

Service Manual



D-Series / E-Series



SUPER MULTI NX D-Series / E-Series

●Cooling Only

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FTKS20D3VMW FTKS20D3VML FTKS25D3VMW	FTKS20CAVMB FTKS25CAVMB FTKS35CAVMB	FDKS25CAVMB FDKS35CAVMB FDKS50CVMB	FLKS25BAVMB FLKS35BAVMB FLKS50BAVMB
FTKS25D3VML	FTKS50EV1B	FDKS60CVMB	FLKS60BAVMB
FTKS35D3VMW	FTKS60EV1B	FDKS25EAVMB	FVKS25BAVMB
FTKS35D3VML	FTKS71EV1B	FDKS35EAVMB	FVKS35BAVMB
FTKS50D2V1W	FTKS71BAVMB		FVKS50BAVMB
FTKS50D2V1I			

Outdoor Unit

4MKS75E2V1B 4MKS75E3V1B 4MKS90DAVMB

●Heat Pump

illuool ollit			
FTXG25EV1BW	FTXS35D3VMW	FDXS25CAVMB	FLXS25BAVMB
FTXG25EV1BS	FTXS35D3VML	FDXS35CAVMB	FLXS35BAVMB
FTXG35EV1BW	FTXS50D2V1W	FDXS50CVMB	FLXS50BAVMB
FTXG35EV1BS	FTXS50D2V1L	FDXS60CVMB	FLXS60BAVMB
CTXG50EV1BW	FTXS20CAVMB	FDXS25EAVMB	FVXS25BAVMB
CTXG50EV1BS	FTXS25CAVMB	FDXS35EAVMB	FVXS35BAVMB
FTXS20D3VMW	FTXS35CAVMB		FVXS50BAVMB
FTXS20D3VML	FTXS50EV1B		
FTXS25D3VMW	FTXS60EV1B		

FTXS71EV1B FTXS71BAVMB

Outdoor Unit

FTXS25D3VML

4MXS68E2V1B 4MXS68E3V1B 4MXS80DAVMB

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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
- $\ \ \, \bigwedge$ This symbol indicates an item for which caution must be exercised.
 - The pictogram shows the item to which attention must be paid.
- This symbol indicates a prohibited action.
 - The prohibited item or action is shown inside or near the symbol.
- This symbol indicates an action that must be taken, or an instruction. The instruction is shown inside 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 Caution in Repair

^	
/! Warning	
Be sure to disconnect the power cable plug from the plug socket before disassembling the equipment for a repair. Working on the equipment that is connected to a power supply can cause an electrical shook. If it is necessary to supply power to the equipment to conduct the repair or inspecting the circuits, do not touch any electrically charged sections of the equipment.	9 😂
If the refrigerant gas discharges during the repair work, do not touch the discharging refrigerant gas. The refrigerant gas can cause frostbite.	\bigcirc
When disconnecting the suction or discharge pipe of the compressor at the welded section, release the refrigerant gas completely at a well-ventilated place first. If there is a gas remaining inside the compressor, the refrigerant gas or refrigerating machine oil discharges when the pipe is disconnected, and it can cause injury.	
If the refrigerant gas leaks during the repair work, ventilate the area. The refrigerant gas can generate toxic gases when it contacts flames.	0
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 can cause an electrical shock.	A
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 can cause an electrical shock or fire.	\bigcirc

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(Caution	
Do not repair the electrical components with wet hands. Working on the equipment with wet hands can cause an electrical shock.	\Diamond
Do not clean the air conditioner by splashing water. Washing the unit with water can cause an electrical shock.	\Diamond
Be sure to provide the grounding when repairing the equipment in a humid or wet place, to avoid electrical shocks.	•
Be sure to turn off the power switch and unplug the power cable when cleaning the equipment. The internal fan rotates at a high speed, and cause injury.	9.5
Do not tilt the unit when removing it. The water inside the unit can spill and wet the furniture and floor.	\Diamond
Be sure to check that the refrigerating cycle section has cooled down sufficiently before conducting repair work. Working on the unit when the refrigerating cycle section is hot can cause burns.	
Use the welder in a well-ventilated place. Using the welder in an enclosed room can cause oxygen deficiency.	0

1.1.2 Cautions Regarding Products after Repair

! 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 can cause an electrical shock, excessive heat generation or fire.	
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 can fall and cause injury.	
Be sure to install the product correctly by using the provided standard installation frame. Incorrect use of the installation frame and improper installation can cause the equipment to fall, resulting in injury.	For integral units only
Be sure to install the product securely in the installation frame mounted on a window frame. If the unit is not securely mounted, it can fall and cause injury.	For integral units only

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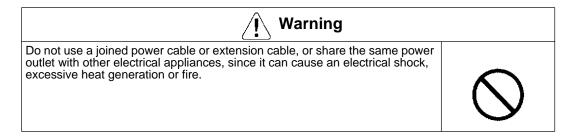
! Warning	
Be sure to use an exclusive power circuit for the equipment, and follow the technical standards related to the electrical equipment, the internal wiring regulations and the instruction manual for installation when conducting electrical work. Insufficient power circuit capacity and improper electrical work can cause an electrical shock or fire.	
Be sure to use the specified cable to connect 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 can cause excessive heat generation or fire.	
When connecting the cable 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 can cause an electrical shock, excessive heat generation or fire.	
Do not damage or modify the power cable. Damaged or modified power cable can cause an electrical shock or fire. Placing heavy items on the power cable, and heating or pulling the power cable can damage the cable.	\bigcirc
Do not mix air or gas other than the specified refrigerant (R-410A) 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 leak and repair it before charging the refrigerant. After charging refrigerant, make sure that there is no refrigerant leak. If the leak 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 can generate toxic gases when it contacts flames, such as fan and other heaters, stoves and ranges.	0
When replacing the coin battery in the remote controller, be sure to disposed of the old battery to prevent children from swallowing it. If a child swallows the coin battery, see a doctor immediately.	

<u> </u>	
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 a combustible gas leaks and remains around the unit, it can cause a fire.	\Diamond
Be sure to install the packing and seal on the installation frame properly. If the packing and seal are not installed properly, water can enter the room and wet the furniture and floor.	For integral units only

1.1.3 Inspection after Repair

! Warning	
Check to make sure that the power cable plug is not dirty or loose, then insert the plug into a power outlet all the way. If the plug has dust or loose connection, it can cause an electrical shock or fire.	0
If the power cable and lead wires have scratches or deteriorated, be sure to replace them. Damaged cable and wires can cause an electrical shock, excessive heat generation or fire.	•

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Caution	
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 can cause excessive heat generation, fire or an electrical shock.	
If the installation platform or frame has corroded, replace it. Corroded installation platform or frame can cause the unit to fall, resulting in injury.	
Check the grounding, and repair it if the equipment is not properly grounded. Improper grounding can cause an electrical shock.	
Be sure to measure the insulation resistance after the repair, and make sure that the resistance is 1 $M\Omega$ or higher. Faulty insulation can cause an electrical shock.	
Be sure to check the drainage of the indoor unit after the repair. Faulty drainage can cause the water to enter the room and wet the furniture and floor.	

1.1.4 Using 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:

1.1.5 Using Icons List

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.
G	Reference	A "reference" guides the reader to other places in this binder or in this manual, where he/she will find additional information on a specific topic.

Part 1 List of Functions

1. List	t of Functions	2
	Cooling Only Models	
	Heat Pump Models	

List of Functions SiEBE12-625

1. List of Functions

1.1 Cooling Only Models

Category	Functions	FTKS20-35D3VMW(L)	FTKS50D2V1W(L)	FTKS20-35CAVMB	Category	Functions	FTKS20-35D3VMW(L)	FTKS50D2V1W(L)	FTKS20-35CAVMB
	Inverter (with Inverter Power Control)	0	0	0		Air Don't don Filter with Destariostatic			
	Operation Limit for Cooling (°CDB)		_	_		Air Purifying Filter with Bacteriostatic, Virustatic Functions	-	-	—
Basic Function	Operation Limit for Heating (°CWB)	_				Photocatalytic Deodorizing Filter	_		
	PAM Control	_	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_	0
	Oval Scroll Compressor	_	_	_		Titanium Apatite Photocatalytic	0	0	
Compressor	Swing Compressor	_	_	_	Health & Clean	Air-Purifying Filter		\Box	
Compressor	Rotary Compressor	_	_	_	Clean	Mold Proof Air Filter	0	0	0
	Reluctance DC Motor	ı		_		Wipe-clean Flat Panel	0	0	0
	Power-Airflow Flap	_	_	_		Washable Grille	_	_	
	Power-Airflow Dual Flaps	0	0	0		Mold Proof Operation	_	_	
	Power-Airflow Diffuser	ı	_	_	┥ +	Heating Dry Operation	_	_	
	Wide-Angle Louvers	0	0	0		Good-Sleep Cooling Operation	_	_	—
Comfortable Airflow	Vertical Auto-Swing (Up and Down)	0	0	0	Timer	24-Hour On/Off Timer	0	0	0
:	Horizontal Auto-Swing (Right and Left)	_	_	_	Timei	Night Set Mode	0	0	0
	3-D Airflow	_	_	_	- Worry Free "Reliability &	Auto-Restart (after Power Failure)	0	0	0
	Comfort Airflow Mode	0	0	_		Self-Diagnosis (Digital, LED) Display	0	0	0
	3-Step Airflow (H/P Only)	_	_	_		Wiring Error Check	_	_	_
	Auto Fan Speed	0	0	0	Durability"	Anticorrosion Treatment of Outdoor			
	Indoor Unit Quiet Operation	0	0	0		Heat Exchanger			
	Night Quiet Mode (Automatic)	_	_	_		Multi-Split / Split Type Compatible	0	0	0
Comfort	Outdoor Unit Quiet Operation (Manual)	_	_	_		Indoor Unit		L	L
Control	Intelligent Eye	0	0	0		Flexible Voltage Correspondence	0	_	0
	Quick Warming Function	_	_	_	Flexibility	High Ceiling Application	_	_	_
	Hot-Start Function	_	_	_		Chargeless	_		<u> </u>
	Automatic Defrosting	_	_	_		Either Side Drain (Right or Left)	0	0	0
	Automatic Operation	_	_	_		Power Selection	_	_	_
Operation	Programme Dry Function	0	0	0		5-Rooms Centralized Controller (Option)	0	0	0
	Fan Only	0	0	0		Remote Control Adaptor			
	New Powerful Operation (Non- Inverter)	_	_	_	Remote Control	(Normal Open-Pulse Contact) (Option)	0	0	0
	Inverter Powerful Operation	0	0	0		Remote Control Adaptor	0	0	0
	Priority-Room Setting	_	_	_		(Normal Open Contact) (Option)	Ľ	Ĺ	Ļ
Lifestyle	Cooling / Heating Mode Lock	_	_	_		DIII-NET Compatible (Adaptor) (Option)	0	0	0
Convenience	Home Leave Operation	_	_	0	Remote	Wireless	0	0	0
	ECONO Mode	0	0	_	Controller	Wired			-
	Indoor Unit On/Off Switch	0	0	0					
	Signal Reception Indicator	0	0	0					
	Temperature Display	_	_	_					
	Another Room Operation								
	O : Holding Functions								

Note: O : Holding Functions

— : No Functions

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Category	Functions	FTKS50-71EV1B	FTKS71BAVMB	Category	Functions	FTKS50-71EV1B	FTKS71BAVMB
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic,		
Basic	Operation Limit for Cooling (°CDB)				Virustatic Functions		
Function	Operation Limit for Heating (°CWB)		_	1	Photocatalytic Deodorizing Filter	_	_
	PAM Control	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function		0
	Oval Scroll Compressor	_	-	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	0	_
Compressor	Swing Compressor	_	_	Clean	Mold Proof Air Filter	0	0
	Rotary Compressor	_	_		Wipe-clean Flat Panel	0	0
	Reluctance DC Motor	_	_		Washable Grille	_	_
	Power-Airflow Flap	_	_		Mold Proof Operation	_	_
	Power-Airflow Dual Flaps	0	0		Heating Dry Operation	_	_
	Power-Airflow Diffuser	_	_		Good-Sleep Cooling Operation		_
	Wide-Angle Louvers	0	0	T:	24-Hour On/Off Timer	0	0
Comfortable Airflow	Vertical Auto-Swing (Up and Down)	0	0	Timer	Night Set Mode	0	0
Alliow	Horizontal Auto-Swing (Right and Left)	0	0	Worry Free "Reliability & Durability"	Auto-Restart (after Power Failure)	0	0
	3-D Airflow	0	0		Self-Diagnosis (Digital, LED) Display	0	0
	Comfort Airflow Mode	_	_		Wiring Error Check	_	_
	3-Step Airflow (H/P Only)	_	_		Anticorrosion Treatment of Outdoor		
	Auto Fan Speed	0	0	-	Heat Exchanger	_	_
	Indoor Unit Quiet Operation	0	0		Multi-Split / Split Type Compatible		
	Night Quiet Mode (Automatic)	_	_		Indoor Unit	0	0
Comfort	Outdoor Unit Quiet Operation (Manual)	_	_		Flexible Voltage Correspondence		0
Control	Intelligent Eye	0	0	Flexibility	High Ceiling Application		
	Quick Warming Function	_	_	1	Chargeless		_
	Hot-Start Function	_	_		Either side Drain (Right or Left)	0	0
	Automatic Defrosting	_	_	1	Power Selection		_
	Automatic Operation	_	_		5-Rooms Centralized Controller (Option)	0	0
Operation	Programme Dry Function	0	0	1	Remote Control Adaptor		
	Fan Only	0	0	1	(Normal Open-Pulse Contact) (Option)	0	0
	New Powerful Operation (Non- Inverter)	_	_	Remote Control	Remote Control Adaptor	0	0
	Inverter Powerful Operation	0	0	1	(Normal Open Contact) (Option)		
	Priority-Room Setting	_	_		DIII-NET Compatible (Adaptor) (Option)	0	0
	Cooling / Heating Mode Lock		 	Remote	Wireless	0	0
Lifestyle Convenience	Home Leave Operation	0	0	Controller	Wired		
Convenience	ECONO Mode		† _				
	Indoor Unit On/Off Switch	0	0				
	Signal Reception Indicator	0	0				
	Temperature Display		<u> </u>				
	Another Room Operation		<u> </u>				
	O : Holding Functions		L				

Note: O : Holding Functions
— : No Functions

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Category	Functions	FDKS25/35CAVMB	FDKS50/60CVMB	FDKS25/35EAVMB	Category	Functions	FDKS25/35CAVMB	FDKS50/60CVMB	FDKS25/35EAVMB
	Inverter (with Inverter Power Control)	0	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	_	_	
	Operation Limit for Cooling (°CDB)	_	-	_		Photocatalytic Deodorizing Filter	-	 	
Basic Function	Operation Limit for Heating (°CWB)	_	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_	
	PAM Control	_	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	-	_	
	Oval Scroll Compressor	_	_	_	Clean	Mold Proof Air Filter	0	0	0
Compressor	Swing Compressor	_	_	_		Wipe-clean Flat Panel	_	_	_
Compressor	Rotary Compressor	_	_	—		Washable Grille	—	—	_
	Reluctance DC Motor	_	_	_]	Mold Proof Operation	I —	_	_
	Power-Airflow Flap	_	_	_		Heating Dry Operation	_	_	
	Power-Airflow Dual Flaps	_	_	_	1	Good-Sleep Cooling Operation	_	_	
	Power-Airflow Diffuser	_	_	_		24-Hour On/Off Timer	0	0	0
	Wide-Angle Louvers	_	_	_	Timer	Night Set Mode	0	0	0
Cambantahla	Vertical Auto-Swing (Up and Down)	_	<u> </u>	_		Auto-Restart (after Power Failure)	0	0	0
Comfortable Airflow	Horizontal Auto-Swing (Right and Left)				Worry Free "Reliability & Durability"	Self-Diagnosis (Digital, LED) Display	0	0	0
	3-D Airflow					Wiring-Error Check	<u> </u>		
	Comfort Airflow Mode	_	_	_		Anticorrosion Treatment of Outdoor Heat Exchanger	_	_	
	3-Step Airflow (H/P Only)	_	-	_	Flexibility	Multi-Split / Split Type Compatible Indoor Unit	0	0	0
	Auto Fan Speed	0	0	0		Flexible Voltage Correspondence	0	0	0
	Indoor Unit Quiet Operation	0	0	0		High Ceiling Application	<u> </u>	_	
	Night Quiet Mode (Automatic)	_	_	_		Chargeless	1—	_	<u> </u>
	Outdoor Unit Quiet Operation (Manual)	_	_	_		Either Side Drain (Right or Left)	<u> </u>	_	
Comfort	Intelligent Eye	_	_	_	1	Power-Selection	<u> </u>	_	
Control	Quick Warming Function	_	_	_		5-Rooms Centralized Controller (Option)	0	0	0
	Hot-Start Function	_	_	_	Remote	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0	0
	Automatic Defrosting	_	_	_	Control	Remote Control Adaptor (Normal Open Contact) (Option)	0	0	0
	Automatic Operation	_	_	_		DIII-NET Compatible (Adaptor) (Option)	0	0	0
Operation	Programme Dry Function	0	0	0	Remote	Wireless	0	0	0
	Fan Only	0	0	0	Controller	Wired			
	New Powerful Operation (Non-Inverter)	_	_	_					
	Inverter Powerful Operation	0	0	0					
	Priority-Room Setting		L	L=					
	Cooling / Heating Mode Lock	_	_	_					
Lifestyle	Home Leave Operation	0	0	0					
Convenience	ECONO Mode	_	_	_					
	Indoor Unit On/Off Switch	0	0	0					
	Signal Reception Indicator	0	0	0					
	Temperature Display	_	_	_					
	Another Room Operation	_	<u> </u>	_					
Note:	O : Holding Functions				1	1	-		

Note: O: Holding Functions
—: No Functions

SiEBE12-625 List of Functions

Category	Functions	FLKS25-60BAVMB	FVKS25-50BAVMB	Category	Functions	FLKS25-60BAVMB	FVKS25-50BAVMB
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	0	0
	Operation Limit for Cooling (°CDB)		_	-	Photocatalytic Deodorizing Filter	0	0
Basic Function	Operation Limit for Heating (°CWB)	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_
	PAM Control	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	_	_
	Oval Scroll Compressor	_	_	Clean	Mold Proof Air Filter	0	0
Compressor	Swing Compressor	_	_		Wipe-clean Flat Panel	_	_
Compressor	Rotary Compressor	_	_		Washable Grille	_	0
	Reluctance DC Motor	_	_		Mold Proof Operation	_	_
	Power-Airflow Flap	_	_		Heating Dry Operation	_	_
	Power-Airflow Dual Flaps	_	_		Good-Sleep Cooling Operation	_	_
	Power-Airflow Diffuser	_	_	Timer	24-Hour On/Off Timer	0	0
	Wide-Angle Louvers	_	0	Timor	Night Set Mode	0	0
Comfortable	Vertical Auto-Swing (Up and Down)	0	0		Auto-Restart (after Power Failure)	0	0
Airflow	Horizontal Auto-Swing (Right and Left)	_	_	Worry Free "Reliability & Durability"	Self-Diagnosis (Digital, LED) Display	0	0
	3-D Airflow	_	_		Wiring-Error Check	_	_
	Comfort Airflow Mode	_	_		Anticorrosion Treatment of Outdoor Heat Exchanger	_	_
	3-Step Airflow (H/P Only)	_	_		Multi-Split / Split Type Compatible Indoor Unit	0	0
	Auto Fan Speed	0	0		Flexible Voltage Correspondence	0	0
	Indoor Unit Quiet Operation	0	0		High Ceiling Application	_	
	Night Quiet Mode (Automatic)	_	_		Chargeless	_	_
	Outdoor Unit Quiet Operation (Manual)		_	-	Either Side Drain (Right or Left)	_	_
Comfort	Intelligent Eye		_		Power-Selection	_	
Control	Quick Warming Function	_	_		5-Rooms Centralized Controller (Option)	0	0
	Hot-Start Function	_	_	Remote Control	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0
	Automatic Defrosting	_	_		Remote Control Adaptor (Normal Open Contact) (Option)	0	0
	Automatic Operation		_		DIII-NET Compatible (Adaptor) (Option)	0	0
Operation	Programme Dry Function	0	0	Remote	Wireless	0	0
	Fan Only	0	0	Controller	Wired	_	_
	New Powerful Operation (Non-Inverter)	_	_				
	Inverter Powerful Operation	0	0				
	Priority-Room Setting		_				
1.95-6-1	Cooling / Heating Mode Lock	_	_				
Lifestyle Convenience	Home Leave Operation	0	0				
	ECONO Mode		_				
	Indoor Unit On/Off Switch	0	0				
	Signal Reception Indicator	0	0				
	Temperature Display	_					
	Another Room Operation	_	I —			I	1

Note: O : Holding Functions
— : No Functions

List of Functions SiEBE12-625

Category	Functions	4MKS75E2(3)V1B	4MKS90DAVMB	Category	Functions	4MKS75E2(3)V1B	4MKS90DAVMB
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	_	
		-10	-10	1			
Basic	Operation Limit for Cooling (°CDB)	~ 46	46		Photocatalytic Deodorizing Filter	_	_
Function	Operation Limit for Heating (°CWB)	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_
	PAM Control	0	0	Health & Clean	Titanium Apatite Photocatalytic Air-Purifying Filter	_	_
O	Oval Scroll Compressor		_		Mold Proof Air Filter	_	_
Compressor	Swing Compressor	0	0		Wipe-clean Flat Panel	_	_
Compressor	Rotary Compressor Reluctance DC Motor	_	_		Washable Grille	_	_
		0	0		Mold Proof Operation	_	_
Power-Airfl	Power-Airflow Flap	_	_		Heating Dry Operation	_	_
	Power-Airflow Dual Flaps	_	_		Good-Sleep Cooling Operation	_	_
	Power-Airflow Diffuser		_	Timer	24-Hour On/Off Timer	_	_
	Wide-Angle Louvers	_	-	Timei	Night Set Mode	_	_
Comfortable	Vertical Auto-Swing (Up and Down)	_	_		Auto-Restart (after Power Failure)	_	_
Airflow	Horizontal Auto-Swing (Right and Left)	_	_	Worry Free	Self-Diagnosis (Digital, LED) Display	0	0
	3-D Airflow	_	_	"Reliability & Durability"	Wiring-Error Check	0	0
	Comfort Airflow Mode		_	Durabinity	Anticorrosion Treatment of Outdoor Heat Exchanger	0	0
	3-Step Airflow (H/P Only)	_	_		Multi-Split / Split Type Compatible Indoor Unit	_	_
	Auto Fan Speed	_	_	Flexibility	Flexible Voltage Correspondence	_	0
	Indoor Unit Quiet Operation	_	_		High Ceiling Application	_	_
	Night Quiet Mode (Automatic)	0	0		Chargeless	0	0
	Outdoor Unit Quiet Operation (Manual)	0	0		Either Side Drain (Right or Left)	_	_
Comfort	Intelligent Eye	_	_		Power-Selection	_	_
Control	Quick Warming Function	_	_		5-Rooms Centralized Controller (Option)	_	_
	Hot-Start Function	_	_	Remote Control	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	_	_
	Automatic Defrosting	_	_		Remote Control Adaptor (Normal Open Contact) (Option)	_	_
	Automatic Operation	_	_		DIII-NET Compatible (Adaptor) (Option)	_	_
Operation	Programme Dry Function	_	_	Remote	Wireless	_	_
	Fan Only	_	_	Controller	Wired	_	_
	New Powerful Operation (Non-Inverter)	_	_				
	Inverter Powerful Operation	_	_				
	Priority-Room Setting	0	0				
	Cooling / Heating Mode Lock	_	_				
Lifestyle Convenience	Home Leave Operation	_	_				
CONVENIENCE	ECONO Mode						
	Indoor Unit On/Off Switch						
	Signal Reception Indicator	_	_				
ĺ	Temperature Display	_	_				
	Another Room Operation	_	_				
Noto:	O : Holding Functions		-			-	-

 $\textbf{Note:} \ \ \bigcirc : \ \ \ \ \, \text{Holding Functions}$

 $-\!-\!:$ No Functions

SiEBE12-625 List of Functions

1.2 Heat Pump Models

Category	Functions	FTXG25/35EV1BW(S)	CTXG50EV1BW(S)	Category	Functions	FTXG25/35EV1BW(S)	CTXG50EV1BW(S)
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic, Virustatic Functions	_	_
Basic	Operation Limit for Cooling (°CDB)			1			
Function	Operation Limit for Heating (°CWB)		_	_	Photocatalytic Deodorizing Filter		_
	PAM Control	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_
	Oval Scroll Compressor	_	_	11. 11. 0	Titanium Apatite Photocatalytic	0	0
Compressor	Swing Compressor		_	Health & Clean	Air-Purifying Filter		
- Compressor	Rotary Compressor	_	_		Mold Proof Air Filter	0	0
	Reluctance DC Motor	_	_	1	Wipe-clean Flat Panel	0	0
	Power-Airflow Flap	0	0		Washable Grille	_	_
	Power-Airflow Dual Flaps	_	_		Mold Proof Operation	_	_
Comfortable	Power-Airflow Diffuser	_	_		Heating Dry Operation	_	_
	Wide-Angle Louvers	0	0		Good-Sleep Cooling Operation	_	_
	Vertical Auto-Swing (Up and Down)	0	0	Timer	24-Hour On/Off Timer	0	0
7	Horizontal Auto-Swing (Right and Left)	0	0	Timei	Night Set Mode	0	0
	3-D Airflow	0	0		Auto-Restart (after Power Failure)	0	0
	Comfort Airflow Mode	0	0	Worry Free	Self-Diagnosis (Digital, LED) Display	0	0
	3-Step Airflow (H/P Only)	_	_	"Reliability & Durability"	Wiring Error Check	_	_
	Auto Fan Speed	0	0		Anticorrosion Treatment of Outdoor		
	Indoor Unit Quiet Operation	0	0		Heat Exchanger	_	-
	Night Quiet Mode (Automatic)	_	_		Multi-Split / Split Type Compatible		
Comfort	Outdoor Unit Quiet Operation (Manual)	_	_	1	Indoor Unit	0	-
Control	Intelligent Eye	0	0	1	Flexible Voltage Correspondence	_	_
	Quick Warming Function	_	_	Flexibility	High Ceiling Application	_	_
	Hot-Start Function	0	0	1	Chargeless	_	_
	Automatic Defrosting		_	1	Either Side Drain (Right or Left)	0	0
	Automatic Operation	0	0	1	Power Selection	_	_
Operation	Programme Dry Function	0	0		5-Rooms Centralized Controller (Option)	0	0
	Fan Only	0	0	Remote	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0
	New Powerful Operation (Non-Inverter)	_	_	Control	Remote Control Adaptor	0	0
	Inverter Powerful Operation	0	0	1	(Normal Open Contact) (Option)		
	Priority-Room Setting	_	_]	DIII-NET Compatible (Adaptor) (Option)	0	0
	Cooling / Heating Mode Lock	_	_	Remote	Wireless	0	0
Lifestyle	Home Leave Operation	_	_	Controller	Wired	_	_
Convenience	ECONO Mode	_	_				
	Indoor Unit On/Off Switch	0	0				
	Signal Reception Indicator	0	0				
	Temperature Display		_				
	Another Room Operation		 				
Nata	O : Holding Functions						-

Note: O : Holding Functions

— : No Functions

List of Functions SiEBE12-625

Category	Functions	FTXS20-35D3VMW(L)	FTXS50D2V1W(L)	FTXS20-35CAVMB	Category	Functions	FTXS20-35D3VMW(L)	FTXS50D2V1W(L)	FTXS20-35CAVMB
	Inverter (with Inverter Power Control)	0	0	0		Air Purifying Filter with Bacteriostatic,			
Basic	Operation Limit for Cooling (°CDB)	_	_	_		Virustatic Functions			
Function	Operation Limit for Heating (°CWB)	_	_	_		Photocatalytic Deodorizing Filter	_	_	
	PAM Control	_	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_	0
	Oval Scroll Compressor	_	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	0	0	_
Compressor	Swing Compressor	_	_	_	Clean	Mold Proof Air Filter	0	0	0
	Rotary Compressor	_	_	_		Wipe-clean Flat Panel	0	0	0
	Reluctance DC Motor	_	_	_		Washable Grille	_	<u> </u>	
	Power-Airflow Flap	_	_	_		Mold Proof Operation	_	_	
	Power-Airflow Dual Flaps	0	0	0		Heating Dry Operation	_	<u> </u>	
	Power-Airflow Diffuser	_	_	_		Good-Sleep Cooling Operation	_	<u> </u>	
	Wide-Angle Louvers	0	0	0	Timer	24-Hour On/Off Timer	0	0	0
Comfortable Airflow	Vertical Auto-Swing (Up and Down)	0	0	0		Night Set Mode	0	0	0
, annow	Horizontal Auto-Swing (Right and Left)	_	_	_		Auto-Restart (after Power Failure)	0	0	0
	3-D Airflow	_	_	_	Worry Free "Reliability & Durability"	Self-Diagnosis (Digital, LED) Display	0	0	0
	Comfort Airflow Mode	0	0	_		Wiring Error Check	_	<u> </u>	
	3-Step Airflow (H/P Only)	_	_	_		Anticorrosion Treatment of Outdoor			
	Auto Fan Speed	0	0	0		Heat Exchanger	_	_	-
	Indoor Unit Quiet Operation	0	0	0		Multi-Split / Split Type Compatible			
	Night Quiet Mode (Automatic)	_	_	_		Indoor Unit	0	0	0
Comfort	Outdoor Unit Quiet Operation (Manual)	_	_	_	1	Flexible Voltage Correspondence	0	_	0
Control	Intelligent Eye	0	0	0	Flexibility	High Ceiling Application	_	<u> </u>	
	Quick Warming Function	_	_	_		Chargeless	_	_	_
	Hot-Start Function	0	0	0	1	Either side Drain (Right or Left)	0	0	0
	Automatic Defrosting	_	_	_		Power Selection	_	_	_
	Automatic Operation	0	0	0		5-Rooms Centralized Controller (Option)	0	0	0
Operation	Programme Dry Function	0	0	0]	Remote Control Adaptor		0	
	Fan Only	0	0	0	D	(Normal Open-Pulse Contact) (Option)	0		0
	New Powerful Operation (Non-Inverter)	_	_	_	Remote Control	Remote Control Adaptor (Normal Open Contact) (Option)	0	0	0
	Inverter Powerful Operation	0	0	0]	(Option)			
	Priority-Room Setting	_	_	_		DIII-NET Compatible (Adaptor) (Option)	0	0	0
l ifootul-	Cooling / Heating Mode Lock	_	_	_	Remote	Wireless	0	0	0
Lifestyle Convenience	Home Leave Operation	_	_	0	Controller	Wired	_	_	_
	ECONO Mode	0	0	_					
	Indoor Unit On/Off Switch	0	0	0					
	Signal Reception Indicator	0	0	0					
ĺ	Temperature Display	_	_	_					
	Another Room Operation	_	_	_					
Notes	O : Holding Functions					•		-	

Note: O: Holding Functions
—: No Functions

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SiEBE12-625 List of Functions

Category	Functions	FTXS50-71EV1B	FTXS71BAVMB	Category	Functions	FTXS50-71EV1B	FTXS71BAVMB
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	_	
Basic	Operation Limit for Cooling (°CDB)	_	_]	Photocatalytic Deodorizing Filter	_	_
Function	Operation Limit for Heating (°CWB)	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	0
	PAM Control	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	0	_
	Oval Scroll Compressor		_	Clean	Mold Proof Air Filter	0	0
Compressor	Swing Compressor		_	1	Wipe-clean Flat Panel	0	0
	Rotary Compressor Reluctance DC Motor		_	1	Washable Grille	_	
			_	1	Mold Proof Operation		_
	Power-Airflow Flap	_	_	1	Heating Dry Operation	_	_
	Power-Airflow Dual Flaps O O	Good-Sleep Cooling Operation		_			
	Power-Airflow Diffuser		_	Timer	24-Hour On/Off Timer	0	0
	Wide-Angle Louvers	0	0		Night Set Mode	0	0
Comfortable	Vertical Auto-Swing (Up and Down)	0	0	1	Auto-Restart (after Power Failure)	0	0
Airflow	Horizontal Auto-Swing (Right and Left)	0	0	Worry Free "Reliability & Durability"	Self-Diagnosis (Digital, LED) Display	0	0
	3-D Airflow	0	0		Wiring-Error Check		_
	Comfort Airflow Mode	_	_	,	Anticorrosion Treatment of Outdoor Heat Exchanger	_	_
	3-Step Airflow (H/P Only)	_	_		Multi-Split / Split Type Compatible Indoor Unit	0	0
	Auto Fan Speed	0	0	Flexibility	Flexible Voltage Correspondence		0
	Indoor Unit Quiet Operation	0	0		High Ceiling Application	_	_
	Night Quiet Mode (Automatic)	_	_		Chargeless		_
	Outdoor Unit Quiet Operation (Manual)		_	1	Either Side Drain (Right or Left)	0	0
Comfort	Intelligent Eye	0	0		Power-Selection		_
Control	Quick Warming Function	_	_		5-Rooms Centralized Controller (Option)	0	0
	Hot-Start Function	0	0	Remote	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0
	Automatic Defrosting	_	_	Control	Remote Control Adaptor (Normal Open Contact) (Option)	0	0
Operation	Automatic Operation	0	0		DIII-NET Compatible (Adaptor) (Option)	0	0
Орегалоп	Programme Dry Function	0	0	Remote	Wireless	0	0
	Fan Only	0	0	Controller	Wired	_	
	New Powerful Operation (Non-Inverter)	_	_				
	Inverter Powerful Operation	0	0				
	Priority-Room Setting	_	_				
	Cooling / Heating Mode Lock	_	_				
Lifestyle Convenience	Home Leave Operation	0	0				
30117011101100	ECONO Mode	_	_				
	Indoor Unit On/Off Switch	0	0				
	Signal Reception Indicator	0	0				
	Temperature Display	_	_				
	Another Room Operation		_				
Note:	O : Holding Functions						

Note: O : Holding Functions
— : No Functions

List of Functions SiEBE12-625

Category	Functions	FDXS25/35CAVMB	FDXS50/60CVMB	FDXS25/35EAVMB	Category	Functions	FDXS25/35CAVMB	FDXS50/60CVMB	FDXS25/35EAVMB
	Inverter (with Inverter Power Control)	0	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	_	_	-
Basic	Operation Limit for Cooling (°CDB)	_	_	_		Photocatalytic Deodorizing Filter	_	_	_
Function	Operation Limit for Heating (°CWB)	_	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_	_
	PAM Control	_	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	_	_	_
	Oval Scroll Compressor	_	_	_	Clean	Mold Proof Air Filter	0	0	0
Compressor	Swing Compressor	_	_	_		Wipe-clean Flat Panel	_	_	_
Compressor	Rotary Compressor	_	_	_		Washable Grille	_	_	
	Reluctance DC Motor	_	_	_		Mold Proof Operation	_	_	
	Power-Airflow Flap	_	_	_		Heating Dry Operation	_	_	_
	Power-Airflow Dual Flaps	_	_	_		Good-Sleep Cooling Operation	_	_	_
	Power-Airflow Diffuser	_	_	_	Timer	24-Hour On/Off Timer	0	0	0
Comfortable	Wide-Angle Louvers	_	_	_	Timor	Night Set Mode	0	0	0
Airflow	Vertical Auto-Swing (Up and Down)	_	_	_		Auto-Restart (after Power Failure)	0	0	0
	Horizontal Auto-Swing (Right and Left)	_	_	_	Worry Free	Self-Diagnosis (Digital, LED) Display	0	0	0
	3-D Airflow	_	_	_	"Reliability & Durability"	Wiring-Error Check	_	_	_
	3-Step Airflow (H/P Only)	_	_	_	Durability	Anticorrosion Treatment of Outdoor Heat Exchanger	_	_	
	Auto Fan Speed	0	0	0		Multi-Split / Split Type Compatible Indoor Unit	0	0	0
	Indoor Unit Quiet Operation	0	0	0		Flexible Voltage Correspondence	0	0	0
	Night Quiet Mode (Automatic)	_	_	_	Flexibility	High Ceiling Application	_	_	_
Comfort	Outdoor Unit Quiet Operation (Manual)	_	_	_		Chargeless	_	_	_
Control	Intelligent Eye	_	_	_		Either Side Drain (Right or Left)	_	_	_
	Quick Warming Function	_	_	_		Power-Selection	_	_	_
	Hot-Start Function	0	0	0		5-Rooms Centralized Controller (Option)	0	0	0
	Automatic Defrosting	_	_	_	Remote Control	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0	0
Operation	Automatic Operation	0	0	0		Remote Control Adaptor (Normal Open Contact) (Option)	0	0	0
Operation	Programme Dry Function	0	0	0		DIII-NET Compatible (Adaptor) (Option)	0	0	0
	Fan Only	0	0	0	Remote	Wireless	0	0	0
	New Powerful Operation (Non-Inverter)	_	_	_	Controller	Wired	_	_	_
Lifestyle Convenience	Inverter Powerful Operation	0	0	0					
	Priority-Room Setting	_	_	_					
	Cooling / Heating Mode Lock	_	_	_					
	Home Leave Operation	0	0	0					
	ECONO Mode								
	Indoor Unit On/Off Switch	0	0	0					
	Signal Reception Indicator	0	0	0					
	Temperature Display	_	_	_					
	Another Room Operation	_	_	_					
Note:	O : Holding Functions	-			•	•	•	•	

Note: O : Holding Functions
— : No Functions

SiEBE12-625 List of Functions

Category	Functions	FLXS25-60BAVMB	FVXS25-50BAVMB	Category	Functions	FLXS25-60BAVMB	FVXS25-50BAVMB
	Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	0	0
D	Operation Limit for Cooling (°CDB)	_	_	1	Photocatalytic Deodorizing Filter	0	0
Basic Function	Operation Limit for Heating (°CWB)	_	_		Air Purifying Filter with Photocatalytic Deodorizing Function	_	_
	PAM Control	_	_	Health &	Titanium Apatite Photocatalytic Air-Purifying Filter	_	_
	Oval Scroll Compressor		_	Clean	Mold Proof Air Filter	0	0
Compressor	Swing Compressor	_	_		Wipe-clean Flat Panel	_	_
Compressor	Rotary Compressor	_	_		Washable Grille	_	0
	Reluctance DC Motor	_	_		Mold Proof Operation	_	_
	Power-Airflow Flap	_	_		Heating Dry Operation	_	_
	Power-Airflow Dual Flaps		_		Good-Sleep Cooling Operation	_	_
	Power-Airflow Diffuser	_	_	- Timer	24-Hour On/Off Timer	0	0
	Wide-Angle Louvers	_	0	Timei	Night Set Mode	0	0
Comfortable	Vertical Auto-Swing (Up and Down)	0	0		Auto-Restart (after Power Failure)	0	0
Airflow	Horizontal Auto-Swing (Right and Left)		_	Worry Free	Self-Diagnosis (Digital, LED) Display	0	0
	3-D Airflow	_	_ _	"Reliability & Durability"	Wiring-Error Check	_	_
	Comfort Airflow Mode	_	_	Durability	Anticorrosion Treatment of Outdoor Heat Exchanger	_	_
	3-Step Airflow (H/P Only)	_	0		Multi-Split / Split Type Compatible Indoor Unit	0	0
	Auto Fan Speed	0	0		Flexible Voltage Correspondence	0	0
	Indoor Unit Quiet Operation	0	0	Flexibility	High Ceiling Application	_	_
	Night Quiet Mode (Automatic)	_	_		Chargeless	_	_
	Outdoor Unit Quiet Operation (Manual)	_	_		Either Side Drain (Right or Left)	_	_
Comfort	Intelligent Eye	_	_		Power-Selection	_	_
Control	Quick Warming Function	_	_		5-Rooms Centralized Controller (Option)	0	0
	Hot-Start Function	0	0	Remote Control	Remote Control Adaptor (Normal Open-Pulse Contact) (Option)	0	0
	Automatic Defrosting		_		Remote Control Adaptor (Normal Open Contact) (Option)	0	0
	Automatic Operation	0	0		DIII-NET Compatible (Adaptor) (Option)	0	0
Operation	Programme Dry Function	0	0	Remote	Wireless	0	0
	Fan Only	0	0	Controller	Wired	_	<u> </u>
	New Powerful Operation (Non-Inverter)	_	_				
Lifestyle Convenience	Inverter Powerful Operation	0	0				
	Priority-Room Setting						
	Cooling / Heating Mode Lock	_	_				
	Home Leave Operation	0	0				
	ECONO Mode		_				
	Indoor Unit On/Off Switch	0	0				
	Signal Reception Indicator	0	0				
	Temperature Display	_	l —				
	·			-			

Note: O : Holding Functions
— : No Functions

List of Functions SiEBE12-625

Inverter (with Inverter Power Control)	Category	Functions	4MXS68E2(3)V1B	4MXS80DAVMB	Category	Functions	4MXS68E2(3)V1B	4MXS80DAVMB
Department Compressor		Inverter (with Inverter Power Control)	0	0		Air Purifying Filter with Bacteriostatic & Virustatic Functions	_	_
Basic Function		On anotice Limit for Cooling (9CDD)	_	1		Dhata actal dia Dandarinia Eller		
Operation Limit for Heating ("CWB) 15.5	Basic	Operation Limit for Cooling (CDB)		1		Photocatalytic Deodonizing Filter		
15.5 15.5	Function	Operation Limit for Heating (°CM/P)	_	_		Air Purifying Filter with Photocatalytic		
PAM Control O O O Clean Air-Puntying Filter		Operation Limit for Fleating (CVVB)		1		Deodorizing Function		
Swing Compressor 0 0 0 0 0 0 0 0 0		PAM Control	0	0		Air-Purifying Filter	_	_
Rotary Compressor Rotary Compressor Rotary Compressor Reluctance DC Motor O O O Pacifical Mode Proof Operation O O O Pacifical Mode Proof Operation O O O Pacifical Mode Proof Operation O O O O Pacifical Mode Proof Operation O O O O Pacifical Mode Proof Operation O O O O O O Pacifical Mode Proof Airflow Diffuser O O O O O O O O O O O O Pacifical Mode Proof Proof Pacifical Mode O O O O O O O O O O O O O O O O O O		Oval Scroll Compressor	_	_		Mold Proof Air Filter	_	
Retary Compressor	Compressor	Swing Compressor	0	0		Wipe-clean Flat Panel	_	_
Power-Airflow Plap Power-Airflow Diffuser Power-Airflow Mode Power-Airflow Mode Power-Airflow Diffuser Power-	Compressor	Rotary Compressor	_			Washable Grille	_	_
Power-Airflow Dual Flaps			0	0		Mold Proof Operation	_	_
Power-Airflow Diffuser		Power-Airflow Flap	_	_		Heating Dry Operation	_	_
Varical Auto-Swing (Up and Down)		Power-Airflow Dual Flaps	_			Good-Sleep Cooling Operation	_	_
Vertical Auto-Swing (Up and Down) Auto-Resitar (after Power Failure) Auto-Resitar (after Power Failure) Auto-Resitar (after Power Failure) Auto-Resitar (after Power Failure) Auto-Resitar (after Power Failure) Auto-Resitar (after Power Failure) Autoratic (Power Failure) Autoratic Power Failure) Autoratic Power Failure) Autoratic Power Failure) Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Automatic Operation Autom				_	Timer		_	_
Horizontal Auto-Swing (Right and Left)			_	_	1	•	_	_
S-D Airflow Comfort Airflow Mode Comfort Comtrol		,	_	_		` '	_	_
Comfort Airflow Mode	Airflow	,	_	_	Worry Free			0
Comfort Airflow Mode		3-D Airflow	_	_		Wiring-Error Check	0	0
Automatic Operation		Comfort Airflow Mode	_	_	,	Heat Exchanger	0	0
Indoor Unit Quiet Operation		, , , , , , , , , , , , , , , , , , , ,	_	_		Indoor Unit	_	_
Night Quiet Mode (Automatic)		· ·	_	_			_	0
Outdoor Unit Quiet Operation (Manual)			_	_	Flexibility	· · · · · · · · · · · · · · · · · · ·	_	_
Intelligent Eye		,			_			40m
Quick Warming Function		' '	0	0		, , ,	_	_
Quick Warming Function O O O Hot-Start Function Hot-Start Function O O Automatic Defrosting O O O Remote Control Adaptor (Normal Open-Pulse Contact) (Option) Option Operation Ope		Intelligent Eye	_	_			_	_
Automatic Defrosting	Control	Quick Warming Function	0	0		(Option)	_	_
Automatic Defrosting		Hot-Start Function	_	_		(Normal Open-Pulse Contact) (Option)	_	_
Operation Programme Dry Function — Remote Controller Wireless — Fan Only — — Wired — New Powerful Operation (Non-Inverter) — — — Inverter Powerful Operation — — — Priority-Room Setting O O — Cooling / Heating Mode Lock O O — Home Leave Operation — — — ECONO Mode — — — Indoor Unit On/Off Switch — — — Signal Reception Indicator — — — Temperature Display — — —		3	0	0		(Normal Open Contact) (Option)	_	_
Fan Only	_	'					_	
New Powerful Operation	Operation	· '	_			115.555	_	
Inverter Powerful Operation		-	_		Controller	Wired	_	
Priority-Room Setting		(Non-Inverter)	_	_				
Cooling / Heating Mode Lock		· · · · · · · · · · · · · · · · · · ·	_					
Lifestyle Convenience Home Leave Operation —		, ,						
ECONO Mode			0	0				
ECONO Mode — — Indoor Unit On/Off Switch — — Signal Reception Indicator — — Temperature Display — —		·	_					
Signal Reception Indicator — — — Temperature Display — — —			_					
Temperature Display — —			_					
		· '	_					
Another Ream Operation			_					
Note: O : Holding Functions		Another Room Operation	_					

Note: O: Holding Functions
—: No Functions

Part 2 Specifications

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Specifications SiEBE12-625

1. Specifications

1.1 Indoor Units - Cooling Only

Wall Mounted Type 50Hz 230V

Model				FTKS20D3VMW	FTKS20D3VML
Rated Capacity				2.0kW Class	2.0kW Class
Front Panel Co	lor			White	Silver Line
			Н	8.7 (307)	8.7 (307)
Air Flow Rates		m³/min	M	6.7 (237)	6.7 (237)
All Flow Rates		(cfm)	L	4.7 (166)	4.7 (166)
			SL	3.9 (138)	3.9 (138)
	Туре			Cross Flow Fan	Cross Flow Fan
Fan	Motor Outpu	ut	W	40	40
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto
Air Direction Co	ontrol			Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Currer	nt (Rated)		Α	0.16	0.16
Power Consum	ption (Rated)		W	35	35
Power Factor			%	95.1	95.1
Temperature C	ontrol		•	Microcomputer Control	Microcomputer Control
Dimensions (H:	«W×D)		mm	283×800×195	283×800×195
Packaged Dime	ensions (H×W	'xD)	mm	265×855×340	265×855×340
Weight			kg	9	9
Gross Weight			kg	12	12
Operation Sound	H/L/SL		dBA	38/25/22	38/25/22
Sound Power	Sound Power H		dBA	56	56
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
		Liquid	mm	ф 6.4	ф 6.4
Piping Connect	ion	Gas	mm	φ 9.5	φ 9.5
Drain		mm	ф18.0	ф18.0	
Drawing No.	•			3D051079	3D051080

Model				FTKS25D3VMW	FTKS25D3VML	
Rated Capacity				2.5kW Class	2.5kW Class	
Front Panel Col	or			White	Silver Line	
			Н	8.7 (307)	8.7 (307)	
Air Flow Rates		m³/min	М	6.7 (237)	6.7 (237)	
All Flow Rates		(cfm)	L	4.7 (166)	4.7 (166)	
			SL	3.9 (138)	3.9 (138)	
	Туре			Cross Flow Fan	Cross Flow Fan	
Fan	Motor Outp	ut	W	40	40	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ntrol		•	Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.16	0.16	
Power Consum	ption (Rated))	W	35	35	
Power Factor			%	95.1	95.1	
Temperature Co	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (Hx	«W×D)		mm	283×800×195	283×800×195	
Packaged Dime	ensions (H×W	/xD)	mm	265×855×340	265×855×340	
Weight			kg	9	9	
Gross Weight			kg	12	12	
Operation Sound	H/L/SL		dBA	38/25/22	38/25/22	
Sound Power	Power H		dBA	56	56	
Heat Insulation	Heat Insulation			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ction Gas mm		φ 9.5			
		Drain	mm	ф18.0	ф18.0	
Drawing No.				3D051081	3D051082	

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

50Hz 230V

Model				FTKS35D3VMW	FTKS35D3VML	
Rated Capacity	,			3.5kW Class	3.5kW Class	
Front Panel Co	lor			White	Silver Line	
			Н	8.9 (314)	8.9 (314)	
Air Flow Rates		m³/min	M	6.9 (244)	6.9 (244)	
All Flow Rates		(cfm)	L	4.8 (169)	4.8 (169)	
			SL	4.0 (141)	4.0 (141)	
	Туре			Cross Flow Fan	Cross Flow Fan	
Fan	Motor Outpu	ıt	W	40	40	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ontrol			Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.18	0.18	
Power Consum	ption (Rated)		W	40	40	
Power Factor			%	96.6	96.6	
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (H:	×W×D)		mm	283×800×195	283×800×195	
Packaged Dime	ensions (H×W	×D)	mm	265×855×340	265×855×340	
Weight			kg	9	9	
Gross Weight			kg	12	12	
Operation Sound	H/L/SL		dBA	39/26/23	39/26/23	
Sound Power	Power H		dBA	57	57	
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
	ı	Liquid	mm	ф 6.4	ф 6.4	
Piping Connection		Gas	mm	φ 9.5	φ 9.5	
			mm	φ18.0	ф18.0	
Drawing No.	'			3D051083	3D051084	

Model				FTKS20CAVMB	FTKS25CAVMB		
Rated Capacity				2.0kW Class	2.5kW Class		
Front Panel Co	lor			White	White		
			Н	7.7 (272)	7.7 (272)		
Air Flow Rates		m³/min	М	5.9 (208)	5.9 (208)		
Air Flow Rates		(cfm)	L	4.2 (148)	4.2 (148)		
			SL	3.6 (127)	3.6 (127)		
	Туре			Cross Flow Fan	Cross Flow Fan		
Fan	Motor Outp	ut	W	18	18		
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto		
Air Direction Co	ontrol			Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward		
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof		
Running Currer	nt (Rated)		Α	0.18	0.18		
Power Consum	ption (Rated)	W	40	40		
Power Factor			%	96.6	96.6		
Temperature C	ontrol			Microcomputer Control	Microcomputer Control		
Dimensions (Ha	«W×D)		mm	273×784×195	273×784×195		
Packaged Dime	ensions (HxV	V×D)	mm	258×834×325	258×834×325		
Weight			kg	7.5	7.5		
Gross Weight			kg	11	11		
Operation Sound	H/M/L/SL		dBA	38/32/25/22	38/32/25/22		
Sound Power	ver H dBA		dBA	56	56		
Heat Insulation	Heat Insulation			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes		
		Liquid	mm	ф 6.4	ф 6.4		
Piping Connect	ion	Gas	mm	ф 9.5	ф 9.5		
		Drain	mm	φ18.0	φ18.0		
Drawing No.				3D050947	3D050949		

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

50Hz 230V

Model				FTKS35CAVMB	FTKS50D2V1W
Rated Capacity				3.5kW Class	5.0kW Class
Front Panel Col	or			White	White
			Н	7.7 (272)	11.4 (402)
Air Flow Rates		m³/min	М	6.0 (212)	9.3 (328)
All Flow Rates		(cfm)	L	4.4 (155)	7.1 (251)
			SL	3.8 (134)	6.2 (219)
	Туре		,	Cross Flow Fan	Cross Flow Fan
Fan	Motor Outp	ut	W	18	40
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto
Air Direction Co	ntrol		,	Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof
Running Currer	t (Rated)		Α	0.18	0.21
Power Consum	ption (Rated))	W	40	48
Power Factor			%	96.6	99.4
Temperature Co	ontrol			Microcomputer Control	Microcomputer Control
Dimensions (H)	(W×D)		mm	273×784×195	283×800×195
Packaged Dime	nsions (HxV	V×D)	mm	258×834×325	265×855×340
Weight			kg	7.5	9
Gross Weight			kg	11	12
Operation Sound	H/M/L/SL		dBA	39/33/26/23	46/41/35/32
Sound Power	er H		dBA	57	62
Heat Insulation			·	Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
		Liquid	mm	ф 6.4	ф 6.4
Piping Connection		Gas	mm	φ 9.5	ф12.7
			mm	ф18.0	ф18.0
Drawing No.			'	3D050951	3D051812

Model				FTKS50D2V1L	FTKS50EV1B	
Rated Capacity				5.0kW Class	5.0kW Class	
Front Panel Co	lor			Silver Line	White	
			Н	11.4 (402)	14.7 (519)	
Air Flow Rates		m³/min	М	9.3 (328)	12.4 (438)	
All Flow Rates		(cfm)	L	7.1 (251)	10.3 (364)	
			SL	6.2 (219)	9.5 (335)	
	Туре			Cross Flow Fan	Cross Flow Fan	
Fan	Motor Outpu	ut	W	40	43	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ntrol			Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.21	0.15	
Power Consum	ption (Rated)		W	48	34	
Power Factor			%	99.4	98.6	
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (Hx	«W×D)		mm	283×800×195	290×1,050×238	
Packaged Dime	ensions (HxW	/xD)	mm	265×855×340	337×1,147×366	
Weight			kg	9	12	
Gross Weight			kg	12	17	
Operation Sound	H/M/L/SL		dBA	46/41/35/32	43/39/34/31	
Sound Power	r H		dBA	62	59	
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
Piping Connection		Liquid	mm	ф 6.4	ф 6.4	
		Gas mm		g Connection Gas		ф12.7
	Drair		mm	ф18.0 ф18.0		
Drawing No.	'		_	3D051813	3D051643	

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

50Hz 230V

Model				FTKS60EV1B	FTKS71EV1B	
Rated Capacity				6.0kW Class	7.1kW Class	
Front Panel Co	lor			White	White	
			Н	16.2 (572)	17.4 (614)	
Air Flow Rates		m³/min	М	13.6 (480)	14.6 (515)	
All Flow Rates		(cfm)	L	11.4 (402)	11.6 (409)	
			SL	10.2 (360)	10.6 (374)	
	Туре			Cross Flow Fan	Cross Flow Fan	
Fan	Motor Outpo	ut	W	43	43	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ontrol		•	Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.18	0.20	
Power Consum	ption (Rated)		W	40	45	
Power Factor			%	96.6	97.8	
Temperature C	ontrol		•	Microcomputer Control	Microcomputer Control	
Dimensions (Hx	«W×D)		mm	290×1,050×238	290×1,050×238	
Packaged Dime	ensions (H×W	/×D)	mm	337×1,147×366	337×1,147×366	
Weight			kg	12	12	
Gross Weight			kg	17	17	
Operation Sound	H/M/L/SL		dBA	45/41/36/33	46/42/37/34	
Sound Power	r H		dBA	61	63	
Heat Insulation	Heat Insulation			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	oing Connection Gas		mm	ф 12.7	ф 15.9	
		Drain	mm	ф18.0	φ18.0	
Drawing No.				3D051644	3D052804	
•						

Model				FTKS71BAVMB		
Rated Capacity				7.1kW Class		
Front Panel Co	lor			White		
			Н	16.7 (590)		
Air Flow Rates		m³/min	М	14.2 (501)		
Air Flow Rates		(cfm)	L	11.6 (409)		
			SL	10.6 (374)		
	Туре		•	Cross Flow Fan		
Fan	Motor Out	put	W	43		
	Speed		Steps	5 Steps, Silent, Auto		
Air Direction Co	ntrol		•	Right, Left, Horizontal, Downward		
Air Filter				Removable-Washable-Mildew Proof		
Running Currer	nt (Rated)		Α	0.20		
Power Consum		(t	W	45		
Power Factor			%	96.4		
Temperature C	ontrol			Microcomputer Control		
Dimensions (H:	«W×D)		mm	290×1,050×238		
Packaged Dime	ensions (Hx	W×D)	mm	337×1,147×336		
Weight			kg	12		
Gross Weight			kg	17		
Operation Sound	H/M/L/SL		dBA	46/42/37/34		
Sound Power H dBA		dBA	63			
Heat Insulation		•	Both Liquid and Gas Pipes			
			mm	ф 6.4		
Piping Connect	Piping Connection Gas Drain		mm	ф15.9		
			mm	ф18.0		
Drawing No.				3D050879		

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

Specifications SiEBE12-625

Duct Connected Type

50Hz 230V

Model				FDKS25CAVMB	FDKS35CAVMB	
Rated Capacity				2.5kW Class	3.5kW Class	
Front Panel Color				_	_	
			Н	9.5 (335)	10.0 (353)	
Air Flow Rates		m³/min	М	8.8 (311)	9.3 (328)	
Air Flow Rates		(cfm)	L	8.0 (282)	8.5 (300)	
			SL	6.7 (237)	7.0 (247)	
	Туре			Sirocco Fan	Sirocco Fan	
Fan	Motor Outp	out	W	62	62	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.47	0.47	
Power Consum	ption (Rated)	W	100	100	
Power Factor			%	92.5	92.5	
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (H:	×W×D)		mm	200×900×620	200×900×620	
Packaged Dime	ensions (HxV	V×D)	mm	266×1,106×751	266×1,106×751	
Weight			kg	25	25	
Gross Weight			kg	31	31	
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29	
External Static	Pressure		Pa	40	40	
Moisture Remo	val		L/h	1.2	1.9	
Heat Insulation	Heat Insulation			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ion	Gas	mm	φ 9.5	ф 9.5	
		Drain	mm	VP20 (O.D. \$\phi26 / I.D. \$\phi20)	VP20 (O.D. φ26 / I.D. φ20)	
Drawing No.				3D048947C	3D048948C	

Model				FDKS50CVMB	FDKS60CVMB	
Rated Capacity	,			5.0kW Class	6.0kW Class	
Front Panel Co	Front Panel Color			_	_	
			Н	12.0 (424)	16.0 (565)	
Air Flow Rates		m³/min	М	11.0 (388)	14.8 (523)	
All Flow Rates		(cfm)	L	10.0 (353)	13.5 (477)	
			SL	8.4 (297)	11.2 (395)	
	Туре	•		Sirocco Fan	Sirocco Fan	
Fan	Motor Out	put	W	130	130	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.64	0.74	
Power Consum	ption (Rated	d)	W	140	160	
Power Factor			%	95.1	94.0	
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (H:	×W×D)		mm	200×900×620	200×1,100×620	
Packaged Dime	ensions (Hx	W×D)	mm	266×1,106×751	266×1,306×751	
Weight			kg	27	30	
Gross Weight			kg	34	37	
Operation Sound	H/M/L/SL		dBA	37/35/33/31	38/36/34/32	
External Static	Pressure		Pa	40	40	
Moisture Remo	val		L/h	2.9	3.9	
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ion	Gas	mm	φ12.7	φ12.7	
		Drain	mm	VP20 (O.D. φ26 / I.D. φ20)	VP20 (O.D. ф26 / I.D. ф20)	
Drawing No.				3D052134A	3D052135	

Note:

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

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

SiEBE12-625 Specifications

50Hz 230V

Model				FDKS25EAVMB	FDKS35EAVMB	
Rated Capacity	r			2.5kW Class	3.5kW Class	
Front Panel Color				_	_	
			Н	8.7 (307)	8.7 (307)	
Air Flow Rates		m³/min	М	8.0 (282)	8.0 (282)	
Air Flow Rates		(cfm)	L	7.3 (258)	7.3 (258)	
			SL	6.2 (219)	6.2 (219)	
	Туре			Sirocco Fan	Sirocco Fan	
Fan	Motor Out	put	W	62	62	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Filter			•	Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.48	0.48	
Power Consum	ption (Rated	d)	W	71	71	
Power Factor			%	64.3	64.3	
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (H:	×W×D)		mm	200×700×620	200×700×620	
Packaged Dime	ensions (Hx	W×D)	mm	274×906×751	274×906×751	
Weight			kg	21	21	
Gross Weight			kg	29	29	
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29	
External Static	Pressure		Pa	30	30	
Moisture Remo	val		L/h	1.2	1.9	
Heat Insulation			•	Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ion	Gas	mm	ф 9.5	φ 9.5	
		Drain	mm	VP20 (O.D.\phi 26 / I.D.\phi 20)	VP20 (O.D.\phi 26 / I.D.\phi 20)	
Drawing No.				3D051882A	3D051884A	

Note:

The operating sound is based on the rear side suction inlet and the external static pressure 30 Pa.
 Operating sound for under side suction inlet: [operating sound for rear side suction inlet]+6 dB.
 However, when installation to which the external static pressure becomes low is carried out, 6 dB or more may go up.

