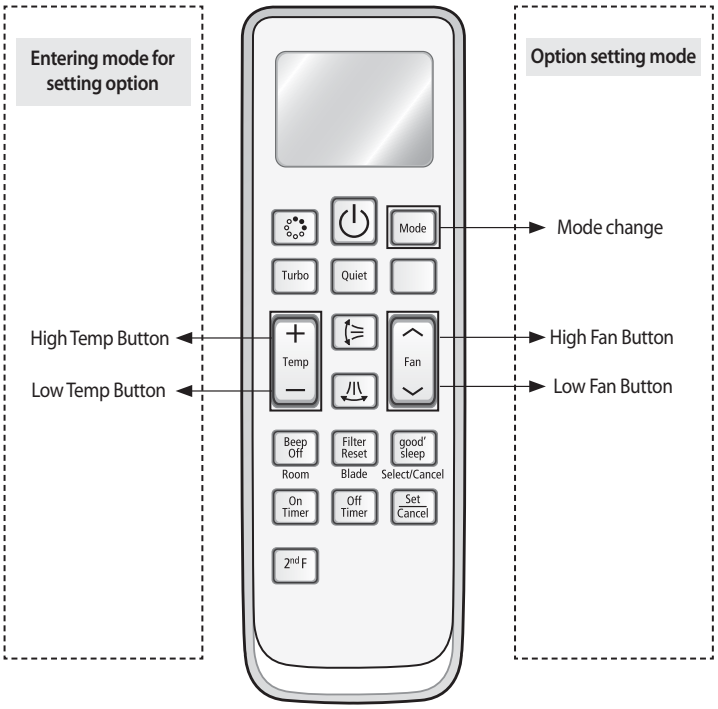
4. Troubleshooting

4-1 Setting an indoor unit address and installation option

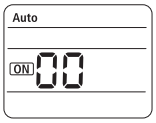
- Set the indoor unit address and installation option with remote controller option.
  Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time.You need to set twice when setting indoor unit address and installation option.
- Please use the proper wireless remocon which can set 24 digit option code. Following is the instructions of setting option code with wireless remocon of MR-DH00. (MR-AH01 can be used for operating but cannot be used for setting the installation option because only 12 digit option setting is available.
- Please refer to the wired remocon installation manual for setting with the wired remocon.

4-1-1 The procedure of setting option



Step 1. Entering mode to set option

1. Remove batteries from the remote controller.
2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button.

3. 

Check if you have entered the option setting status.

Step 2. The procedure of option setting

After entering the option setting status, select the option as listed below.

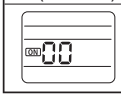
CAUTION

Option setting is available from SEG1 to SEG 24

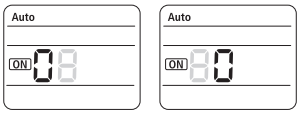
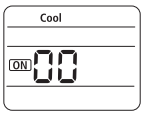
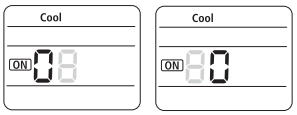
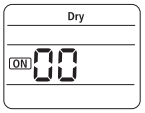
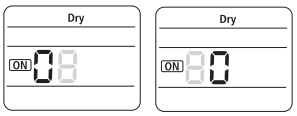
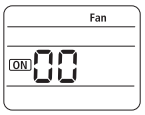
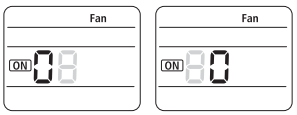
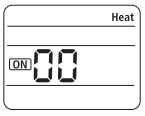
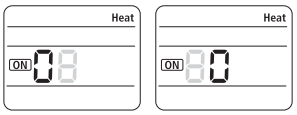
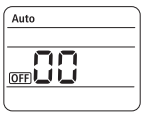
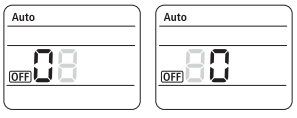
- SEG1, SEG7, SEG13, SEG18 arenot need to be set at MR-DH00. They are the page options which were used at the previous other remocons.
- Set the each 2 bit option code in order except page options.

For example : SEG2, 3 → SEG4, 5 → SEG6, 8 → SEG9, 10 → SEG11, 12 → SEG 14, 15 → SEG 16, 17 → SEG 18, 20 → SEG 21, 22 → SEG23, 24.

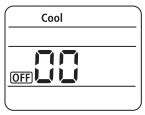
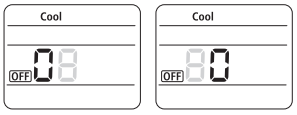
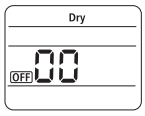
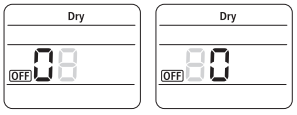
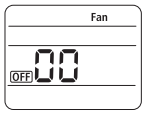
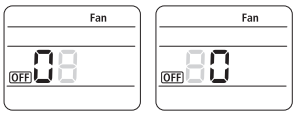
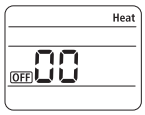
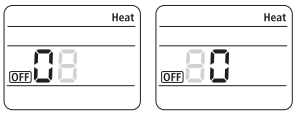
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
0	X	X	X	X	X	1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
2	X	X	X	X	X	3	X	X	X	X	X

On(SEG1~12)	Off(SEG13~24)
	

4-1-2 The procedure of setting option

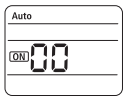
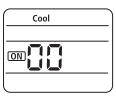
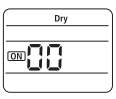
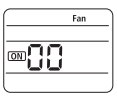
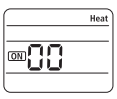
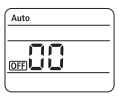
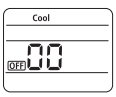
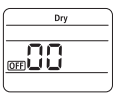
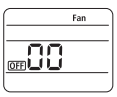
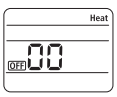
Option setting	Status
1. Setting SEG2, SEG3 option Press Low Fan button(∨) to enter SEG2 value. Press High Fan button(∧) to enter SEG3 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG2 SEG3
2. Setting Cool mode Mode Press Mode button to be changed to Cool mode in the ON status.	
3. Setting SEG4, SEG5 option Press Low Fan button(∨) to enter SEG4 value. Press High Fan button(∧) to enter SEG5 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG4 SEG5
4. Setting Dry mode Mode Press Mode button to be changed to DRY mode in the ON status.	
5. Setting SEG6, SEG8 option Press Low Fan button(∨) to enter SEG6 value. Press High Fan button(∧) to enter SEG8 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG6 SEG8
6. Setting Fan mode Mode Press Mode button to be changed to FAN mode in the ON status.	
7. Setting SEG9, SEG10 option Press Low Fan button(∨) to enter SEG9 value. Press High Fan button(∧) to enter SEG10 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG9 SEG10
8. Setting Heat mode Mode Press Mode button to be changed to HEAT mode in the ON status.	
9. Setting SEG11, SEG12 option Press Low Fan button(∨) to enter SEG11 value. Press High Fan button(∧) to enter SEG12 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG11 SEG12
10. Setting Auto mode Mode Press Mode button to be changed to AUTO mode in the OFF status.	
11. Setting SEG14, SEG15 option Press Low Fan button(∨) to enter SEG14 value. Press High Fan button(∧) to enter SEG15 value. Each time you press the button, 0 → 1 → ··· E → F will be selected in rotation.	 SEG14 SEG15

The procedure of setting option (cont.)

Option setting	Status
12. Setting Cool mode Mode Press Mode button to be change to Cool mode in the OFF status.	
13. Setting SEG16, SEG17 option Press Low Fan button(∨) to enter SEG16 value. Press High Fan button(∧) to enter SEG17 value. Each time you press the button, 0→1→··· E→F will be selected in rotation.	 SEG16 SEG17
14. Setting Dry mode Mode Press Mode button to be change to Dry mode in the OFF status.	
15. Setting SEG18, SEG20 option Press Low Fan button(∨) to enter SEG18 value. Press High Fan button(∧) to enter SEG20 value. Each time you press the button, 0→1→··· E→F will be selected in rotation.	 SEG18 SEG20
16. Setting Fan mode Mode Press Mode button to be change to Fan mode in the OFF status.	
17. Setting SEG21, SEG22 option Press Low Fan button(∨) to enter SEG21 value. Press High Fan button(∧) to enter SEG22 value. Each time you press the button, 0→1→··· E→F will be selected in rotation.	 SEG21 SEG22
18. Setting Heat mode Mode Press Mode button to be change to HEAT mode in the OFF status.	
19. Setting SEG23, SEG24 mode Press Low Fan button(∨) to enter SEG23 value. Press High Fan button(∧) to enter SEG24 value. Each time you press the button, 0→1→··· E→F will be selected in rotation.	 SEG23 SEG24

Step 3. Check the option you have set

After setting option, press Mode button to check whether the option code you input is correct or not.

Option	[SEG2,3]	[SEG4,5]	[SEG6,8]	[SEG9,10]	[SEG11,12]
Remote Controller Display					
Option	[SEG14,15]	[SEG16,17]	[SEG18,20]	[SEG21,22]	[SEG23,24]
Remote Controller Display					

Step 4. Input option

Press operation button ⏻ with the direction of remote control for set.
For the correct option setting, you must input the option twice.

Step 5. Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.
2. Take the batteries out of the remote controller and insert them again and then press the operation button.

4-1-3 Setting an indoor unit address (MAIN/RMC)

1. **Check whether power is supplied or not.**
   - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. **The panel(display) should be connected to an indoor unit to receive option.**
3. **Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.**
4. **Assign an indoor unit address by wireless remote controller.**

   -The initial indoor unit ADDRESS is set as "MAIN : 0, RMC : 0".
   -Set Main and RMC Address only the setting is required.
   -There is no need to assign the indoor unit Main Address if the outdoor unit is addressing automatically.
   The indoor unit Main address will follow the outdoor unit's automatically.
   -Assign 12 digit when setting the indoor unit address.
   -No need to assign SEG4, 5, 8, 10 which are non applicable. Even though those segments are set, they will be ignored.
   -If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.

Option No. : 0AXXXX-1XXXXX-2XXXXX-3XXXXX

<table>
<tr><td>Option</td><td colspan="2">SEG1</td><td colspan="2">SEG2</td><td colspan="2">SEG3</td><td>SEG4</td><td colspan="2">SEG5</td><td colspan="2">SEG6</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="2">MODE</td><td colspan="2">Setting Main address</td><td rowspan="3">RESERVED</td><td colspan="2" rowspan="3">RESERVED</td><td colspan="2">The unit digit of an indoor unit</td></tr>
<tr><td rowspan="4">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td rowspan="2">0</td><td rowspan="2">A</td><td>0</td><td>No Main address</td><td rowspan="2">0~3</td><td rowspan="2">A single digit</td></tr>
<tr><td>1</td><td>Main address setting mode</td></tr>
<tr><td>Option</td><td colspan="2">SEG7</td><td colspan="2">SEG8</td><td colspan="2">SEG9</td><td>SEG10</td><td colspan="2">SEG11</td><td colspan="2">SEG12</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="2" rowspan="3">RESERVED</td><td colspan="2">Setting RMC address</td><td rowspan="3">RESERVED</td><td colspan="2">Group channel(*16)</td><td colspan="2">Group address</td></tr>
<tr><td rowspan="4">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td rowspan="2">1</td><td>0</td><td>No RMC address</td><td rowspan="2">RMC1</td><td rowspan="2">0~2</td><td rowspan="2">RMC2</td><td rowspan="2">0~F</td></tr>
<tr><td>1</td><td>RMC address setting mode</td></tr>
</table>

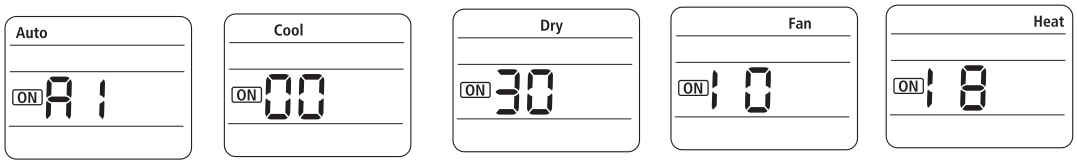
CAUTION

- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.

Example) If you want to set as "MAIN : 3, CHANNEL : 1, RMC : B",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	A	1	-	-	3
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	-	1	-	1	B

assign option codes except SEG 1, 7 which are page options.



4-1-4 Setting an indoor unit installation option (suitable for the condition of each installation location)

1. **Check whether power is supplied or not.**
   - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. **The panel(display) should be connected to an indoor unit to receive option.**
3. **Set the installation option according to the installation condition of an air conditioner.**
   - The default setting of an indoor unit installation option is "02000-100000-200000-300000".
   - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
   - No need to assign SEG3, 6, 9, 10, 11, 16, 21, 22, 23, 24 which are non applicable. Even though those segments are set, they will be ignored.
   - If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.
4. **Set the indoor unit option by wireless remote controller.**

Option No. : 02XXXX-1XXXXX-2XXXXX-3XXXXX

<table>
<tr><td>Option</td><td colspan="2">SEG1</td><td colspan="2">SEG2</td><td>SEG3</td><td colspan="2">SEG4</td><td colspan="2">SEG5</td><td colspan="2">SEG6</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="2">MODE</td><td rowspan="3">RESERVED</td><td colspan="2">Use of external temperature sensor</td><td colspan="2">Use of central control</td><td colspan="2">RPM setting compensation</td></tr>
<tr><td rowspan="3">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td rowspan="3">0. Not used
1. High ceiling mode
2. High ceiling kit
3. Low noise operation mode</td></tr>
<tr><td colspan="2" rowspan="2">0</td><td colspan="2" rowspan="2">2</td><td>0</td><td>Disuse</td><td>0</td><td>Disuse</td></tr>
<tr><td>1</td><td>Use</td><td>1</td><td>Use</td></tr>
<tr><td>Option</td><td colspan="2">SEG7</td><td colspan="2">SEG8</td><td>SEG9</td><td colspan="2">SEG10</td><td colspan="2">SEG11</td><td colspan="2">SEG12</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="2">Use of drain pump</td><td rowspan="5">RESERVED</td><td colspan="2" rowspan="5">RESERVED</td><td colspan="2" rowspan="5">RESERVED</td><td colspan="2">Master / Slave</td></tr>
<tr><td rowspan="5">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td colspan="2" rowspan="3">1</td><td>0</td><td>Disuse</td><td>0</td><td>slave</td></tr>
<tr><td>1</td><td>Use</td><td>1</td><td>master</td></tr>
<tr><td>2</td><td>Use + 3minute delay</td><td></td><td></td></tr>
<tr><td>Option</td><td colspan="2">SEG13</td><td colspan="2">SEG14</td><td colspan="2">SEG15</td><td colspan="2">SEG16</td><td colspan="2">SEG17</td><td colspan="2">SEG18</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="2">Use of external control</td><td colspan="2">Setting the output of external control</td><td colspan="2">S-Plasma ion</td><td colspan="2">Buzzer control</td><td colspan="2">Number of hours using filter</td></tr>
<tr><td rowspan="5">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td colspan="2" rowspan="3">2</td><td>0</td><td>Disuse</td><td>0</td><td>Thermo on</td><td>0</td><td>Disuse</td><td>0</td><td>Use of buzzer</td><td>2</td><td>1000 Hour</td></tr>
<tr><td>1</td><td>ON/OFF Control</td><td rowspan="2">1</td><td rowspan="2">Operation on</td><td rowspan="2">1</td><td rowspan="2">Use</td><td rowspan="2">1</td><td rowspan="2">Non use of buzzer</td><td rowspan="2">6</td><td rowspan="2">2000 Hour</td></tr>
<tr><td>2</td><td>OFF Control</td></tr>
</table>

Option	SEG19		SEG20		SEG21	SEG22	SEG23		SEG24
Explanation	PAGE		Individual control of a remote controller				Motion detect sensor		
	Indication	Details	Indication	Details			Indication	Details	
Indication and Details	3		0 or 1	Indoor 1	RESERVED	RESERVED	0.No Use (Factory Setting) 1.Standard Mode/Auto Set OFF30 Min. 2.Standard Mode/Auto Set OFF60 Min. 3.Standard Mode/Auto Set OFF 120 Min. 4.Standard Mode/Auto Set OFF 180 Min. 5.Premium Mode/ Auto Set OFF30 Min.6.Premium Mode/ Auto Set OFF60 Min. 7.Premium Mode/Auto Set OFF 120 Min. 8.Premium Mode/Auto Set OFF 180 Min.	RESERVED
			2	Indoor 2					
			3	Indoor 3					
			4	Indoor 4					

▶ If you input a number other than 0~4 on the individual control of the indoor unit(SEG 20), the indoor is set as "Indoor 1".

Example) If you want to set as "Exterior temperature sensor : USE, External control : USE, Number of hours using filer : 2000hr",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	-	1	0	-
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	0	-	-	-	0
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	1	0	-	0	6
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	0	-	-	-	-

assign option codes except SEG 1, 7, 13, 19 which are page options.

4-1-5 Changing a particular option

You can change each digit of set option.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		The option mode you want to change		The tens' digit of an option SEG you will change		The unit digit of an option SEG you will change		The changed value	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		Option mode	0~F	Tens' digit of SEG	0~9	Unit digit of SEG	0~9	The changed value	0~F

NOTE

- When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
- When changing a digit of indoor unit installation option, set the SEG3 as '2'.

Ex) When setting the 'buzzer control' into disuse status.

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Explanation	PAGE	MODE	The option mode you want to change	The tens' digit of an option SEG you will change	The unit digit of an option SEG you will change	The changed value
Indication	0	D	2	1	7	1

4-1-6 Option code for each model

Model	OPTION CODE
ACN26FBJDEH	018077-1760B6-271A23-370210
ACN35FBJDEH	018077-1760D8-272328-370210
ACN52FBJDEH	018077-1760F9-273438-370210

4-2 Item to check before diagnosis

- If an error occurs during the operation, one or more LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

4-2-1 Display Error mode

Abnormal conditions	LED lamp display					Remarks
	White					
	⏻	✱	⏲	✤	⁂	
Power reset	◑	X	X	X	X	
Error of temperature sensor in the indoor unit (Open/Short)	X	X	◑	X	X	
Error of heat exchanger sensor in the indoor unit	◑	X	◑	X	X	
Error of the outdoor temperature sensor Error of the condensor temperature sensor Error of the discharge temperature sensor	◑	X	X	◑	X	
1. Indoor and outdoor unit time out 2. Abnormal data reception more than 60 packet 3. Indoor unit is not connected 4. Communication error between the outdoor unit Main-Inverter Micom(After 1 minute of Main-Inverter detection)	X	X	◑	◑	X	1. Indoor unit error (Display is unrelated with operation) 2. Outdoor unit error (Display is unrelated with operation)

● On ◑ Flickering X Off

❊ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

Display Error mode(Cont.)

