MITSUBISHI ELECTRIC

SPLIT-TYPE AIR CONDITIONERS

Revision A:
- MXZ-2DM40VA -ER1 and MXZ-3DM50VA -ER1 have been added.

Please void OBH739.

OUTDOOR UNIT

SERVICE MANUAL

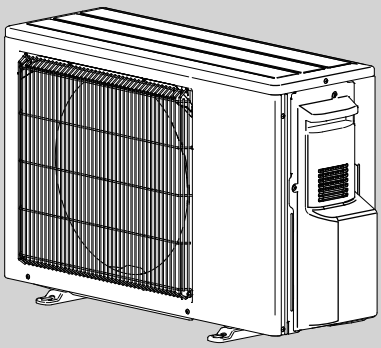
HFC utilized R410A

No. OBH739
REVISED EDITION-A

Models

MXZ-2DM40VA - E1, ET1, ER1
MXZ-3DM50VA - E1, ET1, ER1

Indoor unit service manual
MSZ-DM•VA Series (OBH750)
MSZ-HJ•VA Series (OBH647)



MXZ-2DM40VA

NOTE:
RoHS compliant products have <G> mark on the spec name plate.

CONTENTS

Use the specified refrigerant only

Never use any refrigerant other than that specified.

Doing so may cause a burst, an explosion, or fire when the unit is being used, serviced, or disposed of.
Correct refrigerant is specified in the manuals and on the spec labels provided with our products.
We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

<Preparation before the repair service>

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker and remove the power plug.
- Discharge the capacitor before the work involving the electric parts.

<Precautions during the repair service>

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigeration cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.

Revision A:

• MXZ-2DM40VA -ER1 and MXZ-3DM50VA -ER1 have been added.

1 TECHNICAL CHANGES

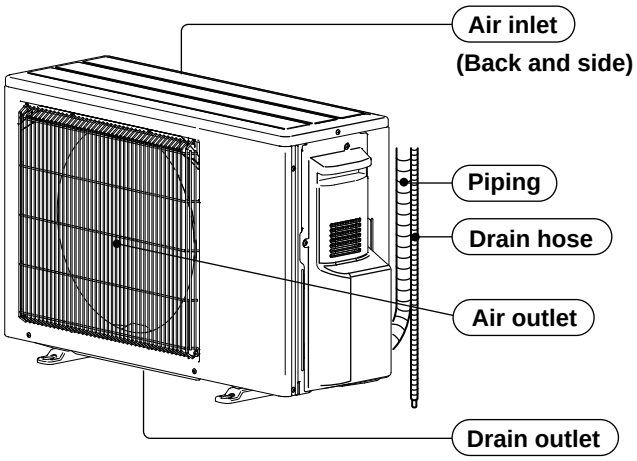
MXZ-2DM40VA -E1, ET1, ER1

MXZ-3DM50VA -E1, ET1, ER1

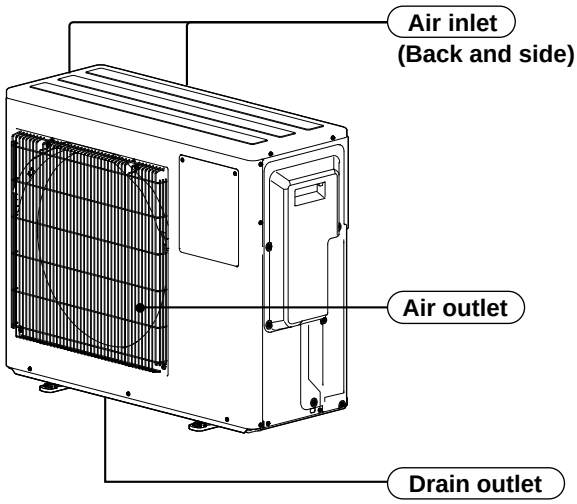
1. New model

2 PART NAMES AND FUNCTIONS

MXZ-2DM40VA



MXZ-3DM50VA



ACCESSORIES

Model		MXZ-2DM40VA	MXZ-3DM50VA
①	Drain socket	1	1
②	Drain cap		2

3 SPECIFICATION

	Outdoor model		**MXZ-2DM40VA**	
	Outdoor unit power supply		Single phase 230 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 7 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 7 REFRIGERANT SYSTEM DIAGRAM.	
	Function		Cooling	Heating
	Capacity Rated frequency (Min.-Max.) ✻2	kW	4.0 (1.1 - 4.3)	4.3 (1.0 - 4.7)
	Breaker capacity	A	15	
Electrical data	Power input (Total) ✻1, ✻2	W	1,050	1,160
	Running current (Total) ✻1, ✻2	A	5.1	5.6
	Power factor (Total) ✻1, ✻2	%	90	
	Starting current (Total) ✻1, ✻2	A	5.6	
Coefficient of performance (C.O.P) (Total) ✻1, ✻2			3.81	3.71
Compressor	Model		KNB092FFDHC	
	Output	W	1,100	
	Current ✻1, ✻2	A	4.7	5.2
	Refrigeration oil (Model)	L	0.32 (NEO22)	
Fan motor	Model		RC0J50-FA	
	Current ✻1, ✻2	A	0.19	0.23
	Dimensions W x H x D	mm	800 x 550 x 285	
	Weight	kg	32	
Special remarks	Air flow (Rated)	m^3 /h	1,752	1,914
	Sound level (Rated)	dB(A)	48	52
	Fan speed (Rated)	rpm	840	910
	Refrigerant filling capacity (R410A)	kg	0.95	

✻1 Measured under rated operating frequency.
✻2 When connected with below indoor units.
MSZ-DM25VA + MSZ-DM25VA

NOTE: Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C
OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C
HEATING INDOOR Dry-bulb temperature 20.0 °C
OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C

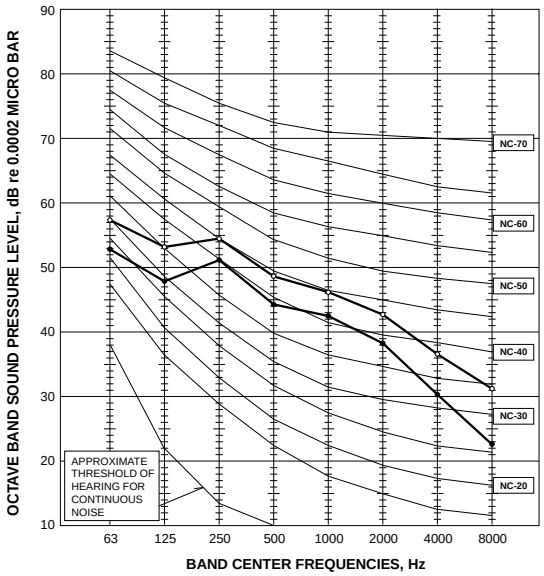
	Outdoor model		**MXZ-3DM50VA**	
	Outdoor unit power supply		Single phase 230 V, 50 Hz	
System	Indoor units number		2 to 3	
	Piping total length	m	Max. 50	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 7 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 7 REFRIGERANT SYSTEM DIAGRAM.	
	Function		Cooling	Heating
	Capacity Rated frequency (Min.-Max.) ✻2	kW	5.0 (2.7 - 6.5)	6.0 (2.4 - 7.5)
	Breaker capacity	A	25	
Electrical data	Power input (Total) ✻1, ✻2	W	1,130	1,310
	Running current (Total) ✻1, ✻2	A	5.0	5.8
	Power factor (Total) ✻1, ✻2	%	99	
	Starting current (Total) ✻1, ✻2	A	5.8	
Coefficient of performance (C.O.P) (Total) ✻1, ✻2			4.42	4.58
Compressor	Model		SNB130FGBH1T	
	Output	W	1,300	
	Current ✻1, ✻2	A	4.5	5.3
	Refrigeration oil (Model)	L	0.7 (NEO22)	
Fan motor	Model		SIC-71FW-F764-1	
	Current ✻1, ✻2	A	0.20	0.23
	Dimensions W x H x D	mm	840 x 710 x 330	
	Weight	kg	57	
Special remarks	Air flow (Rated)	m^3 /h	2,252	2,379
	Sound level (Rated)	dB(A)	50	53
	Fan speed (Rated)	rpm	630	660
	Refrigerant filling capacity (R410A)	kg	2.7	

✻1 Measured under rated operating frequency.
✻2 When connected with below indoor units.
MSZ-DM25VA + MSZ-DM25VA + MSZ-DM25VA
NOTE: Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)
COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C
OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C
HEATING INDOOR Dry-bulb temperature 20.0 °C
OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C

4 NOISE CRITERIA CURVES

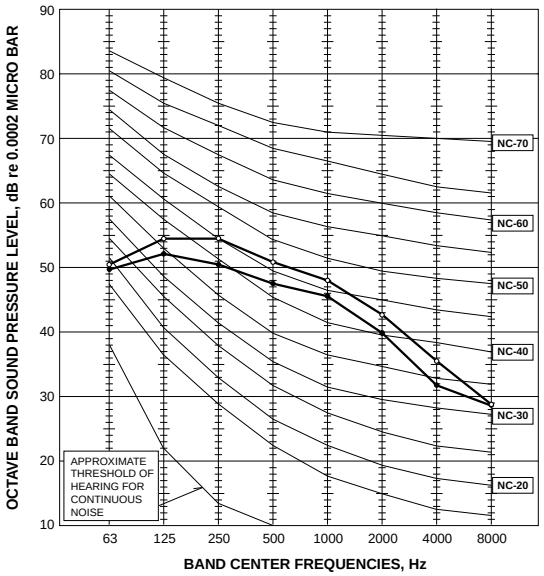
MXZ-2DM40VA

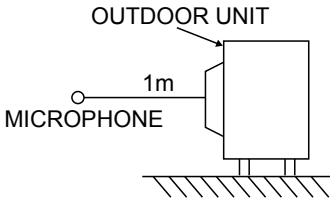
FAN SPEED	FUNCTION	SPL($dB_{(A)}$)	LINE
High	Cooling	48	●—●
High	Heating	52	○—○



MXZ-3DM50VA

FAN SPEED	FUNCTION	SPL($dB_{(A)}$)	LINE
High	Cooling	50	●—●
High	Heating	53	○—○





Test conditions

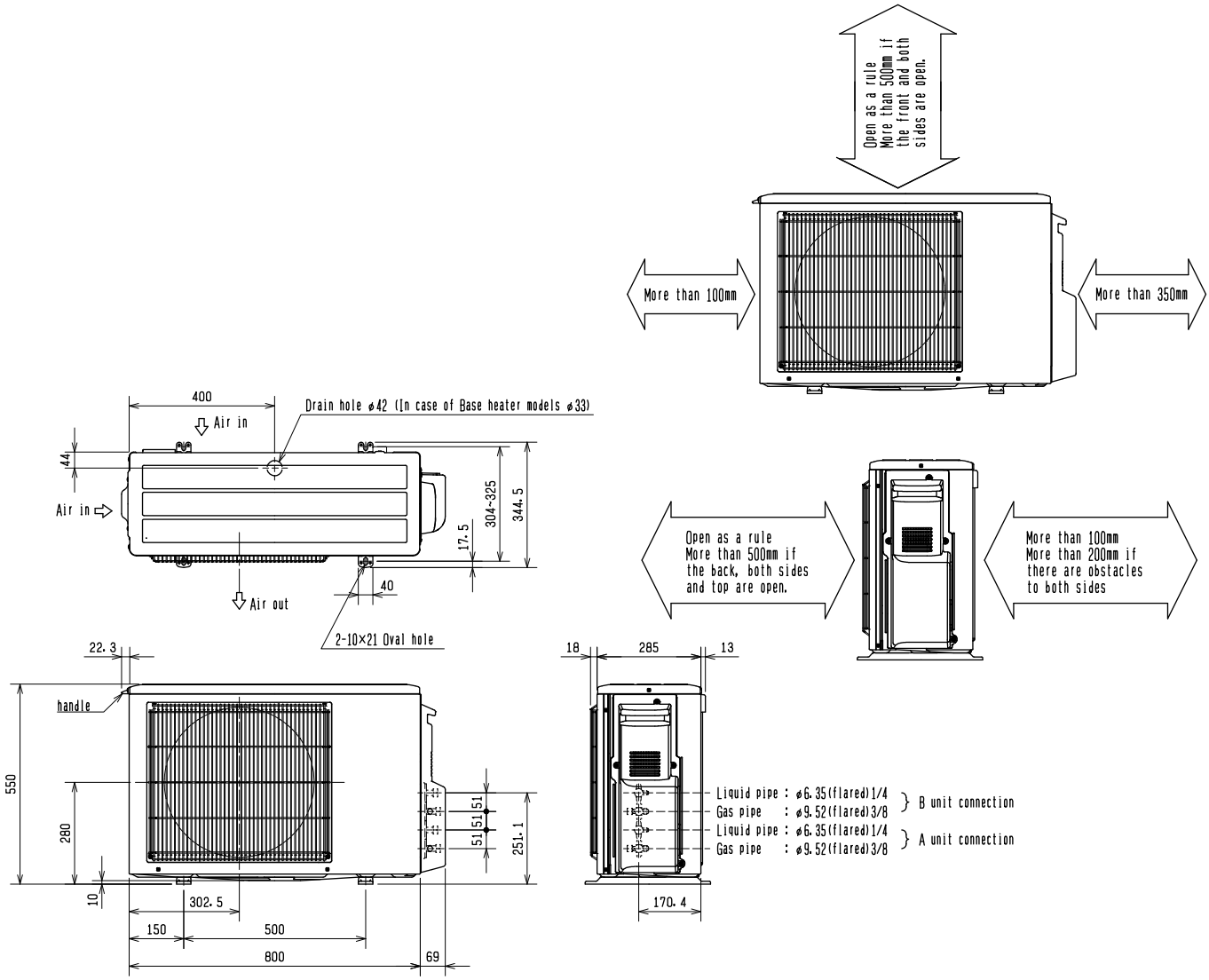
Cooling :Dry-bulb temperature 35°C Wet-bulb temperature 24°C

Heating :Dry-bulb temperature 7°C Wet-bulb temperature 6°C

5 OUTLINES AND DIMENSIONS

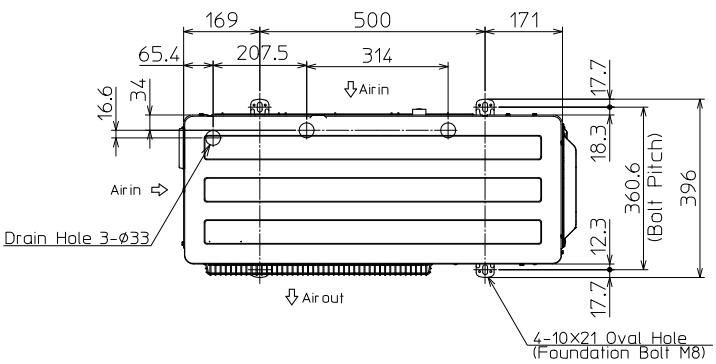
MXZ-2DM40VA

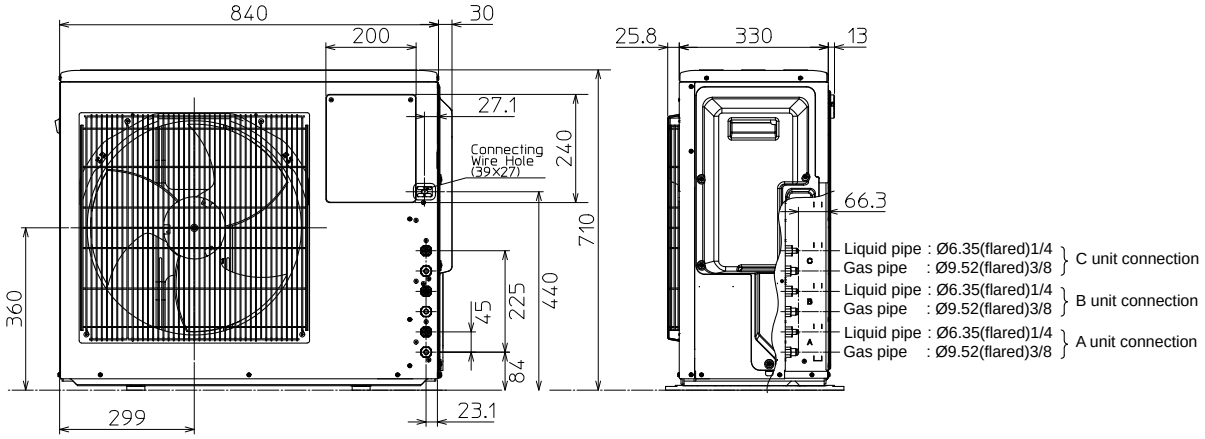
Unit: mm



MXZ-3DM50VA

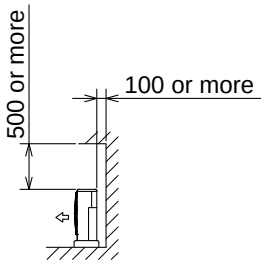
Unit: mm



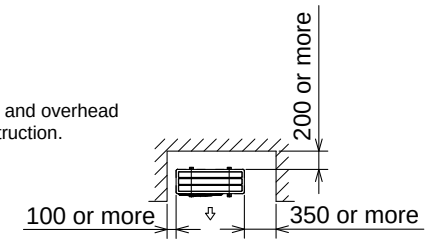


1.Installation space

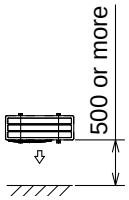
Note : Leave front and both sides free of obstruction.



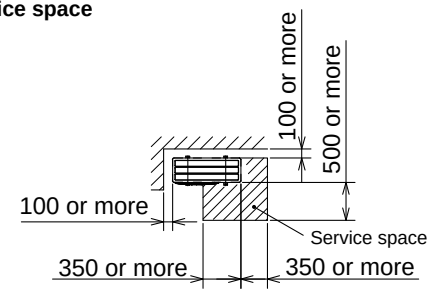
Note : Leave front and overhead free of obstruction.



Note : Leave rear, overhead and both sides free of obstruction.

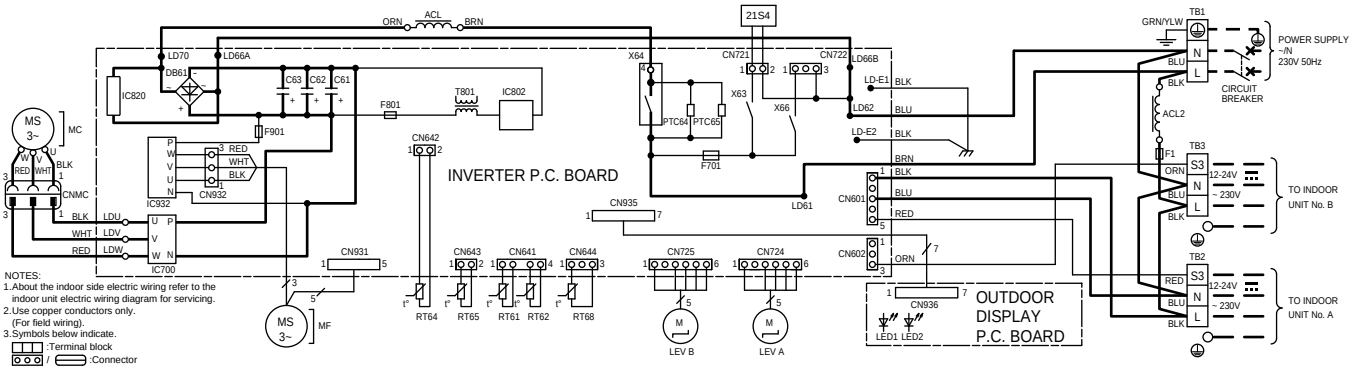


2.Service space



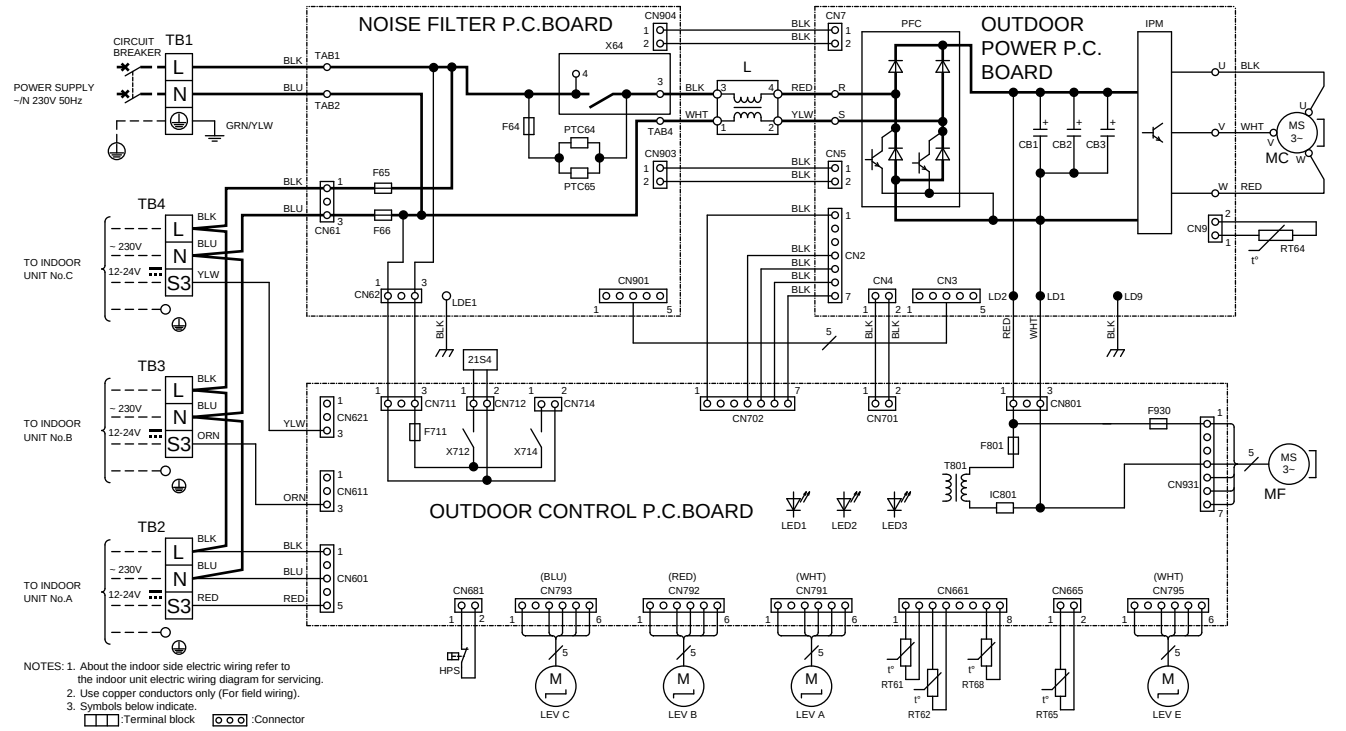
6 WIRING DIAGRAM

MXZ-2DM40VA - E1, ET1, ER1



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL, ACL2	REACTOR	LEV A, B	EXPANSION VALVE COIL	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
C61~63	SMOOTHING CAPACITOR	MC	COMPRESSOR		
DB61	DIODE MODULE	MF	FAN MOTOR	TB1~3	TERMINAL BLOCK
F701, 801, 901	FUSE (T3.15AL250V)	PTC64, 65	CIRCUIT PROTECTOR	T801	SWITCHING TRANS
F1	FUSE (T3.15AL250V)	RT61	DEFROST THERMISTOR	X63, 64, 66	RELAY
IC700, 820, 932	POWER MODULE	RT62	DISCHARGE TEMP. THERMISTOR	21S4	REVERSING VALVE COIL
IC802	POWER DEVICE	RT64	FIN TEMP. THERMISTOR		
LED1, 2	LED	RT65	AMBIENT TEMP. THERMISTOR		

