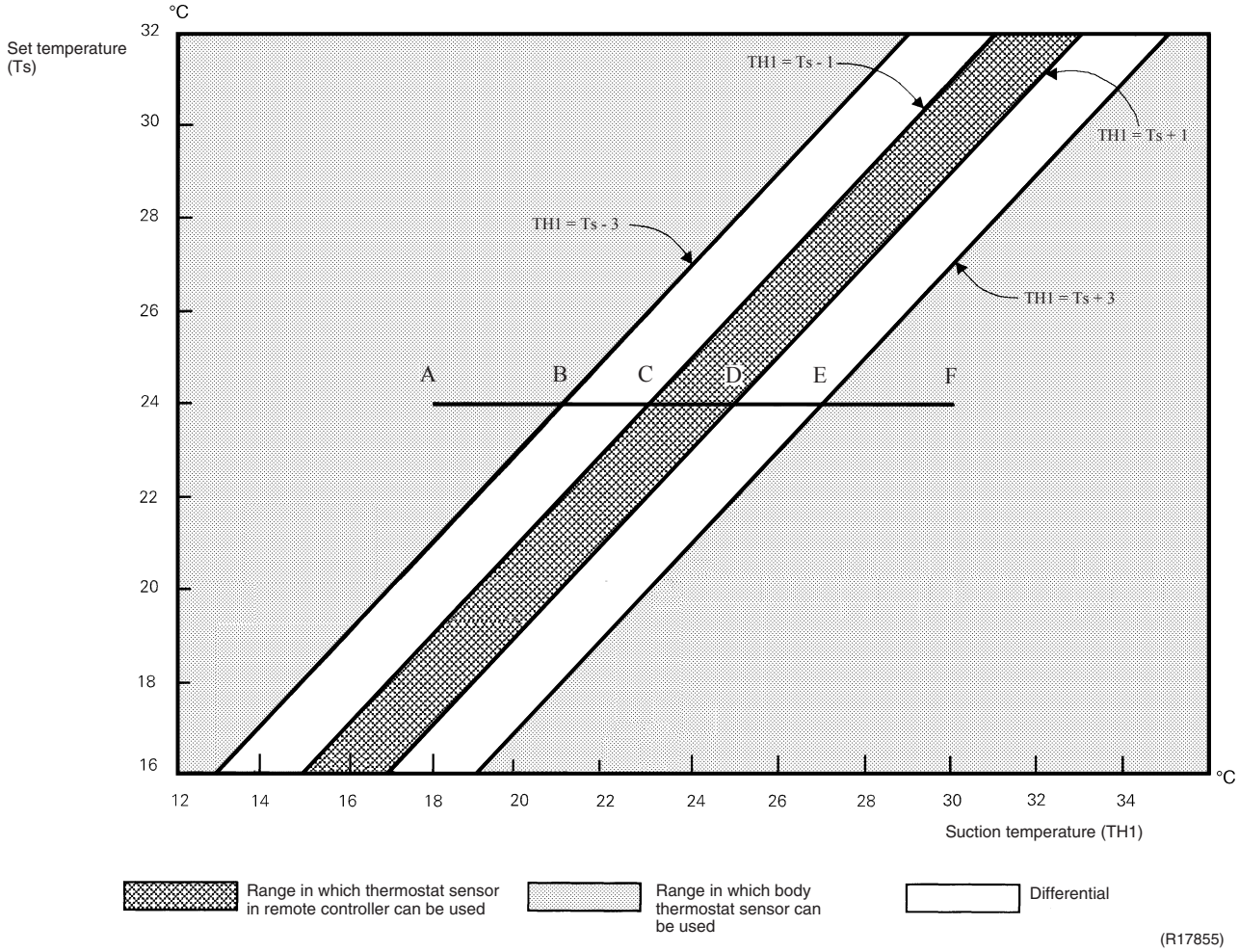
2.2 Thermostat Sensor in Remote Controller

Outline

Temperature is controlled by both the thermostat sensor in remote controller and air suction thermostat in the indoor unit. (This is however limited to when the field setting for the thermostat sensor in remote controller is set to “Use”.)

Cooling

If there is a significant difference in the set temperature and the suction temperature, fine adjustment control is carried out using a body thermostat sensor, or using the sensor in the remote controller near the position of the user when the suction temperature is near the set temperature.



■ **Assuming the set temperature in the figure above is 24°C, and the suction temperature has changed from 18°C to 30°C (A → F):**

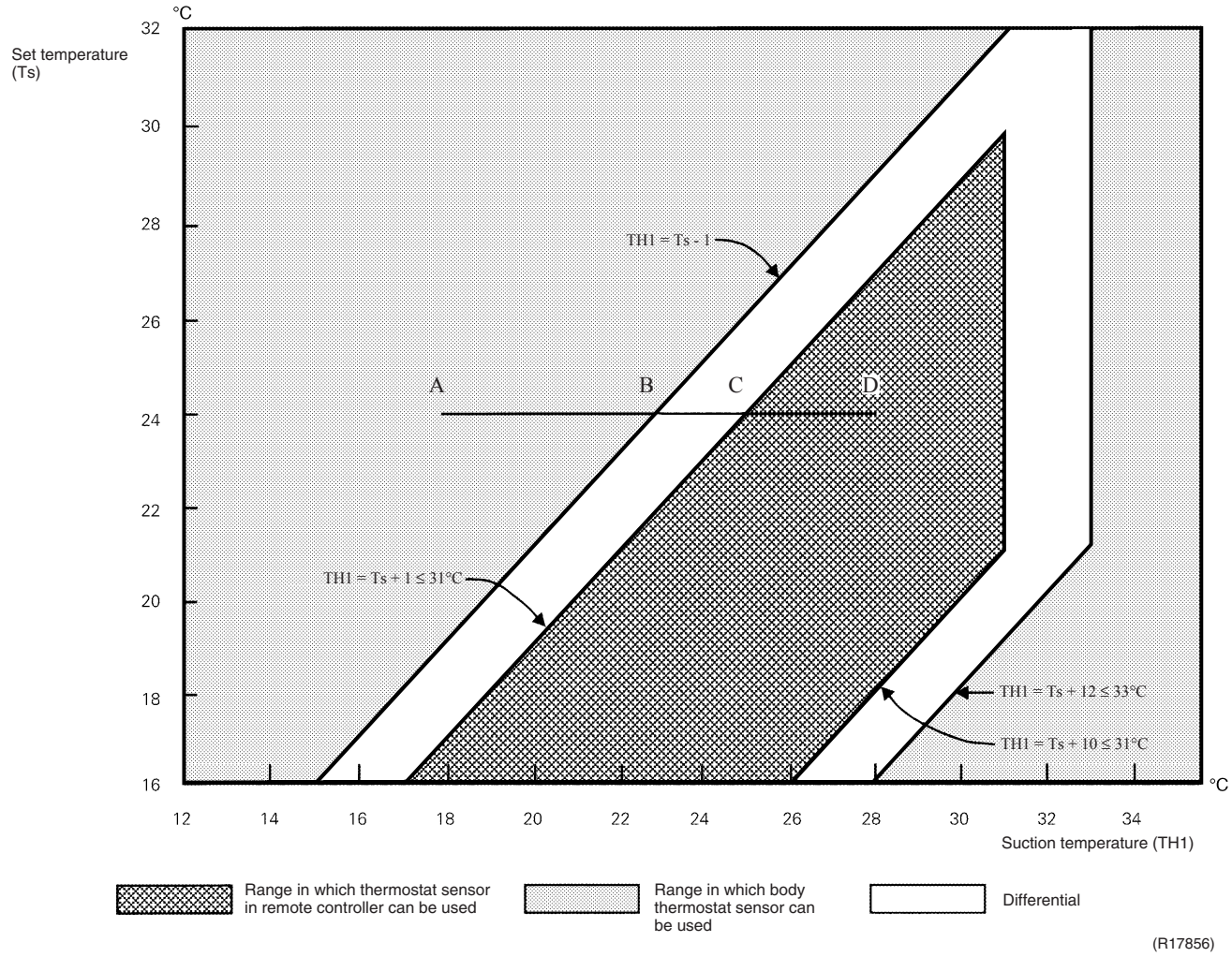
(This example also assumes there are several other air conditioners, and the suction temperature changes even when the thermostat sensor is off.)
Body thermostat sensor is used for temperatures from 18°C to 23°C (A → C).
Remote controller thermostat sensor is used for temperatures from 23°C to 27°C (C → E).
Body thermostat sensor is used for temperatures from 27°C to 30°C (E → F).

■ **Assuming suction temperature has changed from 30°C to 18°C (F → A):**

Body thermostat sensor is used for temperatures from 30°C to 25°C (F → D).
Remote controller thermostat sensor is used for temperatures from 25°C to 21°C (D → B).
Body thermostat sensor is used for temperatures from 21°C to 18°C (B → A).

Heating

When heating, the hot air rises to the top of the room, resulting in the temperature being lower near the floor where the occupants are. When controlling by body thermostat sensor only, the indoor unit may therefore be turned off by the thermostat before the lower part of the room reaches the set temperature. The temperature can be controlled so the lower part of the room where the occupants are does not become cold by widening the range in which thermostat sensor in remote controller can be used so that suction temperature is higher than the set temperature.



■ **Assuming the set temperature in the figure above is 24°C, and the suction temperature has changed from 18°C to 28°C (A → D):**

(This example also assumes there are several other air conditioners, and the suction temperature changes even when the thermostat sensor is off.)
Body thermostat sensor is used for temperatures from 18°C to 25°C (A → C).
Remote controller thermostat sensor is used for temperatures from 25°C to 28°C (C → D).

■ **Assuming suction temperature has changed from 28°C to 18°C (D → A):**

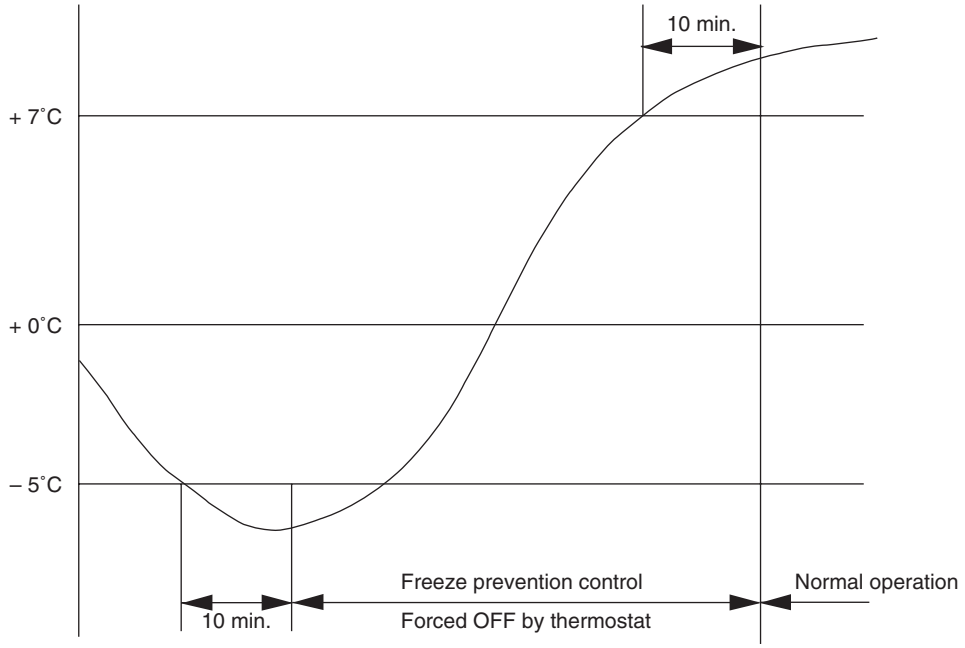
Remote controller thermostat sensor is used for temperatures from 28°C to 23°C (D → B).
Body thermostat sensor is used for temperatures from 23°C to 18°C (B → A).

2.3 Freeze Prevention Control

When the temperature detected by liquid pipe thermistor (R2T) of the indoor heat exchanger drops too low, the unit enters freeze prevention control in accordance with the following conditions, and is also set in accordance with the conditions given below.

Conditions for starting: Temperature is –1°C or less for total of 40 min., or temperature is –5°C or less for total of 10 min.
Conditions for cancelling: Temperature is +7°C or more for 10 min. continuously

Ex: Case where temperature is –5°C or less for total of 10 min.



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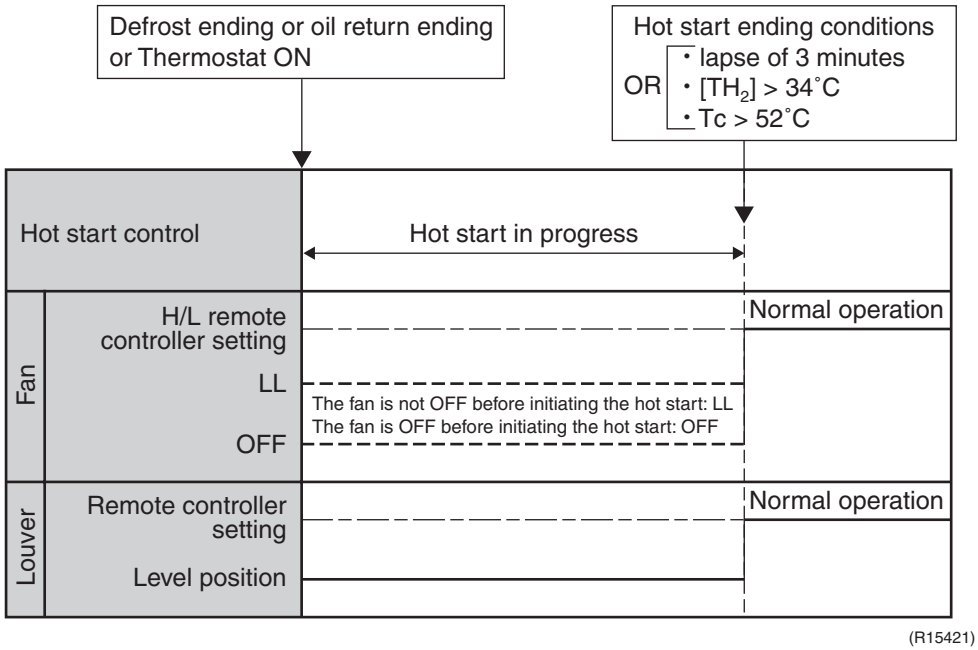
2.4 Hot Start Control (In Heating Operation Only)

Outline

At startup with thermostat ON or after the completion of defrosting in heating operation, the indoor unit fan is controlled to prevent cold air from blasting out and ensure startup capacity.

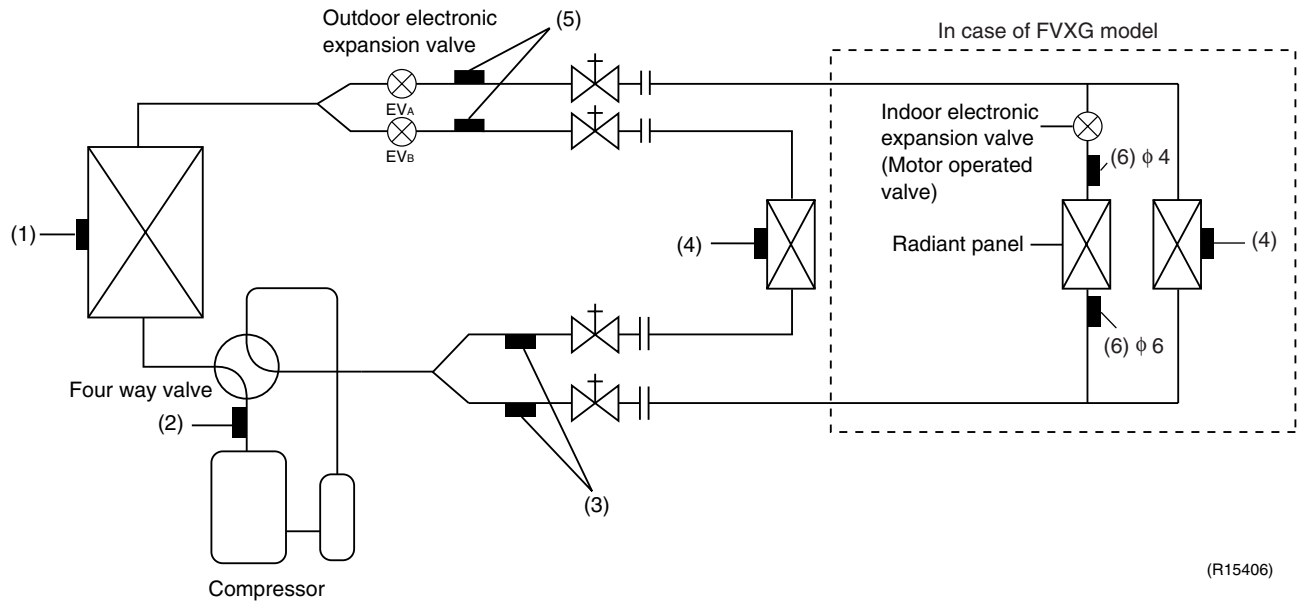
Detail



TH_2: Temperature (°C) detected with the gas thermistor

Tc: High pressure equivalent saturated temperature

3. Function of Thermistor



(1) Outdoor Heat Exchanger Thermistor

1. The outdoor heat exchanger thermistor is used for controlling target discharge pipe temperature. The system sets the target discharge pipe temperature according to the outdoor and indoor heat exchanger temperature, and controls outdoor electronic expansion valve opening so that the target discharge pipe temperature can be obtained.
2. In cooling operation, the outdoor heat exchanger thermistor is used for detecting disconnection of the discharge pipe thermistor. When the discharge pipe temperature drops below the outdoor heat exchanger temperature by more than a certain value, the discharge pipe thermistor is judged as disconnected.
3. In cooling operation, the outdoor heat exchanger thermistor is used for high pressure protection.

(2) Discharge Pipe Thermistor

1. The discharge pipe thermistor is used for controlling discharge pipe temperature. If the discharge pipe temperature (used in place of the inner temperature of the compressor) rises abnormally, the operating frequency becomes lower or the operation halts.
2. The discharge pipe thermistor is used for detecting disconnection of the discharge pipe thermistor.

(3) Gas Pipe Thermistor

In cooling operation, the gas pipe thermistor is used for gas pipe isothermal control. The system controls outdoor electronic expansion valve opening so that the gas pipe temperature in each room becomes equal.

(4) Indoor Heat Exchanger Thermistor

1. The indoor heat exchanger thermistor is used for controlling target discharge pipe temperature. The system sets the target discharge pipe temperature according to the outdoor and indoor heat exchanger temperature, and controls the outdoor electronic expansion valve opening so that the target discharge pipe temperature can be obtained.
2. In cooling operation, the indoor heat exchanger thermistor is used for freeze-up protection control. If the indoor heat exchanger temperature drops abnormally, the operating frequency becomes lower or the operation halts.
3. In cooling operation, the indoor heat exchanger thermistor is used for anti-icing function. If any of the following conditions are met in the room where operation halts, it is assumed as icing.
   The conditions are
   $Tc \leq -1°C$
   $Ta - Tc \geq 10°C$
   where Ta is the room thermistor temperature and Tc is the indoor heat exchanger temperature.
4. In heating operation, the indoor heat exchanger thermistor is used for heating peak-cut control. If the indoor heat exchanger temperature rises abnormally, the operating frequency becomes lower or the operation halts.
5. In heating operation, the indoor heat exchanger thermistor is used for detecting disconnection of the discharge pipe thermistor. When the discharge pipe temperature drops below the highest indoor heat exchanger temperature by more than a certain value, the discharge pipe thermistor is judged as disconnected.
6. When only one indoor unit is operating, the indoor heat exchanger thermistor is used for subcooling control. The actual subcool is calculated with the liquid pipe temperature and the indoor heat exchanger temperature. The system controls outdoor electronic expansion valve openings to obtain the target subcool.

(5) Liquid Pipe Thermistor

1. When only one indoor unit is in heating, the liquid pipe thermistor is used for subcooling control. The actual subcool is calculated with the liquid pipe temperature and the maximum indoor heat exchanger temperature. The system controls outdoor electronic expansion valve openings to obtain the target subcool.
2. In heating operation, the liquid pipe thermistor is used for liquid pipes isothermal control. The system controls outdoor electronic expansion valve opening so that the liquid pipe temperatures in each room becomes equal.

(6) Radiant Panel Thermistors

1. The radiant panel thermistors are used for calculating radiant panel surface temperature. Due to structural and manufactural restrictions, the radiant panel surface temperature cannot be controlled directly with a thermistor. Thermistors are mounted on the radiant panel piping in order to calculate the radiant panel surface temperature.
   The indoor electronic expansion valve is controlled according to the radiant panel surface temperature.
2. The radiant panel thermistors are used for detecting malfunction of the indoor electronic expansion valve.

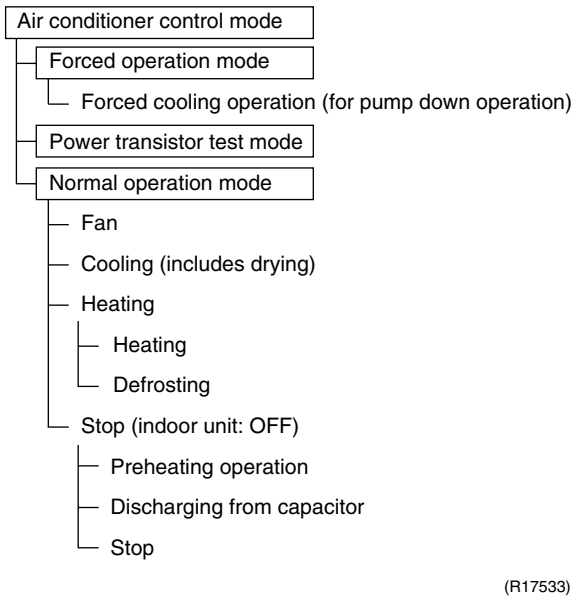
4. Control Specification

4.1 Mode Hierarchy

Outline

Air conditioner control has normal operation mode, forced operation mode, and power transistor test mode for installation and servicing.

Detail



Note:

- Unless specified otherwise, a dry operation command is regarded as cooling operation and a radiant operation command is regarded as heating operation.
- Indoor fan operation cannot be made in multiple indoor units. (A forced fan command is made during forced cooling operation.)

Determine Operation Mode

The system judges the operation mode command which is set by each room in accordance with the procedure, and determines the operation mode of the system.
The following procedure is taken when the operation modes conflict with each other.
∗1. The system follows the operation mode which is set first. (First-push, first-set)
∗2. For the rooms where the different operation mode is set, standby mode is activated. (The operation lamp blinks.)

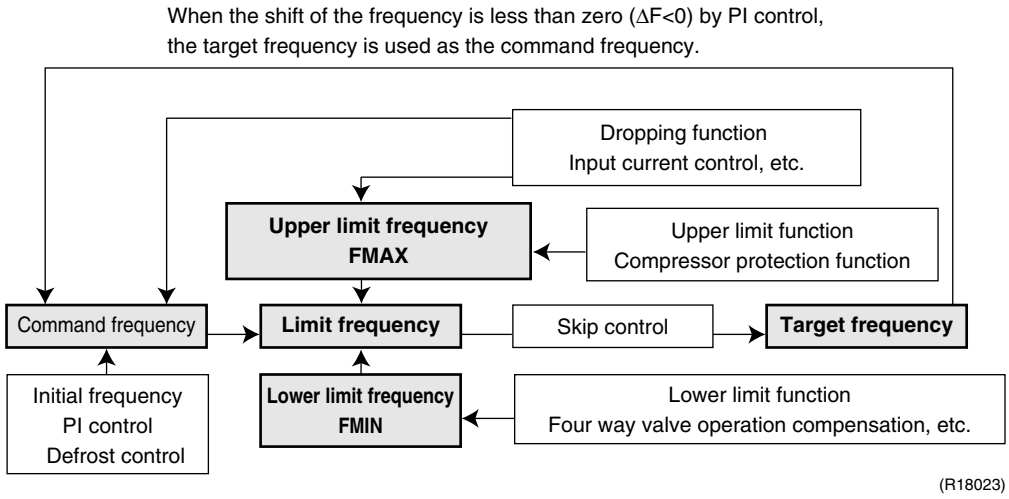
Command from the first room	Command from the second room	Operation of the first room	Operation of the second room
Cooling	Heating	Cooling	Standby
Cooling	Fan	Cooling	Fan
Heating	Cooling	Heating	Standby
Heating	Fan	Heating	Standby
Fan	Cooling	Fan	Cooling
Fan	Heating	Standby	Heating

4.2 Frequency Control

Outline

Frequency that corresponds to each room's capacity is determined according to the difference between the target temperature and the temperature of each room.
The function is explained as follows.

1. How to determine frequency
2. Frequency command from an indoor unit (Difference between a room thermistor temperature and the target temperature)
3. Frequency command from an indoor unit (The ranked capacity of the operating room)
4. Frequency initial setting
5. PI control



Detail

How to Determine Frequency

The compressor's frequency is determined by taking the following steps.

1. Determine command frequency

- Command frequency is determined in the following order of priority.
  1.Limiting defrost control time
  2.Forced cooling / heating
  3.Indoor frequency command

2. Determine upper limit frequency

- The minimum value is set as the upper limit frequency among the frequency upper limits of the following functions:
  Compressor protection, input current, discharge pipe temperature, low Hz high pressure limit, heating peak-cut, freeze-up protection, defrost.

3. Determine lower limit frequency

- The maximum value is set as the lower limit frequency among the frequency lower limits of the following functions:
  Four way valve operation compensation, draft prevention, pressure difference upkeep.

4. Determine prohibited frequency

- There is a certain prohibited frequency such as a power supply frequency.

Indoor Frequency Command (∆D signal)

The difference between a room thermistor temperature and the target temperature is taken as the "∆D signal" and is used for frequency command.

Temperature difference (°C)	∆D signal	Temperature difference (°C)	∆D signal	Temperature difference (°C)	∆D signal	Temperature difference (°C)	∆D signal
–2.0	∗Th OFF	0	4	2.0	8	4.0	C
–1.5	1	0.5	5	2.5	9	4.5	D
–1.0	2	1.0	6	3.0	A	5.0	E
–0.5	3	1.5	7	3.5	B	5.5	F

Values depend on the type of indoor unit.

∗Th OFF = Thermostat OFF

Indoor Unit Capacity (S value)

The capacity of the indoor unit is a "S" value and is used for frequency command.

Ex:

Capacity	S value
2.5 kW	25
3.5 kW	35

Frequency Initial Setting

<Outline>

When starting the compressor, or when conditions are varied due to the change of the operating room, the frequency must be initialized according to the total of a maximum ∆D value of each room and a total value of Q (ΣQ) of the operating room (the room in which the thermos is set to ON).

Q value: Indoor unit output determined from indoor unit volume, airflow rate and other factors.

PI Control (Determine Frequency Up / Down by ∆D Signal)

1. **P control**
   A total of the ∆D value is calculated in each sampling time (20 seconds), and the frequency is adjusted according to its difference from the frequency previously calculated.

2. **I control**
   If the operating frequency is not change more than a certain fixed time, the frequency is adjusted according to the Σ∆D value.
   When the Σ∆D value is low, the frequency is lowered.
   When the Σ∆D value is high, the frequency is increased.

3. **Limit of frequency increasing range**
   When the difference between input current and input current dropping value is less than 1.5 A, the frequency increasing range must be limited.

4. **Frequency management when other controls are functioning**

- When each frequency is dropping;
  Frequency management is carried out only when the frequency drops.
- For limiting lower limit
  Frequency management is carried out only when the frequency rises.

5. **Upper and lower limit of frequency by PI control**
   The frequency upper and lower limits are set according to the total of S values. When the indoor unit quiet operation commands come from more than one room or when the outdoor unit quiet operation commands come from all the rooms, the upper limit frequency is lower than the usual setting.

4.3 Controls at Mode Changing / Start-up

4.3.1 Preheating Control

Outline

The inverter operation in open phase starts with the conditions of the outdoor temperature and the discharge pipe temperature.

Detail

ON Condition

- When outdoor temperature is below 10.5°C and discharge pipe temperature is below 10.5°C, the inverter operation in open phase starts.

OFF Condition

- When outdoor temperature is higher than 12°C or discharge pipe temperature is higher than 12°C, the inverter operation in open phase stops.

4.3.2 Four Way Valve Switching

Outline

In heating operation, current is conducted, and in cooling and defrosting, current is not conducted. In order to eliminate the switching sound, as the four way valve coil switches from ON to OFF when the heating is stopped, the OFF delay switch of the four way valve is carried out after the operation stopped.

Detail

OFF delay switch of four way valve:

The four way valve coil is energized for 150 seconds after the operation is stopped.

4.3.3 Four Way Valve Operation Compensation

Outline

At the beginning of the operation as the four way valve is switched, the pressure difference to activate the four way valve is acquired by having output frequency which is more than a certain fixed frequency, for a certain fixed time.

Detail

Starting Conditions

1. When the compressor starts and the four way valve switches from OFF to ON
2. When the four way valve switches from ON to OFF during operation
3. When the compressor starts after resetting
4. When the compressor starts after the fault of four way valve switching

The lower limit of frequency keeps **A** Hz for 60 seconds with any conditions 1 through 4 above.

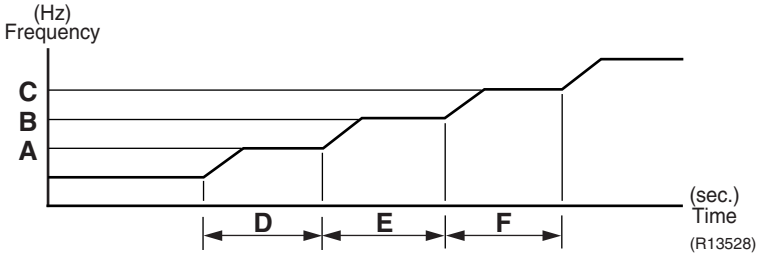
		40 class	50 class
A (Hz)	Cooling	56	40
	Heating	68	54

4.3.4 3-Minute Standby

Turning on the compressor is prohibited for 3 minutes after turning off.
(Except when defrosting.)

4.3.5 Compressor Protection Function

When turning the compressor from OFF to ON, the upper limit of frequency is set as follows. (The function is not used when defrosting.)



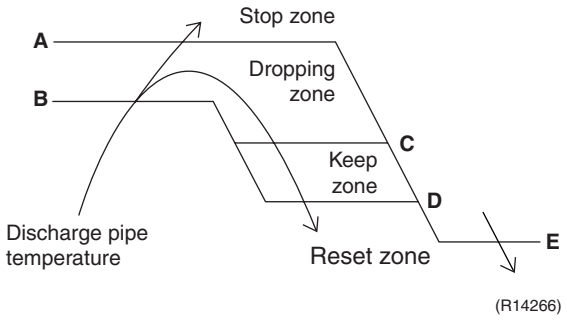
	40 class	50 class
A (Hz)	62	55
B (Hz)	72	70
C (Hz)	90	85
D (seconds)	140	150
E (seconds)	180	180
F (seconds)	300	300

4.4 Discharge Pipe Temperature Control

Outline

The discharge pipe temperature is used as the internal temperature of the compressor. If the discharge pipe temperature rises above a certain level, the upper limit of frequency is set to keep this temperature from rising further.

Detail



	40 class	50 class
A(°C)	110	110
B(°C)	103	103
C(°C)	102	102
D(°C)	101	100
E(°C)	97	95

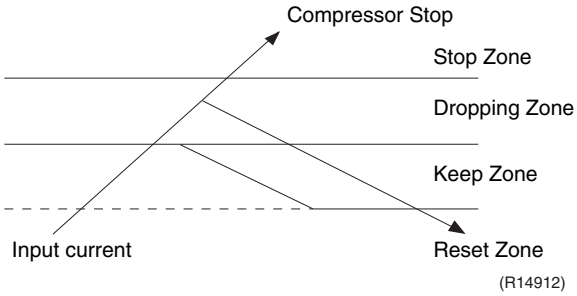
Zone	Control
Stop zone	When the temperature reaches the stop zone, the compressor stops.
Dropping zone	The upper limit of frequency decreases.
Keep zone	The upper limit of frequency is kept.
Reset zone	The upper limit of frequency is canceled.

4.5 Input Current Control

Outline

An input current is detected by the CT while the compressor is running, and the frequency upper limit is set from the input current.
In case of heat pump model, this control, which is the upper limit control of the frequency, takes priority over the lower limit control of four way valve operation compensation.

Detail



Frequency control in each zone

Stop zone

- After 2.5 seconds in this zone, the compressor is stopped.

Dropping zone

- The upper limit of the compressor frequency is defined as operation frequency – 2 Hz.
- After this, the output frequency is pulled down by 2 Hz every second until it reaches the keep zone.

Keep zone

- The present maximum frequency goes on.

Reset zone

- Limit of the frequency is canceled.

Limitation of current dropping and stop value according to the outdoor temperature

- The current drops when outdoor temperature becomes higher than a certain level (depending on the model).

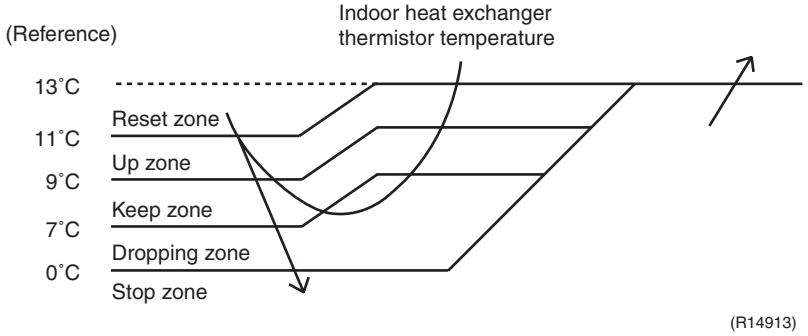
4.6 Freeze-up Protection Control

Outline

During cooling operation, the signals sent from the indoor unit allow the operating frequency limitation and prevent freezing of the indoor heat exchanger. (The signal from the indoor unit is divided into zones.)

Detail

The operating frequency limitation is judged with the indoor heat exchanger temperature 2 seconds after operation starts and 30 seconds after the number of operation room is changed.



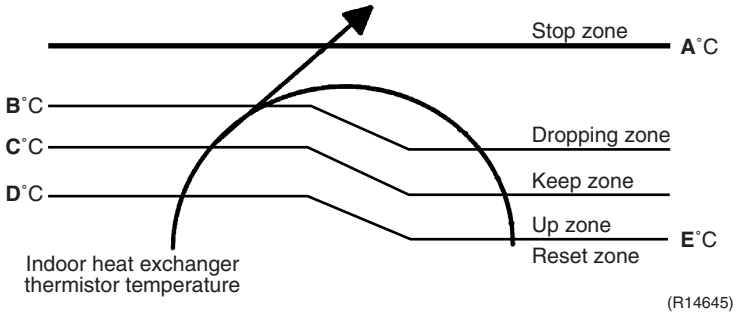
4.7 Heating Peak-cut Control

Outline

During heating operation, the indoor heat exchanger temperature determines the frequency upper limit to prevent abnormal high pressure.

Detail

- The operating frequency is judged with the indoor heat exchanger temperature 2 minutes after the operation starts and **F** seconds after the number of operation room is changed.
- The maximum value of the indoor heat exchanger temperature controls the following (excluding stopped rooms).



Zone	Control
Stop zone	When the temperature reaches the stop zone, the compressor stops.
Dropping zone	The upper limit of frequency decreases.
Keep zone	The upper limit of frequency is kept.
Up zone	The upper limit of frequency increases.
Reset zone	The upper limit of frequency is canceled.

A (°C)	65
B (°C)	55
C (°C)	54
D (°C)	52
E (°C)	50

	F (seconds)
When increase	30
When decrease	2

4.8 Outdoor Fan Control

1. Fan ON control to cool down the electrical box
The outdoor fan is turned ON when the electrical box temperature is high while the compressor is OFF.

2. Fan OFF control during defrosting
The outdoor fan is turned OFF while defrosting.

3. Fan OFF delay when stopped
The outdoor fan is turned OFF 60 seconds after the compressor stops.

4. Fan speed control for pressure difference upkeep
The rotation speed of the outdoor fan is controlled for keeping the pressure difference during cooling operation with low outdoor temperature.
- When the pressure difference is low, the rotation speed of the outdoor fan is reduced.
- When the pressure difference is high, the rotation speed of the outdoor fan is controlled as well as normal operation.

5. Fan control when the number of heating room decreases
When the outdoor temperature is more than 10°C, the fan is turned off for 30 seconds.

6. Fan speed control during forced operation
The outdoor fan is controlled as well as normal operation during forced operation.

7. Fan speed control during POWERFUL operation
The rotation speed of the outdoor fan is increased during POWERFUL operation.

8. Fan speed control during indoor / outdoor unit quiet operation
The rotation speed of the outdoor fan is reduced by the command of the indoor / outdoor unit quiet operation.

9. Fan ON/OFF control when operation starts / stops
The outdoor fan is turned ON when the operation starts. The outdoor fan is turned OFF when the operation stops.

4.9 Liquid Compression Protection Function

Outline

In order to obtain the dependability of the compressor, the compressor is stopped according to the outdoor temperature and temperature of the outdoor heat exchanger.

Detail

■ Operation stops depending on the outdoor temperature
Compressor turns off under the conditions that the system is in cooling operation and outdoor temperature is below 0°C.

4.10 Defrost Control

Outline

Defrosting is carried out by the cooling cycle (reverse cycle). The defrosting time or outdoor heat exchanger temperature must be more than a certain value to finish.

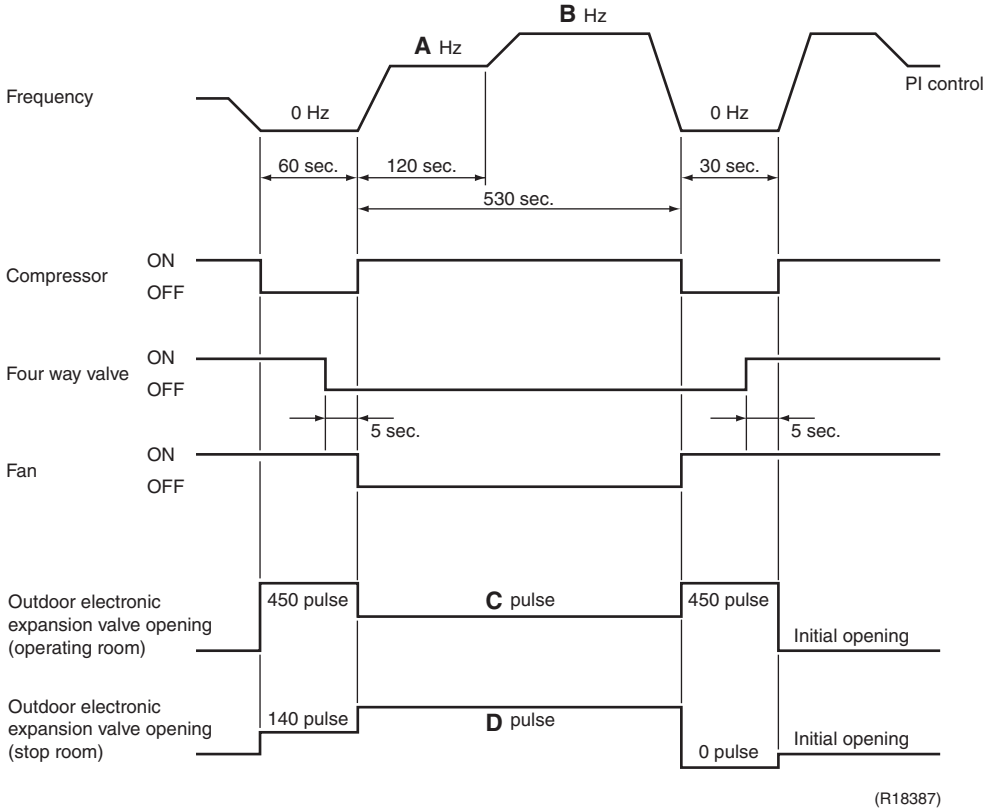
Detail

Conditions for Starting Defrost

- The starting conditions is determined with the outdoor temperature and the outdoor heat exchanger temperature.
- The system is in heating operation.
- The compressor operates for 6 minutes.
- More than 30 minutes of accumulated time pass since the start of the operation, or ending the previous defrosting.

Conditions for Canceling Defrost

The target heat exchanger temperature as the canceling condition is selected in the range of **E**°C according to the outdoor temperature.



	40 class	50 class
A (Hz)	70	48
B (Hz)	86	64
C (pulse)	350	300
D (pulse)	160	200
E (˚C)	4 ~ 12	4 ~ 15

4.11 Outdoor Electronic Expansion Valve Control

Outline

The following items are included in the outdoor electronic expansion valve control.

Outdoor electronic expansion valve is fully closed

1. Outdoor electronic expansion valve is fully closed when turning on the power.
2. Pressure equalizing control

Room Distribution Control

1. SC (subcooling) control
2. Heat exchanger isothermal control during heating
3. Liquid pipe isothermal control during heating
4. Gas pipe isothermal control during cooling

Open Control

1. Outdoor electronic expansion valve control when starting operation
2. Outdoor electronic expansion valve control when the frequency changes
3. Outdoor electronic expansion valve control for defrosting
4. Outdoor electronic expansion valve control for oil recovery
5. Outdoor electronic expansion valve control when a discharge pipe temperature is abnormally high
6. Outdoor electronic expansion valve control when the discharge pipe thermistor is disconnected
7. Outdoor electronic expansion valve control for anti-icing control for indoor unit

Feedback Control

1. Target discharge pipe temperature control

Detail

The followings are the examples of control which function in each operation mode by the outdoor electronic expansion valve control.

Operation pattern	● : Holding Functions × : No Functions	SC (subcooling) control	Control when frequency changed	Control for abnormally high discharge pipe temperature	Heat exchanger isothermal control during heating	Oil recovery control	Anti-icing control for indoor unit
When power is turned on	Fully closed when power is turned on	×	×	×	×	×	×
Cooling, 1 room operation	Open control when starting	×	×	●	×	●	●
	(Target discharge pipe temperature control)	×	●	●	×	●	●
Cooling, 2 rooms operation	Control when the operating room is changed	×	×	●	×	●	●
	(Target discharge pipe temperature control)	×	●	●	×	●	●
Stop	Pressure equalizing control	×	×	×	×	×	×
Heating operation	Open control when starting	×	×	●	●	×	×
	(Target discharge pipe temperature control)	●	●	●	●	×	×
	(Defrost control)	×	×	×	×	×	×
Stop	Pressure equalizing control	×	×	×	×	×	×
Heating operation	Open control when starting	×	×	●	●	×	×
Control of discharge pipe thermistor disconnection	Continue	●	×	×	●	×	×
Stop	Pressure equalizing control	×	×	×	×	×	×

(R14236)

4.11.1 Fully Closing with Power ON

The outdoor electronic expansion valve is initialized when the power is turned on. The opening position is set and the pressure equalization is developed.

4.11.2 Pressure Equalization Control

When the compressor is stopped, the pressure equalization control is activated. The outdoor electronic expansion valve opens, and develops the pressure equalization.

4.11.3 Opening Limit Control

Outline

A maximum and minimum opening of the outdoor electronic expansion valve are limited.

Detail

- A maximum outdoor electronic expansion valve opening in the operating room: 450 pulses
- A minimum outdoor electronic expansion valve opening in the operating room: 60 pulses

The outdoor electronic expansion valve is fully closed in the room where cooling is stopped and is opened at the fixed degree during defrosting.

4.11.4 Starting Operation Control / Changing Operation Room

The outdoor electronic expansion valve opening is controlled when the operation starts, and prevent the superheating or liquid compression.

4.11.5 Control when the Frequency Changes

When the target discharge pipe temperature control is active, if the target frequency is changed for a specified value in a certain time period, the target discharge pipe temperature control is canceled and the target opening of the outdoor electronic expansion valve is changed.

4.11.6 Oil Recovery Function

Outline

The outdoor electronic expansion valve opening in the cooling stopped room is set as to open for a certain time at a specified interval so that the oil in the cooling stopped room may not be accumulated.

Detail

During cooling operation, every 1 hour continuous operation, the outdoor electronic expansion valves in the operation stopped room is opened by 80 pulses for specified time.

4.11.7 High Discharge Pipe Temperature Control

When the compressor is operating, if the discharge pipe temperature exceeds a certain value, the outdoor electronic expansion valve opens and the refrigerant runs to the low pressure side. This procedure lowers the discharge pipe temperature.

4.11.8 Control for Disconnection of the Discharge Pipe Thermistor

Outline

The disconnection of the discharge pipe thermistor is detected by comparing the discharge pipe temperature with the condensing temperature. If the discharge pipe thermistor is disconnected, the outdoor electronic expansion valve opens according to the outdoor temperature and the operation frequency, and operates for a specified time, and then stops.
After 3 minutes of waiting, the operation restarts and checks if the discharge pipe thermistor is disconnected. If the discharge pipe thermistor is disconnected, the system stops after operating for a specified time.
If the disconnection is detected 4 times in succession, the system is shut down. When the compressor runs for 60 minutes without any error, the error counter is reset.

Detail

Detect Disconnection
When the starting control (about 660 seconds) finishes, and the 9-minute timer for the compressor operation continuation is not counting time, the following adjustment is made.

1. When the operation mode is cooling
   When the following condition is fulfilled, the discharge pipe thermistor disconnection is ascertained.
   Discharge pipe temperature + 6°C < outdoor heat exchanger temperature
2. When the operation mode is heating
   When the following condition is fulfilled, the discharge pipe thermistor disconnection is ascertained.
   Discharge pipe temperature + 6°C < highest indoor heat exchanger temperature

Adjustment when the thermistor is disconnected
When the disconnection is ascertained, the compressor continues operation for 9 minutes and then stops.
When the compressor stops repeatedly, the system is shut down.

4.11.9 Gas Pipe Isothermal Control During Cooling

When the units are operating in multiple rooms, the gas pipe temperature is detected and the outdoor electronic expansion valve opening is adjusted so that the temperature of the gas pipe in each room becomes equal.

- When the gas pipe temperature > the average gas pipe temperature,
  → the opening degree of outdoor electronic expansion valve in the corresponding room increases.
- When the gas pipe temperature < the average gas pipe temperature,
  → the opening degree of outdoor electronic expansion valve in the corresponding room decreases.

The temperatures are monitored every 40 seconds.

4.11.10SC (Subcooling) Control

Outline

The liquid pipe temperature and the heat exchanger temperature are detected and the outdoor electronic expansion valve opening is compensated so that the SC of each room becomes the target SC.

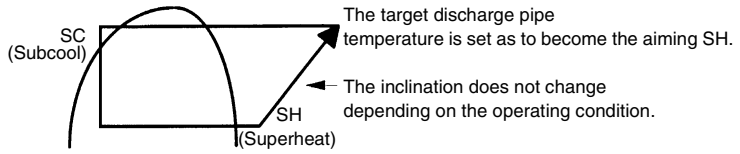
- When the actual SC is > target SC, open the outdoor electronic expansion valve of the room.
- When the actual SC is < target SC, close the outdoor electronic expansion valve of the room.

Detail

Start Conditions
After finishing the starting control (about 660 seconds), all the outdoor electronic expansion valve(s) in the operating room is/are controlled.
Determine Outdoor Electronic Expansion Valve Opening
The outdoor electronic expansion valve opening is adjusted so that the temperature difference between the maximum heat exchanger temperature of connected room and the liquid pipe temperature thermistor becomes constant.

4.11.11Target Discharge Pipe Temperature Control

The target discharge pipe temperature is obtained from the indoor and outdoor heat exchanger temperature, and the outdoor electronic expansion valve opening is adjusted so that the actual discharge pipe temperature becomes close to the target discharge pipe temperature. (Indirect SH (superheating) control using the discharge pipe temperature)



(R14219)

The outdoor electronic expansion valve opening and the target discharge pipe temperature are adjusted every 20 seconds. The target discharge pipe temperature is controlled by indoor heat exchanger temperature and outdoor heat exchanger temperature. The opening degree of the outdoor electronic expansion valve is controlled by followings.

- Target discharge pipe temperature
- Actual discharge pipe temperature
- Previous discharge pipe temperature

4.12 Malfunctions

4.12.1 Sensor Malfunction Detection

Sensor malfunction may occur either in the thermistor or current transformer (CT) system.

Relating to Thermistor Malfunction

1. Outdoor heat exchanger thermistor
2. Discharge pipe thermistor
3. Radiation fin thermistor
4. Gas pipe thermistor
5. Outdoor temperature thermistor
6. Liquid pipe thermistor

Relating to CT Malfunction

When the output frequency is more than 52 Hz, abnormal adjustment is carried out.

4.12.2 Detection of Overcurrent and Overload

Outline

In order to protect the inverter, an excessive output current is detected and the OL temperature is observed to protect the compressor.

Detail

- If the inverter current exceeds 11.0 ~12.5 A (depending on the model), the system shuts down the compressor.
- If the OL (compressor head) temperature exceeds 120°C, the compressor stops.

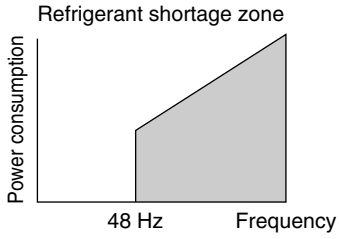
4.12.3 Refrigerant Shortage Control

Outline

I: Detecting by power consumption

If the power consumption is below the specified value and the frequency is higher than the specified frequency, it is regarded as refrigerant shortage.

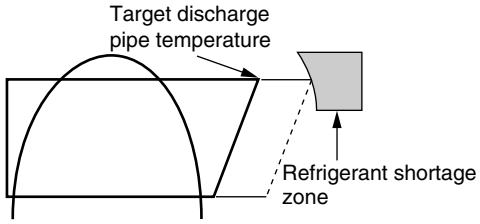
The power consumption is low comparing with that in the normal operation when refrigerant is insufficient, and refrigerant shortage is detected by checking power consumption.



(R12507)

II: Detecting by discharge pipe temperature

If the discharge pipe temperature is higher than the target discharge pipe temperature, and the outdoor electronic expansion valve is fully open for more than the specified time, it is regarded as refrigerant shortage.



(R1391)

Refer to page 178 for detail.

4.12.4 Anti-icing Control

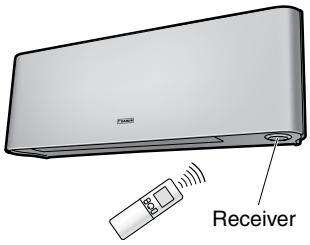
During cooling, if the indoor heat exchanger temperature in the outdoor operation stopped room becomes below the specified temperature for the specified time, the outdoor electronic expansion valve is opened in the operation stopped room as specified, and the fully closed operation is carried out. After this, if freezing abnormality occurs more than specified time, the system shuts down as the system abnormality.

Part 5
Remote Controller

1. RA Indoor Unit

1.1 FTXG25/35/50JV1BW(S)(A), CTXS15/35K2V1B, FTXS20/25K2V1B

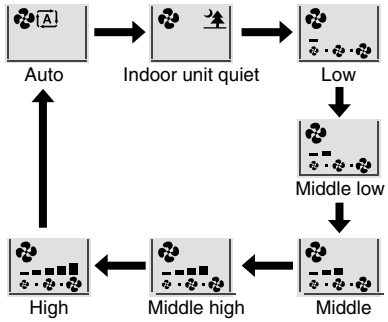
Signal transmitter



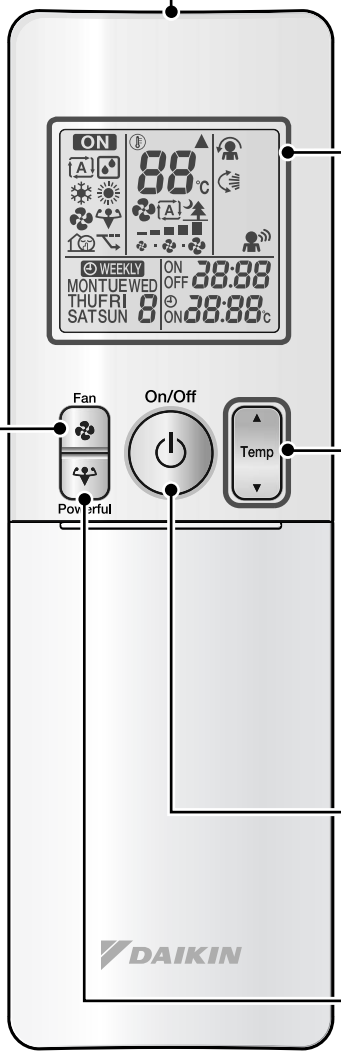
- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- The maximum distance for communication is approx. 7m.

FAN setting button

- Selects the airflow rate setting.



- In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
- In DRY operation, the airflow rate setting is not available.



Display (LCD)

- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

: AUTO	18 ~ 30 °C
: DRY	Not available
: COOL	18 ~ 32 °C
: HEAT	10 ~ 30 °C
: FAN	Not available

ON/OFF button

- Press this button once to start operation.
  Press once again to stop it.

POWERFUL*1 button

- POWERFUL operation.

(R17860)

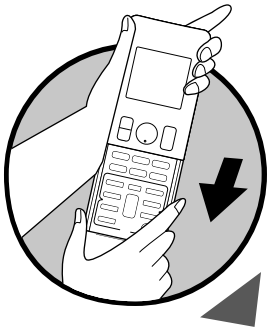
< ARC466A1, A6 >

Reference Refer to the following pages for detail.

★1	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover

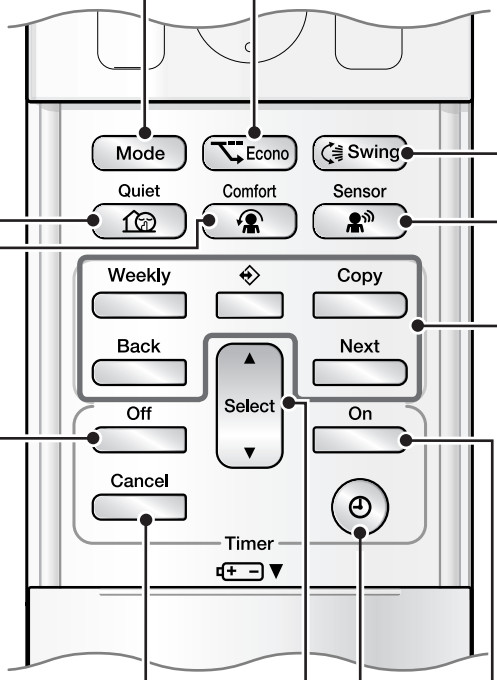


MODE button
• Selects the operation mode.

ECONO*3 button
• ECONO operation.

SWING*4 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down. The flap stops when you press the SWING button again.

QUIET button
• OUTDOOR UNIT QUIET operation.
• QUIET operation is not available in FAN and DRY operation.
• QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.



SENSOR button (INTELLIGENT EYE operation*5)
• To start INTELLIGENT EYE operation, press the SENSOR button.
"" is displayed on the LCD.
• To cancel the INTELLIGENT EYE operation, press the SENSOR button again.
"" disappears from the LCD.

COMFORT*2 button
• The airflow direction will be in upward while in COOL operation, in downward while in HEAT operation. This function will prevent cold or warm air from directly blowing on your body.

Weekly
: WEEKLY button
: PROGRAM button
Copy
: COPY button
Back
: BACK button
Next
: NEXT button
• WEEKLY TIMER*6 operation.

OFF TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

SELECT button
• Changes the ON/OFF TIMER and WEEKLY TIMER settings.

TIMER CANCEL button
• Cancels the timer setting.
• It cannot be used for the WEEKLY TIMER operation.

