Galanz 格兰仕

service manual

Double door air-cooled refrigerator

BCD-280WEV-A

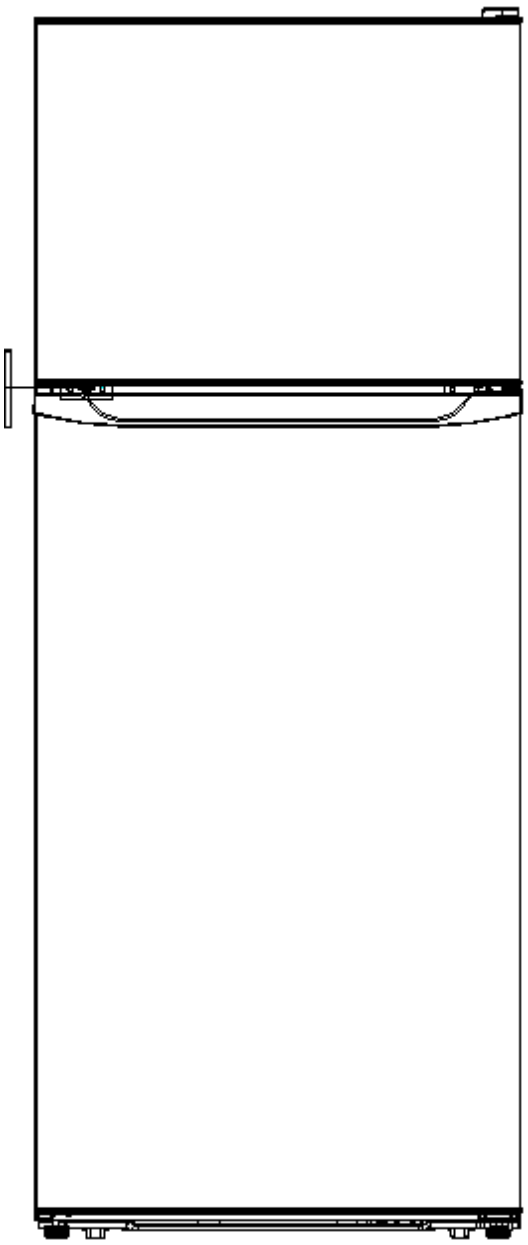


Table of Contents

1. Attention

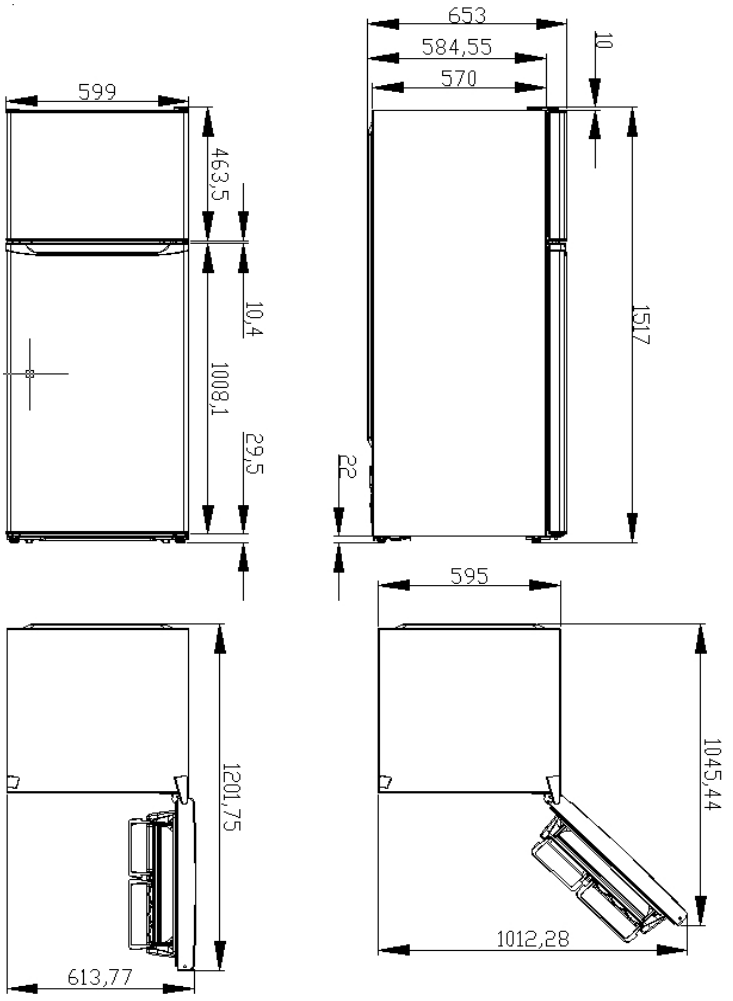
- Check if there is any leak of current.
- Cut out the power supply before the repair to avoid an electrical hazard.
- In the case of a live-line test, insulating gloves should be worn to avoid potential electrical shock.
- Confirm the rated current, voltage and capacity before testing with any kinds of instruments.
- Watch if the upper door is open when we check something at a lower position.
- Take out every part in the cabinet before moving the machine, especially things like panels (e.g. glass shelf).
- Please wear intact cotton gloves when repair any parts of the evaporator, so that scratches by the sharp fins can be avoided.
- If there is a breakdown with the refrigeration system, please surrender the machine to the service center, else the leaked refrigerant may pollute the atmosphere.
- Take care not to damage the supply line. Don't yank at the line, pull the plug out gently from the receptacle. Don't press the line under the line under the cabinet or step on it. Take care not to roll on or damage the supply line when moves the machine from the wall.
- In the case of leakage of inflammable gases like carbon monoxide, open the door and windows. Don't pull out or insert the plugs of the appliance .
- Don't touch the refrigeration surface of the freezing compartment when the refrigerator is in operation, especially when our hand is wet, else we may be glued to the surface.
- Pull out the plug of power supply during clearance or power outage. Wait at least five minutes to resume the power supply in order to prevent damage to the compressor caused by continuous restart.

2. Product feature

2.1.Specifications

Model		BCD-280WEV-A Double door air-cooled refrigerator
Capacity	Total capacity (L)	283
	refrigerator(L)	213
	freezer (L)	70
Unit dimensions (W*D*H)		599x653x1517
Voltage / frequency		12V/DC
Product weight	Net weight	52.6KG
	Gross weight	57KG

2.2.Installation dimension



2.3.Performance parameter

content		parameter
model		BCD-280WEV-A
Compressor	model	HUA YI DL30H
	Refrigerating capacity/COP	58W～98W/1.27～1.34
	Starting mode	Control panel program control
	Refrigerant oil	120ml
Evaporator	Refrigerated evaporator	finned
Drier		XH-9
Capillary tube		freezing capillary tube: pressure ratio 7:5.3 specification 1.8x0.7mm
refrigerant		70(g)/R134a
Indirect temperature sensor	Refrigerating chamber	yes
	Freezing chamber	/
Defrosting sensor	Refrigerated evaporator	Reset sensor≥10℃defrosting over

Attention: Trs: Refrigerating chamber sets temperature
Tfs: Freezing chamber sets temperature

2.4.Electric appliance parameter

content	parameter
model	BCD-280WEV-A
Voltage / frequency	12V/DC
Compressor rated power	45W～73W
Freezing and defrosting heating tube	DC12V 120W
freezing fan	DC 12V 110mA
Refrigerating light	DC12V 40mA 0.5W

3.Operational Guidelines and Installation

3.1 Setting temperature

3.1.1 Refrigerating chamber

Refrigerator temperature is manually adjusted by the operator panel。The number of the operator is bigger, the setting temperature is lower, temperature range :7℃~1℃。Short press “SET” key, add a high grade. When reach to the highest grade, press again, and then return to the lowest grade, e.g.1-1。

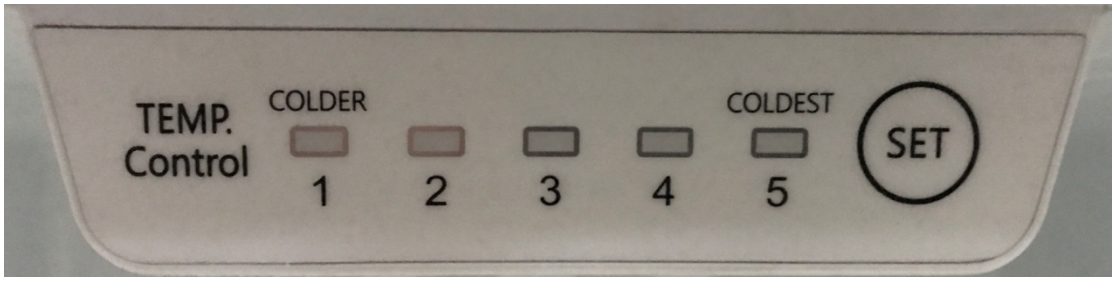


图 1-1

3.1.2 Freezing chamber

Freezing chamber temperature adjusted by rotating manual valve, If you need to lower the set temperature, rotate the knob in the "COLDER" direction, and on the contrary rotate the knob in the "cold" direction, e.g.1-2。

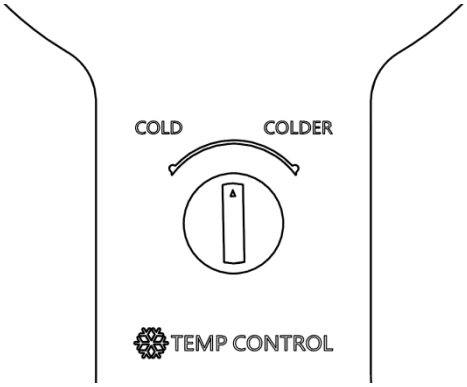


图 1-2

3.2 Troubleshooting tips

Refrigerator checks the operation by itself, if there is a problem, the operator panel on the corresponding position of the LED flicker prompts fault information of the user, a variety of faults corresponding to the LED position as follows:

1、Refrigerating chamber temperature is too high: When refrigerating chamber temperature is higher than +5℃ and lasting 60 minutes (Except within 5 hours of initial power-on), Display board current gear LED light flashes

2、Refrigerating sensor has problems：LED1 and LED2，e.g.2-2；

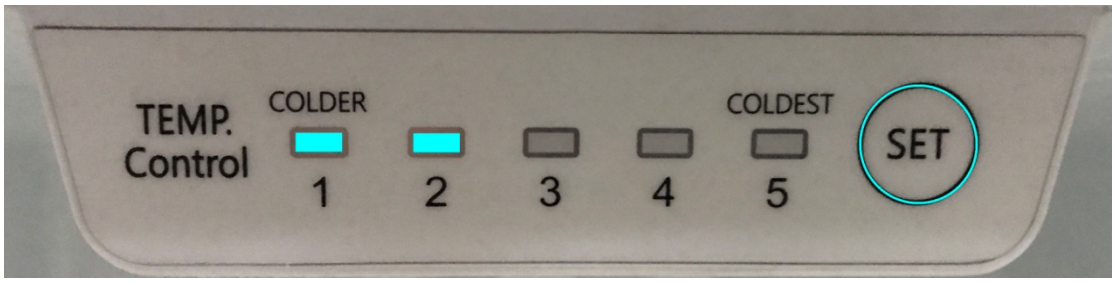


图 2-2

3、Defrosting sensor has problems：LED2and LED3，e.g.2-3；

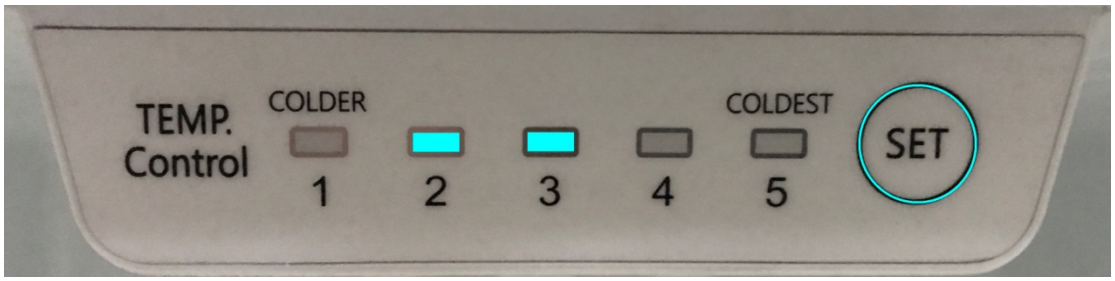


图 2-3

4、Draught fan has problems：LED3 and LED4，e.g.2-4；

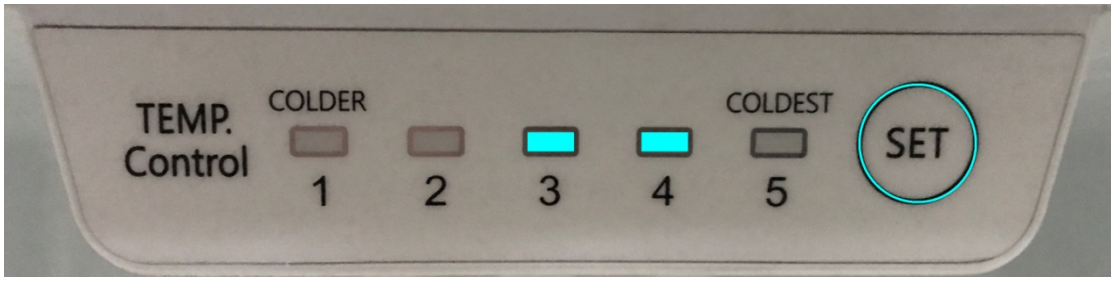


图 2-4

5、Undervoltage or overvoltage protection：When the supply voltage is less than 9V or more than 17V，LED1、LED2、LED3.、LED4、LED5 flicker together，e.g.2-5

