SAMSUNG

SYSTEM AIR CONDITIONER

Model :	INDOOR UNIT	OUTDOOR UNIT
	AC026MNJDKH/EU	AC026MXADKH/EU
	AC035MNJDKH/EU	AC035MXADKH/EU
	AC052MNJDKH/EU	AC052MXADKH/EU

SERVICE Manual

AIR CONDITIONER

AC026MNADKH
AC035MNADKH
AC052MNADKH
AC071MNADKH

AC026MXADKH
AC035MXADKH

AC052MXADKH

CONTENTS

Refer to the service manual in the GSPN(see the rear cover) for the more information.

Contents

1. Precautions

1-1 Precautions for the Service

◆ **Use the standard parts when replacing the electric parts.**
– Confirm the model name, rated voltage, rated current of the electric parts.

◆**When repairing the equipment, connection of the harness parts must be firm and solid.**
– A loose connection may cause noise or other malfunction.

◆**When assembling and disassembling the equipment while it is laid down, lay it on soft cloth.**
– Otherwise it may scratch the back of the exterior of the product.

◆**Remove dust or dirt completely from the housing block, wiring block and service parts during repair.**
– This helps prevent the danger of fire caused by tracking or short circuit.

◆**Fasten the valve caps of service valves and charging valves of outdoor unit as much as possible using adjustable wrenches.**

◆**Check the status of the components' assembly after repair service.**
– The status must be the same as before the repair service.

1-2 Precautions related to static electricity and PL

◆ **The PCB power supply block is susceptible to static electricity. Therefore, care must be taken during repair or measuring while the power is on.**
– Wear insulation gloves for PCB repair or measuring.

◆ **Check whether the installation location is at least two meters away from other electronic products such as TV, video, or audio.**
– Otherwise, the video quality might be degraded or noise might be generated.

◆ **Do not let end users repair the products themselves.**
– Unauthorized disassembly might cause electric shock or fire.

1-3 Precautions related to product safety

- **Do not pull the power cord and do not touch the power plug or aux power switch with wet hands.**
  – It might cause electric shock or fire.

- **A damaged power line or power plug must be replaced to prevent danger.**

- **Do not bend the power cable with excessive force, and do not place a heavy weight on the case as it might damage the cable.**
  – It might cause electric shock or fire.

- **Do not use multiple electric outlets.**
  – This might cause electric shock or fire.

- **Connect the ground terminal when necessary.**
  – You must connect the ground terminal if you determine that there is a danger of electric leakage due to moisture or water.

- **Unplug the power cable or turn off the auxiliary power switch for electric part replacement and repair service.**
  – Otherwise it might cause electric shock.

- **Instruct end users to separate the batteries from the remote controllers and store them separately when the product is not used for long time.**
  – Otherwise leakage from the dry cell may cause problems with the remote controller.

1-4 Other precautions

- **The pipes should have no leaks during installation, and the compressor must be stopped before removing connecting pipes for pump down work. Operating the compressor while the service valve is open and coolant pipe is not properly connected may cause explosion or injury due to abnormal high pressure created inside the coolant cycle as the air can be absorbed through the pipe.**

- **Pump Down work procedure (When uninstalling the product)**
  – Turn on the air conditioner, select cooling operation, and run the compressor for more than three minutes.
  – Release the high pressure and low pressure valve caps.
  – Close the high pressure valve completely using an L-wrench
  – After about two minutes, close the low pressure valve completely.
  – Stop running the air conditioner.
  – Separate the connecting pipe.

2. Product Specifications

2-1 The Feature of Product

■ **What is a Console type Air Conditioner?**

Floor standing type Air Conditioner, Powerful on floor heating & cooling.

■ **VIRUS DOCTOR Zone (Air cleaning solution)**

Samsung's Micro Plasma Ion Zone is a technology that generates activated hydrogen and oxygen ions, which exterminates viruses and allergy-causing microbes in the air by neutralizing them and turning into water.

■ **Special Filter**

Allergy Filter, Deodorizing Filter and Anti-bacteria

Filter will make air so pure.

■ **Flexible Pipe Installation**

Anywhere it can be installed by 6way piping.

■ **Elegance Design**

Slim Design(199mm), Clean Front Panel, Luxurious Wide Display

Mirror & Lamp

2-2 Product Specifications

<table>
<tr><td colspan="5" rowspan="2">Item</td><td colspan="2">Model Name</td></tr>
<tr><td>AC026MNJDKH
AC026MXADKH</td><td>AC035MNJDKH
AC035MXADKH</td></tr>
<tr><td rowspan="3">Design</td><td colspan="4">Indoor Unit</td><td colspan="2">  </td></tr>
<tr><td colspan="4">Outdoor Unit</td><td colspan="2">  </td></tr>
<tr><td colspan="4">Remote Control</td><td colspan="2">  </td></tr>
<tr><td colspan="5">Power specifications</td><td>1Φ, 220~240V, 50Hz</td><td>1Φ, 220~240V, 50Hz</td></tr>
<tr><td rowspan="2">Size</td><td>Indoor</td><td colspan="2">W×D×H</td><td>mm</td><td>720*620*199</td><td>720*620*199</td></tr>
<tr><td>Outdoor</td><td colspan="2">W×D×H</td><td>mm</td><td>790*285*548</td><td>790*285*548</td></tr>
<tr><td rowspan="2">Weight</td><td colspan="3">Indoor Unit</td><td>kg</td><td>15.5</td><td>15.5</td></tr>
<tr><td colspan="3">Outdoor Unit</td><td>kg</td><td>36.2</td><td>36.2</td></tr>
<tr><td colspan="2" rowspan="2">Capacity</td><td colspan="2">Cooling</td><td>w</td><td>2,600</td><td>3,500</td></tr>
<tr><td colspan="2">Heating</td><td>w</td><td>3,500</td><td>4,000</td></tr>
<tr><td colspan="2" rowspan="2">Power consumption</td><td colspan="2">Cooling</td><td>w</td><td>700</td><td>1,090</td></tr>
<tr><td colspan="2">Heating</td><td>w</td><td>1,000</td><td>1,210</td></tr>
<tr><td colspan="2" rowspan="2">Operation current</td><td colspan="2">Cooling</td><td>A</td><td>4</td><td>5.6</td></tr>
<tr><td colspan="2">Heating</td><td>A</td><td>5</td><td>5.9</td></tr>
<tr><td colspan="2" rowspan="2">Noise (Cooling/Heating)</td><td>Indoor</td><td>In case of strongest air blow</td><td>dBA</td><td>41/43</td><td>42/44</td></tr>
<tr><td>Outdoor</td><td>In case of strongest air blow</td><td>dBA</td><td>51/51</td><td>53/53</td></tr>
<tr><td colspan="4">Refrigerant(R-410A)</td><td>g</td><td>1,050</td><td>1,050</td></tr>
<tr><td colspan="3" rowspan="2">Connecting Pipe</td><td>Liquid</td><td>mm</td><td>6.35</td><td>6.35</td></tr>
<tr><td>Gas</td><td>mm</td><td>9.52</td><td>9.52</td></tr>
<tr><td colspan="4">Additional Refrigerant(R410A)</td><td>g/m</td><td>Chargeless</td><td>Chargeless</td></tr>
<tr><td colspan="4">Standard</td><td>m</td><td>5</td><td>5</td></tr>
<tr><td colspan="4">Extension length(Total)</td><td>m</td><td>20</td><td>20</td></tr>
<tr><td colspan="4">Extension length(Elevation)</td><td>m</td><td>15</td><td>15</td></tr>
<tr><td colspan="4" rowspan="2">Option Code</td><td>Product Option</td><td>01907F-1930B6-271A23-370260</td><td>01907F-1930D8-272328-370260</td></tr>
<tr><td>Installation Option</td><td>020000-100000-200000-300000</td><td>020000-100000-200000-300000</td></tr>
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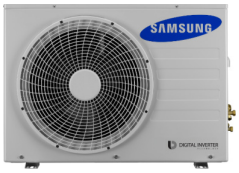
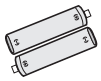
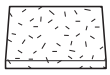
Item				Model Name
				AC052MNJDKH **AC052MXADKH**
Design	Indoor Unit			
	Outdoor Unit			
	Remote Control			
Power specifications				1Φ, 220~240V, 50Hz
Size	Indoor	W×D×H	mm	720*620*199
	Outdoor	W×D×H	mm	880*310*638
Weight	Indoor Unit		kg	15.8
	Outdoor Unit		kg	44.5
Capacity		Cooling	w	5,000
		Heating	w	5,600
Power consumption		Cooling	w	1,750
		Heating	w	1,730
Operation current		Cooling	A	7.9
		Heating	A	7.9
Noise (Cooling/Heating)	Indoor	In case of strongest air blow	dBA	47/49
	Outdoor	In case of strongest air blow	dBA	58/58
Refrigerant(R-410A)			g	1,300
Connecting Pipe		Liquid	mm	6.35
		Gas	mm	12.7
Additional Refrigerant(R410A)			g/m	10
Standard			m	5
Extension length(Total)			m	30
Extension length(Elevation)			m	20
Option Code			Product Option	019077-1910F9-27343C-370210
			Installation Option	020000-100000-200000-300000

2-3 Product Accessories and Option accessories

Item	Description	Code No.	Q'ty	Remark
	Remote Control	DB93-15882F	1	Essential Offer (Indoor Unit)
	Batteries for Remote Control	4301-000121	2	
	USER MANUAL INSTALLATION MANUAL	DB68-06493A DB68-06494A	1/1	
	Remote Control Holder	DB61-06087A	1	
	M4 x 16 Tapped Screws	6002-000234	2	
	CARD WARRNATY	DB68-02596B	1	
	Insulation install out	B62-05580V	1	
	Insulation install SVC	DB62-05691C	1	
	Cable-tie	DB65-10088C	4	
	Drain Plug	DB67-20011A	1	Essential Offer (Outdoor Unit)
	Rubber Leg	DB67-01533A	4	
	INSTALLATION MANUAL	DB68-06488A	1	

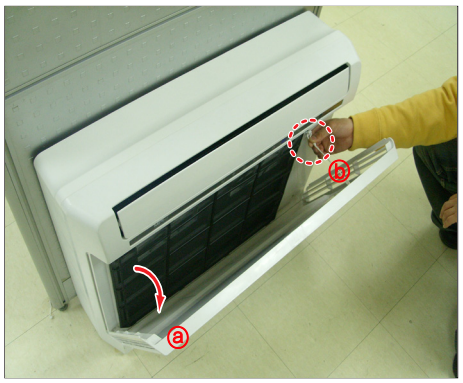
3. Disassembly and Reassembly

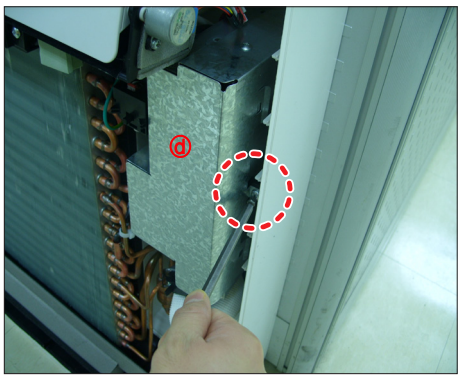
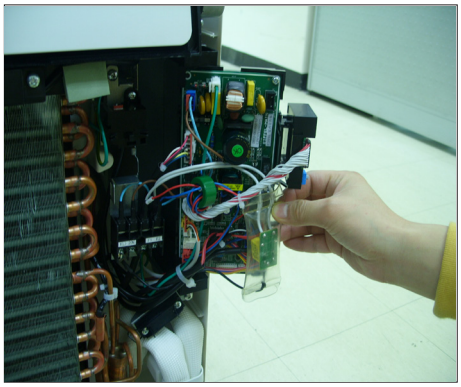
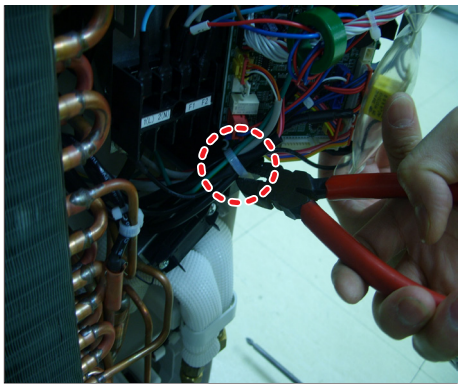
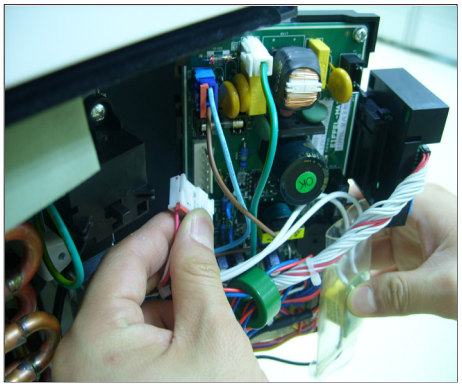
■ Necessary Tools

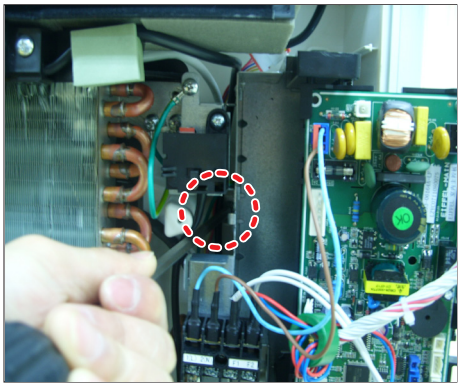
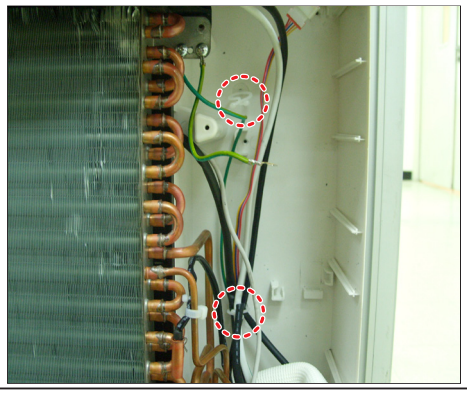
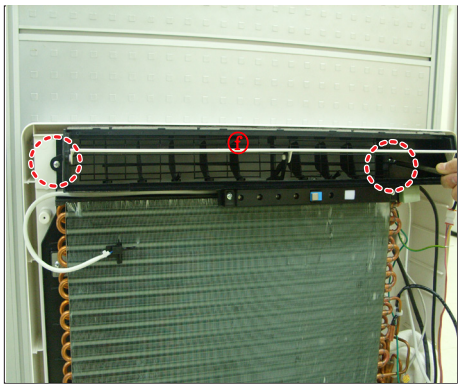
Item	Remarks
+SCREW DRIVER	
Adjustable Wrench (8mm, 10mm, 13mm)	
M6, M8 Hex Wrench	

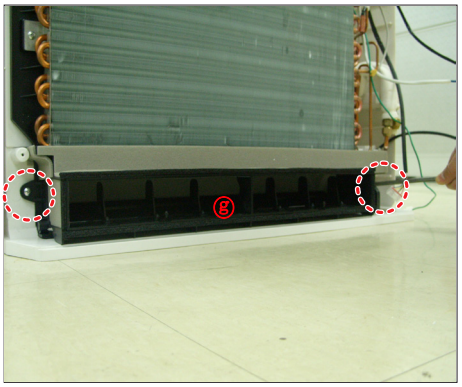
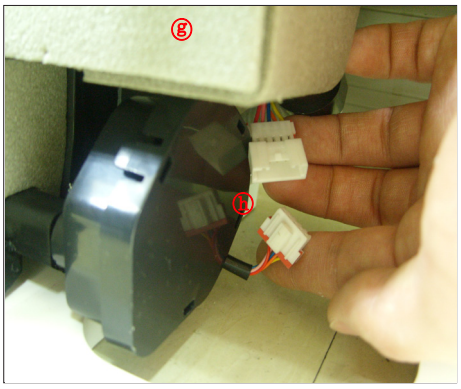
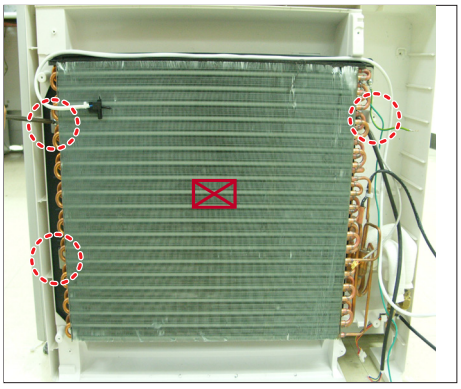
3-1 Indoor unit

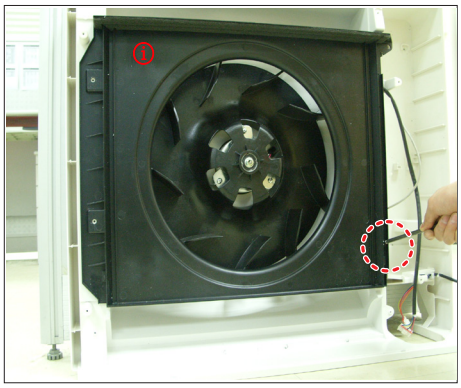
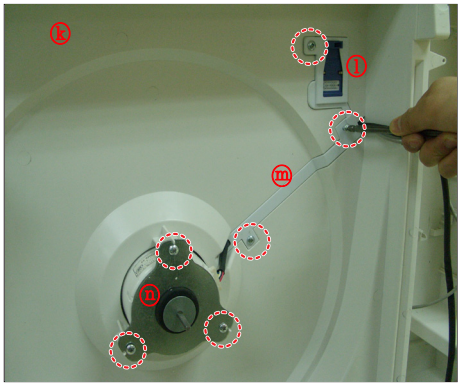
■ AC026MNJDKH / AC035MNJDKH / AC052MNJDKH

No	Parts	Procedure	Remark
1	Cabi Parts	1) Open the Panel Front(ⓐ). Remove the Clip Wire(ⓑ).	
		2) Release 4 screws on the Body Front(ⓒ).	
		3) Open the Body Front(ⓒ) by pulling from bottom of the part.	

No	Parts	Procedure	Remark
2	Electrical Parts	1) Open the cover of Control Box(ⓓ).	
		2) Pull the PBA out along the slide guide.	
		3) Cut the Cable tie.	
		4) Pull all wires out from the PBA.	

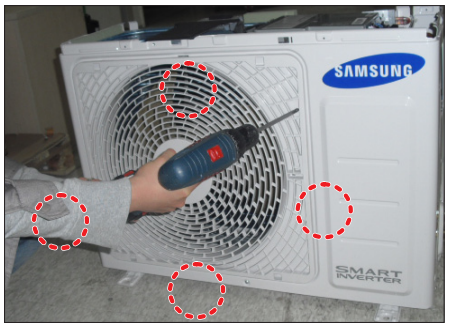
No	Parts	Procedure	Remark
		5) Release the 2 screws. (one is top of the C-Box, the other is left of it)	
		6) Release 2 Hold Wires and pull all wires out from it .	
3	Blowing & Evap Part	1) Pull the Bracket Pipe(ⓔ)out.	
		2) Release 2 screws and pull Top Discharge Kit(ⓕ) out.	

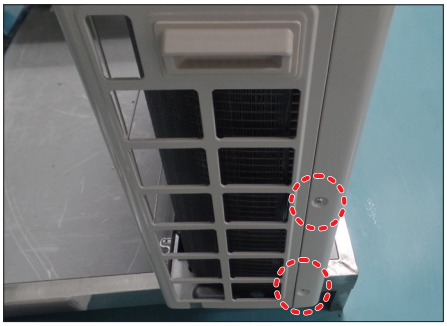
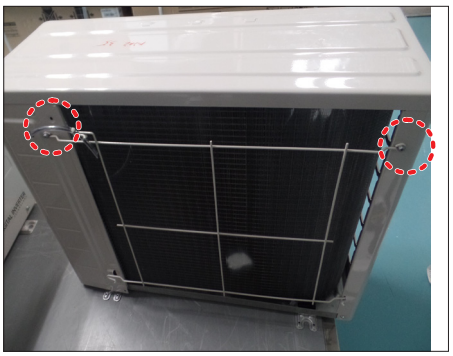
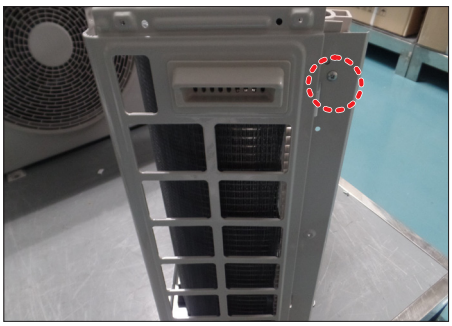
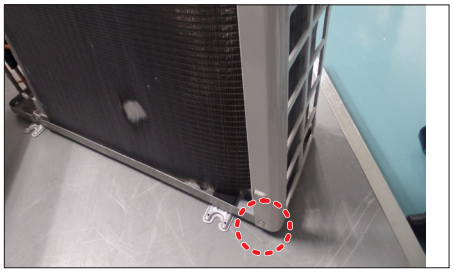
No	Parts	Procedure	Remark
		3) Release 2 screws and pull Bottom Discharge Kit(ⓖ) out.	
		4) Disconect the Step Motor wire(ⓗ) from the conect wire . This part is right side of the Bottom Discharge Kit(ⓖ).	
		5) Pull Bottom Discharge Kit(ⓖ) Out from the bottom of it.	
		6) Release 3 screws and pull the Evap out from top to bottom direction.	

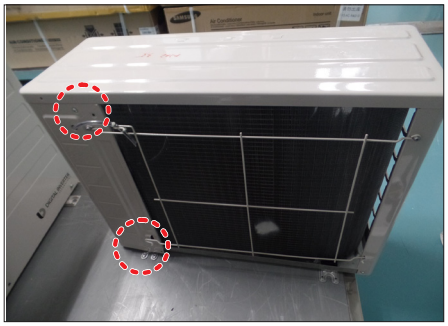
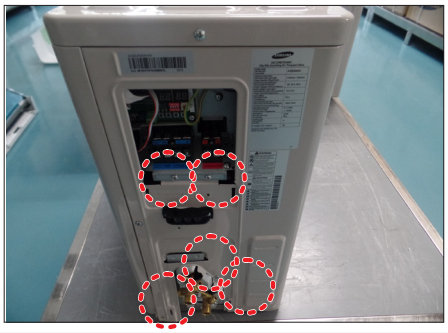
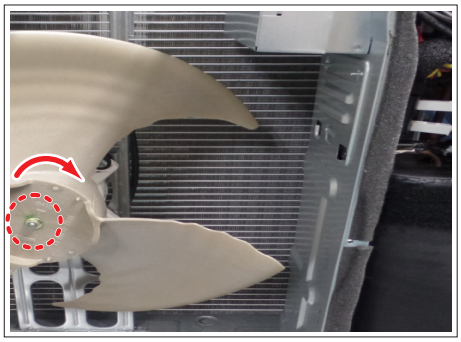
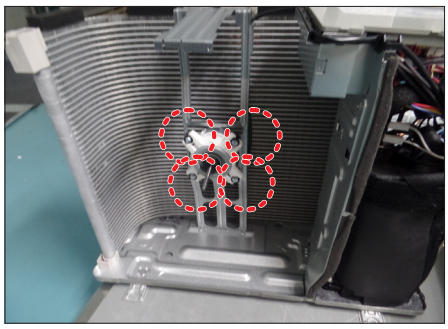
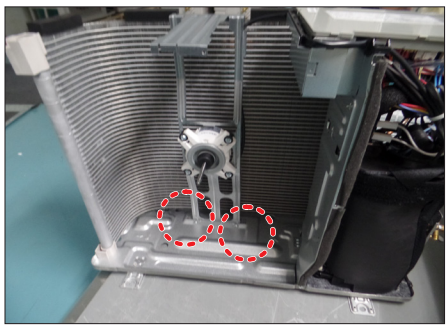
No	Parts	Procedure	Remark
4	Fan Part	1) Release 1 screw and pull the Bell Mouth (ⓘ) out.	
		2) Release the Nut and pull Fan Turbo(ⓙ)out.	
		3) Release 6 screw on the Body Back(ⓚ). Pull the Cap VIRUS DOCTOR(ⓛ), Bracket Wire(ⓜ) and Bracket Motor(ⓝ) out.	
		4) Pull the VIRUS DOCTOR Kit(ⓞ) and Motor(ⓟ) out from the Body Back(ⓚ).	

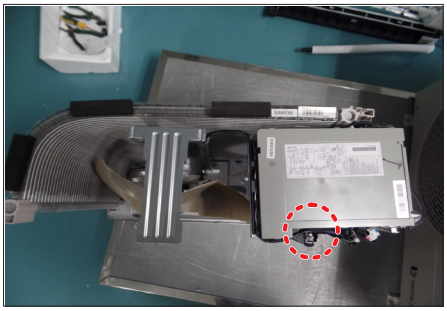
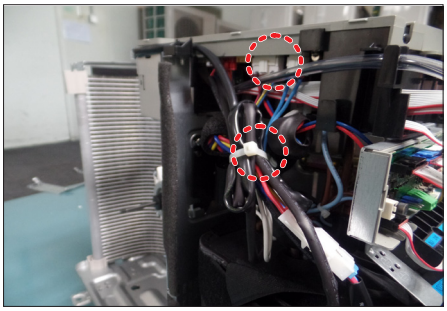
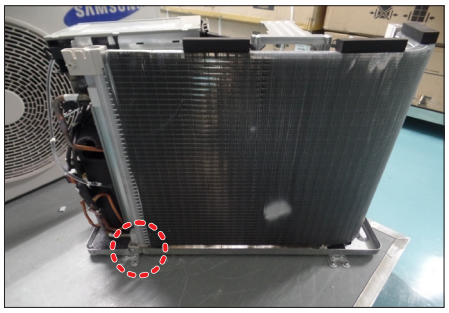
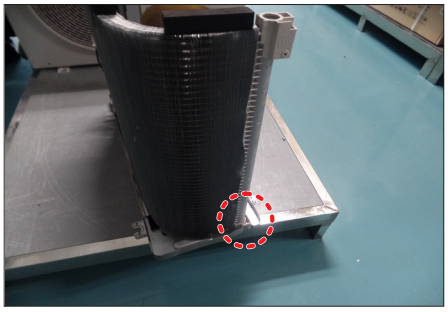
3-2 Outdoor unit

■ AC026MXADKH / AC035MXADKH

No	Parts	Procedure	Remark
1	common work	⚠ CAUTION You must turn off the Power before disassembly. 1) loosen 1 pcs screw of cover control,and detach it.	
		2) loosen 5 pcs screws on both right and left cabniet side edges and to detach the cover-top	
			
		3) Loosen 7 screwsfixed to disassemble cabi-front , and detach it.	

