






## 6. Troubleshooting

### 6-1 Items to be checked first

- The input voltage should be rating voltage  $\pm 10\%$  range.  
The air conditioner may not operate properly if the voltage is out of this range.
- Is the link cable linking the indoor unit and the outdoor unit linked properly?  
The indoor unit and the outdoor unit shall be linked by 5 cables.  
Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.  
Otherwise the air conditioner may not operate properly.
- When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.


No	Operation of air conditioner	Explanation
1	The OPERATION indication LED(GREEN) blinks when a power plug of the indoor unit is plugged in for the first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. <b>[In case of heat pump model]</b> In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
3	Fan speed setting is not allowed in DRY(  ) mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in DRY(  ) mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED(GREEN) of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.
7	<b>[In case of heat pump model]</b> Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 9 minutes (maximum) until the deice is completed.
8	<b>[In case of heat pump model]</b> The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
9	<b>[In case of heat pump model]</b> Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation

4. Indoor unit observes operation condition of the air conditioner, and displays self diagnosis details on the display panel.

Error Mode	LAMP			7-segment Display
	OPERATION	TIMER	TURBO	
				
Indoor unit room temperature sensor error (open or short)	○	◐	○	E1
Indoor unit heat exchanger temperature sensor error (open or short)	◐	◐	○	E2
Indoor fan motor malfunction	◐	○	◐	E3
EEPROM error	○	◐	◐	E6
Option error (option wasn't set up or option data error)	◐	◐	◐	Display Flickering

○ : Lamp off   ◐ : Lamp flickering

5. Operation with abnormal motion

No	Abnormal condition	Inspection	Initial Diagnosis	
1	No response from the remote control operation signal.	<ul style="list-style-type: none"> <li>Plug out and plug in 5 seconds later.</li> </ul>	Able to operate the remote control.	OK
			Unable to operate the remote control.	Press the  (ON/OFF) button in the indoor unit. <ul style="list-style-type: none"> <li>If it operates, the remote control and indoor unit receiver are in trouble.</li> <li>If not, the indoor unit is in trouble.</li> </ul>
2	Unable to operate the outdoor unit	<ul style="list-style-type: none"> <li>Press the TURBO button with the remote control.</li> <li>In 3 minutes, check the voltage between the indoor unit terminal block N(1) and 1.</li> </ul>	AC198V ~ AC242V	Problem with the outdoor unit or PCB
			No power source displayed.	Problem with the relay (RY71) or PCB

