

SiE39-404

Service Manual



R-410A Heat Pump 50Hz









VRVI R410A Heat Pump 50Hz

	 Introduction 1.1 Safety Cautions 1.2 PREFACE 	vi
Part 1	General Information	1
	1. Model Names of Indoor/Outdoor Units	2
	2. External Appearance	3
	2.1 Indoor Units	3
	2.2 Outdoor Units	
	3. Combination of Outdoor Units	
	4. Model Selection	6
Part 2	Specifications	9
	1. Specifications	10
	1.1 Outdoor Units	
	1.2 Indoor Units	21
Part 3	Refrigerant Circuit	
	1. Refrigerant Circuit	50
	1.1 RXYQ5M (* Products after January, 2004)	
	1.2 RXYQ8, 10, 12M (* Products after January, 2004)	
	1.3 RXYQ14, 16M (* Products after January, 2004)	
	1.4 Outdoor air processing unit FXMQ125~250MFV1	
	2. Functional Parts Layout	
	2.1 RXYQ5M 2.2 RXYQ8, 10, 12M	
	2.3 RXYQ14, 16M	
	3. Refrigerant Flow for Each Operation Mode	

Part 4	Function	73	}
--------	----------	----	---

1.	Fund	tion general	74
		Symbol	
	1.2	Operation Mode	75
2.	Basi	c Control	76
	2.1	Normal Operation	76
	2.2	Compressor PI Control	77
	2.3	Electronic Expansion Valve PI Control	83
	2.4	Cooling Operation Fan Control	84

i

	3.	Special Control	85
		3.1 Startup Control	85
		3.2 Oil Return Operation	86
		3.3 Defrosting Operation	88
		3.4 Pump-down Residual Operation	
		3.5 Restart Standby	90
		3.6 Stopping Operation	91
		3.7 Pressure Equalization prior to Startup	93
	4.	Protection Control	94
		4.1 High Pressure Protection Control	
		4.2 Low Pressure Protection Control	95
		4.3 Discharge Pipe Protection Control	96
		4.4 Inverter Protection Control	
		4.5 STD Compressor Overload Protection	98
	5.	Other Control	
		5.1 Outdoor Unit Rotation	
		5.2 Emergency Operation	100
		5.3 Demand Operation	102
		5.4 Heating operation prohibition	102
	6.	Outline of Control (Indoor Unit)	103
		6.1 Drain Pump Control	103
		6.2 Louver Control for Preventing Ceiling Dirt	105
		6.3 Thermostat Sensor in Remote Controller	
		6.4 Freeze Prevention	108
		6.5 Control of outdoor air Processing unit (Unique Control for	
		Outdoor Air Processing Unit)	100
			103
Part 5	Test Op	peration	
Part 5	_	peration	113
Part 5	_	peration	113 114
Part 5	_	Deration Test Operation 1.1 Procedure and Outline	113 114 114
Part 5	1.	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On	113 114 114 117
Part 5	1. 2.	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout	113 114 114 117 118
Part 5	1. 2.	peration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting	113 114 114 117 118 119
Part 5	1. 2.	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller	113 114 114 117 118 119 119
Part 5	1. 2.	peration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting	113 114 114 117 118 119 119
	1. 2. 3.	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller	113 114 114 114 117 118 119 119 132
	1. 2. 3. Trouble	Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit	113 114 114 114 117 118 119 119 132 157
	1. 2. 3. Trouble	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit	113 114 114 117 117 118 119 119 132 157 160
	1. 2. 3. Trouble	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit Shooting Troubleshooting by Remote Controller	113 114 114 117 117 118 119 119 132 157 160 160
	1. 2. 3. Trouble	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button	113 114 114 114 117 118 119 119 132 157 160160161
	1. 2. 3. Trouble	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wired Remote Controller	113 114 114 114 117 118 119 119 132 157 160160161
	1. 2. 3. Trouble	Deration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wireless Remote Controller	113 114 114 117 117 118 119 119 132 157 160 160 161 162
	1. 2. 3. Trouble	Peration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit Shooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wireless Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button 1.5 Remote Controller Service Mode	113 114 114 117 117 118 119 119 132 157 160 161 162
	1. 2. 3. Trouble	Deration 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wireless Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button	113 114 114 117 117 118 119 119 132 157 160 161 162
	1. 2. 3. Trouble 1.	Peration Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit Shooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wireless Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button 1.5 Remote Controller Service Mode	113 114114114117118119119132 157 160161162165166168
	1. 2. 3. Trouble 1.	Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wired Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button 1.5 Remote Controller Service Mode 1.6 Remote Controller Self-Diagnosis Function	113 114114114117118119119132 157 160160161162165166168173
	1. 2. 3. Trouble 1.	Test Operation 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit eshooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wired Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button 1.5 Remote Controller Service Mode 1.6 Remote Controller Self-Diagnosis Function	113 114114114117118119119132 157 160160161162165166168173173
	1. 2. 3. Trouble 1.	Peration 1.1 Procedure and Outline 1.2 Operation When Power is Turned On Outdoor Unit PC Board Layout Field Setting 3.1 Field Setting from Remote Controller 3.2 Field Setting from Outdoor Unit Schooting Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button 1.2 Self-diagnosis by Wireless Remote Controller 1.3 Self-diagnosis by Wireless Remote Controller 1.4 Operation of The Remote Controller's Inspection / Test Operation Button 1.5 Remote Controller Self-Diagnosis Function 1.6 Remote Controller Self-Diagnosis Function 2.1 "#0" Indoor Unit: Error of External Protection Device	113 114 114 117 118 119 119 132 157 160 161 162 165 165 166 168 173 174

ii

	<i>"R7"</i> Indoor Unit: Malfunction of Swing Flap Motor (MA)
2.6	"89" Indoor Unit: Malfunction of Moving Part of
	Electronic Expansion Valve (20E)
	"RF" Indoor Unit: Drain Level above Limit
	"RJ" Indoor Unit: Malfunction of Capacity Determination Device
	"LY" Indoor Unit: Malfunction of Thermistor (R2T) for Heat Exchanger 184
	"L5" Indoor Unit: Malfunction of Thermistor (R3T) for Gas Pipes
2.11	"L3" Indoor Unit: Malfunction of Thermistor (R1T) for Suction Air
2.12	"LJ" Indoor Unit: Malfunction of Thermostat Sensor
	in Remote Controller
	"Ei" Outdoor Unit: PC Board Defect
	<i>"E3</i> " Outdoor Unit: Actuation of High Pressure Switch
	<i>"E4"</i> Outdoor Unit: Actuation of Low Pressure Sensor
	"E5" Compressor Motor Lock191
	<i>"ЕБ</i> " Compressor Motor Overcurrent/Lock192
2.18	"E7" Malfunction of Outdoor Unit Fan Motor
2.19	"E9" Outdoor Unit: Malfunction of Moving Part of
	Electronic Expansion Valve (Y1E, Y2E)
2.20	"F3" Outdoor Unit: Abnormal Discharge Pipe Temperature
2.21	<i>"F6</i> " Refrigerant Overcharged198
2.22	"H7" Abnormal Outdoor Fan Motor Signal
2.23	"H9" Outdoor Unit: Malfunction of Thermistor for Outdoor Air (R1T)200
2.24	<i>"الح</i> ك" Current Sensor Malfunction201
2.25	"J3" Outdoor Unit: Malfunction of Discharge Pipe Thermistor
	(R3, R31~33T)202
2.26	"J5" Outdoor Unit: Malfunction of Thermistor (R2T) for Suction Pipe203
2.27	"الله" Outdoor Unit: Malfunction of Thermistor (R4T) for
	Outdoor Unit Heat Exchanger
2.28	"J8" Malfunction of Oil Equalizing Pipe Thermistor (R7T)205
2.29	"عل" Malfunction of Receiver Gas Pipe Thermistor (R5T)206
2.30	"JR" Outdoor Unit: Malfunction of Discharge Pipe Pressure Sensor207
2.31	"JC" Outdoor Unit: Malfunction of Suction Pipe Pressure Sensor
2.32	"L4" Outdoor Unit: Malfunction of Inverter Radiating
	Fin Temperature Rise
2.33	"L5" Outdoor Unit: Inverter Compressor Abnormal
2.34	"L8" Outdoor Unit: Inverter Current Abnormal
2.35	<i>"L3</i> " Outdoor Unit: Inverter Start up Error
2.36	"LC" Outdoor Unit: Malfunction of Transmission Between Inverter
	and Control PC Board213
2.37	"Pl" Outdoor Unit: Inverter Over-Ripple Protection
2.38	"P4" Outdoor Unit: Malfunction of Inverter Radiating Fin
	Temperature Rise Sensor
2.39	"UD" Low Pressure Drop Due to Refrigerant Shortage or
	Electronic Expansion Valve Failure
2.40	"Ul" Reverse Phase, Open Phase
2.41	"U2" Power Supply Insufficient or Instantaneous Failure
2.42	"U3" Check Operation not executed
	""
	"U5" Malfunction of Transmission Between Remote Controller
	and Indoor Unit
2.45	"U7" Malfunction of Transmission Between Outdoor Units
	"U8" Malfunction of Transmission Between Master and
	Slave Remote Controllers

	2.47	" "US" Malfunction of Transmission Between Indoor and	
		Outdoor Units in the Same System	228
	2.48	"UR" Excessive Number of Indoor Units	230
	2.49	"UC" Address Duplication of Central Remote Controller	231
	2.50	"UE" Malfunction of Transmission Between Central Remote	
		Controller and Indoor Unit	232
	2.51	"UF" Refrigerant System not Set, Incompatible Wiring/Piping	234
	2.52	"UH" Malfunction of System, Refrigerant System Address Unde	fined235
3.	Trou	bleshooting (OP: Central Remote Controller)	236
		"UE" Malfunction of Transmission Between Central Remote	
		Controller and Indoor Unit	236
	3.2	"/າ/" PC Board Defect	237
	3.3	"#8" Malfunction of Transmission Between Optional Controllers	6
		for Centralized Control	238
	3.4	" " R" Improper Combination of Optional Controllers for	
		Centralized Control	239
	3.5	"flc" Address Duplication, Improper Setting	241
4.	Trou	bleshooting (OP: Schedule Timer)	242
	4.1	"UE" Malfunction of Transmission Between Central Remote	
		Controller and Indoor Unit	242
	4.2	"/îl" PC Board Defect	244
	4.3	"#8" Malfunction of Transmission Between Optional Controllers	s for
		Centralized Control	245
	4.4	" " R" Improper Combination of Optional Controllers for	
		Centralized Control	
	4.5	"PC" Address Duplication, Improper Setting	248
5.	Trou	bleshooting (OP: Unified ON/OFF Controller)	249
	5.1	Operation Lamp Blinks	249
	5.2		
		(Repeats Single Blink)	251
	5.3	Display "Under Host Computer Integrate Control" Blinks	
		(Repeats Double Blink)	254
D 1			
керіас	eme	ent procedure for INV compressor,	
VRV II	(RX	YQ5M to 48M)	257
1	Ronl	acement procedure for INV compressor,	
1.	-	II (RXYQ5M-48M)	258
		Replacement procedure	

Part 8 Appendix......259

1.	Pipir	ng Diagrams	260
	1.1	Outdoor Unit	260
	1.2	Indoor Unit	263
2.	Wiri	ng Diagrams for Reference	269
	2.1	Outdoor Unit	269
	2.2	Field Wiring	272
	2.3	Indoor Unit	275
3.	List	of Electrical and Functional Parts	293
	3.1	Outdoor Unit	293
	3.2	Indoor Side	295

Part 7

4.	Option List	301
	4.1 Option List of Controllers	
	4.2 Option Lists (Outdoor Unit)	303
5.	Piping Installation Point	304
	5.1 Piping Installation Point	
	5.2 The Example of A Wrong Pattern	305
6.	Selection of Pipe Size, Joints and Header 6.1 RXYQ5MY1B, RXYQ8MY1B, RXYQ10MY1B, RXYQ12MY1B, RXYQ14MY1B,	306
	RXYQ16MY1B	306
	6.2 RXYQ18MY1B, RXYQ20MY1B, RXYQ22MY1B, RXYQ24MY1B, RXYQ26MY1B, RXYQ28MY1B, RXYQ30MY1B, RXYQ32MY1B,	
	RXYQ34MY1B, RXYQ36MY1B, RXYQ38MY1B, RXYQ40MY1B,	
	RXYQ42MY1B, RXYQ44MY1B, RXYQ46MY1B, RXYQ48MY1B	308
7.	Thermistor Resistance / Temperature Characteristics	311
8.	Pressure Sensor	313
9.	Method of Replacing The Inverter's Power Transistors	
	and Diode Modules	314
Part 9 Precau	tions for New Refrigerant (R410)	. 317
1.	Precautions for New Refrigerant (R410)	318
	1.1 Outline	
	1.2 Refrigerant Cylinders	320
	1.3 Service Tools	321
Index		i
Drawings & Flo	ow Charts	v

۷

Table of Contents

Introduction Safety Cautions

Cautions and Warnings

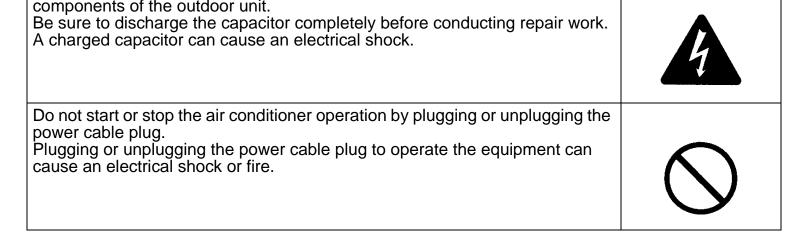
- Be sure to read the following safety cautions before conducting repair work.
- The caution items are classified into " A Warning" and " Caution". The " Warning" items are especially important since they can lead to death or serious injury if they are not followed closely. The " Caution" items can also 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
- \wedge 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.	
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	



Caution	
Do not repair the electrical components with wet hands. Working on the equipment with wet hands can cause an electrical shock.	\bigcirc
Do not clean the air conditioner by splashing water. Washing the unit with water can cause an electrical shock.	\bigcirc
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.	
Do not tilt the unit when removing it. The water inside the unit can spill and wet the furniture and floor.	\bigcirc
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.	

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 releasting the equipment, make sure that the new installation site has	

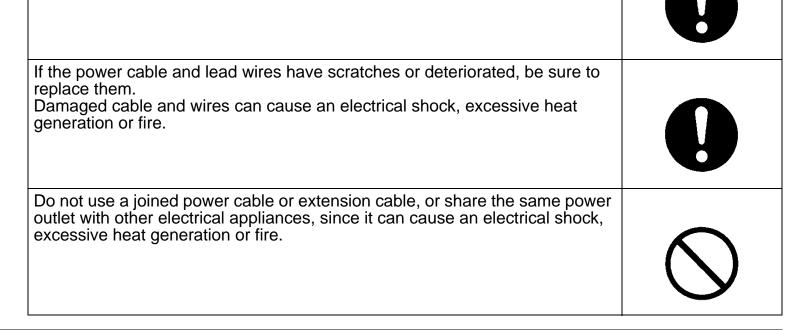
When relocating the equipment, make sure that the new installation site has sufficient strength to withstand the weight of the equipment. If the installation site does not have sufficient strength and if the installation work is not conducted securely, the equipment can fall and cause injury.	
Be sure 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
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.	

🕺 Warning	
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 (R410A) 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.	

Caution	
Installation of a leakage breaker is necessary in some cases depending on the conditions of the installation site, to prevent electrical shocks.	
Do not install the equipment in a place where there is a possibility of combustible gas leaks. If a combustible gas leaks and remains around the unit, it can cause a fire.	\bigcirc
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.	



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.	ļ
Be sure to measure the insulation resistance after the repair, and make sure that the resistance is 1 Mohm 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.
C	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.

1.2 PREFACE

Thank you for your continued patronage of Daikin products.

This is the new service manual for Daikin's Year 2004 VRVII series Heat Pump System. Daikin offers a wide range of models to respond to building and office air conditioning needs. We are confident that customers will be able to find the models that best suit their needs.

This service manual contains information regarding the servicing of VRVII series Heat Pump System.

There are some changes in piping and control system for products before December 2003. Please refer the service information for product before December, 2003 to the service manual Si39-302.

October, 2004

After Sales Service Division

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Part 1 General Information

1.	Model Names of Indoor/Outdoor Units	2
2.	External Appearance	3
	2.1 Indoor Units	
	2.2 Outdoor Units	4
3.	Combination of Outdoor Units	5
4.	Model Selection	6

1

General Information

1. Model Names of Indoor/Outdoor Units

Indoor Units

Туре			Model Name												
Ceiling Mounted Cassette Type (Double Flow)	FXCQ	20M	25M	32M	40M	50M	63M	80M		125M	_	_			
Ceiling Mounted Cassette Type (Multi Flow) 600×600	FXZQ	20M	25M	32M	40M	50M	_	_	_	_	_	_			
Ceiling Mounted Cassette Type (Multi Flow)	FXFQ	_	25M	32M	40M	50M	63M	80M	100M	125M	_	_			
Ceiling Mounted Cassette Corner Type	FXKQ	_	25M	32M	40M	_	63M	_	_	_	_	_			
Slim Ceiling Mounted Duct Type	FXDQ	20N	25N	32N	40N	50N	63N								
Ceiling Mounted Built-In Type	FXSQ	20M	25M	32M	40M	50M	63M	80M	100M	125M		_	VE		
Ceiling Mounted Duct Type	FXMQ	_	_	_	40M	50M	63M	80M	100M	125M	200M	250M			
Ceiling Suspended Type	FXHQ	_	_	32M		_	63M	_	100M	_	_	_			
Wall Mounted Type	FXAQ	20M	25M	32M	40M	50M	63M	_	_	_	_	_			
Floor Standing Type	FXLQ	20M	25M	32M	40M	50M	63M								
Concealed Floor Standing Type	FXNQ	20M	25M	32M	40M	50M	63M								
Outdoor Air Processing Unit	FXMQ- MF	_	_							125MF	200MF	250MF	V1		

Indoor Units (Connection Unit Series)

Туре			Model Name										Power Supply
Ceiling Suspended Cassette Type	FXUQ	_						71M	100M	125M			
Wall Mounted Type	FXAQ-MH	20MH	25MH	32MH	40MH	50MH	_	_	—	_	—	_	V1
Floor Standing Type	FXLQ-MH	20MH	25MH	32MH	40MH	50MH	_	_	—		_	_	
Connection Unit	BEVQ-M	50M	50M	50M	50M	50M		71M	100M	125M			VE

Note: BEV unit is required for each indoor unit.

Outdoor Units

Series		Model Name										Power Supply	
Heat Pump	RXYQ	5M	8M	10M	12M	14M	16M	18M	20M	22M	24M	26M	Y1B

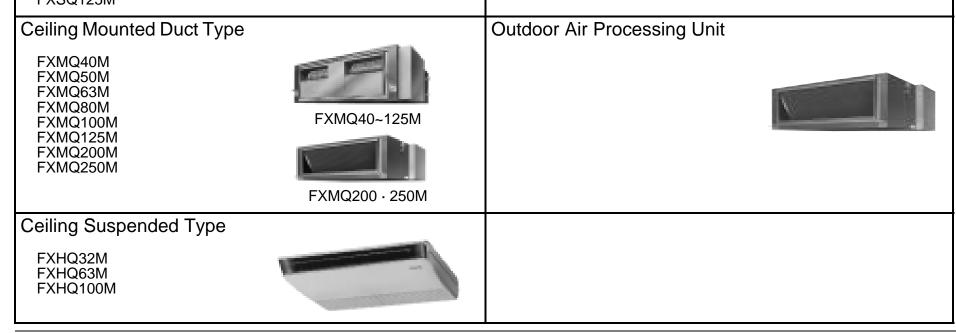
Series				odel Name						Power Supply			
Heat Pump	RXYQ	28M	30M	32M	34M	36M	38M	40M	42M	44M	46M	48M	Y1B

- VE: 1¢, 220~240V, 50Hz, 1¢, 220V, 60Hz
- V1: 1¢, 220~240V, 50Hz
- Y1B: 36, 380~415V, 50Hz

2. External Appearance

2.1 Indoor Units

Ceiling Mounted Cassette Type (Double Flow)	Wall Mounted Type
FXCQ20M FXCQ25M FXCQ32M FXCQ40M FXCQ50M FXCQ63M FXCQ63M FXCQ80M FXCQ125M	FXAQ20M FXAQ25M FXAQ32M FXAQ40M FXAQ50M FXAQ63M
Ceiling Mounted Cassette Type (Multi Flow) 600×600	Floor Standing Type
FXZQ20M FXZQ25M FXZQ32M FXZQ40M FXZQ50M	FXLQ20M(H) FXLQ25M(H) FXLQ32M(H) FXLQ40M(H) FXLQ50M(H) FXLQ63M(H)
Ceiling Mounted Cassette Type (Multi Flow)	Concealed Floor Standing Type
FXFQ25M FXFQ32M FXFQ40M FXFQ50M FXFQ63M FXFQ80M FXFQ100M FXFQ125M	FXNQ20M FXNQ25M FXNQ32M FXNQ40M FXNQ50M FXNQ63M
Ceiling Mounted Cassette Corner Type	New Ceiling Suspended Cassette Type
Ceiling Mounted Cassette Corner Type FXKQ25M FXKQ32M FXKQ40M FXKQ63M	New Ceiling Suspended Cassette Type FXUQ71M + BEVQ71M FXUQ100M + BEVQ100M BEVQ125M + BEVQ125M Connection Unit
FXKQ25M FXKQ32M FXKQ40M	FXUQ71M + FXUQ100M + FXUQ125M + BEVQ125M
FXKQ25M FXKQ32M FXKQ40M FXKQ63M	FXUQ71M + FXUQ100M + FXUQ125M + EVQ125M Connection Unit
FXKQ25M FXKQ32M FXKQ40M FXKQ63M Slim Ceiling Mounted Duct Type FXDQ20N FXDQ25N FXDQ32N FXDQ32N FXDQ40N FXDQ30N FXDQ30N FXDQ40N FXDQ50N	FXUQ71M + FXUQ100M + FXUQ125M + BEVQ125M Connection Unit Wall Mounted Type (Connection Unit Series) FXAQ20MH FXAQ25MH FXAQ20MH FXAQ20MH



2.2 Outdoor Units

RXYQ5M



5HP

RXYQ8M, 10M



8,10HP

RXYQ12M, 14M, 16M



12,14,16HP

RXYQ18M, 20M



18, 20HP

RXYQ28M, 30M, 32M



28, 30, 32HP

RXYQ22M, 24M, 26M



22, 24, 26HP

RXYQ34M, 36M



34, 36HP

RXYQ38M, 40M, 42M

RXYQ44M, 46M, 48M



4

3. Combination of Outdoor Units

System	Number			Мо	dule			Outdoor Unit Multi Connection Piping Kit+Pipe Size Reducer (Option)
Capacity	of units	5	8	10	12	14	16	
5HP	1							
8HP	1		I					
10HP	1			I				
12HP	1				I			
14HP	1					I		
16HP	1						I	
18HP	2		I	I				Heat Pump: BHFP22M90+BHFP22M90P
20HP	2							
22HP	2			I	I			
24HP	2			I		I		
26HP	2			I			I	
28HP	2				I		I	
30HP	2					I	I	
32HP	2							
34HP	3					I		Heat Pump: BHFP22M135+BHFP22M135P
36HP	3						I	
38HP	3			I	I		I	
40HP	3			I		I	I	
42HP	3			I				
44HP	3				I			
46HP	3					I]
48HP	3							



For multiple connection of 18HP systems or more, an optional Daikin outdoor unit multi connection piping kit is required.

SiE39-404

4. Model Selection

VRV II Heat Pump Series

Connectable indoor units number and capacity

HP	5HP	8HP	10HP	12HP	14HP	16HP
System name	RXYQ5M	RXYQ8M	RXYQ10M	RXYQ12M	RXYQ14M	RXYQ16M
Outdoor unit 1	RXYQ5M	RXYQ8M	RXYQ10M	RXYQ12M	RXYQ14M	RXYQ16M
Outdoor unit 2	_	_	-	_	_	_
Outdoor unit 3	_	_	-	_	_	_
Total number of connectable indoor units	8	13	16	19	20	20
Total capacity of connectable indoor units (kW)	7.0~18.2	11.2~29.1	14.0~36.4	16.8~43.6	20.0~52.0	22.5~58.5
HP	18HP	20HP	22HP	24HP	26HP	28HP
System name	RXYQ18M	RXYQ20M	RXYQ22M	RXYQ24M	RXYQ26M	RXYQ28M
Outdoor unit 1	RXYQ8M	RXYQ10M	RXYQ10M	RXYQ10M	RXYQ10M	RXYQ12M
Outdoor unit 2	RXYQ10M	RXYQ10M	RXYQ12M	RXYQ14M	RXYQ16M	RXYQ16M
Outdoor unit 3	_	_	-	_	_	_
Total number of connectable indoor units	20	20	22	32	32	32
Total capacity of connectable indoor units (kW)	25.2~65.5	28.0~72.8	30.8~80.0	34.0~88.4	36.5~94.9	39.3~102.1

HP	30HP	32HP	34HP	36HP	38HP	40HP
System name	RXYQ30M	RXYQ32M	RXYQ34M	RXYQ36M	RXYQ38M	RXYQ40M
Outdoor unit 1	RXYQ14M	RXYQ16M	RXYQ10M	RXYQ10M	RXYQ10M	RXYQ10M
Outdoor unit 2	RXYQ16M	RXYQ16M	RXYQ10M	RXYQ10M	RXYQ12M	RXYQ14M
Outdoor unit 3	-	-	RXYQ14M	RXYQ16M	RXYQ16M	RXYQ16M
Total number of connectable indoor units	32	32	34	36	38	40
Total capacity of connectable indoor units (kW)	42.5~110.5	45.0~117.0	48.0~124.8	50.5~131.3	53.3~138.5	56.5~146.9

HP	42HP	44HP	46HP	48HP
System name	RXYQ42M	RXYQ44M	RXYQ46M	RXYQ48M
Outdoor unit 1	RXYQ10M	RXYQ12M	RXYQ14M	RXYQ16M
Outdoor unit 2	RXYQ16M	RXYQ16M	RXYQ16M	RXYQ16M
Outdoor unit 3	RXYQ16M	RXYQ16M	RXYQ16M	RXYQ16M
Total number of connectable indoor units	40	40	40	40
Total capacity of connectable indoor units (kW)	59.0~153.4	61.8~160.6	65.0~169.0	67.5~175.5

Connectable Indoor Unit

Туре						M	odel Nar	ne					Power Supply
Ceiling Mounted Cassette Type (Double Flow)	FXCQ	20M	25M	32M	40M	50M	63M	80M	_	125M		_	
Ceiling Mounted Cassette Type (Multi Flow) 600×600	FXZQ	20M	25M	32M	40M	50M	_	_	_	_	_	_	
Ceiling Mounted Cassette Type (Multi Flow)	FXFQ	_	25M	32M	40M	50M	63M	80M	100M	125M		_	
Ceiling Mounted Cassette Corner Type	FXKQ	_	25M	32M	40M	_	63M		_			_	
Slim Ceiling Mounted Duct Type	FXDQ	20N	25N	32N	40N	50N	63N	_	_	_	_	_	
Ceiling Mounted Built-In Type	FXSQ	20M	25M	32M	40M	50M	63M	80M	100M	125M	_	_	VE
Ceiling Mounted Duct Type	FXMQ	_	_		40M	50M	63M	80M	100M	125M	200M	250M	
Ceiling Suspended Type	FXHQ	_		32M			63M		100M				
Wall Mounted Type	FXAQ	20M	25M	32M	40M	50M	63M	_	_	_	_	_	
Floor Standing Type	FXLQ	20M	25M	32M	40M	50M	63M						
Concealed Floor Standing Type	FXNQ	20M	25M	32M	40M	50M	63M						
Outdoor Air Processing Unit	FXMQ- MF	_	_	_	_	_	_	_	_	125MF	200MF	250MF	V1

Connectable Indoor Unit (Connection Unit Series)

Туре						Мо	odel Nar	ne					Power Supply
Ceiling Suspended Cassette Type	FXUQ				_	_		71M	100M	125M		_	
Wall Mounted Type	FXAQ-MH	20MH	25MH	32MH	40MH	50MH	—	—	—	—	—	_	V1
Floor Standing Type	FXLQ-MH	20MH	25MH	32MH	40MH	50MH		—	—			_	
Connection Unit	BEVQ-M	50M	50M	50M	50M	50M		71M	100M	125M		_	VE

Note: BEV unit is required for each indoor unit.

Indoor unit capacity

New refrigerant model code	P20	P25	P32	P40	P50	P63	P80	P100	P125	P200	P250
	type	type	type	type	type	type	type	type	type	type	type
Selecting model capacity	2.2	2.8	3.5	4.5	5.6	7.0	9.0	11.2	14.0	22.4	28.0
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
		41.15									

Use the above tables to determine the capacities of indoor units to be connected. Make sure the total capacity of indoor units connected to each outdoor unit is within the specified value (kW).

- The total capacity of connected indoor units must be within a range of 50 to 130% of the rated capacity of the outdoor unit.
- In some models, it is not possible to connect the maximum number of connectable indoor units. Select models so the total capacity of connected indoor units conforms to the specification.

Part 2 Specifications

1.	Spec	cifications	.10
	1.1	Outdoor Units	.10
	1.2	Indoor Units	.21

Specifications Outdoor Units

Model Name			RXYQ5MY1B	RXYQ8MY1B		
		kcal / h	12,500	20,000		
H1 Cooling Ca	apacity (19.5°CWB)	Btu / h	49,500	78,900		
		kW	14.5	23.1		
H2 Cooling Ca	apacity (19.0°CWB)	kW	14.0	22.4		
		kcal / h	13,800	21,500		
H3 Heating C	apacity	Btu / h	54,600	85,400		
		kW	16.0	25.0		
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)		
Dimensions: (H×W×D)	mm	1600×635×765	1600×930×765		
Heat Exchang	er		Cross Fin Coil	Cross Fin Coil		
Туре			Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type		
	Piston Displacement	m³/h	13.72	13.72+10.47		
Comp.	Number of Revolutions	r.p.m	6480	6480, 2900		
comp.	Motor Output×Number of Units	kW	3.2×1	(1.2+4.5)×1		
Starting Method		•	Soft start	Soft start		
	Туре		Propeller Fan	Propeller Fan		
	Motor Output	kW	0.35×1	0.75×1		
Fan	Air Flow Rate	m³/min	75	175		
	Drive		Direct Drive	Direct Drive		
	Liquid Pipe	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)		
Connecting Pipes	Gas Pipe	mm	φ15.9 (Flare Connection)	φ19.1 (Brazing Connection)		
	Oil Equalizing Pipe	mm	—	_		
Machine Weig	ht (Mass)	kg	160	230		
Safety Device	S		High Pressure Switch, Fan Driver Overload Protector, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs		
Defrost Metho	d		Deicer	Deicer		
Capacity Cont	rol	%	24~100	14~100		
	Refrigerant Name		R410A	R410A		
Refrigerant	Charge	kg	5.6	8.6		
Control			Electronic Expansion Valve	Electronic Expansion Valve		
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil		
Oil	Charge Volume	L	1.2	1.9+1.6		
Standard Acce	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps		
Drawing No.			4D038964B	4D038965B		

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

Conversion Formulae

kcal/h=kW×860

Btu/h=kWx3414

cfm=m³/min×35.3

Model Name			RXYQ10MY1B	RXYQ12MY1B			
		kcal / h	25,000	30,000			
H1 Cooling C	apacity (19.5°CWB)	Btu / h	98,700	118,000			
		kW	28.9	34.6			
H2 Cooling C	Capacity (19.0°CWB)	kW	28.0	33.5			
		kcal / h	27,000	32,300			
H3 Heating C	Capacity	Btu / h	108,000	128,000			
		kW	31.5	37.5			
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)			
Dimensions: (H×W×D) mm			1600×930×765	1600×1240×765			
Heat Exchanger			Cross Fin Coil	Cross Fin Coil			
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type			
	Piston Displacement	m³/h	13.72+10.47	13.72+10.47			
Comp.	Number of Revolutions	r.p.m	6480, 2900	6480, 2900			
comp.	Motor Output×Number of Units	kW	(2.7+4.5)×1	(4.2+4.5)×1			
	Starting Method		Soft start	Soft start			
F	Туре		Propeller Fan	Propeller Fan			
	Motor Output	kW	0.75×1	0.75×1			
Fan	Air Flow Rate	m³/min	180	210			
	Drive		Direct Drive	Direct Drive			
	Liquid Pipe	mm	φ9.5 (Flare Connection)	φ12.7 (Flare Connection)			
Connecting Pipes	Gas Pipe	mm	φ22.2 (Brazing Connection)	φ28.6 (Brazing Connection)			
1 1000	Oil Equalizing Pipe	mm	_	_			
Machine Weig	ght (Mass)	kg	230	281			
Safety Device	98		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs			
Defrost Metho	bc		Deicer	Deicer			
Capacity Con	trol	%	14~100	14~100			
	Refrigerant Name		R410A	R410A			
Refrigerant	Charge	kg	9.6	11.4			
Control	Control		Electronic Expansion Valve	Electronic Expansion Valve			
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil			
Oil	Charge Volume	L	1.9+1.6	1.9+1.6			
Standard Acc	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps			
Drawing No.			4D038966B	4D038967C			
-				I			

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

Specifications

Model Name			RXYQ14MY1B	RXYQ16MY1B			
		kcal / h	35,500	40,000			
H1 Cooling Ca	apacity (19.5°CWB)	Btu / h	141,000	157,000			
		kW	41.3	45.9			
H2 Cooling Ca	apacity (19.0°CWB)	kW	40.0	44.5			
		kcal / h	38,700	43,000			
H3 Heating Ca	apacity	Btu / h	154,000	171,000			
		kW	45.0	50.0			
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)			
Dimensions: (I	H×W×D)	mm	1600×1240×765	1600×1240×765			
Heat Exchang	er		Cross Fin Coil	Cross Fin Coil			
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type			
	Piston Displacement	m³/h	13.72+10.47+10.47	13.72+10.47+10.47			
Comp.	Number of Revolutions	r.p.m	6480, 2900×2	6480, 2900×2			
comp.	Motor Output×Number of Units	kW	(2.0+4.5+4.5)×1	(3.0+4.5+4.5)×1			
	Starting Method		Soft start	Soft start			
	Туре		Propeller Fan	Propeller Fan			
F	Motor Output	kW	0.75×1	0.75×1			
Fan	Air Flow Rate	m³/min	210	210			
	Drive		Direct Drive	Direct Drive			
	Liquid Pipe	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)			
Connecting Pipes	Gas Pipe	mm	φ28.6 (Brazing Connection)	φ28.6 (Brazing Connection)			
, ibee	Oil Equalizing Pipe	mm	_	_			
Machine Weig	ht (Mass)	kg	323	325			
Safety Devices	3		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs			
Defrost Metho	d		Deicer	Deicer			
Capacity Cont	rol	%	10~100	10~100			
	Refrigerant Name		R410A	R410A			
Refrigerant	Charge	kg	12.9	14.4			
-	Control		Electronic Expansion Valve	Electronic Expansion Valve			
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil			
Oil	Charge Volume	L	1.9+1.6+1.6	1.9+1.6+1.6			
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps			
Drawing No.			4D038968C	4D038969C			

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- Conversion Formulae kcal/h=kWx860 Btu/h=kWx3414 cfm=m³/minx35.3
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.



Model Name	(Combination Unit)		RXYQ18MY1B	RXYQ20MY1B		
Model Name	(Independent Unit)		RXYQ8MY1B+RXYQ10MY1B	RXYQ10MY1B+RXYQ10MY1B		
		kcal / h	45,000	50,000		
H1 Cooling C	apacity (19.5°CWB)	Btu / h	178,000	197,000		
		kW	52.0	57.8		
H2 Cooling C	apacity (19.0°CWB)	kW	50.4	56.0		
		kcal / h	48,500	54,000		
H3 Heating C	H3 Heating Capacity Btu / h kW		193,000	216,000		
			56.5	63.0		
Casing Color		•	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)		
Dimensions: (H×W×D) mm			(1600×930×765)+(1600×930×765)	(1600×930×765)+(1600×930×765)		
Heat Exchang	ger	•	Cross Fin Coil	Cross Fin Coil		
Туре			Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type		
	Piston Displacement	m³/h	(13.72+10.47)×2	(13.72+10.47)×2		
Comp.	Number of Revolutions	r.p.m	(6480, 2900)×2	(6480, 2900)×2		
comp.	Motor Output×Number of Units	kW	(1.2+4.5)+(2.7+4.5)	(2.7+4.5)×2		
	Starting Method		Soft start	Soft start		
	Туре		Propeller Fan	Propeller Fan		
Fan	Motor Output	kW	0.75×2	0.75×2		
ran	Air Flow Rate	m³/min	175+180	180+180		
	Drive		Direct Drive	Direct Drive		
	Liquid Pipe	mm	<pre></pre>	φ15.9 (Brazing Connection)		
Connecting Pipes	Gas Pipe	mm	φ28.6 (Brazing Connection)	φ28.6 (Brazing Connection)		
p.c.	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)		
Machine Weig	ght (Mass)	kg	230+230	230+230		
Safety Device	95		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs		
Defrost Metho	bd		Deicer	Deicer		
Capacity Con	trol	%	7~100	7~100		
	Refrigerant Name		R410A	R410A		
Refrigerant	Charge	kg	8.6+9.6	9.6+9.6		
-	Control		Electronic Expansion Valve	Electronic Expansion Valve		
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil		
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6)	(1.9+1.6)+(1.9+1.6)		
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps		
Drawing No.			4D038965B, 4D038966B	4D038966B		
0			+	ł		

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

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

Model Name	(Combination Unit)		RXYQ22MY1B	RXYQ24MY1B		
Model Name	(Independent Unit)		RXYQ10MY1B+RXYQ12MY1B	RXYQ10MY1B+RXYQ14MY1B		
		kcal / h	55,000	60,500		
H1 Cooling C	apacity (19.5°CWB)	Btu / h	217,000	240,000		
		kW	63.5	70.2		
H2 Cooling C	apacity (19.0°CWB)	kW	61.5	68.0		
		kcal / h	59,300	65,700		
H3 Heating C	H3 Heating Capacity Btu /		236,000	262,000		
		kW	69.0	76.5		
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)		
Dimensions: (H×W×D) mm			(1600×930×765)+(1600×1240×765)	(1600×930×765)+(1600×1240×765)		
Heat Exchang	ger		Cross Fin Coil	Cross Fin Coil		
Туре			Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type		
	Piston Displacement	m³/h	(13.72+10.47)×2	(13.72+10.47)+(13.72+10.47+10.47)		
Comp.	Number of Revolutions	r.p.m	(6480, 2900)×2	(6480, 2900)+(6480, 2900×2)		
comp.	Motor Output×Number of Units	kW	(2.7+4.5)+(4.2+4.5)	(2.7+4.5)+(2.0+4.5+4.5)		
	Starting Method		Soft start	Soft start		
	Туре		Propeller Fan	Propeller Fan		
Fan	Motor Output	kW	0.75×2	0.75×2		
Fan	Air Flow Rate	m³/min	180+210	180+210		
	Drive		Direct Drive	Direct Drive		
	Liquid Pipe	mm	φ15.9 (Brazing Connection)	φ15.9 (Brazing Connection)		
Connecting Pipes	Gas Pipe	mm	φ28.6 (Brazing Connection)	φ34.9 (Brazing Connection)		
	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)		
Machine Weig	ght (Mass)	kg	230+281	230+323		
Safety Device	25		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs		
Defrost Metho	bd		Deicer	Deicer		
Capacity Con	trol	%	7~100	6~100		
	Refrigerant Name		R410A	R410A		
Refrigerant	Charge	kg	9.6+11.4	9.6+12.9		
-	Control		Electronic Expansion Valve	Electronic Expansion Valve		
Refrigerator	·		Synthetic (ether) oil	Synthetic (ether) oil		
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6)	(1.9+1.6)+(1.9+1.6+1.6)		
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps		
Drawing No.			4D038966B, 4D038967C	4D038966B, 4D038968C		
•						

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- 3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

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



Model Name (Combination Unit)			RXYQ26MY1B	RXYQ28MY1B
Model Name (Independent Unit)			RXYQ10MY1B+RXYQ16MY1B	RXYQ12MY1B+RXYQ16MY1B
		kcal / h	65,000	70,000
H1 Cooling Capacity (19.5°CWB) kW		Btu / h	256,000	275,000
		kW	74.9	80.5
H2 Cooling C	apacity (19.0°CWB)	kW	72.5	78.0
		kcal / h	70,000	75,300
H3 Heating C	apacity	Btu / h	279,000	299,000
		kW	81.5	87.5
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: ((H×W×D)	mm	(1600×930×765)+(1600×1240×765)	(1600×1240×765)+(1600×1240×765)
Heat Exchang	ger		Cross Fin Coil	Cross Fin Coil
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m³/h	(13.72+10.47)+(13.72+10.47+10.47)	(13.72+10.47)+(13.72+10.47+10.47)
Comp.	Number of Revolutions	r.p.m	(6480, 2900)+(6480, 2900×2)	(6480, 2900)+(6480, 2900×2)
comp.	Motor Output×Number of Units kW		(2.7+4.5)+(3.0+4.5+4.5)	(4.2+4.5)+(3.0+4.5+4.5)
	Starting Method		Soft start	Soft start
	Туре		Propeller Fan	Propeller Fan
Fan	Motor Output	kW	0.75×2	0.75×2
ran	Air Flow Rate	m³/min	180+210	210+210
	Drive		Direct Drive	Direct Drive
0	Liquid Pipe	mm	<pre></pre>	<pre></pre>
Connecting Pipes	Gas Pipe	mm	<pre> \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</pre>	φ34.9 (Brazing Connection)
F	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Machine Weig	ght (Mass)	kg	230+325	281+325
Safety Device	25		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs
Defrost Metho	bd		Deicer	Deicer
Capacity Con	trol	%	6~100	6~100
Refrigerant Name			R410A	R410A
Refrigerant	Charge	kg	9.6+14.4	11.4+14.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6+1.6)	(1.9+1.6)+(1.9+1.6+1.6)
Standard Acc	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			4D038966B, 4D038969C	4D038967C, 4D038969C
			<u> </u>	<u> </u>

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

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

Model Name (Combination Unit)			RXYQ30MY1B	RXYQ32MY1B
Model Name (Independent Unit)			RXYQ14MY1B+RXYQ16MY1B	RXYQ16MY1B+RXYQ16MY1B
		kcal / h	75,500	80,000
H1 Cooling Capacity (19.5°CWB) kW		Btu / h	298,000	314,000
		kW	87.2	91.9
H2 Cooling C	apacity (19.0°CWB)	kW	84.5	89.0
		kcal / h	81,700	86,000
H3 Heating C	apacity	Btu / h	325,000	342,000
		kW	95.0	100
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)	mm	(1600×1240×765)+(1600×1240×765)	(1600×1240×765)+(1600×1240×765)
Heat Exchang	ger	•	Cross Fin Coil	Cross Fin Coil
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m³/h	(13.72+10.47+10.47)×2	(13.72+10.47+10.47)×2
Comp.	Number of Revolutions	r.p.m	(6480, 2900×2)×2	(6480, 2900×2)×2
Comp.	Motor Output×Number of Units	kW	(2.0+4.5+4.5)+(3.0+4.5+4.5)	(3.0+4.5+4.5)+(3.0+4.5+4.5)
	Starting Method	•	Soft start	Soft start
	Туре		Propeller Fan	Propeller Fan
F an	Motor Output	kW	0.75×2	0.75×2
Fan	Air Flow Rate	m³/min	210×2	210×2
	Drive		Direct Drive	Direct Drive
	Liquid Pipe mm		φ19.1 (Brazing Connection)	φ19.1 (Brazing Connection)
Connecting Pipes	Gas Pipe	mm	φ34.9 (Brazing Connection)	φ34.9 (Brazing Connection)
p	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Machine Weig	ght (Mass)	kg	323+325	325+325
Safety Device	S	·	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs
Defrost Metho	od		Deicer	Deicer
Capacity Con	trol	%	5~100	5~100
Refrigerant Name		•	R410A	R410A
Refrigerant	Charge	kg	12.9+14.4	14.4+14.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil
Oil	Charge Volume	L	(1.9+1.6+1.6)+(1.9+1.6+1.6)	(1.9+1.6+1.6)+(1.9+1.6+1.6)
Standard Acc	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			4D038968C, 4D038969C	4D038969C

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

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



Model Name (Combination Unit)			RXYQ34MY1B	RXYQ36MY1B	
Model Name (Independent Unit)			RXYQ10MY1B+RXYQ10MY1B+RXYQ14MY1B	RXYQ10MY1B+RXYQ10MY1B+RXYQ16MY1B	
		kcal / h	85,500	90,000	
H1 Cooling Capacity (19.5°CWB) kW		Btu / h	338,000	354,000	
		kW	99.1	104	
H2 Cooling Ca	apacity (19.0°CWB)	kW	96.0	101	
		kcal / h	92,700	97,000	
H3 Heating Ca	apacity	Btu / h	370,000	387,000	
		kW	108	113	
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	
Dimensions: (I	H×W×D)	mm	(1600×930×765)+(1600×930×765)+(1600×1240×765)	(1600×930×765)+(1600×930×765)+(1600×1240×765)	
Heat Exchang	er		Cross Fin Coil	Cross Fin Coil	
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type	
	Piston Displacement	m³/h	(13.72+10.47)×2+(13.72+10.47+10.47)	(13.72+10.47)×2+(13.72+10.47+10.47)	
Comp.	Number of Revolutions	r.p.m	(6480, 2900)×2+(6480, 2900×2)	(6480, 2900)×2+(6480, 2900×2)	
comp.	Motor Output×Number of Units	kW	(2.7+4.5)+(2.7+4.5)+(2.0+4.5+4.5)	(2.7+4.5)+(2.7+4.5)+(3.0+4.5+4.5)	
	Starting Method	•	Soft start	Soft start	
	Туре		Propeller Fan	Propeller Fan	
Fer	Motor Output	kW	0.75×3	0.75×3	
Fan	Air Flow Rate	m³/min	180+180+210	180+180+210	
	Drive		Direct Drive	Direct Drive	
	Liquid Pipe	mm	φ19.1 (Brazing Connection)	φ19.1 (Brazing Connection)	
Connecting Pipes	Gas Pipe	mm	φ34.9 (Brazing Connection)	φ41.3 (Brazing Connection)	
, ibee	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Machine Weig	ht (Mass)	kg	230+230+323	230+230+325	
Safety Devices	3		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	
Defrost Metho	d		Deicer	Deicer	
Capacity Cont	rol	%	4~100	4~100	
	Refrigerant Name		R410A	R410A	
Refrigerant	Charge	kg	9.6+9.6+12.9	9.6+9.6+14.4	
	Control		Electronic Expansion Valve	Electronic Expansion Valve	
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil	
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6)+(1.9+1.6+1.6)	(1.9+1.6)+(1.9+1.6)+(1.9+1.6+1.6)	
Standard Acce	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps	
Drawing No.			4D038966B, 4D038968C	4D038966B, 4D038969C	

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference
 : 0m.

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

Specifications

Model Name (RXYQ40MY1B	
Model Name (Independent Unit)			RXYQ10MY1B+RXYQ12MY1B+RXYQ16MY1B	RXYQ10MY1B+RXYQ14MY1B+RXYQ16MY1B	
		kcal / h	95,000	101,000	
H1 Cooling Capacity (19.5°CWB) Btu / h kW		Btu / h	374,000	397,000	
		kW	109	117	
H2 Cooling Ca	pacity (19.0°CWB)	kW	106	113	
		kcal / h	102,000	109,000	
H3 Heating Ca	pacity	Btu / h	407,000	433,000	
		kW	119	127	
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	
Dimensions: (H	H×W×D)	mm	(1600×930×765)+(1600×1240×765)+(1600×1240×765)	(1600×930×765)+(1600×1240×765)+(1600×1240×765)	
Heat Exchange	er		Cross Fin Coil	Cross Fin Coil	
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type	
	Piston Displacement	m³/h	(13.72+10.47)×2+(13.72+10.47+10.47)	(13.72+10.47)+(13.72+10.47+10.47)×2	
Comp.	Number of Revolutions	r.p.m	(6480, 2900)×2+(6480, 2900×2)	(6480, 2900), (6480, 2900×2)×2	
comp.	Motor Output×Number of Units	kW	(2.7+4.5)+(4.2+4.5)+(3.0+4.5+4.5)	(2.7+4.5)+(2.0+4.5+4.5)+(3.0+4.5+4.5)	
	Starting Method	•	Soft start	Soft start	
	Туре		Propeller Fan	Propeller Fan	
F	Motor Output	kW	0.75×3	0.75×3	
Fan	Air Flow Rate	m³/min	180+210+210	180+210+210	
	Drive		Direct Drive	Direct Drive	
	Liquid Pipe	mm	φ19.1 (Brazing Connection)	φ19.1 (Brazing Connection)	
Connecting Pipes	Gas Pipe	mm	φ41.3 (Brazing Connection)	φ41.3 (Brazing Connection)	
, poo	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Machine Weigh	nt (Mass)	kg	230+281+325	230+323+325	
Safety Devices	3		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Ove Current Relay, Inverter Overload Protector, Fusible Plugs	
Defrost Method	Ł		Deicer	Deicer	
Capacity Contr	ol	%	4~100	4~100	
	Refrigerant Name		R410A	R410A	
Refrigerant	Charge	kg	9.6+11.4+14.4	9.6+12.9+14.4	
	Control		Electronic Expansion Valve	Electronic Expansion Valve	
Refrigerator	-		Synthetic (ether) oil	Synthetic (ether) oil	
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6)+(1.9+1.6+1.6)	(1.9+1.6)+(1.9+1.6+1.6)+(1.9+1.6+1.6)	
Standard Acce	ssories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes Clamps	
Drawing No.			4D038966B, 4D038967C, 4D038969C	4D038966B, 4D038968C, 4D038969C	

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

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



Model Name (Combination Unit)			RXYQ42MY1B	RXYQ44MY1B	
Model Name (Independent Unit)			RXYQ10MY1B+RXYQ16MY1B+RXYQ16MY1B	RXYQ12MY1B+RXYQ16MY1B+RXYQ16MY1B	
		kcal / h	105,000	110,000	
H1 Cooling Capacity (19.5°CWB) Btu / h kW		Btu / h	413,000	432,000	
		kW	121	127	
H2 Cooling Ca	pacity (19.0°CWB)	kW	117	123	
		kcal / h	113,000	118,000	
H3 Heating Ca	apacity	Btu / h	450,000	470,000	
		kW	132	138	
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	
Dimensions: (H	H×W×D)	mm	(1600×930×765)+(1600×1240×765)+(1600×1240×765)	(1600×1240×765)+(1600×1240×765)+(1600×1240×765)	
Heat Exchange	er		Cross Fin Coil	Cross Fin Coil	
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type	
	Piston Displacement	m³/h	(13.72+10.47)+(13.72+10.47+10.47)×2	(13.72+10.47)+(13.72+10.47+10.47)×2	
Comp.	Number of Revolutions	r.p.m	(6480, 2900), (6480, 2900×2)×2	(6480, 2900), (6480, 2900×2)×2	
Comp	Motor Output×Number of Units	kW	(2.7+4.5)+(3.0+4.5+4.5)×2	(4.2+4.5)+(3.0+4.5+4.5)×2	
	Starting Method	•	Soft start	Soft start	
	Туре		Propeller Fan	Propeller Fan	
Fan	Motor Output	kW	0.75×3	0.75×3	
Fall	Air Flow Rate	m³/min	180+210+210	210+210+210	
	Drive		Direct Drive	Direct Drive	
	Liquid Pipe	mm	φ19.1 (Brazing Connection)		
Connecting Pipes	Gas Pipe	mm	φ41.3 (Brazing Connection)	φ41.3 (Brazing Connection)	
· · · · · ·	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Machine Weigl	ht (Mass)	kg	230+325+325	281+325+325	
Safety Devices	3		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	
Defrost Method	b		Deicer	Deicer	
Capacity Conti	ol	%	4~100	4~100	
	Refrigerant Name		R410A	R410A	
Refrigerant	Charge	kg	9.6+14.4+14.4	11.4+14.4+14.4	
	Control		Electronic Expansion Valve	Electronic Expansion Valve	
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil	
Oil	Charge Volume	L	(1.9+1.6)+(1.9+1.6+1.6)+(1.9+1.6+1.6)	(1.9+1.6)+(1.9+1.6+1.6)+(1.9+1.6+1.6)	
Standard Acce	ssories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps	
Drawing No.			4D038966B, 4D038969C	4D038967C, 4D038969C	

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference : 0m.

Conversion Formulae

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

Model Name (Combination Unit)			RXYQ46MY1B	RXYQ48MY1B
Model Name (Independent Unit)			RXYQ14MY1B+RXYQ16MY1B+RXYQ16MY1B	RXYQ16MY1B+RXYQ16MY1B+RXYQ16MY1B
		kcal / h	116,000	120,000
H1 Cooling Capacity (19.5°CWB) Btu / h kW		Btu / h	455,000	471,000
		kW	133	138
H2 Cooling C	apacity (19.0°CWB)	kW	129	134
		kcal / h	125,000	129,000
H3 Heating C	apacity	Btu / h	496,000	513,000
		kW	145	150
Casing Color		1	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)	mm	(1600×1240×765)+(1600×1240×765)+(1600×1240×765)	(1600×1240×765)+(1600×1240×765)+(1600×1240×765
Heat Exchang	er	1	Cross Fin Coil	Cross Fin Coil
	Туре		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m³/h	(13.72+10.47+10.47)×3	(13.72+10.47+10.47)×3
Comp	Number of Revolutions	r.p.m	(6480, 2900×2)×3	(6480, 2900×2)×3
Comp.	Motor Output×Number of Units	kW	(2.0+4.5+4.5)+(3.0+4.5+4.5)×2	(3.0+4.5+4.5)×3
	Starting Method		Soft start	Soft start
	Туре		Propeller Fan	Propeller Fan
-	Motor Output	kW	0.75×3	0.75×3
Fan	Air Flow Rate	m³/min	210+210+210	210+210+210
	Drive		Direct Drive	Direct Drive
	Liquid Pipe mm		φ19.1 (Brazing Connection)	φ19.1 (Brazing Connection)
Connecting Pipes	Gas Pipe	mm	φ41.3 (Brazing Connection)	φ41.3 (Brazing Connection)
r ipeo	Oil Equalizing Pipe	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Machine Weig	ht (Mass)	kg	323+325+325	325+325+325
Safety Device	S		High Pressure Switch, Fan Driver Overload Protector, Over Current Relay, Inverter Overload Protector, Fusible Plugs	High Pressure Switch, Fan Driver Overload Protector, Ove Current Relay, Inverter Overload Protector, Fusible Plugs
Defrost Metho	d		Deicer	Deicer
Capacity Cont	rol	%	3~100	3~100
	Refrigerant Name		R410A	R410A
Refrigerant	Charge	kg	12.9+14.4+14.4	14.4+14.4+14.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator			Synthetic (ether) oil	Synthetic (ether) oil
Oil	Charge Volume	L	(1.9+1.6+1.6)+(1.9+1.6+1.6)+(1.9+1.6+1.6)	(1.9+1.6+1.6)+(1.9+1.6+1.6)+(1.9+1.6+1.6)
Standard Acce	essories		Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes. Clamps
Drawing No.			4D038968C, 4D038969C	4D038969C

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp. : 35°CDB / Equivalent piping length : 7.5m, level difference : 0m.
- kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3 H3 Indoor temp. : 20°CDB / outdoor temp. : 7°CDB, 6°CWB / Equivalent piping length : 7.5m, level difference
 - : 0m.

Conversion Formulae

Indoor Units 1.2

Ceiling Mounted Cassette Type (Double Flow)

Model			FXCQ20MVE	FXCQ25MVE	FXCQ32MVE	FXCQ40MVE	
kcal/h		2,000	2,500	3,150	4,000		
H1 Cooling Capacity (19.5°CWB) kW		7,900	9,900	12,500	15,900		
		2.3	2.9	3.7	4.7		
H2 Cooling C	apacity (19.0°CWB)	kW	2.2	2.8	3.6	4.5	
		kcal/h	2,200	2,800	3,400	4,300	
H3 Heating Capacity Btu/h			8,500	10,900	13,600	17,000	
		kW	2.5	3.2	4.0	5.0	
Casing		1	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions:	(H×W×D)	mm	305×775×600	305×775×600	305×775×600	305×990×600	
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×10×1.5	2×10×1.5	2×10×1.5	2×10×1.5	
Fin Coil)	Face Area	m²	2×0.100	2×0.100	2×0.100	2×0.145	
	Model	L	D17K2AA1	D17K2AB1	D17K2AB1	2D17K1AA1	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan	
Fan	Motor Output × Number of Units	W	10×1	15×1	15×1	20×1	
		m³/min	7/5	9/6.5	9/6.5	12/9	
	Air Flow Rate (H/L)	cfm	247/177	318/230	318/230	424/318	
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive	
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating			
Sound Absor	bing Thermal Insulation Ma	terial	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	
		mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Piping	Gas Pipes	mm	§12.7 (Flare Connection)	φ12.7 (Flare Connection)	\$\$\overline{12.7}\$ (Flare Connection)	\$\$\overline{12.7}\$ (Flare Connection)	
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	
Machine Weig	ght (Mass)	kg	26	26	26	31	
H5 Sound Le	vel (H/L) (220V)	dBA	32/27	34/28	34/28	34/29	
Safety Device	es		Fuse, Thermal Protector for Fan Motor				
Refrigerant C	ontrol		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	R410A M Series	
	Model		BYBC32G-W1	BYBC32G-W1	BYBC32G-W1	BYBC50G-W1	
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	
Decoration Panels	Dimensions: (H×W×D)	mm	53×1,030×680	53×1,030×680	53×1,030×680	53×1,245×680	
(Option) Air Filter kg			Resin Net (with Mold Resistant)				
		8	8	8	8.5		
Standard Accessories			Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	
Drawing No.			3D039413				

Notes:

H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.

H2	Indoor temp. : 27°CDB,	19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level	
	difference: 0m.		

H3 Indoor temp.: 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference;

Conversion Formulae
kcal/h=kW×860 Btu/h=kW×3414
cfm=m ³ /minx35.3

- 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
 H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Ceiling Mounted Cassette Type (Double Flow)

Model			FXCQ50MVE	FXCQ63MVE	FXCQ80MVE	FXCQ125MVE		
		kcal/h	5,000	6,300	8,000	12,500		
H1 Cooling Capacity (19.5°CWB) Btu/h kW		19,900	25,000	31,800	49,600			
		5.8	7.3	9.3	14.5			
H2 Cooling C	apacity (19.0°CWB)	kW	5.6	7.1	9.0	14.0		
		kcal/h	5,400	6,900	8,600	13,800		
		Btu/h	21,500	27,300	34,100	54,600		
		kW	6.3	8.0	10.0	16.0		
Casing		Į	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate		
Dimensions:	(H×W×D)	mm	305×990×600	305×1,175×600	305×1,665×600	305×1,665×600		
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×10×1.5	2×10×1.5	2×10×1.5	2×10×1.5		
Fin Coil)	Face Area	m²	2×0.145	2×0.184	2×0.287	2×0.287		
	Model		2D17K1AA1	2D17K2AA1VE	3D17K2AA1	3D17K2AB1		
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan		
Fan	Motor Output × Number of Units	W	20×1	30×1	50×1	85×1		
		m³/min	12/9	16.5/13	26/21	33/25		
	Air Flow Rate (H/L)	cfm	424/318	582/459	918/741	1,165/883		
	Drive	4	Direct Drive	Direct Drive	Direct Drive	Direct Drive		
Temperature Control		Microprocessor Thermostat for Cooling and Heating	rmostat Microprocessor Thermostat for Cooling and Heating for Cooling and Heating		Microprocessor Thermostat for Cooling and Heating			
Sound Absor	bing Thermal Insulation Ma	terial	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam		
Liquid Pipes		mm	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)		
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)	\$\$\overline{15.9}\$ (Flare Connection)	<pre> \$\$\\$</pre>		
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)		
Machine Weig	ght (Mass)	kg	32	35	47	48		
H5 Sound Le	vel (H/L)	dBA	34/29	37/32	39/34	44/38		
Safety Device	es		Fuse, Thermal Protector for Fan Motor					
Refrigerant C	ontrol		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve		
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	R410A M Series		
	Model		BYBC50G-W1	BYBC63G-W1	BYBC125G-W1	BYBC125G-W1		
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)		
Decoration Panels	Dimensions: (H×W×D)	mm	53×1,245×680	53×1,430×680	53×1,920×680	53×1,920×680		
(Option)	Air Filter		Resin Net (with Mold Resistant)					
	Weight	kg	8.5	9.5	12	12		
Standard Accessories			Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Washer for Hanging Brackets, Clamp Metal, Drain Hose, Insulation for Fitting, Washer Fixing Plates, Sealing Pads, Clamps, Screws, Washers.		
			Siamps, Ociews, Washers.			oramps, ocrews, washers.		
Drawing No.			3D039413					

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation,

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

these values are normally somewhat higher as a result of ambient conditions.

Ceiling Mounted Cassette Type (Multi Flow) 600×600

Model			FXZQ20MVE	FXZQ25MVE	FXZQ32MVE		
		kcal/h	2,000	2,500	3,150		
H1 Cooling C	H1 Cooling Capacity (19.5°CWB) Btu/		7,900	9,900	12,500		
		kW	2.3	2.9	3.7		
H2 Cooling C	apacity (19.0°CWB)	kW	2.2	2.8	3.6		
		kcal/h	2,200	2,800	3,400		
		Btu/h	8,500	10,900	13,600		
		kW	2.5	3.2	4.0		
Casing		•	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate		
Dimensions: ((H×W×D)	mm	260×575×575	260×575×575	260×575×575		
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×10×1.5	2×10×1.5	2×10×1.5		
Fin Coil)	Face Area	m²	0.269	0.269	0.269		
	Model	•	QTS32C15M	QTS32C15M	QTS32C15M		
	Туре		Turbo Fan	Turbo Fan	Turbo Fan		
Fan	Motor Output × Number of Units	W	55×1	55×1	55×1		
Fan		m³/min	9/7	9/7	9.5/7.5		
	Air Flow Rate (H/L)	cfm	318/247	318/247	335/265		
	Drive	•	Direct Drive Direct Drive		Direct Drive		
Temperature	Control		Microprocessor Thermostat for Cooling and Heating Microprocessor Thermostat for Cooling and Heating		Microprocessor Thermostat for Cooling and Heating		
Sound Absort	bing Thermal Insulation Ma	terial	Foamed Polystyrene/ Foamed Polyethylene	Foamed Polystyrene/ Foamed Polyethylene	Foamed Polystyrene/ Foamed Polyethylene		
	Liquid Pipes mm		φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)		
Piping	Gas Pipes mm		φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)		
Connections	Drain Pipe mm		VP20 (External Dia. 26 (Internal Dia. 20)	VP20 (External Dia. 26 (Internal Dia. 20)	VP20 (External Dia. 26 (Internal Dia. 20)		
Machine Weig	ght (Mass)	kg	18 18		18		
H5 Sound Le	vel (H/L) (230V)	dBA	30/25	30/25	32/26		
Safety Device	es		Fuse	Fuse	Fuse		
Refrigerant C	ontrol		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve		
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series		
	Model		BYFQ60BW1	BYFQ60BW1	BYFQ60BW1		
	Panel Color		White (Ral 9010)	White (Ral 9010)	White (Ral 9010)		
Decoration Panels	Dimensions: (H×W×D)	mm	55×700×700	55×700×700	55×700×700		
(Option)	Air Filter		Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)		
	Weight	kg	2.7	2.7	2.7		
Standard Accessories		Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Washer Fixing Plate, Sealing Pads, Clamps, Screws, Washer for Hanging Bracket, Insulation for Fitting.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Washer Fixing Plate, Sealing Pads, Clamps, Screws, Washer for Hanging Bracket, Insulation for Fitting.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Washer Fixing Plate, Sealing Pads, Clamps, Screws, Washer for Hanging Bracket, Insulation for Fitting.			
Drawing No.			3D038929A				

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- Conversion Formulae kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Ceiling Mounted Cassette Type (Multi Flow) 600×600

Model			FXZQ40MVE	FXZQ50MVE
		kcal/h	4,000	5,000
H1 Cooling C	apacity (19.5°CWB)	Btu/h	15,900	19,900
k		kW	4.7	5.8
H2 Cooling C	apacity (19.0°CWB)	kW	4.5	5.6
		kcal/h	4,300	5,400
H3 Heating C	apacity	Btu/h	17,000	21,500
		kW	5.0	6.3
Casing			Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: ((H×W×D)	mm	260×575×575	260×575×575
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×10×1.5	2×10×1.5
Fin Coil)	Face Area	m²	0.269	0.269
	Model		QTS32C15M	QTS32C15M
	Туре		Turbo Fan	Turbo Fan
Fan	Motor Output × Number of Units	W	55×1	55×1
		m³/min	11/8	14/10
	Air Flow Rate (H/L)	cfm	388/282	494/353
	Drive		Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absort	ping Thermal Insulation Ma	terial	Foamed Polystyrene/Foamed Polyethylene	Foamed Polystyrene/Foamed Polyethylene
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
Connections	Drain Pipe	mm	VP20 (External Dia. 26 (Internal Dia. 20)	VP20 (External Dia. 26 (Internal Dia. 20)
Machine Weig	ght (Mass)	kg	18	18
H5 Sound Le	vel (H/L) (230V)	dBA	36/28	41/33
Safety Device	es		Fuse	Fuse,
Refrigerant C	ontrol		Electronic Expansion Valve	Electronic Expansion Valve
Connectable	outdoor unit		R410A M Series	R410A M Series
	Model		BYFQ60BW1	BYFQ60BW1
	Panel Color		White (Ral 9010)	White (Ral 9010)
Decoration Panels	Dimensions: (H×W×D)	mm	55×700×700	55×700×700
(Option)	Air Filter		Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Weight	kg	2.7	2.7
Standard Accessories			Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Washer Fixing Plate, Sealing Pads, Clamps, Screws, Washer for Hanging Bracket, Insulation for Fitting.	Operation Manual, Installation Manual Paper Pattern for Installation, Drain Hose, Clamp Metal, Washer Fixing Plate, Sealing Pads, Clamps, Screws, Washer for Hanging Bracket, Insulation for Fitting.
Drawing No.			3D03	8929A

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

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



Ceiling Mounted Cassette Type (Multi-flow)

Model		FXFQ25MVE	FXFQ32MVE	FXFQ40MVE	FXFQ50MVE	
H1 Cooling Capacity (19.5°CWB) Btu		kcal/h	2,500	3,150	4,000	5,000
		Btu/h	9,900	12,500	15,900	19,900
		kW	2.9	3.7	4.7	5.8
H2 Cooling Capacity (19.0°CWB)		kW	2.8	3.6	4.5	5.6
		kcal/h	2,800	3,400	4,300	5,400
H3 Heating Capacity		Btu/h	10,900	13,600	17,000	21,500
		kW	3.2	4.0	5.0	6.3
Casing		<u>I</u>	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions:	(H×W×D)	mm	246×840×840	246×840×840	246×840×840	246×840×840
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	2x8x1.2	2×8×1.2	2×8×1.2	2×8×1.2
	Face Area	m²	0.363	0.363	0.363	0.363
Fan	Model		QTS46D14M	QTS46D14M	QTS46D14M	QTS46D14M
	Туре		Turbo Fan	Turbo Fan	Turbo Fan	Turbo Fan
	Motor Output × Number of Units	W	30×1	30×1	30×1	30×1
	Air Flow Rate (H/L)	m³/min	13/10	13/10	15/11	16/11
		cfm	459/353	459/353	530/388	565/388
	Drive	<u>I</u>	Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absor	bing Thermal Insulation Ma	iterial	Polyurethane Form	Polyurethane Form	Polyurethane Form	Polyurethane Form
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping	Gas Pipes	mm	§12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	<pre> \$\$\overline{12.7 (Flare Connection) } \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$</pre>
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)
Machine Weight (Mass) kg		kg	24	24	24	24
H5 Sound Level (H/L) (220V) dBA		30/27	30/27	31/27	32/27	
Safety Devices		Fuse	Fuse	Fuse	Fuse	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit		R410A M Series	R410A M Series	R410A M Series	R410A M Series	
Decoration Panels (Option)	Model		BYCP125D-W1	BYCP125D-W1	BYCP125D-W1	BYCP125D-W1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
	Dimensions: (H×W×D)	mm	45×950×950	45×950×950	45×950×950	45×950×950
	Air Filter	•	Resin Net (with Mold Resistant)			
	Weight	kg	5.5	5.5	5.5	5.5
Weight kg Standard Accessories			Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.
Drawing No.			3D038812			

Notes:

H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.

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

- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Ceiling Mounted Cassette Type (Multi-flow)

Model		FXFQ63MVE	FXFQ80MVE	FXFQ100MVE	FXFQ125MVE	
kcal/h		6,300	8,000	10,000	12,500	
H1 Cooling Capacity (19.5°CWB) Btu/h		25,000	31,800	39,700	49,600	
		kW	7.3	9.3	11.6	14.5
H2 Cooling Ca	apacity (19.0°CWB)	kW	7.1	9.0	11.2	14.0
		kcal/h	6,900	8,600	10,800	13,800
H3 Heating C	apacity	Btu/h	27,300	34,100	42,700	54,600
		kW	8.0	10.0	12.5	16.0
Casing		<u>I</u>	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)	mm	246×840×840	246×840×840	288×840×840	288×840×840
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×10×1.2	2×10×1.2	2×12×1.2	2×12×1.2
Fin Coil)	Face Area	m²	0.454	0.454	0.544	0.544
	Model	1	QTS46D14M	QTS46D14M	QTS46C17M	QTS46C17M
	Туре		Turbo Fan	Turbo Fan	Turbo Fan	Turbo Fan
Fan	Motor Output × Number of Units	W	30×1	30×1	120×1	120×1
		m³/min	18.5/14	20/15	26/21	30/24
	Air Flow Rate (H/L)	cfm	653/494	706/530	918/741	1,059/847
	Drive	4	Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control		Microprocessor Thermostat for Cooling and Heating				
Sound Absorb	bing Thermal Insulation Mat	terial	Polyurethane Form	Polyurethane Form	Polyurethane Form	Polyurethane Form
	Liquid Pipes	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)
Piping	Gas Pipes	mm	\$\$\overline{15.9}\$ (Flare Connection)	\$\$\overline{15.9}\$ (Flare Connection)	\$\$\overline{15.9}\$ (Flare Connection)	φ15.9 (Flare Connection)
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)
Machine Weig	ht (Mass)	kg	25	25	29	29
H5 Sound Lev	vel (H/L)	dBA	33/28	36/31	39/33	42/36
Safety Device	S		Fuse	Fuse	Fuse	Fuse
Refrigerant Co	ontrol		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable of	outdoor unit		R410A M Series	R410A M Series	R410A M Series	R410A M Series
	Model		BYCP125D-W1	BYCP125D-W1	BYCP125D-W1	BYCP125D-W1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
Decoration Panels	Dimensions: (HxWxD)	mm	45×950×950	45×950×950	45×950×950	45×950×950
(Option)	Air Filter		Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Weight	kg	5.5	5.5	5.5	5.5
Standard Accessories		Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	Operation manual, Installation manual, Paper pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting.	
Drawing No.				3D03	88812	

Notes:

H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.

Conversion Formulae	Э
kcal/h=kW×860 Btu/h=kW×3414	

cfm=m³/min×35.3

- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.



Ceiling Mounted Cassette Corner Type

Model		FXKQ25MVE	FXKQ32MVE	FXKQ40MVE	FXKQ63MVE	
		kcal/h	2,500	3,150	4,000	6,300
H1 Cooling Capacity (19.5°CWB) Btu/h		9,900	12,500	15,900	25,000	
0		kW	2.9	3.7	4.7	7.3
H2 Cooling C	apacity (19.0°CWB)	kW	2.8	3.6	4.5	7.1
		kcal/h	2,800	3,400	4,300	6,900
H3 Heating C	Capacity	Btu/h	10,900	13,600	17,000	27,300
0		kW	3.2	4.0	5.0	8.0
Casing		ļ	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions:	(H×W×D)	mm	215×1,110×710	215×1,110×710	215×1,110×710	215×1,310×710
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×11×1.75	2×11×1.75	2×11×1.75	3×11×1.75
Fin Coil)	Face Area	m²	0.180	0.180	0.180	0.226
	Model		3D12H1AN1V1	3D12H1AN1V1	3D12H1AP1V1	4D12H1AJ1V1
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	15×1	15×1	20×1	45×1
		m³/min	11/9	11/9	13/10	18/15
	Air Flow Rate (H/L)	cfm	388/318	388/318	459/353	635/530
	Drive	•	Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating			
Sound Absor	bing Thermal Insulation Ma	terial	Polyethylene Foam	Polyethylene Foam	Polyethylene Foam	Polyethylene Foam
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Piping	Gas Pipes	mm	§12.7 (Flare Connection)	<pre> \$\$\overline{12.7 (Flare Connection) } </pre>	\$\$\overline{12.7}\$ (Flare Connection)	\$\$\overline{15.9}\$ (Flare Connection)
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)
Machine Wei	ght (Mass)	kg	31	31	31	34
H5 Sound Le	vel (H/L) (220V)	dBA	38/33	38/33	40/34	42/37
Safety Device	es		Fuse, Thermal Fuse for Fan Motor			
Refrigerant C	ontrol		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable	Outdoor Units		R410A M Series	R410A M Series	R410A M Series	R410A M Series
	Model		BYK45FJW1	BYK45FJW1	BYK45FJW1	BYK71FJW1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
Decoration Panels	Dimensions: (H×W×D)	mm	70×1,240×800	70×1,240×800	70×1,240×800	70×1,440×800
(Option)	Air Filter		Resin Net (with Mold Resistant)			
	Weight	kg	8.5	8.5	8.5	9.5
Standard Acc	essories		Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Positioning Jig for Installation, Insulation for Hanger Bracket, Air Outlet Blocking Pad.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Positioning Jig for Installation, Insulation for Hanger Bracket, Air Outlet Blocking Pad.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Positioning Jig for Installation, Insulation for Hanger Bracket, Air Outlet Blocking Pad.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Positioning Jig for Installation, Insulation for Hanger Bracket, Air Outlet Blocking Pad.
Drawing No.				3D03	38813	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
 H5 Anechoic chamber conversion value, measured at a point 1m in front of the unit and 1m downward.
 During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae	
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Slim Ceiling Mounted Duct Type

Model			FXDQ20NVE	FXDQ25NVE	FXDQ32NVE
		kcal/h	2,000	2,500	3,150
H1 Cooling Capacity (19.5°CWB) Btu/h kW		Btu/h	7,900	9,900	12,500
		2.3	2.9	3.7	
H2 Cooling Ca	apacity (19.0°CWB)	kW	2.2	2.8	3.6
		kcal/h	2,200	2,800	3,400
H3 Heating Ca	apacity	Btu/h	8,500	10,900	13,600
		kW	2.5	3.2	4.0
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H	H×W×D)	mm	200×900×620	200×900×620	200×900×620
Coil (Cross	RowsxStagesxFin Pitch	mm	2×12×1.5	2×12×1.5	2×12×1.5
Fin Coil)	Face Area	m²	0.176	0.176	0.176
	Model			_	_
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number W		62×1	62×1	62×1
- un	Air Flow Rate (H/L)	m³/min	9.5/7.5	9.5/7.5	10.5/8.5
	External Static Pressure	Pa	44-15 H 5	44-15 H 5	44-15 H 5
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature C	Control		Microprocessor Thermostat for Cooling and Heating for Cooling and Heating		Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ing Thermal Insulation Mate	erial	Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof Removal / Washable / Mildew Proof		Removal / Washable / Mildew Proof
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
Connections	Drain Pipe	mm	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)
Machine Weig	ht (Mass)	kg	26	26	26
H6 Sound Level (H/L) dBA		33/29	33/29	33/29	
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Standard Accessories			Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter
Drawing No.				3D045744	

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 External static pressure is changeable to set by the remote controller this pressure means "High static pressure Standard static pressure".
- H6 The operation sound levels are the conversion values in anechoic chamber. In practice, the sound tend to be larger than the specified values due to ambient noise or reflections.
 When the place of suction is changed to the bottom suction, the sound level will increase by approx. 5dBA.

Conversion Formulae



Slim Ceiling Mounted Duct Type

Model			FXDQ40NVE	FXDQ50NVE	FXDQ63NVE
H1 Cooling Capacity (19.5°CWB) Btu/h		4,000	5,000	6,300	
		15,900	19,900	25,000	
		kW	4.7	5.8	7.3
H2 Cooling Ca	apacity (19.0°CWB)	kW	4.5	5.6	7.1
		kcal/h	4,300	5,400	6,900
H3 Heating Ca	apacity	Btu/h	17,000	21,500	27,300
		kW	5.0	6.3	8.0
Casing Color		<u> </u>	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H	H×W×D)	mm	200×900×620	200×900×620	200×1100×620
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×12×1.5	3×12×1.5	3×12×1.5
Fin Coil)	Face Area	m²	0.176	0.176	0.227
	Model				
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number W		62×1	130×1	130×1
- un	Air Flow Rate (H/L)	m³/min	10.5/8.5	10.5/8.5 12.5/10.0	
	External Static Pressure	Pa	44-15 H 5	44-15 H 5	44-15 H 5
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature C	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ing Thermal Insulation Mate	erial	Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof Removal / Washable / Mildew Proof		Removal / Washable / Mildew Proof
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)
Connections	Drain Pipe	mm	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)
Machine Weight (Mass) kg		kg	27	28	31
H6 Sound Level (H/L) dBA		34/30	35/31	36/32	
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Standard Accessories			Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Warranty, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter
Drawing No.				3D045744	

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 External static pressure is changeable to set by the remote controller this pressure means "High static pressure Standard static pressure".
- H6 The operation sound levels are the conversion values in anechoic chamber. In practice, the sound tend to be larger than the specified values due to ambient noise or reflections.
 When the place of suction is changed to the bottom suction, the sound level will increase by approx. 5dBA.

Conversion Formulae

Ceiling Mounted Built-in Type

Model			FXSQ20MVE	FXSQ25MVE	FXSQ32MVE	
kcal/h H1 Cooling Capacity (19.5°CWB) Btu/h			2,000	2,500	3,150	
			7,900	9,900	12,500	
		kW	2.3 2.9		3.7	
H2 Cooling C	Capacity (19.0°CWB)	kW	2.2	2.8	3.6	
		kcal/h	2,200	2,800	3,400	
H3 Heating C	Capacity	Btu/h	8,500	10,900	13,600	
		kW	2.5	3.2	4.0	
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions:	(H×W×D)	mm	300×550×800	300×550×800	300×550×800	
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75	
Fin Coil)	Face Area	m²	0.088	0.088	0.088	
	Model		D18H3A	D18H3A	D18H3A	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	
F	Motor Output × Number of Units	W	50×1	50×1	50×1	
Fan	Air Flow Rate (H/L)	m³/min	9/6.5	9/6.5	9.5/7	
	H4 Static external pressure	Pa	88-39-20	88-39-20	64-39-15	
	Drive		Direct Drive	Direct Drive	Direct Drive	
Temperature Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating		
Sound Absor	bing Thermal Insulation Mate	erial	Glass Fiber	Glass Fiber	Glass Fiber	
Air Filter			Resin Net (with Mold Resistant) Resin Net (with Mold Resistant)		Resin Net (with Mold Resistant)	
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	
Connections	Drain Pipe	mm	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	
Machine Wei	ght (Mass)	kg	30	30	30	
H7 Sound Le	evel (H/L) (220V)	dBA	37/32	37/32	38/32	
Safety Device	es		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant C	Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	
	Model		BYBS32DJW1	BYBS32DJW1	BYBS32DJW1	
Decoration	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	
Panel (Option)	Dimensions: (H×W×D)	mm	55×650×500	55×650×500	55×650×500	
	Weight	kg	3	3	3	
Standard Acc	cessories		Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	
Drawing No.				3D039431		

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard -Low static pressure".
- H5 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard".

- 6 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
- H7 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values are normally somewhat higher during actual operation as a result of ambient conditions.

Ceiling Mounted Built-in Type

Model			FXSQ40MVE	FXSQ50MVE	FXSQ63MVE	
kcal/h			4,000	5,000	6,300	
H1 Cooling Capacity (19.5°CWB) Btu/h			15,900	19,900	25,000	
		kW	4.7	4.7 5.8		
H2 Cooling C	Capacity (19.0°CWB)	kW	4.5	5.6	7.1	
		kcal/h	4,300	5,400	6,900	
H3 Heating C	Capacity	Btu/h	17,000	21,500	27,300	
		kW	5.0	6.3	8.0	
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions:	(H×W×D)	mm	300×700×800	300×700×800	300×1,000×800	
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75	
Fin Coil)	Face Area	m²	0.132	0.132	0.221	
	Model		D18H2A	D18H2A	2D18H2A	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	
F	Motor Output × Number of Units	W	65×1	85×1	125×1	
Fan	Air Flow Rate (H/L)	m³/min	11.5/9	15/11	21/15.5	
	H4 Static external pressure	Pa	88-49-20	88-59-29	88-49-20	
Drive			Direct Drive	Direct Drive Direct Drive		
Temperature Control			Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absor	bing Thermal Insulation Mate	rial	Glass Fiber	Glass Fiber	Glass Fiber	
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)	
Piping	Gas Pipes mm		φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)	
Connections	Drain Pipe	mm	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	
Machine Wei	ght (Mass)	kg	30	31	41	
H7 Sound Le	evel (H/L)	dBA	38/32	41/36	42/35	
Safety Device	es		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant C	control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	
	Model		BYBS45DJW1	BYBS45DJW1	BYBS71DJW1	
Decoration Panel (Option)	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	
	Dimensions: (H×W×D)	mm	55×800×500	55×800×500	55×1,100×500	
	Weight	kg	3.5	3.5	4.5	
Standard Acc	cessories		Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	
Drawing No.				3D039431		

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard -Low static pressure".
- H5 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard".

- 6 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
- H7 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values are normally somewhat higher during actual operation as a result of ambient conditions.

Ceiling Mounted Built-in Type

Model			FXSQ80MVE	FXSQ100MVE	FXSQ125MVE	
kcal/h		8,000	10,000	12,500		
H1 Cooling Capacity (19.5°CWB) Btu/h			31,800	39,700	49,600	
		kW	9.3	11.6	14.5	
H2 Cooling (Capacity (19.0°CWB)	kW	9.0	11.2	14.0	
		kcal/h	8,600	10,800	13,800	
H3 Heating	Capacity	Btu/h	34,100	42,700	54,600	
		kW	10.0	12.5	16.0	
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions:	(H×W×D)	mm	300×1,400×800	300×1,400×800	300×1,400×800	
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75	
Fin Coil)	Face Area	m²	0.338	0.338	0.338	
	Model	•	3D18H2A	3D18H2A	3D18H2A	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	
F	Motor Output × Number of Units	W	225×1	225×1	225×1	
Fan	Air Flow Rate (H/L)	m³/min	27/21.5	28/22	38/28	
	H5 Static external pressure	Pa	113-82	107-75	78-39	
Drive		•	Direct Drive	Direct Drive	Direct Drive	
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Abso	rbing Thermal Insulation Mate	erial	Glass Fiber	Glass Fiber	Glass Fiber	
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	
	Liquid Pipes	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	
Piping	Gas Pipes	mm	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)	
Connections	Drain Pipe	mm	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	VP25 (External Dia. 32 Internal Dia. 25)	
Machine We	ight (Mass)	kg	51	51	52	
H7 Sound Le	evel (H/L)	dBA	43/37	43/37	46/41	
Safety Devic	es		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant (Control		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	
	Model		BYBS125DJW1	BYBS125DJW1	BYBS125DJW1	
Decoration	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	
Panel (Option)	Dimensions: (H×W×D)	mm	55×1,500×500	55×1,500×500	55×1,500×500	
•	Weight	kg	6.5	6.5	6.5	
Standard Ac	cessories		Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers.	
Drawing No.				3D039431		

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard -Low static pressure".
- H5 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard".

- 6 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
- H7 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values are normally somewhat higher during actual operation as a result of ambient conditions.

Ceiling Mounted Duct Type

Model		FXMQ40MVE	FXMQ50MVE	FXMQ63MVE	FXMQ80MVE	
H1 Cooling Capacity (19.5°CWB) Btu/h		4,000	5,000	6,300	8,000	
		15,900	19,900	25,000	31,800	
		kW	4.7	5.8	7.3	9.3
H2 Cooling C	apacity (19.0°CWB)	kW	4.5	5.6	7.1	9.0
		kcal/h	4,300	5,400	6,900	8,600
H3 Heating C	apacity	Btu/h	17,000	21,500	27,300	34,100
		kW	5.0	6.3	8.0	10.0
Casing		•	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions:	(H×W×D)	mm	390×720×690	390×720×690	390×720×690	390×720×690
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×16×2.0	3×16×2.0	3×16×2.0	3x16x2.0
Fin Coil)	Face Area	m²	0.181	0.181	0.181	0.181
	Model		D11/2D3AB1VE	D11/2D3AB1VE	D11/2D3AB1VE	D11/2D3AA1VE
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	100×1	100×1	100×1	160×1
Fan	Air Flow Rate (H/L)	m³/min	14/11.5	14/11.5	14/11.5	19.5/16
		cfm	494/406	494/406	494/406	688/565
	External Static Pressure 50 / 60Hz	Pa	157/157-118/108 H 4	157/157-118/108 H 4	157/157-118/108 H 4	157/160-108/98 H 4
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absor	bing Thermal Insulation Ma	terial	Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			H 5	H 5	H 5	H5
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)
Piping	Gas Pipes	mm	§12.7 (Flare Connection)	<pre> \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</pre>	§15.9 (Flare Connection)	<pre> \$\$\\$ \$\$\\$ \$</pre>
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)
Machine Weig	ght (Mass)	kg	44	44	44	45
H7 Sound Level (H/L) dBA		39/35	39/35	39/35	42/38	
Safety Devices		Fuse, Thermal Fuse for Fan Motor				
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R410A M Series	R410A M Series	R410A M Series	R410A M Series
Standard Accessories		Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	
Drawing No.				3D03	88814	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- H4 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
 - "High static pressure-Standard".
- H5 Air filter is not standard accessory, but please mount it in the duct system of the suction side. Select its colorimetric method (gravity method) 50% or more.
- 6 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H7 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values are normally somewhat higher during actual operation as a result of ambient conditions.
- Conversion Formulae kcal/h=kW×860 Btu/h=kW×3414 cfm=m³/min×35.3

Ceiling Mounted Duct Type

Model		FXMQ100MVE	FXMQ125MVE	FXMQ200MVE	FXMQ250MVE		
		kcal/h	10,000	12,500	20,000	25,000	
H1 Cooling Capacity (19.5°CWB)		Btu/h	39,700	49,600	79,000	99,000	
		kW	11.6	14.5	23.0	28.8	
H2 Cooling C	Capacity (19.0°CWB)	kW	11.2	14.0	22.4	28.0	
		kcal/h	10,800	13,800	21,500	27,000	
H3 Heating C	Capacity	Btu/h	42,700	54,600	85,300	107,500	
-		kW	12.5	16.0	25.0	31.5	
Casing		ļ	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions:	(H×W×D)	mm	390×1,110×690	390×1,110×690	470×1,380×1,100	470×1,380×1,100	
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×16×2.0	3×16×2.0	3×26×2.0	3×26×2.0	
Fin Coil)	Face Area	m²	0.319	0.319	0.68	0.68	
	Model		2D11/2D3AG1VE	2D11/2D3AF1VE	D13/4G2DA1×2	D13/4G2DA1×2	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan	
	Motor Output × Number of Units	W	270×1	430×1	380×2	380×2	
Fan		m³/min	29/23	36/29	58/50	72/62	
	Air Flow Rate (H/L)	cfm	1,024/812	1,271/1,024	2,047/1,765	2,542/2,189	
	External Static Pressure 50 / 60Hz	Ра	157/172-98/98 H 4	191/245-152/172 H 4	221/270-132 H 4	270/191-147 H 4	
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive	
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absor	bing Thermal Insulation Ma	terial	Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber	
Air Filter			H5	H 5	H 5	H5	
	Liquid Pipes	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	
Piping	Gas Pipes	mm	\$\$\overline{15.9}\$ (Flare Connection)	<pre> \$\$\\$</pre>	<pre> \$\$\\$\\$419.1(Brazing Connection) \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</pre>	φ22.2 (Brazing Connection)	
Connections	Drain Pipe	mm	VP25 (External Dia. 32 (Internal Dia. 25)	VP25 (External Dia. 32 (Internal Dia. 25)	PS1B	PS1B	
Machine Wei	ght (Mass)	kg	63	65	137	137	
H7 Sound Level (H/L) dBA		dBA	43/39	45/42	48/45	48/45	
Safety Devices		Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor		
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Connectable	outdoor unit		R410A M Series	R410A M Series	R410A M Series	R410A M Series	
Standard Accessories		Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws.	Operation Manual, Installation Manual, Sealing Pads, Connection Pipes, Screws, Clamps.	Operation Manual, Installation Manual, Sealing Pads, Connection Pipes, Screws, Clamps.		
Drawing No.				3D03	88814	•	
-			50030014				

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; Om. (Heat pump only)
- H4 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means

"High static pressure-Standard".

