

SPLIT TYPE AIR CONDITIONER

SERVICE MANUAL

HKEB-HCNB-261-X

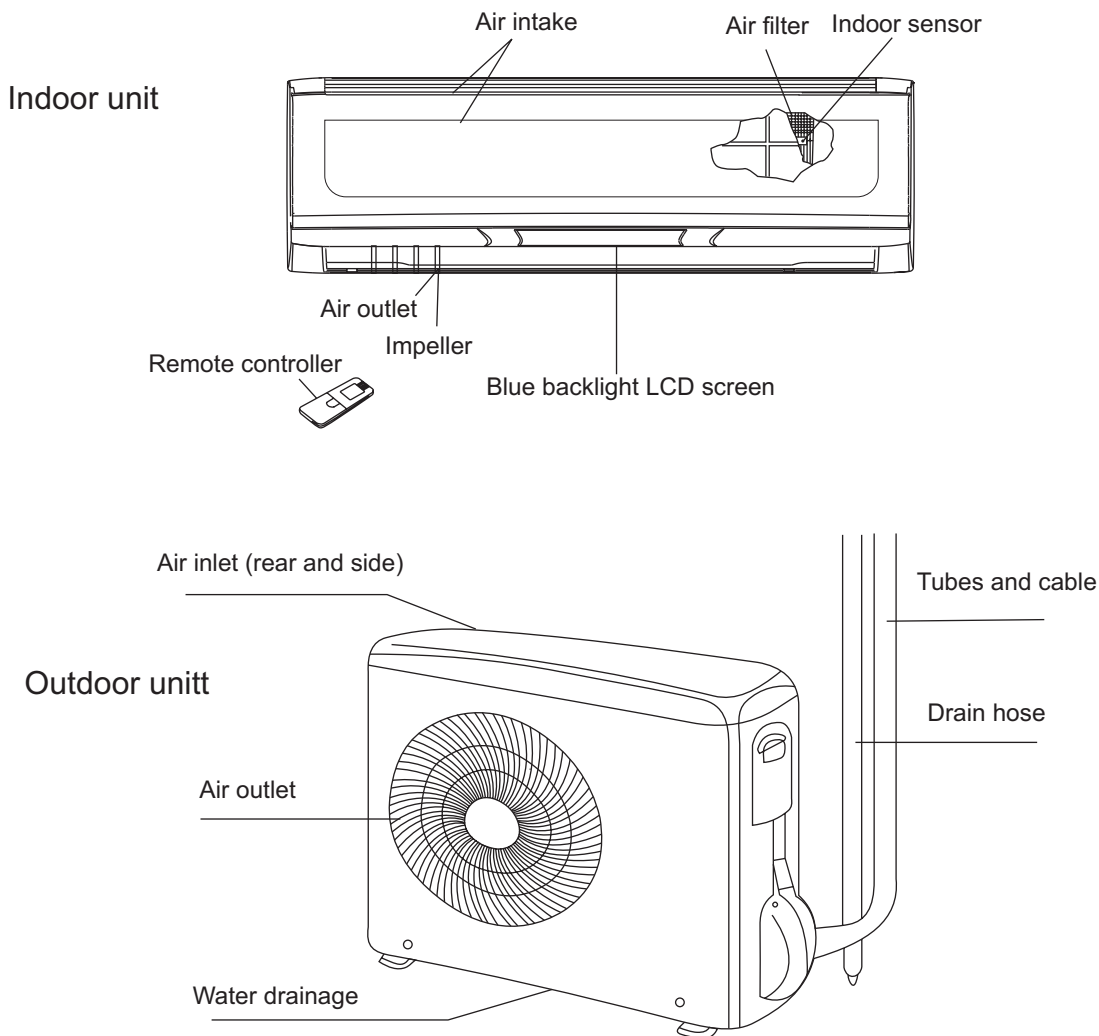
HKEB-HCNB-351-X

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1. PART NAMES AND FUNCTIONS

1. Diagram of Structure



Appearance of the indoor may differ from some the picutres in the manual.

NOTE

This air conditioner consists of an indoor unit and an outdoor unit. You can control the air conditioner with the remote controller.

Air Intake	Air from the room is drawn into this section and passes through air filters which remove dust.
Air Outlet	Conditioned air is blown out of the air conditioner through the air outlet.
Remote Controller	The wireless remote controller controls power ON/OFF, operation mode selection, temperature, fan speed, timer setting, and air sweeping.
Refrigerant Tubes	The indoor and outdoor units are connected by copper tubes through which refrigerant gas flows.
Outdoor(Condensing)Unit	The outdoor unit contains the compressor, fan motor, heat exchanger coil, and other electrical components.
Drain Hose	Moisture in the room condenses and drains off through this hose

2、 SPECIFICATION

Model			HKEB -HCNB -261X		
Function			Cooling	Heating	
Power supply			220-230V ~ 50Hz		
Capacity	Capacity	kW	2.5 (0,39-3,2)	3.1 (0,40-3,53)	
	Dehumidification	l/h	1.5		
	Air flow	m ³ /h	800	800	
Electrical data	Power outlet	A	16		
	Running current	A	3.54/5.89	4.8/8.08	
	Power input	kW	0.53 (0,3-1,05)	0.66 (0,3-1,25)	
	Auxiliary heater	A(KW)	--		
	Starting current	A	--		
	Power factor	%	90%		
	Compressor motor current	A	--		
Coefficient of performance(C.O.P)			4.7/4.7		
Compressor	Model	DA91A1F-22FD			
	Output	W	750		
	Winding resistance (at20)		1.10		
Indoor fan motor	Model	SIC-37CV-F835-1			
	Winding resistance (at20)		-		
Outdoor fan motor	Model	DR-8938-504A-G			
	Winding resistance (at20)		-		
Dimensions	Indoor unit	Width	mm	870	
		Height	mm	225	
		Depth	mm	305	
	Outdoor unit	Width	mm	800	
		Height	mm	565	
		Depth	mm	260	
Weight	Indoor unit	kg	11		
	Outdoor unit	kg	34.5		
Refrigerant piping	Liquid pipe	mm	6.35		
	Gas pipe	mm	9.52		
Special remarks	Air direction			6	
	Sound level (Hi)	Indoor unit	dB	46	
		Outdoor unit	dB	53	
	Fan speed (Hi)	Indoor unit	rpm	1200	
		Outdoor unit	rpm	760	
	Refrigerant filling capacity(R410A)		kg	1.15	
	Sensor	RT1(at25)	k	5	
		RT2(at25)	k	5	
RT3(at0)		k	16.44		

NOTE :Test conditions : Cooling : Indoor: DB27 / WB19

Heating: Indoor: DB20 / WB15

Outdoor DB35 / WB24

Outdoor DB7 / WB 6

2、 SPECIFICATION

Model			HKEB - HCNB - 351 X		
Function			Cooling	Heating	
Power supply			220-230V ~ 50Hz		
Capacity	Capacity	kW	3.5 (0,39-3,98)	4.0 (0,4-4,49)	
	Dehumidification	l/h	1.5		
	Air flow	m ³ /h	800	800	
Electrical data	Power outlet	A	16		
	Running current	A	4.75/7.0	5.62/9.5	
	Power input	kW	0.98 (0,3-1,3)	0.94 (0,3-1,6)	
	Auxiliary heater	A(KW)	--		
	Starting current	A	--		
	Power factor	%	90		
	Compressor motor current	A	--		
Coefficient of performance(C.O.P)			3.57/4.26		
Compressor	Model	DA91A1F-22FD			
	Output	W	750		
	Winding resistance (at20)		1.10		
Indoor fan motor	Model	SIC-37CV-F835-1			
	Winding resistance (at20)		-		
Outdoor fan motor	Model	DR-8938-504A-G			
	Winding resistance (at20)		-		
Dimensions	Indoor unit	Width	mm	870	
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NOTE :Test conditions : Cooling : Indoor: DB27 / WB19

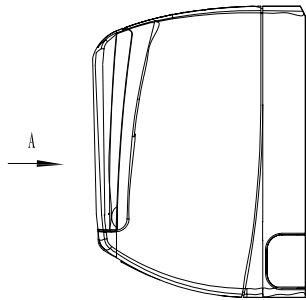
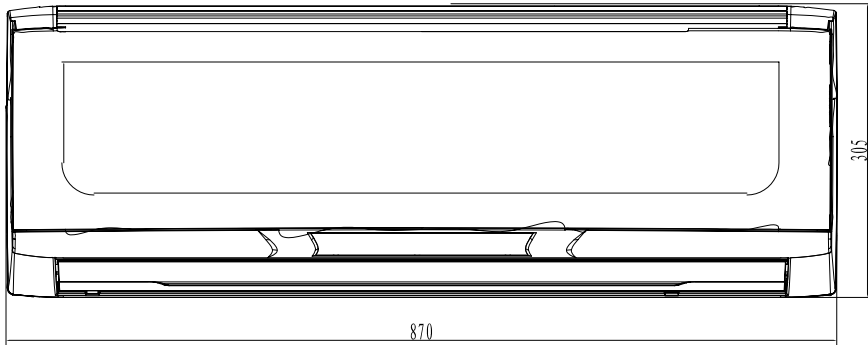
Heating: Indoor: DB20 / WB15

