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Chapter 1 Product Specification

1.1 Photo of Product

Indoor unit for LK



1.2 Outline Dimensions

Indoor Unit

MODEL		7000BTU	9000BTU	12000BTU	18000BTU	24000BTU
W	mm	700	700	800	970	970
D	mm	285	285	300	315	315
H	mm	188	188	197	235	235

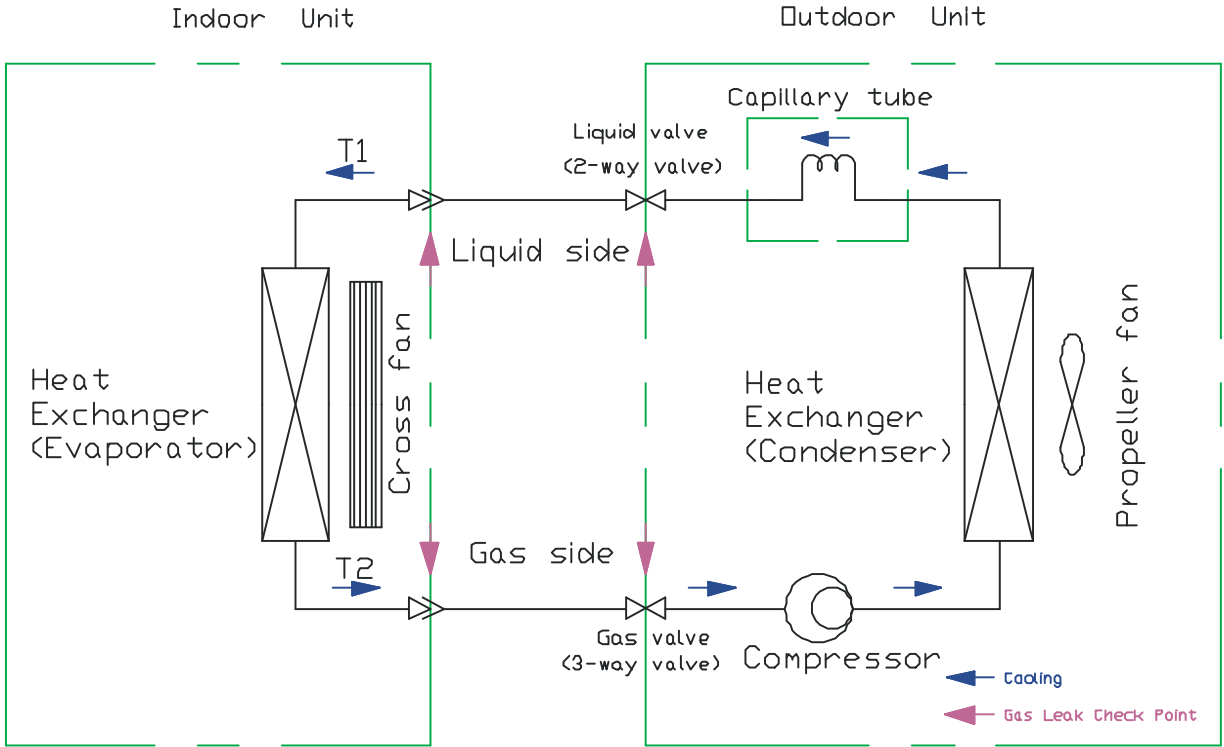
Outdoor Unit

MODEL		7000BTU	9000BTU	12000BTU	18000BTU	24000BTU
W	mm	663	600	700	802	800
D	mm	254	250	225	298	300
H	mm	421	490	500	535	690