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

Specifications SiEBE12-625

Floor / Ceiling Suspended Dual Type

50Hz 230V

Model			FLKS25BAVMB	FLKS35BAVMB		
Rated Capacity				2.5kW Class	3.5kW Class	
Front Panel Color				Almond White	Almond White	
			Н	7.6 (268)	8.6 (304)	
Air Flow Rates		m³/min	M	6.8 (240)	7.6 (268)	
All Flow Rates		(cfm)	L	6.0 (212)	6.6 (233)	
			SL	5.2 (184)	5.6 (198)	
	Туре			Sirocco Fan	Sirocco Fan	
Fan	Motor Outp	out	W	34	34	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ntrol			Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.34	0.36	
Power Consum	ption (Rated	l)	W	74	78	
Power Factor			%	94.6	94.2	
Temperature Co	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (H)	«W×D)		mm	490×1,050×200	490×1,050×200	
Packaged Dime	ensions (Hx\	N×D)	mm	566×1,100×280	566×1,100×280	
Weight			kg	16	16	
Gross Weight			kg	22	22	
Operation Sound	H/M/L/SL		dBA	37/34/31/28	38/35/32/29	
Sound Power	nd Power H dBA		dBA	53	54	
Heat Insulation				Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
Liquid		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ion	Gas	mm	φ 9.5	ф 9.5	
		Drain	mm	φ18.0	φ18.0	
Drawing No.				3D050862	3D050864	

Model			FLKS50BAVMB	FLKS60BAVMB		
Rated Capacity				5.0W Class	6.0kW Class	
Front Panel Co	Front Panel Color			Almond White	Almond White	
			Н	11.4 (402)	12.0 (424)	
Air Flow Rates		m³/min	M	10.0 (353)	10.7 (378)	
All Flow Rates		(cfm)	L	8.5 (300)	9.3 (328)	
			SL	7.5 (265)	8.3 (293)	
	Туре			Sirocco Fan	Sirocco Fan	
Fan	Motor Out	out	W	34	34	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ntrol		'	Right, Left, Horizontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.45	0.45	
Power Consum	ption (Rated	i)	W	96	98	
Power Factor			%	92.8	94.7	
Temperature C	ontrol		'	Microcomputer Control	Microcomputer Control	
Dimensions (Hx	(W×D)		mm	490×1,050×200	490×1,050×200	
Packaged Dime	ensions (Hx\	N×D)	mm	280×1,100×566	280×1,100×566	
Weight			kg	17	17	
Gross Weight			kg	24	24	
Operation Sound	H/M/L/SL		dBA	47/43/39/36	48/45/41/39	
Sound Power	Sound Power H dBA		dBA	63	64	
Heat Insulation	•			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
	Liquid		mm	ф 6.4	Φ 6.4	
Piping Connect	ion	Gas	mm	φ12.7	ф12.7	
		Drain	mm	ф18.0	ф18.0	
Drawing No.				3D050896	3D050881	

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

Floor Standing Type

50Hz 230V

Model			FVKS25BAVMB	FVKS35BAVMB		
Rated Capacity				2.5kW Class	3.5kW Class	
Front Panel Color				Almond White	Almond White	
			Н	8.1 (286)	8.3 (293)	
Air Flow Rates		m³/min	M	6.2 (219)	6.3 (222)	
All Flow Rates		(cfm)	L	4.3 (152)	4.3 (152)	
			SL	3.4 (120)	3.4 (120)	
	Туре			Cross Flow Fan	Cross Flow Fan	
Fan	Motor Out	out	W	14+14	14+14	
	Speed		Steps	5 Steps, Silent, Auto	5 Steps, Silent, Auto	
Air Direction Co	ntrol			Right, Left, Horizontal, Upward	Right, Left, Horizontal, Upward	
Air Filter				Removable-Washable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	nt (Rated)		Α	0.14	0.14	
Power Consum	ption (Rated	l)	W	32	32	
Power Factor			%	99.4		
Temperature C	ontrol			Microcomputer Control	Microcomputer Control	
Dimensions (Ha	«W×D)		mm	600×650×195	600×650×195	
Packaged Dime	ensions (Hx\	N×D)	mm	714×770×294	714×770×294	
Weight			kg	13	13	
Gross Weight			kg	19	19	
Operation Sound	H/M/L/SL		dBA	38/32/26/23	39/33/27/24	
Sound Power	Sound Power H dB		dBA	54	55	
Heat Insulation	•			Both Liquid and Gas Pipes	Both Liquid and Gas Pipes	
		Liquid	mm	ф 6.4	ф 6.4	
Piping Connect	ion	Gas	mm	ф 9.5	ф 9.5	
		Drain	mm	ф18.0	ф18.0	
Drawing No.				3D050870	3D050872	

Model				FVKS50BAVMB		
Rated Capacity				5.0kW Class		
Front Panel Col	Front Panel Color			Almond White		
			Н	10.8 (381)		
Air Flow Rates		m³/min	М	9.2 (325)		
All Flow Rates		(cfm)	L	7.7 (272)		
			SL	6.7 (237)		
	Туре	•		Cross Flow Fan		
Fan	Motor Out	out	W	14+14		
	Speed		Steps	5 Steps, Silent, Auto		
Air Direction Co	ntrol			Right, Left, Horizontal, Upward		
Air Filter				Removable-Washable-Mildew Proof		
Running Curren	t (Rated)		Α	0.26		
Power Consum	otion (Rated	i)	W	55		
Power Factor			%	92.0		
Temperature Co	ontrol			Microcomputer Control		
Dimensions (Hx	:W×D)		mm	600×650×195		
Packaged Dime	nsions (Hx	N×D)	mm	714×770×294		
Weight			kg	13		
Gross Weight			kg	19		
Operation Sound	H/M/L/SL		dBA	44/40/36/33		
Sound Power	Sound Power H		dBA	56		
Heat Insulation				Both Liquid and Gas Pipes		
			mm	ф 6.4		
Piping Connecti	on	Gas	mm	ф12.7		
		Drain	mm	ф20.0		
Drawing No.		!	1	3D050894		

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

Specifications SiEBE12-625

1.2 Outdoor Units - Cooling Only

50Hz 230V

Model				4MKS75E2(3)V1B	4MKS90DAVMB
Cooling Capaci	oling Capacity kW			_	_
Power Consum	ption		W	_	_
Running Currer	nt		Α	_	_
Casing Color				Ivory White	Ivory White
,	Туре			Hermetically Sealed Swing Type	Hermetically Sealed Swing Type
Compressor	Model			2YC45BXD	2YC45BXD
•	Motor Outp	out	W	1,380	1,380
D . (:)	Model			FVC50K	FVC50K
Refrigerant Oil	Charge		L	0.75	0.75
Defriesess	Туре			R-410A	R-410A
Refrigerant	Charge		kg	2.3	3.1
		3/:	Н	51	48.5
Ala Flanc Barra		m³/min	L	45	42
Air Flow Rates			Н	1,801	1,713
		cfm	L	1,589	1,483
	Туре	e		Propeller	Propeller
Г	Motor Output		W	53	51
Fan	Running C	Running Current		H: 0.33 / L: 0.25	H: 0.44 / L: 0.34
	Power Cor	sumption	W	H: 68 / L: 46	H: 60 / L: 41
Starting Current	t		Α	8.7	9.1
Dimensions (Hx	«W×D)		mm	735×936×300	908×900×320
Packaged Dime	ensions (HxV	V×D)	mm	784×992×390	1,025×926×402
Weight			kg	58	66
Gross Weight			kg	64	79
Operation Soun	ıd		dBA	48	48
Sound Power			dBA	61	61
		Liquid	mm	ф 6.4×4	ф 6.4×4
Piping Connect	ion	Gas	mm	φ 9.5×2, φ12.7×1, φ15.9×1	φ 9.5×1, φ12.7×1, φ15.9×2
		Drain	mm	ф18.0	Ф25.0
Heat Insulation			•	Both Liquid and Gas Pipes	Both Liquid and Gas Pipes
No. of Wiring C	onnection			3 for Power Supply, 4 for Interunit Wiring	3 for Power Supply, 4 for Interunit Wiring
Max. Interunit P	lining Longth	,	m	60 (for Total of Each Room)	70 (for Total of Each Room)
			m	25 (for One Room)	25 (for One Room)
Amount of Addi	tional Charg	е	g/m	Chargeless	Chargeless
Max. Installation	Loight Diff	orongo	m	15 (between Indoor Unit and Outdoor Unit)	15 (between Indoor Unit and Outdoor Unit)
iviax. IIIStallatioi	i neigni Dili	erence	m	15 (between Indoor Units)	15 (between Indoor Units)
Drawing No.				3D051892#1	3D050821#1A

Note:

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

Cooling	Piping Length
Indoor ; 27°CDB/19°CWB Outdoor ; 35°CDB	7.5m

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

1.3 Indoor Units - Heat Pump

Wall Mounted Type 50Hz 230V

Model				FTXG25	EV1BW	FTXG25EV1BS		
				Cooling	Heating	Cooling	Heating	
Rated Capacity				2.5kW	Class	2.5kW	2.5kW Class	
Front Panel Co	lor			Mat Crys	tal White	Mat Crys	stal Silver	
			Н	7.7 (271)	9.0 (317)	7.7 (271)	9.0 (317)	
Air Flow Rates		m³/min	М	6.1 (215)	7.9 (278)	6.1 (215)	7.9 (278)	
All Flow Rates		(cfm)	L	4.7 (165)	6.7 (236)	4.7 (165)	6.7 (236)	
			SL	3.8 (134)	5.4 (190)	3.8 (134)	5.4 (190)	
	Туре		,	Cross F	low Fan	Cross F	low Fan	
Fan	Motor Outp	ut	W	4	0	4	.0	
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	Silent, Auto	
Air Direction Co	ontrol		,	Right, Left, Horiz	ontal, Downward	Right, Left, Horiz	ontal, Downward	
Air Filter				Removable / Wash	able / Mildew Proof	Removable / Wash	able / Mildew Proof	
Running Curre	nt (Rated)		Α	0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13	
Power Consum	ption (Rated)	W	30-30-30	30-30-30	30-30-30	30-30-30	
Power Factor			%	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2	
Temperature C	ontrol		•	Microcomputer Control		Microcomputer Control		
Dimensions (H	×W×D)		mm	275×840×150		275×840×150		
Packaged Dime	ensions (H×V	V×D)	mm	222×894×345		222×894×345		
Weight			kg	g)	9		
Gross Weight			kg	1:	3	13		
Operation Sound	H/M/L/SL		dBA	38/32/25/22	38/33/28/25	38/32/25/22	38/33/28/25	
Sound Power	Н		dBA	56	56	56	56	
Heat Insulation			·	Both Liquid a	nd Gas Pipes	Both Liquid a	nd Gas Pipes	
Liquid		mm	φ 6	6.4	ф	6.4		
Piping Connect	ion	Gas	mm	φ 9	9.5	ф	9.5	
		Drain	mm	φ18	3.0	ф1	8.0	
Drawing No.				3D05	1101	3D05	51102	

Model				FTXG35	EV1BW	FTXG3	FTXG35EV1BS		
Model				Cooling	Heating	Cooling	Heating		
Rated Capacity				3.5kW	Class	5.0kW	/ Class		
Front Panel Co	lor			Mat Crys	tal White	Mat Crys	stal Silver		
			Н	8.1 (285)	9.6 (338)	8.1 (285)	9.6 (338)		
Air Flow Rates		m³/min	M	6.5 (229)	8.2 (289)	6.5 (229)	8.2 (289)		
All Flow Rates		(cfm)	L	4.9 (173)	6.7 (236)	4.9 (173)	6.7 (236)		
			SL	4.1 (144)	5.9 (208)	4.1 (144)	5.9 (208)		
	Туре			Cross F	ow Fan	Cross F	low Fan		
Fan	Motor Outp	out	W	4			10		
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	Silent, Auto		
Air Direction Co	ntrol			Right, Left, Horizontal, Downward		Right, Left, Horiz	Right, Left, Horizontal, Downward		
Air Filter				Removable / Washable / Mildew Proof		Removable / Washable / Mildew Proof			
Running Currer	nt (Rated)		Α	0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13		
Power Consum	ption (Rated	l)	W	30-30-30	30-30-30	30-30-30	30-30-30		
Power Factor			%	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2		
Temperature C	ontrol			Microcomputer Control		Microcomputer Control			
Dimensions (H	«W×D)		mm	275×840×150		275×840×150			
Packaged Dime	ensions (HxV	N×D)	mm	222×894×345		222×894×345			
Weight			kg	9		9			
Gross Weight			kg	13		13			
Operation Sound	H/M/L/SL		dBA	39/33/26/23	39/34/29/26	39/33/26/23	39/34/29/26		
Sound Power	Sound Power H dB		dBA	57	57	57	57		
Heat Insulation				Both Liquid a	nd Gas Pipes	Both Liquid a	ind Gas Pipes		
Liquid		mm	φ 6			6.4			
Piping Connect	ion	Gas	mm	φ 9).5	ф1	2.7		
		Drain	mm	φ18	•		8.0		
Drawing No.				3D05	1103	3D051104			

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

50Hz 230V

Model -				FTXS20	D3VMW	FTXS20D3VML		
				Cooling	Heating	Cooling	Heating	
Rated Capacity				2.0kW	Class	2.0kW Class		
Front Panel Co	lor			Wh	nite	Silve	er Line	
			Н	8.7 (307)	9.4 (332)	8.7 (307)	9.4 (332)	
Air Flow Rates		m³/min	М	6.7 (237)	7.6 (268)	6.7 (237)	7.6 (268)	
All Flow Rates		(cfm)	L	4.7 (166)	5.8 (205)	4.7 (166)	5.8 (205)	
			SL	3.9 (138)	5.0 (177)	3.9 (138)	5.0 (177)	
	Туре			Cross F	low Fan	Cross	Flow Fan	
Fan	Motor Outp	ut	W	4	0		40	
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps,	Silent, Auto	
Air Direction Co	ontrol			Right, Left, Horiz	ontal, Downward	Right, Left, Hori	zontal, Downward	
Air Filter				Removable-Washable-Mildew Proof		Removable-Washable-Mildew Proof		
Running Curre	nt (Rated)		Α	0.16	0.16	0.16	0.16	
Power Consum	ption (Rated)		W	35	35	35	35	
Power Factor			%	95.1	95.1	95.1	95.1	
Temperature C	ontrol			Microcomputer Control		Microcomputer Control		
Dimensions (H	×W×D)		mm	283×800×195		283×800×195		
Packaged Dime	ensions (H×W	/×D)	mm	265×855×340		265×855×340		
Weight			kg	9		9		
Gross Weight			kg	1	2	12		
Operation Sound	H/L/SL		dBA	38/25/22	38/28/25	38/25/22	38/28/25	
Sound Power	Н		dBA	56	56	56	56	
Heat Insulation				Both Liquid a	nd Gas Pipes	Both Liquid a	and Gas Pipes	
	Liquid		mm	фе	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	ф 9	9.5	ф	9.5	
		Drain	mm	ф1			18.0	
Drawing No.				3D05	1085	3D0	51086	

Model				FTXS25D3VMW		FTXS25D3VML	
Wodel				Cooling	Heating	Cooling	Heating
Rated Capacity	1			2.5kW Class		2.5kW Class	
Front Panel Color				Wh	iite	Silve	r Line
			Н	8.7 (307)	9.4 (332)	8.7 (307)	9.4 (332)
Air Flow Rates	Air Flow Botos		М	6.7 (237)	7.6 (268)	6.7 (237)	7.6 (268)
All Flow Rates		(cfm)	L	4.7 (166)	5.8 (205)	4.7 (166)	5.8 (205)
			SL	3.9 (138)	5.0 (177)	3.9 (138)	5.0 (177)
	Туре			Cross Flow Fan		Cross F	low Fan
Fan	Motor Outp	out	W	40		4	10
	Speed	Step		5 Steps, Silent, Auto		5 Steps, Silent, Auto	
Air Direction Co	ontrol			Right, Left, Horize	ontal, Downward	Right, Left, Horiz	zontal, Downward
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Washable-Mildew Proof	
Running Currer	Running Current (Rated) A			0.16	0.16	0.16	0.16
Power Consum	ption (Rated)	W	35	35	35	35
Power Factor			%	95.1	95.1	95.1	95.1
Temperature C	ontrol			Microcomputer Control Microcomputer Co		uter Control	
Dimensions (Ha	×W×D)		mm	283×800×195 283×800×195		00×195	
Packaged Dime	ensions (HxV	V×D)	mm	265×855×340		265×855×340	
Weight			kg	g	9 9		9
Gross Weight			kg	12		12	
Operation Sound	H/L/SL		dBA	38/25/22	38/28/25	38/25/22	38/28/25
Sound Power	Н		dBA	56	56	56	56
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes	
Piping Connection Liquid Gas Drain		mm	ф 6.4		ф 6.4		
		Gas	mm	ф 9.5		φ 9.5	
		Drain	mm	ф18.0		φ18.0	
Drawing No.				3D05	1087	3D05	51088

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

50Hz 230V

Model				FTXS35	D3VMW	FTXS35D3VML		
Wodei				Cooling	Heating	Cooling	Heating	
Rated Capacity	,			3.5kW Class		3.5kW Class		
Front Panel Color				White		Silver Line		
Air Flow Rates		m³/min	Н	8.9 (314)	9.7 (342)	8.9 (314)	9.7 (342)	
				М	6.9 (244)	7.9 (279)	6.9 (244)	7.9 (279)
All Flow Rates		(cfm)	L	4.8 (169)	6.0 (212)	4.8 (169)	6.0 (212)	
			SL	4.0 (141)	5.2 (184)	4.0 (141)	5.2 (184)	
	Туре			Cross Flow Fan		Cross Flow Fan		
Fan	Motor Outp	or Output W		40		40		
	Speed	Steps		5 Steps, Silent, Auto		5 Steps, Silent, Auto		
Air Direction Co	ontrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horizontal, Downward		
Air Filter				Removable-Washable-Mildew Proof Removable-Washable-N		nable-Mildew Proof		
Running Curre	nt (Rated)		Α	0.18	0.18	0.18	0.18	
Power Consum	ption (Rated)		W	40	40	40	40	
Power Factor			%	96.6	96.6	96.6	96.6	
Temperature C	ontrol			Microcomputer Control		Microcomputer Control		
Dimensions (H	×W×D)		mm	283×800×195		283×800×195		
Packaged Dime	ensions (H×W	/×D)	mm	265×855×340		265×855×340		
Weight			kg	9 9		9		
Gross Weight			kg	12		12		
Operation Sound	H/L/SL		dBA	39/26/23	39/29/26	39/26/23	39/29/26	
Sound Power H		dBA	57	57	57	57		
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes		
Piping Connection Liquid Gas Drain		mm	ф 6.4		ф 6.4			
		Gas	mm	φ 9.5		φ 9.5		
		mm	ф18.0		ф18.0			
Drawing No.				3D05	1089	3D051090		

Model				FTXS20	CAVMB	FTXS25CAVMB		
wodei	Model			Cooling	Heating	Cooling	Heating	
Rated Capacity	,			2.5kW Class		2.5kW Class		
Front Panel Color				Wh	nite	White		
Air Flow Rates		m³/min	H M	7.7 (272)	7.8 (275)	7.7 (272)	7.8 (275)	
				5.9 (208)	6.5 (230)	5.9 (208)	6.5 (230)	
All Flow Rates		(cfm)	L	4.2 (148)	5.3 (187)	4.2 (148)	5.3 (187)	
			SL	3.6 (127)	4.6 (162)	3.6 (127)	4.6 (162)	
	Туре			Cross Flow Fan		Cross Flow Fan		
Fan	Motor Outp	out	W	18		18		
	Speed	Ste		5 Steps, Silent, Auto		5 Steps, Silent, Auto		
Air Direction Co	ontrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horiz	ontal, Downward	
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Washable-Mildew Proof		
Running Currer	Running Current (Rated) A			0.18	0.18	0.18	0.18	
Power Consum	ption (Rated	l)	W	40	40	40	40	
Power Factor			%	96.6	96.6	96.6	96.6	
Temperature C	ontrol			Microcomputer Control Microcomputer Control		uter Control		
Dimensions (Ha	×W×D)		mm	273×784×195 273×784×195		34×195		
Packaged Dime	ensions (HxV	N×D)	mm	258×834×325		258×834×325		
Weight			kg	7.5		5		
Gross Weight	Gross Weight kg		kg	11		11		
Operation Sound	H/M/L/SL		dBA	38/32/25/22	38/33/28/25	38/32/25/22	38/33/28/25	
Sound Power	Н		dBA	56	56	56	56	
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes		
Piping Connection Liquid Gas Drain		Liquid	mm	φ 6.4		ф 6.4		
		Gas	mm	φ 9.5		ф 9.5		
		Drain	mm	ф18.0		φ18.0		
Drawing No.	Drawing No.			3D05	0941	3D05	0943	

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

50Hz 230V

Model				FTXS35CAVMB			
				Cooling	Heating		
Rated Capacity				3.5kW Class			
Front Panel Col	or			White			
Air Flow Rates m³/min		Н	7.7 (272)	8.1 (286)			
		m³/min		М	6.0 (212)	6.7 (237)	
All Flow Rates		(cfm)	L	4.4 (155)	5.3 (187)		
			SL	3.8 (134)	4.6 (162)		
	Туре			Cross Flow Fan			
Fan	Motor Outpu	Output W		18			
	Speed		Steps	5 Steps, S	ilent, Auto		
Air Direction Co	ntrol			Right, Left, Horizontal, Downward			
Air Filter				Removable-Washable-Mildew Proof			
Running Currer	nt (Rated)		Α	0.18	0.18		
Power Consum	ption (Rated)		W	40	40		
Power Factor		%	96.6 96.6				
Temperature Co				Microcomputer Control			
Dimensions (Hx	«W×D)		mm	273×784×195			
Packaged Dime	ensions (HxW	/×D)	mm	258×834×325			
Weight			kg	7.5			
Gross Weight			kg	11			
Operation Sound	H/M/L/SL		dBA	39/33/26/23	39/34/29/26		
Sound Power	. Н		dBA	57	57		
Heat Insulation				Both Liquid and Gas Pipes			
Piping Connection		mm	Ф 6.4				
		Gas	mm	φ 9.5			
		mm	φ18.0				
Drawing No.				3D050945			

Model				CTXG50EV1BW		CTXG50EV1BS		
Wodel				Cooling	Heating	Cooling	Heating	
Rated Capacity	•			5.0kW Class		5.0kW Class		
Front Panel Color				Mat Crys	tal White	Mat Crystal Silver		
	Air Flow Roton m³/min		H M	11.3 (398)	12.6 (444)	11.3 (398)	12.6 (444)	
Air Flow Rates				9.1 (320)	10.6 (373)	9.1 (320)	10.6 (373)	
All Flow Rates		(cfm)	L	7.1 (250)	8.7 (306)	7.1 (250)	8.7 (306)	
			SL	6.7 (236)	7.7 (271)	6.7 (236)	7.7 (271)	
	Туре			Cross F	low Fan	Cross F	low Fan	
Fan	Motor Out	put	W	40		4	40	
	Speed	Steps		5 Steps, Silent, Auto		5 Steps, Silent, Auto		
Air Direction Co	ontrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horizontal, Downward		
Air Filter				Removable-Washable-Mildew Proof Removable-Washable-Mildew Removable-Washable-Mildew Proof		nable-Mildew Proof		
Running Currer	Running Current (Rated) A			0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13	0.15-0.14-0.13	
Power Consum	ption (Rated	d)	W	30	30	30	30	
Power Factor			%	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2	90.9-93.2-96.2	
Temperature C	ontrol			Microcomputer Control Microcomputer Control		outer Control		
Dimensions (Ha	×W×D)		mm	275×840×150 275×840×150		40×150		
Packaged Dime	ensions (Hx	W×D)	mm	222×894×345		222×894×345		
Weight			kg	9			9	
Gross Weight			kg	13		13		
Operation Sound	H/M/L/SL		dBA	47/41/35/32	47/41/35/32	47/41/35/32	47/41/35/32	
Sound Power H		dBA	64	64	64	64		
Heat Insulation				Both Liquid and Gas Pipes		Both Liquid and Gas Pipes		
Piping Connection Liquid Gas Drain		mm	ф 6.4		ф 6.4			
		Gas	mm	φ 12.7		ф 12.7		
		Drain	mm	ф18.0		ф18.0		
Drawing No.				3D05	1105	3D0:	51106	

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

50Hz 230V

Model				FTXS50	D2V1W	FTXS50D2V1L		
Wodei				Cooling	Heating	Cooling	Heating	
Rated Capacity	,			5.0kW Class		5.0kW Class		
Front Panel Co	lor			WI	nite	W	hite	
			Н	11.4 (402)	11.4 (402)	11.4 (402)	11.4 (402)	
Air Flow Rates		m³/min	М	9.3 (328)	9.4 (332)	9.3 (328)	9.4 (332)	
All Flow Rates		(cfm)	L	7.1 (251)	7.4 (261)	7.1 (251)	7.4 (261)	
			SL	6.2 (219)	6.3 (222)	6.2 (219)	6.3 (222)	
	Туре			Cross F	low Fan	Cross F	low Fan	
Fan	Motor Outp	ut	W	4	10		10	
	Speed		Steps	5 Steps, S	Silent, Auto	5 Steps, S	Silent, Auto	
Air Direction Co	ontrol			Right, Left, Horiz	contal, Downward	Right, Left, Horiz	zontal, Downward	
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Wash	nable-Mildew Proof	
Running Curre	nt (Rated)		Α	0.21	0.21	0.21	0.21	
Power Consum	ption (Rated)		W	48	48	48	48	
Power Factor			%	99.4	99.4	99.4	99.4	
Temperature C	ontrol			Microcomputer Control		Microcomputer Control		
Dimensions (H	×W×D)		mm	283×800×195		283×800×195		
Packaged Dime	ensions (H×V	V×D)	mm	265×8	55×340	265×855×340		
Weight			kg	•	9	9		
Gross Weight			kg	1	2	•	12	
Operation Sound	H/M/L/SL		dBA	46/41/35/32	46/40/34/31	46/41/35/32	46/40/34/31	
Sound Power	Sound Power H dBA		dBA	62	62	62	62	
Heat Insulation			Both Liquid a	nd Gas Pipes	Both Liquid a	and Gas Pipes		
Liquid		mm	φ	6.4	ф	6.4		
Piping Connect	ion	Gas	mm	ф1	2.7	φ1	5.9	
		Drain	mm	ф1	8.0	φ1	8.0	
Drawing No.				3D05	51814	3D0:	51815	

Model				FTXS5	0EV1B	FTXS6	DEV1B
wodei			Ī	Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW	Class	6.0kW Class	
Front Panel Co	Front Panel Color			Wh	nite	Wh	ite
			Н	14.7 (519)	16.1 (569)	16.2 (572)	17.4 (614)
Air Flow Rates		m³/min	М	12.4 (438)	13.9 (491)	13.6 (480)	15.1 (533)
All Flow Rates		(cfm)	L	10.3 (364)	11.5 (406)	11.4 (402)	12.7 (448)
			SL	9.5 (335)	10.2 (360)	10.2 (360)	11.4 (402)
	Туре	•		Cross F	low Fan	Cross F	ow Fan
Fan	Motor Out	put	W	4	3	4:	3
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	lent, Auto
Air Direction Co	ntrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horizontal, Downward	
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Washa	able-Mildew Proof
Running Currer	nt (Rated)		Α	0.15	0.16	0.18	0.20
Power Consum	ption (Rated	d)	W	34	36	40	45
Power Factor			%	98.6	97.8	96.6	97.8
Temperature C	ontrol			Microcomputer Control		Microcomputer Control	
Dimensions (Ha	«W×D)		mm	290×1,050×238		290×1,050×238	
Packaged Dime	ensions (Hx\	W×D)	mm	337×1,1	47×366	337×1,147×366	
Weight			kg	1	2	12	
Gross Weight			kg	1	7	1	7
Operation Sound	H/M/L/SL		dBA	43/39/34/31	42/38/33/30	45/41/36/33	44/40/35/32
Sound Power	Н		dBA	59	58	61	60
Heat Insulation			Both Liquid a	nd Gas Pipes	Both Liquid ar	nd Gas Pipes	
Liquid		mm	φ (6.4	φ 6	5.4	
Piping Connect	ion	Gas	mm	ф1:	2.7	ф12	2.7
		Drain	mm	φ1	8.0	φ18	3.0
Drawing No.				3D05	1645	3D05	1646

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

50Hz 230V

Model	Model			FTXS71EV1B		FTXS71	BAVMB
Model				Cooling	Heating	Cooling	Heating
Rated Capacity				7.1kW Class		7.1kW Class	
Front Panel Co	lor			WI	nite	Wh	nite
			Н	17.4 (614)	19.7 (695)	16.7 (590)	18.5 (653)
Air Flow Rates		m³/min	M	14.6 (515)	16.6 (586)	14.2 (501)	15.1 (533)
All Flow Rates		(cfm)	L	11.6 (409)	13.5 (477)	11.6 (409)	13.5 (477)
			SL	10.6 (374)	12.1 (427)	10.6 (374)	12.1 (427)
	Туре			Cross F	low Fan	Cross F	low Fan
Fan	Motor Out	put	W	4	3	4	3
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	ilent, Auto
Air Direction Co	ntrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horiz	ontal, Downward
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Wash	able-Mildew Proof
Running Currer	nt (Rated)		Α	0.20	0.22	0.20	0.22
Power Consum	ption (Rated	d)	W	45	50	45	50
Power Factor			%	97.8	98.8	96.4	97.6
Temperature C	ontrol			Microcomputer Control		Microcomputer Control	
Dimensions (H:	«W×D)		mm	290×1,050×238		290×1,050×238	
Packaged Dime	ensions (Hx	W×D)	mm	337×1,147×366		337×1,147×366	
Weight			kg	1	2	1	2
Gross Weight			kg	1	7	1	7
Operation Sound	H/M/L/SL		dBA	46/42/37/34	46/42/37/34	46/42/37/34	46/42/37/34
Sound Power	ower H dBA		dBA	63	63	63	63
Heat Insulation		Both Liquid a	nd Gas Pipes	Both Liquid a	nd Gas Pipes		
Liquid		mm	ф	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	ф1	5.9	ф1:	5.9
		Drain	mm	ф1	8.0	ф1	8.0
Drawing No.				3D05	2803	3D05	0880

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

Duct Connected Type

50Hz 230V

Model				FDXS25	5CAVMB	FDXS35	CAVMB
Model				Cooling	Heating	Cooling	Heating
Rated Capacity				2.5kW Class		3.5kW Class	
Front Panel Color				-	_	-	_
			Н	9.5 (335)	9.5 (335)	10.0 (353)	10.0 (353)
A:= Fla Datas		m³/min	М	8.8 (311)	8.8 (311)	9.3 (328)	9.3 (328)
Air Flow Rates		(cfm)	L	8.0 (282)	8.0 (282)	8.5 (300)	8.5 (300)
			SL	6.7 (237)	6.7 (237)	7.0 (247)	7.0 (247)
	Туре	•	•	Siroco	co Fan	Siroco	co Fan
Fan	Motor Out	out	W	6	52	6	52
	Speed		Steps	5 Steps, Silent, Auto		5 Steps, Silent, Auto	
Air Filter	•		·	Removable-Wash	nable-Mildew Proof	Removable-Washable-Mildew Proof	
Running Current (Rated)		Α	0.47	0.47	0.47	0.47	
Power Consum	ption (Rated	i)	W	100	100	100	100
Power Factor			%	92.5	92.5	92.5	92.5
Temperature C	ontrol		·	Microcomputer Control		Microcomputer Control	
Dimensions (H)	«W×D)		mm	200×900×620		200×900×620	
Packaged Dime	ensions (Hx\	N×D)	mm	266×1,106×751		266×1,106×751	
Weight			kg	2	25	2	25
Gross Weight			kg	3	31	3	31
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29	35/33/31/29	35/33/31/29
External Static Pressure Pa		4	10	4	0		
Heat Insulation		•	Both Liquid a	ind Gas Pipes	Both Liquid a	nd Gas Pipes	
Liquid		mm	ф	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	φ:	9.5	ф	9.5
Drain		Drain	mm	VP20 (O.D. φ	26 / I.D. ф 20)	VP20 (O.D. ф	26 / I.D. ф 20)
Drawing No.				3D04	8945C	3D04	8946C

Model				FDXS5	OCVMB	FDXS6	0CVMB	
wodei			Ī	Cooling	Heating	Cooling	Heating	
Rated Capacity	,			5.0kW Class		6.0kW Class		
Front Panel Co	Front Panel Color			_	=	_	_	
				Н	12.0 (424)	12.0 (424)	16.0 (565)	16.0 (565)
Air Flow Rates		m³/min	М	11.0 (388)	11.0 (388)	14.8 (523)	14.8 (523)	
Air Flow Rates		(cfm)	L	10.0 (353)	10.0 (353)	13.5 (477)	13.5 (477)	
			SL	8.4 (297)	8.4 (297)	11.2 (395)	11.2 (395)	
	Туре		•	Siroco	o Fan	Siroco	o Fan	
Fan	Motor Outpu	ut	W	13	30	13	30	
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	ilent, Auto	
Air Filter	•		•	Removable-Wash	able-Mildew Proof	Removable-Washable-Mildew Proof		
Running Currer	nt (Rated)		Α	0.64	0.64	0.74	0.74	
Power Consum	ption (Rated)		W	140	140	160	160	
Power Factor			%	95.1	95.1	94.0	94.0	
Temperature C	ontrol			Microcomputer Control		Microcomputer Control		
Dimensions (Ha	×W×D)		mm	200×900×620		200×1,100×620		
Packaged Dime	ensions (H×W	/xD)	mm	266×1,1	06×751	266×1,306×751		
Weight			kg	2	7	3	0	
Gross Weight			kg	3	4	3	7	
Operation Sound	H/M/L/SL		dBA	37/35/33/31	37/35/33/31	38/36/34/32	38/36/34/32	
External Static Pressure Pa		4	0	4	0			
Heat Insulation			Both Liquid a	nd Gas Pipes	Both Liquid a	nd Gas Pipes		
Liquid		mm	ф	6.4	ф	6.4		
Piping Connect	ion	Gas	mm	ф1:	2.7	ф1.	2.7	
Drain		Drain	mm	VP20 (O.D. φ	26 / I.D. ф 20)	VP20 (O.D. φ	26 / I.D. ф 20)	
Drawing No.				3D05	2132	3D049	52133	

Note:

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

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

Specifications SiEBE12-625

50Hz 230V

Model				FDXS2	5EAVMB	FDXS35EAVMB		
wodei				Cooling	Heating	Cooling	Heating	
Rated Capacity	'			2.5kW	/ Class	3.5kW Class		
Front Panel Co	Front Panel Color			-	_	-	_	
			Н	8.7 (307)	8.7 (307)	8.7 (307)	8.7 (307)	
Air Flow Rates		m³/min	М	8.0 (282)	8.0 (282)	8.0 (282)	8.0 (282)	
Air Flow Rates		(cfm)	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)	
	Туре		•	Siroc	co Fan	Siroco	co Fan	
Fan	Motor Out	put	W	6	52	6	52	
	Speed		Steps	5 Steps, S	Silent, Auto	5 Steps, S	Silent, Auto	
Air Filter			•	Removable / Wash	nable / Mildew Proof	Removable / Washable / Mildew Proof		
Running Curre	nt (Rated)		Α	0.48	0.48	0.48	0.48	
Power Consum	ption (Rated	d)	W	71	71	71	71	
Power Factor			%	64.3	64.3	64.3	64.3	
Temperature C	ontrol			Microcomputer Control		Microcomp	uter Control	
Dimensions (H	×W×D)		mm	200×700×620		200×700×620		
Packaged Dime	ensions (Hx	W×D)	mm	274×9	06×751	274×906×751		
Weight			kg	2	21	2	21	
Gross Weight			kg	2	29	2	9	
Operation Sound	H/M/L/SL		dBA	35/33/31/29	35/33/31/29	35/33/31/29	35/33/31/29	
External Static Pressure Pa		Pa	3	30	3	80		
Heat Insulation			Both Liquid a	and Gas Pipes	Both Liquid a	nd Gas Pipes		
Liquid		Liquid	mm	ф	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	ф	9.5	φ:	9.5	
		Drain	mm	VP20 (O.D. ф	26 / I.D. φ 20)	VP20 (O.D. φ	26 / I.D. ф 20)	
Drawing No.				3D05	1881A	3D05	1883A	

Note:

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

The operating sound is based on the rear side suction inlet and the external static pressure 30 Pa.
 Operating sound for under side suction inlet: [operating sound for rear side suction inlet] +6 dB.
 However, when installation to which the external static pressure becomes low is carried out,
 6 dB or more may go up.

SiEBE12-625 Specifications

Floor / Ceiling Suspended Dual Type

50Hz 230V

Model		FLXS25	BAVMB	FLXS35BAVMB			
Wodei				Cooling	Heating	Cooling	Heating
Rated Capacity				2.5kW	Class	3.5kW Class	
Front Panel Co	lor			Almono	d White	Almono	d White
			Н	7.6 (268)	9.2 (325)	8.6 (304)	9.8 (346)
Air Flow Rates		m³/min	M	6.8 (240)	8.3 (293)	7.6 (268)	8.9 (314)
All Flow Rates		(cfm)	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)
	Туре			Siroco	o Fan	Siroco	o Fan
Fan	Motor Outp	out	W	3	4	3	4
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	ilent, Auto
Air Direction Co	ntrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horiz	ontal, Downward
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Wash	able-Mildew Proof
Running Currer	nt (Rated)		Α	0.32	0.34	0.36	0.36
Power Consum	ption (Rated)	W	70	74	78	78
Power Factor			%	95.1	94.6	94.2	94.2
Temperature C	ontrol			Microcomputer Control		Microcomputer Control	
Dimensions (Ha	«W×D)		mm	490×1,050×200		490×1,050×200	
Packaged Dime	ensions (HxV	V×D)	mm	566×1,1	00×280	566×1,100×280	
Weight			kg	1	6	16	
Gross Weight			kg	2	2	2	2
Operation Sound	H/M/L/SL		dBA	37/34/31/28	37/34/31/29	38/35/32/29	39/36/33/30
Sound Power	und Power H dBA		dBA	53	_	54	_
Heat Insulation		Both Liquid a	nd Gas Pipes	Both Liquid a	nd Gas Pipes		
Liquid r		mm	φ 6	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	φ 9	9.5	φ:	9.5
Drain		mm	ф1	8.0	φ1	8.0	
Drawing No.				3D05	0866	3D05	0868

Model		FLXS50	BAVMB	FLXS60	FLXS60BAVMB		
Wodei				Cooling	Heating	Cooling	Heating
Rated Capacity				5.0kW Class		6.0kW Class	
Front Panel Co	lor			Almono	d White	Almon	d White
			Н	11.4 (402)	12.1 (427)	12.0 (424)	12.8 (452)
Air Flow Rates		m³/min	М	10.0 (353)	9.8 (346)	10.7 (378)	10.6 (374)
All I low Itales		(cfm)	L	8.5 (300)	7.5 (265)	9.3 (328)	8.4 (297)
			SL	7.5 (265)	6.8 (240)	8.3 (293)	7.5 (265)
	Туре			Siroco	o Fan	Siroc	co Fan
Fan	Motor Out	put	W	3	4	3	34
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	Silent, Auto
Air Direction Co	ntrol			Right, Left, Horiz	ontal, Downward	Right, Left, Horiz	zontal, Downward
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Wash	nable-Mildew Proof
Running Currer	nt (Rated)		Α	0.45	0.45	0.47	0.45
Power Consum	ption (Rated	d)	W	96	96	98	96
Power Factor			%	92.8	92.8	90.7	92.8
Temperature C	ontrol			Microcomputer Control		Microcomputer Control	
Dimensions (Ha	«W×D)		mm	490×1,050×200		490×1,050×200	
Packaged Dime	ensions (Hx	W×D)	mm	280×1,1	00×566	280×1,100×566	
Weight			kg	1	7	1	7
Gross Weight			kg	2	4	2	24
Operation Sound	H/M/L/SL		dBA	47/43/39/36	46/41/35/33	48/45/41/39	47/42/37/34
Sound Power	Sound Power H dB.		dBA	63	32	64	63
Heat Insulation			Both Liquid a	nd Gas Pipes	Both Liquid a	ind Gas Pipes	
Liquid		mm	ф	6.4	ф	6.4	
Piping Connect	ion	Gas	mm	ф1:	2.7	φ1	2.7
		Drain	mm	ф1	8.0	φ1	8.0
Drawing No.				3D05	0897	3D05	50882

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

Floor Standing Type

50Hz 230V

Model				FVXS25	BAVMB	FVXS35BAVMB		
wodei				Cooling	Heating	Cooling	Heating	
Rated Capacity	/			2.5kW	Class	3.5kW Class		
Front Panel Co	lor			Almono	l White	Almon	d White	
Air Flow Rates			Н	8.1 (286)	9.2 (325)	8.3 (293)	9.2 (325)	
		m³/min	М	6.2 (219)	7.0 (247)	6.3 (222)	7.1 (251)	
		(cfm)	L	4.3 (152)	4.8 (169)	4.3 (152)	5.0 (177)	
			SL	3.4 (120)	3.5 (124)	3.4 (120)	3.6 (127)	
	Туре			Cross F	low Fan	Cross F	low Fan	
Fan	Motor Outpu	ut	W	14+	-14	14	+14	
	Speed		Steps	5 Steps, S	ilent, Auto	5 Steps, S	Silent, Auto	
Air Direction C	ontrol			Right, Left, Hori	zontal, Upward	Right, Left, Horizontal, Upward		
Air Filter				Removable-Wash	able-Mildew Proof	Removable-Washable-Mildew Proof		
Running Curre	nt (Rated)		Α	0.14	0.14	0.14	0.14	
Power Consum	ption (Rated)		W	32	32	32	32	
Power Factor			%	99.4	99.4	99.4	99.4	
Temperature C	ontrol			Microcomputer Control		Microcomputer Control		
Dimensions (H	×W×D)		mm	600×650×195		600×650×195		
Packaged Dim	ensions (H×W	'xD)	mm	714×77	70×294	714×770×294		
Weight			kg	1:	3	13		
Gross Weight			kg	1:	9	1	9	
Operation Sound	H/M/L/SL		dBA	38/32/26/23	38/32/26/23	39/33/27/24	39/34/29/26	
Sound Power	ower H dBA		dBA	54	-	55	_	
Heat Insulation			Both Liquid a	nd Gas Pipes	Both Liquid a	nd Gas Pipes		
Liquid		mm	φ 6	5.4		6.4		
Piping Connec	tion	Gas	mm	ф 9	9.5	ф	9.5	
		Drain	mm	φ18	3.0	ф1	8.0	
Drawing No.				3D05	0874	3D05	50876	

Model				FVXS5	DBAVMB			
wodei				Cooling	Heating			
Rated Capacit	у			5.0kV	V Class			
Front Panel Co	olor			Almond White				
			Н	10.8 (381)	13.2 (466)			
Air Flow Rates		m³/min	M	9.2 (325)	11.3 (399)			
All Flow Rates	·	(cfm)	L	7.7 (272)	9.4 (332)			
			SL	6.7 (237)	8.3 (293)			
	Туре			Cross I	Flow Fan			
Fan	Motor Outpu	t	W		+14			
	Speed		Steps	5 Steps, S	Silent, Auto			
Air Direction C	ontrol			Right, Left, Horizontal, Upward				
Air Filter				Removable-Wasl	nable-Mildew Proof			
Running Curre	ent (Rated)		Α	0.26	0.32			
Power Consun	nption (Rated)		W	55	70			
Power Factor			%	92.0	95.1			
Temperature C	Control			Microcomputer Control				
Dimensions (H	l×W×D)		mm	600×650×195				
Packaged Dim	nensions (HxWx	×D)	mm	714×7	70×294			
Weight			kg		13			
Gross Weight			kg		19			
Operation Sound	H/M/L/SL		dBA	44/40/36/33	45/40/36/33			
Sound Power	und Power H		dBA	56	57			
Heat Insulation			Both Liquid a	and Gas Pipes				
Liquid		mm	ф	6.4				
Piping Connec	ction	Gas	mm	φ,	2.7			
		Orain	mm	φ20.0				
Drawing No.				3D0	50895			

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

SiEBE12-625 Specifications

1.4 Outdoor Units - Heat Pump

50Hz 230V

Model			4MXS68E2	2(3)V1B	4MXS80	4MXS80DAVMB	
Wodei				Cooling	Heating	Cooling	Heating
Cooling Capacit	ty		kW	_			-
Power Consum	ption		W	_		-	
Running Curren	it		А	_		_	
Casing Color				Ivory W	/hite	lvory	White
<u> </u>	Туре			Hermetically Seale		Hermetically Sea	
Compressor	Model			2YC45I	BXD	2YC4	5BXD
	Motor Outp	ut	W	1,38	0	1,3	80
Refrigerant Oil	Model		·	FVC5	0K	FVC	50K
Reingerant Oil	Charge		L	0.75	5	0.7	75
Refrigerant	Туре			R-410	DA .	R-4	10A
yerani	Charge		kg	2.6		3.	1
		m³/min	Н	51	47.6	48.5	45
Air Flow Rates		111 /111111	L	45	45	42	42
All I low Italoo		cfm	Н	1,801	1,681	1,713	1,589
			L	1,589	1,589	1,483	1,483
	Туре		I w	Prope	ller	Prop	
Fan		Motor Output		53		5	•
	Running Cu		A	H: 0.33 / I		H: 0.44 /	
	Power Con	sumption	W	H: 68 / L: 46		H: 60 /	
Starting Current			A	8.5		8.	·
Dimensions (Hx	,	. D)	mm	735×936×300 784×992×390		908×900×320	
Packaged Dime	ensions (H×V	/xD)	mm		2×390	1,025×926×402	
Weight			kg	59		73	
Gross Weight Operation Soun			kg	48	49	48	
Operation Soun	a		dBA dBA	61		61	49 62
Sound Power		Liquid		Φ 6.4	62	Φ 6	
Piping Connecti	ion	Gas	mm	ψ 6.4- φ9.5×2, φ	-	φ 6.· φ9.5×2, φ12.7	· ·
riping Connecti	-	Drain	mm	ψ9.5×2, ψ Φ18.		φ9.5×2, ψ12	
Heat Insulation		Dialli	111111	Ψ18. Both Liquid and	·	Ψ2: Both Liquid ar	
No. of Wiring Connection			3 for Power Supply, 4		3 for Power Supply,		
		m	60 (for Total of		70 (for Total of		
Max. Interunit P	iping Length		m	25 (for One	•	25 (for Or	
		g/m	20 (30m o		20 (40m	,	
			m	15 (between Indoor Un		15 (between Indoor U	
Max. Installation	n Height Diffe	erence	m	7.5 (between Ir		7.5 (between Indoor Units)	
Drawing No.			-	3D0518	91#1	3D050	837#1

Note:

1.	. 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	7.5m							

Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3

Specifications SiEBE12-625

Part 3 Printed Circuit Board Connector Wiring Diagram

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		Duct Connected Type	
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1. Printed Circuit Board Connector Wiring Diagram

1.1 Wall Mounted Type

1.1.1 FTK(X)S 20~50 D

Connectors

PCB(1) (Control PCB)

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

PCB(2) (Signal Receiver PCB)

1) S29 Connector for control PCB

PCB(3) (Display PCB)

1) S27 Connector for control PCB

PCB(4) (INTELLIGENT EYE sensor PCB)

1) S36 Connector for control PCB

Note:

€:

Other designations

PCB(1) (Control PCB)

1)	V1	Varistor
٠,	• •	

2) JA Address setting jumper

JB Fan speed setting when compressor is OFF on thermostat

JC Power failure recovery function (auto-restart)

* Refer to page 291 for detail.