- H5 Air filter is not standard accessory, but please mount it in the duct system of the suction side. Select its colorimetric method (gravity method) 50% or more.
- 6 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H7 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values are normally somewhat higher during actual operation as a result of ambient conditions.



Ceiling Suspended Type

Model			FXHQ32MVE	FXHQ63MVE	FXHQ100MVE
H1 Cooling Capacity (19.5°CWB) Btu/h		3,150	6,300	10,000	
		Btu/h	12,500	25,000	39,700
		kW	3.7	7.3	11.6
H2 Cooling Ca	apacity (19.0°CWB)	kW	3.6	7.1	11.2
		kcal/h	3,400	6,900	10,800
H3 Heating Ca	apacity	Btu/h	13,600	27,300	42,700
		kW	4.0	8.0	12.5
Casing Color		•	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
Dimensions: (I	H×W×D)	mm	195×960×680	195×1,160×680	195×1,400×680
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×12×1.75	3×12×1.75	3×12×1.75
Fin Coil)	Face Area	m²	0.182	0.233	0.293
	Model		3D12K1AA1	4D12K1AA1	3D12K2AA1
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	62×1	62×1	130×1
		m³/min	12/10	17.5/14	25/19.5
	Air Flow Rate (H/L)	cfm	424/353	618/494	883/688
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature (Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating Cooling and Heating	
Sound Absorb	ing Thermal Insulation Mat	erial	Glass Wool	Glass Wool	Glass Wool
Air Filter			Resin Net (with Mold Resistant) Resin Net (with Mold Resistant)		Resin Net (with Mold Resistant)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)
Connections	Drain Pipe	mm	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)	VP20 (External Dia. 26 Internal Dia. 20)
Machine Weig	ht (Mass)	kg	24	28	33
H5 Sound Lev	rel (H/L)	dBA	36/31	39/34	45/37
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Clamps, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Clamps, Washers.	Operation Manual, Installation Manual, Paper Pattern for Installation, Drain Hose, Clamp Metal, Insulation for Fitting, Clamps, Washers.
Drawing No.				3D038815	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae

Wall Mounted Type

Model			FXAQ20MVE	FXAQ25MVE	FXAQ32MVE
		kcal/h	2,000	2,500	3,150
H1 Cooling Ca	1 Cooling Capacity (19.5°CWB)		7,900	9,900	12,500
		kW	2.3	2.9	3.7
H2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
		kcal/h	2,200	2,800	3,400
H3 Heating C	apacity	Btu/h	8,500	10,900	13,600
		kW	2.5	3.2	4.0
Casing Color			White (3.0Y8.5/10.5)	White (3.0Y8.5/10.5)	White (3.0Y8.5/10.5)
Dimensions: ((H×W×D)	mm	290×795×230	290×795×230	290×795×230
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×14×1.4	2x14x1.4	2×14×1.4
Fin Coil)	Face Area	m²	0.161	0.161	0.161
	Model		QCL9661M	QCL9661M	QCL9661M
	Туре		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
Fan	Motor Output × Number of Units	W	40×1	40×1	40×1
		m³/min	7.5/4.5	8/5	9/5.5
	Air Flow Rate (H/L)	cfm	265/159	282/177	318/194
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ping Thermal Insulation Mate	erial	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
Connections	Drain Pipe	mm	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)
Machine Weig	ght (Mass)	kg	11	11	11
H5 Sound Lev	vel (H/L)	dBA	35/29	36/29	37/29
Safety Devices			Fuse	Fuse	Fuse
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.
Drawing No.				3D039370A	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length:7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae



Wall Mounted Type

Model			FXAQ40MVE	FXAQ50MVE	FXAQ63MVE
kcal/h			4,000	5,000	6,300
H1 Cooling Capacity (19.5°CWB)		Btu/h	15,900	19,900	25,000
		kW	4.7	5.8	7.3
H2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
		kcal/h	4,300	5,400	6,900
H3 Heating C	apacity	Btu/h	17,000	21,500	27,300
		kW	5.0	6.3	8.0
Casing Color			White (3.0Y8.5/10.5)	White (3.0Y8.5/10.5)	White (3.0Y8.5/10.5)
Dimensions: (H×W×D)	mm	290×1,050×230	290×1,050×230	290×1,050×230
Coil (Cross	Rows×Stages×Fin Pitch	mm	2x14x1.4	2x14x1.4	2x14x1.4
Fin Coil)	Face Area	m²	0.213	0.213	0.213
	Model		QCL9686M	QCL9686M	QCL9686M
	Туре		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
Fan	Motor Output × Number of Units	W	43×1	43×1	43×1
	Air Flow Pote (H/L)	m³/min	12/9	15/12	19/14
	Air Flow Rate (H/L)	cfm	424/318	530/424	671/494
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	bing Thermal Insulation Mat	erial	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)
Connections	Drain Pipe	mm	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)
Machine Weig	ght (Mass)	kg	14	14	14
H5 Sound Lev	vel (H/L)	dBA	39/34	42/36	46/39
Safety Devices			Fuse	Fuse	Fuse
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.
Drawing No.				3D039370A	

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae

Floor Standing Type

Model			FXLQ20MVE	FXLQ25MVE	FXLQ32MVE		
		kcal/h	2,000	2,500	3,150		
H1 Cooling C	11 Cooling Capacity (19.5°CWB)		7,900	9,900	12,500		
		kW	2.3	2.9	3.7		
H2 Cooling C	apacity (19.0°CWB)	kW	2.2	2.8	3.6		
		kcal/h	2,200	2,800	3,400		
H3 Heating C	Capacity	Btu/h	8,500	10,900	13,600		
		kW	2.5	3.2	4.0		
Casing Color		•	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)		
Dimensions: ((H×W×D)	mm	600×1,000×222	600×1,000×222	600×1,140×222		
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5		
Fin Coil)	Face Area	m²	0.159	0.159	0.200		
	Model	I	D14B20	D14B20	2D14B13		
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan		
Fan	Motor Output × Number of Units	W	15×1	15×1	25×1		
	Air Flow Rate (H/L)	m³/min	7/6	7/6	8/6		
		cfm	247/212	247/212	282/212		
	Drive		Direct Drive	Direct Drive	Direct Drive		
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating		
Sound Absort	bing Thermal Insulation Ma	terial	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam		
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)		
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)		
Piping Connections	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)		
	Drain Pipe	mm	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)		
Machine Weig	ght (Mass)	kg	25	25	30		
H5 Sound Le	vel (H/L)	dBA	35/32	35/32	35/32		
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor			
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve		
Connectable Outdoor Unit			R410A M Series	R410A M Series	R410A M Series		
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.		
Drawing No.			3D038816				

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae kcal/h=kW×860



Floor Standing Type

Model			FXLQ40MVE	FXLQ50MVE	FXLQ63MVE
H1 Cooling Capacity (19.5°CWB) kcal/h Btu/h		4,000	5,000	6,300	
		Btu/h	15,900	19,900	25,000
		kW	4.7	5.8	7.3
H2 Cooling Ca	apacity (19.0°CWB)	kW	4.5	5.6	7.1
		kcal/h	4,300	5,400	6,900
H3 Heating C	apacity	Btu/h	17,000	21,500	27,300
		kW	5.0	6.3	8.0
Casing Color		•	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)	mm	600×1,140×222	600×1,420×222	600×1,420×222
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
Fin Coil)	Face Area	m²	0.200	0.282	0.282
	Model	•	2D14B13	2D14B20	2D14B20
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	25×1	35×1	35×1
	Air Flow Rate (H/L)	m³/min	11/8.5	14/11	16/12
		cfm	388/300	494/388	565/424
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	bing Thermal Insulation Mat	erial	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)
Piping Connections	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)
Connocación	Drain Pipe	mm	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)
Machine Weig	ht (Mass)	kg	30	36	36
H5 Sound Lev	vel (H/L)	dBA	38/33	39/34	40/35
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable Outdoor Unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.
Drawing No.				3D038816	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae kcal/h=kW×860

Concealed Floor Standing Type

Model			FXNQ20MVE	FXNQ25MVE	FXNQ32MVE
kcal/h			2,000	2,500	3,150
H1 Cooling Capacity (19.5°CWB) H2 Cooling Capacity (19.0°CWB)		Btu/h	7,900	9,900	12,500
		kW	2.3	2.9	3.7
H2 Cooling Ca	apacity (19.0°CWB)	kW	2.2	2.8	3.6
		kcal/h	2,200	2,800	3,400
H3 Heating C	apacity	Btu/h	8,500	10,900	13,600
		kW	2.5	3.2	4.0
Casing Color		•	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)	mm	610×930×220	610×930×220	610×1,070×220
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
Fin Coil)	Face Area	m²	0.159	0.159	0.200
	Model		D14B20	D14B20	2D14B13
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	15×1	15×1	25×1
	Air Flow Rate (H/L)	m³/min	7/6	7/6	8/6
		cfm	247/212	247/212	282/212
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ing Thermal Insulation Mat	erial	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping Connections	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
Connocación	Drain Pipe	mm	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)
Machine Weig	ht (Mass)	kg	19	19	23
H5 Sound Lev	/el (H/L)	dBA	35/32	35/32	35/32
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable Outdoor Unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.
Drawing No.				3D038817	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae kcal/h=kW×860



Concealed Floor Standing Type

Model			FXNQ40MVE	FXNQ50MVE	FXNQ63MVE
kcal/h			4,000	5,000	6,300
H1 Cooling Capacity (19.5°CWB)		Btu/h	15,900	19,900	25,000
	I2 Cooling Capacity (19.0°CWB)		4.7	5.8	7.3
H2 Cooling Ca	apacity (19.0°CWB)	kW	4.5	5.6	7.1
		kcal/h	4,300	5,400	6,900
H3 Heating C	apacity	Btu/h	17,000	21,500	27,300
		kW	5.0	6.3	8.0
Casing Color		4	Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)	mm	610×1,070×220	610×1,350×220	610×1,350×220
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
Fin Coil)	Face Area	m²	0.200	0.282	0.282
	Model		2D14B13	2D14B20	2D14B20
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	25×1	35×1	35×1
	Air Flow Rate (H/L)	m³/min	11/8.5	14/11	16/12
		cfm	388/300	494/388	565/424
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	bing Thermal Insulation Mat	erial	Glass Fiber / Urethane Foam	Glass Fiber / Urethane Foam	Glass Fiber / Urethane Foam
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ9.5 (Flare Connection)
Piping Connections	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ15.9 (Flare Connection)
Connocacito	Drain Pipe	mm	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)
Machine Weig	ht (Mass)	kg	23	27	27
H5 Sound Lev	vel (H/L)	dBA	38/33	39/34	40/35
Safety Devices		Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	Fuse, Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable Outdoor Unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.
Drawing No.				3D038817	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae kcal/h=kW×860

Ceiling Suspended Cassette Type

		Indoor Unit		FXUQ71MV1	FXUQ100MV1	FXUQ125MV1
Model		Connection	Unit	BEVQ71MVE	BEVQ140MVE	BEVQ140MVE
			kcal/h	7,100	10,000	12,500
H1 Cooling Ca	apacity (19.5°	°CWB)	Btu/h	28,200	39,700	49,600
			kW	8.3	11.6	14.5
H2 Cooling Ca	apacity (19.0°	°CWB)	kW	8.0	11.2	14.0
			kcal/h	7,700	10,800	13,800
H3 Heating C	apacity		Btu/h	30,700	42,700	54,600
			kW	9.0	12.5	16.0
Casing Color				White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
Dimensions: (H×W×D)		mm	165×895×895	230×895×895	230×895×895
Coil (Cross	Rows×Stag	esxFin Pitch	mm	3x6x1.5	3×8×1.5	3×8×1.5
Fin Coil)	Face Area		m²	0.265	0.353	0.353
	Model	el		QTS48A10M	QTS50B15M	QTS50B15M
	Туре			Turbo Fan	Turbo Fan	Turbo Fan
Fan	Motor Output × Number of Units		W	45×1	90×1	90×1
	Air Flow Br	Air Flow Rate (H/L) Drive		19/14	29/21	32/23
				671/494	1,024/741	1,130/812
	Drive			Direct Drive	Direct Drive	Direct Drive
Temperature	Control			Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ing Thermal	Insulation Mate	erial	Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene	Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene	Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene
	Liquid Pipe	S	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)
Piping Connections	Gas Pipes		mm	φ15.9 (Flare Connection)	φ19.1 (Flare Connection)	φ19.1 (Flare Connection)
	Drain Pipe		mm	I.Dφ20×O.Dφ26	I.Dq20×O.Dq26	I.Dq20xO.Dq26
Machine Weig	ht (Mass)		kg	25	31	31
H5 Sound Level (H/L) dBA		40/35	43/38	44/39		
Safety Devices				Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
Standard Accessories				Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Holding Plate.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Holding Plate.	Operation Manual, Installation Manual, Drain Hose, Clamp Metal, Insulation for Fitting, Sealing Pads, Clamps, Screws, Washers, Holding Plate.
Drawing No.					4D049395	

Notes:

- H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- Btu/h=kWx3414 cfm=m³/min×35.3 H3 Indoor temp.: 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference;
- 0m. (Heat pump only) 4 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These
 - values are normally somewhat higher during actual operation as a result of ambient conditions.

BEV Units

Model		BEVQ71MVE	BEVQ100MVE	BEVQ125MVE		
Power Supp	lу			1 Phase 50Hz 220~240V	1 Phase 50Hz 220~240V	1 Phase 50Hz 220~240V
Casing				Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions:	(H×W×D)		mm	100×350×225	100×350×225	100×350×225
Sound Absorbing Thermal Insulation Material			Flame and Heat Resistant Foamed Polyethylene	Flame and Heat Resistant Foamed Polyethylene	Flame and Heat Resistant Foamed Polyethylene	
	Indoor	Liquid Pipes Gas Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)
Piping	Unit			15.9mm (Flare Connection)	15.9mm (Flare Connection)	15.9mm (Flare Connection)
Connection	Outdoor	Liquid Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)
	Unit	Suction Gas Pipes		15.9mm (Flare Connection)	15.9mm (Flare Connection)	15.9mm (Flare Connection)
Machine We	ight (Mass)	kg	3.0	3.0	3.5
Standard Accessories				Installation manual, Gas piping connections, Insulation for fitting, Sealing material, Clamps	Installation manual, Gas piping connections, Insulation for fitting, Sealing material, Clamps	Installation manual, Gas piping connections, Insulation for fitting, Sealing material, Clamps
Drawing No.		4D045387	4D045387	4D045388		

Conversion Formulae

kcal/h=kW×860

Wall Mounted Type

Model			FXAQ20MHV1	FXAQ25MHV1	FXAQ32MHV1
		kcal/h	2,000	2,500	3,150
H1 Cooling Capacity (19.5°CWB)	Btu/h	7,900	9,900	12,500	
		kW	2.3	2.9	3.7
H2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
		kcal/h	2,200	2,800	3,400
H3 Heating C	apacity	Btu/h	8,500	10,900	13,600
		kW	2.5	3.2	4.0
Casing Color			White (3.0Y8.5/0.5)	White (3.0Y8.5/0.5)	White (3.0Y8.5/0.5)
Dimensions: (H×W×D)	mm	290×795×230	290×795×230	290×795×230
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×14×1.4	2x14x1.4	2×14×1.4
Fin Coil)	Face Area	m²	0.161	0.161	0.161
	Model	-	QCL9661M	QCL9661M	QCL9661M
	Туре		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
Fan	Motor Output × Number of Units	W	40×1	40×1	40x1
		m³/min	7.5/4.5	8/5	9/5.5
	Air Flow Rate (H/L)	cfm	265/159	282/177	318/194
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	ing Thermal Insulation Mat	erial	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
Connections	Drain Pipe	mm	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)
Machine Weig	ht (Mass)	kg	11	11	11
H5 Sound Lev	vel (H/L)	dBA	35/29	36/29	37/29
Safety Devices			Fuse	Fuse	Fuse
Refrigerant Control			—	—	—
Connectable outdoor unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.
Drawing No.				3D046711	

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length:7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae

Wall Mounted Type

Model			FXAQ40MHV1	FXAQ50MHV1	
		kcal/h	4,000	5,000	
H1 Cooling Ca	1 Cooling Capacity (19.5°CWB)		15,900	19,900	
		kW	4.7	5.8	
H2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	
		kcal/h	4,300	5,400	
H3 Heating Ca	apacity	Btu/h	17,000	21,500	
		kW	5.0	6.3	
Casing Color			White (3.0Y8.5/0.5)	White (3.0Y8.5/0.5)	
Dimensions: (I	H×W×D)	mm	290×1,050×230	290×1,050×230	
Coil (Cross	Rows×Stages×Fin Pitch	mm	2×14×1.4	2x14x1.4	
Fin Coil)	Face Area	m²	0.213	0.213	
	Model		QCL9686M	QCL9686M	
	Туре		Cross Flow Fan	Cross Flow Fan	
Fan	Motor Output × Number of Units	W	43×1	43×1	
	Air Flow Rate (H/L)	m³/min	12/9	15/12	
		cfm	424/318	530/424	
	Drive		Direct Drive	Direct Drive	
Temperature (Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absorb	ing Thermal Insulation Mate	erial	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	
Air Filter			Resin Net (Washable)	Resin Net (Washable)	
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Piping	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	
Connections	Drain Pipe	mm	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)	
Machine Weig	ht (Mass)	kg	13	13	
H5 Sound Lev	el (H/L)	dBA	39/34	42/36	
Safety Devices			Fuse	Fuse	
Refrigerant Co	ntrol		_	_	
Connectable of	utdoor unit		R410A M Series	R410A M Series	
Standard Acce	essories		Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	Operation Manual, Installation Manual, Installation Panel, Paper Pattern for Installation, Insulation Tape, Clamps, screws.	
Drawing No.			3D0-	46711	

Notes:

H1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.

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

- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured under JISB8616 conditions. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

BEV Units

Model	BEVQ50MVE			BEVQ50MVE
Power Supply	1			1 Phase 50Hz 220~240V
Casing				Galvanized Steel Plate
Dimensions: (H×W×D)		mm	100×350×225
Sound Absorb	oing Therma	mal Insulation Material		Flame and Heat Resistant Foamed Polyethylene
	Indoor	Liquid Pipes		6.4mm (Flare Connection)
Piping	Unit	Gas Pipes		12.7mm (Flare Connection)
Connection	Outdoor	Liquid Pipes		6.4mm (Flare Connection)
	Unit	Suction Gas F	Pipes	12.7mm (Flare Connection)
Machine Weight kg		kg 3.0		
Standard Accessories		•	Installation manual, Gas piping connections, Insulation for fitting, Sealing material, Clamps	
Drawing No.			4D046708	

Floor Standing Type

Model			FXLQ20MHV1	FXLQ25MHV1	FXLQ32MHV1
H1 Cooling Capacity (19.5°CWB)			2,000	2,500	3,150
H1 Cooling C	Cooling Capacity (19.5°CWB)		7,900	9,900	12,500
		kW	2.3	2.9	3.7
H2 Cooling C	H2 Cooling Capacity (19.0°CWB) k		2.2	2.8	3.6
		kcal/h	2,200	2,800	3,400
H3 Heating C	Capacity	Btu/h	8,500	10,900	13,600
		kW	2.5	3.2	4.0
Casing Color		ł	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: ((H×W×D)	mm	600×1,000×222	600×1,000×222	600×1,140×222
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
Fin Coil)	Face Area	m²	0.159	0.159	0.200
	Model	I	D14B20	D14B20	2D14B13
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan
Fan	Motor Output × Number of Units	W	15×1	15×1	25×1
		m³/min	7/6	7/6	8/6
	Air Flow Rate (H/L)	cfm	247/212	247/212	282/212
	Drive	•	Direct Drive	Direct Drive	Direct Drive
Temperature	Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating
Sound Absorb	bing Thermal Insulation Ma	terial	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)
Piping Connections	Gas Pipes	mm	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)	φ12.7 (Flare Connection)
	Drain Pipe	mm	¢21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)	φ21 O.D (Vinyl Chloride)
Machine Weig	ght (Mass)	kg	25	25	30
H5 Sound Lev	vel (H/L) (220V)	dBA	35/32	35/32	35/32
Safety Devices			Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
Refrigerant Control			—	_	_
Connectable Outdoor Unit			R410A M Series	R410A M Series	R410A M Series
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.
Drawing No.				3D047065	

Notes:

H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.

- H2 Indoor temp.: 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Floor Standing Type

Model			FXLQ40MHV1	FXLQ50MHV1	
H1 Cooling Capacity (19.5°CWB) kcal/h kW		kcal/h	4,000	5,000	
		Btu/h	15,900	19,900	
		kW	4.7	5.8	
H2 Cooling Ca	apacity (19.0°CWB)	kW	4.5	5.6	
		kcal/h	4,300	5,400	
H3 Heating Ca	apacity	Btu/h	17,000	21,500	
		kW	5.0	6.3	
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)	
Dimensions: (I	H×W×D)	mm	600×1,140×222	600×1,420×222	
Coil (Cross	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	
Fin Coil)	Face Area	m²	0.200	0.282	
	Model	•	2D14B13	2D14B20	
	Туре		Sirocco Fan	Sirocco Fan	
Fan	Motor Output × Number of Units	W	25×1	35×1	
		m³/min	11/8.5	14/11	
	Air Flow Rate (H/L)	cfm	388/300	494/388	
	Drive		Direct Drive	Direct Drive	
Temperature (Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absorb	ing Thermal Insulation Mat	erial	Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam	
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	
	Liquid Pipes	mm	φ6.4 (Flare Connection)	φ6.4 (Flare Connection)	
Piping Connections	Gas Pipes	mm	<pre> \$\$\phi12.7 (Flare Connection) \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$</pre>	φ12.7 (Flare Connection)	
	Drain Pipe	mm	¢21 O.D (Vinyl Chloride)	¢21 O.D (Vinyl Chloride)	
Machine Weight (Mass) kg		kg	30	36	
H5 Sound Level (H/L) dBA		dBA	38/33	39/34	
Safety Devices			Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	
Refrigerant Control			_	-	
Connectable Outdoor Unit			R410A M Series	R410A M Series	
Standard Accessories			Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	Operation Manual, Installation Manual, Insulation for Fitting, Drain Hose, Clamps, Screws, Washers, Level Adjustment Screw.	
Drawing No.			3D047065		

Notes:

- H1 Indoor temp.: 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
- H3 Indoor temp. : 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Equivalent piping length; 7.5m, level difference; 0m. (Heat pump only)
- 4 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- H5 Anechoic chamber conversion value, measured at a point 1.5 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion Formulae kcal/h=kW×860 Btu/h=kW×3414

Kcal/n=KVV×860 Btu/h=kW×3414 cfm=m³/min×35.3



Outdoor Air Processing Unit

Model			FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1	
H1 Cooling Capacity Kcal/h Btu/h kW		12,000	19,300	24,100		
		47,800	76,500	95,600		
		14.0	22.4	28.0		
		kcal/h	7,700 12,000		15,000	
H1 Heating Ca	apacity	Btu/h	30,000	47,500	59,400	
		kW	8.9	13.9	17.4	
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate	
Dimensions: (I	H×W×D)	mm	470×744×1,100	470×1,380×1,100	470×1,380×1,100	
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	3×26×2.0	3×26×2.0	3×26×2.0	
	Face Area	m²	0.28	0.65	0.65	
	Model		D13/4G2DA1	D13/4G2DA1	D13/4G2DA1	
	Туре		Sirocco Fan	Sirocco Fan	Sirocco Fan	
	Motor Output × Number of Units	W	380×1	380×1	380×1	
Fan	Air Flow Rate (H/L)	m³/min	18	28	35	
		cfm	635	988	1,236	
	External Static Pressure H4	Pa	185	225	205	
	Drive		Direct Drive	Direct Drive	Direct Drive	
Temperature (Control		Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	Microprocessor Thermostat for Cooling and Heating	
Sound Absorb	ing Thermal Insulation M	laterial	Glass Fiber	Glass Fiber	Glass Fiber	
Air Filter			H2	H2	H2	
	Liquid Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)	
Piping Connections	Gas Pipes		15.9mm (Flare Connection)	19.1mm (Brazing Connection)	22.2mm (Brazing Connection)	
	Drain Pipe	(mm)	PS1B (female thread)	PS1B (female thread)	PS1B (female thread)	
Machine Weight (Mass) kg		86	123	123		
Sound Level (220V) H3,H4 dBA		42	47	47		
Safety Devices			Fuse Thermal Protector for Fan Motor	Fuse Thermal Protector for Fan Motor	Fuse Thermal Protector for Fan Motor	
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	
Standard Accessories			Operation Manual, Installation Manual, Sealing Pads, Screws, Clamps.	Operation Manual, Installation Manual, Sealing Pads, Connection Pipes, Screws, Clamps.	Operation Manual, Installation Manual, Sealing Pads, Connection Pipes, Screws, Clamps.	
Connectable C	Dutdoor Units H5,H6		RXYQ8~48MY1B	RXYQ8~48MY1B	RXYQ10~48MY1B	
Drawing No.			3D046147A	3D046147A	3D046147A	

Notes:

- H1. Specifications are based on the following conditions:
 - Cooling: Outdoor temp. of 33°CDB, 28°CWB (68% RH). and discharge temp. of 18°CDB • Heating: Outdoor temp. of 0°CDB, -2.9°CWB (50% RH). and discharge temp. of 25°CDB
 - · Equivalent reference piping length: 7.5m (0m Horizontal)
 - At 220V
- H2. Air intake filter is not supplied, so be sure to install the optional long-life filter or high-efficiency filter.
 Prease mount it in the duct system of the suction side. Select its colorimetric method (gravity method) 50% or more.
- H3. Anechoic chamber conversion value, measured at a point 1.5m downward from the unit center. These values (measured at 220V) are normally somewhat higher during actual operation as a result of ambient conditions.
- H4. Valves measured at 220 V.
- H5. Within the range that the total capacity of indoor units is 50 to 100%, it is possible to connect to the outdoor unit.
- H6. It is not possible to connect to the 5 HP outdoor unit. Not available for Heat Recovery type and VRV II-S series.

- - This equipment cannot be incorporated into the refrigerant piping system or remote group control of the VRV II system.



Part 3 Refrigerant Circuit

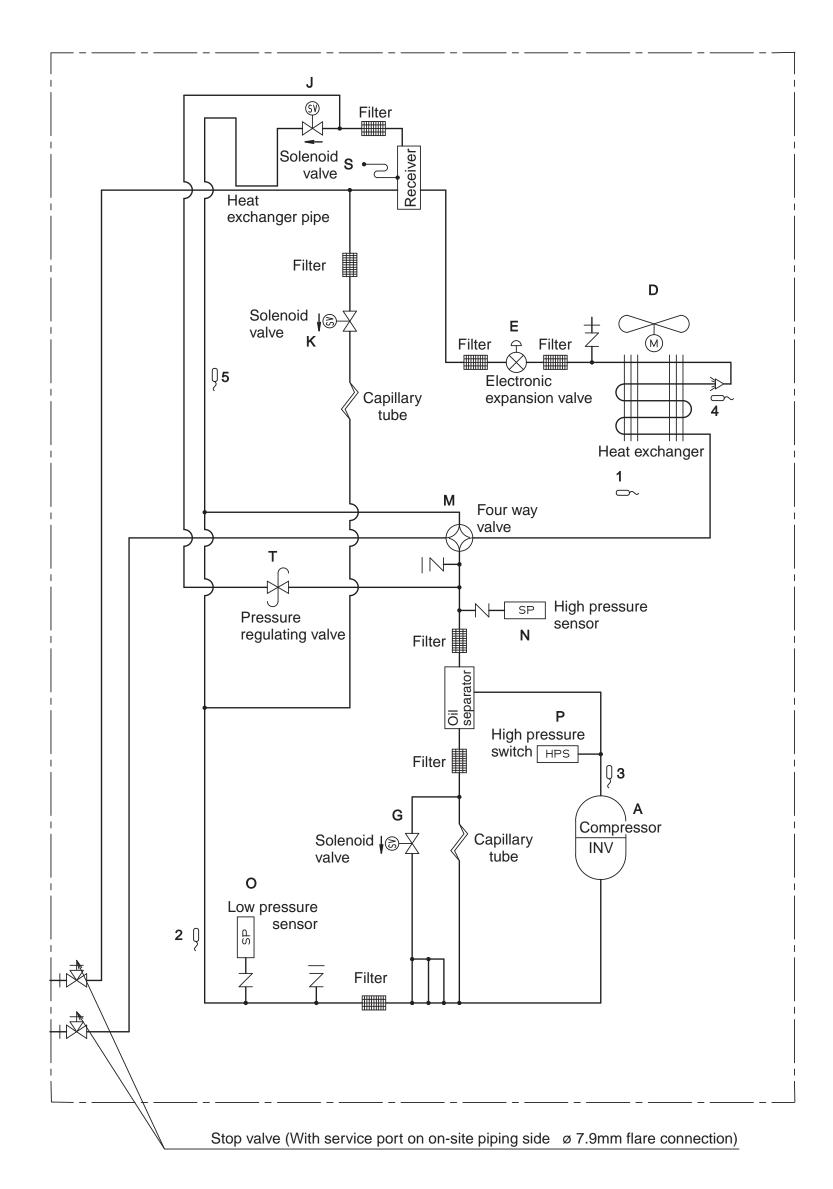
1.	Refr	igerant Circuit	50
	1.1	RXYQ5M (% Products after January, 2004)	50
	1.2	RXYQ8, 10, 12M (% Products after January, 2004)	52
	1.3	RXYQ14, 16M (% Products after January, 2004)	54
	1.4	Outdoor air processing unit FXMQ125~250MFV1	56
2.	Fund	ctional Parts Layout	57
	2.1	RXYQ5M	57
	2.2	RXYQ8, 10, 12M	58
	2.3	RXYQ14, 16M	59
3.	Refr	igerant Flow for Each Operation Mode	60

Refrigerant Circuit RXYQ5M (* Products after January, 2004)

No. in refrigerant system diagram	Symbol	Name	Major Function
A	M1C	Inverter compressor (INV)	Inverter compressor is operated on frequencies between 52 Hz and 210 Hz by using the inverter. The number of operating steps is as follows when Inverter compressor is operated. RXYQ5M : 20 steps
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 8-step rotation speed by using the inverter.
E	Y1E	Electronic expansion valve (Main: EV1)	While in heating operation, PI control is applied to keep the outlet superheated degree of air heat exchanger constant.
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.
J	Y2S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.
К	Y4S	Solenoid valve (Injection)	Used to cool the compressor by injecting refrigerant when the compressor discharge temperature is high.
М	Y3S	4-way valve	Used to switch the operation mode between cooling and heating.
N	S1NPH	High pressure sensor	Used to detect high pressure.
0	S1NPL	Low pressure sensor	Used to detect low pressure.
Р	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 3.8 MPA or more to stop the compressor operation.
S	_	Fusible plug	In order to prevent the increase of pressure when abnormal heating is caused by fire or others, the fusible part of the plug is molten at a temperature of 70 to 75°C to release the pressure into the atmosphere.
Т	_	Pressure regulating valve 1 (Receiver to discharge pipe)	This valve opens at a pressure of 2 to 2.7 MPa for prevention of pressure increase, thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature, keep the suction superheated degree constant in heating operation, and others.
3	R3T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
4	R4T	Thermistor (Heat exchanger deicer: Tb)	Used to detect liquid pipe temperature of air heat exchanger, determine defrosting operation, and others.
5	R5T	Thermistor (Sub-cooling heat- exchanger outlet)	Used to judge the refrigerant overcharge at the check operation.

Note: Please refer the refrigerant circuit for products before December, 2003 to service manual Si39-302.

RXYQ5M



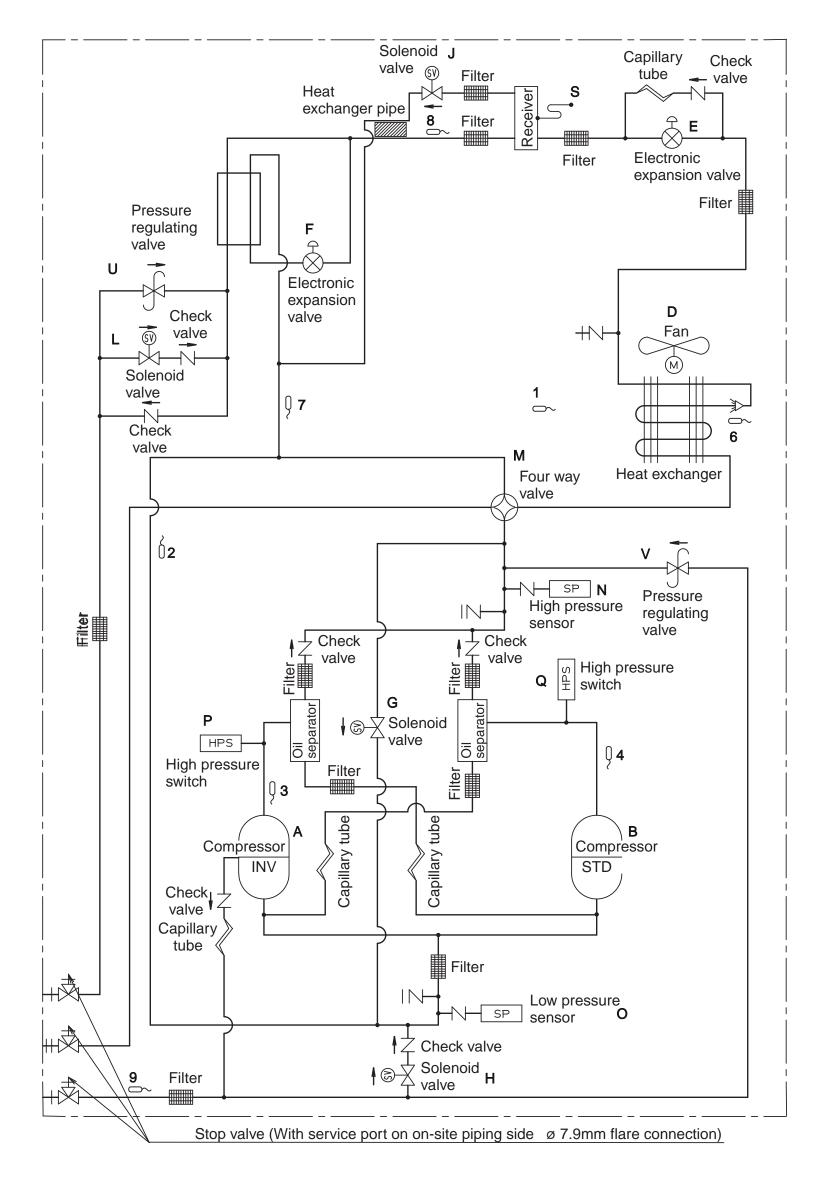
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1.2 RXYQ8, 10, 12M (* Products after January, 2004)

No. in refrigerant system diagram	Symbol	Name	Major Function	
А	M1C	Inverter compressor (INV)	Inverter compressor is operated on frequencies between 52 Hz and 210 Hz by using	
В	M2C	Standard compressor 1 (STD1)	the inverter, while Standard compressor is operated with commercial power supply only. The number of operating steps is as follows when Inverter compressor is operated in combination with Standard compressor. RXYQ8, 10, 12M: 29 steps	
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 8-step rotation speed by using the inverter.	
E	Y1E	Electronic expansion valve (Main: EV1)	While in heating operation, PI control is applied to keep the outlet superheated degree of air heat exchanger constant.	
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.	
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.	
Н	Y2S	Solenoid valve (Oil equalization: SVO)	Used for oil equalizing among outdoor units in multiple-outdoor-unit system.	
J	Y3S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.	
L	Y4S	Solenoid valve (Non-operating unit liquid pipe closing: SVSL)	Used to prevent the accumulation of refrigerant in non-operating outdoor units in the case of multi-outdoor unit system.	
М	Y5S	4-way valve	Used to switch the operation mode between cooling and heating.	
Ν	S1NPH	High pressure sensor	Used to detect high pressure.	
0	S1NPL	Low pressure sensor	Used to detect low pressure.	
Р	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 3.8 MPA or more to stop the compressor operation.	
Q	S2PH	HP pressure switch (For STD compressor 2)		
S	_	Fusible plug	In order to prevent the increase of pressure when abnormal heating is caused by fire or others, the fusible part of the plug is molten at a temperature of 70 to 75°C to release the pressure into the atmosphere.	
U	_	Pressure regulating valve 2 (Liquid pipe to receiver)	This valve opens at a pressure of 2 to 2.7 MPa for prevention of pressure increase,	
V	_	Pressure regulating valve 3 (Equalizing pipe to discharge pipe)	thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.	
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.	
2	R2T	Thermistor (Suction pipe: Ts)	used to detect suction pipe temperature, keep the suction superheated degree constant in heating operation, and others.	
3	R31T	Thermistor (INV discharge pipe: Tdi)	used to detect discharge pipe temperature, make the temperature protection control of	
4	R32T	Thermistor (STD1 discharge pipe: Tds1)	compressor, and others.	
6	R4T	Thermistor (Heat exchanger deicer: Tb)	Used to detect liquid pipe temperature of air heat exchanger, determine defrosting operation, and others.	
7	R5T	Thermistor (Subcooling heat exchanger gas pipe: Tsh)	Used to detect gas pipe temperature on the evaporation side of subcooling heat exchanger, keep the superheated degree at the outlet of subcooling heat exchanger constant, and others.	
8	R6T	Thermistor (Receiver outlet liquid pipe: TI)	Used to detect receiver outlet liquid pipe temperature, prevent the drift between outdoor units while in heating operation in the case of multiple-outdoor-unit system, and others.	
9	R7T	Thermistor (Oil equalizing pipe: To)	Used to detect equalizing pipe temperature, opening/closing of the equalizing pipe stop valve, and others.	

Note: Please refer the refrigerant circuit for products before December, 2003 to service manual Si39-302.

RXYQ8, 10, 12M



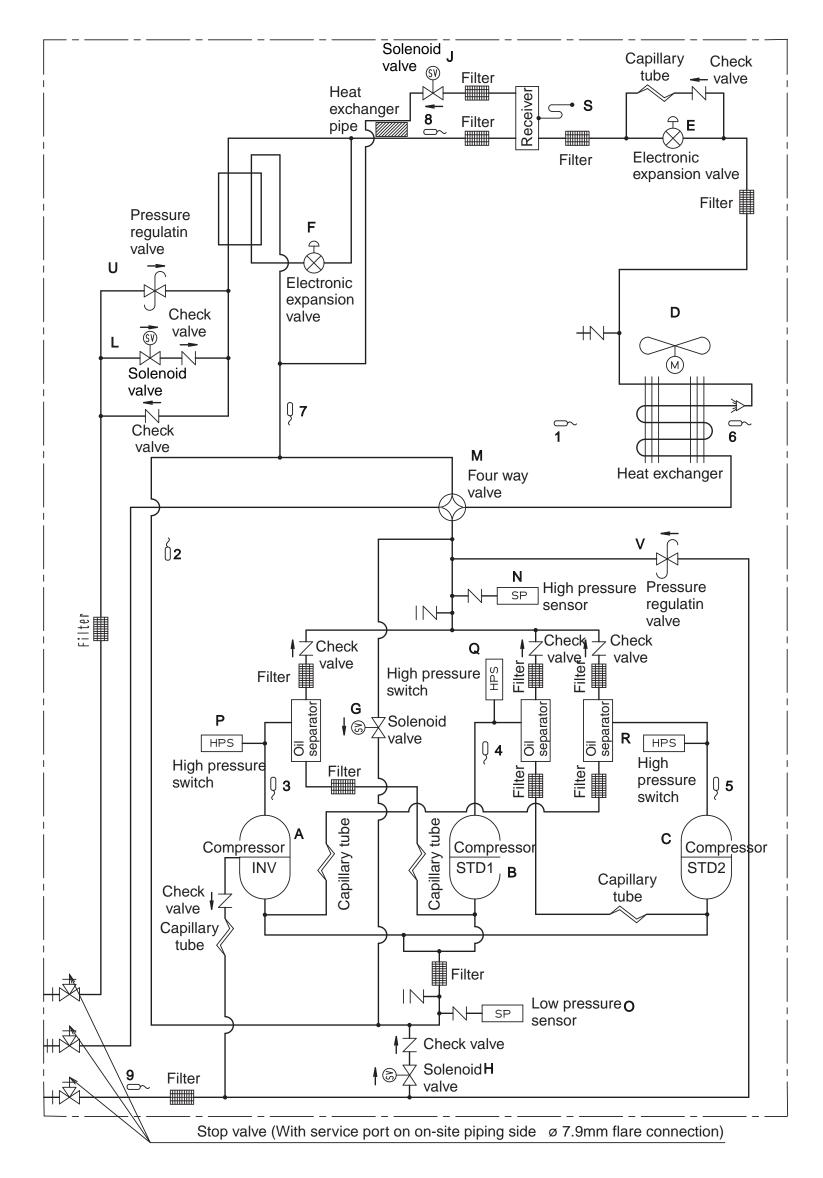
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1.3 RXYQ14, 16M (*Products after January, 2004)

No. in refrigerant system diagram	Symbol	Name	Major Function	
А	M1C	Inverter compressor (INV)	Inverter compressor is operated on frequencies between 52 Hz and 210 Hz by using	
В	M2C	Standard compressor 1 (STD1)	the inverter, while Standard compressor is operated with commercial power supply only. The number of operating steps is as follows when Inverter compressor is	
С	МЗС	Standard compressor 1 (STD2)	operated in combination with Standard compressor. RXYQ14, 16M: 35 steps	
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 8-step rotation speed by using the inverter.	
E	Y1E	Electronic expansion valve (Main: EV1)	While in heating operation, PI control is applied to keep the outlet superheated degree of air heat exchanger constant.	
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.	
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.	
Н	Y2S	Solenoid valve (Oil equalization: SVO)	Used for oil equalizing among outdoor units in multiple-outdoor-unit system.	
J	Y3S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.	
L	Y4S	Solenoid valve (Non-operating unit liquid pipe closing: SVSL)	Used to prevent the accumulation of refrigerant in non-operating outdoor units in the case of multi-outdoor unit system.	
М	Y5S	4-way valve	Used to switch the operation mode between cooling and heating.	
N	S1NPH	High pressure sensor	Used to detect high pressure.	
0	S1NPL	Low pressure sensor	Used to detect low pressure.	
Р	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 3.8 MPA or more to stop the compressor operation.	
Q	S2PH	HP pressure switch (For STD compressor 2)		
R	S3PH	HP pressure switch (For STD compressor 1)		
S	_	Fusible plug	In order to prevent the increase of pressure when abnormal heating is caused by fire or others, the fusible part of the plug is molten at a temperature of 70 to 75°C to release the pressure into the atmosphere.	
U	_	Pressure regulating valve 2 (Liquid pipe to receiver)	This valve opens at a pressure of 2 to 2.7 MPa for prevention of pressure increase,	
V	_	Pressure regulating valve 3 (Equalizing pipe to discharge pipe)	thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.	
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.	
2	R2T	Thermistor (Suction pipe: Ts)	used to detect suction pipe temperature, keep the suction superheated degree constant in heating operation, and others.	
3	R31T	Thermistor (INV discharge pipe: Tdi)		
4	R32T	Thermistor (STD1 discharge pipe: Tds1)	used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.	
5	R33T	Thermistor (STD2 discharge pipe: Tds2)		
6	R4T	Thermistor (Heat exchanger deicer: Tb)	Used to detect liquid pipe temperature of air heat exchanger, determine defrosting operation, and others.	
7	R5T	Thermistor (Subcooling heat exchanger gas pipe: Tsh)	Used to detect gas pipe temperature on the evaporation side of subcooling heat exchanger, keep the superheated degree at the outlet of subcooling heat exchanger constant, and others.	
8	R6T	Thermistor (Receiver outlet liquid pipe: TI)	Used to detect receiver outlet liquid pipe temperature, prevent the drift between outdoor units while in heating operation in the case of multiple-outdoor-unit system, and others.	
9	R7T	Thermistor (Oil equalizing pipe: To)	Used to detect equalizing pipe temperature, opening/closing of the equalizing pipe stop valve, and others.	

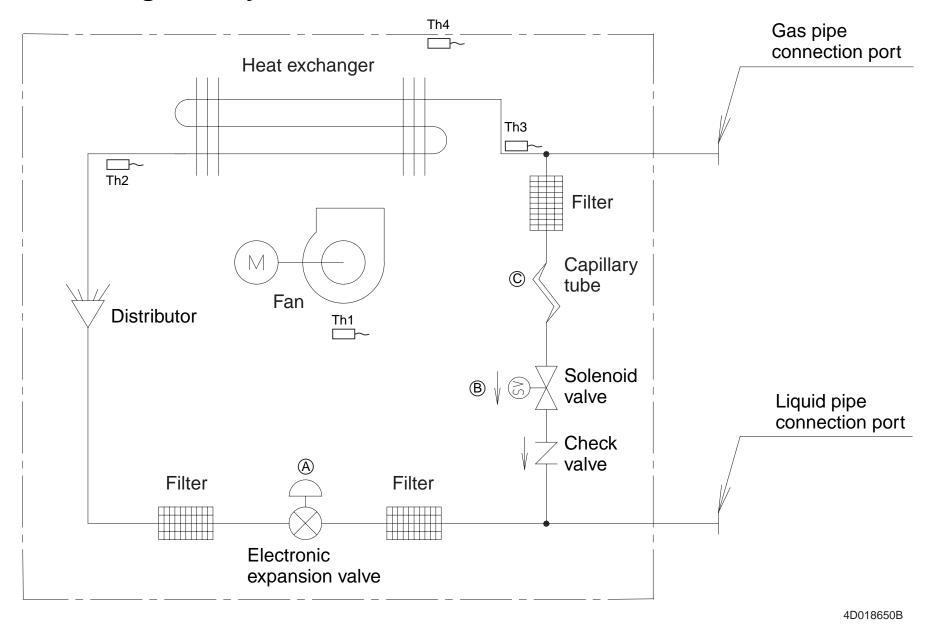
Note: Please refer the refrigerant circuit for products before December, 2003 to service manual Si39-302.

RXYQ14, 16M



4D044809

1.4 Outdoor air processing unit FXMQ125~250MFV1 1.4.1 Refrigerant System



Main Control Equipment

Code	Symbol	Name	Main function
A	Y1E	Motorized valve	Used to control the flow rate of refrigerant, and make the SH control while in cooling or the SC control while in heating.*
В	Y1S	Solenoid valve	Used to bypass hot gas while in heating with thermostat OFF.
С		Capillary tube	Used to reduce pressure from high to low in bypassing hot gas.

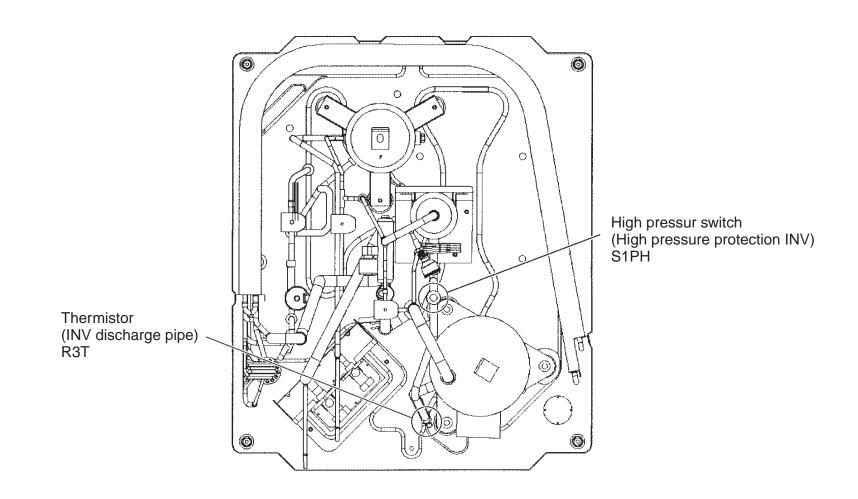
*SH control: Superheated control of heat exchanger outlet

SC control: Subcooled control of heat exchanger outlet

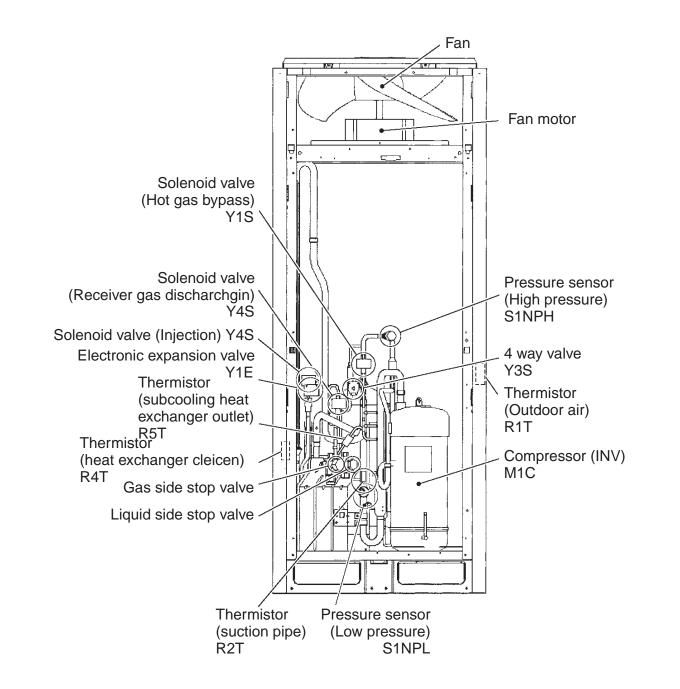
Code	Symbol	Name	Main function
Th1	R1T	Suction air temperature thermistor	Used to turn ON or OFF the thermostat and select cooling or heating operation.
Th2	R2T	Liquid pipe temperature thermistor	Used to control the opening degree of EV (Y1F) under the SC control.
Th3	R3T	Gas pipe temperature thermistor	Used to control the opening degree of EV (Y1E) under the SH control.
Th4	R4T	Discharge air temperature thermistor	Used to control the electric expansion valve opening and thermostat ON/OFF so as to keep the discharge air temperature at the set temperature.

2. Functional Parts Layout 2.1 RXYQ5M

Plan

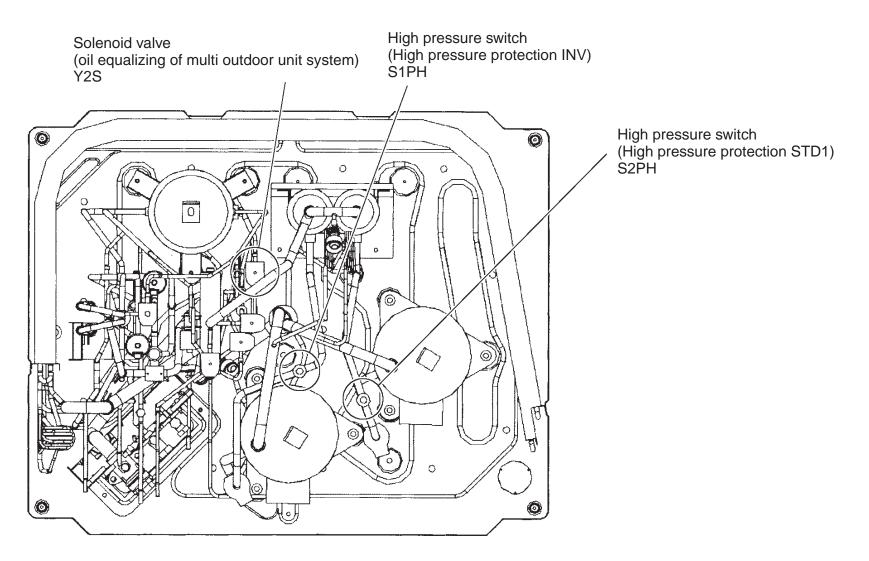


Front View

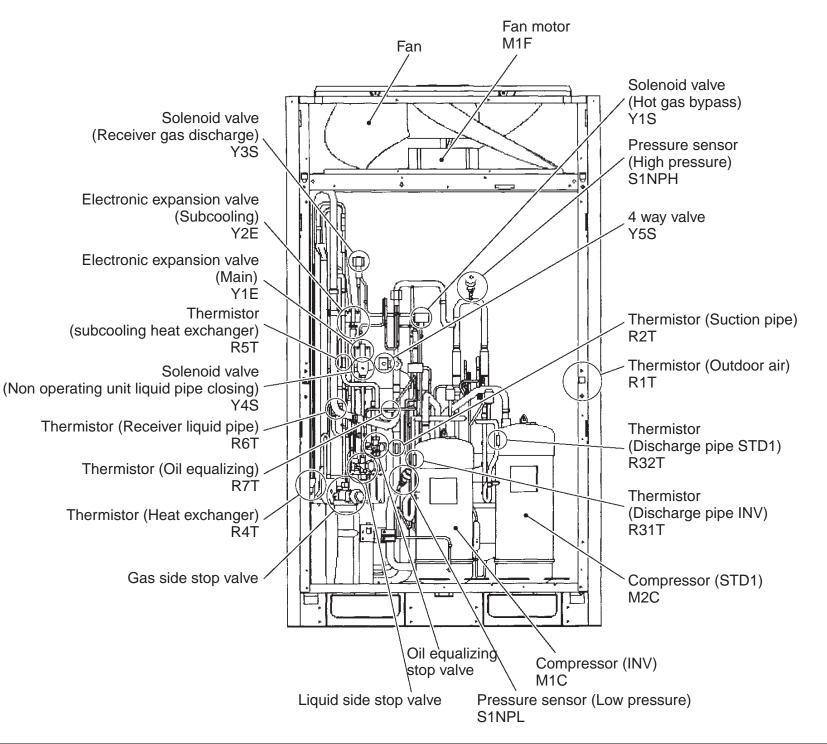


2.2 RXYQ8, 10, 12M

Plan

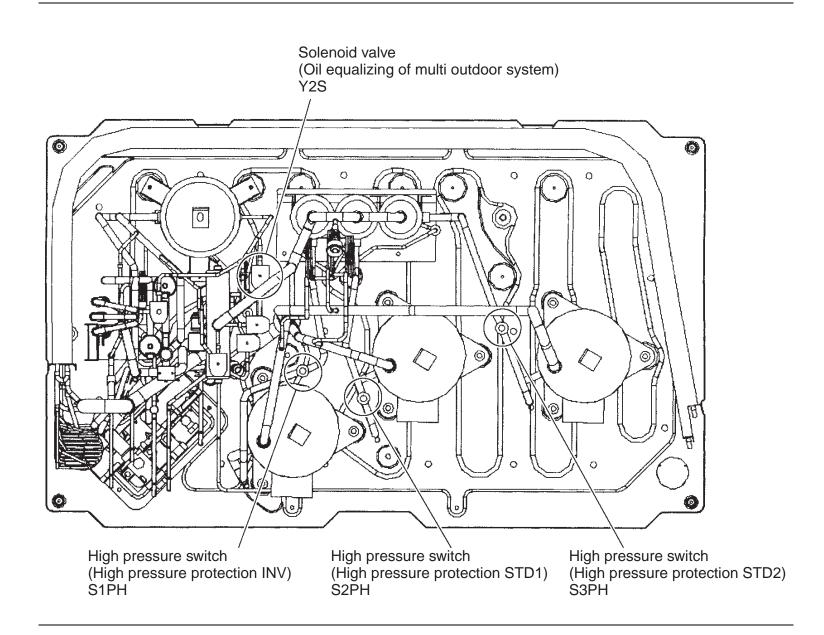


Front View

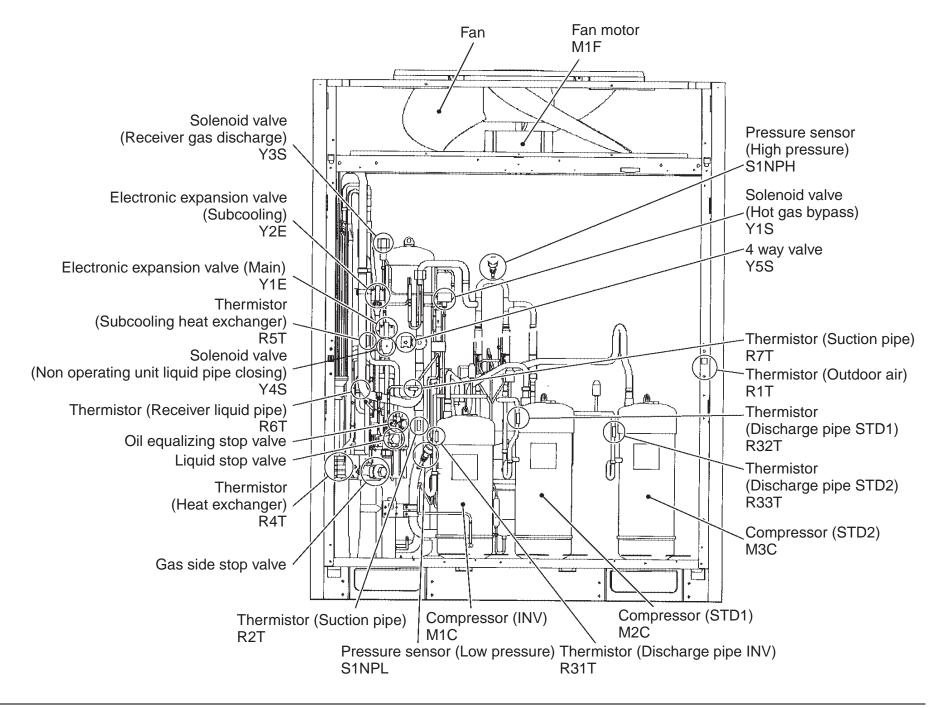


2.3 RXYQ14, 16M

Plan

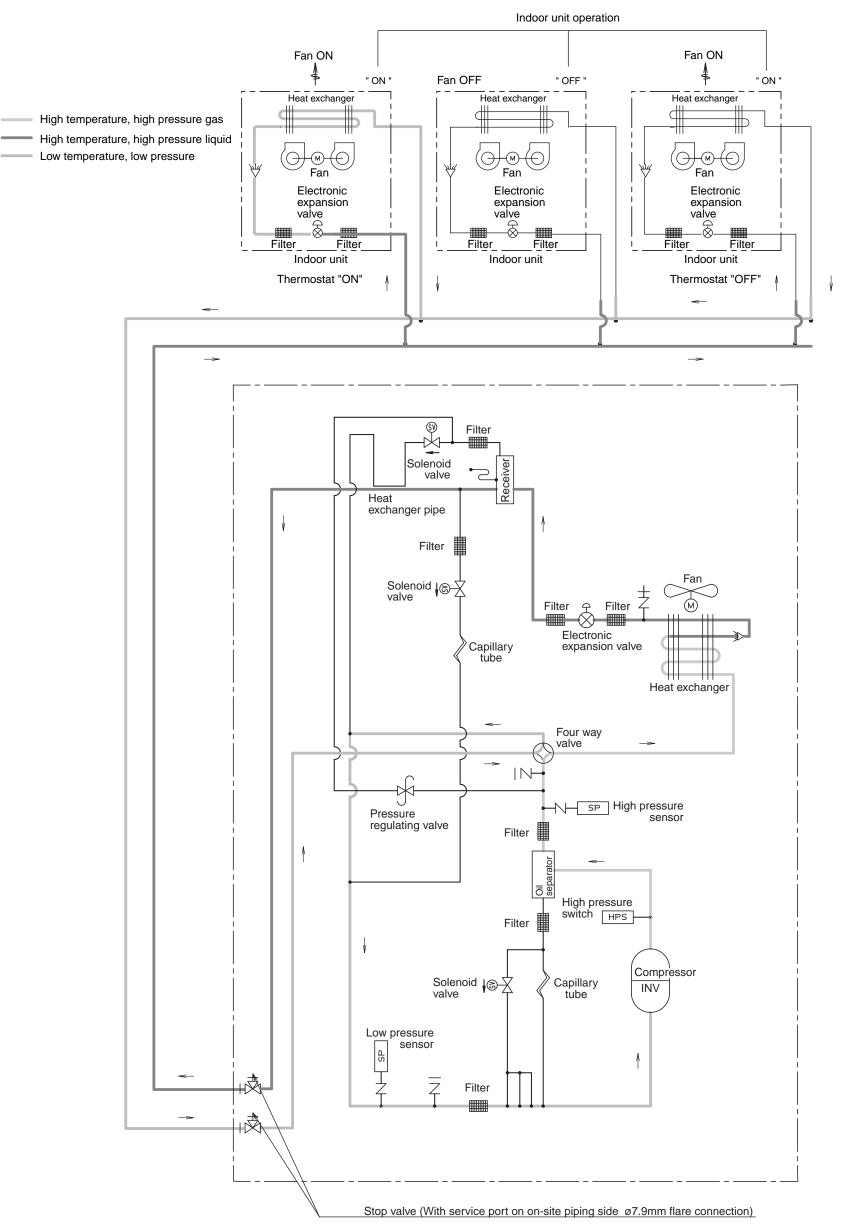


Front View



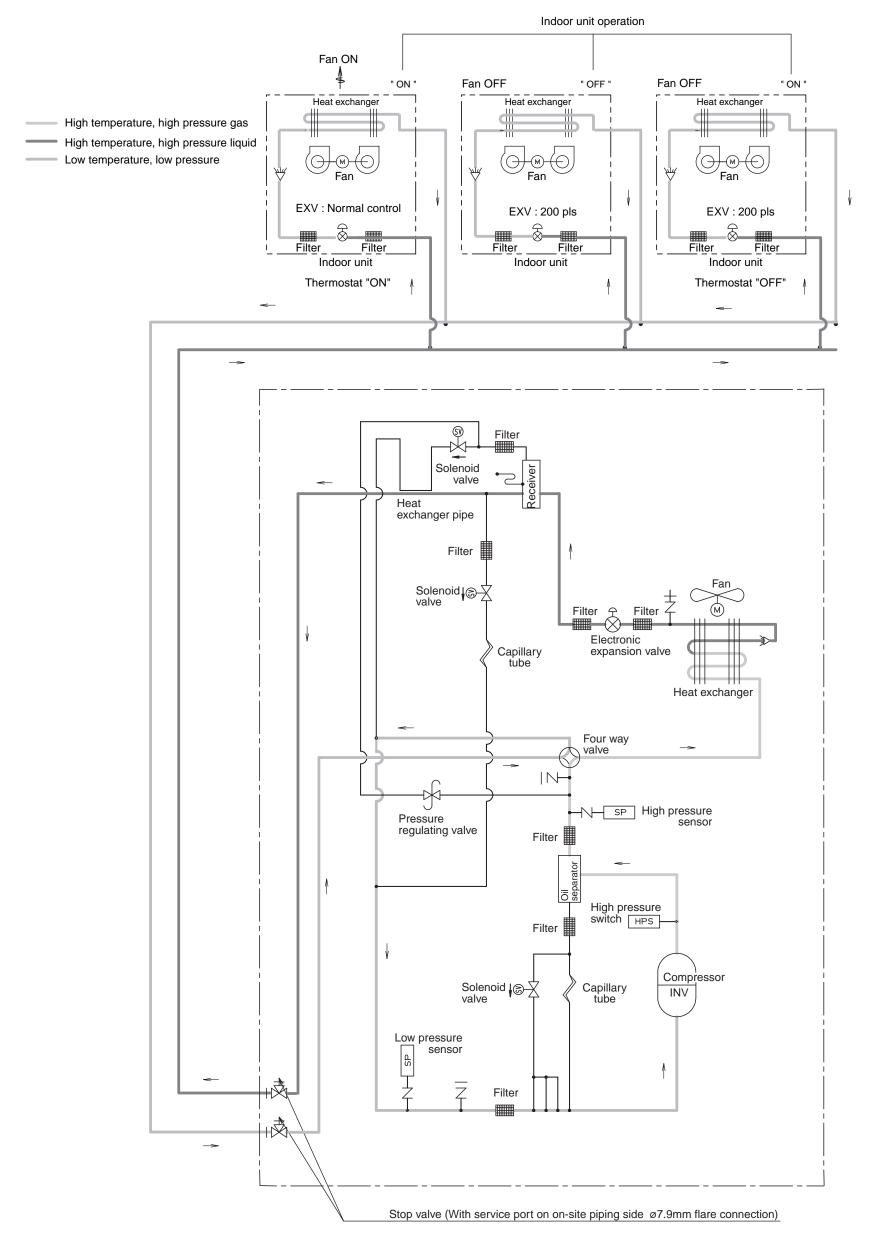
3. Refrigerant Flow for Each Operation Mode

RXYQ5M Cooling Operation



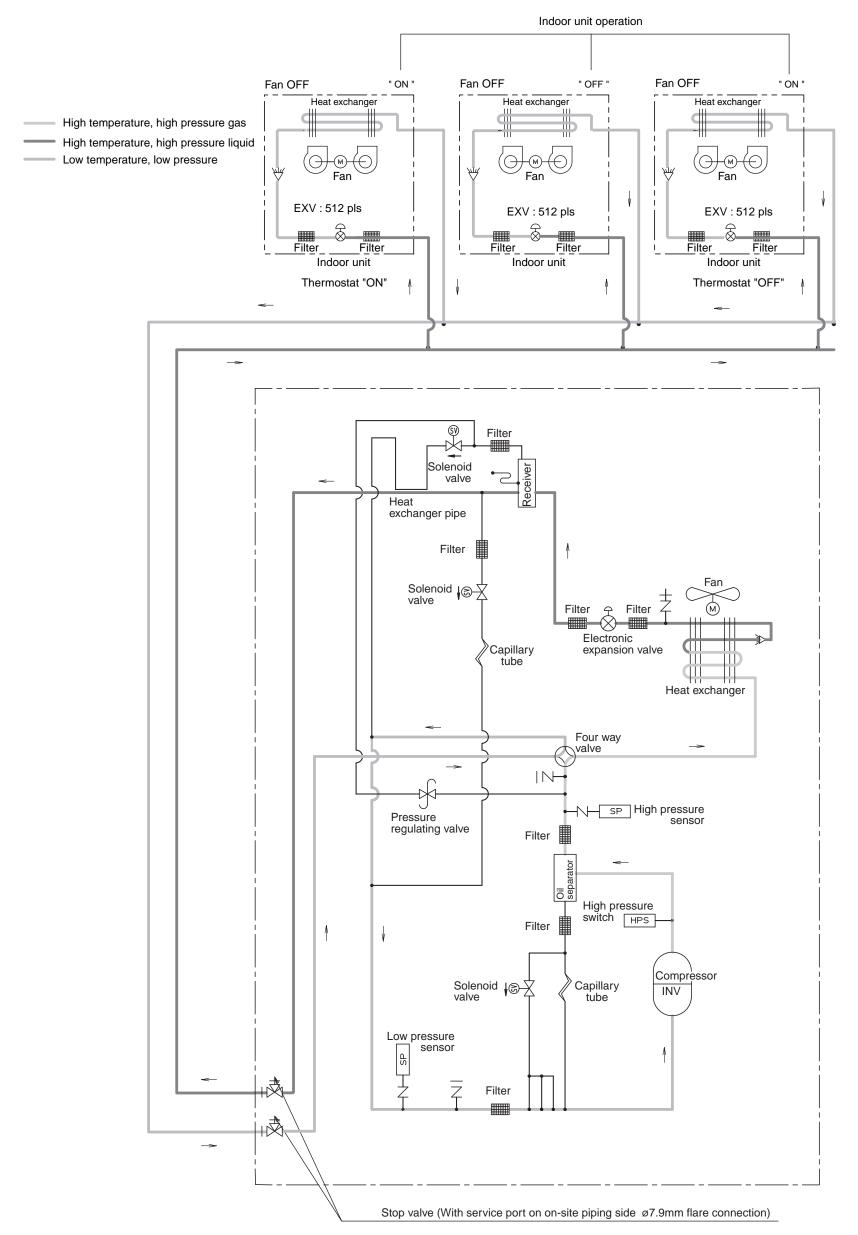
4D040337C

Cooling Oil Return Operation



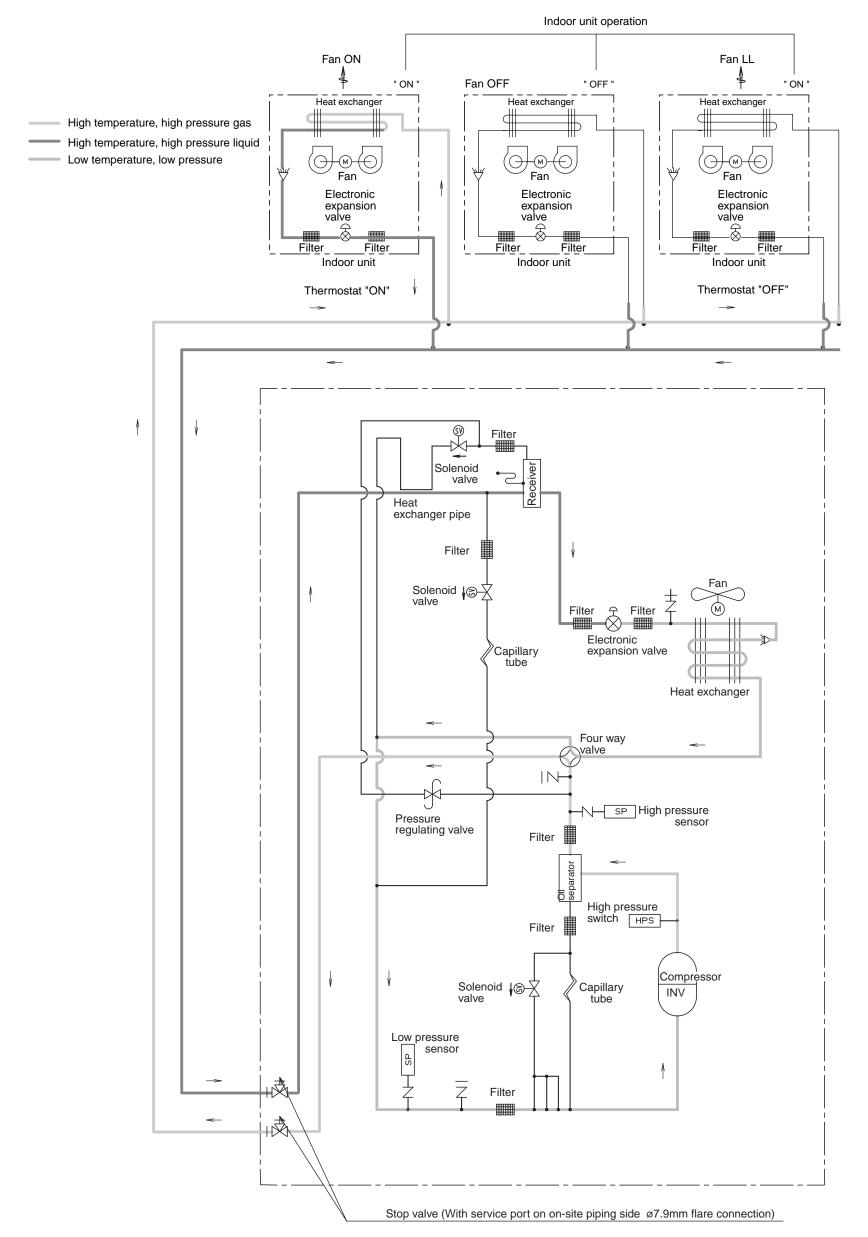
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Heating Oil Return & Defrost Operation



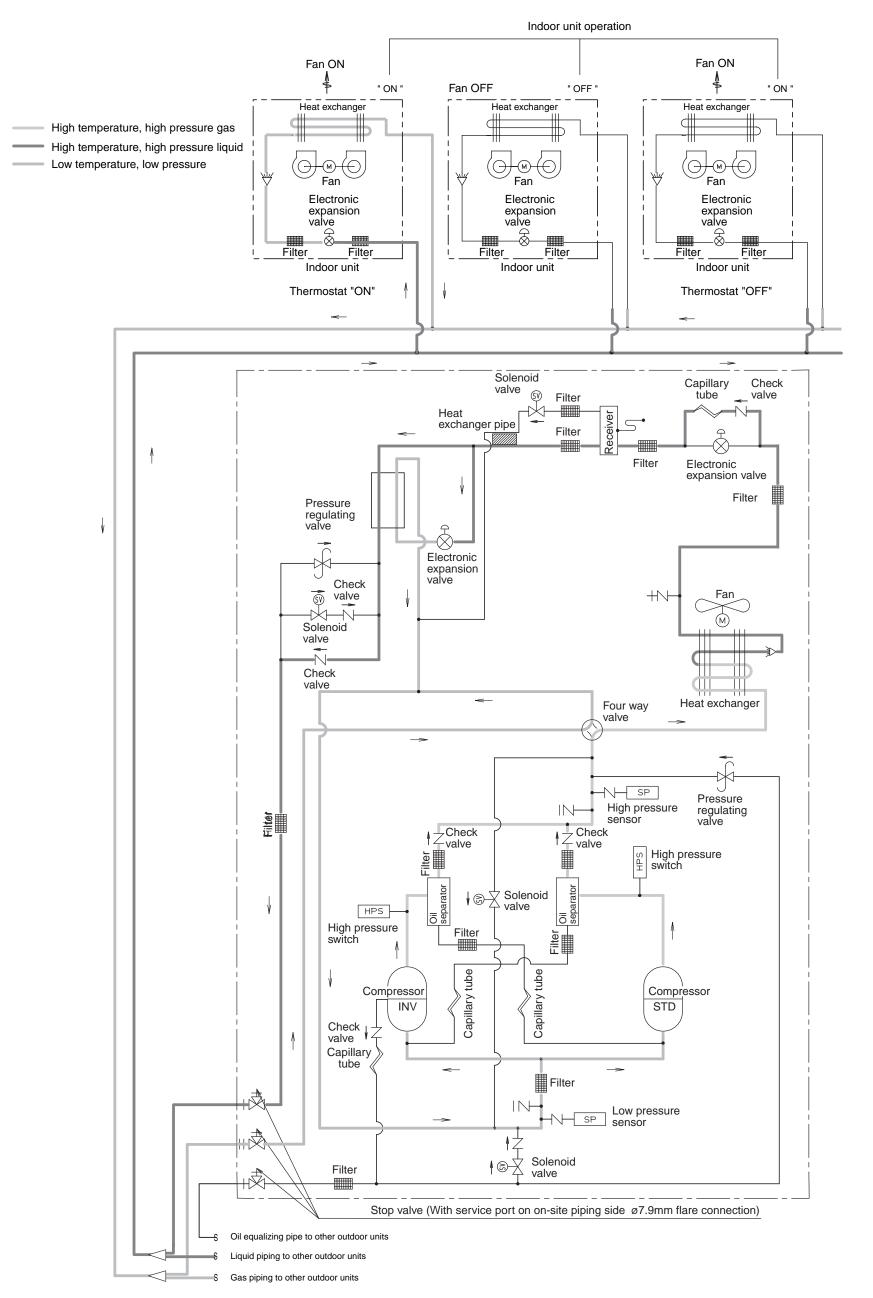
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Heating Operation