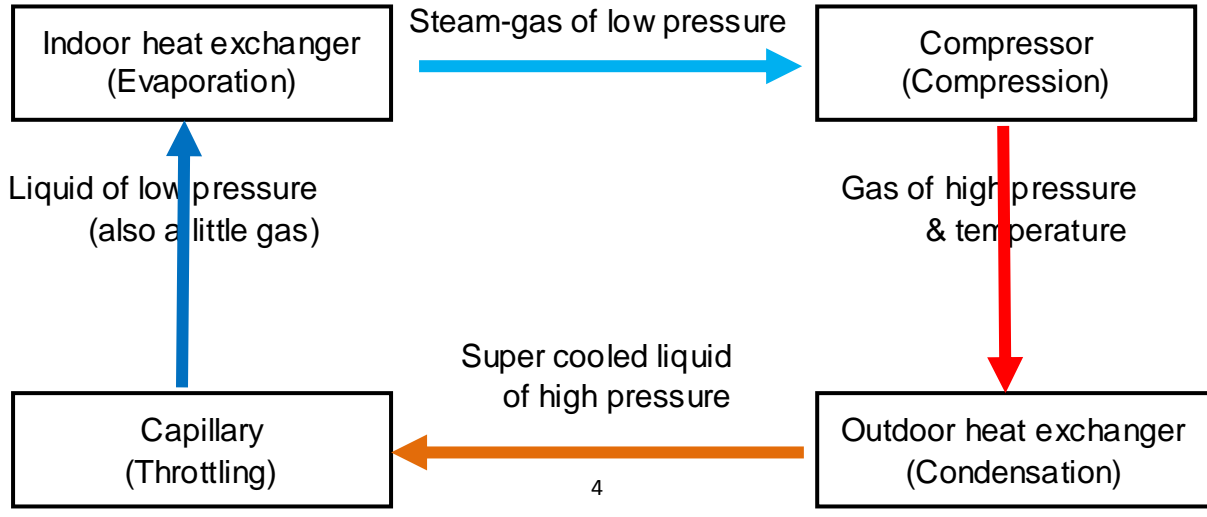
Chapter 2 Refrigeration Diagrams

2.1 Cooling Only

Cooling Mode

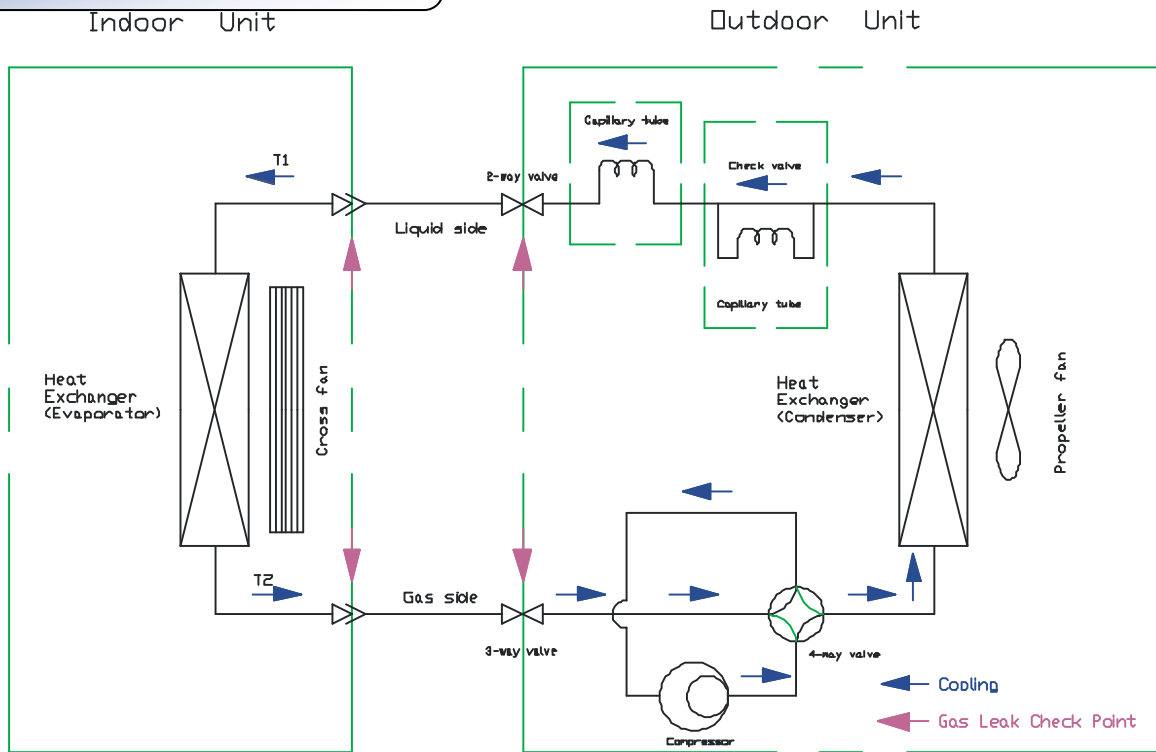


Cooling Cycle

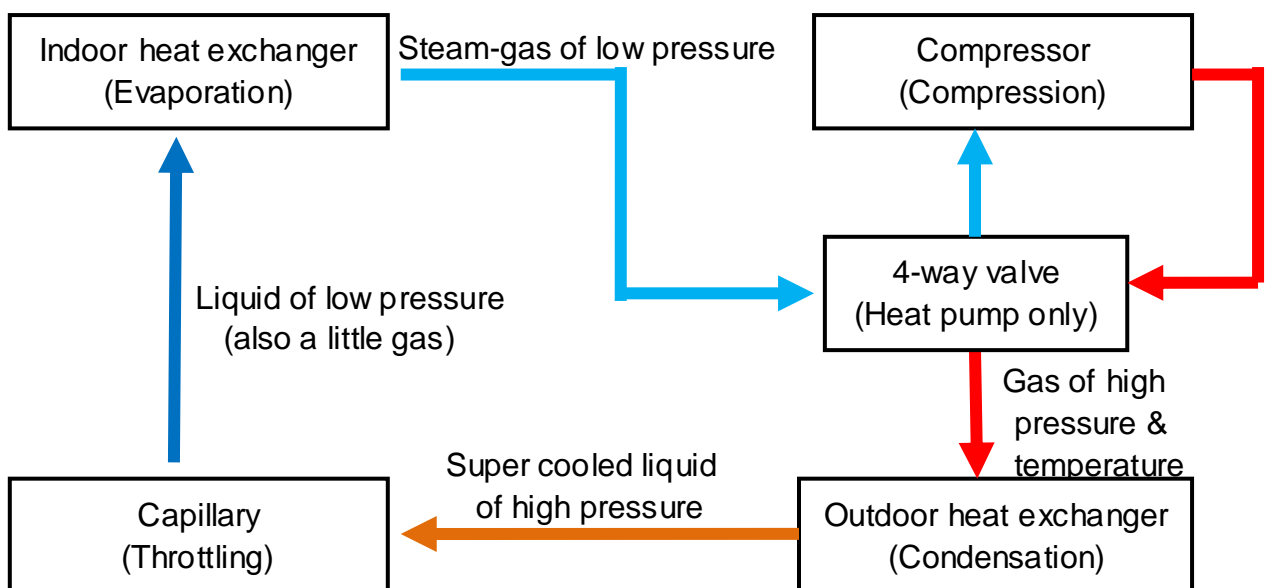


2.2 Cooling & Heating

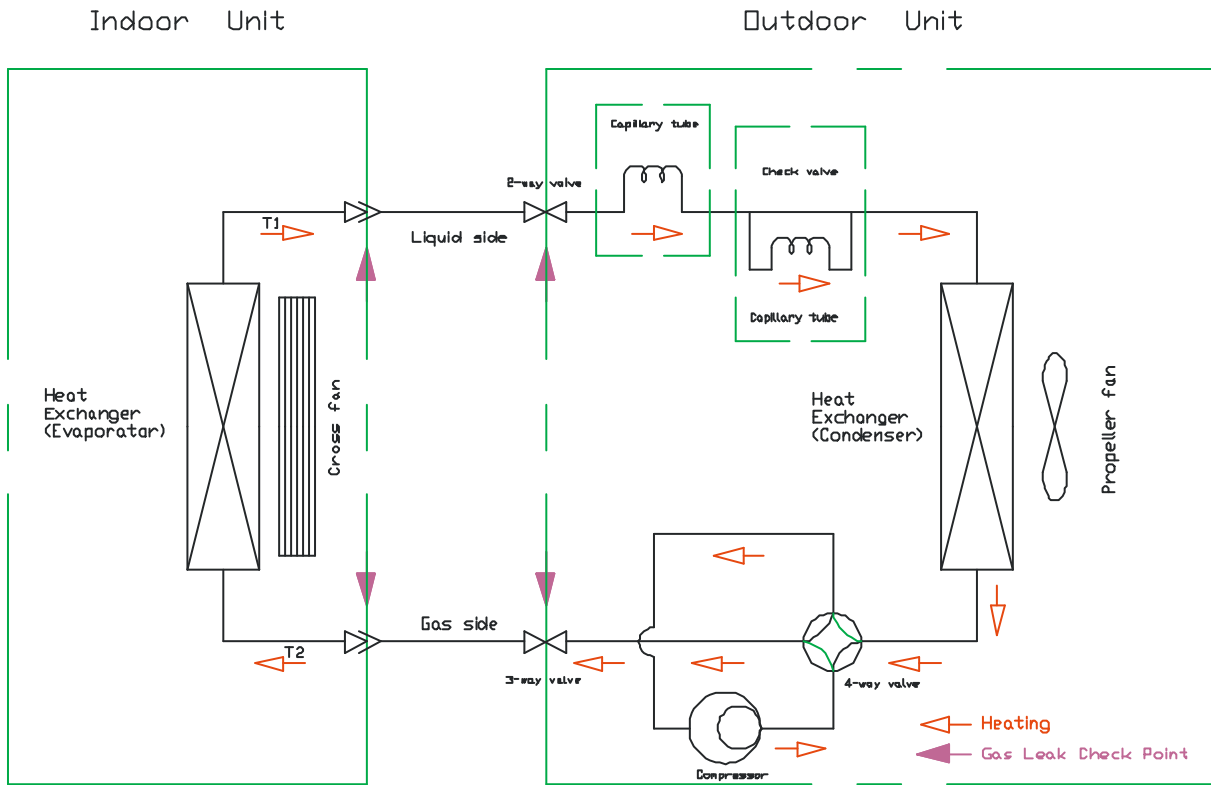
Cooling Mode



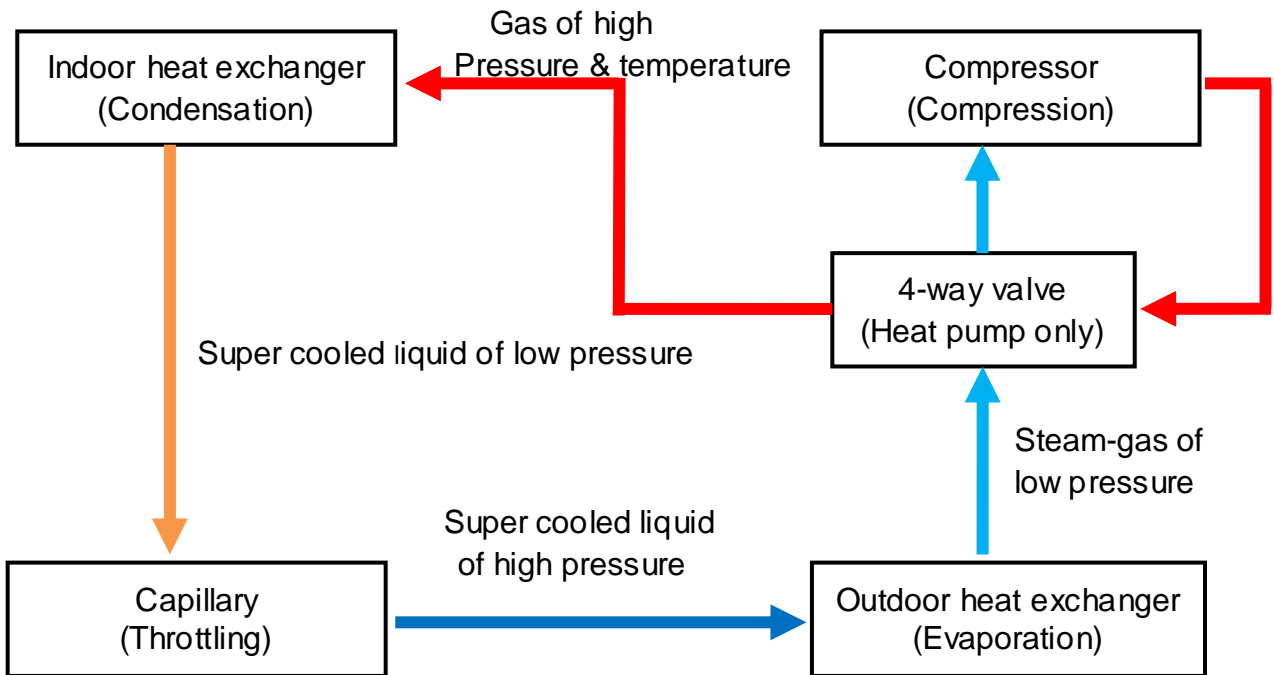
Cooling Cycle



Heating Mode



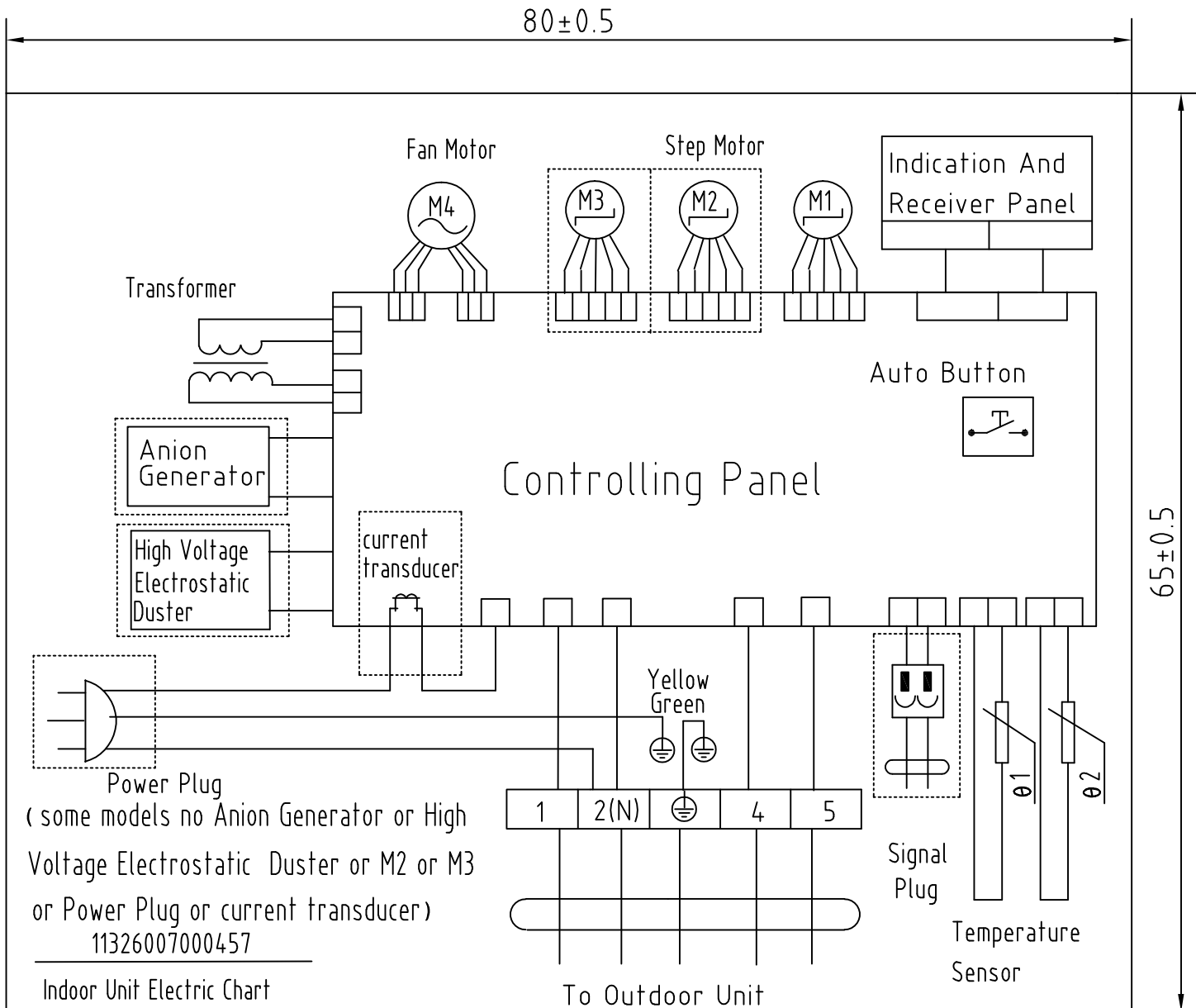
Heating Cycle



Chapter 3 Wiring Diagram

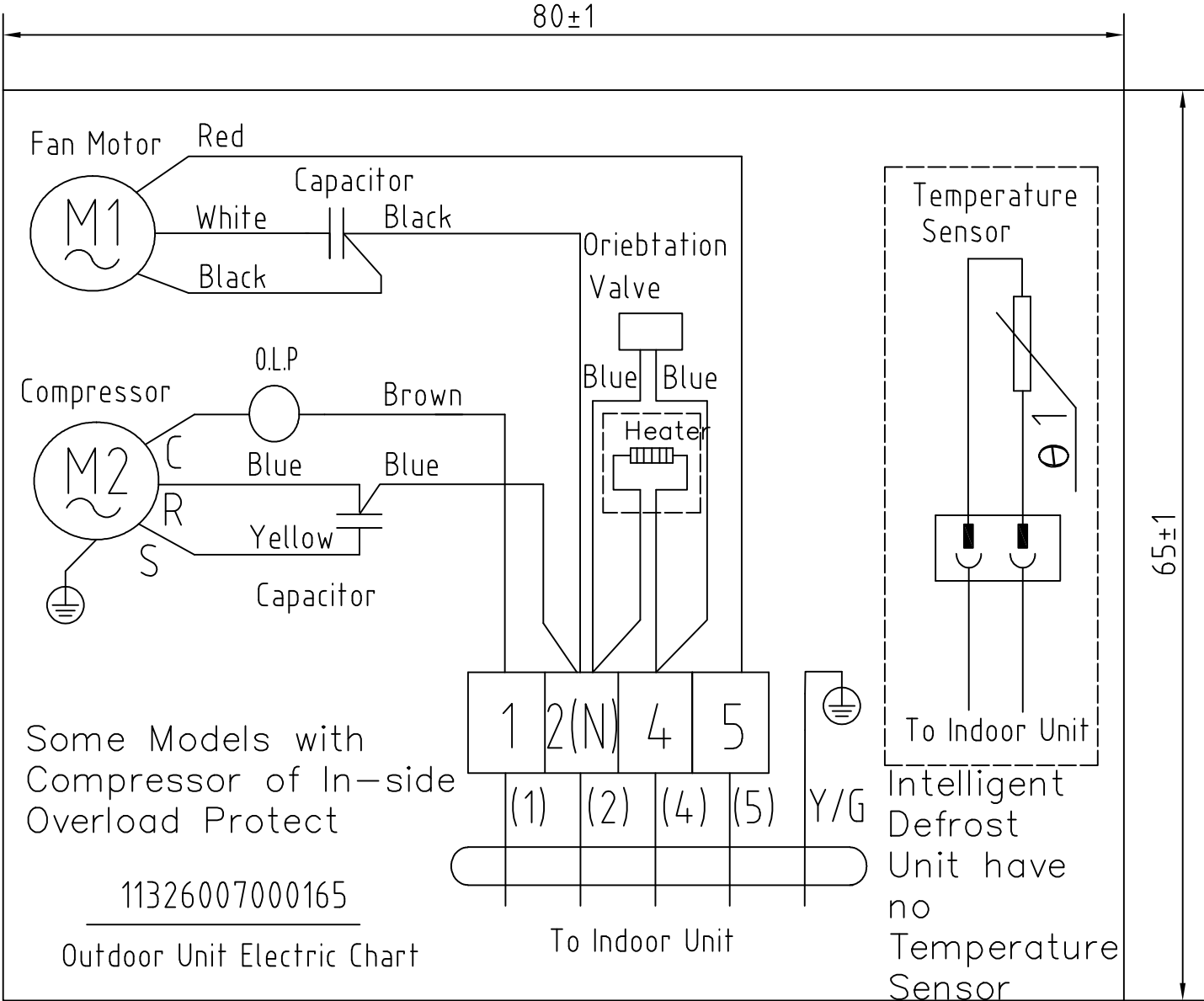
Indoor unit

Electric chart for 07/09/12/18K



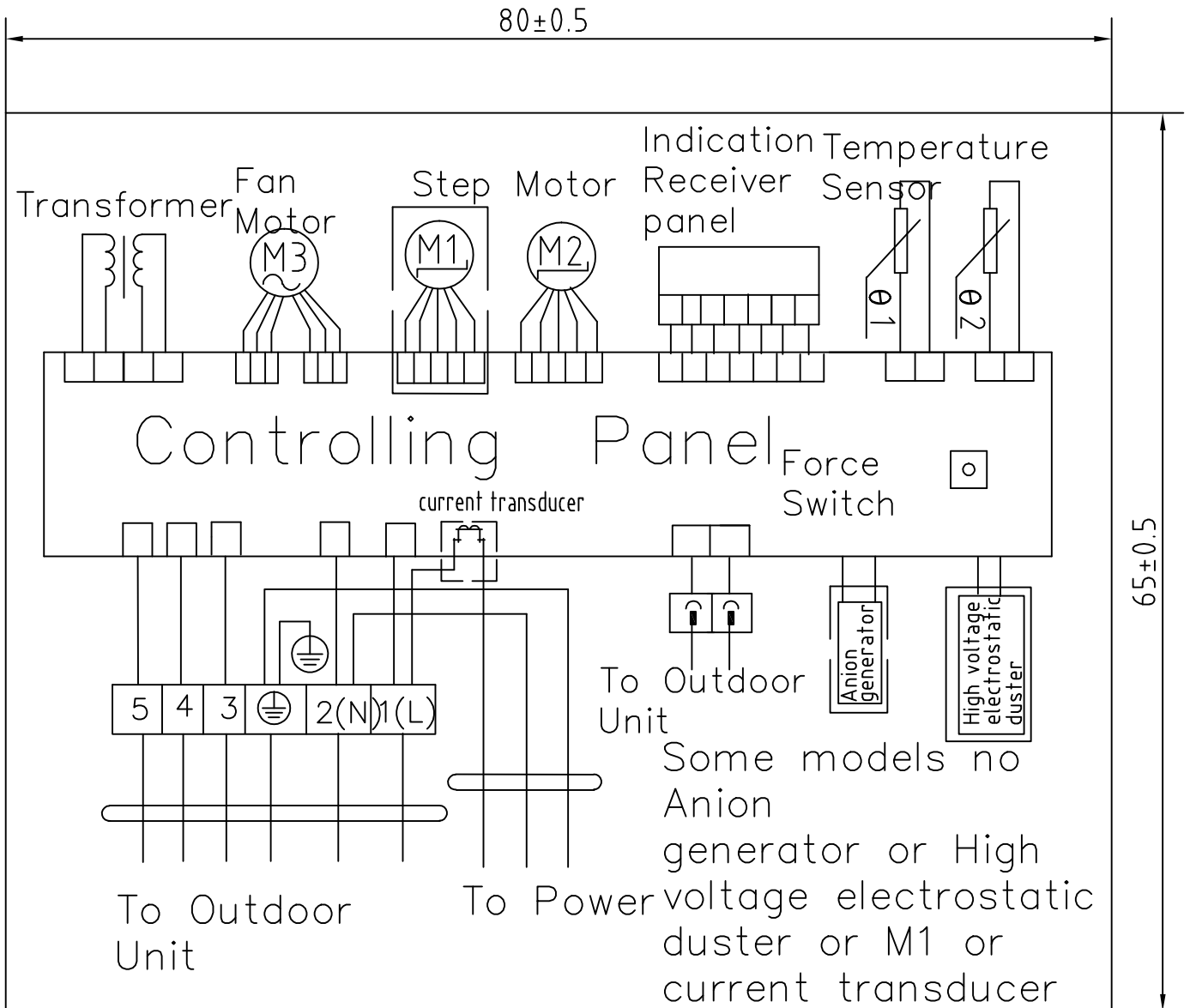
Outdoor unit

Electric chart for 07/09/12/18K



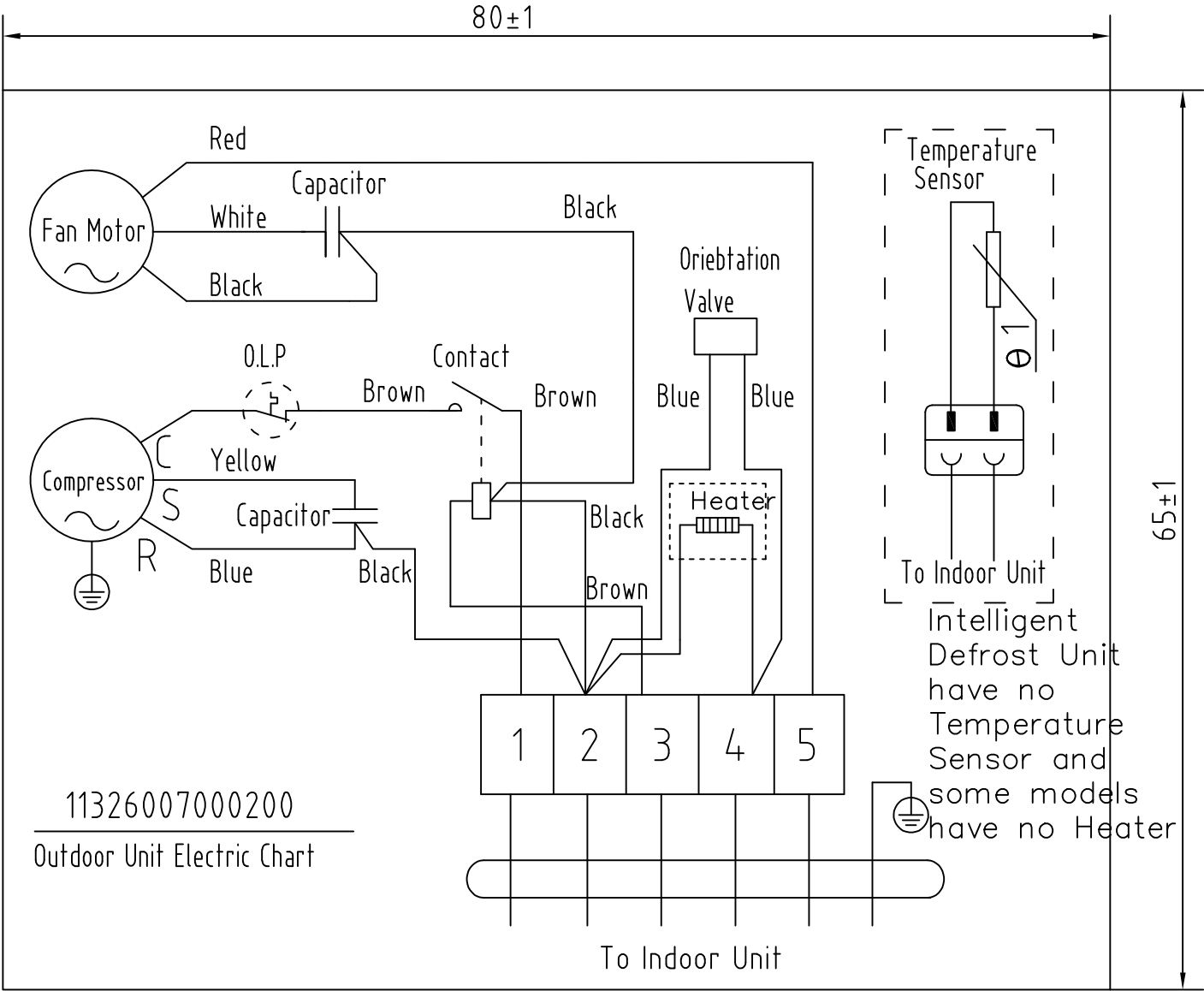
Indoor unit

Electric chart for 24K



Outdoor unit

Electric chart for 24K



Chapter 4 Troubleshooting Guide

4.1 Error Code

No.	Error Code	Problem
1	E1	Temperature sensor of air intake fault
2	E2	Temperature sensor of outdoor coil fault
3	E3	Temperature sensor of indoor coil fault
4	E4	PG motor of indoor unit feedback fault

4.2 Troubleshooting Guide for 07-12K

1. The Foremost Inspecting Items

(1)The input voltage must be within +10% tolerance of the rated Voltage. If it is not the case, the air-conditioner will probably not work normally.

