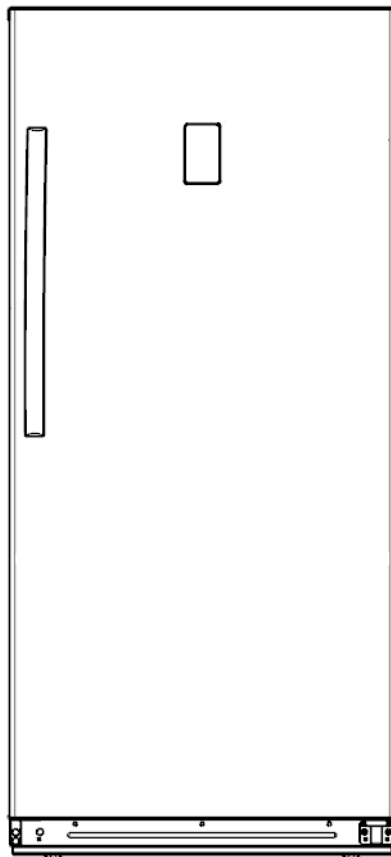


Service Manual

Applicable Models	Model No.
UR-BD390WE-ST	22031010001341
CE-BD390WE-ST	22031010001361
UR-BD390WE-ST	92031010Z00044
UR-BD390WE-ST	92031010Z00046



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

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Reviewed by	QA:Li Jiangli SVC:Zhang kun
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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.

Midea Refrigerators

Technical Maintenance Manual

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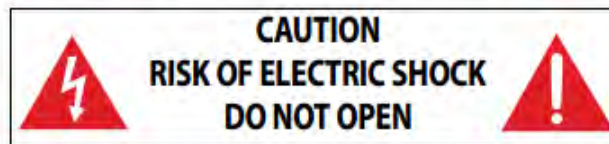
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1.Safety Warning Code

1.1Warning for operation safety

Important Safety Instructions



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.

- 15 Do not handle the plug with wet hands. This could result in an electric shock.
- 16 Unplug the power cord by holding the plug, never by pulling the cord.
- 17 Do not turn the appliance on or off by plugging or unplugging the power cord.
- 18 Refer all servicing to qualified service personnel. Servicing is required when the appliance has been damaged in any way, such as the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the appliance, the appliance has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 19 To reduce the risk of fire or electric shock, do not expose this appliance to rain, moisture, dripping, or splashing, and no objects filled with liquids should be placed on top of it.
- 20 Do not use extension cords or ungrounded (two prong) adapters.
- 21 This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- 22 Children should be supervised to ensure that they do not play with the appliance.
- 23 If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person, in order to avoid a hazard.
- 24 Take off the doors and leave the shelves in place so that children may not easily climb inside.



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:
 - 1) Take off the doors
 - 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.

1.2 冷媒安全须知

⚠ WARNING  **Explosion Hazard.**

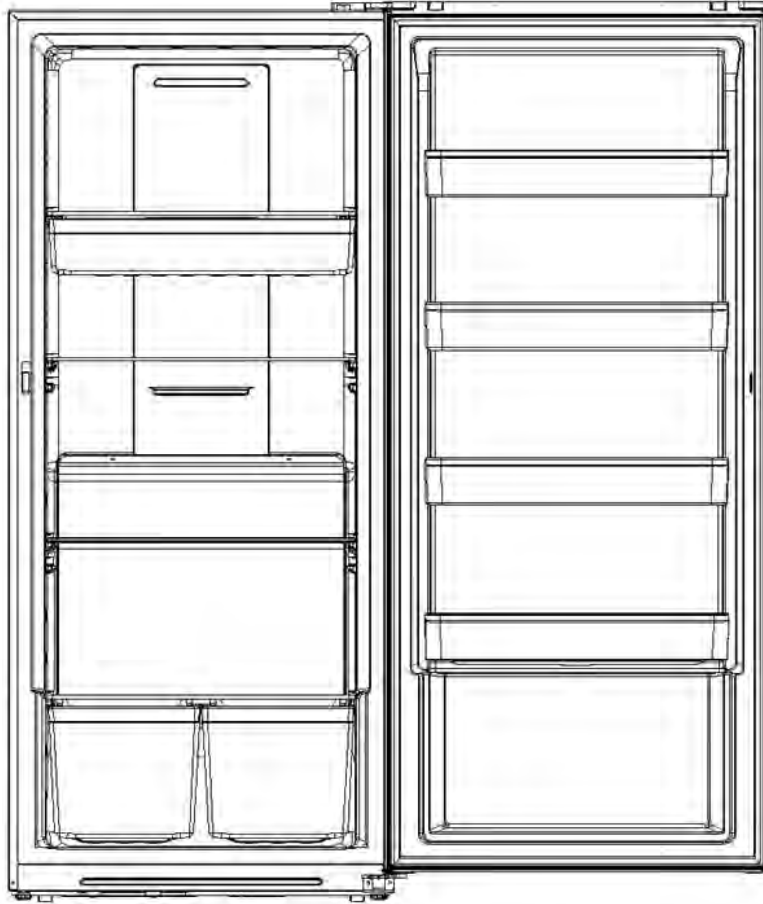
Keep flammable materials and vapors, such as gasoline, away from freezer. Failure to do so can result in fire, explosion, or death.

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.



2. Description for product features

This product is provided with following features:



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

- 1) Full air-cooling and frost-free design
- 2) Electronic temperature control, more accurate temperature control.
- 3) BC/BD can switch, meet the different needs of customers.

3. Installation and commissioning

3.1 Handling

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



3.2 Disassembly (None)

The refrigerator door needs to be dismantled if it cannot enter the room in the whole.

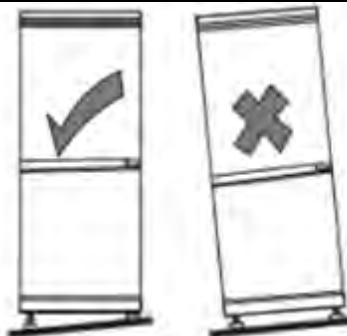
3.3 Installation location

Location that is easy for ventilation shall be chosen to facilitate heat dissipation, enhance its performance and reduce the energy consumption.



3.4 Leveling of the refrigerator

If the refrigerator cannot be placed steadily, adjust the footing to level it.



3.5 Change the door opening direction(None)

3.6 Installation of handle



1. Take out ①, use a cross screwdriver to drive ① into the screw hole ② on the door body and tighten it.
2. Align the screw hole on the handle with the tightened ① to fix the handle;
3. Tighten ③ on the handle side;
4. Put ④ onto the handle side hole ③ to complete handle installation.

3.7 Installation of door lock(None)

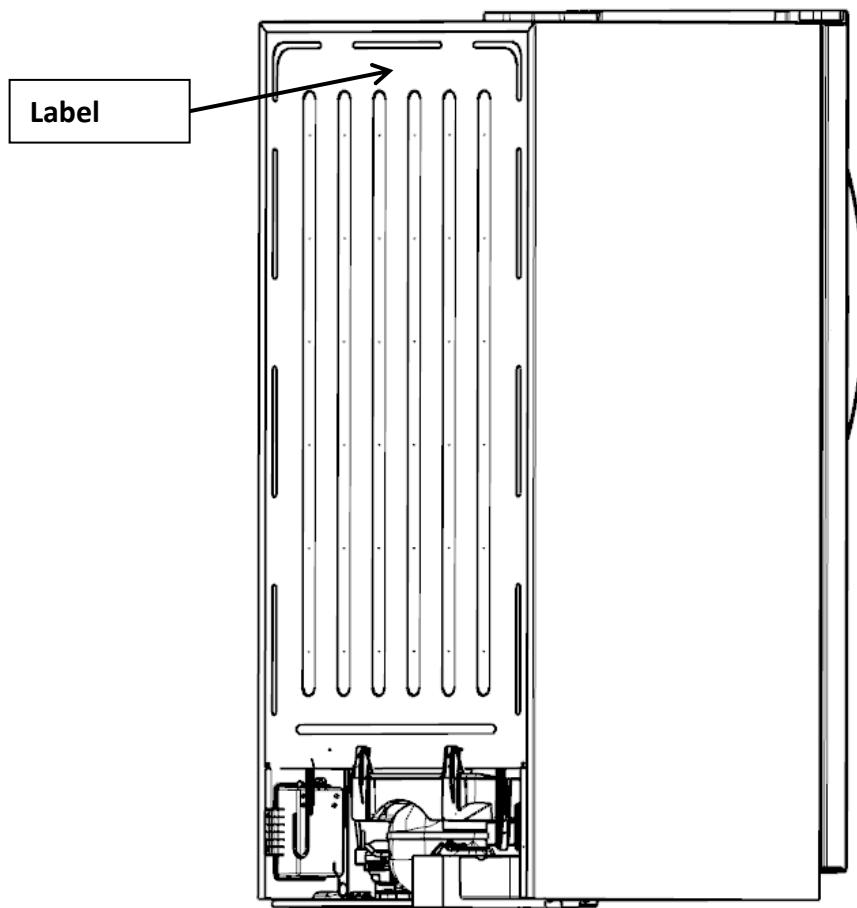
3.8 Adjustment to level the door(None)

3.9 Adjustment to shelves(None)

4. Terms

4.1 Definition of model(None)

4.2 Location of nameplate

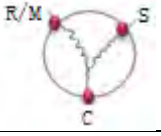


(The picture is only for reference, and specific appearance and configuration are subject to the real product)

5. Product specification

5.1 typespecification(None)

5.2 Electrical parameters

Product Name		UR-BD390WE-ST	CE-BD390WE-ST	/	
Product Code		22031010001341	22031010001361	/	
Name	Item	Type	Specification	Specification	Specification
Compressor	Compressor	/	EZ80H1A-USCL	LJ118DY1	/
	Starter	PTC	QP2-4R7	LPC319D-01/QPE2-A15MD3	/
	Overload protector	OLP	DRB31T61A1	BT69-120/DRB246N61 A2/3TM213NF1	/
	Winding resistance of compressor wiring terminal		Rmc: 4.6~4.74Ω Rsc: 6.16~6.3Ω Rms=Rmc+Rsc	Rmc: 8.67~11.73Ω Rsc: 16.15~21.85Ω Rms=Rmc+Rsc	/
	Variable frequency driver board	/	/	/	/
Motor	Fan motor of the freezing chamber	DC	DC12V	DC12V	/
	Ventilation door of the refrigerating chamber	/	/	/	/
	Condensation fan	/	/	/	/
Lights inside the refrigerator	Lights inside the freezing chamber	LED	DC12V	DC12V	/
	Lights inside the refrigerating chamber	/	/	/	/
	Switch of the refrigerator door	mechanical switch	Cylindrical switch	Cylindrical switch	/