Outdoor DB35 / WB24

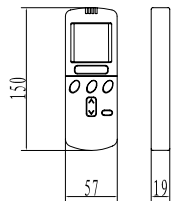
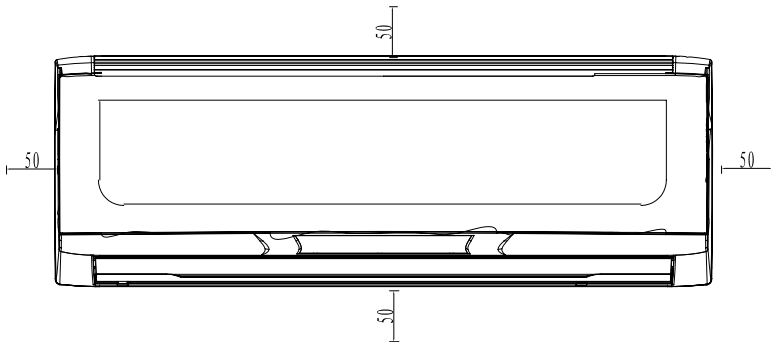
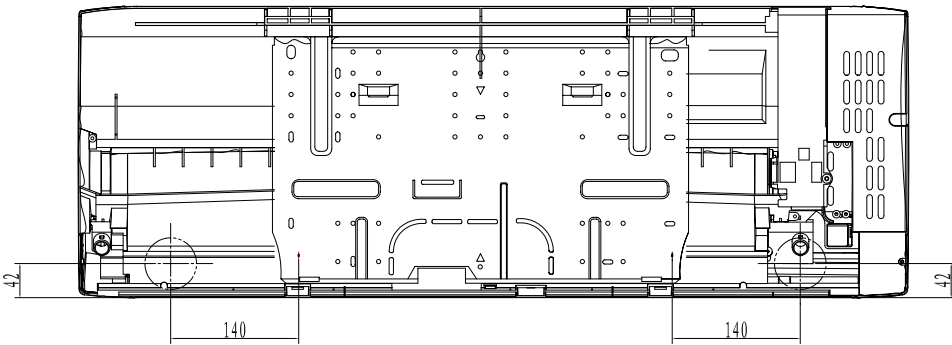
Outdoor DB7 / WB 6

3.OUTLINES AND DIMENSIONS

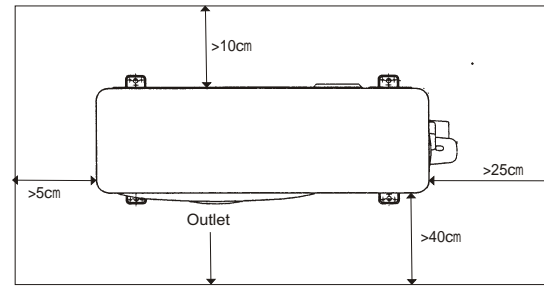
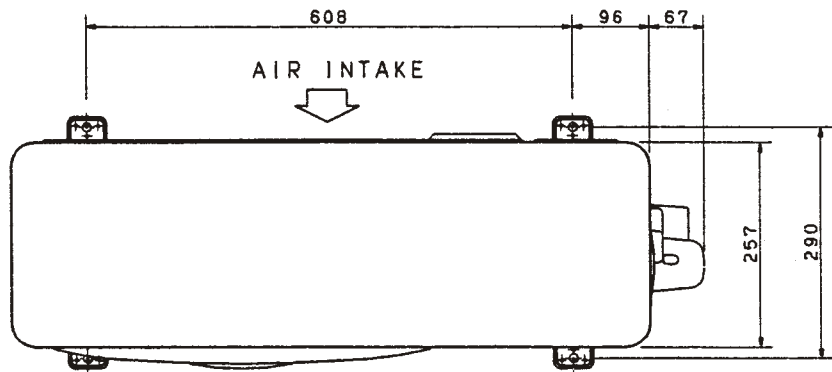
HKEB - HCNB 261-351 X



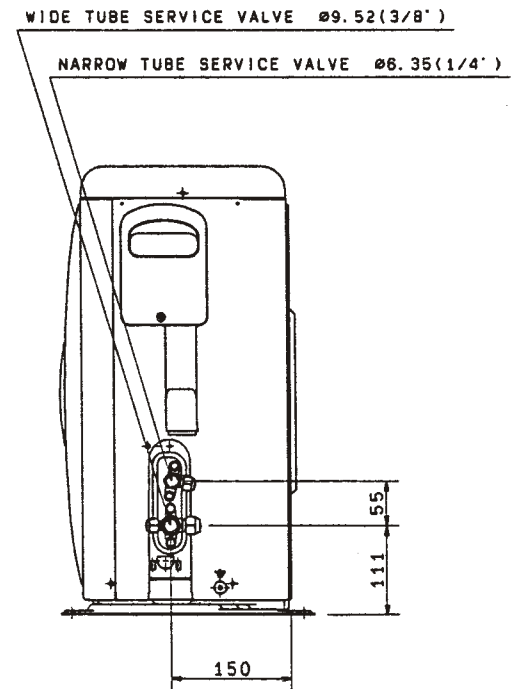
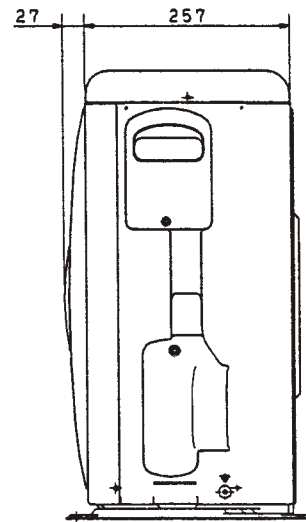
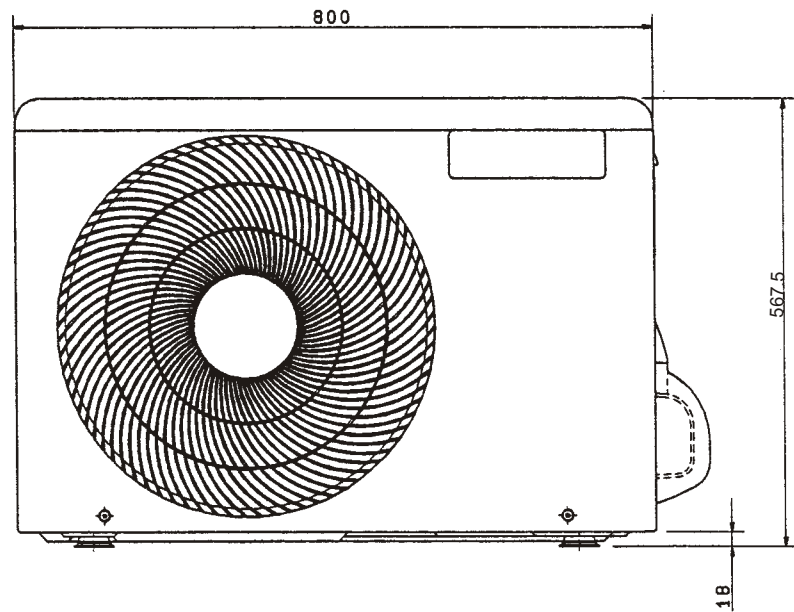
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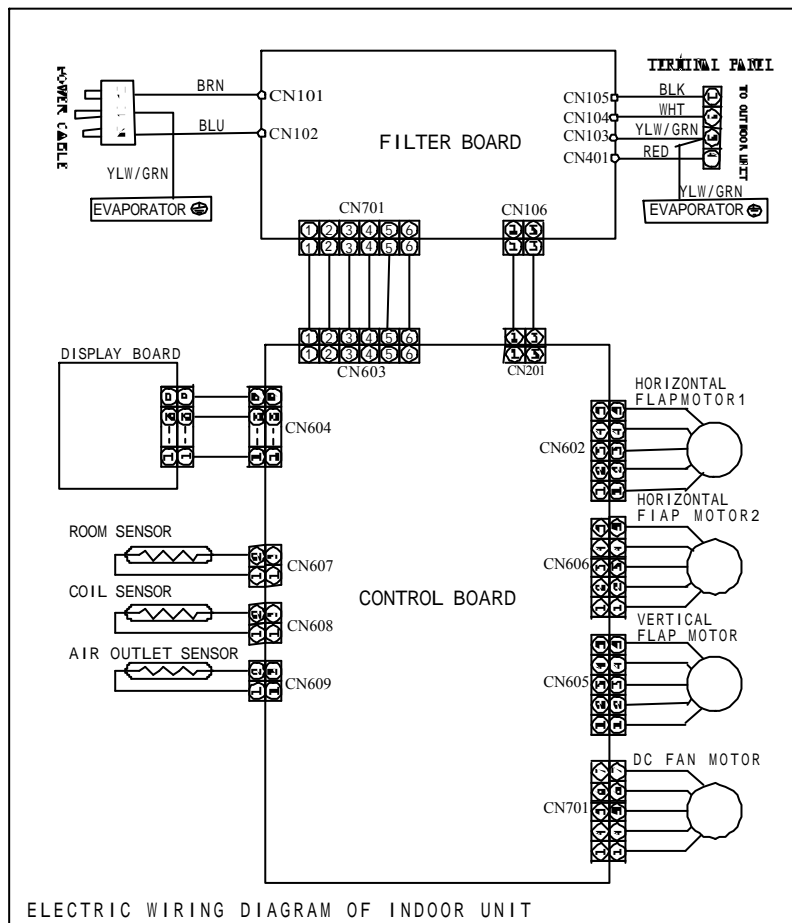
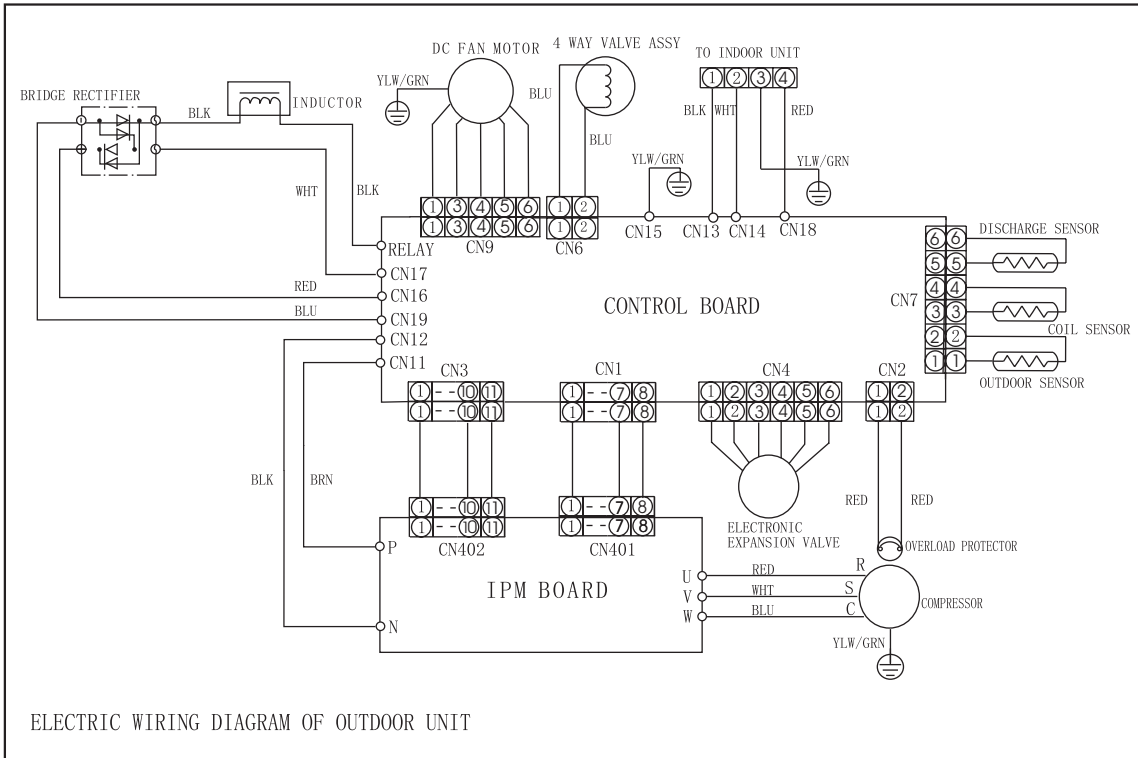
3.OUTLINES AND DIMENSIONS