(2)Check the connecting cord between indoor unit and outdoor unit to see if it is properly connected. The connecting must be done according to the wiring diagram, please also notice that even different models may have the connecting cord of the same specification.

Please check if the marks at the connecting terminal and the marks on the cord can match, otherwise, the air-conditioner will not work normally.

(3)If the following phenomena are found, the problem is not from the air-conditioner itself.

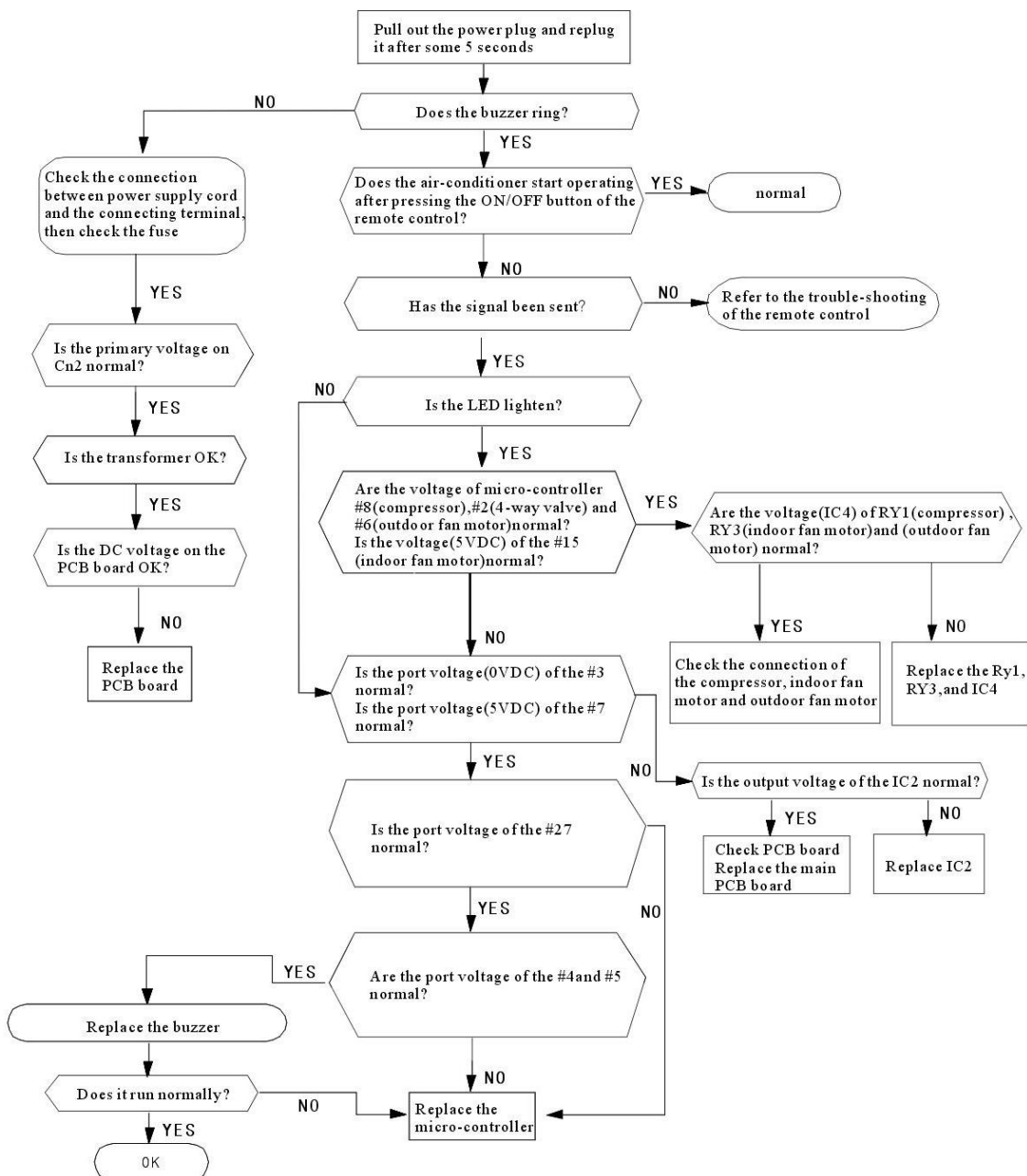
NO.	Problems	Causes
1	The motor is heard operating but the air-conditioner does not work when the indoor unit is powered on	Since the air-conditioner is powered on, it will come to working condition as long as you press the ON/OFF button of the remote control and the Signal is well received.
2	The compressor stops running but the indoor fan motor keeps working when it is at cooling mode with the indoor temperature higher than set temperature.	If you turn off the air-conditioner and restart it immediately, it will return to normal in 3 minutes, after that, the air-conditioner will automatically adjust the indoor fan speed to what you set.