5.3 Inside temperature

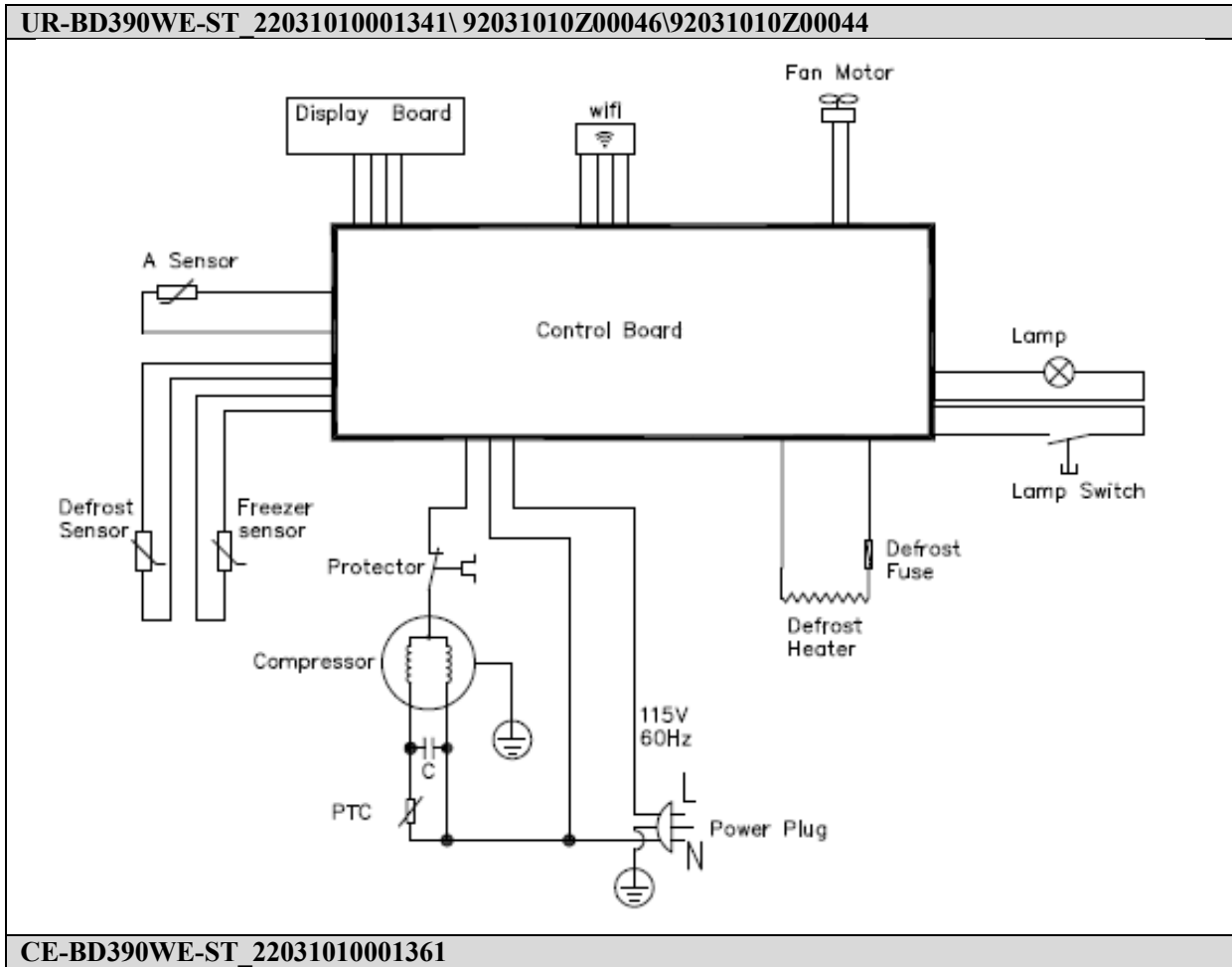
Temperature tolerance $\leq 2^{\circ}\text{C}$

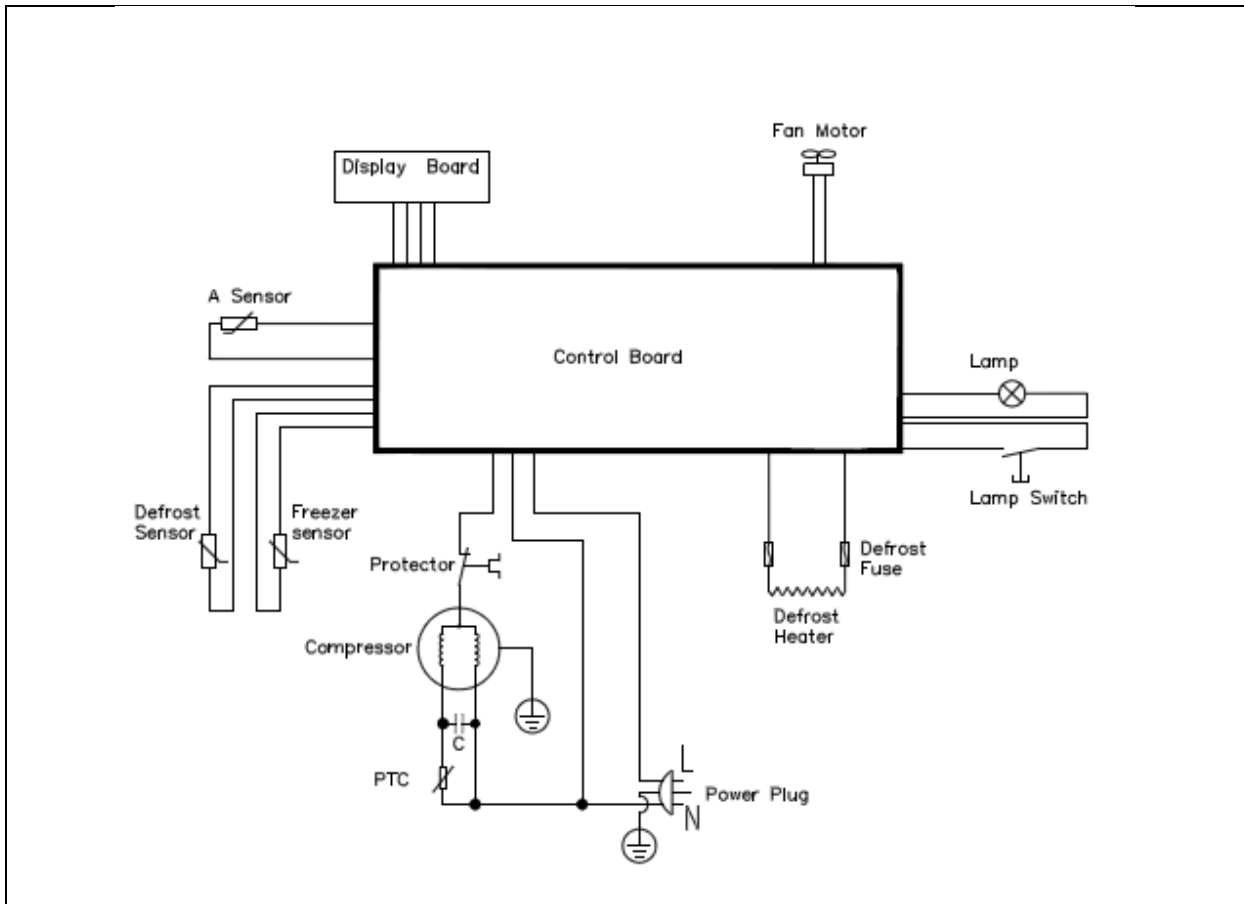
Compartment	The highest ($^{\circ}\text{C}$)	Lowest ($^{\circ}\text{C}$)
Freezing	-14	-21
Refrigerating	/	/
Variable temperature	/	/

5.4 Defrosting parts

Defrosting period	Initial defrosting period	Normal defrosting period
		/
Defrosting sensor	NTC	B3839
Thermal fuse	Can't be restored	77 $^{\circ}\text{C}$
Defrosting heater in freezing chamber	Steel pipe	115V/200W 230V/

