

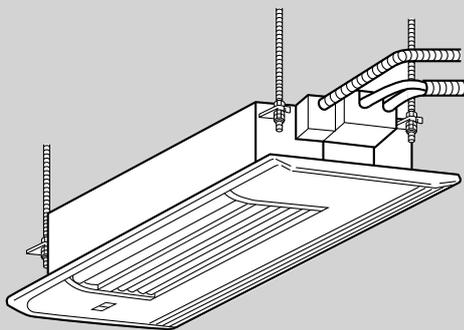
INDOOR UNIT SERVICE MANUAL

**No. OBH483
REVISED EDITION-D**

Models

MLZ-KA25VA	- E1 , E2 , E3 , E4
MLZ-KA25VA	- ER3 , ER4
MLZ-KA35VA	- E1 , E2 , E3 , E4
MLZ-KA35VA	- ER3 , ER4
MLZ-KA50VA	- E1 , E2 , E3 , E4
MLZ-KA50VA	- ER3 , ER4

Outdoor unit service manual
MXZ-A·VA Series (OB377)
MXZ-B·VA Series (OBH554)
MXZ-8B·VA Series (OCH480)
MXZ-D·VA Series (OBH626)



MLZ-KA25VA
MLZ-KA35VA
MLZ-KA50VA



CONTENTS

1. TECHNICAL CHANGES	2
2. PART NAMES AND FUNCTIONS.....	3
3. SPECIFICATION.....	4
4. NOISE CRITERIA CURVES	5
5. OUTLINES AND DIMENSIONS	6
6. WIRING DIAGRAM.....	7
7. REFRIGERANT SYSTEM DIAGRAM	11
8. SERVICE FUNCTIONS	12
9. MICROPROCESSOR CONTROL	15
10. TROUBLESHOOTING.....	21
11. DISASSEMBLY INSTRUCTIONS.....	36

PARTS CATALOG (OBB483)

NOTE:

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

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.

Revision A :

- MLZ-KA25/35/50VA-**E2** have been added.

Revision B :

- MLZ-KA25/35/50VA-**E3** have been added.

Revision C :

- MLZ-KA25/35/50VA-**ER3** have been added.

Revision D :

- MLZ-KA25/35/50VA-**E4**, **ER4** have been added.

1 TECHNICAL CHANGES

MLZ-KA25VA-E1****

MLZ-KA35VA-E1****

MLZ-KA50VA-E1****

1. New model

MLZ-KA25VA-E1**** → **MLZ-KA25VA-**E2****

MLZ-KA35VA-E1**** → **MLZ-KA35VA-**E2****

MLZ-KA50VA-E1**** → **MLZ-KA50VA-**E2****

1. Fan motor has been changed (RC0J30-KC → RC0J30-KK).
2. Control of auto fan speed has been changed. (When indoor units are connected with a multi type outdoor unit, and operated in heat mode.)
Air flow in auto fan speed is changed depending on air outlet temperature of indoor unit.
3. Electronic control P.C. board has been changed.

MLZ-KA25VA-E2**** → **MLZ-KA25VA-**E3****

MLZ-KA35VA-E2**** → **MLZ-KA35VA-**E3****

MLZ-KA50VA-E2**** → **MLZ-KA50VA-**E3****

1. Software has been changed for ERP.

MLZ-KA25VA-ER3****

MLZ-KA35VA-ER3****

MLZ-KA50VA-ER3****

1. New model

MLZ-KA25VA-E3**** → **MLZ-KA25VA-**E4****

MLZ-KA35VA-E3**** → **MLZ-KA35VA-**E4****

MLZ-KA50VA-E3**** → **MLZ-KA50VA-**E4****

MLZ-KA25VA-ER3**** → **MLZ-KA25VA-**ER4****

MLZ-KA35VA-ER3**** → **MLZ-KA35VA-**ER4****

MLZ-KA50VA-ER3**** → **MLZ-KA50VA-**ER4****

1. Remote controller has been changed.
2. Electronic control P.C. board and display receiver P.C. board have been changed.
3. Vane motor (horizontal) has been changed.

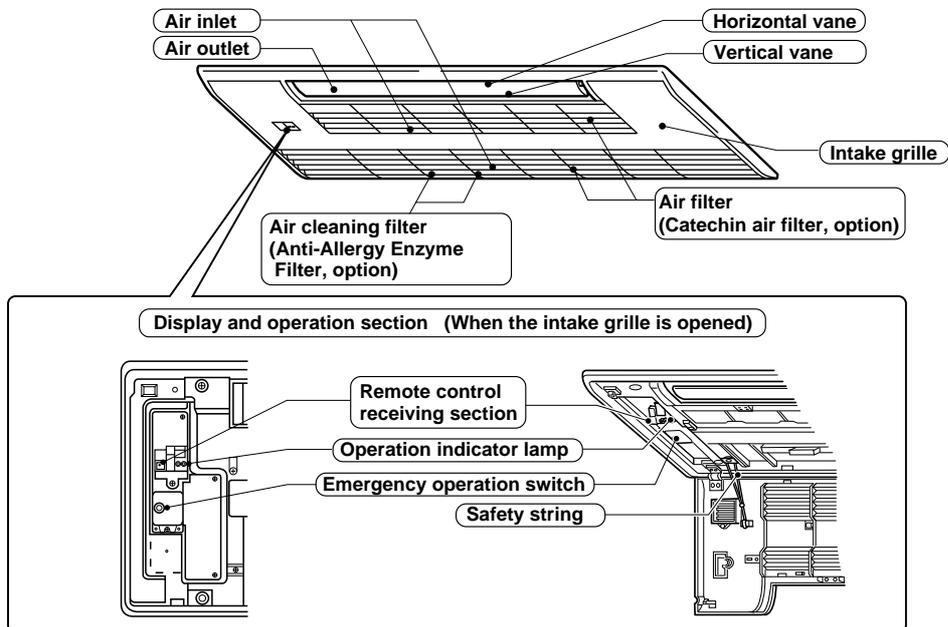
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PART NAMES AND FUNCTIONS

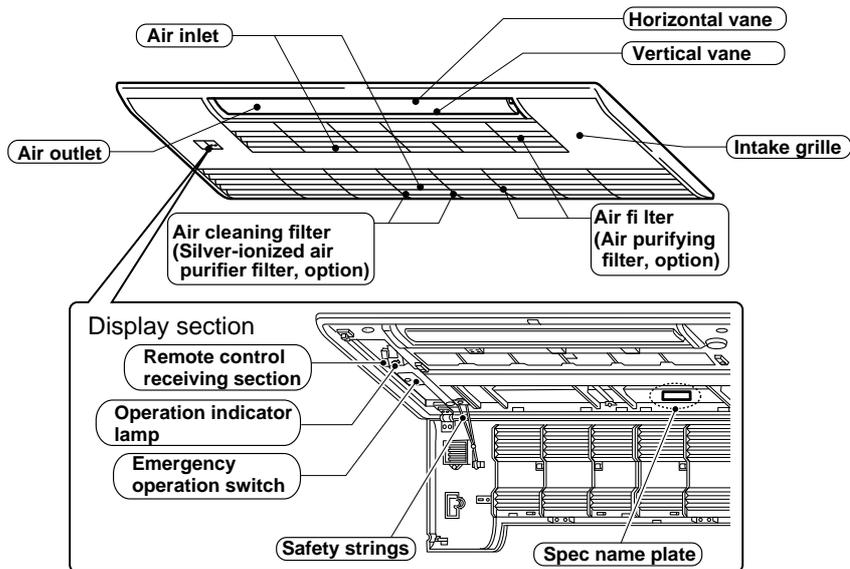
INDOOR UNIT

MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

MLZ-KA25/35/50VA- E1, E2, E3, ER3



MLZ-KA25/35/50VA- E4, ER4



ACCESSORIES

		MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA
①	Alkaline battery (AAA) for remote controller	2
②	Drain hose (with insulation)	1
③	Special washer (with cushion, 4pcs)	8
④	Installation template	1
⑤	Fixing screw for ④ M5 x 30 mm	4
⑥	Band	1
⑦	Fixing screw for ⑥ 4 x 16 mm	2
⑧	Remote controller	1
⑨	Remote controller holder	1
⑩	Fixing screw for ⑨ 3.5 x 16 mm (Black)	2

3

SPECIFICATION

Indoor model			MLZ-KA25VA		MLZ-KA35VA		MLZ-KA50VA			
Function			Cooling	Heating	Cooling	Heating	Cooling	Heating		
Power supply			Single phase 230V,50Hz		Single phase 230V,50Hz		Single phase 230V,50Hz			
Capacity	Air flow (High/Med./Low)	m ³ /h	528/ 480/ 432	552/ 492/ 420	564/ 504/ 438	594/ 528/ 462	684/ 588/ 498	708/ 618/ 528		
Electrical data	Running current *1	A	0.3		0.3		0.3			
	Power input *1	W	40		40		40			
	Auxiliary heater	A(kW)	—		—		—			
	Power factor *1	%	58		58		58			
	Fan motor current *1	A	0.3		0.3		0.3			
Fan motor	Model	[E1]	RC0J30-KC		[E1]	RC0J30-KC		[E1]	RC0J30-KC	
		[E2]	RC0J30-KK RC0J30-KT		[E2]	RC0J30-KK RC0J30-KT		[E2]	RC0J30-KK RC0J30-KT	
		[E3]								
		[E4]								
		[ER3]								
		[ER4]								
Dimensions W x H x D	mm	1,102 x 175 x 360		1,102 x 175 x 360		1,102 x 175 x 360				
Weight	kg	15		15		15				
Special remarks	Air direction		5		5		5			
	Sound level (High/Med./Low)	dB(A)	35/ 32/ 29	36/ 32/ 28	37/ 34/ 31	38/ 35/ 31	43/ 38/ 34	43/ 39/ 34		
	Fan speed (High/Med./Low)	rpm	1,120/1,030/950	1,160/ 1,060/ 930	1,180/ 1,080/ 960	1,230/ 1,120/ 1,000	1,380/1,220/1,070	1,420/ 1,270/ 1,120		
	Fan speed regulator		3		3		3			
Remote controller model		KM152 (MLZ-KA-VA-[E4], [ER4])/KM07E (Other models)								

NOTE: Test conditions are based on ISO 5151.

Cooling: Indoor Dry-bulb temperature 27°C Wet-bulb temperature 19°C

Outdoor Dry-bulb temperature 35°C Wet-bulb temperature 24°C

Heating: Indoor Dry-bulb temperature 20°C

Outdoor Dry-bulb temperature 7°C Wet-bulb temperature 6°C

Refrigerant piping length (one way): 5m

*1 Measured under rated operating frequency.

Specifications and rated conditions of main electric parts

Item	Model	MLZ-KA25VA	MLZ-KA35VA	MLZ-KA50VA
Fuse	(F11)	T3.15AL 250V		
Horizontal vane motor	(MV1)	12V 300Ω		
Vertical vane motor	(MV2)	12V 300Ω		
Varistor	(NR11)	ERZV14D471		
DRAIN PUMP	(DP)	230V 6.4W		
FLOAT SENSOR	(FS)	DC 12V		

4

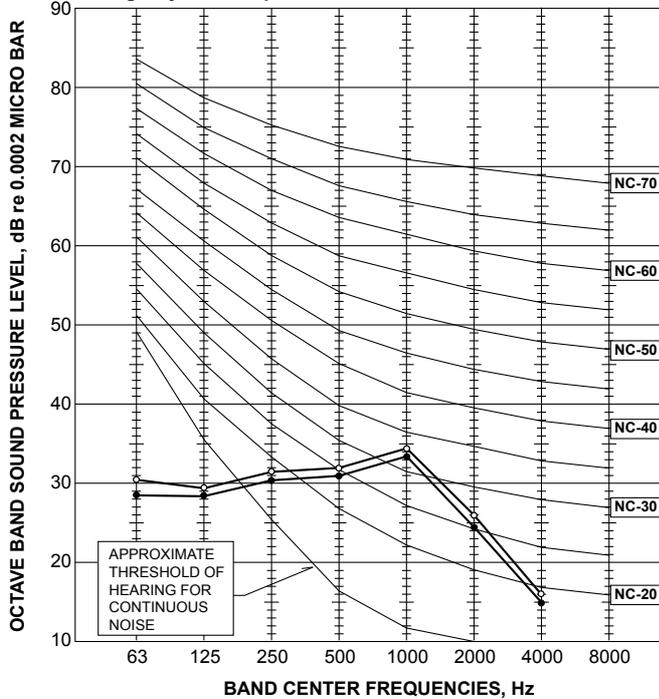
NOISE CRITERIA CURVES

MLZ-KA25VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	COOLING	35	●—●
	HEATING	36	○—○

Test conditions,

Cooling: Dry-bulb temperature 27°C Wet-bulb temperature 19°C
 Heating: Dry-bulb temperature 20°C

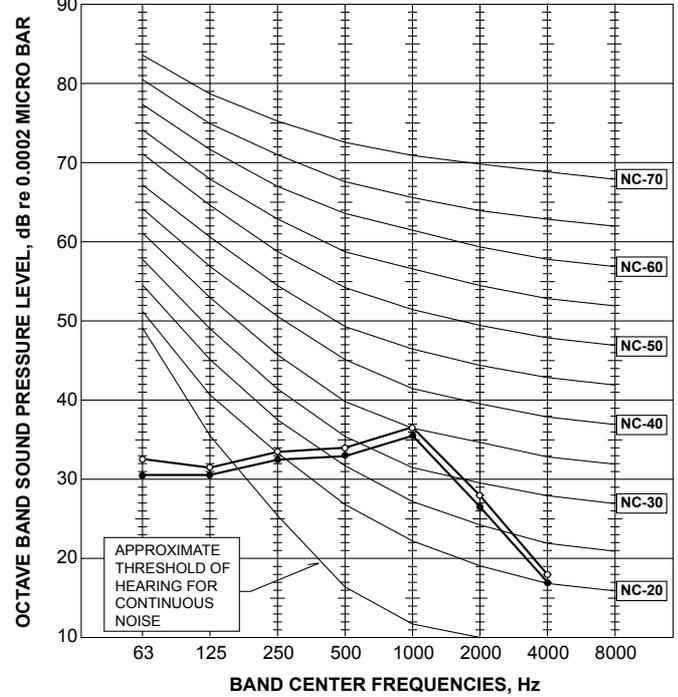


MLZ-KA35VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	COOLING	37	●—●
	HEATING	38	○—○

Test conditions,

Cooling: Dry-bulb temperature 27°C Wet-bulb temperature 19°C
 Heating: Dry-bulb temperature 20°C

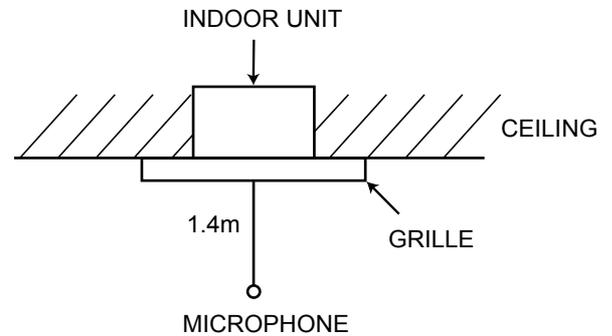
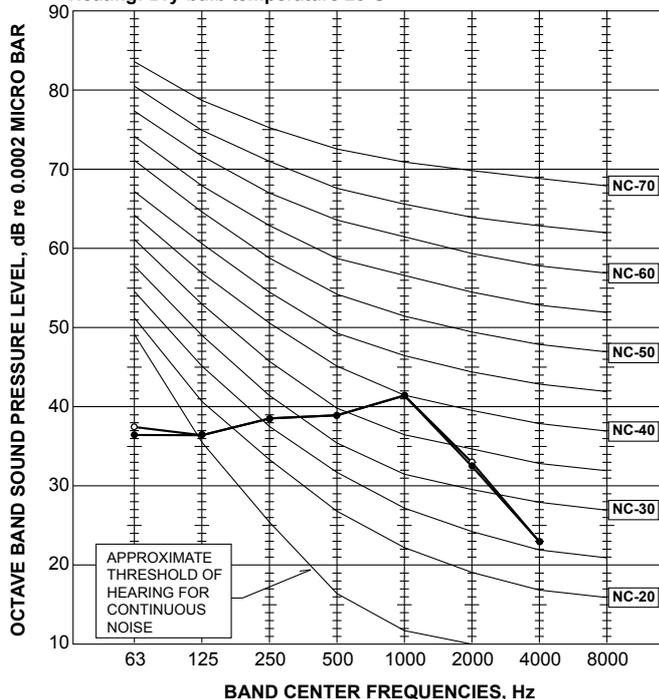


MLZ-KA50VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	COOLING	43	●—●
	HEATING	43	○—○

Test conditions,

Cooling: Dry-bulb temperature 27°C Wet-bulb temperature 19°C
 Heating: Dry-bulb temperature 20°C



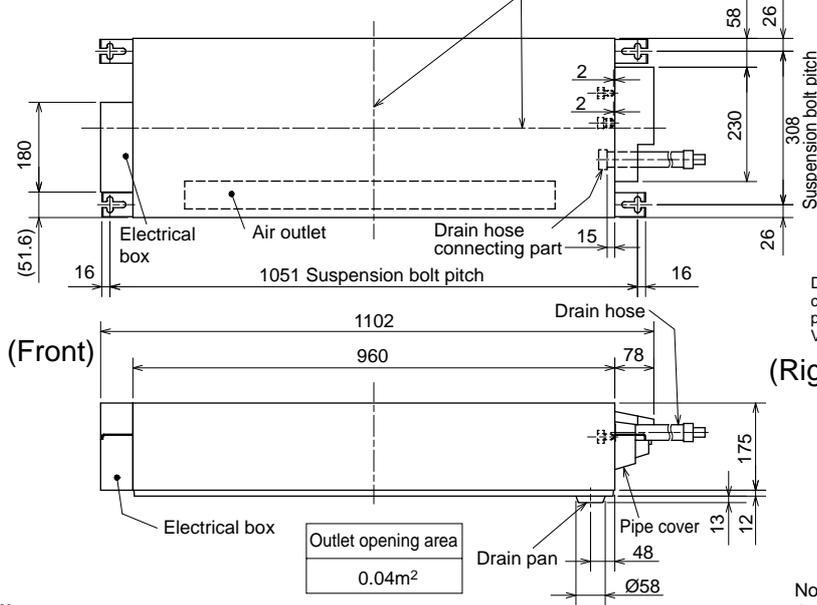
MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

Unit : mm

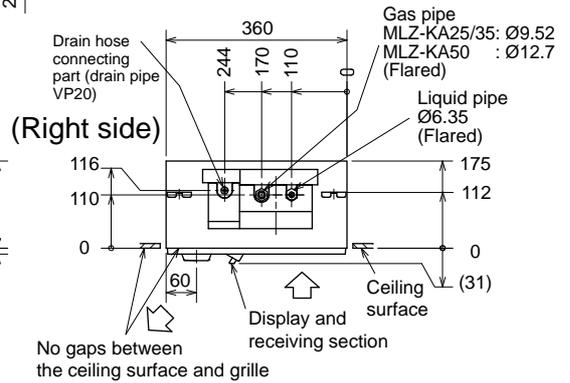
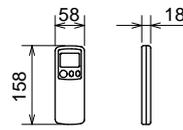
INDOOR UNIT

(Top)

Center of ceiling opening, suspension bolt pitch and grille are located in one position.

