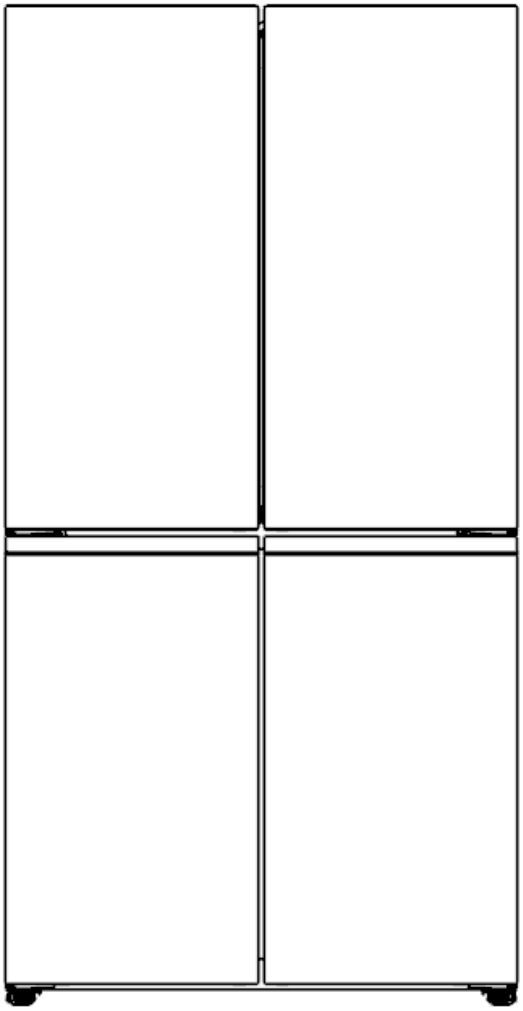
Service Manual

Cross-Door No Frost Series

Market Model	Product Model	Product Code
MDRM923CIE46M	SA-BCD694WZ-JT	92031040Z07142



The picture in this service manual is only for reference, and specific appearance and configuration are subject to the real product.
This manual mainly teaches the method, the specific work skill needs engineer to accumulate through the daily work.

⚠ WARNING

Important Safety Notice

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

⚠ WARNING

Important Safety Notice

The Maintenance Manual is only for the use of maintenance personnel with certain experience and background in electrical, electronic and mechanical field.

Any attempt to repair main devices may lead to personal injury and property loss.

Manufacturers or distributors are not responsible for the content of the Manual and interpretation thereof.

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1. Significant update notes

(SM No.)	Date	Author	Description

2.Safety Warning

2.1Warning for operation safety

Important Safety Instructions

	**CAUTION** **RISK OF ELECTRIC SHOCK** **DO NOT OPEN** 
	This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your freezer.
	This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your freezer.

WARNING

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this appliance near water.

6) Clean only with a damp cloth.

7) Do not block any ventilation openings.

8) Install in accordance with the manufacturer’s instructions.

9) Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.

10) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

11) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the appliance.

12) Do not attempt to modify or extend the power cord of this appliance.

13) Unplug this appliance during lightning storms or when it will not be used for long periods of time.

14) Make sure that the available AC power matches the voltage requirements of this appliance.

CONNECTING ELECTRICITY

WARNING Electrical Shock Hazard.

Plug into a grounded 3-prong outlet.
Do not remove the ground prong.
Do not use an adapter.

Failure to follow these instructions can result in death, fire, or electrical shock.



WARNING

Electric Shock Hazard
Failure to follow these instructions can result in electric shock, fire, or death.

1) WARNING–Keep ventilation openings, in both the freezer and the built-in structure, clear of obstruction.

2) WARNING–Do not touch the interior of the freezer with wet hands. This could result in frost bite.

3) WARNING–Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

4) WARNING–Do not damage the refrigerant circuit.

5)WARNING–Do not damage the refrigerant tubing when handling, moving, or using the freezer.

6) WARNING–DANGER–Never allow children to play with, operate, or crawl inside the freezer. Risk of child entrapment. Before you throw away your old freezer:

6-1) Take off the doors

6-2) Leave the shelves in place so that children may not easily climb inside

7) Unplug the freezer before carrying out user maintenance on it.

8) This freezer can be used by children age eight years and older and persons with reduced physical or mental capabilities or lack of experience and knowledge if they are given supervision or instruction concerning the use of the freezer in a safe way and understand the hazards involved. Children should not play with the freezer. Cleaning and maintenance should not be performed by children without supervision.

9) If a component part is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.

10) Please dispose of the freezer according to local regulations as the freezer contains flammable gas and refrigerant.

11) Follow local regulations regarding disposal of the freezer due to flammable refrigerant and gas. All refrigeration products contain refrigerants, which under the guidelines of federal law must be removed before disposal. It is the consumer's responsibility to comply with federal and local regulations when disposing of this product.

12) This freezer is intended to be used in household and similar environments.

13) Do not store or use gasoline or any flammable liquids inside or in the vicinity of this freezer.

14) Do not use extension cords or ungrounded (two-prong) adapters with this freezer. If the power cord is too short, have a qualified electrician install an outlet near the freezer. Use of an extension cord can negatively affect the freezer's performance.

Grounding requirement

This freezer must be grounded. This freezer is equipped with a cord having a grounding wire with a grounding plug. The plug must be inserted into an outlet that is properly installed and grounded.

Improper use of the grounding plug can result in a risk of electric shock. Consult a qualified electrician or service person if the grounding instructions are not completely understood, or if doubt exists as to whether the freezer is properly grounded.

2.2Safety instruction for refrigerant



Explosion Hazard.

Keep flammable materials and vapors, such as gasoline, away from freezer. Failure to do so can result in fire, explosion, or death.

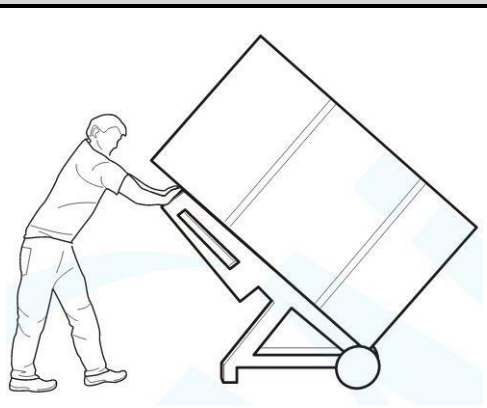


Safety instruction for refrigerant

DANGER–Risk of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Use Mechanical Devices. Do Not Puncture Refrigerant Tubing. CAUTION–Risk of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must be Followed. CAUTION–Risk of Fire or Explosion. Dispose of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used. CAUTION–Risk of Fire or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used.

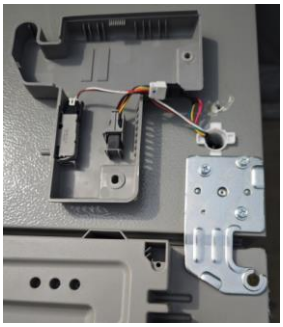
3. Installation and commissioning

3.1 Handling

Handling	
1) Protect the refrigerator in moving it,Same as shown as left photo, please move it by handcart with cushion 2) Remove all packing materials and bottom cushion, the move into house for placement 3) After moving it to appropriate location, wait for 2 hou rs before power on.	

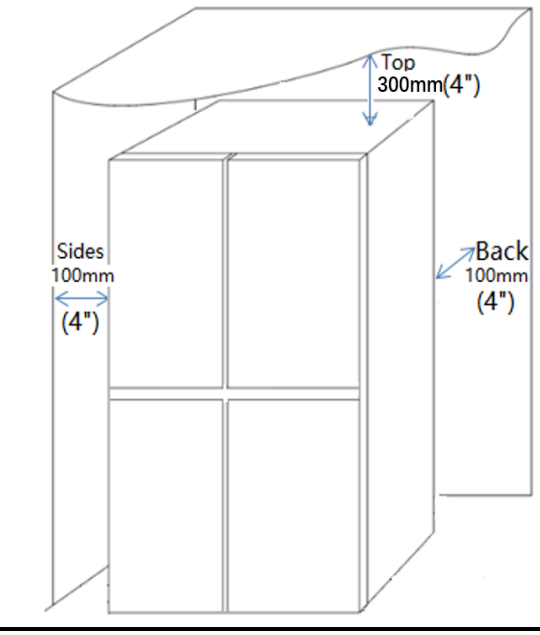
3.2 Door Disassembly and Assembly

When the whole refrigerator cannot enter the room, the door can be disassembled, then assembled after entering separately.

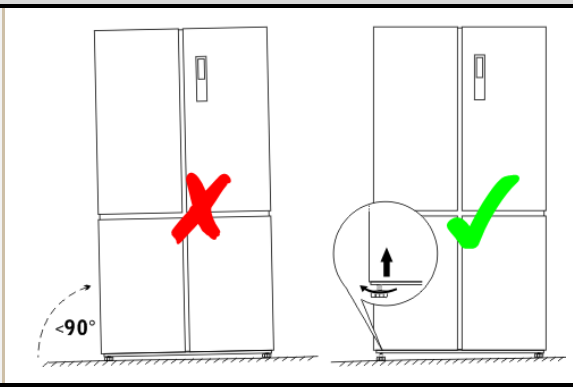
Disassembly of refrigerator door	
1)As shown in the diagram, use a screwdriver to loosen the fixing screws on the hinge cover and remove the hinge cover.	 
2)Disconnect the harness plugs on both the left and right sides. Then, use a screwdriver to remove the bolts by turning them counterclockwise and lift off the upper left and right hinges. Be careful when removing the refrigerator door to prevent it from falling on you.	 
3)Lift the left and right refrigerator doors in the direction of the arrows to remove them from the middle hinges on both sides.	

Disassembly of Freezer door	
1)Use an Allen wrench to remove the bolts from the middle hinge, then take off the middle hinge.	
2)Then lift the freezer door upwards to detach it from the lower hinge pin. Remove the door and place it in a suitable location, keeping the bolts for future use.	

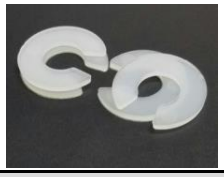
3.3Installation location

Installation location	
Please select a ventilated place to place the refrigerator, and reserve space according to the recommended size in the picture, which is conducive to heat dissipation, performance improvement and energy consumption reduction.	

3.4 Leveling of the refrigerator

Leveling of the refrigerator	
If the refrigerator cannot be placed steadily, adjust the footing to level it. Turn the feet clockwise to raise the refrigerator; turn the feet counterclockwise to lower the refrigerator.	

3.5 Adjustment to level the door

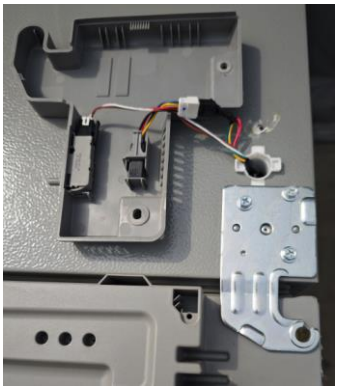
Adjustment to level the door (Up and down)	
Insert the adjustment shim under the hinge of the door that needs to be adjusted, ensuring that the heights of the left and right doors are aligned.	 
Adjustment to inhomogeneous aperture the door (Up and down)	
Use a screwdriver to loosen the two screws securing the hinge cover, then remove the upper hinge cover. 2)Loosen the screws on the hinge body and adjust the hinge body left or right according to the door gap to ensure the gap is even. 3)Attach the upper hinge cover, then use a screwdriver to tighten the two fixing screws on the hinge cover.	



Adjustment to plane the door (left and right)

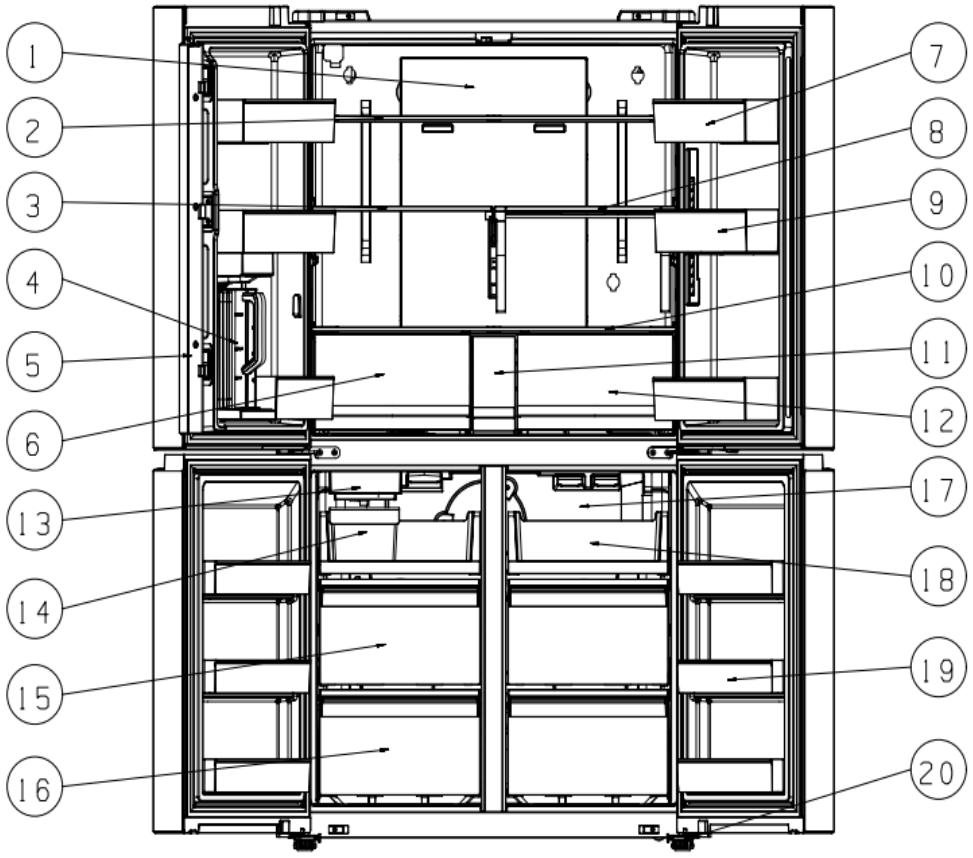
1)Use a screwdriver to loosen the two fixing screws on the hinge cover, then remove the upper hinge cover.
2)Loosen the screws on the hinge body, and adjust the hinge body back and forth according to the door gap to ensure the door gap is even.
3)Attach the upper hinge cover, then use a screwdriver to tighten the two fixing screws of the hinge cover.





4. Main parts and external dimension

4.1 Main parts

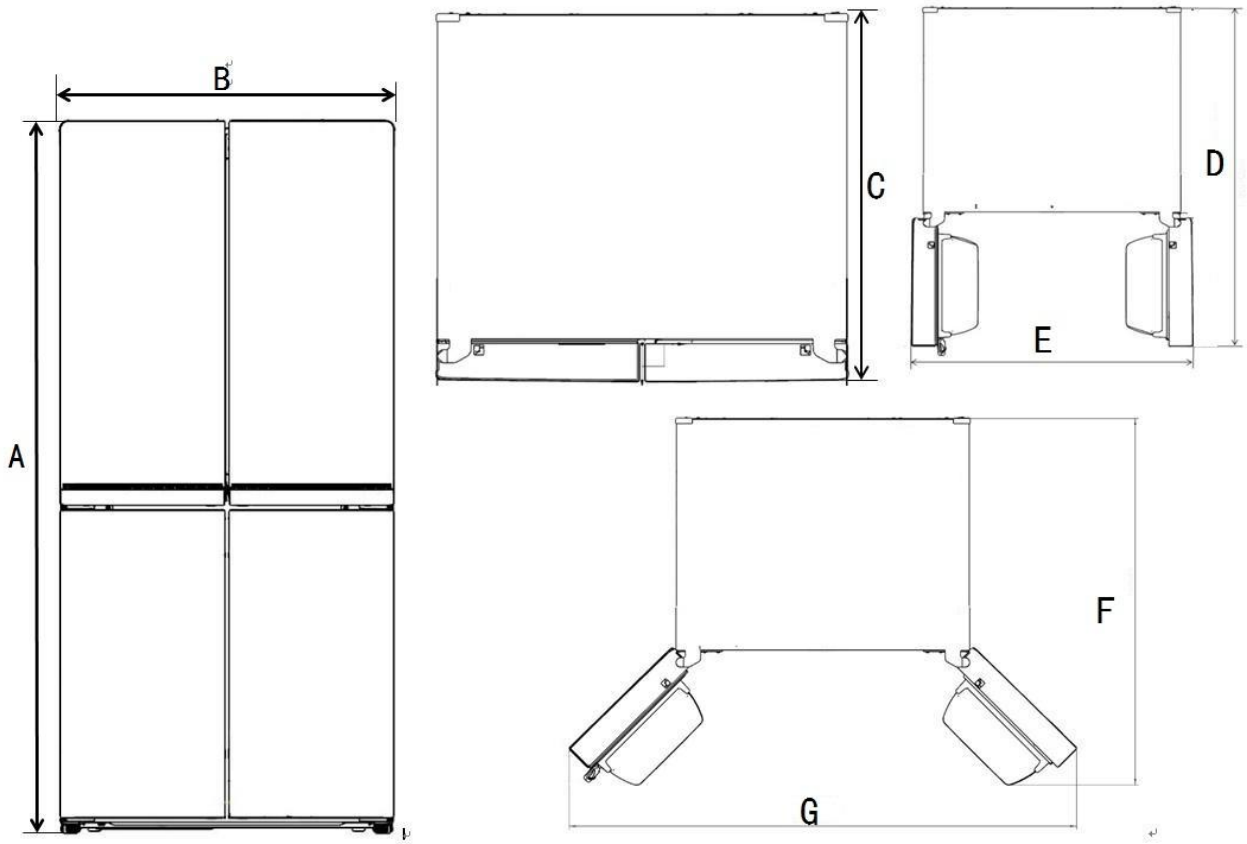


(The picture is only for reference, and specific appearance and configuration are subject to the real product)

Refrigerating chamber	Freezing chamber
1. Refrigerator air duct assembly	11. Water tank
2. Glass shelf	12. Vegetable and fruit drawer
3. Fully edge-wrapped shelf	13. Ice maker components
4. Water bottle	14. Ice tray
5. Inverted beam	15. Freezer middle drawer
6. Refrigerator drawer	16. Bottom freezer drawer
7. Bottle rack in the refrigerator compartment	17. Freezer air duct assembly
8. No grade shelf	18. Freezer upper tray
9. Adjustable bottle frame	19. Freezer door bin
10. Vegetable and fruit drawer cover	20. Adjustable feet

4.2 External dimension

Description	Code	Size (mm)
Height to Top of Case	A	**1775**
Width	B	**908**
Depth w/Handle	C	**736**
Depth (Door open 90 deg. w)	D	**1107**
Depth (Door open 90 deg. w)	E	**1012**
Depth (Door open 130 deg. w)	F	**1055**
Width (Door open 130 deg. w)	G	**1538**



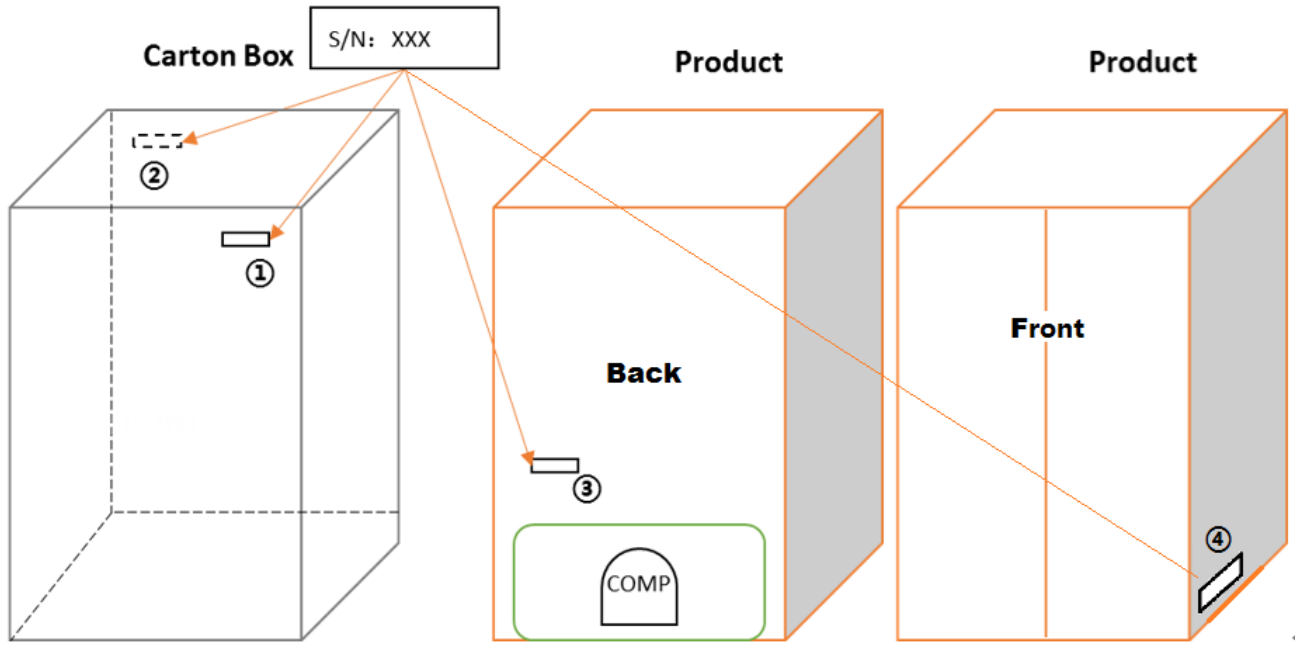
(The picture is only for reference)

4.3 Midea product serial number and location

1）Product Serial Number —Including order number, production date and other information. When the product occur problem, it needs to be recorded or photographed and provided to us.