CLOCK*7 button

ON TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

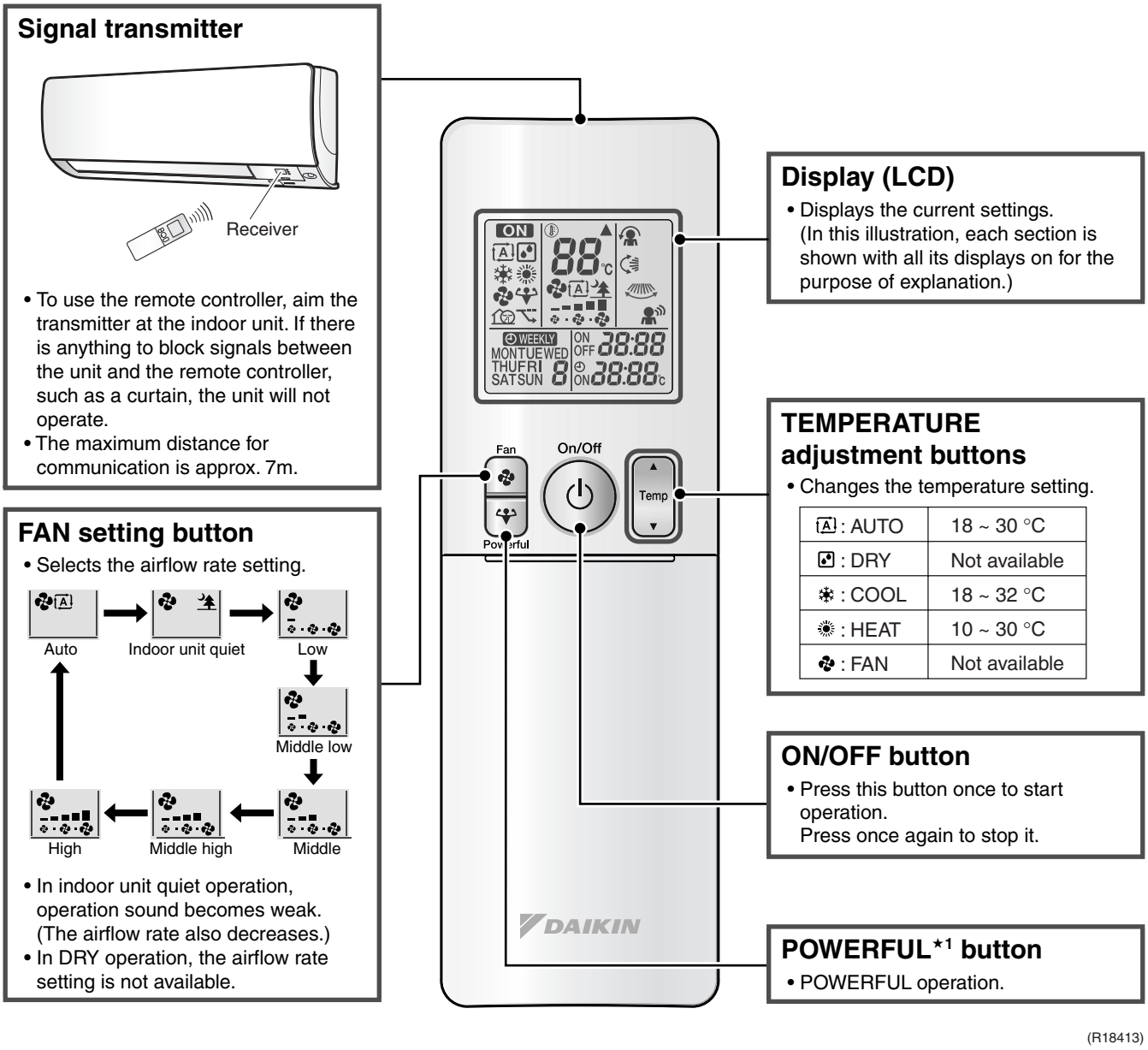
(R17861)

Reference Refer to the following pages for detail.

★2	COMFORT AIRFLOW operation	P.57, 59	★5	INTELLIGENT EYE operation	P.71
★3	ECONO operation	P.66	★6	WEEKLY TIMER operation	P.76
★4	Auto swing setting	P.55	★7	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.2 FTXS35/42/50K2V1B



(R18413)

< ARC466A9 >

Reference Refer to the following pages for detail.

★1	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover

MODE button
• Selects the operation mode.

ECONO*5 / OUTDOOR UNIT QUIET button
• Each time the Econo/Quiet is pressed, a different setting option is displayed on the LCD.

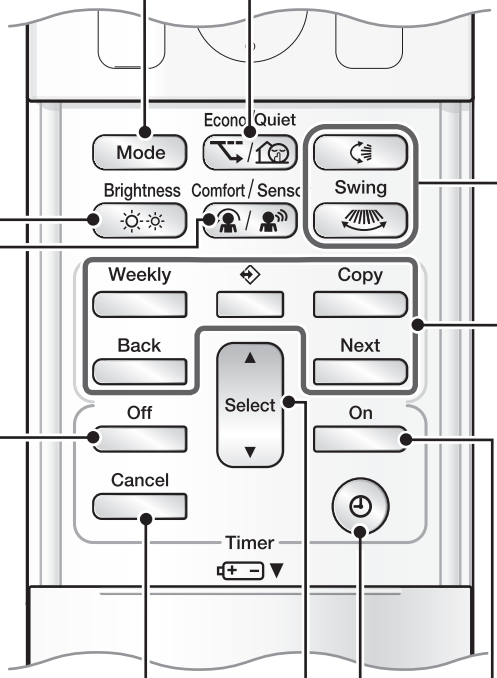
ECONO → OUTDOOR UNIT QUIET → Combination → blank (No Setting) → ECONO

• QUIET operation is not available in FAN and DRY operation.
• QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.

Lamp brightness setting button*2

COMFORT/SENSOR button (COMFORT AIRFLOW Operation*3/ INTELLIGENT EYE Operation*4)
• Every time you press the COMFORT/SENSOR button, the setting changes in the following order.

COMFORT AIRFLOW → INTELLIGENT EYE → Combination → blank (No Setting) → COMFORT AIRFLOW



SWING*6 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down, or (and) the louver moves right and left. The flap (louver) stops when you press the SWING button again.

OFF TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

SELECT button
• Changes the ON/OFF TIMER and WEEKLY TIMER settings.

TIMER CANCEL button
• Cancels the timer setting.
• It cannot be used for the WEEKLY TIMER operation.

CLOCK*8 button

Weekly : WEEKLY button
: PROGRAM button
Copy : COPY button
Back : BACK button
Next : NEXT button
• WEEKLY TIMER*7 operation.

ON TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

(R17861)

Reference Refer to the following pages for detail.

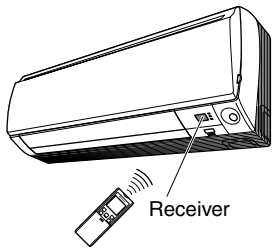
★2	Lamp brightness setting	P.74
★3	COMFORT AIRFLOW operation	P.57, 59
★4	2-area INTELLIGENT EYE operation	P.69

★5	ECONO operation	P.66
★6	Auto swing setting	P.55
★7	WEEKLY TIMER operation	P.76
★8	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.3 FTXS20/25/35/42/50J2V1B

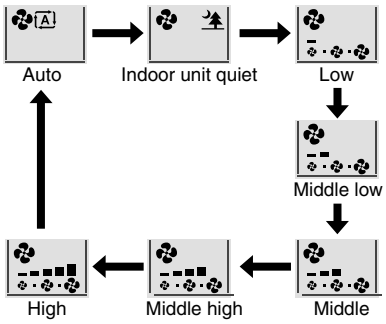
Signal transmitter



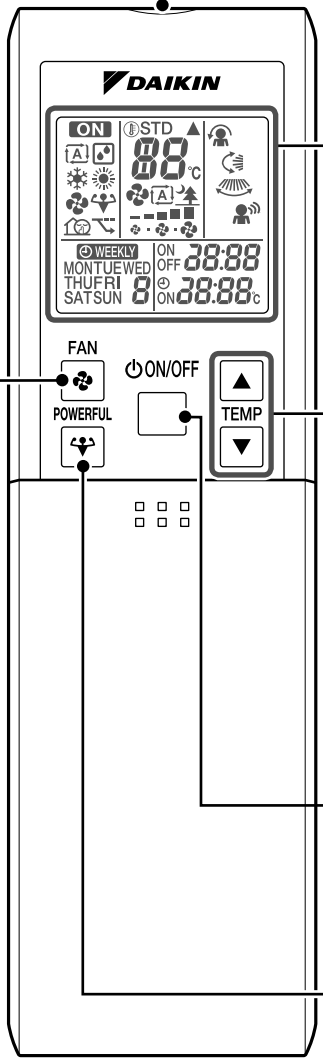
- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- The maximum distance for communication is approx. 7m.

FAN setting button

- Selects the airflow rate setting every time you press this button.



- In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
- In DRY operation, the airflow rate setting is not available.



Display (LCD)

- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

: AUTO	18 ~ 30 °C
: DRY	Not available
: COOL	18 ~ 32 °C
: HEAT	10 ~ 30 °C
: FAN	Not available

ON/OFF button

- Press this button once to start operation. Press once again to stop it.

POWERFUL★1 button

- POWERFUL operation.

(R18208)

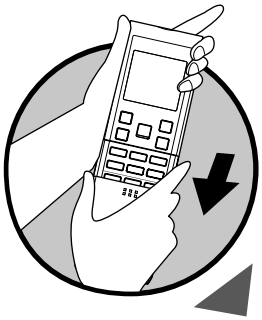
< ARC452A3 >

Reference Refer to the following pages for detail.

★1	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover



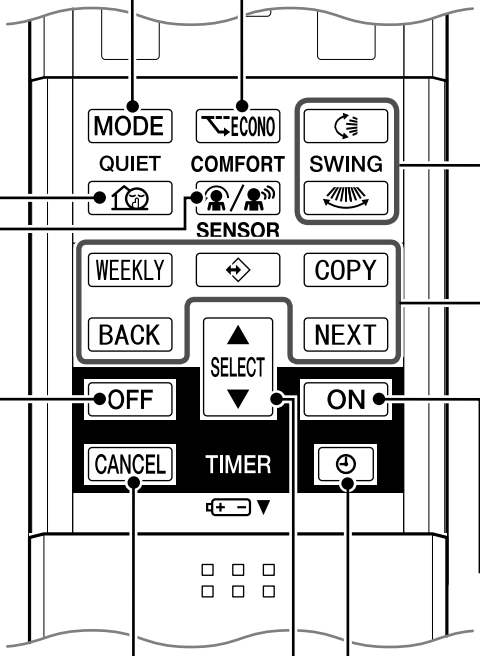
MODE button
• Selects the operation mode.

(heat pump only) (heat pump only)

ECONO*4 button
• ECONO operation.

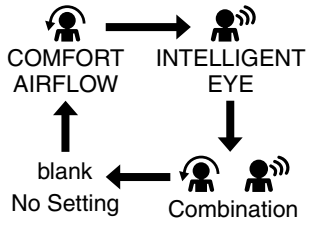
QUIET button
• OUTDOOR UNIT QUIET operation.
• QUIET operation is not available in FAN and DRY operation.
• QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.

SWING*5 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down, or (and) the louver moves right and left. The flap (louver) stops when you press the SWING button again.



WEEKLY button
WEEKLY : **WEEKLY button**
: **PROGRAM button**
COPY : **COPY button**
BACK : **BACK button**
NEXT : **NEXT button**
• WEEKLY TIMER*6 operation.

COMFORT/SENSOR button (COMFORT AIRFLOW Operation*2/ INTELLIGENT EYE Operation*3)
• Every time you press the COMFORT/SENSOR button, the setting changes in the following order.



ON TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

CLOCK*7 button

OFF TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

TIMER CANCEL button
• Cancels the timer setting.
• Cannot be used for the WEEKLY TIMER operation.

SELECT button
• It changes the ON/OFF TIMER and WEEKLY TIMER settings.

(R18209)

Reference Refer to the following pages for detail.

★2	COMFORT AIRFLOW operation	P.57, 59
★3	2-area INTELLIGENT EYE operation	P.69
★4	ECONO operation	P.66

★5	Auto swing setting	P.55
★6	WEEKLY TIMER operation	P.76
★7	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
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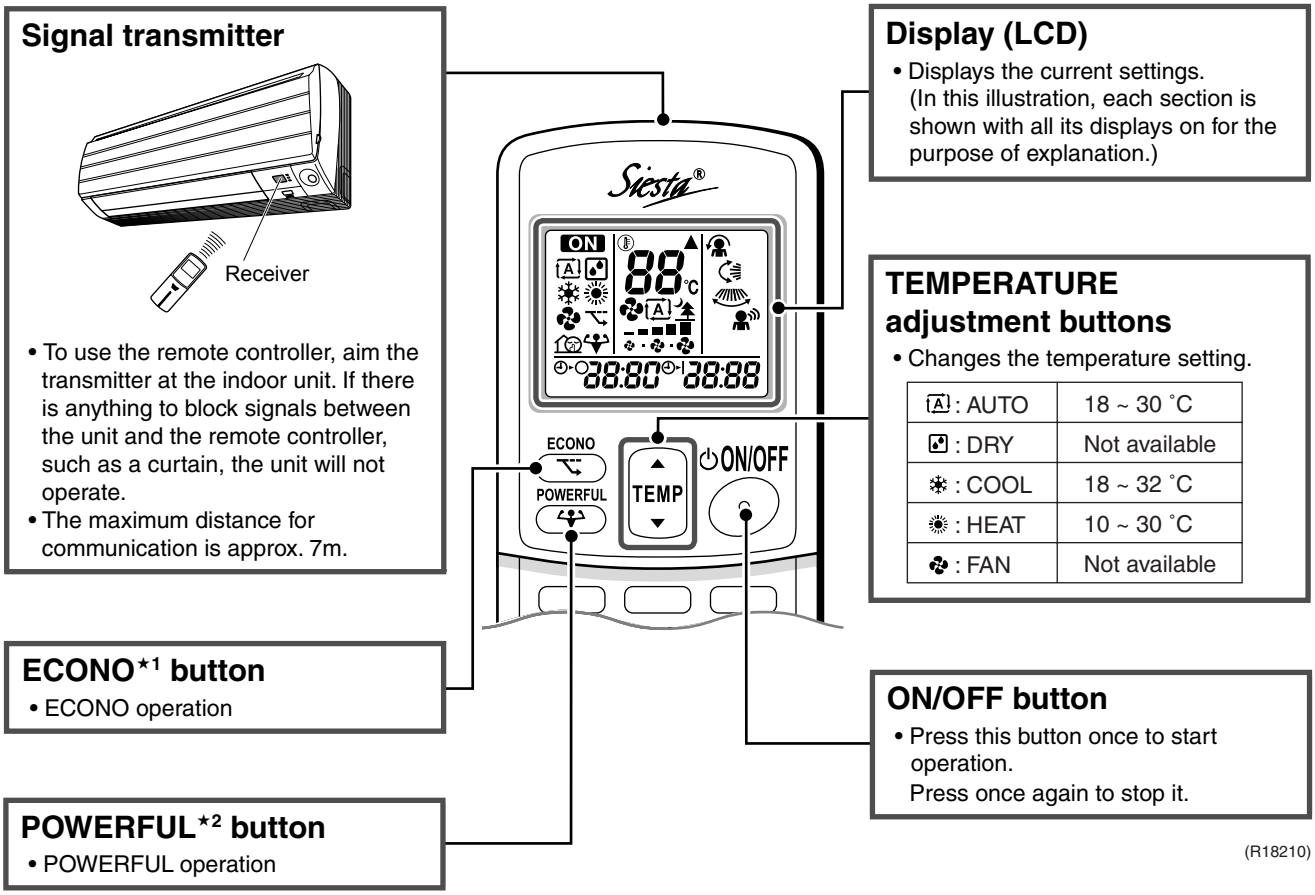
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.4 ATXS20/25/35/42/50G2V1B



< ARC433A85 >

Reference Refer to the following pages for detail.

★1	ECONO operation	P.66
★2	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
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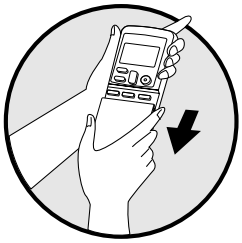
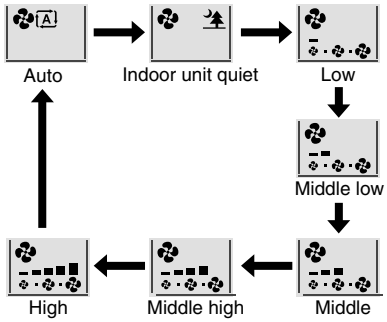
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover



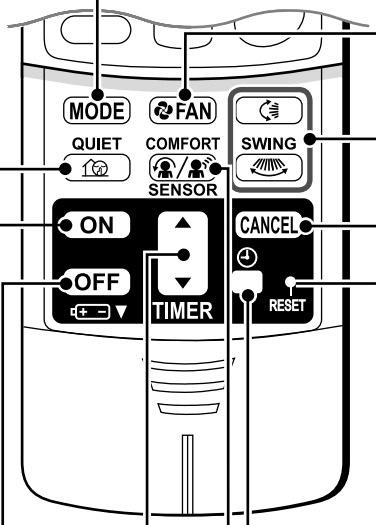
MODE button
• Selects the operation mode.

FAN setting button
• Selects the airflow rate setting every time you press this button.



• In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
• In DRY operation, the airflow rate setting is not available.

QUIET button
• OUTDOOR UNIT QUIET operation.
• QUIET operation is not available in FAN and DRY operation.
• QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.



ON TIMER button
• Press this button and adjust the day and time with TIMER setting button.
Press this button again to complete TIMER setting.

OFF TIMER button
• Press this button and adjust the day and time with TIMER setting button.
Press this button again to complete TIMER setting.

TIMER Setting button
• It changes the ON/OFF TIMER settings.

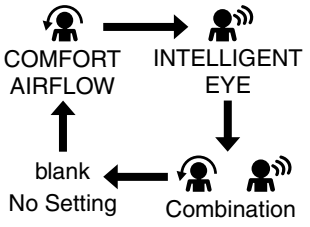
SWING★3 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down, or (and) the louver moves right and left. The flap (louver) stops when you pressed the SWING button again.

TIMER CANCEL button
• Cancels the timer setting.

RESET button
• Restarts the unit if it freezes.
• Use a thin object to push.

CLOCK★6 button

COMFORT/SENSOR button (COMFORT AIRFLOW Operation★4/ INTELLIGENT EYE Operation★5)
• Every time you press the COMFORT/SENSOR button, the setting changes in the following order.



(R18211)

Reference Refer to the following pages for detail.

★3	Auto swing setting	P.55
★4	COMFORT AIRFLOW operation	P.57, 59

★5	INTELLIGENT EYE operation	P.71
★6	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
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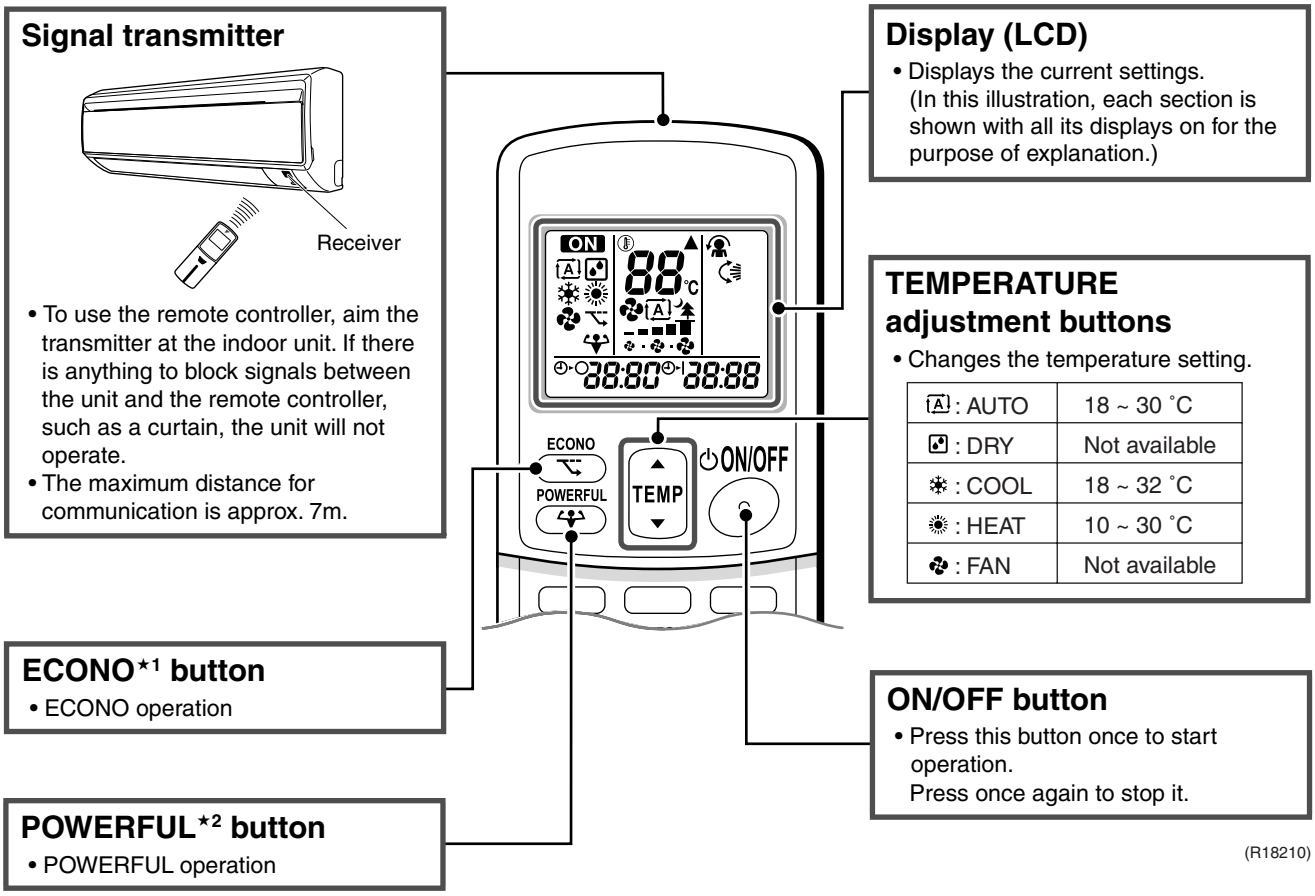
1.5 FTX20/25/35JV1B, FTX20/25/35J2V1B, ATX20/25/35JV1B, ATX20/25/35J2V1B



FTX20/25/35JV1B	ARC433A87
ATX20/25/35JV1B	ARC433A89

Reference

Refer to the following pages for detail.

★1	ECONO operation	P.66
★2	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
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(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

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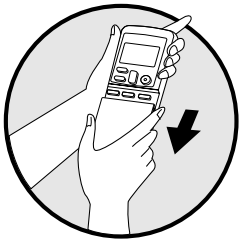
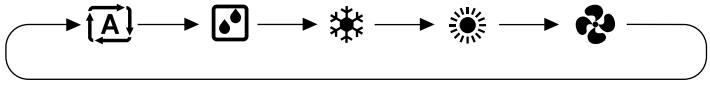
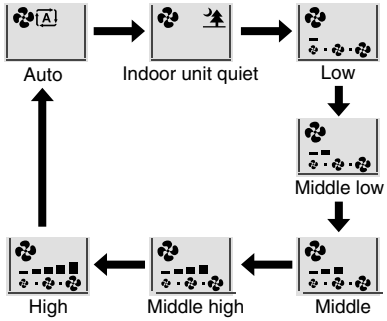


MODE button
• Selects the operation mode.



FAN setting button
• Selects the airflow rate setting every time you press this button.

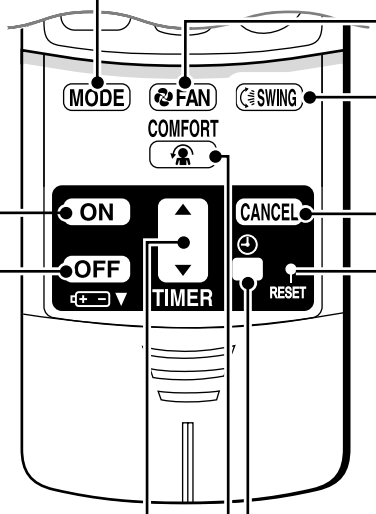


• In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
• In DRY operation, the airflow rate setting is not available.

ON TIMER button
• Press this button and adjust the day and time with TIMER setting button.
Press this button again to complete TIMER setting.

OFF TIMER button
• Press this button and adjust the day and time with TIMER setting button.
Press this button again to complete TIMER setting.

TIMER Setting button
• It changes the ON/OFF TIMER settings.



SWING★3 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down.
The flap (louver) stops when you pressed the SWING button again.

COMFORT★4 button
• The airflow direction will be in upward while in COOL operation, in downward while in HEAT operation. This function will prevent cold or warm air from directly blowing on your body.

TIMER CANCEL button
• Cancels the timer setting.

RESET button
• Restarts the unit if it freezes.
• Use a thin object to push.

CLOCK★5 button

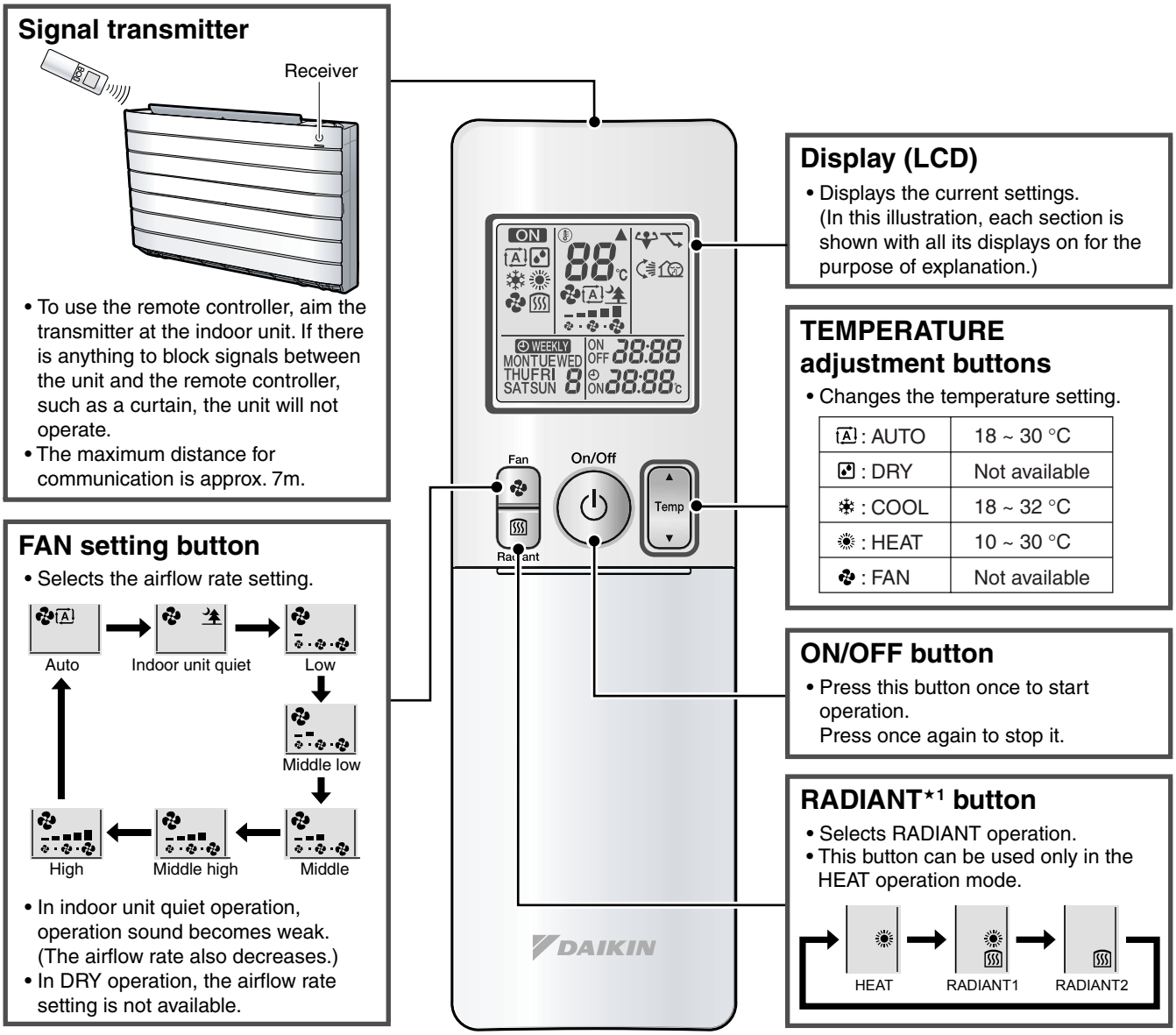
(R18211)

Reference Refer to the following pages for detail.

★3	Auto swing setting	P.55
★4	COMFORT AIRFLOW operation	P.57, 59
★5	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.6 FVXG25/35/50K2V1B



(R18348)

< ARC466A2 >

Reference Refer to the following pages for detail.

★1	RADIANT operation	P.60

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

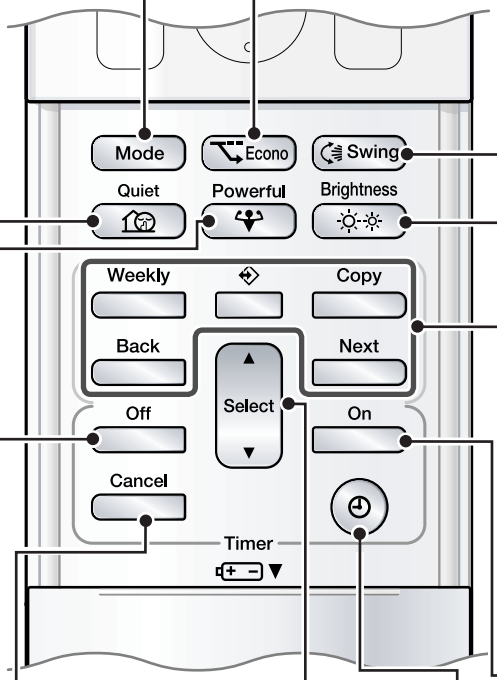
Open the Front Cover

MODE button
- Selects the operation mode.

ECONO*3 button
- ECONO operation.

QUIET button
- OUTDOOR UNIT QUIET operation.
- QUIET operation is not available in FAN and DRY operation.
- QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.

SWING*4 button
- Adjusts the airflow direction.
- When you press the SWING button, the flap moves up and down. The flap stops when you press the SWING button again.



Lamp brightness setting button*5

POWERFUL*2 button
- Powerful operation.

Weekly
: WEEKLY button
: PROGRAM button
Copy
: COPY button
Back
: BACK button
Next
: NEXT button
- WEEKLY TIMER*6 operation.

OFF TIMER button
- Press this button and adjust the day and time with the SELECT button.
  Press this button again to complete TIMER setting.

ON TIMER button
- Press this button and adjust the day and time with the SELECT button.
  Press this button again to complete TIMER setting.

TIMER CANCEL button
- Cancels the timer setting.
- It cannot be used for the WEEKLY TIMER operation.

SELECT button
- Changes the ON/OFF TIMER and WEEKLY TIMER settings.

CLOCK*7 button

(R18349)

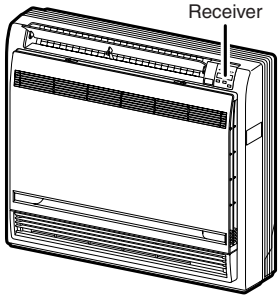
Reference Refer to the following pages for detail.

★2	POWERFUL operation	P.72	★5	Lamp brightness setting	P.74
★3	ECONO operation	P.66	★6	WEEKLY TIMER operation	P.76
★4	Auto swing setting	P.55	★7	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.7 FVXS25/35/50FV1B

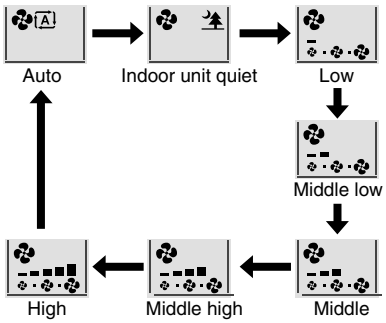
Signal transmitter



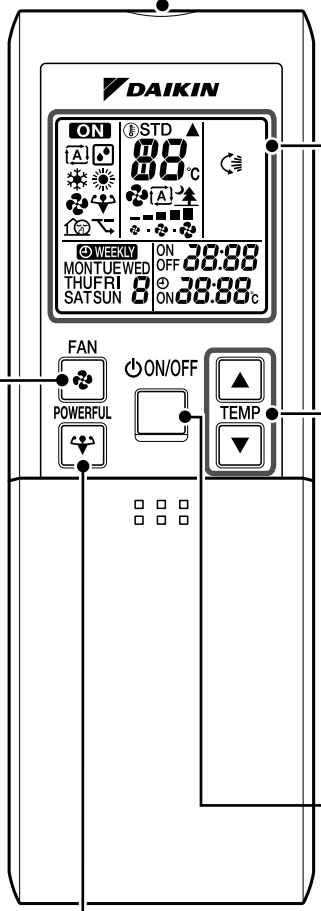
- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- The maximum distance for communication is approx. 7m.

FAN setting button

- Selects the airflow rate setting every time you press this button.



- In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
- In DRY operation, the airflow rate setting is not available.



Display (LCD)

- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

: AUTO	18 ~ 30 °C
: DRY	Not available
: COOL	18 ~ 32 °C
: HEAT	10 ~ 30 °C
: FAN	Not available

ON/OFF button

- Press this button once to start operation. Press once again to stop it.

POWERFUL★1 button

- POWERFUL operation.

(R17823)

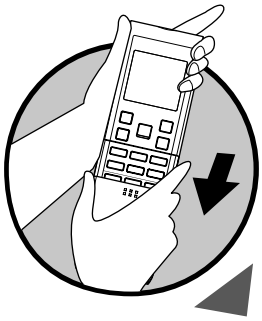
< ARC452A1 >

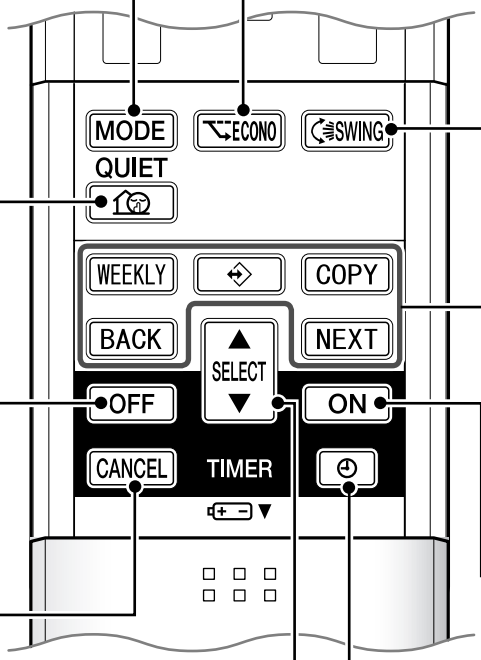
Reference Refer to the following pages for detail.

★1	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover





MODE button
• Selects the operation mode.

ECONO★2 button
• ECONO operation.

SWING★3 button
• Adjusts the airflow direction.
• When you press the SWING button, the flap moves up and down. The flap (louver) stops when you press the SWING button again.

QUIET button
• OUTDOOR UNIT QUIET operation.
• QUIET operation is not available in FAN and DRY operation.
• QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.

WEEKLY button
WEEKLY : **WEEKLY button**
: **PROGRAM button**
COPY : **COPY button**
BACK : **BACK button**
NEXT : **NEXT button**
• WEEKLY TIMER★4 operation.

OFF TIMER button
• Press this button and adjust the day and time with the SELECT button.
Press this button again to complete TIMER setting.

ON TIMER button
• Press this button and adjust the day and time with the SELECT button. Press this button again to complete TIMER setting.

TIMER CANCEL button
• Cancels the timer setting.
• Cannot be used for the WEEKLY TIMER operation.

SELECT button
• It changes the ON/OFF TIMER and WEEKLY TIMER settings.

CLOCK★5 button

(R17824)

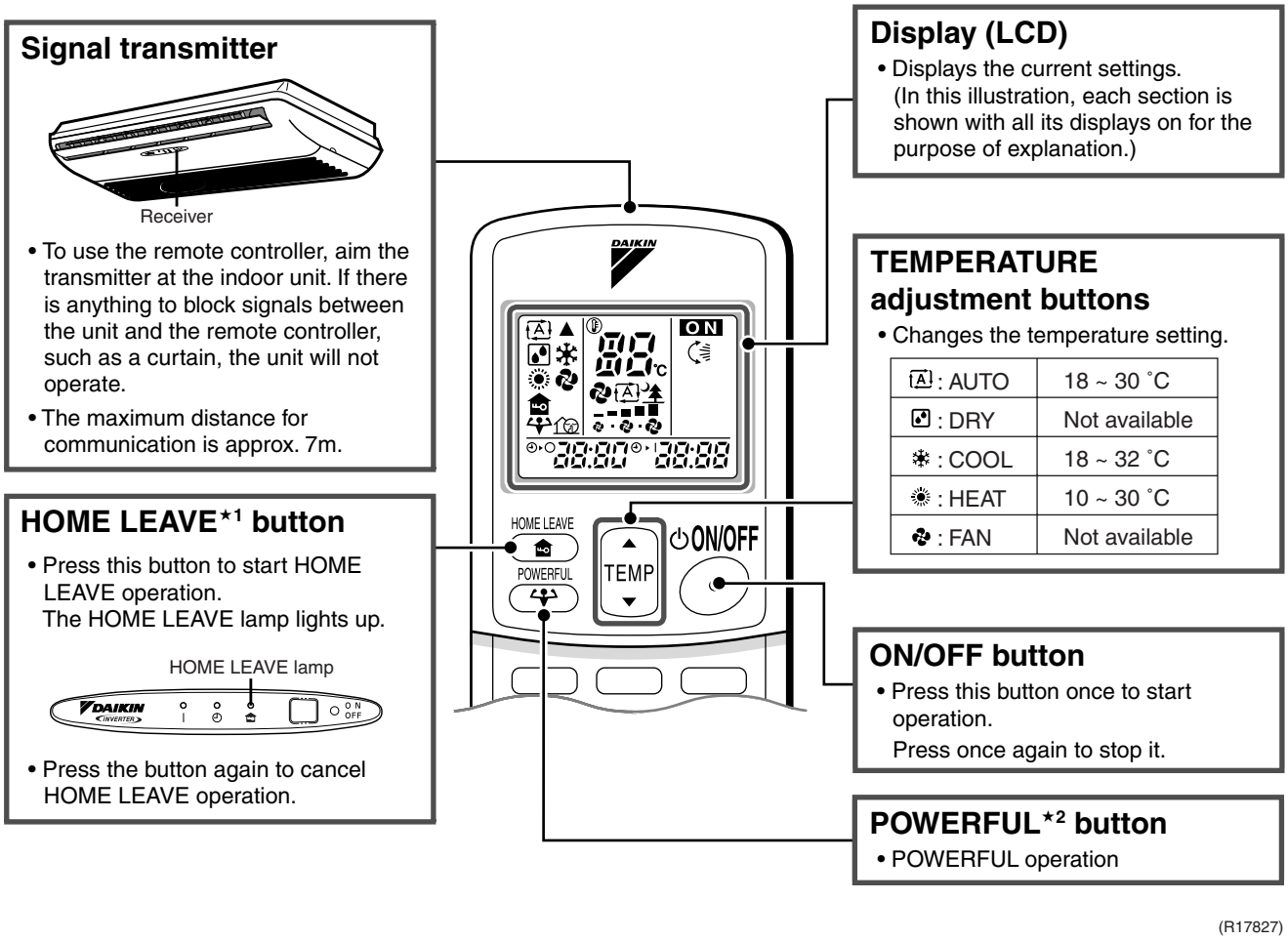
Reference Refer to the following pages for detail.

★2	ECONO operation	P.66
★3	Auto swing setting	P.55

★4	WEEKLY TIMER operation	P.76
★5	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manual from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.8 FLXS25/35/50BAVMB



(R17827)

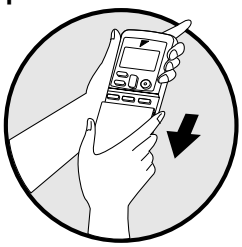
< ARC433B67 >

Reference Refer to the following pages for detail.

★1	HOME LEAVE operation	P.67
★2	POWERFUL operation	P.72

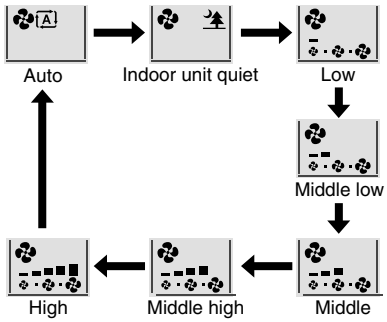
Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover



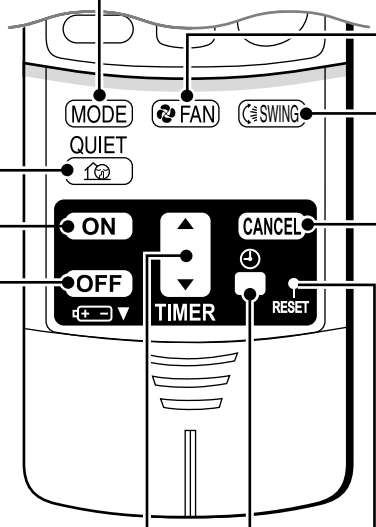
MODE button
- Selects the operation mode.

FAN setting button
- Selects the airflow rate setting every time you press this button.



- In indoor unit quiet operation, operation sound becomes weak. (The airflow rate also decreases.)
- In DRY operation, the airflow rate setting is not available.

QUIET button
- OUTDOOR UNIT QUIET operation
- QUIET operation is not available in FAN and DRY operation
- QUIET operation and POWERFUL operation cannot be used at the same time. Priority is given to the function you pressed last.



ON TIMER button
- Press this button and adjust the day and time with the TIMER setting button. Press this button again to complete TIMER setting.

OFF TIMER button
- Press this button and adjust the day and time with the TIMER setting button. Press this button again to complete TIMER setting.

SWING★3 button
- Adjusts the airflow direction.
- When you press the SWING button, the flap moves up and down. The flap stops when you press the SWING button again.

TIMER CANCEL button
- Cancels the timer setting.

TIMER Setting button
- Changes the ON/OFF TIMER settings.

RESET button
- Restarts the unit if it freezes.
- Use a thin object to push.

CLOCK★4 button

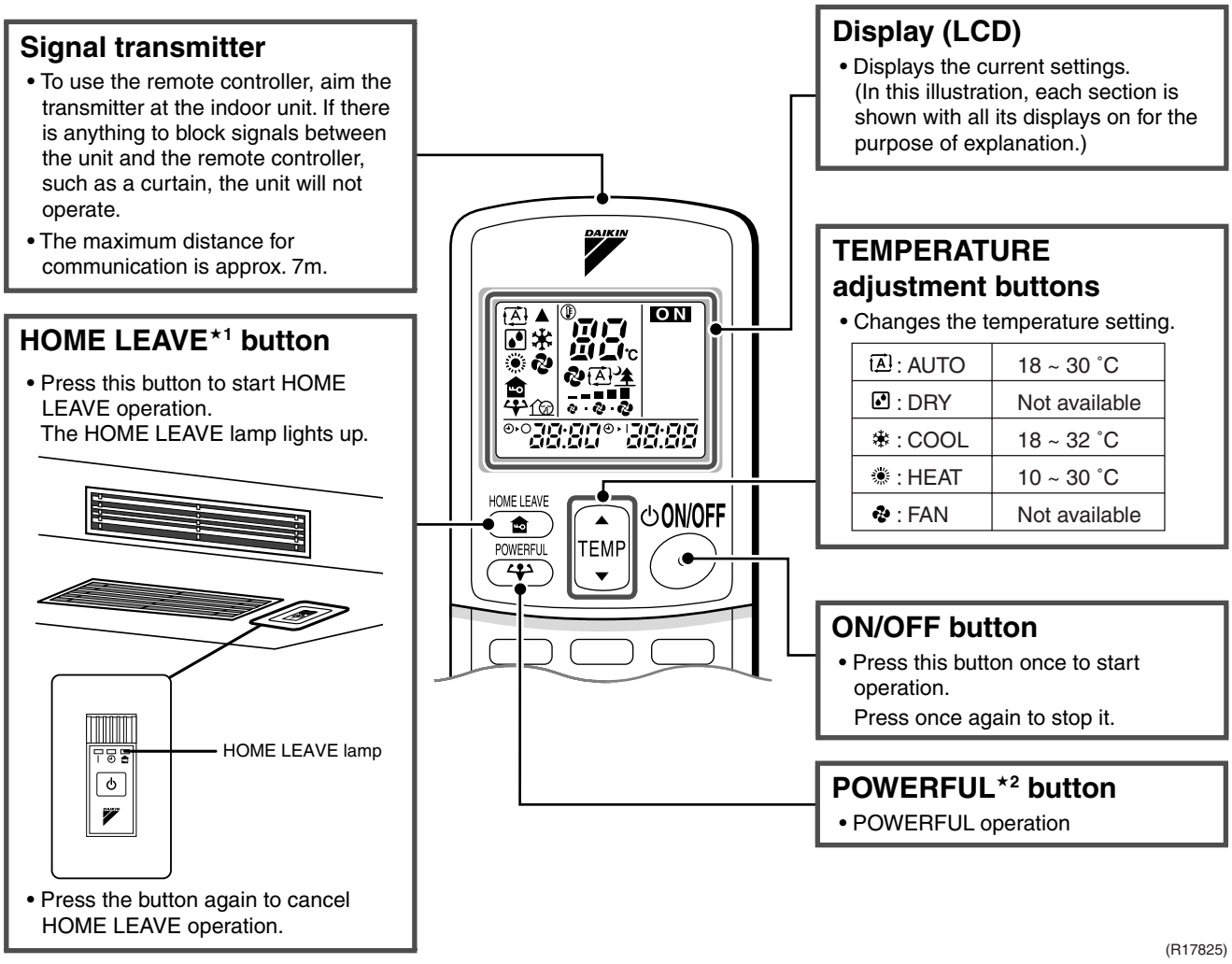
(R18385)

Reference Refer to the following pages for detail.

★3	Auto swing setting	P.55
★4	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

1.9 FDXS25/35EAVMB, FDXS25/35E7VMB, FDXS50CVMB, FDXS50C7VMB



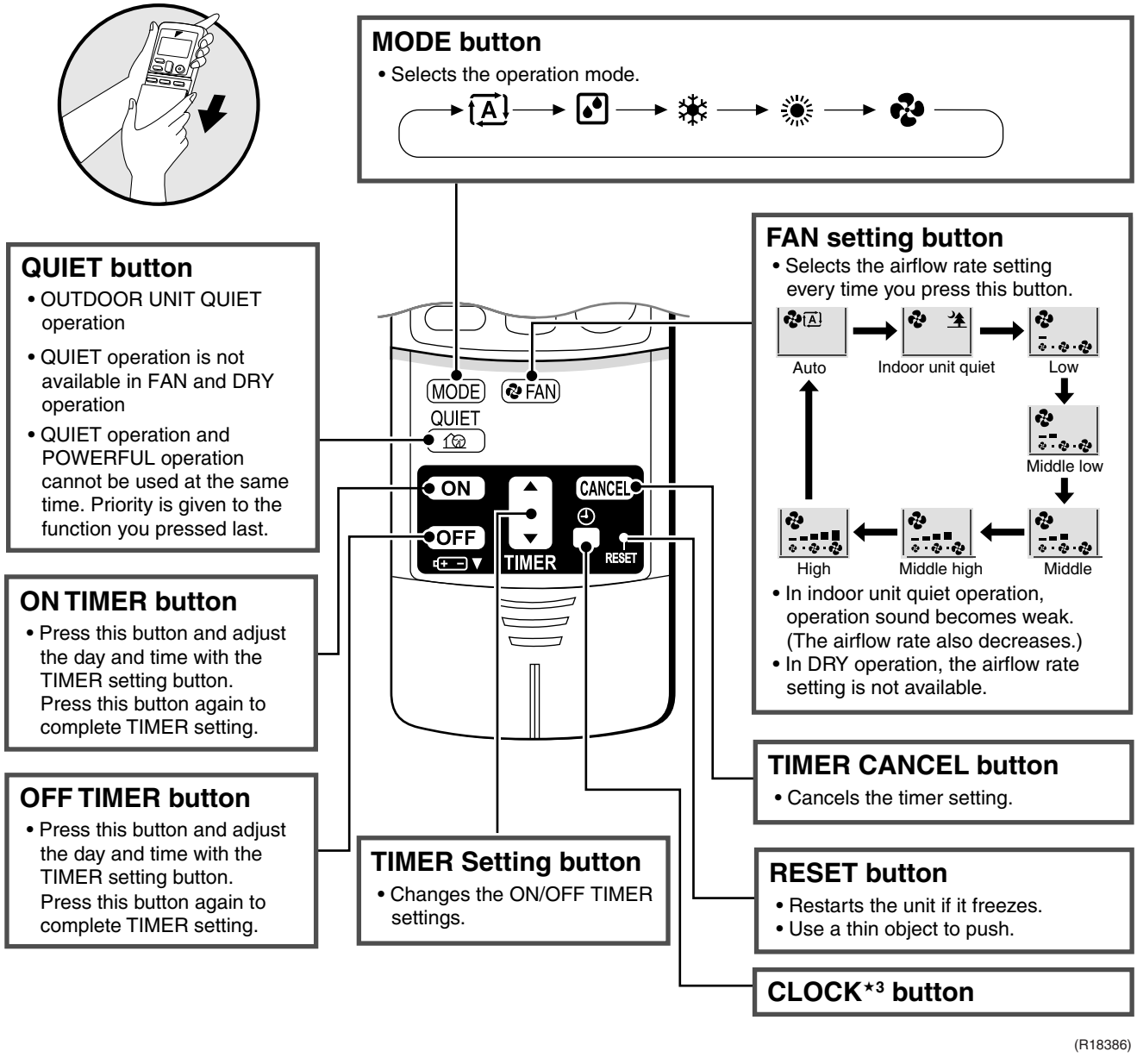
< ARC433B69 >

Reference Refer to the following pages for detail.

★1	HOME LEAVE operation	P.67
★2	POWERFUL operation	P.72

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

Open the Front Cover



(R18386)

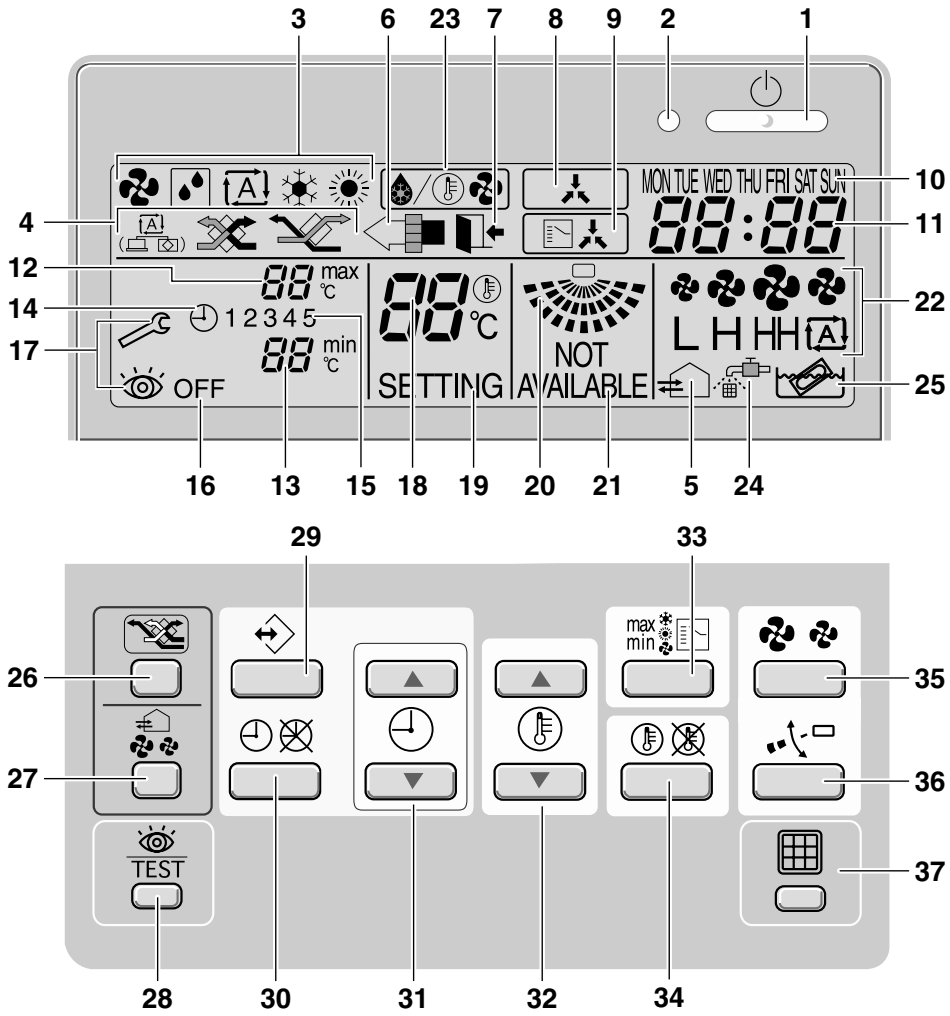
Reference Refer to the following pages for detail.

★3	Clock setting	P.75

Note: Refer to the operation manual of applicable model for detail. You can download operation manuals from 'DISTRIBUTOR'S PAGE':
DISTRIBUTOR'S PAGE → Product Information → Operation/Installation Manual
(URL: http://global.daikin.com/Daikin/global/Distributors_admin/user_mng/login.php)

2. SA Indoor Unit

2.1 BRC1D528



1 ON/OFF BUTTON

Press the ON/OFF button to start or stop the system.

2 OPERATION LAMP

The operation lamp lights up during operation or blinks if a malfunction occurs.

3 OPERATION MODE ICON

These icons indicate the current operation mode (FAN, DRY, AUTOMATIC, COOLING, HEATING).

4 VENTILATION MODE ICON

These icons indicate the current ventilation mode (HRV only) (AUTOMATIC, HEAT EXCHANGE, BYPASS).

5 VENTILATION ICON

The ventilation icon appears when the ventilation is adjusted with the ventilation amount button (HRV only). Simultaneously, the ventilation amount is indicated by the fan speed icon (see 22).

6 AIR CLEANING ICON

This icon indicates that the air cleaning unit (option) is operational.

7 LEAVE HOME ICON

The leave home icon shows the status of the leave home function.

ON	Leave home is enabled
FLASHING	Leave home is active
OFF	Leave home is disabled

8 EXTERNAL CONTROL ICON

This icon indicates that another controller with higher priority is controlling or disabling your installation.

9 CHANGE-OVER UNDER CENTRALISED CONTROL ICON

This icon indicates that the change-over of the installation is under centralised control assigned to another indoor unit or optional cool/heat selector connected to the outdoor unit (= master remote controller).

10 DAY OF THE WEEK INDICATOR

MON TUE WED THU FRI SAT SUN

The day of the week indicator shows the current week day (or the set day when reading or programming the schedule timer).

11 CLOCK DISPLAY 88:88

The clock display indicates the current time (or the action time when reading or programming the schedule timer).

12 MAXTEMPERATURE IMUM SET 88 max °C

The maximum set temperature indicates the maximum set temperature when in limit operation.

13 MINIMUM SET TEMPERATURE 88 min °C

The minimum set temperature indicates the minimum set temperature when in limit operation.

14 SCHEDULE TIMER ICON

This icon indicates that the schedule timer is enabled.

15 ACTION ICONS 1 2 3 4 5

These icons indicate the actions for each day of the schedule timer.

16 OFF ICON OFF

This icon indicates that the OFF action is selected when programming the schedule timer.

