DAIKIN

Si39-501

Service Manual

VRV II®

RXQ5-48MAY1
R-410A Cooling Only 50Hz



VRV II R-410A Cooling Only 50Hz

1. Introduction

1.1 Safety Cautions

Cautions and Warnings

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

△ This symbol indicates 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.	
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.	
The step-up capacitor supplies high-voltage electricity to the electrical components of the outdoor unit. Be sure to discharge the capacitor completely before conducting repair work. A charged capacitor can cause an electrical shock.	
Do not start or stop the air conditioner operation by plugging or unplugging the power cable plug. Plugging or unplugging the power cable plug to operate the equipment can cause an electrical shock or fire.	

Caution	
Do not repair the electrical components with wet hands. Working on the equipment with wet hands can cause an electrical shock.	
Do not clean the air conditioner by splashing water. Washing the unit with water can cause an electrical shock.	
Be sure to provide the grounding when repairing the equipment in a humid or wet place, to avoid electrical shocks.	
Be sure to turn off the power switch and unplug the power cable when cleaning the equipment. The internal fan rotates at a high speed, and cause injury.	
Do not tilt the unit when removing it. The water inside the unit can spill and wet the furniture and floor.	
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 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.	
Do not mix air or gas other than the specified refrigerant (R-410A) in the refrigerant system. If air enters the refrigerating system, an excessively high pressure results, causing equipment damage and injury.	
If the refrigerant gas leaks, be sure to locate the leak and repair it before charging the refrigerant. After charging refrigerant, make sure that there is no refrigerant leak. If the leak cannot be located and the repair work must be stopped, be sure to perform pump-down and close the service valve, to prevent the refrigerant gas from leaking into the room. The refrigerant gas itself is harmless, but it can generate toxic gases when it contacts flames, such as fan and other heaters, stoves and ranges.	
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.	
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.	
If the power cable and lead wires have scratches or deteriorated, be sure to replace them. Damaged cable and wires can cause an electrical shock, excessive heat generation or fire.	
Do not use a joined power cable or extension cable, or share the same power outlet with other electrical appliances, since it can cause an electrical shock, excessive heat generation 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.	
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.
	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 2005 VRVII series Cooling Only 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 Cooling Only System.

September, 2005

After Sales Service Division

Part 1
General Information

1. Model Names of Indoor/Outdoor Units

*Indoor Units

Type		Model Name											Power Supply
Ceiling Mounted Cassette Type (Double Flow)	FXCQ	20M	25M	32M	40M	50M	63M	80M	—	125M	—	—	VE
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	—	—	
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	—	—	—	—	—	

Note:FXDQ has following 2 Series, as show below. General, Asia (except for EU, China and Australia)
FXDQ-NVET: without Drain Pump
FXDQ-NVE: with Drain Pump

*Indoor Units (Connection Unit Series)

Type		Model Name											Power Supply
Ceiling Suspended Cassette Type	FXUQ	—	—	—	—	—	—	71M	100M	125M	—	—	V1
Wall Mounted Type	FXAQ	20MH	25MH	32MH	40MH	50MH	—	—	—	—	—	—	
Floor Standing Type	FXLQ	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
Cooling Only	RXQ	5MA	8MA	10MA	12MA	14MA	16MA	18MA	20MA	22MA	24MA	26MA	Y1

Series		Model Name											Power Supply
Cooling Only	RXQ	28MA	30MA	32MA	34MA	36MA	38MA	40MA	42MA	44MA	46MA	48MA	Y1

VE: 1ϕ, 220~240V, 50Hz, 1ϕ, 220V, 60Hz
V1: 1ϕ, 220~240V, 50Hz
Y1: 3ϕ, 380~415V, 50Hz

***Note:** Refer to the Engineering Data of ED39-428B concerning about the informations of Indoor Units.

2. External Appearance

2.1 Indoor Units

Ceiling Mounted Cassette Type (Double Flow)

FXCQ20M
FXCQ25M
FXCQ32M
FXCQ40M
FXCQ50M
FXCQ63M
FXCQ80M
FXCQ125M

Wall Mounted Type

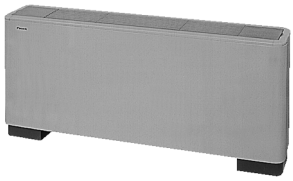
FXAQ20M
FXAQ25M
FXAQ32M
FXAQ40M
FXAQ50M
FXAQ63M

Ceiling Mounted Cassette Type (Multi Flow)

FXFQ25M
FXFQ32M
FXFQ40M
FXFQ50M
FXFQ63M
FXFQ80M
FXFQ100M
FXFQ125M

Floor Standing Type

FXLQ20M
FXLQ25M
FXLQ32M
FXLQ40M
FXLQ50M
FXLQ63M

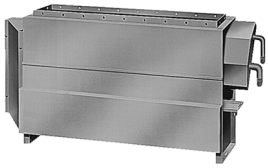


Ceiling Mounted Cassette Corner Type

FXKQ25M
FXKQ32M
FXKQ40M
FXKQ63M

Concealed Floor Standing Type

FXNQ20M
FXNQ25M
FXNQ32M
FXNQ40M
FXNQ50M
FXNQ63M



Slim Ceiling Mounted Duct Type

FXDQ20N
FXDQ25N
FXDQ32N
FXDQ40N
FXDQ50N
FXDQ63N
with Drain Pump (VE)
without Drain Pump (VET)

General, Asia (except for EU, China and Australia)

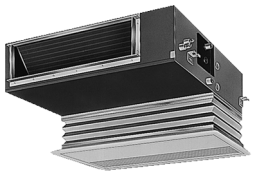
Ceiling Suspended Cassette Type (Connection Unit Series)

FXUQ71M + BEVQ71M
FXUQ100M + BEVQ100M
FXUQ125M + BEVQ125M

Connection Unit

Ceiling Mounted Built-In Type

FXSQ20M
FXSQ25M
FXSQ32M
FXSQ40M
FXSQ50M
FXSQ63M
FXSQ80M
FXSQ100M
FXSQ125M



Wall Mounted Type (Connection Unit Series)

FXAQ20MH
FXAQ25MH
FXAQ32MH
FXAQ40MH
FXAQ50MH
+ BEVQ50M
Connection Unit

Ceiling Mounted Duct Type

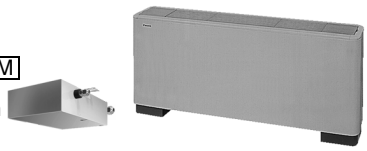
FXMQ40M
FXMQ50M
FXMQ63M
FXMQ80M
FXMQ100M
FXMQ125M
FXMQ200M
FXMQ250M

FXMQ40~125M

FXMQ200 · 250M

Floor Standing Type (Connection Unit Series)

FXLQ20MH
FXLQ25MH
FXLQ32MH
FXLQ40MH
FXLQ50MH
+ BEVQ50M
Connection Unit



Ceiling Suspended Type

FXHQ32M
FXHQ63M
FXHQ100M

2.2 Outdoor Units

RXQ5MA	RXQ8MA, 10MA,12MA	RXQ14MA, 16MA
		

RXQ18MA, 20MA, 22MA, 24MA	RXQ26MA, 28MA
	

RXQ30MA, 32MA	RXQ34MA, 36MA	RXQ38MA, 40MA
		

RXQ42MA, 44MA	RXQ46MA, 48MA
	

3. Combination of Outdoor Units

System Capacity	Number of units	Module						Outdoor Unit Multi Connection Piping Kit (Option)
		5	8	10	12	14	16	
5HP	1	●						—
8HP	1		●					
10HP	1			●				
12HP	1				●			
14HP	1					●		
16HP	1						●	
18HP	2		●	●				Cooling Only: BHFP22MA90
20HP	2			●●				
22HP	2			●	●			
24HP	2				●●			
26HP	2			●			●	
28HP	2				●		●	
30HP	2					●	●	
32HP	2						●●	
34HP	3			●	●●			Cooling Only: BHFP22MA135
36HP	3				●●●			
38HP	3				●●	●		
40HP	3				●●		●	
42HP	3			●			●●	
44HP	3				●		●●	
46HP	3					●	●●	
48HP	3						●●●	

Note: For multiple connection of 18HP system or more, an optional Daikin Outdoor Unit Multi Connection Piping Kit is required.

4. Model Selection

VRV II Cooling Only Series

Connectable indoor units number and capacity

HP	5HP	8HP	10HP	12HP	14HP	16HP
System name	RXQ5MA	RXQ8MA	RXQ10MA	RXQ12MA	RXQ14MA	RXQ16MA
Outdoor unit 1	RXQ5MA	RXQ8MA	RXQ10MA	RXQ12MA	RXQ14MA	RXQ16MA
Outdoor unit 2	–	–	–	–	–	–
Outdoor unit 3	–	–	–	–	–	–
Total number of connectable indoor units	8	13	16	20	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	RXQ18MA	RXQ20MA	RXQ22MA	RXQ24MA	RXQ26MA	RXQ28MA
Outdoor unit 1	RXQ8MA	RXQ10MA	RXQ10MA	RXQ12MA	RXQ10MA	RXQ12MA
Outdoor unit 2	RXQ10MA	RXQ10MA	RXQ12MA	RXQ12MA	RXQ16MA	RXQ16MA
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	RXQ30MA	RXQ32MA	RXQ34MA	RXQ36MA	RXQ38MA	RXQ40MA
Outdoor unit 1	RXQ14MA	RXQ16MA	RXQ10MA	RXQ12MA	RXQ12MA	RXQ12MA
Outdoor unit 2	RXQ16MA	RXQ16MA	RXQ12MA	RXQ12MA	RXQ12MA	RXQ12MA
Outdoor unit 3	–	–	RXQ12MA	RXQ12MA	RXQ14MA	RXQ16MA
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	RXQ42MA	RXQ44MA	RXQ46MA	RXQ48MA
Outdoor unit 1	RXQ10MA	RXQ12MA	RXQ14MA	RXQ16MA
Outdoor unit 2	RXQ16MA	RXQ16MA	RXQ16MA	RXQ16MA
Outdoor unit 3	RXQ16MA	RXQ16MA	RXQ16MA	RXQ16MA
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

Type		Model Name											Power Supply
Ceiling Mounted Cassette Type (Double Flow)	FXCQ	20M	25M	32M	40M	50M	63M	80M	—	125M	—	—	VE
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	—	—	
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	—	—	—	—	—	V1

Note:FXDQ has following 2 Series, as show below. General, Asia (except for EU, China and Australia)
FXDQ-NVET: without Drain Pump
FXDQ-NVE: with Drain Pump

Connectable Indoor Unit (Connection Unit Series)

Type		Model Name											Power Supply
Ceiling Suspended Cassette Type	FXUQ	—	—	—	—	—	—	71M	100M	125M	—	—	V1
Wall Mounted Type	FXAQ-MH	20MH	25MH	32MH	40MH	50MH	—	—	—	—	—	—	
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 type	P25 type	P32 type	P40 type	P50 type	P63 type	P80 type	P100 type	P125 type	P200 type	P250 type
Selecting model capacity	2.2 kW	2.8 kW	3.5 kW	4.5 kW	5.6 kW	7.0 kW	9.0 kW	11.2 kW	14.0 kW	22.4 kW	28.0 kW
Equivalent output	0.8HP	1HP	1.25HP	1.6HP	2.0HP	2.5HP	3.2HP	4HP	5HP	8HP	10HP

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.

Differences from Conventional Models

Item	Differences		
	Object	New model (MA Model)	Conventional model (M Model)
Compressor	Connection of equalizer oil pipe	● NONE (No particular changes in terms of service)	● YES
Workability	Equalizer oil pipe for multi-outdoor-unit system	● NONE	● YES
	Procedure for calculating refrigerant refilling quantity	● Refilling quantity due to piping length + Adjustment quantity according to models of outdoor units	● Refilling quantity due to piping length - Adjustment quantity according to models of outdoor units
Optional accessories	Branch pipe for outdoor unit connection	● Y branch Type: BHFP22MA90/135	● T branch Type: BHFP22M90/135

Part 2
Specifications

1. Specifications

1.1 Outdoor Units

Model Name			RXQ5MAY1	RXQ8MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	12,100	19,400
		Btu / h	48,100	76,800
		kW	14.1	22.5
★2 Cooling Capacity (19.0°CWB)		kW	14.0	22.4
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)		mm	1600×635×765	1600×930×765
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	13.72	13.72+10.53
	Number of Revolutions	r.p.m	6480	6480, 2900
	Motor Output×Number of Units	kW	3.0×1	(0.7+4.5)×1
	Starting Method		Direct on line (Inverter Drive)	Soft start + Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.35×1	0.75×1
	Air Flow Rate	m^3/min	75	175
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipe	mm	ϕ15.9(Flare Connection)	ϕ19.1 (Brazing Connection)
Product Mass (Machine weight)		kg	150	230
Safety Devices			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
Capacity Control		%	14~100	14~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	5.6	7.6
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049338	C: 4D049339

Notes:

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

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

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

The Reference Number
C~: Partly corrected drawings.
J~: Original drawing is Japanese
V~: Printing Convenience

Model Name			RXQ10MAY1	RXQ12MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	24,300	29,000
		Btu / h	96,200	115,000
		kW	28.2	33.7
★2 Cooling Capacity (19.0°CWB)		kW	28.0	33.5
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)		mm	1600×930×765	1600×930×765
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	13.72+10.53	13.72+10.53
	Number of Revolutions	r.p.m	6480, 2900	6480, 2900
	Motor Output×Number of Units	kW	(1.6+4.5)×1	(2.8+4.5)×1
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×1	0.75×1
	Air Flow Rate	m^3/min	180	180
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipe	mm	ϕ22.2 (Brazing Connection)	ϕ22.2 (Brazing Connection)
Product Mass (Machine Weight)		kg	230	230
Safety Devices			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
Capacity Control		%	14~100	14~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	8.6	9.0
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049340	C: 4D049341

Notes:

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

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

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

Model Name			RXQ14MAY1	RXQ16MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	34,600	39,000
		Btu / h	137,000	155,000
		kW	40.2	45.3
★2 Cooling Capacity (19.0°CWB)		kW	40.0	45.0
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)		mm	1600×1240×765	1600×1240×765
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	13.72+10.53+10.53	13.72+10.53+10.53
	Number of Revolutions	r.p.m	6480, 2900×2	6480, 2900×2
	Motor Output×Number of Units	kW	(1.1+4.5+4.5)×1	(2.7+4.5+4.5)×1
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×1	0.75×1
	Air Flow Rate	m^3/min	210	210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	Gas Pipe	mm	ϕ28.6 (Brazing Connection)	ϕ28.6 (Brazing Connection)
Product Mass (Machine Weight)		kg	312	312
Safety Devices			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
Capacity Control		%	10~100	10~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	11.6	12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049342	C: 4D049343

Notes:

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

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

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

Model Name (Combination Unit)			RXQ18MAY1	RXQ20MAY1
Model Name (Independent Unit)			RXQ8MAY1+RXQ10MAY1	RXQ10MAY1+RXQ10MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	43,600	48,400
		Btu / h	173,000	192,000
		kW	50.7	56.3
★2 Cooling Capacity (19.0°CWB)		kW	50.4	56.0
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 Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53)×2	(13.72+10.53)×2
	Number of Revolutions	r.p.m	(6480, 2900)×2	(6480, 2900)×2
	Motor Output×Number of Units	kW	(0.7+4.5)+(1.6+4.5)	(1.6+4.5)×2
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×2	0.75×2
	Air Flow Rate	m^3/min	175+180	180+180
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ12.7 (Brazing Connection)	ϕ15.9 (Brazing Connection)
	Gas Pipe	mm	ϕ28.6 (Brazing Connection)	ϕ28.6 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+230	230+230
Safety Devices			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
Capacity Control		%	7~100	7~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	7.6+8.6	8.6+8.6
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049339, 4D049340	C: 4D049340

Notes:

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

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

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

Model Name (Combination Unit)			**RXQ22MAY1**	**RXQ24MAY1**
Model Name (Independent Unit)			**RXQ10MAY1+RXQ12MAY1**	**RXQ12MAY1+RXQ12MAY1**
★1 Cooling Capacity (19.5°CWB)		kcal / h	53,200	58,800
		Btu / h	211,000	233,000
		kW	61.9	68.4
★2 Cooling Capacity (19.0°CWB)		kW	61.5	67.0
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 Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53)×2	(13.72+10.53)×2
	Number of Revolutions	r.p.m	(6480, 2900)×2	(6480, 2900)×2
	Motor Output×Number of Units	kW	(1.6+4.5)+(2.8+4.5)	(2.8+4.5)×2
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×2	0.75×2
	Air Flow Rate	m^3/min	180+180	180+180
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ15.9 (Brazing Connection)	ϕ15.9 (Brazing Connection)
	Gas Pipe	mm	ϕ28.6 (Brazing Connection)	ϕ28.6 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+230	230+230
Safety Devices			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
Capacity Control		%	7~100	6~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	8.6+9.0	9.0+9.0
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D039340, 4D039341	C: 4D049341

Notes:

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

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

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

Model Name (Combination Unit)			RXQ26MAY1	RXQ28MAY1
Model Name (Independent Unit)			RXQ10MAY1+RXQ16MAY1	RXQ12MAY1+RXQ16MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	63,100	68,000
		Btu / h	250,000	270,000
		kW	73.4	79.0
★2 Cooling Capacity (19.0°CWB)		kW	73.0	78.5
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 Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m³/h	(13.72+10.53)+(13.72+10.53+10.53)	(13.72+10.53)+(13.72+10.53+10.53)
	Number of Revolutions	r.p.m	(6480, 2900)+(6480, 2900×2)	(6480, 2900)+(6480, 2900×2)
	Motor Output×Number of Units	kW	(1.6+4.5)+(2.7+4.5+4.5)	(2.8+4.5)+(2.7+4.5+4.5)
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×2	0.75×2
	Air Flow Rate	m³/min	180+210	180+210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ34.9 (Brazing Connection)	ϕ34.9 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+312	230+312
Safety Devices			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
Capacity Control		%	6~100	6~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	8.6+12.4	9.0+12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049340, 4D049343	C: 4D049341, 4D049343

Notes:

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

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

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

Model Name (Combination Unit)			**RXQ30MAY1**	**RXQ32MAY1**
Model Name (Independent Unit)			**RXQ14MAY1+RXQ16MAY1**	**RXQ16MAY1+RXQ16MAY1**
★1 Cooling Capacity (19.5°CWB)		kcal / h	73,500	77,800
		Btu / h	292,000	309,000
		kW	85.5	90.5
★2 Cooling Capacity (19.0°CWB)		kW	85.0	90.0
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 Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53+10.53)×2	(13.72+10.53+10.53)×2
	Number of Revolutions	r.p.m	(6480, 2900×2)×2	(6480, 2900×2)×2
	Motor Output×Number of Units	kW	(1.1+4.5+4.5)+(2.7+4.5+4.5)	(2.7+4.5+4.5)+(2.7+4.5+4.5)
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×2	0.75×2
	Air Flow Rate	m^3/min	210+210	210+210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ34.9 (Brazing Connection)	ϕ34.9 (Brazing Connection)
Product Mass (Machine Weight)		kg	312+312	312+312
Safety Devices			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
Capacity Control		%	5~100	5~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	11.6+12.4	12.4+12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049342, 4D049343	C: 4D049343

Notes:

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

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

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

Model Name (Combination Unit)			RXQ34MAY1	RXQ36MAY1
Model Name (Independent Unit)			RXQ10MAY1+RXQ12MAY1+RXQ12MAY1	RXQ12MAY1+RXQ12MAY1+RXQ12MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	83,100	87,700
		Btu / h	330,000	348,000
		kW	96.6	102
★2 Cooling Capacity (19.0°CWB)		kW	95.0	101
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)+(1600×930×765)+(1600×930×765)
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53)×2+(13.72+10.53+10.53)	(13.72+10.53)×3
	Number of Revolutions	r.p.m	(6480, 2900)×3	(6480, 2900)×3
	Motor Output×Number of Units	kW	(1.6+4.5)+(1.6+4.5)+(2.8+4.5)	(2.8+4.5)×3
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×3	0.75×3
	Air Flow Rate	m^3/min	180+180+180	180+180+180
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ34.9 (Brazing Connection)	ϕ34.9 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+230+230	230+230+230
Safety Devices			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
Capacity Control		%	4~100	4~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	8.6+8.6+9.0	8.6+8.6+9.0
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049340, 4D049341	C: 4D049341

Notes:

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

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

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

Model Name (Combination Unit)			**RXQ38MAY1**	**RXQ40MAY1**
Model Name (Independent Unit)			**RXQ12MAY1+RXQ12MAY1+RXQ14MAY1**	**RXQ12MAY1+RXQ12MAY1+RXQ16MAY1**
★1 Cooling Capacity (19.5°CWB)		kcal / h	92,900	98,000
		Btu / h	368,000	389,000
		kW	108	114
★2 Cooling Capacity (19.0°CWB)		kW	107	112
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)		mm	(1600×930×765)+(1600×930×765)+(1600×1240×765)	(1600×930×765)+(1600×930×765)+(1600×1240×765)
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m³/h	(13.72+10.53)×2+(13.72+10.53+10.53)	(13.72+10.53)×2+(13.72+10.53+10.53)
	Number of Revolutions	r.p.m	(6480, 2900)×2+(6480, 2900×2)	(6480, 2900)×2+(6480, 2900×2)
	Motor Output×Number of Units	kW	(2.8+4.5)×2+(1.1+4.5+4.5)	(2.8+4.5)×2+(2.7+4.5+4.5)
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×3	0.75×3
	Air Flow Rate	m³/min	180+180+210	180+180+210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ41.3 (Brazing Connection)	ϕ41.3 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+230+312	230+230+312
Safety Devices			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
Capacity Control		%	4~100	4~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	9.0+9.0+11.6	9.0+9.0+12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049341, 4D049342	C: 4D049341, 4D049343

Notes:

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

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

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

Model Name (Combination Unit)			RXQ42MAY1	RXQ44MAY1
Model Name (Independent Unit)			RXQ10MAY1+RXQ16MAY1+RXQ16MAY1	RXQ12MAY1+RXQ16MAY1+RXQ16MAY1
★1 Cooling Capacity (19.5°CWB)		kcal / h	102,000	108,000
		Btu / h	406,000	427,000
		kW	119	125
★2 Cooling Capacity (19.0°CWB)		kW	118	124
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)	(1600×930×765)+(1600×1240×765)+(1600×1240×765)
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53)+(13.72+10.53+10.53)×2	(13.72+10.53)+(13.72+10.53+10.53)×2
	Number of Revolutions	r.p.m	(6480, 2900), (6480, 2900×2)×2	(6480, 2900), (6480, 2900×2)×2
	Motor Output×Number of Units	kW	(1.6+4.5)+(2.7+4.5+4.5)×2	(2.8+4.5)+(2.7+4.5+4.5)×2
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×3	0.75×3
	Air Flow Rate	m^3/min	180+210+210	210+210+210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ41.3 (Brazing Connection)	ϕ41.3 (Brazing Connection)
Product Mass (Machine Weight)		kg	230+312+312	230+312+312
Safety Devices			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
Capacity Control		%	4~100	4~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	8.6+12.4+12.4	9.0+12.4+12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049340, 4D049343	C: 4D049341, 4D049343

Notes:

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

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

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

Model Name (Combination Unit)			**RXQ46MAY1**	**RXQ48MAY1**
Model Name (Independent Unit)			**RXQ14MAY1+RXQ16MAY1+RXQ16MAY1**	**RXQ16MAY1+RXQ16MAY1+RXQ16MAY1**
★1 Cooling Capacity (19.5°CWB)		kcal / h	113,000	117,000
		Btu / h	447,000	464,000
		kW	131	136
★2 Cooling Capacity (19.0°CWB)		kW	130	135
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)+(1600×1240×765)+(1600×1240×765)
Heat Exchanger			Cross Fin Coil	Cross Fin Coil
Comp.	Type		Hermetically Sealed Scroll Type	Hermetically Sealed Scroll Type
	Piston Displacement	m^3/h	(13.72+10.53+10.53)×3	(13.72+10.53+10.53)×3
	Number of Revolutions	r.p.m	(6480, 2900×2)×3	(6480, 2900×2)×3
	Motor Output×Number of Units	kW	(1.1+4.5+4.5)+(2.7+4.5+4.5)×2	(2.7+4.5+4.5)×3
	Starting Method		Direct on line (Inverter Drive)	Direct on line (Inverter Drive)
Fan	Type		Propeller Fan	Propeller Fan
	Motor Output	kW	0.75×3	0.75×3
	Air Flow Rate	m^3/min	210+210+210	210+210+210
	Drive		Direct Drive	Direct Drive
Connecting Pipes	Liquid Pipe	mm	ϕ19.1 (Brazing Connection)	ϕ19.1 (Brazing Connection)
	Gas Pipe	mm	ϕ41.3 (Brazing Connection)	ϕ41.3 (Brazing Connection)
Product Mass (Machine Weight)		kg	312+312+312	312+312+312
Safety Devices			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
Capacity Control		%	3~100	3~100
Refrigerant	Refrigerant Name		R-410A	R-410A
	Charge	kg	11.6+12.4+12.4	12.4+12.4+12.4
	Control		Electronic Expansion Valve	Electronic Expansion Valve
Refrigerator Oil			Refer to the nameplate of compressor	Refer to the nameplate of compressor
Standard Accessories			Installation Manual, Operation Manual, Connection Pipes, Clamps	Installation Manual, Operation Manual, Connection Pipes, Clamps
Drawing No.			C: 4D049342, 4D049343	C: 4D049343

Notes:

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

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

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

1.2 Indoor Units

Ceiling Mounted Cassette Type (Double Flow)

Model				FXCQ20MVE	FXCQ25MVE	FXCQ32MVE	FXCQ40MVE
★1 Cooling Capacity (19.5°CWB)			kcal/h	2,000	2,500	3,200	4,000
			Btu/h	7,800	9,900	12,600	16,000
			kW	2.3	2.9	3.7	4.7
★2 Cooling Capacity (19.0°CWB)			kW	2.2	2.8	3.6	4.5
Casing				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 Fin Coil)	Rows×Stages×Fin Pitch		mm	2×10×1.5	2×10×1.5	2×10×1.5	2×10×1.5
	Face Area		m²	2×0.100	2×0.100	2×0.100	2×0.145
Fan	Model			D17K2AA1	D17K2AB1	D17K2AB1	2D17K1AA1
	Type			Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units		W	10×1	15×1	15×1	20×1
	Air Flow Rate (H/L)		m³/min	7/5	9/6.5	9/6.5	12/9
			cfm	247/177	318/230	318/230	424/318
	Drive			Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control				Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material				Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam
Piping Connections	Liquid Pipes		mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes		mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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	26	26	26	31
★4 Sound Level (H/L) (220V)			dBA	32/27	34/28	34/28	34/29
Safety Devices				Fuse, Thermal Protector for Fan Motor	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	Electronic Expansion Valve
Connectable outdoor unit				R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panels (Option)	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)
	Dimensions: (H×W×D)		mm	53×1,030×680	53×1,030×680	53×1,030×680	53×1,245×680
	Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Weight		kg	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.				C:3D039413			

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Ceiling Mounted Cassette Type (Double Flow)

Model			FXCQ50MVE	FXCQ63MVE	FXCQ80MVE	FXCQ125MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	5,000	6,300	8,000	12,500
		Btu/h	19,800	24,900	31,700	49,500
		kW	5.8	7.3	9.3	14.5
★2 Cooling Capacity (19.0°CWB)		kW	5.6	7.1	9.0	14.0
Casing			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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×10×1.5	2×10×1.5	2×10×1.5	2×10×1.5
	Face Area	m²	2×0.145	2×0.184	2×0.287	2×0.287
Fan	Model		2D17K1AA1	2D17K2AA1VE	3D17K2AA1	3D17K2AB1
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	20×1	30×1	50×1	85×1
	Air Flow Rate (H/L)	m³/min	12/9	16.5/13	26/21	33/25
		cfm	424/318	582/459	918/741	1,165/883
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam	Glass Wool/Urethane Foam
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	32	35	47	48
★4 Sound Level (H/L)		dBA	34/29	37/32	39/34	44/38
Safety Devices			Fuse, Thermal Protector for Fan Motor	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	Electronic Expansion Valve
Connectable outdoor unit			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panels (Option)	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)
	Dimensions: (H×W×D)	mm	53×1,245×680	53×1,430×680	53×1,920×680	53×1,920×680
	Air Filter		Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	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.
Drawing No.			C:3D039413			

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Ceiling Mounted Cassette Type (Multi-flow)

Model			FXFQ25MVE	FXFQ32MVE	FXFQ40MVE	FXFQ50MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,500	3,200	4,000	5,000
		Btu/h	9,900	12,600	16,000	19,800
		kW	2.9	3.7	4.7	5.8
★2 Cooling Capacity (19.0°CWB)		kW	2.8	3.6	4.5	5.6
Casing			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	2×8×1.2	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
	Type		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		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Polyurethane Form	Polyurethane Form	Polyurethane Form	Polyurethane Form
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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	24	24	24	24
★4 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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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)	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.			C:3D038812			

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Ceiling Mounted Cassette Type (Multi-flow)

Model			FXFQ63MVE	FXFQ80MVE	FXFQ100MVE	FXFQ125MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	6,300	8,000	10,000	12,500
		Btu/h	24,900	31,700	39,600	49,500
		kW	7.3	9.3	11.6	14.5
★2 Cooling Capacity (19.0°CWB)		kW	7.1	9.0	11.2	14.0
Casing			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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×10×1.2	2×10×1.2	2×12×1.2	2×12×1.2
	Face Area	m²	0.454	0.454	0.544	0.544
Fan	Model		QTS46D14M	QTS46D14M	QTS46C17M	QTS46C17M
	Type		Turbo Fan	Turbo Fan	Turbo Fan	Turbo Fan
	Motor Output × Number of Units	W	30×1	30×1	120×1	120×1
	Air Flow Rate (H/L)	m³/min	18.5/14	20/15	26/21	30/24
		cfm	653/494	706/530	918/741	1,059/847
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Polyurethane Form	Polyurethane Form	Polyurethane Form	Polyurethane Form
Piping Connections	Liquid Pipes	mm	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)	φ9.5 (Flare Connection)
	Gas Pipes	mm	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)	φ15.9 (Flare Connection)
	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	25	25	29	29
★4 Sound Level (H/L)		dBA	33/28	36/31	39/33	42/36
Safety Devices			Fuse	Fuse	Fuse	Fuse
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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)	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.			C:3D038812			

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Ceiling Mounted Cassette Corner Type

Model			FXKQ25MVE	FXKQ32MVE	FXKQ40MVE	FXKQ63MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,500	3,200	4,000	6,300
		Btu/h	9,900	12,600	16,000	24,900
		kW	2.9	3.7	4.7	7.3
★2 Cooling Capacity (19.0°CWB)		kW	2.8	3.6	4.5	7.1
Casing			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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×11×1.75	2×11×1.75	2×11×1.75	3×11×1.75
	Face Area	m²	0.180	0.180	0.180	0.226
Fan	Model		3D12H1AN1V1	3D12H1AN1V1	3D12H1AP1V1	4D12H1AJ1V1
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	15×1	15×1	20×1	45×1
	Air Flow Rate (H/L)	m³/min	11/9	11/9	13/10	18/15
		cfm	388/318	388/318	459/353	635/530
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Polyethylene Foam	Polyethylene Foam	Polyethylene Foam	Polyethylene Foam
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	31	31	31	34
★4 Sound Level (H/L) (220V)		dBA	38/33	38/33	40/34	42/37
Safety Devices			Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable Outdoor Units			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panels (Option)	Model		BYK45FJW1	BYK45FJW1	BYK45FJW1	BYK71FJW1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
	Dimensions: (H×W×D)	mm	70×1,240×800	70×1,240×800	70×1,240×800	70×1,440×800
	Air Filter		Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
	Weight	kg	8.5	8.5	8.5	9.5
Standard Accessories			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.			C:3D038813			

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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
kcal/h=kW×860 Btu/h=kW×3412 cfm=m³/min×35.3

Slim Ceiling Mounted Duct Type (with Drain Pump)

Model			FXDQ20NVE	FXDQ25NVE	FXDQ32NVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)		mm	200×900×620	200×900×620	200×900×620
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	2×12×1.5	2×12×1.5	2×12×1.5
	Face Area	m²	0.176	0.176	0.176
Fan	Model		—	—	—
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	62×1	62×1	62×1
	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 ★4	44-15 ★4	44-15 ★4
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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	26	26	26
★5 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.			C:3D045744		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 External static pressure is changeable to set by the remote controller this pressure means “High static pressure - Standard static pressure”.

★5 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
kcal/h=kW×860 Btu/h=kW×3412 cfm=m³/min×35.3

Slim Ceiling Mounted Duct Type (with Drain Pump)

Model			FXDQ40NVE	FXDQ50NVE	FXDQ63NVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
Casing Color			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)		mm	200×900×620	200×900×620	200×1100×620
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	3×12×1.5	3×12×1.5	3×12×1.5
	Face Area	m²	0.176	0.176	0.227
Fan	Model		—	—	—
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	62×1	130×1	130×1
	Air Flow Rate (H/L)	m³/min	10.5/8.5	12.5/10.0	16.5/13.0
	External Static Pressure	Pa	44-15 ★4	44-15 ★4	44-15 ★4
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	27	28	31
★5 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.			C:3D045744		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 External static pressure is changeable to set by the remote controller this pressure means “High static pressure - Standard static pressure”.

★5 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
kcal/h=kW×860 Btu/h=kW×3412 cfm=m³/min×35.3

Slim Ceiling Mounted Duct Type (without Drain Pump)

Model			FXDQ20NVET	FXDQ25NVET	FXDQ32NVET
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)		mm	200×900×620	200×900×620	200×900×620
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	2×12×1.5	2×12×1.5	2×12×1.5
	Face Area	m²	0.176	0.176	0.176
Fan	Model		—	—	—
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	62×1	62×1	62×1
	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 ★4	44-15 ★4	44-15 ★4
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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	26	26	26
★5 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, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter
Drawing No.			C:3D049693		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 External static pressure is changeable to set by the remote controller this pressure means “High static pressure - Standard static pressure”.

★5 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
kcal/h=kW×860 Btu/h=kW×3412 RT=kW×0.284 cfm=m³/min×35.3

Slim Ceiling Mounted Duct Type (without Drain Pump)

Model			FXDQ40NVET	FXDQ50NVET	FXDQ63NVET
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
Casing Color			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (H×W×D)		mm	200×900×620	200×900×620	200×1100×620
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	3×12×1.5	3×12×1.5	3×12×1.5
	Face Area	m²	0.176	0.176	0.227
Fan	Model		—	—	—
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	62×1	130×1	130×1
	Air Flow Rate (H/L)	m³/min	10.5/8.5	12.5/10.0	16.5/13.0
	External Static Pressure	Pa	44-15 ★4	44-15 ★4	44-15 ★4
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polyethylene	Foamed Polyethylene	Foamed Polyethylene
Air Filter			Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof	Removal / Washable / Mildew Proof
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	27	28	31
★5 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, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter	Operation Manual, Installation Manual, Drain Hose, Sealing Pads, Clamps, Washers, Insulation for Fitting, Clamp Metal, Washer Fixing Plate, Screws for Duct Flanges, Air Filter
Drawing No.			C:3D049693		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 External static pressure is changeable to set by the remote controller this pressure means “High static pressure - Standard static pressure”.

★5 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
kcal/h=kW×860 Btu/h=kW×3412 RT=kW×0.284 cfm=m³/min×35.3

Ceiling Mounted Built-in Type

Model			FXSQ20MVE	FXSQ25MVE	FXSQ32MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75
	Face Area	m^2	0.088	0.088	0.088
Fan	Model		D18H3A	D18H3A	D18H3A
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	50×1	50×1	50×1
	Air Flow Rate (H/L)	m^3/min	9/6.5	9/6.5	9.5/7
	★3 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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 Weight (Mass)		kg	30	30	30
★5 Sound Level (H/L) (220V)		dBA	37/32	37/32	38/32
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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panel (Option)	Model		BYBS32DJW1	BYBS32DJW1	BYBS32DJW1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
	Dimensions: (H×W×D)	mm	55×650×500	55×650×500	55×650×500
	Weight	kg	3	3	3
Standard Accessories			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.			C:3D039431		

Notes:

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

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

★3 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
"High static pressure-Standard -Low static pressure".

4 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.

★5 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×3412 cfm=m^3/min×35.3

Ceiling Mounted Built-in Type

Model			FXSQ40MVE	FXSQ50MVE	FXSQ63MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75
	Face Area	m²	0.132	0.132	0.221
Fan	Model		D18H2A	D18H2A	2D18H2A
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	65×1	85×1	125×1
	Air Flow Rate (H/L)	m³/min	11.5/9	15/11	21/15.5
	★3 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	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 Weight (Mass)		kg	30	31	41
★5 Sound Level (H/L)		dBA	38/32	41/36	42/35
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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panel (Option)	Model		BYBS45DJW1	BYBS45DJW1	BYBS71DJW1
	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 Accessories			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.			C:3D039431		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★3 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
"High static pressure-Standard -Low static pressure".
4 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
★5 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×3412 cfm=m³/min×35.3

Ceiling Mounted Built-in Type

Model			FXSQ80MVE	FXSQ100MVE	FXSQ125MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	8,000	10,000	12,500
		Btu/h	31,700	39,600	49,500
		kW	9.3	11.6	14.5
★2 Cooling Capacity (19.0°CWB)		kW	9.0	11.2	14.0
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.75	3×14×1.75	3×14×1.75
	Face Area	m^2	0.338	0.338	0.338
Fan	Model		3D18H2A	3D18H2A	3D18H2A
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	225×1	225×1	225×1
	Air Flow Rate (H/L)	m^3/min	27/21.5	28/22	38/28
	★3 Static external pressure	Pa	113-82	107-75	78-39
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
Piping Connections	Liquid Pipes	mm	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)
	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 Weight (Mass)		kg	51	51	52
★5 Sound Level (H/L)		dBA	43/37	43/37	46/41
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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series
Decoration Panel (Option)	Model		BYBS125DJW1	BYBS125DJW1	BYBS125DJW1
	Panel Color		White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
	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 Accessories			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.			C:3D039431		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★3 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
"High static pressure-Standard".
4 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.
★5 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×3412 cfm=m^3/min×35.3

Ceiling Mounted Duct Type

Model			FXMQ40MVE	FXMQ50MVE	FXMQ63MVE	FXMQ80MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300	8,000
		Btu/h	16,000	19,800	24,900	31,700
		kW	4.7	5.8	7.3	9.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1	9.0
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×16×2.0	3×16×2.0	3×16×2.0	3×16×2.0
	Face Area	m²	0.181	0.181	0.181	0.181
Fan	Model		D11/2D3AB1VE	D11/2D3AB1VE	D11/2D3AB1VE	D11/2D3AA1VE
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	100×1	100×1	100×1	160×1
	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 ★3	157/157-118/108 ★3	157/157-118/108 ★3	157/160-108/98 ★3
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			★4	★4	★4	★4
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	44	44	44	45
★6 Sound Level (H/L)		dBA	39/35	39/35	39/35	42/38
Safety Devices			Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor	Fuse, Thermal Fuse for Fan Motor
Refrigerant Control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Connectable outdoor unit			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038814			

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★3 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means "High static pressure-Standard".
★4 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.
5 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★6 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×3412 cfm=m³/min×35.3

Ceiling Mounted Duct Type

Model			FXMQ100MVE	FXMQ125MVE	FXMQ200MVE	FXMQ250MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	10,000	12,500	19,800	24,800
		Btu/h	39,600	49,500	78,500	98,300
		kW	11.6	14.5	23.0	28.8
★2 Cooling Capacity (19.0°CWB)		kW	11.2	14.0	22.4	28.0
Casing			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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×16×2.0	3×16×2.0	3×26×2.0	3×26×2.0
	Face Area	m²	0.319	0.319	0.68	0.68
Fan	Model		2D11/2D3AG1VE	2D11/2D3AF1VE	D13/4G2DA1×2	D13/4G2DA1×2
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	270×1	430×1	380×2	380×2
	Air Flow Rate (H/L)	m³/min	29/23	36/29	58/50	72/62
		cfm	1,024/812	1,271/1,024	2,047/1,765	2,542/2,189
	External Static Pressure 50 / 60Hz	Pa	157/172-98/98 ★3	191/245-152/172 ★3	221/270-132 ★3	270/191-147 ★3
	Drive		Direct Drive	Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			★4	★4	★4	★4
Piping Connections	Liquid Pipes	mm	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ19.1(Brazing Connection)	ϕ22.2 (Brazing Connection)
	Drain Pipe	mm	VP25 (External Dia. 32 / Internal Dia. 25)	VP25 (External Dia. 32 / Internal Dia. 25)	PS1B	PS1B
Machine Weight (Mass)		kg	63	65	137	137
★6 Sound Level (H/L)		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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038814			

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★3 Static external pressure is changeable to change over the connectors inside electrical box, this pressure means
"High static pressure-Standard".
★4 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.
5 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★6 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×3412 cfm=m³/min×35.3

Ceiling Suspended Type

Model			FXHQ32MVE	FXHQ63MVE	FXHQ100MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	3,200	6,300	10,000
		Btu/h	12,600	24,900	39,600
		kW	3.7	7.3	11.6
★2 Cooling Capacity (19.0°CWB)		kW	3.6	7.1	11.2
Casing Color			White (10Y9/0.5)	White (10Y9/0.5)	White (10Y9/0.5)
Dimensions: (H×W×D)		mm	195×960×680	195×1,160×680	195×1,400×680
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	2×12×1.75	3×12×1.75	3×12×1.75
	Face Area	m²	0.182	0.233	0.293
Fan	Model		3D12K1AA1	4D12K1AA1	3D12K2AA1
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	62×1	62×1	130×1
	Air Flow Rate (H/L)	m³/min	12/10	17.5/14	25/19.5
		cfm	424/353	618/494	883/688
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Wool	Glass Wool	Glass Wool
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)
	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	24	28	33
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038815		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

Wall Mounted Type

Model			FXAQ20MVE	FXAQ25MVE	FXAQ32MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×14×1.4	2×14×1.4	2×14×1.4
	Face Area	m²	0.161	0.161	0.161
Fan	Model		QCL9661M	QCL9661M	QCL9661M
	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor Output × Number of Units	W	40×1	40×1	40×1
	Air Flow Rate (H/L)	m³/min	7.5/4.5	8/5	9/5.5
		cfm	265/159	282/177	318/194
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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 Weight (Mass)		kg	11	11	11
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D039370A		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Wall Mounted Type

Model			FXAQ40MVE	FXAQ50MVE	FXAQ63MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×14×1.4	2×14×1.4	2×14×1.4
	Face Area	m²	0.213	0.213	0.213
Fan	Model		QCL9686M	QCL9686M	QCL9686M
	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor Output × Number of Units	W	43×1	43×1	43×1
	Air Flow Rate (H/L)	m³/min	12/9	15/12	19/14
		cfm	424/318	530/424	671/494
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	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 Weight (Mass)		kg	14	14	14
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D039370A		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

Floor Standing Type

Model			FXLQ20MVE	FXLQ25MVE	FXLQ32MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
	Face Area	m²	0.159	0.159	0.200
Fan	Model		D14B20	D14B20	2D14B13
	Type		Sirocco Fan	Sirocco Fan	Sirocco 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			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)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	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 Weight (Mass)		kg	25	25	30
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038816		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

Floor Standing Type

Model			FXLQ40MVE	FXLQ50MVE	FXLQ63MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
	Face Area	m²	0.200	0.282	0.282
Fan	Model		2D14B13	2D14B20	2D14B20
	Type		Sirocco Fan	Sirocco Fan	Sirocco 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			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)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	Drain Pipe	mm	ϕ21 O.D (Vinyl Chloride)	ϕ21 O.D (Vinyl Chloride)	ϕ21 O.D (Vinyl Chloride)
Machine Weight (Mass)		kg	30	36	36
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038816		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Concealed Floor Standing Type

Model			FXNQ20MVE	FXNQ25MVE	FXNQ32MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
	Face Area	m²	0.159	0.159	0.200
Fan	Model		D14B20	D14B20	2D14B13
	Type		Sirocco Fan	Sirocco Fan	Sirocco 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			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)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	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 Weight (Mass)		kg	19	19	23
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038817		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

Concealed Floor Standing Type

Model			FXNQ40MVE	FXNQ50MVE	FXNQ63MVE
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000	6,300
		Btu/h	16,000	19,800	24,900
		kW	4.7	5.8	7.3
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6	7.1
Casing Color			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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
	Face Area	m²	0.200	0.282	0.282
Fan	Model		2D14B13	2D14B20	2D14B20
	Type		Sirocco Fan	Sirocco Fan	Sirocco 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			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)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ15.9 (Flare Connection)
	Drain Pipe	mm	ϕ21 O.D (Vinyl Chloride)	ϕ21 O.D (Vinyl Chloride)	ϕ21 O.D (Vinyl Chloride)
Machine Weight (Mass)		kg	23	27	27
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D038817		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Ceiling Suspended Cassette Type

Model		Indoor Unit		FXUQ71MV1	FXUQ100MV1	FXUQ125MV1
		Connection Unit		BEVQ71MVE	BEVQ100MVE	BEVQ125MVE
★1 Cooling Capacity (19.5°CWB)			kcal/h	7,100	10,000	12,500
			Btu/h	28,300	39,600	49,500
			kW	8.3	11.6	14.5
★2 Cooling Capacity (19.0°CWB)			kW	8.0	11.2	14.0
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 Fin Coil)	Rows×Stages×Fin Pitch		mm	3×6×1.5	3×8×1.5	3×8×1.5
	Face Area		m²	0.265	0.353	0.353
Fan	Model			QTS48A10M	QTS50B15M	QTS50B15M
	Type			Turbo Fan	Turbo Fan	Turbo Fan
	Motor Output × Number of Units		W	45×1	90×1	90×1
	Air Flow Rate (H/L)		m³/min	19/14	29/21	32/23
			cfm	671/494	1,024/741	1,130/812
	Drive			Direct Drive	Direct Drive	Direct Drive
Temperature Control				Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material				Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene	Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene	Heat Resistant Foamed Polyethylene, Regular Foamed Polyethylene
Piping Connections	Liquid Pipes		mm	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)	ϕ9.5 (Flare Connection)
	Gas Pipes		mm	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)	ϕ15.9 (Flare Connection)
	Drain Pipe		mm	I.Dϕ20×O.Dϕ26	I.Dϕ20×O.Dϕ26	I.Dϕ20×O.Dϕ26
Machine Weight (Mass)			kg	25	31	31
★4 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.				C:4D045395		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an additional for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

BEV Units

Model				BEVQ71MVE	BEVQ100MVE	BEVQ125MVE
Power Supply				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
Piping Connection	Indoor Unit	Liquid Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)
		Gas Pipes		15.9mm (Flare Connection)	15.9mm (Flare Connection)	15.9mm (Flare Connection)
	Outdoor Unit	Liquid Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)
		Suction Gas Pipes		15.9mm (Flare Connection)	15.9mm (Flare Connection)	15.9mm (Flare Connection)
Machine Weight (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

Wall Mounted Type

Model			FXAQ20MHV1	FXAQ25MHV1	FXAQ32MHV1
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	2×14×1.4	2×14×1.4	2×14×1.4
	Face Area	m^2	0.161	0.161	0.161
Fan	Model		QCL9661M	QCL9661M	QCL9661M
	Type		Cross Flow Fan	Cross Flow Fan	Cross Flow Fan
	Motor Output × Number of Units	W	40×1	40×1	40×1
	Air Flow Rate (H/L)	m^3/min	7.5/4.5	8/5	9/5.5
		cfm	265/159	282/177	318/194
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)	Resin Net (Washable)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	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 Weight (Mass)		kg	11	11	11
★4 Sound Level (H/L)		dBA	35/29	36/29	37/29
Safety Devices			Fuse	Fuse	Fuse
Refrigerant Control			—	—	—
Connectable outdoor unit			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D046711		

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length:7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m^3/min×35.3

Wall Mounted Type

Model			FXAQ40MHV1	FXAQ50MHV1
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000
		Btu/h	16,000	19,800
		kW	4.7	5.8
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6
Casing Color			White (3.0Y8.5/0.5)	White (3.0Y8.5/0.5)
Dimensions: (H×W×D)		mm	290×1,050×230	290×1,050×230
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	2×14×1.4	2×14×1.4
	Face Area	m²	0.213	0.213
Fan	Model		QCL9686M	QCL9686M
	Type		Cross Flow Fan	Cross Flow 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	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Foamed Polystyrene / Foamed Polyethylene	Foamed Polystyrene / Foamed Polyethylene
Air Filter			Resin Net (Washable)	Resin Net (Washable)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	Drain Pipe	mm	VP13 (External Dia. 18 Internal Dia. 13)	VP13 (External Dia. 18 Internal Dia. 13)
Machine Weight (Mass)		kg	13	13
★4 Sound Level (H/L)		dBA	39/34	42/36
Safety Devices			Fuse	Fuse
Refrigerant Control			—	—
Connectable outdoor unit			R-410A M(A) Series	R-410A M(A) 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.
Drawing No.			C:3D046711	

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp; 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

BEV Units

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

Connection Unit Series

FXAQ20MH
FXAQ25MH
FXAQ32MH
FXAQ40MH
FXAQ50MH
+ BEVQ50M

FXLQ20MH
FXLQ25MH
FXLQ32MH
FXLQ40MH
FXLQ50MH
+ BEVQ50M

Floor Standing Type

Model			FXLQ20MHV1	FXLQ25MHV1	FXLQ32MHV1
★1 Cooling Capacity (19.5°CWB)		kcal/h	2,000	2,500	3,200
		Btu/h	7,800	9,900	12,600
		kW	2.3	2.9	3.7
★2 Cooling Capacity (19.0°CWB)		kW	2.2	2.8	3.6
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 Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5	3×14×1.5
	Face Area	m²	0.159	0.159	0.200
Fan	Model		D14B20	D14B20	2D14B13
	Type		Sirocco Fan	Sirocco Fan	Sirocco 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	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			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)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	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 Weight (Mass)		kg	25	25	30
★4 Sound Level (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			R-410A M(A) Series	R-410A M(A) Series	R-410A M(A) 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.			C:3D047065		

Notes:

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

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

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

★4 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×3412 cfm=m³/min×35.3

Floor Standing Type

Model			FXLQ40MHV1	FXLQ50MHV1
★1 Cooling Capacity (19.5°CWB)		kcal/h	4,000	5,000
		Btu/h	16,000	19,800
		kW	4.7	5.8
★2 Cooling Capacity (19.0°CWB)		kW	4.5	5.6
Casing Color			Ivory White (5Y7.5/1)	Ivory White (5Y7.5/1)
Dimensions: (H×W×D)		mm	600×1,140×222	600×1,420×222
Coil (Cross Fin Coil)	Rows×Stages×Fin Pitch	mm	3×14×1.5	3×14×1.5
	Face Area	m²	0.200	0.282
Fan	Model		2D14B13	2D14B20
	Type		Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	25×1	35×1
	Air Flow Rate (H/L)	m³/min	11/8.5	14/11
		cfm	388/300	494/388
	Drive		Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber/ Urethane Foam	Glass Fiber/ Urethane Foam
Air Filter			Resin Net (with Mold Resistant)	Resin Net (with Mold Resistant)
Piping Connections	Liquid Pipes	mm	ϕ6.4 (Flare Connection)	ϕ6.4 (Flare Connection)
	Gas Pipes	mm	ϕ12.7 (Flare Connection)	ϕ12.7 (Flare Connection)
	Drain Pipe	mm	ϕ21 O.D (Vinyl Chloride)	ϕ21 O.D (Vinyl Chloride)
Machine Weight (Mass)		kg	30	36
★4 Sound Level (H/L)		dBA	38/33	39/34
Safety Devices			Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
Refrigerant Control			—	—
Connectable Outdoor Unit			R-410A M(A) Series	R-410A M(A) 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.			C:3D047065	

Notes:

★1 Indoor temp. : 27°CDB, 19.5°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
★2 Indoor temp. : 27°CDB, 19.0°CWB / outdoor temp.: 35°CDB / Equivalent piping length: 7.5m, level difference: 0m.
3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
★4 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×3412 cfm=m³/min×35.3

Outdoor Air Processing Unit

Model			FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1
★1 Cooling Capacity		kcal/h	12,000	19,300	24,100
		Btu/h	47,800	76,400	95,500
		kW	14.0	22.4	28.0
Casing			Galvanized Steel Plate	Galvanized Steel Plate	Galvanized Steel Plate
Dimensions: (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
Fan	Model		D13/4G2DA1	D13/4G2DA1	D13/4G2DA1
	Type		Sirocco Fan	Sirocco Fan	Sirocco Fan
	Motor Output × Number of Units	W	380×1	380×1	380×1
	Air Flow Rate (H/L)	m³/min	18	28	35
		cfm	635	988	1,236
	External Static Pressure ★4	Pa	185	225	205
	Drive		Direct Drive	Direct Drive	Direct Drive
Temperature Control			Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling	Microprocessor Thermostat for Cooling
Sound Absorbing Thermal Insulation Material			Glass Fiber	Glass Fiber	Glass Fiber
Air Filter			★2	★2	★2
Piping Connections	Liquid Pipes		9.5mm (Flare Connection)	9.5mm (Flare Connection)	9.5mm (Flare Connection)
	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) ★3,★4		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 Outdoor Units ★5,★6			RXQ8~48MAY1B	RXQ8~48MAY1B	RXQ10~48MAY1B
Drawing No.			C:3D046147A	C:3D046147A	C:3D046147A

Notes:

★1. Specifications are based on the following conditions:
- Cooling: Outdoor temp. of 33°CDB, 28°CWB (68% RH). and discharge temp. of 18°CDB
- Equivalent reference piping length: 7.5m (0m Horizontal)
- At 220V

★2. Air intake filter is not supplied, so be sure to install the optional long-life filter or high-efficiency filter. Please mount it in the duct system of the suction side. Select its colorimetric method (gravity method) 50% or more.

★3. 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.

★4. Valves measured at 220 V.

★5. Within the range that the total capacity of indoor units is 50 to 100%, it is possible to connect to the outdoor unit.

★6. 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.

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

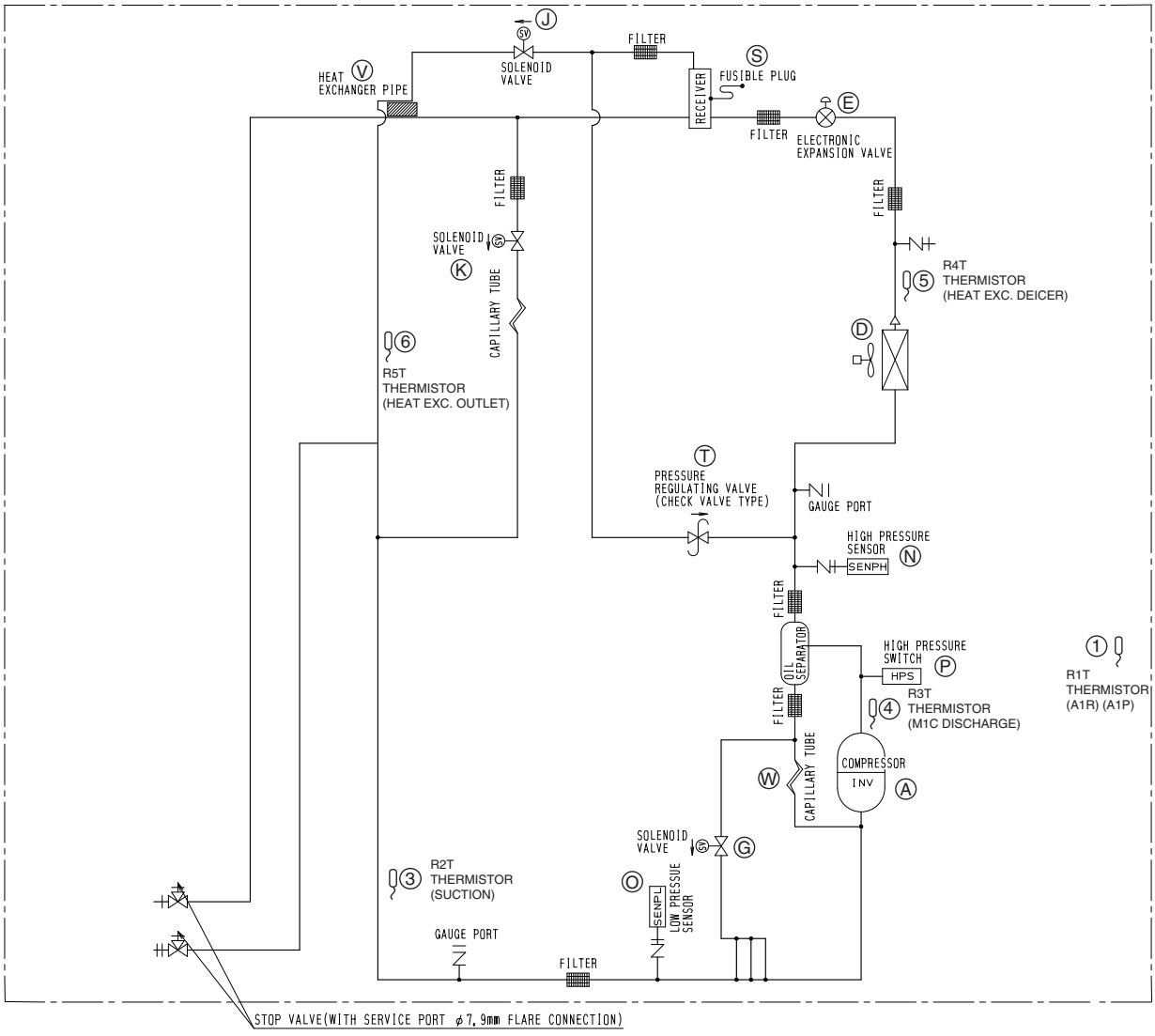
Part 3
Refrigerant Circuit

1. Refrigerant Circuit

1.1 RXQ5MA

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. RXQ5MA : 20 steps
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 9-step rotation speed by using the inverter.
E	Y1E	Electronic expansion valve (Main: EV1)	Fully open during cooling operation.
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.
K	Y4S	Solenoid valve (Injection)	Used to cool the compressor by injecting refrigerant when the compressor discharge temperature is high.
N	S1NPH	High pressure sensor	Used to detect high pressure.
O	S1NPL	Low pressure sensor	Used to detect low pressure.
P	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 4.0 MPA or more to stop the compressor operation.
S	—	Fusible plug	In order to prevent the increase of pressure when abnormal heating is caused by fire or others, the fusible part of the plug is molten at a temperature of 70 to 75°C to release the pressure into the atmosphere.
T	—	Pressure regulating valve 1 (Receiver to discharge pipe)	This valve opens at a pressure of 2 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.
V	—	Piping heat exchanger	Used to heat the gas refrigerant from the liquid receiver.
W	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the compressor.
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R1T	Thermistor (Fin)	Used to detect fin temperature of inverter PC board, make the temperature protection of inverter PC board.
3	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature.
4	R3T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
5	R4T	Thermistor (Heat exchanger outlet: Tb)	Used to detect liquid pipe temperature of air heat exchanger.
6	R5T	Thermistor (Sub-cooling heat-exchanger gas pipe)	Used to judge the refrigerant overcharge at the check operation.

RXQ5MA

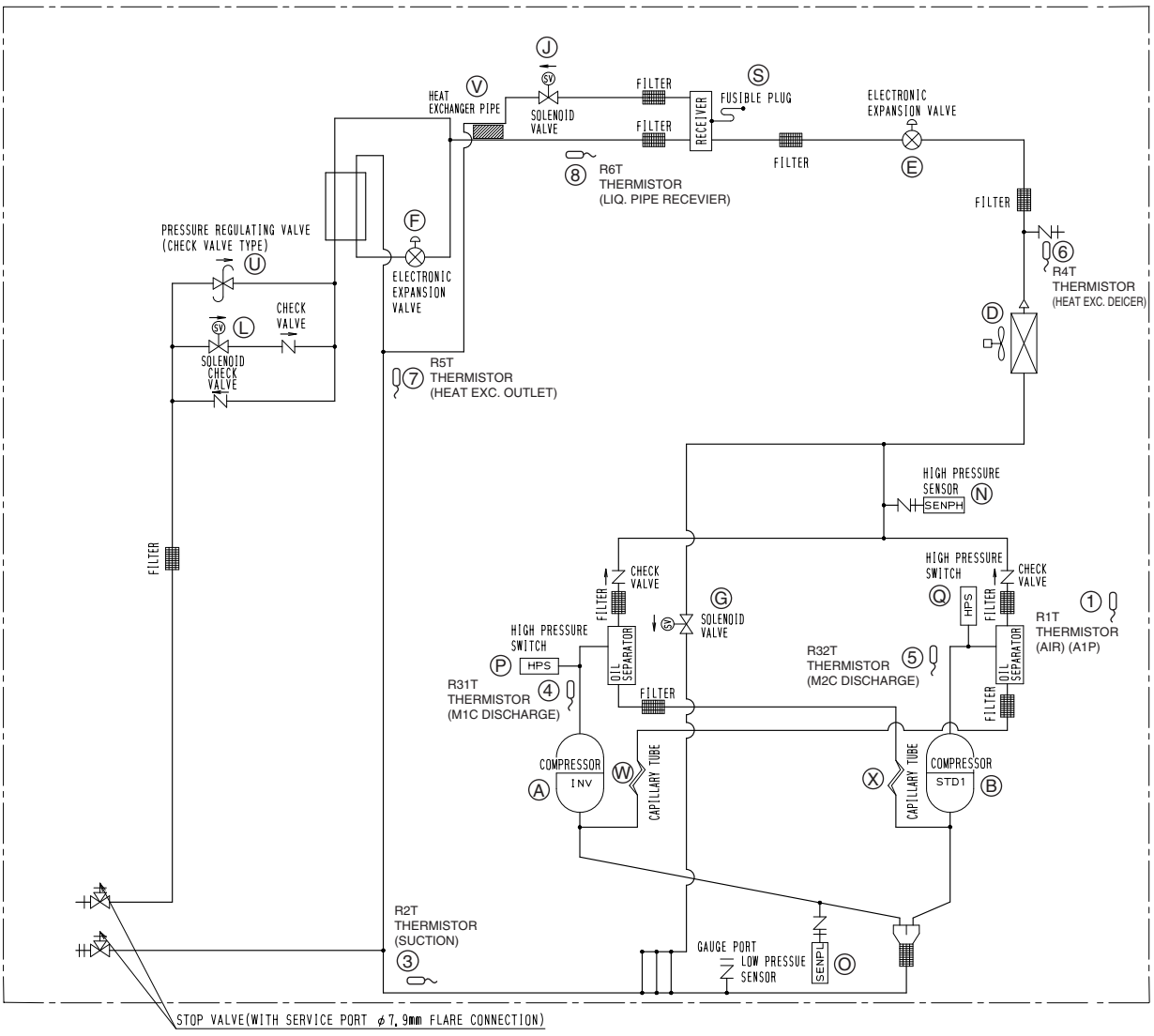


C:3D048413

1.2 RXQ8MA, 10MA

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, 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. RXQ8, 10MA: 37 steps
B	M2C	Standard compressor 1 (STD1)	
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 9-step rotation speed by using the inverter.
E	Y1E	Electronic expansion valve (Main: EV1)	Fully open during cooling operation.
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.
J	Y2S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.
L	Y3S	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.
N	S1NPH	High pressure sensor	Used to detect high pressure.
O	S1NPL	Low pressure sensor	Used to detect low pressure.
P	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 4.0 MPa or more to stop the compressor operation.
Q	S2PH	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, thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.
V	—	Piping heat exchanger	Used to heat the gas refrigerant from the liquid receiver.
W	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the INV compressor.
X	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the STD1 compressor.
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R1T	Thermistor (Fin)	Used to detect fin temperature of inverter PC board, make the temperature protection of inverter PC board.
3	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature.
4	R31T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
5	R32T	Thermistor (STD1 discharge pipe: Tds1)	
6	R4T	Thermistor (Heat exchanger outlet: Tb)	Used to detect liquid pipe temperature of air heat exchanger.
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: Tl)	Used to detect receiver outlet liquid pipe temperature.

RXQ8MA, 10MA

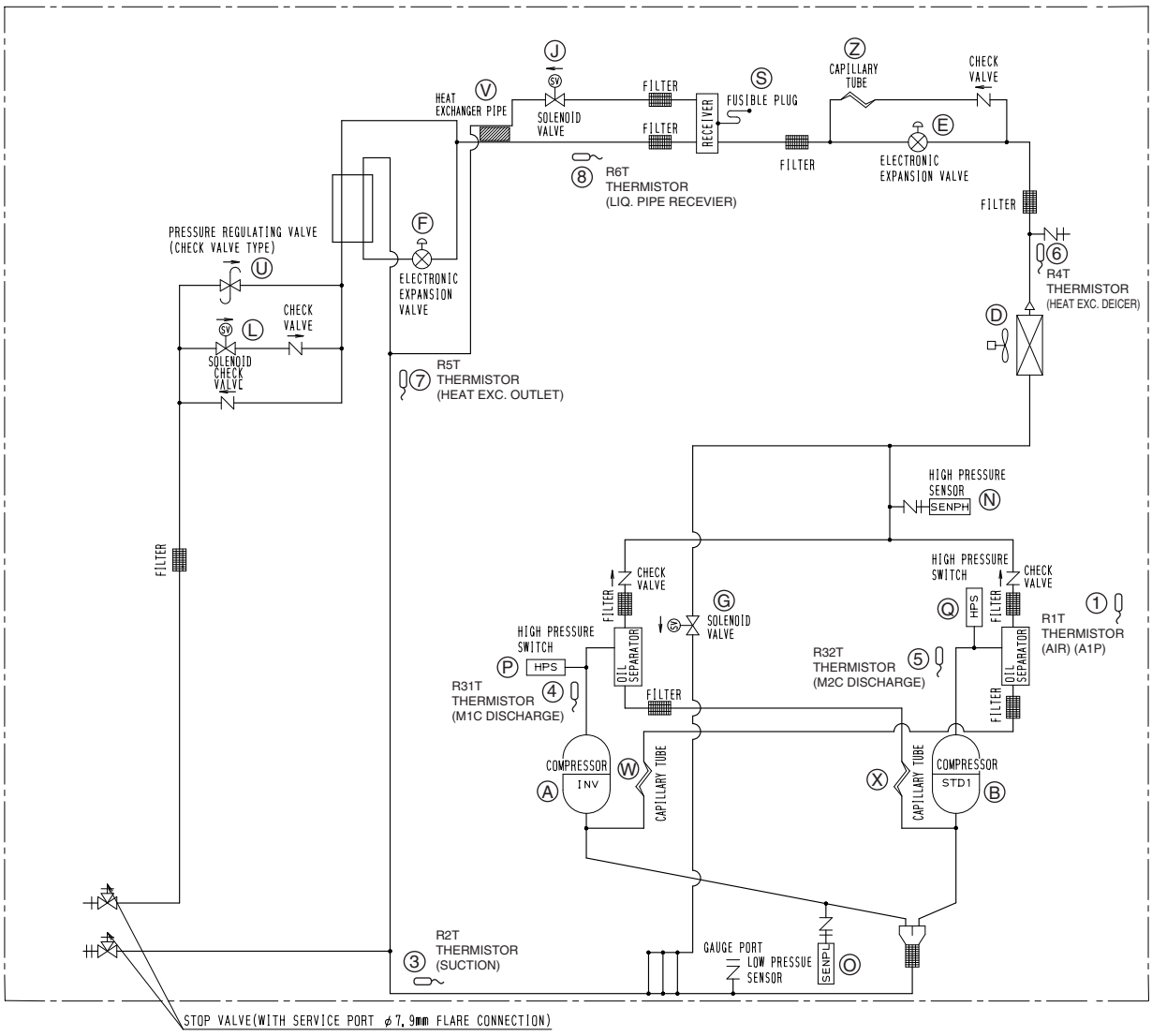


C:3D048414

1.3 RXQ12MA

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, 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. RXQ12MA: 37 steps
B	M2C	Standard compressor 1 (STD1)	
D	M1F	Inverter fan	Since the system is of air heat exchanging type, the fan is operated at 9-step rotation speed by using the inverter.
E	Y1E	Electronic expansion valve (Main: EV1)	Fully open during cooling operation.
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.
J	Y2S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.
L	Y3S	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.
N	S1NPH	High pressure sensor	Used to detect high pressure.
O	S1NPL	Low pressure sensor	Used to detect low pressure.
P	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 4.0 MPa or more to stop the compressor operation.
Q	S2PH	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, thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.
V	—	Piping heat exchanger	Used to heat the gas refrigerant from the liquid receiver.
W	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the INV compressor.
X	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the STD1 compressor.
Z	—	Capillary tube	Used to add the refrigerant flow capacity to Y1E.
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R1T	Thermistor (Fin)	Used to detect fin temperature of inverter PC board, make the temperature protection of inverter PC board.
3	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature.
4	R31T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
5	R32T	Thermistor (STD1 discharge pipe: Tds1)	
6	R4T	Thermistor (Heat exchanger outlet: Tb)	Used to detect liquid pipe temperature of air heat exchanger.
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: Tl)	Used to detect receiver outlet liquid pipe temperature.

RXQ12MA

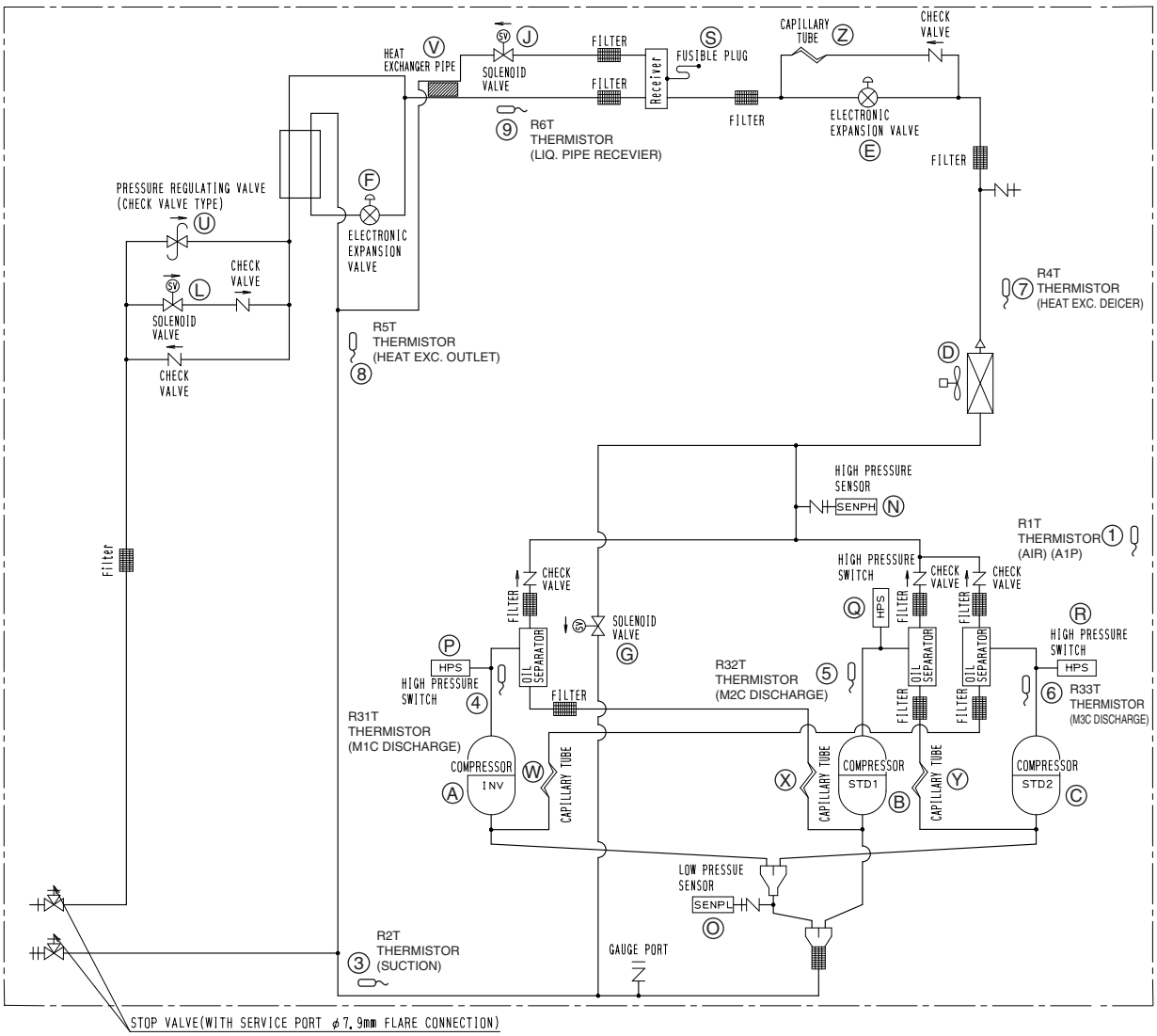


C: 3D048415

1.4 RXQ14MA, 16MA

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, 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. RXQ14A, 16MA: 49 steps
B	M2C	Standard compressor 1 (STD1)	
C	M3C	Standard compressor 1 (STD2)	
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)	Fully open during cooling operation.
F	Y2E	Electronic expansion valve (Subcool: EV2)	PI control is applied to keep the outlet superheated degree of subcooling heat exchanger constant.
G	Y1S	Solenoid valve (Hot gas: SVP)	Used to prevent the low pressure from transient falling.
J	Y2S	Solenoid valve (Receiver gas discharging: SVG)	Used to collect refrigerant to receiver.
L	Y3S	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.
N	S1NPH	High pressure sensor	Used to detect high pressure.
O	S1NPL	Low pressure sensor	Used to detect low pressure.
P	S1PH	HP pressure switch (For INV compressor)	In order to prevent the increase of high pressure when a malfunction occurs, this switch is activated at high pressure of 4.0 MPa or more to stop the compressor operation.
Q	S2PH	HP pressure switch (For STD compressor 1)	
R	S3PH	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, thus resulting in no damage of functional parts due to the increase of pressure in transportation or storage.
V	—	Piping heat exchanger	Used to heat the gas refrigerant from the liquid receiver.
W	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the INV compressor.
X	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the STD1 compressor.
Y	—	Capillary tube	Used to return the refrigerating oil separated through the oil separator to the STD2 compressor.
Z	—	Capillary tube	Used to add the refrigerant flow capacity to Y1E
1	R1T	Thermistor (Outdoor air: Ta)	Used to detect outdoor temperature, correct discharge pipe temperature, and others.
2	R1T	Thermistor (Fin)	Used to detect fin temperature of inverter PC board, make the temperature protection of inverter PC board.
3	R2T	Thermistor (Suction pipe: Ts)	Used to detect suction pipe temperature.
4	R31T	Thermistor (INV discharge pipe: Tdi)	Used to detect discharge pipe temperature, make the temperature protection control of compressor, and others.
5	R32T	Thermistor (STD1 discharge pipe: Tds1)	
6	R33T	Thermistor (STD2 discharge pipe: Tds2)	
7	R4T	Thermistor (Heat exchanger outlet: Tb)	Used to detect liquid pipe temperature of air heat exchanger.
8	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.
9	R6T	Thermistor (Receiver outlet liquid pipe: Tl)	Used to detect receiver outlet liquid pipe temperature.

RXQ14MA, 16MA



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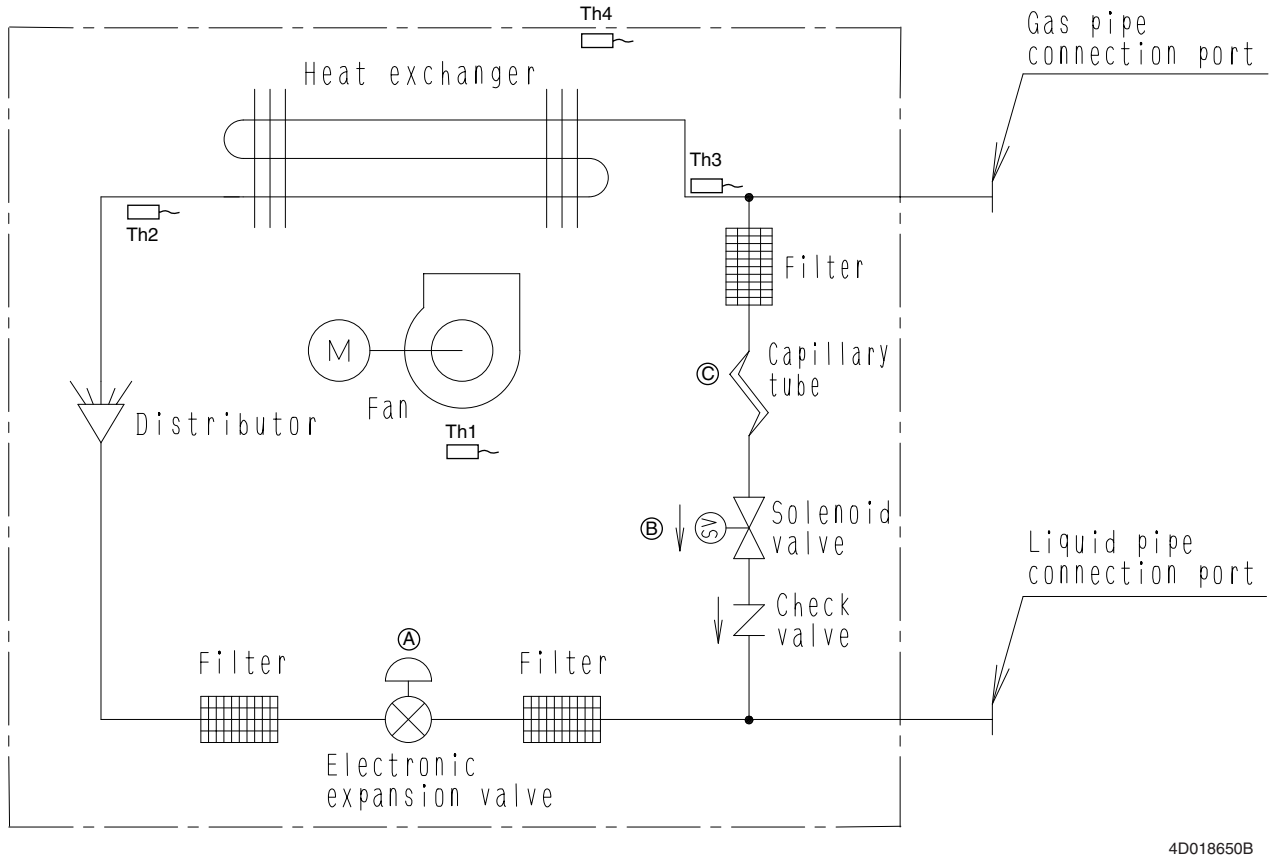
1.5 Outdoor Air Processing Unit FXMQ125MFV1~250MFV1

1.5.1 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.*
B	Y1S	Solenoid valve	Used to bypass hot gas while in heating with thermostat OFF. (Close while in cooling)
C	—	Capillary tube	Used to reduce pressure from high to low in bypassing hot gas.

*SH control: Superheated control of heat exchanger outlet

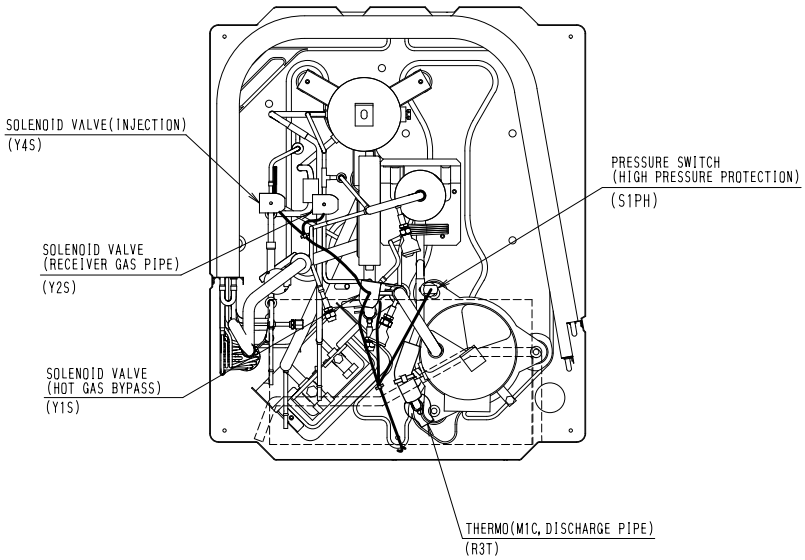
Thermistor

Code	Symbol	Name	Main function
Th1	R1T	Suction air temperature thermistor	Used to turn ON or OFF the thermostat.
Th2	R2T	Liquid pipe temperature thermistor	(Not used while in cooling operation)
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.