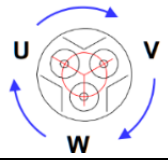
2）Paste location



Some products also have S/N on the lower part of the right side of the Cabinet.

5. Electric control system

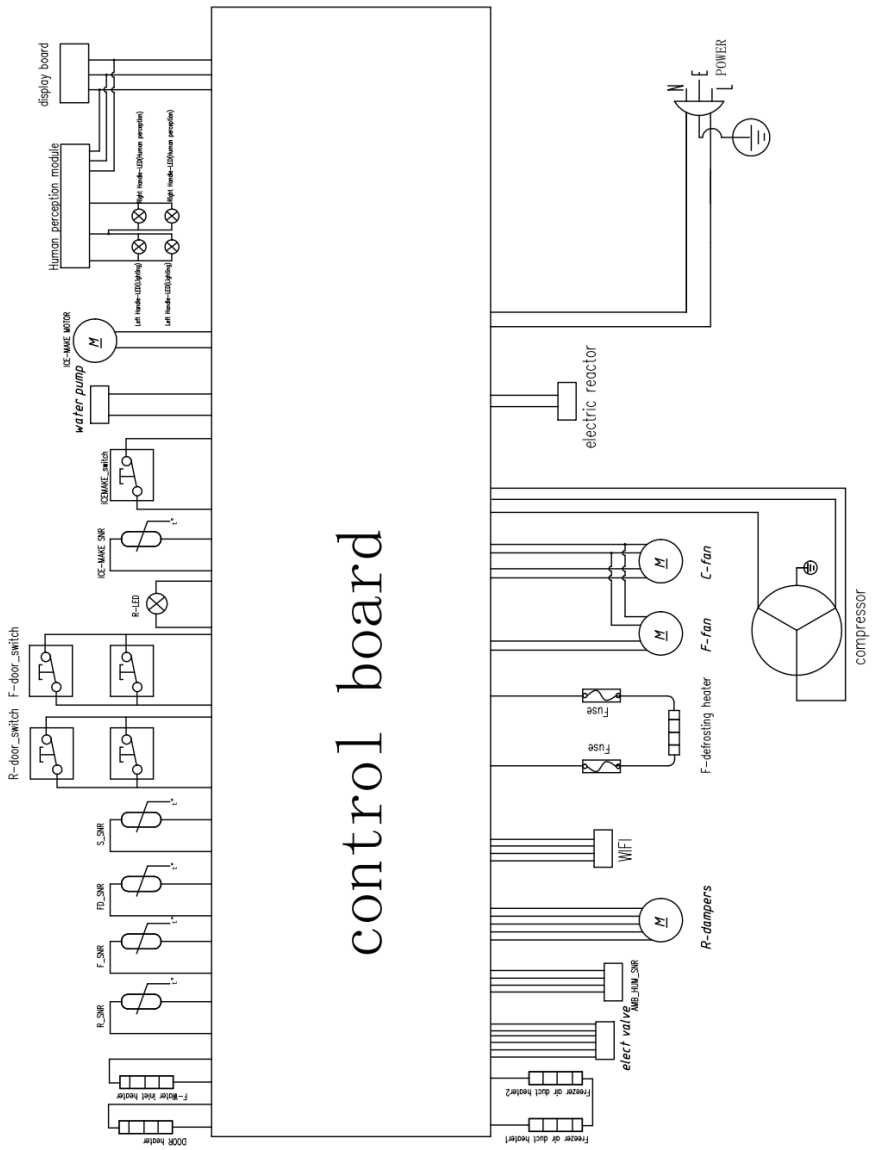
5.1 Electrical parts parameters

Applicable Model	MDRF923FIU46D(IM)
Product Model	SA-BCD694WZ-JT
Rated Voltage	220-240V/50/60Hz
Item	**Specification**
Refrigerant	R290
Compressor	DA59A1Z
Starting device type	Inverter
The COP of compressor	1.68-1.83
The max cooling capacity of compressor	420W
Winding resistance of compressor wiring terminal (20℃)	U-W:11.2Ω ± 7% U-V: 11.2Ω ± 7% W-V: 11.2Ω ± 7%
Winding resistance picture	
Starter (PTC)	None
Overload protector (OLP)	None
Integrate PTC+OLP	None
Inverter driver board	
Capacitor	None
Power filter (EMI)	Have
Power reactor (EU EMC)	None
Motor	
Fan motor of the freezing chamber	DC12V、4.2W、1200r/min
Fan motor of the variable temperature chamber	None
Fan motor of the refrigerating chamber	None
Condensation fan motor in compressor case	DC12V、2W、2500r/min
Electric damper	DC12V、2.5W
Electric damper heater	None
Ice maker motor	None
Crushed ice motor	None
Lights	
Lights inside the freezing chamber	None
Lights inside the variable temperature chamber	None
Lights inside the top of refrigerating chamber	DC12V、8W
Others Lights（Sterilization-LED）	DC12V、3W
Sterilization device assembly	DC12V、＜1W

Switch of the lights	■Mechanical switch □Magnetism control switch
Other electrical parts	
Electric exchange valve	DC12V、3W
Defrosting sensor	NTC B3839 (B5/25=3839K±2%)
Fuse in freezing chamber	250V、10A、77(0,-5)℃
Defrost heater in freezing chamber	220V、230W
Defrost heater in freezing chamber	AC220V、10W
DOOR Heater	DC12V、9W

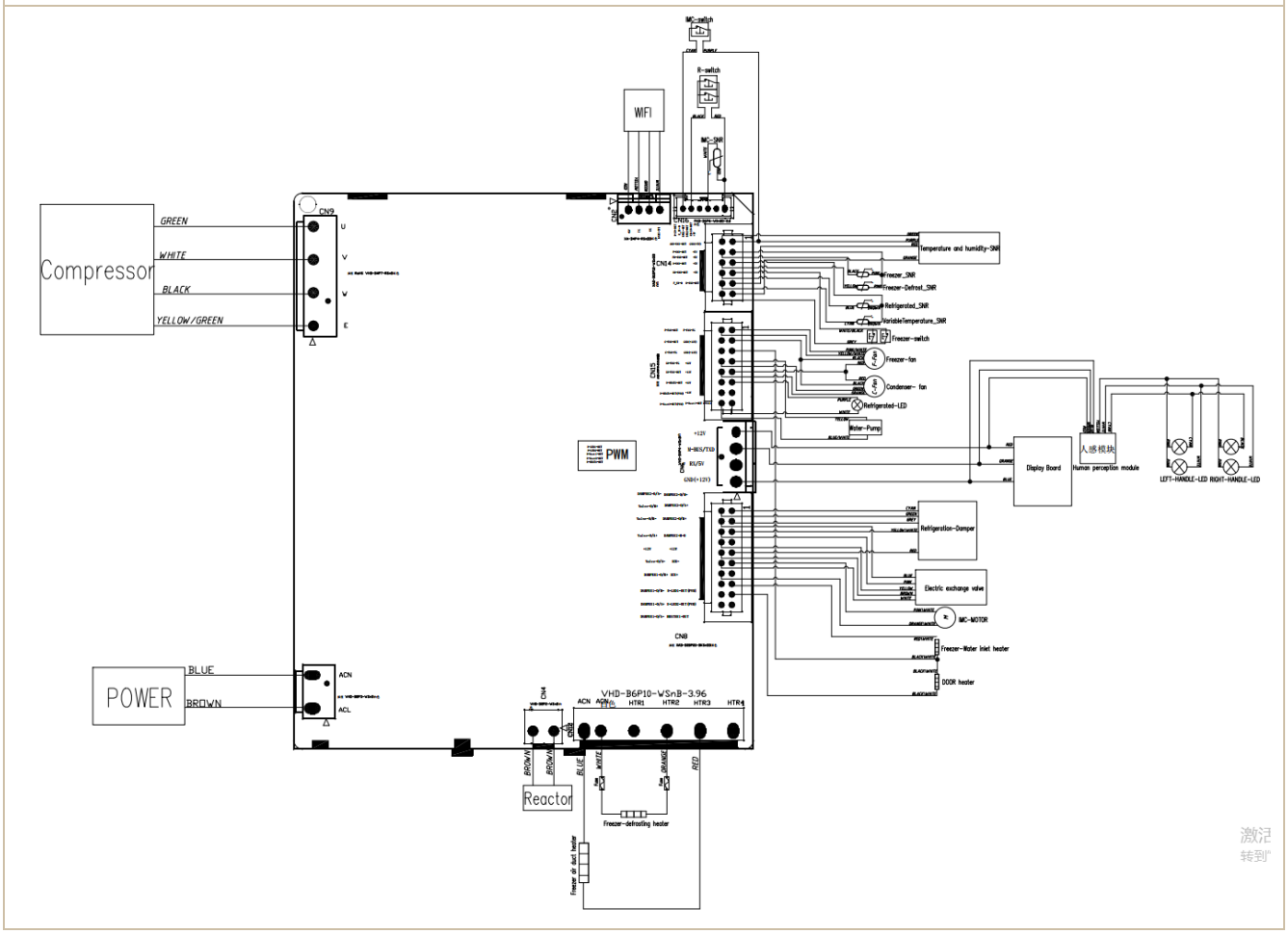
5.2 Circuit diagram

REF_Circuit diagram_SA-BCD(



5.3 Wiring diagram

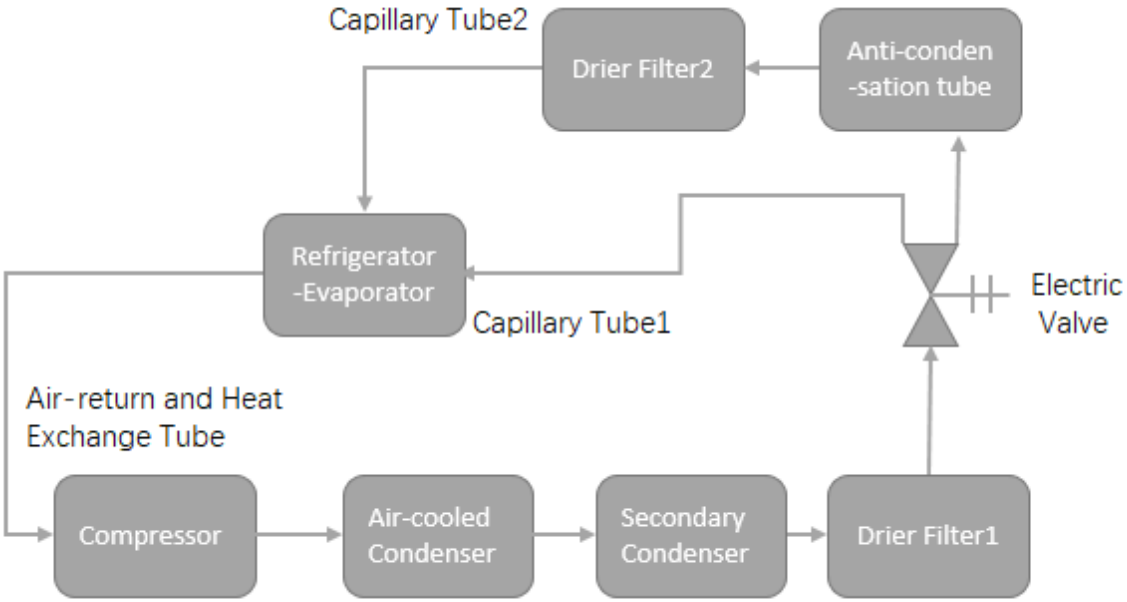
REF_Wiring diagram_SA-BCD(



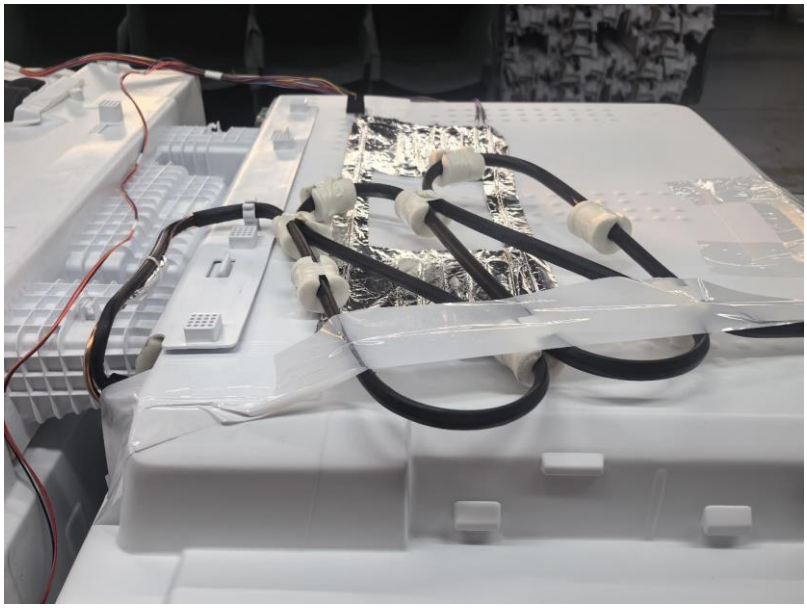
6. Refrigeration system

6.1 Refrigeration system working principle

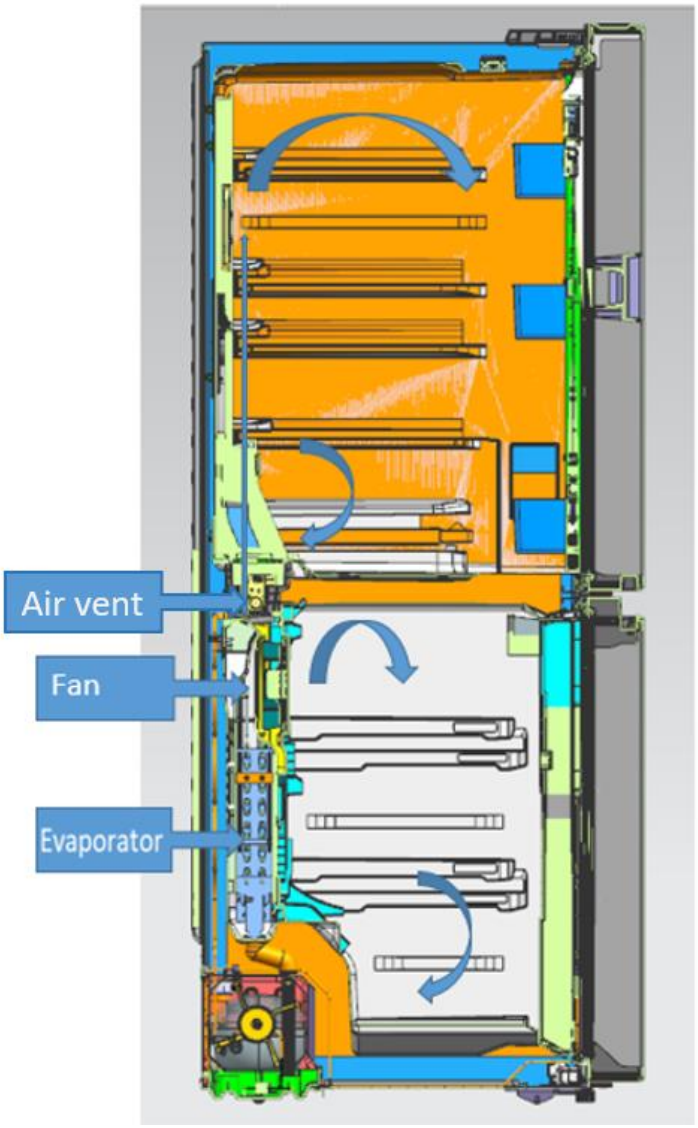
Compressor→ Air-cooled condenser→ Secondary condenser→ Dry filter1→
Electric switch valve→ Capillary Tube1 ↘
↘Anti-condensation tube→ Drier Filter2→Capillary Tube2→ FRZ. evaporator→
Suction pipe→ Compressor



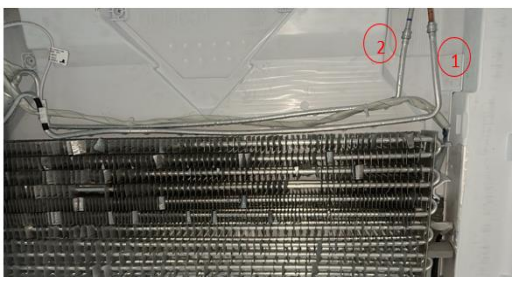
6.2 Cooling pipeline and drain pipe inside the cabinet



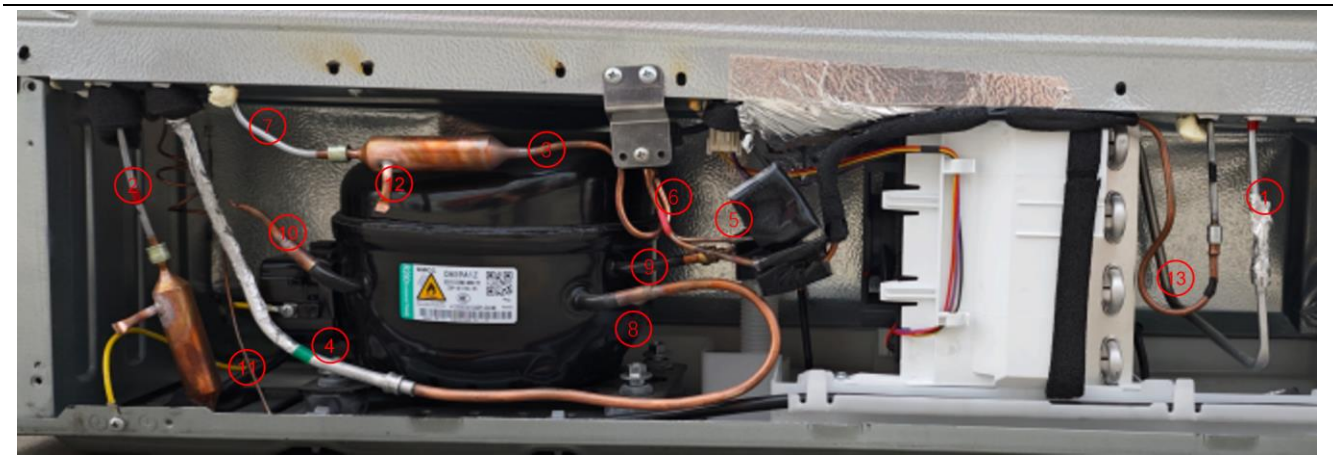
6.3 Circulating route of cool



6.4 Welding points in chambers or foam layer

1)Welding points on freezer evaporator		
Welding point	**Pipe outer diameter(mm)**	
1-Freezer capillary and inlet of evaporator	Copper pipe: Φ6	Aluminum pipe: Φ6.17
2-Heat transition tube and outlet of evaporator	Aluminum pipe: Φ6	Aluminum pipe: Φ6.17