17 INSPECTION REQUIRED and

These icons indicate that inspection is required. Consult your installer.

18 SET TEMPERATURE DISPLAY 88 °C

This indicates the current set temperature of the installation (not shown in LIMIT operation or in FAN or DRY mode).

19 SETTING SETTING

Not used, for service purposes only.

20 AIR FLOW DIRECTION ICON

This icon indicates the air flow direction (only for installations with motorised air flow flaps).

21 NOT AVAILABLE NOT AVAILABLE

NOT AVAILABLE is displayed whenever a non-installed option is addressed or a function is not available.

22 FAN SPEED ICON L H HH A

This icon indicates the set fan speed.

23 DEFROST/HOTSTART MODE ICON

This icon indicates that the defrost/hotstart mode is active.

24 AIR FILTER CLEANING TIME ICON

This icon indicates the air filter must be cleaned. Refer to the manual of the indoor unit.

25 ELEMENT CLEANING TIME ICON

This icon indicates the element must be cleaned (HRV only).

26 VENTILATION MODE BUTTON

The ventilation mode button operates the HRV; refer to the HRV manual for more details.

27 VENTILATION AMOUNT BUTTON

This button sets the ventilation amount; refer to the HRV manual for more details.

28 INSPECTION/TEST OPERATION BUTTON TEST

Not used, for service purposes only.

29 PROGRAMMING BUTTON

This button is a multi-purpose button.

Depending on the previous manipulations of the user, the programming button can have various functions.

30 SCHEDULE TIMER BUTTON

This button enables or disables the schedule timer.

31 TIME ADJUST BUTTON

These buttons are used to adjust the clock or, when in programming mode, to adjust the programmed action time. Both buttons have an auto-repeat function.

32 TEMPERATURE ADJUST BUTTONS

These buttons are used to adjust the current setpoint or, when in programming mode, to adjust the programmed setpoint temperature (step = 1°C). Both buttons are also used to adjust the day of the week.

33 OPERATION CHANGE/MIN-MIX BUTTON

This button is a multi-purpose button. Depending on the previous manipulations of the user, it can have following functions:

1 select the operation mode of the installation (FAN, DRY, AUTOMATIC, COOLING, HEATING)

2 toggle between minimum temperature and maximum temperature when in limit operation

34 SETPOINT/LIMIT BUTTON

This button toggles between setpoint, limit operation or OFF (programming mode only).

35 FAN SPEED BUTTON

This button toggles between L (Low), H (High), HH (very High), A (Automatic).

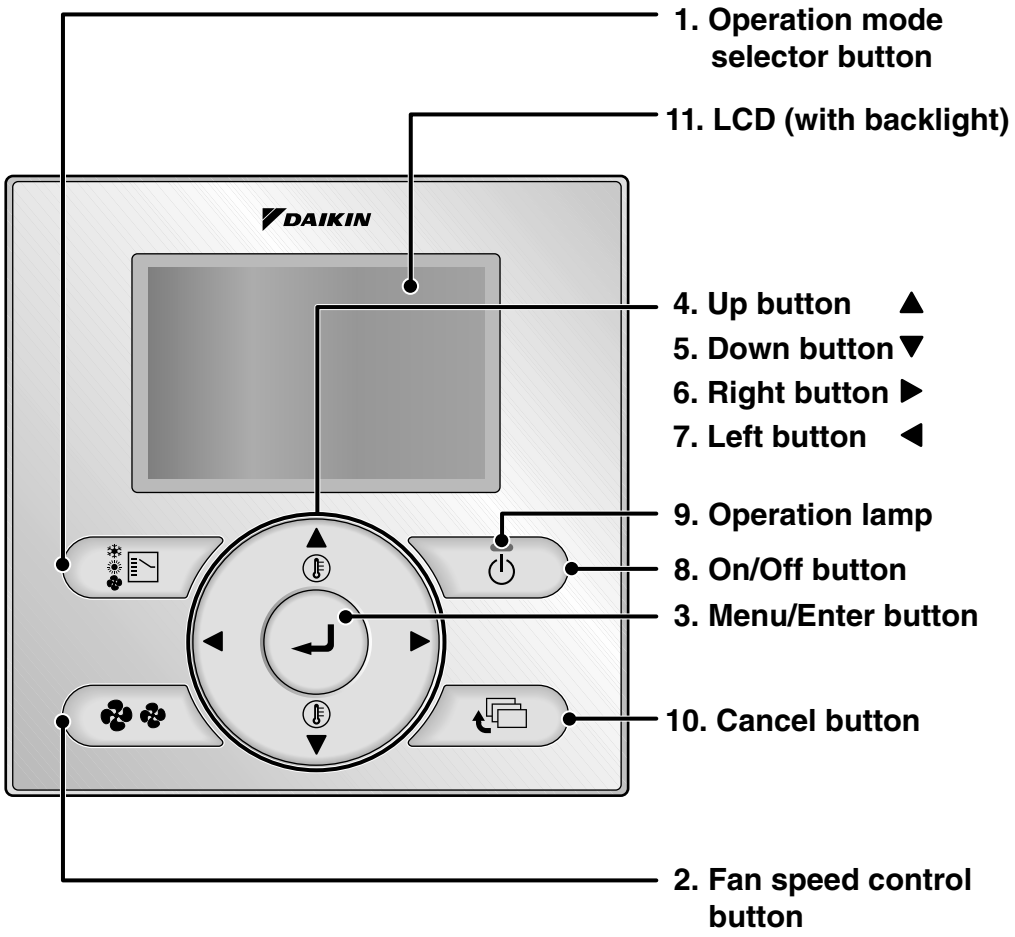
36 AIR FLOW DIRECTION ADJUST BUTTON

This button enables to adjust the air flow direction.

37 AIR FILTER CLEANING TIME ICON RESET BUTTON

This button is used to reset the air filter cleaning time icon.

2.2 BRC1E51A7



1. Operation mode selector button

- Press this button to select the operation mode of your preference.
  * Available modes vary with the connecting model.

2. Fan speed control button

- Press this button to select the fan speed of your preference.
  * Available fan speed vary with the connecting model.

3. Menu/Enter button

- Used to indicate the main menu.
- Used to enter the setting item selected.

4. Up button ▲ (Be sure to press the part with the symbol ▲)

- Used to raise the set temperature.
- The next items on the upper side will be highlighted.
  (The highlighted items will be scrolled continuously when the button is kept pressed.)
- Used to change the item selected.

5. Down button ▼ (Be sure to press the part with the symbol ▼)

- Used to lower the set temperature.
- The next items on the lower side will be highlighted.
  (The highlighted items will be scrolled continuously when the button is kept pressed.)
- Used to change the item selected.

6. Right button ▶ (Be sure to press the part with the symbol ▶)

- Used to highlight the next items on the right-hand side.
- Each screen is scrolled in the right-hand direction.
- Home leave settings are enabled with this button kept pressed for at least four seconds.

7. Left button ◀ (Be sure to press the part with the symbol ◀)

- Used to highlight the next items on the left-hand side.
- Each screen is scrolled in the left-hand direction.
- Home leave settings are enabled with this button kept pressed for at least four seconds.

8. On/Off button

- Press this button and system will start.
- Press this button again and system will stop.

9. Operation lamp (Green)

- This lamp lights up during operation.
- This lamp blinks if a error occurs.

10. Cancel button

- Used to return to the previous screen.

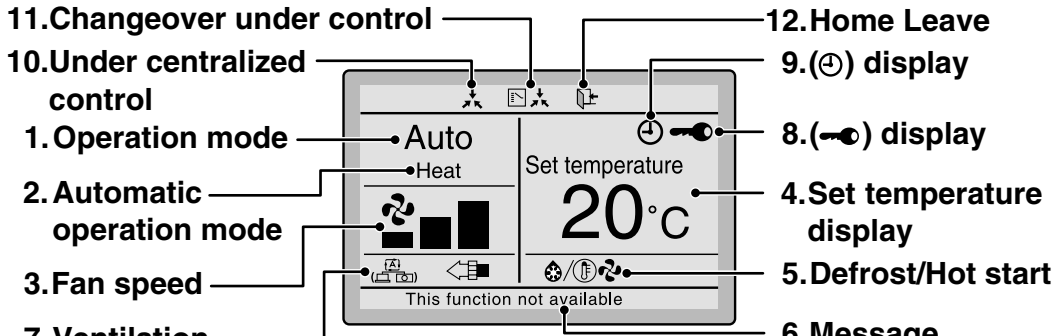
11. LCD (with backlight)

- The backlight will be light for approximately 30 seconds by pressing any operation button. Operate buttons excluding the On/Off button while the backlight is lit.
- If two remote controllers are used to control a single indoor unit, the backlight of the remote controller operated earlier than the other one will be lit.

Liquid Crystal Display

- Two types of liquid crystal display (LCD) are available. The standard display is by default set.
- To go to the detailed display, select the detailed display in the main menu.
- The displayed contents of the screen vary with the operation mode of the equipment interlocked. (The following display will appear when the air conditioner is in automatic heating operation.)

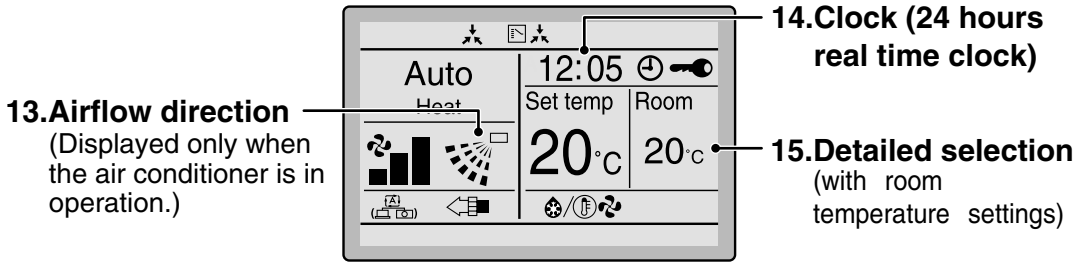
Standard display



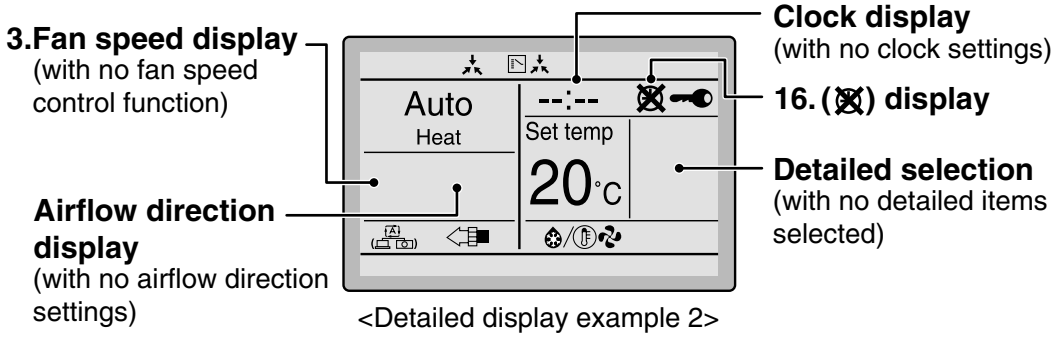
<Standard display example>

Detailed display

■ **The airflow direction, clock, and detailed selection items appear on the detailed display screen in addition to the items appearing on the standard display.**



<Detailed display example 1>



<Detailed display example 2>

1. Operation mode

- Used to display the present operation mode Cool, Heat, Vent, Fan, Dry or Auto mode.

2. Automatic operation mode

- Used to display the present automatic operation mode (Cool or Heat).

3. Fan speed

- Used to display the fan speed that is set for the air conditioner.
- The fan speed will not be displayed if the air conditioner does not have fan speed control function.

4. Set temperature display

- Used to display the temperature set for the air conditioner.

5. Defrost/Hot start "❄/🔥"

If Ventilating operation "" is displayed:

- Displayed when a total heat exchanger unit, such as the Ventiair, is connected. For details, refer to the Operation Manual of the Ventiair.

6. Message

The following messages are displayed.
"This function not available."

- Displayed for a few seconds when an operation button is pressed if the indoor unit is not provided with the corresponding function.
- If a number of indoor units are in operation, the message will appear only if none of the indoor units is provided with the corresponding function, i.e., the message will not appear if at least one of the indoor units is provided with the corresponding function.

"Error: Press Menu Button."
"Warning: Press Menu Button."

- Displayed if the error or warning is detected.

"Quick Cool/Heat" (SkyAir only)

- Displayed if the quick cooling/heating function is turned ON**.**

"Clean the filter."
"Clean the element."
"Clean the filter and element."

- Displayed when the time to clean the filter or element has come**.**

7. Ventilation / Purifying

- Displayed when a total heat exchanger unit, such as the Ventiair, is connected.
- **Ventilation mode icon."** **"** These icons indicate the current ventilation mode (HRV only) (AUTOMATIC, HEAT EXCHANGE, BYPASS).
- **AIR Purifying ICON "** **"** This icon indicates that the air cleaning unit (option) is operational.

8. 🔑 display

- Displayed when the key lock is set.

9. 🕘 display

- Displayed if the schedule timer or OFF reminder timer is enabled.

10. Under Centralized control "🖧"

- Displayed if the system is under the management of central control equipment (optional accessories) and the operation of the system through the remote controller is prohibited.

11. Changeover under control "🖧"

(VRV only)

- Displayed on the remote controller if the remote controller has no cooling/heating selection eligibility mode.

12. Home leave “ ”

- The home leave icon shows the status of the home leave function.

ON	Home leave is enabled
FLASHING	Home Leave is active
OFF	Home Leave is disabled

13. Airflow direction “ ”

- Displayed when the airflow direction and swing are set.
- This item is not displayed if the system is not provided with a function to set airflow directions.

14. Clock (24 hours real time clock)

- Displayed if the clock is set.
- If the clock is not set, “ -- : -- ” will be displayed.

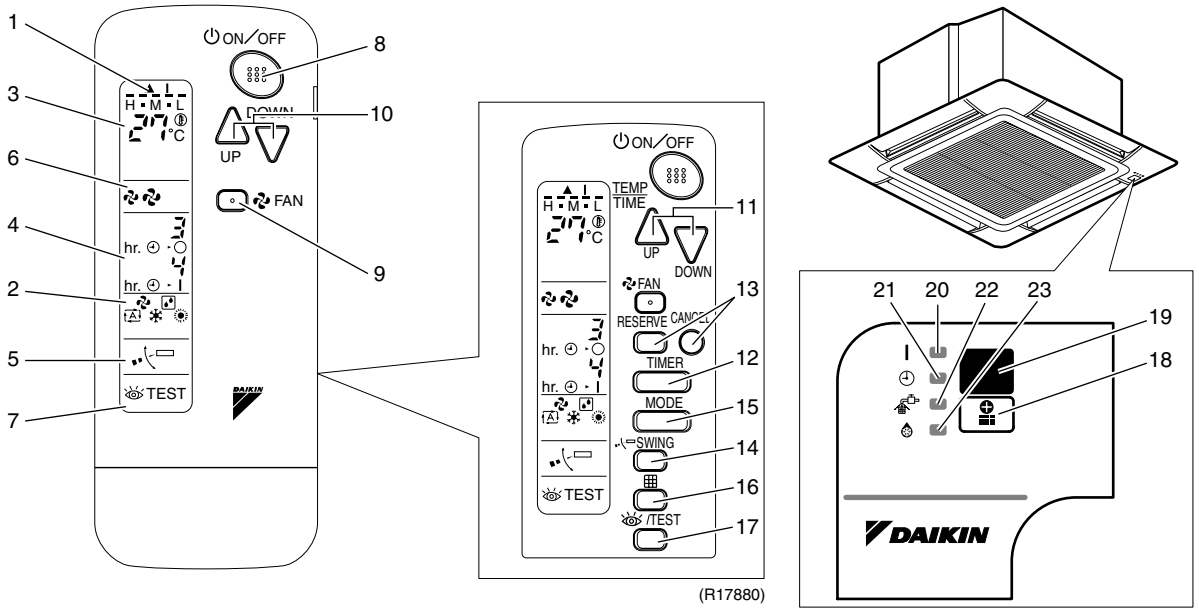
15.Detailed selection

- Displayed if the detailed display items are selected.
- No detailed items are by default selected.

16. display

- Displayed to inform that the clock needs setting again.
- The schedule timer function will not work unless the clock is set again.

2.3 BRC7E530W



1	**DISPLAY " ▲ " (SIGNAL TRANSMISSION)**
	This lights up when a signal is being transmitted.
2	**DISPLAY " " " " " " " " " " (OPERATION MODE)**
	This display shows the current OPERATION MODE. For straight cooling type, " " (Auto) and " " (Heating) are not installed.
3	**DISPLAY " " (SET TEMPERATURE)**
	This display shows the set temperature.
4	**DISPLAY " " (PROGRAMMED TIME)**
	This display shows PROGRAMMED TIME of the system start or stop.
5	**DISPLAY " " (AIR FLOW FLAP)**
6	**DISPLAY " " " " (FAN SPEED)**
	The display shows the set fan speed.
7	**DISPLAY " TEST" (INSPECTION/ TEST OPERATION)**
	When the INSPECTION/TEST OPERATION BUTTON is pressed, the display shows the system mode is in.
8	**ON/OFF BUTTON**
	Press the button and the system will start. Press the button again and the system will stop.
9	**FAN SPEED CONTROL BUTTON**
	Press this button to select the fan speed, HIGH or LOW, of your choice.
10	**TEMPERATURE SETTING BUTTON**
	Use this button for SETTING TEMPERATURE (Operates with the front cover of the remote controller closed.)

11	**PROGRAMMING TIMER BUTTON**
	Use this button for programming "START and/or STOP" time. (Operates with the front cover of the remote controller opened.)
12	**TIMER MODE START/STOP BUTTON**
13	**TIMER RESERVE/CANCEL BUTTON**
14	**AIR FLOW DIRECTION ADJUST BUTTON**
15	**OPERATION MODE SELECTOR BUTTON**
	Press this button to select OPERATION MODE.
16	**FILTER SIGN RESET BUTTON**
17	**INSPECTION/TEST OPERATION BUTTON**
	This button is used only by qualified service persons for maintenance purposes.
18	**EMERGENCY OPERATION SWITCH**
	This switch is readily used if the remote controller does not work.
19	**RECEIVER**
	This receives the signals from the remote controller.
20	**OPERATING INDICATOR LAMP (Red)**
	This lamp stays lit while the air conditioner runs. It flashes when the unit is in trouble.
21	**TIMER INDICATOR LAMP (Green)**
	This lamp stays lit while the timer is set.
22	**AIR FILTER CLEANING TIME INDICATOR LAMP (Red)**
	Lights up when it is time to clean the air filter.
23	**DEFROST LAMP (Orange)**
	Lights up when the defrosting operation has started. (For straight cooling type this lamp does not turn on.)

Part 6
Service Diagnosis

1. Troubleshooting with LED

1.1 Indoor Unit

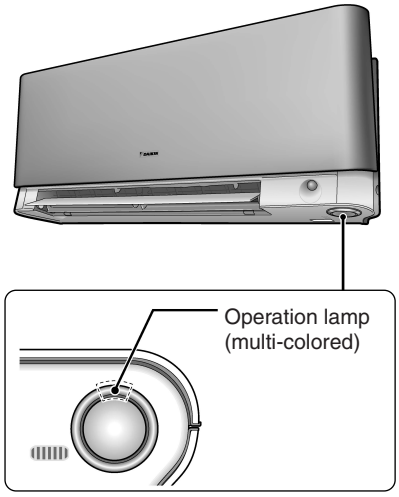
Operation Lamp

The operation lamp blinks 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.
2. When a signal transmission error occurs between the indoor and outdoor units.

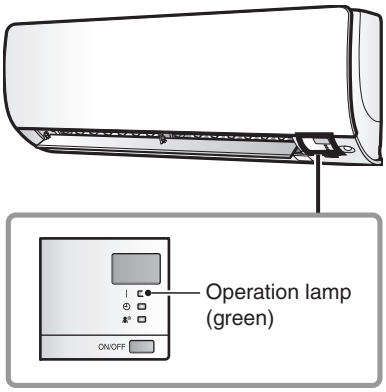
In either case, conduct the diagnostic procedure described in the following pages.

Wall Mounted Type: FTXG Series



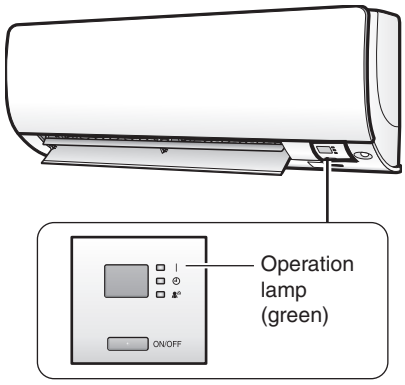
(R12750)

Wall Mounted Type: CTXS, FTXS20/25K Series



(R17161)

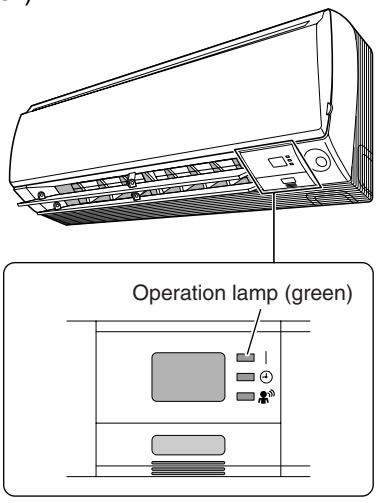
FTXS35/42/50K Series



(R18419)

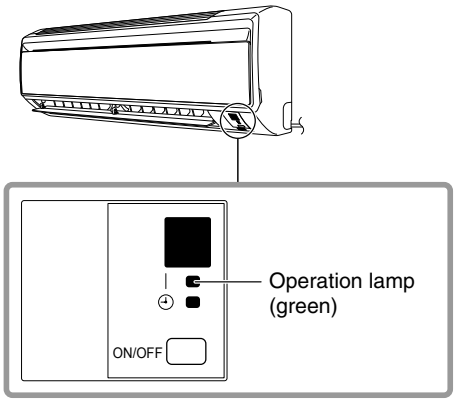
Wall Mounted Type: FTXS-J, ATXS Series

(The design of the front panel varies depending on the model.)



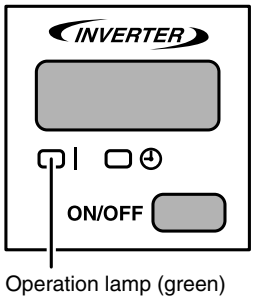
(R12187)

Wall Mounted Type: FTX, ATX Series



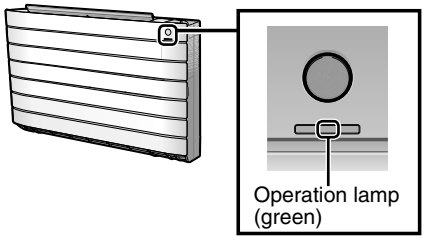
(R15296)

Floor Standing Type: FVXS Series



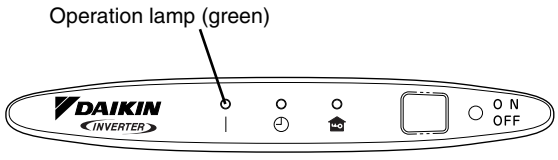
(R11687)

Floor Standing Type: FVXG Series



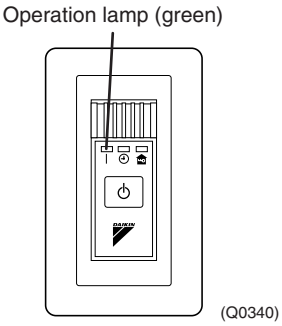
(R14646)

Floor / Ceiling Suspended Dual Type



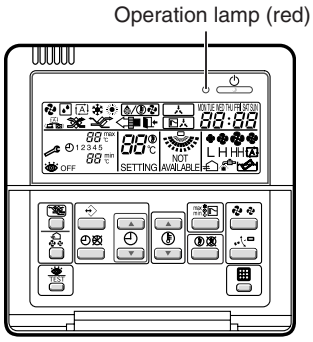
(R11688)

Duct Connected Type



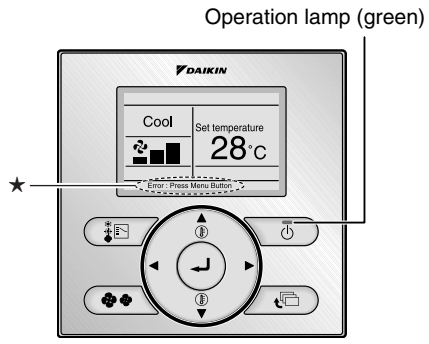
(Q0340)

BRC1D528



(R12851)

BRC1E51A7



★The error or warning message also blinks on the basic screen.

(R18420)

BRC7E530W

In case of wireless remote controller, a signal receiver PCB and a display PCB are installed on indoor unit.

When the error occurs, the operation lamp on the display PCB blinks.

Caution: When operation stops suddenly and the operation lamp blinks, it could be "operation mode conflict".

Check followings;

Are the operation modes all the same for the indoor units connected to multi system outdoor unit? If not, set all the indoor units to the same operation mode and confirm that the operation lamp is not blinking.

Moreover, when the operation mode is automatic, set all the indoor unit operation mode as "cooling" or "heating" 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 different operation mode is set later. (The first set operation mode has priority.)

Service Monitor

The indoor unit has one green LED (LED A) on the control PCB. When the microcomputer works in order, the LED A blinks.

1.2 Outdoor Unit

The outdoor unit has one green LED (LED A) on the PCB. When the microcomputer works in order, the LED A blinks.

2. Problem Symptoms and Measures

Problem Symptom	Check Item	Details of Measure	Reference Page
None of the units operates.	Check the power supply.	Check if the rated voltage is supplied.	—
	Check the types of the indoor units.	Check if the indoor unit type is compatible with the outdoor unit.	—
	Check the outdoor temperature.	Heating operation cannot be used when the outdoor temperature is 15.5°CWB or higher, and cooling operation cannot be used when the outdoor temperature is below 10°CDB.	—
	Diagnose with remote controller indication	—	155, 156
	Check the remote controller addresses.	Check if address settings for the remote controller and indoor unit are correct.	226
Operation sometimes stops.	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation. (Operation lamp OFF)	—
	Check the outdoor temperature.	Heating operation cannot be used when the outdoor temperature is 15.5°CWB or higher, and cooling operation cannot be used when the outdoor temperature is below 10°CDB.	—
	Diagnose with remote controller indication.	—	155, 156
Some indoor units do not operate.	Check the type of the indoor units.	Check if the indoor unit type is compatible with the outdoor unit.	—
	Diagnose with remote controller indication	—	155, 156
Heating operation is not available.	Check the model type setting of the remote controller.	Make sure that the setting of the remote controller is for the heat pump model type.	225
Units operate but do not cool, or do not heat.	Check for wiring and piping errors in the connection between the indoor and outdoor units.	—	—
	Check for thermistor detection errors.	Check if the thermistor is mounted securely.	—
	Check for faulty operation of the outdoor electronic expansion valve.	Set both the units to cooling operation, and compare the temperatures of the liquid pipes to see if the each outdoor electronic expansion valve works.	—
	Diagnose with remote controller indication.	—	155, 156
	Diagnose by service port pressure and operating current.	Check for refrigerant shortage.	178
Large operating noise and vibrations	Check the output voltage of the power module.	—	217
	Check the power module.	—	—
	Check the installation condition.	Check if the required spaces for installation (specified in the installation manual) are provided.	—

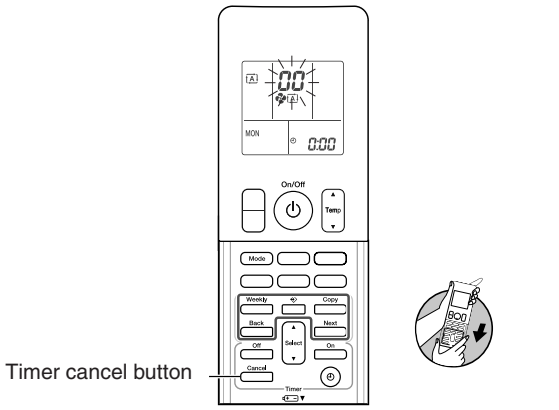
3. Service Check Function

3.1 RA Indoor Unit

3.1.1 ARC466 Series Remote Controller

Check Method 1

1. When the timer cancel button is held down for 5 seconds, 00 is displayed on the temperature display screen.



< ARC466 Series > (R14220)

2. Press the timer cancel button repeatedly until a long beep sounds.

■ The code indication changes in the sequence shown below.

<ARC466A1, A6, A9>

No.	Code	No.	Code	No.	Code
1	00	13	C7	25	UA
2	U4	14	A3	26	UH
3	L5	15	H8	27	P4
4	E6	16	H9	28	L3
5	H6	17	C9	29	L4
6	H0	18	C4	30	H7
7	A6	19	C5	31	U2
8	E7	20	J3	32	EA
9	U0	21	J6	33	AH
10	F3	22	E5	34	FA
11	A5	23	A1	35	H1
12	F6	24	E1	36	P9

<ARC466A2>

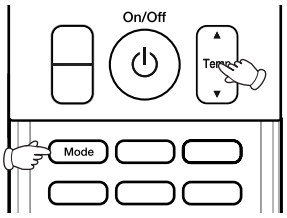
No.	Code	No.	Code	No.	Code
1	00	14	C7	27	UA
2	U4	15	A3	28	UH
3	L5	16	H8	29	P4
4	E6	17	H9	30	L3
5	H6	18	C9	31	L4
6	H0	19	C4	32	H7
7	A6	20	C5	33	U2
8	E7	21	CE	34	EA
9	U0	22	J3	35	AH
10	F3	23	J6	36	FA
11	A5	24	E5	37	H1
12	F6	25	A1	38	P9
13	A9	26	E1		

Note:

1. A short beep and two consecutive beeps indicate non-corresponding codes.
2. To return to the normal mode, hold the timer cancel button down for 5 seconds. When the remote controller is left untouched for 60 seconds, it also returns to the normal mode.
3. Not all the error codes are displayed. When you cannot find the error code, try the check method 2. (→ Refer to page 140.)

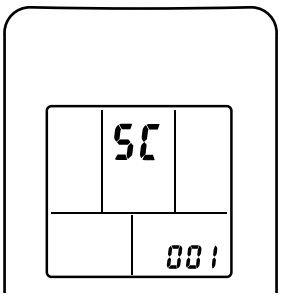
Check Method 2

1. Press the center of the [Temp] button and the [Mode] button at the same time.



(R11669)

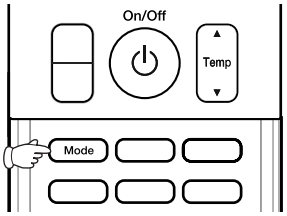
SC is displayed on the LCD.



(R11821)

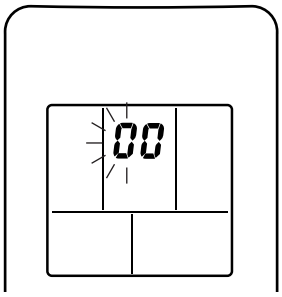
2. Select SC (service check) with the [Temp] ▲ or ▼ button.

3. Press the [Mode] button to enter the service check mode.



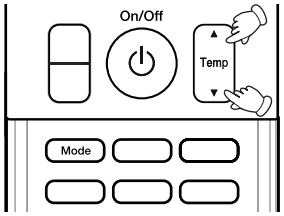
(R11672)

The left-side number blinks.



(R11670)

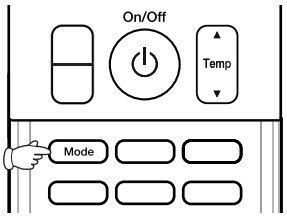
4. Press the [Temp] ▲ or ▼ button and change the number until you hear the two consecutive beeps or the long beep.



(R11671)

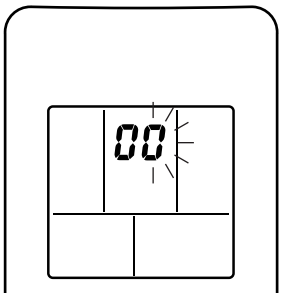
5. Diagnose by the sound.
   ★beep : The left-side number does not correspond with the error code.
   ★tow consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★long beep : Both the left-side and right-side numbers correspond with the error code. (The numbers indicated when you hear the long beep are the error code. → Refer to page 155, 156.)

6. Press the [Mode] button.



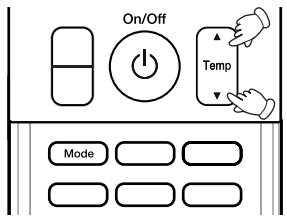
(R11672)

   The right-side number blinks.



(R11673)

7. Press the [Temp] ▲ or ▼ button and change the number until you hear the long beep.

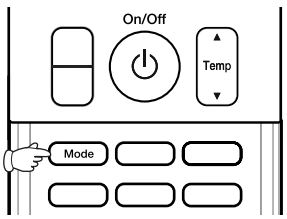


(R11671)

8. Diagnose by the sound.
   ★beep : The left-side number does not correspond with the error code.
   ★two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★long beep : Both the left-side and right-side numbers correspond with the error code.

9. Determine the error code.
   The numbers indicated when you hear the long beep are the error code.
   (Error codes and description → Refer to page 155, 156.)

10. Press the [Mode] button for 5 seconds to exit from the service check mode.
    (When the remote controller is left untouched for 60 seconds, it returns to the normal mode also.)

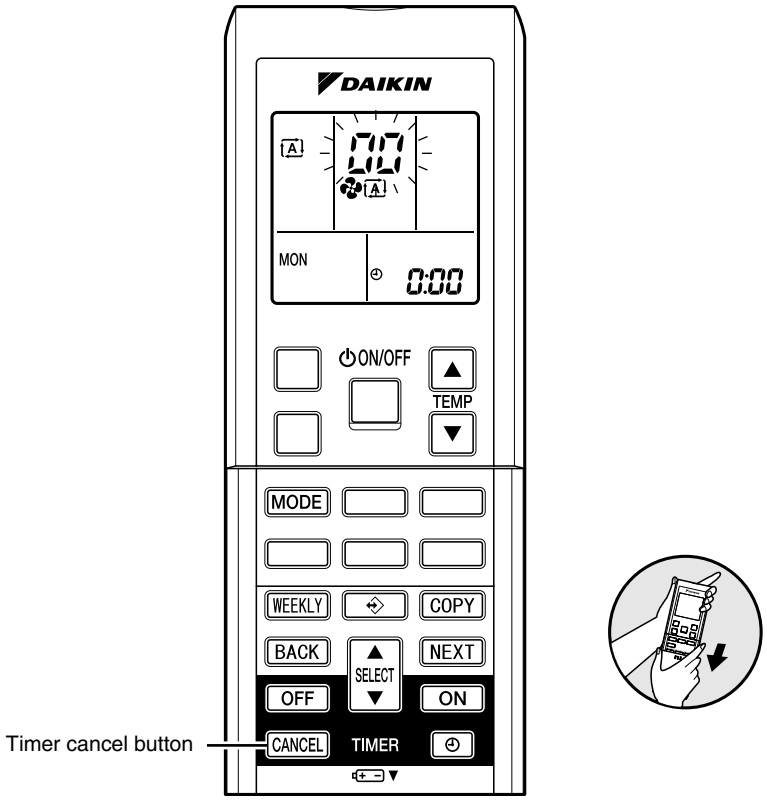


(R11672)

3.1.2 ARC452 Series Remote Controller

Check Method 1

1. When the timer cancel button is held down for 5 seconds, 00 is displayed on the temperature display screen.



< ARC452 Series >

(R14554)

2. Press the timer cancel button repeatedly until a long beep sounds.

■ The code indication changes in the sequence shown below.

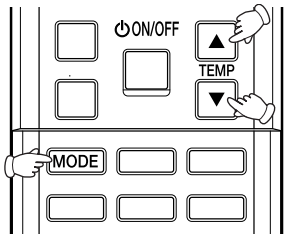
No.	Code	No.	Code	No.	Code
1	00	13	C7	25	UR
2	U4	14	R3	26	UX
3	L5	15	X8	27	P4
4	E6	16	X9	28	L3
5	X6	17	C9	29	L4
6	X0	18	C4	30	X7
7	R6	19	C5	31	U2
8	E7	20	J3	32	ER
9	U0	21	J6	33	RX
10	F3	22	E5	34	FR
11	R5	23	R1		
12	F6	24	E1		

Note:

1. A short beep or 2 consecutive beeps indicate non-corresponding codes.
2. To return to the normal mode, hold the timer cancel button down for 5 seconds. When the remote controller is left untouched for 60 seconds, it also returns to the normal mode.
3. Not all the error codes are displayed. When you cannot find the error code, try the check method 2. (→ Refer to page 143.)

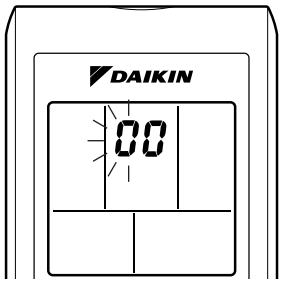
Check Method 2

1. Press the 3 buttons (TEMP▲, TEMP▼, MODE) at the same time to enter the diagnosis mode.



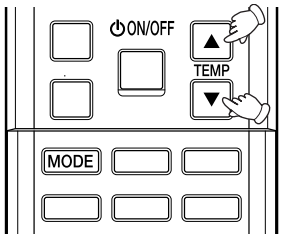
(R8381)

The left-side number blinks.



(R8382)

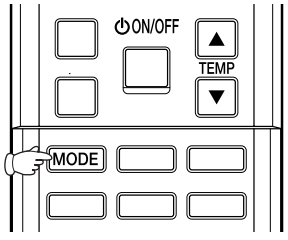
2. Press the [TEMP] ▲ or ▼ button and change the number until you hear the two consecutive beeps or the long beep.



(R8383)

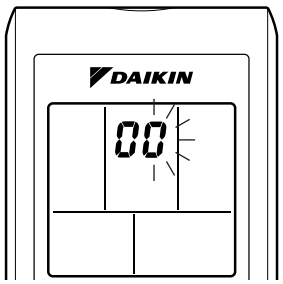
3. Diagnose by the sound.
   ★ beep : The left-side number does not correspond with the error code.
   ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★ long beep : Both the left-side and right-side numbers correspond with the error code. (The numbers indicated when you hear the long beep are the error code. → Refer to page 155, 156.)

4. Press the [MODE] button.



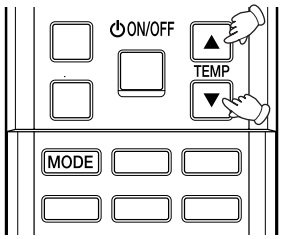
(R8384)

The right-side number blinks.



(R8385)

5. Press the [TEMP] ▲ or ▼ button and change the number until you hear the long beep.

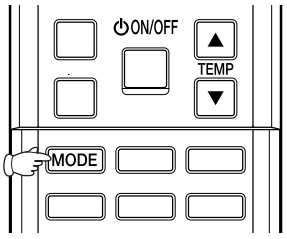


(R8383)

6. Diagnose by the sound.
   ★ beep : The left-side number does not correspond with the error code.
   ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★ long beep : Both the left-side and right-side numbers correspond with the error code.

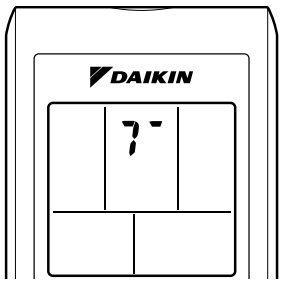
7. Determine the error code.
   The numbers indicated when you hear the long beep are the error code.
   (Error codes and description → Refer to page 155, 156.)

8. Press the [MODE] button to exit from the diagnosis mode.



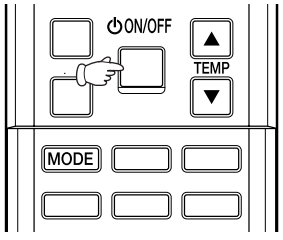
(R8384)

   The display "7" means the trial operation mode.
   (Refer to page 221 for trial operation.)



(R9659)

9. Press the [ON/OFF] button twice to return to the normal mode.



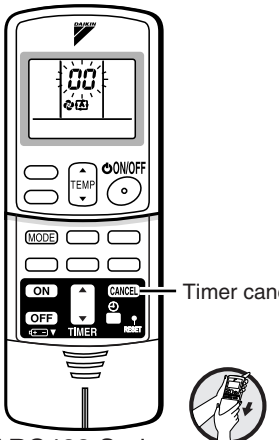
(R9660)

Note: When the remote controller is left untouched for 60 seconds, it returns to the normal mode.

3.1.3 ARC433 Series Remote Controller

Check Method 1

1. When the timer cancel button is held down for 5 seconds, 00 is displayed on the temperature display screen.



< ARC433 Series > (R14555)

2. Press the timer cancel button repeatedly until a long beep sounds.

■ The code indication changes in the sequence shown below.

<ARC433A85, A87, A89>

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

<ARC433B67, B69>

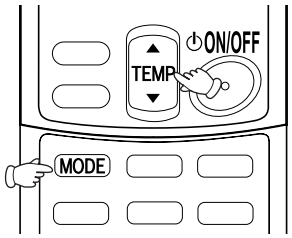
No.	Code	No.	Code	No.	Code
1	00	12	C7	23	H0
2	U4	13	H8	24	E1
3	F3	14	J3	25	P4
4	E6	15	A3	26	L3
5	L5	16	A1	27	L4
6	A6	17	C4	28	H6
7	E5	18	C5	29	H7
8	F6	19	H9	30	U2
9	C9	20	J6	31	UH
10	U0	21	UA	32	EA
11	E7	22	A5	33	AH

Note:

1. A short beep and two consecutive beeps indicate non-corresponding codes.
2. To return to the normal mode, hold the timer cancel button down for 5 seconds. When the remote controller is left untouched for 60 seconds, it also returns to the normal mode.
3. Not all the error codes are displayed. When you cannot find the error code, try the check method 2. (→ Refer to page 146.)

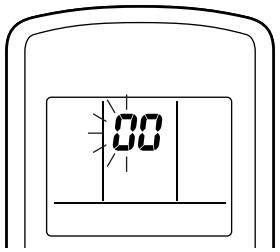
Check Method 2

1. Press the center of the [TEMP] button and the [MODE] button at the same time to enter the diagnosis mode.



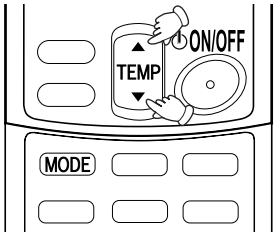
(R4272)

The left-side number blinks.



(R14967)

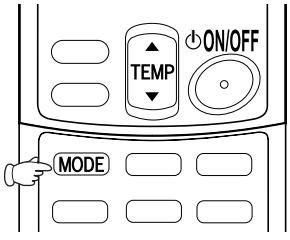
2. Press the [TEMP] ▲ or ▼ button and change the number until you hear the two consecutive beeps or the long beep.



(R4274)

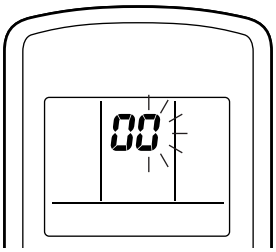
3. Diagnose by the sound.
   ★ beep : The left-side number does not correspond with the error code.
   ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★ long beep : Both the left-side and right-side numbers correspond with the error code. (The numbers indicated when you hear the long beep are the error code. → Refer to page 155, 156.)

4. Press the [MODE] button.



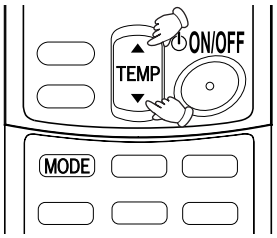
(R4275)

The right-side number blinks.



(R14968)

5. Press the [TEMP] ▲ or ▼ button and change the number until you hear the long beep.

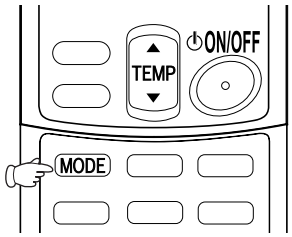


(R4277)

6. Diagnose by the sound.
   ★ beep : The left-side number does not correspond with the error code.
   ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
   ★ long beep : Both the left-side and right-side numbers correspond with the error code.

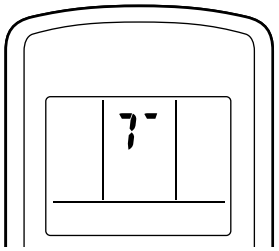
7. Determine the error code.
   The numbers indicated when you hear the long beep are the error code.
   (Error codes and description → Refer to page 155, 156.)

8. Press the [MODE] button to exit from the diagnosis mode.



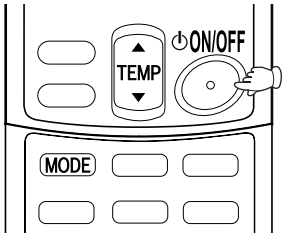
(R4278)

   The display 7- means the trial operation mode.
   (Refer to page 221 for trial operation.)



(R14969)

9. Press the [ON/OFF] button twice to return to the normal mode.



(R9670)

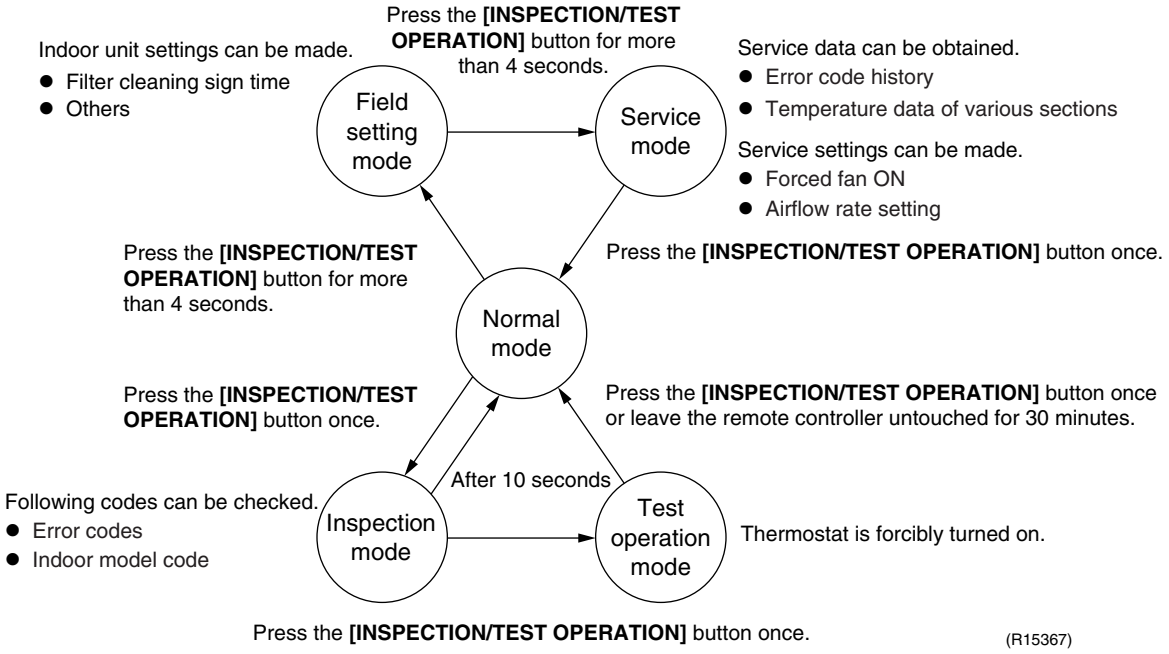
Note: When the remote controller is left untouched for 60 seconds, it returns to the normal mode.

3.2 SA Indoor Unit

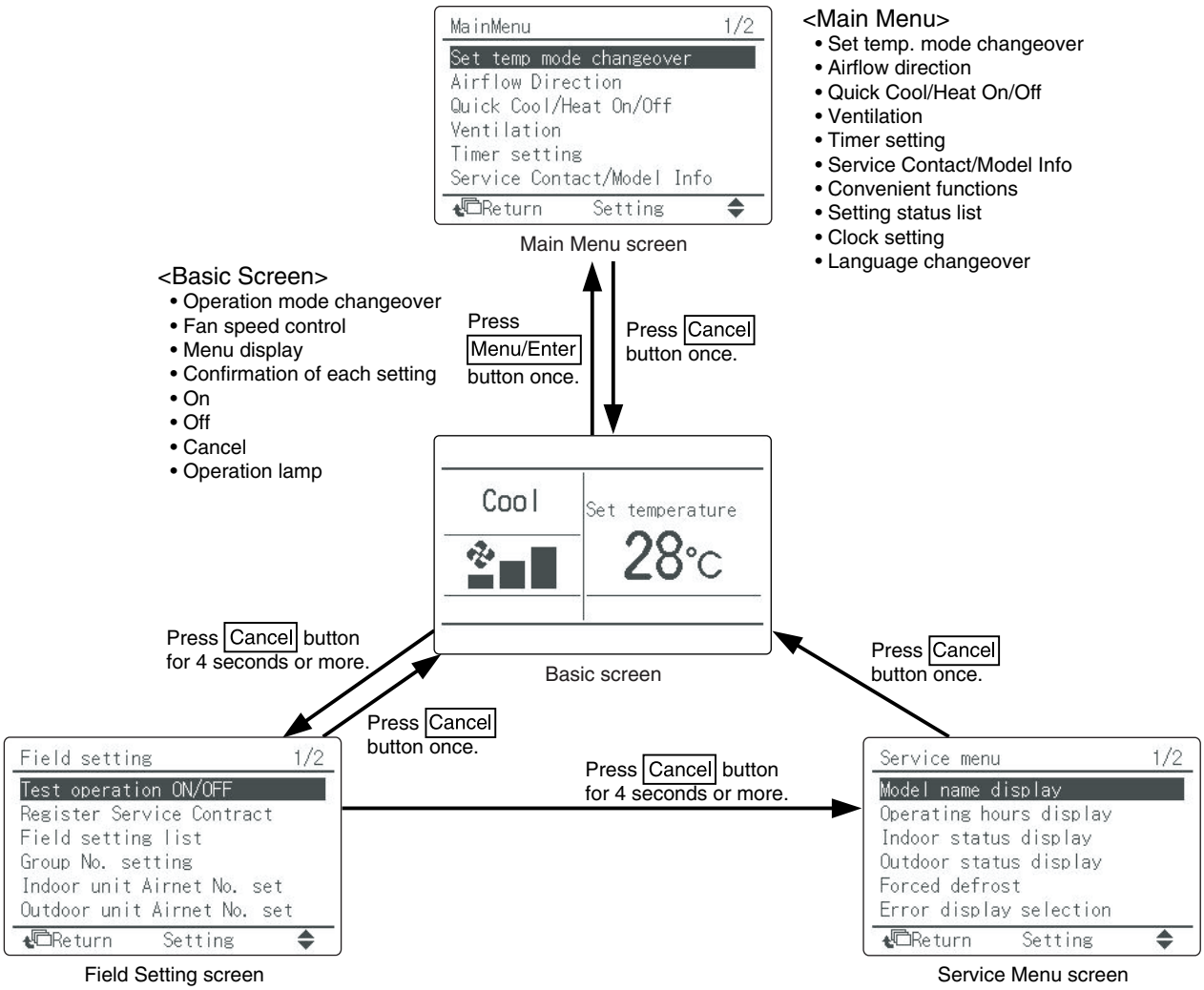
3.2.1 Relations between Modes

BRC1D528, BRC7E530W

The following modes can be selected by using the [Inspection / Test] button on the remote controller.

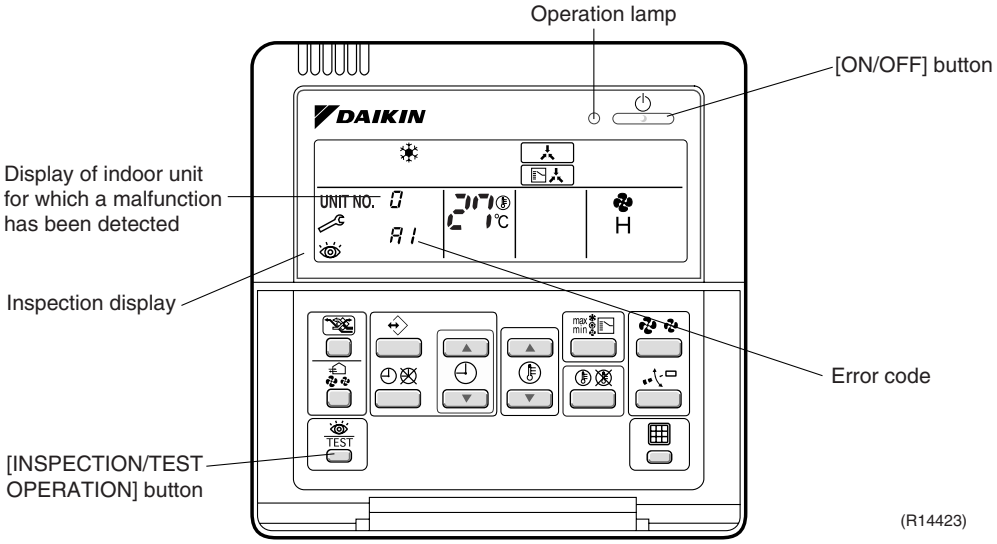


BRC1E51A7


MainMenu 1/2
Set temp mode changeover
Airflow Direction
Quick Cool/Heat On/Off
Ventilation
Timer setting
Service Contact/Model Info
Return Setting
Main Menu screen
<Main Menu>
• Set temp. mode changeover
• Airflow direction
• Quick Cool/Heat On/Off
• Ventilation
• Timer setting
• Service Contact/Model Info
• Convenient functions
• Setting status list
• Clock setting
• Language changeover
<Basic Screen>
• Operation mode changeover
• Fan speed control
• Menu display
• Confirmation of each setting
• On
• Off
• Cancel
• Operation lamp
Press Menu/Enter button once.
Press Cancel button once.
Cool
Set temperature
28°C
Basic screen
Press Cancel button for 4 seconds or more.
Press Cancel button once.
Press Cancel button once.
Press Cancel button for 4 seconds or more.
Field setting 1/2
Test operation ON/OFF
Register Service Contract
Field setting list
Group No. setting
Indoor unit Airnet No. set
Outdoor unit Airnet No. set
Return Setting
Field Setting screen
Service menu 1/2
Model name display
Operating hours display
Indoor status display
Outdoor status display
Forced defrost
Error display selection
Return Setting
Service Menu screen
<Field Setting Menu>
• Test operation ON/OFF
• Register Service Contract
• Field setting list
• Group No. setting
• Indoor unit AIRNET No. set
• Outdoor unit AIRNET No. set
• Error record
• Indoor status display
• Outdoor status display
• Fan forced operation ON
• Main/Sub changeover
• Filter element sign OFF
<Service Menu>
• Model name display
• Operating hours display
• Indoor status display
• Outdoor status display
• Forced defrost
• Error display selection
• Unit No. transfer
• Sensor/address data display
(R12855)

3.2.2 BRC1D528

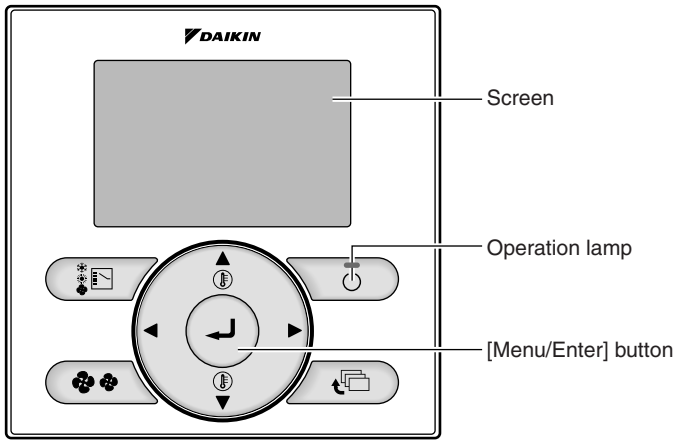
If operation stops due to malfunction, the operation lamp on the remote controller blinks, and error code is displayed. (Even if stop operation is carried out, malfunction contents are displayed when inspection mode is entered.) The error code enables you to tell what kind of malfunction caused operation to stop.
Refer to page 155, 156 for error code and malfunction contents.