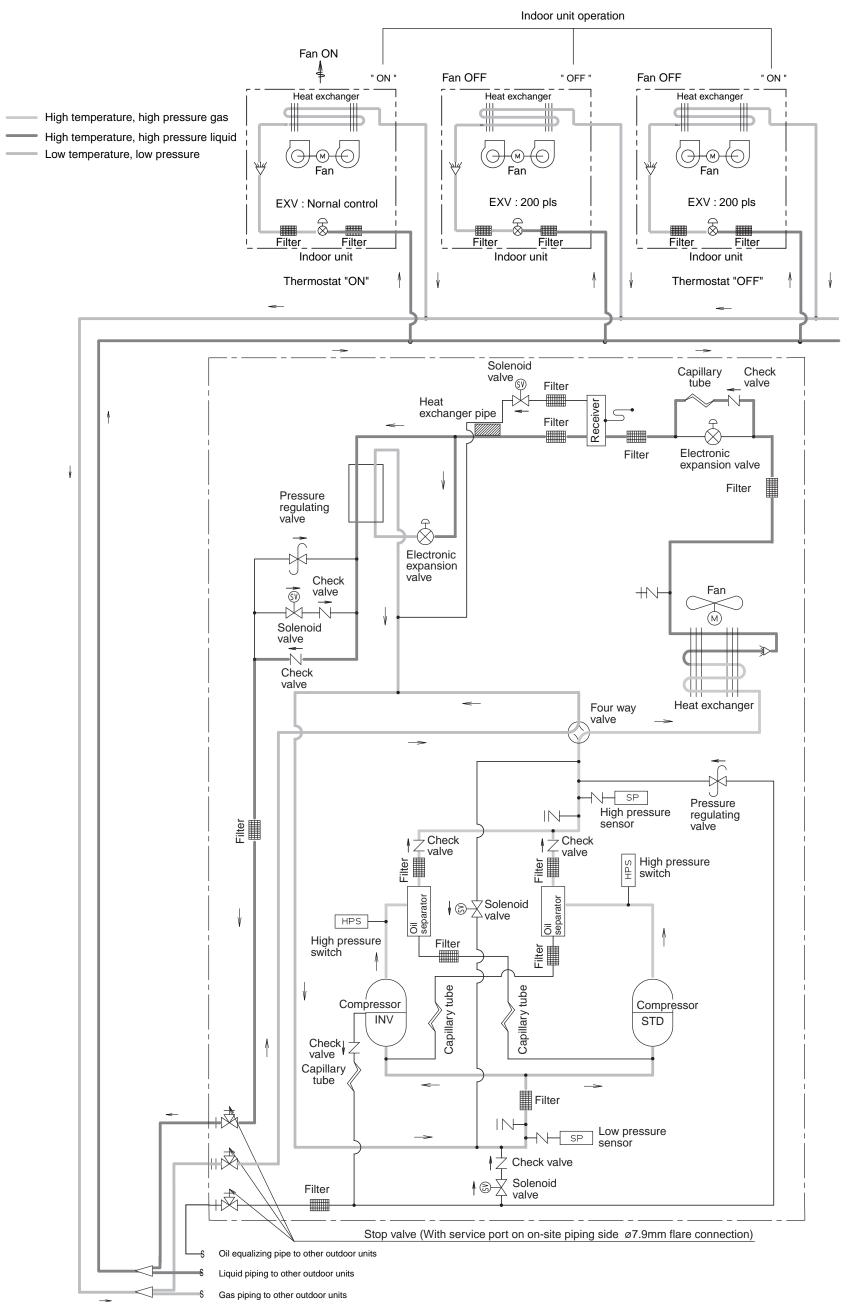
4D040337C

RXYQ8, 10, 12M Cooling Operation



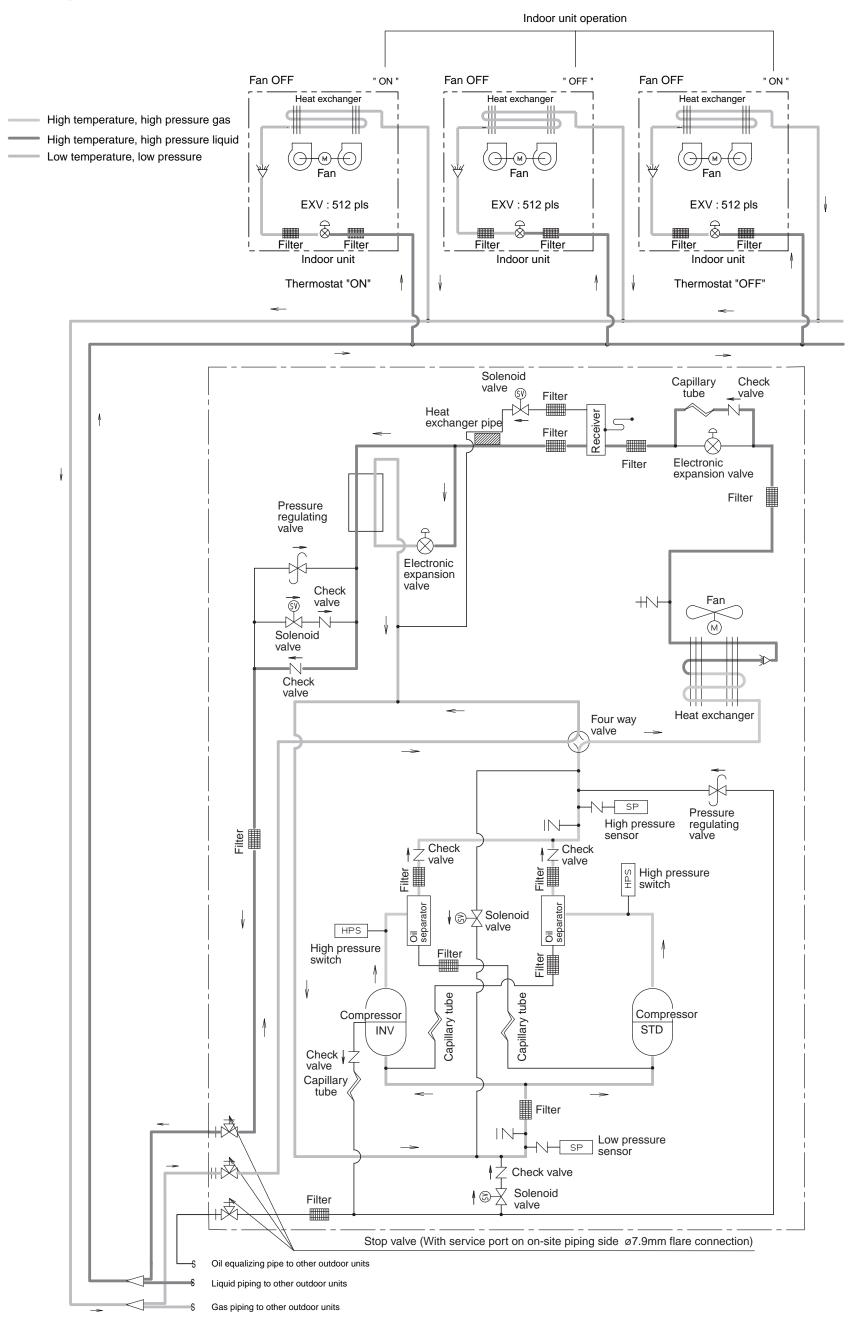
4D044808

Cooling Oil Return

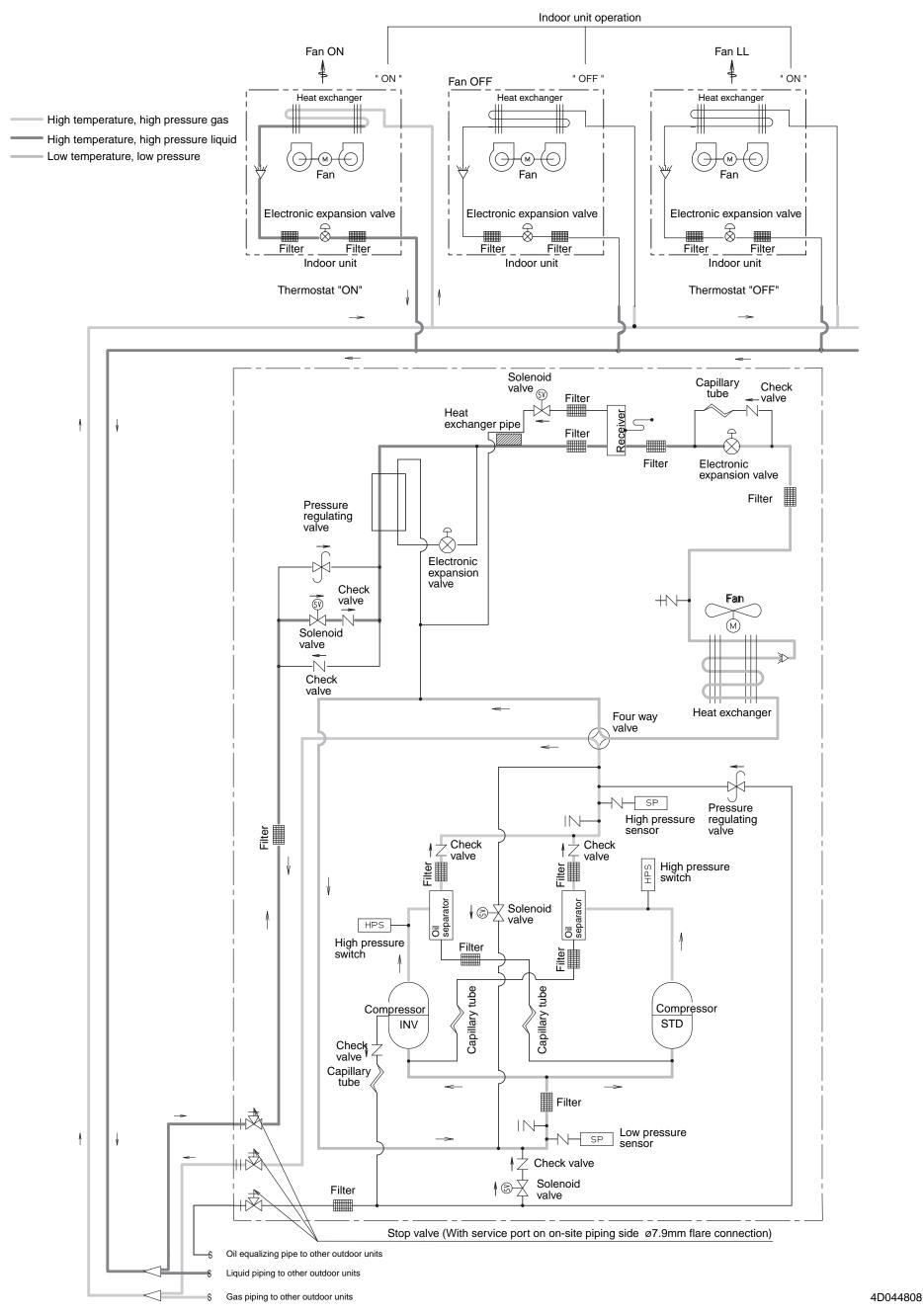


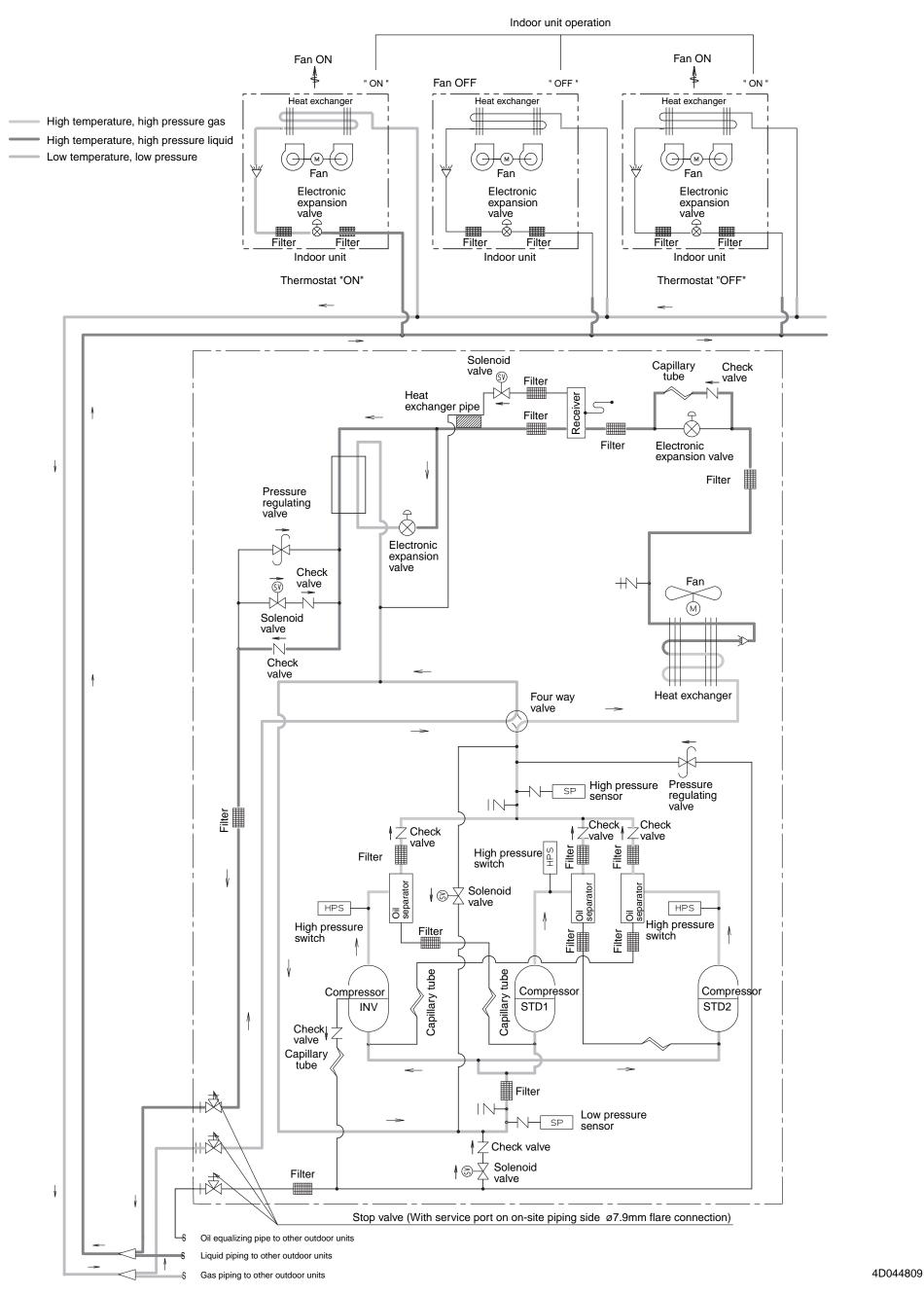
4D044808

Heating Oil Return & Defrost

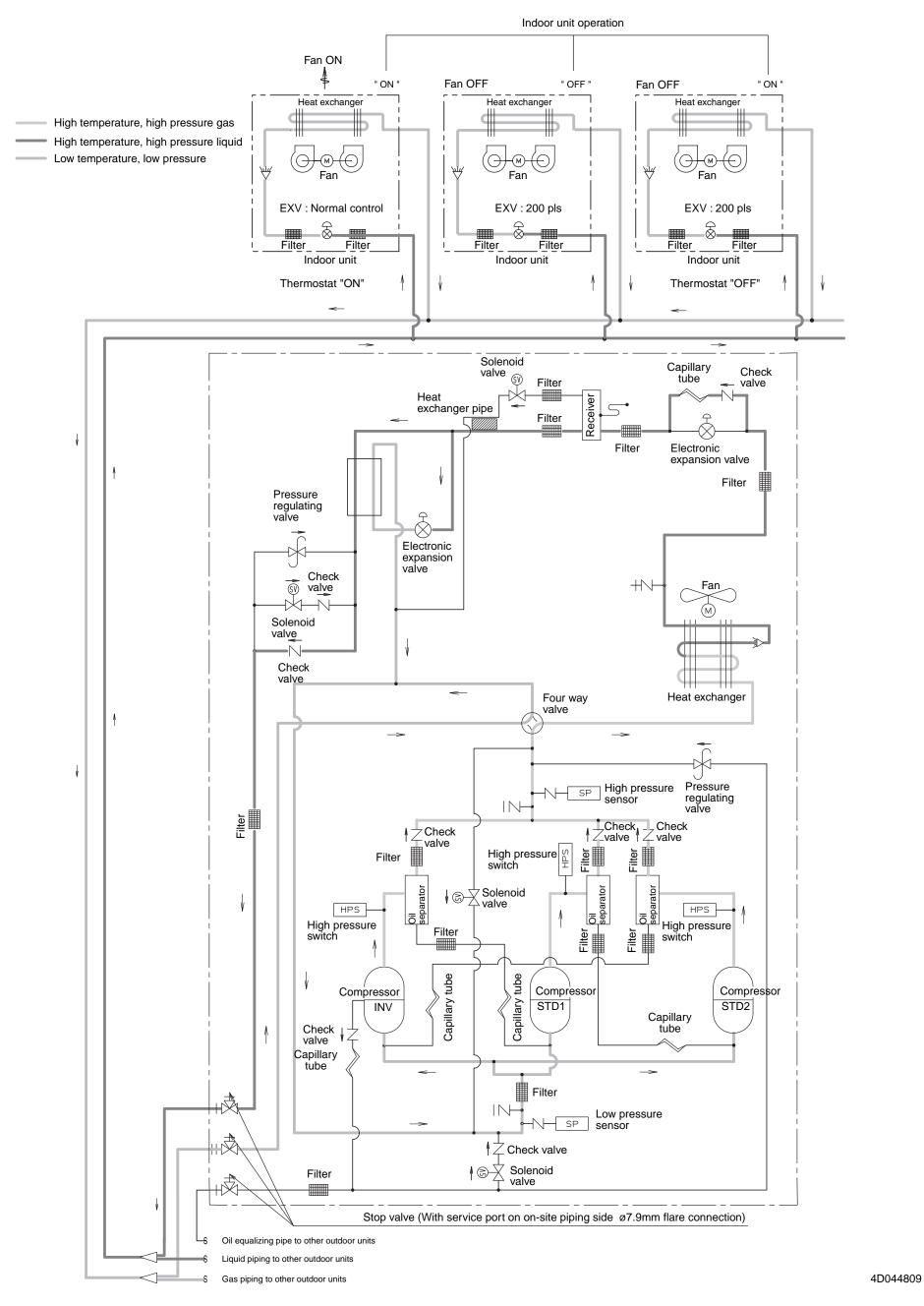


Heating Operation

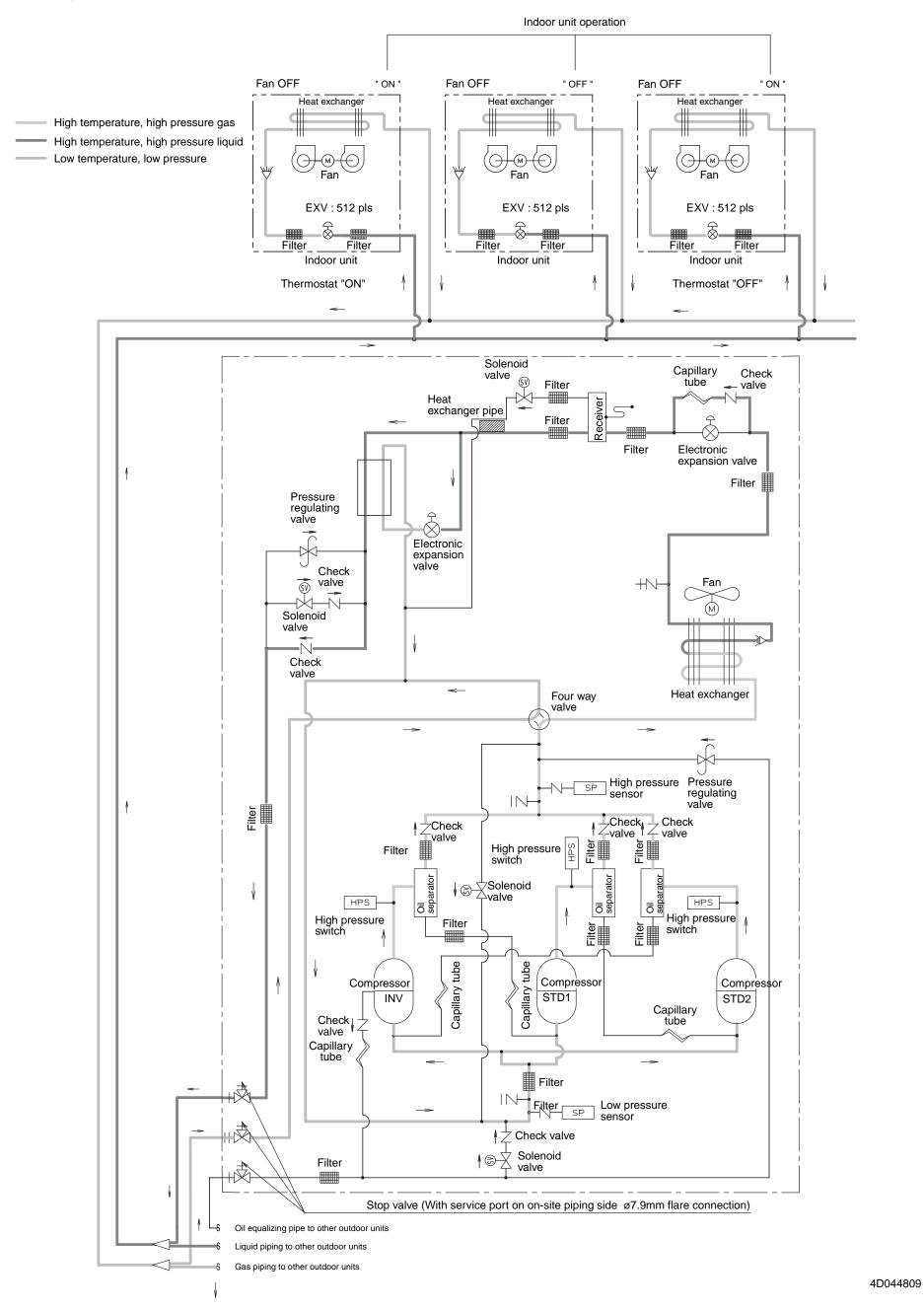




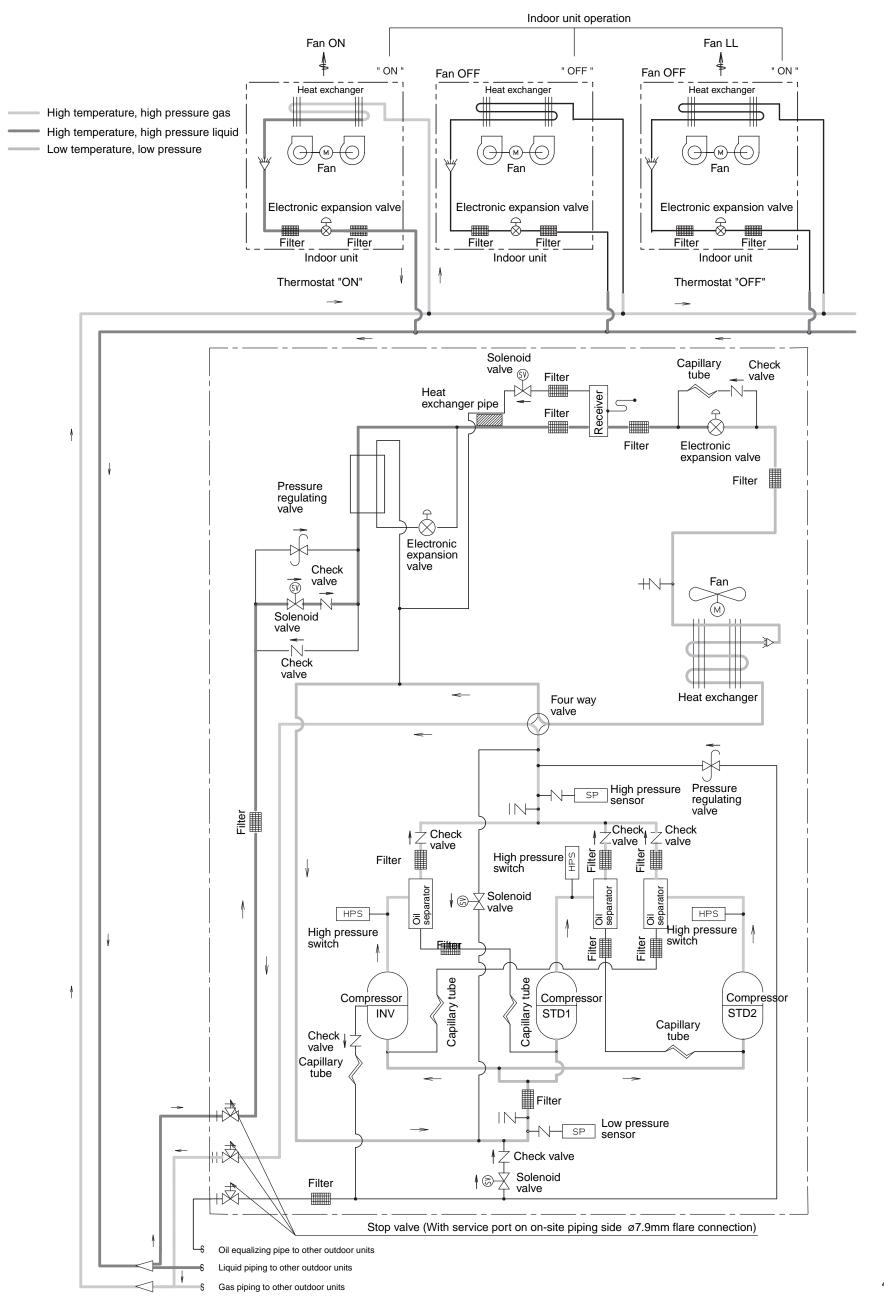
Cooling Oil Return Operation



Heating Oil Return & Defrost Operation



Heating Operation



4D044809

Part 4 Function

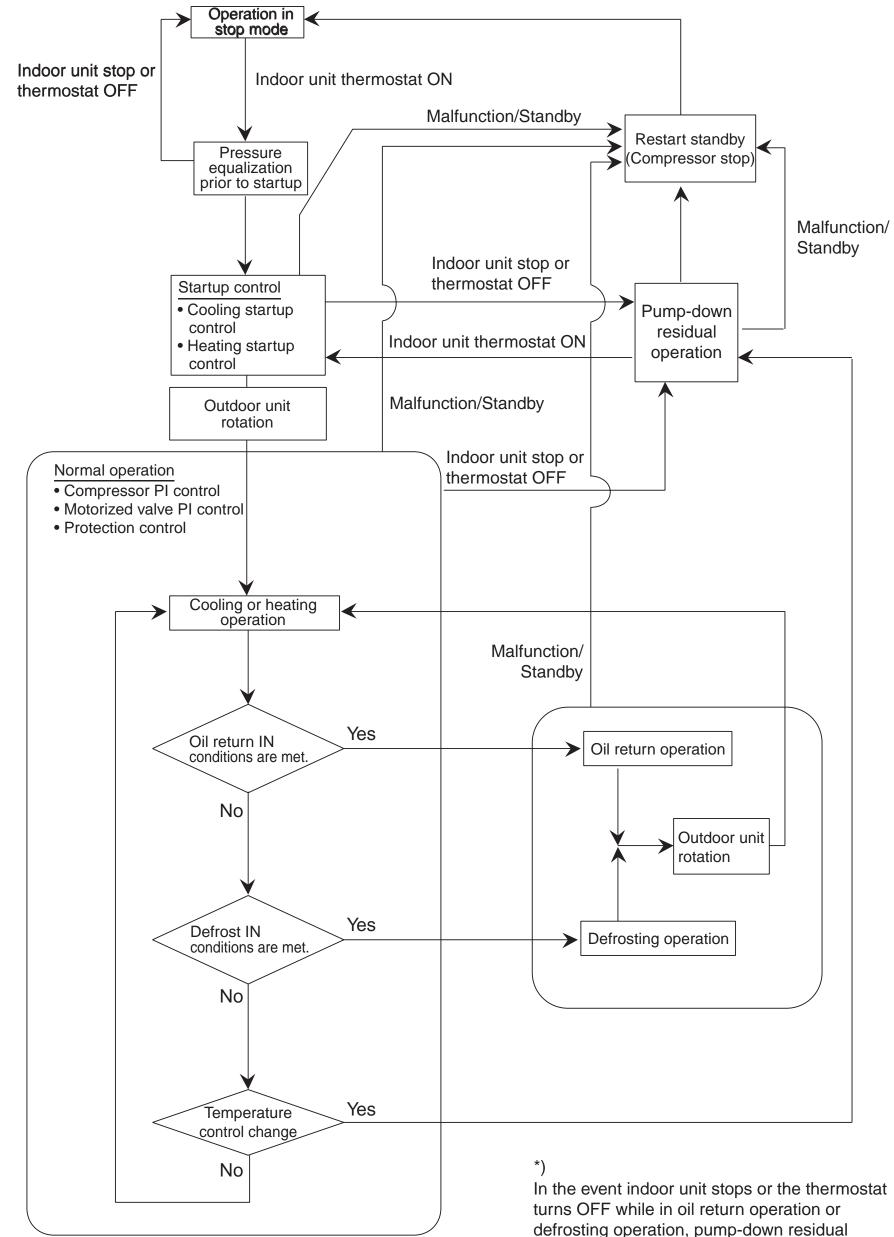
1.	Fund	ction general	74
	1.1	Symbol	74
	1.2	Operation Mode	75
2.	Basi	ic Control	76
	2.1	Normal Operation	76
	2.2	Compressor PI Control	77
	2.3	Electronic Expansion Valve PI Control	83
	2.4	Cooling Operation Fan Control	84
3.	Spe	cial Control	85
	3.1	Startup Control	85
	3.2	Oil Return Operation	86
	3.3	Defrosting Operation	88
	3.4	Pump-down Residual Operation	89
	3.5	Restart Standby	90
	3.6	Stopping Operation	91
	3.7	Pressure Equalization prior to Startup	93
4.	Prot	ection Control	94
	4.1	High Pressure Protection Control	94
	4.2	Low Pressure Protection Control	95
	4.3	Discharge Pipe Protection Control	96
	4.4	Inverter Protection Control	97
	4.5	STD Compressor Overload Protection	98
5.	Othe	er Control	99
	5.1	Outdoor Unit Rotation	
	5.2	Emergency Operation	.100
	5.3	Demand Operation	.102
	5.4	Heating operation prohibition	.102
6.	Outl	ine of Control (Indoor Unit)	.103
	6.1	Drain Pump Control	
	6.2	Louver Control for Preventing Ceiling Dirt	.105
	6.3	Thermostat Sensor in Remote Controller	.106
	6.4	Freeze Prevention	.108
	6.5	Control of outdoor air Processing unit	
		(Unique Control for Outdoor Air Treatment)	.109

1. Function general

1.1 Symbol

Symbol	Electric symbol	Description or function	
20S1	Y1R	Four way valve (Energize during heating)	
DSH	-	Discharge pie superheat	
DSHi	-	Discharge pie superheat of inverter compressor	
DSHs	-	Discharge pie superheat of standard compressor	
EV	-	Opening of electronic expansion valve	
EV1	Y1E	Electronic expansion valve for main heat exchanger	
EV2	Y2E	Electronic expansion valve for sub-coolig heat exchanger	
HTDi	_	Value of INV compressor discharge pie temperature (R31T) compensated with outdoor air temperature	
HTDs	_	Value of STD compressor discharge pie temperature (R32T, R33T) compensated with outdoor air temperature	
Pc	S1NPH	Value detected by high pressure sensor	
Pe	S1NPL	Value detected by low pressure sensor	
SH	-	Evaporator outlet superheat	
SHS	-	Target evaporator outlet superheat	
SVG	Y3S	Solenoid valve for discharging gas from receiver	
SVO	Y2S	Solenoid valve for oil equalizing	
SVP	Y1S	Solenoid valve for hot gas bypass	
SVSL	Y4S	Solenoid valve for non-operating unit liquid pipe closing	
Tb	R4T	Heat exchanger outlet temperature at cooling	
Тс	-	High pressure equivalent saturation temperature	
TcS	-	Target temperature of Tc	
Те	-	Low pressure equivalent saturation temperature	
TeS	-	Target temperature of Te	
Tfin	R1T	Inverter fin temperature	
Ts	R2T	Suction pie temperature detected by R2T	
Tsh	R5T	Temperature detected by R5T	
Тр	-	Calculated value of compressor port temperature	

1.2 **Operation Mode**



defrosting operation, pump-down residual operation is performed on completion of the oil return operation or defrosting operation.

2. Basic Control

2.1 Normal Operation

Cooling Operation

Actuator	Operation	Remarks
Compressor	Compressor PI control	Used for high pressure protection control, low pressure protection control, discharge pipe temperature protection control, and compressor operating frequency upper limit control with inverter protection control.
Outdoor unit fan	Cooling fan control	—
Four way valve	OFF	—
Main motorized valve (EV1)	1400 pls	—
Subcooling motorized valve (EV2)	PI control	—
Hot gas bypass valve (SVP)	OFF	This valve turns on with low pressure protection control.
Oil equalization valve (SVO)	ON	In the case of multi-outdoor-unit system, this valve repeats ON/OFF operation at regular intervals of time.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	

Heating Operation

Actuator	Operation	Remarks
Compressor	Compressor PI control	Used for high pressure protection control, low pressure protection control, discharge pipe temperature protection control, and compressor operating frequency upper limit control with inverter protection control.
Outdoor unit fan	STEP8 or 9	—
Four way valve	ON	—
Main motorized valve (EV1)	PI control	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF	This valve turns on with low pressure protection control.
Oil equalization valve (SVO)	ON	In the case of multi-outdoor-unit system, this valve repeats ON/OFF operation at regular intervals of time.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	—

HHeating operation is not functional at an outdoor air temperature of 24°C or more.

Compressor PI Control 2.2

Compressor PI Control

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

[Cooling operation]

achieve target value (TeS).

Te setting

L	M (Normal) (factory setting)	Н
3	6	9

[Heating operation]

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

Tc setting

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

Controls compressor capacity to adjust Te to Te : Low pressure equivalent saturation temperature (°C)

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

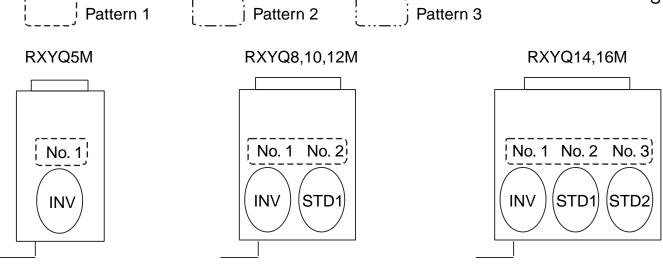
Tc: High pressure equivalent saturation temperature (°C)

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

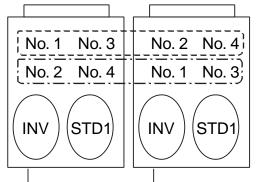
Compressor Operating Priority

Each compressor operates in the following order of priority. In the case of multi-outdoor-unit system, each compressor operates in any of Pattern 1 through Pattern 3 according to the rotation of outdoor units.

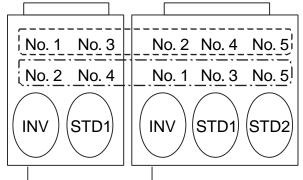
- INV: Inverter compressor STD1: Standard compressor 1
- STD2: Standard compressor 2



RXYQ18,20,22M



RXYQ24,2	26,28M
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RXYQ30,32M

No. 1 No. 3 No. 5	No. 2 No. 4 No. 6
(No. 2 No. 4 No. 6	No. 1 No. 3 No. 5
INV STD1 STD2	INV STD1 STD2

RXYQ34,36,38M

No.

No.

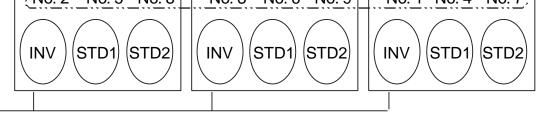
INV

RXYQ40,42,44M

. 1 No. 4	No. 2 No. 5	No. 3 No. 6 No. 7;	{ No. 1 No. 4	No. 2 No. 5 No. 7	No. 3 No. 6 No. 8
. <u>3</u> No. 6	No. 1 No. 4	No. 2 No. 5 No. 7	[No. 3 No. 6	No. 1 No. 4 No. 7	No. 2 No. 5 No. 8
. 2 No. 5	No. 3 No. 6	No. 1 No. 4 No. 7	No. 2 No. 5	No. 3 No. 6 No. 8	No. 1 No. 4 No. 7
y STD1	INV STD1	INV STD1 STD2	INV STD1	INV STD1 STD2	INV STD1 STD2

RXYQ46,48M

[No. 1 No.	o. 4 No. 7	No. 2	No. 5	No. 8	No. 3	No. 6	No. 9;
[<u>No. 3</u> No.	o. 6 No. 9	<u>No. 1</u>	No. 4	No. 7	<u>No. 2</u>	No. 5	<u>No. 8</u> j
No. 2 No. 2	o. 5 No. 8	No. 3	No. 6	No. 9	No. 1	No. 4	No. 7



- *
- In the case of combination of 3 outdoor units, the above diagram shows master unit, slave unit 1, and slave unit 2 from left to right.
- Compressors may operate in any pattern other than those mentioned above according to the operating status.

RXYQ5M

STEP	INV
1	52Hz
2	57Hz
1 2 3 4 5 6 7 8	62Hz
4	68Hz
5	74Hz
6	81Hz
7	88Hz
8	96Hz
9	104Hz
10	110Hz
11	116Hz
12	124Hz
13	133Hz
14	143Hz
15	158Hz
16	165Hz
17	177Hz
18	189Hz
19	202Hz
20	210Hz

RXYQ8,10,12M

	,	
STEP	INV	STD1
1	52Hz	OFF
1 2 3	57Hz	OFF
3	62Hz	OFF
4	68Hz	OFF
5	74Hz	OFF
6 7	81Hz	OFF
7	88Hz	OFF
8	96Hz	OFF
9	104Hz	OFF OFF
10	110Hz	OFF
11	116Hz	OFF
12 13	124Hz 133Hz	OFF
13	133Hz	OFF
14	143Hz	OFF
15	158Hz	OFF
16	165Hz	OFF
17	177Hz	OFF
18	177Hz 189Hz	OFF
19	202Hz	OFF
20	210Hz	OFF OFF
21 22	52Hz	ON
22	74Hz	ON
23 24 25	96Hz	ON
24	116Hz	ON
25	133Hz	ON
26 27 28	158Hz	ON
27	177Hz	ON
28	202Hz	ON
29	210Hz	ON

RXYQ14.16M

STEP	INV	STD1	STD2
1	52Hz	OFF	OFF
2	57Hz	OFF	OFF
3	62Hz	OFF	OFF
4	68Hz	OFF	OFF
5	74Hz	OFF	OFF
6	81Hz	OFF	OFF
7	88Hz	OFF	OFF
8	96Hz	OFF	OFF
9	104Hz	OFF	OFF
10	110Hz	OFF	OFF
11	116Hz	OFF	OFF
12	124Hz	OFF	OFF
13	133Hz	OFF	OFF
14	143Hz	OFF	OFF
15	158Hz	OFF	OFF
16	165Hz	OFF	OFF
17	177Hz	OFF	OFF
18	189Hz	OFF	OFF
19	202Hz	OFF	OFF
20	210Hz	OFF	OFF
21	52Hz	ON	OFF
22	74Hz	ON	OFF
23	96Hz	ON	OFF
24	116Hz	ON	OFF
25	133Hz	ON	OFF
26	158Hz	ON	OFF
27	177Hz	ON	OFF
28	202Hz	ON	OFF
29	210Hz	ON	OFF
30	52Hz	ON	ON
31	88Hz	ON	ON
32	124Hz	ON	ON
33	158Hz	ON	ON
34	189Hz	ON	ON
35*	210Hz	ON	ON

*)Available only on 50Hz

RXYQ24,26,28M

STEP	Master unit	Slave unit	STD unit	STD unit	STD unit
SIEP	INV	INV	No.1	No.2	No.3
1	52Hz	OFF	OFF	OFF	OFF
2	57Hz	OFF	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF	OFF
6	81Hz	OFF	OFF	OFF	OFF
7	88Hz	OFF	OFF	OFF	OFF
8	96Hz	OFF	OFF	OFF	OFF
9	104Hz	OFF	OFF	OFF	OFF
10	110Hz	OFF	OFF	OFF	OFF
11	116Hz	OFF	OFF	OFF	OFF
12	124Hz	OFF	OFF	OFF	OFF
13	133Hz	OFF	OFF	OFF	OFF
14	143Hz	OFF	OFF	OFF	OFF
15	158Hz	OFF	OFF	OFF	OFF
16	165Hz	OFF	OFF	OFF	OFF
17	177Hz	OFF	OFF	OFF	OFF
18	189Hz	OFF	OFF	OFF	OFF
19	202Hz	OFF	OFF	OFF	OFF
20	210Hz	OFF	OFF	OFF	OFF
21	52Hz	189Hz	OFF	OFF	OFF
22	74Hz	189Hz	OFF	OFF	OFF
23	96Hz	189Hz	OFF	OFF	OFF
24	116Hz	189Hz	OFF	OFF	OFF
25	133Hz	189Hz	OFF	OFF	OFF
26	158Hz	189Hz	OFF	OFF	OFF
27	177Hz	189Hz	OFF	OFF	OFF
28	202Hz	189Hz	OFF	OFF	OFF
29	210Hz	189Hz	OFF	OFF	OFF
30	52Hz	189Hz	ON	OFF	OFF
31	88Hz	189Hz	ON	OFF	OFF
32	124Hz	189Hz	ON	OFF	OFF
33	158Hz	189Hz	ON	OFF	OFF
34	189Hz	189Hz	ON	OFF	OFF
35	210Hz	189Hz	ON	OFF	OFF

RXYQ18,20,22M

STEP	Master unit	Slave unit	STD unit	STD unit
	INV	INV	No.1	No.2
1	52Hz	OFF	OFF	OFF
2	57Hz	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF
6	81Hz	OFF	OFF	OFF
7	88Hz	OFF	OFF	OFF
8	96Hz	OFF	OFF	OFF
9	104Hz	OFF	OFF	OFF
10	110Hz	OFF	OFF	OFF
11	116Hz	OFF	OFF	OFF
12	124Hz	OFF	OFF	OFF
13	133Hz	OFF	OFF	OFF
14	143Hz	OFF	OFF	OFF
15	158Hz	OFF	OFF	OFF
16	165Hz	OFF	OFF	OFF
17	177Hz	OFF	OFF	OFF
18	189Hz	OFF	OFF	OFF
19	202Hz	OFF	OFF	OFF
20	210Hz	OFF	OFF	OFF
21	52Hz	189Hz	OFF	OFF
22	74Hz	189Hz	OFF	OFF
23	96Hz	189Hz	OFF	OFF
24	116Hz	189Hz	OFF	OFF
25	133Hz	189Hz	OFF	OFF
26	158Hz	189Hz	OFF	OFF
27	177Hz	189Hz	OFF	OFF
28	202Hz	189Hz	OFF	OFF
29	210Hz	189Hz	OFF	OFF
30	52Hz	189Hz	ON	OFF
31	88Hz	189Hz	ÓN	OFF
32	124Hz	189Hz	ÓN	OFF
33	158Hz	189Hz	<u>ON</u>	OFF
34	189Hz	189Hz	ON	OFF
35	210Hz	189Hz	ON	OFF

34	18962	18982	UN	OFF
35	210Hz	189Hz	ON	OFF
36	52Hz	189Hz	ON	ON
37	88Hz	189Hz	ON	ON
38	124Hz	189Hz	ON	ON
39	158Hz	189Hz	ON	ON
40	189Hz	189Hz	ON	ON
41	210Hz	189Hz	ON	ON
42	210Hz	210Hz	ON	ON

35	210Hz	189Hz	ON	OFF	OFF
36	52Hz	189Hz	ON	ON	OFF
37	88Hz	189Hz	ON	ON	OFF
38	124Hz	189Hz	ON	ON	OFF
39	158Hz	189Hz	ON	ON	OFF
40	189Hz	189Hz	ON	ON	OFF
41	210Hz	189Hz	ON	ON	OFF
42	52Hz	189Hz	ON	ON	ON
43	104Hz	189Hz	ON	ON	ON
44	143Hz	189Hz	ON	ON	ON
45	189Hz	189Hz	ON	ON	ON
46	210Hz	189Hz	ON	ON	ON
47	210Hz	210Hz	ON	ON	ON

*

- Compressors are operated in the order of descending priorities. •
- Compressors may operate in a pattern other than those listed in above tables subject to the operating conditions. •
- "Master unit", and "slave unit" in this section are the names for control, and they will be transferred according to the • priority of rotation system.

RXYQ30,32M

	Master	Slave	STD	STD	STD	STD
STEP	unit	unit	unit	unit	unit	unit
OTEI	INV	INV	No.1	No.2	No.3	No.4
1	52Hz	OFF	OFF	OFF	OFF	OFF
2	57Hz	OFF	OFF	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF	OFF	OFF
6	81Hz	OFF	OFF	OFF	OFF	OFF
7	88Hz	OFF	OFF	OFF	OFF	OFF
8	96Hz	OFF	OFF	OFF	OFF	OFF
9	104Hz	OFF	OFF	OFF	OFF	OFF
10	110Hz	OFF	OFF	OFF	OFF	OFF
11	116Hz	OFF	OFF	OFF	OFF	OFF
12	124Hz	OFF	OFF	OFF	OFF	OFF
13	133Hz	OFF	OFF	OFF	OFF	OFF
14	143Hz	OFF	OFF	OFF	OFF	OFF
15	158Hz	OFF	OFF	OFF	OFF	OFF
16	165Hz	OFF	OFF	OFF	OFF	OFF
17	177Hz	OFF	OFF	OFF	OFF	OFF
18	189Hz	OFF	OFF	OFF	OFF	OFF
10	202Hz	OFF	OFF	OFF	OFF	OFF
20	210Hz	OFF	OFF	OFF	OFF	OFF
-						
21	52Hz	189Hz	OFF	OFF	OFF	OFF
22	74Hz	189Hz	OFF	OFF	OFF	OFF
23	96Hz	189Hz	OFF	OFF	OFF	OFF
24	116Hz	189Hz	OFF	OFF	OFF	OFF
25	133Hz	189Hz	OFF	OFF	OFF	OFF
26	158Hz	189Hz	OFF	OFF	OFF	OFF
27	177Hz	189Hz	OFF	OFF	OFF	OFF
28	202Hz	189Hz	OFF	OFF	OFF	OFF
29	210Hz	189Hz	OFF	OFF	OFF	OFF
30	52Hz	189Hz	ON	OFF	OFF	OFF
31	88Hz	189Hz	ON	OFF	OFF	OFF
32	124Hz	189Hz	ON	OFF	OFF	OFF
33	158Hz	189Hz	ON	OFF	OFF	OFF
34	189Hz	189Hz	ÔN	OFF	OFF	OFF
35	210Hz	189Hz	ON	OFF	OFF	OFF
36	52Hz	189Hz	ON	ON	OFF	OFF
37	88Hz	189Hz	ON	ON	OFF	OFF
38	124Hz	189Hz	ON	ON	OFF	OFF
39	158Hz	189Hz	ON	ON	OFF	OFF
<u> </u>	189Hz	189Hz	ON	ON	OFF	OFF
40	210Hz	189Hz		ON	OFF	OFF
••		100112	•••	•••	• · ·	• · ·
42	52Hz	189Hz	ON	ON	ON	OFF
43	104Hz	189Hz	ON	ON	ON	OFF
44	143Hz	189Hz	ON	ON	ON	OFF
45	189Hz	189Hz	ON	ON	ON	OFF
46	210Hz	189Hz	ON	ON	ON	OFF
47	52Hz	189Hz	ON	ON	ON	ON
48	104Hz	189Hz	ON	ON	ON	ON
49	143Hz	189Hz	ON	ON	ON	ON
50	189Hz	189Hz	ON	ON	ON	ON
51	210Hz	189Hz	ON	ON	ON	ON
52	210Hz	210Hz	ON	ON	ON	ON
52		210112				

OTED	Master	Slave	Slave	STD	STD	STD	STD
STEP	unit INV	unit1 INV	unit2 INV	unit No.1	unit No.2	unit No.3	unit No.4
1		OFF	OFF	OFF	OFF	OFF	OFF
<u>1</u> 2	52Hz 57Hz	OFF	OFF	OFF	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF	OFF	OFF	OFF
			OFF	OFF	OFF	OFF	OFF
6	81Hz 88Hz	OFF OFF	OFF	OFF	OFF	OFF	OFF
<u>7</u> 8	96Hz	OFF	OFF	OFF	OFF	OFF	OFF
9		OFF	OFF	OFF	OFF	OFF	OFF
<u>9</u> 10	104Hz 110Hz	OFF	OFF	OFF	OFF	OFF	OFF
11		OFF	OFF	OFF	OFF	OFF	OFF
12	116Hz 124Hz	OFF	OFF	OFF	OFF	OFF	OFF
12	124HZ 133Hz	OFF	OFF	OFF	OFF	OFF	OFF
13		OFF	OFF	OFF	OFF	OFF	OFF
	143Hz	OFF	OFF	OFF	OFF	OFF	OFF
15	158Hz						
16	165Hz	OFF	OFF	OFF	OFF	OFF	OFF
17	177Hz	OFF	OFF	OFF	OFF	OFF	OFF
18	189Hz 202Hz	OFF	OFF	OFF	OFF	OFF	OFF
<u>19</u> 20	202HZ 210Hz	OFF OFF	OFF OFF	OFF OFF	OFF OFF	OFF OFF	OFF OFF
21	52Hz	189Hz	OFF	OFF	OFF	OFF	OFF
22	74Hz	189Hz	OFF	OFF	OFF	OFF	OFF
23	96Hz	189Hz	OFF	OFF	OFF	OFF	OFF
24	116Hz	189Hz	OFF	OFF	OFF	OFF	OFF
25	133Hz	189Hz	OFF	OFF	OFF	OFF	OFF
26	158Hz	189Hz	OFF	OFF	OFF	OFF	OFF
27	177Hz	189Hz	OFF	OFF	OFF	OFF	OFF
28	202Hz	189Hz	OFF	OFF	OFF	OFF	OFF
29	210Hz	189Hz	OFF	OFF	OFF	OFF	OFF
30	52Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
31	88Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
32	124Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
33	158Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
34	189Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
35	210Hz	189Hz	189Hz	OFF	OFF	OFF	OFF
36	52Hz	189Hz	189Hz	ON	OFF	OFF	OFF
37	88Hz	189Hz	189Hz	ON	OFF	OFF	OFF
38	124Hz	189Hz	189Hz	ON	OFF	OFF	OFF
39	158Hz	189Hz	189Hz	ON	OFF	OFF	OFF
40	189Hz	189Hz	189Hz	ON	OFF	OFF	OFF
41	210Hz	189Hz	189Hz	ON	OFF	OFF	OFF
42	52Hz	189Hz	189Hz	ON	ON	OFF	OFF
43	104Hz	189Hz	189Hz	ON	ON	OFF	OFF
44	143Hz	189Hz	189Hz	ON	ON	OFF	OFF
45	189Hz	189Hz	189Hz	ON	ON	OFF	OFF
46	210Hz	189Hz	189Hz	ON	ON	OFF	OFF
47	52Hz	189Hz	189Hz	ON	ON	ON	OFF
48	104Hz	189Hz	189Hz	ON	ON	ON	OFF
49	143Hz	189Hz	189Hz	ON	ON	ON	OFF
50	189Hz	189Hz	189Hz	ON	ON	ON	OFF
51	210Hz	189Hz	189Hz	ON	ON	ON	OFF
52	52Hz	189Hz	189Hz	ON	ON	ON	ON
53	104Hz	189Hz	189Hz	ON	ON	ON	ON
54	143Hz	189Hz	189Hz	ON	ON	ON	ON
55	189Hz	189Hz	189Hz	ON	ON	ON	ON
56	210Hz	189Hz	189Hz	ON	ON	ON	ON
~~	210Hz	210Hz	210Hz	ON	ON	ON	ON

- *
- Compressors are operated in the order of descending priorities.
- Compressors may operate in a pattern other than those listed in above tables subject to the operating conditions.
- "Master unit", and "slave unit" in this section are the names for control, and they will be transferred according to the priority of rotation system.

RXYQ34,36,38M

RXYQ40,42,44M

STEP	Master unit INV		Slave unit2 INV		STD unit No.2	STD unit No.3	STD unit No.4	STD unit No.
1	52Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	57Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
6	81Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
7	88Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8	96Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
9	104Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
10	110Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
11	116Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
12	124Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
13	133Hz	ÖFF	OFF	ÖFF	OFF	ÖFF	ÖFF	ÖFF
14	143Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
15	158Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
16	165Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
17	177Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
18	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
19	202Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		OFF	OFF	OFF	OFF	OFF	OFF	OFF
20	210Hz				•			
21	52Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
22	74Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
23	96Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
24	116Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
25	133Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
26	158Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
27	177Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
28	202Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
29	210Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
		•						
30	52Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
31	88Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
32	124Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
33	158Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
34	189Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
35	210Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF
36	52Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF
37	88Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF
38	124Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF
39	158Hz	189Hz	189Hz	ON ON	OFF	ÖFF	ÖFF	OFF
40	189Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF
41	210Hz	189Hz	189Hz	ON ON	OFF	OFF	OFF	OFF
				÷				
42	52Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF
43	104Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF
44	143Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF
45	189Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF
46	210Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF
47	52Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF
48	104Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF
49	143Hz	189Hz	189Hz	ON ON	ON ON	ON ON	ÖFF	ÖFF
50	189Hz	189Hz	189Hz	ON ON	ON ON	ON ON	OFF	OFF
51	210Hz	189Hz	189Hz	ON ON	ON ON	ON ON	OFF	OFF
			•					
52	52Hz	189Hz	189Hz	ON	ON	ON	ON	OFF
53	104Hz	189Hz	189Hz	ON	ON	ON	ON	OFF
54	143Hz	189Hz	189Hz	ON	ON	ON	ON	OFF
55	189Hz	189Hz	189Hz	ON	ON	ON	ON	OFF
56	210Hz	189Hz	189Hz	ON	ON	ON	ON	OFF
57	52Hz	189Hz	189Hz	ON	ON	ON	ON	ON
58	104Hz	189Hz	189Hz	ON ON	ON	ON	ON ON	- ON
59	143Hz	189Hz	189Hz	ON ON	ON ON	ON ON	ON	ON
								ON
	189H7	189H7	189H7	()N	C IN	()11	C JN	()/\
<u>60</u> 61	189Hz 210Hz	189Hz 189Hz	189Hz 189Hz	ON ON	ON ON	ON ON	ON ON	ON

*

• Compressors are operated in the order of descending priorities.

- Compressors may operate in a pattern other than those listed in above tables subject to on the operating conditions.
- "Master unit", "slave unit 1" and "slave unit 2" in this section are the names for control, and they will be transferred according to the priority of rotation system.

RXYQ46,48M

STEP	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD unit No.1	STD unit No.2	STD unit No.3	STD unit No.4	STD unit No.5	STD unit No
1	52Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	57Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	62Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	68Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
5	74Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
6	81Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
7	88Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8	96Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
9	104Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
10	110Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
11	116Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
12	124Hz	OFF	OFF	OFF	OFF	OFF	ÖFF	OFF	OFF
13	133Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
14	143Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
15	158Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
16	165Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
							OFF		
17	177Hz	OFF	OFF	OFF	OFF	OFF		OFF	OFF
18	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
19	202Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
20	210Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
21	52Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
22	74Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
23	96Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
23	116Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
24	133Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
26	158Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
27	177Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
28	202Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
29	210Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF	OFF
30	52Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
31	88Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
32	124Hz	189Hz	189Hz	OFF	OFF	OFF	ÖFF	OFF	OFF
33	158Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
34	189Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
35	210Hz	189Hz	189Hz	OFF	OFF	OFF	OFF	OFF	OFF
36	52Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF	OFF
37	88Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF	OFF
38	124Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF	OFF
39	158Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF	OFF
40	189Hz	189Hz	189Hz	ON	OFF	OFF	OFF	OFF	OFF
41	210Hz	189Hz	189Hz	ÓN	OFF	OFF	OFF	OFF	OFF
42	52Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF	OFF
43	104Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF	OFF
44	143Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF	OFF
45	189Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF	OFF
46	210Hz	189Hz	189Hz	ON	ON	OFF	OFF	OFF	OFF
47	52Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF	OFF
48	104Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF	OFF
49	143Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF	OFF
50	189Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF	OFF
<u> </u>	210Hz	189Hz	189Hz	ON	ON	ON	OFF	OFF	OFF
52	52Hz	189Hz	189Hz	ON	ON	ON	ON	OFF	OFF
53	104Hz	189Hz	189Hz	ON	ON	ON	ON	OFF	OFF
54	143Hz	189Hz	189Hz	ON	ON	ON	ON	OFF	OFF
55	189Hz	189Hz	189Hz	ON	ON	ON	ON	OFF	OFF
56	210Hz	189Hz	189Hz	ON	ON	ON	ON	OFF	OFF
57	52Hz	189Hz		ON	ON	ON	ON	ON	OFF
			189Hz						
58	104Hz	189Hz	189Hz	ON	ON	ON	ON	ON	OFF
59	143Hz	189Hz	189Hz	ON	ON	ON	ON	ON	OFF
60	189Hz	189Hz	189Hz	ON	ON	ON	ON	ON	OFF
61	210Hz	189Hz	189Hz	ON	ON	ON	ON	ON	OFF
62	52Hz	189Hz	189Hz	ON	ON	ON	ON	ON	ON
63	104Hz	189Hz	189Hz	ON	ON	ON	ON	ON	ON
64	143Hz	189Hz	189Hz	ON	ON	ON	ON	ON	ON
<u>65</u>	143HZ 189Hz	189Hz	189Hz	ON	ON	ON	ON	ON	ON
66 66	210Hz	189Hz	189Hz	ON ON	ON				-
			109772			ON	ON	ON	ON

*) Only for 50Hz

- *
- Compressors are operated in the order of descending priorities.
- Compressors may operate in a pattern other than those listed in above tables subject to on the operating conditions.
- "Master unit", "slave unit 1" and "slave unit 2" in this section are the names for control, and they will be transferred according to the priority of rotation system.

2.3 Electronic Expansion Valve PI Control

Main Motorized Valve EV1 Control

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

SH = Ts - Te	SH	: Ev	vapo	rator	outlet	t super	heate	ed d	egr	ee (°0	C)
	_	-		-							-

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

Te : Low pressure equivalent saturation temperature (°C)

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

Subcooling Motorized Valve EV2 Control

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

SH = Tsh -Te

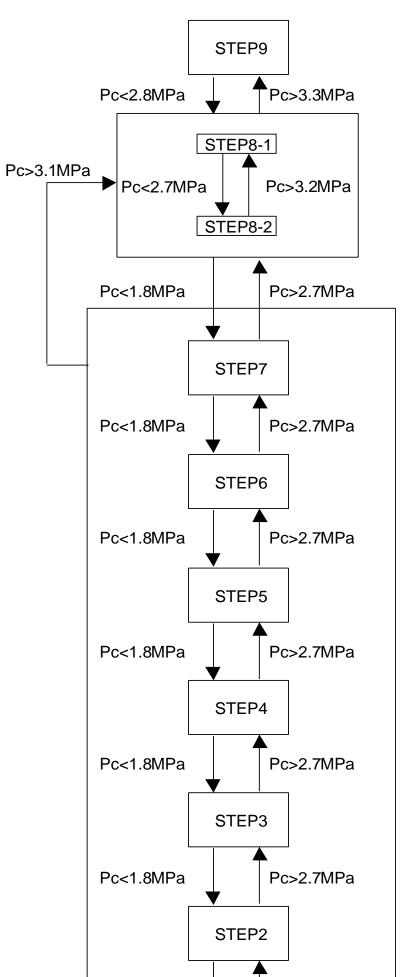
SH : Outlet superheated degree of evaporator (°C)

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

Te : Low pressure equivalent saturation temperature (°C)

2.4 Cooling Operation Fan Control

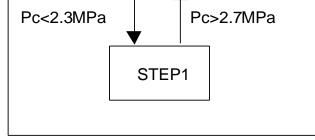
In cooling operation with low outdoor air temperature, this control is used to provide the adequate amount of circulation air with liquid pressure secured by high pressure control using outdoor unit fan.



Pc: HP pressure sensor detection value

Fan Steps

	RXYQ5M	RXYQ	RXYQ
		8 and 10M	12 to 16M
STEP1	0rpm	0rpm	Orpm
STEP2	300rpm	300rpm	300rpm
STEP3	320rpm	320rpm	325rpm
STEP4	350rpm	345rpm	355rpm
STEP5	385rpm	385rpm	400rpm
STEP6	470rpm	465rpm	500rpm
STEP7	585rpm	575rpm	630rpm
STEP8-2	800rpm	660rpm	710rpm
STEP8-1	800rpm	785rpm	880rpm
STEP9	840rpm	825rpm	920rpm



3. Special Control

3.1 Startup Control

3.1.1 Startup Control in Cooling Operation

Actuator	Operation	Remarks
Compressor	Differential pressure control	Compressor operating frequency increases by 1 step / 20 sec until Pc - Pe>0.4 MPa.
Outdoor unit fan	High pressure control	Initial compressor operating frequency is set to STEP 1. 1-step increase with Pc>2.2 MPa 1-step decrease with Pc<1.8 MPa
Four way valve	OFF	—
Main motorized valve (EV1)	1400 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	ON	—
Oil equalization valve (SVO)	ON	In the case of multi-outdoor-unit system, this valve repeats ON/OFF operation at regular intervals of time to equalize the oil level of each outdoor unit.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	—
Ending conditions	or • 200 sec. • Pc - Pe>0.4 MPa	

- * In the case of multi-outdoor-unit system, both master and slave units perform the operations listed in the table above.
- * Actuators are based on RXYQ16M.

3.1.2 Startup Control in Heating Operation

Actuator	Operation	Remarks
Compressor	Differential pressure control	Compressor operating frequency increases by 1 step / 20 sec until Pc - Pe>0.4 MPa.
Outdoor unit fan	STEP9	—
Four way valve	ON	—
Main motorized valve (EV1)	200 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	ON	—
Oil equalization valve (SVO)	ON	In the case of multi-outdoor-unit system, this valve repeats ON/OFF operation at regular intervals of time to equalize the oil level of each outdoor unit.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	
Ending conditions	or • 200 sec. • Pc - Pe>0.4 MPa	

- * In the case of multi-outdoor-unit system, both master and slave units perform the operations listed in the table above.
- * Actuators are based on RXYQ16M.

3.2 Oil Return Operation

3.2.1 Oil Return Operation in Cooling Operation

Outdoor unit actuator	Oil return preparation operation	Oil return operation	Post-oil-return operation
Compressor	Upper limit control	124 Hz + ON + OFF	52 Hz + OFF + OFF
Outdoor unit fan	Fan control	Fan control	Fan control
Four way valve	OFF	OFF	OFF
Main motorized valve (EV1)	1400 pls	1400 pls	1400 pls
Subcooling motorized valve (EV2)	SH control	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Oil equalization valve (SVO)	ON	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON	ON
Ending conditions	2 min.	or 6 min. • Ts - Te<5	10 sec.

* In the case of multi-outdoor-unit system,

Master unit: Performs the operations listed in the table above.

Slave units: Operating units perform the operations listed in the table above.

Non-operating units perform the operations listed in the table above from the oil return operation. (Non-operating unit stops during "oil return preparation operation".)

* Actuators are based on RXYQ16M.

In	door unit actuator	Cooling oil return operation
	Thermostat ON unit	Set Air Volume
Fan	Stopping unit	OFF
	Thermostat OFF unit	OFF
	Thermostat ON unit	Normal opening
Electronic expansion valve	Stopping unit	200 pls
	Thermostat OFF unit	200 pls

3.2.2 Oil Return Operation in Heating Operation

=			
Outdoor Unit Actuator	Oil return preparation operation	Oil return operation	Post-oil-return operation
Compressor	Upper limit control	124 Hz + ON + OFF	1-step increase from (74 Hz + OFF + OFF) to (Pc - Pe>0.4 MPa) time
Outdoor unit fan	STEP8 or STEP9	OFF	STEP9
Four way valve	ON	OFF	ON
Main motorized valve (EV1)	SH control	1400 pls	180 pls
Subcooling motorized valve (EV2)	0 pls	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Oil equalization valve (SVO)	ON	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON	ON
Ending conditions	2 min.	or 6 min. • Ts - Te<5	or • 160 sec. • Pc - Pe>0.4MPa

* In the case of multi-outdoor-unit system,

Master unit: Performs the operations listed in the table above.

Slave units: Operating units perform the operations listed in the table above.

Non-operating units perform the operations listed in the table above from the oil return operation.

(Non-operating unit stops during "oil return preparation operation".)

* Actuators are based on RXYQ16M.

Indoor unit actuator		Heating oil return operation
	Thermostat ON unit	OFF
Fan	Stopping unit	OFF
	Thermostat OFF unit	OFF
	Thermostat ON unit	512 pls
Electronic expansion valve	Stopping unit	512 pls
	Thermostat OFF unit	512 pls

<In condition of oil return operation>

Compressor cumulative operation time > 8 hours

(However, 2 hours after turning power on first time.)

3.3 Defrosting Operation

Outdoor unit actuator	Defrost preparation operation	Defrost operation	Post Defrost operation
Compressor	Upper limit control	143 Hz + ON + ON	1-step increase from (74 Hz + OFF + OFF) to (Pc - Pe>0.4 MPa)
Outdoor unit fan	STEP8 or STEP9	OFF	STEP9
Four way valve	ON	OFF	ON
Main motorized valve (EV1)	SH control	1400 pls	200 pls
Subcooling motorized valve (EV2)	0 pls	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Oil equalization valve (SVO)	ON	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON	ON
Ending conditions	2 min.	or • 12 min. • Ts >11°C	or • 160 sec. • Pc - Pe>0.4MPa

* In the case of multi-outdoor-unit system,

Master unit: Performs the operations listed in the table above.

Slave units: Operating units perform the operations listed in the table above.

Non-operating units perform the operations listed in the table above from the Defrost operation.

(Non-operating unit stops during "Defrost preparation operation".)

* Actuators are based on RXYQ16M.

In	door unit actuator	During defrost
	Thermostat ON unit	OFF
Fan	Stopping unit	OFF
	Thermostat OFF unit	OFF
	Thermostat ON unit	512 pls
Electronic expansion valve	Stopping unit	512 pls
	Thermostat OFF unit	512 pls

<Defrost starting condition>

Defrost operation is started when the outdoor heat exchanger temperature becomes lower than deicer temperature. Defrost operation is conducted once in max. 2 hours.

3.4 Pump-down Residual Operation

3.4.1 Pump-down Residual Operation in Cooling Operation

Actuator	Master unit operation	Slave unit operation
Compressor	210 Hz + OFF + OFF	OFF
Outdoor unit fan	Fan control	OFF
Four way valve	OFF	OFF
Main motorized valve (EV1)	1400 pls	0 pls
Subcooling motorized valve (EV2)	0 pls	0 pls
Hot gas bypass valve (SVP)	ON	OFF
Oil equalization valve (SVO)	ON	OFF
Receiver gas discharging valve (SVG)	ON	ON
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON
Ending conditions	or • 5 min. • Pe<0.5 MPa • Td>110°C	

* Actuators are based on RXYQ16M.

3.4.2 Pump-down Residual Operation in Heating Operation

-		-
Actuator	Master unit operation	Slave unit operation
Compressor	124 Hz + OFF + OFF	OFF
Outdoor unit fan	STEP8	STEP5
Four way valve	ON	ON
Main motorized valve (EV1)	0 pls	0 pls
Subcooling motorized valve (EV2)	0 pls	0 pls
Hot gas bypass valve (SVP)	ON	OFF
Oil equalization valve (SVO)	ON	OFF
Receiver gas discharging valve (SVG)	ON	ON
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON
Ending conditions	or 0 30 sec. • Pe<0.25 MPa • Td>110°C	·

* Actuators are based on RXYQ16M.

3.5 Restart Standby

Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	Ta>30°C: STEP5 Ta≤30°C: OFF	_
Four way valve	Holds ON	—
Main motorized valve (EV1)	0 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF	In the case of RXYQ5M , this valve turns ON.
Oil equalization valve (SVO)	ON	In the case of slave units, this valve turns OFF.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	
Ending conditions	5 min.	

* Actuators are based on RXYQ16M.

3.6 **Stopping Operation**

3.6.1 When System is in Stop Mode

Actuator	Operation
Compressor	OFF
Outdoor unit fan	OFF
Four way valve	Holds ON
Main motorized valve (EV1)	0 pls
Subcooling motorized valve (EV2)	0 pls
Hot gas bypass valve (SVP)	OFF
Oil equalization valve (SVO)	OFF
Receiver gas discharging valve (SVG)	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON
Ending conditions	Indoor unit thermostat is turned ON.

* Actuators are based on RXYQ16M.

Stopping Operation of Slave Units During Master Unit is in Operation 3.6.2 With Multi-Outdoor-Unit System

In cooling operation: The system operates in Mode A or Mode B listed in the table below.

Actuator	Mode-A operation	Mode-B operation
Compressor	OFF	OFF
Outdoor unit fan	STEP4	OFF
Four way valve	OFF	Holds ON
Main motorized valve (EV1)	150 pls to 300 pls	0 pls
Subcooling motorized valve (EV2)	0 pls	0 pls
Hot gas bypass valve (SVP)	ON	ON
Oil equalization valve (SVO)	OFF	OFF
Receiver gas discharging valve (SVG)	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	OFF	ON
Mode transition conditions	To Mode B when Tc-Tl >0.27×(Tc - Ta) +6	To Mode A when gas shortage signal is sent from indoor unit
Ending conditions	Slave units are required to operate.	

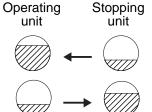
In heating operation: The system operates in Mode A or Mode B listed in the table below.

Actuator	Mode-A operation	Mode-B operation
Compressor	OFF	OFF
Outdoor unit fan	STEP2	STEP2
Four way valve	ON	ON
Main motorized valve (EV1)	0 pls	0 pls
Subcooling motorized valve (EV2)	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	OFF
Oil equalization valve (SVO)	OFF	OFF
Receiver gas discharging valve (SVG)	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	OFF	ON
Mode transition conditions	To Mode B when Tc-mean temperature of indoor unit liquid pipes>10°C	To Mode A when motorized valve of operating outdoor unit fully opens.
Ending conditions	Slave units are required to operate.	

* Mode A or B operation

Mode A : Operating unit collects refrigerant.

Mode B : Stopping unit storage refrigerant.



The changeover operation for mode A and B is performed for the reason that the required refrigerant amount varies depending on the indoor unit operation capacity.

3.7 Pressure Equalization prior to Startup

Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	Cooling:OFF Heating:STEP 4	_
Four way valve	Holds ON	—
Main motorized valve (EV1)	0 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF	In the case of RXYQ5M, this valve turns ON.
Oil equalization valve (SVO)	OFF	—
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	OFF	_
Ending conditions	10 sec.	In the case of RXYQ5M, 3 min. or Pc–Pe<0.2 MPa

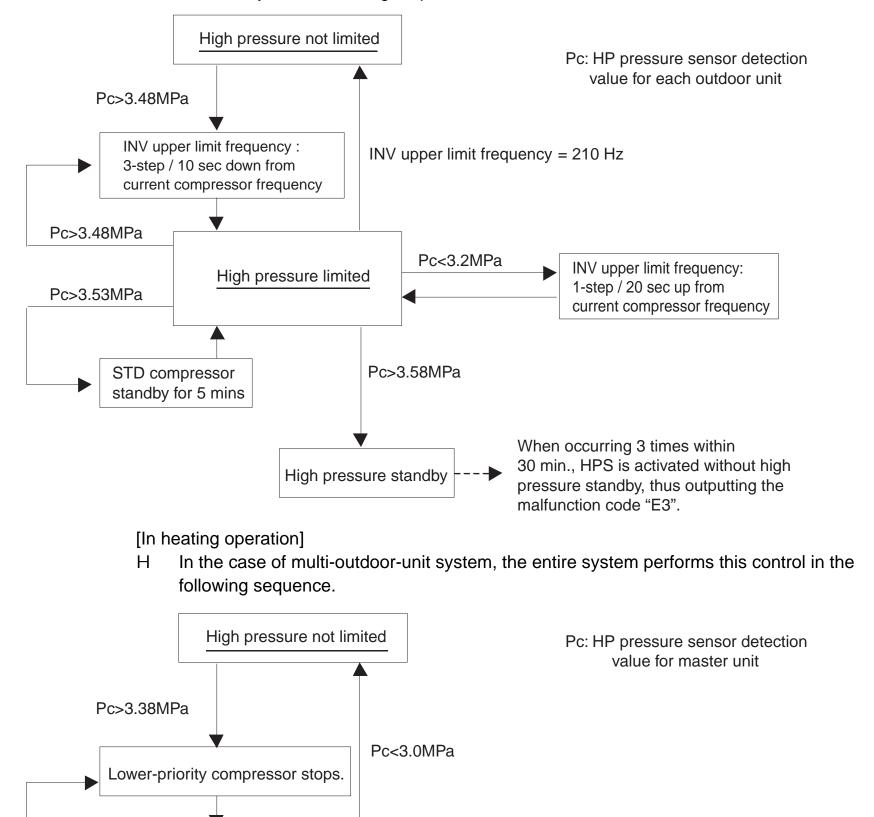
4. Protection Control

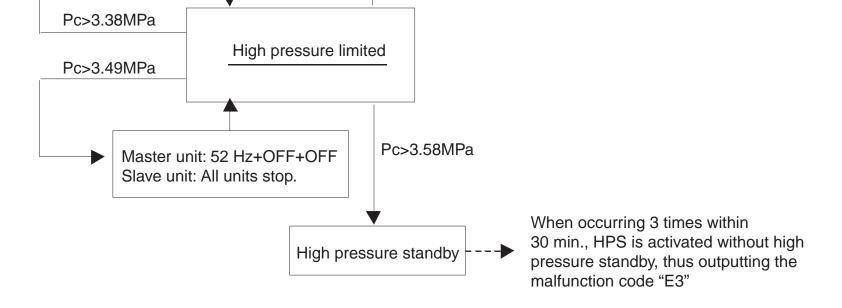
4.1 High Pressure Protection Control

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

[In cooling operation]

H In the case of multi-outdoor-unit system, each outdoor unit performs this control individually in the following sequence.



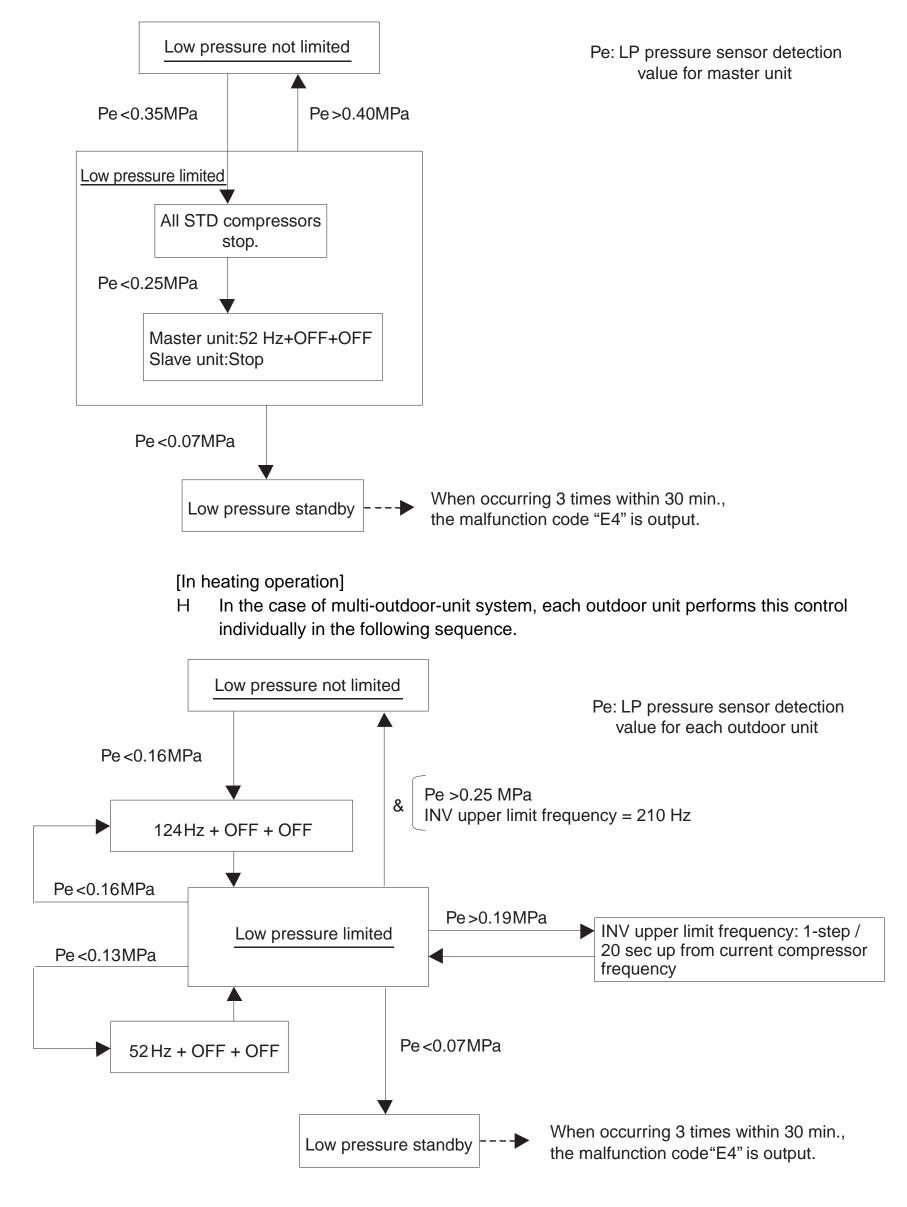


4.2 Low Pressure Protection Control

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

[In cooling operation]

H In the case of multi-outdoor-unit system, the entire system performs this control in the following sequence.

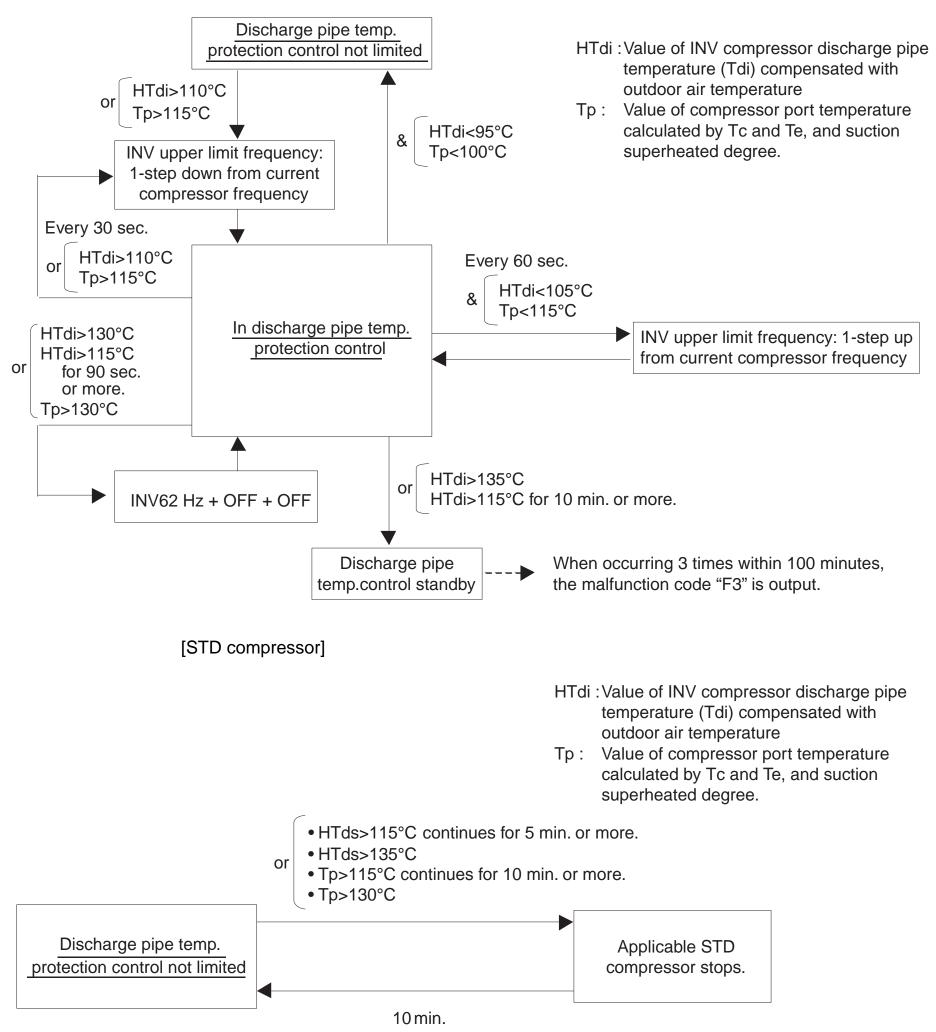


4.3 Discharge Pipe Protection Control

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

H Each compressor performs the discharge pipe temperature protection control individually in the following sequence.



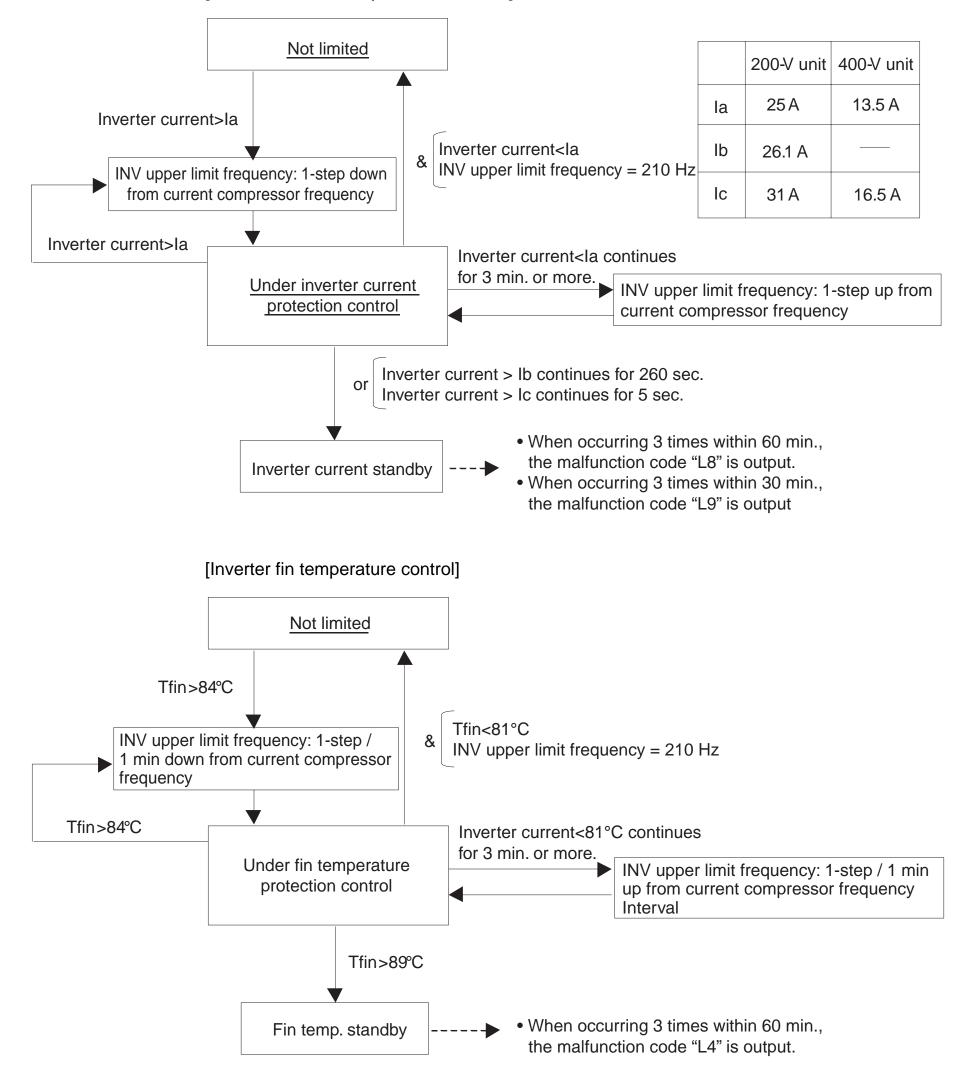


4.4 Inverter Protection Control

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

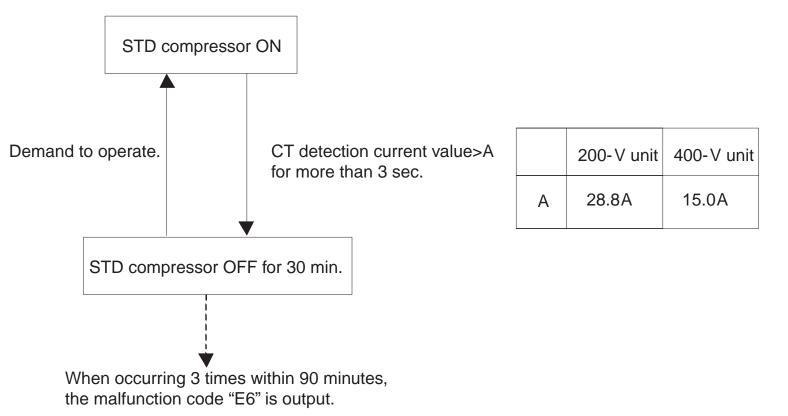
H In the case of multi-outdoor-unit system, each INV compressor performs these controls in the following sequence.

[Inverter overcurrent protection control]



4.5 STD Compressor Overload Protection

This control is used to prevent abnormal heating due to overcurrent to the compressor resulting from failures of STD compressor such as locking.



Function

5. Other Control5.1 Outdoor Unit Rotation

In the case of multi-outdoor-unit system, this outdoor unit rotation is used to prevent the compressor from burning out due to unbalanced oil level between outdoor units.

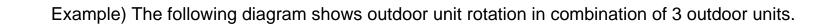
[Details of outdoor unit rotation]

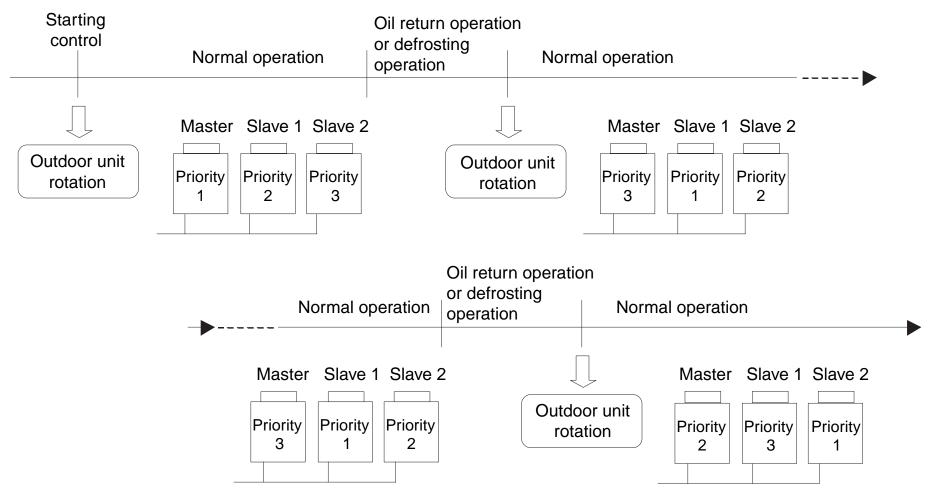
In the case of multi-outdoor-unit system, each outdoor unit is given an operating priority for the control.

Outdoor unit rotation makes it possible to change the operating priority of outdoor units. Thus, the system becomes free of compressors that stop over an extended period of time at the time of partial loading, preventing unbalanced oil level.

[Timing of outdoor unit rotation]

- After oil return operation
- or After defrosting operation
 - At the beginning of the starting control





* "Master unit", "slave unit 1" and "slave unit 2" in this section are the names for installation.

They are determined in installation work, and not changed thereafter. (These names are different from "master unit" and "slave unit" for control.)

The outdoor unit connected the control wires (F1 and F2) for the indoor unit should be designated as master unit

Consequently, The LED display on the main PCB for "master unit", "slave unit 1" and "slave unit 2" do not change. (Refer to the page 90.)

5.2 **Emergency Operation**

If the compressor cannot operate, this control inhibits any applicable compressor or outdoor unit from operating to perform emergency operation only with the operative compressor or outdoor unit.

Caution

"For making a compressor unable to operate due to malfunction, etc., be sure to conduct the work with emergency operation setting.

Never execute work such as disconnection of the power cable from magnet contactor. (Otherwise, other normal compressors may malfunction.)

* Because the units will be operated in the combination with which oil pressure equalization between compressors cannot be performed.

5.2.1 Restrictions for Emergency Operation

- In the case of system with 1 outdoor unit installed, only when thermostats of indoor units having a capacity of 50% or more of the outdoor unit capacity turn ON, the emergency operation is functional. (If the total capacity of indoor units with thermostat ON is small, the outdoor unit cannot operate.)
- If the emergency operation is set while the outdoor unit is in operation, the outdoor unit stops once after pump-down residual operation (a maximum of 5 minutes elapsed).

5.2.2 In the Case of 1-Outdoor-Unit System (RXYQ8 to 16M)

- Emergency operation with settings in service mode
- * "Inhibition of operation" is set with each compressor.
- To inhibit INV compressor from operating → Set setting mode 2 from No. 0 to No. 2.

(Procedure)

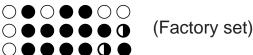
- (1) Press and hold the MODE button (BS1) for 5 sec. or more.
- (2) Press the RETURN button (BS3) once.
- (3) Press the SET button (BS2) one.
- (4) Press the RETURN button (BS3) twice.
- (5) Press the MODE button (BS1) once.
- To inhibit STD1 and STD2 compressors from operating → Set setting mode 2 from No. 19 to No.
 2 (DXXORM to DXXO16M)
- 2. (RXYQ8M to RXYQ16M)

(Procedure)

- (1) Press and hold the MODE button (BS1) for 5 sec. or more.
- (2) Press the SET button (BS2) 19 times.
- (3) Press the RETURN button (BS3) once.
- (4) Press the SET button (BS2) once.

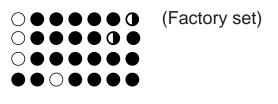
LED display (○:ON ●:OFF ●:Blink) H1P--H7P

 $\bigcirc \bullet \bullet \bullet \bullet \bullet \bullet \bullet$



LED display (○:ON ●:OFF ●:Blink) H1P——H7P

$\bigcirc \bullet \bullet \bullet \bullet \bullet \bullet \bullet$



(5) Press the RETURN button (BS3) twice.(6) Press the MODE button (BS1) once.

• To inhibit STD2 compressor from operating \rightarrow Set setting mode 2 from No. 19 to No.3.(RXYQ14M)

(Procedure)

 Press and hold the MODE button (BS1) for 5 sec. or more.

(2) Press the SET button (BS2) 19 times.(3) Press the RETURN button (BS3) once.

(4) Press the SET button (BS2) twice.

(5) Press the RETURN button (BS3) twice.(6) Press the MODE button (BS1) once.

LED display (○:ON ●:OFF ●:Blink) H1P———H7P

 $\bigcirc \bullet \bullet \bullet \bullet \bullet \bullet \bullet$

- With RXYQ14M and 16M, if INV compressor is inhibited from operating, only 1 STD compressor can operate for reasons of oil equalization.
- With RXYQ14M and 16M, STD1 compressor cannot be inhibited from operating for reasons of oil equalization.
- When 1 outdoor unit is installed (with RXYQ8M to 16M), automatic backup operation cannot be performed.

5.2.3 In The Case of Multi-Outdoor-Unit System (RXYQ18 to 48M)

Automatic backup operation

With multi-outdoor-unit system, if a certain outdoor unit system malfunctions (i.e., the system stops and indoor unit remote controller displays the malfunction), by resetting the system with the indoor unit remote controller, the applicable outdoor unit is inhibited from operating for 8 hours, thus making it possible to perform emergency operation automatically.

However, in the event any of the following malfunctions occurs, automatic backup operation can be performed.

Malfunctions under which automatic backup operation can be performed:

- E3, E4, E5, E7
- F3
- H7, H9
- J2, J3, J5, J6, J7, J9, JA, JC
- L3, L4, L5, L8, L9, LC
- U2, UJ

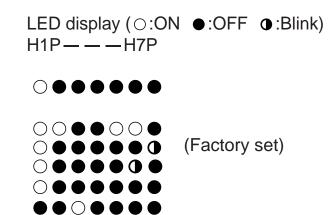
Emergency operation with settings in service mode

* "Inhibition of operation" is set with each outdoor unit.

Make the following settings with the master unit. (Setting with the slave unit becomes disabled.)

 Discriminate the operating status of the master unit/slave units through the following LED display.

- To inhibit the master unit from operating → Set setting mode 2 from No. 38 to No. 2.
 - (Procedure)
 - (1) Press and hold the MODE button (BS1) for 5 sec. or more.
 - (2) Press the SET button (BS2) 38 times.
 - (3) Press the RETURN button (BS3) once.
 - (4) Press the SET button (BS2) once.
 - (5) Press the RETURN button (BS3) twice.
 - (6) Press the MODE button (BS1) once.



 To inhibit the slave unit 1 from operating → Set setting mode 2 from No. 39 to No. 2.

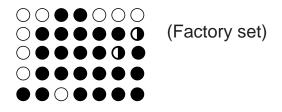
(Procedure)

(1) Press and hold the MODE button (BS1) for 5 sec. or more.

(2) Press the SET button (BS2) 39 times.
(3) Press the RETURN button (BS3) once.
(4) Press the SET button (BS2) once.
(5) Press the RETURN button (BS3) twice.
(6) Press the MODE button (BS1) once.

LED display (○:ON ●:OFF ●:Blink) H1P——H7P

 $\bigcirc \bullet \bullet \bullet \bullet \bullet \bullet$

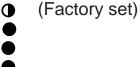


 To inhibit the slave unit 2 from operating → Set setting mode 2 from No. 40 to No. 2.

(Procedure)

- (1) Press and hold the MODE button (BS1) for 5 sec. or more.
- (2) Press the SET button (BS2) 40 times.
- (3) Press the RETURN button (BS3) once.
- (4) Press the SET button (BS2) once.
- (5) Press the RETURN button (BS3) twice.
- (6) Press the MODE button (BS1) once.





- In the case of multi-outdoor-unit system, "Inhibition of operation" is not set with each compressor individually.
- In the case of multi-outdoor-unit system, when the above "Inhibition of operation" is set, outdoor unit rotation is not functional.

Note : Reset the power supply during the outdoor unit is stopping to cancel the automatic backup operation forcibly.

5.3 Demand Operation

*

In order to save the power consumption, the capacity of outdoor unit is saved with control forcibly by using "Demand 1 Setting" or "Demand 2 Setting".

To operate the unit with this mode, additional setting of "Continuous Demand Setting" or external input by external control adapter is required.

[Demand 1 setting]

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

[Demand 2 setting]

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

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

5.4 Heating operation prohibition

Heating operation is prohibited above 24°C ambient temperature.

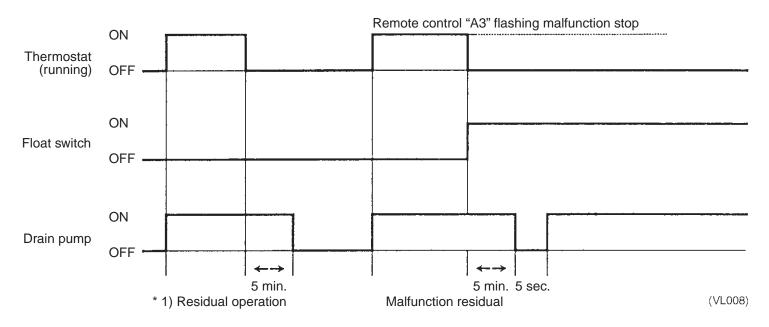


6. Outline of Control (Indoor Unit)

6.1 Drain Pump Control

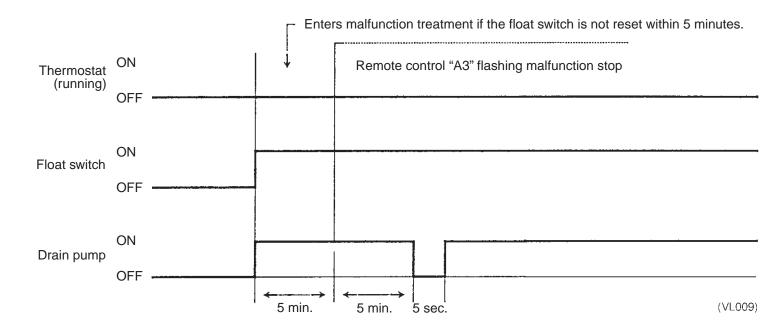
1. The drain pump is controlled by the ON/OFF buttons (4 button (1) - (4) given in the figure below).

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

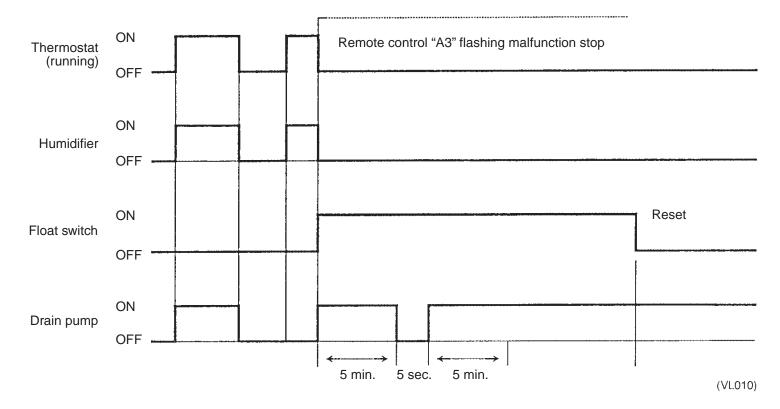


* 1. The objective of residual operation is to completely drain any moisture adhering to the fin of the indoor unit heat exchanger when the thermostat goes off during cooling operation.