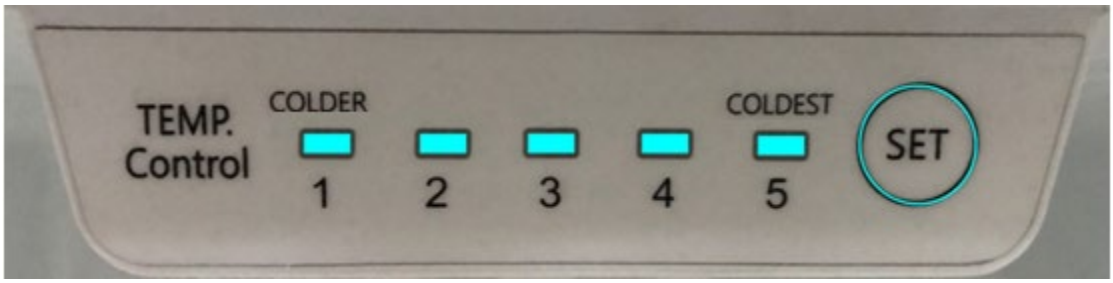


图 2-5

3.3 Self-test

When the refrigerator has a tip of troubleshoot, you can find troubleshoot reason through the refrigerator self-test。

1、enter：

Press and play the "SET" key for 5 seconds until the LEDS are all lit, then into the self-test mode.

2、return:

When finish self-test, it will return by itself.

3、Procedure of self-test:

After entering the self-test, in addition to the compressor, other loads automatically shut down, and then the operation panel of the LED light up in the following order:

LED all bright 2 seconds,

LED all out 2 seconds,

LED1~LED5 display software phase number 2 seconds,

LED1~LED5 display software version number 2 seconds,

and then according to the following table order self-test, At the same time LED1~LED5 prompts the self-test step:

number	Self-test function	LED1~LED5	description
1	Refrigerated sensor	●●○○○	When the refrigerated sensor fails, it flashes for 2 seconds .And if it does not have problems it will light up for 2 seconds
2	Defrosting sensor	○●●○○	When defrosting sensor fails, it flashes for 2 seconds .And if it does not have problems it will light up for 2 seconds
3	draught fan	○○●●○	When draught fan fails, it flashes for 2 seconds .And if it does not have problems it will light up for 2 seconds
4	Refrigerated light	●●●○○	The refrigerating lamp is powered on for 2 seconds, and the LED indicator lights up for 2 seconds
5	Evaporator defrost pipe	○●●●○	2s Evaporator defrost pipe is powered on for 2 seconds, and the LED indicator lights up for 2 seconds
6	compressor	○○●●●	2s compressor is powered on for 2 seconds, and the LED indicator lights up for 2 seconds

After the above steps are completed, the self-test ends and all LEDS are extinguished for 2 seconds before they automatically exit to normal mode.

4. Disassembly and reassembly

4.1. Door gasket

Refrigerator door seals are used between the refrigerator door body and the box, for sealing accessories, installed on the door lining

（1）open the door。

（2) Start by grabbing the PVC door seal from the corner and pulling it out of the door lining.

Note:1. Can't push too hard to prevent ripping the door seal.

2. hold the door body during demolition, to prevent injury to people or damage to the door body.

4.2. Frozen door

(1) Pry open the upper hinge cover.

(2) loosen the upper hinge screws (3 pcs) with a cross screwdriver or an outer hexagonal sleeve and take onto the upper hinge.

(3) Grab both sides of the door body with both hands, gently lift up, take away the door body.

Note: When disassembling, the door body must be closed. To prevent the removal of the upper hinge, the door body loses its pivot and dumps outward, resulting in injury to personnel and damage to the door body.

4.3. Refrigerator door

(1) Loosen the middle hinge screws (2 pcs) with a cross screwdriver or an outer hexagonal sleeve and remove the middle hinge in.

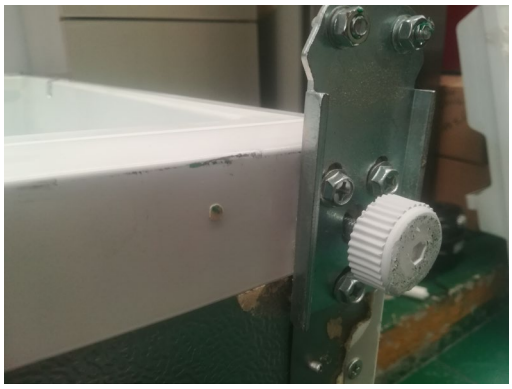
(2) Grab both sides of the door body with both hands, gently lift up, take away the door body.

Note: When disassembling, the door body must be closed. Prevent disassembly of the hinge, the door body lost pivot, outward dumping, resulting in injury to people and damage to the door body.

4.4. Lower hinge

(1) Twist the pad out.

(2) Loosen the screws (3 pcs) with a cross screwdriver or an outer hexagonal sleeve and remove the hinge.



4.5. Freezing duct

(1) Use a screwdriver to warp the screws on both sides in the direction of the diagram.

(2) Unscrew the mounting screws with a cross screwdriver.

(3) Use the tool to insert the wind crossing, and then pull out the airway parts outward.

(4) Remove the fan terminal.

4.6.Refrigerated duct

(1) unscrew the mounting screws with a cross screwdriver.

(2) Remove the terminal.

4.7.Frozen evaporator

(1) Remove the frozen airway cover part

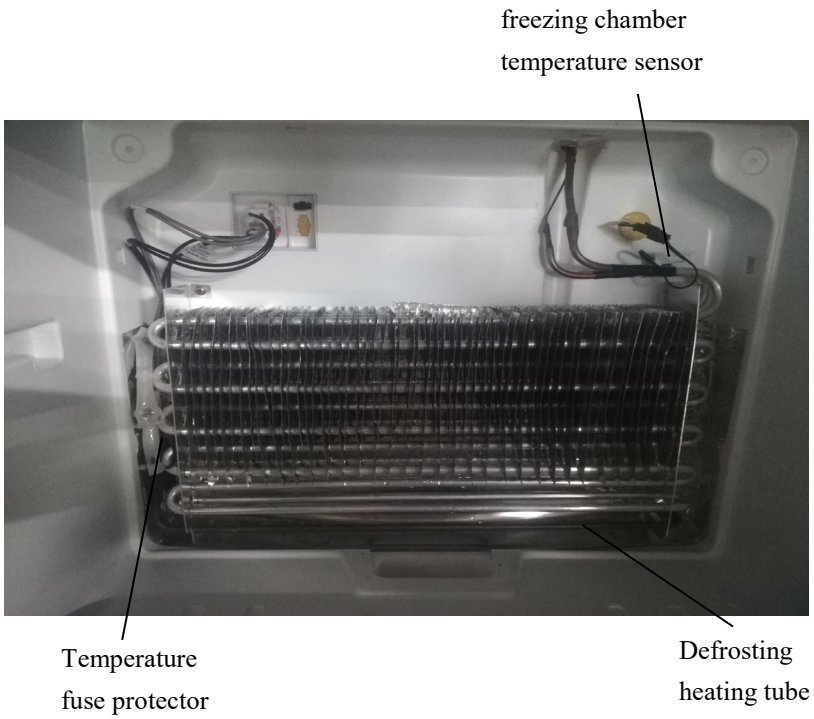
(2) Release all connection terminals.

(3) Loosen the evaporator fixing screws (2 pcs).

(4) Heating evaporator two copper connection welds, melt open welds.

(5) Remove the frozen evaporator.

Note: Evaporator blades are sharp, it is recommended to wear gloves operation. Before operation, the system refrigerant should be released and the system should be blown out with nitrogen.



4.8.Electrical box

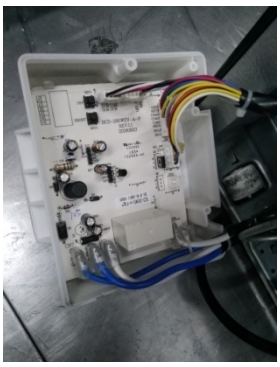
(1) Use a screwdriver as shown to remove the electrical box mounting screws.

(2) Use a screwdriver as shown to remove the electrical box cover mounting screws.

(3) Remove the terminal.

(4) Remove the main control board.





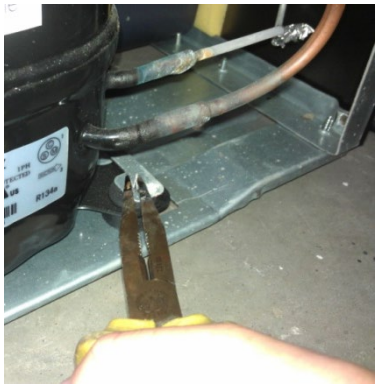

4.9.Compressor

(1) Remove the compressor control box with a screwdriver and remove the internal starter and protector.

(2) Use special pliers to cut the compressor back trachea and exhaust pipe.

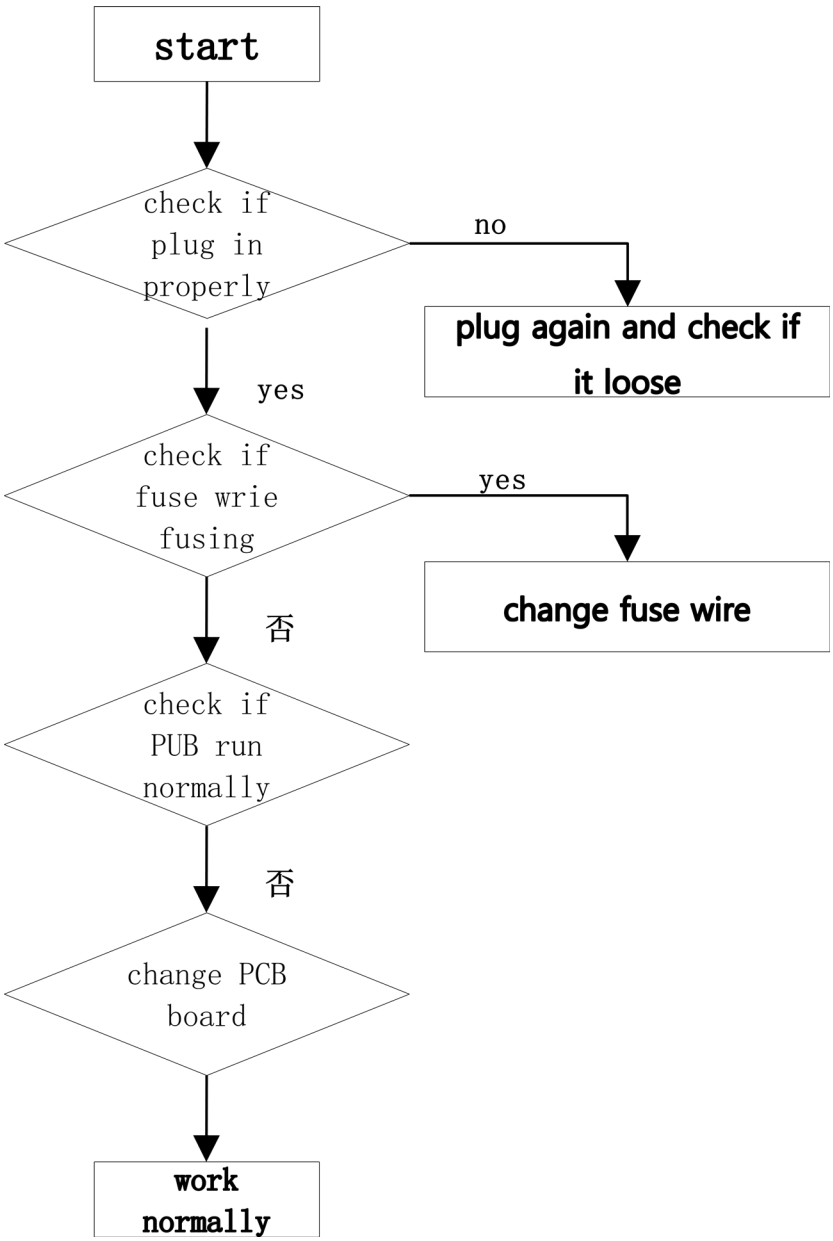
(3) Use the vice to rotate the compressor floor hanging ear so that it is parallel to the compressor pressure plate hole, remove the two compressor pressure plate, you can remove the compressor