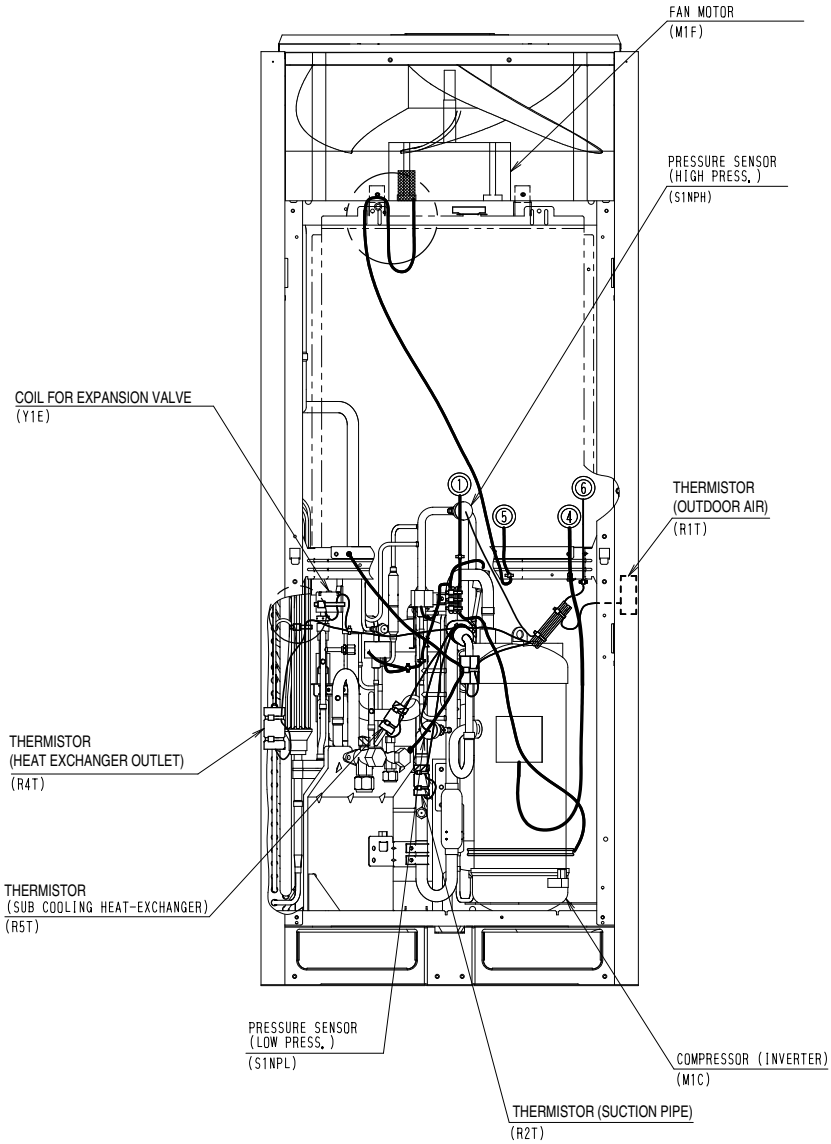
2. Functional Parts Layout

2.1 RXQ5MA

Plan

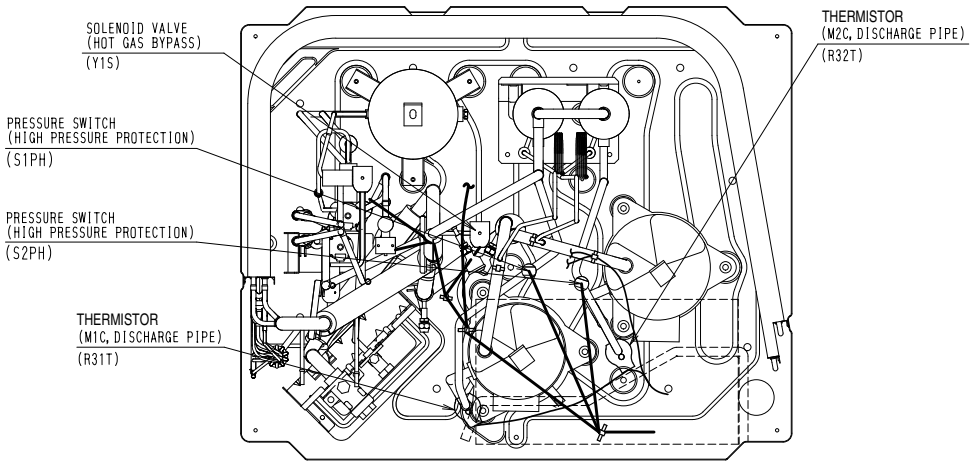


Front View

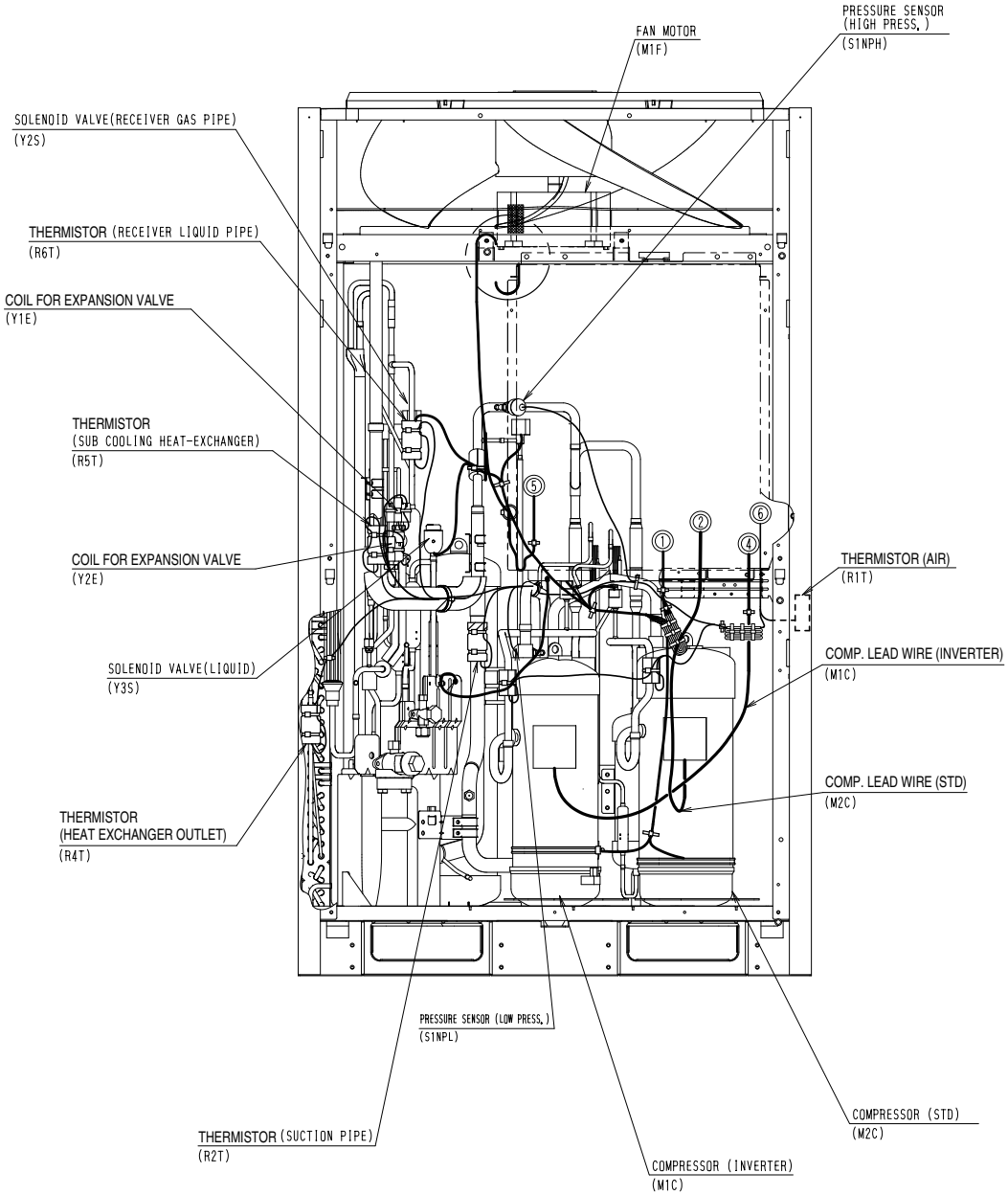


2.2 RXQ8MA, 10MA, 12MA

Plan

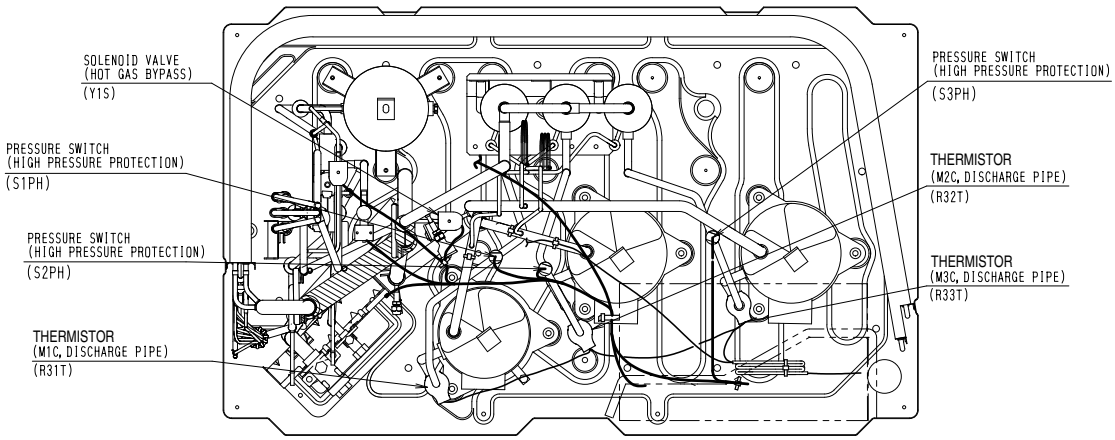


Front View

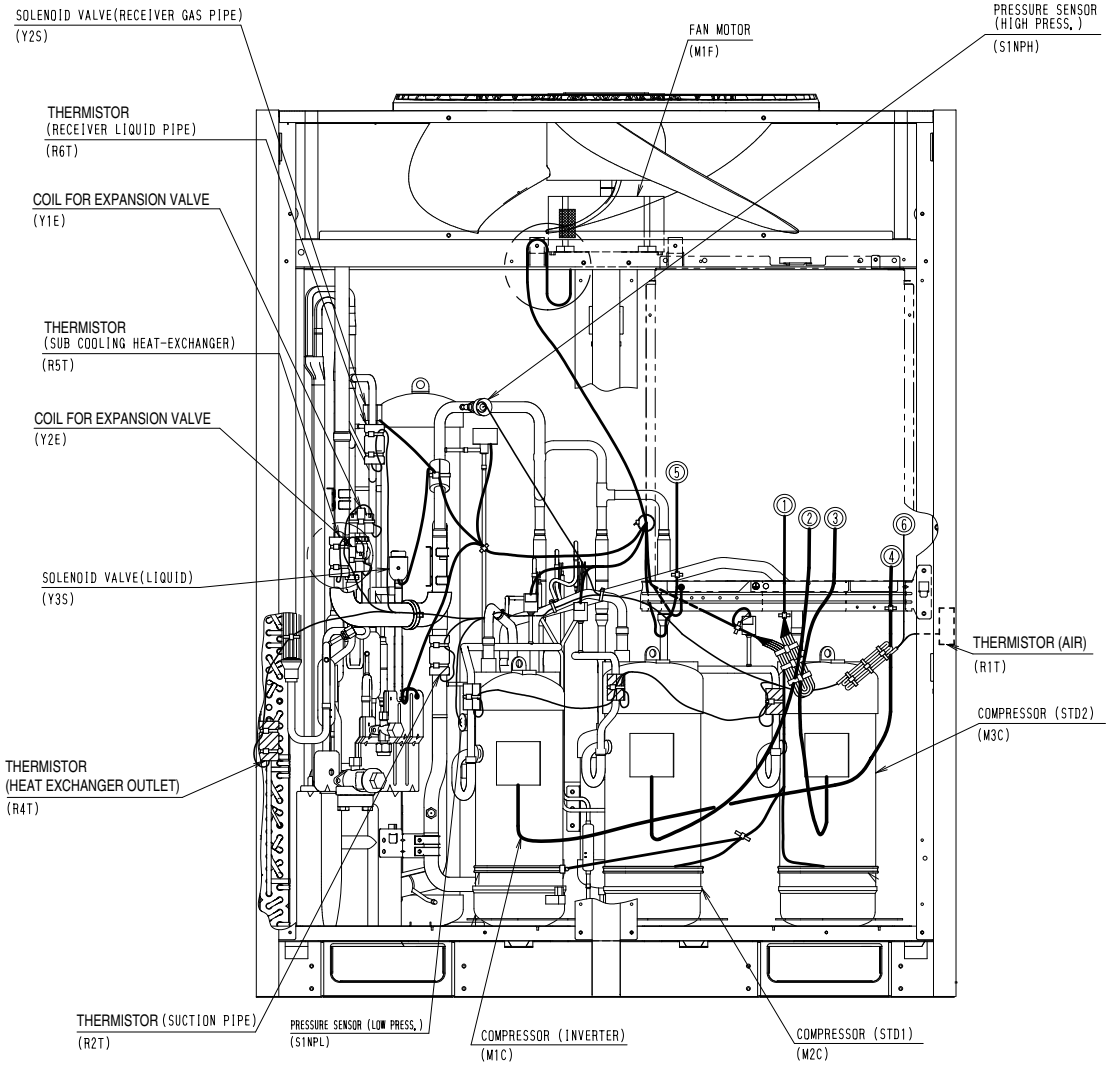


2.3 RXQ14MA, 16MA

Plan



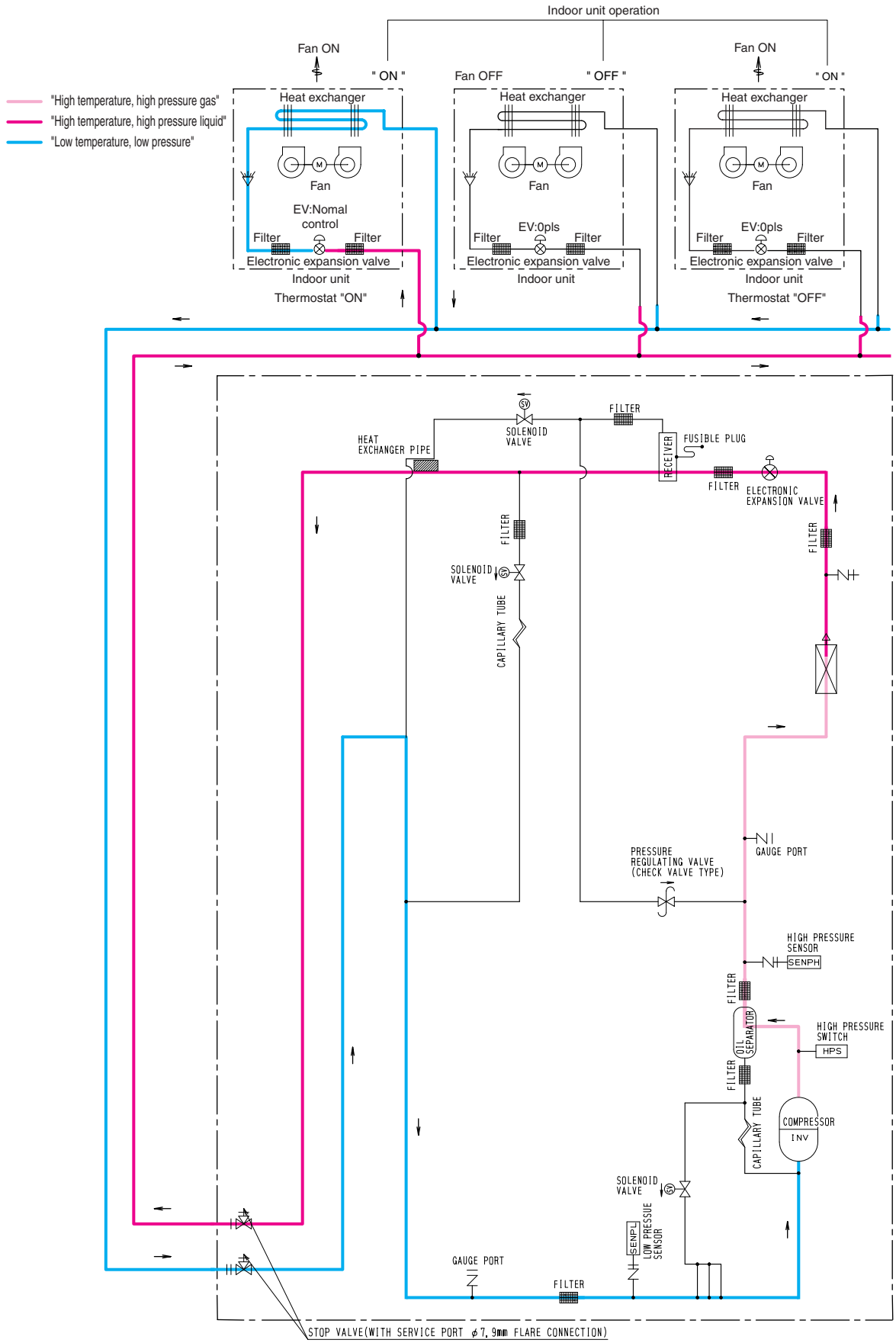
Front View



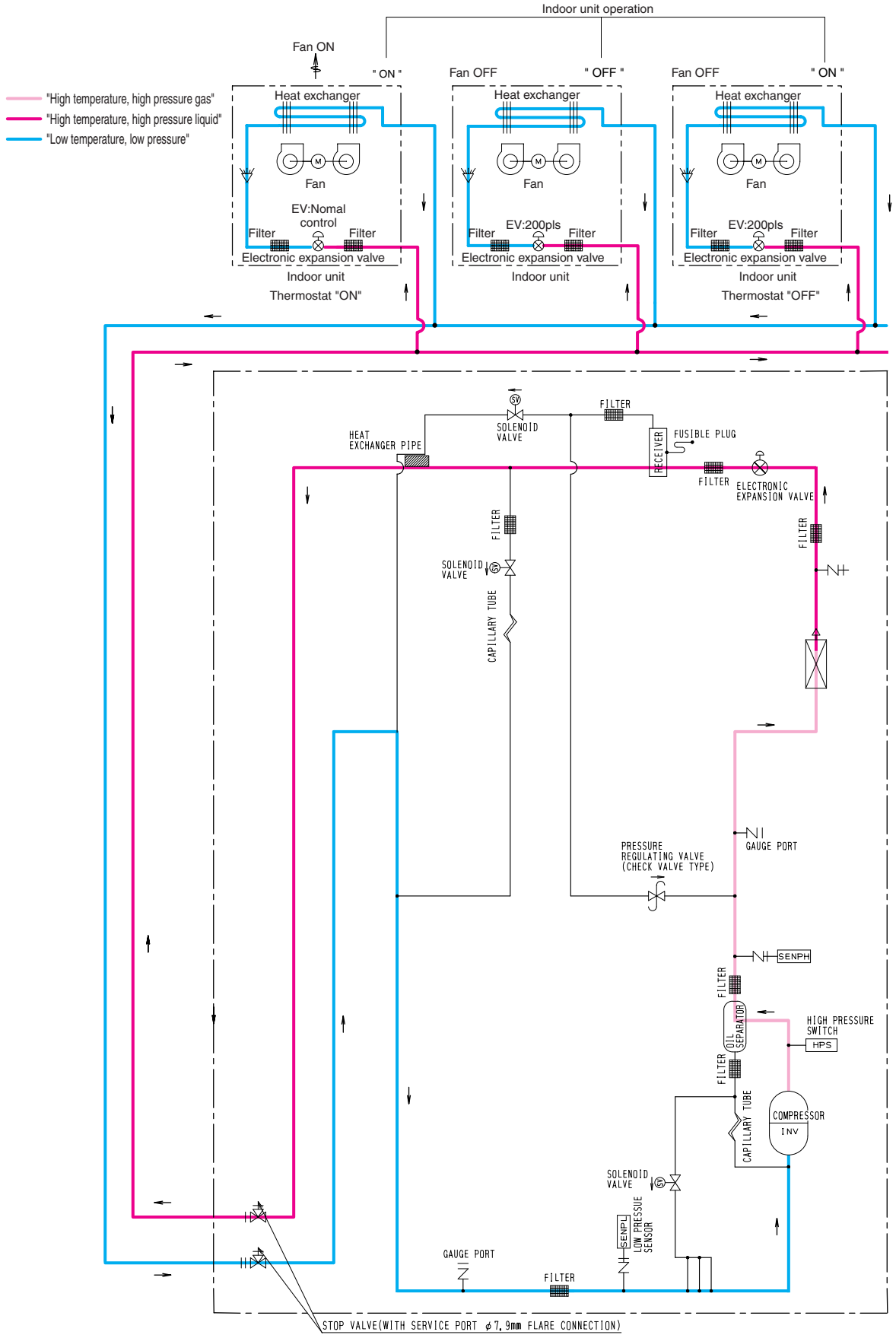
3. Refrigerant Flow for Each Operation Mode

RXQ5MA

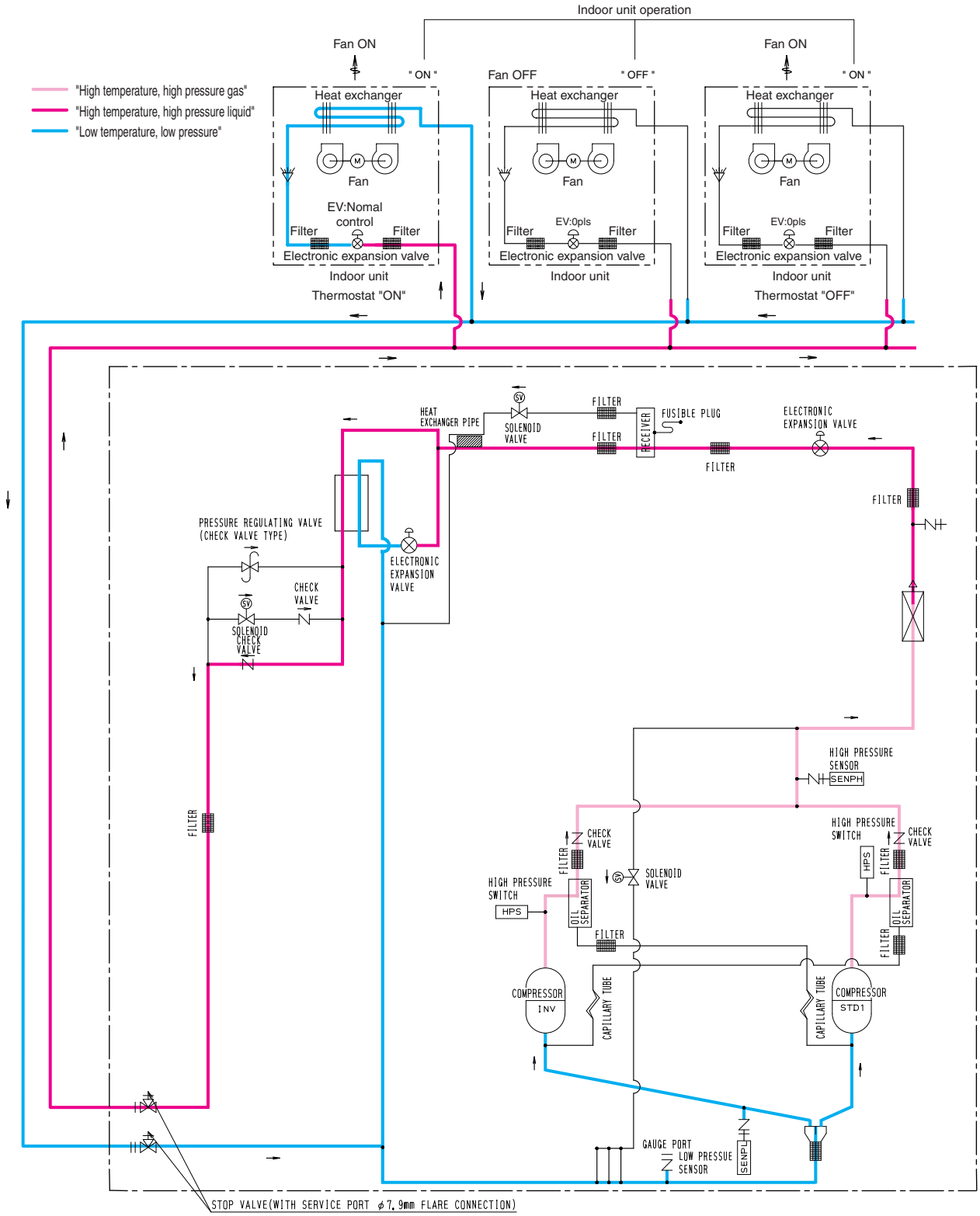
Cooling Operation



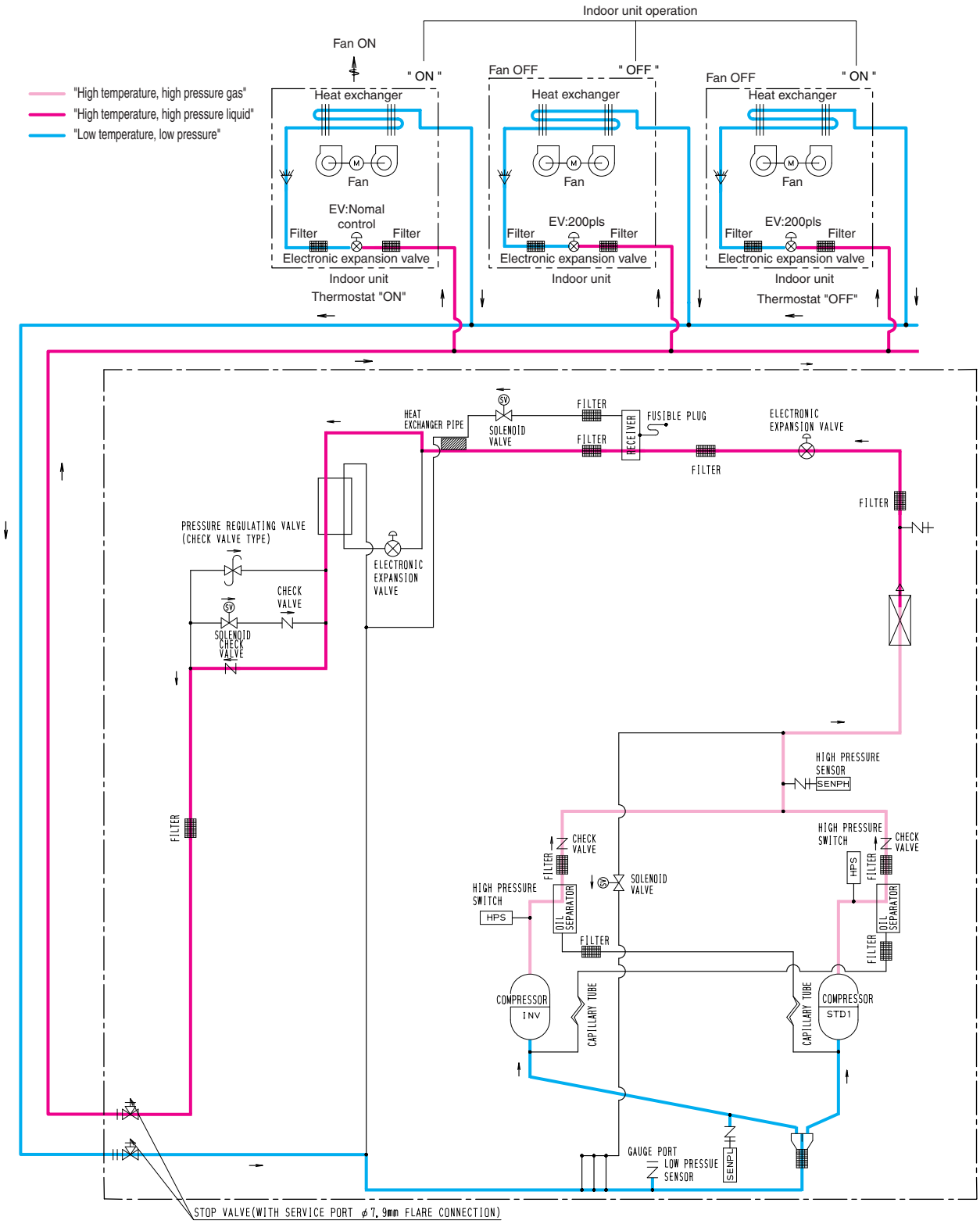
Cooling Oil Return Operation



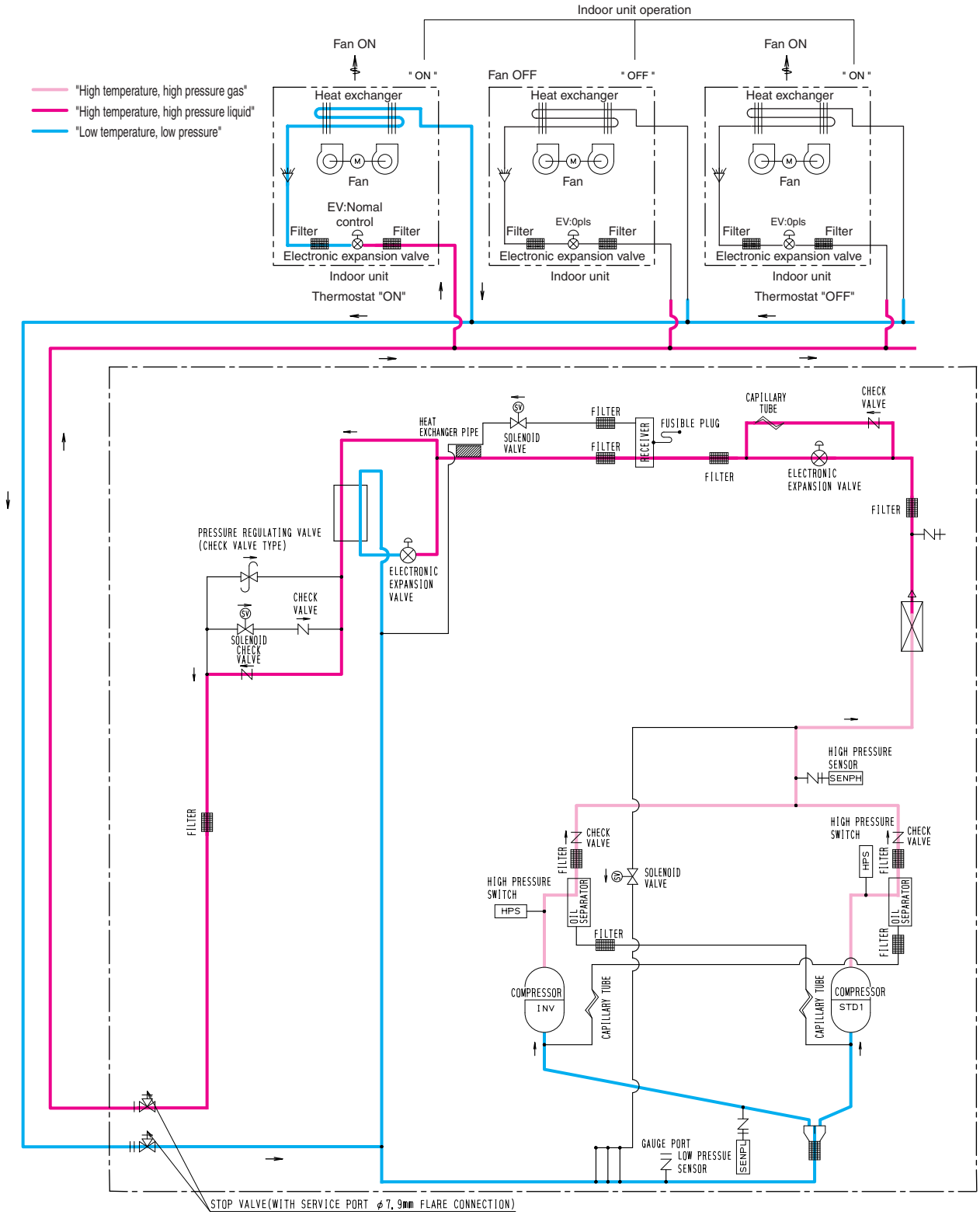
RXQ8MA, 10MA
Cooling Operation



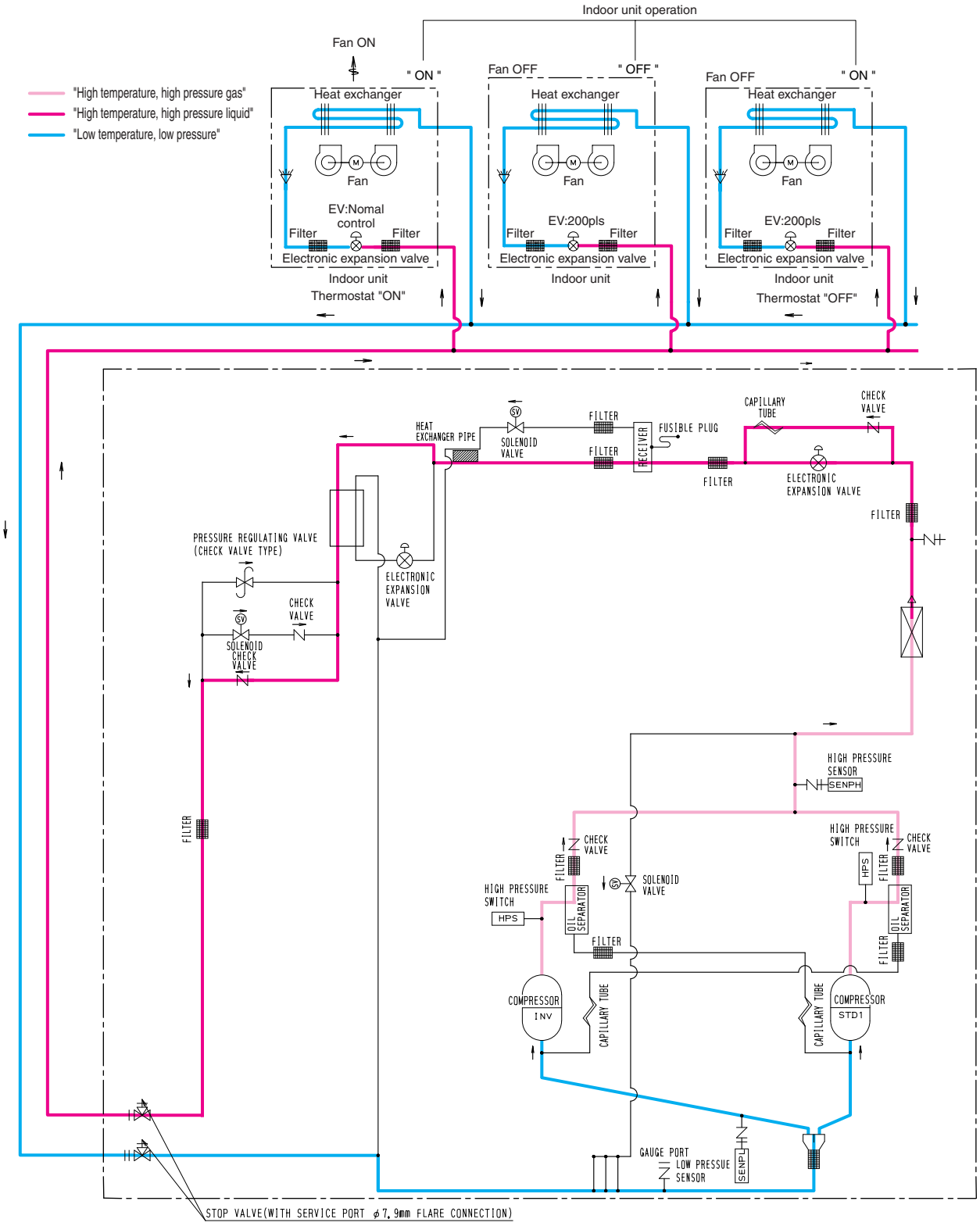
Cooling Oil Return



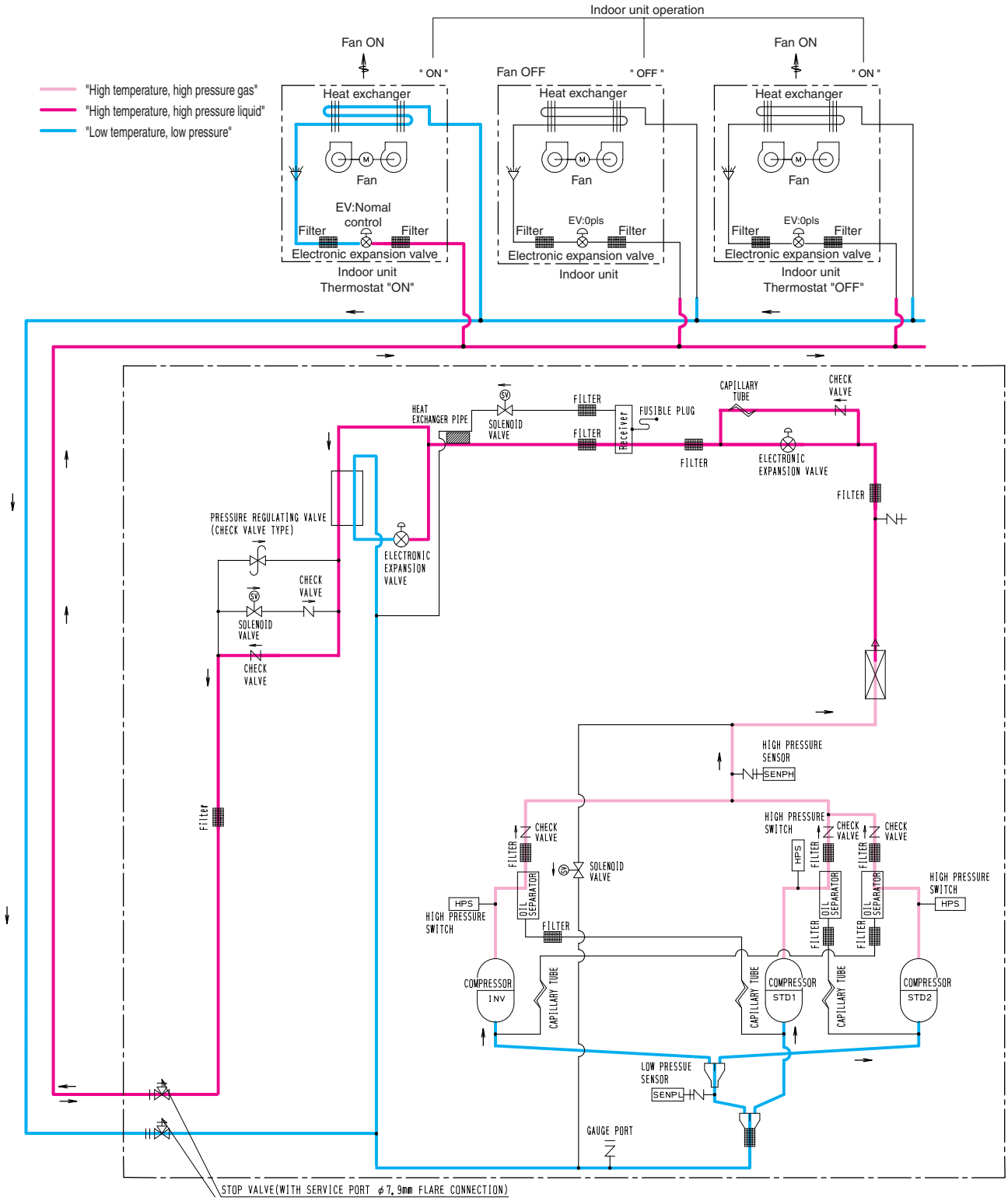
RXQ12MA
Cooling Operation



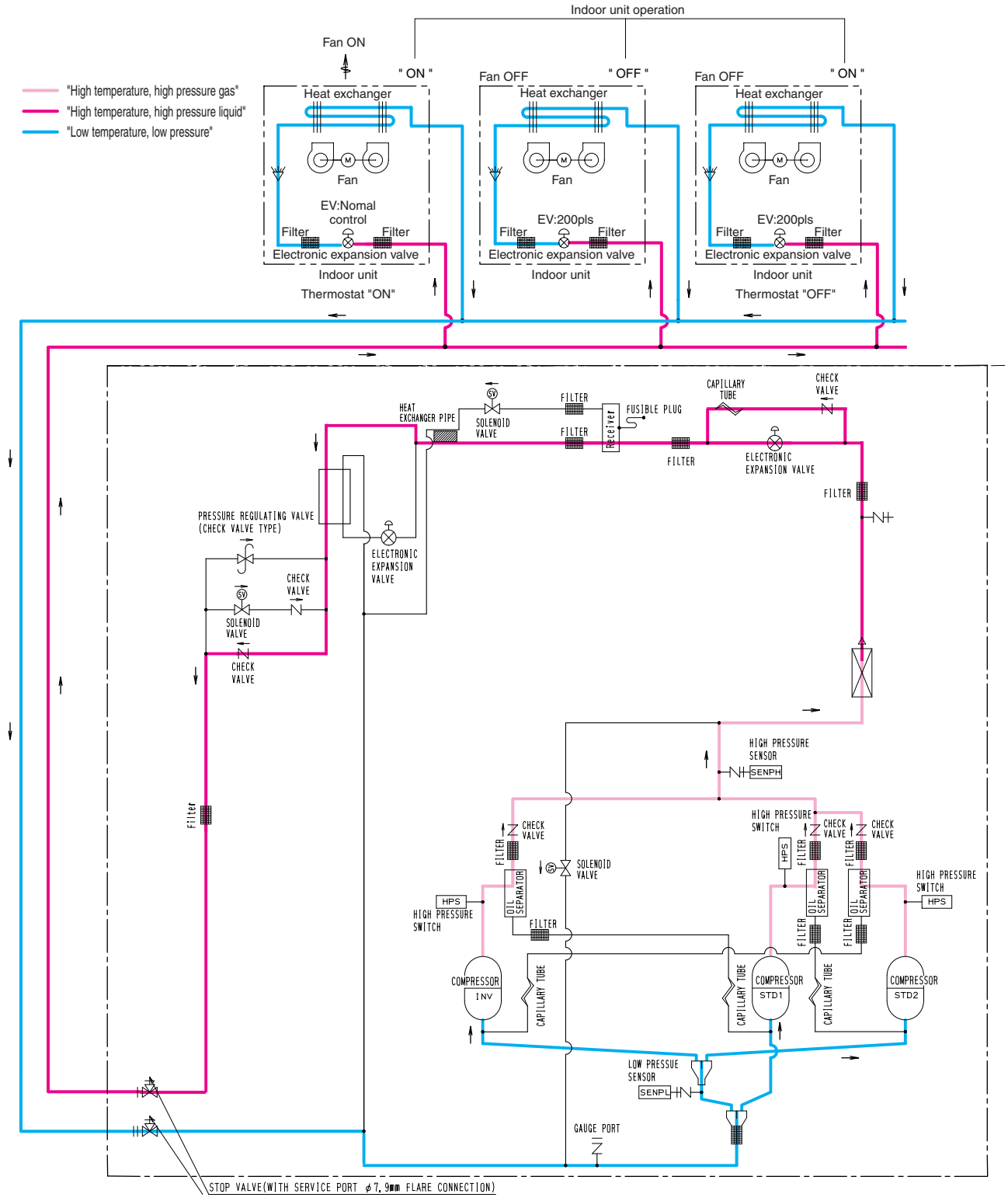
Cooling Oil Return



RXQ14MA, 16MA
Cooling Operation



Cooling Oil Return Operation



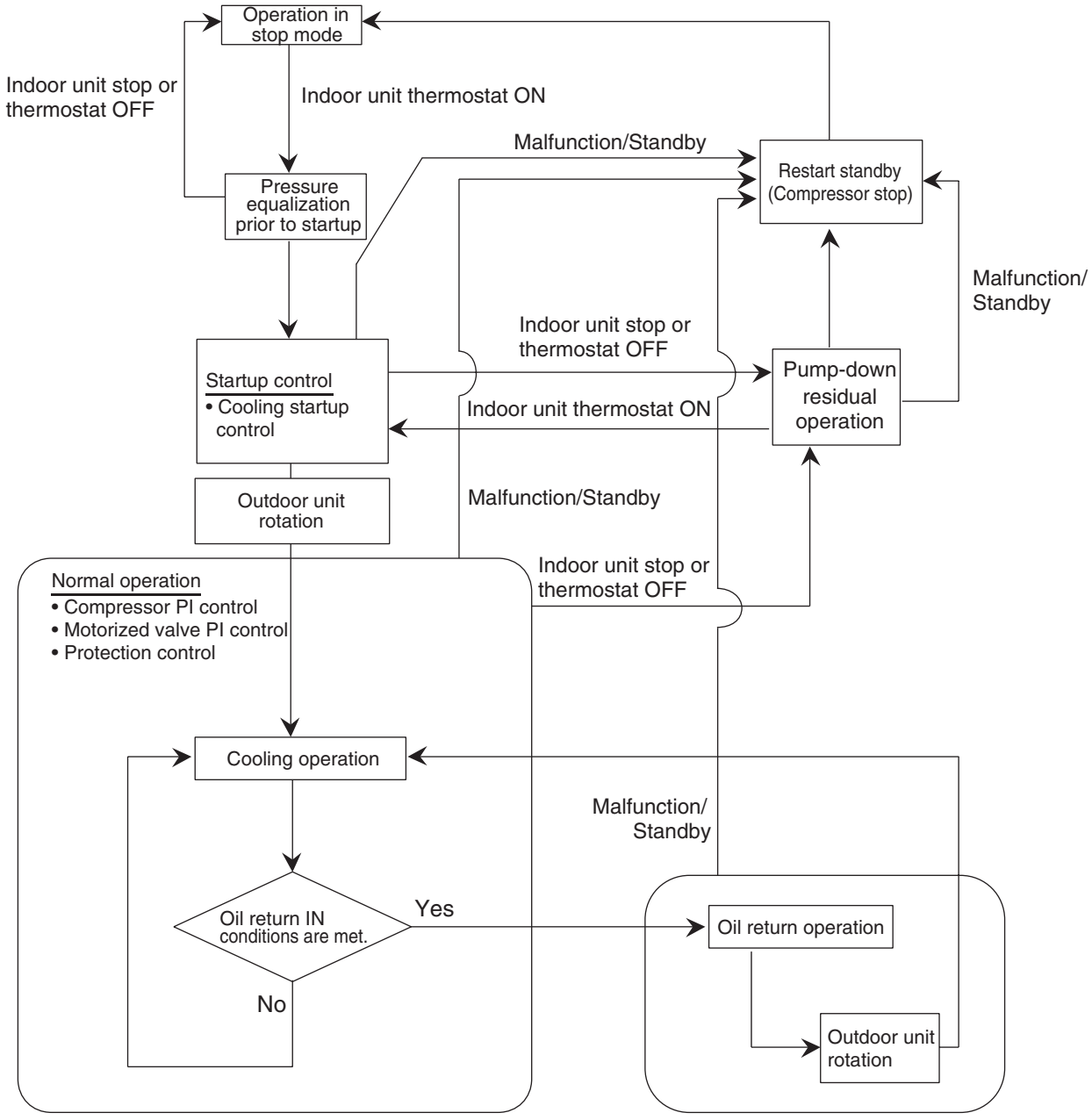
Part 4
Function

1. Function General

1.1 Symbol

Symbol	Electric symbol	Description or function
DSH	–	Discharge pipe superheated degree
DSHi	–	Discharge pipe superheat of inverter compressor
DSHs	–	Discharge pipe 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	Y2S	Solenoid valve for discharging gas from receiver
SVP	Y1S	Solenoid valve for hot gas bypass
SVSL	Y3S	Solenoid valve for non-operating unit liquid pipe closing
Ta	R1T (A1P)	Outdoor air temperature
Tb	R4T	Heat exchanger outlet temperature at cooling
Ts	R2T	Suction pipe temperature detected with the suction pipe thermistor (R2T)
Tsh	R5T	Temperature detected with the subcool heat exchanger outlet thermistor (R5T)
Tc	–	High pressure equivalent saturation temperature
TcS	–	Target temperature of Tc
Te	–	Low pressure equivalent saturation temperature
TeS	–	Target temperature of Te
Tfin	R1T	Inverter fin temperature
Tl	R6T	Liquid pipe temperature detected with the receiver outlet liquid pipe thermistor
Tp	–	Calculated value of compressor port temperature

1.2 Operation Mode



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

2. Basic Control

2.1 Normal Operation

2.1.1 List of Functions in Normal Operation

Part Name	Symbol	(Electric Symbol)	Function of Functional Part
			Normal Cooling
Compressor	—	(M1C, M2C)	PI control, High pressure protection, Low pressure protection, Td protection, INV protection,
Outdoor unit fan		(M1F)	Cooling fan control
Main motorized valve	EV1	(Y1E)	2000 pls
Subcool heat exchanger electronic expansion valve	EV2	(Y2E)	PI control
Hot gas bypass valve	SVP	(Y1S)	OFF
Receiver gas discharging valve	SVG	(Y4S)	OFF
Non-operating unit liquid pipe stop valve	SVSL	(Y6S)	ON

2.2 Compressor PI Control

Compressor PI Control

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

[Cooling operation]

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

Te set value (Make this setting while in Setting mode 2.)

Te setting

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

Te : Low pressure equivalent saturation temperature (°C)

TeS : Target Te value
(Varies depending on Te setting, operating frequency, etc.)
*On multi-outdoor-unit systems, this control is made according to values of the first-priority unit, which is detected with the pressure sensor.

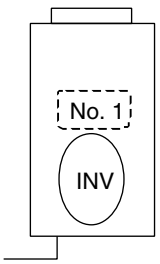
■ Operating Priority and Rotation of Compressors

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.

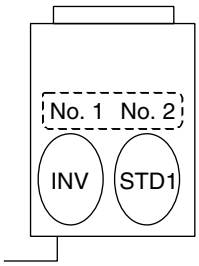
INV: Inverter compressor
STD1: Standard compressor 1
STD2: Standard compressor 2

Pattern 1 Pattern 2 Pattern 3

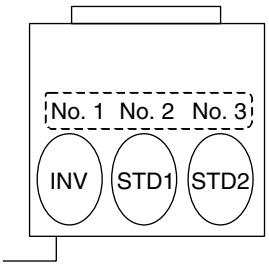
RXQ5MA



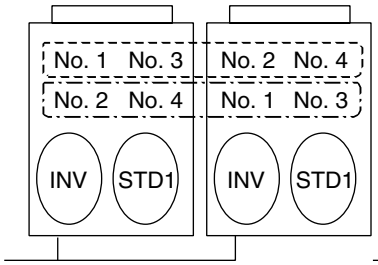
RXQ8MA,10MA,12MA



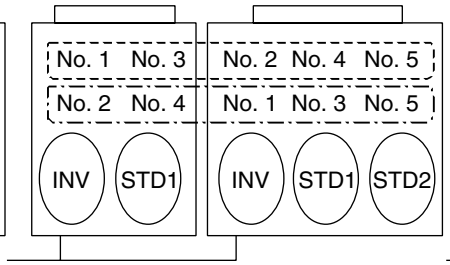
RXQ14MA,16MA



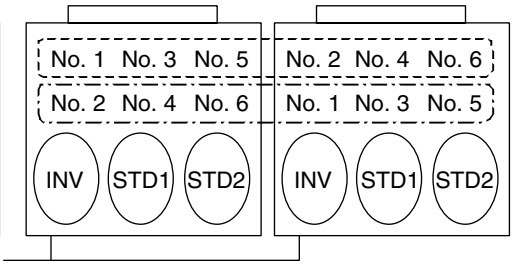
RXQ18MA,20MA,22MA,24MA



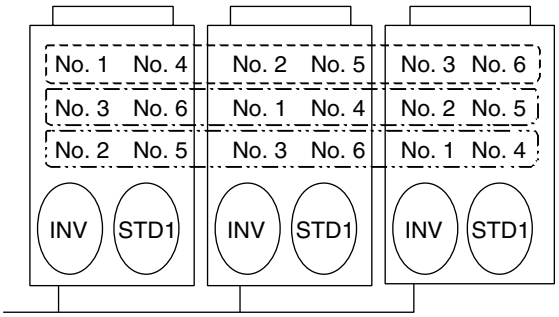
RXQ26MA,28MA



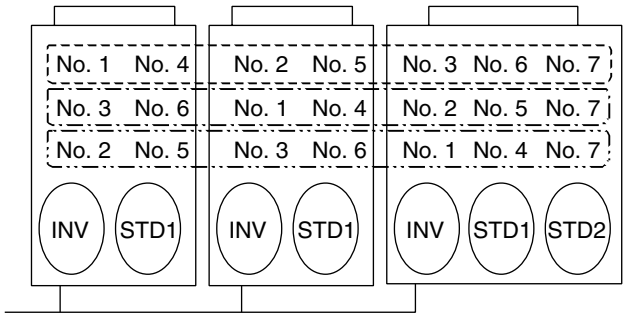
RXQ30MA,32MA



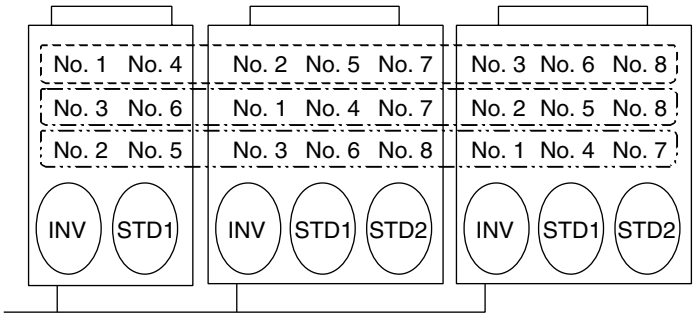
RXQ34MA,36MA



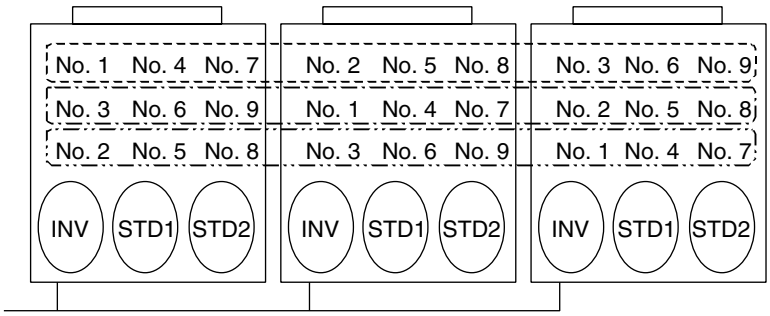
RXQ38MA,40MA



RXQ42MA,44MA



RXQ46MA,48MA



*

- 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.

■ Compressor Step Control
Compressor operations vary with the following steps according to information in "2.2 Compressor PI Control". Furthermore, the operating priority of compressors is subject to information in "■ Operating Priority and Rotation of Compressors".

RXQ5MA

STEP No.	INV
1	52Hz
2	57Hz
3	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

RXQ8MA,10MA,12MA

STEP No.	INV	STD1
1	52Hz	OFF
2	57Hz	OFF
3	62Hz	OFF
4	68Hz	OFF
5	74Hz	OFF
6	81Hz	OFF
7	88Hz	OFF
8	96Hz	OFF
9	104Hz	OFF
10	110Hz	OFF
11	116Hz	OFF
12	124Hz	OFF
13	133Hz	OFF
14	143Hz	OFF
15	158Hz	OFF
16	165Hz	OFF
17	177Hz	OFF
18	189Hz	OFF
19	202Hz	OFF
20	210Hz	OFF
21	52Hz	ON
22	62Hz	ON
23	68Hz	ON
24	74Hz	ON
25	81Hz	ON
26	88Hz	ON
27	96Hz	ON
28	104Hz	ON
29	116Hz	ON
30	124Hz	ON
31	133Hz	ON
32	143Hz	ON
33	158Hz	ON
34	177Hz	ON
35	189Hz	ON
36	202Hz	ON
37	210Hz	ON

RXQ14MA,16MA

STEP No.	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	62Hz	ON	OFF
23	68Hz	ON	OFF
24	74Hz	ON	OFF
25	81Hz	ON	OFF
26	88Hz	ON	OFF
27	96Hz	ON	OFF
28	104Hz	ON	OFF
29	116Hz	ON	OFF
30	124Hz	ON	OFF
31	133Hz	ON	OFF
32	143Hz	ON	OFF
33	158Hz	ON	OFF
34	177Hz	ON	OFF
35	189Hz	ON	OFF
36	202Hz	ON	OFF
37	210Hz	ON	OFF
38	52Hz	ON	ON
39	62Hz	ON	ON
40	74Hz	ON	ON
41	88Hz	ON	ON
42	96Hz	ON	ON
43	110Hz	ON	ON
44	124Hz	ON	ON
45	143Hz	ON	ON
46	158Hz	ON	ON
47	165Hz	ON	ON
48	177Hz	ON	ON
49	189Hz	ON	ON

Notes:
1. INV : Inverter compressor
   STD1 : Standard compressor 1
   STD2 : Standard compressor 2
2. Depending on the operating conditions of compressors, the compressors may run in patterns other than those aforementioned.

RXQ18MA, 20MA, 22MA, 24MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	143Hz	143Hz	OFF
26	158Hz	158Hz	OFF
27	165Hz	165Hz	OFF
28	177Hz	177Hz	OFF
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	116Hz	116Hz	ON1
34	124Hz	124Hz	ON1
35	133Hz	133Hz	ON1
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	110Hz	110Hz	ON2
39	124Hz	124Hz	ON2
40	143Hz	143Hz	ON2
41	158Hz	158Hz	ON2
42	165Hz	165Hz	ON2
43	177Hz	177Hz	ON2
44	189Hz	189Hz	ON2
45	202Hz	202Hz	ON2
46	210Hz	210Hz	ON2

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	52Hz	52Hz	OFF
11	57Hz	57Hz	OFF
12	62Hz	62Hz	OFF
13	68Hz	68Hz	OFF
14	71Hz	71Hz	OFF
15	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	52Hz	52Hz	ON1
26	62Hz	62Hz	ON1
27	68Hz	68Hz	ON1
28	74Hz	74Hz	ON1
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	52Hz	52Hz	ON2
34	62Hz	62Hz	ON2
35	74Hz	74Hz	ON2
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	110Hz	110Hz	ON2
39	124Hz	124Hz	ON2
40	143Hz	143Hz	ON2
41	158Hz	158Hz	ON2
42	165Hz	165Hz	ON2
43	177Hz	177Hz	ON2
44	189Hz	189Hz	ON2
45	202Hz	202Hz	ON2
46	210Hz	210Hz	ON2

RXQ26MA, 28MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	143Hz	143Hz	OFF
26	158Hz	158Hz	OFF
27	165Hz	165Hz	OFF
28	177Hz	177Hz	OFF
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	116Hz	116Hz	ON1
34	124Hz	124Hz	ON1
35	133Hz	133Hz	ON1
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	110Hz	110Hz	ON2
39	124Hz	124Hz	ON2
40	143Hz	143Hz	ON2
41	92Hz	92Hz	ON3
42	104Hz	104Hz	ON3
43	116Hz	116Hz	ON3
44	124Hz	124Hz	ON3
45	143Hz	143Hz	ON3
46	158Hz	158Hz	ON3
47	165Hz	165Hz	ON3
48	177Hz	177Hz	ON3
49	189Hz	189Hz	ON3
50	202Hz	202Hz	ON3
51	210Hz	210Hz	ON3

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	52Hz	52Hz	OFF
11	57Hz	57Hz	OFF
12	62Hz	62Hz	OFF
13	68Hz	68Hz	OFF
14	71Hz	71Hz	OFF
15	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	52Hz	52Hz	ON1
26	62Hz	62Hz	ON1
27	68Hz	68Hz	ON1
28	74Hz	74Hz	ON1
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	52Hz	52Hz	ON2
34	62Hz	62Hz	ON2
35	74Hz	74Hz	ON2
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	52Hz	52Hz	ON3
39	62Hz	62Hz	ON3
40	74Hz	74Hz	ON3
41	92Hz	92Hz	ON3
42	104Hz	104Hz	ON3
43	116Hz	116Hz	ON3
44	124Hz	124Hz	ON3
45	143Hz	143Hz	ON3
46	158Hz	158Hz	ON3
47	165Hz	165Hz	ON3
48	177Hz	177Hz	ON3
49	189Hz	189Hz	ON3
50	202Hz	202Hz	ON3
51	210Hz	210Hz	ON3

Notes:

1. INV : Inverter compressor
   STD : Standard compressor
   Figures after ON represent the number of STD compressors in operation.
2. “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.
3. Depending on the operating conditions of compressors, the compressors may run in patterns other than those aforementioned.

RXQ30MA, 32MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	143Hz	143Hz	OFF
26	158Hz	158Hz	OFF
27	165Hz	165Hz	OFF
28	177Hz	177Hz	OFF
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	116Hz	116Hz	ON1
34	124Hz	124Hz	ON1
35	133Hz	133Hz	ON1
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	110Hz	110Hz	ON2
39	124Hz	124Hz	ON2
40	143Hz	143Hz	ON2
41	92Hz	92Hz	ON3
42	104Hz	104Hz	ON3
43	116Hz	116Hz	ON3
44	124Hz	124Hz	ON3
45	143Hz	143Hz	ON3
46	96Hz	96Hz	ON4
47	104Hz	104Hz	ON4
48	116Hz	116Hz	ON4
49	124Hz	124Hz	ON4
50	143Hz	143Hz	ON4
51	158Hz	158Hz	ON4
52	165Hz	165Hz	ON4
53	177Hz	177Hz	ON4
54	189Hz	189Hz	ON4

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit INV	STD
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	52Hz	52Hz	OFF
11	57Hz	57Hz	OFF
12	62Hz	62Hz	OFF
13	68Hz	68Hz	OFF
14	71Hz	71Hz	OFF
15	74Hz	74Hz	OFF
16	81Hz	81Hz	OFF
17	88Hz	88Hz	OFF
18	92Hz	92Hz	OFF
19	96Hz	96Hz	OFF
20	104Hz	104Hz	OFF
21	110Hz	110Hz	OFF
22	116Hz	116Hz	OFF
23	124Hz	124Hz	OFF
24	133Hz	133Hz	OFF
25	52Hz	52Hz	ON1
26	62Hz	62Hz	ON1
27	68Hz	68Hz	ON1
28	74Hz	74Hz	ON1
29	81Hz	81Hz	ON1
30	88Hz	88Hz	ON1
31	96Hz	96Hz	ON1
32	104Hz	104Hz	ON1
33	52Hz	52Hz	ON2
34	62Hz	62Hz	ON2
35	74Hz	74Hz	ON2
36	88Hz	88Hz	ON2
37	96Hz	96Hz	ON2
38	52Hz	52Hz	ON3
39	62Hz	62Hz	ON3
40	74Hz	74Hz	ON3
41	92Hz	92Hz	ON3
42	104Hz	104Hz	ON3
43	52Hz	52Hz	ON4
44	62Hz	62Hz	ON4
45	74Hz	74Hz	ON4
46	96Hz	96Hz	ON4
47	104Hz	104Hz	ON4
48	116Hz	116Hz	ON4
49	124Hz	124Hz	ON4
50	143Hz	143Hz	ON4
51	158Hz	158Hz	ON4
52	165Hz	165Hz	ON4
53	177Hz	177Hz	ON4
54	189Hz	189Hz	ON4

RXQ34MA, 36MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	74Hz	74Hz	OFF	OFF
16	81Hz	81Hz	OFF	OFF
17	88Hz	88Hz	OFF	OFF
18	92Hz	92Hz	OFF	OFF
19	96Hz	96Hz	OFF	OFF
20	104Hz	104Hz	OFF	OFF
21	110Hz	110Hz	OFF	OFF
22	116Hz	116Hz	OFF	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	104Hz	104Hz	104Hz	OFF
27	110Hz	110Hz	110Hz	OFF
28	116Hz	116Hz	116Hz	OFF
29	124Hz	124Hz	124Hz	OFF
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	116Hz	116Hz	116Hz	ON1
35	124Hz	124Hz	124Hz	ON1
36	133Hz	133Hz	133Hz	ON1
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	0N2
39	110Hz	110Hz	110Hz	ON2
40	124Hz	124Hz	124Hz	0N2
41	143Hz	143Hz	143Hz	ON2
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	116Hz	116Hz	116Hz	ON3
45	124Hz	124Hz	124Hz	ON3
46	143Hz	143Hz	143Hz	ON3
47	158Hz	158Hz	158Hz	ON3
48	165Hz	165Hz	165Hz	ON3
49	177Hz	177Hz	177Hz	ON3
50	189Hz	189Hz	189Hz	ON3
51	202Hz	202Hz	202Hz	ON3
52	210Hz	210Hz	210Hz	ON3

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	52Hz	52Hz	OFF	OFF
11	57Hz	57Hz	OFF	OFF
12	62Hz	62Hz	OFF	OFF
13	68Hz	68Hz	OFF	OFF
14	71Hz	71Hz	OFF	OFF
15	74Hz	74Hz	OFF	OFF
16	52Hz	52Hz	52Hz	OFF
17	57Hz	57Hz	57Hz	OFF
18	62Hz	62Hz	62Hz	OFF
19	65Hz	65Hz	65Hz	OFF
20	68Hz	68Hz	68Hz	OFF
21	71Hz	71Hz	71Hz	OFF
22	74Hz	74Hz	74Hz	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	52Hz	52Hz	52Hz	ON1
27	62Hz	62Hz	62Hz	ON1
28	68Hz	68Hz	68Hz	ON1
29	74Hz	74Hz	74Hz	ON1
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	52Hz	52Hz	52Hz	ON2
35	62Hz	62Hz	62Hz	ON2
36	74Hz	74Hz	74Hz	ON2
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	52Hz	52Hz	52Hz	ON3
40	62Hz	62Hz	62Hz	ON3
41	74Hz	74Hz	74Hz	ON3
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	124Hz	124Hz	124Hz	ON3
45	143Hz	143Hz	143Hz	ON3
46	158Hz	158Hz	158Hz	ON3
47	165Hz	165Hz	165Hz	ON3
48	177Hz	177Hz	177Hz	ON3
49	189Hz	189Hz	189Hz	ON3
50	202Hz	202Hz	202Hz	ON3
51	210Hz	210Hz	210Hz	ON3

Notes:

1. INV : Inverter compressor
   STD : Standard compressor
   Figures after ON represent the number of STD compressors in operation.
2. “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.
3. Depending on the operating conditions of compressors, the compressors may run in patterns other than those aforementioned.

RXQ38MA, 40MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	74Hz	74Hz	OFF	OFF
16	81Hz	81Hz	OFF	OFF
17	88Hz	88Hz	OFF	OFF
18	92Hz	92Hz	OFF	OFF
19	96Hz	96Hz	OFF	OFF
20	104Hz	104Hz	OFF	OFF
21	110Hz	110Hz	OFF	OFF
22	116Hz	116Hz	OFF	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	104Hz	104Hz	104Hz	OFF
27	110Hz	110Hz	110Hz	OFF
28	116Hz	116Hz	116Hz	OFF
29	124Hz	124Hz	124Hz	OFF
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	116Hz	116Hz	116Hz	ON1
35	124Hz	124Hz	124Hz	ON1
36	133Hz	133Hz	133Hz	ON1
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	0N2
39	110Hz	110Hz	110Hz	ON2
40	124Hz	124Hz	124Hz	0N2
41	143Hz	143Hz	143Hz	ON2
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	116Hz	116Hz	116Hz	ON3
45	124Hz	124Hz	124Hz	ON3
46	143Hz	143Hz	143Hz	ON3
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	116Hz	116Hz	116Hz	ON4
50	124Hz	124Hz	124Hz	ON4
51	143Hz	143Hz	143Hz	ON4
52	158Hz	158Hz	158Hz	ON4
53	165Hz	165Hz	165Hz	ON4
54	177Hz	177Hz	177Hz	ON4
55	189Hz	189Hz	189Hz	ON4
56	202Hz	202Hz	202Hz	ON4
57	210Hz	210Hz	210Hz	ON4

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	52Hz	52Hz	OFF	OFF
11	57Hz	57Hz	OFF	OFF
12	62Hz	62Hz	OFF	OFF
13	68Hz	68Hz	OFF	OFF
14	71Hz	71Hz	OFF	OFF
15	74Hz	74Hz	OFF	OFF
16	52Hz	52Hz	52Hz	OFF
17	57Hz	57Hz	57Hz	OFF
18	62Hz	62Hz	62Hz	OFF
19	65Hz	65Hz	65Hz	OFF
20	68Hz	68Hz	68Hz	OFF
21	71Hz	71Hz	71Hz	OFF
22	74Hz	74Hz	74Hz	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	52Hz	52Hz	52Hz	ON1
27	62Hz	62Hz	62Hz	ON1
28	68Hz	68Hz	68Hz	ON1
29	74Hz	74Hz	74Hz	ON1
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	52Hz	52Hz	52Hz	ON2
35	62Hz	62Hz	62Hz	ON2
36	74Hz	74Hz	74Hz	ON2
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	52Hz	52Hz	52Hz	ON3
40	62Hz	62Hz	62Hz	ON3
41	74Hz	74Hz	74Hz	ON3
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	52Hz	52Hz	52Hz	ON4
45	62Hz	62Hz	62Hz	ON4
46	74Hz	74Hz	74Hz	ON4
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	116Hz	116Hz	116Hz	ON4
50	124Hz	124Hz	124Hz	ON4
51	143Hz	143Hz	143Hz	ON4
52	158Hz	158Hz	158Hz	ON4
53	165Hz	165Hz	165Hz	ON4
54	177Hz	177Hz	177Hz	ON4
55	189Hz	189Hz	189Hz	ON4
56	202Hz	202Hz	202Hz	ON4
57	210Hz	210Hz	210Hz	ON4

RXQ42MA, 44MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	74Hz	74Hz	OFF	OFF
16	81Hz	81Hz	OFF	OFF
17	88Hz	88Hz	OFF	OFF
18	92Hz	92Hz	OFF	OFF
19	96Hz	96Hz	OFF	OFF
20	104Hz	104Hz	OFF	OFF
21	110Hz	110Hz	OFF	OFF
22	116Hz	116Hz	OFF	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	104Hz	104Hz	104Hz	OFF
27	110Hz	110Hz	110Hz	OFF
28	116Hz	116Hz	116Hz	OFF
29	124Hz	124Hz	124Hz	OFF
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	116Hz	116Hz	116Hz	ON1
35	124Hz	124Hz	124Hz	ON1
36	133Hz	133Hz	133Hz	ON1
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	110Hz	110Hz	110Hz	ON2
40	124Hz	124Hz	124Hz	ON2
41	143Hz	143Hz	143Hz	ON2
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	116Hz	116Hz	116Hz	ON3
45	124Hz	124Hz	124Hz	ON3
46	143Hz	143Hz	143Hz	ON3
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	116Hz	116Hz	116Hz	ON4
50	124Hz	124Hz	124Hz	ON4
51	143Hz	143Hz	143Hz	ON4
52	96Hz	96Hz	96Hz	ON5
53	104Hz	104Hz	104Hz	ON5
54	116Hz	116Hz	116Hz	ON5
55	124Hz	124Hz	124Hz	ON5
56	143Hz	143Hz	143Hz	ON5
57	158Hz	158Hz	158Hz	ON5
58	165Hz	165Hz	165Hz	ON5
59	177Hz	177Hz	177Hz	ON5
60	189Hz	189Hz	189Hz	ON5
61	202Hz	202Hz	202Hz	ON5
62	210Hz	210Hz	210Hz	ON5

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	52Hz	52Hz	OFF	OFF
11	57Hz	57Hz	OFF	OFF
12	62Hz	62Hz	OFF	OFF
13	68Hz	68Hz	OFF	OFF
14	71Hz	71Hz	OFF	OFF
15	74Hz	74Hz	OFF	OFF
16	52Hz	52Hz	52Hz	OFF
17	57Hz	57Hz	57Hz	OFF
18	62Hz	62Hz	62Hz	OFF
19	65Hz	65Hz	65Hz	OFF
20	68Hz	68Hz	68Hz	OFF
21	71Hz	71Hz	71Hz	OFF
22	74Hz	74Hz	74Hz	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	52Hz	52Hz	52Hz	ON1
27	62Hz	62Hz	62Hz	ON1
28	68Hz	68Hz	68Hz	ON1
29	74Hz	74Hz	74Hz	ON1
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	52Hz	52Hz	52Hz	ON2
35	62Hz	62Hz	62Hz	ON2
36	74Hz	74Hz	74Hz	ON2
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	52Hz	52Hz	52Hz	ON3
40	62Hz	62Hz	62Hz	ON3
41	74Hz	74Hz	74Hz	ON3
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	52Hz	52Hz	52Hz	ON4
45	62Hz	62Hz	62Hz	ON4
46	74Hz	74Hz	74Hz	ON4
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	52Hz	52Hz	52Hz	ON5
50	68Hz	68Hz	68Hz	ON5
51	81Hz	81Hz	81Hz	ON5
52	96Hz	96Hz	96Hz	ON5
53	104Hz	104Hz	104Hz	ON5
54	116Hz	116Hz	116Hz	ON5
55	124Hz	124Hz	124Hz	ON5
56	143Hz	143Hz	143Hz	ON5
57	158Hz	158Hz	158Hz	ON5
58	165Hz	165Hz	165Hz	ON5
59	177Hz	177Hz	177Hz	ON5
60	189Hz	189Hz	189Hz	ON5
61	202Hz	202Hz	202Hz	ON5
62	210Hz	210Hz	210Hz	ON5

Notes:

1. INV : Inverter compressor
   STD : Standard compressor
   Figures after ON represent the number of STD compressors in operation.
2. “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.
3. Depending on the operating conditions of compressors, the compressors may run in patterns other than those aforementioned.

RXQ46MA, 48MA

(To increase Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	74Hz	74Hz	OFF	OFF
16	81Hz	81Hz	OFF	OFF
17	88Hz	88Hz	OFF	OFF
18	92Hz	92Hz	OFF	OFF
19	96Hz	96Hz	OFF	OFF
20	104Hz	104Hz	OFF	OFF
21	110Hz	110Hz	OFF	OFF
22	116Hz	116Hz	OFF	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	104Hz	104Hz	104Hz	OFF
27	110Hz	110Hz	110Hz	OFF
28	116Hz	116Hz	116Hz	OFF
29	124Hz	124Hz	124Hz	OFF
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	116Hz	116Hz	116Hz	ON1
35	124Hz	124Hz	124Hz	ON1
36	133Hz	133Hz	133Hz	ON1
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	110Hz	110Hz	110Hz	ON2
40	124Hz	124Hz	124Hz	ON2
41	143Hz	143Hz	143Hz	ON2
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	116Hz	116Hz	116Hz	ON3
45	124Hz	124Hz	124Hz	ON3
46	143Hz	143Hz	143Hz	ON3
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	116Hz	116Hz	116Hz	ON4
50	124Hz	124Hz	124Hz	ON4
51	143Hz	143Hz	143Hz	ON4
52	96Hz	96Hz	96Hz	ON5
53	104Hz	104Hz	104Hz	ON5
54	116Hz	116Hz	116Hz	ON5
55	124Hz	124Hz	124Hz	ON5
56	143Hz	143Hz	143Hz	ON5
57	96Hz	96Hz	96Hz	ON6
58	104Hz	104Hz	104Hz	ON6
59	116Hz	116Hz	116Hz	ON6
60	124Hz	124Hz	124Hz	ON6
61	143Hz	143Hz	143Hz	ON6
62	158Hz	158Hz	158Hz	ON6
63	165Hz	165Hz	165Hz	ON6
64	177Hz	177Hz	177Hz	ON6
65	189Hz	189Hz	189Hz	ON6

(To decrease Step No.)

STEP No.	Master unit INV	Slave unit1 INV	Slave unit2 INV	STD
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	52Hz	52Hz	OFF	OFF
11	57Hz	57Hz	OFF	OFF
12	62Hz	62Hz	OFF	OFF
13	68Hz	68Hz	OFF	OFF
14	71Hz	71Hz	OFF	OFF
15	74Hz	74Hz	OFF	OFF
16	52Hz	52Hz	52Hz	OFF
17	57Hz	57Hz	57Hz	OFF
18	62Hz	62Hz	62Hz	OFF
19	65Hz	65Hz	65Hz	OFF
20	68Hz	68Hz	68Hz	OFF
21	71Hz	71Hz	71Hz	OFF
22	74Hz	74Hz	74Hz	OFF
23	81Hz	81Hz	81Hz	OFF
24	88Hz	88Hz	88Hz	OFF
25	96Hz	96Hz	96Hz	OFF
26	52Hz	52Hz	52Hz	ON1
27	62Hz	62Hz	62Hz	ON1
28	68Hz	68Hz	68Hz	ON1
29	74Hz	74Hz	74Hz	ON1
30	81Hz	81Hz	81Hz	ON1
31	88Hz	88Hz	88Hz	ON1
32	96Hz	96Hz	96Hz	ON1
33	104Hz	104Hz	104Hz	ON1
34	52Hz	52Hz	52Hz	ON2
35	62Hz	62Hz	62Hz	ON2
36	74Hz	74Hz	74Hz	ON2
37	88Hz	88Hz	88Hz	ON2
38	96Hz	96Hz	96Hz	ON2
39	52Hz	52Hz	52Hz	ON3
40	62Hz	62Hz	62Hz	ON3
41	74Hz	74Hz	74Hz	ON3
42	92Hz	92Hz	92Hz	ON3
43	104Hz	104Hz	104Hz	ON3
44	52Hz	52Hz	52Hz	ON4
45	62Hz	62Hz	62Hz	ON4
46	74Hz	74Hz	74Hz	ON4
47	96Hz	96Hz	96Hz	ON4
48	104Hz	104Hz	104Hz	ON4
49	52Hz	52Hz	52Hz	ON5
50	68Hz	68Hz	68Hz	ON5
51	81Hz	81Hz	81Hz	ON5
52	96Hz	96Hz	96Hz	ON5
53	104Hz	104Hz	104Hz	ON5
54	52Hz	52Hz	52Hz	ON6
55	68Hz	68Hz	68Hz	ON6
56	81Hz	81Hz	81Hz	ON6
57	96Hz	96Hz	96Hz	ON6
58	104Hz	104Hz	104Hz	ON6
59	116Hz	116Hz	116Hz	ON6
60	124Hz	124Hz	124Hz	ON6
61	143Hz	143Hz	143Hz	ON6
62	158Hz	158Hz	158Hz	ON6
63	165Hz	165Hz	165Hz	ON6
64	177Hz	177Hz	177Hz	ON6
65	189Hz	189Hz	189Hz	ON6

Notes:

1. INV : Inverter compressor
   STD : Standard compressor
   Figures after ON represent the number of STD compressors in operation.
2. “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.
3. Depending on the operating conditions of compressors, the compressors may run in patterns other than those aforementioned.

2.3 Electronic Expansion Valve PI Control

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 Step Control of Outdoor Unit Fans

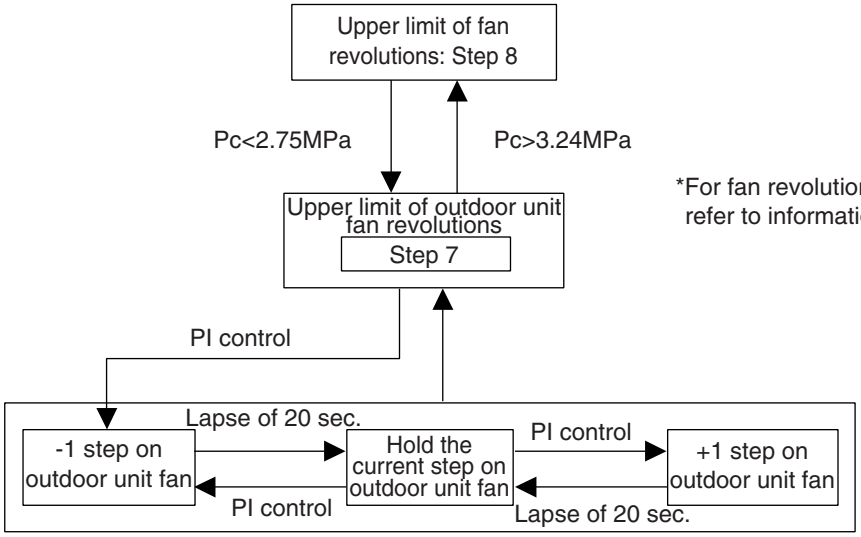
Used to control the revolutions of outdoor unit fans in the steps listed in table below, according to condition changes.

STEP No.	Fan revolutions (rpm)					
	RXQ5MA	RXQ8MA	RXQ10MA	RXQ12MA	RXQ14MA	RXQ16MA
0	0	0	0	0	0	0
1	300	300	300	300	300	300
2	320	320	320	325	325	325
3	350	345	345	355	355	355
4	385	385	385	400	400	400
5	470	465	465	500	500	500
6	585	575	575	605	605	605
7	800	765	785	880	880	880
8	840	825	825	920	920	920

* Figures listed above are all those controlled while in standard mode, which vary when the system is set to high static pressure or capacity precedence mode.

2.5 Outdoor Unit Fan Control in Cooling Operation

While in cooling operation, if the outdoor temperature is low, this mode provides high-pressure control using the outdoor unit fan to retain appropriate liquid pressure, thus ensuring refrigerant circulation rate to be supplied to indoor units.



*For fan revolutions in each step, refer to information on page 85.

3. Special Control

3.1 Startup Control

This control is used to equalize the pressure in the front and back of the compressor prior to the startup of the compressor, thus reducing startup loads. Furthermore, the inverter is turned ON to charge the capacitor.
In addition, to avoid stresses to the compressor due to oil return or else after the startup, the following control is made.

3.1.1 Startup Control in Cooling Operation

Thermostat ON

	Pressure equalization control prior to startup	Startup control	
		STEP1	STEP2
Compressor	OFF	52Hz +OFF +OFF	+2 steps/20 sec. (until Pc - Pe>0.39MPa is achieved)
Outdoor unit fan	OFF	OFF	+1 step/15 sec. (when Pc>2.16MPa) -1 step/15 sec. (when Pc<1.77MPa)
Main motorized valve (EV1)	0 pls	2000 pls	2000 pls
Subcooling motorized valve (EV2)	0 pls	0 pls	0 pls
Hot gas bypass valve (SVP)	ON (RXQ5MA models) OFF (RXQ8~16MA models)	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Non-operating unit liquid pipe stop valve (SVL)	ON	ON	ON
Ending conditions	RXQ5MA models • OR [• Pc - Pe<0.20MPa • A lapse of three minutes] RXQ8~16MA models • A lapse of 15 sec.	A lapse of 5 sec.	• OR [• A lapse of 320 sec. • Pc - Pe>0.39MPa]

3.2 Oil Return Operation

In order to prevent the compressor from running out of oil, the oil return operation is conducted to recover oil flown out from the compressor to the system side.

3.2.1 Oil Return Operation in Cooling Operation

[Start conditions]

Referring to the set conditions for the following items, start the oil return operation in cooling.

- Cumulative oil feed rate
- Timer setting (Make this setting so as to start the oil return operation when the initial cumulative operating time reaches two hours after power supply is turned ON and then every eight hours.)

Furthermore, the cumulative oil feed rate is computed from Tc, Te, and compressor loads.

Outdoor unit actuator	Oil return preparation operation	Oil return operation	Post-oil-return operation
Compressor	Upper limit control	177 Hz + OFF + OFF Lapse of 20 sec. Pe<5.5k⇒Inv 25 Step Down Pe>6.5k⇒1 Step Up	52 Hz + OFF + OFF
Outdoor unit fan	Fan control	Fan control	Fan control
Main motorized valve (EV1)	2000 pls	2000 pls	2000 pls
Subcooling motorized valve (EV2)	SH control	0 pls	0 pls
Hot gas bypass valve (SVP)	OFF	ON	ON
Receiver gas discharging valve (SVG)	OFF	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON	ON
Ending conditions	20 sec.	or • 3 min. • Ts - Te<5°C	or • 3 min. • Pe<0.4MPa • HTdi>110°C

* 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 RXQ16MA.

Indoor unit actuator		Cooling oil return operation
Fan	Thermostat ON unit	Set flow rate (subject to the situation)
	Stopping unit	OFF
	Thermostat OFF unit	OFF
Electronic expansion valve	Thermostat ON unit	Normal opening
	Stopping unit	200 pls
	Thermostat OFF unit	200 pls

3.3 Pump-down Residual Operation

3.3.1 Pump-down Residual Operation in Cooling Operation

If the liquid refrigerant stays in the heat exchanger at the startup of a compressor, this liquid refrigerant enters the compressor, thus resulting in diluted oil in the compressor and then degraded lubrication performance. Consequently, in order to recover the refrigerant in the heat exchanger while the compressor stops, the pump-down residual operation is conducted.

Actuator	Master unit operation	Slave unit operation
Compressor	210 Hz + OFF + OFF	OFF
Outdoor unit fan	Fan control	OFF
Main motorized valve (EV1)	2000 pls	0 pls
Subcooling motorized valve (EV2)	0 pls	0 pls
Hot gas bypass valve (SVP)	ON	OFF
Receiver gas discharging valve (SVG)	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	ON	ON
Ending conditions	or • 5 min. • Pe<0.49 MPa • Td>110°C	

* Actuators are based on RXQ16MA.

3.4 Standby

3.4.1 Restart Standby

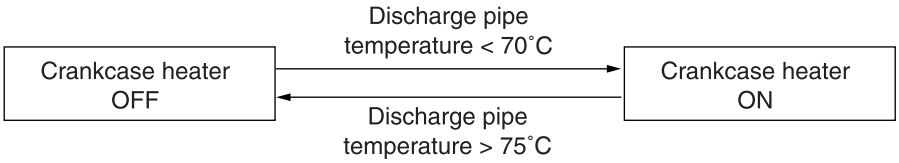
Used to forcedly stop the compressor for a period of five minutes, in order to prevent the frequent ON/OFF of the compressor and equalize the pressure within the refrigerant system.

Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	Ta>30°C: STEP4 Ta≤30°C: OFF	—
Main motorized valve (EV1)	0 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF	In the case of RXYQ5MA, this valve turns ON.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	—
Ending conditions	5 min.	—

* Actuators are based on RXQ16MA.

3.4.2 Crankcase Heater Control

In order to prevent the refrigerant from melting in the compressor oil in the stopped mode, this mode is used to control the crankcase heater.



3.5 Stopping Operation

3.5.1 When System is in Stop Mode

This mode is used to define actuator operations when the system stops.

Actuator	Operation
Compressor	OFF
Outdoor unit fan	OFF
Main motorized valve (EV1)	0 pls
Subcooling motorized valve (EV2)	0 pls
Hot gas bypass valve (SVP)	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 RXQ16MA.

3.5.2 Stop due to Malfunction

In order to protect compressors, if any of the following items has an abnormal value, the system will make "stop with thermostat OFF" and the malfunction will be determined according to the number of retry times.

Item	Judgment Criteria	Malfunction Code
1. Abnormal low pressure level	0.07MPa	E4
2. Abnormal high pressure level	4.0MPa	E3
3. Abnormal discharge pipe temperature level	135°C	F3
4. Abnormal power supply voltage	Reverse-phase power supply	U1
5. Abnormal inverter current level	14.5A: 260 sec.	L8
6. Abnormal radiator fin temperature level	98°C	L4
7. Abnormal CT current level	14.95A	E6

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

While the master unit is in operation, this mode is used to set the refrigerant flow rate to a required level using a slave unit in the stopped mode.

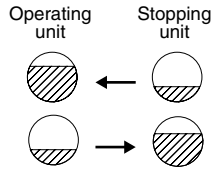
In cooling operation: The system operates in Mode A or Mode B listed in the table below.

Actuator	Mode-A operation	Mode-B operation
Compressor	OFF	OFF
Outdoor unit fan	STEP4	OFF
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
Receiver gas discharging valve (SVG)	OFF	OFF
Non-operating unit liquid pipe stop valve (SVSL)	OFF	ON
Mode transition conditions	To Mode B when $Tc - Tl > 0.27 \times (Tc - Ta) + 6$	To Mode A when gas shortage signal is sent from indoor unit
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.

3.6 Pressure Equalization prior to Startup

Actuator	Operation	Remarks
Compressor	OFF	—
Outdoor unit fan	Cooling:OFF Heating:STEP 4	—
Main motorized valve (EV1)	0 pls	—
Subcooling motorized valve (EV2)	0 pls	—
Hot gas bypass valve (SVP)	OFF	In the case of RXQ5M, this valve turns ON.
Receiver gas discharging valve (SVG)	OFF	—
Non-operating unit liquid pipe stop valve (SVSL)	ON	—
Ending conditions	10 sec.	In the case of RXQ5MA, 3 min. or Pc−Pe<0.2 MPa

Indoor unit actuator	Operation
Cooling operation Fan EV	 Remote controller All indoor unit : 0 pls

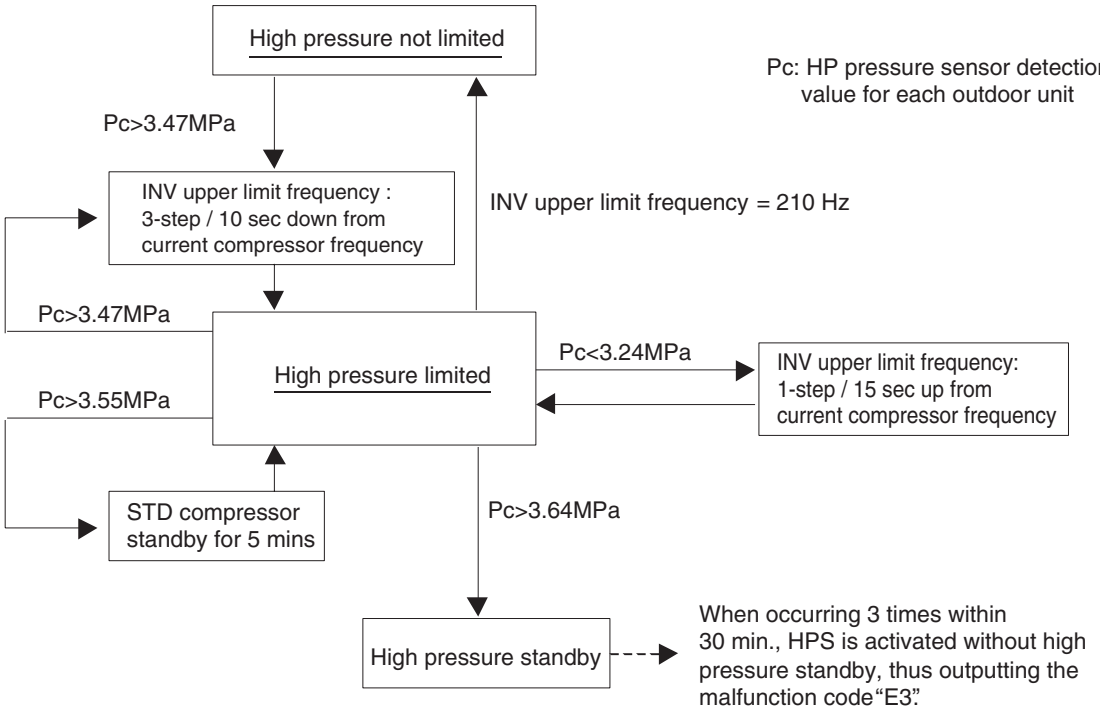
4. Protection Control

4.1 High Pressure Protection Control

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

[In cooling operation]

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

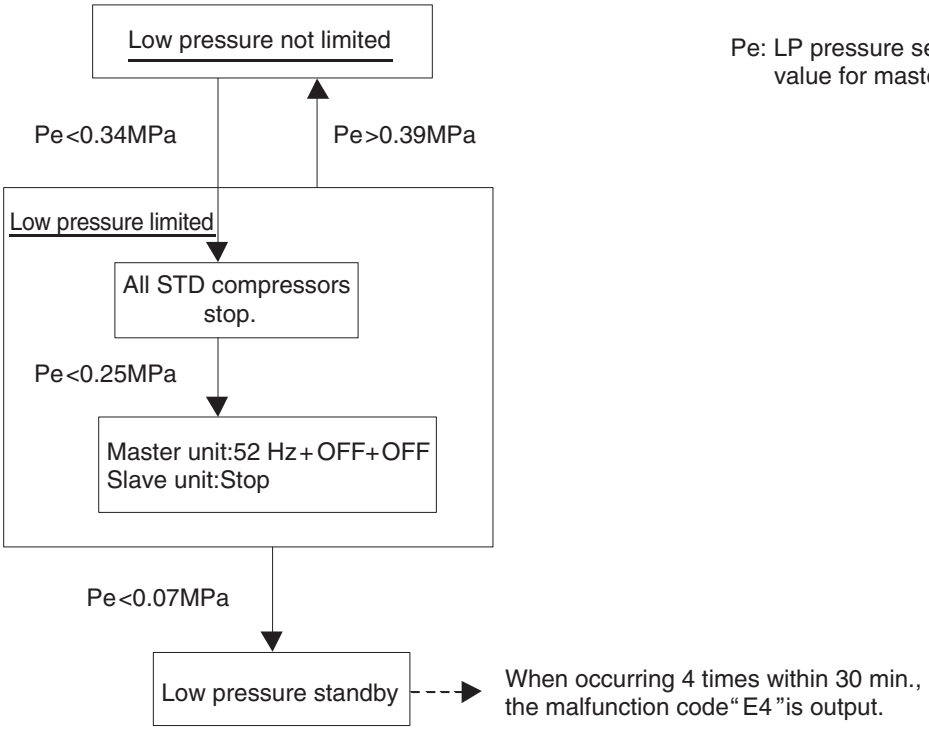


4.2 Low Pressure Protection Control

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

[In cooling operation]

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



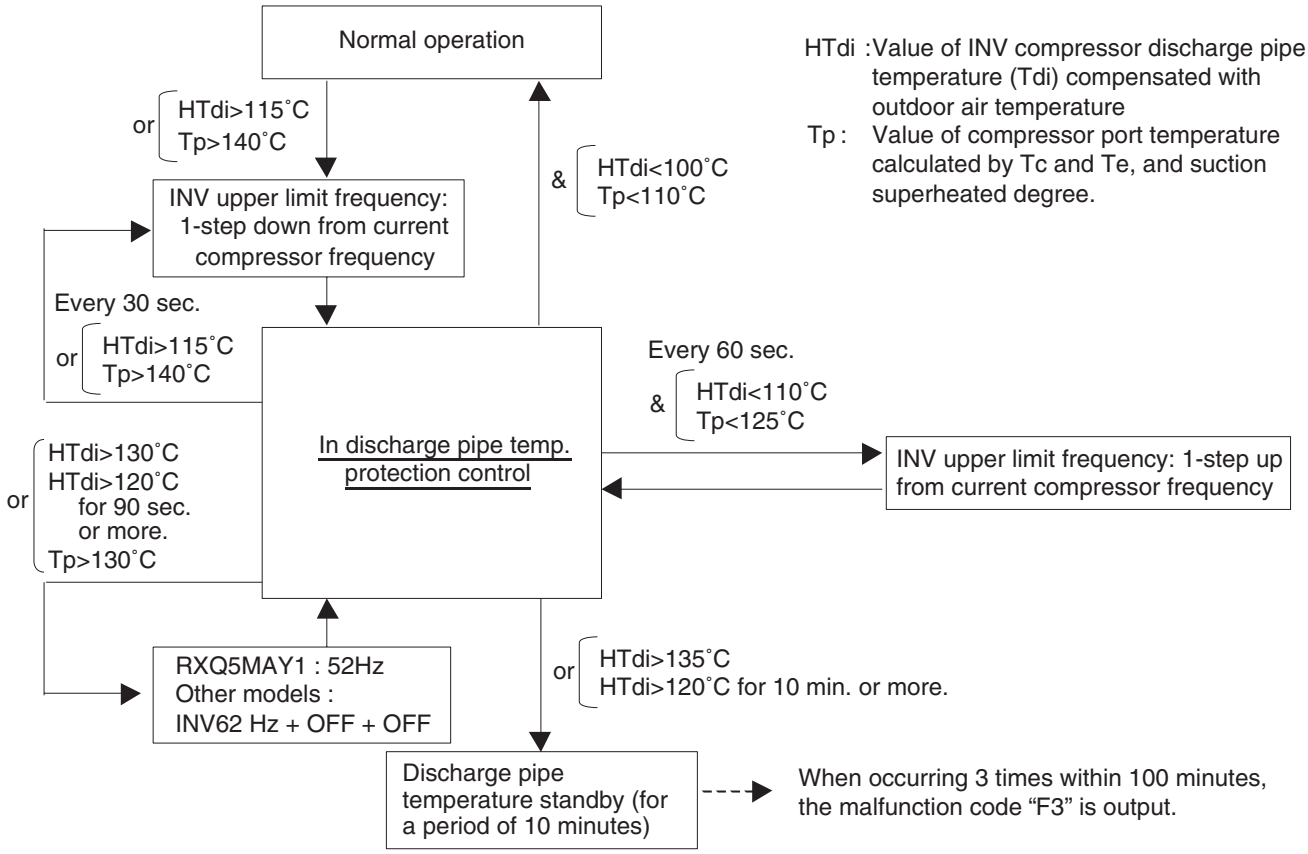
Pe: LP pressure sensor detection value for master unit

4.3 Discharge Pipe Protection Control

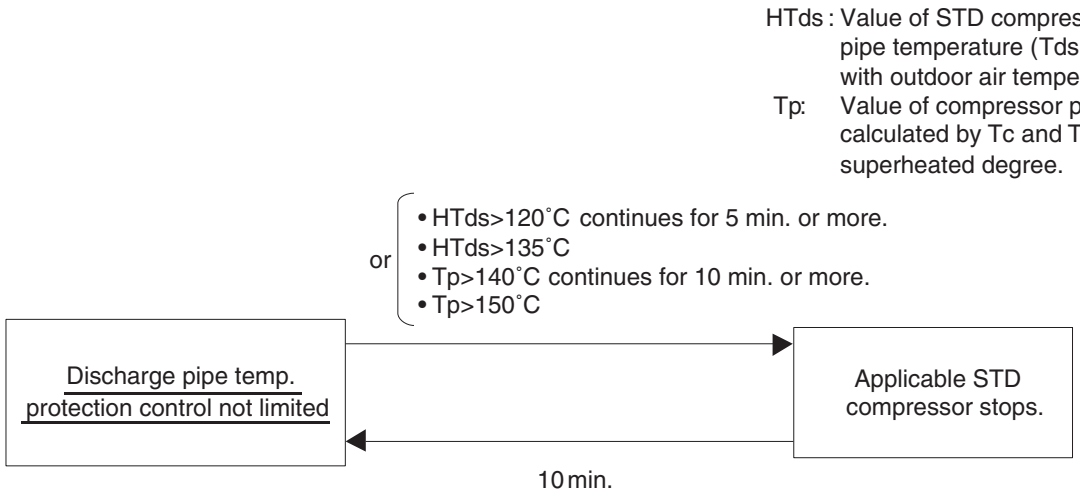
This discharge pipe protection control is used to protect the compressor internal temperature against a malfunction or transient increase of discharge pipe temperature.

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

[INV compressor]



[STD compressor]

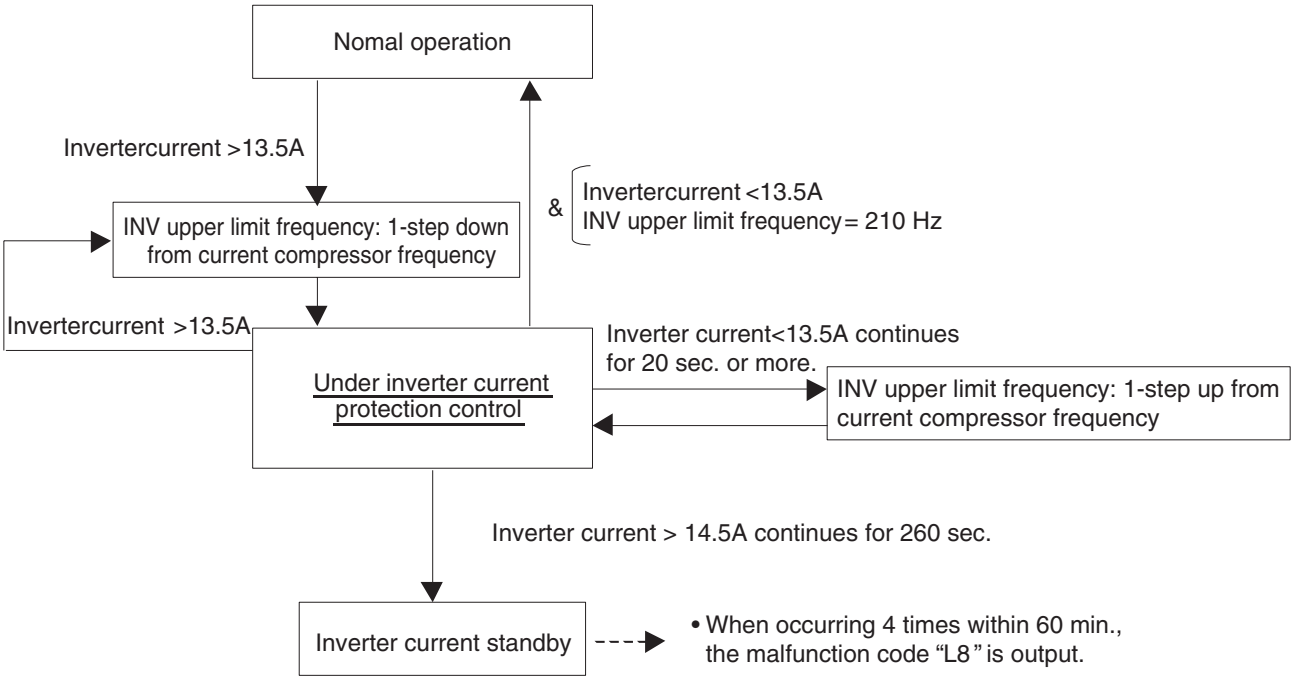


4.4 Inverter Protection Control

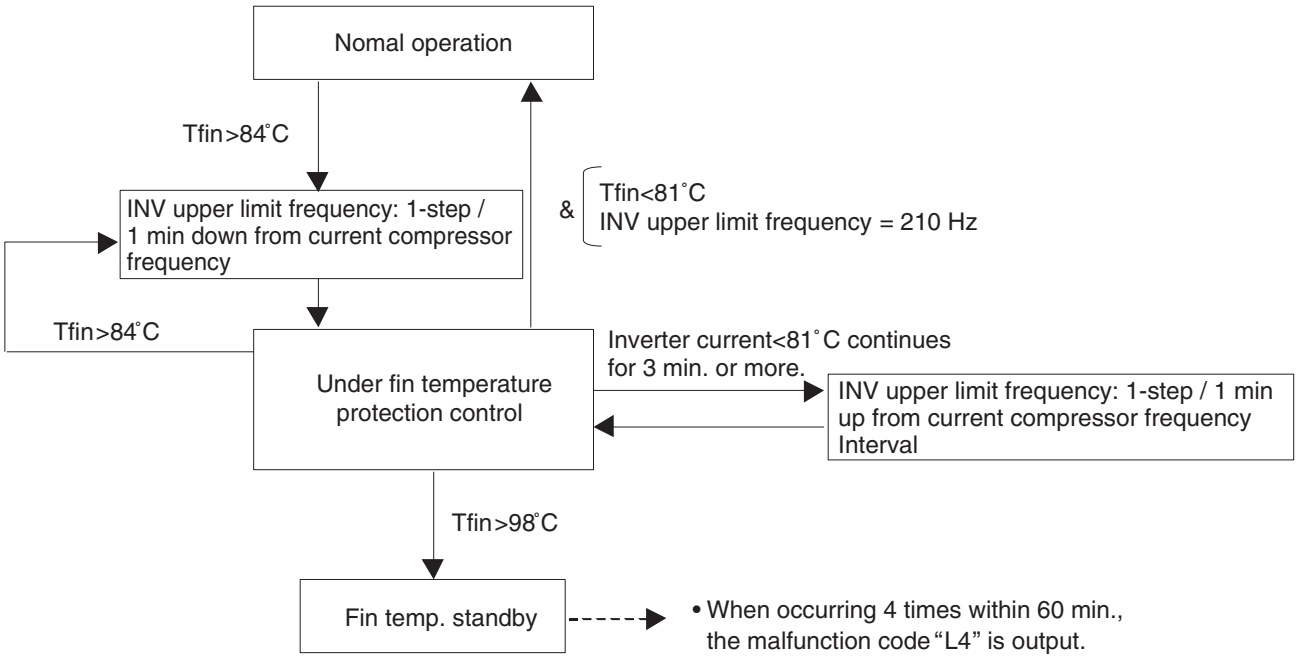
Inverter current protection control and inverter fin temperature control are performed to prevent tripping due to a malfunction, or transient inverter overcurrent, and fin temperature increase.