6.1.2 When the Float Switch is Tripped During Cooling OFF by Thermostat:

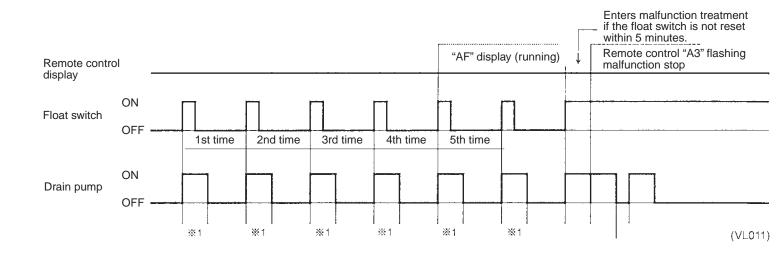


6.1.3 When the Float Switch is Tripped During Heating Operation:



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

6.1.4 When the Float Switch is Tripped and "AF" is Displayed on the Remote Controller:

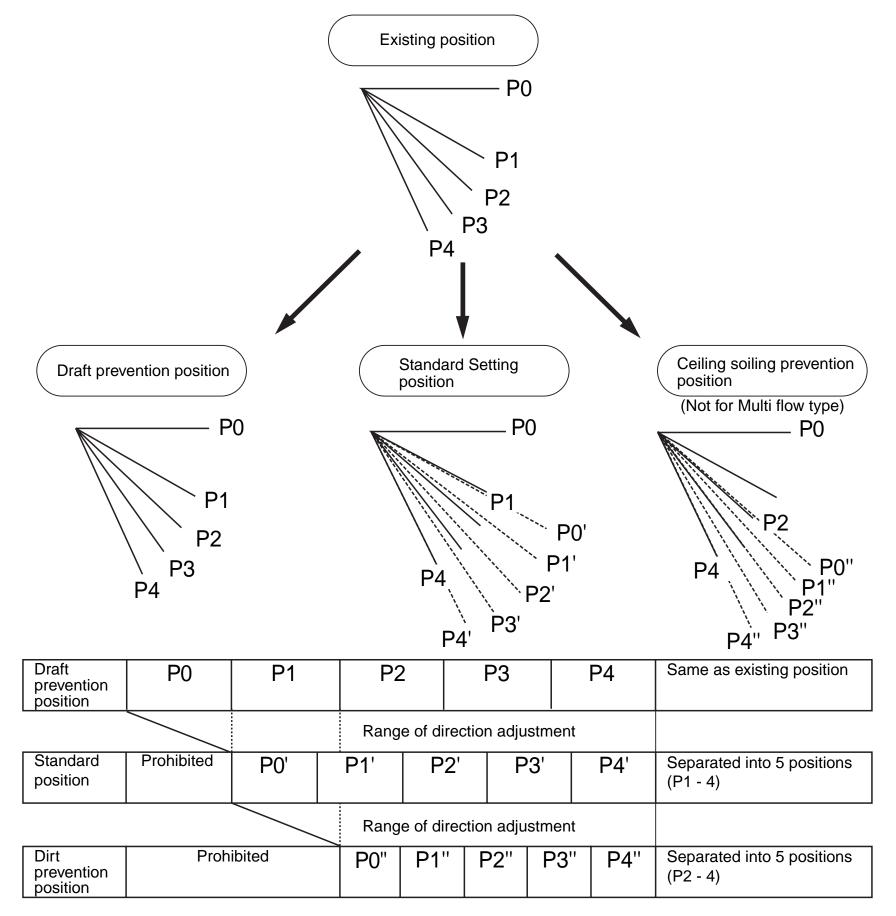




If the float switch is tripped five times in succession, a drain malfunction is determined to have occurred. "AF" is then displayed as operation continues.

6.2 Louver Control for Preventing Ceiling Dirt

We have added a control feature that allows you to select the range of in which air direction can be adjusted in order to prevent the ceiling surrounding the air discharge outlet of ceiling mounted cassette type units from being soiled. (This feature is available on double flow, multiflow and corner types.)



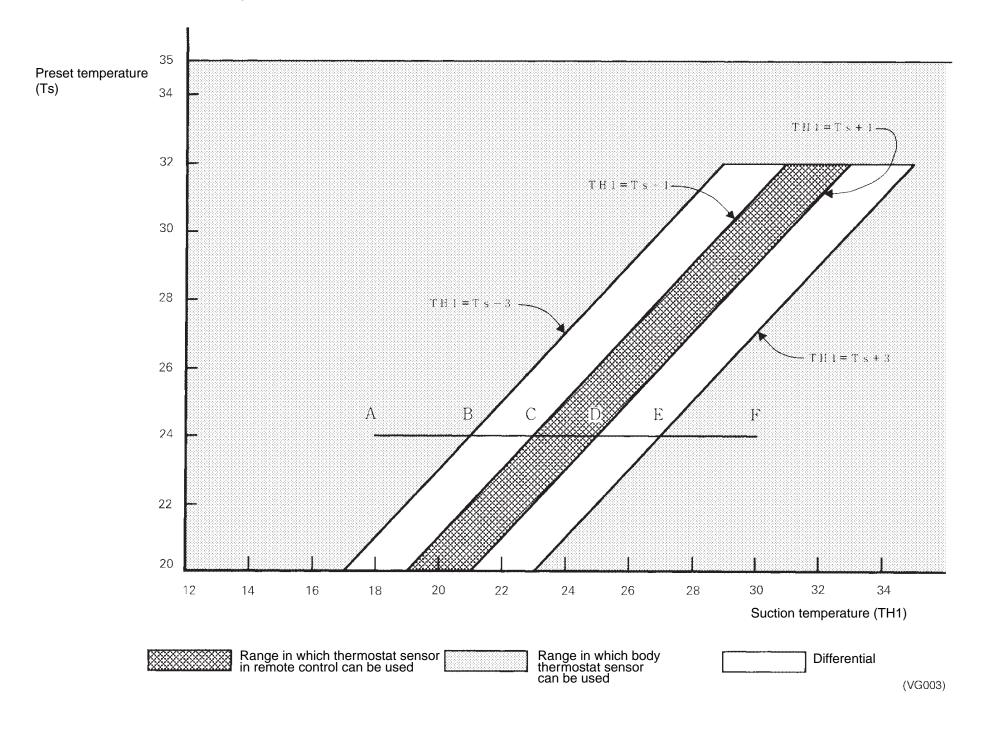
The factory set position is standard position.

6.3 Thermostat Sensor in Remote Controller

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

Cooling

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



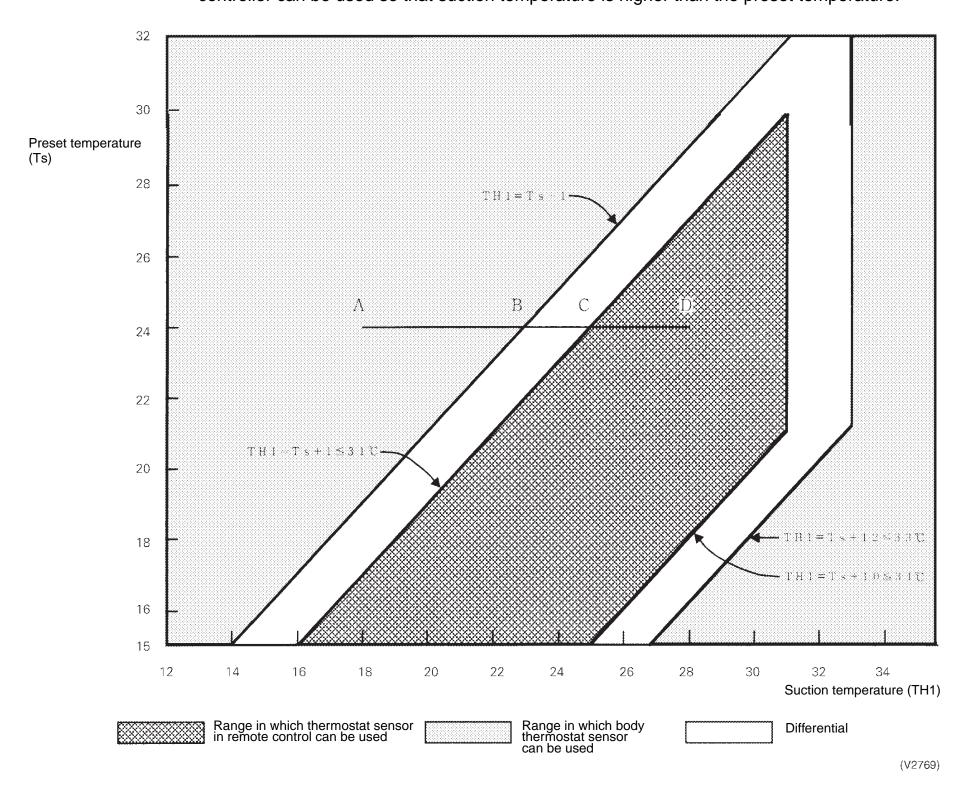
Ex: When cooling

Assuming the preset temperature in the figure above is 24°C, and the suction temperature has changed from 18°C to 30°C (A \rightarrow F):

(This example also assumes there are several other air conditioners, the VRV system is off, and

that temperature changes even when the thermostat sensor is off.) Body thermostat sensor is used for temperatures from 18°C to 23°C (A \rightarrow C). Remote controller thermostat sensor is used for temperatures from 23°C to 27°C (C \rightarrow E). Body thermostat sensor is used for temperatures from 27°C to 30°C (E \rightarrow F).

And, assuming suction temperature has changed from 30°C to 18°C (F \rightarrow A): Body thermostat sensor is used for temperatures from 30°C to 25°C (F \rightarrow D). Remote controller thermostat sensor is used for temperatures from 25°C to 21°C (D \rightarrow B). Body thermostat sensor is used for temperatures from 21°C to 18°C (B \rightarrow A). **Heating** When heating, the hot air rises to the top of the room, resulting in the temperature being lower near the floor where the occupants are. When controlling by body thermostat sensor only, the unit may therefore be turned off by the thermostat before the lower part of the room reaches the preset temperature. The temperature can be controlled so the lower part of the room where the occupants are doesn't become cold by widening the range in which thermostat sensor in remote controller can be used so that suction temperature is higher than the preset temperature.



Ex: When heating

Assuming the preset temperature in the figure above is 24°C, and the suction temperature has changed from 18°C to 28°C (A \rightarrow D):

(This example also assumes there are several other air conditioners, the VRV system is off, and that temperature changes even when the thermostat sensor is off.)

Body thermostat sensor is used for temperatures from 18°C to 25°C (A \rightarrow C). Remote controller thermostat sensor is used for temperatures from 25°C to 28°C (C \rightarrow D).

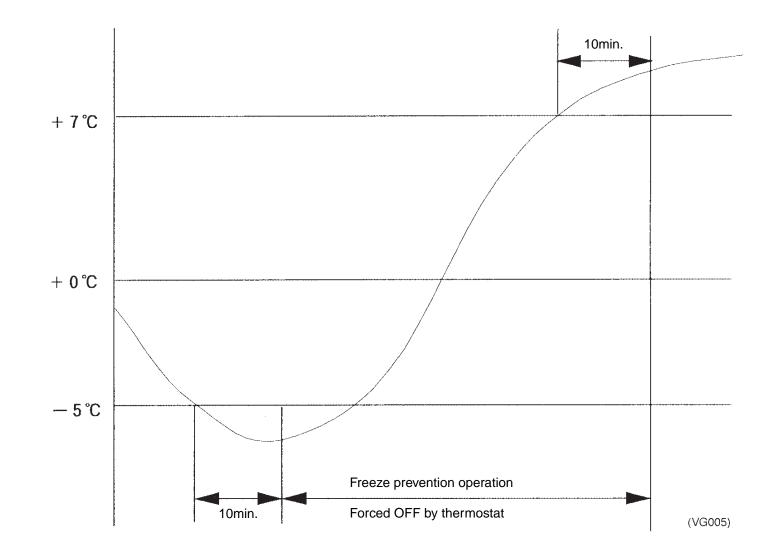
And, assuming suction temperature has changed from 28°C to 18°C (D \rightarrow A): Remote controller thermostat sensor is used for temperatures from 28°C to 23°C (D \rightarrow B). Body thermostat sensor is used for temperatures from 23°C to 18°C (B \rightarrow A).

6.4 Freeze Prevention

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

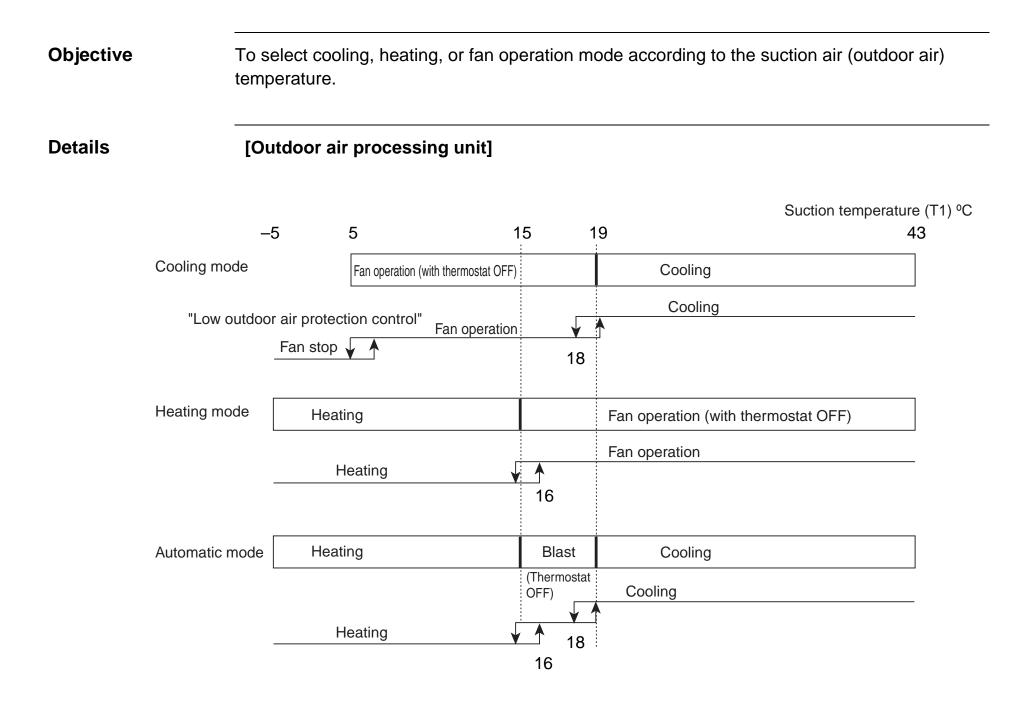
Conditions for starting freeze prevention: Temperature is -1°C or less for total of 40 min., or temperature is -5°C or less for total of 10 min. Conditions for stopping freeze prevention: Temperature is +7°C or more for 10 min. continuously

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



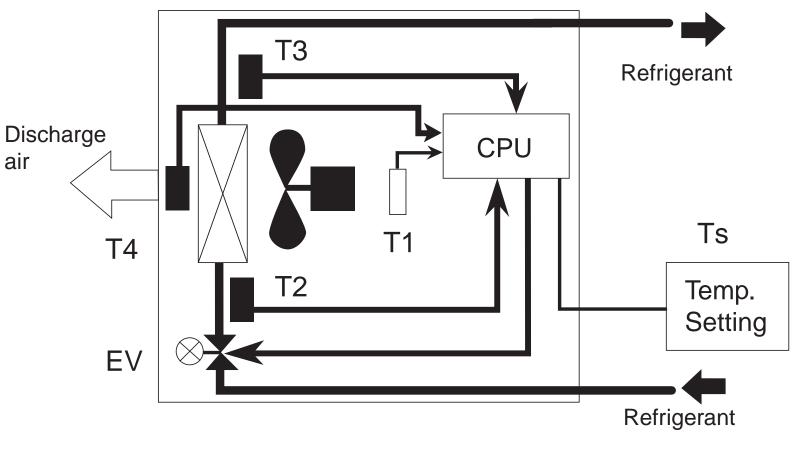


6.5 Control of outdoor air Processing unit (Unique Control for Outdoor Air Processing Unit) 6.5.1 Selection of Operation Mode (by suction air thermostat)



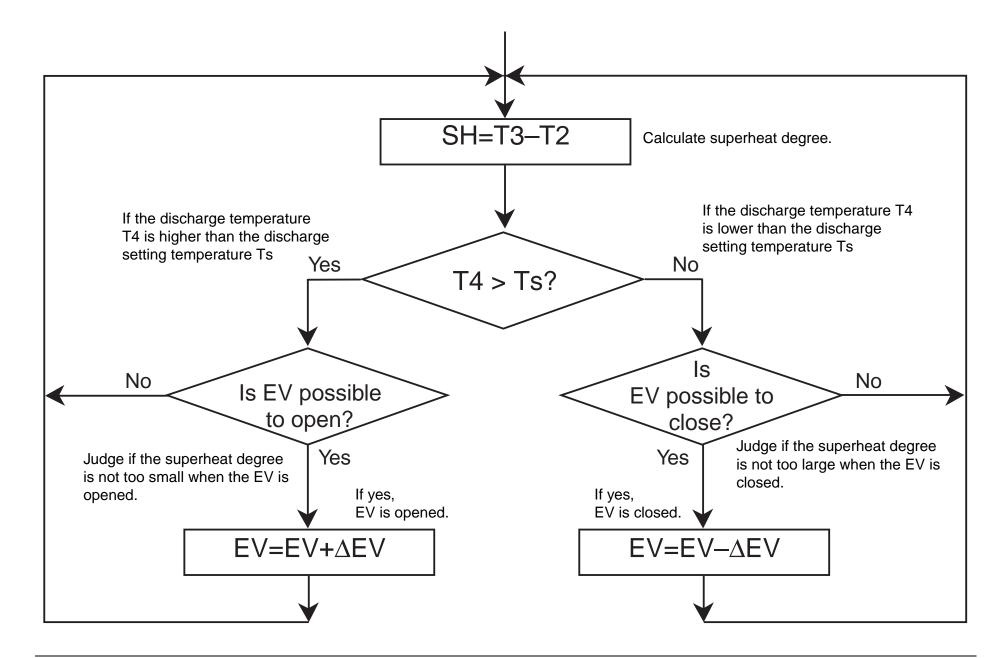
6.5.2 Discharge air temperature control

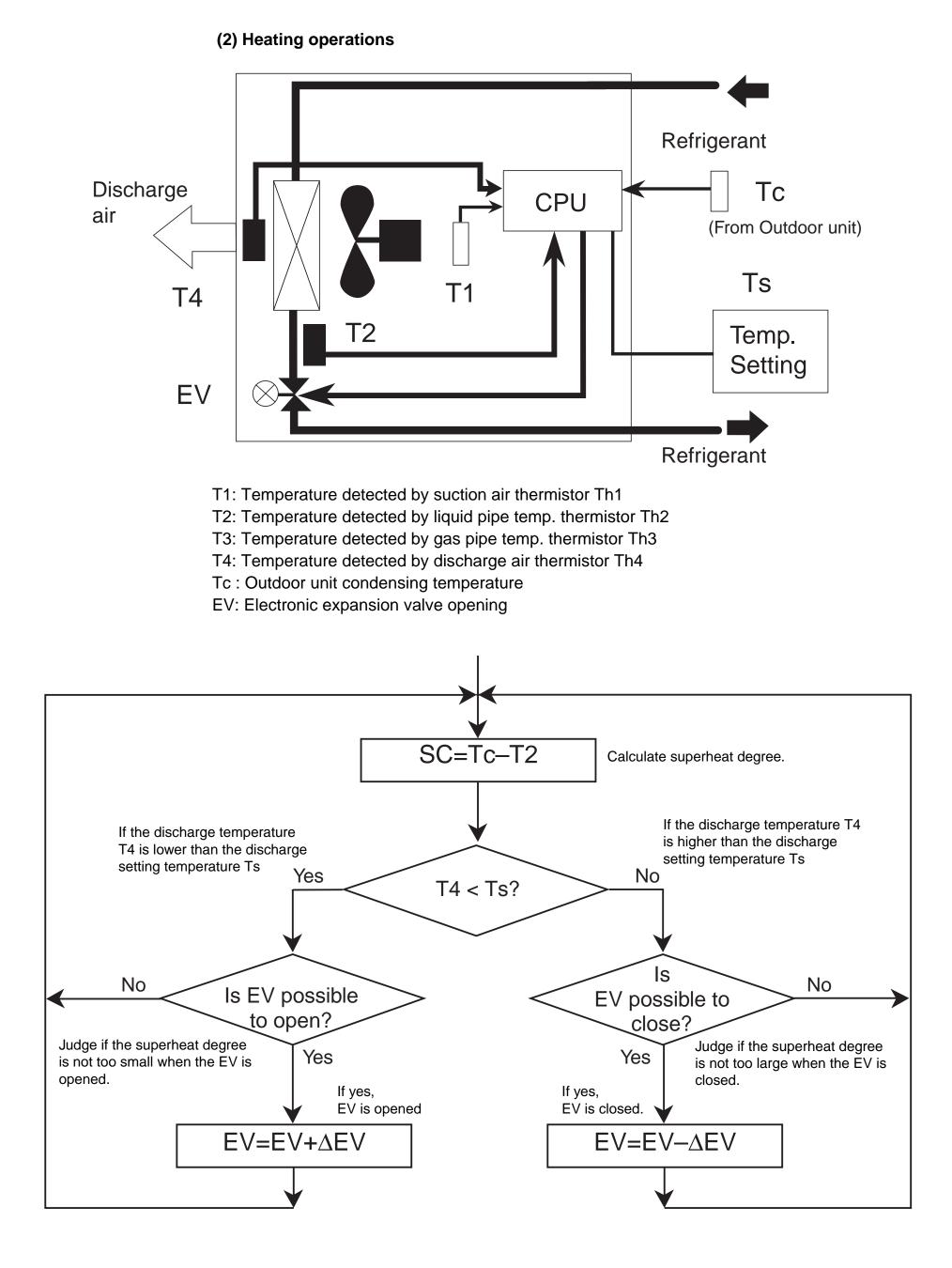
Used to control the EV (electronic expansion valve) opening and thermostat ON/OFF so as to keep the discharge air temperature at the set temperature.



(1) Cooling operations

- T1: Temperature detected by suction air thermistor Th1
- T2: Temperature detected by liquid pipe temp. thermistor Th2
- T3: Temperature detected by gas pipe temp. thermistor Th3
- T4: Temperature detected by discharge air thermistor Th4
- EV: Electronic expansion valve opening





(3) Thermostat OFF by discharge air temperature

<Cooling>

Target discharge air temp. Ts – Discharge air temp. T4

>5 degree continue for 5 minutes.

 \rightarrow Thermostat stops for 1 minute.

<Heating>

Discharge air temp. T4 – Target discharge air temp. Ts >5 degree

EV opening is low limit &

continue for 5

 \rightarrow Thermostat stops for 1 minute.

minutes

6.5.3 Low Outdoor Air Temperature Protection Control

Objective	In cooling (or fan operation) or heating, if outdoor air is low in temperature, stop the fan forcibly.							
Details	[Cooling and fan operation]							
	Turn OFF the fan for a period of 60 minutes at a suction temperature of 5 °C or lower. In order to monitor the outdoor air temperature, however, turn ON the fan for a period of one minute and turn OFF the fan again at a temperature of 5 °C or lower after the said timer completes the operative period.							
	Reset the 60-minute timer when the fan stops running.							
	[Heating]							
	Turn OFF the fan for a period of 60 minutes at a suction temperature of -5 °C or lower. In order to monitor the outdoor air temperature, however, turn ON the fan for a period of one minute and turn OFF the fan again at a temperature of -5 °C or lower after the said timer completes the operative period.							
	Reset the 60-minute timer when the fan stops running.							
	* The thermostat will not turn ON in one minute due to the temperature while the fan stops.							
	This control shall be disabled at test run both in cooling and heating. (The test run shall be conducted first.)							

Part 5 Test Operation

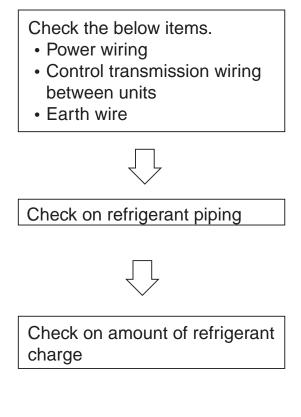
1.	Test	Operation	114
		Procedure and Outline	
	1.2	Operation When Power is Turned On	117
2.	Outo	door Unit PC Board Layout	118
3.	Field	d Setting	119
	3.1	Field Setting from Remote Controller	119
	3.2	Field Setting from Outdoor Unit	132

1. Test Operation

1.1 Procedure and Outline

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

1.1.1 Check work prior to turn power supply on



- O Is the wiring performed as specified?
- O Are the designated wires used?
- O Is the grounding work completed?
 - Use a 500V megger tester to measure the insulation.
 - Do not use a megger tester for other circuits than 200V (or 240v) circuit.
- O Are the setscrews of wiring not loose?
- O Is pipe size proper? (The design pressure of this product is 3.8MPa.)
- O Are pipe insulation materials installed securely?
- Liquid and gas pipes need to be insulated. (Otherwise causes water leak.)
- O Are respective stop valves on liquid, gas and oil equalizing lines securely open?

O Is refrigerant charged up to the specified amount?

- If insufficient, charge the refrigerant from the service port of stop valve on the liquid side with outdoor unit in stop mode after turning power on.
- O Has the amount of refrigerant charge been recorded on "Record Chart of Additional Refrigerant Charge Amount"?

(V3055)

1.1.2 Turn power on

Turn outdoor unit power on.



Carry out field setting on outdoor PC board

Turn indoor unit power on.

O Be sure to turn the power on 6 hours before starting operation to protect compressors. (to power on clankcase heater)

O For field settings, refer to "Field Settings" on and after P119. After the completion of field settings, set to "Setting mode 1".

1.1.3 Check Operation

* During check operation, mount front panel to avoid the misjudging.

- * Check operation is mandatory for normal unit operation.
- (When the check operation is not executed, alarm code "U3" will be displayed.)

O The test operation is started automatically. Press and hold the TEST The following judgements are conducted within 15 minutes. OPERATION button (BS4) on "Check for wrong wiring" outdoor unit PC board for 5 "Check refrigerant for over charge" seconds. "Check stop valve for not open" Pipe length automatic judgement" The following indications are conducted while in test operation. LED lamp on outdoor unit PC board — H2P flickers (test operation) • Remote controller — Indicates "On Centralized Control" on upper right. Indicates "Test Operation" on lower left (V3057) Check on operation

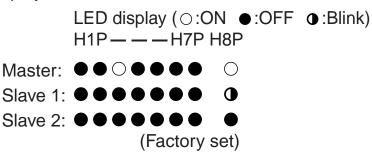
> On completion of test operation, LED on outdoor unit PC board displays the following. H3P ON: Normal completion

> H2P and H3P ON: Abnormal completion →Check the indoor unit remote controller for abnormal display and correct it.

In the case of multi-outdoor-unit system, make setting on the master unit PC board. (Setting with the slave unit is disabled.)

[LED display in the case of multi-outdoor-unit system] (Same as that in emergency operation)

* Discriminate the operating status of the master unit/slave units through the following LED display.



Malfunction code

In case of an alarm code displayed on remote controller:

Cause of trouble due to faulty installation work	Alarm code	Countermeasure
Closed stop valve of outdoor unit	E3	In case of RXYQ5 to 16M (Single outdoor installation)
	E4	Liquid side stop valve : Open
	F3	Gas side stop valve : Open
	UF	Oil equalizing pipe stop valve : Close
		In case of RXYQ18 to 48M (Multi outdoor installation)
		Liquid side stop valve : Open
		Gas side ston valve · Open

		Oil equalizing pipe stop valve : Open
Reversed phase in power cable connection for outdoor unit	U1	Change connection of two wires among three for correct phasing.
Electric power for outdoor or indoor unit is not supplied. (Including open phase)	U4	Check that the power cable for outdoor unit is connected properly.
Incorrect wiring between units	UF	Check that the wiring between units corresponds correctly to refrigerant piping system.
Refrigerant overcharge	E3 F6 UF	Compute again optimum amount of refrigerant to be added based on the piping length, then, collect the excessive amount by using refrigerant collector to make the refrigerant amount proper.
Insufficient refrigerant	E4 F3	 Check that additional charging has been carried out. Compute again the refrigerant amount to be added based on the piping length, and charge proper amount of refrigerant additionally.

1.1.4 Confirmation on normal operation

 Conduct normal unit operation after the check operation has been completed. (When outdoor air temperature is 24°C or higher, the unit can not be operated with heating mode. See the instruction manual attached.)

Confirm that the indoor/outdoor units can be operated normally.

(When an abnormal noise due to liquid compression by the compressor can be heard, stop the unit immediately, and turn on the crankcase heater to heat up it sufficiently, then start operation again.)

- Operate indoor unit one by one to check that the corresponding outdoor unit operates.
- Confirm that the indoor unit discharges cold air (or warm air).
- Operate the air direction control button and flow rate control button to check the function of the devices.

1.2 Operation When Power is Turned On

1.2.1 When Turning On Power First Time

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

Status

Test lamp H2P Blinks

Can also be set during operation described above.

Indoor unit

Outdoor unit

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

1.2.2 When Turning On Power The Second Time and Subsequent

Tap the RESET button on the outdoor unit PC board. Operation becomes possible for about 2 minutes. If you do not push the RESET button, the unit cannot be run for up to 10 minutes to automatically set master power.

Status

Outdoor unit

Test lamp H2P Blinks

Can also be set during operation described above.

Indoor unit

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

1.2.3 When an Indoor Unit or Outdoor unit Has Been Added, or Indoor or Outdoor Unit PC Board Has Been Changed

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

Status

Test lamp H2P ON

Can also be set during operation described above.

Indoor unit

Outdoor unit

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

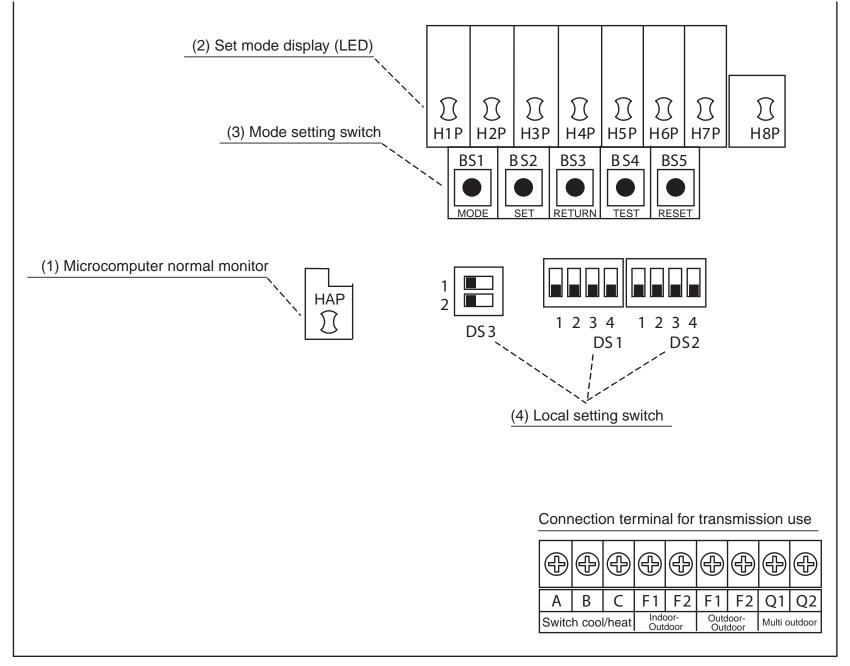


Caution When the 400 volt power supply is applyed to "N" phase by mistake, replace Inverter P.C.B (A2P) and control transformer (T1R, T2R) in switch box together.

(V0847)

2. Outdoor Unit PC Board Layout

Outdoor unit PC board



(V3054)

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

- (2) Set mode display (LED) LEDs display mode according to the setting.
- (3) Mode setting switch Used to change mode.
- (4) Local setting switch Used to make local settings.

3. Field Setting

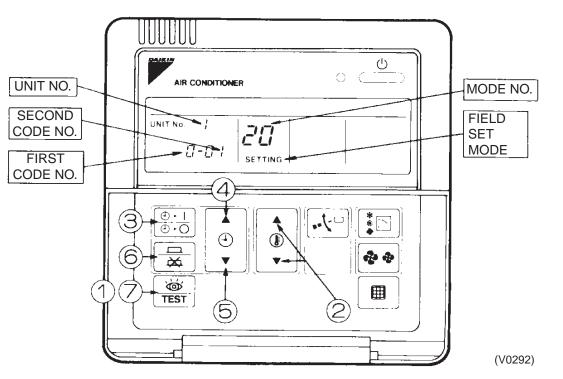
3.1 Field Setting from Remote Controller

Individual function of indoor unit can be changed from the remote controller. At the time of installation or after service inspection / repair, make the local setting in accordance with the following description.

Wrong setting may cause malfunction.

(When optional accessory is mounted on the indoor unit, setting for the indoor unit may be required to change. Refer to information in the option handbook.)

3.1.1 Wired Remote Controller <BRC1A61, 62>



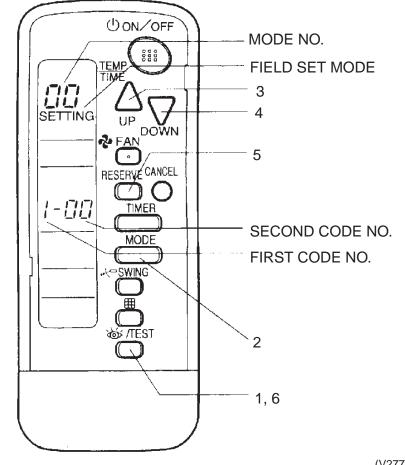
- When in the normal mode, press the " is button for a minimum of four seconds, and the FIELD SET MODE is entered.
- 2. Select the desired MODE NO. with the " (\mathfrak{g}) " button (\mathfrak{Q}).
- 3. During group control, when setting by each indoor unit (mode No. 20, 22 and 23 have been selected), push the " (1) is button (3) and select the INDOOR UNIT NO to be set. (This operation is unnecessary when setting by group.)
- 4. Push the " [3] " upper button (④) and select FIRST CODE NO.
- 5. Push the " $[\circ]$ " lower button (5) and select the SECOND CODE NO.
- 7. Push the " []" button (⑦) to return to the NORMAL MODE.

(Example)

If during group setting and the time to clean air filter is set to FILTER CONTAMINATION, HEAVY, SET MODE NO. to "10" FIRST CODE NO. to "0", and SECOND CODE NO. to "02".

3.1.2 Wireless Remote Controller - Indoor Unit

BRC7C type



(V2770)

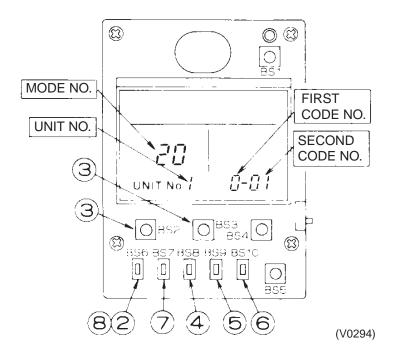
- 1. When in the normal mode, push the button for 4 seconds or more, and operation then enters the "field set mode."
- 2. Select the desired "mode No." with the button.
- 3. Pushing the \bigcirc button, select the first code No.
- 4. Pushing the \sum_{DOAN} button, select the second code No.
- 5. Push the timer \square button and check the settings.
- 6. Push the \bigcirc button to return to the normal mode.

(Example)

When setting the filter sign time to "Filter Dirtiness-High" in all group unit setting, set the Mode No. to "10", Mode setting No. to "0" and setting position No. to "02".

3.1.3 Simplified Remote Controller

BRC2A51



- 1. Remove the upper part of remote controller.
- 2. When in the normal mode, press the [BS6] BUTTON (2) (field set), and the FIELD SET MODE is entered.
- 3. Select the desired MODE No. with the [BS2] BUTTON (⁽³⁾) (temperature setting s) and the [BS3] BUTTON (⁽³⁾) (temperature setting t).
- During group control, when setting by each indoor unit (mode No. 20, 22, and 23 have been selected), push the [BS8] (⁽⁴⁾) BUTTON (unit No.) and select the INDOOR UNIT NO. to be set. (This operation is unnecessary when setting by group.)
- 5. Push the [BS9] BUTTON (⁵) (set A) and select FIRST CODE NO.
- 6. Push the [BS10] BUTTON (⁶) (set B) and select SECOND CODE NO.
- 7. Push the [BS7] BUTTON $(\overline{\mathcal{O}})$ (set/cancel) once and the present settings are SET.
- 8. Push the [BS6] BUTTON ($^{(8)}$) (field set) to return to the NORMAL MODE.
- (Example) If during group setting and the time to clean air filter is set to FILTER CONTAMINATION - HEAVY, SET MODE NO. to "10", FIRST CODE NO. to "0", and SECOND CODE NO. to "02".

3.1.4 Setting Contents and Code No. – VRV Indoor unit

VRV	Mode	Setting	Setting Contents				Se	cond Code	e No.(Not	e 3)		
system indoor	No. Note 2	Switch No.			C)1	C)2	C)3	04	4
unit settings	10(20)	0	Filter contamination heavy/ light (Setting for display time to clean air filter) (Sets display time to clean	Super long life filter	Light	Approx. 10,000 hrs.	Heavy	Approx. 5,000 hrs.	_	_	_	-
			air filter to half when there is heavy filter contamination.)	Long life filter		Approx. 2,500 hrs.		Approx. 1,250 hrs.				
				Standard filter		Approx. 200 hrs.		Approx. 100 hrs.				
		1	Long life filter type		Long li	ife filter		long life ter	-	_	_	-
		2	Thermostat sensor in remote	controller	U	se	No	use	_	_		
		3	Display time to clean air filter calculation (Set when filter si to be displayed.)		Dis	play	No d	isplay	_			
	12(22)	0	Optional accessories output (field selection of output for a wiring)		turned	or unit ON by nostat			Operatio	onoutput	Malfur out	
		1	ON/OFF input from outside (ON/OFF is to be controlled fr outside.)		Force	d OFF	ON/OFF control		_			
	2 Thermostat differential changeover (Set when remote sensor is to be used.)			1	1°C 0.5°C		5°C	—		_	_	
		3	OFF by thermostat fan speed	FF by thermostat fan speed		L	Set fan speed		—		_	_
		4 Automatic mode differential (temperature differential settin system heat recovery series		ig for VRV	01:0	02:1	03:2	04:3	05:4	06:5	07:6	08:7
		5	Power failure automatic rese	t	Not eq	luipped	Equipped		-		_	-
	13(23)	0	High air outlet velocity (Set when installed in place w higher than 2.7 m.)	vith ceiling	-	N	Н		S		_	_
		1	Selection of air flow direction (Set when a blocking pad kit installed.)		F (4 dir	ections)	T (3 directions)		W (2 directions)		_	_
		3	Air flow direction adjustment installation of decoration pan		Equi	pped	Not equipped				_	-
		4	Field set air flow position set			evention	Standard		Ceiling Soiling prevention		_	-
		5	Field set fan speed selection (fan speed control by air disc outlet for phase control)	ntrol by air discharge		n speed control by air discharge accessory 1				ional sory 2	_	_
	15(25)	1	Thermostat OFF excess humidity		Not eq	luipped	Equipped		_ 1		<u> </u>	
		2	Direct duct connection (when the indoor unit and he ventilation unit are connected directly.) *Note 6	at reclaim d by duct	Not eq	luipped	Equi	pped		_		-
		3	Drain pump humidifier interlo	ck	Not eq	luipped	Equi	pped	-	_	_	-
		5	Field set selection for individ ventilation setting by remote	controller		luipped		pped	-		_	-
		6	Field set selection for individ ventilation setting by remote		Not eq	luipped	Equi	pped	_	_		-



1. Settings are made simultaneously for the entire group, however, if you select the mode No. inside parentheses, you can also set by each individual unit. Setting changes however cannot be checked except in the individual mode for those in parentheses.

- 2. The mode numbers inside parentheses cannot be used by wireless remote controllers, so they cannot be set individually. Setting changes also cannot be checked.
- 3. Marked are factory set.
- 4. Do not make settings other than those described above. Nothing is displayed for functions the indoor unit is not equipped with.
- 5. "88" may be displayed to indicate the remote controller is resetting when returning to the normal mode.
- 6. If the setting mode to "Equipped", heat reclaim ventilation fan conducts the fan residual operation by linking to indoor unit.

3.1.5 Applicable range of Field setting

	Ceiling mounted cassette type			e type	Slim	Ceiling	ling Ceiling Ceiling	Ceiling	Wall	Floor	Concealed		Outdoor
	Multi flow		Double flow	Corner type	Ceiling mounted duct type	mounted built-in type	mounted duct type	suspended type	mounted type	standing type	Floor standing type	Ceiling suspended cassette type	air processing unit
	FXFQ	FXZQ	FXCQ	FXKQ	FXDQ	FXSQ	FXMQ	FXHQ	FXAQ	FXLQ	FXNQ	FXUQ	FXMQ- MF
Filter sign	0	0	0	0	0	0	0	0	0	0	0	0	0
Ultra long life filter sign	0	0	0	_	_	_	_		_	_			
Remote controller thermostat sensor	0	0	0	0	0	0	0	0	0	0	0	0	_
Set fan speed when thermostat OFF	0	0	0	0	0	0	0	0	0	0	0	0	_
Air flow adjustment Ceiling height	0	_	_	_	_	_	_	0	_	_	_	0	_
Air flow direction	0	0	_	_	_	_	_	_	_	_	_	0	_
Air flow direction adjustment (Down flow operation)				0		_					_		_
Air flow direction adjustment range	0	0	0	0		_				_		_	_
Field set fan speed selection	0	_	_	_	O*1	_		0		_			
Discharge air temp. (Cooling)	_	_	_	_	_	_	_	_	_	_	_	_	0
Discharge air temp. (Heating)													0

*1 Static pressure selection

3.1.6 Detailed Explanation of Setting Modes

Filter Sign Setting

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

Set Time

Filter Specs. Setting	Standard	Long Life	Ultra Long Life Filter
Contamination Light	200 hrs.	2,500 hrs.	10,000 hrs.
Contamination Heavy	100 hrs.	1,250 hrs.	5,000 hrs.

Ultra-Long-Life Filter Sign Setting

When a Ultra-long-life filter is installed, the filter sign timer setting must be changed.

Setting Table

Mode No.	Setting Switch No.	Setting Position No.	Setting
10 (20)	1	01	Long-Life Filter
		02	Ultra-Long-Life Filter (1)
		03	—

Fan Speed Changeover When Thermostat is OFF

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

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

Setting Table

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

Auto restart after power failure reset

For the air conditioners with no setting for the function (same as factory setting), the units will be left in the stop condition when the power supply is reset automatically after power failure reset or the main power supply is turned on again after once turned off. However, for the air conditioners with the setting, the units may start automatically after power failure reset or the main power supply turned on again (return to the same operation condition as that of before power failure).

For the above reasons, when the unit is set enabling to utilize "Auto restart function after power failure reset", utmost care should be paid for the occurrence of the following situation.

Caution 1. The air conditioner starts operation suddenly after power failure reset or the main power supply turned on again. Consequently, the user might be surprised (with question for the reason why).

> 2. In the service work, for example, turning off the main power switch during the unit is in operation, and turning on the switch again after the work is completed start the unit operation (the fan rotates).

Air Flow Adjustment - Ceiling height

Make the following setting according to the ceiling height. The setting position No. is set to "01" at the factory.

■ In the Case of FXAQ, FXHQ

Mode No.	Setting Switch No.	Setting Position No.	Setting
		01	Wall-mounted type: Standard
13(23)	0	02	Wall-mounted type: Slight increase
		03	Wall-mounted type: Normal increase

■ In the Case of FXFQ25~80

Mode	First	Second						
No.	code No.	code No.	Setting	4-way Outlets	3-way Outlets	2-way Outlets		
		01	Standard (N)	Lower than 2.7 m	Lower than 3.0 m	Lower than 3.5 m		
13 (23)	0	02	High Ceiling (H)	Lower than 3.0 m	Lower than 3.3 m	Lower than 3.8 m		
		03	Higher Ceiling (S)	Lower than 3.5 m	Lower than 3.5 m	_		

■ In the Case of FXFQ100~125

Mode	First	Second			Ceiling height					
No.	code No.	code No.	Setting	4-way Outlets	3-way Outlets	2-way Outlets				
		01	Standard (N)	Lower than 3.2 m	Lower than 3.6 m	Lower than 4.2 m				
13 (23)	0	02	High Ceiling (H)	Lower than 3.6 m	Lower than 4.0 m	Lower than 4.2 m				
		03	Higher Ceiling (S)	Lower than 4.2 m	Lower than 4.2 m	—				

■ In the Case of FXUQ71~125M

Mode	First	Second	5 5					
No.	code No.	code No.	Setting	4-way Outlets	3-way Outlets	2-way Outlets		
		01	Standard (N)	Lower than 2.7 m	Lower than 3.0 m	Lower than 3.5 m		
13 (23)	0	02	High Ceiling (H)	Lower than 3.0 m	Lower than 3.5 m	Lower than 3.8 m		
		03	Higher Ceiling (S)	Lower than 3.5 m	Lower than 3.8 m			

Air Flow Direction Setting

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

Setting Table

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

|--|

Setting of Air Flow Direction Adjustment

Only the model FXKQ has the function.

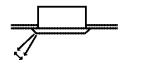
When only the front-flow is used, sets yes/no of the swing flap operation of down-flow.

Setting	Mode No.	First Code No.	Second Code No.
Down-flow operation: Yes	13 (23)	3	01
Down-flow operation: No			02

Setting Table

Setting of Air Flow Direction Adjustment Range

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



(S2537)

Setting Table

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

Air flow rate switching at discharge grille for field air flow rate switching

When the optional parts (high performance filter, etc.) is installed, sets to change fan speed for securing air flow rate.

Follow the instruction manual for the optional parts to enter the setting numbers.

Setting of the static pressure selection (for FXDQ model)

Model No.	First Code No.	Second Code No.	External static pressure
13 (23)	5	01	Standard (15Pa)
13 (23)	5	02	High static pressure (44Pa)

3.1.7 Outdoor Air Processing Unit-Field Setting (Remote Controller)

Mode	Mode Setting Setting						S	Setting	g posit	tion N	0.						
No.	SW No.	contents	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	0	Stain of filter	2500hr	1250hr	_	_	_	_	—	—	—	_	_	—	_	—	—
10 (20)	3	Filtering time cumulation	Display	No display	_	_	_	_	_	_	_	_	_	_	_	_	
12	1	External ON/OFF input	Forced stop	Forced input		_	_	_	_	_	_	_	_	_	_	_	
(22)	5	Power failure automatic reset	Not equipped	Equipped	_	_	_		_	_	_	_	_	_	_	_	_
14	3	Discharge temperature (cooling)	13°C	14	15	16	17	18	19	20	21	22	23	24	25	25	25
(24)	4	Discharge temperature (heating)	18°C	19	20	21	22	23	24	25	26	27	28	29	30	30	30

Note) Bold face in indicates the default setting.

3.1.8 Centralized Control Group No. Setting

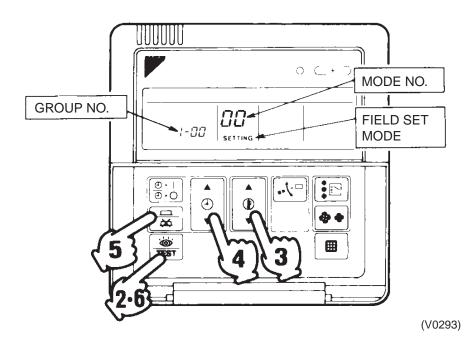
BRC1A Type

Set the group number of each group of the indoor unit from the remote controller. (In case of no remote controller, also connect the remote controller and set the group No. Then, remove the remote controller.)

 Turn ON the power of the indoor unit and central remote controller. (Unless the power is ON, no setting can be made.) Check that the installation and electrical wiring are correct before turning the power supply ON.

(When the power supply is turned ON, all LCD appear once and the unit may not accept the operation for about one minute with the display of "88".)

- While in the normal mode, hold down the " button for a minimum of 4 seconds. The remote controller will enter the FIELD SET MODE.
- 3. Select the MODE No. "00" with the " 👔 " button.
- 4. Use the " 👌 " button to select the group No. for each group.
- 5. (Group numbers increase in the order of 1-00, 1-01, ... 1-15, 2-00, ... 4-15.)
- 6. Press " \square_{∞} " to set the selected group No.
- 7. Press " $\left[\underbrace{\textcircled{}}_{T \in ST} \right]$ " to return to the NORMAL MODE.



Note:

- For simplified remote controller, see the following.
- For setting group No. of HRV and wiring adaptor for other air conditioners, etc., refer to the instruction manual attached.

NOTICE

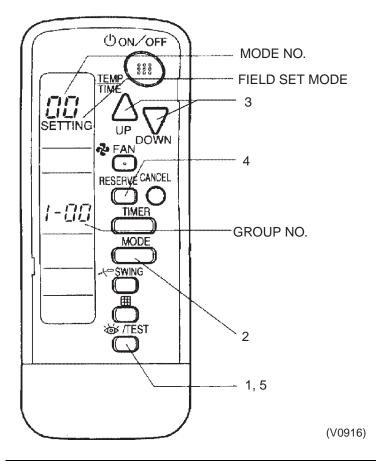
Enter the group No. and installation place of the indoor unit into the attached installation table. Be sure to keep the installation table with the operation manual for maintenance.

BRC7C Type

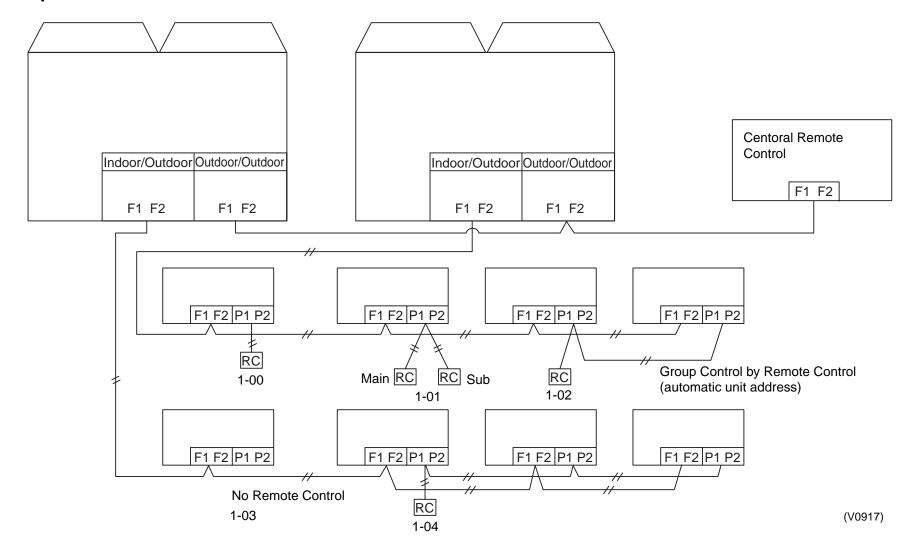
■ Group No. setting by wireless remote controller for centralized control

- 1. When in the normal mode, push button for 4 seconds or more, and operation then enters the "field set mode."
- 2. Set mode No. "00" with button.
- 3. Set the group No. for each group with $\bigtriangleup_{\text{DP}}$ \bigvee_{DOWN} button (advance/backward).
- 4. Enter the selected group numbers by pushing \square button.
- 5. Push \bigcirc button and return to the normal mode.

BRC7C Type



Group No. Setting Example



Caution

When turning the power supply on, the unit may often not accept any operation while "88" is displaying after all indications were displayed once for about 1 minute on the liquid crystal display. This is not an operative fault.

3.1.9 Setting of Operation Control Mode from Remote Controller (Local Setting)

The operation control mode is compatible with a variety of controls and operations by limiting the functions of the operation remote controller. Furthermore, operations such as remote controller ON/OFF can be limited in accordance with the combination conditions. (Refer to information in the table below.)

Centralized controller is normally available for operations. (Except when centralized monitor is connected)

3.1.10 Contents of Control Modes

Twenty modes consisting of combinations of the following five operation modes with temperature and operation mode setting by remote controller can be set and displayed by operation modes 0 through 19.

- ON/OFF control impossible by remote controller
 Used when you want to turn on/off by central remote controller only. (Cannot be turned on/off by remote controller.)
- OFF control only possible by remote controller Used when you want to turn on by central remote controller only, and off by remote controller only.
- Centralized

Used when you want to turn on by central remote controller only, and turn on/off freely by remote controller during set time.

Individual

Used when you want to turn on/off by both central remote controller and remote controller.

Timer operation possible by remote controller Used when you want to turn on/off by remote controller during set time and you do not want to start operation by central remote controller when time of system start is programmed.

How to Select Operation Mode

Whether operation by remote controller will be possible or not for turning on/off, controlling temperature or setting operation mode is selected and decided by the operation mode given on the right edge of the table below.

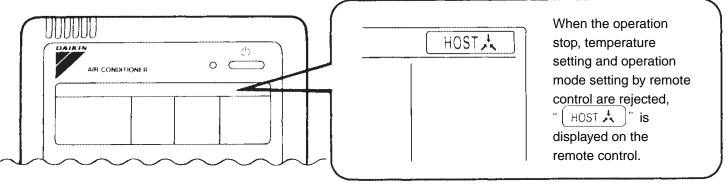
⊨xampie

ON by remote controller (Unified ON by central remote controller)	OFF by remote controller (Unified OFF by central remote controller)	OFF by remote controller	Temperature control by remote controller	Operation mode setting by remote controller	Control mode is "1."
\downarrow	\downarrow	\downarrow	\downarrow	\downarrow	
Rejection	Rejection	Rejection	Acceptance	Acceptance	(VL069)

Control mode		Control by ren	note controller			Control mode
	Ope	ration	OFF	Temperature	Operation	
	Unified operation, individual operation by central remote controller, or operation controlled by timer	Unified OFF, individual stop by central remote controller, or timer stop		control	mode setting	
ON/OFF control	Rejection (Example)	Rejection (Example)	Rejection	Rejection	Acceptance	0
impossible by remote controller			(Example)		Rejection	10
				Acceptance (Example)	Acceptance (Example)	1(Example)
					Rejection	11
OFF control only			Acceptance	Rejection	Acceptance	2
possible by remote controller					Rejection	12
				Acceptance Rejection	Acceptance	3
		_			Rejection	13
Centralized	Acceptance				Acceptance	4
					Rejection	14
				Acceptance	Acceptance	5
					Rejection	15
Individual		Acceptance		Rejection	Acceptance	6
					Rejection	16
				Acceptance	Acceptance	7 *1
					Rejection	17
Timer operation	Acceptance	Acceptance		Rejection	Acceptance	8
possible by remote controller	(During timer at ON position only)	(During timer at ON position only)			Rejection	18
				Acceptance	Acceptance	9
					Rejection	19

Do not select "timer operation possible by remote controller" if not using a remote controller. Operation by timer is impossible in this case.

*1. Factory setting



3.2 Field Setting from Outdoor Unit

3.2.1 Field Setting from Outdoor Unit

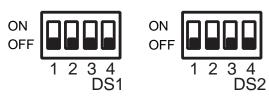
Setting by dip switches

The following field settings are made by dip switches on PC board.

	Dipswitch	Setting item	Description		
No.	Setting	Setting item	Description		
	ON		Used to set cool / heat select by remote controller		
DS1-1	OFF (Factory set)	Cool / Heat select	equipped with outdoor unit.		
DS1-2	ON	Netwood			
~DS1-4	OFF (Factory set)	Not used	Do not change the factory settings.		
DS2-1	ON	Netwood	De net ekenne the factory actions		
~4	OFF (Factory set)	Not used	Do not change the factory settings.		
DS3-1,	ON	Netwood	De net ekenne the factory actions		
2	OFF (Factory set)	Not used	Do not change the factory settings.		

Caution

DIP switch Setting after changing the main P.C.Board(A1P) to spare parts P.C.B. When you change the main P.C.Board(A1P) to spare parts P.C.B., please carry out the following setting.



DS No.	ltem				Cor	ntents				
DS1-1	Cool/Heat change over setting	ON	C	he Cool/ OOL/HE utdoor u	AT cha	nange o angeove	over set er remo	tting is ote cont	carried troller fit	out by ted to
		OFF	b	he Cool/ y COOL/ outdool	HEAT	nange o change	over set over re	tting is mote c	not carr controlle	ied ou r fitte
DS1-2	Power supply	ON	20	00V (ma	inly dor	nestic .	Japan)			
	specification	OFF	4	00V (ma	inly ove	erseas)				
DS1-3	Cooling only/Heat-	ON	С	ooling o	nly					
	pump setting	OFF	Н	eat-pum	р					
DS1-4	New/previous unit setting	ON		Production after January 2004 :ON						
		OFF (Spare parts PCB)	•	Producti	on befc	ore Dec	ember	2003 :0	DFF	
DS2-1	Domestic Japan or overseas setting	ON	•	Oversea	S	:ON				
		OFF (Spare parts PCB)	•	Domesti	c Japar	n :OFF				
DS2-2	HP setting (Horse power)		5	8	10	12	14	16	HP	
DS2-3	Factory setting of spare parts		OFF	OFF	ON	OFF	ON	OFF	-	
DS2-4	PCB are all		OFF OFF	ON OFF	ON OFF	OFF ON	OFF ON	ON ON	1	

DIP Switch Detail



Refer "DS1-4, DS2-1~4 setting detail" on next page.

"Detail of DS1-4,	, DS2-1~4 setting	ງ "
-------------------	-------------------	------------

Previous unit	Mfg. No.	Setting method (■ repre	esents the position of switches)
HEAT PUNP(5HP) RXYQ5MY1B	6300001~6300272	On Off $1 2 3 4$ $1 2 3 4$	Set DS2-1 to ON.
HEAT PUNP(8HP) RXYQ8MY1B	6300001~6300491	On Off $1 2 3 4$ $1 2 3 4$	Set DS2-1 and DS2-3 to ON.
HEAT PUNP(10HP) RXYQ10MY1B	6300001~6301014	On Off 1 2 3 4 1 2 3 4	Set DS2-1, DS2-2 and DS2-3 to ON.
HEAT PUNP(12HP) RXYQ12MY1B	6300001~6300276	On Off 1 2 3 4 1 2 3 4	Set DS2-1 and DS2-4 to ON.
HEAT PUNP(14HP) RXYQ14MY1B	6300001~6300314	On Off $1 2 3 4 1 2 3 4$	Set DS2-1, DS2-2 and DS2-4 to ON.
HEAT PUNP(16HP) RXYQ16MY1B	6300001~6300500	On Off $1 2 3 4 1 2 3 4$	Set DS2-1, DS2-3 and DS2-4 to ON.
New unit	Mfg. No.	Setting method (esents the position of switches)
New unit HEAT PUNP(5HP) RXYQ5MY1B	Mfg. No. 6300273~	Setting method (represented of the setting method (represented to the setting method (represented t	esents the position of switches) Set DS1-4 and DS2-1 to ON.
HEAT PUNP(5HP)			
HEAT PUNP(5HP) RXYQ5MY1B HEAT PUNP(8HP)	6300273~	On Off $1 2 3 4 1 2 3 4$	Set DS1-4 and DS2-1 to ON. Set DS1-4, DS2-1 and DS2-3
HEAT PUNP(5HP) RXYQ5MY1B HEAT PUNP(8HP) RXYQ8MY1B HEAT PUNP(10HP)	6300273~ 6300492~	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Set DS1-4 and DS2-1 to ON. Set DS1-4, DS2-1 and DS2-3 to ON. Set DS1-4, DS2-1, DS2-2 and
HEAT PUNP(5HP) RXYQ5MY1B HEAT PUNP(8HP) RXYQ8MY1B HEAT PUNP(10HP) RXYQ10MY1B HEAT PUNP(12HP)	6300273~ 6300492~ 6301015~	On Off 1 2 3 4 1 2 3 4 On Off 1 2 3 4 1 2 3 4	Set DS1-4 and DS2-1 to ON. Set DS1-4, DS2-1 and DS2-3 to ON. Set DS1-4, DS2-1, DS2-2 and DS2-3 to ON. Set DS1-4, DS2-1 and DS2-4

Setting by pushbutton switches

The following settings are made by pushbutton switches on PC board.

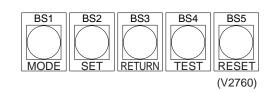
In case of multi-outdoor unit system, various items should be set with the master unit.

(Setting with the slave unit is disabled.)

The master unit and slave unit can be discriminated with the LED indication as shown below.

	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H8P
Master unit	ightarrow		0					0
Slave unit 1	lacksquare							•
Slave unit 2								

(Factory setting)



There are the following three setting modes.

① Setting mode 1 (H1P off)

Initial status (when normal) : Used to select the cool/heat setting. Also indicates during "abnormal", "low noise control" and "demand control".

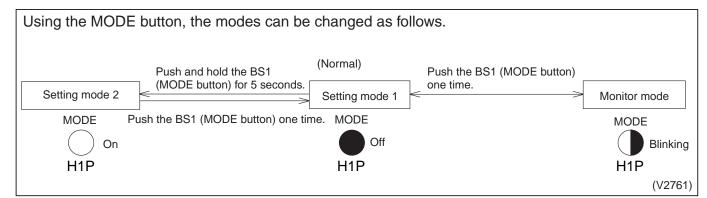
② Setting mode 2 (H1P on)

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

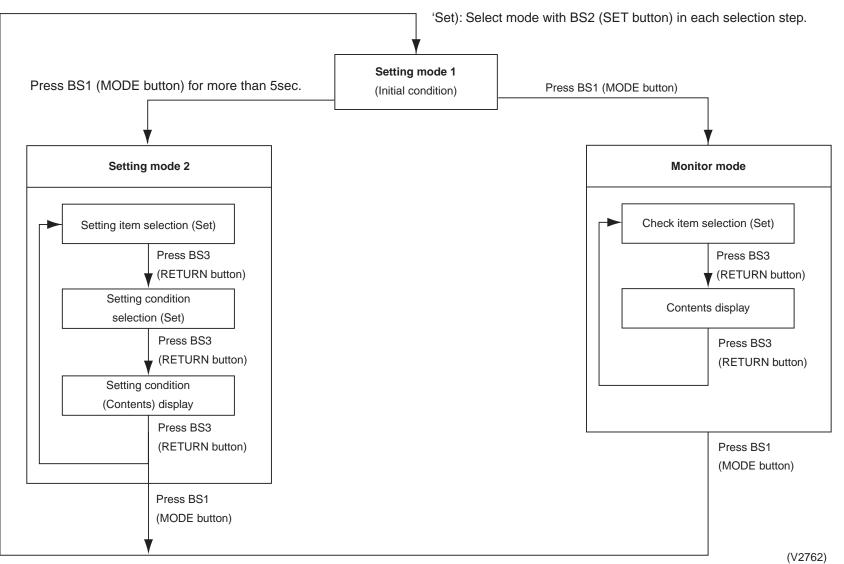
③ Monitor mode (H1P blinks)

Used to check the program made in Setting mode 2.

Mode changing procedure



Mode changing procedure

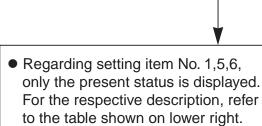


a. "Setting mode 1"

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

<Selection of setting items>

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



 The cool/heat selection setting can be changed on setting item 2, 3, 4.
 → After setting, push the RETURN button (BS3) and decide the item.

▼
When the RETURN button (BS3) is pushed, the status becomes the initial
status of "Setting mode 1".

No.	Sotting (displaying) item	LED display example											
INO.	Setting (displaying) item	H1P	H2P	H3P	H4P	H5P	H6P	H7P					
1	Display for malfunction / preparing / test run *		•	0		•							
2	C/H selector (individual)		\bullet	0	\bullet	\bullet		●					
3	C/H selector (Master)		•		0								
4	C/H selector (Slave)				•	0							
5	Low noise operation *			0									
6	Demand operation *		lacksquare	0	•	•							

* Setting No. 1, 5, 6 are the present status display only.

Display for malfunction/preparing/test-run

	<u> </u>					
Normal	igodol	\bullet	0	ullet	\bullet	ullet
Malfunction		0	0	•	•	
Preparing/Test-run		•	0	•		

Display during low noise operation

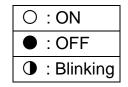
Normal		0			ightarrow
During low noise operation	ightarrow	0		0	•

H3P to H5P LED display changes depending on setting No. 2, 3, 4.

Display during demand operation

 Normal	•	0		\bullet
During demand operation		0		0

H3P to H5P LED display changes depending on setting No. 2, 3, 4.



b. "Setting mode 2"	No.	Setting item	Description
Push and hold the MODE button (BS1) for 5 seconds and set to "Setting mode 2".	0	EMG (Emergency operation 1)	Operates by Standard compressor only when inverter compressor malfunctions. Temporary operation until the compressor is replaced. Since the comfortability is extremely deteriorated, immediately replace the compressor. (This setting is not applicable to RXYQ5M.)
	1	Cool/heat unified address	Sets address for cool/heat unified operation.
	2	Low noise/demand address	Address for low noise/demand operation
<selection items="" of="" setting=""></selection>	5	Indoor unit forced fan H	Allows forced operation of indoor unit fan while unit is stopped. (H tap)
Push the SET button (BS2) and set the LED display to a setting item shown in the table on the right.	6	Indoor unit forced operation	Allows forced operation of indoor unit.
\downarrow	8	Te setting	Target evaporation temperature for cooling
Push the RETURN button (BS3) and decide the item. (The present setting	9	Tc setting	Target condensation temperature for heating
condition is blinked.)	10	Defrost changeover setting	Changes the temperature condition for defrost and sets to quick defrost or slow defrost.
	11	Sequential operation setting	Sets sequential operation
	12	External low noise setting / Demand setting	Reception of external low noise or demand signal
	13	AIRNET address	Set address for AIRNET.
<selection conditions="" of="" setting=""></selection>	18	High static pressure setting	Make this setting in the case of operating in high static pressure mode with diffuser duct mounted.
Push the SET button (BS2) and set to the setting condition you want. ↓ Push the RETURN button (BS3) and decide the condition.	19	Emergency operation (STD compressor operation prohibited)	Used to operate system only with inverter compressor when STD compressor malfunctions. This is a temporary operation extremely impairing comfortable environment. Therefore, prompt replacement of the compressor is required. (This operation, however, is not set with RXYQ5M.)
	20	Additional refrigerant charge operation setting	Carries out additional refrigerant charge operation.
	21	Refrigerant collection mode setting	Sets to refrigerant collection mode.
Push the RETURN button (BS3) and set to the initial status of "Setting mode 2".	22	Night-time low noise setting	Sets automatic nighttime low noise operation in a simple way. The operating time is based on "Starting set" and "Ending set".
	25	Low noise setting	Sets low noise level when the low noise signal is input from outside.
 If you become unsure of how to proceed, push the MODE button (BS1) and return to setting mode 1. 	26	Night-time low noise control starting setting	Sets starting time of nighttime low noise operation. (Nighttime low noise setting is also required.)
(V2764)	27	Night-time low noise control ending setting	Sets ending time of nighttime low noise operation. (Nighttime low noise setting is also required.)
		Power transistor check mode	Used for trouble diagnosis of DC compressor. Since the waveform of inverter is output without wiring to the

28	*Check after disconnection of compressor wires	compressor, it is convenient to probe whether the trouble comes from the compressor or PC board.
29	Capacity precedence setting	If the capacity control is required, the low noise control is automatically released by this setting during carrying out low noise operation and nighttime low noise operation.
30	Demand setting 1	Changes target value of power consumption when demand control 1 is input.
32	Normal demand setting	Normally enables demand control 1 without external input. (Effective to prevent a problem that circuit breaker of small capacity is shut down due to large load.

No.	Setting item	Description
38	Emergency operation (Setting for the master unit operation prohibition in multi- outdoor-unit system)	
39	Emergency operation (Setting for the slave unit 1 operation prohibition in multi- outdoor-unit system)	Used to temporarily prohibit the applicable outdoor unit from operating should there be any faulty part in multi- outdoor-unit system. Since the comfortable environment is extremely impaired, prompt replacement of the part is required.
40	Emergency operation (Setting for the slave unit 2 operation prohibition in multi- outdoor-unit system)	

No.			Setting	g item dis	C/H selection	20	1	I	Setting condition display						
No.	Setting item	MODE H1P	TEST H2P	IND	Master	Slave	Low	Demand H7P	Setting	lion dispi					
	EMG (emergency operation)			H3P	H4P	H5P	H6P		Normal operation	$\bigcirc ullet ullet$			* Fa	C	set *
0	INV compressor operation inhibited.	0			-	•	•		Emergency operation		$\bigcirc ullet$	••	• (
									Address	0	$\bigcirc ullet$	$\bullet \bullet$	•		*
1	Cool / Heat	0						0	Binary number		$\bigcirc ullet$	$\bullet \bullet$	• •	\mathbf{O}	
-	Unified address	0	•			•			(6 digits)		~				
										31	$\bigcirc ullet$	00	00	\mathbf{O}	
									Address	0	$\bigcirc ullet$	\bullet \bullet			*
2	Low noise/demand address	0					0		Binary number	1	$\bigcirc ullet$	$\bullet \bullet$	•	\mathbf{O}	
	address								(6 digits)	04	~	~ ~	~ ~		
										31	$\bigcirc \bullet$	00	00		
5	Indoor forced fan H	0	igodol			0	\bullet	0	Normal operation		$\bigcirc \bullet$				*
									Indoor forced fan H		$\bigcirc \bullet$				
6	Indoor forced operation	0	igodol			0	0		Normal operation		$\bigcirc \bullet$				*
									Indoor forced operation		$\bigcirc \bullet$				
0	T	\sim							High		$\bigcirc \bullet$		0		
8	Te setting	0			0			-	Normal (factory setting)		$\bigcirc \bullet$				*
									Low		$\bigcirc \bullet$				
•	T	\sim							High		$\bigcirc \bullet$		0		
9	Tc setting	0	U		0			0	Normal (factory setting)		$\bigcirc \bullet$				X
									Low		$\bigcirc \bullet$				
4.0		\sim							Quick defrost		$\bigcirc \bullet$		0		
10	Defrost setting	0	U		0		0	-	Normal (factory setting)		$\bigcirc \bullet$				X
									Slow defrost OFF						
11	Sequential operation setting	0	igodol		0	\bullet	0	0	ON		$\bigcirc \bullet$				
	5								External low noise/demand:		\bigcirc \bigcirc				*
12	External low noise/	0			0	0			NO		$\bigcirc ullet$	$\bullet \bullet$			*
12	demand setting)				0			External low noise/demand: YES		$\bigcirc ullet$	••	• (\mathbf{O}	
									Address	0	$\bigcirc ullet$	••			*
13	Airnet address	0			0	0		0	Binary number	1	$\bigcirc ullet$	$\bullet \bullet$	• •	\mathbf{O}	
10		\bigcirc							(6 digits)		~				
										63	$\bigcirc ullet$	00	00	\mathbf{O}	
	High static pressure	0							High static pressure setting: OFF		$\bigcirc ullet$	$\bullet \bullet$	•	\mathbf{O}	*
18	setting	0		0			0		High static pressure setting: ON		$\bigcirc ullet$	••	• (
	Emorgonov								OFF		\bigcirc				*
19	Emergency operation	0		0			0	0	STD 1, 2 operation: Inhibited	ł	\bigcirc \bigcirc				
	(STD compressor is inhibited to operate.)								STD 2 operation: Inhibited		\bigcirc \bigcirc	••			
	Additional refrigerant								Refrigerant charging: OFF		$\bigcirc \bigcirc$				*
20	operation setting	0		0	•	0			Refrigerant charging: ON		\bigcirc \bigcirc				
	Refrigerant recovery						_		Refrigerant recovery: OFF		$\bigcirc \bigcirc$	••			*
21	mode setting	0		0		0		0	Refrigerant recovery: ON		\bigcirc \bullet				
			<u> </u>						OFF		\bigcirc				×
	Night-time low poice	~	_			~					\bigcirc \bigcirc	••			-
22	Night-time low noise setting	0		0		0	0				\bigcirc				
											\bigcirc				
									Level 1 (outdoor fan with 8 step or lower)						
25	Low noise setting	0		0	0			0	Level 2 (outdoor fan with 7 step or lower						×
		`	-				-		Level 3 (outdoor fan with 6 step or lower)			••			

			Settin	g item dis	play							
No.		MODE	TEST	С	/H selection	on	Low	Demand	Setting cor	ndition display		
	Setting item	H1P	H2P	IND H3P	Master H4P	Slave H5P	noise H6P	H7P			* Fact	ory set
	Night time low poice								About 20:00	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0
26		0	\bullet	0	0		0		About 22:00 (factory	$\bigcirc \bullet \bullet \bullet$		• *
	setting								About 24:00	$\bigcirc \bullet \bullet \bullet$	$\bigcirc ullet$	•
									About 6:00	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0
27	Night-time low noise operation end setting	0	•	0	0	\bullet	0	0	About 7:00	$\bigcirc \bullet \bullet \bullet$	ullet $ullet$	•
	-								About 8:00 (factory setting)	$\bigcirc \bullet \bullet \bullet$	$\bigcirc igodot$	• *
28	Power transistor	0		0	0	0			OFF	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0 *
20	check mode	0	•	0				•	ON	$\bigcirc \bullet \bullet \bullet$	\bullet O	•
29	Capacity	0		0	0	0		0	OFF	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0 *
20	precedence setting)							ON	$\bigcirc \bullet \bullet \bullet$	\bullet O	•
									60 % demand	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0
30	Demand setting 1	0	•	0	0	0	0		70 % demand	$\bigcirc \bullet \bullet \bullet$	ullet $igcap$	• *
									80 % demand	$\bigcirc \bullet \bullet \bullet$	$\bigcirc ullet$	•
32	Continuous demand	0	0						OFF	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0 *
02	setting)			•	•			ON	$\bigcirc \bullet \bullet \bullet$	$ullet$ \bigcirc	•
	Emergency operation								OFF	$\bigcirc \bullet \bullet \bullet$	••	0 *
38	Master unit with multi-outdoor-unit	0	0	igodot		0	0					-
	system is inhibited to operate.)								Master unit operation: Inhibited	d 🔿 🔴 🔴	$\bullet \bullet \circ$	
	Emergency											<u> </u>
20	operation (Slave unit 1 with								OFF	$\bigcirc \bullet \bullet \bullet$	\bullet \bullet	0 *
39	multi-outdoor-unit system is inhibited to	0	0		-	0	0	0	Slave unit 1 operation: Inhibite	ed () 🔴 🔴 (
	operate.)							_				
	Emergency operation								OFF	$\bigcirc \bullet \bullet \bullet$	$\bullet \bullet$	0 *
40	(Ślave unit 2 with multi-outdoor-unit	0	0	igodol	0							
	system is inhibited to operate.)								Slave unit 2 operation: Inhibite	$d \bigcirc \bullet \bullet$	$\bullet \bullet \circ$	

SiE39-404

c Monitor mode

c. Monitor mode	No	Cotting item			LE	D disp	lay			Data diaplay		
	No.	Setting item	H1P	H2P	H3P	H4P	H5P	H6P	H7P	Data display		
To enter the monitor mode, push the MODE button (BS1) when in "Setting	0	Number of units for sequential starting, and others	0		•	•	•	•		See below		
mode 1".	1	C/H unified address	\bullet					\bullet	0			
	2	Low noise/demand address	\bullet					0				
	3	Not used	0					0	0			
	4	Airnet address	0				0					
	5	Number of connected indoor units	•				0		0	Lower 6 digits		
<selection item="" of="" setting=""></selection>	6	Number of connected BS units	•				0	0				
Push the SET button (BS2) and set the LED display to a setting item.	7	Number of connected zone units (excluding outdoor and BS unit)	•				0	0	0			
	8	Number of outdoor units	\bullet			0						
	9	Number of connected BS units	0			0	•		0	Lower 4 digits: upper		
	10	Number of connected BS units	0			0		0		Lower 4 digits: lower		
<confirmation contents="" on="" setting=""></confirmation>	11	Number of zone units (excluding outdoor and BS unit)	0	•		0		0	0	Lower 6 digits		
Push the RETURN button (BS3) to	12	Number of terminal blocks				0	0			Lower 4 digits: upper		
display different data of set items.	13	Number of terminal blocks	0	•		0	0	ullet	0	Lower 4 digits: lower		
	14	Contents of malfunction (the latest)	0			0	0	0		Malfunction code table		
	15	Contents of malfunction (1 cycle before)	0	•		0	0	0	0	Refer page 171, 172.		
	16	Contents of malfunction (2 cycle before)	0		0		•					
	20	Contents of retry (the latest)	0		0		0					
Push the RETURN button (BS3) and	21	Contents of retry (1 cycle before)	0		0		0		0			
switches to the initial status of	22	22 Contents of retry (2 cycle before) O • O • O •										
"Monitor mode".	Setti	ng item 0 Display content	ts of	"Nun	nber	of ur	nits fo	or se	quer	ntial start,		
	and	others"			.							
	Num	ber of units for sequential	1 un	it								

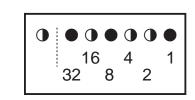
* Push the MODE button (BS1) and returns to "Setting mode 1".

Number of units for sequential start	1 unit	0					
Start	2 units	0	0				
	3 units	0	0				
EMG operation /backup operation setting	ON	0		0			
operation setting	OFF	0					
Defrost select setting	Short	0			0		
	Medium	0			0		
	Long	0					
Te setting	Н	0				0	
	М	0				0	
	L	0					
Tc setting	Н	0					0
	М	0					•
	L	0					

(V2765)

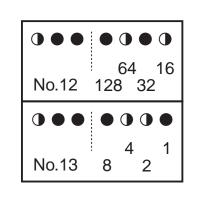
Push the SET button and match with the LEDs No. 1 - 15, push the RETURN button, and enter the data for each setting.

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



The No. 1 cool/heat unified address is expressed as a binary number consisting of the lower 6 digits. (0 - 63)

In \bigcirc the address is 010110 (binary number), which translates to 16 + 4 + 2 = 22 (base 10 number). In other words, the address is 22.



The number of terminal blocks for No. 12 and 13 is expressed as an 8-digit binary number, which is the combination of four upper, and four lower digits for No. 12 and 13 respectively. (0 - 128) In @ the address for No. 12 is 0101, the address for No. 13 is 0110, and the combination of the two is 01010110 (binary number), which translates to 64 + 16 + 4 + 2 = 86 (base 10 number). In other words, the number of terminal block is 86.

H See the preceding page for a list of data, etc. for No. 0 - 22.

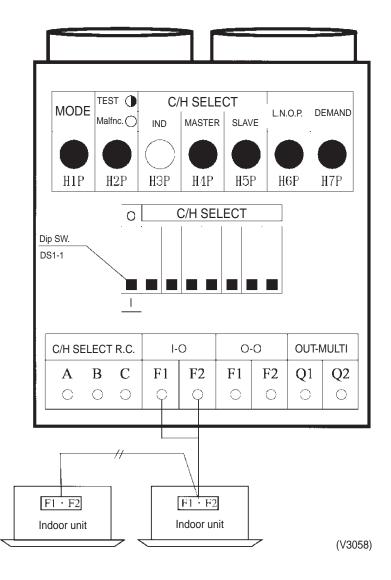
3.2.2 Cool / Heat Mode Switching

There are the following 5 cool/heat switching modes.

- ① Set cool/heat separately for each outdoor unit system by indoor unit remote controller.
- ② Set cool/heat separately for each outdoor unit system by cool/heat switching remote controller.
- ③ Set cool/heat for more than one outdoor unit system simultaneously in accordance with unified master outdoor unit by indoor unit remote controller.
- ④ Set cool/heat for more than one outdoor unit system simultaneously in accordance with unified master outdoor unit by cool/heat switching remote controller.

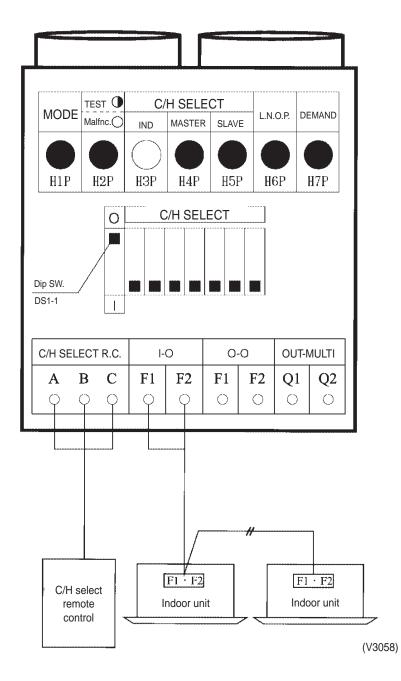
① Set Cool/Heat Separately for Each Outdoor System by Indoor Unit Remote Controller

- It does not matter whether or not there is outdoor outdoor unit wiring.
- Set outdoor unit PC board DS1-1 to "indoor" (factory set).
- Set cool/heat switching to "individual" for "Setting mode 1" (factory set).

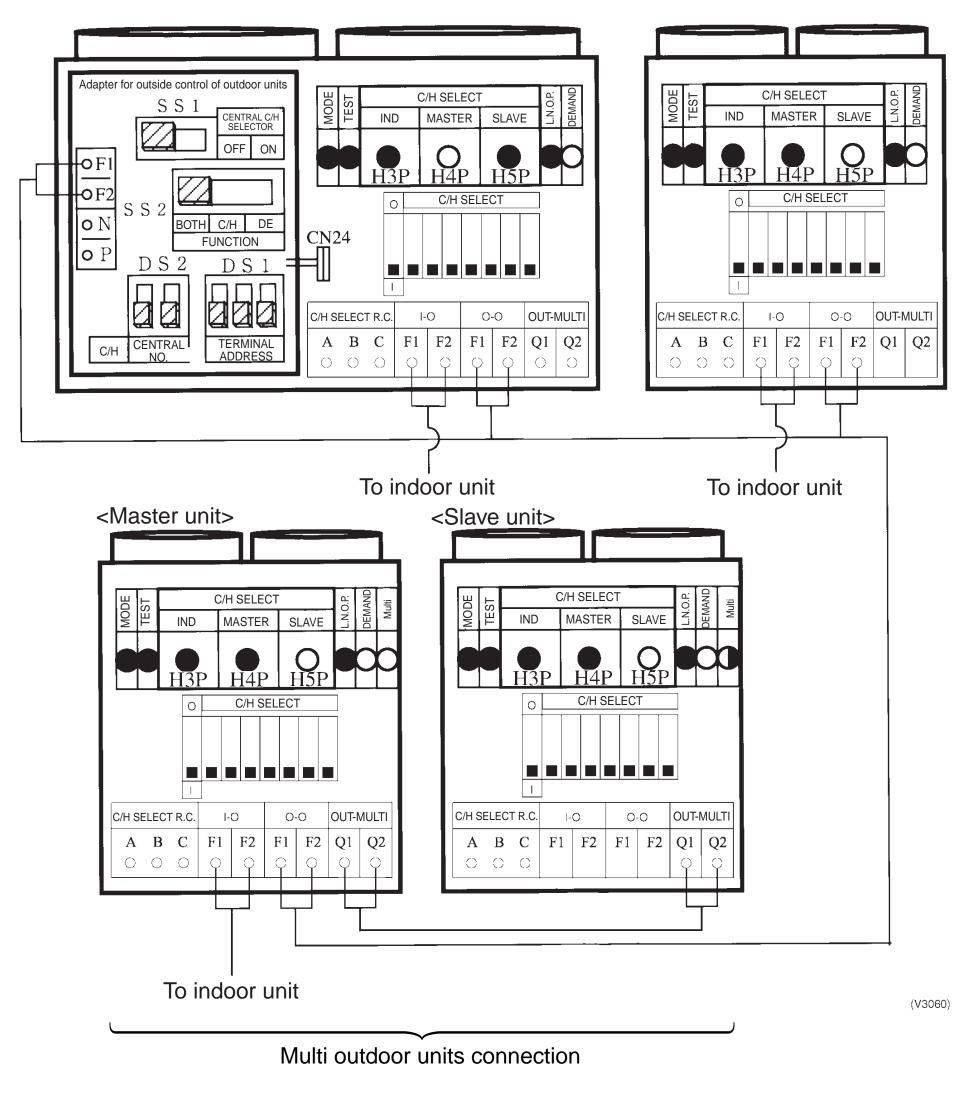


② Set Cool / Heat Separately for Each Outdoor Unit System by Cool/Heat Switching Remote Controller

- ◆ It does not matter whether or not there is outdoor outdoor unit wiring.
- Set outdoor unit PC board DS1-1 to "outdoor" (factory set).
- Set cool/heat switching to "individual" for "Setting mode 1" (factory set).



- Install the outdoor unit external control adapter on either the outdoor-outdoor, indooroutdoor, or transmission line.
- Set outdoor unit PC board DS1-1 to "Indoor" (factory set).
- In setting mode 1, set the outdoor unit you want to give cool/heat selection permission to as the group master, and set the other outdoor units as group slave units.
- Set the outdoor unit external control adapter SS1 to Unified (factory set) or Cool, and SS2 to No (factory set).



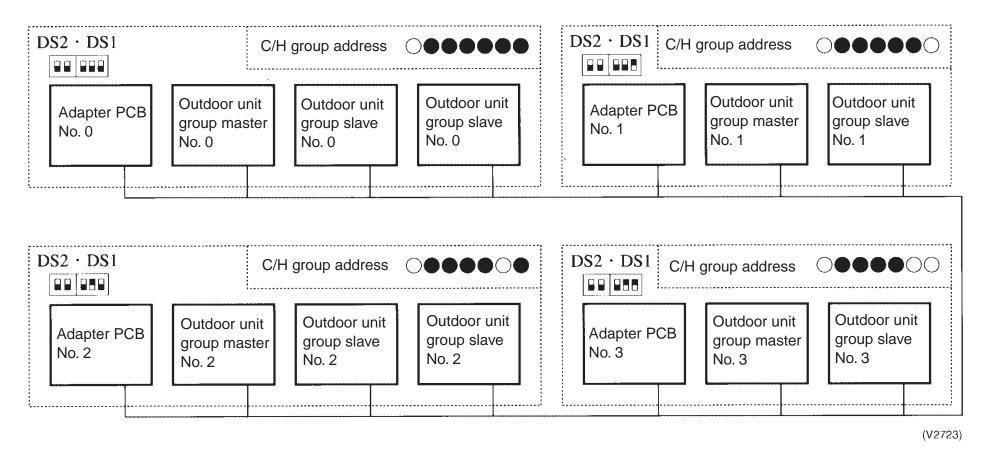
Set Cool / Heat for More Than One Outdoor Unit System Simultaneously in Accordance with Unified Master Outdoor Unit by Cool/Heat Switching Remote Controller

◆ Add and change the following items to ③.

- H Install cool/heat switching remote controller on the group master outdoor unit.
- H Set SS1 on the group master outdoor unit PC board.

Supplementation on (3) and (4).

When switching cool/heat for each adapter PC board with the use of more than one adapter PC board, set the address of the adapter PC board DS1 and DS2 so that it matches the unified cool/heat address of outdoor unit PC board.



Address	Outdoor unit PCB LED	A	dapter PCB					
No.	Set with setting mode 2	DS2	DS1					
No. 0	$\bigcirc \bullet \qquad \bullet \bullet \bullet \bullet \\ 0 \qquad \qquad 0$							
No. 1	$\bigcirc \bullet \bullet \bullet \bullet \circ $							
No. 2	$\bigcirc \bullet \\ 2 \\ \bullet \\ 2 \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\$		2					
No. 3	$\bigcirc \bullet \\ 3 \\ \bigcirc \bigcirc \circ \\ 3 \\ \bigcirc \bigcirc \bigcirc \bigcirc \\ 3 \\ \bigcirc \bigcirc \bigcirc \bigcirc \\ 3 \\ \bigcirc \bigcirc \bigcirc \bigcirc$		3					
No. 4	$\bigcirc \bullet \bullet \bullet \circ \bullet \bullet \\ 4$		4					
2	2		2					
No. 30	$\bigcirc \bullet \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \odot \odot \bullet \\ 30 \bigcirc \bullet$		30					
No. 31	$\bigcirc \bullet \qquad \bigcirc $		31					
O ON ● OFF Upper position (ON) lower position (OFF) (The shaded part shows knob)								

Address setting for ③ and ④ (Set lower 5 digits with binary number.) [No.0 to No.31]

(V2724)

3.2.3 Setting of Low Noise Operation and Demand Operation

Setting of Low Noise Operation

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

- A. When the low noise operation is carried out by external instructions (with the use of the outdoor unit external control adapter)
- Set "External low noise / Demand YES/NO setting" to "External low noise / Demand YES". (Set by Setting Mode 2)
- Set "External low noise level setting" on the outdoor unit PC board, as the need arises. (Lower noise operation can be carried out by "Mode 2" than by "Mode 1", and by "Mode 3" than by "Mode 2".)
- 3. Set "Capacity precedence setting" on the outdoor unit PC board, as the need arises. (If set to "ON", when air conditioning load gets higher, the low noise instructions are neglected to switch to normal operation.) (Set by Setting Mode 2)
- B. When the low noise operation is carried out automatically at night (The outdoor unit external control adapter is not required)
- Set "Night-time low noise setting" on the outdoor unit PC board. (Set by Setting Mode 2) (Lower noise operation can be carried out by "Mode 2" than by "Mode 1", and by "Mode 3" than by "Mode 2".)
- Set "Night-time low noise start setting" on the outdoor unit PC board, as the need arises. (Set by Setting Mode 2)

(Since the time is presumed in accordance with the outdoor temperature, the starting time is a target only.)

- Set "Night-time low noise end setting" on the outdoor unit PC board, as the need arises. (Set by Setting Mode 2) (Since the time is presumed in accordance with the outdoor temperature, the ending time is a target only.)
- 4. Set "Capacity precedence setting" on the outdoor unit PC board, as the need arises. (Set by Setting Mode 2) (If set to "ON", when air conditioning load gets higher, the status is switched to normal

operation even at night.)