Abnormal conditions	LED lamp display					Remarks
	White					
	⏻	*💧	🕒	🌀	⁘	
Communication error between indoor units	X	X	◑	◑	◑	
[Self diagnosis]Power voltage detection between indoor and outdoor unit communication cable [Self diagnosis]Outdoor unit refrigerant leakage(Gas leak) [Self diagnosis]Outdoor fan restriction error [Inverter]Inverter compressor operation failure [Inverter] DC peak error [Inverter]DC Link voltage 150V or less, 410V or more [Inverter] Compressor rotation error [Inverter]Electric current error [Inverter]DC Link sensor error [Inverter]EEPROM READ/WRITE error [Inverter]Inverter zerocrossing error Setting the outdoor unit capacity option error	X	X	X	◑	◑	
Detection of the float switch	X	X	◑	X	◑	
Error of setting option switches for optional accessories	X	X	◑	X	◑	
EEPROM error	◑	X	◑	◑	X	
EEPROM option error	◑	◑	◑	◑	◑	
VIRUS DOCTOR no feedback Error	X	X	X	X	◑	

● On ◑ Flickering X Off

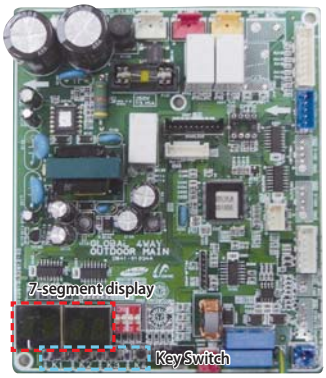
❊ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

○ : On ◑ : Blink X : Off

4-2-2 Test run mode and View mode

■ Display Option Key

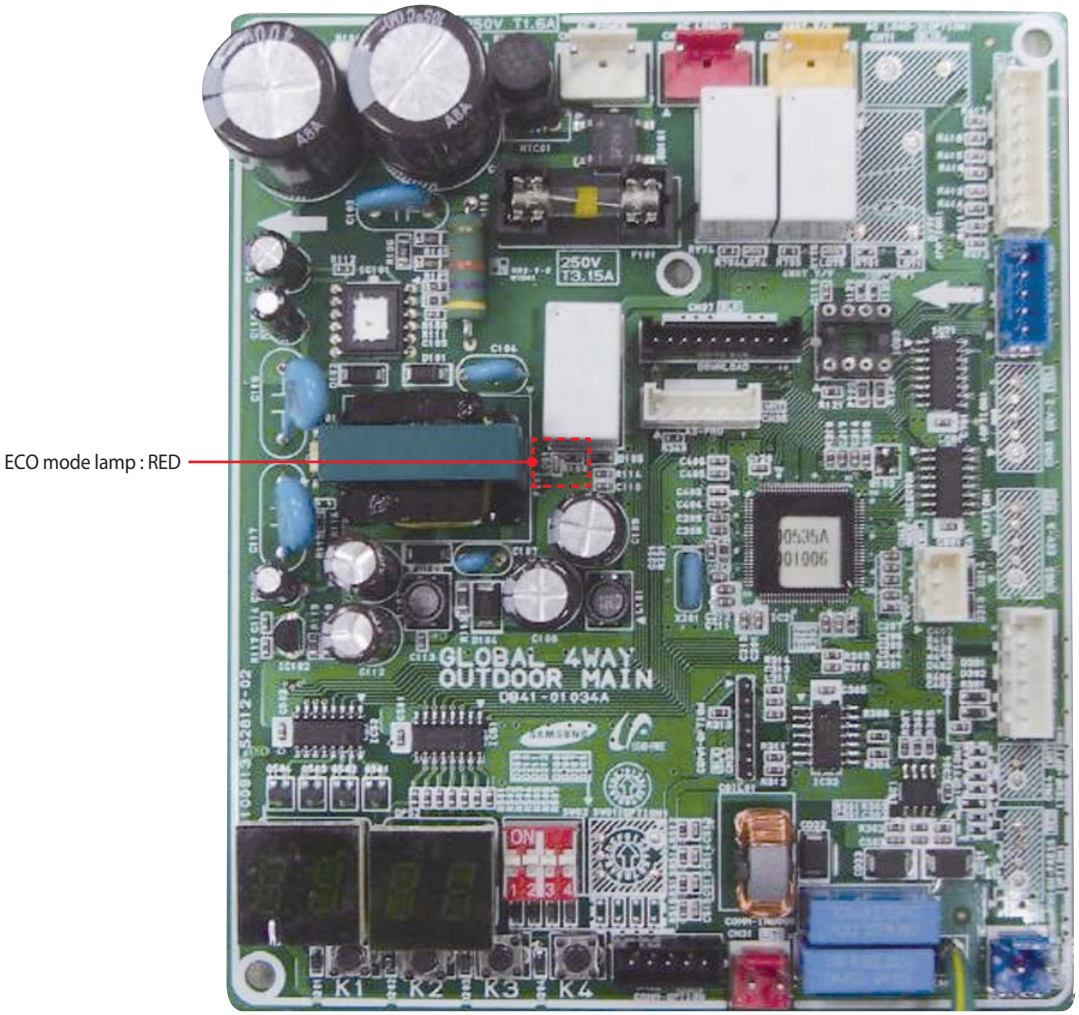
KEY	KEY operation	7-segment display
K1	Press once : Heating test run	"" "1" "BLANK" "BLANK"
	Press twice : Defrost test run	"" "3" "BLANK" "BLANK"
K2	Press once : Cooling test run	"" "2" "BLANK" "BLANK"
K3	Reset	
K4	View mode	Refer to View mode display



■ VIEW mode display

Number of press	Display contents	Display				Units
		Segment 1	Segment 2	Segment 3	Segment 4	
1	Order frequency	1	Three digits	Two digits	One digit	Hz
2	Current frequency	2	Three digits	Two digits	One digit	Hz
3	Number of indoor heat exchangers	3	Three digits	Two digits	One digit	Hz
4	Out sensor	4	Two digits	One digit	First decimal	℃
5	Discharge sensor	5	Two digits	One digit	First decimal	℃
6	OLP sensor	6	Two digits	One digit	First decimal	℃
7	Cond sensor	7	Two digits	One digit	First decimal	℃
8	Current	8	Two digits	One digit	First decimal	C
9	Fan RPM	9	Three digits	Two digits	One digit	rpm
10	Target discharge temperature	A	Three digits	Two digits	One digit	℃
11	EEV	B	Three digits	Two digits	One digit	step
12	Total indoor heat exchanger capacity	C	Two digits	One digit	First decimal	kW
13	Protection control	D	0 : air conditioning 1 : heating	**Protection control** 0 : no protection control 1 : freezing 2 : non-stop defrosting 3 : over-load 4 : discharge	**Frequency state** 0 : Normal 1 : Hold 2 : Down 3 : Up_limit 4 : Sown_limit	-
14	Group address of indoor heat exchanger	E	Three digits	Two digits	One digit	-
15	S/W check	F	-	-	-	-

4-2-3 ECO mode(Power save)



Mode	Display				ECO mode lamp
	Segment 1	Segment 2	Segment 3	Segment 4	RED color
ECO mode	"BLANK"	"BLANK"	"BLANK"	"BLANK"	On
Exit ECO mode	Press K3 to exit				Off

4-2-4 Troubleshooting for outdoor unit

If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Error Code	Meaning	Remarks
1	**E201**	Unit quantity miss matching between indoor and outdoor.	Check indoor quantity setting in outdoor (Refer to page 17.)
2	**E202**	Abnormal state, no communication between Indoor and Outdoor Main PCB	Check electrical connection and setting
3	**E203**	1min. Time out of communcation error(Main Inverter)	Check electrical connection and setting
4	**E221**	Outdoor temp sensor error	Check Outdoor sensor Open/Short
5	**E231**	Cond. temp sensor error	Check Cond. sensor Open/Short
6	**E251**	Discharge temp sensor error	Check Discharge sensor Open/Short
7	**E320**	OLP Sensor Error	Check OLP sensor Open/Short
8	**E403**	Detection of Outdoor Freezing when Comp. Stop	Check Outdoor Cond.
9	**E404**	Protection of Outdoor Overload when Comp. Stop	Check Comp. when it start
10	**E416**	Discharge temperature of a compressor in an outdoor unit is overheated.	
11	**E440**	Heating operation is not available since the outdoor air temperature is over 30°C.	Heating
	E441	Cooling operation is not available since the outdoor air temperature is lower than -5°C.	Cooling
12	**E458**	Outdoor unit BLDC Fan 1 or Fan 2 error	FAN1 error
	E475		FAN2 error
13	**E461**	Comp. Starting error	
14	**E462**	Primary Current Trip error	
15	**E463**	Over current trip / PFC over current error	Check OLP sensor
16	**E464**	IPM(IGBT Module) Over Current(O.C)	
17	**E465**	Comp. Over load error	
18	**E466**	DC-Link voltage under/over error	Check AC Power or DC_Link voltage
19	**E467**	Comp. wire missing error	Check Comp. wire
20	**E468**	Current sensor error	Check Outdoor Inverter PBA
21	**E471**	Outdoor EEPROM error	Check Outdoor EEPROM date
22	**E474**	IPM(IGBT Module) or PFCM Temperature sensor Error	Check Outdoor Inverter PBA
23	**E484**	PFC Overload Error	Check Outdoor Inverter PBA
24	**E500**	IPM is over heated.	Check Outdoor Inverter PBA
25	**E554**	GAS Leak error	Check indoor and outdoor unit model
26	**E556**	Capacity miss match between indoor and outdoor	Check indoor and outdoor unit model

4-2-5 Wired remote controller

- If an error occurs, ( ) icon will be displayed on the wired remote controller.
- Press the Test button to see the error code.

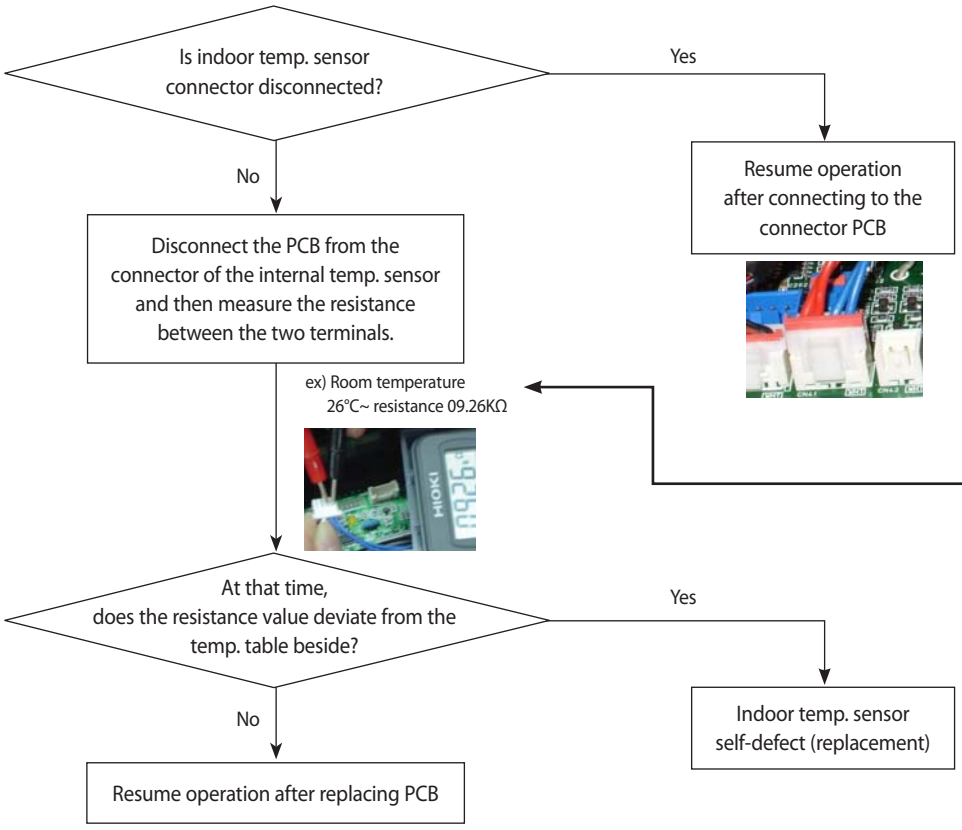
Error mode	Contents	Measure	Product operation in error condition	Error type
			Outdoor unit/ Compressor/Indoor unit	
101	Indoor unit communication error	Check the communication cable of indoor unit. Check the DC output voltage at the communication terminal	Operation Off	Communication error
102	Indoor unit/outdoor unit communication time-out error: errors in more than 6 packets	Check the outdoor communication cable connection. Check DC output voltage and the communication terminal	Operation Off	Communication error
121	Indoor temperature sensor (open/ short error)	Check indoor unit room temperature sensor. Check indoor unit PCB connector CN41 (White)	Operation Off	Indoor sensor error
122	Indoor unit Eva In sensor (Open/Short)	Check indoor unit pipe sensor. Check indoor PCB connector CN41(White)	Operation Off	Indoor sensor error
128	Indoor unit Eva In sensor disconnection	Check the disconnection of indoor unit pipe sensor	Operation Off	Indoor sensor error
143	Remocon Option for MDS is set for ON, but MDS kit is disconnected or the signals for sensors are abnormal.	Check the wire connection Check the MDS kit Check the main PBA	Normal operation (without MDS kit)	MDS kit Error
153	Indoor floating switch secondary detection	Check indoor unit float sensor. Check indoor PCB connector CN5 (black)	Operation Off	Self diagnostic error
202	Indoor/outdoor communication error (1 min)	Check the communication connection between indoor and outdoor units. Check the power line and communication cable connection status	Operation Off	Communication error
203	Communication error between indoor/outdoor INV↔MAIN MICOM (1 min)	Check MAIN MICOM Check INVERTER MICOM	-	Communication error
221	Outdoor temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
230	COND temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
251	[Inverter] Emission temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
416	Emission temperature excessively high	No error (DISCHARGE temperature control)	-	Outdoor unit protection control error
440	Heating operation blocked	Check the operation setting state Check temperature sensor	Operation Off	Self diagnostic error
441	Cooling operation blocked	Check the operation setting state Check temperature sensor	Operation Off	Self diagnostic error
458	Outdoor fan 1 error	Check input power connection status Check the connection status between the motor and outdoor unit PCB Check indoor/outdoor fuse	Operation Off	Self diagnostic error
461	[Inverter] Compressor startup error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
462	[Inverter] Total current error/PFC over current error	Check the input power Check the coolant charging status Check the normal operation of outdoor fan	Operation Off	Outdoor unit protection control error

Wired remote controller (cont.)

Error mode	Contents	Measure	Product operation in error condition	Error type
			Outdoor unit/ Compressor/Indoor unit	
464	[Inverter] IPM over current error	Check coolant charging Check the compressor connection status and normal operation Check the obstacles around the indoor and outdoor units Check whether the outdoor unit service valve is open Check whether the indoor/outdoor installation pipe/ wiring are correct	Operation Off	Outdoor unit protection control error
465	Compressor V limit error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
466	DC LINK over/low voltage error	Check input power Check AC power connection	Restart in 3 minutes	Outdoor unit protection control error
467	[Inverter] Compressor rotation error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
468	[Inverter] Current sensor error	Check EEPROM DATA Check the normal operation of PCB	Operation Off	Outdoor unit protection control error
469	[Inverter] DC LINK voltage sensor error	Check the input power connection Check the status of RY21 and R200 in the INVERTER PCB	Operation Off	Outdoor unit protection control error
471	[Inverter] OTP error	Check EEPROM DATA Check the normal operation of PCB	Operation Off	Outdoor unit protection control error
472	AC ZERO CROSSING SIGNAL OUT error	Check the input power status	Operation Off	Outdoor unit protection control error
473	Compressor LOCK error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
475	Outdoor fan 2 error	Check the input power connection status Check the connection status of the motor and the outdoor unit PCB Check the indoor/outdoor unit fuse	Operation Off	Self diagnostic error
554	Gas leak error	Check the coolant charging status Check the indoor EVA sensor Check if the outdoor unit service value is open Check that the indoor/outdoor installation pipe/wiring are correct	Operation Off	Self diagnostic error
556	Capacities not matched	Check the option code of the indoor unit	Operation Off	Outdoor unit protection control error
601	Communication error between the indoor unit and wired remote controller	Check the connection wire between the indoor unit and the wired remote controller	Normal operation	Wired remote controller error
602	Communication error between the Master and Slave wired remote controllers	Check the option switch for defining the Master and Slave (only one Master and one Slave can exist)	Normal operation	Wired remote controller error
606	COM1/COM2 cross installation error	Check that wired remote controller is connected to the COM2 terminal of the indoor unit	Normal operation	Wired remote controller error
EA	Wired remote controller COM2 option setting error	Check that Com1, Com2 setting DIP switch is set to Com2	Normal operation	Wired remote controller error

4-3-1 Indoor temperature sensor (open/short)

Indoor unit display	X(Operation) X(Defrost) ◑(Reservation) X(Fan) X(VIRUS DOCTOR)
Criteria	In case of disconnection or short-circuit of the indoor temperature sensors
Cause of problem	Disconnection or short-circuit of the relevant sensors

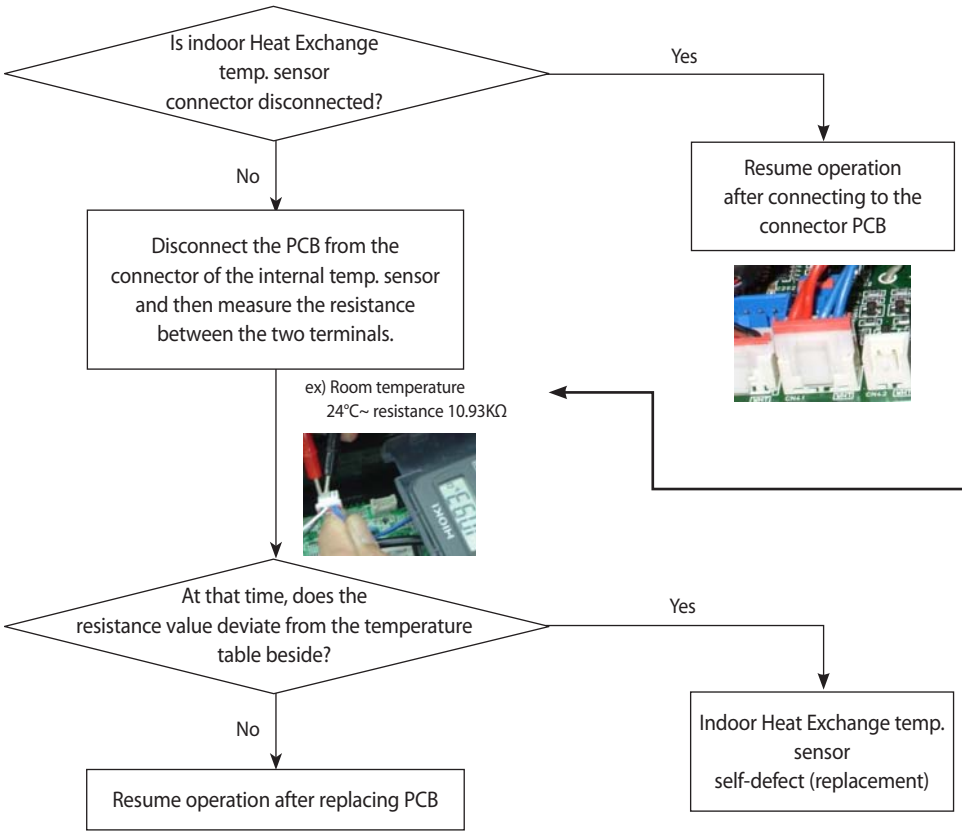


<Temperature sensor resistance values>

Current Temp. (°C)	Resistance (KΩ)
40	5.800
35	6.900
30	8.300
25	10.00
20	12.10
15	14.70
10	18.00
5	22.00
0	28.30
-5	33.90
-10	42.30