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

[Inverter overcurrent protection control]

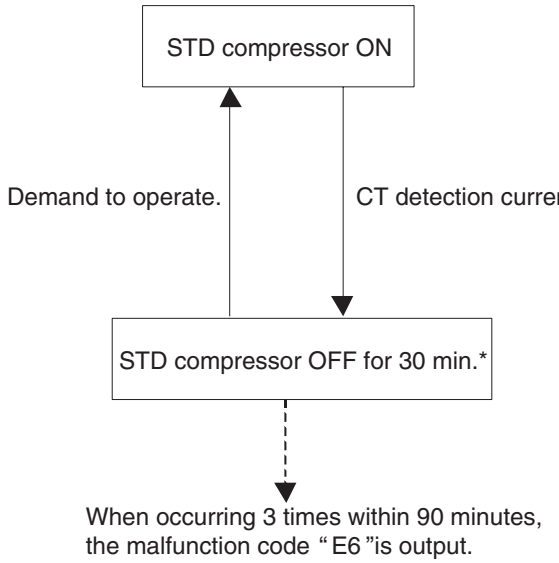


[Inverter fin temperature control]



4.5 STD Compressor Overload Protection

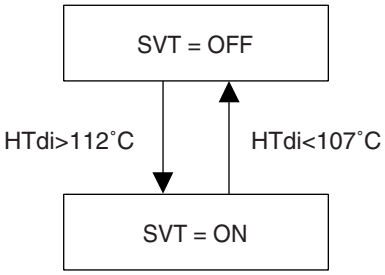
This control is used to prevent abnormal heating due to overcurrent to the compressor resulting from failures of STD compressor such as locking.



*If the power supply is reset while in operation prohibition mode, the prohibition timer will continue counting when the power supply is turned ON.

4.6 Injection Control (only for RXQ5MA)

For transitional rise in discharge pipe temperature, have the liquid refrigerant flow into the suction side to reduce the discharge pipe temperature for the compressor protection.



HTdi: Correction value of the discharge pipe temperature on the INV compressor.

5. Other Control

5.1 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.

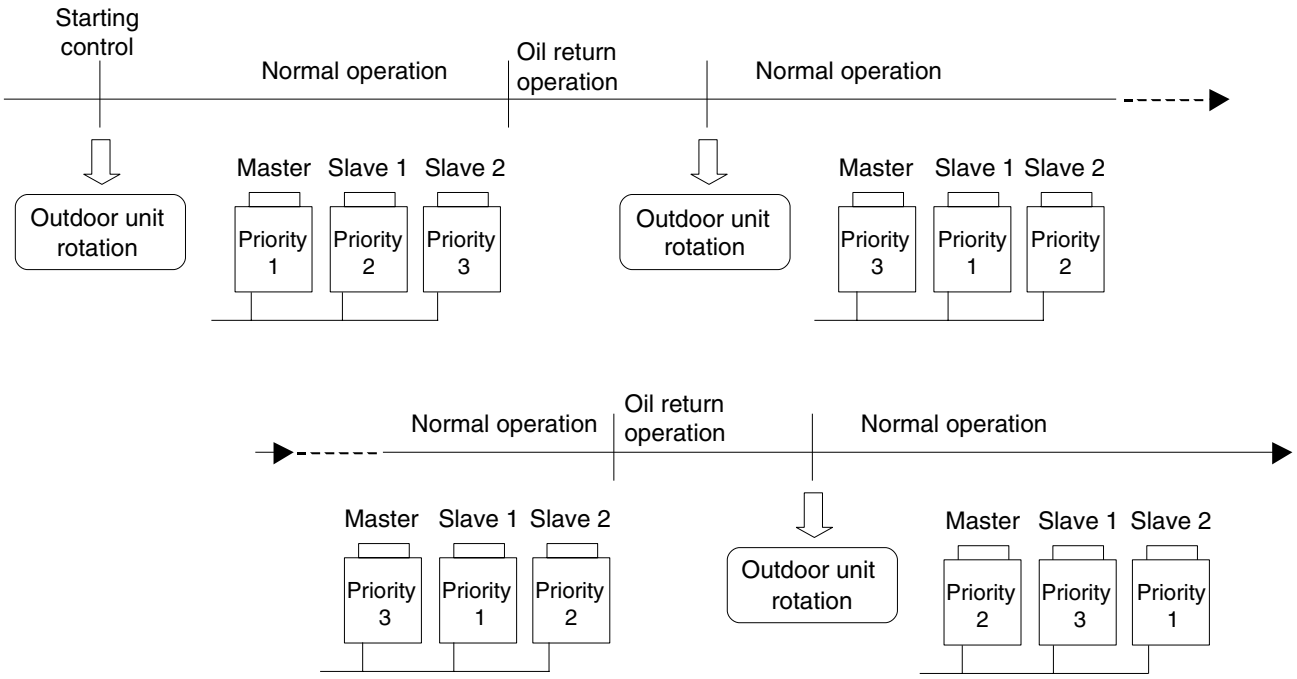
[Details of outdoor unit rotation]

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]

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

Example) The following diagram shows outdoor unit rotation in combination of 3 outdoor units.



* "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 115.)

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

In order to disable the compressor operation due to a failure or else, be sure to do so in emergency operation mode.
NEVER attempt to disconnect power supply wires from magnetic contactors or else. (Doing so will operate compressors in combination that disables oil equalization between the compressors, thus resulting in malfunctions of other normal compressors.)

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 (RXQ8MA to 16MA)

[Set the system to operation prohibition mode by compressor]

- In order to set an INV compressor to operation prohibition mode, set No. 42 of Setting mode 2 to "EMERGENCY OPERATION".

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

(Procedure)

(1) Press and hold the MODE button (BS1) for a period of 5 seconds or more.	○●●●●●	
(2) Press the SET button (BS2) 42 times.	○○●○●○●	(Factory set)
(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 order to set STD1 and STD2 compressors to operation prohibition mode, set No. 19 of Setting mode 2 to "STD1, 2 OPERATION PROHIBITION". (RXQ8M, 16M)

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

(Procedure)

(1) Press and hold the MODE button (BS1) for a period of 5 seconds or more.	○●●●●●	
(2) Press the SET button (BS2) 19 times.	○●○●●○○	
(3) Press the RETURN button (BS3) once.	○●●●●●	(Factory set)
(4) Press the SET button (BS2) once.	○●●●●◑	
(5) Press the RETURN button (BS3) twice.	○●●●●●	
(6) Press the MODE button (BS1) once.	●●○●●●	

- In order to set the STD 2 compressor to operation prohibition mode, set No. 19 of Setting mode 2 to "STD2 OPERATION PROHIBITION".(RXQ14MA, 16MA)

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

(Procedure)

(1) Press and hold the MODE button (BS1) for a period of 5 seconds or more.	○●●●●●	
(2) Press the SET button (BS2) 19 times.	○●○●●○○	
(3) Press the RETURN button (BS3) once.	○●●●●●	(Factory set)
(4) Press the SET button (BS2) twice.	○●●●◑●	
(5) Press the RETURN button (BS3) twice.	○●●●●●	
(6) Press the MODE button (BS1) once.	●●○●●●	

- For RXQ14MA and 16MA, if the INV compressor is set to operation prohibition mode, only a single STD compressor will operate for the convenience of oil equalization.
- For RXQ14MA and 16MA, only the STD1 compressor cannot be put into operation prohibition mode for the convenience of oil equalization.
- For the system with a single outdoor unit (RXQ8MA to 16MA), automatic backup operation is not functional.

5.2.3 In The Case of Multi-Outdoor-Unit System (RXQ18MA to 48MA)

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

Note : In order to forcedly clear the automatic backup operation, reset the power supply with the outdoor unit in the stopped state.

[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.

LED display (○:ON ●:OFF ◑:Blink)
H1P — — — — H7P H8P

Master:	●●○●●●●	○
Slave 1:	●●●●●●●	◑
Slave 2:	●●●●●●●	●

(Factory set)

- In order to set the main unit to operation prohibition mode, set No. 38 of Setting mode 2 to "MAIN OPERATION PROHIBITION".

(Procedure)
(1) Press and hold the MODE button (BS1) for a period of 5 seconds 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.

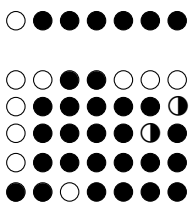
LED display (○:ON ●:OFF ◑:Blink)
H1P — — — — H7P

○●●●●●●
○○●●○○●
○●●●●●◑ (Factory set)
○●●●●◑●
○●●●●●●
●●○●●●●

• In order to set the slave unit 1 to operation prohibition mode, set No. 39 of Setting mode 2 to "SLAVE 1 OPERATION PROHIBITION".

(Procedure)
(1) Press and hold the MODE button (BS1) for a period of 5 seconds 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

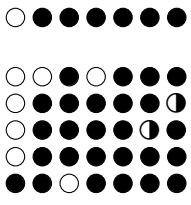


(Factory set)

• In order to set the slave unit 2 to operation prohibition mode, set No. 40 of Setting mode 2 to "SLAVE 2 OPERATION PROHIBITION".

(Procedure)
(1) Press and hold the MODE button (BS1) for a period of 5 seconds 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.

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



(Factory set)

*
• 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.

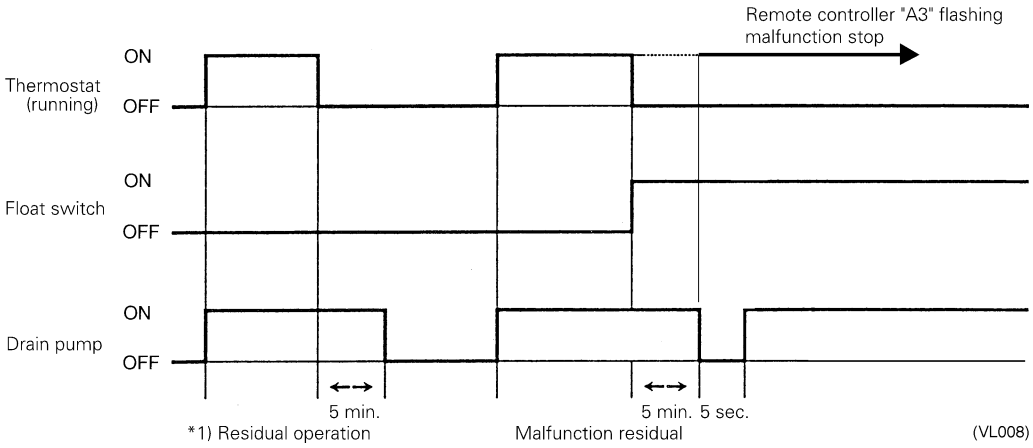
Set item	Condition	Content
Demand 1	Mode 1	The compressor operates at approx. 60% or less of rating.
	Mode 2	The compressor operates at approx. 70% or less of rating.
	Mode 3	The compressor operates at approx. 80% or less of rating.
Demand 2	—	The compressor operates at approx. 40% or less of rating.

6. Outline of Control (Indoor Unit)

6.1 Drain Pump Control

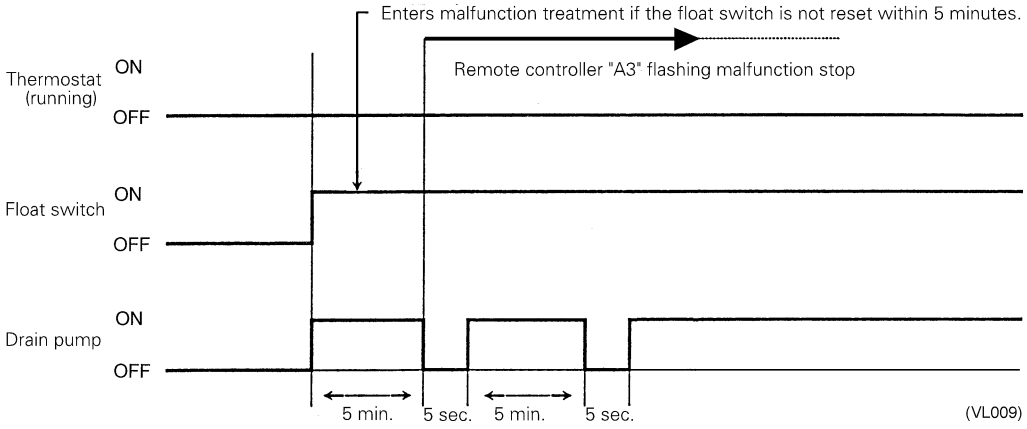
1. The drain pump is controlled by the ON/OFF buttons (4 button (1) - (4) given in the figure below).

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

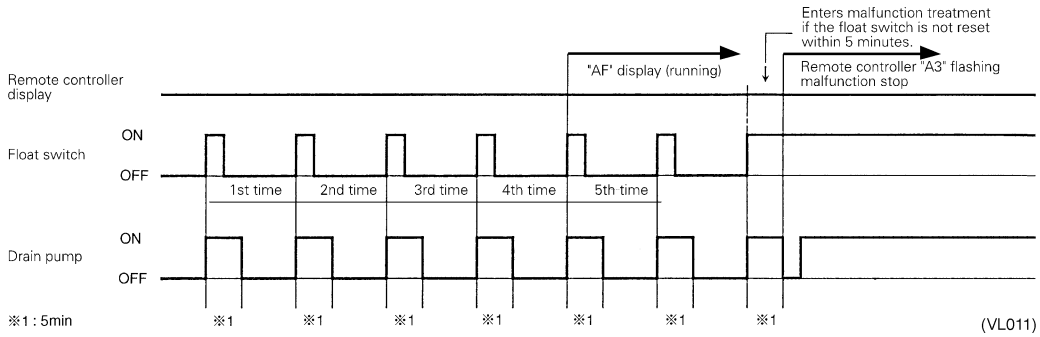


∗ 1. The objective of residual operation is to completely drain any moisture adhering to the fin of the indoor unit heat exchanger when the thermostat goes off during cooling operation.

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



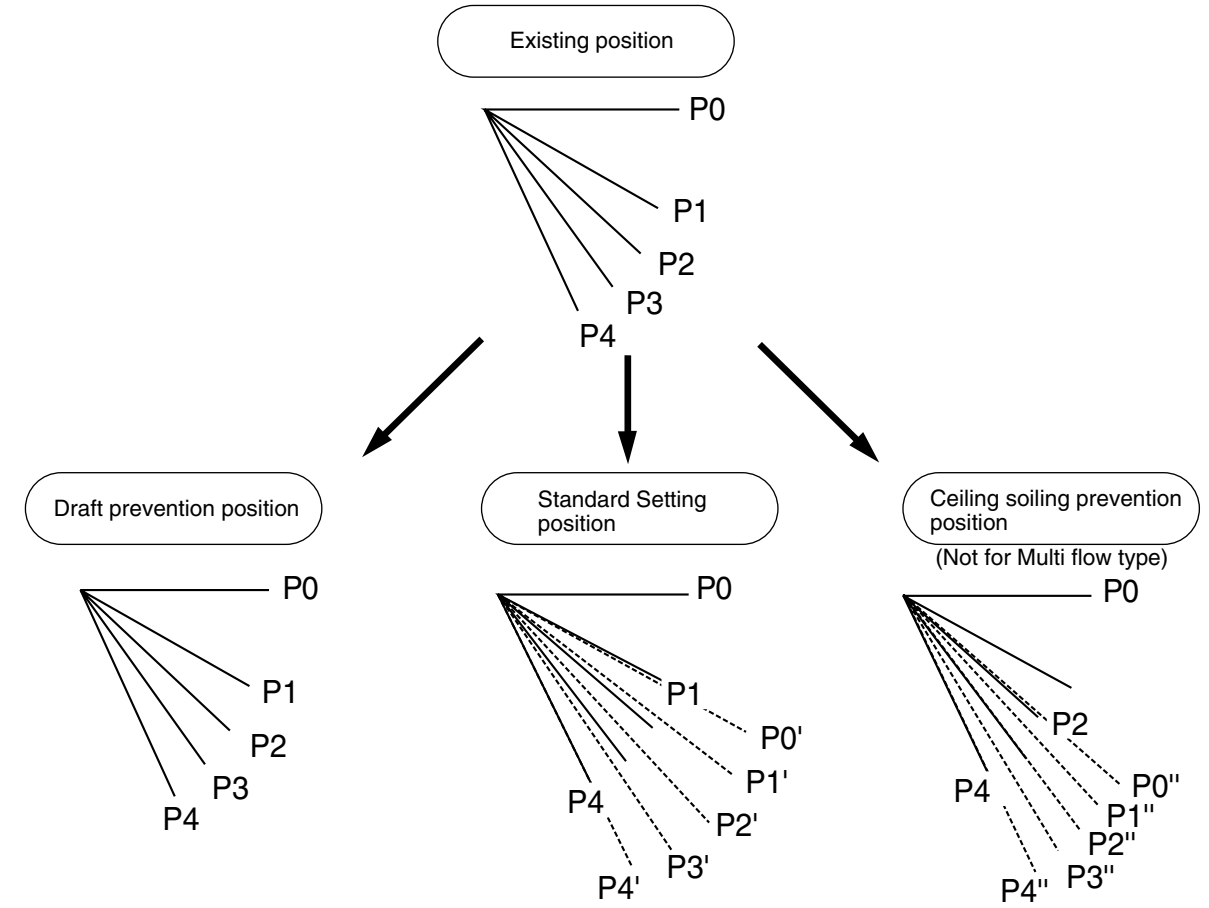
6.1.3 When the Float Switch is Tripped and “AF” is Displayed on the Remote Controller:



Note: 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, multi-flow and corner types.)



Draft prevention position	P0	P1	P2	P3	P4	Same as existing position
		Range of direction adjustment				
Standard position	Prohibited	P0'	P1'	P2'	P3'	P4'	Separated into 5 positions (P1 - 4)
		Range of direction adjustment				
Dirt prevention position	Prohibited	P0"	P1"	P2"	P3"	P4"	Separated into 5 positions (P2 - 4)

The factory set position is standard position.

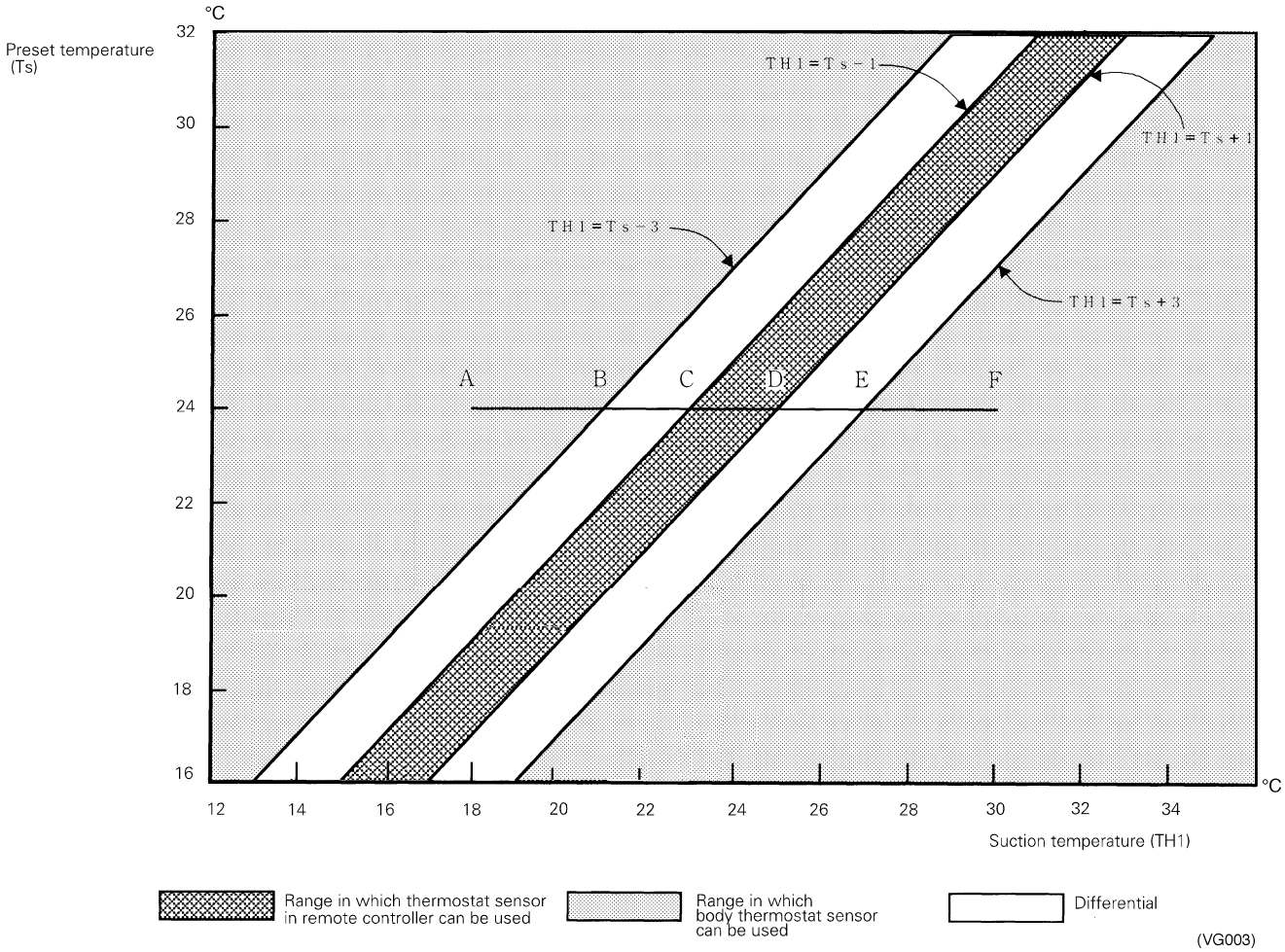
(VL012)

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 → 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 → C).

Remote controller thermostat sensor is used for temperatures from 23°C to 27°C (C → E).

Body thermostat sensor is used for temperatures from 27°C to 30°C (E → F).

And, assuming suction temperature has changed from 30°C to 18°C (F → A):

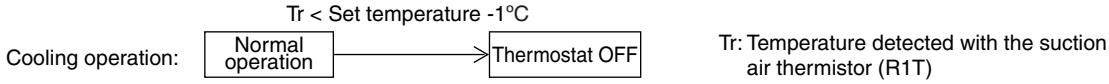
Body thermostat sensor is used for temperatures from 30°C to 25°C (F → D).

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

Body thermostat sensor is used for temperatures from 21°C to 18°C (B → A).

6.4 Thermostat Control While in Normal Operation

VRV multi systems are set at factory to thermostat control mode using the remote controller. While in normal thermostat differential control mode (i.e., factory set mode), the thermostat turns OFF when the system reaches a temperature of -1°C from the set temperature while in cooling operation.

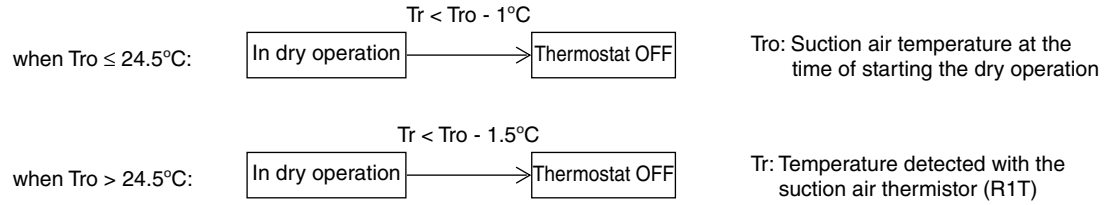


While in a single remote controller group control, the body thermostat is only used fro this control.
(Through field settings, the thermostat differential setting can be changed from 1°C to 0.5°C. For details on the changing procedure, refer to information on page onward.)

6.5 Thermostat Control in Dry Operation

While in dry operation, the thermostat control is conducted according to a suction temperature at the time of starting the dry operation.

Assuming that the suction air temperature at the time of starting the dry operation is Tro and the suction air temperature in operation is Tr,



Furthermore, while in dry operation mode, fans operate at L flow rate, stops for a period of six minutes while the thermostat is OFF, and then return to operation at L flow rate. (This control is used to prevent a rise in indoor temperature while in thermostat OFF mode.)

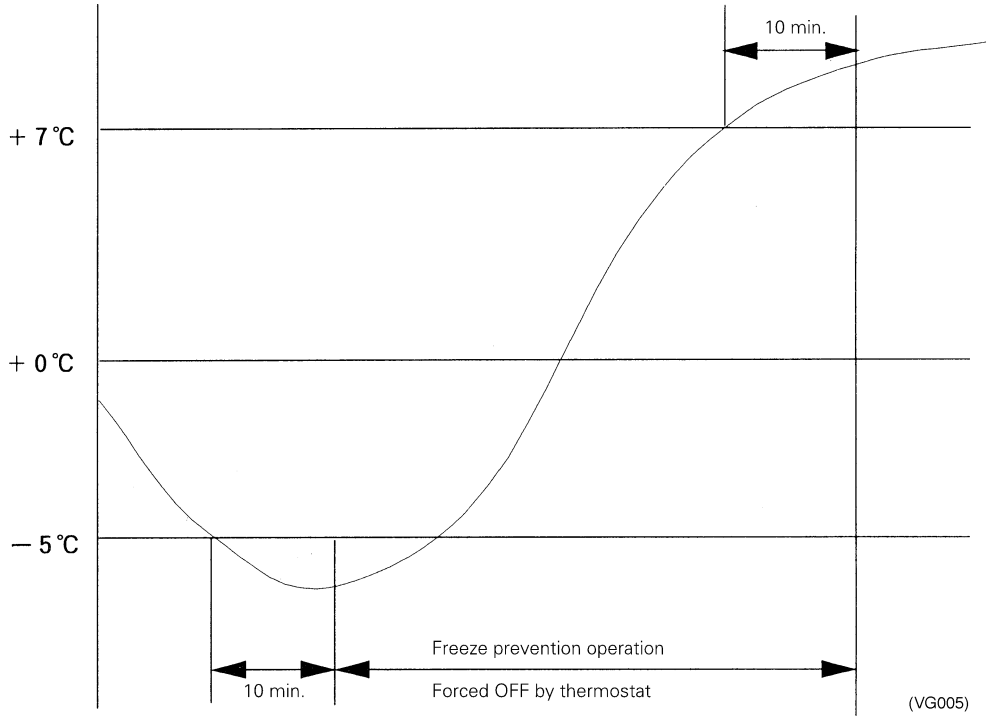
6.6 Freeze Prevention

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.



6.7 Control of Outdoor Air Processing Unit (Unique Control for Outdoor Air Processing Unit)

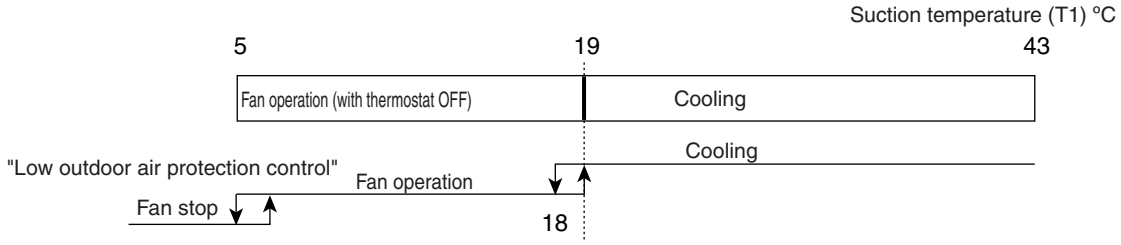
6.7.1 Selection of Operation Mode (by suction air thermostat)

Objective

To select cooling, heating, or fan operation mode according to the suction air (outdoor air) temperature.

Details

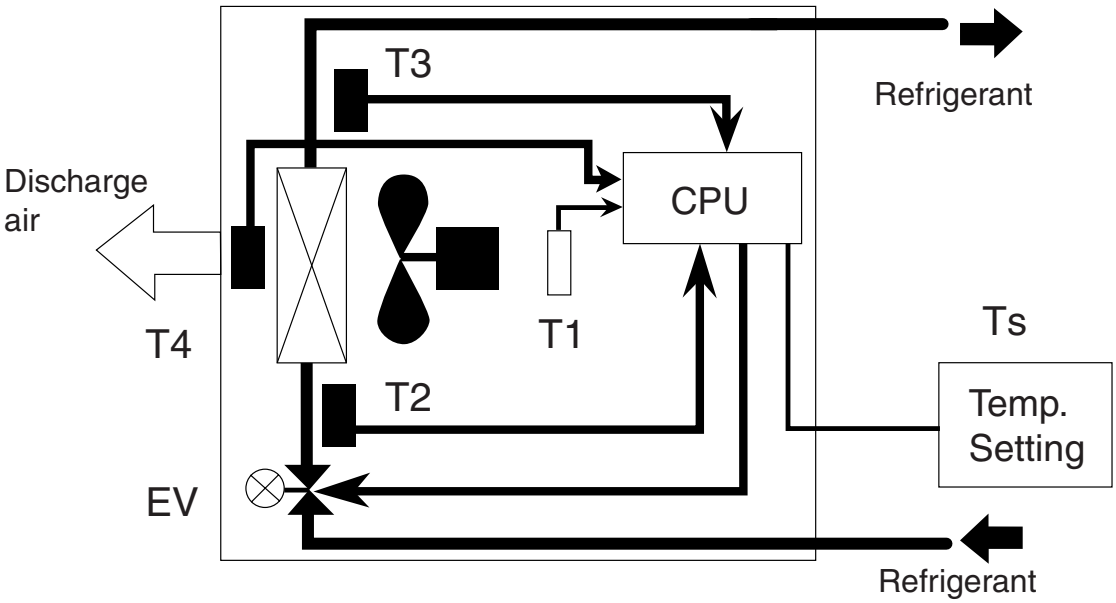
[Outdoor air processing unit]



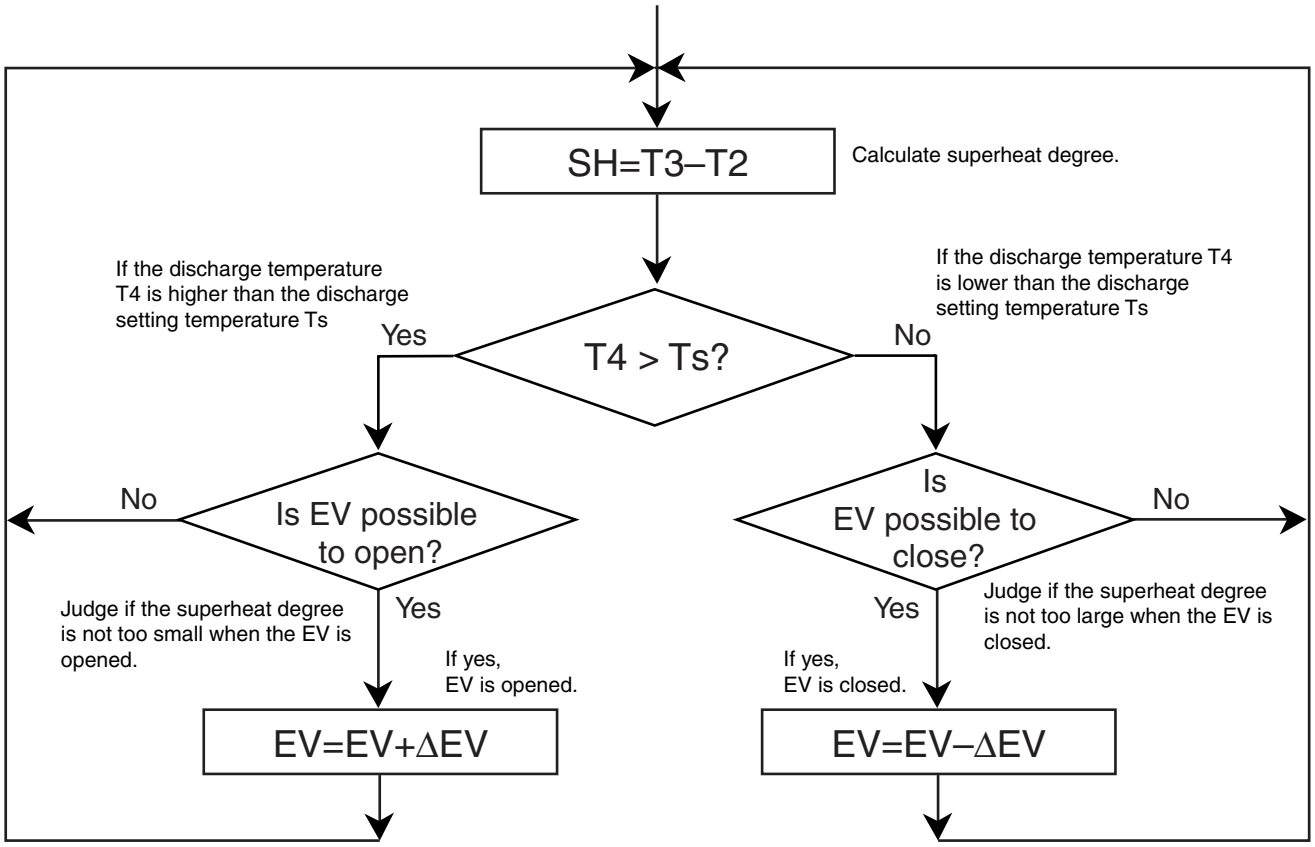
6.7.2 Discharge Air Temperature Control

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



(2) Thermostat OFF by discharge air temperature

<Cooling>
Target discharge air temp. Ts – Discharge air temp. T4
>5 degree continue for 5 minutes.
→Thermostat stops for 1 minute. →Thermostat ON

6.7.3 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.

6.8 List of Swing Flap Operations

Swing flaps operate as shown in table below.

			Fan	Flap		
				FXFQ	FXCQ FXHQ FXKQ	FXAQ
Cooling	Thermostat ON in dry operation using micro computer	Swing	L*1	Swing	Swing	Swing
		Wind direction set	L*1	Set	Set	Set
	Thermostat OFF in dry operation using micro computer	Swing	OFF or L	Swing	Swing	Swing
		Wind direction set		Set	Set	Set
	Thermostat OFF in cooling	Swing	Set	Swing	Swing	Swing
		Wind direction set	Set	Set	Set	Set
	Stop	Swing	OFF	Horizontal	Horizontal	Totally closed
		Wind direction set	OFF	Set	Horizontal	Totally closed
	Micro computer control (including cooling operation)	Swing	L	Swing	Swing	Swing
		Wind direction set	L	Set	Set	Set

*1. L or LL only on FXFQ models

Part 5
Test Operation

1. Test Operation

1.1 Procedure and Outline

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

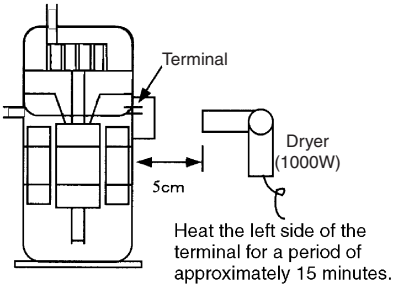
1.1.1 Check Work Prior to Turn Power Supply On

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

⇩

○ Is the wiring performed as specified?
○ Is the designated wire used?
○ Is the wiring screw of wiring not loose?
○ Is the grounding work completed?
○ Is the insulation of the main power supply circuit deteriorated?
Use a 500V megger tester to measure the insulation. (*1)
- Do not use a megger tester for other circuits than 200V (or 240V) circuit.

*1:Measure to be taken against decreased insulation resistance in the compressor
If the compressor is left to stand for an extended period of time after the refrigerant charge with the stop valve open and the power supply OFF, the refrigerant may be mixed in the compressor, thus decreasing the insulation resistance.
Heat the compressor as shown on the right and then recheck the insulation.



Check on refrigerant piping / insulation materials

⇩

○ Is the pipe size proper?
○ Is the pipe insulation material installed securely?
Liquid and gas pipes need to be insulated. (Otherwise causes water leak.)

Check airtight test and vacuum drying.

⇩

○ Have the airtight test and the vacuum drying been conducted according to the procedure in the Installation Manual?

Check on amount of refrigerant charge

⇩

○ Has a proper amount of refrigerant been charged according to the result of the "Calculation of the refrigerant additional charging amount"?
Charge refrigerant in the liquid state from the service port of the liquid-side stop valve, with stopping the outdoor unit after the completion of vacuuming.
If the total amount of refrigerant calculated cannot be charged, follow information in "Additional charging of refrigerant" on the following page to charge the refrigerant by the deficient amount.
○ Has the refrigerant additional charging amount been recorded on the "Service Precautions" label?

Check the stop valves for conditions.

○ Check to be sure the stop valves are under the following conditions.

Liquid-side stop valve	Gas-side stop valve
Open	Open

1.1.2 Turn Power On

Turn outdoor unit and indoor unit power on.

⇩

Check the LED display of the outdoor unit PC board.

⇩

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

○ Check to be sure the transmission is normal.
The transmission is normal if the LEDs display conditions as shown in table below.

LED display ○ ON ● OFF ◑ Blinking

LED display (Default status before delivery)		Micro-computer operation monitor	MODE	TEST	COOL/HEAT select			Low noise	Demand	Multi
					IND	MASTER	SLAVE			
		HAP	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H8P
One outdoor unit installed		◑	●	●	○	●	●	●	●	●
When multiple outdoor unit installed (*)	Master	◑	●	●	○	●	●	●	●	○
	Slave1	◑	●	●	●	●	●	●	●	◑
	Slave2	◑	●	●	●	●	●	●	●	●

(*) The main unit is the outdoor unit to which the transmission wiring for the indoor units is conncted.
The other outdoor units are slave units.

Make field settings with outdoor unit PC board.

○ Make field settings if needed.
(For the setting procedure, refer to information in "3.2. Field Setting from Outdoor Unit" on page 133 onward.)
For the outdoor-multi system, make field settings with the master unit.
(Field settings made with the slave unit will be all invalid.)

Additional charging of refrigerant

If a full amount of refrigerant cannot be charged with the outdoor unit OFF, charge the refrigerant by the deficient amount according to the following procedure.

Check the power supply.

⇩

○ Is the power supplied to the outdoor unit and the indoor unit?

Check the stop valves.

⇩

○ Bring the stop valves to the following conditions, respectively.

Liquid-side stop valve	Gas-side stop valve
Closed	Open

Set the system to "refrigerant additional charging operation" while in Setting mode 2.

⇩

○ The system will automatically start operation.
*The "H2P" blinks during operation, and "TEST OPERAION" and "UNDER CENTRALIZED CONTROL" are displayed on the remote controller.

Stopping equipment

Press the CHECK button (BS3) after charging the specified amount of refrigerant.

⇩

○ Even if no stop operation is conducted, the equipment will automatically stop after a lapse of 30 minutes at maximum.

Operation after stop

○ Disconnect the refrigerant charge hose and then open the liquid-side stop valve.

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.)

Check Setting mode 1.

If the LED "H1P" turns OFF, the system is set to "Setting mode 1".
If the "H1P" turns ON or Blink, pressing the MODE button (BS1) will set the system to "Setting mode 1".

⇩

Press and hold the TEST OPERATION button (BS4) on outdoor unit PC board for 5 seconds.

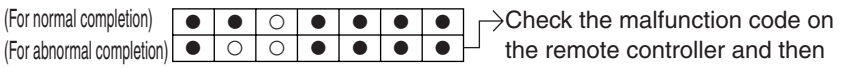
○ The test operation is started automatically.
The following judgements are conducted within 15 minutes.
- "Check for wrong wiring"
- "Check refrigerant for over charge"
- "Check stop valve for not open"
- "Pipe length automatic judgement"

⇩

*1. The "H2P" blinks during operation, and "TEST OPERATION" and "UNDER CENTRALIZED CONTROL" are displayed on the remote controller.
2. There may be cases where approximately 10 minutes are required for the compressor to start up, which, however, is not a malfunction but used to ensure even refrigerant conditions.
3. The check operation will be automatically conducted in cooling mode.
4. In order to stop the compressor operation, press the RETURN button (BS3). The compressor will stop after the completion of residual operation for a period of approximately 30 seconds. (The compressor operation cannot be stopped from the remote controller.)

Completion of check operation

After the completion of check operation, check the operation results through the LED displays.



<Precautions for check operation>

- If the check operation is started within approximately 12 minutes after turning ON the power supply to the indoor and outdoor units, H2P will turn ON and the compressor will not operate. Referring to information in table in 1.1.2 Turn Power On (on the previous page), check to be sure the LED displays are normal and then operate the compressor.
- For the outdoor-multi system, an outdoor unit to which the indoor unit connecting wires are connected serves as the master unit. Be sure to make settings with pushbutton switches on the master unit.
- In order to ensure even refrigerant conditions, there may be cases where a maximum of approximately 10 minutes are required for the compressor to start up, which, however, is not a malfunction.
- No malfunctions can be checked on individual indoor unit. After the completion of this test operation, check the individual indoor unit for any malfunctions while in normal operation mode using the remote controller.
- While in check operation mode, the indoor units as well as the outdoor units start the operation.
  Do not attempt to conduct the check operation while working on the indoor unit.
- Work with all the outside panels closed except for the switch box.
- While in the test operation, operating sounds such as refrigerant passing sounds or solenoid valve switching sounds may become louder.

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

Cause of trouble due to faulty installation work	Alarm code	Countermeasure
The stop valve of an outdoor unit is left closed.	E3 E4 F3 F6 UF	Open the stop valve.
The phases of the power to the outdoor units are reversed.	U1	Exchange two of the three phases (L1, L2, L3) to make a positive phase connection.
No power is supplied to an outdoor or indoor unit (including open phase interruption).	U1 U4	Check if the power wiring for the outdoor units are connected correctly. (If the power wire is not connected to L2 phase, no malfunction display will appear and the compressor will not work.)
Incorrect transmission between units	UF	Check if the refrigerant piping line and the unit transmission wiring are consistent with each other.
Refrigerant overcharge	E3 F6 UF	Recalculate the required amount of refrigerant from the piping length and correct the refrigerant charge level by recovering any excessive refrigerant with a refrigerant recovery machine.
Insufficient refrigerant	E4 F3	• Check if the additional refrigerant charge has been finished correctly. • Recalculate the required amount of refrigerant from the piping length and add an adequate amount of refrigerant.
If an outdoor multi terminal is connected when there is one outdoor unit installed	U7 UF	Remove the line from the outdoor multi terminals (Q1 and Q2).
The operation mode on the remote controller was changed before the check operation.	UF E4	Set the operation mode on all indoor unit remote controllers to "cooling".

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.

<Precautions for checking normal operation>

- For a period of approximately 5 minutes after the compressor stops, even if the ON/OFF button for the indoor units in the same refrigerant system is pressed, the compressor will not operate.
- After stopping the compressor operation using the remote controller, the outdoor unit may conduct the residual operation for a period of 5 minutes at maximum.
- If the system is set to "nighttime automatic low noise operation setting" or "external low noise level setting", the outdoor unit fan may operate at a low speed, which, however, is not a malfunction.
- When the check operation is not conducted using the TEST OPERATION button at the first test operation after installation, the malfunction code "U3" will be displayed.
  Be sure to conduct the check operation according to 1.1.3 Check Operation (for details, refer to information on the previous page.)

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

Outdoor unit	Test lamp H2P .... Blinks Can also be set during operation described above.
Indoor unit	If ON button is pushed during operation described above, the "UH" malfunction indicator blinks. (Returns to normal when automatic setting is complete.)

1.2.2 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

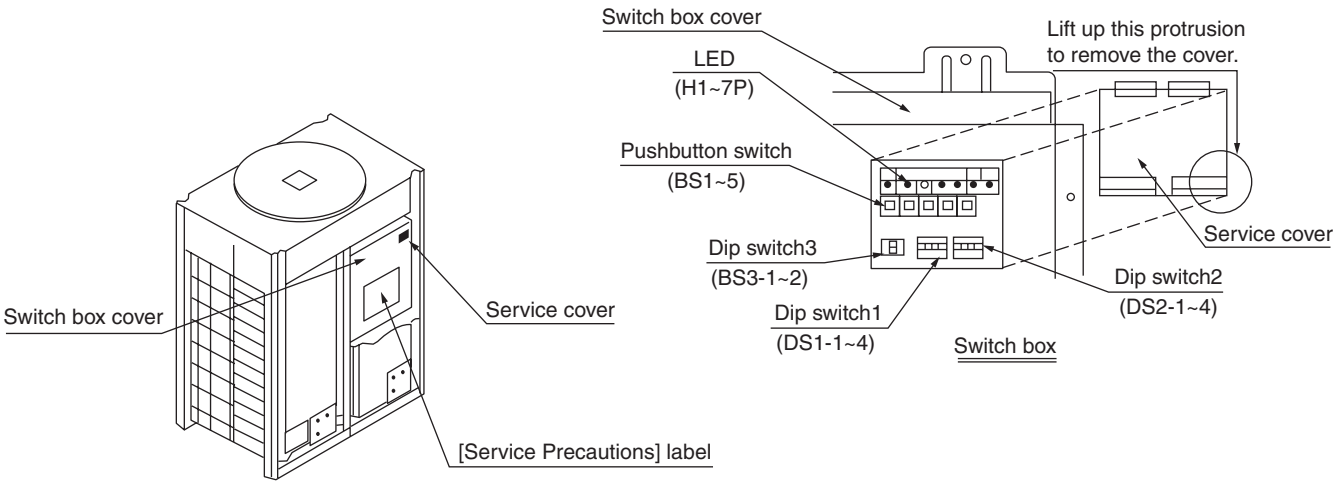
Outdoor unit	Test lamp H2P .... Blinks Can also be set during operation described above.
Indoor unit	If ON button is pushed during operation described above, the operation lamp lights but the compressor does not operate. (Returns to normal when automatic setting is complete.)

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

Outdoor unit	Test lamp H2P .... ON Can also be set during operation described above.
Indoor unit	If ON button is pushed during operation described above, the "UH" or "U4" malfunction indicator blinks. (Returns to normal when automatic setting is complete.)

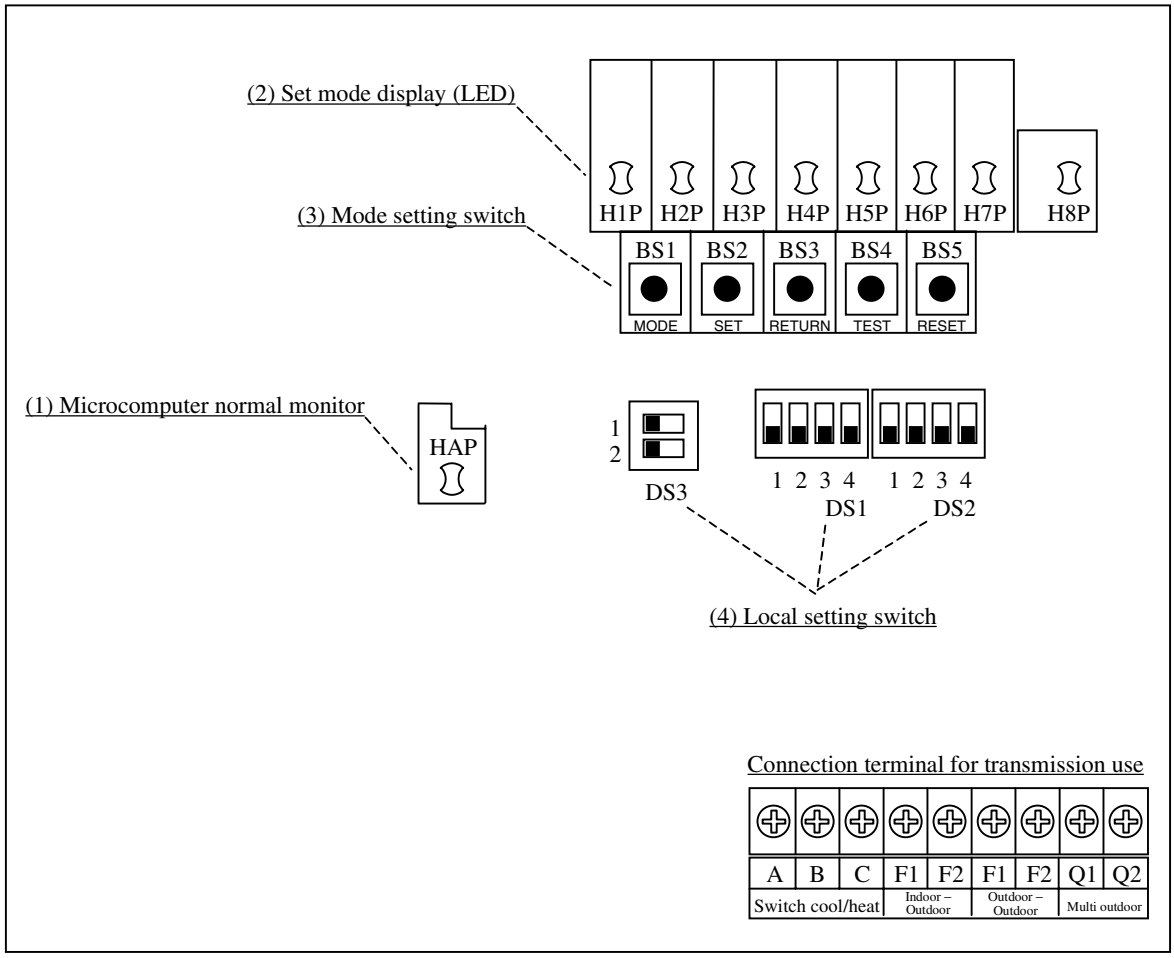


Caution When the 400 volt power supply is applyed to "N" phase by mistake, replace Inverter PC Board (A2P) and control transformer (T1R, T2R) in switch box together.

(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.

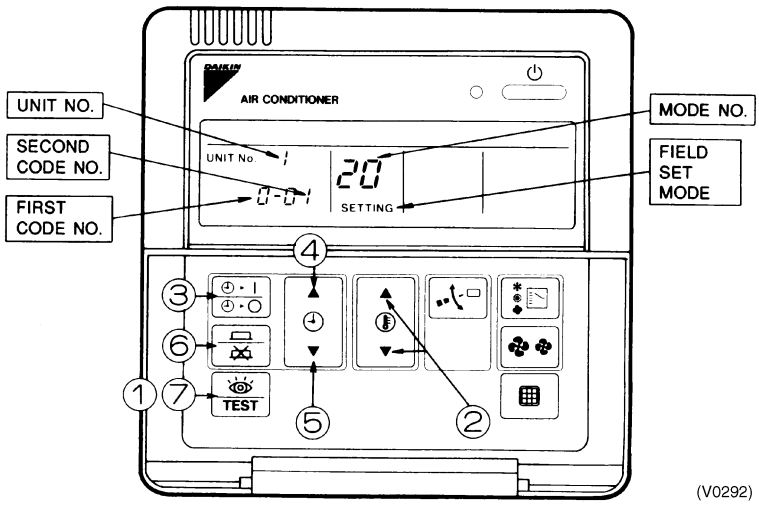
(4) Local setting switch
Used to make local settings.

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>

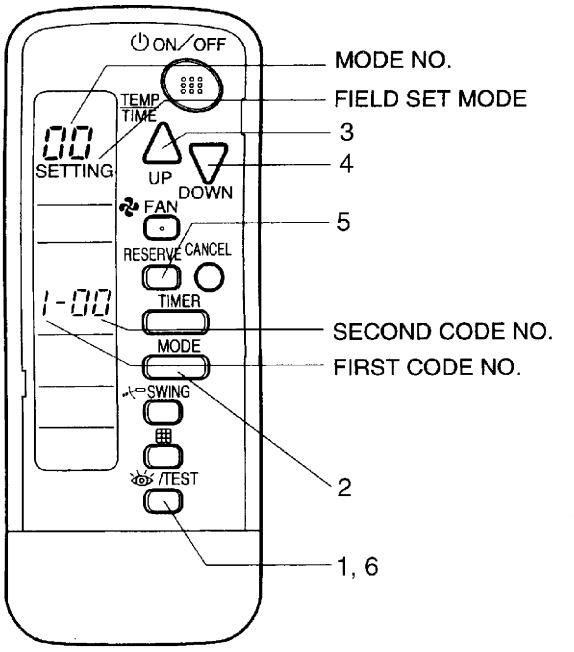


1. When in the normal mode, press the " TEST " button for a minimum of four seconds, and the FIELD SET MODE is entered.
2. Select the desired MODE NO. with the " " button (②).
3. During group control, when setting by each indoor unit (mode No. 20, 22 and 23 have been selected), push the " " button (③) and select the INDOOR UNIT NO to be set. (This operation is unnecessary when setting by group.)
4. Push the " " upper button (④) and select FIRST CODE NO.
5. Push the " " lower button (⑤) and select the SECOND CODE NO.
6. Push the " " button (⑥) once and the present settings are SET.
7. Push the " TEST " 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
BRC7E type
BRC4C type

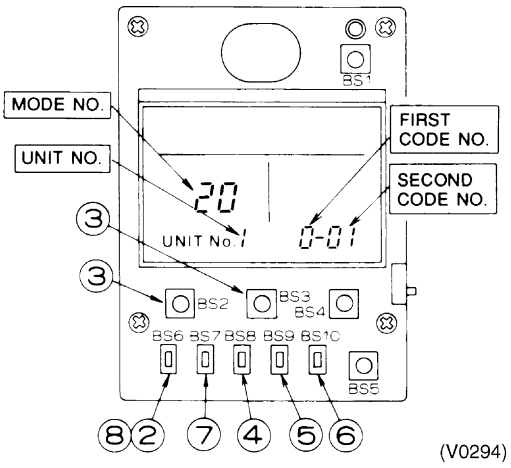


(V2770)

1. When in the normal mode, push the " /TEST " button for 4 seconds or more, and operation then enters the "field set mode."
2. Select the desired "mode No." with the " MODE " button.
3. Pushing the " UP " button, select the first code No.
4. Pushing the " DOWN " button, select the second code No.
5. Push the timer " RESERVE " button and check the settings.
6. Push the " /TEST " 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, BRC2C51>



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 ▲) and the [BS3] BUTTON (③) (temperature setting ▼).
4. 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 (⑦) (set/cancel) once and the present settings are SET.
8. Push the [BS6] BUTTON (⑧) (field set) to return to the NORMAL MODE.
9. (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 system indoor unit settings	Mode No. Note 2	Setting Switch No.	Setting Contents		Second Code No.(Note 3)							
					01		02		03	04		
	10(20)	0	Filter contamination heavy/ light (Setting for display time to clean air filter) (Sets display time to clean air filter to half when there is heavy filter contamination.)	Super long life filter	Light	Approx. 10,000 hrs.	Heavy	Approx. 5,000 hrs.	—	—		
				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 life filter		Super long life filter		—	—		
		2	Thermostat sensor in remote controller		Use		No use		—			
		3	Display time to clean air filter calculation (Set when filter sign is not to be displayed.)		Display		No display		—			
	12(22)	0	Optional accessories output selection (field selection of output for adaptor for wiring)		Indoor unit turned ON by thermostat				Operation output	Malfunction output		
		1	ON/OFF input from outside (Set when ON/OFF is to be controlled from outside.)		Forced OFF		ON/OFF control		External protection device input	—		
		2	Thermostat differential changeover (Set when remote sensor is to be used.)		1°C		0.5°C		—	—		
		3	OFF by thermostat fan speed		LL		Set fan speed		—	—		
		5	Power failure automatic reset		Not equipped		Equipped		—	—		
	13(23)	0	High air outlet velocity (Set when installed in place with ceiling higher than 2.7 m.)		N		H		S	—		
		1	Selection of air flow direction (Set when a blocking pad kit has been installed.)		F (4 directions)		T (3 directions)		W (2 directions)	—		
		3	Air flow direction adjustment (Set at installation of decoration panel.)		Equipped		Not equipped			—		
		4	Field set air flow position setting		Draft prevention		Standard		Ceiling Soiling prevention	—		
		5	Field set fan speed selection (fan speed control by air discharge outlet for phase control)		Standard		Optional accessory 1		Optional accessory 2	—		
	15(25)	2	Direct duct connection (when the indoor unit and heat reclaim ventilation unit are connected by duct directly.) ∗Note 6		Not equipped		Equipped		—	—		
		5	Field set selection for individual ventilation setting by remote controller		Not equipped		Equipped		—	—		
		6	Field set selection for individual ventilation setting by remote controller		Not equipped		Equipped		—	—		

Notes:

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

∗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
13(23)	0	01	Wall-mounted type: Standard
		02	Wall-mounted type: Slight increase
		03	Wall-mounted type: Normal increase

■ **In the Case of FXFQ25~80**

Mode No.	First code No.	Second code No.	Setting	Ceiling height		
				4-way Outlets	3-way Outlets	2-way Outlets
13 (23)	0	01	Standard (N)	Lower than 2.7 m	Lower than 3.0 m	Lower than 3.5 m
		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 No.	First code No.	Second code No.	Setting	Ceiling height		
				4-way Outlets	3-way Outlets	2-way Outlets
13 (23)	0	01	Standard (N)	Lower than 3.2 m	Lower than 3.6 m	Lower than 4.2 m
		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 FXUQ71~125**

Mode No.	First code No.	Second code No.	Setting	Ceiling height		
				4-way Outlets	3-way Outlets	2-way Outlets
13 (23)	0	01	Standard (N)	Lower than 2.7 m	Lower than 3.0 m	Lower than 3.5 m
		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.

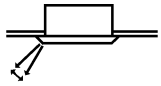
When only the front-flow is used, sets yes/no of the swing flap operation of down-flow.

Setting Table

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

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)
		02	High static pressure (44Pa)

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

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

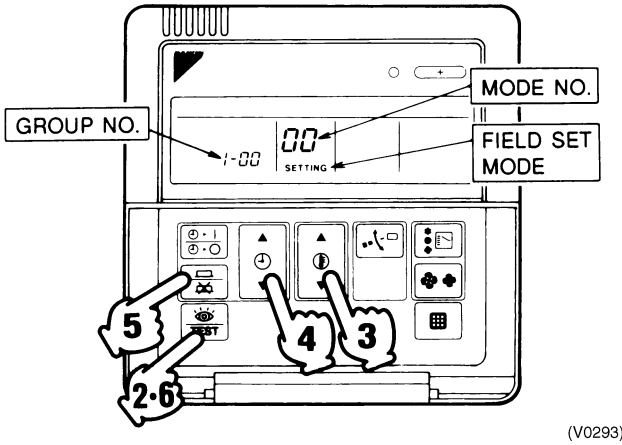
Note) Bold face in ☐ indicates the default setting.

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.)

1. 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*".)
2. While in the normal mode, hold down the " TEST " 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 " " to set the selected group No.
7. Press " TEST " to return to the NORMAL MODE.



(V0293)

Note:

- For wireless 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.

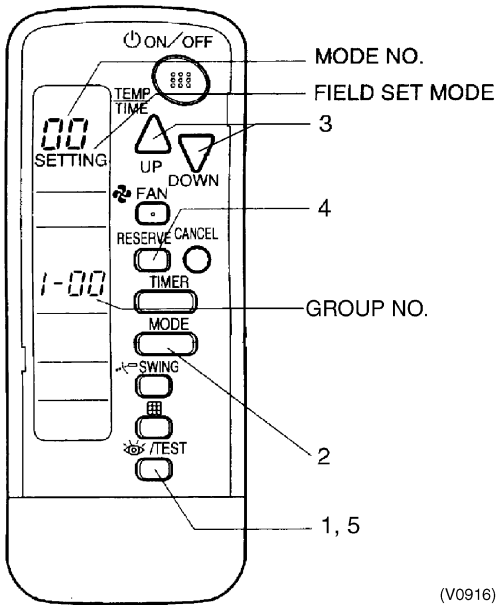
NOTICE

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

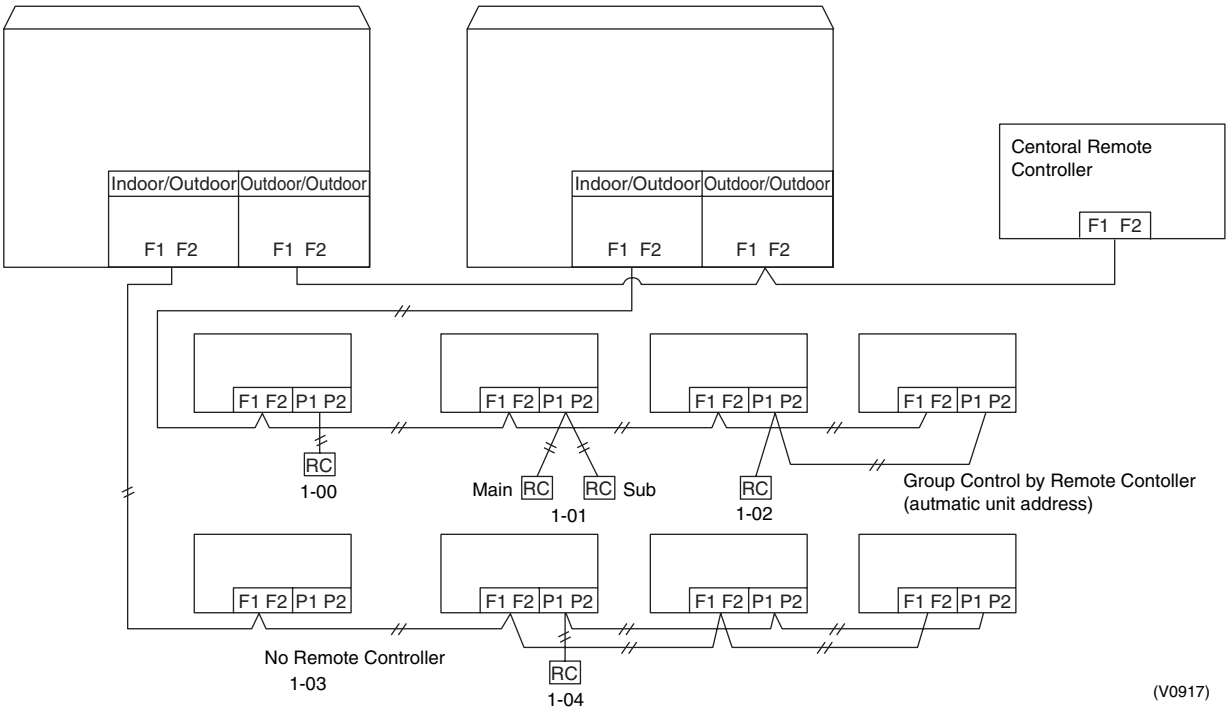
■ Group No. setting by wireless remote controller for centralized control

1. When in the normal mode, push " /TEST " button for 4 seconds or more, and operation then enters the "field set mode."
2. Set mode No. "00" with " MODE " button.
3. Set the group No. for each group with " UP " " DOWN " button (advance/backward).
4. Enter the selected group numbers by pushing " RESERVE " button.
5. Push " /TEST " button and return to the normal mode.



(V0916)

Group No. Setting Example



(V0917)

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

3.1.10 Contents of Control Modes

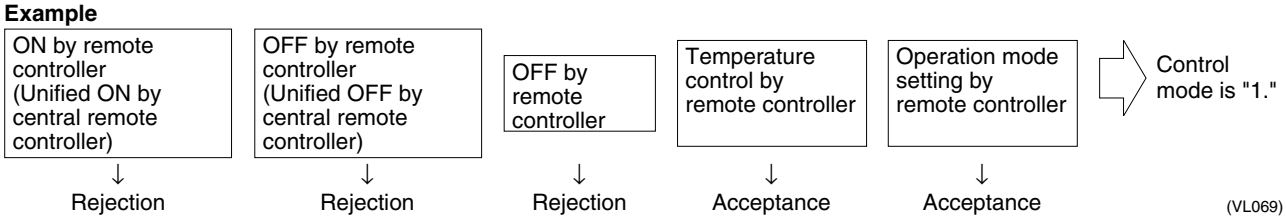
Twenty modes consisting of combinations of the following five operation modes with temperature and operation mode setting by remote controller can be set and displayed by operation modes 0 through 19.

- 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.

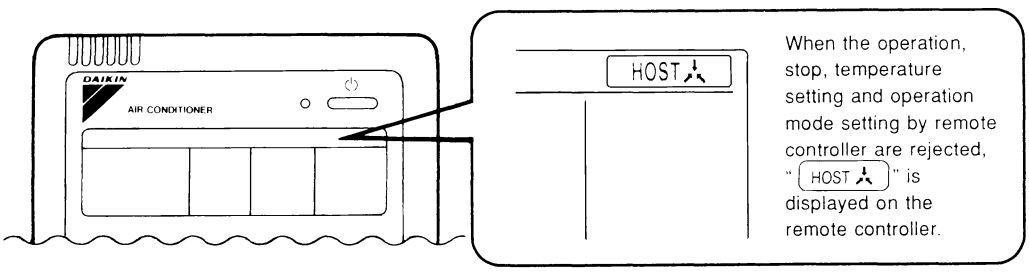
Example



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

■ **List of Field Setting Items**

This following section indicates the list of field setting items. For the lists of dip switch contents, Setting mode 1, and Setting mode 2, refer to information in tables shown on the following page onward.

For setting items of (*1), refer to detailed information provided on page 144 onward.

Setting item			Content and objective of setting	Overview of setting procedure
Function setting	1	Setting of low noise operation (*1)	A. Use external input to step down the upper limit of the fan (factory set to Step 8), providing low noise level. (1) Mode 1: Step 6 or lower (2) Mode 2: Step 5 or lower (3) Mode 3: Step 4 or lower	■ Use the "external control adapter". Set to "External control adaptor for outdoor unit" with No. 12 of "Setting mode 2" and select the mode with No. 25. If necessary, set the "Capacity priority setting" to ON with No. 29.
			B. The low noise operation aforementioned is enabled in nighttime automatic low noise operation mode. Start time: Selectable in the range of 20:00 to 24:00 hours. End time: Selectable in the range of 06:00 to 08:00 hours. (Use the said time as a guide since the start time and the end time are estimated according to outdoor temperatures.)	■ Make this setting while in "Setting mode 2". Select a mode with No. 22 of "Setting mode 2". Select the start time with No. 26 and the end time with No. 27. If necessary, set the "Capacity priority setting" to ON with No. 29.
	2	Setting of demand operation (*1)	■ Used to place limits on the compressor operating frequency to control the upper limit of power consumption. (1) Mode 1 of Demand 1: 60% or less of rating (2) Mode 2 of Demand 1: 70% or less of rating (3) Mode 3 of Demand 1: 80% or less of rating (4) Demand 2: 40% or less of rating	■ For setting with the use of "external control adapter": Set the system to "External control adaptor for outdoor unit" with No. 12 of Setting mode 2" and select the mode with No. 30.
				■ For setting only in "Setting mode 2": Set the system to Constant demand mode with No. 32 of "Setting mode 2" and select the mode with No. 30.
	3	Setting of AirNet address	■ Used to make address setting with AirNet connected.	■ Set the AirNet to an intended address using binary numbers with No. 13 of "Setting mode 2".
	4	Setting of high static pressure	■ Make this setting to operate a system with diffuser duct while in high static pressure mode. (Use this setting mode when shields are installed on upper floors or balconies.) * In order to mount the diffuser duct, remove the cover from the outdoor unit fan.	■ Set No. 18 of "Setting mode 2" to ON.

Setting item			Content and objective of setting	Overview of setting procedure
Service setting	1	Indoor unit fan forced H operation	■ Used to operate the indoor unit in the stopped state in forced H operation mode.	■ Set No. 5 of "Setting mode 2" to indoor unit forced fan H.
	2	Indoor unit forced operation	■ Used to operate the indoor unit in forced operation mode.	■ Set No. 6 of "Setting mode 2" to indoor unit forced operation mode.
	3	Change of targeted evaporating temperature (in cooling)	■ In cooling operation, used to change the targeted evaporating temperature for compressor capacity control.	■ Select high side or low side with No. 8 of "Setting mode 2".
	4	Setting of sequential startup	■ Used to start units not in sequence but simultaneously.	■ Set No. 11 of "Setting mode 2" to NONE.
	5	Emergency operation	■ If the compressor has a failure, used to prohibit the operation of compressor(s) concerned or outdoor unit(s) concerned and to conduct emergency operation of the system only with operable compressor(s) or outdoor unit(s).	■ Make this setting while in "Setting mode 2". For system with a single outdoor unit: Set with No. 19 or 42. For system with multiple outdoor units: Set with No. 38, 39, or 40.
	6	Additional refrigerant charging (*1)	■ If a necessary amount of refrigerant cannot be charged due to the stop of outdoor unit, operate the outdoor unit and then charge refrigerant.	■ Set No. 20 of "Setting mode 2" to ON and then charge refrigerant.
	7	Refrigerant recovery mode (*1)	■ Used to recover refrigerant on site. With operations of indoor and outdoor units prohibited, fully open the expansion valve of the indoor and outdoor units.	■ Set No. 21 of "Setting mode 2" to ON.
	8	Vacuuming mode (*1)	■ Used to conduct vacuuming on site. Fully open the expansion valves of the indoor and outdoor units, and energize part of solenoid valves. Use a vacuum pump to conduct vacuuming.	■ Set No. 21 of "Setting mode 2" to ON.
	9	ENECUT test operation	■ Used to forcedly turn ON the ENECUT. (Be noted this mode is not functional with the indoor unit remote controller turned ON.)	■ Set No. 24 of "Setting mode 2" to ON.
	10	Power transistor check mode	■ Used for the troubleshooting of DC compressors. Inverter waveform output makes it possible to judge whether a malfunction results from the compressor or the PC board.	■ Set No. 28 of "Setting mode 2" to ON.
	11	Setting of model with spare PC board	■ In order to replace the PC board by a spare one, be sure to make model setting.	■ For this setting, set the DS2-2, -3, and-4 switches on the PC board to the model concerned.

For setting items of (*1), refer to detailed information provided on page 150 onward.

■ Setting by dip switches

Using dip switches on the PC board enables field setting shown below. However, make no changes of factory settings except for DS1-1.

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

Setting at replacement by spare PC board

Caution

DIP switch Setting after changing the main P.C.Board(A1P) to spare parts P.C.B.

After the replacement by the spare PC board, be sure to make settings shown below.
When you change the main P.C.Board(A1P) to spare parts P.C.B., please carry out the following setting.

Initial conditions of dip switches

DIP Switch Detail

DS No.	Item	Contents	
DS1-1	Cool/Heat change over setting	ON	Do not Set.
		OFF (Factory setting of spare PCB)	Do not Set.
DS1-2	Power supply specification	ON	200V (mainly domestic Japan)
		OFF (Factory setting of spare PCB)	400V (mainly overseas)
DS1-3	Cooling only/Heat-pump setting	ON	Make no changes of factory settings of the spare PC board.
		OFF (Factory setting of spare PCB)	
DS1-4	Model setting	ON	Make the following settings according to models of outdoor units. (All models are set to OFF at factory.)
		OFF (Spare parts PCB)	
DS2-1	Domestic Japan or overseas setting	ON	Make no changes of factory settings of the spare PC board.
		OFF (Spare parts PCB)	
DS2-2 DS2-3 DS2-4	Model setting	Make the following settings according to models of outdoor units. (All models are set to OFF at factory.)	

	RXQ5MA	RXQ8MA	RXQ10MA	RXQ12MA	RXQ14MA	RXQ16MA
DS2-2	OFF	OFF	ON	OFF	ON	OFF
DS2-3	OFF	ON	ON	OFF	OFF	ON
DS2-4	OFF	OFF	OFF	ON	ON	ON

* If the DS1-1~1-4,DS2-2~DS2-4 setting has not been carried out, error code "UA" is displayed and unit can not be operated.

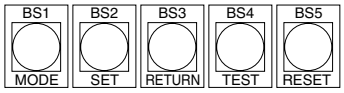
■ Setting by pushbutton switches

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 display as shown below.

LED display

		MODE H1P	TEST H2P	COOL/HEAT select			Low noise H6P	Demand H7P	Multi H8P
				Individual H3P	Unified master H4P	Unified slave H5P			
Single-outdoor-unit system		●	●	○	●	●	●	●	●
Outdoor-multi system	Master	●	●	○	●	●	●	●	○
	Slave 1	●	●	●	●	●	●	●	◑
	Slave 2	●	●	●	●	●	●	●	●

(Factory setting)



(V2760)

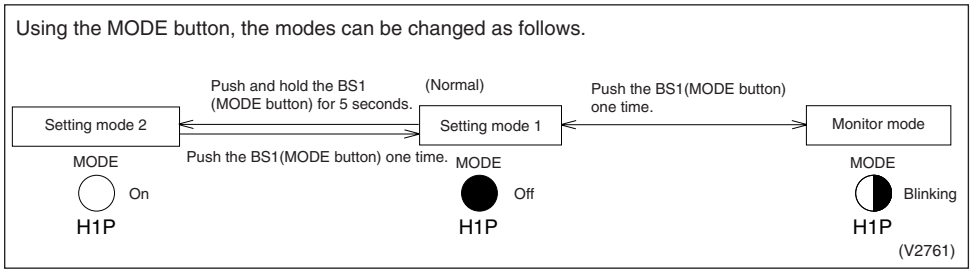
There are the following three setting modes.

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.

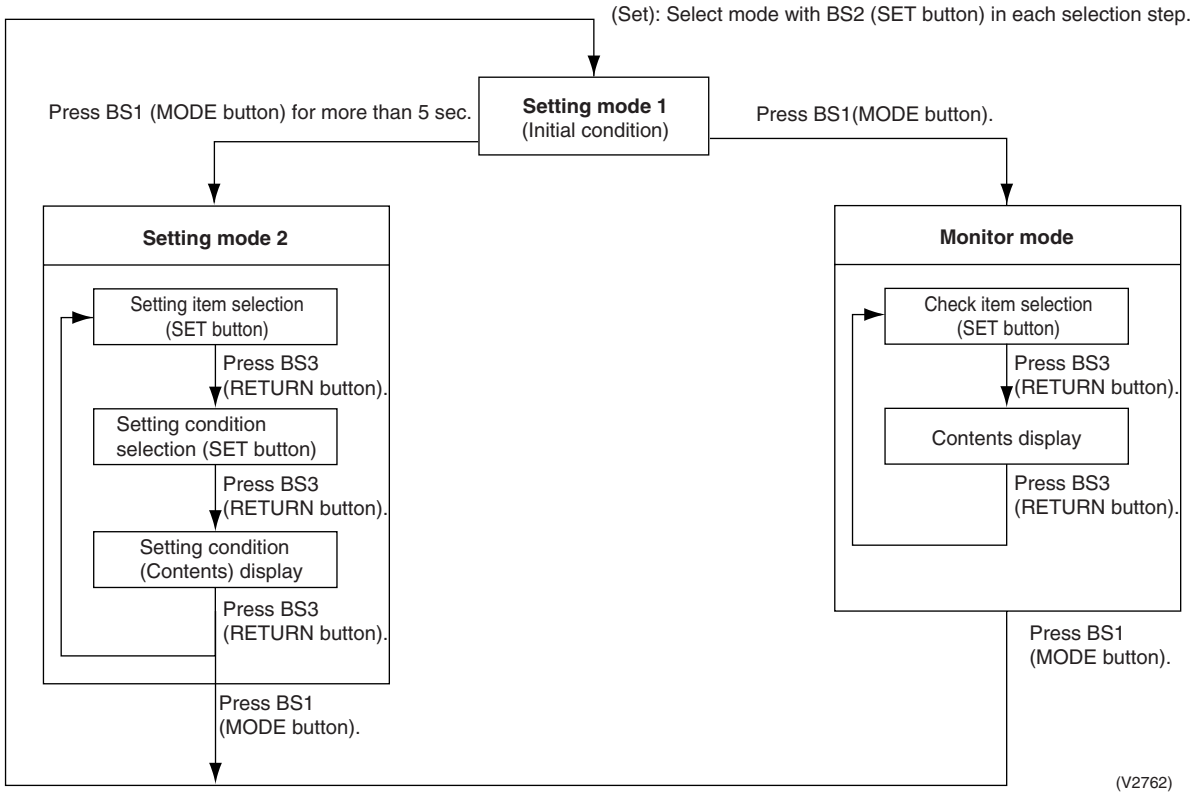
③ **Monitor mode (H1P blinks)**
Used to check the program made in Setting mode 2.

■ Mode changing procedure 1



(V2761)

■ Mode changing procedure 2



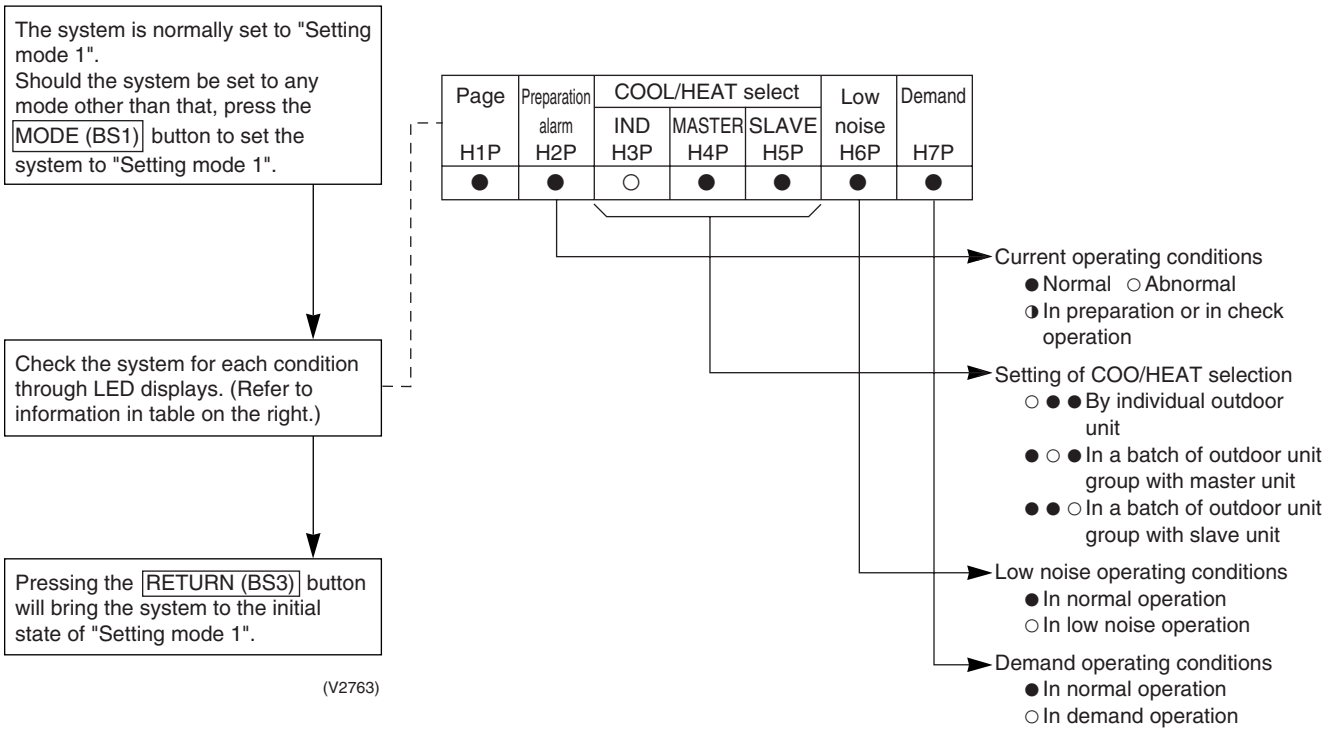
(V2762)

a. “Setting mode 1”

This mode is used to check the following items.

1. Check items ····· The following items can be checked.
   (1) Current operating conditions (Normal / Abnormal / In check operation)
   (2) Setting conditions of COOL/HEAT selection (Individual / Batch master / Batch slave)
   (3) Low noise operating conditions (In normal operation / In low noise operation)
   (4) Demand operating conditions (In normal operation / In demand operation)

Procedure for checking check items



b. “Setting mode 2”

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

<Selection of setting items>

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

<Selection of setting conditions>

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

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

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

(V2764)

No.	Setting item	Description
1	Cool/heat unified address	Sets address for cool/heat unified operation.
2	Low noise/demand address	Address for low noise/demand operation
5	Indoor unit forced fan H	Allows forced operation of indoor unit fan while unit is stopped. (H tap)
6	Indoor unit forced operation	Allows forced operation of indoor unit.
8	Te setting	Target evaporation temperature for cooling
9	Tc setting	Target condensation temperature for heating
10	Defrost changeover setting	Changes the temperature condition for defrost and sets to quick defrost or slow defrost.
11	Sequential operation setting	Sets sequential operation (Factory set to ON)
12	External low noise setting / Demand setting	Reception of external low noise or demand signal
13	AIRNET address	Set address for AIRNET.
16	Setting of hot water	Make this setting to conduct heating operation with hot water heater.
18	High static pressure setting	Make this setting in the case of operating in high static pressure mode with diffuser duct mounted. (In order to mount the diffuser duct, remove the cover from the outdoor unit fan.)
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 RXQ5M.)
20	Additional refrigerant charge operation setting	Carries out additional refrigerant charge operation.
21	Refrigerant recovery / vacuuming mode setting	Sets to refrigerant recovery or vacuuming mode.
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”.
24	ENECUT test operation	Used to forcedly turn ON the ENECUT. (Be noted that the ENECUT is only functional with outdoor unit in the stopped state - Japanese domestic model only.)
25	Setting of external low noise level	Sets low noise level when the low noise signal is input from outside.
26	Night-time low noise operation start setting	Sets starting time of nighttime low noise operation. (Night-time low noise setting is also required.)
27	Night-time low noise operation end setting	Sets ending time of nighttime low noise operation. (Night-time low noise setting is also required.)
28	Power transistor check mode ∗Check after disconnection of compressor wires	Used for trouble diagnosis of DC compressor. Since the waveform of inverter is output without wiring to the 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)	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.
39	Emergency operation (Setting for the slave unit 1 operation prohibition in multi-outdoor-unit system)	
40	Emergency operation (Setting for the slave unit 2 operation prohibition in multi-outdoor-unit system)	
42	Emergency operation (prohibition of INV compressor operation)	If the INV compressor has a failure, used to run the system only with STD compressor(s). This is a temporary running of the system until the compressor is replaced, thus making comfort extremely worse. Therefore, it is recommended to replace the compressor soonest possible. (Be noted this setting is not available on model RXQ5MAY1)

No.	Setting item display								Setting condition display								
	Setting item	MODE H1P	TEST H2P	C/H selection IND H3P	C/H selection Master H4P	C/H selection Slave H5P	Low noise H6P	Demand H7P									∗ Factory set
1	Cool / Heat Unified address	○	●	●	●	●	●	○	Address (6 digits) Binary number	0	○	●	●	●	●	●	● ∗
										1	○	●	●	●	●	●	○
										~							
										31	○	●	○	○	○	○	○
2	Low noise/demand address	○	●	●	●	●	○	●	Address (6 digits) Binary number	0	○	●	●	●	●	●	● ∗
										1	○	●	●	●	●	●	○
										~							
										31	○	●	○	○	○	○	○
5	Indoor forced fan H	○	●	●	●	○	●	○	Normal operation		○	●	●	●	●	●	○ ∗
									Indoor forced fan H		○	●	●	●	●	○	●
6	Indoor forced operation	○	●	●	●	○	○	●	Normal operation		○	●	●	●	●	●	○ ∗
									Indoor forced operation		○	●	●	●	●	○	●
8	Te setting	○	●	●	○	●	●	●	High		○	●	●	●	○	●	●
									Normal (factory setting)		○	●	●	●	●	○	● ∗
									Low		○	●	●	●	●	●	○
9	Tc setting	○	●	●	○	●	●	○	High		○	●	●	●	○	●	●
									Normal (factory setting)		○	●	●	●	●	○	● ∗
									Low		○	●	●	●	●	●	○
10	Defrost changeover setting	○	●	●	○	●	○	●	Quick defrost		○	●	●	●	○	●	●
									Normal (factory setting)		○	●	●	●	●	○	● ∗
									Slow defrost		○	●	●	●	●	●	○
11	Sequential operation setting	○	●	●	○	●	○	○	OFF		○	●	●	●	●	●	○
									ON		○	●	●	●	●	○	● ∗
12	External low noise/ demand setting	○	●	●	○	○	●	●	External low noise/demand: NO		○	●	●	●	●	●	○ ∗
									External low noise/demand: YES		○	●	●	●	●	○	●
13	Airnet address	○	●	●	○	○	●	○	Address (6 digits) Binary number	0	○	●	●	●	●	●	● ∗
										1	○	●	●	●	●	●	○
										~							
										63	○	○	○	○	○	○	○
16	Setting of hot water heater	○	●	○	●	●	●	●	OFF		○	●	●	●	●	●	○ ∗
									ON		○	●	●	●	●	○	●
18	High static pressure setting	○	●	○	●	●	○	●	High static pressure setting: OFF		○	●	●	●	●	●	○ ∗
									High static pressure setting: ON		○	●	●	●	●	○	●
19	Emergency operation (STD compressor is inhibited to operate.)	○	●	○	●	●	○	○	OFF		○	●	●	●	●	●	● ∗
									STD 1, 2 operation: Inhibited		○	●	●	●	●	●	○
									STD 2 operation: Inhibited		○	●	●	●	●	○	●
20	Additional refrigerant charging operation setting	○	●	○	●	○	●	●	Refrigerant charging: OFF		○	●	●	●	●	●	○ ∗
									Refrigerant charging: ON		○	●	●	●	●	○	●
21	Refrigerant recovery/ vacuuming mode setting	○	●	○	●	○	●	○	Refrigerant recovery/ vacuuming: OFF		○	●	●	●	●	●	○ ∗
									Refrigerant recovery/ vacuuming: ON		○	●	●	●	●	○	●
22	Night-time low noise setting	○	●	○	●	○	○	●	OFF		○	●	●	●	●	●	● ∗
									Level 1 (outdoor fan with 8 step or lower)		○	●	●	●	●	●	○
									Level 2 (outdoor fan with 7 step or lower)		○	●	●	●	●	○	●
									Level 3 (outdoor fan with 6 step or lower)		○	●	●	●	●	○	○

No.	Setting item display								Setting condition display							
	Setting item	MODE H1P	TEST H2P	C/H selection			Low noise H6P	Demand H7P								∗ Factory set
				IND H3P	Master H4P	Slave H5P										
24	ENECUT test operation (Domestic Japan only)	○	●	○	○	●	●	●	ENECUT output OFF	○	●	●	●	●	●	○ ∗
									ENECUT output forced ON	○	●	●	●	●	○	●
25	Low noise setting	○	●	○	○	●	●	○	Level 1 (outdoor fan with 8 step or lower)	○	●	●	●	●	●	○
									Level 2 (outdoor fan with 7 step or lower)	○	●	●	●	●	○	● ∗
									Level 3 (outdoor fan with 6 step or lower)	○	●	●	●	○	●	●
26	Night-time low noise operation start setting	○	●	○	○	●	○	●	About 20:00	○	●	●	●	●	●	○
									About 22:00 (factory setting)	○	●	●	●	●	○	● ∗
									About 24:00	○	●	●	●	○	●	●
27	Night-time low noise operation end setting	○	●	○	○	●	○	○	About 6:00	○	●	●	●	●	●	○
									About 7:00	○	●	●	●	●	○	●
									About 8:00 (factory setting)	○	●	●	●	○	●	● ∗
28	Power transistor check mode	○	●	○	○	○	●	●	OFF	○	●	●	●	●	●	○ ∗
									ON	○	●	●	●	●	○	●
29	Capacity precedence setting	○	●	○	○	○	●	○	OFF	○	●	●	●	●	●	○ ∗
									ON	○	●	●	●	●	○	●
30	Demand setting 1	○	●	○	○	○	○	●	60 % demand	○	●	●	●	●	●	○
									70 % demand	○	●	●	●	●	○	● ∗
									80 % demand	○	●	●	●	○	●	●
32	Normal demand setting	○	○	●	●	●	●	●	OFF	○	●	●	●	●	●	○ ∗
									ON	○	●	●	●	●	○	●
38	Emergency operation (Master unit with multi-outdoor-unit system is inhibited to operate.)	○	○	●	●	○	○	●	OFF	○	●	●	●	●	●	○ ∗
									Master unit operation: Inhibited	○	●	●	●	●	○	●
39	Emergency operation (Slave unit 1 with multi-outdoor-unit system is inhibited to operate.)	○	○	●	●	○	○	○	OFF	○	●	●	●	●	●	○ ∗
									Slave unit 1 operation: Inhibited	○	●	●	●	●	○	●
40	Emergency operation (Slave unit 2 with multi-outdoor-unit system is inhibited to operate.)	○	○	●	○	●	●	●	OFF	○	●	●	●	●	●	○ ∗
									Slave unit 2 operation: Inhibited	○	●	●	●	●	○	●
42	Emergency operation (prohibition of INV compressor operation)	○	○	●	○	●	○	●	Normal operation	○	●	●	●	●	●	○ ∗
									Emergency operation (prohibition of INV compressor operation)	○	●	●	●	●	○	●

c. Monitor mode

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

<Selection of setting item>

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

<Confirmation on setting contents>

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

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

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

(V2765)

No.	Setting item	LED display							Data display
		H1P	H2P	H3P	H4P	H5P	H6P	H7P	
0	Various setting	◑	●	●	●	●	●	●	See below
1	C/H unified address	◑	●	●	●	●	●	○	Lower 6 digits
2	Low noise/demand address	◑	●	●	●	●	○	●	
3	Not used	◑	●	●	●	●	○	○	
4	Airnet address	◑	●	●	●	○	●	●	
5	Number of connected indoor units	◑	●	●	●	○	●	○	
6	Number of connected BS units	◑	●	●	●	○	○	●	
7	Number of connected zone units (excluding outdoor and BS unit)	◑	●	●	●	○	○	○	
8	Number of outdoor units	◑	●	●	○	●	●	●	
9	Number of connected BS units	◑	●	●	○	●	●	○	Lower 4 digits: upper
10	Number of connected BS units	◑	●	●	○	●	○	●	Lower 4 digits: lower
11	Number of zone units (excluding outdoor and BS unit)	◑	●	●	○	●	○	○	Lower 6 digits
12	Number of terminal blocks	◑	●	●	○	○	●	●	Lower 4 digits: upper
13	Number of terminal blocks	◑	●	●	○	○	●	○	Lower 4 digits: lower
14	Contents of malfunction (the latest)	○	●	●	○	○	○	●	Malfunction code table Refer page 170, 171
15	Contents of malfunction (1 cycle before)	○	●	●	○	○	○	○	
16	Contents of malfunction (2 cycle before)	○	●	○	●	●	●	●	
20	Contents of retry (the latest)	○	●	○	●	○	●	●	
21	Contents of retry (1 cycle before)	○	●	○	●	○	●	○	
22	Contents of retry (2 cycle before)	○	●	○	●	○	○	●	

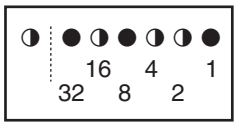
The numbers in the "No." column represent the number of times to press the SET (BS2) button.