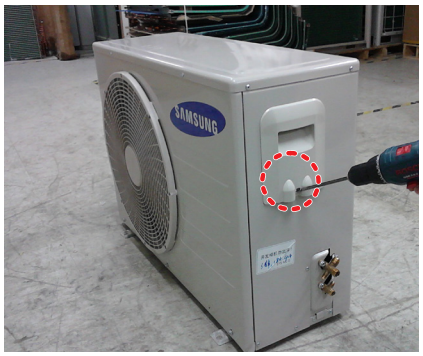
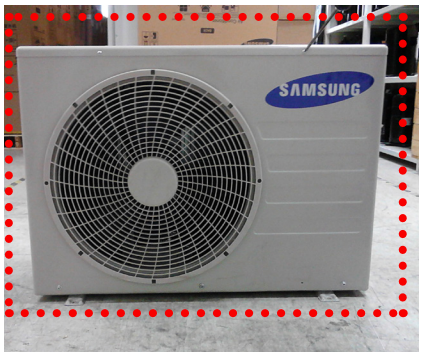
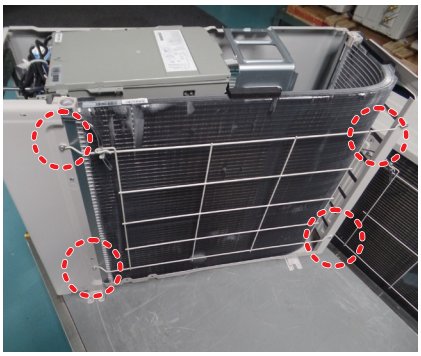
No	Parts	Procedure	Remark
	common work		
			
		4) loosen 2 screws to disassemble steel-bar.	
		5) Loosen 2 screws to disassemble the cabi left and detach it.	
			

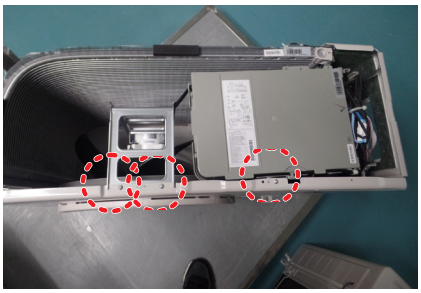
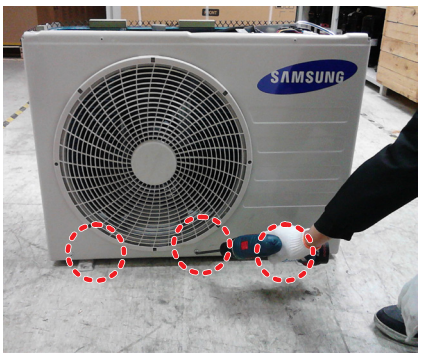
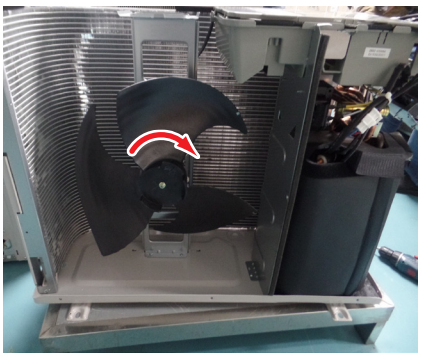
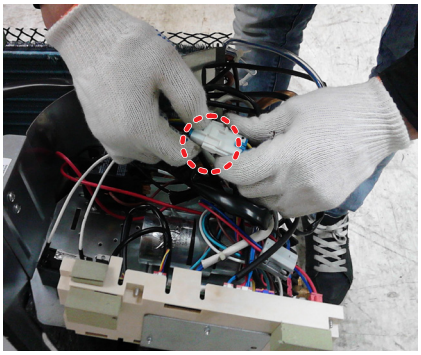
No	Parts	Procedure	Remark
	common work	6) Loosen 7 screws to disassemble the cabi right and detach it.	 
2	fan&motor	1) loosen 1 screw as indication and detached the fan.	
		2) loosen 4 pcs motor screws and disconnect the wire betwwen assy control out and motor.	
		3) loosen 2 pcs bracket-motor screw and detach it.	

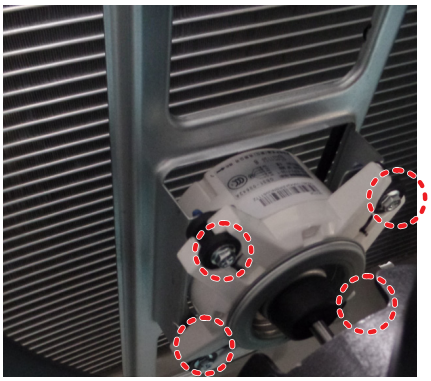
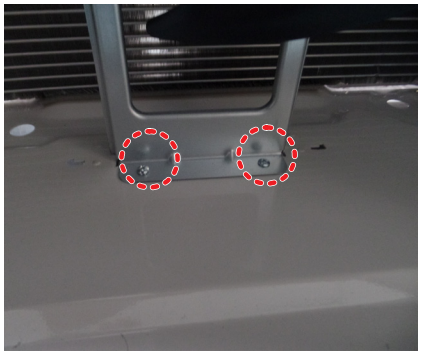
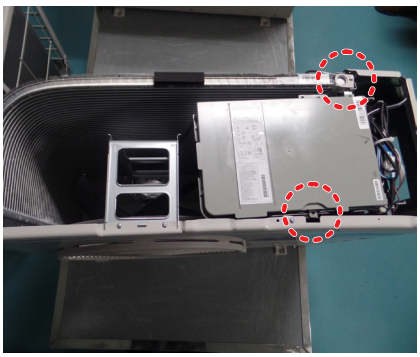
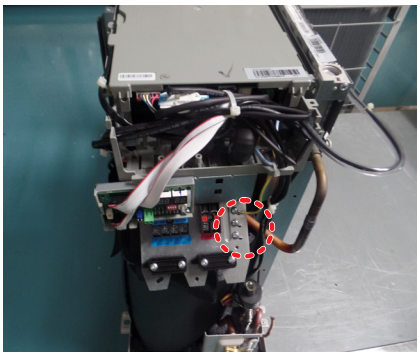
No	Parts	Procedure	Remark
3	assy control out	1) lossen fixing 1 screw from cover -control 2) detach several connections from assy control out, take out assy control out.	 
4	Heat exchanger	1) Release the refrigerant at first 2) Looosen fixing screw on both side. 3) disaessembly the pipes in both inlet and outlet with welding torch. 4) detach the heat exchanger.	 

No	Parts	Procedure	Remark
5	compressor	1) disconnect the compressor lead wire .	
		2)disassembly the felt comp sound. loosen the 3 bolts at the bottom . CAUTION When removing the compressor, Heat Exchanger, and Pipe, purge the Coolant inside the Compressor completely and remove the pipe with a welding flame.	

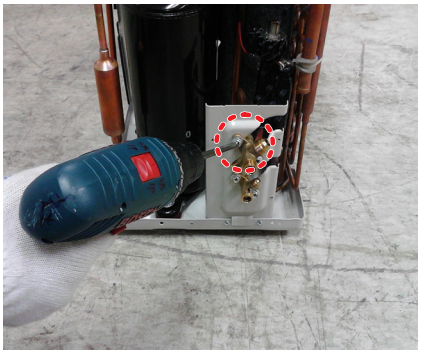
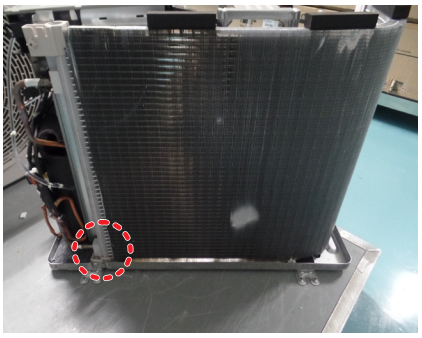
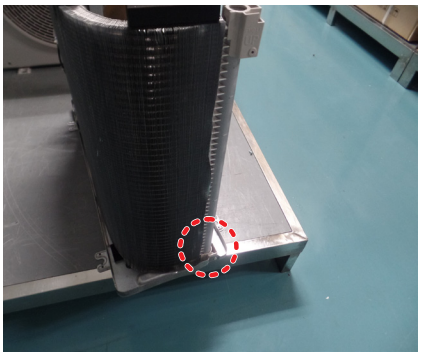
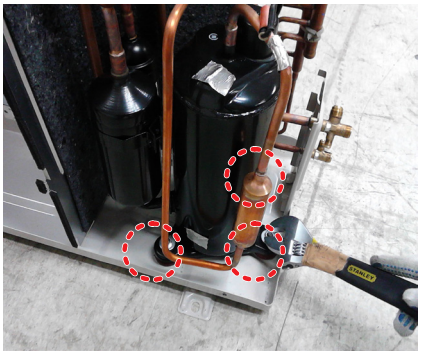
■ AC052MXADKH

No	Parts	Procedure	Remark
1	common work	CAUTION You must turn off the Power before disassembly. 1) Loosen 1 pcs screw of cover control	
		2) Loosen 8 pcs screw of the cabi top cover.	
		3) Loosen 4 pcs screw of the bar steel.	
		4) Loosen 10 pcs screw of the cabi side front.	

No	Parts	Procedure	Remark
1	common work		 
2	Fan& motor	1) Loosen the fan screw according the indication and detach the fab propeller 2)Disconnect the wire between assy control out and motor.	 

No	Parts	Procedure	Remark
2		3) Loosen 4 pcs motor screw.	
		4) Loosen 2 pcs screw of bracket motor.	
3	Assy control out	1)Loosen the screws that connected partition and case control then get the control out.	
		2) Loosen the screw of the cover termimal	

No	Parts	Procedure	Remark
3		3) Loosen 2 screws , disassemble the Coil Harmonic.	
		4) Loosen the screw of the cover terminal.	

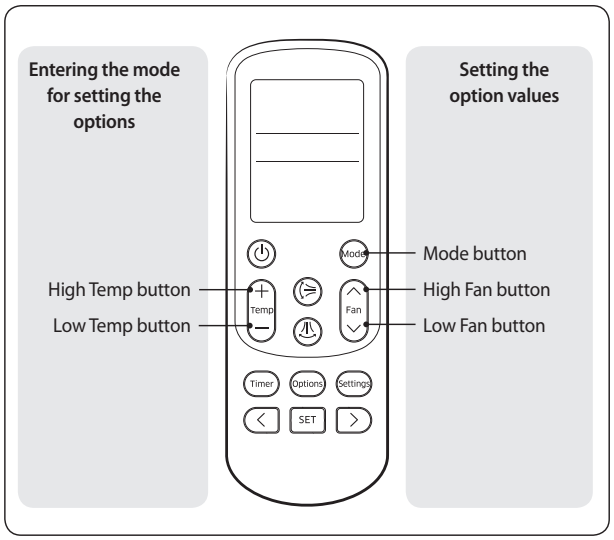
No	Parts	Procedure	Remark
4	Heat exchanger	1) Release the refrigerant at first 2) Loosen fixing screw on both side.. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the heat exchanger. CAUTION When removing the compressor, Heat Exchanger, and Pipe, purge the Coolant inside the Compressor completely and remove the pipe with a welding flame.	  
5	Compressor	1)Loosen the 3 bolts at the bottom of compressor.	

4. Troubleshooting

You cannot set both of the indoor unit addresses and the installation options in a batch: set both of them respectively.

4-1-1 Common steps for setting the addresses and options

MR-EC00 and MR-EH00 remote controls



NOTE

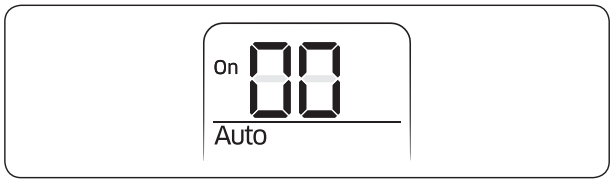
- The remote control display and buttons may vary depending on the model.

1 Enter the mode for setting the options:

   a Remove the batteries from the remote control, and then insert them again.

   b While holding down the (High Temp) and (Low Temp) buttons simultaneously, insert the batteries into the remote control.

   c Make sure that you are entered to the mode for setting the options:



2 Set the option values.

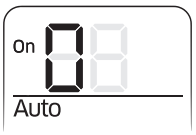
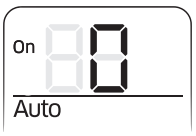
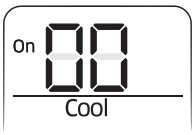
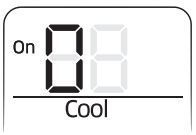
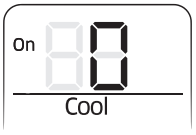
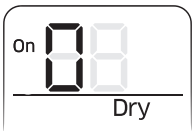
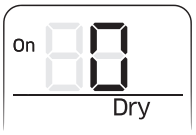
CAUTION

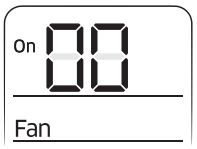
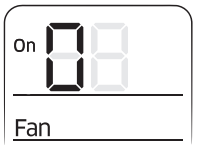
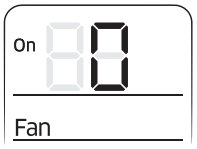
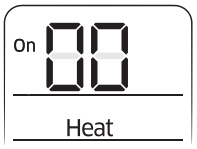
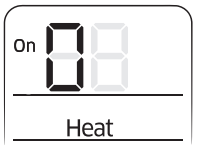
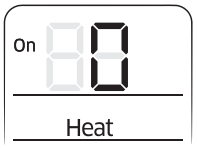
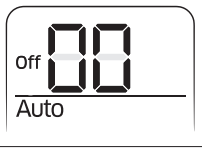
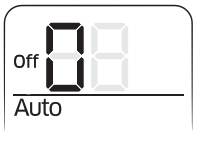
- The total number of available options are 24: SEG1 to SEG24.
- Because SEG1, SEG7, SEG13, and SEG19 are the page options used by the previous remote control models, the modes to set values for these options are skipped automatically.
- Set a 2-digit value for each option pair in the following order: SEG2 and SEG3 SEG4 and SEG5 SEG6 and SEG8 SEG9 and SEG10 SEG11 and SEG12 SEG14 and SEG15 SEG16 and SEG17 SEG18 and SEG20 SEG21 and SEG22 SEG23 and SEG24

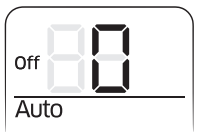
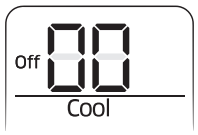
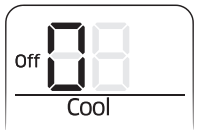
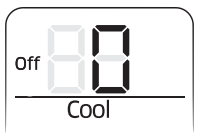
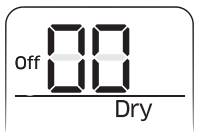
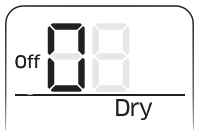
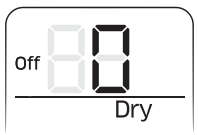
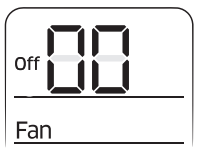
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	X	X	X	X	X
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	X	X	X	X	X
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	X	X	X	X	X

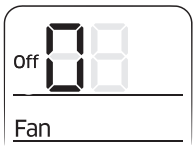
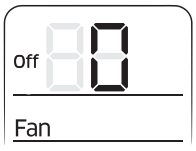
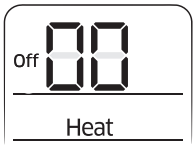
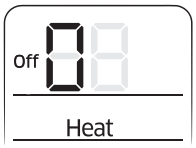
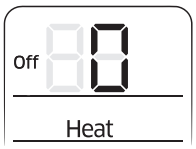
On (SEG1 to SEG12)	Off (SEG13 to SEG24)
	

Take the steps presented in the following table:

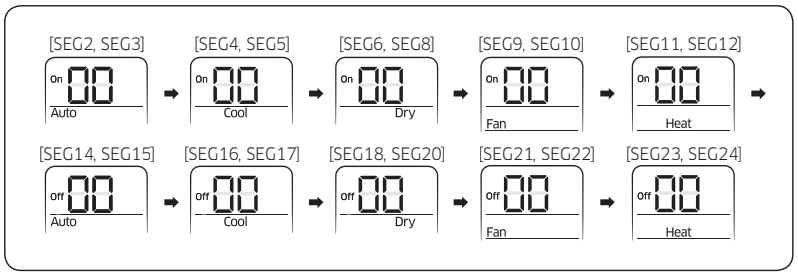
Steps	Remote control display
1 Set the SEG2 and SEG3 values: a Set the SEG2 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG3 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG2  SEG3
2 Press the (Mode) button. Cool and On appear on the remote control display.	
3 Set the SEG4 and SEG5 values: a Set the SEG4 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG5 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG4  SEG5
4 Press the (Mode) button. Dry and On appear on the remote control display.	
5 Set the SEG6 and SEG8 values: a Set the SEG6 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG8 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG6  SEG8

Steps	Remote control display
6 Press the (Mode) button. Fan and On appear on the remote control display.	
7 Set the SEG9 and SEG10 values: a Set the SEG9 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG10 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG9  SEG10
8 Press the (Mode) button. Heat and On appear on the remote control display.	
9 Set the SEG11 and SEG12 values: a Set the SEG11 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG12 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG11  SEG12
10 Press the (Mode) button. Auto and Off appear on the remote control display.	
11 Set the SEG14 and SEG15 values: a Set the SEG14 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG14

Steps	Remote control display
b Set the SEG15 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG15
1 Press the (Mode) button. Cool and Off appear on the remote control display.	
2 Set the SEG16 and SEG17 values: a Set the SEG16 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG16
b Set the SEG17 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG17
3 Press the (Mode) button. Dry and Off appear on the remote control display.	
4 Set the SEG18 and SEG20 values: a Set the SEG18 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display.	 SEG18
b Set the SEG20 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG20
5 Press the (Mode) button. Fan and Off appear on the remote control display.	

Steps	Remote control display
6 Set the SEG21 and SEG22 values: a Set the SEG21 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG22 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG21  SEG22
7 Press the (Mode) button. Heat and Off appear on the remote control display.	
8 Set the SEG23 and SEG24 values: a Set the SEG23 value by pressing the (Low Fan) button repeatedly until the value you want to set appears on the remote control display. b Set the SEG24 value by pressing the (High Fan) button repeatedly until the value you want to set appears on the remote control display. When you press the (Low Fan) or (High Fan) button, values appear in the following order: 0 → 1 → ··· E → F	 SEG23  SEG24

3 Check whether the option values that you have set are correct by pressing the (Mode) button repeatedly



4 Save the option values into the indoor unit:

Point the remote control to the remote control sensor on the indoor unit and then press the (Power) button on the remote control twice. Make sure that this command is received by the indoor unit. When it is successfully received, you can hear a short sound from the indoor unit. If the command is not received, press the (Power) button again.

1 Check whether the air conditioner operates in accordance with the option values you have set:

a Reset the indoor or outdoor unit.

- Indoor unit : Press the SET (Set) and Fan (Low Fan) buttons on the remote control simultaneously for 4 seconds.
- Outdoor unit : Press the K3 button.

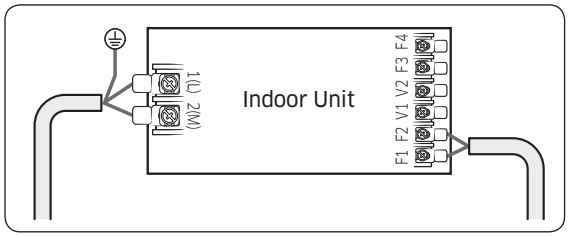
b Remove the batteries from the remote control, insert them again, and then press the (Power) button on the remote control.

4-1-2 Setting the indoor unit addresses

Option No. for an indoor unit address: 0AXXXX-1XXXXX-2XXXXX-3XXXXX

Before installing an indoor unit, be sure to set an address for the indoor unit by taking the following steps:

1 Make sure that the power is supplied to the indoor unit. If the indoor unit is not plugged in, it must include a power supply.



2 Set an address for each indoor unit using the remote control, according to your air conditioning system plan, by referring to the following table and by following the steps in **Common steps for setting the addresses and options** on page <?>.

- The indoor unit addresses (main and RMC addresses) are set to 0A0000-100000-200000-300000 by default.
- If indoor units and outdoor units match 1:1, you don't need to set the main address because it is automatically set by the outdoor unit.
- If you are using on or off controller, set RMC address.

<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>Function</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">Indoor unit number</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></tr>
<tr><td rowspan="2">0</td><td rowspan="2">A</td><td>0</td><td>No main address</td><td rowspan="2">0 to 9</td><td rowspan="2">Units 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>Function</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 (x16)</td><td colspan="2">Group address</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></tr>
<tr><td rowspan="2">1</td><td>0</td><td>No RMC address</td><td rowspan="2">RMC1</td><td rowspan="2">0 to 2</td><td rowspan="2">RMC2</td><td rowspan="2">0 to F</td></tr>
<tr><td>1</td><td>RMC address setting mode</td></tr>
</table>

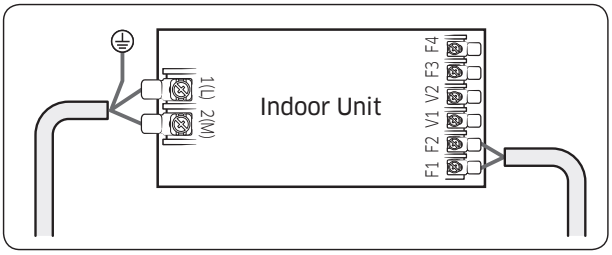
⚠ CAUTION

- The main address must be set to a value in the range 0 to 14. If you set other values, communication error will occur.
- If any of SEG5 and SEG6 is set to a value in the range A to F, the main address of the indoor unit does not change.
- If SEG3 is set to 0, the indoor unit maintains the existing main address even if SEG6 is set to a new value.
- If SEG9 is set 0, the indoor unit maintains the existing RMC address even if SEG11 and SET12 are set to new values.

4-1-3 Setting the installation options in a batch

Option No. for an indoor unit address: 02XXXX-1XXXXX-2XXXXX-3XXXXX

1 Make sure that the power is supplied to the indoor unit. If the indoor unit is not plugged in, it must include a power supply.



2 Set the installation options of indoor units, by referring to the following table and by following the steps in **Common steps for setting the addresses and options** on page <?>.
   - The installation options of indoor units are set to 020000-100000-200000-300000 by default.
   - The SEG20 option, Individual control with remote control, allows you to control multiple indoor units individually by using the remote control.

Option	SEG1		SEG2		SEG3	SEG4		SEG5		SEG6	
Function	Page		Mode			Use of external temperature sensor		Use of central control		Compensation of the fan RPM	
	Indication	Details	Indication	Details		Indication	Details	Indication	Details	Indication	Details
Indication and details	0		2		Reserved	0	Disuse	0	Disuse	0	Disuse (recessed installation)
										1	High-ceiling mode (recessed installation)
						1	Use	1	Use	4	Disuse (exposed installation)
										5	High-ceiling mode (exposed installation)

<table>
<tr><td>Option</td><td colspan="2">SEG7</td><td colspan="3">SEG8</td><td colspan="2">SEG9</td><td colspan="2">SEG10</td><td colspan="2">SEG11</td><td colspan="2">SEG12</td></tr>
<tr><td>Function</td><td colspan="2">Page</td><td colspan="3">Use of drain pump</td><td colspan="2" rowspan="2">Reserved</td><td colspan="2" rowspan="2">Reserved</td><td colspan="2" rowspan="2">Reserved</td><td colspan="2" rowspan="2">Reserved</td></tr>
<tr><td rowspan="5">Indication and details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td></tr>
<tr><td rowspan="4">1</td><td>0</td><td colspan="2">Disuse</td></tr>
<tr><td>1</td><td colspan="2">Use</td></tr>
<tr><td>2</td><td colspan="2">Use with 3 minute delay</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Option</td><td colspan="2">SEG13</td><td colspan="3">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>Function</td><td colspan="2">Page</td><td colspan="3">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">Maximum filter usage time</td></tr>
<tr><td rowspan="10">Indication and details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">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="9">2</td><td>0</td><td>Disuse</td><td rowspan="4">Slave (disable Level control*)</td><td rowspan="4">0</td><td rowspan="4">Thermo on</td><td rowspan="4">0</td><td rowspan="4">Disuse</td><td rowspan="4">0</td><td rowspan="4">Use of buzzer</td><td rowspan="4">2</td><td rowspan="4">1000 hours</td></tr>
<tr><td>1</td><td>On/Off control</td></tr>
<tr><td>2</td><td>Off control</td></tr>
<tr><td>3</td><td>Window on/off control</td></tr>
<tr><td>4</td><td>Disuse</td><td rowspan="4">Master (enable Level control*)</td><td rowspan="4">1</td><td rowspan="4">Operation on</td><td rowspan="4">1</td><td rowspan="4">Use</td><td rowspan="4">1</td><td rowspan="4">Disuse of buzzer</td><td rowspan="4">6</td><td rowspan="4">2000 hours</td></tr>
<tr><td>5</td><td>On/Off control</td></tr>
<tr><td>6</td><td>Off control</td></tr>
<tr><td>7</td><td>Window on/off control</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Option</td><td colspan="2">SEG19</td><td colspan="3">SEG20</td><td colspan="2">SEG21</td><td colspan="2" rowspan="6">SEG22</td><td colspan="2" rowspan="6">SEG23</td><td colspan="2">SEG24</td></tr>
<tr><td>Function</td><td colspan="2">Page</td><td colspan="3">Individual control with remote control</td><td colspan="2">Heating setting compensation</td><td colspan="2">Cycle time of Swing</td></tr>
<tr><td rowspan="5">Indication and details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td rowspan="4">3</td><td>0 or 1</td><td colspan="2">Indoor 1</td><td>0</td><td>Default</td><td>0</td><td>34 seconds (default)</td></tr>
<tr><td>2</td><td colspan="2">Indoor 2</td><td>1</td><td>2℃</td><td>1</td><td>30 seconds</td></tr>
<tr><td>3</td><td colspan="2">Indoor 3</td><td rowspan="2">2</td><td rowspan="2">5℃</td><td rowspan="2">2</td><td rowspan="2">38 seconds</td></tr>
<tr><td>4</td><td colspan="2">Indoor 4</td></tr>
</table>

- Even if you set the Use of drain pump (SEG8) option to 0, it is automatically set to 2 (the drain pump is used with 3 minute delay).
- If you set the Maximum filter usage time (SEG18) option to a value other than 2 and 6, it is automatically set to 2 (1000 hours).
- If you set the Individual control with remote control (SEG20) option to a value other than 0 to 4, it is automatically set to 0 (Indoor 1).
- Default value of Heating setting compensation (SEG21) is 5°C for 360 cassette model.