3) LED A LED for service monitor (green)

4) FU1 Fuse (3.15A)

PCB(3) (Display PCB)

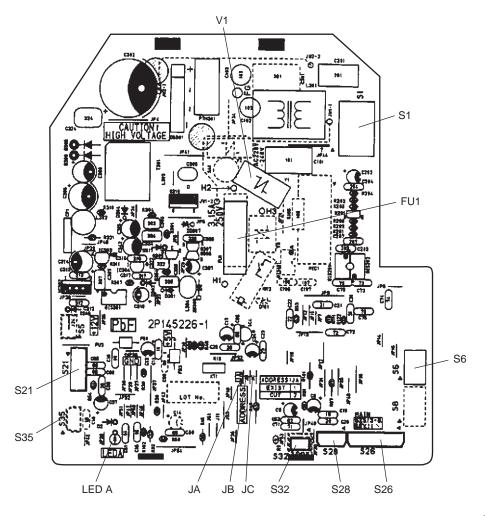
1) SW1 (S1W)	Forced operation ON / OFF switch
2) LED1	LED for operation (green)

3) LED2 LED for timer (yellow)

4) LED3 LED for INTELLIGENT EYE (green)5) RTH1 (R1T) Room temperature thermistor

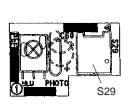
PCB Detail

PCB(1): Control PCB

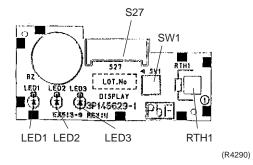


(R4288)

PCB(2): Signal Receiver PCB

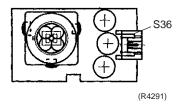


PCB(3): Display PCB



PCB(4): INTELLIGENT EYE sensor PCB

(R5183)



1.1.2 FTK(X)S20~35C

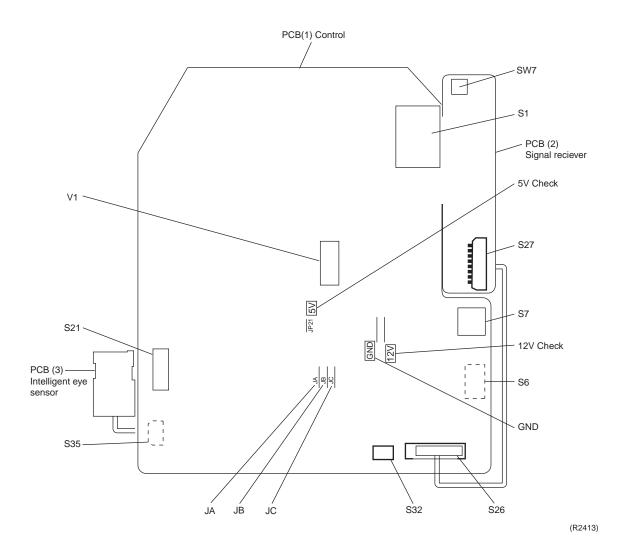
Connectors

1)	S1	Connector for fan motor
2)	S6	Connector for swing motor (Horizontal Flap)
3)	S7	Connector for fan motor
4)	S21	Connector for centralized control to 5 rooms
5)	S26	Connector for signal receiver PCB
6)	S27	Connector for control PCB
7)	S32	Connector for heat exchanger thermistor
8)	S35	Connector for INTELLIGENT EYE Sensor PCB
9)	S36	Connector for control PCB

Note: Other designations

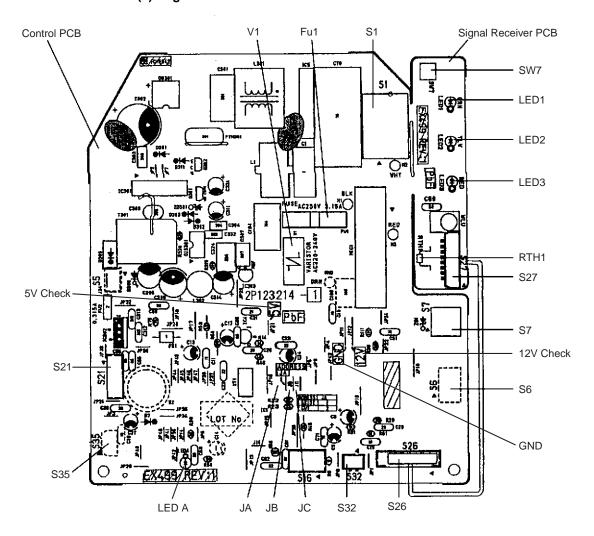
1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function
	* Refer to page 291 for more detail.
3) SW7	Forced operation ON/OFF switch
4) LED1	LED for operation (green)
5) LED2	LED for timer (yellow)
6) LED3	LED for HOME LEAVE operation (red)
7) LED A	LED for service monitor (green)
8) FU1	Fuse (3.15A)
9) RTH1	Room temperature thermistor

PCB



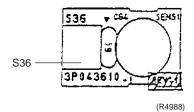
PCB Detail PCB(1): Control PCB

PCB(2): Signal Receiver PCB



(R4987)

PCB(3): INTELLIGENT EYE sensor PCB (Inverter models only)



1.1.3 FTK(X)S50~71E, FTK(X)S71B

Connectors

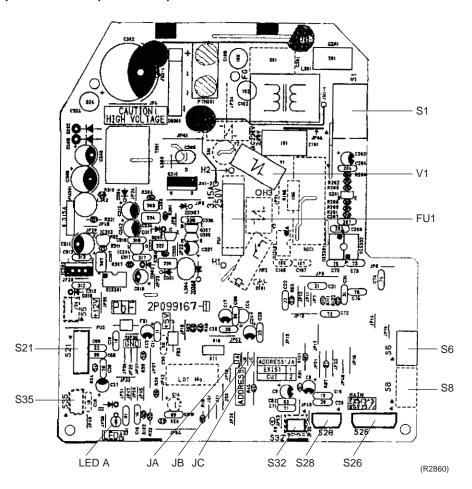
1) S1	Connector for fan motor
2) S6	Connector for swing motor (horizontal blades)
3) S8	Connector for swing motor (vertical blades)
4) S21	Connector for centralized control (HA)
5) S26, S37	Connector for buzzer PCB
6) S27, S29, S36	Connector for control PCB
7) S28	Connector for signal receiver PCB
8) S32	Connector for heat exchanger thermistor
9) S35	Connector for Intelligent Eye sensor PCB
10)S38	Connector for display PCB

Note: Other designations

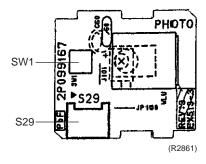
•	
1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function
	* Refer to page 291 for detail.
3) SW1	Forced operation ON/OFF switch
4) LED1	LED for operation (green)
5) LED2	LED for timer (yellow)
6) LED3	LED for HOME LEAVE operation (red)
7) LED A	LED A for service monitor (green)
8) FU1	Fuse (3.15A)
9) RTH1	Room temperature thermistor

PCB Detail

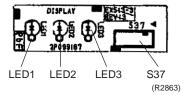
PCB(1): Control PCB (indoor unit)



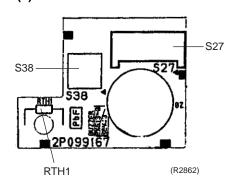
PCB(2): Signal Receiver PCB



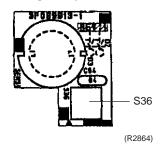
PCB(4): Display PCB



PCB(3): Buzzer PCB



PCB(5): Intelligent Eye sensor PCB



1.1.4 FTXG25~35E, CTXG50E

Connectors

PCB(1) (Control PCB)

1)	S1	Connector for fan motor
2)	S21	Connector for centralized control (HA)
3)	S32	Connector for heat exchanger thermistor
4)	S36	Connector for INTELLIGENT EYE sensor PCB and control PCB
5)	S41	Connector for swing motor
6)	S46	Connector for signal receiver PCB
7)	S49	Connector for reduction motor (front panel mechanism)
8)	S51	Connector for front panel limit switch

PCB(2) (Signal Receiver PCB)

1) S47 Connector for control PCB

PCB(3) (INTELLIGENT EYE sensor PCB)

1) S36 Connector for control PCB

Note:

Other designations

PCB(1) (Control PCB)

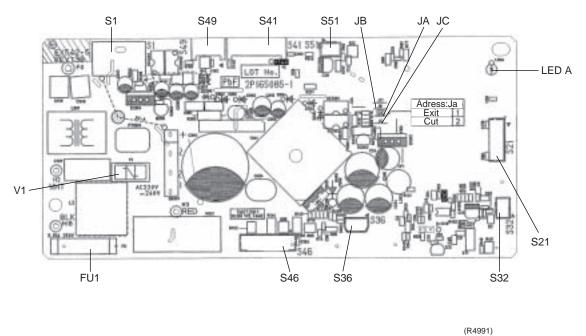
1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function (auto-restart)
	* Refer to page 291 for detail.
3) FU1	Fuse (3.15A)
4) LED A	LED for service monitor (green)

PCB(2) (Signal Receiver PCB)

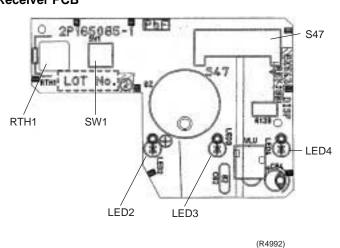
1) SW1	Forced operation ON / OFF switch
2) LED2	LED for INTELLIGENT EYE (green)
3) LED3	LED for timer (yellow)
4) LED4	LED for operation (green)
5) RTH1	Room temperature thermistor

PCB Detail

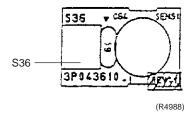
PCB(1): Control PCB (indoor unit)



PCB(2): Signal Receiver PCB



PCB(3): INTELLIGENT EYE sensor PCB



1.2 Duct Connected Type

Connectors

S1 (on PCB 1) Connector for fan motor
 S1 (on PCB 2) Connector for control PCB
 S7 Connector for fan motor
 S21 Connector for centralized control to 5 rooms

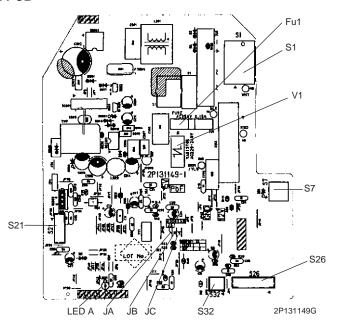
5) S26 Connector for display PCB

6) S32 Connector for room temp / heat exchanger thermistor

Note: Other designations

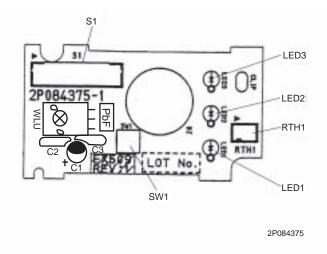
1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function
	* Refer to page 291 for more detail.
3) SW1	Forced operation ON/OFF switch
4) LED1	LED for operation (green)
5) LED2	LED for timer (yellow)
6) LED3	LED for HOME LEAVE operation (red)
7) LED A	LED for service monitor (green)
8) FU1	Fuse (3.15A)
9) RTH1	Room temperature thermistor

PCB Detail PCB (1): Control PCB



PCB Detail

PCB (2): Display PCB



1.3 Floor / Ceiling Suspended Dual Type

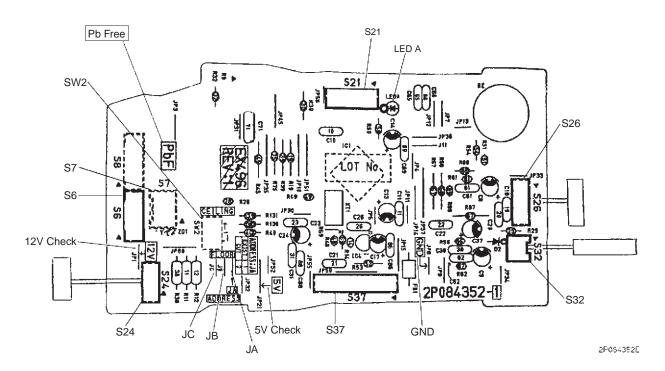
Connectors

1) S6	Connector for swing motor (horizontal swing)	
2) S7	Connector for fan motor	
3) S21	Connector for centralized control	
4) S24	Connector for display PCB	
5) S25, S27, S36	Connector for control PCB	
6) S26	Connector for signal receiver PCB	
7) S31	Connector for room temperature thermistor	
8) S32	Connector for heat exchanger thermistor	
9) S37	Connector for power supply PCB	

Note: Other designations

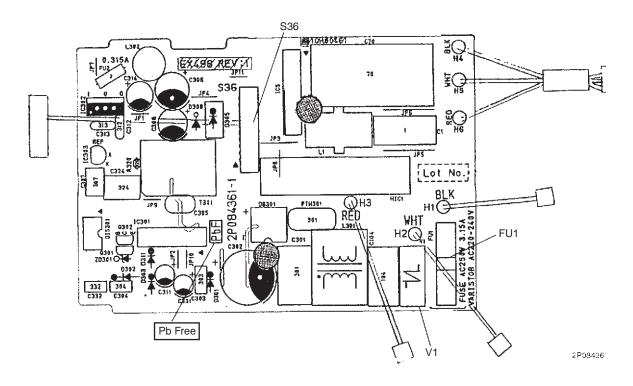
1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function
	* Refer to page 291 for detail.
3) SW1	Forced operation ON/OFF switch
4) SW2	Select switch ceiling or floor
5) LED1	LED for operation (green)
6) LED2	LED for timer (yellow)
7) LED3	LED for HOME LEAVE operation (red)
8) LED A	LED for service monitor (green)
9) FU1	Fuse (3.15A)

PCB Detail PCB (1): Control PCB

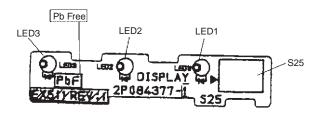


PCB Detail

PCB (2): Power Supply PCB

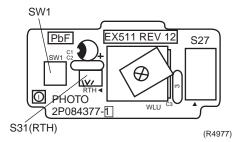


PCB (3): Display PCB



2P084377C

PCB (4): Signal Receiver PCB



1.4 Floor Standing Type

Connectors

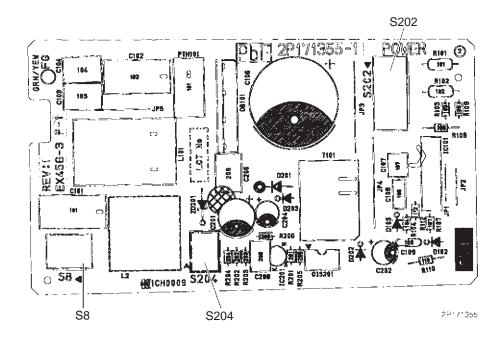
1) S6 Connector for swing motor and lower air outlet motor 2) S21 Connector for centralized control 3) S23 Connector for signal receiver 4) S31, S32 Connector for room temperature / heat exchanger thermistor 5) S201, S203, Connector for power supply PCB (1) S7, S24, S26 6) S202, S204, Connector for control PCB (2) S8 7) S25 Connector for display PCB (3) 8) S301, S302 Connector for fan motors

Note: Other Designations

1) V1	Varistor
2) JA	Address setting jumper
JB	Fan speed setting when compressor is OFF on thermostat
JC	Power failure recovery function
	* Refer to page 291 for detail.
3) SW1	Forced operation ON/OFF switch
4) SW2	Changing upward air flow limit switch
5) SW4	Discharge changeover switch
6) FU	Fuse (3.15A)
7) LED11	LED for operation (green)
8) LED12	LED for timer (yellow)
9) LED14	LED for HOME LEAVE operation (red)
10)LED A	LED for service monitor (green)

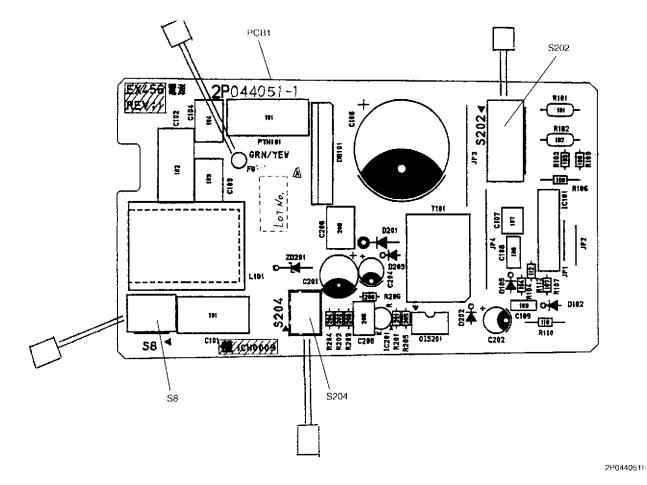
PCB Detail

PCB (1): Power Supply PCB (25, 35 class)



PCB Detail

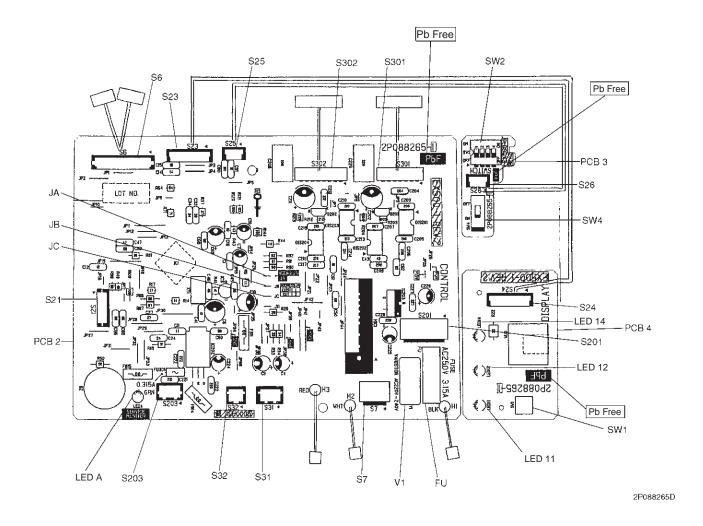
PCB (1): Power Supply PCB (50 class)



PCB Detail

PCB (2): Control PCB PCB (3): Display PCB

PCB (4): Signal Receiver PCB



1.5 Outdoor Units

Connectors

1) S10	Connector for S11 on MID1
2) S20	Connector for electronic expansion valve coil A port
3) S21	Connector for electronic expansion valve coil B port
4) S22	Connector for electronic expansion valve coil C port
5) S23	Connector for electronic expansion valve coil D port
6) S31	Connector for CN14 on SPM
7) S32	Connector for CN11 on SPM
8) S33	Connector for S34 on inverter PCB (MID2)
9) S40	Connector for overload protector
10) S51	Connector for S52 on service monitor PCB
11) S52	Connector for S51 on PCB
12) S71	Connector for S72 on inverter PCB (MID2)
13) S80	Connector for four way valve coil
14) \$90	Connector for thermistors (outdoor air, heat exchanger, and discharge pipe)
15) S91	Connector for fin thermistor
16) S92	Connector for gas pipe thermistor
17) S93	Connector for liquid pipe thermistor
18) S101	Connector for S102 on service monitor PCB
19) S102	Connector for S101 on PCB
20) AC1	Connector for HL on MID1
21) AC2	Connector for HN on MID1
22) E	Connector for earth
23) H1, H2	Connector for diode bridge
24) LED A, LED1 to 4	Service monitor LED
25) FU2	Fuse (3.15 A)
26) V2, V5	Varistor

MID 1

1) S11	Connector for S10 on PCB
2) FU1	Fuse (30A)
3) V3	Varistor
4) HE	Connector for earth
5) HL	Connector for AC1 on PCB
6) HN	Connector for AC2 on PCB

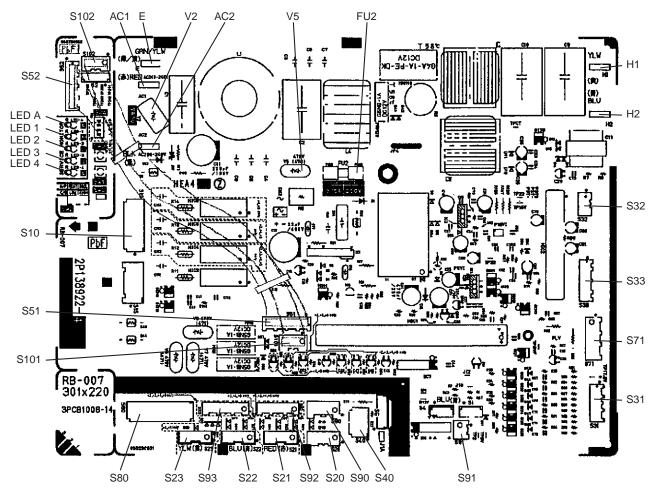
Inverter PCB (MID 2)

1) S34	Connector for S33 on PCB
2) S70	Connector for fan motor
3) S72	Connector for S71 on PCB
4) FU201	Fuse (3.15A)
5) N, U, V, W	Connector for compressor

SPM

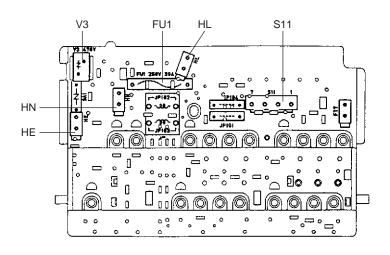
1) CN11 Connector for S32 on PCB
2) CN14 Connector for S31 on PCB
3) L1, L2 Connector for reactor

PCB Detail PCB (1): Control PCB



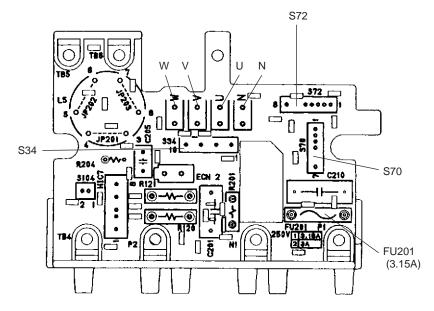
2P138922

MID1



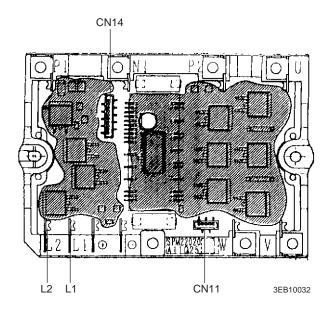
3P080081

Inverter PCB (MID2)



3P080085

SPM



Part 4 Function and Control

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Main Functions SiEBE12-625

1. Main Functions

£

ote: See the list of functions for the functions applicable to different models.

1.1 Frequency Principle

Main Control Parameters

The compressor is frequency-controlled during normal operation. The target frequency is set by the following 2 parameters coming from the operating indoor unit:

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

Additional Control Parameters

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

- Frequency restrictions
- Initial settings
- Forced cooling / heating operation

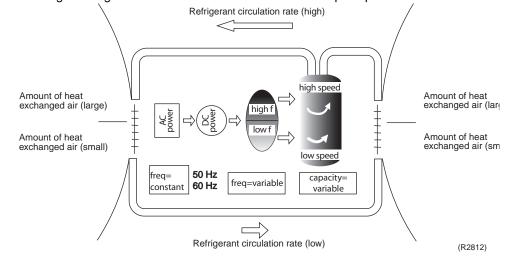
Inverter Principle

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:



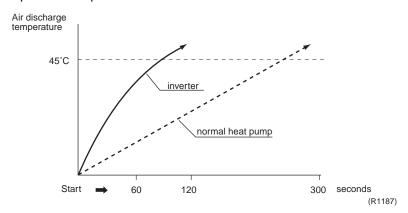
SiEBE12-625 Main Functions

Inverter Features

The inverter provides the following features:

■ The regulating capacity can be changed according to the changes in the outdoor air temperature and cooling / heating load.

Quick heating and quick cooling The compressor rotational speed is increased when starting the heating (or cooling). This enables a quick set temperature.



- Even during extreme cold weather, the high capacity is achieved. It is maintained even when the outdoor air temperature is 2°C.
- Comfortable air conditioning
 A detailed adjustment is integrated to ensure a fixed room temperature. It is possible to air condition with a small room temperature variation.
- 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 table shows the functions that define the minimum and maximum frequency:

Frequency limits	Limited during the activation of following functions	
Low	■ Four way valve operation compensation. Refer to page 81.	
High	 Input current control. Refer to page 82. Compressor protection function. Refer to page 81. Heating Peak-cut control. Refer to page 83. Freeze-up protection. Refer to page 83. Defrost control. Refer to page 85. 	

Forced Cooling / Heating Operation

For more information, refer to "Forced operation mode" on page 91.

Main Functions SiEBE12-625

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

Power-airflow Dual Flaps

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

Heating Mode

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

Cooling Mode

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

Wide-Angle Louvers

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

Auto-Swing

In case of FTK(X)S20-50D

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

Vertical Swing (up and down)			Horizontal Swing (right and left: manual)
Cooling / Dry	Heating	Fan	(right and left: manual)
10° \$\int_{50}^\circ}\$ (R4281)	30° 65° (R4282)	5°	(R4284)

3-D Airflow

FTXG25-35E, CTXG50E, FTK(X)S50-71E, FTK(X)S71B

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



COMFORT AIRFLOW Mode

FTXG25-35E, CTXG50E

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

- The airflow rate is set to AUTOMATIC.
- The airflow rate has the upper limit (M tap) in heating mode.
- The latest command has the priority between POWERFUL and COMFORT AIRFLOW.

Heating	Cooling, Dry
80°/	5°
(R3297)	(R3298)

SiEBE12-625 Main Functions

FTK(X)S20-50D

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

■ The airflow rate is controlled automatically within the following steps. Cooling: L tap – MH tap (same as AUTOMATIC)

Heating: ML tap - M tap

■ The latest command has the priority between POWERFUL and COMFORT AIRFLOW.

Heating	Cooling
	5°
70° (R4303)	(R4302)

Main Functions SiEBE12-625

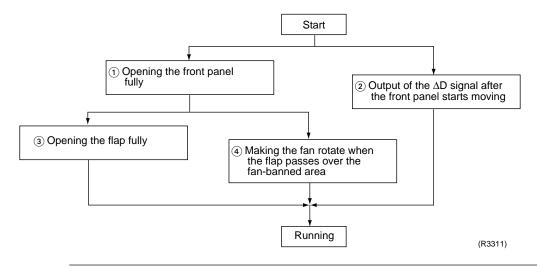
1.3 Operation Starting Control

FTXG25-35E, CTXG50E

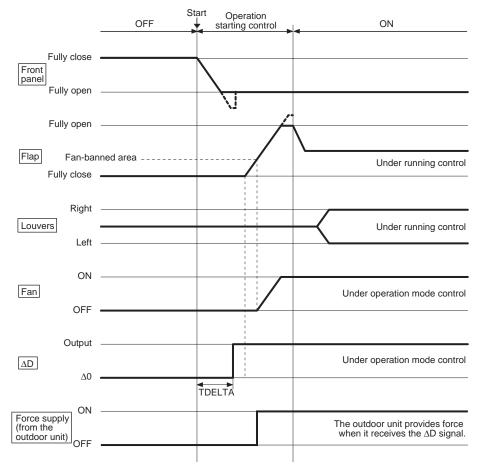
The system carries out the following control at the beginning to conduct every functional parts properly.

- 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



(R3312)

SiEBE12-625 Main Functions

1.4 Fan Speed Control for Indoor Units

Control Mode

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



For more information about Hall IC, refer to the troubleshooting for fan motor on page 204.

Phase Steps

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

	FTXG25/3	35E	CTXG50E		FTK(X)S5 FTK(X)S7	0-71E 11B	FTK(X)S2 FTK(X)S2 FDK(X)S2 FDK(X)S2 FDK(X)S5 FVK(X)S2 FLK(X)S2	0-35CA 25-35EA 25-35CA 50-60C 25-50BA
Step	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
LLL SL L ML M MH				•	(R6037)		(R6037)	
Н	(R6035)	(R6036)	(R6035)	(R6036)		(R6036)		(R6036)
HH (Powerful)	H+70	H+50	H+50	H+50	H+90	H+90	H+50	H+50

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



- 1. Fan stops during defrost operation.
- 2. In time of thermostat OFF, the fan rotates at the following speed.

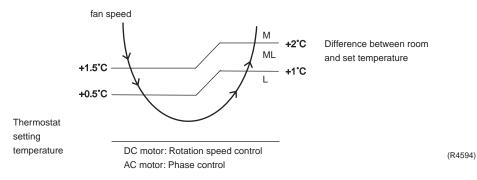
Cooling: The fan keeps rotating at the set tap.

Heating: The fan stops.

Automatic Air Flow Control for Heating

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

Automatic Air Flow Control for Cooling The following drawing explains the principle of fan speed control for cooling:



Main Functions SiEBE12-625

1.5 Programme Dry Function

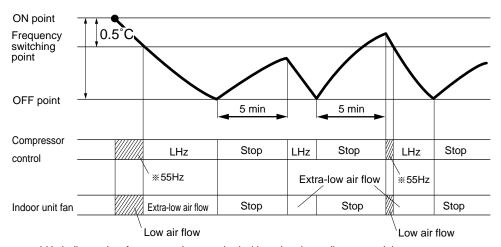
Programme dry function removes humidity while preventing the room temperature from lowering.

Since the microcomputer controls both the temperature and air flow volume, the temperature adjustment and fan adjustment buttons are inoperable in this mode.

In Case of Inverter Units

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

Room temperature at startup	Temperature (ON point) at which operation starts	Frequency switching point	Temperature difference for operation stop	
24°C	Room temperature at startup	0.5°C	1.5°C	
18°C	18°C		1.0°C	
17.0		_		



LHz indicates low frequency. Item marked with varies depending on models.

(R1359)

SiEBE12-625 Main Functions

1.6 Automatic Operation

Automatic Cooling / Heating Function (Heat Pump Only)

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

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

Detailed Explanation of the Function

- 1. Remote controller setting temperature is set as automatic cooling / heating setting temperature (18 to 30°C).
- 2. Main unit setting temperature equals remote controller setting temperature plus correction value (correction value / cooling: 0 deg, heating: 0 deg.).
- 3. Operation ON / OFF point and mode switching point are as follows.
 - ① Heating → Cooling switching point:

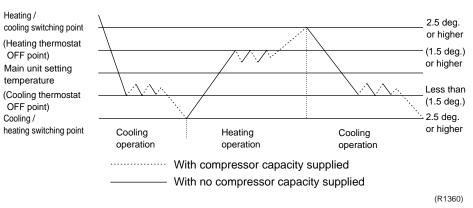
Room temperature ≥ Main unit setting temperature +2.5 deg.

② Cooling → Heating switching point:

Room temperature < Main unit setting temperature -2.5 deg.

- 3 Thermostat ON / OFF point is the same as the ON / OFF point of cooling or heating operation.
- 4. During initial operation

Room temperature ≥ Remote controller setting temperature: Cooling operation Room temperature < Remote controller setting temperature: Heating operation



Main Functions SiEBE12-625

1.7 Thermostat Control

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

Thermostat OFF Condition

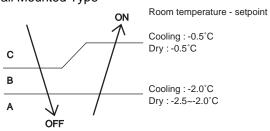
The temperature difference is in the zone A.

Thermostat ON Condition

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

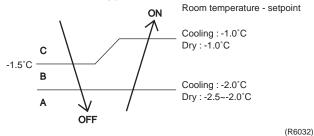
Cooling / Dry

Wall Mounted Type



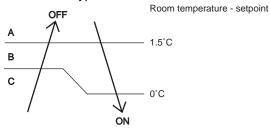
(R4668)

- Floor standing Type
- Floor/Ceiling suspended Type
- **Duct Connected Type**



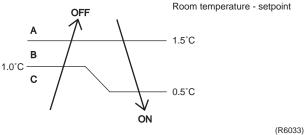
Heating

Wall Mounted Type



(R4669)

- Floor standing Type
- Floor/Ceiling suspended Type
- **Duct Connected Type**



SiEBE12-625 **Main Functions**

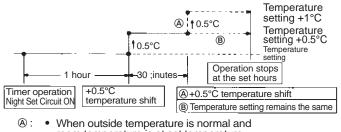
Night Set Mode 1.8

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

The Night Set Circuit

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

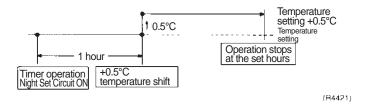
Cooling Operation



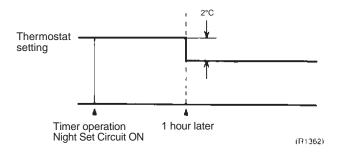
room temperature is at set temperature.

When outside temperature is high (27°C or higher).

In case of FTXG25-35E, CTXG50E, FTK(X)S20-50D the temperature rises once.



Heating Operation



Main Functions SiEBE12-625

1.9 ECONO Mode

Outline

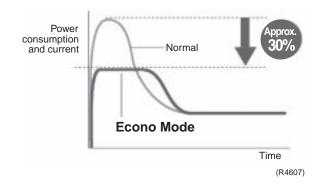
FTK(X)S20-50D

The "ECONO mode" reduces the maximum operating current and power consumption by approx. 30% during start up etc..

This mode is particularly convenient for energy-saving-oriented users. It is also a major bonus for those whose breaker capacities do not allow the use of multiple electrical devices and air conditioners.

It is easily activated from the wireless remote controller by pushing the ECONO button.

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



Details

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

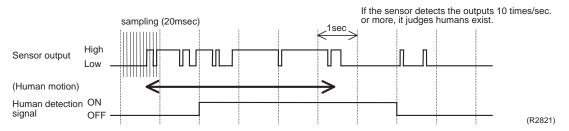
SiEBE12-625 Main Functions

1.10 INTELLIGENT EYE (Wall Mounted Type Only)

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

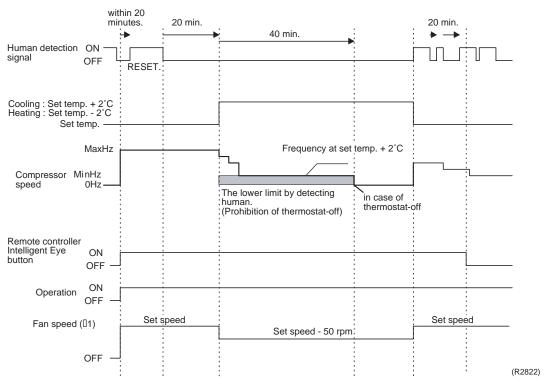
Processing

1. Detection method by Intelligent Eye



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

2. The motions (for example: in cooling)



- When a microcomputer doesn't have a signal from the sensor in 20 minutes, it judges that nobody is in the room and operates the unit in temperature shifted 2°C from the set temperature. (Cooling: 2°C higher, Dry: 1°C higher and Auto: according to the operation mode at that time.)
- ★1 In case of Fan mode, the fan speed reduces by 50 rpm.

Main Functions SiEBE12-625

■ Since the set temperature is shifted by 2°C higher for 40 minutes, compressor speed becomes low and can realize energy saving operation. But as thermostat is prone to be off by the fact that the set temperature has been shifted, the thermostat-off action is prohibited in 40 minutes so as to prevent this phenomena.

After this 40 minutes, the prohibition of the thermostat-off is cancelled and it can realize the conditions to conduct thermostat-off depending on the room temperature. In or after this forty

minutes, if the sensor detects human motion detection signal, it let the set temperature and

Others

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

the fan speed return to the original set point, keeping a normal operation.

SiEBE12-625 Main Functions

1.11 HOME LEAVE Operation

Outline

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

This time, we seek for simplicity of operation by providing the special temperature and air volume control for outing to be set by the exclusive button.

The SkyAir indoor models also have the function.

Detail of the Control

1. Start of Function

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

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

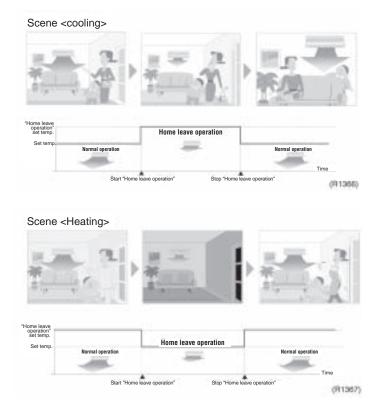
2. Details of Function

A mark representing [HOME LEAVE] is indicated on the liquid crystal display of the remote controller. The indoor unit is operated according to the set temperature and air volume for HOME LEAVE which were pre-set in the memory of the remote controller.

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

3. End of Function

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



Others

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

Main Functions SiEBE12-625

1.12 Inverter POWERFUL Operation

Outline

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

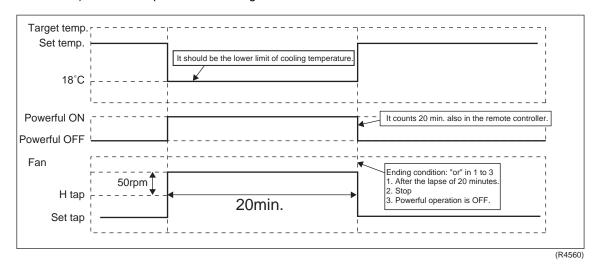
Details of the Control

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

In case of FTK(X)S20-50D

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

Ex.): Powerful operation in cooling mode.



B

Refer to "Fan Speed control" on page 61 for detail.

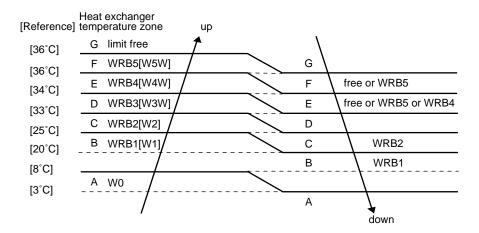
SiEBE12-625 Main Functions

1.13 Other Functions

1.13.1 Hot Start Function

Heat Pump Only

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



1.13.2 Signal Receiving Sign

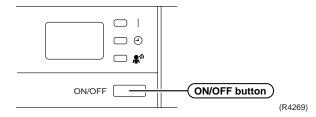
When the indoor unit receives a signal from the remote controller, the unit emits a signal receiving sound.

1.13.3 ON/OFF Button on Indoor Unit

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

Every press of the button switches from ON to OFF or from OFF to ON.

In case of FTK(X)S20-50D



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

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

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

1.13.4 Titanium Apatite Photocatalytic Air-Purifying Filter

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

Main Functions SiEBE12-625

1.13.5 Photocatalytic Deodorizing Filter

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

1.13.6 Air-Purifying Filter

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

1.13.7 Air Purifying Filter with Photocatalytic Deodorizing Function

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

1.13.8 Mold Proof Air Filter

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

1.13.9 Self-Diagnosis Digital Display

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

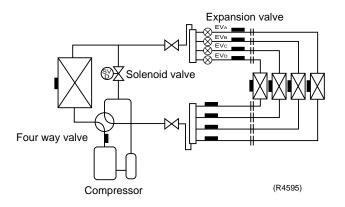
1.13.10Auto-restart Function

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

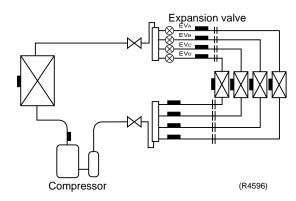
2. Function of Main Structural Parts

2.1 Main Structural Parts

Heat Pump Model



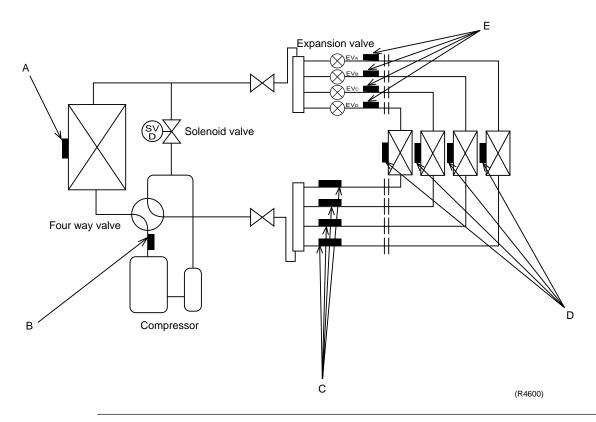
Cooling Only Model



Note: Expansion Valve : In Case of 2MK(X).....EVA-B, 3MK(X).....EVA-C, 4MK(X).....EVA-D

2.2 Function of Thermistor

2.2.1 Heat Pump Model



A Outdoor Heat Exchanger Thermistor

- The outdoor heat exchanger thermistor is used for controlling target discharge temperature.
 The system sets a target discharge temperature according to the outdoor and indoor heat exchanger temperature, and controls the electronic expansion valve opening so that the target discharge temperature can be obtained.
- 2. The outdoor heat exchanger thermistor is used for detecting disconnection of the discharge thermistor when cooling.
 - When the discharge pipe temperature becomes lower than the outdoor heat exchanger temperature, the discharge pipe thermistor is judged as disconnected.

B Discharge Pipe Thermistor

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

C Gas Pipe Thermistor

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

D Indoor Heat Exchanger Thermistor

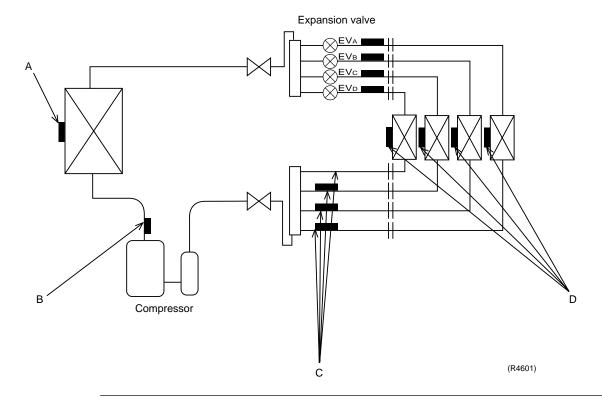
- The indoor heat exchanger thermistors are used for controlling target discharge temperature.
 - The system sets a target discharge pipe temperature according to the outdoor and indoor heat exchanger temperature, and controls the electronic expansion valve opening so that the target discharge temperature can be obtained.
- The indoor heat exchanger thermistors are used for preventing freezing.During the cooling operation, if the temperature drops abnormally, the operating frequency becomes lower, then the operation halts.
- 3. The indoor heat exchanger thermistors are used for anti-icing control.

 During the cooling operation, if the heat exchanger temperature in the room where operation is halted becomes -1°C, or if the room temperature heat exchanger temperature in the room where operation is halted becomes ≥10°C, it is assumed as icing.
- 4. During heating: the indoor heat exchanger thermistors are used for detecting disconnection of the discharge pipe thermistor.
 When the discharge pipe temperature becomes lower than the indoor heat exchanger
- temperature, the discharge pipe thermistor is judged as disconnected.5. The indoor heat exchanger thermistors are used for detecting incorrect wiring.During checking incorrect wiring, refrigerant is passed in order from the port A to detect a
- heat exchanger temperature, and then wiring and piping will be checked.
 6. The indoor heat exchanger thermistors are used for sub-cooling control.
 The actual sub-cooling is calculated from the liquid pipe temperature and the heat exchanger temperature. The system controls the electronic expansion valve opening to
- reach the target sub-cooling.7. The indoor heat exchanger thermistors are used for heating isothermal control of heat exchanger.
 - When heating: if the difference in temperature of each room is greater than 8°C, the electronic expansion valve of the room in which the temperature is higher is opened.

E Liquid Pipe Thermistor

In heating, the liquid pipe thermistors are used for sub-cooling control.
 The system calculates the actual sub-cooling with the liquid pipe temperature and the maximum heat exchanger temperature among all rooms, and controls the opening of the electronic expansion valve to reach the target sub-cooling.

2.2.2 Cooling Only Model



A Outdoor Heat Exchanger Thermistor

- The outdoor heat exchanger thermistor is used for controlling target discharge temperature.
 The system sets a target discharge temperature according to the outdoor and indoor heat exchanger temperature, and controls the electronic expansion valve opening so that the target discharge temperature can be obtained.
- The outdoor heat exchanger thermistor is used for detecting disconnection of the discharge thermistor when cooling.

When the discharge pipe temperature becomes lower than the outdoor heat exchanger temperature, the discharge pipe thermistor is judged as disconnected.

B Discharge Pipe Thermistor

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

C Gas Pipe Thermistor

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

D Indoor Heat Exchanger Thermistor

- 1. The indoor heat exchanger thermistors are used for controlling target discharge temperature.
 - The system sets a target discharge pipe temperature according to the outdoor and indoor heat exchanger temperature, and controls the electronic expansion valve opening so that the target discharge temperature can be obtained.
- The indoor heat exchanger thermistors are used for preventing freezing.During the cooling operation, if the temperature drops abnormally, the operating frequency becomes lower, then the operation halts.
- 3. The indoor heat exchanger thermistors are used for anti-icing control.

 During the cooling operation, if the heat exchanger temperature in the room where operation is halted becomes -1°C, or if the room temperature heat exchanger temperature in the room where operation is halted becomes ≥10°C, it is assumed as icing.
- 4. The indoor heat exchanger thermistors are used for detecting incorrect wiring.

 During checking incorrect wiring, refrigerant is passed in order from the port A to detect a heat exchanger temperature, and then wiring and piping will be checked.

3. Control Specification

3.1 Mode Hierarchy

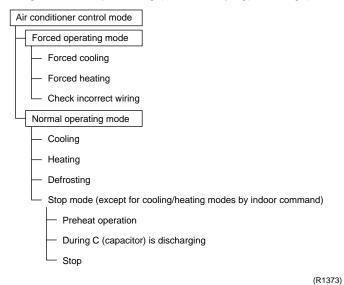
Outline

There are two modes; the mode selected in user's place (normal air conditioning mode) and forced operation mode for installation and providing service.

Detail

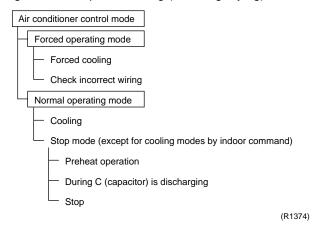
1. For heat pump model

There are following modes; stop, cooling (includes drying), heating (include defrosting)



2. For cooling only model

There are following models; stop and cooling (including drying).





Unless specified otherwise, an indoor dry operation command must be regarded as cooling operation. An indoor fan operation command cannot be made in a multiple indoor unit. (A forced fan command to the indoor unit from the outdoor unit must be made during forced operation.)

Determine Operating Mode

Judge the operating mode command set by each room in accordance with the instructing procedure, and determine the operating mode of the system.

The following procedure will be taken as the modes conflict with each other.

*1. The system will follow the mode determined first. (First-push, first-set)

*2. For the rooms set with different mode, select stand-by mode. (Operation lamp flashes)

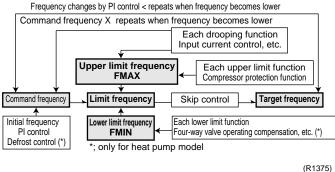
3.2 **Frequency Control**

Outline

Frequency that corresponds to each room's capacity will be determined according to the difference in the temperature of each room and the temperature that is set by the remote controller.

The function is explained as follows.

- 1. How to determine frequency.
- 2. Frequency command from an indoor unit. (The difference between a room temperature and the temperature set by the remote controller.)
- 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 will finally be determined by taking the following steps.

For Heat Pump Model

- 1. Determine command frequency
- Command frequency will be determined in the following order of priority.
- 1.1 Limiting frequency by drooping function
- Input current, discharge pipes, low Hz high pressure limit, peak cutting, freeze-up protection, dew prevention, fin thermistor temperature.
- 1.2 Limiting defrost control time
- 1.3 Forced cooling / heating
- 1.4 Indoor frequency command

2. Determine upper limit frequency

Set a minimum value as an upper limit frequency among the frequency upper limits of the following functions:

Compressor protection, input current, discharge pipes, Low Hz high pressure, peak cutting, freeze-up protection, defrost.

3. Determine lower limit frequency

Set a maximum value as an lower limit frequency among the frequency lower limits of the following functions:

Four way valve operating compensation, draft prevention, pressure difference upkeep.

4. Determine prohibited frequency

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

For Cooling Only Model

1. Determine command frequency

- Command frequency will be determined in the following order of priority.
- 1.1 Limiting frequency by drooping function

Input current, discharge pipes, freeze-up protection, dew prevention, fin thermistor temperature. 1.2 Indoor frequency command

2. Determine upper limit frequency

• Set a minimum value as an upper limit frequency among the frequency upper limits of the following functions:

Compressor protection, input current, discharge pipes, freeze-up protection, dew prevention, fin thermistor temperature.

3. Determine lower limit frequency

 Set a maximum value as an lower limit frequency among the frequency lower limits of the following functions:

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 temperature and the temperature set by the remote controller will be taken as the " ΔD signal" and is used for frequency command.

Temperature difference	∆D signal	Temperature difference					∆D signal
0	*Th OFF	2.0	4	4.0	8	6.0	С
0.5	1	2.5	5	4.5	9	6.5	D
1.0	2	3.0	6	5.0	Α	7.0	Е
1.5	3	3.5	7	5.5	В	7.5	F

^{*}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.

Capacity	S value	Capacity	S value		
2.5 kW	25	5.0 kW	50		
3.5 kW	35	6.0 kW	60		

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 ΔD value of each room and a total value of Q (ΣQ) of the operating room (the room in which the thermostat is set to ON). Q value: Indoor unit output determined from indoor unit volume, air flow rate and other factors.

PI Control (Determine Frequency Up / Down by ΔD Signal)

1. P control

Calculate a total of the ΔD value in each sampling time (20 seconds), and adjust the frequency 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, adjust the frequency up and down according to the $\Sigma\Delta D$ value, obtaining the fixed $\Sigma\Delta D$ value.

When the $\Sigma\Delta D$ value is small...lower the frequency.

When the $\Sigma\Delta D$ value is large...increase the frequency.

3. Limit of frequency variation width

When the difference between input current and input current drooping value is less than 1.5 A, the frequency increase width must be limited.

4. Frequency management when other controls are functioning

When each frequency is drooping;

Frequency management is carried out only when the frequency droops.

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 depending on the total of S values of a room. When low noise commands come from the indoor unit more than one room or when outdoor unit low noise or quiet commands come from all the rooms, the upper limit frequency must be lowered than the usual setting.

3.3 Controls at Mode Changing / Start-up

3.3.1 Preheating Operation

Outline

Operate the inverter in the open phase operation with the conditions including the preheating command from the indoor, the outdoor air temperature and discharge pipe temperature.

Detail

Preheating ON Condition

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

OFF Condition

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

3.3.2 Four Way Valve Switching

Outline of heating operation

Heat Pump Only

During the heating operation current must be conducted and during cooling and defrosting current must not be 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 delay switch of the four way valve must be carried out after the operation stopped.

Detail

The OFF delay of four way valve

Energize the coil for 150 sec after unit operation is stopped.

3.3.3 Four Way Valve Operation Compensation

Outline

Heat Pump Only

At the beginning of the operation as the four way valve is switched, acquire the differential pressure required for activating the four way valve by having output the operating frequency, which is more than a certain fixed frequency, for a certain fixed time.

Detail

Staring Conditions

- 1. When starting compressor for heating.
- 2. When the operating mode changes from the previous time.
- 3. When starting compressor for rushing defrosting or resetting.
- 4. When starting compressor for the first time after the reset with the power is ON. Set the lower limit frequency to 55 (model by model) Hz for 70 seconds with any conditions 1 through 4 above.

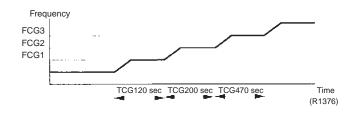
3.3.4 3 Minutes Stand-by

Prohibit to turn ON the compressor for 3 minutes after turning it off. (Except when defrosting. (Only for Heat Pump Model).)

3.3.5 Compressor Protection Function

When turning the compressor from OFF to ON, the upper limit of frequency must be set as follows. (The function must not be used when defrosting (only for heat pump model).)

	2YC45
FCG 3	80
FCG 2	65
FCG 1	55



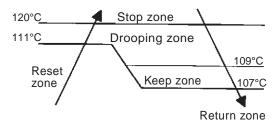
3.4 Discharge Pipe Control

Outline

The discharge pipe temperature is used as the compressor's internal temperature. If the discharge pipe temperature rises above a certain level, the operating frequency upper limit is set to keep this temperature from going up further.

Detail

Zones (typical value)



(R4597)

Management within the Zone

Zone	Control contents
Stop zone	When the temperature reaches the stop zone, stop the compressor and correct abnormality.
Drooping zone	Start the timer, and the frequency will be drooping.
Keep zone	Keep the frequency upper limit.
Return / Reset zone	Cancel the frequency upper limit.

3.5 Input Current Control

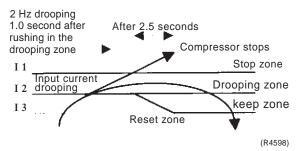
Outline

Detect an input current by the CT during the compressor is running, and set the frequency upper limit from such input current.

In case of heat pump model, this control is the upper limit control function of the frequency which takes priority of the lower limit of four way valve activating compensation.

Detail

The frequency control will be made within the following zones.



When a "stop current" continues for 2.5 seconds after rushing on the stop zone, the compressor operation stops.

If a "drooping current" is continues for 1.0 second after rushing on the drooping zone, the frequency will be 2 Hz drooping.

Repeating the above drooping continues until the current rushes on the drooping zone without change. In the unchanged zone, the frequency limit will remain.

In the return / reset zone, the frequency limit will be cancelled.

Limitation of current drooping and stop value according to the outdoor air temperature

- 1. In case the operation mode is cooling
- The current droops when outdoor air temperature becomes higher than a certain level (model by model).
- 2. In case the operation mode is heating (only for heat pump model)
- The current droops when outdoor air temperature becomes higher than a certain level (model by model).

3.6 Freeze-up Protection Control

Outline

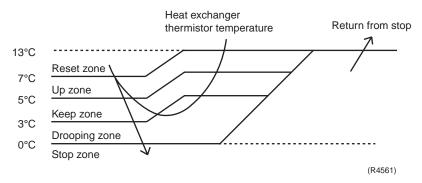
During cooling operation, the signals being sent from the indoor unit allow the operating frequency limitation and then prevent freezing of the indoor heat exchanger. (The signal from the indoor unit must be divided into the zones as the followings.

Detail

Conditions for Start Controlling

Judge the controlling start with the indoor heat exchanger temperature after 2 sec from operation start and after 30 sec from changing number of operation room.

Control in Each Zone



3.7 Heating Peak-cut Control

Outline

Heat Pump Only

During heating operation, the signals being sent form the indoor unit allow the operating frequency limitation and prevent abnormal high pressure. (The signal from the indoor unit must be divided as follows.)

Detail

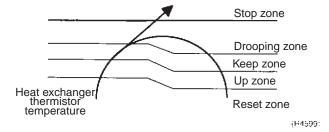
Conditions for Start Controlling

Judge the controlling start with the indoor heat exchanger temperature after 2 min from operation start and after A sec from changing number of operation room.

Control in Each Zone

The maximum value of heat exchange intermediate temperature of each indoor unit controls the following (excluding stopped rooms).

	А
When increase	30
When decrease	2



3.8 Fan Control

Outline

Fan control is carried out with following functions.

- 1. Fan ON control for electric component cooling fan
- 2. Fan control when defrosting
- 3. Fan OFF delay when stopped
- 4. ON/OFF control when cooling operation
- 5. Fan control when the number of heating rooms decreases
- 6. Fan control when forced operation
- 7. Fan control in indoor / outdoor silent operation
- 8. Fan control for pressure difference upkeep

Detail

Fan OFF Control when Stopped

• Fan OFF delay for 60 seconds must be made when the compressor is stopped.

Fan control when the number of heating room decreases (Only for Heat Pump Model) When the outdoor air temperature is more than 10°C, the fan must be turned OFF for 30 seconds.

Tap Control in Indoor / Outdoor Unit Silent Operation

- When Cooling Operation
 - When the outdoor air temperature is less than 37°C, the fan tap must be set to L.
- When Heating Operation
 When the outdoor air temperature is more than 4°C, the fan tap must be turned to L (only for heat pump model).

3.9 Liquid Compression Protection Function 2

Outline

In order to obtain the dependability of the compressor, the compressor must be stopped according to the conditions of the temperature of the outdoor air and outdoor heat exchanger.

Detail

Heat Pump Model

Operation stop depending on the outdoor air temperature
 Compressor operation turns OFF under the conditions that the system is in cooling operation and outdoor air temperature is below -10°C.

Cooling Only Model

Operation stops depending on the outdoor air temperature.

Compressor operation turns OFF under the condition that outdoor air temperature is below –10°C.

3.10 Defrost Control

Outline

Heat Pump Only

Defrosting is carried out by the cooling cycle (reverse cycle). The defrosting time or outdoor heat exchanger temperature must be more than its fixed value when finishing.

Detail

Conditions for Starting Defrost

The starting conditions must be made with the outdoor air temperature and heat exchanger temperature. Under the conditions that the system is in heating operation, 6 minutes after the compressor is started and more than 47 minutes of accumulated time pass since the start of the operation or ending the defrosting.

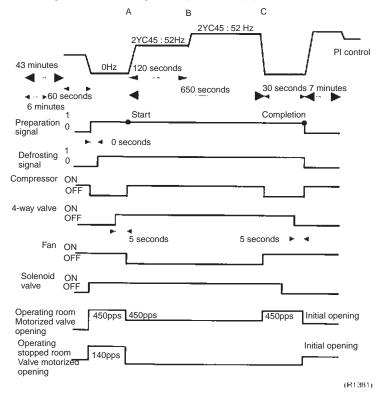
Conditions for Canceling Defrost

The target heat exchanger temperature as the canceling condition is selected in the range of 4° C<Te<12°C according to the air temperature as the following formula.

The target heat exchanger temperature=–(45/65)×(ambient temperature)+14

The defrost operation surely operates in 120 seconds after the start. ($A\rightarrow B$) After then the defrost operation stops at the following conditions.

- When the heat exchanger temperature reaches the target heat exchanger temperature.
 (B→C)
- 2. When 650 seconds have passed after the start even if the heat exchanger temperature does not reaches the target heat exchanger temperature. (C)



3.11 Low Hz High Pressure Limit

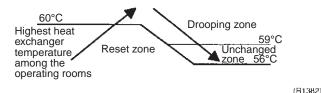
Outline

Heat Pump Only

Set the upper limit of high pressure in a low Hz zone. Set the upper limit of the indoor heat exchanger temperature by its operating frequency of Hz. Separate into three zones, reset zone, unchanged zone and drooping zone and the frequency control must be carried out in such zones.

Detail

Separate into Zones



Note:

Drooping: The system stops 2 minutes after staying in the drooping zone.

3.12 Electronic Expansion Valve Control

Outline

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

Electronic expansion valve is fully closed

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

Room Distribution Control

- 1. Gas pipe isothermal control (distribution control in cooling)
- 2. SC control (only for heat pump model, distribution control in heating)

Open Control

- 1. Electronic expansion valve control when starting operation
- 2. Control when frequency changed
- 3. Control for defrosting (only for heat pump model)
- 4. Oil recover control
- 5. Control when a discharge pipe temperature is abnormally high
- 6. Control when the discharge pipe thermistor is disconnected
- 7. Control for indoor unit freeze-up protection

Feedback Control

1. Discharge pipe temperature control

Distribution control for each room

- Liquid pipe temperature control (with all ports connected and all rooms being airconditioned)
- 2. Liquid pipe temperature control for stopped rooms
- 3. Dew prevention function for indoor rotor

Detail

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

Operation pattern When power is turned ON	O : function X : not function	Gas pipe isothermal control	SC control (only for heat pump model)	Control when frequency changed	Control for abnormally high discharge pipe temperature	Oil recovery control	Indoor freeze-up protection control	Liquid pipe temperature control	Liquid pipe temperature control for stopped rooms	Dew prevention control for indoor rotor
	Fully closed when power is turned ON	×	×	×	×	×	×	×	×	×
Cooling, 1 room operation	Open control when starting	×	×	×	0	0	0	×	×	×
\	(Control of target discharge pipe temperature)	×	×	0	0	0	0	×	×	0
Cooling, 2 rooms operation to Cooling, 4 rooms operation	Control when the operating room is changed	×	×	×	0	0	0	×	×	0
	(Control of target discharge pipe temperature)	0	×	0	0	0	0	×	×	0
Stop	Pressure equalizing control	×	×	×	×	×	×	×	×	×
Heating, 1 room operation (only for heat pump model)	Open control when starting	×	×	×	0	×	×	×	×	×
	(Control of target discharge pipe temperature)	×	O All rooms ×	0	0	×	×	All rooms O	All rooms ×	×
Heating, 2 rooms operation to Heating, 4 rooms operation	Control when the operating room is changed	×	×	×	0	×	×	×	×	×
(only for heat pump model)	(Control of target discharge pipe temperature)	×	All rooms ×	0	0	×	×	All rooms O	All rooms X	×
 	(Defrost control FD=1) (only for heat pump model)	×	×	×	×	×	×	×	×	×
Stop	Pressure equalizing control	×	×	×	×	×	×	×	×	×
Heating operation (only for heat pump model)	Open control when starting	×	×	×	0	×	×	×	×	×
Control of discharge pipe thermistor disconnection	Continue	×	All rooms	×	×	×	×	All rooms O	All rooms	×
Stop	Pressure equalizing control	×	×	×	×	×	×	×	×	×

(R3056)

3.12.1 Fully Closing with Power ON

Initialize the electronic expansion valve when turning on the power, set the opening position and develop pressure equalizing.

3.12.2 Pressure Equalization Control

When the compressor is stopped, open and close the electronic expansion valve and develop pressure equalization.

3.12.3 Opening Limit

Outline

Limit a maximum and minimum opening of the electronic expansion valve in the operating room.