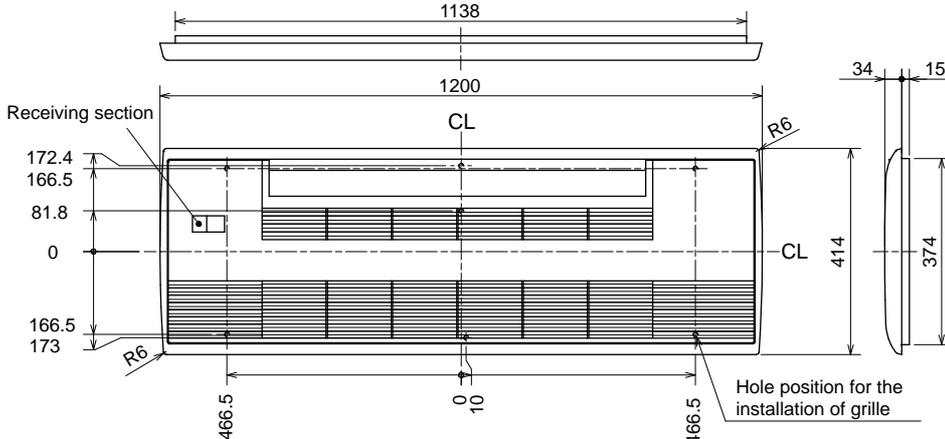


Wireless remote controller



Grille

[MLP-443PW: MLZ-KA-VA- E4, ER4 /MLP-440W: Other models]

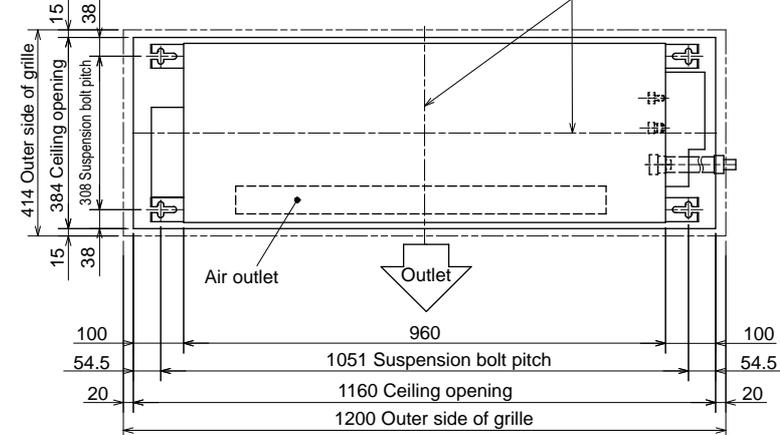


Refrigerant Pipe	Liquid	Ø6.35
	Gas	Ø9.52 (MLZ-KA25/35) Ø12.7 (MLZ-KA50)
Length of drain hose		480
Drain pipe		VP20

NOTE: Drain hose can be used by cutting it.

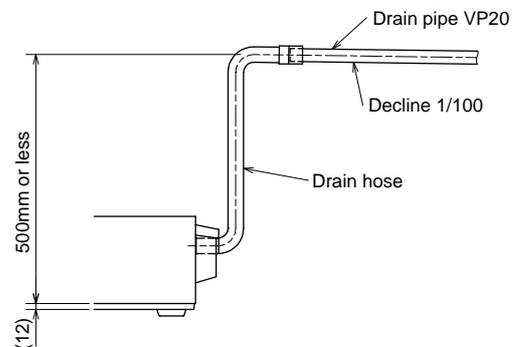
(Top)

Center of ceiling opening, suspension bolt pitch and grille are located in one position.

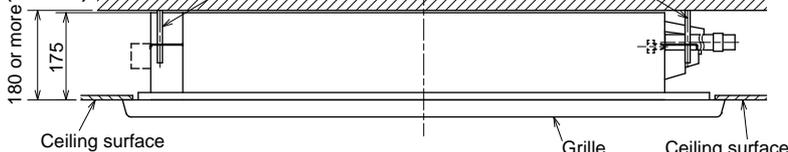


How to connect drain pipe on indoor unit by lifting drain hose.

* Drain hose can be used by cutting it.



(Front)

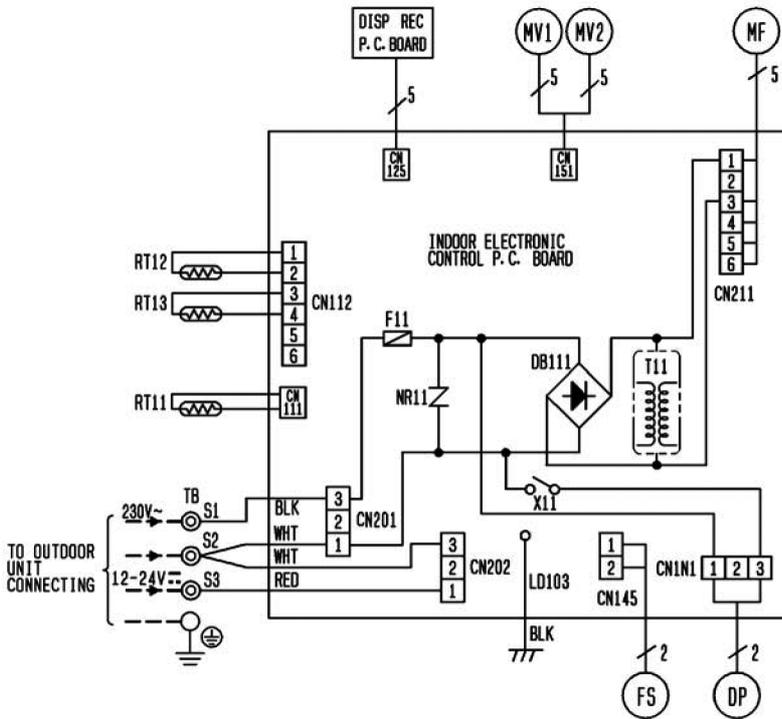


OBH483D

INDOOR UNIT

MLZ-KA25VA- E1

MLZ-KA35VA- E1



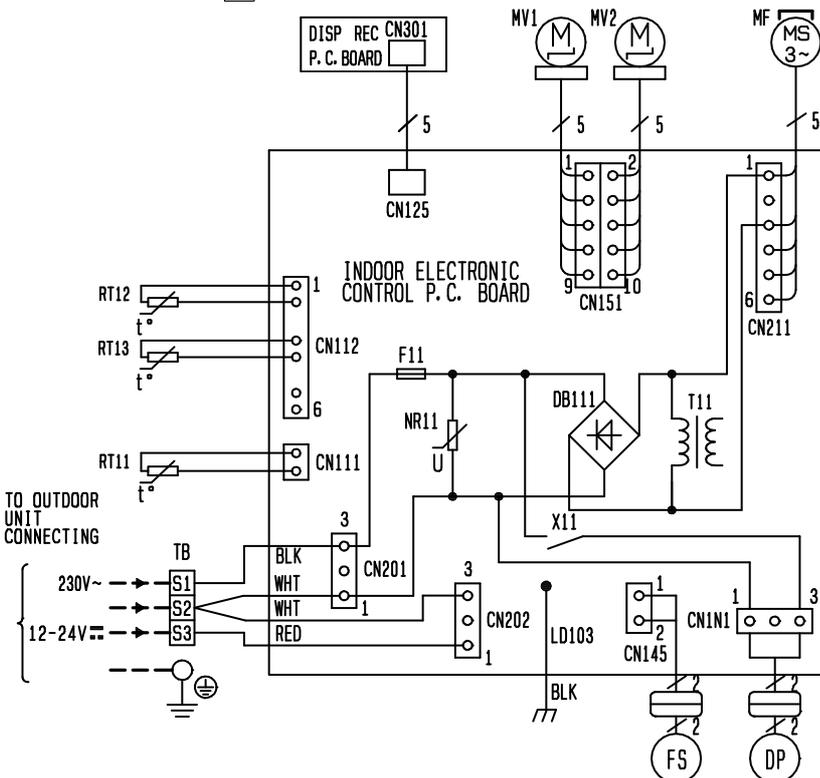
SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	DB111	DIODE STACK
FS	FLOAT SENSOR	NR11	VARISTOR
F11	FUSE (T3. 15AL250V)	T11	TRANSFORMER
X11	RELAY		

NOTES: 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only. (For field wiring)
 3. Symbols below indicate.

⊙ : Terminal block
 □ : Connector

MLZ-KA25VA- E2

MLZ-KA35VA- E2

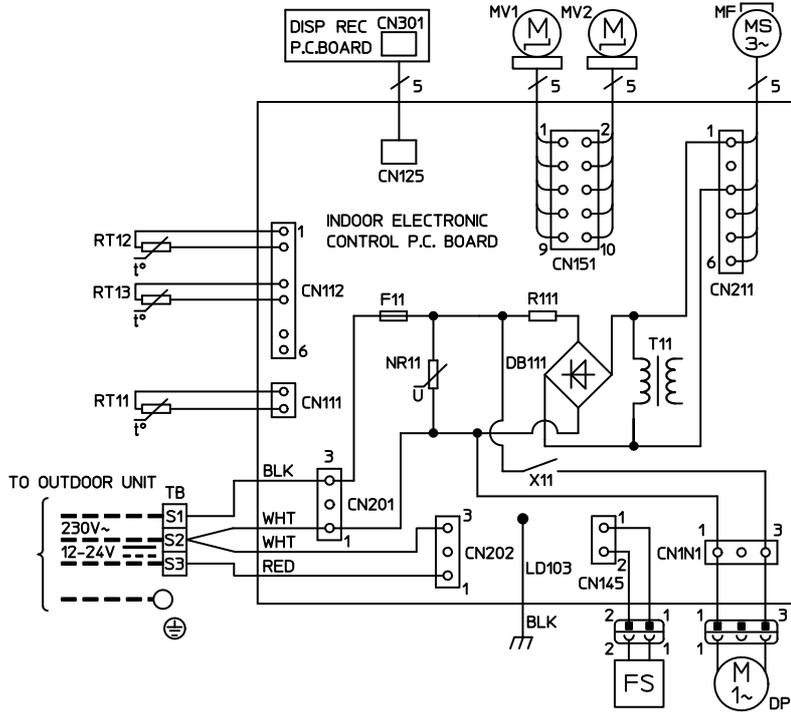


SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	DB111	DIODE STACK
FS	FLOAT SENSOR	NR11	VARISTOR
F11	FUSE (T3. 15AL250V)	T11	TRANSFORMER
X11	RELAY		

NOTES:
 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only. (For field wiring)
 3. Symbols below indicate.

⊙ : Terminal block
 □ : Connector

MLZ-KA25VA- E3, ER3
MLZ-KA35VA- E3, ER3

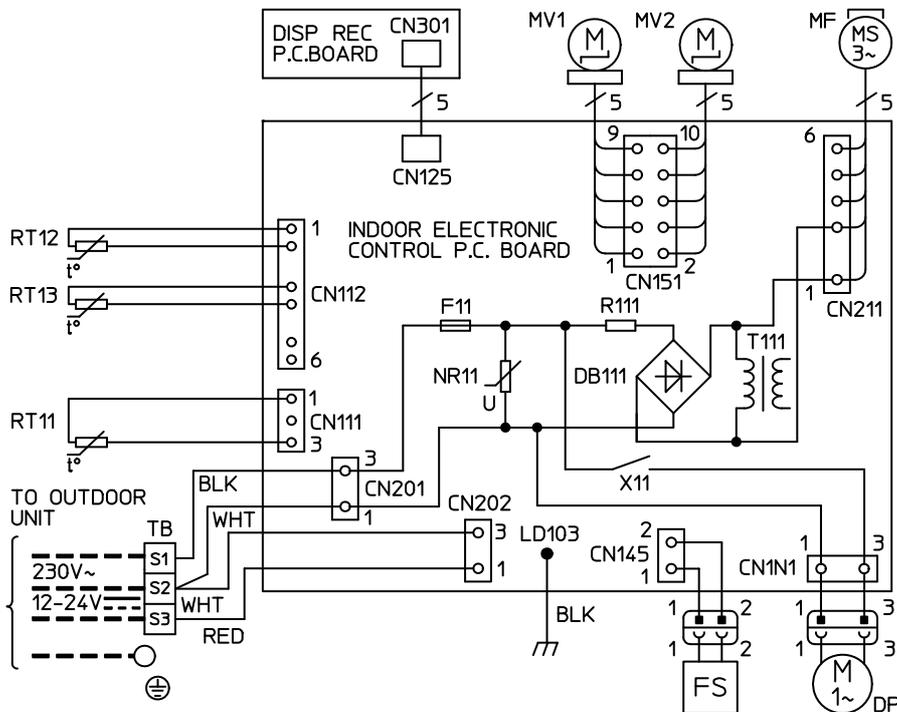


SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR(MAIN)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR(SUB)
DP	DRAIN PUMP	DB111	DIODE STACK
FS	FLOAT SENSOR	NR11	VARISTOR
F11	FUSE (T3.15AL250V)	T11	TRANSFORMER
X11	RELAY	R111	RESISTOR

- NOTES:
 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only.
 (For field wiring)
 3. Symbols below indicate.

□ : Terminal block
 ○ ○ : Connector

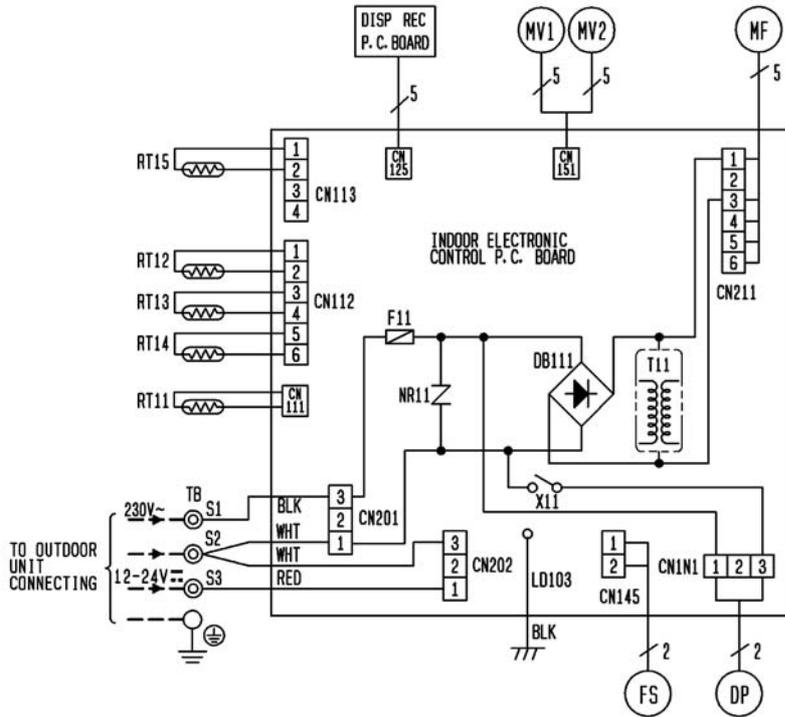
MLZ-KA25VA- E4, ER4
MLZ-KA35VA- E4, ER4



SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	DB111	DIODE STACK
FS	FLOAT SENSOR	NR11	VARISTOR
F11	FUSE (T3.15AL250V)	R111	RESISTOR
T111	TRANSFORMER		
X11	RELAY		

- NOTES:
 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only.
 (For field wiring)
 3. Symbols below indicate.
 □ : Terminal block
 ○ ○ : Connector

MLZ-KA50VA- E1

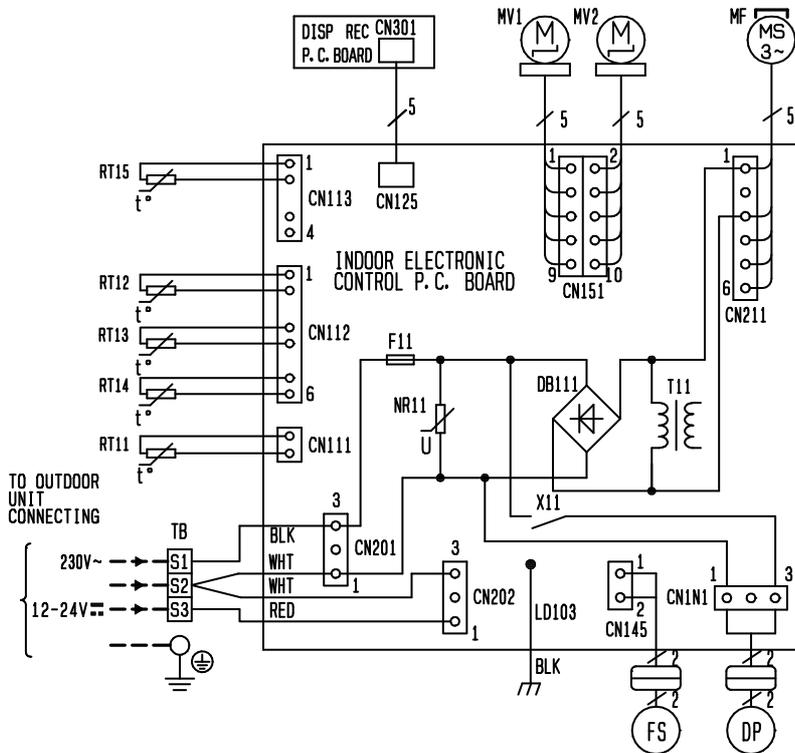


SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN1)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	RT14	COIL TEMP. THERMISTOR (MAIN2)
FS	FLOAT SENSOR	RT15	COIL TEMP. THERMISTOR (MAIN3)
F11	FUSE (T3.15A/250V)	DB11	DIODE STACK
T11	TRANSFORMER	NR11	VARISTOR
X11	RELAY		

- NOTES: 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only. (For field wiring)
 3. Symbols below indicate.