Note:
1. When you press the [INSPECTION/TEST OPERATION] button, the inspection display blinks.
2. While in the inspection mode, press the [ON/OFF] button for 5 seconds or more to clear the failure history indication. In this case, the error code blinks twice and then changes to 00 (= Normal), the UNIT No. changes to 0, and the operation mode automatically switches from the inspection mode to the normal mode (displaying the set temperature).

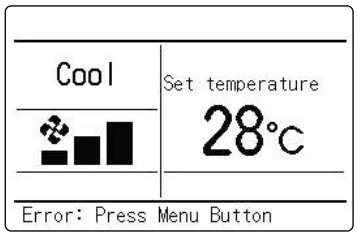
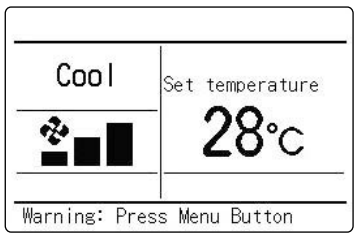
3.2.3 BRC1E51A7

The following display appears on the screen when a error (or a warning) occurs during operation.
Check the error code and take the corrective action specified for the particular model.



(R15409)

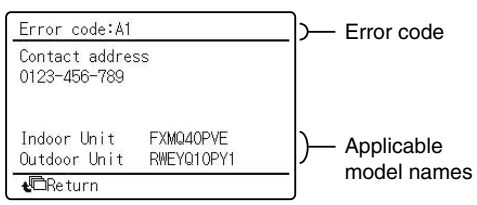
(1) Check if it is error or warning.

	Operation status	Display	
Abnormal shutdown	The system stops operating.	The operation lamp (green) starts to blink. The message "Error: Press Menu Button" appears and blinks at the bottom of the screen.	 (R12858)
Warning	The system continues its operation.	The operation lamp (green) remains on. The message "Warning: Press Menu Button" appears and blinks at the bottom of the screen.	 (R12857)

(2) Take corrective action.

· Press the [Menu/Enter] button to check the error code.

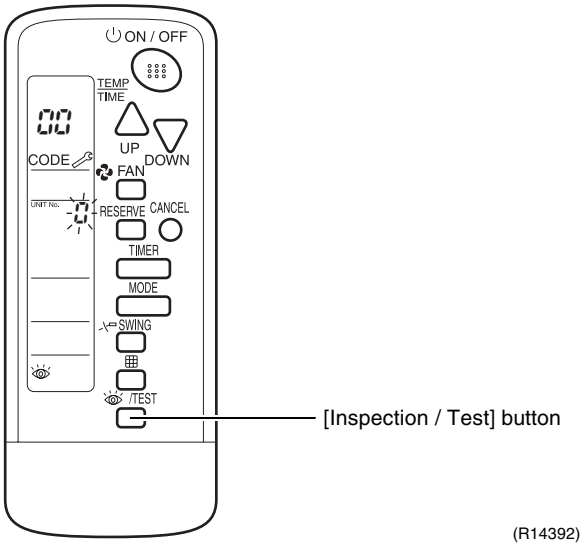
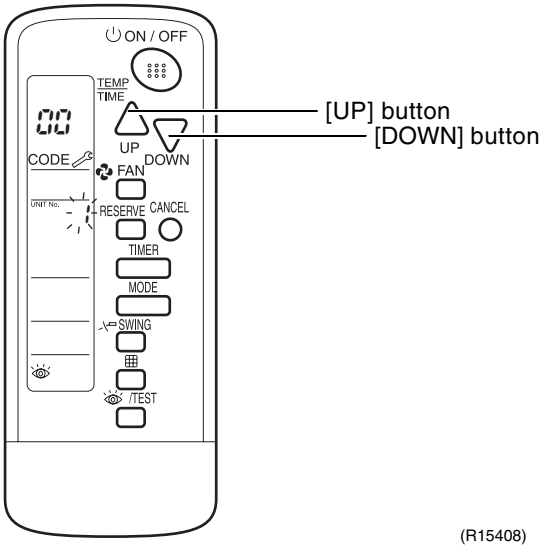
· Take the corrective action specific to the model.



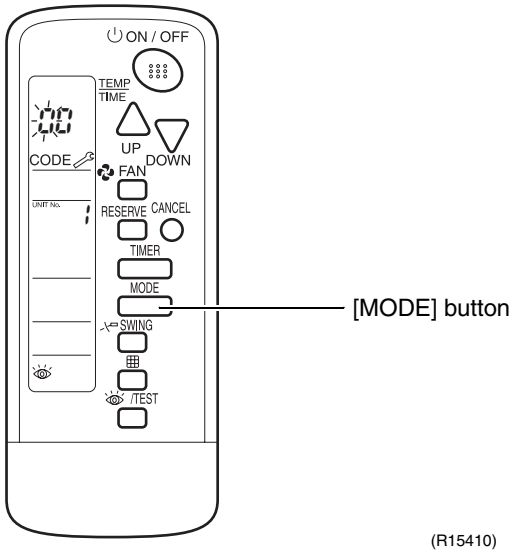
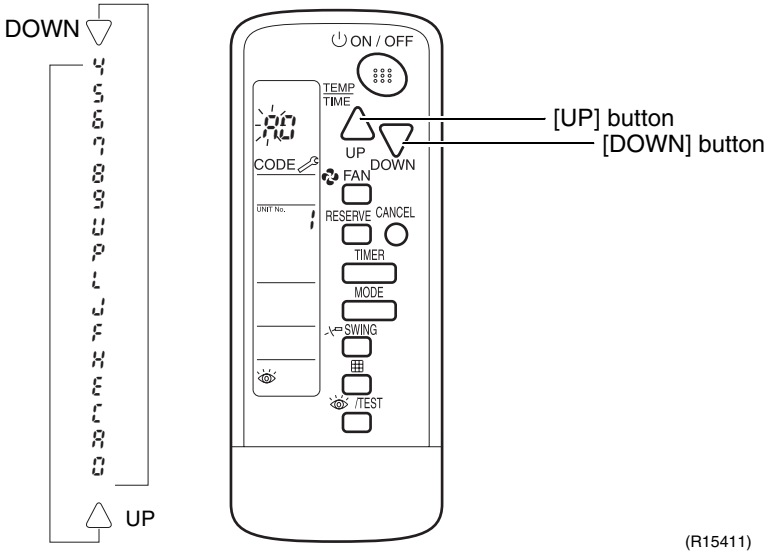
(R12859)

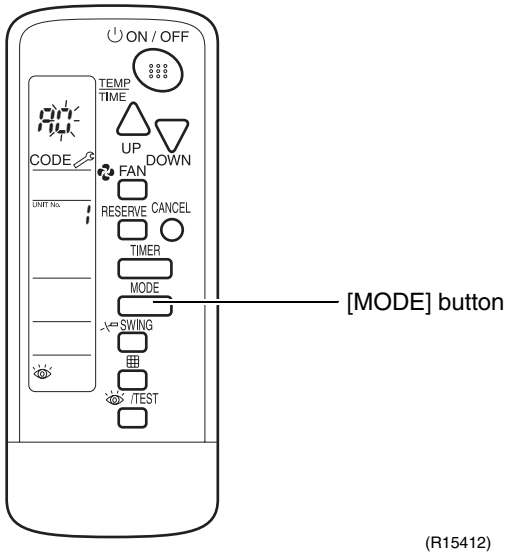
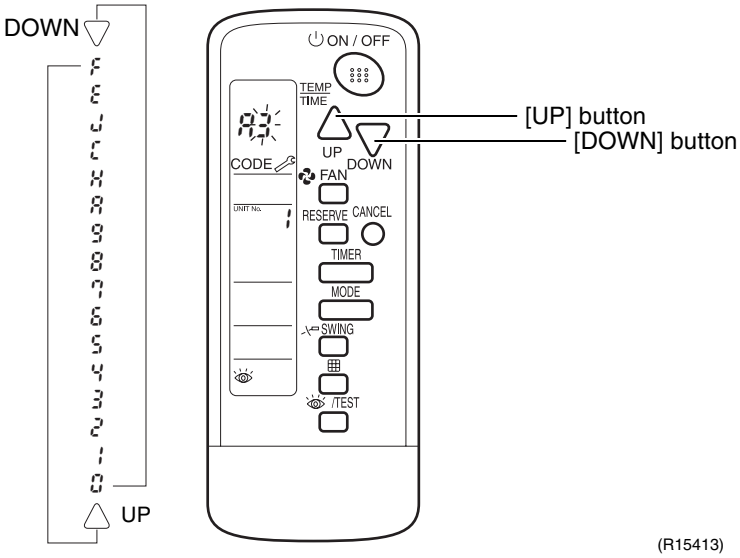
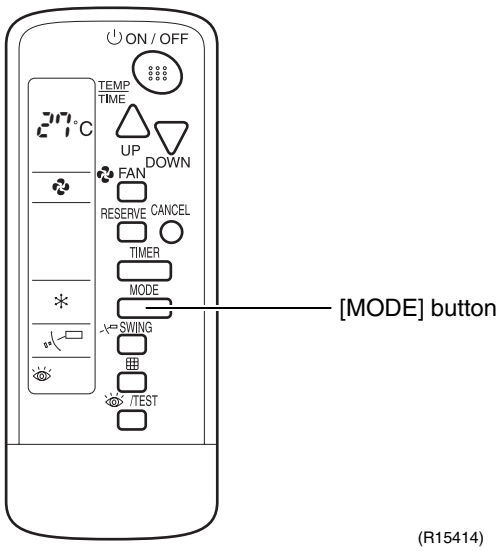
3.2.4 BRC7E530W

To find the error code, proceed as follows:

Step	Action
1	Press the [Inspection / Test] button to enter the inspection mode. Then the figure 0 blinks on the UNIT No. display.  (R14392)
2	Press the [UP] or [DOWN] button and change the UNIT No. until the receiver of the remote controller starts to beep.  (R15408)

If you hear...	Then...
3 short beeps	Follow all steps below.
1 short beep	Follow steps 3 and 4. Continue the operation in step 4 until you hear a continuous beep. This continuous beep indicates that the error code is confirmed.
1 continuous beep	There is no abnormality.

Step	Action
3	Press the [MODE] button. The left 0 (upper digit) indication of the error code blinks.  (R15410)
4	Press the [UP] or [DOWN] button to change the error code upper digit until the receiver of the remote controller starts to beep.  (R15411) **If you hear... / Then...** 2 short beeps — The upper digit matches. 1 short beep — No digits match. 1 continuous beep — Both upper and lower digits match.

Step	Action
5	Press the [MODE] button. The right 0 (lower digit) indication of the error code blinks.  (R15412)
6	Press the [UP] or [DOWN] button and change the error code lower digit until the receiver of the remote controller generates a continuous beep.  (R15413)
7	Press the [MODE] button to return to the normal mode. If you do not press any button for 1 minutes, the remote controller automatically returns to the normal mode.  (R15414)

4. Code Indication on Remote Controller

4.1 RA Indoor Unit

Error Codes	Description		Reference Page
00	Normal condition		—
A1	Indoor unit PCB abnormality		157
A5	Freeze-up protection control or heating peak-cut control		159
A6	Fan motor or related abnormality	DC motor (wall, floor standing)	161
		AC motor (floor / ceiling, duct)	164
A9	Radiant panel temperature rise, indoor electronic expansion valve (motor operated valve) abnormality, freeze-up protection control (FVXG series only)		165
C4	Indoor heat exchanger thermistor or related abnormality		167
C7	Front panel open / close fault (FTXG series only)		168
C9	Room temperature thermistor or related abnormality		167
CE	Radiant panel thermistor or related abnormality (FVXG series only)		167

4.2 SA Indoor Unit

Error Codes	Description	Reference Page
00	Normal condition	—
A1	Indoor unit PCB abnormality	169
A3	Drain level control system abnormality	170
A6	Fan motor (AC motor) or related abnormality (See the Note below.)	171
AF	Drain system abnormality	172
C4	Indoor heat exchanger thermistor 1 or related abnormality	173
C5	Indoor heat exchanger thermistor 2 or related abnormality	173
C9	Room temperature thermistor or related abnormality	173
CJ	Remote controller thermistor abnormality	174
U5	Signal transmission error (between indoor unit and remote controller)	175
U8	Signal transmission error (between MAIN remote controller and SUB remote controller)	176
UA	Field setting abnormality	177

: Error code displays automatically and system stops. Inspect and repair it.

: In the case of the shaded error codes, “inspection” is not displayed. The system operates, but be sure to inspect and repair it.

Note: When there is a possibility of open phase power supply, also check power supply.

4.3 Outdoor Unit

	Error Codes	Description	Reference Page
System	00	Normal	—
	U0★	Refrigerant shortage	178
	U2	Low-voltage detection or over-voltage detection	180
	U4	Outdoor unit PCB abnormality or signal transmission error	182
	U8	Unspecified voltage (between indoor unit and outdoor unit)	185
	UH	Anti-icing control in other room	185
Outdoor Unit	A5	Anti-icing control for indoor unit	186
	E5★	OL activation (compressor overload)	188
	E6★	Compressor lock	190
	E7	DC fan lock	191
	E8	Input overcurrent detection	192
	F3	Discharge pipe temperature control	193
	F6	High pressure control in cooling	194
	H0	Compressor system sensor abnormality	195
	H6	Position sensor abnormality	196
	H8	DC voltage / current sensor abnormality	198
	H9	Outdoor temperature thermistor or related abnormality	199
	J3	Discharge pipe thermistor or related abnormality	199
	J6	Outdoor heat exchanger thermistor or related abnormality	199
	J8	Liquid pipe temperature thermistor or related abnormality	199
	J9	Gas pipe temperature thermistor or related abnormality	199
	L3	Electrical box temperature rise	201
	L4	Radiation fin temperature rise	202
	L5	Output overcurrent detection	204
	P4	Radiation fin thermistor or related abnormality	199

★: Displayed only when system-down occurs.

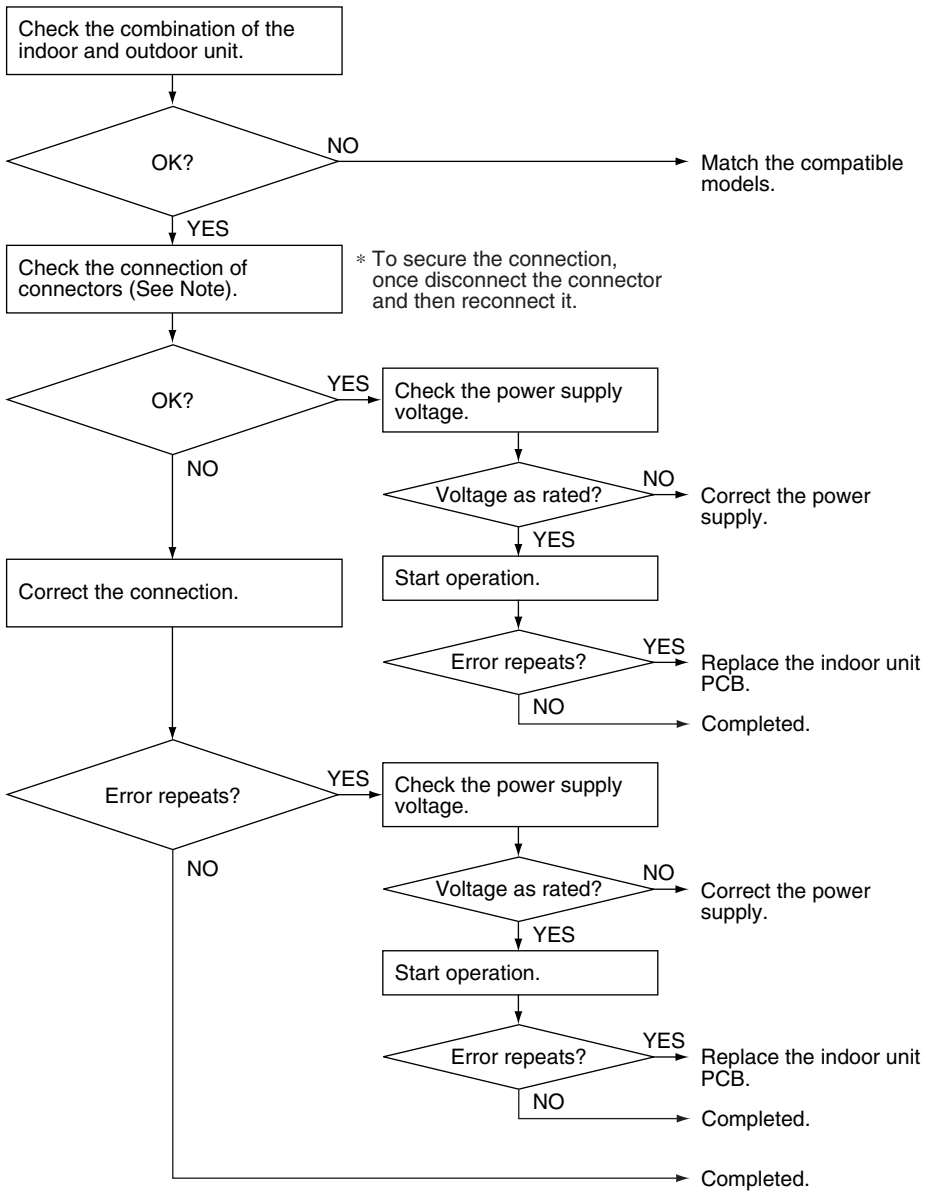
5. Troubleshooting for RA Indoor Unit

5.1 Indoor Unit PCB Abnormality

Error Code	A1
Method of Error Detection	The system checks if the circuit works properly within the microcomputer of the indoor unit.
Error Decision Conditions	The system cannot set the internal settings.
Supposed Causes	■ Wrong models interconnected ■ Defective indoor unit PCB ■ Disconnection of connector ■ Reduction of power supply voltage

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15310)

Note: Check the following connector.

Model Type	Connector
Wall mounted type	Terminal board ~ Control PCB (H1, H2, H3)
Floor standing type	Terminal board ~ Control PCB (H1, H2, H3)
Floor / ceiling suspended dual type	S36 ~ S37
Duct connected type	Terminal board ~ Control PCB (H1, H2, H3)

5.2 Freeze-up Protection Control or Heating Peak-cut Control

Error Code

P5

Method of Error Detection

- Freeze-up protection control
  During cooling operation, the freeze-up protection control (operation halt) is activated according to the temperature detected by the indoor heat exchanger thermistor.
- Heating peak-cut control
  During heating operation, the indoor heat exchanger temperature is used for the heating peak-cut control (operation halt, outdoor fan stop, etc.)

Error Decision Conditions

- Freeze-up protection control
  During cooling operation, the indoor heat exchanger temperature is below 0°C.
- Heating peak-cut control
  During heating operation, the indoor heat exchanger temperature is above 65°C.

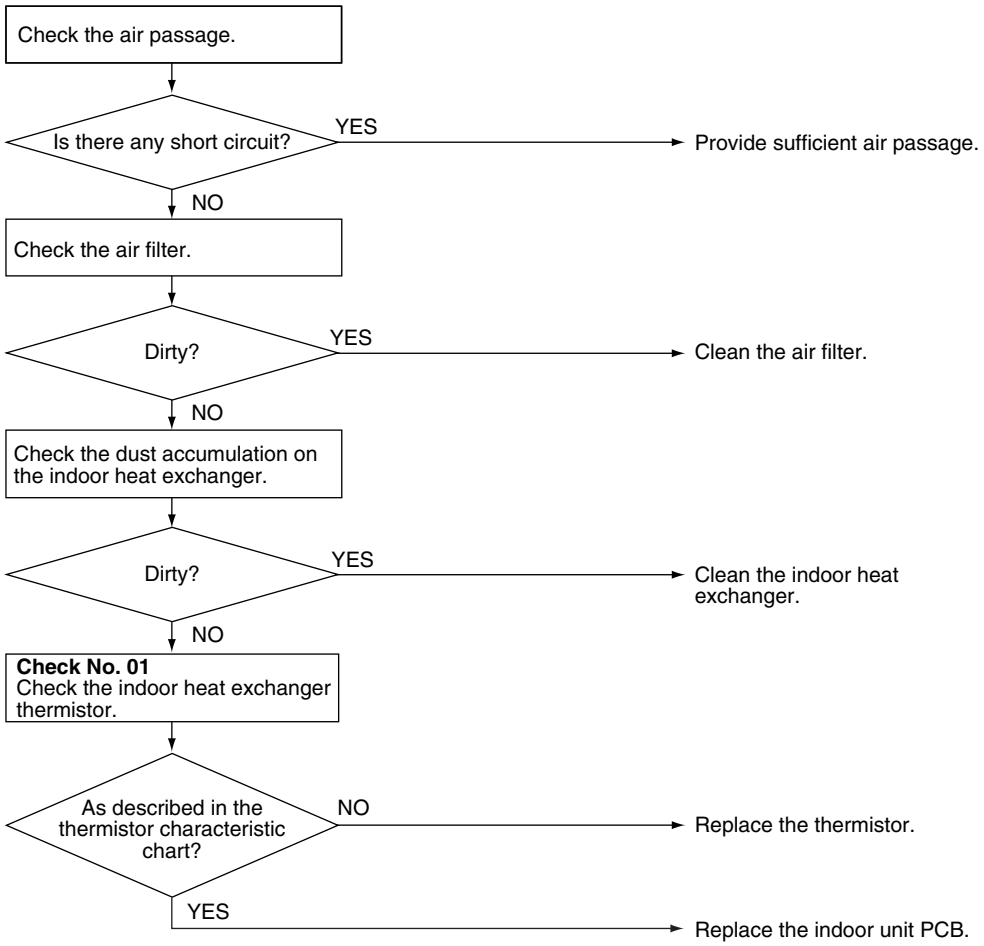
Supposed Causes

- Short-circuited air
- Clogged air filter of the indoor unit
- Dust accumulation on the indoor heat exchanger
- Defective indoor heat exchanger thermistor
- Defective indoor unit PCB

Troubleshooting

Check No.01
Refer to P.206

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15715)

5.3 Fan Motor or Related Abnormality

5.3.1 DC Motor (Wall Mounted Type, Floor Standing Type)

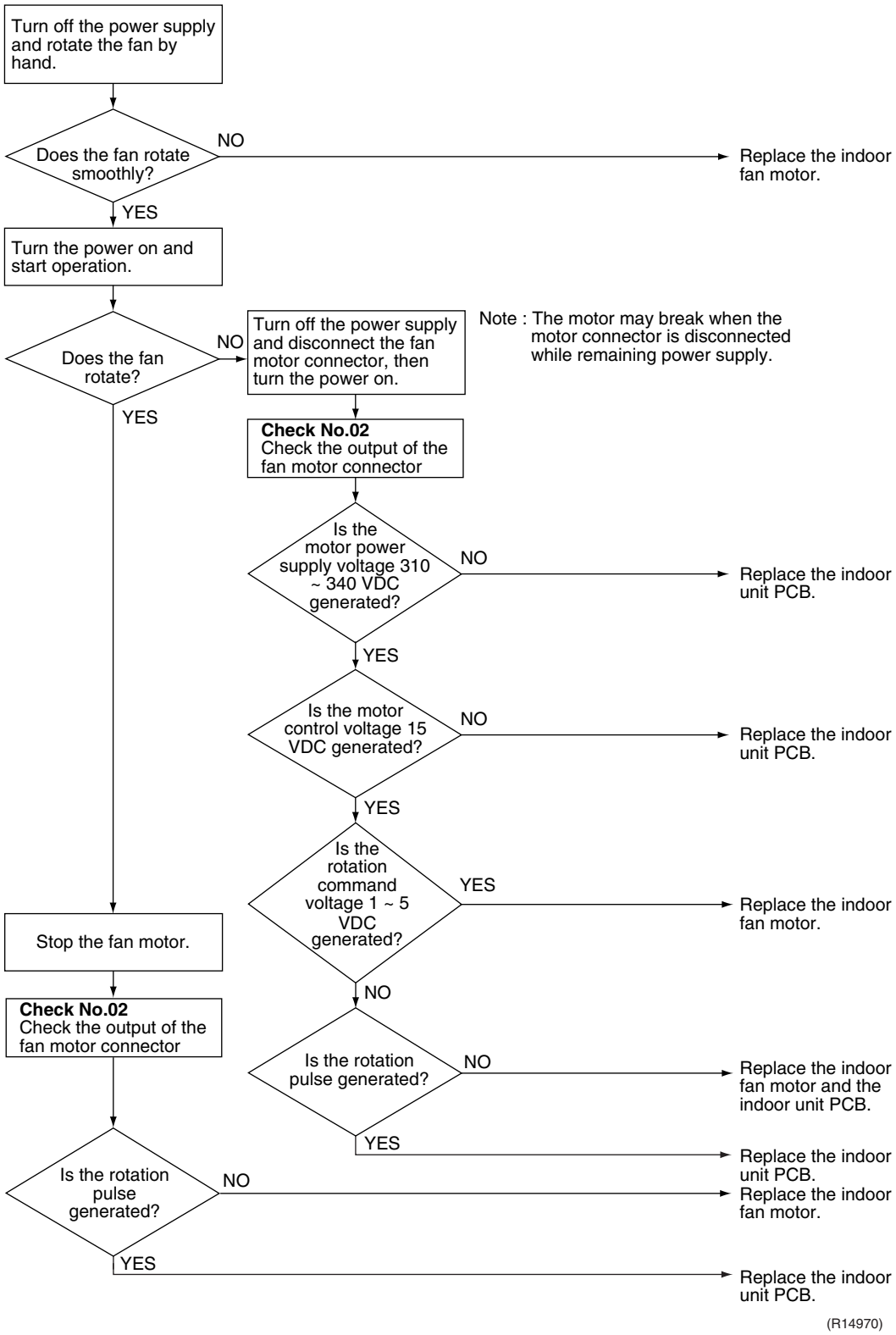
Error Code	A6
Method of Error Detection	The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.
Error Decision Conditions	The detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.
Supposed Causes	■ Disconnection of connector ■ Foreign matters stuck in the fan ■ Layer short inside the fan motor winding ■ Breaking of wire inside the fan motor ■ Breaking of the fan motor lead wires ■ Defective capacitor of the fan motor ■ Defective indoor unit PCB

Troubleshooting

FTXG, FTXS35/42/50K, FTXS-J, ATXS, FVXG, FVXS Series

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Check No.02
Refer to P.207



(R14970)

Troubleshooting

CTXS, FTXS20/25K, FTX, ATX Series

Check No.03
Refer to P.207

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Turn off the power supply. (Unplug the power cable or turn the breaker off.)

Note: The motor may break when the motor connector is disconnected with the power supply on. (Turn off the power supply before connecting the connector also.)

Check the connector for connection.

* To secure the connection, once disconnect the connector and then reconnect it.

OK? — NO → Correct the connection.

YES

Foreign matters in or around the fan? — YES → Remove the foreign matters.

NO

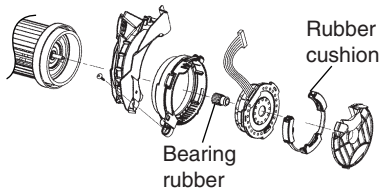
Rotate the fan by hand.

Fan rotates smoothly? — NO → Abnormal sound occurs? — NO

YES

YES

Check No. 03
Check the fan motor for breakdown or short circuit.



Is the rubber cushion properly fitted? — YES → Replace the bearing rubber cushion.

NO → Correct the position of rubber cushion or replace the rubber cushion.

Resistance OK? — NO → Replace the indoor fan motor.

YES

Turn the power on again.

Check No. 03
Check the motor control voltage.

Is the motor control voltage 15 VDC generated? — NO → Replace the indoor unit PCB (1).

YES

Check No. 03
Check the indoor unit PCB for rotation pulse.

Is the rotation pulse generated? — NO → Replace the indoor fan motor.

YES → Replace the indoor unit PCB (1).

(R18153)

5.3.2 AC Motor (Floor / Ceiling Suspended Dual Type, Duct Connected Type)

Error Code A6

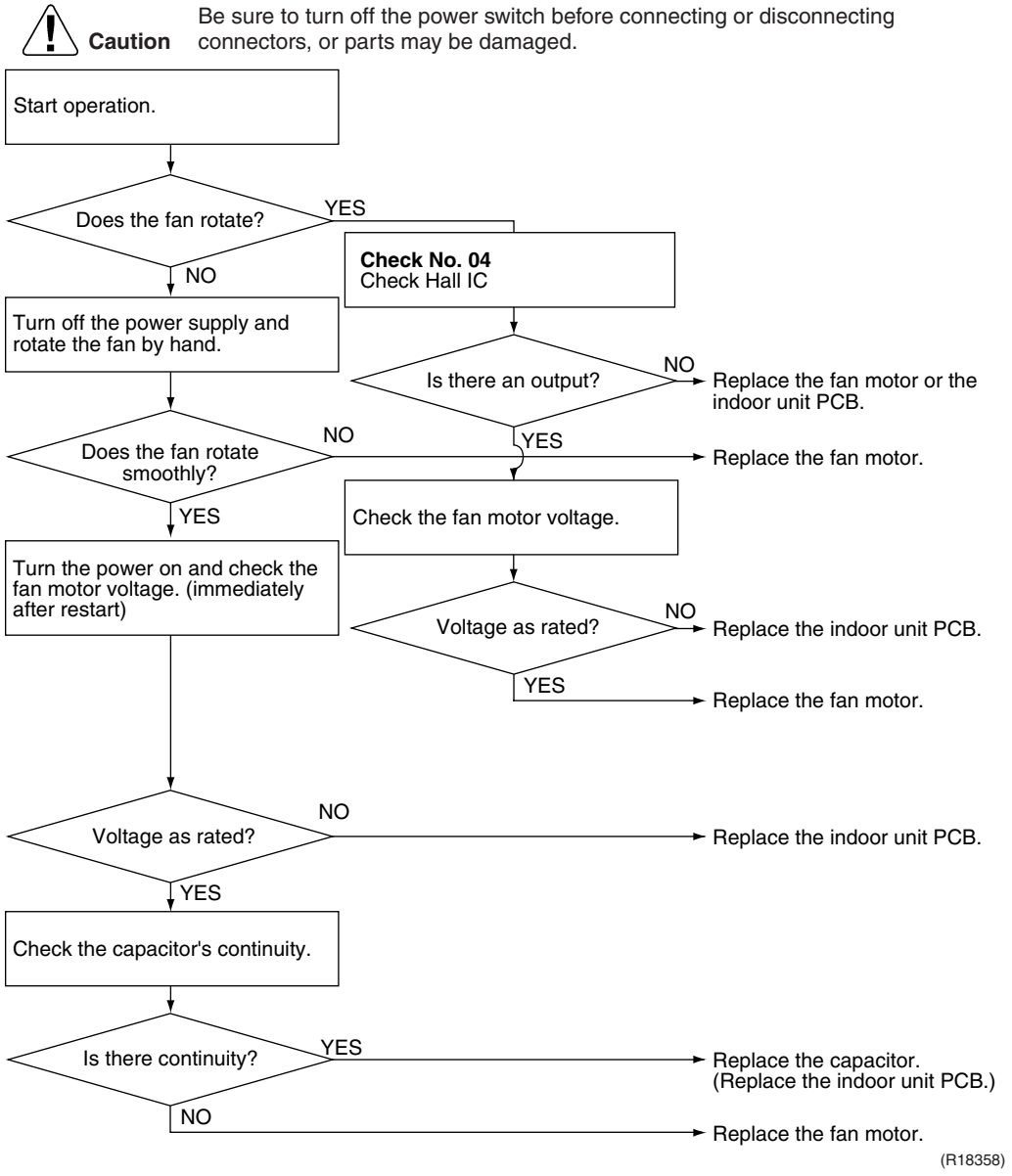
Method of Error Detection
The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

Error Decision Conditions
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
- Layer short inside the fan motor winding
- Breaking of wire inside the fan motor
- Breaking of the fan motor lead wires
- Defective capacitor of the fan motor
- Defective indoor unit PCB

Troubleshooting

Check No.04
Refer to P.208



5.4 Radiant Panel Temperature Rise, Indoor Electronic Expansion Valve (Motor Operated Valve) Abnormality, Freeze-up Protection Control (FVXG Series Only)

Error Code A9

Method of Error Detection

Radiant panel temperature rise
During RADIANT operation, high temperature control (e.g., operation halt, indoor electronic expansion valve closure) is activated according to the temperature detected by the radiant panel thermistors.

Indoor electronic expansion valve abnormality
- The indoor electronic expansion valve is required to be fully closed during cooling, dry or heating operation. When the indoor electronic expansion valve is open due to malfunction, the refrigerant flows into the radiant panel and the radiant panel temperature rises or drops.
- The indoor electronic expansion valve is required to be open during RADIANT operation. When the indoor electronic expansion valve is closed due to malfunction, the refrigerant does not flow into the radiant panel and the radiant panel temperature does not rise.
- For multi system
  The indoor electronic expansion valve is required to be fully closed in the room where the system does not run. When the indoor electronic expansion valve is open due to malfunction and heating or RADIANT operation is conducted in the other room(s), the refrigerant flows into the radiant panel and the radiant panel temperature rises.

Freeze-up protection control
The temperature detected by the radiant panel thermistors is used to prevent the indoor unit from freezing during cooling operation.

Error Decision Conditions

Radiant panel temperature rise
The radiant panel surface temperature calculated by the radiant panel thermistors is above 70°C.

Indoor electronic expansion valve abnormality
- During cooling or dry operation, the temperature detected by the radiant panel thermistor (ϕ 4) has dropped.
- During heating operation, the temperature detected by the radiant panel thermistor (ϕ 4) has risen.
- During RADIANT operation, the temperature detected by the radiant panel thermistor (ϕ 4) does not rise.
- For multi system
  While the system does not run and heating or RADIANT operation is conducted in the other room(s), the temperature detected by the radiant panel thermistor (ϕ 4) has risen.

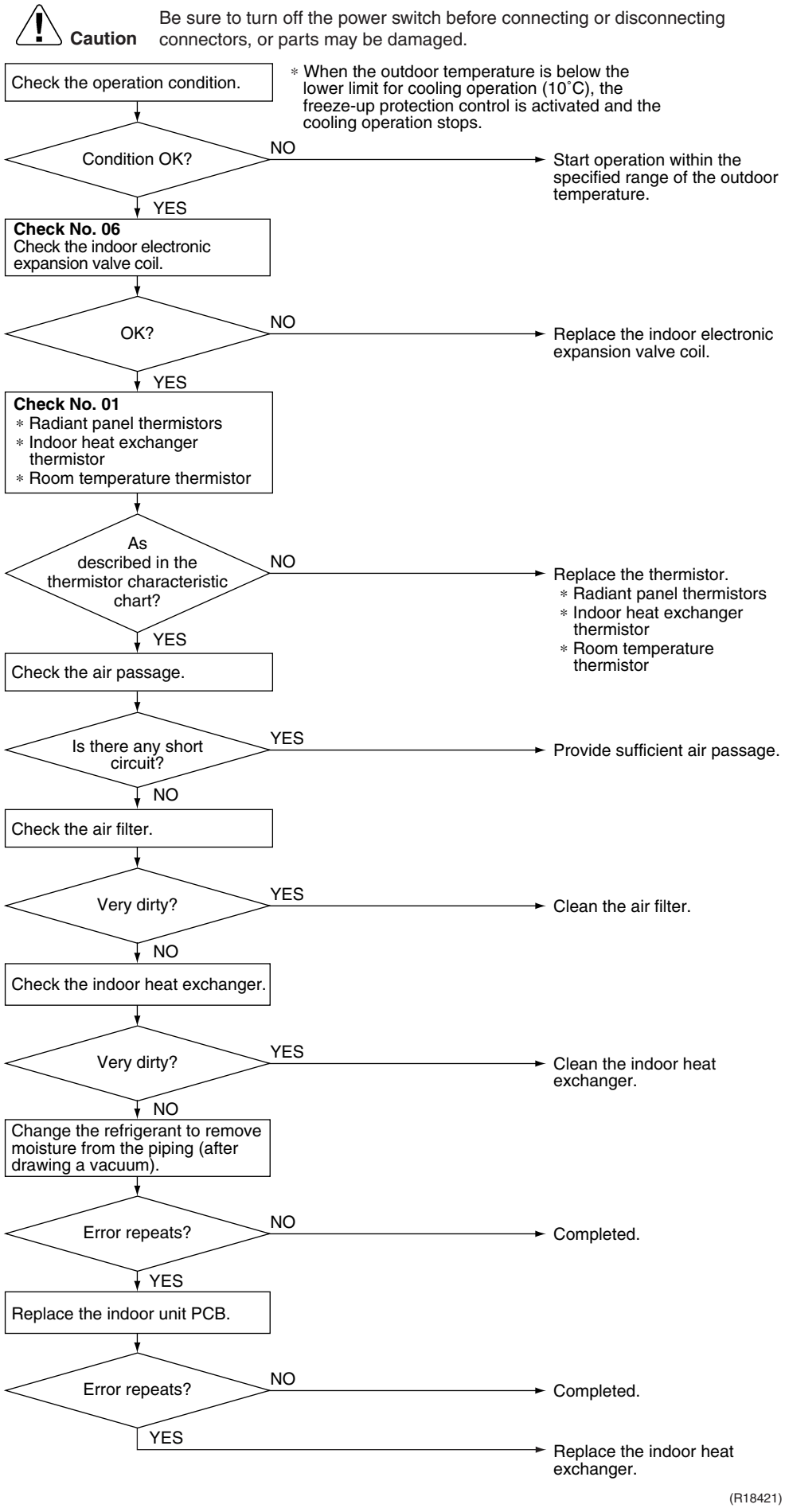
Freeze-up protection control
During cooling operation, the operation stops when the temperature detected by the radiant panel thermistor (ϕ 4) has dropped.

Supposed Causes
- Clogged air filter of the indoor unit
- Dust accumulation on the indoor heat exchanger
- Short-circuited air
- Defective radiant panel thermistor(s)
- Defective indoor heat exchanger thermistor
- Defective room temperature thermistor
- Defective indoor electronic expansion valve (or coil)

Troubleshooting

Check No.01
Refer to P.206

Check No.06
Refer to P.208



(R18421)

5.5 Thermistor or Related Abnormality (RA Indoor Unit)

Error Code

C4, C9, CE

Method of Error Detection

The temperatures detected by the thermistors determine thermistor errors.

Error Decision Conditions

The thermistor input is more than 4.96 V or less than 0.04 V during compressor operation.

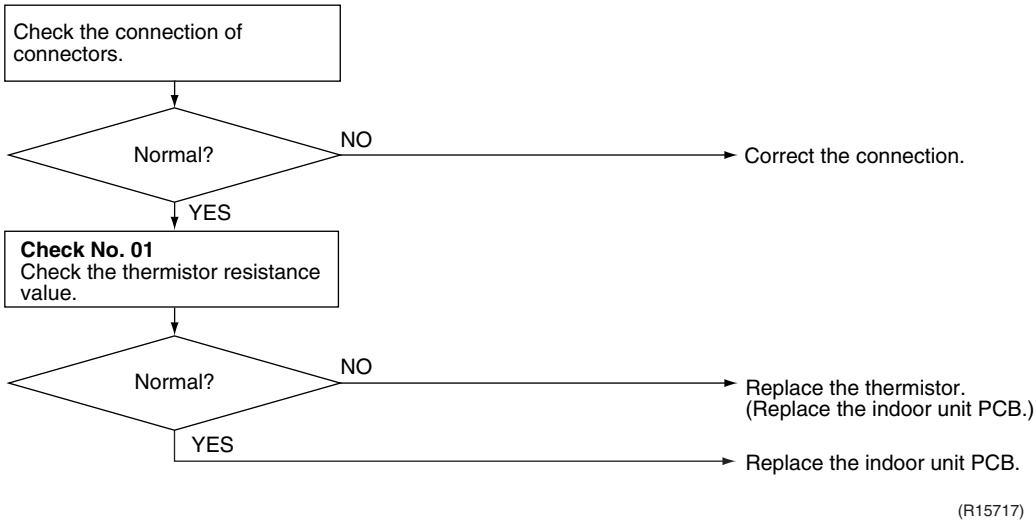
Supposed Causes

- Disconnection of connector
- Defective thermistor corresponding to the error code
- Defective indoor unit PCB

Troubleshooting

Check No.01
Refer to P.206

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



C4 : Indoor heat exchanger thermistor
C9 : Room temperature thermistor
CE : Radiant panel thermistor (FVXG series only)

5.6 Front Panel Open / Close Fault (FTXG Series Only)

Error Code

C7

Method of Error Detection

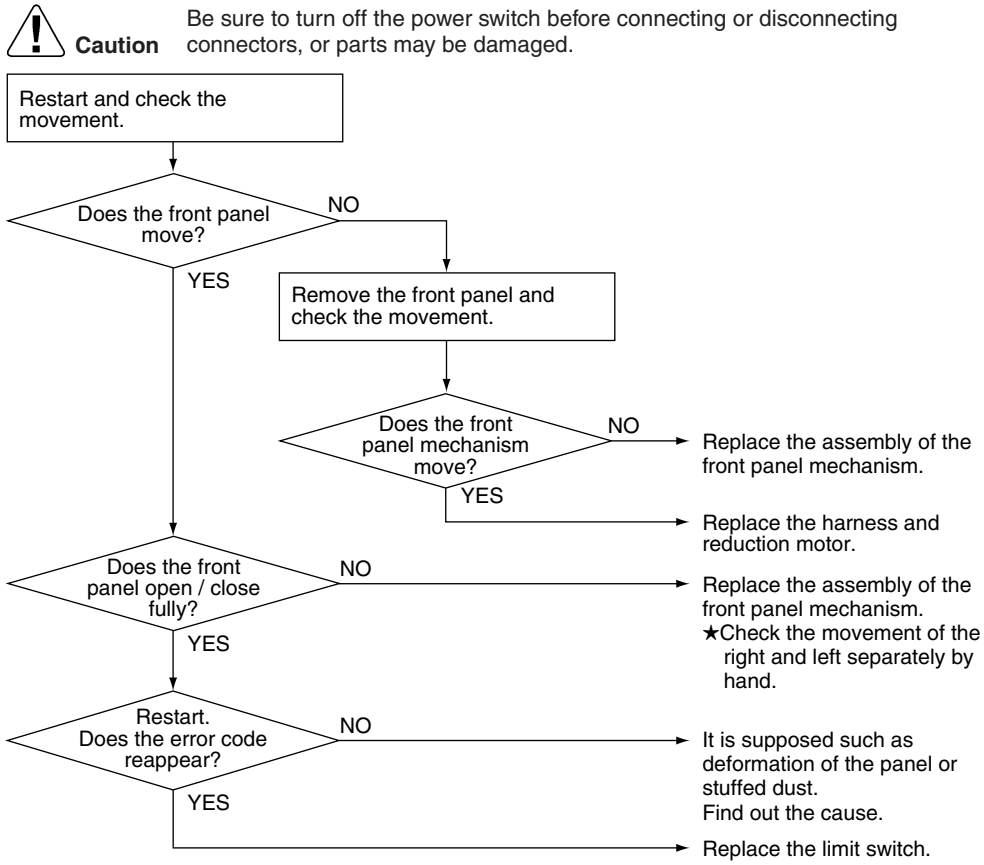
Error Decision Conditions

- If the error repeats, the system is shut down.

Supposed Causes

- Defective reduction motor
- Malfunction or deterioration of the front panel mechanism
- Defective limit switch

Troubleshooting



(R17249)

Note: You cannot operate the unit by the remote controller when the front panel mechanism breaks down.

<To the dealers: temporary measure before repair>

1. Turn off the power.
2. Remove the front panel.
3. Turn on the power.
   (Wait until the initialization finishes.)
4. Operate the unit by the indoor unit [ON/OFF] button.

6. Troubleshooting for SA Indoor Unit

6.1 Indoor Unit PCB Abnormality

Error Code

A1

Method of Error Detection

The system checks the data from EEPROM.

Error Decision Conditions

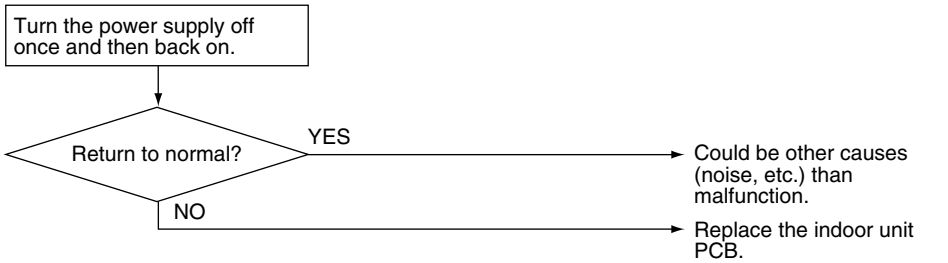
When data could not be correctly received from the EEPROM
EEPROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- External factor (noise etc.)
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15319)

6.2 Drain Level Control System Abnormality

Error Code

A3

Method of Error Detection

The float switch detects error.

Error Decision Conditions

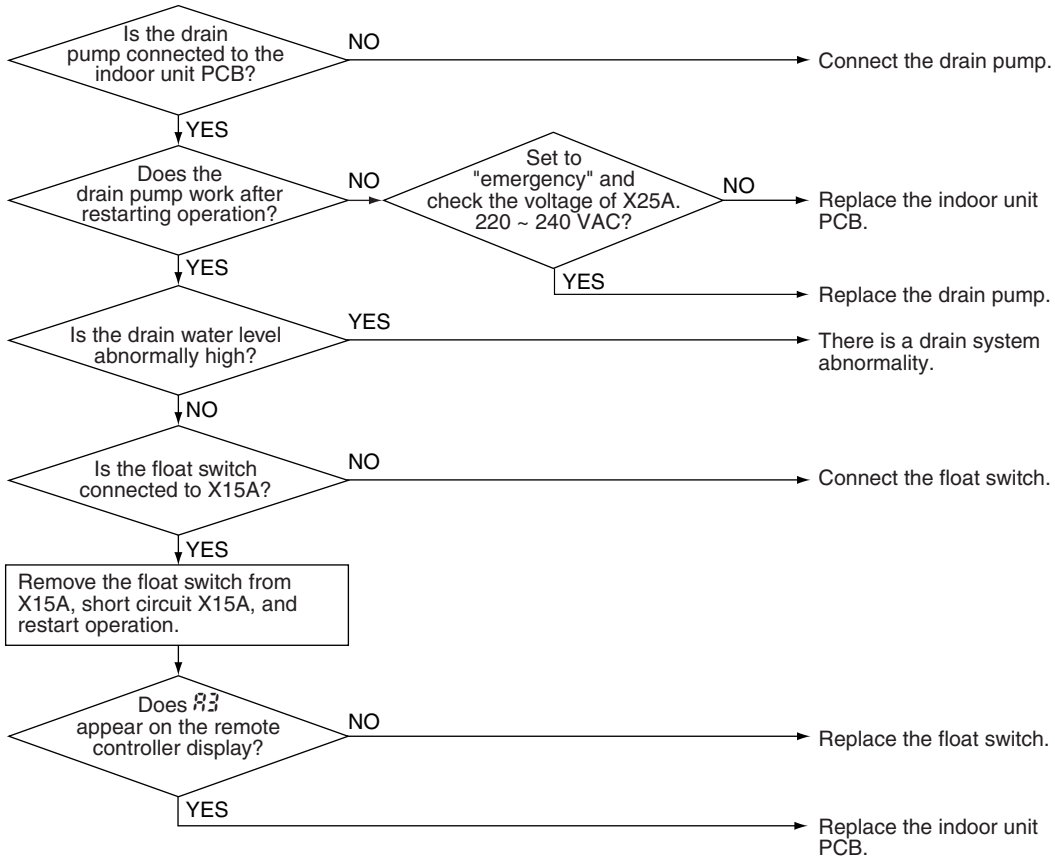
When the water level reaches its upper limit and when the float switch turns OFF

Supposed Causes

- Defective drain pump
- Improper drain piping work
- Clogged drain piping
- Defective float switch
- Defective indoor unit PCB
- Defective short circuit connector X15A on indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R14923)

6.3 Fan Motor (AC Motor) or Related Abnormality

Error Code

A6

Method of Error Detection

The signal from the fan motor detects abnormal fan speed.

Error Decision Conditions

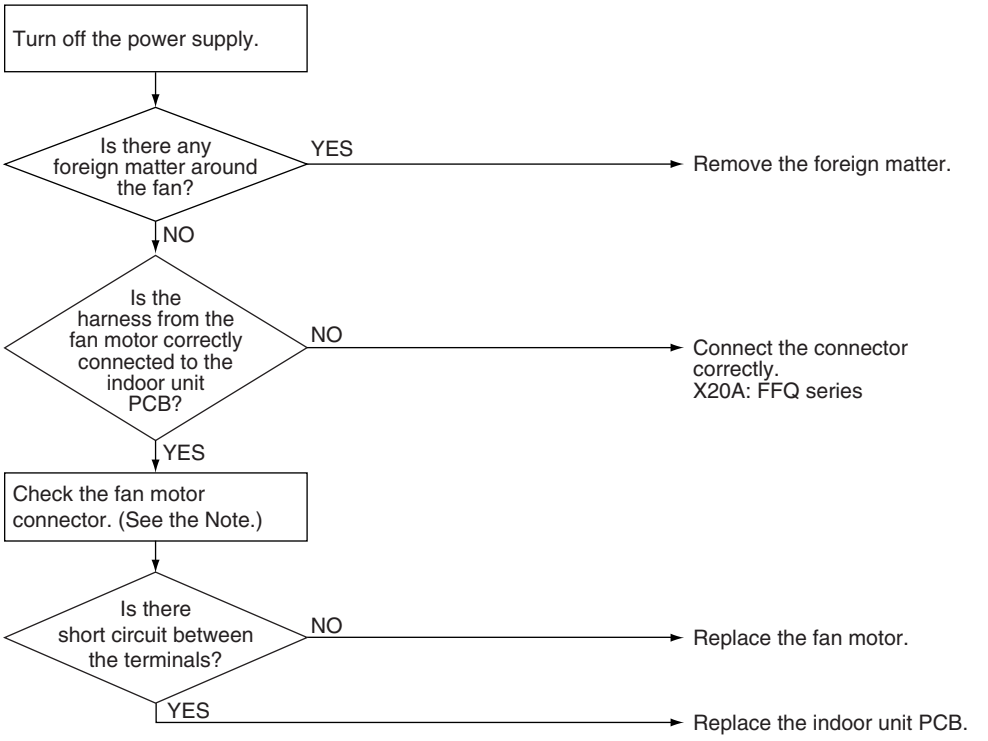
The fan rotations are not detected while the output voltage to the fan is at its maximum.

Supposed Causes

- Disconnection, short circuit or disengagement of connector in fan motor harness
- Defective fan motor (disconnection, poor insulation)
- Abnormal signal from fan motor (faulty circuit)
- Defective indoor unit PCB
- Momentary fluctuation of power supply voltage
- Fan motor lock
  (Caused by motor or other external factors)
- Fan does not rotate due to tangled foreign matters.

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

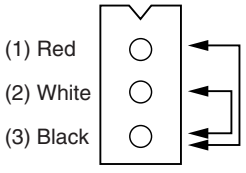


(R18389)

Note:

1. Check the connector of fan motor. (Power supply cable)
2. Turn OFF the power supply.
3. Measure the resistance between the terminals at the motor side connectors to check that there is no short circuit, while the connector is disconnected.

FFQ series



(R18060)

Measuring points	Resistance for judgement
(1) - (3)	88.2Ω ± 10%
(2) - (3)	85.5Ω ± 10%

6.4 Drain System Abnormality

Error Code

AF

Method of Error Detection

Water leakage is detected based on the float switch ON/OFF changeover while the compressor is not operating.

Error Decision Conditions

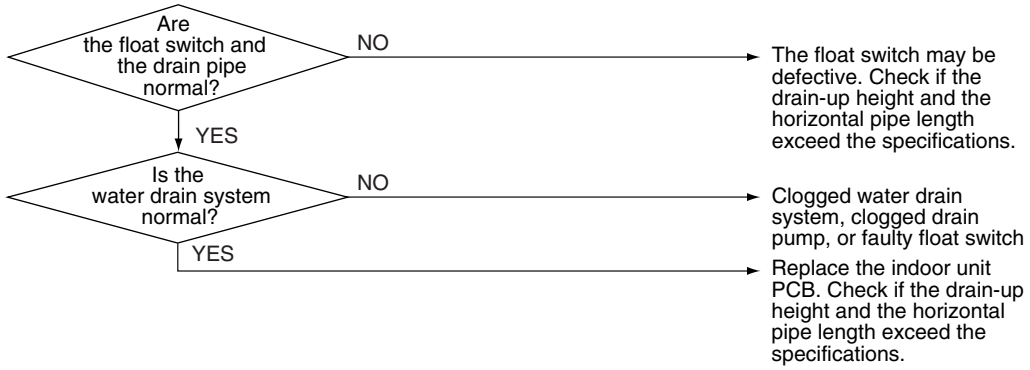
When the float switch changes from ON to OFF while the compressor is OFF

Supposed Causes

- Error in the drain pipe installation
- Defective float switch
- Defective indoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R16022)

6.5 Thermistor or Related Abnormality (SA Indoor Unit)

Error Code

C4, C5, C9

Method of Error Detection

The temperatures detected by the thermistors determine thermistor errors.

Error Decision Conditions

The thermistor input is more than 4.96 V or less than 0.04 V during compressor operation.

Supposed Causes

- Disconnection of connector
- Defective thermistor corresponding to the error code
- Defective indoor unit PCB

Troubleshooting

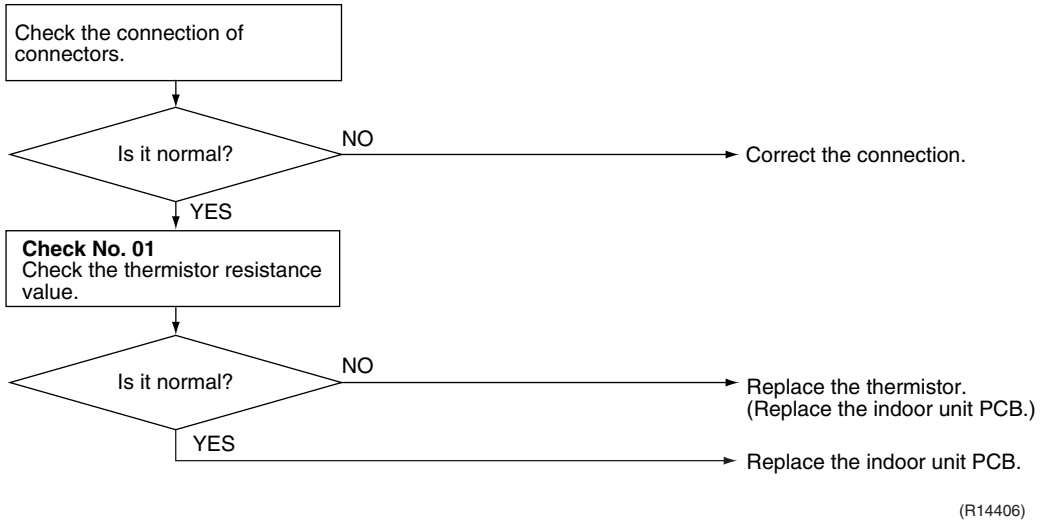
Check No.01
Refer to P.206

If the cause of the problem is related to the thermistors, the thermistors should be checked prior to changing the indoor unit PCB.

To check the thermistors, proceed as follows:

Step	Action
1	Disconnect the thermistor from the indoor unit PCB.
2	Read the temperature and the resistance value.
3	Check if the measured values correspond with the values in the table of thermistor resistance check.