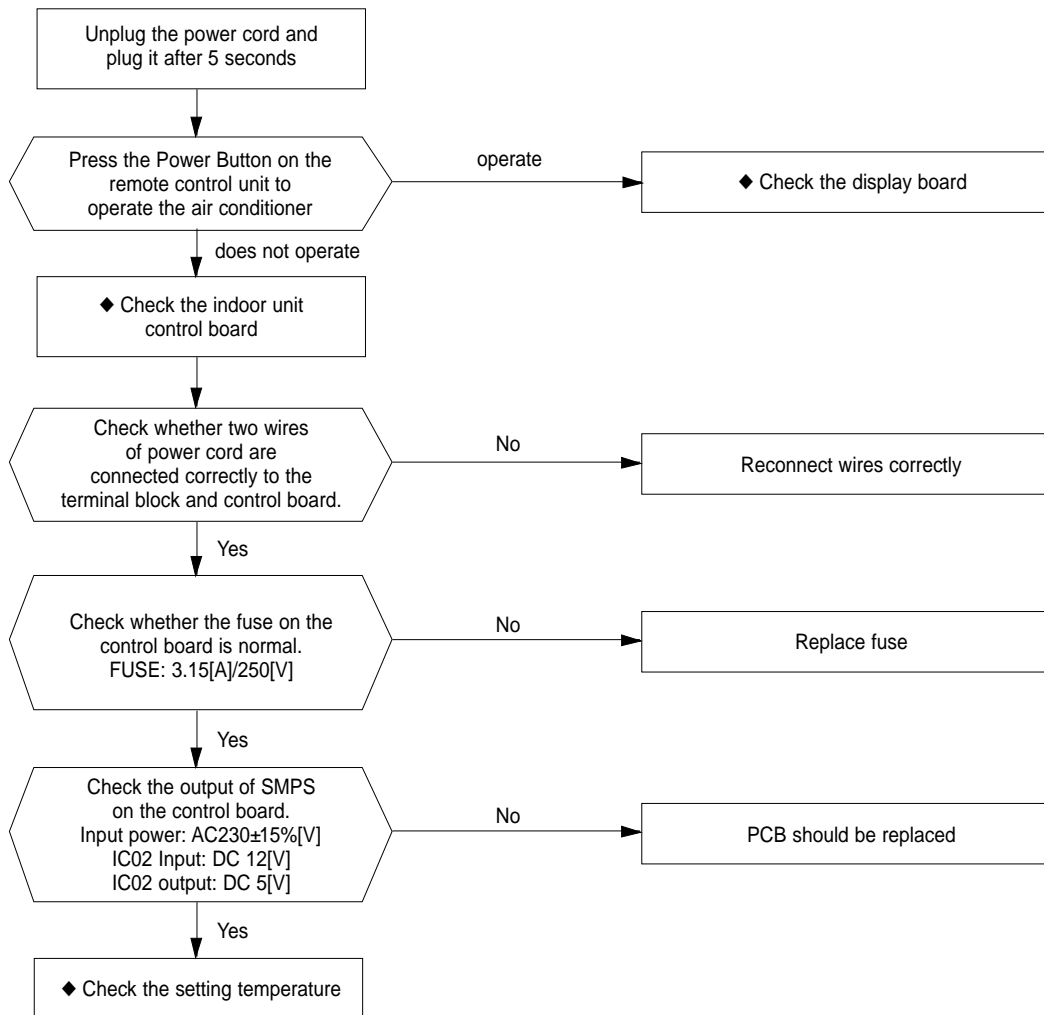
## 6-2 Fault Diagnosis by Symptom

### 6-2-1 No Power (completely dead)-Initial diagnosis




1. Checklist :

- 1) Is input voltage normal?
- 2) Is AC power linked correctly?
- 3) Is input voltage of DC regulator IC KA7805 (IC02) normal? (11VDC-12.5VDC)
- 4) Is output voltage of DC regulator IC KA7805 (IC02) normal? (4.5VDC-5.5VDC)