MXZ-3DM50VA - E1, ET1, ER1

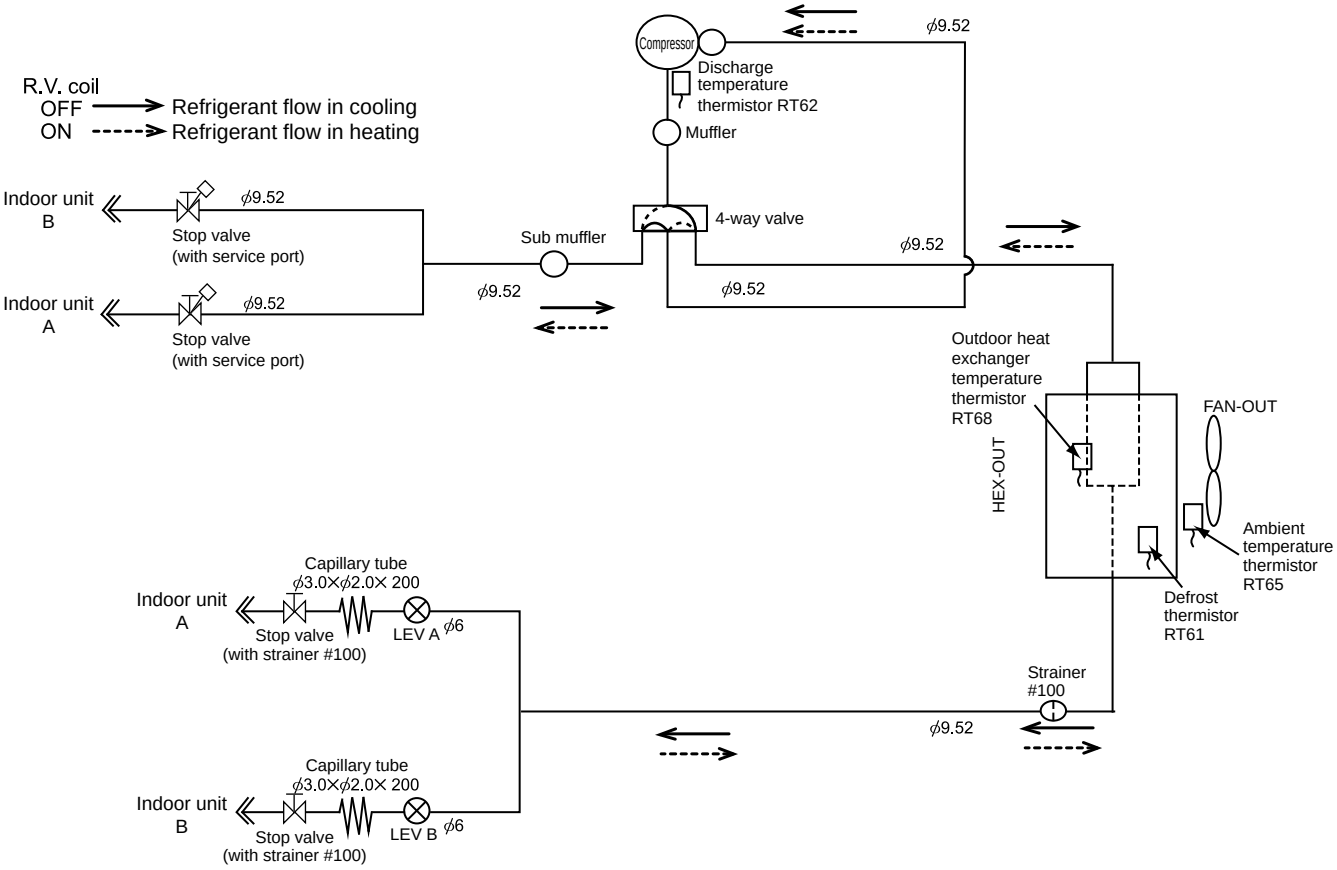


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1~3	SMOOTHING CAPACITOR	IC801	POWER DEVICE	MC	COMPRESSOR	RT64	FIN TEMP. THERMISTOR	X712,714	RELAY
F64	FUSE (T2AL250V)	IPM	POWER MODULE	MF	FAN MOTOR	RT65	AMBIENT TEMP. THERMISTOR	21S4	REVERSING VALVE SOLENOID COIL
F65, 66	FUSE (T6.3AL250V)	L	REACTOR	PFC	POWER FACTOR CONTROLLER	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR		
F711, 801, 930	FUSE (T3.15AL250V)	LED1, 2, 3	LED	PTC64, 65	CIRCUIT PROTECTION	T801	TRANSFORMER		
		LEV A~C	EXPANSION VALVE COIL	RT61	DEFROST THERMISTOR	TB1~4	TERMINAL BLOCK		
HPS	HIGH PRESSURE SWITCH	LEV E	EXPANSION VALVE COIL	RT62	DISCHARGE TEMP. THERMISTOR	X64	RELAY		

7 REFRIGERANT SYSTEM DIAGRAM

MXZ-2DM40VA

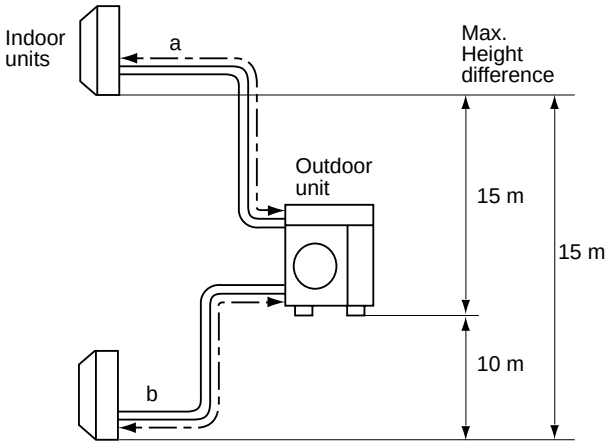
UNIT: mm



MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b)	20 m
Total piping length (a+b)	30 m
Bending point for each unit	20
Total bending point	30

✻It is irrelevant which unit is higher.



ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 2 unit total)	
	20 m	30 m
950	0	200

Calculation: Xg = 20 g/m x (Refrigerant piping length (m) - 20)

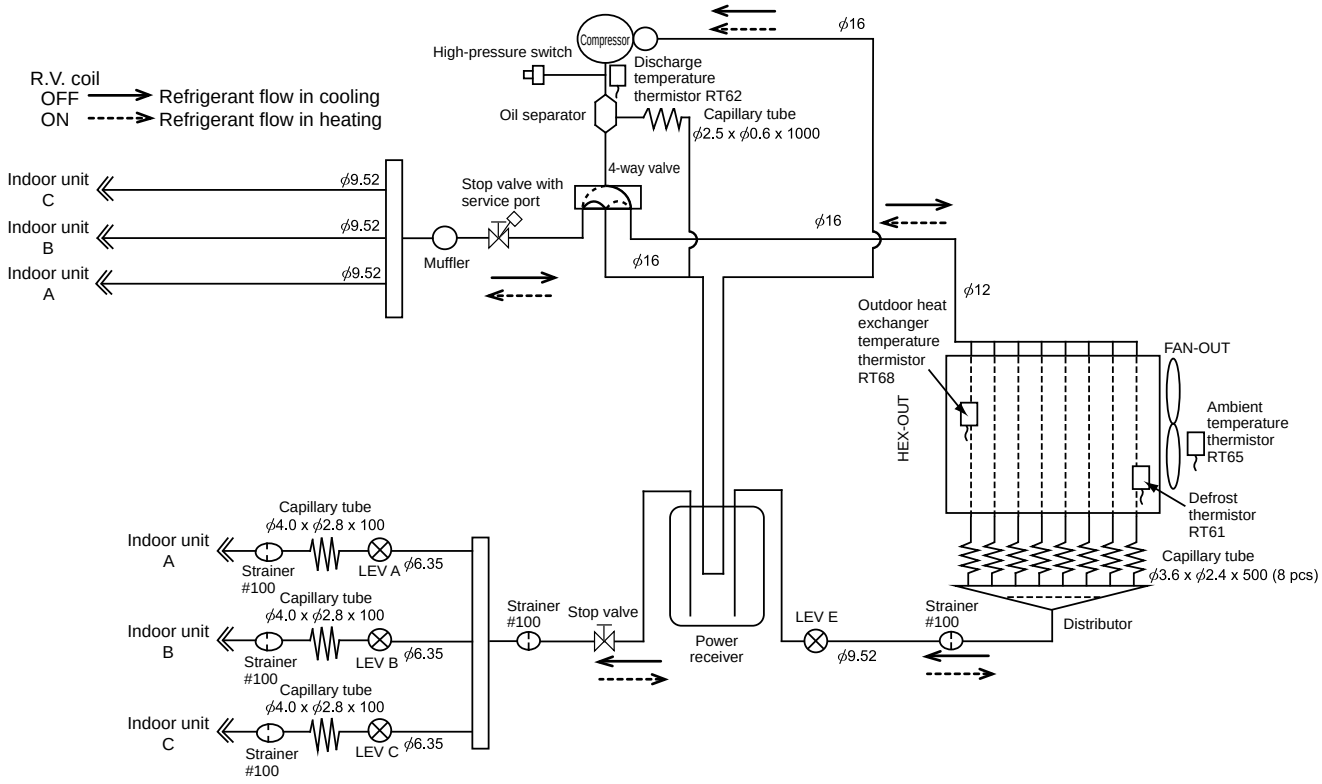
- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe.
  For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)

MXZ-3DM50VA

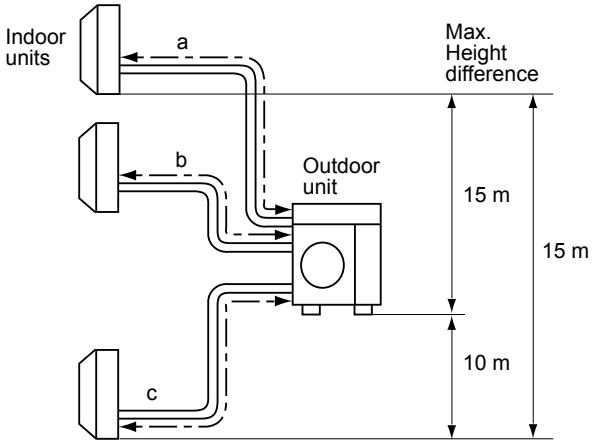
UNIT: mm



MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b, c)	25 m
Total piping length (a+b+c)	50 m
Bending point for each unit	25
Total bending point	50

✻It is irrelevant which unit is higher.



ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 3 unit total)	
	40 m	50 m
2,700	0	200

Calculation: Xg = 20 g/m x (Refrigerant piping length (m) - 40)

- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe.
  For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)

PUMPING DOWN

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.

1) Turn off the breaker.
2) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
3) Fully close the stop valve on the liquid pipe side of the outdoor unit.
4) Turn on the breaker.
5) Start the emergency COOL operation on all the indoor units.
6) When the pressure gauge shows 0.05 to 0 MPa [Gauge] (approximately 0.5 to 0 kgf/cm²), fully close the stop valve on the gas pipe side of the outdoor unit and stop the operation. (Refer to the indoor unit installation manual about the method for stopping the operation.)
   * If too much refrigerant has been added to the air conditioner system, the pressure may not drop to 0.05 MPa [Gauge] (approximately 0.5 kgf/cm²), or the protection function may operate due to the pressure increase in the high-pressure refrigerant circuit. If this occurs, use a refrigerant collecting device to collect all of the refrigerant in the system, and then recharge the system with the correct amount of refrigerant after the indoor and outdoor units have been relocated.
7) Turn off the breaker. Remove the pressure gauge and the refrigerant piping.

WARNING

When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst and cause injury if any foreign substance, such as air, enters the pipes.

8 PERFORMANCE CURVES

MXZ-2DM40VA MXZ-3DM50VA

The standard specifications apply only to the operation of the air conditioner under normal conditions.
Since operating conditions vary according to the areas where these units are installed, the following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

(1) GUARANTEED VOLTAGE

198 - 264 V 50 Hz

(2) AIR FLOW

Air flow should be set at MAX.

(3) MAIN READINGS

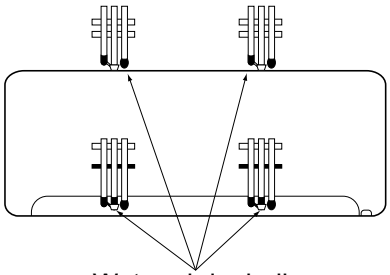
(1) Indoor intake air wet-bulb temperature :	°CWB	Cooling
(2) Indoor outlet air wet-bulb temperature :	°CWB	
(3) Outdoor intake air dry-bulb temperature :	°CDB	
(4) Total input:	W	
(5) Indoor intake air dry-bulb temperature :	°CDB	Heating
(6) Outdoor intake air wet-bulb temperature :	°CWB	
(7) Total input :	W	

Indoor air wet and dry bulb temperature difference on the left side of the following chart shows the difference between the indoor intake air wet and dry bulb temperature and the indoor outlet air wet and dry bulb temperature for your reference at service.

How to measure the indoor air wet and dry bulb temperature difference

1. Attach at least 2 sets of wet and dry bulb thermometers to the indoor air intake as shown in the figure, and at least 2 sets of wet and dry bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
2. Attach at least 2 sets of wet and dry bulb thermometers to the outdoor air intake.
   Cover the thermometers to prevent direct rays of the sun.
3. Check that the air filter is cleaned.
4. Open windows and doors of room.
5. Press the EMERGENCY OPERATION switch once (twice) to start the EMERGENCY COOL (HEAT) MODE.
6. When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
7. 10 minutes later, measure temperature again and check that the temperature does not change.

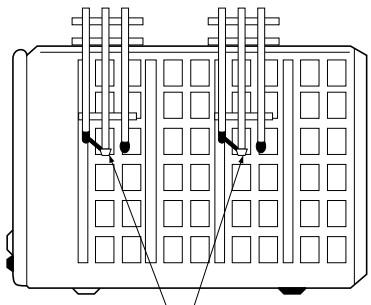
INDOOR UNIT



Wet and dry bulb thermometers

FRONT VIEW

OUTDOOR UNIT

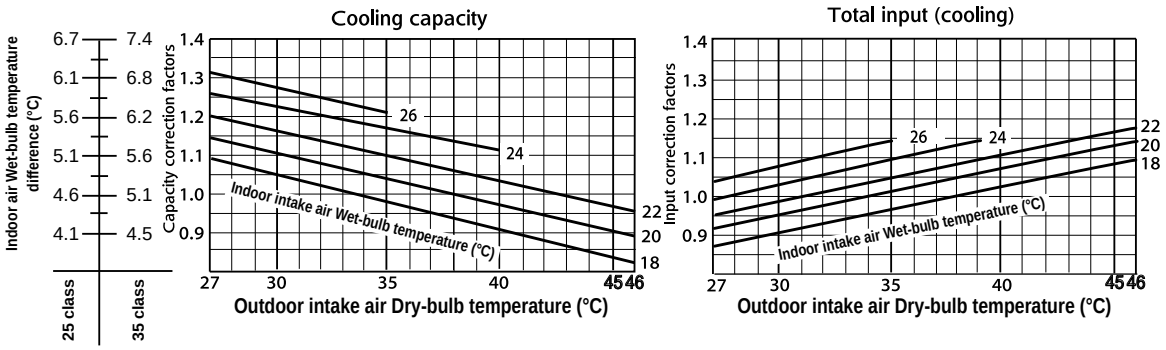


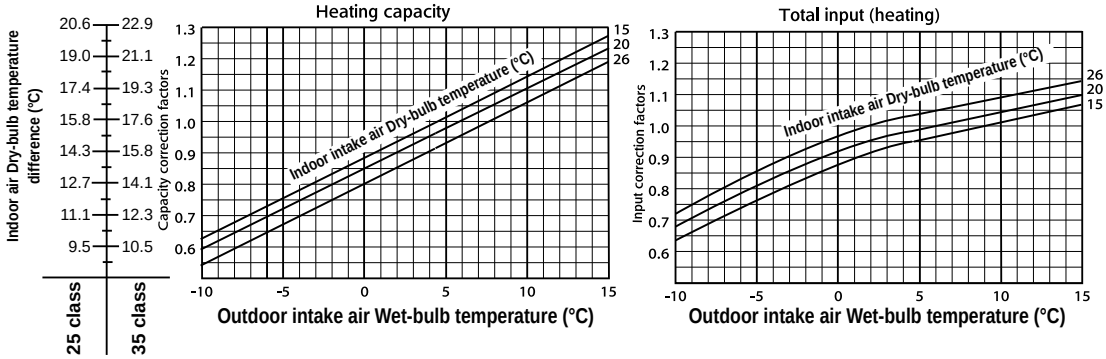
Wet and dry bulb thermometers

BACK VIEW

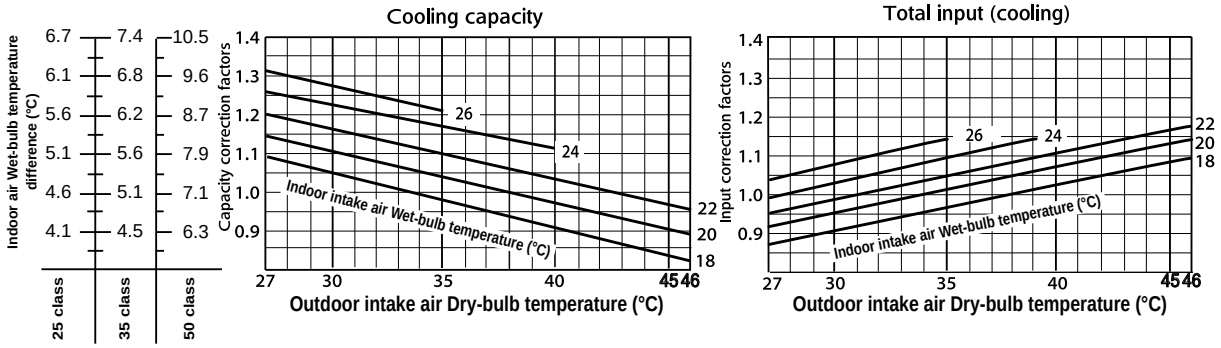
8-1. CAPACITY AND THE INPUT CURVES

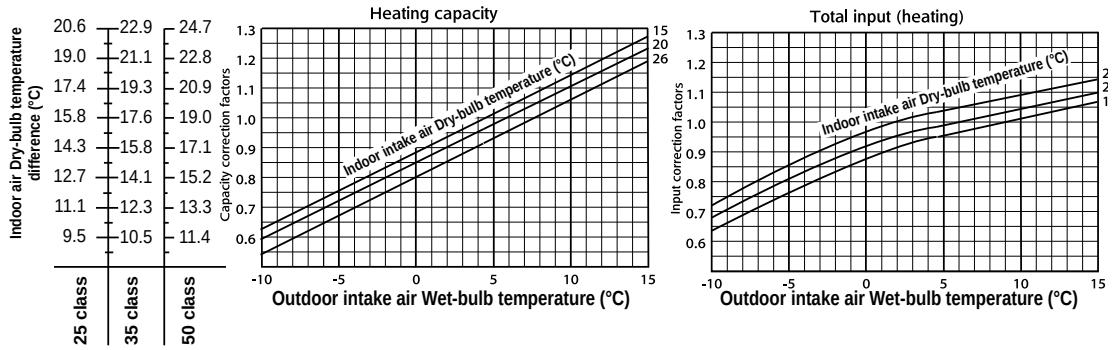
MXZ-2DM40VA





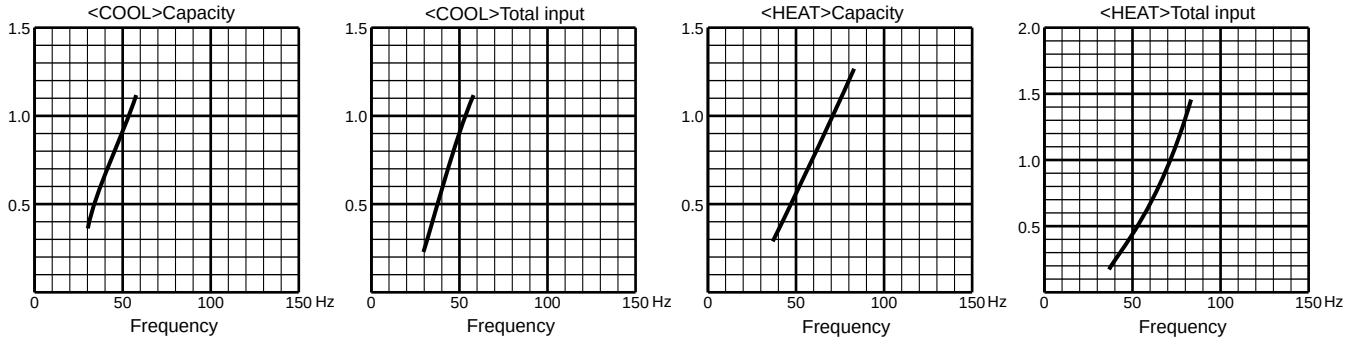
MXZ-3DM50VA



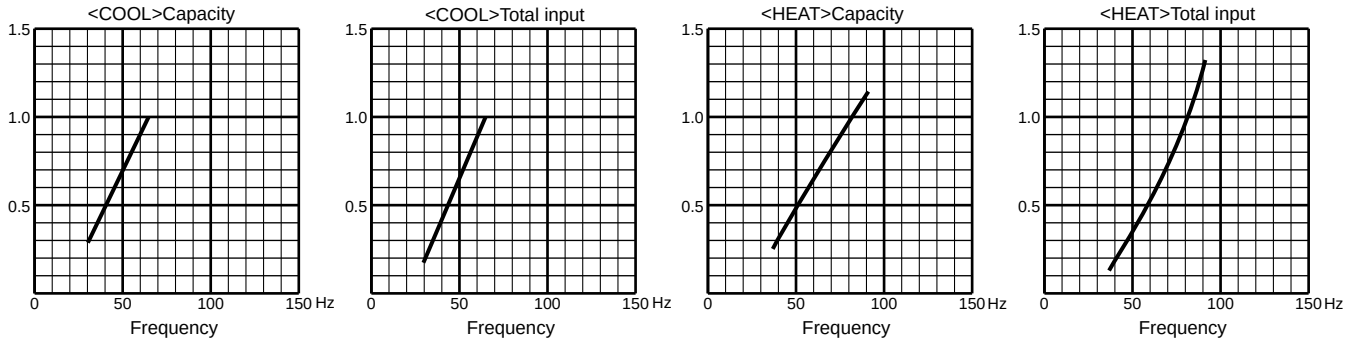


8-2. CAPACITY AND INPUT CORRECTION BY INVERTER OUTPUT FREQUENCY (single operation)
MXZ-2DM40VA

25-class unit

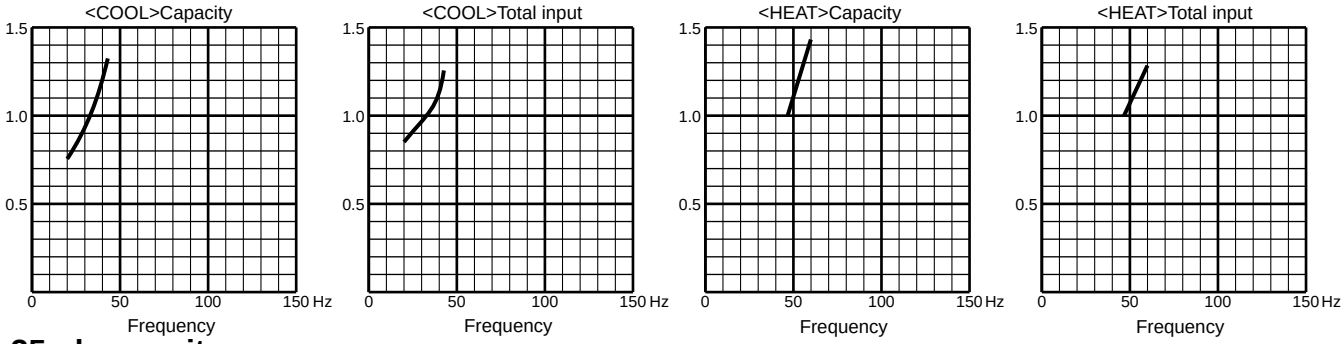


35-class unit

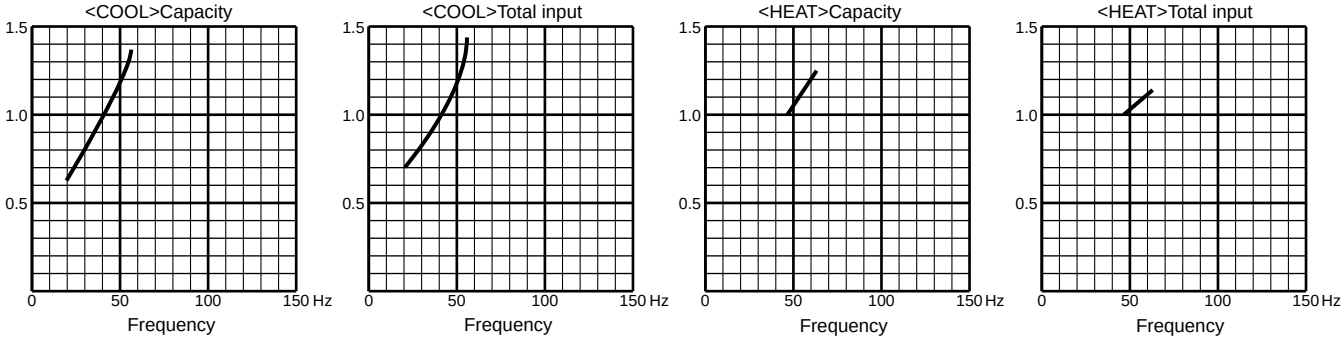


MXZ-3DM50VA

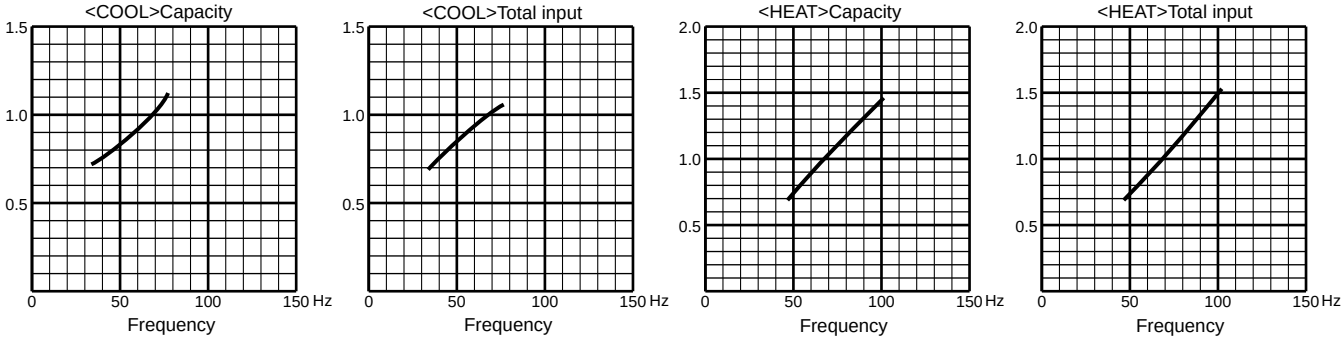
25-class unit



35-class unit



50-class unit



8-3. HOW TO OPERATE FIXED-FREQUENCY OPERATION <Test run operation>

1. Press EMERGENCY OPERATION switch to start COOL or HEAT mode (COOL: Press once, HEAT: Press twice).
2. Test run operation starts and continues to operate for 30 minutes.
3. Compressor operates at rated frequency.
4. Indoor fan operates at High speed.
5. After 30 minutes, test run operation finishes and EMERGENCY OPERATION starts (Operation frequency of compressor varies).
6. To cancel test run operation or EMERGENCY OPERATION, press EMERGENCY OPERATION switch or any button on remote controller.