* Level control: The centralized controller can limit the functions and inputs of connected products with this function enabled. (Example: Operation mode limit (Cooling only/Heating only/No limitation), Heating temperature upper limit, Cooling temperature lower limit)
To enable 'Level control' when applying the DPM with the centralized controller, appoint the master (Set 'Use of external control [SEG14] option to 4 or higher).

Example: When installing DPM (1 Outdoor unit with 4 indoor units)

Condition		SEG14 Setting				Result
External control	Level control	Indoor 1	Indoor 2	Indoor 3	Indoor 4	
Default		Not set (0)				Slave (All)
Disuse	Use	4	Not set (0)	Not set (0)	Not set (0)	Master (Indoor 1), Slave (Indoor 2,3,4)
Use (Indoor 3)	Disuse	Not set (0)	Not set (0)	1~3	Not set (0)	Slave (All)
Use (Indoor 4)	Use	Not set (0)	Not set (0)	Not set (0)	5~7	Master (Indoor 4), Slave (Indoor 1,2,3)

4-1-4 Changing the addresses and options individually

When you want to change the value of a specific option, refer to the following table and follow the steps in **Common steps for setting the addresses and options** on page <**?**>.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Function	Page		Mode		Option mode to change		Tens position of the option number		Units position of the option number		New value	
Indication and details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		Option type	0 to F	Tens position value	0 to 9	Units position value	0 to 9	New value	0 to F

Example: Changing the Buzzer control (SEG17) option of the installation options to 1 disuse.

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Function	Page	Mode	Option mode to change	Tens position of the option number	Units position of the option number	New value
Indication	0	D	2	1	7	1

4-2 Item to check before diagnosis

4-2-1 Display Error mode

- 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.

Abnormal conditions	LED lamp display (white)					Remarks
	⏻	*💧	🕒	🌀	⁘	
Power reset	X	X	X	◑	◑	
Error of temperature sensor in the indoor unit (Open/Short)	X	X	◑	◑	◑	
Error of heat exchanger sensor in the indoor unit	X	X	◑	X	◑	
Indoor fan motor is non-operative Indoor fan motor is operating slowly Indoor fan motor operates at an excessive speed	X	◑	◑	X	X	Indoor motor fan error
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)
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	
Error of setting option switches for optional accessories	◑	X	◑	X	X	
EEPROM error	X	◑	◑	X	◑	
EEPROM option error	◑	◑	◑	◑	◑	
MPI no feedback Error	◑	X	X	X	X	

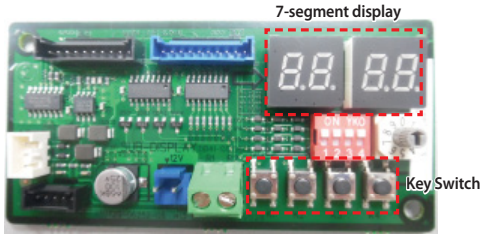
● : On, ◑ : Flickering, X : Off

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

4-2-2 Test run mode and View mode

■ Display Option Key

KEY	KEY operation	7-segment display
K1	Press once : Heating test run	"H" "1" "BLANK" "BLANK"
	Press twice : Defrost test run	"H" "3" "BLANK" "BLANK"
K2	Press once : Cooling test run	"C" "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 Troubleshooting for outdoor unit

The table below list the self-diagnostic routines. For some of error codes, you must contact an authorized service centre.
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	E108	Error due to duplicated communication address	Check on repeated indoor unit main address
2	E121	Error on room temperature sensor of indoor unit (Short or Open)	Indoor unit Room Thermistor Open/Short
3	E122	Error on EVA IN sensor of indoor unit (Short or Open)	Indoor unit EVA_IN Thermistor Open/Short
4	E123	Error on EVA OUT sensor of indoor unit (Short or Open)	Indoor unit EVA_OUT Thermistor Open/Short
5	E153	Error on float switch (2nd detection)	Indoor unit Float Switch Open/Short Drain Pump operation Check
6	E154	Indoor fan error	Check on indoor unit indoor Fan operation
7	E198	Error on thermal fuse of indoor unit (Open)	Thermal Fuse Open Check of indoor unit Terminal Block
8	E201	Communication error between the indoor unit and outdoor unit (Pre-tracking failure or when the actual number of indoor units are different from the indoor unit quantity setting on the outdoor unit) Error due to communication tracking failure after initial power is supplied (The error occurs regardless of the number of units.)	Check indoor quantity setting in outdoor
9	E202	Communication error between indoor unit and outdoor unit (When there is no response from indoor units after tracking is completed)	Check electrical connection and setting between indoor unit and outdoor unit
10	E203	Communication error between the outdoor unit and main micom (For PF #4 to #6 controllers, error will be determined from the time when the compressor is turned on.)	Check electrical connection and setting between indoor unit MAIN PBA - INVERTER PBA
11	E221	Error on outdoor temperature sensor (Short or Open)	Check Outdoor sensor Open / Short
12	E231	Error on outdoor COND OUT sensor (Short or Open)	Check Cond-Out sensor Open / Short
13	E251	Error on discharge temperature sensor of compressor 1 (Short or Open)	Check Discharge sensor Open / Short
14	E320	Error on OLP sensor (Short or Open)	Check OLP sensor Open / Short
15	E403	Compressor down due to freeze protection control	Check Outdoor Cond.
16	E404	System stop due to overload protection control	Check Comp. when it starts
17	E416	System stop due to discharge temperature	-
18	E422	Blockage detected on high pressure pipe	1. Check if the service valve is open 2. Check for refrigerant leakage (pipe connections, heat exchanger) and charge refrigerant if necessary 3. Check if there's any blockage on the refrigerant cycle (indoor unit/outdoor unit) 4. Check if additional refrigerant has been added after pipe extension
19	E425	Reverse phase or open phase	Check whether 3 phase is reversed or opened.
20	E440	Heating operation restricted at outdoor temperature over Theat_high value	HEATING
21	E441	Cooling operation restricted at outdoor temperature below Tcool_low value	COOLING
22	E458	Fan speed error	FAN1 ERROR

No.	Error Code	Meaning	Remarks
23	E461	Error due to operation failure of inverter compressor	-
24	E462	System stop due to full current control	-
25	E463	Over current trip / PFC over current error	Check OLP sensor
26	E464	IPM Over Current(O.C)	IPM
27	E465	Comp. Over load error	-
28	E466	DC-Link voltage under/over error	Check AC Power and DC Link Voltage
29	E467	Error due to abnormal rotation of the compressor or unconnected wire of compressor	Check Comp wire
30	E468	Error on current sensor (Short or Open)	Check Outdoor Inverter PBA.
31	E469	Error on DC-Link voltage sensor (Short or Open)	-
32	E470	Outdoor unit EEPROM Read/Write error (Option)	Check Outdoor EEPROM Data
33	E471	Outdoor unit EEPROM Read/Write error (H/W)	Check Outdoor EEPROM PBA
34	E472	AC Line Zero Cross Signal out	-
35	E473	Comp Lock error	-
36	E474	Error on IPM Heat Sink sensor of inverter 1 (Short or Open)	Check Outdoor Inverter PBA.
37	E475	Error on inverter fan 2	FAN2 ERROR
38	E484	PFC Overload (Over current) Error	Check Outdoor Inverter PBA.
39	E485	Error on input current sensor of inverter 1 (Short or Open)	Check Outdoor EEPROM PBA
40	E500	IPM over heat error on inverter 1	Check Outdoor Inverter PBA.
41	E508	Smart install is not installed	-
42	E554	Gas leak detected	Check the refrigerant
43	E556	Error due to mismatching capacity of indoor and outdoor unit	Check the indoor and outdoor unit capacity
45	E590	Inverter EEPROM Checksum error	-
46	E660	Inverter Boot Code error	-

4-2-4 Wired remote controller

- If an error occurs, (TEST) 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
237	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

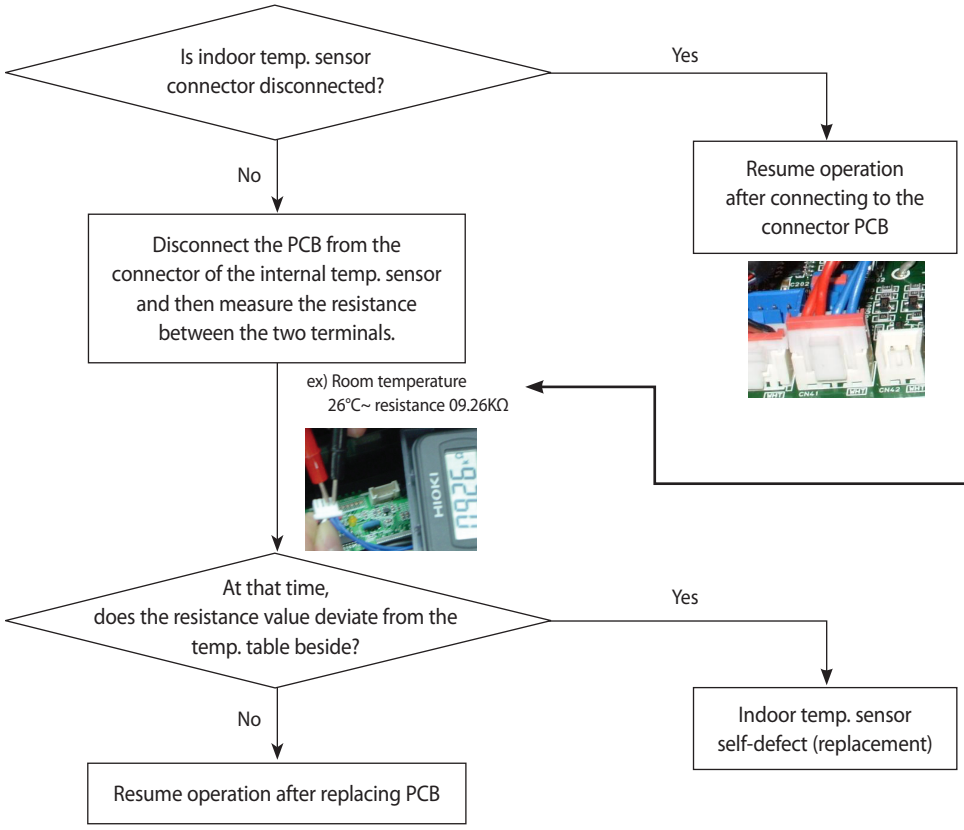
Wired remote controller (cont.)

Error mode	Contents	Measure	Product operation in error condition Outdoor unit/ Compressor/Indoor unit	Error type
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 Troubleshooting by symptoms

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

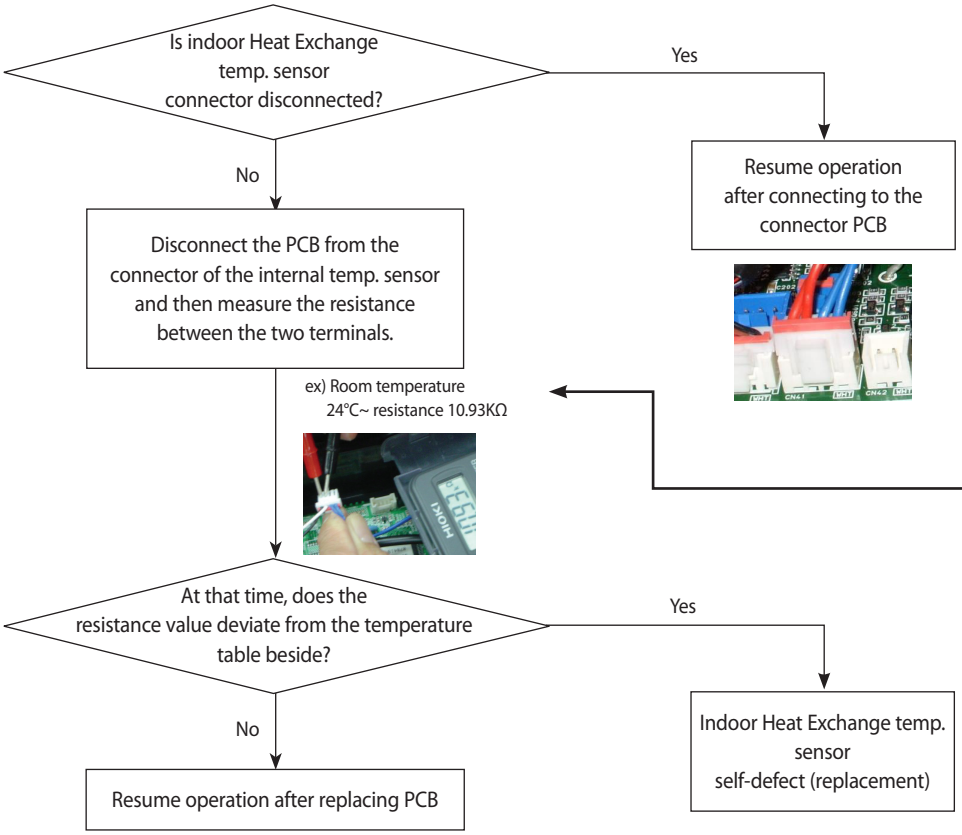


<Temperature sensor resistance values>

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

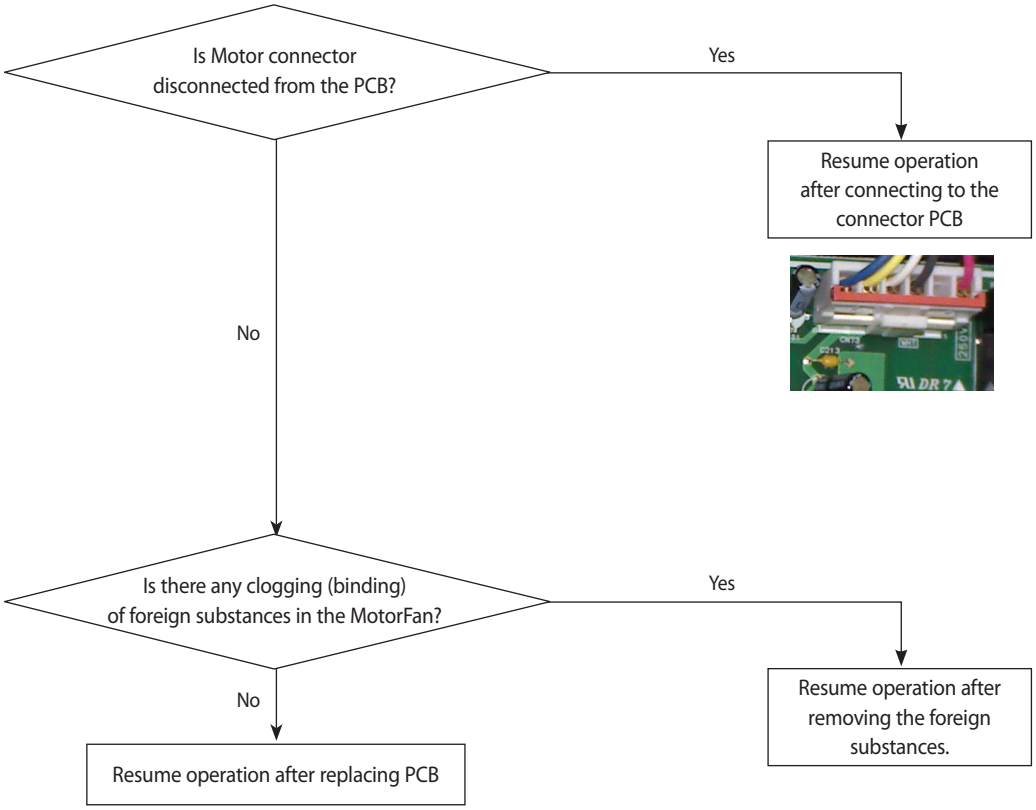


<Temperature sensor resistance values>

Current Temp. (°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

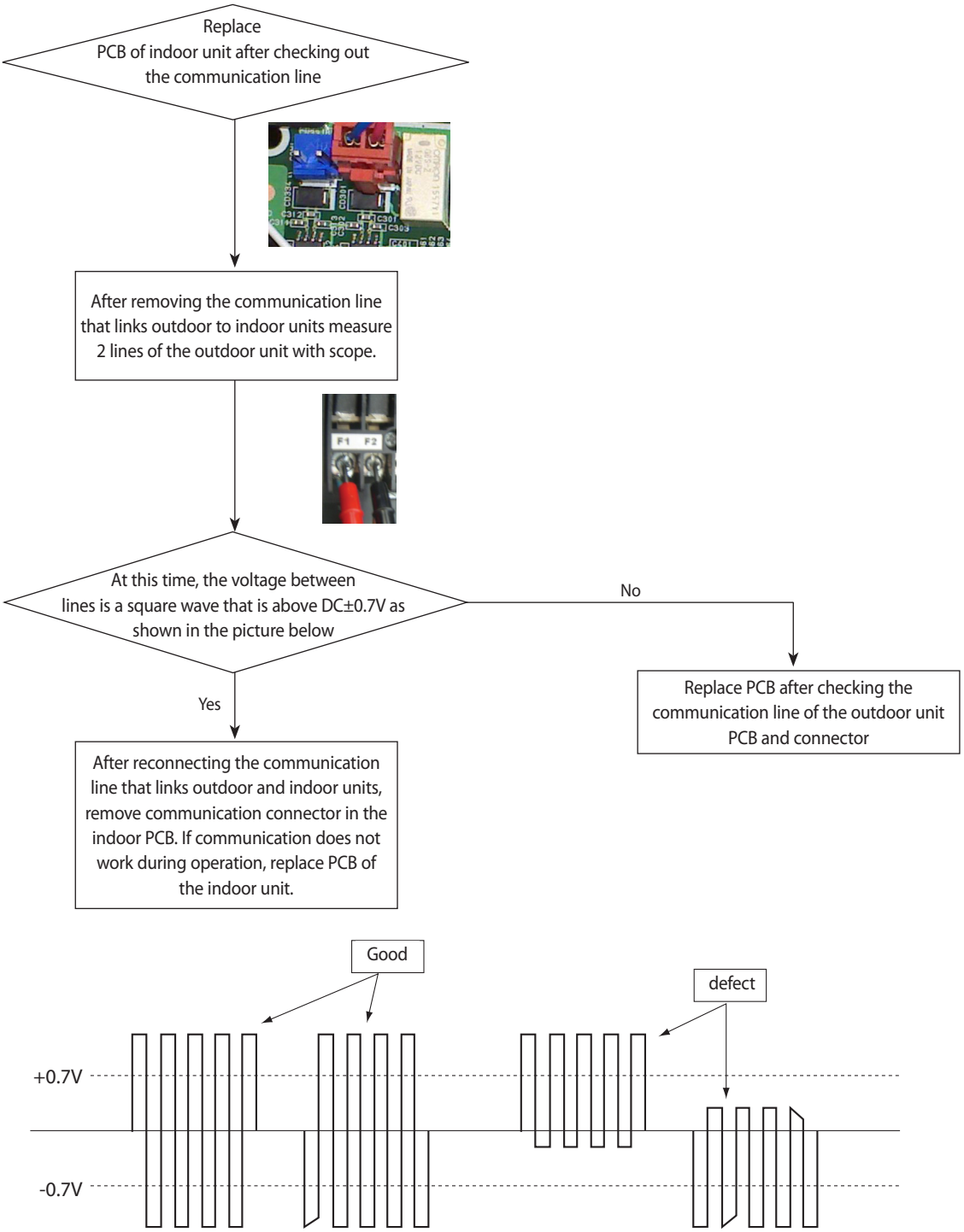
4-3-3 Indoor Fan error

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



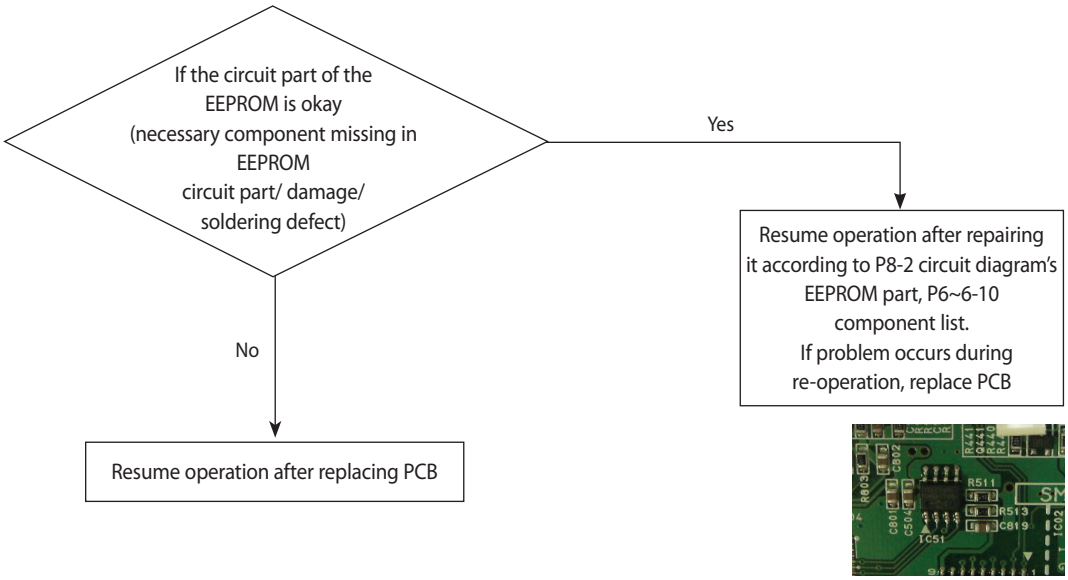
4-3-4 Communication error after completion of tracking

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

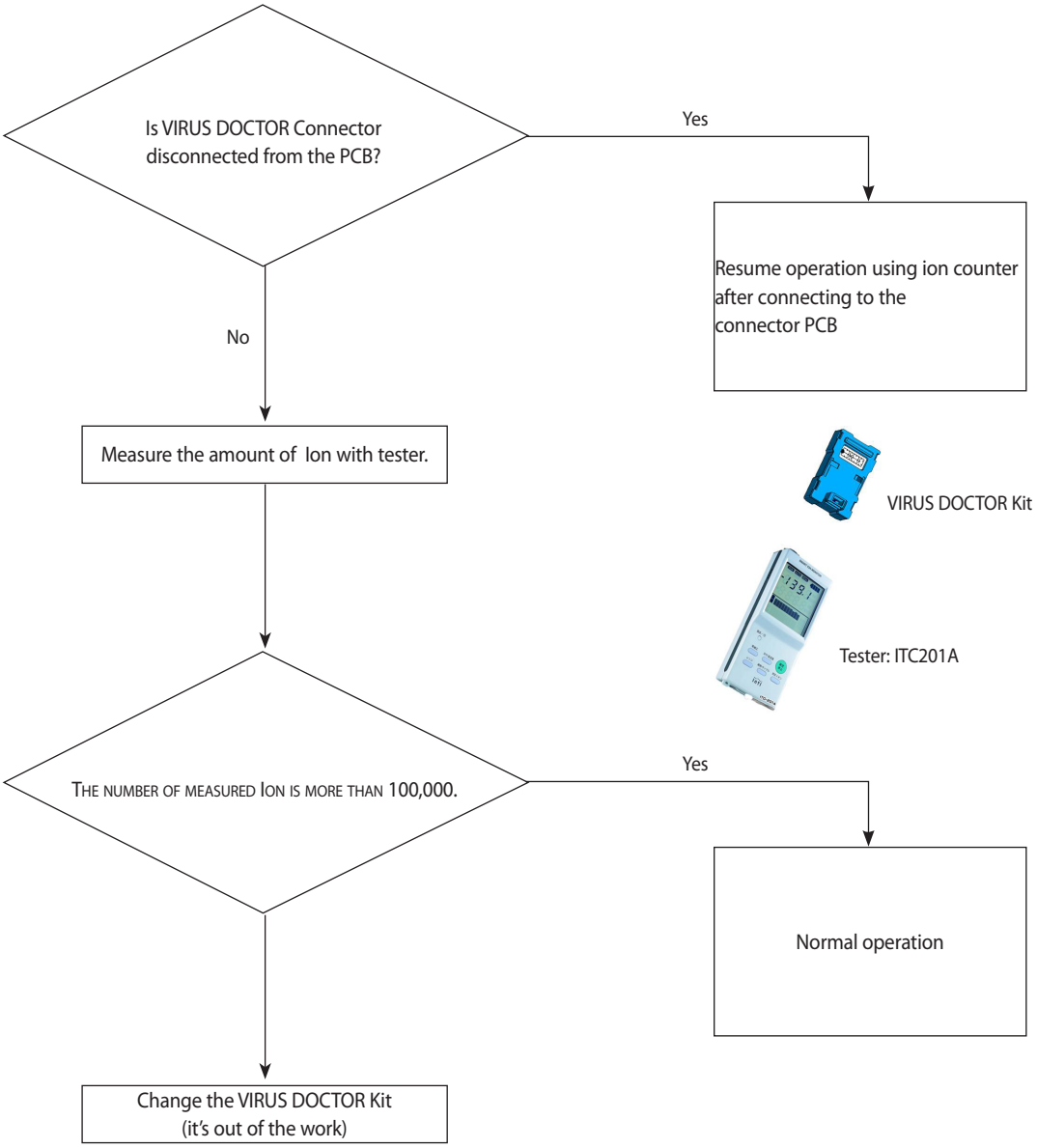
Indoor unit display	◑(Operation) X(Defrost) ◑(Reservation) ◑(Fan) X(Filter)
Criteria	EEPROM circuit part defect
Cause of problem	EEPROM component defect/ necessary component missing in EEPROM circuit part/ damage/ soldering