6.5 Welding point in the compressor case

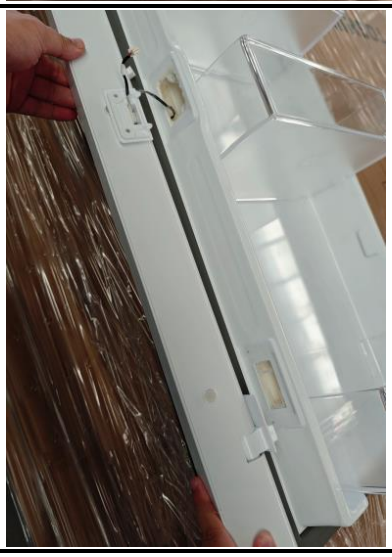


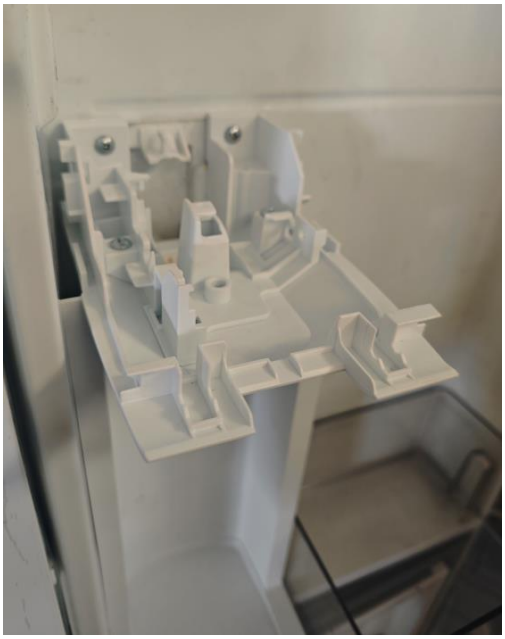
Welding point	Pipe outer diameter(mm)	
1-Inlet of Secondary condensation tube and outlet of condenser	Steel pipe: Φ4.0	
2-Outlet of anti-condensation tube and inlet of dry filter2	Steel pipe: Φ4.0	Aluminum pipe: Φ4.17
3-Outlet of dry filter and connector tube	Copper pipe: Φ4.17	Copper pipe: Φ4.17
4-Heat transition tube and Suction connection tube	Aluminum pipe: Φ6.17	Copper pipe: Φ4.0
5-Outlet 1 of electric valve and inlet of freezer capillary1 (Black mark)	Copper pipe: Φ2.0	Copper pipe: Φ6.0
6-Outlet2 of electric valve and inlet of electric valve tube	Copper pipe: Φ3.0	Copper pipe: Φ1.8
7-Outlet of Secondary condensation tube and inlet of dry filter1	Steel pipe: Φ4.0	Copper pipe: Φ3.17
8-Suction connection pipe and Compressor intake tube	Copper pipe: Φ6.0	Copper pipe: Φ4.17
9-Compressor outlet tube and inlet of condenser	Copper pipe: Φ4.17	Copper pipe: Φ6.17
10-Compressor process tube and refrigerant filling tube	Copper pipe: Φ6.17	Steel pipe: Φ4.0
11-Outlet of dry filter2 and inlet of freezer capillary2 (Read mark)	Steel pipe: Φ4.0	Copper pipe: Φ6.0
12-Dry filter connection tube	Copper pipe: Φ4.76	Steel pipe: Φ4.0
13-Inlet of anti-condensation tube and outlet of electric valve tube	Copper pipe: Φ4.17	Copper pipe: Φ4.76

7. Dismantling of parts

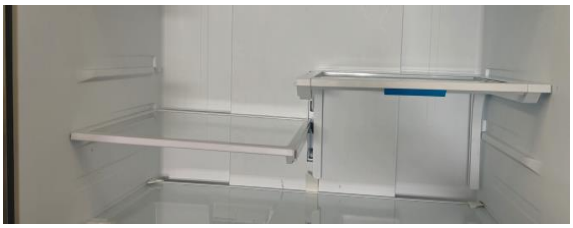
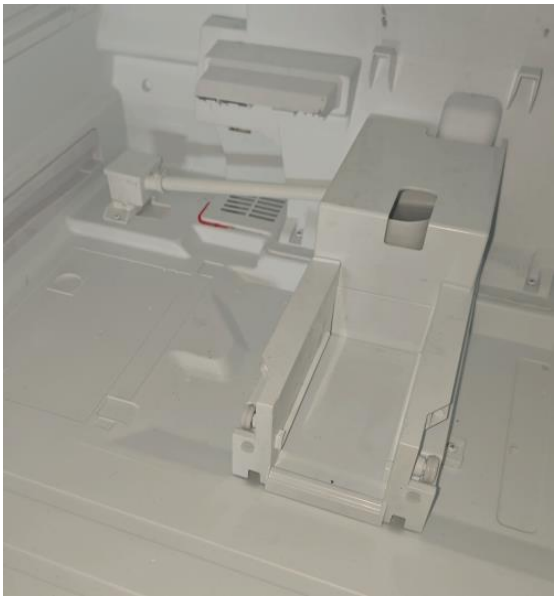
7.1 Parts on the door

Door seal	
The refrigerator door seal is installed into the door liner groove. 1) Open the refrigerator door; 2) Grasp one corner of the door seal and remove it from the door groove.	
Door tray	
1) While pressing inward, lift the door frame upward and remove it from the door cavity. 2) Hold the handle of the lifting bottle frame, support the bottom of the bottle frame and remove it from the top.	 

Flipping beam component	
1) Use a Phillips screwdriver to remove the two securing screws.	
2) Pull open the upper fastener of the flip beam to detach it from the door, then disconnect the terminal.	 
3) Lift the entire flip beam upwards to detach the lower fastener from the door, and reverse the steps to complete the installation.	

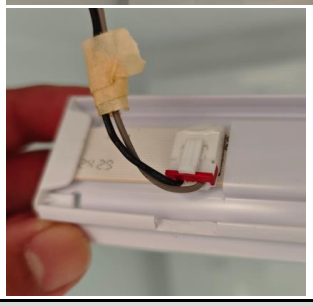
Door stopper	
After removing the refrigerator door, unscrew the fasteners shown in the diagram, take off the door self-lock and the stopper, and complete the replacement.	
The kettle on the door	
1) Remove the cover of the kettle stand. 2) Use cross screws to unscrew two fixing screws. 3) Remove the stand of the kettle upwards.	 

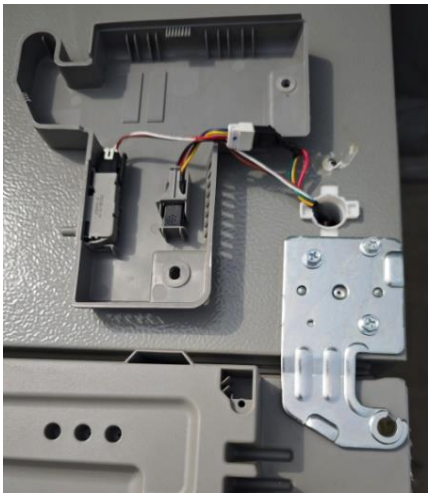
7.2 Parts inside the refrigerator

Drawer of the refrigerator compartment	
Pull out the drawer, lift it slightly, and remove it from the refrigerator.	
shelf	
Lift the front edge of the shelf slightly upward to disengage the lower end of the fixed foot from the shelf support bracket, then pull the movable shelf out at an upward angle.	
Refrigerator drawer and water tank	
1)Pull out the refrigerator drawer and lift it at a certain angle to remove it.	
2)Use a Phillips screwdriver to remove the three screws, pull out the water tank bracket, and disconnect the terminal.	

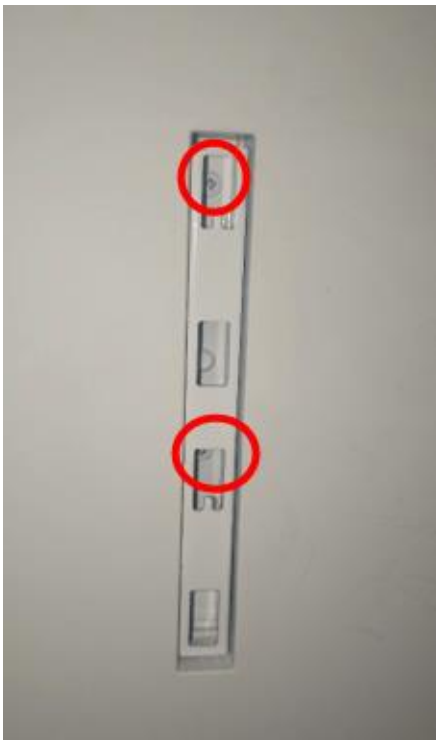
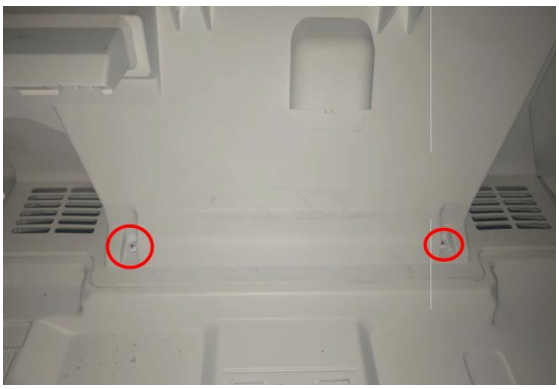
Freezer Drawer	
The drawer is located in the freezer compartment. 1)Pull out the drawer completely. 2)Lift it slightly upwards and take it out from the refrigerator.	

7.3 Light system

Light of the refrigerating	
The refrigerator light is located at the top of the refrigerator compartment. 1) Use a flathead screwdriver to pry off the lampshade. 2) Disconnect the plug terminal and remove the LED light.	   
Light switch	
There is a cylindrical switch in each of the left and right hinge covers of the refrigerator. 1) Use a Phillips screwdriver to remove the bolts from the hinge cover;	

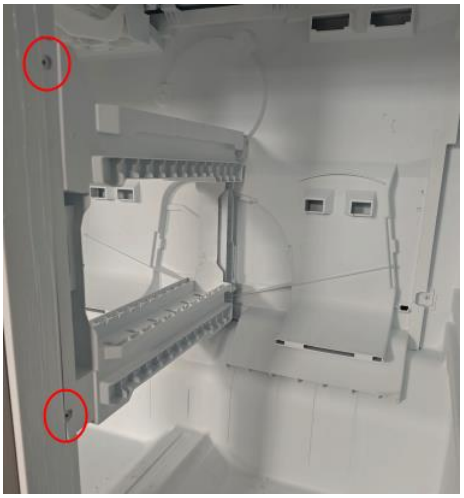
2) after removing the hinge cover, you can see the magnetic sensor switch.	

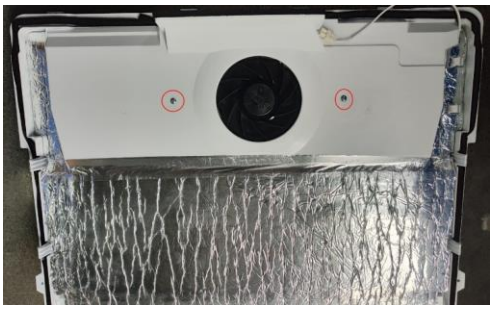
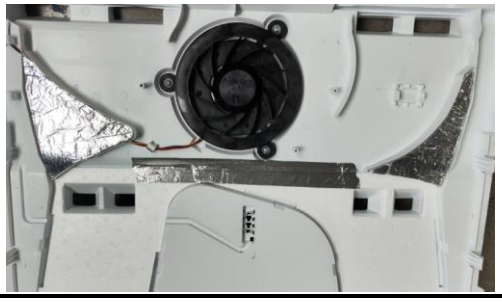
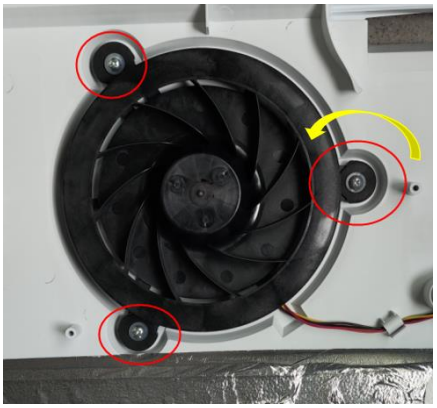
7.4 Air duct components refrigerating chamber

Air duct components in refrigeratingchamber	
Before disassembling the air duct assembly, all accessories in the refrigerator compartment should be removed. 1) Use a cross-head screwdriver to remove two fastening screws and take off the shelf support. 2) Use a Phillips screwdriver to remove the two fastening screws. 3) Hold the middle of the air duct with both hands and lift it upward with force to detach it from the hook.	 

	
3) Unplug the connector terminal of the refrigeration duct harness at the lower left corner.	

7.5 Air duct components in freezing chamber and fan motor

Air duct components in freezing chamber	
Before disassembling the air duct assembly, all accessories in the freezer compartment should be removed. 1) Remove the two fixing screws, then gently push the partition from the left refrigerator compartment to the right refrigerator compartment to remove it.	

2) Remove the two fixing screws, then pull the air duct out from the bottom.	
3) Lift or remove the terminal cover and unplug the fan motor and temperature sensor connectors in the upper left corner.	
Fan motor of air duct	
1) Use a Phillips screwdriver to remove the two screws on the back of the freezer air duct. 2) Remove the aluminum foil sponge. 3) Remove the temperature sensor wire from the clip. 4) Pry open the clips connecting the front and rear panels of the air duct.	 
5) Remove the rear cover of the freezer air duct. 6) Use a Phillips screwdriver to remove the three screws securing the fan. 7) Remove the fan. 8) Replace the fan and complete the installation by reversing the steps.	

7.6Evaporator and Defrost system

Evaporator in freezing

1) After cutting off the power, remove the freezer duct assembly.
2) Disconnect all terminal connections.
3) Remove the welding from the inlet and outlet pipes.
4) Remove the evaporator.



Components on the evaporator

The defrost heater with a defrost sensor and fuse can be replaced individually.

1) Disconnect the terminals;
2) Remove the cable ties securing the sensor;
3) Separate the sensor from the evaporator; remove the defrost heater from the evaporator support plate;





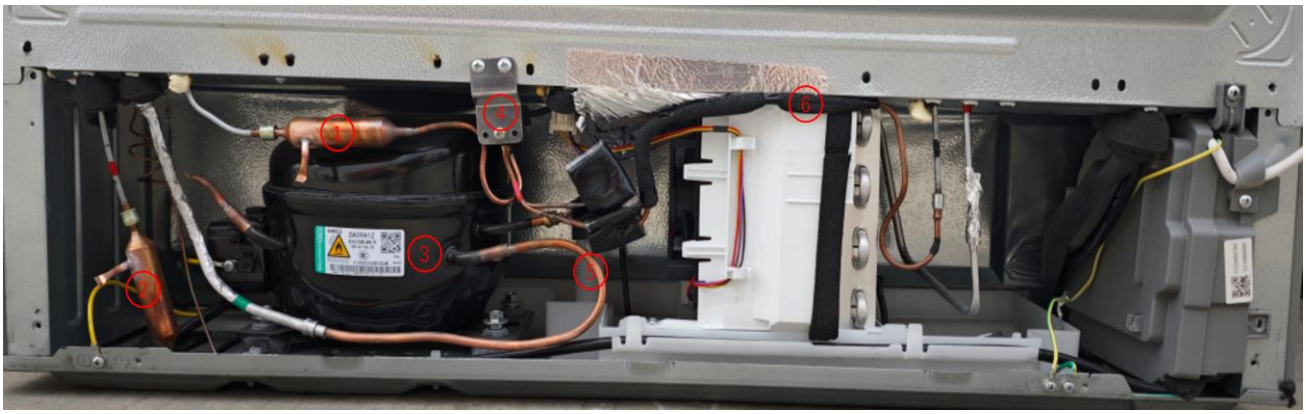
7.7 Compressor case

Rear cover

1) Use a Phillips screwdriver to remove the six screws from the back, left, and right sides of the compressor cover plate.
2) Lift the rear cover plate of the compressor compartment.

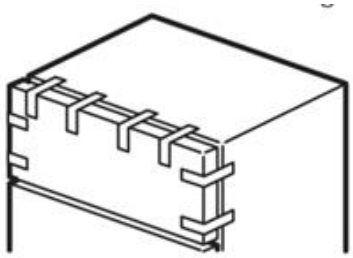
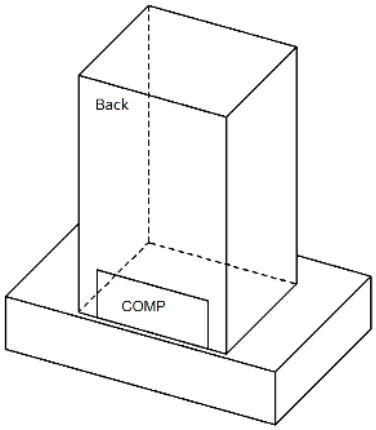
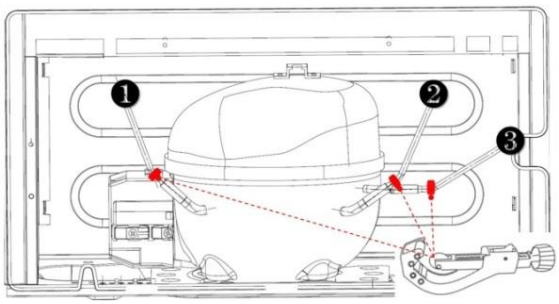


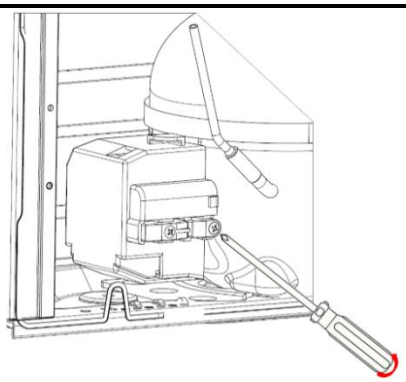
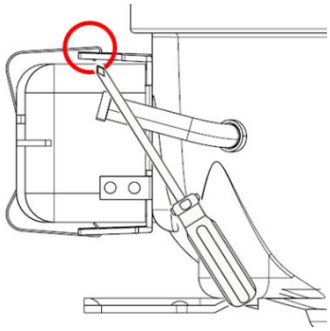
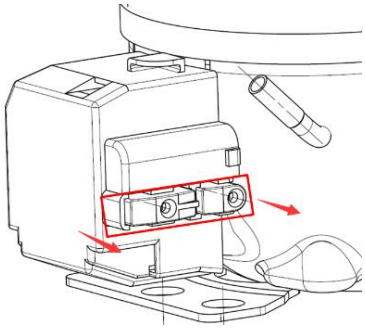
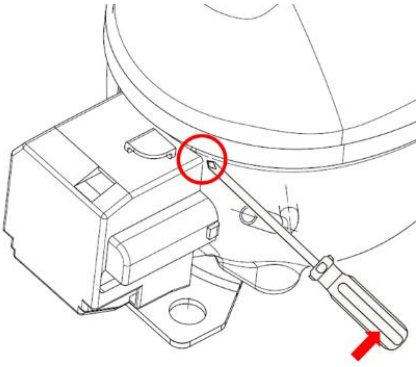
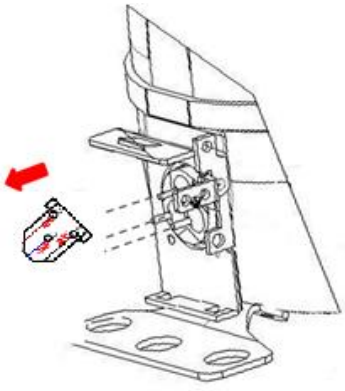
Piping and parts in the compressor case