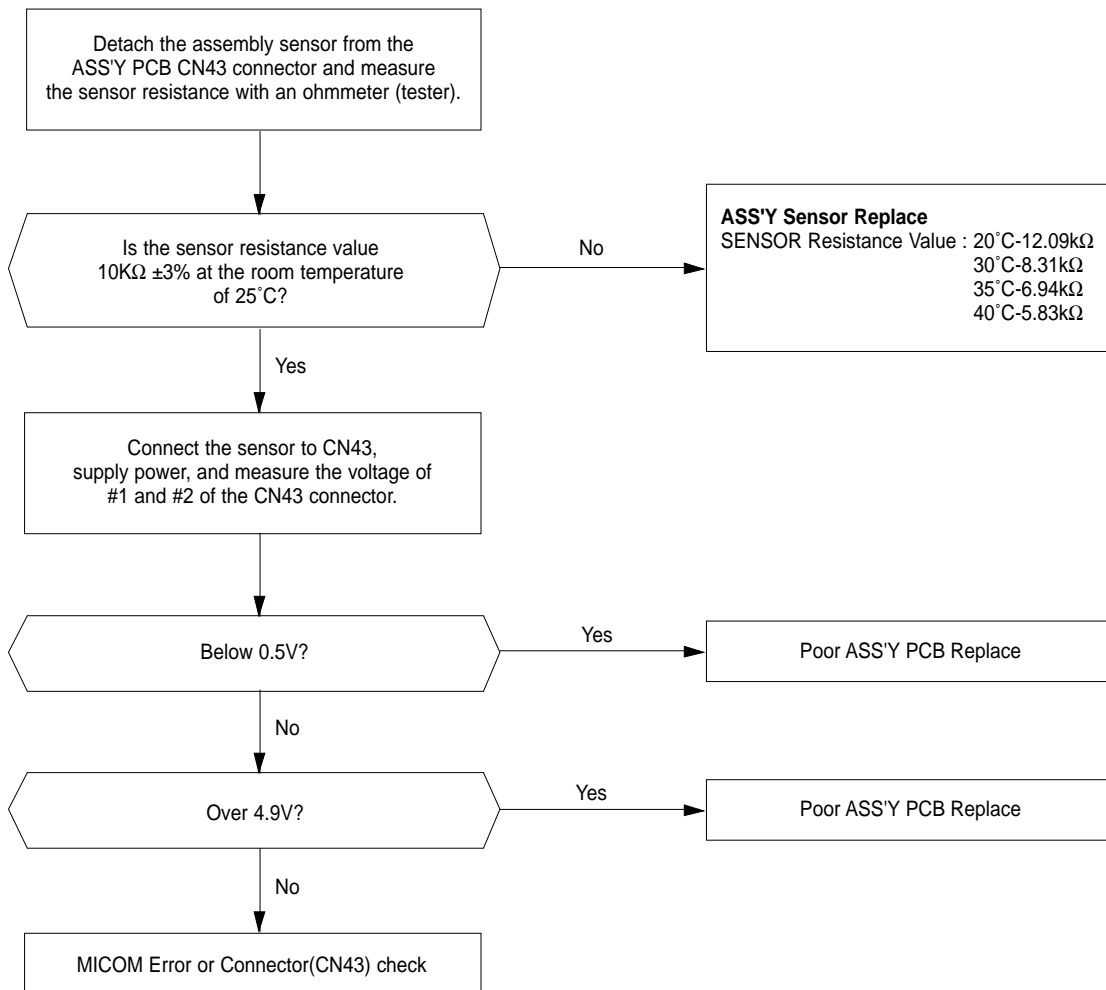
2. Troubleshooting procedure









### 6-2-2 Room temperature sensor failure

Description	LAMP			7-segment Display
	OPERATION	TIMER	TURBO	
				
Indoor unit room temperature sensor error(open or short)	○	◐	○	<i>E 1</i>

○ : Lamp off   ◐ : Lamp flickering



### 6-2-3 Room Pipe sensor failure

Description	LAMP			7-segment Display
	OPERATION	TIMER	TURBO	
				
Indoor unit heat exchanger temperature sensor error (open or short)				E2

○ : Lamp off    ● : Lamp flickering







1. Check the assembly condition of the sensor connector(CN43) on the indoor unit Main PCB and if not assembled, reassemble the connector accurately.
2. Detach the room pipe sensor connector(CN43) and check the resistance between connector 3 and 4.

Temperature(°C)	Resistance Value(Kohm)	Temperature(°C)	Resistance Value(Kohm)	Others
15	14.68	30	8.31	The data tolerance is ±3%.
20	12.09	35	6.94	
25	10	40	5.83	

If the above data is not met, replace the room pipe sensor.

3. Assemble the room pipe sensor to PCB, plug in, and check the voltage of connector 3 and 4. If the resistance is below 0.5V or over 4.9V, replace the indoor Main PCB. (short or disconnected in the PCB board)