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

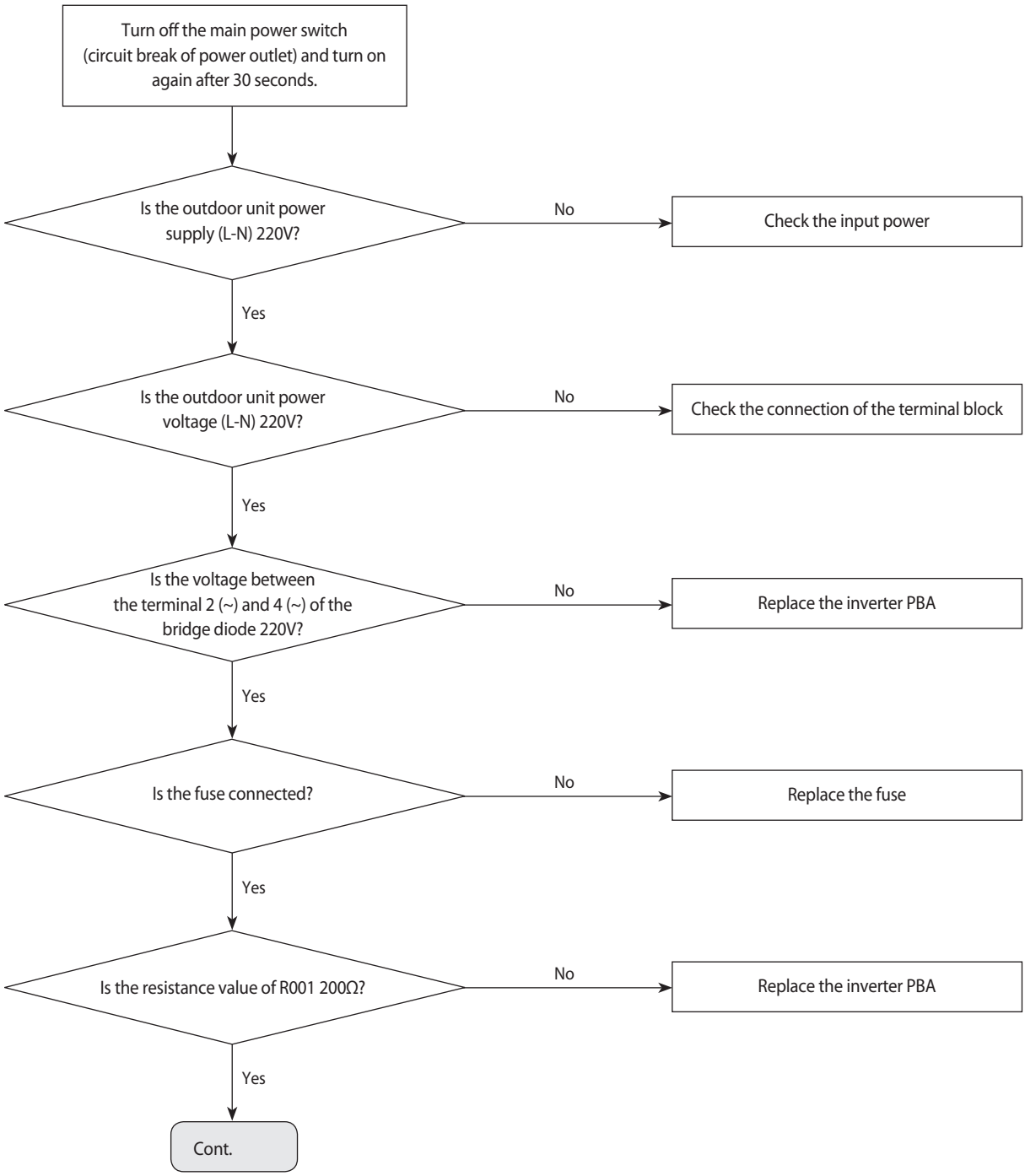


4-3-7 Outdoor unit is not powered on – Initial diagnosis

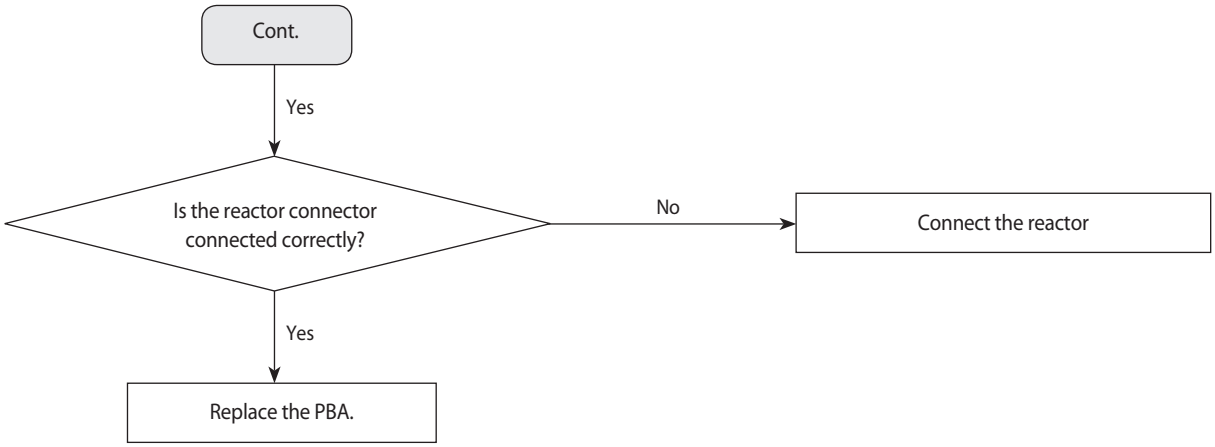
1. Check items

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

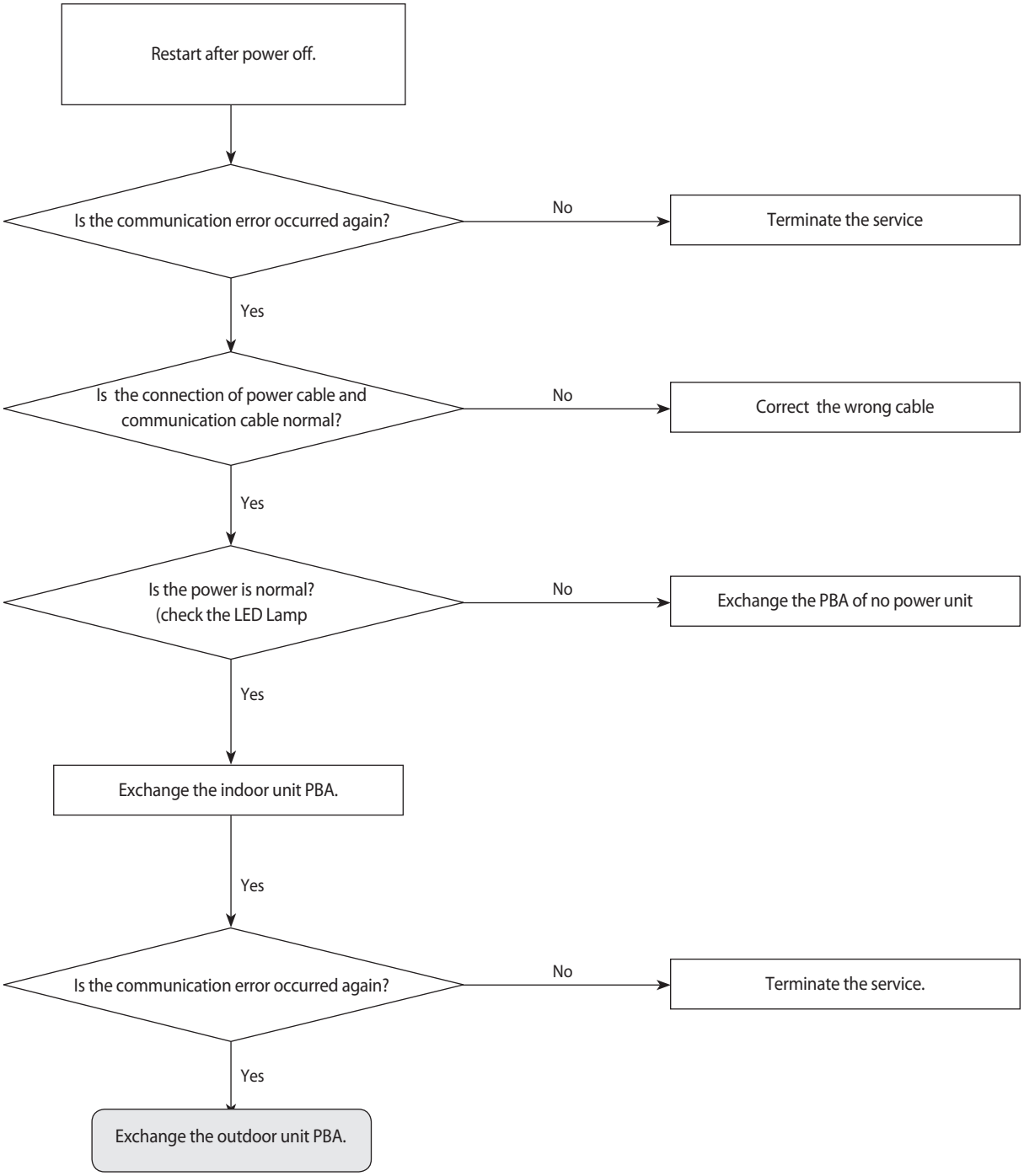
4-4-1 Communication error

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

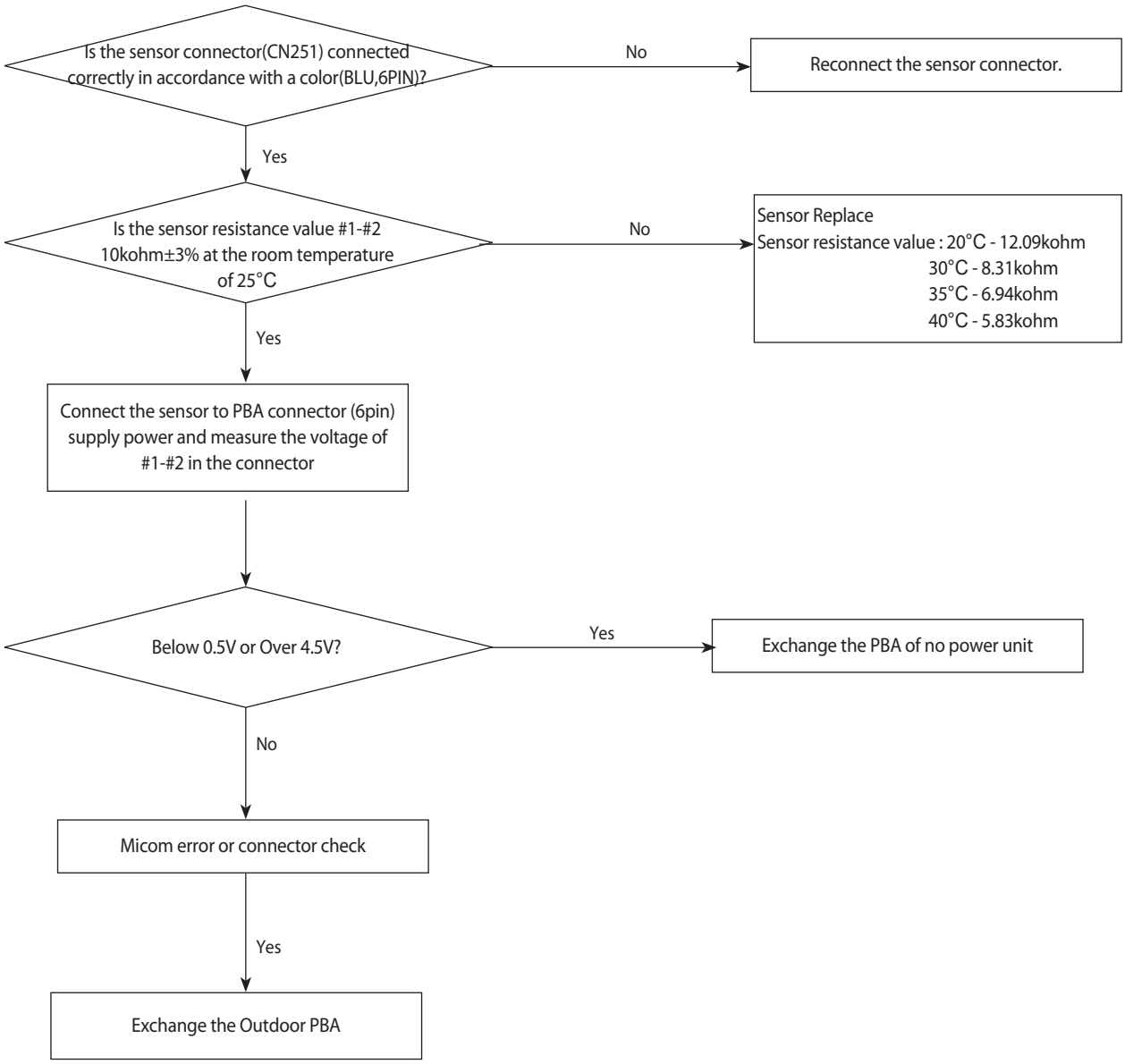


4-4-2 Outdoor temperature sensor error

1. 1.Checklist :

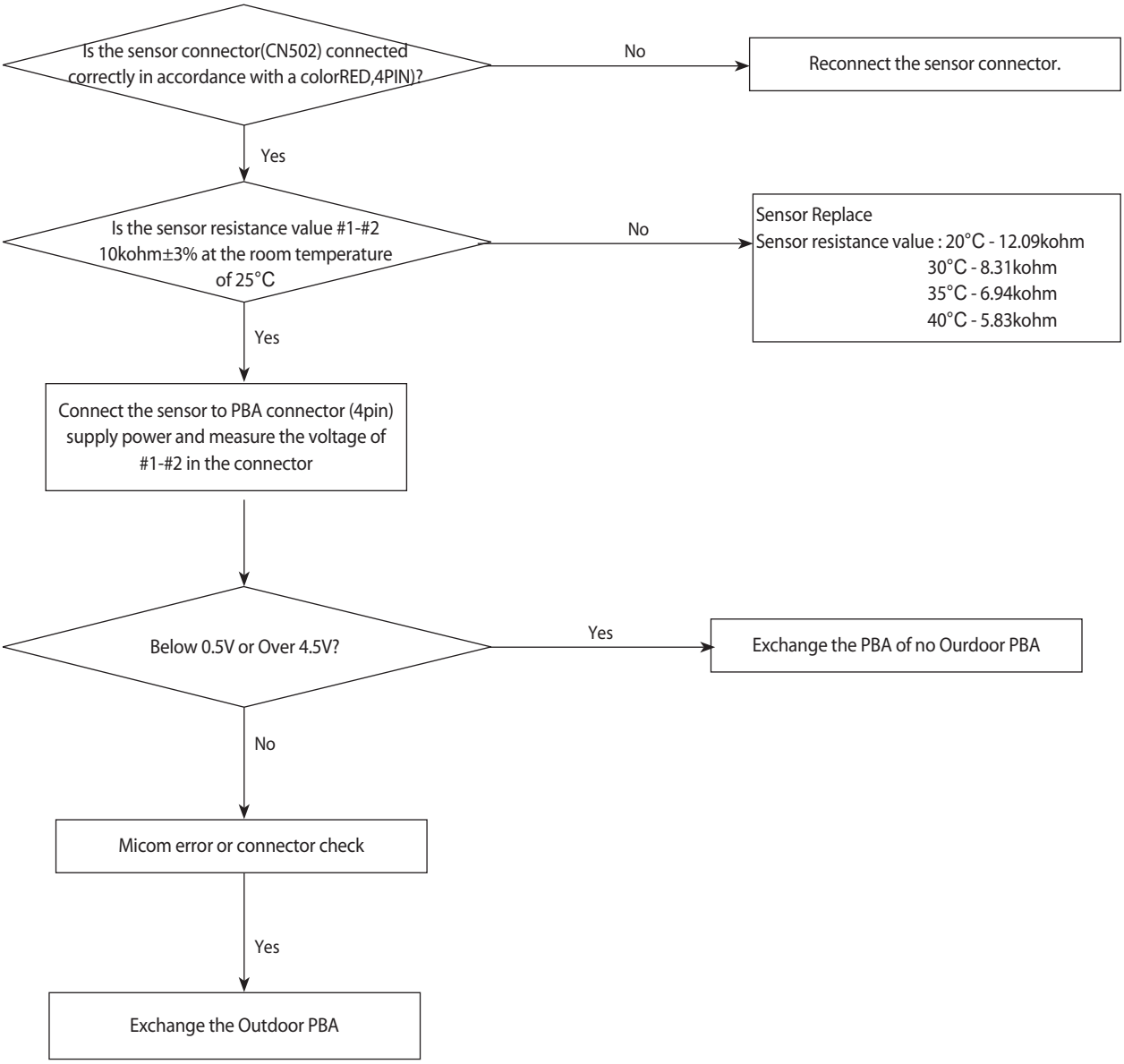
1) Is the cable between the indoor unit and outdoor unit connected correctly?
2) Is the sensor placed correctly?
3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
4) Is the resistance value of sensor connection pull-up correct?

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



4-25

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

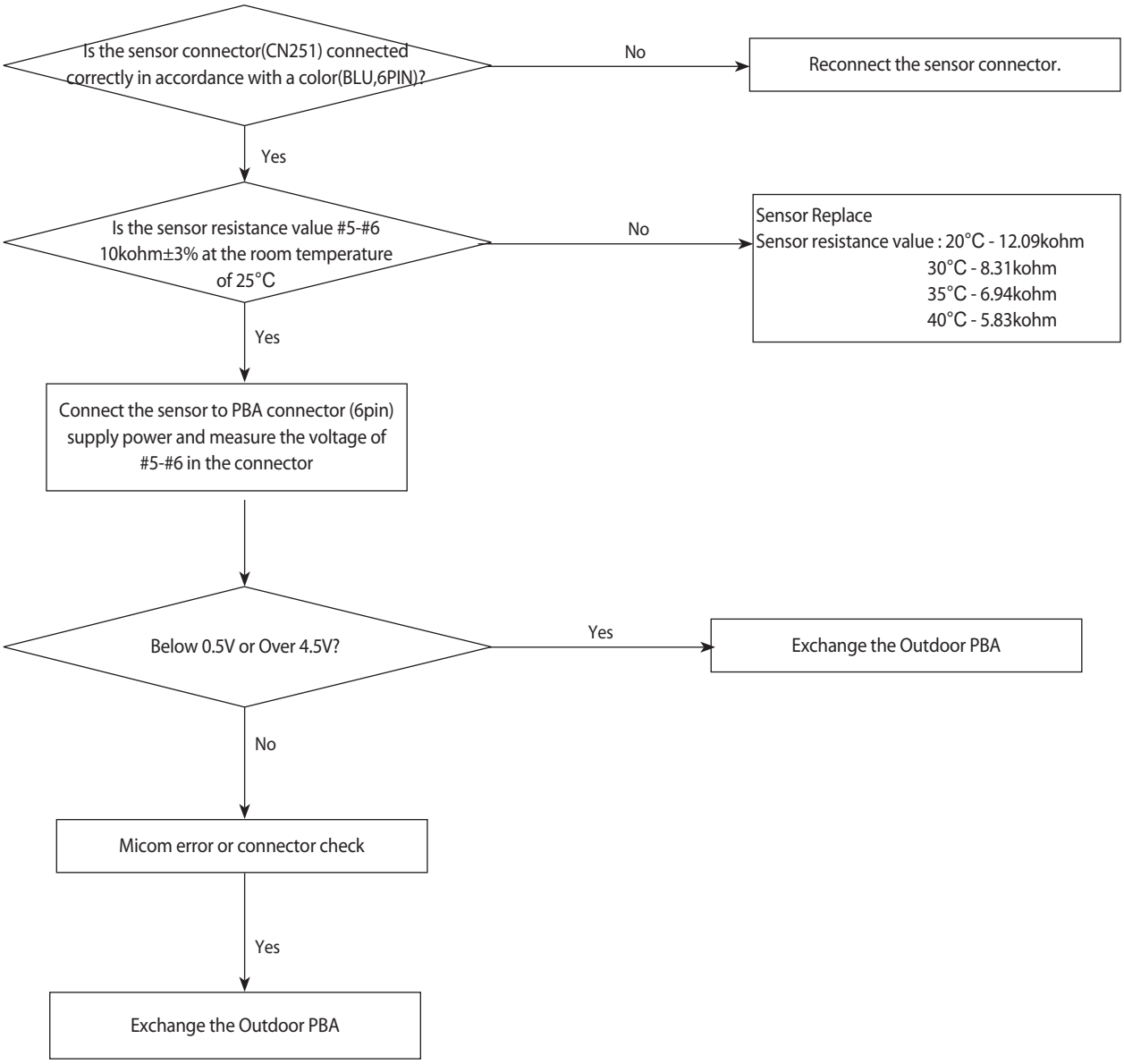


4-4-3 Outdoor Coil temperature sensor error

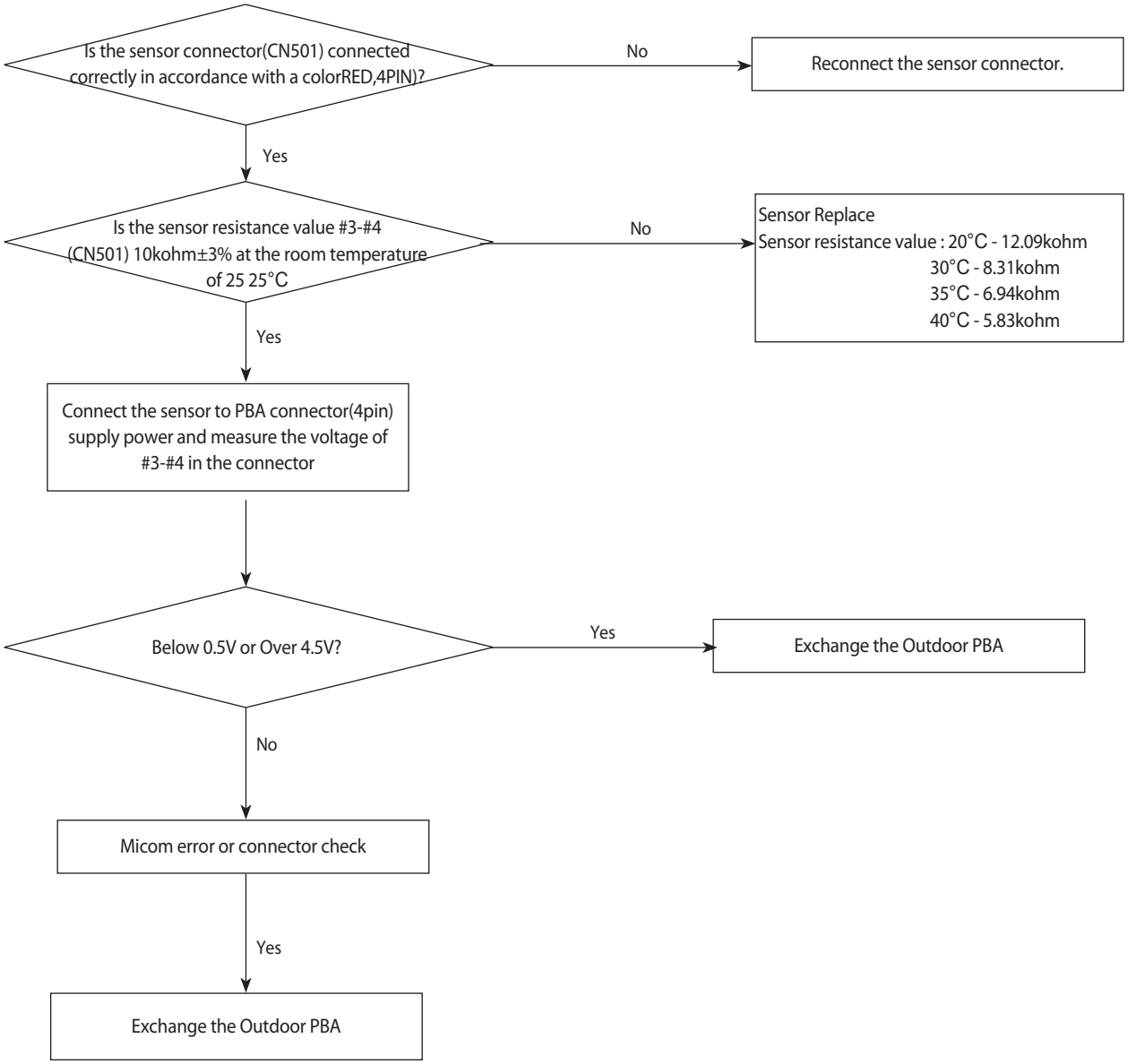
1.Checklist :

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)