Detail

- A maximum electronic expansion valve opening in the operating room: 450 pulses
- A minimum electronic expansion valve opening in the operating room: 75 pulses The electronic expansion valve is fully closed in the room where cooling is stopped and is opened with fixed opening during defrosting.

3.12.4 Gas Pipe Isothermal Control During Cooling

When the units are operating in multiple rooms, detect the gas piping temperature and correct the electronic expansion valve opening so that the temperature of the gas pipe in each room becomes identical.

- When the gas pipe temperature > the average gas pipe temperature,
 - → open the electronic expansion valve in that room
- When the gas pipe temperature < the average gas pipe temperature,
 - → close the electronic expansion valve in that room

3.12.5 SC Control

Outline

Heat Pump Only

Detect the temperature of liquid pipe and heat exchanger of the rooms and compensate the electronic expansion valve opening so that the SC of each room becomes the target SC.

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

Detail

Start Functioning Conditions

After finishing the open control (660 seconds after the beginning of the operation), control all the electronic expansion valve in the operating room.

Determine Electronic Expansion Valve Opening

Adjust the electronic expansion valve so that the temperature difference between the maximum heat exchanger temperature of connected room and the temperature of liquid pipe thermistor becomes constant.

3.12.6 Starting Operation Control / Changing Operation Room

Control the electronic expansion valve opening when the system is starting or the operating room is changed, and prevent the system to be super heated or moistened.

3.12.7 Disconnection of the Discharge Pipe Thermistor

Outline

Detect a disconnected discharge pipe thermistor by comparing the discharge pipe temperature with the condensation temperature. If any is disconnected, open the electronic expansion valve according to the outdoor air temperature and the operating frequency and operate for a specified time, and then stop.

After 3 minutes of waiting, restart the unit and check if any is disconnected. If any is disconnected stop the system after operating for a specified time. If the disconnection is detected 4 times in succession, then the system will be down.

Detail

Detect Disconnection

If a 630-second timer for open control becomes over, and a 9-minute timer for the compressor operation continuation is not counting time, the following adjustment must be made.

- When the operation mode is cooling When the discharge pipe temperature is lower than the outdoor heat exchanger temperature, the discharge pipe thermistor disconnection must be ascertained.
- When the operation mode is heating (only for heat pump model)When the discharge pipe temperature is lower than the max temperature of operating room heat exchanger, the discharge pipe thermistor disconnection must be ascertained.

Adjustment when the thermistor is disconnected

When compressor stop repeats specified time, the system should be down.

3.12.8 Control when frequency is changed

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

3.12.9 High Temperature of the Discharge Pipe

When the compressor is operating, if the discharge pipe temperature exceeds a certain value, open the electronic expansion valve and remove the refrigerant to the low pressure side and lower discharge temperature.

3.12.10 Oil Recovery Function

Outline

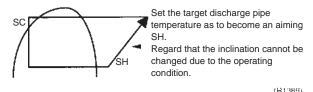
The electronic expansion valve opening in the cooling stopped room must be set as to open for a certain time at a specified interval so that the oil in the cooling stopped room may not be accumulated.

Detail

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

3.12.11 Target Discharge Pipe Temperature Control

Obtain the target discharge pipe temperature from the indoor and outdoor heat exchange temperature, and adjust the electronic expansion valve opening so that the actual discharge pipe temperature become close to that temperature. (Indirect SH control using the discharge pipe temperature)



Determine a correction value of the electronic expansion valve compensation and drive it according to the deflection of the target discharge temperature and actual discharge temperature, and the discharge temperature variation by the 20 sec.

3.13 Malfunctions

3.13.1 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. Fin thermistor
- 4. Gas pipe thermistor
- 5. Outdoor air temperature thermistor
- 6. Liquid pipe thermistor

Relating to CT Malfunction

When the output frequency is more than 55 Hz and the input current is less than 1.25A, carry out abnormal adjustment.

3.13.2 Detection of Overload and Over Current

Outline

In order to protect the inverter, detect an excessive output current, and for protecting compressor, monitor the OL operation.

Detail

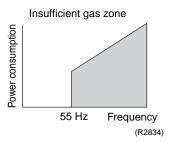
- If the OL (compressor head) temperature exceeds 130°C (for the 2YC32) (120°C for 52 class) or 130°C (for the 2YC45), the compressor gets interrupted.
- If the inverter current exceeds 30 A, the compressor gets interrupted too.

3.13.3 Insufficient Gas Control

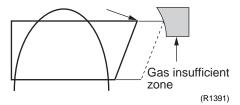
Outline

If a power consumption is below the specified value in which the frequency is higher than the specified frequency, it must be regarded as gas insufficient.

In addition to such conventional function, if the discharge temperature is higher than the target discharge pipe temperature, and more than the specified temperature, and the electronic expansion valve is fully open (450 pulses) more than the specified time, it is considered as an insufficient gas.



With the conventional function, a power consumption is weak comparing with that in the normal operation when gas is insufficient, and gas insufficiency is detected by checking a power consumption.



When operating with insufficient gas, although the rise of discharge pipe temperature is great and the electronic expansion valve is open, it is presumed as an insufficient gas if the discharge pipe temperature is higher than the target discharge pipe temperature.

Detail

Judgment by Input Current

When an output frequency is exceeds 55 Hz and the input current is less than specified value, the adjustment is made for insufficient gas.

Judgment by Discharge Pipe Temperature

When discharge pipe temperature is 20°C higher than target value and the electronic expansion value opening is 450 plus (max.), the adjustment is made for insufficient gas.

3.13.4 Preventing Indoor Freezing

During cooling, if the heat exchanger temperature in the operation stopped room becomes below the specified temperature for the specified time, open the electronic expansion valve in the operation stopped room as specified, and carry out the fully closed operation. After this, if freezing abnormality occurs more than specified time, the system shall be down as the system abnormality.

3.14 Forced Operation Mode

Outline

Forced operating mode includes functions such as; forced cooling, forced heating, incorrect wiring, incorrect piping check.

Operating mode must be selected by operating the forced operation switch.

Detail

Forced Cooling, Forced Heating (Only for Heat Pump Model)

Item	Forced Cooling	Forced Heating			
Forced operation allowing conditions	1) The indoor unit is not abnormal, but the indoor unit which is not in the freezing prohibiting zone is present in more than 1 room.	1) The indoor unit is not abnormal. The indoor unit which is not in the peak-cut prohibited zone is present in more than 1 room.			
	2) The outdoor unit is not abnormal and not in the 3-minute stand-by mode.	←			
	3) The operating mode of the outdoor unit is the stop mode.	←			
	4) The slide selection switch of the forced operation is the cooling mode. The forced operation is allowed when the above "and" conditions are met.	4) The slide selection switch of the forced operation is the heating mode. The forced operation is allowed when the above "and" conditions are met.			
Starting / adjustment	If the forced operation switch is pressed as the above conditions are met.	←			
1) Determine operating room	All rooms	One of the available units runs. Priority is given to the youngest number's room in alphabetical order. (A > B > C > D)			
2) Command frequency	◆ 2YC45: 42 Hz	2YC45: 37 Hz (Outdoor air temp:0°C)			
3) Electronic expansion valve opening	It depends on the capacity of the operating indoor unit.	←			
4) Outdoor unit adjustment	Compressor is in operation.	←			
5) Indoor unit adjustment	The command of forced operation is transmitted to the indoor unit.	←			
End	1) When the forced operation switch is pressed again.	←			
	2) The operation is to end automatically after 30 min.				
Others	The protect functions are prior to all others in the forced operation.	←			

3.15 Wiring-Error Check

Outline

The convenient Wiring Error Check function is designed for the microcomputer to correct wiring errors itself.

If local wiring is unclear in the case of buried piping, for example, just press the wiring error check switch that is behind the right-hand panel of the outdoor unit. Even if the connections for Room A and Room B are confused, the system may run without a hassle. Note that this check function does not work in the following cases.

- For about 30 seconds after the power is turned on (during initial setup).
- For 3-minute standby period after the compressor has stopped.
- When the outdoor air temperature is below 5°C.
- If the indoor unit is in trouble (also in case of all-room transmission failure).

When the piping and wiring are perfect, there is no need to use this function.

Operation

- 1. Remove the 5 screws from the service panel (right side panel) and detach the panel.
- 2. Press the wiring error check switch on the service monitor PCB, and the wiring error check function is activated.
- 3. In about 10-15 minutes, the checking will end automatically.
- 4. When the checking is over, the service monitor LED indicators start flashing.

	LED	1	2	3	4	Judgment		
	Status	All flashing at once				Self-correction impossible		
		Flashi	ng one	after a	nother	Self-correction complete		

Self-correction complete...The LED indicators 1 ~ 4 flash one after another.

Self-correction impossible...The LED indicators flash all at the same time.

- Transmission failure occurs at any of the indoor units.
- The indoor unit heat exchanger thermistor is disconnected.
- An indoor unit is in trouble (if a trouble occurs during the wiring error checking).

Emergency stop...Any of the LED indicators 1 ~ 4 stays on.



- 1. It takes about 10-15 minutes (after pressing the wiring error check switch) to complete the checking. (Wrong wiring between the upper and lower units cannot be self-corrected.)
- 2. Wrongly connected liquid and gas pipes cannot be self-corrected either. Be sure to make the liquid pipe and the gas pipe in pairs.
- 3. To forced-terminate the wiring error check procedure halfway, press the wiring error check switch again.
 - In this case, the microcomputer's memory gets back to its initial status (Room A wiring \rightarrow Port A piping, Room B wiring \rightarrow Port B piping).
- 4. In replacing the outdoor unit PCB, be sure to use this function.
- 5. Make the power slide setting after doing the wiring error checking. (Otherwise, if the wiring is reversed, the air-conditioners being connected are set up in the reverse way.)

Basic Knowledge

- This function works in this way. Refrigerant is let flow from Port A and on. The temperatures
 of the indoor unit heat exchanger thermistors are detected one by one to check up the
 matching between the pipes and wiring.
- With this function on, freezing (crackling) noise may be heard from the indoor unit. This is not a problem. (This is because the heat exchange temperature is made to drop below 0°C in order to increase the detection accuracy.)
- The indoor fan is made to turn on and off at the same time.

Checking the current setting data on the microcomputer memory

Those data can be checked by looking at the service monitor LED indicators, when the wiring error checking is over, during forced operation, at the stop of the system.

The LED indicators stop flashing when the forced operation is over.

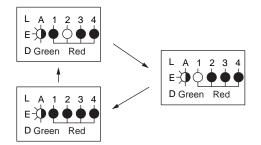
LED1...Room A wiring, LED2...Room B wiring

1st flashing LED...Port A piping, 2nd flashing LED...Port B piping

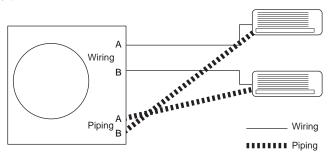
The first stay-on LED means the room that is connected with Port A. The next stay-on LED means the one connected with Port B.

Example

Let's suppose the LED indicators are flashing as follows.



The above means that Port A is connected with Port B and Port B with Room A (or self-corrected this way.)



3.16 Additional Function

3.16.1 Connection Pipe Condensation Preventing Function

This control is intended to adjust the electronic expansion valve opening so that the outdoor unit gas pipe temperature (GDN) be kept below 8°C.

3.16.2 Priority Room Setting

Electronic expansion valves are controlled to provide the unit designated as the priority room with the capacity of other room units.

(Distribution of capacity: Priority room unit --- ΔD Max., other room units --- ΔD - α)

Setting method

Turn off the circuit breaker before changing the setting.

Only one room can be set as the priority room.

· Control start conditions

Priority room setting is made.

AND

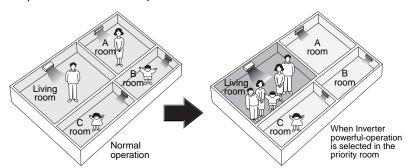
"Powerful" signal from the priority room unit is received.

Note:

The operation mode of the priority room unit has precedence.

Cancellation of control

The control function is canceled when the "Powerful" operation mode is switched off or 20 minutes elapse after "Powerful Operation" started.



The prioritised room will be heated/cooled much more quickly

. (R1396)

3.16.3 POWERFUL Operation Mode

Compressor operating frequency is increased to PI Max. (Max. Hz of operating room unit Σ S) and outdoor unit airflow rate is increased.

3.16.4 Voltage Detection Function

Power supply voltage is detected each time equipment operation starts.

3.16.5 Cooling / Heating Mode Lock

Use the S15 connector to set the unit to only cool or heat.

Setting to only heat (H): Short-circuit pins 1 and 3 of the connector <S15>.

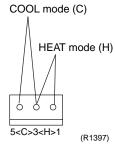
Setting to only cool (C): short-circuit pins 3 and 5 of the connector <S15>.

The following specifications apply to the connector housing and pins.

JST products Housing: VHR-5N

Pin: SVH-21T-1, 1

Note that forced operation is also possible in COOL / HEAT mode.



Part 5 System Configuration

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	•	Operation Instructions	
2.	Instru	uction	99
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	2.2	Safety Precautions	
	2.3	Names of Parts	102
	2.4	Preparation Before Operation	126
		AUTO • DRY • COOL • HEAT • FAN Operation	
		Adjusting the Air Flow Direction	
	2.7	POWERFUL Operation	143
	2.8	OUTDOOR UNIT SILENT Operation	144
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	2.10	HOME LEAVE Operation	146
		INTELLIGENT EYE Operation	
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		Note for Multi System	
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System Configuration 97

System Configuration SiEBE12-625

1. System Configuration

1.1 Operation Instructions

After the installation and test operation of the room air conditioner have been completed, it should be operated and handled as described below. Every user would like to know the correct method of operation of the room air conditioner, to check if it is capable of cooling (or heating) well, and to know a clever method of using it.

In order to meet this expectation of the users, giving sufficient explanations taking enough time can be said to reduce about 80% of the requests for servicing. However good the installation work is and however good the functions are, the customer may blame either the room air conditioner or its installation work because of improper handling. The installation work and handing over of the unit can only be considered to have been completed when its handling has been explained to the user without using technical terms but giving full knowledge of the equipment.

98 List of Functions

2. Instruction

2.1 Manual Contents and Reference Page

Model Series	Wall Mounted Type				
Model Series	FTK(X)S20/25/35/50D	FTK(X)S20/25/35C	FTK(X)S50/60/71E	FTK(X)S71B	
Read before Operation					
Safety Precautions	100	100	100	100	
Names of Parts	102	105	108	111	
Preparation before Operation ★	126	126	126	126	
Operation					
AUTO, DRY, COOL, HEAT, FAN Operation ★	129	129	129	129	
Adjusting the Air Flow Direction	131	133	135	135	
POWERFUL Operation ★	143	143	143	143	
OUTDOOR UNIT SILENT Operation ★	144	144	144	144	
ECONO Operation	145	_	_	_	
HOME LEAVE Operation ★	_	146	146	146	
INTELLIGENT EYE Operation	148	150	152	152	
TIMER Operation ★	156	156	156	156	
Note for Multi System	158	158	158	158	
Care					
Care and Cleaning	160	163	166	169	
Trouble Shooting					
Trouble Shooting	185	185	185	185	
Drawing No.	3P142629-1C 3P170835-4	3P119293-2L	3P170835-1A	3P098586-1J	

Model Series	Wall Mounted Type	Duct Connected Type		Floor/Ceiling Suspended Dual Type	Floor Standing Type
	FTXG25/35E CTXG50E	FDK(X)S25/35C	FDK(X)S50/60C FDK(X)S25/35E	FLK(X)S25/35/50/60B	FVK(X)S25/35/50B
Read before Operation					
Safety Precautions	100	100	100	100	100
Names of Parts	114	117	117	120	123
Preparation before Operation ★	126	126	126	126	126
Operation					
AUTO, DRY, COOL, HEAT, FAN Operation ★	129	129	129	129	129
Adjusting the Air Flow Direction	137	_	_	139	141
POWERFUL Operation ★	143	143	143	143	143
OUTDOOR UNIT SILENT Operation	144	144	144	144	144
ECONO Operation	_	_	_	_	_
HOME LEAVE Operation ★	_	146	146	146	146
INTELLIGENT EYE Operation	154	_	_	_	_
TIMER Operation ★	156	156	156	156	156
Note for Multi System	158	158	158	158	158
Care					
Care and Cleaning	172	175	177	179	182
Trouble Shooting					
Trouble Shooting	185	185	185	185	185
Drawing No.	3P166453-1B	3P131999-2L	3P131999-3K	3P098587-2N	3P098587-1N

 $[\]bigstar$: Illustrations are for wall mounted type FTXS20-50D as representative.

2.2 Safety Precautions

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



WARNING



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

If you do not follow these instructions exactly, the unit may cause minor or moderate property damage or personal injury.



Never do.



Be sure to follow the instructions.



Be sure to earth the air conditioner.



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



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



In order to avoid fire, explosion or injury, do not operate the unit when harmful, among which flammable or corrosive gases, are detected near the unit.



- It is not good for health to expose your body to the air flow for a long time.
- Do not put a finger, a rod or other objects into the air outlet or inlet. As the fan is rotating at a high speed, it will cause injury.
- Do not attempt to repair, relocate, modify or reinstall the air conditioner by yourself. Incorrect work will cause electric shocks, fire etc.
 - For repairs and reinstallation, consult your Daikin dealer for advice and information.
- The refrigerant used in the air conditioner is safe. Although leaks should not occur, if for some reason any refrigerant happens to leak into the room, make sure it does not come in contact with any flame as of gas heaters, kerosene heaters or gas range.



- If the air conditioner is not cooling (heating) properly, the refrigerant may be leaking, so call your dealer. When carrying out repairs accompanying adding refrigerant, check the content of the repairs with our service staff.
- Do not attempt to install the air conditioner by your self. Incorrect work will result in water leakage, electric shocks or fire. For installation, consult the dealer or a qualified technician.
- In order to avoid electric shock, fire or injury, if you detect any abnormally such as smell of fire, stop the operation and turn off the breaker. And call your dealer for instructions.

CAUTION

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



In order to avoid any quality deterioration, do not use the unit for cooling precision instruments, food, plants, animals or works of art.



- Never expose little children, plants or animals directly to the air flow.
- Do not place appliances which produce open fire in places exposed to the air flow from the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the
- Do not block air inlets nor outlets. Impaired air flow may result in insufficient performance or trouble.
- Do not stand or sit on the outdoor unit. Do not place any object on the unit to avoid injury, do not remove the fan guard.
- Do not place anything under the indoor or outdoor unit that must be kept away from moisture. In certain conditions, moisture in the air may condense and drip.
- After a long use, check the unit stand and fittings for damage.
- Do not touch the air inlet and aluminum fins of outdoor unit. It may cause injury.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the appliance.

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



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



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



Installation site

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

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

Consider nuisance to your neighbours from noises

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

Electrical work

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

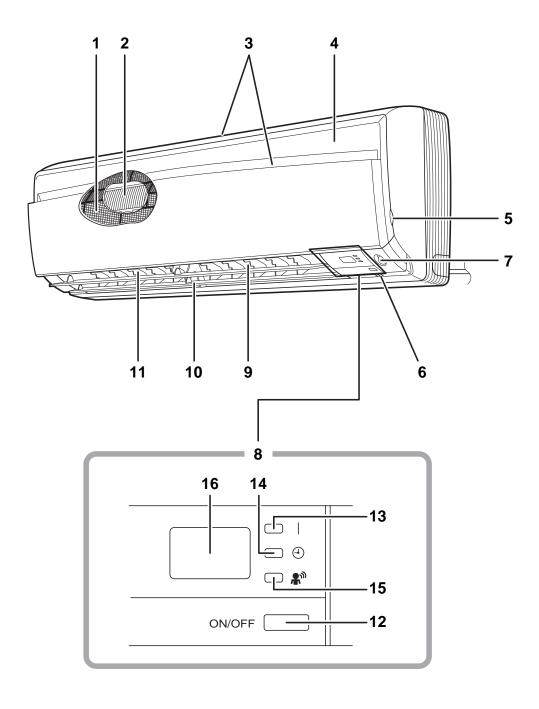
System relocation

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

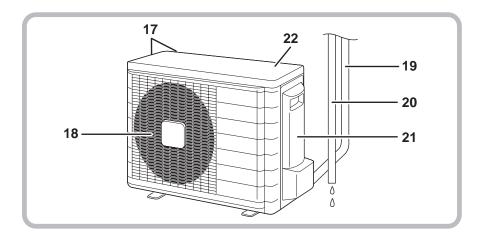
2.3 Names of Parts

FTK(X)S 20/25/35/50 D

■ Indoor Unit



Outdoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Titanium Apatite Photocatalytic Air-Purifying Filter:
 - These filters are attached to the inside of the air filters.
- 3. Air inlet
- 4. Front panel
- 5. Panel tab
- 6. Room temperature sensor:
 - It senses the air temperature around the unit

7. INTELLIGENT EYE sensor:

- It detects the movements of people and automatically switches between normal operation and energy saving operation.
- 8. Display
- 9. Air outlet
- 10. Flaps (horizontal blades)
- 11. Louvers (vertical blades):
 - The louvers are inside of the air outlet.

12. Indoor Unit ON/OFF switch:

- Push this switch once to start operation.
 Push once again to stop it.
- The operation mode refers to the following table.:

	Mode	Temperature setting	Air flow rate
F(C)TKS	COOL	22°C	AUTO
F(C)TXE	AUTO	25°C	AUTO

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

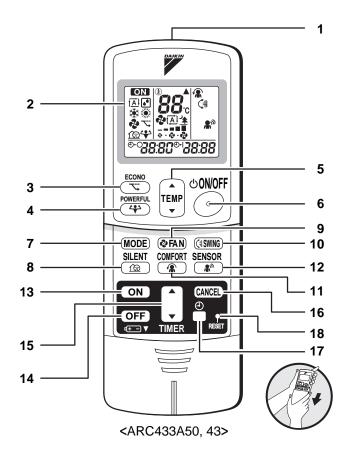
Outdoor Unit

- 17. Air inlet: (Back and side)
- 18. Air outlet
- 19. Refrigerant piping and inter-unit cable
- 20. Drain hose

- 21. Earth terminal:
 - It is inside of this cover.
- 22. Outside air temperature sensor:
 - It senses the ambient temperature around the unit.

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

• It sends signals to the indoor unit.

2. Display:

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

3. ECONO button:

ECONO operation

4. POWERFUL button:

POWERFUL operation

5. TEMPERATURE adjustment buttons:

It changes the temperature setting.

6. ON/OFF button:

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

7. MODE selector button:

 It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)

8. SILENT button: OUTDOOR UNIT SILENT operation

Only works for multi-connection

9. FAN setting button:

· It selects the air flow rate setting.

10. SWING button

• Adjusting the Air Flow direction.

11. COMFORT AIRFLOW button:

COMFORT AIRFLOW operation

12. SENSOR button: INTELLIGENT EYE operation

13. ON TIMER button

14. OFF TIMER button

15. TIMER Setting button:

· It changes the time setting.

16. TIMER CANCEL button:

· It cancels the timer setting.

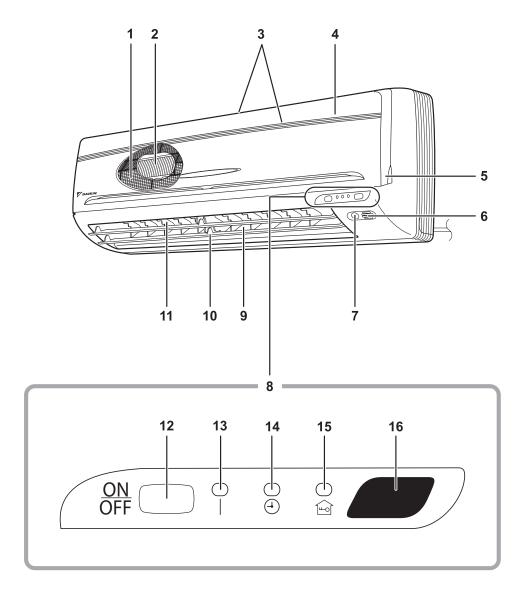
17. CLOCK button

18. RESET button:

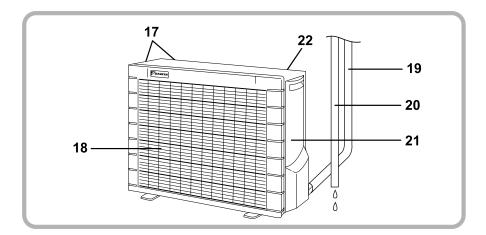
- · Restart the unit if it freezes.
- Use a thin object to push.

FTK(X)S 20/25/35 C

■ Indoor Unit



Oudoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Air purifying filter with photocatalytic deodorizing function:
 - These filters are attached to the inside of the air filters.
- 3. Air inlet
- 4. Front panel
- 5. Panel tab
- 6. Room temperature sensor:
 - It senses the air temperature around the unit.

7. INTELLIGENT EYE sensor:

- It detects the movements of people and automatically switches between normal operation and energy saving operation.
- 8. Display
- 9. Air outlet
- 10. Flaps (horizontal blade)
- 11. Louvers (vertical blades):
 - The louvers are inside of the air outlet.

12. indoor Unit ON/OFF switch:

- Push this switch once to start operation.
 Push once again to stop it.
- The operation mode refers to the following table.

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

- This switch is useful when the remote control is missing.
- 13. Operation lamp (green):
- 14. TIMER lamp (yellow)
- 15. HOME LEAVE lamp (red)
- 16. Signal receiver:
 - It receives signals from the remote control.
 - When the unit receives a signal, you will hear a short beep.
 - Operation startbeep-beep
 - Settings changed.....beep
 - Operation stopbeeeeep

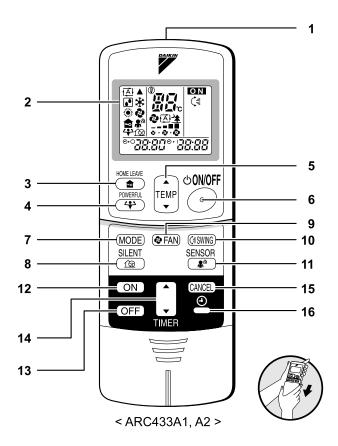
Outdoor Unit

- 17. Air inlet: (Back and side)
- 18. Air outlet
- 19. Refrigerant piping and inter-unit cable
- 20. Drain hose

- 21. Earth terminal:
 - · It is inside of this cover.
- 22. Outside air temperature sensor: (Back side)
 - It senses the ambient temperature around the unit

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

· It sends signals to the indoor unit.

2. Display:

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

HOME LEAVE operation

4. POWERFUL button:

POWERFUL operation

- 5. TEMPERATURE adjustment buttons:
 - It changes the temperature setting.
- 6. ON/OFF button:
 - Press this button once to start operation.
 Press once again to stop it.
- 7. MODE selector button:

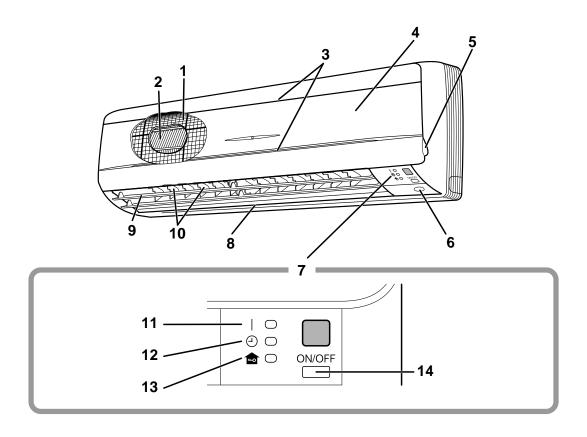
- It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
- **8. SILENT button:** OUTDOOR UNIT SILENT operation
- 9. FAN setting button:
 - It selects the air flow rate setting.
- 10. SWING button
- 11. SENSOR button:

INTELLIGENT EYE operation

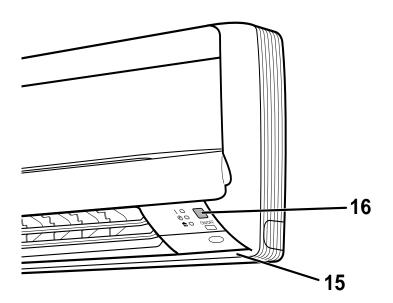
- 12. ON TIMER button
- 13. OFF TIMER button
- 14. TIMER Setting button:
 - · It changes the time setting.
- 15. TIMER CANCEL button:
 - It cancels the timer setting.
- 16. CLOCK button

CDK(X)S 50/60/71 E

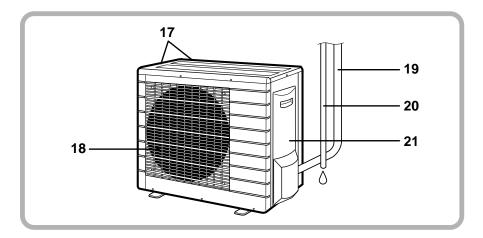
■ Indoor Unit



■ Main unit control panel



Outdoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Titanium Apatite Photocatalytic Air-Purifying Filter
 - These filters are attached to the inside of the air filters
- 3. Air inlet
- 4. Front panel
- 5. Panel tab:
- 6. INTELLIGENT EYE sensor:
 - It detects the movements of people and automatically switches between normal operation and energy saving operation.
- 7. Display
- 8. Air outlet
- 9. Flap (horizontal blade)
- 10. Louvers (vertical blades)
 - The Louvers are inside of the air outlet.
- 11. Operation Lamp (green)
- 12. TIMER lamp (yellow)
- 13. HOME LEAVE lamp (red):
 - Lights up when you use HOME LEAVE Operation

14. Indoor Unit ON/OFF switch:

- Push this switch once to start operation.
 Push once again to stop it.
- The operation mode refer to the following table.

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

 This switch is useful when the remote control is missing.

15. Room temperature sensor:

• It senses the air temperature around the unit.

16. Signal receiver:

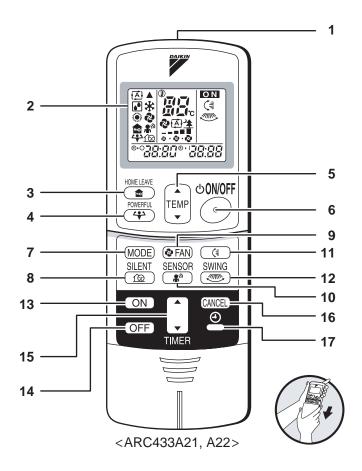
- It receives signals from the remote controller.
- When the unit receives a signal, you will hear a short beep
 - Operation startbeep-beep
 - Settings changedbeep
 - Operartion stopbeeeeep

■ Outdoor Unit

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

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

• It sends signals to the indoor unit.

2. Display:

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

3. HOME LEAVE button:

HOME LEAVE operation

4. POWERFUL button:

POWERFUL operation

5. TEMPERATURE adjustment buttons:

• It changes the temperature of time setting.

6. ON/OFF button:

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

7. MODE selector button:

 It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN) **8. SILENT button:** for OUTDOOR UNIT SILENT operation

9. FAN setting button:

It selects the air flow rate setting.

10. SENSOR button: INTELLIGENT EYE operation

11. SWING button:

• Flap (Horizontal blade)

12. SWING button:

· Louver (Vertical blades)

13. ON TIMER button

14. OFF TIMER button

15. TIMER Setting button:

It changes the time setting.

16. TIMER CANCEL button:

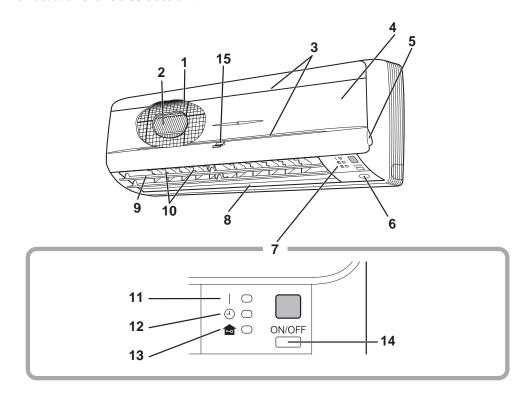
• It cancels the timer setting.

17. CLOCK button

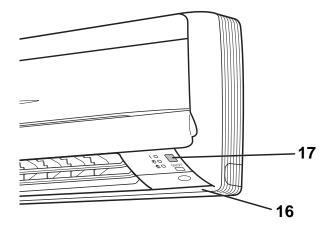
FLK(X)S 71 B

■ Indoor Unit

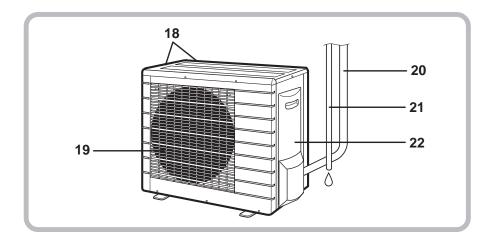
This illustration shows a 50-class unit



■ Main unit control panel



Oudoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Air purifying filter with photocatalytic deodorizing function:
 - These filters are attached to the inside of the air filters
- 3. Air inlet
- 4. Front grille
- 5. Grille tab
- 6. INTELLIGENT EYE sensor:
 - It detects the movements of people and automatically switches between normal operation and energy saving operation.
- 7. Display
- 8. Air outlet
- 9. Flap (horizontal blade)
- 10. Louvers (vertical blades):
 - The Louvers are inside of the air outlet.
- 11. Operation lamp (green)
- 12. TIMER lamp (yellow)
- 13. HOME LEAVE lamp (red):

Lights up when you use HOME LEAVE Operation.

14. Indoor unit ON/OFF switch

- Push this switch once to start operation.
 Push once again to stop it.:
- The operation mode refer to the following table.

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

 This switch is useful when the remote control is missing.

15. Packaging materials: 50 class only

• If any packaging materials are included, please remove before operating

16. Room temperature sensor:

It senses the air temperature around the unit

17. Signal receiver:

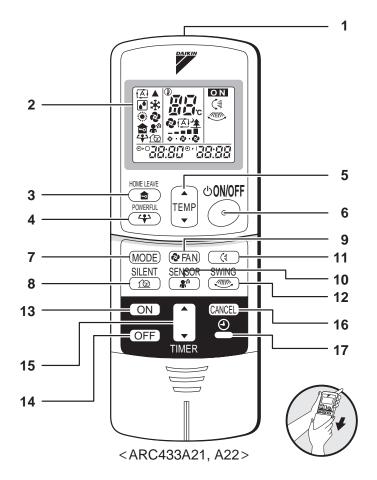
- It receives signals from the remote control.
- When the unit receives a signal, you will hear a short beep.
 - Operation startbeep-beep
 - Settings changed.....beep
 - Operation stopbeeeeep

■ Outdoor Unit

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

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

· It sends signals to the indoor unit.

2. Display:

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

3. HOME LEAVE button:

for HOME LEAVE operation

4. POWERFUL button:

for POWERFUL operation

5. TEMPERATURE adjustment buttons:

• It changes the temperature of time setting.

6. ON/OFF button:

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

7. MODE selector button:

 It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN) **8. SILENT button:** for OUTDOOR UNIT SILENT operation

9. FAN setting button:

- · It selects the air flow rate setting.
- **10. SENSOR button:** for INTELLIGENT EYE operation

11. SWING button

• Flap (Horizontal blade)

12. SWING button

· Louver (Vertical blades)

13. ON TIMER button

14. OFF TIMER button

15. TIMER Setting button:

· It changes the time setting.

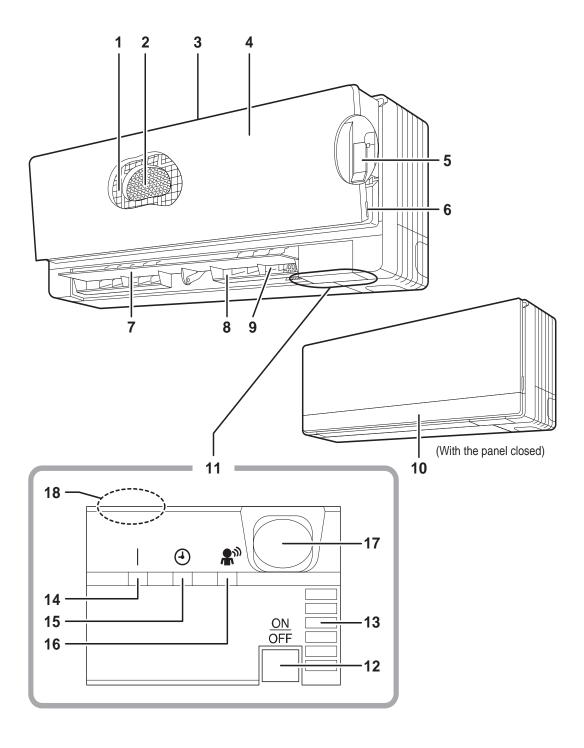
16. TIMER CANCEL button:

• It cancels the timer setting.

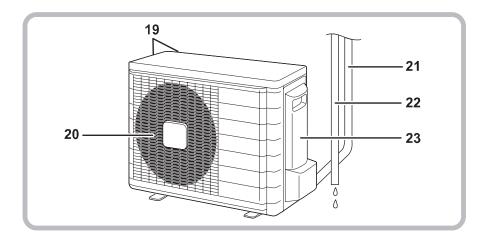
17. CLOCK button

FTXG 25/35 E, CTXG 50 E

■ Indoor Unit



Outdoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Titanium Apatite Photocatalytic Air-Purifying Filter
 - These filters are attached to the inside of the air filters
- 3. Air inlet
- 4. Front panel
- 5. Supporting plate:
 - The supporting plate is used to support the front panel during maintenance.
- 6. Panel tab
- 7. Flap (horizontal blade)
- 8. Air outlet
- 9. Louvers (vertical blades)
 - The louvers are inside of the air outlet.
- 10. Outlet vent panel
- 11. Display
- 12. Indoor unit ON/OFF switch:
 - Push this switch once to start operation.
 Push once again to stop it.

The operation mode refer to the following table.

	Mode	Temperature setting	Air flow rate
FTXS	AUTO	25°C	AUTO

 This switch is useful when the remote control is missing

13. Room temperature sensor:

- It senses the air temperature around the unit
- 14. Operation Lamp (green)
- 15. TIMER lamp (yellow)
- 16. INTELLIGENT EYE lamp (green)
- 17. INTELLIGENT EYE sensor:
 - It detects the movements of people and automatically switches between normal operation and energy saving operation.
- 18. Signal receiver:
 - · It receives signals from the remote controller.
 - When the unit receives a signal, you will hear a short beep
 - Operation startbeep-beep
 - Settings changedbeep
 - Operartion stopbeeeeep

■ Outdoor Unit

19. Air inlet: (Back and side)

20. Air outlet

21. Refrigerant piping and inter-unit cable

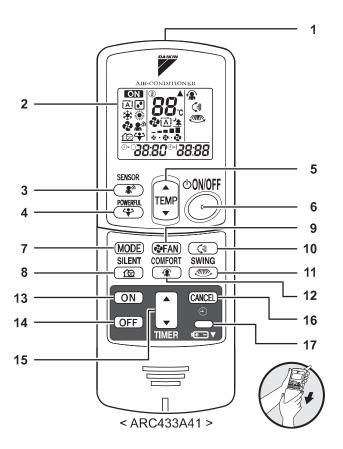
22. Drain hose

23. Earth terminal

· It is inside of this cover.

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

• It sends signals to the indoor unit.

2. Display:

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

3. SENSOR button:

INTELLIGENT EYE operation

4. POWERFUL button:

POWERFUL operation

5. TEMPERATURE adjustment buttons:

• It changes the temperature setting.

6. ON/OFF button:

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

7. MODE selector button:

 It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)

8. SILENT button: OUTDOOR UNIT SILENT operation

9. FAN setting button:

• It selects the air flow rate setting.

10. SWING button:

• Flap (Horizontal blade)

11. SWING button:

- Louver (Vertical blades)
- 12. COMFORT AIRFLOW mode button
- 13. ON TIMER button
- 14. OFF TIMER button

15. TIMER Setting button:

· It changes the time setting.

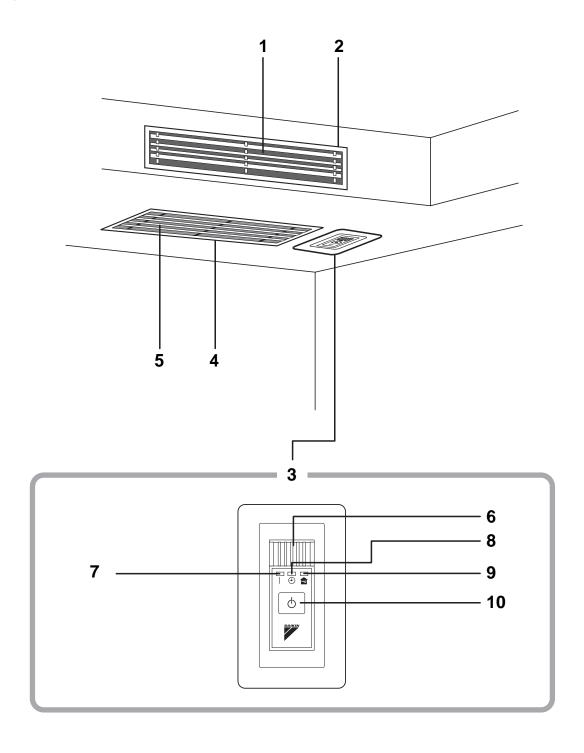
16. TIMER CANCEL button:

· It cancels the timer setting.

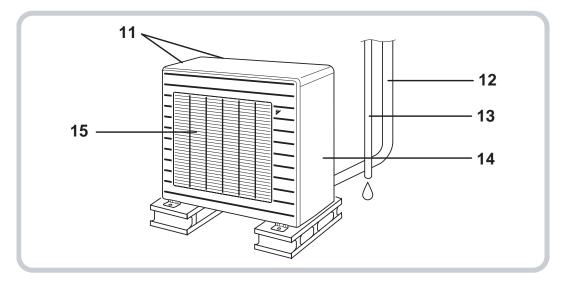
17. CLOCK button

FDK(X)S 25/35/50/60 C, FDK(X)S 25/35 E

■ Indoor Unit



Outdoor Unit



■ Indoor Unit

- 1. Air filter
- 2. Air outlet grille (field supply)
 - Appearance of the Air outlet grille and Air inlet grille may differ with some models.
- 3. Display, Control panel
- 4. Suction grille (option)
 - Appearance of the sunction grille and Air inlet grille may differ with some models.
- 5. Air inlet
- 6. Room temperature sensor
 - It senses the air temperature around the unit.
- 7. Operation lamp (green)
- 8. TIMER lamp (yellow)
- 9. HOME LEAVE lamp (red)
 - Lights up when you use HOME LEAVE operation.

10. Indoor Unit ON/OFF switch

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

	Mode	Temperature setting	Air flow rate
FDKS	COOL	22°C	AUTO
FDXS	AUTO	25°C	AUTO

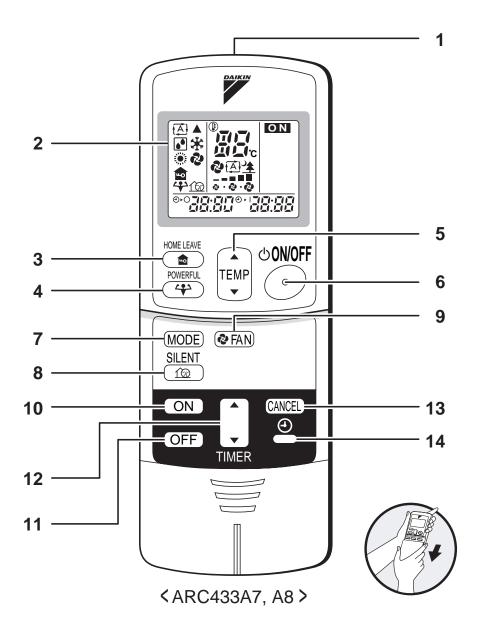
■ Outdoor Unit

- 11. Air inlet: (Back and side)
- 12. Refrigerant piping and inter-unit cable
- 13. Drain hose

- 14. Earth terminal
 - · It is inside of this cover.
- 15. Air outlet

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

• It sends signals to the indoor unit.

2. Display:

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

3. HOME LEAVE button:

for HOME LEAVE operation

4. POWERFUL button:

for POWERFUL operation

5. TEMPERATURE adjustment buttons:

· It changes the temperature of time setting.

6. ON/OFF button:

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

7. MODE selector button:

- It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
- **8. SILENT button:** for OUTDOOR UNIT SILENT operation

9. FAN setting button:

• It selects the air flow rate setting.

10. ON TIMER button

11. OFF TIMER button

12. TIMER Setting button:

• It changes the time setting.

13. TIMER CANCEL button:

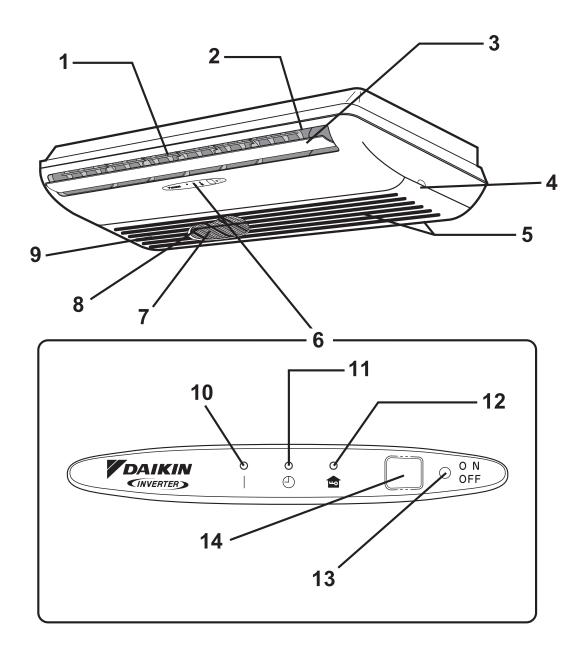
· It cancels the timer setting.

14. CLOCK button

FLK(X)S 25/35/50/60 B

Indoor Unit

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



List of Functions

Opening the front panel

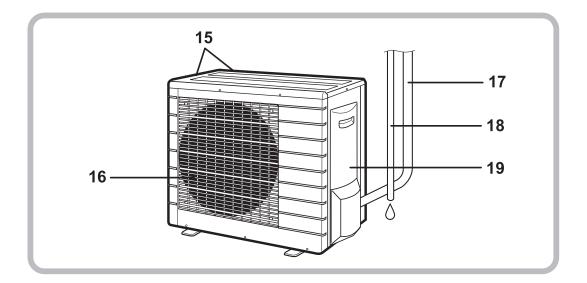
How to open the front panel



! CAUTION

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

Outdoor Unit



■ Indoor Unit

- 1. Louvers (vertical blades):
 - The louvers are inside of the air outlet.
- 2. Air outlet
- 3. Flap (horizontal blade)
- 4. Panel tab
- 5. Air inlet
- 6. Display
- 7. Air filter
- 8. Photocatalytic deodorizing filter or Air purifying filter:
 - These filters are attached to the inside of the air filters.
- 9. Front panel
- 10. Display
- 11. Operation Lamp (green)
- 12. TIMER lamp (yellow)
- 13. HOME LEAVE lamp (red)
 - Lights up when you use HOME LEAVE Operation

14. Indoor unit ON/OFF switch:

- Push this switch once to start operation.
 Push once again to stop it.
- The operation mode refer to the following table.

	Mode	Temperature setting	Air flow rate
FLKS	COOL	22°C	AUTO
FLXS	AUTO	25°C	AUTO

- Push the switch using an object with a sharp tip, such as a pen.
- This switch is useful when the remote controller is missing.

15. Signal receiver:

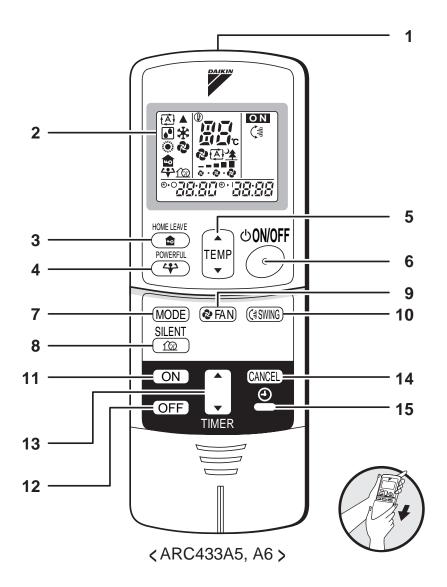
- It receives signals from the remote controller.
- When the unit receives a signal, you will hear a short beep
 - Operation startbeep-beep
 - · Settings changedbeep
 - Operartion stopbeeeeep

■ Outdoor Unit

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

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

· It sends signals to the indoor unit.

2. Display:

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

3. HOME LEAVE button:

HOME LEAVE operation

4. POWERFUL button:

POWERFUL operation

5. TEMPERATURE adjustment buttons:

• It changes the temperature setting.

6. ON/OFF button:

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

7. MODE selector button:

- It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
- 8. OUTDOOR UNIT SILENT button

9. FAN setting button:

• It selects the air flow rate setting.

10. SWING button:

11. ON TIMER button

12. OFF TIMER button

13. TIMER Setting button:

• It changes the time setting.

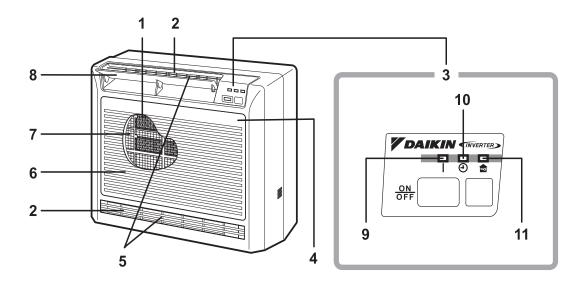
14. TIMER CANCEL button:

• It cancels the timer setting.

15. CLOCK button

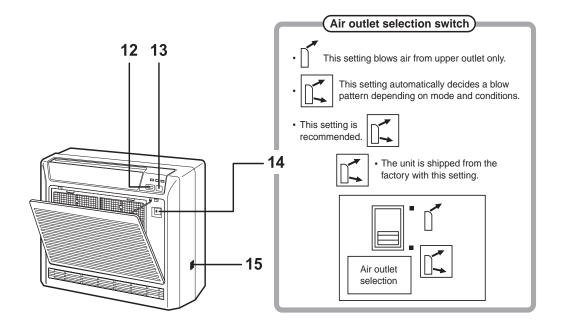
FVK(X)S 25/35/50 B

■ Indoor Unit



Opening the front panel

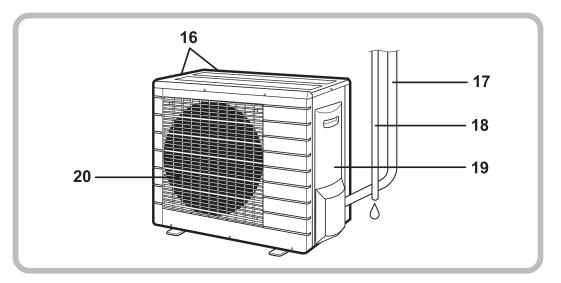
How to open the front panel



A CAUTION

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

Outdoor Unit



■ Indoor Unit

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

The operation mode refer to the following table.

	Mode	Temperature setting	Air flow rate
FLKS	COOL	22°C	AUTO
FLXS	AUTO	25°C	AUTO

 This switch is useful when the remote control is missing.

13. Signal receiver:

- Signals are recieved from the remote control.
- When the unit receives a signal, you will hear a short beep
 - Operation startbeep-beep
 - Settings changedbeep
 - Operartion stopbeeeeep
- 14. Air outlet selection switch
- 15. Room temperature sensor:
 - It senses the air temperature around the unit

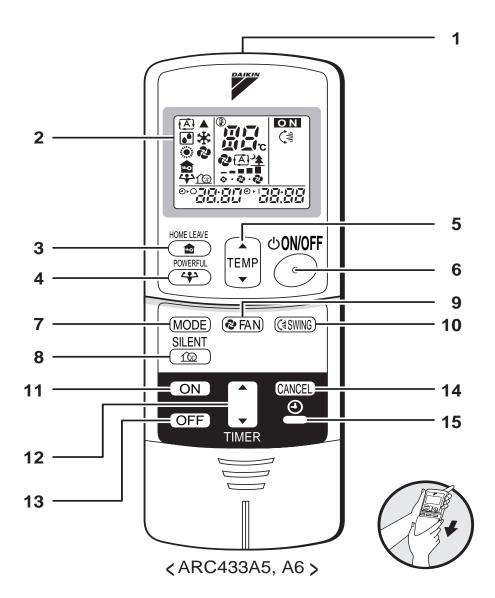
■ Outdoor Unit

- 16. Air inlet: (Back and side)
- 17. Refrigerant piping and inter-unit cable
- 18. Drain hose

- 19. Earth terminal
 - It is inside of this cover.
- 20. Air outlet

Appearance of the outdoor unit may differ from some models.

Remote control



1. Signal transmitter:

· It sends signals to the indoor unit.

2. Display:

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

3. HOME LEAVE button:

HOME LEAVE operation

4. POWERFUL button:

POWERFUL operation

5. TEMPERATURE adjustment buttons:

• It changes the temperature setting.

6. ON/OFF button:

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

7. MODE selector button:

- It selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN)
- **8. SILENT button:** OUTDOOR UNIT SILENT operation

9. FAN setting button:

· It selects the air flow rate setting.

10. SWING button:

11. ON TIMER button

12. TIMER Setting button:

• It changes the time setting.

13. OFF TIMER button

14. TIMER CANCEL button:

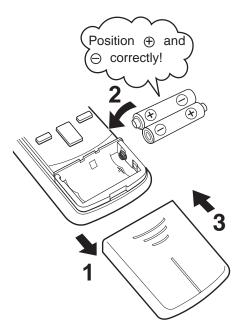
• It cancels the timer setting.

15. CLOCK button

2.4 Preparation before Operation

■ To set the batteries

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



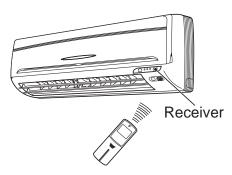
ATTENTION

About batteries

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

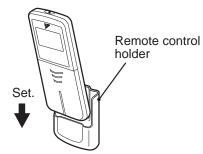
To operate the remote control

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



■ To fix the remote control holder on the wall

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



• To remove, pull it upwards.

ATTENTION

■ About remote control

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

■ To set the clock

1. Press "CLOCK button".

 $\mathcal{D}:\mathcal{D}\mathcal{D}$ is displayed.

blinks.

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

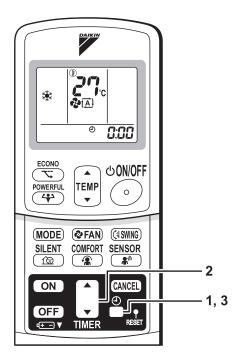
Holding down " ▲ " or " ▼ " button rapidly increases or decreases the time display.

3. Press "CLOCK button".

: blinks.

■ Turn the breaker ON

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



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NOTE

■ Tips for saving energy

• Be careful not to cool (heat) the room too much.

Keeping the temperature setting at a moderate level helps save energy.

Cover windows with a blind or a curtain.

Blocking sunlight and air from outdoors increases the cooling (heating) effect.

 Clogged air filters cause inefficient operation and waste energy. Clean them once in about every two weeks. Recommended temperature setting

For cooling: 26°C – 28°C

For heating: 20°C – 24°C

■ Please note

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

Mode	Operating conditions	If operation is continued out of this range
COOL	Outdoor temperature:<2MK(X)S40> 10 to 46 °C	A safety device may work to stop the operation. (In multi system, it may work to stop the operation of the outdoor unit only.) Condensation may occur on the indoor unit and drip.
HEAT	Outdoor temperature:<2MKXS40> -10 to 15.5 °C <2MXS52> -15 to 15.5 °C <3/4/5MXS> -15 to 20°C <rxs50> -15 to 18°C Indoor temperature: 10 to 30 °C</rxs50>	A safety device may work to stop the operation.
DRY	Outdoor temperature:<2MK(X)S40> 10 to 46 °C <2MKS52> -10 to 46 °C <3/4/SMK(X)S> -10 to 46 °C <3/4/SMK(X)S> -10 to 46 °C R(X)S50> -10 to 46 °C Indoor temperature: 18 to 32 °C Indoor humidity: 80% max.	A safety device may work to stop the operation. Condensation may occur on the indoor unit and drip.

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

2.5 AUTO · DRY · COOL · HEAT · FAN Operation

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

To start operation

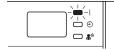
- 1. Press "MODE selector button" and select a operation mode.
 - Each pressing of the button advances the mode setting in sequence.