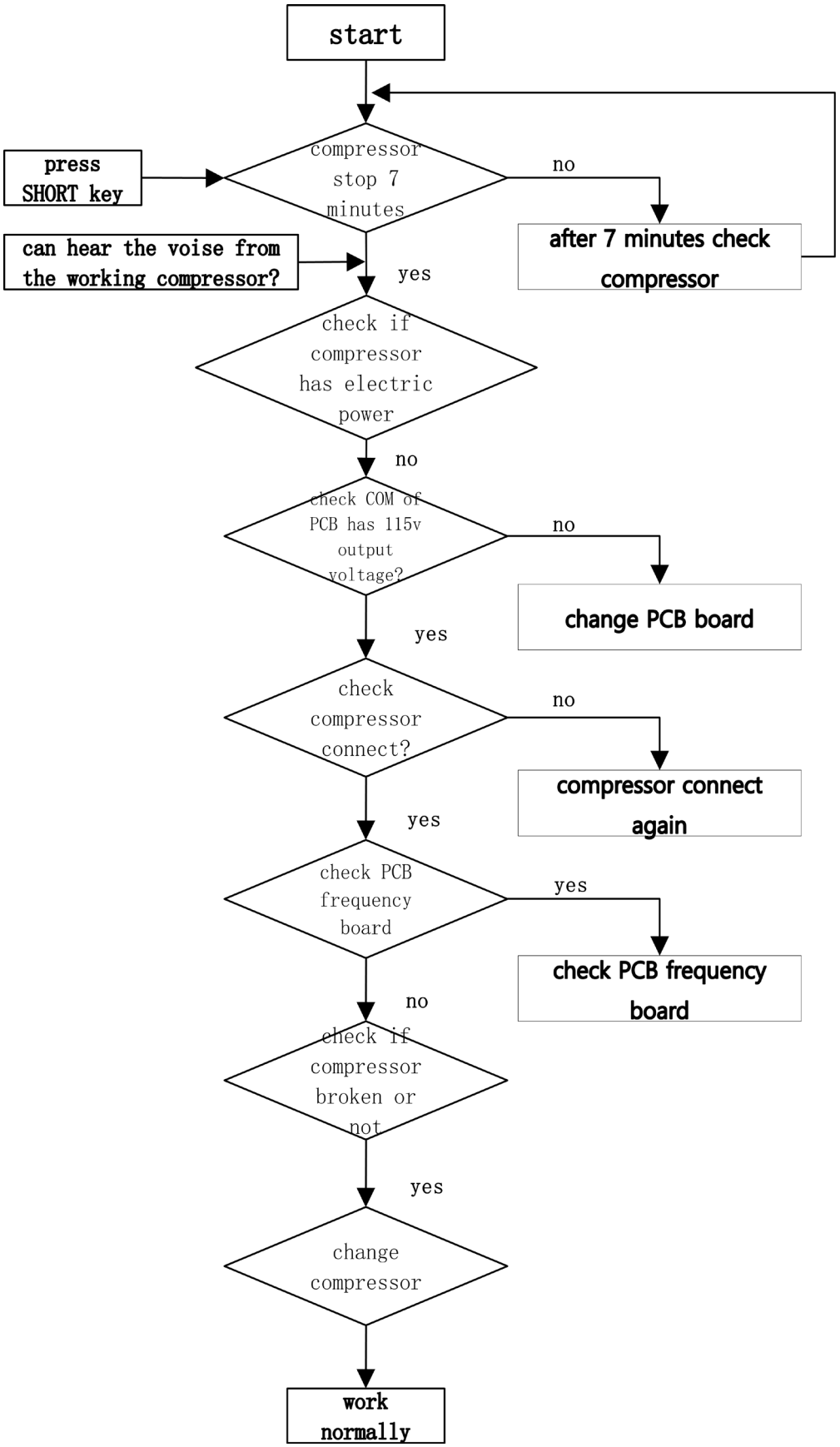


5.Fault diagnosis

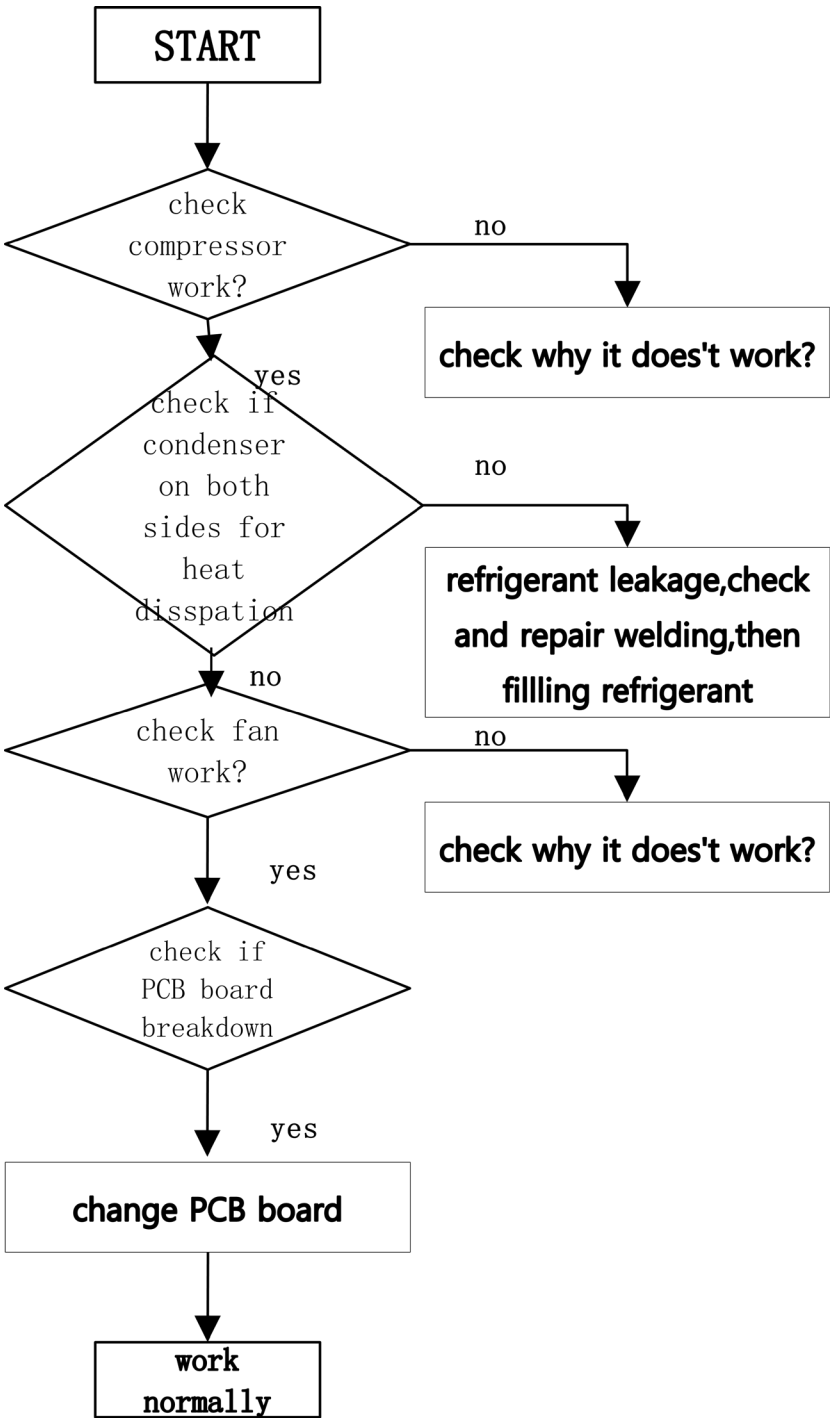
5.1.No electricity



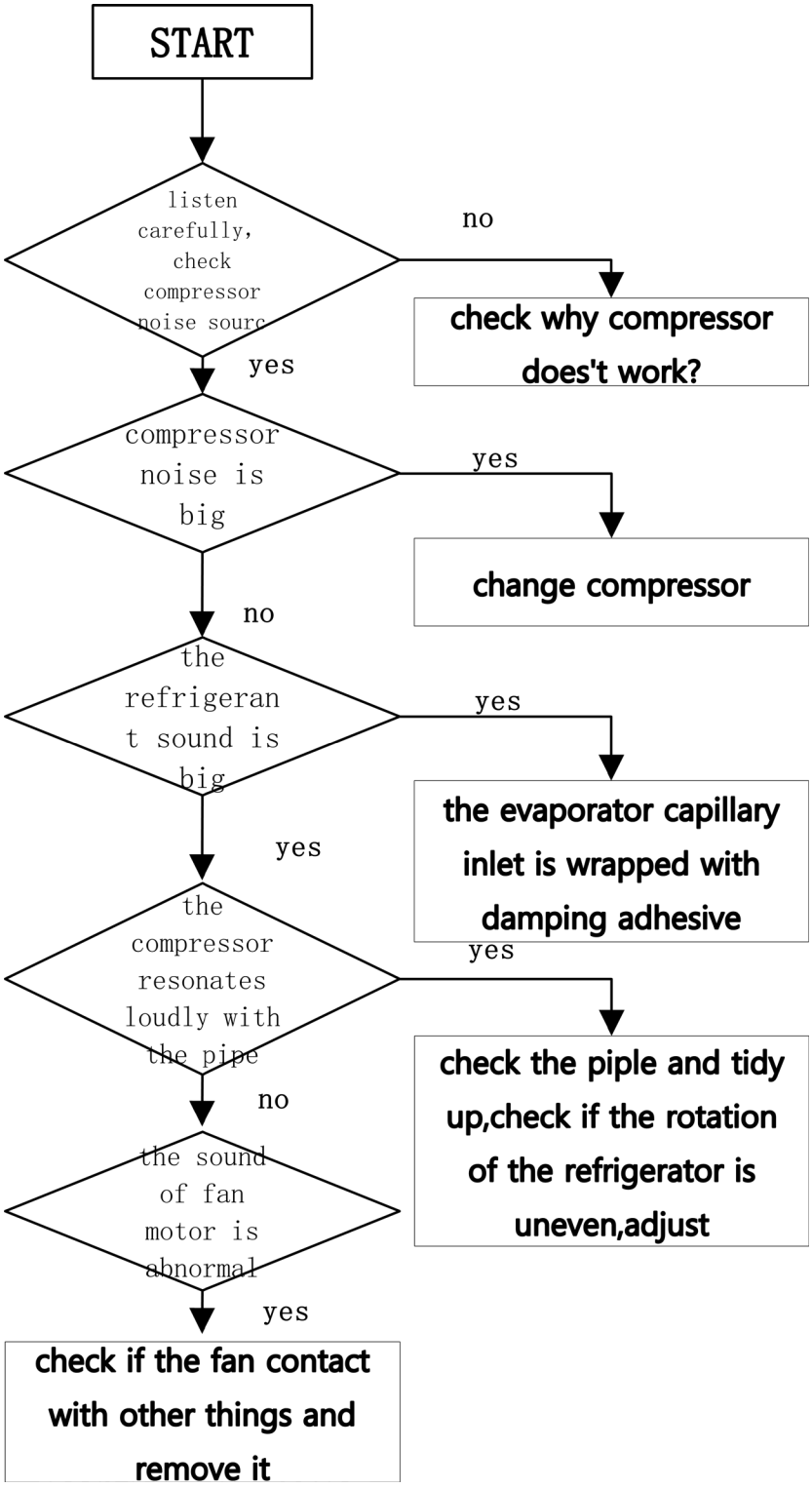
5.2. Compressor can’ t work normally



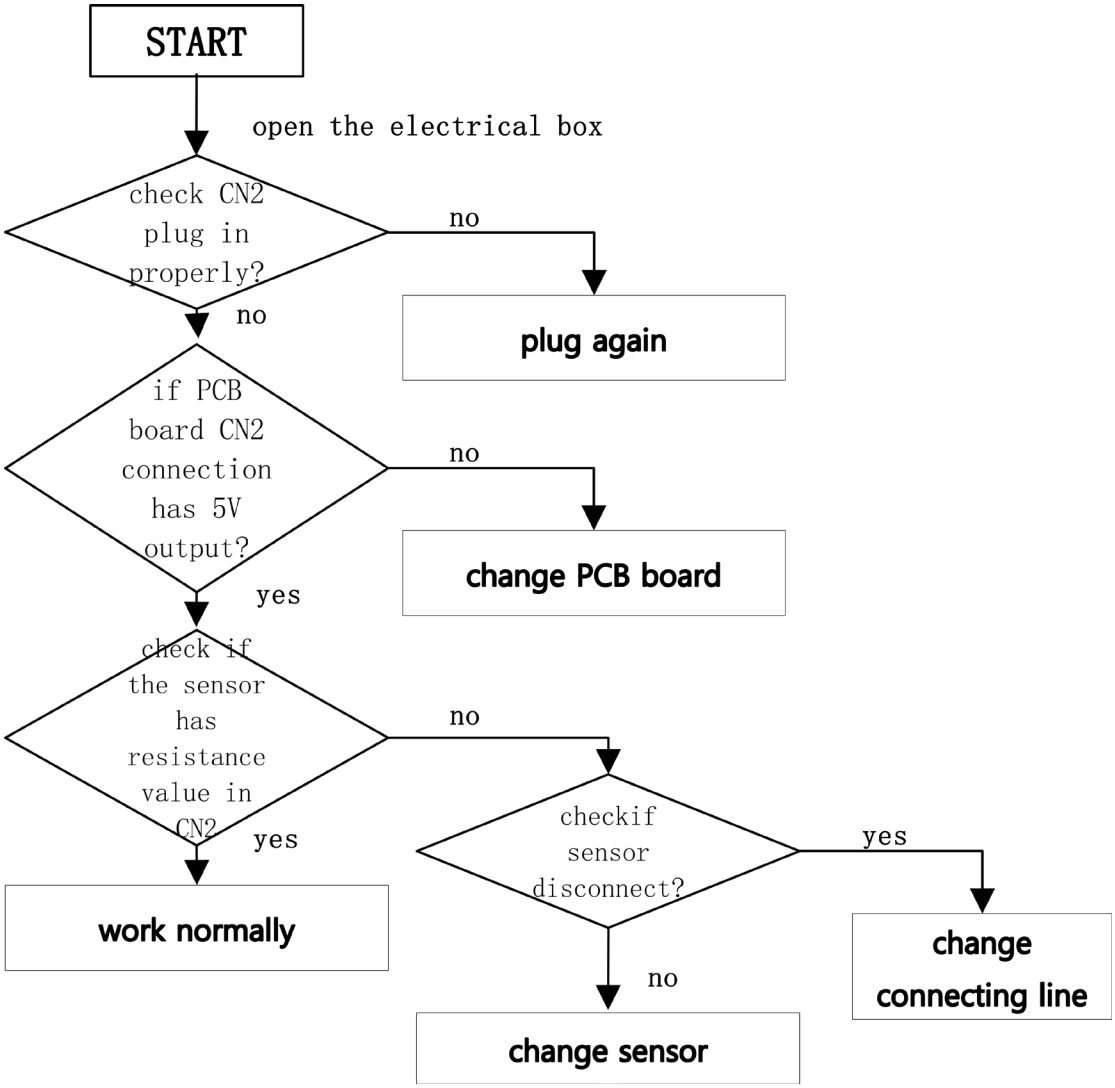