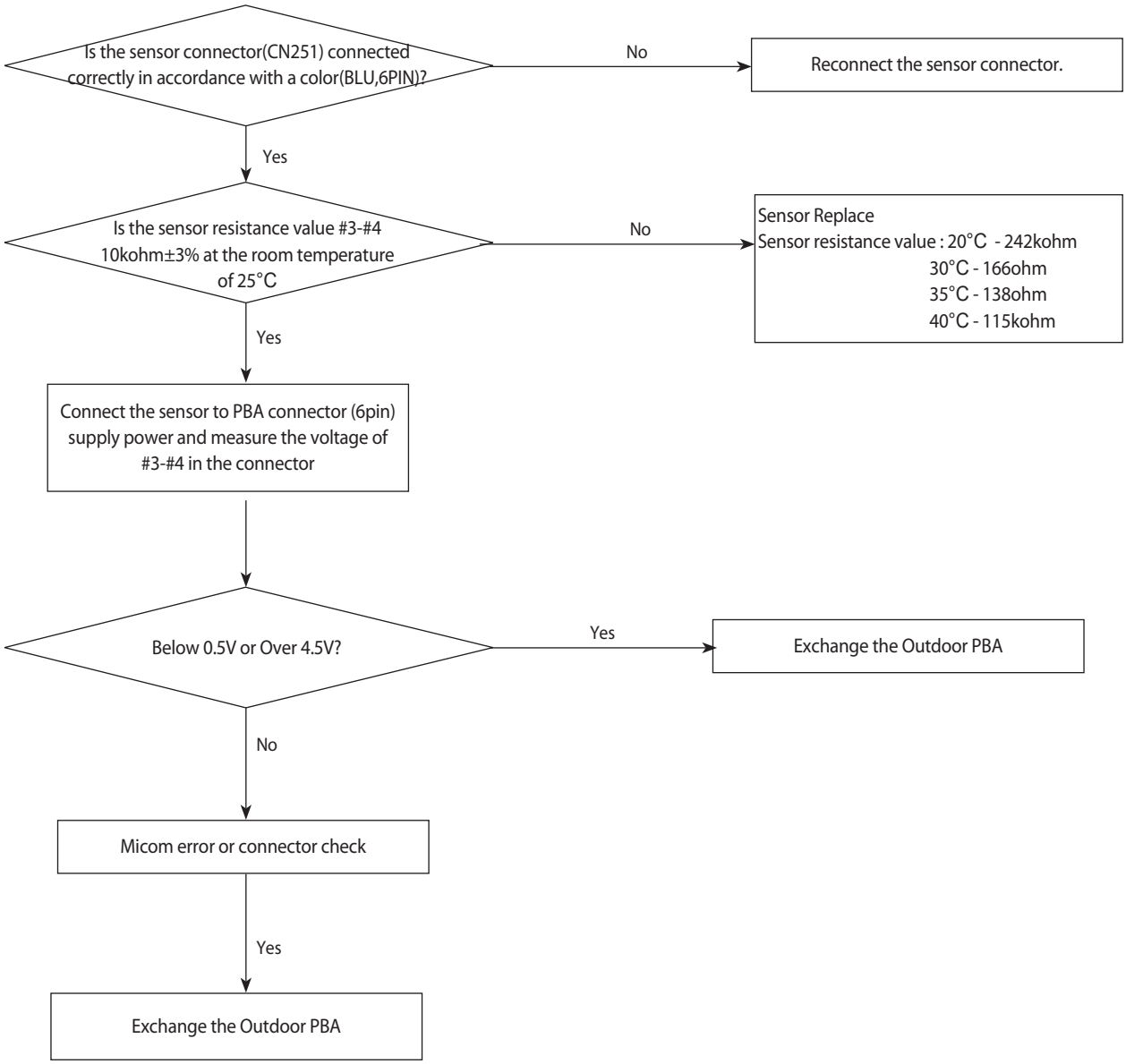


4-4-4 Outdoor Discharge temperature sensor error

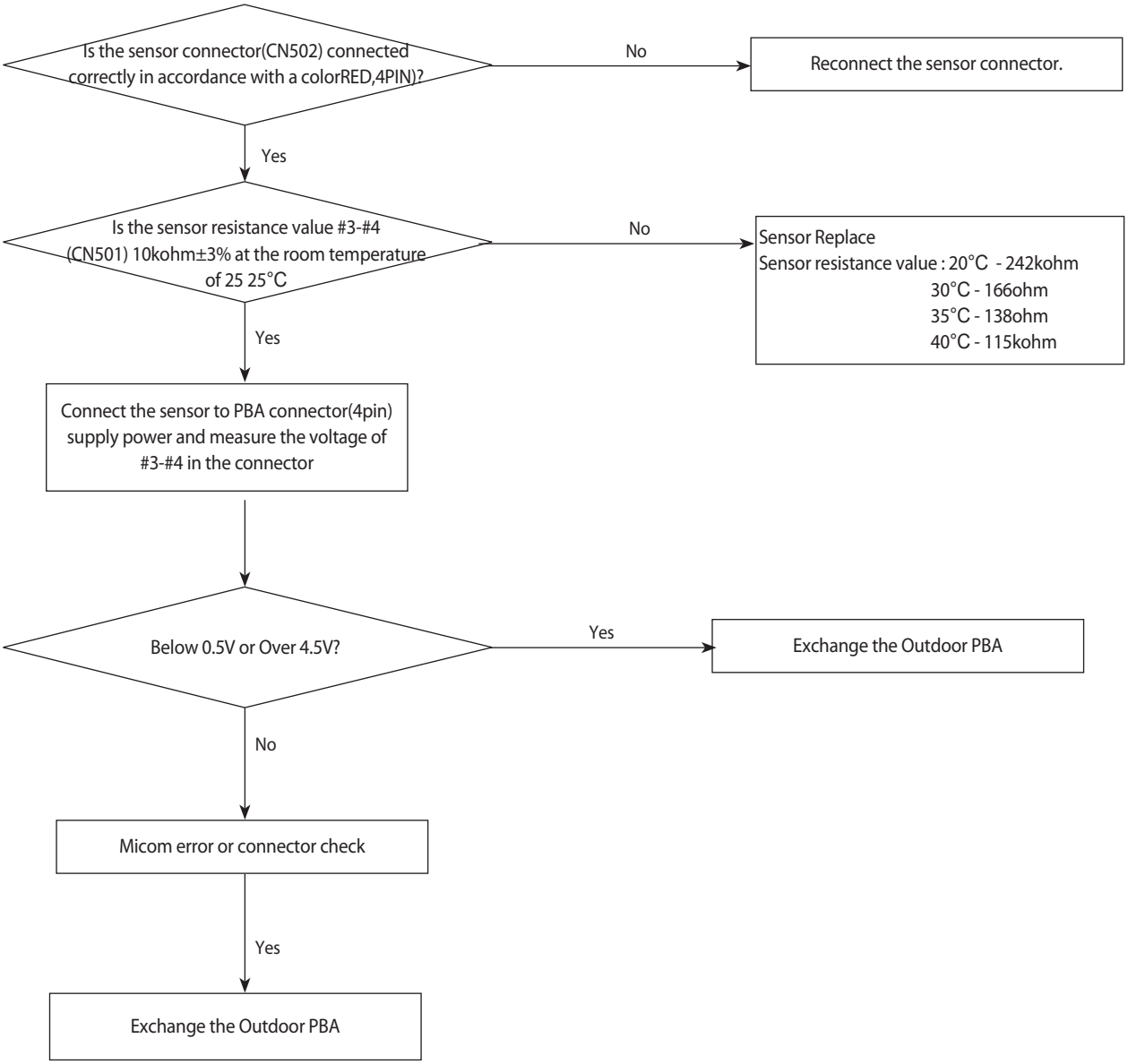
1.Checklist :

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)

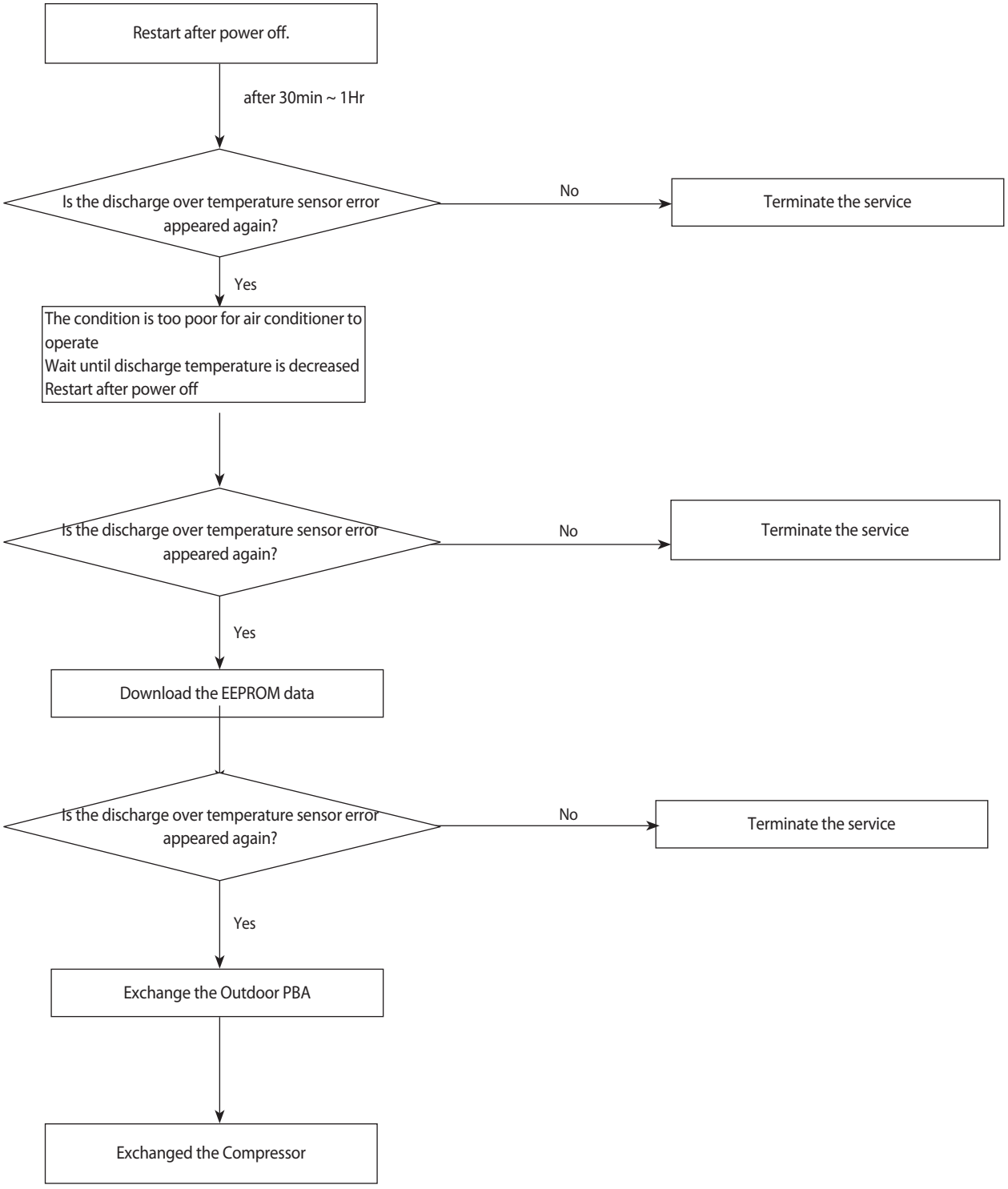


4-4-5 Outdoor Discharge over temperature error

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

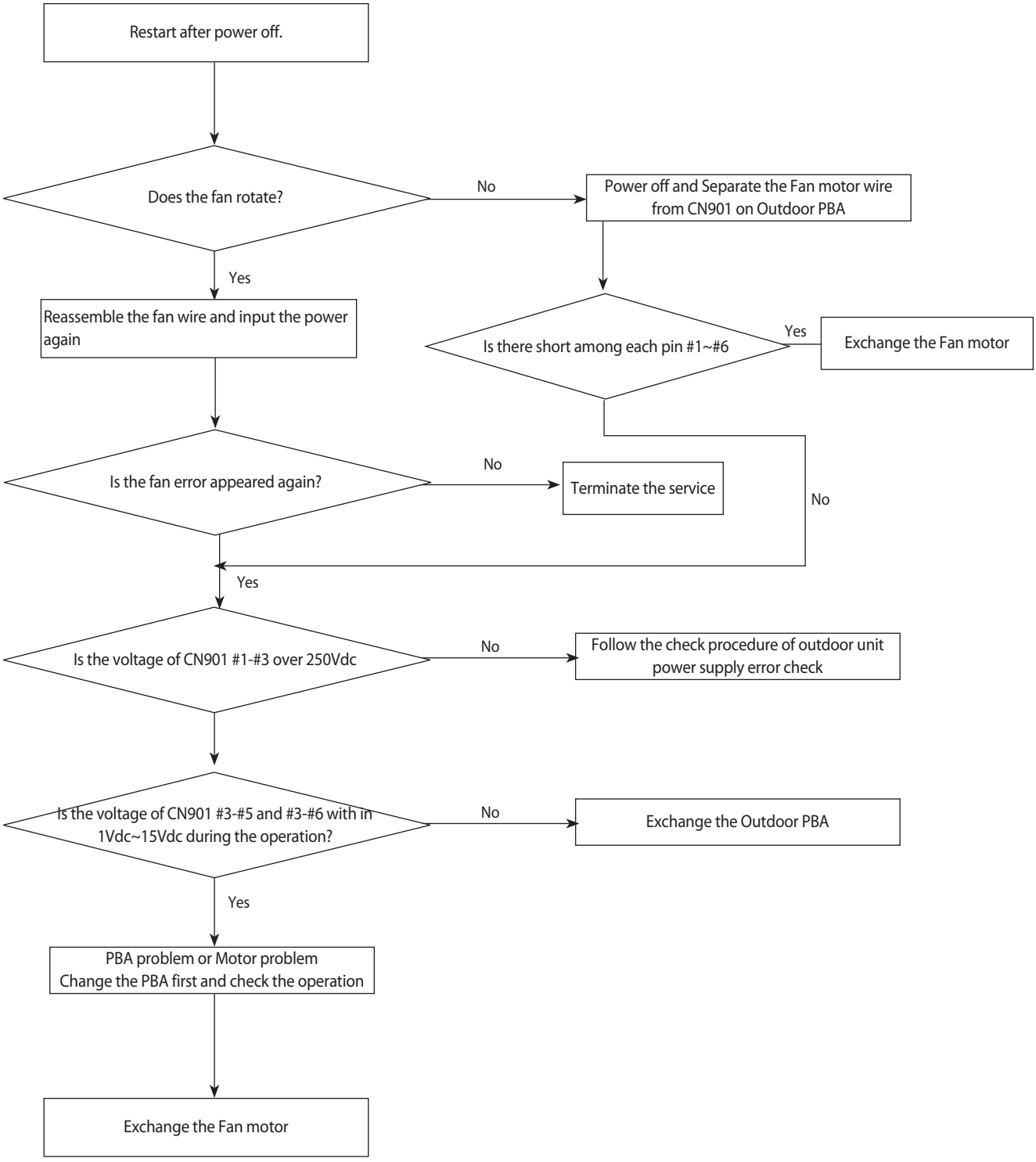


4-4-6 Outdoor Fan motor error

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

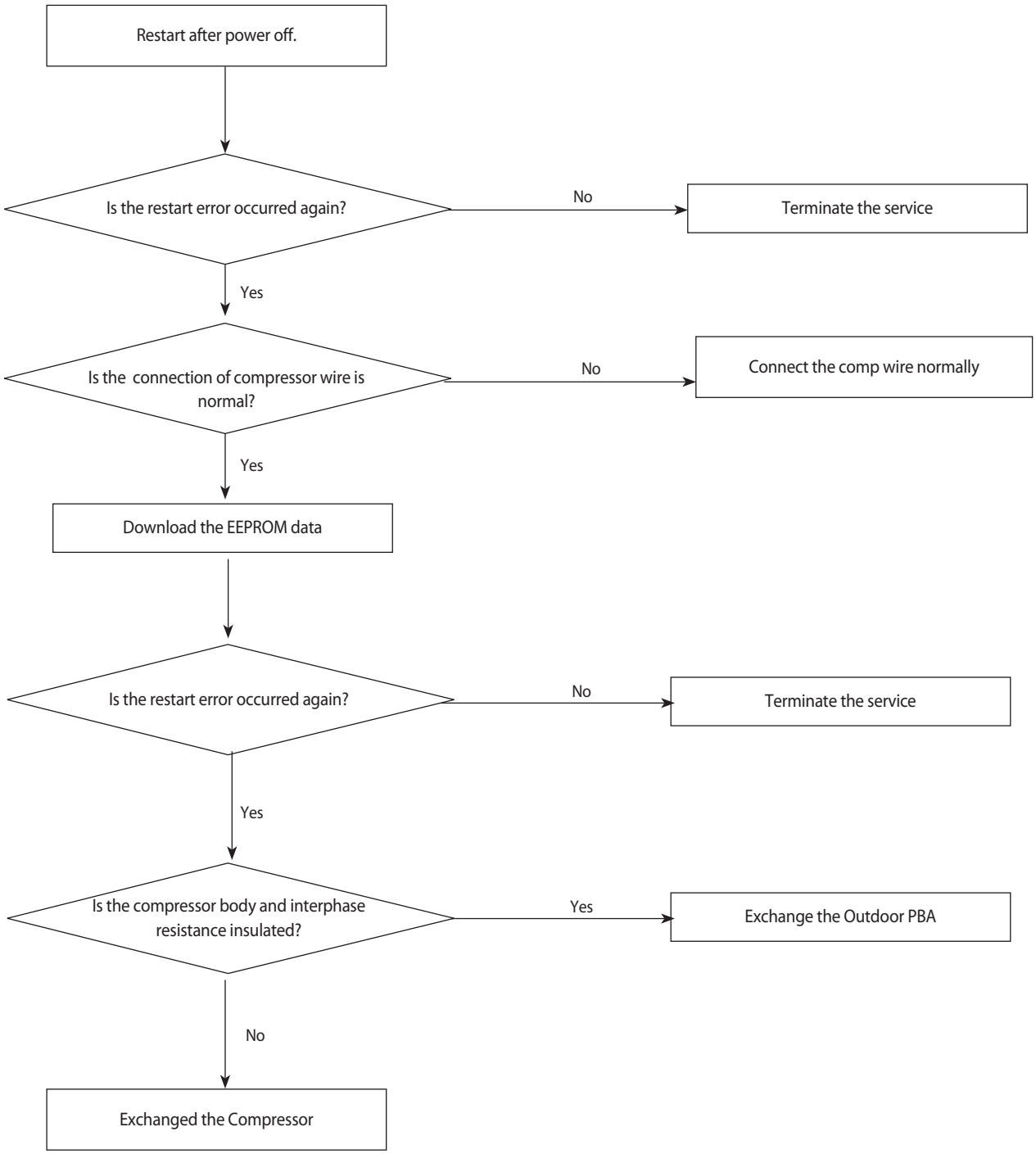


4-4-7 Compressor starting error

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

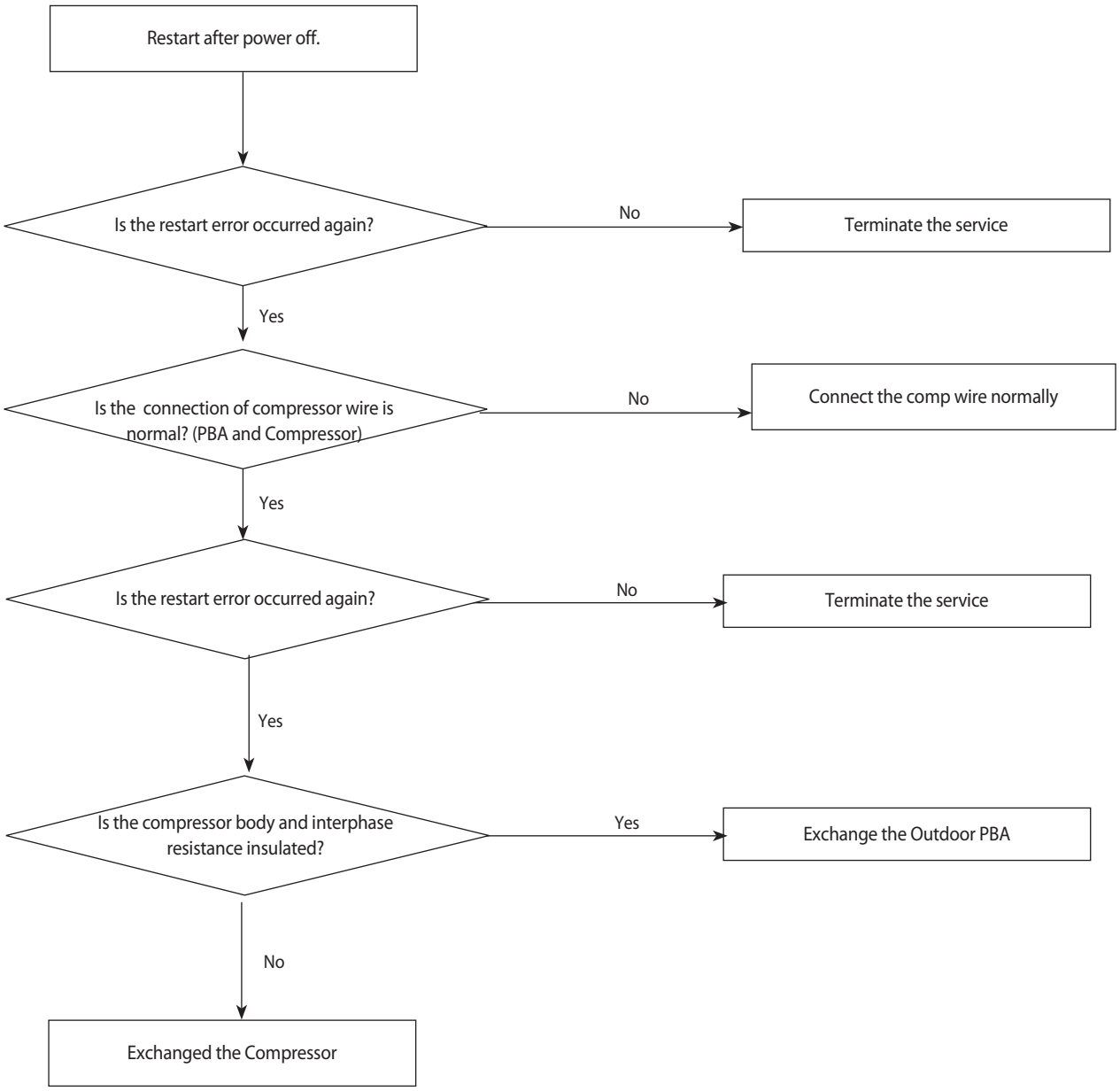


4-4-8 Compressor wire missing error/rotation error

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

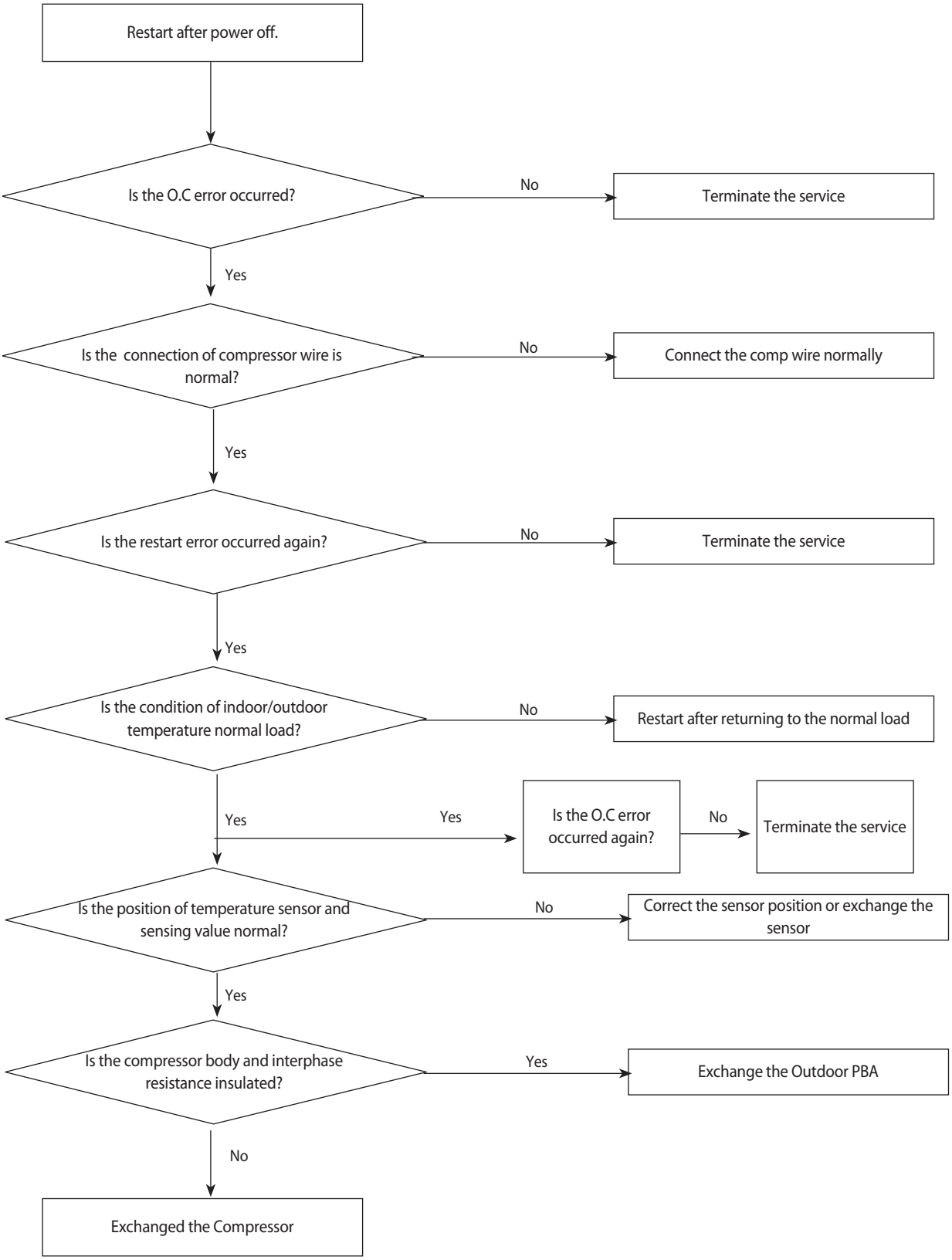


4-4-9 O.C(Over Current) error

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 :