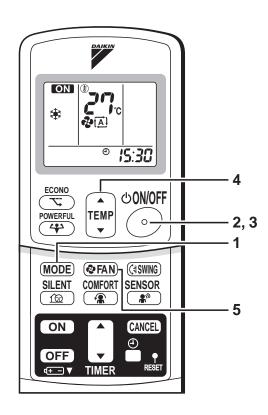
⚠ : AUTO☑ : DRY

♣ : FAN



- 2. Press "ON/OFF button".
 - The OPERATION lamp lights up.





■ To stop operation

- 3. Press "ON/OFF button" again.
 - Then OPERATION lamp goes off.

■ To change the temperature setting

4. Press "TEMPERATURE adjustment button"

DRY or FAN mode	AUTO or COOL or HEAT mode
The temperature setting is not variable.	Press " " to raise the temperature and press
	" ▼ " to lower the temperature.
	Set to the temperature you like.
The same same grown and the same same same same same same same sam	

To change the air flow rate setting

5. Press "FAN setting button".

DRY mode	AUTO or COOL or HEAT or FAN mode
The air flow rate setting is not variable.	Five levels of air flow rate setting from " o " to " lous " (A) " * 2 " are available.

Indoor unit quiet operation

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

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

NOTE

■ Note on HEAT operation

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

■ Note on COOL operation

• This air conditioner cools the room by blowing the hot air in the room outside, so if the outside temperature is high, performance drops.

■ Note on DRY operation

• The computer chip works to rid the room of humidity while maintaining the temperature as much as possible. It automatically controls temperature and fan strength, so manual adjustment of these functions is unavailable.

■ Note on AUTO operation

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

Note on air flow rate setting

• At smaller air flow rates, the cooling (heating) effect is also smaller.

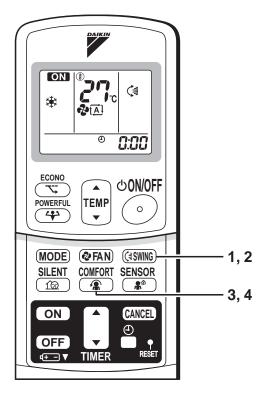
2.6 Adjusting the Air Flow Direction FTK(X)E 20/25/35/50 D

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

■ To adjust the horizontal blades (flaps)

- 1. Press "SWING button".
 - The display will light up and the flaps will begin to swing.
- When the flaps have reached the desired position, press "SWING button" once more.

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

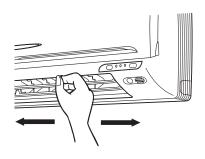


■ To adjust the vertical blades (louvers)

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

 When the unit is installed in the corner of a room, the direction of the louvers should be facing away from the wall.
 If they face the wall, the wall will block off the

If they face the wall, the wall will block off the wind, causing the cooling (or heating) efficiency to drop.



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■ To start COMFORT AIRFLOW operation

- 3. Press "COMFORT AIRFLOW button".
 - The flap position will change, preventing air from blowing directly on the occupants of the room.

To cancel COMFORT AIRFLOW operation

- 4. Press "COMFORT AIRFLOW button" again.
 - The flaps will return to the memory position from before COMFROT AIRFLOW mode.
 - " man " disappears from the LCD

Notes on COMFORT AIRFLOW operation

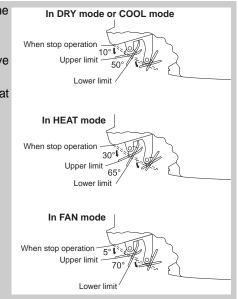
• POWERFUL operation and COMFORT AIRFLOW operation cannot be used at the same time. Priority is given to POWERFUL operation.

Notes on flaps and louvers angles

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

■ ATTENTION

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



FTK(X)S 20/25/35 C

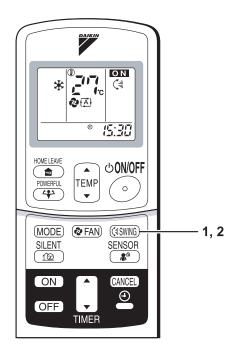
You can adjust the air flow direction to increase your comfort.

■ To adjust the horizontal blades (flaps)

- 1. Press "SWING button".
 - The display will light up and the flaps will begin to swing.
- 2. When the flap have reached the desired position, press "SWING button" once more.

The flap will stop moving.

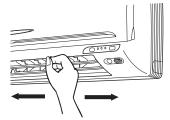
" disappears from the LCD $\,$



■ To adjust the vertical blades (louvers)

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

)



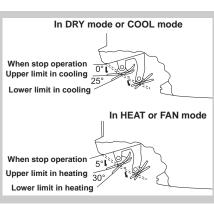
Notes on flaps and louvers angle

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

■ ATTENTION

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

 When stop operation Upper limit in cooling Lower limit in cooling
- Be careful when adjusting the louvers. Inside the air outlet, a fan is rotating at a high speed.

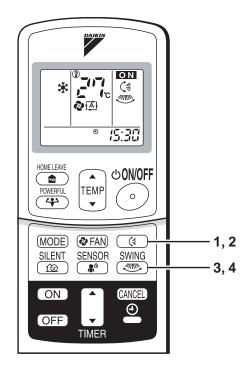


FLK(X) 25/35/50/60 A

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

To adjust the horizontal blade (flap)

- 1. Press "SWING button ().".
 - " jis displayed on the LCD and the flaps will begin to swing.
- When the flap have reached the desired position, press "SWING button (\$\sqrt{\sq}}}}}}}\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}\sightimes\sqnt{\sqrt{\sqrt{\sqrt{\sq}\sq}\sqrt{\sq}}}}}\signt{\sqrt{\sq}\signt{\sq}\sqrt{\sq}\sinq}\signt{\sqrt{\sq}\signt{\sqrt{\si
 - · The flaps will stop moving.
 - "(\$\frac{1}{2}\$"disappears from the LCD



■ To adjust the vertical blades (louvers)

- "@\omega\" is displayed on the LCD
- 1. When the louvers have reached the desired position, press the "SWING button once more."
- The louvers will stop moving.

■ To 3-D Airflow

1.3 Press the "SWING button \bigcirc " and the "SWING button \bigcirc ": The " \bigcirc " and " \bigcirc " display will light up and the flap and louvers will move in turn.

■ To cancel 3-D Airflow

2.4 Press either the "SWING button ()" or the "SWING button)".

Notes louvers angles

■ ATTENTION

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

Notes on flap angle

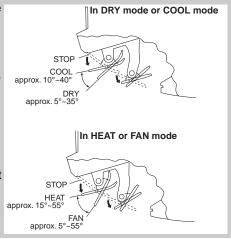
 When "Swing button" is selected, the flaps swinging range depends on the operation mode. (See the figure)

Three-Dimensional (3-D) Airflow

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

■ ATTENTION

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

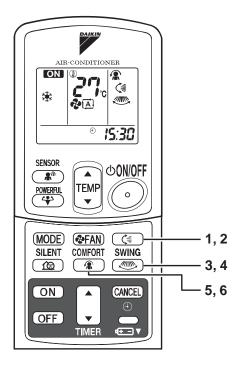


FTXG 25/35 E, CTXG 50 E

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

To adjust the horizontal blade (flap)

- 1. Press "SWING button 📜 ".
 - " (is displayed on the LCD
- 2. When the flap have reached the desired position, press "SWING button () "once more
 - · The flaps will stop moving.
 - "(\(\beta\)") disappears from the LCD



■ To adjust the vertical blades (louvers)

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

■ To 3-D Airflow

1.3 Press the "SWING button \ref{swing} " and the "SWING button \ref{swing} ": The " \ref{swing} " and " \ref{swing} " displaywill light up and the flap and louvers will move in turn

■ To cancel 3-D Airflow

2.4 Press either the "SWING button (*)" or the "SWING button":

To start COMFORT AIRFLOW operation

- 5. Press the "COMFORT AIRFLOW button".
 - The flap orientation will change, preventing air from blowing directly on the occupants of the room.
 - " is displayed on the LCD.

<COOL/DRY> The flap will go up.

<HEAT> The flap will go down

■ To cancel COMFORT AIRFLOW operation

- 5. Press the "COMFORT AIRFLOW button" again.
 - The flaps will return to the memory position from before COMFORT AIRFLOW mode.

NOTE

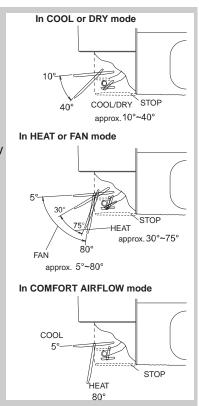
• When "SWING button <a>" is selected, the flap swinging range depends on the operation mode. (See the figure.)

Three-Dimensional (3-D) Airflow

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

■ ATTENTION

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

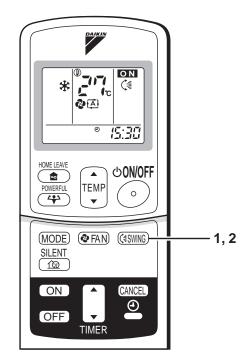


FTXS 25/35/50/60 B

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

To adjust the horizontal blade (flap)

- 1. Press "SWING button () ".
 " () " is displayed on the LCD and the flaps will begin to swing
- 2. When the flaps have reached the desired position, press "SWING button (§" once more.
 - The flap will stop moving.
 - "(\$\int \mathbb{'}\) "disappears from the LCD



■ To adjust the vertical blades (louvers)

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

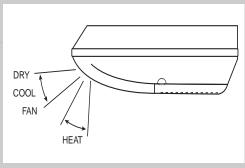


Notes on flap and louvers angles.

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

■ ATTENTION

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

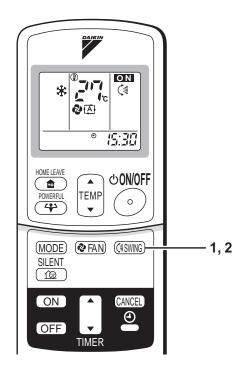


FTXS 25/35/50/60 B

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

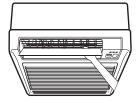
To adjust the horizontal blade (flap)

- 1. Press "SWING button () ".
 - " is displayed on the LCD and the flaps will begin to swing
- When the flaps have reached the desired position, press "SWING button (\$\\$\sqrt{2}\\$" once more.
 - · The flaps will stop moving.
 - "(\$"disappears from the LCD



■ To adjust the vertical blades (louvers)

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

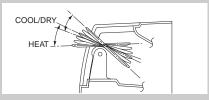


Notes on flap and louvers angle.

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

■ ATTENTION

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



Air flow selection

· make air flow selection according to what suits you.

When setting the air flow selection switch to \square .

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

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

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

When setting the air outlet selection switch to

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

⚠ CAUTION

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

2.7 POWERFUL Operation

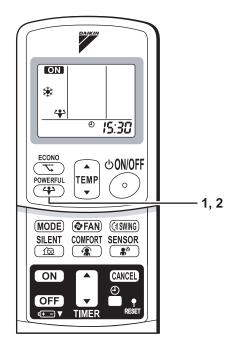
Powerful operation quickly maximizes the cooling (heating) effect in any operation mode. You can get the maximum capacity.

■ To start POWERFUL operation

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

To cancel POWERFUL operation

- 2. Press "POWERFUL button" again.
 - " 4 " disappears from the LCD.



NOTE

■ Notes on POWERFUL operation

- POWERFUL Operation cannot be used together with ECONO, SILENT or COMFORT Operation. Priority is given to the function of whichever button is pressed last.
- POWERFUL Operation can only be set when the unit is running. Pressing the operation stop button causes the settings to be canceled, and the " 🐥 " disappears from the LCD.
- In COOL and HEAT mode

To maximize the cooling (heating) effect, the capacity of outdoor unit must be increased and the air flow rate be fixed to the maximum setting.

The temperature and air flow settings are not variable.

· In DRY mode

The temperature setting is lowered by 2.5°C and the air flow rate is slightly increased.

In FAN mode

The air flow rate is fixed to the maximum setting.

When using priority-room setting

See "Note for multi system".

2.8 OUTDOOR UNIT SILENT Operation

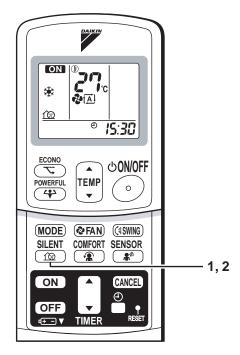
OUTDOOR UNIT SILENT operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during night.

■ To start OUTDOOR UNIT SILENT operation

- 1. Press "SILENT button".
 - " is displayed on the LCD

To cancel OUTDOOR UNIT SILENT operation

- 2. Press "SILENT button" again.
 - " disappears from the LCD



NOTE

■ Note on OUTDOOR UNIT SILENT operation

- If using a multi system, this function will work only when the OUTDOOR UNIT SILENT operation is set on all operated indoor units
 - However, if using priority-room setting, see "Note for multi system".
- This function is available in COOL, HEAT, and AUTO modes.
 (This is not available in FAN and DRY mode.)
- POWERFUL operation and OUTDOOR UNIT SILENT operation cannot be used at the same time.
 Priority is given to the function of whichever button is pressed last.

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2.9 ECONO Operation

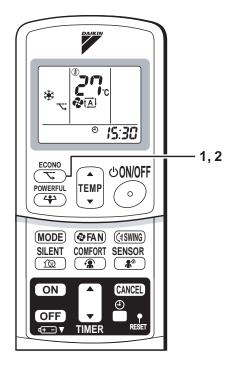
ECONO operation is a function which enables efficient operation by lowering the maximum power consumption value.

■ To start ECONO operation

- 1. Press "SILENT button".
 - " 🔀 " is displayed on the LCD

■ To cancel ECONO operation

- 2. Press "ECONO button" again.
 - " 🔀 " disappears from the LCD



NOTE

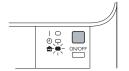
- ECONO Operation can only be set when the unit is running. Pressing the operation stop button causes the settings to be canceled, and the " " disappears from the LCD.
- ECONO Operation is a function which enables efficient operation by limiting the power consumption of the outdoor unit (operating frequency).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

2.10 HOME LEAVE Operation

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

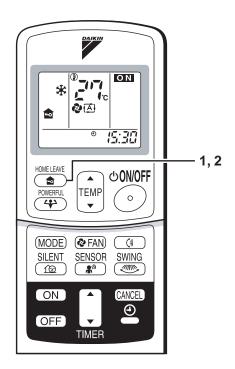
To start HOME LEAVE operation

- 1. Press "HOME LEAVE button".
 - " a " is displayed on the LCD
 - The HOME LEAVE lamp lights up.



To cancel HOME LEAVE operation

- 2. Press "HOME LEAVE button" again.
 - " a " disappears from the LCD
 - The HOME LEAVE lamp goes off.



Before using HOME LEAVE operation.

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

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

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

- 3. Press "HOME LEAVE button". Make sure " 🍙 " is displayed in the remote control display.
- 4. Adjust the set temperature with " ▲ " or " ▼ " as you like.
- 5. Adjust the air flow rate with "FAN" setting button as you like.

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

■ What's the HOME LEAVE operation

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

Useful in these cases.

1. Use as an energy-saving mode

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

· Every day before you leave the house...



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



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



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

· Before bed...



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



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



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

2. Use as a favorite mode

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

NOTE

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

2.11 INTELLIGENT EYE Operation

FTK(X)E 25/35 B

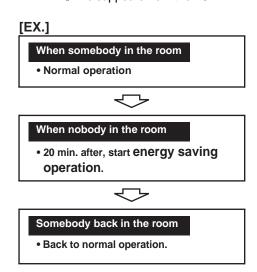
"INTELLIGENT EYE" is the infrared sensor which detects the human movement.

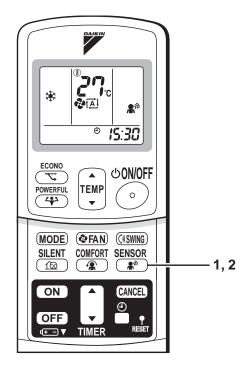
To start INTELLIGENT EYE operation

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

To cancel the INTELLIGENT EYE operation

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



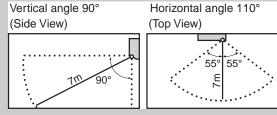


"INTELLIGENT EYE" is useful for Energy Saving

- **Energy saving operation**
 - Change the temperature –2°C in heating / +2°C in cooling / +2°C in dry mode from set temperature.
 - Decrease the air flow rate slightly in fan operation. (In FAN mode only).

Notes on "INTELLIGENT EYE"

Application range is as follows.



- Sensor may not detect moving objects further than 7m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.



!\ CAUTION

- Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect objects it shouldn't as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction

FTK(X)D 50/60/71 B

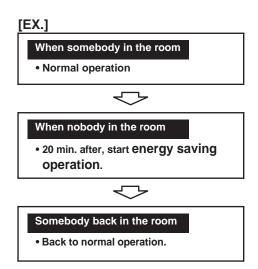
"INTELLIGENT EYE" is the infrared sensor which detects the human movement.

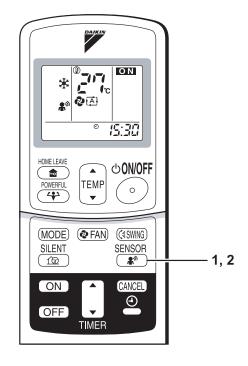
■ To start INTELLIGENT EYE operation

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

■ To cancel the INTELLIGENT EYE operation

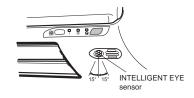
- 2. Press "SENSOR button" again.
 - " A disappears from the LCD

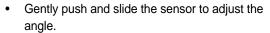


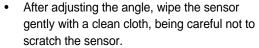


To adjust the angle of the INTELLIGENT EYE sensor

You can adjust the angle of the INTELLIGENT EYE sonsor to increase the detection area. (Adjustable angle: 15° to right and left of centre)











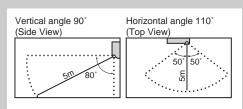
"INTELLIGENT EYE" is useful for Energy Saving

Energy saving operation

- Change the temperature –2°C in heating / +2°C in cooling / +1°C in dry mode from set temperature.
- Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on "INTELLIGENT EYE"

Application range is as follows.



- Sensor may not detect moving objects further than 5m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.



CAUTION

- Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect objects it shouldn't as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction

FTK(X)S 50/60/71 E, FTK(X)S 71 B

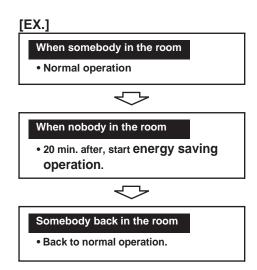
"INTELLIGENT EYE" is the infrared sensor which detects the human movement.

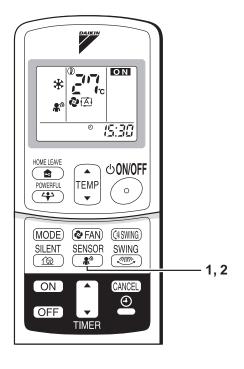
■ To start INTELLIGENT EYE operation

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

■ To cancel the INTELLIGENT EYE operation

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



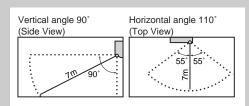


"INTELLIGENT EYE" is useful for Energy Saving

- Energy saving operation
 - Change the temperature –2°C in heating / +2°C in cooling / +1°C in dry mode from set temperature.
 - Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on "INTELLIGENT EYE"

Application range is as follows.



- Sensor may not detect moving objects further than 7m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.



- Do not place large objects near the sensor.
 Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect objects it shouldn't as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction

FTK(X)S 50/60/71 E, FTK(X)S 71 B

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

■ To start INTELLIGENT EYE operation

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

■ To cancel the INTELLIGENT EYE operation

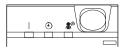
- 2. Press "SENSOR button" again.
 - " #" " disappears from the LCD

[EX.]



When somebody in the room

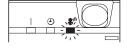
- 20 min. after, start energy saving operation.
- The INTILLIGENT EYE lamp goes off

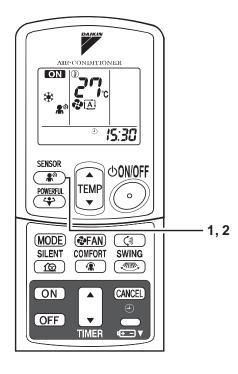


₹

Somebody back in the room

- Back to normal operation
- The INTILLIGENT EYE lamp lights up



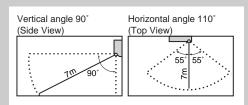


"INTELLIGENT EYE" is useful for Energy Saving

- **■** Energy saving operation
 - Change the temperature -2°C in heating / +2°C in cooling / +2°C in dry mode from set temperature.
 - Decrease the air flow rate slightly in fan operation. (In FAN mode only)

Notes on "INTELLIGENT EYE"

· Application range is as follows.



- Sensor may not detect moving objects further than 7m away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during powerful operation.
- Night set mode will not go on during you use INTELLIGENT EYE operation.



- Do not place large objects near the sensor.
 Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect objects it shouldn't as well as not detect objects it should.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction

2.12 TIMER Operation

Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use OFF TIMER and ON TIMER in combination.

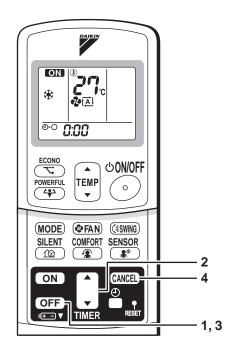
■ To use OFF TIMER operation

- Check that the clock is correct.
 If not, set the clock to the present time.
- 1. Press "OFF TIMER button". □:□□ is displayed.

⊕₊○ blinks.

- 2. Press "TIMER Setting button until the time setting reaches the point you like.
 - Every pressing of either button increases or decreases the time setting by 10 minutes.
 Holding down either button changes the setting rapidly.
- 3. Press "OFF TIMER button" again.
 - The TIMER lamp lights up.





To cancel the OFF TIMER operation

- 4. Press "CANCEL button".
 - The TIMER lamp goes off.

Notes

- When TIMER is set, the present time is not displayed.
- Once you set ON, OFF TIMER, the time setting is kept in the memory. (The memory is canceled when remote control batteries are replaced.)
- When operating the unit via the ON/OFF Timer, the actual length of operation may vary from the time entered by the user.

■ NIGHT SET MODE

When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.5°C up in COOL, 2.0°C down in HEAT) to prevent excessive cooling (heating) for your pleasant sleep.

■ To use ON TIMER operation

- Check that the clock is correct. If not, set the clock to the present time.
- 1. Press "ON TIMER button".

5:00 is displayed.

⊕ ⊦ | blinks.

- 2. Press "TIMER Setting button" until the time setting reaches the point you like.
 - Every pressing of either button increases or decreases the time setting by 10 minutes.
 Holding down either button changes the setting rapidly.
- 3. Press "ON TIMER button" again.
 - The TIMER lamp lights up.



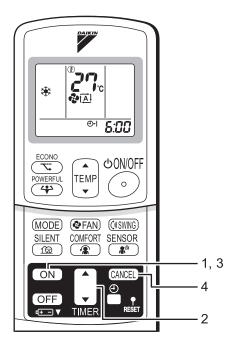
■ To cancel ON TIMER operation

- 4. Press "CANCEL button".
 - The TIMER lamp goes off.



 A sample setting for combining the two timers is shown below.





ATTENTION

- In the following cases, set the timer again.
 - · After a breaker has turned OFF.
 - · After a power failure.
 - After replacing batteries in the remote control.

2.13 Note for Multi System

<< What is a "Multi System"? >>

This system has one outdoor unit connected to multiple indoor units.

Functions depend on the model. See the list of functions and applicable models (*2) on the next page.

Selecting the Operation Mode

 With the Priority Room Setting present but inactive or not present

When more than one indoor unit is operating, priority is given to the first unit that was turned on.

In this case, set the units that are turned on later to the same operation mode (*1) as the first unit.

Otherwise, they will enter the Standby Mode, and the operation lamp will flash; this does not indicate malfunction.

(*1)

- COOL, DRY and FAN mode may be used at the same time.
- AUTO mode automatically selects COOL mode or HEAT mode based on the room temperature.
 Therefore, AUTO mode is available when selecting the same operation mode as that of the room with the first unit to be turned on.

<CAUTION>

Normally, the operation mode in the room where the unit is first run is given priority, but the following situations are exceptions, so please keep this in mind.

If the operation mode of the first room is **FAN Mode**, then using **Heating Mode** in any room after this will give priority to **heating**. In this situation, the air conditioner running in FAN Mode will go on standby, and the operation lamp will flash.

2. With the Priority Room Setting active See "Priority Room Setting" on the next page.

NIGHT QUIET Mode (Available only for cooling operation)

NIGHT QUIET Mode requires initial programming during installation. Please consult your retailer or dealer for assistance.

NIGHT QUIET Mode reduces the operation noise of the outdoor unit during the night time hours to prevent annoyance to neighbors.

- The NIGHT QUIET Mode is activated when the temperature drops 5°C or more below the highest temperature recorded that day. Therefore, when the temperature difference is less than 5°C, this function will not be activated.
- NIGHT QUIET Mode reduces slightly the cooling efficiency of the unit.

OUTDOOR UNIT SILENT Operation

1. With the Priority Room Setting present but inactive or not present

When using the OUTDOOR UNIT SILENT operation feature with the Multi system, set all indoor units to OUTDOOR UNIT SILENT operation using their remote controls.

When clearing OUTDOOR UNIT SILENT operation, clear one of the operating indoor units using their remote control.

However OUTDOOR UNIT SILENT operation display remains on the remote control for other rooms.

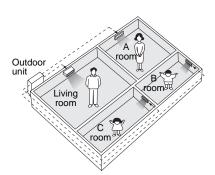
We recommend you release all rooms using their remote controls.

2. With the Priority Room Setting active

See "Priority Room Setting" on the next page.

Cooling / Heating Mode Lock (Available only for heat pump models)

The Cooling / Heating Mode Lock requires initial programming during installation. Please consult your retailer or dealer for assistance. The Cooling / Heating Mode Lock sets the unit forcibly to either Cooling or Heating Mode. This function is convenient when you wish to set all indoor units connected to the Multi system to the same operation mode.



■ Priority Room Setting

The Priority Room Setting requires initial programming during installation. Please consult your retailer or dealer for assistance.

The room designated as the Priority Room takes priority in the following situations;

1. Operation Mode Priority

As the operation mode of the Priority Room takes precedence, the user can select a different operation mode from other rooms.

<Example>

* Room A is the Priority Room in the examples.

When COOL mode is selected in Room A while operating the following modes in Room B,C and D:

Operation mode in Room B, C and D	Status of Room B, C and D when the unit in Room A is in COOL mode
COOL or DRY or FAN	Current operation mode maintained
HEAT	The unit enters Standby Mode. Operation resumes when the Room A unit stops operating.
AUTO	If the unit is set to COOL mode, operation continues. If set to HEAT mode, it enters Standby Mode. Operation resumes when the Room A unit stops operating.

2. Priority when POWERFUL operation is used

<Example>

The indoor units in Rooms A,B,C and D are all operating. If the unit in Room A enters POWERFUL operation, operation capacity will be concentrated in Room A. In such a case, the cooling (heating) efficiency of the units in Rooms B,C and D may be slightly reduced.

3. Priority when using OUTDOOR UNIT SILENT operation

<Example>

Just by setting the unit in Room A to SILENT operation, the air conditioner starts OUTDOOR UNIT SILENT operation.

You don't have to set all the operated indoor units to SILENT operation.

^{*} Room A is the Priority Room in the examples.

^{*} Room A is the Priority Room in the examples.

2.14 Care and Cleaning

FTK(X)E 20/25/35/50 D



/!\ CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

1. Open the front panel.

Hold the panel by the tabs on the two sides and lift it until it stops with a click.

2. Remove the front panel.

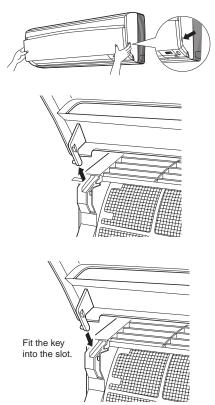
Lift the panel up, slide it slightly to the right, and remove it from the horizontal axle.

3. Clean the front panel

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel

- Set the 3 keys of the front panel into the slots and push them in all the way.
- Close the front panel slowly and push the panel at the 3 points.
 - (1 on each sides and 1 in the middle.)
- Check to see if the rotating axis in the upper center section is moving.





$^{\prime !}ackslash$ Caution

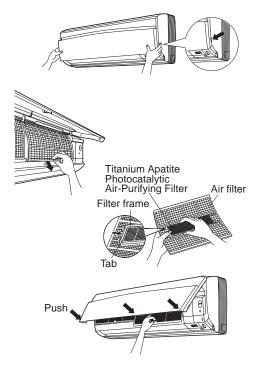
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

Filters

- 1. Open the front panel.
- 2. Pull out the air filters.
 - Push a little upwards the tab at the center of each air filter, then pull it down.
- Take off the Titanium Apatite Photocatalytic Air Purifying Filter.
 - Hold the recessed parts of the frame and unhook the four claws.
- **4.** Clean or replace each filter. See figure.



 Insert claws of the filters into slots of the front panel.
 Close the front panel slowly and push the panel at the 3 points. (1 on each sides and 1 in the middle.)



■ Air Filter

- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
 - It is recommended to clean the air filters every two weeks.



■ Titanium Apatite Photocatalytic Air-Purifying Filter.

The Titanium apatite Photocatalytic Air-Purifying filger cn be renewed by washing it with water every 6 months. We recommend replacing it once every 3 years.



[Maintenance]

- 1. Remove dust with a vacuum cleaner and wash it lightly with water.
- 2. If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.
- 3. Do not remove filter from frame when washing with water.
- 4. After washing, shake off remaining water and dry in the shade.
- Since the material is made out of paper, do not wring out the filter when removing water from it.

[Replacement]

- 1. Remove the tabs on the filter frame and replace with a new filter.
 - Dispose of the old filter as flammable waste.

NOTE

- · Operation with dirty filters:
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- To order Titanium Apatite Photocatalytic Air-Purifying filter contact to the service shop there you bought the air conditioner.
- Dispose of old filters as burnable waste.

Item	Part No.
Titanium Apatite Photocatalytic Air-Purifying Filter. (without frame) 1 set	KAF970A46

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "fan only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "fan" operation.
 - Press "ON/OFF" button and start operation.
- 2. Clean the air filters and set them again.
- 3. Take out batteries from the remote control.
- 4. Turn OFF the breaker for the room air conditioner.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

FTK(X)D 50/60/71 B



✓!\ CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

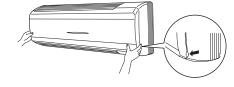
Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

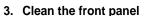
1. Open the front panel.

Hold the panel by the tabs on the two sides and lift it until it stops with a click.



2. Remove the front panel.

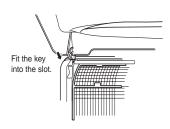
- Open the front panel with one hand, release the lock by sliding down the knob with the other hand.
- To remove the front panel, pull it toward yourself with both hands.



- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel

- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way in.
- Close the front panel slowly. (Press the panel at both sides and the center.)



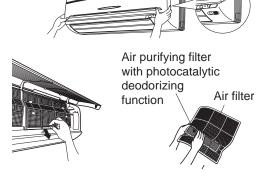


$^{\prime !}ackslash$ Caution

- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

Filters

- 1. Open the front panel.
- 2. Pull out the air filters.
 - Push a little upwards the tab at the center of each air filter, then pull it down.
- 3. Take off the air purifying filter with photocatalytic deodorizing function.
 - Hold the recessed parts of the frame and unhook the four claws.



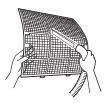
4. Clean or replace each filter. See figure.

- Set the air filter, air purifying filter with photocalytic deodorizing function as they were and close the front panel.
 - Press the front panel at both sides and the center.



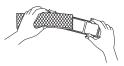
■ Air Filter

- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
 - · It is recommended to clean the air filters every two weeks.



Air purifying filter with photocatalytie deodorizing function. (gray)

The Air purifying filter wiht photocatalytic deodorizing function can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years



[Maintenance]

- 1. Remove dust with a vacuum cleaner and wash lightly with water.
- 2. If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.
- 3. Do not remove filter from frame when washing with water.
- 4. After washing, shake off remaining water and dry in the shade.
- 5. Since the material is made out of paper, do not wring out the filter when removing water from it.

[Replacement]

- 1. Remove the tabs on the filter frame and replace with a new filter.
 - Dispose of the old filter as flammable waste.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the earth wire is not disconnected or broken.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "fan only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "fan" operation.
 - · Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote controller.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- · Operation with dirty filters :
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- To order air purifying filter with photocatalytic deodorizing function contact to the service shop there you bought the air conditioner.
- · Dispose of old air filters as burnable waste.

Item	Part No.
Air purifying filter with photocatalytie deodorizing function. (without frame) 1 set	KAF918A43
Air purifying filter with photocatalytic deodorizing function. (without frame) 1 set	KAF918A44

CDK(X)D 25/35/50/60 C



 $/! \setminus$ CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

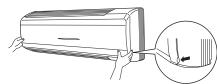
Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

1. Open the front panel.

· Hold the panel by the tabs on the two sides and lift it until it stops with a click.



2. Remove the front panel.

Open the front penel further while sliding it to either the left or right and pulling it toward you; This will disconnect the rotation dowel on one side. Then disconnect the rotation dowel on the other side in the same manner.

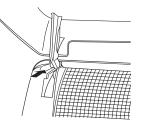


3. Clean the front panel

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel

- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way in.
- Close the front panel slowly. (Press the panel at both sides and the center.)



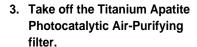


$! \setminus \mathsf{CAUTION}$

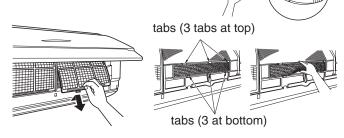
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

Filters

- 1. Open the front panel.
- 2. Pull out the air filters.
 - Push a little upwards the tab at the center of each air filter, then pull it down.

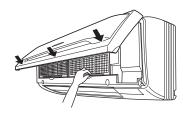


 Press the top of the aircleaning filter onto the tabs (3 tabs at top). Then press the bottom of the filter up slightly, and press it onto the tabs (3 at bottom).



4. Clean or replace each filter. See figure.

- 5. Set the air filter and the Titanium Apatite Photocatalytic Air-Purifying filter as they were and close the front panel.
 - Press the front panel at both sides and the center.



■ Air Filter

- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
 - It is recommended to clean the air filters every two weeks.



Titanium Apatite Photocatalytic Air-purifying Filter (gray)

The Titanium Apatite Photocatalytic Air-Purifying Filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

[Maintenance]

- 1. Remove dust with a vacuum cleaner and wash lightly with water.
- 2. If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.
- 3. After washing, shake off remaining water and dry in the shade.
- 4. Since the material is made out of paper, do not wring out the filter when removing water from it.

[Replacement]

- 1. Remove the tabs on the filter frame and replace with a new filter.
 - · Dispose of the old filter as flammable waste.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote control.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Operation with dirty filters :
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- To order Titanium Apatite Photocatalytic Air-Purifying Filter contact to the service shop there you bought the air conditioner.
- Dispose of old filters as burnable waste.

Item	Part No.
Titanium Apatite Photocatalytic Air-Purifying Filter. (without frame) 1 set	KAF952B42

FTK(X)S 71B



CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front grille

1. Open the front grille.

Hold the panel by the tabs on the two sides and lift it until it stops with a click.



2. Remove the front grille.

Open the front panel further while sliding it to either the left or right and pulling it toward you. This will disconnect the rotation dowel on one side; Then disconnect the rotation dowel on the other side in the same manner.

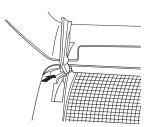


3. Clean the front grille

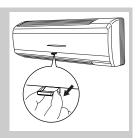
- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the grille with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front grille

- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way in.
- Close the front panel slowly. (Press the panel at both sides and the center.)

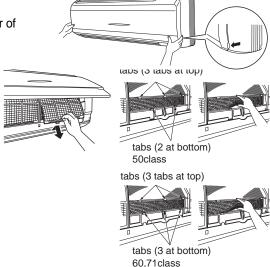


- When the packaging materials are attached to the front panel, please remove them.
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the grille securely with hand to prevent it from
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.



Filters

- 1. Open the front panel.
- 2. Pull out the air filters.
 - Push a little upwards the tab at the center of each air filter, then pull it down.
- 3. Take off the air purifying filter with photocatalytic deodorizing function.
 - Press the top of the aircleaning filter onto the tabs (3 tabs at top). Then press the bottom of the filter up slightly, and press it onto the tabs (2 at bottom)(3 at bottom).



- **4. Clean or replace each filter.** See figure.
- Set the air filter, air purifying filter with photocalytic deodorizing function as they were and close the front grille.
 - Press the front panel at both sides and the center.



■ Air Filter

- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
 - It is recommended to clean the air filters every two weeks.



Air purifying filter with photocatalytic deodorizing function. (gray)

The Air purifying filter with photocatalytic deodorizing function can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.

[Maintenance]

- 1. Remove dust with a vacuum cleaner and wash lightly with water.
- 2. If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.
- 3. After washing, shake off remaining water and dry in the shade.
- Since the material is made out of paper, do not wring out the filter when removing water from it.

[Replacement]

- 1. Remove the tabs on the filter frame and replace with a new filter.
 - Dispose of the old filter as flammable waste.

SiEBE12-625 Instruction

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote control.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- · Operation with dirty filters :
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- To order air purifying filter with photocatalytic deodorizing function contact to the service shop there you bought the air conditioner.
- Dispose of old air filters as burnable waste..

Item	Part No.
Air purifying filter with photcatalytic deodorizing function. (without frame) 1 set	KAF952A42

Instruction SiEBE12-625

FTK(X)S 71B



• Before cleaning, be sure to stop the operation and turn the breaker OFF.

 Always shut down the unit (and close the anel) before doing any work. Opening the panel during operation may cause the panel to fall off.

Units

Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

1. Open the front panel.

· Open the fornt panel by placing a finger on the panel tab on either side of the front panel.

2. Remove the front panel.

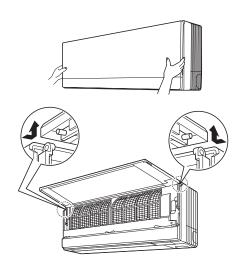
· With the front panel open so that is almost horizontal, slide it to the right. The revolving axis on the left will come off. The revolving axis on the right can be removed by sliding the front panel to the left.

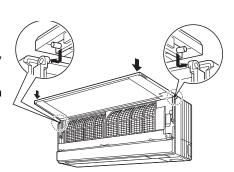
3. Clean the front panel

- Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the front panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel

- Align the rotation dowels on the left and right of the front panel with the slots, then push them all the way
- Close the front panel slowly. (Press the panel at both sides and the center.)





$^{\prime !}ackslash$ Caution

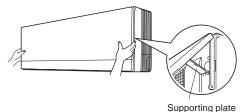
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the grille securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

SiEBE12-625 Instruction

Filters

1. Open the front panel.

Open the front panel by placing a finger on the panel tab on either side of the front panel and then secure it using the supporting plate on the right.



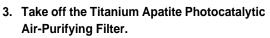
Titanium Apatite

Photocatalytic Air-Purifying Filter

Filter frame

2. Pull out the air filters..

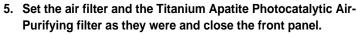
Push a little upwards the tab at the center of each air filter, then pull it down.



· Hold the recessed parts of the frame and unhook the four claws



See figure.



- Be sure to insert the two tabs below.
- Return the supporting plate to its previous position.
- Press either side of the front panel.



Air Filter

1. Wash the air filters with water or clean them with vacuum cleaner.

- If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
- It is recommended to clean the air filters every two weeks.



Air filter

Titanium Apatite Photocatalytic Air-purifying Filter (gray)

The Titanium Apatite Photocatalytic Air-Purifying Filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.



[Maintenance]

- 1. Remove dust with a vacuum cleaner and wash lightly with water.
- 2. If it is very dirty, soak it for 10 to 15 minutes in water mixed with a neutral cleaning agent.
- 3. Do not remove filter from frame when washing with water.
- 4. After washing, shake off remaining water and dry in the shade.
- 5. Since the material is made out of paper, do not wring out the filter when removing water from it.

[Replacement]

- 1. Remove the tabs on the filter frame and replace with a new filter.
 - Dispose of the old filter as flammable waste.



Instruction SiEBE12-625

NOTE

- · Operation with dirty filters:
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- To order Titanium Apatite Photocatalytic Air-Purifying filter contact to the service shop there you bought the air conditioner.
- · Dispose of old filters as burnable waste.

Item	Part No.
Titanium Apatite Photocatalytic Air-Purifying Filter. (with frame) 1 set	KAF952B41
Titanium Apatite Photocatalytic Air-Purifying Filter. (without frame) 1 set	KAF952B42

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

■ Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote control.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

FDK(X)S 25/35 C

SiEBE12-625 Instruction



Only a qualified service person is allowed to perform maintenance.

• Before cleaning, be sure to stop the operation and turn the breaker OFF.

Cleaning the air filter

5. Remove the air filter.

Rear suction

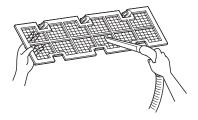
Pull the bottom side of the air filter backwards, over the 3 bends.

Bottom suction

Pull the filter over the 3 bends situated at the backside of the unit.

6. Cleaning the air filter.

Remove dust from the air filter using a vacuum cleaner and gently rinse them in cool water. Do not use detergent or hot water to avoid filter shrinking or deformation. After cleaning dry them in the shade.



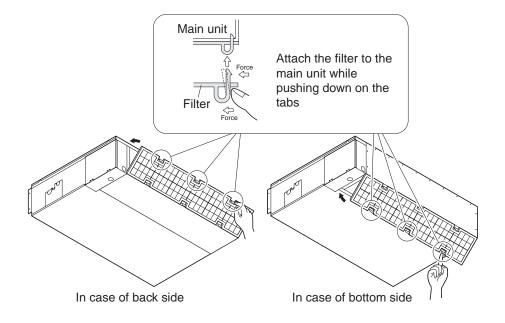
7. Replacing the air filter.

Rear suction

Hook the filter behind the flap situated at the top of the unit and push the other side gently over the 3 bends.

· Bottom suction

Hook the filter behind the flap situated at the middle of the unit and push the other side gently over the 3 bends.



Instruction SiEBE12-625

Cleaning the drain pan

Clean the drain pan periodically, or drain piping may be clogged with dust and may result in water leakage.

Ask your DAIKIN dealer to clean them.

Prepare a cover locally to prevent any dust in the air around the indoor unit from getting in the drain pan, if there is a great deal of dust present.



✓!\ CAUTION

- Do not operate the air conditioner without filters, this to avoid dust accummulation inside the unit.
- Do not remove the air filter except when cleaning; Unnecessary handling meay damage the filter.
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide, it may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Operation with dusty air filters lowers the cooling and heating capacidy and wastes energy.
- The suction grille is option.
- do not use water or air of 50°C or higher for cleaning air filters and outside panels.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote control
 - · When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

SiEBE12-625 Instruction

FDK(X)S 50/60 C, FDK(X)S 25/35 E



Only a qualified service person is allowed to perform maintenance.

. Before cleaning, be sure to stop the operation and turn the breaker OFF.

Cleaning the air filter

5. Remove the air filter.

Rear suction

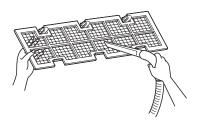
Pull the bottom side of the air filter backwards, over the bends. (2 bends for 25/35 type, 3 bends for 50/60 type)

· Bottom suction

Pull the filter over the bends (2 bends for 25/35 type, 3 bends for 50/60 type) situated at the backside of the unit.

6. Cleaning the air filter.

Remove dust from the air filter using a vacuum cleaner and gently rinse them in cool water. Do not use detergent or hot water to avoid filter shrinking or deformation. After cleaning dry them in the shade.



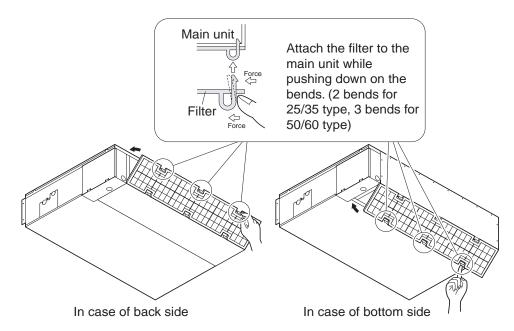
7. Replacing the air filter.

Rear suction

Hook the filter behind the flap situated at the top of the unit and push the other side gently over the bends. (2 bends for 25/35 type, 3 bends for 50/60 type)

Bottom suction

Hook the filter behind the flap situated at the middle of the unit and push the other side gently over the bends. (2 bends for 25/35 type, 3 bends for 50/60 type)



Instruction SiEBE12-625

Cleaning the drain pan

Clean the drain pan periodically, or drain piping may be clogged with dust and may result in water leakage.

Ask your DAIKIN dealer to clean them.

Prepare a cover locally to prevent any dust in the air around the indoor unit from getting in the drain pan, if there is a great deal of dust present.



✓!\ CAUTION

- Do not operate the air conditioner without filters, this to avoid dust accummulation inside the unit.
- Do not remove the air filter except when cleaning; Unnecessary handling may damage the filter.
- Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide, it may cause discoloring or warping.
- Do not let the indoor unit get wet. It may cause an electric shock or a fire.
- Operation with dusty air filters lowers the cooling and heating capacidy and wastes energy.
- The suction grille is option.
- Do not use water or air of 50°C or higher for cleaning air filters and outside panels.
- Ask your DAIKIN dealer how to clean it.

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. Clean the air filters and set them again.
- 3. Take out batteries from the remote control.
- 4. Turn OFF the breaker for the room air conditioner.
 - · When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

SiEBE12-625 Instruction

FLK(X)S 25/35/50/60 B



✓! CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

1. Open the front panel.

· Hold the panel by the tabs on the two sides and lift it until it stops.

2. Clean the front panel

- · Wipe it with a soft cloth soaked in water.
- Only neutral detergent may be used.
- In case of washing the panel with water, dry it with cloth, dry it up in the shade after washing.

3. Attach the front panel

- Push the panel at the 5 points indicated by 1.
- Operation without air filters may result in troubles as dust will accumulate inside the indoor unit.







∴ CAUTION

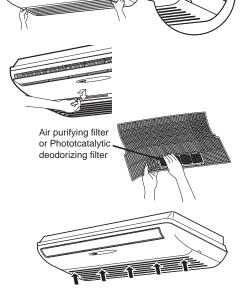
- Don't touch the metal parts of the indoor unit. If you touch those parts, this may cause an injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

Instruction SiEBE12-625

Filters

- 1. Open the front panel.
- 2. Pull out the air filters..
 - Push a little upwards the tab at the center of each air filter, then pull it down.
- 3. Take off the air-purifying filter, photocatalytic deodorizing filter.
 - Hold the recessed parts of the frame and unhook the four claws.
- 4. Clean or replace each filter.

See figure.



- 5. Set the air filter, air purifying filter and photocatalytic deodorizing filter as they were and close the front panel.
 - Insert claws of the filters into slots of the front
 - Push the panel at the 5 points.

Air Filter

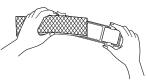
- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come of easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the
 - It is recommended to clean the air filters every two weeks.



Air-purifying Filter (green)

(Replace approximately once every 3 months.)

- 1. Detach the filter element and attach a new one.
 - Insert with the green side up
 - It is recommended to replace the air purifying filter every three months.



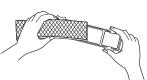
Photocatalytic Deodorizing Filter (gray)

[Maintenance]

- 1. Dry the photocatalytic deodorizing filter in the sun.
 - After removing the dust with a vacuum cleaner, place the filter in the sun for approximately
 - Bij drying the photocatalytic deodorizing filter in the sun, its deodorizing and antibacterial capabilities are regenerated
 - Because the filter material is paper, it can not be cleaned with water.
 - It is recomended dry the filter once every 6 months.

[Replacement]

1. Detach the filter element and attach a new one.



SiEBE12-625 Instruction

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote control.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Operation with dirty filters :
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- The air purifying filter and Photocatalytic deodorizing filter cannot be reused, even if washed.
- In principle, there is no need to replace the photocatalytic deodorizing filter. Remove the dust periodically with a vacuum cleaner; however, it is recommended to replace the filter in the following cases.
 - (1) The paper material is torn or broken during cleaning.
 - (2) The filter has become extremely dirty after long use.
- To order air purifying filter with Photocatalytic deodorizing function contact to the service shop where you bought the air conditioner.
- Dispose of old air filters as non-burnable and Photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Photocatalytic deodorizing filter (with frame)	KAZ917B41
Photocatalytic deodorizing filter (without frame)	KAZ917B42
Air purifying filter (with frame)	KAF925B41
Air purifying filter (without frame)	KAF925B42

Instruction SiEBE12-625

FVK(X)S 25/35/50 B



/!\ CAUTION

Before cleaning, be sure to stop the operation and turn the breaker OFF.

Units

Indoor unit, Outdoor unit and Remote control

1. Wipe them with dry soft cloth.

Front panel

1. Open the front panel.

Press the two places on the left and right of the front panel.

2. Remove the front panel.

- Remove the chain.
- Allowing the front panel to fall forward will enable you to remove it.

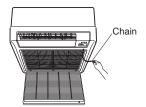
3. Clean the front panel.

- Wipe softly with a damp cloth;
- Only neutral detergent may be used.
- In case of washing the front panel with water, dry it with cloth, dry it up in the shade after washing.

4. Attach the front panel.

- Insert the front panel into the grooves of the unit (3 places).
- Attach the chain to the right, inner-side of the front panel.
- Close the panel slowly.







Place front panel in grooves.

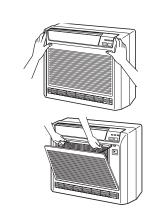
CAUTION

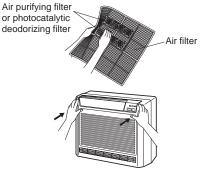
- Hold the front grille firmly so that it does not fall.
- Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.
- When removing or attaching the front panel, use a robust and stable stool and watch your steps carefully.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- For cleaning, do not use hot water above 40 °C, benzine, gasoline, thinner, nor other volatile oils, polishing compound, scrubbing brushes, nor other hand stuff.
- After cleaning, make sure that the front panel is securely fixed.

SiEBE12-625 Instruction

Filters

- 1. Open the front panel.
- 2. Remove the air filter.
 - Press the claws on the right and left of the air filter down slchtly, then pull upward..
- 3. Take off the air-purifying filter, photocatalytic deodorizing filter.
 - Hold the tabs of the frame and remove the claws in 4 places.
- 4. Clean or replace each filter. See figure.
- 5. Set the air filter, air purifying filter and photocatalytic deodorizing filter as they were and close the front panel.
 - Operation without air filters may result in troubles as dust will accumulate inside the indoor unit.





Air Filter

- 1. Wash the air filters with water or clean them with vacuum cleaner.
 - If the dust does not come off easily, wash them with neutral detergent thinned with lukewarm water, then dry them up in the shade.
 - It is recommended to clean the air filters every two weeks.



Air-purifying Filter (green)

(replace approximately once every 3 months.)

- 1. Detach the filter element and attach a new one.
 - Insert with the green side up
 - It is recommended to replace the air purifying filter every three months.



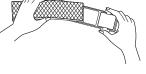
Photocatalytic Deodorizing Filter (gray)

[Maintenance]

- 1. Dry the photocatalytic deodorizing filter in the sun.
 - · After removing the dust with a vacuum cleaner, place the filter in the sun for approximately
 - Bij drying the photocatalytic deodorizing filter in the sun, its deodorizing and antibacterial capabilities are regenerated
 - Because the filter material is paper, it can not be cleaned with water.
 - It is recomended dry the filter once every 6 months.

[Replacement]

1. Detach the filter element and attach a new one.



Instruction SiEBE12-625

Check

Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.

Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.

Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.

• If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.

Before a long idle period

- 1. Operate the "FAN only" for several hours on a fine day to dry out the inside.
 - Press "MODE" button and select "FAN" operation.
 - Press "ON/OFF" button and start operation.
- 2. After operation stops, turn off the breaker for the room air conditioner.
- 3. Clean the air filters and set them again.
- 4. Take out batteries from the remote controller.
 - When a multi outdoor unit is connected, make sure the heating operation is not used at the other room before you use the fan operation.

NOTE

- Operation with dusty air filters lowers the cooling (heating) capacity and wastes energy.
 Air is also prevented from flowing smoothly through the unit creating a noise.
- · Operation with dirty filters :
 - (1) cannot deodorize the air.(2) cannot clean the air.
 - (3) results in poor heating or cooling.(4) may cause odour.
- The air purifying filter and Photocatalytic deodorizing filter cannot be reused, even if washed.
- In principle, there is no need to replace the photocatalytic deodorizing filter. Remove the dust periodically with a vacuum cleaner. However, it is recommended to replace the filter in the following cases.
 - (1) The paper material is torn or broken during cleaning.
 - (2) The filter has become extremely dirty after long use.
- To order air purifying filter or Photocatalytic deodorizing filter, contact to the service shop where you bought the air conditioner.
- Dispose of old filters as non-burnable waste and Photocatalytic deodorizing filters as burnable waste.

Item	Part No.
Photocatalytic deodorizing filter (with frame)	KAZ917B41
Photocatalytic deodorizing filter (without frame)	KAZ917B42
Air purifying filter (with frame)	KAF925B41
Air purifying filter (without frame)	KAF925B42

SiEBE12-625 Instruction

2.15 Troubleshooting

These cases are not troubles.

The following cases are not air conditioner troubles but have some reasons. You may just continue using it.

Case	Explanation
 Operation does not start soon. When ON/OFF button was pressed soon after operation was stopped. When the mode was reselected. 	This is to protect the air conditioner. You should wait for about 3 minutes.
Hot air does not flow out soon after the start of heating operation.	The air conditioner is warming up. You should wait for 1 to 4 minutes. (The system is designed to start discharging air only after it has reached a certain temperature.)
The heating operation stops suddenly and a flowing sound is heard.	The system is taking away the frost on the outdoor unit. You should wait for about 3 to 8 minutes.
The outdoor unit emits water or steam.	 In HEAT mode The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation. In COOL or DRY mode Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.
Mists come out of the indoor unit.	■ This happens when the air in the room is cooled into mist by the cold air flow during cooling operation.
The indoor unit gives out odour.	 This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the air flow. (If this happens, we recommend you to have the indoor unit washed by a technician. Consult the service shop where you bought the air conditioner.)
The outdoor fan rotates while the air conditioner is not in operation.	 After operation is stopped: The outdoor fan continues rotating for another 60 seconds for system protection. While the air conditioner is not in operation: When the outdoor temperature is very high, the out door fan starts rotating for system protection.
The operation stopped suddenly. (OPERATION lamp is on)	■ For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.

Instruction SiEBE12-625

Check again.

Please check again before calling a repair person.

Case	Check
The air conditioner does not operate. (OPERATION lamp is off)	 Hasn't a breaker turned OFF or a fuse blown? Isn't it a power failure? Are batteries set in the remote control? Is the timer setting correct?
Cooling (Heating) effect is poor.	 Are the air filters clean? Is there anything to block the air inlet or the outlet of the indoor and the outdoor units? Is the temperature setting appropriate? Are the windows and doors closed? Are the air flow rate and the air direction set appropriately? Is the unit set to the INTELLIGENT EYE mode?
Operation stops suddenly. (OPERATION lamp flashes.)	 Are the air filters clean? Is there anything to block the air inlet or the outlet of the indoor and the outdoor units? Clean the air filters or take all obstacles away and turn the breaker OFF. Then turn it ON again and try operating the air conditioner with the remote control. If the lamp still flashes, call the service shop where you bought the air conditioner. Are operation modes all the same for indoor units connected to outdoor units in the multi system? If not, set all indoor units to the same operation mode and confirm that the lamps flash. Moreover, when the operation mode is in "AUTO", set all indoor unit operation modes to "COOL" or "HEAT" for a moment and check again that the lamps are normal. If the lamps stop flashing after the above steps, there is no malfunction.
An abnormal functioning happens during operation.	The air conditioner may malfunction with lightening or radio waves. Turn the breaker OFF, turn it ON again and try operating the air conditioner with the remote control.

SiEBE12-625 Instruction

Call the service shop immediately.



When an abnormality (such as a burning smell) occurs, stop operation and turn the breaker OFF. Continued operation in an abnormal condition may result in troubles, electric shocks or fire. Consult the service shop where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.
 Incorrect work may result in electric shocks or fire.
 Consult the service shop where you bought the air conditioner.

If one of the following symptoms takes place, call the service shop immediately.

- The power cord is abnormally hot or damaged.
- An abnormal sound is heard during operation.
- The safety breaker, a fuse, or the earth leakage breaker cuts off the operation frequently.
- A switch or a button often fails to work properly.
- There is a burning smell.
- Water leaks from the indoor unit.