5.3.Refrigerator is not refrigerating or poor refrigerating



5.4.Noise fault

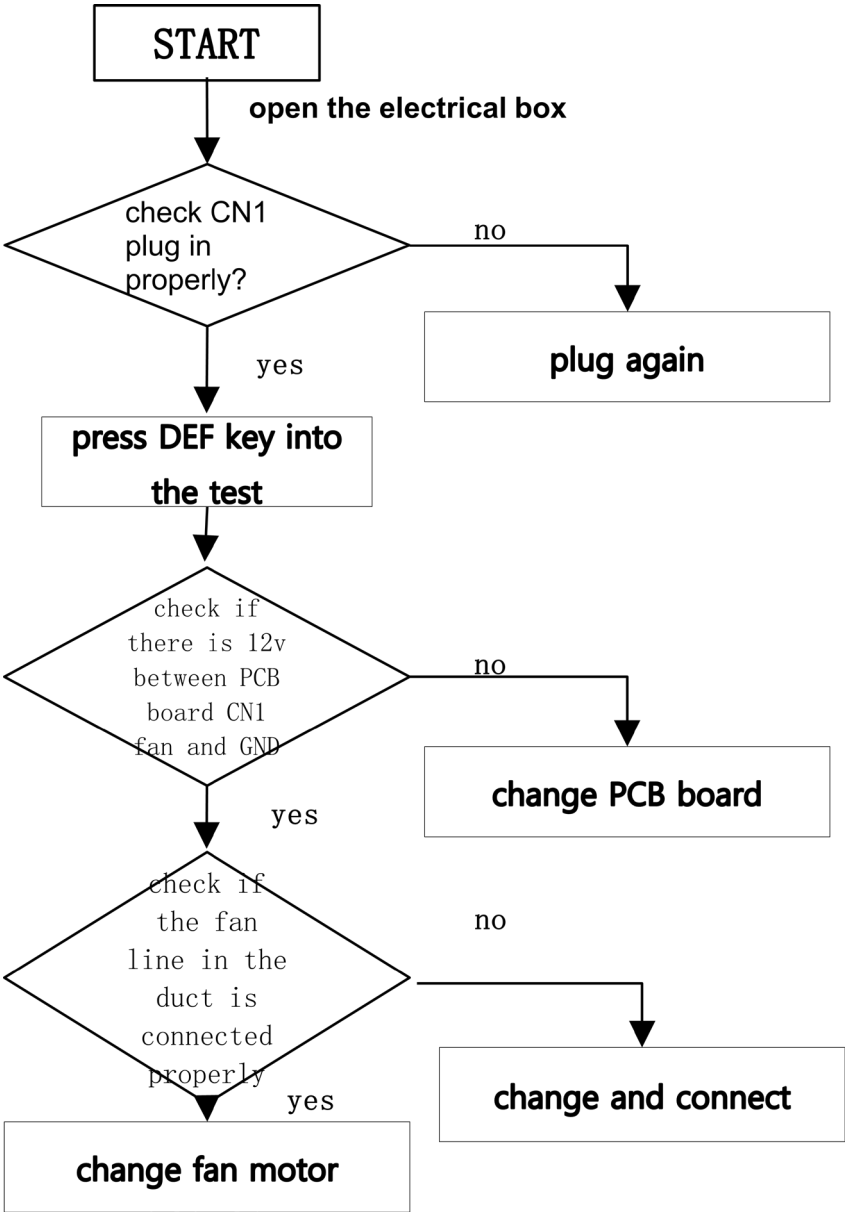


5.5. Sensor breakdown



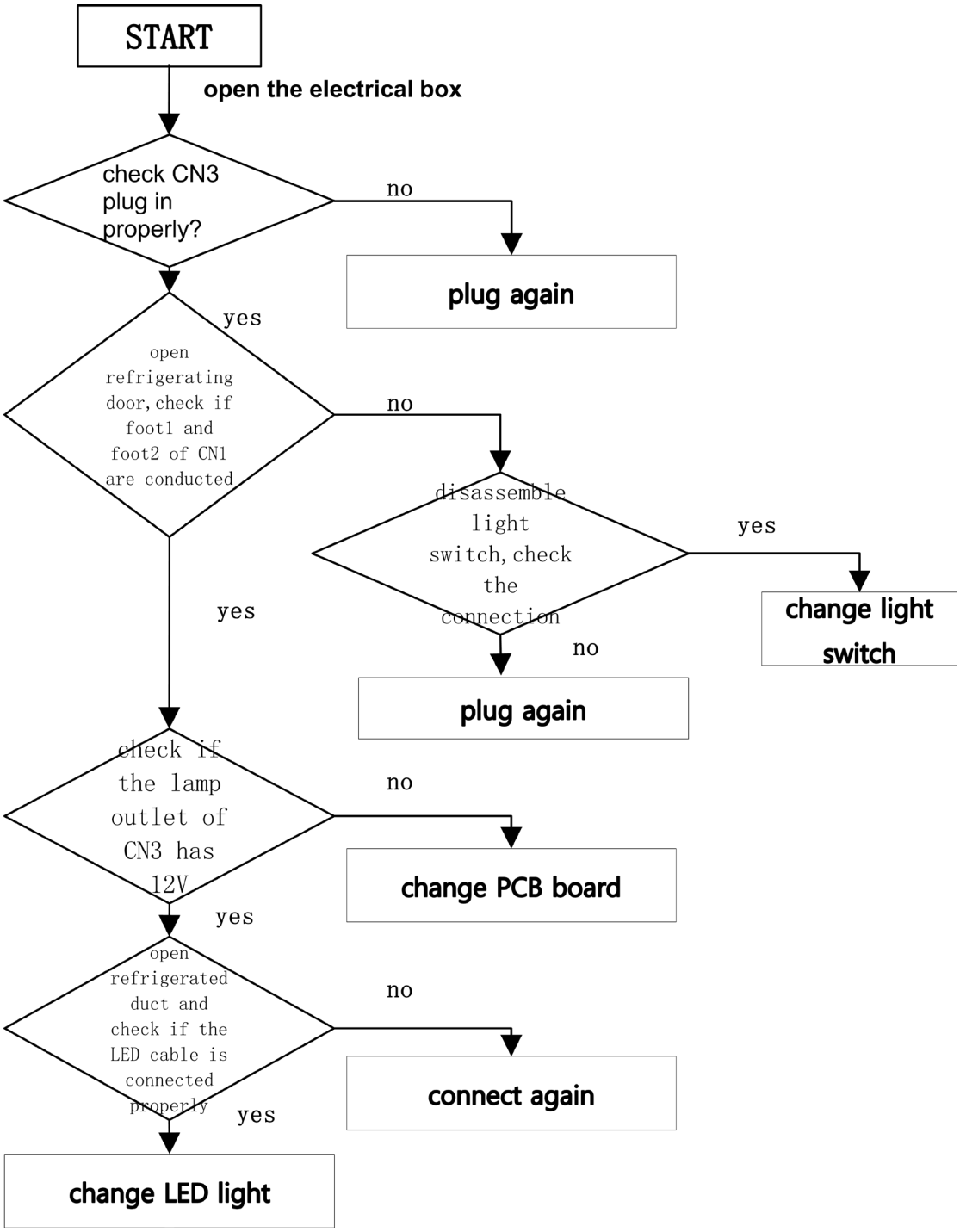
Note: If the cable disconnect is located inside the box, please contact the manufacturer