8-4. OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT CURVE (single operation)

NOTE: The unit of pressure has been changed to MPa on the international system of units (SI unit system).
The conversion factor is: **1 (MPa [Gauge]) = 10.2 (kgf/cm² [Gauge])**

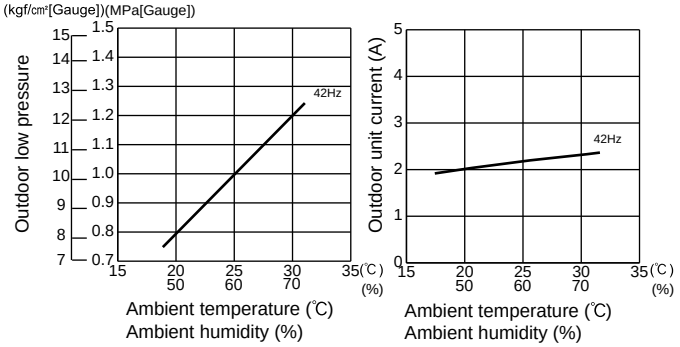
(1) COOL operation

① Both indoor and outdoor units are under the same temperature/humidity condition.
② Operation: TEST RUN OPERATION (Refer to 8-3.)

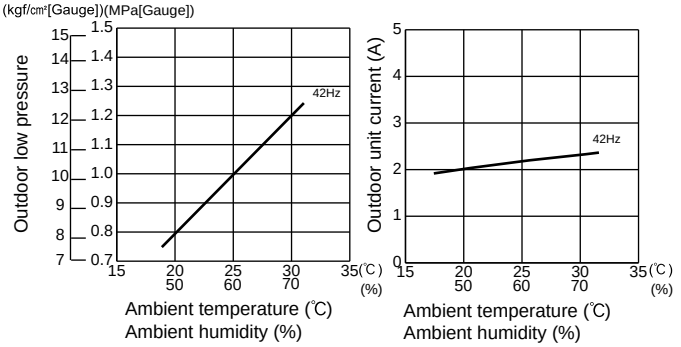
Dry-bulb temperature (˚C)	Relative humidity (%)
20	50
25	60
30	70

MXZ-2DM40VA

25-class unit

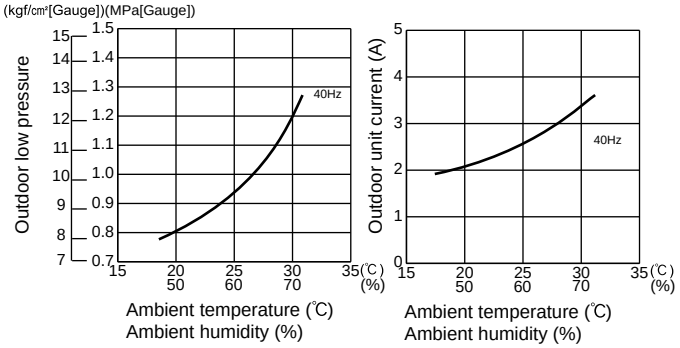


35-class unit

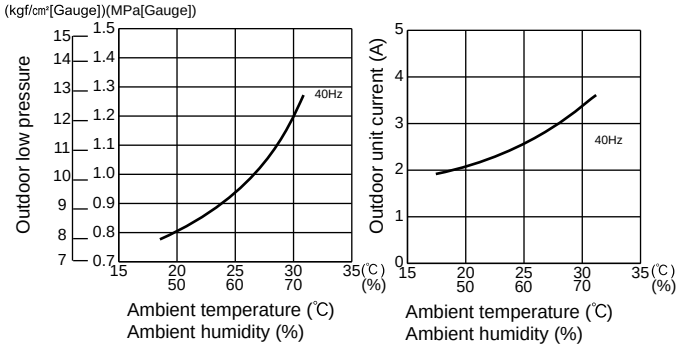


MXZ-3DM50VA

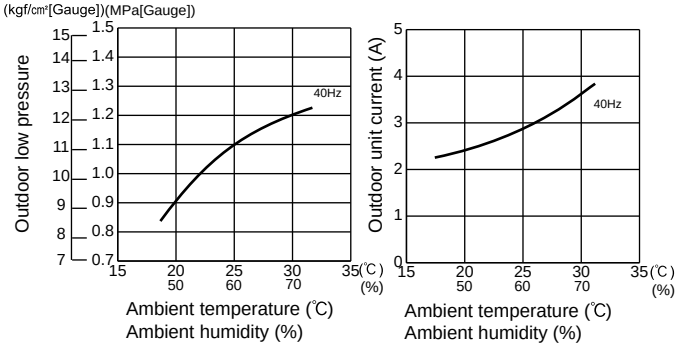
25-class unit



35-class unit



50-class unit



(2) HEAT operation

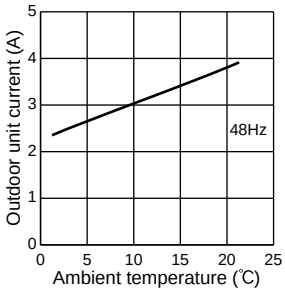
① Condition:

	Indoor	Outdoor			
Dry bulb temperature (°C)	20.0	2	7	15	20.0
Wet bulb temperature (°C)	14.5	1	6	12	14.5

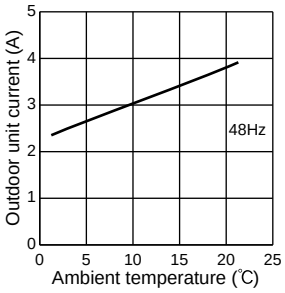
② Operation: TEST RUN OPERATION (Refer to 8-3.)

MXZ-2DM40VA

25-class unit

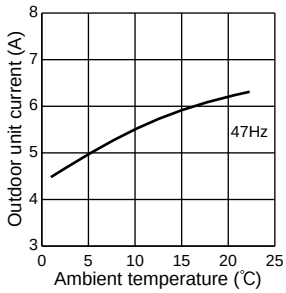


35-class unit

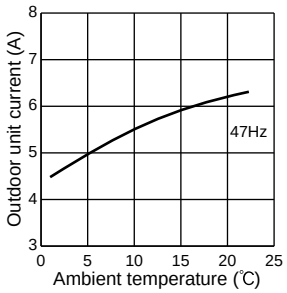


MXZ-3DM50VA

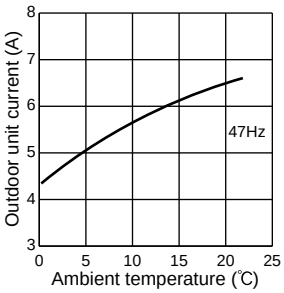
25-class unit



35-class unit



50-class unit



9 ACTUATOR CONTROL

MXZ-2DM40VA MXZ-3DM50VA

Relation between main sensor and actuator

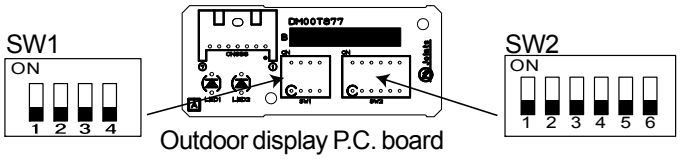
Sensor	Purpose	Actuator			
		Compressor	LEV	Outdoor fan motor	R.V. coil
Discharge temperature thermistor	Protection	○	○		
Indoor coil temperature thermistor	Cooling: Coil frost prevention	○			
	Heating: High pressure protection	○	○		
Defrost thermistor	Heating: Defrosting	○	○	○	○
Fin temperature thermistor	Protection	○		○	
Ambient temperature thermistor	Control/Protection	○	○	○	
Outdoor heat exchanger temperature thermistor	Cooling: Control/Protection	○	○	○	
Capacity code	Control	○	○		

10 SERVICE FUNCTIONS

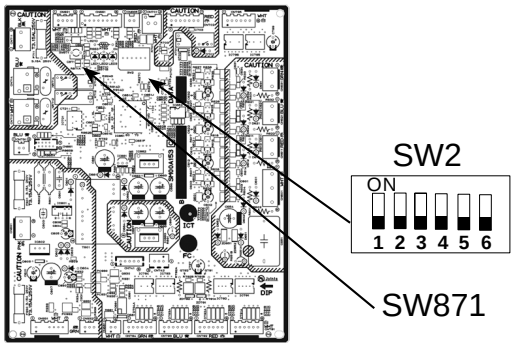
MXZ-2DM40VA MXZ-3DM50VA

10-1. THE POSITION OF SWITCH

MXZ-2DM40VA



MXZ-3DM50VA



Oudoor control P.C. board

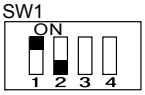
10-2. LOCKING THE OPERATION MODE OF THE AIR CONDITIONER (COOL, DRY, HEAT)

With this function, you can lock the operation mode of the outdoor unit.
Once the operation mode is locked to either COOL/DRY mode or HEAT mode, the air conditioner operates in that mode only.
Default setting is required to activate this function.
Please explain this function to your customers and ask them whether they want to use it.

[How to lock the operation mode]
(1) Turn OFF the breaker and make sure that the LED goes off.
(2) Set SW1 or SW2 as shown in the figure below.
(3) Turn ON the breaker.

MXZ-2DM40VA
SW1 on the outdoor display P.C. board

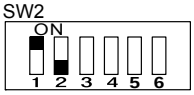
Cool/Dry
SW1



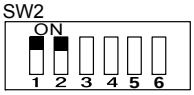
Heat
SW1

MXZ-3DM50VA
SW2 on the outdoor control P.C. board

Cool/Dry
SW2



Heat
SW2

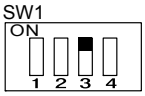


10-3. LOWERING THE OPERATING NOISE OF THE OUTDOOR UNIT

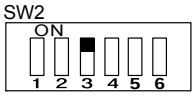
With this function, you can lower the operating noise of the outdoor unit when the operation load is small, for example, during night time in COOL mode.
However, note that the cooling and heating capacity can also be lowered if this function is activated.
Default setting is required to activate this function.
Please explain this function to your customers and ask them whether they want to use it.

[How to lower the operating noise]
(1) Turn OFF the breaker and make sure that the LED goes off.
(2) Set the "3" Switch of SW1 to ON to enable this function. (**MXZ-2DM40VA**)
Set the "3" Switch of SW2 to ON to enable this function. (**MXZ-3DM50VA**)
(3) Turn ON the breaker.

MXZ-2DM40VA
SW1 on the outdoor display P.C. board



MXZ-3DM50VA
SW2 on the outdoor control P.C. board



10-4. AUTOMATIC LINE CORRECTING

This outdoor unit has an automatic line correcting function which automatically detects and corrects improper wiring or piping.

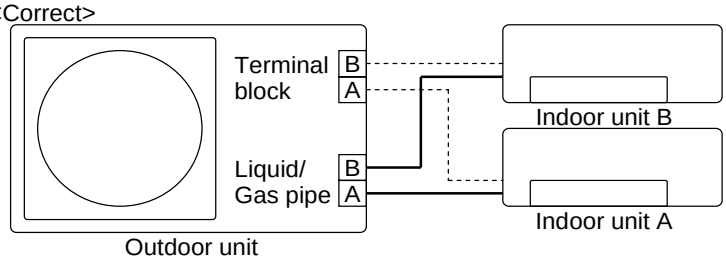
<MXZ-2DM40VA>

Improper wiring or piping can be automatically detected when one indoor unit is operated in COOL mode for 30 minutes. When improper wiring or piping is detected, wiring lines are corrected (A to B/ B to A) with the software.

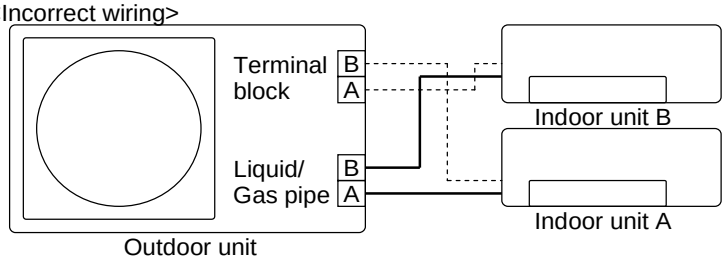
NOTE: This function may not work due to the condition or environment of the unit, such as the following:
- gas leak, closed stop valve
- unit failure such as defective LEV
- indoor/outdoor temperature

NOTE: This function does not work when the "2" of SW2 on the outdoor display P.C. board is turned OFF.

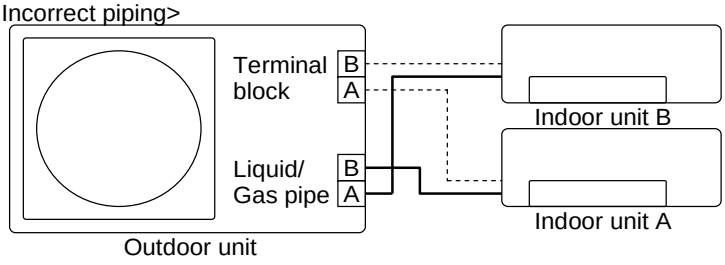
<Correct>



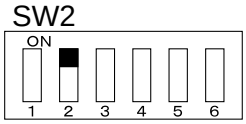
<Incorrect wiring>

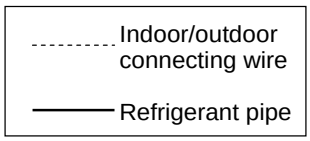


<Incorrect piping>



MXZ-2DM40VA
SW2 on the outdoor display P.C. board

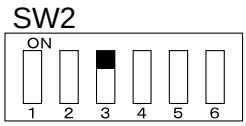




The record of automatic line correcting can be checked in the following way:
(1) Turn OFF the breaker and make sure that the LED goes off.
(2) Turn ON the "3" of SW2 on the outdoor display P.C. board.
(3) Turn ON the breaker.
(4) Check the correction state with the LED lamps on the outdoor display P.C. board.
(5) Turn OFF the breaker and make sure that the LED goes off.
(6) Turn OFF the "3" of SW2 on the outdoor display P.C. board.
(7) Turn ON the breaker.

Number of blinks		Wiring line
LED1 (Red)	LED2 (Yellow)	
Once	Once	Not corrected
3 times	3 times	Corrected

MXZ-2DM40VA
SW2 on the outdoor display P.C. board



<MXZ-3DM50VA>
Improper wiring or piping can be automatically detected by pressing the piping/wiring correction switch (SW871) on the outdoor control P.C. board.
When improper wiring or piping is detected, wiring lines are corrected.
This will be completed in about 10 to 20 minutes.

[How to activate this function]

1. Check that outside temperature is above 0ºC.
   (This function does not work when outside temperature is not above 0ºC.)
2. Check that the stop valves of the liquid pipe and gas pipe are open.
3. Check that the wiring between indoor and outdoor unit is correct.
   (If the wiring is not correct, this function does not work.)
4. Turn ON the breaker and wait at least 1 minute.
5. Press the piping/wiring correction switch (SW871) on the outdoor P.C. board.
   Do not touch energized parts.

LED indication during detection:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Lighted	Lighted	Once

LED indication after detection:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)	Indication
Lighted	Not lighted	Lighted	Completed (Problem corrected/Normal)
Once	Once	Once	Not completed (Detection failed)
Other indications			Refer to "SAFETY PRECAUTIONS WHEN LED FLASHES" located behind the service panel.

Make sure that the valves are open and the pipes are not collapsed or clogged.

6. Press the switch to cancel.
   LED indication after cancel:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Lighted	Lighted	Not lighted

NOTE: Indoor unit cannot be operated while this function is activated.
When this function is activated while indoor unit is operating, the operation will be stopped.
Operate indoor unit after the automatic line correcting is finished.
Pressing the switch during detection cancels this function.

The record of automatic line correcting can be checked in the following way:
Press the switch for more than 5 seconds
LED will show the record of automatic correcting for about 30 seconds as shown in the table below:

Number of blinks			Wiring line
LED1 (Red)	LED2 (Yellow)	LED3 (Green)	
Once	Once	Lighted	Not corrected
3 times	3 times	Lighted	Corrected

NOTE: Activate this function to check the correct wiring after replacing the outdoor P.C. board.
(Previous records are deleted when the outdoor control P.C. board is replaced.)
The record cannot be shown if automatic line correcting is not cancelled (Refer to "How to activate this function").

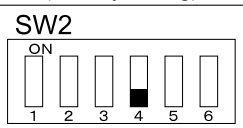
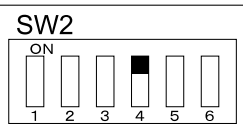
10-5. PRE-HEAT CONTROL

If moisture gets into the refrigerant cycle, or when refrigerant is liquefied and collected in the compressor, it may interfere the start-up of the compressor. To improve start-up condition, the compressor is energized even while it is not operating to generate heat at the winding.
The compressor uses about 50 W when pre-heat control is turned ON. Pre-heat control is OFF(**MXZ-2DM40VA**) / ON (**MXZ-3DM50VA**) at the default setting.

MXZ-2DM40VA

[How to activate pre-heat control]
(1) Turn OFF the breaker and make sure that the LED goes off.
(2) Set the “4” of SW2 as shown figure below to ON to activate pre-heat control function.
(3) Turn ON the breaker.

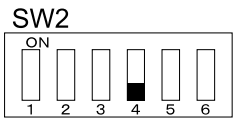
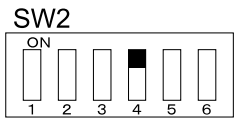
SW2 on the outdoor display P.C. board

Switch	Pre-heat control	
	Deactivated (Factory setting)	Activated
SW2		

MXZ-3DM50VA

[How to activate pre-heat control]
(1) Turn OFF the breaker and make sure that the LED goes off.
(2) Set the “4” of SW2 as shown figure below to OFF to activate pre-heat control function.
(3) Turn ON the breaker.

SW2 on the outdoor control P.C. board

Switch	Pre-heat control	
	Activated (Factory setting)	Deactivated
SW2		

NOTE: Pre-heat control will be turned OFF when the breaker is turned OFF.

11 TROUBLESHOOTING

MXZ-2DM40VA MXZ-3DM50VA

11-1. CAUTIONS ON TROUBLESHOOTING

1. Before troubleshooting, check the following:

1) Check the power supply voltage.
2) Check the indoor/outdoor connecting wire for miswiring.

2. Take care of the following during servicing

1) Before servicing the air conditioner, be sure to turn OFF the unit first with the remote controller, and after confirming the horizontal vane is closed, turn OFF the breaker and/or disconnect the power plug.
2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the P.C. board.
3) When removing the electrical parts, be careful of the residual voltage of smoothing capacitor.
4) When removing the P.C. board, hold the edge of the board with care NOT to apply stress on the components.
5) When connecting or disconnecting the connectors, hold the connector housing. DO NOT pull the lead wires.

<Incorrect> <Correct>

Lead wiring **Connector housing**

3. Troubleshooting procedure

1) Check if the OPERATION INDICATOR lamp on the indoor unit is flashing on and off to indicate an abnormality. To make sure, check how many times the OPERATION INDICATOR lamp is flashing on and off before starting service work.
2) Before servicing, check that the connector and terminal are connected properly.
3) When the P.C. board seems to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
4) Refer to 11-2, 11-3 and 11-4.

11-2. FAILURE MODE RECALL FUNCTION

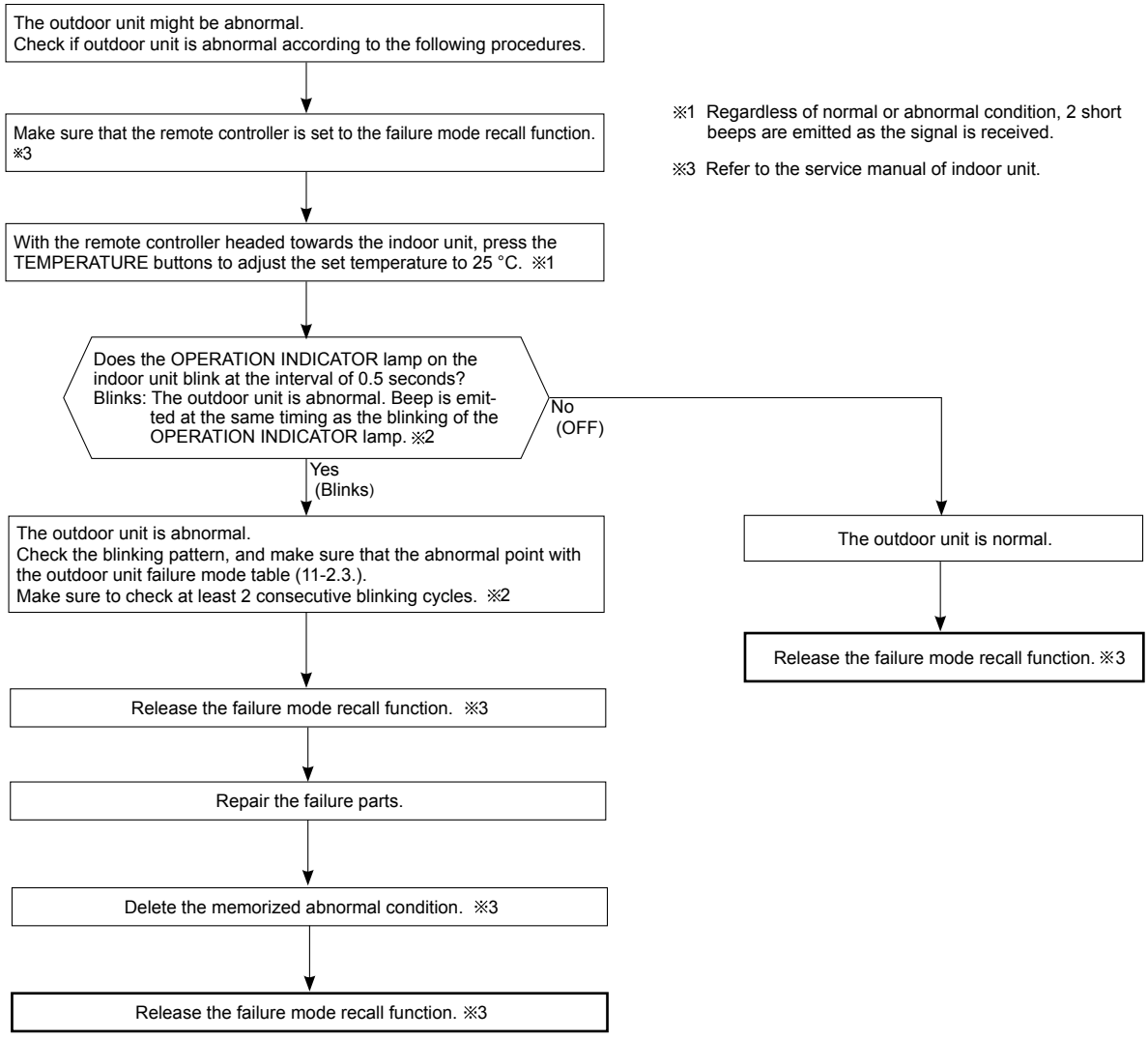
This air conditioner can memorize the abnormal condition which has occurred once.
Even though LED indication listed on the troubleshooting check table (11-4.) disappears, the memorized failure details can be recalled.