Image of operation in the case of A

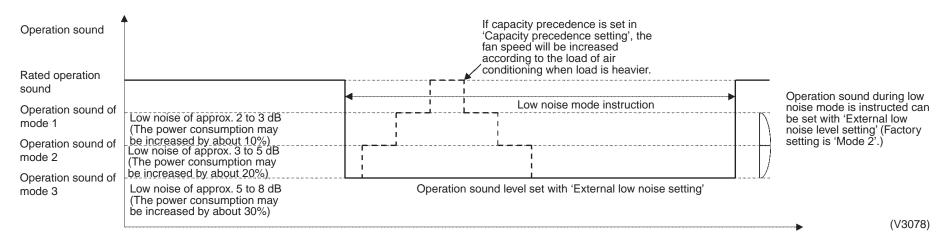


Image of operation in the case of B

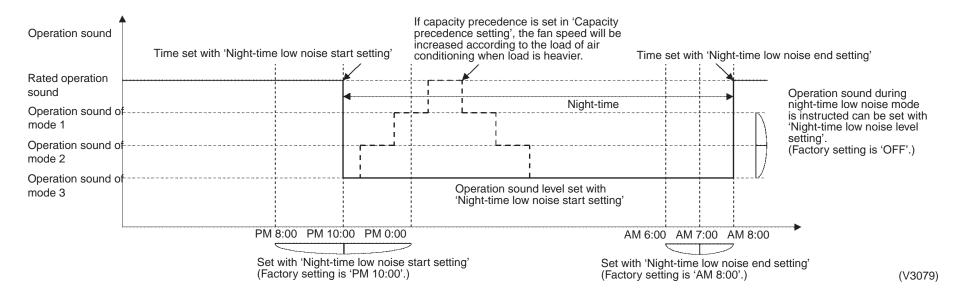
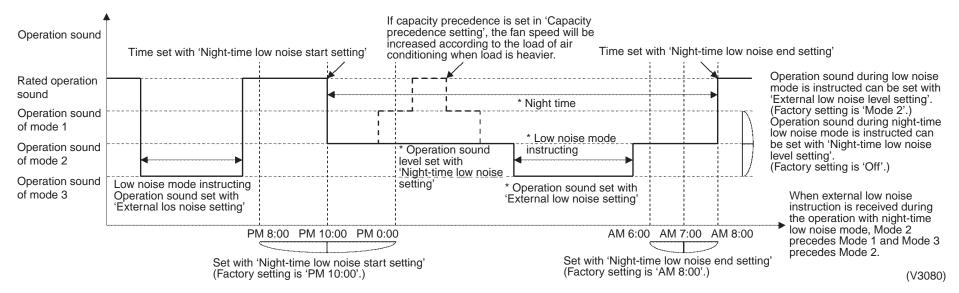


Image of operation in the case of A, B



Setting of Demand Operation

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

- A. When the demand operation is carried out by external instructions (with the use of the outdoor unit external control adapter).
- Set the "External low noise/Demand YES/NO setting" switch on the outdoor unit PCB to the "External low noise/Demand YES". (Set by Setting Mode 2)
- Set the "Demand 1 level setting " on the outdoor unit PCB, as the need arises. (During the demand level 1 instruction, the power consumption can be saved to 80 %, 70 % or 60 % of the rated value respectively.)
- B. When the continuous demand operation is carried out. (Use of the outdoor unit external control adapter is not required.)
- Set the "Continuous demand setting" on the outdoor unit PCB.
- If the "Continuous demand setting" is set to the "Continuous demand 1 fixing", set the "Demand 1 setting " on the outdoor unit PCB, as the need arises. (During the continuous demand level 1 operation, the power consumption can be saved to 80 %, 70 % or 60 % of the rated value respectively.)

Image of operation in the case of A

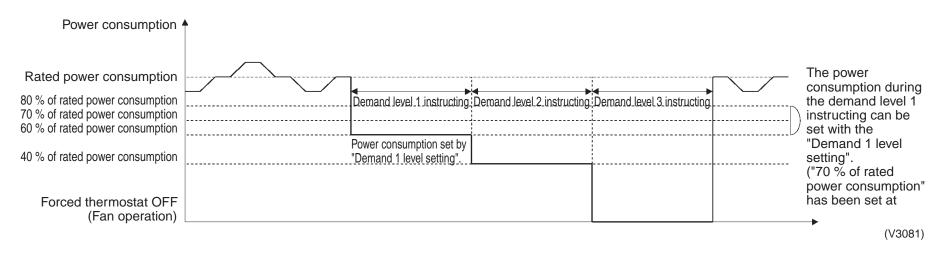
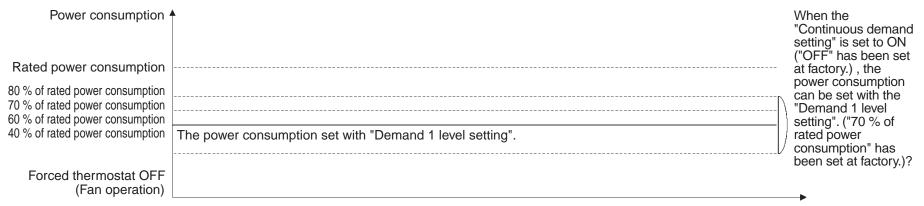


Image of operation in the case of B



(V3082)

Image of operation in the case of A and B

Power consumption					The power consumption can be set with the "Demand 1 level
Rated power consumption					setting". ("70 % of rated power
80 % of rated power consumption 70 % of rated power consumption 60 % of rated power consumption					consumption" has been set at factory.)
40 % of rated power consumption	The power consumption set with "Demand 1 level setting".	★ Demand level 2 instructing	*Demand level 3 instructing		
Forced thermostat OFF (Fan operation)				when the external received repeated	us demand operation, demand instruction is lly, the instruction with vel has the precedence.
					(V3083)

Detailed Setting Procedure of Low Noise Operation and Demand Control

1. Setting mode 1 (H1P off)

① In setting mode 2, push the BS1 (MODE button) one time. \rightarrow Setting mode 2 is entered and H1P lights.

During the setting mode 1 is displayed, "In low noise operation" and "In demand control" are displayed.

2. Setting mode 2 (H1P on)

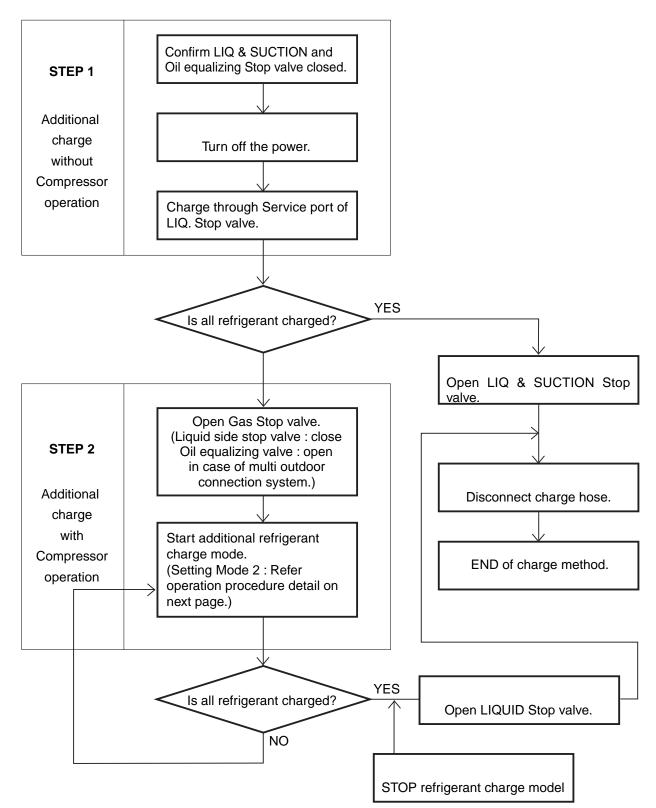
- ① In setting 1, push and hold the BS1 (MODE button) for more than 5 seconds. → Setting mode 2 is entered and H1P lights.
- ② Push the BS2 (SET button) several times and match the LED display with the Setting No. you want.
- ③ Push the BS3 (RETURN button) one time, and the present setting content is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

Setting	Setting	1	S	etting	No. in	dicatio	n		2	S	etting	No. in	dicatio	n		Setting	③ Settii	ng con	tents i	ndicat	ion (In	itial se	etting)										
No.	contents	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	contents	H1P	H2P	H3P	H4P	H5P	H6P	H7P										
22	Night-time low noise setting	0	•	•	•	•	•	•	0	•	0	•	0	0	•	OFF (Factory setting)	0	•	•	•	•	•	•										
																Mode 1	0	•	•	•	•	•	0										
																Mode 2	0	•	•	●	•	0	0										
																Mode 3	0	•	•	●	•	0	0										
25	External low noise								0	•	0	0	•	•	0	Mode 1	0	•	•	•	•	•	0										
	setting															Mode 2 (Factory setting)	0	•	•	•	•	0	•										
																Mode 3	0	•	•	●	•	•	0										
26	Night-time low noise								0	•	0	0	•	0	•	PM 8:00	0	•	•	•	•	0	•										
	start setting															PM 10:00 (Factory setting)	0	•	•	•	0	•	•										
																PM 0:00	0	•	•	●	•	•	0										
27	Night-time low noise end setting									0	•	0	0 0	•	0	0	AM 6:00	0	•	•	•	•	0	•									
																			AM 7:00	0	•	•	•	0	•								
																							AM 8:00 (Factory setting)	0	•	•	•	•	•	0			
29	Capacity precedence setting								0	•	0	0	0	•	0	Low noise precedence (Factory setting)	0	•	•	●	•	•	•										
																										Capacity precedence	0	•	•	•	•	0	
30	Demand setting 1								0	•	0	0	0	0	0	0	0	0	0	0	0		•	60 % of rated power consumption	0	•	•	•	•	•	0		
																								70 % of rated power consumption (Factory setting)		•	•	•	•	0	•		
															80 % of rated power consumption		•	•	•	0	•	•											
32	Continuous demand setting								0	•	•	•	•	• •	•	OFF (Factory setting)	0	•	•	•	•	•	0										
																Continuous demand 1 fixed	0	•	•	•	•	0	•										
12	External low noise / Demand								0	•	•	0	0	•	•	NO (Factory set)	0	•	•	•	•	•	0										
	setting															YES	0	•	•	•	•	0	•										

3.2.4 Setting of Refrigerant Additional Charging Operation

When additional refrigerant is not charged all with outdoor unit in stop mode, operate the outdoor unit and charge the liquid refrigerant from the service port of liquid stop value. The additional charging operation is activated by pushbutton switch on the outdoor unit PC board.





[Operation procedure detail]

- After turning the respective remote switch of indoor and outdoor units off and charging the refrigerant, turn on the power of indoor and outdoor units.
 Do not fail to turn the power off and charge the refrigerant with outdoor unit in stop mode before adding the refrigerant following this procedure, otherwise resulting in trouble.
- ② Fully open the stop valve on the gas side and oil equalizing valve for multi outdoor connection, and do not fail to fully close the stop valve on the liquid side. (If the stop valve on the liquid side is open, the refrigerant cannot be charged.)
- ③ In Setting mode 2 (H1P : ON) with outdoor unit in stop mode, Set "A Additional refrigerant charging operation" switch to ON to start the operation. (H2P turns to display TEST OPERATION (blinks), and "TEST OPERATION" and "IN CENTRALIZED CONTROL" are displayed on the remote controller.)
- When the refrigerant is charged up to the specified amount, press the RETURN button (BS3) to stop charging.

The charging operation is automatically stopped after operating for a maximum of about 30 minutes.

If the charging is not complete within 30 minutes, set the A Additional refrigerant charging operation again to start charging. When the charging immediately stops even by restarting, the refrigerant is charged excessively. The refrigerant cannot be charged any more.

S Do not fail to fully open the stop valve on the liquid side as soon as disconnecting the refrigerant charging hose.

(The piping may be burst due to the liquid sealing.)

[Operation state]

- Compressor frequency : 210Hz
- Y1S, Y2S Solenoid valve : Open
- Outdoor unit fan : High pressure control
- Indoor unit expansion valve (All unit) : 1024 pulse
- Indoor unit fan : H tap

3.2.5 Setting of Refrigerant Recovery Mode

When carrying out the refrigerant collection on site, fully open the respective expansion valve of indoor and outdoor units

[Operation procedure]

- In setting mode 2 with units in stop mode, set "B Refrigerant Recovery / Vacuuming mode" to ON. The respective expansion valve of indoor and outdoor units are fully opened. (H2P turns to display "TEST OPERATION" (blinks), "TEST OPERATION" and "IN CENTRALIZED CONTROL" are displayed on the remote controller, and the operation is prohibited.
- ② Collect the refrigerant using a refrigerant recovery unit. (See the instruction attached to the refrigerant recovery unit for more detal.)
- ③ Press Mode button "BS1" once and reset "Setting Mode 2".

3.2.6 Setting of Vacuuming Mode

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

[Operating procedure]

① With Setting Mode 2 while the unit stops, set (B) Refrigerant recovery / Vacuuming mode to ON. The expansion valves of indoor and outdoor units fully open and some of solenoid valves open.

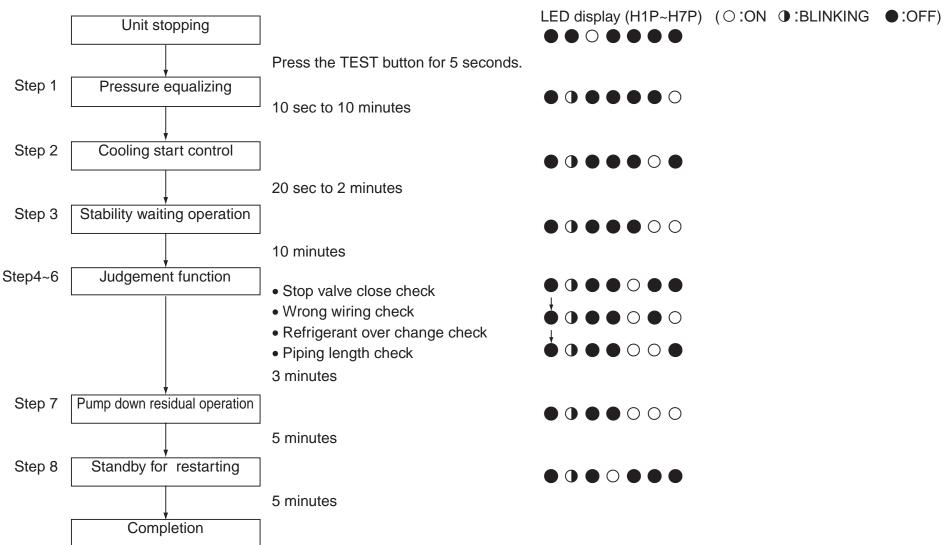
(H2P blinks to indicate the test operation, and the remote controller displays "Test Operation" and "In Centralized control", thus prohibiting operation.)

After setting, do not cancel "Setting Mode 2" until completion of Vacuuming operation.

- ② Use the vacuum pump to perform vacuuming operation.
- ③ Press Mode button "BS1" once and reset "Setting Mode 2".

3.2.7 Check Operation

To prevent any trouble in the period of installation at site, the system is provided with a test operation mode enabling check for incorrect wiring, stop valve left in closed, coming out (or misplacing with suction pipe thermistor) of discharge pipe thermistor and judgment of piping length, refrigerant overcharging, and learning for the minimum opening degree of motorized valve.



CHECK OPERATION FUNCTION

3.2.8 Power Transistor Check Operation

When the inverter system malfunctions (malfunction of inverter, INV compressor), to locate where the malfunction occurs, switching to the power transistor check mode of inverter in the service mode setting enables not to judge the position detection signal malfunction but to output waveform only during inverter operation. (The waveform can be checked by disconnecting the wiring of compressor.)



Be sure to disconnect the compressor wiring when conducting the check operation mentioned above.
 When the output voltage is approx. 50 V (10 Hz) and the voltage balance between phases U-V, V-W, W-U is within ±5%, the inverter PCB is normal.

Part 6 Troubleshooting

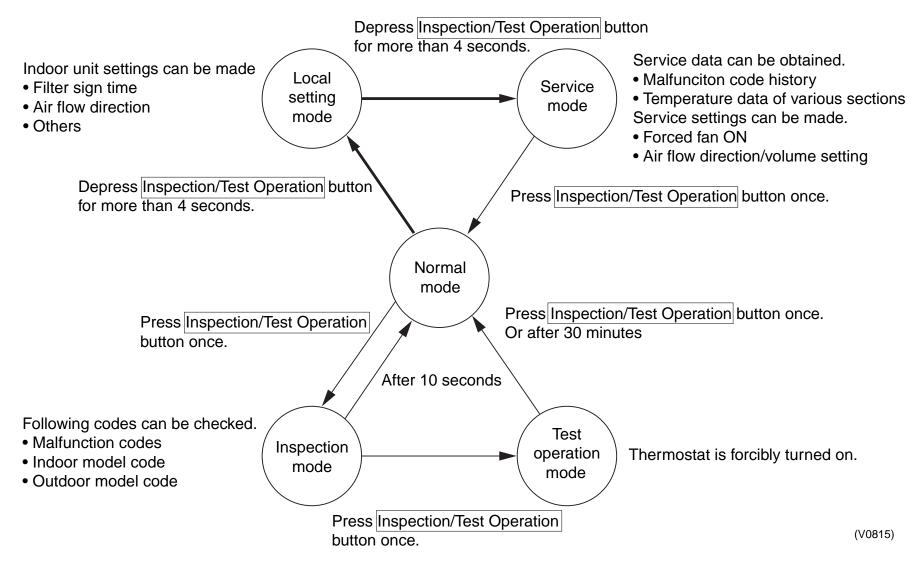
1.	Trou	bleshooting by Remote Controller	160
	1.1	The INSPECTION / TEST Button	160
	1.2	Self-diagnosis by Wired Remote Controller	161
	1.3	Self-diagnosis by Wireless Remote Controller	162
	1.4	Operation of The Remote Controller's Inspection /	
		Test Operation Button	165
	1.5	Remote Controller Service Mode	166
	1.6	Remote Controller Self-Diagnosis Function	168
2	Trou	bleshooting by Indication on the Remote Controller	
	2.1	<i>"RD</i> " Indoor Unit: Error of External Protection Device	
	2.2	"Ri" Indoor Unit: PC Board Defect	
	2.3	"R3" Indoor Unit: Malfunction of Drain Level Control System (S1L)	
	2.4	<i>"R5</i> " Indoor Unit: Fan Motor (M1F) Lock, Overload	
	2.5	"87" Indoor Unit: Malfunction of Swing Flap Motor (MA)	
		"R9" Indoor Unit: Malfunction of Moving Part of Electronic	
	2.0	Expansion Valve (20E)	180
	2.7	<i>"RF</i> " Indoor Unit: Drain Level above Limit	
	2.8	"RJ" Indoor Unit: Malfunction of Capacity Determination Device	
	2.9	"E4" Indoor Unit: Malfunction of Thermistor (R2T)	
		for Heat Exchanger	184
	2.10	"[5" Indoor Unit: Malfunction of Thermistor (R3T) for Gas Pipes	
		"L9" Indoor Unit: Malfunction of Thermistor (R1T) for Suction Air	
		"LJ" Indoor Unit: Malfunction of Thermostat Sensor	
		in Remote Controller	187
	2.13	"Ei" Outdoor Unit: PC Board Defect	
		<i>"E3</i> " Outdoor Unit: Actuation of High Pressure Switch	
		<i>"E4"</i> Outdoor Unit: Actuation of Low Pressure Sensor	
	2.16	"E5" Compressor Motor Lock	191
		"E&" Compressor Motor Overcurrent/Lock	
		<i>"E7"</i> Malfunction of Outdoor Unit Fan Motor	
		"E9" Outdoor Unit: Malfunction of Moving Part of Electronic	
		Expansion Valve (Y1E, Y2E)	195
	2.20	"F3" Outdoor Unit: Abnormal Discharge Pipe Temperature	197
		"F6" Refrigerant Overcharged	
		"หา" Abnormal Outdoor Fan Motor Signal	
	2.23	"H9" Outdoor Unit: Malfunction of Thermistor for Outdoor Air (R1T)	200
	2.24	"JZ" Current Sensor Malfunction	201
	2.25	"J3" Outdoor Unit: Malfunction of Discharge Pipe Thermistor	
		(R3, R31~33T)	202
	2.26	"J5" Outdoor Unit: Malfunction of Thermistor (R2T)	
		for Suction Pipe	203
	2.27	"J5" Outdoor Unit: Malfunction of Thermistor (R4T) for	
		Outdoor Unit Heat Exchanger	204
	2.28	"J8" Malfunction of Oil Equalizing Pipe Thermistor (R7T)	205
	2.29	"J9" Malfunction of Receiver Gas Pipe Thermistor (R5T)	206
	2.30	"JR" Outdoor Unit: Malfunction of Discharge Pipe Pressure Sensor	207

	2.31	"JC" Outdoor Unit: Malfunction of Suction Pipe Pressure Sensor	208
	2.32	"L4" Outdoor Unit: Malfunction of Inverter Radiating	
		Fin Temperature Rise	209
	2.33	"L5" Outdoor Unit: Inverter Compressor Abnormal	210
		<i>"L8</i> " Outdoor Unit: Inverter Current Abnormal	
		"L9" Outdoor Unit: Inverter Start up Error	
		<i>"LC</i> " Outdoor Unit: Malfunction of Transmission Between Inverter	
	2.00	and Control PC Board	213
	2 27	"Pi" Outdoor Unit: Inverter Over-Ripple Protection	
			215
	2.30	<i>"P4</i> " Outdoor Unit: Malfunction of Inverter Radiating Fin	246
	2 20	Temperature Rise Sensor	210
	2.39	"UD" Low Pressure Drop Due to Refrigerant Shortage or	047
	0.40	Electronic Expansion Valve Failure	
		"Ul" Reverse Phase, Open Phase	
		"U2" Power Supply Insufficient or Instantaneous Failure	
		"U3" Check Operation not executed	
		"UY" Malfunction of Transmission Between Indoor Units	222
	2.44	"U5" Malfunction of Transmission Between Remote Controller	
		and Indoor Unit	224
	2.45	"U7" Malfunction of Transmission Between Outdoor Units	225
	2.46	"U8" Malfunction of Transmission Between Master and	
		Slave Remote Controllers	227
	2.47	"U9" Malfunction of Transmission Between Indoor and Outdoor Units	S
		in the Same System	228
	2.48	<i>"UR"</i> Excessive Number of Indoor Units	
	2.49	"UC" Address Duplication of Central Remote Controller	231
		"UE" Malfunction of Transmission Between Central	
		Remote Controller and Indoor Unit	232
	2.51	"UF" Refrigerant System not Set, Incompatible Wiring/Piping	
		"UH" Malfunction of System, Refrigerant System	-
		Address Undefined	235
2	Trou	bleshooting (OP: Central Remote Controller)	
З.		<i>"UE</i> " Malfunction of Transmission Between Central	230
	5.1		226
	<u> </u>	Remote Controller and Indoor Unit	
		" ^(III) " PC Board Defect	237
	3.3	"#8" Malfunction of Transmission Between Optional Controllers	000
	0.4	for Centralized Control	238
	3.4		000
	o =	for Centralized Control	
	3.5	"TE" Address Duplication, Improper Setting	
4.		bleshooting (OP: Schedule Timer)	242
	4.1	"UE" Malfunction of Transmission Between Central Remote	
		Controller and Indoor Unit	242
	4.2	"m" PC Board Defect	244
	4.3	"#8" Malfunction of Transmission Between Optional Controllers	
		for Centralized Control	245
	4.4	" " " R" Improper Combination of Optional Controllers	
		for Centralized Control	246
	4.5	"TC" Address Duplication, Improper Setting	248
5.	Trou	bleshooting (OP: Unified ON/OFF Controller)	249
	5.1		

5.2	Display "Under Host Computer Integrate Control" Blinks	
	(Repeats Single Blink)	251
5.3	Display "Under Host Computer Integrate Control" Blinks	
	(Repeats Double Blink)	254

1. Troubleshooting by Remote Controller 1.1 The INSPECTION / TEST Button

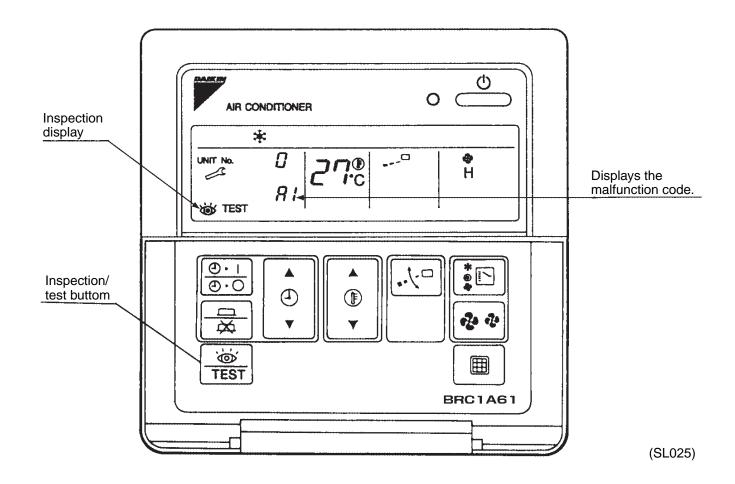
The following modes can be selected by using the [Inspection/Test Operation] button on the remote control.



1.2 Self-diagnosis by Wired Remote Controller

Explanation

If operation stops due to malfunction, the remote controller's operation LED blinks, and malfunction code is displayed. (Even if stop operation is carried out, malfunction contents are displayed when the inspection mode is entered.) The malfunction code enables you to tell what kind of malfunction caused operation to stop. See page 168 for malfunction code and malfunction contents.



1.3 Self-diagnosis by Wireless Remote Controller

In the Case of BRC7C ~ Type

If equipment stops due to a malfunction, the operation indicating LED on the light reception section flashes.

The malfunction code can be determined by following the procedure described below. (The malfunction code is displayed when an operation error has occurred. In normal condition, the malfunction code of the last problem is displayed.)

- Press the INSPECTION/TEST button to select "Inspection." The equipment enters the inspection mode. The "Unit" indication lights and the Unit No. display shows flashing "0" indication.
- 2. Set the Unit No.

Press the UP or DOWN button and change the Unit No. display until the buzzer (*1) is generated from the indoor unit.

*1 Number of beeps

3 short beeps : Conduct all of the following operations.

1 short beep : Conduct steps 3 and 4.

Continue the operation in step 4 until a buzzer remains ON. The continuous buzzer indicates that the malfunction code is confirmed.

Continuous beep : No abnormality.

- 3. Press the MODE selector button. The left "0" (upper digit) indication of the malfunction code flashes.
- Malfunction code upper digit diagnosis Press the UP or DOWN button and change the malfunction code upper digit until the malfunction code matching buzzer (*2) is generated.
- The upper digit of the code changes as shown below when the UP and DOWN buttons are pressed.



*2 Number of beeps

Continuous beep : Both upper and lower digits matched. (Malfunction code confirmed) **2 short beeps :** Upper digit matched.

1 short beep : Lower digit matched.

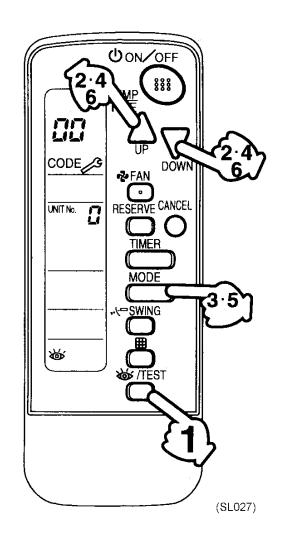
5. Press the MODE selector button.

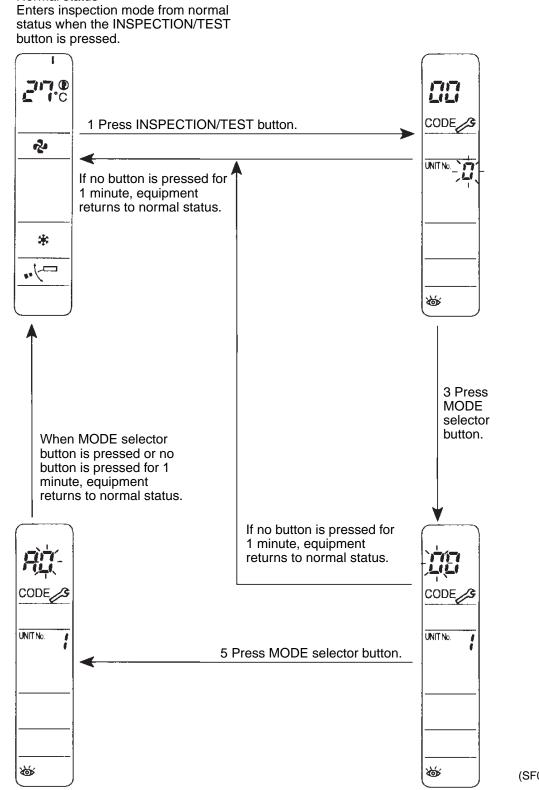
The right "0" (lower digit) indication of the malfunction code flashes.

Malfunction code lower digit diagnosis
 Press the UP or DOWN button and change the malfunction code lower digit until the continuous malfunction code matching buzzer (*2) is generated.

The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.





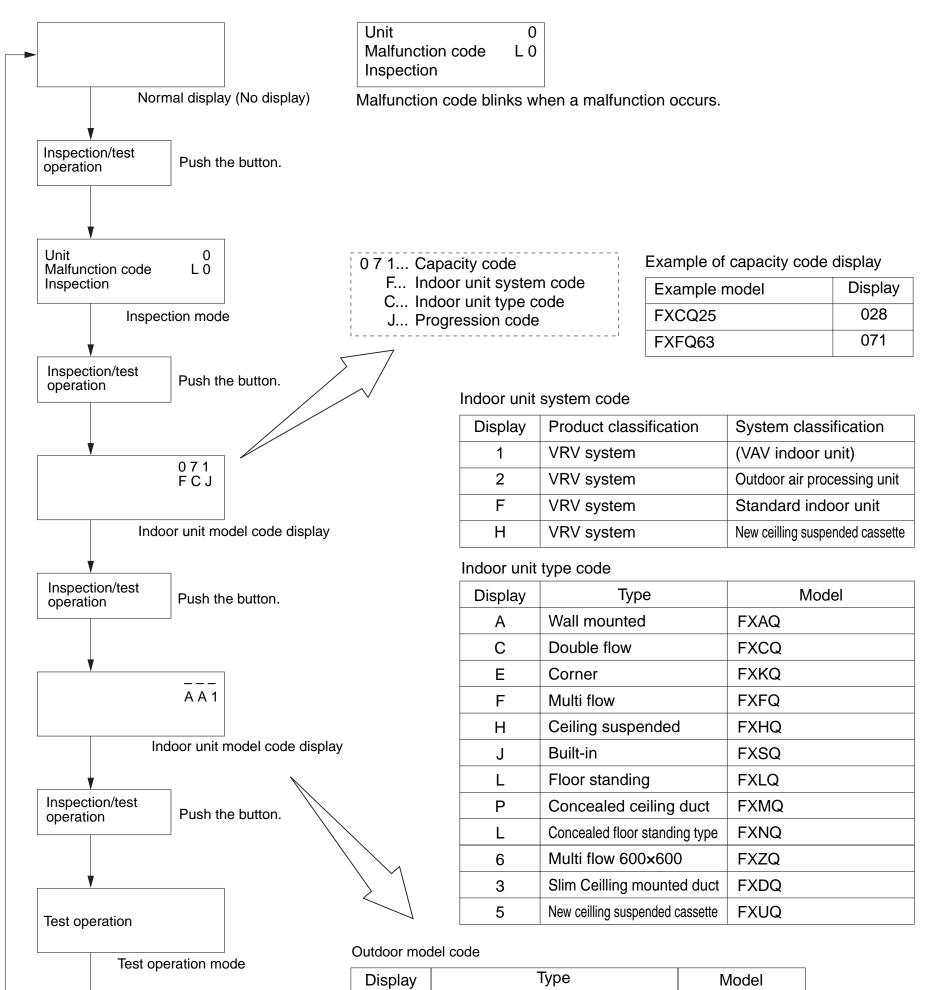


Normal status

(SF008)

SiE39-404

1.4 Operation of The Remote Controller's Inspection / Test Operation Button



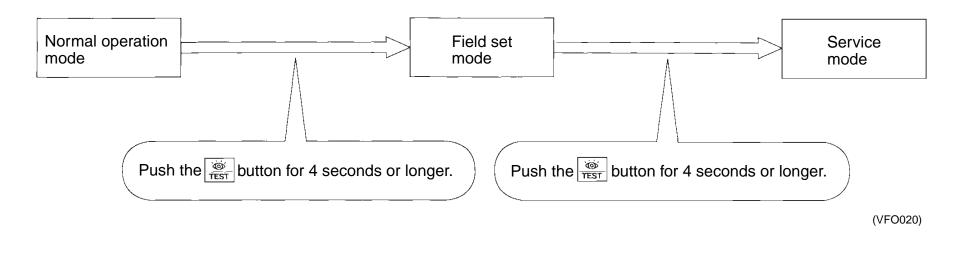
Inspection/test operation	Push the button.

A A 1	VRV System Inverter K Series	RSXYP
A A 3	R407C VRV PLUS Series	RXYP
A 9 2	VRV Heat Recovery Series	RSEYP
A A 5	High COP type R407C L Series	RSXYP-L
ΑΑΑ	VRV II	RXYQ-M

(V2775)

1.5 Remote Controller Service Mode

How to Enter the Service Mode



Service Mode	1. Select the mode No.						
Operation	Set the desired mode No. with the 👔 button.						
Method	(For wireless remote controller, Mode 43 only can be set.)						
	2. Select the unit No. (For group control only)						
	Select the indoor unit No. to be set with the time mode $\frac{\oplus \cdot 1}{\oplus \cdot \odot}$. (For wireless remote controller,						
	▲ (v) button.)						
3. Make the settings required for each mode. (Modes 41, 44, 45)							
	In case of Mode 44, 45, push $\begin{bmatrix} \Box \\ \infty \end{bmatrix}$ button to be able to change setting before setting work.						
	(LCD "code" blinks.)						
	For details, refer to the table in next page.						
	4. Define the setting contents. (Modes 44, 45)						
	Define by pushing the timer 🚊 button.						
	After defining, LCD "code" changes blinking to ON.						
	5. Return to the normal operation mode.						
	Push the button one time.						

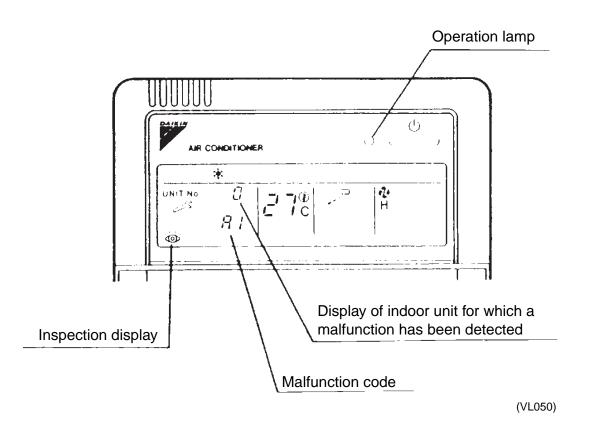
Mode No	Function	Contents and operation method	Remote controller display example
40	Malfunction hysteresis display	Display malfunction hysteresis. The history No. can be changed with the sutton.	Unit 1 Malfunction code 2-U4 Malfunction code Hystory No: 1 - 9 1: Latest
47	Display of sensor and address data	Display various types of data. Select the data to be displayed with the button. Sensor data 0: Thermostat sensor in remote controller. 1: Suction 2: Liquid pipe 3: Gas pipe Address data 4: Indoor unit address 5: Outdoor unit address 6: BS unit address 7: Zone control address 8: Cool/heat group address 9: Demand / Iow noise address	Sensor data display Unit No. Sensor type 1 1 27 Temperature °C Address display Unit No. Address type 1 8 4 1 1 1 Address type
43	Forced fan ON	Manually turn the fan ON by each unit. (When you want to search for the unit No.)By selecting the unit No. with the 	Unit 1 <i>ЧЭ</i> (VE009)
ЧЧ	Individual setting	Set the fan speed and air flow direction by each unit Select the unit No. with the time mode button. Set the fan speed with the button. Set the air flow direction with the set the air flow direction with the	Unit 1 Code 1 3 Fan speed 1: Low 3: High (VE010)
45	Unit No. transfer	Transfer unit No. Select the unit No. with the $\begin{bmatrix} \textcircled{0} \cdot 1 \\ \hline{0} \cdot 0 \end{bmatrix}$ button.	Present unit No

	Select the unit No. with the $\bigcup_{\overline{D} \cup \overline{D}}$ button. Set the unit No. after transfer with the button.	Unit 1 0 2 Code Unit No. after	
		(VE011)	
48	This function is not used by VRV II R410A Heat Pump 50Hz.		
47			

1.6 Remote Controller Self-Diagnosis Function

The remote controller switches are equipped with a self diagnosis function so that more appropriate maintenance can be carried out. If a malfunction occurs during operation, the operation lamp, malfunction code and display of malfunctioning unit No. let you know the contents and location of the malfunction.

When there is a stop due to malfunction, the contents of the malfunction given below can be diagnosed by a combination of operation lamp, INSPECTION display of the liquid crystal display and display of malfunction code. It also lets you know the unit No. during group control.



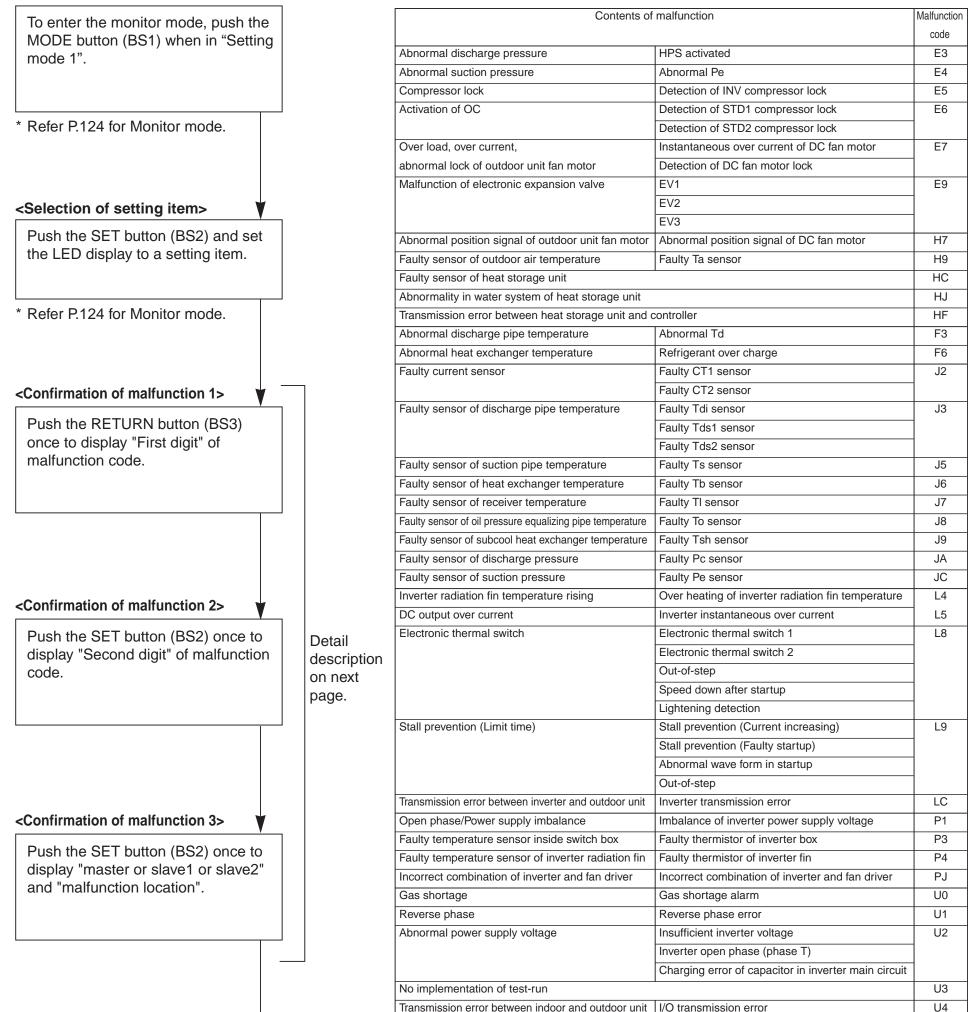
	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referred
Indoor	A0	0	0	0	Error of external protection device	173
Unit	A1	0	•	•	PC board defect, E ² PROM defect	174
	A3	0	0	0	Malfunction of drain level control system (33H)	175
	A6	0	0	0	Fan motor (MF) lock, overload	177
	A7	0	•	•	Malfunction of swing flap motor (MA)	178
	A9	0	0	•	Malfunction of moving part of electronic expansion valve (20E)	180
	AF	0	•	0	Drain level about limit	182
	AH	0	•	0	Malfunction of air filter maintenance	
	AJ	0	0	0	Malfunction of capacity setting	183
	C4	•	٠	•	Malfunction of thermistor (R2T) for heat exchange (loose connection, disconnection, short circuit, failure)	184
	C5	•	•	•	Malfunction of thermistor (R3T) for gas pipes (loose connection, disconnection, short circuit, failure)	185
	C9	0	0	•	Malfunction of thermistor (R1T) for air inlet (loose connection, disconnection, short circuit, failure)	186
	CJ	0	0	0	Malfunction of thermostat sensor in remote controller	187
Outdoor Unit	E1	•	•	•	PC board defect	188
	E3	0	0	0	Actuation of high pressure switch	189
	E4	•	0	•	Actuation of low pressure sensor	190
	E5	0	•	0	Compressor motor lock	191
	E6	0	0	0	Standard compressor lock or over current	192
	E7	0	0	0	Malfunction of outdoor unit fan motor	193
	E9	•	•	0	Malfunction of moving part of electronic expansion valve (Y1E~3E)	195
	F3	0	•	•	Abnormal discharge pipe temperature	197
	F6	0	•	0	Refrigerant overcharged	198
	H3	0	•	0	Malfunction of High pressure switch	
	H4	0	0	0	Malfunction of Low pressure switch	
	H7	9	•	9	Abnormal outdoor fan motor signal	199
	H9	0	0	0	Malfunction of thermistor (R1T) for outdoor air (loose connection, disconnection, short circuit, failure)	200
	J2	0	•	0	Current sensor malfunction	201
	J3	0	•	0	Malfunction of discharge pipe thermistor (R31~33T) (loose connection, disconnection, short circuit, failure)	202
	J5	•	٩	0	Malfunction of thermistor (R2T) for suction pipe (loose connection, disconnection, short circuit, failure)	203
Outdoor Unit	J6	•	•	•	Malfunction of thermistor (R4T) for heat exchanger (loose connection, disconnection, short circuit, failure)	204
	J7	0	0	0	Malfunction of header thermistor	
	J8	•	•	0	Malfunction of thermistor (R7T) for oil equalizing pipe. (loose connection, disconnection, short circuit, failure)	205
	J9	0	•	0	Malfunction of receiver gas pipe thermistor (R5T)	206
	JA	0	•	0	Malfunction of discharge pipe pressure sensor	207
	JC	0	•	0	Malfunction of suction pipe pressure sensor	208
	LO	0	•	0	Inverter system error	
	L4	0	•	0	Malfunction of inverter radiating fin temperature rise	209
	L5	0	0	0	Inverter compressor motor grounding, short circuit	210
	L6	0	•	9	Compressor motor coil grounding on short circuit	
	L8	0	•	9	Inverter current abnormal	211
	L9	0	•	•	Inverter start up error	212

	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referre
Outdoor	LA	0	0	0	Malfunction of power unit	
Unit	LC	•	0	0	Malfunction of transmission between inverter and control PC board	213
	P1	0	0	0	Inverter over-ripple protection	215
	P4	0	0	0	Malfunction of inverter radiating fin temperature rise sensor	216
System	U0	0	•	0	Low pressure drop due to refrigerant shortage or electronic expansion valve failure	217
	U1	0	0	0	Reverse phase / open phase	218
	U2	0	0	0	Power supply insufficient or instantaneous failure	219
	U3	0	0	0	Check operation is not conducted.	221
	U4	•	•	0	Malfunction of transmission between indoor and outdoor units	222
	U5 • Malfunction of transmission between remote controller and indoor unit			224		
	U5 • C • Failure of remote controller PC board or sett during control by remote controller		Failure of remote controller PC board or setting during control by remote controller	224		
	U7	0	•	0	Malfunction of transmission between outdoor units	225
	U8	•	•	•	Malfunction of transmission between master and slave remote controllers (malfunction of slave remote controller)	227
	U9	0	0	0	Malfunction of transmission between indoor unit and outdoor unit in the same system	228
	UA	O		Excessive number of indoor units etc.	230	
	UC	0	0	0	Address duplication of central remote controller	231
	UE	•	•	0	Malfunction of transmission between central remote controller and indoor unit	232 236 242
	UF	0	0	0	Refrigerant system not set, incompatible wiring / piping	234
	UH	•	•	•	Malfunction of system, refrigerant system address undefined	235
Centralized Control	M1	○ or ●	0	0	PC board defect	237 244
and Schedule Timer	M8	○ or ●	•	0	Malfunction of transmission between optional controllers for centralized control	238 245
	MA	○ or ●	•	•	Improper combination of optional controllers for centralized control	239 246
	MC	○ or ●	0	0	Address duplication, improper setting	241 248
Heat	64	0	•	0	Indoor unit's air thermistor error	
Reclaim Ventilation	65	0	•	0	Outside air thermistor error	
	68	0	•	0		-
	6A	0	•	0	Damper system alarm	<u> </u>
	6A	0	•	0	Damper system + thermistor error	
	6F	0	•	0	Malfunction of simple remote controller	
	6H	0		•	Malfunction of door switch or connector	

94				Malfunction of door switch or connector	
94	U	U	U		_

The system operates for malfunction codes indicated in black squares, however, be sure to check and repair.

Malfunction code indication by outdoor unit PCB

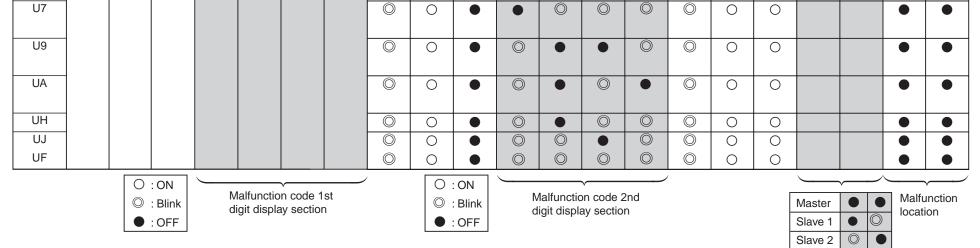


Push the RETURN button (BS3) and switches to the initial status of "Monitor mode".

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

Iransmission error between indoor and outdoor unit	I/O transmission error	04
Transmission error between outdoor units, transmission error	O/O transmission error	U7
between thermal storage units, duplication of IC address		
Transmission error of other system	Indoor unit system malfunction in other system or	U9
	other unit of own system	
Erroneous on-site setting	Abnormal connection with excessive number of indoor units	UA
	Conflict of refrigerant type in indoor units	
Faulty system function	Incorrect wiring (Auto address error)	UH
Transmission error in accessory devices, conflict	Malfunction of multi level converter, abnormality in	UJ
in wiring and piping, no setting for system	conflict check	UF

Malfunction		C	onfirmat	ion of ma	alfunction	1			С	Confirmat	ion of ma	lfunction	2			С	onfirmat	ion of malfu	Inction	3	
code	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED1	LED2	LED3	LED4 L	ED5	LED6	LED7
E3	0		0			Ô	O	0	0				O	Ô	O	0	0				
E4								O	0			O			Ô	0	0				
E5								O	0			O		Ô	\bigcirc	0	0				
E6								0	0			0	O		0	0	0				O
								0	0			O	O		O	0	0			\bigcirc	
E7									0	•	•	O	O	O	O	0	0			•	O
E9								0	0	•	0	•	•	Ô	Ô	0	0			•	0
															0	0	0			0	
H7	0		0		0				0			0	0	0	0	0	0			0	0
H9										-				0	0	0	0			•	
HC									0	•					0	0	0			•	
HJ									0							0	0			•	
HF									0			0		0	0	0	0				
F3	0		0		\bigcirc		0		0				0	0	0	0	0			•	
F6									0			0	0		0	0	0				
J2	0		0		0	0		0	0				0		0	0	0				0
					Ŭ	Ŭ									0	0	0			0	
J3									0	•			0	0	Ô	0	0				\bigcirc
														Ũ	0	0	0			0	
															0	0	0			0	\bigcirc
J5								0	0			0		0	0	0	0			•	
J6									0	•		0	0		0	0	0				
J7								0	0			0	0	0	0	0	0				
J8								0	0		\bigcirc				0	0	0				
J9								0	0		\bigcirc			0	0	0	0				
JA								0	0		\bigcirc		O		0	0	0				
JC								0	0		\bigcirc	0			0	0	0				
L4								0	0			O			O	0	0				
L5								0	0			0		O	O	0	0				
L8									0	•	0	•	•	•	0	0	0			•	•
L9								0	0	•	O	•	•	O	Ø	0	0			•	•
LC								0	0		\bigcirc	O			O	0	0				
P1	0		0	0				0	0					O	O	0	0				
P3								0	0				O	O	\bigcirc	0	0				
P4								0	0			O			O	0	0				
PJ	_							0	0		O	O		Ô	0	0	0				
U0	O		0	Ô			Ô	0	0						0	0	0				
U1								0	0					O	Ô	0	0				
U2								0	0	•	•	•	O	•	O	0	0			•	
U3								0	0	•			O	O	O	0	0			•	
U4								0	0	•		0			O	0	0				
U7									0			\bigcirc	\bigcirc	\bigcirc	\bigcirc	\cap	0				



2. Troubleshooting by Indication on the Remote Controller

2.1 *"RD"* Indoor Unit: Error of External Protection Device

Remote Controller Display	<i>RO</i>	
Applicable Models	All indoor unit models	
Method of Malfunction Detection		
Malfunction Decision Conditions		
Supposed Causes	 Actuation of external protection device Improper field set Defect of indoor unit PC board 	
Troubleshooting		
lieuneenig	Caution Be sure to turn off power switch before conn or parts damage may be occurred.	Actuation of external protection device.
	ON/OFF input from outside (mode No. 12, first code No. 1) has been set to external protection device input (second code No. 03) by remote controller.	Change the second code No. to "01" or "02".

2.2 *"Ri"* Indoor Unit: PC Board Defect

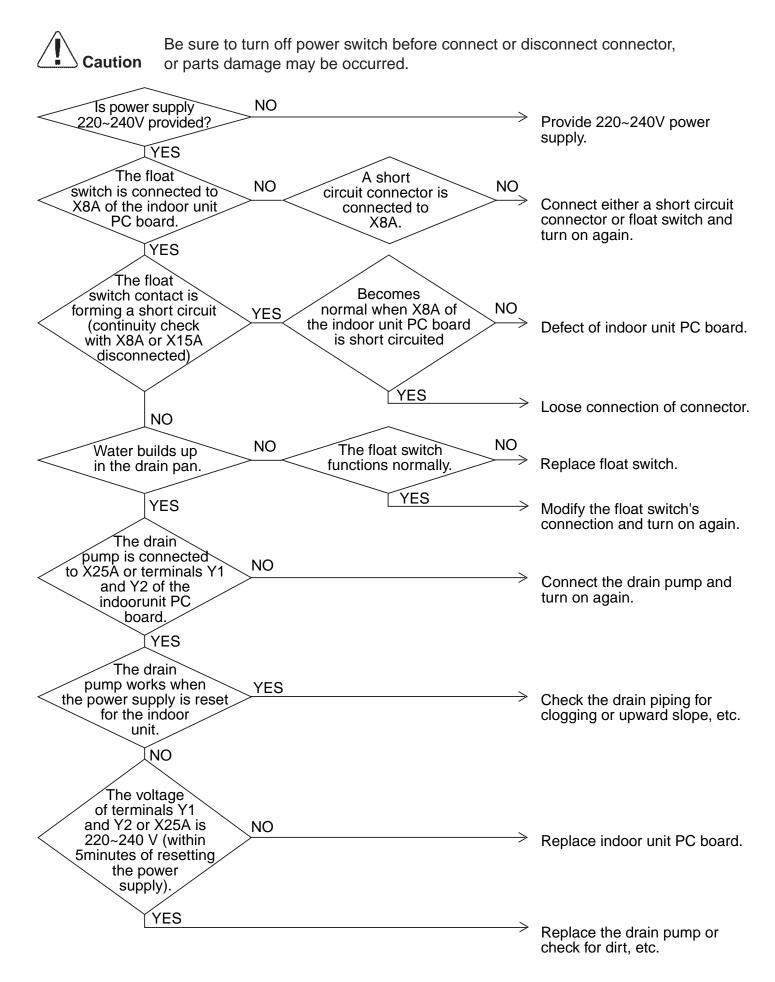
Remote Controller Display	81
Applicable Models	All indoor unit models
Method of Malfunction Detection	Check data from E ² PROM.
Malfunction Decision Conditions	When data could not be correctly received from the E ² PROM E ² PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.
Supposed Causes	Defect of indoor unit PC board
Troubleshooting	Image: Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Caution Image: Caution Image: Caution <t< th=""></t<>

(V2777)

2.3 *"R3"* Indoor Unit: Malfunction of Drain Level Control System (S1L)

Remote Controller Display	83
Applicable Models	FXCQ, FXFQ, FXZQ, FXSQ, FXKQ, FXDQ, FXMQ, FXUQ, FXHQ (Option), FXMQ200,250M (Option), FXAQ (Option), FXMQ-MF (Option)
Method of Malfunction Detection	By float switch OFF detection
Malfunction Decision Conditions	When rise of water level is not a condition and the float switch goes OFF.
Supposed Causes	 220~240V power supply is not provided Defect of float switch or short circuit connector Defect of drain pump Drain clogging, upward slope, etc. Defect of indoor unit PC board Loose connection of connector

Troubleshooting



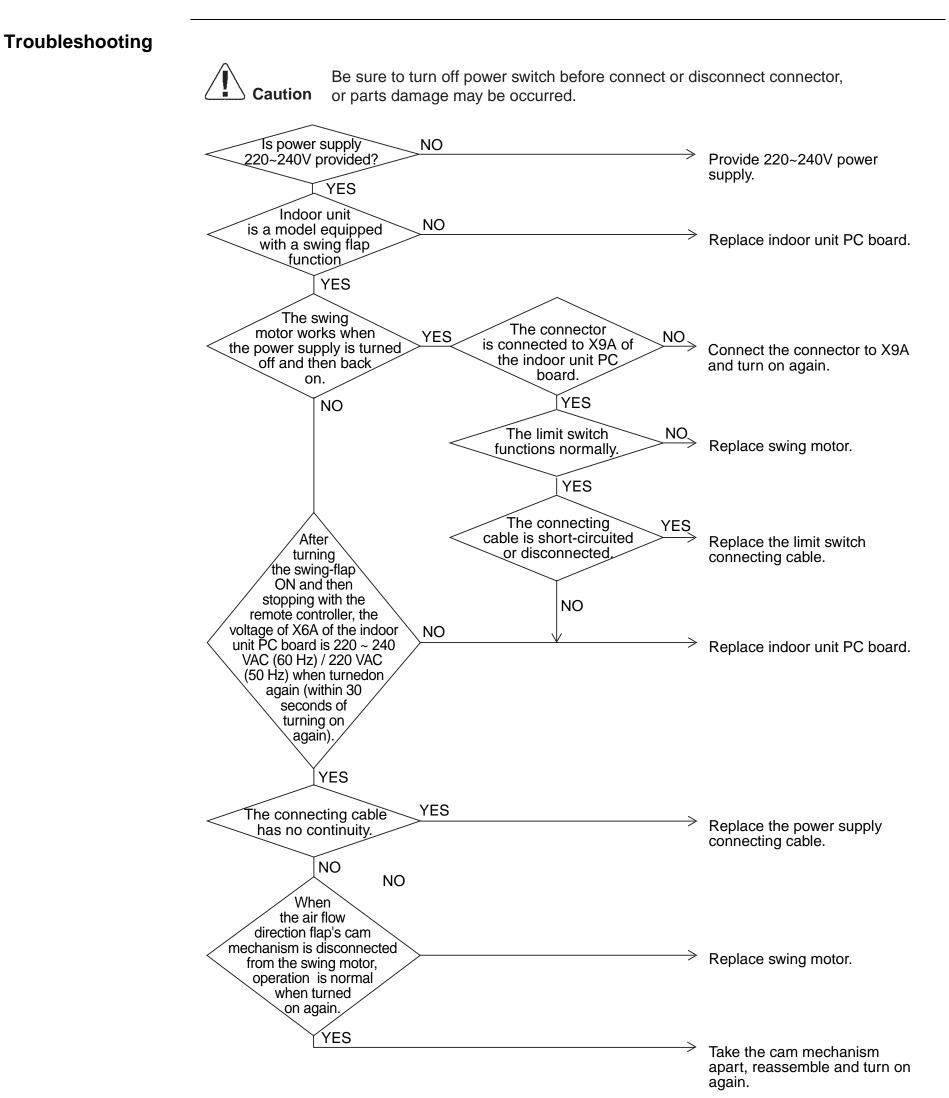
2.4 "R5" Indoor Unit: Fan Motor (M1F) Lock, Overload

Remote Controller Display	85
Applicable Models	All indoor units
Method of Malfunction Detection	Detection by failure of signal for detecting number of turns to come from the fan motor
Malfunction Decision Conditions	When number of turns can't be detected even when output voltage to the fan is maximum
Supposed Causes	 Fan motor lock Disconnected or faulty wiring between fan motor and PC board
Troubleshooting	Image: No source of the second sec
	NO YES Replace the indoor unit PC board. NO Replace the fan motor.

SiE39-404

2.5 *"R7"* Indoor Unit: Malfunction of Swing Flap Motor (MA)

Remote Controller Display	87
Applicable Models	FXCQ, FXHQ, FXKQ
Method of Malfunction Detection	Utilizes ON/OFF of the limit switch when the motor turns.
Malfunction Decision Conditions	When ON/OFF of the microswitch for positioning cannot be reversed even though the swing flap motor is energized for a specified amount of time (about 30 seconds).
Supposed Causes	 Defect of swing motor Defect of connection cable (power supply and limit switch) Defect of air flow direction adjusting flap-cam Defect of indoor unit PC board



2.6 *"R9"* Indoor Unit: Malfunction of Moving Part of Electronic Expansion Valve (20E)

Remote Controller Display	89	
Applicable Models	All indoor unit models	
Method of Malfunction Detection	Detection by failure of signal for detecting number of	turns to come from the fan motor
Malfunction Decision Conditions	When number of turns can't be detected even when o	output voltage to the fan is maximum
Supposed Causes	 Malfunction of moving part of electronic expansion Defect of indoor unit PC board Defect of connecting cable 	n valve
Troubleshooting	Caution Be sure to turn off power switch before or parts damage may be occurred. The electronic expansion valve is connected to X7A of the indoor unit PC board NO YES Normal when coil check (*1) of the moving part of the electronic expansion valve is checked YES YES The connecting response YES Cable is short-circuited or disconnected. NO	 After connecting, turn the power supply off and then back on. Replace the moving part of the electronic expansion valve. Replace the connecting cable. If you turn the power supply off and turn on again, and it still does not help, replace the indoor unit

*1: Coil check method for the moving part of the electronic expansion valve Discount the electronic expansion valve from the PC board and check the continuity between the connector pins.

Pin No.	1. White	2. Yellow	3. Orange	4. Blue	5. Red	6. Brown
1. White		×	Ο Approx. 300Ω	×	Ο Αpprox. 150Ω	×
2. Yellow			×	Ο Approx. 300Ω	×	Ο Αpprox. 150Ω
3. Orange				×	Ο Approx. 150Ω	×
4. Blue					×	Ο Αpprox. 150Ω
5. Red						×
6. Brown						

O: Continuity

x: No continuity

2.7 *"RF"* Indoor Unit: Drain Level above Limit

Remote Controller Display	<i>RF</i>
Applicable Models	FXCQ, FXFQ, FXZQ, FXSQ, FXKQ, FXMQ, FXDQ, FXMQ-MF, FXUQ
Method of Malfunction Detection	Water leakage is detected based on float switch ON/OFF operation while the compressor is in non-operation.
Malfunction Decision Conditions	When the float switch changes from ON to OFF while the compressor is in non-operation.
Supposed Causes	 Humidifier unit (optional accessory) leaking Defect of drain pipe (upward slope, etc.) Defect of indoor unit PC board
Troubleshooting	Image: Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Field drain piping has a defect such as upward sloping YES Image: NO Modify the drain piping. Image: NO YES Image: NO Check if the humidifier unit is leaking. Image: NO Defect of indoor unit PC board.

2.8 *"RJ*" Indoor Unit: Malfunction of Capacity Determination Device

Remote controller display	RJ	
Applicable Models	All indoor unit models	
Method of Malfunction Detection	Capacity is determined according to resistance of the capacity setting adaptor and the memory inside the IC memory on the indoor unit PC board, and whether the value is normal or abnormal is determined.	
Malfunction Decision Conditions	 Operation and: 1. When the capacity code is not contained in the PC board's memory, and the capacity setting adaptor is not connected. 2. When a capacity that doesn't exist for that unit is set. 	
Supposed Causes	 You have forgotten to install the capacity setting adaptor. Defect of indoor unit PC board 	
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. The indoor NO unit PC board was replaced with a replacement PC board. NO YES YES	
	The indoor unit is a model that requires installation of a capacity setting adaptor when replacing the PC board. YES Install a capacity setting adaptor.	

(V2783)

" *EY*" Indoor Unit: Malfunction of Thermistor (R2T) for Heat 2.9 Exchanger

Remote Controller Display	<u></u>	
Applicable Models	All indoor unit models	
Method of Malfunction Detection	Malfunction detection is carried out by temperature detected by heat exchanger thermistor.	
Malfunction Decision Conditions	When the heat exchanger thermistor becomes disconnected or shorted while the unit is running.	
Supposed Causes	 Defect of thermistor (R2T) for liquid pipe Defect of indoor unit PC board 	
Troubleshooting	Image: Control of power switch before connect or disconnect connector, or parts damage may be occurred. Image: Connector of the indoor unit PC board. Image: Connecting the thermistor of the indoor unit PC board. Image: VES Resistance is normal when measured after disconnecting the thermistor Image: VES Image: VES </th	
	• (V2784)	
	*2: Refer to thermistor resistance / temperature characteristics table on P311.	

*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.10 "25" Indoor Unit: Malfunction of Thermistor (R3T) for Gas **Pipes**

Remote Controller Display	<i>C</i> 5	
Applicable Models	All indoor unit models	
Method of Malfunction Detection	Malfunction detection is carried out by temperature detected by gas pipe thermistor.	
Malfunction Decision Conditions	When the gas pipe thermistor becomes disconnected or shorted while the unit is running.	
Supposed Causes	 Defect of indoor unit thermistor (R3T) for gas pipe Defect of indoor unit PC board 	
Troubleshooting		
	YES > Replace the indoor unit PC board.	
	(V2785)	
	(V2785) *2: Refer to thermistor resistance / temperature characteristics table on P311.	

2.11 "[9" Indoor Unit: Malfunction of Thermistor (R1T) for **Suction Air**

	Remote [9 Controller Display
	Applicable All inde
ture	Method ofMalfunMalfunctionthermisDetection
le the unit is	Malfunction When the Tecision running Conditions
 Defect of indoor unit thermistor (R1T) for air inlet Defect of indoor unit PC board 	
, and turn (R1T). t PC board. (V2786)	Troubleshooting
á	Supposed Causes Troubleshooting

2.12 "[J" Indoor Unit: Malfunction of Thermostat Sensor in Remote Controller

Remote Controller Display	ΓJ
Applicable Models	All indoor unit models
Method of Malfunction Detection	Malfunction detection is carried out by temperature detected by remote controller air temperature thermistor. (Note1)
Malfunction Decision Conditions	When the remote controller air temperature thermistor becomes disconnected or shorted while the unit is running.
Supposed Causes	 Defect of remote controller thermistor Defect of remote controller PC board
Troubleshooting	Image: Note that the series of the series

Note: In case of remote controller thermistor malfunction, unit is still operable by suction air thermistor on indoor unit.



*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.13 "E?" Outdoor Unit: PC Board Defect

Remote Controller Display	E1
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Check data from E ² PROM
Malfunction Decision Conditions	When data could not be correctly received from the E ² PROM E ² PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.
Supposed Causes	Defect of outdoor unit PC board (A1P)
Troubleshooting	Image: Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Caution Image: Caution Image: Caution <t< th=""></t<>

(V3064)

2.14 "E3" Outdoor Unit: Actuation of High Pressure Switch

Remote Controller Display	<i>E3</i>
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Abnormality is detected when the contact of the high pressure protection switch opens.
Malfunction Decision Conditions	Error is generated when the HPS activation count reaches the number specific to the operation mode.
Supposed Causes	 Actuation of outdoor unit high pressure switch Defect of High pressure switch Defect of outdoor unit PC board Instantaneous power failure Faulty high pressure sensor
Troubleshooting	Image: No or parts damage may be occurred. Image: No or

H1: Actuation of high pressure switch (HPS)

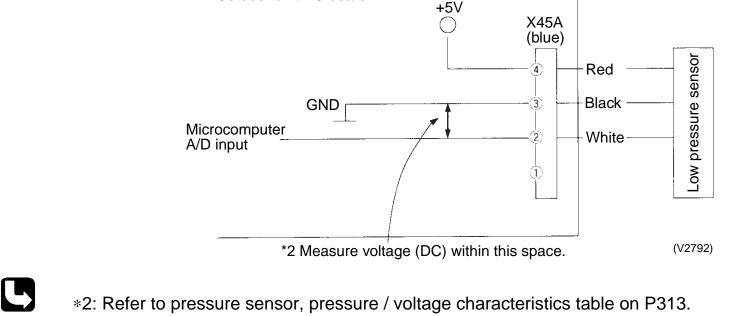
- The outdoor unit PC board's connector is disconnected.
- Is the outdoor unit heat exchanger dirty?
- Defect of outdoor fan
- Is the refrigerant over-charged?
- Faulty high pressure sensor

2.15 "E4" Outdoor Unit: Actuation of Low Pressure Sensor

Remote Controller Display	ЕЧ	
Applicable Models	RXYQ5~48M	
Method of Malfunction Detection		
Malfunction Decision Conditions	Error is generated when the low pressure is d	ropped under specific pressure.
Supposed Causes	 Abnormal drop of low pressure (Lower that Defect of low pressure sensor Defect of outdoor unit PC board Stop valve is not opened. 	n 0.07MPa)
Troubleshooting	Be sure to turn off power switch or parts damage may be occurre	before connect or disconnect connector, ed.
	Is stop valve opened? NO	> Open stop valve.
	Low pressure at stop due to malfunction is 0.07 MPa. NO	 Out of gas, refrigerant system clogging, wiring and piping wrong connection, stop valve closed, electronic expantion valve fully close malfunction.
	Measure the voltage (VL) of X45A pin No. (2) - (3) of outdoor PC board (A2P).*1 YES Is the relationship between low voltage and VL	
	normal? NO	

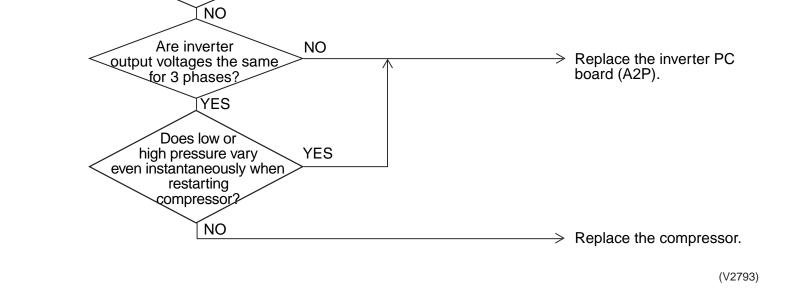
*1: Voltage measurement point

Outdoor unit PC board A1P	



2.16 "E5" Compressor Motor Lock

Remote Controller Display	<i>E</i> 5	
Applicable Models	RXYQ5~48M	
Method of Malfunction Detection	Inverter PC board takes the position signal from UVWN line connected between the inverter and compressor, and detects the position signal pattern.	
Malfunction Decision Conditions	The position signal with 3 times cycle as imposed frequency is detected when compressor motor operates normally, but 2 times cycle when compressor motor locks. When the position signal in 2 times cycle is detected.	
Supposed Causes	 Compressor lock High differential pressure (0.5MPa or more) Incorrect UVWN wiring Faulty inverter PC board Stop valve is left in closed. 	
Troubleshooting	Image: No is the stop valve open? No is the stop valve open? Open the stop valve. VES No is the UVWN wiring is high is high of the stop valve. Connect correctly. VES VES Remedy the cause.	
	whether compressor is short-circuited or ground.	

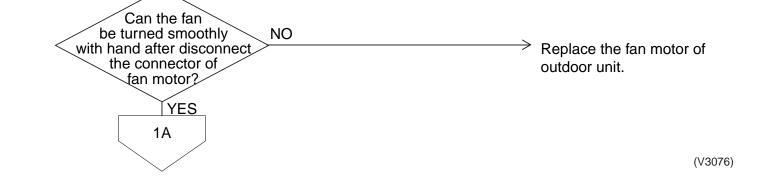


2.17 "EE" Compressor Motor Overcurrent/Lock

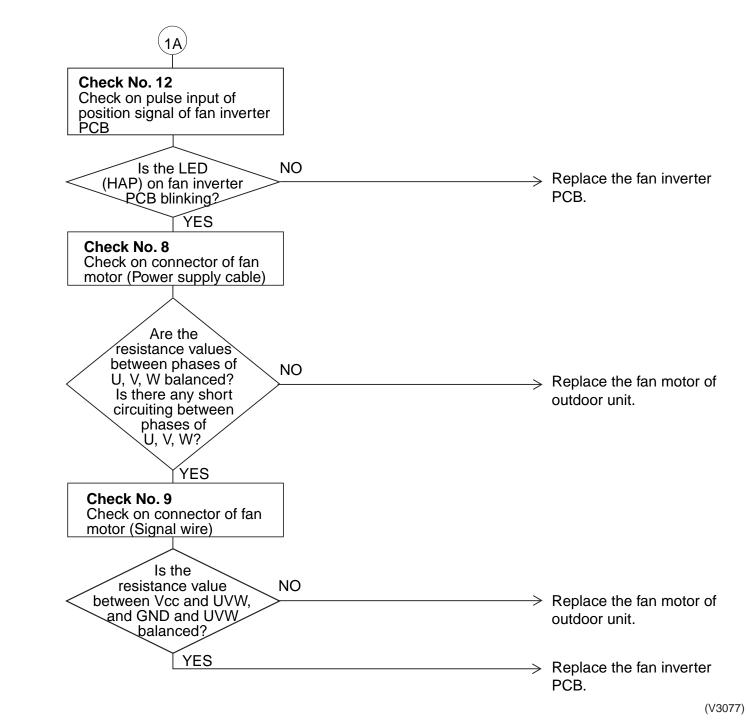
Remote Controller Display	Ε6		
Applicable Models	Outdoor unit		
Method of Malfunction Detection	Detects the overcurrent with current sensor (CT).		
Malfunction Decision Conditions	Malfunction is decided when the detected current value exceeds the below mentioned value for 2 seconds. 400 V unit : 15.0 A 		
Supposed Causes	 Closed stop value Obstacles at the discharge port Improper power voltage Faulty magnetic switch Faulty compressor 		
Troubleshooting	Is the stop valve open? NO Open the stop valve. YES YES Obstacle YES Obstacle YES Remove the obstacle. NO Is the power source of the power voltage.		
	YES Is the NO MO Seplace the magnetic switch. YES NO YES Replace the compressor.		

2.18 "E7" Malfunction of Outdoor Unit Fan Motor

Remote Controller Display	E7		
Applicable Models	RXYQ5~48M		
Method of Malfunction Detection	Malfunction of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.		
Malfunction Decision Conditions	 When the fan runs with speed less than a specified one for 15 seconds or more when the fa motor running conditions are met When connector detecting fan speed is disconnected When malfunction is generated 4 times, the system shuts down. 		
Supposed Causes	 Malfunction of fan motor The harness connector between fan motor and PC board is left in disconnected, or faulty connector Fan does not run due to foreign matters tangled Clearing condition: Operate for 5 minutes (normal) 		
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Connector of fan motor is disconnected. YES NO Connect the connector. Harness connector between compressor YES Inverter PCB and fan inverter PCB Connect the harness connector. (A2P, A3P) is disconnected YES NO NO Is there any obstacle around YES Remove the obstacle.		
	between compressor inverter PCB and fan inverter PCB (A2P, A3P) is disconnected NO Is there any YES		









Note: Refer check 8, 9 and 12 to P.255~256.

2.19 "E9" Outdoor Unit: Malfunction of Moving Part of Electronic Expansion Valve (Y1E, Y2E)

Remote Controller Display	E9
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Check disconnection of connector Check continuity of expansion valve coil
Malfunction Decision Conditions	Error is generated under no common power supply when the power is on.
Supposed Causes	 Defect of moving part of electronic expansion valve Defect of outdoor unit PC board (A1P) Defect of connecting cable
Troubleshooting	Image: No After connecting, turn the power supply of RXYQ5M Image: No After connecting, turn the power off and then back on again. Image: No After connecting, turn the power off and then back on again. Image: No After connecting, turn the power off and then back on again. Image: No NO Image: No After connecting, turn the power off and then back on again. Image: No No Image: No After connecting, turn the power off and then back on again. Image: No No Image: No Replace the moving part of the electronic expansion valve is checked. Image: No Replace the connecting cable.



*1 Coil check method for the moving part of the electronic expansion valve Disconnect the electronic expansion valve from the PC board and check the continuity between the connector pins.

(Normal)

Pin No.	1. White	2. Yellow	3. Orange	4. Blue	5. Red	6. Brown
1. White		×	0	×	0	×
2. Yellow			×	0	×	0
3. Orange				×	0	×
4. Blue					×	0
5. Red						×
6. Brown						

 \odot : Continuity Approx. 300 Ω

 $O:Continuity\ Approx.\ 150\Omega$

x : No continuity

2.20 "F3" Outdoor Unit: Abnormal Discharge Pipe Temperature

Remote Controller Display	F3		
Applicable Models	RXYQ5~48M		
Method of Malfunction Detection	Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.		
Malfunction Decision Conditions	 When the discharge pipe temperature rises to an abnormally high level When the discharge pipe temperature rises suddenly 		
Supposed Causes	 Faulty discharge pipe temperature sensor Faulty connection of discharge pipe temperature sensor Faulty outdoor unit PCB 		
Troubleshooting			
	A2P.		
	(\/3068)		
	*2: Refer to thermistor resistance / temperature characteristics table on P311.		

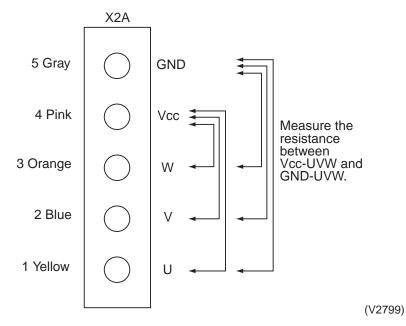
*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.21 "F6" Refrigerant Overcharged

Remote Controller Display	F5		
Applicable Models	RXYQ5~48M		
Method of Malfunction Detection	Refrigerant overcharge is detected from the receiver gas pipe temperature during test operation.		
Malfunction Decision Conditions	When the receiver gas pipe temperature is lower than evaporating temperature during test operation.		
Supposed Causes	 Refrigerant overcharge Disconnection of the receiver gas pipe thermistor 		
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Is the receiver gas pipe temperature thermistor installed the gas relief pipe on top of receiver? NO VES VES		
	Is the characteristic of the NO receiver gas pipe thermistor normal? YES Replace thermistor.		
	(V2797)		

2.22 "H7" Abnormal Outdoor Fan Motor Signal

		—
Remote Controller Display	НŢ	
Applicable Models	RXYQ5~48M	_
Method of Malfunction Detection	Detection of abnormal signal from fan motor.	
Malfunction Decision Conditions	In case of detection of abnormal signal at starting fan motor.	
Supposed Causes	 Abnormal fan motor signal (circuit malfunction) Broken, short or disconnection connector of fan motor connection cable Fan Inverter PC board malfunction 	_
Troubleshooting	Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.	
	(A3P)	
	(V3069)	



2.23 "H9" Outdoor Unit: Malfunction of Thermistor for Outdoor Air (R1T)

-	-
Remote Controller Display	H9
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	The abnormal detection is based on current detected by current sensor.
Malfunction Decision Conditions	When the outside air temperature sensor has short circuit or open circuit.
Supposed Causes	 Defect of thermistor (R1T) for outdoor air Defect of outdoor unit PC board (A1P)
Troubleshooting	Image: Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Connector is connected to X44A of outdoor PC board (A1P). NO Image: VES Connect the thermistor and turn on again. Image: VES Resistance is normal when measured after disconnecting the thermistor Image: VES NO Image: VES Replace the thermistor (R1T)
	$(111) \text{ from PC board.} (3.5 \text{k}\Omega \text{-} 360 \text{k}\Omega)$ $YES \rightarrow \text{Replace outdoor unit PC board} A1P. (V3070)$

The alarm indicator is displayed when the fan only is being used also.



*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.24 "J⊇" Current Sensor Malfunction

Remote Controller Display	J2
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected according to the current value detected by current sensor.
Malfunction Decision Conditions	When the current value detected by current sensor becomes 5A or lower, or 40A or more during standard compressor operation.
Supposed Causes	 Faulty current sensor Faulty outdoor unit PC board
Troubleshooting	Is the connector for current sensor connected to X30A, X31A on outdoor unit PC board (A1P)? NO VES Connect the connector, and operate unit again.
	Is the current sensor NO mounted on the T-phase wire? > Mount the current sensor correctly, and operate unit again. YES > Replace current sensor and outdoor unit PC board. (V3071)

2.25 "J3" Outdoor Unit: Malfunction of Discharge Pipe Thermistor (R3, R31~33T)

Remote Controller Display	J3	
Applicable Models	RXYQ5~48M	
Method of Malfunction Detection	Malfunction is detected from the temperature dete thermistor.	cted by discharge pipe temperature
Malfunction Decision Conditions	When a short circuit or an open circuit in the disch	arge pipe temperature thermistor is detected.
Supposed Causes	 Defect of thermistor (R31T, R32T or R33T) for Defect of outdoor unit PC board (A1P) 	outdoor unit discharge pipe
Troubleshooting	Caution or parts damage may be occurred.	 Connect the thermistor and turn on again. Replace the thermistor (R31, 32T or R33T)
	400kΩ) YES	

The alarm indicator is displayed when the fan is being used also.



8~12 HP class ... R31T, R32T

14, 16Hp class ··· R31T, R32T and R33T

2.26 "J5" Outdoor Unit: Malfunction of Thermistor (R2T) for Suction Pipe

JS		
RXYQ5~48M		
Malfunction is detected from the temperature detected by the suction pipe temperature thermistor.		
When a short circuit or an open circuit in the suction pipe temperature thermistor is detected.		
 Defect of thermistor (R2T) for outdoor unit suction pipe Defect of outdoor unit PC board (A1P) 		
Image: Sector		

2.27 "J5" Outdoor Unit: Malfunction of Thermistor (R4T) for Outdoor Unit Heat Exchanger

Remote Controller Display	J8
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected from the temperature detected by the heat exchanger thermistor.
Malfunction Decision Conditions	When a short circuit or an open circuit in the heat exchange thermistor is detected.
Supposed Causes	 Defect of thermistor (R4T) for outdoor unit coil Defect of outdoor unit PC board (A1P)
Troubleshooting	
	YES > Replace outdoor unit PC board A1P.
	(V3074)

L

2.28 "J8" Malfunction of Oil Equalizing Pipe Thermistor (R7T)

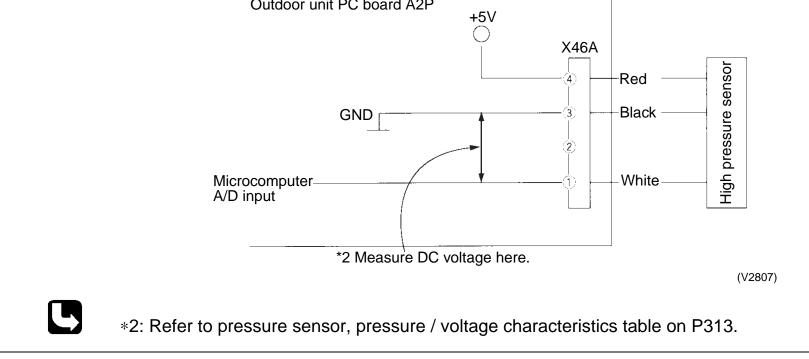
Remote Controller Display	J8
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected according to the temperature detected by oil equalizing pipe thermistor.
Malfunction Decision Conditions	When the oil equalizing pipe thermistor is short circuited or open.
Supposed Causes	 Faulty oil equalizing pipe thermistor (R7T) Faulty outdoor unit PC board
Troubleshooting	
	*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.29 "J3" Malfunction of Receiver Gas Pipe Thermistor (R5T)

Remote Controller Display	J9
Applicable Models	RXYQ5~48M
lethod of Ialfunction Detection	Malfunction is detected according to the temperature detected by receiver gas pipe thermistor
Ialfunction Decision Conditions	When the receiver gas pipe thermistor is short circuited or open.
Supposed Causes	 Faulty receiver gas pipe thermistor (R5T) Faulty outdoor unit PC board
Froubleshooting	
roubleshooting	Image: Second content of the connect of the connect of the connect of the connector, or parts damage may be occurred. Image: Second connect of the conneconnect of the connect of the connect of the
roubleshooting	Caution or parts damage may be occurred. Is the connector for oil equalizing pipe thermistor connected to X37A on outdoor unit PC board (A1P)? YES Is the resistance measured after removing the thermistor (R7T) from outdoor unit PC board normal? (3.5 kΩ to 360 kΩ) VES
roubleshooting	Caution or parts damage may be occurred. Is the connector for oil equalizing pipe thermistor connect do X37A on outdoor unit PC board (A1P)? YES Is the resistance measured after removing the thermistor (R7T) from outdoor unit PC board normal? (3.5 kΩ to

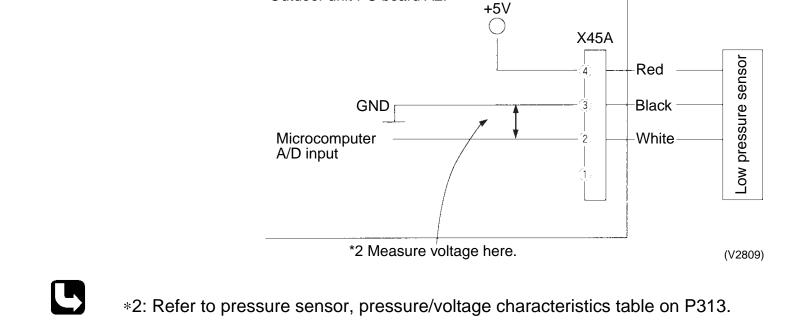
2.30 "JR" Outdoor Unit: Malfunction of Discharge Pipe Pressure Sensor

Remote Controller Display	JR
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected from the pressure detected by the high pressure sensor.
Malfunction Decision Conditions	When the discharge pipe pressure sensor is short circuit or open circuit.
Supposed Causes	 Defect of high pressure sensor system Connection of low pressure sensor with wrong connection. Defect of outdoor unit PC board.
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. The high pressure sensor is connected to X46A of outdoor unit PC board (A1P) NO YES Connect the high pressure sensor and turn on again. YES The relationship between the *1 VH and high pressure YES voltage is measured between X46A pins (1) and (3) of out PC
	*1: Voltage measurement point



2.31 "JC" Outdoor Unit: Malfunction of Suction Pipe Pressure Sensor

Remote Controller Display	JC
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected from pressure detected by low pressure sensor.
Malfunction Decision Conditions	When the suction pipe pressure sensor is short circuit or open circuit.
Supposed Causes	 Defect of low pressure sensor system Connection of high pressure sensor with wrong connection. Defect of outdoor unit PC board.
Troubleshooting	Image: Second
	(V2808)
	*1: Voltage measurement point
	Outdoor unit PC board A2P

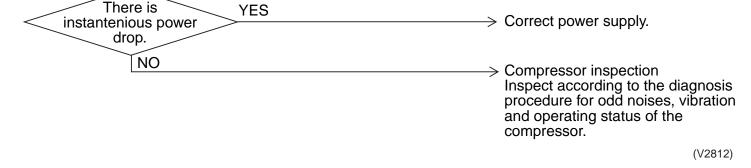


2.32 "L4" Outdoor Unit: Malfunction of Inverter Radiating Fin Temperature Rise

Remote Controller Display	LY
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Fin temperature is detected by the thermistor of the radiation fin.
Malfunction Decision Conditions	When the temperature of the inverter radiation fin increases above 89°C.
Supposed Causes	 Actuation of fin thermal (Actuates above 89°C) Defect of inverter PC board Defect of fin thermistor
Troubleshooting	Image: Second constraints of the radiator fin rises. YES Actuates at min. YES NO Endiator fin is dirty NO Not donormal Resistance Abnormal Resistance Abnormal Normal Replace the thermistor. Normal NO Resistance NO Replace the inverter PC board YES Reset and operate.
	(V2811)

2.33 "L5" Outdoor Unit: Inverter Compressor Abnormal

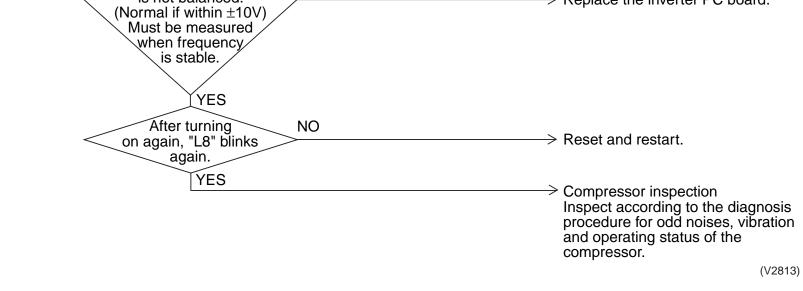
Remote Controller Display	L5
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Malfunction is detected from current flowing in the power transistor.
Malfunction Decision Conditions	When an excessive current flows in the power transistor. (Instantaneous overcurrent also causes activation.)
Supposed Causes	 Defect of compressor coil (disconnected, defective insulation) Compressor start-up malfunction (mechanical lock) Defect of inverter PC board
Troubleshooting	Compressor inspection



Higher voltage than actual is displayed when the inverter output voltage is checked by tester.

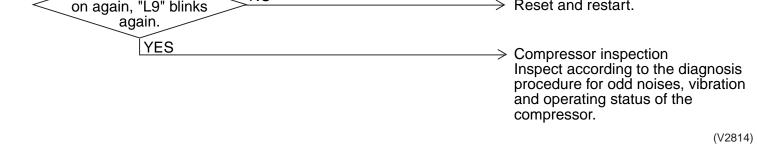
2.34 "L8" Outdoor Unit: Inverter Current Abnormal

Remote	L8	
Controller		
Display		
Applicable	RXYQ5~48M	
Models		
Method of	Malfunction is detected by current flowing in the power	transistor.
Malfunction Detection		
Malfunction	When overload in the compressor is detected.	
Decision Conditions		
Supposed	 Compressor overload 	
Causes	 Compressor coil disconnected 	
	Defect of inverter PC board	
Troubleshooting	Output current check	
	Caution Be sure to turn off power switch before of or parts damage may be occurred. The secondary current of the inverter is higher than 15A YES	
	for each phase.	refrigerant system is required.
	Compressor inspection The compressor's coil is disconnected	\longrightarrow Replace the compressor.
	Disconnect the the connection between the compressor and inverter. Make the power transistor check mode setting ON by service mode.	
	Inverter output voltage check	
	Inverter output voltage NO is not balanced.	\longrightarrow Replace the inverter PC board.