4-3-2 Indoor Heat Exchange temperature sensor (open/short)

Indoor unit display	◑(Operation) X(Defrost) ◑(Reservation) X(Fan) X(VIRUS DOCTOR)
Criteria	In case of disconnection or short-circuit of the heat exchanger of indoor temperature
Cause of problem	Disconnection or short-circuit of the relevant sensors

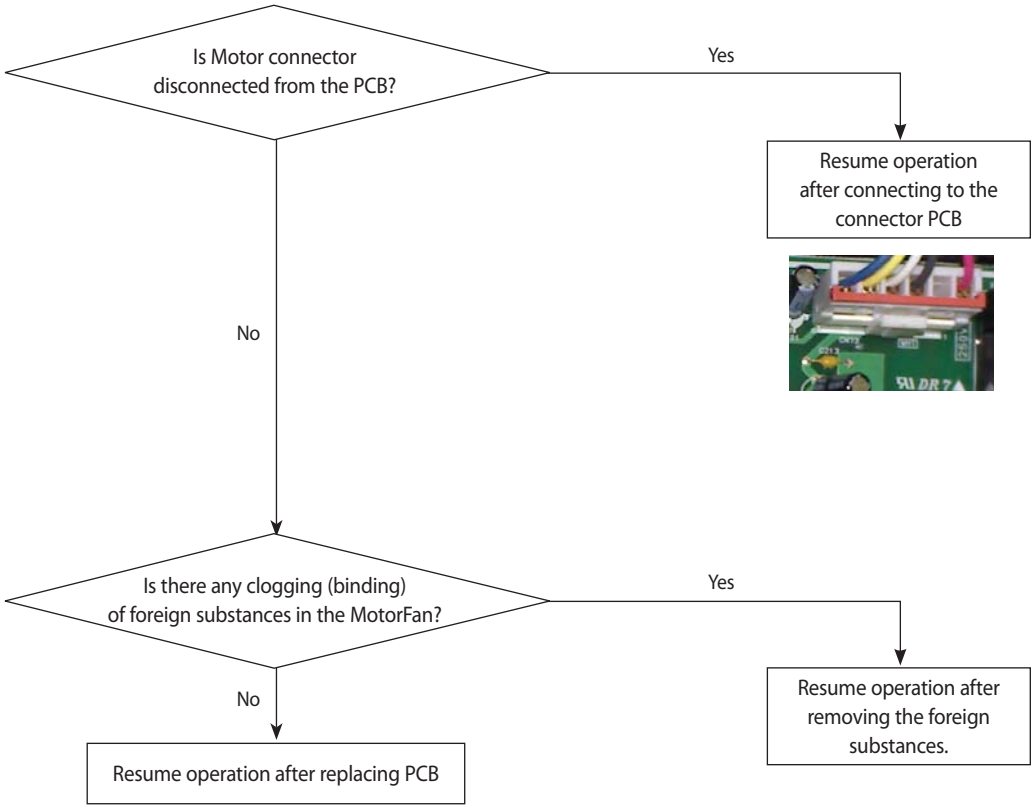


<Temperature sensor resistance values>

Current Temp. (℃)	Resistance (KΩ)
40	5.800
35	6.900
30	8.300
25	10.00
20	12.10
15	14.70
10	18.00
5	22.00
0	28.30
-5	33.90
-10	42.30

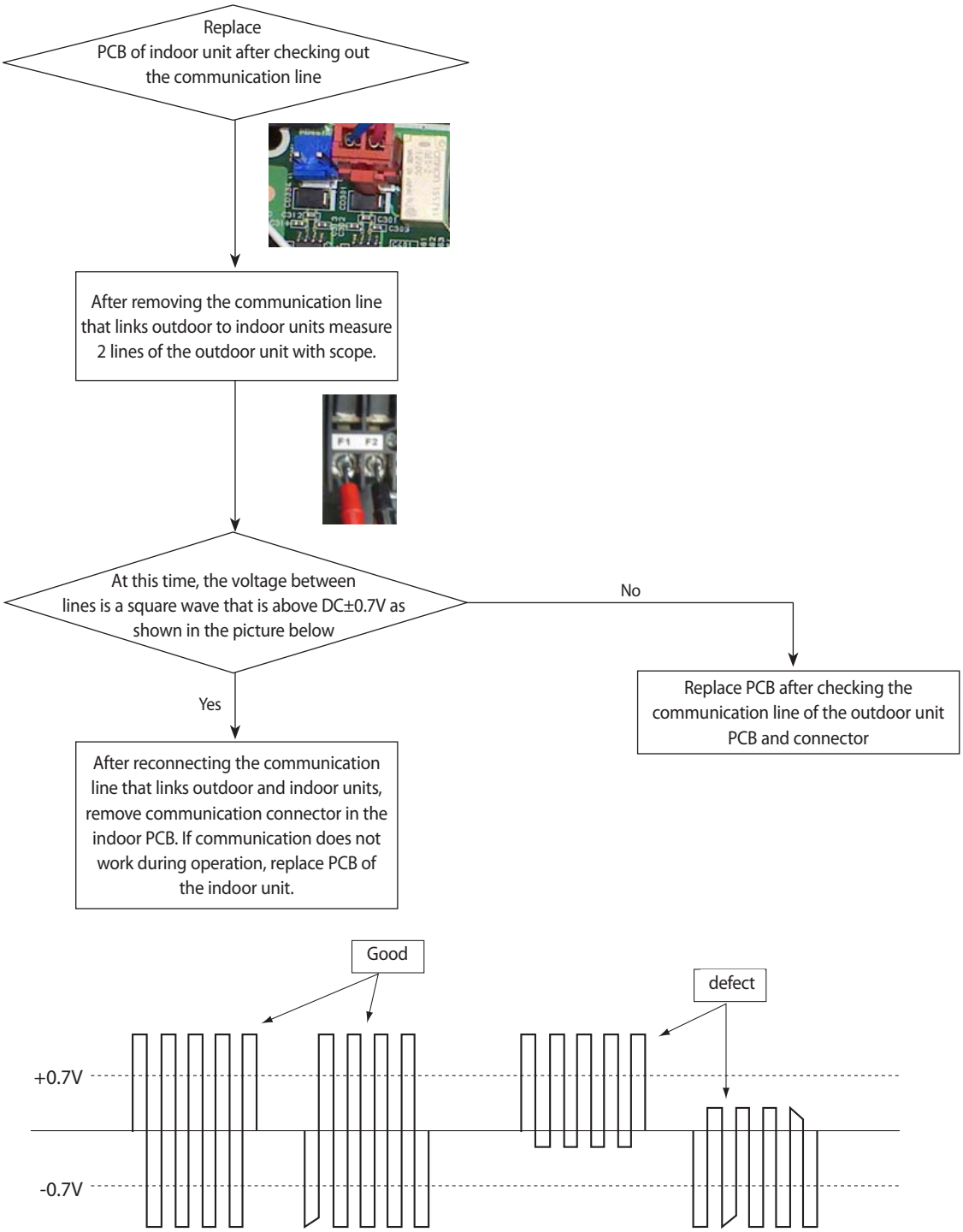
4-3-3 Indoor Fan error

Indoor unit display	X(Operation) X(Defrost) X(Reservation) ◑(Fan) X(VIRUS DOCTOR)
Criteria	Indoor fan being non-operative/ stop after excessive high speed
Cause of problem	Check for motor connector disconnect/ check motor fan fastening



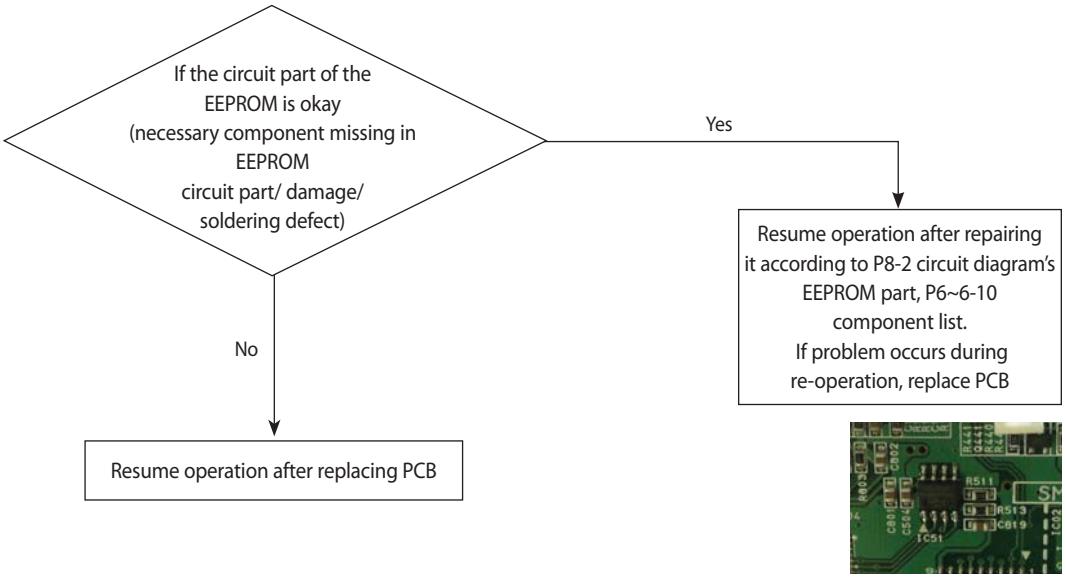
4-3-4 Communication error after completion of tracking

Indoor unit display	X(Operation) X(Defrost) ◑(Reservation) ◑(Fan) X(VIRUS DOCTOR)
Criteria	If communication between indoor and outdoor units has been blocked for 2 minutes during operation
Cause of problem	Communication error between indoor and outdoor unit



4-3-5 EEPROM circuit part defect

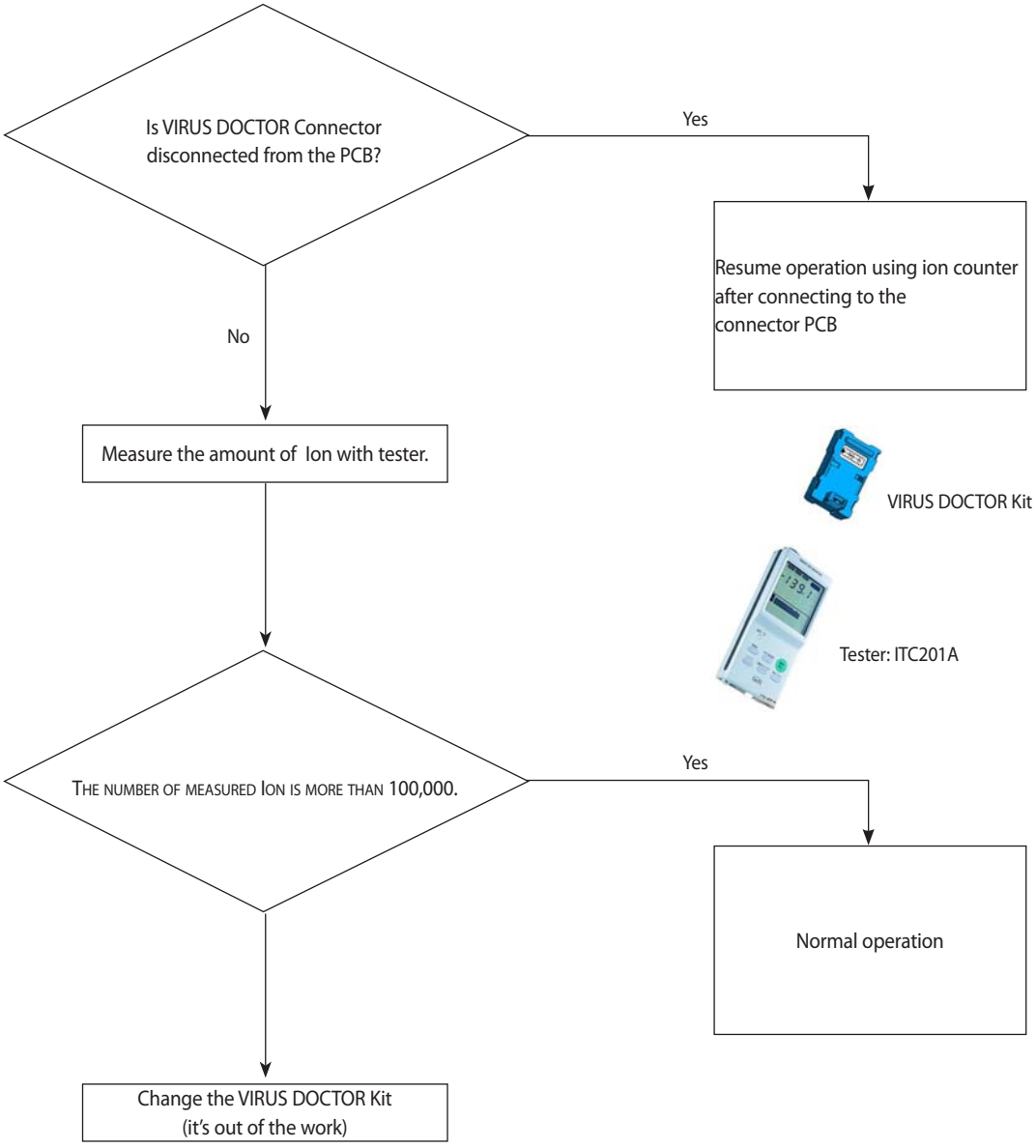
Indoor unit display	◑(Operation) X(Defrost) ◑(Reservation) ◑(Fan) X(Filter)
Criteria	EEPROM circuit part defect
Cause of problem	EEPROM component defect/ necessary component missing in EEPROM circuit part/ damage/ soldering



4-3-6 VIRUS DOCTOR(Micro Plasmalon) error

Indoor unit display	◑(VIRUS DOCTOR) X(Fan) X(Reservation) X(Defrost) X(Operation)
Criteria	VIRUS DOCTOR non-operation
Cause of problem	Check for VIRUS DOCTOR connector disconnect

● On ◑ Flickering X Off

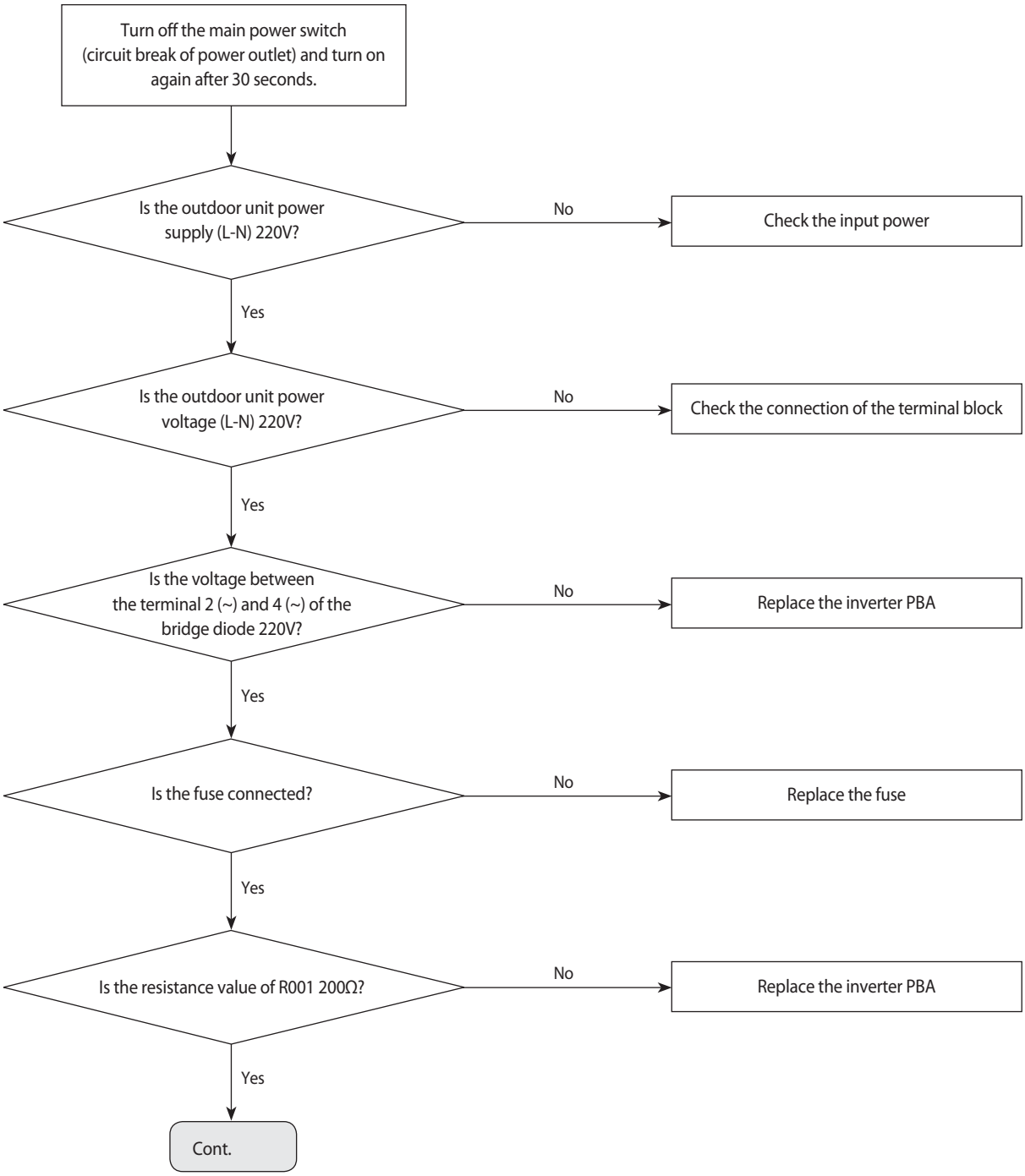


4-3-7 Outdoor unit is not powered on – Initial diagnosis

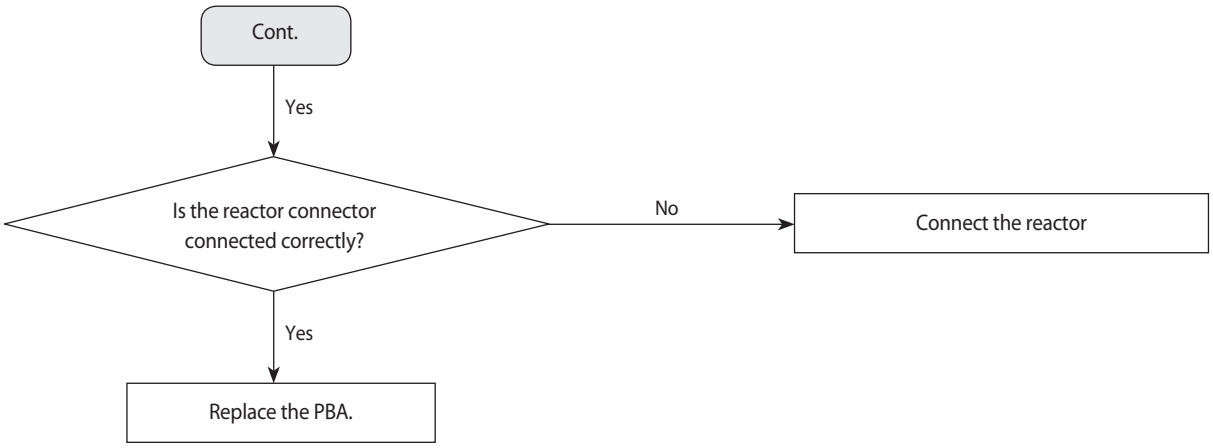
1. Check items

1) Is the power supply voltage 220V?
2) Is the AC power connected correctly?
3) Are the LEDs in the main PCB and inverter PCB of the outdoor unit ON?
4) Is the input power voltage of the indoor unit 220V?
5) Is the wired remote controller connected correctly?