⊙ : Terminal block
 □ : Connector

MLZ-KA50VA- E2

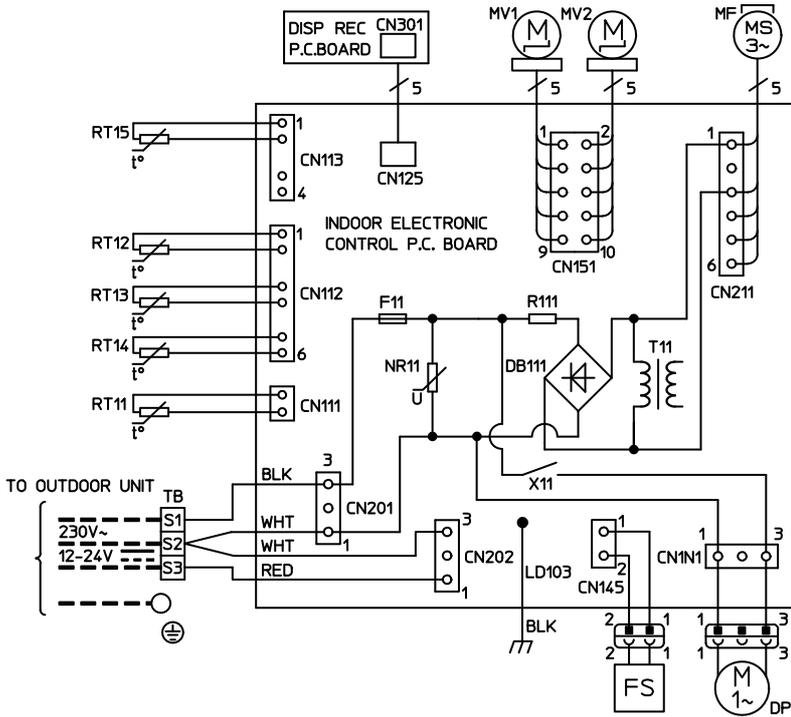


SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN1)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	RT14	COIL TEMP. THERMISTOR (MAIN2)
FS	FLOAT SENSOR	RT15	COIL TEMP. THERMISTOR (MAIN3)
F11	FUSE (T3.15A/250V)	DB11	DIODE STACK
T11	TRANSFORMER	NR11	VARISTOR
X11	RELAY		

- NOTES: 1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
 2. Use copper conductors only. (For field wiring)
 3. Symbols below indicate.

□ : Terminal block
 □ : Connector

MLZ-KA50VA- E3, ER3



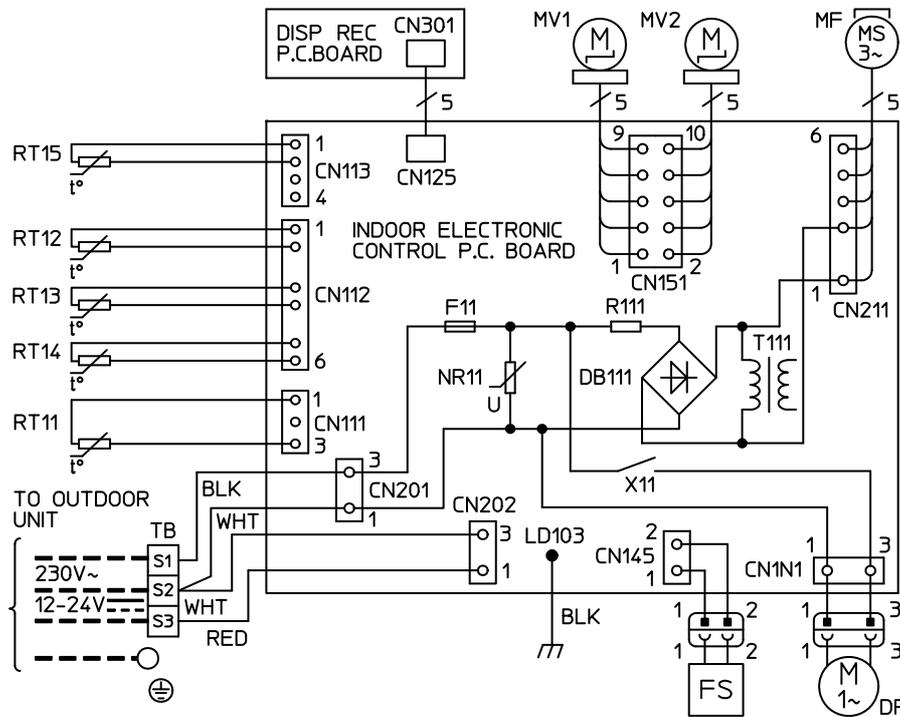
SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR(MAIN1)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR(SUB)
DP	DRAIN PUMP	RT14	COIL TEMP. THERMISTOR(MAIN2)
FS	FLOAT SENSOR	RT15	COIL TEMP. THERMISTOR(MAIN3)
F11	FUSE (T3.15AL250V)	DB11	DIODE STACK
T11	TRANSFORMER	NR11	VARISTOR
X11	RELAY	R111	RESISTOR

NOTES:

1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.

- : Terminal block
- : Connector

MLZ-KA50VA- E4, ER4



SYMBOL	NAME	SYMBOL	NAME
MF	FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MV1	HORIZONTAL VANE MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN1)
MV2	VERTICAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
DP	DRAIN PUMP	RT14	COIL TEMP. THERMISTOR (MAIN2)
FS	FLOAT SENSOR	RT15	COIL TEMP. THERMISTOR (MAIN3)
F11	FUSE (T3.15AL250V)	DB11	DIODE STACK
T111	TRANSFORMER	NR11	VARISTOR
X11	RELAY	R111	RESISTOR

NOTES :

1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.

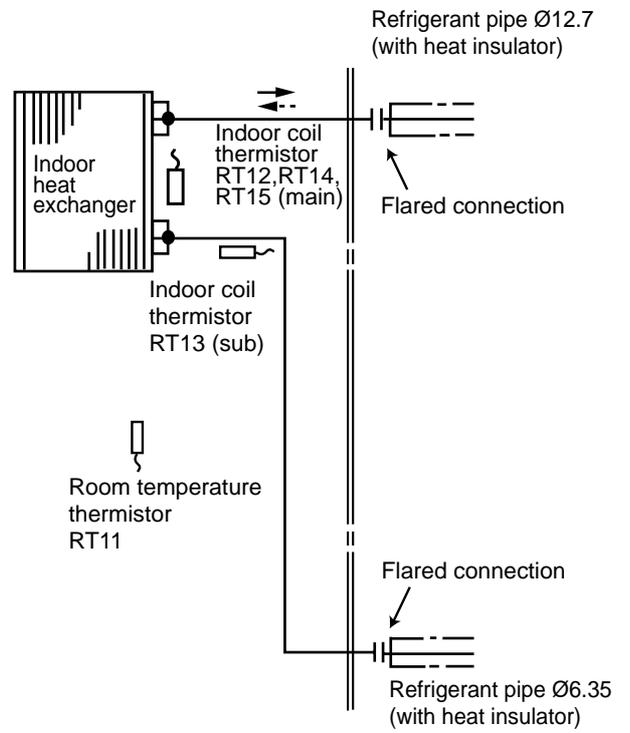
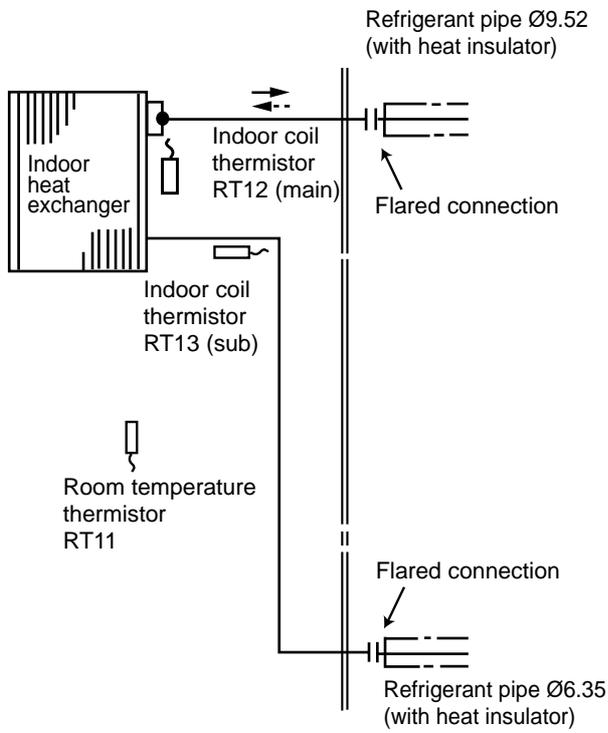
- : Terminal block
- : Connector

INDOOR UNIT

MLZ-KA25VA
MLZ-KA35VA

MLZ-KA50VA

Unit : mm



→ Refrigerant flow in cooling
 --→ Refrigerant flow in heating

MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

8-1. TIMER SHORT MODE

- For service, the following set time can be shortened by bridging the JPG and JPS (**MLZ-KA-VA-[E1, E2, E3, ER3]**) / timer short mode point (**MLZ-KA-VA-[E4, ER4]**) on the electronic control P.C. board. (Refer to 10-7.)
- The set time for the ON/OFF timer can be reduced to 1 second for each minute.
- After the breaker is turned on, the time for starting the compressor, which normally takes 3 minutes, can be reduced to 3 seconds. Restarting the compressor, which takes 3 minutes, cannot be reduced.

8-2. P.C. BOARD MODIFICATION FOR INDIVIDUAL OPERATION

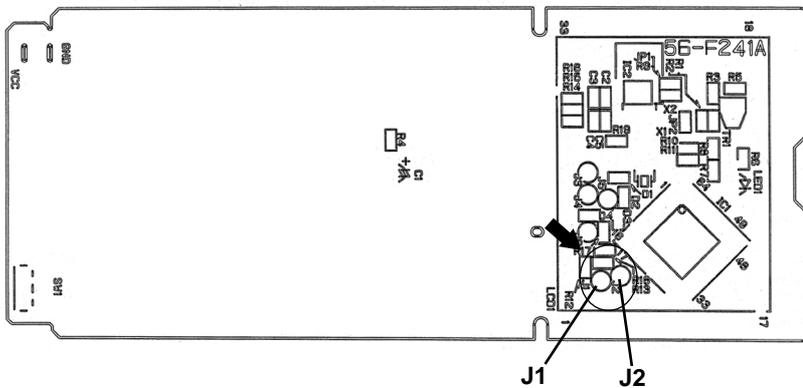
A maximum of 4 indoor units with wireless remote controllers can be used in a room.

In this case, to operate each indoor unit individually by each remote controller, both the P.C. boards of remote controller and the electronic control P.C. boards must be modified according to the number of the indoor unit.

How to modify the remote controller P.C. board

Remove batteries before modification.

The board has a print as shown below:



NOTE: For modification, take out the batteries and press the STOP/OPERATE (OFF/ON) (**MLZ-KA-VA-[E4, ER4]**)/ OPERATE/STOP (ON/OFF) (**MLZ-KA-VA-[E1, E2, E3, ER3]**) button 2 or 3 times at first. After modification, put back the batteries then press the RESET button.

The P.C. board has the print "J1" and "J2". Solder "J1" and "J2" according to the number of indoor unit as shown in Table 1. After modification, press the RESET button.

Table 1

	1 unit operation	2 units operation	3 units operation	4 units operation
No. 1 unit	No modification	Same as at left	Same as at left	Same as at left
No. 2 unit	–	Solder J1	Same as at left	Same as at left
No. 3 unit	–	–	Solder J2	Same as at left
No. 4 unit	–	–	–	Solder both J1 and J2

How to modify the electronic control P.C. board

Turn OFF the power supply before modification. Cut off "JR05" and "JR06" on the electronic control P.C. board according to the number of indoor unit as shown in Table 2. (Refer to 10-7.)

Table 2

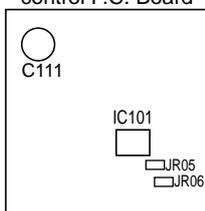
	JR05	JR06
No. 1 unit	No modification	No modification
No. 2 unit	Cut off JR05	No modification
No. 3 unit	No modification	Cut off JR06
No. 4 unit	Cut off JR05	Cut off JR06

NOTE: After modification, turn ON the power supply and with the remote controller headed towards the indoor unit, press the STOP/OPERATE (OFF/ON) (**MLZ-KA-VA-[E4, ER4]**)/OPERATE/STOP (ON/OFF) (**MLZ-KA-VA-[E1, E2, E3, ER3]**) button. If 1 or 2 beeps is heard from the indoor unit, modification is completed correctly.

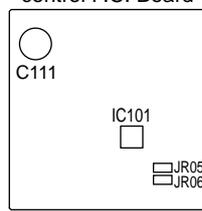
MLZ-KA-VA-[E1, E2, E3, ER3]

MLZ-KA-VA-[E4, ER4]

Indoor electronic control P.C. Board



Indoor electronic control P.C. Board



8-3. AUTO RESTART FUNCTION

When the indoor unit is controlled with the remote controller, the operation mode, the set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. "AUTO RESTART FUNCTION" automatically starts operation in the same mode just before the shutoff of the main power.

Operation

- ① If the main power has been cut, the operation settings remain.
- ② After the power is restored, the unit restarts automatically according to the memory.
(However, it takes at least 3 minutes for the compressor to start running.)

How to disable "AUTO RESTART FUNCTION"

- ① Turn off the main power for the unit.

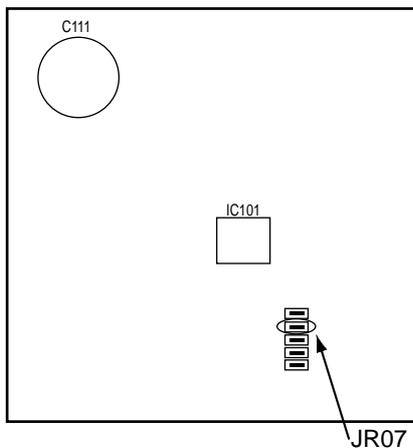
MLZ-KA-VA-E1, E2, E3, ER3

- ② Solder the Jumper wire to JR07 on the indoor electronic control P.C. board. (Refer to 10-7.)

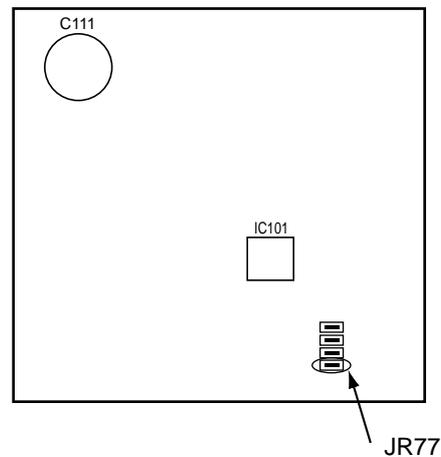
MLZ-KA-VA-E4, ER4

- ② Cut the jumper wire to JR77 on the indoor electronic control P.C. board. (Refer to 10-7.)

MLZ-KA-VA-E1, E2, E3, ER3



MLZ-KA-VA-E4, ER4



NOTE:

- The operation settings are memorized when 10 seconds has passed after the indoor unit was operated with the remote controller.
- If main power is turned OFF or a power failure occurs while AUTO START/STOP timer is active, the timer setting is cancelled.
- If the unit has been off with the remote controller before power failure, the auto restart function does not work as the power button of the remote controller is off.
- To prevent breaker tripping due to the rush of starting current, systematize other home appliance not to turn on at the same time.
- When some air conditioners are connected to the same supply system, if they are operated before power failure, the starting current of all the compressors may flow simultaneously at restart. Therefore, the special counter-measures are required to prevent the main voltage-drop or the rush of the starting current by adding to the system that allows the units to start one by one.

8-4. P.C. BOARD MODIFICATION FOR CHANGING AIRFLOW VOLUME

Change dip switch SW3 setting according to the height of ceiling.

Dip switch SW3	Normal	Increase airflow volume
Ceiling height	2.4 m or below	above 2.4 m and 2.7 m or below

NOTE: When the ceiling is above 2.7 m, airflow volume may be insufficient even with the Dip switch (SW3) set to "increase airflow".

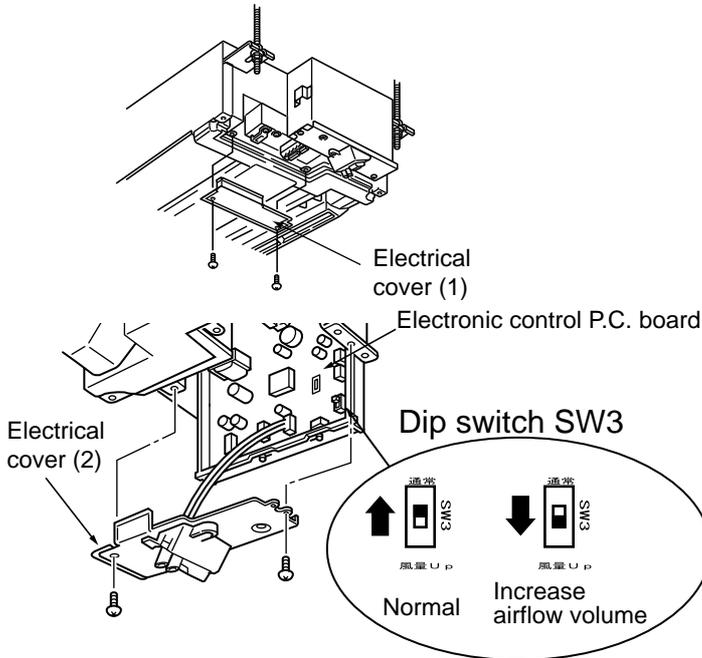
How to change Dip switch (SW3) setting (Default setting is Normal)

1. Turn OFF the power supply for the air conditioner.
2. Remove electrical cover (1) and (2).
3. Slide out electronic control P.C. board, and slide Dip switch (SW3) up or down (**MLZ-KA-VA-E1, E2, E3, ER3**) / to the left or right (**MLZ-KA-VA-E4, ER4**).
4. Put electronic control P.C. board back to the original position, and install electrical cover (1) and (2).