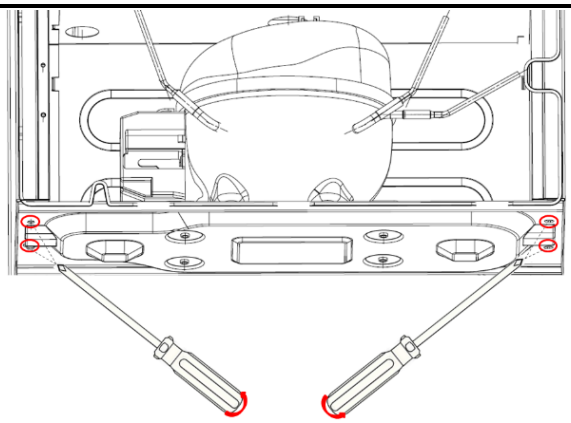
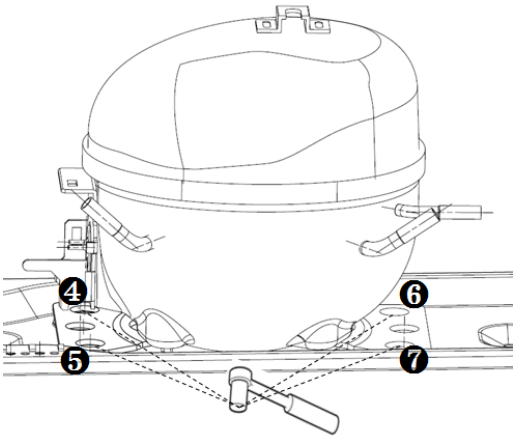
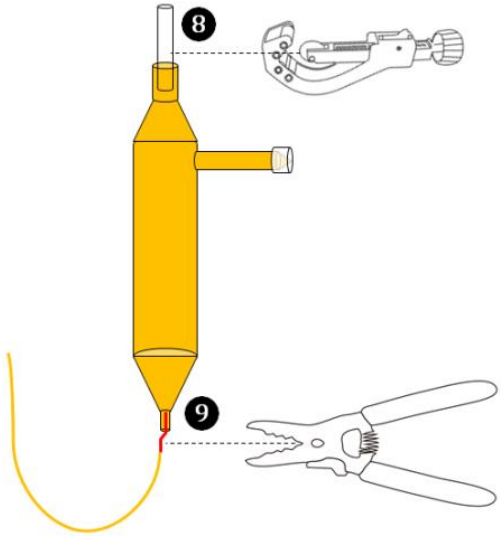
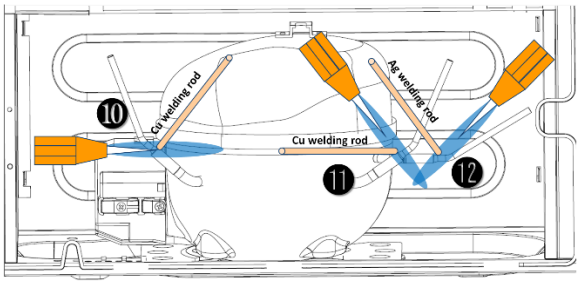


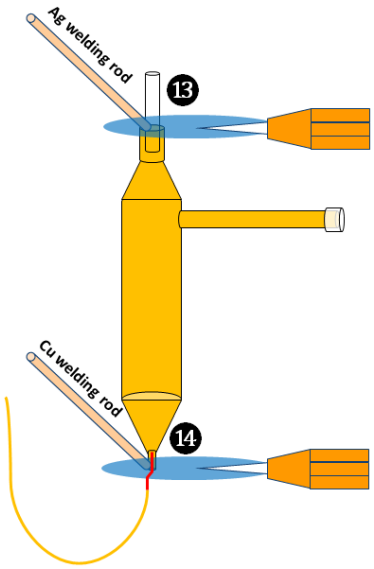
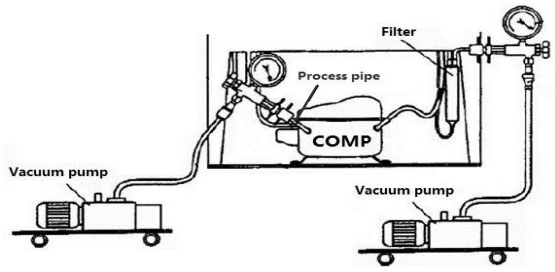
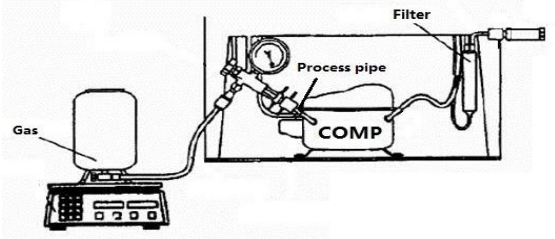
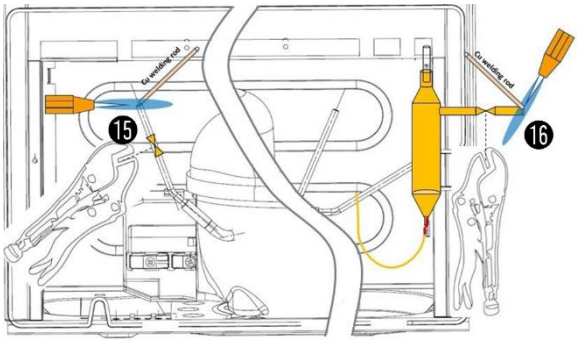
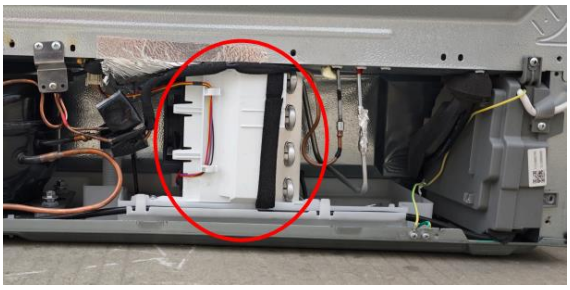
1- Dry filter 2- Dry filter 3- Variable frequency reciprocating compressor	4- Solenoid switching valve 5- Drain pipe 6- Transition pipe for connecting pipes

Disassembly and assembly of compressor

1）Cut off the power, remove the goods in the refrigerator, with the tape to make the door fixed firmly and prevent the door dropping when the refrigerator dumping.	
2）Place the refrigerator in an area that is open, ventilated, and away from fire sources. Then placing on an operating table and securing it firmly.	
3）Cut off the compressor pipeline. -❶Cut off the process pipeline. -❷Cut off the low-pressure muffler. -❸Cut off the high-pressure exhaust pipe.	

4-1）**Remove the screws(for some models)** -Two screws outside -One screw inside	
4-2）**Remove the metal clamp(for some models)** -Disassembly the metal clamp that is fix the electric appliance shield	
5）**Remove the clipping strip** Slowly pull it out	
6）**Remove the protective cover** -Pry the protective cover slowly from the upper part, -Pull it out and remove it.	
7）**Remove the connecting terminals** Unplug the connection terminals of a compressor. (you can use a screwdriver to pry it slowly)	

8）Loosen the screw of the compressor bottom plate, remove the floor together with the compressor from the box.	
9）Use the wrench to remove the bolts by steps❹❺❻❼, replace the compressor and reverse process can complete installation.	
10）Use Pipe cutter cut off the condenser tube❽, then Shear off capillary ❾ by the capillary tube scissors.	
11）Replace the compressor and welding the compressor pipeline. -❿Welding the process pipeline. -⓫Welding the low-pressure muffler. -⓬Welding the high-pressure exhaust pipe.	

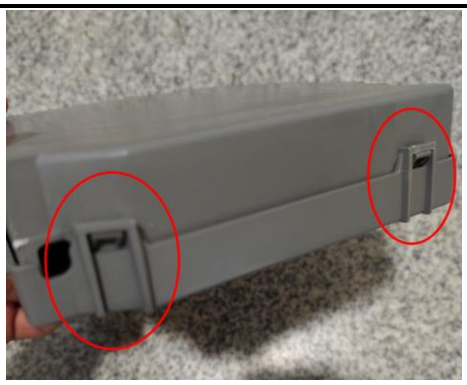
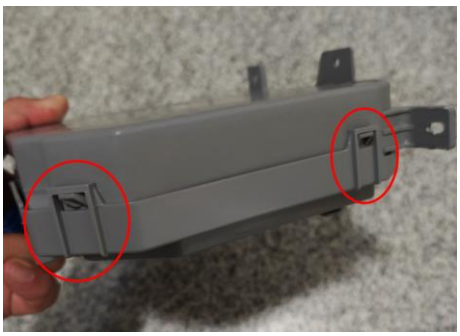
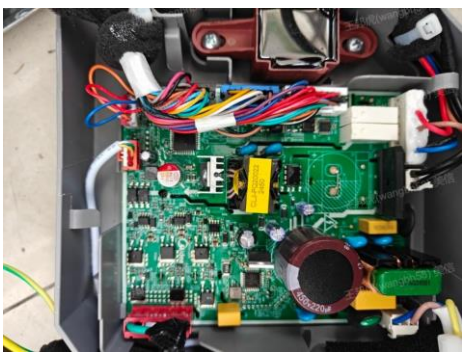
12）Replace the filter, Cu-Fe tubes welding ⓭ used Ag welding rod, Cu-Cu tubes welding⓮ used Cu welding rod.	
13）Vacuum system, The degree of vacuum below 6Pa.	
14）Perfusion refrigerant.	
15）Use the vise grip pliers clamp the middle of the process pipe, then seal welding process tube⓯⓰.	
Condenser fan motor	
1) Disconnect the fan terminals. 2) Remove the fan wiring harness from the side clip. 3) Remove the fan from the bracket. 4) Complete the installation by reversing the steps.	

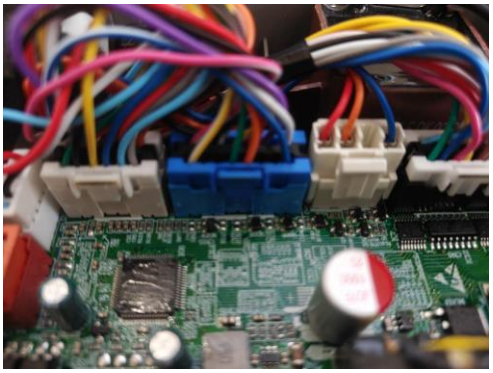
Drain tray	
1) Remove the fixing screws on the bottom side of the compressor. 2) Replace the drip tray; the reverse procedure can complete the installation.	

7.8 Display control board

Display control board	
1) Use a suction cup to pull out the display control panel assembly by pulling it outward with force. If you don't have a suction cup, you can make one using double-sided tape.	
2) Disconnect the terminal to complete the replacement.	

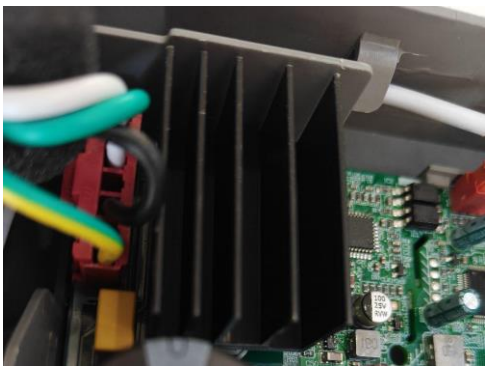
7.9 Main control board

Main control board	
The main control board is installed in the compressor compartment. 1) Remove the three screws using a Phillips screwdriver or an electric drill.	
2) Pry open the plastic clips to separate the component from the cover.	 
3) Disconnect all the wiring connectors. 4) Remove the main control board and complete the replacement.	





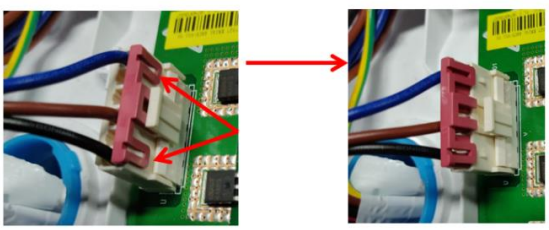


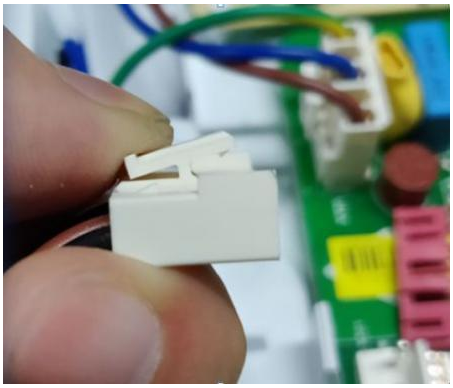


Method for removing the terminal connection.

a) Use a needle-like tool to pry open the clip at the arrow, then lift to remove the latch.

b) After removing the latch, press the hook to detach the connector.

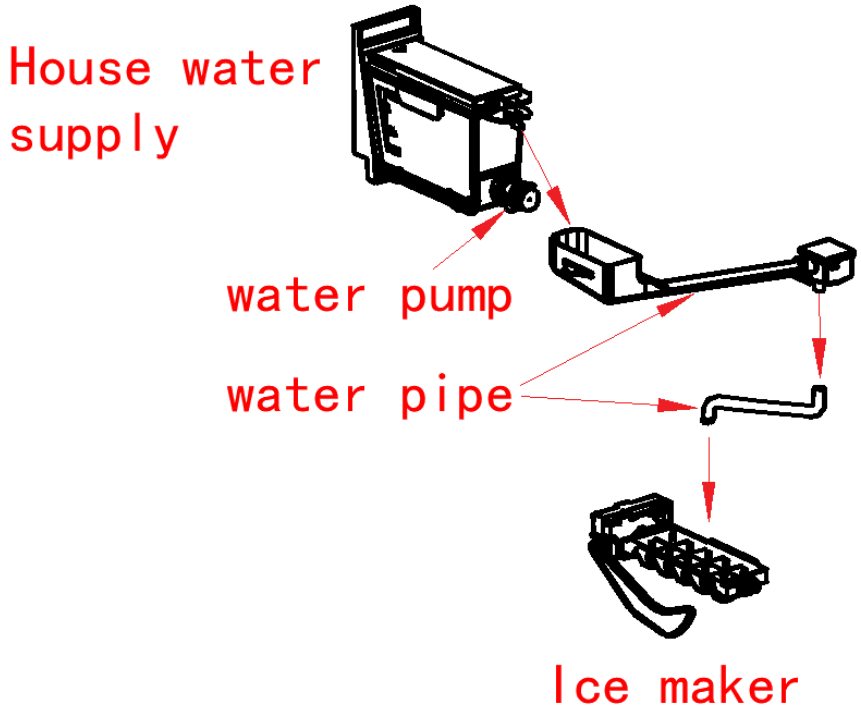


7.10 Wireless connection modular (Option)

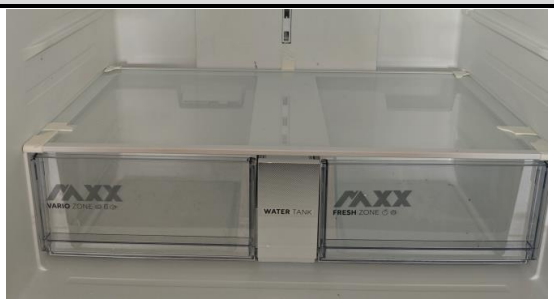
Wireless connection modular	
1）Remove the box cover of the main control board 2） Find the wireless connection modular terminals shown in the picture, remove the terminals	
3） Remove the main control board and take out the wireless connection modular.	

7.11 Water Supply & Ice Making System

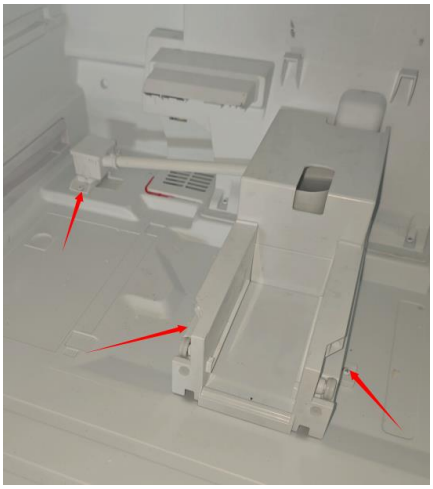
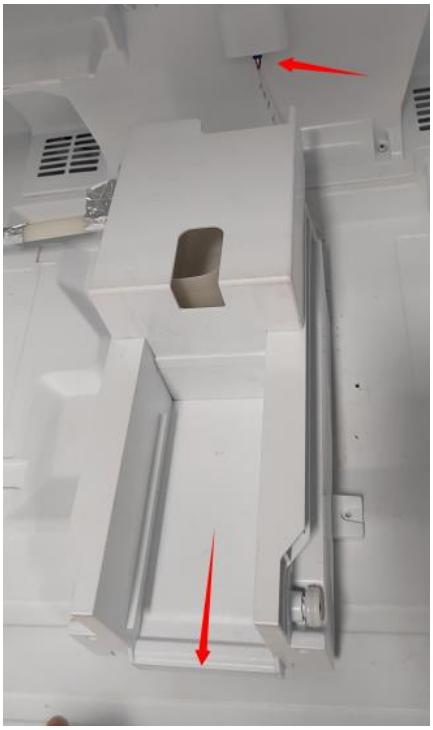
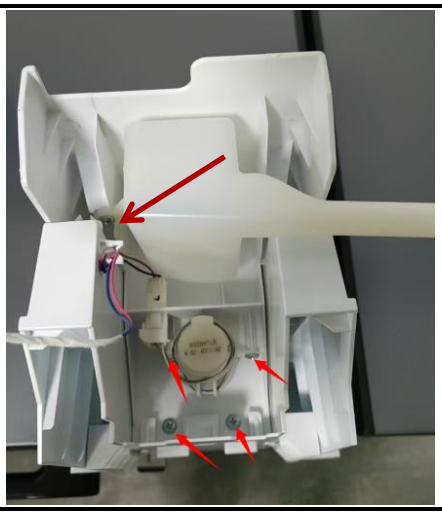


Water tank assembly.

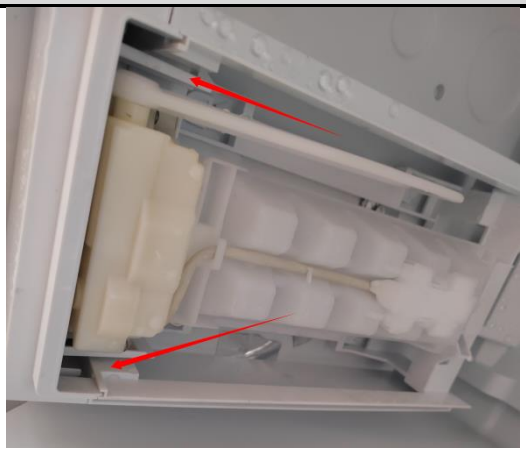
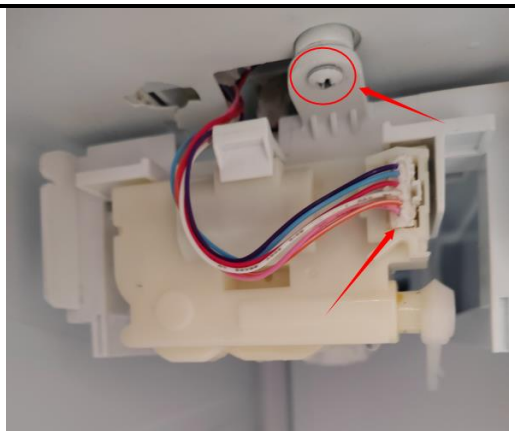
1)Pull out the water tank.





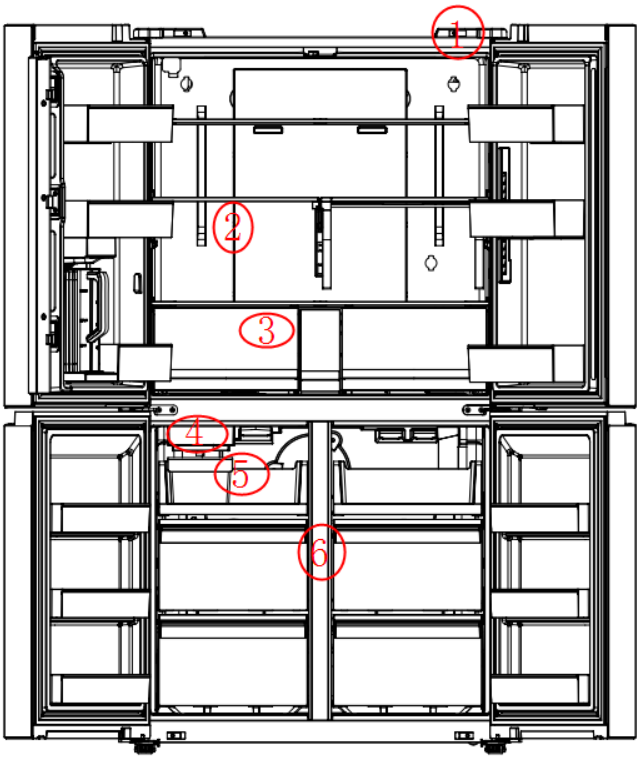
2) Remove the drawer and the glass shelf to expose the water tank bracket, remove three screws and pull out the funnel	
3) Lift up and pull out the water tank bracket backward at the same time, and then find the terminal	
4) Remove the two screws at the back of the water tank bracket, then remove the two screws that fix the pump, and also remove the pump connector	

7.12 Ice maker

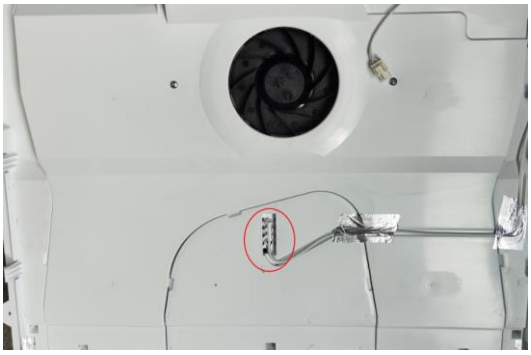
Disassembly of ice maker	
1)Use your hand to pry open the clip.	
2)Remove the screws securing the ice maker and unplug the terminals，Pull the dual ice maker straight back horizontally.	