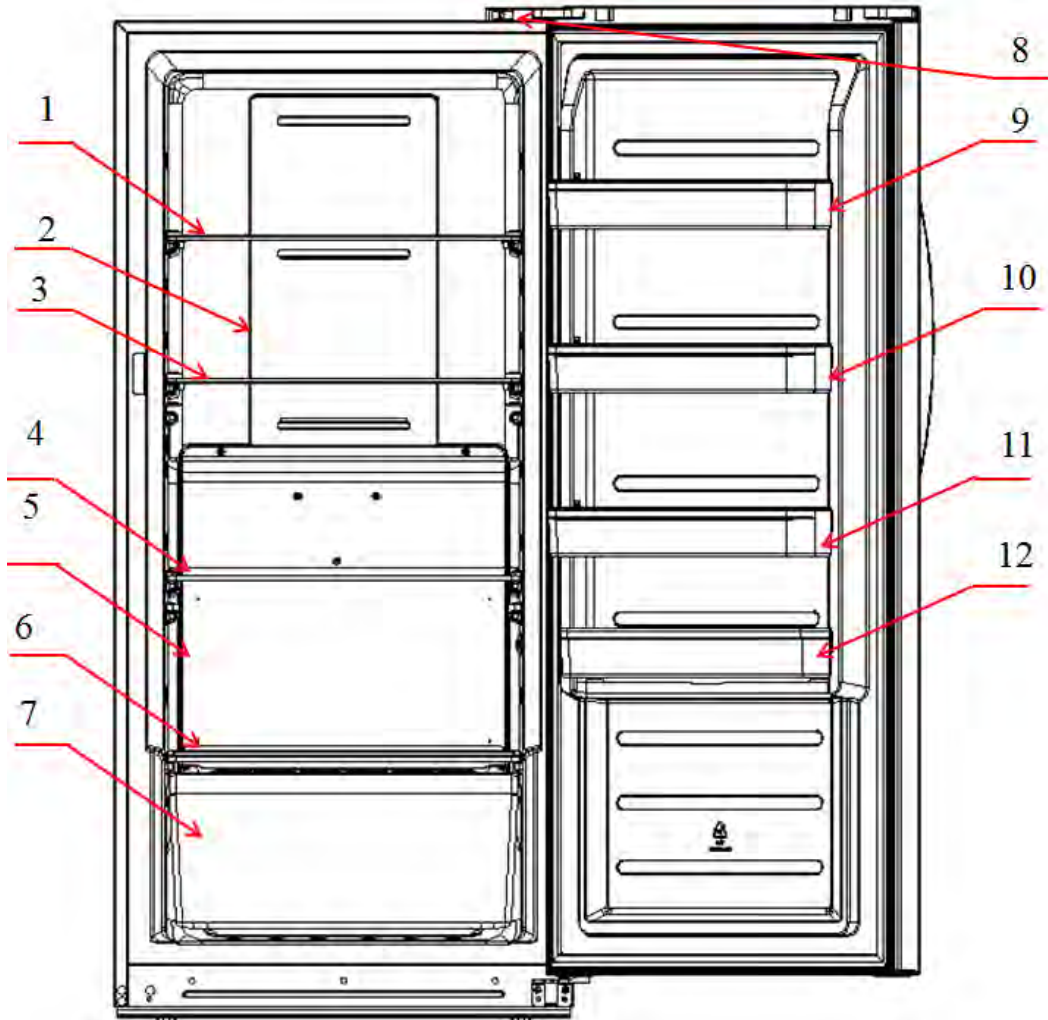
5.5 Circuit diagram





6. Internal view and dimension

6.1 Main parts and their names

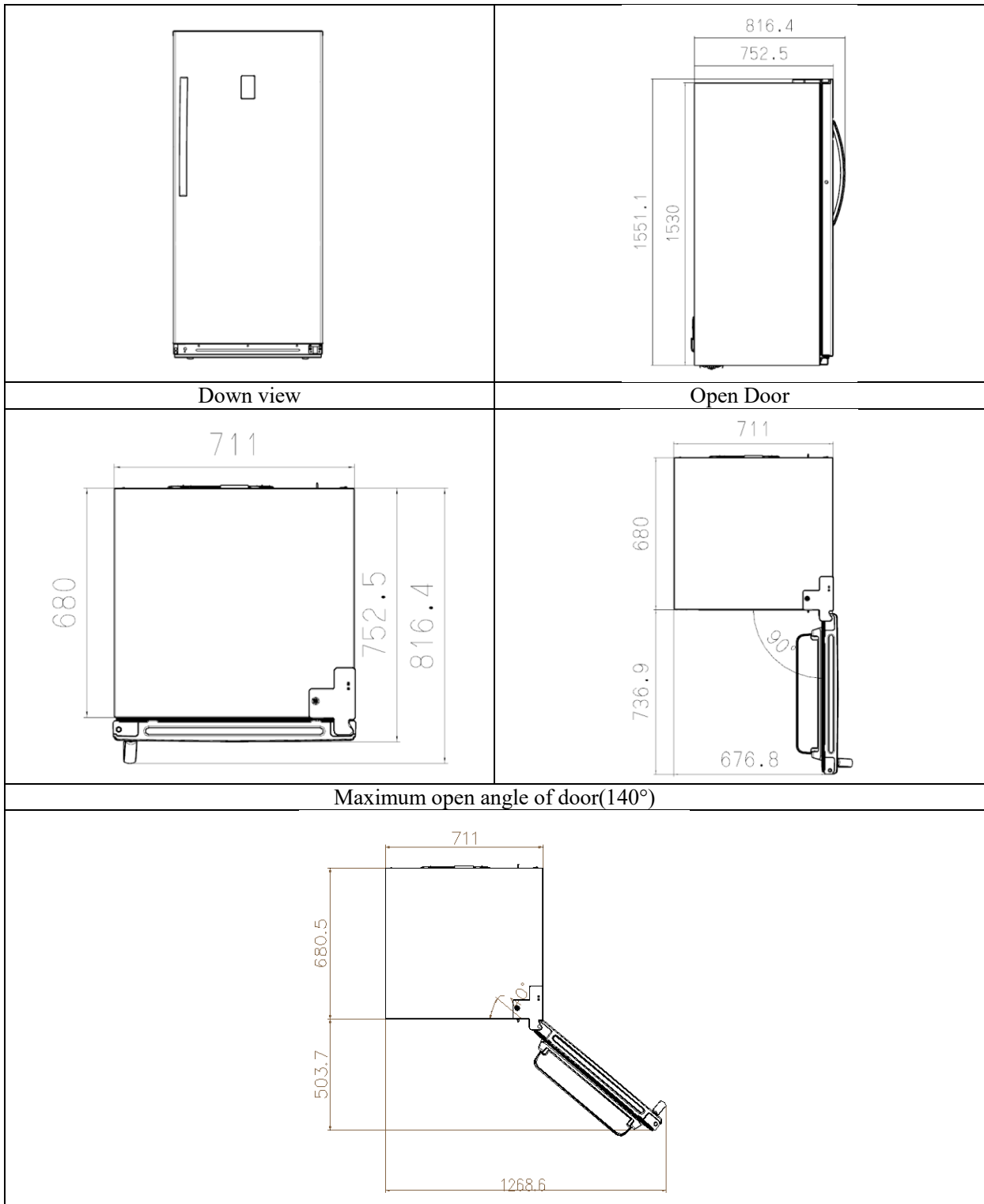


(The picture is only for reference, and specific appearance and configuration are subject to the real product)

1. Glass shelf	7. Bottom drawer of freezer chamber
2. Upper air duct cover	8. Door switch
3. Glass shelf	9. Door tray
4. Glass shelf	10. Door tray
5. Bottom air duct cover	11. Door tray
6. Glass shelf	12. Door tray

6.2 External dimension

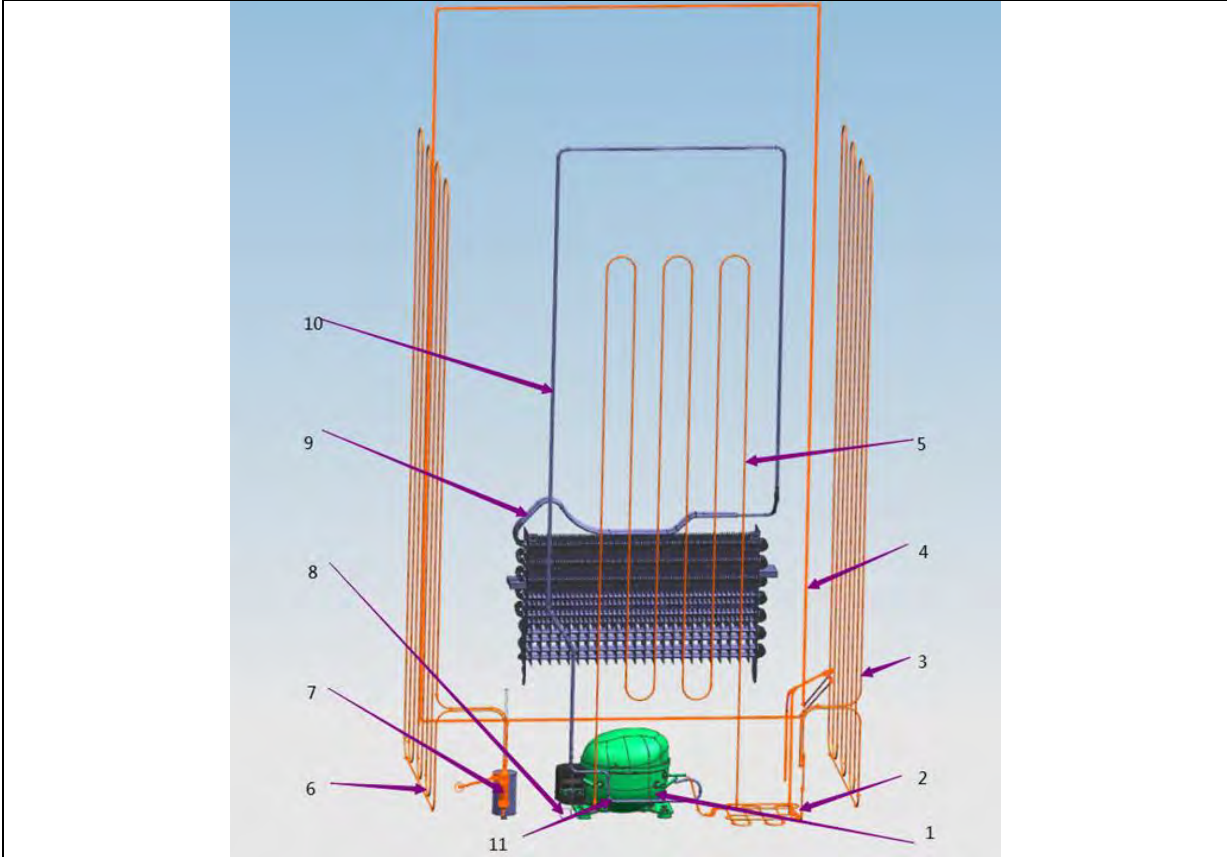
Front view	Side view
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(The picture is only for reference, and specific appearance and configuration are subject to the real product)

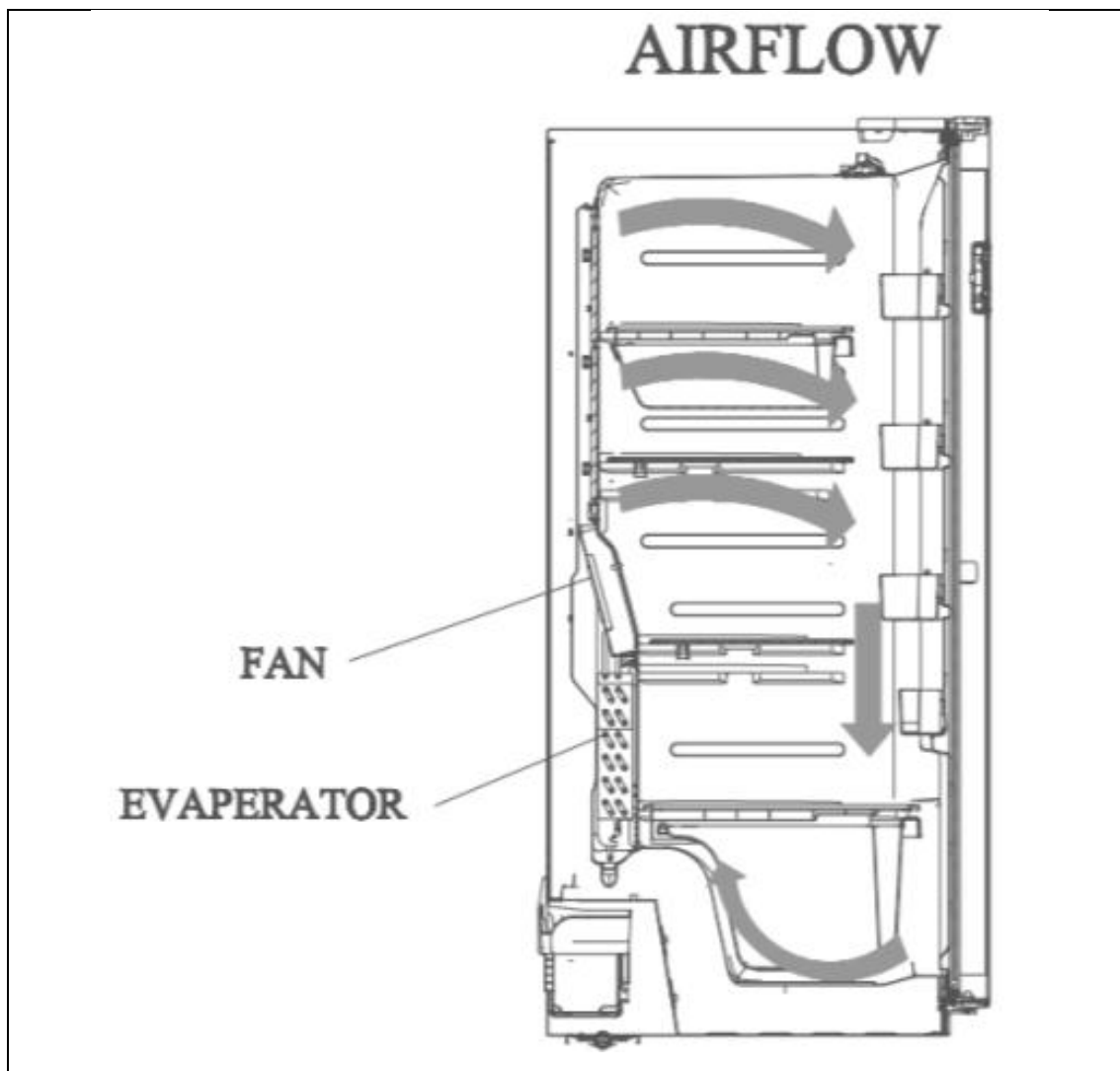
7.Refrigerating piping system and circulating route of cooling air
7.1 Refrigerating piping system