AIR DISCHARGE
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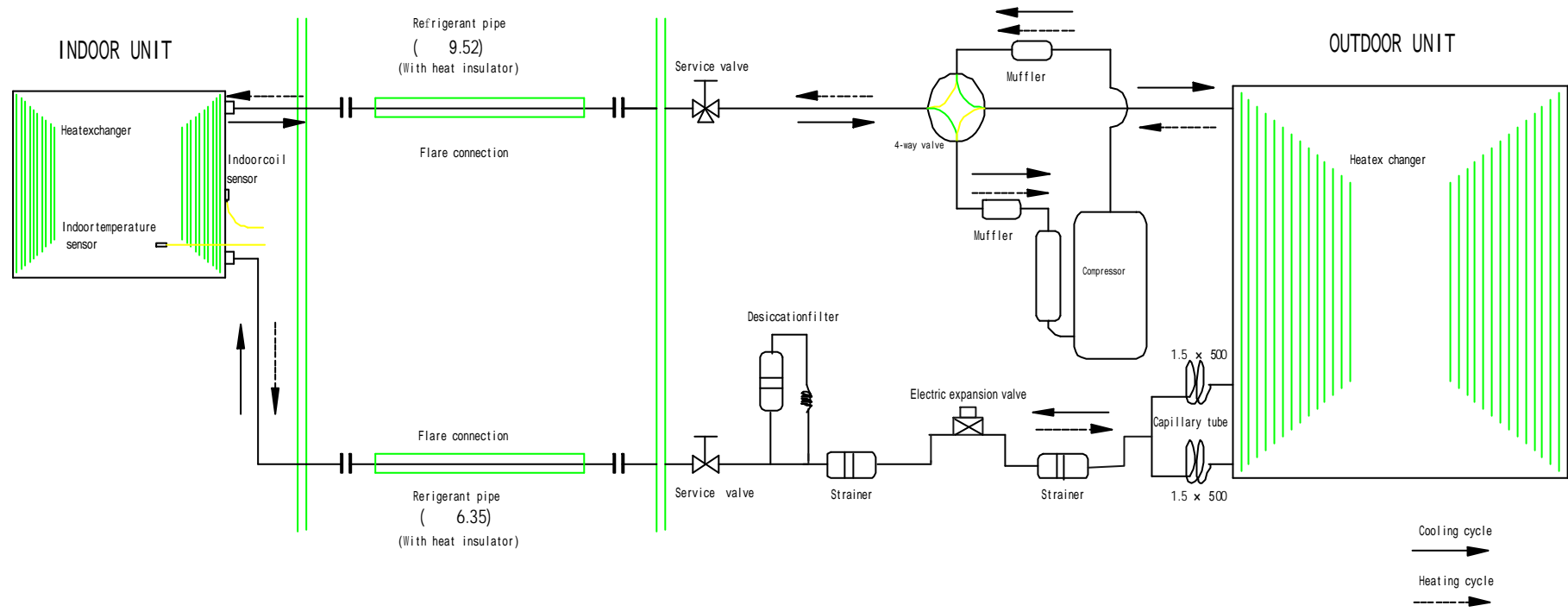
4. WIRING DIAGRAM



5. REFRIGERANT SYSTEM DIAGRAM

HKEB HCNB 351 X

HKEB HCNB 261 X

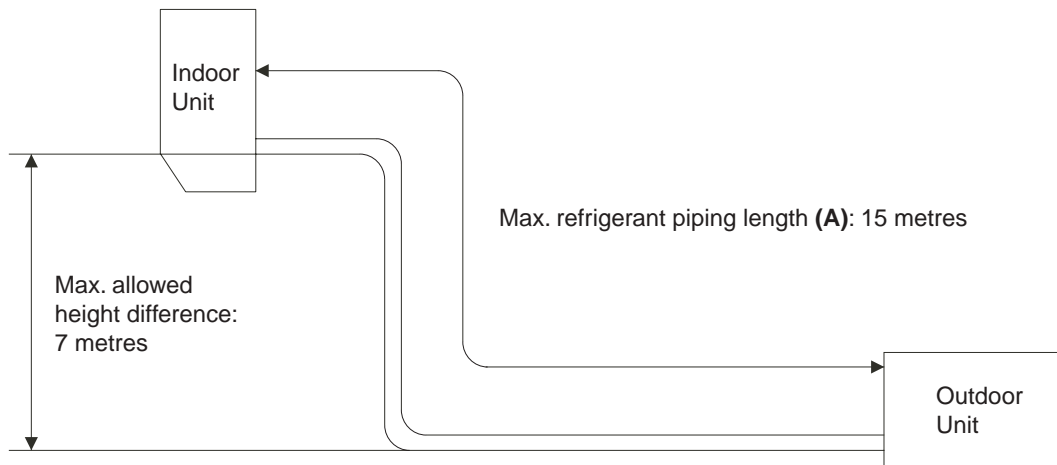


5.REFRIGERANT SYSTEM DIAGRAM

Limitations to refrigerant piping length and height difference

Maximum allowed refrigerant piping length (single line) and height difference

Models	Max. piping length (m), single line: A	Piping diameter (mm)		Height Difference (m)	
		Liquid side	Gas side	Indoor Unit above	Indoor unit below
HKEB-HCNB 261X	15	6.35	9.52	7	7
HKEB-HCNB 351X	15	6.35	9.52	7	7



Additional refrigerant charge (R410A refrigerant)

Models	Precharged amount (g) up to 7 metres	Additional R410A charge according to piping length		
		7m	10m	15m
HKEB-HCNB 261X	1150	0g	75g	200g
HKEB-HCNB 351X	1150	0g	75g	200g

Calculation of the additional refrigerant charge: R410A g = [(A-7) meters x 25g/m]

Temperature range for regular operation:

Outdoor air temperature:

- In Cooling mode: +16°C ~ +43°C
- In Heating mode: -15°C ~ +30°C

If this appliance is operated under temperature conditions out of the above specified temperature range, this may result in malfunction and/or operation could stop due to intervention of built-in protective functions.