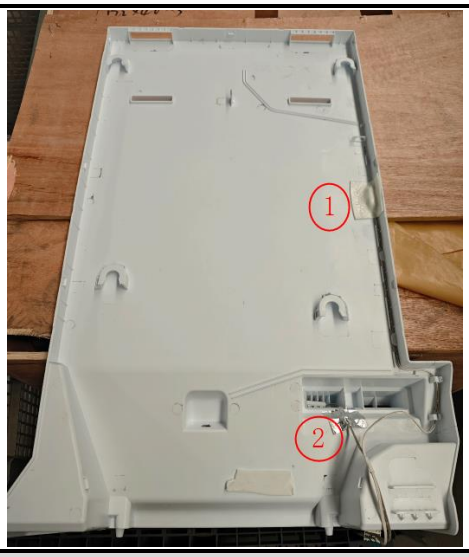
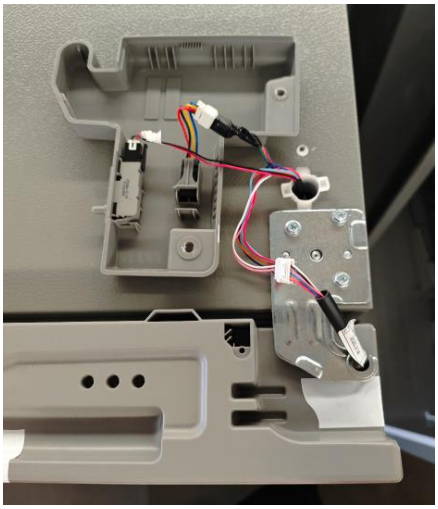
8. Temperature sensing system

8.1 Position of sensors

Position of sensors	
Have 6 sensors ① Environmental humidity sensor ② Refrigerator compartment sensor ③ Variable temperature compartment sensor ④ Ice maker sensor（The ice maker sensor cannot be replaced individually; the entire ice maker must be replaced） ⑤ Defrost sensor for the freezer compartment ⑥ Freezer compartment sensor	Please place a photo or line diagram here that includes the positions of all sensors. 

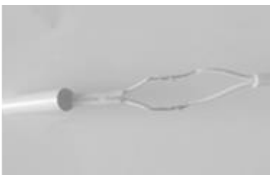
8.2 Replacement of sensors

Sensor in freezing chamber	
Before removing the freezer temperature sensor, the freezer air duct assembly should be taken out. 1) Remove the aluminum foil sponge. 2) Remove the adhesive tape. 3) Remove the sensor.	
Refrigerator and variable temperature compartment sensors.	

Before removing the temperature sensor, the refrigerator air duct assembly should be removed first. 1) Remove the air duct foam. 1) Remove the No. 1 refrigerator sensor and the No. 2 variable temperature compartment sensor.	
Environmental humidity sensor	
Located inside the right door hinge cover of the refrigerator.	
Defrost sensor in freezing chamber	
1) Disconnect the terminal. 2) Remove the tie securing the sensor.	

8.3 Sensor without terminal replacement

Sensor replacement guidelines
Cut off the damaged head of sensor. 

Strip off the sensor wiring.	
Take out a new sensor to cut the head of sensor. (Spare parts code：11201007000795) Its technical specifications apply to all MIDEA refrigerators.	
Strip off the head of the sensor and connect it.	 
Wrap the two wires together with insulation tape.	 
Wrap the two wires together.	

8.4 Sensor R/T table

Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)	Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)	Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)
-15	5	13.74	14.31	14.9	**3**	37.4	5.464	5.587	5.71	**22**	71.6	2.206	2.287	2.37
-14	6.8	13.02	13.55	14.1	**4**	39.2	5.205	5.316	5.428	**23**	73.4	2.109	2.188	2.269
-13	8.6	12.34	12.83	13.33	**5**	41	4.959	5.06	5.161	**24**	75.2	2.016	2.094	2.174
-12	10.4	11.71	12.16	12.62	**6**	42.8	4.717	4.818	4.919	**25**	77	1.929	2.005	2.083
-11	12.2	11.11	11.52	11.94	**7**	44.6	4.488	4.589	4.69	**26**	78.8	1.845	1.919	1.996
-10	14	10.54	10.92	11.31	**8**	46.4	4.272	4.372	4.472	**27**	80.6	1.765	1.838	1.913
-9	15.8	10	10.36	10.71	**9**	48.2	4.067	4.167	4.256	**28**	82.4	1.609	1.761	1.835
-8	17.6	9.497	9.82	10.15	**10**	50	3.874	3.972	4.071	**29**	84.2	1.617	1.687	1.759
-7	19.4	9.019	9.316	9.619	**11**	51.8	3.69	3.788	3.886	**30**	86	1.549	1.617	1.687
-6	21.2	8.568	8.841	9.119	**12**	53.6	3.517	3.613	3.71	**31**	87.8	1.483	1.55	1.619
-5	23	8.141	8.392	8.647	**13**	55.4	3.352	3.447	3.543	**32**	89.6	1.421	1.486	1.553
-4	24.8	7.738	7.968	8.202	**14**	57.2	3.197	3.29	3.385	**33**	91.4	1.363	1.426	1.492
-3	26.6	7.357	7.568	7.782	**15**	59	3.049	3.141	3.234	**34**	93.2	1.306	1.368	1.432
-2	28.4	6.997	7.19	7.386	**16**	60.8	2.908	2.999	3.091	**35**	95	1.252	1.312	1.375
-1	30.2	6.656	6.833	7.011	**17**	62.6	2.776	2.865	2.956	**36**	96.8	1.2	1.259	1.32
0	32	6.333	6.495	6.658	**18**	64.4	2.649	2.737	2.827	**37**	98.6	1.151	1.209	1.269
1	33.8	6.027	6.175	6.324	**19**	66.2	2.53	2.616	2.704	**38**	100.4	1.105	1.161	1.22
2	35.6	5.378	5.873	6.008	**20**	68	2.417	2.501	2.587	**39**	102.2	1.06	1.115	1.172

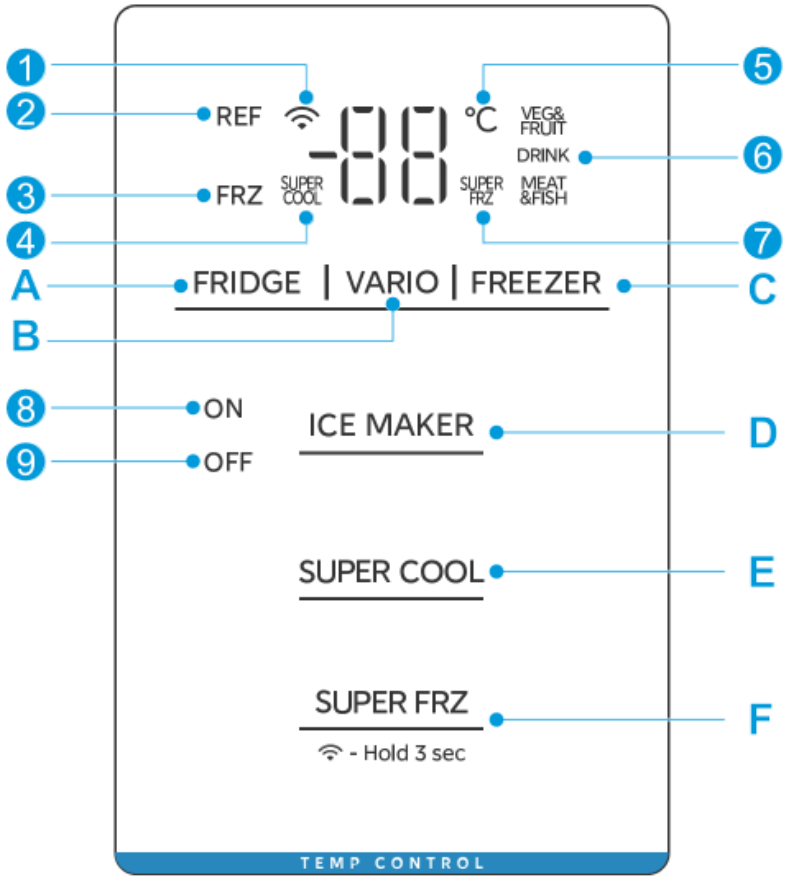
8.5 Sensor R/T table

Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)	Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)	Tx(℃)	Tx(℉)	Rmin (KΩ)	Rnom (KΩ)	Rmax (KΩ)
-15	5	26.38	27.34	28.30	**3**	37.4	11.28	11.76	12.24	**22**	71.6	5.026	5.280	5.540
-14	6.8	25.11	26.01	26.91	**4**	39.2	10.79	11.25	11.71	**23**	73.4	4.828	5.074	5.327
-13	8.6	23.91	24.76	25.60	**5**	41	10.32	10.76	11.21	**24**	75.2	4.639	4.878	5.123
-12	10.4	22.79	23.60	24.40	**6**	42.8	9.867	10.30	10.730	**25**	77	4.459	4.690	4.927
-11	12.2	21.75	22.52	23.29	**7**	44.6	9.441	9.858	10.280	**26**	78.8	4.286	4.510	4.740
-10	14	20.76	21.50	22.24	**8**	46.4	9.037	9.439	9.848	**27**	80.6	4.121	4.338	4.561
-9	15.8	19.79	20.51	21.23	**9**	48.2	8.651	9.041	9.436	**28**	82.4	3.964	4.174	4.390
-8	17.6	18.85	19.55	20.24	**10**	50	8.285	8.661	9.044	**29**	84.2	3.813	4.016	4.226
-7	19.4	17.97	18.64	19.31	**11**	51.8	7.936	8.300	8.670	**30**	86	3.668	3.866	4.069
-6	21.2	17.13	17.77	18.42	**12**	53.6	7.604	7.956	8.314	**31**	87.8	3.530	3.722	3.919
-5	23	16.33	16.96	17.58	**13**	55.4	7.287	7.628	7.975	**32**	89.6	3.398	3.584	3.775
-4	24.8	15.58	16.18	16.79	**14**	57.2	6.985	7.315	7.651	**33**	91.4	3.272	3.452	3.637
-3	26.6	14.86	15.45	16.03	**15**	59	6.698	7.017	7.342	**34**	93.2	3.151	3.325	3.505
-2	28.4	14.19	14.75	15.31	**16**	60.8	6.424	6.733	7.048	**35**	95	3.035	3.204	3.379
-1	30.2	13.54	14.09	14.63	**17**	62.6	6.163	6.462	6.767	**36**	96.8	2.924	3.088	3.257
0	32	12.93	13.46	13.99	**18**	64.4	5.914	6.203	6.498	**37**	98.6	2.817	2.977	3.141
1	33.8	12.36	12.86	13.37	**19**	66.2	5.676	5.956	6.242	**38**	100.4	2.715	2.870	3.030
2	35.6	11.80	12.30	12.79	**20**	68	5.490	5.720	5.997	**39**	102.2	2.618	2.768	2.923

9. Function and operation

9.1 Display operation panel

Button	Icons
A (Fridge) B (Vario) C (Freezer) D (Ice maker switch) E (Super cooling mode) F (Super freezer mode)	1 (wifi) 2 (Fridge room) 3 (Freezer room) 4 (Super Cool Mode) 5 (Celsius) 6 (Vario room) 7 (Super Frz. Mode) 8 (The ice maker is on) 9 (The ice maker is turned off)



9.2 Temperature control

9.2.1 Refrigerator temperature setting

Pressing the "**FRIDGE**" button allows you to adjust the refrigerator temperature.

The refrigerator compartment can be set between 2 to 8°C; it will automatically lock and take effect after 10 seconds.

9.2.2 Freezer temperature setting.

Press the "**FREEZER**" button to adjust the freezer temperature.

The freezer temperature can be set between -24°C and -16°C; it will automatically lock and take effect after 10 seconds.

9.2.3 Variable temperature compartment setting.

Press the " **VARIO**" button to adjust the variable temperature levels.

Press the variable temperature button to select the temperature settings for vegetables (fruits), beverages, or meat (fish); it will automatically lock and take effect after 10 seconds.

9.3 Mode setting

9.3.1 Super cool mode

Press the "**SUPER COOL**" button to set or exit the quick cooling mode.

When the quick cooling mode is set, the refrigerator automatically sets to 2°C. After the set time (6 hours) is reached, it automatically exits. Upon exiting the quick cooling mode, the refrigerator's set temperature automatically returns to the temperature set before the quick cooling mode. (Adjusting the refrigerator's level during the quick cooling mode will exit the quick cooling mode.)

9.3.2 Super freezing mode

Press the "**SUPER FRZ**" button to set or exit the quick freeze mode.

When the quick freeze mode is set, the freezer automatically sets to -24°C. After the set time (40 hours) is reached, it automatically exits. Upon exiting the quick freeze mode, the freezer's set temperature automatically returns to the temperature set before the quick freeze mode. (Adjusting the freezer's level during the quick freeze mode will exit the quick freeze mode.) Operating status of each mode.

9.3.3 Vacation Mode

Press the "**Vacation Mode**" key to set/exit the holiday mode. When setting the holiday mode, the refrigeration is off and the freezing is fixed at -18℃. When exiting the holiday mode, the refrigerator compartment returns to the temperature set before the holiday. Adjusting the refrigerated or frozen gear in holiday mode will exit Holiday Mode.

9.2.4 Ice maker

Pressing the "**ICE MAKER**" button can adjust the switch for the Ice maker. When the Ice maker is on, the ON icon next to the button lights up; otherwise, the OFF icon lights up.

9.4 Defrosting function

Defrosting principle:

The defrosting of a frozen evaporator involves using a defrost heater to raise the temperature, causing the accumulated ice and frost on the evaporator to melt into water, which is then drained into the drip tray in the compressor compartment to evaporate.

Defrosting steps:

Compressor stops—defrost heater turns on—heater turns off once conditions are met—if startup conditions are met, compressor starts—after a 3-minute delay, all fan motors resume normal operation.

1) Exit defrost heating if any of the following conditions are met: The freezer defrost sensor is functioning properly, and the actual temperature measured by the defrost temperature sensor (Tfd)

is greater than or equal to the defrost exit temperature, or the heater has been operating continuously for 80 minutes.

2) The freezer defrost sensor is malfunctioning, and the heater has been operating continuously for 50 minutes.

9.5 Open door alarm

If the door remains open for 120 seconds, the buzzer will sound an alarm. After that, it will beep once every minute until the door is closed, or you can press any key to cancel the buzzer sound.

9.6 Error code and solutions

Note: Midea full common fault code, combined with the actual product display reference.

Error code	Fault Type	Troubleshooting and Solutions
E0	Initialization fault of freeze ice maker	**Step 1**: Check whether the connection terminals on the ice maker and the main control PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: Enter the forced ice making mode and check whether the ice maker works normally. **Step 3**: If the ice maker does not work, replace the ice motor. **Step 4**: If the fault still occurs, replace the main control PCB.
E1	Temperature sensor fault in refrigerating chamber	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main control PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
E2	Temperature sensor fault in freezing chamber	
E3	Temperature sensor fault in chiller chamber or flex drawer	
C9	Sensor fault of ice-making compartment	
E4	Defrost sensor fault in refrigerating chamber	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main control PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
E5	Defrost sensor fault in freezing chamber	
CC	Defrosting fault of ice-making compartment	
E6	Main control PCB and Display control PCB communication fails	**Step 1**: Check whether the connection terminal on the display control panel, hinge cover and main control PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out all connection terminals, use a multimeter to check the resistance value of the wire

		between the display control board and the main control PCB to see if it is broken. If test value is ∞Ω, the wire is broken.(If the wire in the door is broken, replace the door. Other conditions cannot be repaired.) **Step 3**: If the wire is OK, replace the display control board. **Step 4**: If the fault still occurs, replace the main control PCB.
E7	Ambient temperature sensor fault	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main control PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
E8	Defrost sensor fault in chiller chamber	
E9	High temperature alarm in freezing chamber	**Step 1**: Check whether the door is not closed, or whether there is leakage between the door gasket and the cabinet. **Step 2**: Check whether the door gasket is deformed and causes leakage, reshape or replaced with a new one. **Step 3**: Check whether the freezing frost is OK, if there is ice on the evaporator and the fan motor is frozen, replace a new defroster heater. **Step 4**: Check whether the light switch is damaged, replace new one. **Step 5**: Check whether the freezer fan stops working, plug and unplug connection terminals, replace a new fan motor. **Step 6**: Check if the pipeline is leaking or blocked. After maintenance, vacuum and refill the refrigerant.
EE	Sensor fault at the bottom of freeze ice maker	**Step 1**: Check whether the connection terminal s on the ice maker and the main control PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the connection terminal on ice maker, use a multi meter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
F4	Sensor fault at the bottom of refrigeration ice maker	
L7	Temperature sensor of FRZ. Half cubed ice maker failure	
H7	Temperature sensor of the FRZ. cubed ice maker failure	
F5	Ice-flipping fault of refrigerating ice maker	**Step 1**: Check whether the connection terminals of ice maker are plugged in place and whether there are foreign matters in them, after cleaning, plug them in again. **Step 2**: Enter the **Forced Ice-making (EYE) Mode** and check whether the ice maker works normally. **Step 3**: If the ice maker does not work, replace the ice maker.
L9	FRZ. small ice maker ice-flipping failure	
H9	FRZ. big ice maker ice-flipping failure	

		Step 4: If the fault still occurs, replace the main control board or power control board.
F6	Initialization fault of refrigerating ice maker	**Step 1**: Check whether the connection terminals on the ice maker and the main control PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: Enter the forced ice making mode and check whether the ice maker works normally. **Step 3**: If the ice maker does not work, replace the ice maker. **Step 4**: If the fault still occurs, replace the main control PCB
L8	FRZ. half cubed ice maker horizontal initialization failure	
H8	FRZ. cubed ice maker horizontal initialization failure	
F7	The upper chamber low temperature sensor failure	**Step 1**: Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the corresponding connection terminal on the main control PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal. **Step 3**: If the resistance value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
F8	The lower chamber low temperature sensor failure	
EH	Circuit fault of ambient humidity sensor	**Step 1**: Check whether the connection terminal s in the hinge cover and the main control PCB are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the connection terminal on the hinge cover, use a multi meter to check the voltage value of the sensor, and confirm whether it is normal. **Step 3**: If the voltage value is wrong, replace the sensor. **Step 4**: If the fault still occurs, replace the main control PCB.
EF	Water tank installation failure	**Step 1**: Check whether the water tank is installed in place, pull out the water tank and install it again; **Step 2**: Check whether the connection terminals behind the water tank seat is plugged in place and whether there are foreign matters in it; after cleaning the terminal, plug it in again. **Step 3**: Check whether the switch in the water tank seat is damaged, replace a new switch.
EP	Ice-flipping fault of freeze ice maker	**Step 1**: Check whether the connection terminal on the ice maker and the Ice-making PCB (Power board) are plugged in place and whether there are foreign matters in them, after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, enter the **Forced Ice Making** mode and check whether the ice maker works normally. **Step 3**: If the ice maker not OK, replace it with a new one. **Step 4**: If the fault still occurs, replace the Ice-making PCB (Power board).