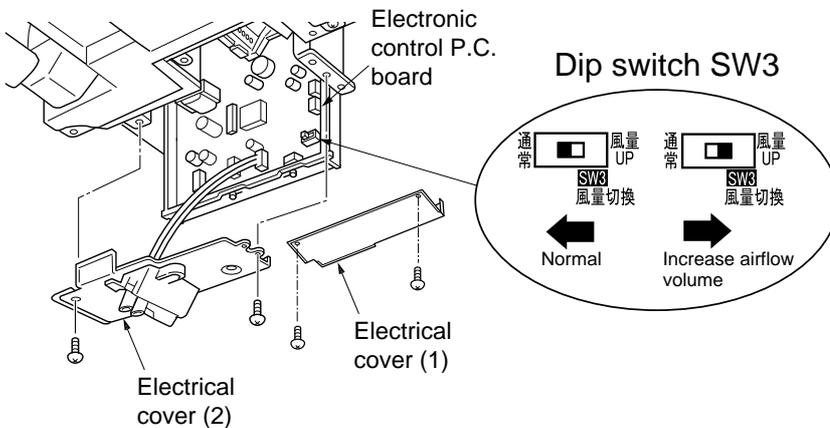
NOTE:

To prevent damage of P.C. board due to static electricity, make sure to perform static elimination before setting.

MLZ-KA-VA-E1, E2, E3, ER3



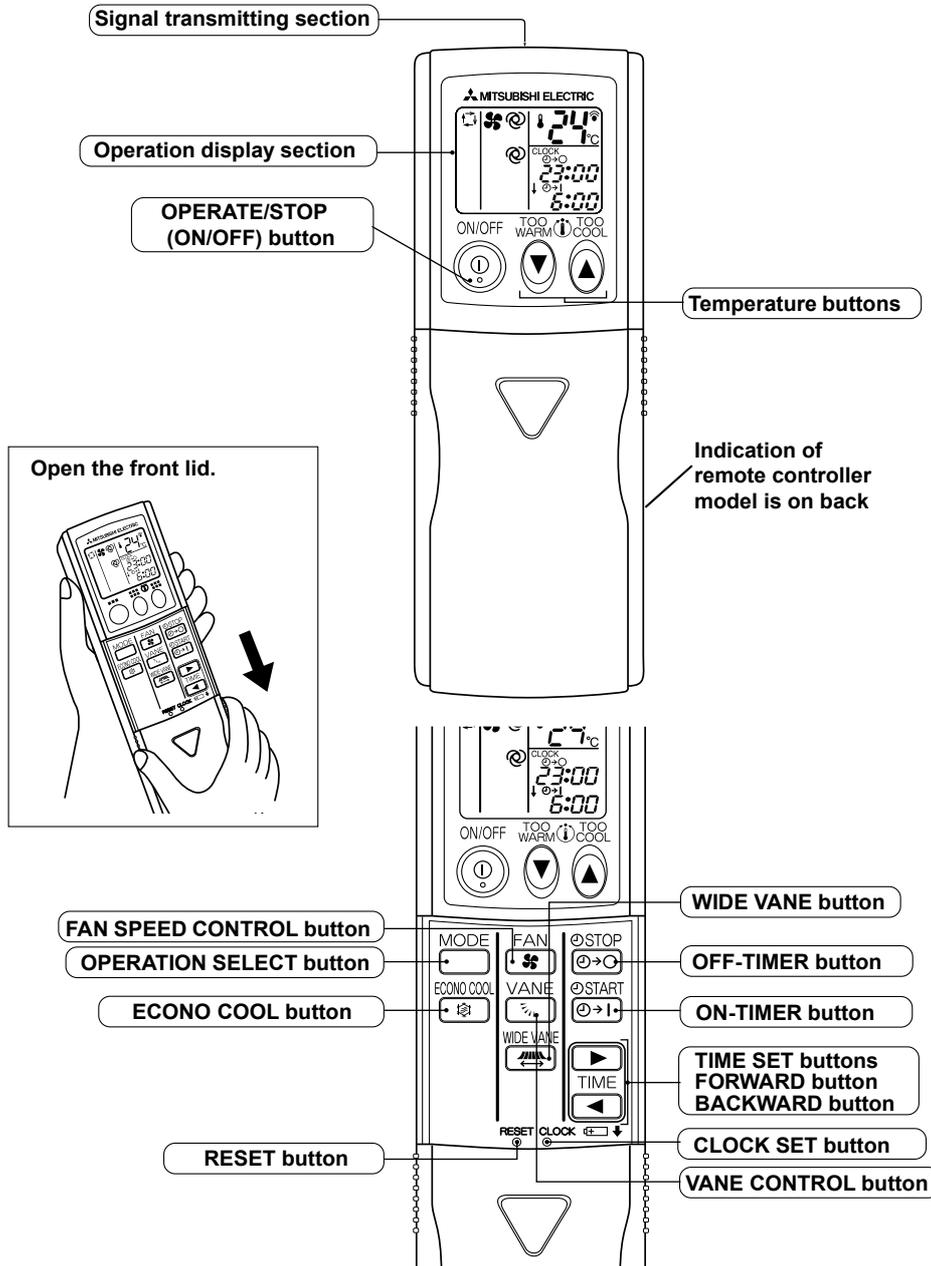
MLZ-KA-VA-E4, ER4



MLZ-KA25VA
MLZ-KA35VA
MLZ-KA50VA

WIRELESS REMOTE CONTROLLER

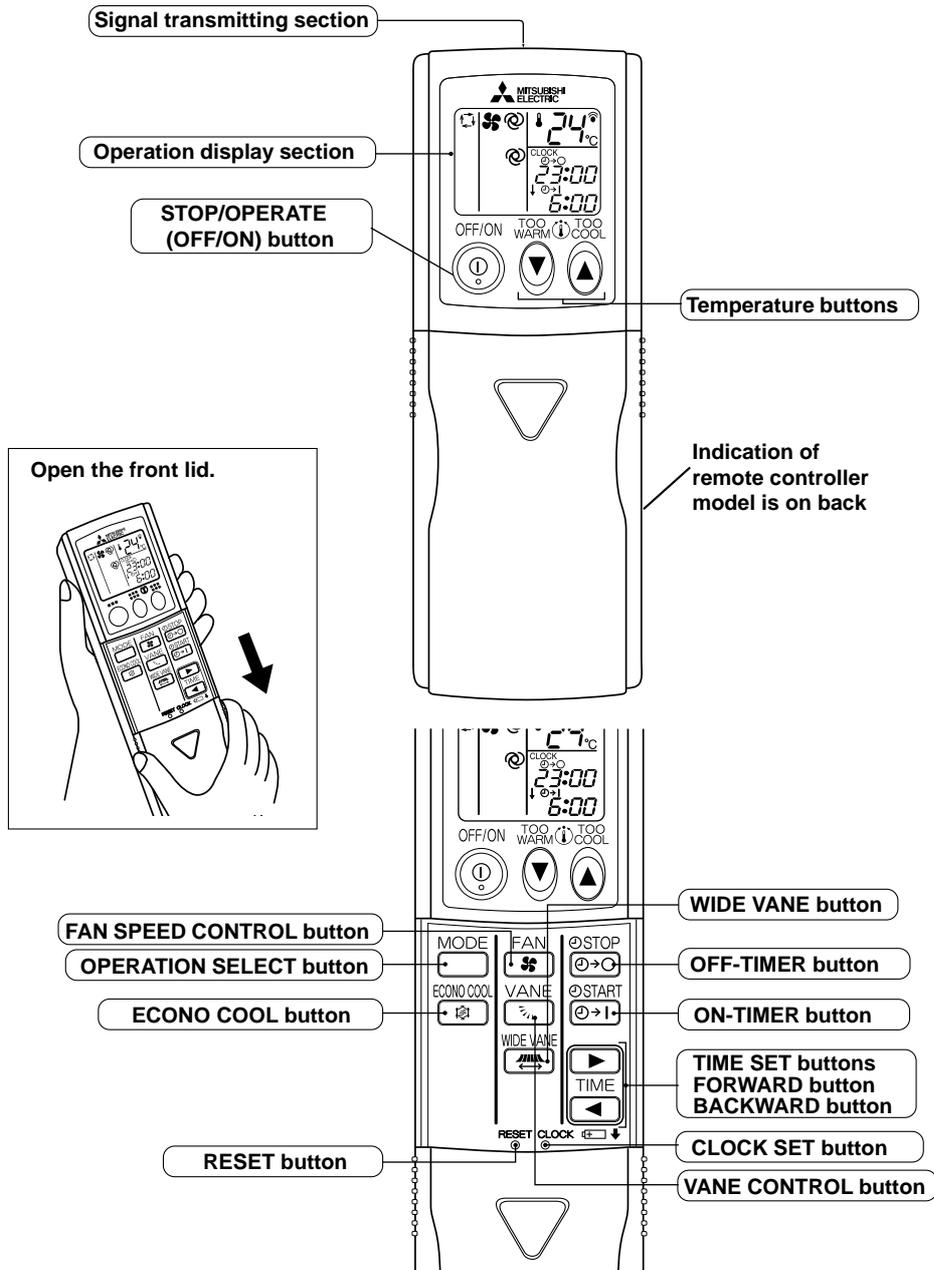
MLZ-KA25/35/50VA-



NOTE:

- The last setting will be stored after the unit is turned off with the remote controller.
- Indoor unit receives the signal of the remote controller with beeps.

MLZ-KA25/35/50VA- E4, ER4



NOTE:

- The last setting will be stored after the unit is turned off with the remote controller.
- Indoor unit receives the signal of the remote controller with beeps.

INDOOR UNIT DISPLAY SECTION

Operation Indicator lamp

The operation indicator at the left side of the indoor unit indicates the operation state.

Indication	Operation state	Difference between target temperature and room temperature
	This shows that the air conditioner is operating to reach the target temperature. Please wait until the target temperature is obtained.	Approximate 2°C or more
	This shows that the room temperature is approaching the target temperature.	Approximate 2°C or less
	This shows a state of standby for operation. (For multi system air conditioner)	—



Lighted



Blinking



Not lighted

9-1. COOL (❄️) OPERATION

- (1) Press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-E4, ER4)/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-E1, E2, E3, ER3) button. OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select COOL mode with OPERATION SELECT button.
- (3) Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature. The setting range is 16 ~ 31°C.

1. Coil frost prevention

When the temperature of indoor heat exchanger becomes too low, the coil frost prevention mode works. The indoor fan operates at the set speed and the compressor stops. This mode continues until the temperature of indoor heat exchanger rises.

9-2. DRY (☀️) OPERATION

- (1) Press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-E4, ER4)/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-E1, E2, E3, ER3) button. OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select DRY mode with OPERATION SELECT button.
- (3) The set temperature is determined from the initial room temperature.

1. Coil frost prevention

Coil frost prevention works the same way as that in COOL mode. (9-1.1.)

9-3. HEAT (🔥) OPERATION

- (1) Press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-E4, ER4)/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-E1, E2, E3, ER3) button. OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select HEAT mode with OPERATION SELECT button.
- (3) Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature. The setting range is 16 ~ 31°C.

1. Cold air prevention control

When the compressor is not operating or is starting, and the temperature of indoor heat exchanger and/or the room temperature is low or when defrosting is being done, the indoor fan will stop or rotate in Very Low speed.

9-4. AUTO CHANGE OVER --- AUTO MODE OPERATION

Once desired temperature is set, unit operation is switched automatically between COOL and HEAT operation.

Mode selection

(1) Initial mode

- When unit starts the operation with AUTO operation from off;
- If the room temperature is higher than the set temperature, operation starts in COOL mode.
- If the room temperature is equal to or lower than the set temperature, operation starts in HEAT mode.

(2) Mode change

COOL mode changes to HEAT mode when about 15 minutes have passed with the room temperature 2 degrees below the set temperature.
HEAT mode changes to COOL mode when about 15 minutes have passed with the room temperature 2 degrees above the set temperature.

NOTE:

If two or more indoor units are operating in multi system, there might be a case that the indoor unit, which is operating in □ (AUTO), cannot change over to the other operating mode (COOL ↔ HEAT) and becomes a state of standby.

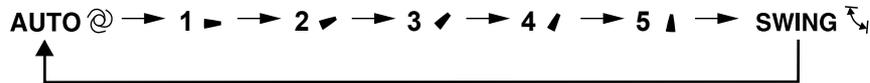
9-5. AUTO VANE OPERATION

1. Horizontal vane

(1) Vane motor drive

These models are equipped with a stepping motor for the horizontal vane. The rotating direction, speed, and angle of the motor are controlled by pulse signals (approximately 12V) transmitted from indoor microprocessor.

(2) The horizontal vane angle and mode change as follows by pressing VANE CONTROL button.



(3) Positioning

To confirm the standard position, the vane moves until it touches the vane stopper. Then the vane is set to the desired angle.

Confirming of standard position is performed in the following cases:

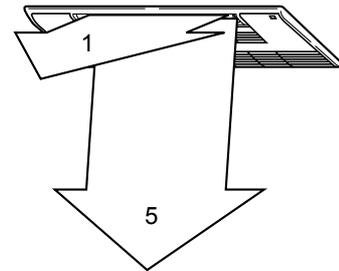
- When the power supply turns on.
- When the operation starts or finishes (including timer operation).
- When the test run starts.
- When multi-standby starts or finishes.
- When the swing operation finishes.

(4) VANE AUTO (@) mode

In VANE AUTO mode, the microprocessor automatically determines the vane angle and operation to make the optimum room-temperature distribution.

(1) In COOL and DRY operation Vane angle is fixed to Angle 1.

(2) In HEAT operation Vane angle is fixed to Angle 5.



(5) STOP (operation OFF) and ON-TIMER standby

In the following cases, the horizontal vane returns to the closed position.

- When STOP/OPERATE (OFF/ON) (MLZ-KA-VA-E4, ER4)/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-E1, E2, E3, ER3) button is pressed (POWER OFF).
- When the operation is stopped by the emergency operation.
- When ON-TIMER is ON standby.

(6) SWING MODE (S)

By selecting SWING mode with VANE CONTROL button, the horizontal vane swings vertically. The remote controller displays "S". SWING mode is cancelled when VANE CONTROL button is pressed once again.

(7) Cold air prevention in HEAT operation

The horizontal vane position is set to Upward.

(8) ECONO COOL (E) operation (ECONOmical operation)

When ECONO COOL button is pressed in COOL mode, set temperature is automatically set 2°C higher.

Also the horizontal vane swings in various cycle.

SWING operation makes you feel cooler than set temperature. So, even though the set temperature is higher, the air conditioner can keep comfort. As a result, energy can be saved.

To cancel this operation, select a different mode or press one of the following buttons in ECONO COOL operation: ECONO COOL or VANE CONTROL button.

2. Vertical vane

- (1) Press WIDE VANE button to change horizontal airflow direction.
 - The vertical vane moves for about 30 seconds.
 - (After 30 seconds, the vertical vane moves to its original position. In this case, press WIDE VANE button again.)
- (2) Press WIDE VANE button again to set horizontal airflow direction.
 - The vertical vane stops and the airflow direction is set.
- (3) Positioning
To confirm the standard position, the vane moves until it touches the vane stopper. Then the vane set to the desired angle.
Confirming of standard position is performed in the following cases:
 - (a) When STOP/OPERATE (OFF/ON) (MLZ-KA-VA-[E4], [ER4])/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-[E1], [E2], [E3], [ER3]) button is pressed (POWER ON).
 - (b) When SWING is started.

9-6. DRAIN PUMP/ FLOAT SENSOR CONTROL

1. Drain pump

Operating condition:

1. During COOL, DRY, or emergency COOL operation
2. When float sensor detects water level above fixed point during:
 - (a) HEAT operation.
 - (b) emergency HEAT operation.
 - (c) standby when during multi system operation.
 - (d) standby when ON timer is set.
 - (e) operation STOP.

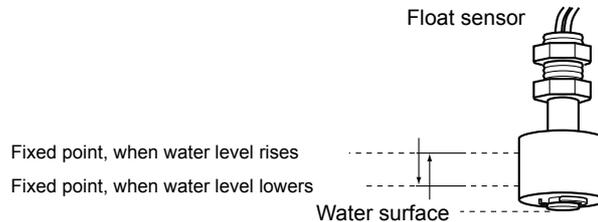
Drain pump operates in conditions 1 or 2.

Operation stop condition:

Condition other than 1 or 2 indicated above.

2. Float sensor

Float moves with the up and down of water surface inside the drain pan, and judges water level.
(Fixed point differs at raised and lowered water levels.)



9-7. TIMER OPERATION

1. How to set the time

- (1) Press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-[E4], [ER4])/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-[E1], [E2], [E3], [ER3]) button to start the air conditioner.
- (2) Check that the current time is set correctly.
NOTE: Timer operation will not work without setting the current time. Initially "AM0:00" blinks at the current time display of TIME MONITOR, so set the current time correctly with CLOCK SET button.

How to set the current time

- (1) Press the CLOCK set button.
 - (2) Press the TIME SET buttons (▶) and (◀) to set the current time.
 - Each time FORWARD button (▶) is pressed, the set time increases by 1 minute, and each time BACKWARD button (◀) is pressed, the set time decreases by 1 minute.
 - Pressing those buttons longer increases/decreases the set time by 10 minutes.
- Press the CLOCK set button.

ON timer setting

- (1) Press ON-TIMER button (⊙^{START}_{⊙→1}) during operation.
- (2) Set the time of the timer using TIME SET buttons (▶) and (◀) . *

OFF timer setting

- (1) Press OFF-TIMER button (⊙^{STOP}_{⊙→0}) during operation.
 - (2) Set the time of the timer using TIME SET buttons (▶) and (◀) . *
- * Each time FORWARD button (▶) is pressed, the set time increases by 10 minutes; each time BACKWARD button (◀) is pressed, the set time decreases by 10 minutes.

2. Cancel

To cancel ON timer, press ON-TIMER button ().