5.REFRIGERANT SYSTEM DIAGRAM

EVACUATION PROCEDURES

Connect the refrigerant pipes (both the liquid and gas pipes) between the indoor and the outdoor units.

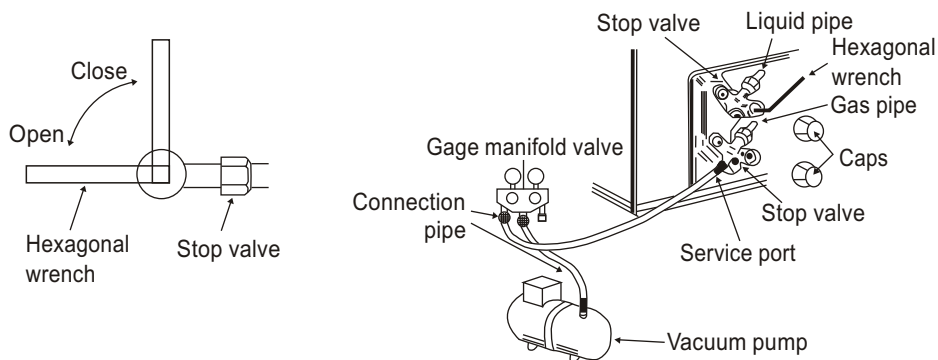
Remove the service port cap of the stop valve on the side of the outdoor unit gas pipe. (The stop valve will not work in its initial state fresh out of the factory (totally closed with cap on).

Connect the gage manifold valve and the vacuum pump to the service port of the stop valve on the gas pipe side of the outdoor unit.

Run the vacuum pump for more than 15 minutes and at this time confirm that the pressure gage indicates -0.1 Mpa (-76 cmHg).

Check the vacuum with the gage manifold valve, then close the gage manifold valve, and stop the vacuum pump.

Leave it as is for one or two minutes .Make sure the pointer of the gage manifold valve remains in the same position.



Remove the gage manifold valve quickly from the service port of the stop valve.

After refrigerant pipes are connected and evacuated, fully open all stop valves on gas and liquid pipe sides.
Operating without fully opening lowers the performance and causes trouble.

Pipe length
7m maximum
No gas charge is needed.

Pipe length
exceeding 7m
Charge the prescribed amount of gas.

Tighten the cap to the service port to obtain the initial status.

Retighten the cap.

Leak test

6. CONTROL MODE

1. Functional features

- 1.1 The compressor's motor system is fitted with DC brushless sensor without position, with reliable and efficient performance;
- 1.2 The indoor and outdoor air supply motor is of built-in DC brushless type.
- 1.3 Throttle control by electronic expansion valve.

2 Main controlling functions

- 2.1 Controlling functions of the remote controller (see operation and installation manual)
- 2.2 Display icons of the indoor unit

Indicating lights

“Simultaneous Operation Power Limitation” indicator: When the “simultaneous operation power limitation” function is started, this light goes on.

“Timing” indicator: It goes on when “timing” is selected.

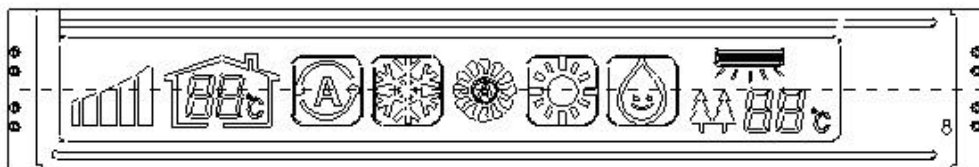
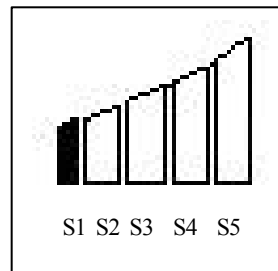
“Sleep” indicator: It goes on when “sleep” is selected.

“Night” indicator: No available for this unit.

Room temperature display

Fre

- 1-30 (Hz) S1
- 31-50 (Hz) S1S2
- 51-70 (Hz) S1S2S3
- 71-90 (Hz) S1S2S3S4
- 91 (Hz) S1S2S3S4S5.



Room temperature is displayed in the “House”: The actually measured temperature of the unit body or the remote controller is displayed.

Outdoor temperature display:

The outdoor temperature is displayed when detected by the outdoor unit. Otherwise, there is no display.

Working mode display

During operation, such information as cooling, heating, dehumidifying is displayed. When the air conditioner works in the Automatic Mode, the Auto icon, as well as the cooling/heating information is displayed.

Fan speed display

The three blades of high, medium and low speeds are shown at the same time. “A” is displayed when Auto Speed is selected.

Left and right swinging display

6.CONTROL MODE

Surrounding air: K0, K1, K2, K4, K5

Directional air: Left K0, K1, K2, K3

Directional air: Right K0, K3, K4, K5

Directional air: Center K0, K2, K3, K4

Swinging air: K0K1, K0K2, K0K3 respectively according to the actual working status

Error message

Press the Emergency button for over 5 seconds when the power is on, the air conditioner will give out alarm as follows: indoor unit trouble at the indoor temperature reading area and outdoor unit trouble at the outdoor temperature area; the message is blinking at a frequency of 1Hz.

3.Temporary switch

3.1 If the remote controller is missing, press the temporary switch and the system starts in the automatic mode, press the switch again to stop the system. Automatic mode follows:

A indoor temperature> 26 cooling mode temperature setting 26

B indoor temperature> 23 heating mode temperature setting 26

C 23 indoor temperature 26 fan mode

Indoor fan speed is automatic in automatic mode.

3.2 Hold down the temporary switch for 5 seconds or longer and the system is forced to run in the cooling mode regardless of indoor temperature.

3.3. How to start the outdoor unit without the indoor unit

Short-circuit the two CN404 terminals on the IPM board of the outdoor unit, and switch on the power, the air conditioner will start heating operation, and the outdoor fan is working; then open the short circuit, the air conditioner will start cooling operation (the compressor starts 50 seconds later), and the fan is still working. Cut off the power, the outdoor unit will stop running.

4.Control mode

4.1 Automatic

4.1.1 When the air conditioner is switched on and the remote controller is set to Auto mode, the air conditioner will select running modes automatically according to the difference between the room temperature and the setting temperature.

4.1.2 The running mode will be set when the machine is first switched on. Once set, the running mode cannot be changed within 30 minutes.

4.1.3 If the difference between the room temperature and the setting temperature exceeds 3 degrees, change the running mode immediately.

4.1.4 If the machine is turned off and restarted using the remote controller, the above conditions are still good.

4.1.5 If the machine is powered off and restarted, the running mode must be re-selected.

4.1.6 The running frequency will be determined by the temperature difference.

4.2 Cooling

4.2.1 In the cooling mode, the preset temperature is determined by the remote controller. The temperature range is 16 —30 .

6. CONTROL MODE

4.2.2 The compressor will start immediately when the machine is first powered on; it will take at least 3min for the compressor to restart if the machine is restarted.

4.2.3 The fan speed changes in auto mode.

	$T_{\text{setting}} - T_{\text{indoor}}$	Fan speed		$T_{\text{setting}} - T_{\text{indoor}}$	Fan speed
Temperature difference ↑	1	Low	Temperature difference ↓	1	Low
	2	Low		2	Mid
	3	Mid		3	Mid
	4	Mid		4	High
	5	High		5	High

4.2.4 Compressor control

The running frequency of the compressor depends on the difference between the set temperature and the detected room temperature. The larger the difference, the higher the frequency. When the room temperature is lower than the set temperature, the compressor stops running (provided the compressor keeps running for more than 5 minutes).

Min	Max	Rated Frequency.
15	100	42

4.3 Outdoor fan

One-speed, which runs simultaneously with the compressor.

4.4 Cooling overload

When $T_{\text{external coil}} = 70$, the compressor stops. When $T_{\text{external coil}} = 50$, the air conditioner starts automatically in 3 minutes.

4.5 Anti-freezing function, the anti-freezing and frequency limiting functions of the evaporator are effective:

When $T_{\text{coil}} > 10$, the working frequency of the compressor is not limited;

When $T_{\text{coil}} < 7$, the working frequency of the compressor begins dropping;

When $T_{\text{internal coil}} < -1$ for 3 minutes, the indoor fan works normally after the compressor is shut down.

When $T_{\text{internal coil}} = 7$ and the compressor has stopped working for 3 minutes, the compressor will restart running.

4.6 Current protection

is the normal working current value of E²ROM , I_{max} is the ceiling current value of E²ROM.

6. CONTROL MODE



- $I < I_0 - 1.5A$ Without limitation.
- $I > I_0 + 1.5A$ Frequency drops.
- $I \geq I_{max}$ Operation stops.