1. Flow chart of failure mode recall function for the indoor/outdoor unit

Refer to the service manual of indoor unit.

2. Flow chart of the detailed outdoor unit failure mode recall function

Operational procedure

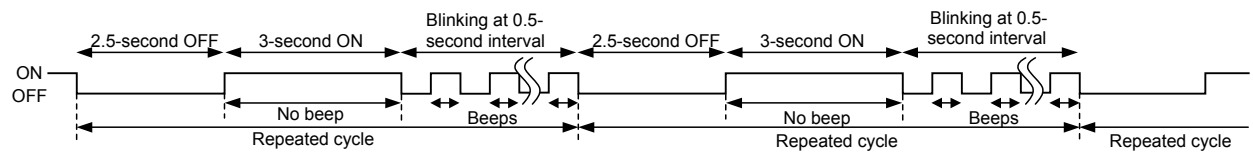


※1 Regardless of normal or abnormal condition, 2 short beeps are emitted as the signal is received.

※3 Refer to the service manual of indoor unit.

NOTE: 1. Make sure to release the failure mode recall function after it is set up, otherwise the unit cannot operate properly.
2. If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

※2.Blinking pattern when outdoor unit is abnormal:



3. Outdoor unit failure mode table

MXZ-2DM

Upper lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board) LED 1	LED 2	Condition	Remedy	Indoor/ outdoor unit failure mode recall function
OFF	None (Normal)	Not lighted	Not lighted	—	—	—
2-time flash	Outdoor power system	Lighted	Lighted	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started. Compressor protection cut-out operates 24 consecutive times within 10 seconds after the compressor gets started.	• Check the compressor connecting wire. • Refer to 11-6. Ⓒ "Check of inverter/compressor". • Check the stop valve.	○
3-time flash	Discharge temperature thermistor	Lighted	Once	Thermistor shorts or opens during compressor running.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".	○
	Defrost thermistor	Lighted	Once			○
	Ambient temperature thermistor	Lighted	Twice			○
	Fin temperature thermistor	Lighted	3 times			○
	P.C. board temperature thermistor	Lighted	4 times		• Replace the inverter P.C. board.	○
	Outdoor heat exchanger temperature thermistor	Lighted	9 times		• Refer to 11-6. Ⓓ "Check of outdoor thermistors".	○
4-time flash	Overcurrent	Once	Not lighted	The overcurrent flows into intelligent power module.	• Check the compressor connecting wire. • Refer to 11-6. Ⓒ "Check of inverter/compressor". • Check the stop valve.	—
	Compressor	Twice	Not lighted	The overcurrent flows into intelligent power module within 10 seconds after the compressor gets started. (The compressor gets restarted in 15 seconds.)	• Check the compressor connecting wire. • Refer to 11-6. Ⓒ "Check of inverter/compressor".	—
		9 times	Not lighted	Waveform of compressor current is distorted.		—
5-time flash	Discharge temperature	Lighted	Lighted	Discharge temperature exceeds 116ºC during operation.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6. Ⓔ "Check of LEV".	—
6-time flash	High pressure	Lighted	Lighted	The outdoor heat exchanger temperature exceeds 70ºC during cooling or the indoor gas pipe temperature exceeds 70ºC during heating.	• Check the refrigerant circuit and the refrigerant amount. • Check the stop valve.	—
7-time flash	Fin temperature	3 times	Not lighted	The fin temperature exceeds 90ºC during operation.	• Check the around outdoor unit. • Check the outdoor unit air passage.	—
	P.C. board temperature	4 times	Not lighted	The P.C. board temperature exceeds 80ºC during operation.	• Refer to 11-6. Ⓕ "Check of outdoor fan motor".	—
8-time flash	Outdoor fan motor	Lighted	Lighted	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	• Refer to 11-6. Ⓕ "Check of outdoor fan motor".	—
9-time flash	Nonvolatile memory data	Lighted	5 times	Nonvolatile memory data cannot be read properly.	• Replace the inverter P.C. board.	○
	Power module	7 times	Not lighted	The output of the power module that drove the compressor was shorted or the winding of the compressor was shorted.	• Refer to 11-6. Ⓒ "Check of inverter/compressor".	○
10-time flash	Discharge temperature	Lighted	Lighted	The discharge temperature is kept under 50ºC (COOL mode)/40ºC (HEAT mode) for more than 40 minutes.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6. Ⓔ "Check of LEV".	—
11-time flash	Current sensor	8 times	Not lighted	The sensor circuit of current of compressor shorts or opens during compressor operate.	• Replace the inverter P.C. board.	○
	Bus-bar voltage	6 times	Not lighted	The bus-bar voltage exceeds 430 V or falls to 50 V or below during compressor operating.	• Check the power supply. • Replace the inverter P.C. board.	○
14-time flash	Stop valve	Lighted	12 times	The current of compressor is power module is out of order.	• Check the stop valve. • Check the refrigerant circuit and the refrigerant amount.	○
17 time flash	Outdoor refrigerant system abnormality	Lighted	17 times	A closed valve and air trapped in the refrigerant circuit are detected based on the temperature sensed by the indoor and outdoor thermistors and the current of the compressor.	• Check for a gas leak in a connecting piping etc. • Check the stop valve. • Refer to 11-6. Ⓚ "Check of outdoor refrigerant circuit".	○

NOTE: Blinking patterns of this mode differ from the ones of Troubleshooting check table (11-4).

MXZ-3DM

Upper lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)		Condition	Remedy	Indoor/outdoor unit failure mode recall function
		LED 1	LED 2			
OFF	None (Normal)	Lighted	Lighted	———	———	———
2-time flash	Outdoor power system	Lighted	Lighted	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started, or converter protection or bus-bar voltage protection cut-out operates 3 consecutive times within 3 minutes after start-up.	• Check the connection of the compressor connecting wire. • Refer to 11-6.Ⓒ "How to check inverter/compressor". • Check the stop valve.	○
3-time flash	Discharge temperature thermistor	Lighted	Once	Thermistor shorts or opens during compressor running.	• Refer to 11-6.Ⓓ "Check of outdoor thermistors".	○
	Defrost thermistor	Lighted	Once			
	Ambient temperature thermistor	Lighted	Twice			
	Fin temperature thermistor	Lighted	3 times			
	P.C. board temperature thermistor	Lighted	4 times		• Replace the outdoor control P.C. board.	
	Outdoor heat exchanger temperature thermistor	Lighted	9 times		• Refer to 11-6.Ⓓ"Check of outdoor thermistors".	
4-time flash	Overcurrent	Once	Not lighted	28 A current flows into intelligent power module.	• Reconnect compressor connector. • Refer to 11-6.Ⓒ "How to check inverter/compressor". • Check the stop valve.	———
5-time flash	Discharge temperature	Lighted	Lighted	Discharge temperature exceeds 116°C during operation. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6.Ⓔ "Check of LEV".	———
6-time flash	High pressure	Lighted	Lighted	High-pressure is detected with the high-pressure switch (HPS) during operation.	• Check the refrigerant circuit and the refrigerant amount. • Check the stop valve.	———
				The outdoor heat exchanger temperature exceeds 70°C during cooling or the indoor gas pipe temperature exceeds 70°C during heating.		
7-time flash	Fin temperature	3 times	Not lighted	The fin temperature exceeds 89°C during operation.	• Check the around outdoor unit. • Check the outdoor unit air passage. • Refer to 11-6.Ⓕ "Check of outdoor fan motor".	———
	P.C. board temperature	4 times	Not lighted	The P.C. board temperature exceeds 73°C during operation.		
8-time flash	Outdoor fan motor	Lighted	Lighted	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	• Refer to 11-6.Ⓕ "Check of outdoor fan motor".	———
9-time flash	Nonvolatile memory data	Lighted	5 times	Nonvolatile memory data cannot be read properly.	• Replace the outdoor control P.C. board.	○
10-time flash	Discharge temperature	Lighted	Lighted	The frequency of the compressor is kept 80Hz or more and the discharge temperature is kept under 50°C (cooling)/40°C (heating) for more than 40 minutes.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6.Ⓔ "Check of LEV".	———

NOTE: Blinking patterns of this mode differ from the ones of Troubleshooting check table (11-4).

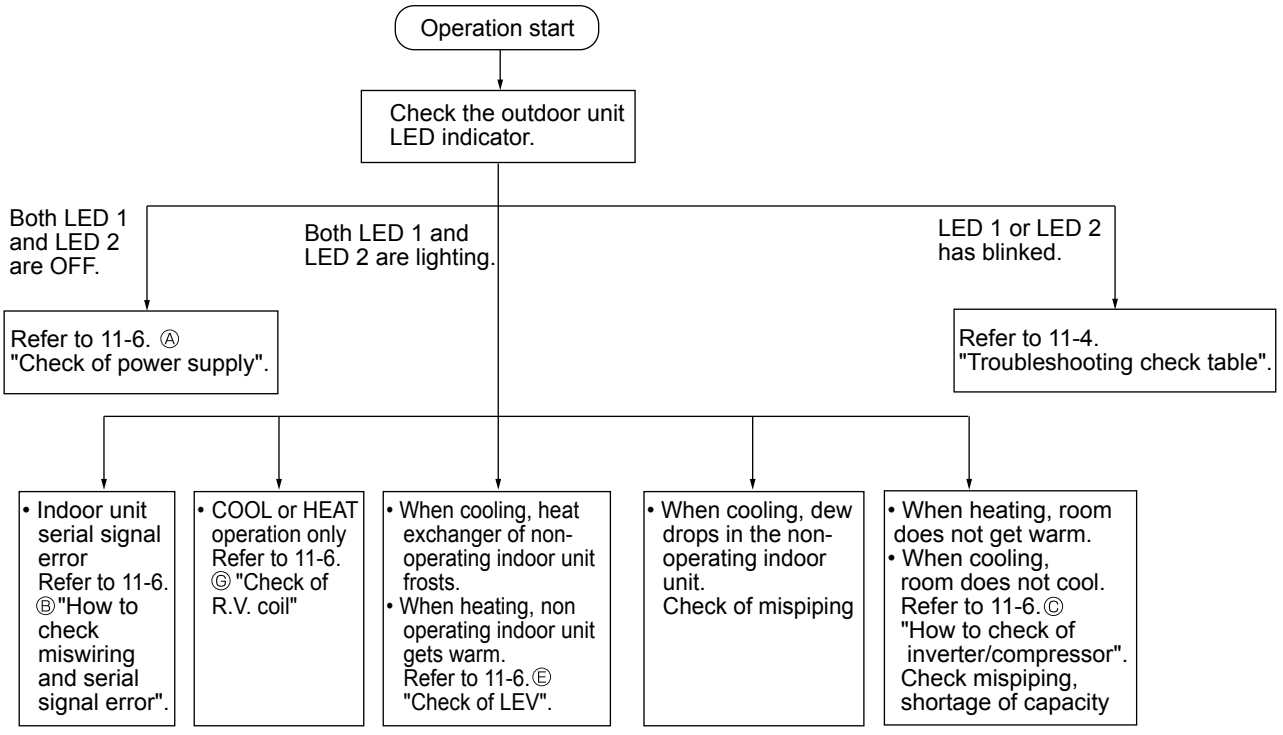
Upper lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board) LED 1	LED 2	Condition	Remedy	Indoor/outdoor unit failure mode recall function
11-time flash	Communication error between P.C. boards	Lighted	6 times	Communication error occurs between the electronic control P.C. board and power board for more than 10 seconds.	• Check the connecting wire between the outdoor control P.C. board and the power P.C. board.	——
				The communication between boards protection cut-out operates 2 consecutive times.		○
	Current sensor	Lighted	7 times	A short or open circuit is detected in the current sensor during compressor operating.	• Replace the power P.C. board.	——
				Current sensor protection cut-out operates 2 consecutive times.		○
	Zero cross detecting circuit	5 times	Not lighted	Zero cross signal cannot be detected while the compressor is operating.	• Check the connecting wire between the control P.C. board, the noise filter P.C. board and the power P.C. board.	——
				The protection cut-out of the zero cross detecting circuit operates 10 consecutive times.		○
	Converter	5 times	Not lighted	A failure is detected in the operation of the converter during operation.	• Check the voltage of the power supply. • Replace the power P.C. board.	——
	Bus-bar voltage (1)	5 times	Not lighted	The bus-bar voltage exceeds 400 V or falls to 200 V or below during compressor operating.		
	Bus-bar voltage (2) ※ Even if this protection stop is performed continuously three times, it does not mean the abnormality in outdoor power system.	6 times	Not lighted	The bus-bar voltage exceeds 400 V or falls to 50V or below during compressor operating.	• Check the voltage of the power supply. • Replace the outdoor control P.C. board.	
15-time flash	LEV and drain pump	Lighted	Lighted	The indoor unit detects an abnormality in the LEV and drain pump.	• Refer to 11-6.Ⓔ"Check of LEV". • Check the drain pump of the indoor unit.	——

NOTE: Blinking patterns of this mode differ from the ones of "Troubleshooting check table" (11-4).

11-3. INSTRUCTION OF TROUBLESHOOTING

• Check the indoor unit by referring to the indoor unit service manual, and confirm whether there is any problem in the indoor unit.

Then, check the outdoor unit by referring to this page.



11-4. TROUBLESHOOTING CHECK TABLE

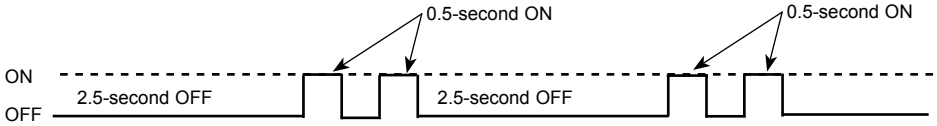
MXZ-2DM

No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
1	Outdoor unit does not operate.	Lighted	Once	LEV and drain pump	The indoor unit detects an abnormality in the LEV and drain pump.	• Refer to 11-6. Ⓔ "Check of LEV". • Check the drain pump of the indoor unit.
2		Lighted	Twice	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started.	• Check the connection of the compressor connecting wire. • Refer to 11-6. Ⓒ "How to check inverter/compressor". • Check the stop valve.
3		Lighted	3 times	Discharge temperature thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 10 minutes of compressor start-up.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".
4		Lighted	4 times	Fin temperature thermistor	A short or open circuit is detected in the thermistor during operation.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".
				P.C board temperature thermistor		• Replace the inverter P.C. board.
5		Lighted	5 times	Ambient temperature thermistor	A short or open circuit is detected in the thermistor during operation.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".
				Outdoor heat exchanger temperature thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 5 minutes (in cooling) and 10 minutes (in heating) of compressor start-up.	
				Defrost thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 5 minutes of compressor start-up.	
6		Lighted	7 times	Nonvolatile memory data	The nonvolatile memory data cannot be read properly.	• Replace the inverter P.C. board.
7		Lighted	11 times	Stop valve Closed valve	Closed valve is detected by compressor current.	• Check the stop valve.
8		Lighted	17 times	Outdoor refrigerant system abnormality	A closed valve and air trapped in the refrigerant circuit are detected based on the temperature sensed by the indoor and outdoor thermistors and the current of the compressor.	• Check for a gas leak in a connecting piping etc. • Check the stop valve. • Refer to 11-6. Ⓚ "Check of outdoor refrigerant circuit".
9	'Outdoor unit stops and restarts 3 minutes later' is repeated.	Twice	Not lighted	Overcurrent	18 A current flows into intelligent power module.	• Reconnect compressor connector. • Refer to 11-6. Ⓒ "How to check inverter/compressor". • Check the stop valve.
10		3 times	Not lighted	Discharge temperature protection	Discharge temperature exceeds 116°C during operation. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	• Check the amount of gas and the refrigerant circuit. • Refer to 11-6. Ⓔ "Check of LEV".
11		4 times	Not lighted	Fin temperature protection	The fin temperature exceeds 90°C during operation.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6. Ⓕ "Check of outdoor fan motor".
				P.C. board temperature protection	The P.C. board temperature exceeds 78°C during operation.	
12		5 times	Not lighted	High-pressure protection	The outdoor heat exchanger temperature exceeds 70°C during cooling or indoor gas pipe temperature exceeds 70°C during heating.	• Check the amount of gas and the refrigerant circuit. • Check the stop valve.
13		9 times	Not lighted	Bus-bar voltage protection	The bus-bar voltage exceeds 430 V or falls to 50 V or below during compressor operating.	• Replace the inverter P.C. board.
14		13 times	Not lighted	Outdoor fan motor	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	• Refer to 11-6. Ⓕ "Check of outdoor fan motor".
15		8 times	Not lighted	Current sensor protection	A short or open circuit is detected in the current sensor during compressor operating.	• Replace the inverter P.C. board.
16		10 times	Not lighted	Compressor	The compressor does not synchronize with the operating power.	• Reconnect compressor connector. • Refer to 11-6. Ⓒ "How to check inverter/compressor". • Check the stop valve.
17	Outdoor unit operates.	Once	Lighted	Primary current protection	The input current exceeds 10 A.	These symptoms do not mean any abnormality of the product, but check the following points. • Check if indoor filters are clogged. • Check if refrigerant is short. • Check if indoor/outdoor unit air circulation is short cycled.
				Secondary current protection	The current of the compressor exceeds 17 A.	
18		Twice	Lighted	High-pressure protection	The indoor gas pipe temperature exceeds 45°C during heating.	
				Defrosting in cooling	The indoor gas pipe temperature falls 3°C or below during cooling.	
19		3 times	Lighted	Discharge temperature protection	The discharge temperature exceeds 100°C during operation.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6. Ⓔ "Check of LEV". • Refer to 11-6. Ⓓ "Check of outdoor thermistors".
20		4 times	Lighted	Low discharge temperature protection	The frequency of the compressor is kept 80 Hz or more and the discharge temperature is kept under 50°C (COOL mode)/40°C (HEAT mode) for more than 40 minutes.	• Refer to 11-6. Ⓔ "Check of LEV". • Check the refrigerant circuit and the refrigerant amount.

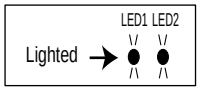
No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
21	Outdoor unit operates.	5 times	Lighted	Cooling high-pressure protection	The outdoor heat exchanger temperature exceeds 58°C during operation.	This symptom does not mean any abnormality of the product, but check the following points. • Check if indoor filters are clogged. • Check if refrigerant is short. • Check if indoor/outdoor unit air circulation is short cycled.
22		8 times	Lighted	Converter protection	A failure is detected in the operation of the converter during operation.	• Check the voltage of power supply. • Replace the inverter P.C. board.
23	Outdoor unit operates normally.	9 times	Lighted	Inverter check mode	The connector of compressor is disconnected. Inverter check mode starts.	–
24		Lighted	Lighted	Normal	–	–

NOTE: 1. The location of LED is illustrated at the right figure. Refer to 11-7.4.

2. LED is lighted during normal operation.
   The flashing frequency shows the number of times the LED blinks after every 2.5-second OFF.
   (Example) The flashing frequency is “2”.



Outdoor display P.C. board (Parts side)



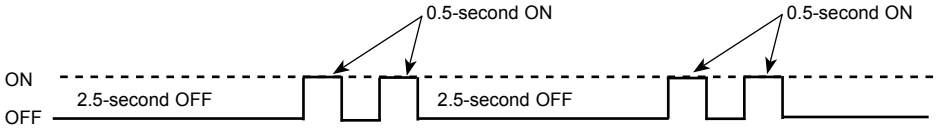
MXZ-3DM

No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
1	Outdoor unit does not operate.	Lighted	Once	LEV and drain pump	The indoor unit detects an abnormality in the LEV and drain pump.	• Refer to 11-6. Ⓔ "Check of LEV". • Check the drain pump of the indoor unit.
2		Lighted	Twice	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started, or converter protection or bus-bar voltage protection cut-out operates 3 consecutive times within 3 minutes after start-up.	• Check the connection of the compressor connecting wire. • Refer to 11-6. Ⓒ "How to check inverter/compressor". • Check the stop valve.
3		Lighted	3 times	Discharge temperature thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor 10 minutes after compressor start-up.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".
4		Lighted	4 times	Fin temperature thermistor	A short or open circuit is detected in the thermistor during operation.	• Refer to 11-6. Ⓓ "Check of outdoor thermistors".
				P.C board temperature thermistor		• Replace the outdoor control P.C. board.
5		Lighted	5 times	Ambient temperature thermistor	A short or open circuit is detected in the thermistor during operation.	• Refer to 11-6. Ⓓ"Check of outdoor thermistors".
				Outdoor heat exchanger temperature thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor 5 minutes (in cooling) and 10 minutes (in heating) after compressor start-up.	
				Defrost thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor 5 minutes after compressor start-up.	
6		Lighted	7 times	Nonvolatile memory data	The nonvolatile memory data cannot be read properly.	• Replace the outdoor control P.C. board.
7		Lighted	8 times	Current sensor	Current sensor protection cut-out operates 2 consecutive times.	• Replace the power P.C. board.
8		Lighted	11 times	Communication error between P.C. boards	Communication error occurs twice between the outdoor control P.C. board and the power P.C. board for more than 10 seconds.	• Check the connecting wire between the outdoor control P.C. board and the power P.C. board.
9		Lighted	12 times	Zero cross detecting circuit	The protection cut-out of the zero cross detecting circuit operates 10 consecutive times.	• Check the connecting wire between the outdoor control P.C. board, the noise filter P.C. board and the power P.C. board.
10	'Outdoor unit stops and restarts 3 minutes later' is repeated.	Twice	Not lighted	IPM protection	Overcurrent is detected 30 seconds after compressor start-up.	• Reconnect compressor connector. • Refer to 11-6. Ⓒ "How to check inverter/compressor". • Check the stop valve. • Check the power module (PAM module).
				Lock protection	Overcurrent is detected within 30 seconds after compressor start-up.	
11		3 times	Not lighted	Discharge temperature protection	Discharge temperature exceeds 116°C during operation. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	• Check the amount of gas and the refrigerant circuit. • Refer to 11-6. Ⓔ "Check of LEV".
12		4 times	Not lighted	Fin temperature protection	The fin temperature exceeds 89°C during operation.	•Check the refrigerant circuit and the refrigerant amount. •Refer to 11-6. Ⓕ "Check of outdoor fan motor".
				P.C. board temperature protection	The P.C. board temperature exceeds 73°C during operation.	
13		5 times	Not lighted	High-pressure protection	High-pressure is detected with the high-pressure switch (HPS) during operation.	• Check the amount of gas and the refrigerant circuit. • Check the stop valve.
					The outdoor heat exchanger temperature exceeds 70°C during cooling or indoor gas pipe temperature exceeds 70°C during heating.	
		6 times	Not lighted	Pre-heat protection	A failure is detected in the operation of pre-heat.	• Replace the power P.C. board.
14		8 times	Not lighted	Converter protection	A failure is detected in the operation of the converter during operation.	• Replace the power P.C. board.
15		9 times	Not lighted	Bus-bar voltage protection (1)	The bus-bar voltage falls to 200 V or below during compressor operating.	• Check the voltage of power supply. • Replace the power P.C. board or the outdoor control P.C. board. • Refer to 11-6. Ⓘ "Check of bus-bar voltage".
				Bus-bar voltage protection (2)	The bus-bar voltage exceeds 400 V or falls to 50 V or below while the compressor is operating.	
16		13 times	Not lighted	Outdoor fan motor	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	• Refer to 11-6. Ⓕ "Check of outdoor fan motor".
17		Lighted	8 times	Current sensor protection	A short or open circuit is detected in the current sensor while the compressor is operating.	• Replace the power P.C. board.
18		Lighted	11 times	Communication protection between P.C. boards	Communication error occurs between the outdoor control P.C. board and the power P.C. board for more than 10 seconds.	• Check the connecting wire between the outdoor control P.C. board and the power P.C. board.
19		Lighted	12 times	Zero cross detecting circuit protection	Zero cross signal cannot be detected while the compressor is operating.	• Check the connecting wire between the outdoor control P.C. board, the noise filter P.C. board and the power P.C. board.