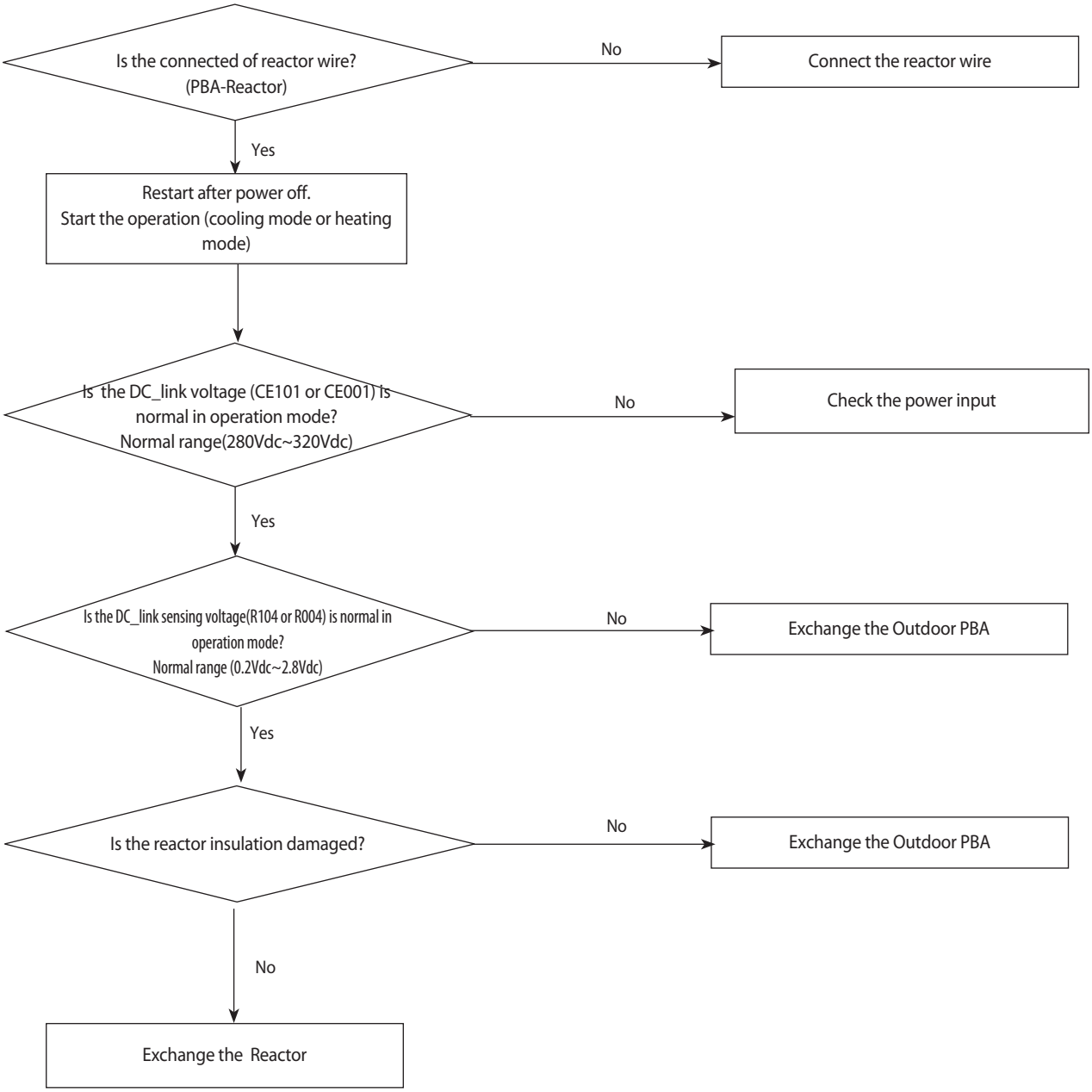
1) Is the input voltage of outdoor terminal block is normal?

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

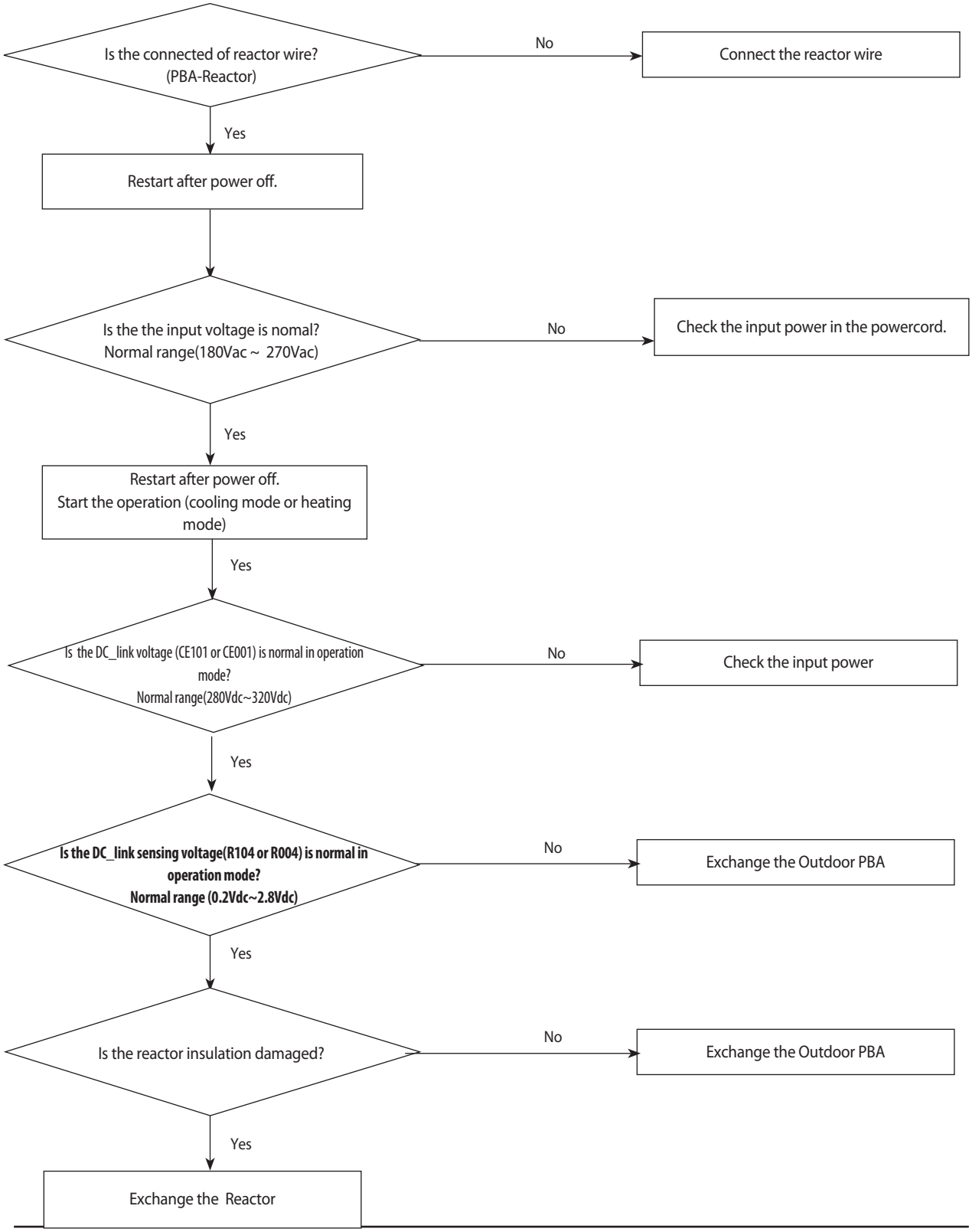


4-4-11 DC_link voltage under/over error, Over voltage protection error/PFC over load

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

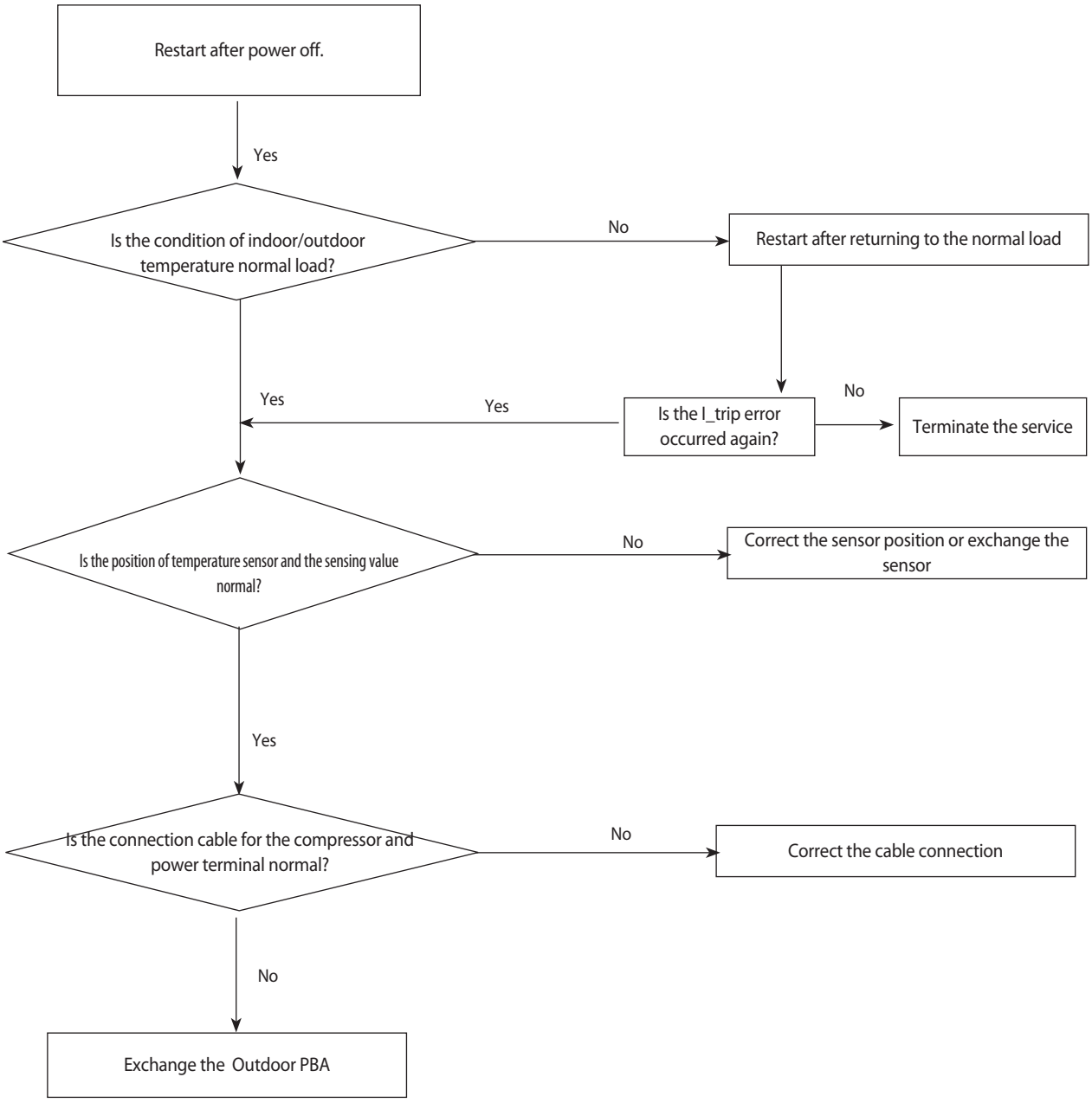


4-4-12 DC_link voltage sensor error

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

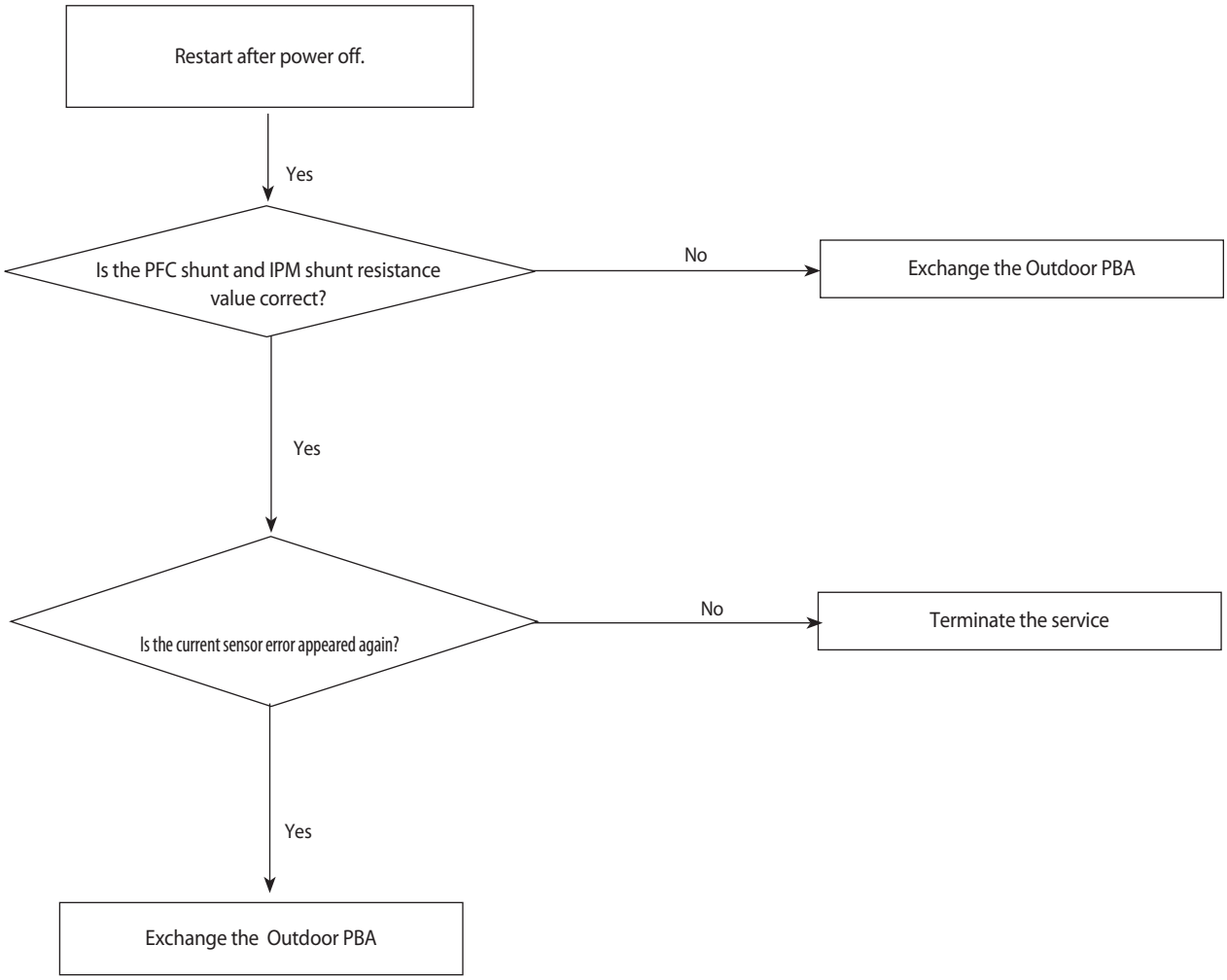
1.Checklist :