5. Dehumidification

- 5.1 In the dehumidification mode, the temperature is determined by the remote controller. The temperature range is 16 —30 . The controller will determine the running mode according to the indoor and outdoor temperature difference.
- 5.2 When the room temperature is 2 higher than the preset temperature, cooling run will be
- 5.3 $T_{set\ temperature} - T_{room\ temperature} \geq 1$ The compressor and the outdoor fan stop working, and the indoor fan runs at a speed of 600 rpm.

6. Heating

- 6.1 When $T_{internal\ coil} \geq 38$, the indoor fan works in accordance with the setting of the remote controller.

	$T_{setting} - T_{indoor}$	Fan speed		$T_{setting} - T_{indoor}$	Fan speed
Temperature difference 	1	Low	Temperature difference 	1	Low
	2	Mid		2	Low
	3	Mid		3	Mid
	4	Mid		4	Mid
	5	High		5	Mid
	6	High		6	High

6.2 Current protection

I_0 is the normal working current value of E²ROM , I_{max} is the ceiling current value of E²ROM.

- $I < I_0 - 1.5A$ Without limitation.
- $I > I_0 + 1.5A$ Frequency drops.
- $I \geq I_{max}$ Operation stops.

6.3 Defrosting

- 6.3.1 The defrosting is done through changing the flow direction of refrigerant inside of the four-way valve.

6.3.2 Defrosting conditions:

Continuous heating run for more than 30min

During single machine operation, $T_{outdoor} - T_{outdoor\ coil} \geq 12$ and lasts 8minutes

6.3.3 Defrosting process:

Compressor and outdoor fan motor off four-way valve off compressor on
 defrosting conditions met compressor off four-way valve on compressor on
 outdoor fan on end

6.3.4 Overhot protection for the indoor heat exchanger

6. CONTROL MODE

When the temperature of the indoor coil ≥ 78 , the compressor will stop;

When the temperature ≥ 63 , the outdoor flow speed will turn to the low speed, and the compressor runs at the descending frequency;

When the temperature < 58 , the compressor will prohibit the frequency from rising.

7 . Air cleaning

The outdoor unit doesn't work in this mode, and the indoor fan runs in cooling mode.

8. Protection

8.1 Abnormal sensor: when the sensor is short circuited or cut off, the compressor will stop, and the trouble code will be displayed.

8.2. IPM error

In the case of IPM abnormalities, e.g. overheat (100), overcurrent (17A), or low driving voltage (below 12V), both the compressor and the outdoor fan stop running, and the corresponding error code is displayed.

8.3 Temperature protection for the compressor exhaust

When the compressor exhaust temperature < 93 , the compressor runs at the ascending frequency;

When the temperature ≥ 93 , and < 115 the compressor runs at the limit to the frequency ascending;

When the temperature > 115 , the compressor stops.

8.4 Abnormal power supply voltage protection

When the supply voltage is above 260V or below 150V, the compressor stops, and the trouble code is displayed.

8.5 No load protection

Measure the total current. When the current in the outdoor unit is lower than 0.15A, the compressor will stop operation and no load protection error is displayed.

8.6 . Economical running

During economical run (this function is set on the remote controller), the working current will be limited (to 60% of the max working current).

9 Automatic control of the electronic expansion valve

9.1 Power-on reset

Upon power-on reset, the expansion valve shuts off for 600 seconds first, and then opens to a degree fit for the frequency.

9.2 The expansion valve regulates according to the outlet air temperature of the compressor.

Compressor rotor position signal not available

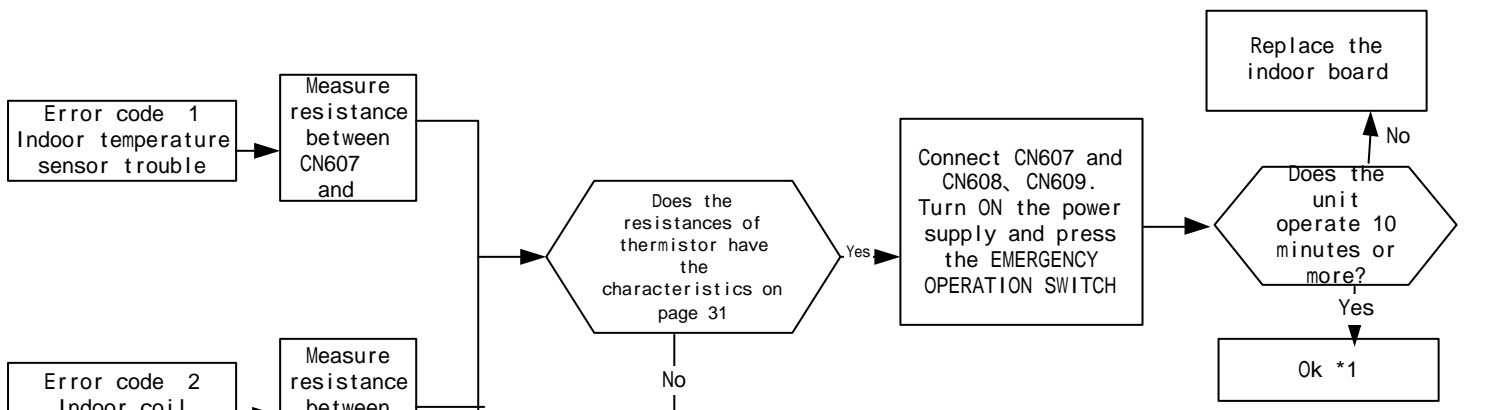
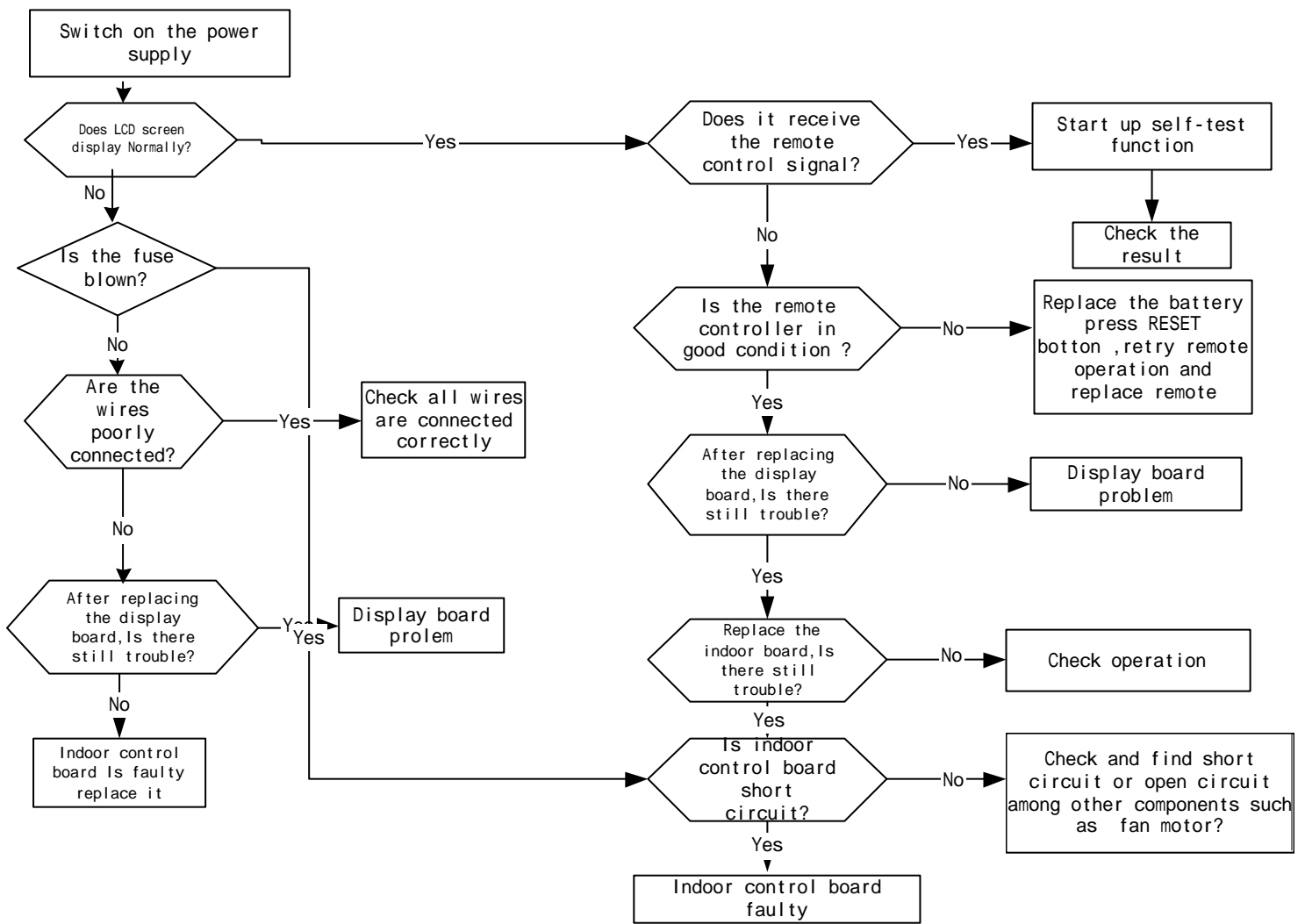
There is an LED indicator on the IPM board of the outdoor unit. During operation of the compressor, the LED blinks to indicate frequency restriction conditions of the compressor.