2. Check procedure



Outdoor unit is not powered on – Initial diagnosis (cont.)



4-4 Troubleshooting by symptoms

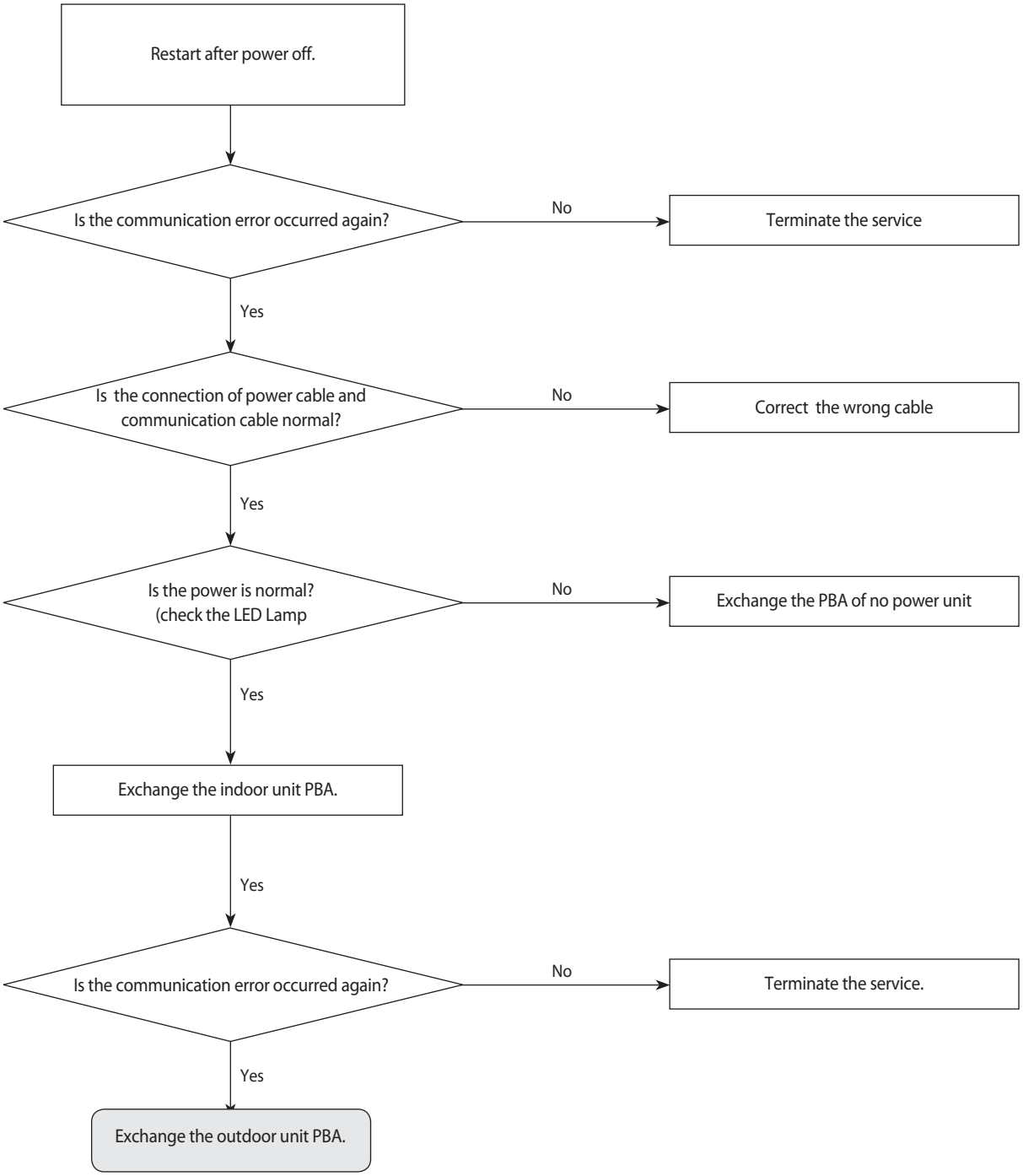
4-4-1 Communication error

1. 1.Checklist :

1) Is the cable between the indoor unit and outdoor unit connected correctly?

2) Isn't the power cable and communication cable cross?

2. Troubleshooting procedure

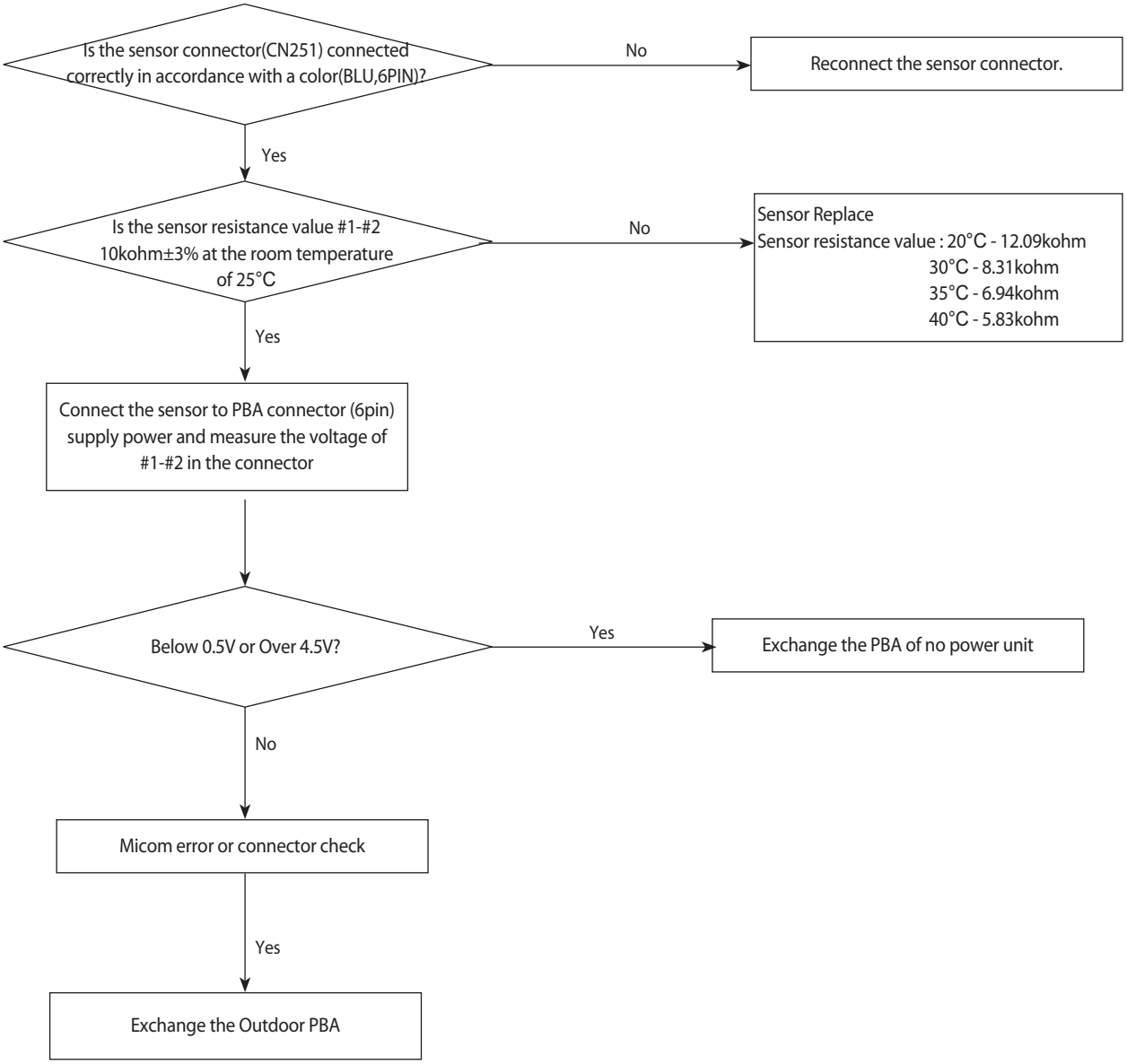


4-4-2 Outdoor temperature sensor error

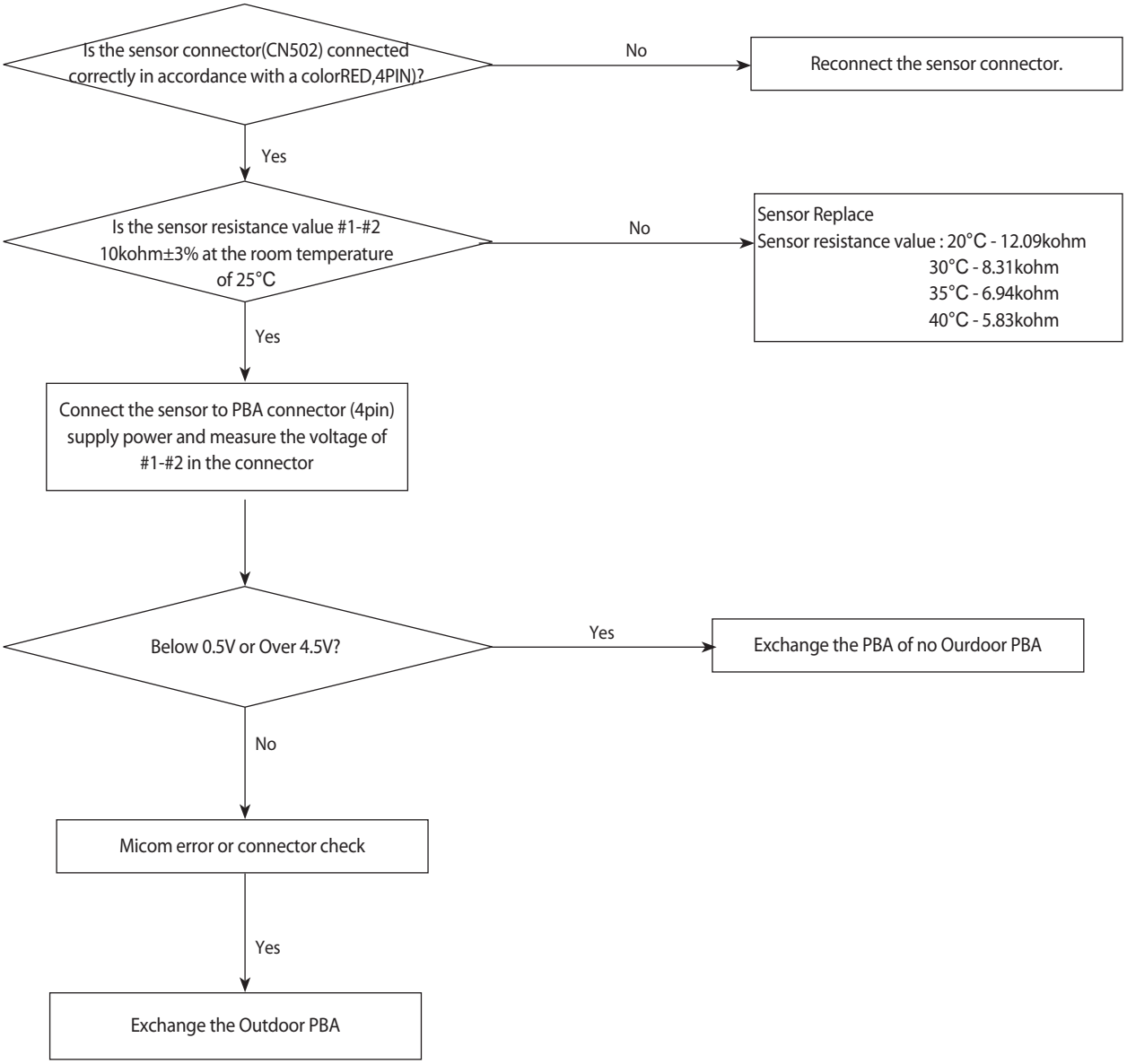
1. 1.Checklist :

1) Is the cable between the indoor unit and outdoor unit connected correctly?
2) Is the sensor placed correctly?
3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
4) Is the resistance value of sensor connection pull-up correct?

4-4-2-1. Troubleshooting procedure (PF2)



4-4-2-2. Troubleshooting procedure (PF3)

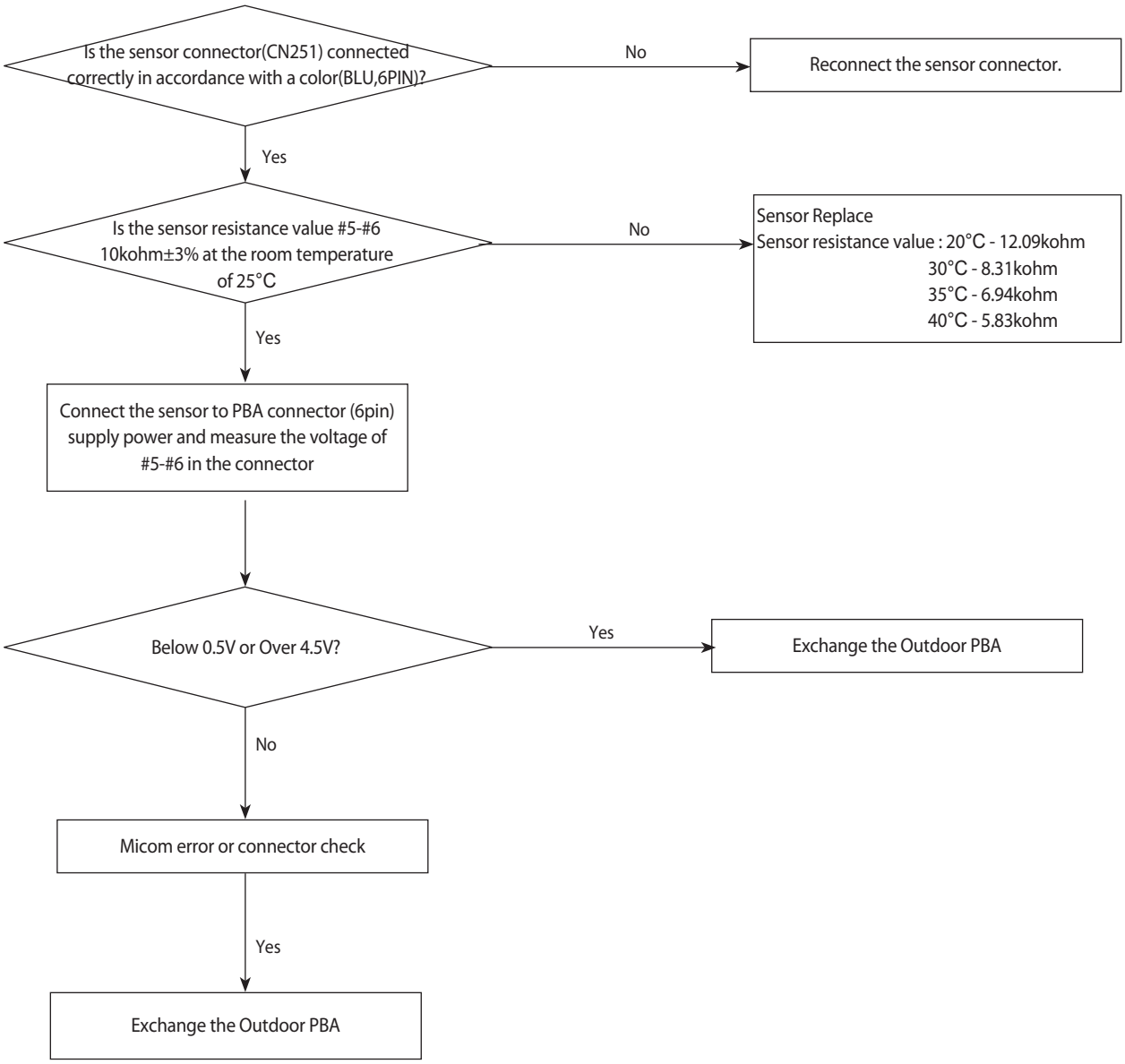


4-4-3 Outdoor Coil temperature sensor error

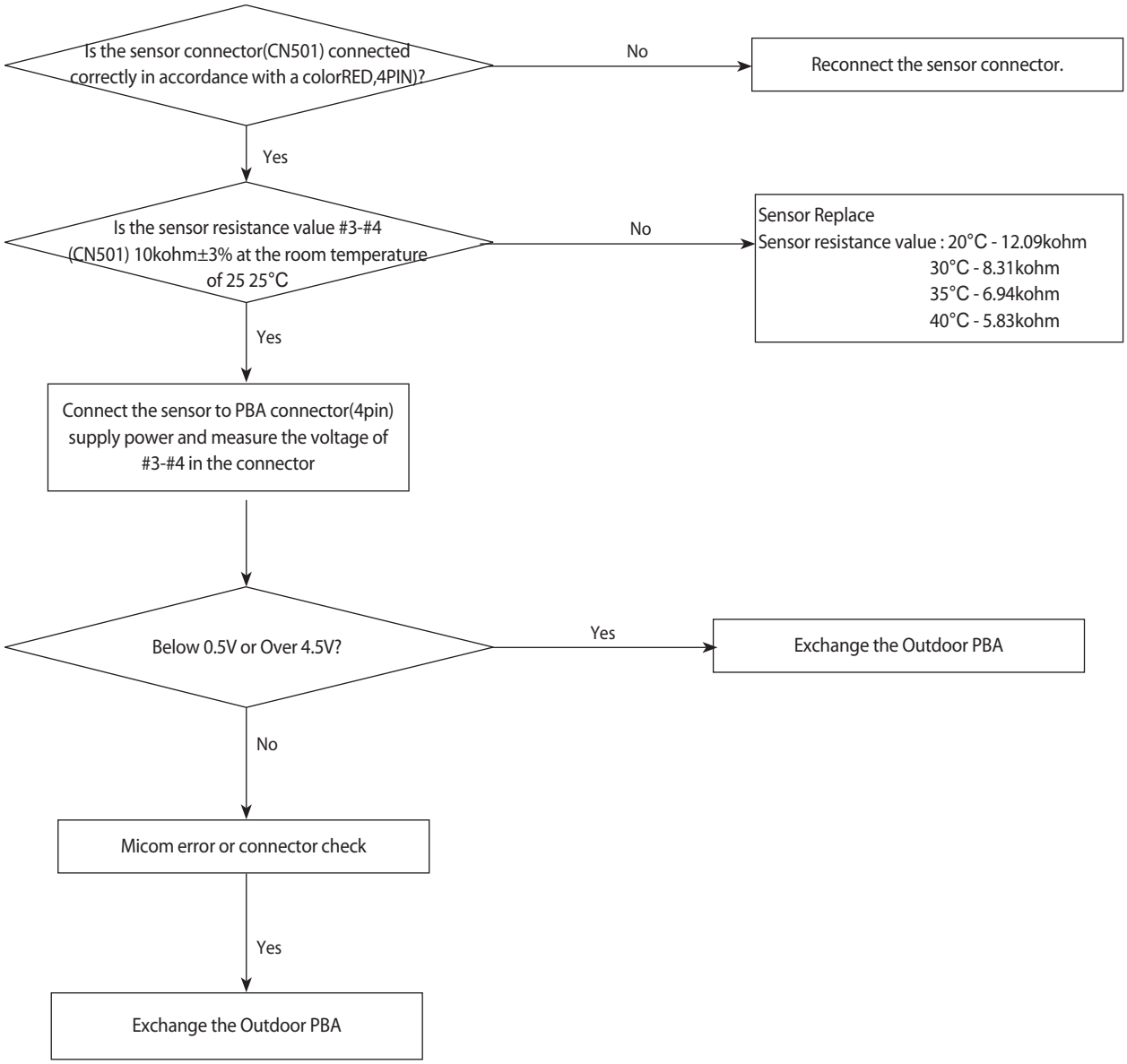
1.Checklist :

1) Is the sensor connected correctly?
2) Is the sensor placed correctly?
3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
4) Is the resistance value of sensor connection pull-up correct?