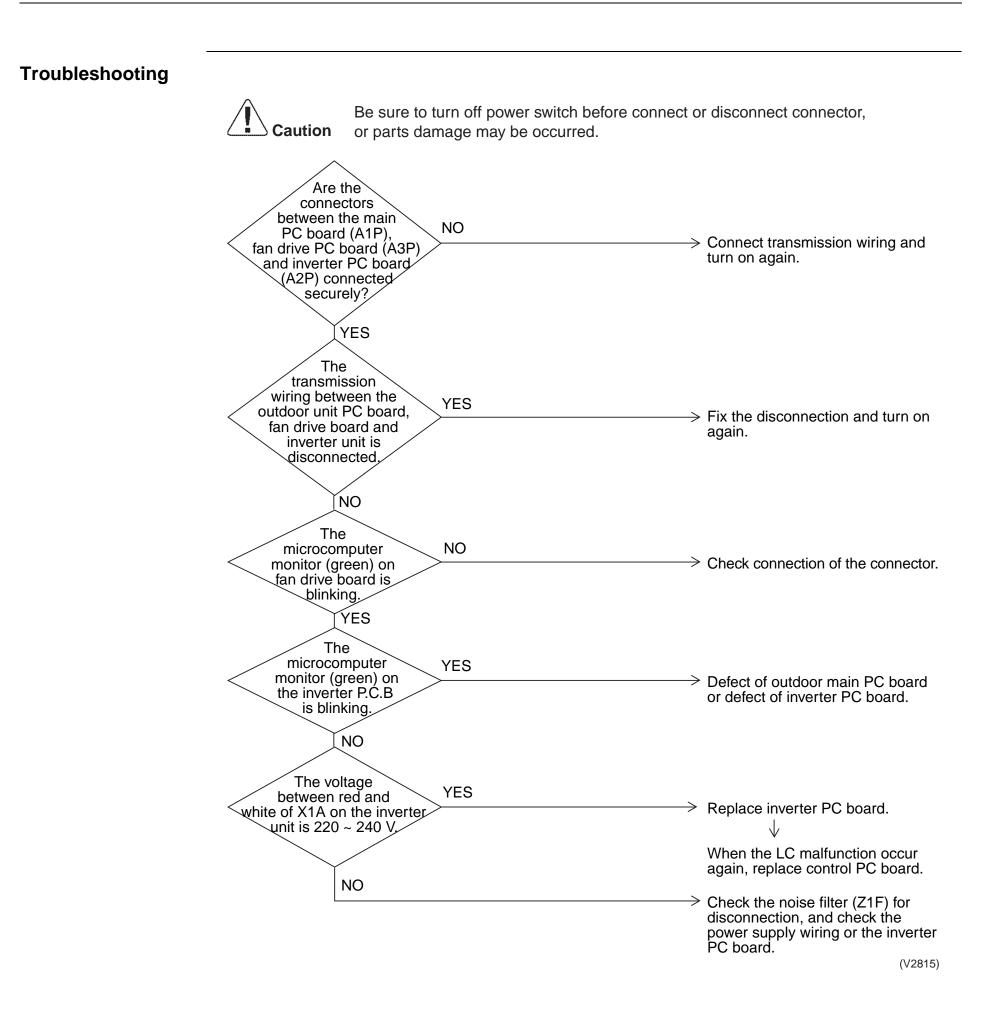
2.35 "L9" Outdoor Unit: Inverter Start up Error

Remote Controller Display	LS	
Applicable Models	RXYQ5~48M	
Method of Malfunction Detection	Malfunction is detected from current flowing	in the power transistor.
Malfunction Decision Conditions	When overload in the compressor is detected	ed during startup
Supposed Causes	 Defect of compressor Pressure differential start Defect of inverter PC board 	
Troubleshooting	Image: Constraint of the second of the constraint of	tich before connect or disconnect connector, burred. Unsatisfactory pressure equalization Check refrigerant system. Replace the inverter PC board
	YES After turning NO	> Popot and rostart



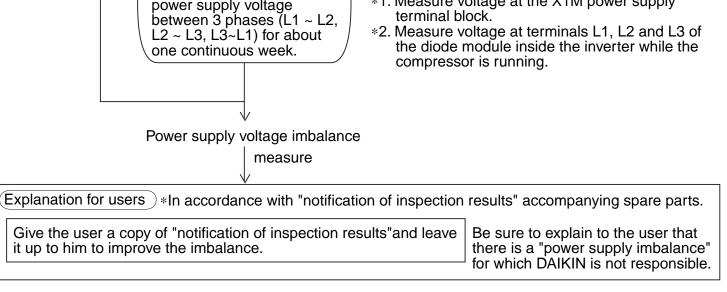
2.36 "LC" Outdoor Unit: Malfunction of Transmission Between Inverter and Control PC Board

Remote Controller Display	LC
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Check the communication state between inverter PC board and control PC board by micro- computer.
Malfunction Decision Conditions	When the correct communication is not conducted in certain period.
Supposed Causes	 Malfunction of connection between the inverter PC board and outdoor control PC board Defect of outdoor control PC board (transmission section) Defect of inverter PC board Defect of noise filter External factor (Noise etc.)



2.37 "P?" Outdoor Unit: Inverter Over-Ripple Protection

Remote Controller Display	P1
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Imbalance in supply voltage is detected in PC board.
Malfunction Decision Conditions	 When the resistance value of thermistor becomes a value equivalent to open or short circuited status. Malfunction is not decided while the unit operation is continued. "P1" will be displayed by pressing the inspection button.
Supposed Causes	 Open phase Voltage imbalance between phases Defect of main circuit capacitor Defect of inverter PC board Defect of K1M Improper main circuit wiring
Troubleshooting	Image: Second constraint of the constant recording of power switch before connect or disconnect connector, or parts damage may be occurred. Image: Second constant constant constant constant constant constant recording of power supply voltage record supply voltage record supply voltage record supply voltage record supply voltage at the X1M power supply Image: Second constant recording of power supply voltage record supply voltage record supply voltage record supply voltage record supply voltage at the X1M power supply



terminal block.

(V2816)

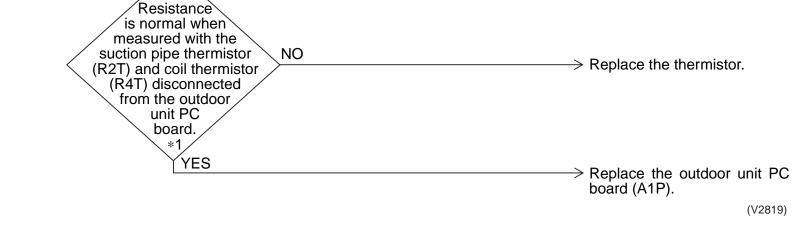
2.38 "P4" Outdoor Unit: Malfunction of Inverter Radiating Fin Temperature Rise Sensor

Remote Controller Display	РЧ
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Resistance of radiation fin thermistor is detected when the compressor is not operating.
Malfunction Decision Conditions	 When the resistance value of thermistor becomes a value equivalent to open or short circuited status. Malfunction is not decided while the unit operation is continued. "P4" will be displayed by pressing the inspection button.
Supposed Causes	 Defect of radiator fin temperature sensor Defect of inverter PC board
Troubleshooting	Image: No Replace inverter PC board. Vertex No Vertex No Vertex Replace inverter PC board. Vertex No Vertex Replace inverter PC board. Vertex No Vertex Replace inverter PC board. Vertex No Vertex Replace inverter PC board.

*2: Refer to thermistor resistance / temperature characteristics table on P311.

2.39 "UD" Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure

Remote Controller Display	UO
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Short of gas malfunction is detected by discharge pipe temperature thermistor.
Malfunction Decision Conditions	Microcomputer judge and detect if the system is short of refrigerant. HMalfunction is not decided while the unit operation is continued.
Supposed Causes	 Out of gas or refrigerant system clogging (incorrect piping) Defect of pressure sensor Defect of outdoor unit PC board (A1P) Defect of thermistor R2T or R4T
Troubleshooting	Image: No product of the suction of the suction of the suction of the suction product of the succe of the succ
	NO



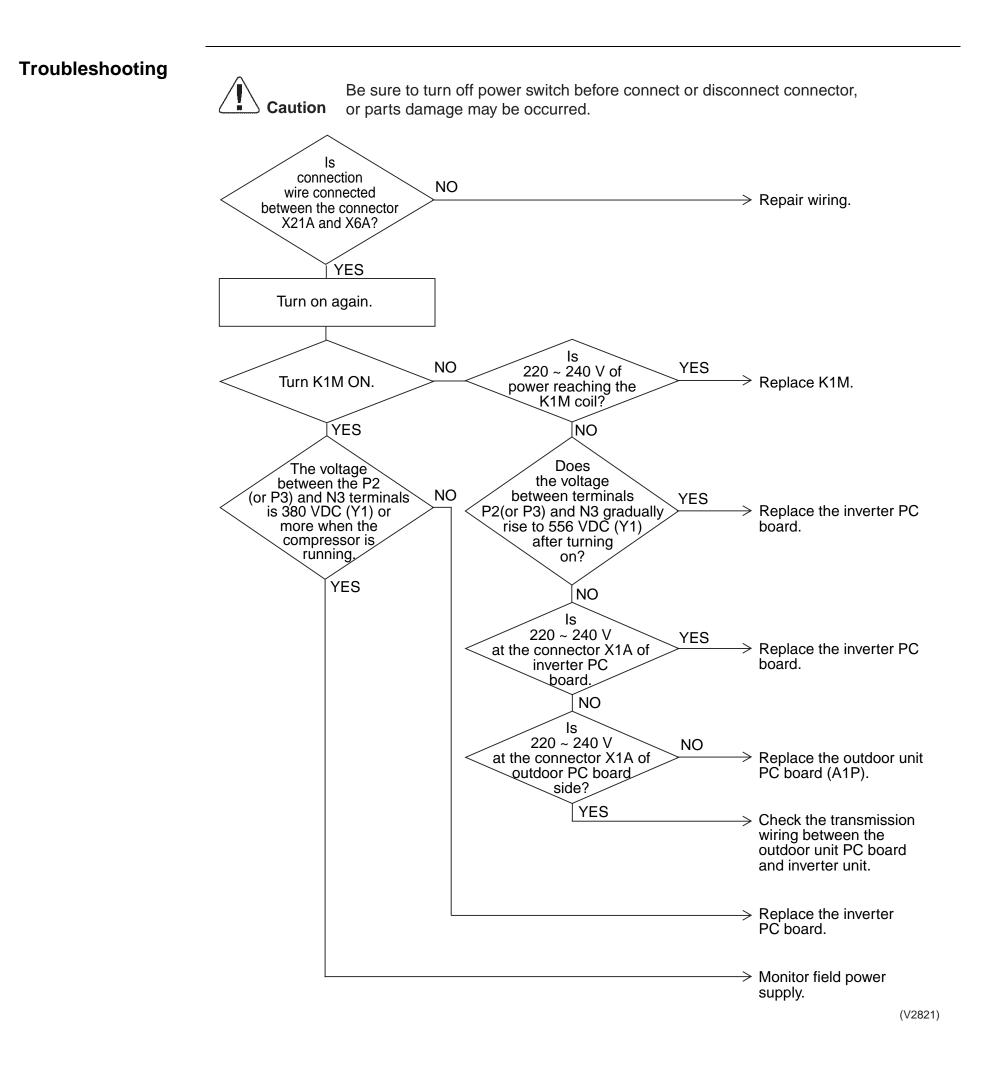
*1: Refer to thermistor resistance / temperature characteristics table on P311. *2: Refer to pressure sensor, pressure / voltage characteristics table on P313.

2.40 "U?" Reverse Phase, Open Phase

Remote	U1
Controller Display	
Applicable Models	H3 phase outdoor unit only
Method of Malfunction Detection	Detection is based on the voltage in main circuit capacitor for inverter and supply voltage. The phase of each phase are detected by reverse phase detection circuit and right phase or reverse phase are judged.
Malfunction Decision Conditions	
Supposed Causes	 Power supply reverse phase Power supply open phase Defect of outdoor PC board A1P
Troubleshooting	
	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.
	There is an open phase at the power supply terminal section (X1M) of the outdoor unit. NO
	Operation is normal if one place of power supply line phase is replaced. NO PReplace outdoor unit PC board A1P.
	(V2820)

2.41 *"U2"* **Power Supply Insufficient or Instantaneous Failure**

Remote Controller Display	U2	
Applicable Models	RXYQ5~48M	
Method of Malfunction Detection	Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.	
Malfunction Decision Conditions		
Supposed Causes	 Power supply insufficient Instantaneous failure Open phase Defect of inverter PC board Defect of outdoor control PC board Defect of K1M. Main circuit wiring defect 	



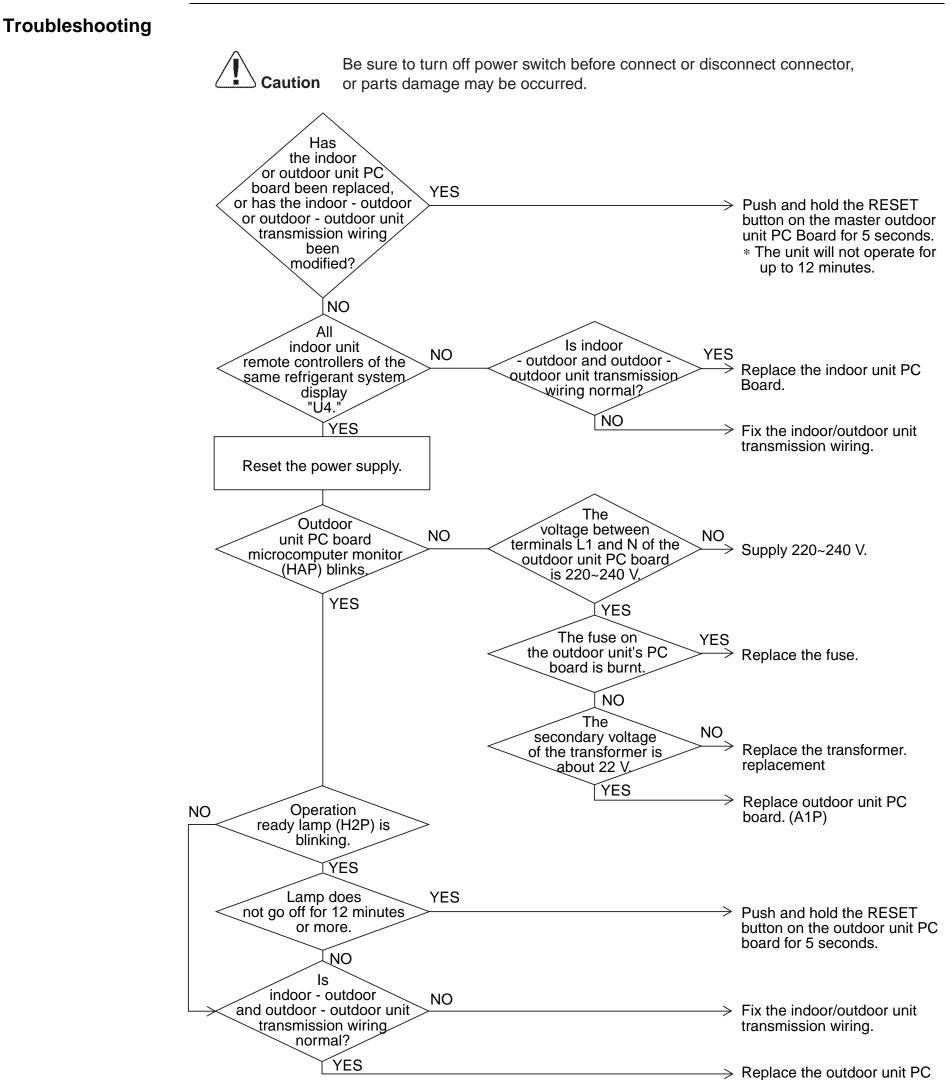
2.42 "U3" Check Operation not executed

Remote Controller Display	U3
Applicable Models	RXYQ5~48M
Method of Malfunction Detection	Check operation is executed or not
Malfunction Decision Conditions	Malfunction is decided when the unit starts operation without check operation.
Supposed Causes	Check operation is not executed.
Troubleshooting	Image: Second state of the second s
	(V3052)

SiE39-404

2.43 "UY" Malfunction of Transmission Between Indoor Units

Remote Controller Display	UY	
Applicable Models	All model of indoor unit RXYQ5~48M	
Method of Malfunction Detection	Microcomputer checks if transmission between indoor and outdoor units is normal.	
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time	
Supposed Causes	 Indoor to outdoor, outdoor to outdoor transmission wiring F1, F2 disconnection, short circuit or wrong wiring Outdoor unit power supply is OFF System address doesn't match Defect of indoor unit PC board Defect of outdoor unit PC board 	



Board (A1P).

(V2822)

2.44 "U5" Malfunction of Transmission Between Remote **Controller and Indoor Unit**

Remote Controller Display	US		
Applicable Models	All models of indoor units		
Method of Malfunction Detection	In case of controlling with 2-remote contro transmission between indoor unit and rem	•	• • •
Malfunction Decision Conditions	Normal transmission does not continue fo	r specified period.	
Supposed Causes	 Malfunction of indoor unit remote control Connection of two main remote control Defect of indoor unit PC board Defect of remote controller PC board Malfunction of transmission caused by 	llers (when using 2 remo	te controllers)
Troubleshooting	Caution or parts damage may be or Using YES bo control. NO All indoor NO ret	SS1 of th remote controllers s set to "MASTER" NO Operation urns to normal when power is turned off momentarily. YES	 Set one remote controller to "SLAVE"; turn the power supply off once and then back on. Replace indoor unit PC board. There is possibility of malfunction caused by noise. Check the surrounding area
	Multi-core cable is used for the indoor unit remote controller transmission wiring. NO		and turn on again. Switch to double-core independent cable. replacement

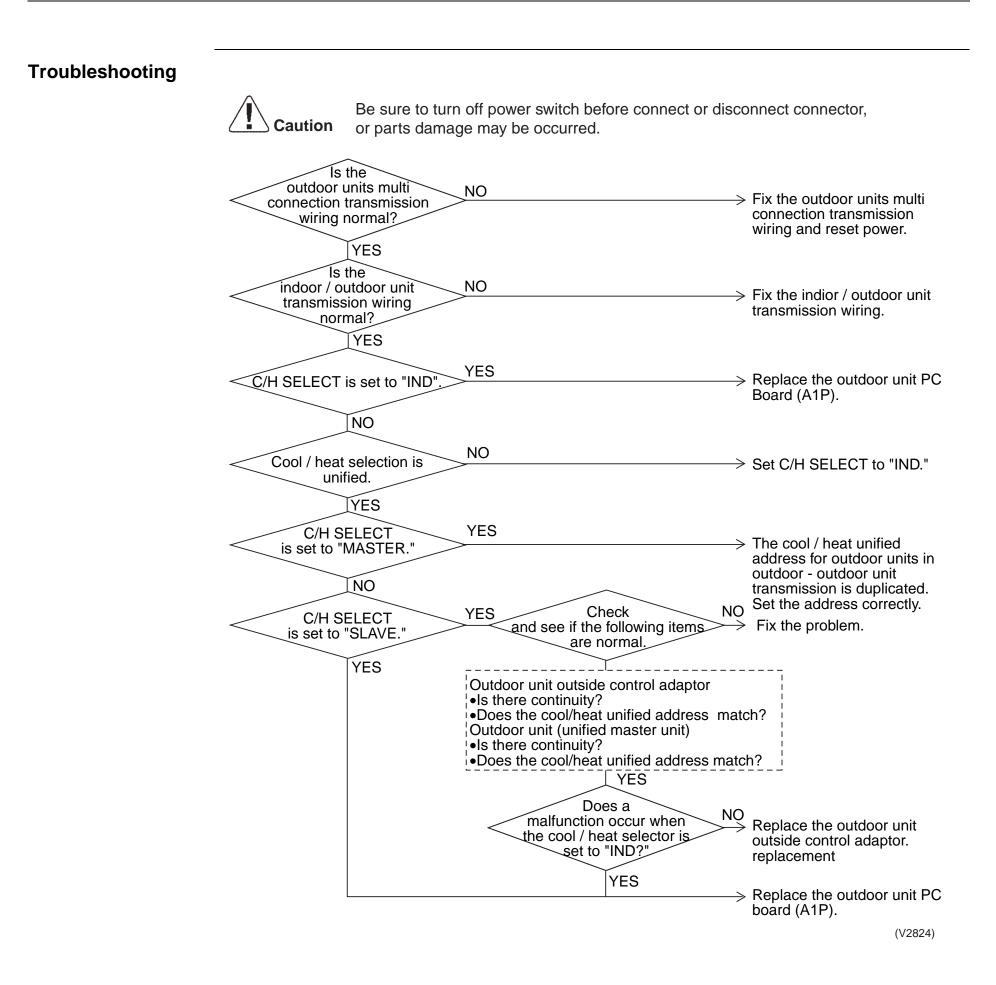
board or indoor unit PC board. Replace whichever is defective.

 \rightarrow Defect of remote controller PC

(V2823)

2.45 "U7" Malfunction of Transmission Between Outdoor Units

Remote Controller Display	רט
Applicable Models	All models of indoor units
Method of Malfunction Detection	Microcomputer checks if transmission between indoor unit and remote controller is normal.
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time
Supposed Causes	 Improper connection of transmission wiring between outdoor unit and outdoor unit outside control adaptor Improper cool/heat selection Improper cool/heat unified address (outdoor unit, external control adaptor for outdoor unit) Defect of outdoor unit PC board (A1P) Defect of outdoor unit outside control adaptor Improper connection of transmission wiring between outdoor units of multi outdoor unit connection.

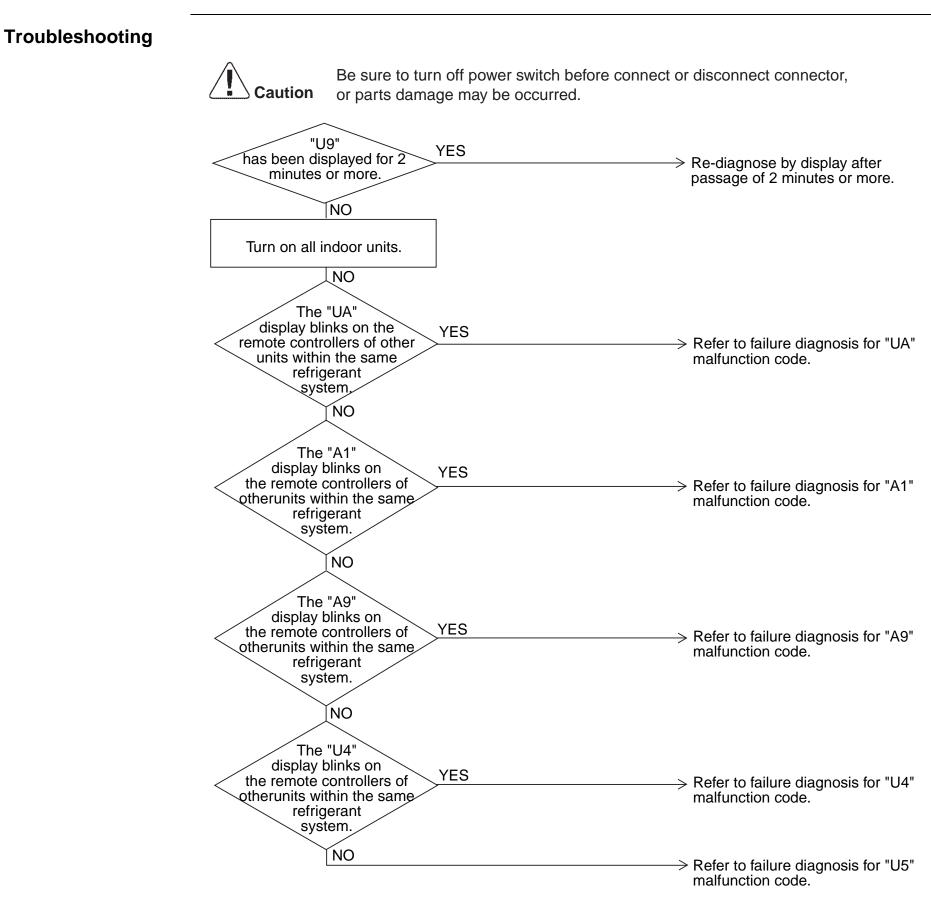


2.46 "UB" Malfunction of Transmission Between Master and Slave Remote Controllers

Remote Controller Display	U8
Applicable Models	All models of indoor units
Method of Malfunction Detection	In case of controlling with 2-remote controller, check the system using microcomputer if signal transmission between indoor unit and remote controller (main and sub) is normal.
Malfunction Decision Conditions	Normal transmission does not continue for specified period.
Supposed Causes	 Malfunction of transmission between main and sub remote controller Connection between sub remote controllers Defect of remote controller PC board
Troubleshooting	Image: Set SS1 to "MAIN"; the power switch before connect or disconnect connector, or parts damage may be occurred. Using 2-remote controllers control. VES VES of both remote controllers is set to "SUB." VES VES Set one remote controller to "MAIN"; the power off and then back on. If a malfunction occurs, replace the remote controller PC boards Set one remote controllers is set to "MAIN." VES Set one remote controller to "MAIN"; the power off and then back on. VES

2.47 "U9" Malfunction of Transmission Between Indoor and Outdoor Units in the Same System

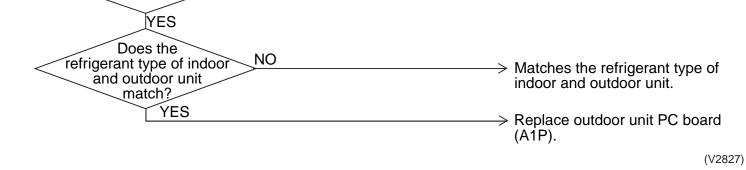
Remote Controller Display	U9
Applicable Models	All models of indoor units
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Malfunction of transmission within or outside of other system Malfunction of electronic expansion valve in indoor unit of other system Defect of PC board of indoor unit in other system Improper connection of transmission wiring between indoor and outdoor unit



(V2826)

2.48 "UR" Excessive Number of Indoor Units

Remote Controller Display	UR	
Applicable Models	All models of indoor unit RXYQ5~48M	
Method of Malfunction Detection		
Malfunction Decision Conditions		
Supposed Causes	 Excess of connected indoor units Defect of outdoor unit PC board (A1P) Mismatching of the refrigerant type of indoor and outdoor Setting of outdoor P.C. board was not conducted after refrigerant 	
Troubleshooting	Caution Be sure to turn off power switch before conne or parts damage may be occurred. P.C. board replaced to spare parts P.C. board ? NO The total of indoor units displaying "UA" and indoor units connected to the same refrigerant system is within connectable number of unit* YES Push and hold the RESET button on the outdoor unit PC board for 5 seconds.	 The refrigerant classification has not been set yet. Please set as per page 117. There are too many indoor units within the same refrigerant system.
	Does a malfunction occur? NO	→ Normal



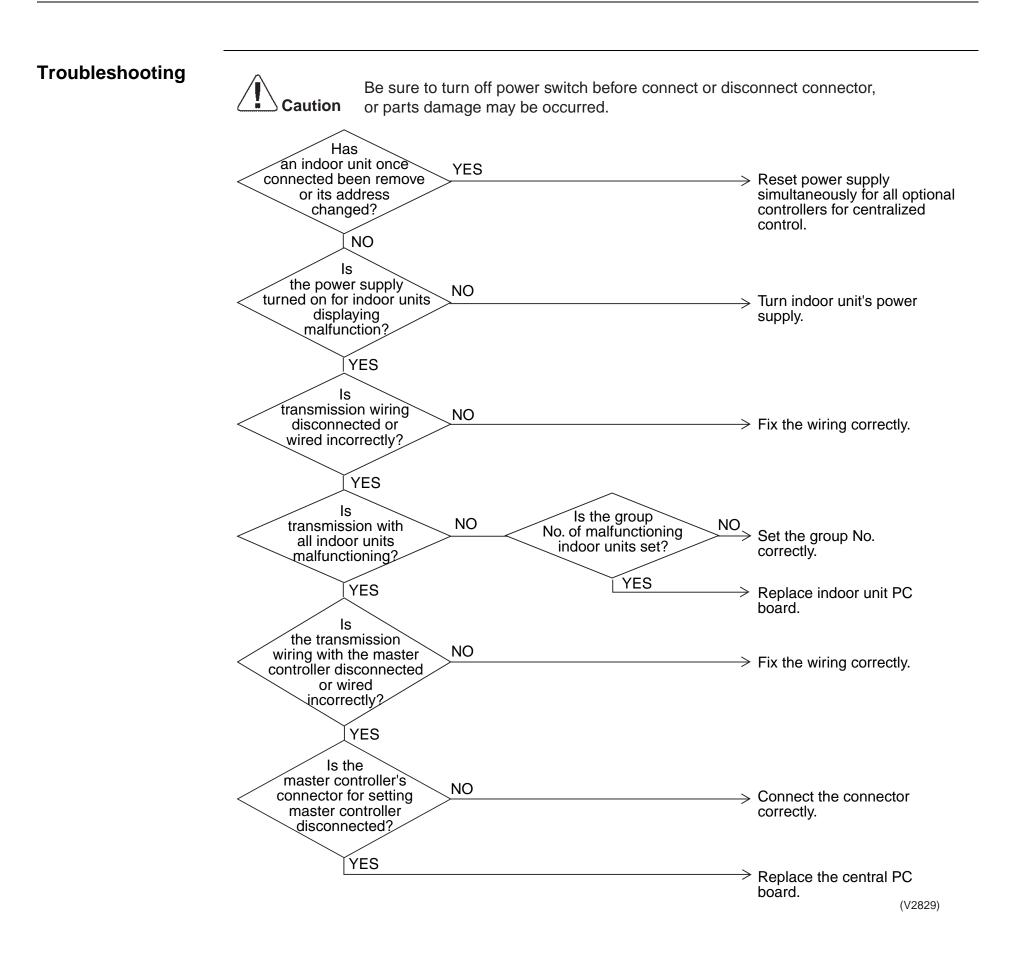
* The number of indoor units that can be connected to a single outdoor unit system depends on the type of outdoor unit.

2.49 *"UC"* Address Duplication of Central Remote Controller

Remote Controller Display	UC
Applicable Models	All models of indoor unit Centralized controller
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Address duplication of centralized remote controller Defect of indoor unit PC board
Troubleshooting	Image: Note that the central remote control are connected to the indoor unit. YES NO Address duplication of central remote controller The setting must be changed so that the central remote control address is not duplicated.

2.50 "UE" Malfunction of Transmission Between Central Remote Controller and Indoor Unit

Remote Controller Display	UE
Applicable Models	All models of indoor units Centralized controller
Method of Malfunction Detection	Microcomputer checks if transmission between indoor unit and centralized remote controller is normal.
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time
Supposed Causes	 Malfunction of transmission between optional controllers for centralized control and indoor unit Connector for setting master controller is disconnected. Failure of PC board for centralized remote controller Defect of indoor unit PC board



2.51 "UF" Refrigerant System not Set, Incompatible Wiring/ Piping

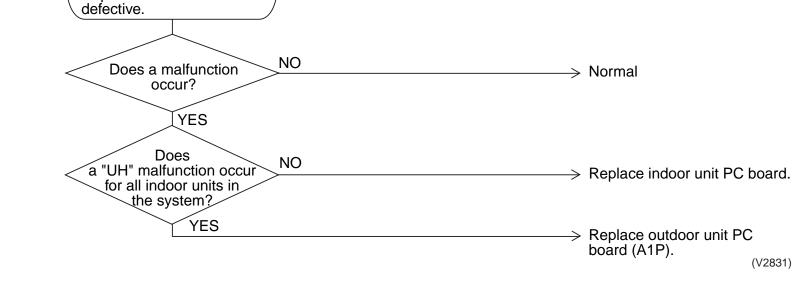
Remote Controller Display	UF
Applicable Models	All models of indoor units RXYQ5~48M
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Improper connection of transmission wiring between outdoor unit and outdoor unit outside control adaptor Failure to execute wiring check operation Defect of indoor unit PC board
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Are the stop NO valves openned? Open stop valve. YES S the test operation NO Wiring check operation Outdoor and outdoor YES NO indoor - outdoor NO VES NO YES NO VES NO VES After fixing incorrect wiring, push and hold the RESET but on on the master outdoor unit PC board. YES YES
	12 minutes. Test operation may not have been carried out successfully.



Test operation may not be successful if carried out after the outdoor unit has been off for more than 12 hours, or if it is not carried out after running all connected indoor units in the fan mode for at least an hour.

2.52 "UH" Malfunction of System, Refrigerant System Address Undefined

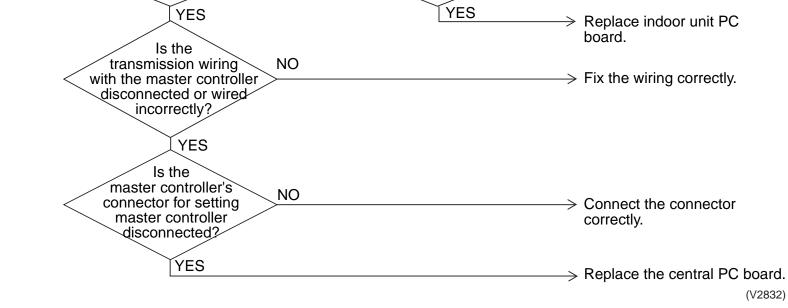
Remote Controller Display	UH
Applicable Models	All models of indoor units RXYQ5~48M
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Improper connection of transmission wiring between outdoor unit and outdoor unit outside control adaptor Defect of indoor unit PC board Defect of outdoor unit PC board (A1P)
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.
	being introduce for the first time after installationor after an indoor or outdoorunit PC board has been replaced? NO NO NO YES
	Is indoor - outdoor and outdoor - outdoor unit transmission wiring normal? YES After fixing incorrect wiring, push and hold the RESET button on the master outdoor unit PC board for 5 seconds. * The unit will not run for up to 12 minutes.



3. Troubleshooting (OP: Central Remote Controller)

3.1 *"UE"* Malfunction of Transmission Between Central Remote Controller and Indoor Unit

Remote Controller Display	UE		
Applicable Models	All models of indoor units RXYQ5~48M		
Method of Malfunction Detection	Microcomputer checks if transmission between indoor unit and central remote controller is normal.		
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time		
Supposed Causes	 Malfunction of transmission between optional controllers for centralized control and indoor unit Connector for setting master controller is disconnected. Failure of PC board for central remote controller Defect of indoor unit PC board 		
Troubleshooting	Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.		
	Has an indoor unit once YES or its address changed? NO NO NO		
	Is the power supply turned NO Turn indoor unit's power supply.		
	YES Is transmission wiring disconnected or wired incorrectly?		
	YES Is transmission with all indoor units malfunctioning? NO NO NO NO NO NO NO NO NO NO		

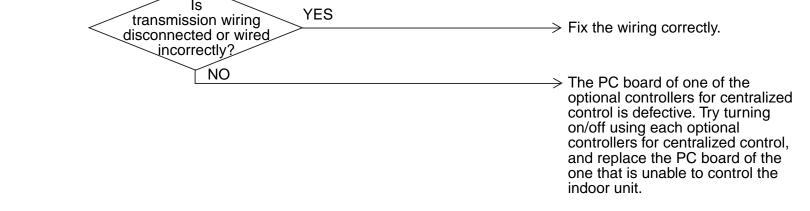


3.2 "///" PC Board Defect

Remote Controller Display	ทา
Applicable Models	Centralized remote controller
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	Defect of central remote controller PC board
Troubleshooting	Replace the central remote controller PC board.

3.3 *"ITB"* Malfunction of Transmission Between Optional Controllers for Centralized Control

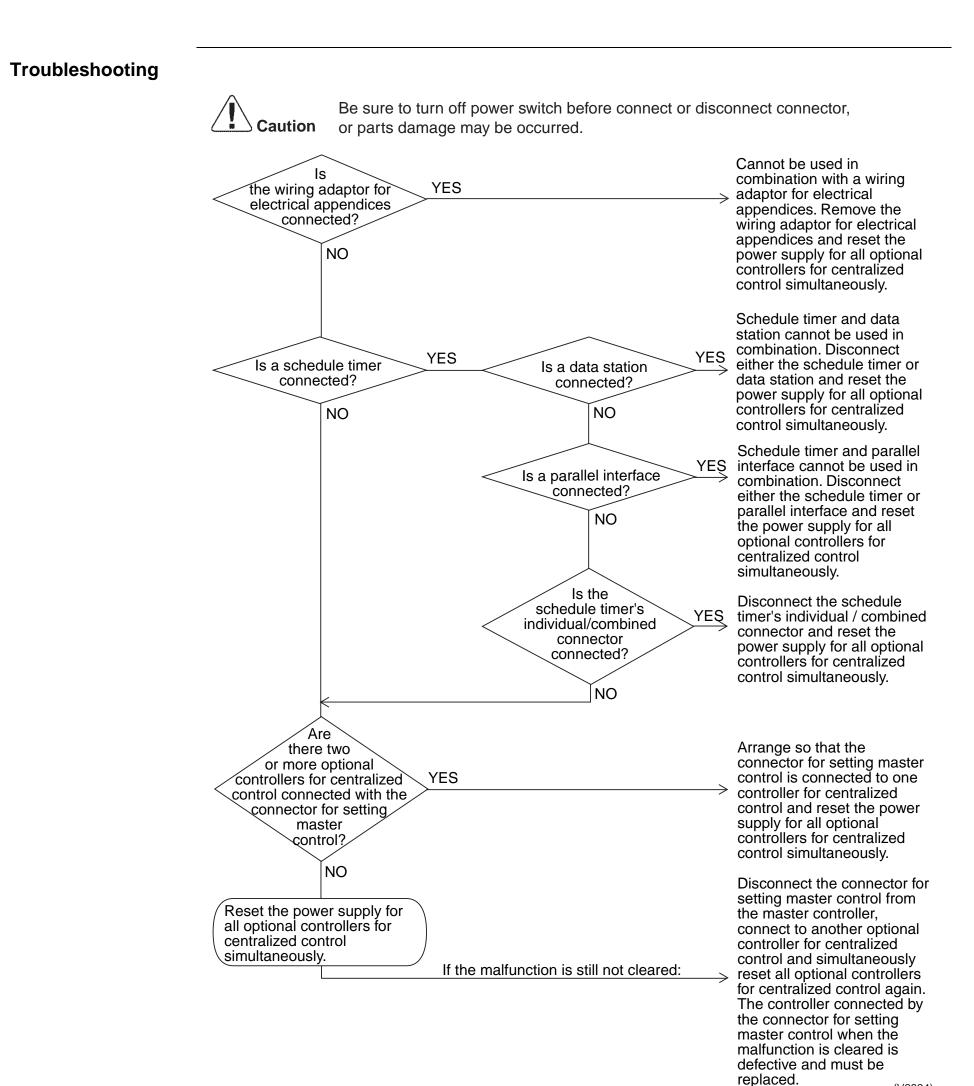
Remote Controller Display	<i>П8</i>	
Applicable Models	Centralized remote controller	
Method of Malfunction Detection		
Malfunction Decision Conditions		
Supposed Causes	 Malfunction of transmission between optional controllers for Defect of PC board of optional controllers for centralized of 	
Troubleshooting	control been disconnected or its address changed? NO Is the power supply	or disconnect connector, Reset power supply simultaneously for all optional controllers for centralized control.
	turned on for all optional controllers for centralized control? YES Is the reset switch NO	 Turn on power supply for all optional controllers for centralized control. Set reset switch to "normal."





3.4 *"IR"* Improper Combination of Optional Controllers for Centralized Control

Remote Controller Display	ΠΑ
Applicable Models	Centralized remote controller
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Improper combination of optional controllers for centralized control More than one master controller is connected Defect of PC board of optional controller for centralized control



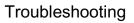
3.5 "ME" Address Duplication, Improper Setting

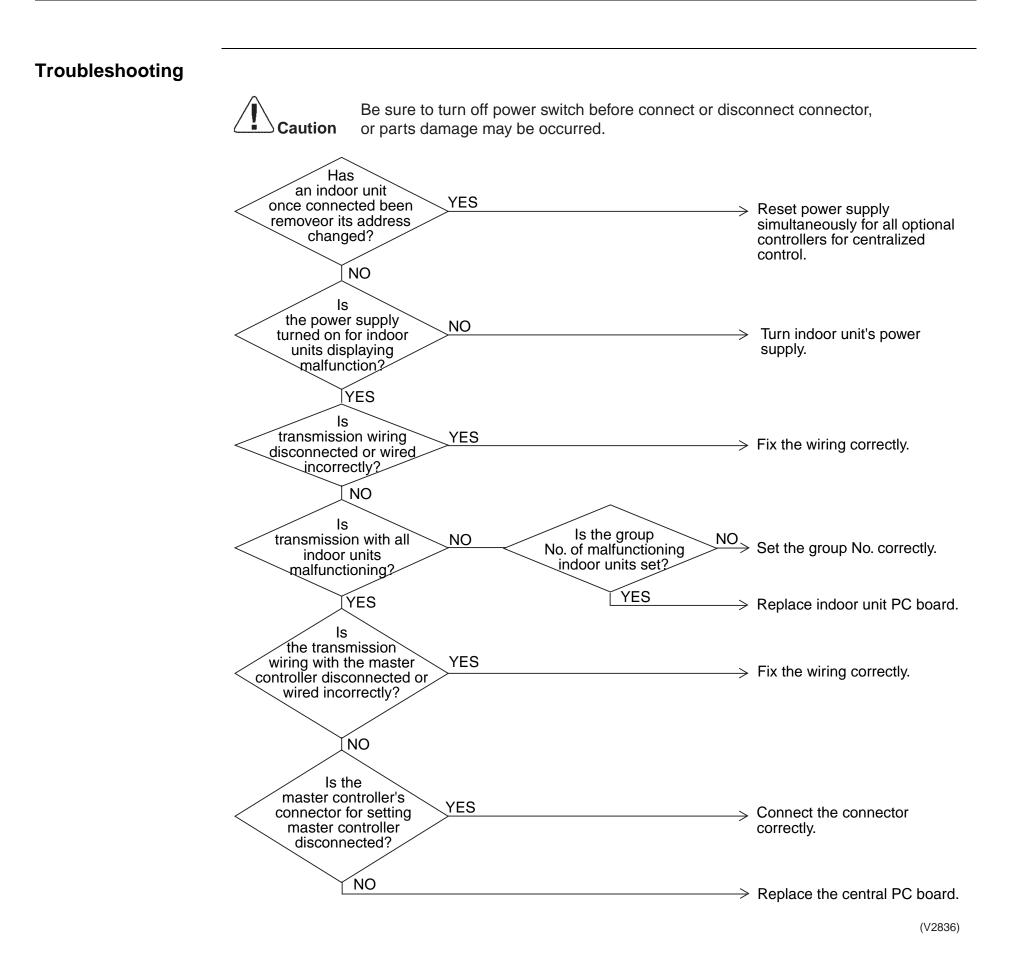
Remote Controller Display	ΠΕ
Applicable Models	Central remote controller
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	Address duplication of centralized remote controller
Troubleshooting	Image: Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Are two or more central remote controllers connected? YES Image: NO Disconnect all central remote controllers except one and reset the power supply of the central remote controller. NO Reset power supply of the central remote controller.

4. Troubleshooting (OP: Schedule Timer)

4.1 "UE" Malfunction of Transmission Between Central Remote Controller and Indoor Unit

Remote Controller Display	UE	
Applicable Models	Schedule timer	
Method of Malfunction Detection	Microcomputer checks if transmission between indoor unit and centralized remote controller is normal.	
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time	
Supposed Causes	 Malfunction of transmission between central remote controller and indoor unit Disconnection of connector for setting master controller (or individual/combined switching connector) Defect of schedule timer PC board Defect of indoor unit PC board 	



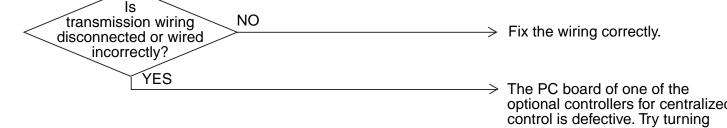


4.2 "///" PC Board Defect

ิกา
Schedule timer
Defect of schedule timer PC board
Image: Description Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: Description Reset power supply. Image: Does the system return to normal? YES Image: NO External factor other than equipment malfunction (noise etc.) Image: NO Replace the indoor unit PC board.

4.3 *"ITB"* Malfunction of Transmission Between Optional Controllers for Centralized Control

Remote Controller Display	<i>M8</i>
Applicable Models	All models of indoor units, schedule timer
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Malfunction of transmission between optional controllers for centralized control Defect of PC board of optional controllers for centralized control
Troubleshooting	Image: Note that the power supply turned on for all optional controllers for centralized control of turned on for all optional controllers for centralized control been disconnected or is address NO Reset power supply simultaneously for all optional controllers for centralized control. NO Is NO Turn on power supply for all optional controllers for centralized control.
	Is the reset switch of all optional controllers for centralized control set to "normal" ? YES

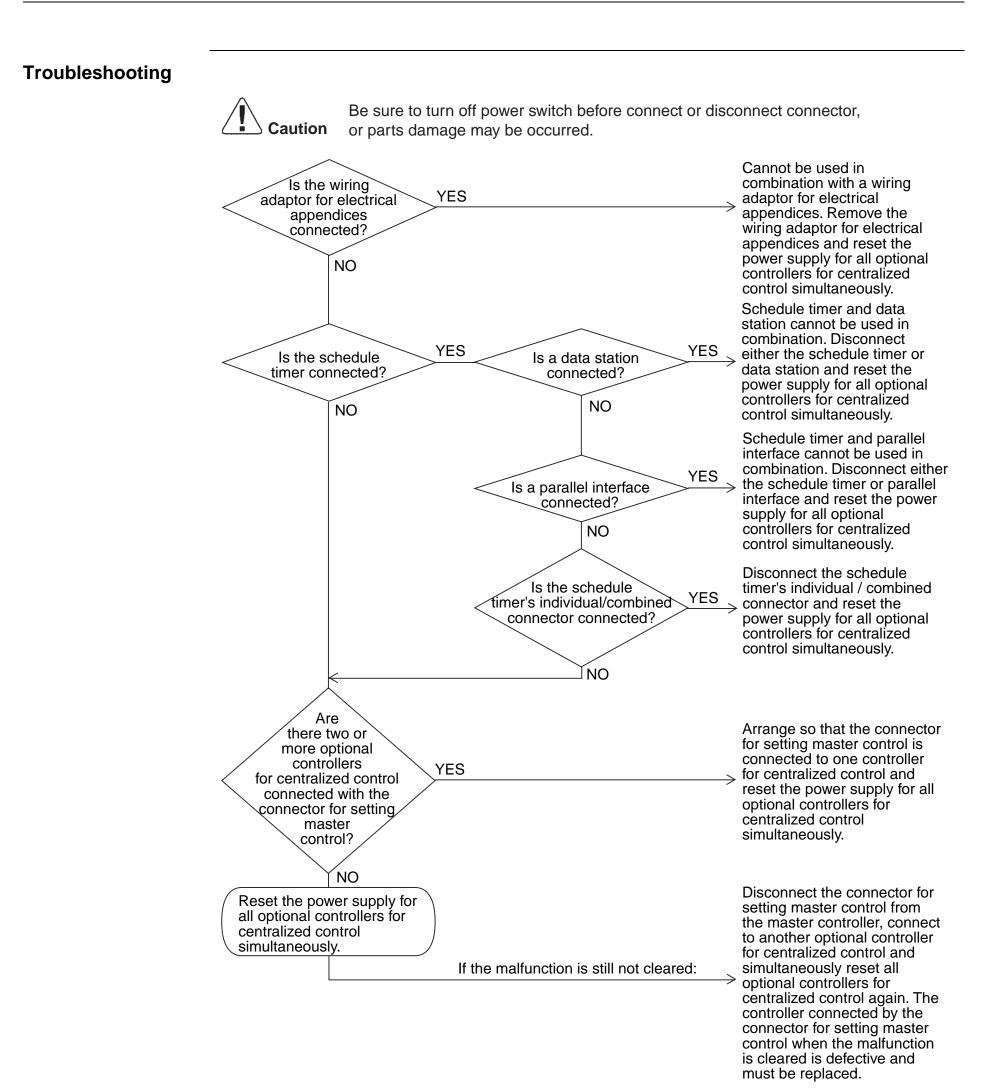


The PC board of one of the optional controllers for centralized control is defective. Try turning on/off using each optional controllers for centralized control, and replace the PC board of the one that is unable to control the indoor unit.

(V2838)

4.4 *"IR"* Improper Combination of Optional Controllers for Centralized Control

Remote Controller Display	<i>ПR</i>
Applicable Models	All models of indoor units, schedule timer
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Improper combination of optional controllers for centralized control More than one master controller is connected. Defect of PC board of optional controller for centralized control

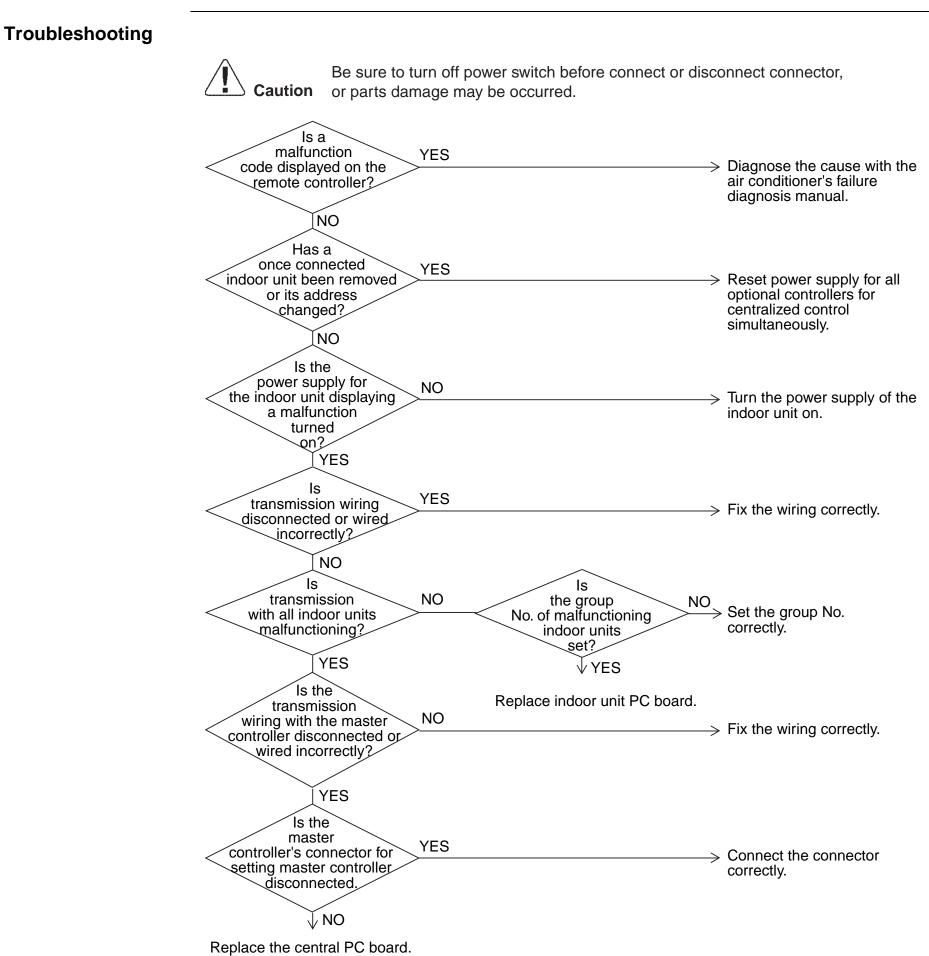


4.5 "TC" Address Duplication, Improper Setting

Remote Controller Display	Πር
Applicable Models	All models of indoor units, schedule timer
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Address duplication of optional controller for centralized control
Troubleshooting	Image: No Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred. Image: No YES Image: No Disconnect all centralized controller timer's power supply. Image: No Reset the power supply for the centralized controller.

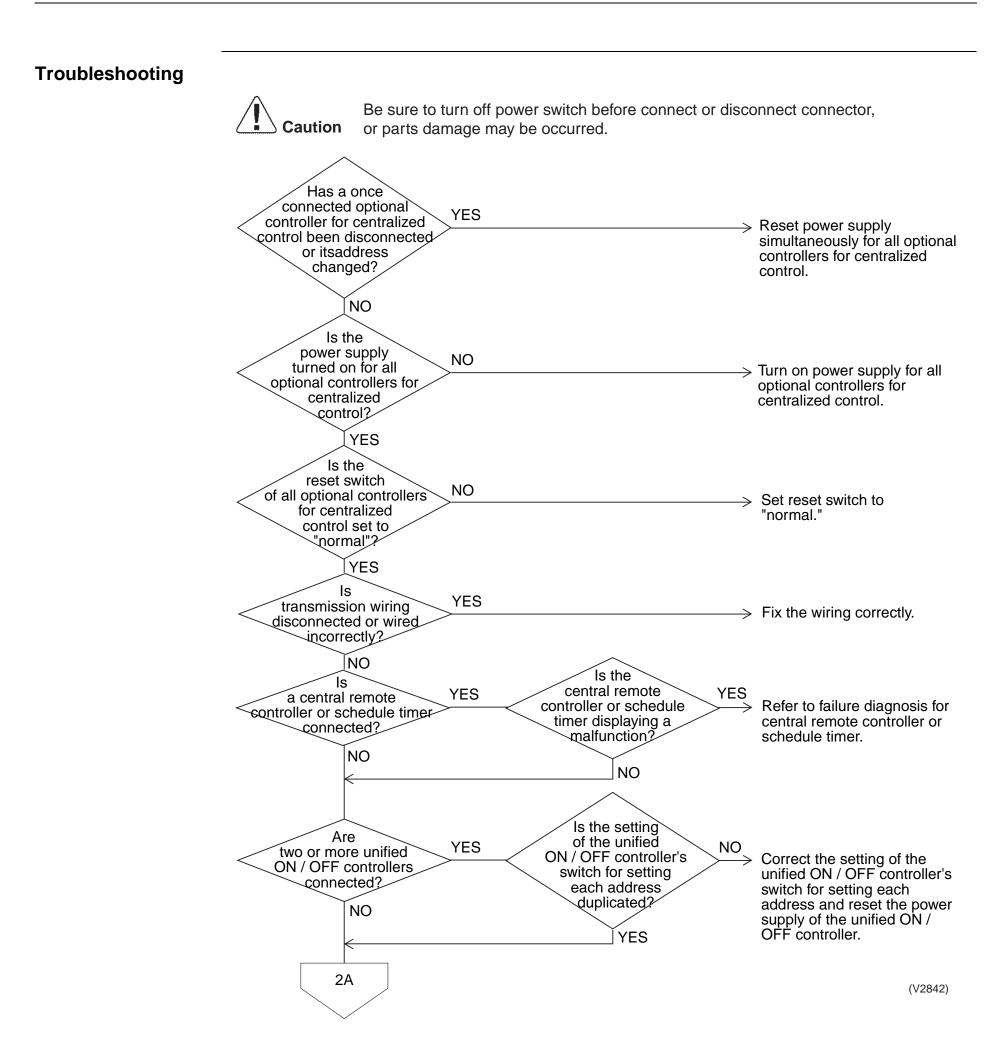
5. Troubleshooting (OP: Unified ON/OFF Controller) 5.1 Operation Lamp Blinks

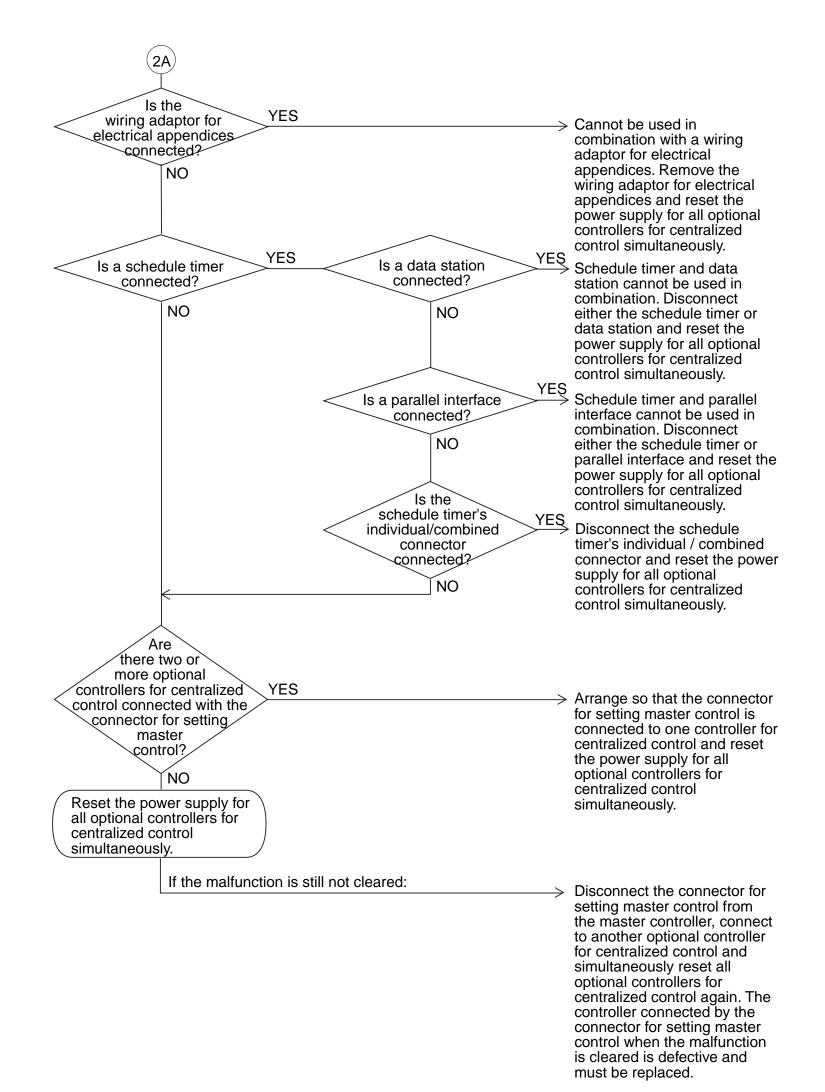
Remote Controller Display	Operation lamp blinks
Applicable Models	All models of indoor units Unified ON/OFF controller
Method of Malfunction Detection	
Malfunction Decision Conditions	
Supposed Causes	 Malfunction of transmission between optional controller and indoor unit Connector for setting master controller is disconnected Defect of unified ON/OFF controller Defect of indoor unit PC board Malfunction of air conditioner



5.2 Display "Under Host Computer Integrate Control" Blinks (Repeats Single Blink)

Remote Controller Display	"under host computer integrated control" (Repeats single blink)		
Applicable Models	Unified ON/OFF controller Central controller, Schedule timer		
Method of Malfunction Detection			
Malfunction Decision Conditions			
Supposed Causes	 Address duplication of central remote controller Improper combination of optional controllers for centralized control Connection of more than one master controller Malfunction of transmission between optional controllers for centralized control Defect of PC board of optional controllers for centralized control 		





(V2843)

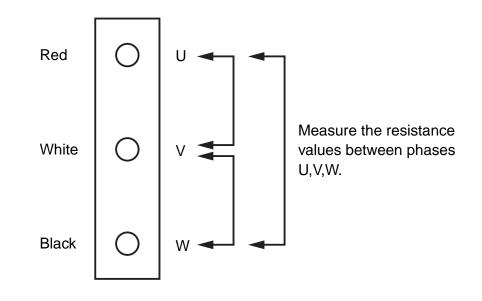
5.3 Display "Under Host Computer Integrate Control" Blinks (Repeats Double Blink)

Remote Controller Display	"under host computer integrated control" (Repeats double blink)		
Applicable Models	Unified ON/OFF controller		
Method of Malfunction Detection			
Malfunction Decision Conditions			
Supposed Causes	 Central control address (group No.) is not set for Improper address setting Improper wiring of transmission wiring 	indoor unit.	
Troubleshooting	Image: Caution Be sure to turn off power switch before or parts damage may be occurred. Is the central control address (group No.) set for the indoor unit? NO YES Is the switch for setting each address set correctly? YES YES	 Set by remote controller the central control address for all indoor units connected to the central control line. Set the switch for setting each address correctly and simultaneously reset the power 	
	Is the transmission wiring disconnected or wired incorrectly? NO	——————————————————————————————————————	
		————————————————————————————————————	

Check No. 8 Check on connector of fan motor (Power supply cable)

(1) Turn off the power supply.

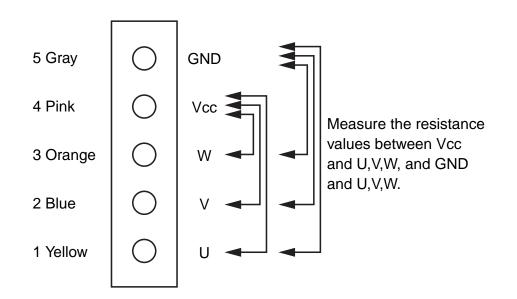
Measure the resistance between phases of U,V,W at the motor side connectors (three-core wire) to check that the values are balanced and there is no short circuiting, while connector or relay connector is disconnected.



Check No. 9

(1) Turn off the power supply.

(2) Measure the resistance between Vcc and each phase of U,V,W, and GND and each phase at the motor side connectors (five-core wire) to check that the values are balanced within the range of \pm 20 %, while connector or relay connector is disconnected.



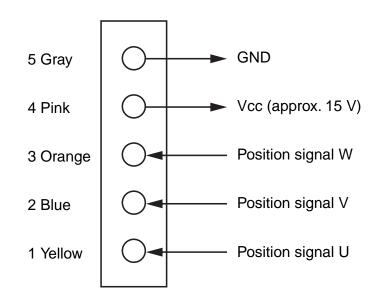
Check No. 12 Check or

Check on pulse input of position signal of fan inverter PCB

- (1) Disconnect the connector X2A while power supply OFF and operation OFF.
- (2) Is the voltage between pins No. 4 and 5 on X2A approx. 15 V after power supply is turned on?
- (3) Connect the connector X2A while power supply OFF and operation OFF.
- (4) Check below conditions when the fan motor is rotated one turn manually under the condition of operation OFF after power supply is turned ON.Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 1 and 5 on X2A?Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 2 and 5 on X2A?

Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 3 and 5 on X2A?

The condition (2) dose not appear \rightarrow Faulty PCB \rightarrow Replacing the PCB The conditions (4) do not appear \rightarrow Faulty hall IC \rightarrow Replacing fan motor of outdoor unit



Part 7 Replacement procedure for INV compressor, VRV II (RXYQ5M to 48M)

1.	Repl	acement procedure for INV compressor,	
	VRV	/ II (RXYQ5M-48M)	258
		Replacement procedure	

Replacement procedure for INV compressor, VRV II (RXYQ5M to 48M)

1. Replacement procedure for INV compressor, VRV II (RXYQ5M-48M)

1.1 Replacement procedure

 Collect the refrigerant by using refrigerant recovery unit.

(Since the setting on outdoor unit PCB is required for refrigerant recovery, refer to the warning plate "Precautions in service work" attached on the switch box cover.)

- (2) Remove the sound insulator mat covering the faulty compressor, and disconnect the power cable from terminal board of the compressor.
- (3) Disconnect the brazing sections of suction pipe and discharge pipe by using brazing torch after the refrigerant has been collected completely.
- (4) Pinch the oil pressure equalizing pipe of the faulty compressor at the lower part of the brazed joint as shown in figure 1, and cut it between the pinched section and brazed joint in order to prevent residual oil from discharging.
- (5) Remove three bolts at cushion rubber section to take out the faulty compressor outside the unit.
- (6) Check that no oil remains in the oil pressure equalizing pipe as shown in figure 2, then remove the cut pipe from the brazed joint with brazing torch.
- (7) Install the new compressor in the unit.(Be sure to insert the cushion rubbers before tightening the fixing bolts of compressor.)
- (8) Remove the rubber caps put on the suction and discharge pipe of the new compressor to release the sealing nitrogen gas.
 (Take note that oil may spout due to the pipe inside pressure if the plug put on the equalizing seat is removed before removing of rubber cap.)
- (9) Remove the plug put on the equalizing seat of the new compressor.
- (10) Install the outlet pipe on the equalizing seat of the new compressor.
- (11) Braze the equalizing seat outlet pipe to the oil pressure equalizing pipe with brazing torch.
 - * Since an O-ring is put in the equalizing seat, be sure to maintain the parts around O-ring in cool.

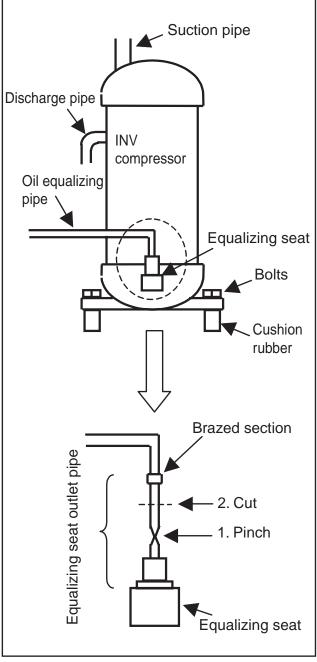
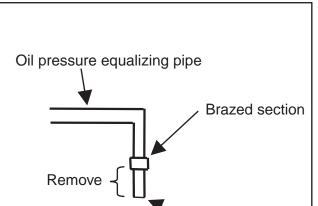


Fig. 1



- (12) Braze the suction and discharge pipe with brazing torch to the compressor.
- (13) Conduct air tight test to check the piping system is free from leakage.
- (14) Connect power cable to the terminal board of compressor and cover the compressor with sound insulator mat.

- Cut section
- * Check that no oil remains in the oil pressure equalizing pipe before removing of the cut pipe.

Fig. 2

(15) Conduct vacuum drying.

(Since the setting on outdoor unit PCB is required for vacuum drying, refer to the warning plate "Precautions in service work" attached on the switch box cover.)

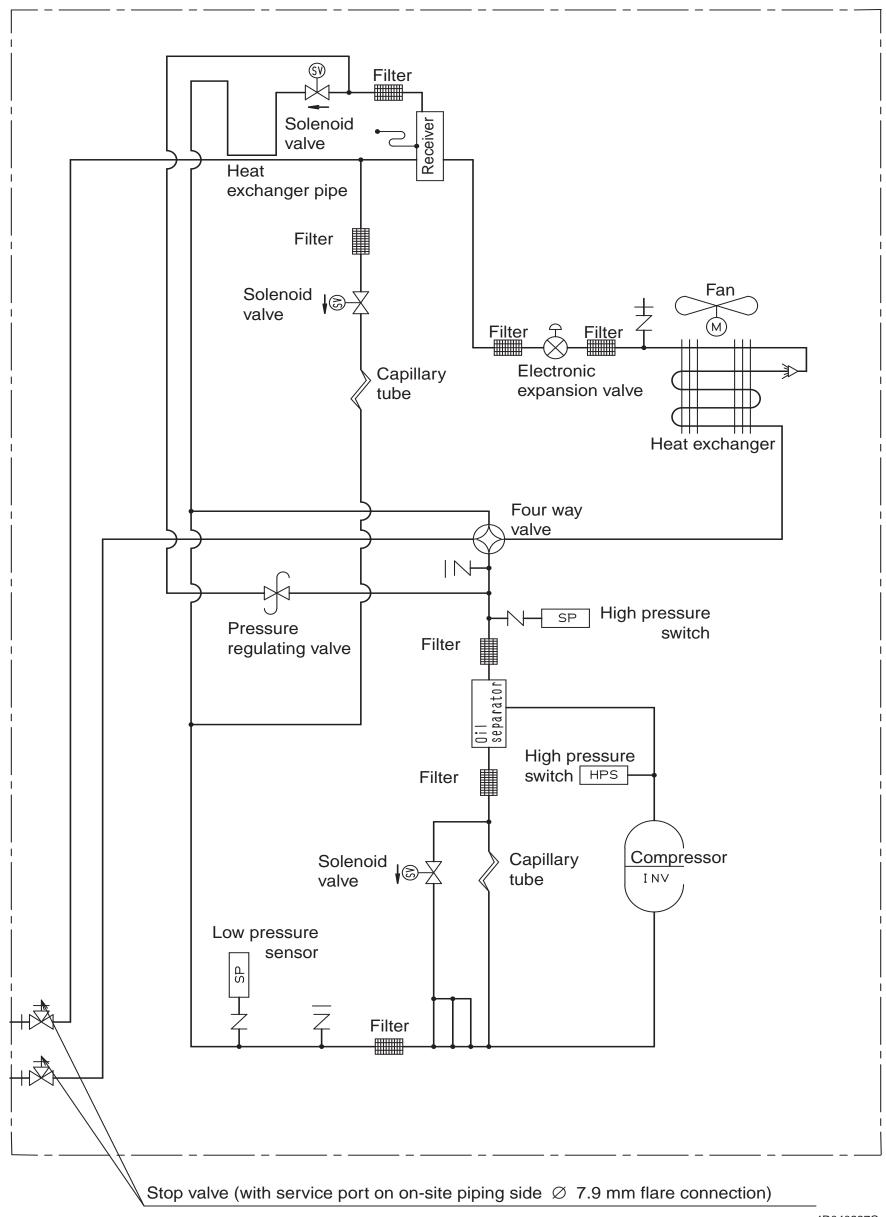
(16) Charge refrigerant after the completion of vacuum drying, and check the function of compressor with cooling or heating operation.

Part 8 Appendix

Piping Diagrams	
Wiring Diagrams for Reference	
2.1 Outdoor Unit	269
2.2 Field Wiring	272
2.3 Indoor Unit	275
List of Electrical and Functional Parts	293
3.1 Outdoor Unit	293
3.2 Indoor Side	295
Option List	301
•	
4.2 Option Lists (Outdoor Unit)	
Piping Installation Point	
5.1 Piping Installation Point	
5.2 The Example of A Wrong Pattern	305
Selection of Pipe Size, Joints and Header	
6.1 RXYQ5MY1B, RXYQ8MY1B, RXYQ10MY1B, RXYQ12MY1B,	
RXYQ14MY1B, RXYQ16MY1B	
6.2 RXYQ18MY1B, RXYQ20MY1B, RXYQ22MY1B, RXYQ24MY1	В,
RXYQ26MY1B, RXYQ28MY1B, RXYQ30MY1B, RXYQ32MY1	В,
RXYQ34MY1B, RXYQ36MY1B, RXYQ38MY1B, RXYQ40MY1	В,
RXYQ42MY1B, RXYQ44MY1B, RXYQ46MY1B, RXYQ48MY1	B308
Thermistor Resistance / Temperature Characteristics	311
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. –	
	 1.1 Outdoor Unit 1.2 Indoor Unit

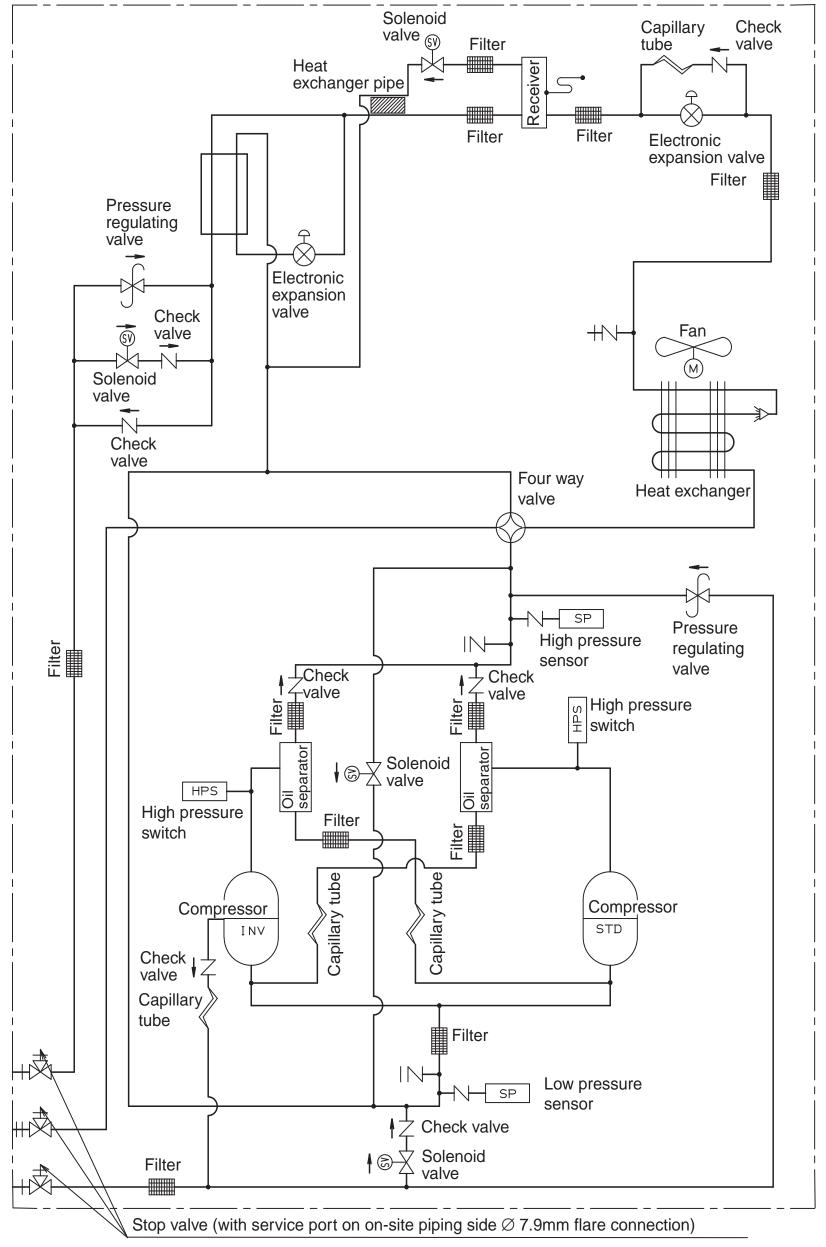
Piping Diagrams Outdoor Unit

RXYQ5MY1B



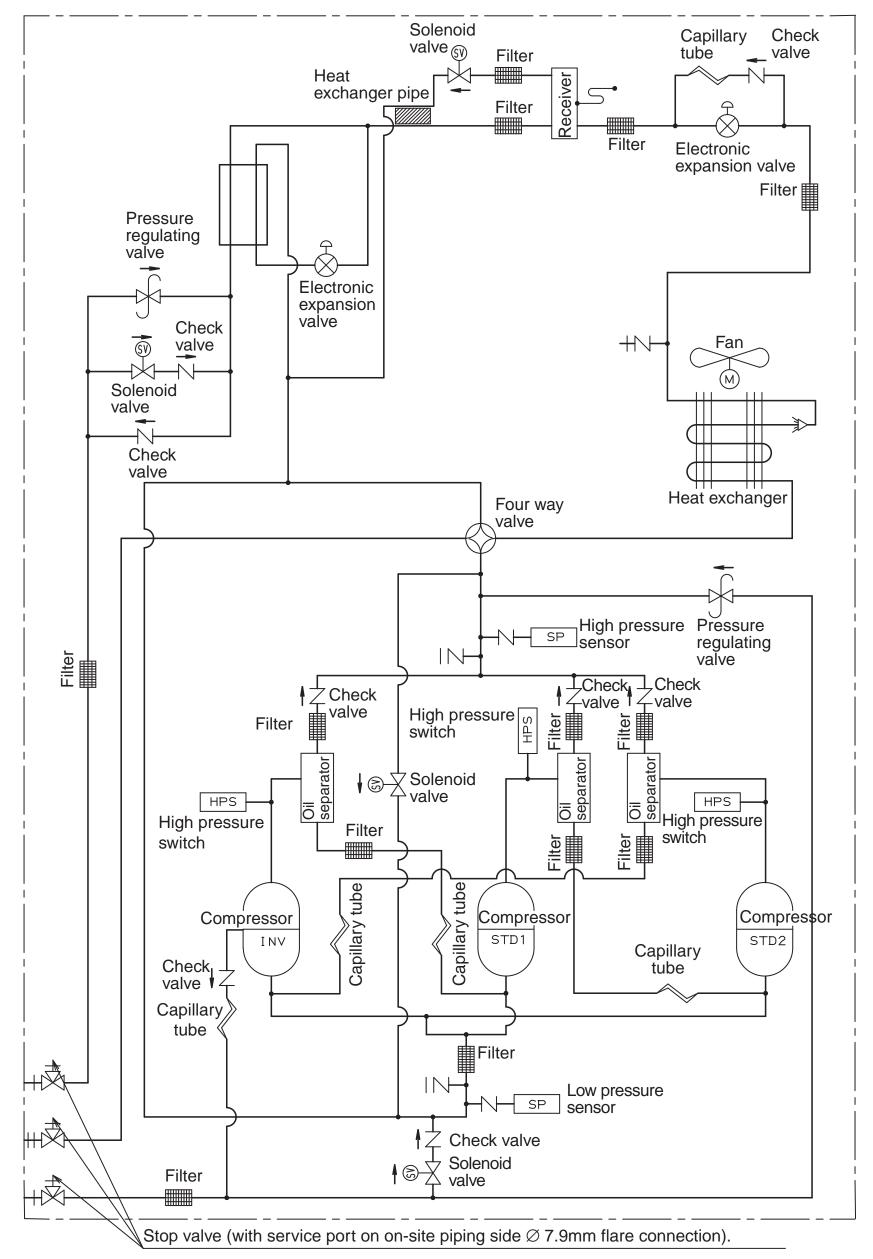
4D040337C

RXYQ8MY1B RXYQ10MY1B RXYQ12MY1B



4D044808

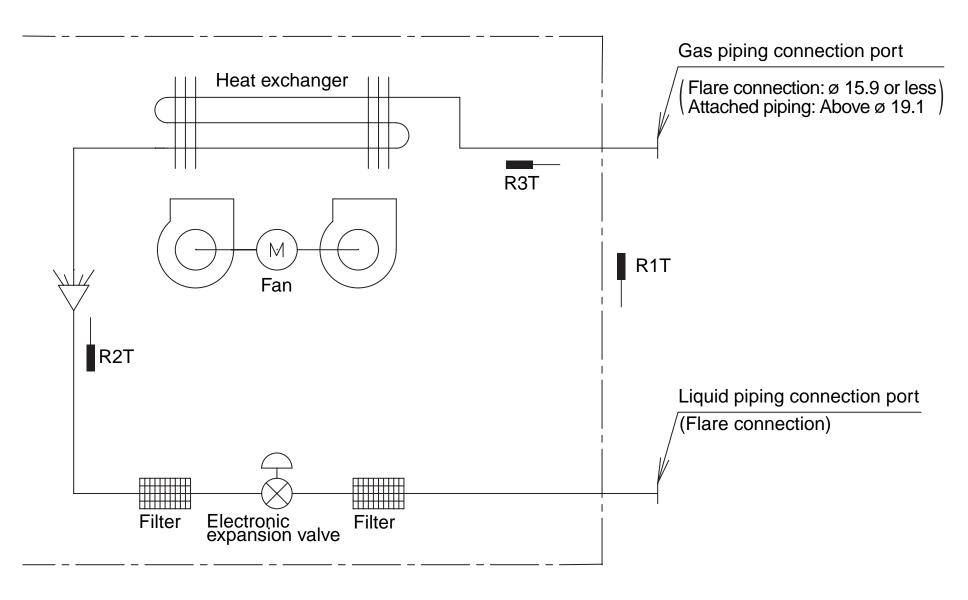
RXYQ14MY1B RXYQ16MY1B



4D044809

1.2 Indoor Unit

FXCQ, FXZQ, FXFQ, FXKQ, FXSQ, FXMQ, FXHQ, FXAQ, FXLQ, FXNQ

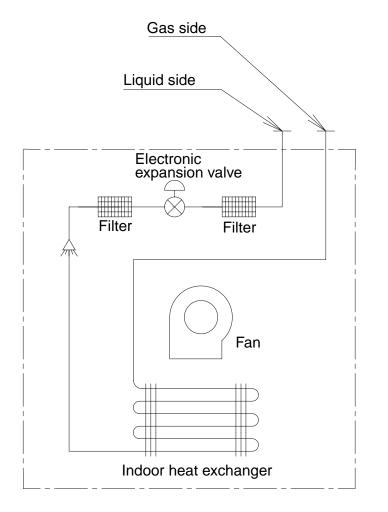


DU220-602D

- R1T : Thermistor for suction air temperature
- R2T : Thermistor for liquid line temperature
- R3T : Thermistor for gas line temperature

		(mm)
Capacity	GAS	Liquid
20 / 25 / 32 / 40 / 50M	φ12.7	φ 6 .4
63 / 80 / 100 / 125M	φ 15 .9	φ9.5
200M	φ 19.1	φ9.5
250M	φ22.2	φ9.5

FXDQ

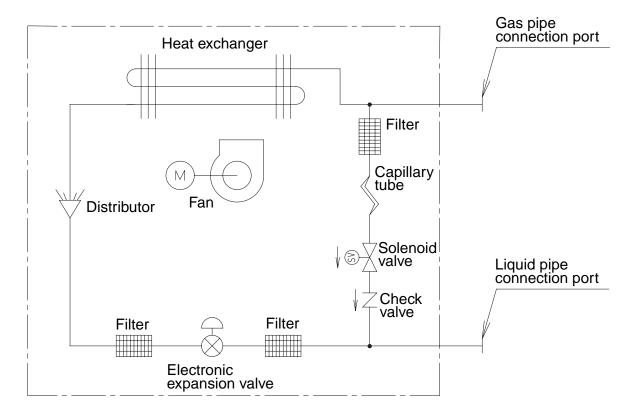


4D043864A

Model Gas Liquid FXDQ20N / 25N / 32N / 40N / 50NVE φ12.7 φ6.4 FXDQ63NVE φ15.9 φ9.5

Refrigerant pipe connection port diameters

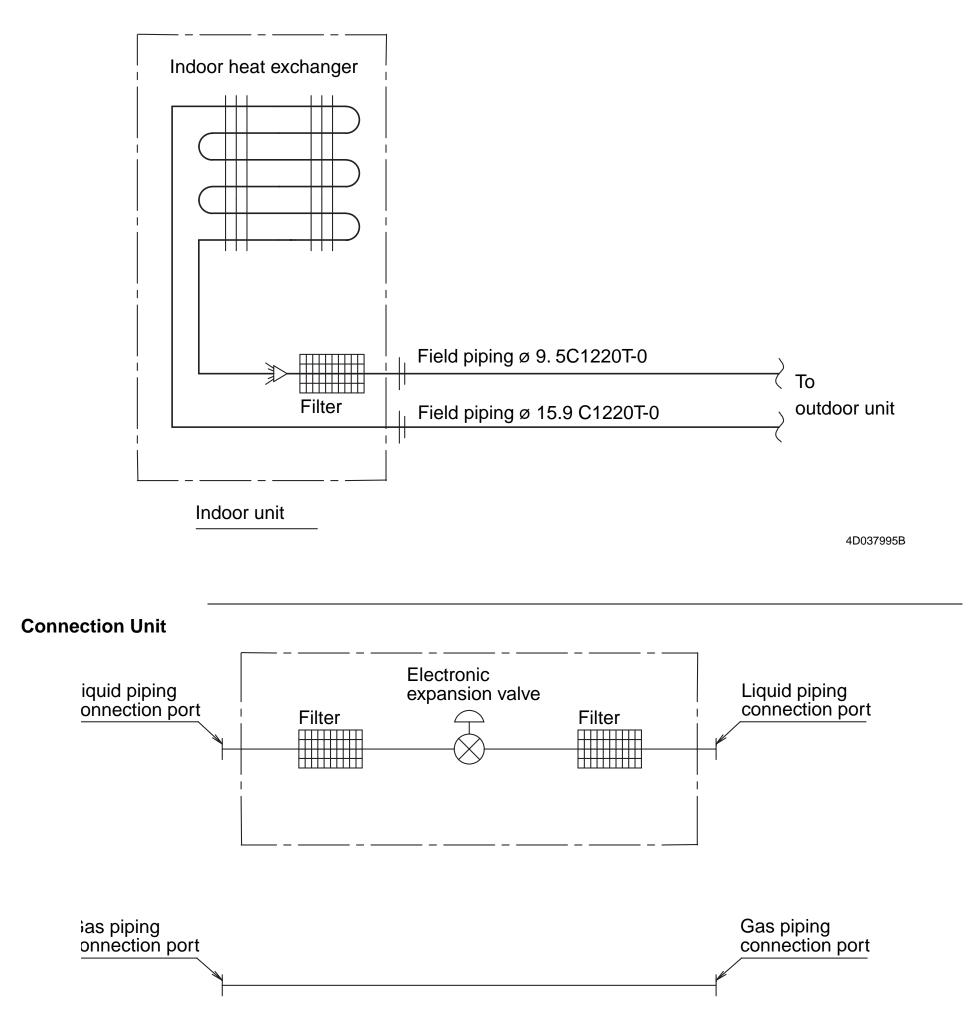
FXMQ125/200/250MFV1



4D018650B

Refrigerant pipe connection port diameters

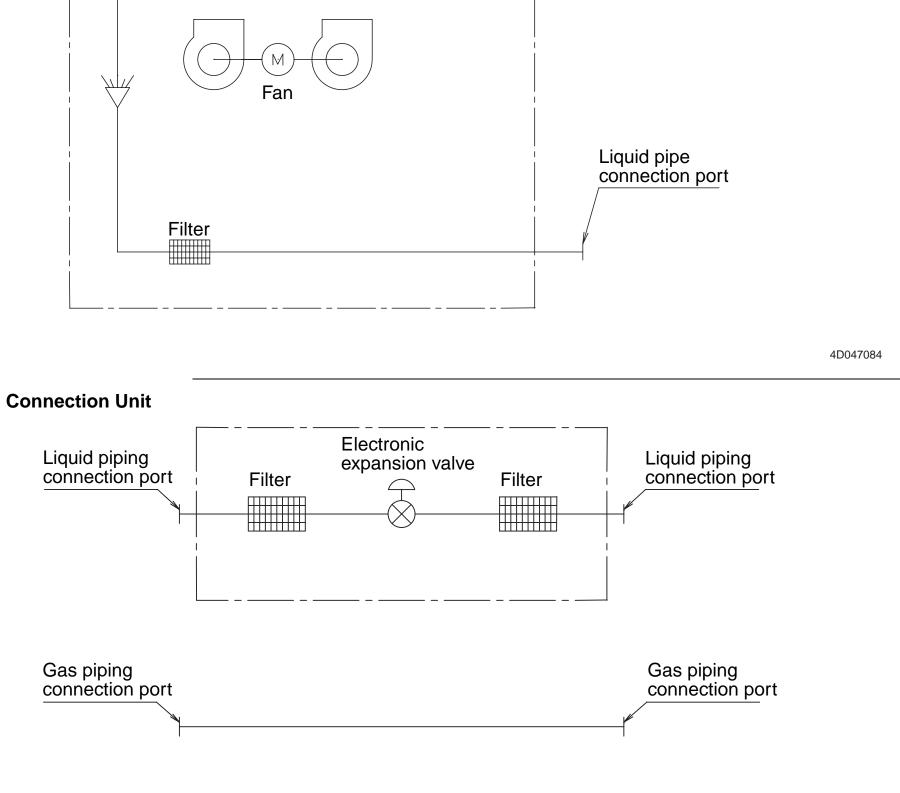
		(mm)
Model	Gas	Liquid
FXMQ125MFV1	φ 15 .9	φ9.5
FXMQ200MFV1	φ19.1	φ9.5
FXMQ250MFV1	φ22.2	φ9.5