6.CONTROL MODE

Content of trouble	Indoor display code
Indoor sensor trouble	1
Evaporator sensor trouble	2
Evaporator freezing	3
Over hot of indoor heat exchanger	4
Communication trouble	5
Over current of compressor	7
Fan motor trouble	8
Indoor EEPROM	13
Outdoor sensor trouble	21
OUTDOOR	
Outdoor sensor trouble	1
Outdoor coil sensor trouble	2
Discharge sensor	3
Compressor position	4
Communication trouble	5
Over current of whole system	6
No load	7
Abnormal power voltage	8
Compressor start-up failure	9
Higher outdoor exchange temperature	10
Defrosting	11
IPM trouble	12
Data failure of outdoor E ² PROM	13
Outdoor Fan	15

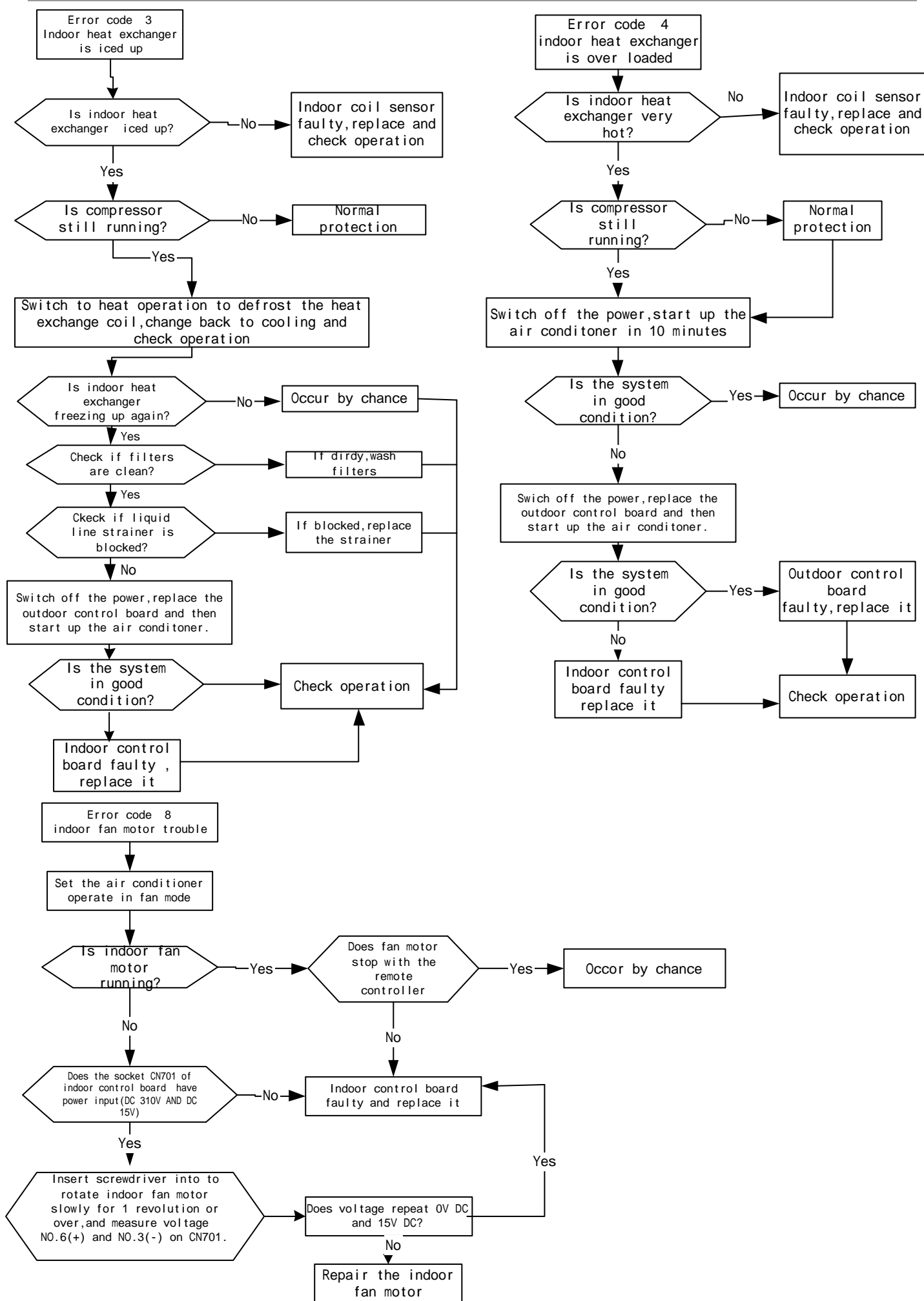
1. Normal operation, no frequency restriction.
2. Power voltage restriction.
3. Condenser temperature restriction.
4. Total current restriction.
5. Outlet air temperature restriction.
6. Indoor heat exchange temperature restriction for cooling operation.
7. Indoor fan speed restriction.
8. AD interface frequency conversion restriction.