4-4-3-1. Troubleshooting procedure (PF2)



4-4-3-2. Troubleshooting procedure (PF3)

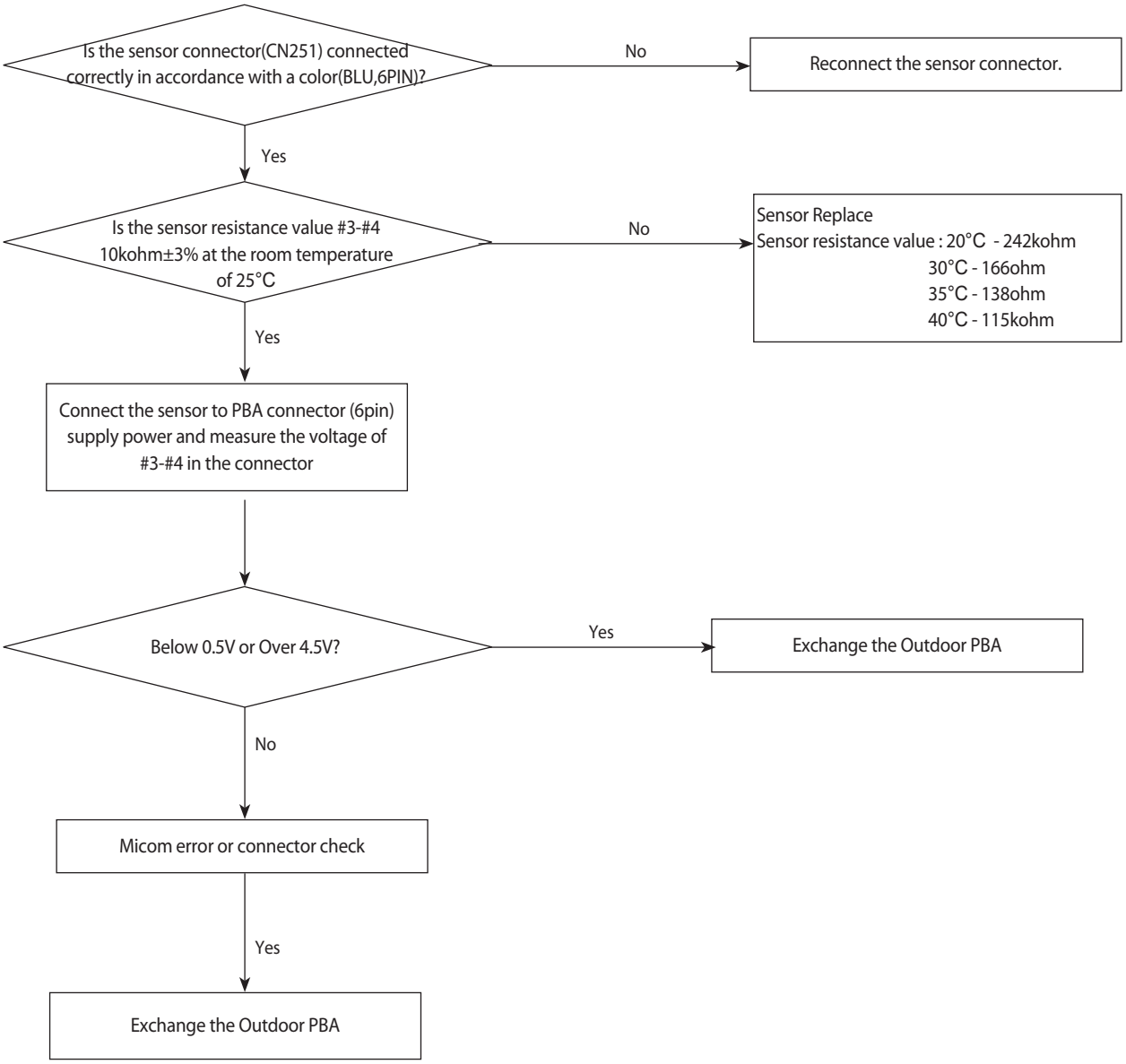


4-4-4 Outdoor Discharge temperature sensor error

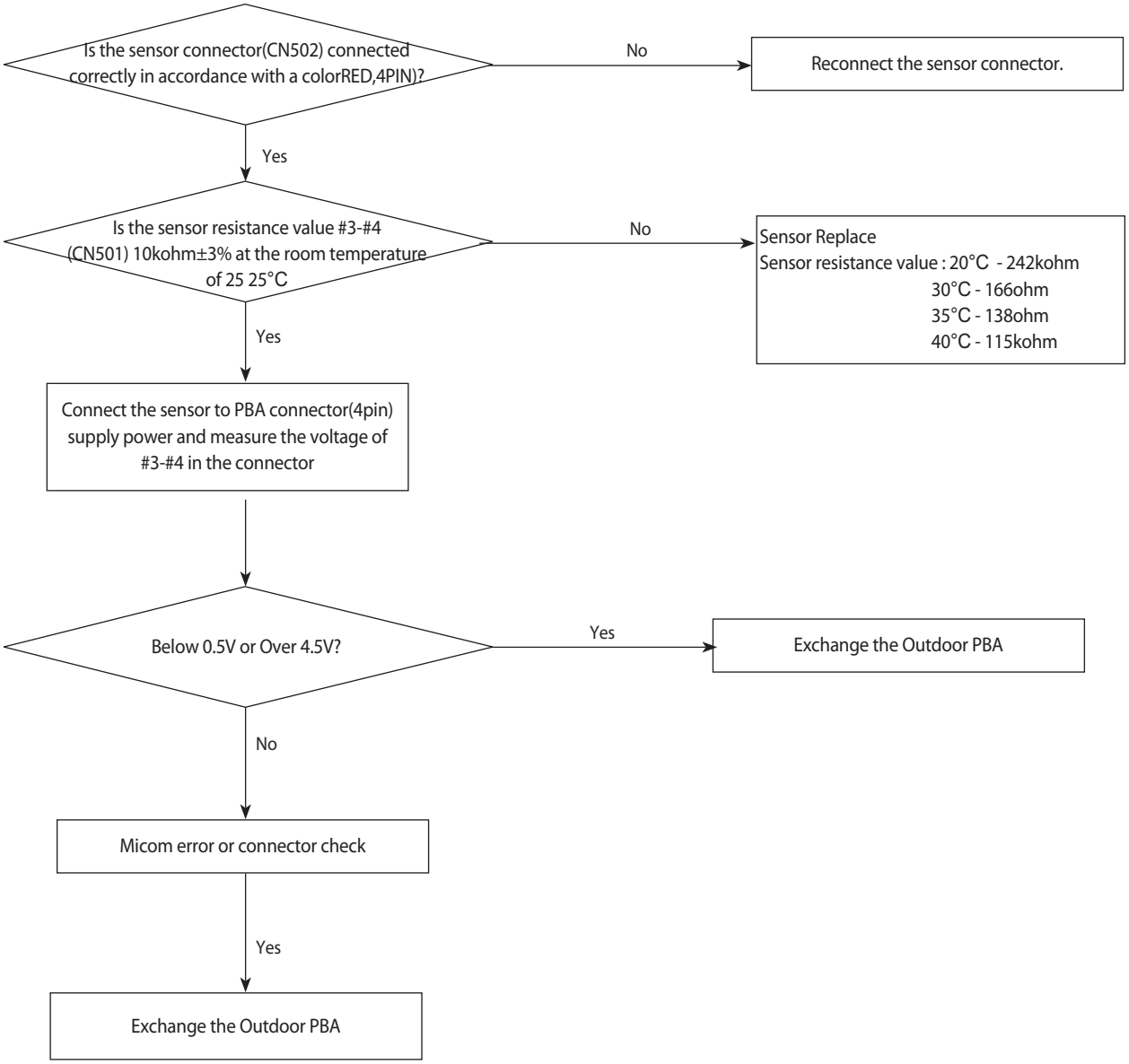
1.Checklist :

1) Is the sensor connected correctly?
2) Is the sensor placed correctly?
3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
4) Is the resistance value of sensor connection pull-up correct?

4-4-4-1. Troubleshooting procedure (PF2)



4-4-4-2. Troubleshooting procedure (PF3)

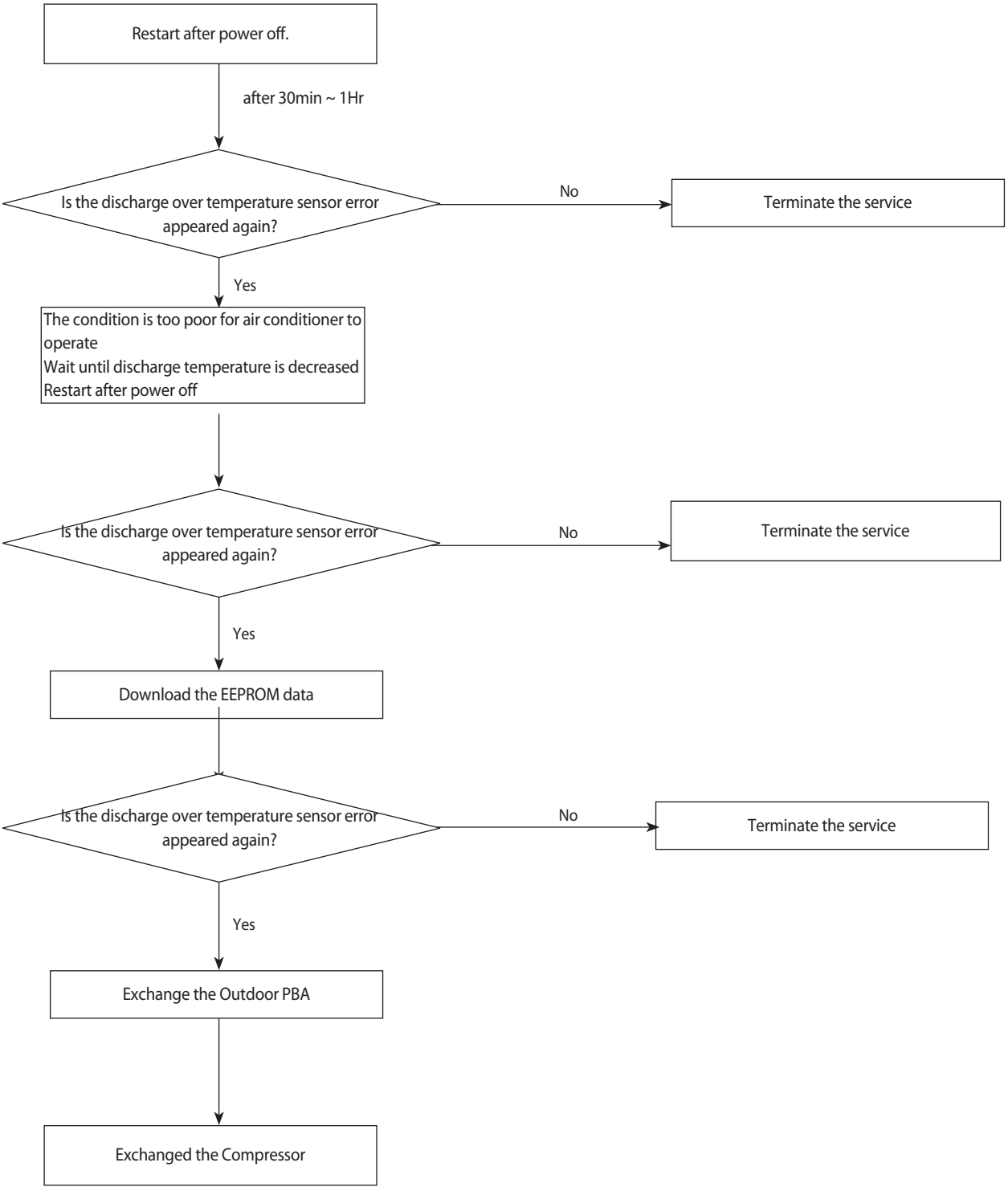


4-4-5 Outdoor Discharge over temperature error

1.Checklist :

1) Check the discharge temperature in the outdoor unit
2) Check the compressor locking or gas leak
3) 3) Download the EEPROM data

2. Troubleshooting procedure

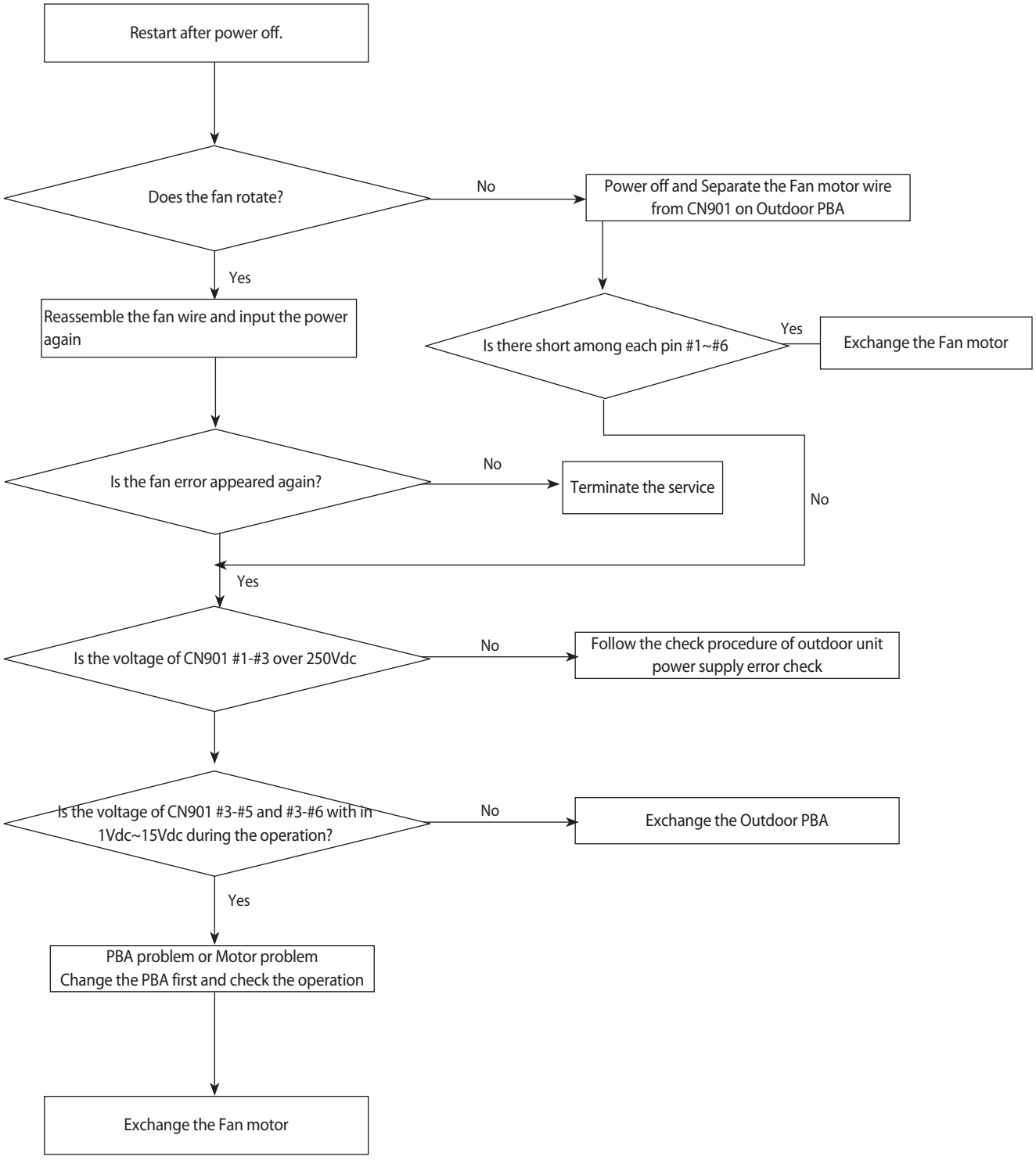


4-4-6 Outdoor Fan motor error

1.Checklist :

1) Are the input power voltage and the power connection correct?
2) Is the motor wire connected to the outdoor PBA correctly?
3) Is there no assembly error or none-assembly in the terminal of motor wire connector?
4) Is there no obstacle at the surrounding of motor and propeller?