3	The compressor works discontinuously at dehumidifying mode.	The air-conditioner will automatically control the working of the compressor according to the inside temperature
4	The air-conditioner does not work while the LED display is on.	The TIMER is set with the air-conditioner; it will be in hold on condition. If the TIMER setting is cancelled, the air-conditioner will return to normal working condition
5	The compressor works discontinuously at cooling and dehumidifying mode, and the indoor fan motor slows down.	The compressor stops internally or the fan motor slows down to prevent the indoor heat exchanger from being frozen.

2. No Power Display

(1) Items

- a) Check if the input voltage is correct?
- b) Check if the AC power supply connecting is correct?
- c) Check if the output voltage of the manostat L7805 (IC2) is correct?

(2) Trouble shooting procedure



3. The Indoor Fan Motor Does Not Work

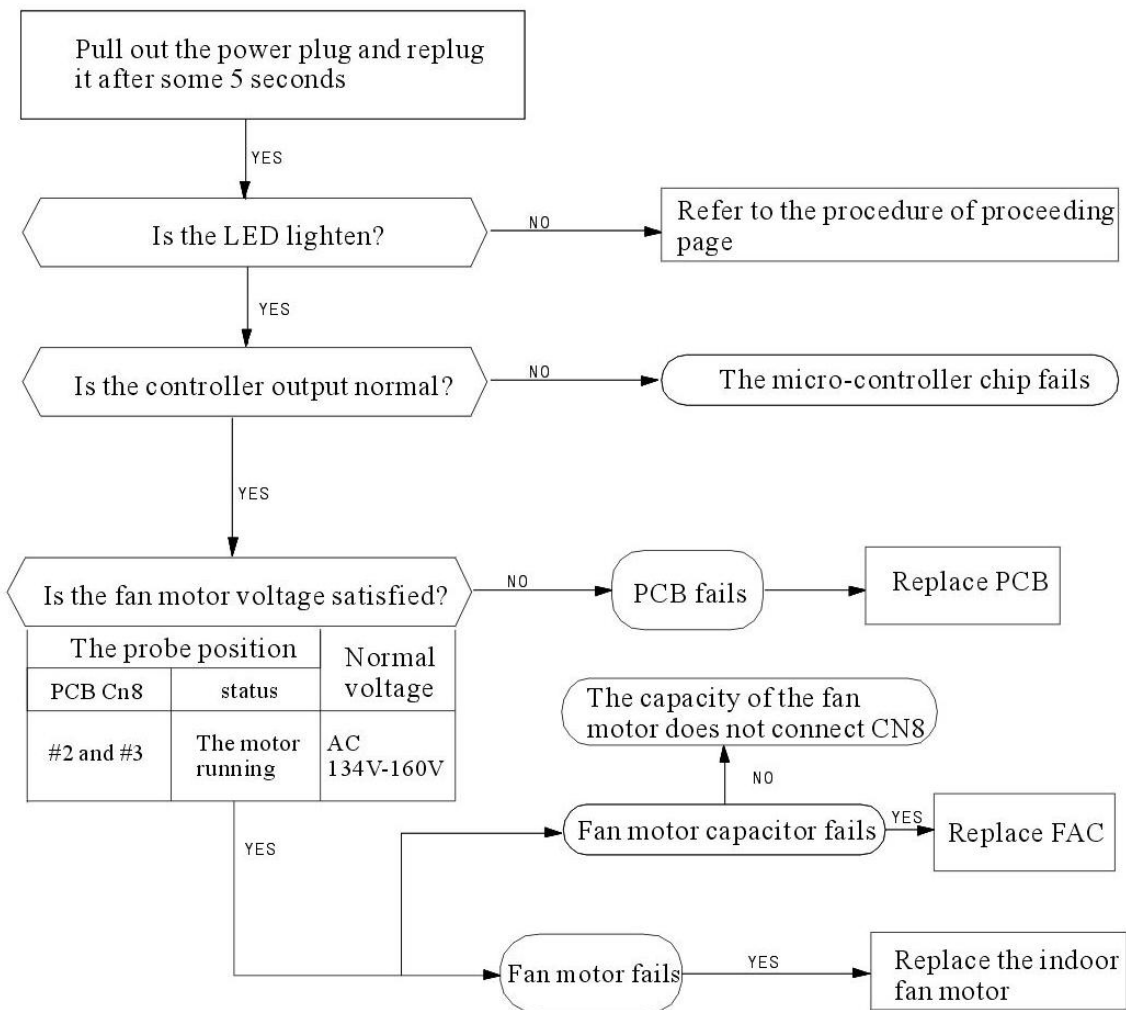
(1) Items

- a) Check if the indoor fan motor is connected correctly to the connector (CN8)?
- b) Check if the AC input voltage is correct?
- c) Check if the IC of indoor fan motor is connected correctly to the connector

(CN2)?