Setting item 0 Display contents of "Various setting"

EMG operation / backup operation setting	ON	◑	●	●	○	●	●	●
	OFF	◑	●	●	●	●	●	●
Defrost select setting	Short	◑	●	●	●	○	●	●
	Medium	◑	●	●	●	◑	●	●
	Long	◑	●	●	●	●	●	●
Te setting	H	◑	●	●	●	●	○	●
	M	◑	●	●	●	●	◑	●
	L	◑	●	●	●	●	●	●
Tc setting	H	◑	●	●	●	●	●	○
	M	◑	●	●	●	●	●	◑
	L	◑	●	●	●	●	●	●

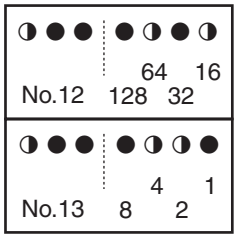
Push the SET button and match with the LEDs No. 1 - 15, push the RETURN button, and confirm the data for each setting.

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



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

In ① 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 ② 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.

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

3.2.2 Setting of Low Noise Operation and Demand Operation

Setting of Low Noise Operation

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

Setting	Content
Mode 1	Set the outdoor unit fan to Step 6 or lower.
Mode 2	Set the outdoor unit fan to Step 5 or lower.
Mode 3	Set the outdoor unit fan to Step 4 or lower.

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

1. While in "Setting mode 2", set the setting condition for set item No. 12 (Setting of external low noise/demand operation) to "YES".
2. If necessary, while in "Setting mode 2", select the setting condition (i.e., "Mode 1", "Mode 2", or "Mode 3") for set item No. 25 (Setting of external low noise level).
3. If necessary, while in "Setting mode 2", set the setting condition for the set item No. 29 (Setting of capacity precedence) to "ON".
   (If the condition is set to "ON", when the air-conditioning load reaches a high level, the low noise operation command will be ignored to put the system into normal operation mode.)

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

1. While in "Setting mode 2", select the setting condition (i.e., "Mode 1", "Mode 2", or "Mode 3") for set item No. 22 (Setting of nighttime low noise level).
2. If necessary, while in "Setting mode 2", select the setting condition (i.e., "20:00", "22:00", or "24:00") for set item No. 26 (Setting of start time of nighttime low noise operation).
   (Use the start time as a guide since it is estimated according to outdoor temperatures.)
3. If necessary, while in "Setting mode 2", select the setting condition (i.e., "06:00", "07:00", or "08:00") for set item No. 27 (Setting of end time of nighttime low noise operation).
   (Use the end time as a guide since it is estimated according to outdoor temperatures.)
4. If necessary, while in "Setting mode 2", set the setting condition for set item No. 29 (Setting of capacity precedence) to "ON".
   (If the condition is set to "ON", when the air-conditioning load reaches a high level, the system will be put into normal operation mode even during nighttime.)

Image of operation in the case of A

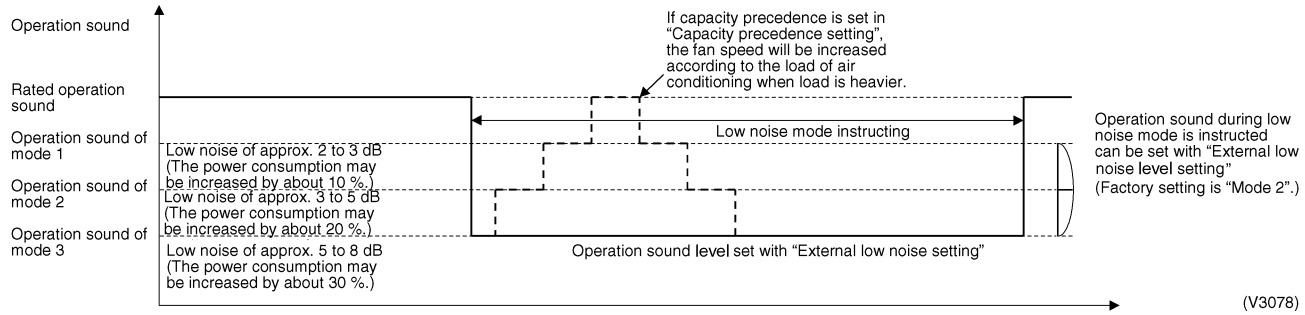


Image of operation in the case of B

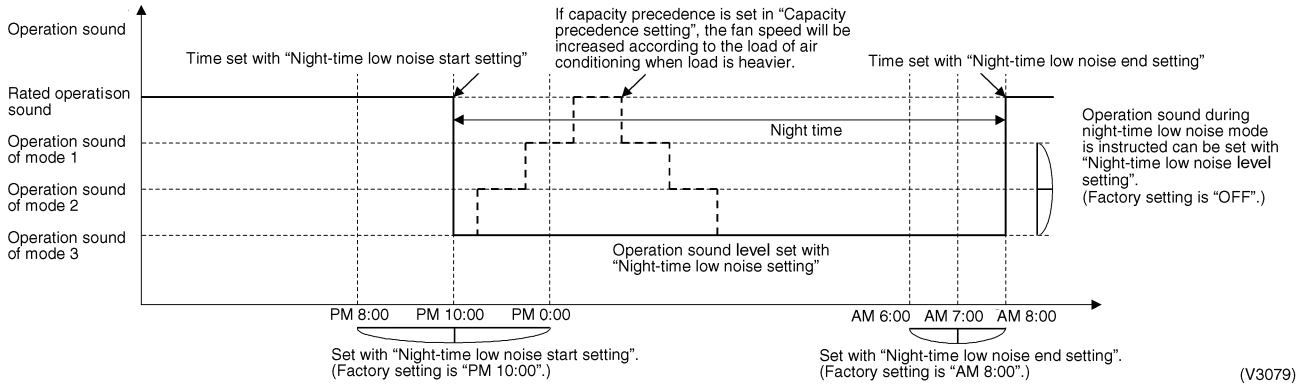
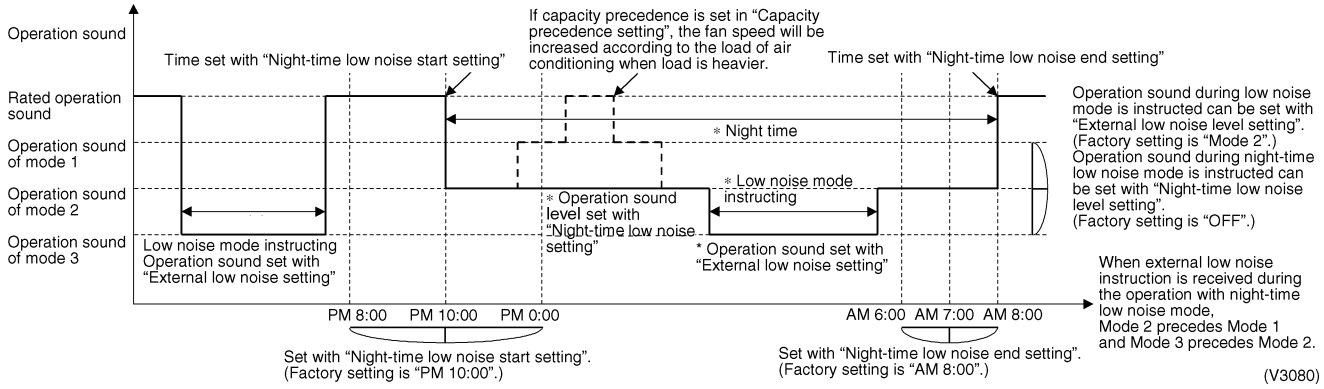


Image of operation in the case of A, B



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.

Set item	Condition	Content
Demand 1	Mode 1	The compressor operates at approx. 60% or less of rating.
	Mode 2	The compressor operates at approx. 70% or less of rating.
	Mode 3	The compressor operates at approx. 80% or less of rating.
Demand 2	—	The compressor operates at approx. 40% or less of rating.

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

1. While in "Setting mode 2", set the setting condition for set item No. 12 (Setting of external low noise/demand operation) to "YES".
2. If necessary, while in "Setting mode 2", select the set item No. 30 (Setting of Demand 1 level) and then set the setting condition to targeted mode.

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

1. While in "Setting mode 2", make setting of the set item No. 32 (Setting of constant demand) to ON.
2. While in "Setting mode 2", select the set item No. 30 (Setting of Demand 1 level) and then set the setting condition to targeted mode.

Image of operation in the case of A

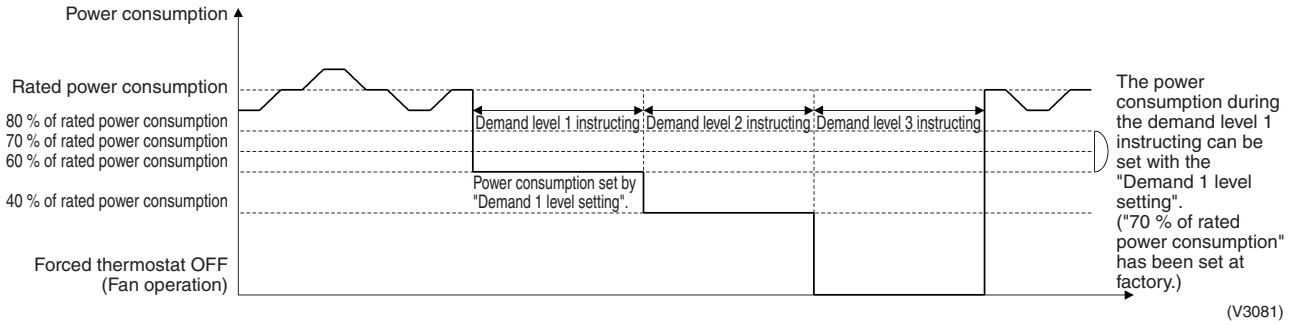


Image of operation in the case of B

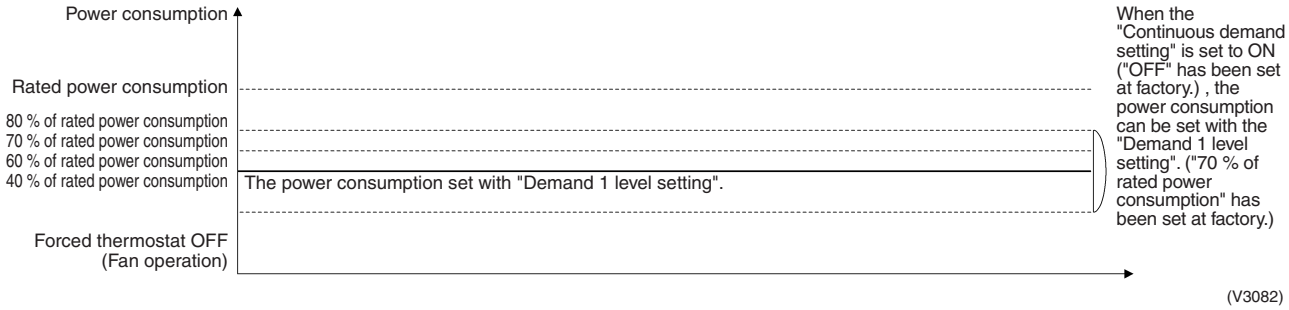
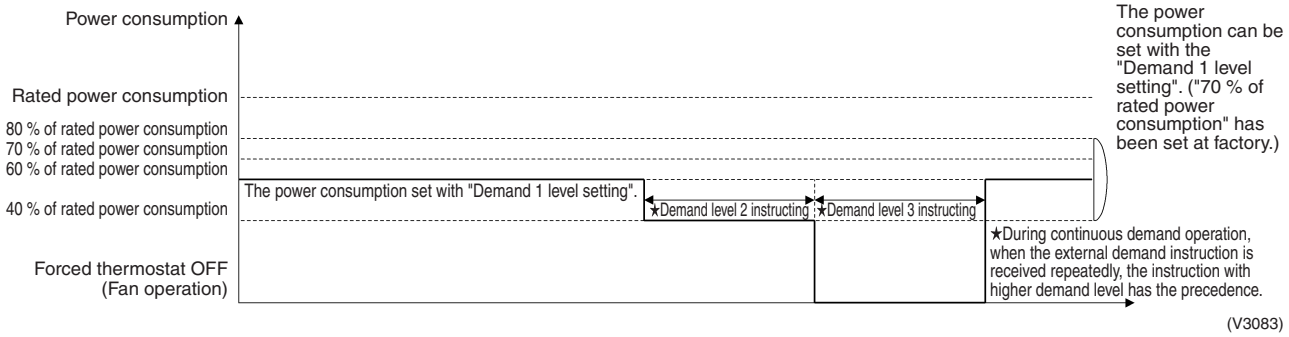


Image of operation in the case of A and B



Detailed Setting Procedure of Low Noise Operation and Demand Control

1. Setting mode 1 (H1P off)

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

2. Setting mode 2 (H1P on)

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

○: ON ●: OFF ◑: Blink

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

Setting mode indication section

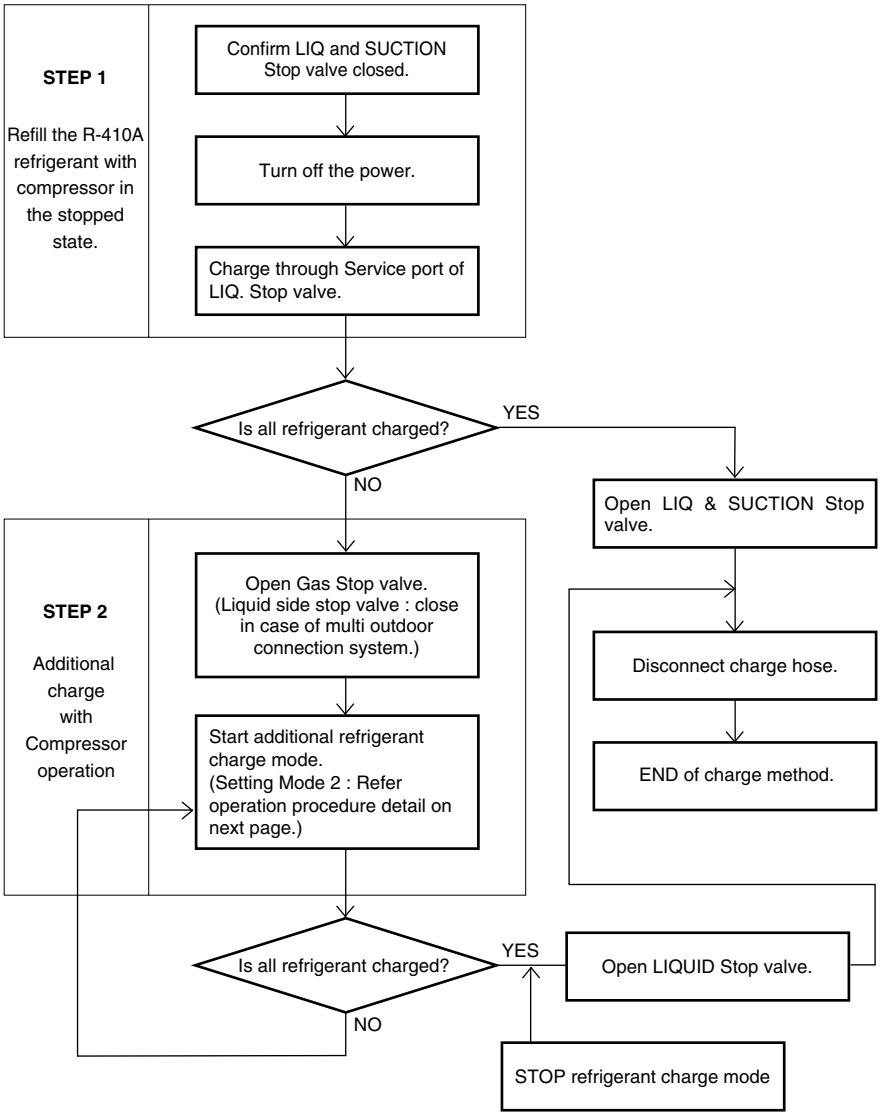
Setting No. indication section

Set contents indication section

3.2.3 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.

[Additional refrigerant charge total flow]



(V2892)

[Operation procedure detail]

① After turning the respective power supply 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 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 With the outdoor unit in the stop state, while in **Setting mode 2** (H1P: ON), set “Additional refrigerant charging operation (set item No. 20)” to "ON", thus initiating the operation. (The H2P will blink to indicate "Test Operation", and then "TEST OPERATION" and "UNDER CENTRALIZED CONTROL" will be displayed on the remote controller.

④ 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 refrigerant charging is not completed within a period of 30 minutes, make setting of “Additional refrigerant charging operation (set item No. 20)” again and then start the operation.
When the charging immediately stops even by restarting, the refrigerant is charged excessively. The refrigerant cannot be charged any more.

⑤ **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

3.2.4 Setting of Refrigerant Recovery Mode

When carrying out the refrigerant collection on site, fully open the respective expansion valve of indoor and outdoor units
All indoor and outdoor unit’s operation are prohibited.

[Operation procedure]

① In **setting mode 2** with units in stop mode, set “B Refrigerant Recovery / Vacuuming mode” to ON. The respective expansion valve of indoor and outdoor units are fully opened. (H2P turns to display “TEST OPERATION” (blinks), “TEST OPERATION” and “UNDER CENTRALIZED CONTROL” are displayed on the remote controller, and the all indoor/ outdoor unit operation is prohibited. After setting, do not cancel “Setting Mode 2” until completion of refrigerant recovery operation.

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”.

3.2.5 Setting of Vacuuming Mode

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

[Operating procedure]

① With **Setting Mode 2** while the unit stops, set “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 "Under Centralized control", thus prohibiting operation.)
After setting, do not cancel “Setting Mode 2” until completion of Vacuuming operation.

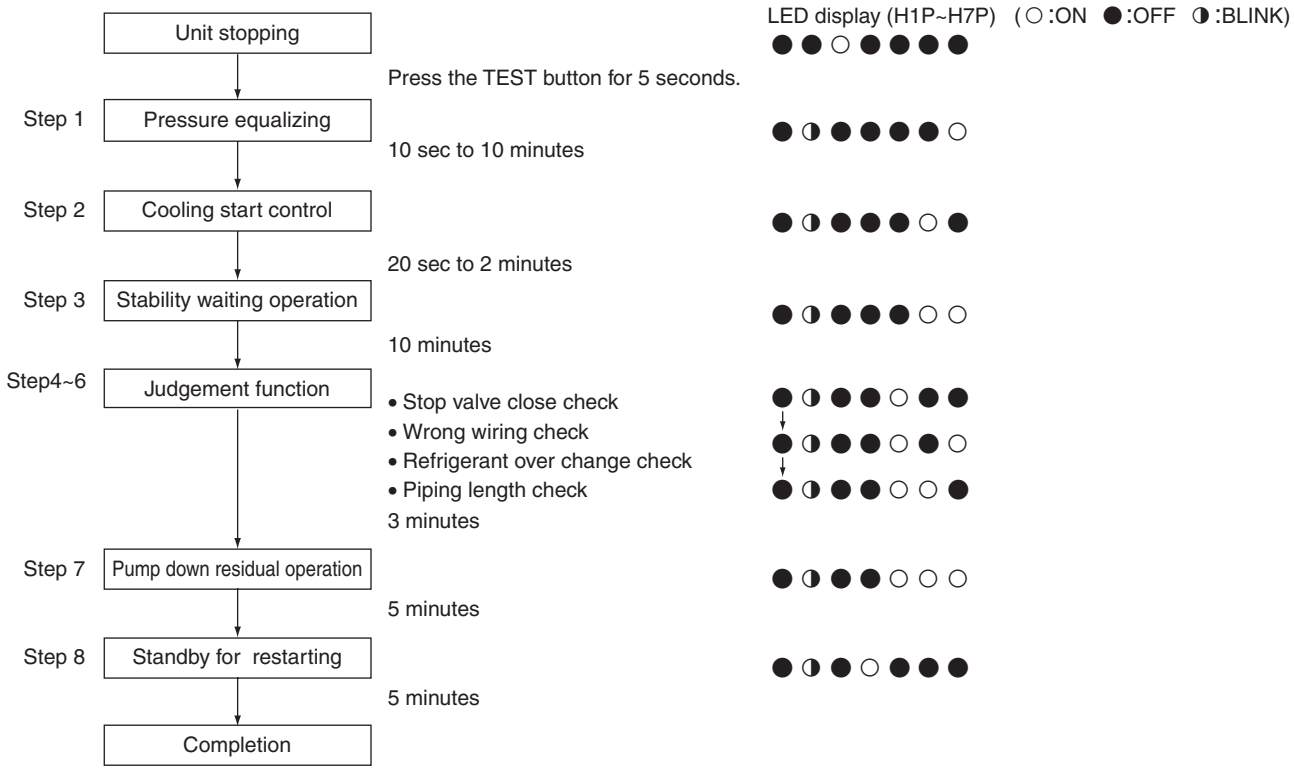
② Use the vacuum pump to perform vacuuming operation.

③ Press Mode button “BS1” once and reset “Setting Mode 2”.

3.2.6 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



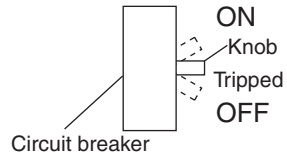
3.2.7 Power Transistor Check Operation

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.)

Note: 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. Symptom-based Troubleshooting

	Symptom		Supposed Cause	Countermeasure
1	The system does not start operation at all.		Blowout of fuse(s)	Turn Off the power supply and then replace the fuse(s).
			Cutout of breaker(s)	• If the knob of any breaker is in its OFF position, turn ON the power supply. • If the knob of any circuit breaker is in its tripped position, do not turn ON the power supply. 
			Power failure	After the power failure is reset, restart the system.
2	The system starts operation but makes an immediate stop.		Blocked air inlet or outlet of indoor or outdoor unit	Remove obstacle(s).
			Clogged air filter(s)	Clean the air filter(s).
3	The system does not cool air well.		Blocked air inlet or outlet of indoor or outdoor unit	Remove obstacle(s).
			Clogged air filter(s)	Clean the air filter(s).
			Enclosed outdoor unit(s)	Remove the enclosure.
			Improper set temperature	Set the temperature to a proper degree.
			Airflow rate set to "LOW"	Set it to a proper airflow rate.
			Improper direction of air diffusion	Set it to a proper direction.
			Open window(s) or door(s)	Shut it tightly.
			Direct sunlight received	Hang curtains or shades on windows.
			Too many persons staying in a room	
			Too many heat sources (e.g. OA equipment) located in a room	
4	The system does not operate.	The system stops and immediately restarts operation.	If the OPERATION lamp on the remote controller turns ON, the system will be normal. These symptoms indicate that the system is controlled so as not to put unreasonable loads on the system.	Normal operation. The system will automatically start operation after a lapse of five minutes.
		Pressing the TEMP ADJUST button immediately resets the system.		
		The remote controller displays "UNDER CENTRALIZED CONTROL", which blinks for a period of several seconds when the OPERATION button is depressed.	The system is controlled with centralized controller. Blinking display indicates that the system cannot be operated using the remote controller.	Operate the system using the COOL/HEAT centralized remote controller.
		The system stops immediately after turning ON the power supply.	The system is in preparation mode of micro computer operation.	Wait for a period of approximately one minute.
5	The system makes intermittent stops.	The remote controller displays malfunction codes "U4" and "U5", and the system stops but restarts after a lapse of several minutes.	The system stops due to an interruption in communication between units caused by electrical noises coming from equipment other than air conditioners.	Remove causes of electrical noises. If these causes are removed, the system will automatically restart operation.
6	The system conducts air blasting operation but not cooling or heating operation.	This symptom occurs immediately after turning ON the power supply.	The system is in preparation mode of operation.	Wait for a period of approximately 10 minutes.

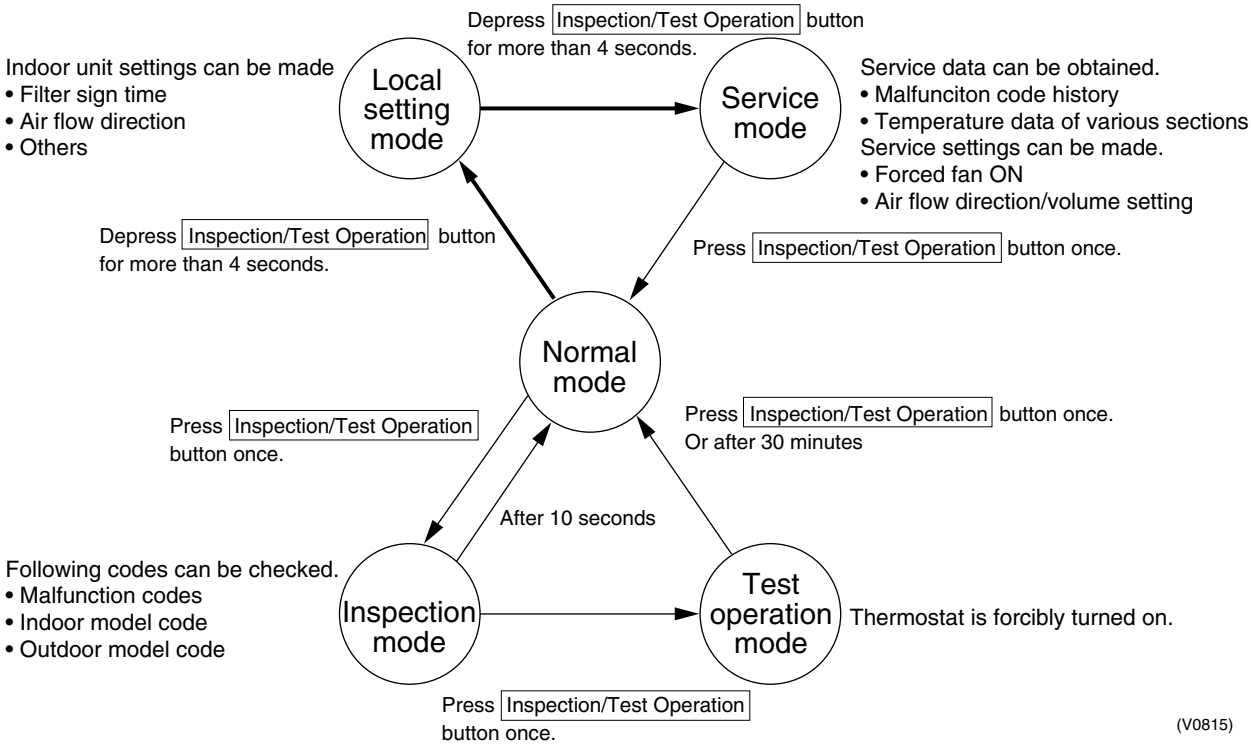
	Symptom		Supposed Cause	Countermeasure
7	The airflow rate is not reproduced according to the setting.	Even pressing the AIRFLOW RATE SET button makes no changes in the airflow rate.	In heating operation, when the room temperature reaches the set degree, the outdoor unit will stop while the indoor unit is brought to breezing operation so that no one gets cold air. Furthermore, if blasting mode is selected when other indoor unit is in heating operation, the system will be brought to breezing operation. (The breezing operation is also enabled while in oil return mode in cooling operation.)	Normal operation.
8	The airflow direction is not reproduced according to the setting.	The airflow direction is not corresponding to that displayed on the remote controller. The flap does not swing.	Automatic control	Normal operation.
9	A white mist comes out from the system.	<Indoor unit> In cooling operation, the ambient humidity is high. (This indoor unit is installed in a place with much oil or dust.)	Uneven temperature distribution due to heavy stain of the inside of the indoor unit	Clean the inside of the indoor unit.
		<Indoor unit> Immediately after cooling operation, the ambient temperature and humidity are low.	Hot gas (refrigerant) flown in the indoor unit results in humidity.	Normal operation.
		<Indoor and outdoor units> After the completion of defrosting operation, the system is switched to heating operation.	Defrosted moisture turns to be vapor and comes out from the units.	Normal operation.
10	The system produces sounds.	<Indoor unit> Immediately after turning ON the power supply, indoor unit produces "ringing" sounds.	These are operating sounds of the electronic expansion valve of the indoor unit.	Normal operation. This sound becomes low after a lapse of approximately one minute.
		<Indoor and outdoor units> "Hissing" sounds are continuously produced while in cooling or defrosting operation.	These sounds are produced from gas (refrigerant) flowing respectively through the indoor and outdoor units.	Normal operation.
		<Indoor and outdoor units> "Hissing" sounds are produced immediately after the startup or stop of the system, or the startup or stop of defrosting operation.	These sounds are produced when the gas (refrigerant) stops or changes flowing.	Normal operation.
		<Indoor unit> Faint sounds are continuously produced while in cooling operation or after stopping the operation.	These sounds are produced from the drain discharge device in operation.	Normal operation.
		<Indoor unit> "Creaking" sounds are produced while in heating operation or after stopping the operation.	These sounds are produced from resin parts expanding and contracting with temperature changes.	Normal operation.
		<Indoor unit> Sounds like "trickling" or the like are produced from indoor units in the stopped state.	On multi-unit systems, these sounds are produced from other indoor units in operation. The reason is that the system runs in order to prevent oil or refrigerant from dwelling.	Normal operation.
		<Outdoor unit> Pitch of operating sounds changes.	The reason is that the compressor changes the operating frequency.	Normal operation.
11	Dust comes out from the system.	Dust comes out from the system when it restarts after the stop for an extended period of time.	Dust, which has deposited on the inside of indoor unit, is blown out from the system.	Normal operation.

	Symptom		Supposed Cause	Countermeasure
12	Odors come out from the system.	In operation	Odors of room, cigarettes or else adsorbed to the inside of indoor unit are blown out.	The inside of the indoor unit should be cleaned.
13	Outdoor unit fan does not rotate.	In operation	The reason is that fan revolutions are controlled to put the operation to the optimum state.	Normal operation.
14	LCD display "88" appears on the remote controller.	Immediately after turning ON the power supply	The reason is that the system is checking to be sure the remote controller is normal.	Normal operation. This code is displayed for a period of approximately one minute at maximum.
15	The outdoor unit compressor or the outdoor unit fan does not stop.	After stopping operation	It stops in order to prevent oil or refrigerant from dwelling.	Normal operation. It stops after a lapse of approximately 5 to 10 minutes.
16	The outdoor gets hot.	While stopping operation	The reason is that the compressor is warmed up to provide smooth startup of the system.	Normal operation.
17	The system does not cool air well.	The system is in dry operation using the microcomputer.	The reason is that the dry operation using the microcomputer serves not to reduce the ambient temperature where possible.	Change the system to cooling operation.

2. Troubleshooting by Remote Controller

2.1 The INSPECTION / TEST Button

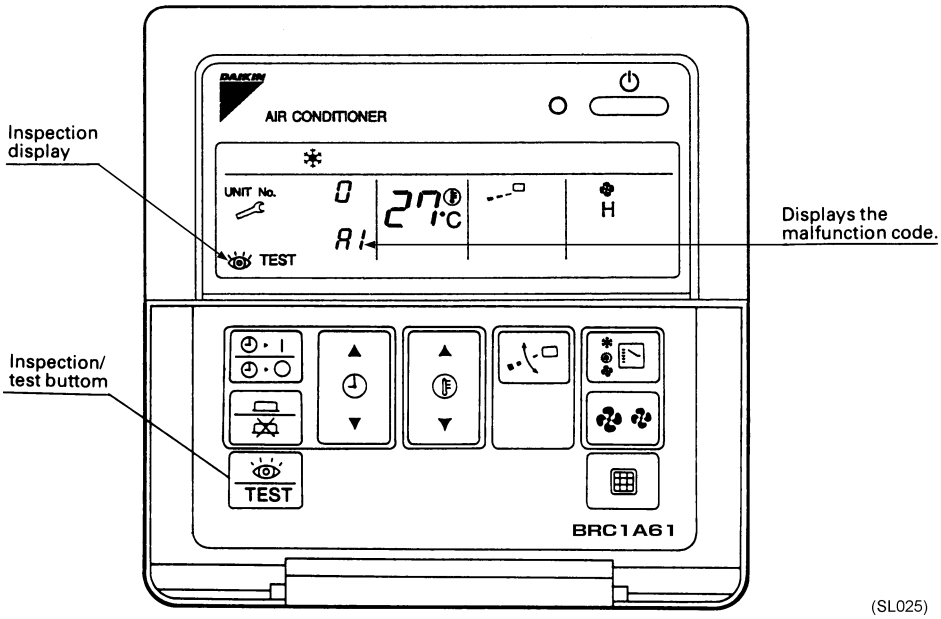
The following modes can be selected by using the [Inspection/Test Operation] button on the remote control.



2.2 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.



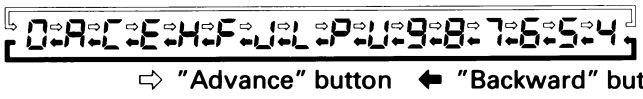
2.3 Self-diagnosis by Wireless Remote Controller

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.)

1. Press the INSPECTION/TEST button to select “Inspection.”
   The equipment enters the inspection mode. The “Unit” indication lights and the Unit No. display shows flashing “0” indication.
2. Set the Unit No.
   Press the UP or DOWN button and change the Unit No. display until the buzzer (*1) is generated from the indoor unit.
   *1 Number of beeps
   3 short beeps : Conduct all of the following operations.
   1 short beep : Conduct steps 3 and 4.
   Continue the operation in step 4 until a buzzer remains ON. The continuous buzzer indicates that the malfunction code is confirmed.
   Continuous beep : No abnormality.
3. Press the MODE selector button.
   The left “0” (upper digit) indication of the malfunction code flashes.
4. Malfunction code upper digit diagnosis
   Press the UP or DOWN button and change the malfunction code upper digit until the malfunction code matching buzzer (*2) is generated.

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

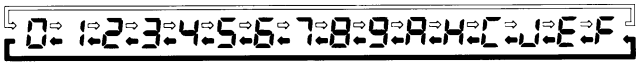


⇨ ”Advance” button ⬅ ”Backward” button (SE006)

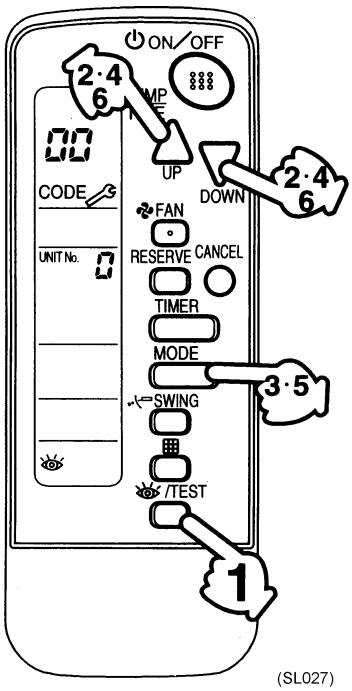
*2 Number of beeps
Continuous beep : Both upper and lower digits matched. (Malfunction code confirmed)
2 short beeps : Upper digit matched.
1 short beep : Lower digit matched.

5. Press the MODE selector button.
   The right “0” (lower digit) indication of the malfunction code flashes.
6. Malfunction code lower digit diagnosis
   Press the UP or DOWN button and change the malfunction code lower digit until the continuous malfunction code matching buzzer (*2) is generated.

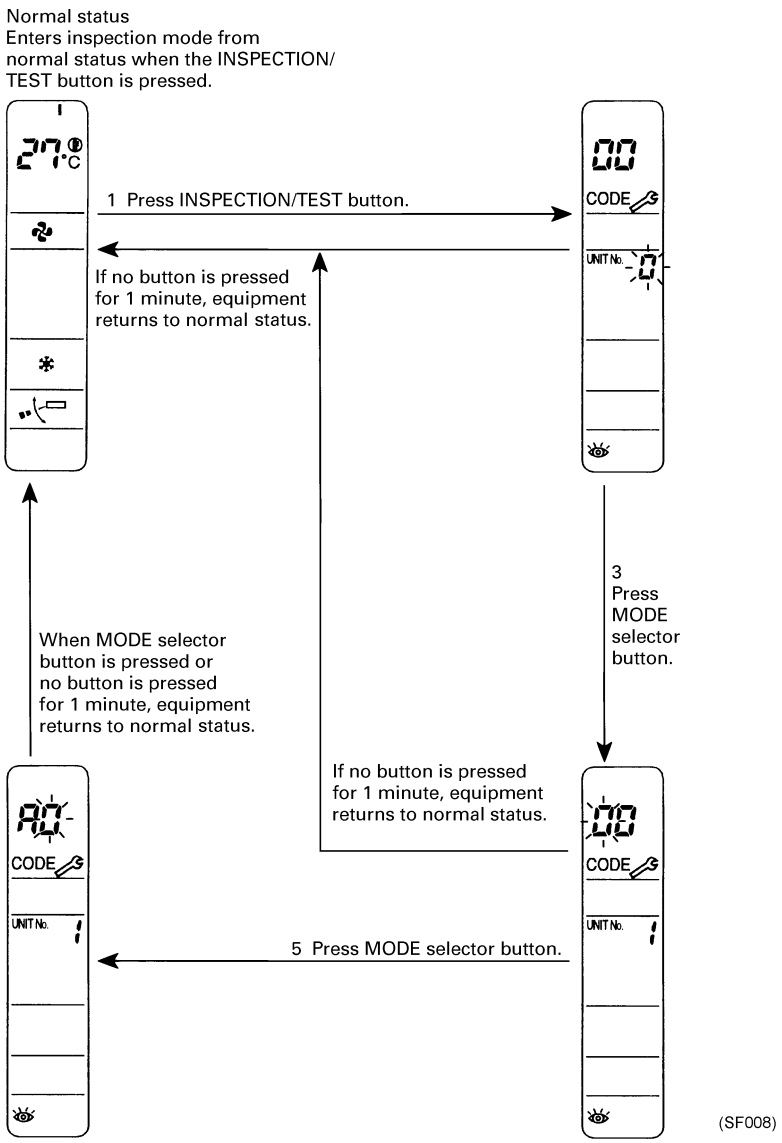
■ The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.



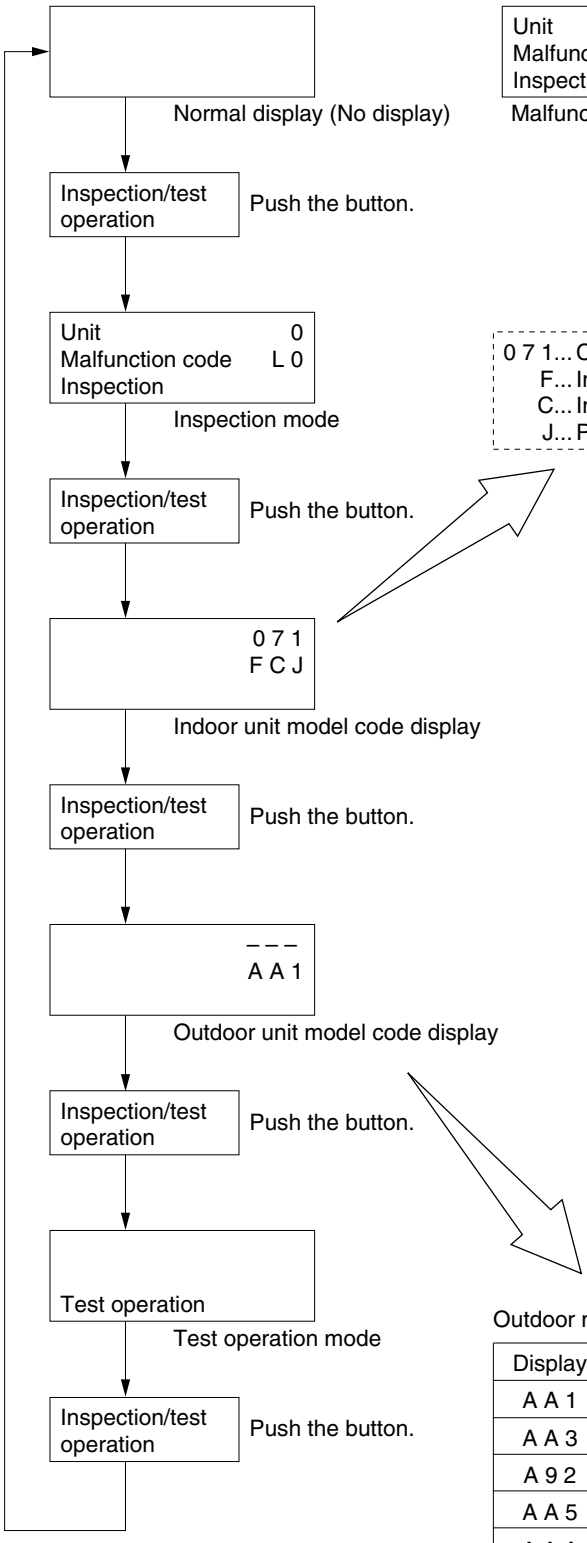
(SE007)



(SL027)


Normal status
Enters inspection mode from
normal status when the INSPECTION/
TEST button is pressed.
27
°C
00
CODE
UNIT No.
0
1 Press INSPECTION/TEST button.
If no button is pressed
for 1 minute, equipment
returns to normal status.
3
Press
MODE
selector
button.
When MODE selector
button is pressed or
no button is pressed
for 1 minute, equipment
returns to normal status.
If no button is pressed
for 1 minute, equipment
returns to normal status.
A0
CODE
UNIT No.
1
00
CODE
UNIT No.
1
5 Press MODE selector button.
(SF008)

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



Unit 0
Malfunction code L 0
Inspection

Malfunction code blinks when a malfunction occurs.

0 7 1... Capacity code
F... Indoor unit system code
C... Indoor unit type code
J... Progression code

Example of capacity code display

Example model	Display
FXCQ25	028
FXFQ63	071

Indoor unit system code

Display	Product classification	System classification
1	VRV system	(VAV indoor unit)
2	VRV system	Outdoor air processing unit
F	VRV system	Standard indoor unit
H	VRV system	New ceilling suspended cassette

Indoor unit type code

Display	Type	Model
A	Wall mounted	FXAQ
C	Double flow	FXCQ
E	Corner	FXKQ
F	Multi flow	FXFQ
H	Ceiling suspended	FXHQ
J	Built-in	FXSQ
L	Floor standing	FXLQ
P	Concealed ceiling duct	FXMQ
L	Concealed floor standing type	FXNQ
6	Multi flow 600×600	FXZQ
3	Slim Ceilling mounted duct	FXDQ
5	New ceilling suspended cassette	FXUQ

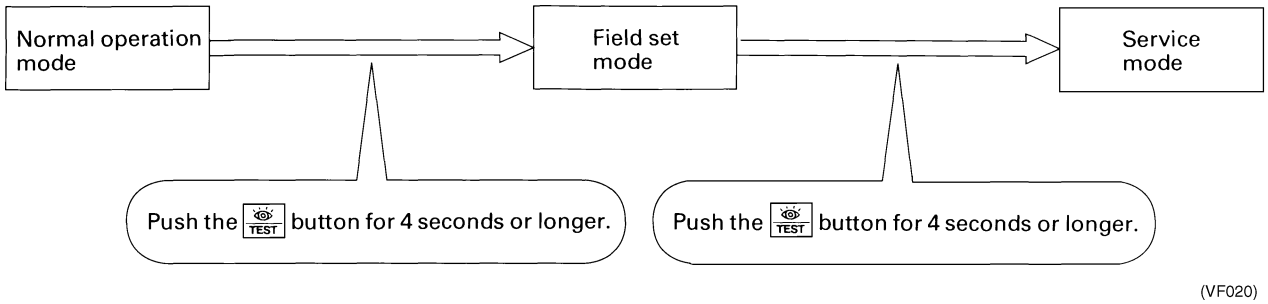
Outdoor model code

Display	Type	Model
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
A A A	VRV II	RXQ-M
A A C	VRV II M/C	RXQ-MA

(V2775)

2.5 Remote Controller Service Mode

How to Enter the Service Mode



Service Mode Operation Method

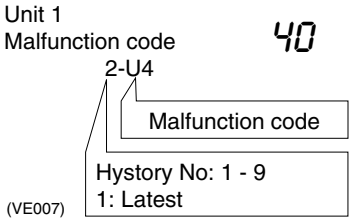
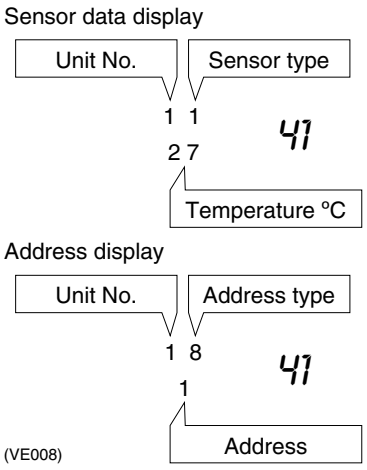
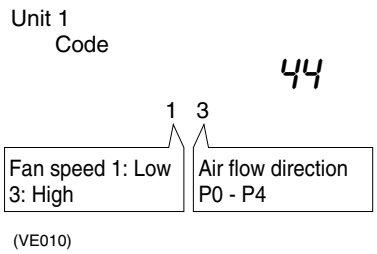
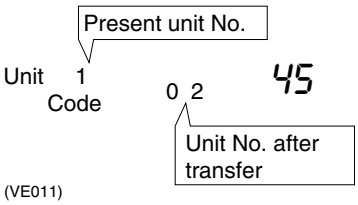
1. Select the mode No.
Set the desired mode No. with the button.
(For wireless remote controller, Mode 43 only can be set.)

2. Select the unit No. (For group control only)
Select the indoor unit No. to be set with the time mode . (For wireless remote controller, button.)

3. Make the settings required for each mode. (Modes 41, 44, 45)
In case of Mode 44, 45, push button to be able to change setting before setting work. (LCD "code" blinks.)
For details, refer to the table in next page.

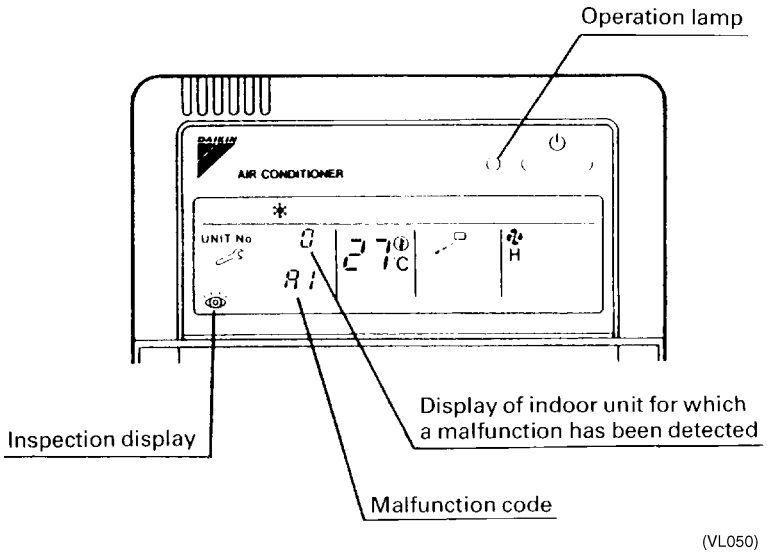
4. Define the setting contents. (Modes 44, 45)
Define by pushing the timer button.
After defining, LCD "code" changes blinking to ON.

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 button.	
41	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 / low noise address	
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 button, you can turn the fan of each indoor unit on (forced ON) individually.	
44	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 button.	
45	Unit No. transfer	Transfer unit No. Select the unit No. with the button. Set the unit No. after transfer with the button.	
46 47	This function is not used by VRV II R-410A Heat Pump 50Hz.		

2.6 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.



○: ON ●: OFF ◑: Blink

	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referred
Indoor Unit	A0	◑	◑	◑	Error of external protection device	172
	A1	◑	◑	◑	PC board defect, E^2 PROM defect	173
	A3	◑	◑	◑	Malfunction of drain level control system (S1L)	174
	A6	◑	◑	◑	Fan motor (M1F) lock, overload	176
	A7	○	●	◑	Malfunction of swing flap motor (MA)	177
	A9	◑	◑	◑	Malfunction of moving part of electronic expansion valve (20E)	179
	AF	○	●	◑	Drain level about limit	181
	AH	○	●	◑	Malfunction of air filter maintenance	—
	AJ	◑	◑	◑	Malfunction of capacity setting	182
	C4	◑	◑	◑	Malfunction of thermistor (R2T) for heat exchange (loose connection, disconnection, short circuit, failure)	183
	C5	◑	◑	◑	Malfunction of thermistor (R3T) for gas pipes (loose connection, disconnection, short circuit, failure)	184
	C9	◑	◑	◑	Malfunction of thermistor (R1T) for air inlet (loose connection, disconnection, short circuit, failure)	185
	CJ	○	○	○	Malfunction of thermostat sensor in remote controller	186
Outdoor Unit	E1	◑	◑	◑	PC board defect	187
	E3	◑	◑	◑	Actuation of high pressure switch	188
	E4	◑	◑	◑	Actuation of low pressure sensor	189
	E5	◑	◑	◑	Compressor motor lock	190
	E6	◑	◑	◑	Standard compressor lock or over current	191
	E7	◑	◑	◑	Malfunction of outdoor unit fan motor	192
	E9	◑	◑	◑	Malfunction of moving part of electronic expansion valve (Y1E~3E)	194
	F3	◑	◑	◑	Abnormal discharge pipe temperature	196
	F6	◑	◑	◑	Refrigerant overcharged	197
	H3	○	●	◑	Malfunction of High pressure switch	—
	H4	◑	◑	◑	Malfunction of Low pressure switch	—
	H7	◑	◑	◑	Abnormal outdoor fan motor signal	198
	H9	◑	◑	◑	Malfunction of thermistor (R1T) for outdoor air (loose connection, disconnection, short circuit, failure)	199
	J2	◑	◑	◑	Current sensor malfunction	200
	J3	◑	◑	◑	Malfunction of discharge pipe thermistor (R31~33T) (loose connection, disconnection, short circuit, failure)	201
	J5	◑	◑	◑	Malfunction of thermistor (R2T) for suction pipe (loose connection, disconnection, short circuit, failure)	202
Outdoor Unit	J6	◑	◑	◑	Malfunction of thermistor (R4T) for heat exchanger (loose connection, disconnection, short circuit, failure)	203
	J7	◑	◑	◑	Malfunction of receiver outlet liquid pipe thermistor (R6T)	204
	J9	◑	◑	◑	Malfunction of subcooling heat exchanger gas pipe thermistor (R5T)	205
	JA	◑	◑	◑	Malfunction of discharge pipe pressure sensor	206
	JC	◑	◑	◑	Malfunction of suction pipe pressure sensor	207
	L0	◑	◑	◑	Inverter system error	—
	L4	◑	◑	◑	Malfunction of inverter radiating fin temperature rise	208
	L5	◑	◑	◑	Inverter compressor motor grounding, short circuit	209
	L6	◑	◑	◑	Compressor motor coil grounding on short circuit	—
	L8	◑	◑	◑	Inverter current abnormal	210
	L9	◑	◑	◑	Inverter start up error	211

○: ON ●: OFF ◑: Blink

	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referred
Outdoor Unit	LA	◑	◑	◑	Malfunction of power unit	—
	LC	◑	◑	◑	Malfunction of transmission between inverter and control PC board	212
	P1	◑	◑	◑	Inverter over-ripple protection	214
	P4	◑	◑	◑	Malfunction of inverter radiating fin temperature rise sensor	215
System	U0	○	●	◑	Low pressure drop due to refrigerant shortage or electronic expansion valve failure	216
	U1	◑	◑	◑	Reverse phase / open phase	217
	U2	◑	◑	◑	Power supply insufficient or instantaneous failure	218
	U3	◑	◑	◑	Check operation is not conducted.	220
	U4	◑	◑	◑	Malfunction of transmission between indoor and outdoor units	221
	U5	◑	◑	◑	Malfunction of transmission between remote controller and indoor unit	223
	U5	●	○	●	Failure of remote controller PC board or setting during control by remote controller	223
	U7	◑	◑	◑	Malfunction of transmission between outdoor units	224
	U8	◑	◑	●	Malfunction of transmission between main and sub remote controllers (malfunction of sub remote controller)	226
	U9	◑	◑	◑	Malfunction of transmission between indoor unit and outdoor unit in the same system	227
	UA	◑	◑	◑	Improper combination of indoor and outdoor units, indoor units and remote controller	229
	UC	○	○	○	Address duplication of central remote controller	230
	UE	◑	◑	◑	Malfunction of transmission between central remote controller and indoor unit	231 241
	UF	◑	◑	◑	Refrigerant system not set, incompatible wiring / piping	233
	UH	◑	◑	◑	Malfunction of system, refrigerant system address undefined	234
Central Remote Controller and Schedule Timer	M1	○ or ●	◑	◑	Central remote controller PC board defect Schedule timer PC board defect	235 243
	M8	○ or ●	◑	◑	Malfunction of transmission between optional controllers for centralized control	236 244
	MA	○ or ●	◑	◑	Improper combination of optional controllers for centralized control	238 245
	MC	○ or ●	◑	◑	Address duplication, improper setting	240 247
Heat Reclaim Ventilation	64	○	●	◑	Indoor unit's air thermistor error	—
	65	○	●	◑	Outside air thermistor error	—
	68	○	●	◑		—
	6A	○	●	◑	Damper system alarm	—
	6A	◑	◑	◑	Damper system + thermistor error	—
	6F	○	●	◑	Malfunction of simple remote controller	—
	6H	○	●	◑	Malfunction of door switch or connector	—
	94	◑	◑	◑	Internal transmission error	—

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

Malfunction code indication by outdoor unit PCB

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

* Refer P.136 for Monitor mode.

<Selection of setting item>

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

* Refer P.136 for Monitor mode.

<Confirmation of malfunction 1>

Push the RETURN (BS3) button once to display "First digit" of malfunction code.

<Confirmation of malfunction 2>

Push the SET (BS2) button once to display "Second digit" of malfunction code.

<Confirmation of malfunction 3>

Push the SET (BS2) button once to display "master or slave1 or slave2" and "malfunction location".

Detail description on next page.

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

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

Contents of malfunction		Malfunction code
Abnormal discharge pressure	HPS activated	E3
Abnormal suction pressure	Abnormal Pe	E4
Compressor lock	Detection of INV compressor lock	E5
Activation of OC	Detection of STD1 compressor lock	E6
	Detection of STD2 compressor lock	
Over load, over current,	Instantaneous over current of DC fan motor	E7
abnormal lock of outdoor unit fan motor	Detection of DC fan motor lock	
Malfunction of electronic expansion valve	EV1	E9
	EV2	
	EV3	
Abnormal position signal of outdoor unit fan motor	Abnormal position signal of DC fan motor	H7
Faulty sensor of outdoor air temperature	Faulty Ta sensor	H9
Faulty sensor of heat storage unit		HC
Abnormality in water system of heat storage unit		HJ
Transmission error between heat storage unit and controller		HF
Abnormal discharge pipe temperature	Abnormal Td	F3
Abnormal heat exchanger temperature	Refrigerant over charge	F6
Faulty current sensor	Faulty CT1 sensor	J2
	Faulty CT2 sensor	
Faulty sensor of discharge pipe temperature	Faulty Tdi sensor	J3
	Faulty Tds1 sensor	
	Faulty Tds2 sensor	
Faulty sensor of suction pipe temperature	Faulty Ts sensor	J5
Faulty sensor of heat exchanger temperature	Faulty Tb sensor	J6
Faulty sensor of receiver outlet liquid pipe temperature	Faulty Tl sensor	J7
Faulty sensor of subcool heat exchanger temperature	Faulty Tsh sensor	J9
Faulty sensor of discharge pressure	Faulty Pc sensor	JA
Faulty sensor of suction pressure	Faulty Pe sensor	JC
Inverter radiation fin temperature rising	Over heating of inverter radiation fin temperature	L4
DC output over current	Inverter instantaneous over current	L5
Electronic thermal switch	Electronic thermal switch 1	L8
	Electronic thermal switch 2	
	Out-of-step	
	Speed down after startup	
	Lightening detection	
Stall prevention (Limit time)	Stall prevention (Current increasing)	L9
	Stall prevention (Faulty startup)	
	Abnormal wave form in startup	
	Out-of-step	
Transmission error between inverter and outdoor unit	Inverter transmission error	LC
Open phase/Power supply imbalance	Imbalance of inverter power supply voltage	P1
Faulty temperature sensor inside switch box	Faulty thermistor of inverter box	P3
Faulty temperature sensor of inverter radiation fin	Faulty thermistor of inverter fin	P4
Incorrect combination of inverter and fan driver	Incorrect combination of inverter and fan driver	PJ
Gas shortage	Gas shortage alarm	U0
Reverse phase	Reverse phase error	U1
Abnormal power supply voltage	Insufficient inverter voltage	U2
	Inverter open phase (phase T)	
	Charging error of capacitor in inverter main circuit	
No implementation of test-run		U3
Transmission error between indoor and outdoor unit	I/O transmission error	U4
Transmission error between outdoor units, transmission error between thermal storage units, duplication of IC address	O/O transmission error	U7
Transmission error of other system	Indoor unit system malfunction in other system or other unit of own system	U9
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 in wiring and piping, no setting for system	Malfunction of multi level converter, abnormality in conflict check	UJ UF

○: ON ●: OFF ◑:Blink

Malfunction code	Confirmation of malfunction 1							Confirmation of malfunction 2							Confirmation of malfunction 3						
	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P
E3	◑			●	●	◑	◑	◑			●	●	◑	◑	◑					●	●
E4								◑			●	◑	●	●	◑					●	●
E5								◑			●	◑	●	◑	◑					●	●
E6								◑			●	◑	◑	●	◑					●	◑
								◑			●	◑	◑	●	◑					◑	●
E7								◑			●	◑	◑	◑	◑					●	◑
E9								◑			◑	●	●	◑	◑					●	◑
															◑					◑	●
															◑					◑	◑
H7	◑			●	◑	●	●	◑			●	◑	◑	◑	◑					●	◑
H9								◑			◑	●	●	◑	◑					●	●
HC								◑			◑	◑	●	●	◑					●	●
HJ								◑			◑	◑	●	◑	◑					●	●
HF								◑			◑	◑	◑	◑	◑					●	●
F3	◑			●	◑	●	◑	◑			●	●	◑	◑	◑					●	●
F6								◑			●	◑	◑	●	◑					●	●
J2	◑			●	◑	◑	●	◑			●	●	◑	●	◑					●	◑
															◑					◑	●
J3								◑			●	●	◑	◑	◑					●	◑
															◑					◑	●
															◑					◑	◑
J5								◑			●	◑	●	◑	◑					●	●
J6								◑			●	◑	◑	●	◑					●	●
J7								◑			●	◑	◑	◑	◑					●	●
J9								◑			◑	●	●	●	◑					●	●
JA								◑			◑	●	●	◑	◑					●	●
JC								◑			◑	●	◑	●	◑					●	●
L4	◑			●	◑	◑	◑	◑			●	◑	●	●	◑					●	●
L5								◑			●	◑	●	◑	◑					●	●
L8								◑			◑	●	●	●	◑					●	●
L9								◑			◑	●	●	◑	◑					●	●
LC								◑			◑	◑	●	●	◑					●	●
P1	◑			◑	●	●	●	◑			●	●	●	◑	◑					●	●
P3								◑			●	●	◑	◑	◑					●	●
P4								◑			●	◑	●	●	◑					●	●
PJ								◑			◑	◑	●	◑	◑					●	●
U0	◑			◑	●	●	◑	◑			●	●	●	●	◑					●	●
U1								◑			●	●	●	◑	◑					●	●
U2								◑			●	●	◑	●	◑					●	●
U3								◑			●	●	◑	◑	◑					●	●
U4								◑			●	◑	●	●	◑					●	●
U7								◑			●	◑	◑	◑	◑					●	●
U9								◑			◑	●	●	◑	◑					●	●
UA								◑			◑	●	◑	●	◑					●	●
UH								◑			◑	●	◑	◑	◑					●	●
UJ								◑			◑	◑	●	◑	◑					●	●
UF								◑			◑	◑	◑	◑	◑					●	●

Malfunction code 1st digit display section

Malfunction code 2nd digit display section

Master	●	●
Slave 1	●	◑
Slave 2	◑	●

Malfunction location

3. Troubleshooting by Indication on the Remote Controller

3.1 "A0" Indoor Unit: Error of External Protection Device

Remote Controller Display

A0

Applicable Models

All indoor unit models

Method of Malfunction Detection

Detect open or short circuit between external input terminals in indoor unit.

Malfunction Decision Conditions

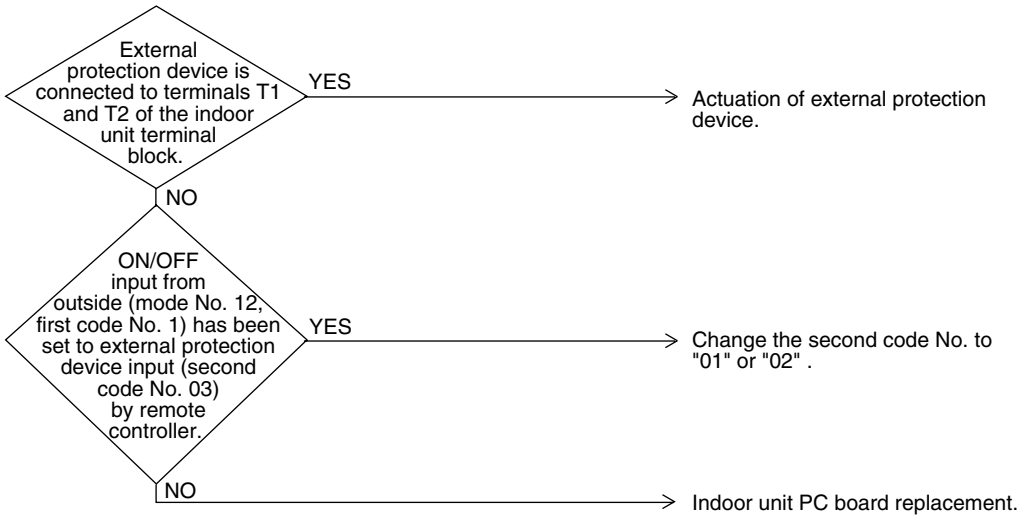
When an open circuit occurs between external input terminals with the remote controller set to "external ON/OFF terminal".

Supposed Causes

- Actuation of external protection device
- Improper field set
- 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.



(V2776)

3.2 "A1" Indoor Unit: PC Board Defect

Remote Controller Display

A1

Applicable Models

All indoor unit models

Method of Malfunction Detection

Check data from E²PROM.

Malfunction Decision Conditions

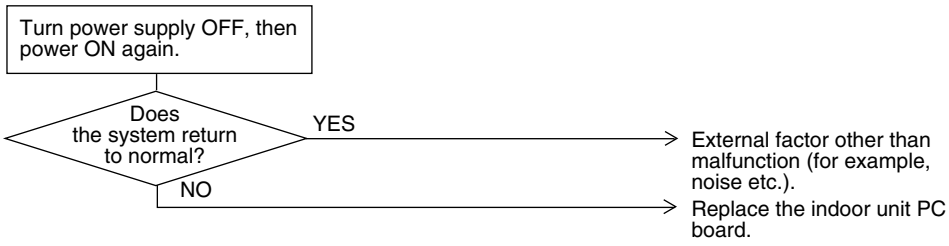
When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



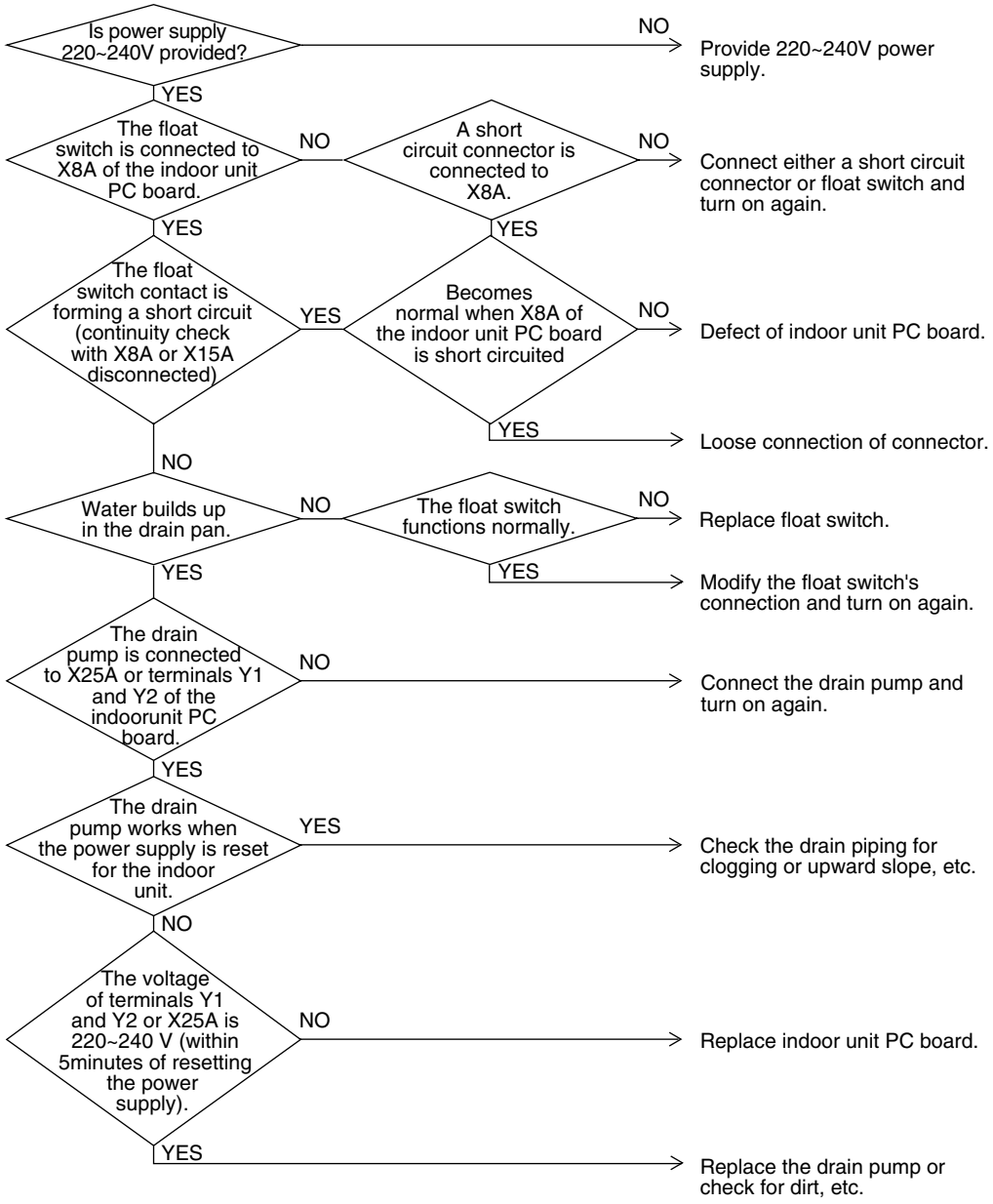
(V2777)

3.3 "A3" Indoor Unit: Malfunction of Drain Level Control System (S1L)

Remote Controller Display	A3
Applicable Models	FXCQ, FXFQ, 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

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2778)

3.4 "A6" Indoor Unit: Fan Motor (M1F) Lock, Overload

Remote Controller Display

A6

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

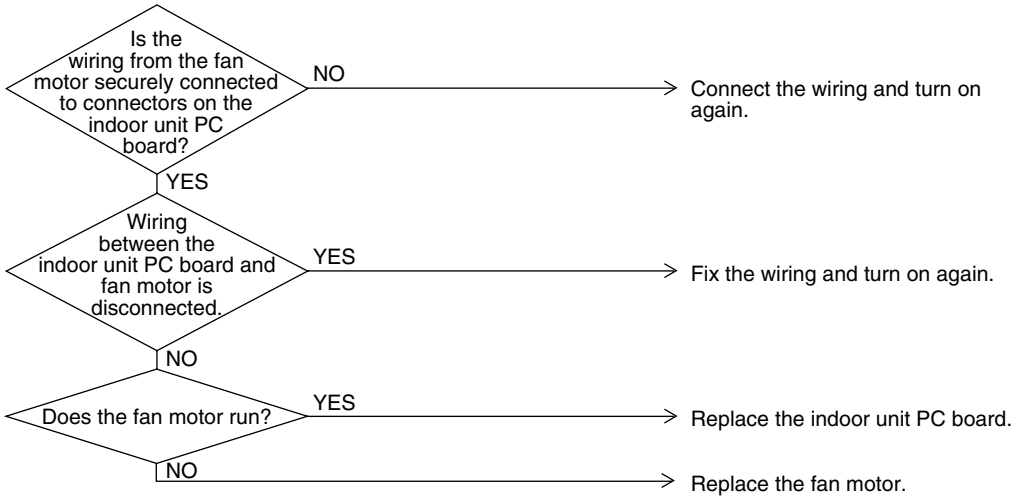
When number of turns can't be detected even when output voltage to the fan is maximum

Supposed Causes

- Fan motor lock
- Disconnected or faulty wiring between fan motor and PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



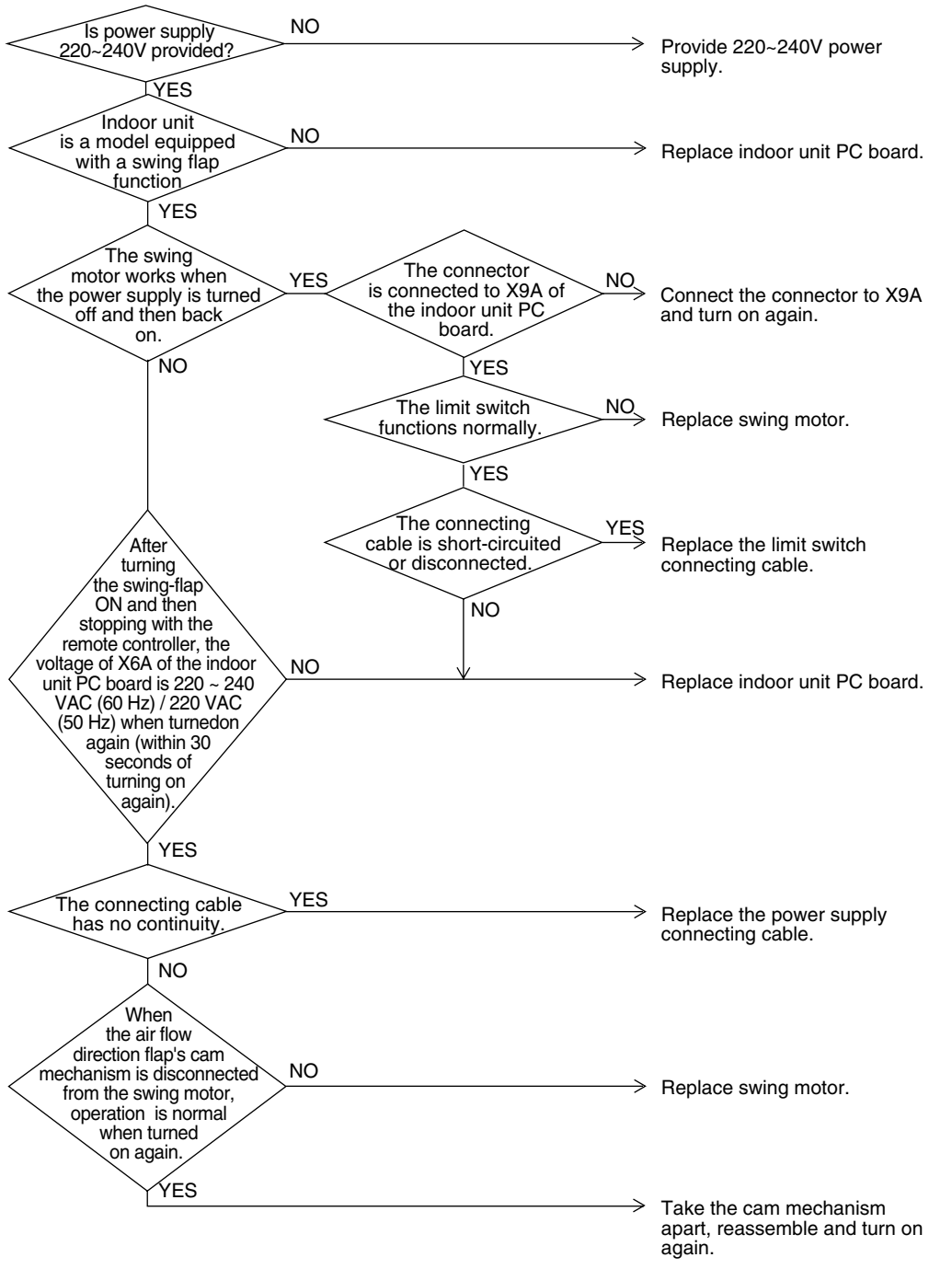
(V2779)

3.5 "A7" Indoor Unit: Malfunction of Swing Flap Motor (MA)

Remote Controller Display	A7
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2780)

3.6 "A9" Indoor Unit: Malfunction of Moving Part of Electronic Expansion Valve (20E)

Remote Controller Display

A9

Applicable Models

All indoor unit models

Method of Malfunction Detection

Use a microcomputer to check the electronic expansion valve for coil conditions.

Malfunction Decision Conditions

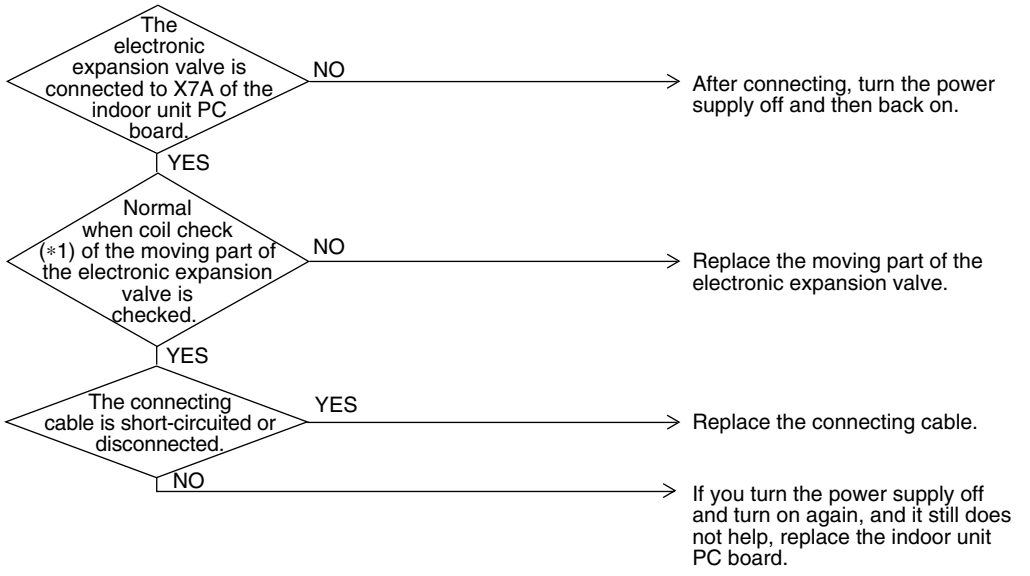
When the pin input of the electronic expansion valve is not normal while in the initialization of the microcomputer.

Supposed Causes

- Malfunction of moving part of electronic expansion valve
- Defect of indoor unit PC board
- Defect of connecting cable

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2781)

∗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		×	○ Approx. 300Ω	×	○ Approx. 150Ω	×
2. Yellow			×	○ Approx. 300Ω	×	○ Approx. 150Ω
3. Orange				×	○ Approx. 150Ω	×
4. Blue					×	○ Approx. 150Ω
5. Red						×
6. Brown						

○: Continuity
×: No continuity

3.7 "AF" Indoor Unit: Drain Level above Limit

Remote Controller Display

AF

Applicable Models

FXCQ, FXFQ, 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

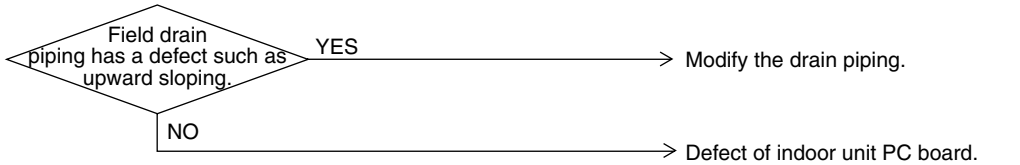
When the float switch changes from ON to OFF while the compressor is in non-operation.

Supposed Causes

- Defect of drain pipe (upward slope, etc.)
- 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.



(V2782)

3.8 "AJ" Indoor Unit: Malfunction of Capacity Determination Device

Remote controller display

AJ

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:

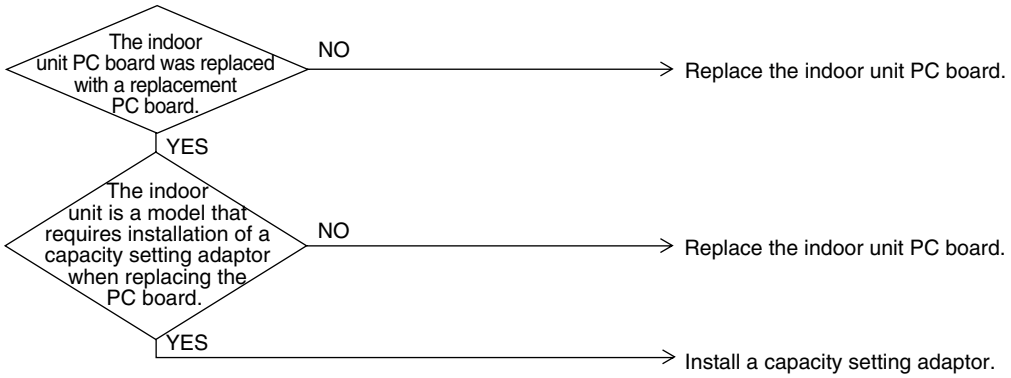
1. When the capacity code is not contained in the PC board's memory, and the capacity setting adaptor is not connected.
2. When a capacity that doesn't exist for that unit is set.

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.



(V2783)

3.9 "C4" Indoor Unit: Malfunction of Thermistor (R2T) for Heat Exchanger

Remote Controller Display

C4

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

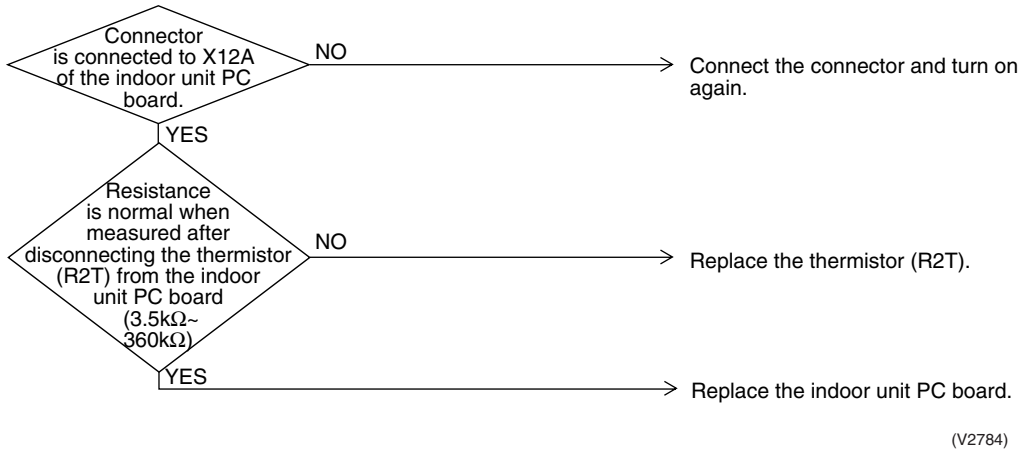
When the heat exchanger thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of thermistor (R2T) for liquid pipe
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.10 "C5" Indoor Unit: Malfunction of Thermistor (R3T) for Gas Pipes

Remote Controller Display

C5

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

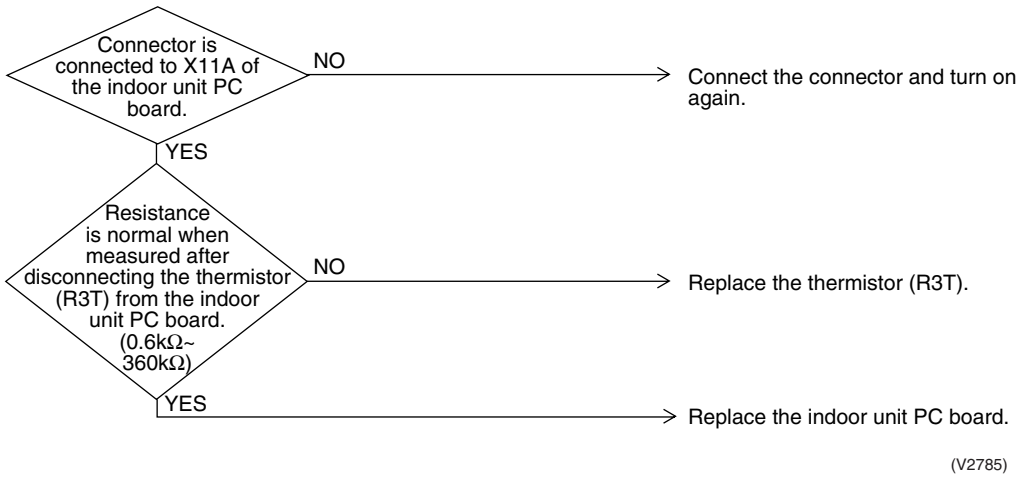
When the gas pipe thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of indoor unit thermistor (R3T) for gas pipe
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2785)

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.11 "C9" Indoor Unit: Malfunction of Thermistor (R1T) for Suction Air

Remote Controller Display

C9

Applicable Models

All indoor unit models

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by suction air temperature thermistor.

Malfunction Decision Conditions

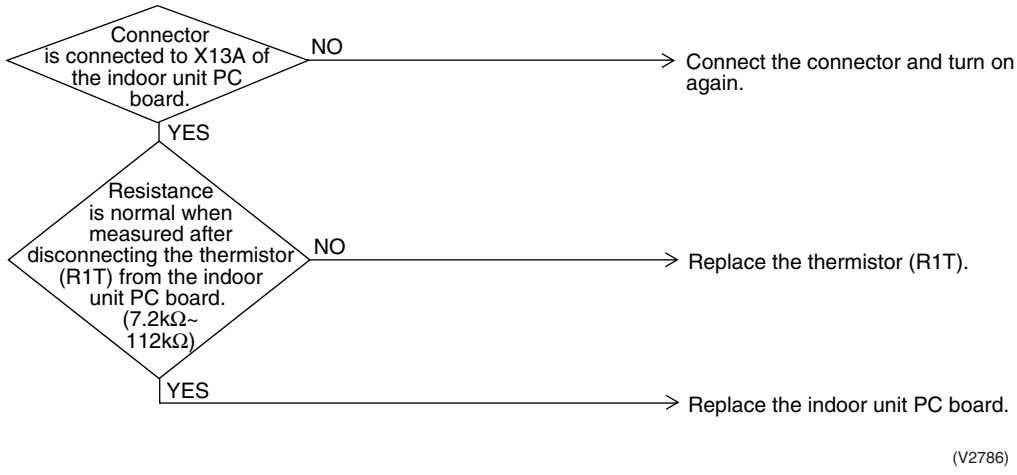
When the suction air temperature thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of indoor unit thermistor (R1T) for air inlet
- 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.



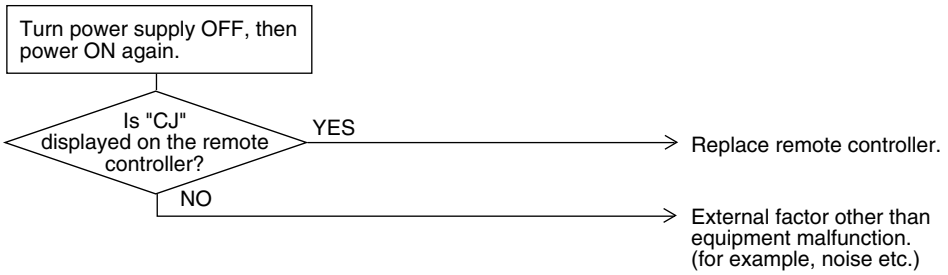
∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.12 "CJ" Indoor Unit: Malfunction of Thermostat Sensor in Remote Controller

Remote Controller Display	CJ
Applicable Models	All indoor unit models
Method of Malfunction Detection	Malfunction detection is carried out by temperature detected by remote controller air temperature thermistor. (Note:)
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

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2787)

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 P312.

3.13 "E1" Outdoor Unit: PC Board Defect

Remote Controller Display

E1

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Check data from E²PROM

Malfunction Decision Conditions

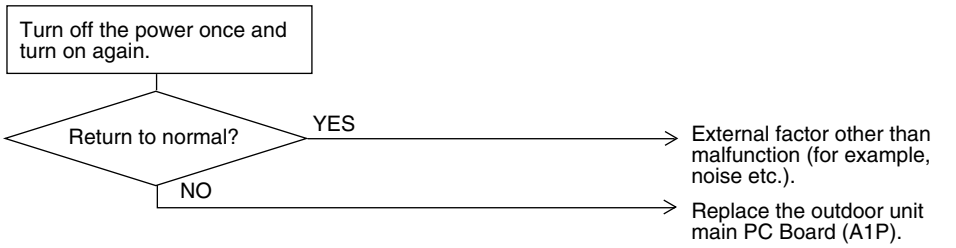
When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Defect of outdoor unit PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3064)

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

Remote Controller Display

E3

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Abnormality is detected when the contact of the high pressure protection switch opens.

Malfunction Decision Conditions

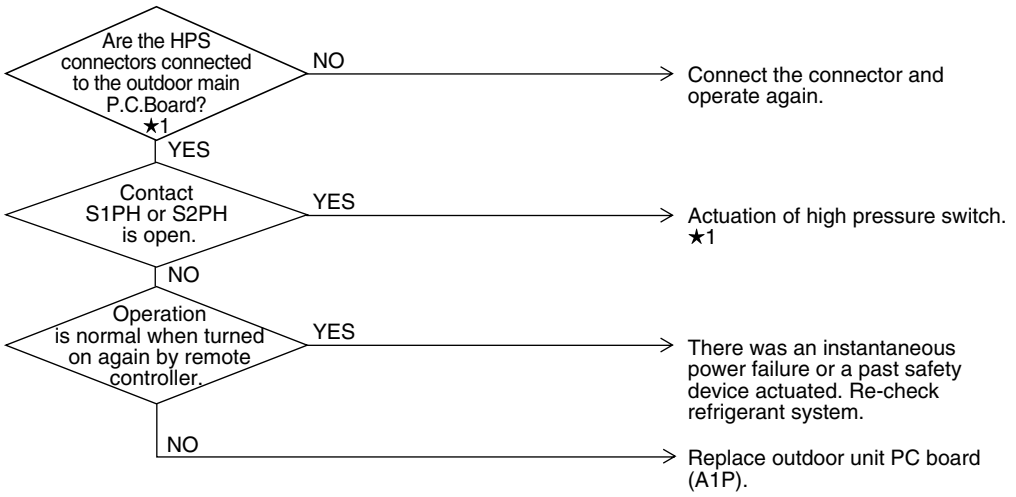
Error is generated when the HPS activation count reaches the number specific to the operation mode.

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

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3065)

★1: 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

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

Remote Controller Display

E4

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Abnormality is detected by the pressure value with the low pressure sensor.

Malfunction Decision Conditions

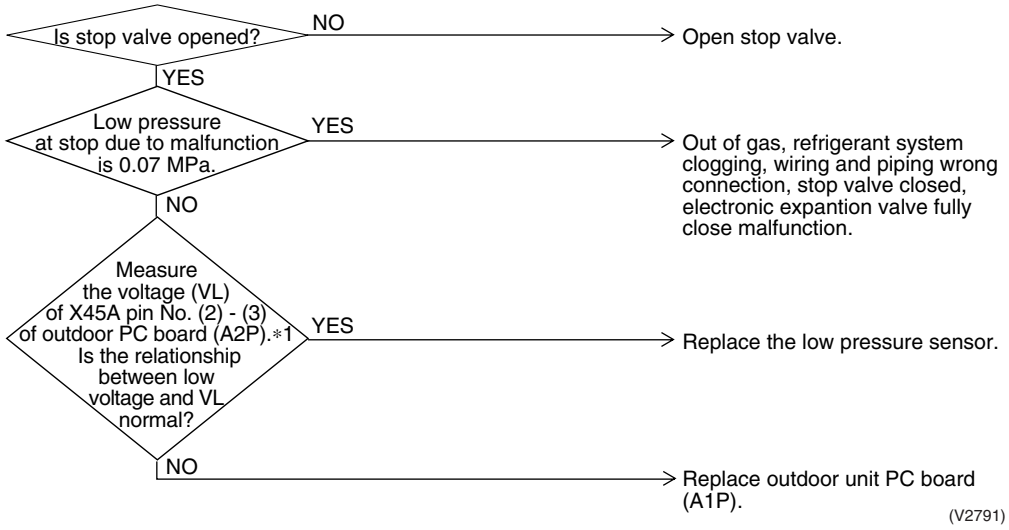
Error is generated when the low pressure is dropped under specific pressure.

Supposed Causes

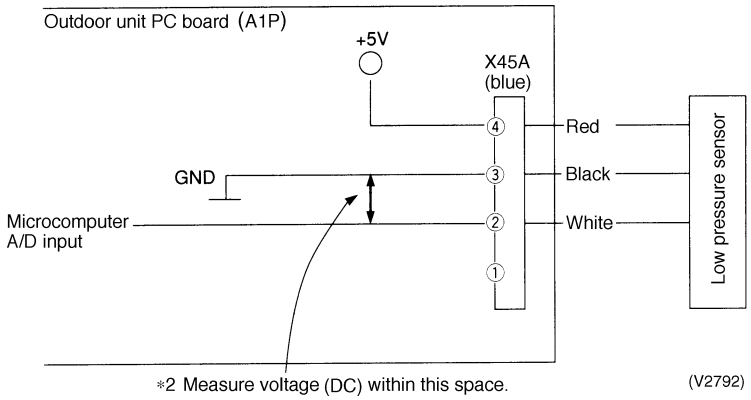
- Abnormal drop of low pressure (Lower than 0.07MPa)
- Defect of low pressure sensor
- Defect of outdoor unit PC board
- Stop valve is not opened.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1: Voltage measurement point



*2: Refer to "Pressure Sensor", pressure / voltage characteristics table on P314.