1Compressor→2Exhaust transition pipe→3Left condenser→4Anti-condensation tube→5Back condenser→6Right condenser→7Dry filter→8Capillary tube→9Evaporator→10Suction pipe→11Return transition pipe→2Compressor



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



7.2 Circulating route of cooling air




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

8. Dismantling of parts


8.1 Parts on the door

Door seal	
<p>Door seal is installed into door liner groove.</p> <ol style="list-style-type: none"> 1) Open the refrigerator door; 2) Take the door seal ① out of door liner; 	
Door tray	
<p>Lift up the bottle frame and take it out from the door liner of the refrigerator.</p>	
rollover beam	None

8.2 Parts inside the refrigerator

Refrigerator Fruit box cover	None
Shelves	
<ol style="list-style-type: none"> 1) Pull out the partition plate completely. 2) Lift it up and take it out from the refrigerator. 	
Ice tray	None
Refrigerator tray	None
Drawer	None

8.3 Light system

Light	
<p>Light of the freezer chamber is located upper chamber</p> <ol style="list-style-type: none"> 1) use slotted screwdriver to insert into the gap, dismantle the lamp 2) loosen the plastic clip, dismantle the lamp PCB 	
Light switch	

- 1) Remove the screws of hinge
- 2) Unplug the wiring connector, and loosen the plastic clip of lamp switch to dismantle lamp switch



8.4 Air duct and fan motor


Air duct components in freezing chamber

All accessories in the freezing chamber should be dismantled before removing the air duct components.


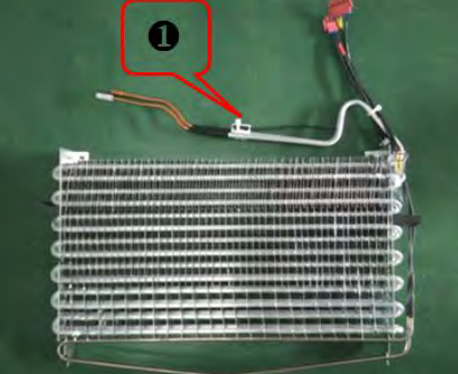
- 1) Remove 2 screws on the cover plate of the freezing air duct using a cross screwdriver;
 - 1) use cross screwdriver to remove the 2 pcs screws of air duct cover
 - 2) hold the upper position of air duct cover, and pull it out slightly, it should be very careful for avoiding the wiring harness/connector be damaged if overexert
 - 3) unplug all wiring connectors ,and dismantle the air duct cover from the rear side of refrigerator inner
- hold the upper cover from the bottom, pull out the upper cover

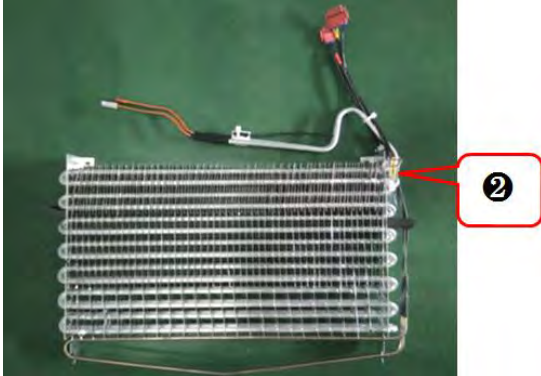
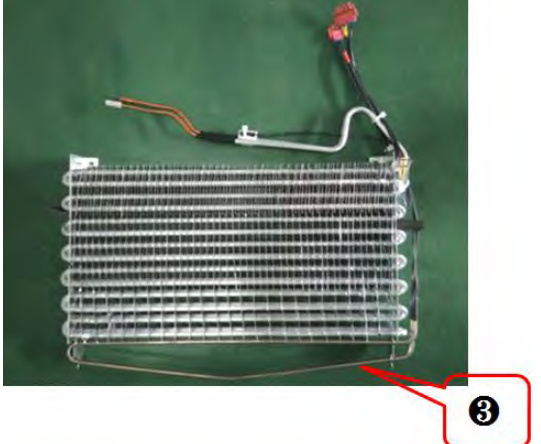




Fan motor

<p>1) 2) Before dismantle it ,please make the front evaporator cover(bottom) be removed already</p> <ol style="list-style-type: none"> 1) Loosen the plastic clips,move the rear cover outwards 2) Hold the edge of cover, and dismantle it from the refrigerator 3) Dismantle the screw, move the fan motor from the refrigerator <p>Replace the fan motor, the inverse operation to complete installation</p>	
<p>Damper assembly</p>	<p>(None)</p>

8.5 Evaporator and temperature sensing system

<p>Evaporator in freezing chamber</p>	
<ol style="list-style-type: none"> 1) Remove the air duct components in freezing chamber. 2) Disconnect all connectors. 3) Remove the welding on inlet and outlet tubes. 4) Remove two screws which are used to fix the evaporator and remove the evaporator. 	
<p>Components on the evaporator</p>	
<p>① Fuse The fuse is located on top of the evaporator</p> <ol style="list-style-type: none"> 1) connect the fuse connector. 2) Cut off the band which fixes the fuse. 3) Separate the fuse and the evaporator. <p>*,Dont break the welding of the evaporator in case that only the fuse needs to be replaced.</p>	

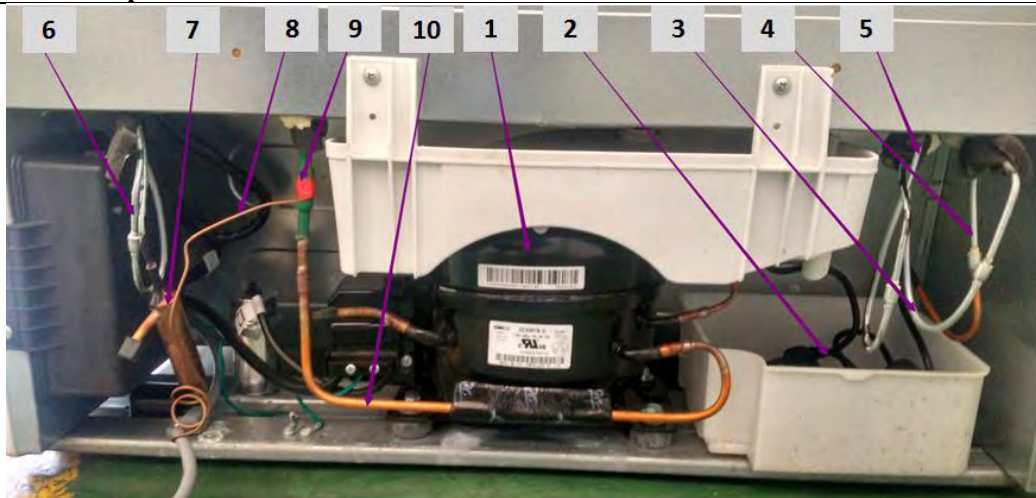
<p>2 Defrost sensor The defrost sensor is located on top of the evaporator. 1) Disconnect the connector of defrost sensor 2) Cut off the band which fixes the sensor. 3) Separate the sensor and the evaporator. *,Dont break the welding of the evaporator in case that only the sensor needs to be replaced.</p>	
<p>3 Defrost heater The defrost heater is located at bottom of the evaporator. 1) Disconnect the connector of defrost heater. 2) Cut off the band which fixes the defrost heater. 3) Take off the defrost heater from the evaporator. *,Dont break the welding of the evaporator in case that only the defrost heater needs to be replaced.</p>	
<p>Ambient temperature sensor</p>	<p>None</p>
<p>Ambient temperature sensor</p>	<p>None</p>
<p>Ambient temperature sensor is located in upper hinge cover,</p>	
<p>Freezer sensor</p>	<p>None</p>
<p>The sensor is located at right of freezer chamber 1) Pull out the cover 2) Pull out the sensors</p>	

8.6 Compressor case

<p>Rear cover and compressor case</p>	<p>None</p>
---------------------------------------	-------------

Condenser fan moto	None
Terminal box of the compressor	None
Standby condenser	None

Piping system in the compressor case



- | | |
|--|--|
| 1. Compressor
2. Exhaust transition pipe
3. Anti-condensating tube
4. Left condenser
5. Back condenser | 6. Right condenser
7. Dry filter
8. Capillary
9. Suction pipe
10. Return transition pipe |
|--|--|