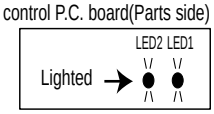
No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
20	Outdoor unit operates.	Once	Lighted	Primary current protection	The primary current exceeds 15 A.	These symptoms do not mean any abnormality of the product, but check the following points. • Check the indoor filters are not clogged. • Check there is sufficient refrigerant. • Check the indoor/outdoor unit air circulation is not short cycling.
				Secondary current protection	The current of the compressor exceeds 12 A.	
21		Twice	Lighted	High-pressure protection	The indoor gas pipe temperature exceeds 45°C during heating.	
				Defrosting in cooling	The indoor gas pipe temperature falls 3°C or below during cooling.	
22		3 times	Lighted	Discharge temperature protection	The discharge temperature exceeds 100°C during operation.	• Check the refrigerant circuit and the refrigerant amount. • Refer to 11-6. Ⓔ "Check of LEV". • Refer to 11-6. Ⓓ "Check of outdoor thermistors".
23		4 times	Lighted	Low discharge temperature protection	The frequency of the compressor is kept 80 Hz or more and the discharge temperature is kept under 50°C (cooling) /40°C (heating) for more than 40 minutes.	• Refer to 11-6. Ⓔ "Check of LEV". • Check the refrigerant circuit and the refrigerant amount.
24		5 times	Lighted	Cooling high-pressure protection	The outdoor heat exchanger temperature exceeds 58°C during operation.	This symptom does not mean any abnormality of the product, but check the following points. • Check the indoor filters are not clogged. • Check there is sufficient refrigerant. • Check the indoor/outdoor unit air circulation is not short cycling.
25	Outdoor unit operates normally.	9 times	Lighted	Inverter check mode	The unit is operated with emergency operation switch.	–
26		Lighted	Lighted	Normal	–	–

NOTE: 1. The location of LED is illustrated at the right figure. Refer to 11-7.2.

2. LED is lighted during normal operation.
   The flashing frequency shows the number of times the LED blinks after every 2.5-second OFF.
   (Example) The flashing frequency is “2”.



Outdoor control P.C. board(Parts side)



11-5. TROUBLE CRITERION OF MAIN PARTS

MXZ-2DM40VA MXZ-3DM50VA

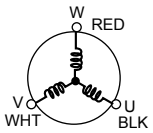
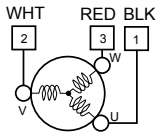
<table>
<tr><th>Part name</th><th>Check method and criterion</th></tr>
<tr><td>Defrost thermistor (RT61)

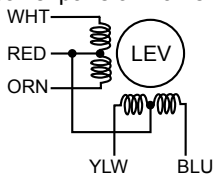
Fin temperature thermistor (RT64)

Ambient temperature thermistor (RT65)

Outdoor heat exchanger temperature thermistor (RT68)</td><td>Measure the resistance with a tester.

Refer to 11-7. "TEST POINT DIAGRAM AND VOLTAGE" 1. "Inverter P.C. board", 2. "Outdoor control P.C. board " or 3. "Outdoor power P.C. board" for the chart of thermistor.</td></tr>
<tr><td>Discharge temperature thermistor (RT62)</td><td>Measure the resistance with a tester.
Before measurement, hold the thermistor with your hands to warm it up.

Refer to 11-7. "TEST POINT DIAGRAM AND VOLTAGE" 1. "Inverter P.C. board", 2. "Outdoor control P.C. board ", for the chart of thermistor.</td></tr>
<tr><td>Compressor
 
</td><td>Measure the resistance between terminals with a tester.
(Winding temperature: -10 °C - 40 °C)
<table>
<tr><th colspan="2">Normal (Each phase)</th></tr>
<tr><th>MXZ-2DM40VA</th><th>MXZ-3DM50VA</th></tr>
<tr><td>1.49 Ω - 1.84 Ω</td><td>0.86 Ω - 1.06 Ω</td></tr>
</table></td></tr>
<tr><td>Outdoor fan motor
 

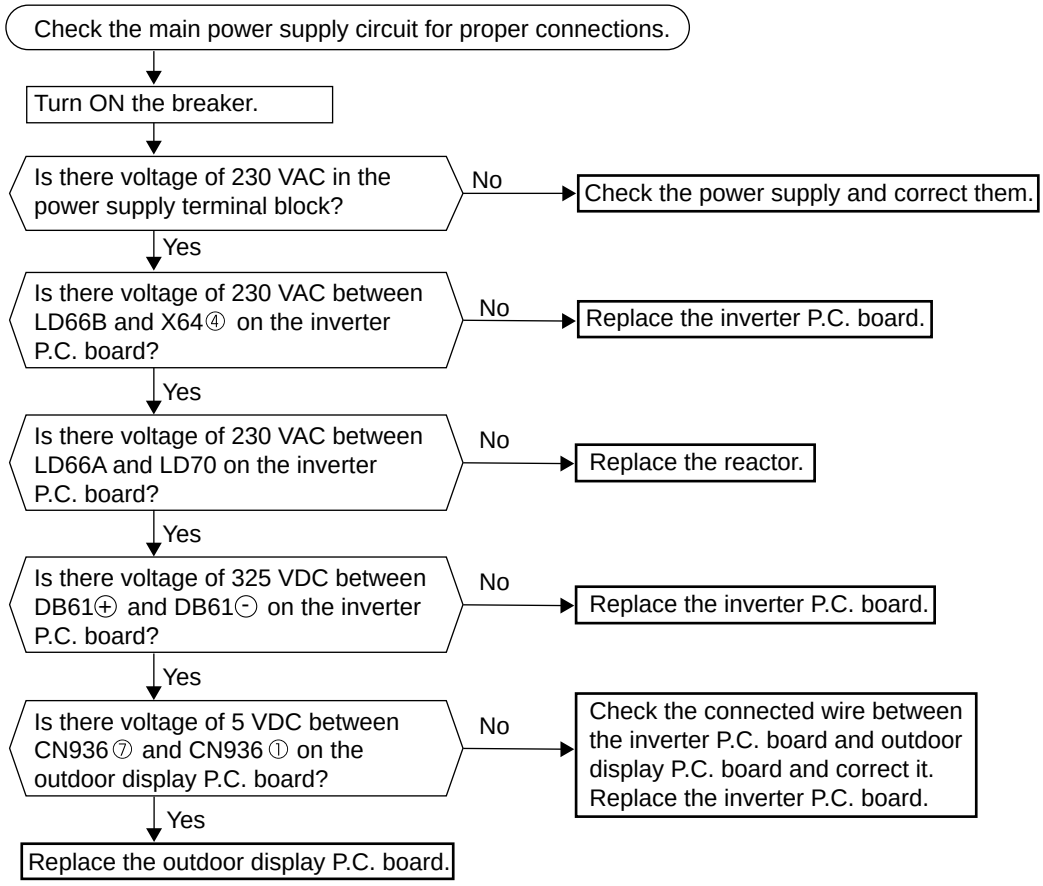
MXZ-2DM40VA</td><td>Measure the resistance between lead wires with a tester.
(Part temperature: -10 °C - 40 °C)
<table>
<tr><th>Normal (Each phase)</th></tr>
<tr><th>MXZ-2DM40VA</th></tr>
<tr><td>12 Ω - 16 Ω</td></tr>
</table></td></tr>
<tr><td>Outdoor fan motor
MXZ-3DM50VA</td><td>MXZ-3DM50VA
Refer to 11-6. Ⓕ.</td></tr>
<tr><td>R.V. coil</td><td>Measure the resistance with a tester. (Part temperature: -10 °C - 40 °C)
<table>
<tr><th colspan="2">Normal</th></tr>
<tr><th>MXZ-2DM40VA</th><th>MXZ-3DM50VA</th></tr>
<tr><td>1.2 kΩ - 1.56 kΩ</td><td>1.26 kΩ - 1.62 kΩ</td></tr>
</table></td></tr>
<tr><td>Linear expansion valve
 
</td><td>Measure the resistance with a tester. (Part temperature: -10 °C - 40 °C)
<table>
<tr><th>Color of lead wire</th><th>Normal</th></tr>
<tr><td>WHT - RED</td><td rowspan="4">37.4 Ω - 53.9 Ω</td></tr>
<tr><td>RED - ORN</td></tr>
<tr><td>YLW - RED</td></tr>
<tr><td>RED - BLU</td></tr>
</table></td></tr>
<tr><td>High pressure switch (HPS)
MXZ-3DM50VA</td><td>
<table>
<tr><th colspan="3">MXZ-3DM50VA</th></tr>
<tr><th colspan="2">Pressure</th><th>Normal</th></tr>
<tr><td rowspan="2">HPS</td><td>3.43 ± 0.15 MPa</td><td>Close</td></tr>
<tr><td>4.41 ± 0.10 MPa</td><td>Open</td></tr>
</table></td></tr>
</table>

11-6. TROUBLESHOOTING FLOW

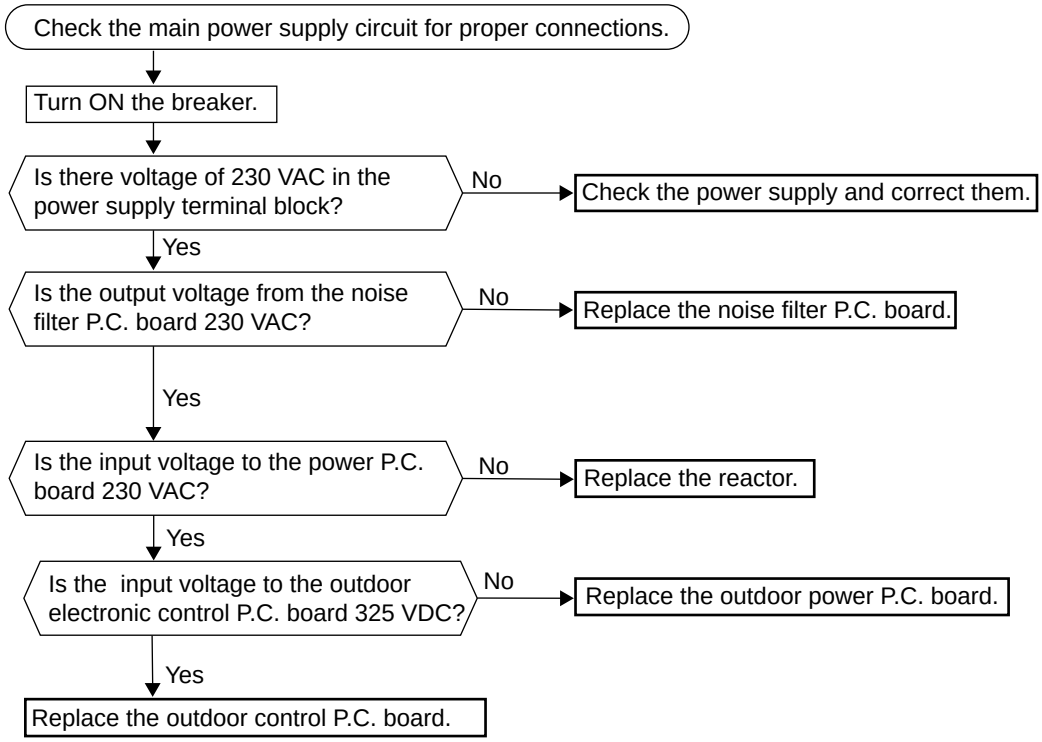
• When outdoor unit does not operate, LED on outdoor P.C. board is not lighting.

Ⓐ Check of power supply

MXZ-2DM40VA



MXZ-3DM50VA


Check the main power supply circuit for proper connections.
Turn ON the breaker.
Is there voltage of 230 VAC in the power supply terminal block?
No
Check the power supply and correct them.
Yes
Is the output voltage from the noise filter P.C. board 230 VAC?
No
Replace the noise filter P.C. board.
Yes
Is the input voltage to the power P.C. board 230 VAC?
No
Replace the reactor.
Yes
Is the input voltage to the outdoor electronic control P.C. board 325 VDC?
No
Replace the outdoor power P.C. board.
Yes
Replace the outdoor control P.C. board.

- **When the indoor unit does not operate, it cannot be operated either with the remote controller or with the EMERGENCY OPERATION switch.**
- **When the outdoor unit does not operate, the OPERATION INDICATOR lamp on the indoor unit flashes ON and OFF every 0.5-second.**

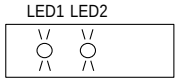
Ⓑ How to check miswiring and serial signal error (when outdoor unit does not work)

LED indication for communication status

Communication status is indicated by the LED.

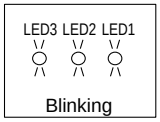
Unit status
Blinking: normal communication
Lighted: abnormal communication or not connected
Not lighted: The outdoor P.C. board is abnormal.
NOTE: "Lighted" and "Not lighted" in the table below does not indicate abnormal.

MXZ-2DM40VA
Outdoor display P.C. board

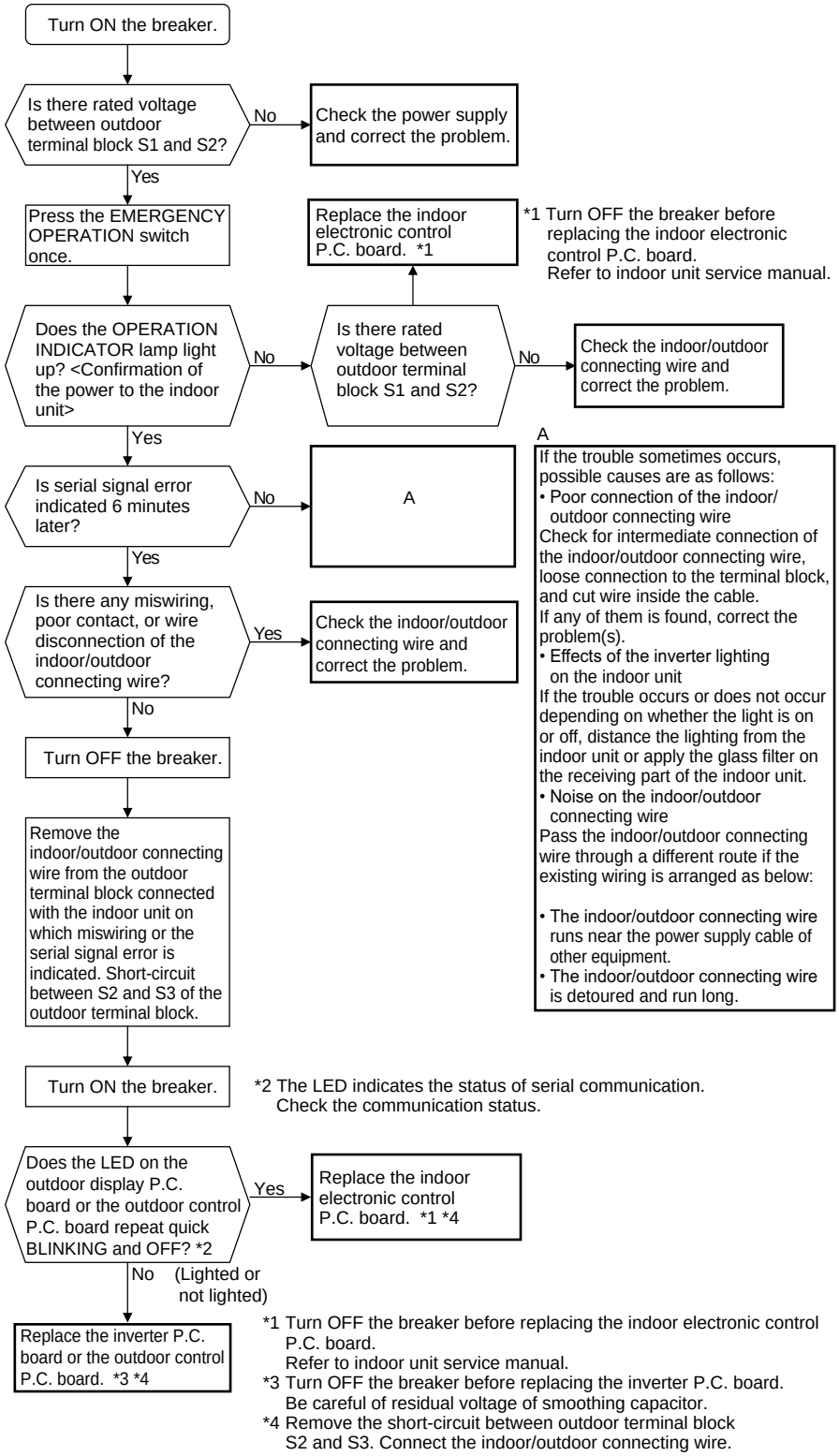


LED 1	LED 2
Unit A status	Unit B status

MXZ-3DM50VA
Outdoor control P.C. board

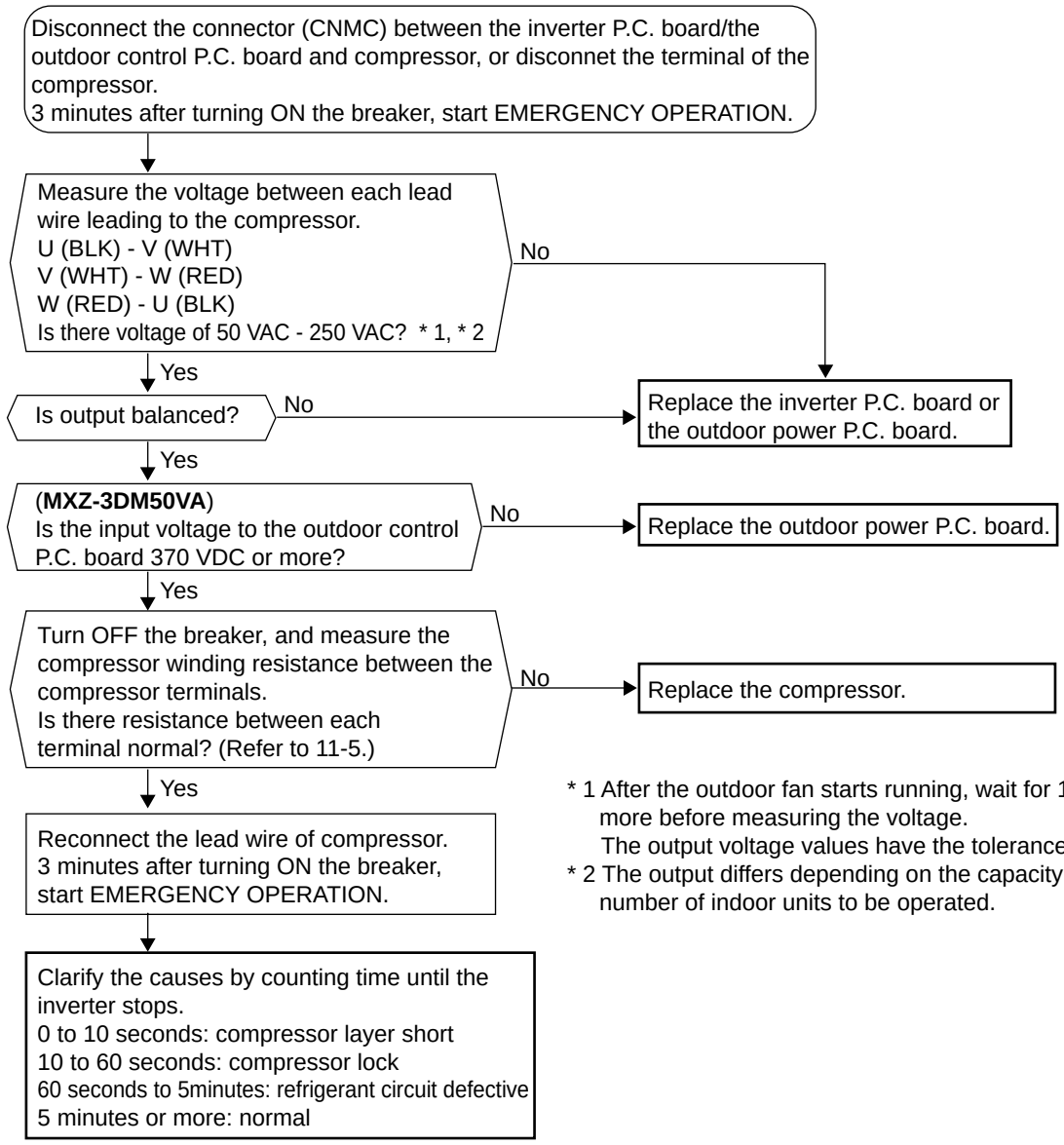


Pattern	LED 3	LED 2	LED 1
1	Lighted	Unit B status	Unit A status
2	Not lighted	–	Unit C status



- **In heating, the room does not get warm.**
- **In cooling, the room does not get cool.**

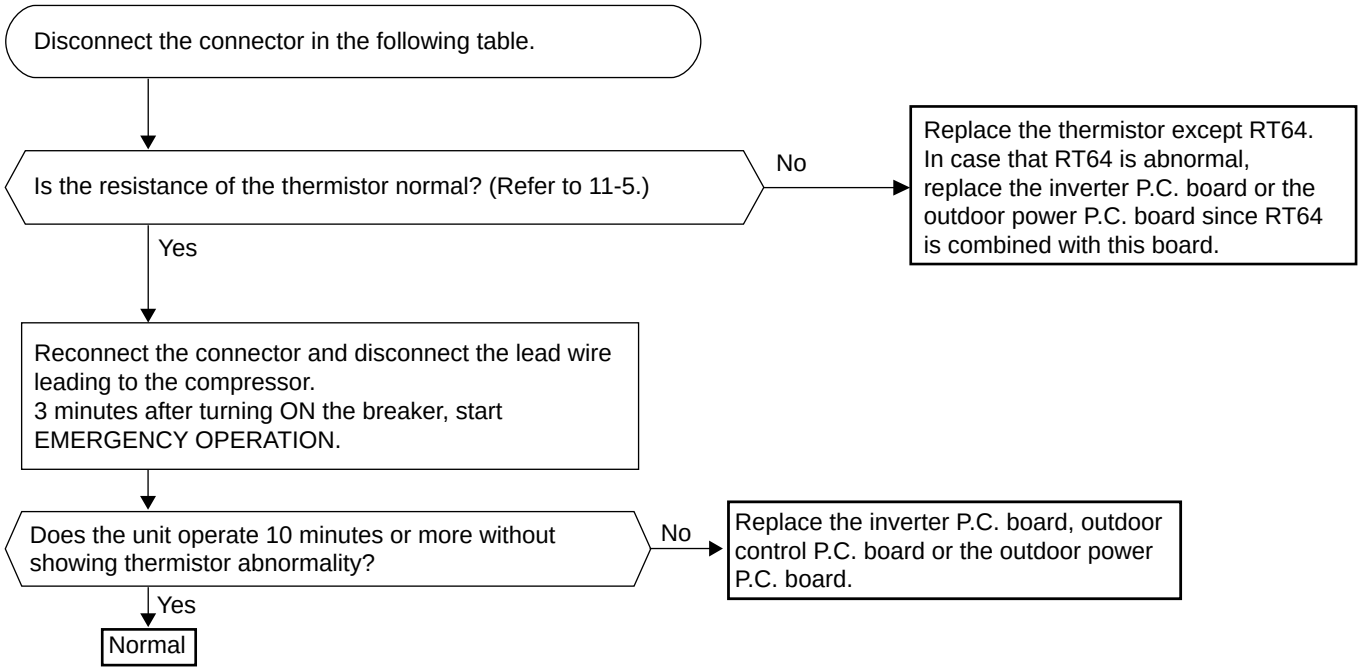
Ⓒ How to check inverter/compressor



* 1 After the outdoor fan starts running, wait for 1 minute or more before measuring the voltage.
  The output voltage values have the tolerance of ± 20%.
* 2 The output differs depending on the capacity or the number of indoor units to be operated.

• The thermistor is abnormal.

Ⓓ Check of outdoor thermistors



MXZ-2DM40VA

Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	CN641 pin1 and pin2	Inverter P.C. board
Discharge temperature	RT62	CN641 pin3 and pin4	
Fin temperature	RT64	CN642 pin1 and pin2	
Ambient temperature	RT65	CN643 pin1 and pin2	
Outdoor heat exchanger temperature	RT68	CN644 pin1 and pin3	

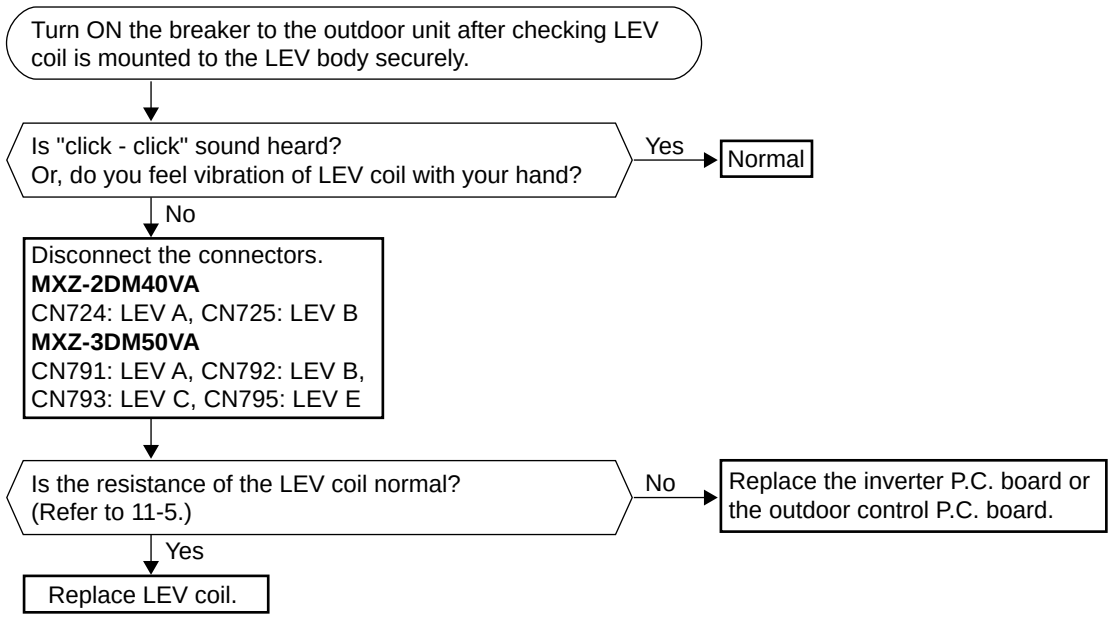
MXZ-3DM50VA

Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	CN661 pin1 and pin2	Outdoor control P.C. board
Discharge temperature	RT62	CN661 pin3 and pin4	
Fin temperature	RT64	CN9 pin1 and pin2	Outdoor power P.C. board
Ambient temperature	RT65	CN665 pin1 and pin2	Outdoor control P.C. board
Outdoor heat exchanger temperature	RT68	CN661 pin7 and pin8	

• In cooling, the heat exchanger of non-operating indoor unit has frosted.
• In heating, non-operating indoor unit gets warm.