To cancel OFF timer, press OFF-TIMER button ().

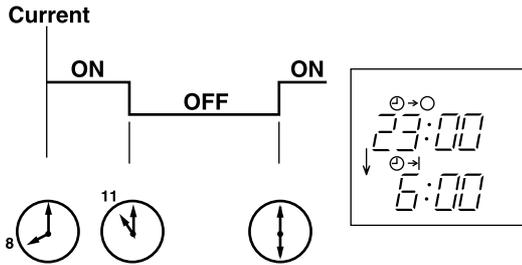
TIMER is cancelled and the display of set time disappears.

PROGRAM TIMER

- OFF timer and ON timer can be used in combination. The time that is reached first will operate first.
- “↑” and “↓” display show the order of OFF timer and ON timer operation.

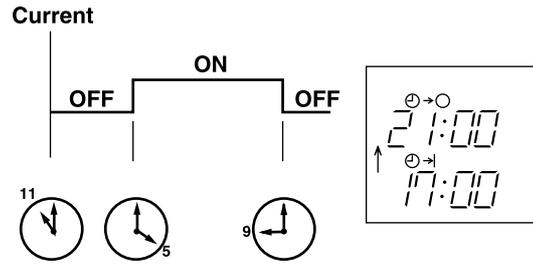
(Example 1) The current time is 8:00 PM.

The unit turns OFF at 11:00 PM, and ON at 6:00 AM.



(Example 2) The current time is 11:00 AM.

The unit turns ON at 5:00 PM, and OFF at 9:00 PM.



NOTE: If the main power is turned off or a power failure occurs while AUTO START/STOP timer is active, the timer setting is cancelled. As these models are equipped with an auto restart function, the air conditioner starts operating with timer cancelled when power is restored.

9-8. EMERGENCY/TEST OPERATION

In the case of test run operation or emergency operation, use EMERGENCY OPERATION switch on the front of the indoor unit. Emergency operation is available when the remote controller is missing or has failed, or the batteries in the remote controller are running down. The unit will start and OPERATION INDICATOR lamp will light up.

The first 30 minutes of operation is the test run operation. This operation is for servicing. The indoor fan runs at High speed and the temperature control does not work.

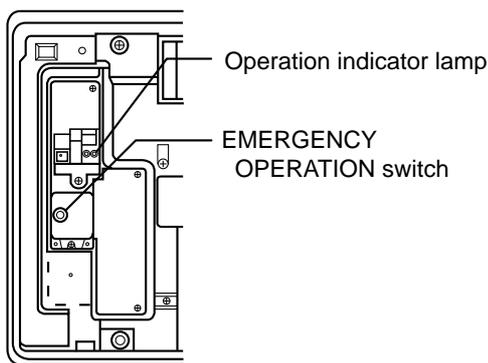
After 30 minutes of test run operation, the system shifts to EMERGENCY COOL/HEAT MODE with a set temperature of 24°C. The fan speed shifts to Med.

The coil frost prevention works even in the test run or the emergency operation, and defrosting too.

In the test run or emergency operation, the horizontal vane operates in VANE AUTO () mode.

Emergency operation continues until EMERGENCY OPERATION switch is pressed once or twice or the unit receives any signal from the remote controller. In the latter case, normal operation will start.

NOTE: Do not press EMERGENCY OPERATION switch during normal operation.



Operation mode	COOL	HEAT
Set temperature	24°C	24°C
Fan speed	Medium	Medium
Horizontal vane	Auto	Auto

The operation mode is indicated by the Operation indicator lamp on the indoor unit as follows

Operation Indicator lamp

Press once <COOL>    Lighted
 Not lighted

Press again <HEAT>  

Press once again <STOP>  

9-9. 3-MINUTE TIME DELAY OPERATION

When the system turns OFF, compressor will not restart for 3 minutes as 3-minute time delay function operates to protect compressor from overload.

MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

10-1. 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

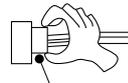
- 1) Before servicing the air conditioner, be sure to turn off the unit first with the remote controller, and then after confirming the horizontal vane is closed, turn off the breaker and/or disconnect the power plug.
- 2) Be sure to turn OFF the power supply before removing the front panel, the cabinet,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

<Incorrect>



Lead wiring

<Correct>



Connector housing

3. Troubleshooting procedure

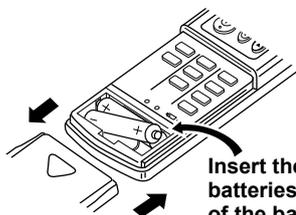
- 1) Check if the OPERATION INDICATOR lamp on the indoor unit is flashing ON and OFF to indicate an abnormality. To make sure, check how many times the OPERATIONAL INDICATOR lamp is flashing ON and OFF before starting service work.
- 2) Before servicing, check that the connector and terminal are connected properly.
- 3) When the electronic control P.C. board seems to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
- 4) Refer to 10-2, 10-3 and 10-4.

4. How to replace batteries

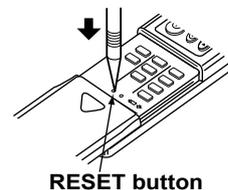
Weak batteries may cause the remote controller malfunction.

In this case, replace the batteries to operate the remote controller normally.

- ① Remove the front lid and insert batteries.
- ② Press RESET button with a thin instrument, and then use the remote controller.



Insert the negative pole of the batteries first. Check if the polarity of the batteries is correct.



RESET button

NOTE: 1. If RESET button is not pressed, the remote controller may not operate correctly.

2. This remote controller has a circuit to automatically reset the microcomputer when batteries are replaced.

This function is equipped to prevent the microcomputer from malfunctioning due to the voltage drop caused by the battery replacement.

3. Do not use the leaking batteries.

INFORMATION FOR MULTI SYSTEM AIR CONDITIONER

OUTDOOR UNIT : MXZ series

Multi system air conditioner can connect two or more indoor units with one outdoor unit.

•Unit will not operate in case the total capacity of indoor units exceeds the capacity of outdoor units.

Do not connect indoor units beyond the outdoor unit capacity.

Operation indicator lamp flashes as shown in the figure below.

•When you try to operate two or more indoor units with one outdoor unit simultaneously, one for the cooling and the other for heating, the operation mode of the indoor unit that operates earlier is selected. The other indoor units cannot operate and indicate as shown in the figure below. In this case, please set all the indoor units to the same operation mode.

OPERATION INDICATOR



Lighted



Blinking



Not lighted

•When indoor units start operation while the defrosting of outdoor unit is being done, it takes a few minutes (maximum 10 minutes) to blow out the warm air.

•In the heating operation, though indoor unit that does not operate may get warm or the sound of refrigerant flowing may be heard, they are not malfunction. The reason is that the refrigerant continuously flows into it.

10-2. FAILURE MODE RECALL FUNCTION

Outline of the function

This air conditioner can memorize the abnormal condition which has occurred once.

Even though OPERATION INDICATOR lamp indication listed on the troubleshooting check table (10-4.) disappears, the memorized failure details can be recalled.

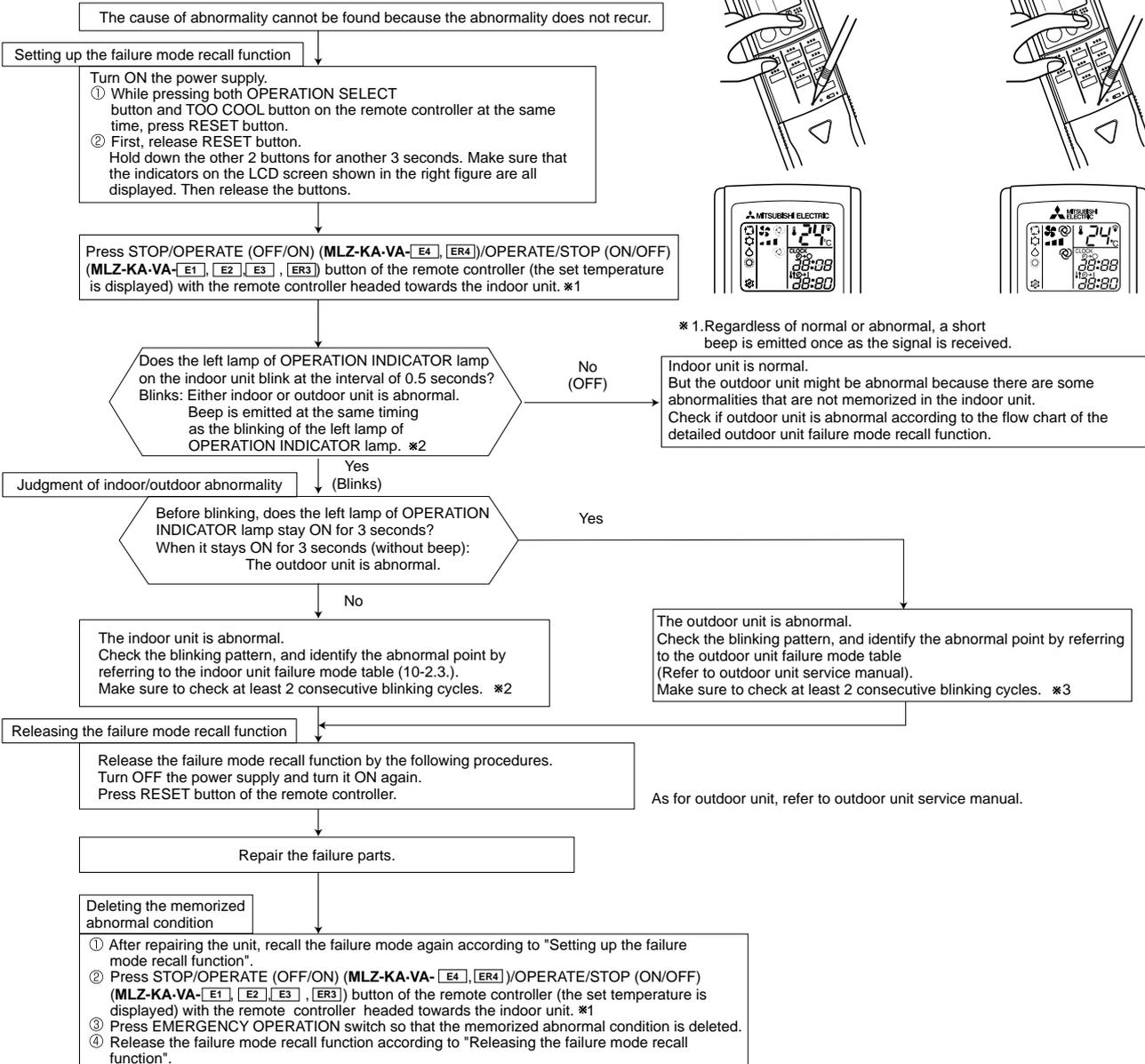
This mode is very useful when the unit needs to be repaired for the abnormality which does not recur.

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

MLZ-KA25/35/50VA-**E1**, **E2**, **E3**
MLZ-KA25/35/50VA-**ER3**

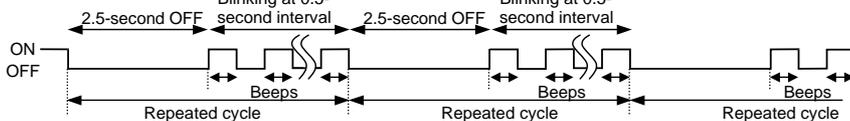
MLZ-KA25/35/50VA-**E4**
MLZ-KA25/35/50VA-**ER4**

Operational procedure

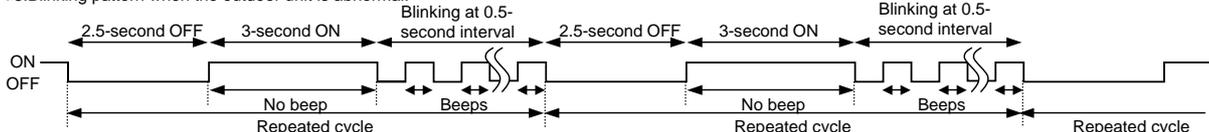


Note1. Make sure to release the failure mode recall function after it is set up, otherwise the unit cannot operate properly.
2. If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

*2. Blinking pattern when the indoor unit is abnormal:
Blinking at 0.5-second interval

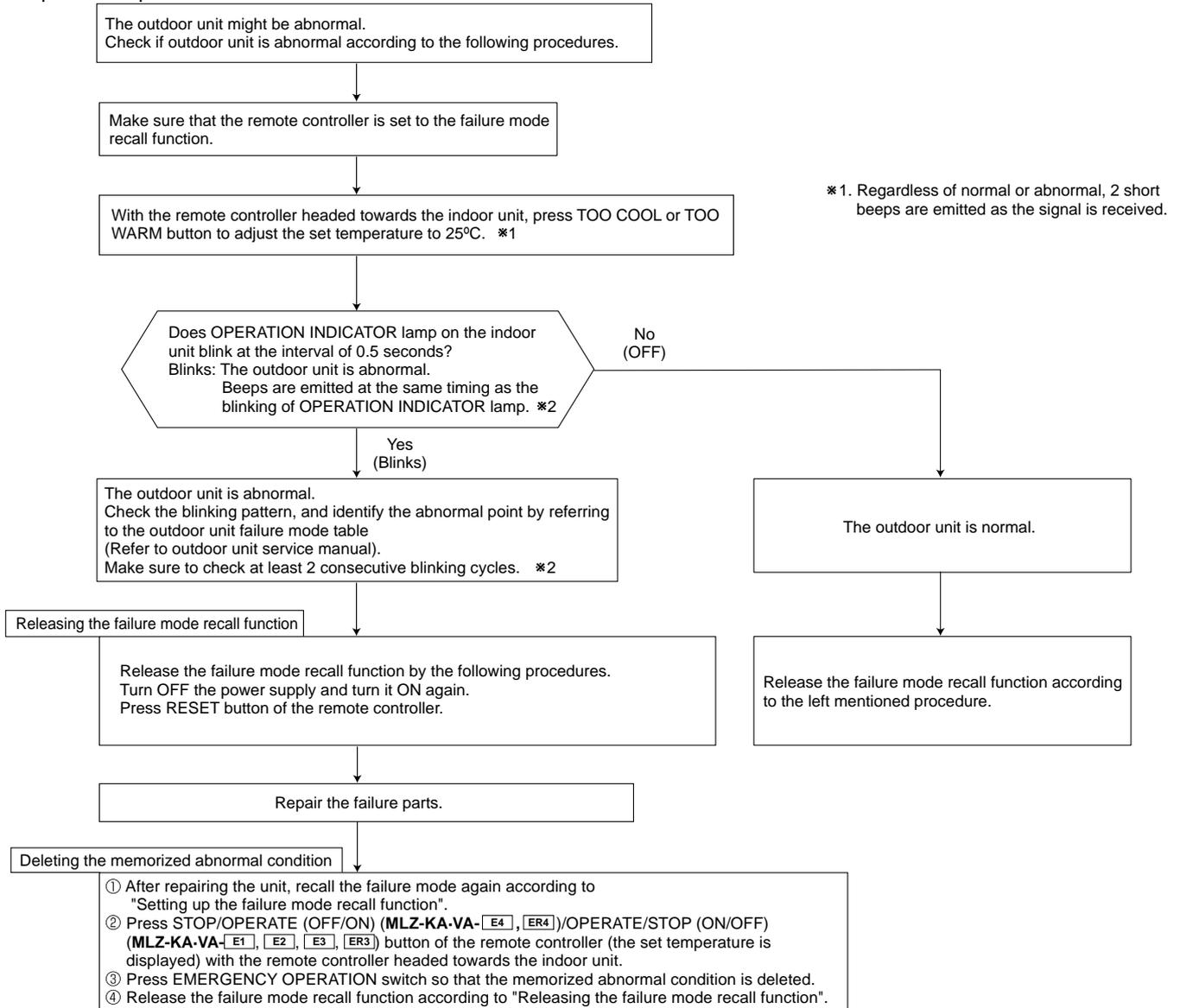


*3. Blinking pattern when the outdoor unit is abnormal:
Blinking at 0.5-second interval



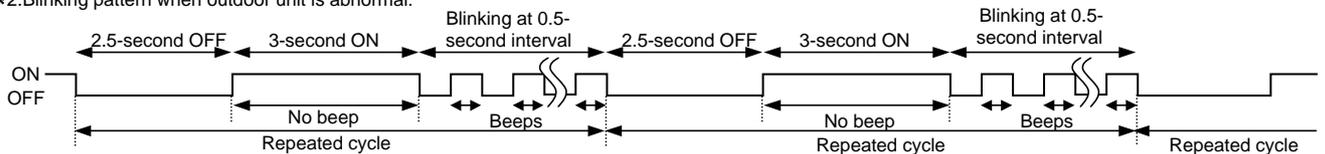
2. Flow chart of the detailed outdoor unit failure mode recall function

Operational procedure



Note1. 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:

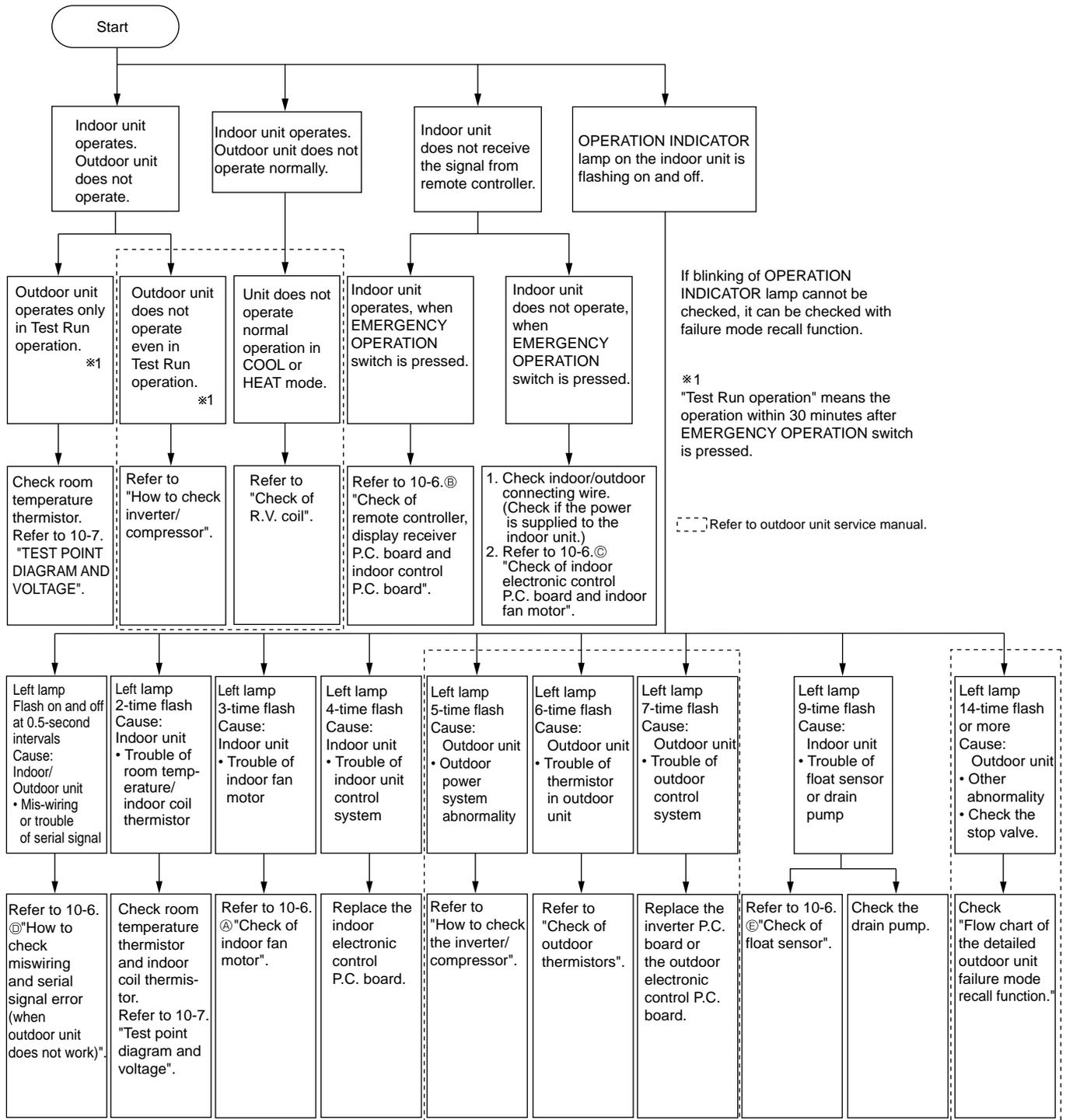


3. Indoor unit failure mode table

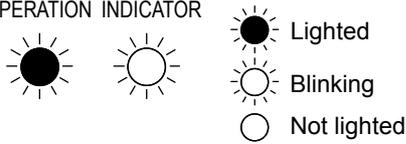
NOTE: Blinking patterns of this mode differs from the ones of Troubleshooting check table (10-4.).