2. Troubleshooting procedure

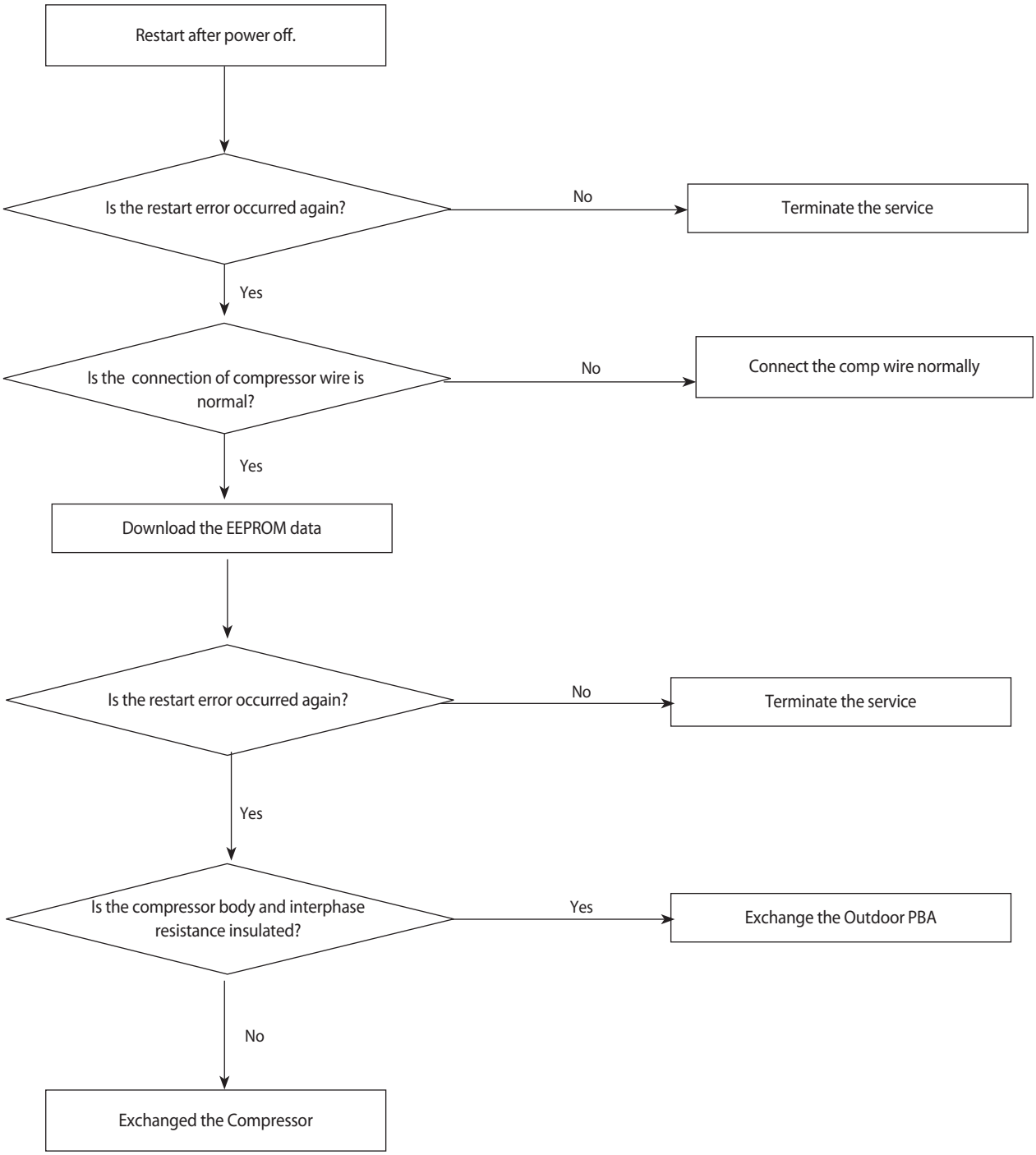


4-4-7 Compressor starting error

1.Checklist :

1) Is the connection of cable for the compressor?
2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

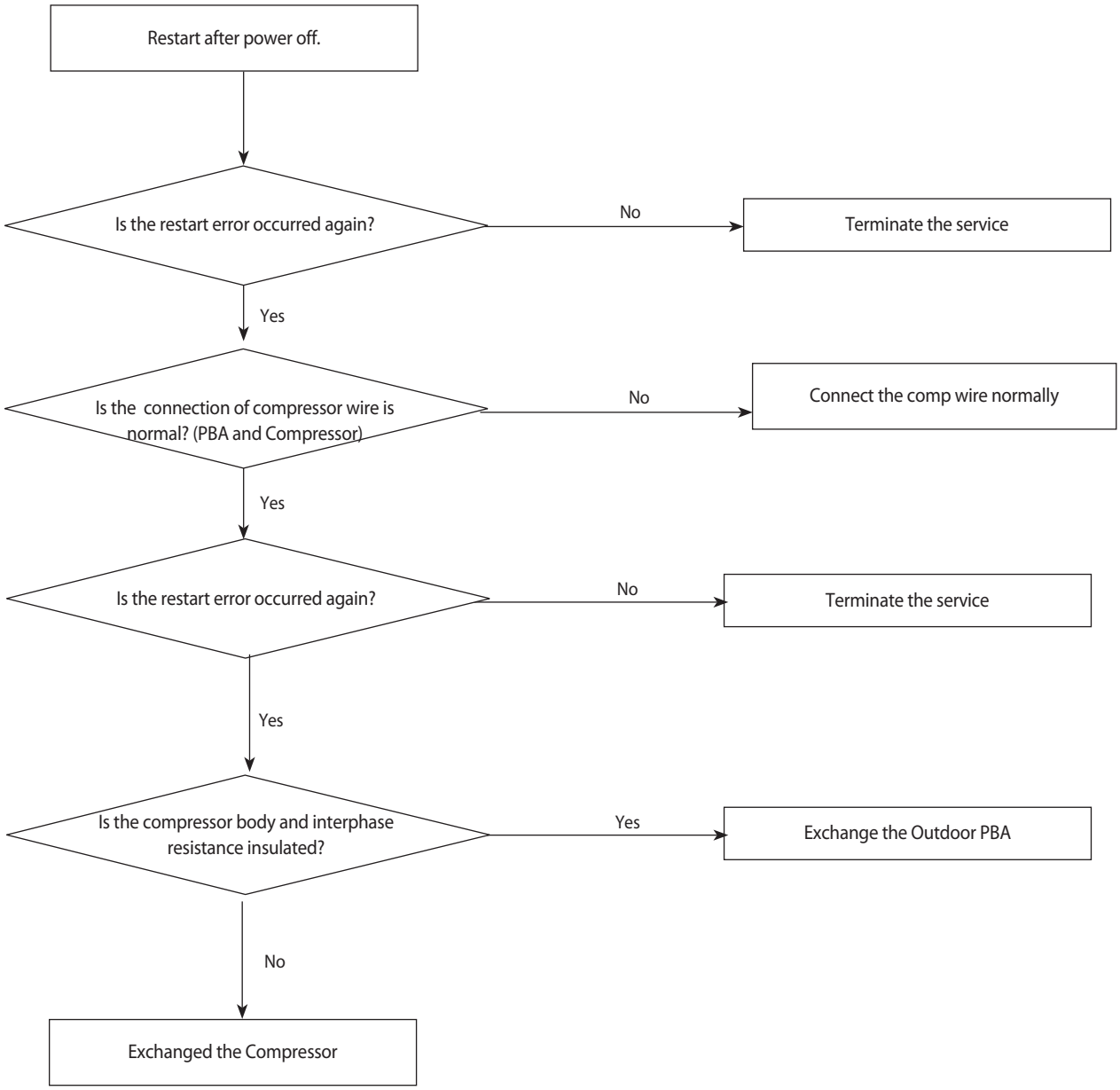


4-4-8 Compressor wire missing error/rotation error

1.Checklist :

1) Is the connection of cable for the compressor?
2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

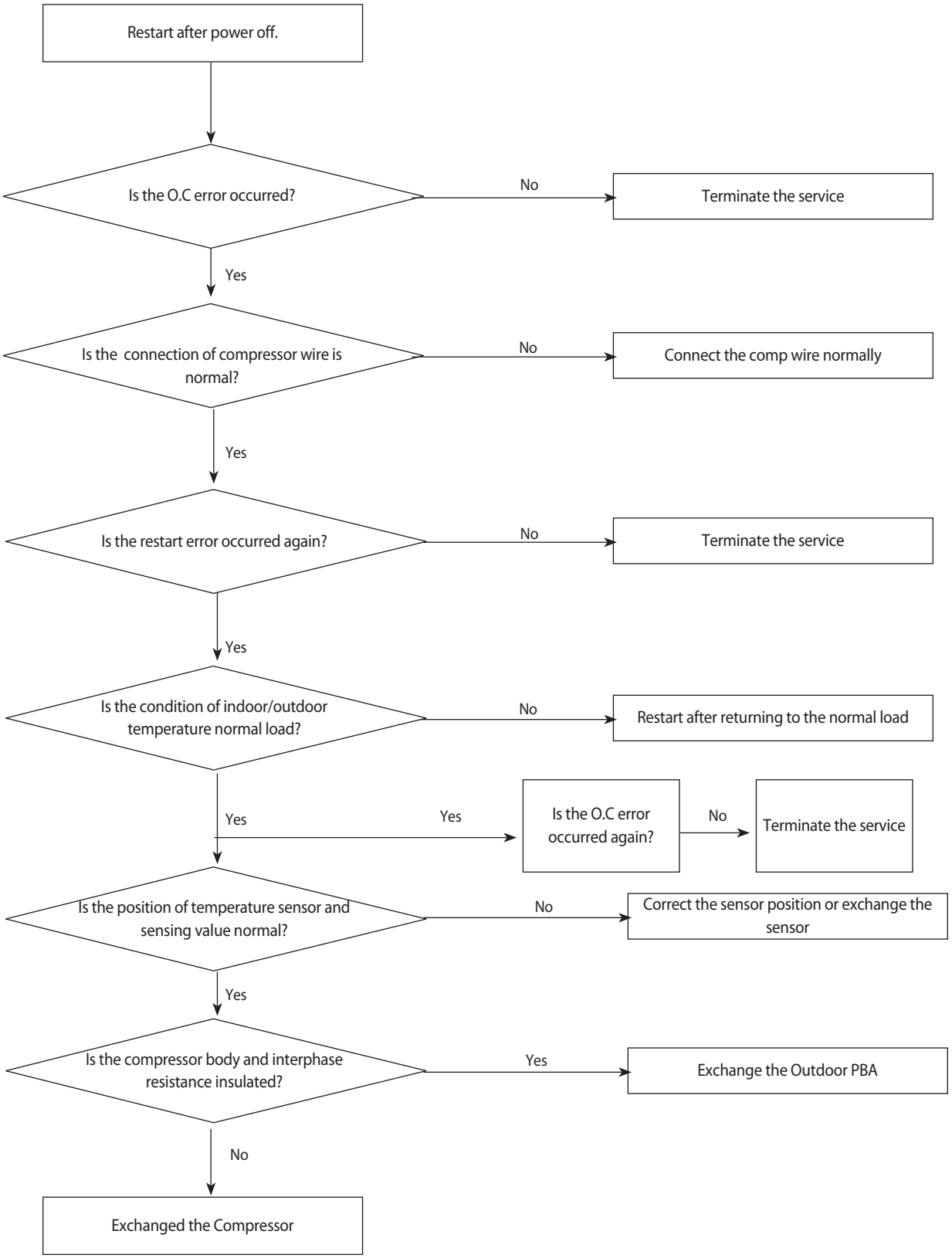


4-4-9 O.C(Over Current) error

1.Checklist :

1) Is the IPM Shunt(PF2:R451,R452,R453,PF3:R413,R414,R415) resistance value correct? Check the resistor is opened
2) Is the condition of surrounding temperature abnormal overload?
3) Is there any problem as like the temperature sensor separation or measurement value error?
4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



4-4-10 DC_link voltage sensor error

1.Checklist :

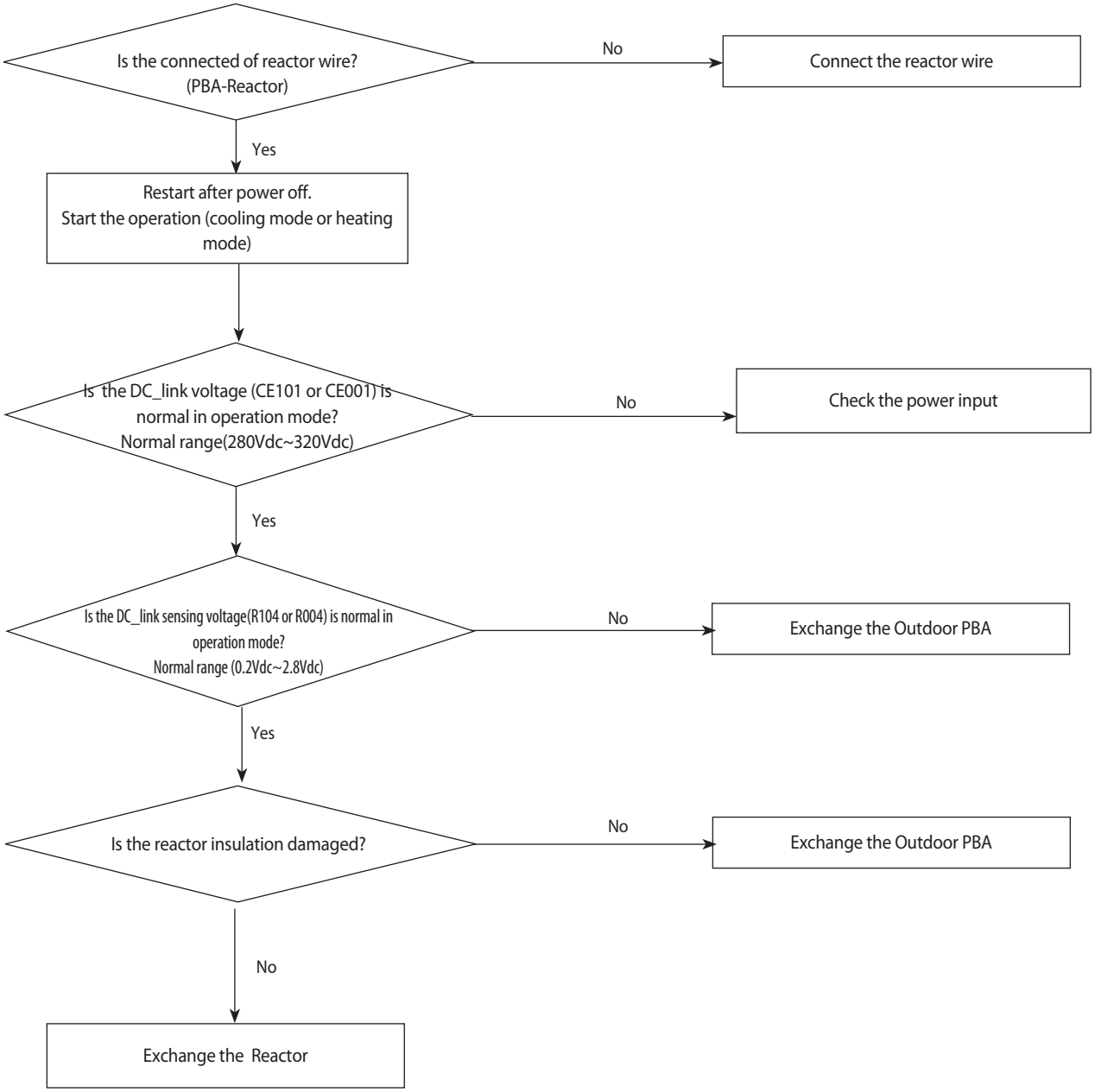
1) Is the input voltage of outdoor terminal block is normal?

2) Is the reactor wire connected?

3) Is the DC_link capacitor(PF2:CE101,CE102,CE103,PF3:CE001,CE002,CE003,CE004)) assembled in accordance the specification? (Outdoor PBA)

4) Is the DC_link resistor(PF2:R104,R106,R107,R108,PF3:R004,R005,R006,R007) value is normal? (Outdoor PBA)

2. Troubleshooting procedure

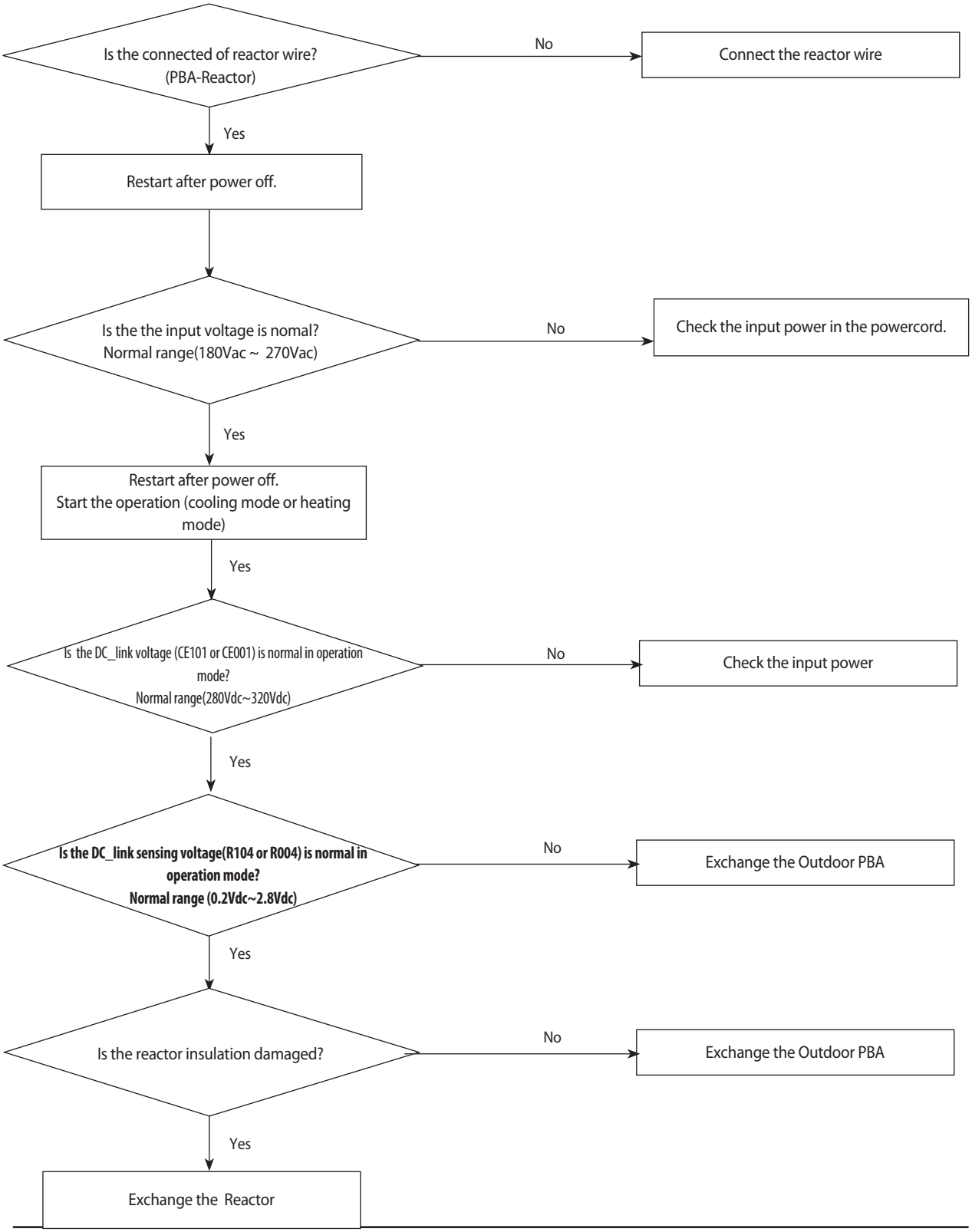


4-4-11 DC_link voltage under/over error, Over voltage protection error/PFC over load