Ⓔ Check of LEV

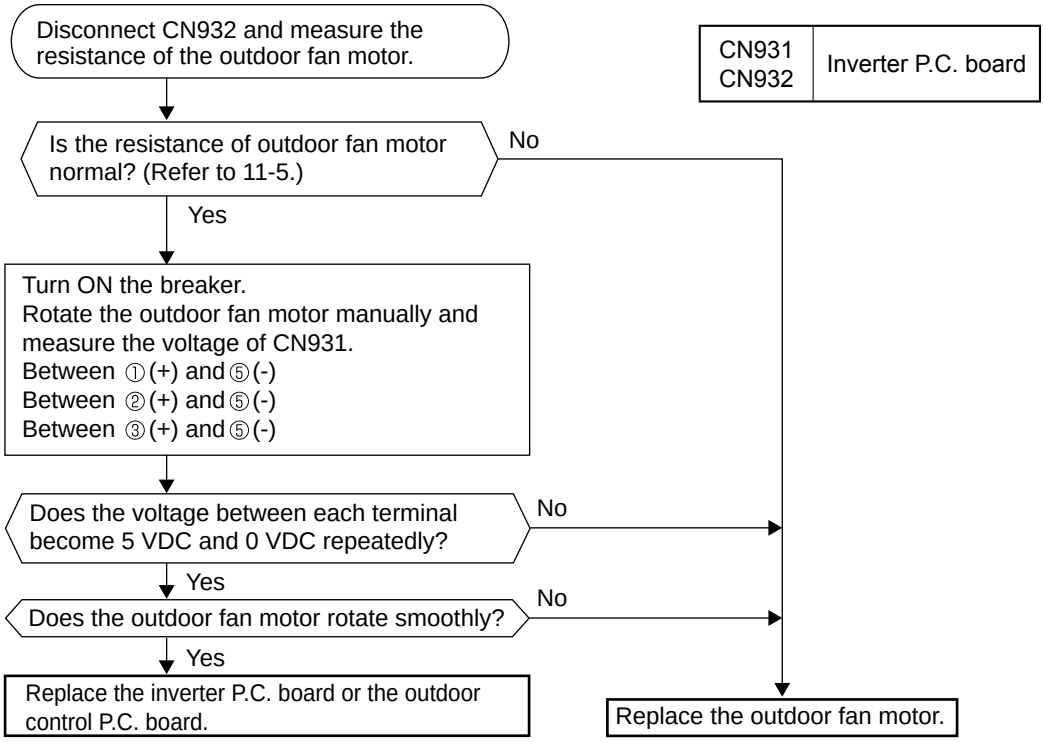
	MXZ-2DM40VA	MXZ-3DM50VA
CN724 CN725	Inverter P.C. board	——
CN791 CN792 CN793 CN795	——	Outdoor control P.C. board



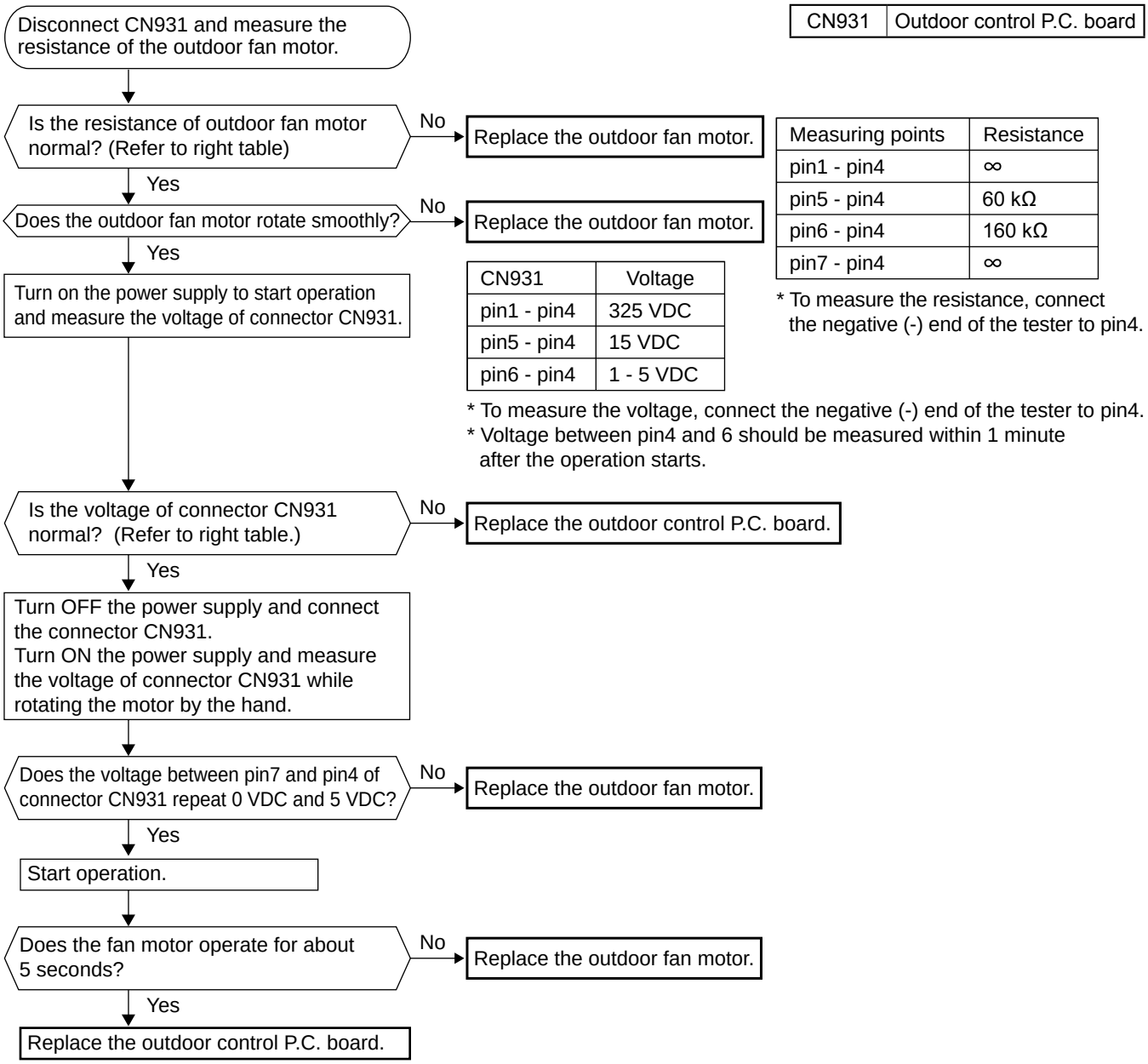
• Fan motor does not operate or stops operating shortly after starting the operation.

Ⓕ Check of outdoor fan motor

MXZ-2DM40VA



MXZ-3DM50VA



CN931	Outdoor control P.C. board

Measuring points	Resistance
pin1 - pin4	∞
pin5 - pin4	60 kΩ
pin6 - pin4	160 kΩ
pin7 - pin4	∞

* To measure the resistance, connect the negative (-) end of the tester to pin4.

CN931	Voltage
pin1 - pin4	325 VDC
pin5 - pin4	15 VDC
pin6 - pin4	1 - 5 VDC

* To measure the voltage, connect the negative (-) end of the tester to pin4.
* Voltage between pin4 and 6 should be measured within 1 minute after the operation starts.

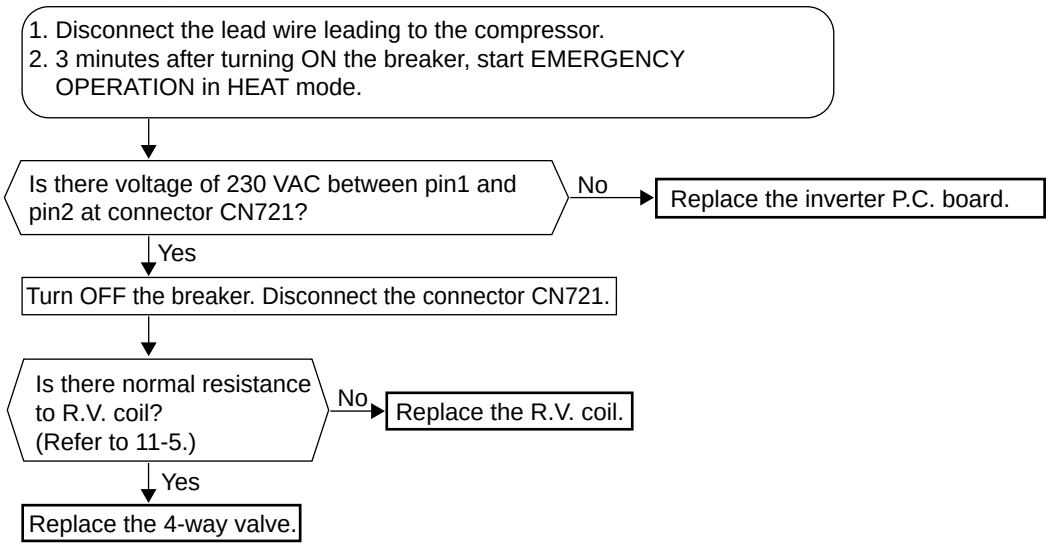
The cooling operation or the heating operation does not operate.

Ⓖ Check of R.V. coil

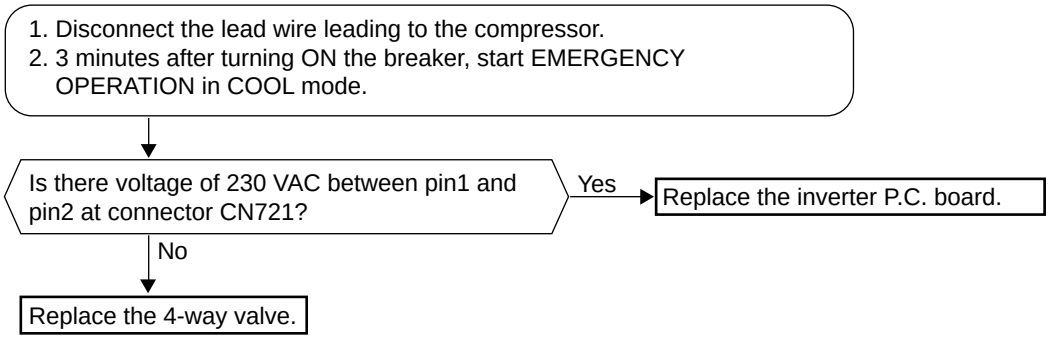
MXZ-2DM40VA

CN721	Inverter P.C. board

• The heating operation does not operate.



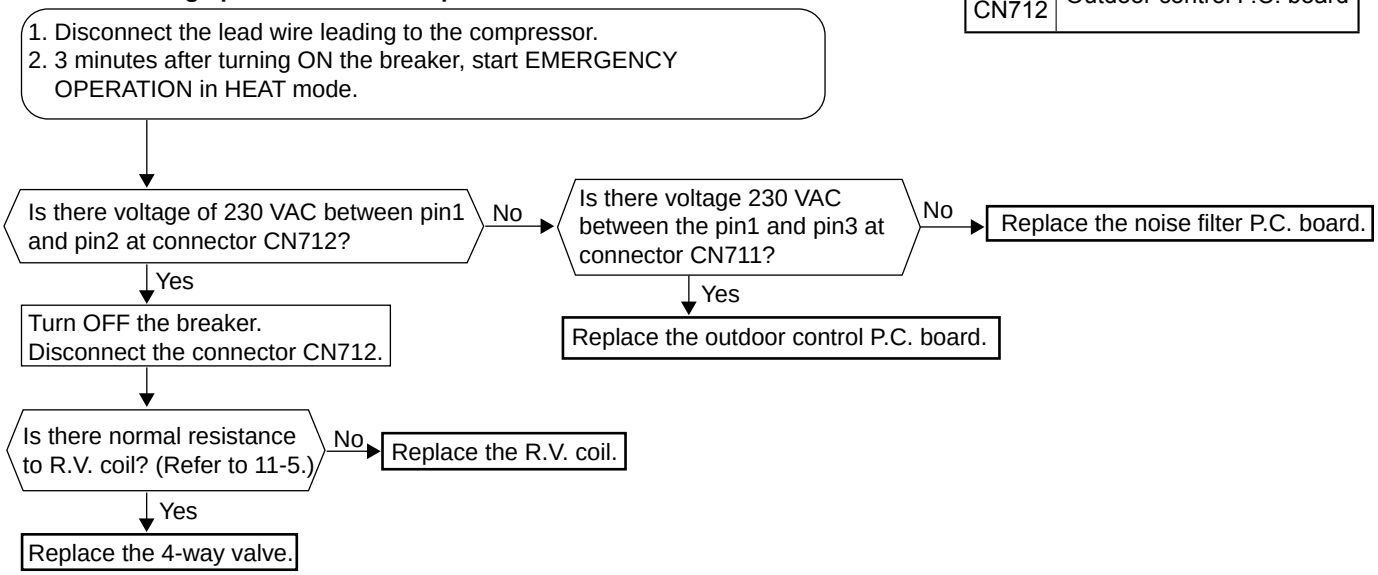
• The cooling operation does not operate.



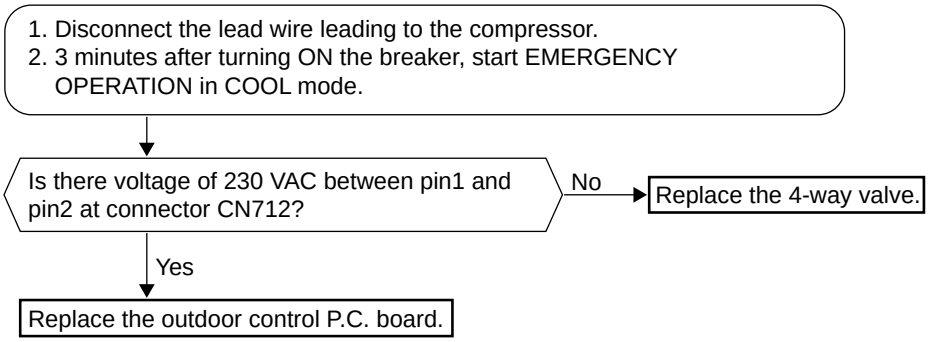
MXZ-3DM50VA

CN711 CN712	Outdoor control P.C. board

• When heating operation does not operate.



• When cooling operation does not operate.

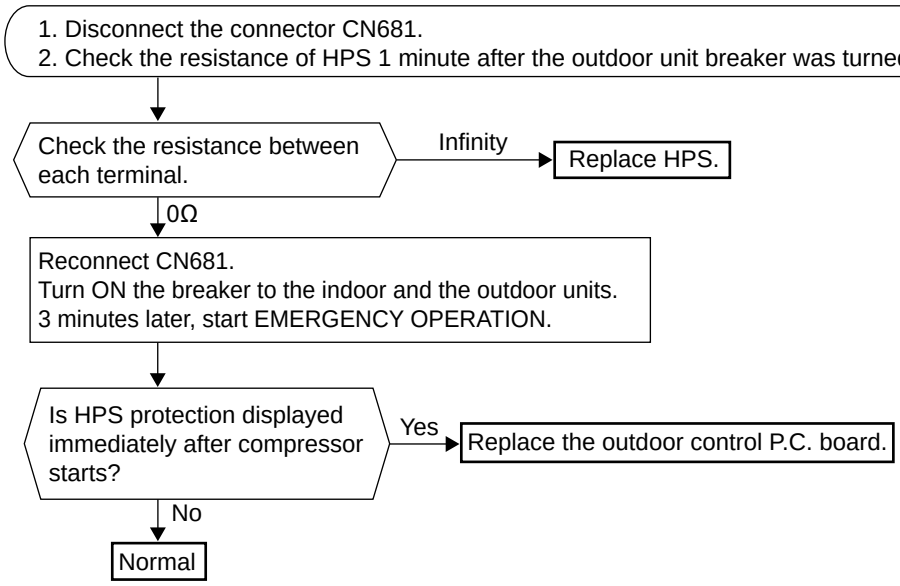


• When the operation frequency does not go up from lowest frequency.

Ⓗ Check of HPS

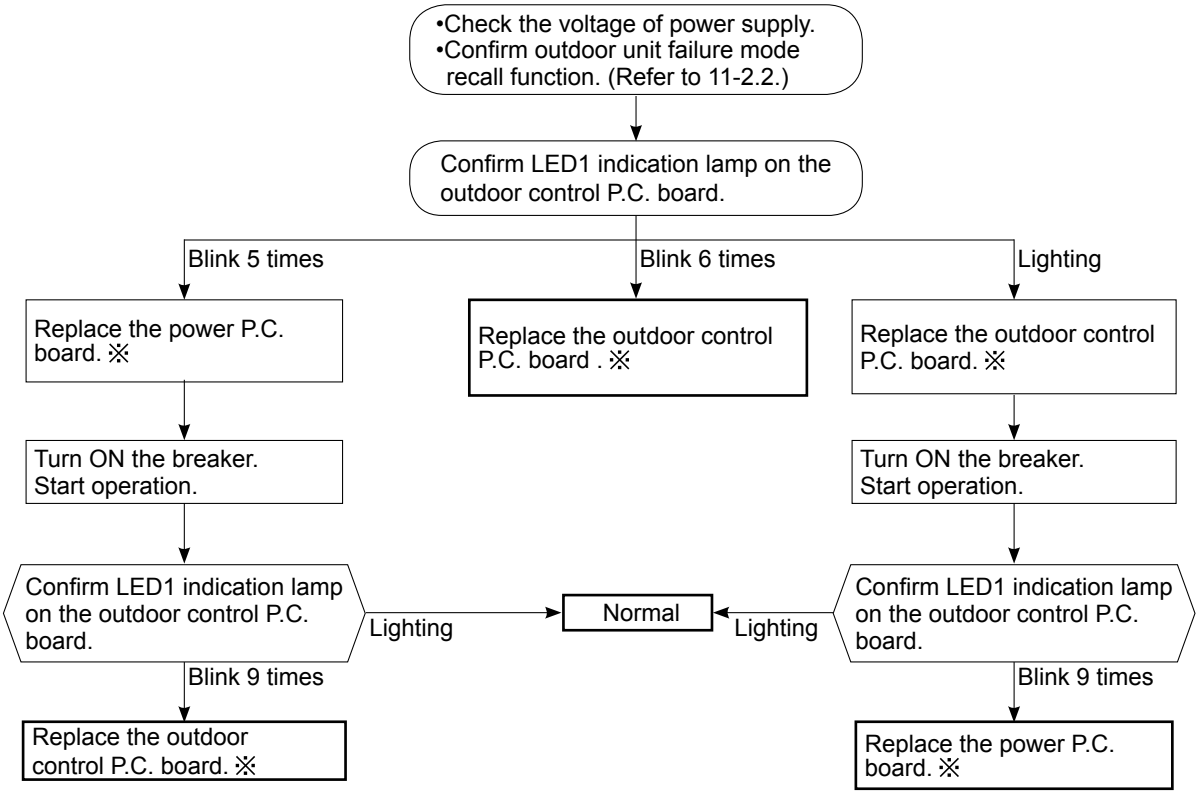
MXZ-3DM50VA

CN681	Outdoor control P.C. board



ⓘ Check of bus-bar voltage

MXZ-3DM50VA



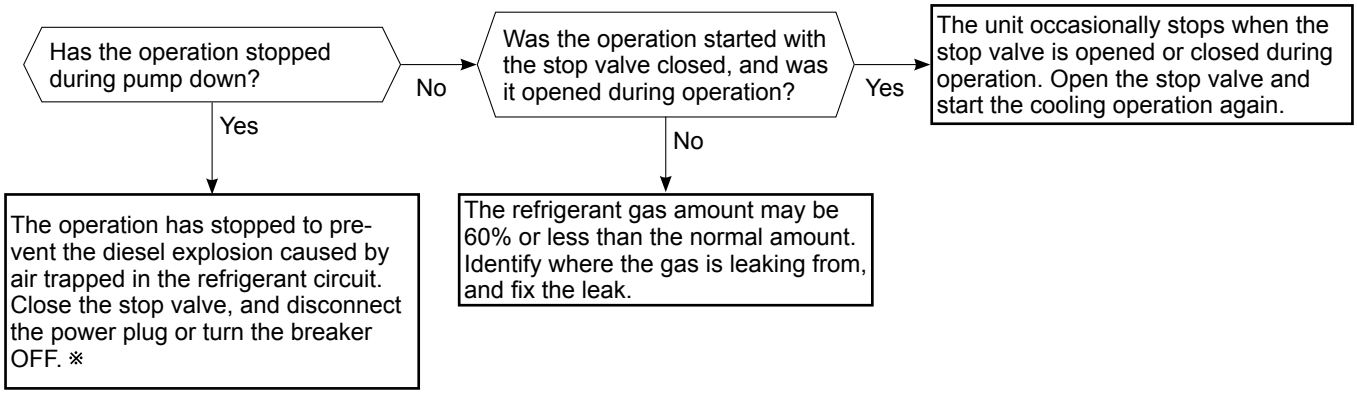
※ Turn OFF the breaker before removing P.C. board.

ⓙ The other cases

Indoor unit does not operate. (different operating models in multi system)

- When you try to run 2 indoor units simultaneously, one for cooling and the other for heating, the unit which transmits signal to the outdoor unit first decides the operation mode.
- When the above situation occurs, set all the indoor units to the same mode, turn OFF the indoor units, then turn them back ON.
- Though the top of the indoor unit sometimes gets warm, this does not mean malfunction.
  The reason is that the refrigerant gas continuously flows into the indoor unit even while it is not operating.