Starter and protector of the compressor

1. Remove the screws

- 1) Two screws outside
- 2) One screw inside



2. Remove the clipping strip


Slowly pull it out



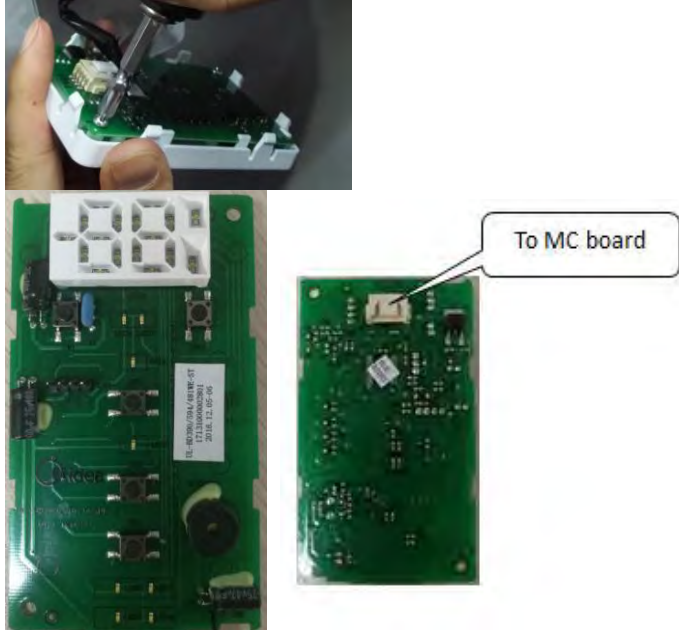

3. Remove the protective cover

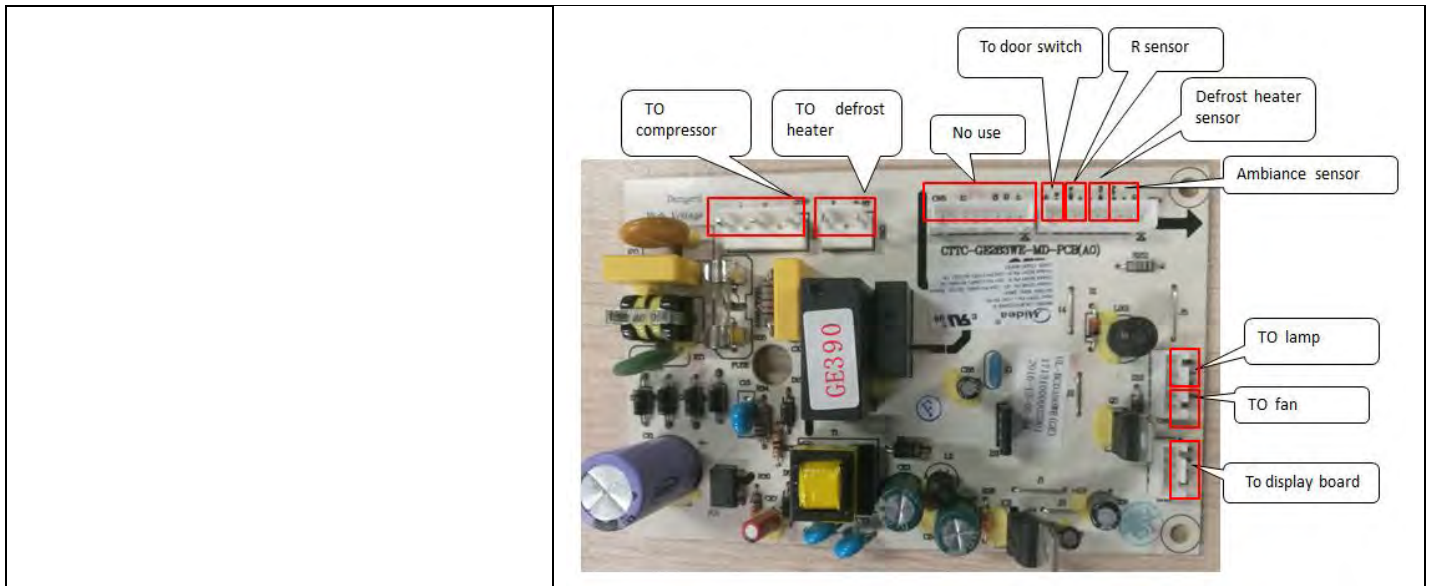
- 1) Pry the protective cover slowly from the upper part,
- 2) Pull it out and remove it.



<p>4. Remove the starter and protector Unplug the starter and protector (you can use a screwdriver to pry it slowly)</p>	
<p>5. The reverse process can complete installation.</p>	<p>/</p>

8.7 Display and main control panel

<p>Display control board</p>	
<p>1) Use vacuum cap to pull the control panel outwards 2) Disconnect the connector of display control board, remove it</p>	
<p>Main control board</p>	
<p>remove the fixed screw from main control board box Open the main control board box cover remove the fixed screw, pull out the main control board Disconnect the connector of main control board</p>	



8.8 Bar counter(None)

Disassembly and installation of bar counter	None
Disassembly and installation bar doorseal	None

8.9 Water dispenser(None)

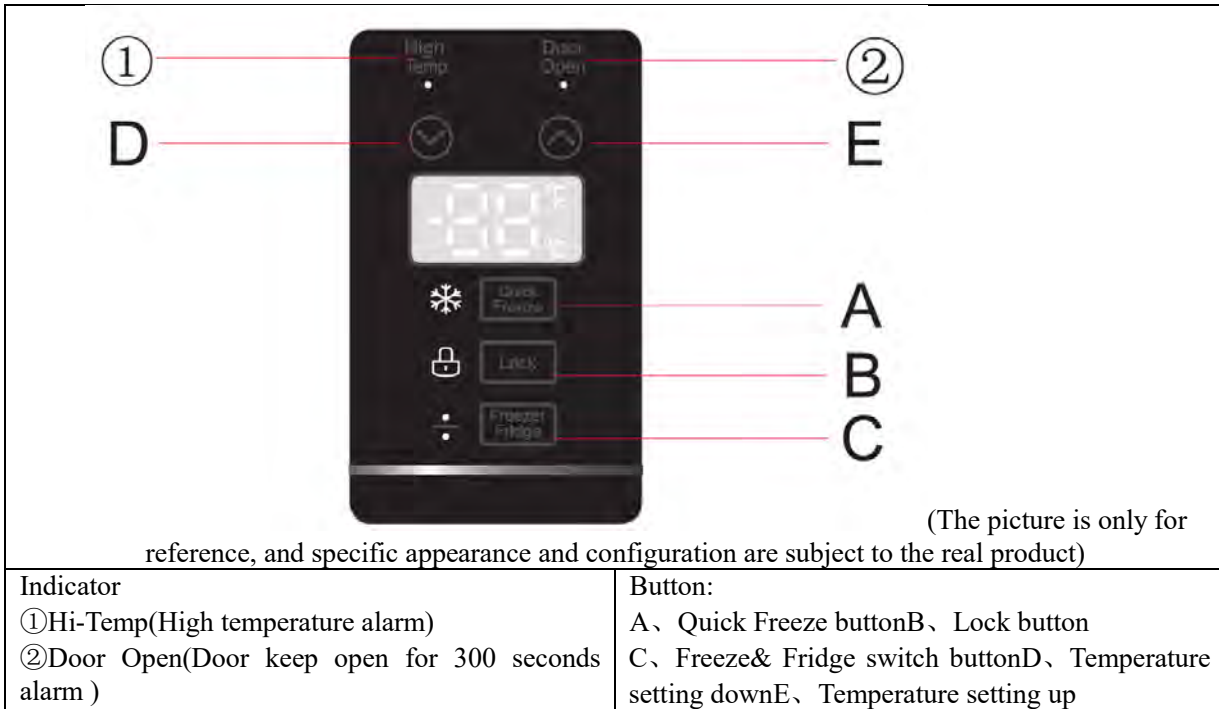
Disassembly and installation of water valve	None
Disassembly and installation of water tank	None

8.10 Ice maker(None)

Disassembly and installation of ice maker	None
Disassembly and installation of water system	None
Disassembly and installation ice machine sensor	None









9. Function and operation

9.1 Operation panel




9.2 Button


9.3 LED Indicator

- 1).  Hi-Temp(High temperature alarm)
- 2).  Door Open(Door keep open for 300 seconds alarm)
- 3).  Temperature display area
- 4).  Fahrenheit temperature
- 5).  Celsius temperature
- 6).  Quick-frozen setting
- 7).  Lock/Unlock button
- 8).  Freezer and fridge function choose




9.4 Function

- Freeze&Fridge switch



Press  for 3s, then the up piont is on with a beep, the machine is running as a freezer.

Press it  for another 3s, then the up point is off and the bottom point is on with a beep, and the machine is running as a Fridge.

● Quick Freeze Function setting

Press  to enter Quick Freeze Mode, then snowflake  is blue on. Then press  again to exit the Quick Freeze Mode. The program test the temp., when test temp. $< -25^{\circ}\text{C}$, the quick freeze function will exit after 3 hours, if the temp. cannot up to -25°C , this function will still exit after 24 hours.

● F/C change the scale

Press  and  at the same time for 3s to change the F/C display, with a beep. The default temperature is -18°C (0°F). The temperature range of Freezer is $-12^{\circ}\text{C}\sim 24^{\circ}\text{C}$ ($10^{\circ}\text{F}\sim 11^{\circ}\text{F}$). The temperature range of Fridge is $2^{\circ}\text{C}\sim 8^{\circ}\text{C}$ ($35^{\circ}\text{F}\sim 46^{\circ}\text{F}$).

● Door open alert

Open the door, the blue point is on, close the door, the blue point is off. If the door is opening over 300s while the refrigerator is running, then the door open alert would be activated and the blue point would be on with buzzer.

● High temp. alert

At fridge mode, if the inside temperature is over 59°F (15°C) for 36 hours, then the high temperature alert is activated with the blue point on and a buzzing for 10s, and it will be buzzing for 10s every 30 minutes.



If the temperature goes under 54°F (12°C), the High Temperature Alert will be lifted. Or press any button, it will be lifted, too.

At freezer mode, if the inside temperature is over 18°F (-8°C) for 36 hours, then the high temperature alert is activated with the blue point on and a buzzing for 10s, and it will be buzzing for 10s every 30 minutes.



If the temperature goes under 10°F (-12°C), the High Temperature Alert will be lifted.

Or press any button, it will be lifted, too.


● Lock function

Press B for 3s, enter into lock status, icon  is on with a beep. Then press it for another 3s to unlock it, icon  is off with a beep.

● Temp

Press  to reduce the Temperature. Press  to rise the Temperature.

● Reset

Press B and  at the same time for 3s to mainboard reset, with a beep. Then all the variables of mainboard will be initialized (except the variables stored in the EEPROM). The display will be fully lighting on for 3s just like the freezer was charged for the first time. While resetting, if the compressor is running, it will pause for 5 minutes then run again.

9.5 Control of standby function(None)

9.6 Control of ice maker(None)

9.7 Fault code and solutions

Fault code	Fault description	Fault cause	Recommended practices
E2	R room sensor failure	There is a problem with the sensor terminals of the R room or the sensor circuit.	Check the status and connections of the F room sensor
E5	R room defrost sensor failure	There is a problem with the defrost sensor terminals of the F room or the sensor circuit.	Check the status and connections of R room defrost sensor
E7	Ambient temperature sensor failure	There is a problem with the ambient temperature sensor terminals of the F room or the sensor circuit.	Check the status and connections of ambient temperature sensor

9.8 Defrosting function

The refrigerator is made based on the air-cooling principle and thus has automatic defrosting function. Frost formed due to change of season or temperature may also be manually removed by disconnection of the appliance from power supply or by wiping with a dry towel.