1.Checklist :

1) Is the input voltage of outdoor terminal block is normal?
2) Is the reactor wire connected?
3) Is the reactor wire connected?
4) **Is the DC_link capacitor(PF2:CE101,CE102,CE103,PF3:CE001,CE002,CE003,CE004)) assembled in accordance the specification? (Outdoor PBA)**
5) Is the DC_link resistor(PF2:R104,R106,R107,R108,PF3:R004,R005,R006,R007) value is normal? (Outdoor PBA)

2. Troubleshooting procedure

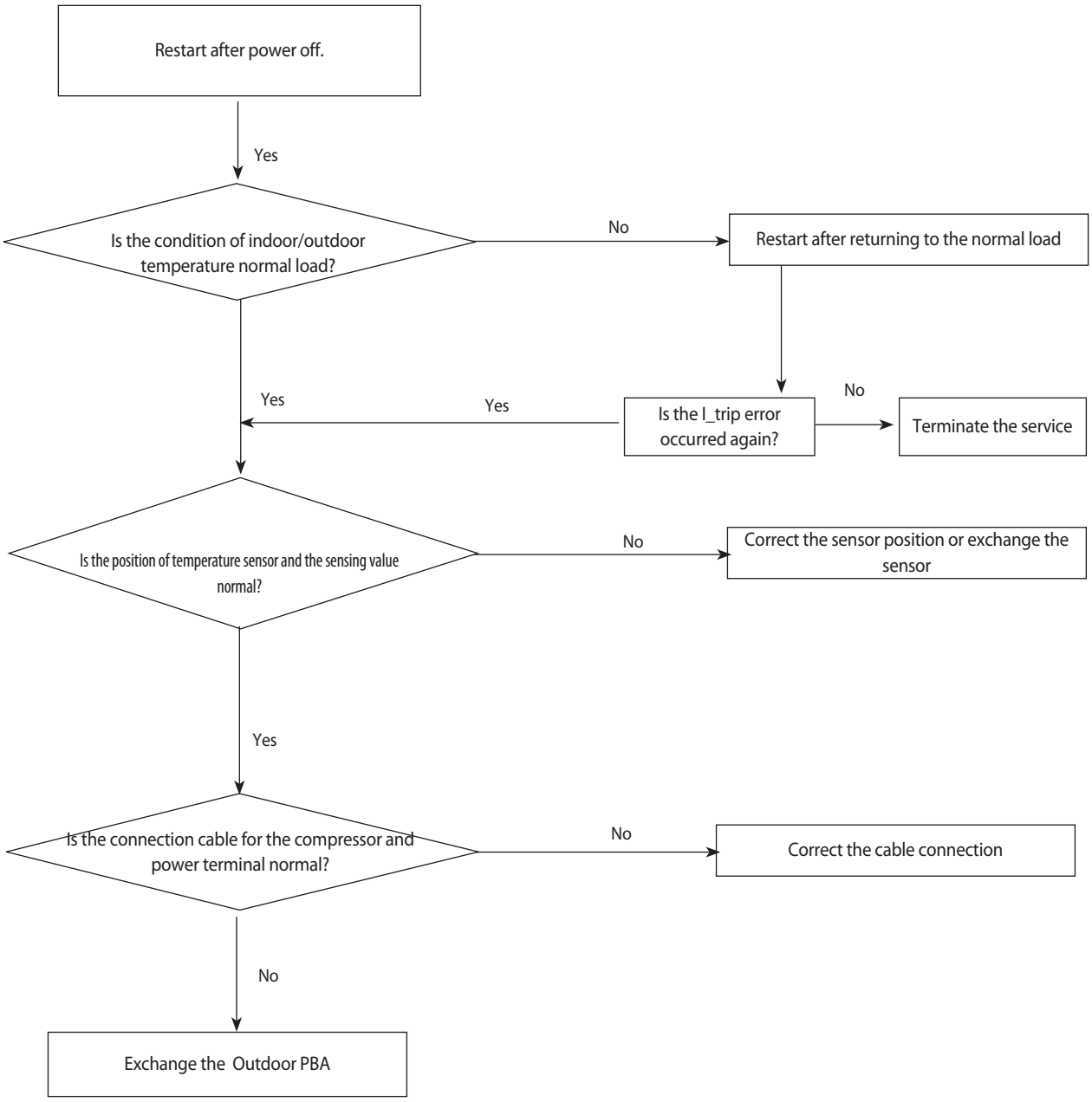


4-4-12 DC_link voltage sensor error

1.Checklist :

1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened
2) Is the condition of surrounding temperature abnormal overload?
3) Is there any problem as like the temperature sensor separation or measurement value error?
4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure



4-4-13 Current sensor error/Input current sensor error

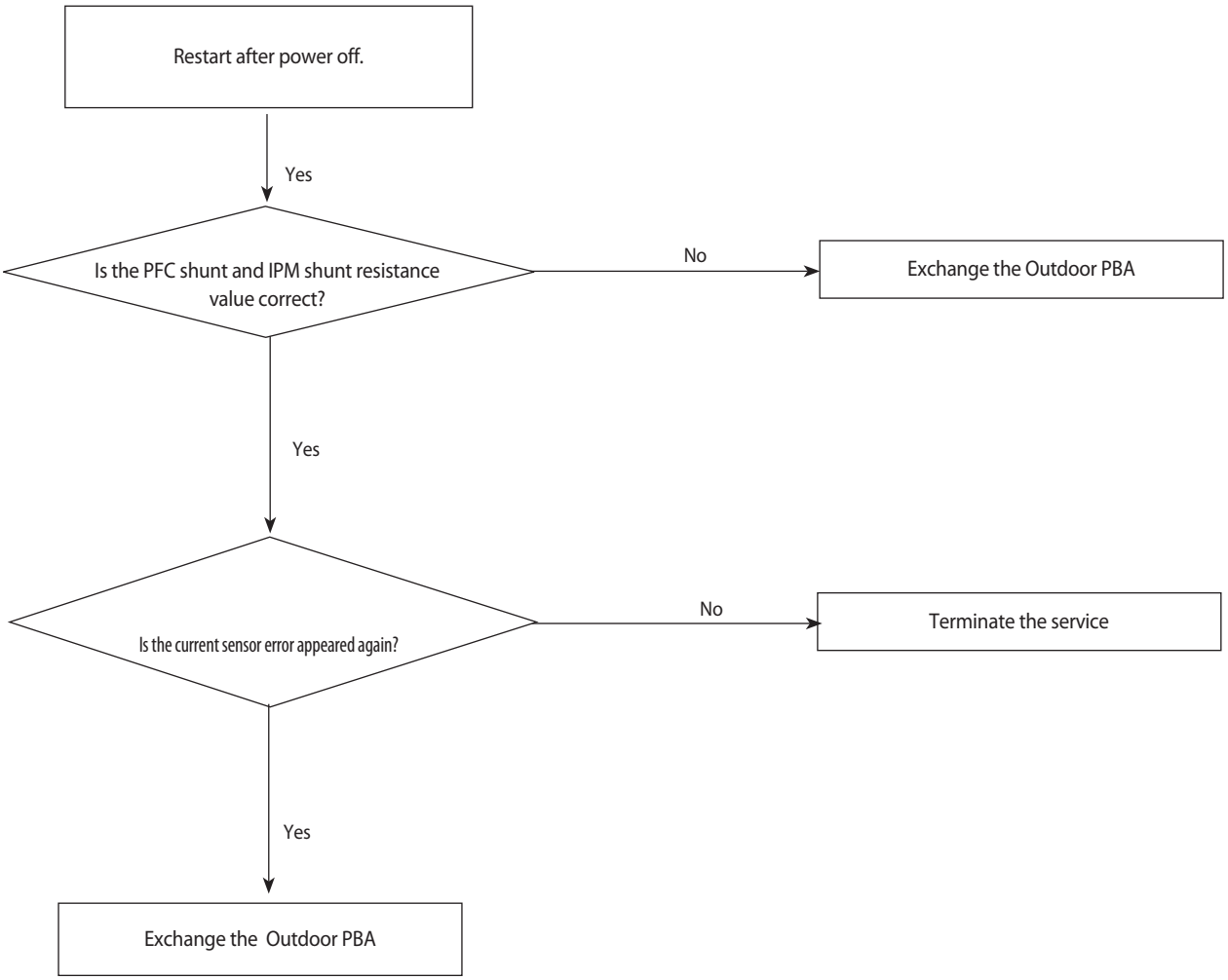
1.Checklist :

1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened

2) Is the IPM Shunt(PF2:R451,R452,R453,PF23:R413,R414,R415) resistance value correct? Check the resistor is opened

3) Is there no short or open around IC451(PF2) or IC451,IC452(PF3)?

2. Troubleshooting procedure

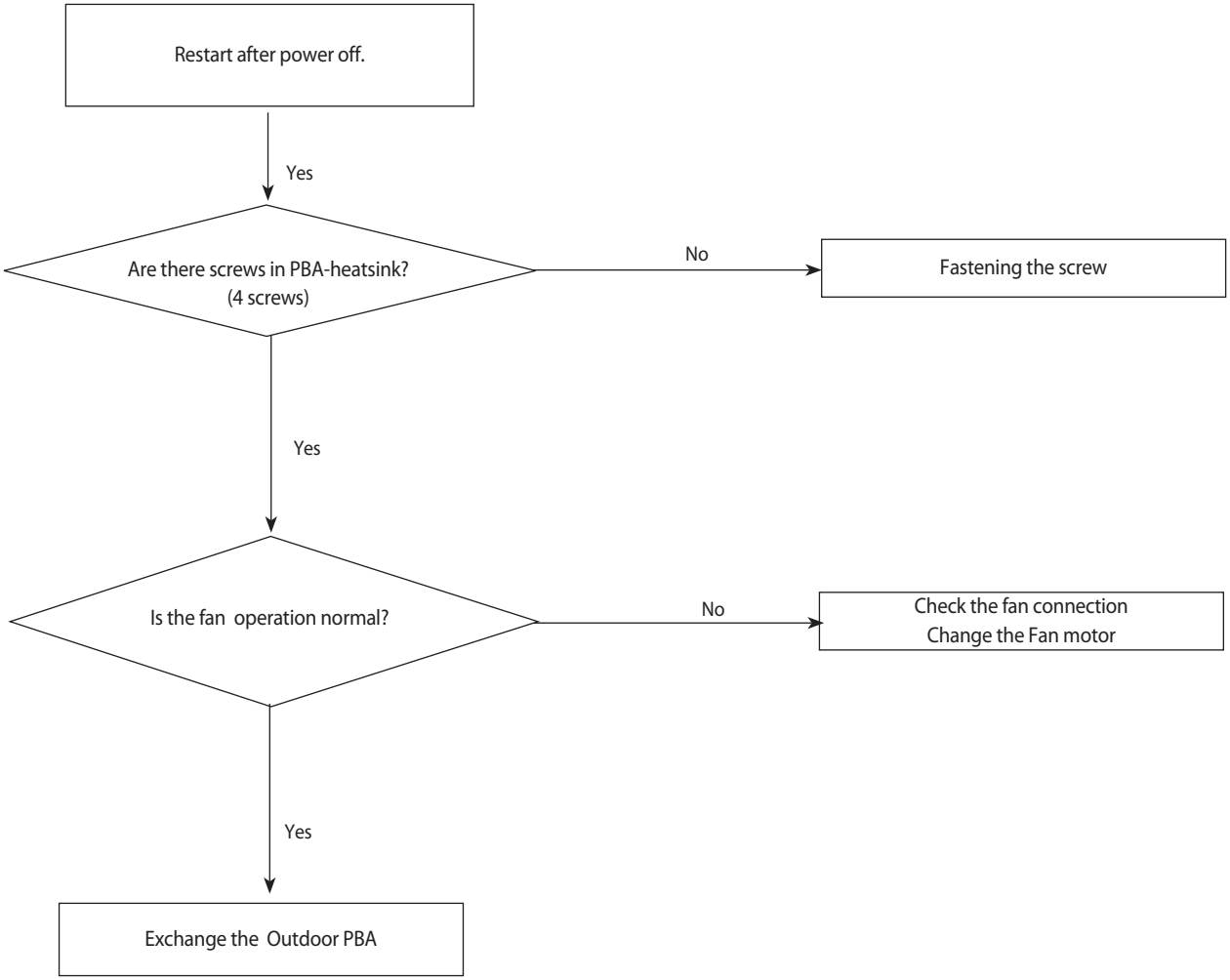


4-4-14 Heatsink sensor error/Heatsink over heat

1.Checklist :

1) Are there screws assembly in PBA-heatsink?
2) Is the gap PBA-heatsink
3) Is the fan operation normal?
4) Is the cover assembly in conrol-box normal?

2. Troubleshooting procedure

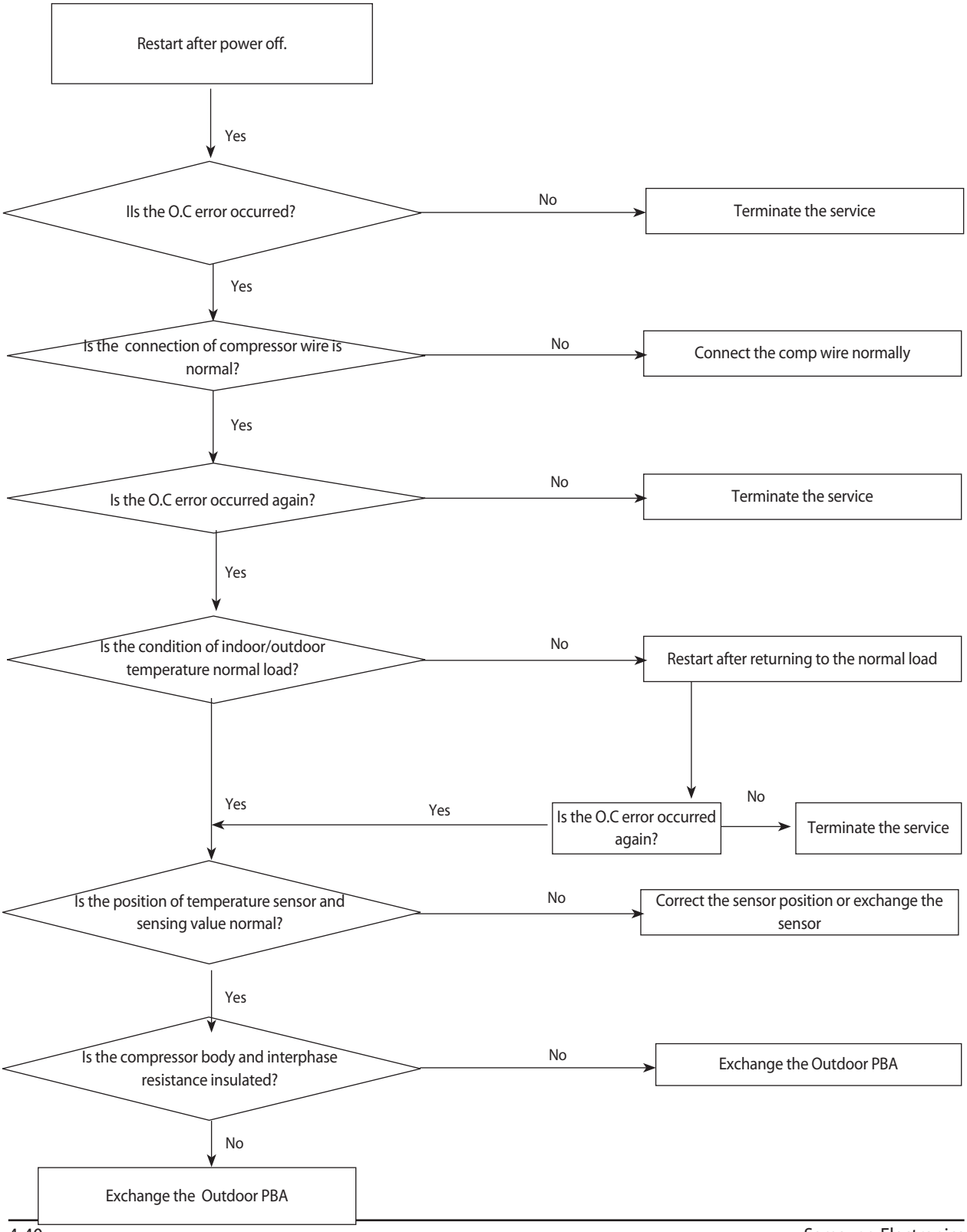


4-4-15 Comp Vlimit error/Comp current limit error

1.Checklist :

1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened
2) Is the condition of surrounding temperature abnormal overload?
3) Is there any problem as like the temperature sensor separation or measurement value error?
4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

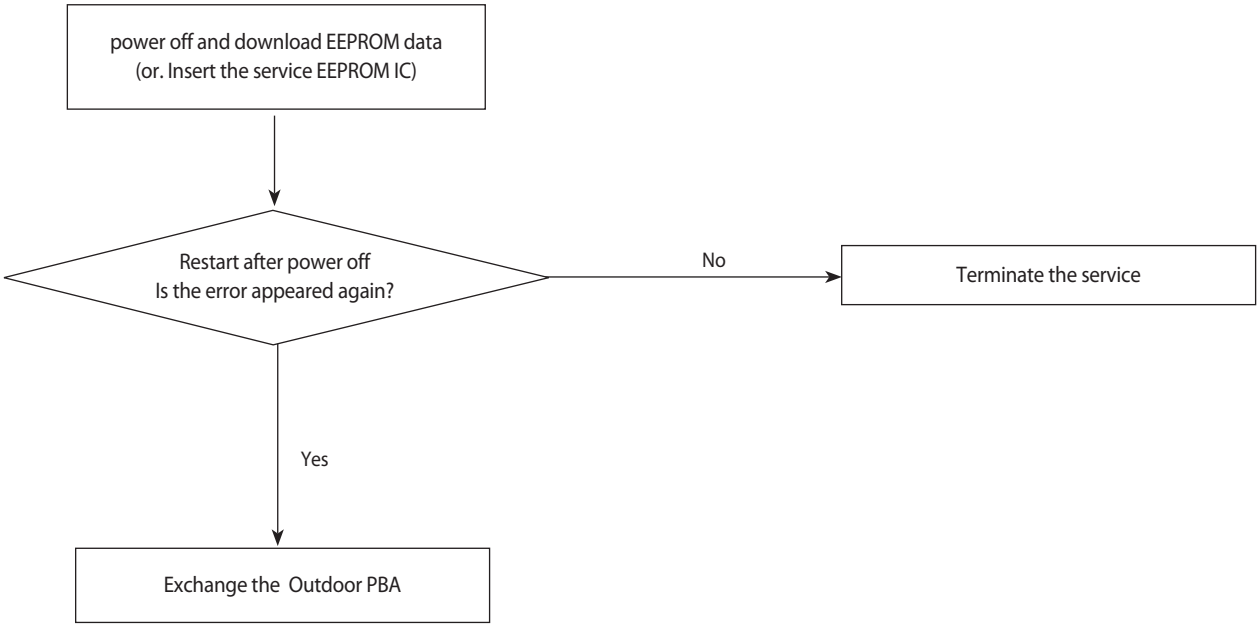


4-4-16 EEPROM error/OTP error

1.Checklist :

1) Is there a short around micom?
2) Is there a short around IC202(PF2) or IC701(PF3)?
3) Did you download or insert EEPROM IC, after changing outdoor PBA?