7.SERVICE FLOW CHART

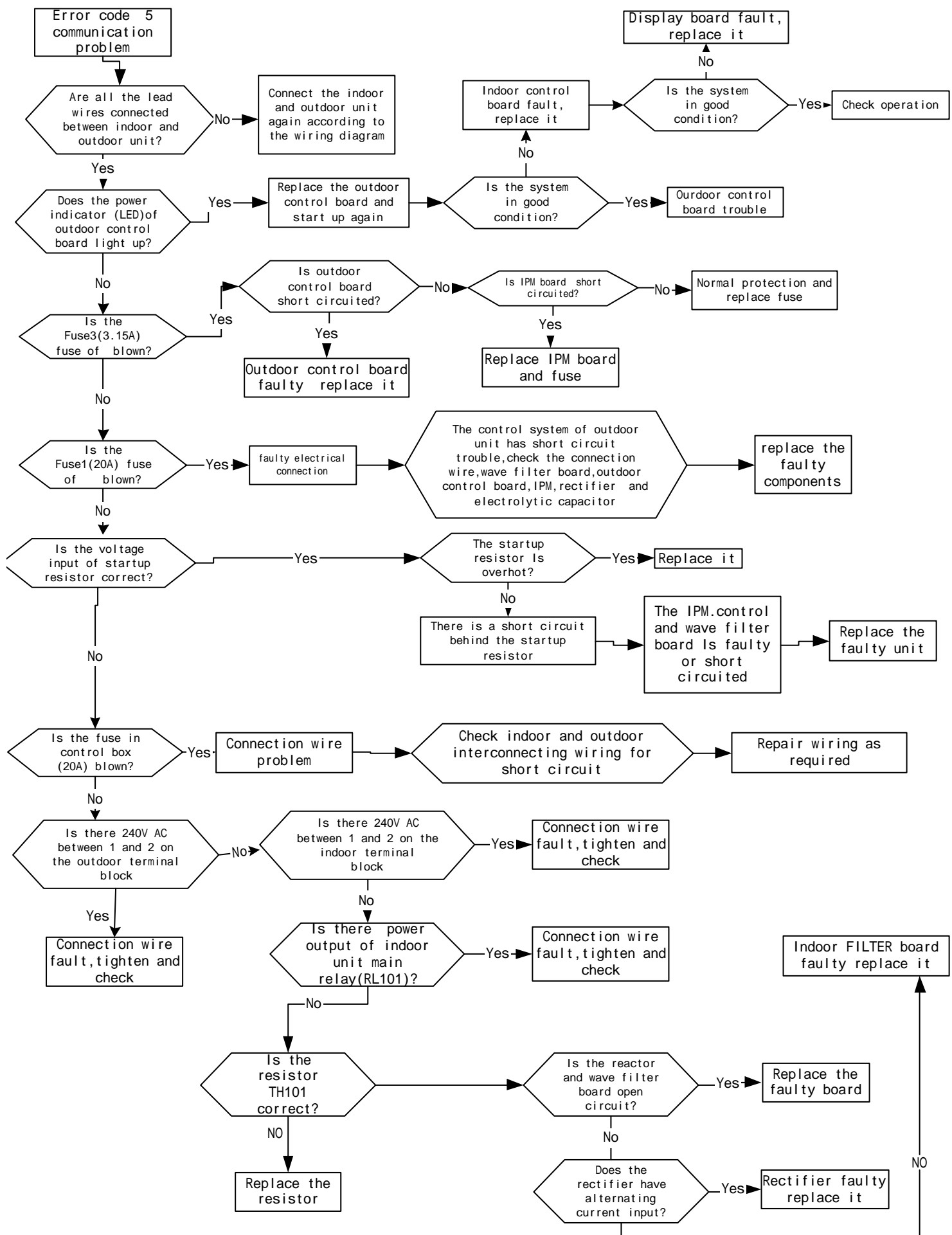


*1 Defective contact of the connector is considered

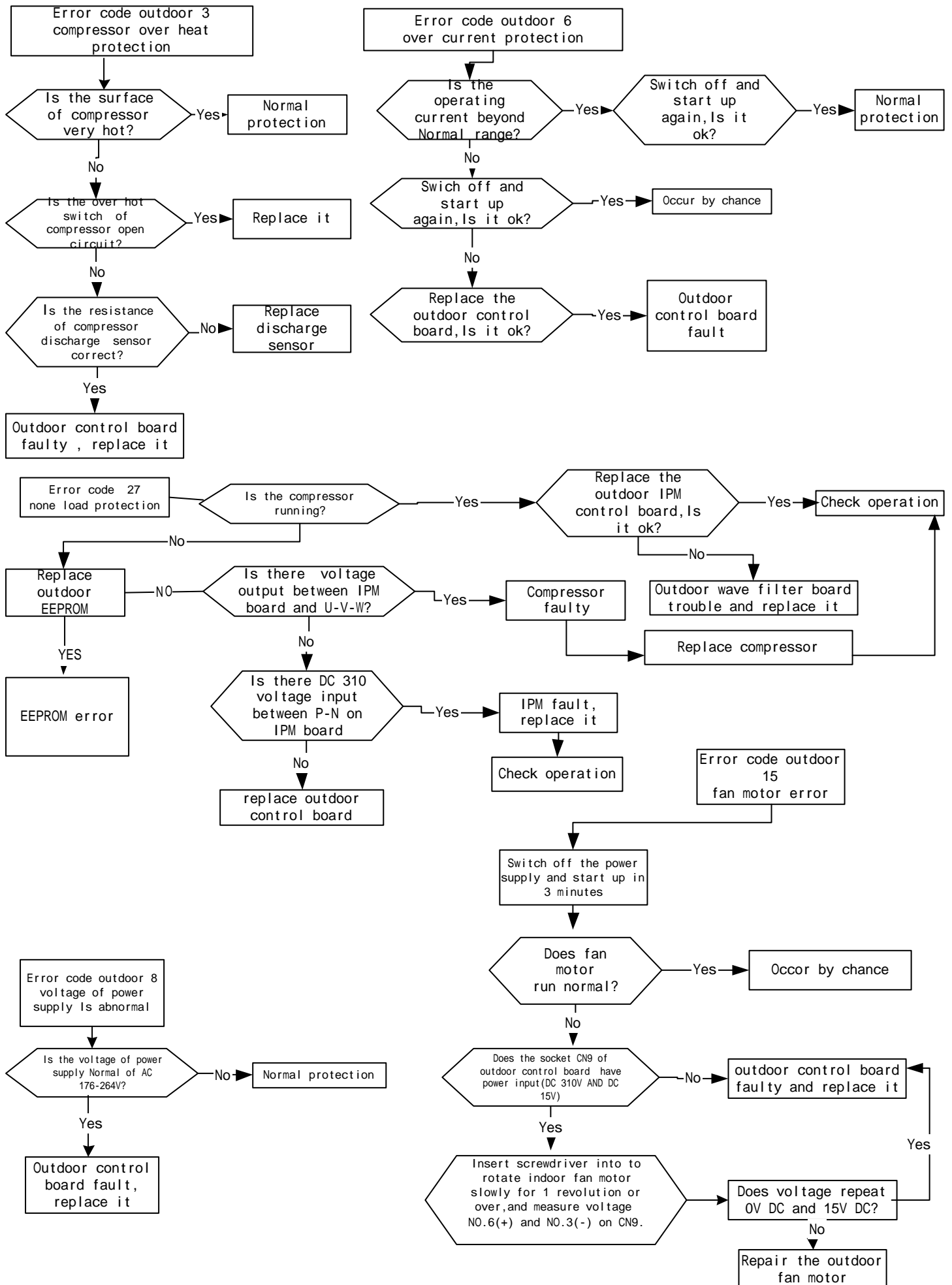
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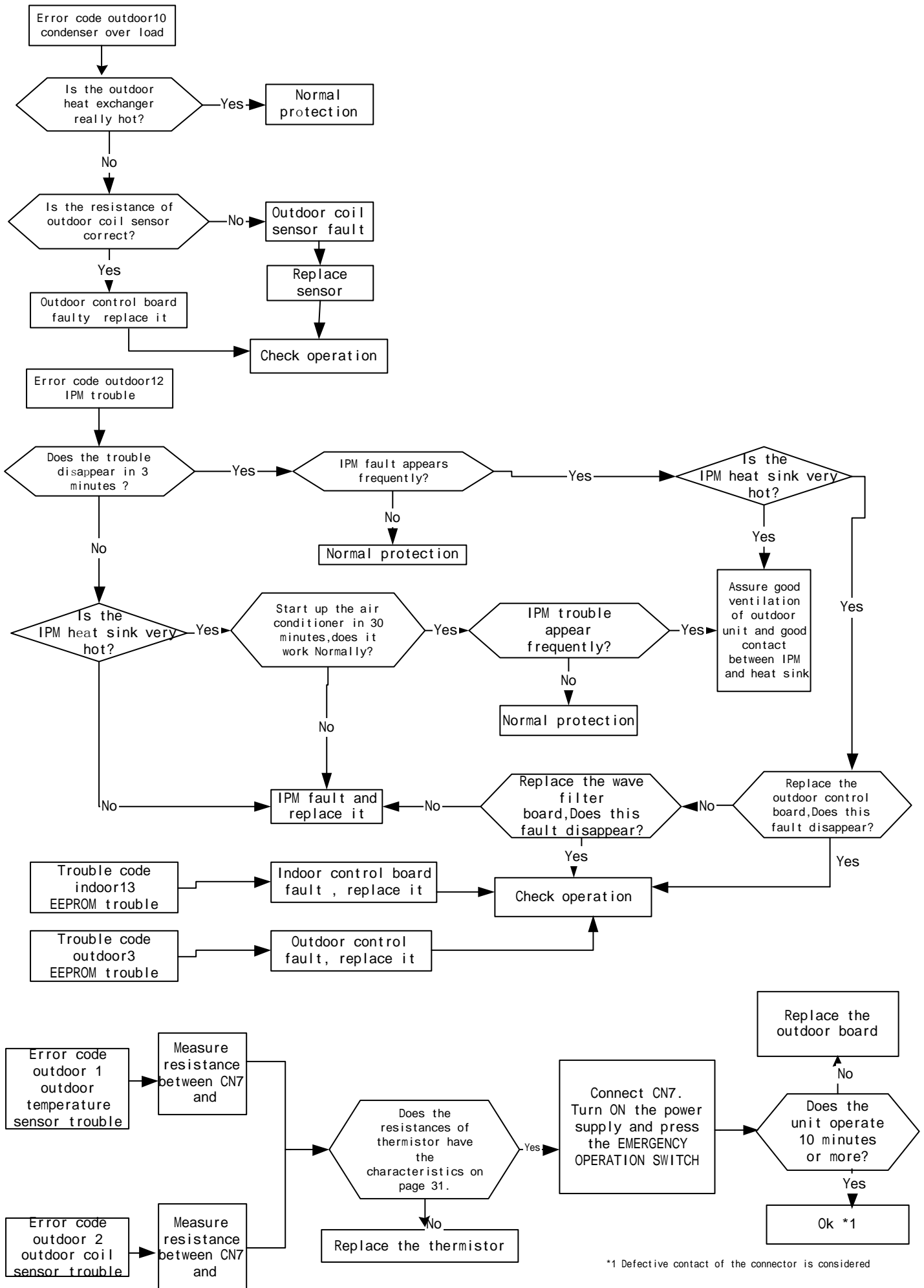
7.SERVICE FLOW CHART



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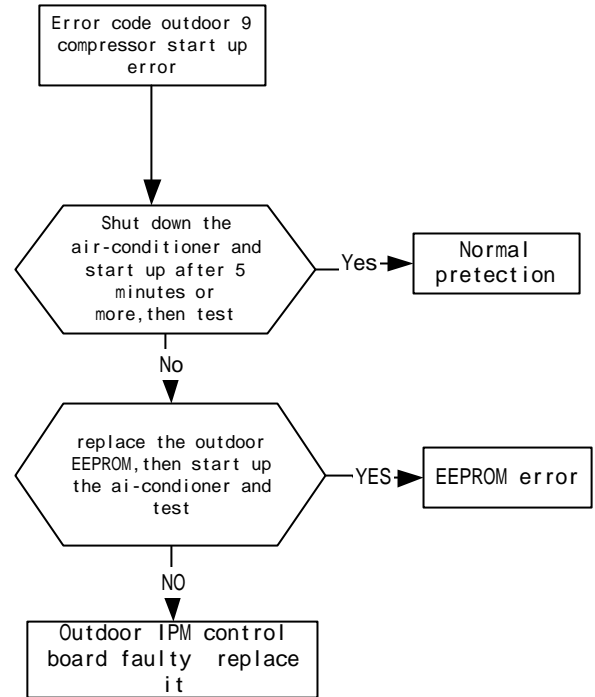
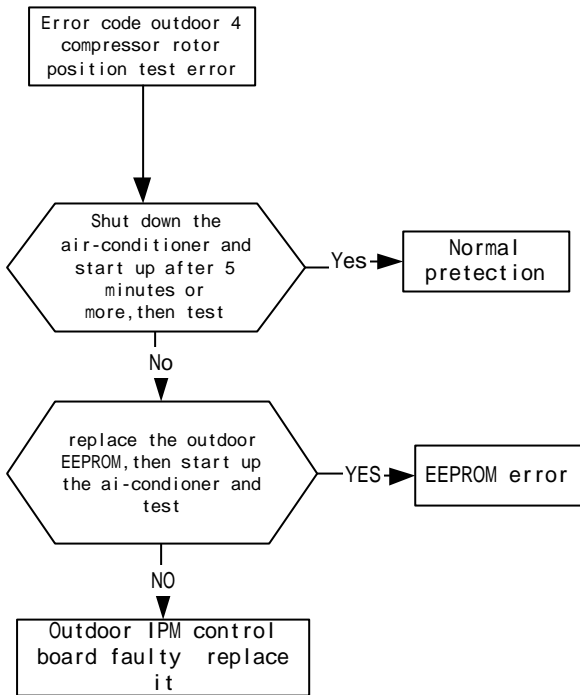