ⓚ Check of outdoor refrigerant circuit

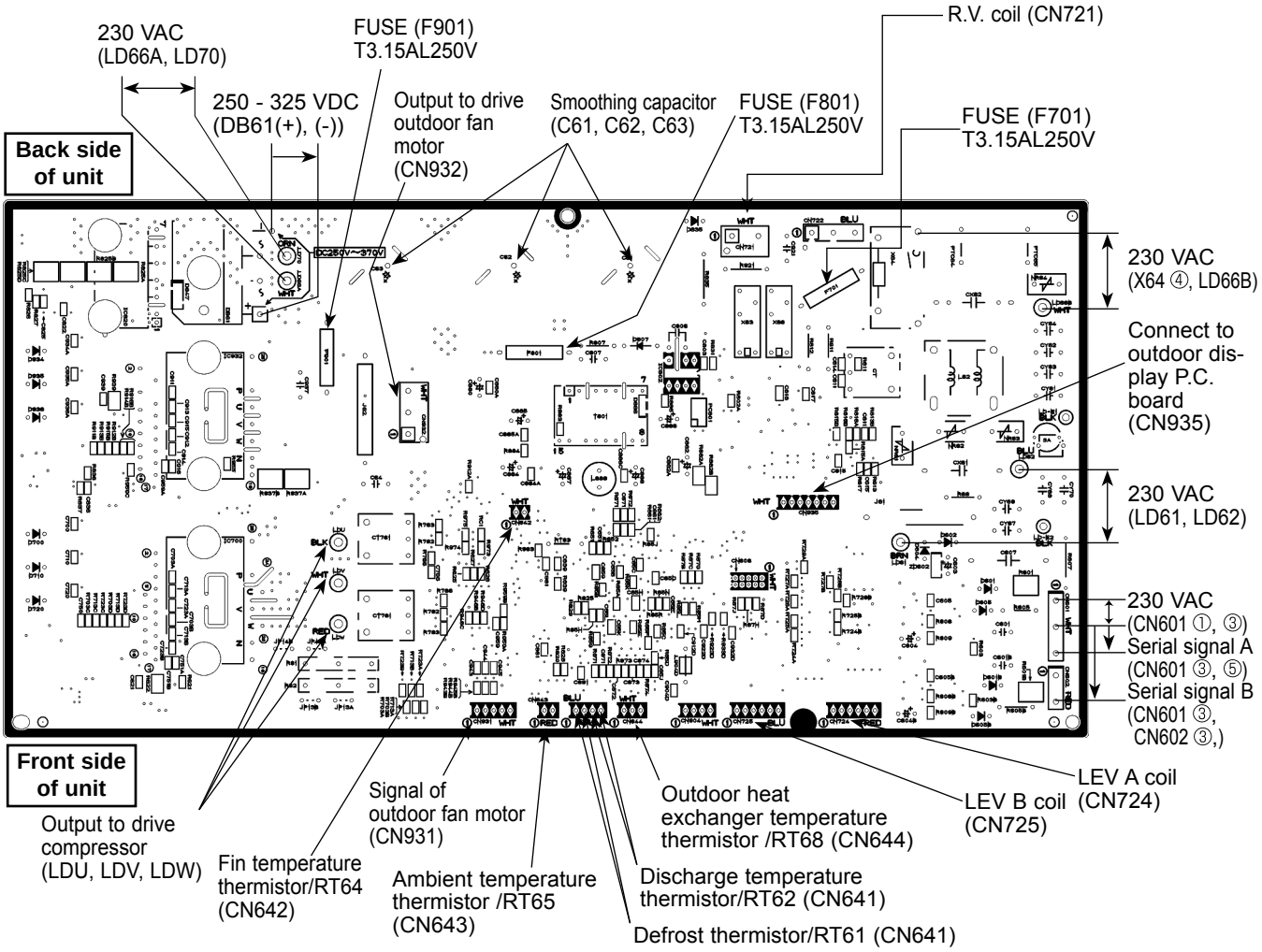


※ CAUTION: Do not start the operation again to prevent hazards.

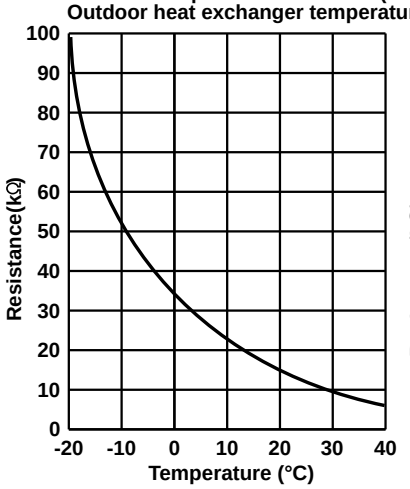
11-7. TEST POINT DIAGRAM AND VOLTAGE

1. Inverter P.C. board

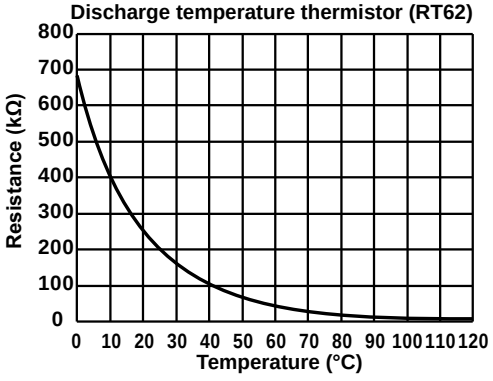
MXZ-2DM40VA



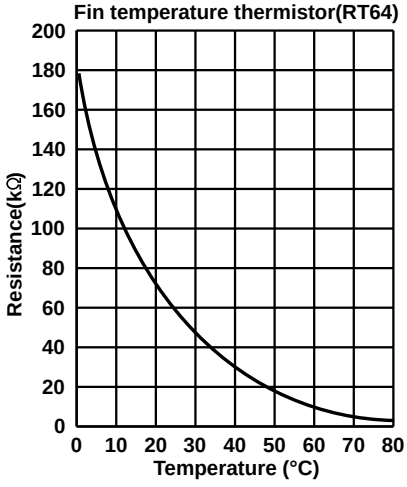
Defrost thermistor(RT61)
Ambient temperature thermistor(RT65)
Outdoor heat exchanger temperature thermistor(RT68)



Discharge temperature thermistor (RT62)

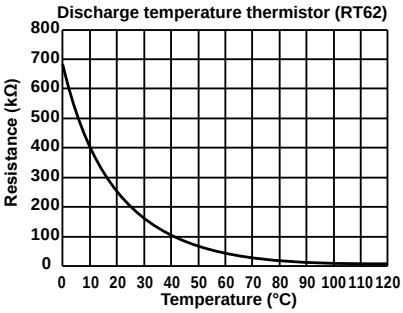


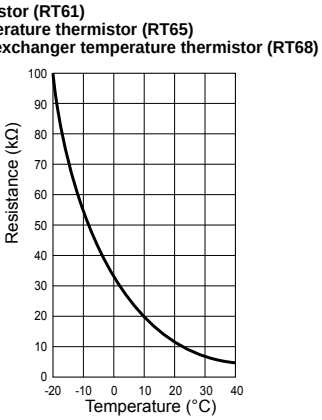
Fin temperature thermistor(RT64)

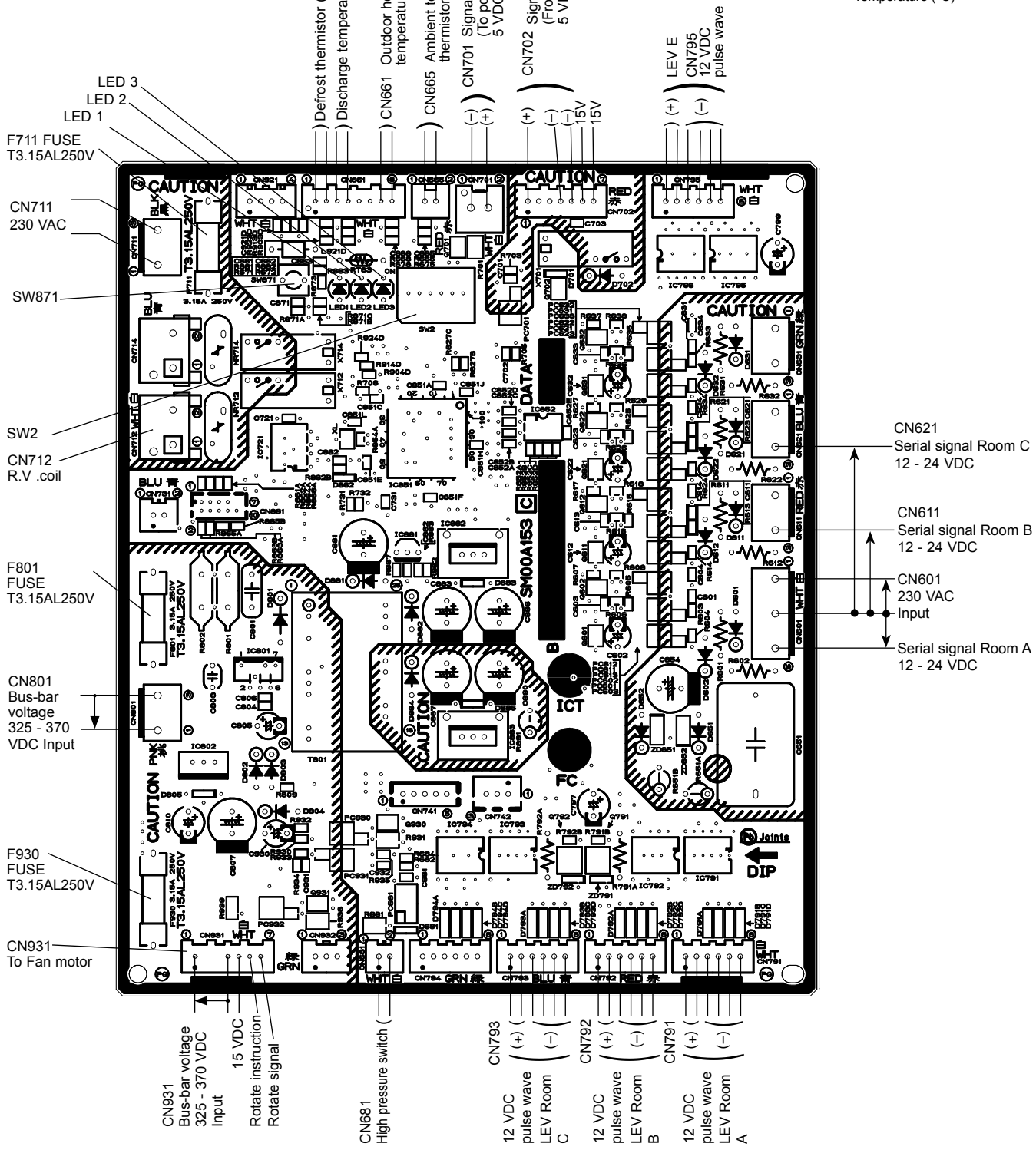


2. Outdoor control P.C. board

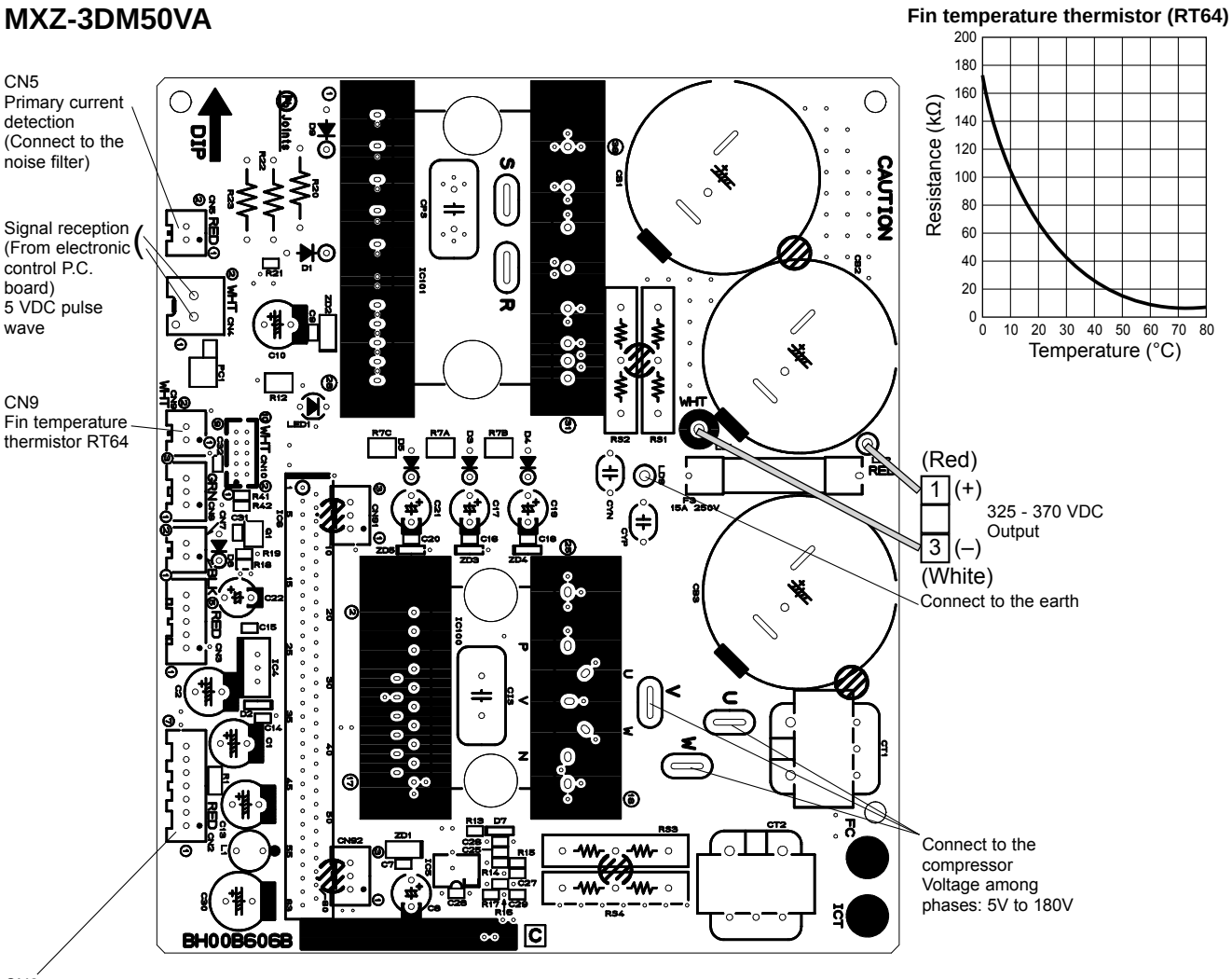
MXZ-3DM50VA





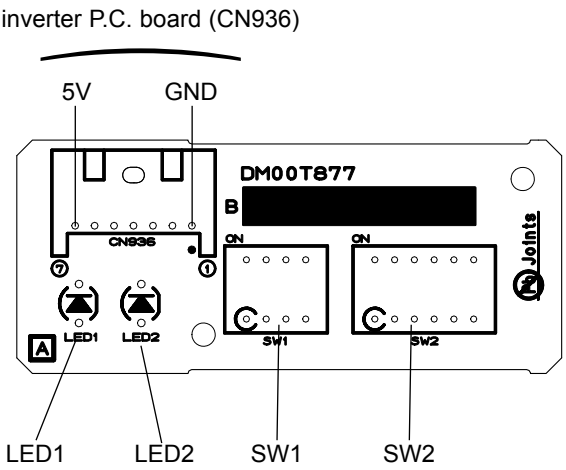


3. Outdoor power P.C. board
MXZ-3DM50VA

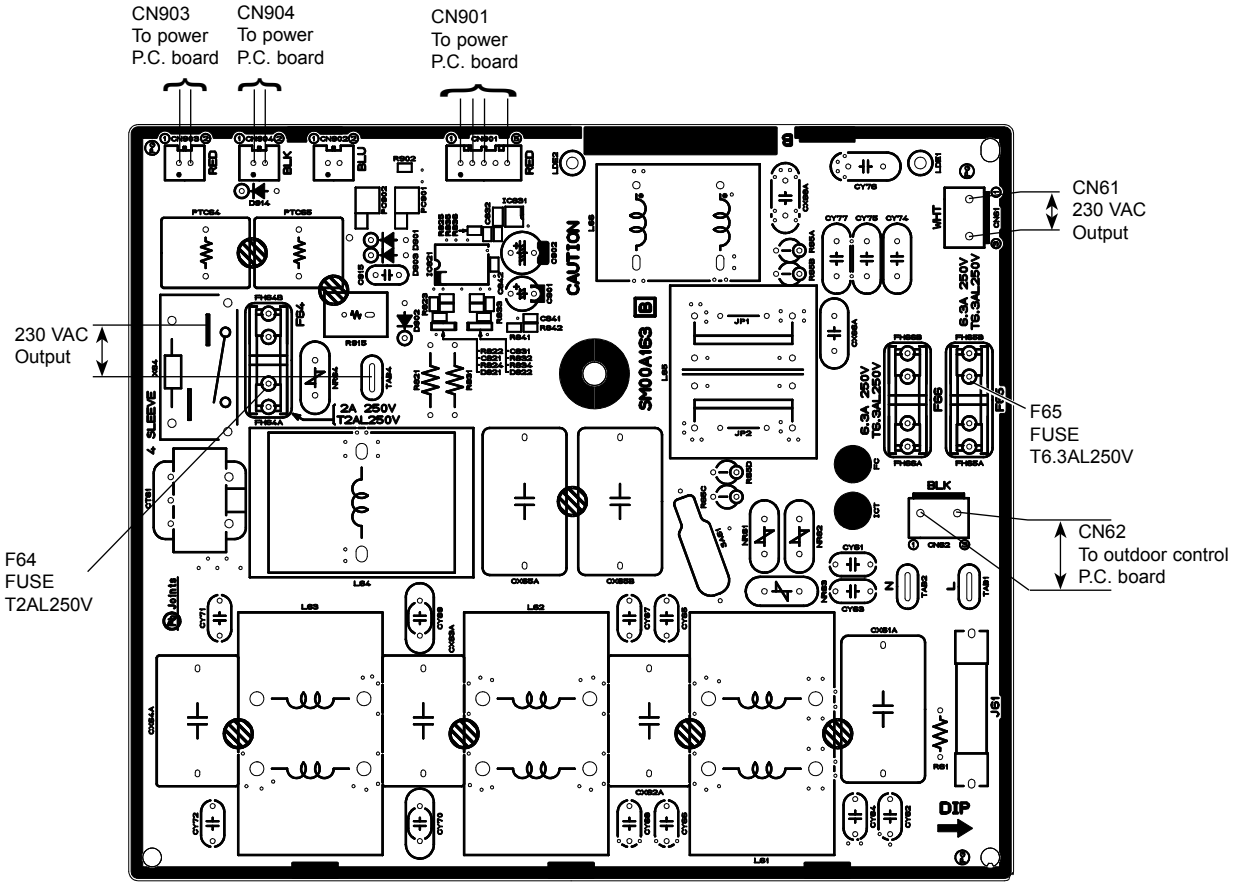


Fin temperature thermistor (RT64)

4. Outdoor display P.C. board
MXZ-2DM40VA



5. Noise filter P.C. board
MXZ-3DM50VA

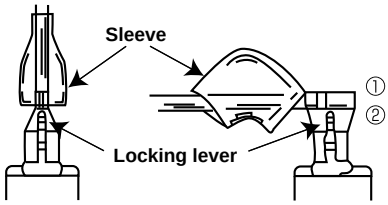


12 DISASSEMBLY INSTRUCTIONS

<"Terminal with locking mechanism" Detaching points>

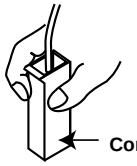
The terminal which has the locking mechanism can be detached as shown below.
There are 2 types (Refer to (1) and (2)) of the terminal with locking mechanism.
The terminal without locking mechanism can be detached by pulling it out.
Check the shape of the terminal before detaching.

(1) Slide the sleeve and check if there is a locking lever or not.



①Slide the sleeve.
②Pull the terminal while pushing the locking lever.

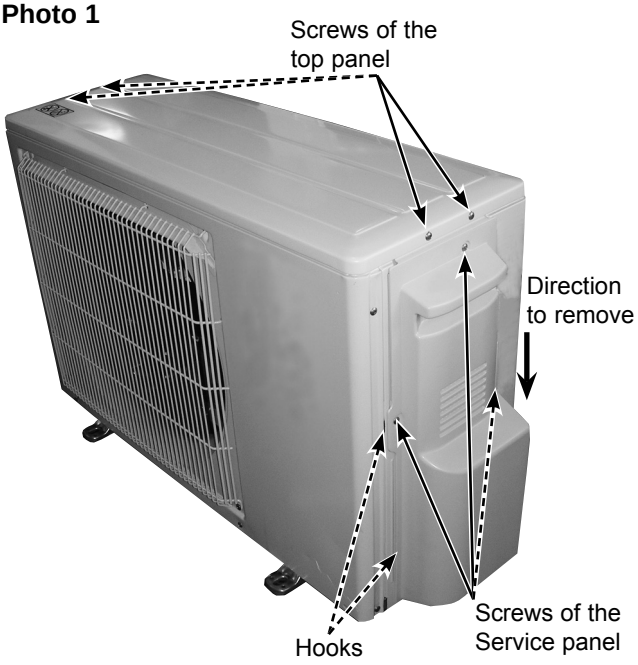
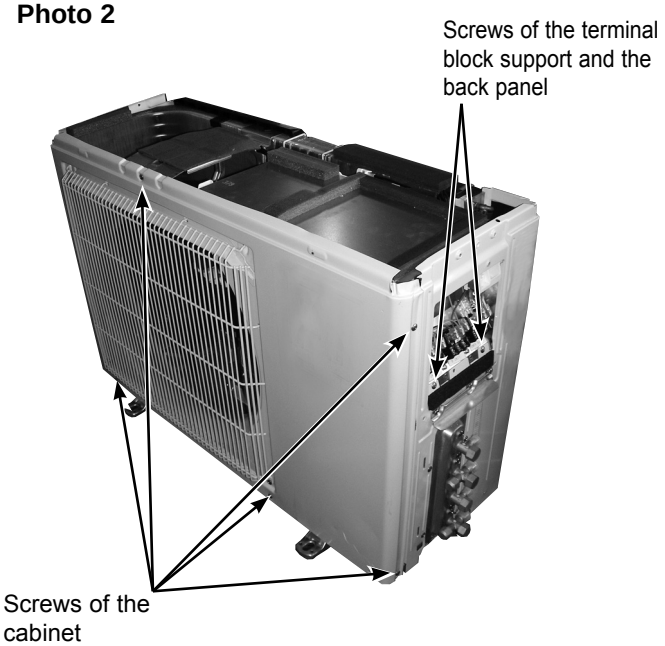
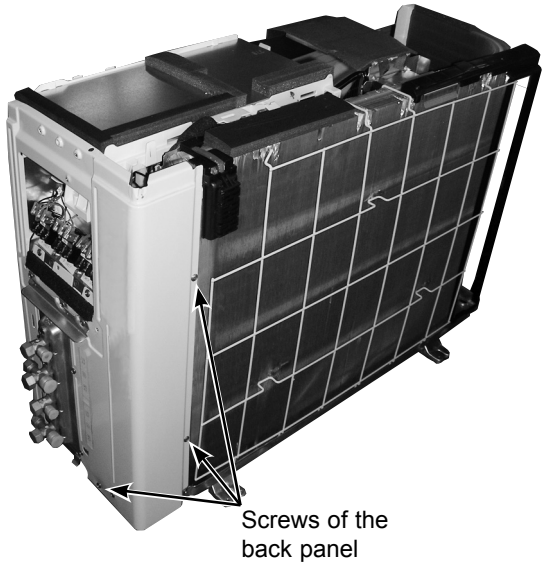
(2) The terminal with this connector has the locking mechanism.

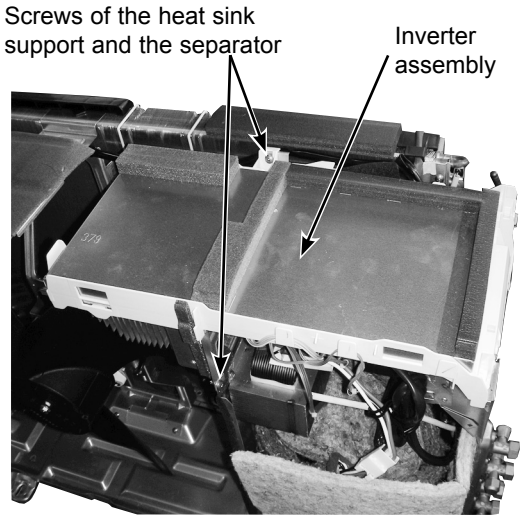
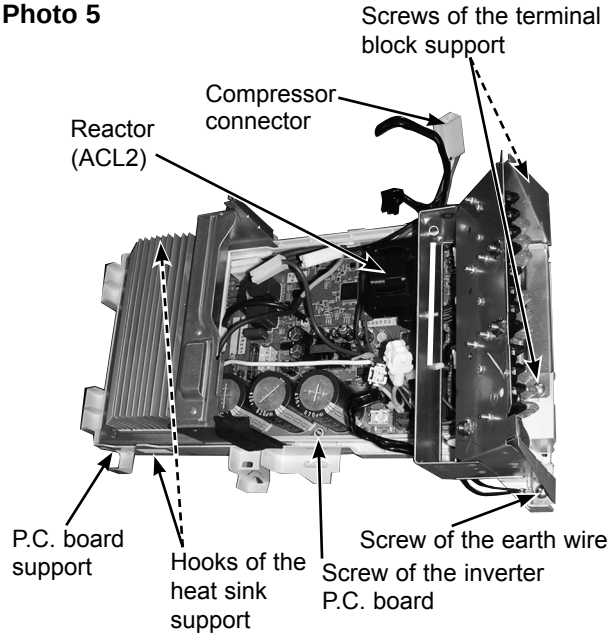
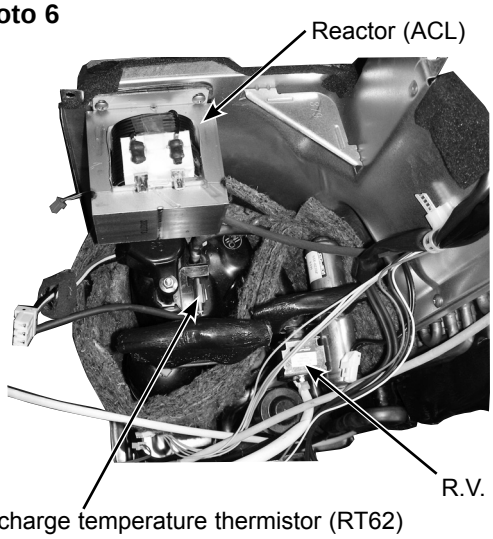


①Hold the sleeve, and pull out the terminal slowly.