3.16 "E5" Outdoor Unit: Compressor Motor Lock

Remote Controller Display

E5

Applicable Models

RXQ5MA~48MA

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

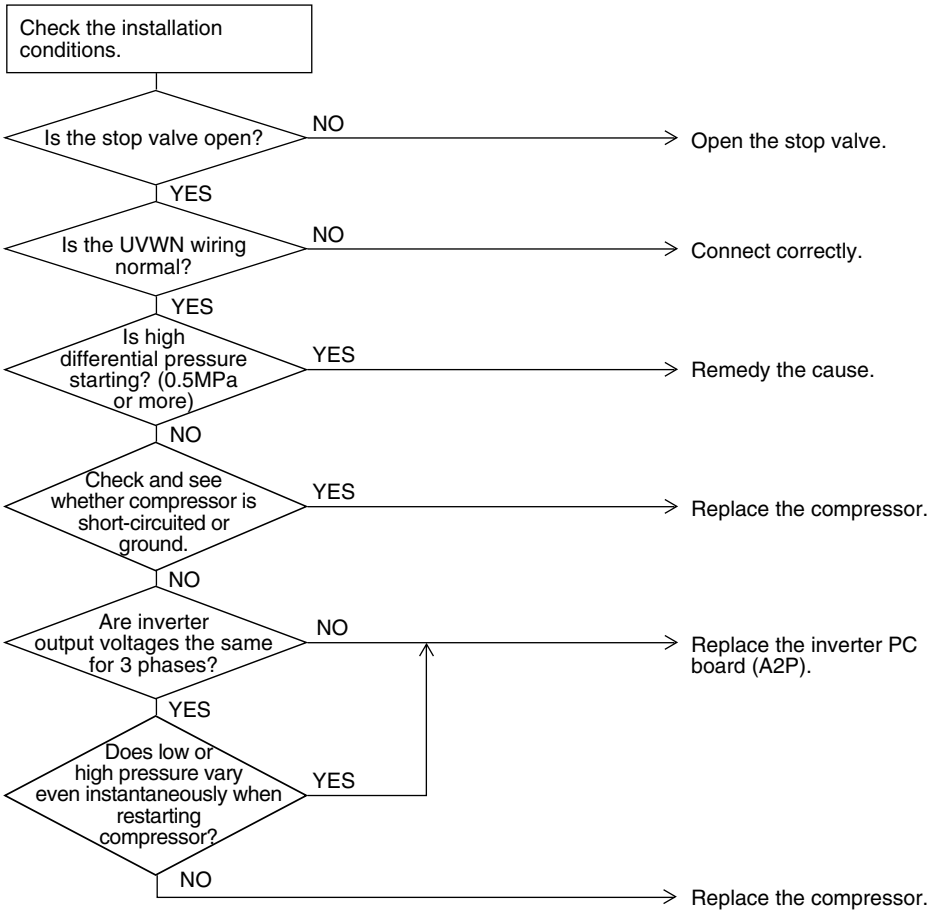
The position signal with 3 times cycle as imposed frequency is detected when compressor motor operates normally, but 2 times cycle when compressor motor locks. When the position signal in 2 times cycle is detected.

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

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2793)

3.17 "E6" Outdoor Unit: STD Compressor Motor Overcurrent/ Lock

Remote Controller Display

E6

Applicable Models

RXQ5~48MA

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.

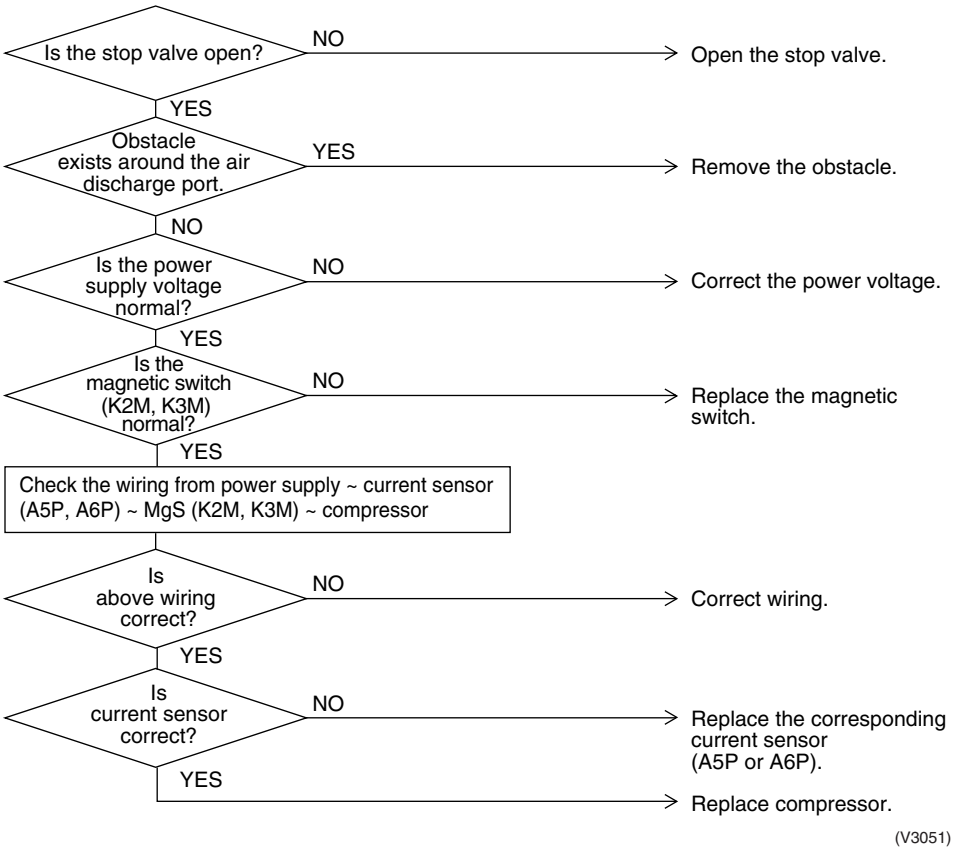
- 400 V unit : 15.0 A

Supposed Causes

- Closed stop value
- Obstacles at the discharge port
- Improper power voltage
- Faulty magnetic switch
- Faulty compressor
- Faulty current sensor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3051)

Note: Abnormal case

- The current sensor value is 0 during STD compressor operation.
- The current sensor value is more than 15.0A during STD compressor operation.

3.18 "E7" Outdoor Unit: Malfunction of Outdoor Unit Fan Motor

Remote Controller Display

E7

Applicable Models

RXQ5MA~48MA

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

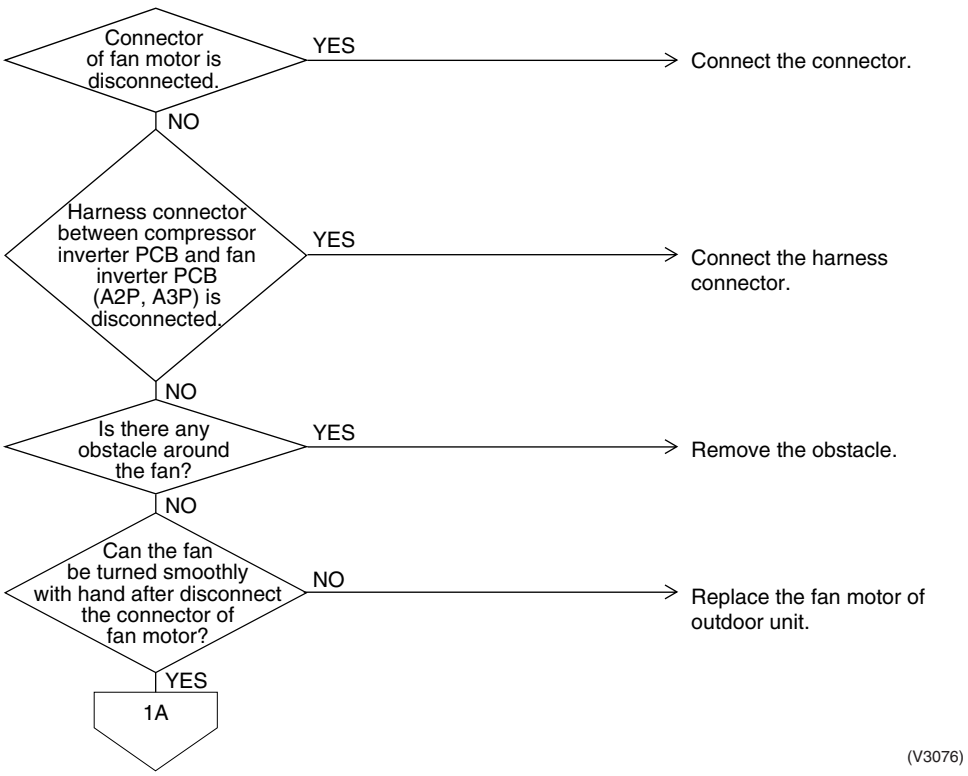
- When the fan runs with speed less than a specified one for 15 seconds or more when the fan motor running conditions are met
- When connector detecting fan speed is disconnected
- When malfunction is generated 4 times, the system shuts down.

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)

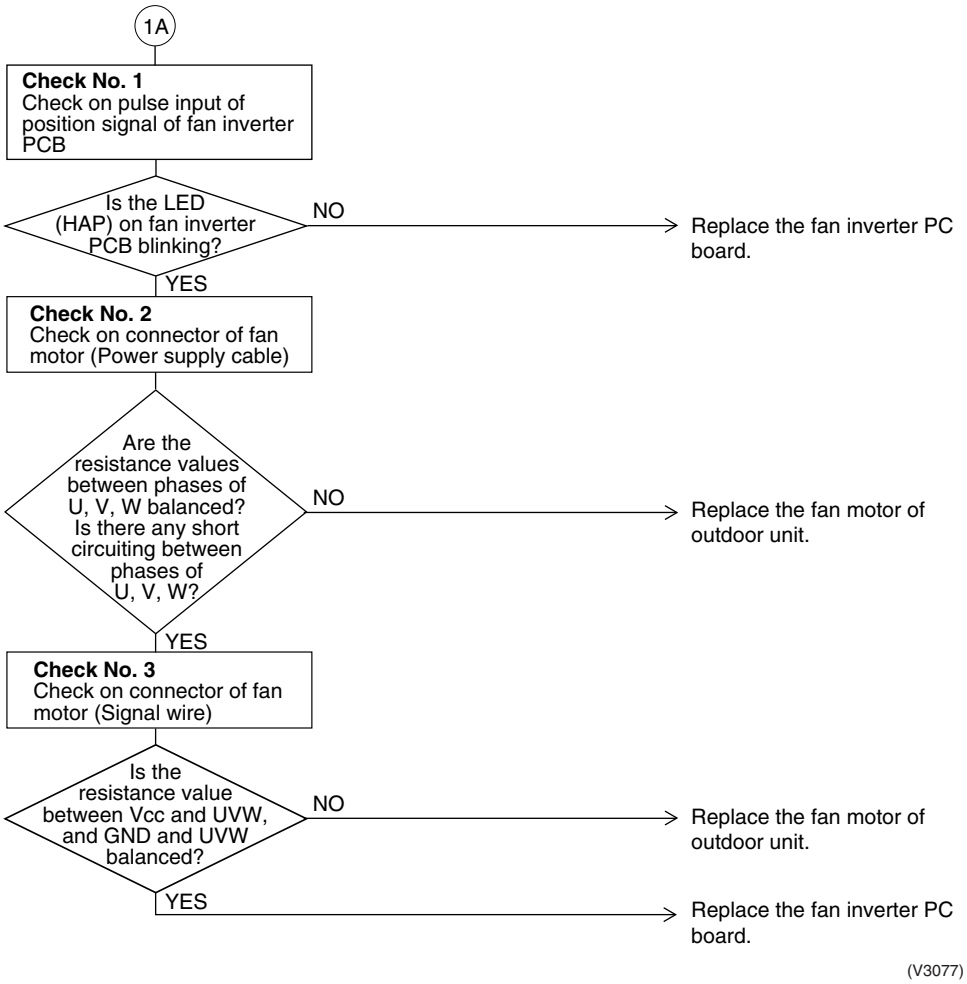
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3076)

Troubleshooting



Note: Refer check 1, 2 and 3 to P.254~255.

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

Remote Controller Display

E9

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Check disconnection of connector
Check continuity of expansion valve coil

Malfunction Decision Conditions

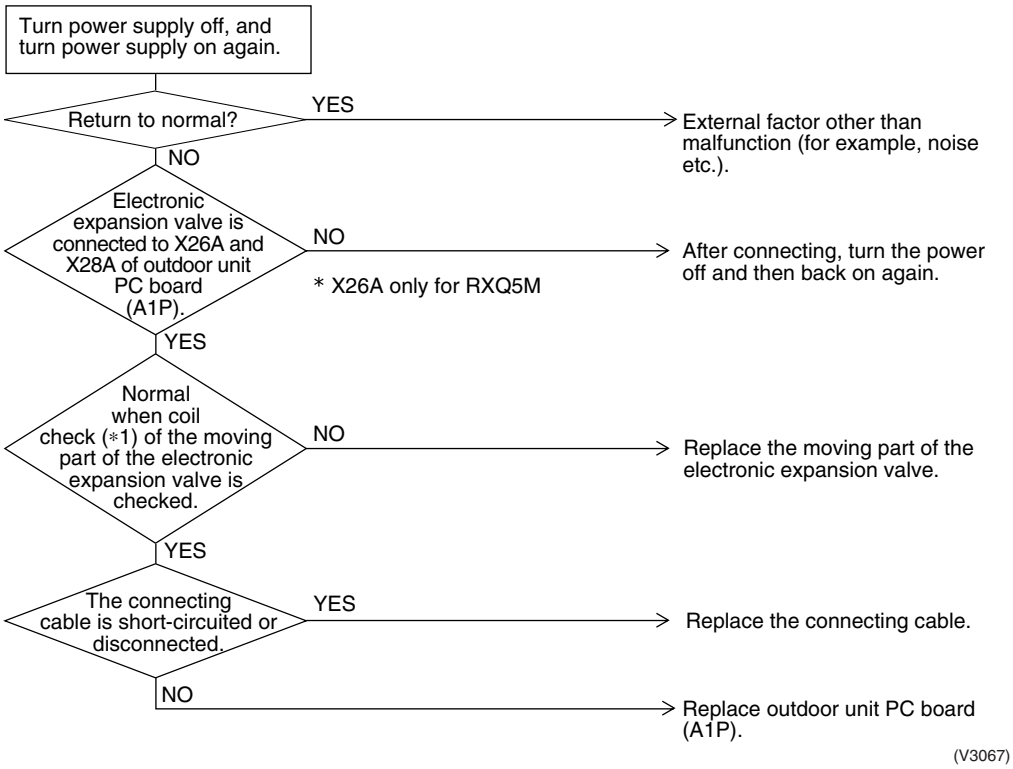
Error is generated under no common power supply when the power is on.

Supposed Causes

- Defect of moving part of electronic expansion valve
- Defect of outdoor unit PC board (A1P)
- Defect of connecting cable

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3067)

∗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		×	○ Approx. 300Ω	×	○ Approx. 150Ω	×
2. Yellow			×	○ Approx. 300Ω	×	○ Approx. 150Ω
3. Orange				×	○ Approx. 150Ω	×
4. Blue					×	○ Approx. 150Ω
5. Red						×
6. Brown						

○: Continuity
×: No continuity

3.20 "F3" Outdoor Unit: Abnormal Discharge Pipe Temperature

Remote Controller Display

F3

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.

Malfunction Decision Conditions

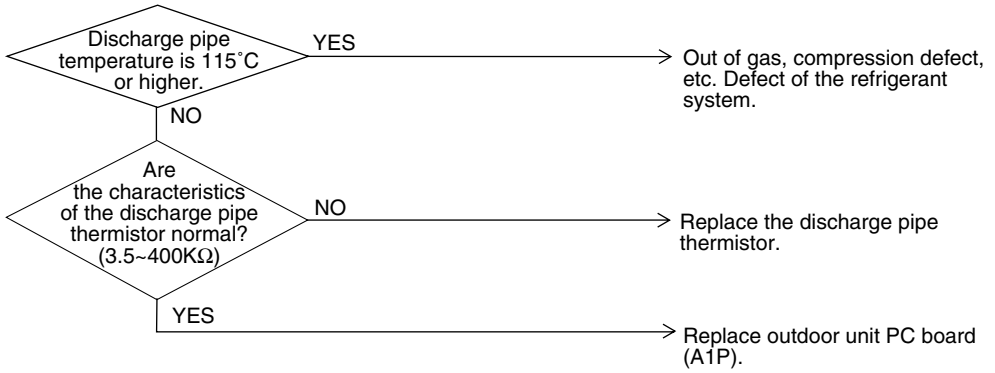
When the discharge pipe temperature rises to an abnormally high level
When the discharge pipe temperature rises suddenly

Supposed Causes

- Faulty discharge pipe temperature sensor
- Faulty connection of discharge pipe temperature sensor
- Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3068)

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.21 "F6" Refrigerant Overcharged

Remote Controller Display

F6

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Refrigerant overcharge is detected from the suction pipe and subcooling heat exchanger gas pipe temperature during check operation.

Malfunction Decision Conditions

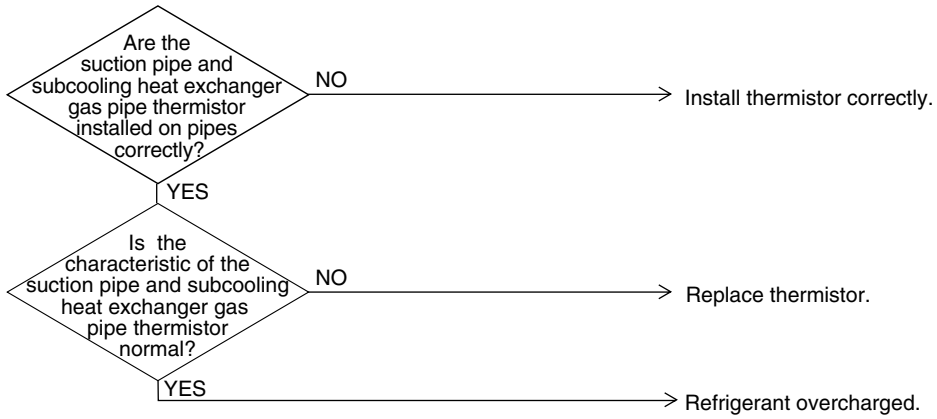
When the suction pipe and subcooling heat exchanger gas pipe temperature is lower than evaporating temperature during check operation.

Supposed Causes

- Refrigerant overcharge
- Disconnection of the suction pipe thermistor
- Disconnection of the subcooling heat exchanger gas pipe thermistor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2797)

3.22 "H7" Abnormal Outdoor Fan Motor Signal

Remote Controller Display

H7

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Detection of abnormal signal from fan motor.

Malfunction Decision Conditions

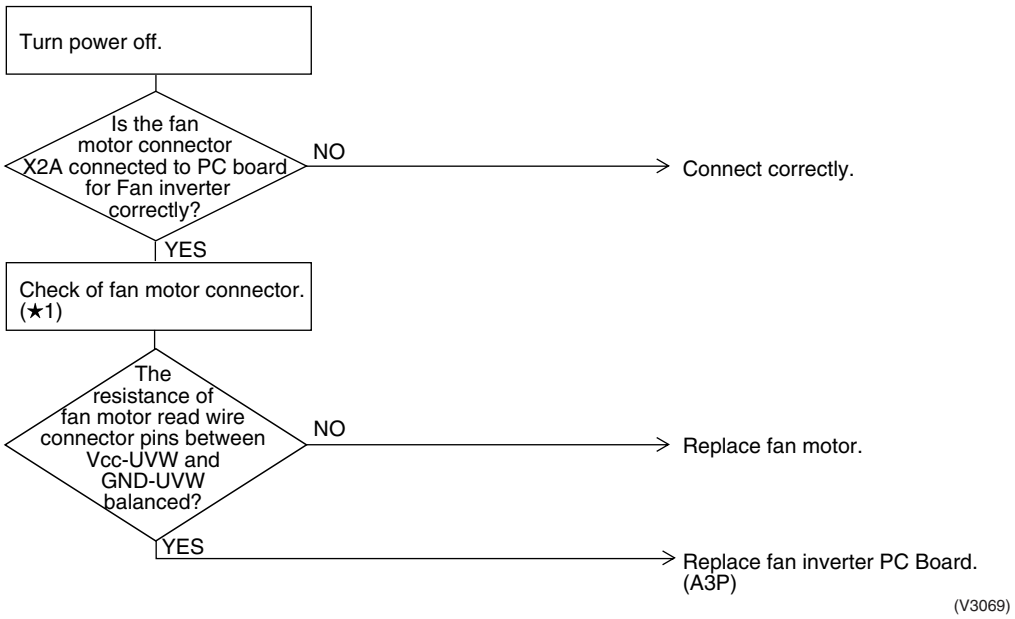
In case of detection of abnormal signal at starting fan motor.

Supposed Causes

- Abnormal fan motor signal (circuit malfunction)
- Broken, short or disconnection connector of fan motor connection cable
- Fan Inverter PC board malfunction

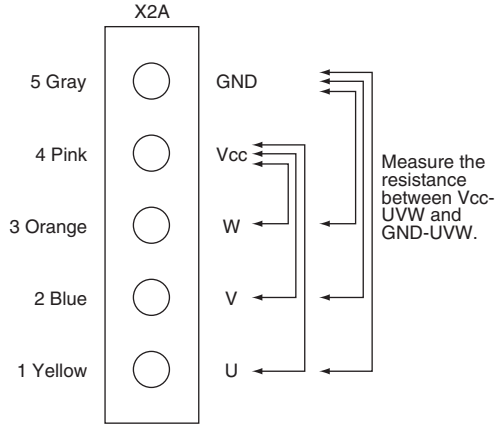
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3069)

★1: Disconnect connector (X2A) and measure the following resistance.



(V2799)

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

Remote Controller Display

H9

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

The abnormal detection is based on current detected by current sensor.

Malfunction Decision Conditions

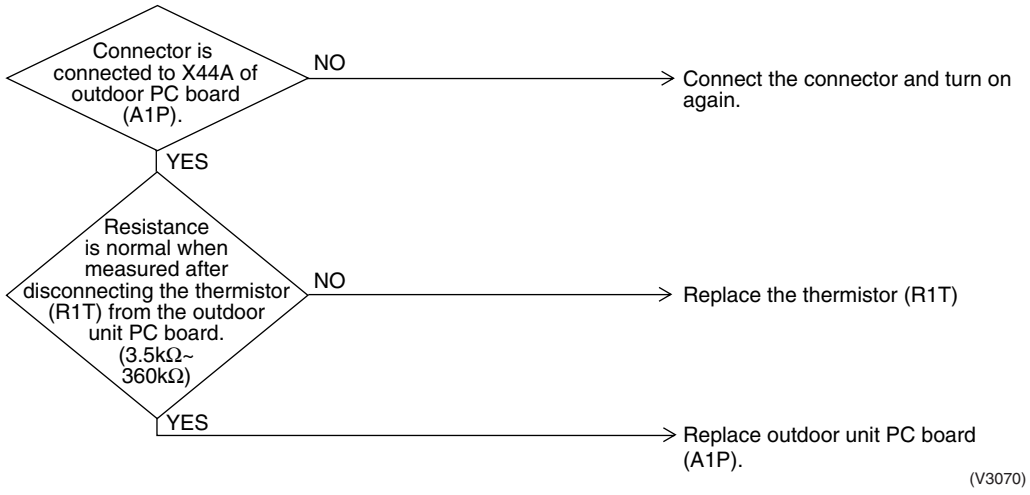
When the outside air temperature sensor has short circuit or open circuit.

Supposed Causes

- Defect of thermistor (R1T) for outdoor air
- Defect of outdoor unit PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



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

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.24 "J2" Current Sensor Malfunction

Remote Controller Display

J2

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected according to the current value detected by current sensor.

Malfunction Decision Conditions

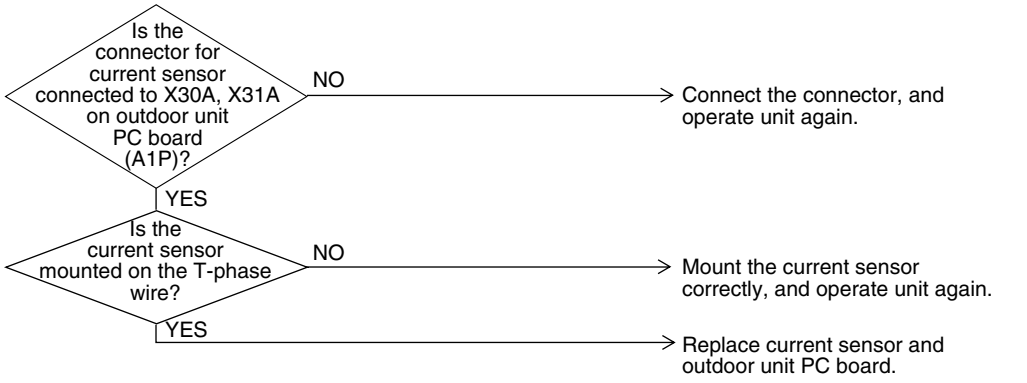
When the current value detected by current sensor becomes 5A or lower, or 40A or more during standard compressor operation.

Supposed Causes

- Faulty current sensor
- Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3071)

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

Remote Controller Display

J3

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from the temperature detected by discharge pipe temperature thermistor.

Malfunction Decision Conditions

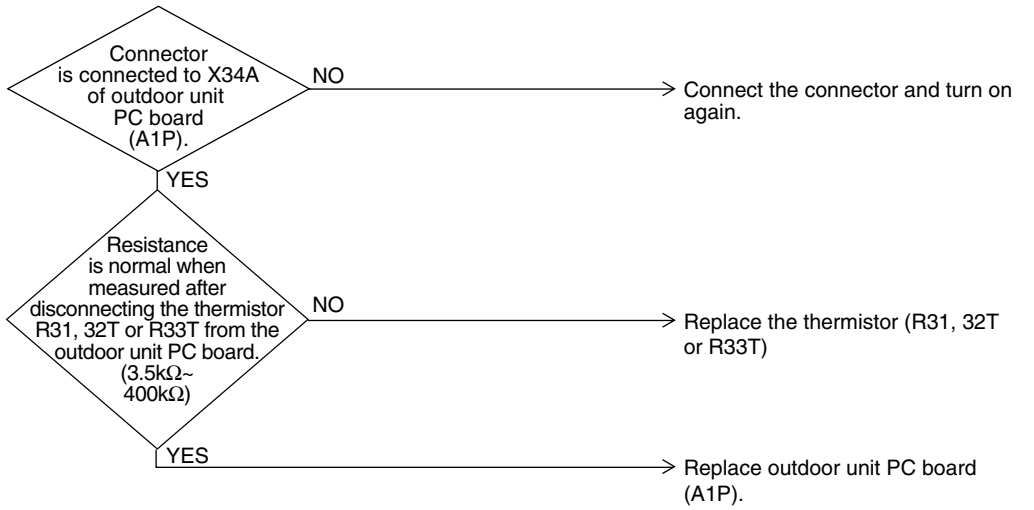
When a short circuit or an open circuit in the discharge pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R31T, R32T or R33T) for outdoor unit discharge pipe
- 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.



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

Note: 5 HP class ··· R3T
8~12 HP class ··· R31T, R32T
14, 16Hp class ··· R31T, R32T and R33T

* Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

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

Remote Controller Display

J5

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the suction pipe temperature thermistor.

Malfunction Decision Conditions

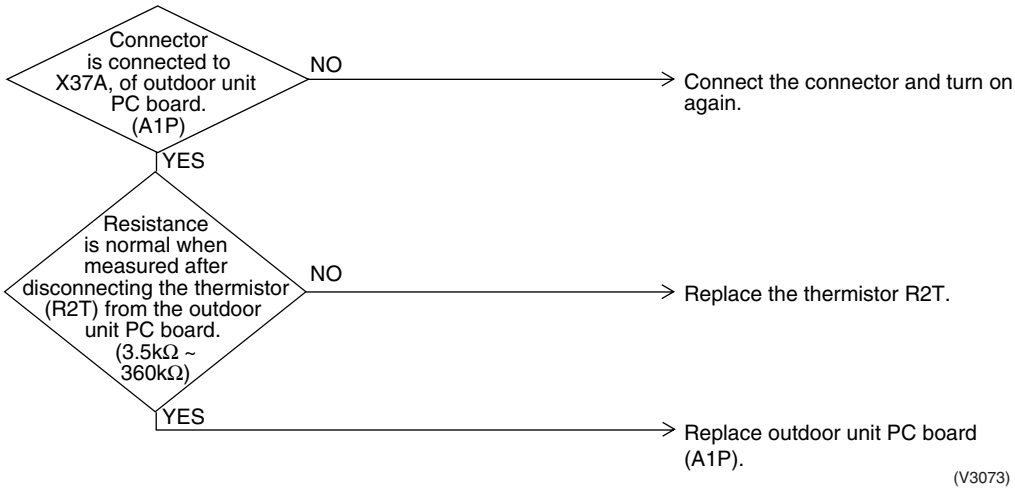
When a short circuit or an open circuit in the suction pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R2T) for outdoor unit suction pipe
- Defect of outdoor unit PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.27 "J6" Outdoor Unit: Malfunction of Thermistor (R4T) for Outdoor Unit Heat Exchanger

Remote Controller Display

J6

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the heat exchanger thermistor.

Malfunction Decision Conditions

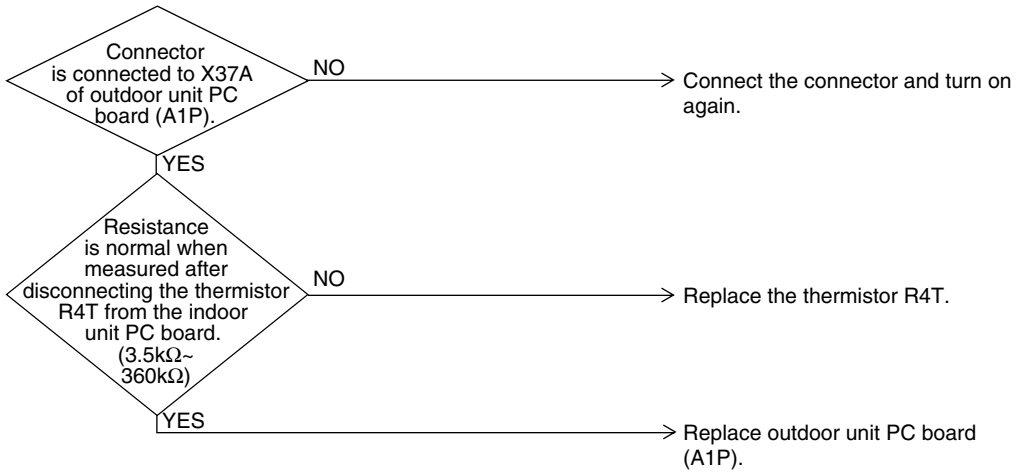
When a short circuit or an open circuit in the heat exchange thermistor is detected.

Supposed Causes

- Defect of thermistor (R4T) for outdoor unit coil
- Defect of outdoor unit PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3074)

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.28 "J7" Malfunction of Receiver Outlet Liquid Pipe Thermistor (R6T)

Remote Controller Display

J7

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by receiver outlet liquid pipe thermistor.

Malfunction Decision Conditions

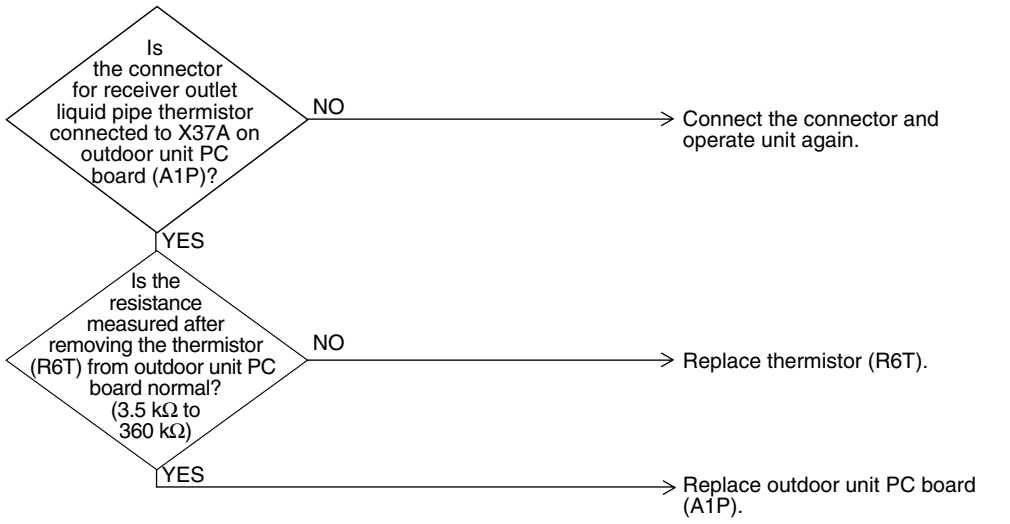
When the receiver outlet liquid pipe thermistor is short circuited or open.

Supposed Causes

- Faulty receiver outlet liquid pipe thermistor (R6T)
- Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3075)

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.29 "J9" Malfunction of Subcooling Heat Exchanger Gas Pipe Thermistor (R5T)

Remote Controller Display

J9

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by subcooling heat exchanger gas pipe thermistor.

Malfunction Decision Conditions

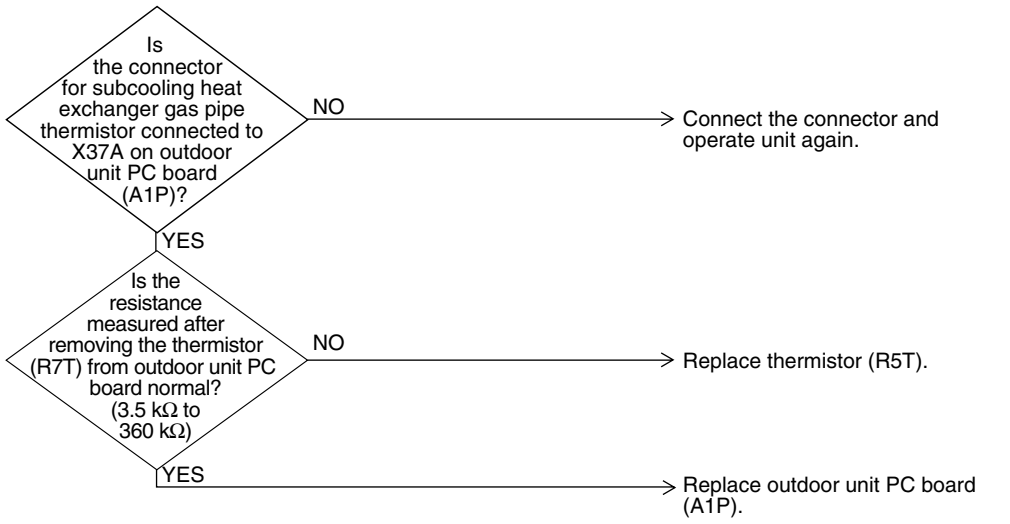
When the subcooling heat exchanger gas pipe thermistor is short circuited or open.

Supposed Causes

- Faulty subcooling heat exchanger gas pipe thermistor (R5T)
- Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3075)

∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.30 "JA" Outdoor Unit: Malfunction of Discharge Pipe Pressure Sensor

Remote Controller Display

JA

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from the pressure detected by the high pressure sensor.

Malfunction Decision Conditions

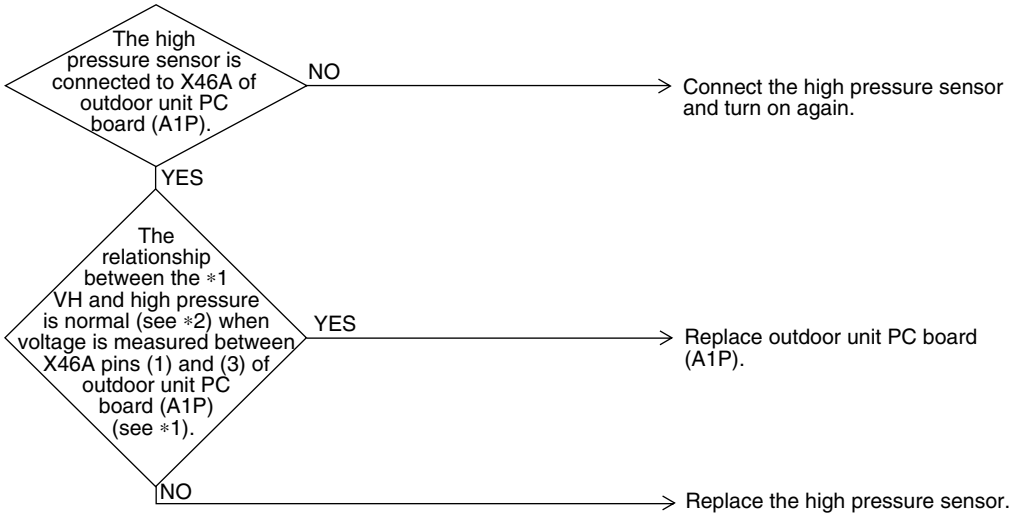
When the discharge pipe pressure sensor is short circuit or open circuit.

Supposed Causes

- Defect of high pressure sensor system
- Connection of low pressure sensor with wrong connection.
- Defect of outdoor unit PC board.

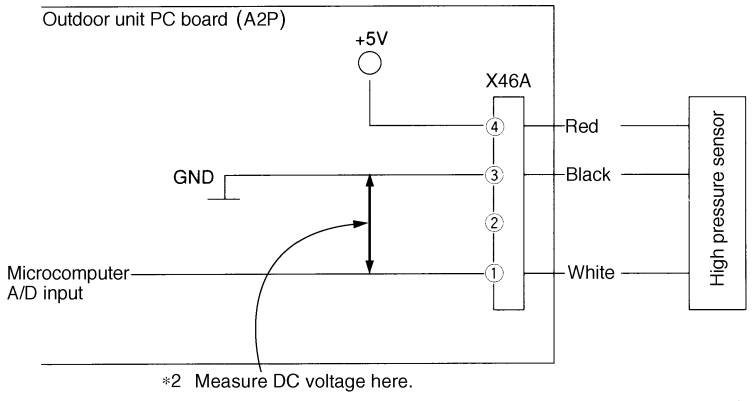
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2806)

∗1: Voltage measurement point



(V2807)

∗2: Refer to "Pressure Sensor", pressure / voltage characteristics table on P314.

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

Remote Controller Display

JC

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from pressure detected by low pressure sensor.

Malfunction Decision Conditions

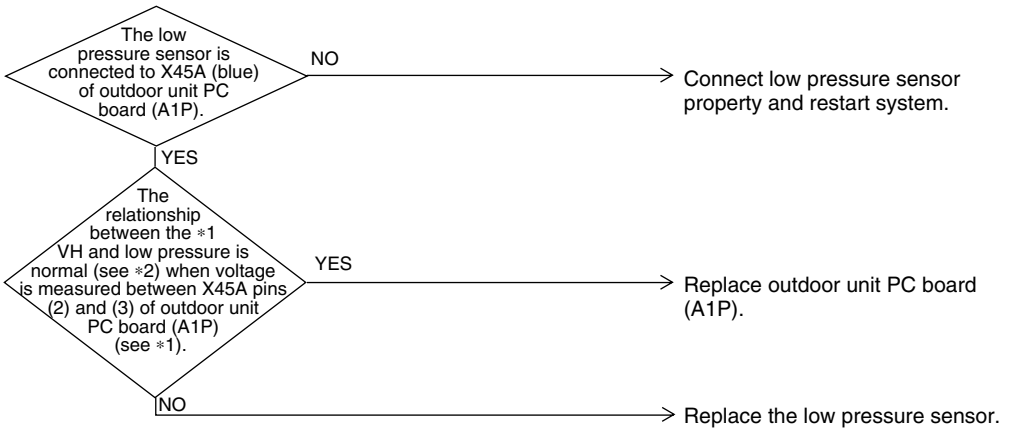
When the suction pipe pressure sensor is short circuit or open circuit.

Supposed Causes

- Defect of low pressure sensor system
- Connection of high pressure sensor with wrong connection.
- Defect of outdoor unit PC board.

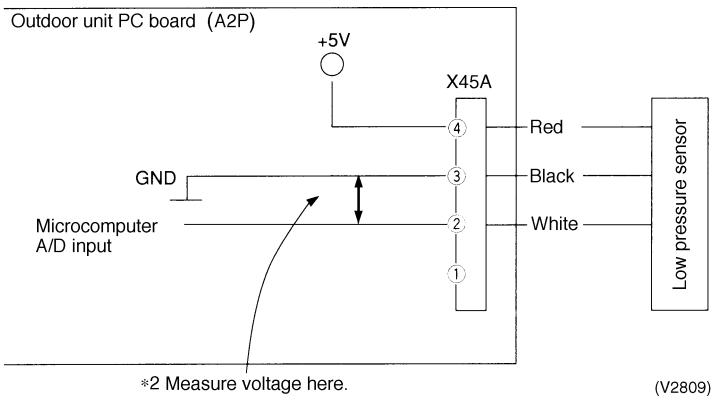
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2808)

∗1: Voltage measurement point



(V2809)

∗2: Refer to "Pressure Sensor", pressure / voltage characteristics table on P314.

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

Remote Controller Display

L4

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Fin temperature is detected by the thermistor of the radiation fin.

Malfunction Decision Conditions

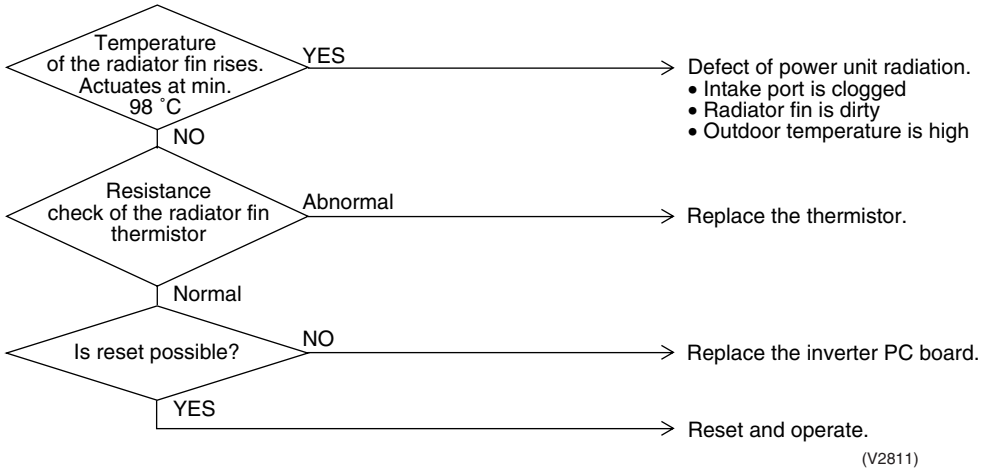
When the temperature of the inverter radiation fin increases above 98°C.

Supposed Causes

- Actuation of fin thermal (Actuates above 98°C)
- Defect of inverter PC board
- Defect of fin thermistor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.33 "L5" Outdoor Unit: Inverter Compressor Abnormal

Remote Controller Display

L5

Applicable Models

RXQ5MA~48MA

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.)

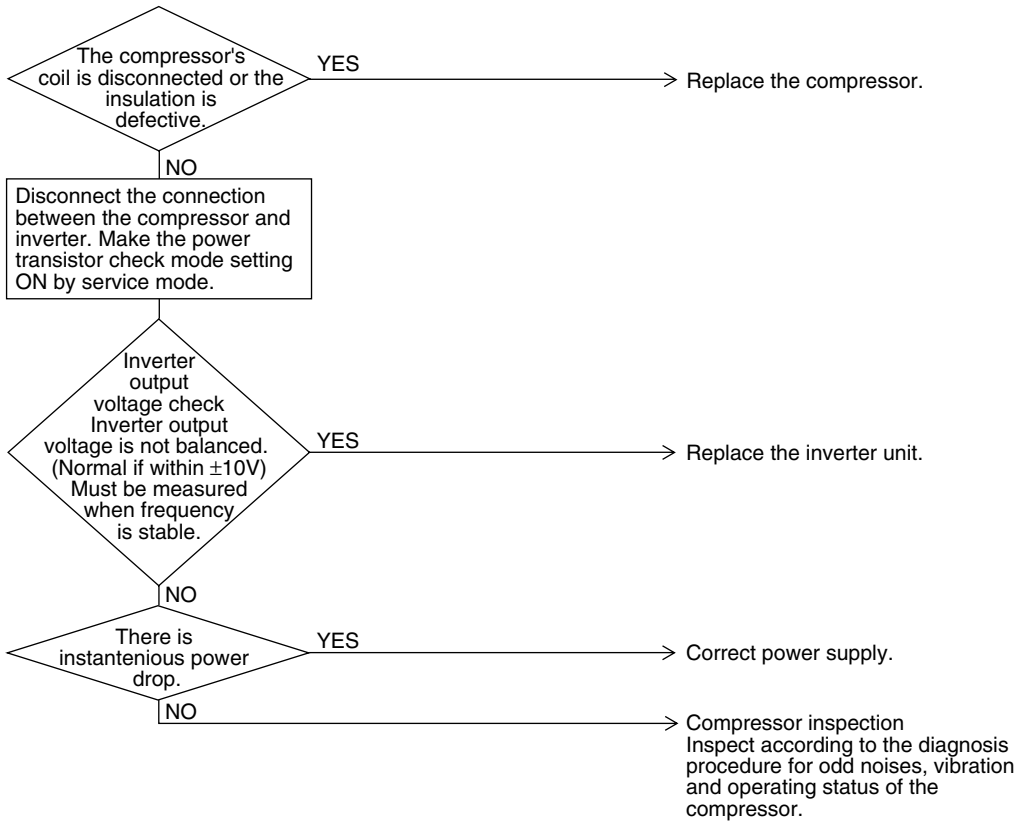
Supposed Causes

- Defect of compressor coil (disconnected, defective insulation)
- Compressor start-up malfunction (mechanical lock)
- Defect of inverter PC board

Troubleshooting

Compressor inspection

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2812)

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

3.34 "L8" Outdoor Unit: Inverter Current Abnormal

Remote Controller Display

L8

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected by current flowing in the power transistor.

Malfunction Decision Conditions

When overload in the compressor is detected. (Inverter secondary current 15.0A)

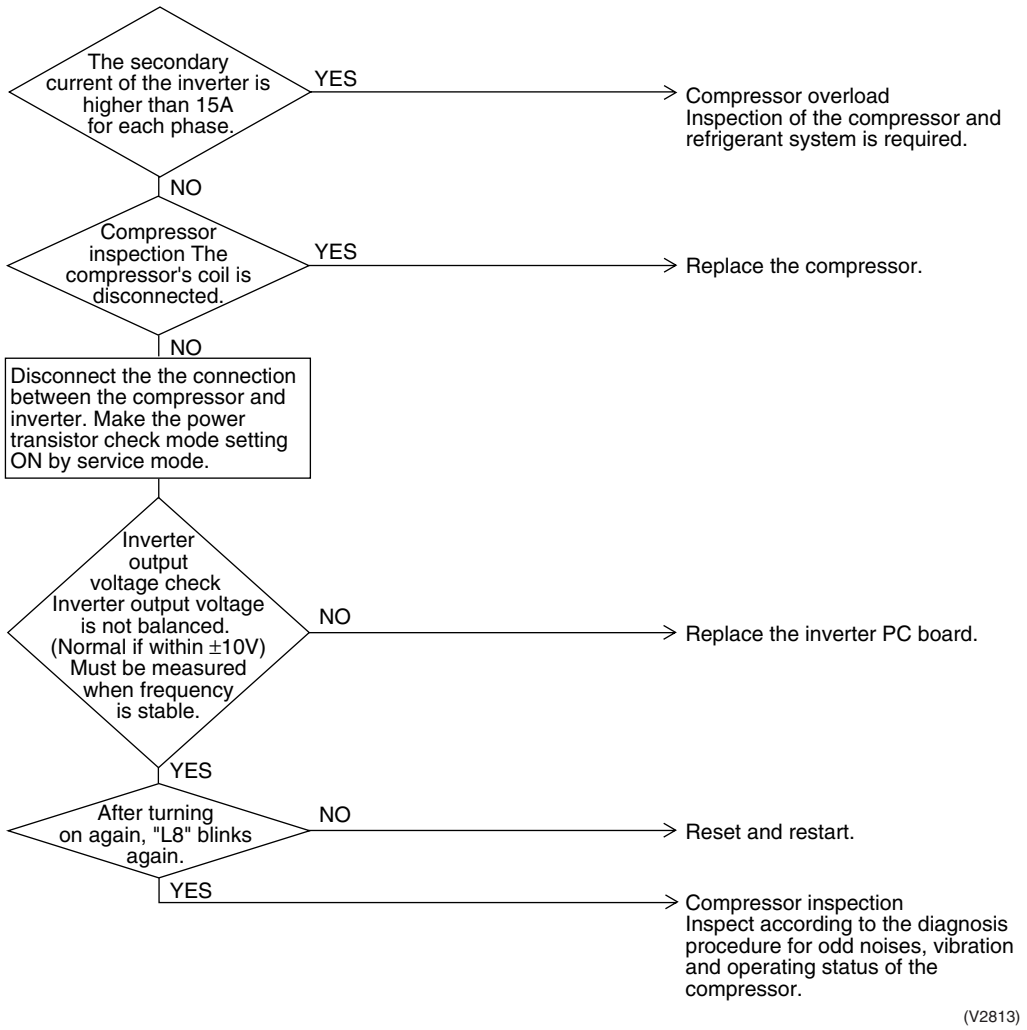
Supposed Causes

- Compressor overload
- Compressor coil disconnected
- Defect of inverter PC board

Troubleshooting

Output current check

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2813)

3.35 "L9" Outdoor Unit: Inverter Start up Error

Remote Controller Display

L9

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Malfunction is detected from current flowing in the power transistor.

Malfunction Decision Conditions

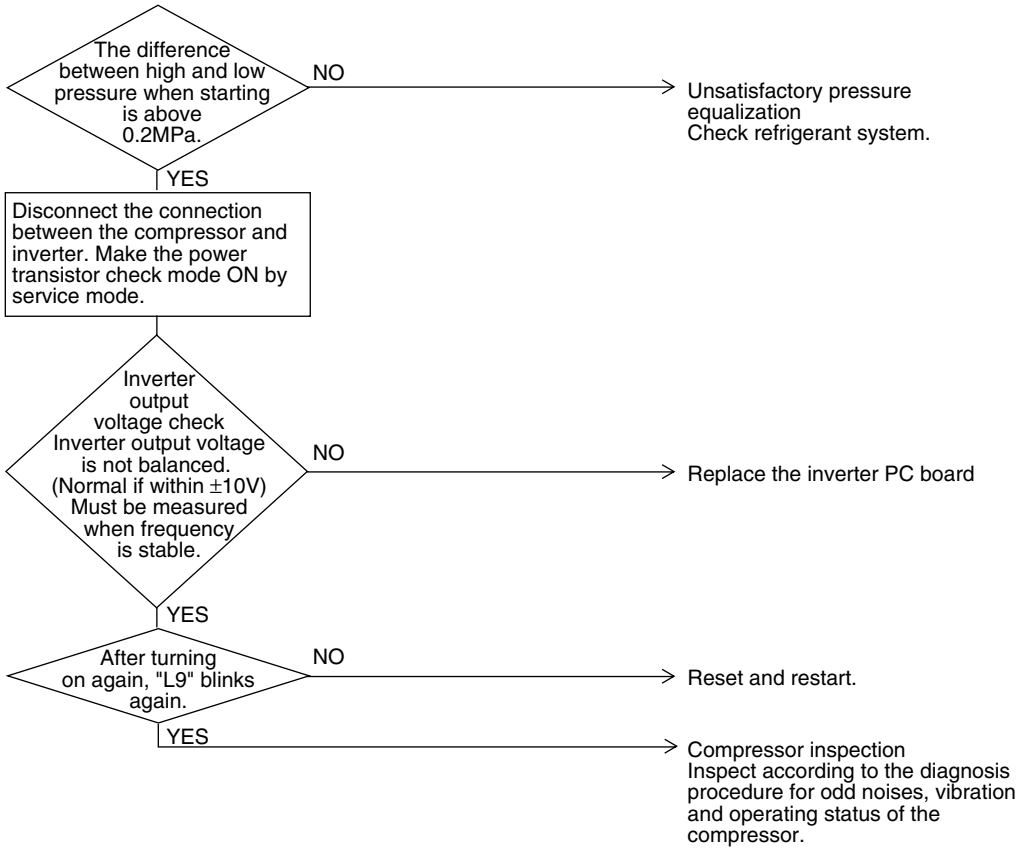
When overload in the compressor is detected during startup (Inverter secondary current 15.0A)

Supposed Causes

- Defect of compressor
- Pressure differential start
- Defect of inverter PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



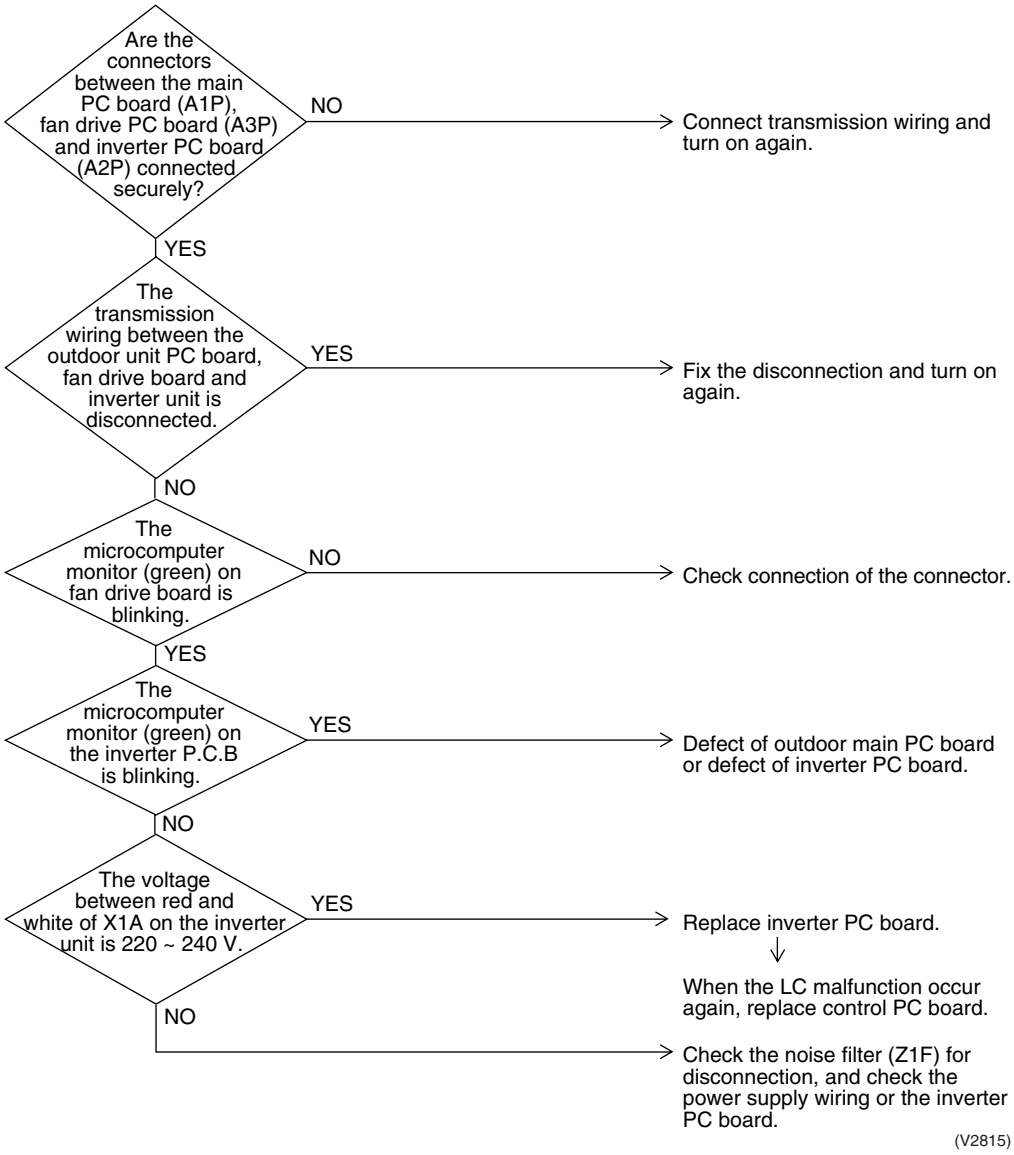
(V2814)

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

Remote Controller Display	LC
Applicable Models	RXQ5MA~48MA
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.)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.37 "P1" Outdoor Unit: Inverter Over-Ripple Protection

Remote Controller Display

P1

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Imbalance in supply voltage is detected in PC board.

Malfunction Decision Conditions

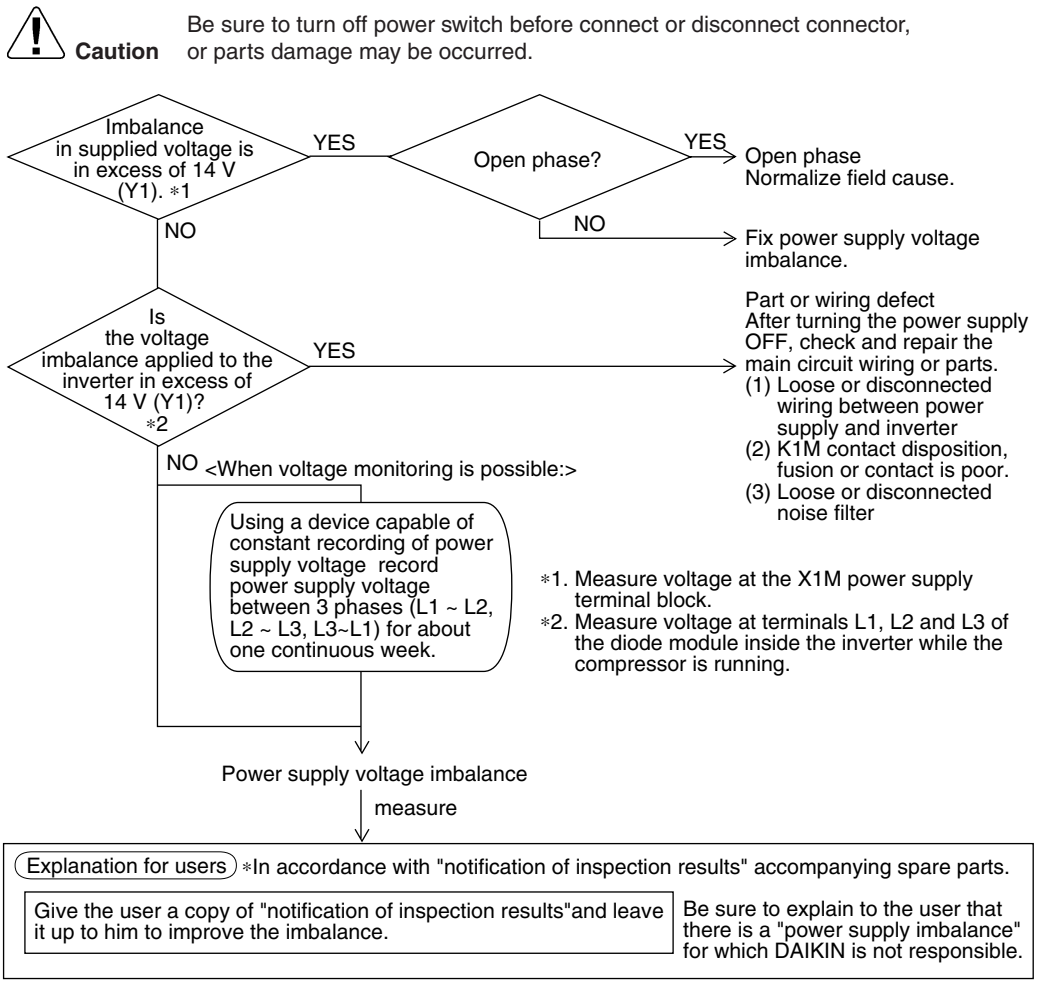
When the resistance value of thermistor becomes a value equivalent to open or short circuited status.

★ 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



(V2816)

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

Remote Controller Display

P4

Applicable Models

RXQ5MA~48MA

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.

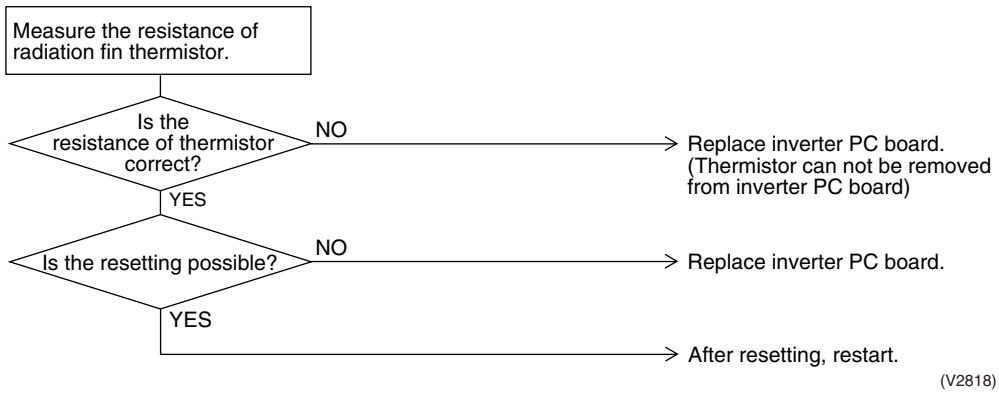
★ Malfunction is not decided while the unit operation is continued.
"P4" will be displayed by pressing the inspection button.

Supposed Causes

- Defect of radiator fin temperature sensor
- Defect of inverter PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗2: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.

3.39 "U0" Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure

Remote Controller Display

U0

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Short of gas malfunction is detected by discharge pipe temperature thermistor.

Malfunction Decision Conditions

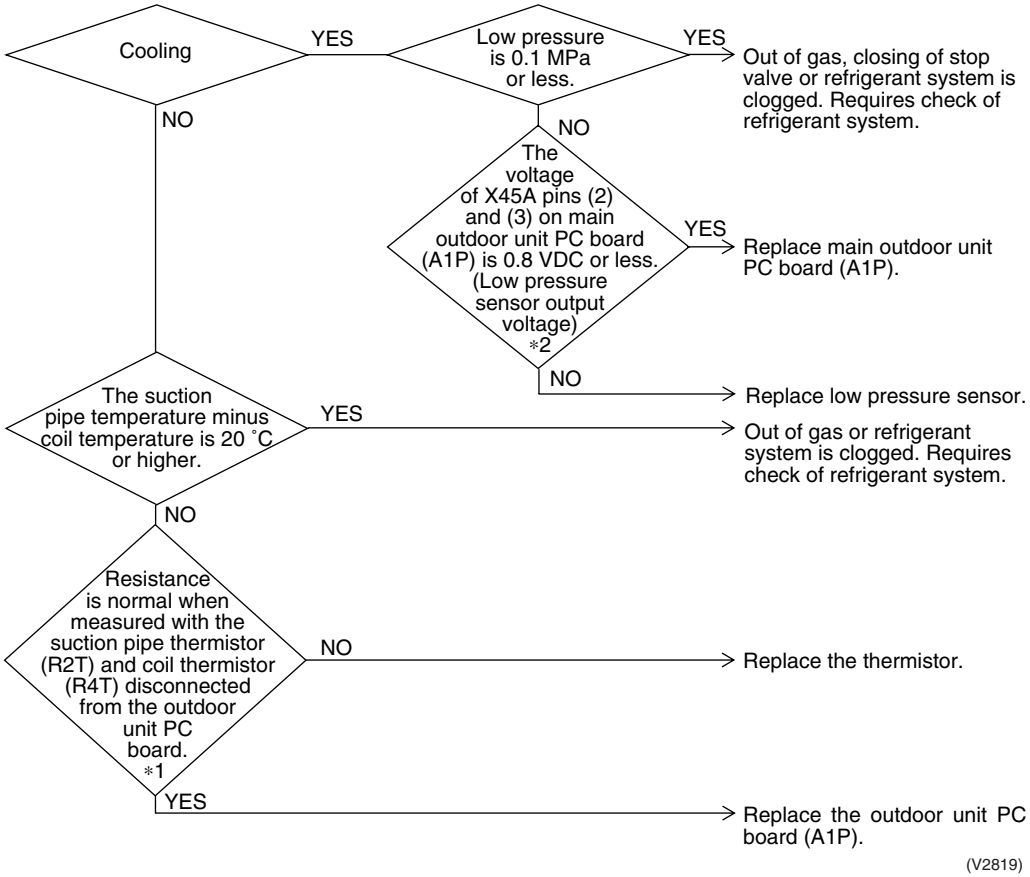
Microcomputer judge and detect if the system is short of refrigerant.
★Malfunction is not decided while the unit operation is continued.

Supposed Causes

- Out of gas or refrigerant system clogging (incorrect piping)
- Defect of pressure sensor
- Defect of outdoor unit PC board (A1P)
- Defect of thermistor (R2T) or (R4T)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1: Refer to "Thermistor Resistance / Temperature Characteristics" table on P312.
*2: Refer to "Pressure Sensor", pressure / voltage characteristics table on P314.

3.40 "U1" Reverse Phase, Open Phase

Remote Controller Display

U1

Applicable Models

★3 phase outdoor unit only

Method of Malfunction Detection

The phase of each phase are detected by reverse phase detection circuit and right phase or reverse phase are judged.

Malfunction Decision Conditions

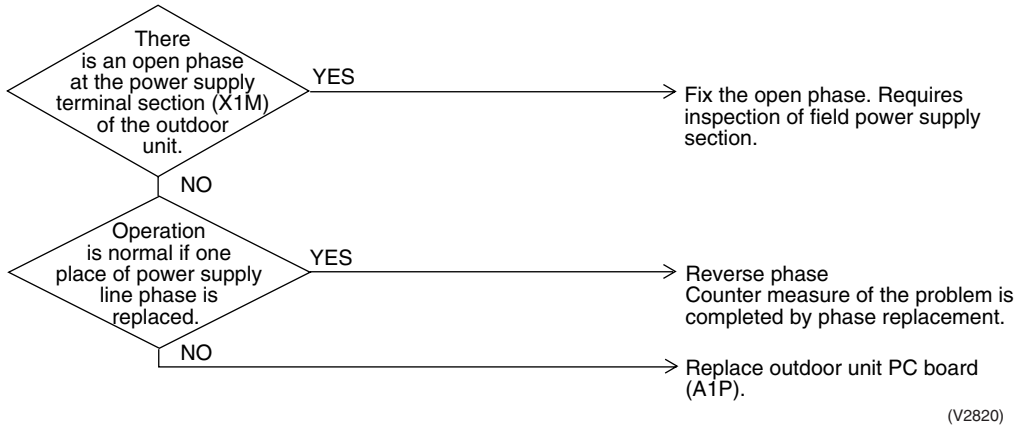
When a significant phase difference is made between phases.

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.



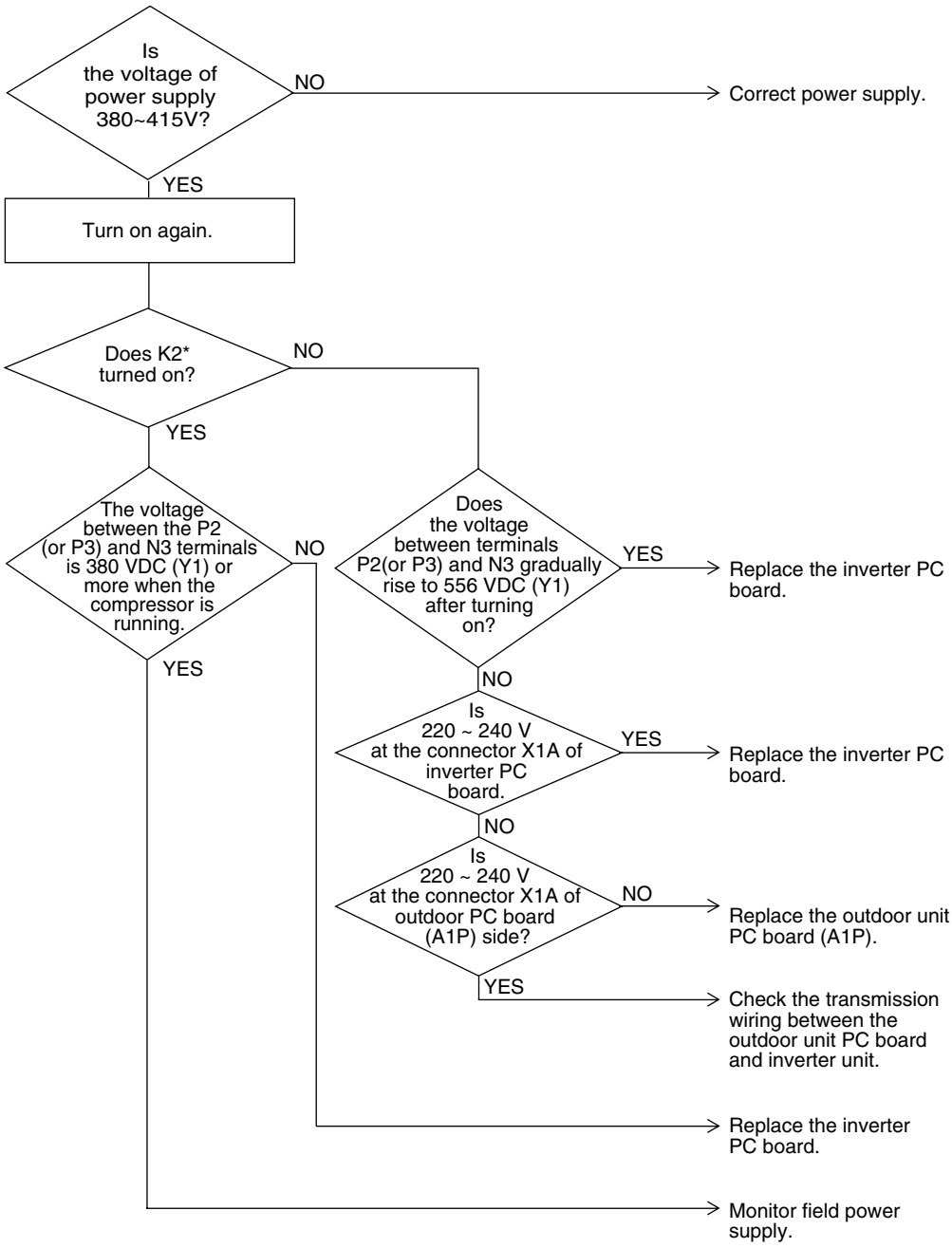
(V2820)

3.41 "U2" Outdoor Unit: Power Supply Insufficient or Instantaneous Failure

Remote Controller Display	U2
Applicable Models	RXQ5MA~48MA
Method of Malfunction Detection	Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.
Malfunction Decision Conditions	When the capacitor above only has a voltage of 380 V or less.
Supposed Causes	■ Power supply insufficient ■ Instantaneous failure ■ Open phase ■ Defect of inverter PC board ■ Defect of outdoor control PC board ■ Main circuit wiring defect

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*K2: Magnetic relay in PC board (A2P)

(V2821)

3.42 "U3" Outdoor Unit: Check Operation not executed

Remote Controller Display

U3

Applicable Models

RXQ5MA~48MA

Method of Malfunction Detection

Check operation is executed or not

Malfunction Decision Conditions

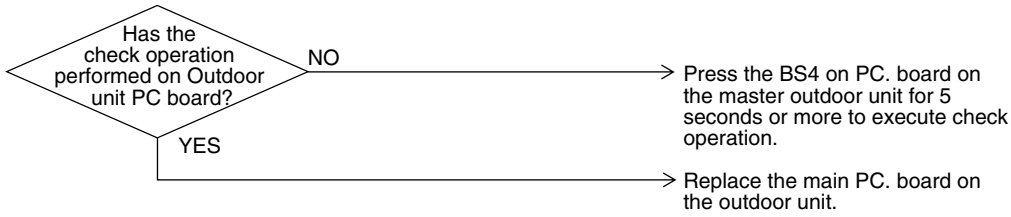
Malfunction is decided when the unit starts operation without check operation.

Supposed Causes

- Check operation is not executed.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



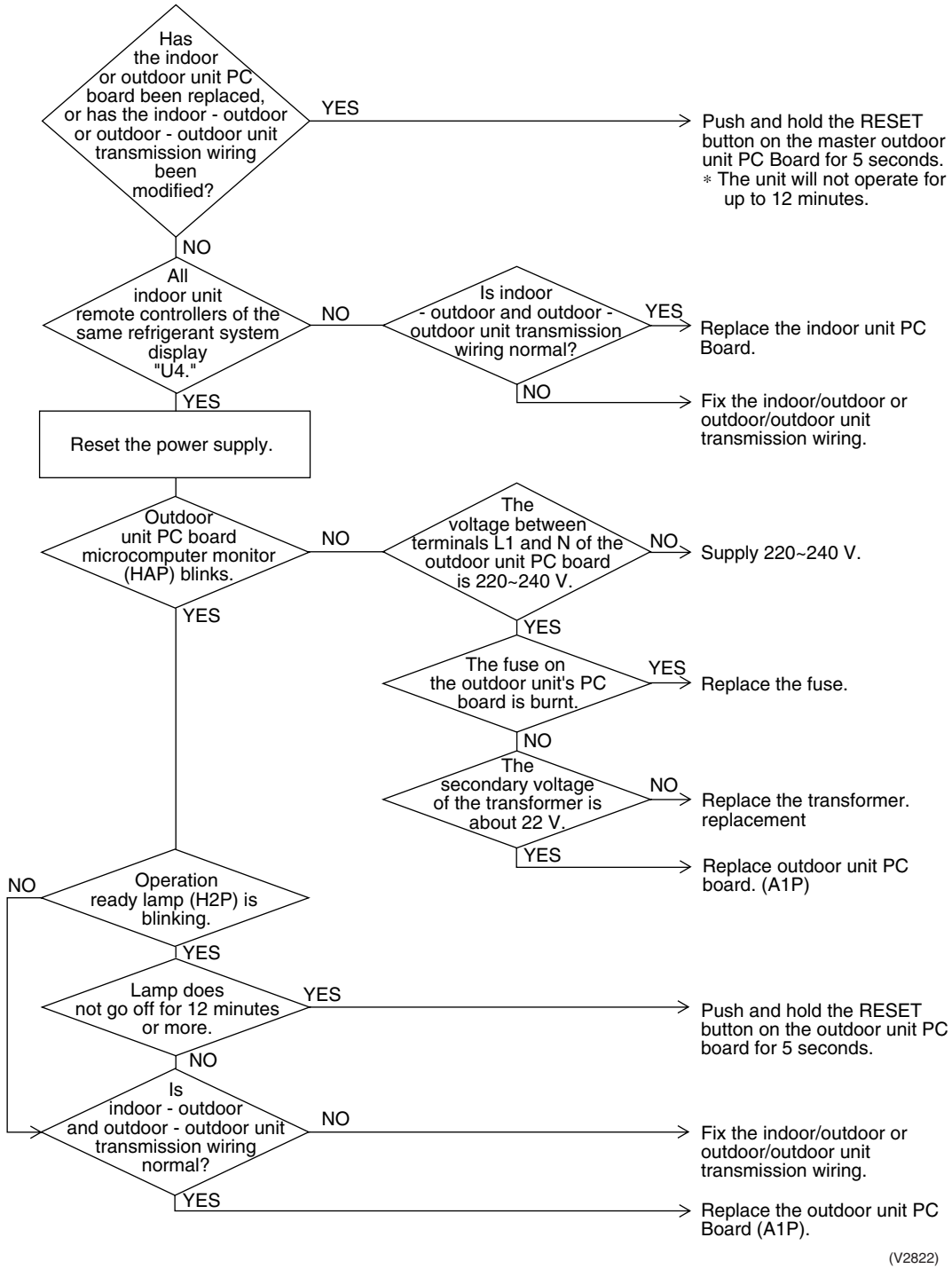
(V3052)

3.43 "U4" Malfunction of Transmission Between Indoor Units

Remote Controller Display	U4
Applicable Models	All model of indoor unit RXQ5MA~48MA
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.44 "U5" Indoor Unit: Malfunction of Transmission Between Remote Controller and Indoor Unit

Remote Controller Display

U5

Applicable Models

All models of indoor units

Method of Malfunction Detection

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

Malfunction Decision Conditions

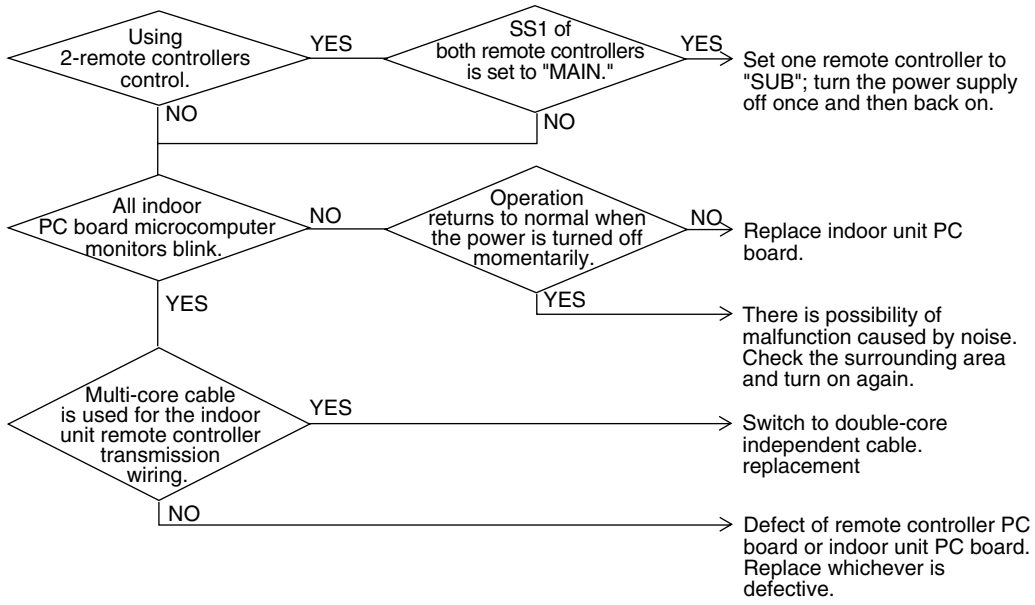
Normal transmission does not continue for specified period.

Supposed Causes

- Malfunction of indoor unit remote controller transmission
- Connection of two main remote controllers (when using 2 remote controllers)
- Defect of indoor unit PC board
- Defect of remote controller PC board
- Malfunction of transmission caused by noise

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



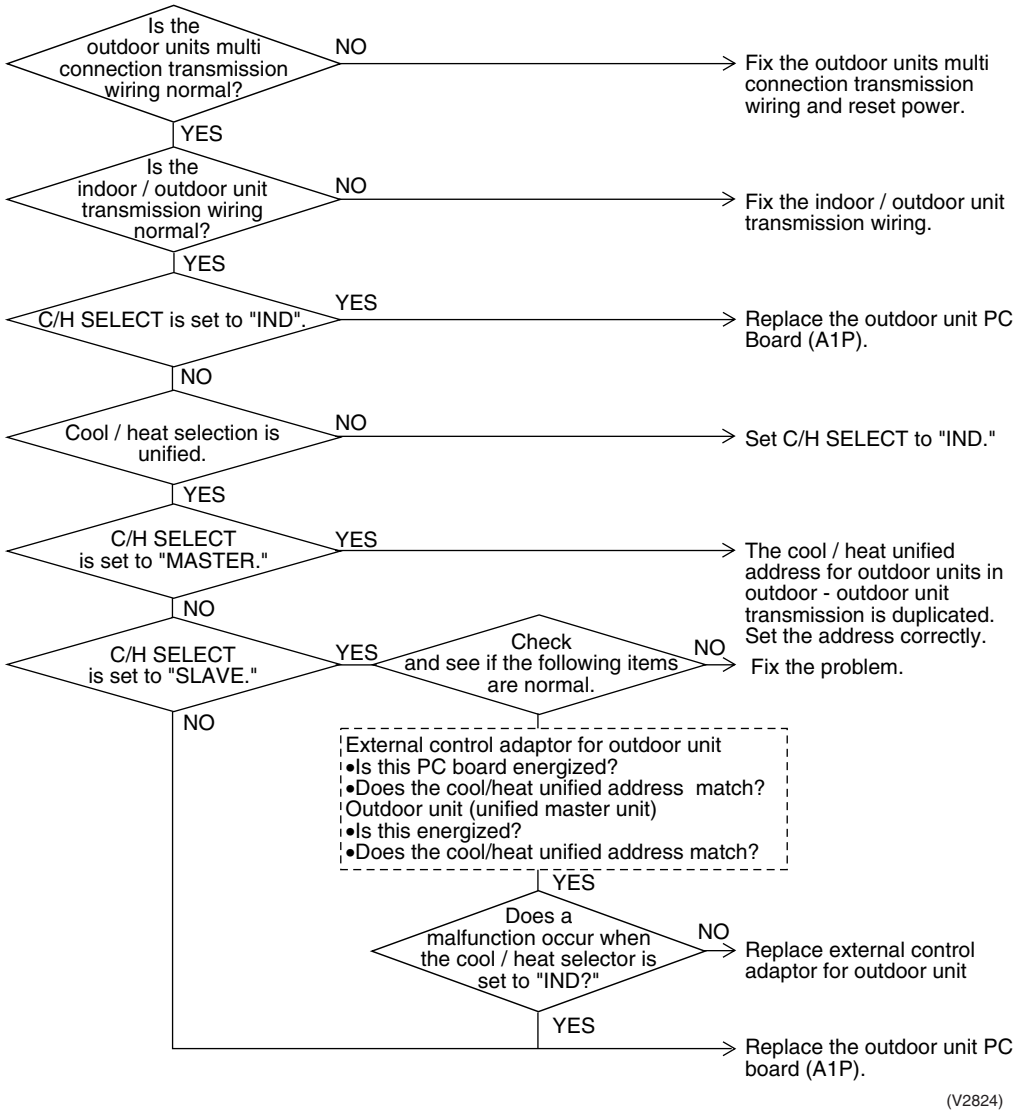
(V2823)

3.45 "U7" Indoor Unit: Malfunction of Transmission Between Outdoor Units

Remote Controller Display	U7
Applicable Models	All models of indoor units
Method of Malfunction Detection	Microcomputer checks if transmission between outdoor units.
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 external control adaptor for outdoor unit ■ Improper connection of transmission wiring between outdoor units. ■ 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 external control adapter for outdoor unit

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.46 "U8" Indoor Unit: Malfunction of Transmission Between Main and Sub 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

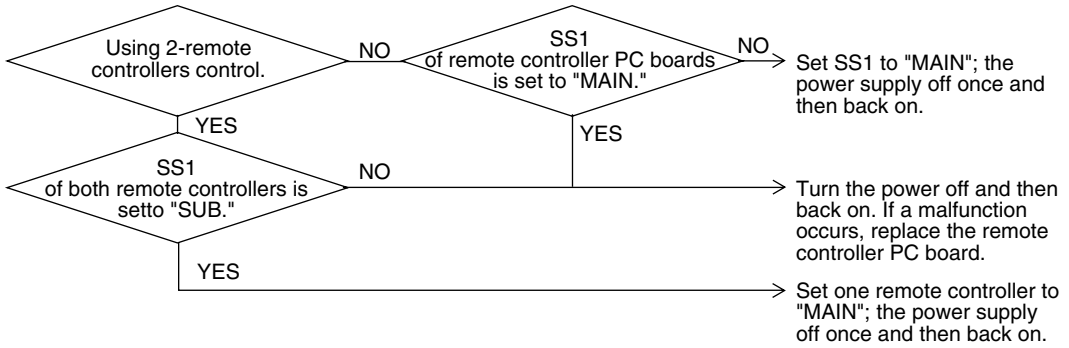
Normal transmission does not continue for specified period.

Supposed Causes

- Malfunction of transmission between main and sub remote controller
- Connection between sub remote controllers
- Defect of remote controller PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



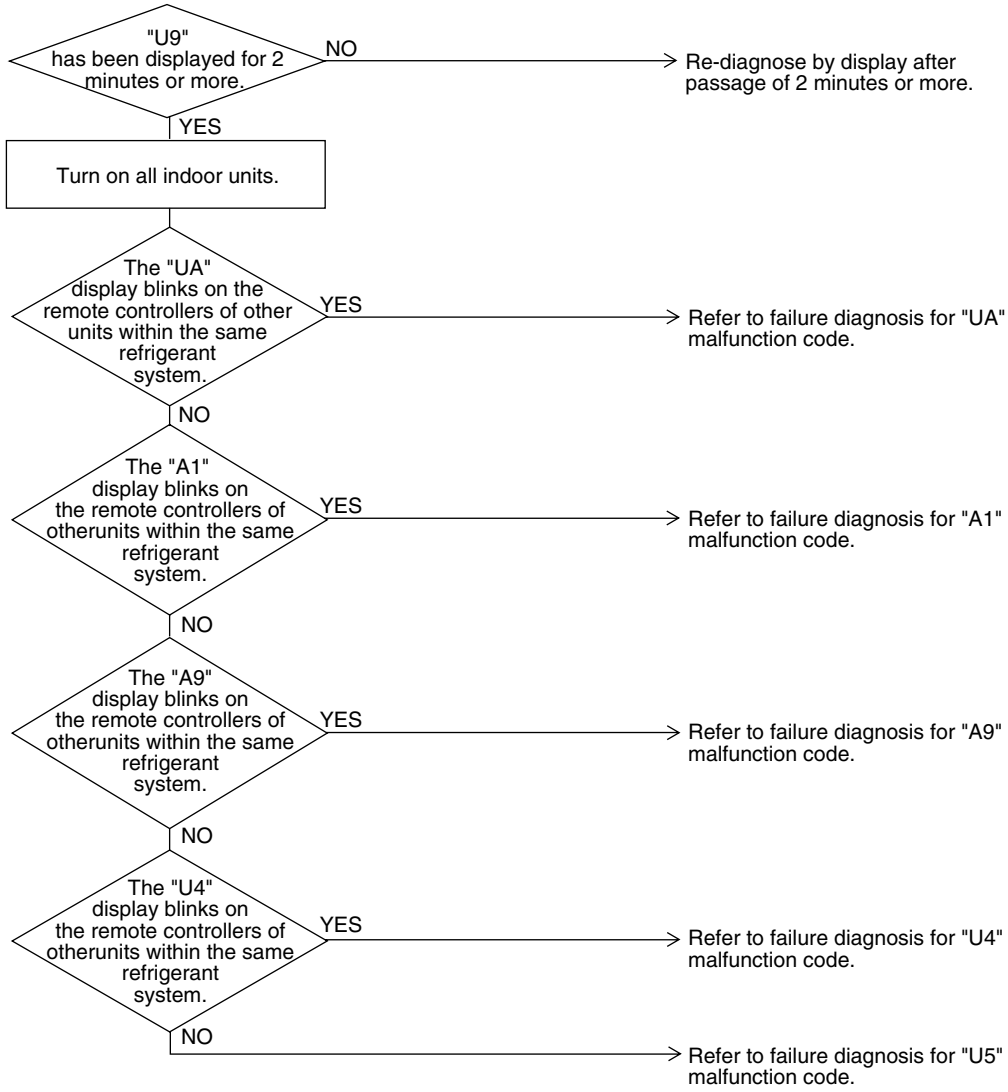
(V2825)

3.47 "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	Detect the malfunction signal of any other indoor unit within the system concerned.
Malfunction Decision Conditions	When the malfunction decision is made on any other indoor unit within the system concerned.
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2826)

3.48 "UA" Improper Combination of Indoor and Outdoor Units, Indoor Unit and Remote Controller

Remote Controller Display

UA

Applicable Models

All models of indoor unit
RXQ5MA~48MA
Remote controller

Method of Malfunction Detection

A difference occurs in data by the type of refrigerant between indoor and outdoor units.
The number of indoor units is outside of the allowable range.

Malfunction Decision Conditions

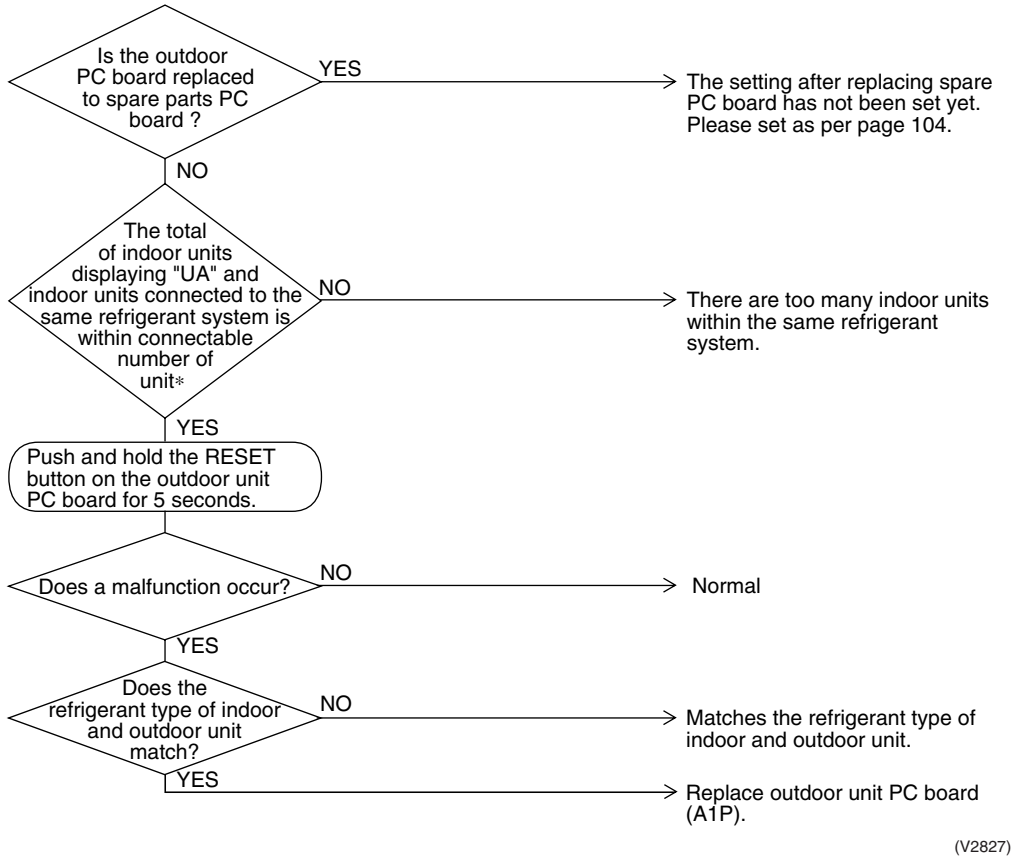
The malfunction decision is made as soon as either of the abnormalities aforementioned is detected.

Supposed Causes

- Excess of connected indoor units
- Defect of outdoor unit PC board (A1P)
- Mismatching of the refrigerant type of indoor and outdoor unit.
- Setting of outdoor PC board was not conducted after replacing to spare parts PC board.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2827)

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

3.49 "UC" Address Duplication of Centralized Controller

Remote Controller Display

UC

Applicable Models

All models of indoor unit
Centralized controller

Method of Malfunction Detection

The principal indoor unit detects the same address as that of its own on any other indoor unit.

Malfunction Decision Conditions

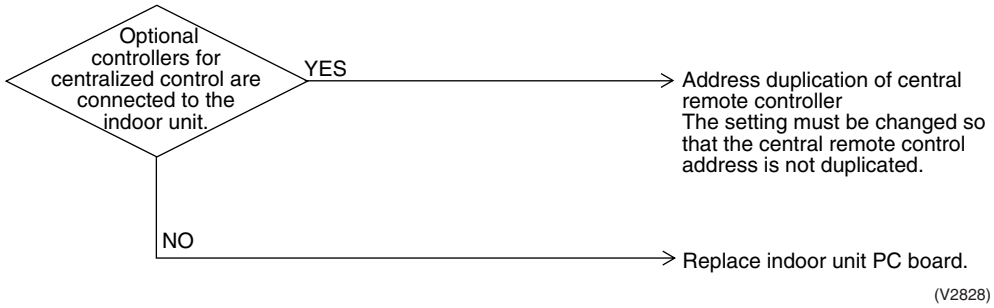
The malfunction decision is made as soon as the abnormality aforementioned is detected.

Supposed Causes

- Address duplication of centralized 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.