FXUQ + BEVQ

Indoor unit

4D034127B





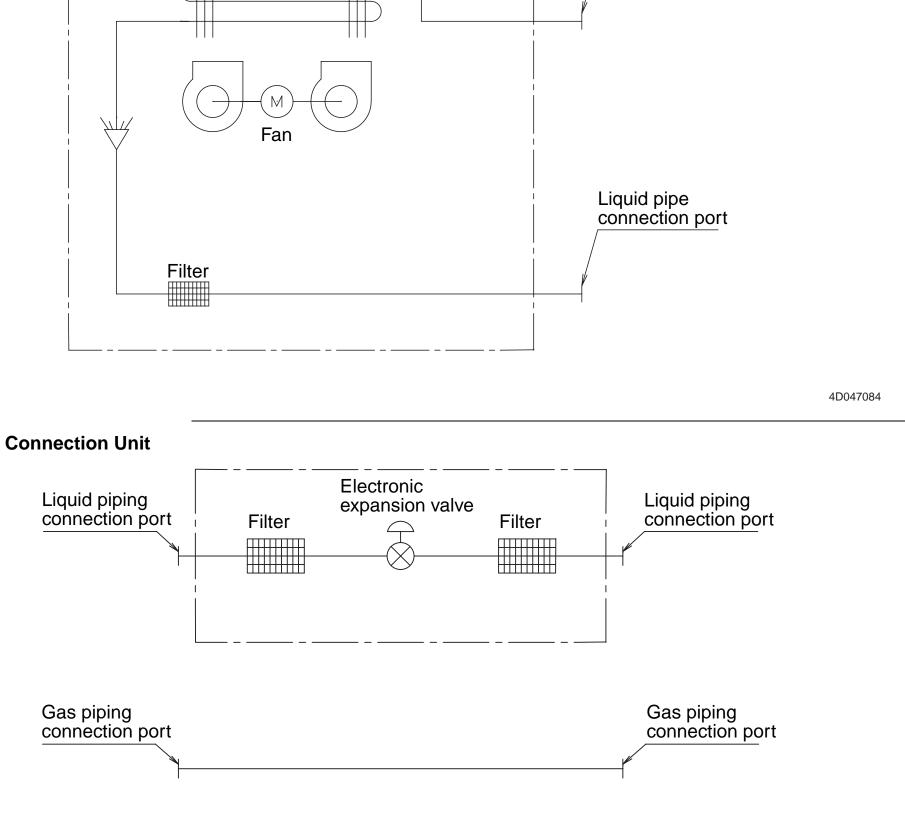
Heat exchanger

Indoor unit

Gas pipe connection port

4D034127B

Appendix



FXLQ + BEVQ

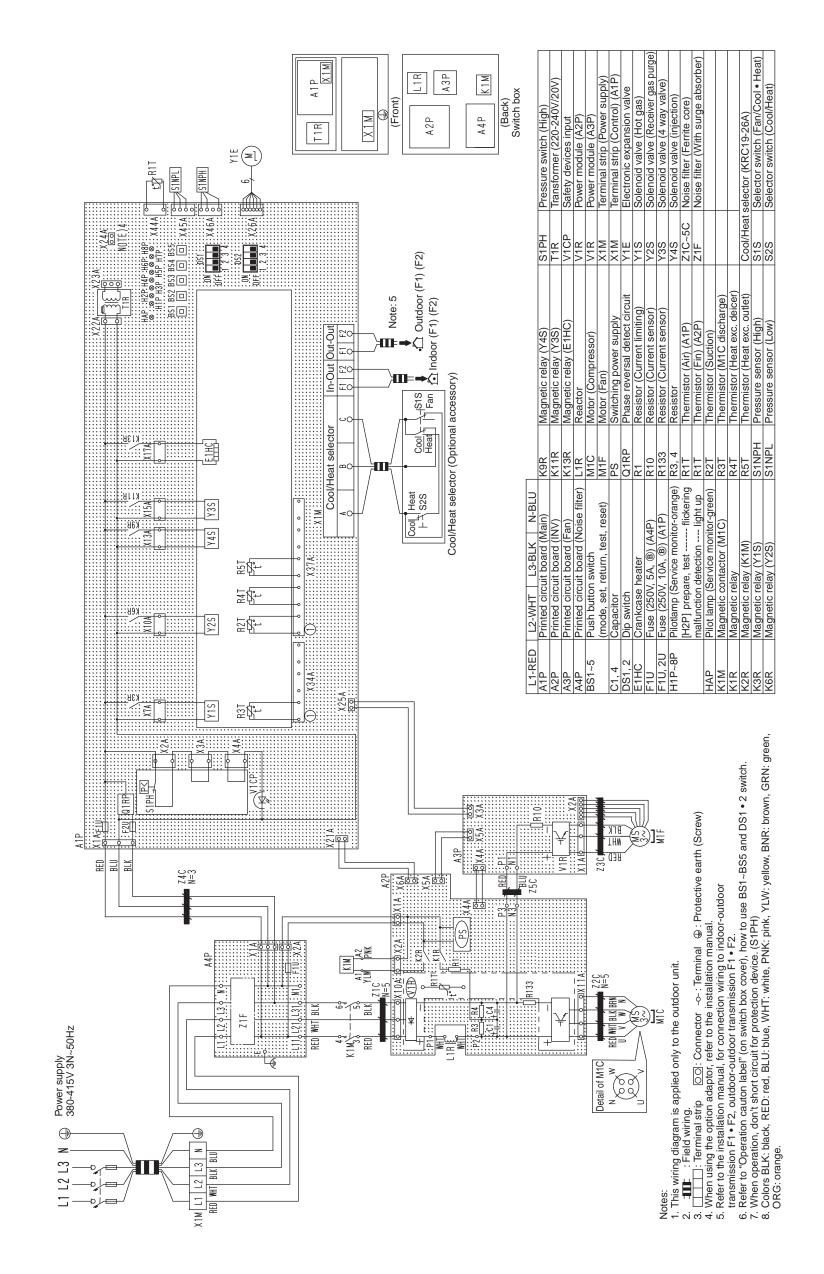
Heat exchanger

Indoor unit

Gas pipe connection port

2. Wiring Diagrams for Reference2.1 Outdoor Unit

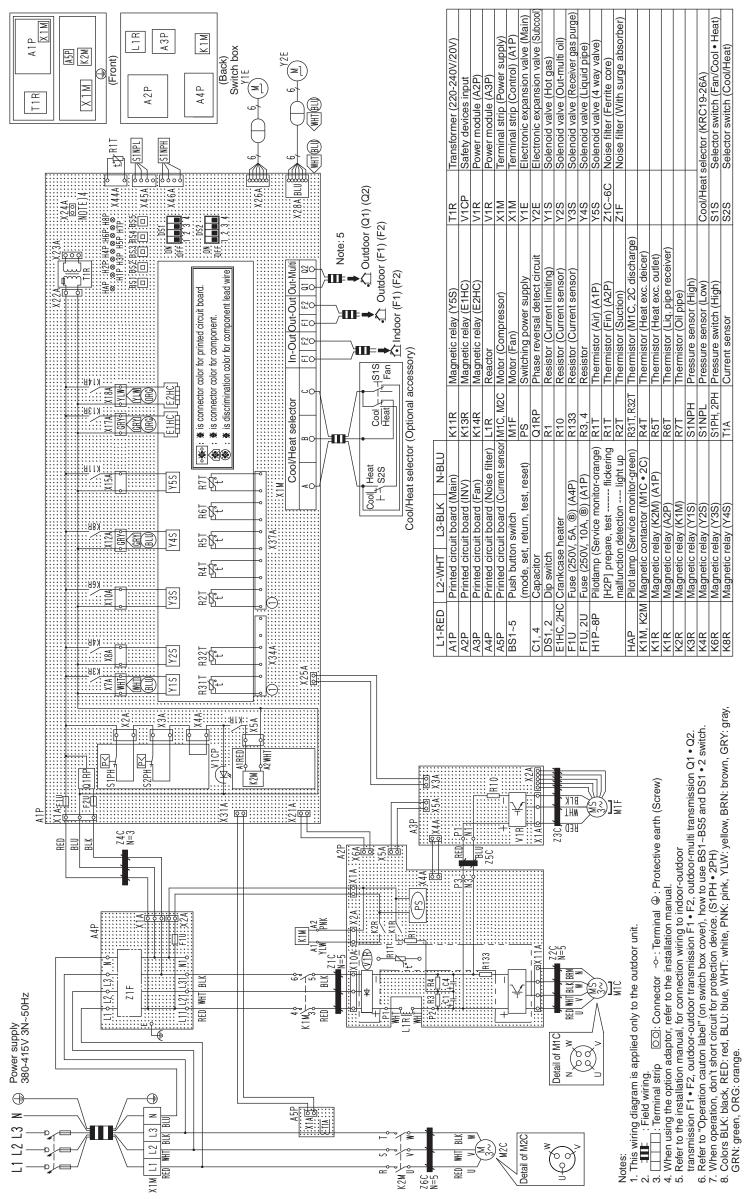
RXYQ5MY1B



3D038590E

Appendix

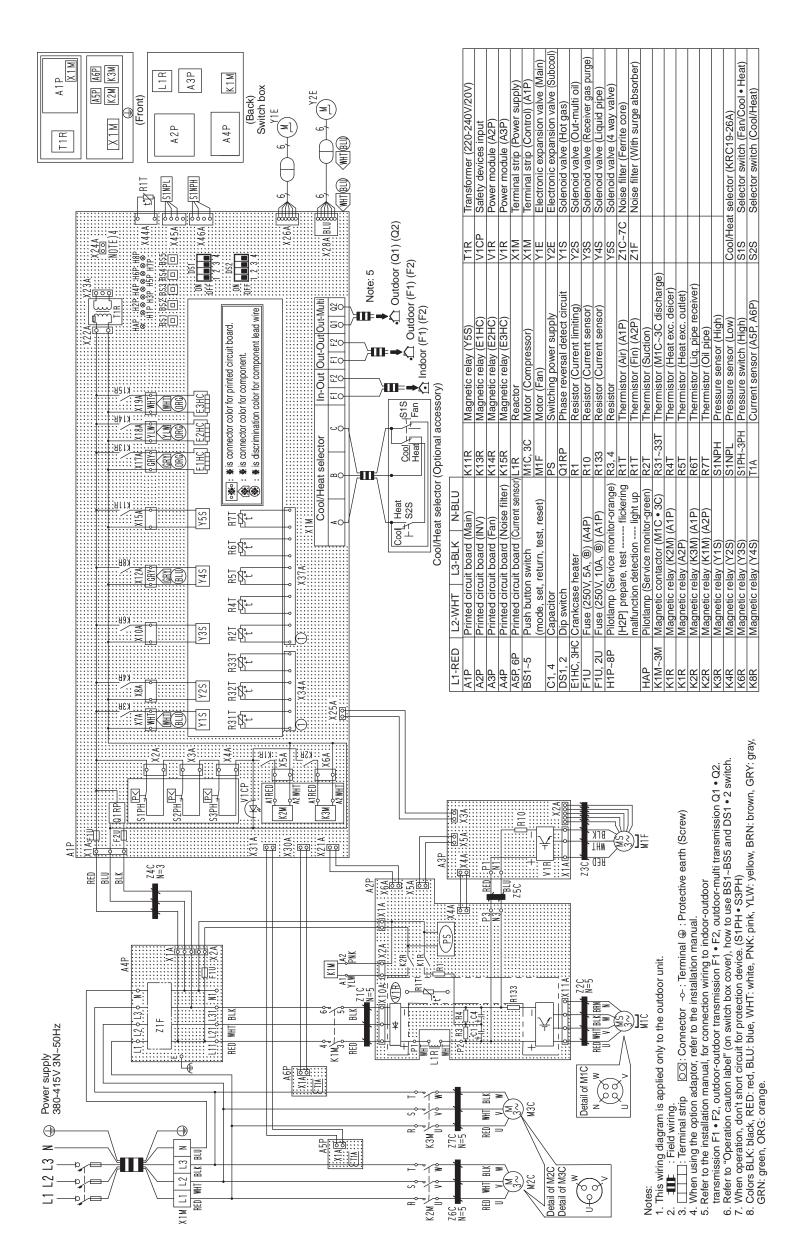
RXYQ8MY1B RXYQ10MY1B RXYQ12MY1B



SiE39-404

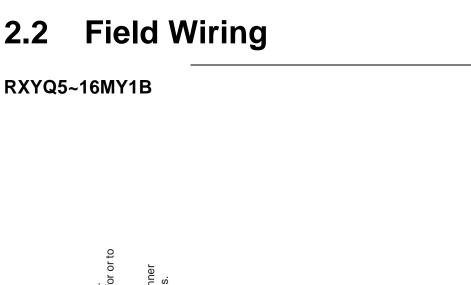
3D44772

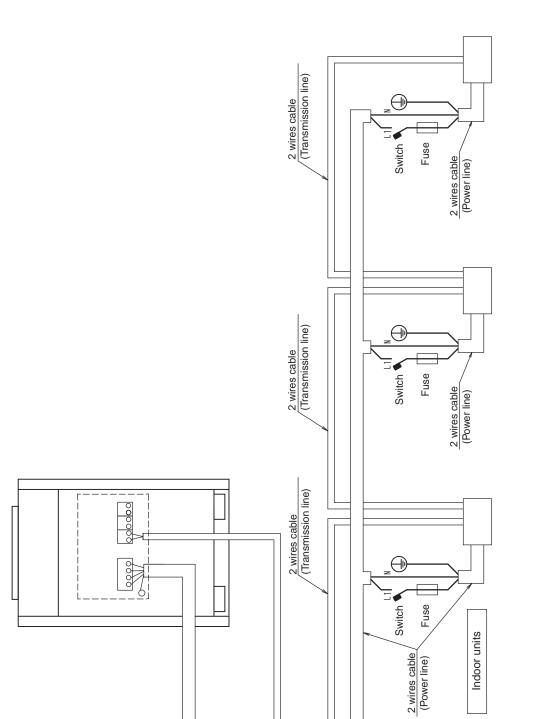
RXYQ14MY1B RXYQ16MY1B



330044773

Appendix



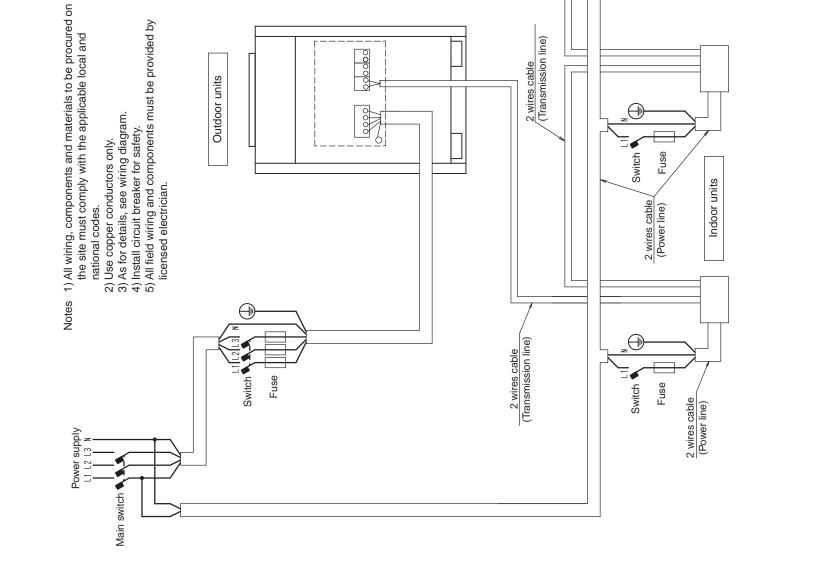


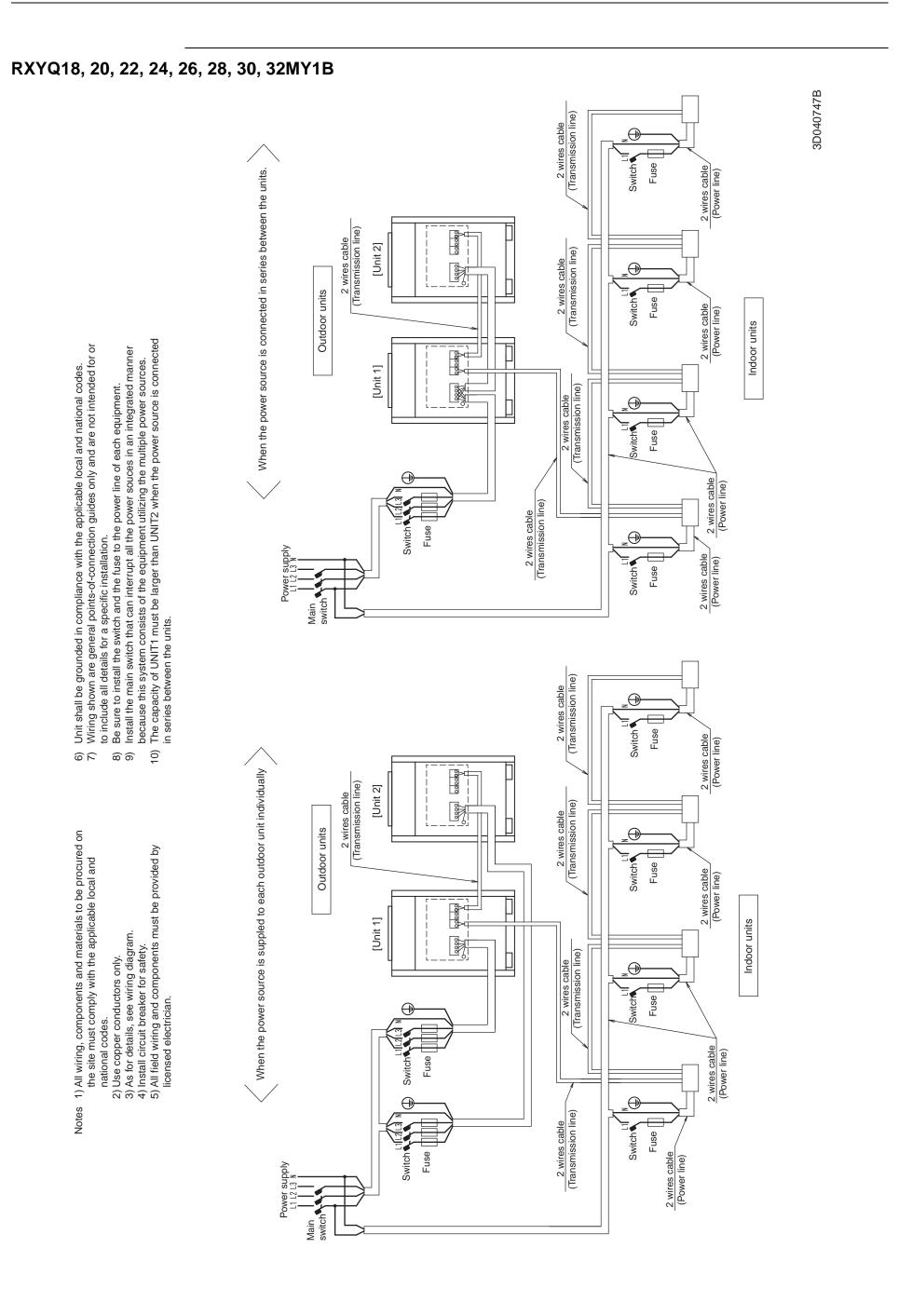
- (6) Unit shall be grounded in compliance with the applicable local and national codes.
 7) Wring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
 8) Be sure to install the switch that can interrupt all the power line of each equipment.
 9) Install the main switch that can interrupt all the power souces in an integrated manner because this system consists of the equipment utilizing the multiple power sources.

national codes. 2) Use copper conductors only. 3) As for details, see wiring diagram. 4) Install circuit breaker for safety. 5) All field wiring and components must be provided by licensed electrician.

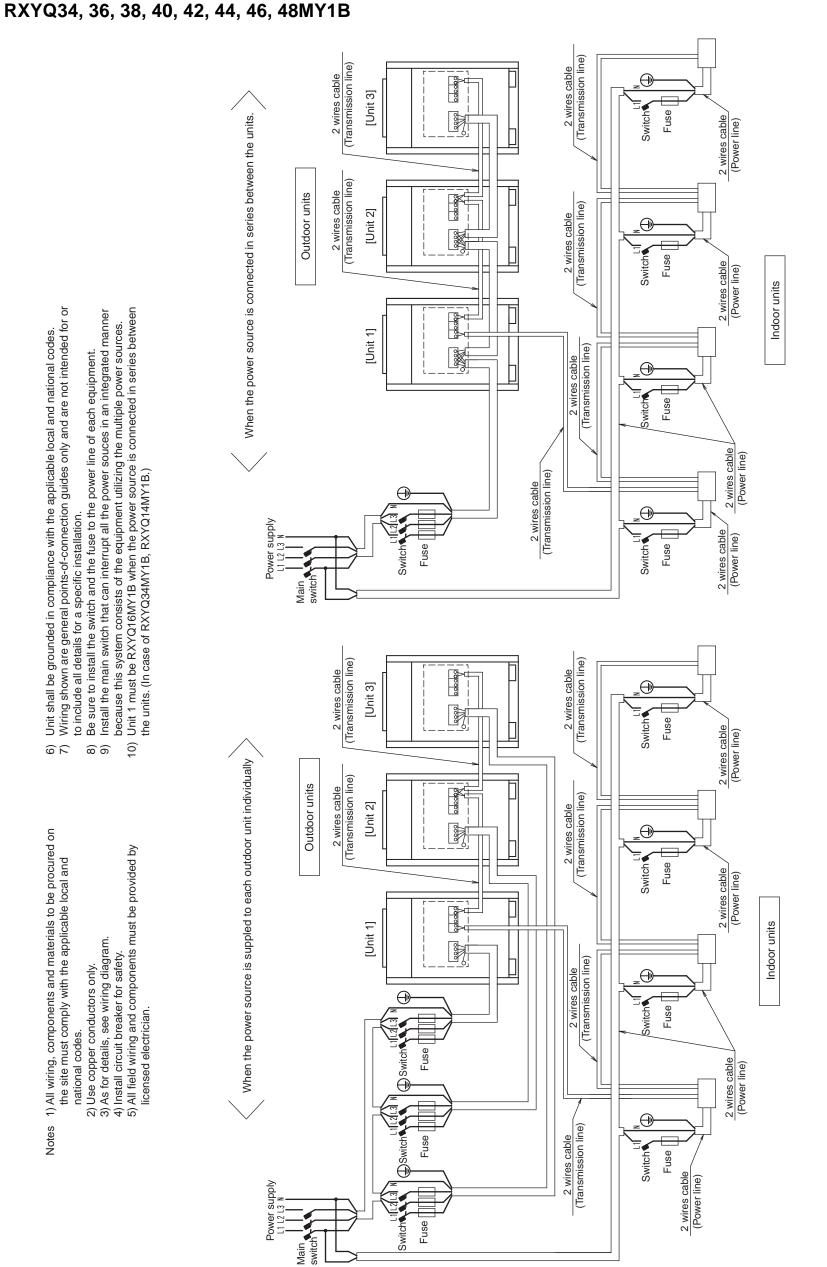
Outdoor units

3D040746C





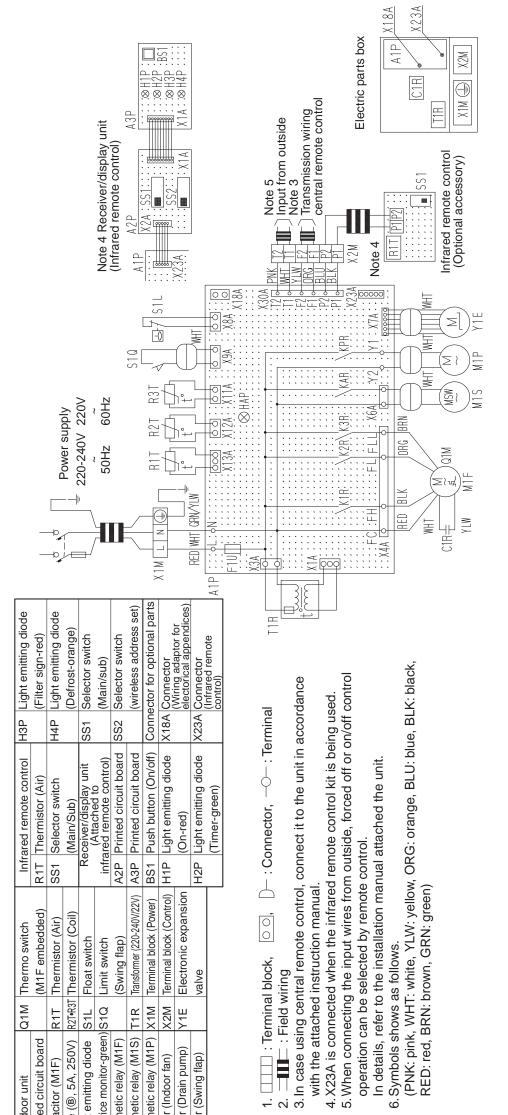
Appendix



3D040748B

Indoor Unit 2.3

FXCQ20M / 25M / 32M / 63MVE



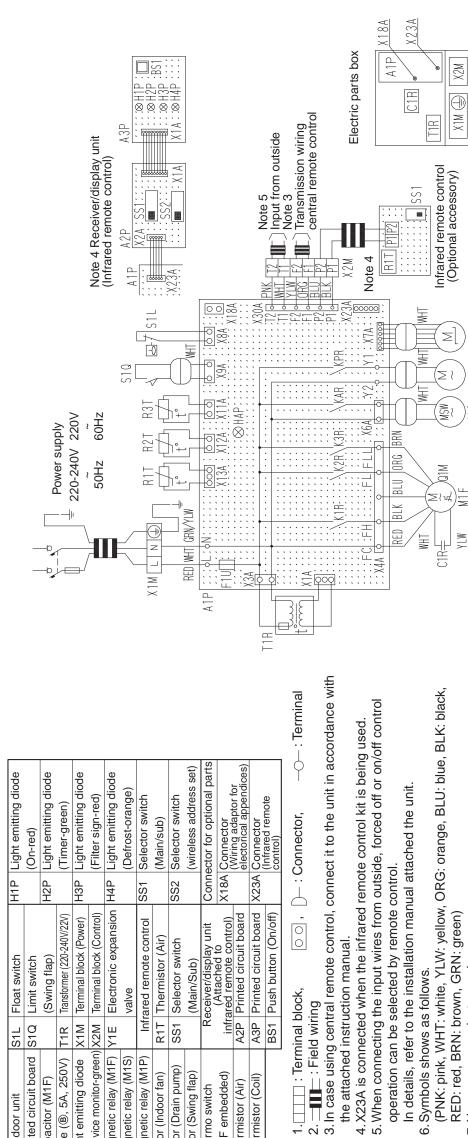
3D039556A

-	Indoor unit	Q1M	F
÷E	Printed circuit board		Σ
ອີ	Capacitor (M1F)	R1T	ЧĻ
19	Fuse (®, 5A, 250V)	R2T•R3T	Ч
g	Light emitting diode	S1L	Ē
ē	(Service monitor-green)S1Q	S1Q	Ē
ъ́	K1R-K3R Magnetic relay (M1F)		Ś
ซี	Magnetic relay (M1S) T1R	T1R	Trar
ð	Magnetic relay (M1P) X1M	X1M	Ter
Ö	Motor (Indoor fan)	X2M	Ter
0	Motor (Drain pump)	Υ1E	ш
0	Motor (Swing flap)		Va

Notes

- <u>.</u>





3D039557A

S.	S1		Ξ	X	X	Σ			R	õ				X	¥	ä	
Indoor unit	Printed circuit board	Capacitor (M1F)	Fuse (®, 5A, 250V)	Light emitting diode	(Service monitor-green) X2	K1R-K3R Magnetic relay (M1F)	Magnetic relay (M1S)	Magnetic relay (M1P)	Motor (Indoor fan)	Motor (Drain pump)	Motor (Swing flap)	Thermo switch	(M1F embedded)	Thermistor (Air)	R2T•R3T Thermistor (Coil)		
	A1P	C1R	F1U	HAP		K1R-K3R	KAR	KPR	M1F	M1P	M1S	Q1M		R1T	R2T•R3T		:

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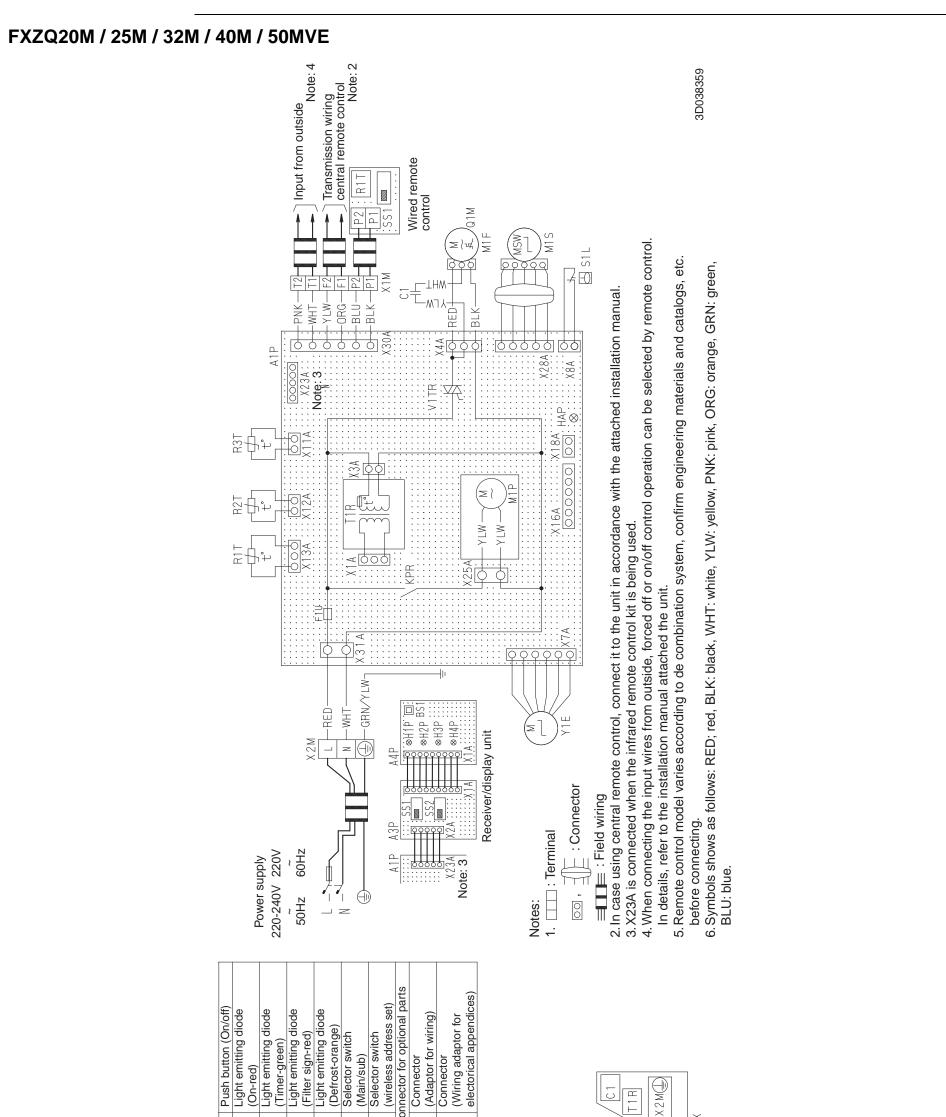
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_ Ø □ : Terminal block, . -Notes

the attached instruction manual 2. **The set of the set**

- operation can
- 7. Use copper conductors only.

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A1P	Printed circuit board	BS1	Push
ы С	Capacitor (M1F)	H1P	Ligh
F1U	Fuse (®, 5A, 250V)	_	-40)
НАР	Light emitting diode (Service	Н2Р	Ligh
	monitor-green)		(Tim
KPR	Magnetic relay (M1P)	НЗР	Ligh
M1F	Motor (Indoor fan)		(Filte
M1P	Motor (Drain pump)	H4P	Ligh
M1S	Motor (Swing flap)		(Def
Q1M	Thermal protector (M1F embedded)	SS1	Sele
R1T	Thermistor (Air)		(Mai
R2T	Thermistor (Coil-liquid)	SS2	Sele
R3T	Thermistor (Coil-gas)		(wire
S1L	Float switch	ပိ	Connect
T1R	Transformer (220-240V/22V)	X16A	Con
V1TR	Triac	_	(Ada
X1M	Terminal block	X18A	Con
X2M	Terminal block		(Wiri
<u></u> 71Е	Electronic expansion valve		elect
	Wired remote control		
R1T	Thermistor (Air)		
SS1	Selector switch (Main/Sub)		
	Infrared remote control	_	
	(Receiver/display unit)		
АЗР	Printed circuit board		
A4P	Printed circuit board		
			1
			5

X 2 M

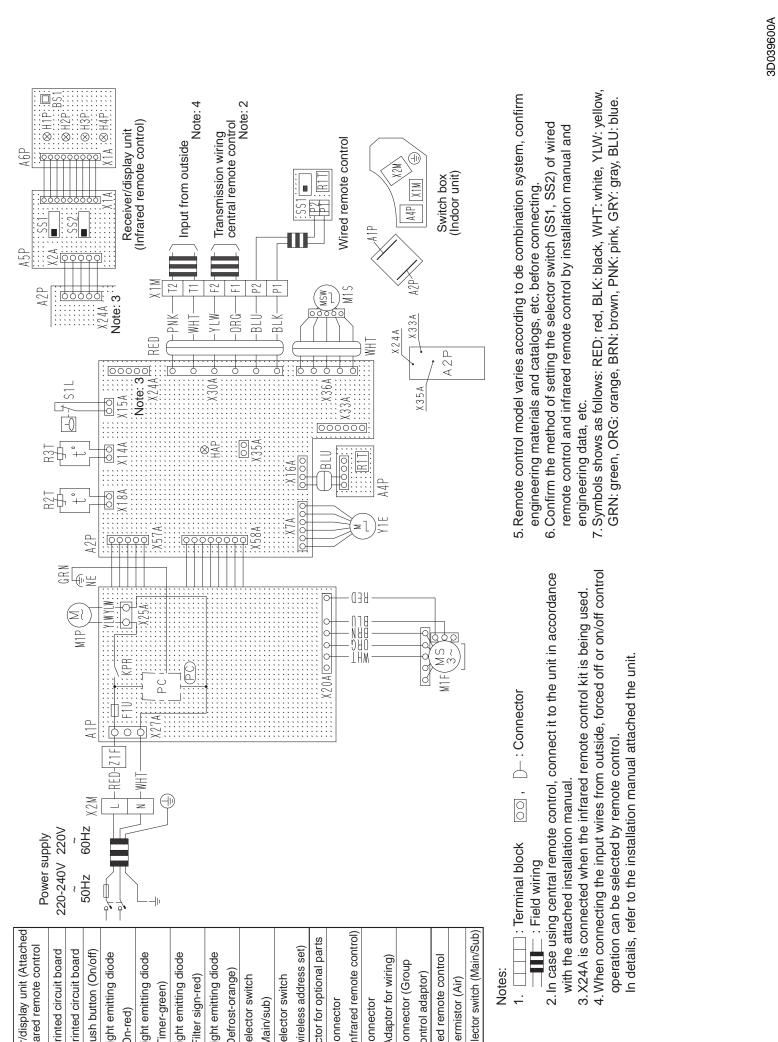
AlP

Х1М

BOX

CONTROL

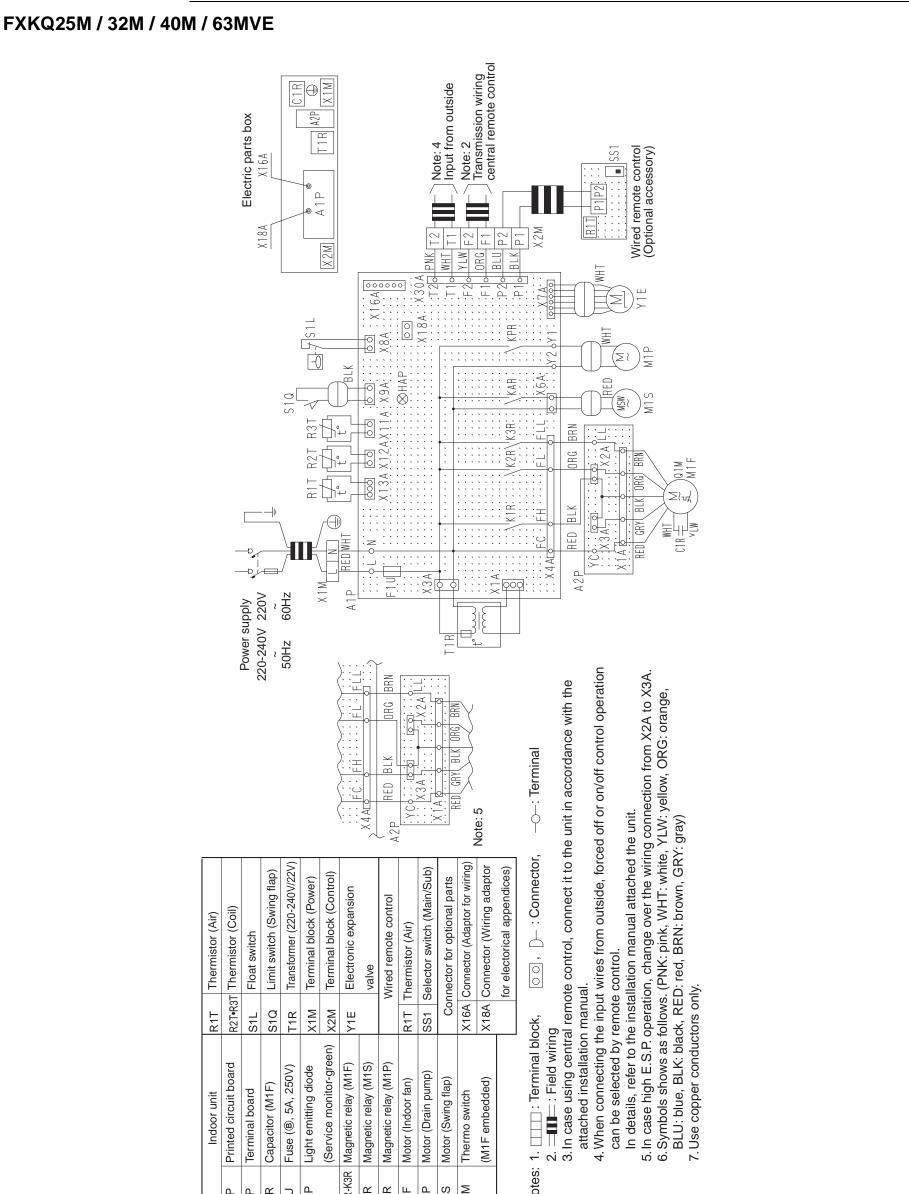
Appendix



FXFQ25M / 32M / 40M / 50M / 63M / 80M / 100M / 125MVE

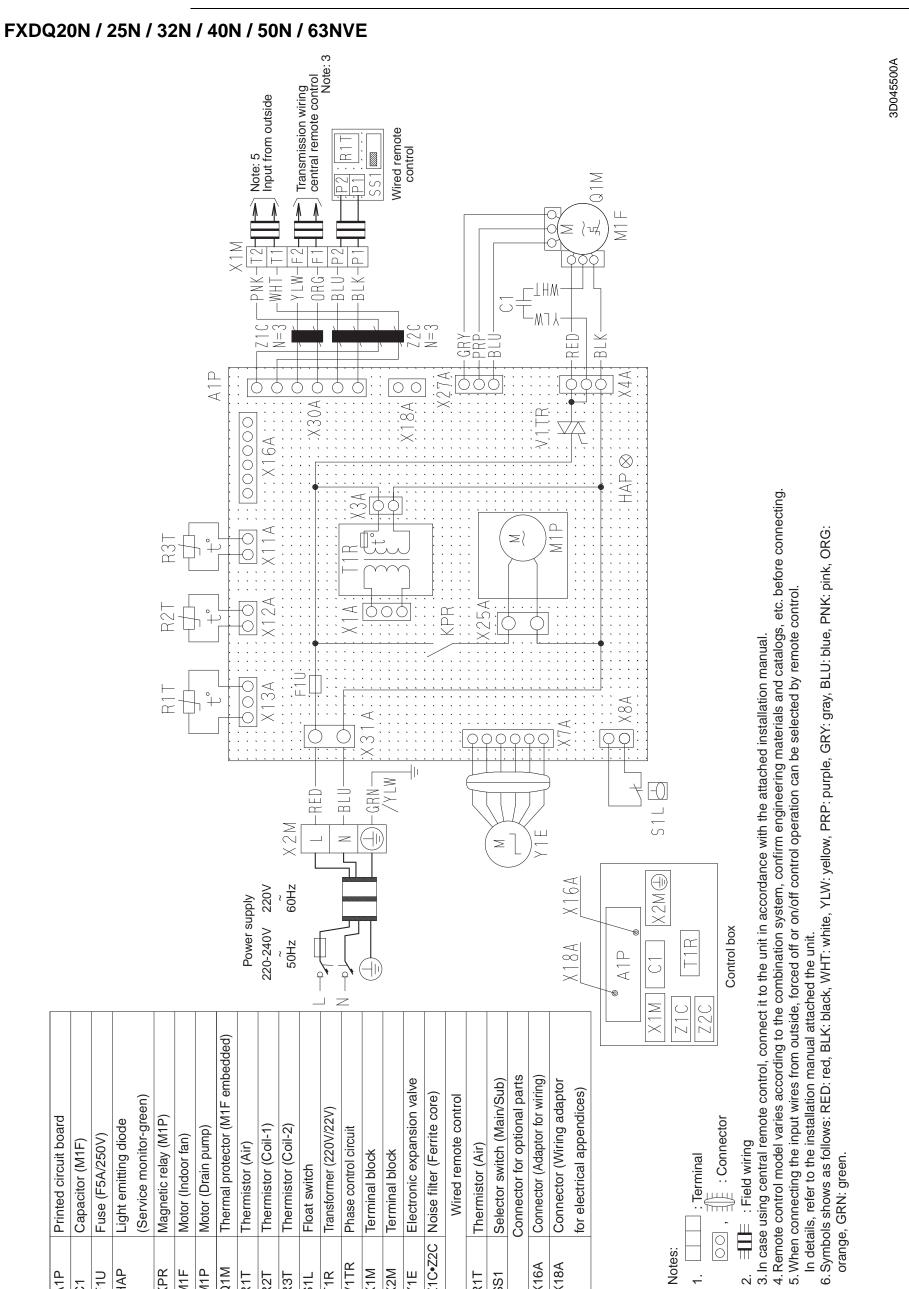
iver/	to infra	Ъ	Ъ	٦	Ĕ	0	Ĕ	E	Ľ	Ē	Ĕ	0	Š	S	Š) N	Connec	A C	U)	Ŭ V	R		8	Wire	The	Sel
Receiver	ţ	A5P	A6P	BS1	H1P		H2P		НЗР		H4P		SS1		SS2		Co	X24A		X33A		X35A			R1T	SS1
Indoor unit	A1P Printed circuit board	(Power supply)	A2P Printed circuit board	(Control)	A4P Printed circuit board	(Temperature sensor unit)	F1U Fuse (®, 5A, 250V)	HAP Light emitting diode	(Service monitor-green)	KPR Magnetic relay (M1P)	M1F Motor (Indoor fan)	M1P Motor (Drain pump)	M1S Motor (Swing flap)	R1T Thermistor (Air)	R2T Thermistor (Coil-liquid)	R3T Thermistor (Coil-gas)	S1L Float switch	X1M Terminal block	X2M Terminal block	Y1E Electronic expansion	valve	Z1F Noise filter	PC Power circuit			

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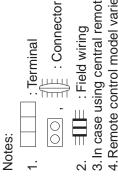


Indoor unit	Printed circuit boar	Terminal board	Capacitor (M1F)	Fuse (®, 5A, 250V	Light emitting diode	(Service monitor-gi	Magnetic relay (M1F	Magnetic relay (M18	Magnetic relay (M1F	Motor (Indoor fan)	Motor (Drain pump)	Motor (Swing flap)	Thermo switch	(M1F embedded)	
	A1P	A2P	C1R	F1U	НАР		K1R-K3R	KAR	KPR	M1F	M1P	M1S	Q1M		

Notes:



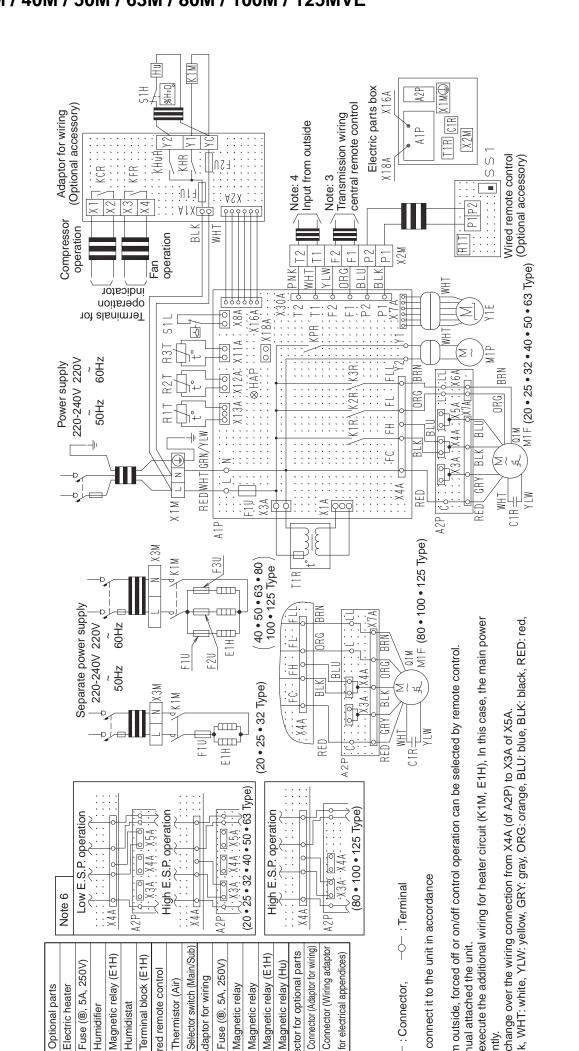
A1P	Printed circuit board
C1	Capacitor (M1F)
F1U	Fuse (F5A/250V)
HAP	Light emitting diode
	(Service monitor-green)
KPR	Magnetic relay (M1P)
M1F	Motor (Indoor fan)
M1P	Motor (Drain pump)
Q1M	Thermal protector (M1F emb
R1T	Thermistor (Air)
R2T	Thermistor (Coil-1)
R3T	Thermistor (Coil-2)
S1L	Float switch
T1R	Transformer (220V/22V)
V1TR	Phase control circuit
X1M	Terminal block
X2M	Terminal block
Y1E	Electronic expansion valve
Z1C•Z2C	Noise filter (Ferrite core)
	Wired remote control
R1T	Thermistor (Air)
SS1	Selector switch (Main/Sub)
	Connector for optional parts
X16A	Connector (Adaptor for wiring
X18A	Connector (Wiring adaptor
	for electrical appendices)





- In details, refer to the installation Symbols shows as follows: RED: orange, GRN: green. . 0
 - Appendix

3D039561A



FXSQ20M / 25M / 32M / 40M / 50M / 63M / 80M / 100M / 125MVE

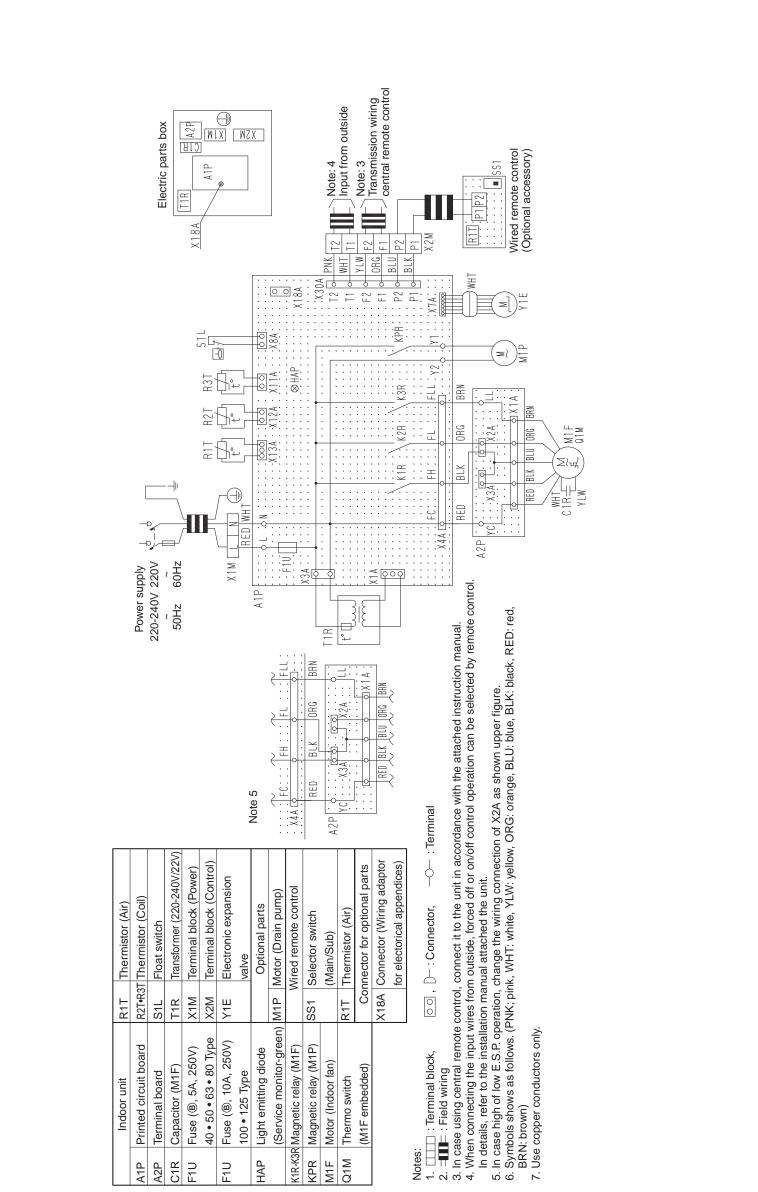
A1P	Printed circuit board	E1H	تا ک
A2P	Terminal board	F1U-F3U	
C1R	Capacitor (M1F)	Hu	ゴ
F1U	Fuse (®, 5A, 250V)	K1M	Ň
HAP	Light emitting diode	S1H	ゴ
	(Service monitor-green)	X3M	Чe
K1R-K3R	Magnetic relay (M1P)	Wi	Wired
KPR	Magnetic relay (M1P)	R1T	두
M1F	Motor (Indoor fan)	SS1	S
M1P	Motor (Drain pump)	4	Ada
Q1M	Thermal switch	F1U-F3U	Ш
	(M1F embedded)	KCR	ž
R1T	Thermistor (Air)	KFR	Ϊ
R2T•R3T	Thermistor (Coil)	КНК	ŝ
S1L	Float switch	KHuR	ΪŽ
T1R	Transformer (220-240V/22V)	Connecto	SC
X1M	Terminal block (Power)	X16A	8
X2M	Terminal block (Control)	X18A	ပိ
<u> </u> 71Е	Electronic expansion valve		for

ŝ	Į
ð	ł
đ	l
Ż	

		•
 Terminal block,	I E E E E E E E E E E E E E E E E E E E	•
. .	∼i	

- In case using central remote control, corwith the attached instruction manual.
 When connecting the input wires from or In details, refer to the installation manual 5. In case installing the electric heater, exesupply has to be supplied independently 6. In case high of low E.S.P. operation, cha 7. Symbols shows as follows. (PNK; pink, V BRN: brown, GRN: green)
 B. Use copper conductors only.

3D039620A



FXMQ40M / 50M / 63M / 80M / 100M / 125MVE

Indoor unit	Printed circuit board	Terminal board	Capacitor (M1F)	Fuse (®, 5A, 250V)	40 • 50 • 63 • 80 Type	Fuse (®, 10A, 250V)	100 • 125 Type	Light emitting diode	(Service monitor-green)	K1R-K3R Magnetic relay (M1F)	Magnetic relay (M1P)	Motor (Indoor fan)	Thermo switch	(M1F embedded)	
ľ	Print	Term	Cape	Fuse	40 • {	Fuse	100	Light	(Ser	Magr	Magr	Moto	Therr	(M1F	
	A1P	A2P	C1R	F1U		F1U		НАР		K1R-K3R	KPR	M1F	Q1M		

Notes:

FXMQ200M / 250MVE

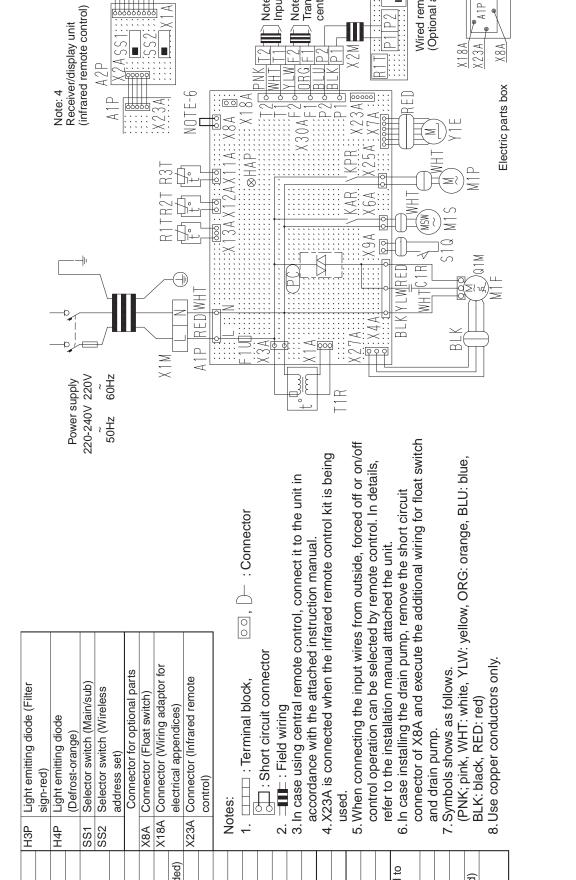
Note: 3 Transmission wiring central remote control C1R C2R Note: 4 Input from outside X2M X3M Electric parts box X1M Wired remote control (Optional accessory) SS1 SS \bigcirc K2M K3M Н X4M Ē K1M R1T BLU P2 BLK P1 X4M ORG F1 12 X18A X8A PNK PNK ΥLW WHT THW .: X18A 0)= NOTE-5 [≥] Ц :X30A¹ : HQ) :⊗HAF $\geq i$ R3T K3R H R1T R2T)RG (JR) (K1M)(K2M) BLK A 2 (IB) E M \mathbb{P} (A2) (A1) H Ľ : X4Ac NIX NIX φοφ AlP Power supply 220-240V 220V 60Hz Ā (SM NSX NSX ì (8) 50Hz RED BLK|BLU|ORG|BRN 0 (7) (8) RED (7) E <u>م</u> (8) Ţ(6)^{REDT_1}. 4 RED 2 WHTWHTW (2) 9 K1N K2M K3M (4) WHT X2M \leq RED BLK BLU ORG BRN (3) RED RED (3) SS (4) ž RED <u>WHT|WHT|WHT|(2)</u>RED|. -1 7 WH T WH T WH T Q1M Ξ (2) RED 99 attached instruction manual. 4. When connecting the input wires from outside, forced off or on/off control operation can be selected by remote control. In details, refer to the installation manual attached the unit. 5. In case installing the drain pump, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump. 6. Symbols shows as follows. (PNK; pink, WHT: white, YLW: yellow, ORG: orange, BLU: blue, BLK: black, RED: red, BRN: brown) 7. Use copper conductors only. 8. In case high E.S.P. operation, change the switch (SS) for "H". Connector (Wiring adaptor for Transformer (220-240V/22V) Electronic expansion valve Selector switch (Main/Sub) Connector for optional parts Connector (Float switch) Terminal block (Control) electorical appendices) Terminal block (Power) Wired remote control Motor (Drain pump) **Optional parts** (Static pressure) Thermistor (Coil) Thermistor (Air) Thermistor (Air) Selector switch Terminal block X2M-X3M X4M R2T•R3T SS X18A R1T X1M M1P T1R <u></u>≺1Ε X8A R1T SS1

3D039621A

Indoor unit Printed circuit board Capacitor (M1F • 2F) Fuse (®, 5A, 250V) Light emitting diode (Service monitor-green) Magnetic contactor (M1F • 2F) Magnetic contactor (M1F • 2F) Magnetic relay (M1F • 2F) Magnetic relay (M1P) Motor (Indoor fan)
nermo switch
otor (Indoor fan)
agnetic relay (M1P)
agnetic relay (M1F • 2F)
agnetic contactor (M1F • 2F)
agnetic contactor (M1F • 2F)
agnetic contactor (M1F • 2F)
service monitor-green)
ght emitting diode
use (®, 5A, 250V)
apacitor (M1F • 2F)
rinted circuit board
Indoor unit

S I	
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- Short circuit connector -O- : Terminal -III: : Field wiring



 F 2
 Mote: 3

 F 1
 Transmission wiring

 P 2
 central remote control

Note: 5 Input from outside

 \oplus

Х2М

X8A

T1R X1M

C1R

Alp

<u>X23A</u>

X18A

Wired remote control (Optional accessory)

<u>;[[]]]]</u>]SS1

X 2 M

X1A SH4P SI

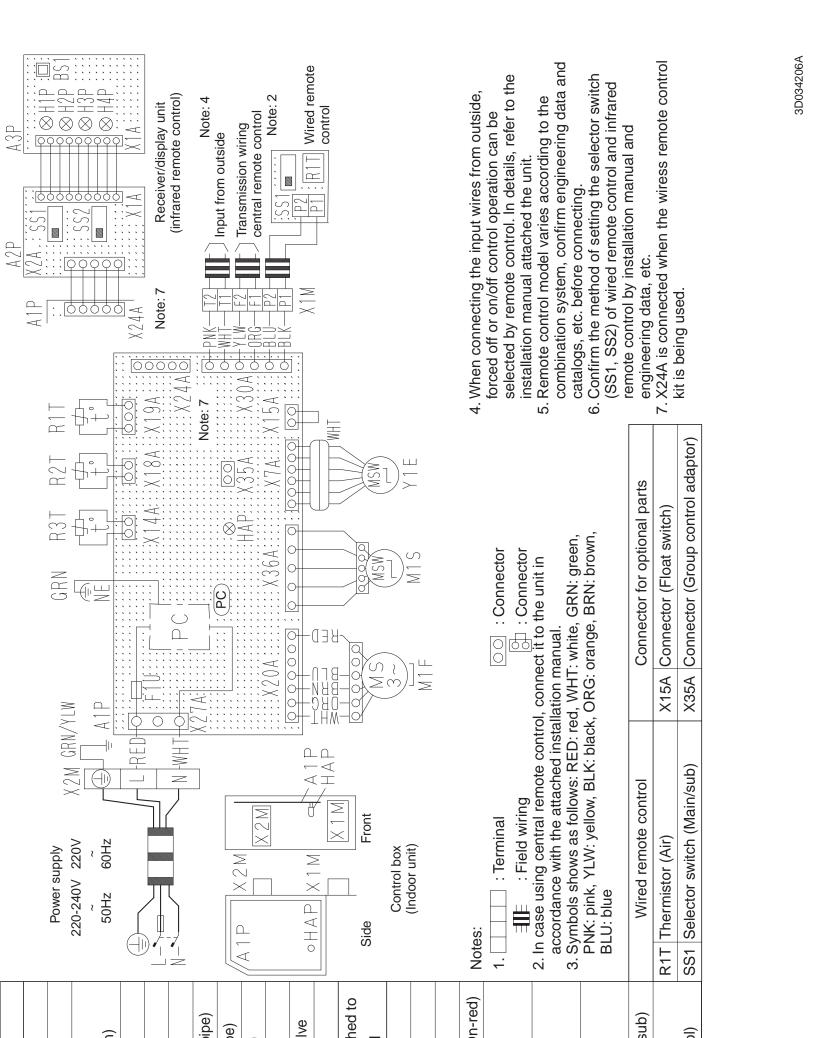
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A3P

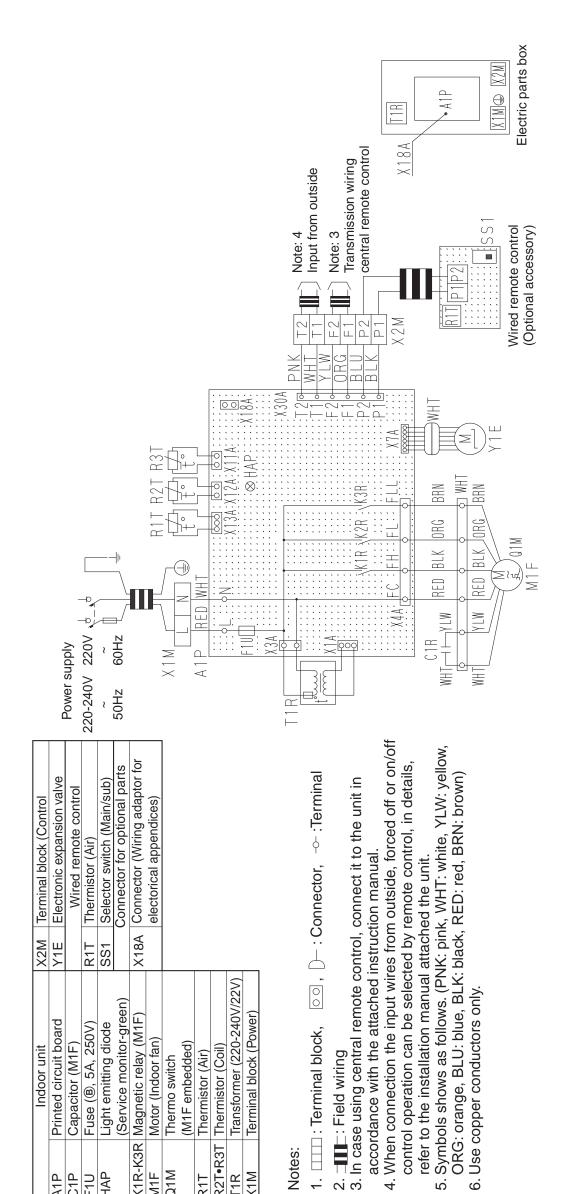
3D039801C

Indoor unit	Printed circuit board	-	Fuse (®, 5A, 250V)		-	R Magnetic relay (L1S)				A Thermo switch (M1F embedd			Thermistor (Coil gas)	<pre>Limit switch (Swing flap)</pre>		1 Terminal block (Power)	1 Terminal block (Control)		Phase control circuit		Wired remote control		Selector switch (Main/Sub)	18	infrared remote control	Printed circuit board		Push botton (On/off)	 Light emitting diode (On-red 	Light emitting diode (Timer-green)	
	A1P	C1R	F1U	НАР		KAR	KPR	M1F	M1S	Q1M	R1T	R2T	R3T	S1Q	T1R	X1M	X2M	У 1Е	PC	M1P		R1T	SS1	Å		A2P	A3P	BS1	H1P	H2P	



FXAQ20M / 25M / 32MVE / 40M / 50M / 63MVE

FXLQ20M / 25M / 32M / 40M / 50M / 63MVE FXNQ20M / 25M / 32M / 40M / 50M / 63MVE



3D039826A

	Indoor unit	\vdash
A1P	Printed circuit board	\succ
C1P	Capacitor (M1F)	
F1U	Fuse (®, 5A, 250V)	ĽĽ.
HAP	Light emitting diode	0)
	(Service monitor-green)	
K1R-K3R	K1R-K3R Magnetic relay (M1F)	\times
M1F	Motor (Indoor fan)	
Q1M	Thermo switch	
	(M1F embedded)	
R1T	Thermistor (Air)	
R2T•R3T	Thermistor (Coil)	
T1R	Transformer (220-240V/22V)	
X1M	Terminal block (Power)	

Notes:

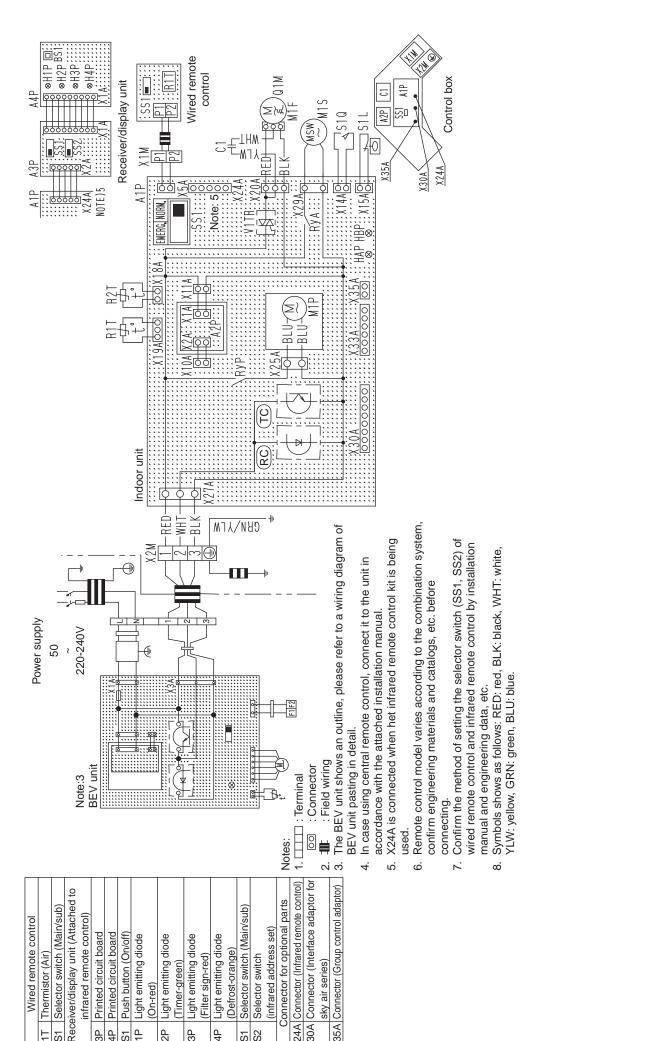
- _____, 00 1. Terminal block,

- <u>ю</u>
 - Use copper conductors only. ю.

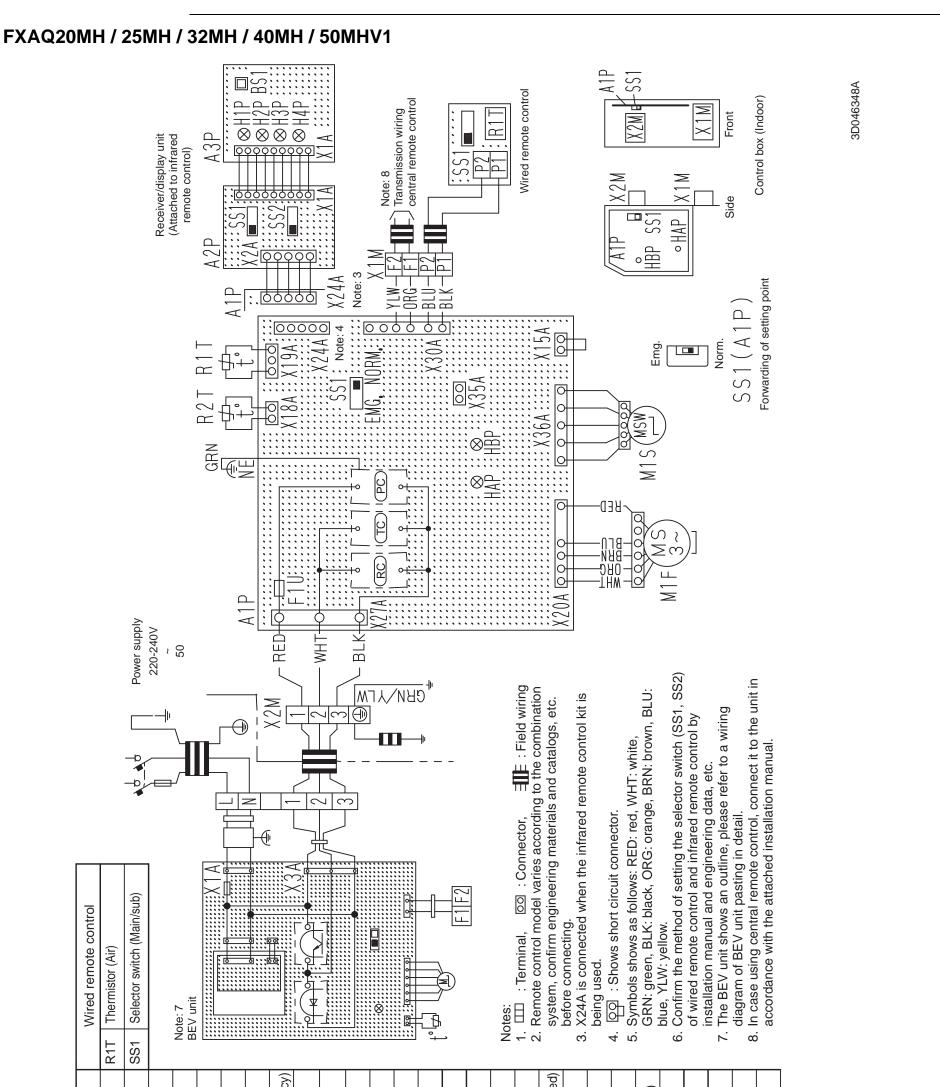
Appendix

3D044973



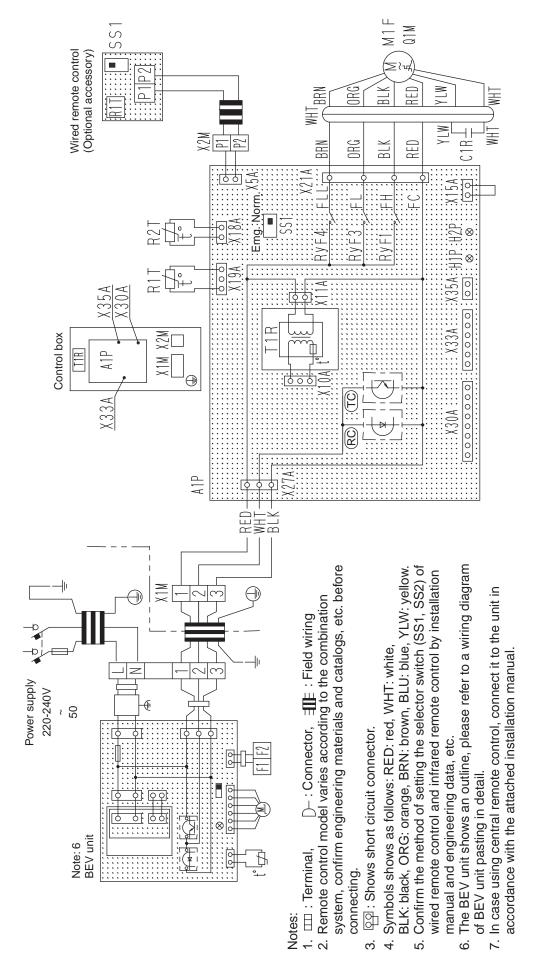






Printed circuit board	Fuse (®, 3A, 250V)	Light emitting diode (Service monitor green)	Light emitting diode (On-green)	Motor (Indoor fan)	Motor (Swing flap)	Thermistor (Air)	Thermistor (Coil liquid)	Selector switch (Emergenc	Terminal block (Control)	Terminal block (Power)	Power circuit	Signal receiver circuit	Signal transmission circuit	Receiver/display unit infrared remote control	circuit l	Printed circuit board	Push button (On/off)	Light emitting diode (On-re	Light emitting diode (Timer-green)	Light emitting diode (Filter sign-red)	Light emitting diode (Defrost-orange)	Selector switch (Main/sub)	Selector switch (infrared address set)	for opti			Connector (Group control adaptor)	
A1P	F1U	HAP	НВР	M1F	M1S	R1T	R2T	SS1	X1M	X2M	PC	RC	TC		A2P	A3P	BS1	H1P	H2P	НЗР	H4P	SS1	SS2	Co	X15A	X24A	X35A	

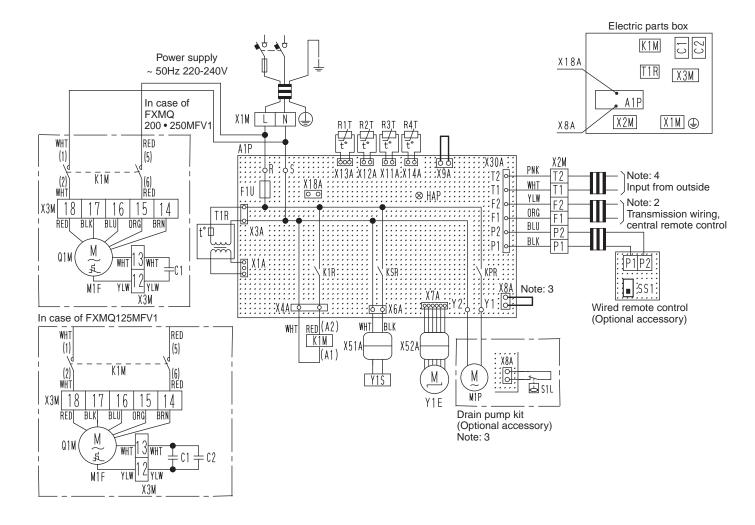
Indoor unit	Printed circuit board	Capacitor (M1F)	Light emitting diode		(Service monitor green)	Motor (Indoor fan)	Thermo switch (135°)	Thermistor (Air)	Thermistor (Coil)	4 Magnetic relay (M1F)	Selector switch	(Emergency)	Transformer (220-240V/22V)	Terminal block (Power)	Terminal block (Control)	Signal receiver circuit	Signal transmission circuit	Wired remote control	Thermistor (Air)	Selector switch (Main/sub)	Connector for optional parts	Connector	(Interface adaptor for	sky air series)	Connector	(Adaptor for wiring)	Connector	(Group control adaptor)
	A1P	C1R	H1P	H2P	i	M1F	Q1M	R1T	R2T	RyF1, 3,	SS1		T1R	X1M	(2M	RC S	2		R1T	SS1	0	X30A			X33A		X35A	



FXLQ20MH / 25MH / 32MH / 40MH / 50MHV1

3D046787A

FXMQ125MF / 200MF / 250MFV1



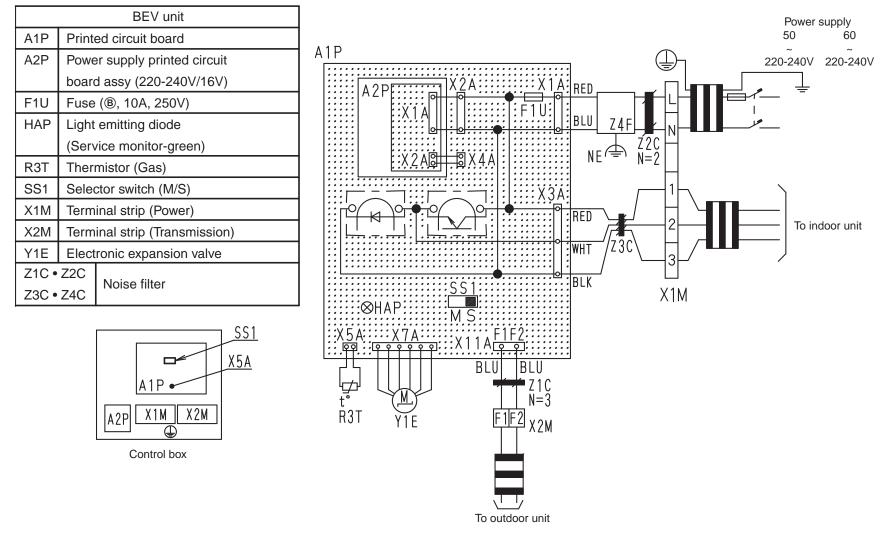
	Indoor unit	V1N1	Terminal block (Dower)
		X1M	Terminal block (Power)
A1P	Printed circuit board	X2M	Terminal block (Control)
C1, C2	Capacitor (M1F)	X3M	Terminal block
F1U	Fuse (B, 5A, 250V) (A1P)	X51A, X52A	Connector
HAP	Light emitting diode	Y1E	Electric expansion valve
	(Service monitor green)	Y1S	solenoid valve (Hot gas)
K1M	Magnetic relay (M1F)		
K1R	Magnetic relay (M1F)		Optional parts
KPR	Magnetic relay (M1P)	M1P	Motor (Drain pump)
KSR	Magnetic relay (Y1S)	S1L	Float switch (Drain pump)
M1F	Motor (Fan)		
Q1M	Thermal protector	١	Nired remote control
	(M1F embedded 135°C)	SS1	Selector switch (Main/sub)
R1T	Thermistor (Suction air)		
R2T	Thermistor (Coil, liquid)	Con	nector for optional parts
R3T	Thermistor (Coil, gas)	X18A	Connector (Wiring adaptor
R4T	Thermistor (Discharge air)		for electrical appendices)
T1R	Transformar (220-240V/22V)		

Notes:

- 1. $\square \square$: Terminal block, \square , \square : Connector, -O-: Terminal, □ : Short circuit connector, = = Field wiring.
- 2. In case using central remote control, connect it to the unit in accordance with the attached installation manual.
- 3. In case installing the drain pump kit, remove the short circuit connector of X8A and execute the additional wiring for float switch and drain pump.
- 4. In case connecting the input wires from outside, forced off or on/off control operation can be selected by remote control.
- In details, refer tot the installation manual attached to the unit.
- Do not remove short circuit connector of X9A.