Turn the breaker OFF and call the service shop.

After a power failure
 The air conditioner automatically resumes
 operation in about 3 minutes. You should just wait for a while.

■ Lightening
If lightening may strike the neighbouring area,
stop operation and turn the breaker OFF for
system protection.

Disposal requirements



Your air conditioning product is marked with this symbol. This means that electrical and electronic products shall not be mixed with unsorted household waste.

Do not to try to dismantle the system yourself: the sismantling of the air conditioning system, treatment of the refrigerant, of oil and of other parts must be done by a qualified installer in accordance with relevant local and national legislation.

Air conditioners must be treated at a specialized treatment facility for re-use, recycling and recovery. Bij ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information.

Batteries must be removed from the remote controller and disposed of separately in accordance with relevant local and national legislation.

We recommend periodical maintenance

In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist aside from regular cleaning by the user. For specialist maintenance, contact the service shop where you bought the air conditioner.

The maintenance cost must be born by the user.

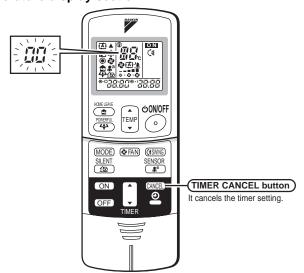
Instruction SiEBE12-625

Fault diagnosis

FAULT DIAGNOSIS BY REMOTE CONTROL

In the ARC433A series, the temperature display sections on the main unit indicate corresponding codes.

1. When the TIMER CANCEL button is held down for 5 seconds, a "the indication flashes on the temperature display section.



- 2. Press TIMER CANCEL button repeatedly until a continuous beeep is produced.
- The code indication changes as shown below, and notifies with a long beep.

	CODE	MEANING
	00	NORMAL
SYSTEM INDOOR UNIT	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
	A1	INDOOR PCB DEFECTIVENESS
1110000	A5	HIGH PRESSURE CONTROL OR FREEZE-UP PROTECTION
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	EA	COOLING-HEATING SWITCHING ERROR
	E5	OL STARTED
	E6	FAULTY COMPRESSED START UP
	E7	DC FAN MOTOR FAULT
	E8	OPERATION HALT DUE TOT DETECTION OF INPUT OVER CURRENT
	F3	HIGH TEMPERATURE DICHARGE PIPE CONTROL
OUTDOOD.	F6	HIGH PRESSURE CONTROL (IN COOLING)
OUTDOOR UNIT	H6	OPERATION HALT DUE TO DETECTION OF INPUT OVER CURRENT
	H8	CT ABNORMALITY
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK
	L5	OUTPUT OVERCURRENT
	P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR

NOTE

- 1. A short beep and two consecutive beeps indicate non-corresponding codes.
- 2. To cancel the code display, hold the TIMER CANCEL button down for 5 seconds. The code display also cancel itself if the button is not pressed for 1 minute.

SiEBE12-625 Instruction

LED ON OUTDOOR UNIT PCB 3MXS, 3MKS, 4MXS, 4MKS series

GREEN		R	ED			
MICROCOMPUTER NORMAL	MALFUNCTION DETECTION					
LED-A	LED1	LED2	LED3	LED4	DIAGNOSIS	
**	•	•	•	•	NORMAL -> CHECK INDOOR UNIT	
∌	*	•	*	₩	HIGH PRESSURE PROTECTOR WORKED OR FREEZE-UP IN OPERATING UNIT OR STAND-BY UNIT	
**	₩	•	₩	•	* OVERLOAD RELAY WORKED OR HIGH DISCHARGE PIPE TEMPERATURE	
**	•	*	☆	•	FAULTY COMPRESSOR START	
**	•	*	•	₩	INPUT OVERCURRENT	
**	₩	*	•	•	* THERMISTOR OR CT ABNORMALITY	
**	₩	*	•	☆	HIGH TEMPERATURE SWITCHBOX	
**	•	•	•	₩	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK	
*	•	•	☆	•	* OUTPUT OVERCURRENT	
**	•	•	*	☆	* REFRIGERANT SHORTAGE	
≯	₩	•	•	₩	LOW VOLTAGE TOT MAIN CIRCUIT OR MOMENTARY VOLTAGE LOSS	
**	₩	•	•	•	REVERSING SOLENOID VALVE SWITCHING FAILURE	
≯	₩	*	₩	₩	FAN MOTOR FAULT	
*	-	-	-	-	[NOTE 1]	
•	-	-	-	-	POWER SUPPLY FAULT OR [NOTE 2]	

GREEN	NORMALLY FLASHING
RED	NORMALLY OFF
-‡-	ON
;	FLASHING
•	OFF
-	IRRELEVANT

GREEN	
MICROCOMPUTER NORMAL	
LED-A	DIAGNOSIS
﴾	NORMAL-> CHECK INDOOR UNIT
☆	[NOTE1]
•	POWER SUPPLY FAULT OR [NOTE2]

GREEN	NORMALLY FLASHING
RED	NORMALLY OFF
*	ON
≯	FLASHING
•	OFF

NOTES

- 1 Turn the woper off and then on again. If the LED display recurs, the outdoor unit PCB is faulty.
- 2 Diagnosis marked
 - * Do not apply to some cases. For details, refer to the service guide.

Instruction SiEBE12-625

Part 6 Service Diagnosis

1.	Caution for Diagnosis						
	1.1 Troubleshooting with Operation Lamp						
	Problem Symptoms and Measures						
3.	Service Check Function	195					
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Caution for Diagnosis SiEBE12-625

1. Caution for Diagnosis

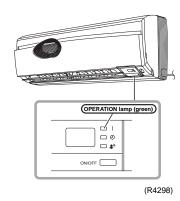
1.1 Troubleshooting with Operation Lamp

The operation lamp flashes when any of the following errors is detected.

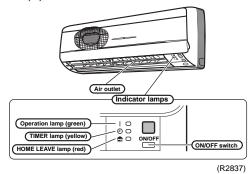
- 1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.
- 2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

Location of Operation Lamp

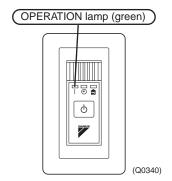
In case of FTK(X)S 20/25/35/50 D Series



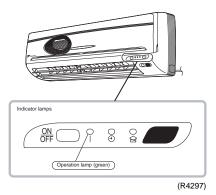
In case of FTK(X)S 50/60/71 E Series FTK(X)S 71 B Series



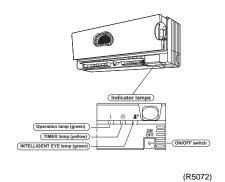
In case of FDK(X)S 25/35/50/60 C Series FDK(X)S 25/35 E Series



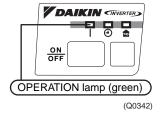
In case of FTK(X)S 20/25/35 C Series



In case of FTXG 25/35 E, CTXG 50 E Series

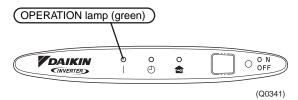


In case of FVK(X)S 25/35/50 B Series



SiEBE12-625 Caution for Diagnosis

In case of FLK(X)S 25/35/50/60 B Series





Operation stops suddenly. (Operation lamp blinks.)

Cause of above trouble could be "Operation mode conflict".

Check followings;

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

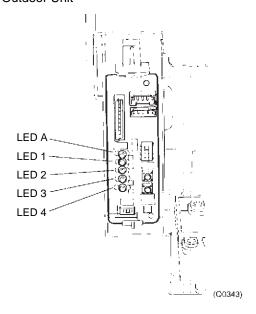
Moreover, when the operation mode is in "Auto", set all indoor unit operation mode to "Cool" or "Heat" and check again if the operation lamp is normal.

If the lamp stops blinking after the above steps, there is no malfunction.

★Operation stops and operation lamp blinks only for indoor unit which the different operation mode is set later. (The first set operation mode has priority.)

Troubleshooting with the LED Indication

Outdoor Unit



There are green and red LEDs on the PCB. The flashing green LED indicates normal equipment condition, and the OFF condition of the red LED indicates normal equipment condition. (Troubleshooting with the green LED)

The LED A (green) of the outdoor unit indicate microcomputer operation condition. Even after the error is cancelled and the equipment operates in normal condition, the LED indication remains.

2. Problem Symptoms and Measures

Problem Symptom	Check Item	Details of Measure	Page No. to be referred
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.	_
	Check the type of the indoor units.	Check to make sure that the indoor unit type is compatible with the outdoor unit.	_
	Check the outdoor air temperature.	Heating operation cannot be used when the outdoor air temperature is 21°C or higher (only for heat pump model), and cooling operation cannot be used when the outdoor air temperature is below –10 °C	_
	Diagnosis with indoor unit LED indication	_	199
	Diagnosis with outdoor unit LED indication	_	200
	Check the remote controller addresses.	Check to make sure that address settings for the remote controller and indoor unit are correct.	_
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 air temperature.	Heating operation cannot be used when the outdoor air temperature is 21°C or higher (only for heat pump model), and cooling operation cannot be used when the outdoor air temperature is below -10°C	_
	Diagnosis with indoor unit LED indication	_	199
	Diagnosis with outdoor unit LED indication	_	200
Some indoor units do not operate.	Check the type of the indoor units.	Check to make sure that the indoor unit type is compatible with the outdoor unit.	_
	Diagnosis with indoor unit LED indication	_	199
	Diagnosis with outdoor unit LED indication	_	200
Equipment operates but does not cool, or does not heat (only for heat pump	Check for wiring and piping errors in the indoor and outdoor units connection wires and pipes.	Conduct the wiring/piping error check described on the product diagnosis nameplate.	_
model).	Check for thermistor detection errors.	Check to make sure that the main unit's thermistor has not dismounted from the pipe holder.	_
	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.	_
	Diagnosis with indoor unit LED indication	_	199
	Diagnosis with outdoor unit LED indication	_	200
	Diagnosis by service port pressure and operating current	Check for insufficient gas.	245
Large operating noise and vibrations	Check the output voltage of the power transistor.	_	246
	Check the power transistor.		_
	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Engineering Data book, etc.) are provided.	_

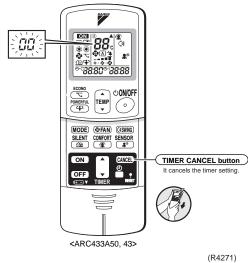
SiEBE12-625 Service Check Function

3. Service Check Function

In the ARC433A series remote controller, the temperature display sections on the main unit indicate corresponding codes.

Check Method 1

1. When the timer cancel button is held down for 5 seconds, a "00" indication flashes on the temperature display section.



- (114271)
- 2. Press the timer cancel button repeatedly until a continuous beep is produced.
- The code indication changes in the sequence shown below, and notifies with a long beep.

No.	Code	No.	Code	No.	Code
1	00	12	בז	23	но
2	UЧ	13	H8	24	ΕΊ
3	F3	14	J3	25	PЧ
4	E6	15	R3	26	L3
5	L5	16	Al	27	LY
6	<i>R</i> 6	17	СЧ	28	Н6
7	E5	18	<i>C</i> 5	29	нт
8	F6	19	Н9	30	U2
9	<i>C9</i>	20	J6	31	UH
10	UO	21	UR	32	ER
11	ЕТ	22	R5	33	RH

<In case of ARC433A41, 43, 50>

No.	Code	No.	Code	No.	Code
1	00	12	F6	23	Al
2	UЧ	13	<i>C</i> 7	24	ΕΊ
3	L5	14	R3	25	UR
4	E6	15	Н8	26	UH
5	Н5	16	H9	27	PY
6	НО	17	C9	28	L3
7	<i>R</i> 5	18	СЧ	29	LY
8	ЕТ	19	<i>C</i> 5	30	НТ
9	UO .	20	J3	31	U2
10	F3	21	J6	32	ER
11	R5	22	E5	33	8H

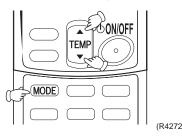
- Note:
- 1. A short beep and two consecutive beeps indicate non-corresponding codes.
- 2. To cancel the code display, hold the timer cancel button down for 5 seconds. The code display also cancels itself if the button is not pressed for 1 minute.

Service Check Function SiEBE12-625

Check Method 2

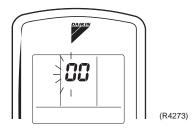
1. Enter the diagnosis mode.

Press the 3 buttons (TEMP▲,TEMP▼, MODE) simultaneously.



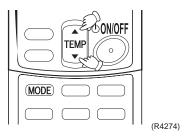
The digit of the number of tens blinks.

★Try again from the start when the digit does not blink.



2. Press the TEMP button.

Press TEMP▲ or TEMP▼ and change the digit until you hear the sound of "beep" or "pi pi".



3. Diagnose by the sound.

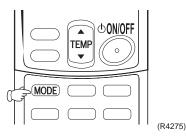
★"pi": The number of tens does not accord with the error code.

★"pi pi": The number of tens accords with the error code.

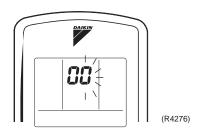
 \star "beep": The both numbers of tens and units accord with the error code. (\rightarrow See 7.)

4. Enter the diagnosis mode again.

Press the MODE button.



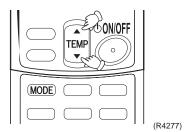
The digit of the number of units blinks.



SiEBE12-625 Service Check Function

5. Press the TEMP button.

Press TEMP▲ or TEMP▼ and change the digit until you hear the sound of "beep".



6. Diagnose by the sound.

★"pi": The both numbers of tens and units do not accord with the error code.

★"pi pi": The number of tens accords with the error code.

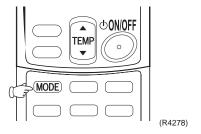
 \star "beep": The both numbers of tens and units accord with the error code.

7. Determine the error code.

The digits indicated when you hear the "beep" sound are error code. (Error codes and description \rightarrow Refer to page 198.)

8. Exit from the diagnosis mode.

Press the MODE button.



4. Code Indication on the Remote Controller

4.1 Error Codes and Description of Fault

	Code Indication	Description of Problem			
System	00	Normal			
	UO	Insufficient gas			
	U2	Low-voltage detection			
	UЧ	Signal transmission error (between indoor and outdoor units)			
	UR	Unspecified voltage (between indoor and outdoor units)			
	UH	Anti-icing function in other rooms			
Indoor Unit	คา	door unit PCB abnormality			
Offic	R5	Freeze-up protection function or high pressure control			
	<i>R</i> 6	Fan motor or related abnormality			
	СЧ	Heat exchanger temperature thermistor abnormality			
	<i>[</i> 7	Shutter drive motor / shutter limit switch abnormality			
		Front panel open / close fault			
	C9	Room temperature thermistor abnormality			
Outdoor Unit	R5	Freeze-up protection control			
Offic	E5	OL activation (compressor overloaded)			
	E6	Compressor lock			
	E7	DC fan lock			
	E8	Input over current detection			
	ER	Four way valve abnormality			
	F3	Discharge pipe temperature control			
	F6	High pressure control in cooling			
	Н6	Position sensor abnormality			
	Н8	CT or related abnormality			
	H9	Outdoor air thermistor or related abnormality			
	J3	Discharge pipe thermistor or related abnormality			
	J6	Heat exchanger thermistor or related abnormality			
	J8	Liquid pipe thermistor or related abnormality			
	J9	Gas pipe thermistor or related abnormality			
	L3	Electrical box temperature rise			
	LY	Radiation fin temperature rise			
	L5	Output over current detection			
	PY	Radiation fin thermistor or related abnormality			

SiEBE12-625 Troubleshooting

5. Troubleshooting

5.1 Indoor Units

- -: Not used for troubleshooting
- *: Varies depending on the cases.

Indication on the remote controller		Details of fault (Refer to the indicated page.)		
00	Indoor unit in normal co	ondition (Conduct a diagnosis of the outdoor unit.)	_	
R1	Indoor unit PCB abnorn	nality	201	
<i>R</i> 5	Freeze-up protection co	Freeze-up protection control or high pressure control (heat pump model only)		
<i>R</i> 6	Fan motor or related	AC motor (Wall : 20~35 C series, Duct, Floor / Ceiling)	204	
no	abnormality	DC motor (Wall: 20~35 D series and 25~71 E series, Floor)	205	
СЧ	Heat exchanger thermis	207		
<i>[</i> 7	Shutter drive motor / sh	208		
L 1	Front panel open / close	209		
<i>C9</i>	Room temperature ther	207		
UЧ	Signal transmission erro	210		
UR	Unspecified voltage (be	211		

Troubleshooting SiEBE12-625

5.2 Outdoor Units

☼: ON, ●: OFF, ♦: Blinks

Green: Flashes when in normal condition

Red: OFF in normal condition
-: Not used for troubleshooting
*: Varies depending on the cases.

Outdoor Unit LED Indication				Indication on Description of The Fault the remote		Reference	
Green	1	R	ed 3	4	controller		
*	•	•	•	•	00	Outdoor unit in normal condition (Conduct a diagnosis of the indoor unit.)	_
					UR	Unspecified voltage (between indoor and outdoor units)	238
					UH	Anti-icing function in other rooms	238
❖	•	•	⇔	₽	(U0)	Insufficient gas	235
❖	✡	•	•	₽	U2	Low-voltage detection	237
♦	✡	•	₽	₽	<i>R</i> 5	Freeze-up protection control	212
•	♡	•	♡	•	(E5)	OL activation (compressor overload)	214
•	•	♦	♦	•	(E6)	Compressor lock	215
•	♡	♦	₽	\$	E7	DC fan lock	216
•	•	\rightarrow	•	\$	E8	Input over current detection	217
•	♡	•	•	•	ER	Four way valve abnormality	219
•	\	•	♦	•	F3	Discharge pipe temperature control	221
•	\rightarrow	•	♡	\$	F6	High pressure control in cooling	222
•	\rightarrow	♦	•	•	Н6	Position sensor abnormality	224
					Н9	Outdoor air thermistor or related abnormality	227
					J3	Discharge pipe thermistor or related abnormality	227
					J6	Heat exchanger thermistor or related abnormality	227
					J8	Liquid pipe thermistor or related abnormality	227
					J9	Gas pipe thermistor or related abnormality	227
					РЧ	Radiation fin thermistor or related abnormality	227
•	♡	♦	•	•	Н8	CT or related abnormality	225
•	\rightarrow	♦	•	\$	L3	Electrical box temperature rise	229
(•	•	•	₽	LY	Radiation fin temperature rise (Protection of driver overheating)	231
♦	•	•	♡	•	L5	Output over current detection	233

Note:

- 1. The indications in the parenthesis () in the remote controller display column are displayed only when system-down occurs.
- 2. When a sensor error occurs, check the remote controller display to determine which sensor is malfunctioning.

If the remote controller does not indicate the error type, conduct the following operation. *Turn the power switch off and back on again. If the same LED indication appears again immediately after the power is turned on, the fault is in the thermistor.

*If the above condition does not result, the fault is in the CT.

3. The indoor unit error indication may take the precedence in the remote controller display.

SiEBE12-625 Troubleshooting

5.3 Indoor Unit PCB Abnormality

Remote Controller Display *R*1

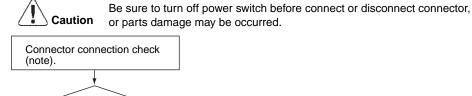
Method of Malfunction Detection Evaluation of zero-cross detection of power supply by indoor unit.

Malfunction Decision Conditions When there is no zero-cross detection in approximately 10 continuous seconds.

Supposed Causes

- Faulty indoor unit PCB
- Faulty connector connection

Troubleshooting



(note).

Is it normal?

NO

Correct connections.

Replace PCBs.

(R1400)

Note:

Connector Nos. vary depending on models.

Control connector

Model Type	Connector No.
Wall Mounted Type 20 / 25 / 35 class	Terminal strip~Control PCB
Wall Mounted Type 50 / 60 / 71 class	Terminal strip~Control PCB
Duct Connected Type	Terminal strip~Control PCB
Floor / Ceiling Suspended Dual Type	S37
Floor Standing Type	Control PCB : S7, S201, S203 Power Supply PCB : S8, S202, S204

Troubleshooting SiEBE12-625

5.4 Freeze-up Protection Control or High Pressure Control

Remote Controller Display

*R*5

Method of Malfunction Detection

- High pressure control (heat pump model only)
 During heating operations, the temperature detected by the indoor heat exchanger thermistor is used for the high pressure control (stop, outdoor fan stop, etc.)
- The freeze-up protection control (operation halt) is activated during cooling operation according to the temperature detected by the indoor unit heat exchanger thermistor.

Malfunction Decision Conditions

- High pressure control
 During heating operations, the temperature detected by the indoor heat exchanger thermistor is above 65°C
- Freeze-up protection

 When the indoor unit heat exchanger temperature is below 0°C during cooling operation.

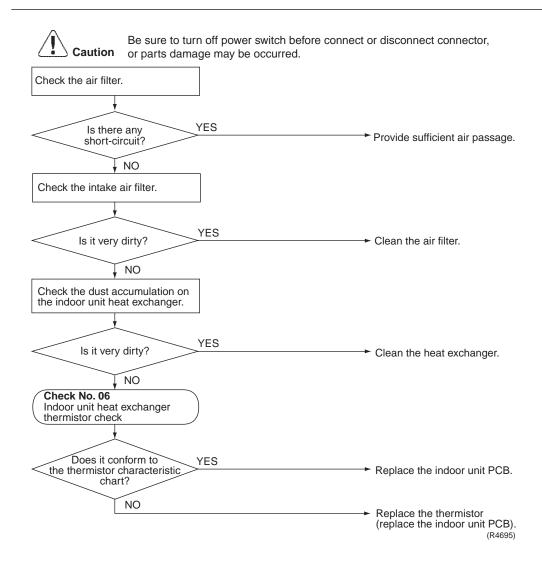
Supposed Causes

- Operation halt due to clogged air filter of the indoor unit.
- Operation halt due to dust accumulation on the indoor unit heat exchanger.
- Operation halt due to short-circuit.
- Detection error due to faulty indoor unit heat exchanger thermistor.
- Detection error due to faulty indoor unit PCB.

SiEBE12-625 Troubleshooting

Troubleshooting





Note:

If the outside temperature is below -10° C in the cooling mode, the system may get interrupted with error R5 displayed. The system will be reset itself, but this stop will be put in the error history memory.

Troubleshooting SiEBE12-625

5.5 Fan Motor or Related Abnormality

5.5.1 AC Motor

Remote Controller Display 88

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

Malfunction Decision Conditions

When the detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

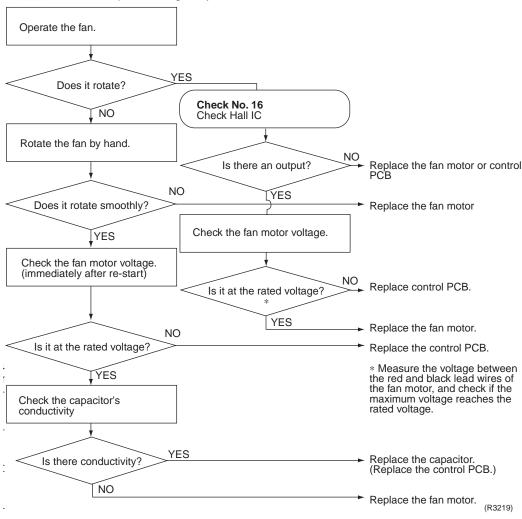
Supposed Causes

- Operation halt due to short circuit inside the fan motor winding.
- Operation halt due to breaking of wire inside the fan motor.
- Operation halt due to breaking of the fan motor lead wires.
- Operation halt due to faulty capacitor of the fan motor.
- Detection error due to faulty control PCB.

Troubleshooting



Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



SiEBE12-625 Troubleshooting

5.5.2 DC Motor

Remote Controller Display

88

Method of Malfunction Detection

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

Malfunction Decision Conditions When the detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

Supposed Causes

- Operation halt due to short circuit inside the fan motor winding.
- Operation halt due to breaking of wire inside the fan motor.
- Operation halt due to breaking of the fan motor lead wires.
- Operation halt due to faulty capacitor of the fan motor.
- Detection error due to faulty indoor unit PCB (1).

Troubleshooting SiEBE12-625

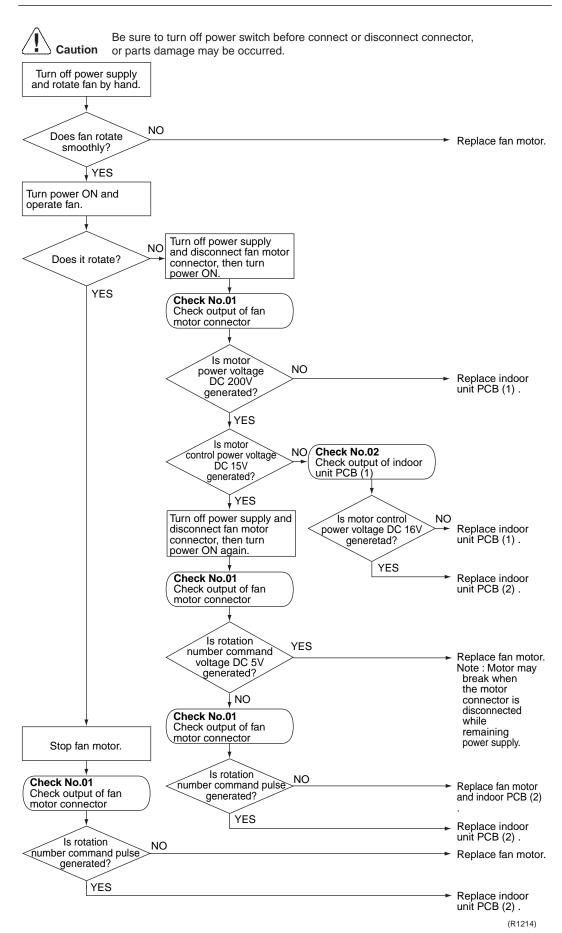
Troubleshooting



Check No.01 Refer to P.239



Check No.02 Refer to P.239



5.6 Thermistor or Related Abnormality (Indoor Unit)

Remote Controller Display C4. C9

Method of Malfunction Detection The temperatures detected by the thermistors are used to determine thermistor errors.

Malfunction Decision Conditions When the thermistor input is more than 4.96 V or less than 0.04 V during compressor

operation*.
* (reference)

When above about 212°C (less than 120 ohms) or below about -50°C (more than 1,860 kohms).



Note:

The values vary slightly in some models.

Supposed Causes

- Faulty connector connection
- Faulty thermistor
- Faulty PCB

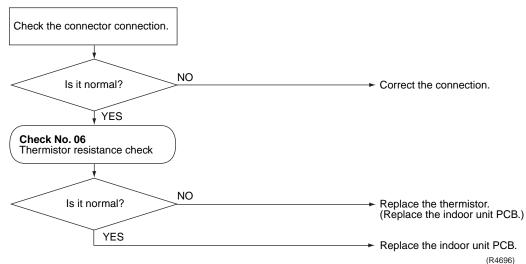
Troubleshooting





Caution

Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



C4: Heat exchanger temperature thermistor

 £9: Room temperature thermistor

5.7 Shutter Drive Motor / Shutter Limit Switch Abnormality

Remote Controller Display [7

Method of Malfunction Detection The shutter open / close performance is detected by the limit switch attached on its structure. In this way, the shutter drive motor and the shutter limit switch are checked for failure.

Malfunction Decision Conditions

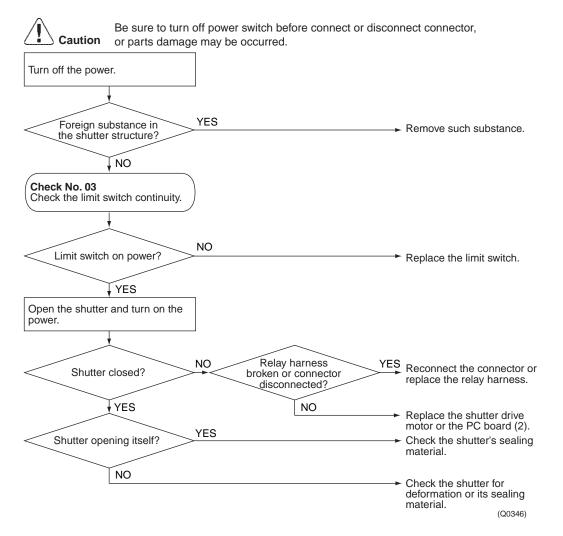
When the shutter is open, the limit switch is closed.

Supposed Causes

- Shutter drive motor defective
- Shutter limit switch defective
- Shutter itself deformed (warped)
- Shutter's sealing material too thick
- Detection error by broken relay harness or disconnected connector
- Detection error due to defective PCB (2)
- Foreign substance in blow port

Troubleshooting

Check No.03 Refer to P.239



5.8 Front Panel Open / Close Fault

Remote Controller Display *[7*

Method of Malfunction Detection

Malfunction Decision Conditions

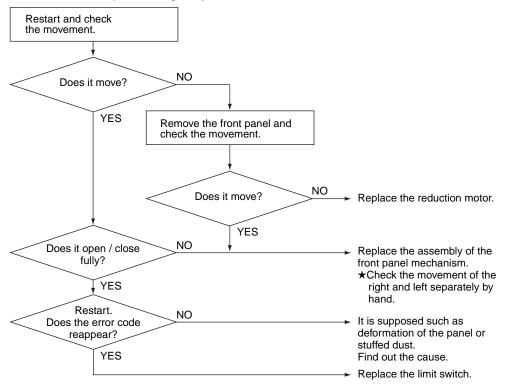
■ The system will be shut down when the error occurs twice.

Supposed Causes

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

Troubleshooting

Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(R3313)

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. Pull the plug out or turn the breaker off.
- 2. Remove the decorative plate.
- 3. Remove the slot-in panel.
- Put the plug in or turn the breaker on. (Wait until the initialization finishes.)
- 5. Operate the unit by the indoor unit ON/OFF switch.

Signal Transmission Error (between Indoor and Outdoor 5.9 Units)

Remote Controller Display

ЦЧ

Method of Malfunction **Detection**

The data received from the outdoor unit in indoor unit-outdoor unit signal transmission is checked whether it is normal.

Malfunction **Decision Conditions**

When the data sent from the outdoor unit cannot be received normally, or when the content of the data is abnormal.

Supposed **Causes**

- Faulty outdoor unit PCB.
- Faulty indoor unit PCB.
- Indoor unit-outdoor unit signal transmission error due to wiring error.
- Indoor unit-outdoor unit signal transmission error due to disturbed power supply waveform.
- Indoor unit-outdoor unit signal transmission error due to breaking of wire in the connection wires between the indoor and outdoor units (wire No. 2).

Be sure to turn off power switch before connect or disconnect connector,

Troubleshooting



Check No.10 Refer to P.245

Caution or parts damage may be occurred. Check the indoor unit-outdoor unit connection wires. YES Is there any wiring error? Correct the indoor unit-outdoor unit connection wires. ₹ NO Check the outdoor unit's LED A NO Is LED A flashing? Diagnose the outdoor unit. YES Check the voltage of the indoor unit-outdoor unit connection wires between No. 1 and No. 2, and between No 2 and No. 3. YES Is the voltage 0 V? Replace the connection wires between the indoor and outdoor units. **√**NO Check No. 10 Check power supply waveform. NO Replace indoor unit control Is there any disturbance? PCB. YES Locate the cause of the disturbance of the power supply waveform, and correct it.

(R2840)

5.10 Unspecified Voltage (between Indoor and Outdoor Units)

Remote Controller Display

UR

Method of Malfunction Detection

The supply power is detected for its requirements (different from pair type and multi type) by the indoor / outdoor transmission signal.

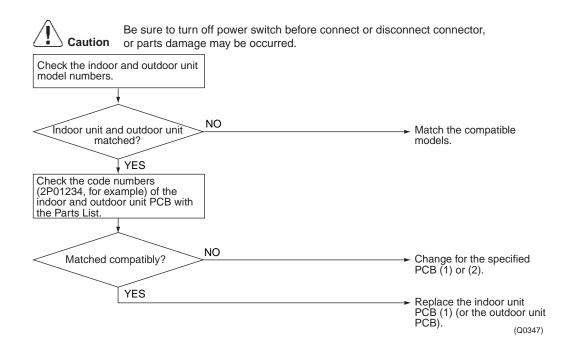
Malfunction Decision Conditions

The pair type and multi type are interconnected.

Supposed Causes

- Wrong models interconnected
- Wrong indoor unit PCB mounted
- Indoor unit PCB defective
- Wrong outdoor unit PCB mounted or defective

Troubleshooting



5.11 Freeze-up Protection Control

Remote Controller Display 85

Outdoor Unit LED Display

Method of Malfunction Detection

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

Malfunction Decision Conditions

In the cooling mode, the following conditions (A) and (B) are kept together for 5 minutes.

- (A) Indoor unit heat exchanger temperature ≤ -1°C
- (B) Indoor unit heat exchanger temperature ≤ Room temperature −10°C

If the freeze-up protection control is activated 4 times continuously, the system will be shut down.

(The 4-time counter will reset itself if any of the following errors does not occur for 60 minutes: OL, radiation fin temperature rise, gas shortage, and compressor startup.)

Supposed Causes

- Wrong wiring or piping
- EV malfunctioning in each room
- Short-circuit
- Indoor unit heat exchanger thermistor defective
- Room temperature thermistor defective

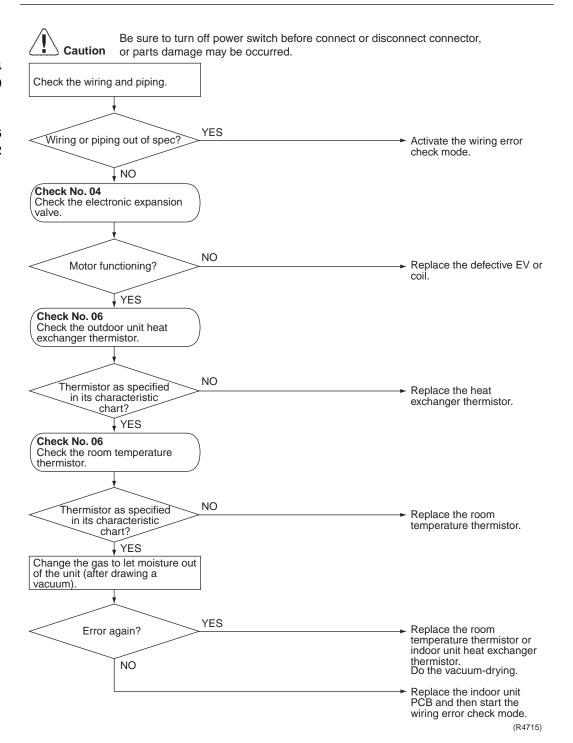
Troubleshooting



Check No.04 Refer to P.240



Check No.06 Refer to P.242



5.12 OL Activation (Compressor Overload)

Remote Controller **Display**

E5

Outdoor Unit LED Display

Method of Malfunction **Detection**

A compressor overload is detected through compressor OL.

Malfunction **Decision Conditions**

- If the compressor OL is activated twice, the system will be shut down.
- The error counter will reset itself if this or any other error does not occur during the following 60-minute compressor running time (total time).
- * The operating temperature condition is not specified.

Supposed Causes

- Refrigerant shortage
- Four way valve malfunctioning
- Outdoor unit PCB defective
- Water mixed in the local piping
- Electronic expansion valve defective
- Stop valve defective

Troubleshooting



Check No.04 Refer to P.240



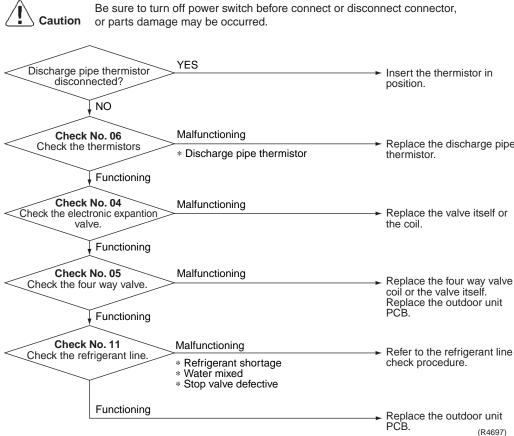
Check No.05 Refer to P.241



Check No.06 Refer to P.242



Check No.11 Refer to P.245



Replace the discharge pipe

5.13 Compressor Lock

Remote Controller Display *E*8

Outdoor Unit LED Display

A 1 1 2 3 3 4 4

Method of Malfunction Detection

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

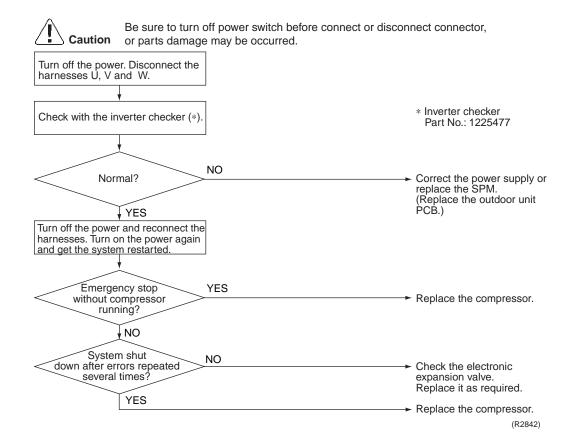
Malfunction Decision Conditions

- The position detection circuit detects a compressor frequency of below 10 Hz for 20 seconds or a frequency of above 160 Hz.
- 40 seconds after the compressor has started, the position detection circuit detects a compressor frequency of above 180 Hz.
- The system will be shut down if the error occurs 16 times.
- Clearing condition: Continuous run for about 5 minutes (normal)

Supposed Causes

■ Compressor locked

Troubleshooting



5.14 DC Fan Lock

Remote Controller Display *E*7

Outdoor Unit LED Display

A ♦ 1 ♦ 2 ♦ 3 ♦ 4 ♦

Method of Malfunction Detection

A fan motor line error is detected by checking the high-voltage fan motor rpm being detected by the Hall IC.

Malfunction Decision Conditions

- The fan does not start in 30 seconds even when the fan motor is running.
- The system will be shut down if the error occurs 16 times.
- Clearing condition: Continuous run for about 5 minutes (normal)

Supposed Causes

- Fan motor breakdown
- Harness or connector disconnected between fan motor and PCB or in poor contact
- Foreign matters stuck in the fan

Troubleshooting



Be sure to turn off power switch before connect or disconnect connector, Caution or parts damage may be occurred. YES Fan motor connector Turn off the power and disconnected? reconnect the connector. NO YES Foreign matters in or - Remove. around the fan? NO Get started. Check No. 15 Check the outdoor unit PCB rpm pulse input. NO Pulse signal inputted? Replace the outdoor unit fan motor. YES Replace the outdoor unit PCB.

(R2843)

5.15 Input Over Current Detection

Remote Controller Display E8

Outdoor Unit LED Display

A ♦ 1 ● 2 ♦ 3 ● 4 ♦

Method of Malfunction Detection

Malfunction is detected by checking the input current value.

Malfunction Decision Conditions

- The following condition continues for 2.5 seconds. Input current ≥ 11A (typical value)
- The compressor halts if the error occurs, and restarts automatically after 3 minutes stand-by.

Supposed Causes

- Over-current due to compressor failure
- Over-current due to defective power transistor
- Over-current due to defective inverter main circuit electrolytic capacitor
- Over-current due to defective outdoor unit PCB
- Error detection due to outdoor unit PCB
- Over-current due to short-circuit

Troubleshooting



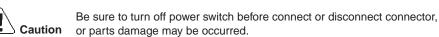
Check No.07 Refer to P.243



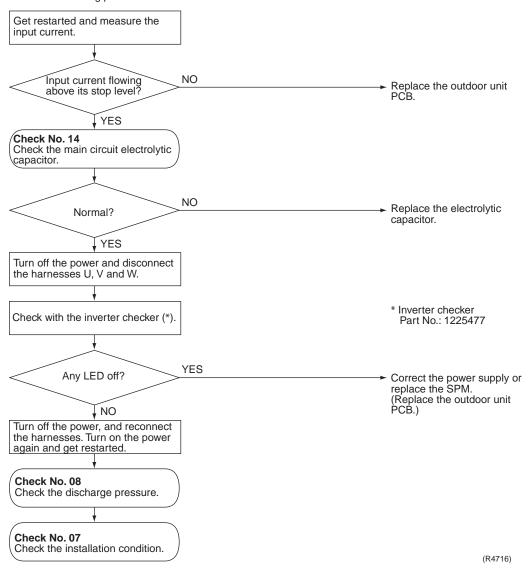
Check No.08 Refer to P.244



Check No.14 Refer to P.247



* An input over-current may result from wrong internal wiring. If the wires have been disconnected and reconnected for part replacement, for example, and the system is interrupted by an input over-current, take the following procedure.



5.16 Four Way Valve Abnormality

Remote Controller Display ER

Outdoor Unit LED Display

A **(**) 1 (○ 2 • 3 • 4 •

Method of Malfunction Detection

The liquid pipe thermistor, the outdoor temperature thermistor and the outdoor unit heat exchanger thermistor are checked to see if they function within their normal ranges in the operating mode.

Malfunction Decision Conditions

Either of the following conditions occurs 6 minutes after the compressor has started.

- Cooling / dry operation

 (Outdoor unit heat exchanger temperature Liquid pipe temperature) < -5°C
- Heating operation (Liquid pipe temperature – Outdoor unit heat exchanger temperature) < 0°C

Supposed Causes

- Connector in poor contact
- Thermistor defective
- Outdoor unit PCB defective
- Four way valve coil or harness defective
- Four way valve defective
- Foreign substance mixed in refrigerant

Troubleshooting



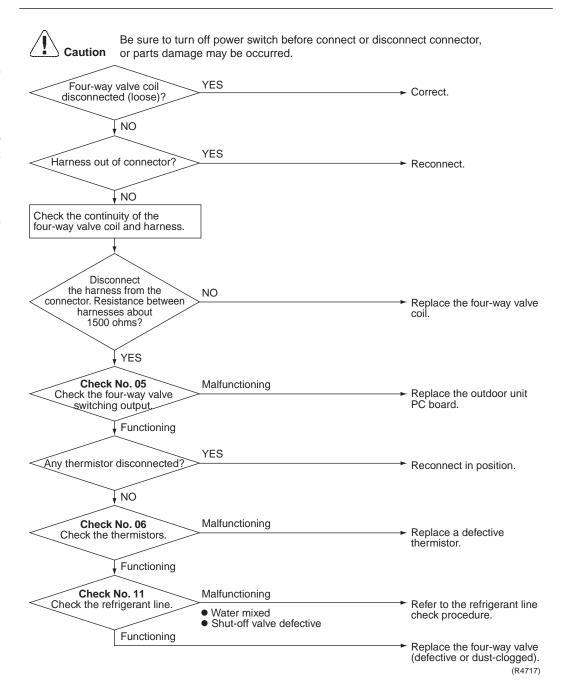
Check No.05 Refer to P.241



Check No.06 Refer to P.242



Check No.11 Refer to P.245



5.17 Discharge Pipe Temperature Control

Remote Controller Display F3

Outdoor Unit LED Display

A ∅ 1 ♡ 2 ● 3 ♡ 4 ●

Method of Malfunction Detection

The discharge pipe temperature control (stop, frequency drooping, etc.) is checked with the temperature being detected by the discharge pipe thermistor.

Malfunction Decision Conditions

2YC45

If the temperature being detected by the discharge pipe thermistor rises above 120°C, the compressor will stop. (The error is cleared when the temperature has dropped below 107°C.)

- If the compressor stops 6 times straight due to abnormal discharge pipe temperature, the system will be shut down.
- The error counter will reset itself if this or any other error does not occur during the following 60-minute compressor running time (total time).

Supposed Causes

- Refrigerant shortage
- Four way valve malfunctioning
- Discharge pipe thermistor defective (heat exchanger or outdoor temperature thermistor defective)
- Outdoor unit PCB defective
- Water mixed in the local piping
- Electronic expansion valve defective
- Stop valve defective

Troubleshooting







Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Check No. 06 Malfunctioning Replace a defective Check the thermistors Discharge pipe thermistor thermistor. Outdoor unit heat exchanger thermistor Outdoor temperature thermistor Functioning Check No. 04 Malfunctioning Check the electronic Replace the valve itself or expansion valve. the coil. Functioning Check No. 11 Malfunctioning Refer to the refrigerant line Check the refrigerant line Refrigerant shortage check procedure. Four way valve malfunctioning Water mixed Functioning Stop valve defective Replace the outdoor unit PCB. (R4700)

5.18 High Pressure Control in Cooling

Remote Controller Display FS

Outdoor Unit LED Display

A **(1)** 1 **(2)** 2 **(4) (4)**

Method of Malfunction Detection

High-pressure control (stop, frequency drop, etc.) is activated in the cooling mode if the temperature being sensed by the heat exchanger thermistor exceeds the limit.

Malfunction Decision Conditions

- Activated when the temperature being sensed by the heat exchanger thermistor rises above 65°C.
- The error is cleared when the temperature drops below 50°C.

Supposed Causes

- The installation space is not large enough.
- Faulty outdoor unit fan
- Faulty electronic expansion valve
- Faulty outdoor unit heat exchanger thermistor
- Faulty outdoor unit PCB
- Faulty stop valve
- Dirty heat exchanger

Troubleshooting



Check No.04 Refer to P.240



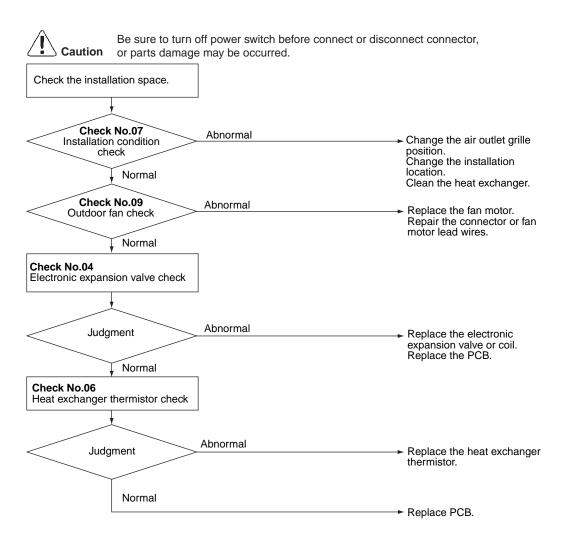
Check No.06 Refer to P.242



Check No.07 Refer to P.243



Check No.09 Refer to P.244



(R4701)

5.19 Position Sensor Abnormality

Remote Controller Display **H**S

Outdoor Unit LED Display

A **♦** 1 **♦** 2 **♦** 3 **●** 4 **●**

Method of Malfunction Detection

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

Malfunction Decision Conditions

- The compressor fails to start in about 15 seconds after the compressor run command signal is sent.
- Clearing condition: Continuous run for about 5 minutes (normal)
- The system will be shut down if the error occurs 16 times.

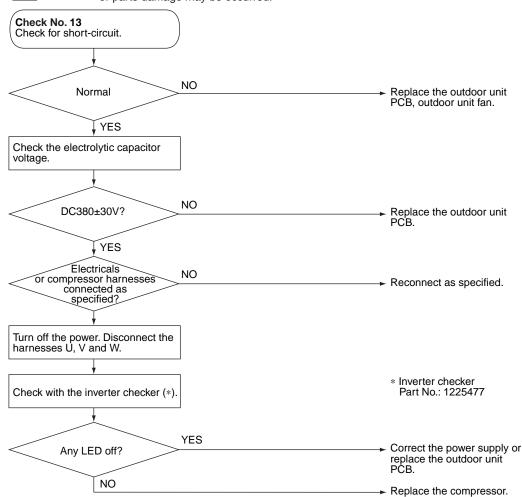
Supposed Causes

- Compressor relay cable disconnected
- Compressor itself defective
- Outdoor unit PCB defective
- Stop valve closed
- Input voltage out of specification

Troubleshooting



Check No.13 Refer to P.246 Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(R2847)

5.20 CT or Related Abnormality

Remote Controller Display H8

Outdoor Unit LED Display

A **()** 1 () 2 () 3 ● 4 ●

Method of Malfunction Detection

A CT or related error is detected by checking the compressor running frequency and CT-detected input current.

Malfunction Decision Conditions

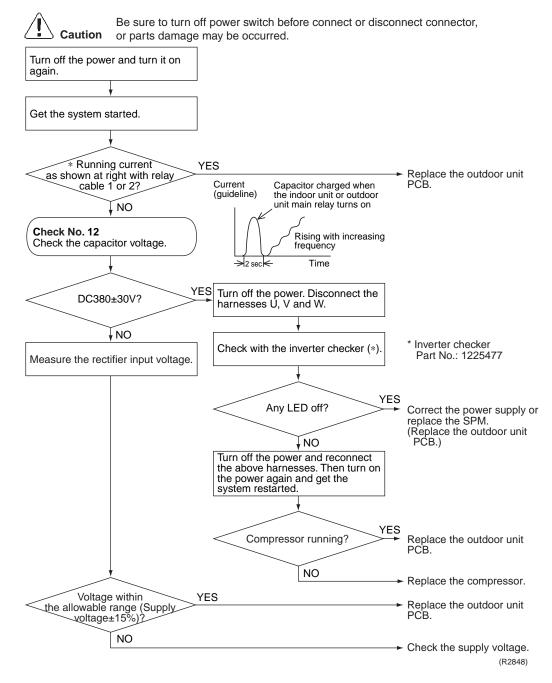
- The compressor running frequency is below 55 Hz and the CT input is below 0.1 V. (The input current is also below 1.25 A.)
- If this error repeats 4 times, the system will be shut down.
- The error counter will reset itself if this or any other error does not occur during the following 60-minute compressor running time (total time).

Supposed Causes

- Power transistor defective
- Internal wiring broken or in poor contact
- Reactor defective
- Outdoor unit PCB defective

Troubleshooting





5.21 Thermistor or Related Abnormality (Outdoor Unit)

Remote Controller Display P4, J3, J6, J8, J9, H9

Outdoor Unit LED Display

A **(1)** 1 **(2)** 2 **(3)** ■ 4 ●

Method of Malfunction 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 being detected by each thermistor.]

Malfunction Decision Conditions When the thermistor input is above 4.96 V or below 0.04 V with the power on, the J3 error is judged if the discharge pipe thermistor temperature is smaller than the condenser thermistor temperature, or the system will be shut down if all the units are judged with the J8 error.

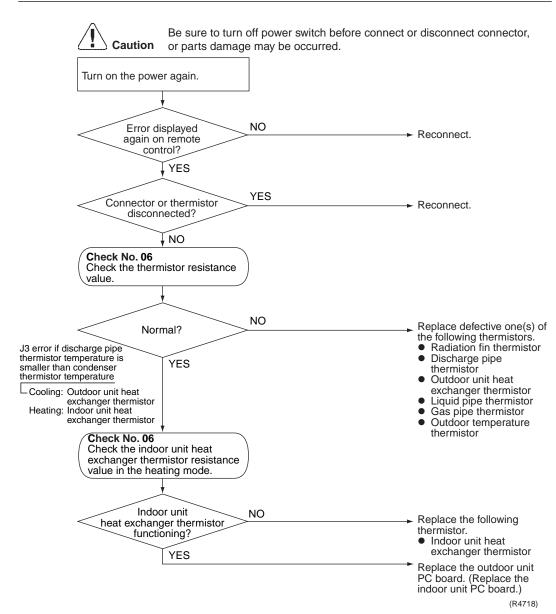
Supposed Causes

- Connector in poor contact
- Thermistor defective
- Outdoor unit PCB defective
- Indoor unit PCB defective
- Condenser thermistor defective in the case of J3 error (outdoor unit heat exchanger thermistor in the cooling mode, or indoor unit heat exchanger thermistor in the heating mode)

Troubleshooting



Refer to P.242



Pप : Radiation fin thermistor

J3: Discharge pipe thermistor

J6 : Outdoor unit heat exchanger thermistor

J8: Liquid pipe thermistor J9: Gas pipe thermistor

ਮ9: Outdoor temperature thermistor

5.22 Electrical Box Temperature Rise

Remote Controller Display L3

Outdoor Unit LED Display

A **(1)** 1 (2) (2) (3) ● 4 (2)

Method of Malfunction Detection

An electrical box temperature rise is detected by checking the radiation fin thermistor with the compressor off.

Malfunction Decision Conditions

- With the compressor off, the radiation fin temperature is above 80°C (above 75°C for 80 · 90 class).
- The error is cleared when the temperature drops below 70°C (below 65°C for 80 · 90 class).

Supposed Causes

- Fin temperature rise due to defective outdoor unit fan
- Fin temperature rise due to short-circuit
- Fin thermistor defective
- Connector in poor contact
- Outdoor unit PCB defective

Troubleshooting



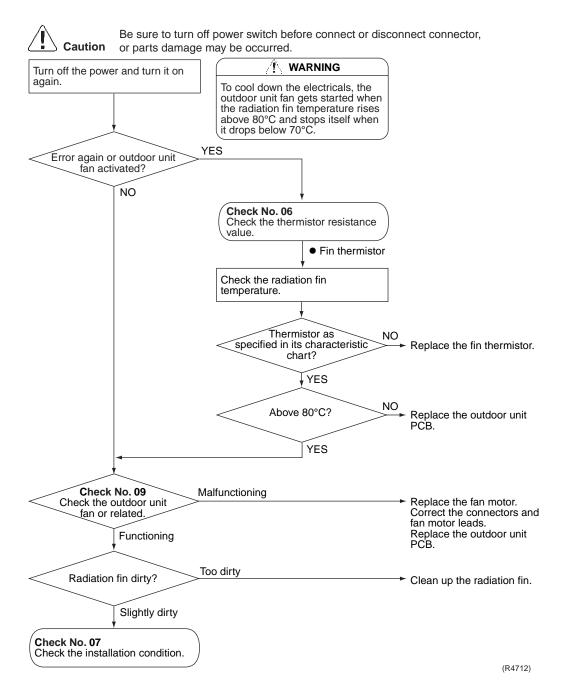
Check No.06 Refer to P.242



Check No.07 Refer to P.243



Check No.09 Refer to P.244



5.23 Radiation Fin Temperature Rise

Remote Controller Display LY

Outdoor Unit LED Display

A **(1)** 1 ● 2 ● 3 ● 4 **(**2)

Method of Malfunction Detection

A radiation fin temperature rise is detected by checking the radiation fin temperature being detected by the fin thermistor with the compressor on.

Malfunction Decision Conditions

- The radiation fin temperature with the compressor on is above 90°C (above 85°C for 80 · 90 class).
- The error is cleared when the temperature drops below 85°C (below 80°C for 80 · 90 class).
- If a radiation fin temperature rise takes place 255 times successively, the system will be shut
- The error counter will reset itself if this or any other error does not occur during the following 60-minute compressor running time (total time).

Supposed Causes

- Fin temperature rise due to defective outdoor unit fan
- Fin temperature rise due to short-circuit
- Fin thermistor defective
- Connector in poor contact
- Outdoor unit PCB defective

Troubleshooting



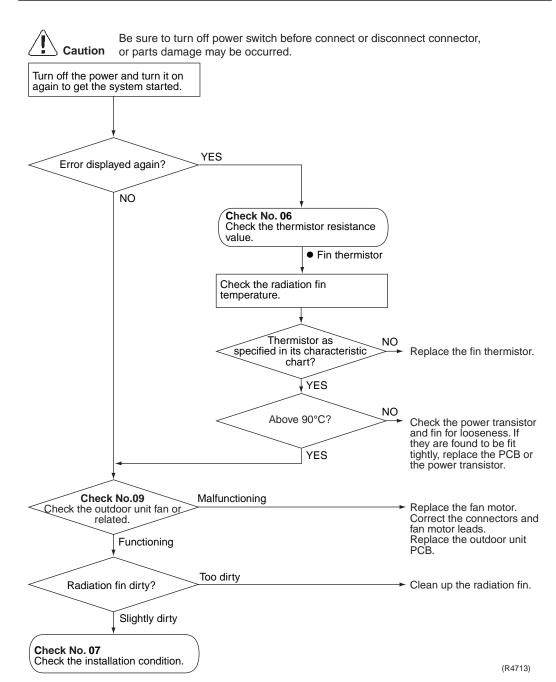
Check No.06 Refer to P.242



Check No.07 Refer to P.243



Check No.09 Refer to P.244



5.24 Output Over Current Detection

Remote Controller Display **L**5

Outdoor Unit LED Display

A **(1)** 1 ● 2 ● 3 **(2)** 4 ●

Method of Malfunction Detection

An output over-current is detected by checking the current that flows in the inverter DC section.