### 6-2-4 When the Indoor Unit Fan Does Not Operate. (Initial Diagnosis)

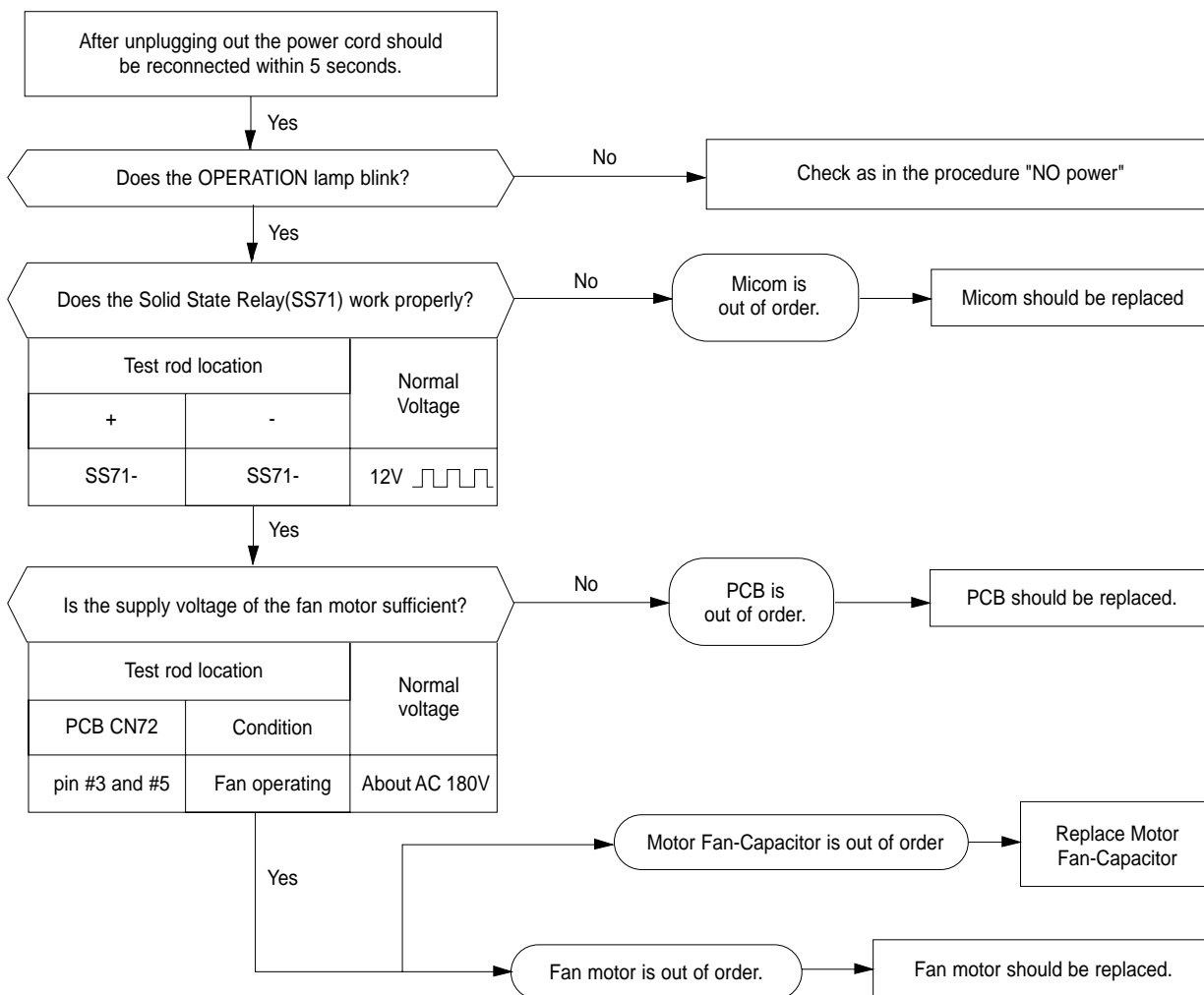
Description	LAMP			7-segment Display
	OPERATION	TIMER	TURBO	
				
Indoor fan motor malfunction				E3

○ : Lamp off    ● : Lamp flickering

1. Checklist :

- 1) Is the indoor unit fan motor properly connected with the connector (CN72)?
- 2) Is the AC voltage correct?
- 3) Is HALL IC in indoor fan motor properly connected with the connector (CN44)?
- 4) Is the running capacitor (CR71) properly connected with PCB board?