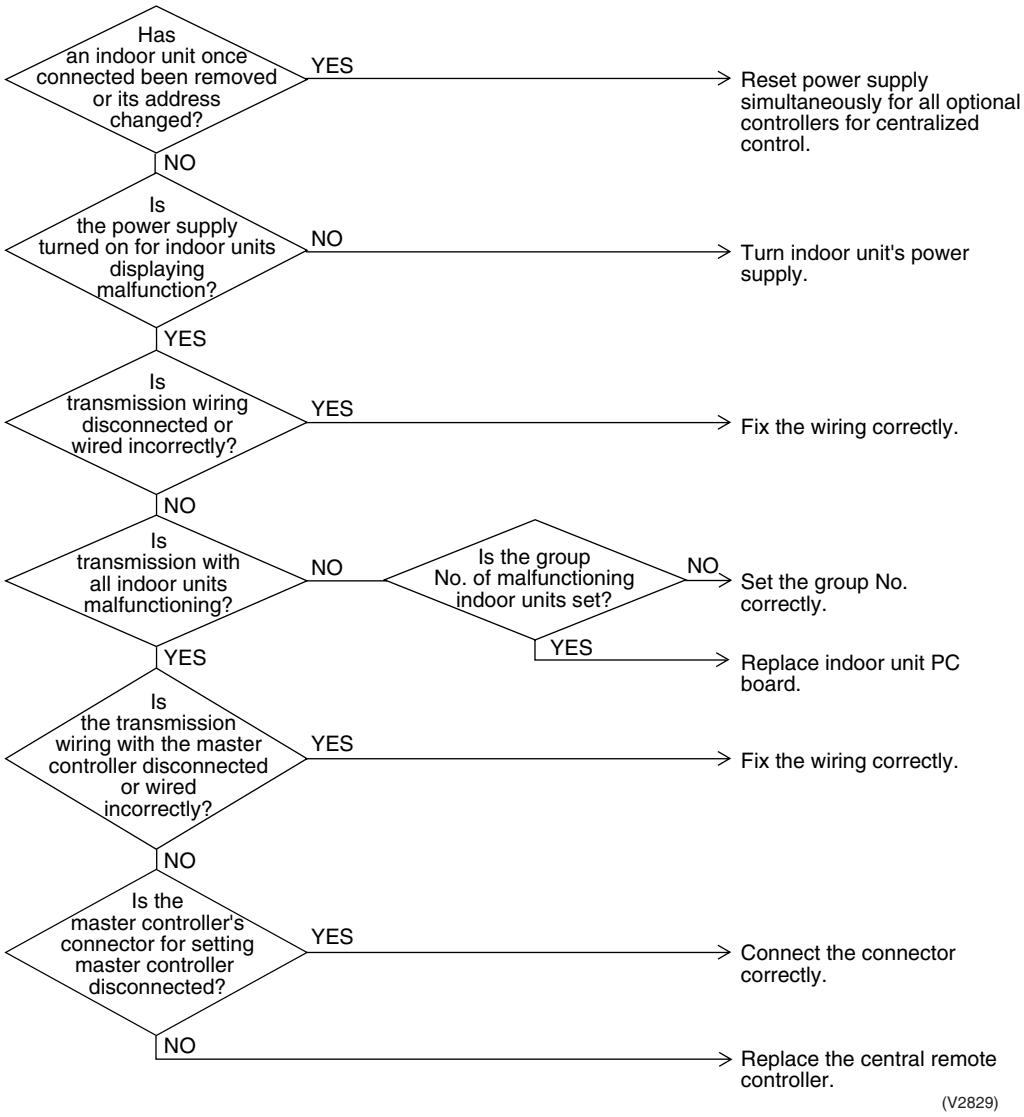
(V2828)

3.50 "UE" Malfunction of Transmission Between Centralized 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 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.



3.51 "UF" System is not Set yet

Remote Controller Display

UF

Applicable Models

All models of indoor units
RXQ5MA~48MA

Method of Malfunction Detection

On check operation, the number of indoor units in terms of transmission is not corresponding to that of indoor units that have made changes in temperature.

Malfunction Decision Conditions

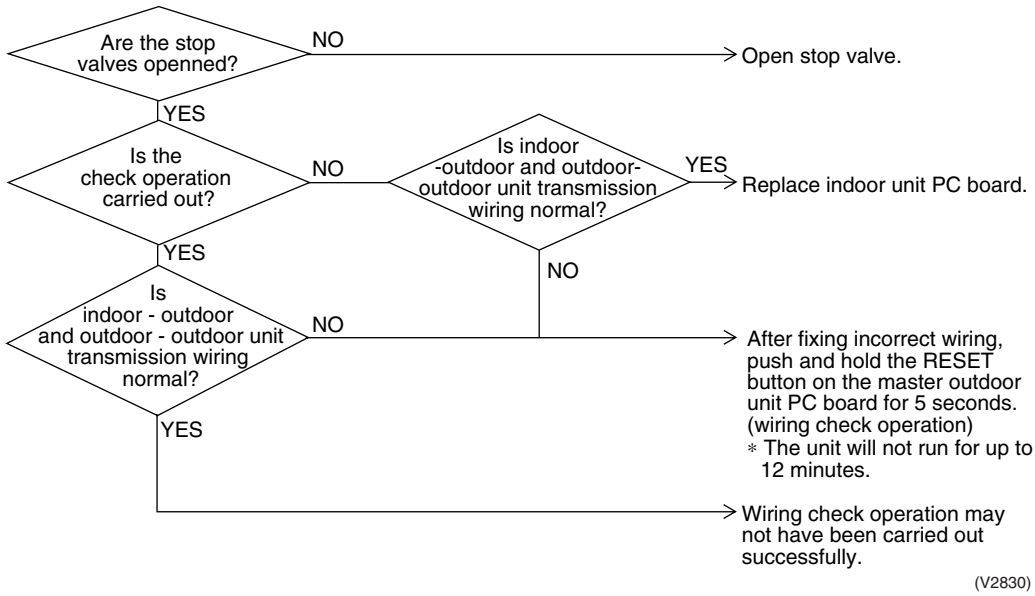
The malfunction is determined as soon as the abnormality aforementioned is detected through checking the system for any erroneous connection of units on the check operation.

Supposed Causes

- Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units
- Failure to execute check operation
- Defect of indoor unit PC board
- Stop valve is left in closed

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2830)

Note: Wiring check 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.

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

Remote Controller Display

UH

Applicable Models

All models of indoor units
RXQ5MA~48MA

Method of Malfunction Detection

Detect an indoor unit with no address setting.

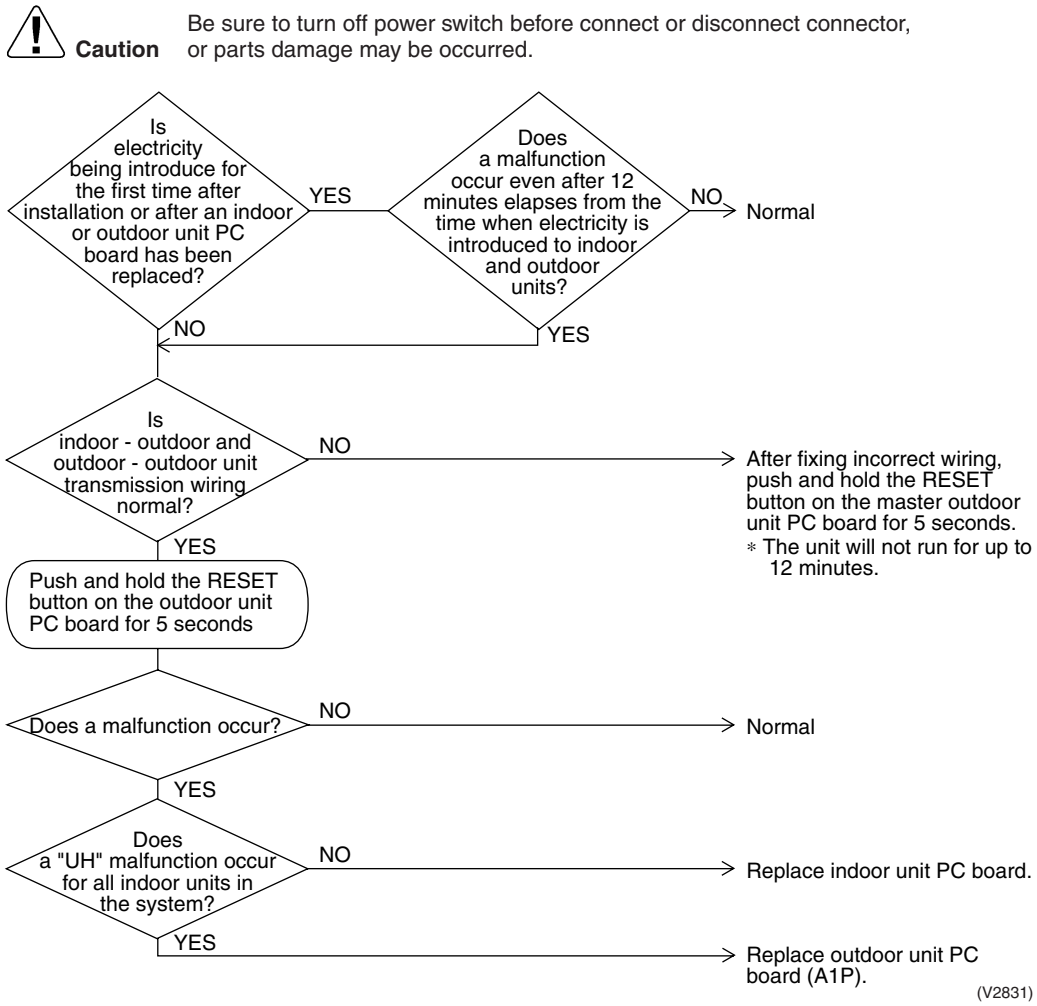
Malfunction Decision Conditions

The malfunction decision is made as soon as the abnormality aforementioned is detected.

Supposed Causes

- Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units
- Defect of indoor unit PC board
- Defect of outdoor unit PC board (A1P)

Troubleshooting



4. Troubleshooting (OP: Central Remote Controller)

4.1 "M1" PC Board Defect

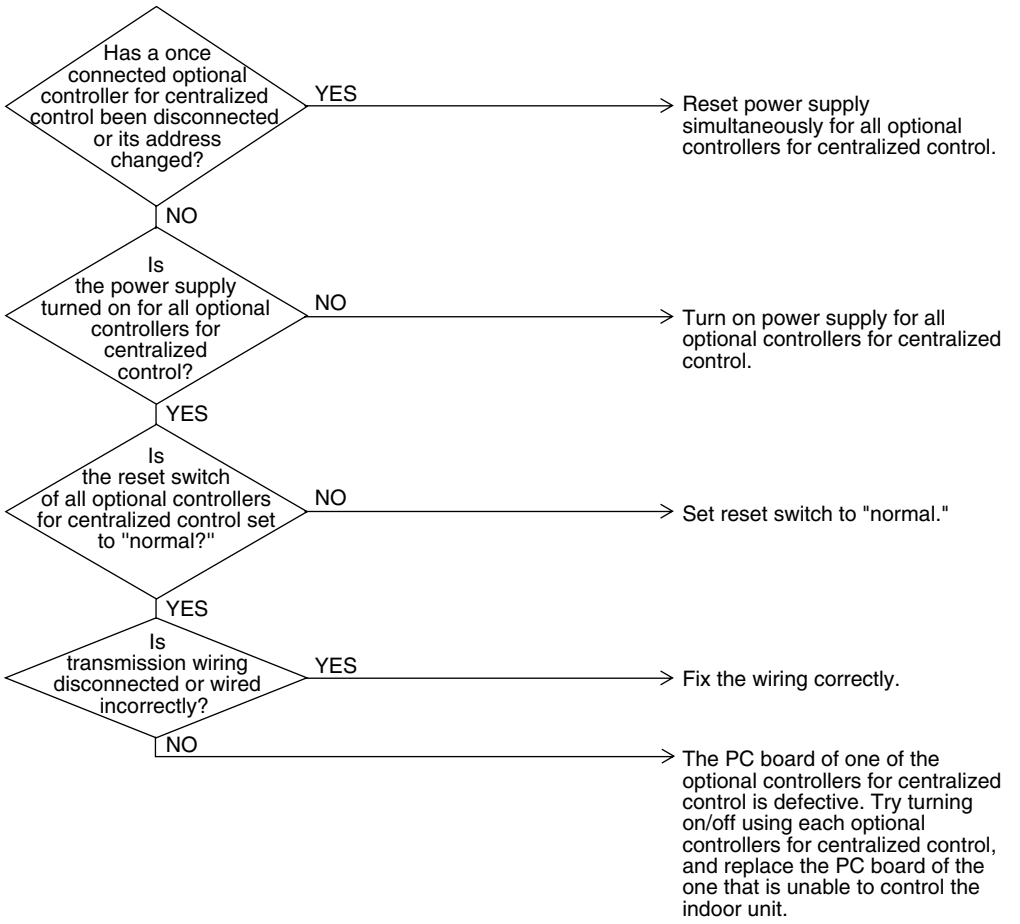
Remote Controller Display	M1
Applicable Models	Central remote controller
Method of Malfunction Detection	Detect an abnormality in the DIII-NET polarity circuit.
Malfunction Decision Conditions	When + polarity and - polarity are detected at the same time.
Supposed Causes	■ Defect of central remote controller PC board
Troubleshooting	Replace the central remote controller.

4.2 "M8" Malfunction of Transmission Between Optional Controllers for Centralized Control

Remote Controller Display	M8
Applicable Models	Central remote controller
Method of Malfunction Detection	Detect the malfunction according to DIII-NET transmission data. (The system will be automatically reset.)
Malfunction Decision Conditions	When no master controller is present at the time of the startup of slave controller. When the centralized controller, which was connected once, shows no response.
Supposed Causes	■ Malfunction of transmission between optional controllers for centralized control ■ Defect of PC board of optional controllers for centralized control

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



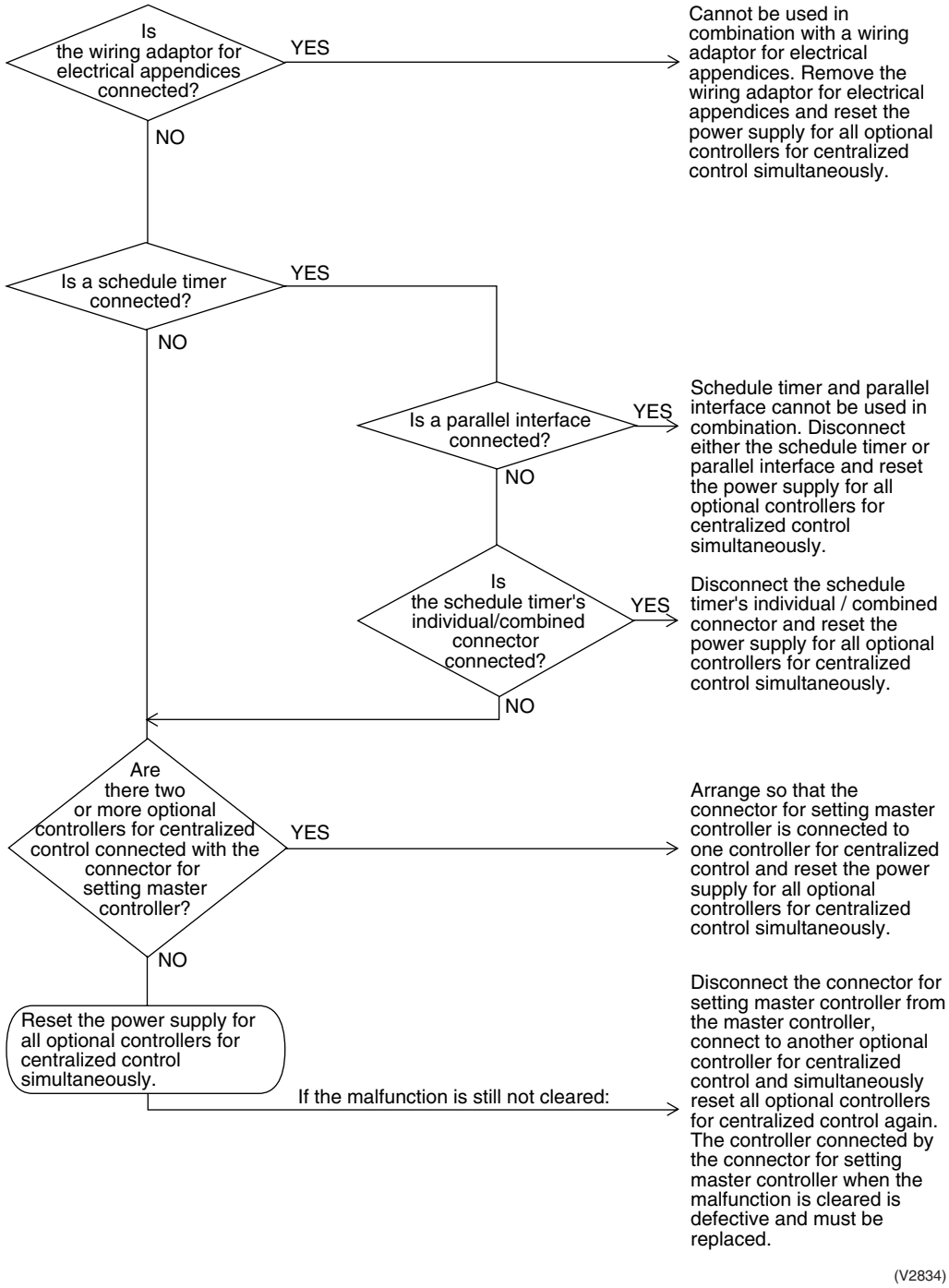
(V2833)

4.3 "MA" Improper Combination of Optional Controllers for Centralized Control

Remote Controller Display	MA
Applicable Models	Central remote controller
Method of Malfunction Detection	Detect the malfunction according to DIII-NET transmission data.
Malfunction Decision Conditions	When the schedule timer is set to individual use mode, other central component is present. When multiple master controller are present. When the remote control adapter is present.
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2834)

4.4 "MC" Address Duplication, Improper Setting

Remote Controller Display

MC

Applicable Models

Central remote controller

Method of Malfunction Detection

Detect the malfunction according to DIII-NET transmission data.

Malfunction Decision Conditions

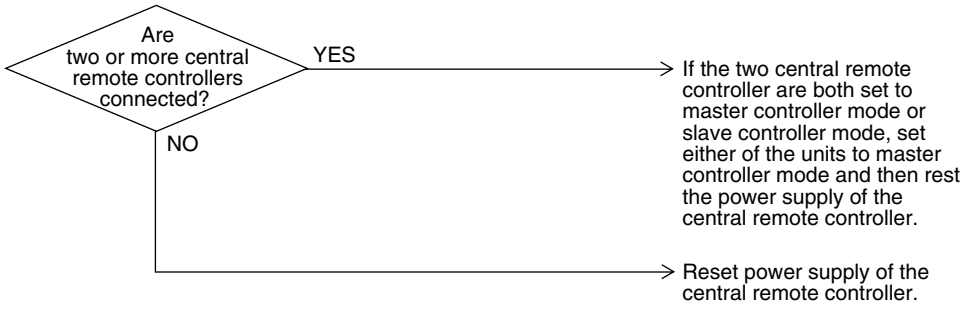
Two units are both set to master controller mode or slave controller mode.

Supposed Causes

- Address duplication of central remote controller

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2835)

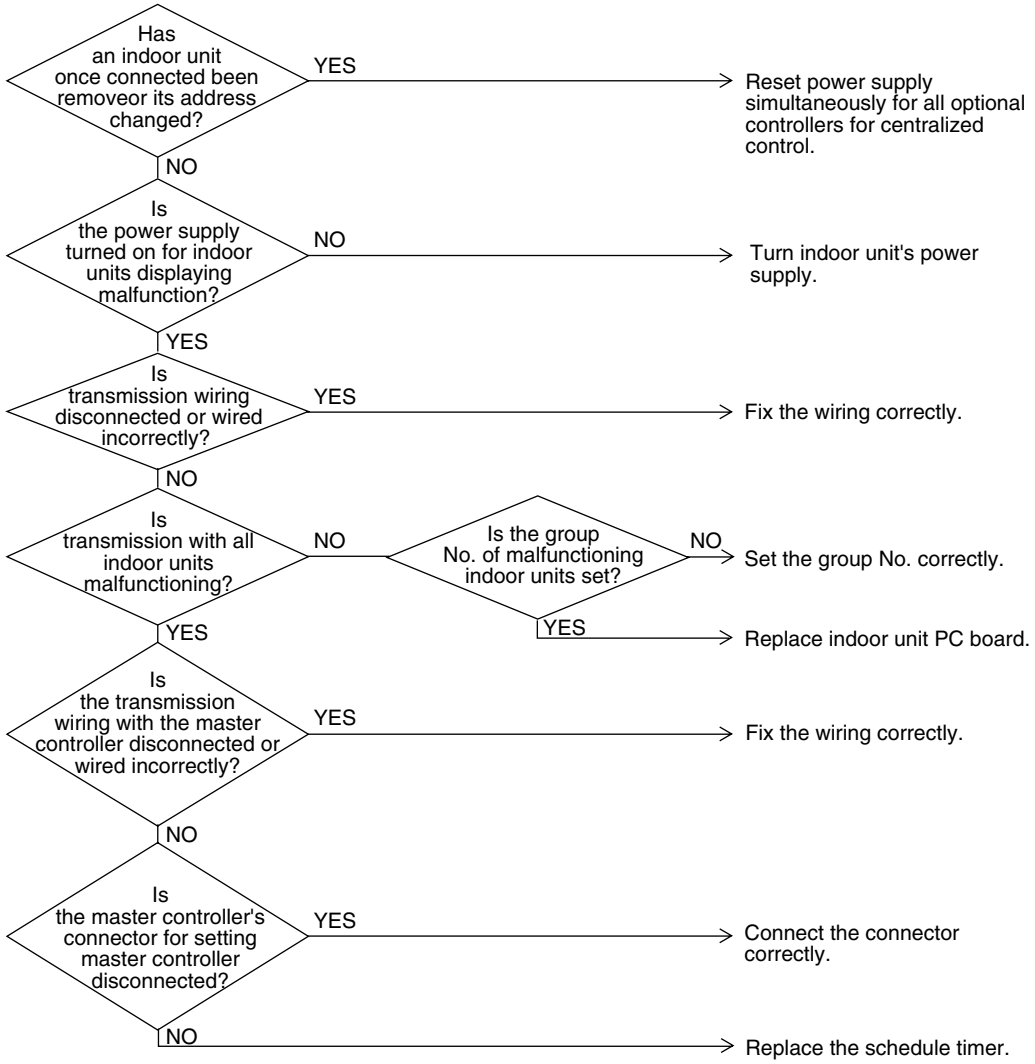
5. Troubleshooting (OP: Schedule Timer)

5.1 "UE" Malfunction of Transmission Between Centralized Controller and Indoor Unit

Remote Controller Display	UE
Applicable Models	Schedule timer Indoor units
Method of Malfunction Detection	Microcomputer checks if transmission between indoor unit and centralized 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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2836)

5.2 "M1" PC Board Defect

Remote Controller Display

M1

Applicable Models

Schedule timer

Method of Malfunction Detection

Detect an abnormality in the DIII-NET polarity circuit.

Malfunction Decision Conditions

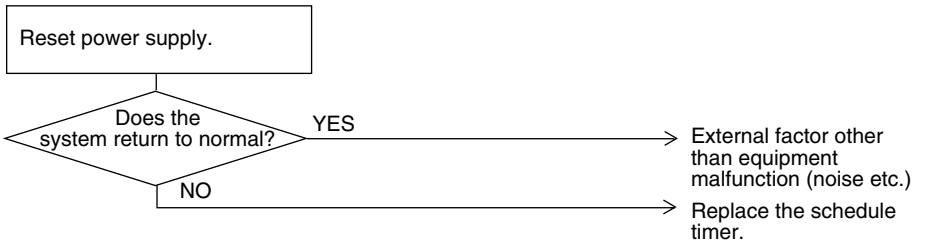
When + polarity and - polarity are detected at the same time.

Supposed Causes

- Defect of schedule timer PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2837)

5.3 "M8" Malfunction of Transmission Between Optional Controllers for Centralized Control

Remote Controller Display

M8

Applicable Models

Schedule timer

Method of Malfunction Detection

Detect the malfunction according to DIII-NET transmission data. (The system will be automatically reset.)

Malfunction Decision Conditions

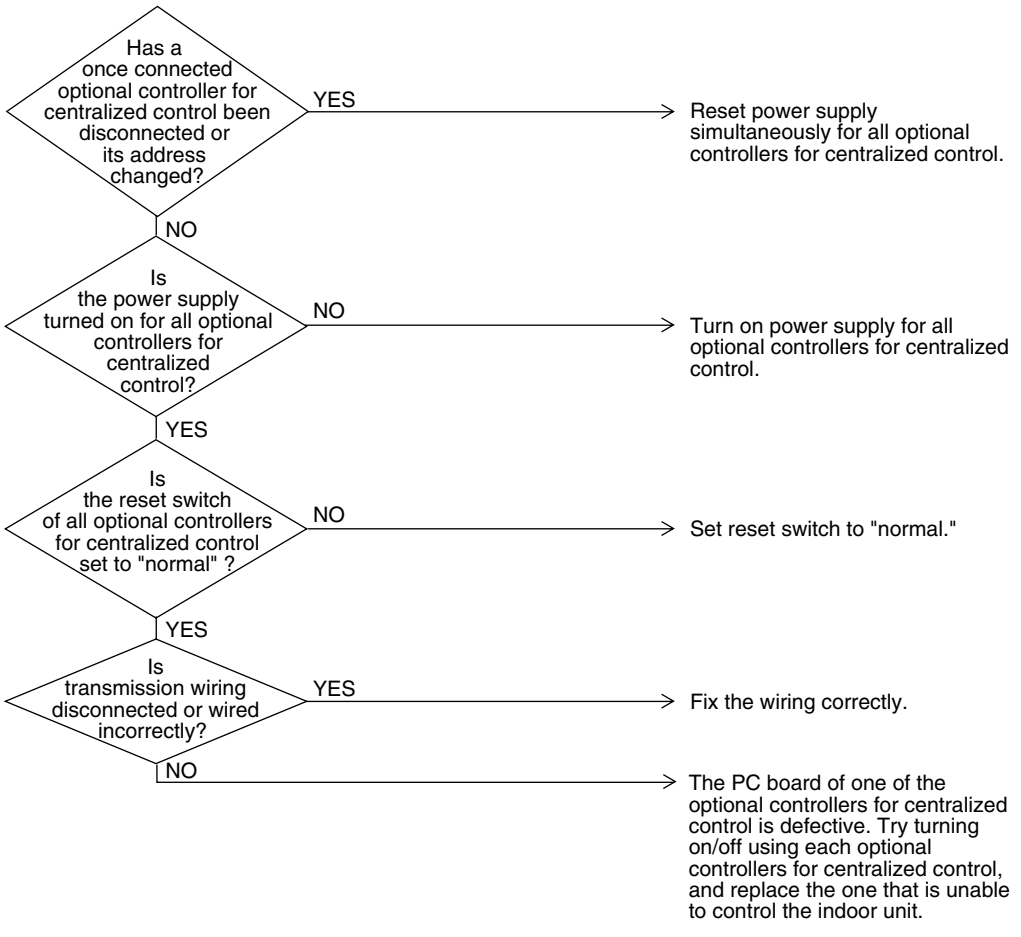
When the centralized controller which was connected once, shows no response.

Supposed Causes

- Malfunction of transmission between optional controllers for centralized control
- Defect of PC board of optional controllers for centralized control

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



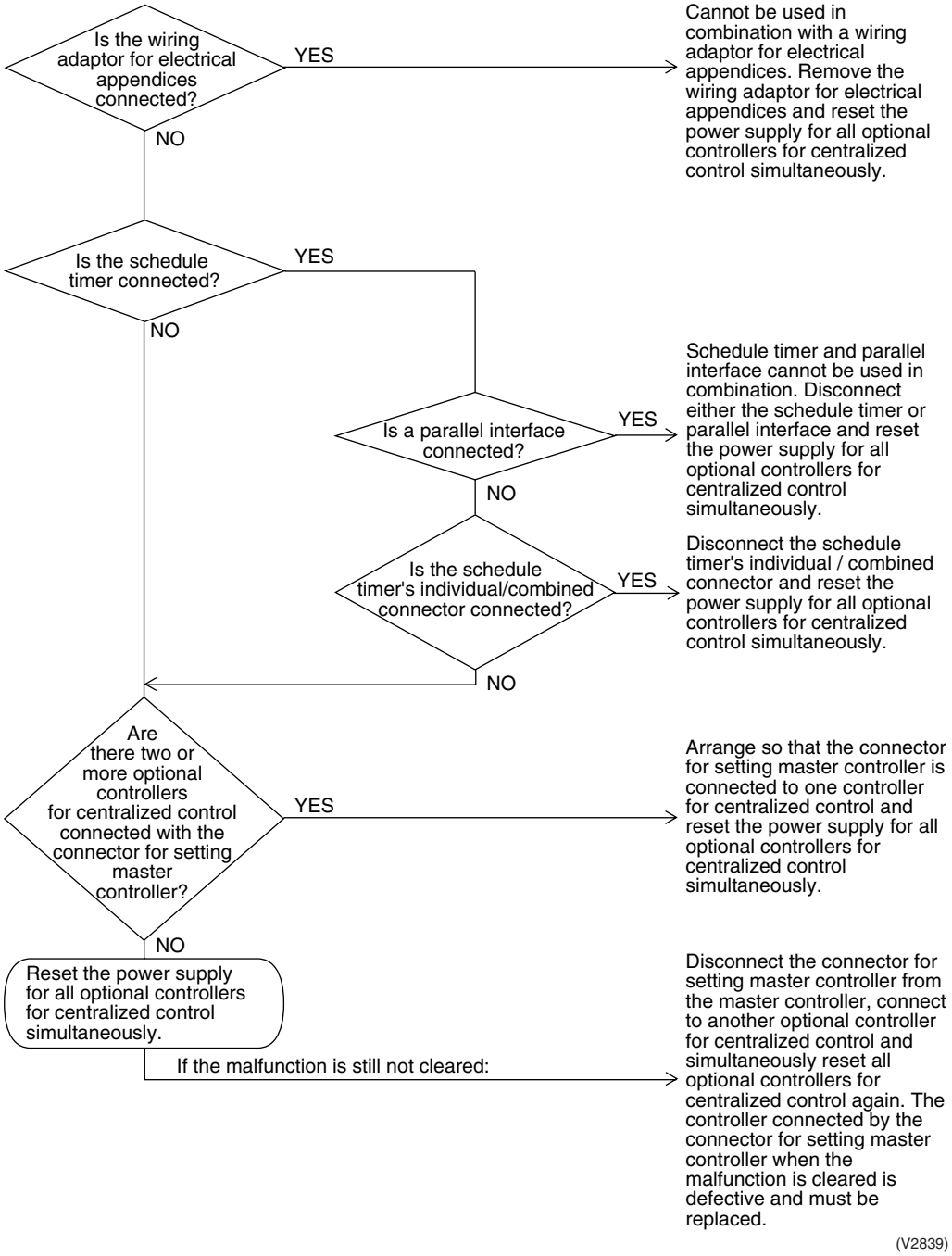
(V2838)

5.4 "MA" Improper Combination of Optional Controllers for Centralized Control

Remote Controller Display	MA
Applicable Models	Schedule timer
Method of Malfunction Detection	Detect the malfunction according to DIII-NET transmission data.
Malfunction Decision Conditions	When the schedule timer is set to individual use mode, other central component is present. When multiple main controller are present.
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



5.5 "MC" Address Duplication, Improper Setting

Remote Controller Display

MC

Applicable Models

Schedule timer

Method of Malfunction Detection

Detect the malfunction according to DIII-NET transmission data.

Malfunction Decision Conditions

When two or more schedule timers are connected.

Supposed Causes

- Address duplication of schedule timer

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

(V2840)

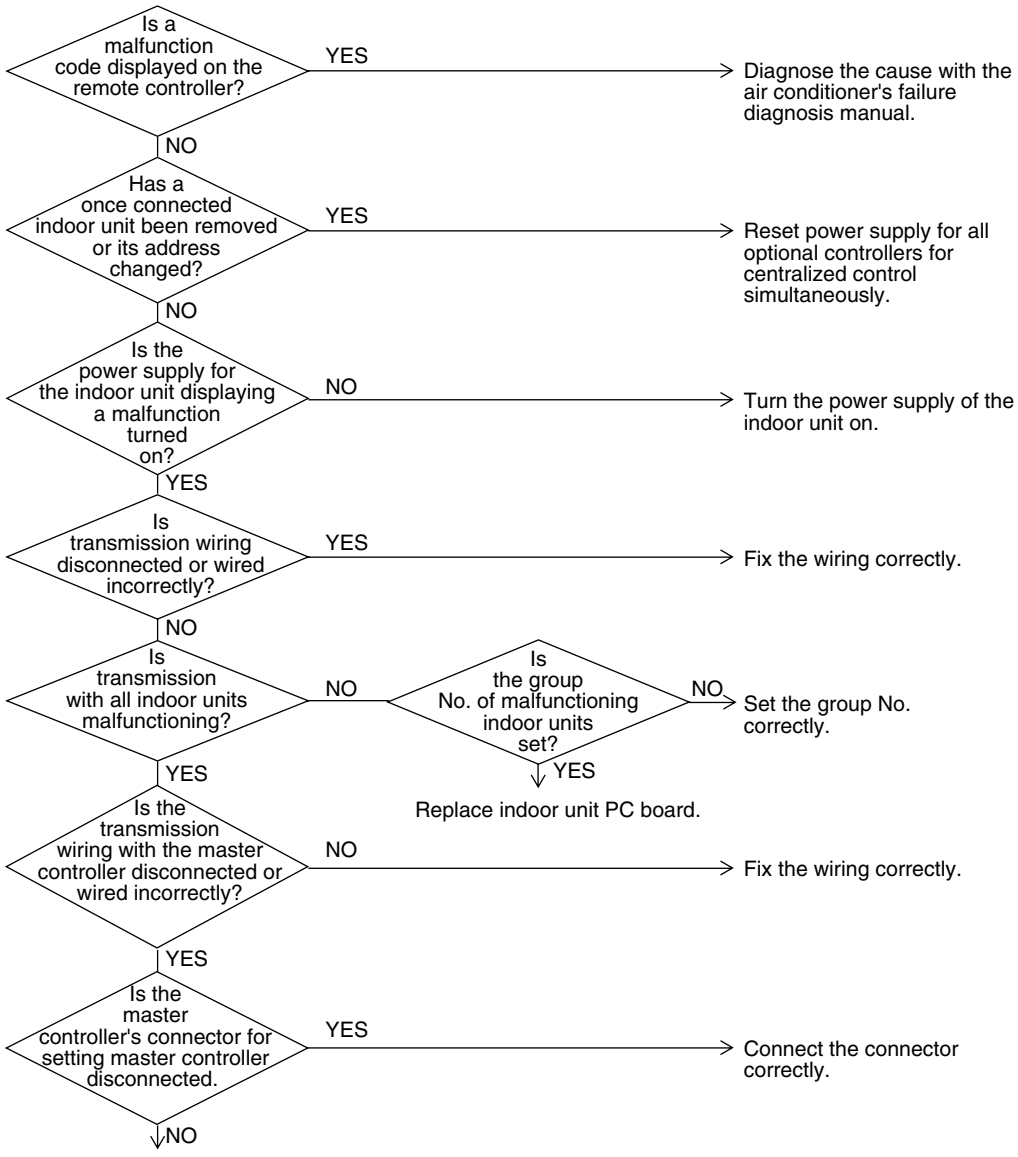
6. Troubleshooting (OP: Unified ON/OFF Controller)

6.1 Operation Lamp Blinks

Remote Controller Display	Operation lamp blinks
Applicable Models	All models of indoor units Unified ON/OFF controller
Method of Malfunction Detection	Detect the malfunction according to DIII-NET transmission data.
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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



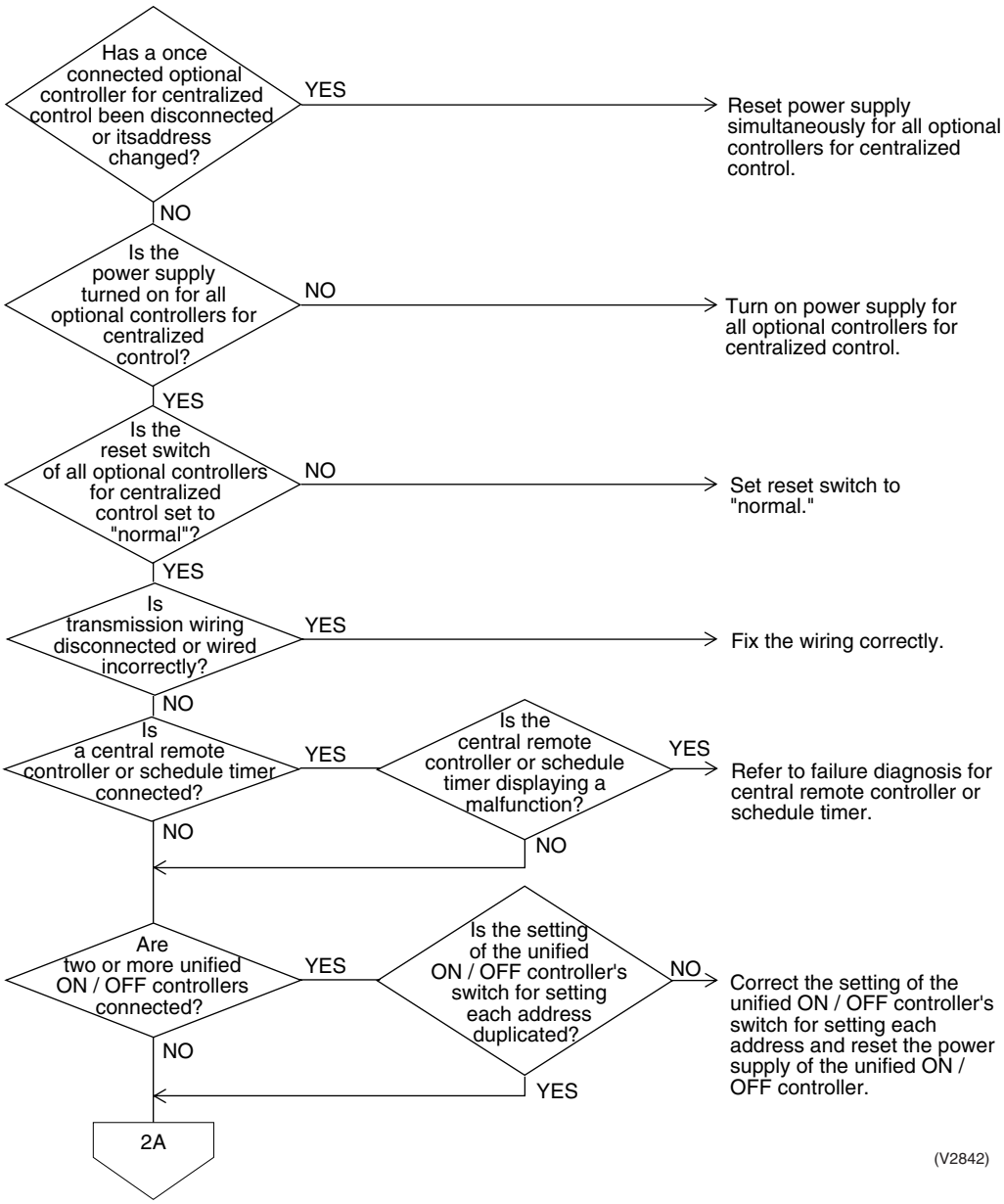
(V2841)

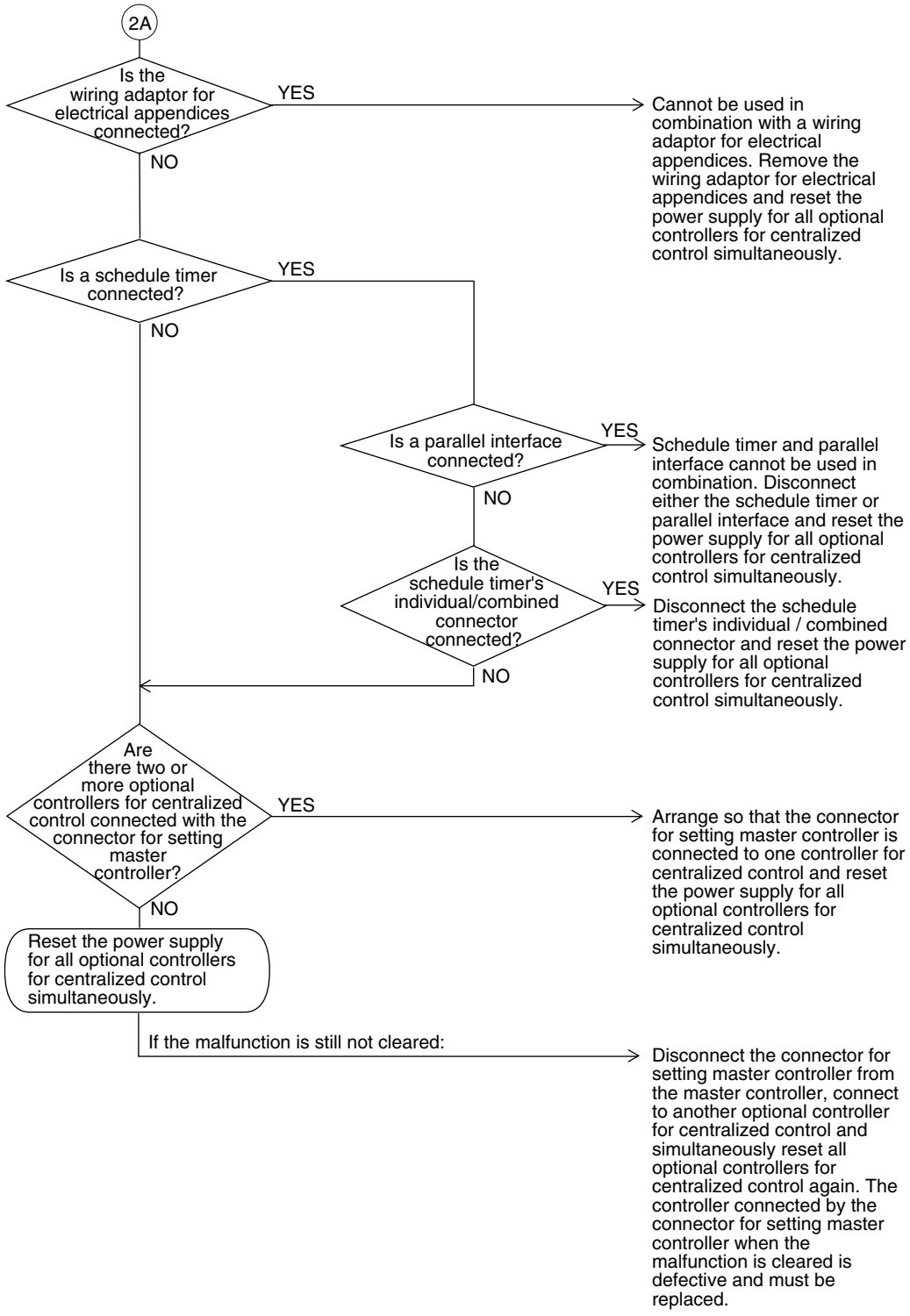
6.2 Display “Under Centralized Control” Blinks (Repeats Single Blink)

Remote Controller Display	“under centralized control” (Repeats single blink)
Applicable Models	Unified ON/OFF controller Central remote controller, Schedule timer
Method of Malfunction Detection	Detect the malfunction according to DIII-NET transmission data.
Malfunction Decision Conditions	When the centralized controller, which was connected once, shows no response. The control ranges are overlapped. When multiple master central controller are present. When the schedule timer is set to individual use mode, other central controller is present. When the wiring adapter for electrical appendices is present.
Supposed Causes	■ Address duplication of optional controllers for centralized control ■ 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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.




2A
Is the wiring adaptor for electrical appendices connected?
YES
Cannot be used in combination with a wiring adaptor for electrical appendices. Remove the wiring adaptor for electrical appendices and reset the power supply for all optional controllers for centralized control simultaneously.
NO
Is a schedule timer connected?
YES
NO
Is a parallel interface connected?
YES
Schedule timer and parallel interface cannot be used in combination. Disconnect either the schedule timer or parallel interface and reset the power supply for all optional controllers for centralized control simultaneously.
NO
Is the schedule timer's individual/combined connector connected?
YES
Disconnect the schedule timer's individual / combined connector and reset the power supply for all optional controllers for centralized control simultaneously.
NO
Are there two or more optional controllers for centralized control connected with the connector for setting master controller?
YES
Arrange so that the connector for setting master controller is connected to one controller for centralized control and reset the power supply for all optional controllers for centralized control simultaneously.
NO
Reset the power supply for all optional controllers for centralized control simultaneously.
If the malfunction is still not cleared:
Disconnect the connector for setting master controller from the master controller, connect to another optional controller for centralized control and simultaneously reset all optional controllers for centralized control again. The controller connected by the connector for setting master controller when the malfunction is cleared is defective and must be replaced.
(V2843)

6.3 Display “Under Centralized Control” Blinks (Repeats Double Blink)

Remote Controller Display

“under centralized control” (Repeats double blink)

Applicable Models

Unified ON/OFF controller

Method of Malfunction Detection

Detect the malfunction according to DIII-NET transmission data.

Malfunction Decision Conditions

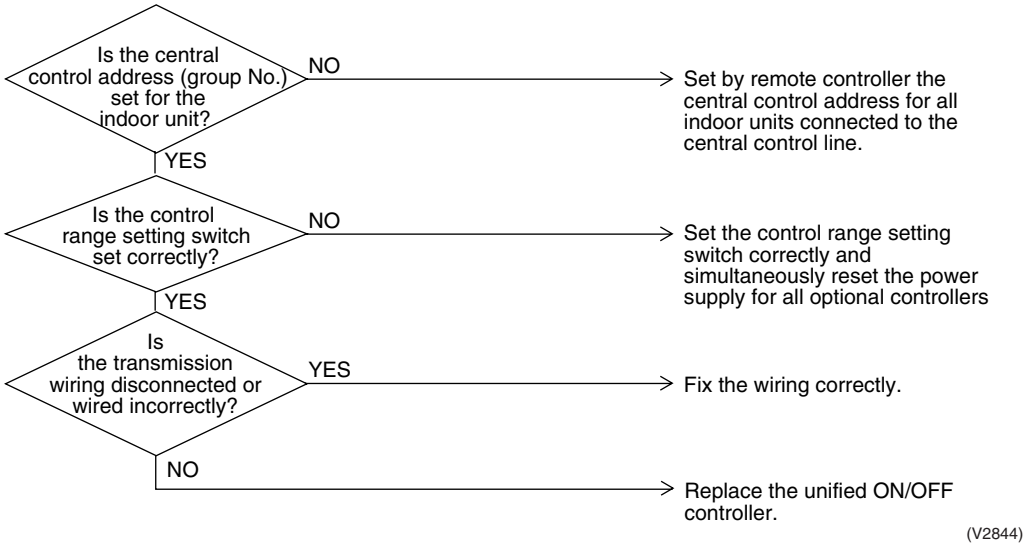
When no central control addresses are set to indoor units.
When no indoor units are connected within the control range.

Supposed Causes

- Central control address (group No.) is not set for indoor unit.
- Improper control range setting switch
- Improper wiring of transmission wiring

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



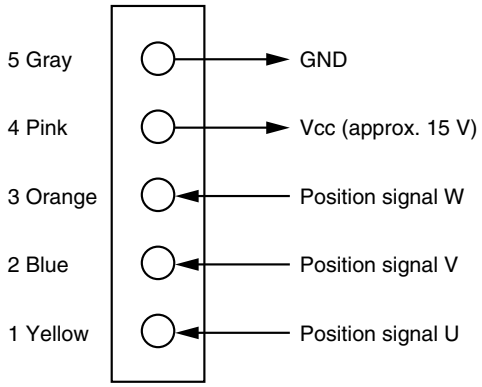
(V2844)

Check No. 1

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?

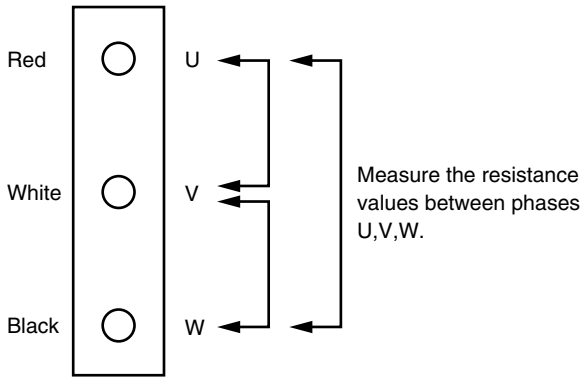
The condition (2) dose not appear → Faulty PCB → Replacing the PCB The conditions (4) do not appear → Faulty hall IC → Replacing fan motor of outdoor unit



Check No. 2

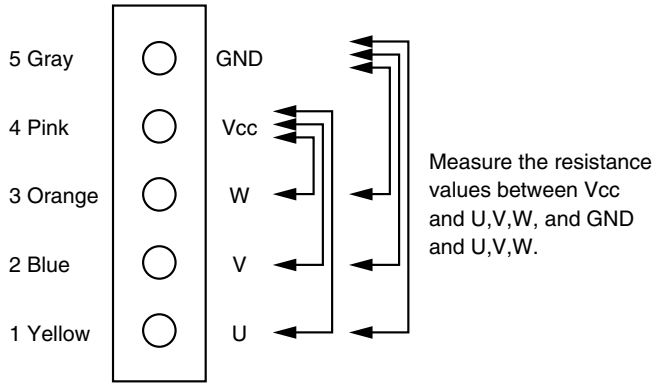
Check on connector of fan motor (Power supply cable)

(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. 3

(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 ± 20 %, while connector or relay connector is disconnected.

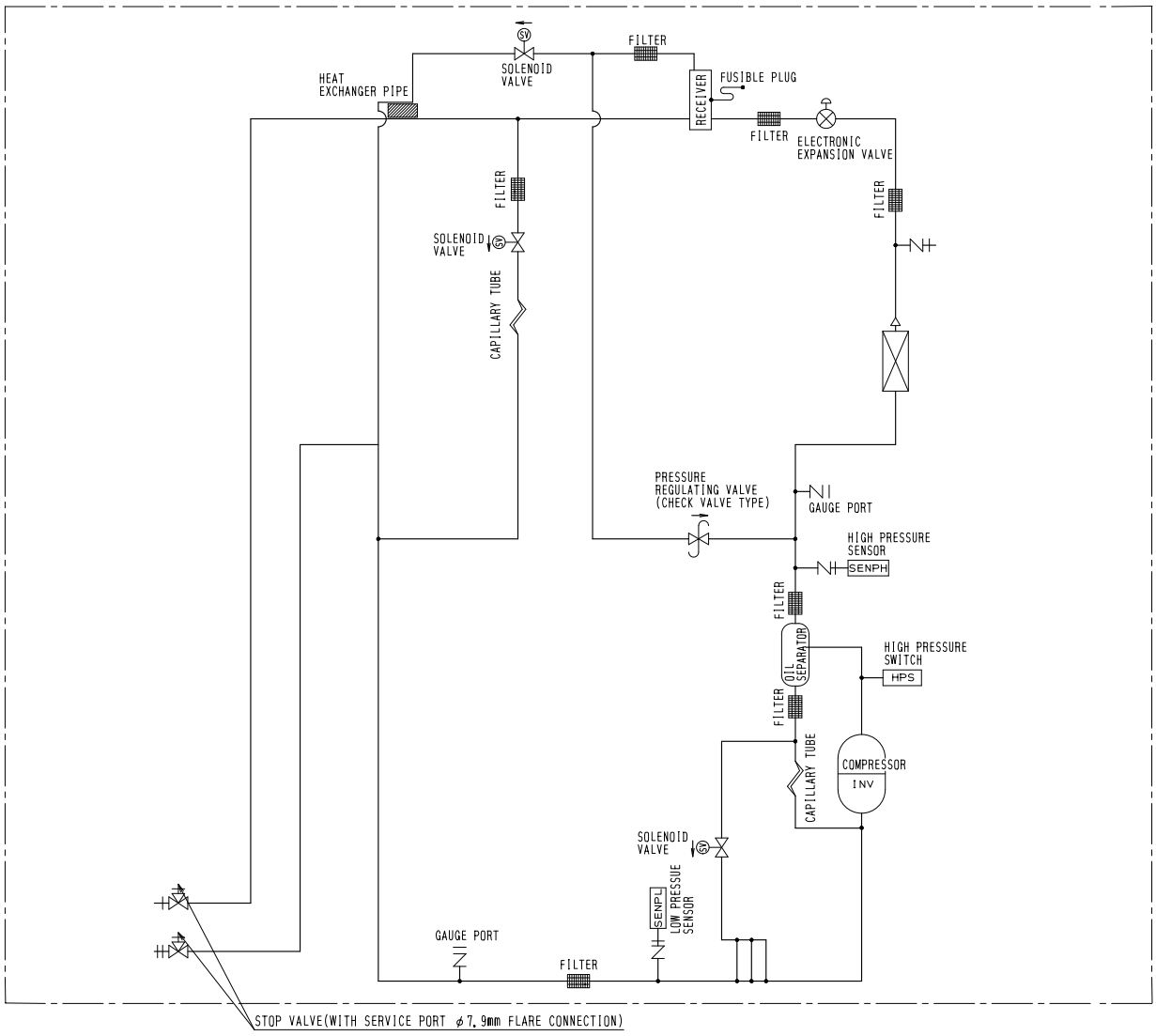


Part 7
Appendix

1. Piping Diagrams

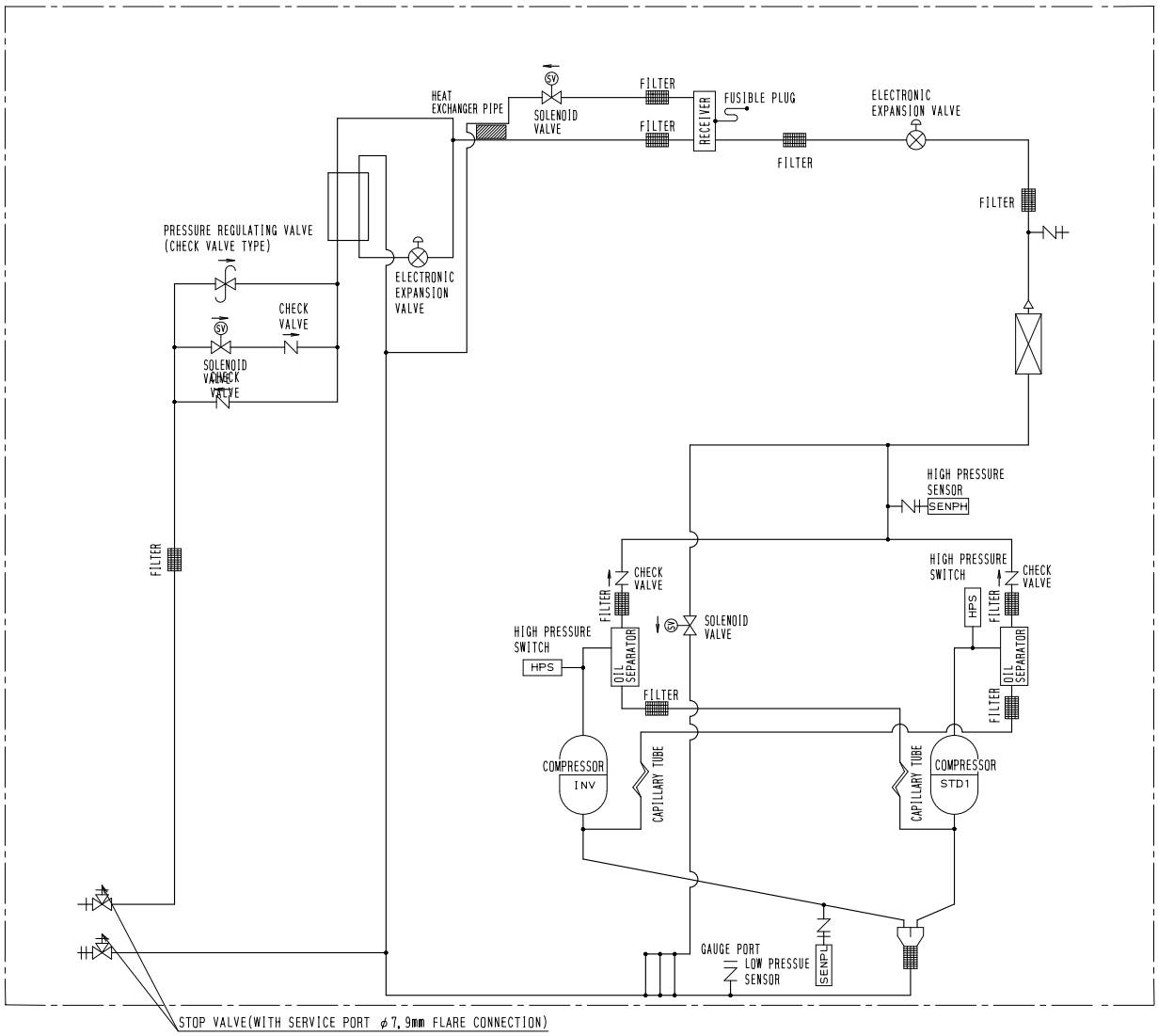
1.1 Outdoor Unit

RXQ5MA



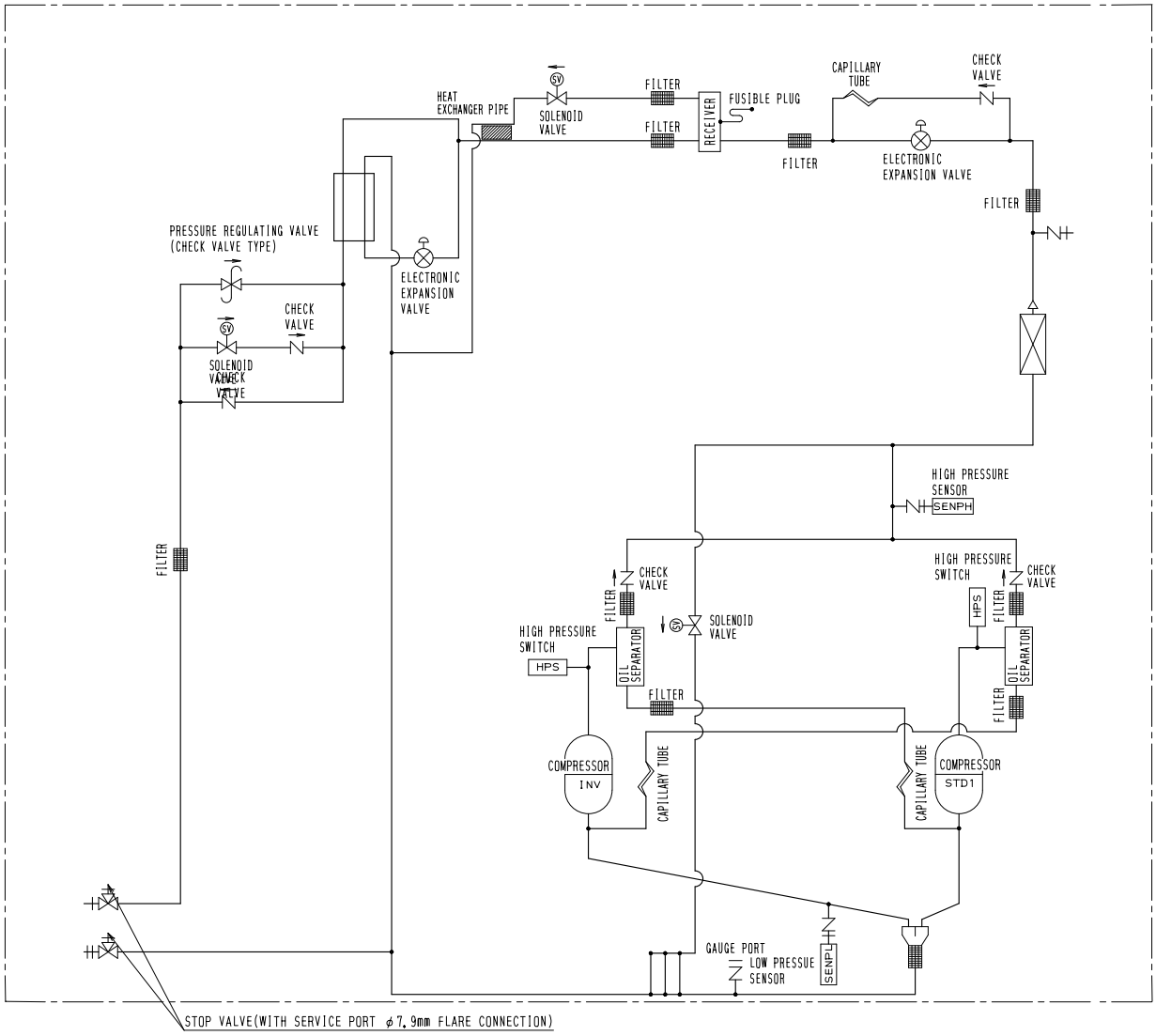
3D048413

RXQ8MA
RXQ10MA



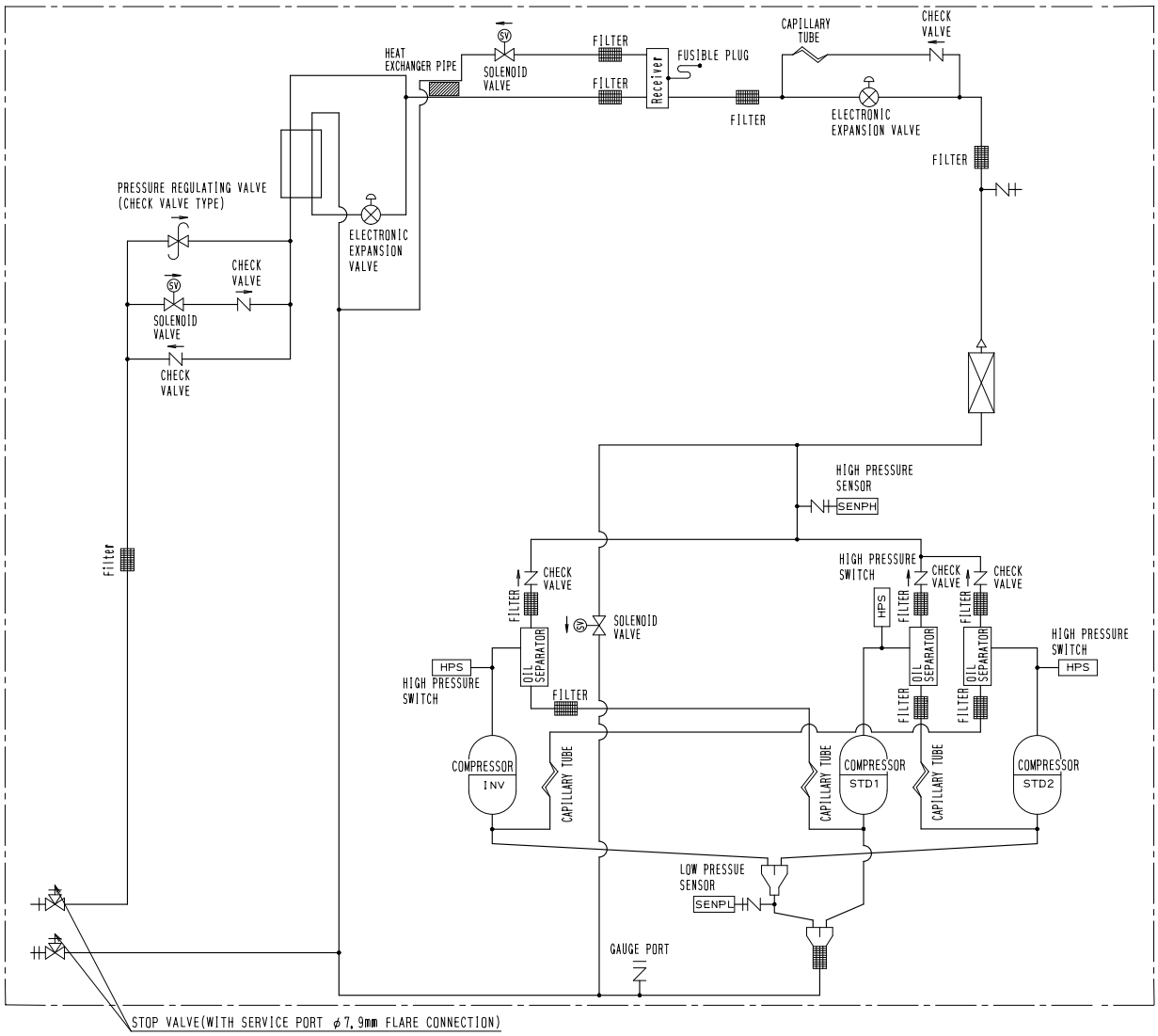
3D048414

RXQ12MA



C: 3D048415

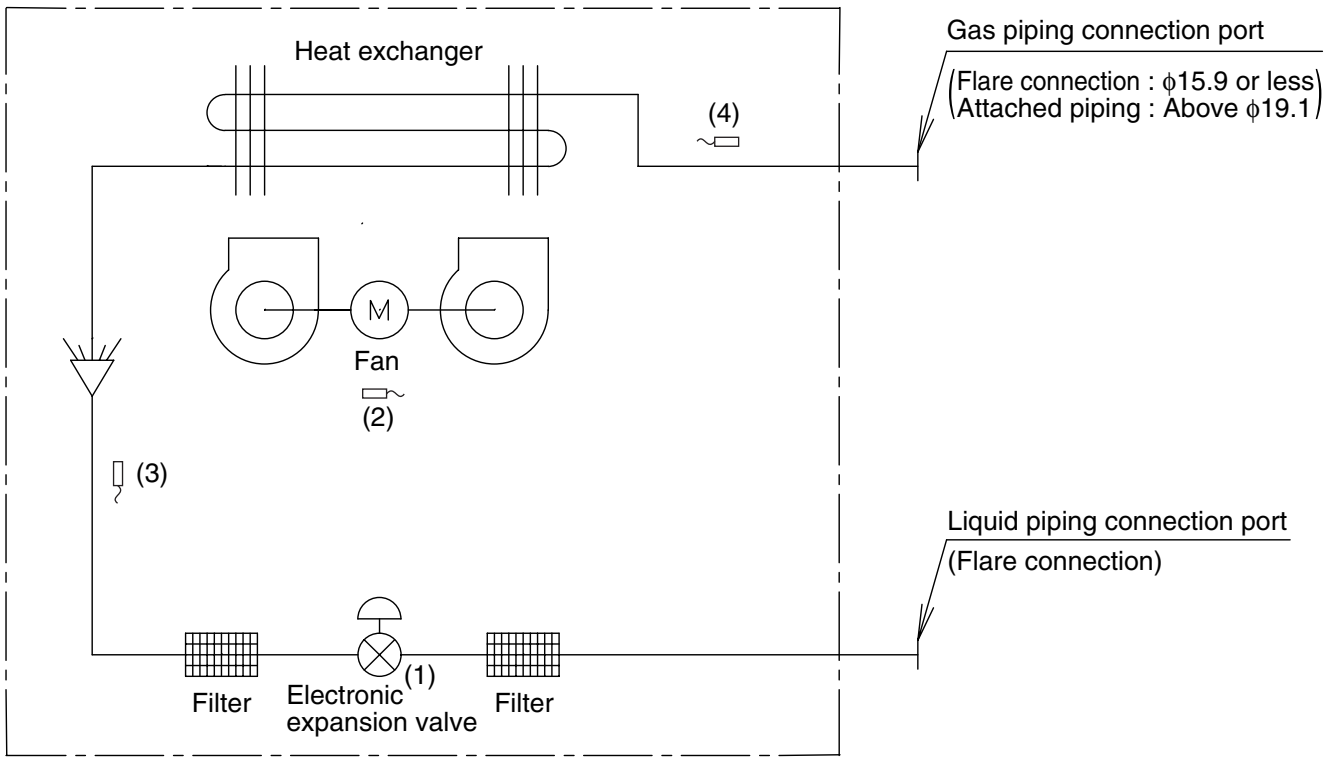
RXQ14MA
RXQ16MA



3D048416A

1.2 Indoor Unit

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



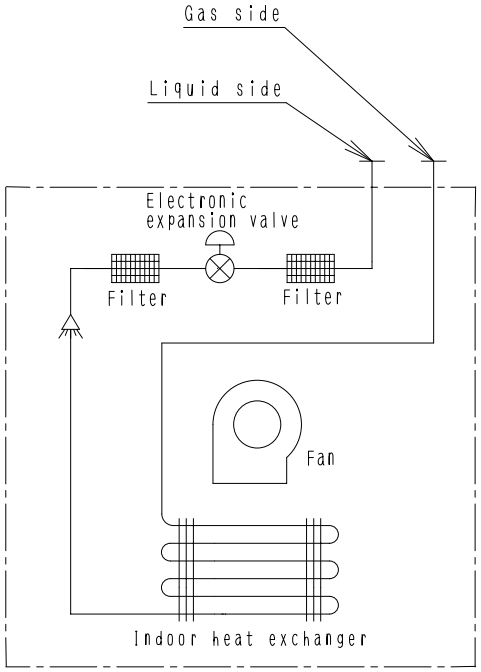
DU220-602J

Code	Name	Code	Main function
(1)	Electronic expansion valve	Y1E	Used for gas superheated degree control while in cooling operation.
(2)	Suction air temperature thermistor	R1T	Used for thermostat control.
(3)	Liquid pipe	R2T	Used for gas superheated degree control while in cooling operation.
(4)	Gas pipe	R3T	Used for gas superheated degree control while in cooling operation.

(mm)

Capacity	GAS	Liquid
20 / 25 / 32 / 40 / 50M	ϕ12.7	ϕ6.4
63 / 80 / 100 / 125M	ϕ15.9	ϕ9.5
200M	ϕ19.1	ϕ9.5
250M	ϕ22.2	ϕ9.5

FXDQ



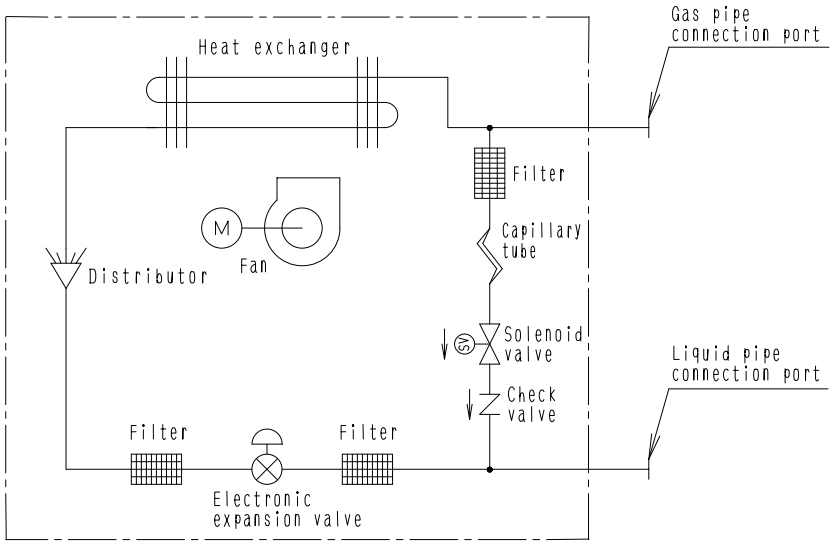
4D043864D

■ Refrigerant pipe connection port diameters

(mm)

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

FXMQ125MFV1/200MFV1/250MFV1



4D018650B

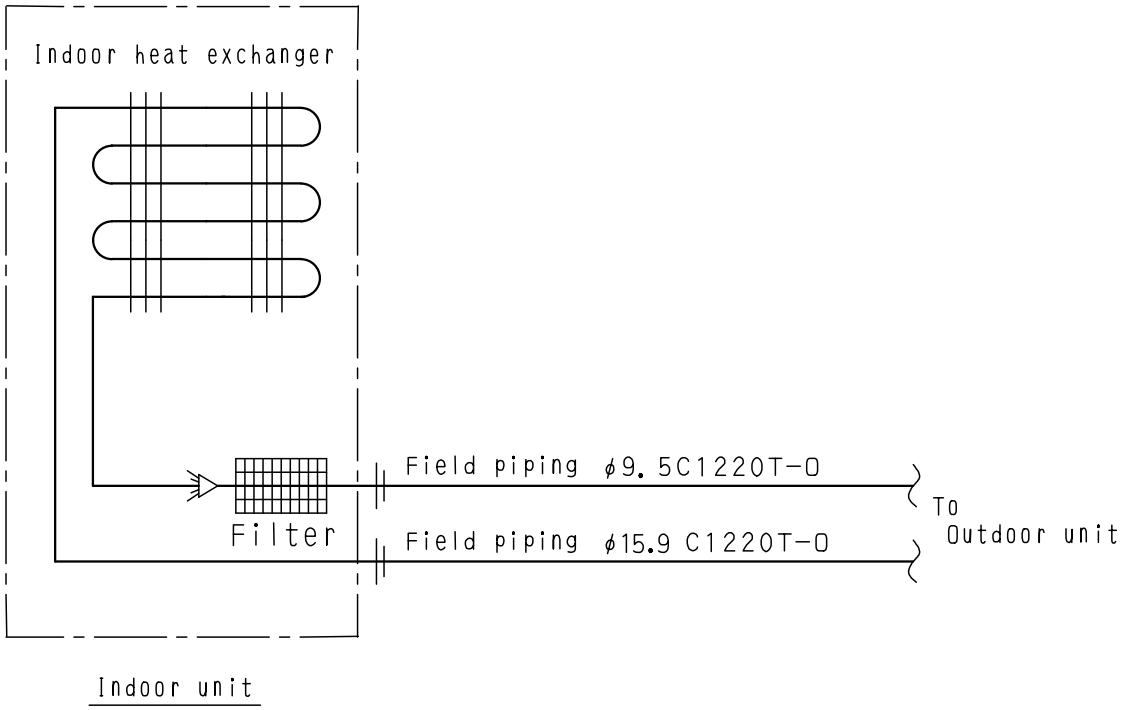
■ Refrigerant pipe connection port diameters

(mm)

Model	Gas	Liquid
FXMQ125MFV1	ϕ15.9	ϕ9.5
FXMQ200MFV1	ϕ19.1	ϕ9.5
FXMQ250MFV1	ϕ22.2	ϕ9.5

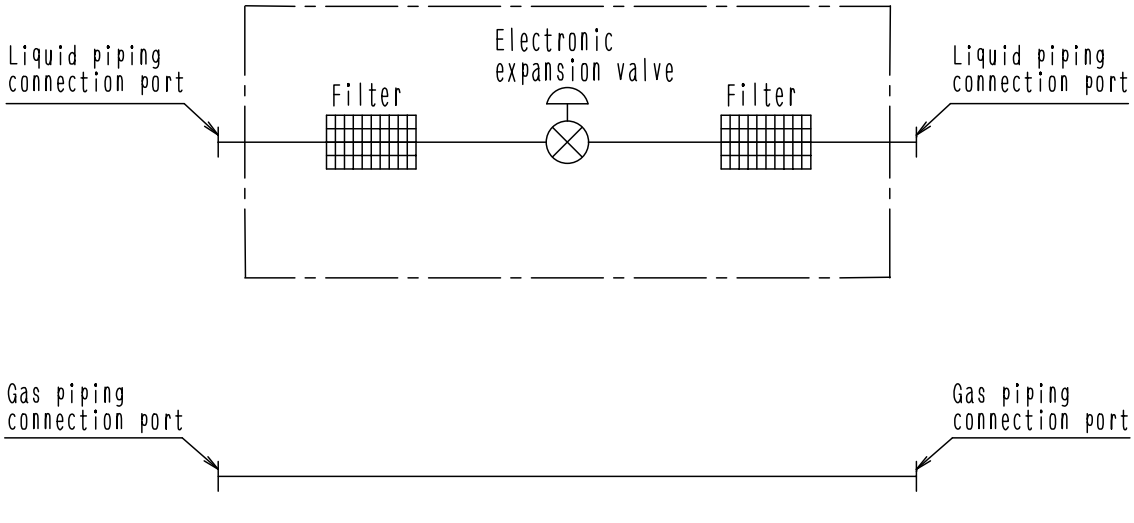
FXUQ + BEVQ

Indoor unit



4D037995E

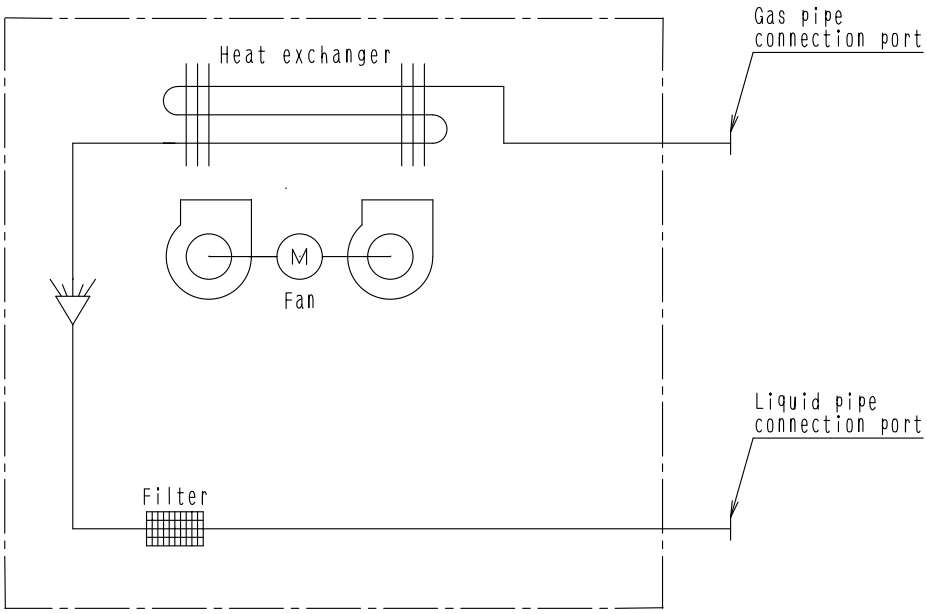
Connection Unit



4D034127B

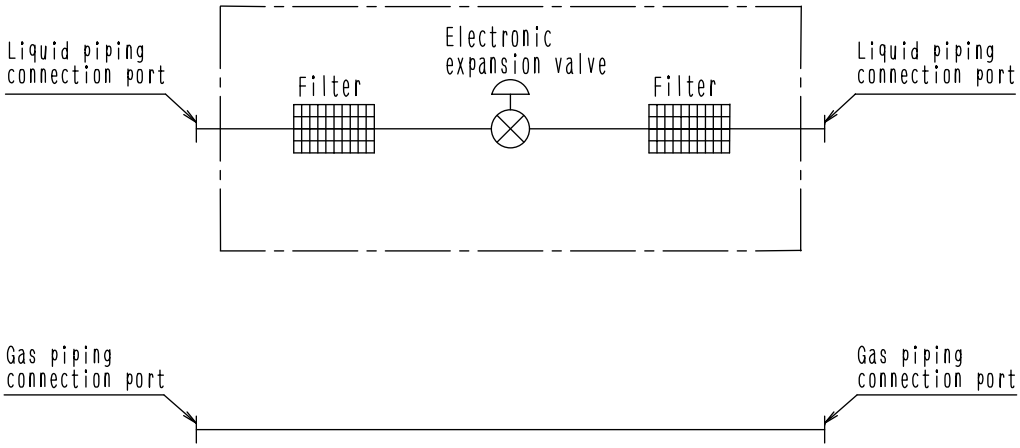
FXAQ + BEVQ

Indoor unit



4D047084

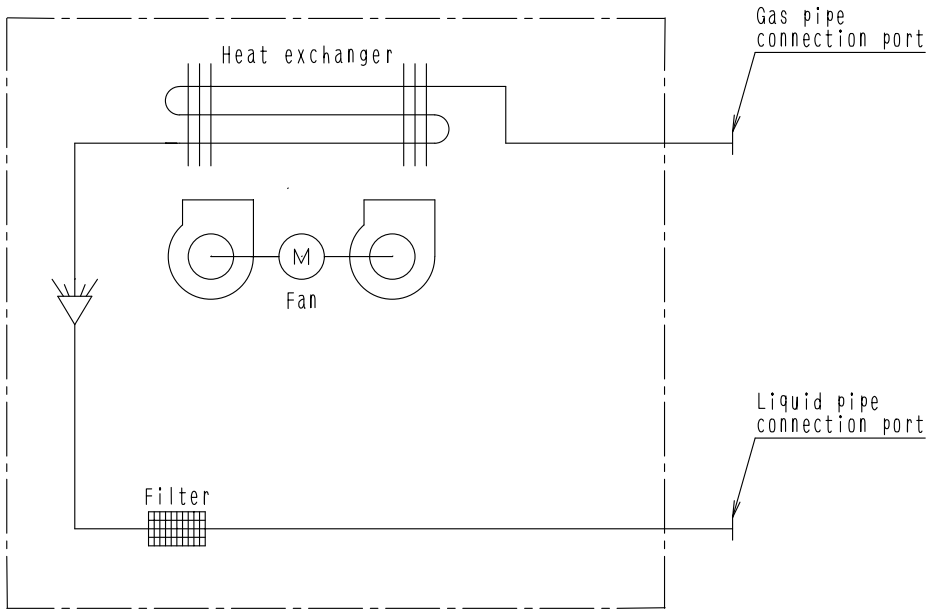
Connection Unit



4D034127B

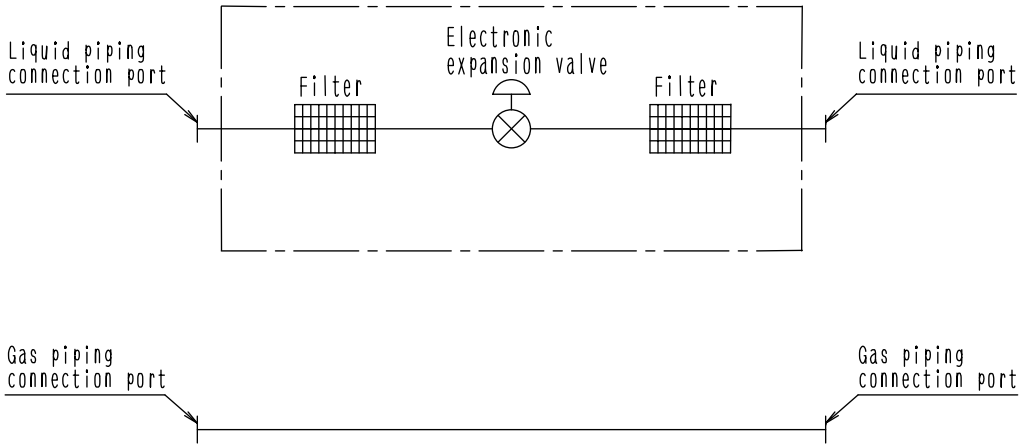
FXLQ + BEVQ

Indoor unit



4D047084

Connection Unit

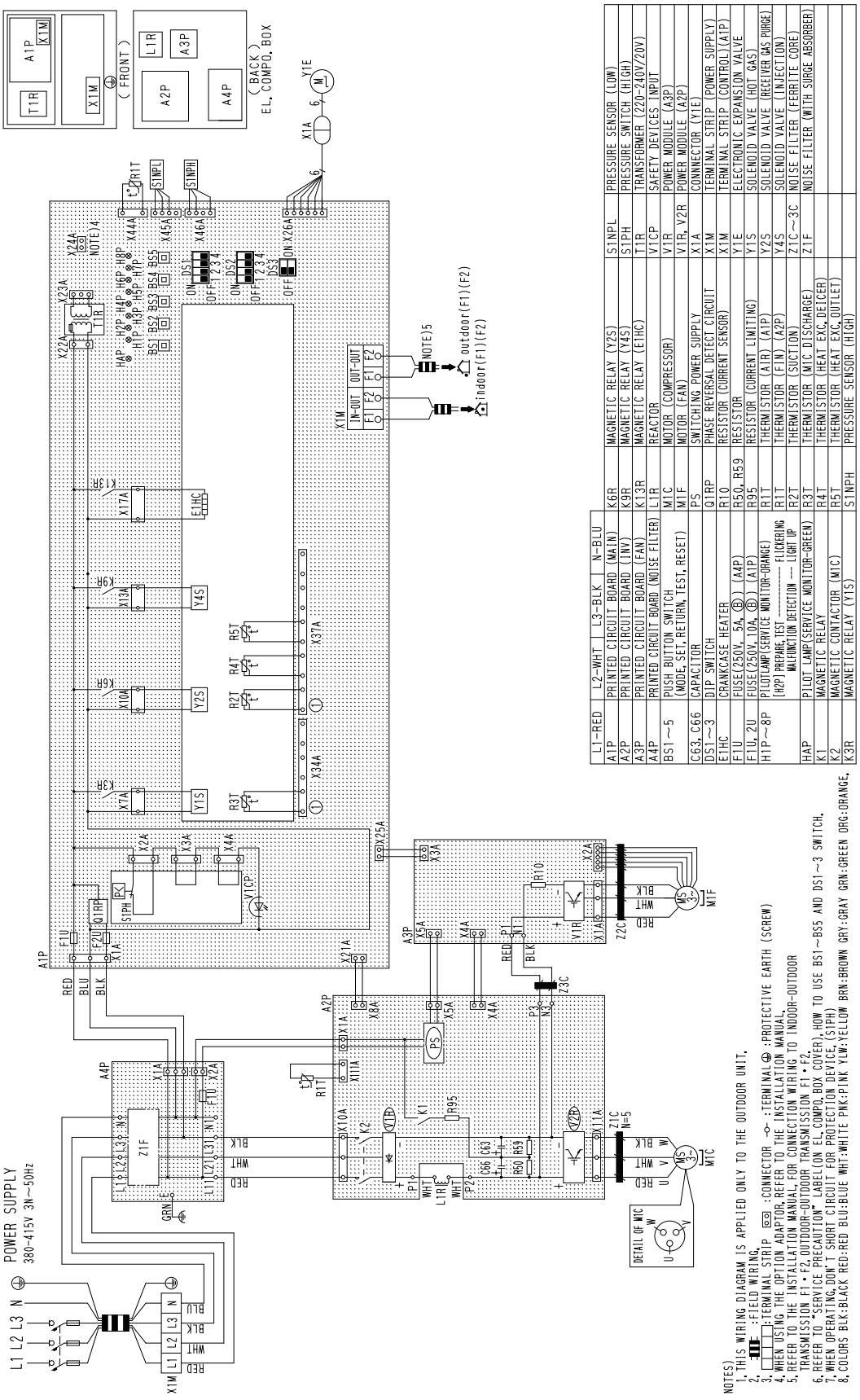


4D034127B

2. Wiring Diagrams for Reference

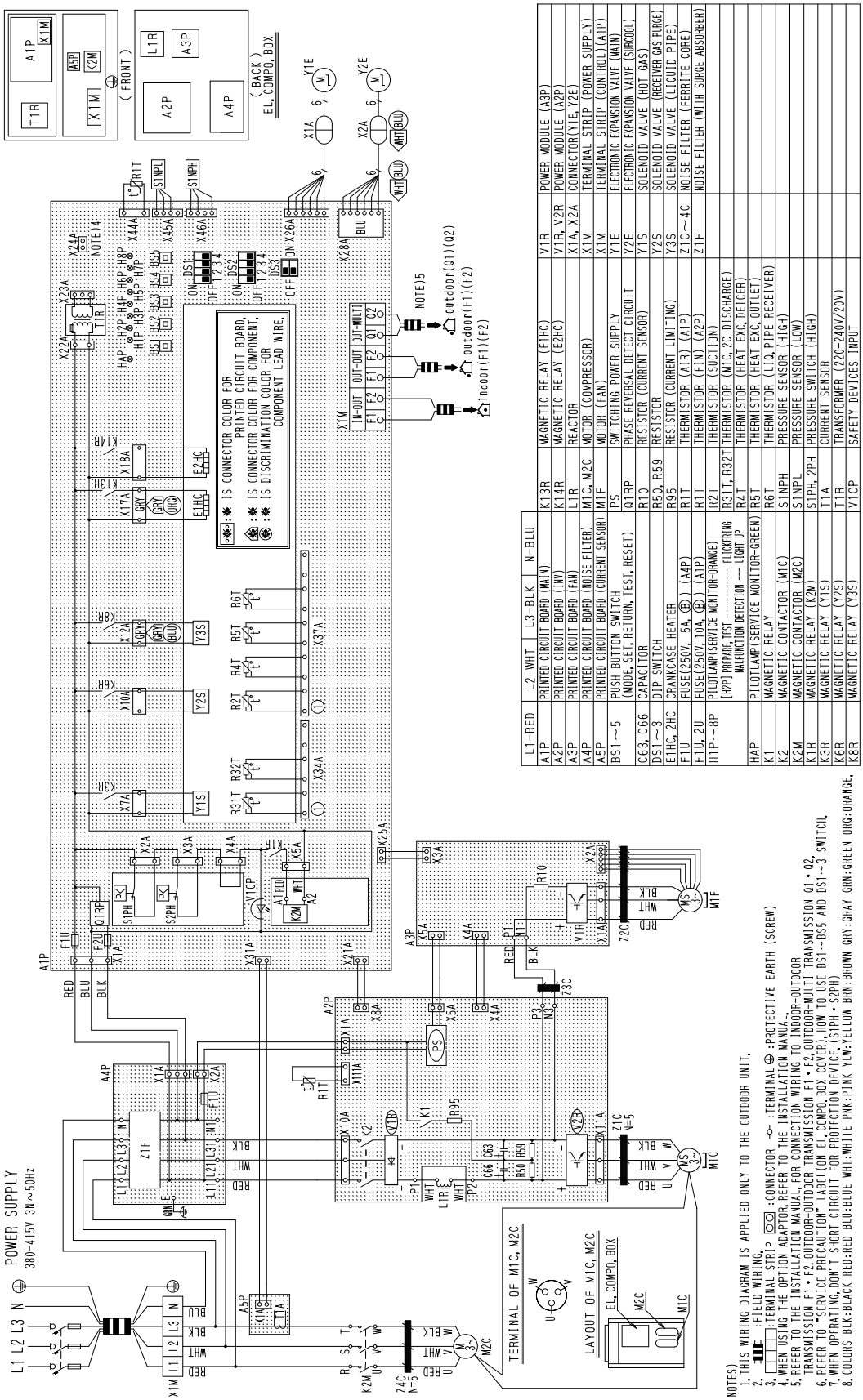
2.1 Outdoor Unit

RXQ5MAY1



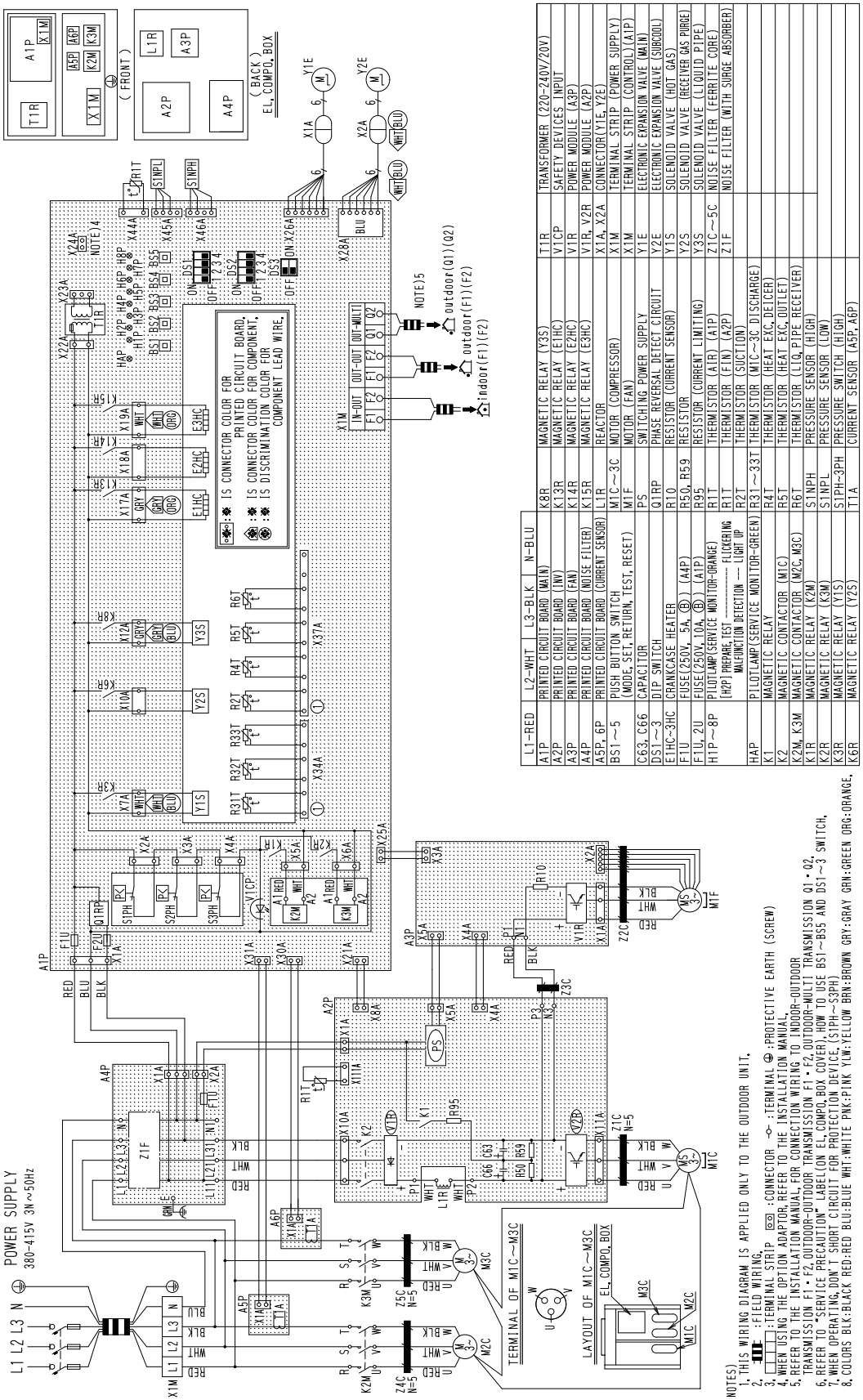
L1-RED	L2-WHT	L3-BLK	N-BLU			
A1P	PRINTED CIRCUIT BOARD (MAIN)			K6R	MAGNETIC RELAY (Y2S)	S1NPL	PRESSURE SENSOR (LOW)
A2P	PRINTED CIRCUIT BOARD (INV)			K9R	MAGNETIC RELAY (Y4S)	S1PH	PRESSURE SWITCH (HIGH)
A3P	PRINTED CIRCUIT BOARD (FAN)			K13R	MAGNETIC RELAY (E1HC)	T1R	TRANSFORMER (220~240V/20V)
A4P	PRINTED CIRCUIT BOARD (NOISE FILTER)			L1R	REACTOR	V1CP	SAFETY DEVICES INPUT
BS1~5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)			M1C	MOTOR (COMPRESSOR)	V1R	POWER MODULE (A3P)
C63, C66	CAPACITOR			M1F	MOTOR (FAN)	V1R, V2R	POWER MODULE (A2P)
DS1~3	DIP SWITCH			PS	SWITCHING POWER SUPPLY	X1A	CONNNECTOR (Y1E)
E1HC	CRANKCASE HEATER			Q1RP	PHASE REVERSAL DETECT CIRCUIT	X1M	TERMINAL STRIP (POWER SUPPLY)
F1U	FUSE(250V, 5A Ⓑ) (A4P)			R10	RESISTOR (CURRENT SENSOR)	X1M	TERMINAL STRIP (CONTROL)(A1P)
F1U, 2U	FUSE(250V, 10A Ⓑ) (A1P)			R50, R59	RESISTOR	Y1E	ELECTRONIC EXPANSION VALVE
H1P~8P	PILOT LAMP(SERVICE MONITOR-ORANGE)			R95	RESISTOR (CURRENT LIMITING)	Y1S	SOLENOID VALVE (HOT GAS)
	PILOT LAMP(SERVICE MONITOR-ORANGE) [H2P] PREPARE TEST ---------- FLICKERING			R1T	THERMISTOR (AIR) (A1P)	Y2S	SOLENOID VALVE (RECEIVER GAS PURGE)
				R1T	THERMISTOR (FIN) (A2P)	Y4S	SOLENOID VALVE (INJECTION)
				R2T	THERMISTOR (SUCTION)	Z1C~3C	NOISE FILTER (FERRITE CORE)
	MALFUNCTION DETECTION ---- LIGHT UP			R3T	THERMISTOR (MIC DISCHARGE)	Z1F	NOISE FILTER (WITH SURGE ABSORBER)
HAP	PILOT LAMP(SERVICE MONITOR-GREEN)			R4T	THERMISTOR (HEAT EXC. DEICER)		
K1	MAGNETIC RELAY			R5T	THERMISTOR (HEAT EXC. OUTLET)		
K2	MAGNETIC CONTACTOR (M1C)			S1NPH	PRESSURE SENSOR (HIGH)		
K3R	MAGNETIC RELAY (Y1S)						