2. Troubleshooting procedure

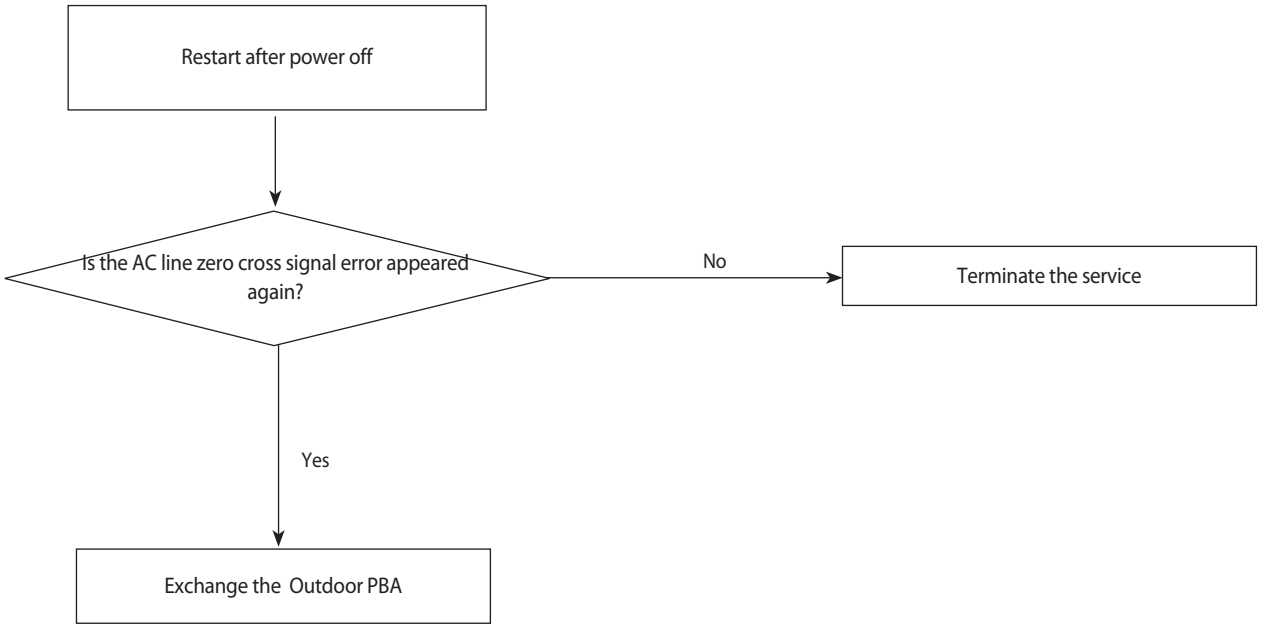


4-4-17 AC zero cross signal error

1.Checklist :

1) Check the power condition at customer's house (Is there any power noise?)
2) Have been there power failure?

2. Troubleshooting procedure

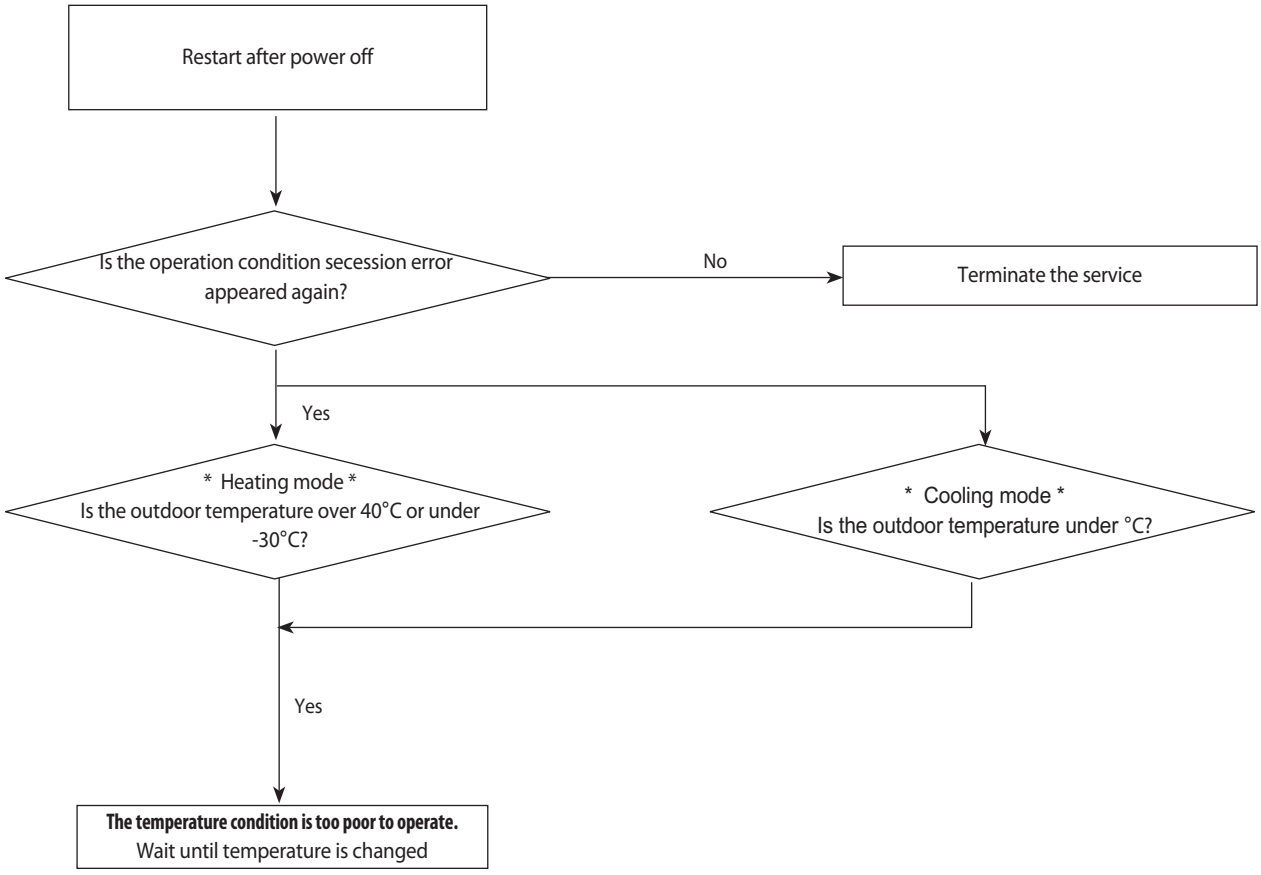


4-4-18 Operation condition secession error

1.Checklist :

1) Check the temperature around the outdoor unit.

2. Troubleshooting procedure

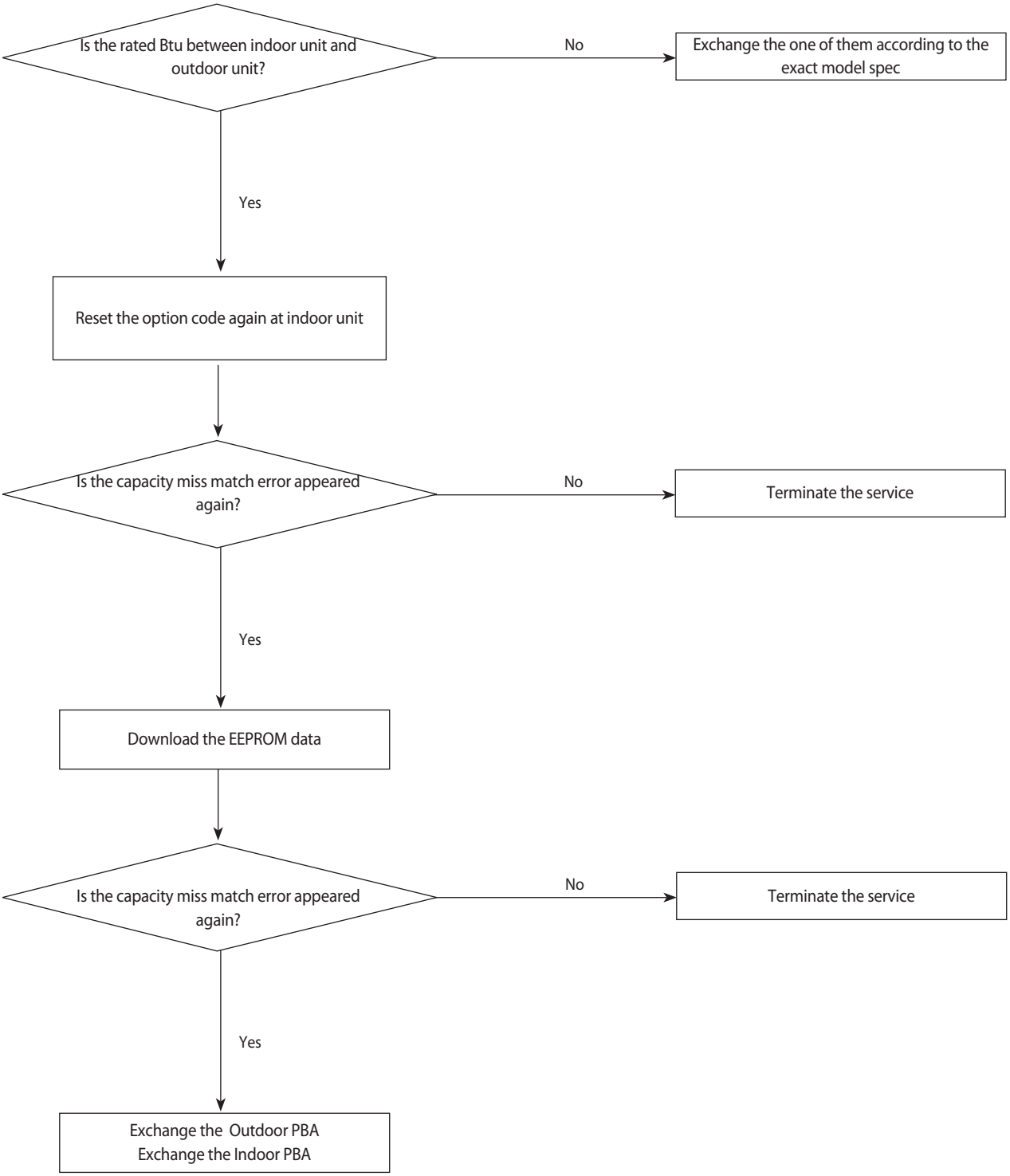


4-4-19 Capacity miss match error

1.Checklist :

1) Check the Btu between indoor and outdoor unit
2) Check the indoor unit option and outdoor unit EEPROM data

2. Troubleshooting procedure

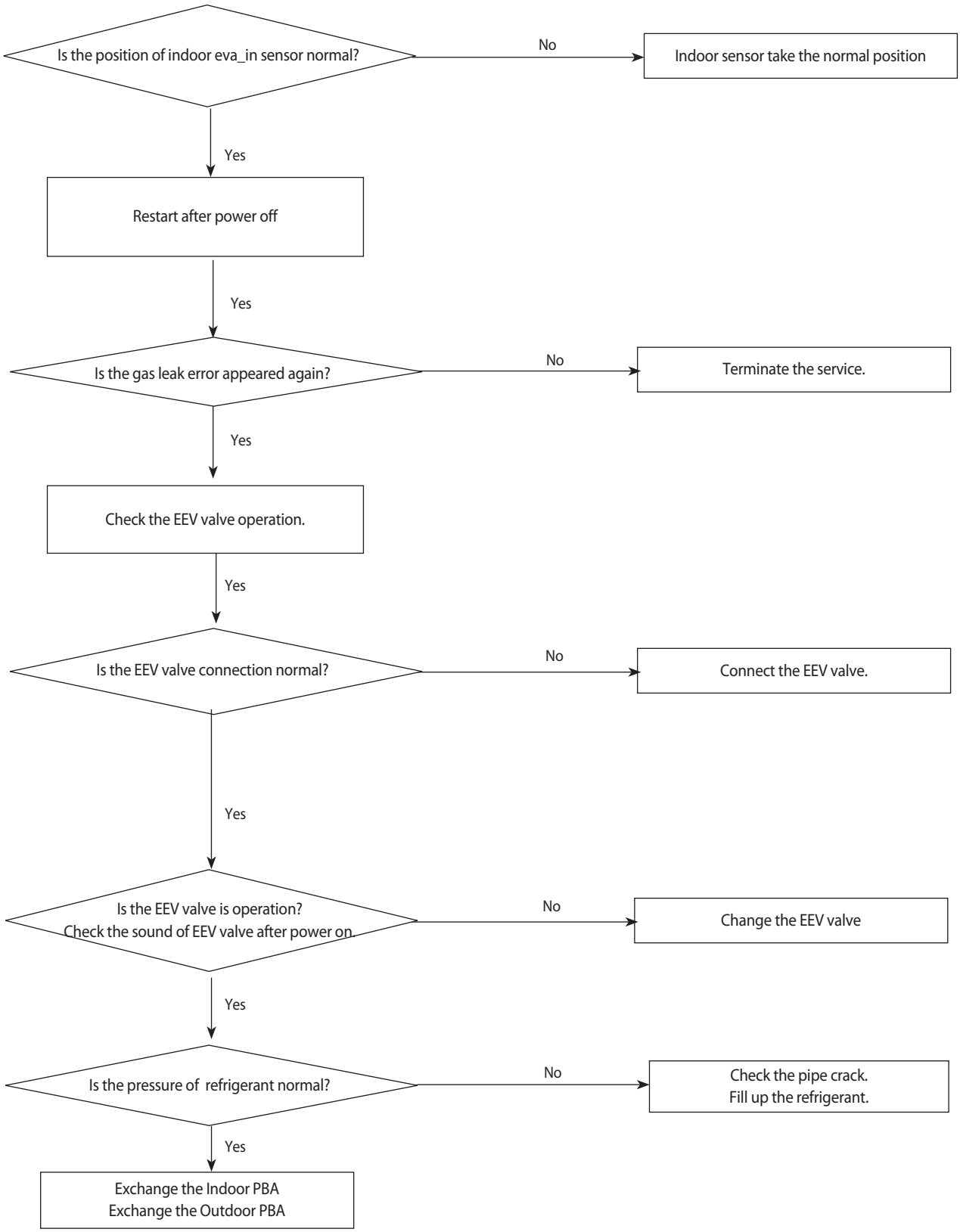


4-4-20 Gas leak error

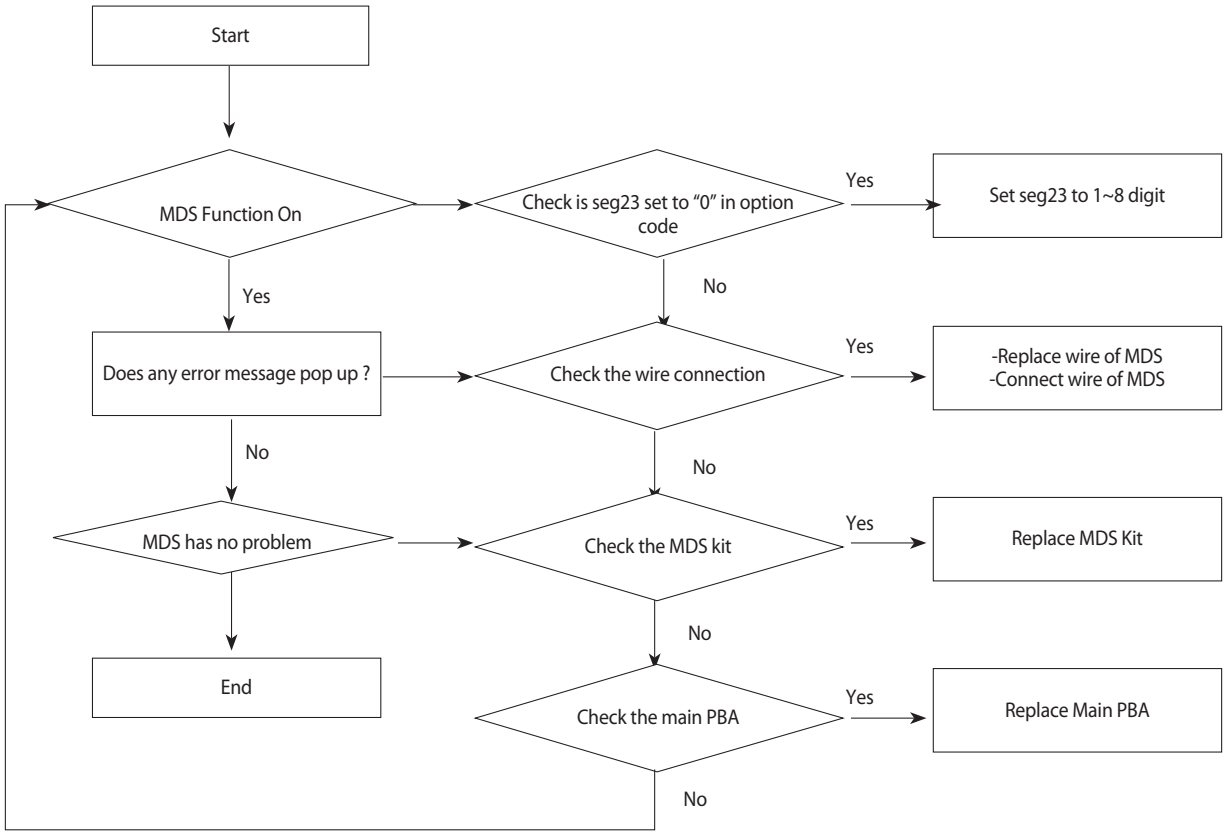
1.Checklist :

1) Is the position of indoor Eva_in sensor normal?
2) Check the pipe crack
3) Check the EEV valve connection in Outdoor unit
4) Check the refrigerant was charged

2. Troubleshooting procedure



4-4-21 MDS Error Flow chart



◆MDS Function only can be set in wired remote controller or central controller.
◆Error Message(Error message will be appeared after 3minutes)
-Wired remote controller: "E143" message is pop up.
-Display Panel: Operation & filter LED is blinking at the same time,after indoor unit is power off.