9.9 Test mode(None)

9.10 Self-diagnosis

Entry Condition

Entry of self-diagnosis: within 5s after power on 5s, if no sensor fault and the temperature sensor $\geq 0^{\circ}\text{C}$, it enter in self-diagnosis

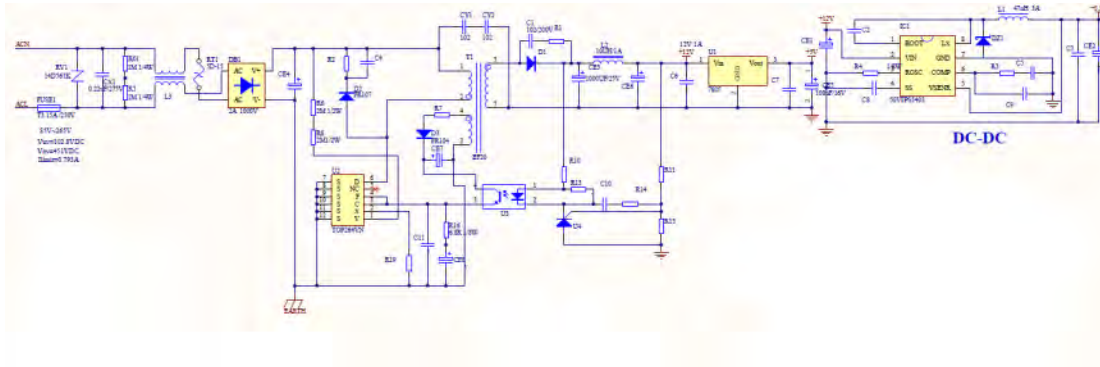
Exit of self-diagnosis: the setting time of self-diagnosis is 15 minutes, it will exit self-diagnosis and enter in normal running state automatically when time arrives.

Action of electric load in self-diagnosis

1. Fan motor switch on for 5s, switch off for 5s
2. defrost heater switch on for 5s, switch off for 5s
3. Fan motor and compressor switch on at same time
4. After 15 minutes, it will exit the self-diagnosis

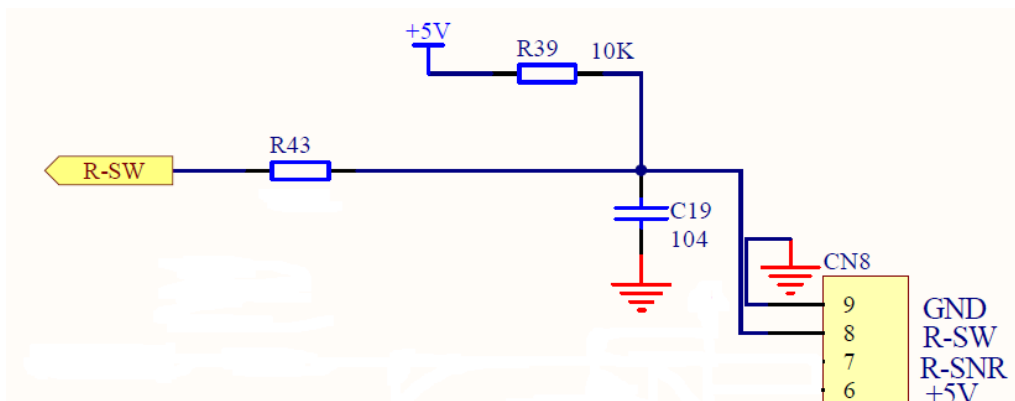
If sensor fault or communication error happen during self-diagnosis, it will exit self-diagnosis

10. Circuit description 10.1 Power Supply



The AC input power is reduced in voltage by SMPS control chip and filtered off wave by the inductance-capacitance filter, then output the DC 12V power which will mainly power the relay that controls strong current. Relay is used to control the strong current loaded switches of compressor, ice maker and defrost heater. The DC 12V power will output stable 5V electricity after passing through the adjustor 7805, to power for the main control chip and thus monitor the temperature changes in refrigerator.

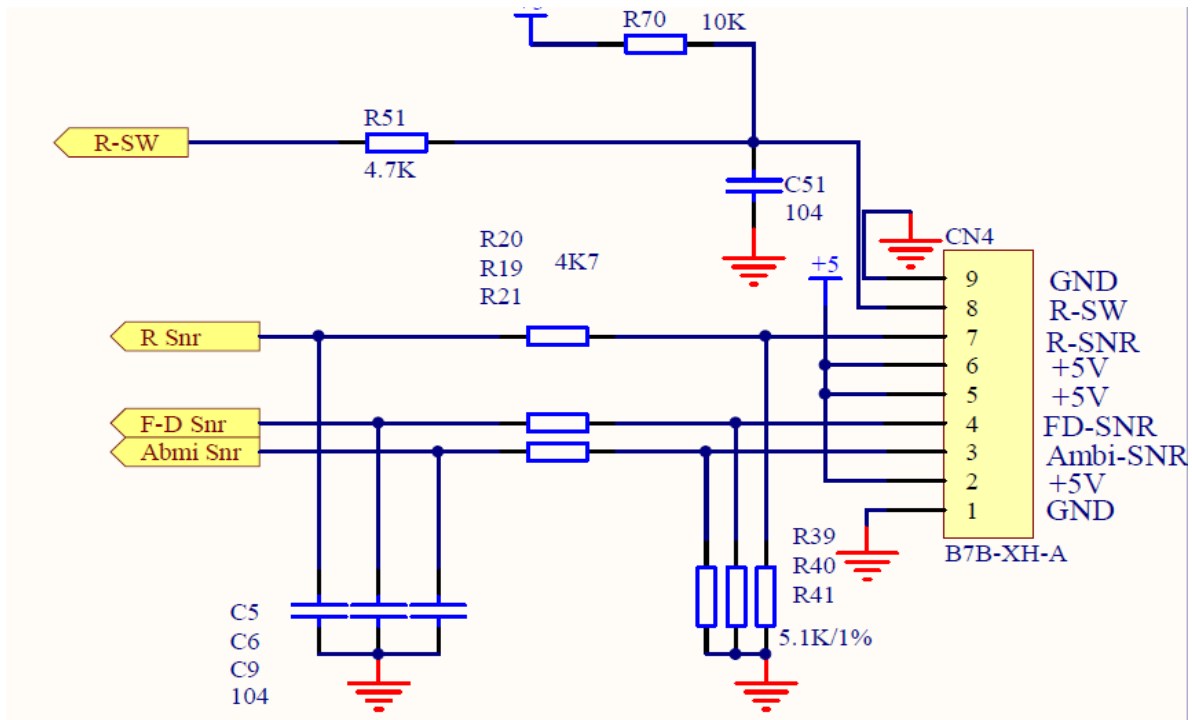
10.2 Door trip test circuit



5V voltage send high-level signal to MCU by passing the R70,at this moment ,the fridge door is closed. When the fridge door is opened, the door switch is closed, at this moment, 5V is connected to GND by passing R70, and it sends low-level signal to MCU. By high-level or low-level voltage detected, the MCU get the information of door opened or closed, so the MCU send out the command:

When door is opened, turn on the LED lamp, turn off the fan motor; when the door is closed , turn off the LED lamp, turn on the fan motor. if the door is open, but the LED lamp does not shine and the fan motor does not stop running, please check whether the door switch fault happen.

10.3 Temperature test circuit



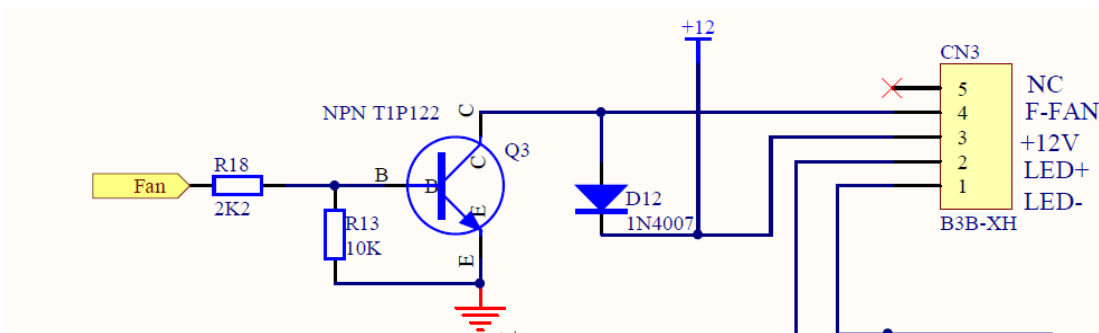
The characteristic that resistance value reduces as the temperature increases is deemed to have negative slope or negative temperature coefficient (NTC), and such thermistor is called as NTC thermistor. The resistance value changes sensitively with temperature and typically changes 7% ~ 3% per degree centigrade. Sensor used in the refrigerator is NTC thermistor.

There is following computing formula for the sensor: Sampling voltage / reference voltage = $R1 / (R_{NTC} + R1)$

$$AD \text{ value} / \text{reference AD value} = R1 / (R_{NTC} + R1)$$

The reference voltage is 5V, R_{NTC} is the resistance value of the sensor, $R1$ is $R31/R32/R33$ in schematic diagram that is 5.1K

10.4 Fan motor circuit of the freezing chamber



The fan in the freezing chamber is running when the compressor is operating. Check 12V and FAN to see if there is a voltage of 12V. When in normal operation, the fan is in low level and the voltage between 12V and FAN is more than 11V. If there's no voltage when the compressor is in operation, fan motor or electric control panel can be replaced.

10.5 Refrigerator fan motor circuit (None)

10.6 Condensing fan motor circuit (None)

10.7 Damper motor circuit (None)

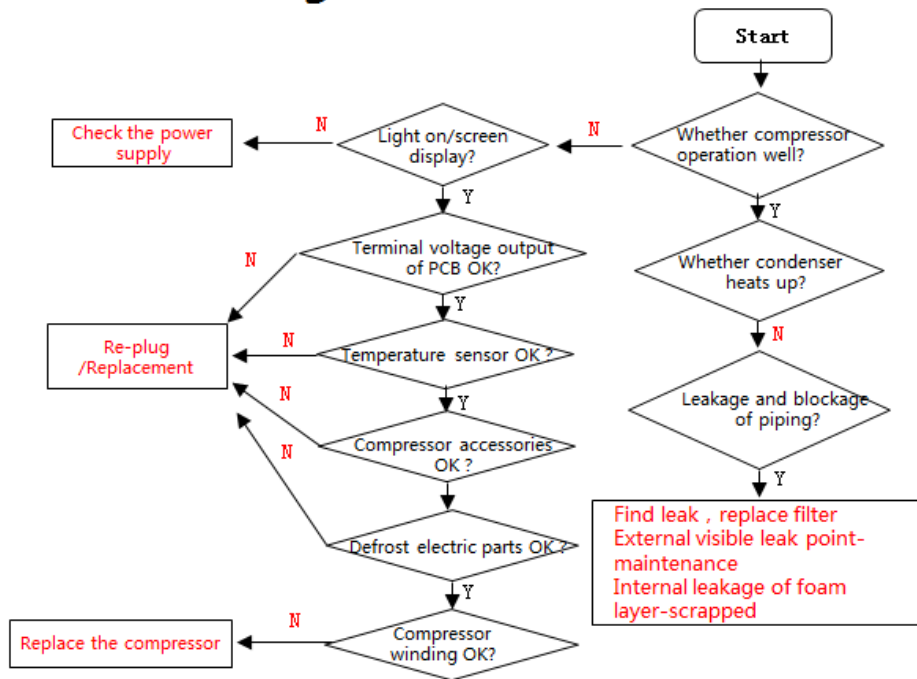
10.8 Resistance value of the sensor (R/T)