- d) Check if the capacity of indoor fan motor is connected correctly to the connector (CN8)?

(2) Trouble shooting procedure

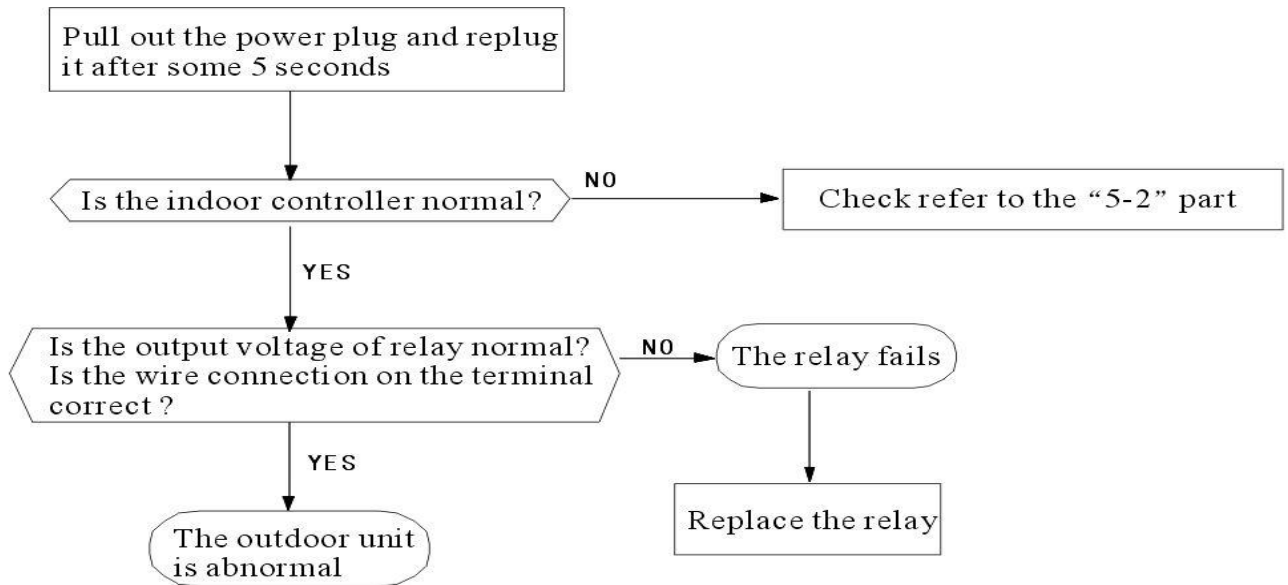


4. The Outdoor Unit Does Not Work

(1) Items

- a) Check if the input voltage is correct?
- b) Check if the wire connection of the outdoor connecting terminal is correct?

(2) Trouble shooting procedure



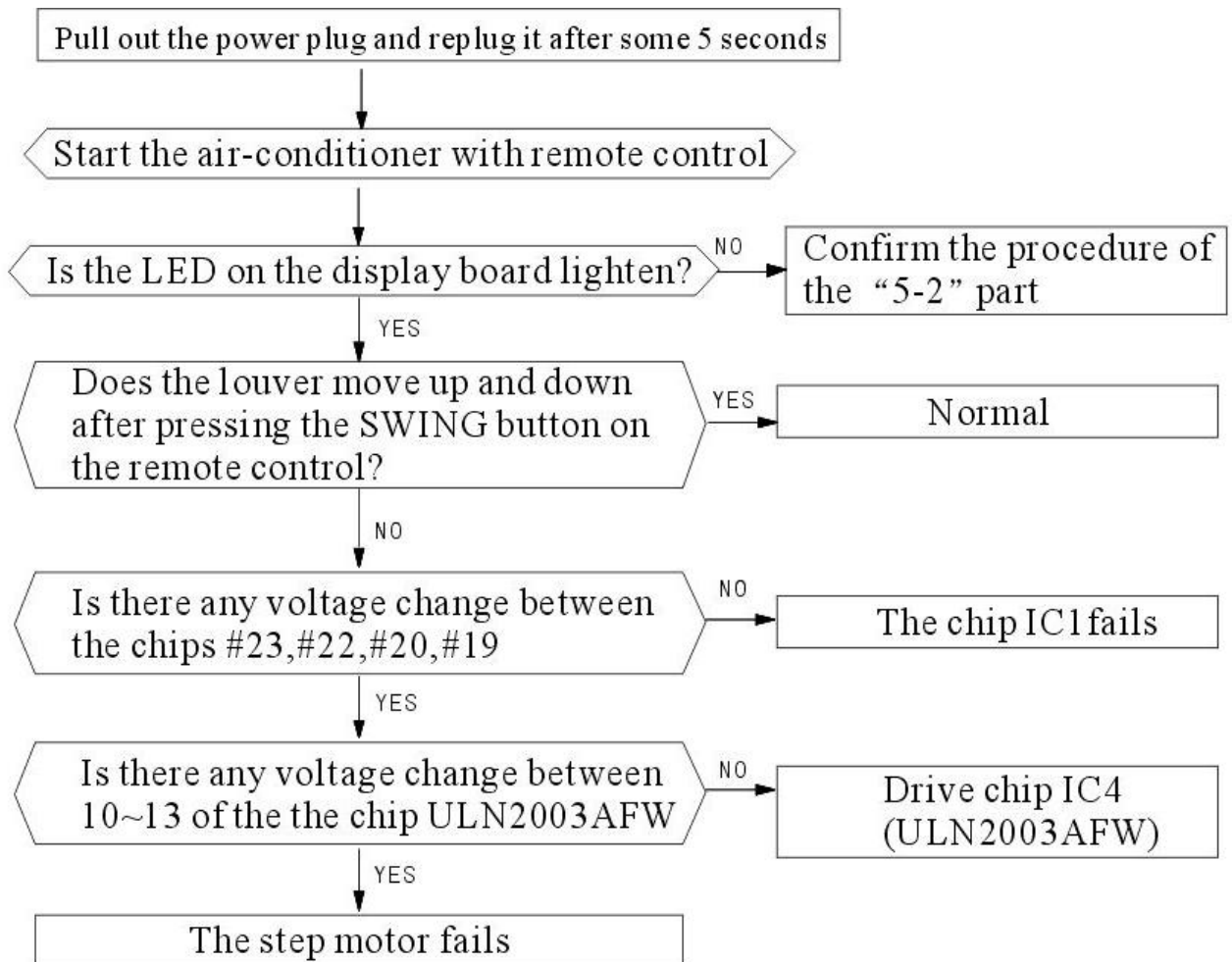
5. The Step Motor Does Not Work

(1)Items

a) Check if the input voltage is correct?

b) Check if the step motor controlling the up-down movement firmly connected to Cn2?