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

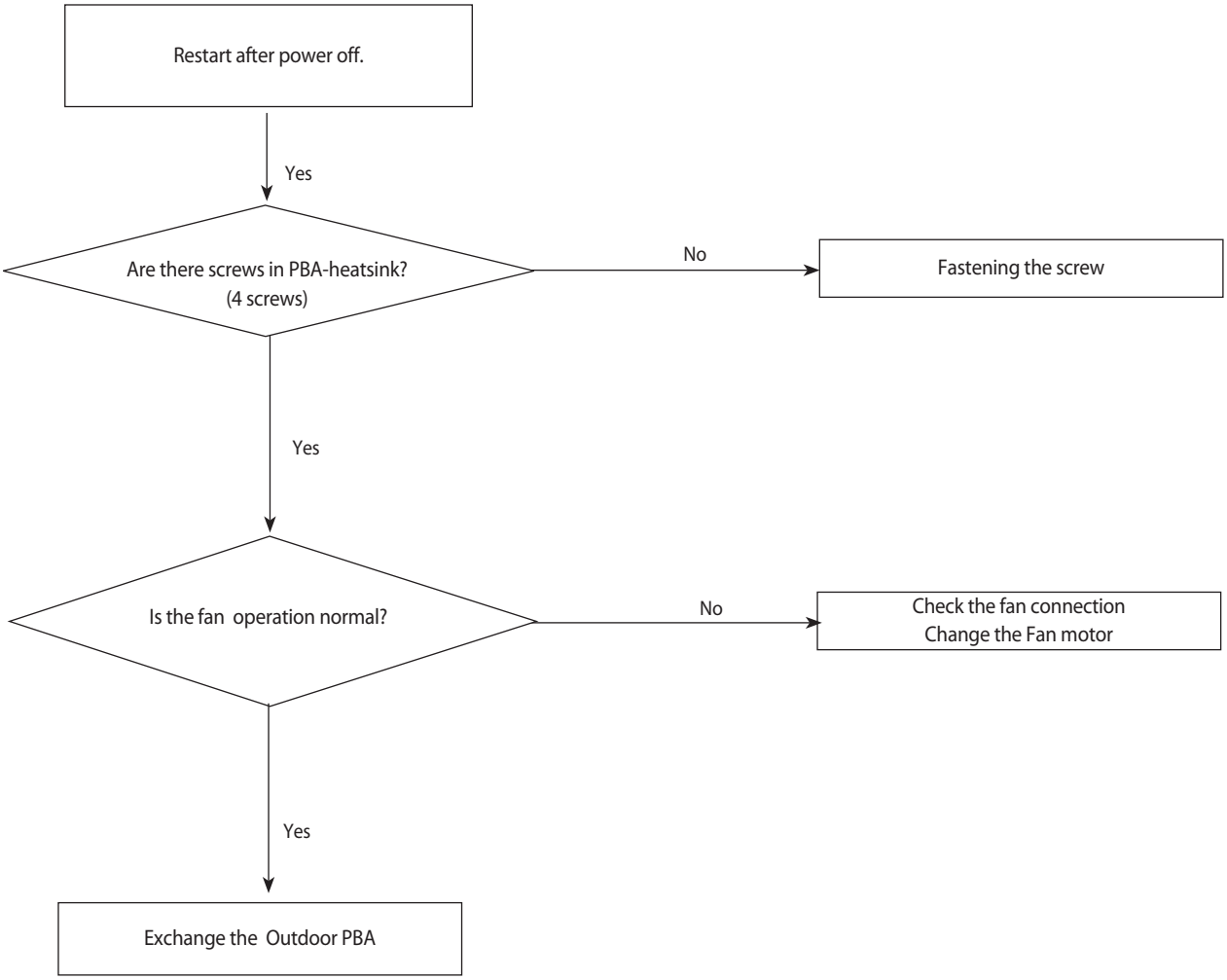


4-4-14 Heatsink sensor error/Heatsink over heat

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

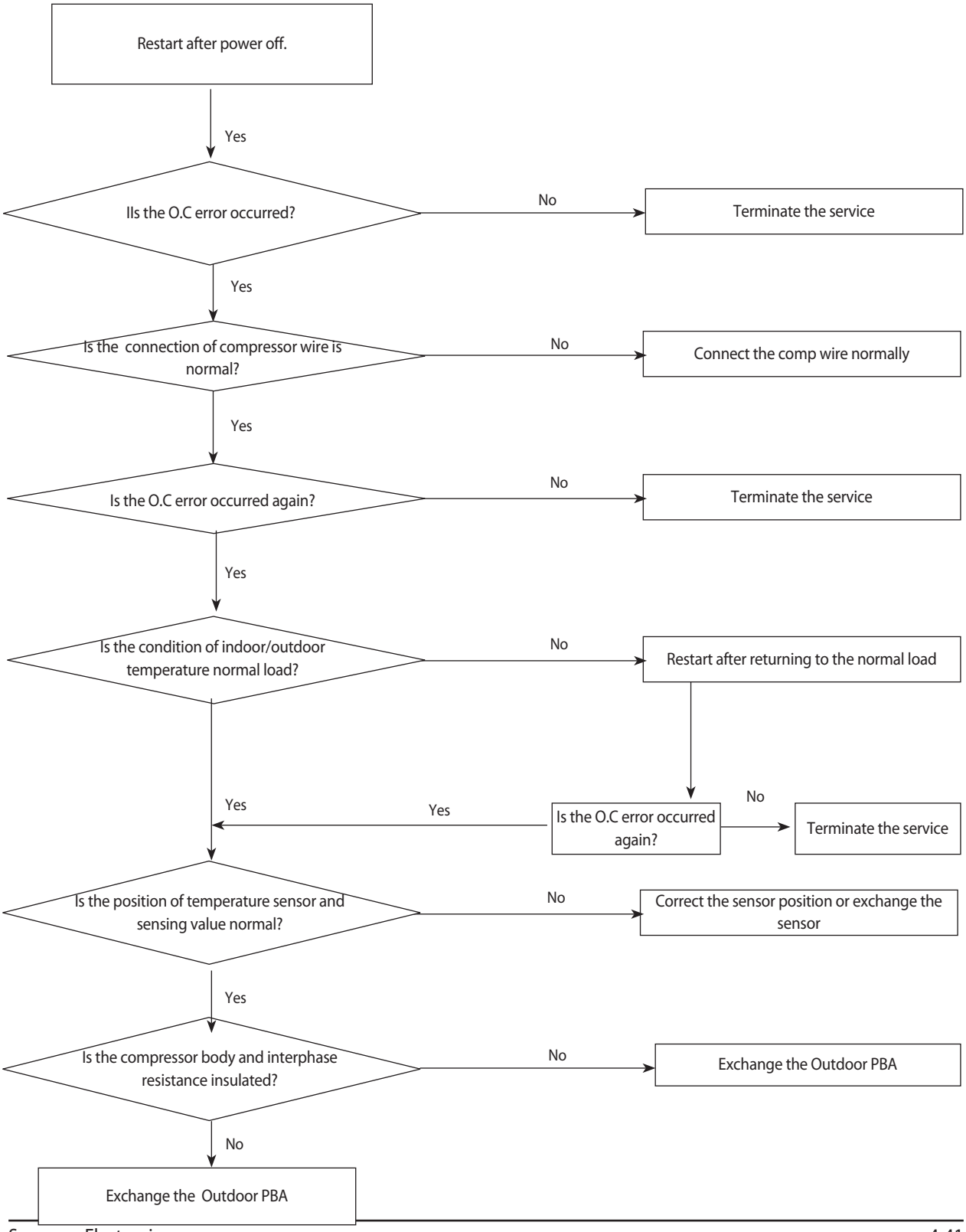


4-4-15 Comp Vlimit error/Comp current limit error

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

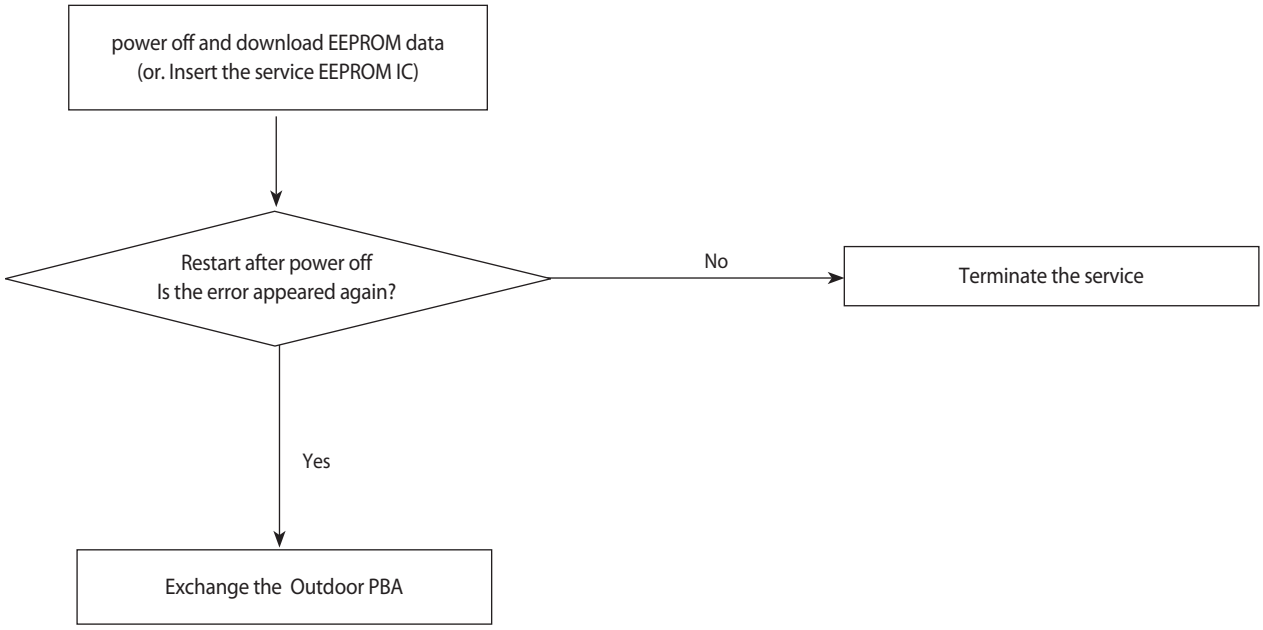


4-4-16 EEPROM error/OTP error

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

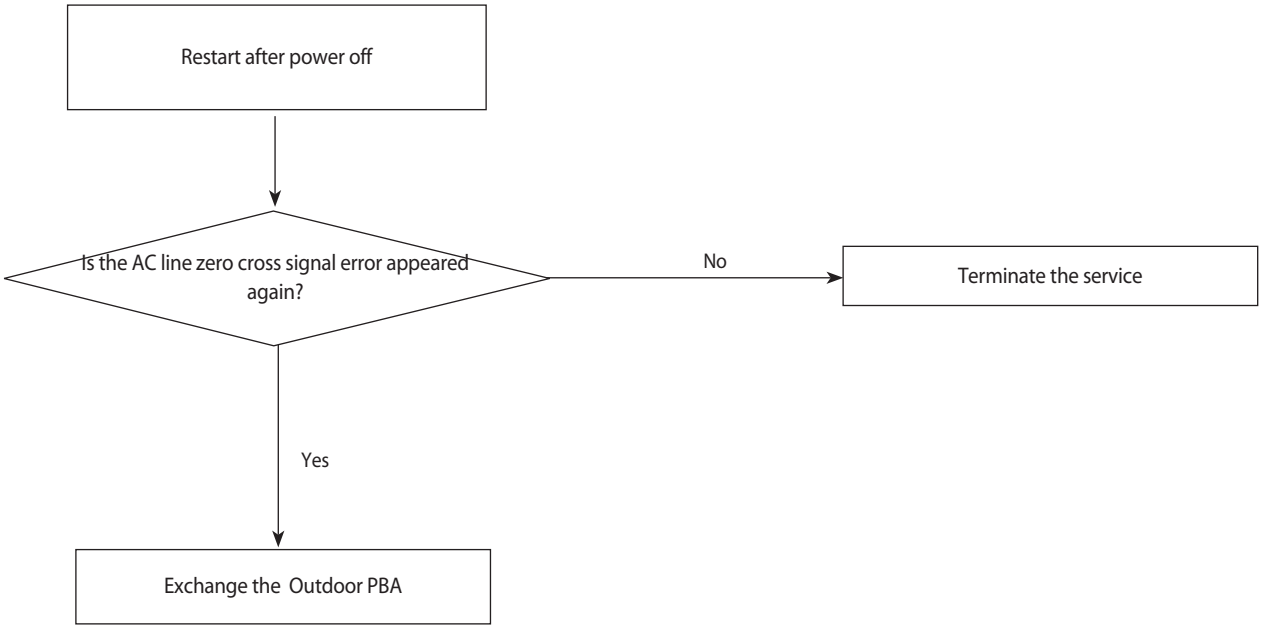


4-4-17 AC zero cross signal error

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

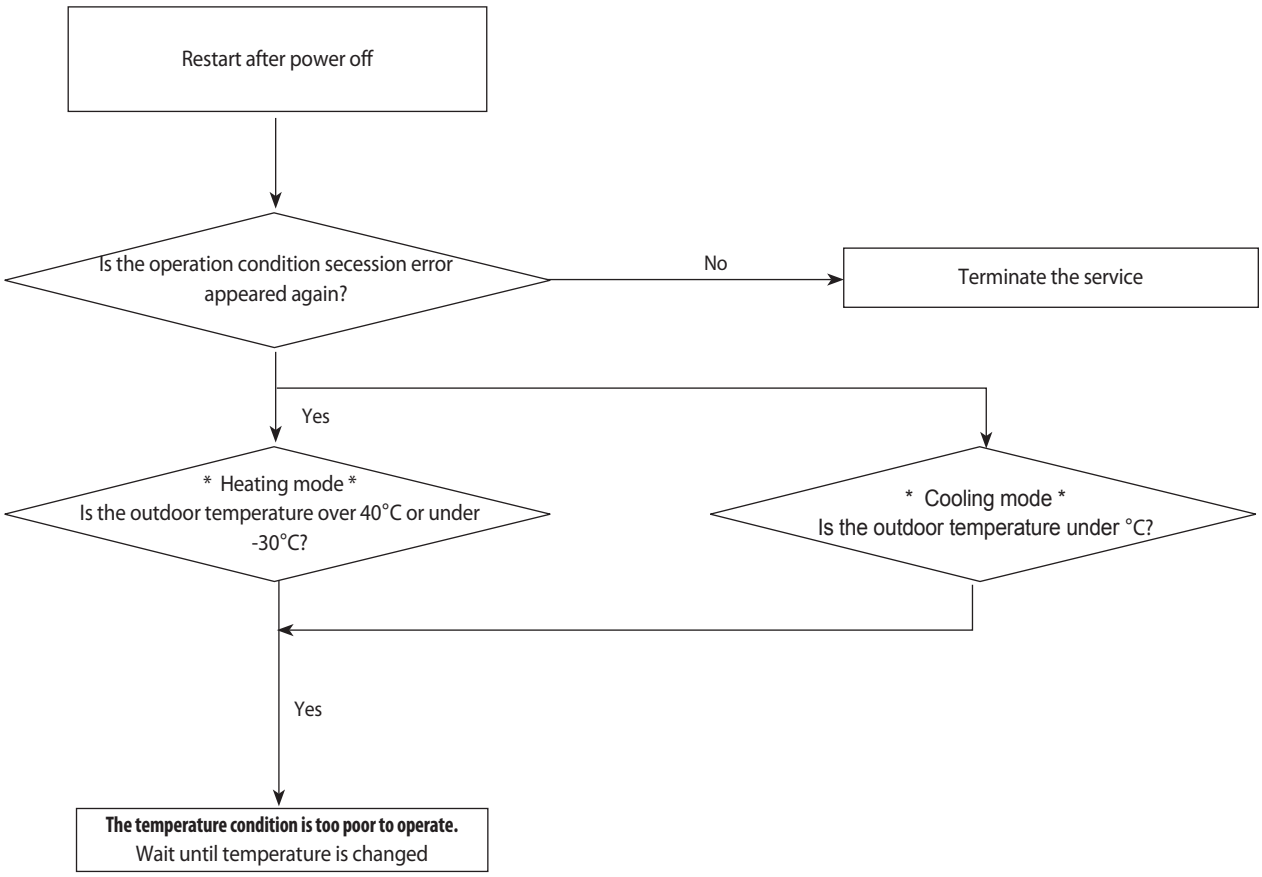


4-4-18 Operation condition secession error

1.Checklist :

1) Check the temperature around the outdoor unit.

2. Troubleshooting procedure

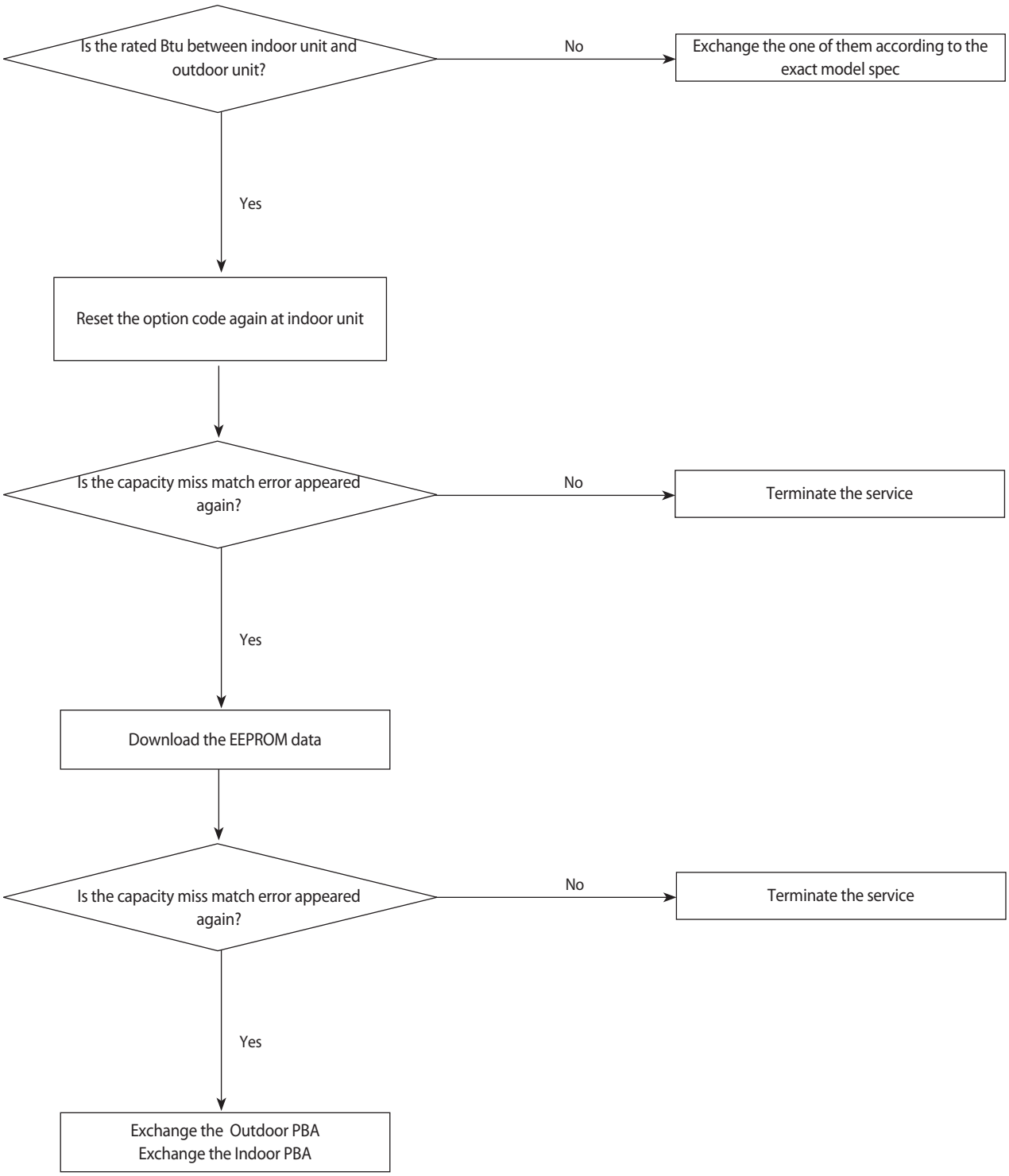


4-4-19 Capacity miss match error

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

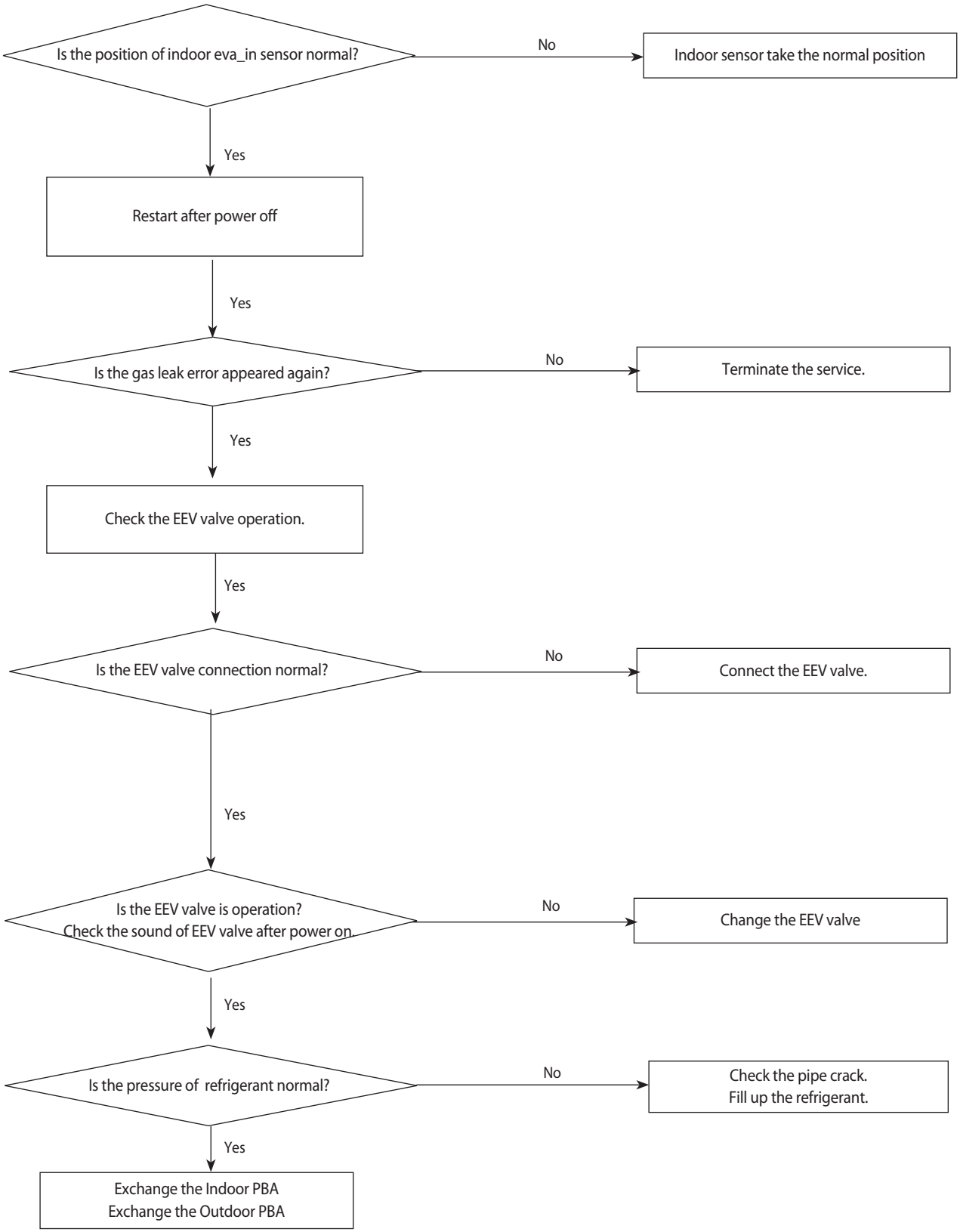


4-4-20 Gas leak error

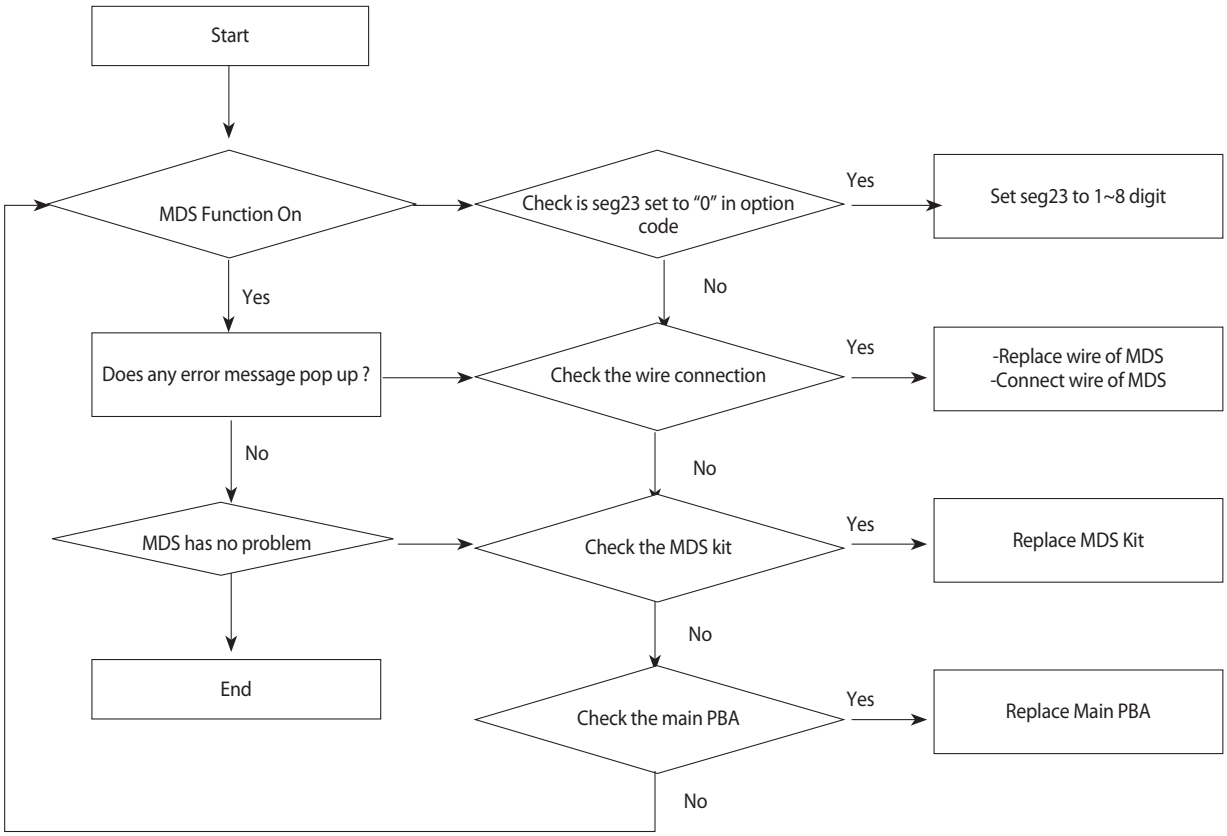
1.Checklist :

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

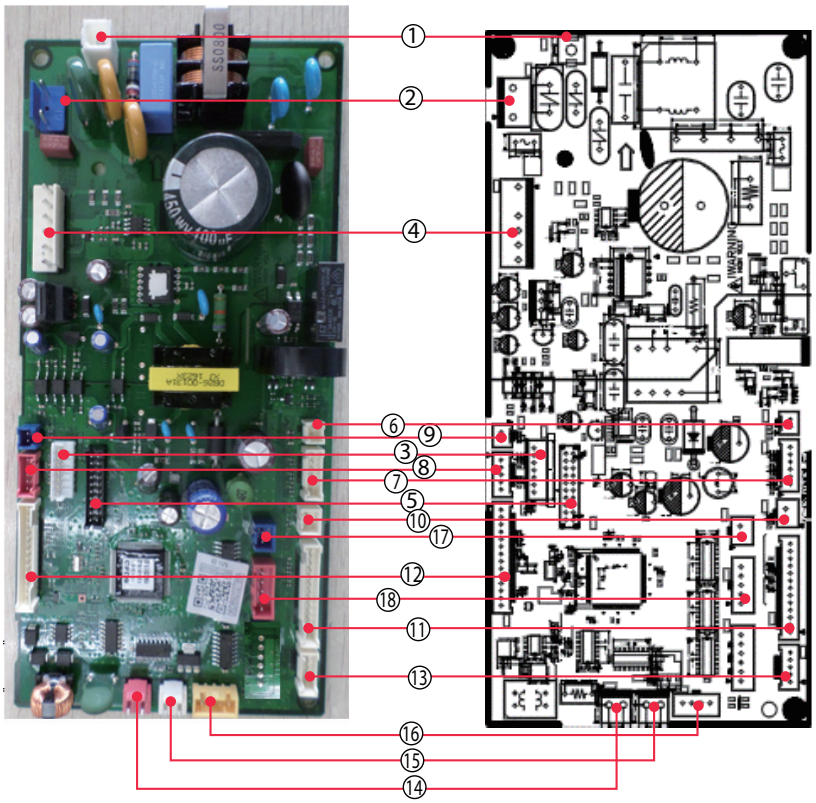


◆MDS Function only can be set in wired remote controller or central controller.
◆Error Message(Error message will be appeared after 3minutes)
-Wired remote controller: "E143" message is pop up.
-Display Panel: Operation & filter LED is blinking at the same time,after indoor unit is power off.

5. PCB Diagram

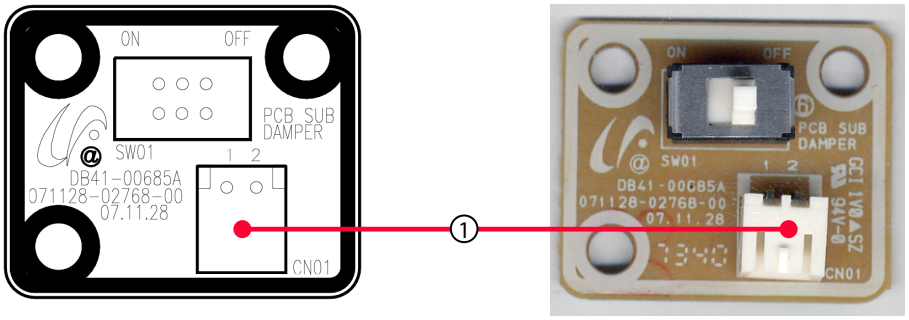
5-1 Indoor Unit

Main PCB



AC Power or Motor Power Connector	① CN101-GND	② CN100-AC POWER INPUT	③ CN201-EEPROM PBA	④ CN703-Fan Motor Output(BLDC) #1. DC 300V #2. No use #3. DGND #4. DC 15V #5. PC501 Output #6. RPM Output
DC connection Connector	⑤ CN301-DOWNLOAD >For Developer, Not for field; >10pin Downloader	⑥ CN140-FUSE CHECK #1. GND #2. EVA OUT Temp Sensor	⑦ CN413-EVA IN/OUT/DIS #1.EVA-IN TEMP SENSOR #3.EVA-OUT TEMP SENSOR #2.4. GND	⑧ CN401-HUMAN SENSING #1. MPI(-) ON/OFF Control(DC 12V) #2. MPI(+) ON/OFF Control(DC 12V) #3. DC 12V #4. MPI Feedback
	⑨ CN411-DAMPER S/W #1. DC 5V #2. GND	⑩ CN412-ROOM #1~#4. Control Signal #5. DC 12V	⑪ CN501-DISPLAY #1. DC 12V #2. GND	⑫ CN313-2WIRE PBA #1~#7.COM2 signal #8.Vcc #9.GND #10.+12V #11~#14.COM2 signal
	⑬ CN2-UP LOUVER #1.12V #2.3.4.5.Signal of LOUVER	⑭ CN31-COM1 #1.Communication Signal COM1_A #2.Communication Signal COM1_B	⑮ CN32-DC12VA #1. DC 12V #2~#5.Communication Signal	⑯ CN801-SPI #1. Communication Signal F1 #2. Communication Signal F2
	⑰ CN804-VENTILATOR #1.12V #2.GND	⑱ CN806-DAMPER #1.12V #2~#5.EEV control signal		