5.6. Draught fan doesn’ t work

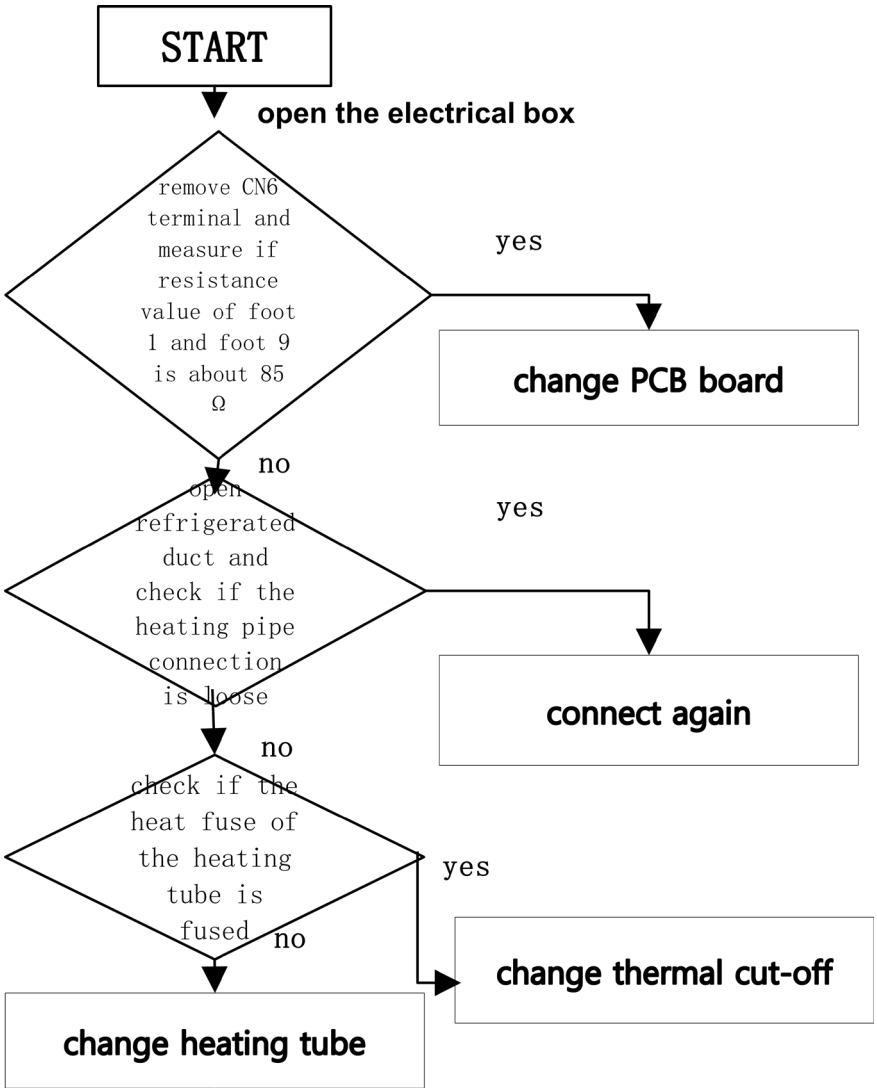


Note: Test mode for draught fan, compressor operation status, lasting 22 minutes, after 25 minutes it will exit test mode

5.7. Refrigerated light does not work

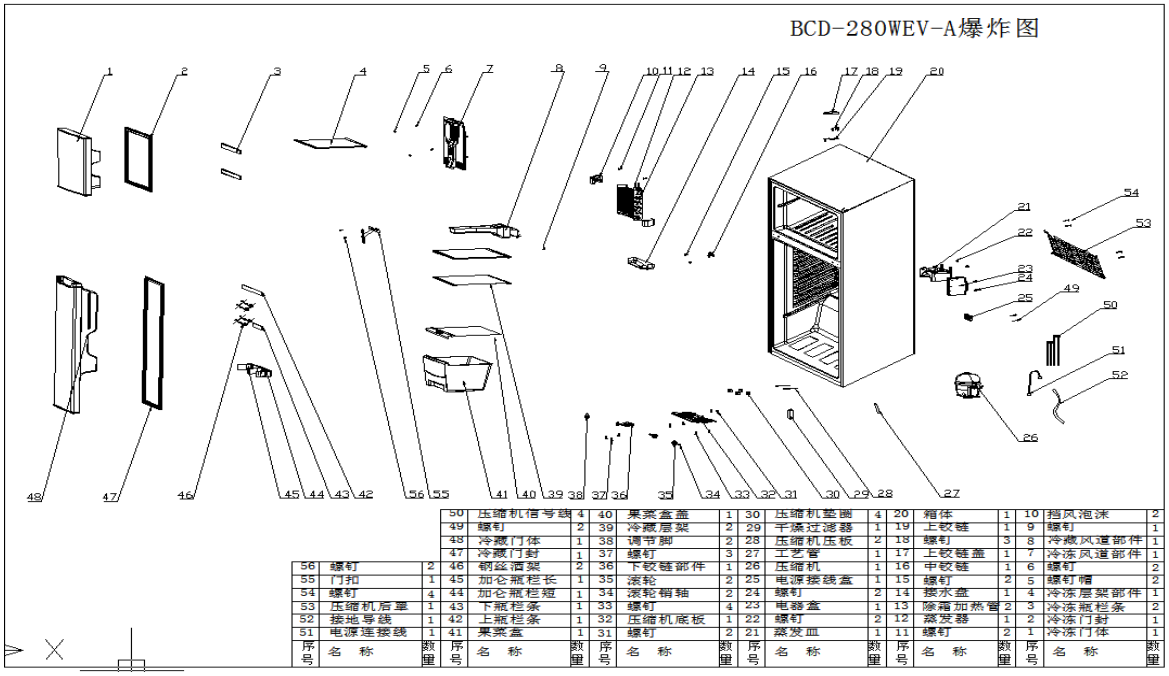


5.8. The defrosting heating tube does not work



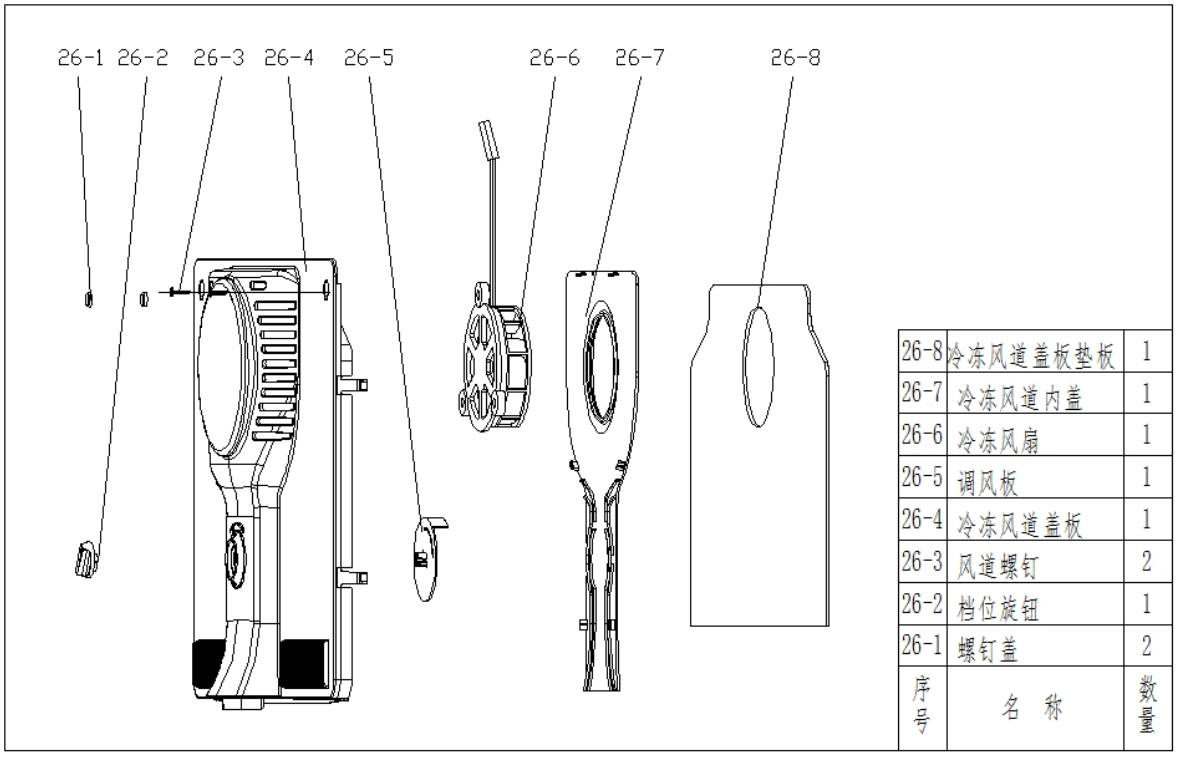
6. Exploded diagram and components

6.1. BCD-280WEV-A exploded diagram



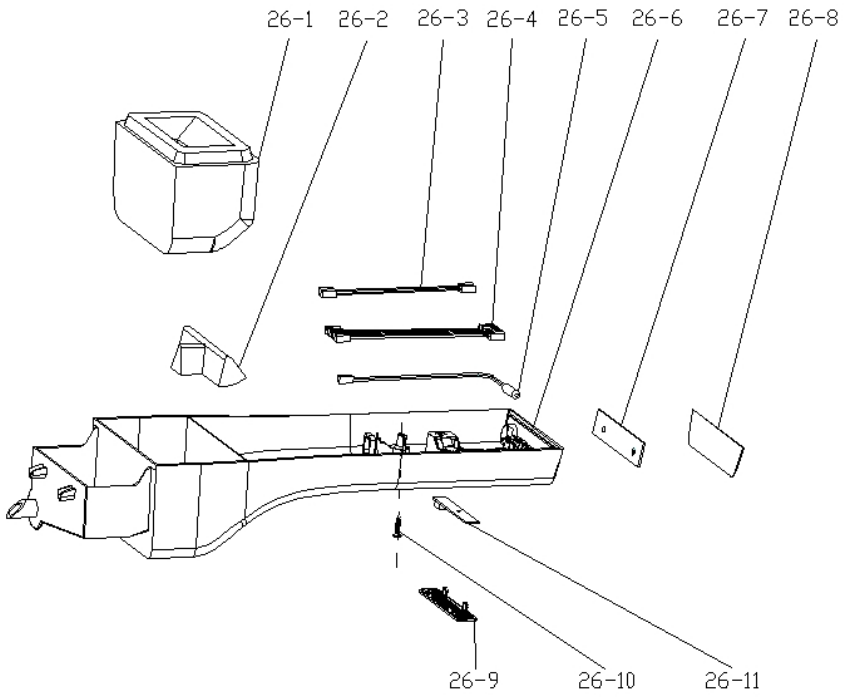
序号	名称	数量	序号	名称	数量	序号	名称	数量	序号	名称	数量	序号	名称	数量	序号	名称	数量
56	螺钉	2	46	钢丝酒架	2	36	下铰链部件	1	26	压缩机	1	16	中铰链	1	6	螺钉	2
55	门扣	1	45	加仑瓶栏长	1	35	滚轮	2	25	电源接线盒	1	15	螺钉	2	5	螺钉帽	2
54	螺钉	4	44	加仑瓶栏短	1	34	滚轮铜轴	2	24	螺钉	2	14	接水盒	1	4	冷冻层架部件	1
53	压缩机后罩	1	43	下瓶栏条	1	33	螺钉	4	23	电器盒	1	13	除霜加热管	2	3	冷冻瓶栏条	2
52	接地导线	1	42	上瓶栏条	1	32	压缩机底板	1	22	螺钉	2	12	蒸发器	1	2	冷冻门封	1
51	电源连接线	1	41	果菜盒	1	31	螺钉	2	21	蒸发皿	1	11	螺钉	2	1	冷冻门体	1
50	压缩机信号线	4	40	果菜盒盖	1	30	压缩机垫圈	4	20	箱体	1	10	挡风泡沫	2			
49	螺钉	2	39	冷藏层架	2	29	干燥过滤器	1	19	上铰链	1	9	螺钉	1			
48	冷藏门体	1	38	调节脚	2	28	压缩机压板	2	18	螺钉	3	8	冷藏风道部件	1			
47	冷藏门封	1	37	螺钉	3	27	工艺管	1	17	上铰链盖	1	7	冷冻风道部件	1			

6.3. Frozen air duct components



序号	名称	数量
26-8	冷冻风道盖板垫板	1
26-7	冷冻风道内盖	1
26-6	冷冻风扇	1
26-5	调风板	1
26-4	冷冻风道盖板	1
26-3	风道螺钉	2
26-2	档位旋钮	1
26-1	螺钉盖	2