Left lamp of OPERATION INDICATOR lamp	Right lamp of OPERATION INDICATOR lamp	Abnormal point (Failure mode)	Condition	Remedy
Not lighted	Not lighted	Normal	–	–
1-time flash every 0.5-second	Not lighted	Room temperature thermistor	When the room temperature thermistor short or open circuit is detected every 8 seconds during operation.	Refer to the characteristics of the room temperature thermistor (10-7.).
2-time flash 2.5-second OFF	Not lighted	Indoor coil thermistor (Main 1, 2 and sub) [Main 2:MLZ-KA50VA]	When the indoor coil thermistor short or open circuit is detected every 8 seconds during operation.	Refer to the characteristic of the main 1,2 indoor coil thermistor and the sub indoor coil thermistor (10-7.).
3-time flash 2.5-second OFF	Not lighted	Serial signal error	When the serial signal from the outdoor unit is not received for a maximum of 6 minutes.	Refer to 10-6.Ⓓ "How to check miswiring and serial signal error".
5-time flash 2.5-second OFF	Not lighted	Drain pump Float sensor	<ul style="list-style-type: none"> • Float sensor is open. • Float sensor detects abnormal water level. 	<ul style="list-style-type: none"> • Check the float sensor and the drain pump. • Check the connectors of float sensor and the drain pump. • Refer to 10-6.Ⓔ "Check of float sensor".
11-time flash 2.5-second OFF	Not lighted	Indoor fan motor	When the rotational frequency feedback signal is not emitted during 12-second the indoor fan operation.	Refer to 10-6.Ⓐ "Check of indoor fan motor"
12-time flash 2.5-second OFF	Not lighted	Indoor control system	When it cannot properly read data in the nonvolatile memory of the indoor electronic control P.C. board.	Replace the indoor electronic control P.C. board.
13-time flash 2.5-second OFF	Not lighted	Indoor coil thermistor (Main 3) [MLZ-KA50VA]	When the indoor coil thermistor short or open circuit is detected every 8 seconds during operation.	Refer to the characteristic of the main 3 indoor coil thermistor (10-7.).

10-3. INSTRUCTION OF TROUBLESHOOTING



OPERATION INDICATOR



- Flashing of OPERATION INDICATOR lamp (right-hand side lamp) indicates abnormality.
- OPERATION INDICATOR lamp (left-hand side lamp) is lighted.

No.	Abnormal point	Operation indicator lamp	Symptom	Condition	Remedy
1	MXZ type Operation mode setting	<p>Right lamp flash</p> <p>2.5-second OFF</p>	Outdoor unit operates but indoor unit does not operate.	When the operation mode of the each indoor unit is differently set to COOL (includes DRY) and HEAT at the same time, the operation mode of the indoor unit that has operated at first has the priority.	<ul style="list-style-type: none"> · Unify the operation mode. Refer to outdoor unit service manual.

NOTE: When the indoor unit has started operation and the above failures are detected (the first detection after the power ON), the indoor electronic control P.C. board turns OFF the indoor fan motor with OPERATION INDICATOR lamp flashing.

10-5. TROUBLE JUDGEMENT CRITERIA OF MAIN PARTS MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

Part name	Check method and criteria	Figure						
Room temperature thermistor (RT11)	Measure the resistance with a tester. (Part temperature 10°C ~ 30°C)							
Indoor coil thermistor (RT12, RT14, RT15 (MAIN), RT13 (SUB))	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Normal</td> </tr> <tr> <td style="text-align: center;">8 kΩ ~ 20 kΩ</td> </tr> </table>		Normal	8 kΩ ~ 20 kΩ				
Normal								
8 kΩ ~ 20 kΩ								
Indoor fan motor	Check 10-6. ㉔.							
Float sensor (FS)	<p>Disconnect connector and check with a tester. Check open or short according to the float position.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Float position</td> <td style="text-align: center;"> Float sensor Float </td> <td style="text-align: center;"> Float sensor Float </td> </tr> <tr> <td style="text-align: center;">Normal</td> <td style="text-align: center;">Short</td> <td style="text-align: center;">Open</td> </tr> </table>	Float position	Float sensor Float	Float sensor Float	Normal	Short	Open	
Float position	Float sensor Float	Float sensor Float						
Normal	Short	Open						
Drain pump (DP)	<p>Measure the resistance between the terminals with a tester. (Part temperature 10°C ~ 30°C)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Color of the lead wire</td> <td style="text-align: center;">Normal</td> </tr> <tr> <td style="text-align: center;">GRAY-GRAY</td> <td style="text-align: center;">520Ω ~ 620Ω</td> </tr> </table>	Color of the lead wire	Normal	GRAY-GRAY	520Ω ~ 620Ω			
Color of the lead wire	Normal							
GRAY-GRAY	520Ω ~ 620Ω							
Horizontal vane motor (MV1)	<p>Measure the resistance between the terminals with a tester. (Part temperature 20°C ~ 30°C)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Color of the lead wire</td> <td style="text-align: center;">Normal</td> </tr> <tr> <td style="text-align: center;">BRN-other one</td> <td style="text-align: center;">Each phase 380Ω</td> </tr> </table>	Color of the lead wire	Normal	BRN-other one	Each phase 380Ω			
Color of the lead wire	Normal							
BRN-other one	Each phase 380Ω							
Vertical vane motor (MV2)	<p>Measure the resistance between the terminals with a tester. (Part temperature 20°C ~ 30°C)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Color of the lead wire</td> <td style="text-align: center;">Normal</td> </tr> <tr> <td style="text-align: center;">BRN-other one</td> <td style="text-align: center;">Each phase 300Ω</td> </tr> </table>	Color of the lead wire	Normal	BRN-other one	Each phase 300Ω			
Color of the lead wire	Normal							
BRN-other one	Each phase 300Ω							

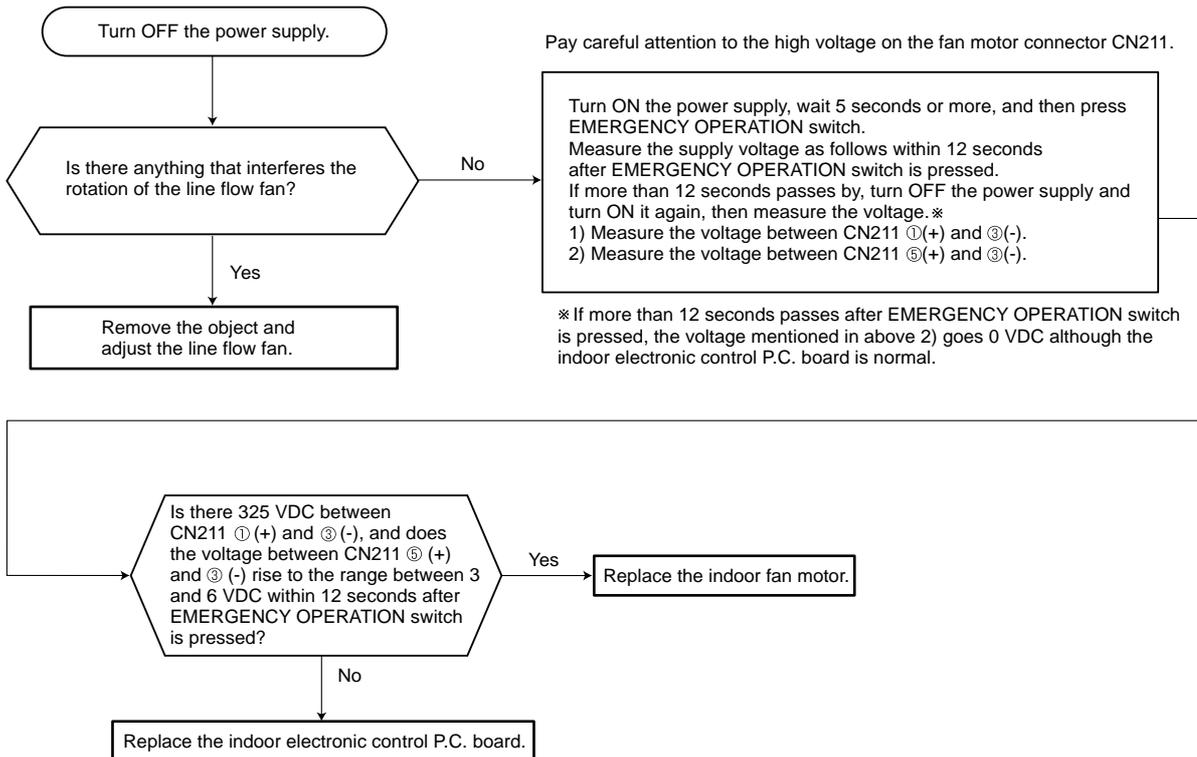
10-6. TROUBLESHOOTING FLOW

When the left lamp of OPERATION INDICATOR lamp flashes 3 times and the right lamp of OPERATION INDICATOR lamp is not lighted.

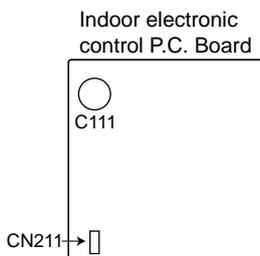
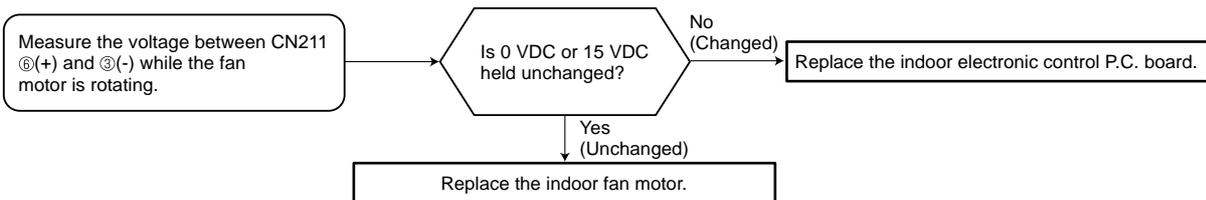
Indoor fan does not operate.

Ⓐ Check of indoor fan motor

The indoor fan motor error has occurred, and the indoor fan does not operate.



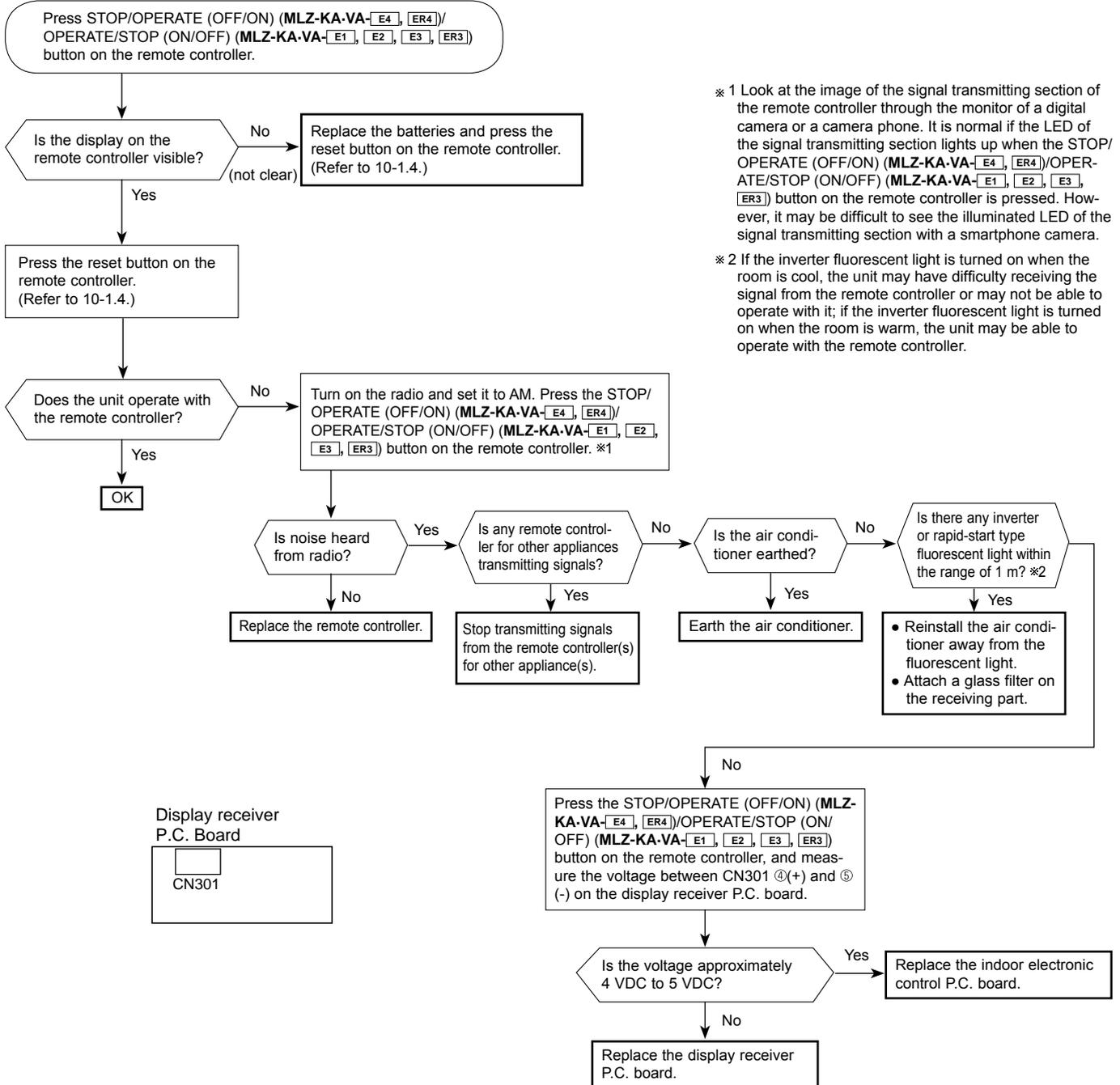
The indoor fan motor error has occurred, and the indoor fan repeats "12-second ON and 30-second OFF" 3 times, and then stops.



Indoor unit operates by pressing EMERGENCY OPERATION switch, but does not operate with the remote controller.