T _x (°C)	R (KΩ)	T _x (°C)	R (KΩ)	T _x (°C)	R (KΩ)	T _x (°C)	R (KΩ)	T _x (°C)	R (KΩ)
-30	33.81	-15	14.31	0	6.495	15	3.141	30	1.617
-29	31.85	-14	13.55	1	6.175	16	2.999	31	1.55
-28	30.01	-13	12.83	2	5.873	17	2.865	32	1.486
-27	28.29	-12	12.16	3	5.587	18	2.737	33	1.426
-26	26.68	-11	11.52	4	5.315	19	2.616	34	1.368
-25	25.17	-10	10.92	5	5.06	20	2.501	35	1.312
-24	23.76	-9	10.35	6	4.818	21	2.391	36	1.259
-23	22.43	-8	9.82	7	4.589	22	2.287	37	1.209
-22	21.18	-7	9.316	8	4.372	23	2.188	38	1.161
-21	20.01	-6	8.841	9	4.167	24	2.094	39	1.115
-20	18.9	-5	8.392	10	3.972	25	2.005	40	1.071
-19	17.87	-4	7.968	11	3.788	26	1.919	41	1.029
-18	16.9	-3	7.568	12	3.613	27	1.838	42	0.9885
-17	15.98	-2	7.19	13	3.447	28	1.761	43	0.9506
-16	15.12	-1	6.833	14	3.29	29	1.687	44	0.914