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



C4 : Indoor heat exchanger thermistor 1 (liquid pipe) (R2T)
C5 : Indoor heat exchanger thermistor 2 (R3T)
C9 : Room temperature thermistor (R1T)

6.6 Remote Controller Thermistor Abnormality

Error Code

C J

Method of Error Detection

Even if remote controller thermistor is faulty, system is possible to operate by system thermistor. Malfunction detection is carried out by the temperature detected by remote controller thermistor.

Error Decision Conditions

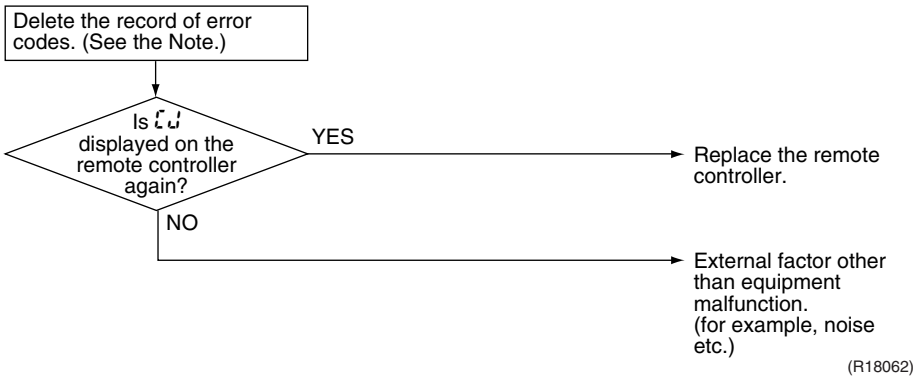
The remote controller thermistor is disconnected or shorted while the unit is running

Supposed Causes

- Defective thermistor
- Broken wire

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note: To delete the record of error codes, press the [ON/OFF] button for 4 seconds or more while the error code is displayed in the inspection mode.

6.7 Signal Transmission Error (between Indoor Unit and Remote Controller)

Error Code

U5

Method of Error Detection

In case of controlling with 2 remote controllers, check the system using microcomputer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Error Decision Conditions

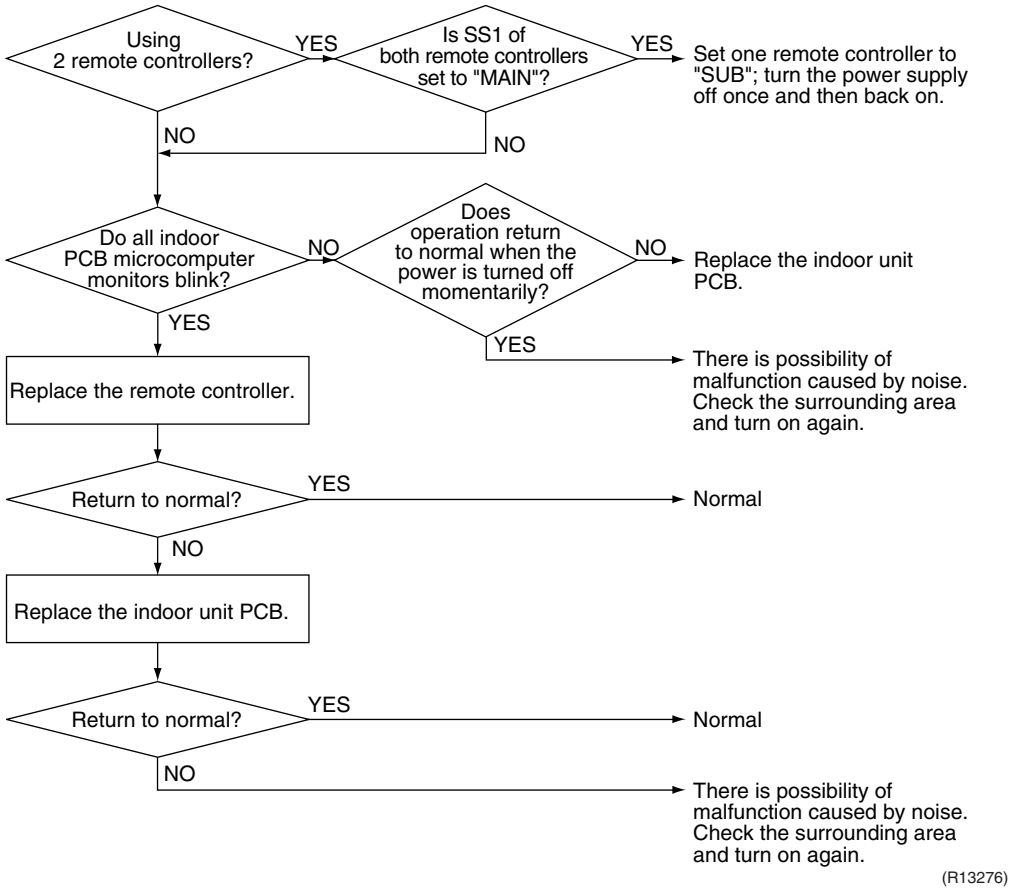
Normal transmission does not continue for specified period.

Supposed Causes

- Connection of 2 main remote controllers (when using 2 remote controllers)
- Defective indoor unit PCB
- Defective remote controller PCB
- Transmission error caused by noise

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R13276)

6.8 Signal Transmission Error (between MAIN Remote Controller and SUB Remote Controller)

Error Code

U8

Method of Error Detection

In case of controlling with 2 remote controllers, check the system using microcomputer if signal transmission between indoor unit and remote controller (main and sub) is normal.

Error Decision Conditions

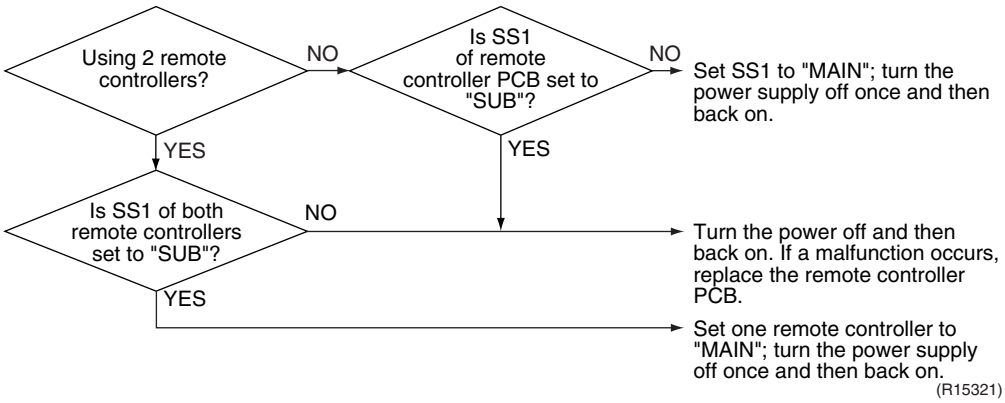
Normal transmission does not continue for specified period.

Supposed Causes

- Remote controller is set to “SUB” when using 1 remote controller
- Connection of 2 sub remote controllers (when using 2 remote controllers)
- Defective remote controller PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



6.9 Field Setting Abnormality

Error Code UA

Method of Error Detection

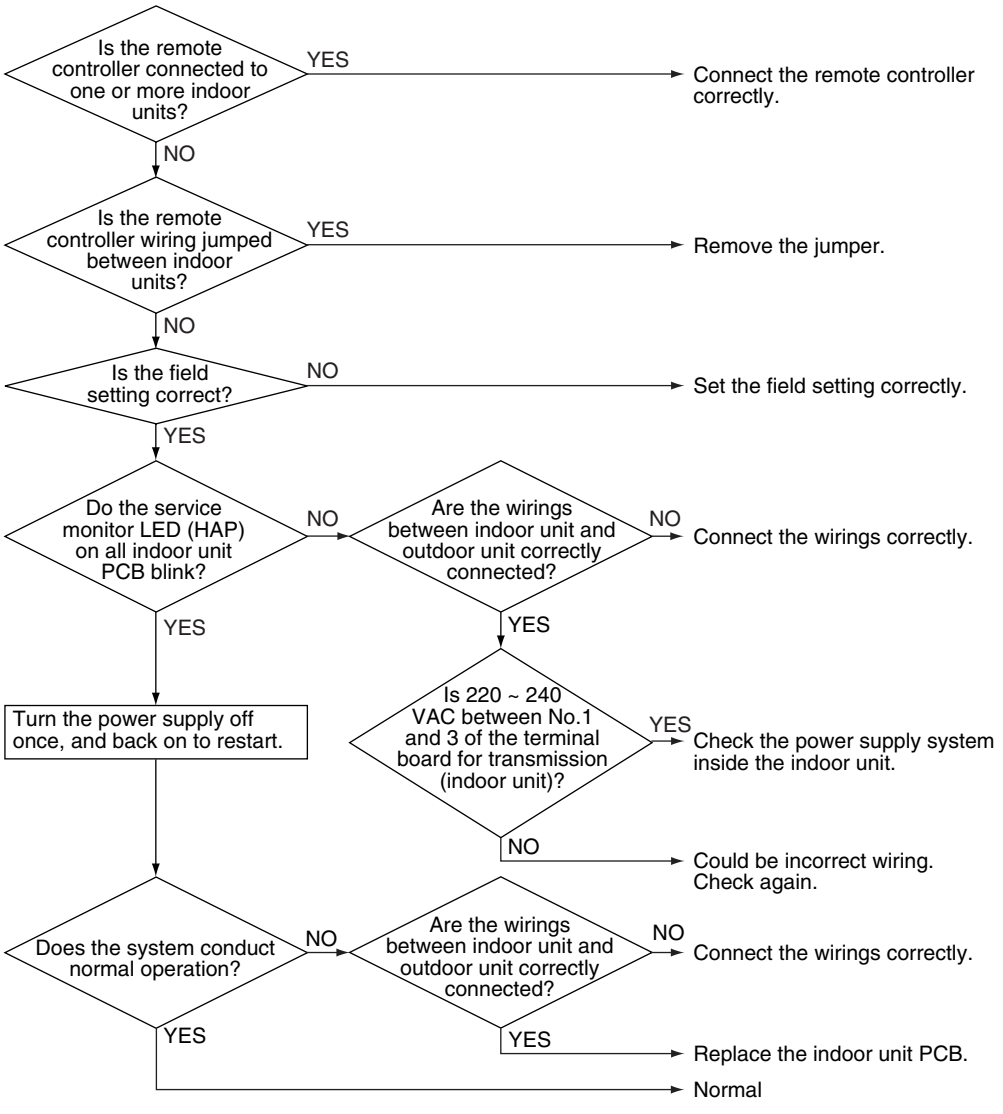
Error Decision Conditions Incorrect field setting

Supposed Causes

- Defective indoor unit PCB
- Defective outdoor unit PCB
- Defective power supply PCB
- Indoor-outdoor, indoor-indoor unit transmission wiring
- Defective remote controller wiring

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R17253)

7. Troubleshooting for Outdoor Unit

7.1 Refrigerant Shortage

Error Code

U0

Method of Error Detection

Refrigerant shortage detection I :
Refrigerant shortage is detected by checking the input current value and the compressor output frequency. If the refrigerant is short, the input current is lower than the normal value.

Refrigerant shortage detection II :
Refrigerant shortage is detected by checking the discharge pipe temperature and the opening of the outdoor electronic expansion valve. If the refrigerant is short, the discharge pipe temperature tends to rise.

Error Decision Conditions

Refrigerant shortage detection I :
The following conditions continue for 7 minutes.

- DC current × DC voltage ≤ **A** × Compressor output frequency + **B**
- Output frequency > **C**

	A (–)	**B** (W)	**C** (Hz)
40 class	2111/256	–361	51
50 class	4628/256	–608	48

Refrigerant shortage detection II :
The following conditions continue for 80 seconds.

- Opening of the outdoor electronic expansion valve ≥ **D**
- Discharge pipe temperature > **E** × target discharge pipe temperature + **F**

D (pulse)	**E** (–)	**F** (°C)
450	255/256	20

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

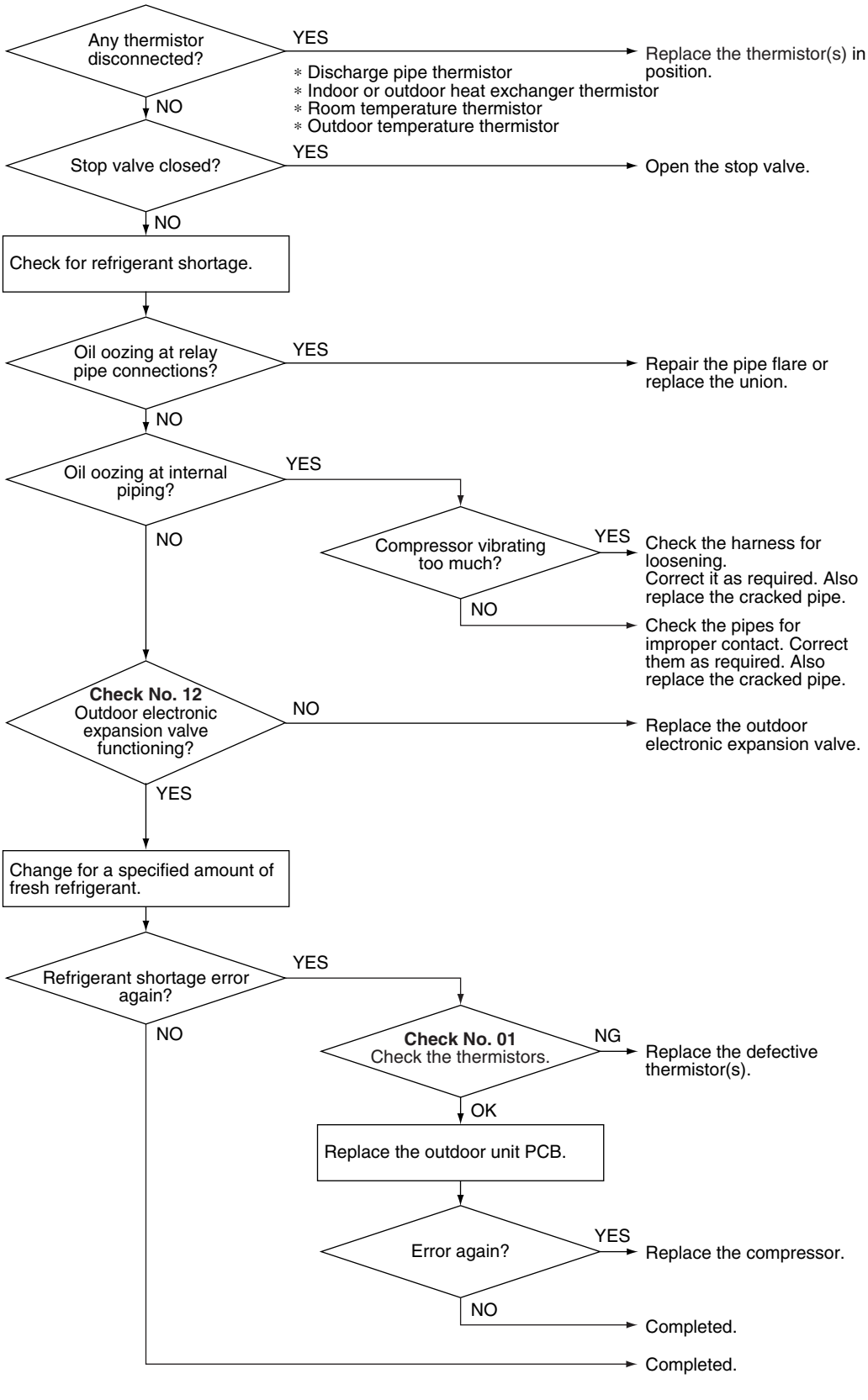
- Disconnection of the discharge pipe thermistor, indoor or outdoor heat exchanger thermistor, room or outdoor temperature thermistor
- Closed stop valve
- Refrigerant shortage (refrigerant leakage)
- Poor compression performance of compressor
- Defective outdoor electronic expansion valve

Troubleshooting

Check No.01
Refer to P.206

Check No.12
Refer to P.210

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R17254)

7.2 Low-voltage Detection or Over-voltage Detection

Error Code

UC

Method of Error Detection

★ **Indoor Unit**

Evaluation of zero-cross detection of power supply by the indoor unit PCB.

★ **Outdoor Unit**

Low-voltage detection:
An abnormal voltage drop is detected by the DC voltage detection circuit.

Over-voltage detection:
An abnormal voltage rise is detected by the over-voltage detection circuit.

Error Decision Conditions

★ **Indoor Unit**

There is no zero-cross detection in approximately 10 seconds.

★ **Outdoor Unit**

Low-voltage detection:
- The voltage detected by the DC voltage detection circuit is below 180 V.

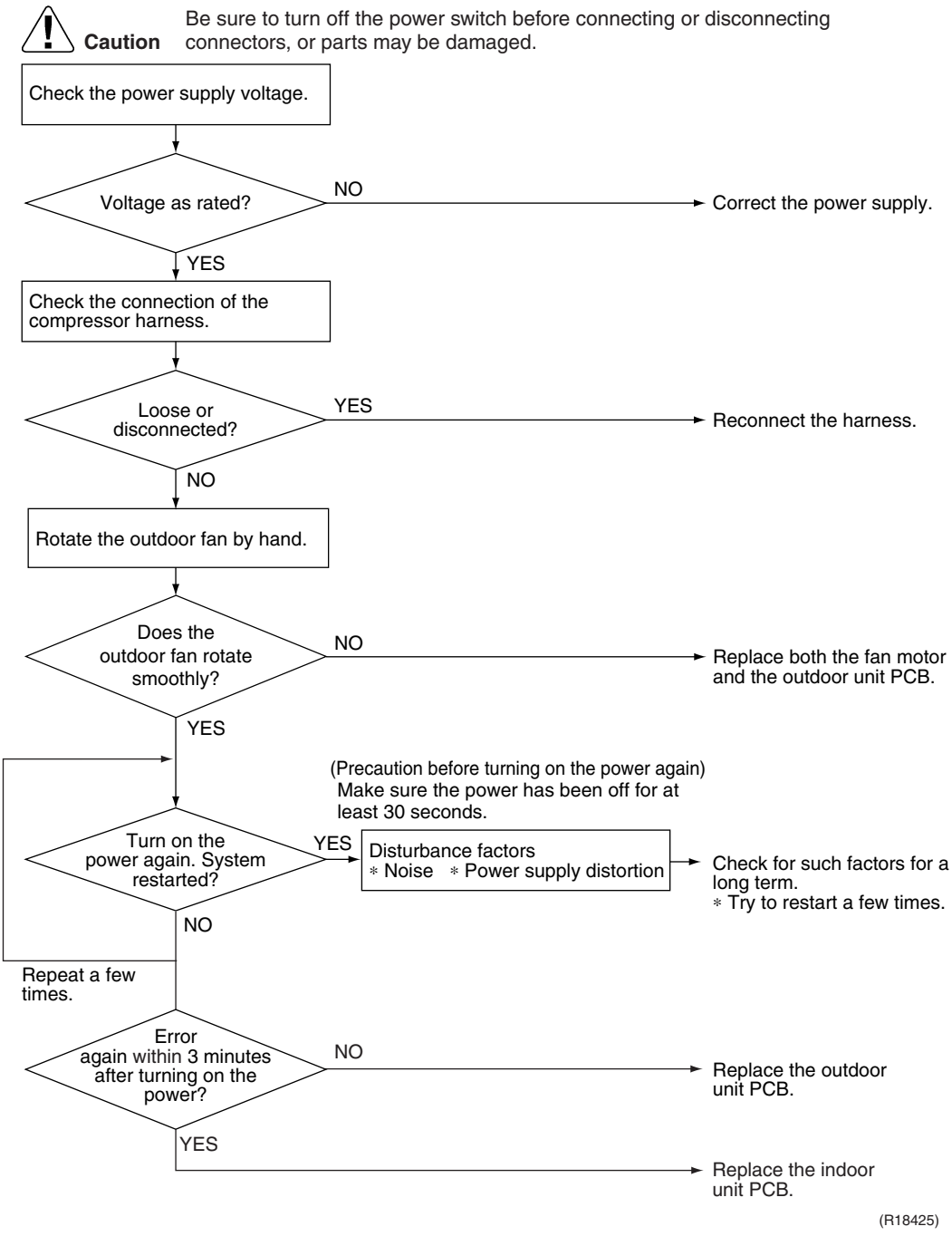
Over-voltage detection:
- An over-voltage signal is fed from the over-voltage detection circuit to the microcomputer.
- The compressor stops if the error occurs, and restarts automatically after 3-minute standby.

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

- Power supply voltage is not as specified.
- Defective DC voltage detection circuit
- Defective over-voltage detection circuit
- Defective PAM control part
- Disconnection of compressor harness
- Short circuit inside the fan motor winding
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective outdoor unit PCB
- Defective indoor unit PCB

Troubleshooting



7.3 Outdoor Unit PCB Abnormality or Signal Transmission Error

Error Code

U4

Method of Error Detection

Detection within the program of the microcomputer that the program is in good running order.

Error Decision Conditions

- The program of the microcomputer does not work in order.
- Signal transmission between the units cannot be performed for more than 15 seconds.
- Zero-cross signal cannot be detected for more than 10 seconds.

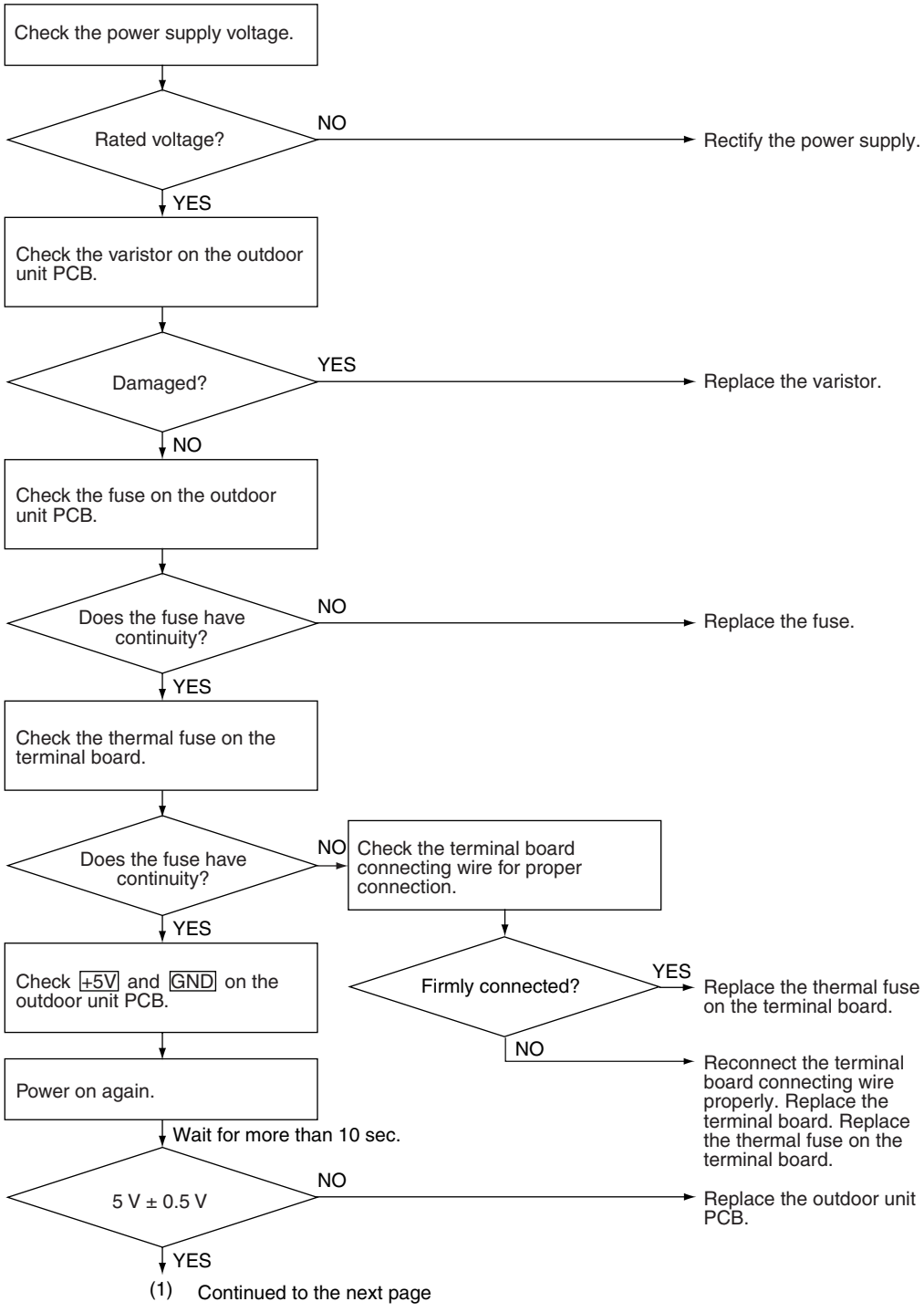
Supposed Causes

- Display disabled due to power supply fault
- Momentary fall of voltage
- Momentary power failure
- Defective varistor
- Defective fuse
- Defective thermal fuse on outdoor terminal board
- Defective terminal board
- Defective outdoor unit PCB
- Improper grounding work
- Noise
- Defective fan motor
- Improper wiring between indoor and outdoor units
- Defective indoor unit PCB

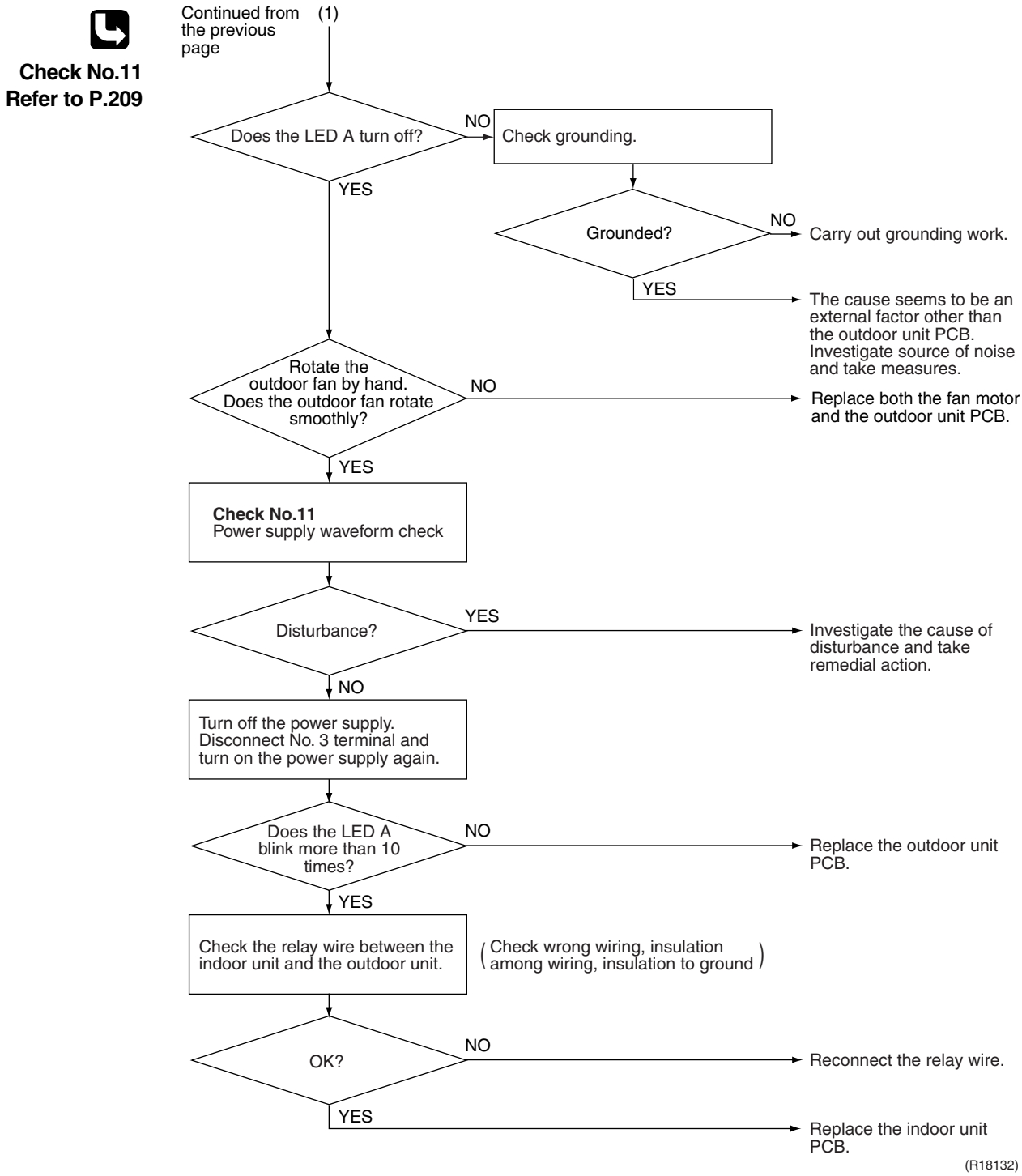
Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Check indoor unit also, because a communication circuit fault may be caused by the problem related to the indoor unit.



(R18131)


Check No.11
Refer to P.209
Continued from the previous page
(1)
Does the LED A turn off?
NO
Check grounding.
YES
Grounded?
NO
Carry out grounding work.
YES
The cause seems to be an external factor other than the outdoor unit PCB. Investigate source of noise and take measures.
Rotate the outdoor fan by hand. Does the outdoor fan rotate smoothly?
NO
Replace both the fan motor and the outdoor unit PCB.
YES
Check No.11
Power supply waveform check
Disturbance?
YES
Investigate the cause of disturbance and take remedial action.
NO
Turn off the power supply. Disconnect No. 3 terminal and turn on the power supply again.
Does the LED A blink more than 10 times?
NO
Replace the outdoor unit PCB.
YES
Check the relay wire between the indoor unit and the outdoor unit.
(Check wrong wiring, insulation among wiring, insulation to ground)
OK?
NO
Reconnect the relay wire.
YES
Replace the indoor unit PCB.
(R18132)

7.4 Unspecified Voltage (between Indoor Unit and Outdoor Unit) / Anti-icing Control in Other Room

Error Code

U9, UH

Method of Error Detection

A wrong connection is detected by checking the combination of indoor and outdoor units on the microcomputer.

Error Decision Conditions

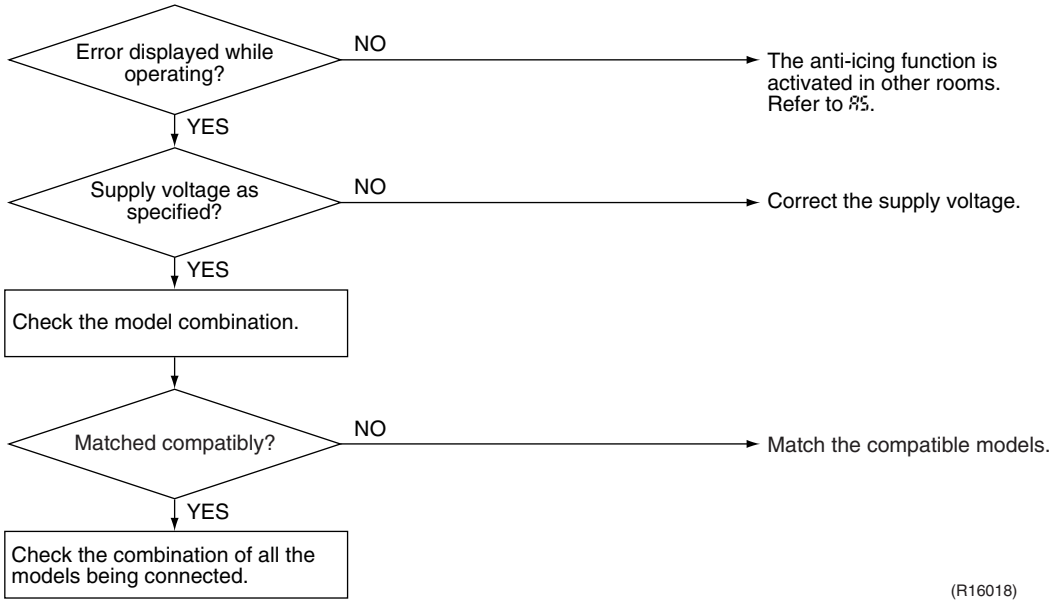
- Anti-icing control in other room
- Unspecified internal and/or external voltages
- Mismatching of indoor and outdoor units

Supposed Causes

- Anti-icing control in other room
- Wrong models interconnected
- Wrong indoor unit PCB or outdoor unit PCB mounted

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



Note: Refer to “Anti-icing control for indoor unit” on page 186 for detail.

7.5 Anti-icing Control for Indoor Unit

Error Code

A5

Method of Error Detection

During cooling operation, indoor unit icing is detected by checking the temperatures sensed by the indoor heat exchanger thermistor and room temperature thermistor that are located in a shut-down room.

Error Decision Conditions

- In cooling operation, both the condition (A) and (B) are met for 5 minutes.
  (A) Stop room thermistor temperature – Indoor heat exchanger temperature ≥ 10°C
  (B) Indoor heat exchanger temperature ≤ –1°C
- If the error repeats 4 times, the system is shut down.
- Reset condition: 3-minute standby is over and the indoor heat exchanger temperature is above 0°C

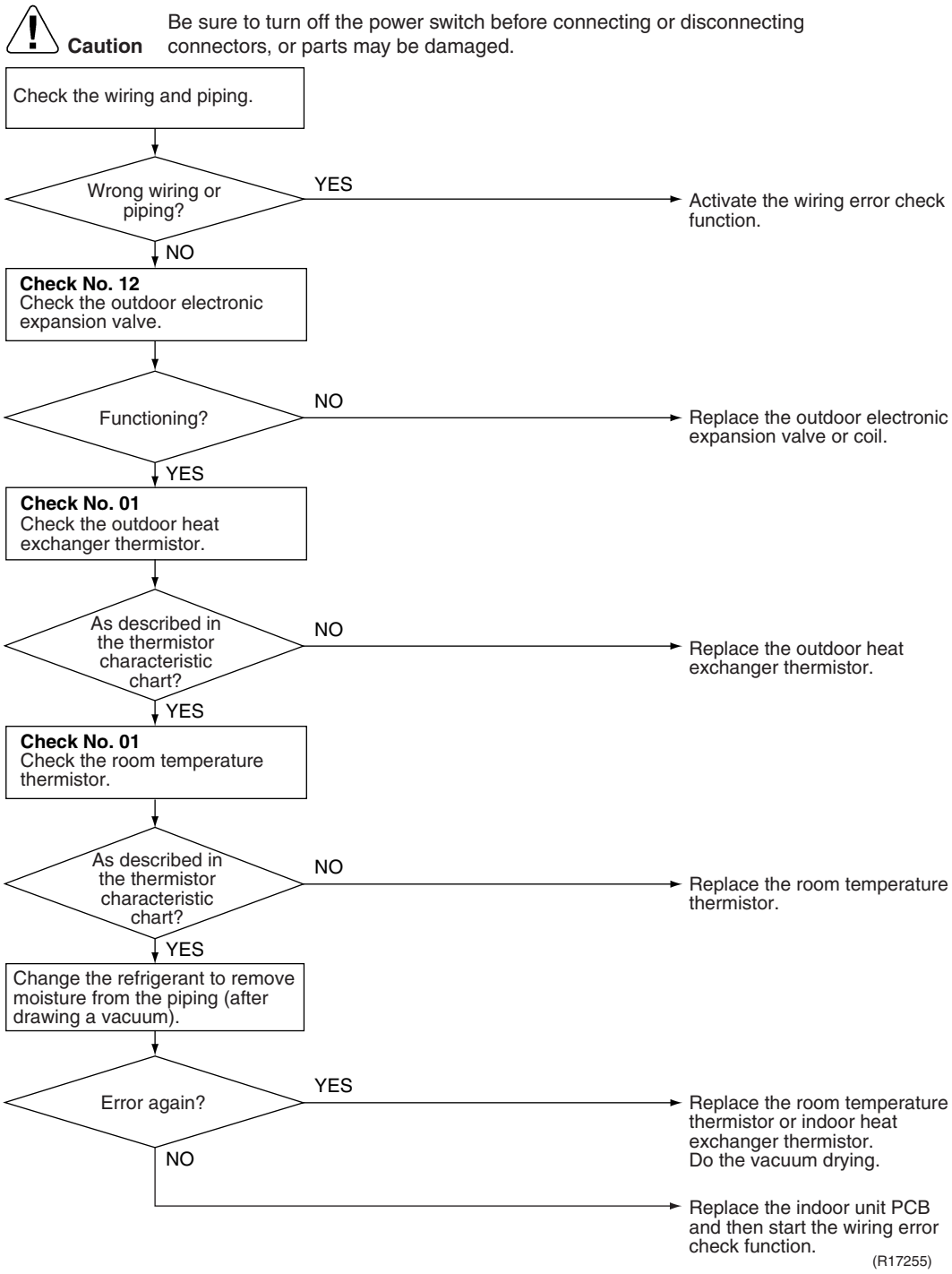
Supposed Causes

- Wrong wiring or piping
- Defective outdoor electronic expansion valve
- Short-circuited air
- Defective indoor heat exchanger thermistor
- Defective room temperature thermistor

Troubleshooting

Check No.01
Refer to P.206

Check No.12
Refer to P.210



7.6 OL Activation (Compressor Overload)

Error Code

E5

Method of Error Detection

A compressor overload is detected through compressor OL.

Error Decision Conditions

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

- Disconnection of discharge pipe thermistor
- Defective discharge pipe thermistor
- Disconnection of connector [S40]
- Disconnection of 2 terminals of OL (Q1L)
- Defective OL (Q1L)
- Broken OL harness
- Defective outdoor electronic expansion valve or coil
- Defective four way valve or coil
- Defective outdoor unit PCB
- Refrigerant shortage
- Water mixed in refrigerant
- Defective stop valve

Troubleshooting

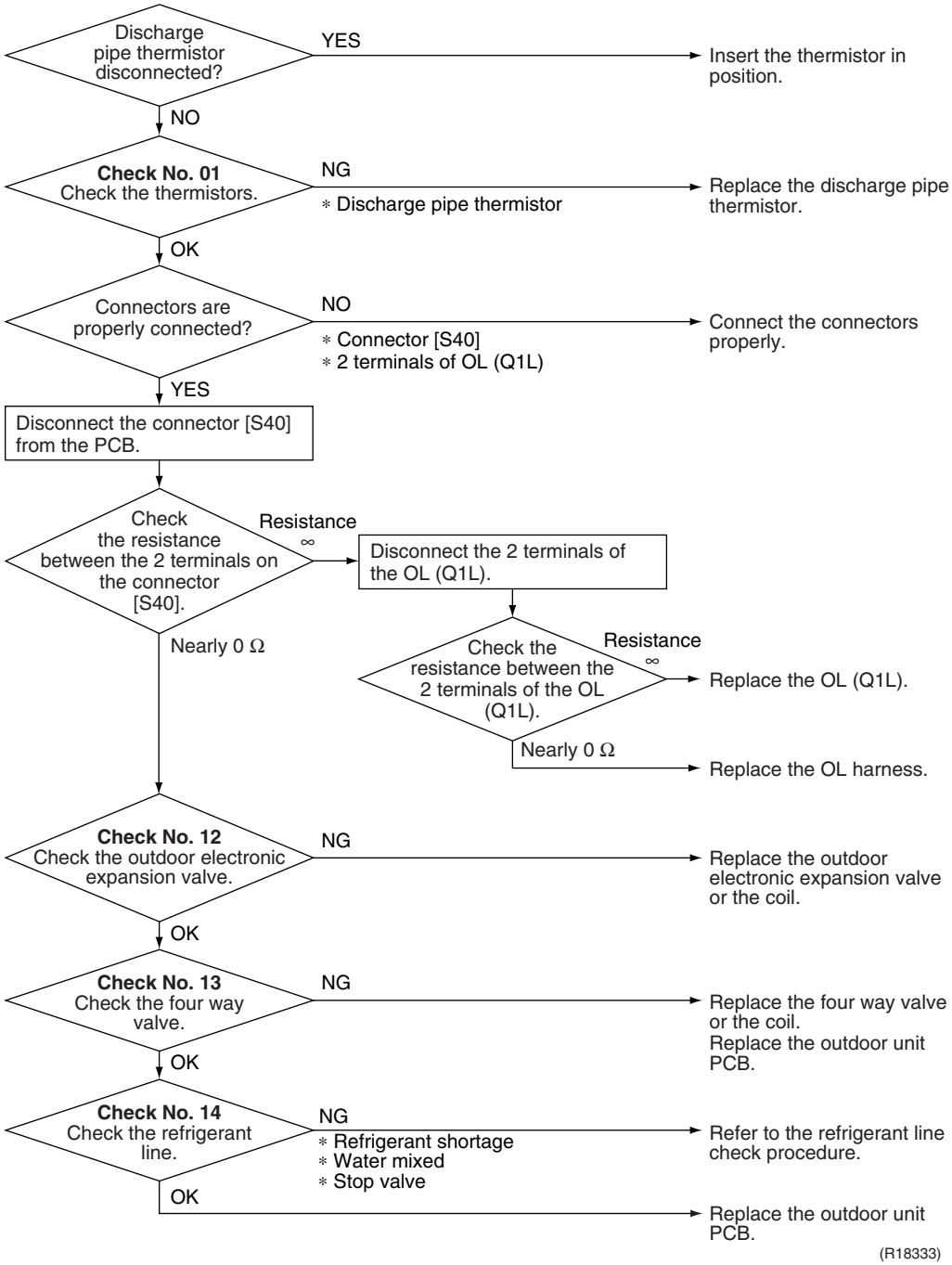
Check No.01
Refer to P.206

Check No.12
Refer to P.210

Check No.13
Refer to P.211

Check No.14
Refer to P.211

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R18333)

Note: OL (Q1L) activating temperature: 120°C
OL (Q1L) recovery temperature: 95°C

7.7 Compressor Lock

Error Code

E6

Method of Error Detection

A compressor lock is detected by checking the compressor running condition through the position detection circuit.

Error Decision Conditions

- Judging from the current waveform generated when high-frequency voltage is applied to the compressor.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 11 minutes without any other error

Supposed Causes

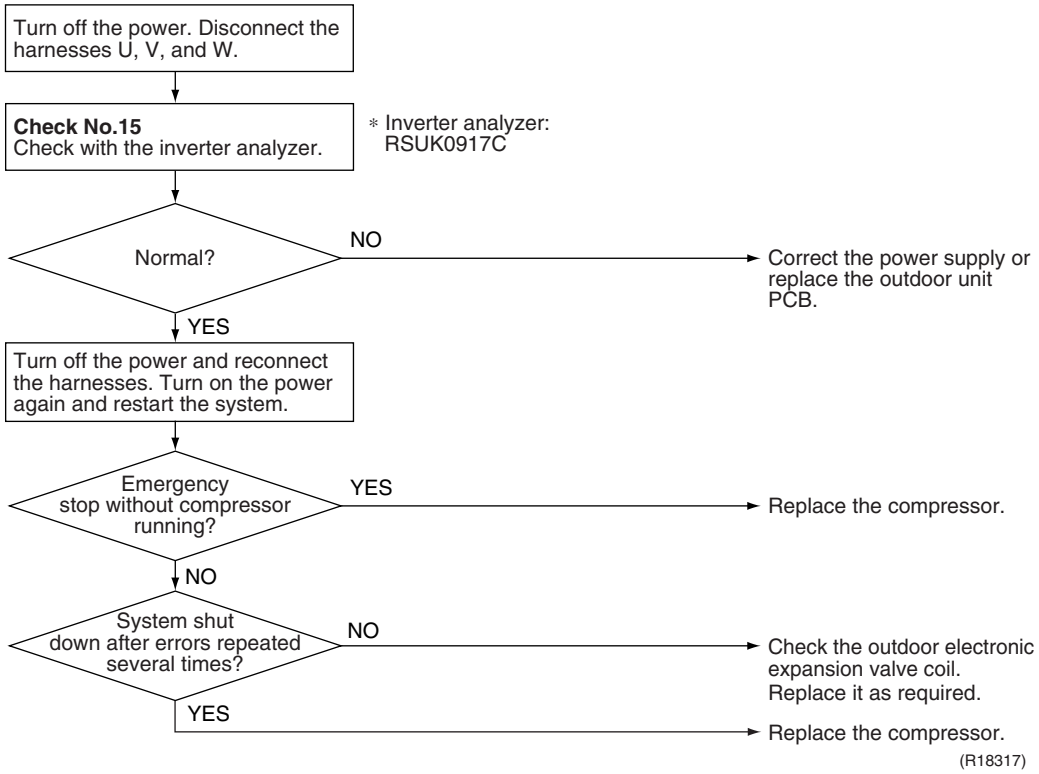
- Defective outdoor unit PCB
- Defective compressor
- Defective outdoor electronic expansion valve

Troubleshooting

Check No.15
Refer to P.212

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

(Precaution before turning on the power again)
Make sure the power has been off for at least 30 seconds.



(R18317)

7.8 DC Fan Lock

Error Code

E7

Method of Error Detection

An error is determined with the high-voltage fan motor rotation speed detected by the Hall IC.

Error Decision Conditions

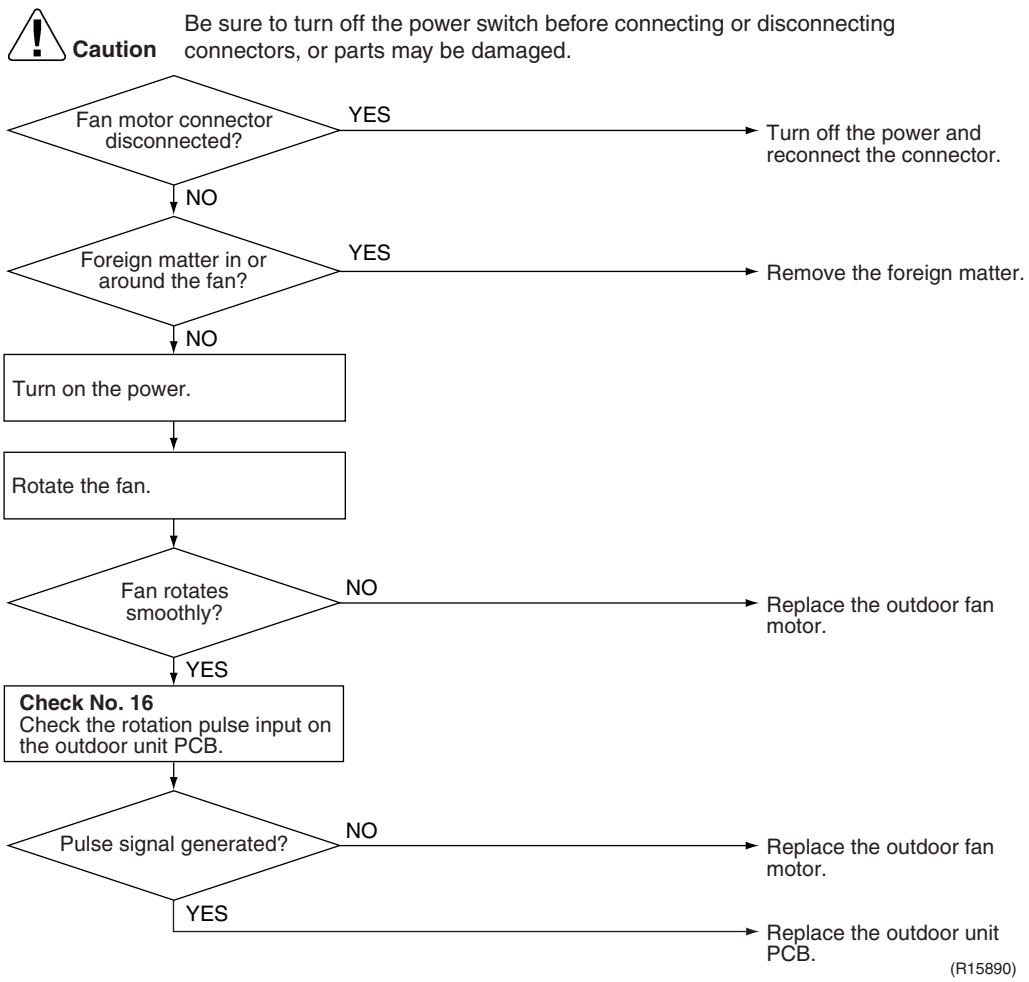
- The fan does not start in 60 seconds even when the fan motor is running.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 11 minutes without any other error

Supposed Causes

- Disconnection of the fan motor
- Foreign matters stuck in the fan
- Defective fan motor
- Defective outdoor unit PCB

Troubleshooting

Check No.16
Refer to P.214



7.9 Input Overcurrent Detection

Error Code

E8

Method of Error Detection

Detected by checking the input current value

Error Decision Conditions

- The input current is at a certain value (depending on the condition) for 2.5 seconds.
- The compressor halts if the error occurs, and restarts automatically after 3-minute standby.

Supposed Causes

- Outdoor temperature is out of operation range.
- Defective compressor
- Defective power module
- Defective outdoor unit PCB
- Short circuit

Troubleshooting

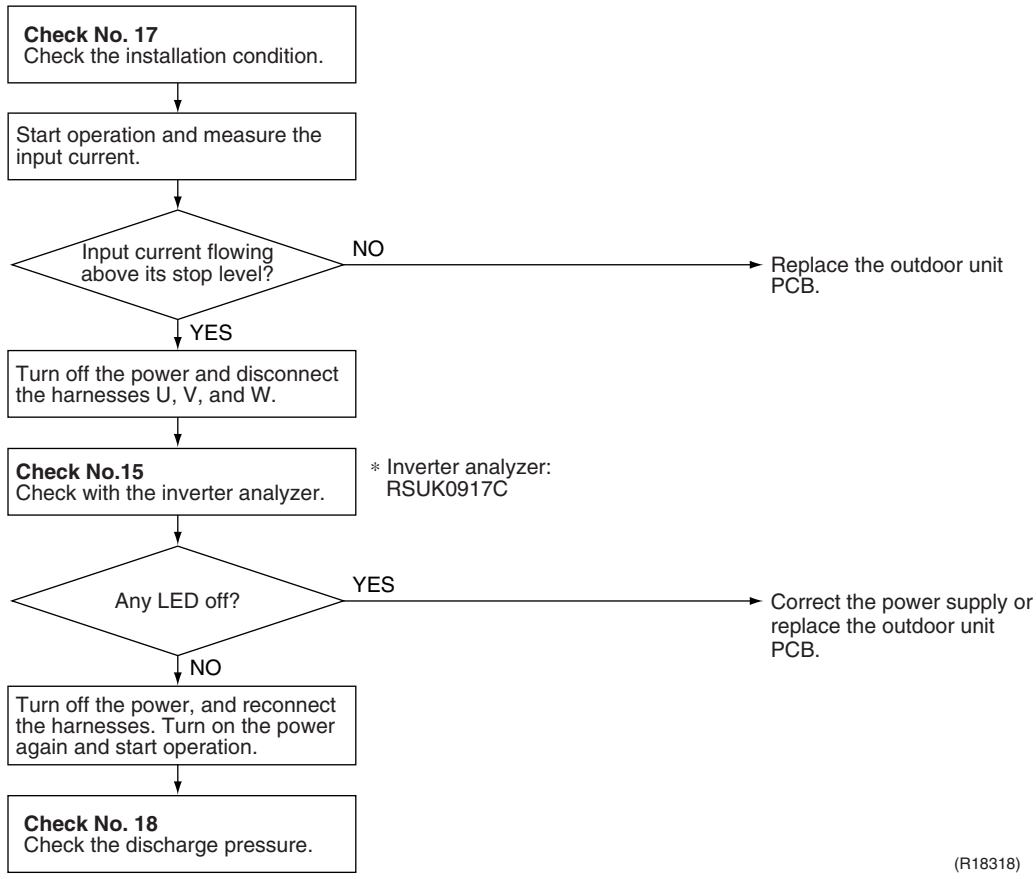
Check No.15
Refer to P.212

Check No.17
Refer to P.215

Check No.18
Refer to P.215

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

* An input overcurrent may result from wrong internal wiring. If the system is interrupted by an input overcurrent after the wires have been disconnected and reconnected for part replacement, check the wiring again.



7.10 Discharge Pipe Temperature Control

Error Code

F3

Method of Error Detection

Detected by the discharge pipe thermistor

Error Decision Conditions

- If the temperature detected by the discharge pipe thermistor rises above **A** °C, the compressor stops.
- The error is cleared when the discharge pipe temperature is dropped below **B** °C.

	A (°C)	**B** (°C)
40 class	110	97
50 class	110	95

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

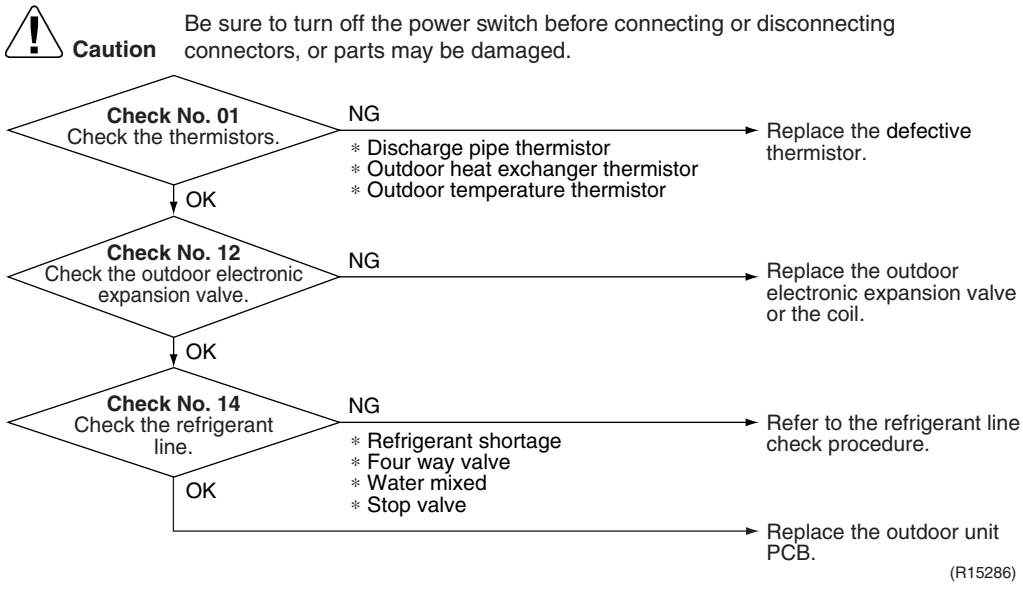
- Defective discharge pipe thermistor (Defective outdoor heat exchanger thermistor or outdoor temperature thermistor)
- Defective outdoor electronic expansion valve
- Refrigerant shortage
- Defective four way valve
- Water mixed in refrigerant
- Defective stop valve
- Defective outdoor unit PCB

Troubleshooting

Check No.01
Refer to P.206

Check No.12
Refer to P.210

Check No.14
Refer to P.211



7.11 High Pressure Control in Cooling

Error Code

F6

Method of Error Detection

High-pressure control (operation halt, frequency drop, etc.) is activated in cooling operation if the temperature sensed by the outdoor heat exchanger thermistor exceeds the limit.