12-1. MXZ-2DM40VA

NOTE: Turn OFF the power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
1. Removing the cabinet and the panels (1) Remove the screw fixing the service panel. (2) Pull down the service panel and remove it. (3) Disconnect the power supply and indoor/outdoor connecting wire. (4) Remove the screws fixing the top panel. (5) Remove the top panel. (6) Remove the screws fixing the cabinet. (7) Remove the cabinet. (8) Remove the screws fixing the back panel. (9) Remove the back panel.	**Photo 1** 
Photo 2  	**Photo 3** 

OPERATING PROCEDURE	PHOTOS
2. Removing the inverter assembly and the inverter P.C. board (1) Remove the service panel, the top panel and the cabinet (Refer to 1). (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to 1). (3) Disconnect all connectors and lead wires on the inverter P.C. board. (4) Remove the compressor connector (CNMC). (5) Remove the screws fixing the heat sink support and the separator. (6) Remove the screws of the terminal block support and the back panel. (Photo 2) (7) Remove the inverter assembly. (8) Remove the screw of the earth wire and screws of the terminal block support. (9) Remove the hooks of the heat sink support and remove the heat sink support from the P.C. board support. (10) Remove the screw fixing the inverter P.C. board and remove the inverter P.C. board from the P.C. board support.	**Photo 4** 
3. Removing the R.V. coil (1) Remove the service panel, the top panel and the cabinet (Refer to 1). (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to 1). (3) Remove the inverter assembly (Refer to 2). (4) Remove the R.V. coil.	**Photo 5** 
4. Removing the discharge temperature thermistor, defrost thermistor and outdoor heat exchanger temperature thermistor (1) Remove the service panel, the top panel and the cabinet (Refer to 1). (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to 1). (3) Remove the inverter assembly (Refer to 2). (4) Pull out the discharge temperature thermistor from its holder. (5) Pull out the defrost thermistor from its holder (Photo 7). (6) Pull out the outdoor heat exchanger temperature thermistor from its holder (Photo 7).	**Photo 6** 

OPERATING PROCEDURE

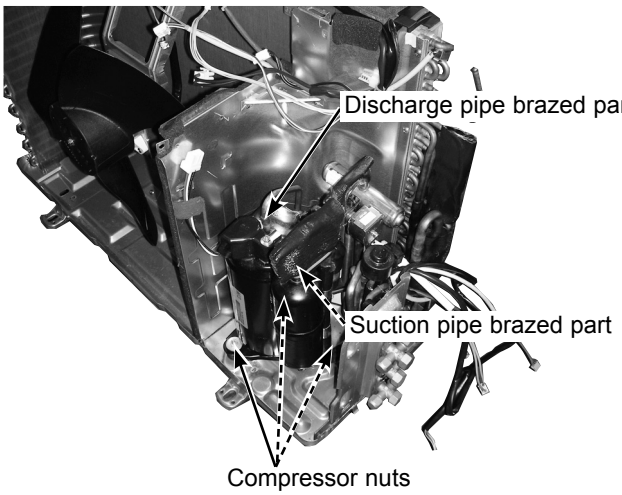
5. Removing the outdoor fan motor

(1) Remove the service panel, the top panel and the cabinet (Refer to 1).
(2) Disconnect the power supply and indoor/outdoor connecting wire.
(3) Disconnect the connectors for outdoor fan motor.
(4) Remove the propeller fan nut.
(5) Remove the propeller fan.
(6) Remove the screws fixing the fan motor.
(7) Remove the fan motor.

6. Removing the compressor and the 4-way valve

(1) Remove the service panel, the top panel and the cabinet (Refer to 1).
(2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to 1).
(3) Remove the inverter assembly (Refer to 2).
(4) Recover gas from the refrigerant circuit.
NOTE: Recover gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa).
(5) Detach the brazed part of the suction and the discharge pipe connected with compressor.
(6) Remove the nuts of compressor legs.
(7) Remove the compressor.
(8) Detach the brazed part of pipes connected with 4-way valve.

Photo 10



PHOTOS

Photo 7

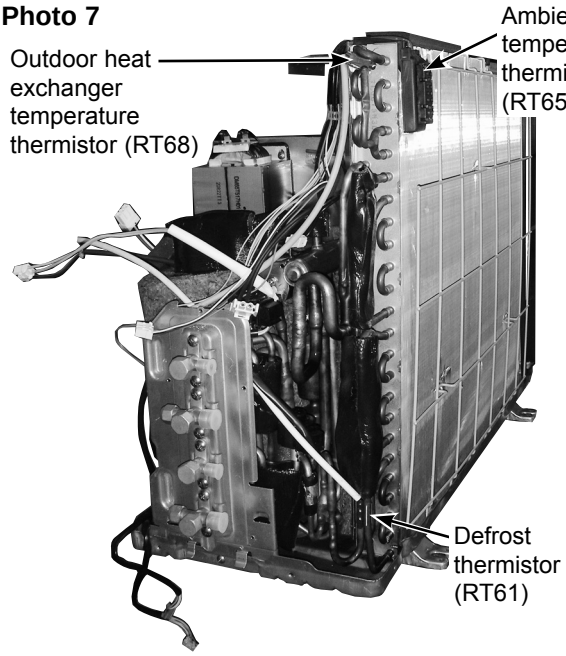


Photo 8

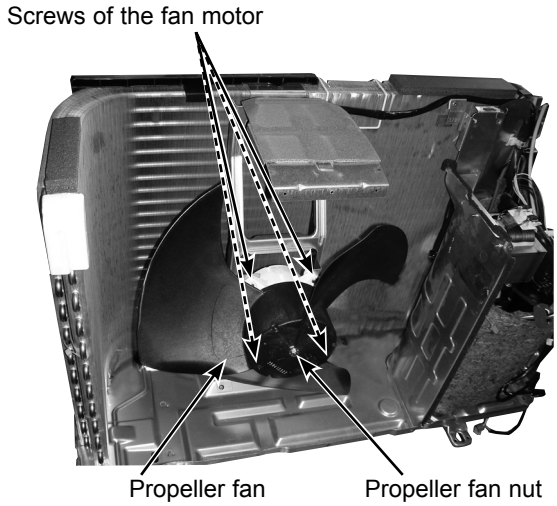
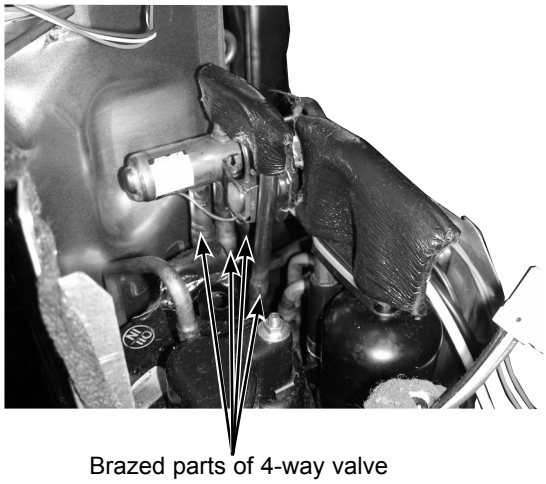
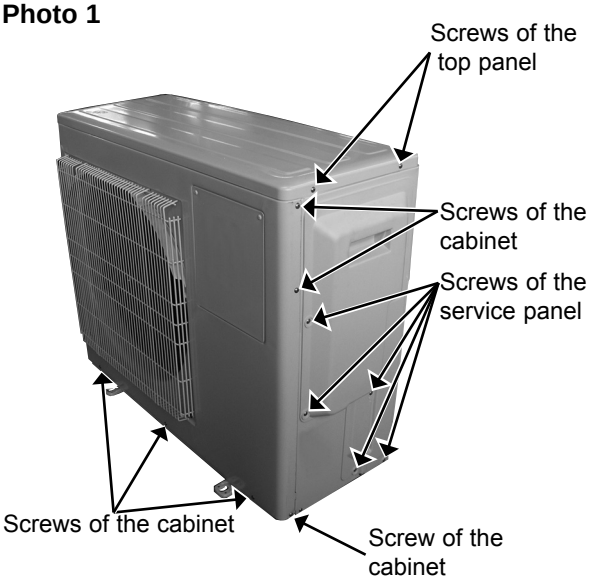
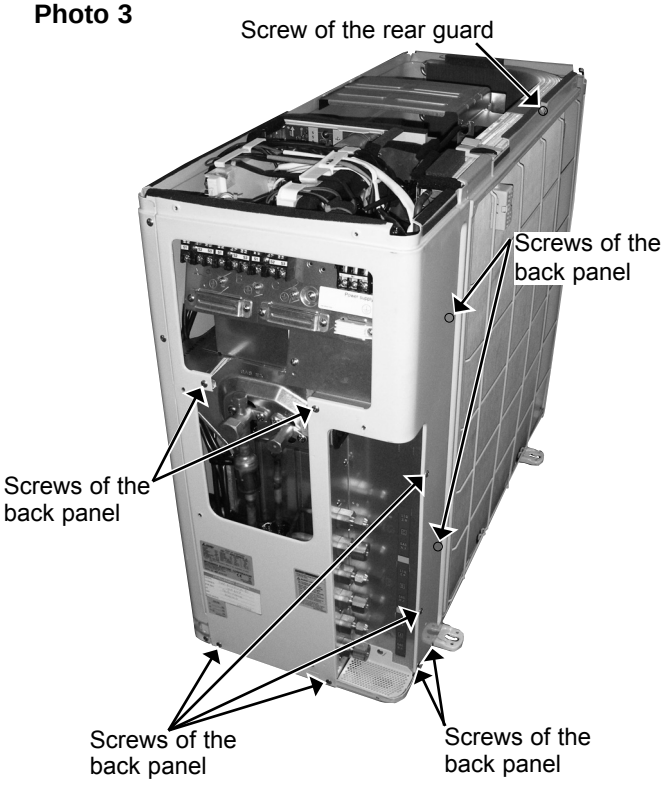
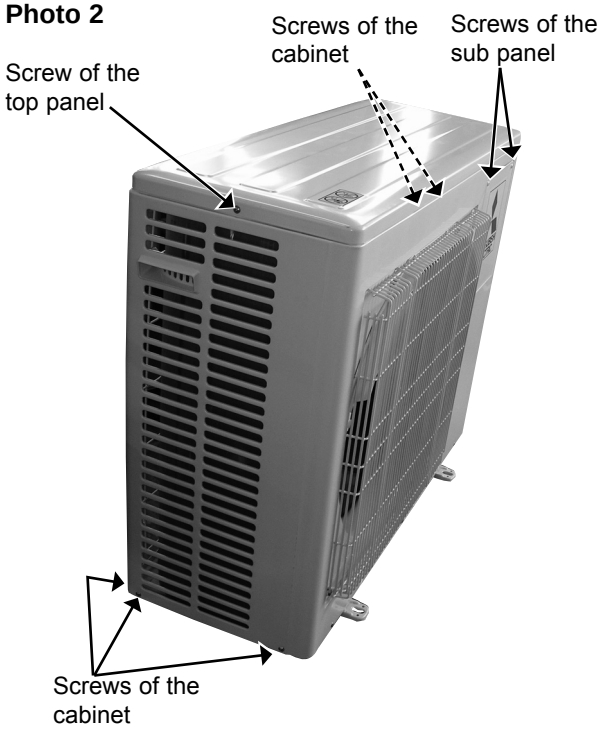


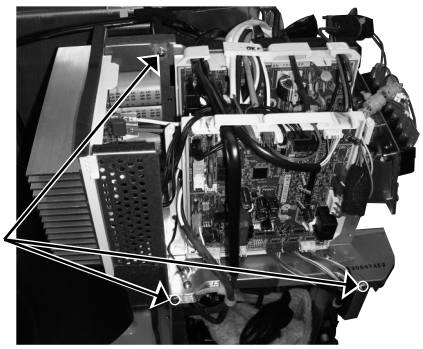
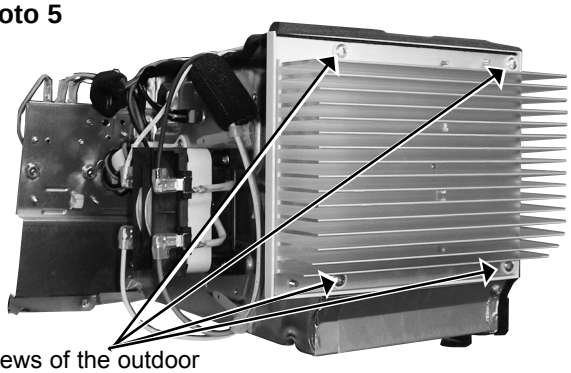
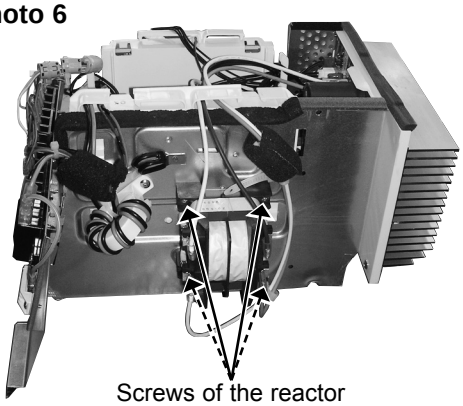
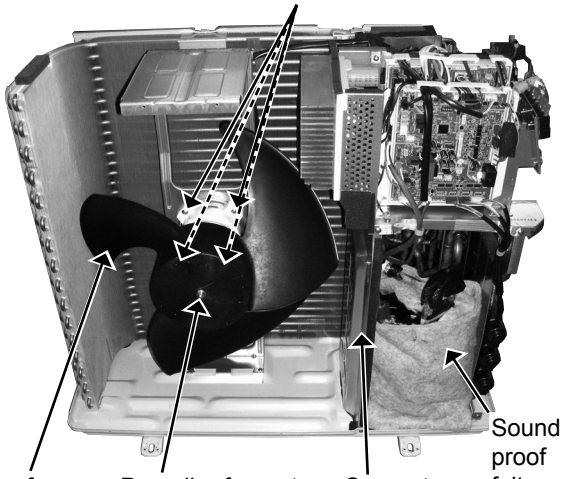
Photo 9

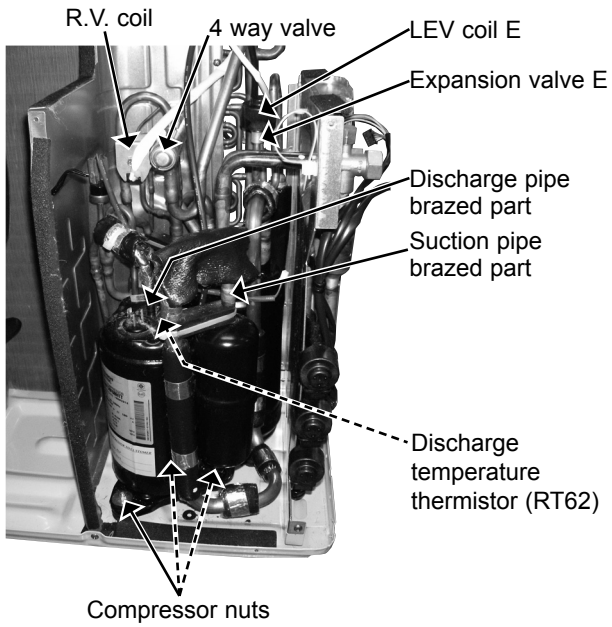
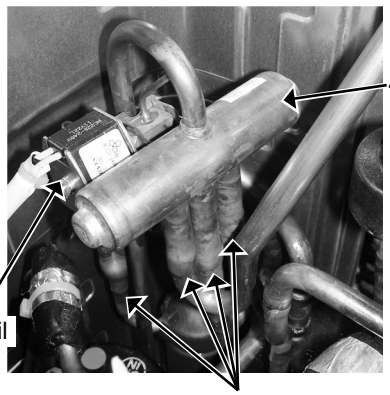
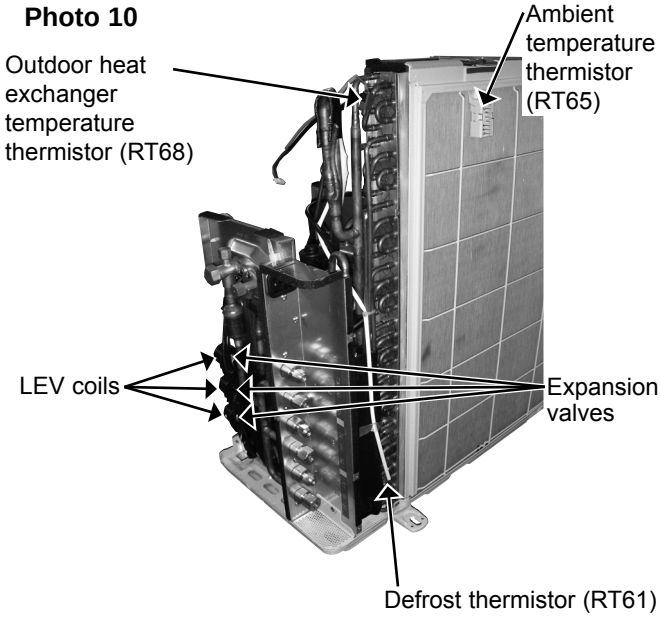


12-2. MXZ-3DM50VA

NOTE: Turn OFF the power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
1. Removing the cabinet and the panels (1) Remove the screws of the service panel, and remove the service panel. (2) Remove the screws of the top panel, and remove the top panel. (3) Disconnect the power supply and indoor/outdoor connecting wire. (3) Remove the screws of the cabinet, and remove the cabinet. (4) Remove the screws of the back panel, and remove the back panel (Photo 3).	**Photo 1** 
Photo 3  	**Photo 2** 

OPERATING PROCEDURE	PHOTOS
2. Removing the outdoor control P.C. board, the outdoor power P.C. board and the noise filter P.C. board (1) Remove the service panel (Refer to 1). (2) Remove the top panel, the cabinet, and the back panel (Refer to 1). (3) Disconnect all connectors and lead wires on the outdoor control P.C. board. (4) Remove the outdoor control P.C. board. (5) Remove the screws fixing the outdoor power P.C. board. (6) Disconnect all connectors and lead wires on the outdoor power P.C. board. (7) Pull up the power P.C. board and remove it upward. (8) Disconnect all connectors and lead wires on the noise filter P.C. board. (9) Remove the noise filter P.C. board.	**Photo 4**  Screws of the electrical parts **Photo 5**  Screws of the outdoor power P.C. board
3. Removing the reactor (1) Remove the service panel (Refer to 1). (2) Remove the top panel, cabinet, back panel, and the electrical parts (Refer to 1 and 2). (3) Disconnect the reactor lead wire from the terminal of the reactor. (4) Remove the screws of the reactor, and remove the reactor.	**Photo 6**  Screws of the reactor
4. Removing the fan motor (1) Remove the service panel, the top panel, and the cabinet (Refer to 1). (2) Disconnect the connector CN931 on the outdoor control P.C. board. (3) Remove the propeller fan. (4) Remove the fan motor.	**Photo 7** Screws of the outdoor fan motor  Propeller fan Propeller fan nut Separator Sound proof felt

OPERATING PROCEDURE	PHOTOS
5. Removing the compressor and the 4-way valve (1) Remove the service panel (Refer to 1). (2) Remove the top panel, the cabinet, and the back panel (Refer to 1). (3) Recover gas from the refrigerant circuit. **NOTE**: Recover gas from the pipes until the pressure gauge shows 0 kg/cm² (0 MPa). (4) Disconnect the compressor lead wire from terminal of the compressor (U, V, W). (5) Disconnect the outdoor control P.C. board connectors: CN661, CN665, CN681 CN711, CN712, CN791, CN792, CN793, CN795, CN931 (6) Remove the screws of the electrical parts, and remove the electrical parts (Photo 4). (7) Remove the propeller fan. (8) Remove the screws of the separator, and remove the separator (Photo 7). (9) Remove the sound proof felt (Photo 7). (10) Detach the brazed parts of the compressor suction and discharge pipes. (11) Remove the compressor nuts and remove the compressor. (12) Detach the brazed parts of 4-way valve and pipe.	**Photo 8**  **Photo 9** 
6. Removing the expansion valve (1) Remove the service panel (Refer to 1). (2) Remove the top panel, the cabinet, and the back panel (Refer to 1). (Gas recovery is not required if the unit is pumped down.) (3) Remove the electrical parts for removing LEV E (Photo 4, 8). (4) Remove the LEV coils. (5) Detach the brazed parts of expansion valves and pipes.	**Photo 10** 

MXZ-2DM40VA COOLING

Indoor units combination	Cooling capacity (kW)			Outdoor unit power consumption(kW)	Current (A)	Power factor(%)
	Unit A	Unit B	Total			
25	2.50	-	2.50 (0.90 - 2.80)	0.617 (0.147 - 0.686)	2.98	90
35	3.15	-	3.15 (0.90 - 3.15)	0.830 (0.147 - 0.830)	4.01	90
25+25	2.00	2.00	4.00 (1.10 - 4.30)	1.014 (0.275 - 1.424)	4.90	90
25+35	1.67	2.33	4.00 (1.10 - 4.40)	1.014 (0.275 - 1.460)	4.90	90

MXZ-2DM40VA HEATING

Indoor units combination	Heating capacity (kW)			Outdoor unit power consumption(kW)	Current (A)	Power factor(%)
	Unit A	Unit B	Total			
25	3.15	-	3.15 (0.90 - 4.00)	0.770 (0.136 - 1.123)	3.72	90
35	3.60	-	3.60 (0.90 - 4.30)	0.939 (0.131 - 1.235)	4.54	90
25+25	2.15	2.15	4.30 (1.00 - 4.70)	1.120 (0.176 - 1.250)	5.41	90
25+35	1.79	2.51	4.30 (1.00 - 4.80)	1.115 (0.181 - 1.282)	5.39	90

MXZ-3DM50VA COOLING

Indoor units combination	Cooling capacity (kW)				Outdoor unit power consumption(kW)	Current (A)	Power factor(%)
	Unit A	Unit B	Unit C	Total			
25	2.50	-	-	2.50 (1.90 - 3.30)	0.671 (0.571 - 0.847)	2.95	99
35	3.15	-	-	3.15 (2.00 - 4.30)	0.838 (0.585 - 1.204)	3.68	99
50	5.00	-	-	5.00 (3.60 - 5.60)	1.604 (1.110 - 1.693)	7.04	99
25+25	2.30	2.30	-	4.60 (1.90 - 5.70)	1.149 (0.537 - 1.271)	5.05	99
25+35	2.08	2.92	-	5.00 (1.90 - 6.50)	1.264 (0.537 - 2.620)	5.55	99
25+50	1.67	3.33	-	5.00 (1.90 - 6.50)	1.264 (0.547 - 2.610)	5.55	99
35+35	2.50	2.50	-	5.00 (1.90 - 6.50)	1.264 (0.537 - 2.620)	5.55	99
35+50	2.06	2.94	-	5.00 (1.90 - 6.50)	1.261 (0.557 - 2.595)	5.54	99
25+25+25	1.67	1.67	1.67	5.00 (2.70 - 6.50)	1.076 (0.666 - 2.296)	4.73	99
25+25+35	1.47	1.47	2.06	5.00 (2.70 - 6.50)	1.076 (0.666 - 2.296)	4.73	99

MXZ-3DM50VA HEATING

Indoor units combination	Heating capacity (kW)				Outdoor unit power consumption(kW)	Current (A)	Power factor(%)
	Unit A	Unit B	Unit C	Total			
25	3.15	-	-	3.15 (3.15 - 4.50)	0.956 (0.956 - 1.238)	4.20	99
35	3.60	-	-	3.60 (3.60 - 4.50)	1.108 (1.108 - 1.268)	4.87	99
50	5.40	-	-	5.40 (3.70 - 7.90)	1.462 (1.005 - 2.216)	6.42	99
25+25	2.90	2.90	-	5.80 (1.70 - 7.50)	1.309 (0.484 - 1.852)	5.75	99
25+35	2.42	3.38	-	5.80 (1.70 - 7.50)	1.309 (0.484 - 1.852)	5.75	99
25+50	1.93	3.87	-	5.80 (1.70 - 7.50)	1.259 (0.484 - 1.828)	5.53	99
35+35	2.90	2.90	-	5.80 (1.70 - 7.50)	1.309 (0.484 - 1.852)	5.75	99
35+50	2.39	3.41	-	5.80 (1.70 - 7.50)	1.182 (0.484 - 1.788)	5.19	99
25+25+25	2.00	2.00	2.00	6.00 (2.40 - 7.50)	1.250 (0.590 - 1.660)	5.49	99
25+25+35	1.76	1.76	2.47	6.00 (2.40 - 7.50)	1.250 (0.590 - 1.660)	5.49	99

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