CA	Main control PCB and Ice-making PCB communication fails	**Step 1**: Check whether the connection terminal on the Ice-making PCB (Power board) and main control PCB are plugged in place and whether there are foreign matters in them, after cleaning the terminals, plug them in again. **Step 2**: If the fault still occurs, pull out the connection terminal, use a multi meter to check the resistance value of the wire between the Ice-making PCB (Power board) and the main control PCB to see if it is broken. (If test value is ∞Ω, the wire is broken. Replace it with a new one.) **Step 3**: If the wire is OK, replace the Ice-making PCB. **Step 4**: If the fault still occurs, replace the main control PCB.
L3	Freezer fan failure	**Step 1**: Check whether the connection terminals of fan motor are plugged in place and whether there are foreign matters in them, after cleaning, plug them in again. **Step 2**: Check whether the fan motor is blocked by ice or foreign objects. If so, clean them out. **Step 3**: Enter the Forced Cooling Mode and check whether the fan motor works OK. **Step 4**: If the fan motor does not work, replace it with a new one. **Step 5**: If the fault still occurs, replace the main control board.
L4	Freezer fan abnormal rotation speed	
L5	Condenser fan failure	**Step 1**: Check whether the connection terminals of fan motor are plugged in place and whether there are foreign matters in them, after cleaning, plug them in again. **Step 2**: Check whether the fan motor is blocked by ice or foreign objects. If so, clean them out. **Step 3**: Enter the Forced Cooling Mode and check whether the fan motor works OK. **Step 4**: If the fan motor does not work, replace it with a new one. **Step 5**: If the fault still occurs, replace the main control board.
L6	Condenser fan abnormal rotation speed	
P1	Refrigeration failure in the refrigerator chamber	Blower door can not be opened, blower door is not closed tightly, refrigerant leakage, inverter board/compressor failure, refrigeration freezer sensor reversed, refrigeration door body is not closed tightly.
P2	Refrigeration failure in the freezer chamber	Frost heater failure, refrigerant leakage, inverter board/compressor failure, refrigeration & freezer sensor reversal, freezer door not closing tightly, freezer fan blockage, condensing fan failure.
P4	Water level sensor failure	**Step 1**: Check whether the connection terminal of water level sensor is plugged in place, and check if there is any foreign matter in the wiring connector. Pull out the wiring connector and clean, then re-plug it in place. **Step 2**: Check if the water level sensor has an 12V output voltage with a multi meter. If not, replace it.

		Step 3: If the fault still occurs, replace the main control board.
P6	Communication failure between the RX terminal of dispenser control board and power control board	**Step 1**: Check whether the connection terminal on the dispenser control board, hinge cover and power control board are plugged in place and whether there are foreign matters in them, after cleaning, plug them in again.
P7	Communication failure between the TX terminal of dispenser control board and power control board	**Step 2**: If the fault still occurs, pull out all connection terminals, use a multimeter to check the resistance value of the wire between the dispenser board and the power control board to see if it is broken. If test value is ∞Ω, the wire is broken. (If the wire in the door is broken, replace the door. Other conditions cannot be repaired.) **Step 3**: If the wire is OK, replace the dispenser control board. **Step 4**: If the fault still occurs, replace the power control board.
P8	Communication failure between the RX terminal of dispenser control board and ultrasonic control board	**Step 1**: Check whether the connection terminal on the dispenser control board, hinge cover and ultrasonic control board are plugged in place and whether there are foreign matters in them, after cleaning, plug them in again. **Step 2**:If the fault still occurs, pull out all connection terminals, use a multimeter to check the resistance value of the wire between the dispenser board and the ultrasonic control board to see if it is broken. If test value is ∞Ω, the wire is broken. (If the wire in the door is broken, replace the door. Other conditions cannot be repaired.) **Step 3**: If the wire is OK, replace the dispenser control board. **Step 4**: If the fault still occurs, replace the ultrasonic control board.
P9	Communication failure between the TX terminal of dispenser control board and ultrasonic control board	

9.7 Test mode

All below functions are only for diagnosis and test purpose, we advise to restart the refrigerator by power on/off if have used these functions.

Test items	Setting Method	Setting result
Enter Test Mode	Press and hold the "**SUPER FRZ** and **FREEZE**" button for 4 seconds to enter the test mode.	The display shows "0," and the refrigerator enters test mode.
Select to enter forced cooling mode.	Enter the test mode and press the **"Fridge"** or **"Freezer"** buttons.	The display shows "1": 1、 The compressor is running at the highest level. 2、 The freezer fan is running at the highest level. 3、 The air damper is open.
	Press the **"Fridge"** or **"Freezer"** buttons to adjust until the screen displays 0. Then lock it and exit the	The refrigerator will exit test mode and return to normal operation.

	forced operation mode. After 72 hours, exit the mode.	
Select to enter simultaneous forced defrost mode for both refrigeration and freezing.	Press the **"Fridge"** or **"Freezer"** buttons to select mode "3"; it will take effect after locking.	The display shows "3", initiating forced defrost for the freezer. The defrost exit temperature for the freezer is set at 16°C, disregarding the impact of overload on the defrost temperature. The defrost heater will be forcibly activated for 3 minutes.
	After defrosting is complete, it will automatically exit the forced defrost mode.	The refrigerator will exit the test mode and return to normal control.
Select to exit test mode.	In test mode, Press the **"FRIDGE"** or **"FREEZER"** buttons to adjust	The display shows "0". Once locked, the refrigerator will exit the test mode and return to normal control.

9.8 Ice maker eye mode

Press and hold the "**SUPER FRZ** and **FREEZE**" button for 4 seconds to enter the test mode. Press the **"FRIDGE"** or **"FREEZER"** button and select "4". Wait for the lock to take effect. The **ON and OFF** beside ice maker flash alternately, that is, the ice maker enters the **EYE** mode.

After completing all the actions of EYE, it will automatically exit. The exit indicator is: The ON and OFF lights will return to the state they were in before entering EYE

9.9 Demo mode

Enter the mode

Press and hold the "**SUPER FRZ** and **FREEZE**" button for 4 seconds to enter the test mode. Press the **"FRIDGE"** or **"FREEZER"** button to select the mode. When **"7"** is selected, it will take effect after being locked.

Mode operation

When entering the showroom mode, the refrigerator display panel remains lit and shows temperatures of 2°C, 5°C, and 8°C for the fridge, and -16°C, -18°C, and -24°C for the freezer. The refrigerator stops cooling, the compressor does not work, and it does not enter defrost mode. The lighting and other functions are controlled normally. It does not enter or exit showroom inspection mode, and it does not retain settings after a power outage.

Mode exit.

Press and hold the "**SUPER FRZ** and **FREEZE**" button for 4 seconds to enter the test mode. Press the **"FRIDGE"** or **"FREEZER"** button until the screen displays **0**, then lock it and exit the mode.

Automatically exit after 12 hours.

9.10 Backup data for power fail

1) The running state of the refrigerator is remembered after compressor running for 1 hour continuously.
2) The running state of the refrigerator is remembered after change function settings and lock.

3) When the refrigerator is out of power and recharged, the running state of the refrigerator is same as before.

9.11 IOT product networking control (Option)

9.11.1 Turn on the Wireless Network module

Long press the "**Super Frz**" button for 3 seconds, when the temperature display area shows **AP** character, the WIFI network module starts. After the startup is successful, the **AP** character stops flashing, and the **Wireless Network** icon lights up.

9.11.2 Connect to mobile SmartHome APP

1) First use your mobile phone to download the **SmartHome** APP, follow the instructions in the APP to complete the account registration.

The download method is as follows:



2) Login to **SmartHome** APP, connect to the WIFI network module of this product according to the guide. After completing the setting of related functions, you can open remote control of this product on your mobile phone.

10. Compressor

10.1 Compressor on and off control specifications

1.1 When one of the following conditions is met, the compressor stops:

1) Measured temperature in all chambers ≤ Shutdown temperature of all chamber
2) Enter defrosting cycle
3) The compressor runs continuously for more than 6 hours, will stop at least 10 minutes

1.2 When compressor shutdown time has been more than 5 min, one of the following conditions is met, the compressor starts up:

1) Measured temperature in refrigerator chamber ≥ Start up temperature of refrigerator
2) Measured temperature in flexible chamber ≥ Start up temperature of Flex.
3) Measured temperature in freezer chamber ≥ Start up temperature of freezer
4) Refrigerator is set to forced cooling mode or super cooling

★When 1.1 and 1.2 are not satisfied, the compressor maintains the original state

10.2 Inverter board fault analysis

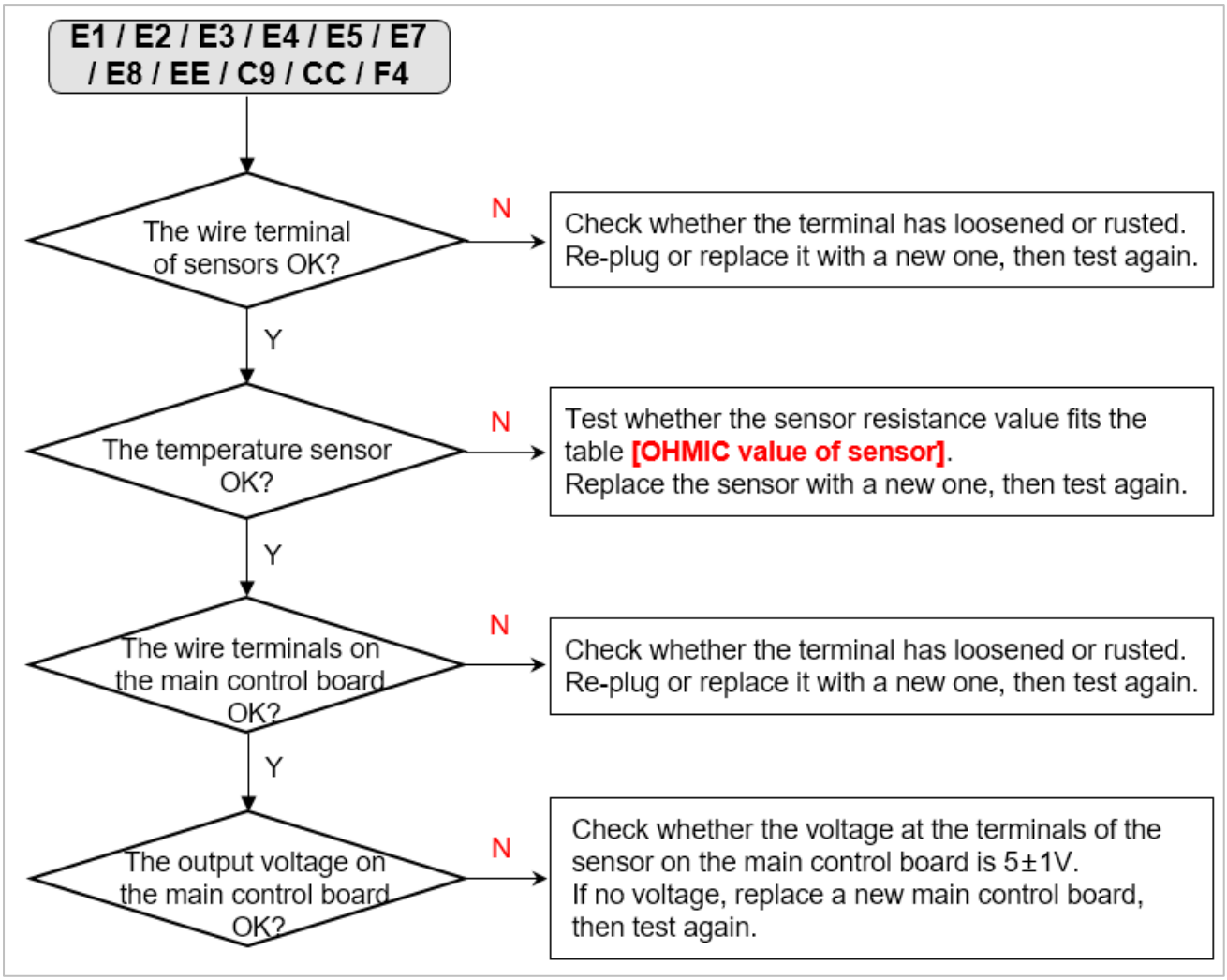
Running status of LED	Fault Type	Troubleshooting and Solutions
Not light	Standby	No repair needed
The light is always on when the power is turned on for the first time, and it is always off after the compressor is turned on and off	Normal working	No repair needed
Blink once: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Software over current protection	Step 1: Disconnect the U-V-W wiring harness, measure the resistance between any two phase of U-V-W terminals (between 5 and 30 Ω and equal in value between any two phase), and measure the resistance between any phase and the fridge metal casing (above 1 MΩ).
		Step 2: If ok, replace a new inverter board
		Step 3: If the fault still occurs, replace a new compressor
Blink twice: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Overvoltage protection	Measure the voltage between L and N
		1）If it is less than 280V, replace a new inverter board
		2）If more than 280V, please check the power supply and power cable
Blink three times: light 0.5 second, extinguish 0.5 second,	Under voltage protection	Measure the voltage between L and N
		1）If it is less than 160V, replace a new inverter board

interval time(extinguish) is 2 second		2）If more than 160V, please check the power supply and power cable
Blink four times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Hardware over current protection	Step 1: Disconnect the U-V-W wiring harness, measure the resistance between any two phase of U-V-W terminals (between 5 and 30 Ω and equal in value between any two phase), and measure the resistance between any phase and the fridge metal casing (above 1 MΩ).
		Step 2: If ok, replace a new inverter board
		Step 3: If the fault still occurs, replace a new compressor
Blink five times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	IPM Hardware temperature throttling	In this case, the inverter is usually normal. If the refrigerator cooling function is working, it may be due to insufficient lubrication inside the compressor. If it is not cooling, then there may be a blockage in the refrigeration circuit.
Blink six times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Lack of phase protection	Step 1: Check if the UVW wiring harness is securely connected to the inverter board and compressor.
		Step 2: Disconnect the UVW wiring harness, measure the resistance between any two phases of UVW terminals. If the resistance between any one or two phases is infinite, replace the compressor.
		Step 3: Re-power and if the compressor runs for a period of time before tripping, it may indicate a blockage in the piping system.
		Step 4: If the fault still occurs, replace a new inverter board.
Blink seven times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Voltage bias fault	Step 1: Power off and restart.
		Step 2: If the fault still occurs, replace a new inverter board.
Blink eight times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Misstep protection	Step 1: After powering on, touch the compressor and wait for the indicator light on the inverter board to light up.
		Step 2: If the compressor does not respond and the indicator light is flashing, it means the compressor is damaged, replace a new compressor.

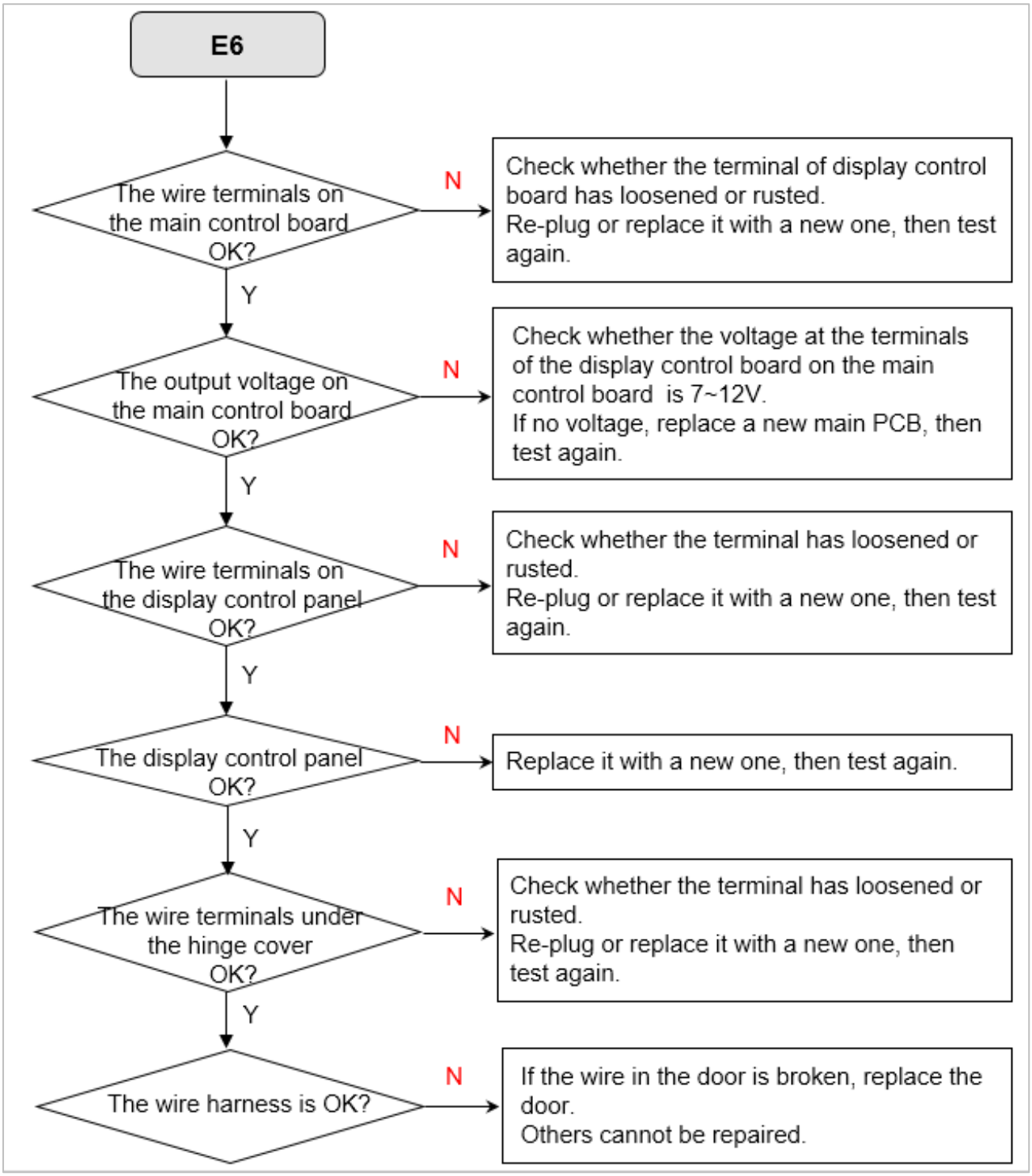
		Step 3: If the compressor shakes when starting and then protects, replace a new inverter board.
Blink night times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Running block protection	Step 1: After powering on, touch the compressor and wait for the indicator light on the inverter board to light up.
		Step 2: If the compressor does not respond and the indicator light is flashing, it means the compressor is damaged, replace a new compressor.
		Step 3: If the compressor shakes when starting and then protects, replace a new inverter board.
Blink ten times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Over-temperature and over-power shutdown protection for variable frequency board	In this case, the inverter is usually normal. If the refrigerator cooling function is working, it may be due to insufficient lubrication inside the compressor. If it is not cooling, then there may be a blockage in the refrigeration circuit.
Blink eleven times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Starting failure	Step 1: After powering on, touch the compressor and wait for the indicator light on the inverter board to light up.
		Step 2: If the compressor does not respond and the indicator light is flashing, it means the compressor is damaged, replace a new compressor.
		Step 3: If the compressor shakes when starting and then protects, replace a new inverter board.
Blink twelve times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	Power and frequency reduction	In this case, the inverter is usually normal. If the refrigerator cooling function is working, it may be due to insufficient lubrication inside the compressor. If it is not cooling, then there may be a blockage in the refrigeration circuit.
Blink thirteen times: light 0.5 second, extinguish 0.5 second, interval time(extinguish) is 2 second	UART communication failure	Check the communication wiring harness between the main control board and the inverter board. If the connection is good, replace either the main control board or the inverter board.