Error Decision Conditions

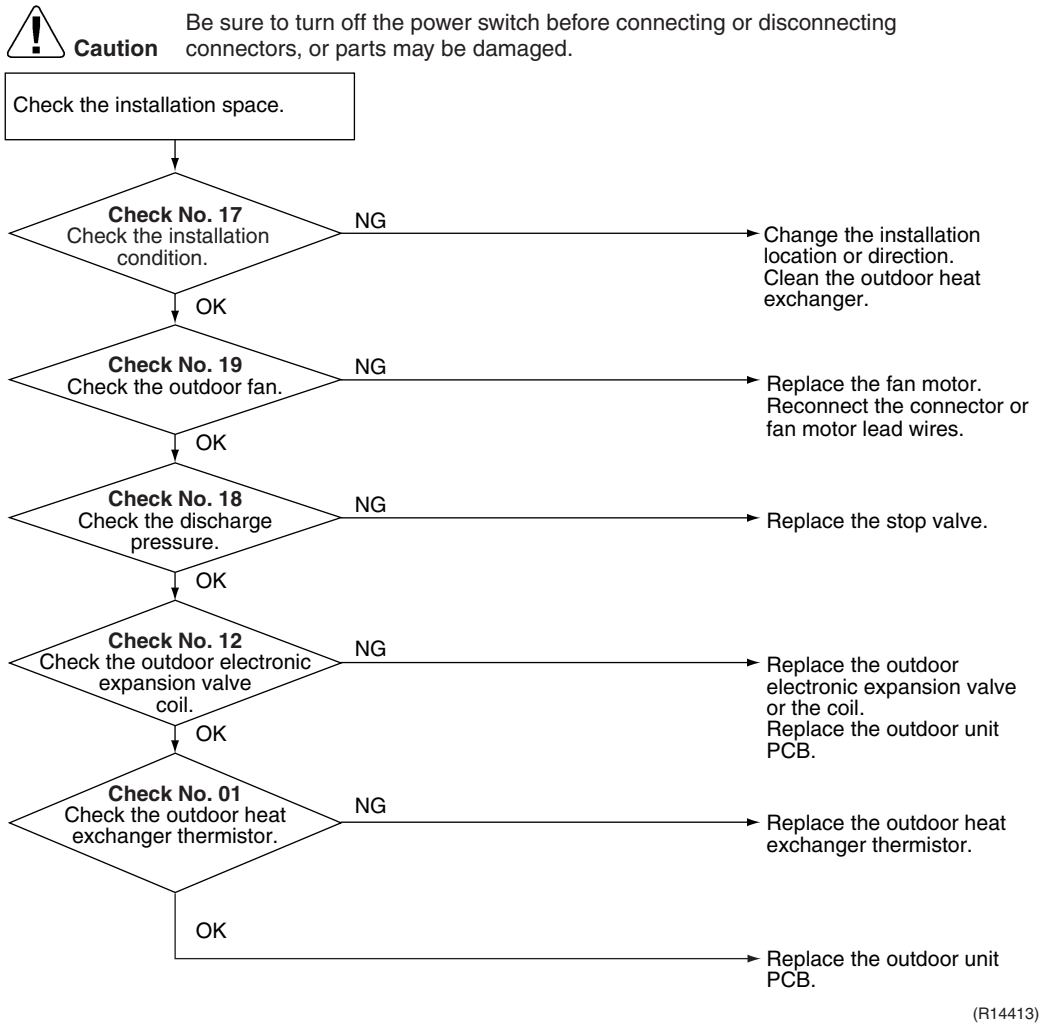
- The temperature sensed by the outdoor heat exchanger thermistor rises above about 65°C.
- The error is cleared when the temperature drops below about 50°C.

Supposed Causes

- The installation space is not large enough.
- Dirty outdoor heat exchanger
- Defective outdoor fan motor
- Defective stop valve
- Defective outdoor electronic expansion valve
- Defective outdoor heat exchanger thermistor
- Defective outdoor unit PCB

Troubleshooting

Check No.01 Refer to P.206
Check No.12 Refer to P.210
Check No.17 Refer to P.215
Check No.18 Refer to P.215
Check No.19 Refer to P.216



7.12 Compressor Sensor System Abnormality

Error Code

H07

Method of Error Detection

Fault condition is identified by DC current which is detected before compressor startup.

Error Decision Conditions

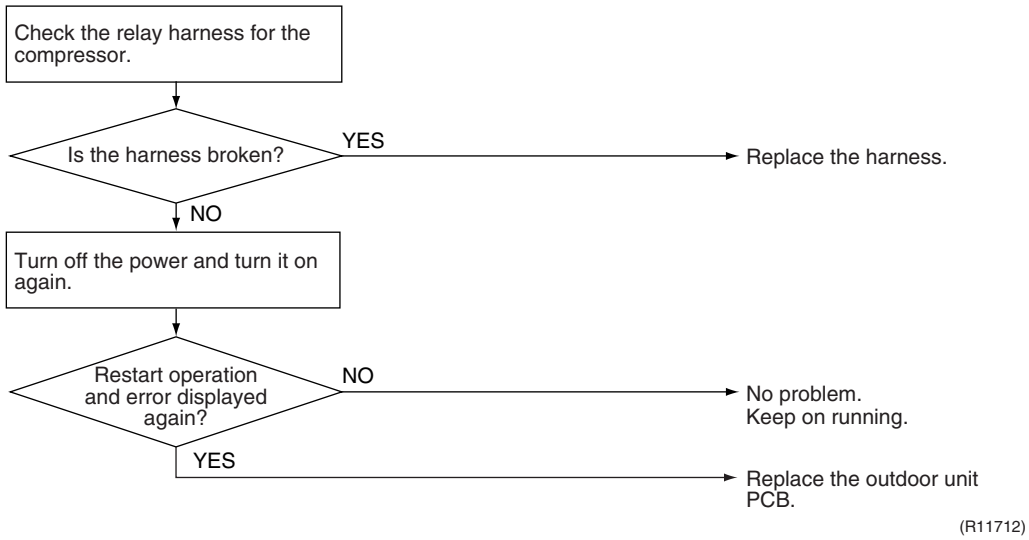
- When the DC current before compressor startup is other than 0.5 to 4.5 V (detected by converting the sensor output to voltage), or the DC voltage is 50 V or less.

Supposed Causes

- Broken or disconnected harness
- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R11712)

7.13 Position Sensor Abnormality

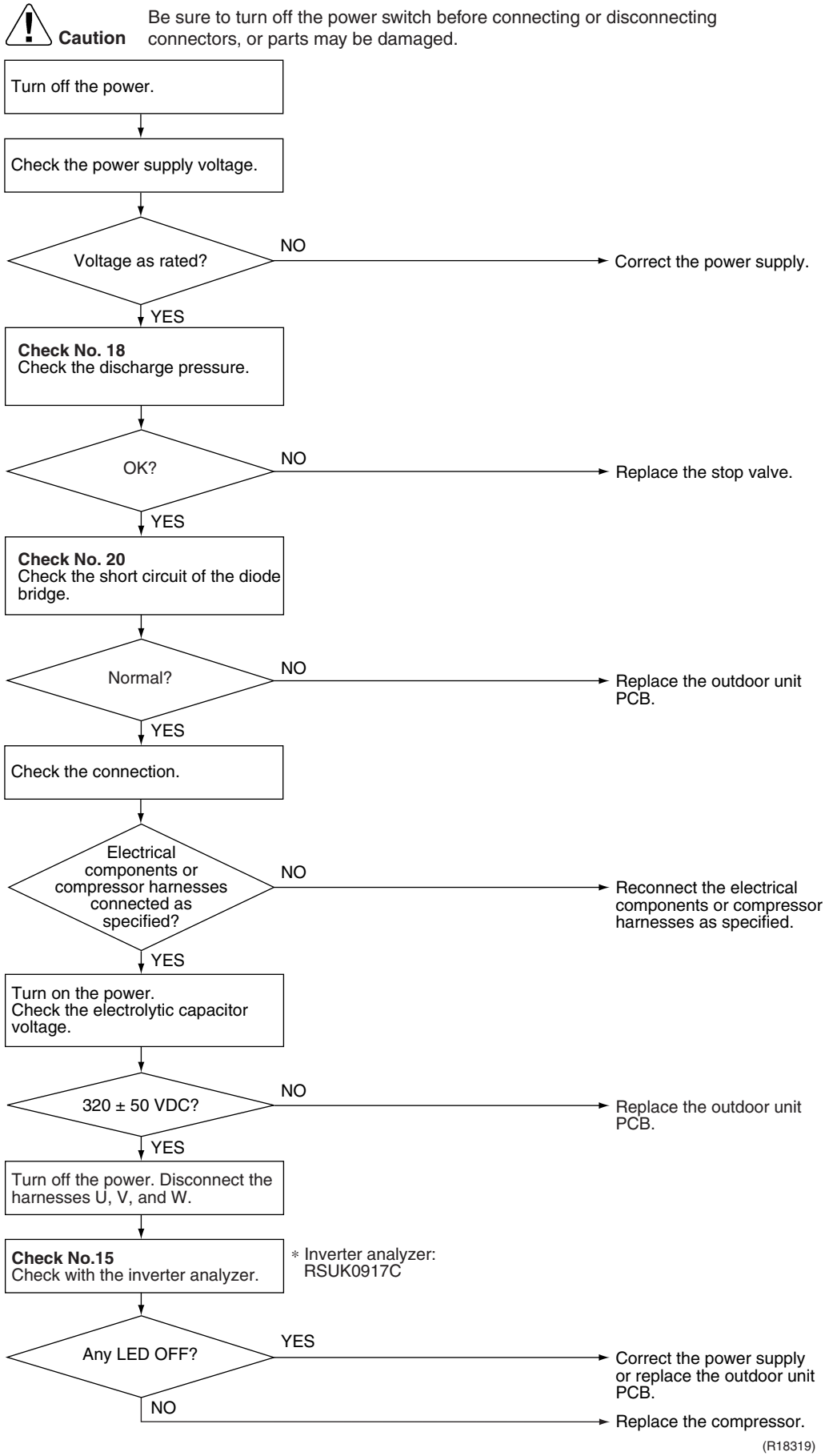
Error Code	H6
Method of Error Detection	A compressor startup failure is detected by checking the compressor running condition through the position detection circuit.
Error Decision Conditions	■ If the error repeats, the system is shut down. ■ Reset condition: Continuous run for about 11 minutes without any other error
Supposed Causes	■ Disconnection of the compressor relay cable ■ Defective compressor ■ Defective outdoor unit PCB ■ Startup failure caused by the closed stop valve ■ Input voltage outside the specified range

Troubleshooting

Check No.15
Refer to P.212

Check No.18
Refer to P.215

Check No.20
Refer to P.216



7.14 DC Voltage / Current Sensor Abnormality

Error Code

H8

Method of Error Detection

DC voltage or DC current sensor abnormality is identified based on the compressor running frequency and the input current.

Error Decision Conditions

- The compressor running frequency is above 52 Hz.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

- Defective outdoor unit PCB

Troubleshooting

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Replace the outdoor unit PCB.

7.15 Thermistor or Related Abnormality (Outdoor Unit)

Error Code

H9, J3, J6, J8, J9, P4

Method of Error Detection

This type of error is detected by checking the thermistor input voltage to the microcomputer. A thermistor error is detected by checking the temperature sensed by each thermistor.

Error Decision Conditions

- The thermistor input is above 4.98 V or below 0.02 V with the power on.
- J3 error is judged if the discharge pipe temperature is lower than the heat exchanger temperature.
- The system is shut down if all the units are judged as the J8 or J9 error.

Supposed Causes

- Disconnection of the connector for the thermistor
- Defective thermistor corresponding to the error code
- Defective heat exchanger thermistor in the case of J3 error (outdoor heat exchanger thermistor in cooling operation, or indoor heat exchanger thermistor in heating operation)
- Defective outdoor unit PCB

Troubleshooting

In case of "P4"

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

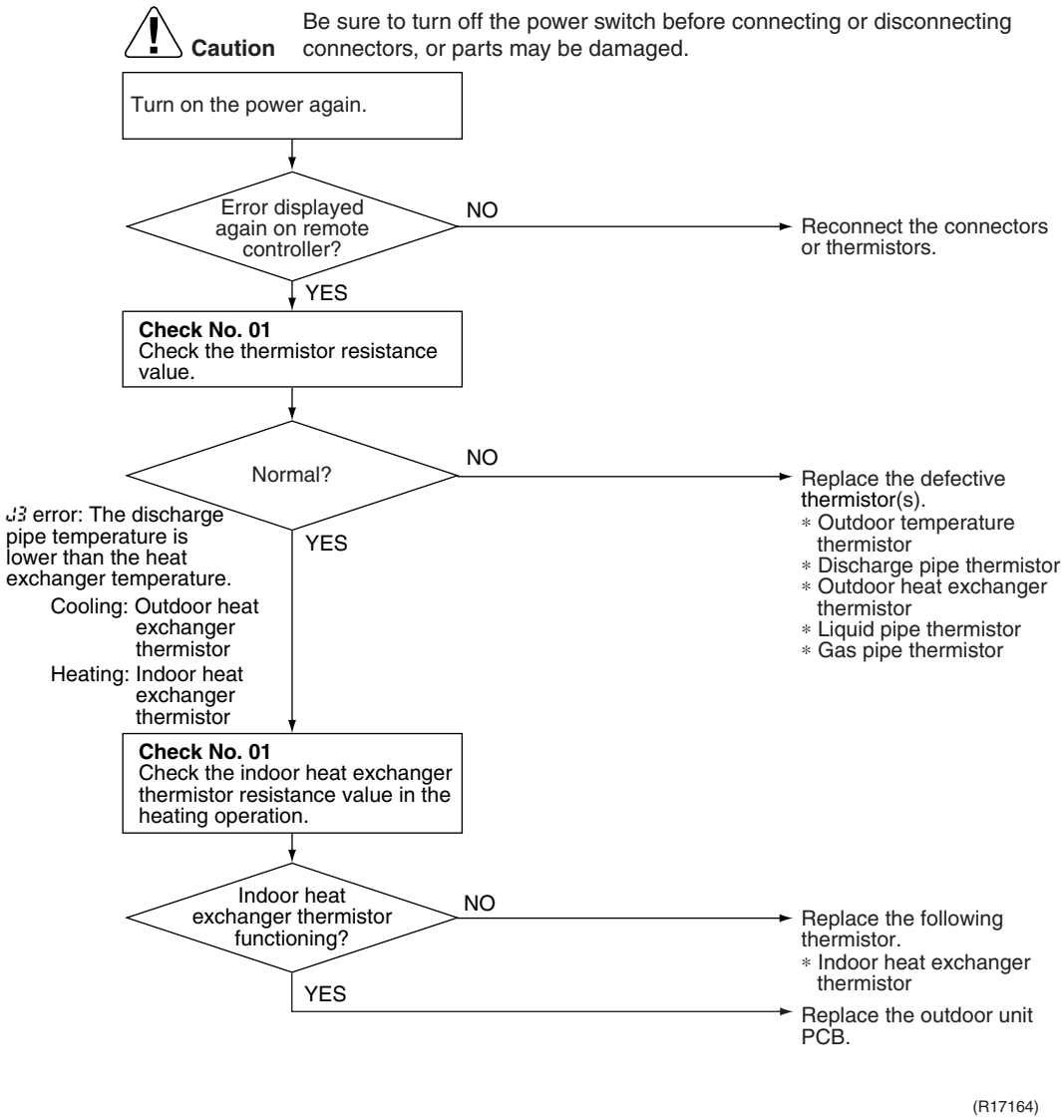
Replace the outdoor unit PCB.

P4 : Radiation fin thermistor

Troubleshooting

In case of "H9" "J3" "J6" "J8" "J9"

Check No.01
Refer to P.206



(R17164)

H9 : Outdoor temperature thermistor
J3 : Discharge pipe thermistor
J6 : Outdoor heat exchanger thermistor
J8 : Liquid pipe thermistor
J9 : Gas pipe thermistor

7.16 Electrical Box Temperature Rise

Error Code

L3

Method of Error Detection

An electrical box temperature rise is detected by checking the radiation fin thermistor with the compressor off.

Error Decision Conditions

- With the compressor off, the radiation fin temperature is above **A** °C.
- The error is cleared when the temperature drops below **B** °C.
- To cool the electrical components, the outdoor fan starts when the radiation fin temperature rises above **C** °C and stops when it drops below **B** °C.

A (°C)	**B** (°C)	**C** (°C)
80	70	75

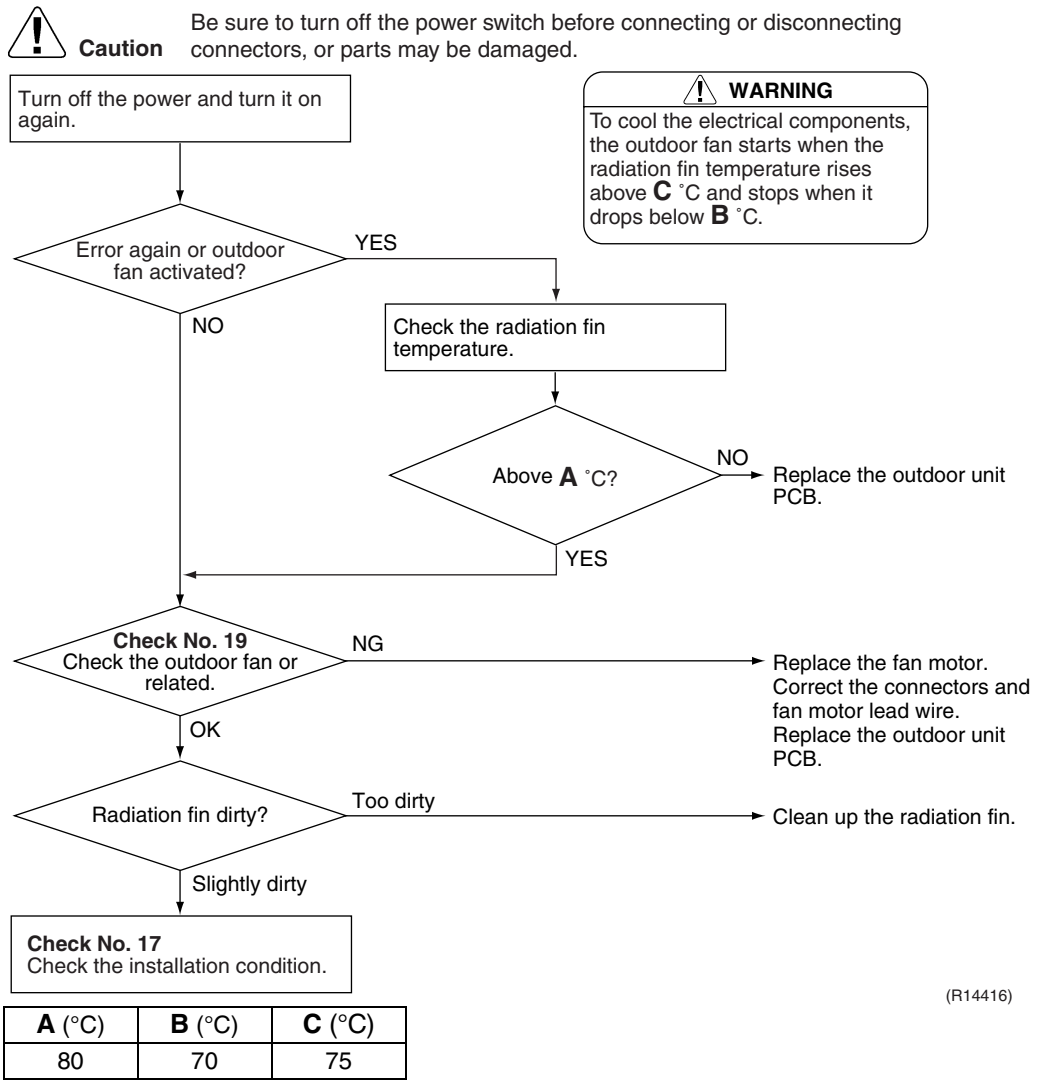
Supposed Causes

- Defective outdoor fan motor
- Short circuit
- Defective radiation fin thermistor
- Disconnection of connector
- Defective outdoor unit PCB

Troubleshooting

Check No.17
Refer to P.215

Check No.19
Refer to P.216



A (°C)	**B** (°C)	**C** (°C)
80	70	75

7.17 Radiation Fin Temperature Rise

Error Code

L4

Method of Error Detection

A radiation fin temperature rise is detected by checking the radiation fin temperature with the compressor on.

Error Decision Conditions

- The radiation fin temperature with the compressor on is above **A** °C.
- The error is cleared when the temperature drops below **B** °C

	A (°C)	**B** (°C)
40 class	95	85
50 class	92.5	85

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

Supposed Causes

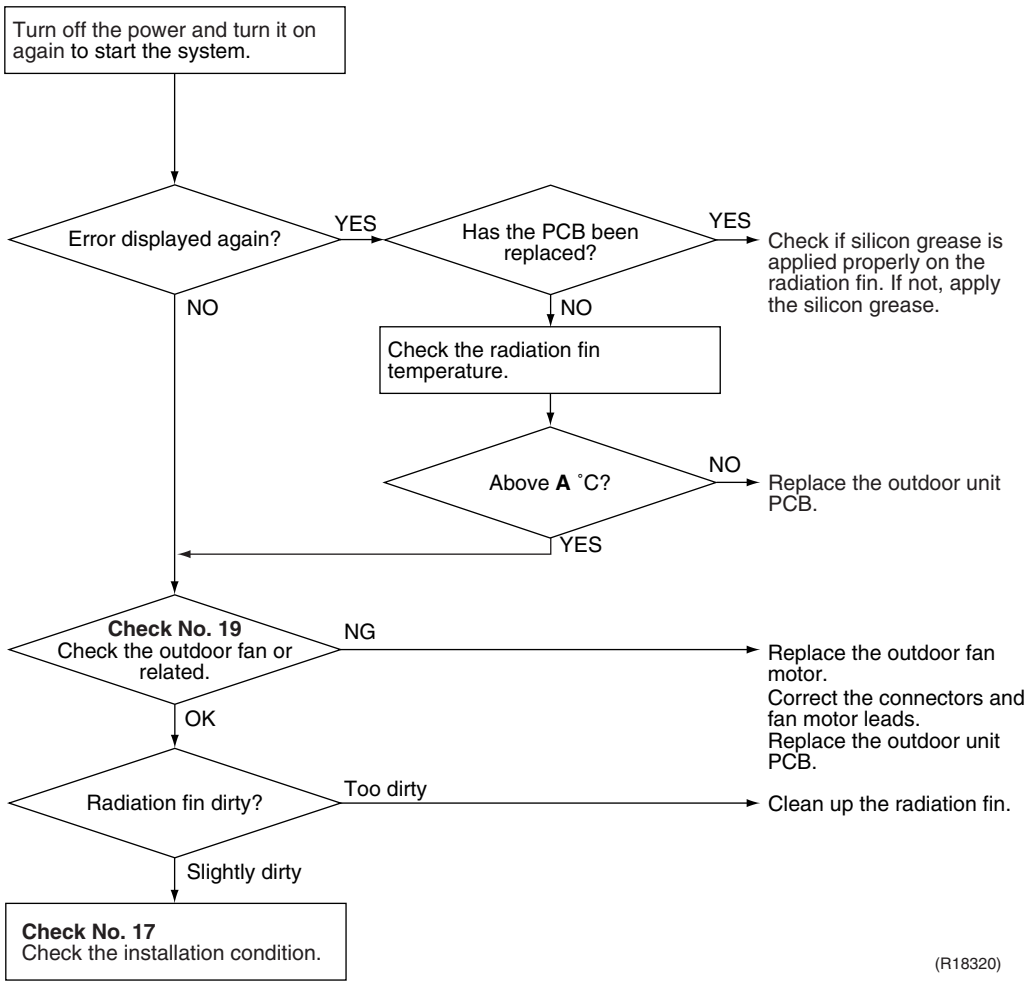
- Defective outdoor fan motor
- Short circuit
- Defective radiation fin thermistor
- Disconnection of connector
- Defective outdoor unit PCB
- Silicon grease is not applied properly on the radiation fin after replacing the outdoor unit PCB.

Troubleshooting

Check No.17
Refer to P.215

Check No.19
Refer to P.216

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



	A (°C)
40 class	95
50 class	92.5

Note: Refer to “Silicon Grease on Power Transistor / Diode Bridge” on page 240 for detail.

7.18 Output Overcurrent Detection

Error Code

L5

Method of Error Detection

An output overcurrent is detected by checking the current that flows in the inverter DC section.

Error Decision Conditions

- A position signal error occurs while the compressor is running.
- A rotation speed error occurs while the compressor is running.
- An output overcurrent signal is fed from the output overcurrent detection circuit to the microcomputer.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 11 minutes without any other error

Supposed Causes

- Poor installation condition
- Closed stop valve
- Defective power module
- Wrong internal wiring
- Abnormal power supply voltage
- Defective outdoor unit PCB
- Defective compressor

Troubleshooting

Check No.15
Refer to P.212

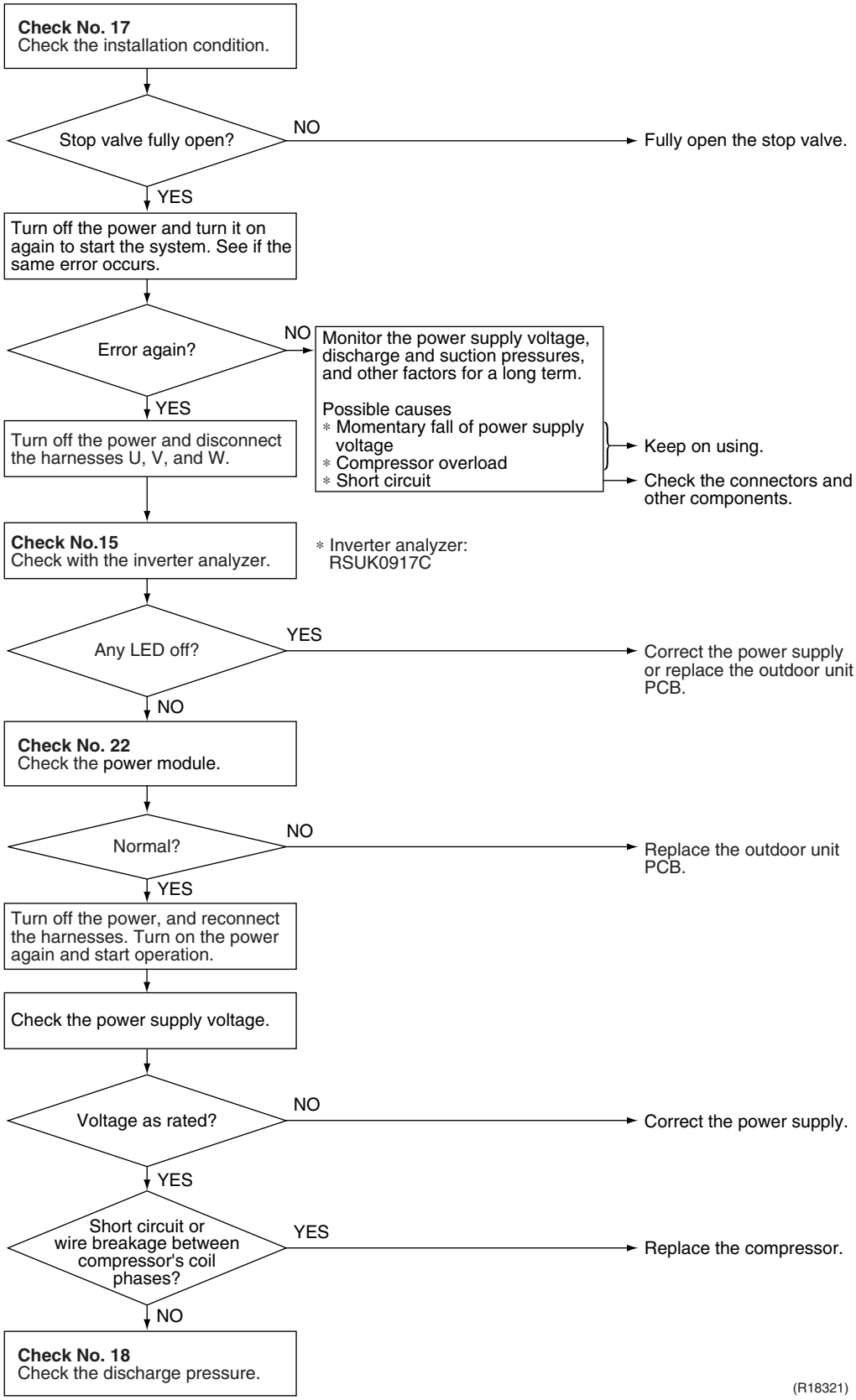
Check No.17
Refer to P.215

Check No.18
Refer to P.215

Check No.22
Refer to P.217

Caution Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

* An output overcurrent may result from wrong internal wiring. If the system is interrupted by an output overcurrent after the wires have been disconnected and reconnected for part replacement, check the wiring again.



(R18321)

8. Check

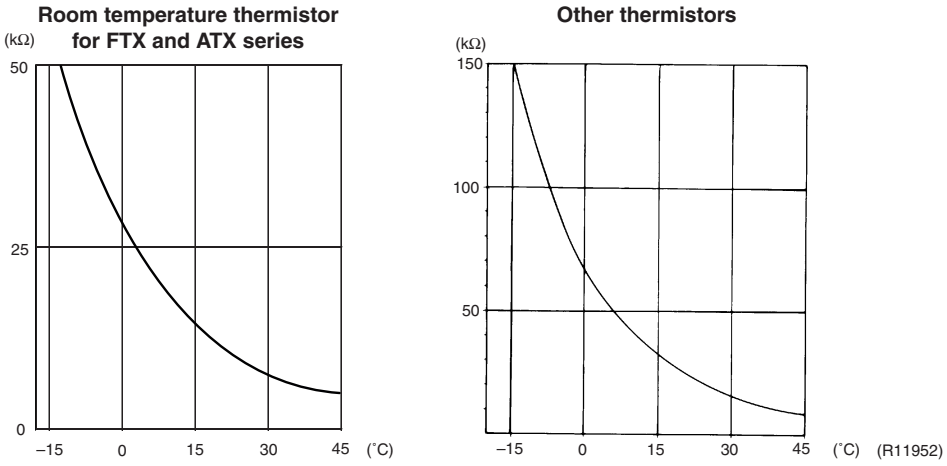
8.1 Thermistor Resistance Check

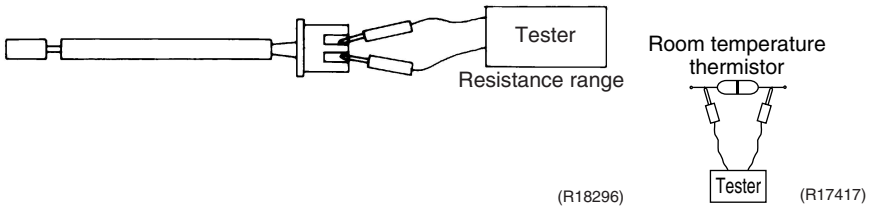
Check No.01

Disconnect the connectors of the thermistors from the PCB, and measure the resistance of each thermistor using a tester.
The relationship between normal temperature and resistance is shown in the table and the graphs below.

Thermistor temperature (°C)	Resistance (kΩ)	
	Room temperature thermistor for FTX and ATX series	Other thermistors
–20	73.4	197.8
–15	57.0	148.2
–10	44.7	112.1
–5	35.3	85.60
0	28.2	65.93
5	22.6	51.14
10	18.3	39.99
15	14.8	31.52
20	12.1	25.02
25	10.0	20.00
30	8.2	16.10
35	6.9	13.04
40	5.8	10.62
45	4.9	8.707
50	4.1	7.176

(R25°C = 10 kΩ, B = 3435 K) (R25°C = 20 kΩ, B = 3950 K)



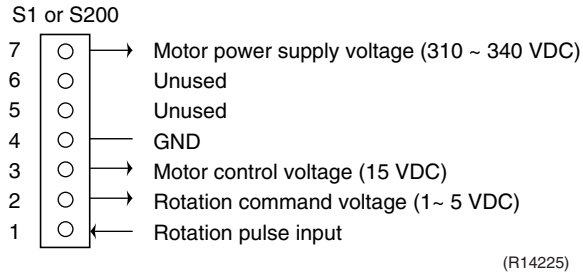


- When the room temperature thermistor is directly mounted on a PCB, remove the PCB from the control PCB to measure the resistance.
- When the connector of indoor heat exchanger thermistor is soldered on the PCB, remove the thermistor and measure the resistance.

8.2 Fan Motor Connector Output Check

Check No.02 **FTXG, FTXS35/42/50K, FTXS-J, ATXS, FVXG, FVXS Series**

1. Check the connection of connector.
2. Check motor power supply voltage output (pins 4 - 7).
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).



Check No.03 **CTXS, FTXS20/25K, FTX, ATX Series**

- Fan motor wire breakdown / short circuit check

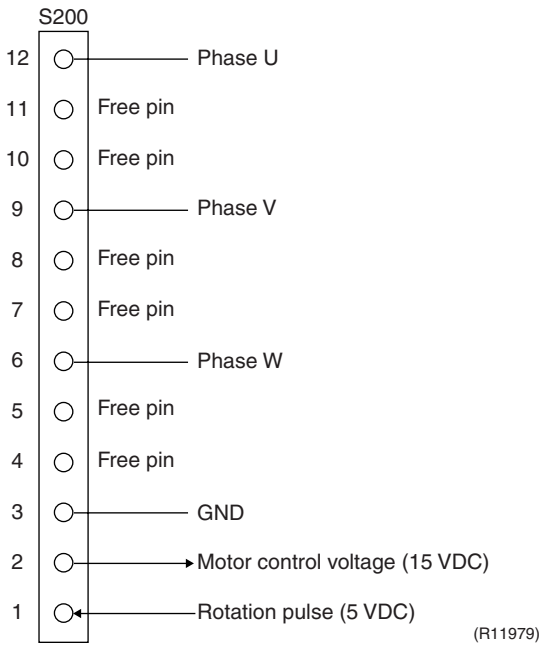
1. Check the connector for connection.
2. Turn the power off.
3. Check if each resistance at the phases U - V and V - W is 90 Ω ~ 100 Ω (between the pins 12 - 9, and between 9 - 6).

- Motor control voltage check

1. Check the connector for connection.
2. Check the motor control voltage is generated (between the pins 2 - 3).

- Rotation pulse check

1. Check the connector for connection.
2. Turn the power on and stop the operation.
3. Check if the Hall IC generates the rotation pulse 4 times when the fan motor is manually rotated once (between the pins 1 - 3).

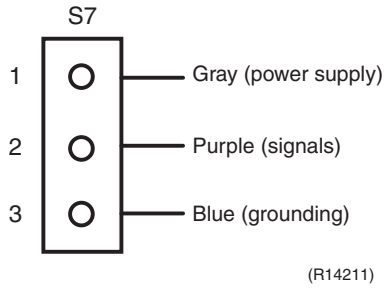


8.3 Hall IC Check

Check No.04 **FLXS, FDXS Series**

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.

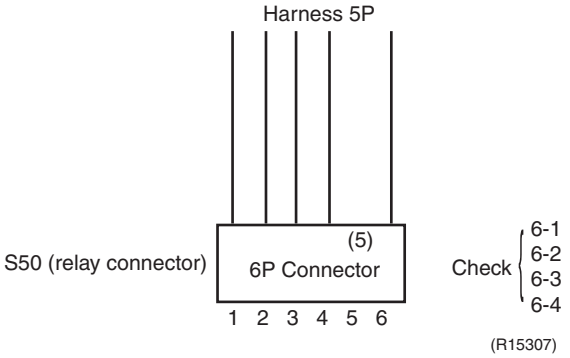
If NG in step 1 → Defective PCB → Replace the PCB.
If NG in step 2 → Defective Hall IC → Replace the fan motor.
If OK in both steps 1 and 2 → Replace the PCB.



8.4 Indoor Electronic Expansion Valve Coil Check

Check No.06 Conduct the followings to check the indoor electronic expansion valve coil (EV).

1. Check to see if the EV connector is correctly connected to the PCB.
2. Turn the power off and on again, and check to see if the EV generate latching sound.
3. If the EV does not generate latching sound in the above step 2, disconnect the connector and check the continuity using a tester.
4. Check the continuity between the pins 1 - 6, 2 - 6, 3 - 6, and 4 - 6. If there is no continuity between the pins, the EV coil is faulty.



5. If the continuity is confirmed in the above step 3, the PCB is faulty.

Note: Please note that the latching sound varies depending on the valve type.

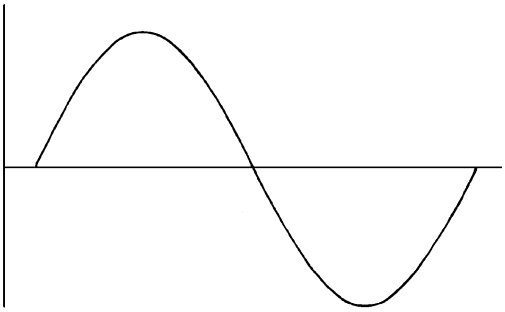
8.5 Power Supply Waveforms Check

Check No.11

Measure the power supply waveform between No. 1 and No. 2 on the terminal board, and check the waveform disturbance.

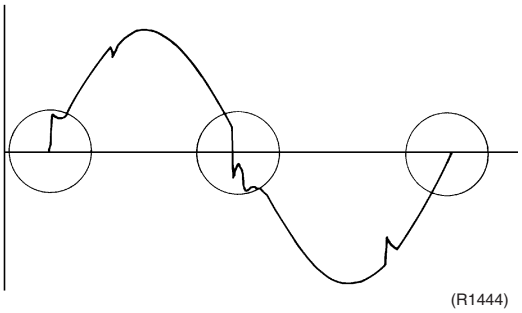
- Check to see if the power supply waveform is a sine wave (Fig.1).
- Check to see if there is waveform disturbance near the zero cross (sections circled in Fig.2)

Fig.1



(R1736)

Fig.2



(R1444)

8.6 Outdoor Electronic Expansion Valve Check

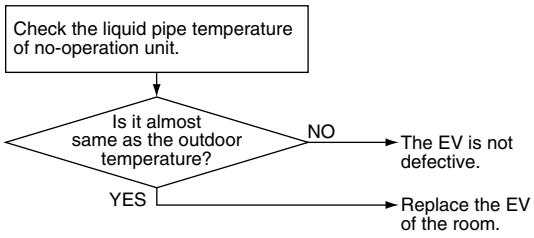
Check No.12

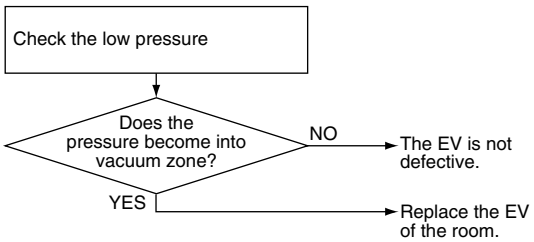
Conduct the followings to check the outdoor electronic expansion valve (EV).

1. Check to see if the EV connector is correctly inserted in the PCB. Match the EV unit number and the connector number.
2. Turn the power off and on again, and check to see if all the EVs generate a latching sound.
3. If any of the EVs does not generate a latching sound in the above step 2, disconnect that connector and check the continuity using a tester.
   Check the continuity between the pins 1 - 6, 3 - 6, 2 - 5, 4 - 5 (between the pins 1 - 5, 2 - 5, 3 - 5, 4 - 5 for the harness 5P models). If there is no continuity between the pins, the EV coil is faulty.
4. If no EV generates a latching sound in the above step 2, the outdoor unit PCB is faulty.
5. If the continuity is confirmed in the above step 3, mount a good coil (which generated a latching sound) in the EV unit that did not generate a latching sound, and check to see if that EV generates a latching sound.
   ∗If a latching sound is generated, the outdoor unit PCB is faulty.
   ∗If a latching sound is not generated, the EV unit is faulty.

Note: Please note that the latching sound varies depending on the valve type.

If the system keeps operating with a defective outdoor electronic expansion valve, the following problem may occur.

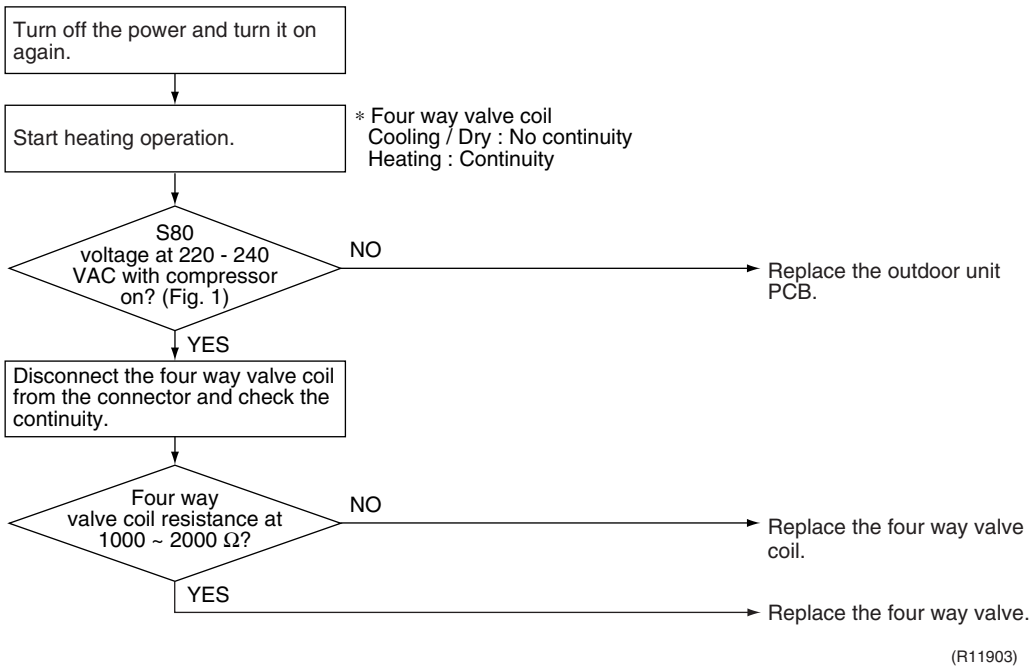
<table>
<tr><th>Valve opening position</th><th>Possible problem</th><th>Check method</th></tr>
<tr><td rowspan="2">Open</td><td>Cooling:
■ Flowing noise of refrigerant in the unit which is not in operation
■ Water leakage at the unit which is not in operation
■ Operation half due to anti-icing function</td><td rowspan="2">Reset power supply and conduct cooling operation unit by unit.
 

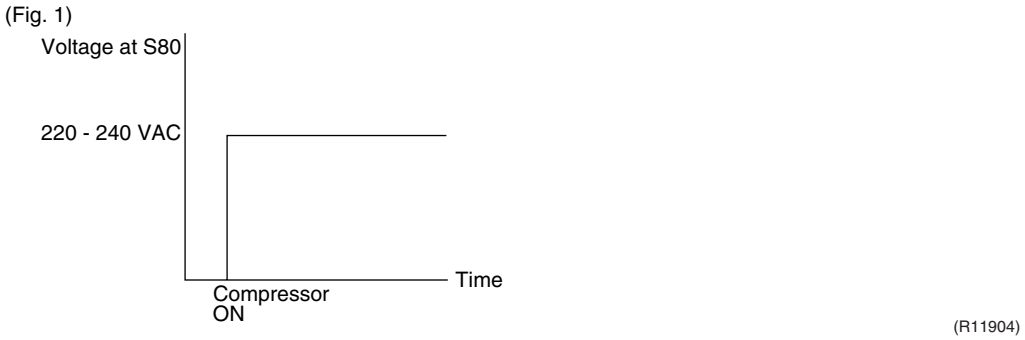
(R14357)</td></tr>
<tr><td>Heating:
■ Flowing noise of refrigerant in the unit which is not in operation
■ The unit does not heat the room.</td></tr>
<tr><td rowspan="2">Close</td><td>Cooling:
■ The problem unit does not cool the room.
■ Only the problem unit is in operation, the unit starts pump down.
(The low pressure of the unit becomes vacuum.)
■ Abnormal discharge pipe temperature</td><td rowspan="2">Reset power supply and conduct cooling operation unit by unit.
 

(R14358)</td></tr>
<tr><td>Heating:
■ Refrigerant shortage due to stagnation of liquid refrigerant inside the faulty indoor unit
■ The unit does not heat the room.
■ Abnormal discharge pipe temperature</td></tr>
</table>

8.7 Four Way Valve Performance Check

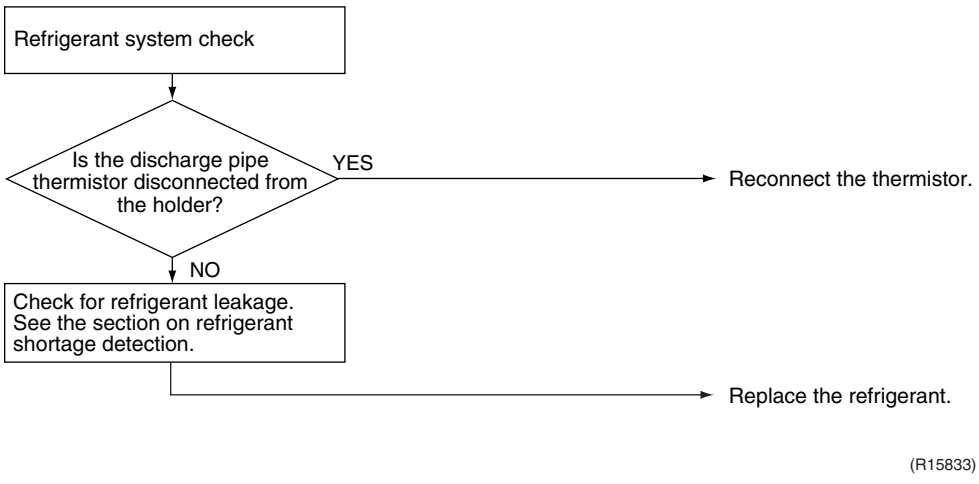
Check No.13





8.8 Inverter Unit Refrigerant System Check

Check No.14



8.9 Inverter Analyzer Check

Check No.15

■ **Characteristics**

Inverter analyzer: RSUK0917C

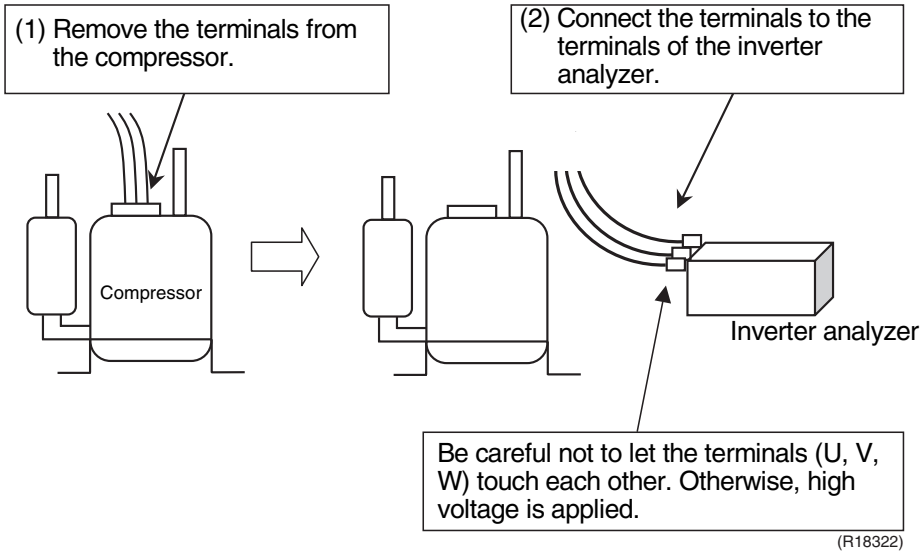
If an abnormal stop occurs due to compressor startup failure or overcurrent output when using an inverter unit, it is difficult to judge whether the stop is caused by the compressor failure or some other failure (main PCB, power module, etc.). The inverter analyzer makes it possible to judge the cause of trouble easily and securely. (Connect an inverter analyzer as a quasi-compressor instead of compressor and check the output of the inverter)

■ **Operation Method**

Step 1
Be sure to turn the power off.

Step 2
Install an inverter analyzer instead of a compressor.

Note:
Make sure the charged voltage of the built-in smoothing electrolytic capacitor drops to 10 VDC or below before carrying out the service work.



Reference:
If the terminals of the compressor are not FASTON terminals (difficult to remove the wire on the terminals), it is possible to connect wires available on site to the outdoor unit from output side of PCB. (Do not connect them to the compressor at the same time, otherwise it may result in incorrect detection.)

Step 3
Activate power transistor test operation from the indoor unit with the remote controller.

- ARC466 Series
  1) Turn the system on.
  2) Select FAN operation with the [MODE] button on the remote controller.
  3) Press the 3 buttons (TEMP▲, TEMP▼, MODE) simultaneously.
     → SC is displayed.
  4) Press the TEMP▲ or TEMP▼ button and select 7.
  5) Press the [MODE] button.
     → Trial operation mode is activated.
  6) Press the [ON/OFF] button.
     → Power transistor test operation starts.

- ARC452, ARC433 Series
  1) Turn the system on.
  2) Select FAN operation with the [MODE] button on the remote controller.
  3) Press the 3 buttons (TEMP▲, TEMP▼, MODE) simultaneously.
     → 00 is displayed with the figure of ten's place blinking.
  4) Press the [MODE] button.
     → 00 is displayed with the figure of one's place blinking.
  5) Press the [MODE] button.
     → 7 is displayed.
  6) Press the [ON/OFF] button.
     → Power transistor test operation starts.

- FFQ models with wired remote controller
  1) Turn the system on.
  2) Select FAN operation on the remote controller.
  3) Press the [ON/OFF] button.
     → FAN operation starts.
  4) Press the [TEST] button 4 times.
     → Power transistor test operation starts.

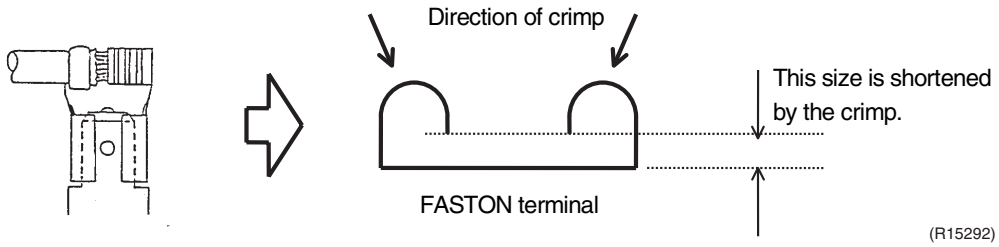
- FFQ models with wireless remote controller
  1) Turn the system on.
  2) Select FAN operation on the remote controller.
  3) Press the [ON/OFF] button.
     → FAN operation starts.
  4) Press the [TEST] button twice.
     → Power transistor test operation starts.

■ **Diagnose method (Diagnose according to 6 LEDs lighting status.)**

(1) When all the LEDs are lit uniformly, the compressor is defective.
→ Replace the compressor.
(2) When the LEDs are not lit uniformly, check the power module.
→ Refer to **Check No.22**.
(3) If NG in **Check No.22**, replace the power module (PCB).
If OK in **Check No.22**, check if there is any solder cracking on the PCB.
(4) If any solder cracking is found, replace the PCB or repair the soldered section.
If there is no solder cracking, replace the PCB.

Caution

(1) When the output frequency is low, the LEDs blink slowly. As the output frequency increases, the LEDs blink quicker. (The LEDs look like they are lit.)
(2) On completion of the inverter analyzer diagnosis, be sure to re-crimp the FASTON terminals. Otherwise, the terminals may be burned due to loosening.



8.10 Rotating Pulse Input on the Outdoor Unit PCB Check

Check No.16

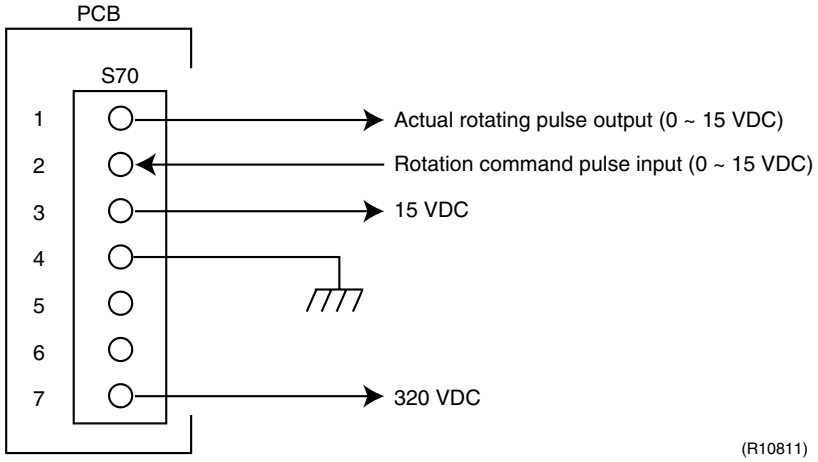
<Outdoor fan motor>

Make sure that the voltage of 320 ± 30 V is applied.

1. Set operation off and power off. Disconnect the connector S70.
2. Check that the voltage between the pins 4 - 7 is 320 VDC.
3. Check that the control voltage between the pins 3 - 4 is 15 VDC.
4. Check that the rotation command voltage between the pins 2 - 4 is 0 ~ 15 VDC.
5. Keep operation off and power off. Connect the connector S70.
6. Check whether 2 pulses (0 ~ 15 VDC) are output at the pins 1 - 4 when the fan motor is rotated 1 turn by hand.

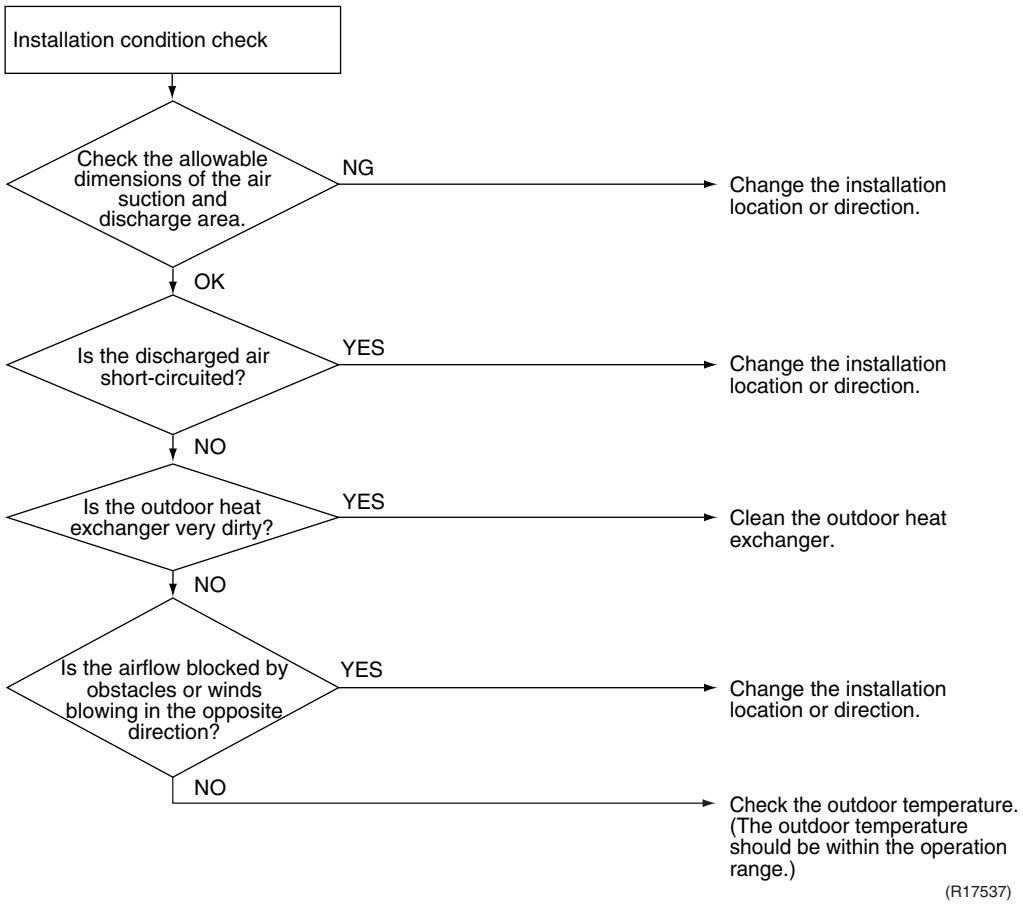
When the fuse is melted, check the outdoor fan motor for proper function.