DAMPER PBA

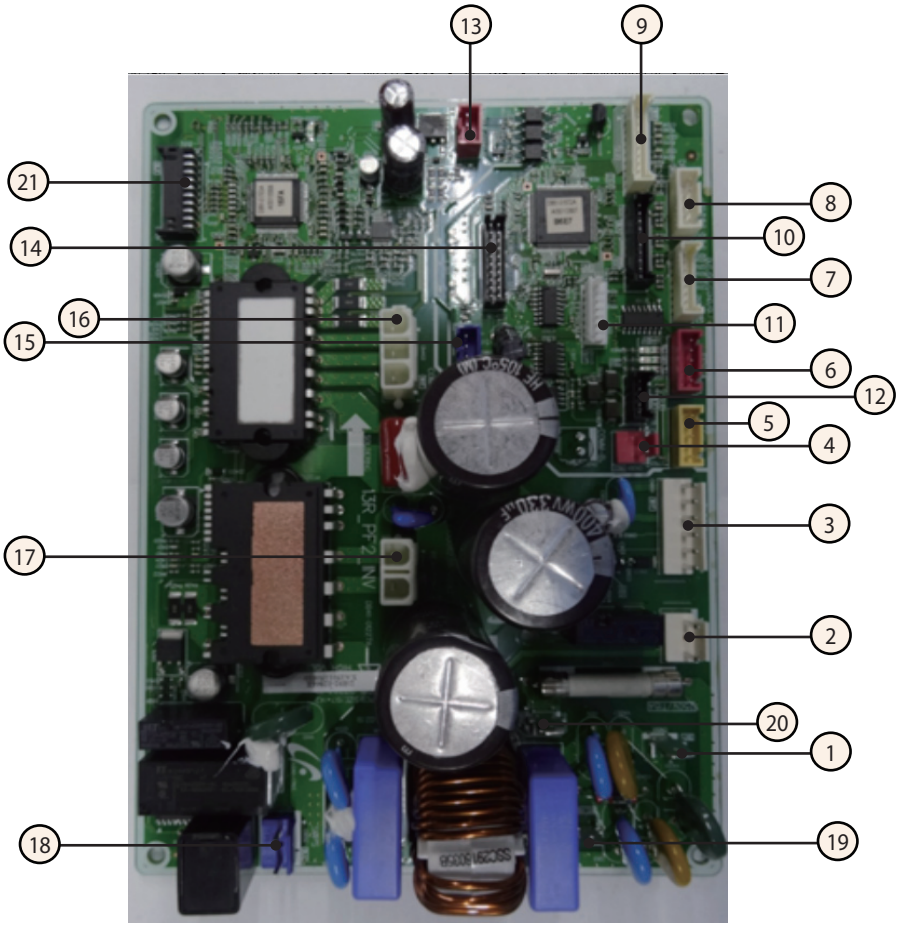


DC connecting connector	① CN01-DAMPER S/W #1. DC 5V #2. GND

5-2 Outdoor Unit

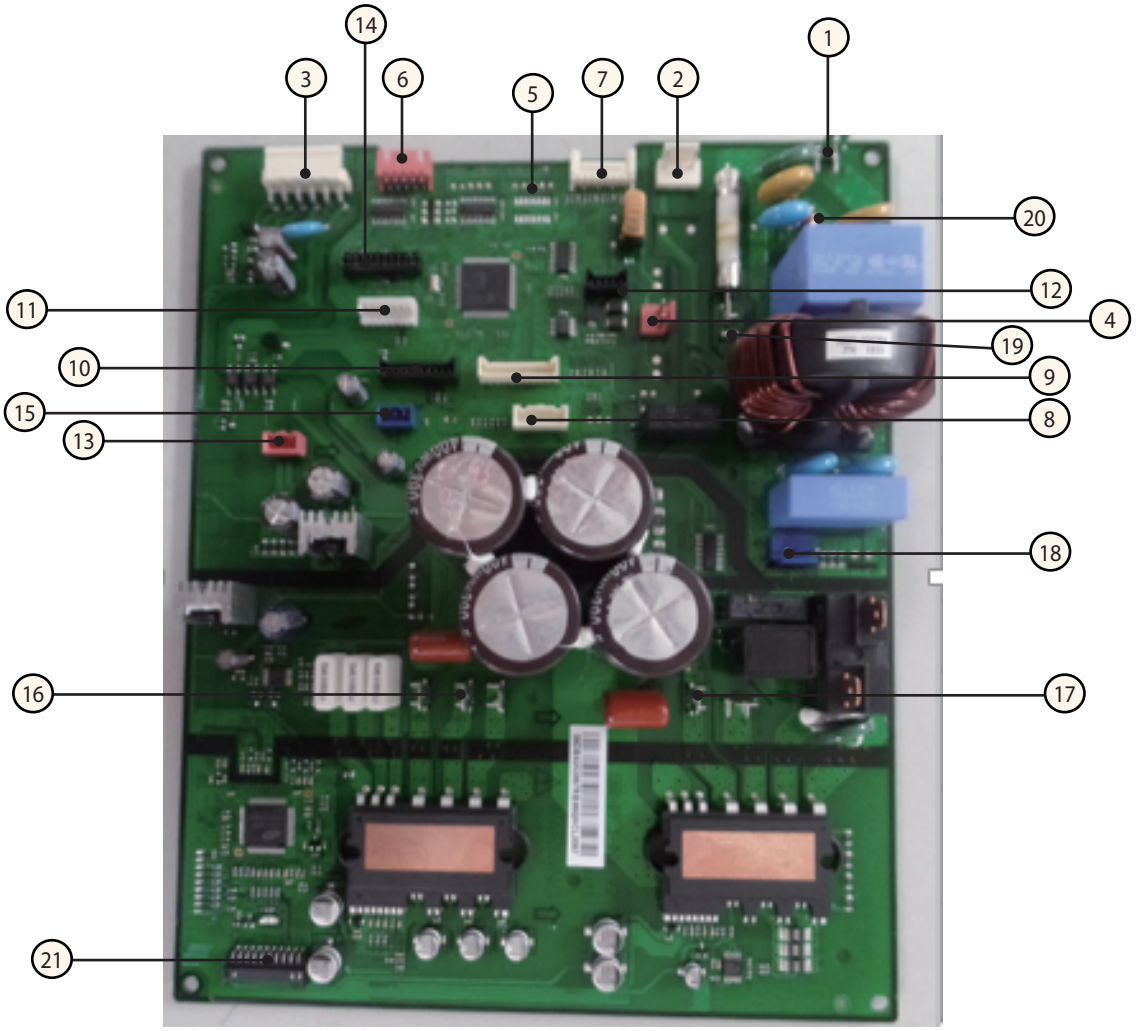
5-2-1 MAIN PBA

■ **AC026MXADKH / AC035MXADKH**



No.	Function	No.	Function
1	MAIN POWER (N)	12	Sub display PCB connection (DC5V,12V,com1,com2)
2	4Way Valve	13	SMPS PCB connection (DC15V)
3	FAN MOTOR connection	14	Download Main
4	Indoor communication connection	15	SMPS PCB connection (DC5V,12V)
5	EEV-B	16	Compressor connection (U,V,W)
6	EEV-A	17	Reactor
7	Out/Discharge/Cond./OLP temp. sensor	18	SMPS PCB connection (AC220V)
8	DRED PBA connection (❊ DRED : Demand Response Enabling Device)	19	EARTH
9	Sub display PCB connection (Key, 7-segment signal)	20	MAIN POWER (L)
10	Sub display PCB connection (Key, solution communication signal)	21	Download INV
11	EEPROM connection		

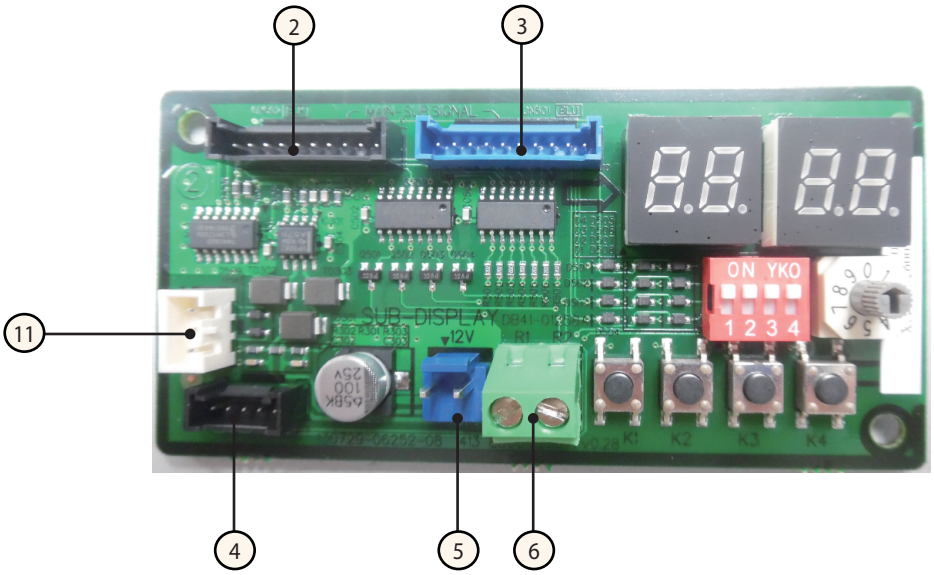
■ AC052MXADKH



No.	Function	No.	Function
1	MAIN POWER (N)	12	Sub display PCB connection (DC5V,12V,com1,com2)
2	4Way Valve	13	SMPS PCB connection (DC15V)
3	FAN MOTOR connection	14	Download Main
4	Indoor communication connection	15	SMPS PCB connection (DC5V,12V)
5	N/A	16	Compressor connection (U,V,W)
6	EEV control	17	Reactor
7	Out/Discharge/Cond./OLP temp. sensor	18	SMPS PCB connection (AC220V)
8	DRED PBA connection (❉ DRED : Demand Response Enabling Device)	19	MAIN POWER (L)
9	Sub display PCB connection (Key, 7-segment signal)	20	EARTH
10	Sub display PCB connection (Key, solution communication signal)	21	Download INV
11	EEPROM connection		

5-2-2 Display PBA

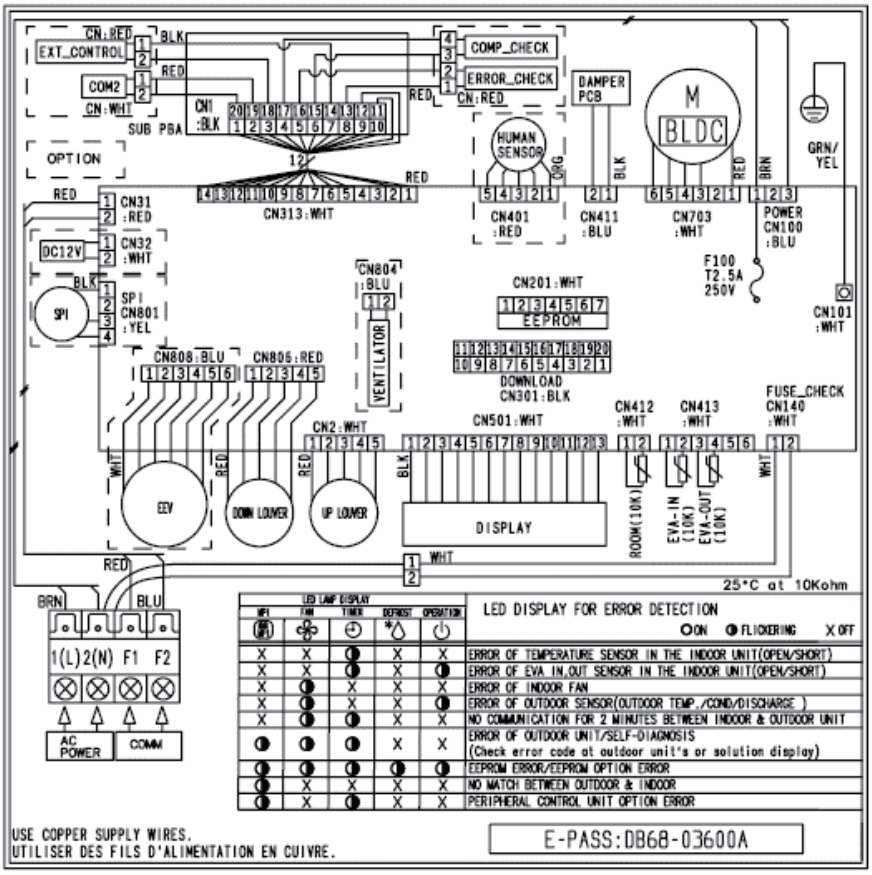
■ **AC026MXADKH / AC035MXADKH / AC052MXADKH**



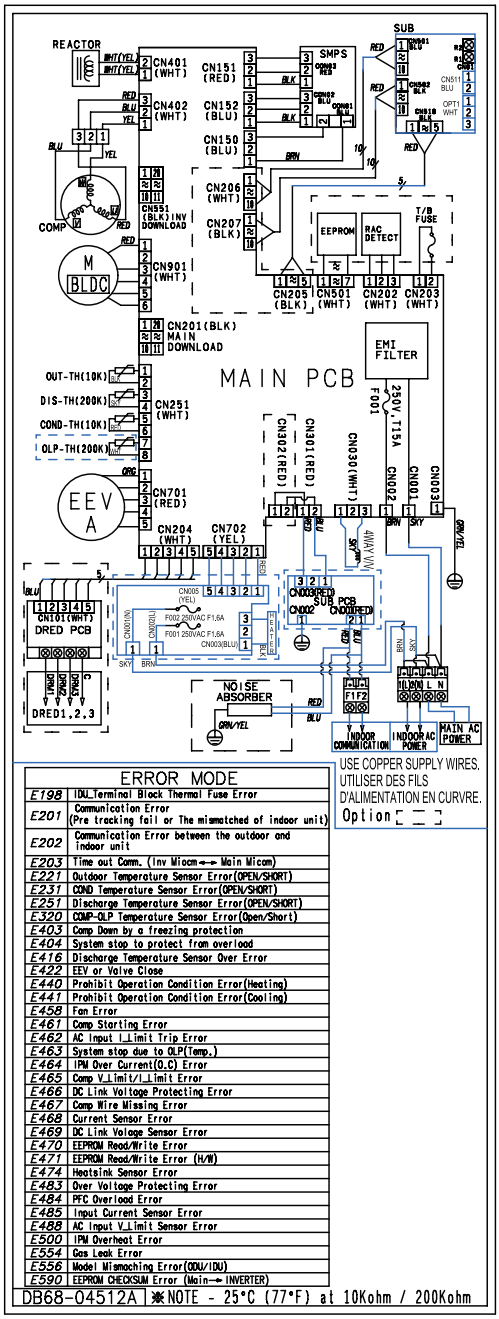
No.	Function
1	MODE SELECTOR
2	MAIN PCB connection (Key, Switch signal)
3	MAIN PCB connection (Key, 7-segment signal)
4	MAIN PCB connection (DC 5V,12V)
5	DC 12V
6	Solution communication

6. Wiring Diagram

6-1 Indoor Unit

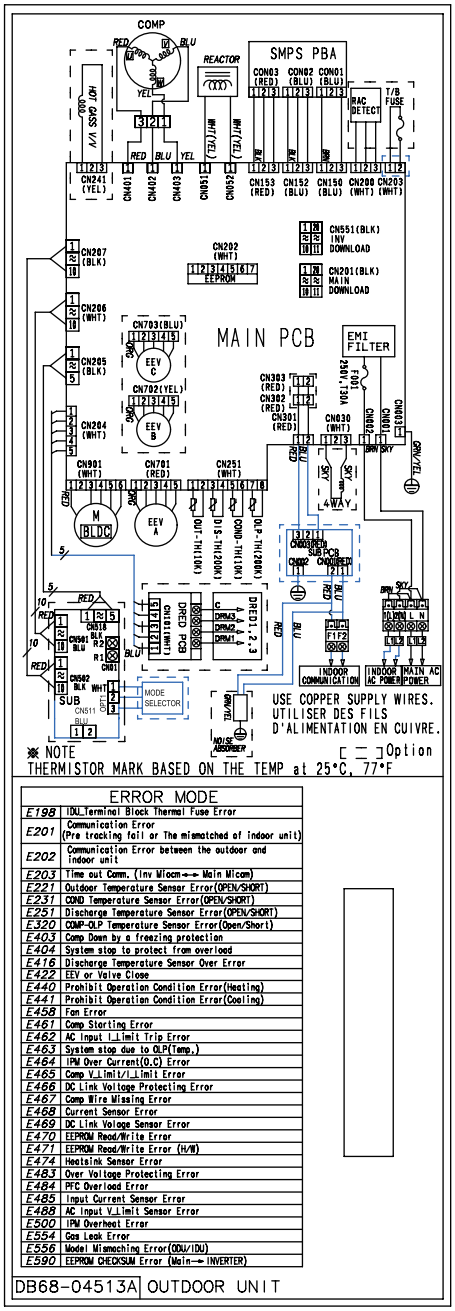


■ AC026MXADKH / AC035MXADKH



ERROR MODE	
E198	IDU_Terminal Block Thermal Fuse Error
E201	Communication Error (Pre tracking fail or The mismatched of indoor unit)
E202	Communication Error between the outdoor and indoor unit
E203	Time out Comm. (Inv Wiocm↔Main Wiocm)
E221	Outdoor Temperature Sensor Error(OPEN/SHORT)
E231	COND Temperature Sensor Error(OPEN/SHORT)
E251	Discharge Temperature Sensor Error(OPEN/SHORT)
E320	COMP-OLP Temperature Sensor Error(Open/Short)
E403	Comp Down by a freezing protection
E404	System stop to protect from overload
E416	Discharge Temperature Sensor Over Error
E422	EEV or Valve Close
E440	Prohibit Operation Condition Error(Heating)
E441	Prohibit Operation Condition Error(Cooling)
E458	Fan Error
E461	Comp Starting Error
E462	AC Input I_Limit Trip Error
E463	System stop due to OLP(Temp.)
E464	IPM Over Current(O.C) Error
E465	Comp V_Limit/I_Limit Error
E466	DC Link Voltage Protecting Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC Link Voltage Sensor Error
E470	EEPROM Read/Write Error
E471	EEPROM Read/Write Error (H/W)
E474	Heatsink Sensor Error
E483	Over Voltage Protecting Error
E484	PFC Overload Error
E485	Input Current Sensor Error
E488	AC Input V_Limit Sensor Error
E500	IPM Overheat Error
E554	Gas Leak Error
E556	Model Mismaching Error(ODU/IDU)
E590	EEPROM CHECKSUM Error (Main↔INVERTER)

■ AC052MXADKH / AC071MXADKH



ERROR MODE	
E198	IDU_Terminal Block Thermal Fuse Error
E201	Communication Error (Pre tracking fail or The mismatched of indoor unit)
E202	Communication Error between the outdoor and indoor unit
E203	Time out Comm. (Inv Micom↔Main Micom)
E221	Outdoor Temperature Sensor Error(OPEN/SHORT)
E231	COND Temperature Sensor Error(OPEN/SHORT)
E251	Discharge Temperature Sensor Error(OPEN/SHORT)
E320	COMP-OLP Temperature Sensor Error(Open/Short)
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E465	Comp V_Limit/I_Limit Error
E466	DC Link Voltage Protecting Error
E467	Comp Wire Missing Error
E468	Current Sensor Error
E469	DC Link Volage Sensor Error
E470	EEPROM Read/Write Error
E471	EEPROM Read/Write Error (H/W)
E474	Heatsink Sensor Error
E483	Over Voltage Protecting Error
E484	PFC Overload Error
E485	Input Current Sensor Error
E488	AC Input V_Limit Sensor Error
E500	IPM Overheat Error
E554	Gas Leak Error
E556	Model Wismaching Error(ODU/IDU)
E590	EEPROM CHECKSUM Error (Main→INVERTER)

7. Reference Sheet

7-1 Index for Model Name

Model Code

AC	026	M	X	A	D	K	H	/	EU
									Buyer Name

Capacity (3 DIGIT)
KW / BTU / Liter

Product Type	
Code	Type
AM	DVM
AJ	PMA
AC	CAC (USD) / ASD
AE	EHS
AN	VTL
AK	PAK (Packaged System)
AG	CHR

Product Type	
Code	Type
E	2012
F	2013
H	2014
J	2015
K	2016
M	2017

Rating Voltage	
Code	Type
A	A(115V, 60hz, 1Φ)
B	B(220V, 60Hz, 1Φ)
C	C(208~230V, 60Hz)
D	D(200~220V, 50Hz)
E	E(220~240V, 50Hz)
F	F(208~230V, 60Hz, 3Φ)
G	G(380~415V, 50Hz, 3Φ)
H	H(380V, 60Hz, 3Φ)
J	J(460V, 60Hz, 3Φ)
K	K(220~240V, 50/60Hz, 1Φ)
M	M(127V, 50Hz)
N	N (380~415V, 50/60Hz, 3Φ)

Refrigerant		
Code	Type	Refrigerant
C	COOLING ONLY	R410a
H	HEAT PUMP	
R	HEAT RECOVERY	
D	COOLING ONLY	R22
E	HEAT PUMP	
A	Cooling only	R134
B	Heat Pump	
N	N/A	

Product Type (Indoor)	
Code	Type
1	1 Way CST
2	2 Way CST
N	Mini 4 Way CST
4	4 Way CST
H	HSP Duct
M	MSP Duct
L	LSP Duct
E	Fresh Air Intake Duct
G	Ceiling Conceiled Duct
C	Ceiling
J	Console
F	Floor Mounting
P	FAC
V	RAC-Jungfrau
Q	RAC-Neo Forte(EEV)
T	RAC-Neo Forte
D	RAC-Domestic
R	RAC-Maldive
A	RAC-New Model (Slim)
7	RAC-Vivace
U	AIR HANDIING UNIT
Z	AIR HANDLING UNIT
Y	HYDRO UNIT
B	HYDRO UNIT
X	HYDRO UNIT
W	WATER TANK
K	FLAT
S	STAND

Product Type (Outdoor)	
Code	Type
A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Top+Tropical Temp
B	Non Inv+Side+General Temp
N	Non Inv+Side+Low Temp
R	Non Inv+Side+Tropical Temp
Z	Non Inv+Top+Tropical Temp
U	UNITED STATUS DUCT
K	DVM PLUS4
V	DVM Inverter
L	DVM SLIM
G	DVM GHP
M	DVM MINI
W	DVM WATER
C	DVM GEO(GEOTHERMAL)
D	DVM PLUS3
X	DVM PLUS2
J	FREE JOINT MULTI
P	PACK MULTI
H	DVM HOME
E	SINGLE
T	MULTI
Y	MONO

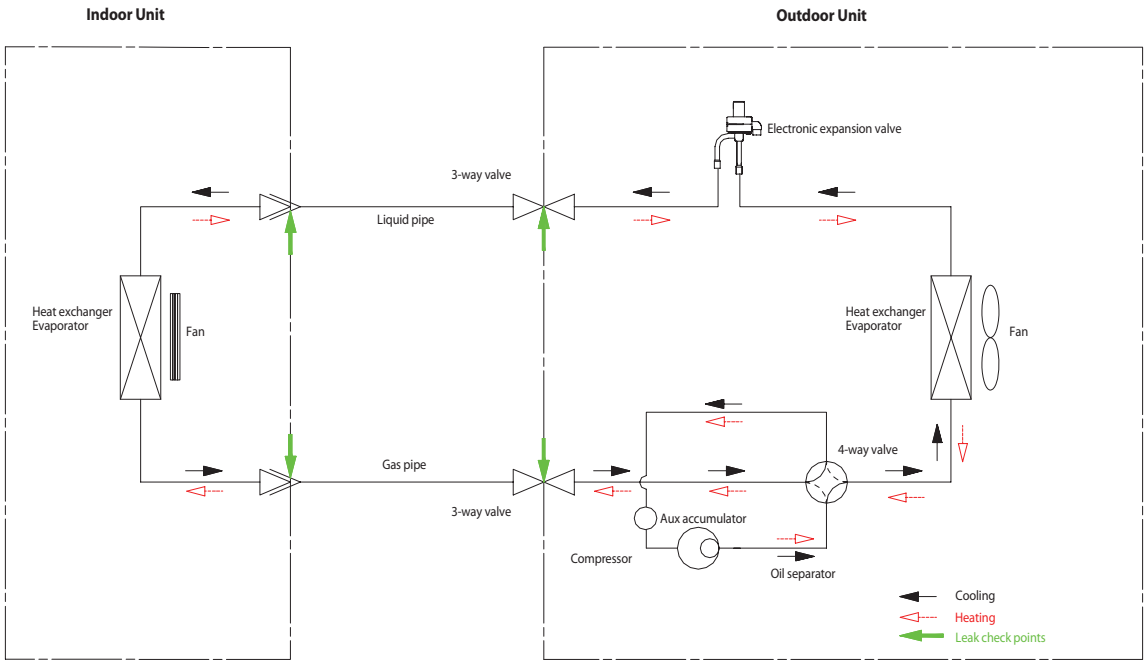
Product Type (Indoor)	
Code	Type
F	FLAGSHIP
P	PREMIUM
D	DELUXE
S	STANDARD
F	CASCADE
G	CASCADE (EEV)
E	MULTI (/ SOLAR TANK)
D	STANDRAD (/ STANDARD TANK)

Product Type (Outdoor)	
Code	Type
F	FLAGSHIP
P	PREMIUM
D	DELUXE <- Basic
S	STANDARD
L	FLAGSHIP + TROPICAL
R	PREMIUM + TROPICAL
T	DELUXE + TROPICAL<- Basic
N	STANDARD + TROPICAL

Product Type	
Code	Type
S	Set (NASA)
N	Indoor (NASA)
X	Outdoor(NASA)
A	Set (NASA)
B	Indoor (No NASA)
C	Outdoor (No NASA)

※ "/" can be removed from the buyer card if there are not enough digits.

7-2 Refrigerating Cycle Diagram



■ **CONDENSER**

High temperature and high pressure gas state coolant discharged from the compressor is converted to a liquid state as it is cooled down by the heat emission in the outdoor condenser unit, and sent to the evaporator.

■ **COMPRESSOR**

Low temperature and low pressure coolant is compressed and sent to the cycling system

■ **EVAPORATOR**

Liquid coolant sucked in through the capillary tubes cools down the room by absorbing the surrounding heat as it evaporates (converting from liquid to gas). (Absorbing heat required for evaporation)

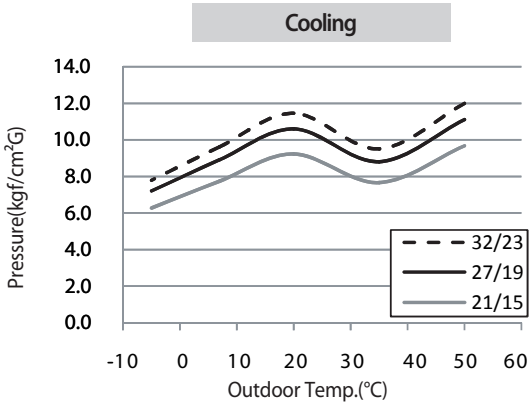
■ **SERVICE VALVE**

You can open the valve by turning the need valve counterclockwise using hex wrench, and it is used for vacuum, gas purging, coolant injection, coolant purging, and indoor-outdoor unit connection.

■ **ACCUMULATOR**

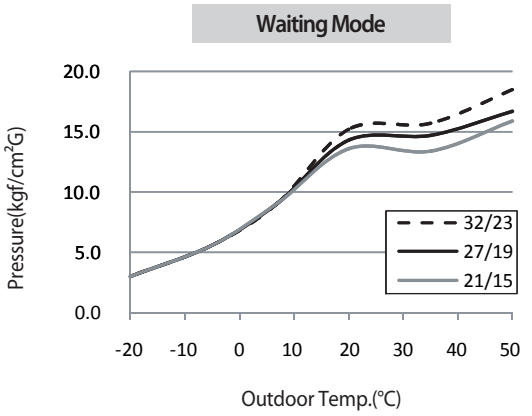
Accumulator prevents the flow of liquid-state coolant into the compressor. (Liquid-state coolant flowing into the compressor will overload the compressor.)

7-3 Pressure Graph



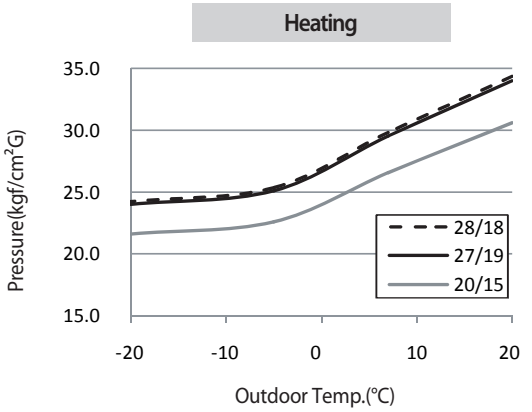
✳ **Cooling**

Indoor (℃) / Outdoor(℃)	32/23	27/19	21/15
50	12.0	11.1	9.7
35	9.5	8.8	7.7
20	11.4	10.6	9.2
7	9.6	8.9	7.7
-5	7.8	7.2	6.3



✳ **Waiting Mode**

Indoor (℃) / Outdoor(℃)	32/23	27/19	21/15
50	18.5	16.7	15.9
35	15.7	14.7	13.4
20	15.2	14.3	13.6
7	9.1	9.1	9.1
-5	5.6	5.6	5.6
-20	3.0	3.0	3.0



✳ **Heating**

Indoor (℃) / Outdoor(℃)	28/18	27/19	20/15
20	34.3	34.0	30.6
7	29.8	29.5	26.6
-5	25.4	25.1	22.6
-20	24.2	24.0	21.6