RXQ8MAY1
RXQ10MAY1
RXQ12MAY1



L1-RED	L2-WHT	L3-BLK	N-BLU			
A1P	PRINTED CIRCUIT BOARD (MAIN)			K13R	MAGNETIC RELAY (E1HC)	V1R POWER MODULE (A3P)
A2P	PRINTED CIRCUIT BOARD (INV)			K14R	MAGNETIC RELAY (E2HC)	V1R, V2R POWER MODULE (A2P)
A3P	PRINTED CIRCUIT BOARD (FAN)			L1R	REACTOR	X1A, X2A CONNECTOR(Y1E, Y2E)
A4P	PRINTED CIRCUIT BOARD (NOISE FILTER)			M1C, M2C	MOTOR (COMPRESSOR)	X1M TERMINAL STRIP (POWER SUPPLY)
A5P	PRINTED CIRCUIT BOARD (CURRENT SENSOR)			M1F	MOTOR (FAN)	X1M TERMINAL STRIP (CONTROL)(A1P)
BS1~5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)			PS	SWITCHING POWER SUPPLY	Y1E ELECTRONIC EXPANSION VALVE (MAIN)
C63, C66	CAPACITOR			Q1RP	PHASE REVERSAL DETECT CIRCUIT	Y2E ELECTRONIC EXPANSION VALVE (SUBCOOL)
DS1~3	DIP SWITCH			R10	RESISTOR (CURRENT SENSOR)	Y1S SOLENOID VALVE (HOT GAS)
E1HC, 2HC	CRANKCASE HEATER			R50, R59	RESISTOR	Y2S SOLENOID VALVE (RECEIVER GAS PURGE)
F1U	FUSE(250V, 5A, Ⓑ) (A4P)			R95	RESISTOR (CURRENT LIMITING)	Y3S SOLENOID VALVE (LIQUID PIPE)
F1U, 2U	FUSE(250V, 10A, Ⓑ) (A1P)			R1T	THERMISTOR (AIR) (A1P)	Z1C~4C NOISE FILTER (FERRITE CORE)
H1P~8P	PILOT LAMP(SERVICE MONITOR-ORANGE) (H2P) PREPARE TEST ---------- FLICKERING MALFUNCTION DETECTION ---- LIGHT UP			R1T	THERMISTOR (FIN) (A2P)	Z1F NOISE FILTER (WITH SURGE ABSORBER)
				R2T	THERMISTOR (SUCTION)	
				R31T, R32T	THERMISTOR (M1C, 2C DISCHARGE)	
				R4T	THERMISTOR (HEAT EXC. DEICER)	
HAP	PILOT LAMP(SERVICE MONITOR-GREEN)			R5T	THERMISTOR (HEAT EXC. OUTLET)	
K1	MAGNETIC RELAY			R6T	THERMISTOR (LIQ. PIPE RECEIVER)	
K2	MAGNETIC CONTACTOR (M1C)			S1NPH	PRESSURE SENSOR (HIGH)	
K2M	MAGNETIC CONTACTOR (M2C)			S1NPL	PRESSURE SENSOR (LOW)	
K1R	MAGNETIC RELAY (K2M)			S1PH, 2PH	PRESSURE SWITCH (HIGH)	
K3R	MAGNETIC RELAY (Y1S)			T1A	CURRENT SENSOR	
K6R	MAGNETIC RELAY (Y2S)			T1R	TRANSFORMER (220~240V/20V)	
K8R	MAGNETIC RELAY (Y3S)			V1CP	SAFETY DEVICES INPUT	

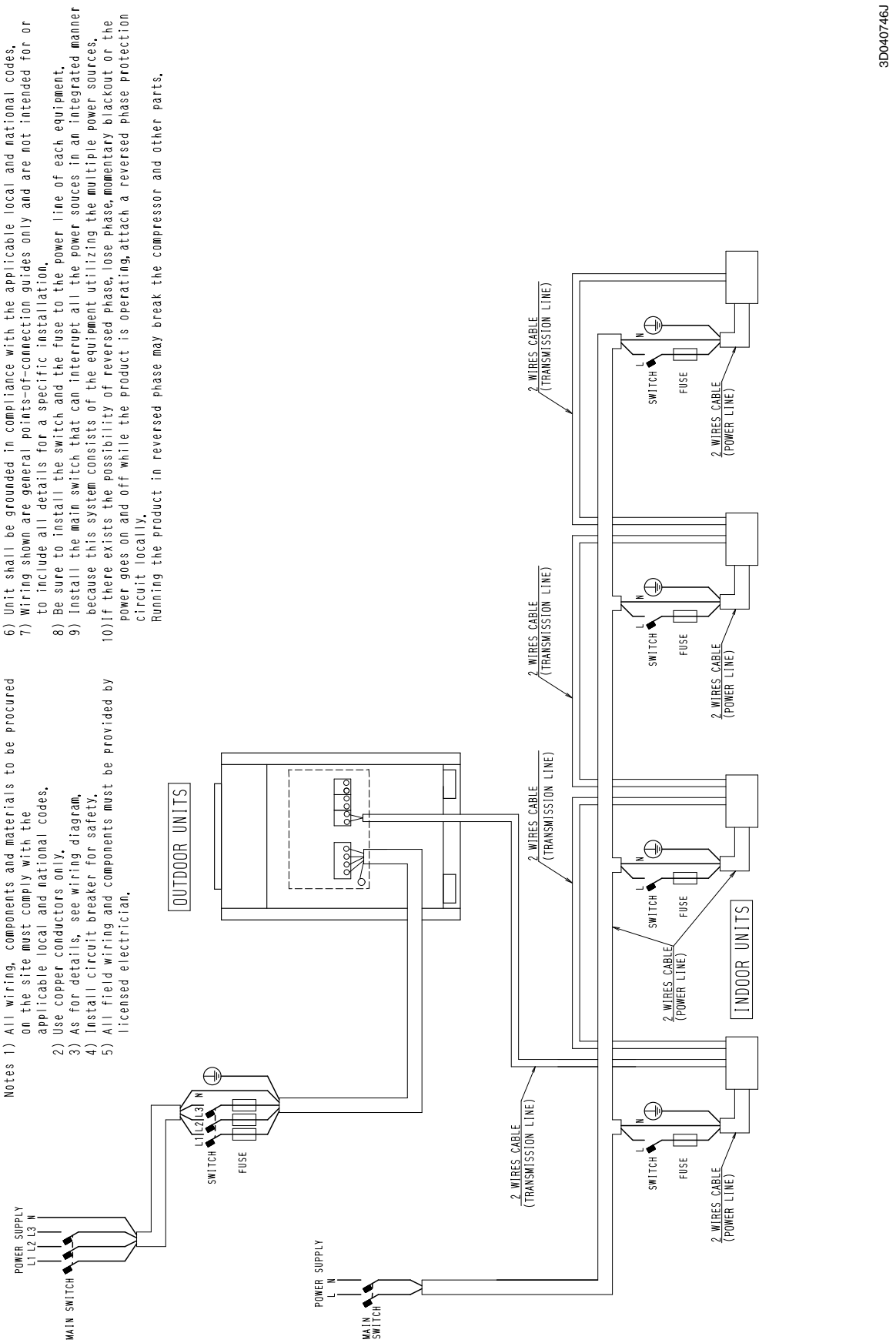
RXQ14MAY1
RXQ16MAY1



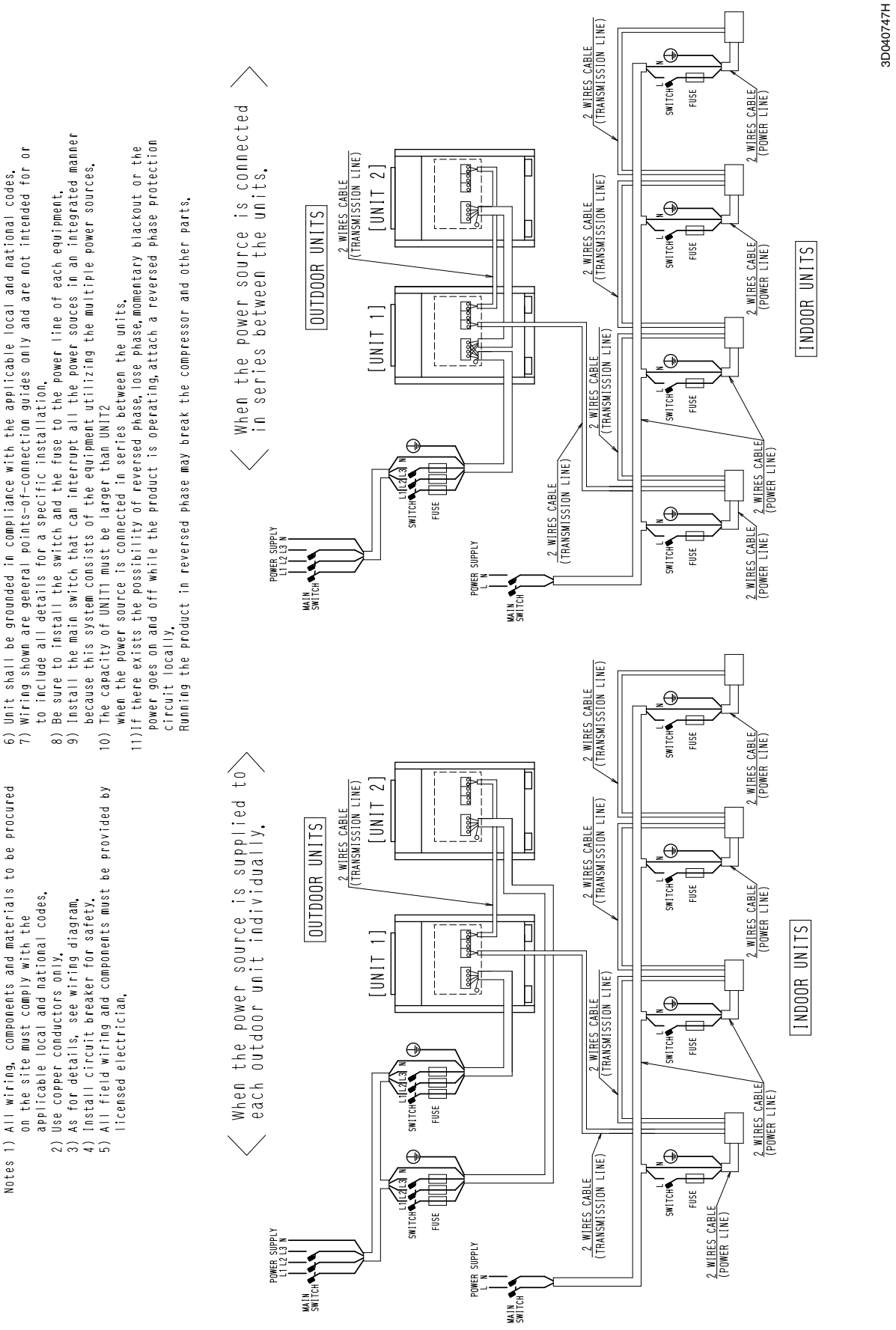
L1-RED	L2-WHT	L3-BLK	N-BLU			
A1P	PRINTED CIRCUIT BOARD (MAIN)			K8R	MAGNETIC RELAY (Y3S)	T1R	TRANSFORMER (220~240V/20V)
A2P	PRINTED CIRCUIT BOARD (INV)			K13R	MAGNETIC RELAY (E1HC)	V1CP	SAFETY DEVICES INPUT
A3P	PRINTED CIRCUIT BOARD (FAN)			K14R	MAGNETIC RELAY (E2HC)	V1R	POWER MODULE (A3P)
A4P	PRINTED CIRCUIT BOARD (NOISE FILTER)			K15R	MAGNETIC RELAY (E3HC)	V1R, V2R	POWER MODULE (A2P)
A5P, 6P	PRINTED CIRCUIT BOARD (CURRENT SENSOR)			L1R	REACTOR	X1A, X2A	CONNECTOR(Y1E, Y2E)
BS1~5	PUSH BUTTON SWITCH (MODE, SET, RETURN, TEST, RESET)			M1C~3C	MOTOR (COMPRESSOR)	X1M	TERMINAL STRIP (POWER SUPPLY)
				M1F	MOTOR (FAN)	X1M	TERMINAL STRIP (CONTROL)(A1P)
C63, C66	CAPACITOR			PS	SWITCHING POWER SUPPLY	Y1E	ELECTRONIC EXPANSION VALVE (MAIN)
DS1~3	DIP SWITCH			Q1RP	PHASE REVERSAL DETECT CIRCUIT	Y2E	ELECTRONIC EXPANSION VALVE (SUBCOOL)
E1HC~3HC	CRANKCASE HEATER			R10	RESISTOR (CURRENT SENSOR)	Y1S	SOLENOID VALVE (HOT GAS)
F1U	FUSE(250V, 5A (B)) (A4P)			R50, R59	RESISTOR	Y2S	SOLENOID VALVE (RECEIVER GAS PURGE)
F1U, 2U	FUSE(250V, 10A (B)) (A1P)			R95	RESISTOR (CURRENT LIMITING)	Y3S	SOLENOID VALVE (LIQUID PIPE)
H1P~8P	PILOT LAMP(SERVICE MONITOR-ORANGE)			R1T	THERMISTOR (AIR) (A1P)	Z1C~5C	NOISE FILTER (FERRITE CORE)
	PILOT LAMP(TEST (H2P) PREPARE, MALFUNCTION DETECTION		FLICKERING LIGHT UP	R1T	THERMISTOR (FIN) (A2P)	Z1F	NOISE FILTER (WITH SURGE ABSORBER)
				R2T	THERMISTOR (SUCTION)		
HAP	PILOT LAMP(SERVICE MONITOR-GREEN)			R31~33T	THERMISTOR (M1C~3C DISCHARGE)		
K1	MAGNETIC RELAY			R4T	THERMISTOR (HEAT EXC. DEICER)		
K2	MAGNETIC CONTACTOR (M1C)			R5T	THERMISTOR (HEAT EXC. OUTLET)		
K2M, K3M	MAGNETIC CONTACTOR (M2C, M3C)			R6T	THERMISTOR (LIQ. PIPE RECEIVER)		
K1R	MAGNETIC RELAY (K2M)			S1NPH	PRESSURE SENSOR (HIGH)		
K2R	MAGNETIC RELAY (K3M)			S1NPL	PRESSURE SENSOR (LOW)		
K3R	MAGNETIC RELAY (Y1S)			S1PH~3PH	PRESSURE SWITCH (HIGH)		
K6R	MAGNETIC RELAY (Y2S)			T1A	CURRENT SENSOR (A5P, A6P)		

2.2 Field Wiring

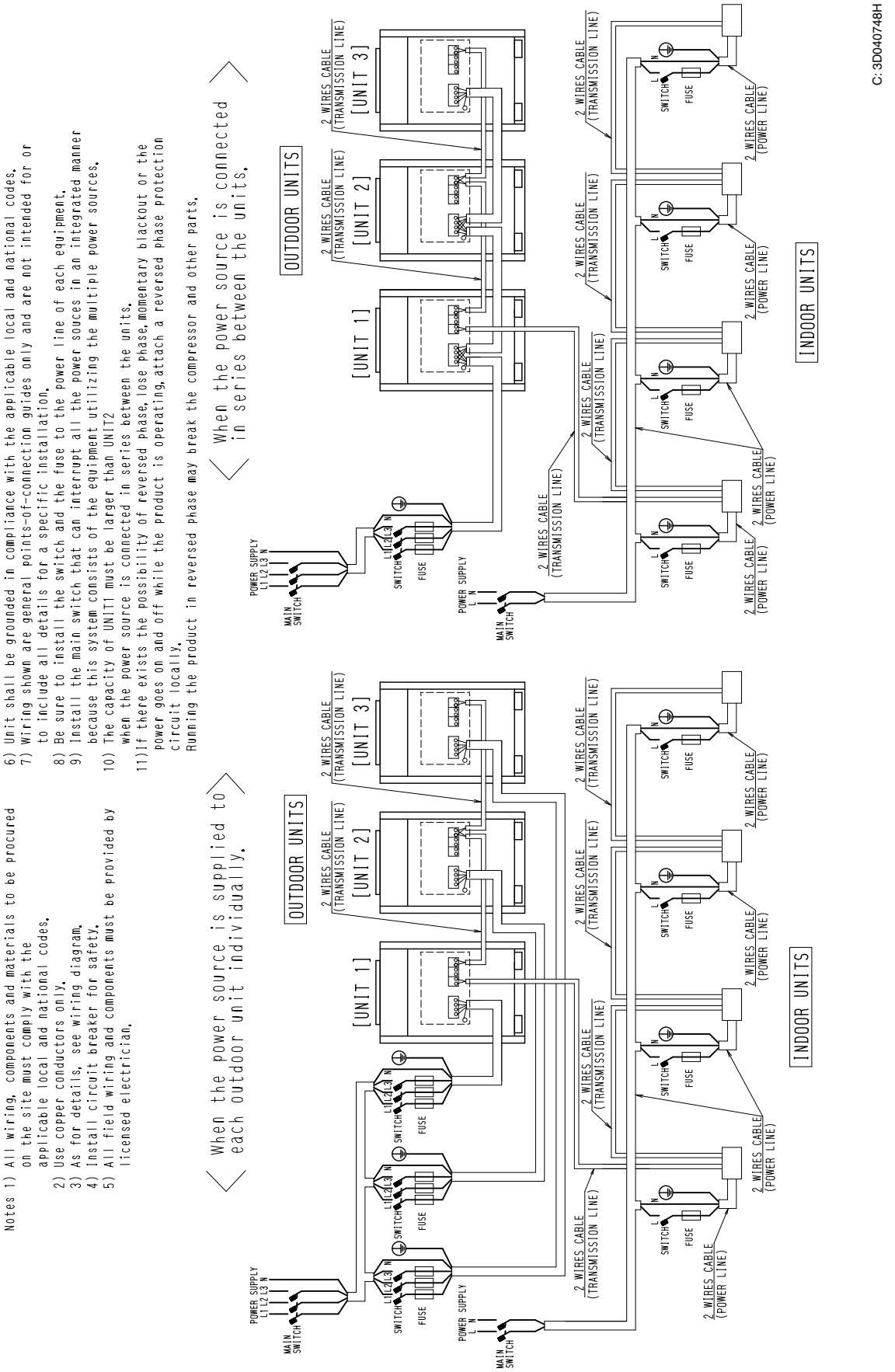
RXQ5, 8, 10, 12, 14, 16MAY1



RXQ18, 20, 22, 24, 26, 28, 30, 32MAY1



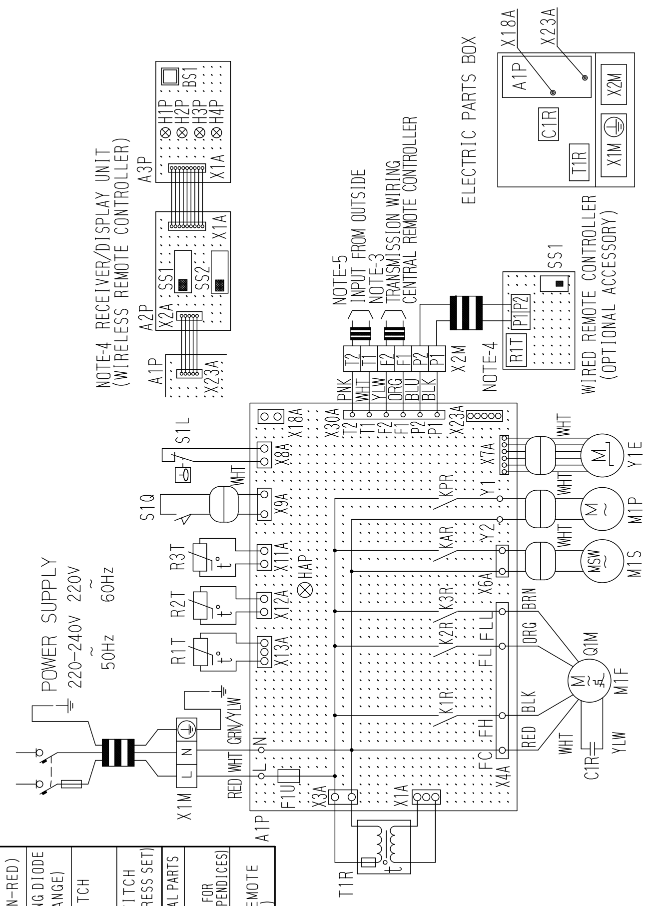
RXQ34, 36, 38, 40, 42, 44, 46, 48MAY1



2.3 Indoor Unit

FXCQ20M / 25M / 32M / 63MVE

3D039556A



INDOOR UNIT	
A1P	PRINTED CIRCUIT BOARD
C1R	CAPACITOR(M1F)
F1U	FUSE(Ⓑ,5A, 250V)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GREEN)
K1R-K3R	MAGNETIC RELAY(M1F)
KAR	MAGNETIC RELAY(M1S)
KPR	MAGNETIC RELAY(M1P)
M1F	MOTOR(INDOOR FAN)
M1P	MOTOR(DRAIN PUMP)
M1S	MOTOR (SWING FLAP)
Q1M	THERMO SWITCH (M1F EMBEDDED)
R1T	THERMISTOR(AIR)
R2T•R3T	THERMISTOR(COIL)
S1L	FLOAT SWITCH
S1Q	LIMIT SWITCH (SWING FLAP)
T1R	TRANSFORMER(220-240V/22V)
X1M	TERMINAL BLOCK(POWER)
X2M	TERMINAL BLOCK(CONTROL)
Y1E	ELECTRONIC EXPANSION VALVE

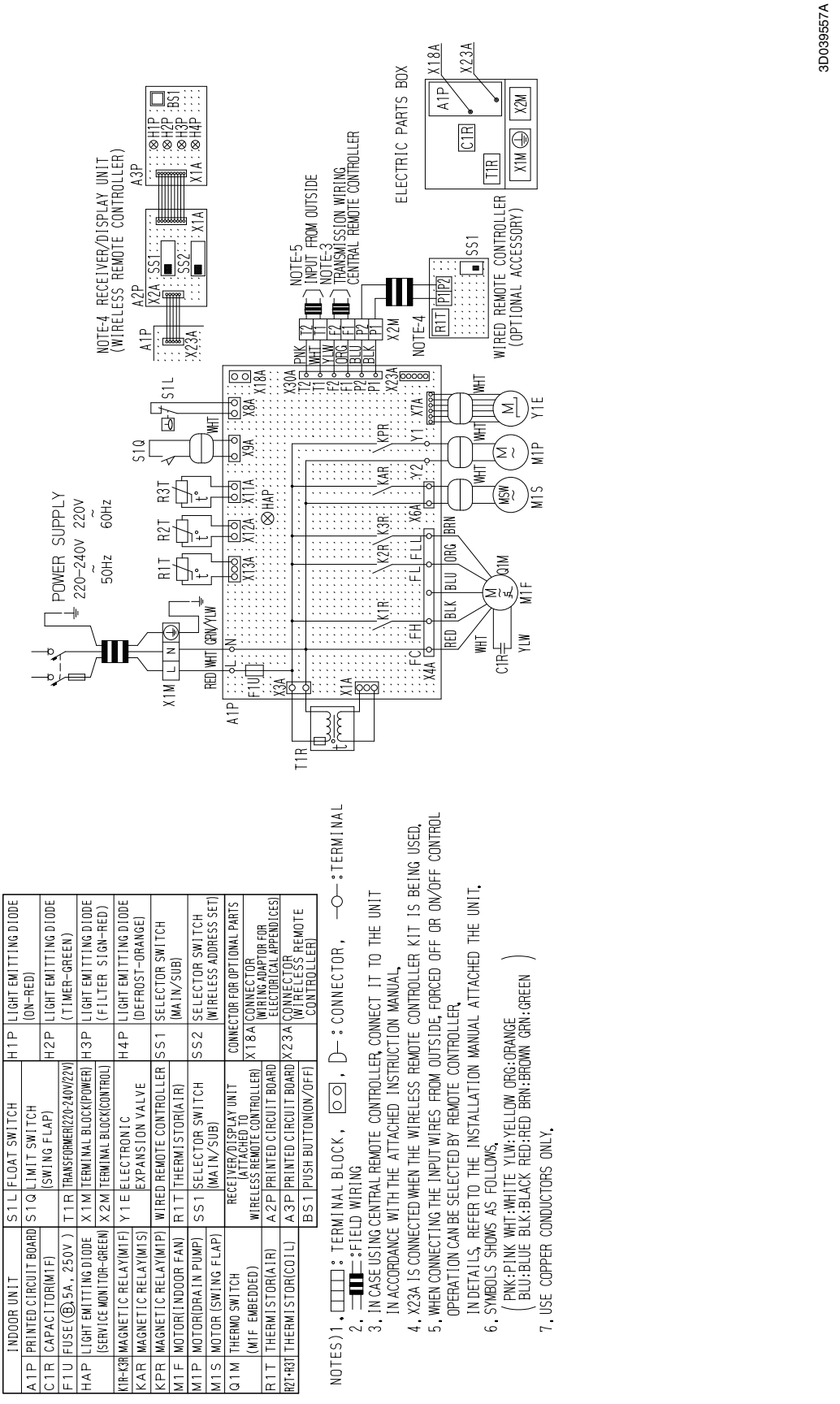
WIRED REMOTE CONTROLLER	
R1T	THERMISTOR(AIR)
SS1	SELECTOR SWITCH (MAIN/SUB)

RECEIVER/DISPLAY UNIT (ATTACHED TO WIRELESS REMOTE CONTROLLER)	
A2P	PRINTED CIRCUIT BOARD
A3P	PRINTED CIRCUIT BOARD
BS1	PUSH BUTTON(ON/OFF)
H1P	LIGHT EMITTING DIODE (ON-RED)
H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
SS1	SELECTOR SWITCH (MAIN/SUB)
SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)

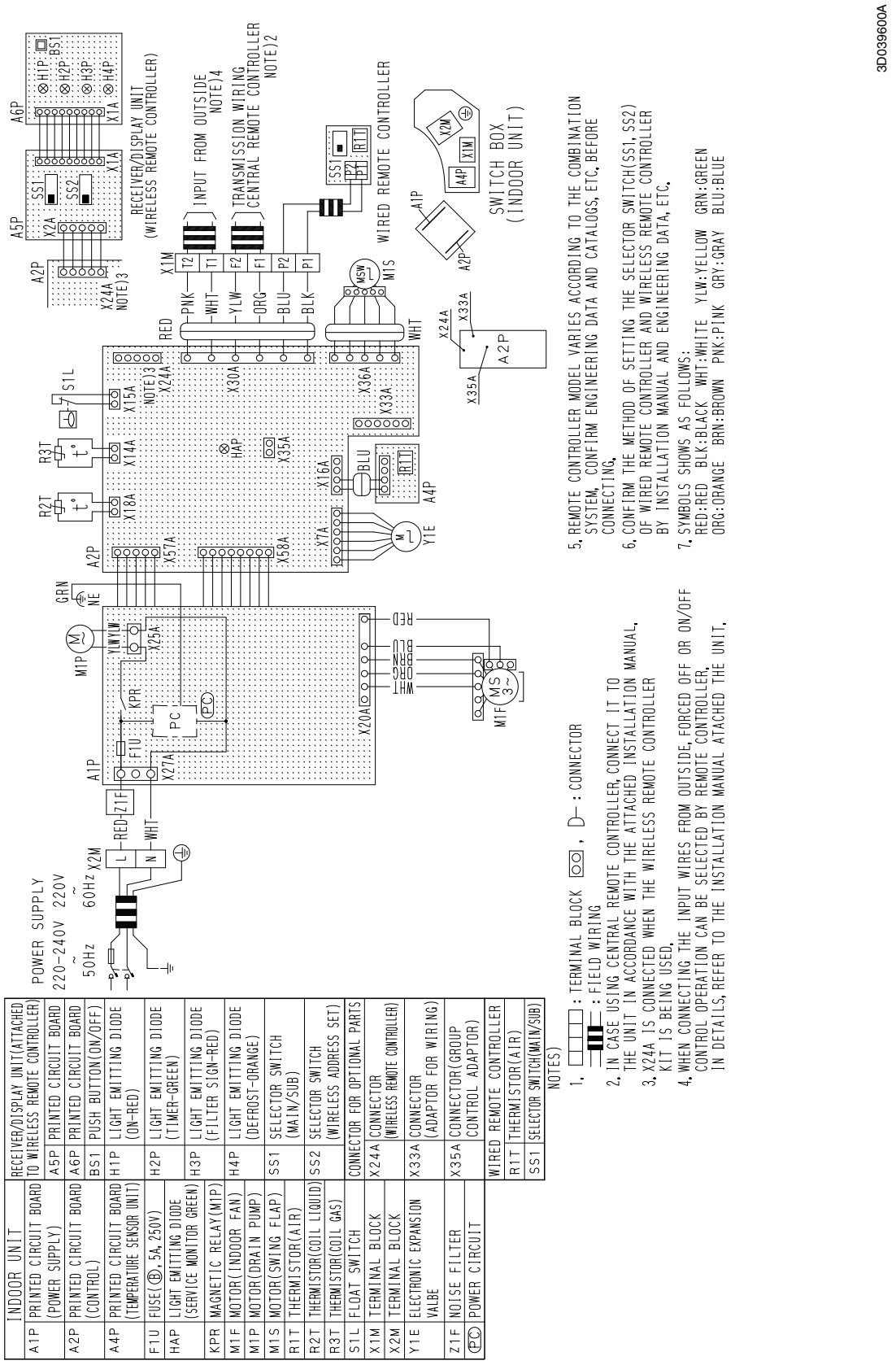
CONNECTOR FOR OPTIONAL PARTS	
X18A	CONNECTOR (WIRING ADAPTOR FOR ELECTORICAL APPENDICES)
X23A	CONNECTOR (WIRELESS REMOTE CONTROLLER)

NOTES)
1. ▭▭▭ : TERMINAL BLOCK, ⊙⊙, ▷— : CONNECTOR, —○— : TERMINAL
2. ═▮▮═ : FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTRUCTION MANUAL.
4. X23A IS CONNECTED WHEN THE WIRELESS REMOTE CONTROLLER KIT IS BEING USED.
5. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY REMOTE CONTROLLER. IN DETAILS, REFER TO THE INSTALLATION MANUAL ATTACHED THE UNIT.
6. SYMBOLS SHOWS AS FOLLOWS. (PNK:PINK WHT:WHITE YLW:YELLOW ORG:ORANGE BLU:BLUE BLK:BLACK RED:RED BRN:BROWN GRN:GREEN)
7. USE COPPER CONDUCTORS ONLY.

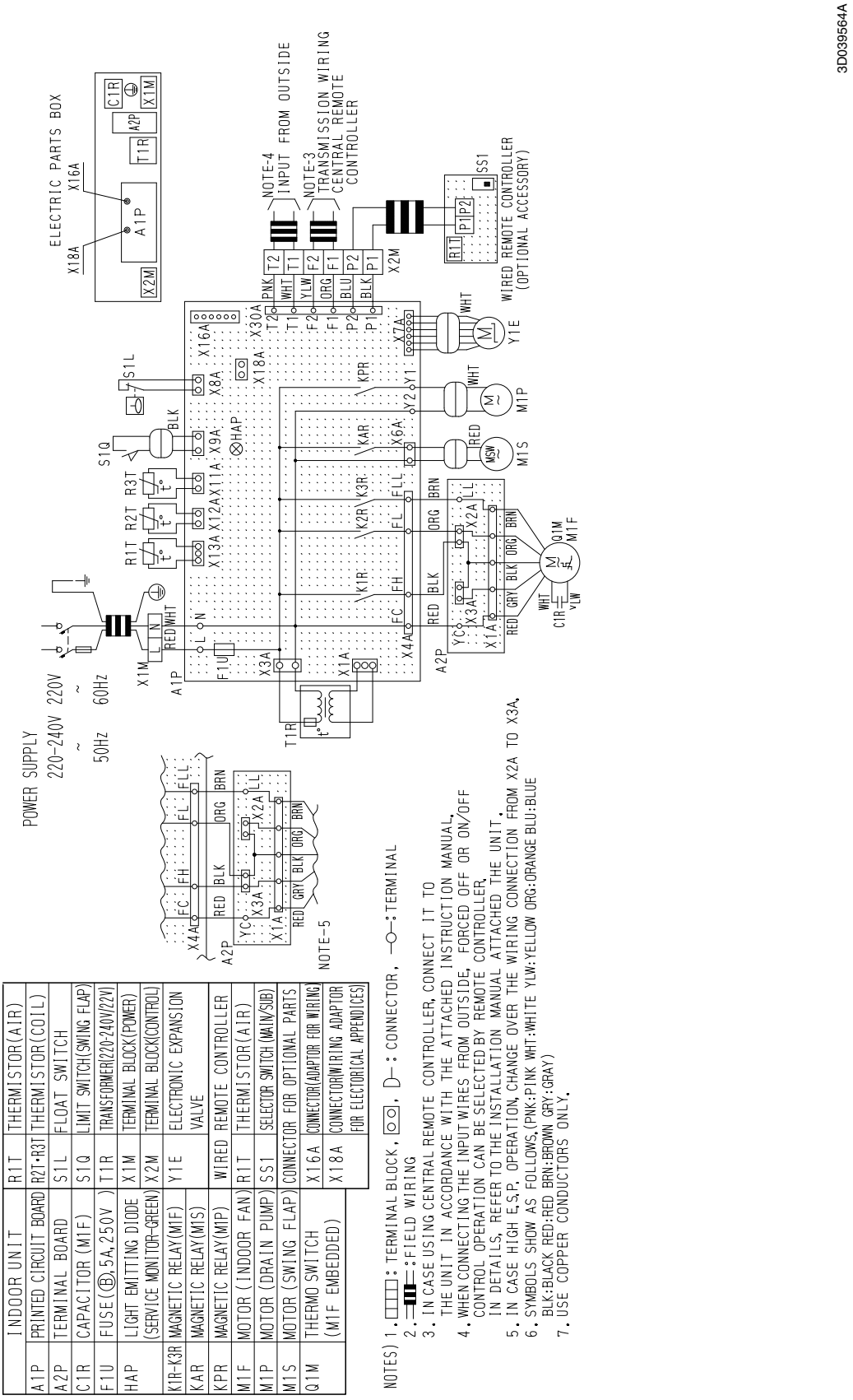
FXCQ40M / 50M / 80M/ 125MVE



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



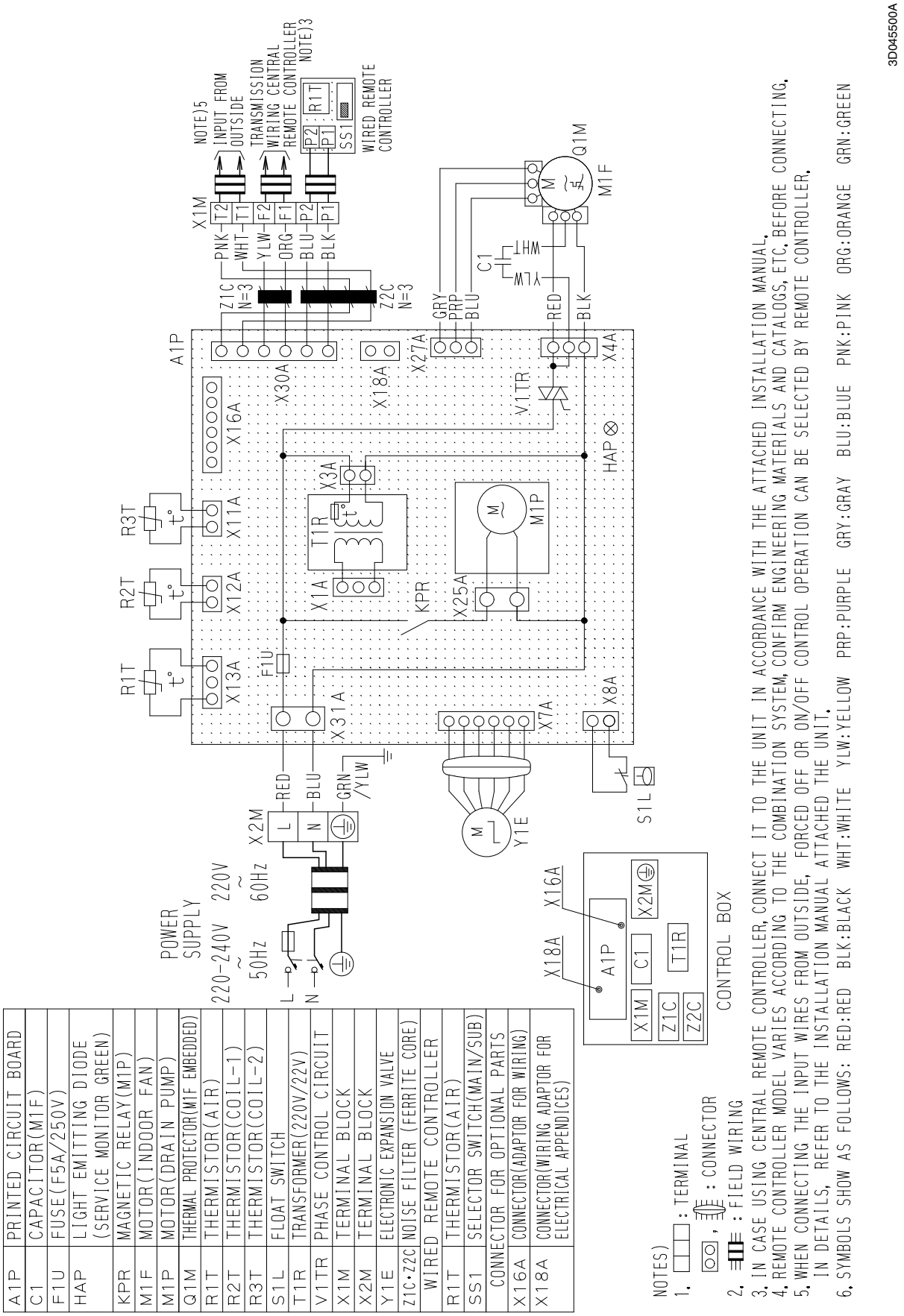
FXKQ25M / 32M / 40M / 63MVE



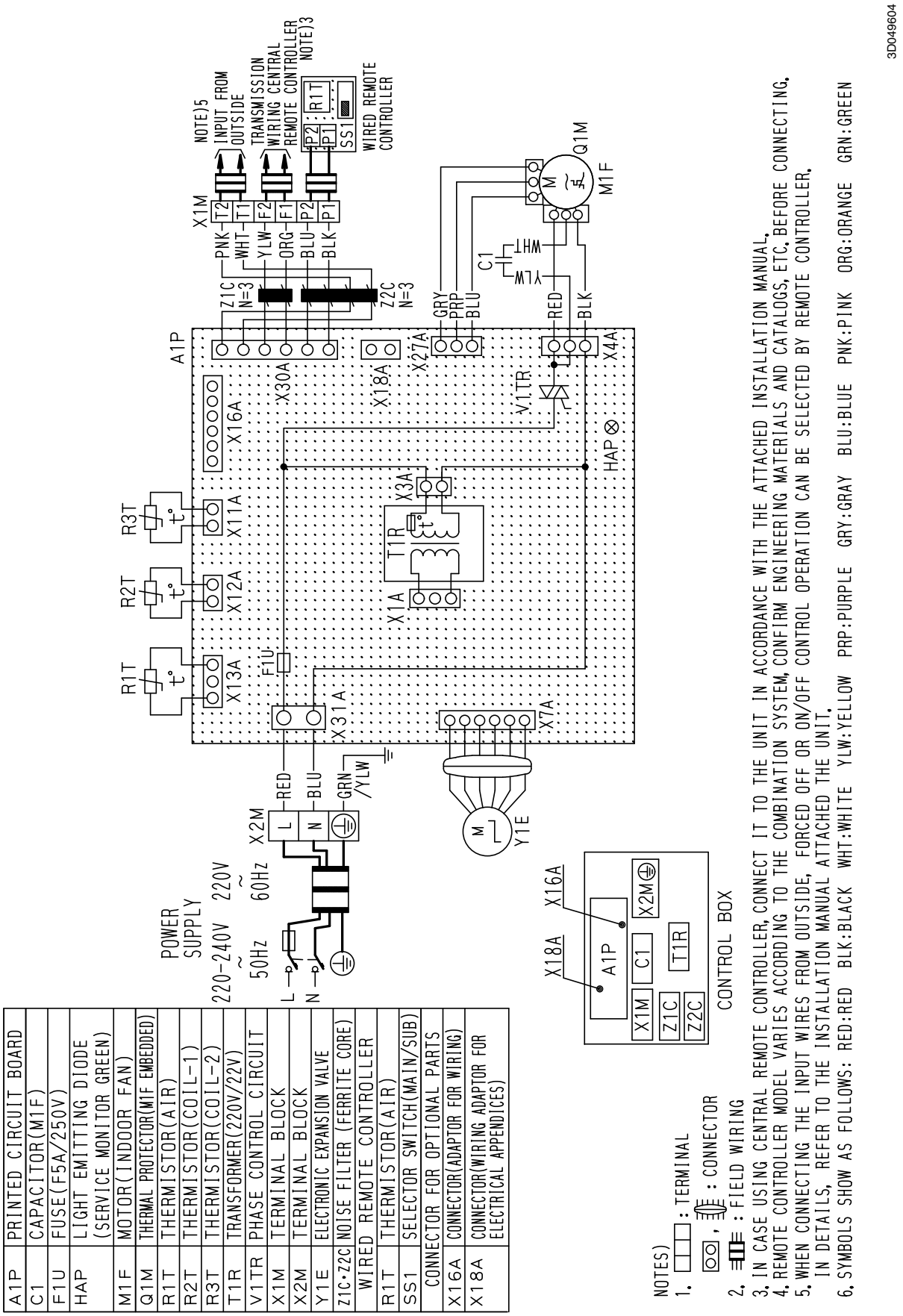
INDOOR UNIT		R1T	THERMISTOR(AIR)
A1P	PRINTED CIRCUIT BOARD	R2T•R3T	THERMISTOR(COIL)
A2P	TERMINAL BOARD	S1L	FLOAT SWITCH
C1R	CAPACITOR(M1F)	S1Q	LIMIT SWITCH(SWING FLAP)
F1U	FUSE(Ⓑ,5A,250V)	T1R	TRANSFORMER(220-240V/22V)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GREEN)	X1M	TERMINAL BLOCK(POWER)
		X2M	TERMINAL BLOCK(CONTROL)
K1R-K3R	MAGNETIC RELAY(M1F)	Y1E	ELECTRONIC EXPANSION VALVE
KAR	MAGNETIC RELAY(M1S)		
KPR	MAGNETIC RELAY(M1P)	WIRED	REMOTE CONTROLLER
M1F	MOTOR (INDOOR FAN)	R1T	THERMISTOR(AIR)
M1P	MOTOR (DRAIN PUMP)	SS1	SELECTOR SWITCH (MAIN/SUB)
M1S	MOTOR (SWING FLAP)	CONNECTOR	FOR OPTIONAL PARTS
Q1M	THERMO SWITCH (M1F EMBEDDED)	X16A	CONNECTOR(ADAPTOR FOR WIRING)
		X18A	CONNECTOR(WIRING ADAPTOR FOR ELECTORICAL APPENDICES)

NOTES) 1. □□□: TERMINAL BLOCK, ⊡⊡, ⊃: CONNECTOR, —○—: TERMINAL
2. ▬▬: FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTRUCTION MANUAL.
4. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY REMOTE CONTROLLER. IN DETAILS, REFER TO THE INSTALLATION MANUAL ATTACHED THE UNIT.
5. IN CASE HIGH E.S.P. OPERATION, CHANGE OVER THE WIRING CONNECTION FROM X2A TO X3A.
6. SYMBOLS SHOW AS FOLLOWS, (PNK:PINK WHT:WHITE YLW:YELLOW ORG:ORANGE BLU:BLUE BLK:BLACK RED:RED BRN:BROWN GRY:GRAY)
7. USE COPPER CONDUCTORS ONLY.

FXDQ20N / 25N / 32N / 40N / 50N / 63NVE (with Drain Pump)

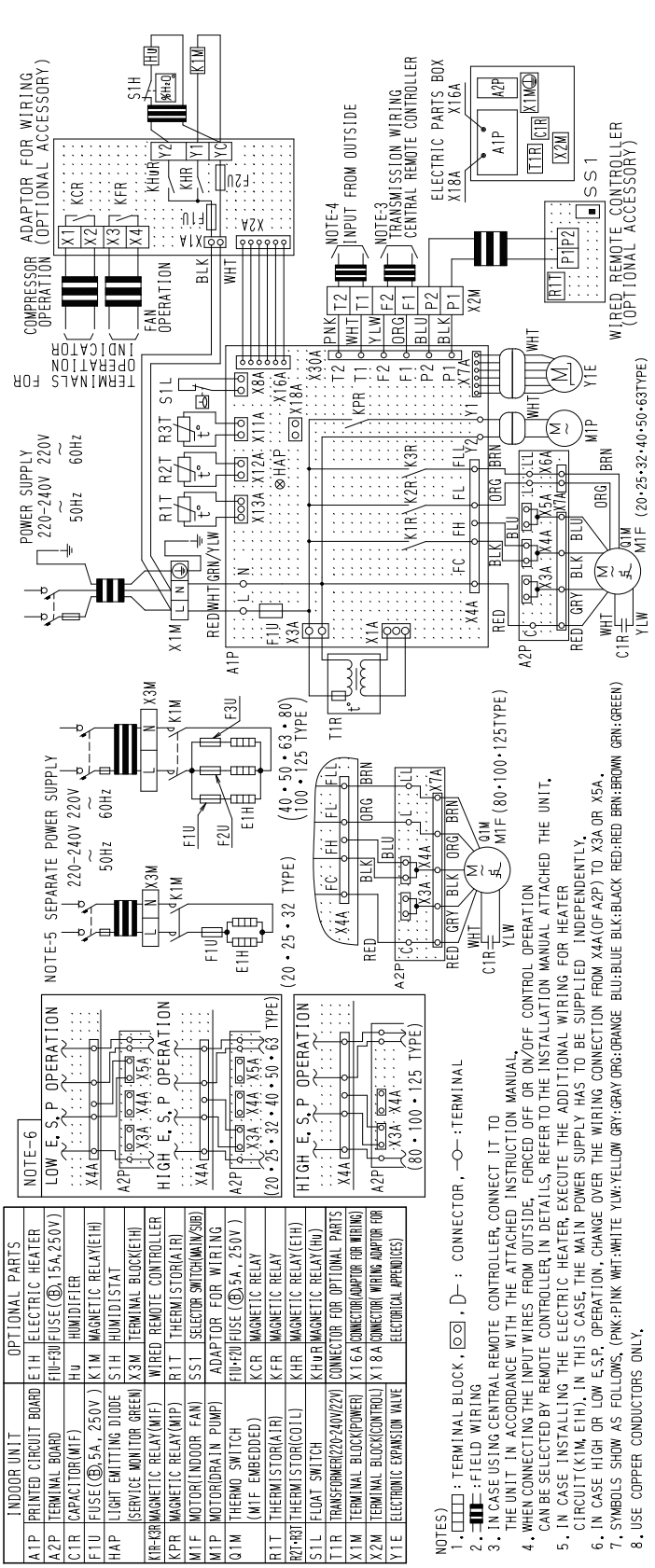


FXDQ20N / 25N / 32N / 40N / 50N / 63NVET (without Drain Pump)



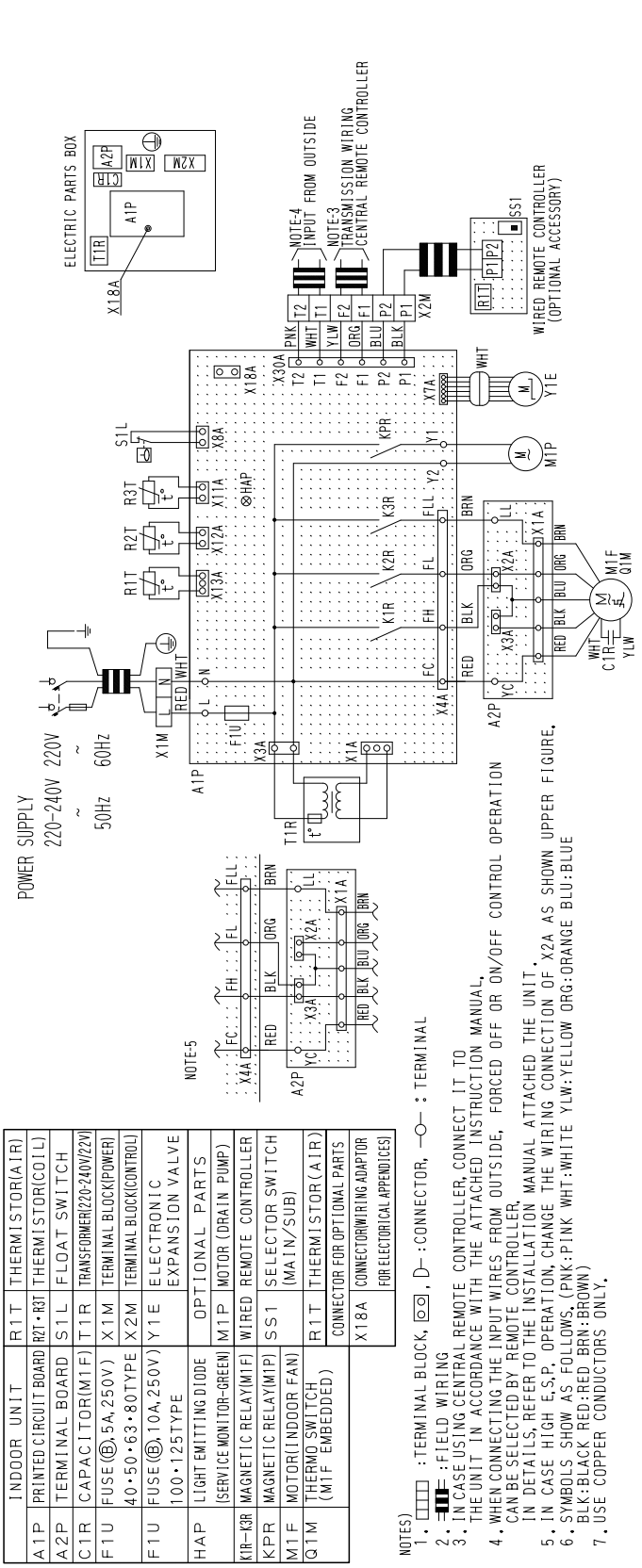
FXSQ20M / 25M / 32M / 40M / 50M / 63M / 80M / 100M / 125MVE

3D039561A



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

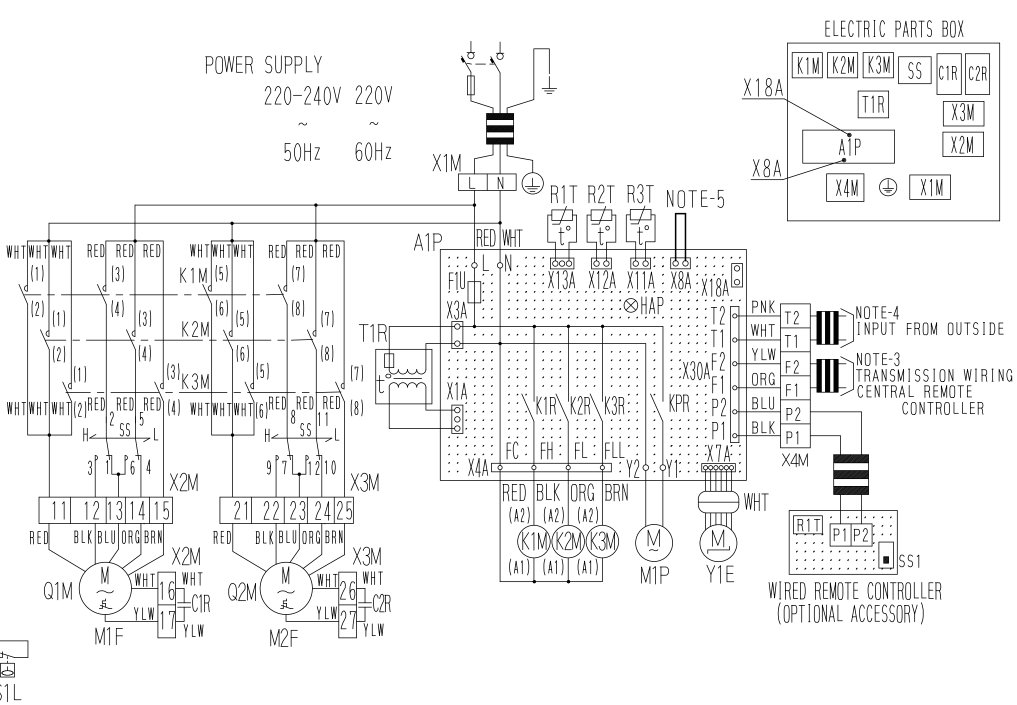
3D039620A



INDOOR UNIT		R1T	THERMISTOR(AIR)
A1P	PRINTED CIRCUIT BOARD	R2T・R3T	THERMISTOR(COIL)
A2P	TERMINAL BOARD	S1L	FLOAT SWITCH
C1R	CAPACITOR(M1F)	T1R	TRANSFORMER(220-240V/22V)
F1U	FUSE(Ⓑ,5A,250V) 40・50・63・80TYPE	X1M	TERMINAL BLOCK(POWER)
		X2M	TERMINAL BLOCK(CONTROL)
F1U	FUSE(Ⓑ,10A,250V) 100・125TYPE	Y1E	ELECTRONIC EXPANSION VALVE
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GREEN)	OPTIONAL PARTS	
		M1P	MOTOR (DRAIN PUMP)
K1R-K3R	MAGNETIC RELAY(M1F)	WIRED	REMOTE CONTROLLER
KPR	MAGNETIC RELAY(M1P)	SS1	SELECTOR SWITCH (MAIN/SUB)
M1F	MOTOR(INDOOR FAN)	R1T	THERMISTOR(AIR)
Q1M	THERMO SWITCH (M1F EMBEDDED)	CONNECTOR FOR OPTIONAL PARTS	
		X18A	CONNECTOR(WIRING ADAPTOR FOR ELECTORICAL APPENDICES)

NOTES)
1. ▭▭ :TERMINAL BLOCK, ⊙⊙ , ⊃– :CONNECTOR, –○– : TERMINAL
2. ▬▬ :FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTRUCTION MANUAL.
4. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY REMOTE CONTROLLER. IN DETAILS, REFER TO THE INSTALLATION MANUAL ATTACHED THE UNIT.
5. IN CASE HIGH E.S.P. OPERATION, CHANGE THE WIRING CONNECTION OF X2A AS SHOWN UPPER FIGURE.
6. SYMBOLS SHOW AS FOLLOWS. (PNK:PINK WHT:WHITE YLW:YELLOW ORG:ORANGE BLU:BLUE BLK:BLACK RED:RED BRN:BROWN)
7. USE COPPER CONDUCTORS ONLY.

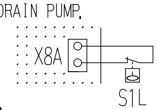
FXMQ200M / 250MVE



INDOOR UNIT		R1T	THERMISTOR(AIR)
A1P	PRINTED CIRCUIT BOARD	R2T・R3T	THERMISTOR(COIL)
C1R・C2R	CAPACITOR (M1F・2F)	SS	SELECTOR SWITCH (STATIC PRESSURE)
F1U	FUSE(Ⓑ,5A, 250V)		
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GREEN)	T1R	TRANSFORMER(220-240V/22V)
		X1M	TERMINAL BLOCK(POWER)
K1M	MAGNETIC CONTACTOR(M1F・2F)	X2M−X3M	TERMINAL BLOCK
K2M	MAGNETIC CONTACTOR(M1F・2F)	X4M	TERMINAL BLOCK(CONTROL)
K3M	MAGNETIC CONTACTOR(M1F・2F)	Y1E	ELECTRONIC EXPANSION VALVE
K1R−K3R	MAGNETIC RELAY(M1F・2F)	OPTIONAL PARTS	
KPR	MAGNETIC RELAY(M1P)	M1P	MOTOR(DRAIN PUMP)
M1F・M2F	MOTOR (INDOOR FAN)	WIRED REMOTE CONTROLLER	
Q1M・Q2M	THERMO SWITCH (M1F・2F EMBEDDED)	R1T	THERMISTOR(AIR)
		SS1	SELECTOR SWITCH(MAIN/SUB)
		CONNECTOR FOR OPTIONAL PARTS	
		X8A	CONNECTOR(FLOAT SWITCH)
		X18A	CONNECTOR(WIRING ADAPTOR FOR ELECTORICAL APPENDICES)

NOTES)

1. ▭▭▭ : TERMINAL BLOCK
   ▭, D− : CONNECTOR
   ▭ : SHORT CIRCUIT CONNECTOR
   —○— : TERMINAL
2. ═▮▮═ : FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTRUCTION MANUAL.
4. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY REMOTE CONTROLLER. 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 SHOW 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".



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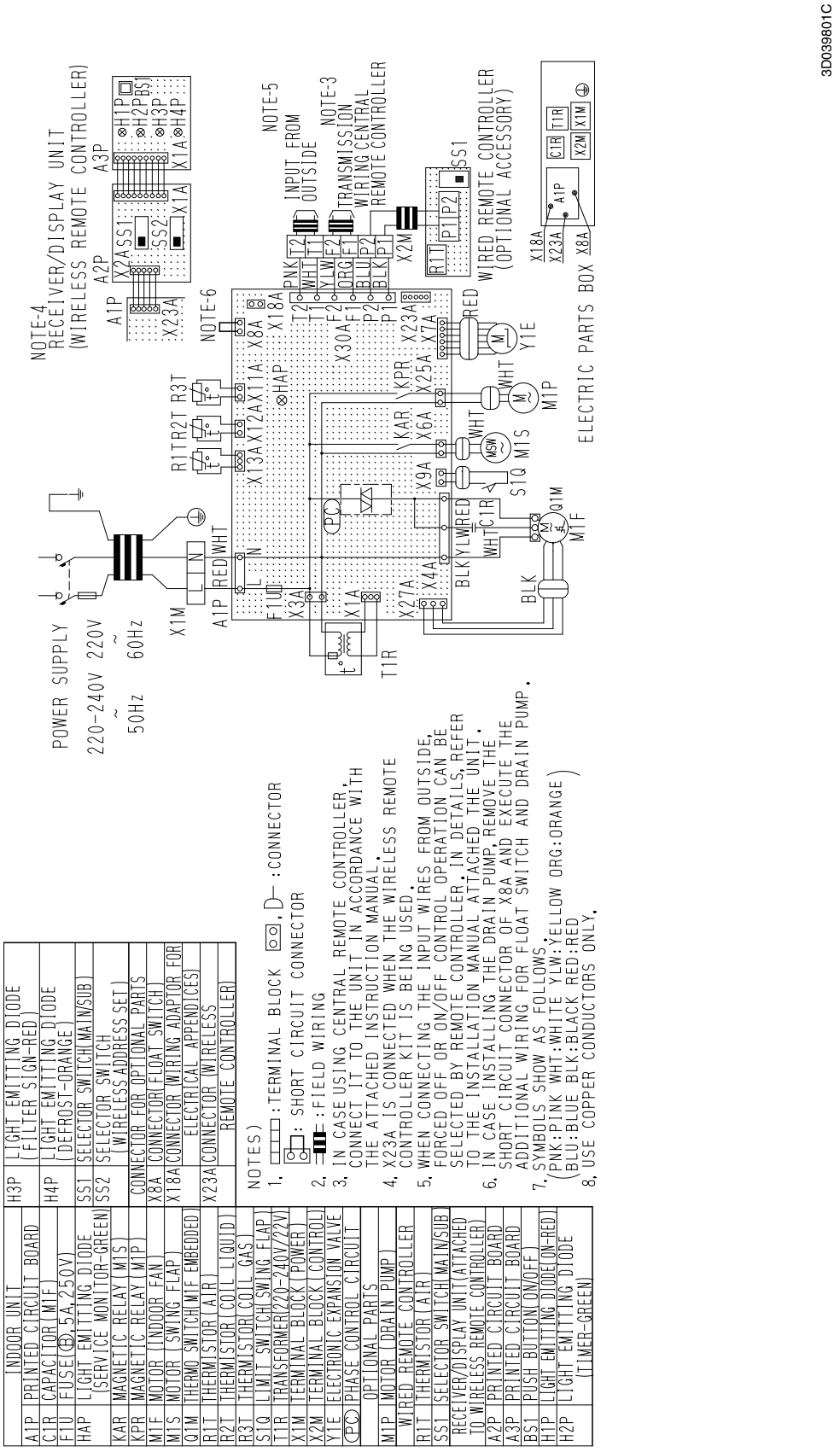
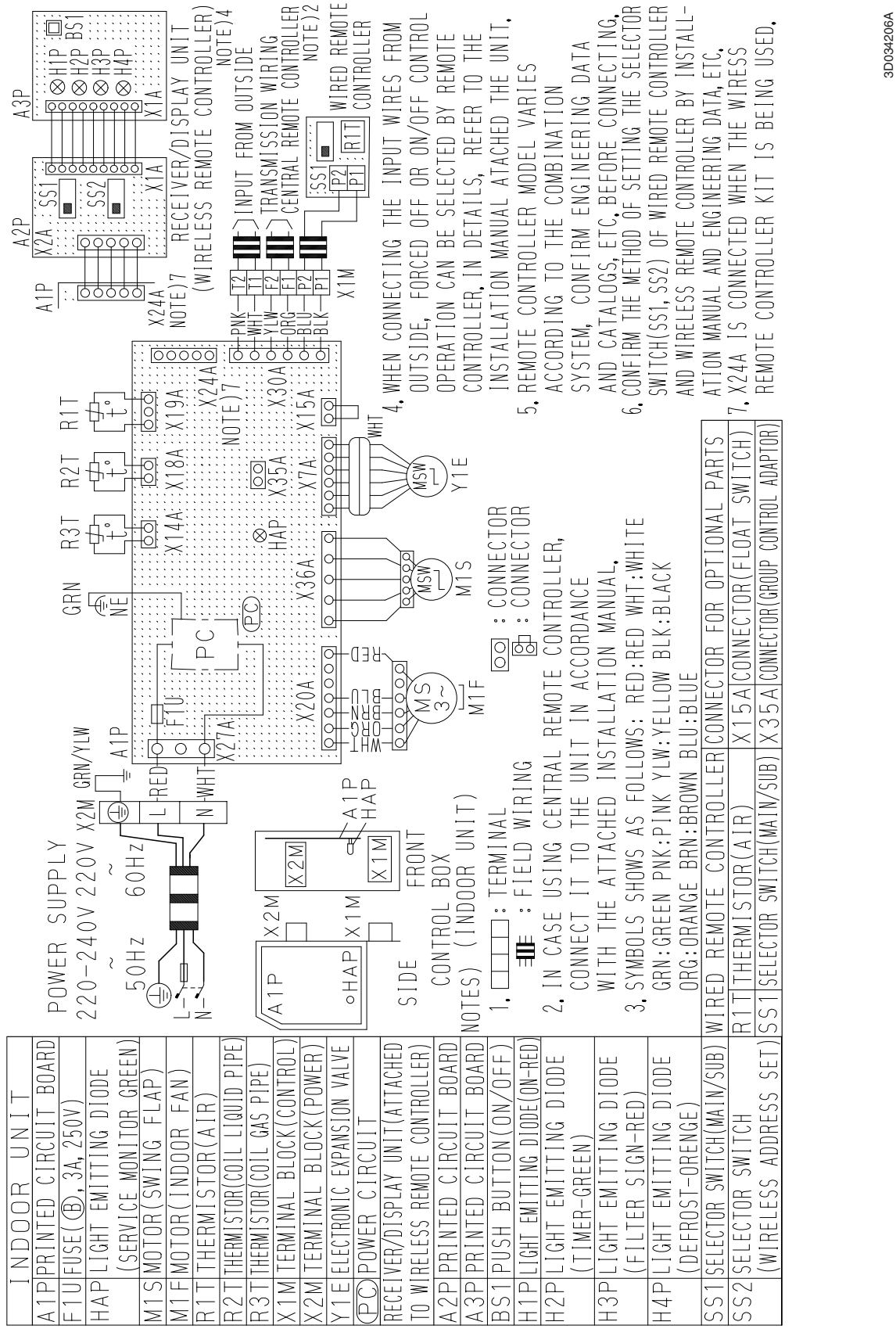
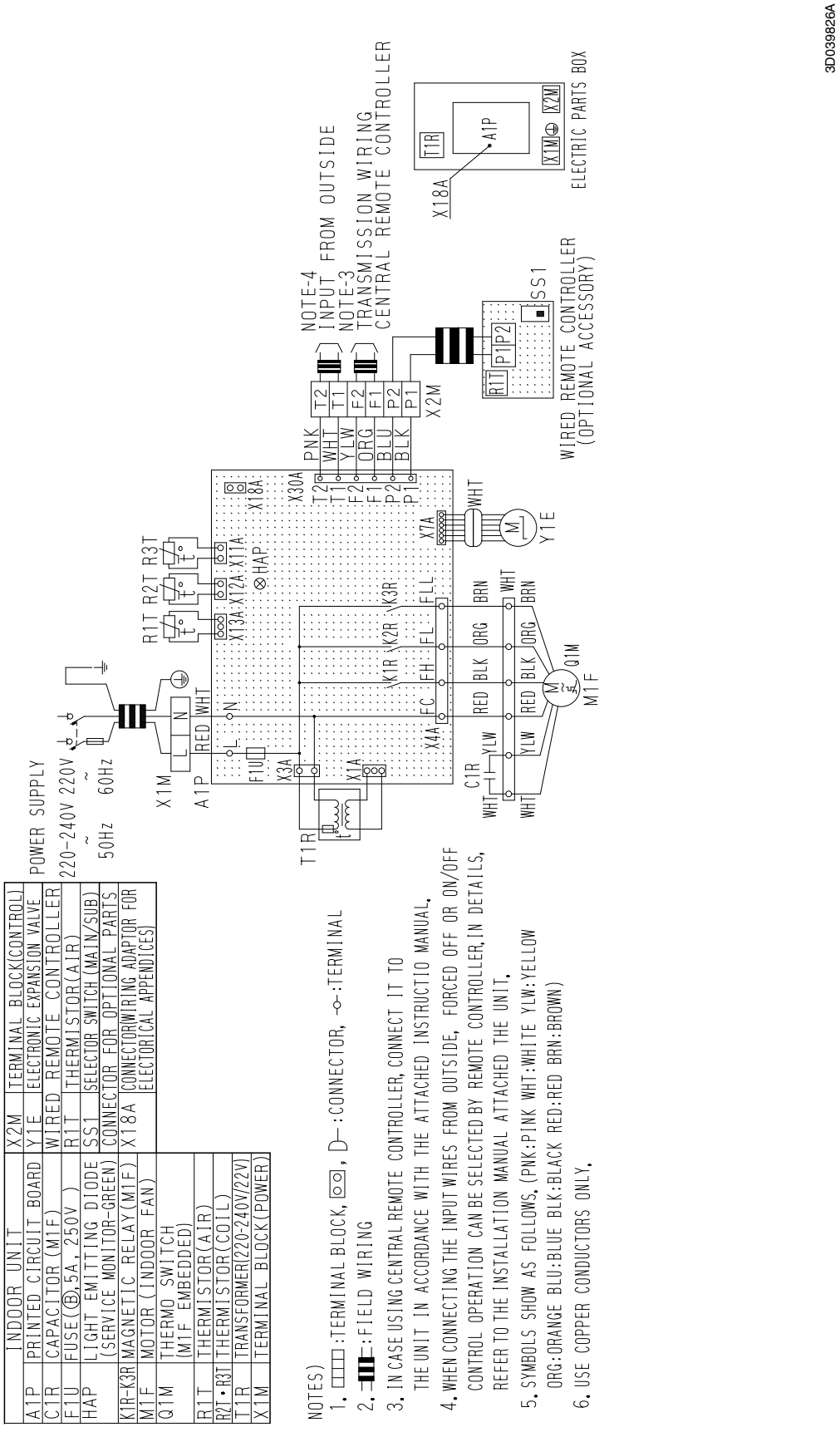
FXHQ32M / 63M / 100MVE



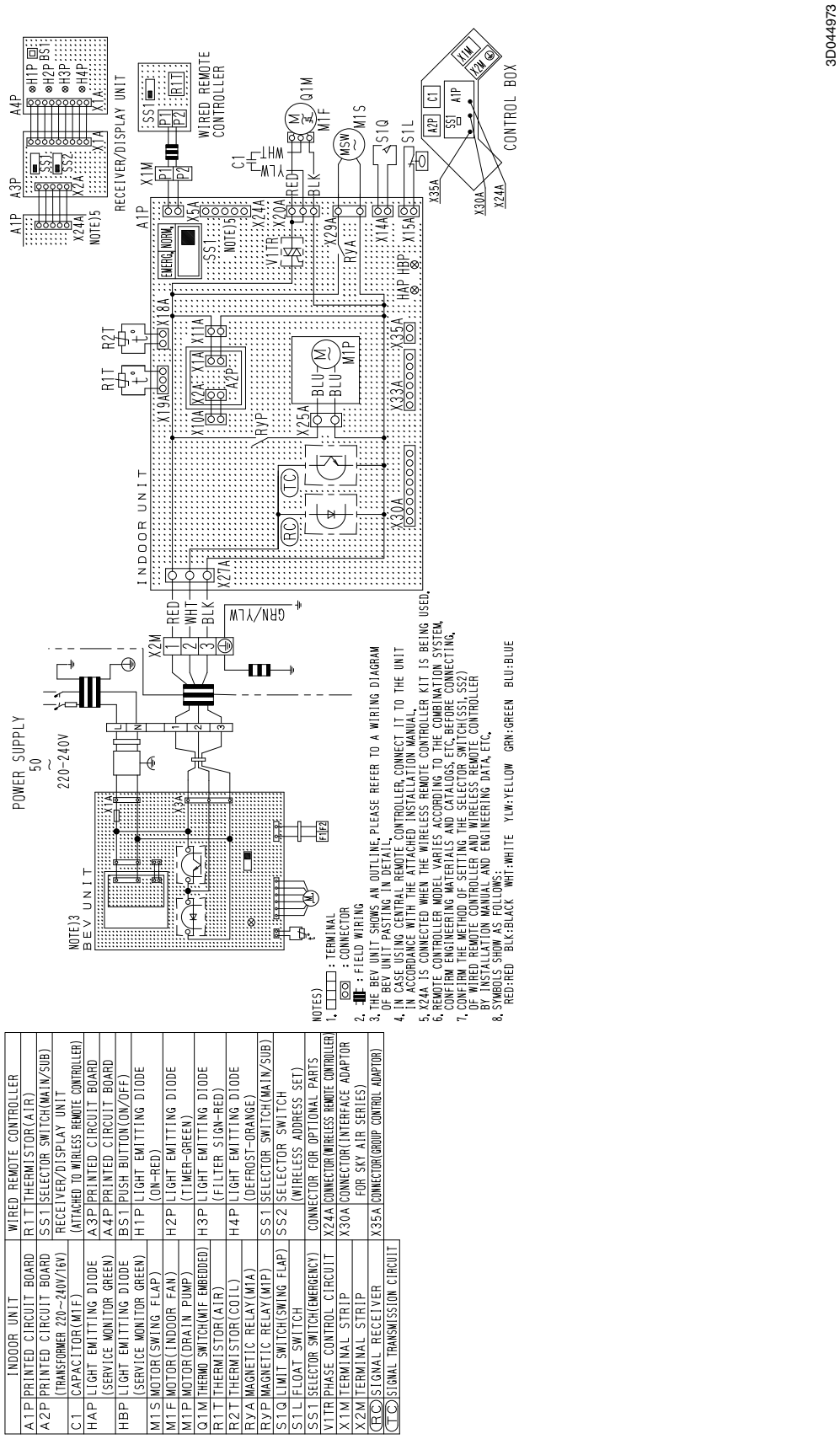
FXAQ20M / 25M / 32MVE / 40M / 50M / 63MVE



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

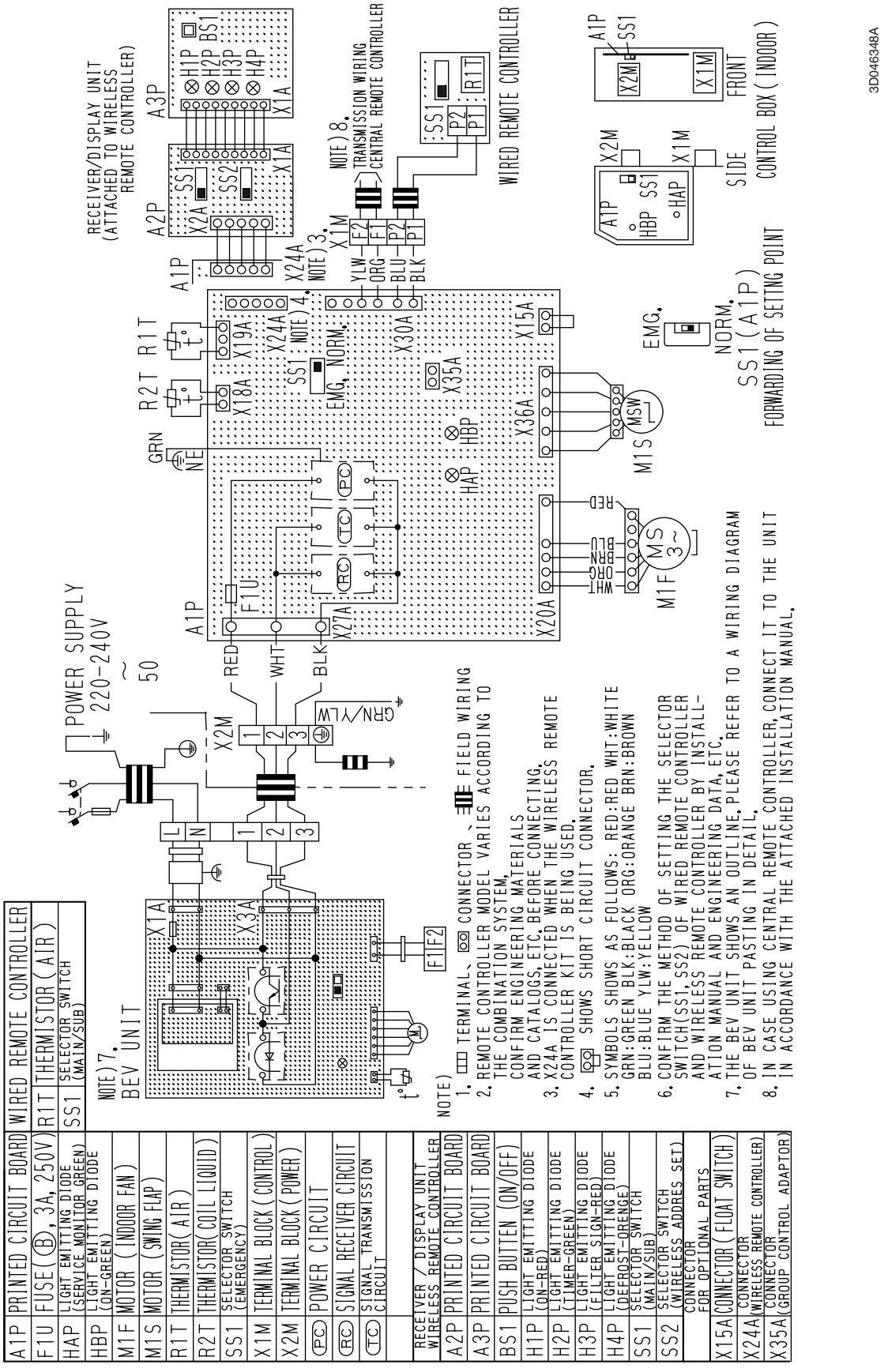


FXUQ71M / 100M / 125MV1

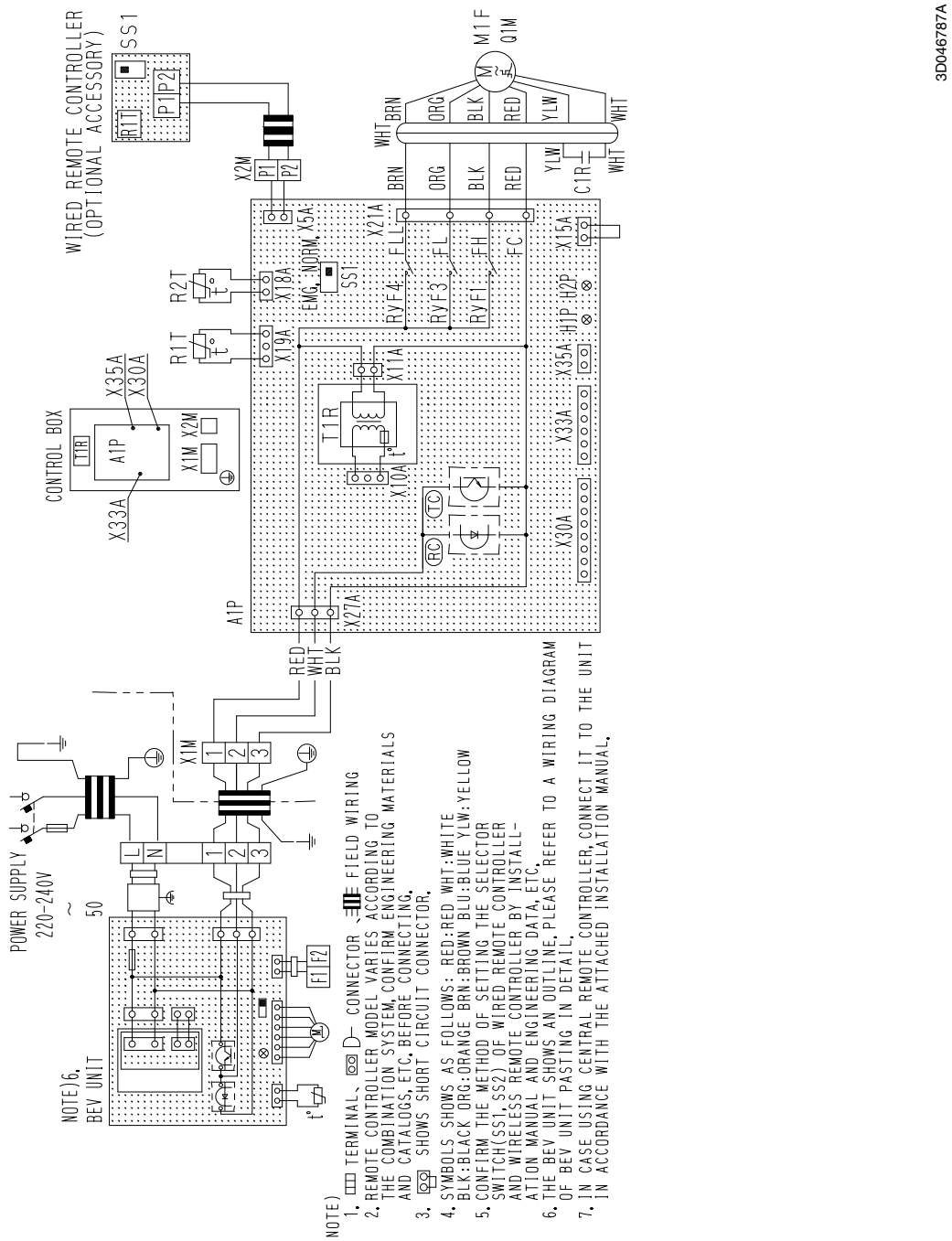


INDOOR UNIT		WIRED REMOTE CONTROLLER	
A1P	PRINTED CIRCUIT BOARD	R1T	THERMISTOR(AIR)
A2P	PRINTED CIRCUIT BOARD (TRANSFORMER 220~240V/16V)	SS1	SELECTOR SWITCH(MAIN/SUB)
			RECEIVER/DISPLAY UNIT (ATTACHED TO WIRLESS REMOTE CONTROLLER)
C1	CAPACITOR(M1F)	A3P	PRINTED CIRCUIT BOARD
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	A4P	PRINTED CIRCUIT BOARD
HBP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	BS1	PUSH BUTTON(ON/OFF)
		H1P	LIGHT EMITTING DIODE (ON-RED)
M1S	MOTOR(SWING FLAP)	H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
M1F	MOTOR(INDOOR FAN)		
M1P	MOTOR(DRAIN PUMP)	H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
Q1M	THERMO SWITCH(M1F EMBEDDED)		
R1T	THERMISTOR(AIR)	H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
R2T	THERMISTOR(COIL)		
RyA	MAGNETIC RELAY(M1A)	SS1	SELECTOR SWITCH(MAIN/SUB)
RyP	MAGNETIC RELAY(M1P)	SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
S1Q	LIMIT SWITCH(SWING FLAP)		
S1L	FLOAT SWITCH		
SS1	SELECTOR SWITCH(EMERGENCY)		CONNECTOR FOR OPTIONAL PARTS
V1TR	PHASE CONTROL CIRCUIT	X24A	CONNECTOR(WIRELESS REMOTE CONTROLLER)
X1M	TERMINAL STRIP	X30A	CONNECTOR(INTERFACE ADAPTOR FOR SKY AIR SERIES)
X2M	TERMINAL STRIP		
(RC)	SIGNAL RECEIVER	X35A	CONNECTOR(GROUP CONTROL ADAPTOR)
(TC)	SIGNAL TRANSMISSION CIRCUIT		

FXAQ20MH / 25MH / 32MH / 40MH / 50MHV1

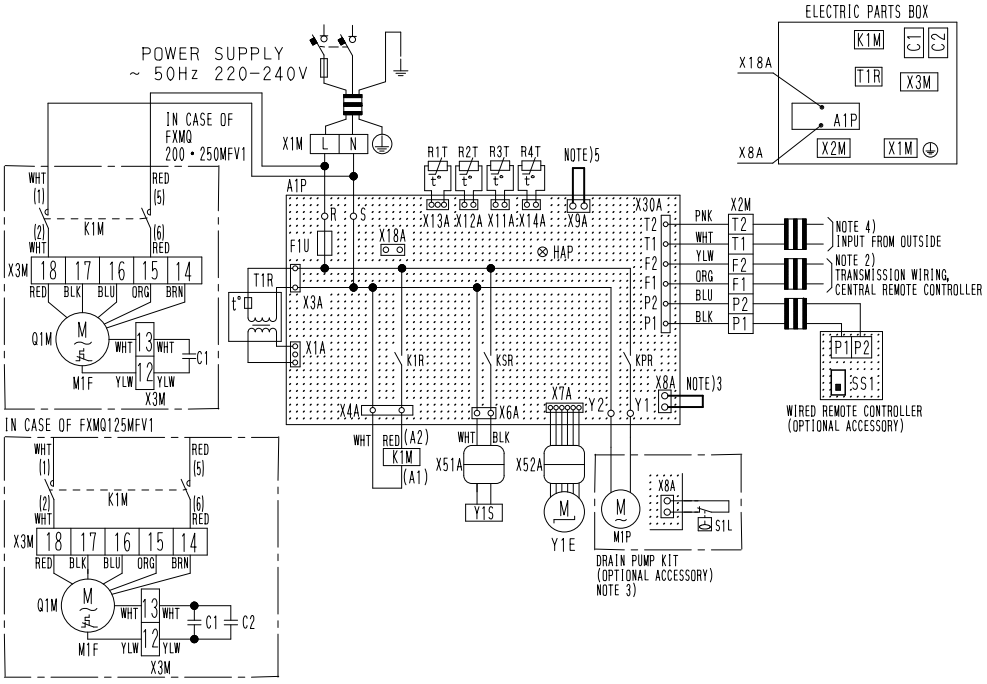


FXLQ20MH / 25MH / 32MH / 40MH / 50MHV1



INDOOR UNIT	
A1P	PRINTED CIRCUIT BOARD
C1R	CAPACITOR(M1F)
H1P	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)
H2P	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)
M1F	MOTOR (INDOOR FAN)
Q1M	THERMO SWITCH(135°) (M1F EMBEDDED)
R1T	THERMISTOR(AIR)
R2T	THERMISTOR(COIL)
RYF1,3,4	MAGNETIC RELAY(M1F)
SS1	SELECTOR SWITCH (EMERGENCY)
T1R	TRANSFORMER(220-240V/22V)
X1M	TERMINAL BLOCK(POWER)
X2M	TERMINAL BLOCK(CONTROL)
RC	SIGNAL RECEIVER CIRCUIT
TC	SIGNAL TRANSMISSION CIRCUIT
WIRED REMOTE CONTROLLER	
R1T	THERMISTOR(AIR)
SS1	SELECTOR SWITCH (MAIN/SUB)
CONNECTOR FOR OPTIONAL PARTS	
X30A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)
X33A	CONNECTOR (ADAPTOR FOR WIRING)
X35A	CONNECTOR (GROUP CONTROL ADAPTOR)

FXMQ125MF / 200MF / 250MFV1



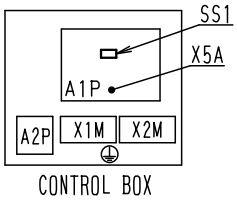
INDOOR UNIT		X1M	TERMINAL BLOCK(POWER)
A1P	PRINTED CIRCUIT BOARD	X2M	TERMINAL BLOCK(CONTROL)
C1, C2	CAPACITOR(M1F)	X3M	TERMINAL BLOCK
F1U	FUSE(Ⓑ, 5A, 250V)(A1P)	X51A, X52A	CONNECTOR
HAP	LIGHT EMMITING DIODE	Y1E	ELECTRIC EXPANSION VALVE
	(SERVICE MONITOR-GREEN)	Y1S	SOLENOID VALVE(HOT GAS)
K1M	MAGNETIC 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	WIRED REMOTE CONTROLLER	
	(M1F EMBEDDED 135℃)	SS1	SELECT SWITCH(MAIN/SUB)
R1T	THERMISTOR(SUCTION AIR)		
R2T	THERMISTOR(COIL, LIQUID)	CONNECTOR FOR OPTIONAL PARTS	
R3T	THERMISTOR(COIL, GAS)	X18A	CONNECTOR(WIRING ADAPTOR
R4T	THERMISTOR(DISCHARGE AIR)		FOR ELECTRICAL APPENDICES)
T1R	TRANSFORMAR(220-240V/22V)		

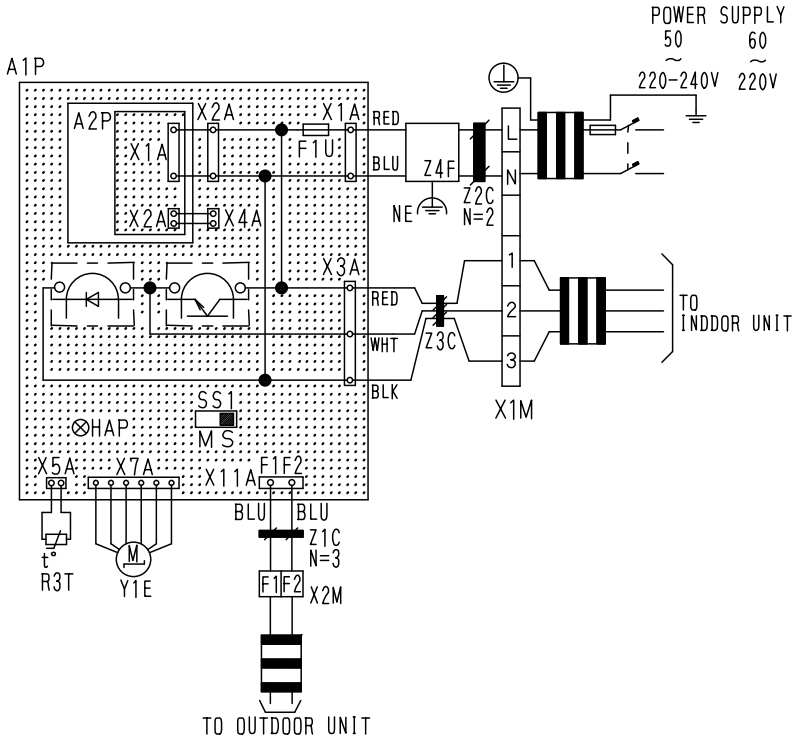
NOTES)
1. □□□:TERMINAL BLOCK, ⊙⊙ ,⊃— :CONNECTOR, —○— :TERMINAL,
   ⊙⊙ :SHORT CIRCUIT CONNECTOR, ═▮▮═ :FIELD WIRING.
2. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTRUCTION MANUAL.
3. IN CASE INSTALLING THE DRAIN PUMP KIT, REMOVE THE SHORT CIRCUIT 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 CONTROLLER.
   IN DETAILS, REFER TO THE INSTALLATION MANUAL ATTACHED TO THE UNIT.
5. DO NOT REMOVE SHORT CIRCUIT CONNECTOR OF X9A.