2. Troubleshooting procedure

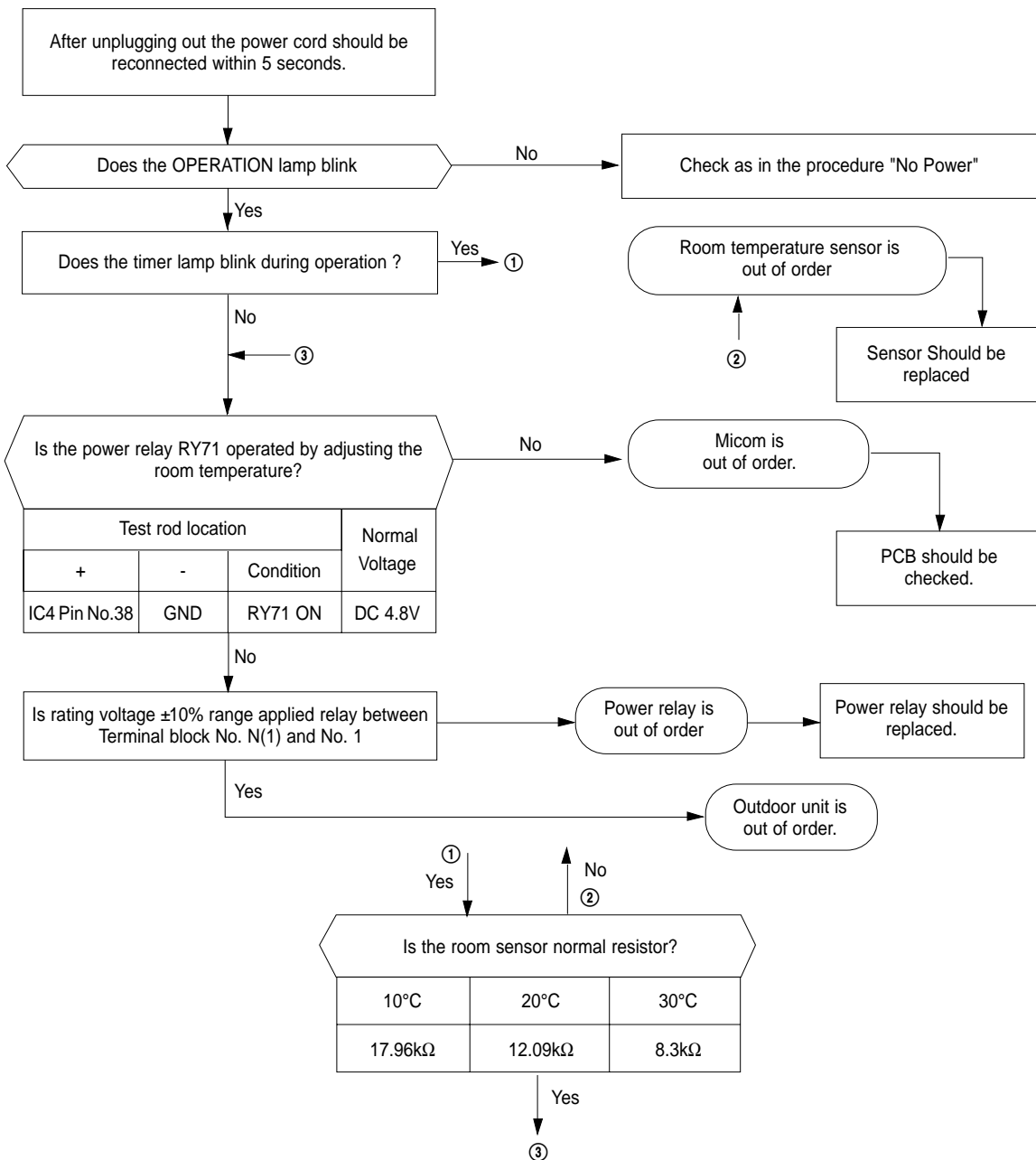


### 6-2-5 When the Outdoor Unit Does Not Operate. (Initial Diagnosis)

1. Checklist :

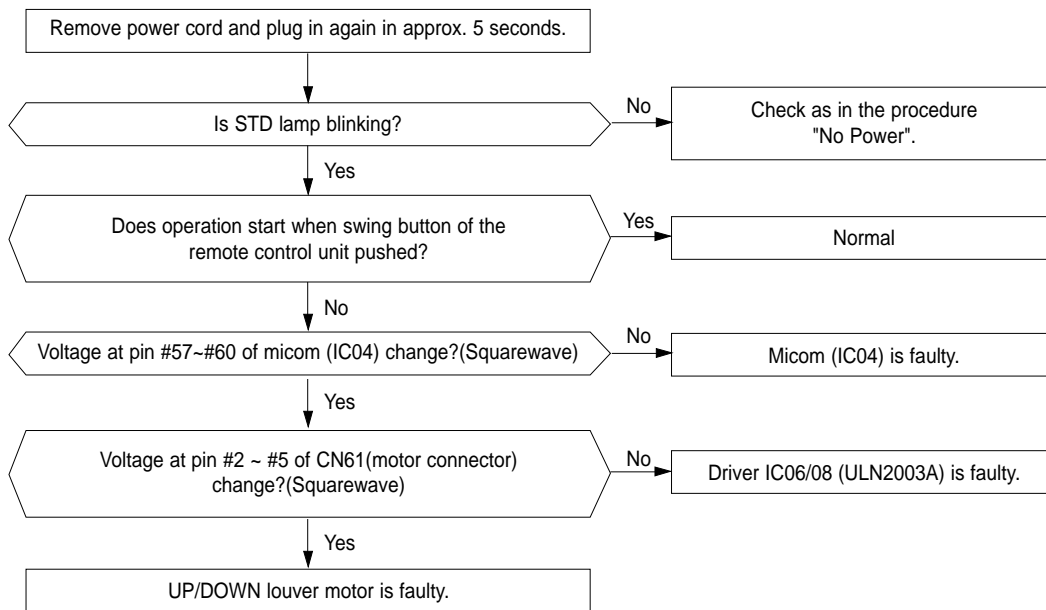
- 1) Is input voltage normal?
- 2) Is the set temperature of the remote control higher than room temperature in COOL mode?
- 3) Is the set temperature of the remote control lower than room temperature in HEAT mode?
- 4) Is the POWER IN connector (CN71) linked correctly?
- 5) Is the outdoor unit properly connected with the TERMINAL BLOCK connector(N(1), 1, 2, 3)?