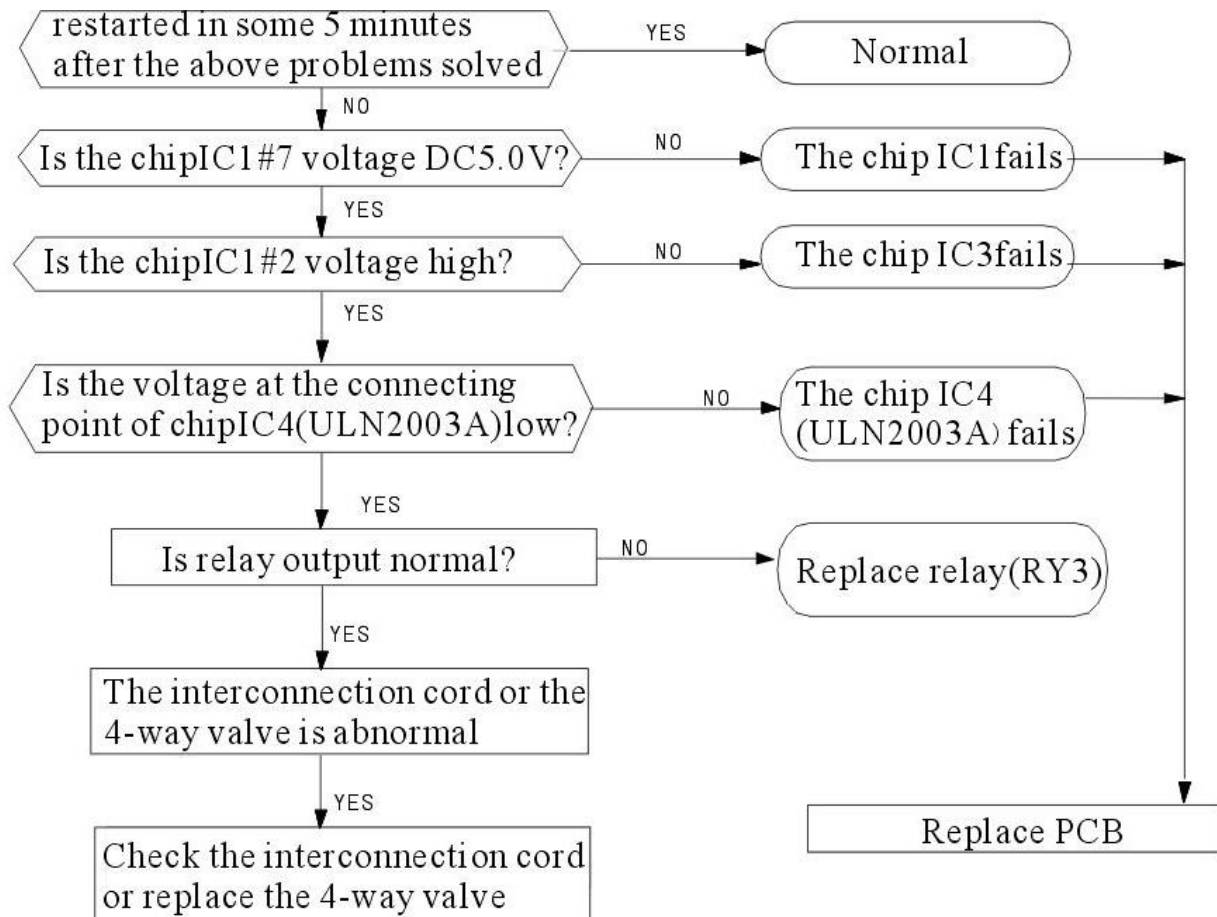
(2)Trouble shooting procedure



6. Heating Mode Can Work, But No Hot Air Blow

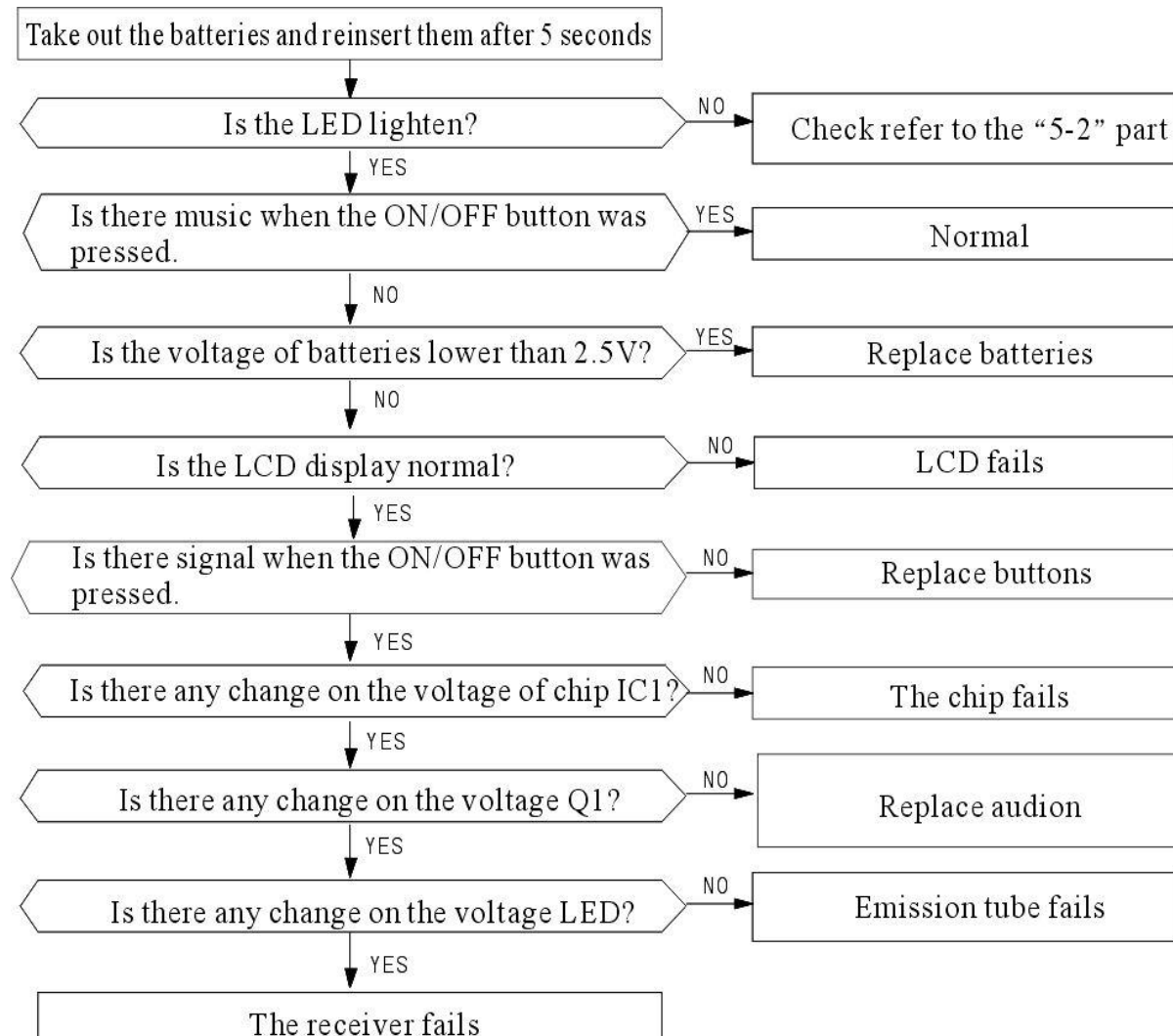
(1) Check if the set temperature is lower than the indoor temperature?

(2) Check if the indoor PCB is connected to the terminal correctly?



7. Remote Control Can Not Work

Trouble shooting rocedure



8. The Failure Analysis of the Main Parts

Part	Analysis																															
Heat exchanger	Measure resistance																															
	Normal	<table border="1"> <thead> <tr> <th>Environment temperature</th> <th>15℃</th> <th>20℃</th> <th>25℃</th> <th>30℃</th> <th>35℃</th> <th>40℃</th> </tr> </thead> <tbody> <tr> <td>Resistance of transformer(KΩ)</td> <td>7.45</td> <td>6.08</td> <td>5</td> <td>4.13</td> <td>3.43</td> <td>2.86</td> </tr> </tbody> </table>	Environment temperature	15℃	20℃	25℃	30℃	35℃	40℃	Resistance of transformer(KΩ)	7.45	6.08	5	4.13	3.43	2.86																
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Abnormal	∞ : Turn-off ; 0 Ω : Short-cut																															
The indoor fan motor	Detecting the resistance between each connecting terminal																															
	Normal	<table border="1"> <thead> <tr> <th colspan="2">Environment temperature (10℃ ~30℃)</th> <th>1</th> <th>2</th> <th>3</th> </tr> <tr> <th colspan="2">Between</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Blue、yellow</td> <td>Main</td> <td>410 Ω ±10%</td> <td>350 Ω ±10%</td> <td>370 Ω ±10%</td> </tr> <tr> <td>Blue、red</td> <td>Auxiliary</td> <td>325 Ω ±10%</td> <td>270 Ω ±10%</td> <td>300 Ω ±10%</td> </tr> <tr> <td colspan="2">Input</td> <td colspan="3">YYK13-4: 13W YYK19-4: 19W</td> </tr> </tbody> </table>	Environment temperature (10℃ ~30℃)		1	2	3	Between					Blue、yellow	Main	410 Ω ±10%	350 Ω ±10%	370 Ω ±10%	Blue、red	Auxiliary	325 Ω ±10%	270 Ω ±10%	300 Ω ±10%	Input		YYK13-4: 13W YYK19-4: 19W							
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Detecting the voltage between the signal wire of fan motor and ground																																
Normal	<table border="1"> <thead> <tr> <th>Between</th> <th>Voltage</th> </tr> </thead> <tbody> <tr> <td>Gray、Orange</td> <td>0.5V~4.5V</td> </tr> <tr> <td>Yellow、Orange</td> <td>5V</td> </tr> </tbody> </table>	Between	Voltage	Gray、Orange	0.5V~4.5V	Yellow、Orange	5V																									
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	Normal	When the temperature is 20℃ ~30℃ ,around 300Ω and 120Ω																														
	Abnormal	∞ : Turn-off ; 0 Ω : Short-cut																														

4.3 Troubleshooting Guide for 18-24K

1. The Foremost Inspecting Items

(1)The input voltage must be within +10% tolerance of the rated Voltage. If it is not the case, the air-conditioner will probably not work normally.

(2)Check the connecting cord between indoor unit and outdoor unit to see if it is properly connected. The connecting must be done according to the wiring diagram, please also notice that even different models may have the connecting cord of the same specification.

Please check if the marks at the connecting terminal and the marks on the cord can match, otherwise, the air-conditioner will not work normally.

(3)If the following phenomena are found, the problem is not from the air-conditioner itself.

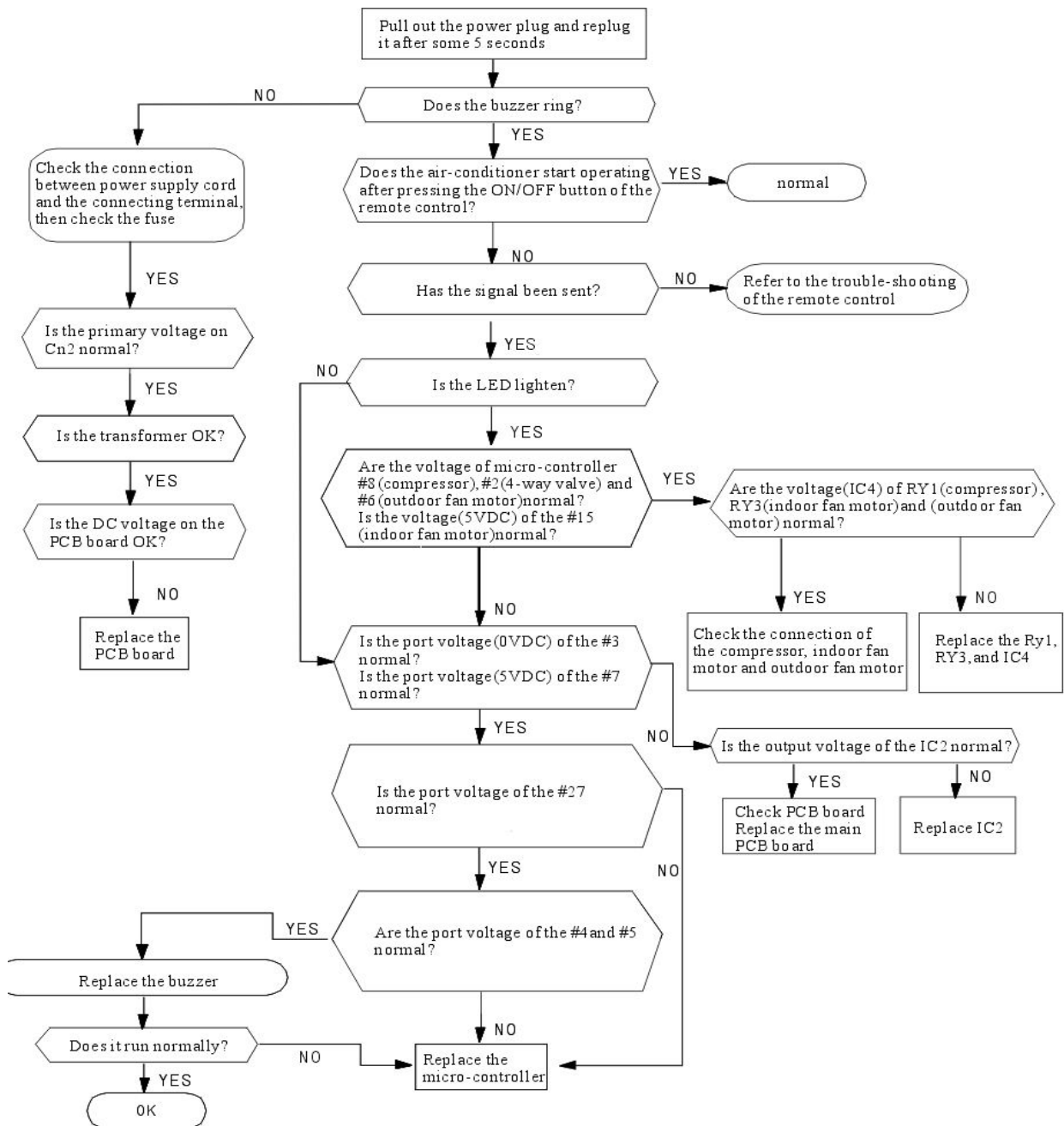
NO.	Problems	Causes
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5	The compressor works discontinuously at cooling and dehumidifying mode, and the indoor fan motor slows down.	The compressor stops internally or the fan motor slows down to prevent the indoor heat exchanger from being frozen.