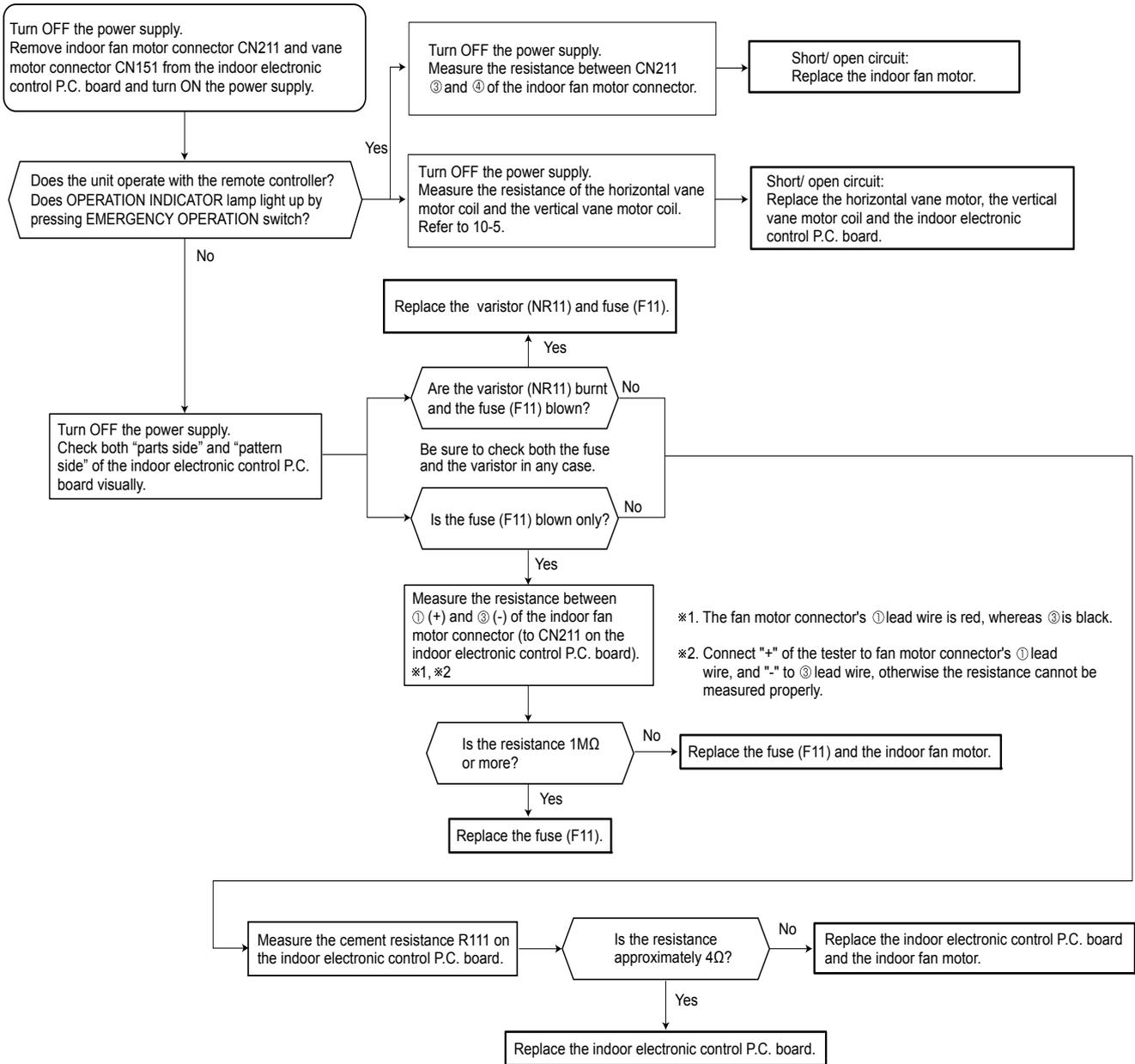
B Check of remote controller, display receiver P.C. board and indoor control P.C. board

* Check if the remote controller is exclusive for this air conditioner.

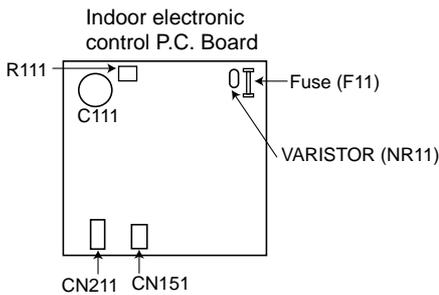


The unit cannot be operated with the remote controller.
 Also, OPERATION INDICATOR lamp does not light up by pressing EMERGENCY OPERATION switch.

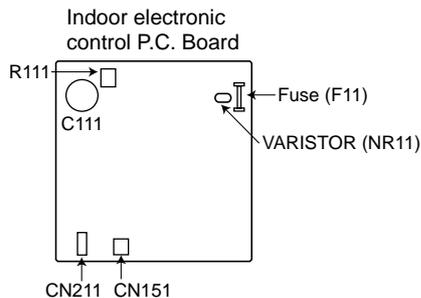
© Check of indoor electronic control P.C. board and indoor fan motor



MLZ-KA-VA-[E1], [E2], [E3], [ER3]

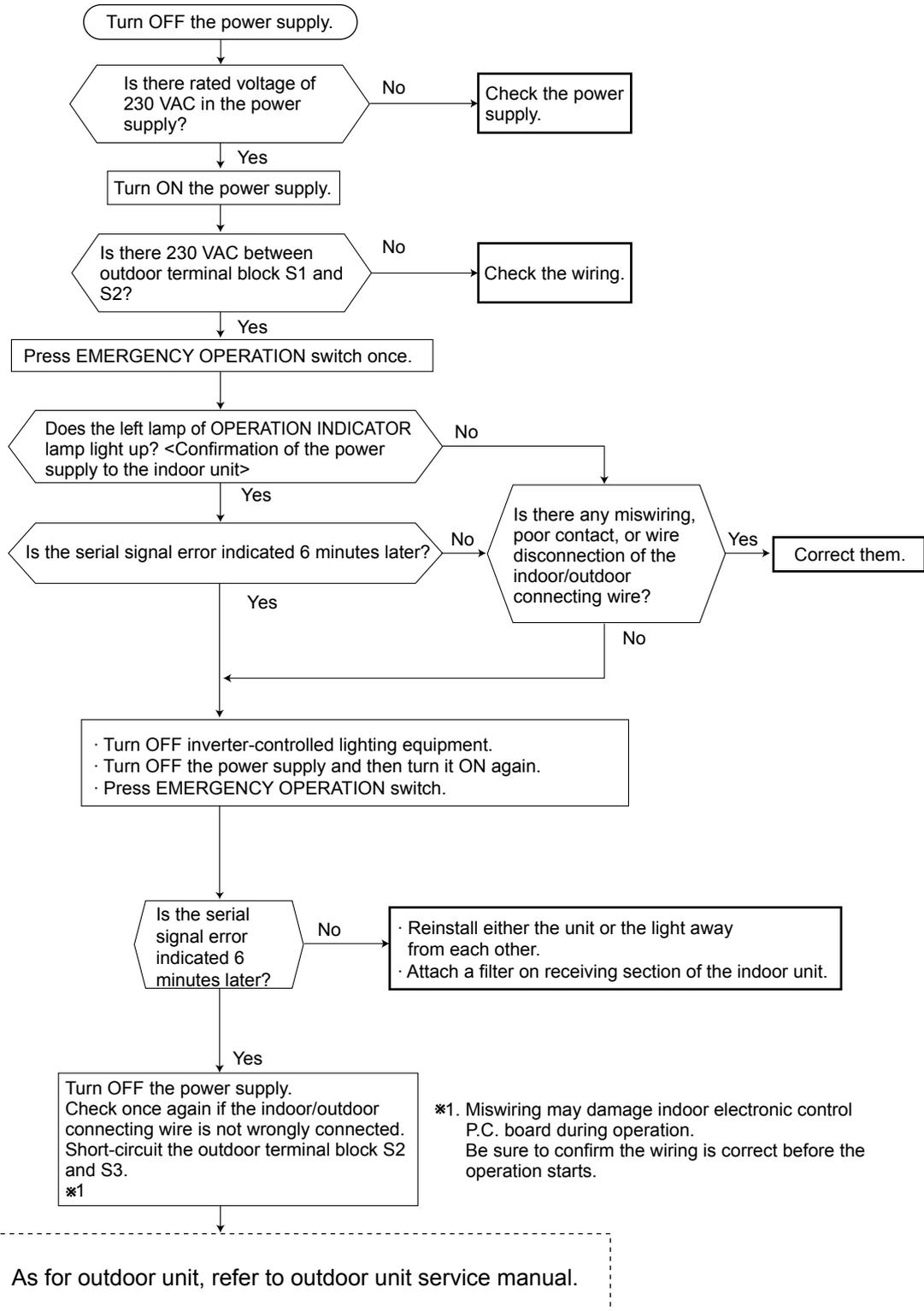


MLZ-KA-VA-[E4], [ER4]



When the left lamp of OPERATION INDICATOR lamp flashes ON and OFF in every 0.5-second.
Outdoor unit does not operate.

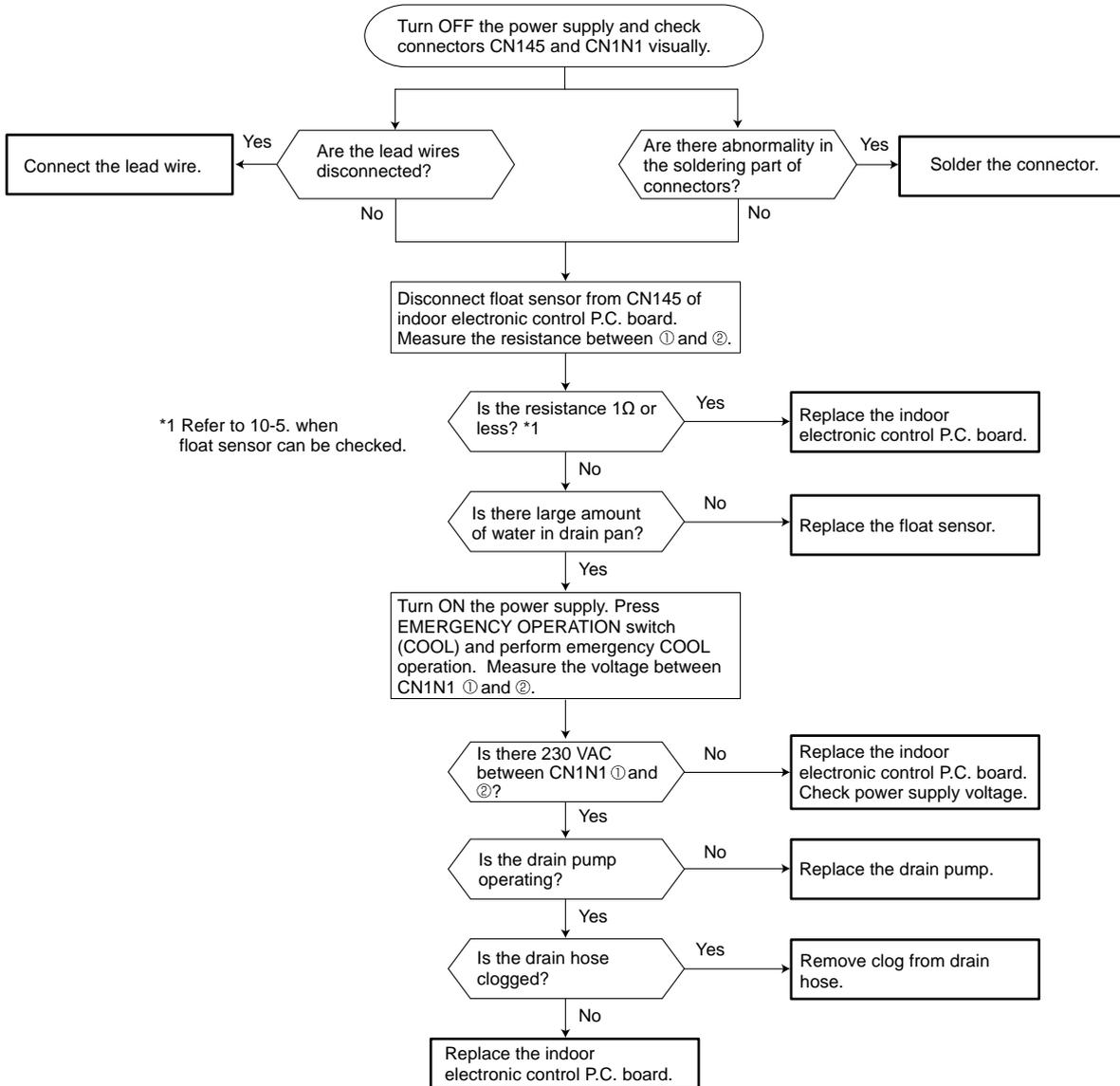
D How to check miswiring and serial signal error



*1. Miswiring may damage indoor electronic control P.C. board during operation. Be sure to confirm the wiring is correct before the operation starts.

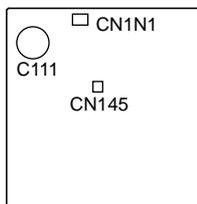
When the left lamp of OPERATION INDICATOR lamp flashes 9-time.
Indoor unit and outdoor unit do not operate.

E Check of float sensor

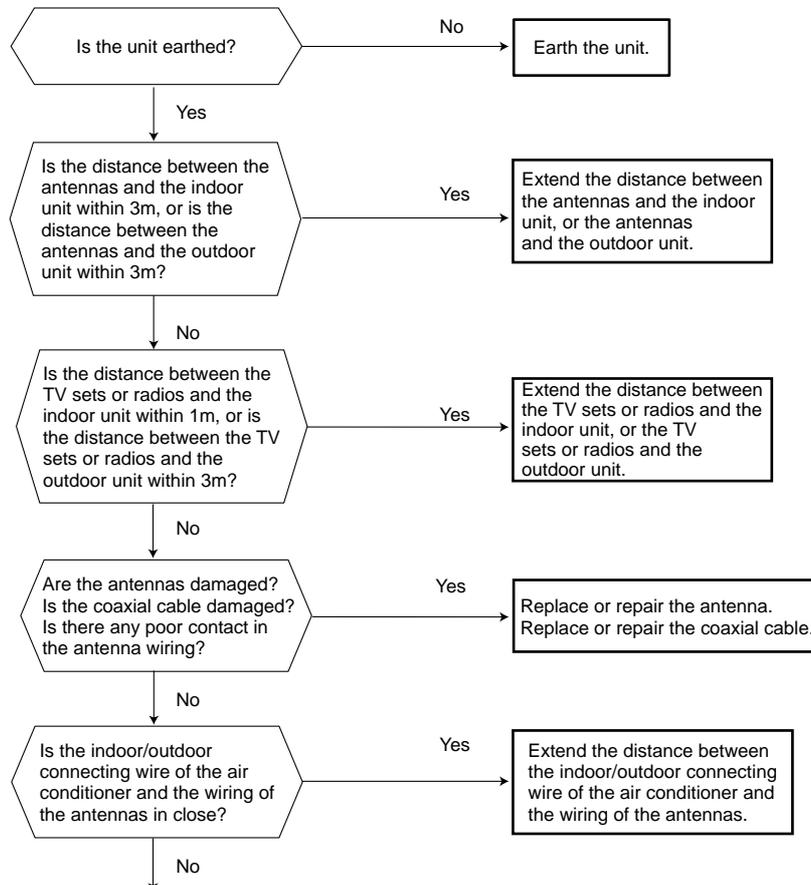


*1 Refer to 10-5. when float sensor can be checked.

Indoor electronic control P.C. board



F Electromagnetic noise enters into TV sets or radios



Even if all of the above conditions is fulfilled, the electromagnetic noise may enter, depending on the electric field strength or the installation condition (combination of specific conditions such as antennas or wiring).
 Check the followings before asking for service.

- 1.Devices affected by the electromagnetic noise
 TV sets, radios (FM/AM broadcast, shortwave)
- 2.Channel, frequency, broadcast station affected by the electromagnetic noise
- 3.Channel, frequency, broadcast station unaffected by the electromagnetic noise
- 4.Layout of ;
 indoor/outdoor unit of the air conditioner, indoor/outdoor wiring, grounding wire, antennas, wiring from antennas, receiver
- 5.Electric field intensity of the broadcast station affected by the electromagnetic noise
- 6.Presence or absence of amplifier such as booster
- 7.Operation condition of air conditioner when the electromagnetic noise enters in.
 - 1)Turn OFF the power supply once, and then turn ON the power supply. In this situation check for the electromagnetic noise.
 - 2)Within 3 minutes after turning ON the power supply, press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-[E4], [ER4])/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-[E1], [E2], [E3], [ER3]) button on the remote controller for power ON, and check for the electromagnetic noise.
 - 3)After a short time (3 minutes later after turning ON), the outdoor unit starts running. During operation, check for the electromagnetic noise.
 - 4)Press STOP/OPERATE (OFF/ON) (MLZ-KA-VA-[E4], [ER4])/OPERATE/STOP (ON/OFF) (MLZ-KA-VA-[E1], [E2], [E3], [ER3]) button on the remote controller for power OFF, when the outdoor unit stops but the indoor/outdoor communication still runs on. In this situation check for the electromagnetic noise.

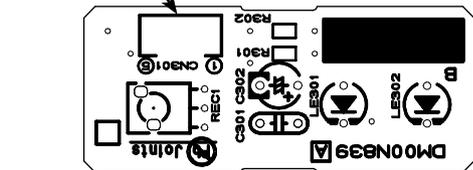
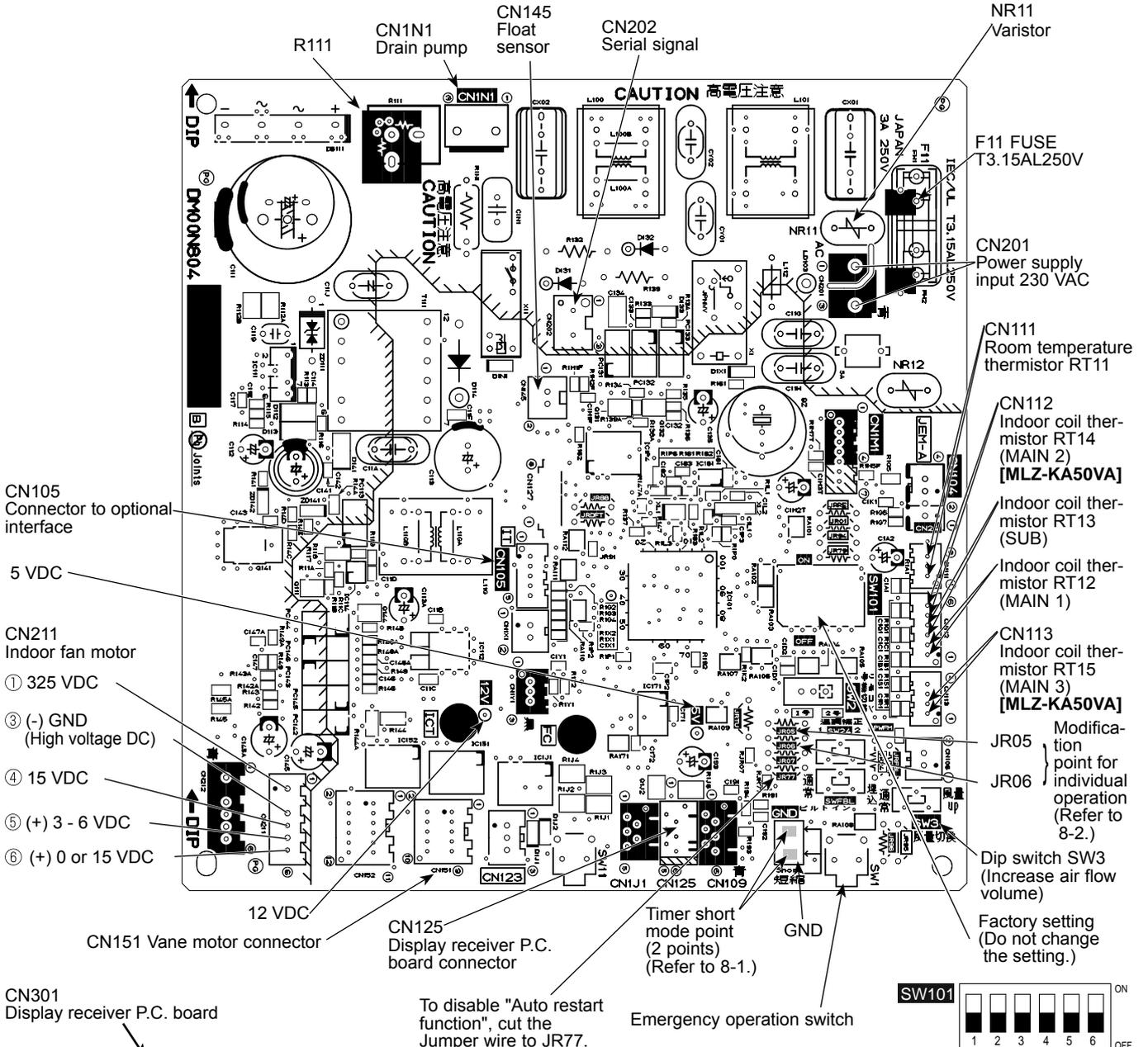
After checking the above, consult the service representative.