Malfunction Decision Conditions

- A position signal error occurs while the compressor is running.
- A speed error occurs while the compressor is running.
- An output over-current input is fed from the output over-current detection circuit to the microcomputer.
- The system will be shut down if the error occurs 16 times.
- Clearing condition: Continuous run for about 5 minutes (normal)

Supposed Causes

- Over-current due to defective power transistor
- Over-current due to wrong internal wiring
- Over-current due to abnormal supply voltage
- Over-current due to defective PCB
- Error detection due to defective PCB
- Over-current due to closed stop valve
- Over-current due to compressor failure
- Over-current due to poor installation condition

Troubleshooting



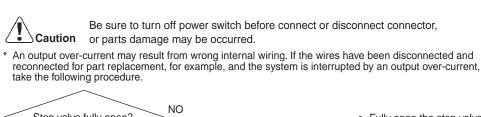
Check No.07 Refer to P.243

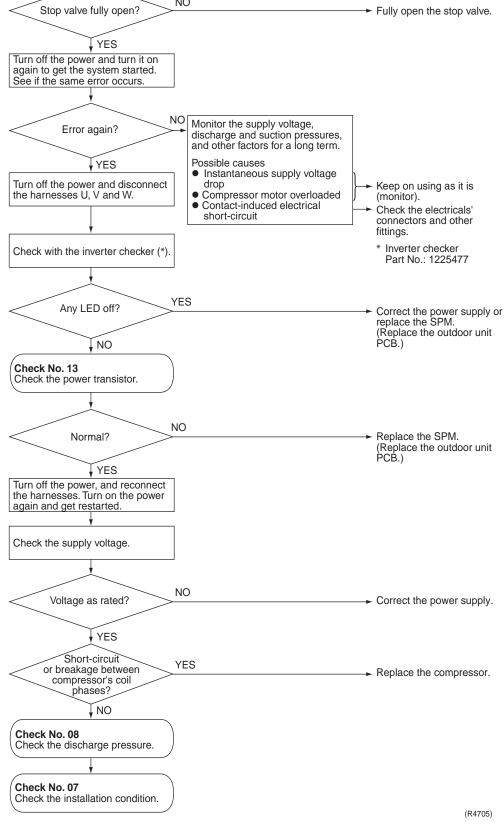


Check No.08 Refer to P.244



Check No.13 Refer to P.246





5.25 Insufficient Gas

Remote Controller Display ШΩ

Outdoor Unit LED Display

A 1 1 2 3 4 2

Method of Malfunction Detection

Gas shortage detection I:

Gas shortage is detected by checking the input current value and the compressor running frequency. If the gas is short, the input current is smaller than the normal value.

Gas shortage detection II:

Gas shortage is detected by checking the discharge temperature and the opening of the electronic expansion valve. If the gas is short, the discharge temperature tends to rise.

Malfunction Decision Conditions

Gas shortage detection I (typical value):

The following conditions continue for 7 minutes.

- Input current x input voltage ≤ 1756 / 256 x output frequency +50 (W)
- Output frequency > 55 (Hz)

Gas shortage detection II:

The following conditions continue for 80 seconds.

- Target opening of the electronic expansion valve ≥ 450 (pulse)
- Cooling: discharge temperature > 255 / 256 x target discharge temperature +20 (°C)
 Heating: discharge temperature > 255 / 256 x target discharge temperature +40 (°C)

If a gas shortage error takes place 4 times straight, the system will be shut down. The error counter will reset itself if this or any other error does not occur during the following 60-minute compressor running time (total time).

Supposed Causes

- Refrigerant shortage (refrigerant leakage)
- Poor compression performance of compressor
- Discharge pipe thermistor disconnected, or indoor unit or outdoor unit heat exchanger thermistor disconnected, room or outside air temperature thermistor disconnected
- Stop valve closed
- Electronic expansion valve defective

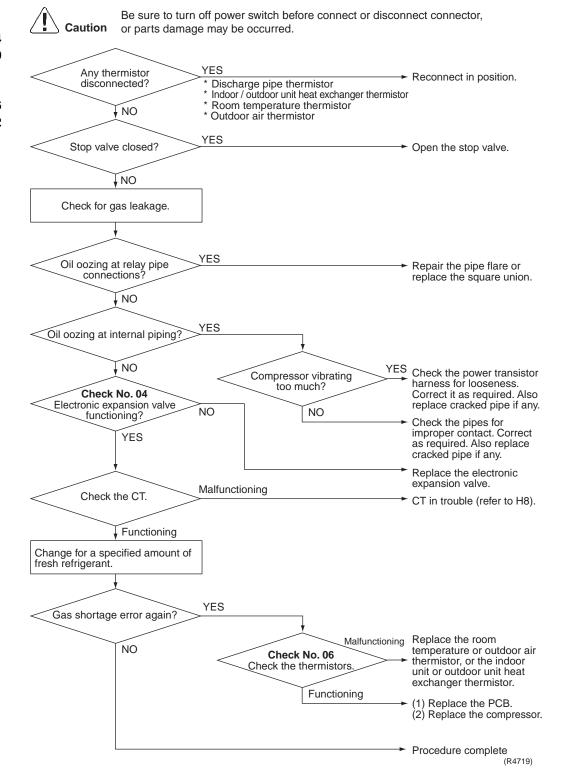
Troubleshooting



Check No.04 Refer to P.240



Check No.06 Refer to P.242



5.26 Low-voltage Detection

Remote Controller Display *U2*

Outdoor Unit LED Display

A ♦ 1 ♦ 2 ● 3 ● 4 ♦

Method of Malfunction Detection

An abnormal voltage rise or drop is detected by checking the detection circuit or DC voltage detection circuit.

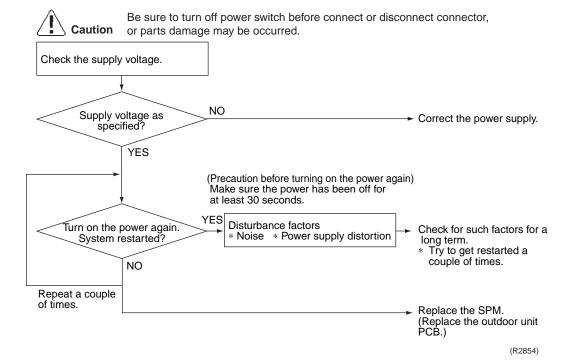
Malfunction Decision Conditions

- An over-voltage signal is fed from the over-voltage detection circuit to the microcomputer, or the voltage being detected by the DC voltage detection circuit is judged to be below 150 V for 0.1 second.
- The system will be shut down if the error occurs 16 times.
- Clearing condition: Continuous run for about 60 minutes (normal)

Supposed Causes

- Supply voltage not as specified
- Over-voltage detector or DC voltage detection circuit defective
- PAM control part(s) defective

Troubleshooting



5.27 Anti-icing Function in Other Rooms / Unspecified Voltage (between Indoor and Outdoor Units)

Remote Controller Display UR. UK

Outdoor Unit LED Display

 $A \circlearrowleft 1 \bullet 2 \bullet 3 \bullet 4 \bullet$

Method of Malfunction Detection

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

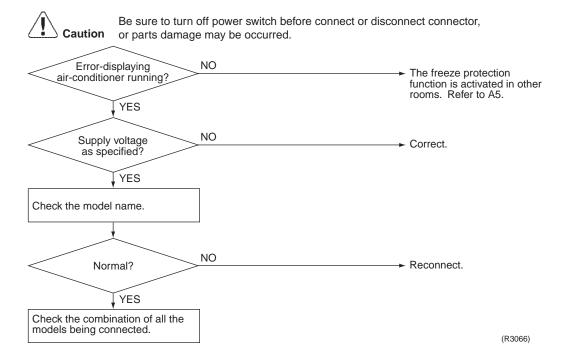
Malfunction Decision Conditions

- Operation halt due to the anti-icing function in other rooms
- Operation halt due to unspecified internal and/or external voltages
- Operation halt due to mismatching of indoor and outdoor units

Supposed Causes

- Operation halt due to the anti-icing function in other rooms
- Wrong connections at the indoor unit
- PCB wrongly connected

Troubleshooting



SiEBE12-625 Check

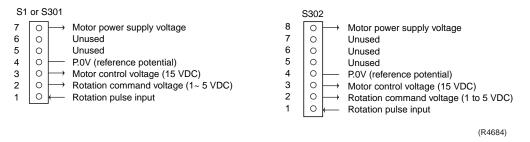
6. Check

How to Check 6.1

6.1.1 Fan Motor Connector Output Check

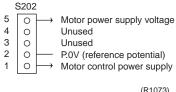
Check No.01

- 1. Check connector connection.
- 2. Check motor power supply voltage output (pins 4-7 and 4-8).
- 3. Check motor control voltage (pins 4-3).
- 4. Check rotation command voltage output (pins 4-2).
- 5. Check rotation pulse input (pins 4-1).



Check No.02

- 1. Check connector connection.
- Check motor control voltage output (pins 2-1).

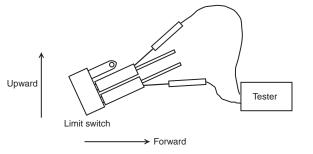


(R1073)

6.1.2 Limit Switch Continuity Check

Check No.03

Remove the front grille. The limit switch is located at the left side of the drain pan assembly. Check the continuity of the switch connection.



Open	Closed
Continuity	No continuity
	Open Continuity

(Q0363)

The shutter can be opened and closed with hand. Keep the shutter open and closed all the way for each continuity check steps.

Check SiEBE12-625

6.1.3 Electronic Expansion Valve Check

Check No.04

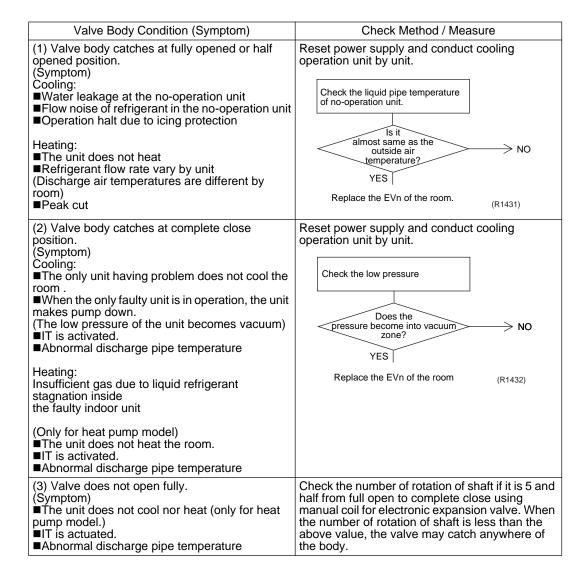
Conduct the followings to check the electronic expansion valve (EV).

- Check to see if the EV connector is correctly inserted in the PCB. Compare the EV unit and the connector number.
- 2. Turn the power off and back on again, and check to see if all the EVs generate latching sound.
- 3. If any of the EVs does not generate latching noise in the above step 2, disconnect that connector and check the conductivity using a tester.

 Check the conductivity between pins 1, 3 and 6, and between pins 2, 4 and 5. If there is no
- conductivity between the pins, the EV coil is faulty.

 4. If no EV generates latching sound in the above step 2, the outdoor unit PCB is faulty.
- 5. If the conductivity is confirmed in the above step 2, mount a good coil (which generated latching sound) in the EV unit that did not generate latching sound, and check to see if that EV generates latching sound.
 - *If latching sound is generated, the outdoor unit PCB is faulty.
 - *If latching sound is not generated, the EV unit is faulty.
- Note:

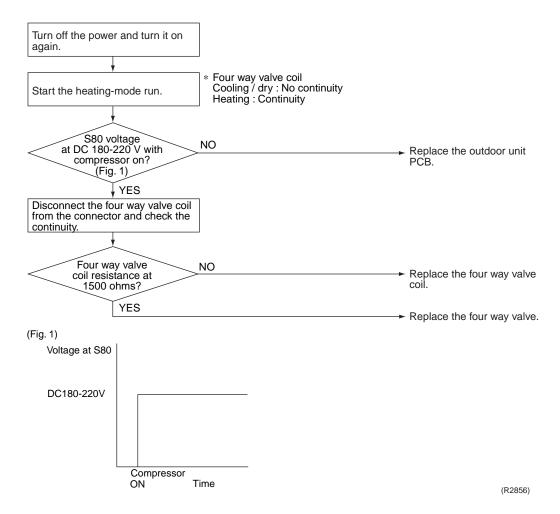
Please note that the latching sound varies depending on the valve type.



SiEBE12-625 Check

6.1.4 Four Way Valve Performance Check

Check No.05



Check SiEBE12-625

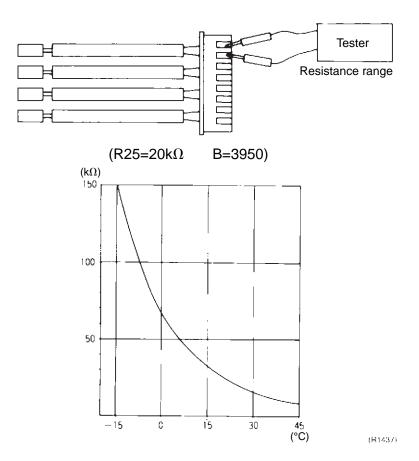
6.1.5 Thermistor Resistance Check

Check No.06

Remove the connectors of the thermistors on the PCB, and measure the resistance of each thermistor using tester.

The relationship between normal temperature and resistance is shown in the graph and the table below.

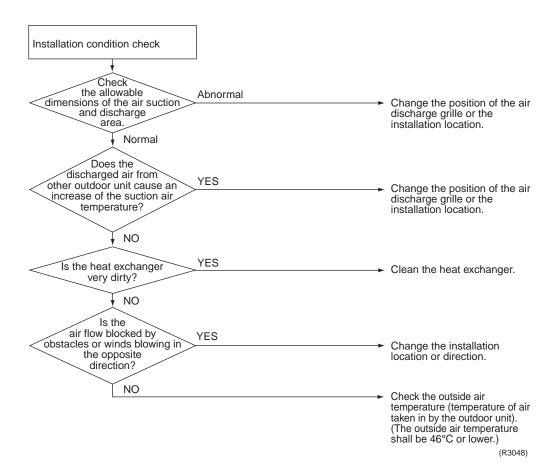
Thermistor	R25°C=20kΩ B=3950
Temperature (°C)	
-20	211.0 (kΩ)
-15	150
-10	116.5
-5	88
0	67.2
5	51.9
10	40
15	31.8
20	25
25	20
30	16
35	13
40	10.6
45	8.7
50	7.2



SiEBE12-625 Check

6.1.6 Installation Condition Check

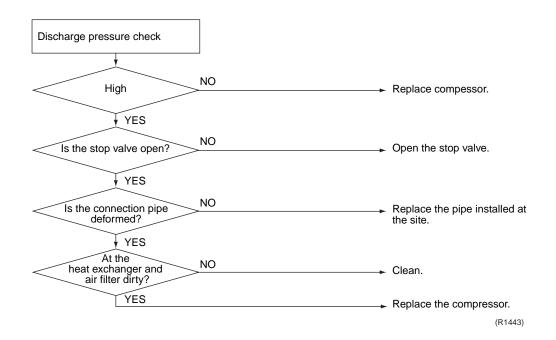
Check No.07



Check SiEBE12-625

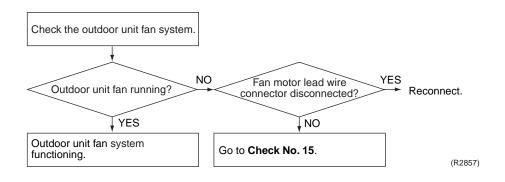
6.1.7 Discharge Pressure Check

Check No.08



6.1.8 Outdoor Unit Fan System Check (With DC Motor)

Check No.09



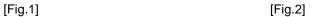
SiEBE12-625 Check

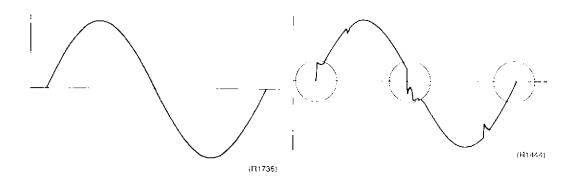
6.1.9 Power Supply Waveforms Check

Check No.10

Measure the power supply waveform between pins 1 and 3 on the terminal board, and check the waveform disturbance.

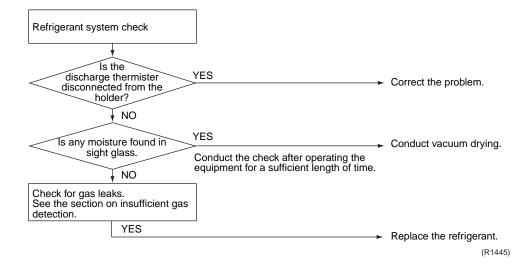
- Check to see if the power supply waveform is a sine wave (Fig.1).
- Check to see if there is waveform disturbance near the zero cross (sections circled in Fig.2)





6.1.10 Inverter Units Refrigerant System Check

Check No.11



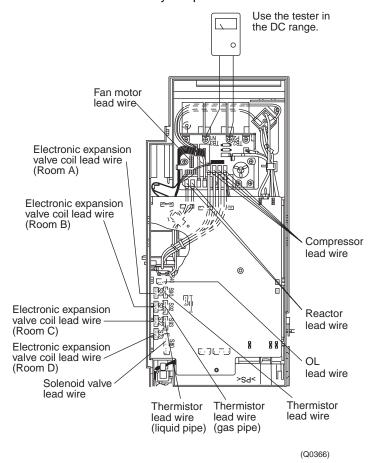
Check SiEBE12-625

6.1.11 Capacitor Voltage Check

Check No.12

Before this checking, be sure to check the main circuit for short-circuit.

- Checking the capacitor voltage
- With the circuit breaker still on, measure the voltage according to the drawing of the model in question. Be careful never to touch any live parts.



6.1.12 Power Transistor Check

Check No.13

- Checking the power transistor
- Never touch any live parts for at least 10 minutes after turning off the circuit breaker.
- If unavoidably necessary to touch a live part, make sure the power transistor's supply voltage is below 50 V using the tester.
- For the UVW, make measurements at the Faston terminal on the board or the relay connector.

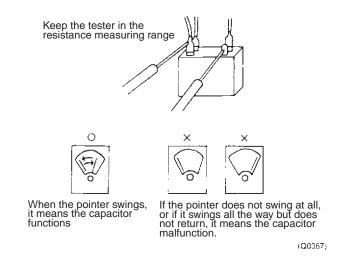
Tester's negative terminal	Power transistor (+)	UVW	Power transistor (–)	UVW
Tester's positive terminal	UVW	Power transistor (+)	UVW	Power transistor (–)
Normal resistance	Several kohms to several Mohms			
Abnormal resistance	0 or ∞			

SiEBE12-625 Check

6.1.13 Main Circuit Electrolytic Capacitor Check

Check No.14

- Checking the main circuit electrolytic capacitor
- Never touch any live parts for at least 10 minutes after turning off the circuit breaker.
- If unavoidably necessary to touch a live part, make sure there is no DC voltage using the tester.
- Check the continuity with the tester. Reverse the pins and make sure there is continuity.



6.1.14 Turning Speed Pulse Input on the Outdoor Unit PCB Check

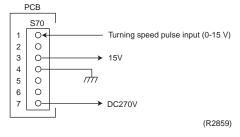
Check No.15

<Propeller fan motor>

Make sure the voltage of 270±30V is being applied.

- (1) Stop the operation first and then the power, and disconnect the connector S70.
- (2) Make sure there is about DC 270 V between pins 4 and 7.
- (3) With the system and the power still off, reconnect the connector S70.
- (4) Make a turn of the fan motor with a hand, and make sure the pulse (0-15 V) appears twice at pins 1 and 4.

If the fuse is blown out, the outdoor-unit fan may also be in trouble. Check the fan too. If the voltage in Step (2) is not applied, it means the PCB is defective. Replace the PCB. If the pulse in Step (4) is not available, it means the Hall IC is defective. Replace the DC fan motor. If there are both the voltage (2) and the pulse (4), replace the PCB.



* Propeller fan motor: S70

Check SiEBE12-625

6.1.15 Hall IC Check

Check No.16

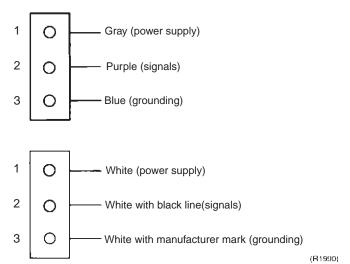
- 1. Check the connector connection.
- 2. With the power ON, operation OFF, and the connector connected, check the following.
 - *Output voltage of about 5 V between pins 1 and 3.
 - *Generation of 3 pulses between pins 2 and 3 when the fan motor is operating.

Failure of (1) \rightarrow faulty PCB \rightarrow Replace the PCB.

Failure of (2) \rightarrow faulty Hall IC \rightarrow Replace the fan motor.

Both (1) and (2) result → Replace the PCB.

The connector has 3 pins, and there are two patterns of lead wire colors.



Part 7 Removal Procedure

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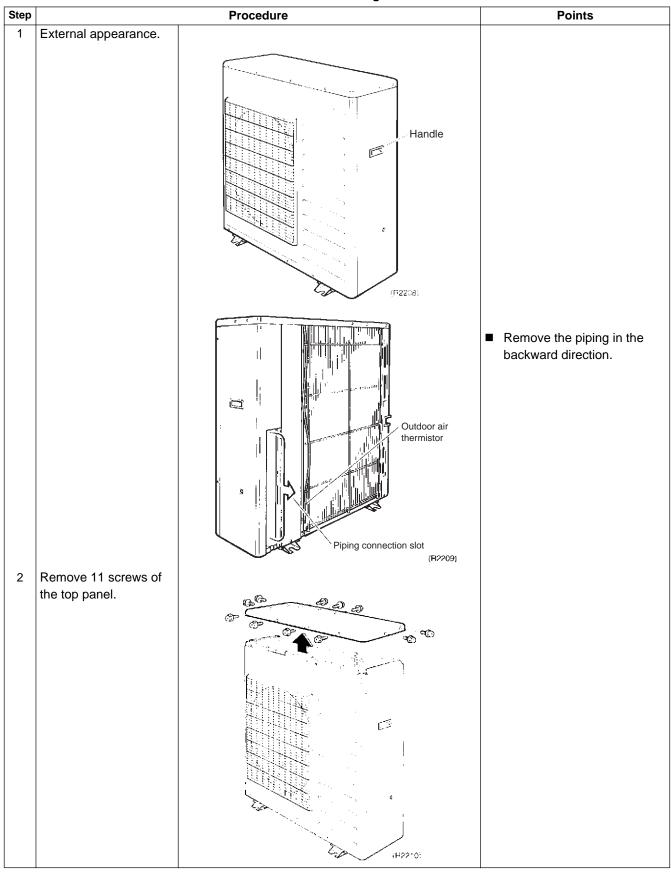
1. Outdoor Unit (80 / 90 Class)

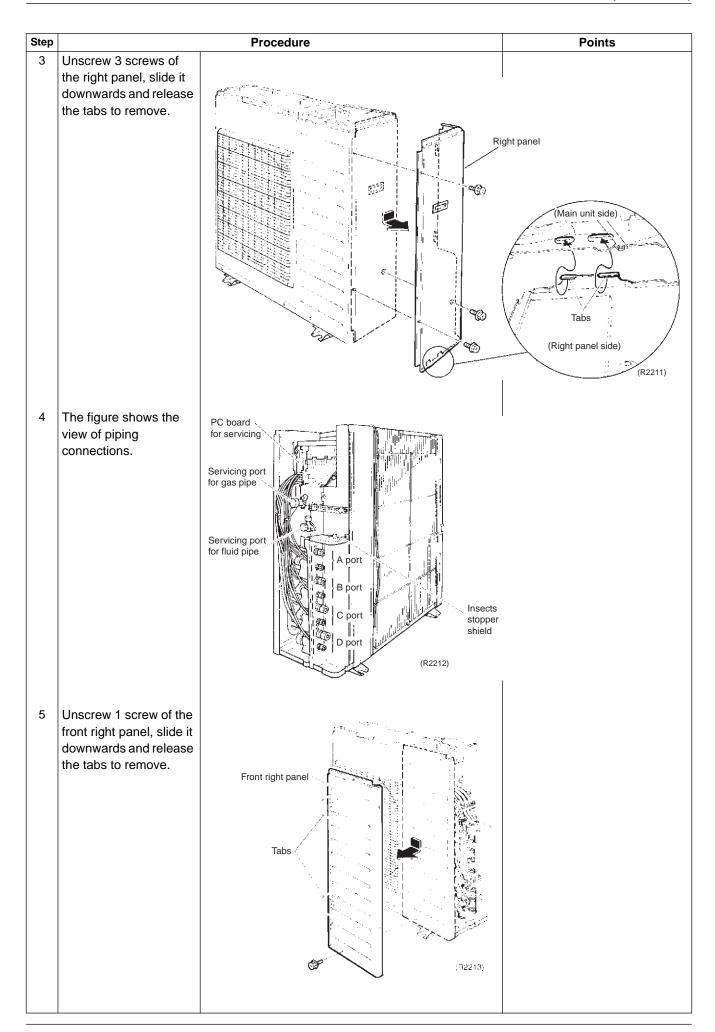
1.1 Removal of Outer Panels

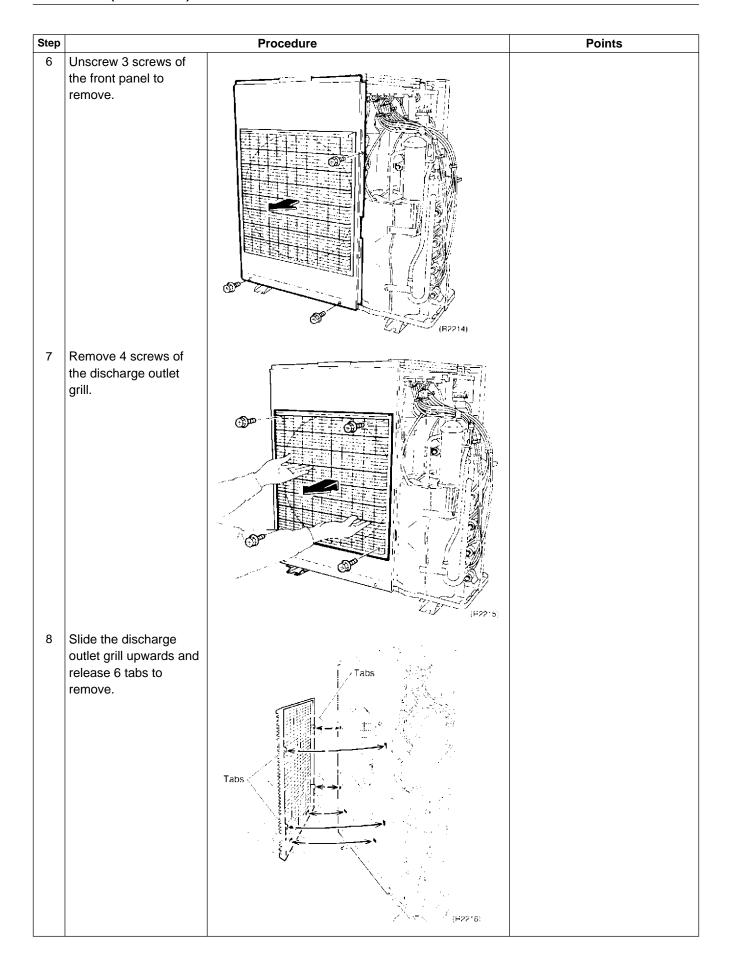
Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.





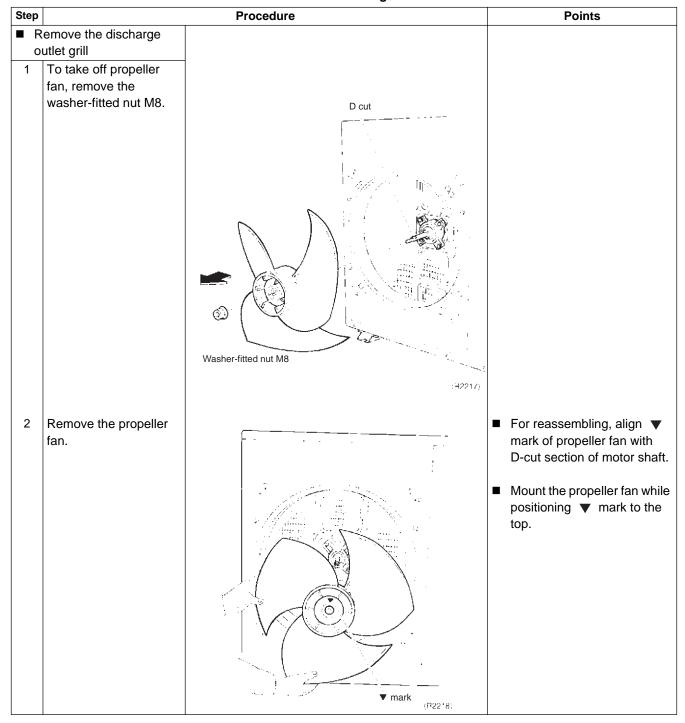


1.2 Removal of Propeller Fans

Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

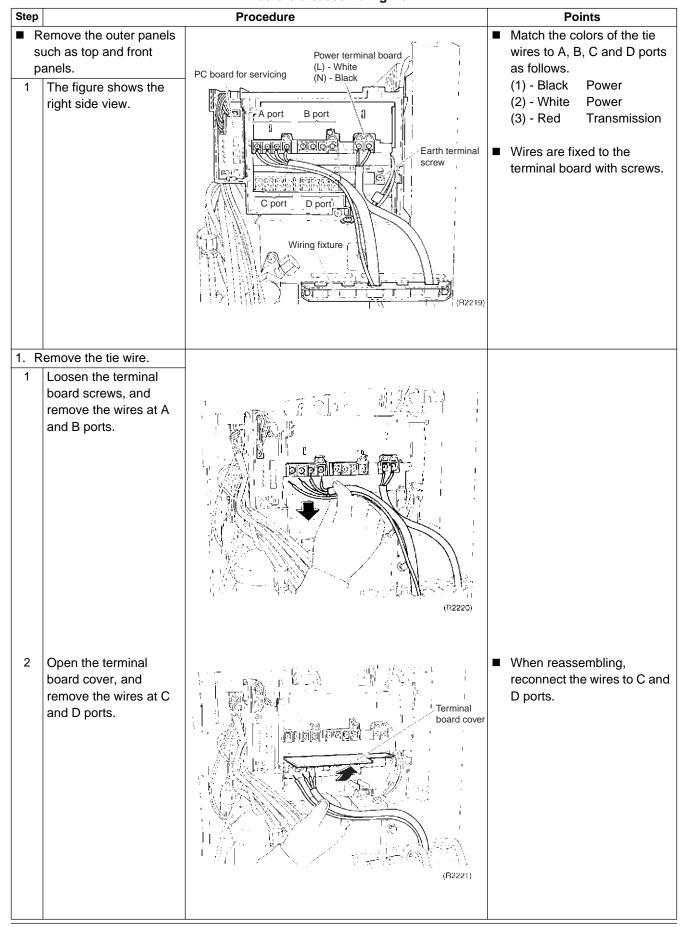


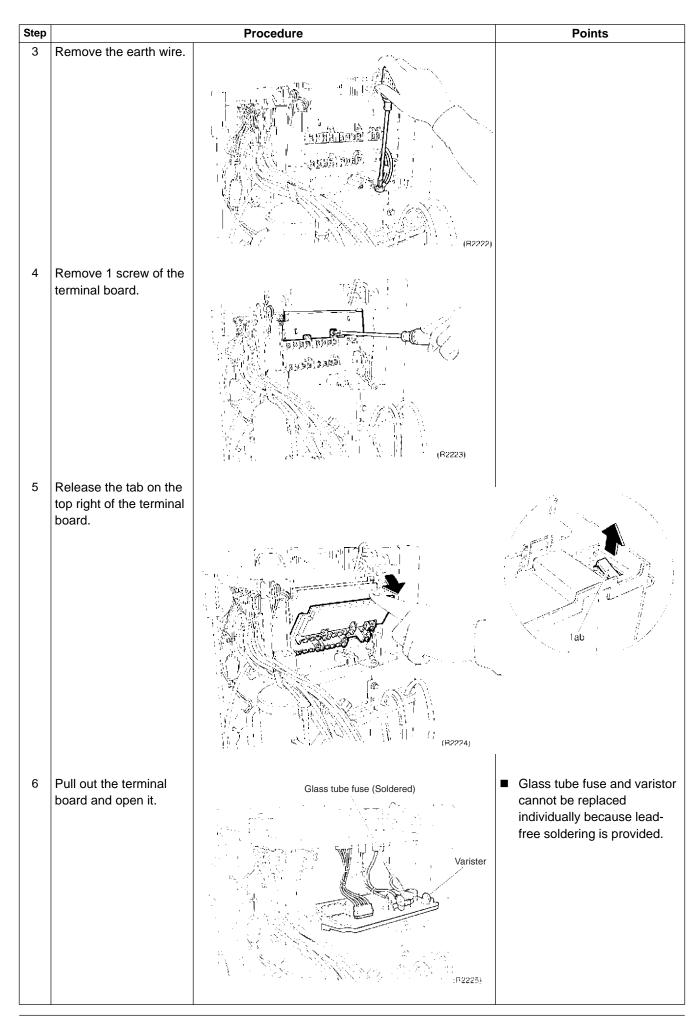
1.3 Removal of Electrical Box

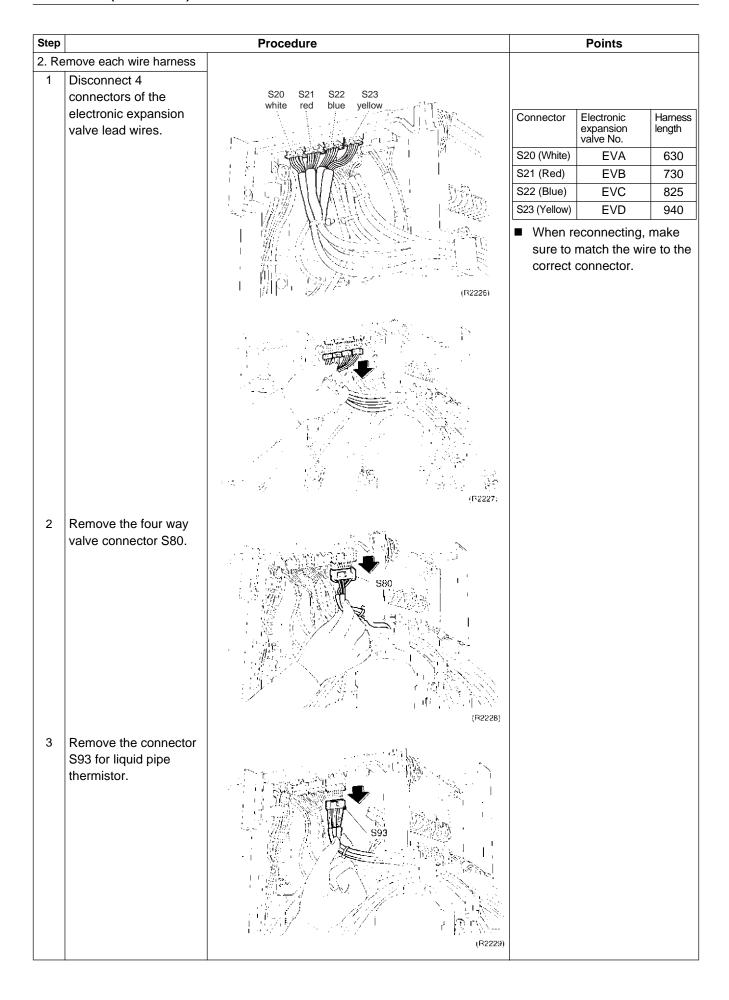
Procedure

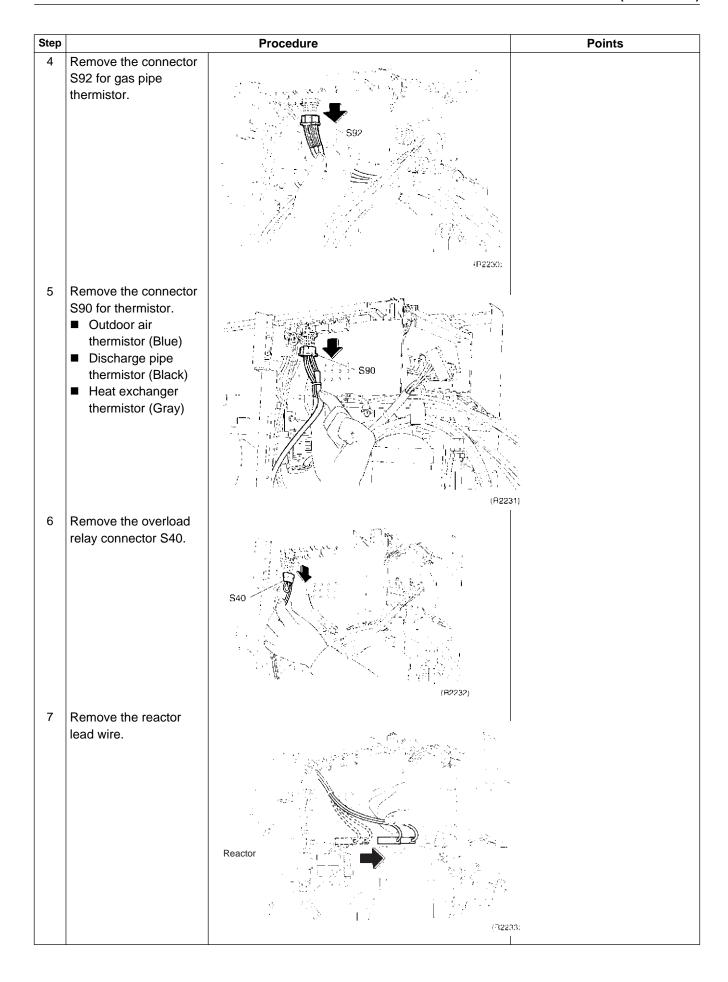
Warning

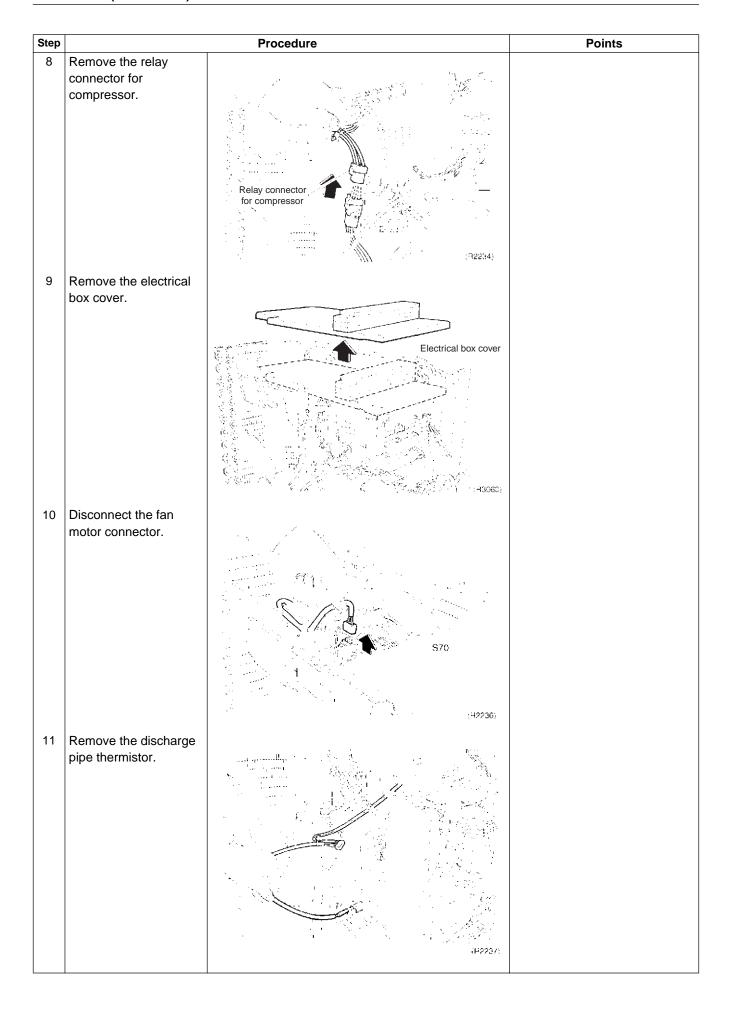
Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.



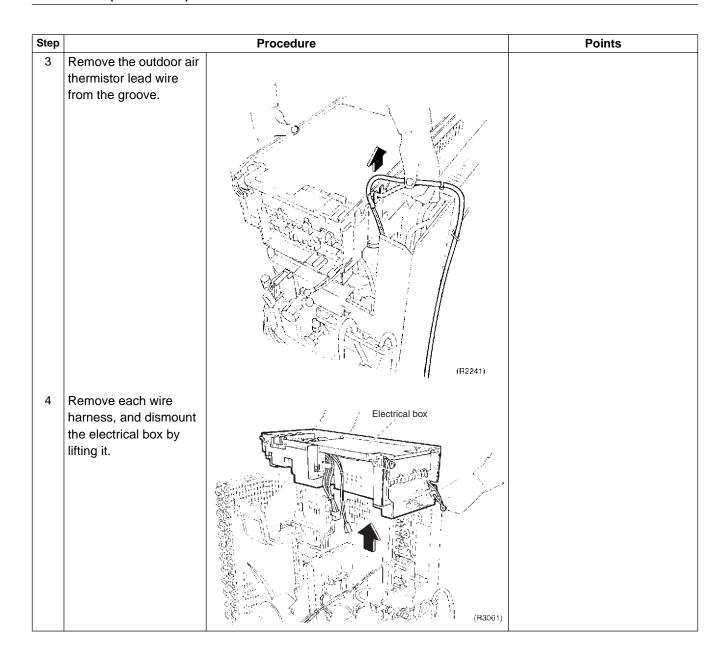








Step		Procedure	Points
12	Take off the thermistor presser spring, and remove the thermistor.	Thermistor presser spring Discharge pipe thermistor (F2236)	 Place the thermistor so that its end comes up to the end of the presser spring. Be careful not to lose the presser spring for the discharge pipe thermistor.
	emoving the electrical ox		
1	Remove 2 screws of the electrical box.	(H2239)	
2	Turn the electrical box up side down halfway, and disconnect the thermistor lead wire from the hook.	Hook	

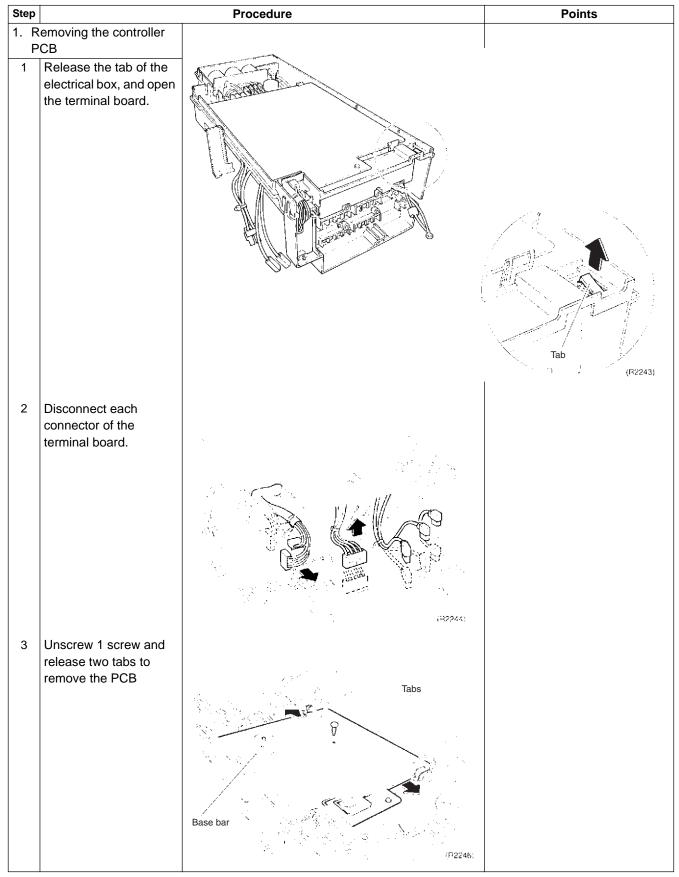


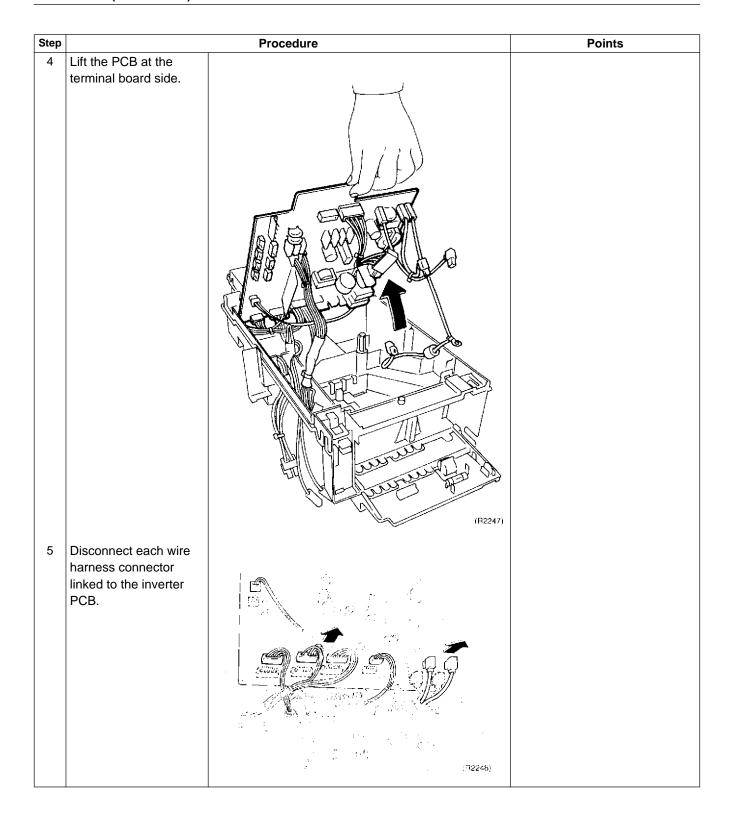
1.4 Removal of PCB

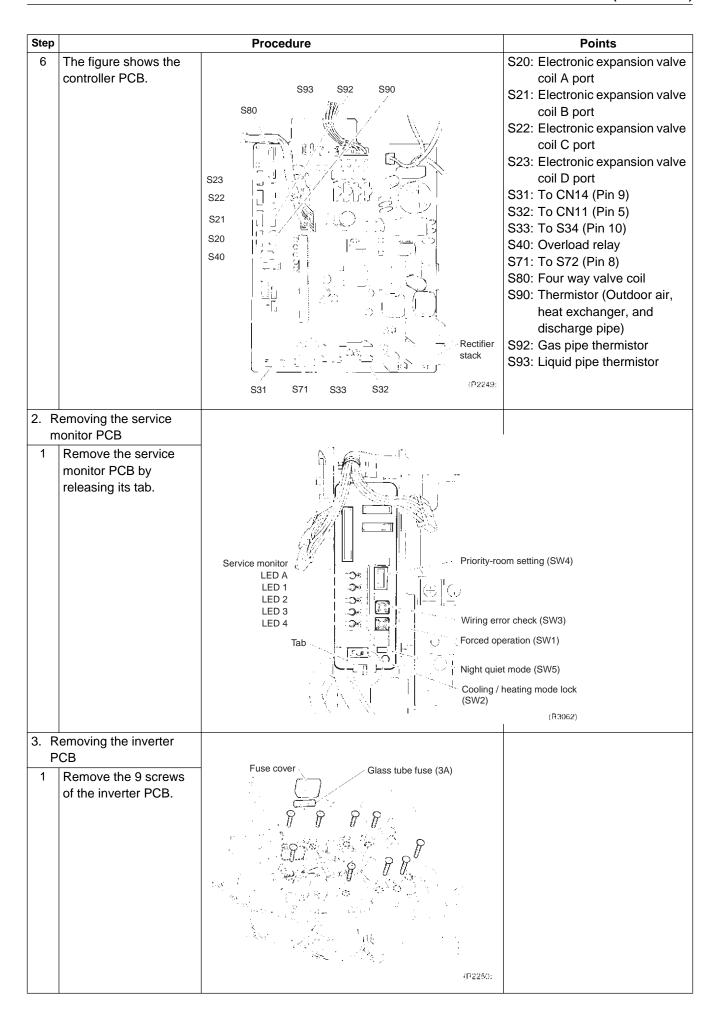
Procedure

<u>∕</u> Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.





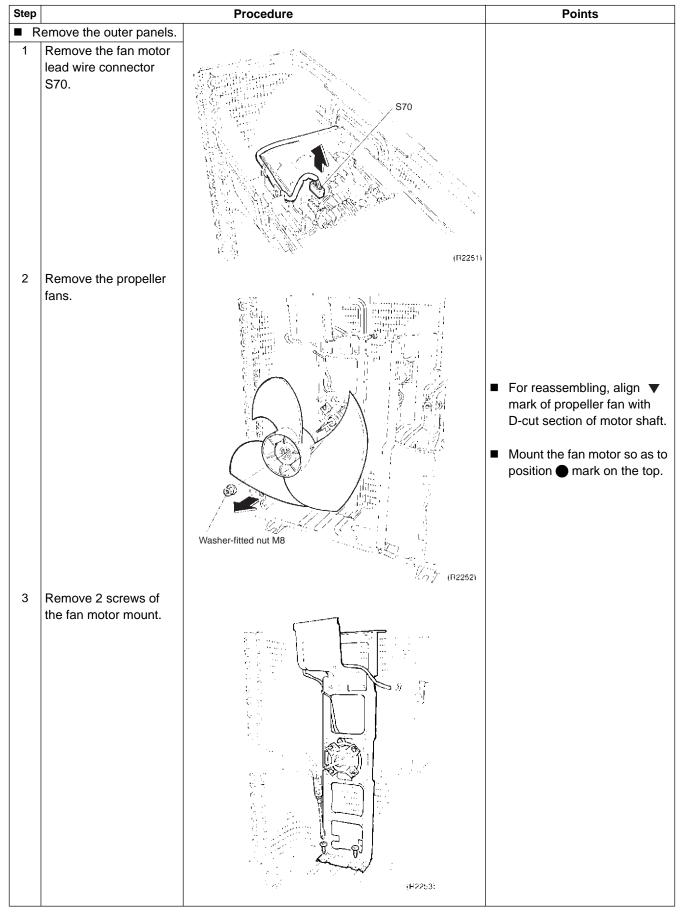


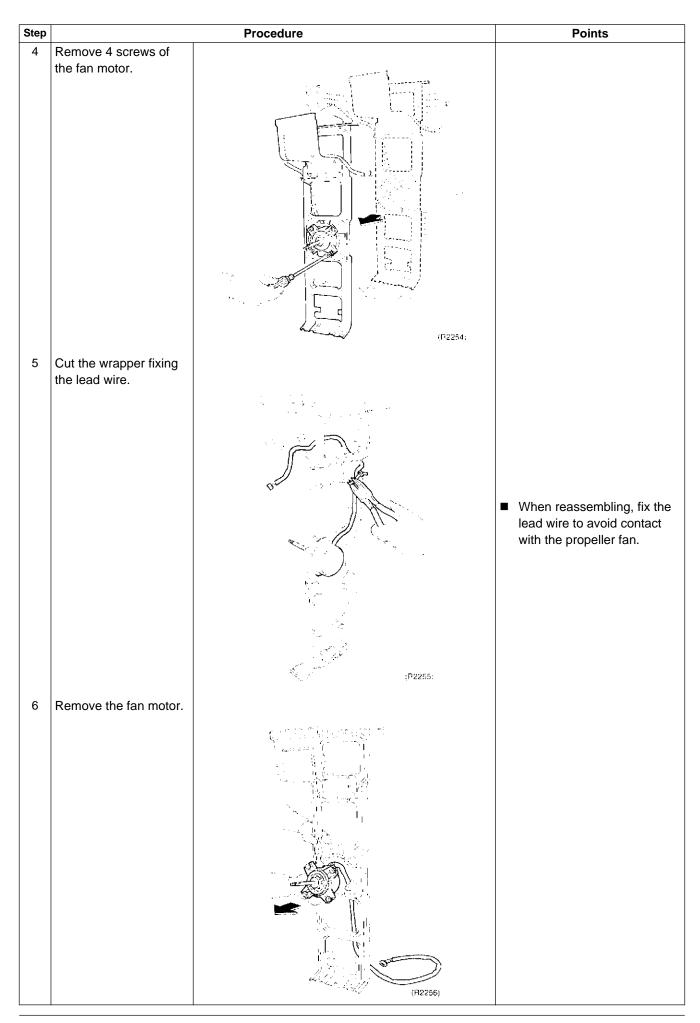
1.5 Removal of Fan Motor

Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.





1.6 Removal of Electronic Expansion Valve and Thermistor

Procedure

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step		Procedure Procedure		Points
1	Remove each wire harness.			Place the thermistor so that its end comes up to the end of the presser spring.
		/P2257:		Be careful not to lose the presser spring for the discharge pipe thermistor.
2	Take off the putty, and remove each thermistor.	:4226	S9 S9 S9	Heat exchanger thermistor (Gray) Discharge pipe thermistor (Black) 92: Gas pipe thermistor Room A (Black) Room B (Gray) Room C (Brown) Room D (Red)
3	Remove the electronic expansion valve coil.	(F2259)		Room A (Black) Room B (Gray) Room C (Yellow) Room D (Blue)

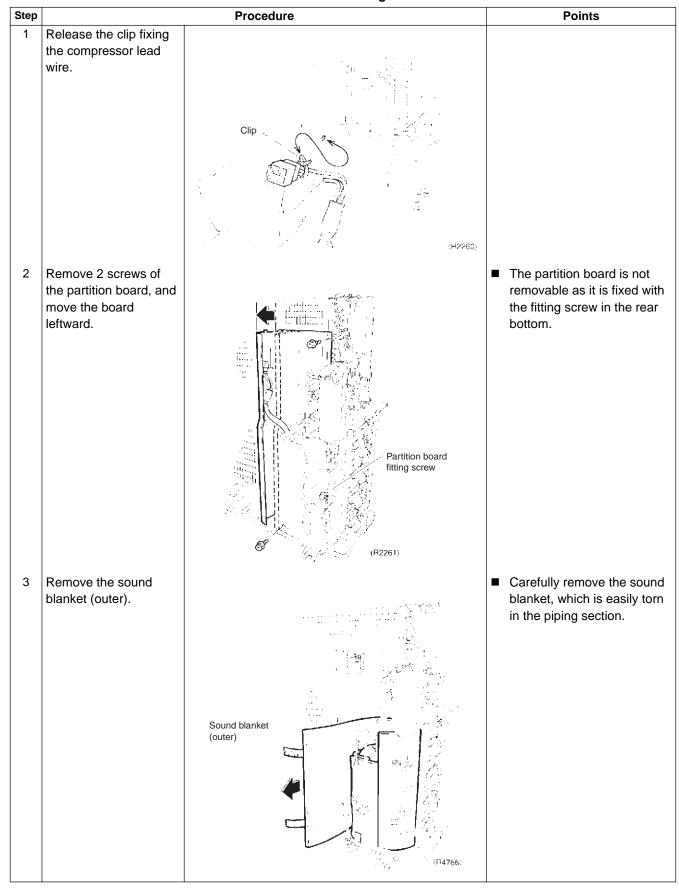
1.7 Removal of Sound Blanket and Reactor

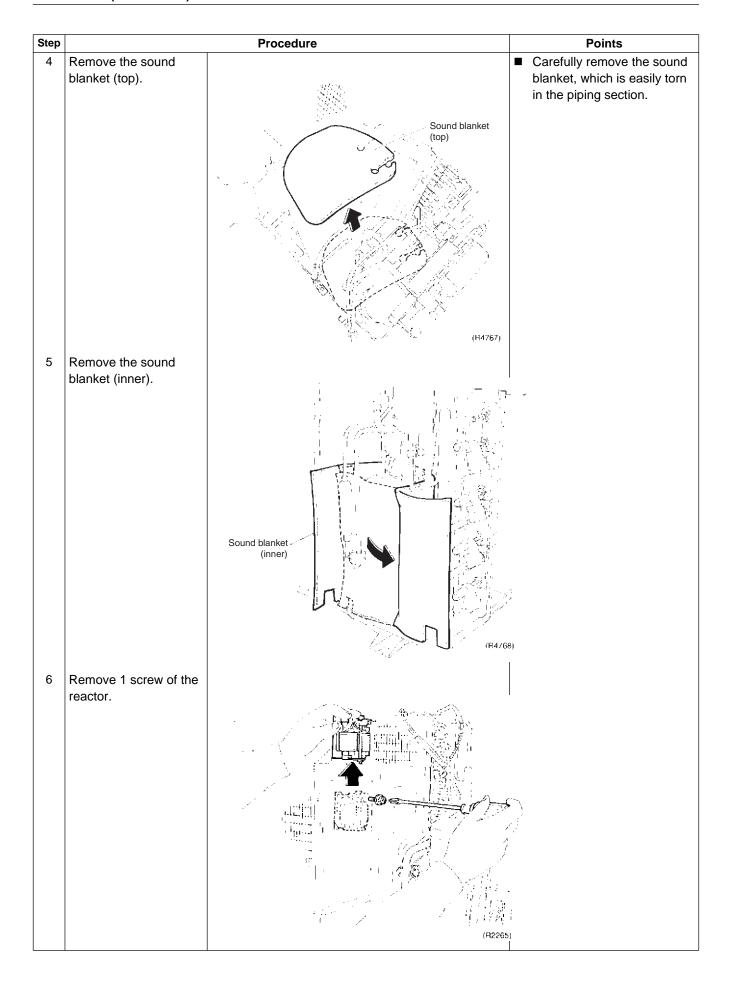
Procedure



Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.