3D044996B

BEVQ50MVE

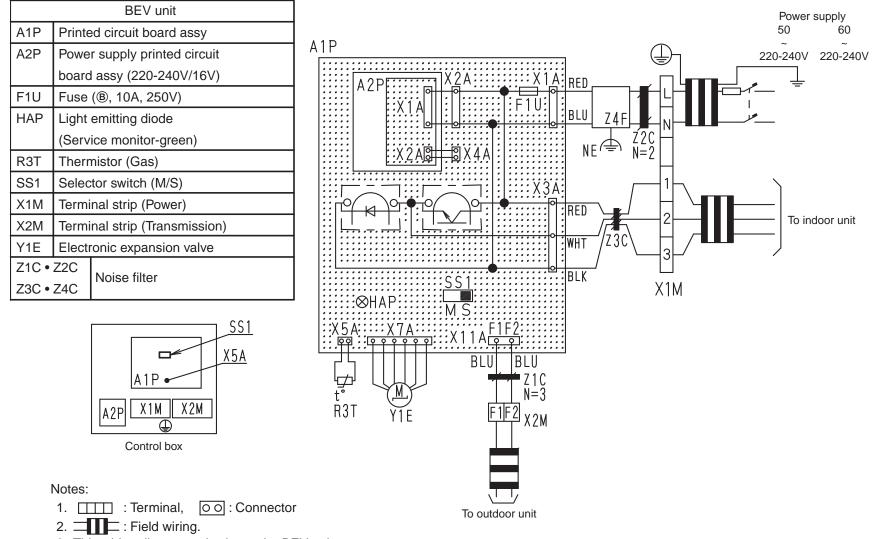


Notes:

- 1. Terminal, OO : Connector
- 2. = Field wiring.
- 3. This wiring diagram only shows the BEV unit.
- See the wiring diagrams and installation manuals for the wiring and settings for the indoor, outdoor. 4. See the indoor unit's wiring diagram when installing optional parts for the indoor unit.
- 5. Only one indoor unit may be connected to the BEV unit.
- See the indoor unit's wiring diagram for when connecting the remote control.
- 6. Always use the sky air connection adapter for the indoor unit when using a central control unit. Refer to the manual attached the unit when connecting. (In FXAQ~MHV1, it is unnecessary.)
- 7. Cool/heat changeover of indoor units connected to BEV unit cannot be carried out. In case of a system with BEV unit only, cool/heat selector is required.
- 8. Connect the attached thermistor to the R3T.
- 9. Symbols show as follows. (BLU: blue, RED: red, WHT: white, BLK: black)

Appendix

BEVQ71M / 100M / 125MVE



- This wiring diagram only shows the BEV unit. See the wiring diagrams and installation manuals for the wiring and settings for the indoor, outdoor, and BS units.
- 4. See the indoor unit's wiring diagram when installing optional parts for the indoor unit.
- 5. Only one indoor unit may be connected to the BEV unit.
- See the indoor unit's wiring diagram for when connecting the remote control.
- 6. Always use the sky air connection adapter for the indoor unit when using a central control unit. Refer to the manual attached the unit when connecting.
- Cool/heat changeover of indoor units connected to BEV unit cannot be carried out unless they are connected to BS unit.
- In case of a system with BEV unit only, cool/heat selector is required.
- 8. Set the SS1 to "M" only for the BEV unit connected to the indoor unit which is to have cool/heat switching capability, when connecting the BS unit.
 - The "M/S" on the SS1 stands for "Main/sub".
- This is set to "S" when shipped from the factory.
- 9. Connect the attached thermistor to the R3T.
- 10. Symbols show as follows. (BLU: blue, RED: red, WHT: white, BLK: black)



3. List of Electrical and Functional Parts 3.1 Outdoor Unit 3.1.1 RXYQ5~16MY1B

*Valve in () are for RXYQ5MY1B

	r			i	1		
Item		Name		Symbol		Model	1
nom		Hamo	ì	-	RXYQ5MY1B	RXYQ8MY1B	RXYQ10MY1B
Compressor	Inverter		Type Output	M1C	JT1FCVDKYR 3.2kW	JT1FCVDKTYR 1.2kW	JT1FCVDKTYR 2.7kW
	STD.1		Type Output	M2C		JT170FCKYE 4.5kW	JT170FCKYE 4.5kW
	STD.2		Type Output	МЗС		_	
	Crankca	ase heater (INV	-	E1HC		240V 33W	
	Crankca	ase heater (STI	.1)	E2HC	_	240V	′ 33W
	Crankca	ase heater (STI	D.2)	E3HC			
	OC prot compres	ection device fo	or STD		_	1	5A
Fan motor	Motor			M1F	0.35kw	0.7	5kw
	OC prot	ection device		—	1.6A	3.	2A
Functional parts		ic expansion	Cooling	Y1E	1400pls	Or	ols
	valve (N	lain)	Heating			PI control	
		ic expansion	Cooling	Y2E	_	PI co	ontrol
	valve (S	ubcool)	Heating			Or	ols
	Solenoid	d valve (Hot ga	s)	Y1S		TEV1620DQ2	
	Solenoid	d valve (Externa	al multi oil)	Y2S		TEV16	20DQ2
	Solenoid discharg	d valve (Receiv ge)	er gas	Y3S (Y2S)		VPV-603D	
		d valve (Non-op id pipe close)	perating	Y4S	—	VPV-8	03DXF
	4 way va	alve		Y5S (Y3S)	VHV0310	VT4	0110
	Solenoid	d valve (Injectio	on)	(Y4S)	TEV1620DQ2	_	_
Pressure-	Pressure	e switch (INV)		S1PH	PS80 ON : 3.8+0/-	0.15MPa OFF : 2.8	5±0.15MPa
related parts	Pressure	e switch (STD1)	S2PH	—	PS80 ON : 3.8+0/-0.15M OFF : 2.85±0.15M	
	Pressure	e switch (STD2	2)	S3PH		_	
	Fusible	plug				FPGD-3D 70 to 75°C	>
	Pressur	e sensor (HP)		S1NPH	Р	S8051A 0 to 4.15MF	Pa 🛛
	Pressure	e sensor (LP)		S1NPL	P	S8051A -0.1 to 1.7M	Pa
Thermistor	INV PCB	For fin		R1T		3.5 to 360Ω	
	Main	For outdoor a	air	R1T		3.5 to 360Ω	
	PCB	For suction p	ipe	R2T		3.5 to 360Ω	
		For discharge (INV)	e pipe	R31T (R3T)		3.5 to 400Ω	
		For discharge (STD.1)	e pipe	R32T		3.5 to 400Ω	
		For discharge (STD.2)		R33T		3.5 to 400Ω	
		For heat exch	nanger	R4T		3.5 to 360Ω	
		For subcoolin exchanger	ng heat	R5T		3.5 to 360Ω	
		For receiver I	iquid pipe	R6T		3.5 to 360Ω	
		For oil equaliz	zing pipe	R7T		3.5 to 360Ω	
Others	Fuse (A	1P)		F1, 2U	:	250VAC 10A Class E	3

ltom		Nama		Symbol		Model	
ltem		Name		Symbol	RXYQ12MY1B	RXYQ14MY1B	RXYQ16MY1B
Compressor	Inverter		Type Output	M1C	JT1FCVDKTYR 4.2kW	JT1FCVDKTYR 2.0kW	JT1FCVDKTYR 3.0kW
	STD.1		Туре	M2C	JT170FCKYE	JT170FCKYE	JT170FCKYE
	STD.2			МЗС	4.5kW	4.5kW JT170FCKYE	4.5kW JT170FCKYE
	510.2		Type Output	MSC	_	4.5kW	4.5kW
	Crankca	ase heater (INV	´)	E1HC		240V 33W	
	Crankca	ase heater (STI	D.1)	E2HC		240V 33W	
	Crankca	ase heater (STI	D.2)	E3HC		240V	33W
	OC prot	ection device for soor	or STD	—		15A	
Fan motor	Motor			M1F		0.75kw	
	OC prot	ection device				3.2A	
Functional parts		hic expansion	Cooling	Y1E		Opls	
	valve (N	iain)	Heating			PI control	
		hic expansion	Cooling	Y2E		PI control	
	valve (S		Heating			0pls	
		d valve (Hot ga	-	Y1S		TEV1620DQ2	
		d valve (Externa		Y2S		TEV1620DQ2	
	Solenoio discharg	d valve (Receiv je)	er gas	Y3S		VPV-603D	
		d valve (Non-op id pipe close)	perating	Y4S		VPV-803DXF	
	4 way va	alve		Y5S	VT40110	VT6	0100
Pressure-	Pressur	e switch (INV)		S1PH	PS80 ON : 3.8+0/-0	0.15MPa OFF : 2.8	5±0.15MPa
related parts	Pressure	e switch (STD1)	S2PH	PS80 ON : 3.8+0/-0	0.15MPa OFF : 2.8	5±0.15MPa
	Pressure	e switch (STD2	2)	S3PH	_	PS80 ON : 3.8+0/-0.15M OFF : 2.85±0.15M	
	Fusible	plug		_		FPGD-3D 70 to 75°c	;
	Pressur	e sensor (HP)		S1NPH	P	S8051A 0 to 4.15MF	a
	Pressure	e sensor (LP)		S1NPL	PS	8051A -0.1 to 1.7M	Pa
Thermistor	INV PCB	For fin		R1T		3.5 to 360Ω	
	Main	For outdoor a	air	R1T		3.5 to 360Ω	
	PCB	For suction p	ipe	R2T		3.5 to 360Ω	
		For discharge (INV)	e pipe	R31T		3.5 to 400Ω	
		For discharge (STD.1)	e pipe	R32T		3.5 to 400Ω	
		For discharge (STD.2)	e pipe	R33T		3.5 to 400Ω	
		For heat exch	nanger	R4T		3.5 to 360Ω	
		For subcoolin exchanger	ng heat	R5T		3.5 to 360Ω	
		For receiver I	iquid pipe	R6T		3.5 to 360Ω	
		For equalizing	g pipe	R7T		3.5 to 360Ω	
Others	Fuse (A	1P)		F1, 2U	2	250VAC 10A Class E	3

3.2 Indoor Side

3.2.1 Indoor Unit

	Parts Name	Symbol	FXFQ25 MVE	FXFQ32 MVE	FXFQ40 MVE	FXFQ50 MVE	FXFQ63 MVE	FXFQ80 MVE	FXFQ100 MVE	FXFQ125 MVE	Remark		
Remote	Wired Remote Controller					BRC	1A61				Option		
Controller	Wireless Remote Controller					BRC7	E61W				Option		
	Fan Motor	M1F			DC380V	30W 8P			DC 380V	120W 8P			
Motors	Drain Pump	M1P			AC220-		z) AC220\ 230DM use 145°C	. ,					
	Swing Motor	M1S		MP35HCA[3P007482-1] Stepping Motor DC16V									
	Thermistor (Suction Air)	R1T		In PCB A4P or wired remote controller									
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T				ST8605-5 20kΩ	φ8 L1000 (25°C)						
	Thermistor (Heat Exchanger)	R2T				ST8602A- 20kΩ							
	Float Switch	S1L	FS-0211B										
Oth a ra	Fuse	F1U	250V 5A										
Others	Thermal Fuse	TFu											
	Transformer	T1R				_	_						

						Мо	del				
	Parts Name	Symbol	FXCQ 20MVE	FXCQ 25MVE	FXCQ 32MVE	FXCQ 40MVE	FXCQ 50MVE	FXCQ 63MVE	FXCQ 80MVE	FXCQ 125MVE	Remark
Remote	Wired Remote Controller					BRC	1A61				Option
Controller	Wireless Remote Controller					BRC	7C62				Option
						AC 220~2	40V 50Hz				
	Fan Motor	M1F	1¢10W	1¢1	5W	1¢2	0W	1¢30W	1¢50W	1¢85W	
				Thermal F	use 152°C		_		otector 135° 87°C:ON		
Motors	Drain Pump	M1P			AC220-	240V (50H PLD-12 Thermal F	230DM	. ,			
	Swing Motor	M1S				MT8-L[3P AC200	A07509-1] ~240V				
	Thermistor (Suction Air)	R1T				ST8601-6 20kΩ	φ4 L1250 (25°C)				
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-6 φ8 L1250 20kΩ (25°C)								
	Thermistor (Heat Exchanger)	R2T	ST8602A-5 φ6 L1000 20kΩ (25°C)								
	Float Switch	S1L				FS-0	211B				
Others	Fuse	F1U	J 250V 5A ¢5.2								
	Transformer	T1R				TR22	H21R8				

					Model			
	Parts Name	Symbol	FXZQ 20MVE	FXZQ 25MVE	FXZQ 32MVE	FXZQ 40MVE	FXZQ 50MVE	Remark
Remote	Wired Remote Controller				BRC1A61			Ontion
Controller	Wireless Remote Controller				BRC7E530W			Option
				ŀ	AC 220~240V 50H	z		
	Fan Motor	M1F			1¢55W 4P			
				Т	hermal Fuse 135°	C		
Motors	Capacitor, fan motor	C1			4.0µ F 400VAC			
MOIOIS	Drain Pump	M1P			C220-240V (50H PLD-12230DM Thermal Fuse 145°			
	Swing Motor	M1S		MP	235HCA [3P08080 AC200~240V	1-1]		
	Thermistor (Suction Air)	R1T		ç	ST8601A-1	0		
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T			ST8605-3)		
	Thermistor (Heat Exchanger)	R2T		ç	ST8602A-3	0		
	Float Switch	S1L			FS-0211			
Others	Fuse	F1U			250V 5A			
	Transformer	T1R			TR22H21R8			

				N	lodel					
	Parts Name	Symbol	FXKQ 25MVE	FXKQ 32MVE	FXKQ 40MVE	FXKQ 63MVE	Remark			
Remote	Wired Remote Controller			BR	C1A61		Option			
Controller	Wireless Remote Controller			BR	C4C61					
				AC 220-	~240V 50Hz					
	Fan Motor	M1F	1 015	W 4P	1¢20W 4P	1¢45W 4P				
• • •			Thermal F	use 146°C	Thermal protector 12	20°C : OFF 105°C : N				
Motors	Drain Pump	M1P		AC 220-240V (50Hz) PLD-12200DM Thermal Fuse 145°C MP35HCA [3P080801-1] AC200~240V						
	Swing Motor	M1S		MP35HCA AC20	∖ [3P080801-1] 00~240V					
	Thermistor (Suction Air)	R1T			-13					
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T			-7					
	Thermistor (Heat Exchanger)	R2T			λ-7 φ6 L1600 Ω (25°C)					
	Float Switch	S1L		FS	-0211B					
Others	Fuse	F1U		250V	/ 5A φ5.2					
	Transformer	T1R		TR2	2H21R8					



			odel								
	Parts Name	Symbol	FXDQ 20MVE	FXDQ 25MVE	FXDQ 32MVE	FXDQ 40MVE	FXDQ 50MVE	FXDQ 63MVE	Remark		
Remote	Wired Remote Controller				BRC	1A62			Option		
Controller	Wireless Remote Controller				BRC	4C62			- Option		
					AC 220~2	240V 50Hz					
	Fan Motor	M1F		1¢6	62W		1¢1	30W			
Motors					Thermal 130°C: OFI	protector F, 83°C: ON					
	Drain Pump	M1P		AC220-240V (50Hz) PLD-12230DM Thermal Fuse 145°C							
	Thermistor (Suction Air)	R1T				φ4 L=250 (25°C)					
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T				l φ8 L=800 (25°C)					
	Thermistor (Heat Exchanger)	R2T	ST8602A-4 φ6 L=800 20kΩ (25°C)								
	Float Switch	S1L			FS-0)211E					
Others	Fuse	F1U			250V 5	5A					
	Transformer	T1R			TR22	H21R8					

							Model					
	Parts Name	Symbol	FXSQ 20MVE	FXSQ 25MVE	FXSQ 32MVE	FXSQ 40MVE	FXSQ 50MVE	FXSQ 63MVE	FXSQ 80MVE	FXSQ 100MVE	FXSQ 125MVE	Remark
Remote	Wired Remote Controller						BRC1A62	2				Option
Controller	Wireless Remote Controller					I	BRC4C62	2				Option
		M1F				AC 2	20~240V	50Hz				
	Fan Motor			1¢50W		1¢65W	1¢85W	1¢125 W		1¢225W		
Motors				7	Thermal F	use 152°C		Thermal protector 135°C : OFF 87°C : ON				
	Drain Pump	M1P		AC220-240V (50Hz) PLD-12230DM Thermal Fuse 145°C								
	Thermistor (Suction Air)	R1T					601-4 φ4 l 0kΩ (25°C					
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T					05-7					
	Thermistor (Heat Exchanger)	R2T)2A-6					
	Float Switch	S1L					FS-0211E	3				
Others	Fuse	F1U				25	50V 5A 	5.2				
	Transformer	T1R				Т	R22H21R	8				

Appendix

						Мс	odel				
	Parts Name	Symbol	FXMQ 40MVE	FXMQ 50MVE	FXMQ 63MVE	FXMQ 80MVE	FXMQ 100MVE	FXMQ 125MVE	FXMQ 200MVE	FXMQ 250MVE	Remark
Remote	Wired Remote Controller				•	BRC	1A62	•	•	•	Ontion
Controller	Wireless Remote Controller					BRC	4C62				Option
				AC 220~240V 50Hz							
	Fan Motor	M1F	1¢100W			1¢160W	1¢270W	1¢430W	1¢38	0Wx2	
Motors			Thermal protector 135°C : OFF 87°C : O						١		
	Capacitor for Fan Motor	C1R	5μ F-400V			7μ F 400V	10μ F 400V	8μ F 400V	10μ F 400V	12μ F 400V	
	Thermistor (Suction Air)	R1T			ST8601A- 20kΩ))1A-13 _630	
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T		ST8605A-4 φ8 L800 ST8605A 20kΩ (25°C) φ8 L100							
	Thermistor (Heat Exchanger)	R2T			ST8602A- 20kΩ	4				02A-6 1250	
	Float switch	S1L				FS-0	0211				
	Fuse	F1U	250V 5A φ5.2			250V 10A			250\	/ 10A	
	Transformer	T1R	TR22H21R8								

				Model				
	Parts Name	Symbol	FXHQ 32MVE	FXHQ 63MVE	FXHQ 100MVE	Remark		
Remote	Wired Remote Controller			BRC1A61		Option		
Controller	Wireless Controller			BRC7E63W				
			/	AC 220~240V/220V 50Hz/60	Hz			
	Fan Motor	M1F	1φ	1¢130W				
Motors			Thermal protector 130°C : OFF 80°C : ON					
Wotoro	Capacitor for Fan Motor	C1R	3.0µI	F-400V	9.0μF-400V			
	Swing Motor	M1S		MT8-L[3P058751-1] AC200~240V				
	Thermistor (Suction Air)	R1T		ST8601A-1				
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T		φ8 L = 1250 2 (25°C)	ST8605-6			
	Thermistor (Heat Exchanger)	R2T		δ φ6 L = 1250 2 (25°C)	ST8602A-6 φ6 L = 1250 20kΩ (25°C)			
Othoro	Fuse	F1U	250V 5A φ5.2					
Others	Transformer	T1R	R TR22H21R8					

					Мс	odel			
	Parts Name	Symbol	FXAQ 20MVE	FXAQ 25MVE	FXAQ 32MVE	FXAQ 40MVE	FXAQ 50MVE	FXAQ 63MVE	Remark
Remote	Wired Remote Controller			BRC1A61					
Controller	Wireless Remote Controller				BRC7	7E618			Option
					AC 220~2	240V 50Hz			
Motors	Fan Motor	M1F		1¢40W		1¢43W			
			Thermal protector 130°C : OFF 80°C : ON						
	Swing Motor	M1S	MF	24[3SB40333 AC200~240V	-1]	MSFBC			
	Thermistor (Suction Air)	R1T				2			
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-2 φ8 L400 20kΩ (25°C)						
	Thermistor (for Heat Exchanger)	R2T				2 φ6 L400 (25°C)			
Others	Float Switch	S1L			OPT	ΓΙΟΝ			
Others	Fuse	F1U	250V 5A φ5.2						

					Мо	del				
	Parts Name	Symbol	FXLQ 20MVE	FXLQ 25MVE	FXLQ 32MVE	FXLQ 40MVE	FXLQ 50MVE	FXLQ 63MVE	Remark	
Remote	Wired Remote Controller				BRC	1A62			Option	
Controller	Wireless Remote Controller			BRC4C62						
					AC 220~2	40V 50Hz				
Motors	Fan Motor	M1F	1 φ15 W		1¢2	5W	1¢35W			
			Thermal protector 135°C : OFF 120°C : ON							
	Capacitor for Fan Motor	C1R	1.0μF-400V		0.5μF-400V	1.0μF-400V	1.5μF-400V	2.0μ F- 400V		
	Thermistor (Suction Air)	R1T			ST8601-6 20kΩ (φ4 L1250 (25°C)				
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T			ST8605-9 20kΩ (
	Thermistor (for Heat Exchanger)	R2T			ST8602A-9 20kΩ (
Others	Fuse	F1U			AC250	0V 5A				
Others	Transformer	T1R	TR22H21R8							

					Мо	del				
	Parts Name	Symbol	FXNQ 20MVE	FXNQ 25MVE	FXNQ 32MVE	FXNQ 40MVE	FXNQ 50MVE	FXNQ 63MVE	Remark	
Remote	Wired Remote Controller				BRC	1A62			- Option	
Controller	Wireless Remote Controller			BRC4C62						
					AC 220~2	40V 50Hz				
Motors	Fan Motor	M1F	1 01	5W	1φ2	5W	1¢3	35W		
		Γ	Thermal protector 135°C : OFF 120°C : ON							
	Capacitor for Fan Motor	C1R	1.0μF-400V		0.5μF-400V	1.0μF-400V	1.5μF-400V	2.0μF-400V		
	Thermistor (Suction Air)	R1T			ST8601-6 20kΩ	φ4 L1250 (25°C)				
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T			ST8605-9 20kΩ	∲8 L2500 (25°С)				
	Thermistor (for Heat Exchanger)	R2T			ST8602A-9 20kΩ					
Others	Fuse	F1U			AC25	0V 5A				
Others	Transformer	T1R	TR22H21R8							

	Darta Nama	Cumhal		Model		Demeri			
	Parts Name	Symbol	FXUQ71MV1	FXUQ100MV1	FXUQ125MV1				
Remote	Wired Remote Controller			BRC1A61		Option			
Controller	Wireless Remote Controller			BRC7C528W		Option			
				AC 220~240V 50Hz					
	Fan Motor	M1F	1¢45W 1¢90W						
• • •			Thermal protector 130°C	Thermal protector 130°C	C:OFF 83°C:ON				
Motors	Drain Pump	M1P	AC220-240V (50Hz) AC220V (60Hz) PJV-1426						
	Swing Motor	M1S	MT8-L[3PA07572-1] AC200~240V						
Themsioters	Thermistor (Suction Air)	R1T	ST8601-1 φ4 L=250 20kΩ (25°C)						
Thermistors	Thermistor (Heat Exchanger)	R2T	ST8602A-4 φ6 L=800 20kΩ (25°C)						
Others	Float Switch	S1L	FS-0211B						

	Parts Name	Currents of		Model		Demeril			
	Pans Name	Symbol —	FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1				
Remote	Wired Remote Controller			BRC1A62		Ontion			
Controller	Wireless Remote Controller			_		Option			
				AC200~240V 50Hz					
	Fan Motor	M1F	1¢380W						
Motors			Thermal protector 135°C : OFF 87°C : ON						
	Capacitor for Fan Motor	C1R	10μ F 400V×2	10μ F 400V	16μ F 400∨				
Solenoid valve	Solenoid valve (Hot gas)	Y1S	Body: VPV-603D Coil: NEV-MOAJ532C1 AC220-240V						
	Thermistor (Suction Air)	R1T	ST8601-13 φ4 L=630 20kΩ (25°C)						
Thermistors	Thermistor (for Heat Exchanger High Temp.)	R3T		ST8605-6					
mermisions	Thermistor (Heat Exchanger)	R2T		ST8602A-2 φ6 L=1250 20kΩ (25°C)					
	Thermistor (for discharge air)	R4T		ST8605-8 L=2000 20kΩ (25°C)					
	Float switch	S1L	Option						
Others	Fuse	F1U	250V 5A φ5.2						
	Transformer	T1R		TR22H21R8					



4. Option List

4.1 Option List of Controllers

Operation Control System Optional Accessories

No.	Item	Туре	FXCQ-M	FXFQ-M	FXZQ-M	FXKQ-M	FXDQ	FXUQ-M	FXSQ-M	FXMQ-M	FXHQ-M	FXAQ-M(H)	FXLQ-M(H) FXNQ-M	FXMQ-MF
1	Remote	Wireless	BRC7C62	BRC7E61W	BRC7E530W	BRC4C61	BRC4C62	BRC7C528W	BRC	4C62	BRC7E63W	BRC7E618	BRC4C62	
I	controller	Wired		BRC	1A61		BRC1A62	BRC1A61	RC1A61 BRC1A62		BRC1A61		BRC1A62	
2	Set back	time clock						BRC15A61						—
3	Simplified remote				BRC2A51	—	BRC	2A51	-	-	BRC2A51	—		
4	Remote of hotel use	controller for		-	_		BRC3A61	—	BRC	3A61	-	_	BRC3A61	_
5	Adaptor f	or wiring	HKRP1B61	HKRP1B59	HKRP1B57	KRP1B61	HKRP1B56	—	KRP	1B61	KRP1B3	_	KRP	1B61
6-1	Wiring ac electrical	laptor for appendices (1)	HKRP2A61	HKRP2A62	HKRP2A62	KRP2A61	HKRP2A53	HKRP2A62	KRP2A61		HKRP2A62	HKRP2A61	KRP	2A61
6-2	Wiring adaptor for electrical appendices (2)		HKRP4A51	HKRP4A53	HKRP4A53	KRP4A51	HKRP4A54	HKRP4A53	KRP4A51		HKRP4A52 HKRP4A51		KRP	4A51
7	Remote s	sensor	KRCS01-1	—					KRCS01-1					—
8	Installation adaptor F		Note 2, 3 KRP1B96	Note 2, 3 KRP1D98	Note 4, 6 KRP1B101	_	Note 4, 6 KRP1B101	KRP1B97	Note 5 KRP4A91	_	Note 3 KRP1C93	Note 2, 3 KRP4A93	—	_
9	Central re	emote controller		DCS302C61							L	I		
9-1	Electrical terminal	box with earth 3 blocks)						KJB:	311A					
10	Unified o	n/off controller						DCS3	01B61					
10-1	Electrical box with earth terminal (2 blocks)													
10-2	Noise filte electroma use only)	r (for Ignetic interface	KEK26-1											
11	Schedule	timer						DST3	01B61					
12	External control adaptor for outdoor unit (Must be installed on indoor units)		H DTA104A61	HDTA	104A62	DTA104A61	H DTA104A53	_	DTA1	04A61	H DTA104A62	H DTA104A61	DTA1	04A61

Note

- 1. Installation box (No.8) is necessary for each adaptor marked H.
- 2. Up to 2 adaptors can be fixed for each installation box.
- 3. Only one installation box can be installed for each indoor unit.
- 4. Up to 2 installation boxes can be installed for each indoor unit.
- 5. Installation box (No. 8) is necessary for second adaptor.
- 6. Installation box (No. 8) is necessary for each adaptor.

Various PC Boards

No.	Part name	Model No.	Function
1	Adaptor for wiring	KRP1B56 KRP1B57 KRP1B59 KRP1B61 KRP1B3	PC board when equipped with auxiliary electric heater in the indoor unit.
2	DIII-NET Expander Adaptor	DTA109A51	 Up to 1024 units can be centrally controlled in 64 different groups. Wiring restrictions (max. length: 1000m, total wiring length: 2000m, max. number of branches: 16) apply to each adaptor.

Appendix

System Configuration

No.	Part name	Model No.	Function
1	Central remote controller	DCS302C61	Up to 64 groups of indoor units (128 units)can be connected, and ON/OFF, temperature setting and monitoring can be accomplished individually or simultaneously. Connectable up to "2" controllers in one system.
2	Unified ON/OFF controller	DCS301B61	Up to 16 groups of indoor units (128 units) can be turned, ON/OFF individually or simultaneously, and operation and malfunction can be displayed. Can be used in combination with up to 8 controllers.
3	Schedule timer	DST301B61	Programmed time weekly schedule can be controlled by unified control for up to 64 groups of indoor units (128 units). Can turn units ON/OFF twice per day.
4	Unification adaptor for computerized control	HDCS302A52	Interface between the central monitoring board and central control units
5	Interface adaptor for SkyAir-series	HDTA102A52	Adaptors required to connect products other than those of the VRV System to the high-
6	Central control adaptor kit	HDTA107A55	speed DIII-NET communication system adopted for the VRV System. ■ To use any of the above optional controllers, an appropriate adaptor must be installed on
7	Wiring adaptor for other air-conditioner	HDTA103A51	the product unit to be controlled.
8	DIII-NET Expander adaptor	DTA109A51	 Up to 1,024 units can be centrally controlled in 64 different groups. Wiring restrictions (max. length : 1,000m, total wiring length : 2,000m, max. number of branches : 16) apply to each adaptor.
9	Mounting plate	KRP4A92	Fixing plate for DTA109A51

Note:

Installation box for H adaptor must be procured on site.

Building management system

No.		Pa	rt name		Model No.	Function		
	intelligent	Tauch Cant	- ller	Without PPD	DCS601B51	Air-Conditioning management system that can be controlled by a compact all-in- one unit.		
1	Intelligent	Touch Contr	olier	With PPD	DCS601B51 DCS002B51	 PPD: Power Proportional Distribution function Auto cool/heat change-over •Temperature limitation Multilingual (English, French, German, Spanish, Italian, or Chinese) 		
1-1	Electrical	box with eart	h terminal (4b	ocks)	KJB411A	Wall embedded switch box.		
				128 units	DAM602A52			
				192 units	DAM602A53			
	intelligent	Manager	units to be	256 units	DAM602A51	Air conditioner management system (featuring minimized engineering) that can		
2	ECO 21	5		512 units	DAM602A51x2	be controlled by personal computers.		
				768 units	DAM602A51x3			
				1024 units	DAM602A51x4			
2-1		Optional DIII Ai unit			DAM101A51	Analog input for "sliding temperature" function (to reduce cold shock) for intelligent Manager EC021.		
3	tion	H1 Interface for use in BACnet [®]		erface for use in BACnet [®]		Interface unit to allow communications between VRV and BMS. Operation and monitoring of air-conditioning systems through BACnet [®] communications.		
3-1	nunica Line	Optional DI	onal DIII board		DAM411A1	Expansion kit, installed on DMS502A51, to provide 3 more DIII-NET communication ports. Not usable independently.		
3-2	Communication Line	Optional Di	nal Di board		DAM412A1	Expansion kit, installed on DMS502A51, to provide 16 more wattmeter pulse input points. Not usable independently.		
4		H2 Interfac	e for use in LO	N WORKS [®]	DMS504B51	Interface unit to allow communications between VRV and BMS. Operation and monitoring of air-conditioning systems through LON WORKS [®] communication.		
5		ce el	Basic unit		DPF201A51	Enables ON/OFF command, operation and display of malfunction; can be used in combination with up to 4 units.		
6	nal	Parallel interface	Temperature measuremen		DPF201A52	Enables temperature measurement output for 4 groups; 0-5VDC.		
7	sig		Temperature	setting units	DPF201A53	Enables temperature setting input for 16 groups; 0-5VDC.		
8	Inalog	Unification control	adaptor for cor	nputerized	DCS302A52	Interface between the central monitoring board and central control units		
9-1	Contact/analog signal	Wiring adap appendices	tor for electrical (1)		KRP2A53, 61, 62	Simultaneously controls air-conditioning control computer and up to 64 groups of indoor units.		
9-2	Co	Wiring adap appendices	tor for electrical (2)		iring adaptor for electrical pendices (2)		KRP4A51-54	To control the group of indoor units collectively, which are connected by the transmission wiring of remote controller.
13		External co unit (Must b	ntrol adaptor fo	or outdoor indoor units.)	DTA104A53, 61, 62	Cooling/Heating mode change over. Demand control and Low noise control are available between the plural outdoor units.		

Note:

^H1. BACnet[®] is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).
 ^H2. LON WORKS[®] is a registered trade mark of Echelon Corporation.

4.2 Option Lists (Outdoor Unit)

RXYQ5 ~ 16MY1B

Optional accessories		RXYQ5MY1B RXYQ8MY1B RXYQ12M RXYQ10MY1B RXYQ16M RXYQ10MY1B RXYQ16M					
Cool	/Heat Selector		KRC19-26A				
Cool/Heat Selector	Fixing box	KJB111A	KJB111A				
Distributive	Refnet header	KHRP26M22H, KHRP26M33H (Max. 4 branch) (Max. 8 branch)	KHRP26M22H, KHRP26M33H, (Max. 4 branch) (Max. 8 branch)	KHRP26M22H, KHRP26M33H, KHRP26M72H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch)			
	Refnet joint	KHRP26M22T	KHRP26M22T, KHRP26M33T,	KHRP26M22T, KHRP26M33T, KHRP26M72T			
Kit of air discharge duct		KPF26B160	KPF26B280	KPF26B450			
Cent	ral drain pan kit	KWC26B160	KWC26B280	KWC26B450			
Refrigerant leak detector kit			KFLD26A				

RXYQ18 ~ 32MY1B

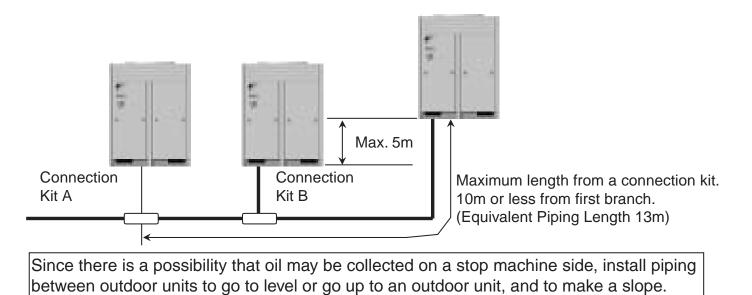
	Optional accessories	RXYQ18MY1B RXYQ20MY1B	RXYQ22MY1B RXYQ24MY1B RXYQ26MY1B	RXYQ28MY1B	RXYQ30MY1B RXYQ32MY1B			
Cool	/Heat Selector		KRC19-26A					
Cool/Heat Selector	Fixing box KJB111A							
utive ng	Refnet header	KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)						
Distributive Piping	Refnet joint	KHRP26M22T, KHRP2	KHRP26M22T, KHRP26M33T, KHRP26M72T, KHRP26M73T					
Outd	oor unit multi connection piping kit	BHFP22M90						
Pipe	size reducer	k	KHRP26M73TP, KHRP26M73HP, BHFP22M90P					
Kit of air discharge duct		KPF26B280 × 2	KPF26B280 KPF26B450	KPF26B450 × 2	KPF26B450 × 2			
Central drain pan kit		KWC26B280 × 2	KWC26B280 KWC26B450	KWC26B450 × 2	KWC26B450 × 2			
Refri	gerant leak detector kit		KFL	D26A				
		L			3D03955			

RXYQ34 ~ 48MY1B

	Optional accessories	RXYQ34MY1B RXYQ36MY1B	RXYQ38MY1B	RXYQ40MY1B RXYQ42MY1B	RXYQ44MY1B RXYQ46MY1B RXYQ48MY1B			
Cool	/Heat Selector		KRC1	9-26A				
Cool/Heat Selector	Fixing box	KJB111A						
utive Jg	Refnet header		KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)					
Distributive Piping	Refnet joint	KHRP26M22T, KHRP2	KHRP26M22T, KHRP26M33T, KHRP26M72T, KHRP26M73T					
Outd	oor unit multi connection piping kit	BHFP22M135						
Pipe	size reducer	KHRP26M73TP, KHRP26M73HP, BHFP22M90P						
Kit of air discharge duct		KPF26B280 × 2 KPF26B450	KPF26B280 KPF26B450 × 2	KPF26B280 KPF26B450 × 2	KPF26B450 × 3			
Central drain pan kit		KWC26B280 × 2 KWC26B450	KWC26B280 KWC26B450 × 2	KWC26B280 KWC26B450 × 2	KWC26B450 × 3			
Refrigerant leak detector kit		KFLD26A						
		•			3D039553			

5. Piping Installation Point

5.1 Piping Installation Point

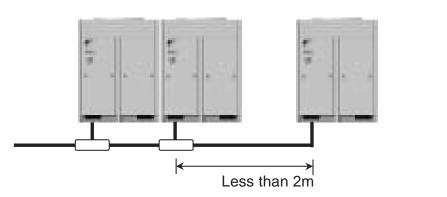


(V3084)

The projection part between multi connection piping kits

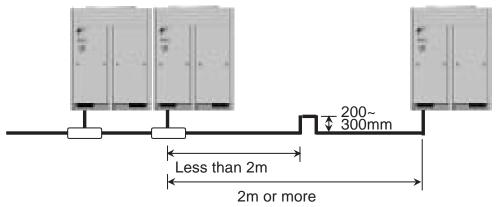
When the piping length between the multi connection kits or between multi connection kit and outdoor unit is 2m or more, prepare a vertical projection part (200mm or more as shown below) only on the gas pipe line location less than 2m from multi connection kit.

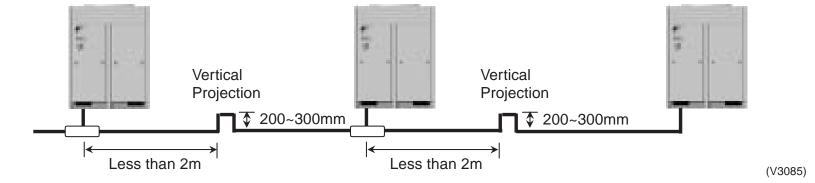
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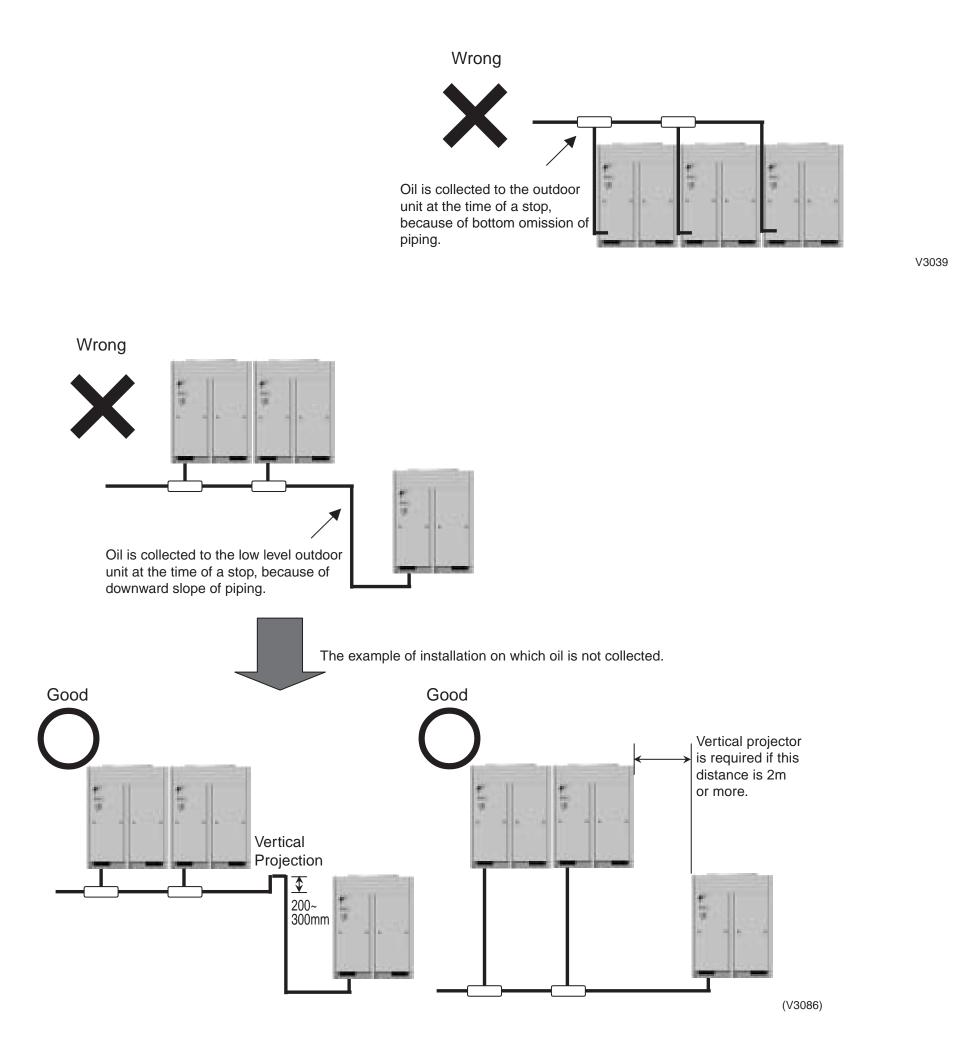
In the case of 2m or less

In the case of 2m or more





5.2 The Example of A Wrong Pattern



	Outdoor Unit - Multi Connection Piping Kit	Actual piping length 10m or less, equivalent length 13m or less
Max.allowable Piping Length	Multi Connection Piping Kit - Indoor Unit	Actual piping length 150m or less, equivalent length 175m or less, the total extension 300m or less
	REFNET Joint - Indoor Unit	Actual piping length 40m or less
	Outdoor Unit - Outdoor Unit	5m or less
Allowable Level Difference	Outdoor Unit - Indoor Unit	50m or less (when an outdoor unit is lower than indoor units : 40m or less)
2	Indoor Unit - Indoor Unit	15m or less

6. Selection of Pipe Size, Joints and Header

RXYQ5MY1B, RXYQ8MY1B, RXYQ10MY1B, 6.1 RXYQ12MY1B, RXYQ14MY1B, **RXYQ16MY1B**

6.1.1 How to select the REFNET Joint

How to select the REFNET Joint

Select the REFNET Joint from the following table when using REFNET Joints at the first branch counted from the outdoor unit side.

(Ex. : REFNET Joint A)

Outdoor Unit	REFNET Joints (Kit Name)
RXYQ5MY1B	KHRP26M22T
RXYQ8,10MY1B	KHRP26M33T
RXYQ12-16MY1B	KHRP26M72T

For REFNET Joints other than the first branch, select the proper ones based on the total capacity index of the indoor units installed after the first branch using the following table :

Total capacity index of indoor units	REFNET Joints (Kit Name)
<200	KHRP26M22T
≥200~<290	KHRP26M33T
≥290	KHRP26M72T

6.1.2 How to select pipe size

Between outdoor unit and uppermost stream REFNET Joint.

Pipe size connected to outdoor unit.

Outdoor Unit	Gas	Liquid
RXYQ5MY1B	φ15.9	
RXYQ8MY1B	φ19.1	φ 9.5
RXYQ10MY1B	φ22.2	
RXYQ12-16MY1B	φ28.6	φ12.7

Piping Material

Select the piping material to be used from the next table according to piping size.

Piping Size (O / D)	Temper grade of Material
φ15.9 or less	0
φ19.1 or more	1 / 2H or H

Wall thickness of refrigerant pipe

Temper grade	О Туре		mper grade O Type 1/2H Type									
Copper tube O.D	φ 6. 4	φ9.5	φ12.7	φ15.9	φ19.1	¢22.2	¢25.4	φ 28.6	¢31.8	¢34.9	¢38.1	¢41.3
Copper tube W.T (Minimum requirement)	0.80	0.80	0.80	0.99	0.80	0.80	0.88	0.99	1.10	1.21	1.32	1.43
The table shows the requirements of Japanese High Pressure Gas Control low. The thickness												

and material shall be selected in accordance with local code. (As of Jan.2003)

6.1.3 How to select the REFNET header

When connecting the indoor unit larger than 250 or more, use with KHRP26M33T,M72T to upper stream side.

(Do not connect downstream side)

Select the proper REFNET Header using the following table based on the total capacity index of indoor units installed after the header.

Total capacity index of indoor units	REFNET Header (Kit Name)
<200	KHRP26M22H (Max.4 Branches)
<290	KHRP26M33H (Max.8 Branches)
≥290	KHRP26M72H (Max.8 Branches)

6.1.4 Piping between the REFNET Joints

Select the proper pipe size using the following table based on the total capacity index of indoor units connected downstream.

Connection piping size should not exceed the refrigerant piping size selected by "the model with combination units".

Total capacity index of indoor units	Gas	Liquid
<200	φ 15 .9	φ 9.5
≥200~<290	φ22.2	ψ9.5
≥290~<420	φ28.6	φ12.7
≥420	φ 28.6	φ 15 .9

6.1.5 Piping between the REFNET Joints and indoor unit

Pipe size for direct connection to indoor unit must be the same as the connection size of indoor unit.

Indoor Units	Gas	Liquid
20 · 25 · 32 · 40 · 50 Type	φ12.7	φ6.4
63 · 80 · 100 · 125 Type	φ15.9	
200 Туре	φ19.1	φ9.5
250 Type	φ22.2	

Appendix

6.2 RXYQ18MY1B, RXYQ20MY1B, RXYQ22MY1B, RXYQ24MY1B, RXYQ26MY1B, RXYQ28MY1B, RXYQ30MY1B, RXYQ32MY1B, RXYQ34MY1B, RXYQ36MY1B, RXYQ38MY1B, RXYQ40MY1B, RXYQ42MY1B, RXYQ44MY1B, RXYQ46MY1B, RXYQ48MY1B

6.2.1 How to select the REFNET Joint

How to select the REFNET Joint

Select the REFNET Joint from the following table. When using REFNET Joints at the first branch counted from the outdoor unit side.

(Ex. : REFNET Joint A)

Outdoor Unit	REFNET Joint (Kit Name)
RXYQ18MY1B-22MY1B	KHRP26M72T
RXYQ24MY1B-48MY1B	KHRP26M73T

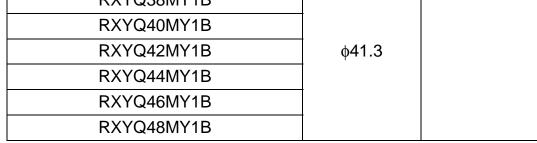
For REFNET Joints other than the first branch, select the proper ones based on the total capacity index of the indoor units installed after the first branch using the following table :

Total capacity index of indoor units	REFNET Joints (Kit Name)
<200	KHRP26M22T
≥200~<290	KHRP26M33T
≥290	KHRP26M72T
≥640	KHRP26M73T

6.2.2 How to select pipe size

<u>Main Piping (Between Multi connection piping kit and REFNET Joint)</u> Select the proper ones based on the following table :

Outdoor Unit	Gas	Liquid
RXYQ18MY1B		
RXYQ20MY1B	φ28.6	±15.0
RXYQ22MY1B		φ15.9
RXYQ24MY1B		
RXYQ26MY1B		
RXYQ28MY1B	φ34.9	
RXYQ30MY1B	ψ04.9	
RXYQ32MY1B		
RXYQ34MY1B		
RXYQ36MY1B		φ19.1
RXYQ38MY1B		ψιθ.ι



Piping Material

Select the piping material to be used from the next table according to piping size.

Piping Size (O / D)	Temper grade of Material	
φ15.9 or less	0	* O: Soft (Annealed)
φ19.1 or more	1 / 2H or H	* H: Hard (Drawn)

Wall thickness of refrigerant pipe

(Unit : mm)

Temper grade		ОТ	уре					1/2H	Туре			
Copper tube O.D	φ 6. 4	φ9.5	φ12.7	φ 15 .9	φ19.1	φ22.2	¢25.4	¢28.6	¢31.8	¢34.9	¢38.1	¢41.3
Copper tube W.T (Minimum requirement)	0.80	0.80	0.80	0.99	0.80	0.80	0.88	0.99	1.10	1.21	1.32	1.43

*The table shows the requirements of Japanese High Pressure Gas Control low. The thickness and material shall be selected in accordance with local code. (As of Jan.2003)

6.2.3 How to select the REFNET header

Select the proper REFNET Header using the following table based on the total capacity index of indoor units installed after the header.

Total capacity index of indoor units	REFNET Header (Kit Name)
<200	KHRP26M22H (Max.4 Branches)
<200	KHRP26M33H (Max8 Branches)
≥200~<290	KIIKF 20103311 (101axo Bialiciles)
≥290~<640	KHRP26M72H (Max8 Branches)
≥640	KHRP26M73H (Max8 Branches) KHRP26M73HP

When using REFNET Joints at the first branch counted from the outdoor unit side, use KHRP26M73H for larger than RXYQ24MY1B.

6.2.4 Piping between the REFNET Joints.

Select the proper pipe size using the following table based on the total capacity index of indoor units connected downstream.

Connection piping size should be larger than main piping size.

Connection piping size should not exceed the refrigerant piping size selected by "the model with combination units".

Total capacity index of indoor units	Gas	Liquid
<200	φ 15 .9	φ9.5
≥200~<290	φ22.2	ψ9.5
≥290~<420	φ28.6	φ12.7
≥420~<640	ψ20.0	φ 15 .9
≥640~<920	φ 34.9	φ 19.1
≥920	φ 41. 3	φ19.1

6.2.5 Piping between the multi connection piping kit

Select the proper pipe size using the following table based on the total capacity index of outdoor units connected upper stream.

Total capacity index of outdoor units Gas Liquid Oil
--

connected to upper stream		-	
Less than RXYQ22MY1B	φ 28.6	φ15.9	
RXYQ24MY1B		φ15.9	φ 6.4
RXYQ26MY1B or more~ Less than RXYQ32MY1B	φ34.9	φ19.1	40.1

6.2.6 Outdoor Unit Multi Connection Piping Kit

Select the piping kit according to the No. of outdoor units

No. of outdoor units	Multi Connection Piping Kit
2 units	BHFP22M90 BHFP22M90P
3 units	BHFP22M135 BHFP22M135P

6.2.7 Piping between REFNET Joint and Indoor Unit

Pipe size for direct connection to indoor unit must be the same as the connection size of indoor unit.

Connection pipe size of indoor unit.

Indoor Units	Gas	Liquid
20 · 25 · 32 · 40 · 50 Type	φ12.7	φ 6.4
63 · 80 · 100 · 125 Type	φ15.9	
200 Туре	φ19.1	φ9.5
250 Туре	φ22.2	

6.2.8 Piping between outdoor Unit and Multi Connection Piping Kit

Pipe size for direct connection to outdoor unit must be the same as the connection size of outdoor unit.

Outdoor Units	Gas	Liquid	Oil	
RXYQ8MY1B	φ19.1	φ9.5		
RXYQ10MY1B	¢22.2	φ9.5	φ 6.4	
RXYQ12-16MY1B	¢28.6	φ12.7		

7. Thermistor Resistance / Temperature Characteristics

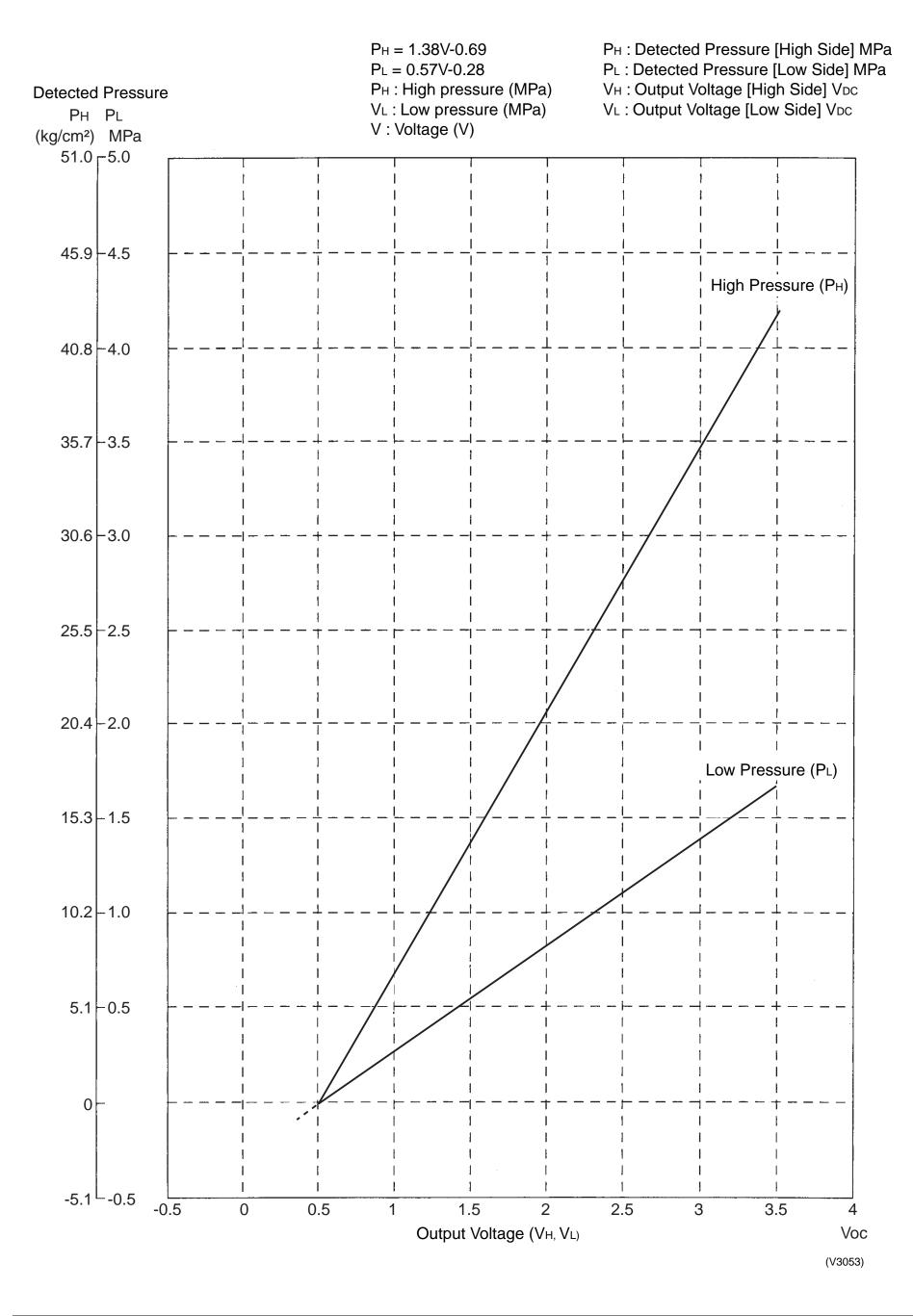
Indoor unit	For air suction	R1T
	For liquid pipe	R2T
	For gas pipe	R3T
Outdoor unit	For outdoor air	R1T
	For coil	R2T
	For suction pipe	R4T
	For Receiver gas pipe	R5T

						(kΩ)
T°C	0.0	0.5		T°C	0.0	0.5
-20	197.81	192.08		30	16.10	15.76
-19	186.53	181.16		31	15.43	15.10
-18	175.97	170.94		32	14.79	14.48
-17	166.07	161.36		33	14.18	13.88
-16	156.80	152.38		34	13.59	13.31
-15	148.10	143.96		35	13.04	12.77
-14	139.94	136.05		36	12.51	12.25
-13	132.28	128.63		37	12.01	11.76
-12	125.09	121.66		38	11.52	11.29
-11	118.34	115.12		39	11.06	10.84
-10	111.99	108.96		40	10.63	10.41
-9	106.03	103.18		41	10.21	10.00
-8	100.41	97.73		42	9.81	9.61
-7	95.14	92.61		43	9.42	9.24
-6	90.17	87.79		44	9.06	8.88
-5	85.49	83.25		45	8.71	8.54
-4	81.08	78.97		46	8.37	8.21
-3	76.93	74.94		47	8.05	7.90
-2	73.01	74.34		48	7.75	7.60
-2	69.32	67.56		40	7.46	7.31
	65.84	64.17		49 50	7.40	7.04
0						
	62.54	60.96		51 52	6.91	6.78
2	59.43	57.94		52	6.65	6.53
3	56.49	55.08		53	6.41	6.53
4	53.71	52.38		54	6.65	6.53
5	51.09	49.83		55	6.41	6.53
6	48.61	47.42		56	6.18	6.06
7	46.26	45.14		57	5.95	5.84
8	44.05	42.98		58	5.74	5.43
9	41.95	40.94		59	5.14	5.05
10	39.96	39.01		60	4.96	4.87
11	38.08	37.18		61	4.79	4.70
12	36.30	35.45		62	4.62	4.54
13	34.62	33.81		63	4.46	4.38
14	33.02	32.25		64	4.30	4.23
15	31.50	30.77		65	4.16	4.08
16	30.06	29.37		66	4.01	3.94
17	28.70	28.05		67	3.88	3.81
18	27.41	26.78		68	3.75	3.68
19	26.18	25.59		69	3.62	3.56
20	25.01	24.45		70	3.50	3.44
21	23.91	23.37		71	3.38	3.32
22	22.85	22.35		72	3.27	3.21
23	21.85	21.37		73	3.16	3.11
24	20.90	20.45		74	3.06	3.01
25	20.00	19.56		75	2.96	2.91
26	19.14	18.73		76	2.86	2.82
27	18.32	17.93		77	2.77	2.72
28	17.54	17.17		78	2.68	2.64
29	16.80	16.45		79	2.60	2.55
30	16.10	15.76		80	2.51	2.47
			J			

Outdoor Unit Thermistors for Discharge Pipe (R3T)

T°C	0.0	0.5	Γ	Т°С	0.0	0.5	Ī	T°C	0.0	(kΩ)) 0.5
0	640.44	624.65		50	72.32	70.96	Ì	100	13.35	13.15
1	609.31	594.43		51	69.64	68.34		101	12.95	12.76
2	579.96	565.78		52	67.06	65.82		102	12.57	12.38
3	552.00	538.63		53	64.60	63.41		103	12.20	12.01
4	525.63	512.97		54	62.24	61.09		104	11.84	11.66
5	500.66	488.67		55	59.97	58.87		105	11.49	11.32
6	477.01	465.65		56	57.80	56.75		106	11.15	10.99
7	454.60	443.84		57	55.72	54.70		107	10.83	10.67
8	433.37	423.17		58	53.72	52.84		108	10.52	10.36
9	413.24	403.57		59	51.98	50.96		109	10.21	10.06
10	394.16	384.98	_	60	49.96	49.06		110	9.92	9.78
11	376.05	367.35	_	61	48.19	47.33		111	9.64	9.50
12	358.88	350.62		62	46.49	45.67		112	9.36	9.23
13	342.58	334.74		63	44.86	44.07		113	9.10	8.97
14	327.10	319.66		64	43.30	42.54		114	8.84	8.71
15	312.41	305.33		65	41.79	41.06		115	8.59	8.47
16	298.45	291.73		66	40.35	39.65		116	8.35	8.23
17	285.18	278.80		67	38.96	38.29		117	8.12	8.01
18	272.58	266.51		68	37.63	36.98		118	7.89	7.78
19	260.60	254.72		69	36.34	35.72		119	7.68	7.57
20	249.00	243.61	_	70	35.11	34.51		120	7.47	7.36
20	238.36	233.14	_	71	33.92	33.35		120	7.26	7.16
22	228.05	223.08		72	32.78	32.23		121	7.06	6.97
23	218.24	213.51		73	31.69	31.15		122	6.87	6.78
24	208.90	204.39		74	30.63	30.12		123	6.69	6.59
25	200.00	195.71		75	29.61	29.12		125	6.51	6.42
26	191.53	187.44		76	28.64	28.16		126	6.33	6.25
20	183.46	179.57		77	27.69	27.24		120	6.16	6.08
28	175.77	172.06		78	26.79	26.35		128	6.00	5.92
29	168.44	164.90		79	25.91	25.49		120	5.84	5.76
30	161.45	158.08	_	80	25.07	24.66		130	5.69	5.61
31	154.79	151.57	_	81	24.26	23.87		130	5.54	5.46
32	148.43	145.37		82	23.48	23.10		132	5.39	5.32
33	142.37	139.44		83	22.73	22.36		133	5.25	5.18
34	136.59	133.79		84	22.01	21.65		134	5.12	5.05
35	131.06	128.39		85	21.31	20.97		135	4.98	4.92
36	125.79	123.24		86	20.63	20.31		136	4.86	4.79
37	120.76	118.32		87	19.98	19.67		130	4.73	4.67
38	115.95	113.62		88	19.36	19.07		138	4.61	4.55
39	111.35	109.13		89	18.75	18.46		139	4.49	4.44
40	106.96	103.13	_	90	18.17	17.89		140	4.38	4.32
40	102.76	100.73	_	91	17.61	17.34		140	4.27	4.22
41	98.75	96.81		92	17.07	16.80		141	4.27	4.22
42	94.92	93.06		92 93	16.54	16.29		142	4.10	4.11
43 44	94.92	93.00 89.47		93 94	16.04	15.79		143	3.96	3.91
44 45	87.74	86.04		94 95	15.55	15.31		144	3.86	3.81
43 46	84.38	82.75		95 96	15.08	14.85		145	3.76	3.72
40 47	81.16	79.61		90 97	14.62	14.85		140	3.67	3.62
47 48	78.09	76.60		97 98	14.02	13.97		147	3.58	3.54
40	10.09				14.18	13.57			3.56 3.49	3.54 3.45
49	75.14	73.71		99	1.2 / ~	1.7 66		149	2/10	4 // h

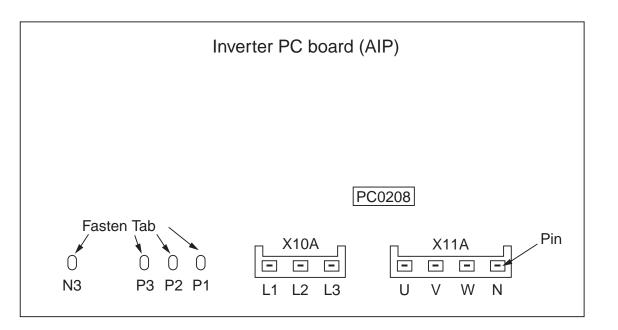
8. Pressure Sensor



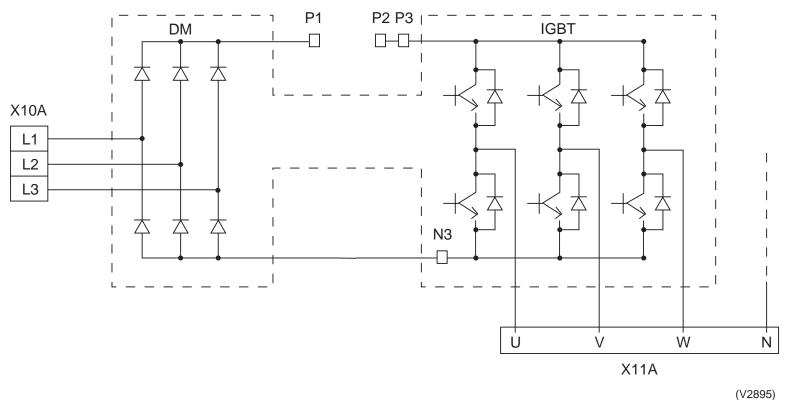
9. Method of Replacing The Inverter's Power Transistors and Diode Modules

9.1 Method of Replacing The Inverter's Power Transistors and Diode Modules

Inverter P.C.Board

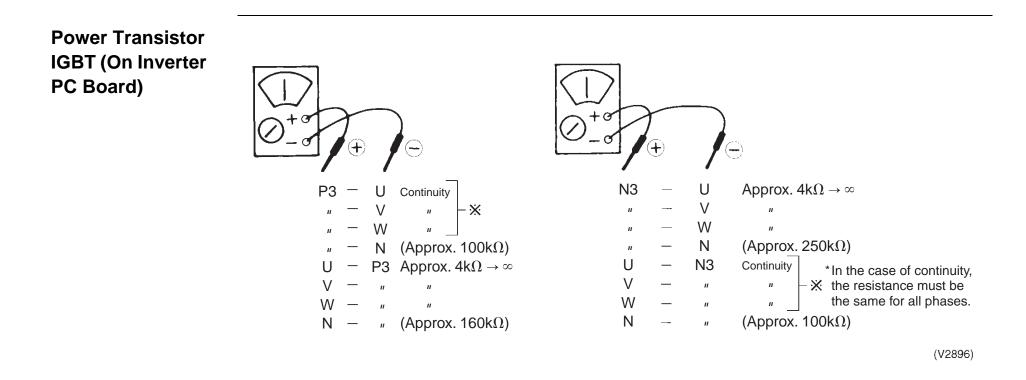


Electronic circuit



[Decision according to continuity check by analog tester]

Before checking, disconnect the electric wiring connected to the power transistor and diode module.



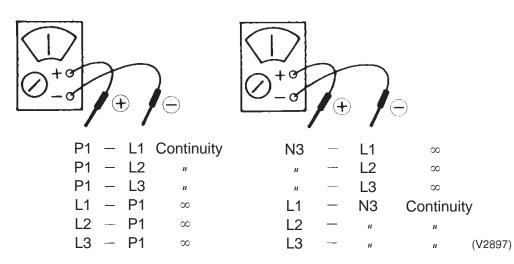
(Decision)

If other than given above, the power unit is defective and must be replaced.

Note: If using a digital tester, ∞ and continuity may be reversed.

Diode Module

Н



(Decision)

If other than given above, the diode module is defective and must be replaced.

Note: If using a digital tester, ∞ and continuity may be reversed.

Appendix

Part 9 Precautions for New Refrigerant (R410)

۱.	Prec	cautions for New Refrigerant (R410)	318
		Outline	
	1.2	Refrigerant Cylinders	320
	1.3	Service Tools	321

1. Precautions for New Refrigerant (R410)

1.1 Outline

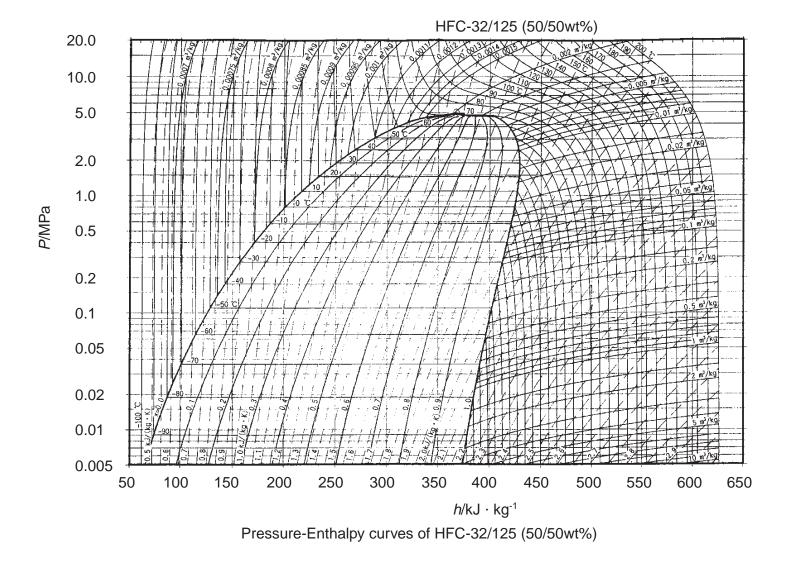
1.1.1 About Refrigerant R410A

- Characteristics of new refrigerant, R410A
- 1. Performance
 - Almost the same performance as R22 and R407C
- Pressure Working pressure is approx. 1.4 times more than R22 and R407C.
- 3. Refrigerant composition Few problems in composition control, since it is a Quasi-azeotropic mixture refrigerant.

	HFC units (Units usi	ng new refrigerants)	HCFC units
Refrigerant name	R407C	R410A	R22
Composing substances			Single-component refrigerant
Design pressure	3.2 MPa (gauge pressure) = 32.6 kgf/cm ²	3.80 MPa (gauge pressure) = 38.7 kgf/cm ²	2.75MPa (gauge pressure) = 28.0 kgf/cm ²
Refrigerant oil	Synthetic	Mineral oil (Suniso)	
Ozone destruction factor (ODP)	0	0	0.05
Combustibility	None	None	None
Toxicity	None	None	None

- H1. Non-azeotropic mixture refrigerant: mixture of two or more refrigerants having different boiling points.
- H2. Quasi-azeotropic mixture refrigerant: mixture of two or more refrigerants having similar boiling points.
- H3. The design pressure is different at each product. Please refer to the installation manual for each product.

(Reference) 1 MPa = 10.19716 kgf / cm²

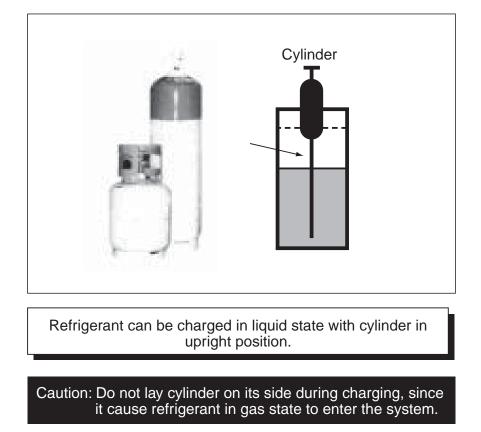


-									DAIREP ver	
emperature	Steam pr		Dens		Specific heat		Specific er		Specific e	
(°C)	(kPa Liquid	a) Vapor	(kg/m Liquid	₃) Vapor	pressure(Liquid	kJ/kgK) Vapor	(kJ/k Liquid	g) Vapor	(kJ/Kg Liquid	gK) Vapor
		ναροι	сіциій	vapoi		ναροι	Liquiu	ναροι	Liquiu	vapoi
-70	36.13	36.11	1410.7	1.582	1.372	0.695	100.8	390.6	0.649	2.074
-68	40.83	40.80	1404.7	1.774	1.374	0.700	103.6	391.8	0.663	2.066
-66	46.02	45.98	1398.6	1.984	1.375	0.705	106.3	393.0	0.676	2.058
-64	51.73	51.68	1392.5	2.213	1.377	0.700	100.0	394.1	0.689	2.051
-62	58.00	57.94	1386.4	2.463	1.378	0.715	111.9	395.3	0.702	2.044
-60	64.87	64.80	1380.2	2.734	1.379	0.720	114.6	396.4	0.715	2.037
-58	72.38	72.29	1374.0	3.303	1.380	0.726	117.4	397.6	0.728	2.030
-56	80.57	80.46	1367.8	3.350	1.382	0.732	120.1	398.7	0.741	2.023
-54	89.49	89.36	1361.6	3.696	1.384	0.737	122.9	399.8	0.754	2.017
-52	99.18	99.03	1355.3	4.071	1.386	0.744	125.7	400.9	0.766	2.010
-51.58	101.32	101.17	1354.0	4.153	1.386	0.745	126.3	401.1	0.769	2.009
-50	109.69	109.51	1349.0	4.474	1.388	0.750	128.5	402.0	0.779	2.004
-48	121.07	120.85	1342.7	4.909	1.391	0.756	131.2	403.1	0.791	1.998
-46	133.36	133.11	1336.3	5.377	1.394	0.763	134.0	404.1	0.803	1.992
-44	146.61	146.32	1330.0	5.880	1.397	0.770	136.8	405.2	0.816	1.987
-42	160.89	160.55	1323.5	6.419	1.401	0.777	139.6	406.2	0.828	1.981
-40	176.24	175.85	1317.0	6.996	1.405	0.785	142.4	407.3	0.840	1.976
-38	192.71	192.27	1310.5	7.614	1.409	0.792	145.3	408.3	0.852	1.970
-36	210.37	209.86	1304.0	8.275	1.414	0.800	148.1	409.3	0.863	1.965
-34	229.26	228.69	1297.3	8.980	1.419	0.809	150.9	410.2	0.875	1.960
-32	249.46	248.81	1290.6	9.732	1.424	0.817	153.8	411.2	0.887	1.955
-30	271.01	270.28	1383.9	10.53	1.430	0.826	156.6	412.1	0.899	1.950
-28	293.99	293.16	1277.1	11.39	1.436	0.835	159.5	413.1	0.911	1.946
-26	318.44	317.52	1270.2	12.29	1.442	0.844	162.4	414.0	0.922	1.941
-24	344.44	343.41	1263.3	13.26	1.448	0.854	165.3	414.9	0.934	1.936
-22	372.05	370.90	1256.3	14.28	1.455	0.864	168.2	415.7	0.945	1.932
-20	401.34	400.06	1249.2	15.37	1.461	0.875	171.1	416.6	0.957	1.927
-18	432.36	430.95	1242.0	16.52	1.468	0.886	174.1	417.4	0.968	1.923
-16	465.20	463.64	1234.8	17.74	1.476	0.897	177.0	418.2	0.980	1.919
-14			1227.5		1.483		180.0		0.991	1.914
	499.91	498.20		19.04		0.909		419.0		
-12	536.58	534.69	1220.0	20.41	1.491	0.921	182.9	419.8	1.003	1.910
-10	575.26	573.20	1212.5	21.86	1.499	0.933	185.9	420.5	1.014	1.906
-8	616.03	613.78	1204.9	23.39	1.507	0.947	189.0	421.2	1.025	1.902
-6	658.97	656.52	1197.2	25.01	1.516	0.960	192.0	421.9	1.036	1.898
-4	704.15	701.49	1189.4	26.72	1.524	0.975	195.0	422.6	1.048	1.894
-2	751.64	748.76	1181.4	28.53	1.533	0.990	198.1	423.2	1.059	1.890
0	801.52	798.41	1173.4	30.44	1.543	1.005	201.2	423.8	1.070	1.886
2	853.87	850.52	1165.3	32.46	1.552	1.022	204.3	424.4	1.081	1.882
4	908.77	905.16	1157.0	34.59	1.563	1.039	207.4	424.9	1.092	1.878
6	966.29	962.42	1148.6	36.83	1.573	1.057	210.5	425.5	1.103	1.874
8	1026.5	1022.4	1140.0	39.21	1.584	1.076	213.7	425.9	1.114	1.870
10	1089.5	1085.1	1131.3	41.71	1.596	1.096	216.8	426.4	1.125	1.86
12	1155.4	1150.7	1122.5	44.35	1.608	1.117	220.0	426.8	1.136	1.862
14	1224.3	1219.2	1113.5	47.14	1.621	1.139	223.2	427.2	1.147	1.85
16	1296.2	1290.8	1104.4	50.05	1.635	1.163	226.5	427.5	1.158	1.85
18	1371.2	1365.5	1095.1	53.20	1.650	1.188	229.7	427.8	1.169	1.85
20	1449.4	1443.4	1085.6	56.48	1.666	1.215	233.0	428.1	1.180	1.84
22	1530.9	1524.6	1075.9	59.96	1.683	1.243	236.4	428.3	1.191	1.843
24	1615.8	1609.2	1066.0	63.63	1.701	1.273	239.7	428.4	1.202	1.83
26 28	1704.2 1796.2	1697.2 1788.9	1055.9 1045.5	67.51 71.62	1.721 1.743	1.306 1.341	243.1 246.5	428.6 428.6	1.214 1.225	1.834 1.830
30	1891.9	1884.2	1034.9	75.97	1.767	1.379	249.9	428.6	1.236	1.82
32	1991.3	1983.2	1024.1	80.58	1.793	1.420	253.4	428.6	1.247	1.82
34	2094.5	2086.2	1012.9	85.48	1.822	1.465	256.9	428.4	1.258	1.81
36	2201.7	2193.1	1001.4	90.68	1.855	1.514	260.5	428.3	1.269	1.81
38	2313.0	2304.0	989.5	96.22	1.891	1.569	264.1	428.0	1.281	1.80
40	2428.4	2419.2	977.3	102.1	1.932	1.629	267.8	427.7	1.292	1.80
42	2548.1	2538.6	964.6	108.4	1.979	1.696	271.5	427.2	1.303	1.79
44	2672.2	2662.4	951.4	115.2	2.033	1.771	275.3	426.7	1.315	1.79
46 48	2800.7 2933.7	2790.7 2923.6	937.7 923.3	122.4 130.2	2.095 2.168	1.857 1.955	279.2 283.2	426.1 425.4	1.327 1.339	1.78 1.78
4 0	2300.1	2323.0	320.3	130.2	2.100	1.900	203.Z	420.4	1.009	1.70
50	3071.5	3061.2	908.2	138.6	2.256	2.069	287.3	424.5	1.351	1.77
52	3214.0	3203.6	892.2	147.7	2.362	2.203	291.5	423.5	1.363	1.77
54	3361.4	3351.0	875.1	157.6	2.493	2.363	295.8	422.4	1.376	1.76
56	3513.8	3503.5	856.8	168.4	2.661	2.557	300.3	421.0	1.389	1.75
58	3671.3	3661.2	836.9	180.4	2.883	2.799	305.0	419.4	1.403	1.74
	3834.1	3824.2	814.9	193.7	3.191	3.106	310.0	417.6	1.417	1.74
00				208.6	3.650	3.511	315.3	415.5	1.433	1.73
60 62	<u>4</u> 002 1									
60 62 64	4002.1 4175.7	3992.7 4166.8	790.1 761.0	200.0	4.415	4.064	321.2	413.0	1.450	1.72

Thermodynamic characteristic of R410A

1.2 Refrigerant Cylinders

- Cylinder specifications
- The cylinder is painted refrigerant color (pink).
- The cylinder valve is equipped with a siphon tube.



- Handling of cylinders
- (1) Laws and regulations

R410A is liquefied gas, and the High-Pressure Gas Safety Law must be observed in handling them. Before using, refer to the High-Pressure Gas Safety Law. The Law stipulates standards and regulations that must be followed to prevent accidents with high-pressure gases. Be sure to follow the regulations.

(2) Handing of vessels

Since R410A is high-pressure gas, it is contained in high-pressure vessels. Although those vessels are durable and strong, careless handling can cause damage that can lead to unexpected accidents. Do not drop vessels, let them fall, apply impact or roll them on the ground.

(3) Storage

Although R410A is not flammable, it must be stored in a well-ventilated, cool, and dark place in the same way as any other high-pressure gases.

It should also be noted that high-pressure vessels are equipped with safety devices that releases gas when the ambient temperature reaches more than a certain level (fusible plug melts) and when the pressure exceeds a certain level (spring-type safety valve operates).

1.3 Service Tools

R410A is used under higher working pressure, compared to previous refrigerants (R22,R407C). Furthermore, the refrigerating machine oil has been changed from Suniso oil to Ether oil, and if oil mixing is occurred, sludge results in the refrigerants and causes other problems. Therefore, gauge manifolds and charge hoses that are used with a previous refrigerant (R22,R407C) can not be used for products that use new refrigerants.

Be sure to use dedicated tools and devices.

		Compatibility		
Tool	HFC		HCFC	Reasons for change
	R410A	R407C	R22	
Gauge manifold Charge hose	5			 Do not use the same tools for R22 and R410A. Thread specification differs for R410A and R407C.
Charging cylinder	Ę	5	0	Weighting instrument used for HFCs.
Gas detector	(\mathbf{D}	5	• The same tool can be used for HFCs.
Vacuum pump (pump with reverse flow preventive function)	0			 To use existing pump for HFCs, vacuum pump adaptor must be installed.
Weighting instrument	0			
Charge mouthpiece	5			 Seal material is different between R22 and HFCs. Thread specification is different between R410A and others.
Flaring tool (Clutch type)	0			• For R410A, flare gauge is necessary.
Torque wrench O		Torque-up for 1/2 and 5/8		
Pipe cutter		0		
Pipe expander	0			
Pipe bender	0			
Pipe assembling oil	5			Due to refrigerating machine oil change. (No Suniso oil can be used.)
Refrigerant recovery device	Check your recovery device.		y device.	
Refrigerant piping	See the chart below.		elow.	 Only φ19.1 is changed to 1/2H material while the previous material is "O".

Tool compatibility

As for the charge mouthpiece and packing, 1/2UNF20 is necessary for mouthpiece size of charge hose.

Copper tube material and thickness

	Ve-up		\	/e-upll	
	F	R407C	R410A		
Pipe size	Material	Thickness	Material	Thickness	
	Material	[mm]	Inaterial	[mm]	
φ 6.4	0	0.8	0	0.8	
φ9.5	0	0.8	0	0.8	
φ 12.7	0	0.8	0	0.8	
φ 15 .9	0	1.0	0	1.0	
φ 19.1	0	1.0	1/2H	1.0	
ф22.2	1/2H	1.0	1/2H	1.0	
φ 25.4	1/2H	1.0	1/2H	1.0	
φ 28.6	1/2H	1.0	1/2H	1.0	
φ 31.8	1/2H	1.2	1/2H	1.1	
φ 38.1	1/2H	1.4	1/2H	1.4	
φ 44.5	1/2H	1.6	1/2H	1.6	

* O: Soft (Annealed)

H: Hard (Drawn)

1. Flaring tool



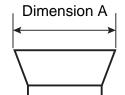
Specifications

• Dimension A

Unit: mm

Nominal size	Tube O.D.	A	+0 -0.4
	Do	Class-2 (R410A)	Class-1 (Conventional)
1/4	6.35	9.1	9.0
3/8	9.52	13.2	13.0
1/2	12.70	16.6	16.2
5/8	15.88	19.7	19.4
3/4	19.05	24.0	23.3

- Differences
- Change of dimension A



For class-1: R407C For class-2: R410A

Conventional flaring tools can be used when the work process is changed. (change of work process) Previously, a pipe extension margin of 0 to 0.5mm was provided for flaring. For R410A air conditioners, perform pipe flaring with a pipe extension margin of <u>1.0 to 1.5mm</u>. (For clutch type only) Conventional tool with pipe extension margin adjustment can be used.

2. Torque wrench



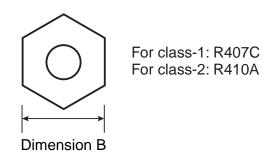
- Specifications
- Dimension B

Unit:mm

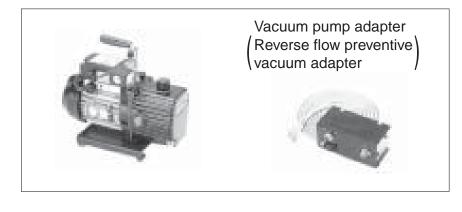
Nominal size	Class-1	Class-2	Previous
1/2	24	26	24
5/8	27	29	27

No change in tightening torque No change in pipes of other sizes

- Differences
- Change of dimension B Only 1/2", 5/8" are extended



3. Vacuum pump with check valve



- Specifications
- Discharge speed
 50 l/min (50Hz)
 60 l/min (60Hz)
- Maximum degree of vacuum
 -100.7 kpa (5 torr 755 mmHg)
- Suction port UNF7/16-20(1/4 Flare) UNF1/2-20(5/16 Flare) with adapter
- Differences
- Equipped with function to prevent reverse oil flow
- Previous vacuum pump can be used by installing adapter.

4. Leak tester



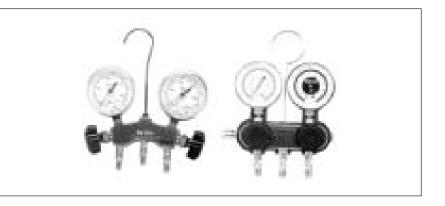
- Specifications
- Hydrogen detecting type, etc.
- Applicable refrigerants R410A, R407C, R404A, R507A, R134a, etc.
- Differences
- Previous testers detected chlorine. Since HFCs do not contain chlorine, new tester detects hydrogen.

5. Refrigerant oil (Air compal)



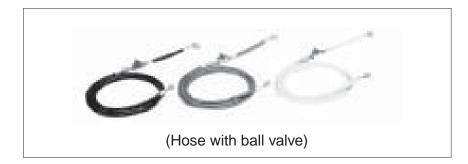
- Specifications
- Contains synthetic oil, therefore it can be used for piping work of every refrigerant cycle.
- Offers high rust resistance and stability over long period of time.
- Differences
- Can be used for R410A and R22 units.

6. Gauge manifold for R410A

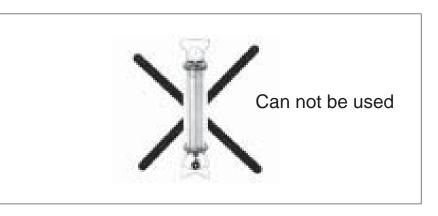


- Specifications
- High pressure gauge
 - 0.1 to 5.3 MPa (-76 cmHg to 53 kg/cm²)
- Low pressure gauge
 - 0.1 to 3.8 MPa (-76 cmHg to 38 kg/cm²)
- $1/4" \rightarrow 5/16"$ (2min \rightarrow 2.5min)
- No oil is used in pressure test of gauges.
 - \rightarrow For prevention of contamination

- Temperature scale indicates the relationship between pressure and temperature in gas saturated state.
- Differences
- Change in pressure
- Change in service port diameter
- 7. Charge hose for R410A



- Specifications
- Working pressure 5.08 MPa (51.8 kg/cm²)
- Rupture pressure 25.4 MPa (259 kg/cm²)
- Available with and without hand-operate valve that prevents refrigerant from outflow.
- Differences
- Pressure proof hose
- Change in service port diameter
- · Use of nylon coated material for HFC resistance
- 8. Charging cylinder



- Specifications
- Use weigher for refrigerant charge listed below to charge directly from refrigerant cylinder.
- Differences
- The cylinder can not be used for mixed refrigerant since mixing ratio is changed during charging.

When R410A is charged in liquid state using charging cylinder, foaming phenomenon is generated inside charging cylinder.

9. Weigher for refrigerant charge



- Specifications
- High accuracy TA101A (for 10-kg cylinder) = ± 2g TA101B (for 20-kg cylinder) = ± 5g
- Equipped with pressure-resistant sight glass to check liquid refrigerant charging.
- A manifold with separate ports for HFCs and previous refrigerants is equipped as standard accessories.
- Differences
- Measurement is based on weight to prevent change of mixing ratio during charging.

10. Charge mouthpiece



- Specifications
- For R410A, 1/4" \rightarrow 5/16" (2min \rightarrow 2.5min)
- Material is changed from CR to H-NBR.
- Differences
- Change of thread specification on hose connection side (For the R410A use)
- Change of sealer material for the HFCs use.

Index

Α

A0	173
A1	174
A3	
A6	
A7	178
A9	
AF	
AJ	
Abnormal Discharge Pipe Temperature	
Abnormal Outdoor Fan Motor Signal	
About Refrigerant R410A	
Actuation of High Pressure Switch	
Actuation of Low Pressure Sensor	
Address Duplication of Central	
Remote Controller	
Address Duplication, Improper Setting	241, 248
Applicable range of Field setting	•
Auto restart after power failure reset	

В

Basic Control	76
---------------	----

С

•	
C4	184
C5	185
C9	186
CJ	187
Centralized Control Group No. Setting	128
Check No. 12	256
Check No. 8	255
Check No. 9	255
Check Operation	115
Check Operation not executed	221
Compressor Motor Lock	191
Compressor Motor Overcurrent/Lock	192
Compressor PI Control	77
Contents of Control Modes	130
Cool/Heat Mode Switching	142
Cooling Operation Fan Control	84
Current Sensor Malfunction	201

E	
E1	188
E3	189
E4	190
E5	191
E6	
E7	193
E9	195
Electronic Expansion Valve PI Control	. 83
Emergency Operation	100
Error of External Protection Device	173
Excessive Number of Indoor Units	230

F

-	
F3	197
F6	
Fan Motor (M1F) Lock, Overload	177
Field Setting	119
Field Setting from Outdoor Unit	132
Field Setting from Remote Controller	119
Filter Sign Setting	124
Freeze Prevention	108
Functional Parts Layout	57
RXYQ14, 16M	59
RXYQ5M	57
RXYQ8, 10, 12M	58

Н

Н7	199
Н9	200
Heating operation prohibition	102
High Pressure Protection Control	. 94

I

J

ers for
.239,246
210
211
215
212

D

Defrosting Operation	88
Demand Operation1	02
Detailed Explanation of Setting Modes1	24
Discharge Pipe Protection Control	96
Display "Under Host Computer Integrate Control"	
Blinks (Repeats Double Blink)2	54
Display "Under Host Computer Integrate Control"	
Blinks (Repeats Single Blink)2	51
Drain Level above Limit1	82
Drain Pump Control1	03

J3	 202
J5	 203
J6	 204
J8	 205
J9	 206
JA	 207
JC	 208
L	
L4	 209
L5	210

i

L8	211
L9	212
LC	213
List of Electrical and Functional Parts	293
Indoor Unit	295
Outdoor Unit	293
Louver Control for Preventing Ceiling Dirt	105
Low Pressure Drop Due to Refrigerant Shortage	or
Electronic Expansion Valve Failure	217
Low Pressure Protection Control	95

Μ

ii

M1
M8
MA
MC
Malfunction code indication by
outdoor unit PCB
Malfunction of Capacity Determination Device183
Malfunction of Discharge Pipe
Pressure Sensor
Malfunction of Discharge Pipe Thermistor
(R3, R31~33T)202
Malfunction of Drain Level Control System
(S1L)
Malfunction of Inverter Radiating Fin Temperature
Rise
Malfunction of Inverter Radiating Fin Temperature Rise Sensor
Malfunction of Moving Part of Electronic Expansion
Valve (20E)
Malfunction of Moving Part of Electronic Expansion
Valve (Y1E, Y2E)
Malfunction of Oil Equalizing Pipe
Thermistor (R7T)
Malfunction of Outdoor Unit Fan Motor
Malfunction of Receiver Gas Pipe
Thermistor (R5T)206
Malfunction of Suction Pipe Pressure Sensor208
Malfunction of Swing Flap Motor (MA)178
Malfunction of System, Refrigerant System
Address Undefined
Malfunction of Thermistor (R1T)
for Suction Air186
Malfunction of Thermistor (R2T)
for Heat Exchanger184
Malfunction of Thermistor (R2T)
for Suction Pipe203
Malfunction of Thermistor (R3T)
for Gas Pipes185
Malfunction of Thermistor (R4T)
for Outdoor Unit Heat Exchanger
Malfunction of Thermistor for
Outdoor Air (R1T)200
Malfunction of Thermostat Sensor in Remote
Controller187
Malfunction of Transmission Between Central
Remote Controller and
Indoor Unit232, 236, 242
Malfunction of Transmission Between
Indoor Units

Malfunction of Transmission Between Indoor and	
Outdoor Units in the Same System	228
Malfunction of Transmission Between Inverter and	b
Control PC Board	213
Malfunction of Transmission Between Master and	
Slave Remote Controllers	227
Malfunction of Transmission Between Optional	
Controllers for Centralized Control238,	245
Malfunction of Transmission Between	
Outdoor Units	225
Malfunction of Transmission Between Remote	
Controller and Indoor Unit	224
Method of Replacing The Inverter's Power	
Transistors and Diode Modules	314

0

Oil Return Operation	86
Operation Lamp Blinks	249
Operation Mode	75
Operation When Power is Turned On	117
Option List	301
Other Control	
Outdoor Air Processing Unit-Field Setting	127
Outdoor Unit PC Board Layout	118
Outdoor Unit Rotation	99

Ρ

R

Refrigerant Circuit	50
FXMQ125~250MFV1	
RXYQ14, 16M	
RXYQ5M	
RXYQ8, 10, 12M	52
Refrigerant Cylinders	320
Refrigerant Flow for Each Operation Mode	60
RXYQ14, 16M	68
RXYQ5M	
RXYQ8, 10, 12M	64
Refrigerant Overcharged	
Refrigerant System not Set, Incompatible	
Wiring/Piping	234
Replacement procedure for INV compressor,	
VRV II (RXYQ5M-48M)	258
Restart Standby	90
Reverse Phase, Open Phase	

S

STD Compressor Overload Protection	98
Selection of Pipe Size, Joints and Header	
Service Tools	
Setting Contents and Code No	122
Setting by dip switches	132
Setting by pushbutton switches	134
Setting of Low Noise Operation and Demand	
Operation	147
Setting of Refrigerant Additional	
Charging Operation	153
Special Control	85
Specifications	10
Indoor Units	21
Outdoor Units	10
Startup Control	85
Stopping Operation	91

Т

Test Operation	114
Thermistor Resistance / Temperature	
Characteristics	311
Thermostat Sensor in Remote Controller	106
Troubleshooting (OP	
Central Remote Controller)	236
Schedule Timer)	242
Unified ON/OFF Controller)	249

U

•	
U0	
U1	218
U2	
U3	221
U4	222
U5	224
U7	225
U8	227
U9	228
UA	
UC	
UE	.232, 236, 242
UF	
UH	235

iv

Drawings & Flow Charts

Α

Abnormal Discharge Pipe Temperature	.197
Abnormal Outdoor Fan Motor Signal	.199
Actuation of High Pressure Switch	.189
Actuation of Low Pressure Sensor	.190
Address Duplication of Central	
Remote Controller	.231
Address Duplication, Improper Setting 241,	248

С

Centralized Control Group No. Setting	
BRC1A Type12	28
BRC7C Type12	29
Group No. Setting Example12	29
Charge hose for R410A	25
Charge mouthpiece	26
Charging cylinder	
Check No. 12	56
Check No. 8	55
Check No. 9	55
Check Operation not executed22	21
Compressor Motor Lock19	91
Compressor Motor Overcurrent/Lock19	92
Contents of Control Modes	
How to Select Operation Mode13	31
Current Sensor Malfunction20	01

D

—
Discharge air temperature control
Cooling operations110
Heating operations111
Display "Under Host Computer Integrate Control"
Blinks (Repeats Double Blink)254
Display "Under Host Computer Integrate Control"
Blinks (Repeats Single Blink)251
Display of sensor and address data167
Drain Level above Limit
Drain Pump Control
When the Float Switch is Tripped and "AF" is
Displayed on the
Remote Controller104
When the Fleet Switch is Tripped During

Field Setting From Outdoor Unit	
Mode changing procedure	
Setting by pushbutton switches	
Field Setting from Outdoor Unit	
Setting by dip switches 132	•
Flaring tool	
Forced fan ON 167	,
Freeze Prevention 108	,
Functional Parts Layout57	,
RXYQ14, 16M)
RXYQ5M57	,
RXYQ8, 10, 12M 58	,

G

Gauge manifold for R410A	
--------------------------	--

Н

How to Enter the Service Mode 1	66
---------------------------------	----

Improper Combination of Optional Controller	rs
for Centralized Control	239, 246
Individual setting	167
Inverter Compressor Abnormal	210
Inverter Current Abnormal	211
Inverter Over-Ripple Protection	215
Inverter Start up Error	212

L

Leak tester	324
Low Pressure Drop Due to Refrigerant Shortage	
or Electronic Expansion Valve Failure	217

Μ

Malfunction hysteresis display
Malfunction of Capacity Determination Device 183
Malfunction of Discharge Pipe
Pressure Sensor
Malfunction of Discharge Pipe
Thermistor (R3, R31~33T)
Malfunction of Drain Level
Control System (S1L) 175

When the Float Switch is Tripped During
Cooling OFF by Thermostat103When the Float Switch is Tripped During
Heating Operation104When the Float Switch is Tripped While the
Cooling Thermostat is ON103

Ε

F Fan Motor (M1F) Lock, Overload177

Malfunction of Inverter Radiating Fin
Temperature Rise 209
Malfunction of Inverter Radiating Fin
Temperature Rise Sensor
Malfunction of Moving Part of Electronic
Expansion Valve (20E)
Malfunction of Moving Part of Electronic
Expansion Valve (Y1E, Y2E)
Malfunction of Oil Equalizing Pipe
Thermistor (R7T)
Malfunction of Outdoor Unit Fan Motor 193
Malfunction of Receiver Gas Pipe
Thermistor (R5T)

Malfunction of Suction Pipe Pressure Sensor208
Malfunction of Swing Flap Motor (MA)178
Malfunction of System, Refrigerant
System Address Undefined235
Malfunction of Thermistor (R1T)
for Suction Air186
Malfunction of Thermistor (R2T)
for Heat Exchanger184
Malfunction of Thermistor (R2T)
for Suction Pipe203
Malfunction of Thermistor (R3T)
for Gas Pipes185
Malfunction of Thermistor (R4T)
for Outdoor Unit Heat Exchanger204
Malfunction of Thermistor for
Outdoor Air (R1T)200
Malfunction of Thermostat Sensor in Remote
Controller187
Malfunction of Transmission Between
Central Remote Controller and
Indoor Unit
Malfunction of Transmission Between Indoor
and Outdoor Units in the Same System228
Malfunction of Transmission
Between Indoor Units222
Malfunction of Transmission Between Inverter
and Control PC Board213
Malfunction of Transmission Between Master
and Slave Remote Controllers227
Malfunction of Transmission Between Optional
Controllers for Centralized Control 238, 245
Malfunction of Transmission Between
Outdoor Units225
Malfunction of Transmission Between Remote
Controller and Indoor Unit224
Method of Replacing The Inverter's
Power Transistors and Diode Modules314
Diode Module
Power Transistor IGBT
(On Inverter PC Board)315

0

Operation Lamp Blinks	249
Outdoor Unit PC Board Layout	118

Ρ

PC Board Defect	
Piping Diagrams	

RXYQ8, 10, 12M	52
Refrigerant Cylinders	320
Refrigerant Flow for Each Operation Mode	60
RXYQ14, 16M	68
RXYQ5M	60
RXYQ8, 10, 12M	64
Refrigerant oil (Air compal)	324
Refrigerant Overcharged	198
Refrigerant R410A	318
Refrigerant System not Set, Incompatible	
Wiring/Piping	234
Replacement procedure for INV compressor,	
VRV II (RXYQ5M-48M)	258
Reverse Phase, Open Phase	218

S

Selection of Operation Mode	109
Setting of Air Flow Direction	
Adjustment Range	126
Setting of Demand Operation	
Image of operation in the case of A	150
Image of operation in the case of A and B	150
Image of operation in the case of B	150
Setting of Low Noise Operation	
Image of operation in the case of A	148
Image of operation in the case of A, B	148
Image of operation in the case of B	148
Simplified Remote Controller	121
BRC2A51	121

Т

Test Operation	115
Thermostat Sensor in Remote Controller	
Cooling	106
Heating	107
Torque wrench	323
Troubleshooting (OP	
Central Remote Controller)	236
Schedule Timer)	242
Unified ON/OFF Controller)	249

U

Unit No. transfer		167
-------------------	--	-----

V Va

Vacuum pump with check valve	323
------------------------------	-----

W

Indoor Unit	263
Outdoor Unit	260
Piping Installation Point	304
The Example of A Wrong Pattern	305
Power Supply Insufficient or	
Instantaneous Failure	219
Pressure Sensor	313

R

Refrigerant Circuit	50
FXMQ125~250MFV1	56
RXYQ14, 16M	54
RXYQ5M	50

Weigher for refrigerant charge	326
Wired Remote Controller	119
Wireless Remote Controller - Indoor Unit	120
BRC7C type	120
Wiring Diagrams for Reference	269
Field Wiring	272
Indoor Unit	275
Outdoor Unit	269

vi



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to convisor related to the product as to services related to the product.



ISO14001 assures an effective environmental



management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the



Daikin units comply with the European regulations that guarantee the safety of the product.

VRV products are not within the scope of the Eurovent certification programme.

environment.

Specifications are subject to change without prior notice

DAIKIN EUROPE N.V.

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