3D044996B

BEVQ50MVE

BEV UNIT	
A1P	PRINTED CIRCUIT BOARD ASSY
A2P	POWER SUPPLY PRINTED CIRCUIT BOARD ASSY(220-240V/16V)
F1U	FUSE(Ⓑ, 10A, 250V)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GRREN)
R3T	THERMISTOR(GAS)
SS1	SELECTOR SWITCH(M/S)
X1M	TERMINAL STRIP(POWER)
X2M	TERMINAL STRIP(TRANSMISSION)
Y1E	ELECTRONIC EXPANSION VALVE
Z1C • Z2C Z3C • Z4F	NOISE FILTER



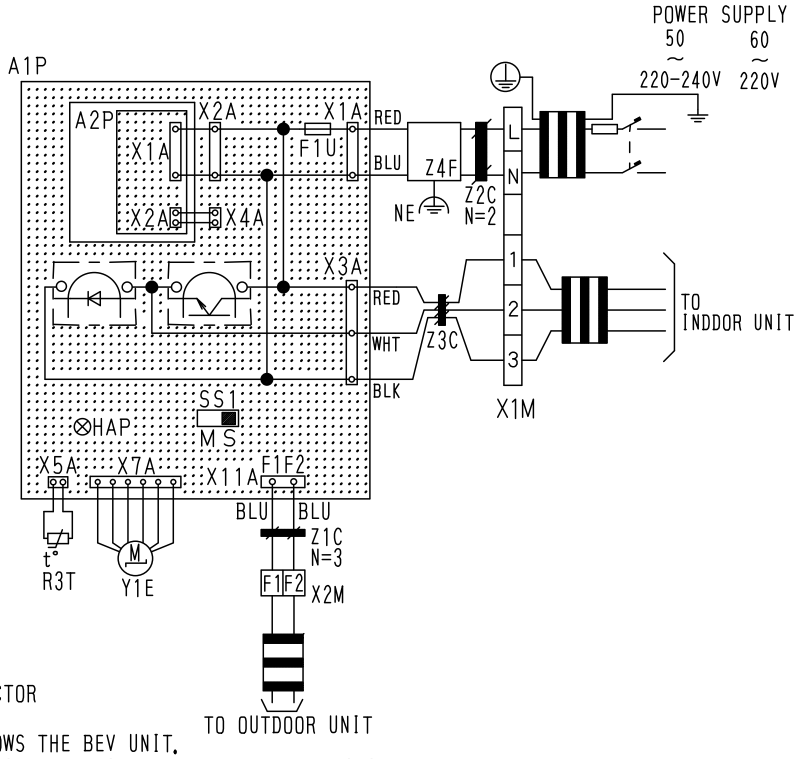


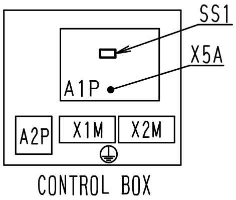
Notes) 1. ▭▭ : TERMINAL ⊡⊡ :CONNECTOR
2. ═▮═ :FIELD WIRING
3. THIS WIRING DIAGRAM ONLY SHOWS THE BEV UNIT.
SEE THE WIRING DIAGRAMS AND INSTALLATION MANUALS FOR THE WIRING AND SETTINGS FOR THE INDOOR , OUTDOOR.
4. SEE THE INDOOR UNIT' S WIRING DIAGRAM WHEN INSTALLING OPTIONAL PARTS FOR THE INDOOR UNIT.
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)

3D046579A

BEVQ71M / 100M / 125MVE

BEV UNIT	
A1P	PRINTED CIRCUIT BOARD ASSY
A2P	POWER SUPPLY PRINTED CIRCUIT BOARD ASSY(220-240V/16V)
F1U	FUSE(B), 10A, 250V)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR-GRREN)
R3T	THERMISTOR(GAS)
SS1	SELECTOR SWITCH(M/S)
X1M	TERMINAL STRIP(POWER)
X2M	TERMINAL STRIP(TRANSMISSION)
Y1E	ELECTRONIC EXPANSION VALVE
Z1C・Z2C Z3C・Z4F	NOISE FILTER





Notes)
1. ▭▭▭ : TERMINAL ⊙⊙ :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 , 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.
7. 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)

3D044901A

3. List of Electrical and Functional Parts

3.1 Outdoor Unit

3.1.1 RXQ5MAY1~16MAY1

Item	Name		Symbol	Model		
				RXQ5MAY1	RXQ8MAY1	RXQ10MAY1
Compressor	Inverter	Type	M1C	JT1G-VDKYR@T		
		OC protection device		13.5A		
	STD 1	Type	M2C	—	JT170G-KYE@T	
		OC protection device			15.0A	
	STD 2	Type	M3C	—		
		OC protection device				
Fan motor		OC protection device	M1F	0.9A	1.3A	
Electronic expansion valve (Main)			Y1E	Fully closed: 0pls Fully open: 2000pls		
Electronic expansion valve (Subcool)			Y2E	Fully closed: 0pls Fully open: 2000pls		
Pressure protection	High pressure switch	For M1C	S1PH	OFF: $4.0^{+0}_{-0.12}$ MPa ON: 3.0±0.15MPa		
		For M2C	S2PH	—	OFF: $4.0^{+0}_{-0.12}$ MPa ON: 3.0±0.15MPa	
		For M3C	S3PH	—		
	Low pressure sensor		SLNPL	OFF: 0.07MPa		
	Fusible plug		—	Open: 70~75°C		
Temperature protection	Discharge gas temperature protection (Discharge pipe thermistor)		R3T	OFF: 135°C		
	Inverter fin temperature protection (Radiator fin thermistor)		R1T	OFF: 98°C		
Others	Fuse	For main PC board	F1U	250V AC 10A Class B		
			F2U	250V AC 10A Class B		
		For Noise filter PC board	F1U	250V AC 5A Class B		

Item	Name		Symbol	Model		
				RXQ12MAY1	RXQ14MAY1	RXQ16MAY1
Compressor	Inverter	Type	M1C	JT1G-VDKYR@T		
		OC protection device		13.5A		
	STD 1	Type	M2C	JT170G-KYE@T		
		OC protection device		15.0A		
	STD 2	Type	M3C	—	JT170G-KYE@T	
		OC protection device			15.0A	
Fan motor		OC protection device	M1F	1.8A		
Electronic expansion valve (Main)			Y1E	Fully closed: 0pls Fully open: 2000pls		
Electronic expansion valve (Subcool)			Y2E	Fully closed: 0pls Fully open: 2000pls		
Pressure protection	High pressure switch	For M1C	S1PH	OFF: $4.0^{+0}_{-0.12}$ MPa ON: 3.0±0.15MPa		
		For M2C	S2PH	OFF: $4.0^{+0}_{-0.12}$ MPa ON: 3.0±0.15MPa		
		For M3C	S3PH	—	OFF: $4.0^{+0}_{-0.12}$ MPa ON: 3.0±0.15MPa	
	Low pressure sensor		SLNPL	OFF: 0.07MPa		
	Fusible plug		—	open: 70~75°C		
Temperature protection	Discharge gas temperature protection (Discharge pipe thermistor)		R3T	OFF: 135°C		
	Inverter fin temperature protection (Radiator fin thermistor)		R1T	OFF: 98°C		
Others	Fuse	For main PC board	F1U	250V AC 10A Class B		
			F2U	250V AC 10A Class B		
		For Noise filter PC board	F1U	250V AC 5A Class B		

3.2 Indoor Side

3.2.1 Indoor Unit

Parts Name		Symbol	Model								Remark
			FXFQ25 MVE	FXFQ32 MVE	FXFQ40 MVE	FXFQ50 MVE	FXFQ63 MVE	FXFQ80 MVE	FXFQ100 MVE	FXFQ125 MVE	
Remote Controller	Wired Remote Controller		BRC1A61								Option
	Wireless Remote Controller		BRC7E65								Option
Motors	Fan Motor	M1F	DC380V 30W 8P						DC 380V 120W 8P		
	Drain Pump	M1P	AC220-240V (50Hz) AC220V (60Hz) PLD-12230DM Thermal Fuse 145°C								
	Swing Motor	M1S	MP35HCA[3P007482-1] Stepping Motor DC16V								
Thermistors	Thermistor (Suction Air)	R1T	In PCB A4P or wired remote controller								
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-5 ϕ8 L1000 20kΩ (25°C)								
	Thermistor (Heat Exchanger)	R2T	ST8602A-5 ϕ6 L1000 20kΩ (25°C)								
Others	Float Switch	S1L	FS-0211B								
	Fuse	F1U	250V 5A ϕ5.2								
	Thermal Fuse	TFu	—								
	Transformer	T1R	—								

Parts Name		Symbol	Model								Remark
			FXCQ 20MVE	FXCQ 25MVE	FXCQ 32MVE	FXCQ 40MVE	FXCQ 50MVE	FXCQ 63MVE	FXCQ 80MVE	FXCQ 125MVE	
Remote Controller	Wired Remote Controller		BRC1A61								Option
	Wireless Remote Controller		BRC7C67								Option
Motors	Fan Motor	M1F	AC 220~240V 50Hz								
			1ϕ10W	1ϕ15W		1ϕ20W		1ϕ30W	1ϕ50W	1ϕ85W	
			Thermal Fuse 152°C				—	Thermal protector 135°C : OFF 87°C : ON			
	Drain Pump	M1P	AC220-240V (50Hz) AC220V (60Hz) PLD-12230DM Thermal Fuse 145°C								
	Swing Motor	M1S	MT8-L[3PA07509-1] AC200~240V								
Thermistors	Thermistor (Suction Air)	R1T	ST8601-6 ϕ4 L1250 20kΩ (25°C)								
	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)								
Others	Float Switch	S1L	FS-0211B								
	Fuse	F1U	250V 5A ϕ5.2								
	Transformer	T1R	TR22H21R8								

Parts Name		Symbol	Model				Remark
			FXKQ 25MVE	FXKQ 32MVE	FXKQ 40MVE	FXKQ 63MVE	
Remote Controller	Wired Remote Controller		BRC1A61				Option
	Wireless Remote Controller		BRC4C63				
Motors	Fan Motor	M1F	AC 220~240V 50Hz				
			1φ15W 4P		1φ20W 4P	1φ45W 4P	
			Thermal Fuse 146°C		Thermal protector 120°C : OFF 105°C : ON		
	Drain Pump	M1P	AC 220-240V (50Hz) PLD-12200DM Thermal Fuse 145°C				
	Swing Motor	M1S	MP35HCA [3P080801-1] AC200~240V				
Thermistors	Thermistor (Suction Air)	R1T	ST8601-13 φ4 L630 20kΩ (25°C)				
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-7 φ8 L1600 20kΩ (25°C)				
	Thermistor (Heat Exchanger)	R2T	ST8602A-7 φ6 L1600 20kΩ (25°C)				
Others	Float Switch	S1L	FS-0211B				
	Fuse	F1U	250V 5A φ5.2				
	Transformer	T1R	TR22H21R8				

Parts Name		Symbol	Model						Remark
			FXDQ 20NVE(T)	FXDQ 25NVE(T)	FXDQ 32NVE(T)	FXDQ 40NVE(T)	FXDQ 50NVE(T)	FXDQ 63NVE(T)	
Remote Controller	Wired Remote Controller		BRC1A62						Option
	Wireless Remote Controller		BRC4C64						
Motors	Fan Motor	M1F	AC 220~240V 50Hz						
			1φ62W				1φ130W		
			Thermal protector 130°C: OFF, 83°C: ON						
	Drain Pump	M1P	AC220-240V (50Hz) PLD-12230DM Thermal Fuse 145°C						*
Thermistors	Thermistor (Suction Air)	R1T	ST8601-1 φ4 L=250 20kΩ (25°C)						
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-4 φ8 L=800 20kΩ (25°C)						
	Thermistor (Heat Exchanger)	R2T	ST8602A-4 φ6 L=800 20kΩ (25°C)						
Others	Float Switch	S1L	FS-0211E						*
	Fuse	F1U	250V 5A φ5.2						
	Transformer	T1R	TR22H21R8						

* Only for FXDQ20 ~ 63NVE (with Drain Pump Type)

Parts Name		Symbol	Model								Remark
			FXSQ 20MVE	FXSQ 25MVE	FXSQ 32MVE	FXSQ 40MVE	FXSQ 50MVE	FXSQ 63MVE	FXSQ 80MVE	FXSQ 100MVE	FXSQ 125MVE	
Remote Controller	Wired Remote Controller		BRC1A62									Option
	Wireless Remote Controller		BRC4C64									
Motors	Fan Motor	M1F	AC 220~240V 50Hz									
			1φ50W			1φ65W	1φ85W	1φ125 W	1φ225W			
			Thermal Fuse 152°C						Thermal protector 135°C : OFF 87°C : ON			
	Drain Pump	M1P	AC220-240V (50Hz) PLD-12230DM Thermal Fuse 145°C									
Thermistors	Thermistor (Suction Air)	R1T	ST8601-4 φ4 L800 20kΩ (25°C)									
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-7 φ8 L1600 20kΩ (25°C)									
	Thermistor (Heat Exchanger)	R2T	ST8602A-6 φ6 L1250 20kΩ (25°C)									
Others	Float Switch	S1L	FS-0211B									
	Fuse	F1U	250V 5A φ5.2									
	Transformer	T1R	TR22H21R8									

Parts Name		Symbol	Model								Remark
			FXMQ 40MVE	FXMQ 50MVE	FXMQ 63MVE	FXMQ 80MVE	FXMQ 100MVE	FXMQ 125MVE	FXMQ 200MVE	FXMQ 250MVE	
Remote Controller	Wired Remote Controller		BRC1A62								Option
	Wireless Remote Controller		BRC4C64								
Motors	Fan Motor	M1F	AC 220~240V 50Hz								
			1φ100W			1φ160W	1φ270W	1φ430W	1φ380W×2		
			Thermal protector 135°C : OFF 87°C : ON								
	Capacitor for Fan Motor	C1R	5μ F-400V			7μ F 400V	10μ F 400V	8μ F 400V	10μ F 400V	12μ F 400V	
Thermistors	Thermistor (Suction Air)	R1T	ST8601A-5 φ4 L1000 20kΩ (25°C)						ST8601A-13 φ4 L630		
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605A-4 φ8 L800 20kΩ (25°C)						ST8605A-5 φ8 L1000		
	Thermistor (Heat Exchanger)	R2T	ST8602A-4 φ6 L800 20kΩ (25°C)						ST8602A-6 φ6 L1250		
Others	Float switch	S1L	FS-0211								
	Fuse	F1U	250V 5A φ5.2			250V 10A φ5.2			250V 10A		
	Transformer	T1R	TR22H21R8								

Parts Name		Symbol	Model			Remark
			FXHQ 32MVE	FXHQ 63MVE	FXHQ 100MVE	
Remote Controller	Wired Remote Controller		BRC1A61			Option
	Wireless Controller		BRC7E66			
Motors	Fan Motor	M1F	AC 220~240V/220V 50Hz/60Hz			
			1φ63W		1φ130W	
			Thermal protector 130°C : OFF 80°C : ON			
	Capacitor for Fan Motor	C1R	3.0μF-400V		9.0μF-400V	
	Swing Motor	M1S	MT8-L[3P058751-1] AC200~240V			
Thermistors	Thermistor (Suction Air)	R1T	ST8601A-1 φ4 L250 20kΩ (25°C)			
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-6 φ8 L = 1250 20kΩ (25°C)		ST8605-6 φ8 L = 1250 20kΩ (25°C)	
	Thermistor (Heat Exchanger)	R2T	ST8602A-6 φ6 L = 1250 20kΩ (25°C)		ST8602A-6 φ6 L = 1250 20kΩ (25°C)	
Others	Fuse	F1U	250V 5A φ5.2			
	Transformer	T1R	TR22H21R8			

Parts Name		Symbol	Model						Remark
			FXAQ 20MVE	FXAQ 25MVE	FXAQ 32MVE	FXAQ 40MVE	FXAQ 50MVE	FXAQ 63MVE	
Remote Controller	Wired Remote Controller		BRC1A61						Option
	Wireless Remote Controller		BRC7E619						Option
Motors	Fan Motor	M1F	AC 220~240V 50Hz						
			1φ40W			1φ43W			
			Thermal protector 130°C : OFF 80°C : ON						
	Swing Motor	M1S	MP24[3SB40333-1] AC200~240V			MSFBC20C21 [3SB40550-1] AC200~240V			
Thermistors	Thermistor (Suction Air)	R1T	ST8601-2 φ4 L400 20kΩ (25°C)						
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-2 φ8 L400 20kΩ (25°C)						
	Thermistor (for Heat Exchanger)	R2T	ST8602-2 φ6 L400 20kΩ (25°C)						
Others	Float Switch	S1L	OPTION						
	Fuse	F1U	250V 5A φ5.2						

Parts Name		Symbol	Model						Remark
			FXLQ 20MVE	FXLQ 25MVE	FXLQ 32MVE	FXLQ 40MVE	FXLQ 50MVE	FXLQ 63MVE	
Remote Controller	Wired Remote Controller		BRC1A62						Option
	Wireless Remote Controller		BRC4C64						
Motors	Fan Motor	M1F	AC 220~240V 50Hz						
			1φ15W		1φ25W		1φ35W		
			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	
Thermistors	Thermistor (Suction Air)	R1T	ST8601-6 φ4 L1250 20kΩ (25°C)						
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-9 φ8 L2500 20kΩ (25°C)						
	Thermistor (for Heat Exchanger)	R2T	ST8602A-9 φ6 L2500 20kΩ (25°C)						
Others	Fuse	F1U	AC250V 5A						
	Transformer	T1R	TR22H21R8						

Parts Name		Symbol	Model						Remark
			FXNQ 20MVE	FXNQ 25MVE	FXNQ 32MVE	FXNQ 40MVE	FXNQ 50MVE	FXNQ 63MVE	
Remote Controller	Wired Remote Controller		BRC1A62						Option
	Wireless Remote Controller		BRC4C64						
Motors	Fan Motor	M1F	AC 220~240V 50Hz						
			1φ15W		1φ25W		1φ35W		
			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	
Thermistors	Thermistor (Suction Air)	R1T	ST8601-6 φ4 L1250 20kΩ (25°C)						
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-9 φ8 L2500 20kΩ (25°C)						
	Thermistor (for Heat Exchanger)	R2T	ST8602A-9 φ6 L2500 20kΩ (25°C)						
Others	Fuse	F1U	AC250V 5A						
	Transformer	T1R	TR22H21R8						

Parts Name		Symbol	Model			Remark
			FXUQ71MV1	FXUQ100MV1	FXUQ125MV1	
Remote Controller	Wired Remote Controller		BRC1A61			Option
	Wireless Remote Controller		BRC7C529W			Option
Motors	Fan Motor	M1F	AC 220~240V 50Hz			
			1φ45W	1φ90W		
			Thermal protector 130°C	Thermal protector 130°C : OFF 83°C : ON		
	Drain Pump	M1P	AC220-240V (50Hz) AC220V (60Hz) PJV-1426			
	Swing Motor	M1S	MT8-L[3PA07572-1] AC200~240V			
Thermistors	Thermistor (Suction Air)	R1T	ST8601-1 φ4 L=250 20kΩ (25°C)			
	Thermistor (Heat Exchanger)	R2T	ST8602A-4 φ6 L=800 20kΩ (25°C)			
Others	Float Switch	S1L	FS-0211B			

Parts Name		Symbol	Model			Remark
			FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1	
Remote Controller	Wired Remote Controller		BRC1A62			Option
	Wireless Remote Controller		—			
Motors	Fan Motor	M1F	AC200~240V 50Hz			
			1φ380W			
			Thermal protector 135°C : OFF 87°C : ON			
	Capacitor for Fan Motor	C1R	10μ F 400V×2	10μ F 400V	16μ F 400V	
Solenoid valve	Solenoid valve (Hot gas)	Y1S	Body: VPV-603D Coil: NEV-MOAJ532C1 AC220-240V			
Thermistors	Thermistor (Suction Air)	R1T	ST8601-13 φ4 L=630 20kΩ (25°C)			
	Thermistor (for Heat Exchanger High Temp.)	R3T	ST8605-6 φ8 L=1250 20kΩ (25°C)			
	Thermistor (Heat Exchanger)	R2T	ST8602A-2 φ6 L=1250 20kΩ (25°C)			
	Thermistor (for discharge air)	R4T	ST8605-8 L=2000 20kΩ (25°C)			
Others	Float switch	S1L	Option			
	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 \ Type		FXCQ-M	FXFQ-M	FXKQ-M	FXDQ-N	FXUQ-M	FXSQ-M	FXMQ-M	FXHQ-M	FXAQ-M(H)	FXLQ-M FXNQ-M	FXLQ-MH
1	Remote controller	Wireless (Cooling Only)	BRC7C67	BRC7E65	BRC4C63	BRC4C64	BRC7C529W	BRC4C64		BRC7E66	BRC7E619	BRC4C64	
		Wired (Cooling Only)	BRC1A61			BRC1A62	BRC1A61	BRC1A62		BRC1A61		BRC1A62	
2	Wired remote controller with weekly schedule timer		BRC1D61										
3	Simplified remote controller		—			Note 8 BRC2C51	—	BRC2C51		—		BRC2C51	
4	Remote controller for hotel use		—			BRC3A61	—	BRC3A61		—		BRC3A61	
5	Adaptor for wiring		★KRP1B61	★KRP1B59	KRP1B61	★KRP1B56	—	KRP1B61		KRP1B3	—	KRP1B61	
6-1	Wiring adaptor for electrical appendices (1)		★KRP2A61	★KRP2A62	KRP2A61	★KRP2A53	★KRP2A62	KRP2A61		★KRP2A62	★KRP2A61	KRP2A61	
6-2	Wiring adaptor for electrical appendices (2)		★KRP4A51	★KRP4A53	KRP4A51	★KRP4A54	★KRP4A53	KRP4A51		★KRP4A52	★KRP4A51	KRP4A51	
7	Remote sensor		KRCS01-1	—	KRCS01-1								
8	Installation box for adaptor PCB		Note 2, 3 KRP1B96	Note 2, 3 KRP1D98	—	Note 4, 6 KRP1B101	KRP1B97	Note 5 KRP4A91	—	Note 3 KRP1C93	Note 2, 3 KRP4A93	—	
9	Central remote controller		DCS302C(A)61										
9-1	Electrical box with earth terminal (3 blocks)		KJB311A										
10	Unified on/off controller		DCS301B(A)61										
10-1	Electrical box with earth terminal (2 blocks)		KJB212A										
10-2	Noise filter (for electromagnetic interface use only)		KEK26-1										
11	Schedule timer		DST301B(A)61										
12	External control adaptor for outdoor unit (Must be installed on indoor units)		★ DTA104A61	★DTA104A 62	DTA104A61	★ DTA104A53	—	DTA104A61		★ DTA104A62	★ DTA104A61	DTA104A61	
13	Interface adaptor for SkyAir-series		—	—	—	—	Note 7 DTA102A52	—		—	—	—	Note 7 DTA102A52

Note:

1. Installation box (No.8) is necessary for each adaptor marked ★.
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.
7. This adaptor is required when connecting with optional controller for centralized control.
8. BRC2A51 is also available.

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.

System Configuration

No.	Part name	Model No.	Function
1	Central remote controller	DCS302C(A)61	■ 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	DCS301B(A)61	■ 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	DST301B(A)61	■ 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	★DCS302A52	■ Interface between the central monitoring board and central control units
5	Interface adaptor for SkyAir-series	★DTA102A52	■ Adaptors required to connect products other than those of the VRV System to the high-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 the product unit to be controlled.
6	Central control adaptor kit	★DTA107A55	
7	Wiring adaptor for other air-conditioner	★DTA103A51	
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 ★ adaptor must be procured on site.

Building management system

No.	Part name				Model No.	Function
1	intelligent Touch Controller	basic	Hardware	intelligent Touch Controller	DCS601C51	• Air-Conditioning management system that can be controlled by a compact all-in-one unit.
1-1		Option	Hardware	DIII-NET plus adaptor	DCS601A52	• Additional 64 groups (10 outdoor units) is possible.
1-2			Software	P.P.D.	DCS002C51	• P.P.D.: Power Proportional Distribution function
1-3				Web	DCS004A51	• Monitors and controls the air conditioning system using the Internet and Web browser application on a PC.
1-4	Electrical box with earth terminal (4blocks)				KJB411A	• Wall embedded switch box.
2	intelligent Manager ECO 21		Number of units to be connected	128 units	DAM602A52	Air conditioner management system (featuring minimized engineering) that can be controlled by personal computers.
				192 units	DAM602A53	
				256 units	DAM602A51	
				512 units	DAM602A51x2	
				768 units	DAM602A51x3	
				1024 units	DAM602A51x4	
2-1	Communication Line	Optional DIII Ai unit			DAM101A51	Analog input for "sliding temperature" function (to reduce cold shock) for intelligent Manager EC021.
3		★2 Interface for use in BACnet®			DMS502A51	Interface unit to allow communications between VRV and BMS. Operation and monitoring of air-conditioning systems through BACnet® communications.
3-1		Optional DIII board			DAM411A1	Expansion kit, installed on DMS502A51, to provide 3 more DIII-NET communication ports. Not usable independently.
3-2		Optional Di board			DAM412A1	Expansion kit, installed on DMS502A51, to provide 16 more wattmeter pulse input points. Not usable independently.
4		★3 Interface for use in LON WORKS®			DMS504B51	Interface unit to allow communications between VRV and BMS. Operation and monitoring of air-conditioning systems through LON WORKS® communication.
5	Contact/Analog signal	Parallel interface	Basic unit		DPF201A51	Enables ON/OFF command, operation and display of malfunction; can be used in combination with up to 4 units.
6			Temperature measurement units		DPF201A52	Enables temperature measurement output for 4 groups; 0-5VDC.
7			Temperature setting units		DPF201A53	Enables temperature setting input for 16 groups; 0-5VDC.
8		Unification adaptor for computerized control			DCS302A52	Interface between the central monitoring board and central control units
9-1		Wiring adaptor for electrical appendices (1)			KRP2A53, 61, 62	Simultaneously controls air-conditioning control computer and up to 64 groups of indoor units.
9-2		Wiring adaptor for electrical appendices (2)			KRP4A51-54	To control the group of indoor units collectively, which are connected by the transmission wiring of remote controller.
13		External control adaptor for outdoor unit (Must be installed on indoor units.)			DTA104A53, 61, 62	Cooling/Heating mode change over. Demand control and Low noise control are available between the plural outdoor units.

Notes:

*1. PPD does not support Connection Unit Series.

*2. BACnet® is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

*3. LON WORKS® is a registered trade mark of Echelon Corporation.

Please refer to Option Handbook etc. for detail.

4.2 Option Lists (Outdoor Unit)

RXQ5 ~ 16MAY1

Optional accessories		RXYQ5MAY1 RXQ5MAY1	RXYQ8MAY1 RXYQ10MAY1 RXQ8MAY1 RXQ10MAY1	RXQ12MAY1	RXYQ12MAY1 RXYQ14MAY1 RXYQ16MAY1 RXQ14MAY1 RXQ16MAY1
Cool/Heat Selector		KRC19-26A			
Cool/Heat Selector	Fixing box	KJB111A			
Distributive Piping	Refnet header	KHRP26M22H, (Max. 4 branch) KHRP26M33H (Max. 8 branch)		KHRP26M22H, KHRP26M33H, (Max. 4 branch) (Max. 8 branch) KHRP26M72H (Max. 8 branch)	
	Refnet joint	KHRP26M22T	KHRP26M22T, KHRP26M33T	KHRP26M22T, KHRP26M33T, KHRP26M72T	
Central drain pan kit		KWC26B160	KWC26B280		KWC26B450

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RXQ18 ~ 32MAY1

Optional accessories		RXYQ18MAY1 RXYQ20MAY1 RXQ18MAY1 RXQ20MAY1 RXQ22MAY1	RXYQ22MAY1 RXYQ24MAY1 RXYQ26MAY1 RXQ24MAY1 RXQ26MAY1 RXQ28MAY1	RXYQ28MAY1	RXYQ30MAY1 RXYQ32MAY1 RXQ30MAY1 RXQ32MAY1
Cool/Heat Selector		KRC19-26A			
Cool/Heat Selector	Fixing box	KJB111A			
Distributive Piping	Refnet header	KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)			
	Refnet joint	KHRP26M22T, KHRP26M33T, KHRP26M72T, KHRP26M73T			
Outdoor unit multi connection piping kit		BHFP22MA90			
Pipe size reducer		KHRP26M73TP, KHRP26M73HP			
Central drain pan kit		KWC26B280 × 2	KWC26B280 KWC26B450	KWC26B450 × 2	

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RXQ34 ~ 48MAY1

Optional accessories		RXYQ34MAY1 RXYQ36MAY1 RXQ34MAY1 RXQ36MAY1 RXQ38MAY1	RXYQ38MAY1	RXYQ40MAY1 RXYQ42MAY1 RXQ40MAY1 RXQ42MAY1 RXQ44MAY1	RXYQ44MAY1 RXYQ46MAY1 RXYQ48MAY1 RXQ46MAY1 RXQ48MAY1
Cool/Heat Selector		KRC19-26A			
Cool/Heat Selector	Fixing box	KJB111A			
Distributive Piping	Refnet header	KHRP26M22H, KHRP26M33H, KHRP26M72H, KHRP26M73H (Max. 4 branch) (Max. 8 branch) (Max. 8 branch) (Max. 8 branch)			
	Refnet joint	KHRP26M22T, KHRP26M33T, KHRP26M72T, KHRP26M73T			
Outdoor unit multi connection piping kit		BHFP22MA135			
Pipe size reducer		KHRP26M73TP, KHRP26M73HP			
Central drain pan kit		KWC26B280 × 2 KWC26B450	KWC26B280 KWC26B450 × 2		KWC26B450 × 3

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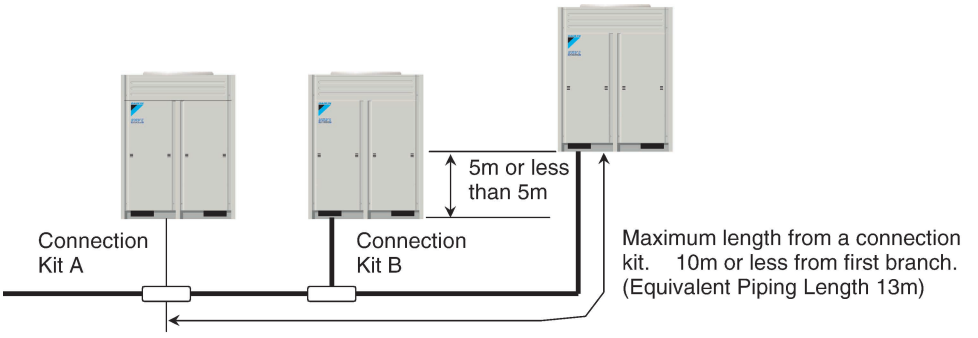
5. Piping Installation Point

5.1 Piping Installation Point



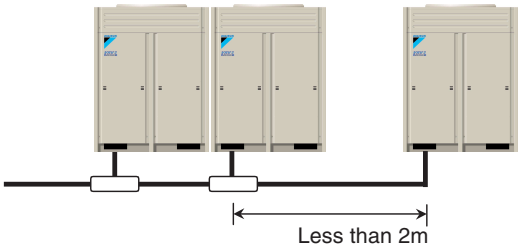
Since there is a possibility that oil may be collected on a stop machine side, install piping between outdoor units to go to level or go up to an outdoor unit, and to make a slope.

(V3036)

The projection part between multi connection piping kits

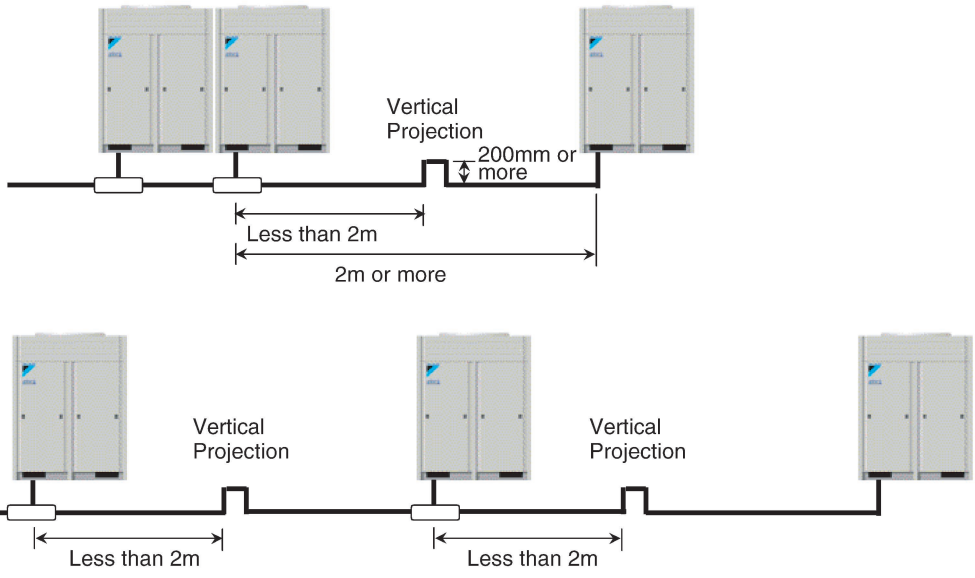
When the piping length between the multi connection kits or between multi connection kit and outdoor unit is 2m or more, prepare a vertical projection part (200mm or more as shown below) only on the gas pipe line location less than 2m from multi connection kit.

In the case of 2m or less



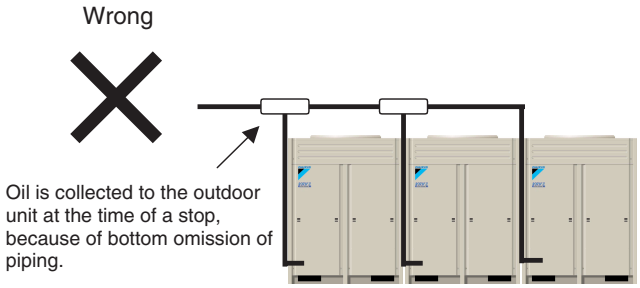
V3037

In the case of 2m or more

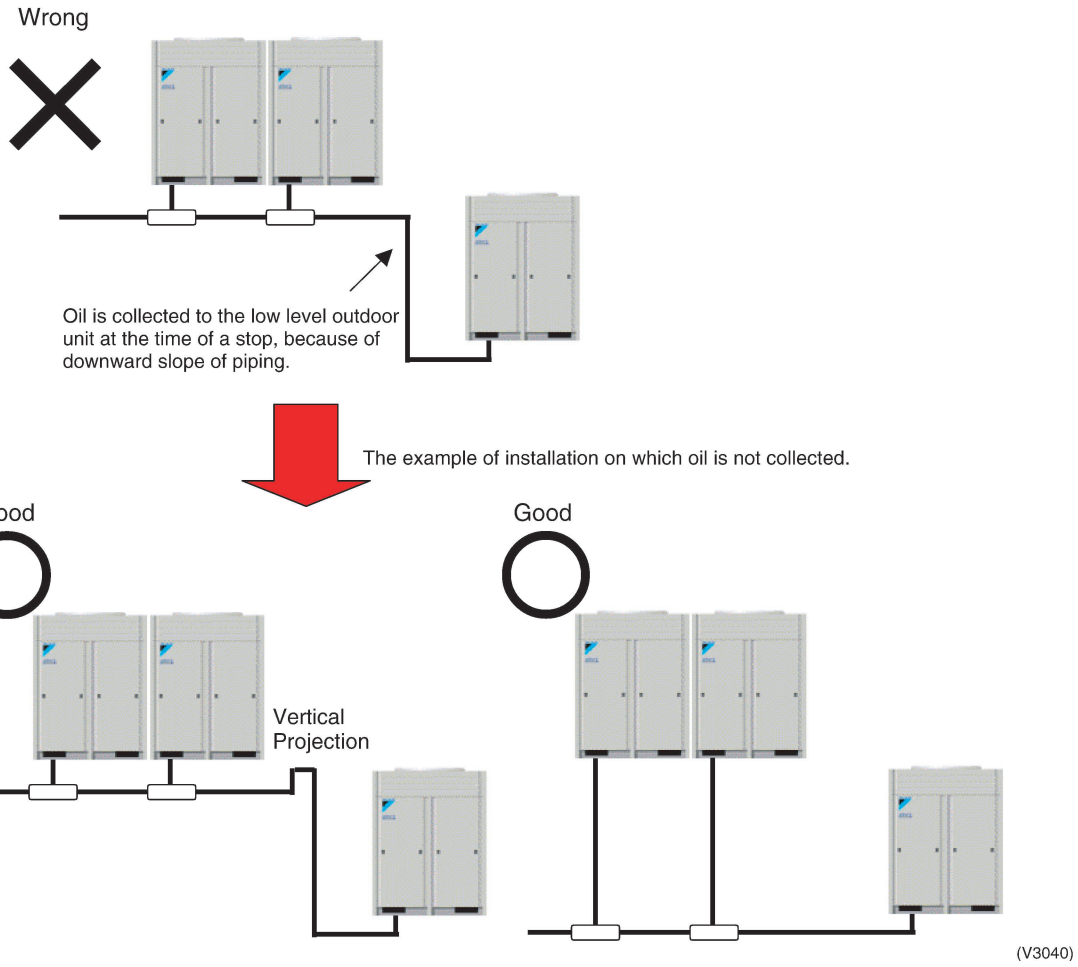


(V3038)

5.2 The Example of A Wrong Pattern



V3039



(V3040)

Max.allowable Piping Length	Outdoor Unit - Multi Connection Piping Kit	Actual piping length 10m or less, equivalent length 13m or less
	Multi Connection Piping Kit - Indoor Unit	Actual piping length 150m or less, equivalent length 175m or less, the total extension 510m or less
	REFNET Joint - Indoor Unit	Actual piping length 40(90)m or less ★Note
Allowable Level Difference	Outdoor Unit - Outdoor Unit	5m or less
	Outdoor Unit - Indoor Unit	50m or less (when an outdoor unit is lower than indoor units : 40m or less)
	Indoor Unit - Indoor Unit	15m or less

Note: Refer to page 307 Note 2 in case of up to 90m.

5.3 Example of Connection

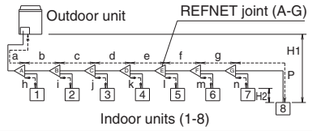
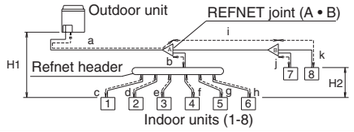
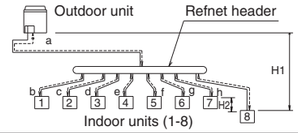
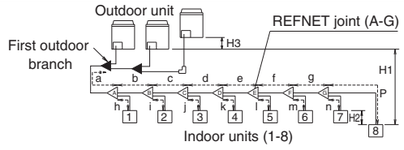
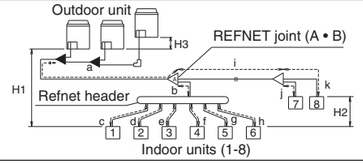
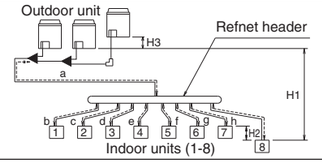
Example of connection

(Connection of 8 indoor units Heat pump system)

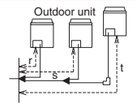
⚠ • Use the outdoor unit multi connection piping kit that is sold separately as an option (BHFP22MA90-135) for the multi installation of outdoor units.Selection method is as shown in the right table.
• Never use the outdoor unit multi connection piping kit (BHFP22M90-135) that are sold separately as an option of M-type or T-joint.

(∗1) "◄" indicates the outdoor unit multi connection piping kit.
Install the joint part (◄ part in the figure) of the outdoor unit multi connection piping kit horizontally with attention to the installation restrictions described in "connection the refrigerant piping".

(∗2) If the system capacity is RXQ18 or more, re-read to the first outdoor branch as seen from the indoor unit.

		Branch with refnet joint	Branch with refnet joint and refnet header	Branch with refnet header
One outdoor unit installed (RXQ5~16)				
When multiple outdoor units installed (RXQ18~)				

Maximum allowable length	Between outdoor (∗2) and indoor units	Actual pipe length	Pipe length between outdoor (∗2) and indoor units ≤ 150m		
			Example unit 8: a + b + c + d + e + f + g + p ≤ 150m	Example unit 6: a + b + h ≤ 150m, unit 8: a + i + k ≤ 150m	Example unit 8: a + i ≤ 150m
		Equivalent length	Equivalent pipe length between outdoor (∗2) and indoor units ≤ 175m ∗Note 1 (assume equivalent pipe length of REFNET joint to be 0.5m, that of REFNET header to be 1m, calculation purposes)		
		Total extension length	Total piping length from outdoor unit (∗2) to all indoor units ≤ 510m		
	Between outdoor branch and outdoor unit (Only for RXQ18 or more)	Actual pipe length	Piping length from outdoor branch to outdoor unit ≤ 10m		
		Equivalent length	Piping length from outdoor branch to outdoor unit ≤ 13m		
Allowable height length	Between outdoor and indoor units	Difference in height	Difference in height between outdoor and indoor units (H1) ≤ 50m (Max 40m if the outdoor unit is below)		
	Between indoor and indoor units	Difference in height	Difference in height between indoor units (H2) ≤ 15m		
	Between outdoor and outdoor units	Difference in height	Difference in height between outdoor unit (main) and outdoor unit (sub) (H3) ≤ 5m		
Allowable length after the branch		Actual pipe length	Pipe length from first refrigerant branch kit (either REFNET joint or REFNET header) to indoor unit ≤ 40m ≤(See Note 2 - Next page)		
			Example unit 8: b + c + d + e + f + g + p ≤ 40m ∗(See Note 2 - Next page)	Example unit 6 : b + h ≤ 40m, unit 8 : i + k ≤ 40m	Example unit 8: i ≤ 40m



r ≤ 10m (Approximately length: max 13m)
s ≤ 10m (Approximately length: max 13m)
t ≤ 10m (Approximately length: max 13m)

Refrigerant branch kit selection

Refrigerant branch kits can only be used with R-410A.

How to select the REFNET joint
- When using REFNET joints at the first branch counted from the outdoor unit side. Choose from the following table in accordance with the capacity of the outdoor unit.

Outdoor unit capacity type	Refrigerant branch kit name
RXQ5 type	KHRP26M22T
RXQ8, 10, 12 type	KHRP26M33T
RXQ14~24 type	KHRP26M72T
RXQ26 type~	KHRP26M73T + KHRP26M73TP

- For REFNET joints other than the first branch, select the proper branch kit model based on the total capacity index.

indoor capacity index	Refrigerant branch kit name
< 200	KHRP26M22T
200 ≤ x< 290	KHRP26M33T
290 ≤ x< 640	KHRP26M72T
640 ≤	KHRP26M73T + KHRP26M73TP

How to select the REFNET header
- Choose from the following table in accordance with the total capacity of all the indoor units connected below the REFNET header.
- Note: 250 type cannot be connected below the REFNET header.

indoor capacity index	Refrigerant branch kit name
< 200	KHRP26M22H (Max. 4 branch)
< 290	KHRP26M33H (Max. 8 branch)
290 ≤ x< 640	KHRP26M72H (Max. 8 branch)
640 ≤	KHRP26M73H (Max. 8 branch) + KHRP26M73HP

How to select an outdoor branch kit (needed if the outdoor unit capacity type is RXQ18 or more.)
- Choose from the following table in accordance with the number of outdoor units.

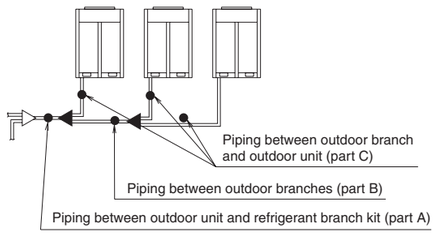
Number of outdoor units	Branch kit name
2 unit	BHFP22MA90
3 unit	BHFP22MA135

Example of downstream indoor units	example in case of REFNET joint C; indoor units 3 + 4 + 5 + 6 + 7 + 8	example in case of REFNET joint B; indoor units 7 + 8, example in case of REFNET header; indoor units 1 + 2 + 3 + 4 + 5 + 6	example in the case of REFNET header ; indoor units 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8

Pipe size selection

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

For an outdoor unit multi installation (RXQ18~48 type), make the settings in accordance with the following figure.



Piping between outdoor unit and refrigerant branch kit (part A)
- Match to the size of the connection piping on the outdoor unit.

Outdoor unit connection piping size (Unit : mm)

Outdoor unit capacity type	Piping size (outer diameter x minimum thickness)	
	Gas pipe	Liquid pipe
RXQ5 type	ϕ15.9 × 0.99	ϕ9.5 × 0.80
RXQ8 type	ϕ19.1 × 0.80	
RXQ10, 12 type	ϕ22.2 × 0.80	
RXQ14, 16, 18 type	ϕ28.6 × 0.99	ϕ12.7 × 0.80
RXQ20~24 type		ϕ15.9 × 0.99
RXQ26~36 type	ϕ34.9 × 1.21	ϕ19.1 × 0.80
RXQ38~48 type	ϕ41.3 × 1.43	

(Unit : mm)

Temper grade	O Type				1/2 H Type						
Copper tube O.D	ϕ6.4	ϕ9.5	ϕ12.7	ϕ15.9	ϕ19.1	ϕ22.2	ϕ25.4	ϕ28.6	ϕ31.8	ϕ34.9	ϕ38.1	ϕ41.3
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

Piping between refrigerant branch kits
- Select from the following table in accordance with the total capacity of all the indoor units connected below this.
- Do not let the connection piping exceed the refrigerant piping size chosen by general system model name. (Unit:mm)

indoor capacity index	Piping size (outer diameter x minimum thickness)	
	Gas pipe	Liquid pipe
x< 150	ϕ15.9 × 0.99	ϕ9.5 × 0.80
150 ≤ x< 200	ϕ19.1 × 0.80	
200 ≤ x< 290	ϕ22.2 × 0.80	
290 ≤ x< 420	ϕ28.6 × 0.99	ϕ12.7 × 0.80
420 ≤ x< 640		ϕ15.9 × 0.99
640 ≤ x< 920	ϕ34.9 × 1.21	ϕ19.1 × 0.80
920 ≤	ϕ41.3 × 1.43	

Piping between outdoor branches (part B)
- Select from the following table in accordance with the total capacity of all the outdoor units connected above this. (Unit:mm)

outdoor capacity index	Piping size (outer diameter x minimum thickness)	
	Gas pipe	Liquid pipe
≤ 24HP	ϕ28.6 × 0.99	ϕ15.9 × 0.99
26HP ≤	ϕ34.9 × 1.21	ϕ19.1 × 0.80

Piping between refrigerant branch kit and indoor unit
- Match to the size of the connection piping on the indoor unit.

Indoor unit connection piping size (Unit : mm)

indoor capacity type	Piping size (outer diameter x minimum thickness)	
	Gas pipe	Liquid pipe
20, 25, 32, 40, 50 type	ϕ12.7 × 0.80	ϕ6.4 × 0.80
63, 80, 100, 125 type	ϕ15.9 × 0.99	ϕ9.5 × 0.80
200 type	ϕ19.1 × 0.80	
250 type	ϕ22.2 × 0.80	

Piping between outdoor branch and outdoor unit (part C) (Unit : mm)

outdoor capacity type	Piping size (outer diameter x minimum thickness)	
	Gas pipe	Liquid pipe
RXQ8 type	ϕ19.1 × 0.80	ϕ9.5 × 0.80
RXQ10, 12 type	ϕ22.2 × 0.80	
RXQ14, 16 type	ϕ28.6 × 0.99	ϕ12.7 × 0.80

How to calculate the additional refrigerant to be charged

Additional referigerant to be charged R (Kg)
(R should be rounded off in units of 0.1Kg.)

NOTE :
If a negative result is gotten for R from the formula at right, no refrigerant needs to be added.

R= (Total length (m) of liquid piping size at ϕ22.2) ×0.35 + (Total length (m) of liquid piping size at ϕ19.1) ×0.25 + (Total length (m) of liquid piping size at ϕ15.9) ×0.17 + (Total length (m) of liquid piping size at ϕ12.7) ×0.11 + (Total length (m) of liquid piping size at ϕ9.5) ×0.054 + (Total length (m) of liquid piping size at ϕ6.4) ×0.022 +

Model name	Amount of refrigerant
RXQ8~32 type	1 kg
RXQ5, 34~48 type	0 kg

Example for refrigerant branch using REFNET joint and REFNET header for RXQ34 type

If the outdoor unit is RXQ34 type and the piping lengths are as at right

a: ϕ19.1 × 30m	d: ϕ9.5 × 10m	g: ϕ 6.4 × 10m	j : ϕ 6.4 × 10m
b: ϕ15.9 × 10m	e: ϕ9.5 × 10m	h: ϕ 6.4 × 20m	k: ϕ 6.4 × 9m
c: ϕ 9.5 × 10m	f : ϕ9.5 × 10m	i : ϕ12.7 × 10m	

R= 30×0.25 + 10×0.17 + 10×0.11 + 40×0.054 + 49×0.022 + 0 =13.538 ⇩ 13.5
(a, b, i, c+d+e+f, g+h+j+k)

∗Note 1

When overall equivalent pipe length is 90 m or more, the size of the main gas and liquid pipes (Outdoor unit-first branch kit) must be increased.

■ Diameter of above case

Model	Gas	Liquid
RXQ5MAY1	ϕ19.1	Not Increased
RXQ8MAY1	ϕ22.2	ϕ12.7
RXQ10MAY1	ϕ25.4*	ϕ12.7
RXQ12MAY1	ϕ25.4*	ϕ12.7
RXQ14MAY1	Not Increased	ϕ15.9
RXQ16MAY1	ϕ31.8	ϕ15.9

Model	Gas	Liquid
RXQ18MAY1	ϕ31.8	ϕ19.1
RXQ20MAY1	ϕ31.8	ϕ19.1
RXQ22MAY1	ϕ31.8	ϕ19.1
RXQ24MAY1	ϕ31.8	ϕ19.1
RXQ26MAY1	ϕ38.1*	ϕ22.2
RXQ28MAY1	ϕ38.1*	ϕ22.2

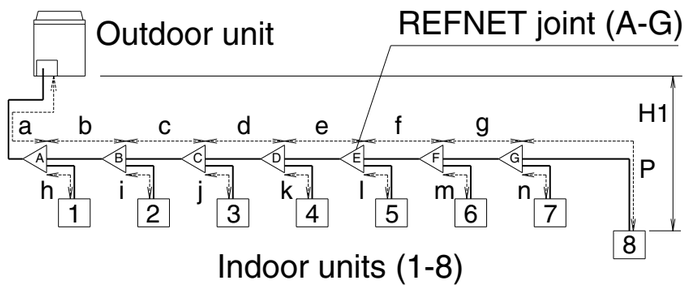
Model	Gas	Liquid
RXQ30MAY1	ϕ38.1*	ϕ22.2
RXQ32MAY1	ϕ38.1*	ϕ22.2
RXQ34MAY1	ϕ38.1*	ϕ22.2
RXQ36MAY1	ϕ38.1*	ϕ22.2
RXQ38MAY1	Not Increased	ϕ22.2
RXQ40MAY1	Not Increased	ϕ22.2

Model	Gas	Liquid
RXQ42MAY1	Not Increased	ϕ22.2
RXQ44MAY1	Not Increased	ϕ22.2
RXQ46MAY1	Not Increased	ϕ22.2
RXQ48MAY1	Not Increased	ϕ22.2

*If available on the site, use this size. Otherwise it can not be increased.

∗Note 2

Allowable length after the first refrigerant branch kit to indoor units is 40 m or less, however it can be extended up to **90** m if all the following conditions are satisfied. (In case of " **Branch with refnet joint** ")

Required Conditions	Example Drawings	
1. It is necessary to increase the pipe size between the first branch kit and the final branch kit. (Reducers must be procured on site)	8 b+c+d+e+f+g+p ≤ 90 m increase the pipe size of b, c, d, e, f, g	Increase the pipe size as follows ϕ 6.4 → ϕ 9.5 ϕ12.7 → ϕ15.9 ϕ19.1 → ϕ22.2 ϕ34.9 → ϕ38.1 ϕ 9.5 → ϕ12.7 ϕ15.9 → ϕ19.1 ϕ28.6 → ϕ31.8
2. For calculation of Total extension length, the actual length of above pipes must be doubled. (except main pipe)	a+b×2+c×2+d×2+e×2+f×2+g×2 +h+i+j+k+l+m+n+p ≤ 510 m	
3. Indoor unit to the nearest branch kit ≤ 40 m	h, i, j ..... p ≤ 40 m	
4. The difference between [Outdoor unit to the farthest indoor unit] and [Outdoor unit to the nearest indoor unit] ≤ 40 m	The farthest indoor unit 8 The nearest indoor unit 1 (a+b+c+d+e+f+g+p) - (a+h) ≤ 40 m	

6. Selection of Pipe Size, Joints and Header

6.1 RXQ5MAY1, RXQ8MAY1, RXQ10MAY1, RXQ12MAY1, RXQ14MAY1, RXQ16MAY1

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)
RXQ5MAY1	KHRP26M22T
RXQ8MAY1, 10MAY1, 12MAY1	KHRP26M33T
RXQ14MAY1, 16MAY1	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≤X<290	KHRP26M33T
290≤X<640	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
RXQ5MAY1	ϕ15.9	ϕ9.5
RXQ8MAY1	ϕ19.1	
RXQ10MAY1, 12MAY1	ϕ22.2	
RXQ14MAY1, 16MAY1	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	O
ϕ19.1 or more	1 / 2H or H

* O: Soft (Annealed)
* H: Hard (Drawn)

Wall thickness of refrigerant pipe

(Unit : mm)

Temper grade	O Type				1/2H Type							
Copper tube O.D	ϕ6.4	ϕ9.5	ϕ12.7	ϕ15.9	ϕ19.1	ϕ22.2	ϕ25.4	ϕ28.6	ϕ31.8	ϕ34.9	ϕ38.1	ϕ41.3
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≤X<640	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
X<150	ϕ15.9	ϕ9.5
150≤X<200	ϕ19.1	
200≤X<290	ϕ22.2	
290≤X<420	ϕ28.6	ϕ12.7
420≤X<640	ϕ28.6	ϕ15.9

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.

Connection pipe 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	ϕ9.5
200 Type	ϕ19.1	
250 Type	ϕ22.2	

6.2 RXQ18MAY1, RXQ20MAY1, RXQ22MAY1, RXQ24MAY1, RXQ26MAY1, RXQ28MAY1, RXQ30MAY1, RXQ32MAY1, RXQ34MAY1, RXQ36MAY1, RXQ38MAY1, RXQ40MAY1, RXQ42MAY1, RXQ44MAY1, RXQ46MAY1, RXQ48MAY1

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)
RXQ18MAY1-24MAY1	KHRP26M72T
RXQ26MAY1-48MAY1	KHRP26M73T+KHRP26M73TP

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≤X<290	KHRP26M33T
290≤X<640	KHRP26M72T
640≤	KHRP26M73T+KHRP26M73TP

6.2.2 How to select pipe size

Main Piping (Between Multi connection piping kit and REFNET Joint)

Select the proper ones based on the following table :

Outdoor Unit	Gas	Liquid
RXQ18MAY1	ϕ28.6	ϕ12.7
RXQ20MAY1		ϕ15.9
RXQ22MAY1		
RXQ24MAY1		
RXQ26MAY1	ϕ34.9	ϕ19.1
RXQ28MAY1		
RXQ30MAY1		
RXQ32MAY1		
RXQ34MAY1		
RXQ36MAY1		
RXQ38MAY1	ϕ41.3	
RXQ40MAY1		
RXQ42MAY1		
RXQ44MAY1		
RXQ46MAY1		
RXQ48MAY1		

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	O
ϕ19.1 or more	1 / 2H or H

* O: Soft (Annealed)
* H: Hard (Drawn)

Wall thickness of refrigerant pipe

(Unit : mm)

Temper grade	O Type				1/2H Type							
Copper tube O.D	ϕ6.4	ϕ9.5	ϕ12.7	ϕ15.9	ϕ19.1	ϕ22.2	ϕ25.4	ϕ28.6	ϕ31.8	ϕ34.9	ϕ38.1	ϕ41.3
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)
<290	KHRP26M33H (Max.8 Branches)
290≤X<640	KHRP26M72H (Max.8 Branches)
640≤	KHRP26M73H (Max.8 Branches) KHRP26M73HP

When using REFNET Joints at the first branch counted from the outdoor unit side, use KHRP26M73H for larger than RXQ26MY1B.

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
X<150	ϕ15.9	ϕ9.5
150≤X<200	ϕ19.1	
200≤X<290	ϕ22.2	
290≤X<420	ϕ28.6	ϕ12.7
420≤X<640		ϕ15.9
640≤X<920	ϕ34.9	ϕ19.1
920≤	ϕ41.3	

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 connected to upper stream	Gas	Liquid	Oil
Less than RXQ22MAY1	ϕ28.6	ϕ15.9	ϕ6.4
RXQ24MAY1	ϕ34.9		
RXQ26MAY1 or more~		ϕ19.1	

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	BHFP22MA90
3 units	BHFP22MA135

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	ϕ6.4
63 · 80 · 100 · 125 Type	ϕ15.9	ϕ9.5
200 Type	ϕ19.1	
250 Type	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
RXQ8MAY1	ϕ19.1	ϕ9.5	ϕ6.4
RXQ10MAY1, 12MAY1	ϕ22.2		
RXQ14MAY1, 16MAY1	ϕ28.6	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

Outdoor unit for fin thermistor R1T

T°C	0.0
-10	-
-8	-
-6	88.0
-4	79.1
-2	71.1
0	64.1
2	57.8
4	52.3
6	47.3
8	42.9
10	38.9
12	35.3
14	32.1
16	29.2
18	26.6
20	24.3
22	22.2
24	20.3
26	18.5
28	17.0
30	15.6
32	14.2
34	13.1
36	12.0
38	11.1
40	10.3
42	9.5
44	8.8
46	8.2
48	7.6
50	7.0
52	6.7
54	6.0
56	5.5
58	5.2
60	4.79
62	4.46
64	4.15
66	3.87
68	3.61
70	3.37
72	3.15
74	2.94
76	2.75
78	2.51
80	2.41
82	2.26
84	2.12
86	1.99
88	1.87
90	1.76
92	1.65
94	1.55
96	1.46
98	1.38

(kΩ)

T°C	0.0	0.5
-20	197.81	192.08
-19	186.53	181.16
-18	175.97	170.94
-17	166.07	161.36
-16	156.80	152.38
-15	148.10	143.96
-14	139.94	136.05
-13	132.28	128.63
-12	125.09	121.66
-11	118.34	115.12
-10	111.99	108.96
-9	106.03	103.18
-8	100.41	97.73
-7	95.14	92.61
-6	90.17	87.79
-5	85.49	83.25
-4	81.08	78.97
-3	76.93	74.94
-2	73.01	71.14
-1	69.32	67.56
0	65.84	64.17
1	62.54	60.96
2	59.43	57.94
3	56.49	55.08
4	53.71	52.38
5	51.09	49.83
6	48.61	47.42
7	46.26	45.14
8	44.05	42.98
9	41.95	40.94
10	39.96	39.01
11	38.08	37.18
12	36.30	35.45
13	34.62	33.81
14	33.02	32.25
15	31.50	30.77
16	30.06	29.37
17	28.70	28.05
18	27.41	26.78
19	26.18	25.59
20	25.01	24.45
21	23.91	23.37
22	22.85	22.35
23	21.85	21.37
24	20.90	20.45
25	20.00	19.56
26	19.14	18.73
27	18.32	17.93
28	17.54	17.17
29	16.80	16.45
30	16.10	15.76

T°C	0.0	0.5
30	16.10	15.76
31	15.43	15.10
32	14.79	14.48
33	14.18	13.88
34	13.59	13.31
35	13.04	12.77
36	12.51	12.25
37	12.01	11.76
38	11.52	11.29
39	11.06	10.84
40	10.63	10.41
41	10.21	10.00
42	9.81	9.61
43	9.42	9.24
44	9.06	8.88
45	8.71	8.54
46	8.37	8.21
47	8.05	7.90
48	7.75	7.60
49	7.46	7.31
50	7.18	7.04
51	6.91	6.78
52	6.65	6.53
53	6.41	6.53
54	6.65	6.53
55	6.41	6.53
56	6.18	6.06
57	5.95	5.84
58	5.74	5.43
59	5.14	5.05
60	4.96	4.87
61	4.79	4.70
62	4.62	4.54
63	4.46	4.38
64	4.30	4.23
65	4.16	4.08
66	4.01	3.94
67	3.88	3.81
68	3.75	3.68
69	3.62	3.56
70	3.50	3.44
71	3.38	3.32
72	3.27	3.21
73	3.16	3.11
74	3.06	3.01
75	2.96	2.91
76	2.86	2.82
77	2.77	2.72
78	2.68	2.64
79	2.60	2.55
80	2.51	2.47

Outdoor Unit Thermistors for Discharge Pipe (R3T, R31~33T)

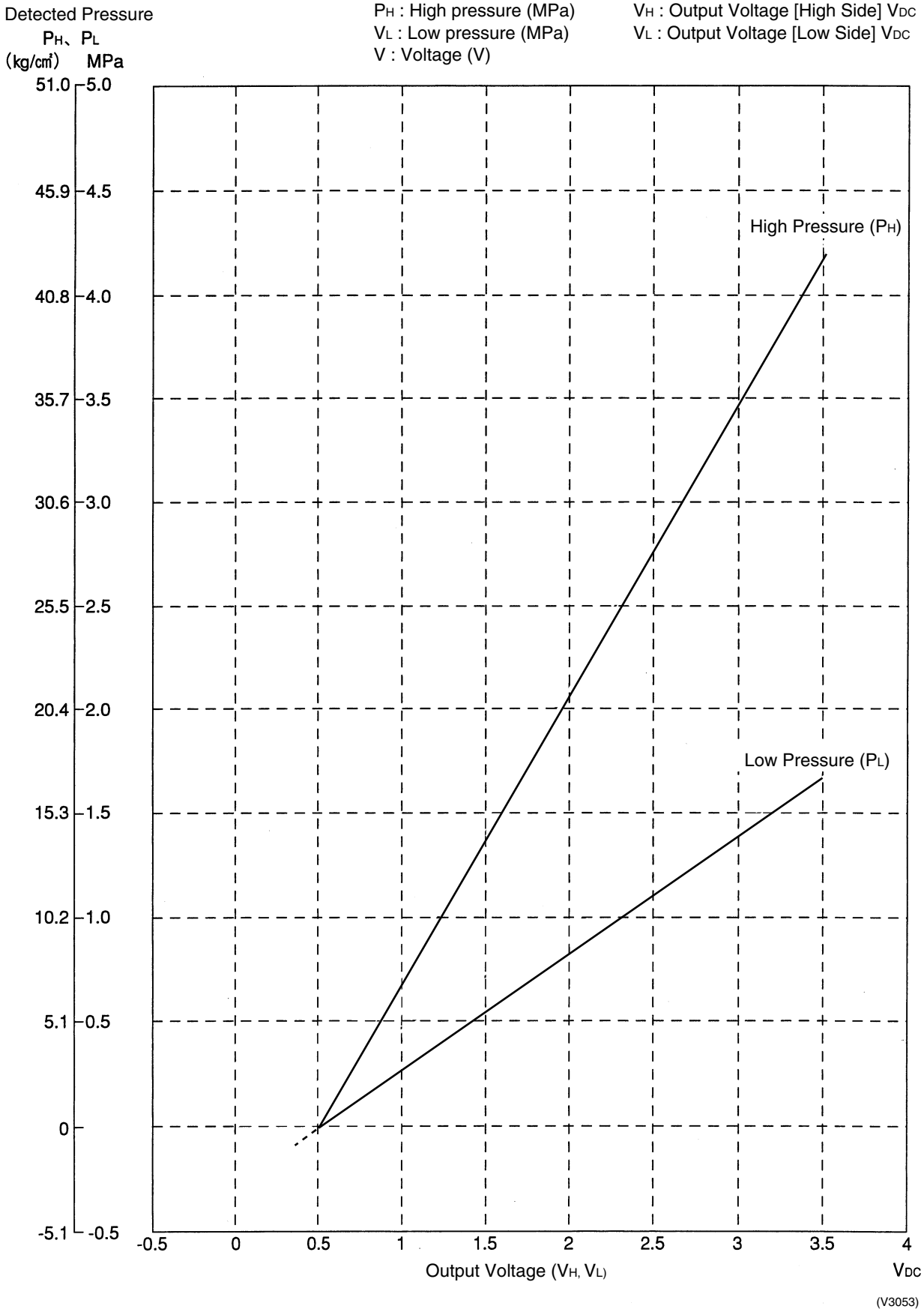
(kΩ))

T°C	0.0	0.5	T°C	0.0	0.5	T°C	0.0	0.5
0	640.44	624.65	50	72.32	70.96	100	13.35	13.15
1	609.31	594.43	51	69.64	68.34	101	12.95	12.76
2	579.96	565.78	52	67.06	65.82	102	12.57	12.38
3	552.00	538.63	53	64.60	63.41	103	12.20	12.01
4	525.63	512.97	54	62.24	61.09	104	11.84	11.66
5	500.66	488.67	55	59.97	58.87	105	11.49	11.32
6	477.01	465.65	56	57.80	56.75	106	11.15	10.99
7	454.60	443.84	57	55.72	54.70	107	10.83	10.67
8	433.37	423.17	58	53.72	52.84	108	10.52	10.36
9	413.24	403.57	59	51.98	50.96	109	10.21	10.06
10	394.16	384.98	60	49.96	49.06	110	9.92	9.78
11	376.05	367.35	61	48.19	47.33	111	9.64	9.50
12	358.88	350.62	62	46.49	45.67	112	9.36	9.23
13	342.58	334.74	63	44.86	44.07	113	9.10	8.97
14	327.10	319.66	64	43.30	42.54	114	8.84	8.71
15	312.41	305.33	65	41.79	41.06	115	8.59	8.47
16	298.45	291.73	66	40.35	39.65	116	8.35	8.23
17	285.18	278.80	67	38.96	38.29	117	8.12	8.01
18	272.58	266.51	68	37.63	36.98	118	7.89	7.78
19	260.60	254.72	69	36.34	35.72	119	7.68	7.57
20	249.00	243.61	70	35.11	34.51	120	7.47	7.36
21	238.36	233.14	71	33.92	33.35	121	7.26	7.16
22	228.05	223.08	72	32.78	32.23	122	7.06	6.97
23	218.24	213.51	73	31.69	31.15	123	6.87	6.78
24	208.90	204.39	74	30.63	30.12	124	6.69	6.59
25	200.00	195.71	75	29.61	29.12	125	6.51	6.42
26	191.53	187.44	76	28.64	28.16	126	6.33	6.25
27	183.46	179.57	77	27.69	27.24	127	6.16	6.08
28	175.77	172.06	78	26.79	26.35	128	6.00	5.92
29	168.44	164.90	79	25.91	25.49	129	5.84	5.76
30	161.45	158.08	80	25.07	24.66	130	5.69	5.61
31	154.79	151.57	81	24.26	23.87	131	5.54	5.46
32	148.43	145.37	82	23.48	23.10	132	5.39	5.32
33	142.37	139.44	83	22.73	22.36	133	5.25	5.18
34	136.59	133.79	84	22.01	21.65	134	5.12	5.05
35	131.06	128.39	85	21.31	20.97	135	4.98	4.92
36	125.79	123.24	86	20.63	20.31	136	4.86	4.79
37	120.76	118.32	87	19.98	19.67	137	4.73	4.67
38	115.95	113.62	88	19.36	19.05	138	4.61	4.55
39	111.35	109.13	89	18.75	18.46	139	4.49	4.44
40	106.96	104.84	90	18.17	17.89	140	4.38	4.32
41	102.76	100.73	91	17.61	17.34	141	4.27	4.22
42	98.75	96.81	92	17.07	16.80	142	4.16	4.11
43	94.92	93.06	93	16.54	16.29	143	4.06	4.01
44	91.25	89.47	94	16.04	15.79	144	3.96	3.91
45	87.74	86.04	95	15.55	15.31	145	3.86	3.81
46	84.38	82.75	96	15.08	14.85	146	3.76	3.72
47	81.16	79.61	97	14.62	14.40	147	3.67	3.62
48	78.09	76.60	98	14.18	13.97	148	3.58	3.54
49	75.14	73.71	99	13.76	13.55	149	3.49	3.45
50	72.32	70.96	100	13.35	13.15	150	3.41	3.37

8. Pressure Sensor

$P_H = 1.38V-0.69$
$P_L = 0.57V-0.28$
P_H : High pressure (MPa)
V_L : Low pressure (MPa)
V : Voltage (V)

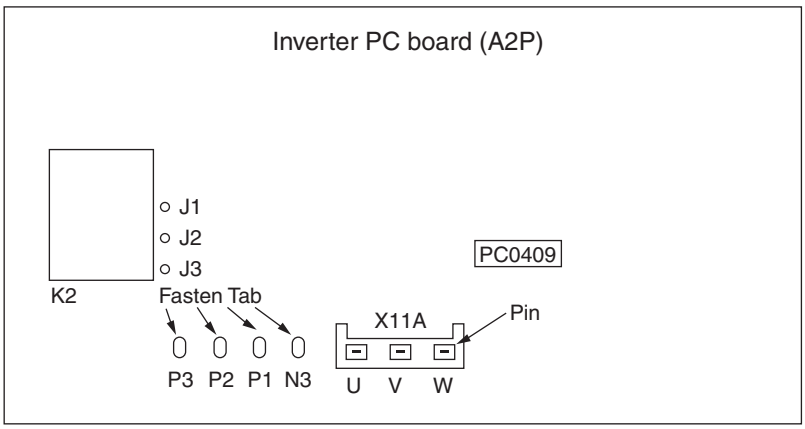
P_H : Detected Pressure [High Side] MPa
P_L : Detected Pressure [Low Side] MPa
V_H : Output Voltage [High Side] V_{DC}
V_L : Output Voltage [Low Side] V_{DC}



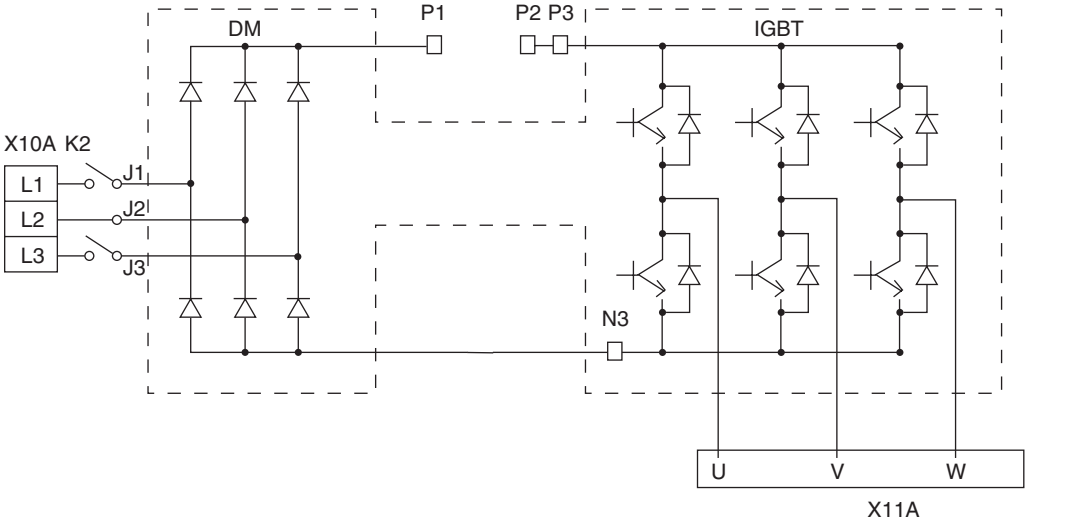
9. Method of Replacing The Inverter's Power Transistors and Diode Modules

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

Inverter P.C.Board



Electronic circuit

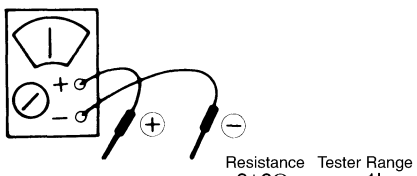


(V2895)

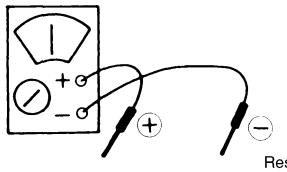
[Decision according to continuity check by analog tester]

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

Power Transistor IGBT (On Inverter PC Board)



			Resistance	Tester Range
P3	—	U	9±6Ω	x 1k
〃	—	V	9±6Ω	x 1k
〃	—	W	9±6Ω	x 1k
U	—	P3	17±12Ω	x 1k
V	—	〃	17±12Ω	x 1k
W	—	〃	17±12Ω	x 1k



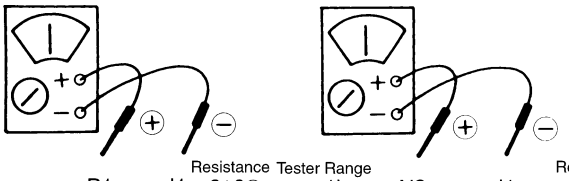
			Resistance	Tester Range
N3	—	U	17±12Ω	x 1k
〃	—	V	17±12Ω	x 1k
〃	—	W	17±12Ω	x 1k
U	—	N3	9±6Ω	x 1k
V	—	〃	9±6Ω	x 1k
W	—	〃	9±6Ω	x 1k

(V2896)

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

Note: Above figures are measured by analogue tester. Make sure to set "Tester Range" to "x 1k".

Diode Module



			Resistance	Tester Range				Resistance	Tester Range
P1	—	J1	9±6Ω	x 1k	N3	—	J1	∞	x 1k
P1	—	J3	9±6Ω	x 1k	〃	—	J3	∞	x 1k
P1	—	J2	9±6Ω	x 1k	〃	—	J2	∞	x 1k
J1	—	P1	∞	x 1k	L1	—	N3	9±6Ω	x 1k
J3	—	P1	∞	x 1k	L2	—	N3	9±6Ω	x 1k
J2	—	P1	∞	x 1k	L3	—	N3	9±6Ω	x 1k

(V2897)

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

Note: Above figures are measured by analogue tester. Make sure to set "Tester Range" to "x 1k".

Part 8
Precautions for New Refrigerant (R-410A)

1. Precautions for New Refrigerant (R-410A)

1.1 Outline

1.1.1 About Refrigerant R-410A

■ Characteristics of new refrigerant, R-410A

1. Performance
   Almost the same performance as R-22 and R-407C
2. Pressure
   Working pressure is approx. 1.4 times more than R-22 and R-407C.
3. Refrigerant composition
   Few problems in composition control, since it is a Quasi-azeotropic mixture refrigerant.

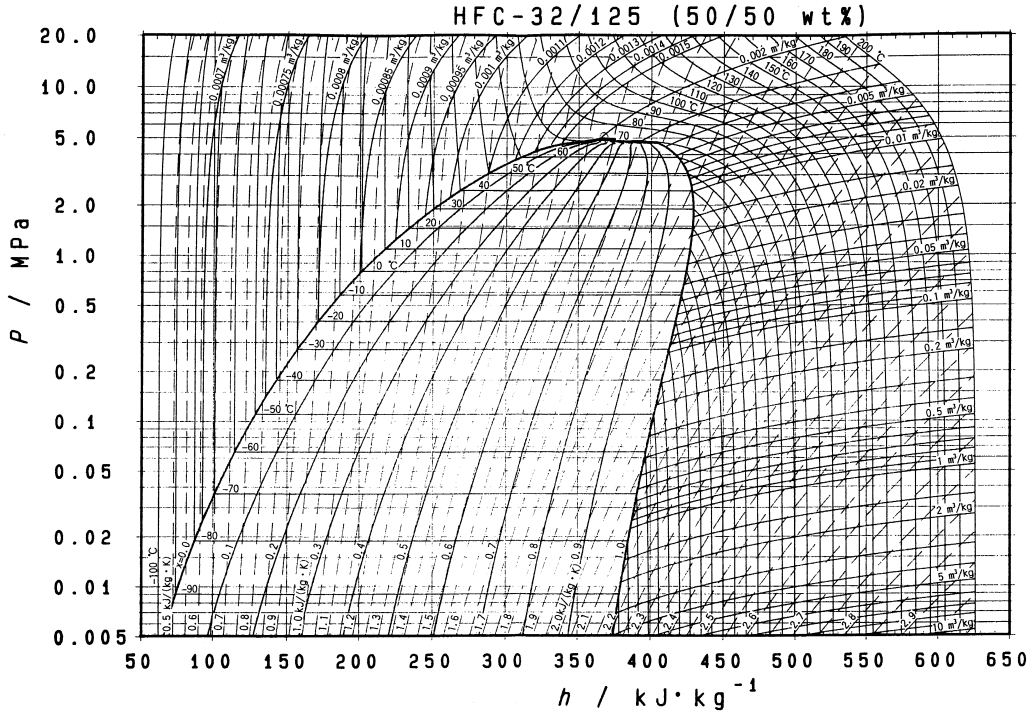
	HFC units (Units using new refrigerants)		HCFC units
Refrigerant name	R-407C	R-410A	R-22
Composing substances	Non-azeotropic mixture of HFC32, HFC125 and HFC134a (*1)	Quasi-azeotropic mixture of HFC32 and JFC125 (*1)	Single-component refrigerant
Design pressure	3.2 MPa (gauge pressure) = 32.6 kgf/cm^2	3.80 MPa (gauge pressure) = 38.7 kgf/cm^2	2.75MPa (gauge pressure) = 28.0 kgf/cm^2
Refrigerant oil	Synthetic oil (Ether)		Mineral oil (Suniso)
Ozone destruction factor (ODP)	0	0	0.05
Combustibility	None	None	None
Toxicity	None	None	None

★1. Non-azeotropic mixture refrigerant: mixture of two or more refrigerants having different boiling points.

★2. Quasi-azeotropic mixture refrigerant: mixture of two or more refrigerants having similar boiling points.

★3. The design pressure is different at each product. Please refer to the installation manual for each product.

(Reference) 1 MPa ≒ 10.19716 kgf / cm^2



Pressure-Enthalpy curves of HFC-32/125 (50/50wt%)

■ Thermodynamic characteristic of R-410A

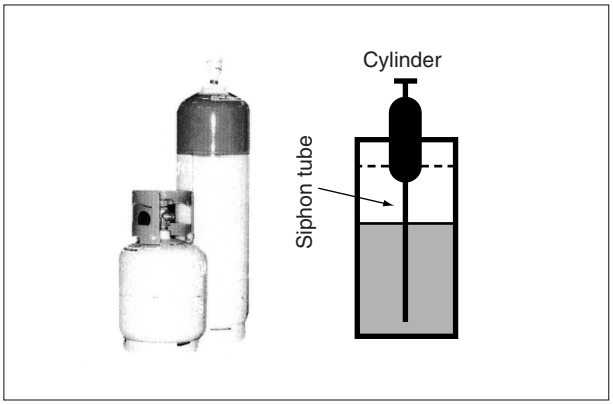
DAIREP ver2.0

Temperature (℃)	Steam pressure (kPa)		Density (kg/m³)		Specific heat at constant pressure (kJ/kgK)		Specific enthalpy (kJ/kg)		Specific entropy (kJ/KgK)	
	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor
-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	0.710	109.1	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	3.030	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	0.864	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	1283.9	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	499.91	498.20	1227.5	19.04	1.483	0.909	180.0	419.0	0.991	1.914
-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	1.866
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	1.859
16	1296.2	1290.8	1104.4	50.09	1.635	1.163	226.5	427.5	1.158	1.855
18	1371.2	1365.5	1095.1	53.20	1.650	1.188	229.7	427.8	1.169	1.851
20	1449.4	1443.4	1085.6	56.48	1.666	1.215	233.0	428.1	1.180	1.847
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	1.839
26	1704.2	1697.2	1055.9	67.51	1.721	1.306	243.1	428.6	1.214	1.834
28	1796.2	1788.9	1045.5	71.62	1.743	1.341	246.5	428.6	1.225	1.830
30	1891.9	1884.2	1034.9	75.97	1.767	1.379	249.9	428.6	1.236	1.826
32	1991.3	1983.2	1024.1	80.58	1.793	1.420	253.4	428.6	1.247	1.822
34	2094.5	2086.2	1012.9	85.48	1.822	1.465	256.9	428.4	1.258	1.817
36	2201.7	2193.1	1001.4	90.68	1.855	1.514	260.5	428.3	1.269	1.813
38	2313.0	2304.0	989.5	96.22	1.891	1.569	264.1	428.0	1.281	1.808
40	2428.4	2419.2	977.3	102.1	1.932	1.629	267.8	427.7	1.292	1.803
42	2548.1	2538.6	964.6	108.4	1.979	1.696	271.5	427.2	1.303	1.798
44	2672.2	2662.4	951.4	115.2	2.033	1.771	275.3	426.7	1.315	1.793
46	2800.7	2790.7	937.7	122.4	2.095	1.857	279.2	426.1	1.327	1.788
48	2933.7	2923.6	923.3	130.2	2.168	1.955	283.2	425.4	1.339	1.782
50	3071.5	3061.2	908.2	138.6	2.256	2.069	287.3	424.5	1.351	1.776
52	3214.0	3203.6	892.2	147.7	2.362	2.203	291.5	423.5	1.363	1.770
54	3361.4	3351.0	875.1	157.6	2.493	2.363	295.8	422.4	1.376	1.764
56	3513.8	3503.5	856.8	168.4	2.661	2.557	300.3	421.0	1.389	1.757
58	3671.3	3661.2	836.9	180.4	2.883	2.799	305.0	419.4	1.403	1.749
60	3834.1	3824.2	814.9	193.7	3.191	3.106	310.0	417.6	1.417	1.741
62	4002.1	3992.7	790.1	208.6	3.650	3.511	315.3	415.5	1.433	1.732
64	4175.7	4166.8	761.0	225.6	4.415	4.064	321.2	413.0	1.450	1.722

1.2 Refrigerant Cylinders

■ Cylinder specifications

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



Refrigerant can be charged in liquid state with cylinder in upright position.

Caution: Do not lay cylinder on its side during charging, since it cause refrigerant in gas state to enter the system.

■ Handling of cylinders

(1) Laws and regulations

R-410A 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 R-410A 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 R-410A 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

R-410A is used under higher working pressure, compared to previous refrigerants (R-22, R-407C). 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 (R-22,R-407C) can not be used for products that use new refrigerants.
Be sure to use dedicated tools and devices.

■ Tool compatibility

Tool	Compatibility			Reasons for change
	HFC		HCFC	
	R-410A	R-407C	R-22	
Gauge manifold Charge hose	×			• Do not use the same tools for R-22 and R-410A. • Thread specification differs for R-410A and R-407C.
Charging cylinder	×		○	• Weighting instrument used for HFCs.
Gas detector	○		×	• The same tool can be used for HFCs.
Vacuum pump (pump with reverse flow preventive function)	○			• To use existing pump for HFCs, vacuum pump adaptor must be installed.
Weighting instrument	○			
Charge mouthpiece	×			• Seal material is different between R-22 and HFCs. • Thread specification is different between R-410A and others.
Flaring tool (Clutch type)	○			• For R-410A, flare gauge is necessary.
Torque wrench	○			• Torque-up for 1/2 and 5/8
Pipe cutter	○			
Pipe expander	○			
Pipe bender	○			
Pipe assembling oil	×			• Due to refrigerating machine oil change. (No Suniso oil can be used.)
Refrigerant recovery device	Check your recovery device.			
Refrigerant piping	See the chart below.			• Only ϕ19.1 is changed to 1/2H material while the previous material is "O".

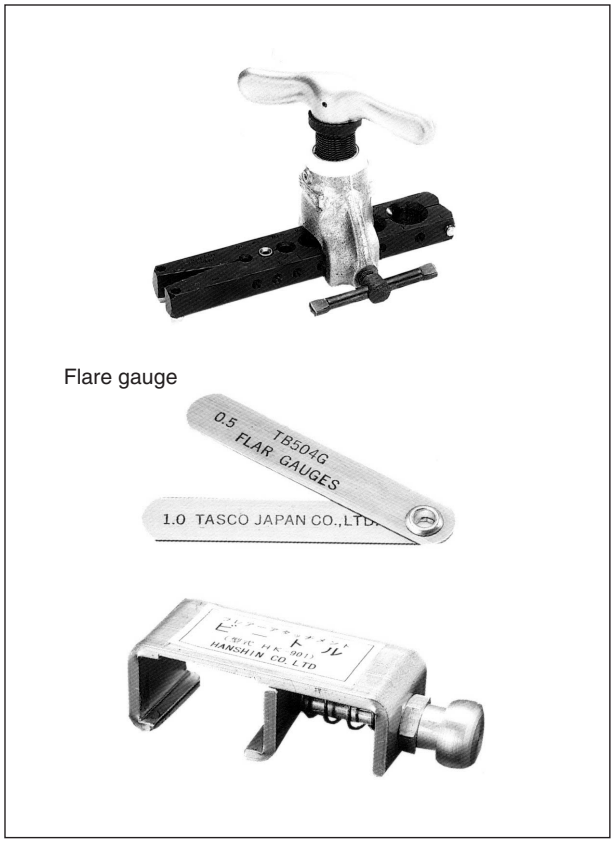
As for the charge mouthpiece and packing, 1/2UNF20 is necessary for mouthpiece size of charge hose.

■ Copper tube material and thickness

Pipe size	Ve-up		Ve-upII	
	R-407C		R-410A	
	Material	Thickness t (mm)	Material	Thickness t (mm)
ϕ6.4	O	0.8	O	0.8
ϕ9.5	O	0.8	O	0.8
ϕ12.7	O	0.8	O	0.8
ϕ15.9	O	1.0	O	1.0
ϕ19.1	O	1.0	1/2H	1.0
ϕ22.2	1/2H	1.0	1/2H	1.0
ϕ25.4	1/2H	1.0	1/2H	1.0
ϕ28.6	1/2H	1.0	1/2H	1.0
ϕ31.8	1/2H	1.2	1/2H	1.1
ϕ38.1	1/2H	1.4	1/2H	1.4
ϕ44.5	1/2H	1.6	1/2H	1.6

* O: Soft (Annealed)
H: Hard (Drawn)

1. Flaring tool



■ Specifications

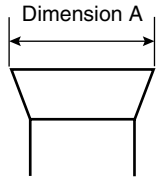
• Dimension A

Unit:mm

Nominal size	Tube O.D.	$A^{+0}_{-0.4}$	
	Do	Class-2 (R-410A)	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: R-407C
For class-2: R-410A

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 R-410A air conditioners, perform pipe flaring with a pipe extension margin of 1.0 to 1.5mm.
(For clutch type only)
Conventional tool with pipe extension margin adjustment can be used.

2. Torque wrench

■ Specifications

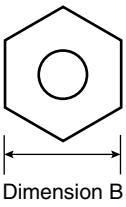
• Dimension B Unit:mm

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

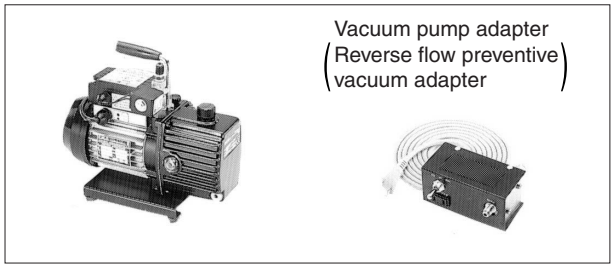
■ Differences

• Change of dimension B
Only 1/2", 5/8" are extended



For class-1: R-407C
For class-2: R-410A

3. Vacuum pump with check valve



■ Specifications

• Discharge speed
50 l/min (50Hz)
60 l/min (60Hz)

• Suction port UNF7/16-20(1/4 Flare)
UNF1/2-20(5/16 Flare) with adapter

● Maximum degree of vacuum
Select a vacuum pump which is able to keep the vacuum degree of the system in excess of –100.7 kPa (5 torr –755 mmHg)

■ 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
  R-410A, R-407C, R-404A, R-507A, R-134a, etc.

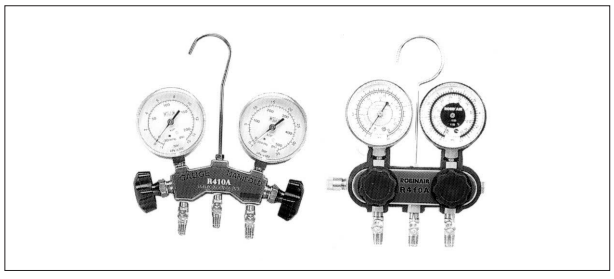
■ Differences
- Previous testers detected chlorine. Since HFCs do not contain chlorine, new tester detects hydrogen.

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 R-410A and R-22 units.

6. Gauge manifold for R-410A



■ Specifications
- High pressure gauge
  - 0.1 to 5.3 MPa (-76 cmHg to 53 kg/cm^2)
- Low pressure gauge
  - 0.1 to 3.8 MPa (-76 cmHg to 38 kg/cm^2)
- 1/4" → 5/16" (2min → 2.5min)
- No oil is used in pressure test of gauges.
  → 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

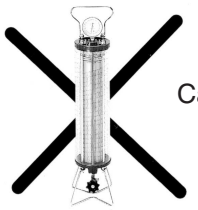
7. Charge hose for R-410A

(Hose with ball valve)

■ Specifications
- Working pressure 5.08 MPa (51.8 kg/cm^2)
- Rupture pressure 25.4 MPa (259 kg/cm^2)
- 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



Can not be used

■ 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.

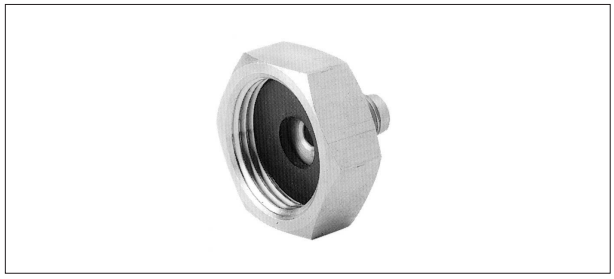
  When R-410A is charged in liquid state using charging cylinder, foaming phenomenon is generated inside charging cylinder.

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 R-410A, 1/4"→ 5/16" (2min → 2.5min)
- Material is changed from CR to H-NBR.

■ Differences
- Change of thread specification on hose connection side (For the R-410A use)
- Change of sealer material for the HFCs use.

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Warning

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorized parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

For any inquiries, contact your local distributor.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided and choose an outdoor unit with anti-corrosion treatment.

The air conditioners manufactured by Daikin Industries have received **ISO 9001** certification for quality assurance.

Certificate Number. **JMI-0107**
JQA-0495
JQA-1452

All Daikin Industries locations and subsidiaries in Japan have received environmental management system standard **ISO 14001** certification.

Daikin Industries, Ltd.
Domestic Group
Certificate Number. EC99J2044

About ISO 14001

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

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