If NG in step 2 → Defective PCB → Replace the PCB.
If NG in step 4 → Defective Hall IC → Replace the outdoor fan motor.
If OK in both steps 2 and 4 → Replace the PCB.



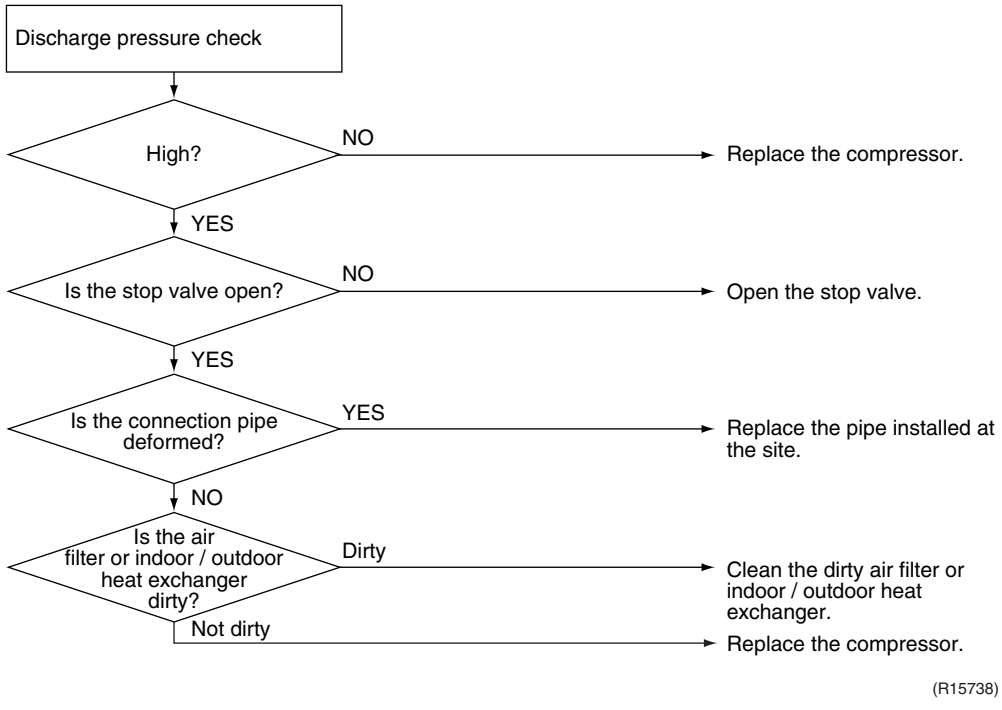
8.11 Installation Condition Check

Check No.17



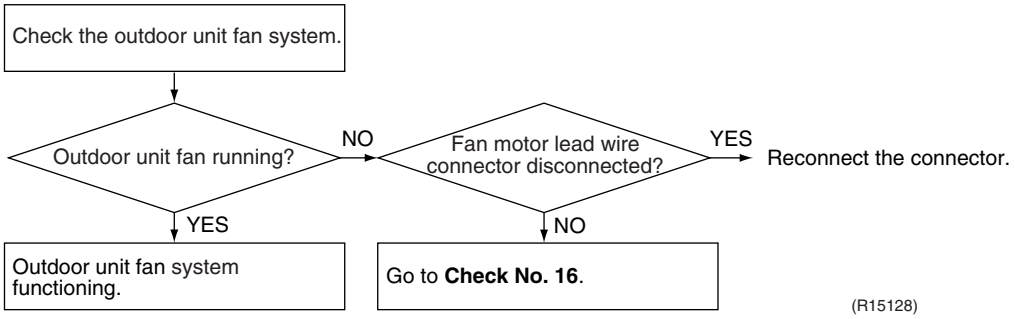
8.12 Discharge Pressure Check

Check No.18



8.13 Outdoor Unit Fan System Check

Check No.19 **DC motor**



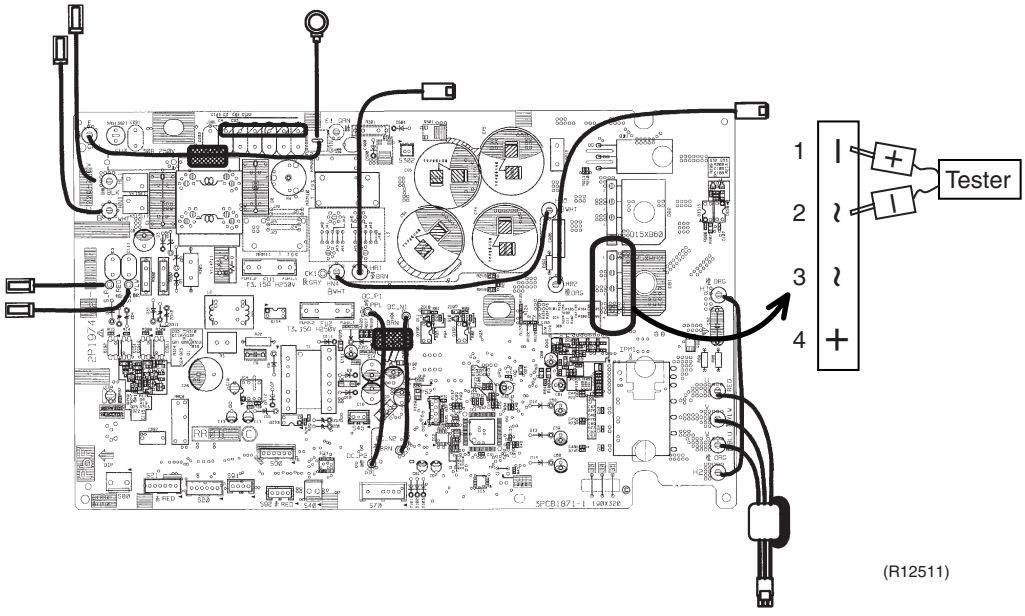
8.14 Main Circuit Short Check

Check No.20

Note: Check to make sure that the voltage between (+) and (–) of the diode bridge (DB1) is approx. 0 V before checking.

- Measure the resistance between the pins of the DB1 as below.
- If the resistance is ∞ or less than 1 kΩ, short circuit occurs on the main circuit.

(–) terminal of the tester (in case of digital, (+) terminal)	~ (2, 3)	+ (4)	~ (2, 3)	− (1)
(+) terminal of the tester (in case of digital, (–) terminal)	+ (4)	~ (2, 3)	− (1)	~ (2, 3)
Resistance is OK.	several kΩ ~ several MΩ	∞	∞	several kΩ ~ several MΩ
Resistance is NG.	0 Ω or ∞	0	0	0 Ω or ∞



★ The illustration is for 50 class model as representative.

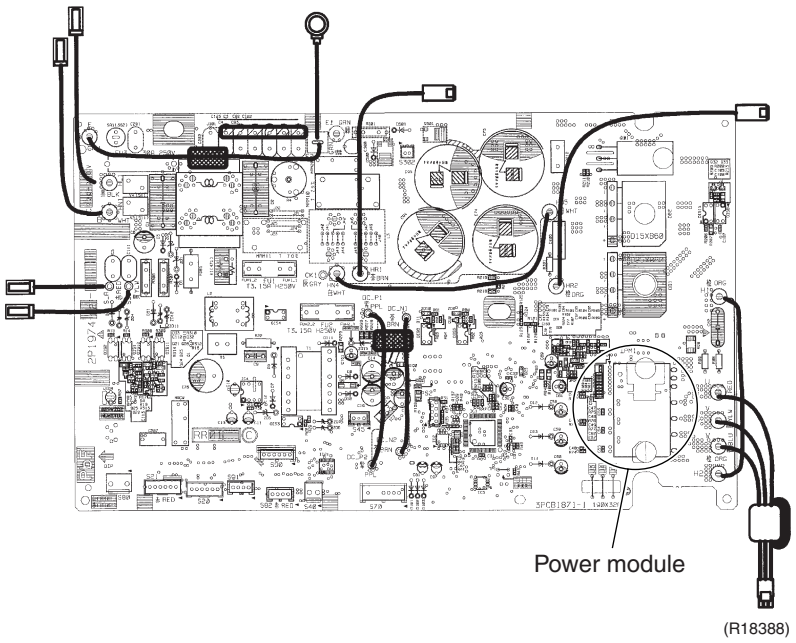
8.15 Power Module Check

Check No.22

Note: Check to make sure that the voltage between (+) and (–) of the power module (IPM1) is approx. 0 V before checking.

- Disconnect the compressor harness connector from the outdoor unit PCB. To disengage the connector, press the protrusion on the connector.
- Follow the procedure below to measure resistance between the terminals of the power module and the terminals of the compressor with a multi-tester. Evaluate the measurement results for a judgment.

Negative (–) terminal of tester (positive terminal (+) for digital tester)	Power module (+)	UVW	Power module (–)	UVW
Positive (+) terminal of tester (negative terminal (–) for digital tester)	UVW	Power module (+)	UVW	Power module (–)
Resistance is OK.	several kΩ ~ several MΩ			
Resistance is NG.	0 Ω or ∞			



(R18388)

★ The illustration is for 50 class model as representative.

Part 7
Trial Operation and Field Settings

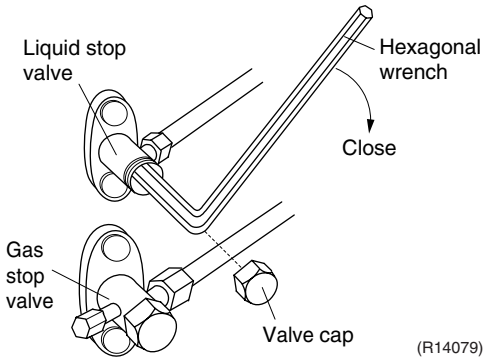
1. Pump Down Operation

Outline

In order to protect the environment, be sure to conduct pump down operation when relocating or disposing the unit.

Detail

1) Remove the valve caps from the liquid stop valve and the gas stop valve at the pipes for rooms A and B.
2) Carry out forced cooling operation.
3) After 5 to 10 minutes, close the liquid stop valve at the pipes for rooms A and B with a hexagonal wrench.
4) After 2 to 3 minutes, close the gas stop valve and stop the forced cooling operation as quickly as possible after the gas stop valves at the pipes for rooms A and B have been shut off.
5) Turn the power breaker off.

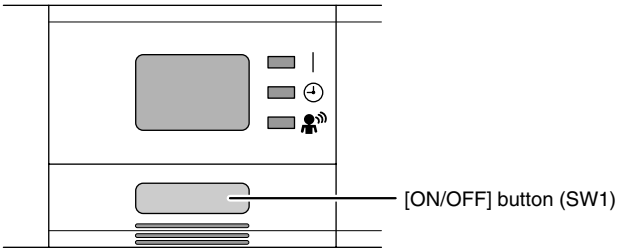


Refer to page 220 for forced cooling operation.

2. Forced Cooling Operation

Item	Forced Cooling
Conditions	The forced cooling operation is allowed when both the following conditions are met. 1) The outdoor unit is not abnormal and not in the 3-minute standby mode. 2) The outdoor unit is not operating.
Start	Press the forced cooling operation ON/OFF button (SW1) on the indoor unit for 5 seconds.
Operating room	All rooms
Command frequency	40 class: 70 Hz 50 class: 47 Hz
End	The forced cooling operation ends when any of the following conditions is fulfilled. 1) The operation ends automatically after 15 minutes. 2) Press the forced cooling operation ON/OFF button (SW1) on the indoor unit again.
Others	The protection functions are prior to all others in the forced cooling operation.

Ex: Wall mounted type FTXS-J Series



(R14226)

3. Trial Operation

3.1 RA Indoor Unit - FTXG, FTXS, ATXS, FTX, ATX, FVXG, FVXS, FLXS, FDXS Series

Outline

1. Measure the power supply voltage and make sure that it falls in the specified range.
2. Trial operation should be carried out in either cooling or heating operation.
   In cooling operation, select the lowest programmable temperature; in heating operation, select the highest programmable temperature.
   - Trial operation may be disabled in either operation mode depending on the room temperature.
   - After trial operation is complete, set the temperature to a normal level.
     (26°C ~ 28°C in cooling, 20°C ~ 24°C in heating)
   - For protection, the system does not start for 3 minutes after it is turned off.
3. Carry out the trial operation in accordance with the operation manual to ensure that all functions and parts, such as flap movement, are working properly.

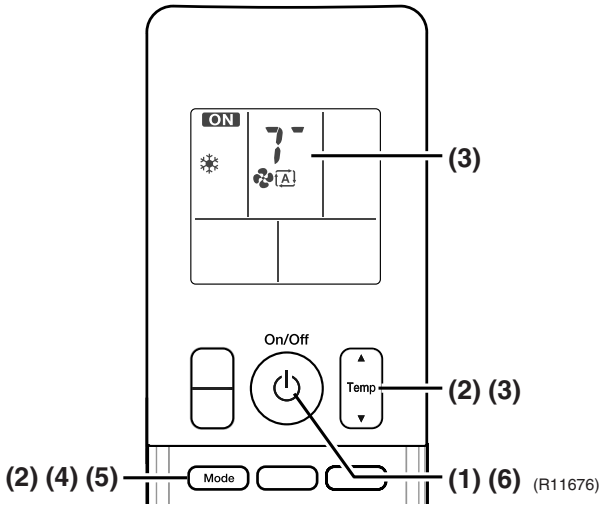
Note:

- 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 backs up the operation mode. The system then restarts operation with the previous operation mode when the circuit breaker is restored.

Detail

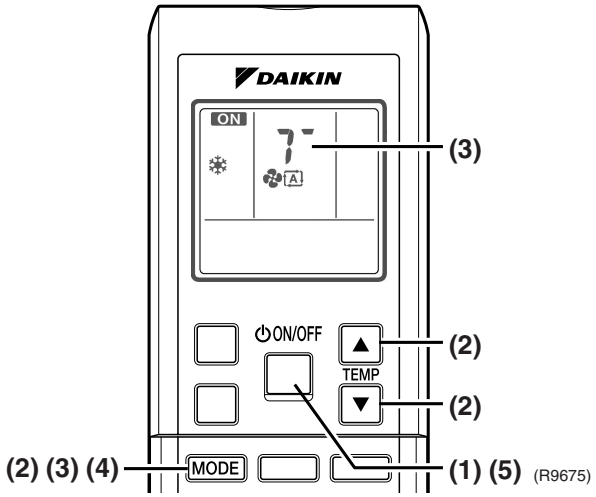
ARC466 Series

(1) Press the [On/Off] button to turn on the system.
(2) Press the center of the [Temp] button and the [Mode] button at the same time.
(3) Select 7- (trial operation) with the [Temp] ▲ or ▼ button.
(4) Press the [Mode] button to start the trial operation.
(5) Press the [Mode] button and select operation mode.
(6) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press the [On/Off] button.



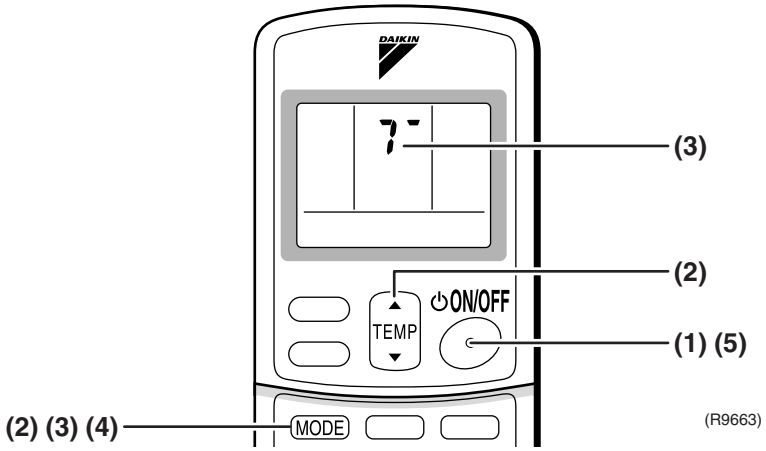
ARC452 Series

(1) Press the [ON/OFF] button to turn on the system.
(2) Press the both of [TEMP] buttons and the [MODE] button at the same time.
(3) Press the [MODE] button twice.
(7 appears on the display to indicate that trial operation is selected.)
(4) Press the [MODE] button and select operation mode.
(5) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press the [ON/OFF] button.



ARC433 Series

(1) Press the [ON/OFF] button to turn on the system.
(2) Press the center of the [TEMP] button and the [MODE] button at the same time.
(3) Press the [MODE] button twice.
(7 appears on the display to indicate that trial operation is selected.)
(4) Press the [MODE] button and select operation mode.
(5) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press the [ON/OFF] button.



3.2 SA Indoor Unit - FFQ Series

3.2.1 Checkpoints

To carry out a trial operation, check the following:

- Check that the temperature setting of the remote controller is at the lowest level in cooling operation or use trial operation mode.
- Go through the following checklist:

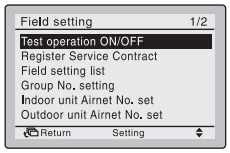
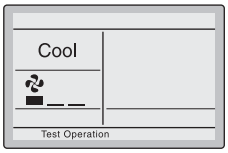
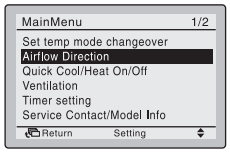
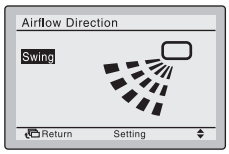
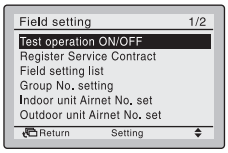
Checkpoints	Cautions or warnings
Are all units securely installed?	● Dangerous for turning over during storm ● Possible damage to pipe connections
Is the earth wire installed according to the applicable local standard?	Dangerous if electric leakage occurs.
Are all air inlets and outlets of the indoor and outdoor units unobstructed?	● Poor cooling ● Poor heating
Does the drain flow out smoothly?	Water leakage
Is piping adequately heat-insulated?	Water leakage
Have the connections been checked for refrigerant leakage?	● Poor cooling ● Poor heating ● Stop
Is the power supply voltage conform to the specifications on the name plate?	Incorrect operation
Are the cable sizes as specified and according to local regulations?	Damage of cables
Are the remote controller signals received by the unit?	No operation

3.2.2 Trial operation

BRC1D528, BRC7E530W

Step	Action
1	Turn on the power supply more than 6 hours before test operation.
2	Open the gas stop valve.
3	Open the liquid stop valve.
4	Set to cooling operation with the remote controller and start operation by pressing [ON/OFF] button (⏻).
5	Press the [INSPECTION/TEST OPERATION] button (TEST) 4 times (2 times for wireless remote controller) and operate at test operation mode for 3 minutes.
6	Press the [AIRFLOW DIRECTION ADJUST] button ( ) to make sure the unit is in operation.
7	Press the [INSPECTION/TEST OPERATION] button (TEST) and operate normally.
8	Confirm all the function of unit according to the operation manual.
9	If the decoration panel has not been installed, turn off the power after the test operation.

BRC1E51A7

Step	Action	Remote controller
Before test operation		
1	Turn on the power supply more than 6 hours before test operation.	
2	Open the gas stop valve.	
3	Open the liquid stop valve.	
How to activate test operation		
4	Press and hold the [Cancel] button ( ) for 4 seconds to enter the **Field setting** menu.	
5	Use the ▼▲ buttons to select **Test operation ON/OFF** and push the [Menu/Enter] button ( ).	 (R12872)
6	**Test operation** is displayed on the bottom of the basic screen.	 (R12873)
7	Push the [ON/OFF] button ( ) within 10 seconds to start the test operation.	
How to check airflow direction		
8	Push the [Menu/Enter] button ( ) to enter the **Main Menu**.	
9	Use the ▼▲ buttons to select **Airflow direction** and push the [Menu/Enter] button ( ).	 (R12874)
10	Check that the airflow direction is actuated according to the setting and push the [Menu/Enter] button ( ).	 (R12875)
How to deactivate test operation		
11	Press and hold the [Cancel] button ( ) for 4 seconds to enter the **Field setting** menu.	
12	Use the ▼▲ buttons to select **Test operation ON/OFF** in the menu and push the [Menu/Enter] button ( ).	 (R12876)

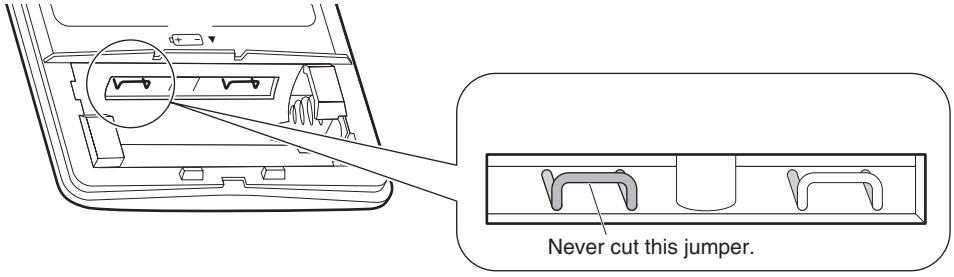
4. Field Settings

4.1 RA Indoor Unit - FTXG, FTXS, ATXS, FTX, ATX, FVXG, FVXS, FLXS, FDXS Series

4.1.1 Model Type Setting

ARC466A6, ARC466A9

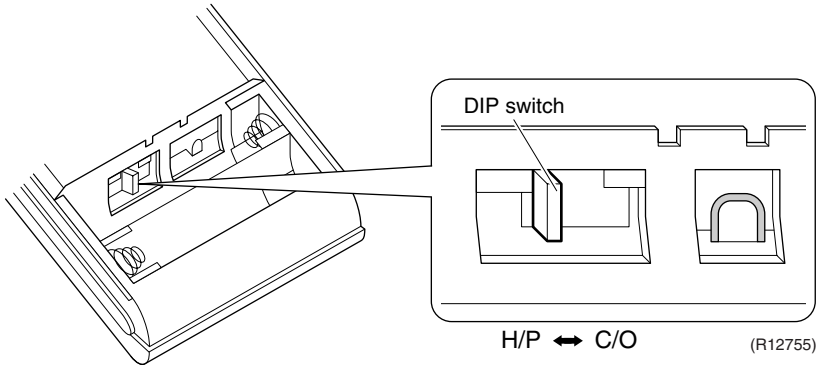
- This remote controller is common to the heat pump model and cooling only model.
- The heating operation will not be available when the jumper on the left side is cut. Replace the remote controller if you cut the jumper on the left side.



(R18451)

ARC452A1, ARC452A3

- This remote controller is common to the heat pump model and cooling only model.
- Make sure the DIP switch is set to the left side. The heating operation will not be available when the DIP switch is set to the right side.



(R12755)

4.1.2 When 2 Units are Installed in 1 Room

Outline

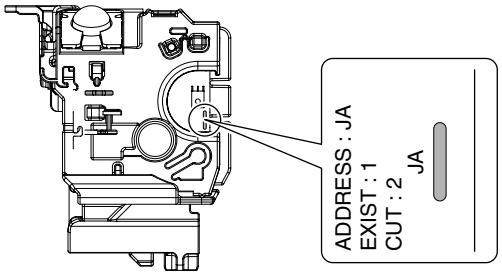
When 2 indoor units are installed in 1 room, 1 of the 2 pairs of indoor unit and wireless remote controller can be set for different address.
Both the indoor unit PCB and the wireless remote controller need alteration.

The method of address setting varies depending on the type of indoor unit and the series of wired remote controller. Refer to the following pages for the appropriate indoor unit and wireless remote controller.

Wall Mounted Type

(1) Remove the front grille.
(2) Remove the electrical box.
(3) Remove the shield plate of the electrical box.
(4) Cut the address setting jumper JA on the PCB.

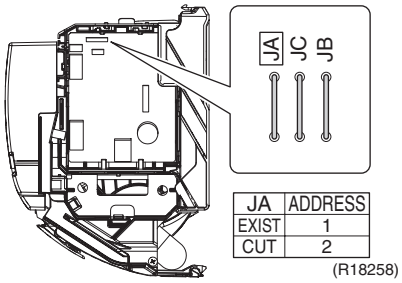
FTXG Series



(Bottom of electrical box)

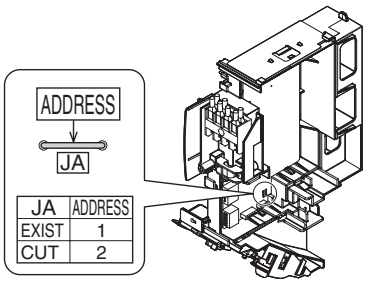
(R12036)

CTXS, FTXS20/15K Series



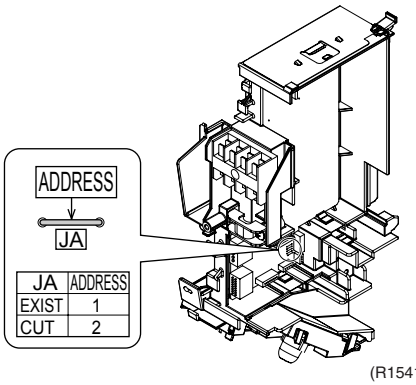
(R18258)

FTXS35/42/50K Series



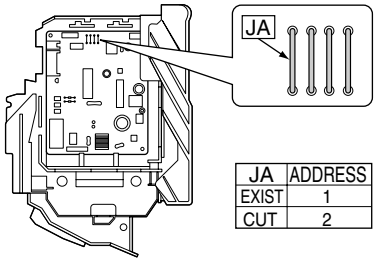
(R18414)

FTXS-J, ATXS Series



(R15415)

FTX, ATX Series



(R12007)

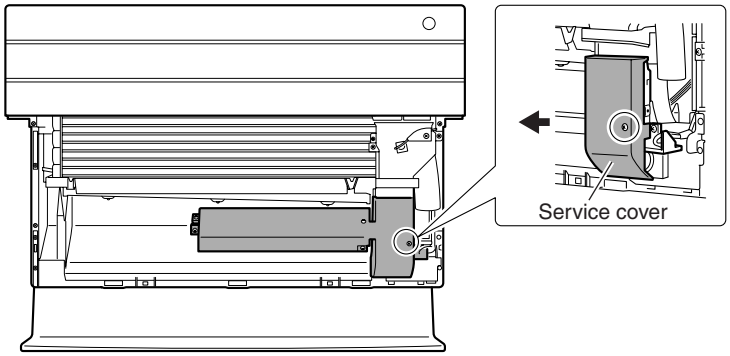
Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Floor Standing Type

FVXG Series

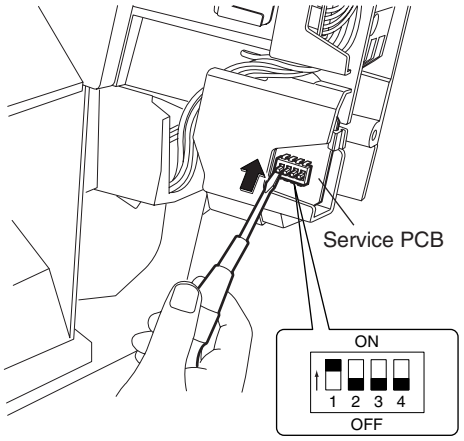
(1) Remove the front panel, air filters and front grille.

(2) Remove the screw, and remove the service cover.



(R14629)

(3)Turn on the DIP switch [S2W-1] on the service PCB.

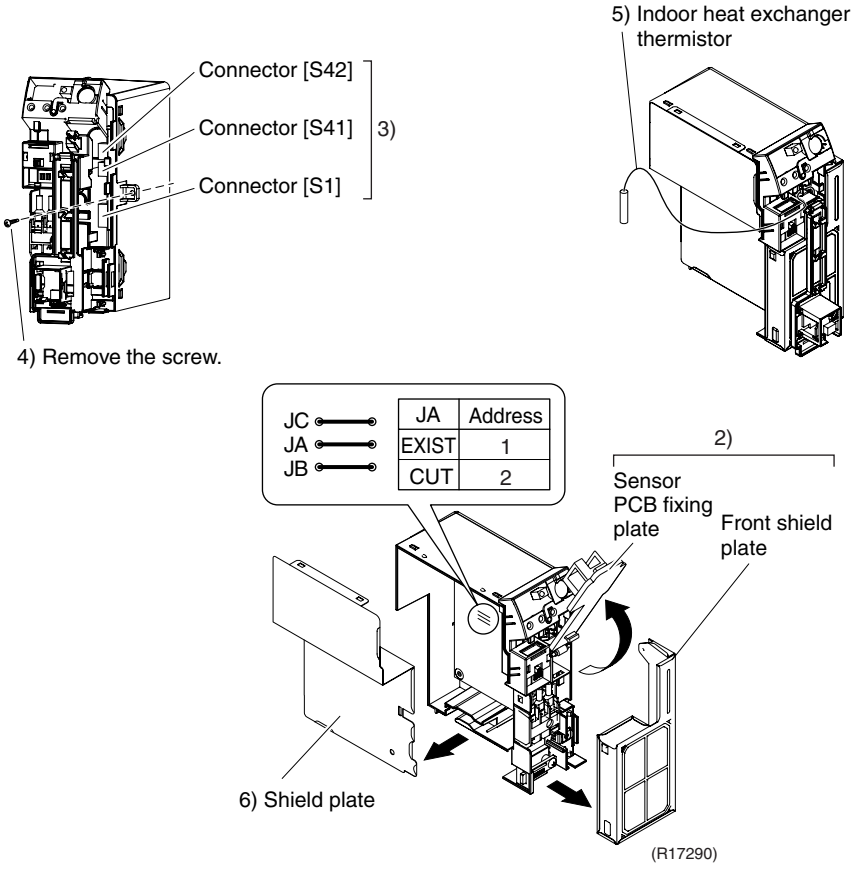


(R14630)

∗ Keep the other switches as factory setting.

FVXS Series

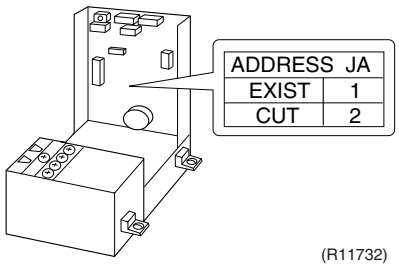
1) Remove the front grille.
2) Lift the sensor PCB fixing plate and remove the front shield plate.
3) Disconnect the connectors [S1] [S41] [S42].
4) Remove the electric box (1 screw).
5) Pull out the indoor heat exchanger thermistor.
6) Remove the shield plate (8 tabs).
7) Cut the address setting jumper JA on the indoor unit PCB.



Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Floor / Ceiling Suspended Dual Type

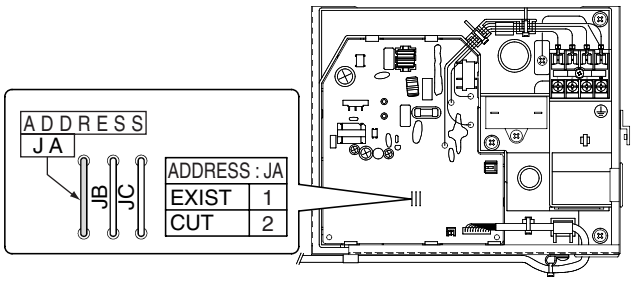
- Cut the jumper JA on PCB.



Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Duct Connected Type

■ Cut the jumper JA on PCB.



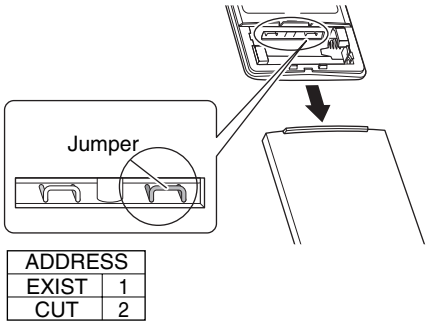
(R17876)

Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

Wireless Remote Controller

(1) Remove the cover and take it off.
(2) Cut the address setting jumper.

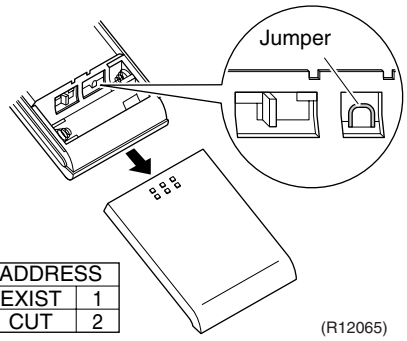
<ARC466 series>



∗ Do not cut the left jumper.

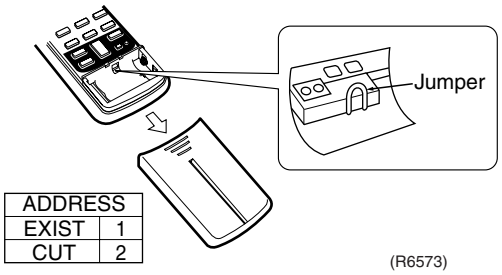
(R18416)

<ARC452 series>



(R12065)

<ARC433 series>



(R6573)

Caution **Replace the remote controller if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

4.1.3 Jumper and Switch Settings

Jumper (on indoor unit PCB)	Function	When connected (factory set)	When cut
JB	Fan speed setting when compressor stops for thermostat OFF. (effective only at cooling operation)	Fan speed setting; Remote controller setting	Fan speed setting; “0” (The fan stops.)
JC	Power failure recovery function	Auto-restart	The unit does not resume operation after recovering from a power failure. Timer settings are cleared.

<Floor Standing Type: FVXS Series>

Switch (on indoor unit PCB)	Function	OFF (factory set)	ON
SW2-4	Upward airflow limit setting	Exposed or half embedded installation	Set the switch to ON position when you install the indoor unit embedded in the wall to avoid condensation.

∗ Keep the other switches as factory setting.

<Floor / Ceiling Suspended Dual Type>

Switch (on indoor unit PCB)	Function	FLOOR (factory set)	CEILING
SW2	Installation style changeover	When installed as the floor mounted type	When installed as the ceiling suspended type

For the location of the jumper and the switch, refer to the following pages.
FTXG25/35/50JV1BW(S)(A): page 29
CTXS15/35K2V1B, FTXS20/25K2V1B: page 31
FTXS35/42/50K2V1B, FTXS20/25/35/42/50J2V1B, ATXS20/25/35/42/50G2V1B: page 33
FTX20/25/35JV1B, FTX20/25/35J2V1B, ATX20/25/35JV1B, ATX20/25/35J2V1B: page 35
FVXG25/35/50K2V1B: page 37
FVXS25/35/50FV1B: page 39
FLXS25/35/50BAVMB: page 41
FDXS25/35EAVMB, FDXS25/35/E7VMB, FDXS50CVMB, FDXS50C7VMB: page 43

Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

4.2 SA Indoor Unit - FFQ Series

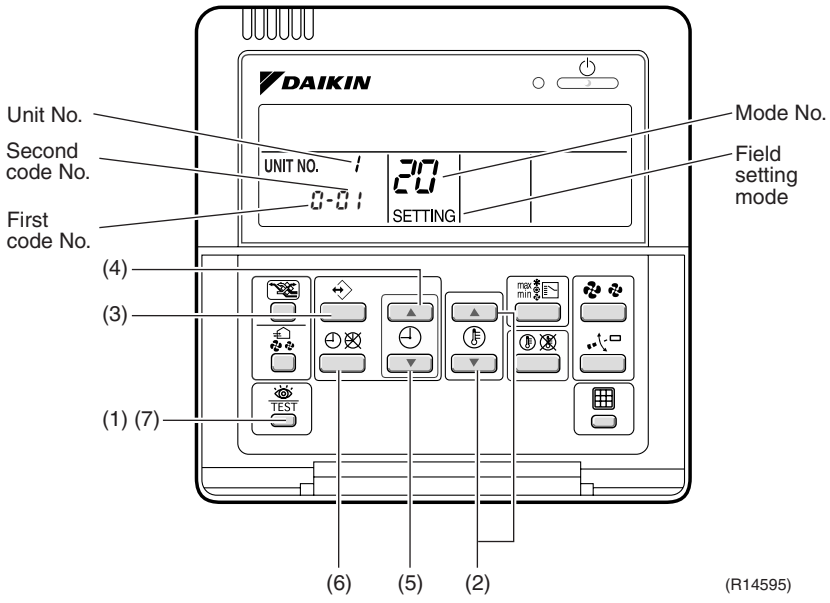
4.2.1 How to Change the Field Settings

Outline

If optional accessories are mounted on the indoor unit, the indoor unit setting may have to be changed. Refer to the instruction manual for each optional accessory.

Wired remote controller

BRC1D528

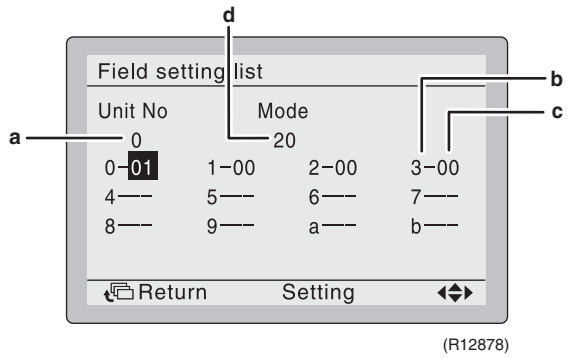


To set the field settings, you have to change:

- Mode No.
- First code No.
- Second code No.

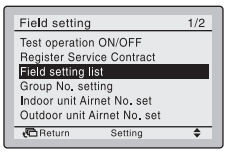
Step	Action
1	Press the [INSPECTION/TEST OPERATION] button for 4 seconds during normal mode to enter the field setting mode.
2	Press the [TEMPERATURE ADJUST] button to select the desired mode No.
3	■ If the indoor unit is under group control, all settings for all the indoor units are set at the same time. Use the codes 10 to 15 to apply this group control and proceed to the next step. ■ If you want to set the indoor units of one group individually or if you want to read out the last settings, use the codes 20 to 25 which are displayed in brackets. Press the [PROGRAMMING] button to select the indoor unit No. for which you want to adjust the field settings.
4	Press the upper part of the [TIME ADJUST] button to select the first code No.
5	Press the lower part of the [TIME ADJUST] button to select the second code No.
6	Press the [SCHEDULE TIMER] button to confirm the setting.
7	Press the [INSPECTION/TEST OPERATION] button to return to normal mode.

BRC1E51A7



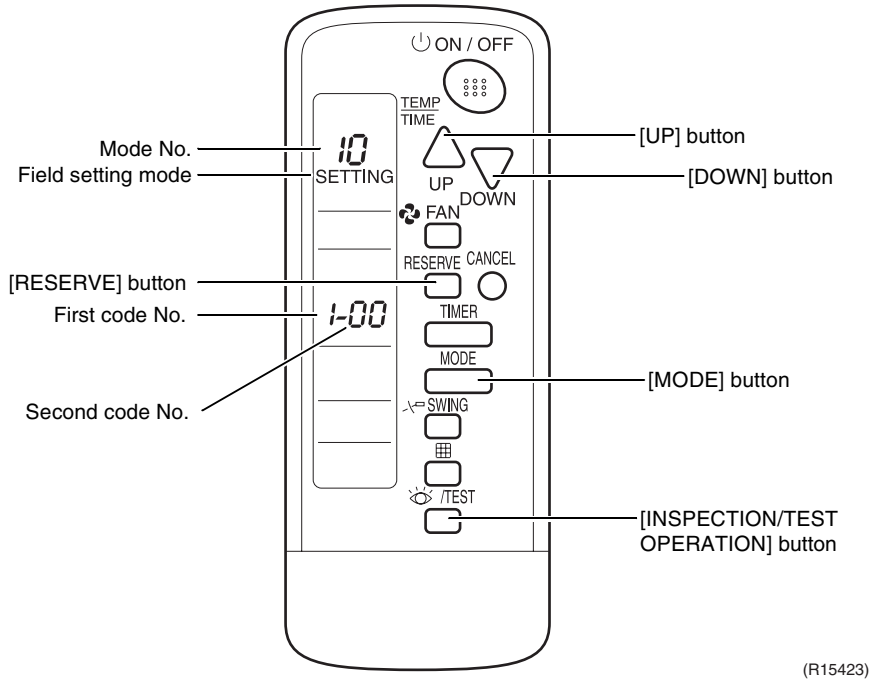
(R12878)

a Unit No.
b First code No.
c Second code No.
d Mode

Step	Action	Remote controller
1	Press and hold the [Cancel] button ( ) for 4 seconds to enter the **Field setting** menu.	
2	Use the ▼▲ buttons to select **Field setting list** and push the [Menu/Enter] button ( ).	 (R12879)
3	Use the ▼▲ buttons to select the desired **Mode**.	
4	During group control, when setting by each indoor unit (**Mode 20, 21, 22** and **23** have been selected), push the ◄ button to highlight and ▼▲ buttons to select the INDOOR UNIT NO. to be set. This operation is unnecessary when setting by group.	
5	Highlight the second code No. to be changed using the ◄► buttons, and use the ▼▲ buttons to select the desired second code No.	When setting by group, all of the second code No. that may be set are displayed as "*".
6	Push the [Menu/Enter] button ( ) to display the confirmation screen.	
7	Use the ◄► buttons to select **Yes** and push the [Menu/Enter] button ( ).	When multiple setting changes are needed, repeat steps 3 to 7.
8	Push the [Cancel] button ( ) 2 times to return to basic screen.	

Wireless remote controller

BRC7E530W



To set the field settings, you have to change:

- Mode No.
- First code No.
- Second code No.

Step	Action
1	Press the [INSPECTION/TEST OPERATION] button for 4 seconds during normal mode to enter the field setting mode.
2	Press the [MODE] button to select the desired mode No.
3	Press the [UP] button to select the first code No.
4	Press the [DOWN] button to select the second code No.
5	Press the [RESERVE] button to confirm the setting.
6	Press the [INSPECTION/TEST OPERATION] button to return to the normal mode.

4.2.2 Overview of the Field Settings

Mode No.	First Code No.	Description of setting		Second Code No. 01		02		03	04
10 (20)	0	Filter cleaning sign interval	Ultra longlife filter	Light	Approx. 10,000 hrs.	Heavy	Approx. 5,000 hrs.	—	—
			Longlife filter	Light	Approx. 2,500 hrs.	Heavy	Approx. 1,250 hrs.		
	1	Longlife filter type		Longlife filter		Ultra longlife filter		—	—
	2	Remote controller thermistor		Enabled		Disabled		—	—
	3	Filter cleaning sign		Display		No display		—	—
11 (21)	0	Indoor unit number of simultaneous operation system		Pair		Twin		Triple	Double twin
	1	Simultaneous operation system individual setting		Unified setting		Individual setting		—	—
	7	External static pressure setting		Airflow adjustment is OFF		Completion of airflow adjustment		Start of airflow adjustment	—
12 (22)	1	Forced ON/OFF function		Forced OFF		ON/OFF operation		—	—
	2	Thermostat differential changeover (setting for when using remote sensor)		1°C		0.5°C		—	—
13 (23)	0	High air outlet velocity (for high ceiling applications)		≤ 2.7 m		2.7 ~ 3.0 m		3.0 ~ 3.5 m	—
	1	Selection of airflow direction (setting for when a blocking pad kit has been installed)		4-way flow		3-way flow		2-way flow	—
	3	Selection of airflow function (setting for when using a decoration panel for outlet)		Equipped		Not equipped		—	—
	4	Airflow direction range setting		Upper		Normal		Lower	—
	6	External static pressure		Standard		High		Low	—
15 (25)	3	Drain pump operation with humidifying		Not equipped		Equipped		—	—

: factory setting

Note: Any function that is not available on the indoor unit is not displayed.

4.2.3 MAIN / SUB Setting when Using 2 Wired Remote Controllers

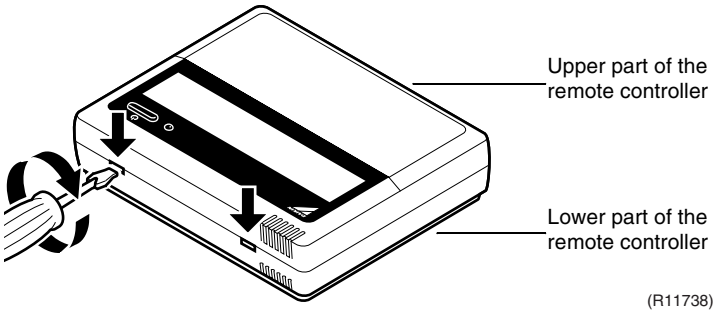
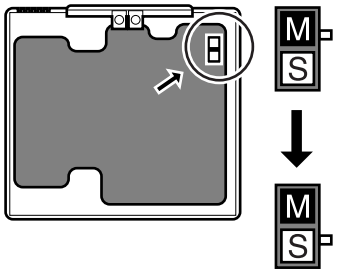
Outline

The MAIN / SUB setting is necessary when 1 indoor unit is controlled by 2 remote controllers. When you use 2 remote controllers (control panel and separate remote controller), set one to MAIN and the other to SUB.

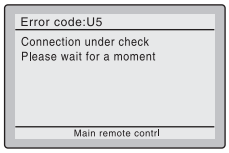
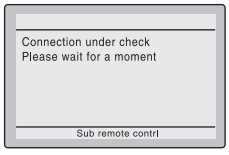
Detail

The remote controllers are factory set to MAIN, so you only have to change one remote controller from MAIN to SUB.

BRC1D528

Step	Action
1	Insert a flat screwdriver into the groove between the upper and lower part of the remote controller, as shown in the illustration below. Gently pry off the upper part of the controller, working from the two possible positions.  (R11738)
2	Set the [MAIN / SUB changeover] switch on the PCB to “S”.  (R11739)

BRC1E51A7

Step	Action	Remote controller
1	Put on the power for both remote controllers.	
2	Determine which one is the sub/main remote controller.	
3	When **Error code: U5 - Connection under check Please wait for a moment** is displayed on both remote controllers, push and hold the [Operation mode selector] button (⏻) of the sub remote controller for 4 seconds.	 (R12880)
4	The sub remote controller now displays **Sub remote contrl.** Note) The main remote controller still displays **Main remote contrl.**	 (R12881)
5	After a few seconds, the basic screen is displayed.	

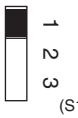
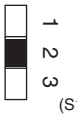
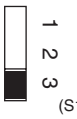
4.2.4 Address and MAIN / SUB Setting for Wireless Remote Controller

Outline

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 on the signal receiver PCB.

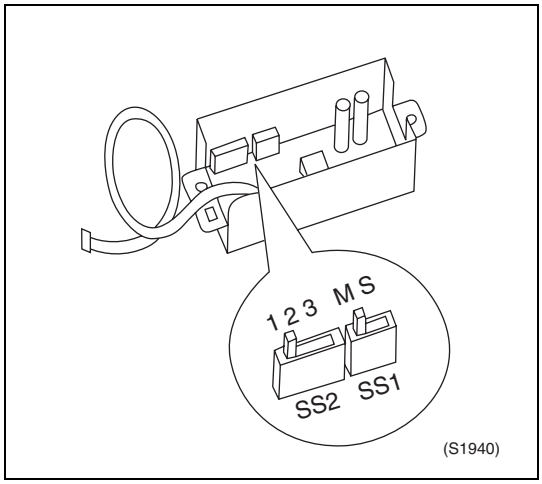
Signal Receiver PCB

Set the address setting switch (SS2) on the signal receiver PCB according to the table below.

Unit No.	No.1	No.2	No.3
Address setting 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 setting switch (SS1) on the signal receiver PCB to SUB.

	MAIN	SUB
MAIN / SUB setting switch (SS1)	 (S1938)	 (S1939)



(S1940)

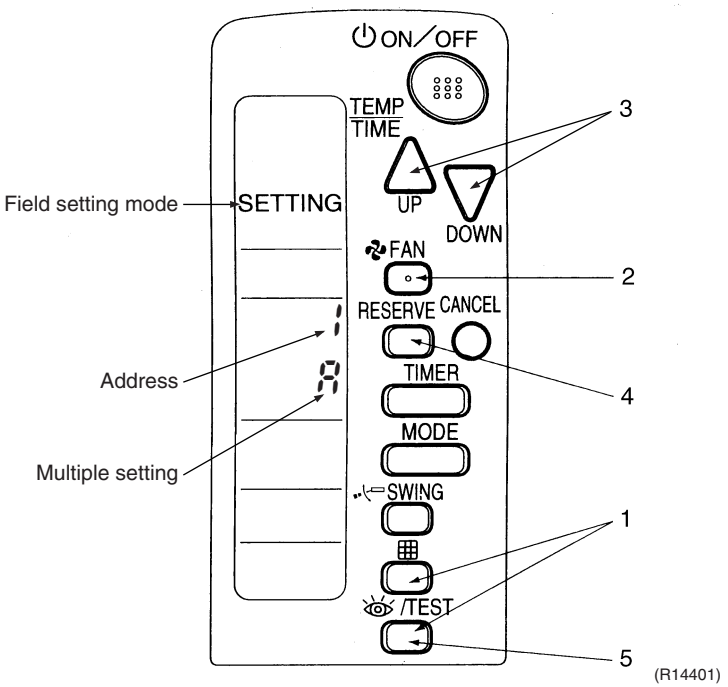
After completing setting, seal off the opening of the address setting switch (SS2) and the MAIN / SUB setting switch (SS1) with the attached sealing pad.

Wireless Remote Controller (Factory Set is "1")

1. Hold down the " ▦ " button and the " /TEST " button at the same time for at least 4 seconds to enter the field setting mode. ("SETTING" is indicated on the display).
2. Press the " FAN " button and select "A" or "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.

   1 → 2 → 3 → 4 → 5 → 6

   Address can be set from 1 ~ 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 confirm the setting.
5. Hold down the " /TEST " button for at least 1 second to exit the field setting mode and return to the normal display.



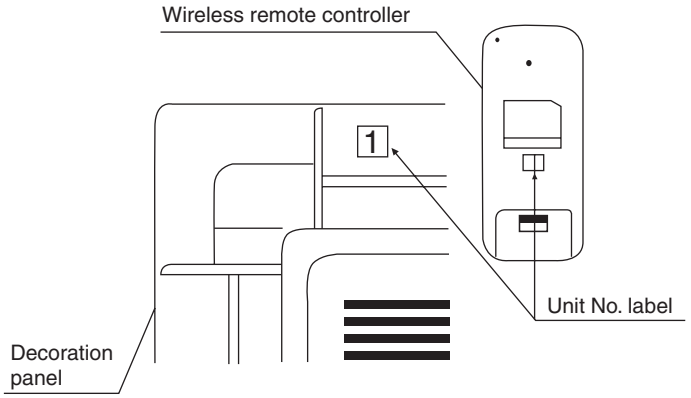
Multiple Settings A/b

When the indoor is controlled by outside controller (central remote controller, etc.), it sometimes does not respond to ON/OFF command or temperature setting command from the remote controller. Check what setting the customer needs and make the multiple setting as shown below.

Remote Controller		Indoor Unit	
Multiple Setting	Remote Controller Display	Controlled by other air conditioners or devices	Other condition
A: Standard	All items are displayed.	ON/OFF command and temperature setting command cannot be accepted. (1 long beep or 3 short beeps emitted)	
b: Multiple display	Operations set only is displayed shortly after execution.	All the commands can be accepted (2 short beeps)	

After Setting

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



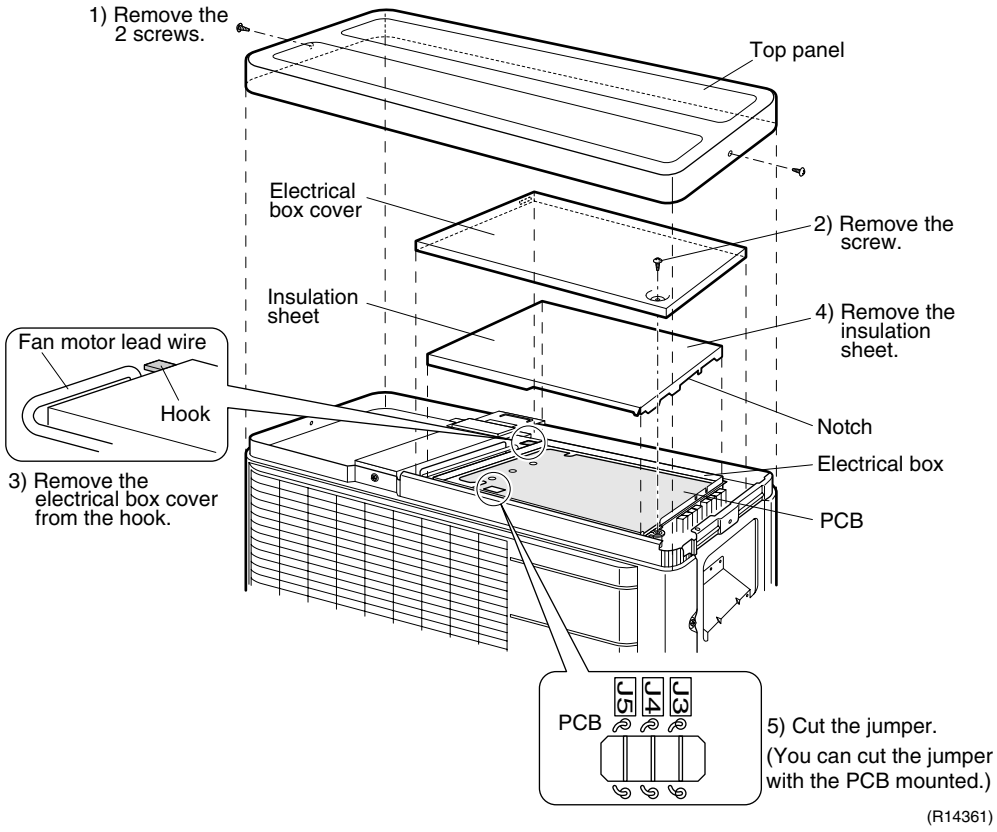
Note: Set the unit No. of the receiver and the wireless remote controller to be the same. If the settings differ, the signal from the remote controller cannot be received.

4.3 Outdoor Unit

4.3.1 Jumper Settings

Jumper	Function	When connected (factory set)	When cut
J3	ECONO operation prohibition setting	ECONO operation is available.	ECONO operation is disabled.
J5	Improvement of defrost performance	Standard control	Reinforced control (Ex: The frequency increases, the duration time of defrost lengthens.)

Location of the jumpers



Caution **Replace the PCB if you accidentally cut a wrong jumper.**
Jumpers are necessary for electronic circuit. Improper operation may occur if you cut any of them.

5. Silicon Grease on Power Transistor / Diode Bridge

Outline

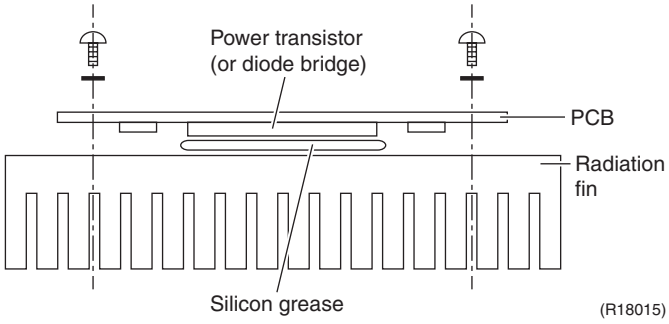
Apply the specified silicon grease to the heat radiation part of a power transistor / diode bridge when you replace an outdoor unit PCB. The silicon grease encourages the heat radiation of a power transistor / diode bridge.

Detail

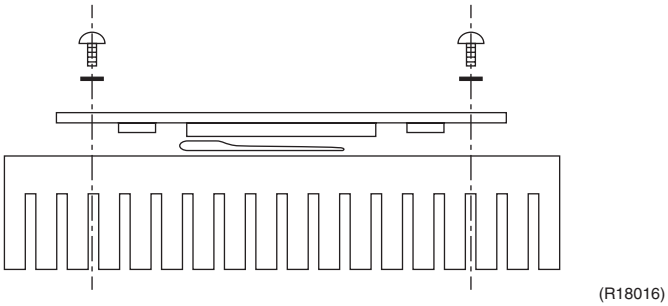
1. Wipe off the old silicon grease completely.
2. Apply the silicon grease evenly. See the illustrations below for examples of application.
3. Tighten the screws of the power transistor / diode bridge.
4. Make sure that the heat radiation parts are firmly contacted to the radiation fin.