2. Troubleshooting procedure



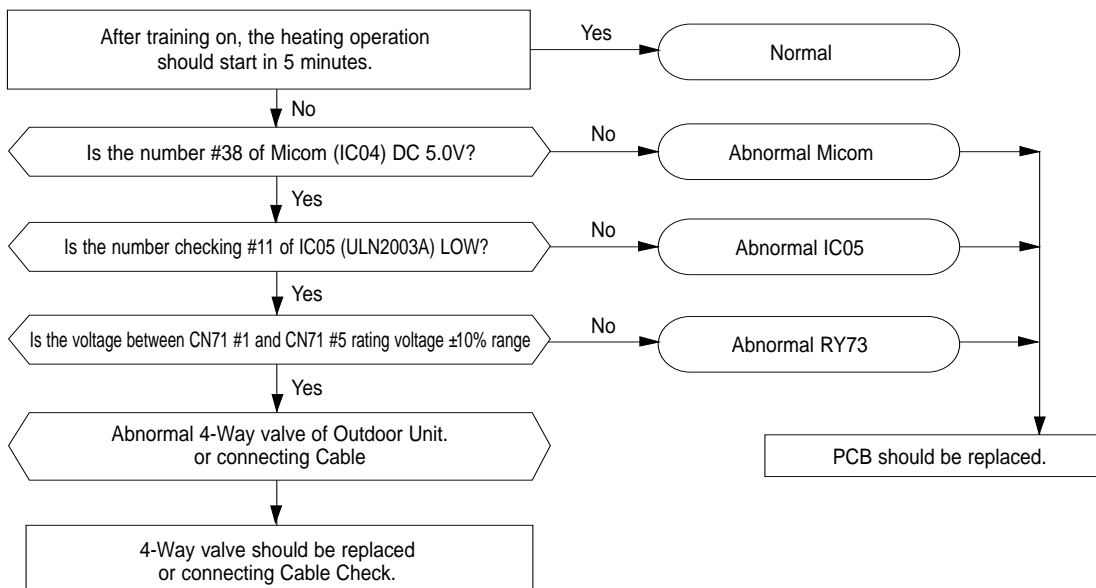
### 6-2-6 When the UP/DOWN Louver Motor Does Not Operate. (Initial Diagnosis)

1. Checklist :
  - 1) Is input voltage normal?
  - 2) Is the UP/DOWN louver motor properly connected with the connector (CN61)?
2. Troubleshooting procedure



### 6-2-7 In the HEAT mode, When there is no warm air current. Check this fist;

1. Is the set temperature of Remote Control lower than room temperature in Heat mode?
2. Is the Indoor PCB properly connected with the CN71 connector?





### **6-2-8 When the remote control is not receiving**

1. Check if the connector was normally assembled.
2. Put the set in operation and check the voltage of No. 3(+) and No. 2(-) of the main PCB CN91 while operating the remote control. When the voltage descends below 3V, the assembly module PCB is normal and the main PCB is poor. Then replace the main PCB.
3. Replace the assembly display PCB because the module PCB is poor if the voltage between No. 2~3 of CN91 maintains 5V after the remote control starts operation.

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