MLZ-KA25VA-**E4**, **ER4**

MLZ-KA35VA-**E4**, **ER4**

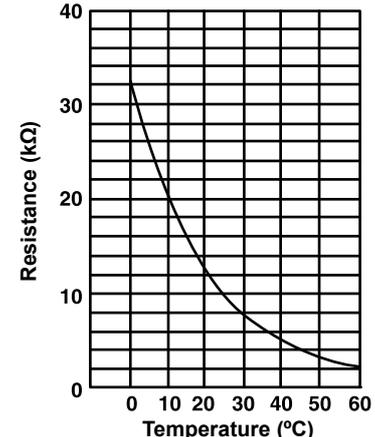
MLZ-KA50VA-**E4**, **ER4**

Indoor electronic control P.C. board



To disable "Auto restart function", cut the Jumper wire to JR77. (Refer to 8-3.)

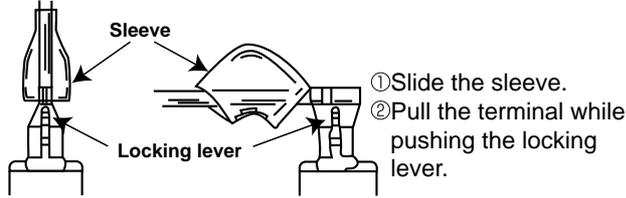
Indoor coil thermistor [RT12,RT14,RT15 (MAIN), RT13 (SUB)]
Room temperature thermistor (RT11)



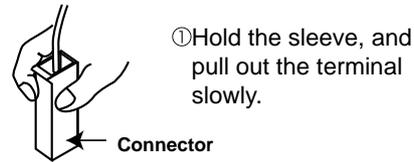
<"Terminal with locking mechanism" Detaching points>

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.



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



MLZ-KA25VA MLZ-KA35VA MLZ-KA50VA

NOTE: Turn OFF the power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
<p>1. Opening the intake grille</p> <p>(1) Press the area indicated "PUSH" on the intake grille until a click is heard (Figure 1).</p> <p>(2) Hold the tabs on both sides of the intake grille and pull it down.</p> <p>2. Removing the intake grille</p> <p>(1) Press the area indicated "PUSH" on the intake grille until a click is heard. Hold the tabs on both sides of the intake grille and pull it down (Figure 1).</p> <p>(2) Pull the hinges of the intake grille toward you (Figure 2).</p> <p>(3) Unhook the safety strings supporting the intake grille from the front panel (Figure 3).</p> <p>Figure 1</p> <p>Figure 2</p> <p>Figure 3</p>	<p>Photo 1</p> <p>Places for installing the Anti-Allergy Enzyme filter (E1, E2, E3, ER3) / Silver-ionized air purifier filter (E4, ER4) (Option)</p> <p>Remote control receiving section Electrical box Safety strings for preventing the intake grille from falling Intake grille Places for installing the air filters (Catechin air filter E1, E2, E3, ER3) / Air purifying filter E4, ER4) (Option)</p>

OPERATING PROCEDURE

3. Checks before setting in place

- (1) Before installing the grille, make sure the indoor unit is square with the ceiling opening (or parallel to the wall-ceiling joint).
- (2) Check that the four points for securing the grille are in contact with the ceiling surface. Use the installation template supplied with the indoor unit to arrange the four points for securing the grille within 0 to 3 mm from the ceiling surface (Figure 4, 5).
- (3) Check that the insulation for the refrigerant pipes, drain pipes, etc. are in place and that wiring connections and arrangements are complete.

4. Removing the horizontal vane

- (1) Slide each stopper of the horizontal vane.
 - (2) Remove the horizontal vane (Figure 6).
- NOTE:** To install, follow the removal procedure in reverse.
Make sure a click is heard from each stopper when attaching the vane.

5. Removing the grille

- (1) Open the intake grille.
- (2) Remove the screw cap in the center of air outlet (Figure 8).
- (3) Remove the fixing screws (① and ② in Figure 7).
- (4) Remove the temporary holding tabs of the grille.

6. Installing the grille

- (1) Press the areas indicated "PUSH" on the intake grille to open.
- (2) Remove the screw cap in the center of air outlet.
- (3) Open the horizontal vane completely.
- (4) Hook the temporary holding tabs of the grille to the indoor unit (Figure 7).
- (5) Place the grille so that it fits properly in the wall-ceiling joint, and attach the front panel with the fixing screws ① provided. Do not fully tighten the screws at this point.
- (6) Tighten the fixing screws ① in the center three places and ② (Figure 7).
- (7) Tighten the fixing screws ① in the four places at left and right side of the indoor unit.

At this point, make sure there are no gaps between the indoor unit and grille, and between the grille and ceiling surface. If there are gaps, the wind may come in and it may cause water to drip (Figure 9).

※ Tighten the fixing screw ① and ② completely.

Installing the Anti-Allergy Enzyme filter (Option)

Push the Anti-Allergy Enzyme filter into the guide of the grille until a click is heard (Figure 10).

PHOTOS

Figure 4

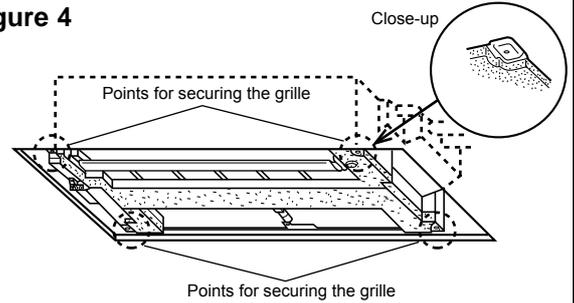


Figure 5

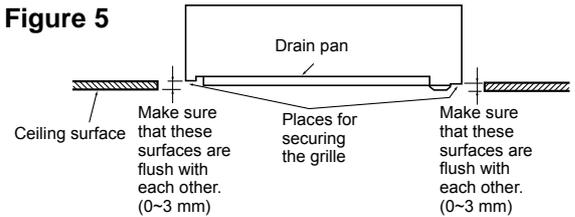


Figure 6

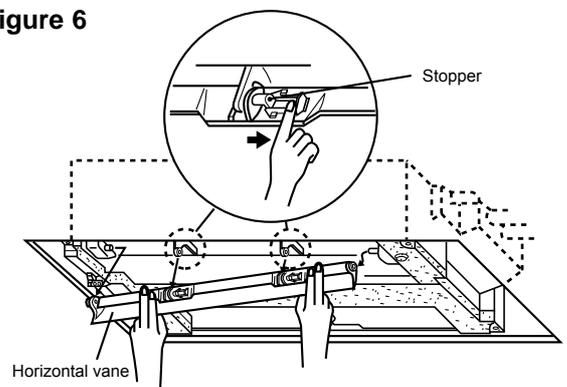


Figure 7

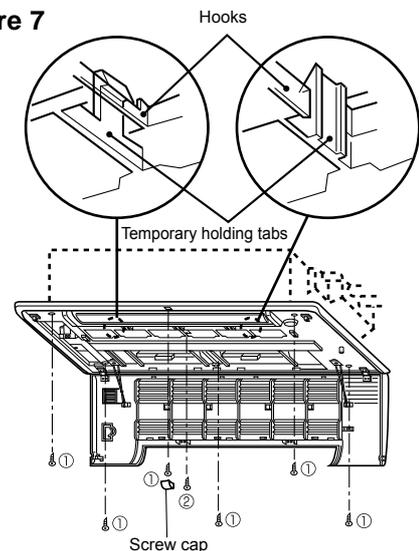
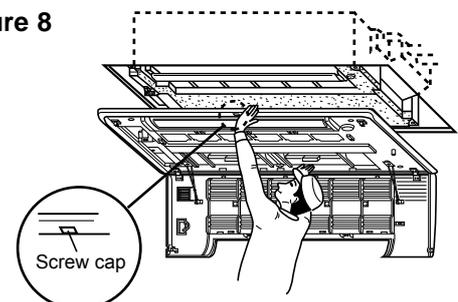


Figure 8



OPERATING PROCEDURE

7. Check after installing

- (1) Check that there are no gaps between the indoor unit and grille, and between the grille and ceiling surface (Figure 9). (If there are gaps, the wind may come in and dew condensation may result.)
- (2) Is the air filter installed?
- (3) Is the Anti-Allergy Enzyme filter (Option) installed?

8. Removing the electronic control P.C. board and display receiver P.C. board

- (1) Open the intake grille.
- (2) Remove the screws for the electrical cover ① and ②. Remove the covers (Photo 2).
- (3) Remove the screw for the lamp cover and unhook it.
- (4) Pull the electronic control P.C. board slightly toward you from the electrical box, and disconnect all the connectors from the electronic control P.C. board.
- (5) Remove the electronic P.C. board and display receiver P.C. board.

9. Removing the heat exchanger and nozzle

- (1) Remove the grille.
- (2) Remove the room temperature thermistor.
- (3) Remove the two claws in the center of the nozzle and the screws for the drain pan.
- (4) Remove the screws for the electrical cover ① and ②. Remove both covers.
- (5) Disconnect the connectors of the vertical and horizontal vane motor.
- (6) Remove the indoor coil thermistor (main and sub.).
- (7) Remove the screws for the drain cover. Remove the drain cover.
- (8) Remove the pipe band.
- (9) Remove the screws for the heat exchanger. Remove the heat exchanger.
- (10) Remove the screws for the nozzle. Remove the nozzle.

10. Removing the horizontal and vertical vane motor unit

- (1) Remove the grille.
- (2) Remove the drain pan.
- (3) Remove the horizontal vane (Figure 6).
- (4) Remove the screws for the cover of the horizontal and vertical vane motor unit. Remove the cover.
- (5) Remove the screws for the vertical vane motor unit. Remove the vertical vane motor unit and disconnect the connectors (Photo 4).
- (6) Remove the screws for the horizontal vane motor unit. Remove the horizontal vane motor unit and disconnect the connectors (Photo 4).

PHOTOS

Figure 9

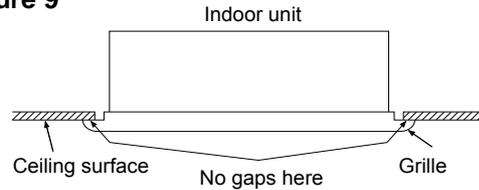
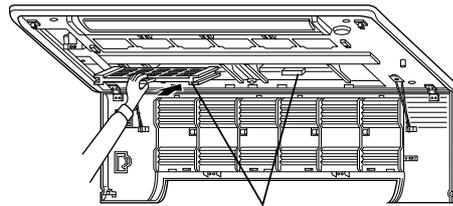


Figure 10



Anti-Allergy Enzyme filter (E1, E2, E3, ER3) /
Silver-ionized air purifier filter (E4, ER4) (Option)

Photo 2

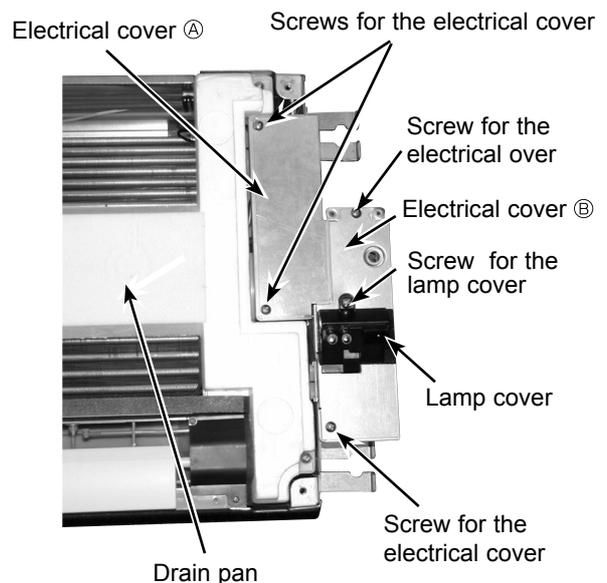
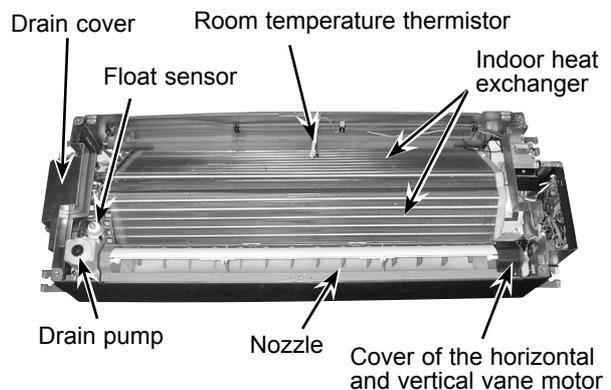


Photo 3



OPERATING PROCEDURE

11. Removing the drain pump and float sensor

- (1) Remove the grille.
- (2) Remove the drain pan.
- (3) Disconnect the connector of the drain pump (Photo 5).
- (4) Disconnect the connector of the float sensor (Photo 5).
- (5) Remove the drain hose (Photo 5).
- (6) Remove the screws for the drain pump (Photo 5).
- (7) Remove the screws for the cover of the drain pump (Photo 5).

12. Removing the fan motor and line flow fan

- (1) Remove the grille.
- (2) Remove the drain pan.
- (3) Remove the drain cover.
- (4) Remove the pipe band.
- (5) Remove the screws for the electrical cover ㉞ and ㉟.
Remove both covers.
- (6) Remove the screws for the terminal box. Remove the terminal box.
- (7) Untie the safety strings from the clamp (Photo 6).
- (8) Hook the safety strings to the tab on the side of the heat exchanger. (This prevents the heat exchanger from falling.) Remove the screws for the heat exchanger and pull the heat exchanger downward.
- (9) Remove the screws for the nozzle. Remove the nozzle.
- (10) Pull out the electronic control P.C. board slightly and disconnect the connector (CN211) of the indoor fan motor.
- (11) Remove the screws for the motor band.
Remove the motor band (Photo 6).
- (12) Remove the indoor fan motor and line flow fan. (No need to remove the heat exchanger before removing these 2 items.)

PHOTOS

Photo 4

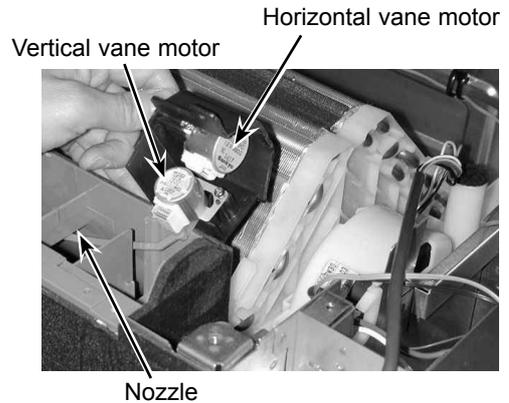


Photo 5

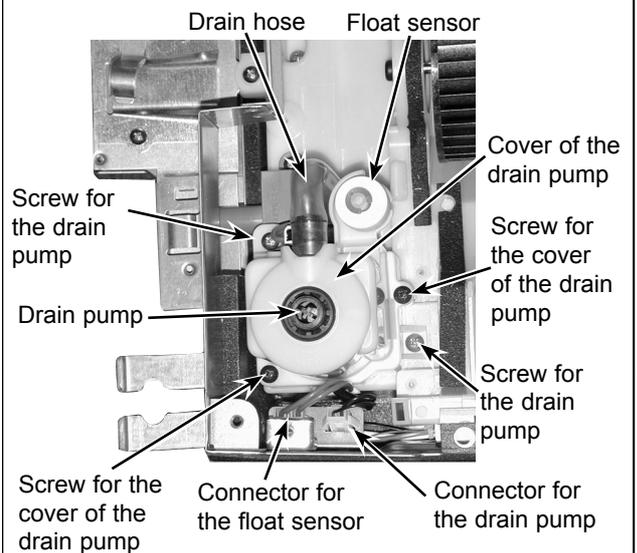
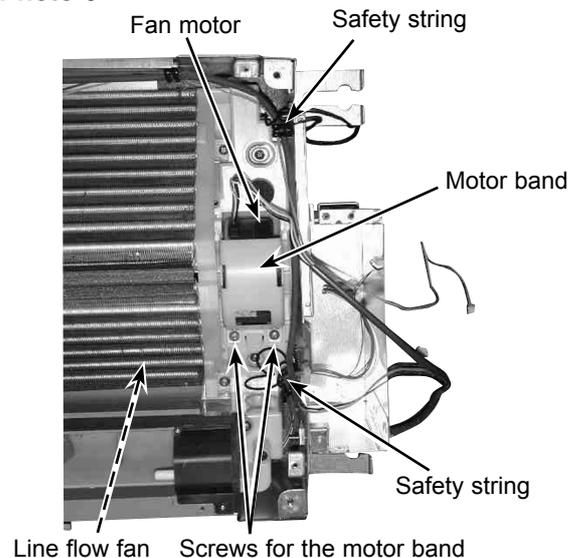


Photo 6



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