2. No Power Display

(1) Items

- ① Check if the input voltage is correct?
- ② Check if the AC power supply connecting is correct?
- ③ Check if the output voltage of the manostat L7805(IC2) is correct?

(2) Trouble shooting procedure

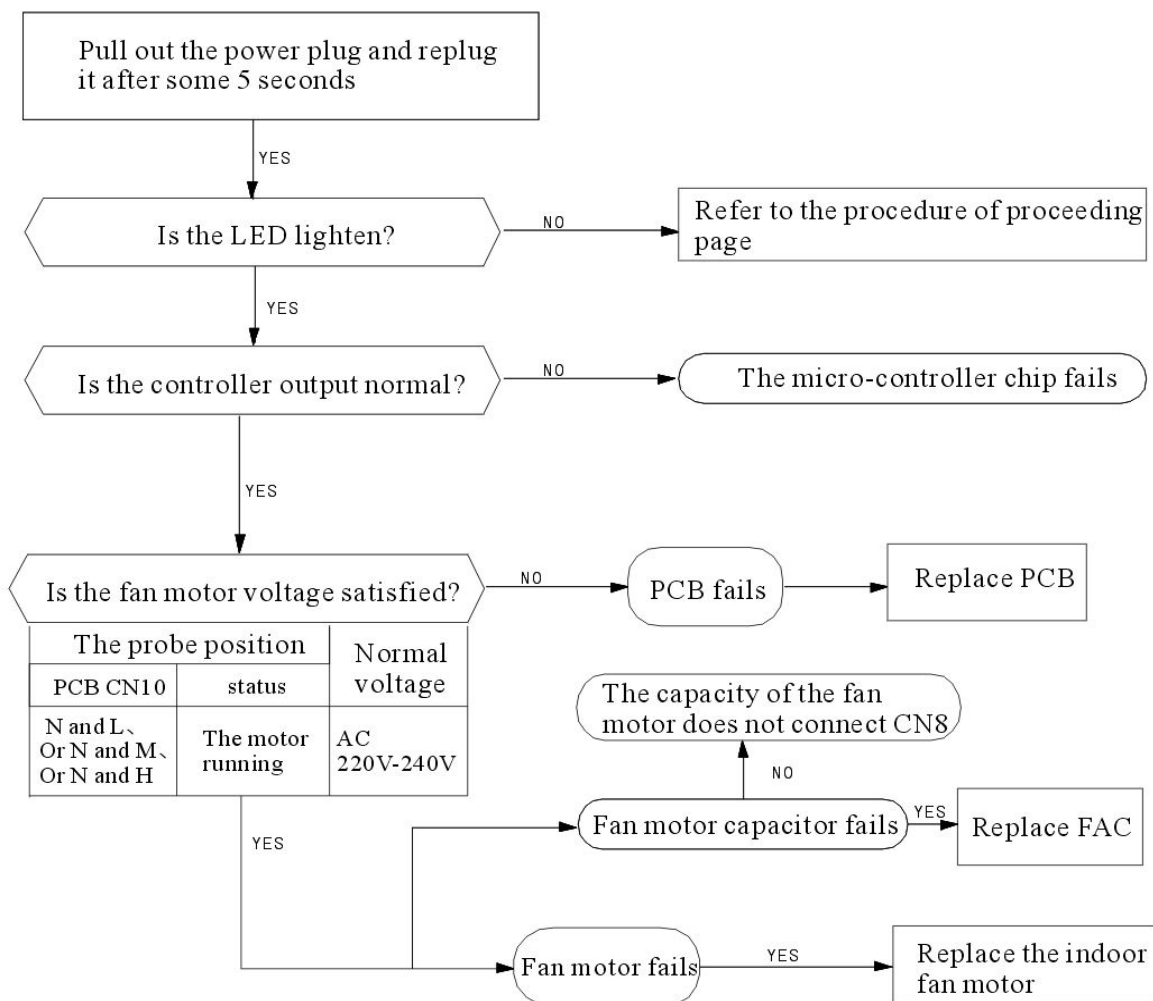


3. The Indoor Fan Motor Does Not Work

(1)Items

- ① Check if the indoor fan motor is connected correctly to the connector(CN8)?
- ② Check if the AC input voltage is correct?
- ③ Check if the IC of indoor fan motor is connected correctly to the connector(CN2)?
- ④ Check if the capacity of indoor fan motor is connected correctly to the connector(CN8)?

(2)Trouble shooting procedure

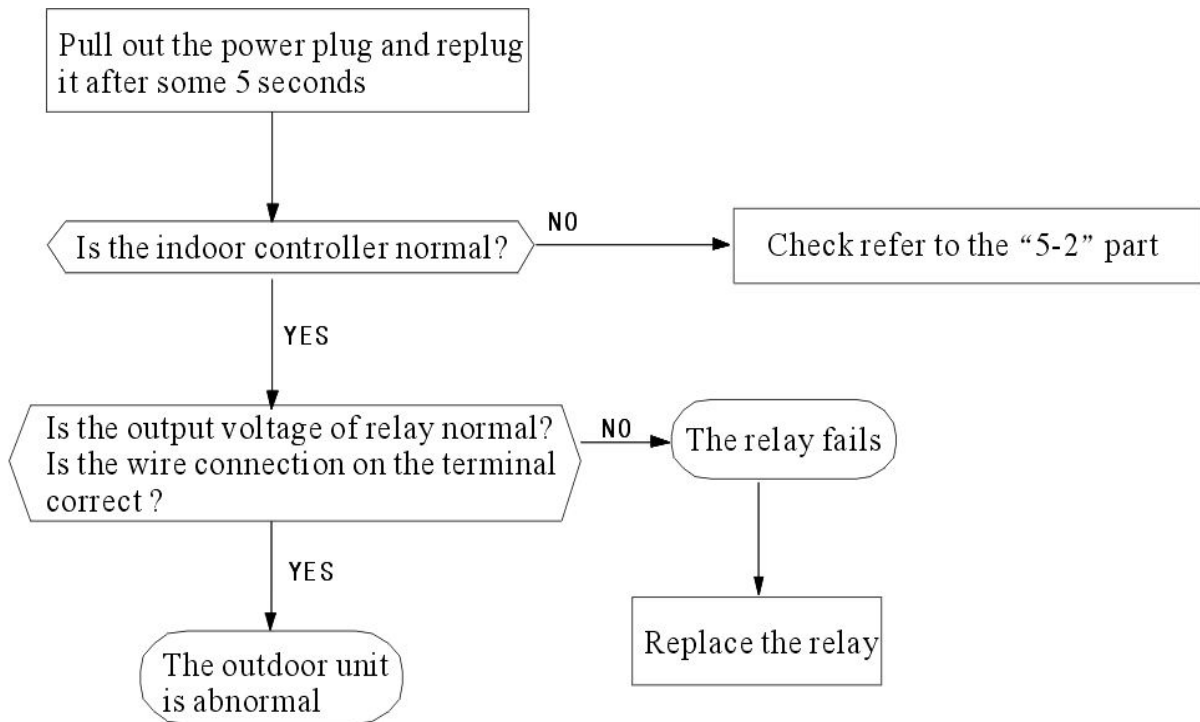


4. The Outdoor Unit Does Not Work

(1) Items

- ① Check if the input voltage is correct?
- ② Check if the wire connection of the outdoor connecting terminal is correct?