11. Troubleshooting Method

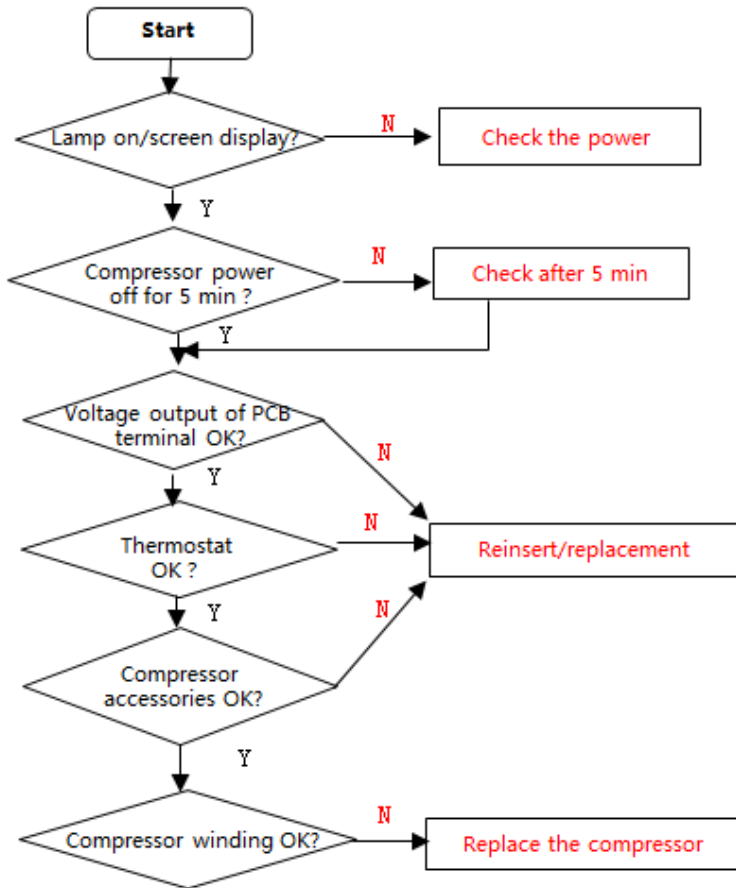
11.1 No refrigeration

No cooling of F room and R room



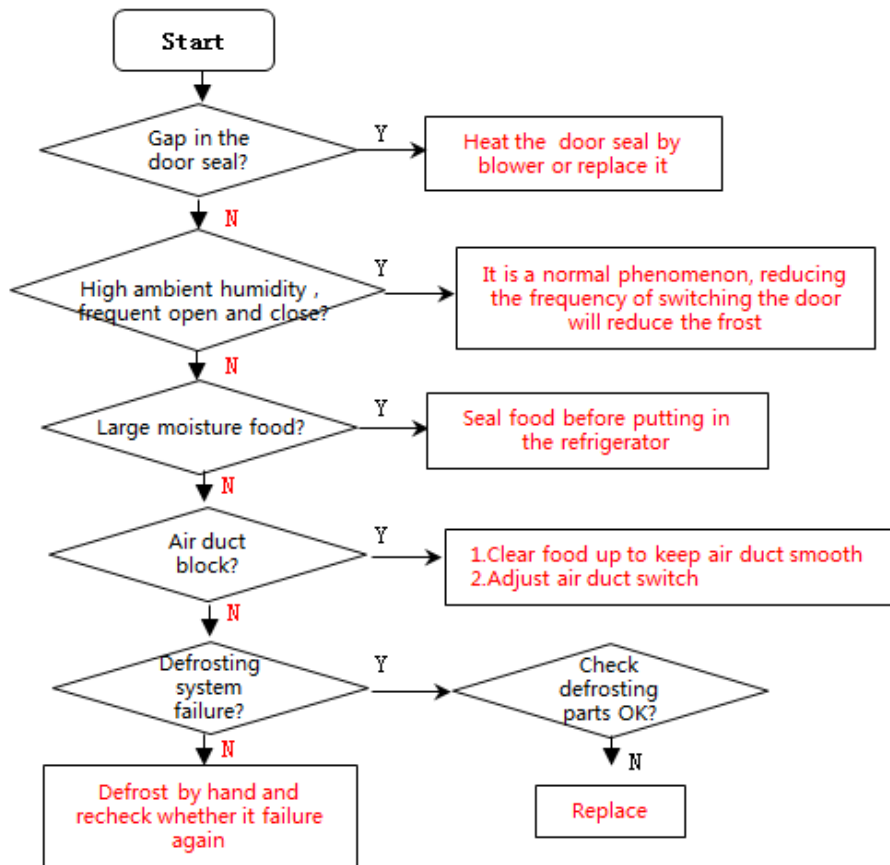
11.2 Compressor failure

No working of compressor

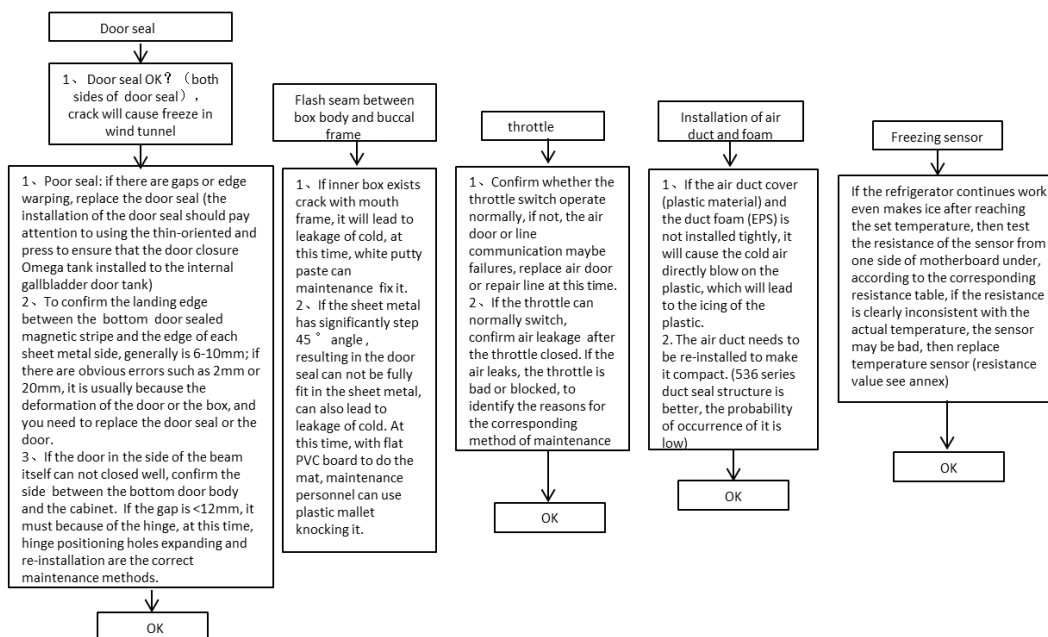


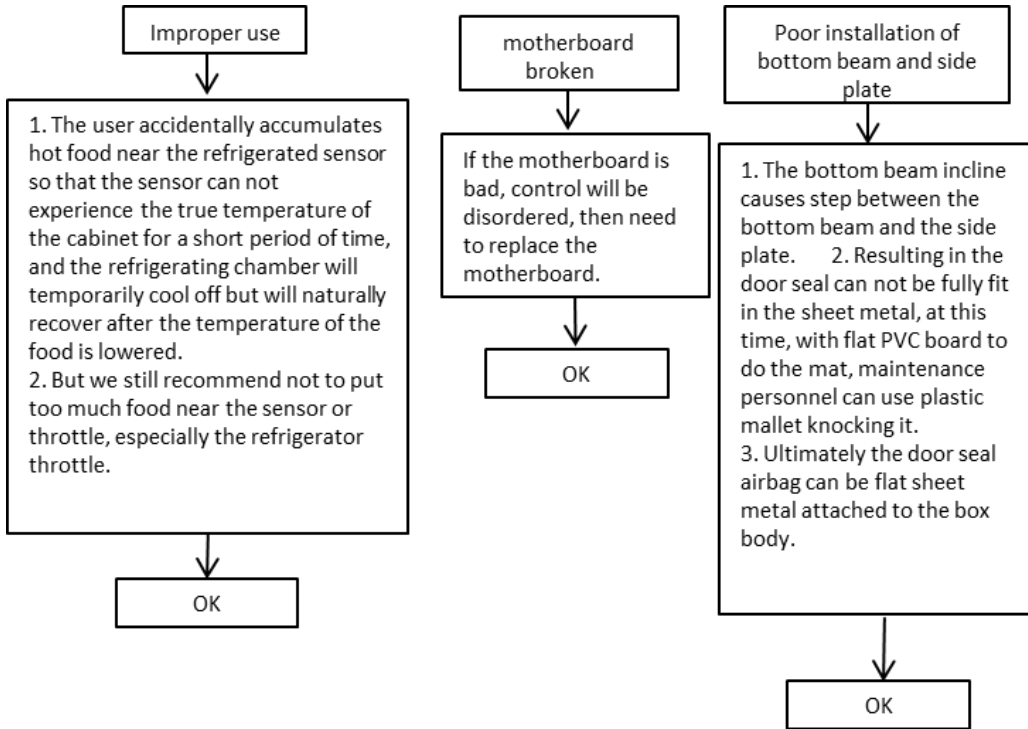
11.3 Defrosting is not working

Inside frosting, no defrosting

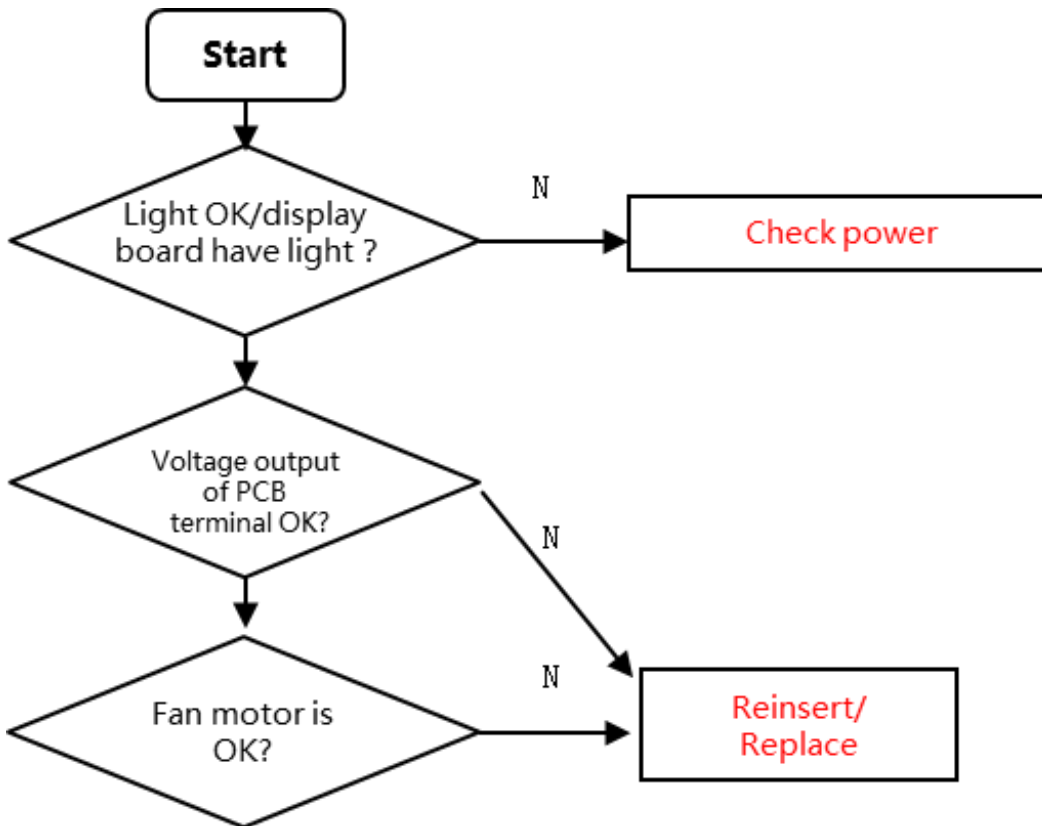


Inside frosting, no defrosting-Maintenance guidelines



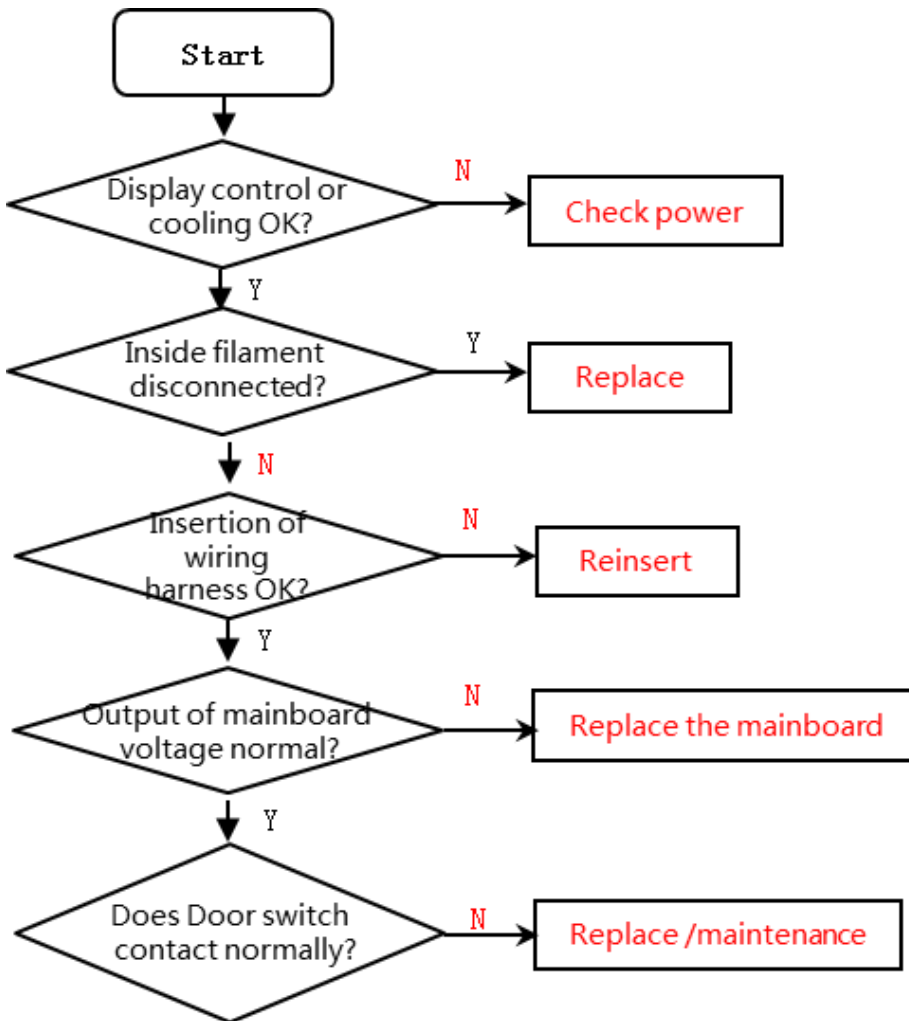


11.4 Fan in the freezing chamber is abnormal



Refer to this method for other fans.

11.5 Damper is abnormal(None)11.6 Lights inside the refrigerator don't light up



12. Figures and details of repair parts(Documents are provided separately)

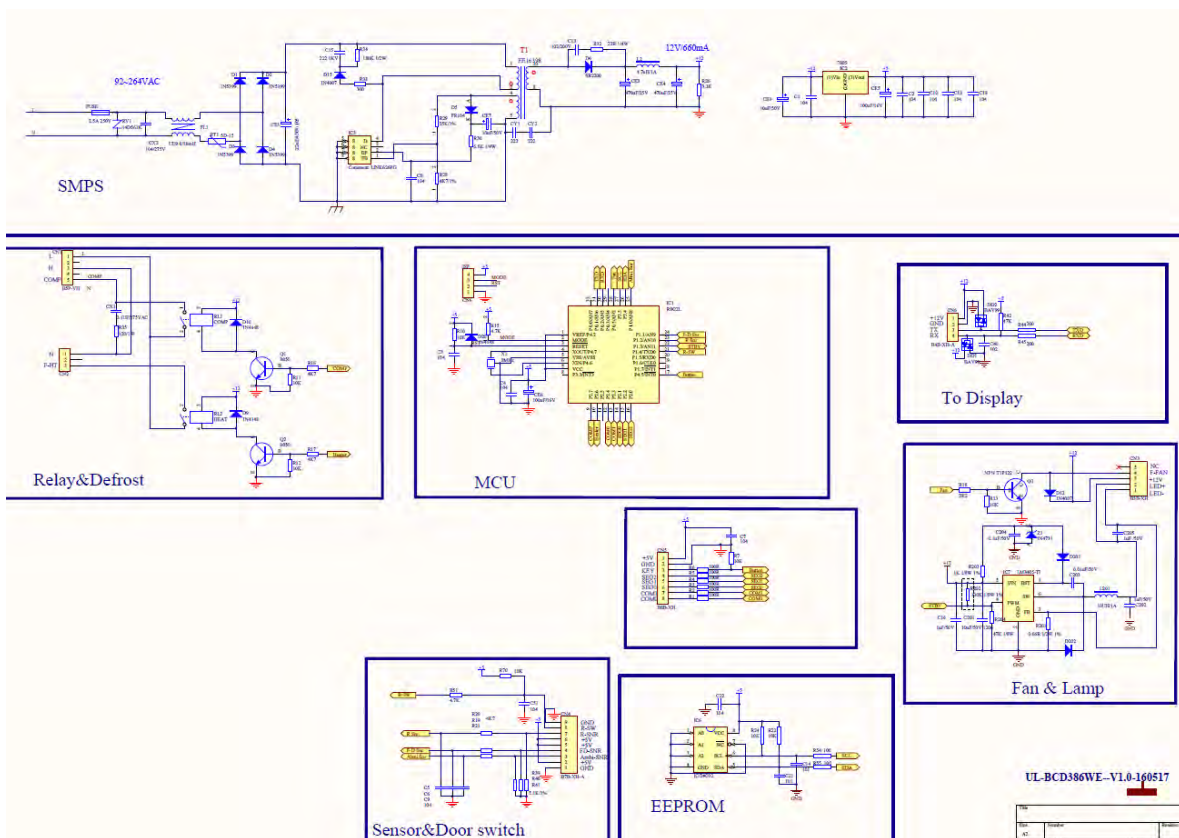
12.1 Figure

12.2 List of parts and components

13Appendix:

13.1Electrical Schematic Diagram

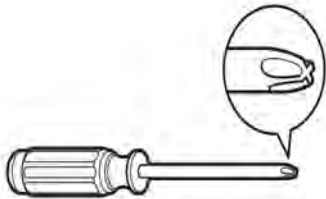
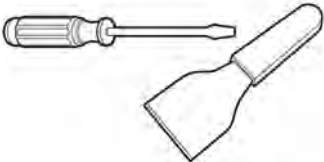
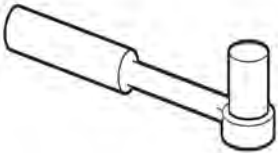




(Model: UL-BD390/481/594WE-ST)

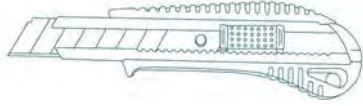




13.2refrigerator maintenance tooling and equipment and material




Tooling




No.	Name	Photo	Main Usage
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1	Phillips screwdriver		screw assemble and disassemble
2	slotted screwdriver/scrapper		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		Charge the refrigerant
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

Midea Refrigerators

If you need to get detailed technical information from the manufacturer, please contact:

xxx@midea.com

Refrigeration Division

Overseas Sales Company

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