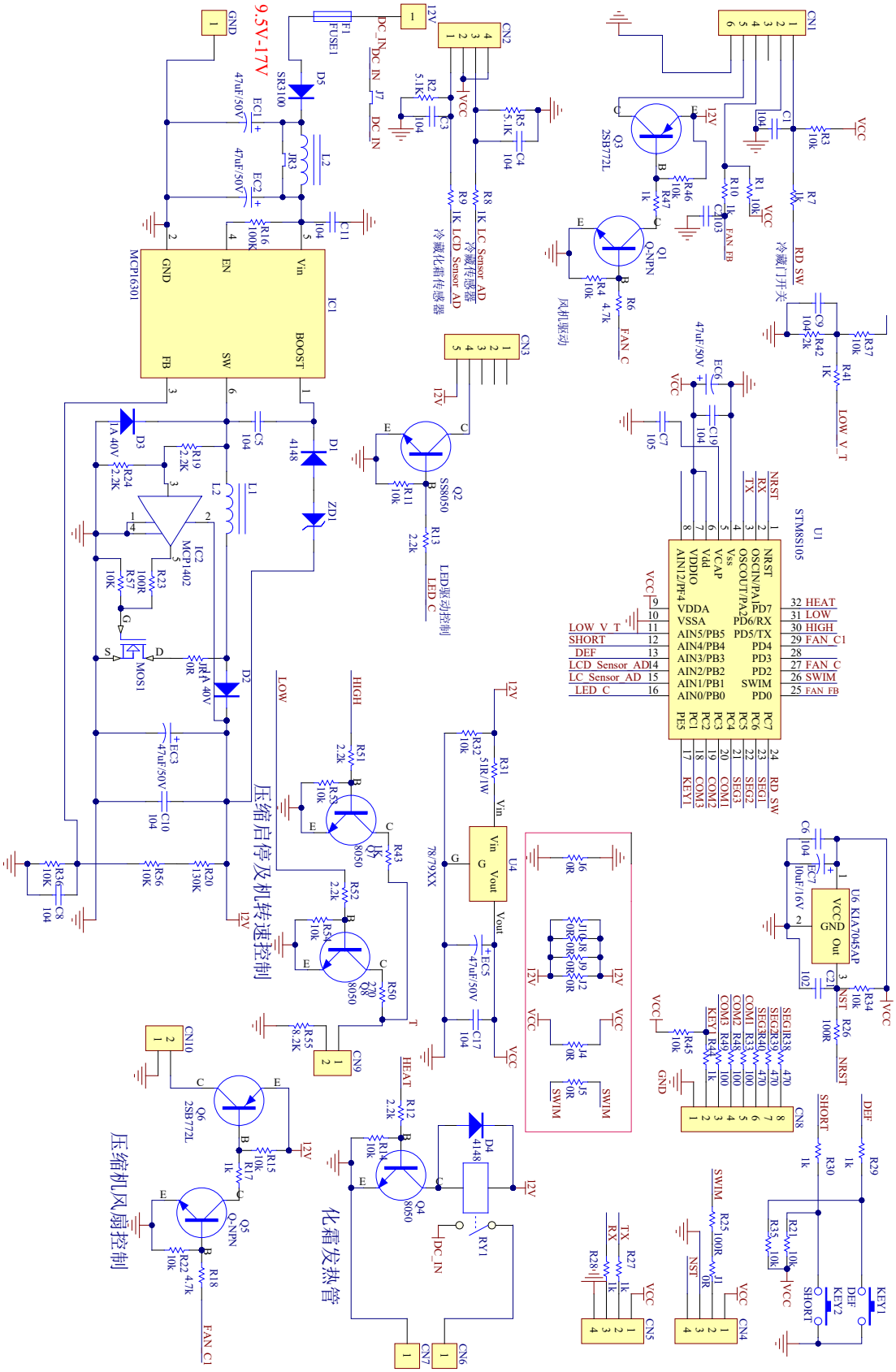
6.4.Refrigerating air duct components



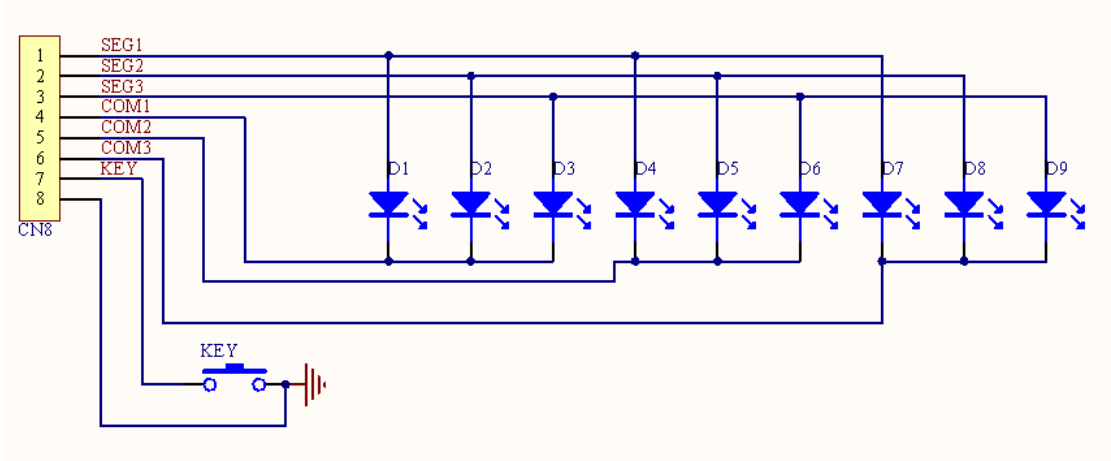
序号	名 称	数量
26-11	LED灯	1
26-10	冷藏风道螺钉	1
26-9	LED灯罩	1
26-8	显示面板	1
26-7	显示板	1
26-6	冷藏风道盖板	1
26-5	传感器	1
26-4	显示屏连接线	1
26-3	LED灯连接线	1
26-2	冷藏风道泡沫2	1
26-1	冷藏风道泡沫1	1

7. Electrical appliances and control

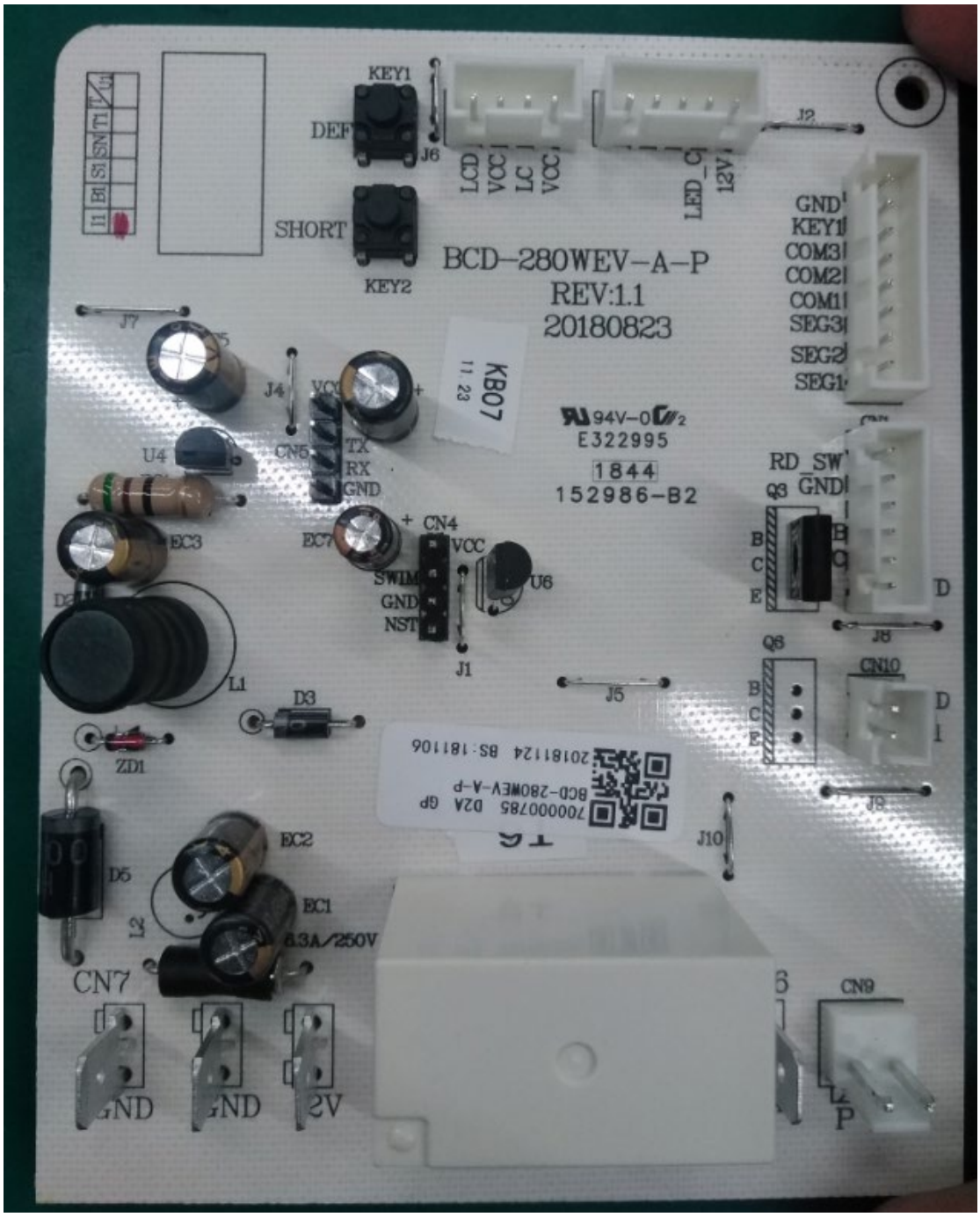
7.1. Schematic diagram of power board

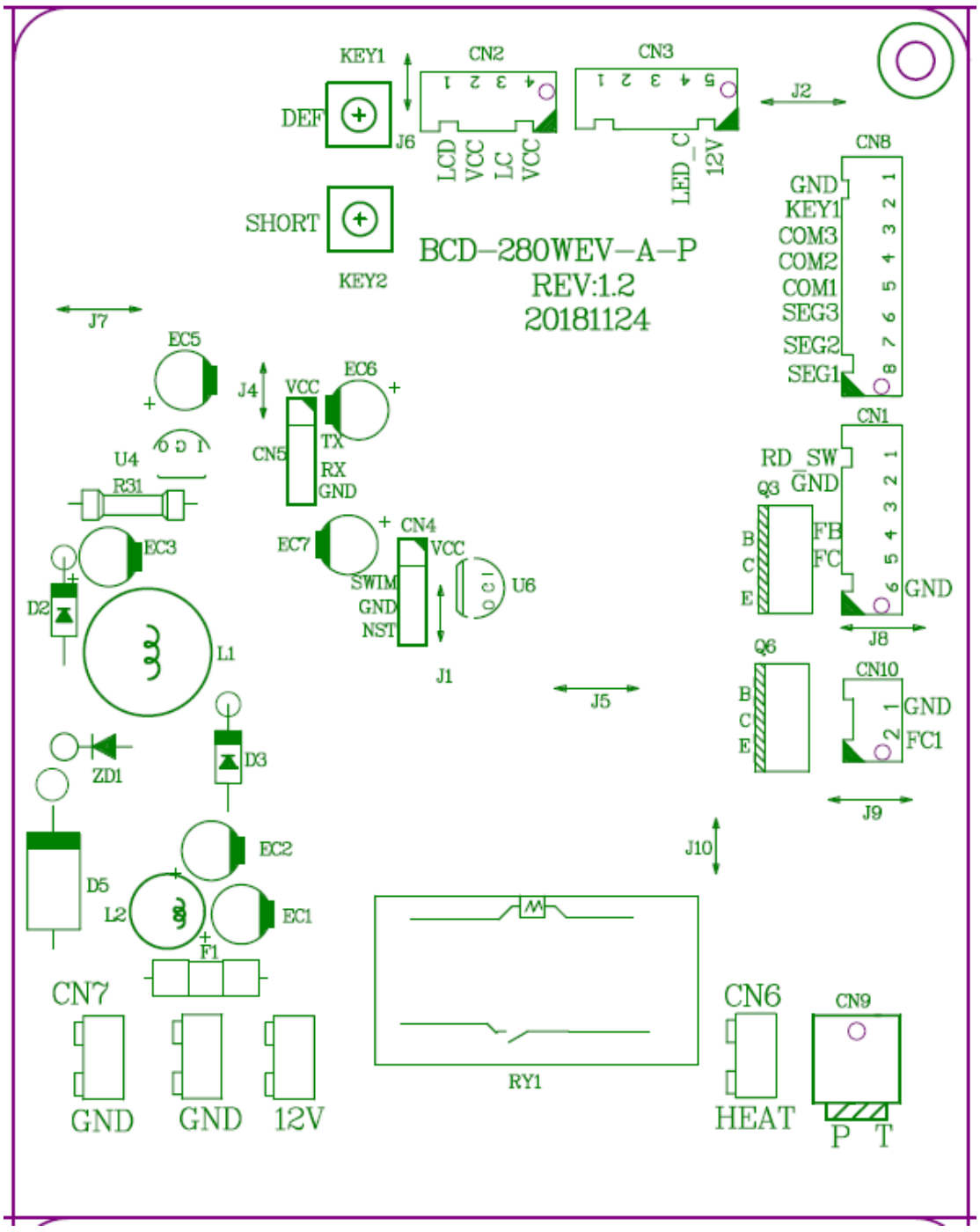


7.2. Display board schematic diagram



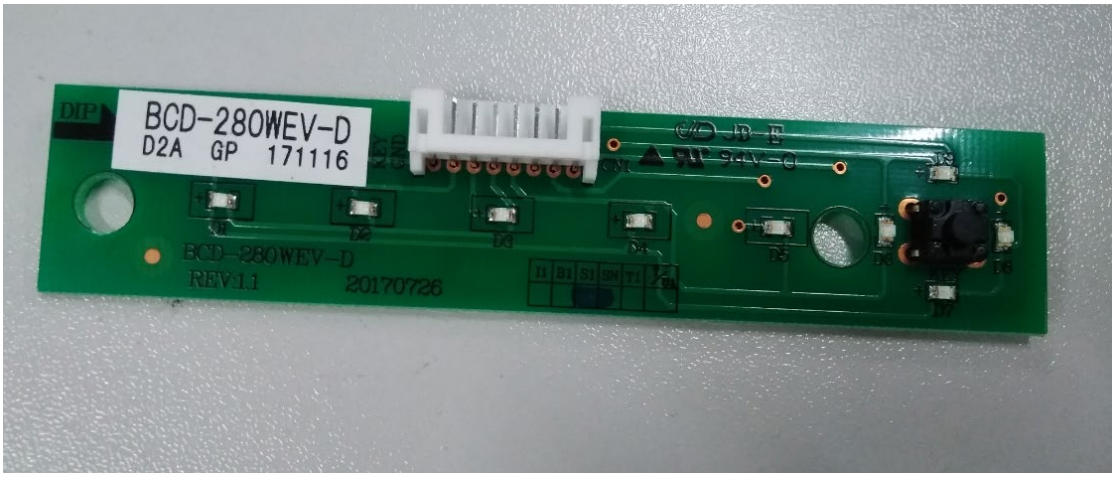
7.3.Power panel picture and arrangement diagram