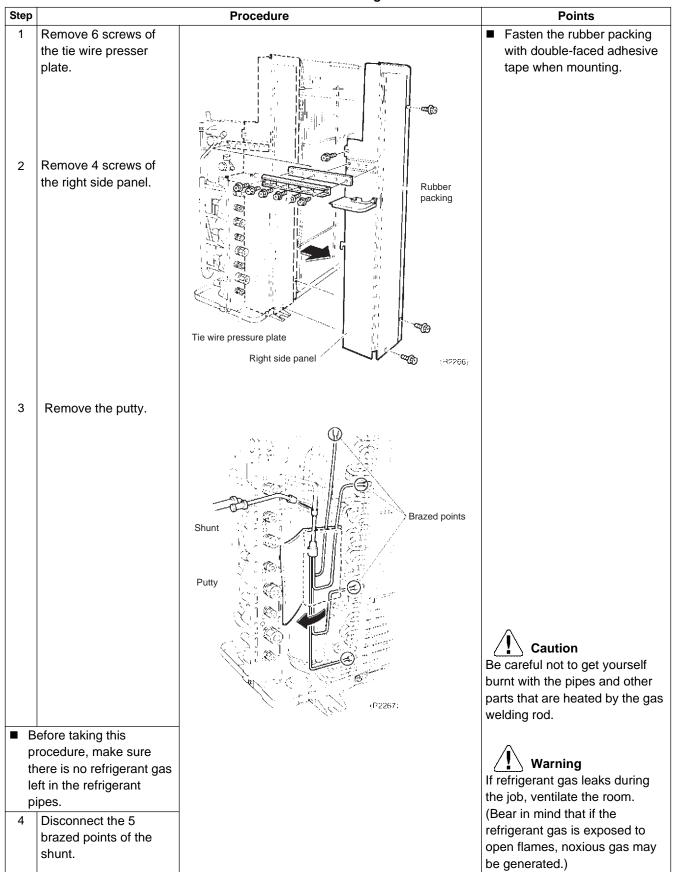


1.8 Removal of Shunt

Procedure

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.



1.9 Removal of Solenoid Valve and Four Way Valve

Procedure

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Ste	ер	Procedure	Points
	Remove the outer panels.		
1.	Removing the solenoid valve		
1	Remove 1 screw of the solenoid valve coil.		
-	Before taking this	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	procedure, make sure		
	there is no refrigerant gas left in the refrigerant		
	pipes.		
			Caution
			Be careful not to get yourself
		日本の まるの 収録日	burnt with the pipes and other
		(42288)	parts that are heated by the gas welding rod.
2	Disconnect the 2		
	brazed points (a) and	Λ III	
	(b) in this order.		
			Warning
		A PA TENVEZ MANIE	If refrigerant gas leaks during
			the job, ventilate the room.
			(Bear in mind that if the refrigerant gas is exposed to
			open flames, noxious gas may
			be generated.)
		(B2269)	
2.	Removing the four way		Reassembling precautions
	valve	Lum - I All	Wrap the solenoid valve body
1			with wet cloth. Splash water
	four way valve coil.	13/1/21/25/1/15-17-11	over the cloth before it is dried to prevent the valve from being
			overheated.
		I I KILITUK MI	
		(R2270)	
		(nectu)	

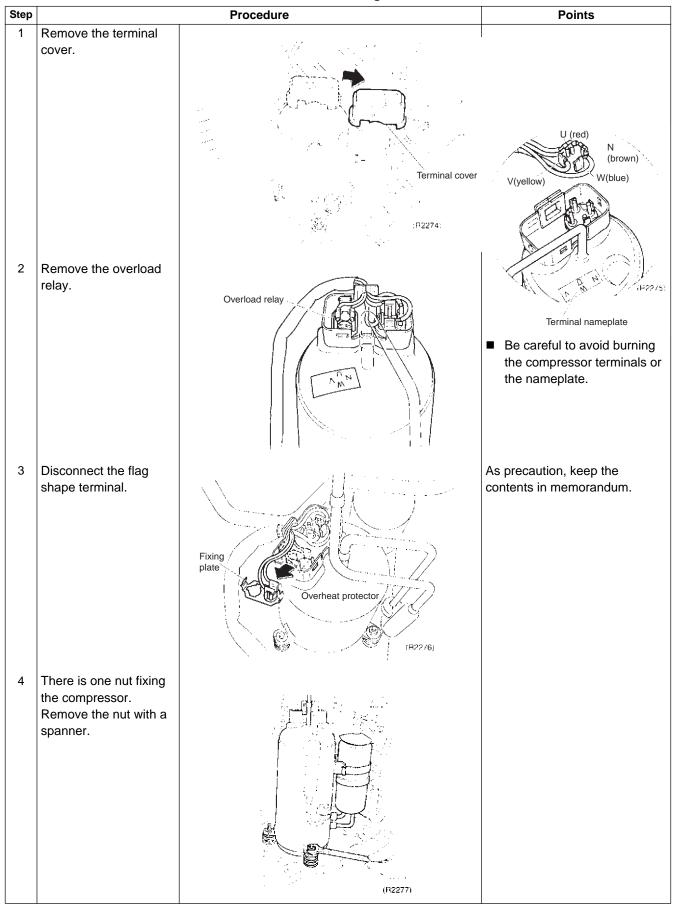
Step **Procedure Points** ■ Before taking this Reassembling precautions procedure, make sure 1. Use non-oxidizing brazing there is no refrigerant gas method. If nitrogen gas is not left in the refrigerant available, braze the parts pipes. speedily. 2. Avoid deterioration of the 2 Place welding gaskets due to carbonization protective sheet or iron of oil inside the four way plate around the four valve or thermal influence. way valve to prevent For this purpose, wrap the the flames of a gas four way valve with wet welding rod from cloth. Splash water over the affecting the valve. cloth against becoming too hot (keep it below 120°C). 3 Heat the 4 brazed points of the four way (32271: ■ In pulling the pipes, be valve. Disconnect the careful not to over-tighten point (a) first. them with pliers. The pipes may get deformed. 4 Disconnect the points (b) and (c). If the gas welding machine fails to remove the four way valve, take the steps below. 1. Disconnect the brazed pipe sections that are readily easy to separate and join together later. 2. With a small copper tube cutter, cut off the internal pipes to easily take out the four way valve. Note: Never use a hack saw. The 5 Disconnect the point sawdust may come into the (d). circuit.

1.10 Removal of Compressor

Procedure

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.



Step **Procedure** Points ■ Make sure there is no refrigerant gas left inside Warning the refrigerant pipes The compressor's refrigerating before starting the job. machine oil may catch fire. Have ■ When heating up the wet cloth at hand for quickly putting brazed parts, make sure out the fire. to carry out the N2 replacement. Remove the 2 sheets of Warning putty. If refrigerant gas leaks during the job, ventilate the room. (Bear in mind that if the refrigerant gas is exposed to open flames, noxious gas may be generated.) Caution Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas welding rod. (B2278) 6 Disconnect the brazed part (a) at discharge side of the compressor. 7 Disconnect the brazed part (b) at suction side of the compressor. (R2279)

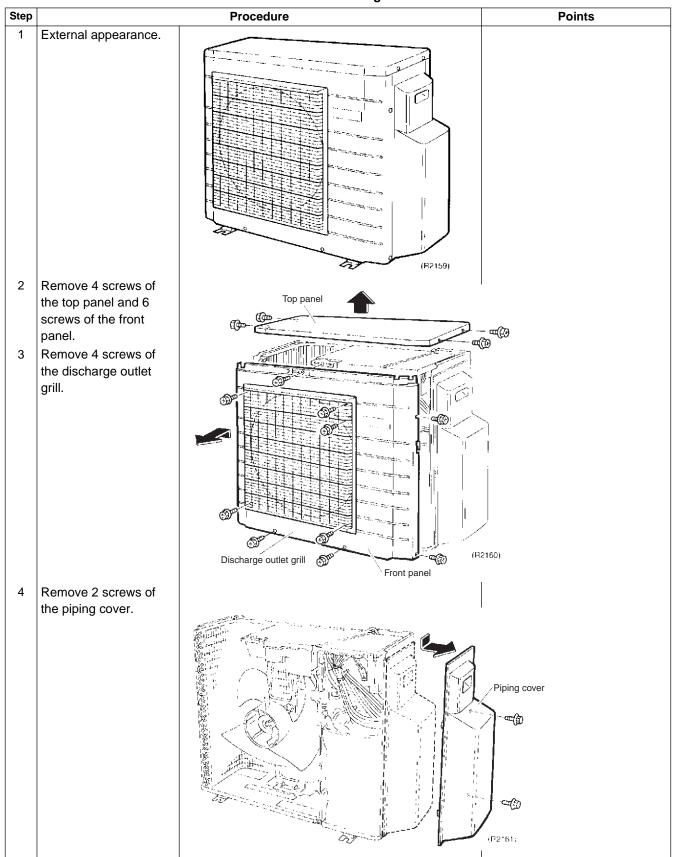
2. Outdoor Unit (68 / 75 Class)

2.1 Removal of Outer Panels

Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

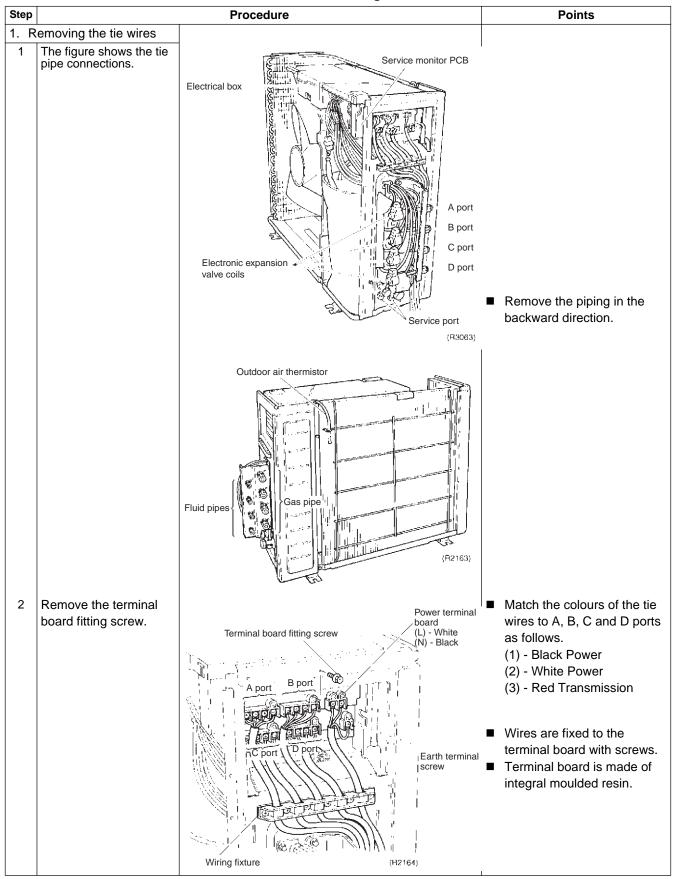


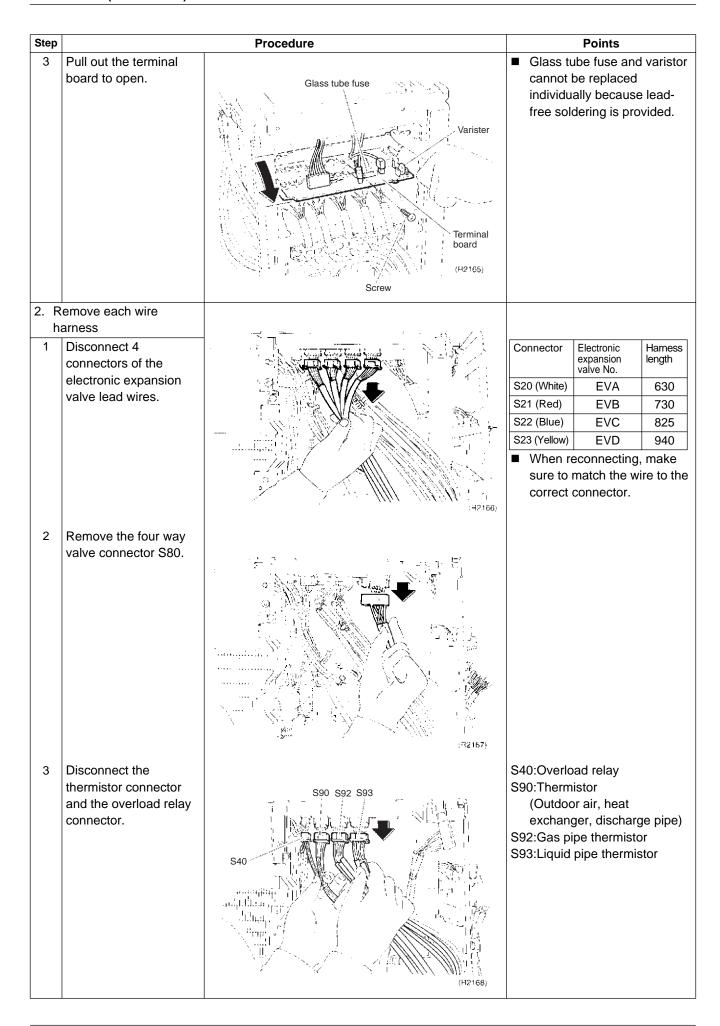
2.2 Removal of Electrical BOX

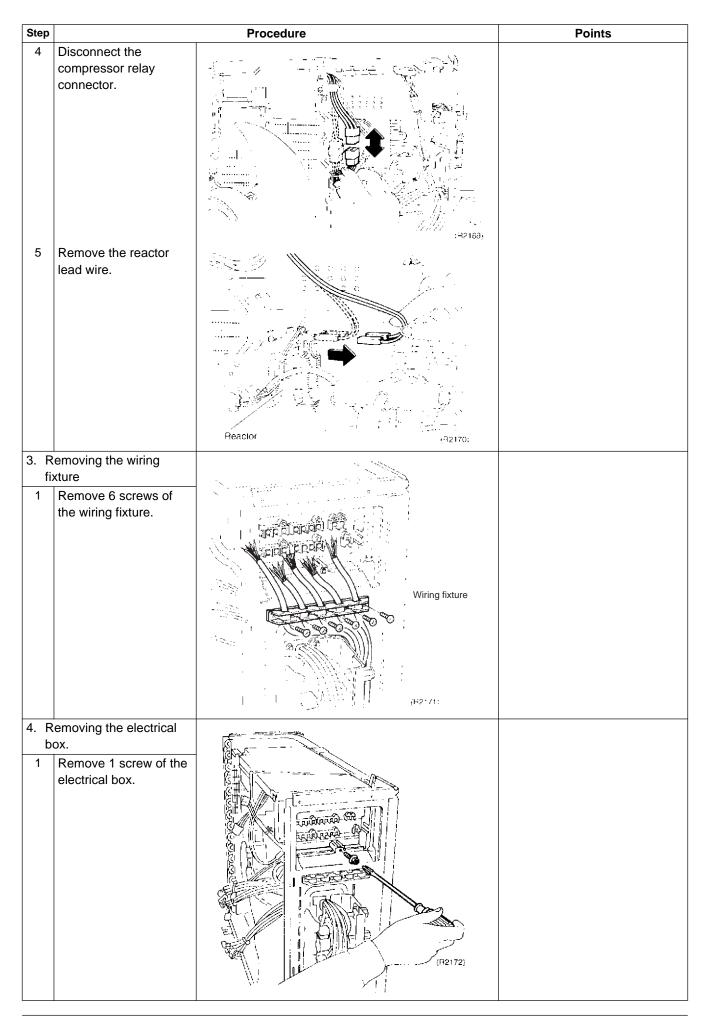
Procedure

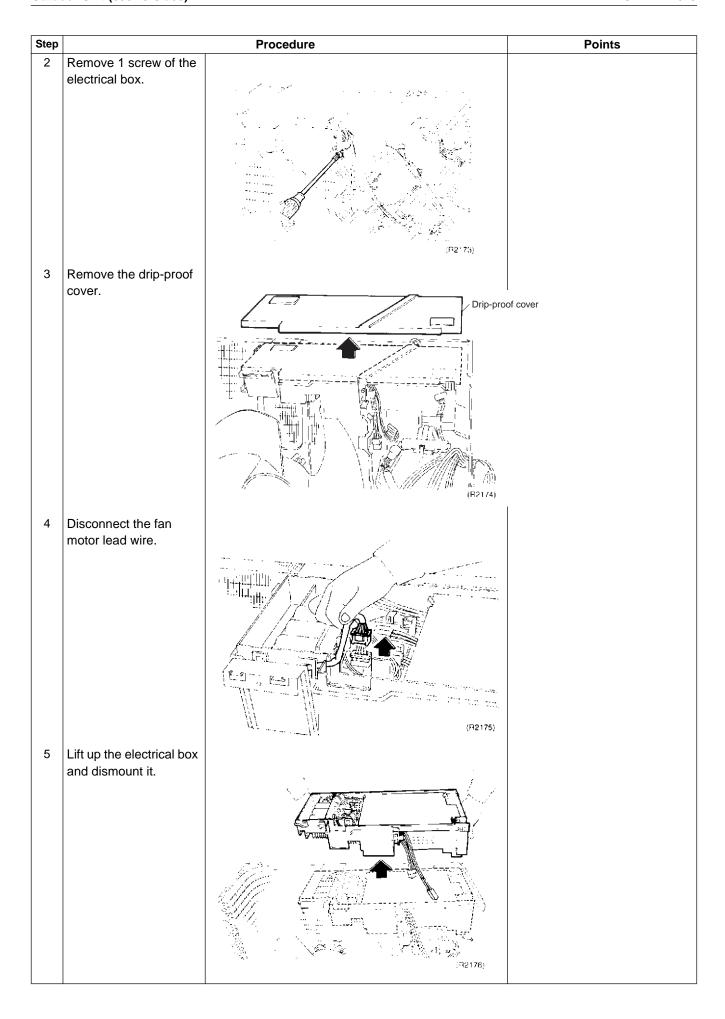
/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.





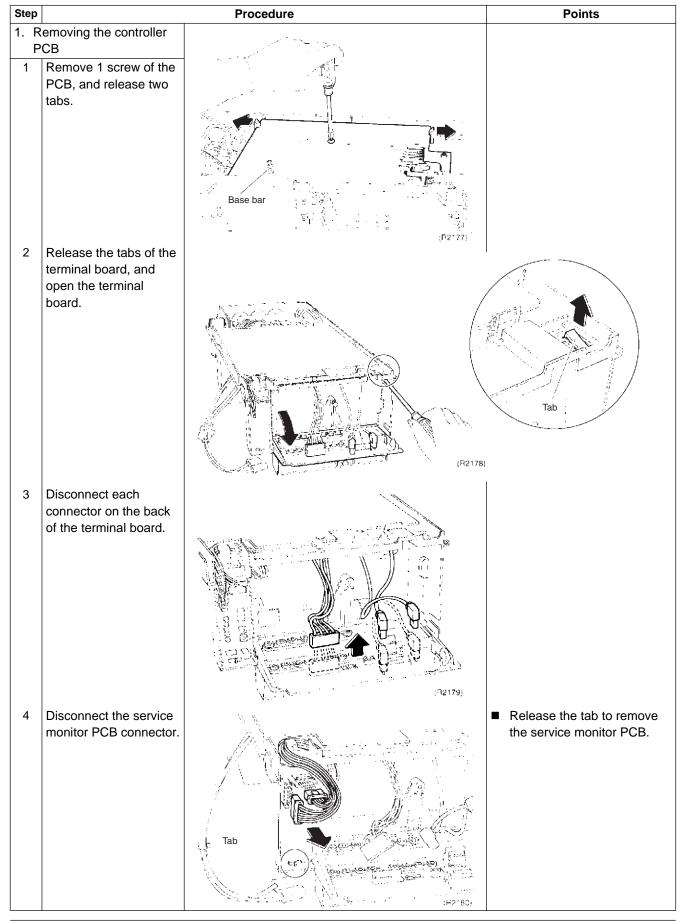


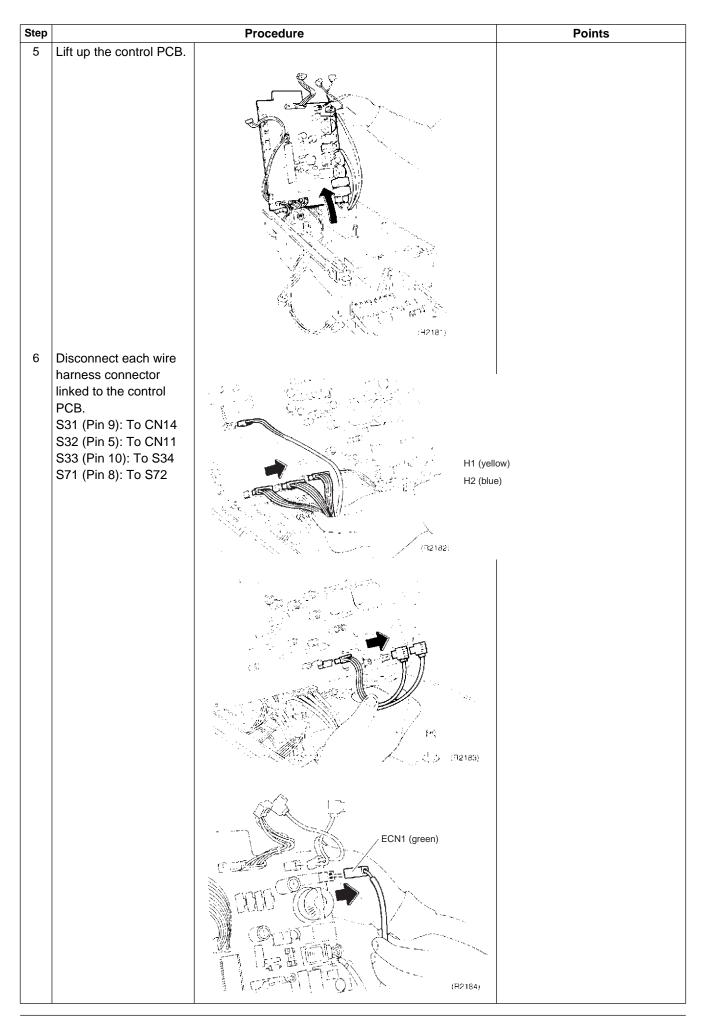


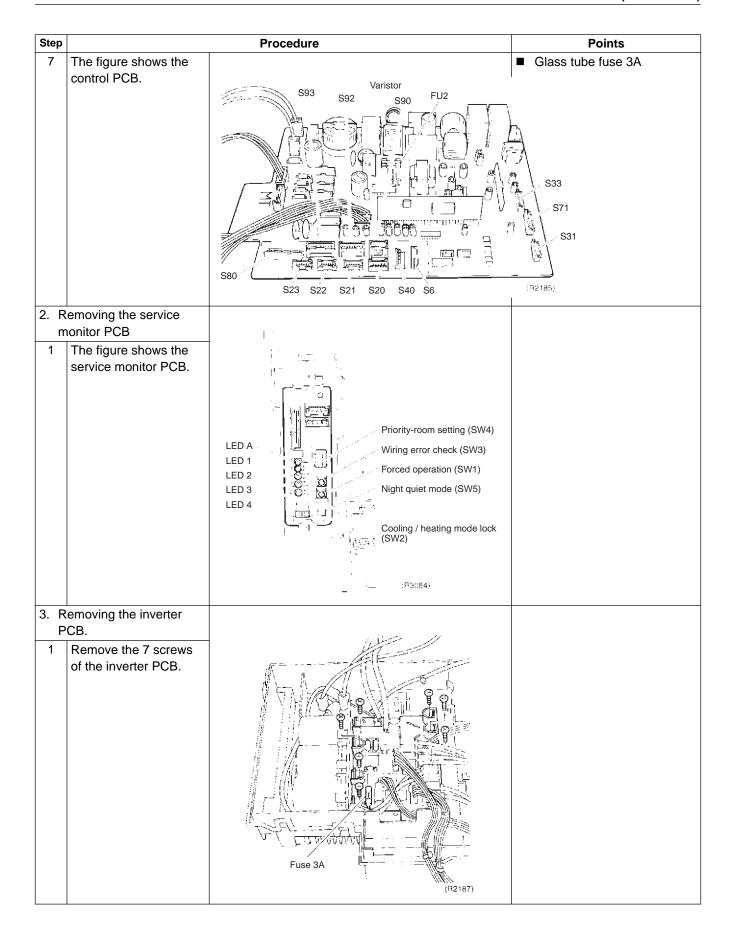
2.3 Removal of PCB

Procedure

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.







2.4 Removal of Fan Motor

Procedure

 \triangle

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

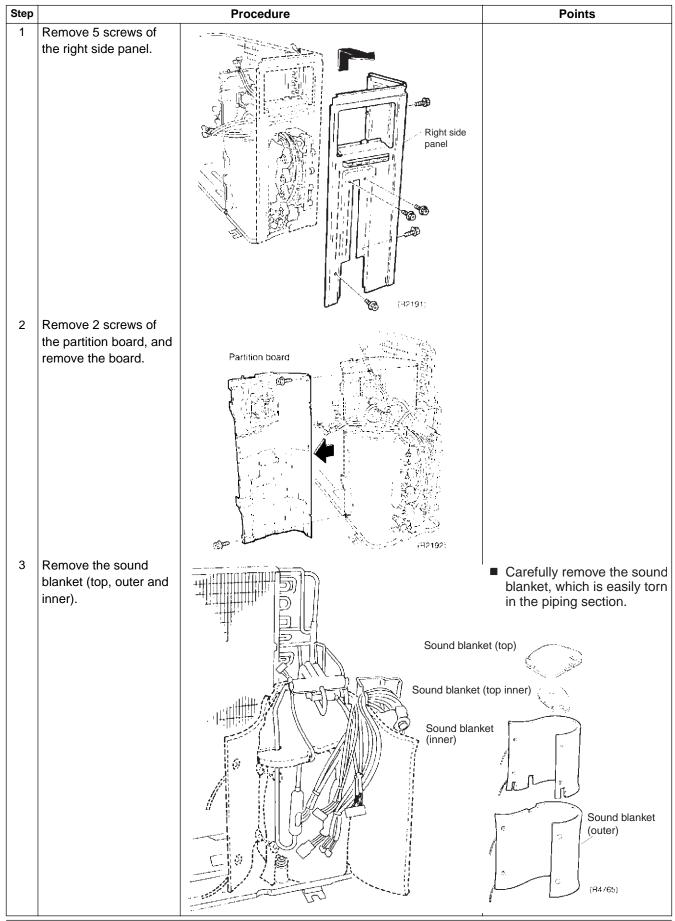
Step Procedure Points ■ For reassembling, align ▼ ■ Remove the fan motor lead wire connector. mark of propeller fan with D-cut section of motor shaft. Remove the propeller fan by removing the ■ Mount the propeller fan while washer-fitted nut. positioning mark to the top. Washer-fitted nut 2 Remove the fan motor. Remove 1 screw of the fan motor mount. ■ When reassembling, fix the lead wire to avoid contact (B2189) with the propeller fan. Disconnect the lead wire by releasing the 2 clamps fixing the wire. Remove 4 screws of the fan motor.

2.5 Removal of Sound Blanket

Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

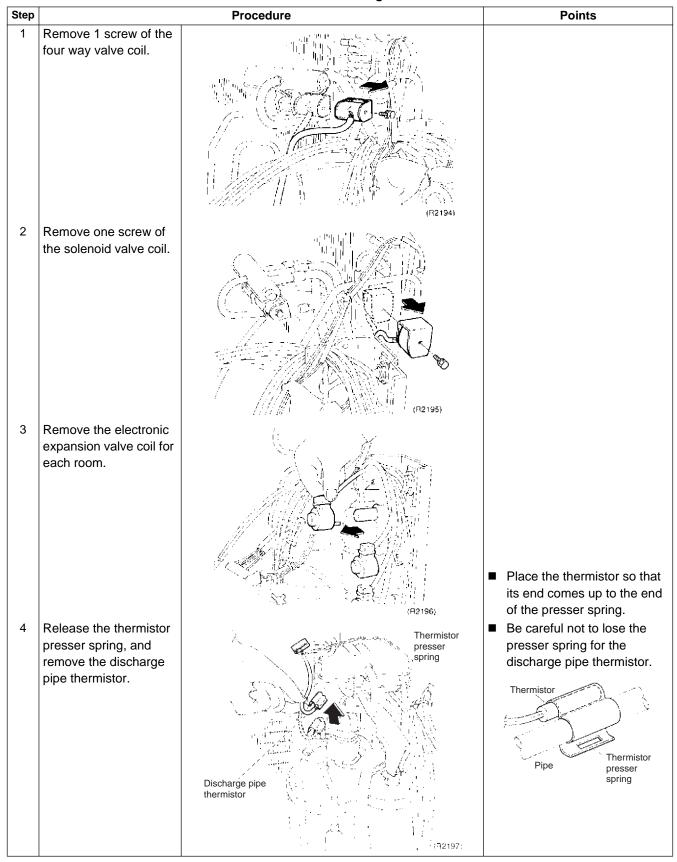


2.6 Removal of Four Way Valve Coil, Solenoid Valve Coil, Electronic Expansion Valve Coil and Thermistor

Procedure

/ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.



Step		Procedure	Points
5	Take off the putty, and remove each thermistor.	(R2198)	 Place the thermistor so that its end comes up to the end of the presser spring. Be careful not to lose the presser spring for the discharge pipe thermistor. Thermistor Pipe Thermistor presser spring
6	Remove the wire harness.	(P2'99)	S90: Outdoor air thermistor (Blue) Heat exchanger thermistor (Gray) Discharge pipe thermistor (Black) S92: Gas pipe thermistor Room A (Black) Room B (Gray) Room C (Brown) Room D (Red) S93: Liquid pipe thermistor Room A (Black) Room B (Gray) Room C (Yellow) Room D (Blue)

Removal of Four Way Valve, Solenoid Valve and Shunt

Procedure

◯ Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step		Procedure	Points
2	Remove 1 screw of the four way valve coil. Remove 1 screw of the solenoid valve coil.	(H2200)	Reassembling precautions 1. Use non-oxidizing brazing method. If nitrogen gas is not available, braze the parts speedily. 2. Avoid deterioration of the gaskets due to carbonization of oil inside the four way valve or thermal influence. For this purpose, wrap the four way valve with wet cloth. Splash water over the cloth against becoming too hot (keep it below 120°C).
p ti	refore taking this rocedure, make sure nere is no refrigerant gas left in the refrigerant ipes.		In pulling the pipes, be careful not to over-tighten them with pliers. The pipes may get deformed.
3	Place welding protective sheet or iron plate around the four way valve to prevent the flames of a gas welding rod from affecting the valve.	(H-9901)	If the gas welding machine fails to remove the four way valve, take the steps below. 1. Disconnect the brazed pipe sections that are readily easy to separate and join together later. 2. With a small copper tube cutter, cut off the internal pipes to easily take out the four way valve. Note: Never use a hack saw. The sawdust may come into the
4	Heat the four brazed points of the four way valve. Disconnect the point (a) first.		circuit.
5	Disconnect the points (b) and (c).		
6	Disconnect the point (d).	(F2202)	

2.8 Removal of Solenoid Valve and Shunt

Procedure

<u>(1)</u>

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step Points **Procedure** ■ Before taking this procedure, make sure there is no refrigerant gas Caution left in the refrigerant Be careful not to get yourself pipes. burnt with the pipes and other Disconnect the 2 parts that are heated by the gas brazed points (a) and welding rod. (b) in this order. Warning If refrigerant gas leaks during the job, ventilate the room. (Bear in mind that if the refrigerant gas is exposed to :B2203) open flames, noxious gas may 2 Remove the putty of the be generated.) shunt. Disconnect the 5 3 brazed points of the Reassembling precautions shunt. Wrap the solenoid valve body with wet cloth. Splash water Brazed part over the cloth before it is dried to prevent the valve from being overheated. point Shunt Putty (H2204)

2.9 Removal of Compressor

Procedure

Warning

Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step		Procedure	Points
1	Domovo the terminal	riocedule	Folitis
	Remove the terminal cover.		V (yellow) W (blue) (H2205:
2	Disconnect the compressor lead wire.		Terminal nameplate As precaution, keep the contents in memorandum.
3	Remove the 2 sheets of putty.		 Be careful to avoid burning the compressor terminals or the nameplate.
re th	There is one nut fixing the compressor. Remove the nut with an open-end spanner. lake sure there is no efrigerant gas left inside the refrigerant pipes efore starting the job.	(R2206)	тте паттеріате.
b to	/hen heating up the razed parts, make sure o carry out the N2	o temer	Warning The compressor's refrigerating machine oil may catch fire.
1	eplacement. Disconnect the brazed		Have wet cloth at hand for quickly putting out the fire.
	part (a) at discharge side of the compressor.		A
2	Disconnect the brazed part (b) at suction side of the compressor.	(H2207)	If refrigerant gas leaks during the job, ventilate the room. (Bear in mind that if the refrigerant gas is exposed to open flames, noxious gas may be generated.) Caution Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas

288 Removal Procedure

welding rod.

Part 8 Others

1.	Othe	ers	290
	1.1	Test Run from the Remote Controller	290
	1.2	Jumper Settings	291

Others 289

Others SiEBE12-625

1. Others

1.1 Test Run from the Remote Controller

For Heat pump

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

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

For Cooling Only

Select the lowest programmable temperature.

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

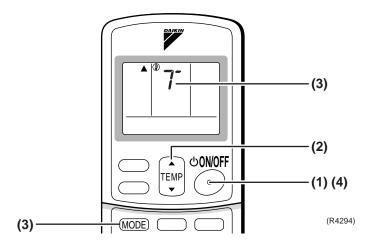
Trial Operation and Testing

- 1. Measure the supply voltage and make sure that it falls in the specified range.
- 2. Trial operation should be carried out in either cooling or heating mode.
- 3. Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, such as louver movement, are working properly.
- The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from Remote Controller

- (1) Press ON/OFF button to turn on the system.
- (2) Simultaneously press center of TEMP button and MODE buttons.
- (3) Press MODE button twice.

 ("7" will appear on the display to indicate that Trial Operation mode is selected.)
- (4) Trial run mode terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press ON/OFF button.



SiEBE12-625 Others

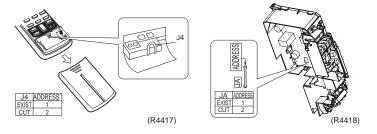
1.2 Jumper Settings

1.2.1 When Two Units are Installed in One Room

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

How to set the different addresses

- Control PCB of the indoor unit
- (1) Remove the electrical box.
- (2) Cut the address jumper JA on the control PCB.
- Wireless remote controller
- (1) Slide the front cover and take it off.
- (2) Cut the address jumper J4.



1.2.2 Jumper Setting

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

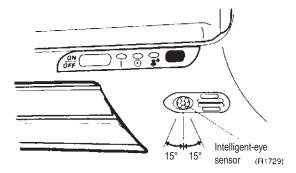
Others 291

Others SiEBE12-625

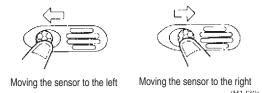
1.2.3 Adjusting the Angle of the Intelligent Eye Sensor

FTK(X)S20-35C

 Once installation of the indoor unit is complete, adjust the angle of the Intelligent eye sensor to ensure the detection area properly covers the room.
 (Adjustable angle: 15° to right and left of center)



■ Gently push and slide the sensor to adjust the angle. Aim so that the sensor is pointing to the center of the room, or to the part of the room that is most frequently used.



■ After adjusting the angle, gently wipe the sensor with a clean cloth, being careful not to scratch the sensor.



- Do not hit or violently push the Intelligent eye sensor. This can lead to damage and malfunction.
- Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

Part 9 Appendix

1.	Piping Diagrams	294
	1.1 Indoor Units	
	1.2 Outdoor Units	
2.	Wiring Diagrams	302
	2.1 Indoor Units	
	2.2 Outdoor Units	306

Piping Diagrams SiEBE12-625

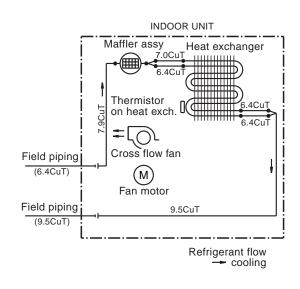
1. Piping Diagrams

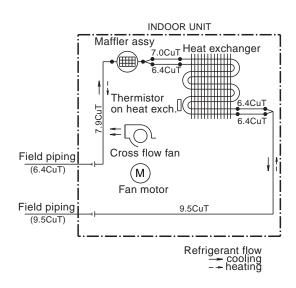
1.1 Indoor Units

1.1.1 Wall Mounted Type

FTKS20/25/35D3VMW(L)

FTXS20/25/35D3VMW(L)

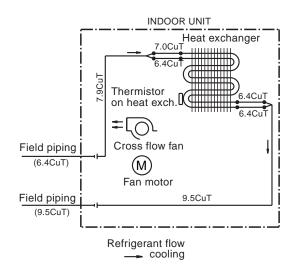


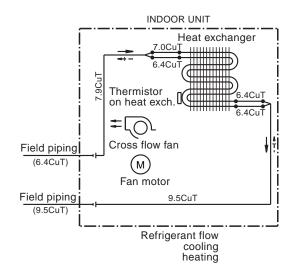


4D050757A 4D047912E

FTKS20/25/35CAVMB

FTXS20/25/35CAVMB



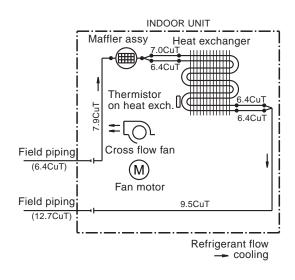


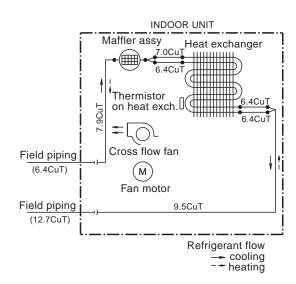
4D033698E 4D049319A

SiEBE12-625 Piping Diagrams

FTKS50D2V1W(L)

FTXS50D2V1W(L)

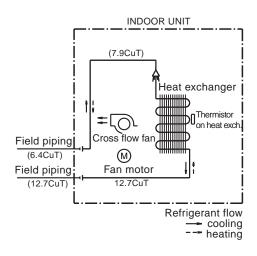


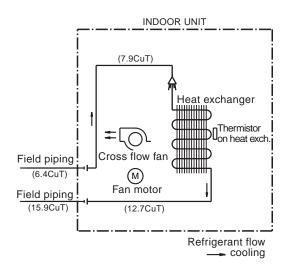


4D051577 4D047913D

FTK(X)S50/60EV1B

FTKS71EV1B, FTKS71BAV1B



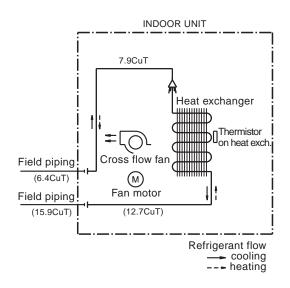


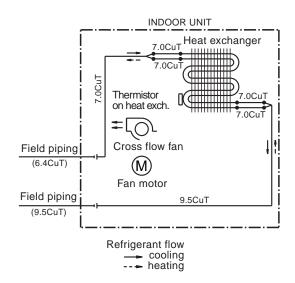
4D040081M 4D050919B

Piping Diagrams SiEBE12-625

FTXS71EV1B, FTXS71BAVMB

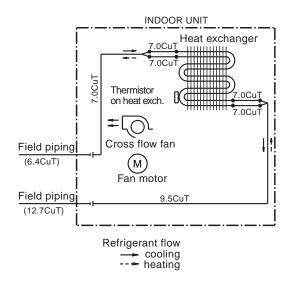
FTXG25/35EV1BW(S)





4D040082M 4D045301B

CTXG50EV1BW(S)

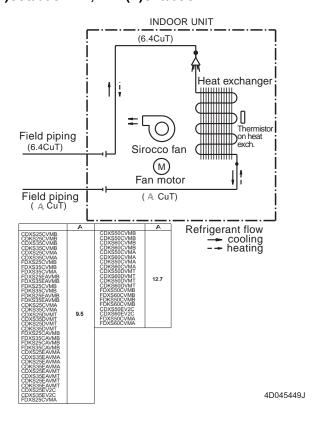


4D050924

SiEBE12-625 Piping Diagrams

1.1.2 Duct Connected Type

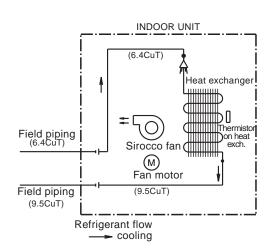
FDK(X)S25/35EAVMB, FDK(X)S50/60CVMB, FDK(X)S25/35CAVMB

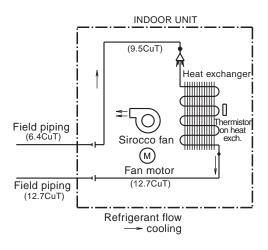


1.1.3 Floor / Ceiling Suspended Dual Type

FLKS25/35BAVMB

FLKS50/60BAVMB



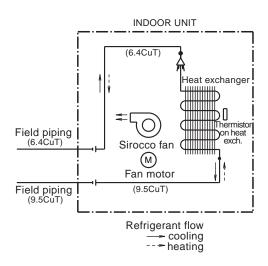


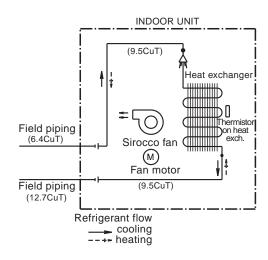
4D034012E 4D048723A

Piping Diagrams SiEBE12-625

FLXS25/35BAVMB

FLXS50/60BAVMB



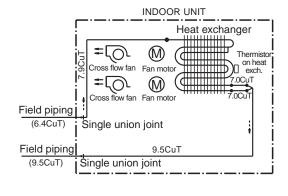


4D048722A 4D048724A

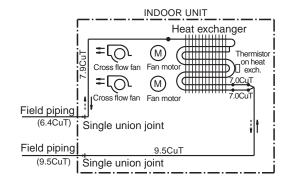
1.1.4 Floor Standing Type

FVKS25/35BAVMB

FVXS25/35BAVMB







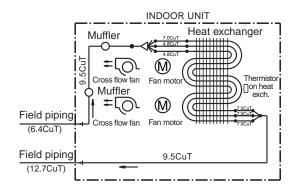
Refrigerant flow cooling heating

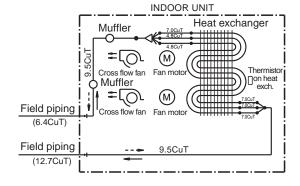
4D050798 4D034714C

SiEBE12-625 Piping Diagrams

FVKS50BAVMB

FVXS50BAVMB





Refrigerant flow cooling

Refrigerant flow cooling heating

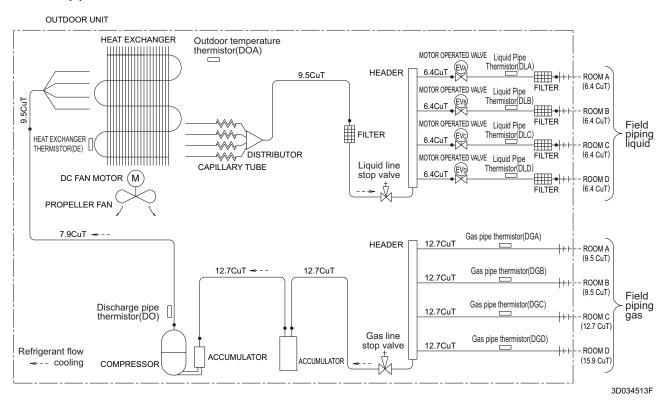
4D050804 4D020911D

Piping Diagrams SiEBE12-625

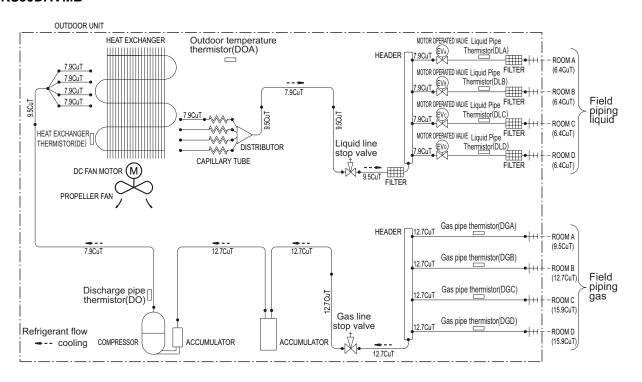
1.2 Outdoor Units

1.2.1 Cooling Only

4MKS75E2(3)V1B



4MKS90DAVMB

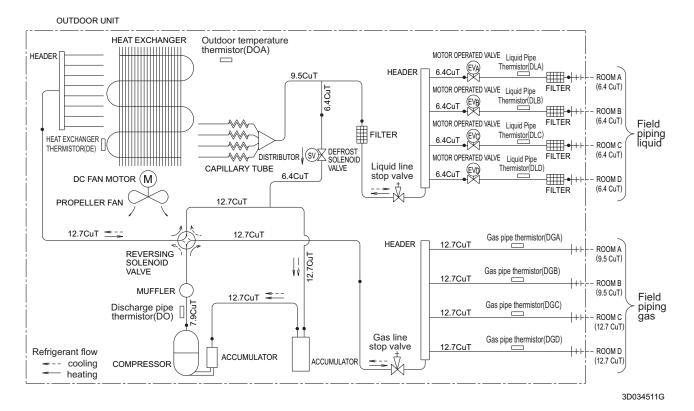


3D034481D

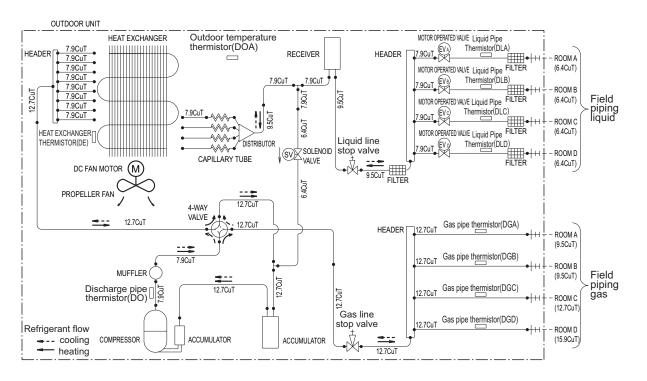
SiEBE12-625 Piping Diagrams

1.2.2 Heat Pump

4MXS68E2(3)V1B



4MXS80DAVMB



3D034480D

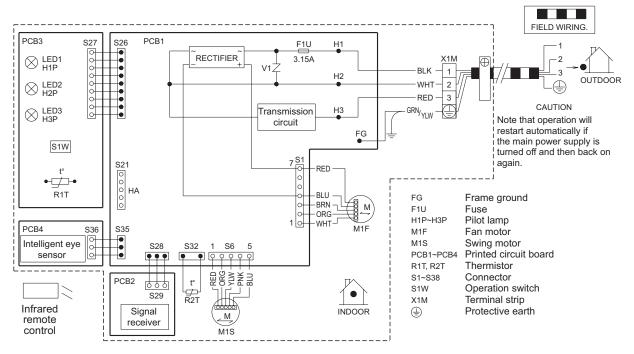
Wiring Diagrams SiEBE12-625

2. Wiring Diagrams

2.1 Indoor Units

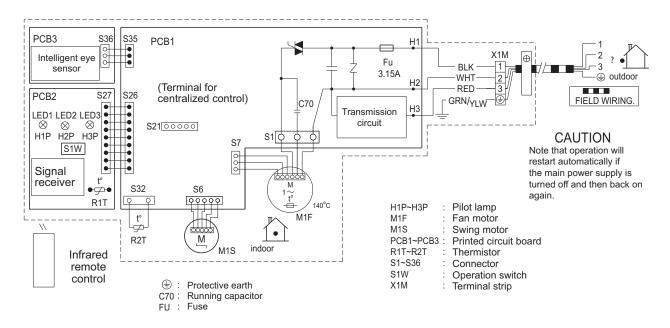
2.1.1 Wall Mounted Type

FTK(X)S20/25/35D3VMW(L)



3D051268A

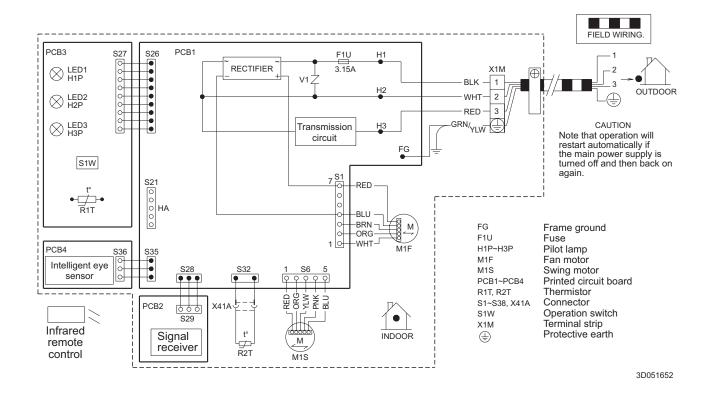
FTK(X)S20/25/35CAVMB



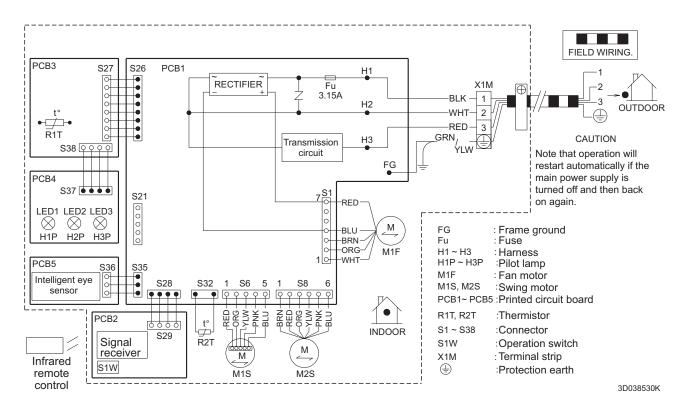
3D033599G

SiEBE12-625 Wiring Diagrams

FTK(X)S50D2V1W(L)

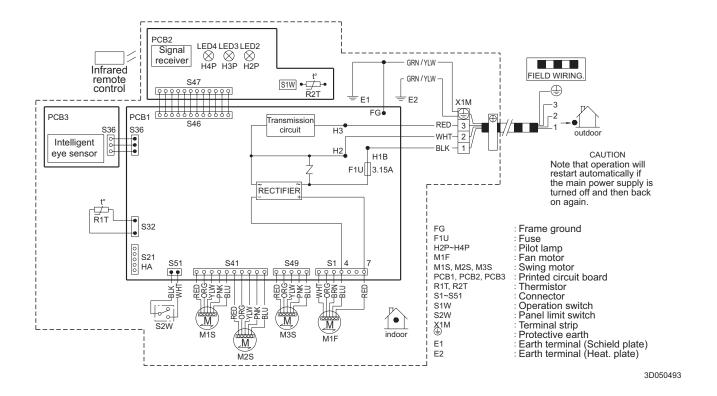


FTK(X)S50/60/71EV1B, FTK(X)S71BAVMB



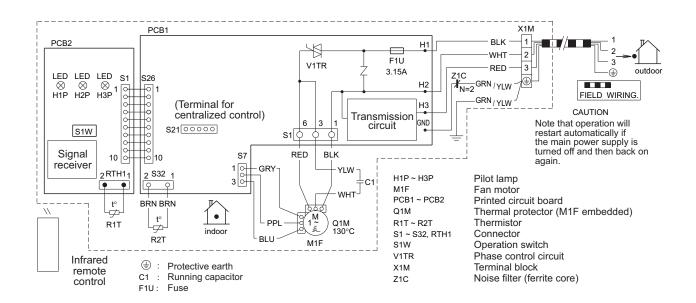
Wiring Diagrams SiEBE12-625

FTXG25/35EV1BW(S), CTXG50EV1BW(S)



2.1.2 Duct Connected Type

FDK(X)S25/35CAVMB, FDK(X)S50/60CVMB, FDK(X)S25/35EAVMB

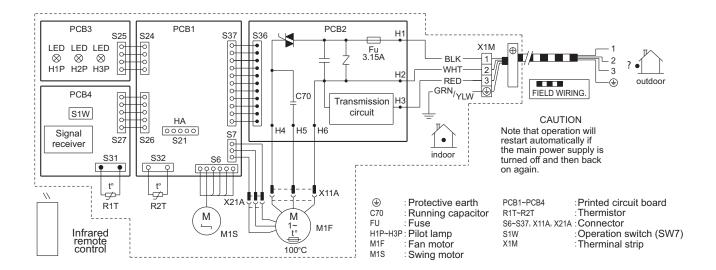


3D045012K

SiEBE12-625 Wiring Diagrams

2.1.3 Floor / Ceiling Suspended Dual Type

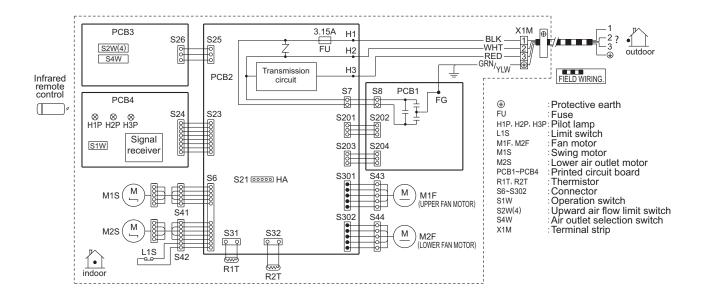
FLK(X)S25/35/50/60BAVMB



3D033909E

2.1.4 Floor Standing Type

FVK(X)S25/35/50BAVMB

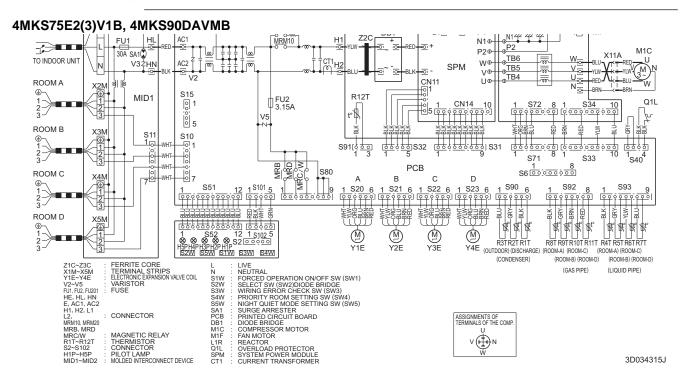


3D034713C

Wiring Diagrams SiEBE12-625

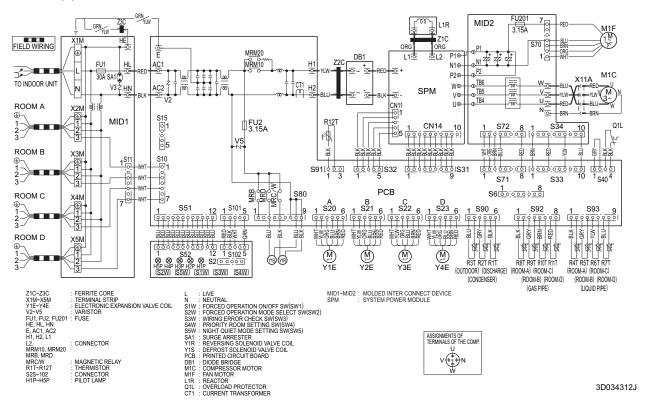
2.2 Outdoor Units

2.2.1 Cooling only



2.2.2 Heat Pump

4MXS68E2(3)V1B, 4MXS80DAVMB



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