Note: Smoke emission may be caused by bad heat radiation when the silicon grease is not appropriately applied.

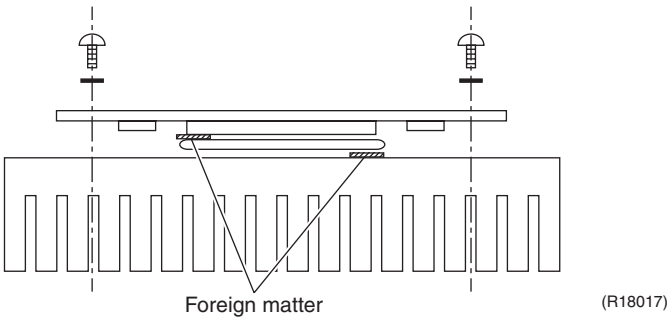
- OK: Evenly applied



- NG: Not evenly applied



- NG: Foreign matter is stuck.



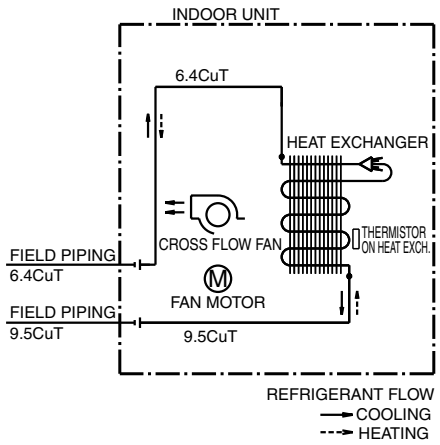
Part 8
Appendix

1. Piping Diagrams

1.1 Indoor Unit

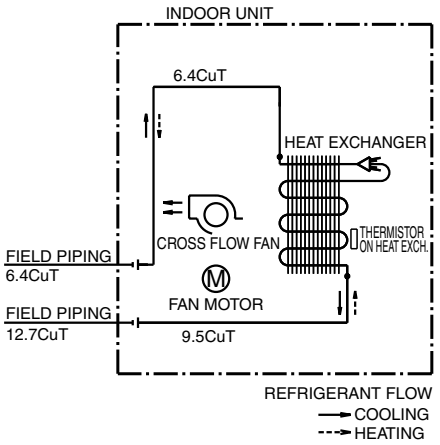
1.1.1 Wall Mounted Type

FTXG25/35JV1BW(S)(A)



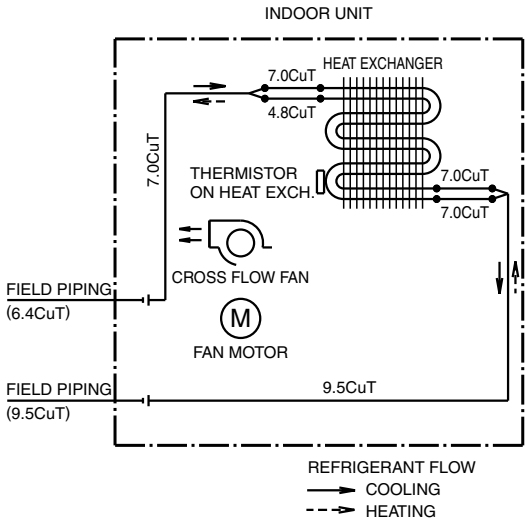
4D065855B

FTXG50JV1BW(S)(A)



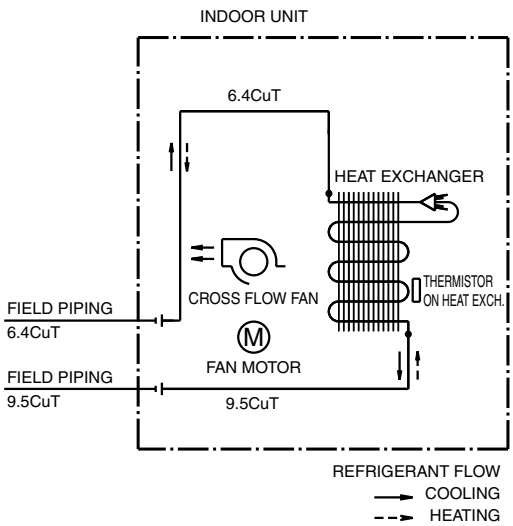
4D065856C

CTXS15/35K2V1B, FTXS20/25K2V1B
FTX20/25/35JV1B, FTX20/25/35J2V1B
ATX20/25/35JV1B, ATX20/25/35J2V1B



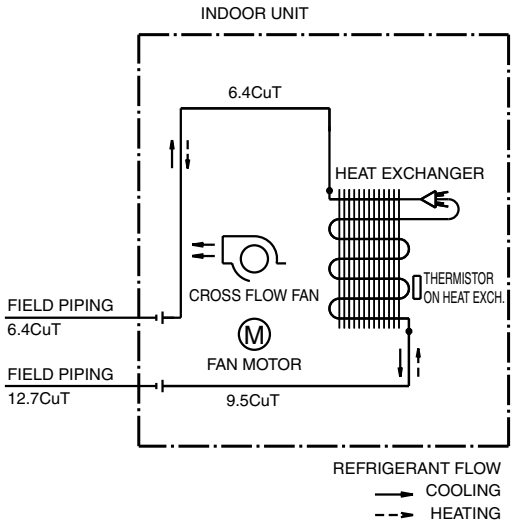
4D058926Q

FTXS35/42K2V1B, FTXS20/25/35/42J2V1B
ATXS20/25/35/42G2V1B



4D058897K

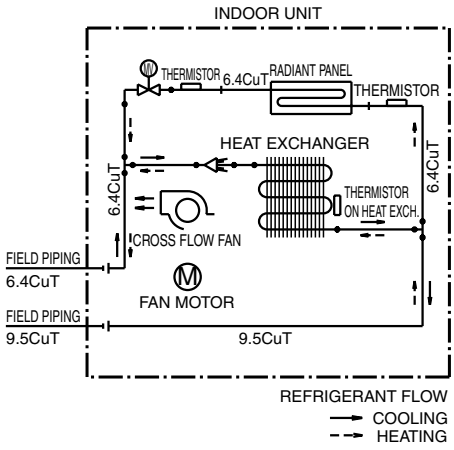
FTXS50K2V1B, FTXS50J2V1B
ATXS50G2V1B



4D058898G

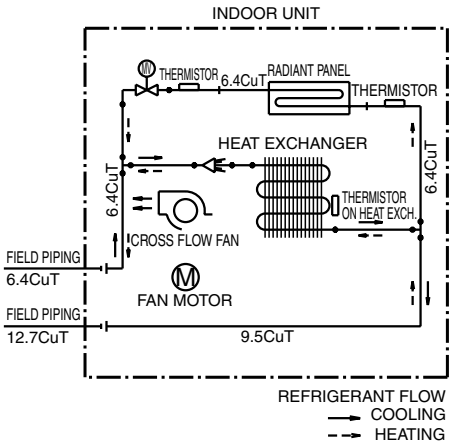
1.1.2 Floor Standing Type

FVXG25/35K2V1B



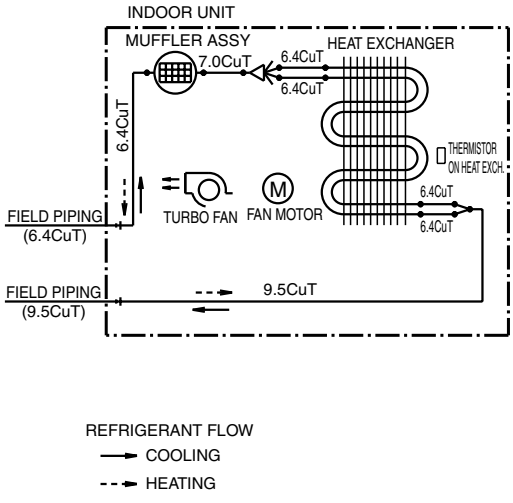
4D071597

FVXG50K2V1B



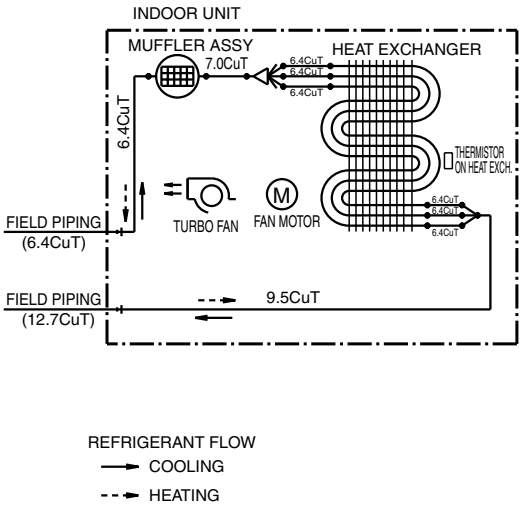
4D071598

FVXS25/35FV1B



4D056137B

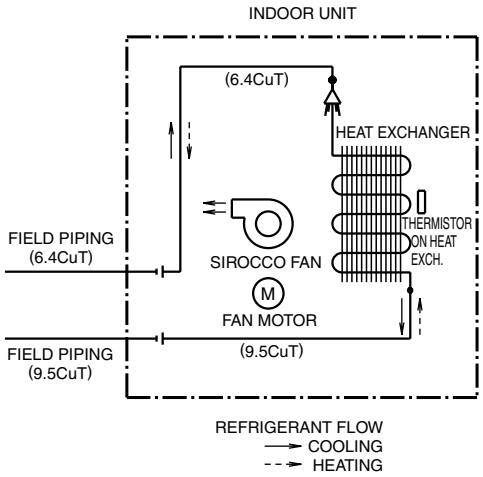
FVXS50FV1B



4D056138D

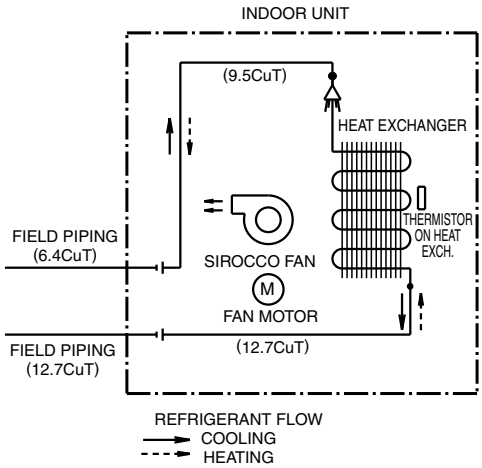
1.1.3 Floor / Ceiling Suspended Dual Type

FLXS25/35BAVMB



4D048722B

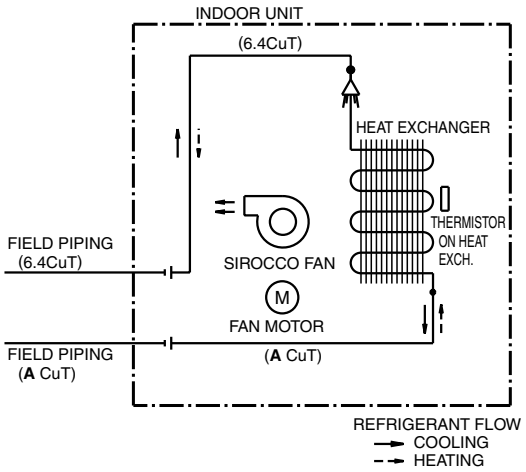
FLXS50BAVMB



4D048724B

1.1.4 Duct Connected Type

FDXS25/35EAVMB, FDXS25/35E7VMB, FDXS50CVMB, FDXS50C7VMB

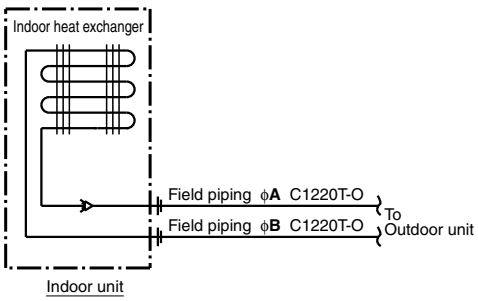


	A		A
FDXS25EAVMB FDXS35EAVMB FDXS25E7VMB FDXS35E7VMB	9.5	FDXS50CVMB FDXS50C7VMB	12.7

C: 4D045449R

1.1.5 Ceiling Mounted Cassette Type

FFQ25/35/50B8V1B, FFQ25/35/50B9V1B

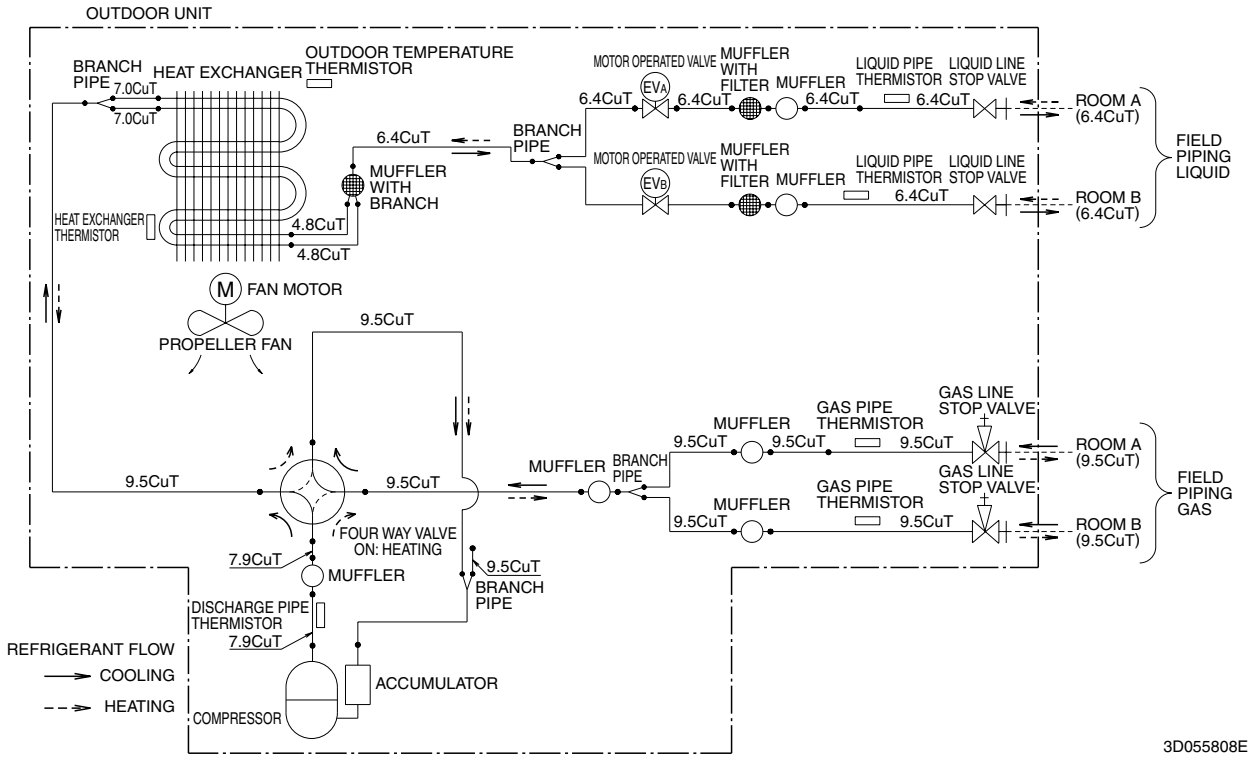


MODEL	A	B
FFQ25/35B8V1B FFQ25/35B9V1B	6.4	9.5
FFQ50B8V1B FFQ50B9V1B	6.4	12.7

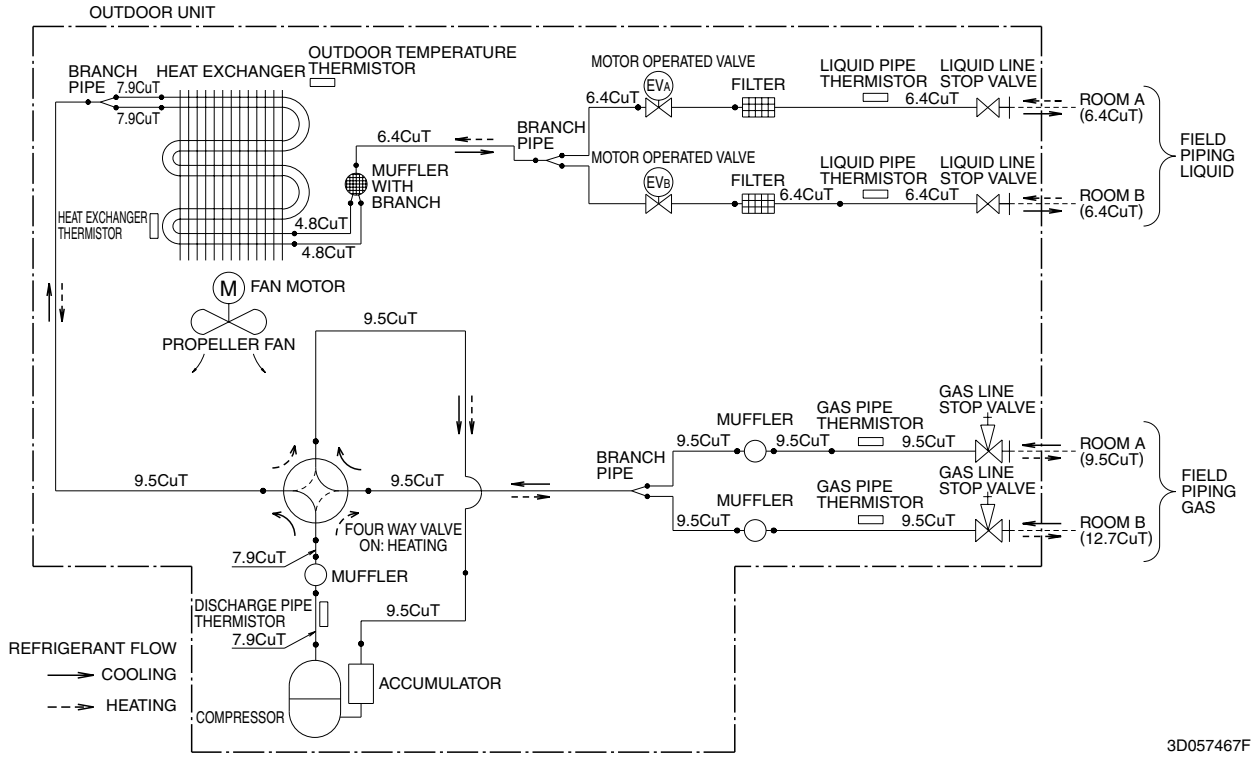
C: 4D039335B

1.2 Outdoor Unit

2MXS40H2V1B, 2MXS40H3V1B, 2AMX40G2V1B, 2AMX40G3V1B



2MXS50H2V1B, 2MXS50H3V1B, 2AMX50G2V1B, 2AMX50G3V1B

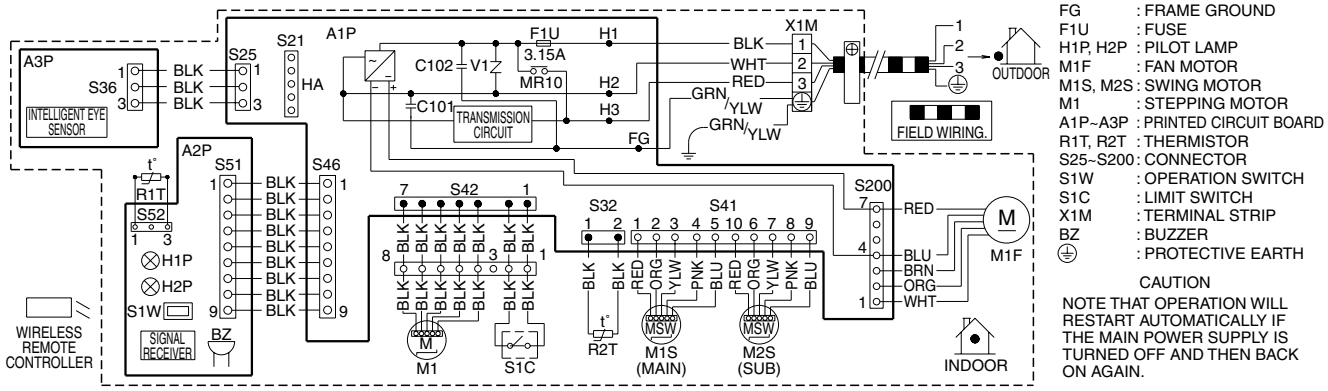


2. Wiring Diagrams

2.1 Indoor Unit

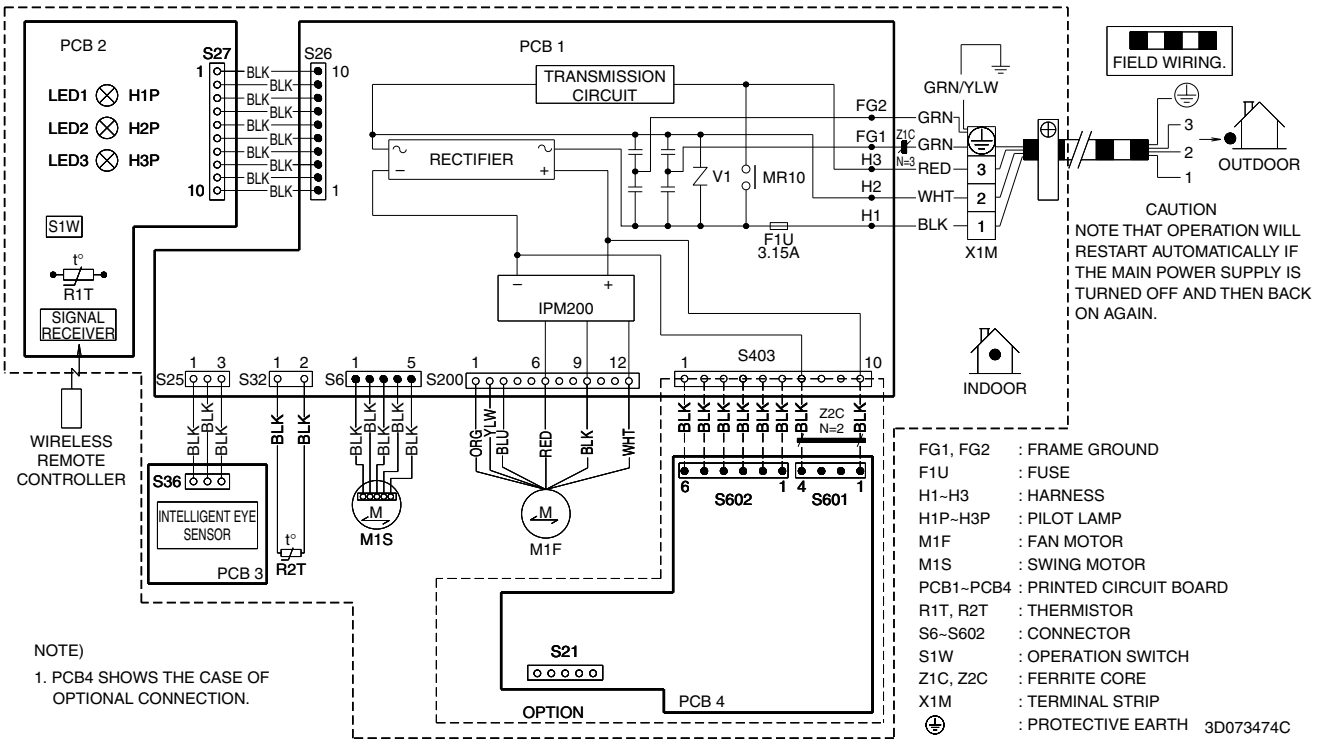
2.1.1 Wall Mounted Type

FTXG25/35/50JV1BW(S)(A)



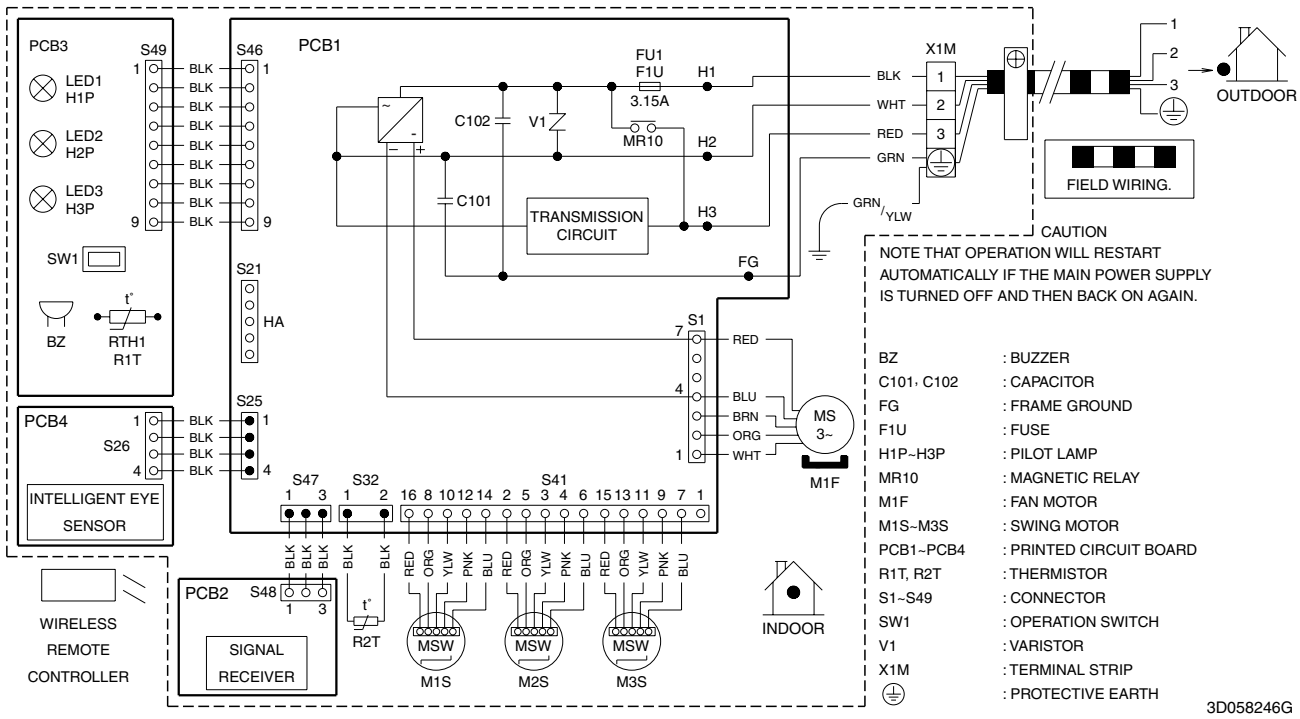
3D065507D

CTXS15/35K2V1B, FTXS20/25K2V1B

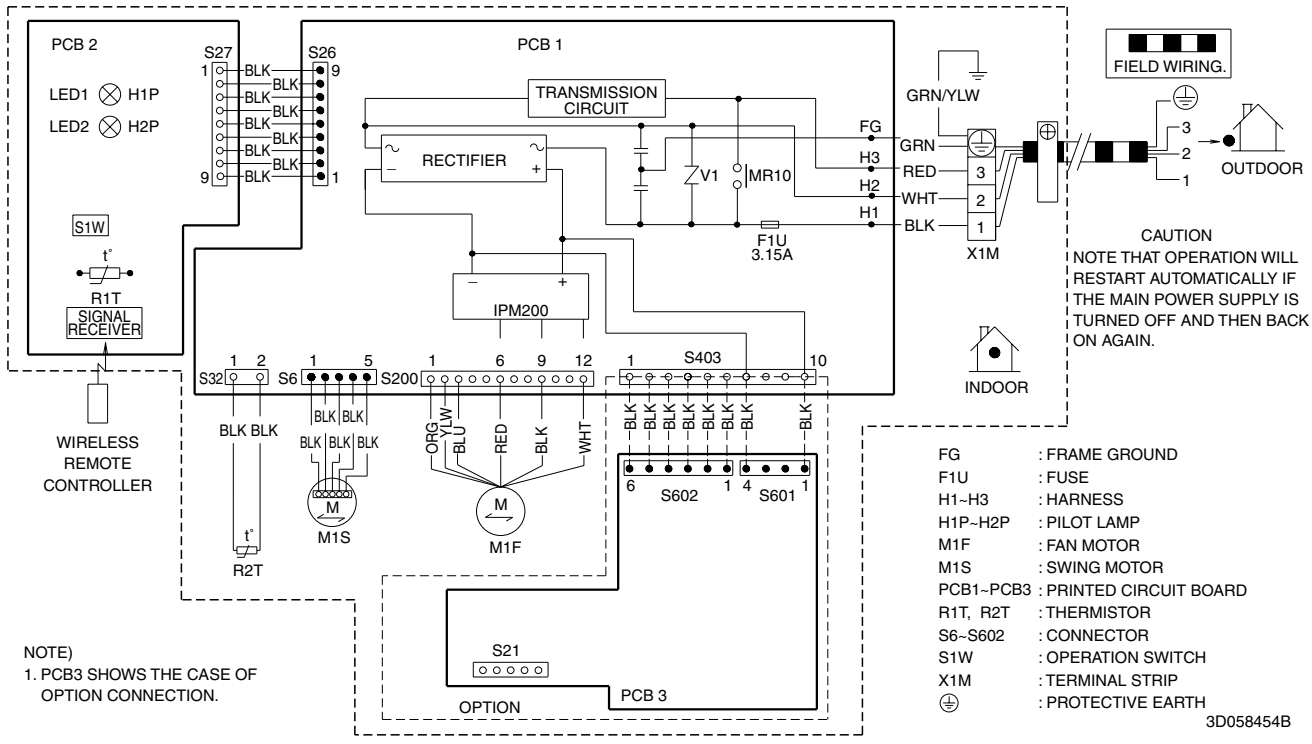


3D073474C

FTXS35/42/50K2V1B, FTXS20/25/35/42/50J2V1B, ATXS20/25/35/42/50G2V1B

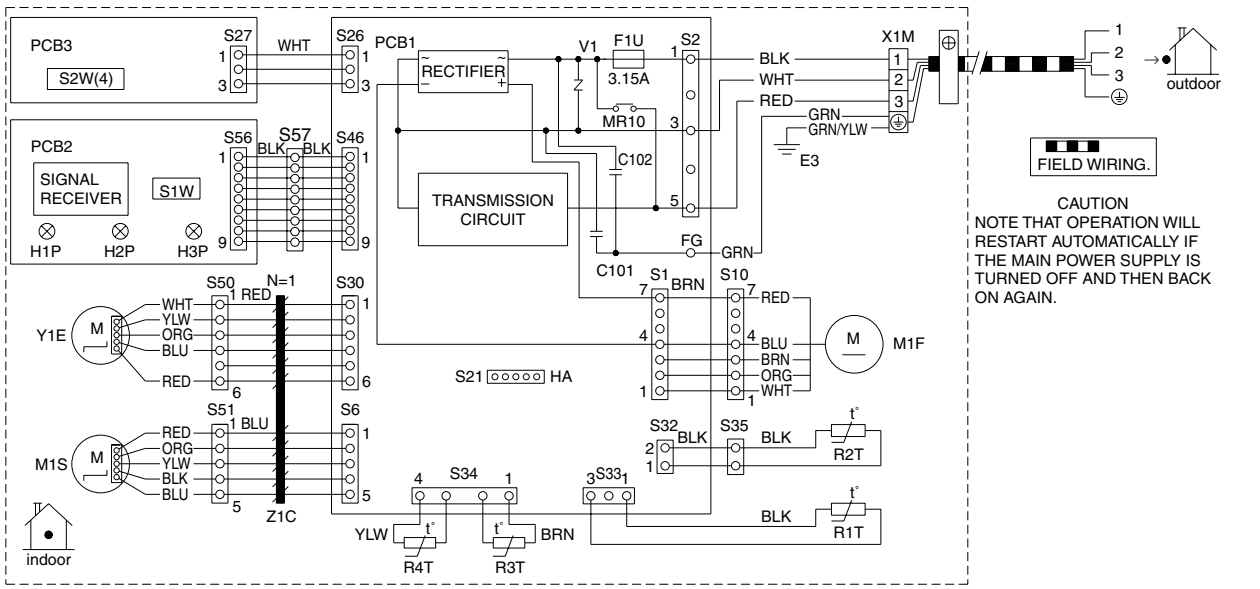


FTX20/25/35JV1B, FTX20/25/35J2V1B, ATX20/25/35JV1B, ATX20/25/35J2V1B



2.1.2 Floor Standing Type

FVXG25/35/50K2V1B

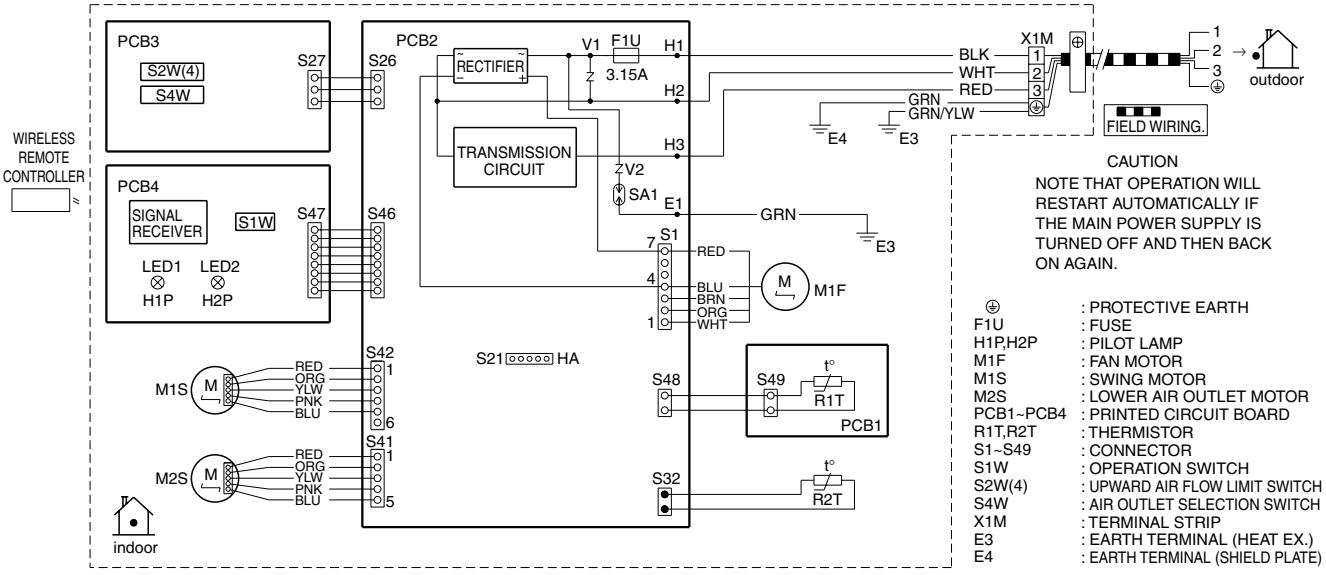


WIRELESS REMOTE CONTROLLER

⏚	:	PROTECTIVE EARTH	S1~S57	:	CONNECTOR
F1U	:	FUSE	S1W	:	OPERATION SWITCH
H1P~H3P	:	PILOT LAMP	S2W(4)	:	UPWARD AIR FLOW LIMIT SWITCH
M1F	:	FAN MOTOR	X1M	:	TERMINAL STRIP
M1S	:	SWING MOTOR	E3	:	EARTH TERMINAL (HEAT EX.)
PCB1~PCB3	:	PRINTED CIRCUIT BOARD	Y1E	:	ELECTRONIC EXPANSION VALVE COIL
R1T~R4T	:	THERMISTOR	Z1C	:	FERRITE CORE

3D069838A

FVXS25/35/50FV1B

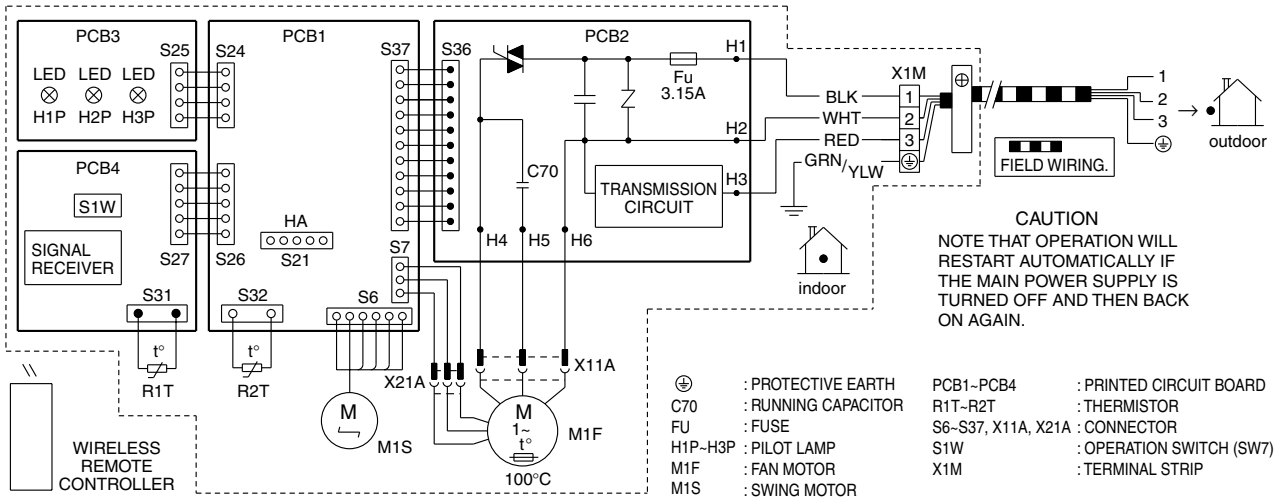


⏚	: PROTECTIVE EARTH
F1U	: FUSE
H1P,H2P	: PILOT LAMP
M1F	: FAN MOTOR
M1S	: SWING MOTOR
M2S	: LOWER AIR OUTLET MOTOR
PCB1~PCB4	: PRINTED CIRCUIT BOARD
R1T,R2T	: THERMISTOR
S1~S49	: CONNECTOR
S1W	: OPERATION SWITCH
S2W(4)	: UPWARD AIR FLOW LIMIT SWITCH
S4W	: AIR OUTLET SELECTION SWITCH
X1M	: TERMINAL STRIP
E3	: EARTH TERMINAL (HEAT EX.)
E4	: EARTH TERMINAL (SHIELD PLATE)

3D055953A

2.1.3 Floor / Ceiling Suspended Dual Type

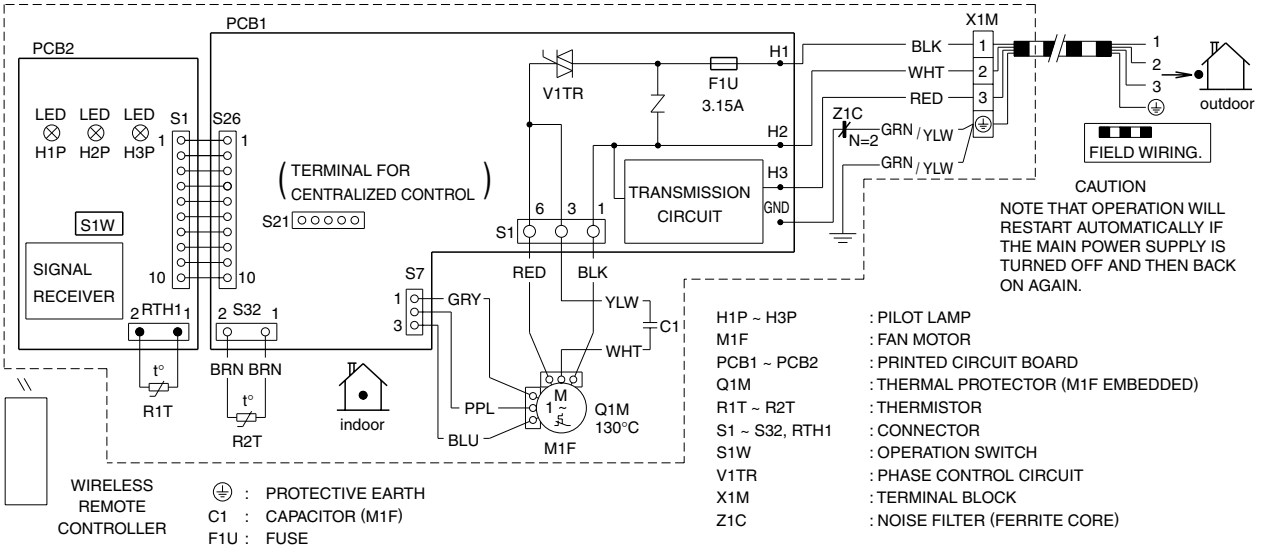
FLXS25/35/50BAVMB



3D033909F

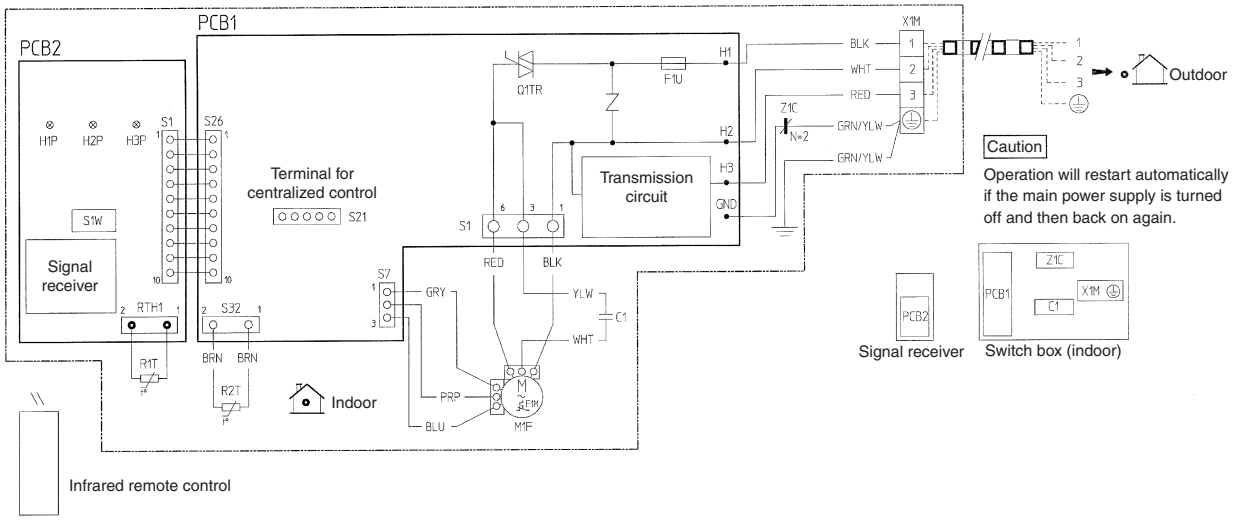
2.1.4 Duct Connected Type

FDXS25/35EAVMB, FDXS50CVMB



3D045012M

FDXS25/35E7VMB, FDXS50C7VMB



Indoor unit		PCB2	Signal receiver
C1	Capacitor	O1TR	Phase control circuit
F1M	Thermal protector (M1F Embedded)	R1T, R2T	Thermistor
F1U	Fuse (3.15, 250V)	S1~S32, RTH1	Connector
H1P~H3P	Light emitting diode	S1W	Operation switch
M1F	Motor (fan)	X1M	Terminal strip
PCB1	Printed circuit board	Z1C	Noise filter (Ferrite core)

: Field wiring
: Protective earth (screw)
: Connector
: Wire clamp

Colors:
BLK: Black
BLU: Blue
BRN: Brown
GRY: Grey
ORG: Orange
PNK: Pink
PRP: Purple
RED: Red
WHT: White
YLW: Yellow
GRN: Green

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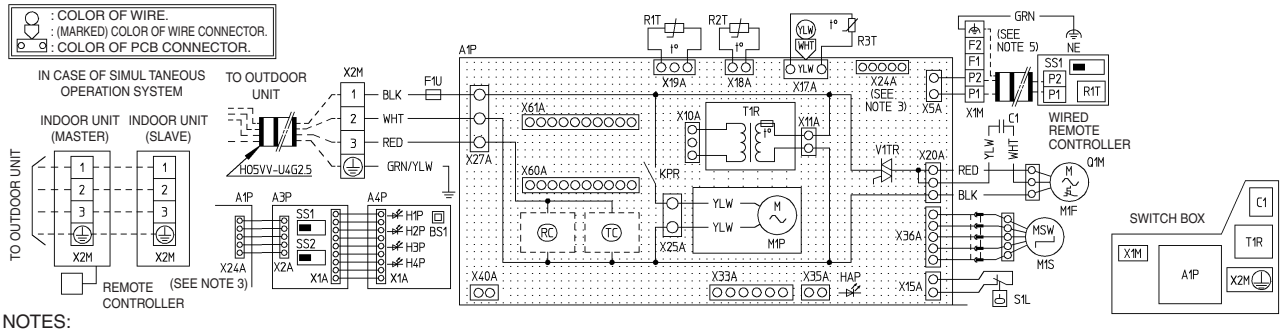
2.1.5 Ceiling Mounted Cassette Type

FFQ25/35/50B8V1B, FFQ25/35/50B9V1B



NOTES:

1. IN CASE OF USING A REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE TO THE ATTACHED INSTALLATION MANUAL.
2. X24A IS CONNECTED WHEN THE WIRELESS REMOTE CONTROLLER KIT IS BEING USED.
3. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM.
   SEE TECHNICAL DATA AND CATALOGS, ETC.
   BEFORE CONNECTING.
4. GROUND THE SHIELD OF THE REMOTE CONTROLLER WIRE TO THE INDOOR UNIT.
   (IN CASE OF USING SHIELD WIRE)

: TERMINAL
: CONNECTOR
: WIRE CLAMP
: FIELD WIRING

RED: RED
BLK: BLACK
WHT: WHITE
YLW: YELLOW
GRN: GREEN

A1P	PRINTED CIRCUIT BOARD	WIRED REMOTE CONTROLLER	
C1	CAPACITOR (M1F)	R1T	THERMISTOR (AIR)
F1U	FUSE (F5A, 250V)	SS1	SELECTOR SWITCH (MAIN/SUB)
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 (COIL-1)		
R3T	THERMISTOR (COIL-2)		
S1L	FLOAT SWITCH		
T1R	TRANSFORMER (220-240V/22V)		
V1TR	PHASE CONTROL CIRCUIT		
X1M	TERMINAL STRIP		
X2M	TERMINAL STRIP		
RC	SIGNAL RECEIVER CIRCUIT		
TC	SIGNAL TRANSMISSION CIRCUIT		

WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)		CONNECTOR FOR OPTIONAL PARTS	
A3P	PRINTED CIRCUIT BOARD	X33A	CONNECTOR (ADAPTOR FOR WIRING)
A4P	PRINTED CIRCUIT BOARD	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
BS1	PUSH BUTTON (ON/OFF)	X40A	CONNECTOR (ON/OFF INPUT FROM OUTSIDE)
H1P	LIGHT EMITTING DIODE (ON-RED)	X60A X61A	CONNECTOR (INTERFACE ADAPTOR FOR SKY-AIR SERIES)
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)		

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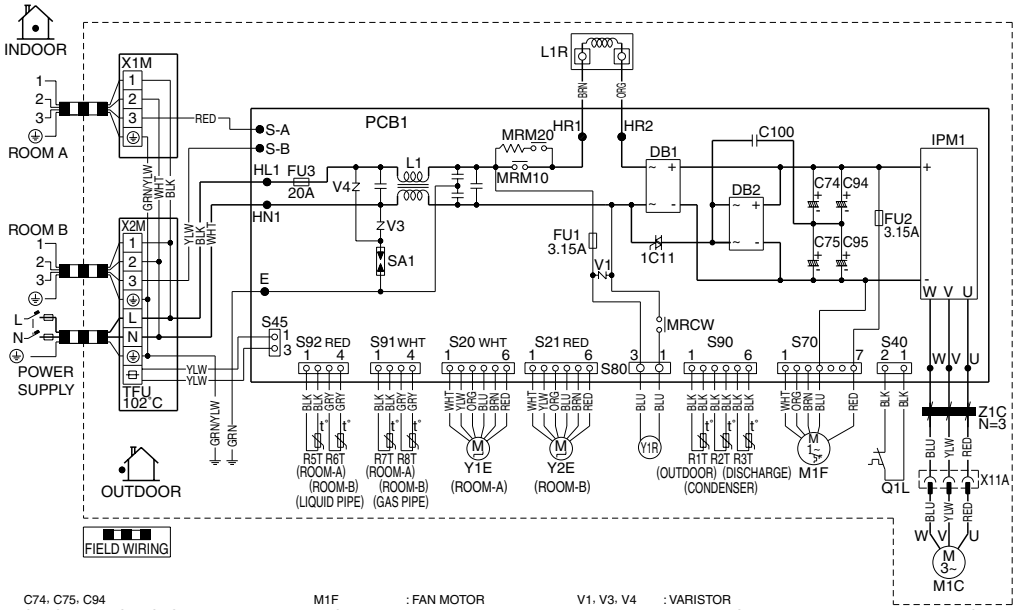
2.2 Outdoor Unit

2MXS40H2V1B, 2MXS40H3V1B, 2AMX40G2V1B, 2AMX40G3V1B



C74, C75, C94		M1F	: FAN MOTOR	V1, V3, V4	: VARISTOR	BLK	: BLACK
C95, C100	: CAPACITOR	MRCW, MRM10,		X1M, X2M	: TERMINAL STRIP	BLU	: BLUE
DB1, DB2	: DIODE BRIDGE	MRM20	: MAGNETIC RELAY	Y1E, Y2E	: ELECTRONIC EXPANSION VALVE COIL	BRN	: BROWN
FU1, FU2, FU3	: FUSE	N	: NEUTRAL	Y1R	: REVERSING SOLENOID VALVE COIL	GRY	: GREY
IC11	: TRIAC	PCB1	: PRINTED CIRCUIT BOARD	Z1C	: FERRITE CORE	ORG	: ORANGE
IPM1	: INTELLIGENT POWER MODULE	Q1L	: OVERLOAD PROTECTOR	⏚	: PROTECTIVE EARTH	RED	: RED
L	: LIVE	R1T~R8T	: THERMISTOR	S20, S21, S40,		WHT	: WHITE
L1	: COIL	SA1	: SURGE ARRESTER	S70, S80, S45,		YLW	: YELLOW
L1R	: REACTOR	TFU	: THERMAL FUSE	S90, S91, S92,		GRN	: GREEN
M1C	: COMPRESSOR MOTOR			X11A	: CONNECTOR		

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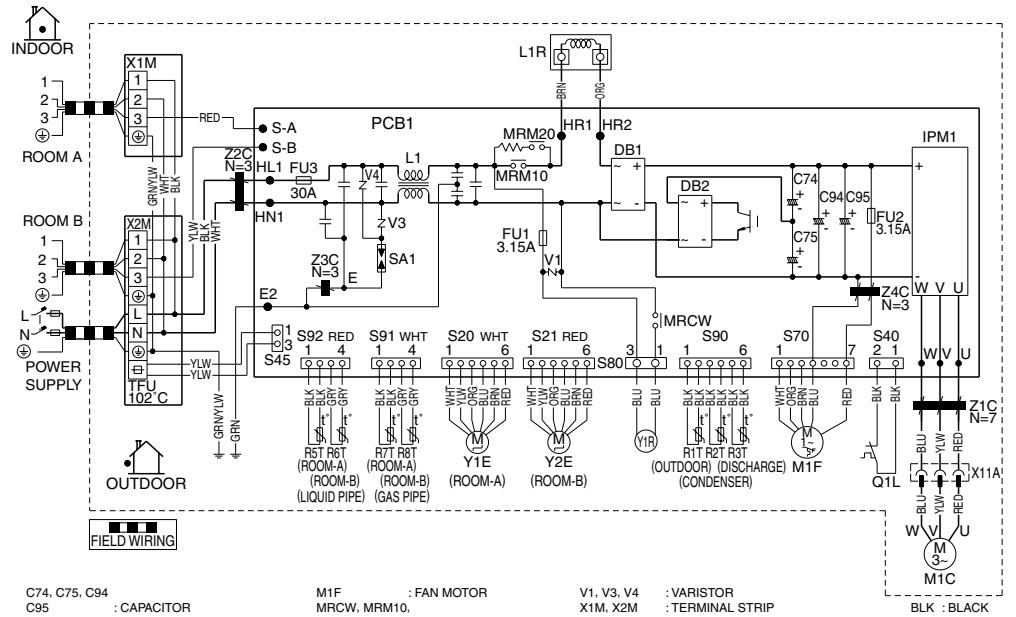
2MXS50H2V1B, 2MXS50H3V1B, 2AMX50G2V1B, 2AMX50G3V1B



C74, C75, C94		M1F	: FAN MOTOR	V1, V3, V4	: VARISTOR	BLK	: BLACK
C95	: CAPACITOR	MRCW, MRM10,		X1M, X2M	: TERMINAL STRIP	BLU	: BLUE
DB1, DB2	: DIODE BRIDGE	MRM20	: MAGNETIC RELAY	Y1E, Y2E	: ELECTRONIC EXPANSION VALVE COIL	BRN	: BROWN
FU1, FU2, FU3	: FUSE	N	: NEUTRAL	Y1R	: REVERSING SOLENOID VALVE COIL	GRY	: GREY
IPM1	: INTELLIGENT POWER MODULE	PCB1	: PRINTED CIRCUIT BOARD	Z1C, Z2C, Z3C		ORG	: ORANGE
L	: LIVE	Q1L	: OVERLOAD PROTECTOR	Z4C	: FERRITE CORE	RED	: RED
L1	: COIL	R1T~R8T	: THERMISTOR	⏚	: PROTECTIVE EARTH	WHT	: WHITE
L1R	: REACTOR	SA1	: SURGE ARRESTER	S20, S21, S40,		YLW	: YELLOW
M1C	: COMPRESSOR MOTOR	TFU	: THERMAL FUSE	S70, S80, S45,		GRN	: GREEN
				S90, S91, S92,			
				X11A	: CONNECTOR		

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3. Removal Procedure (Booklet No.)

Refer to the following booklets for removal procedure.

∗2MXS40/50H2V1B, 2AMX40/50G2V1B	Refer to **Si121173**.
∗2MXS40/50H3V1B, 2AMX40/50G3V1B	Refer to **Si121295**.
∗FTXG25/35/50JV1BW(S)(A)	Refer to **Si041256**.
∗CTXS15/35K2V1B, FTXS20/25K2V1B	Refer to **Si041258**.
∗FTXS35/42/50K2V1B	Refer to **Si041259**.
∗FTXS20/25/35/42/50J2V1B	Refer to **Si041049**.
∗ATXS20/25/35/42/50G2V1B	Refer to **Si041252_A**.
∗FTX20/25/35JV1B, ATX20/25/35JV1B	Refer to **Si041051**.
∗FTX20/25/35J2V1B, ATX20/25/35J2V1B	Refer to **Si041264**.
∗FVXG25/35/50K2V1B	Refer to **Si061263**.
∗FVXS25/35/50FV1B	Refer to **Si061262_A**.
∗FLXS25/35/50BAVMB	Refer to **Si051261_A**.
∗FDXS series, FFQ series	N/A

Revision History

Month / Year	Version	Revised contents
08 / 2011	SiBE121123	First edition
01 / 2013	SiBE121123_A	Model addition: 2MXS40/50H3V1B, 2AMX40/50G3V1B, FTXG25/35/50JV1BA, CTXS15/35K2V1B, FTXS20/25/35/42/50K2V1B, FTX20/25/35J2V1B FDXS25/35E7VMB, FDXS50C7VMB, FFQ25/35/50B9V1B, ATX20/25/35J2V1B

Warning

- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please 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.

Dealer

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http://www.daikin.com/global_ac/

SiBE121123_A
01/2013 AK.B