KEY1
CN2
CN3
J2
DEF
J6
LCD
VCC
LC
VCC
LED_C
12V
CN8
GND
KEY1
COM3
COM2
COM1
SEG3
SEG2
SEG1
SHORT
KEY2
BCD-280WEV-A-P
REV:1.2
20181124
J7
EC5
J4
VCC
EC6
CN5
TX
RX
GND
U4
R31
CN1
RD_SW
GND
Q3
B
C
E
FB
FC
GND
EC3
EC7
CN4
VCC
SWIM
GND
NST
U6
D2
L1
J1
J8
J5
Q6
CN10
GND
FC1
ZD1
D3
J9
J10
EC2
D5
L2
EC1
F1
CN7
RY1
CN6
CN9
GND
GND
12V
HEAT
P
T

CN2	CN2-1	蓝色	VCC	5V	√
	CN2-2	红色	LC_AD	冷藏温度传感器	√
	CN2-3	白色	VCC	5V	√
	CN2-4	黑色	LCD_AD	化霜传感器	√
CN3	CN3-1	白色	12V	冷藏LED灯12V	√
	CN3-2	黑色	LED_C	冷藏LED灯GND	√
	CN3-3				√
	CN3-4				√
	CN3-5				√
CN8	CN8-1	灰色	seg1	显示板段1	√
	CN8-1	白色	seg2	显示板段2	√
	CN8-1	蓝色	seg3	显示板段3	√
	CN8-1	橙色	COM1	显示板位1	√
	CN8-1	绿色	COM2	显示板位2	√
	CN8-1	黄色	COM3	显示板位3	√
	CN8-1	红色	KEY	按键	√
	CN8-1	黑色	GND	按键地	√
CN6	CN6-1	白色	N	电源零线	√
	CN6-3	白色	N	电源零线	√
	CN6-5	棕色	H-H	化霜加热管	√
	CN6-9	黑色	COMP.	压缩机	√
CN1	CN7-1	白色	N	电源零线	√
	CN7-2	黑色	L	电源火线	√
插座	插针	参考接线颜色	丝印	插针定义	√

7.4.Display board picture and arrangement diagram



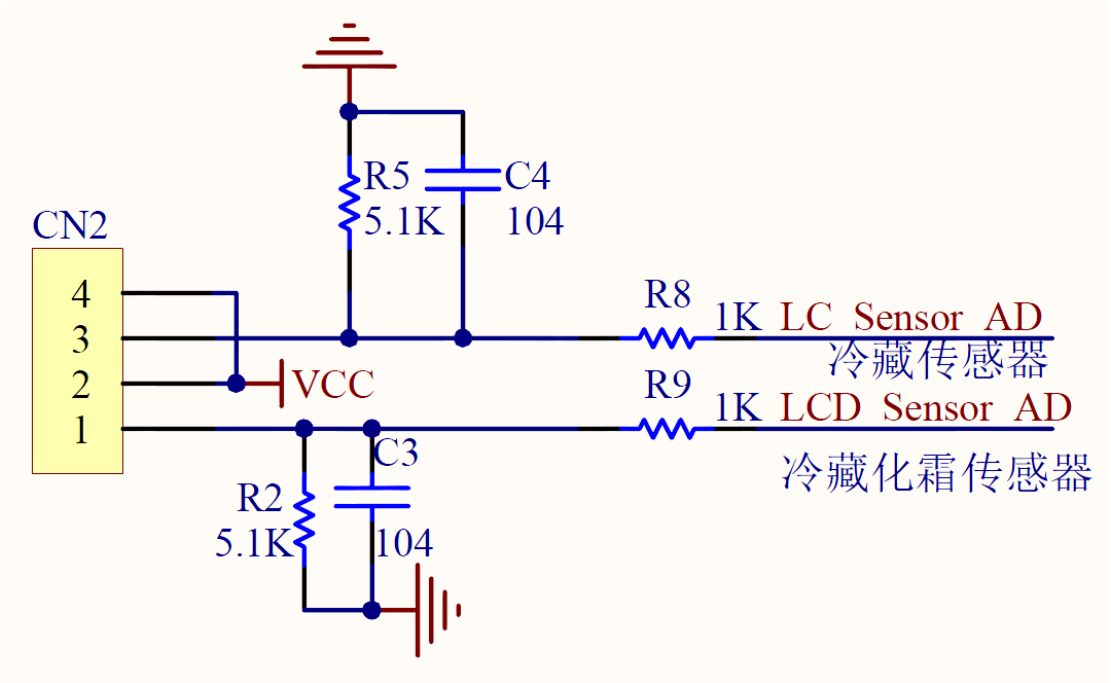
CN1	CN8-1	灰色	seg1	显示板段1	√
	CN8-1	白色	seg2	显示板段2	√
	CN8-1	蓝色	seg3	显示板段3	√
	CN8-1	橙色	COM1	显示板位1	√
	CN8-1	绿色	COM2	显示板位2	√
	CN8-1	黄色	COM3	显示板位3	√
	CN8-1	红色	KEY	按键	√
	CN8-1	黑色	GND	按键地	√
插座	插针	参考接线颜色	丝印	插针定义	√

7.5 Temperature sensor

Principle:

The R-T sensor corresponds to the corresponding resistance value at different temperatures and shows the temperature through the PCB board calculation.

The R-T resistance value is shown as follow:



电阻-----温度特性表

R5℃=5.06kΩ±2%						B5/25=3839K±2%					
T(℃)	Rmin	Rcent	Rmax	DR(%)	DT(℃)	T(℃)	Rmin	Rcent	Rmax	DR(%)	DT(℃)
-40	57.71	61.91	66.40	7.24	1.09	3	5.463	5.586	5.709	2.20	0.44
-39	54.33	58.21	62.35	7.11	1.08	4	5.204	5.316	5.427	2.10	0.42
-38	51.15	54.74	58.56	6.98	1.06	5	4.959	5.060	5.161	2.00	0.41
-37	48.18	51.49	55.02	6.84	1.05	6	4.717	4.818	4.919	2.10	0.43
-36	45.38	48.45	51.70	6.71	1.04	7	4.489	4.589	4.690	2.20	0.45
-35	42.76	45.60	48.60	6.58	1.03	8	4.272	4.372	4.473	2.30	0.48
-34	40.30	42.92	45.69	6.46	1.01	9	4.068	4.167	4.267	2.40	0.50
-33	38.00	40.42	42.97	6.33	1.00	10	3.874	3.972	4.071	2.49	0.52
-32	35.83	38.07	40.43	6.20	0.99	11	3.691	3.788	3.886	2.59	0.55
-31	33.79	35.86	38.04	6.07	0.97	12	3.517	3.613	3.710	2.69	0.57
-30	31.88	33.79	35.80	5.95	0.96	13	3.352	3.447	3.543	2.79	0.60
-29	30.09	31.85	33.71	5.82	0.94	14	3.196	3.290	3.385	2.88	0.62
-28	28.40	30.03	31.74	5.70	0.93	15	3.049	3.141	3.234	2.98	0.65
-27	26.82	28.32	29.90	5.57	0.92	16	2.908	2.999	3.091	3.07	0.67
-26	25.33	26.72	28.18	5.45	0.90	17	2.776	2.865	2.955	3.17	0.70
-25	23.93	25.21	26.56	5.33	0.89	18	2.649	2.737	2.826	3.26	0.72
-24	22.61	23.80	25.04	5.21	0.87	19	2.530	2.616	2.704	3.35	0.75
-23	21.37	22.47	23.61	5.09	0.86	20	2.416	2.501	2.587	3.45	0.77
-22	20.21	21.22	22.28	4.97	0.84	21	2.308	2.391	2.476	3.54	0.80
-21	19.11	20.05	21.02	4.85	0.83	22	2.206	2.287	2.370	3.63	0.83
-20	18.08	18.94	19.84	4.73	0.82	23	2.109	2.188	2.270	3.72	0.85
-19	17.11	17.91	18.73	4.61	0.80	24	2.016	2.094	2.174	3.82	0.88
-18	16.20	16.93	17.69	4.49	0.79	25	1.929	2.005	2.083	3.91	0.90
-17	15.34	16.01	16.71	4.38	0.77	26	1.845	1.919	1.996	4.00	0.93
-16	14.52	15.15	15.80	4.26	0.75	27	1.766	1.838	1.914	4.09	0.96
-15	13.76	14.34	14.93	4.15	0.74	28	1.690	1.761	1.835	4.18	0.99
-14	13.04	13.57	14.12	4.03	0.72	29	1.618	1.688	1.760	4.26	1.01
-13	12.36	12.85	13.35	3.92	0.71	30	1.550	1.618	1.688	5.35	1.04
-12	11.72	12.17	12.63	3.81	0.69	31	1.485	1.551	1.620	4.44	1.07
-11	11.12	11.53	11.96	0.69	0.98	32	1.422	1.487	1.555	4.53	1.10
-10	10.55	10.93	11.32	3.58	0.66	33	1.363	1.427	1.493	4.62	1.12
-9	10.01	10.36	10.72	3.47	0.64	34	1.307	1.369	1.433	4.70	1.15
-8	9.501	9.825	10.150	3.36	0.63	35	1.253	1.314	1.377	7.79	1.18
-7	9.022	9.319	9.622	3.25	0.61	36	1.202	1.261	1.323	4.87	1.21
-6	8.569	8.842	9.121	3.15	0.60	37	1.154	1.211	1.271	4.96	1.24
-5	8.142	8.393	8.647	3.04	0.58	38	1.107	1.163	1.222	5.04	1.27
-4	7.738	7.968	8.201	2.93	0.56	39	1.063	1.118	1.175	5.13	1.30
-3	7.356	7.567	7.781	2.82	0.55	40	1.020	1.074	1.130	5.21	1.32