11. Troubleshooting Method

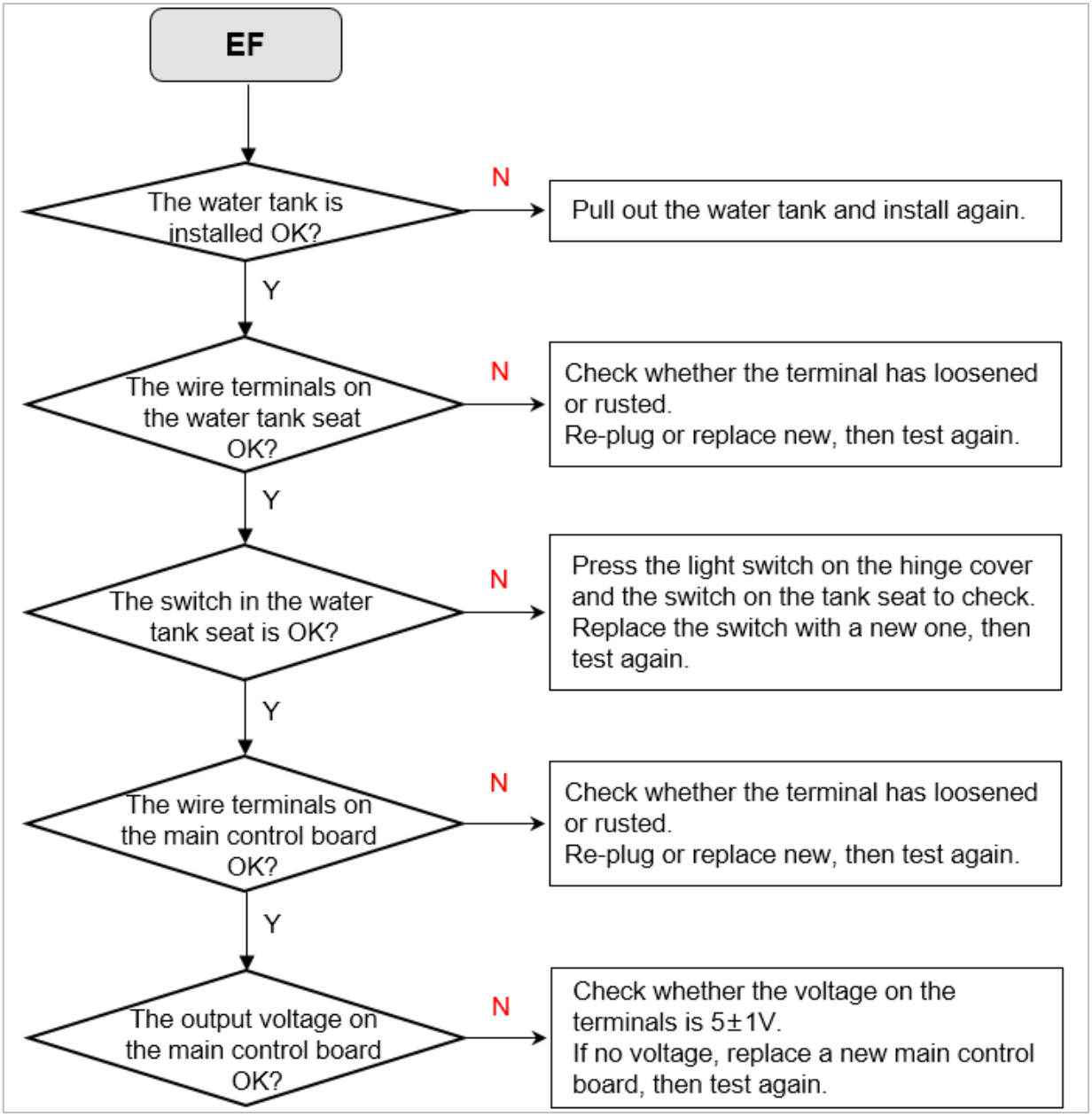
11.1 Error code E1 / E2 / E3 / E4 / E5 / E7 / E8 / EE / C9 / CC / F4



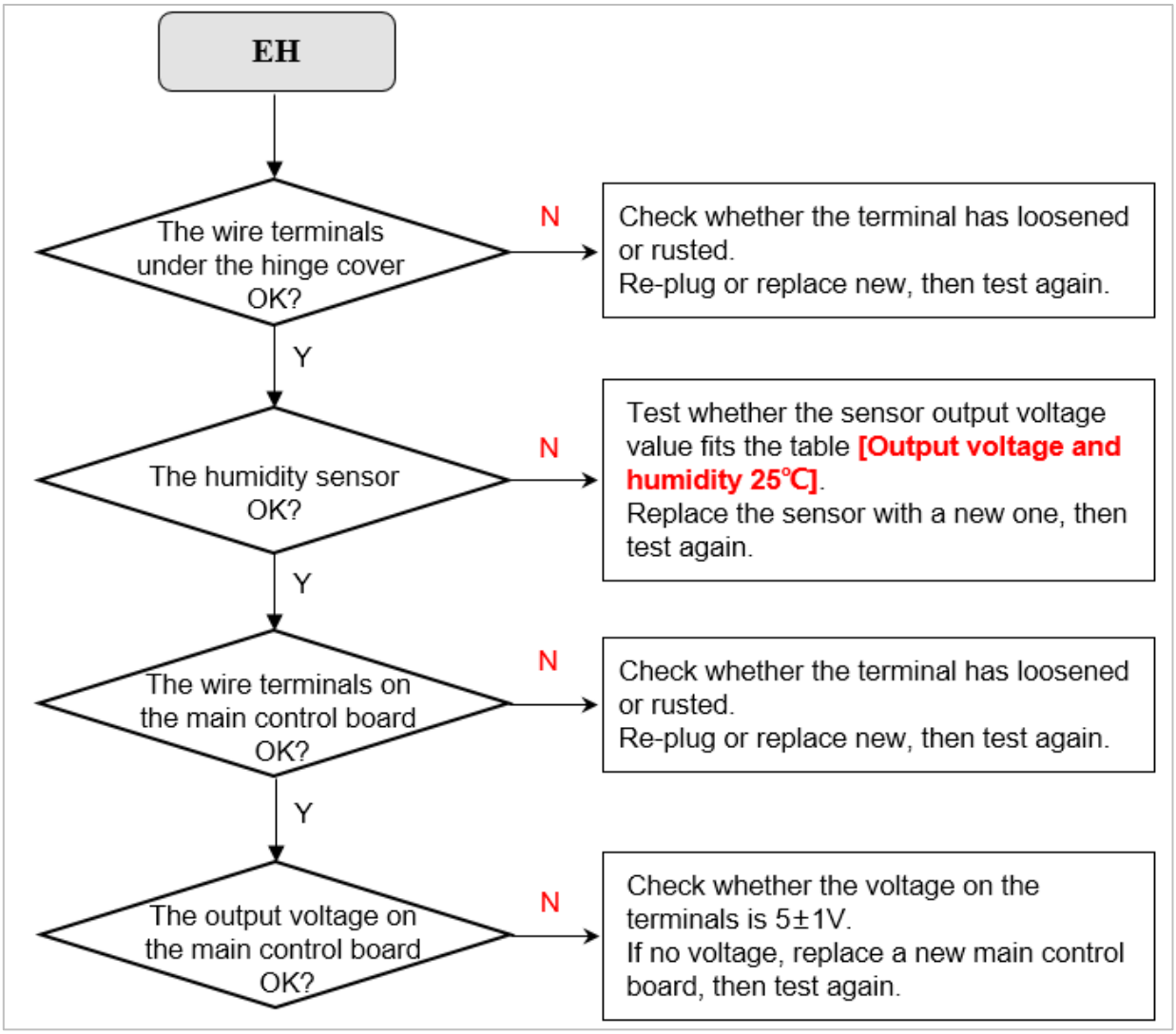
11.2 Error code E6



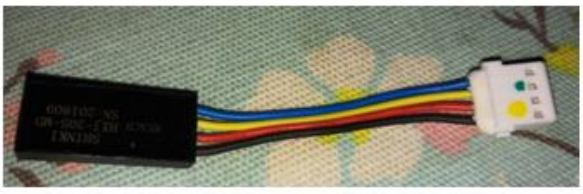
11.3 Error code EF



11.4 Error code EH



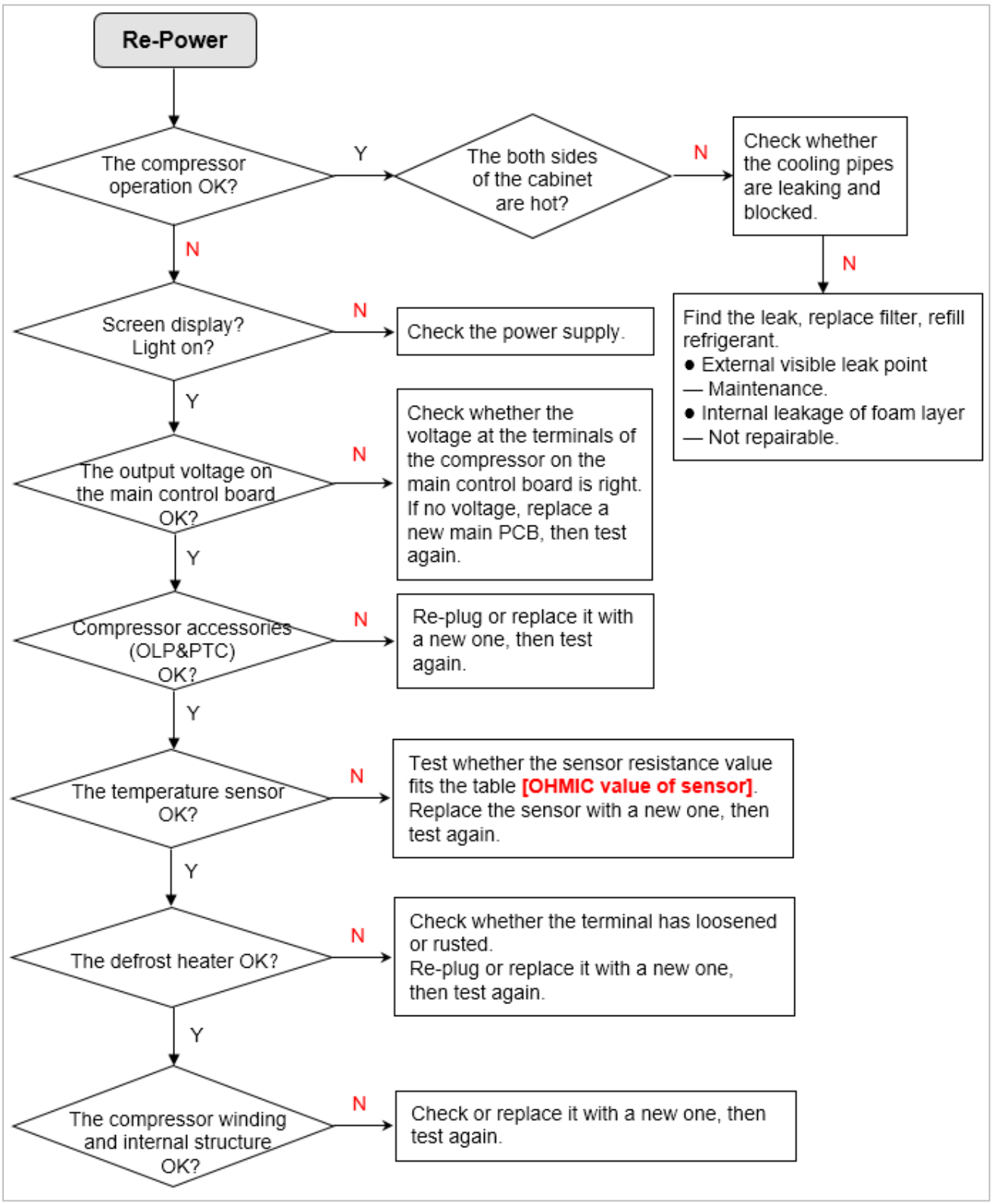
The meaning of different color wires:
Blue: Ambient temperature
Yellow: Humidity
Red: +5V
Black: GND



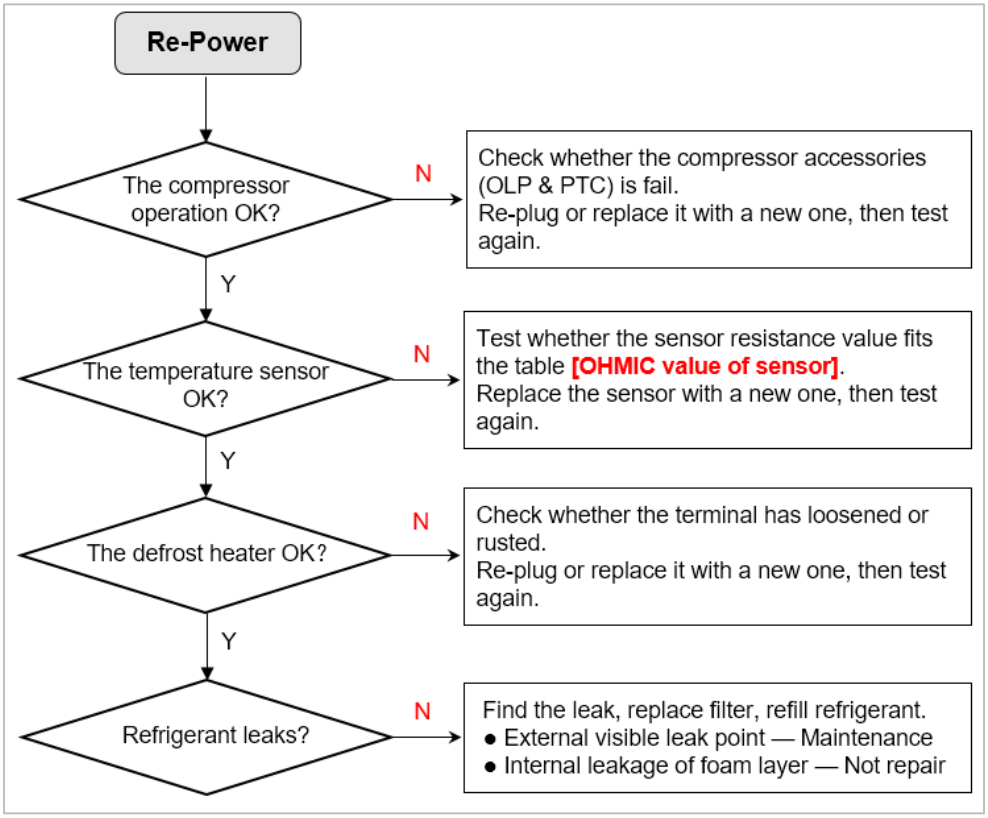
Comparison table of output voltage and humidity at 25℃	
Humidity（%）	Output (V)
20	1.528
40	2.067
60	2.779
80	3.400

1. Check if the sensor has an correct output voltage between **Yellow and Black** wires with a multi meter.
2. If the value is wrong, please replace it with a new one.