(2) Trouble shooting procedure



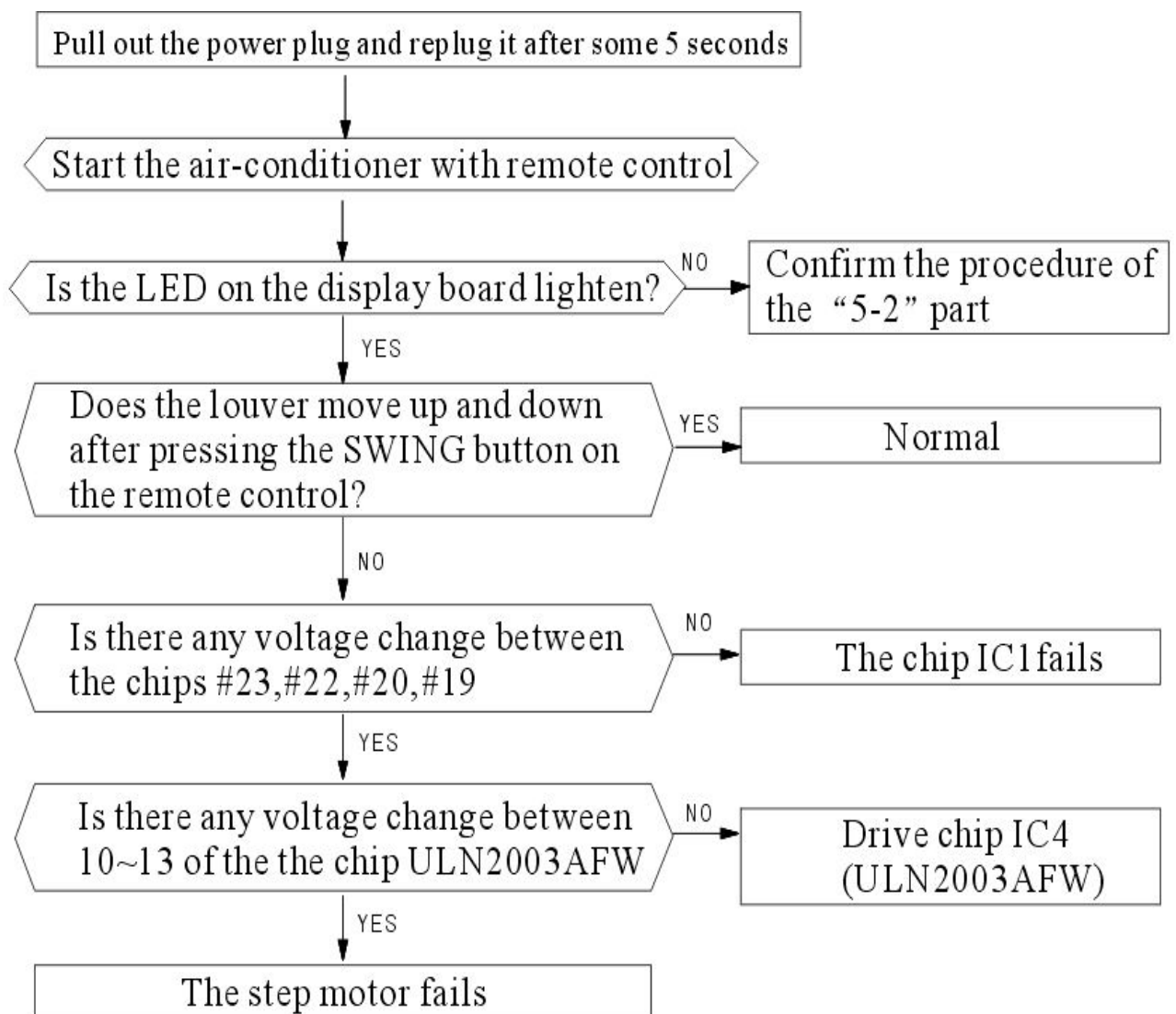
5. The Step Motor Does Not Work

(1)Items

①Check if the input voltage is correct?

②Check if the step motor controlling the up-down movement firmly connected to Cn2?

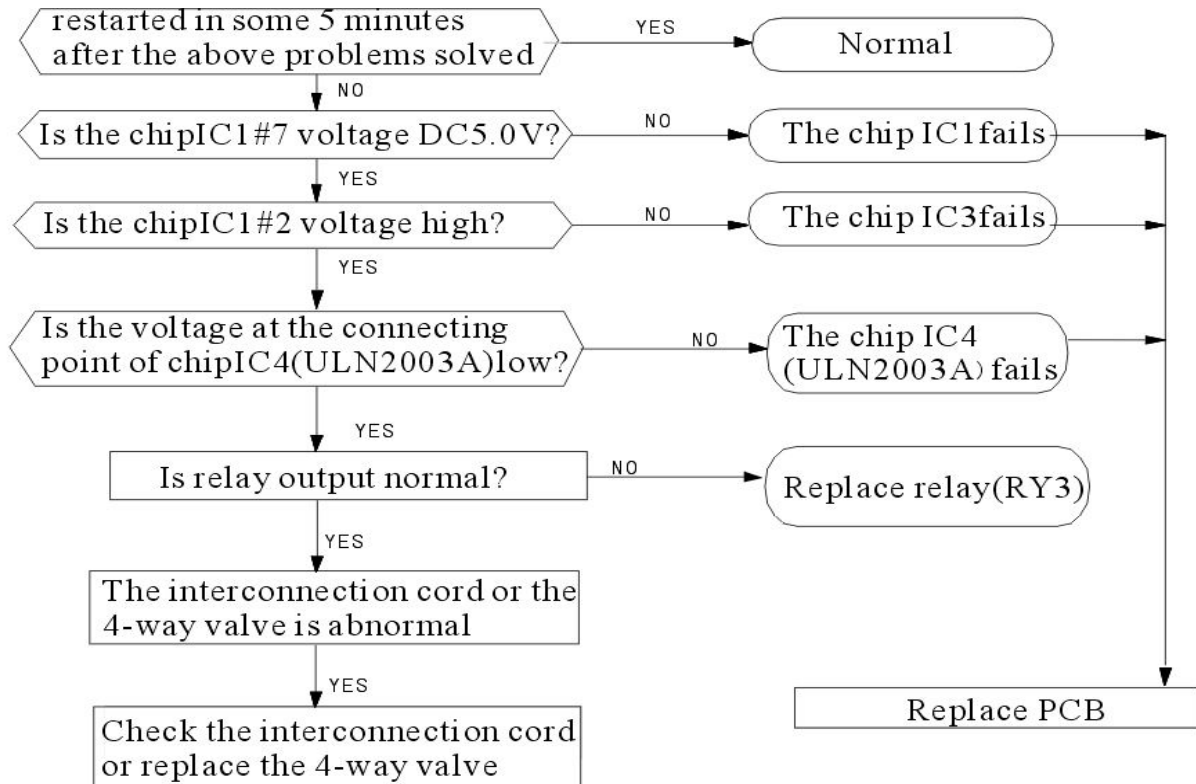
(2)Trouble shooting procedure



6. Heating Mode Can Work, But No Hot Air Blow

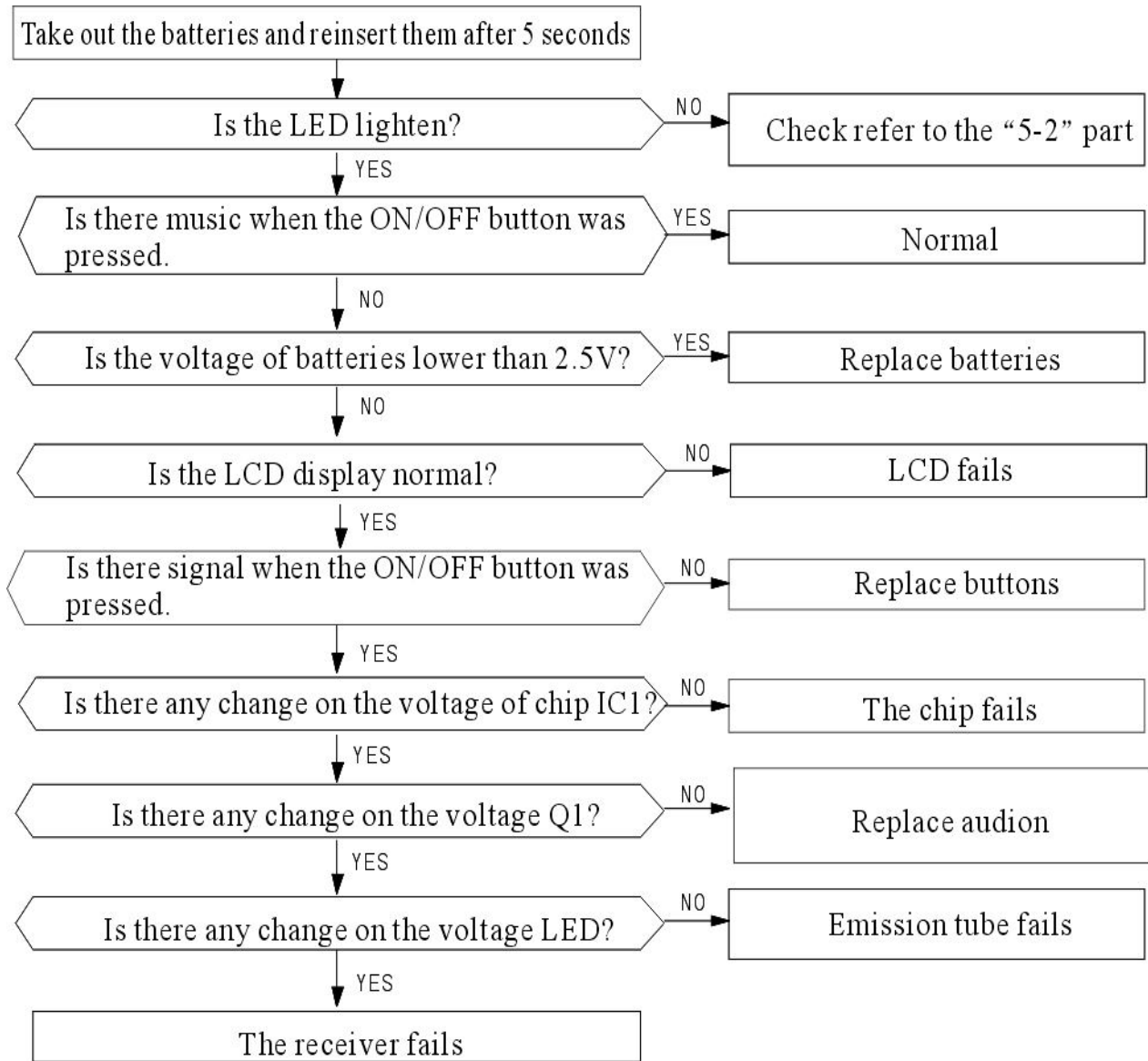
(1) Check if the set temperature is lower than the indoor temperature?

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7. Remote Control Can Not Work

Trouble shooting procedure



8. The Failure Analysis of the Main Parts

Part	Analysis							
Transformer Heat exchanger	Measure resistance							
	Normal	Environment temperature	15°C	20°C	25°C	30°C	35°C	40°C
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Abnormal	∞ : Turn-off ; 0Ω : Short-cut							
Step motor	Normal	Environment temperature (10°C ~30°C)						
		Between		1	2	-		
				24BYJ48	35BYJ412B	-		
		Blue, yellow	-	Above300Ω	Around120Ω	-		
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Input	1.5W		-	-				
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