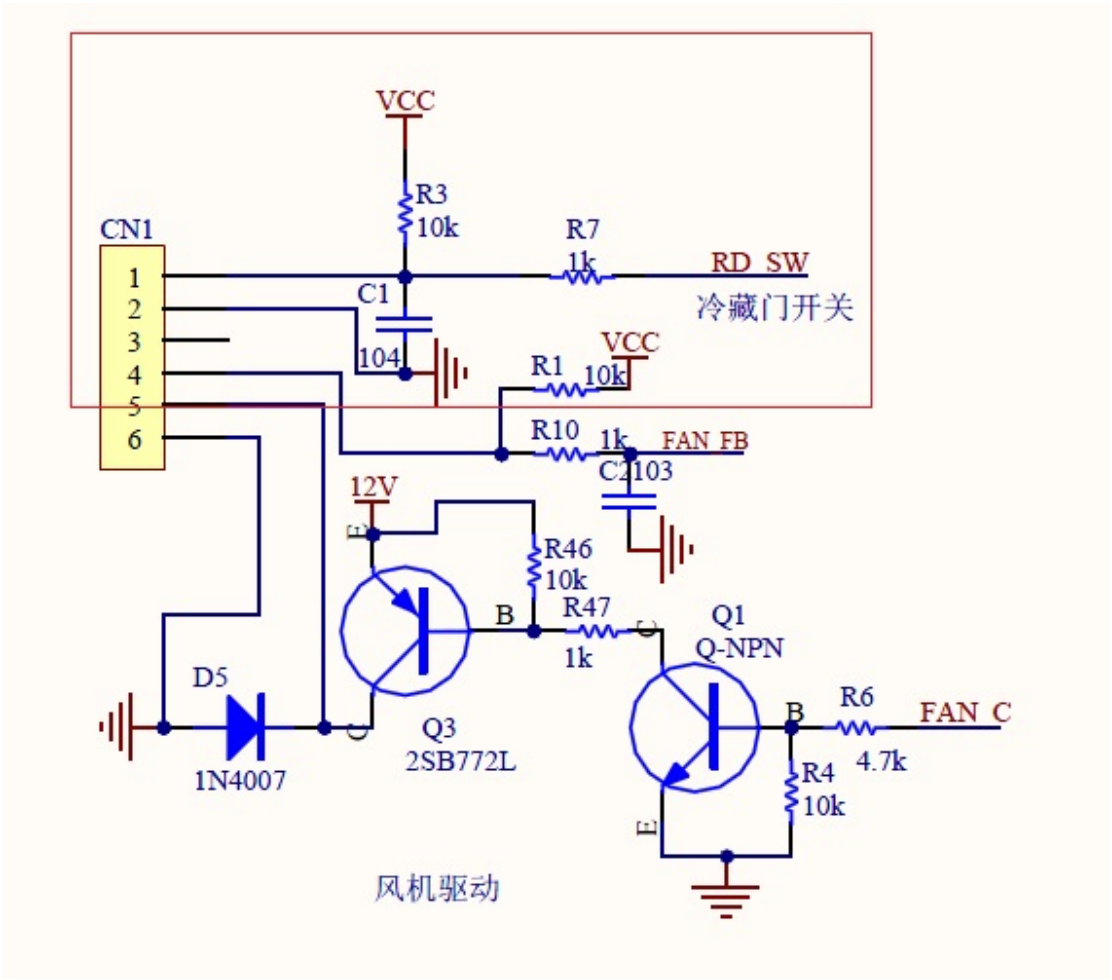
Shenzhen Sunrise Co.

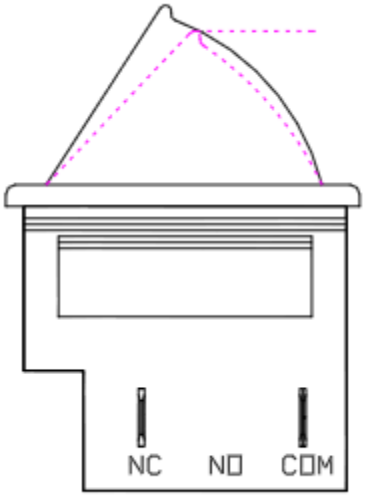
电阻-----温度特性表

R5℃=5.06kΩ±2%						B5/25=3839K±2%					
T(℃)	Rmin	Rcent	Rmax	DR(%)	DT(℃)	T(℃)	Rmin	Rcent	Rmax	DR(%)	DT(℃)
-2	6.995	7.188	7.384	2.72	0.53	41	0.9799	1.0320	1.0870	5.30	1.35
-1	6.654	6.831	7.009	2.61	0.51	42	0.9413	0.9923	1.0460	5.38	1.38
0	6.331	6.493	6.656	2.51	0.49	43	0.9044	0.9542	1.0060	5.46	1.41
1	6.026	6.173	6.322	2.41	0.48	44	0.8692	0.9178	0.9687	5.54	1.44
2	5.737	5.871	6.007	2.30	0.46	45	0.8356	0.8830	0.9326	5.62	1.47
46	0.8035	0.8497	0.8981	5.71	1.50	87	0.1940	0.2110	0.2293	8.69	2.90
47	0.7727	0.8178	0.8651	5.79	1.53	88	0.1882	0.2048	0.2227	8.76	2.94
48	0.7434	0.7873	0.8335	5.87	1.57	89	0.1826	0.1988	0.2164	8.82	2.98
49	0.7153	0.7581	0.8032	5.95	1.60	90	0.1773	0.1931	0.2103	8.88	3.02
50	0.6884	0.7302	0.7742	6.03	1.63	91	0.1721	0.1876	0.2043	8.95	3.06
51	0.6627	0.7034	0.7464	6.11	1.66	92	0.1671	0.1822	0.1986	9.01	3.10
52	0.6381	0.6778	0.7198	6.18	1.69	93	0.1623	0.1770	0.1931	9.07	3.14
53	0.6145	0.6533	0.6942	6.26	1.72	94	0.1576	0.1721	0.1878	9.14	3.17
54	0.5920	0.6298	0.6697	6.34	1.75	95	0.1531	0.1673	0.1827	9.20	3.21
55	0.5704	0.6072	0.6462	0.64	1.79	96	0.1488	0.1626	0.1777	9.26	3.25
56	0.5497	0.5856	0.6237	6.50	1.82	97	0.1446	0.1582	0.1729	9.32	3.29
57	0.5299	0.5649	0.6021	6.57	1.85	98	0.1406	0.1538	0.1683	9.38	3.33
58	0.5109	0.5451	0.5813	6.65	1.88	99	0.1367	0.1479	0.1638	9.44	3.37
59	0.4927	0.5260	0.5614	6.72	1.92	100	0.1330	0.1457	0.1595	9.50	3.41
60	0.4752	0.5077	0.5423	6.80	1.95	101	0.1294	0.1418	0.1553	9.56	3.45
61	0.4585	0.4902	0.5239	6.87	1.98	102	0.1259	0.1380	0.1513	9.62	3.49
62	0.4424	0.4734	0.5063	6.95	2.01	103	0.1225	0.1344	0.1474	9.68	3.53
63	0.4270	0.4572	0.4893	7.02	2.05	104	0.1193	0.1309	0.1437	9.73	3.58
64	0.4122	0.4417	0.4730	7.10	2.08	105	0.1161	0.1275	0.1400	9.79	3.62
65	0.3981	0.4268	0.4574	7.17	2.12	106	0.1131	0.1243	0.1365	9.85	3.66
66	0.3844	0.4125	0.4423	7.24	2.15	107	0.1102	0.1211	0.1331	9.91	3.70
67	0.3714	0.3987	0.4279	7.32	2.18	108	0.1074	0.1181	0.1299	9.96	3.74
68	0.3588	0.3855	0.4140	7.39	2.22	109	0.1046	0.1152	0.1267	10.02	3.78
69	0.3468	0.3728	0.4006	7.46	2.25	110	0.1020	0.1123	0.1236	10.07	3.83
70	0.3352	0.3606	0.3877	7.53	2.29	111	0.0995	0.1096	0.1207	10.13	3.87
71	0.3240	0.3488	0.3753	7.60	2.32	112	0.0970	0.1069	0.1178	10.18	3.91
72	0.3133	0.3375	0.3634	7.68	2.36	113	0.0947	0.1044	0.1151	10.23	3.95
73	0.3031	0.3267	0.3520	7.75	2.39	114	0.0924	0.1019	0.1124	10.29	4.00
74	0.2932	0.3162	0.3409	7.82	2.43	115	0.2902	0.0995	0.1098	10.34	4.04
75	0.2837	0.3062	0.3303	7.89	2.46	116	0.0880	0.0972	0.1073	10.39	4.08
76	0.2745	0.2965	0.3201	7.96	2.50	117	0.0860	0.0950	0.1049	10.44	4.13
77	0.2657	0.2872	0.3102	8.02	2.53	118	0.0840	0.0929	0.1026	10.49	4.17
78	0.2573	0.2782	0.3307	8.09	2.57	119	0.0821	0.0908	0.1004	10.54	4.21

Uncontrolled Copy

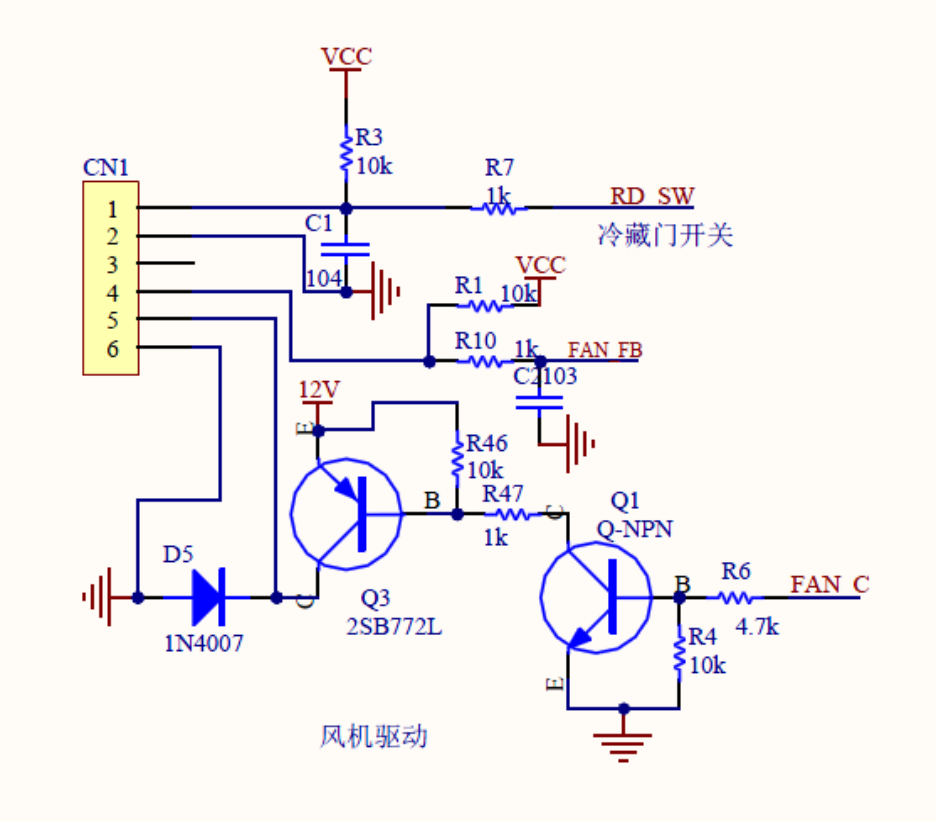
7.6 Door Switch control circuit

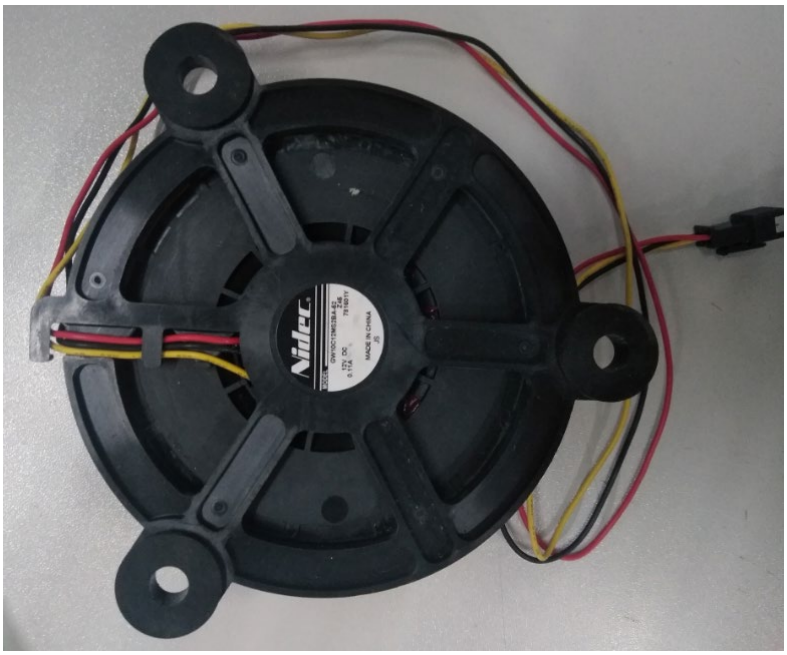




The type of the door switch is normally closed, when the door opens ,the switch is close; when door closes ,the switch is off.

7.7Fan motor control circuit





Red line	fan motor power source	12V
Black line	fan motor ground electrode	GND
Yellow line	fan motor feedback line	For feedback fan speed, fan breakdown