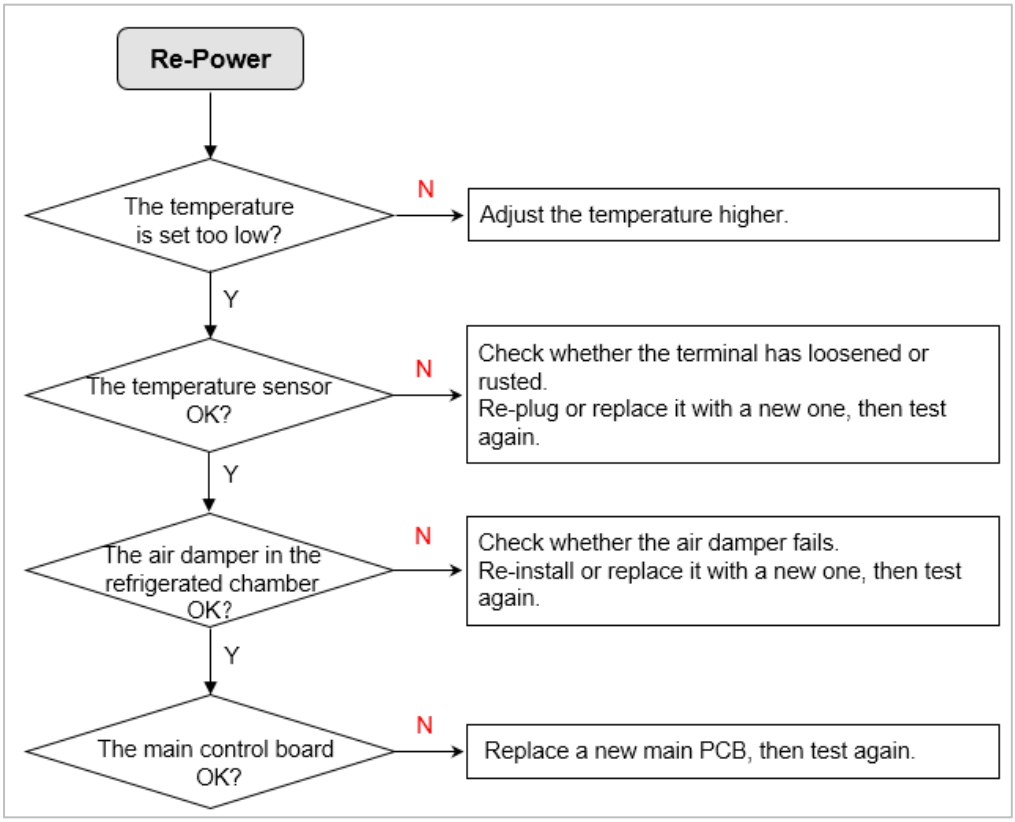
11.5 Not cooling in all the chambers



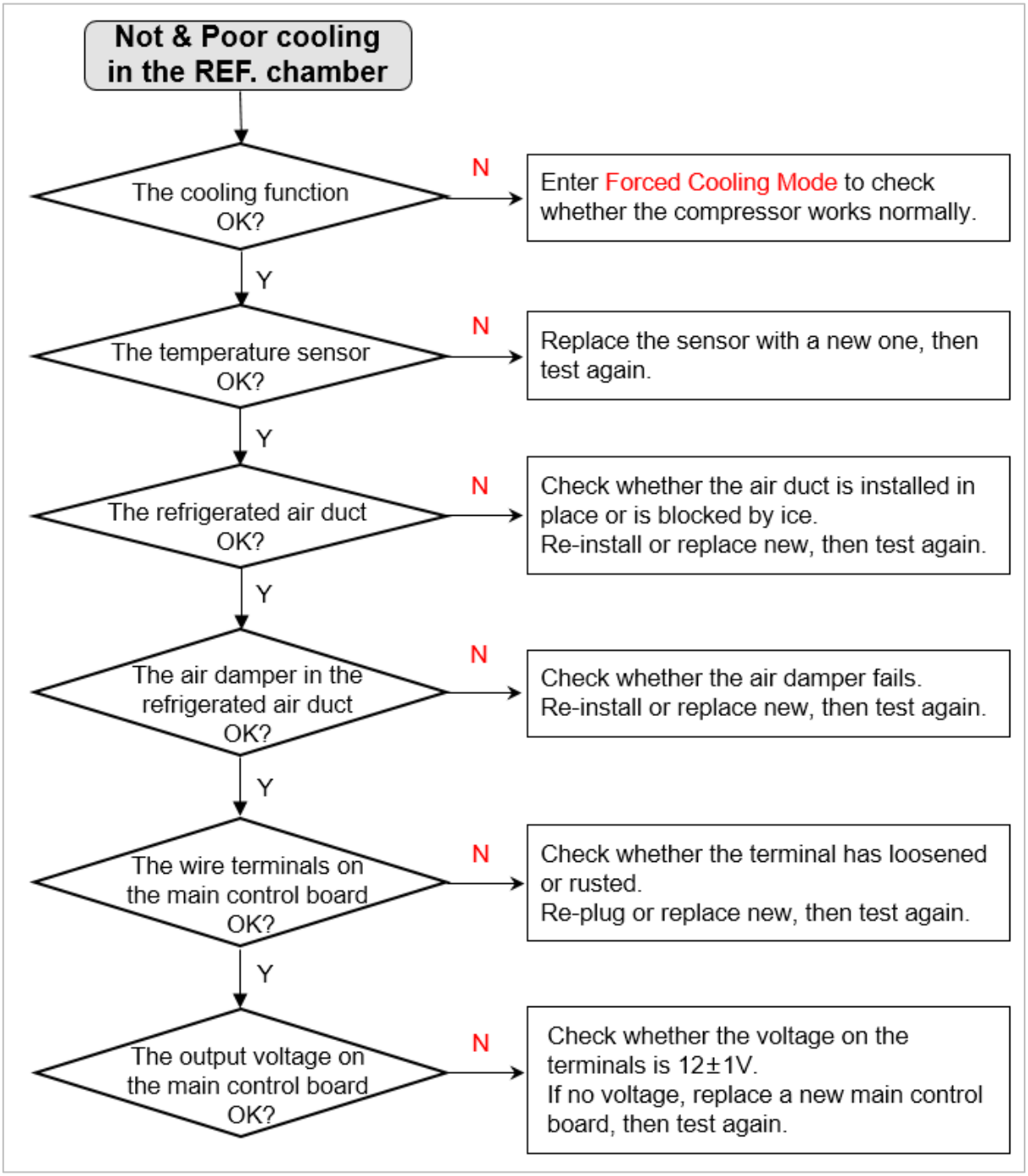
11.6 Poor Cooling in all the chambers



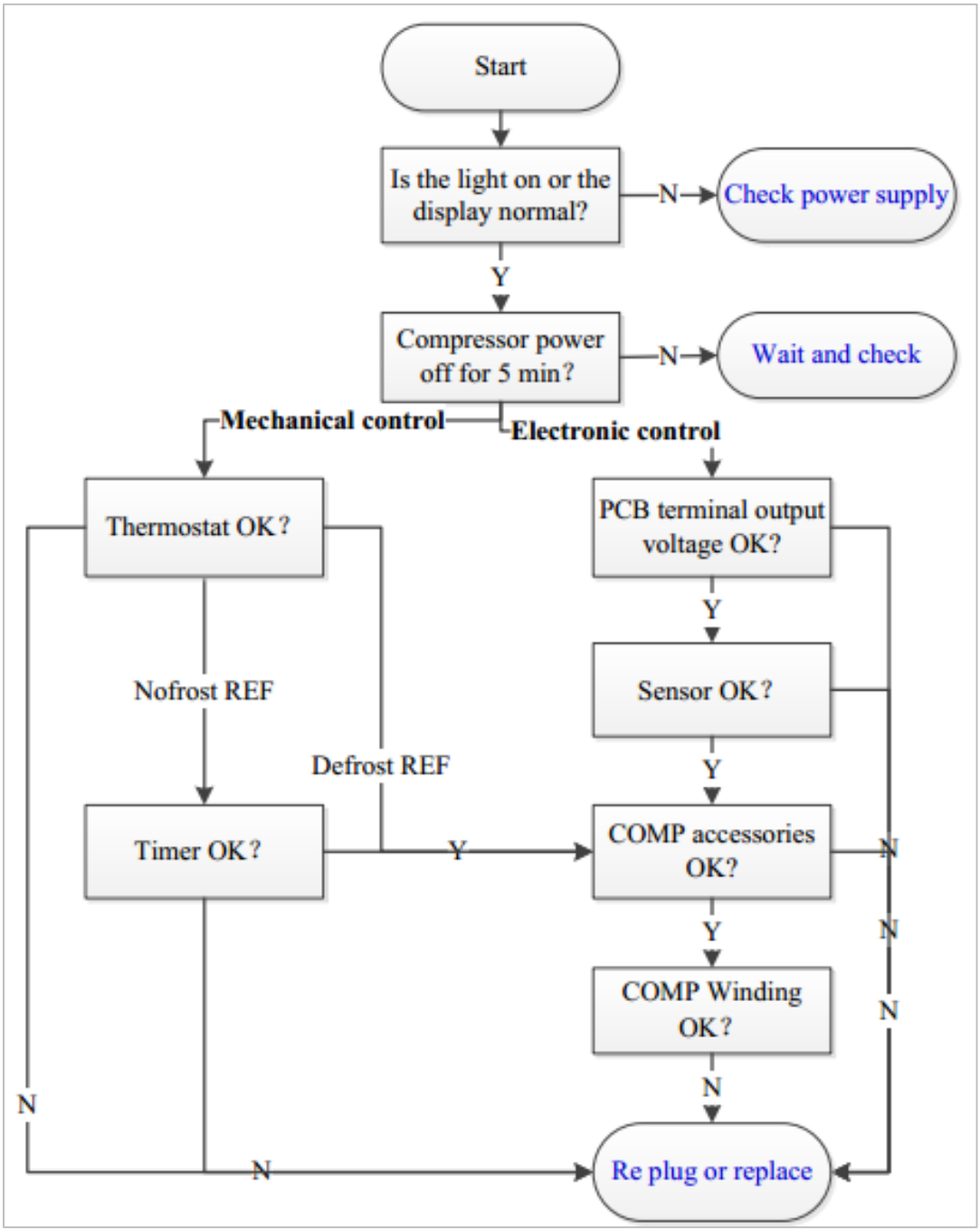
11.7 Overcooling in the refrigerated chamber



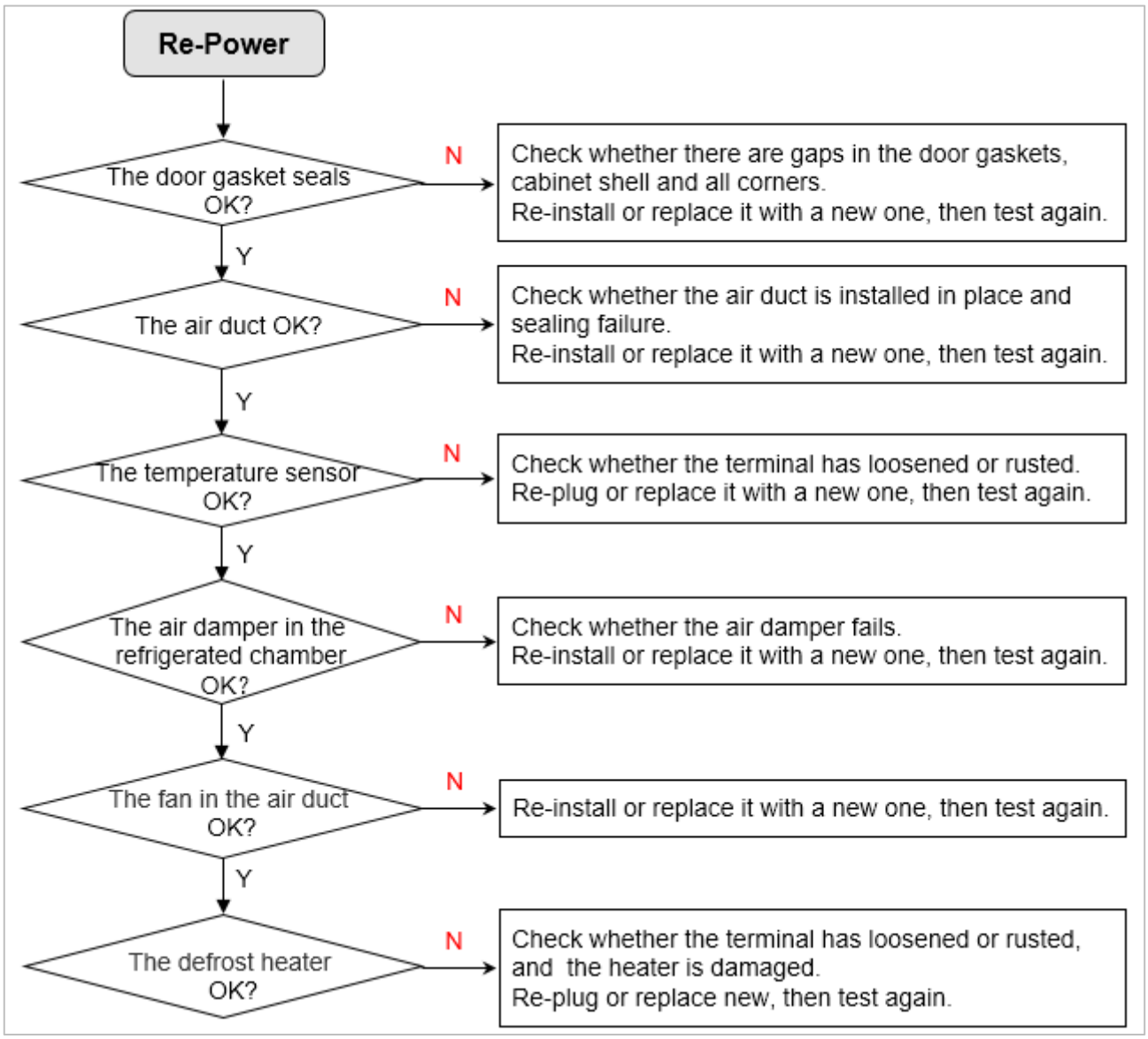
11.8 Not & Poor cooling in the refrigerated chamber



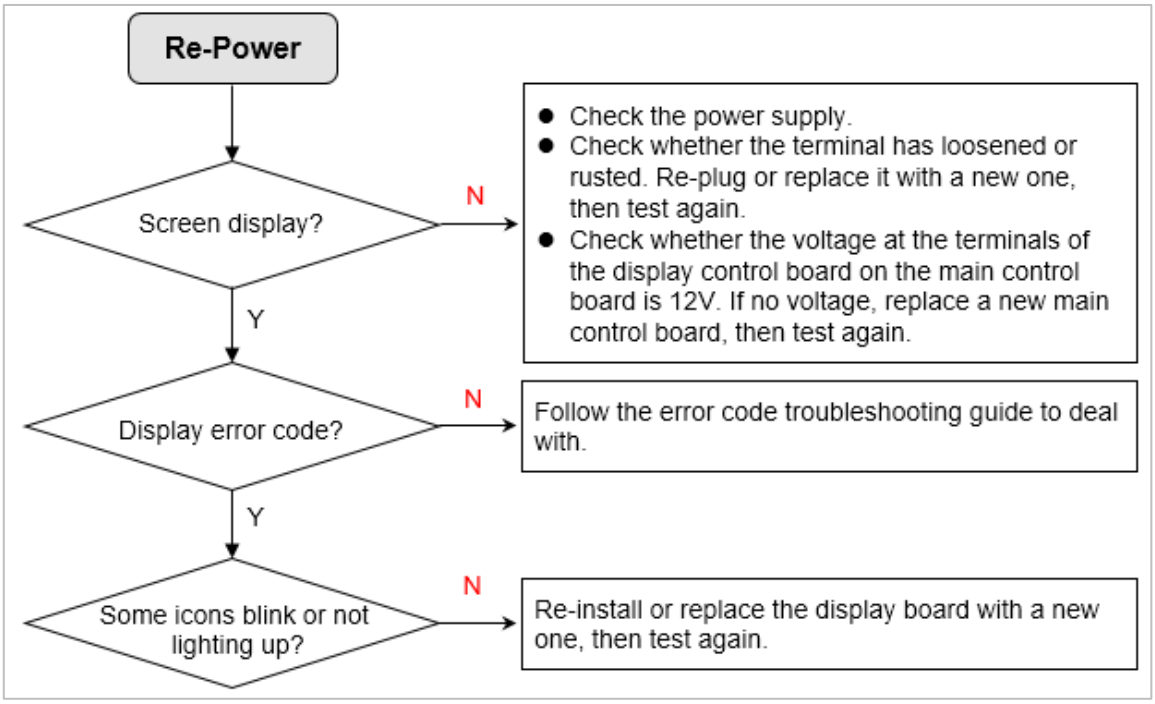
11.9 No working of compressor



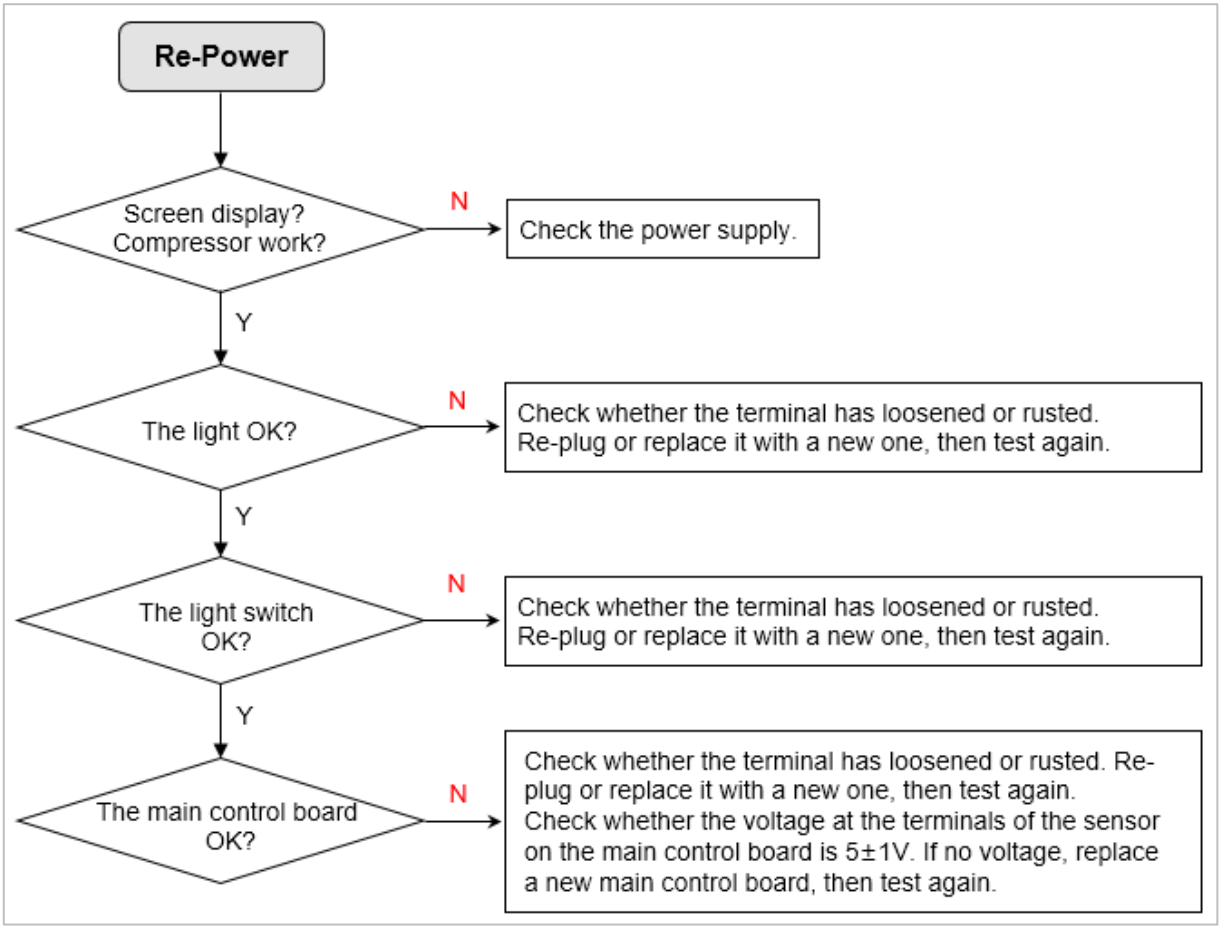
11.10 Condensation & Frost



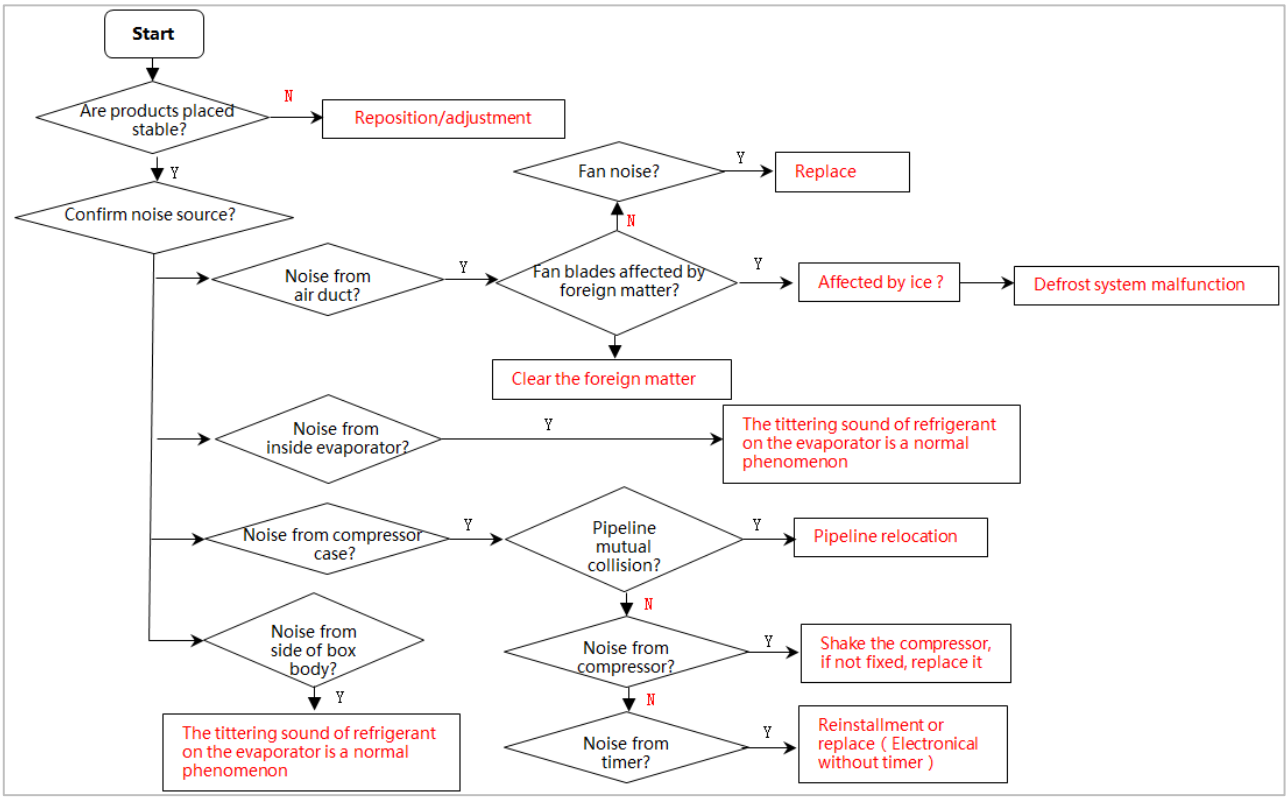
11.11 Display panel failure



11.12 Light failure

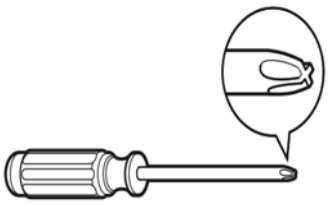
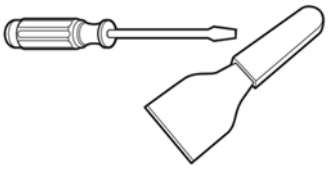
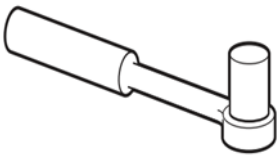


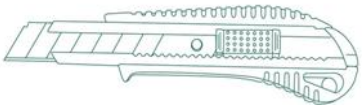
11.13 Noise


Start
Are products placed stable?
N
Reposition/adjustment
Y
Confirm noise source?
Fan noise?
Y
Replace
N
Noise from air duct?
Y
Fan blades affected by foreign matter?
Y
Affected by ice ?
Defrost system malfunction
Clear the foreign matter
Noise from inside evaporator?
Y
The tittering sound of refrigerant on the evaporator is a normal phenomenon
Noise from compressor case?
Y
Pipeline mutual collision?
Y
Pipeline relocation
N
Noise from side of box body?
Noise from compressor?
Y
Shake the compressor, if not fixed, replace it
Y
N
The tittering sound of refrigerant on the evaporator is a normal phenomenon
Noise from timer?
Y
Reinstallment or replace (Electronical without timer)

12. Maintenance tooling, equipment and material

Tooling

No.	Name	Photo	Main Usage
1	Phillips screwdriver		screw assemble and disassemble
2	slotted screwdriver/scraper		screw and rivet assemble and disassemble
3	Socket spanner 5/16″		hinge and compressor screw assemble and disassemble
4	Sucker		display panel and air duct cover disassemble
5	Allen wrench （2.8~4mm）		handle assemble and disassemble
6	Vise grip pliers		sealing process tube

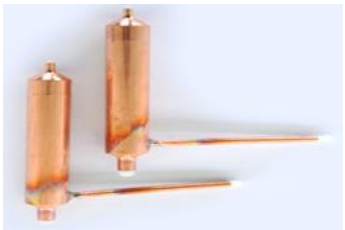
7	Pipe cutter		pipe cutting
8	Knife		assistive tool
9	Nipper pliers		assistive tool
10	Capillary tube scissors		Shear capillary

Equipment

No.	Name	Photo	Main Usage
1	Vacuum pump		vacuum pumping
2	Electronic scale		weighing refrigerant/gas

3	High pressure nitrogen with piezometer		pipe and cooling system(condenser, evaporator, etc) impurities clean
4	Soldering gun		heating and welding
5	Quick coupling		connection process pipeline, vacuum or charge refrigerant will be used.
6	hand leak detector		welding point leakage detect, if no, use soap-suds

Material

No.	Name	Photo	Main Usage
1	Process pipeline		Chargetherefrigerant
2	Dry filter		Involving a system failure to be replaced

3	Copper welding rod		tube welding
4	Refrigerant/gas		Add refrigerant to the system
5	Sealing tape		door fixing for reversible door option

13. Product exploded view and spare parts list

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