7.SERVICE FLOW CHART



*1 Defective contact of the connector is considered

7.SERVICE FLOW CHART

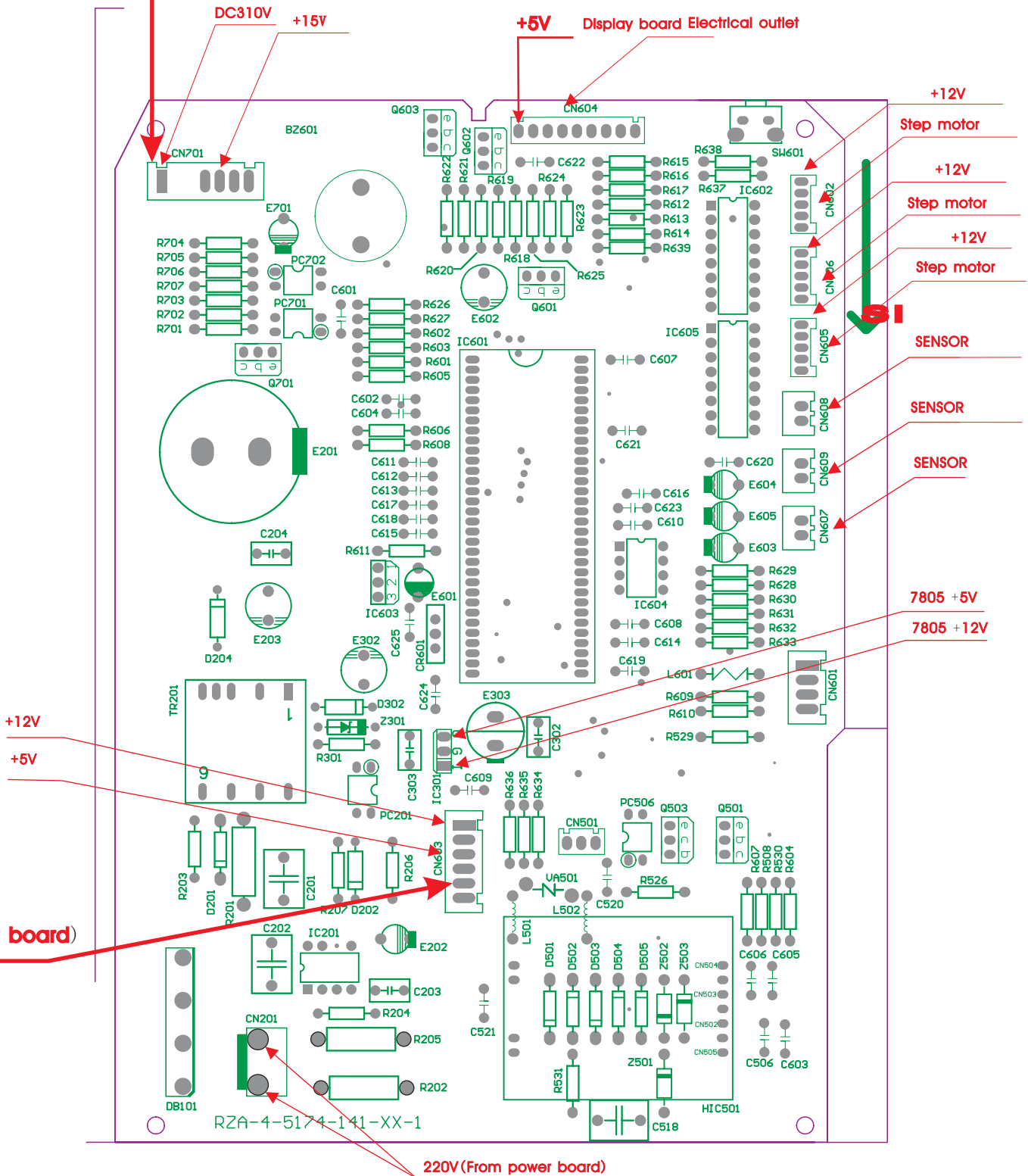


8.ELECTRIC CONTROL BOARD

HKEB - HCNB 261 X

HKEB - HCNB 351 X

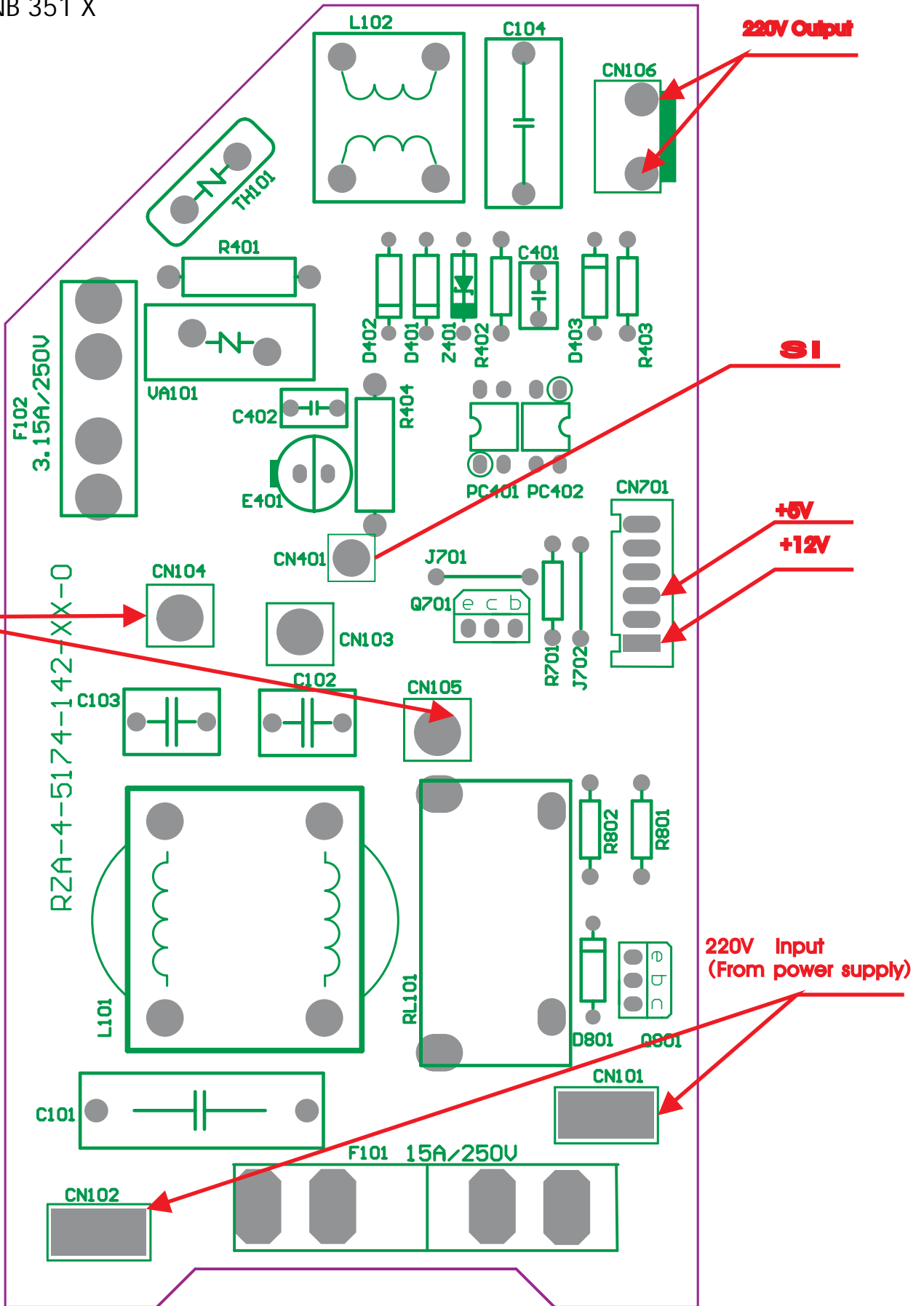
FAN MOTOR CONTROL



8.ELECTRIC CONTROL BOARD

HKEB - HCNB 261 X

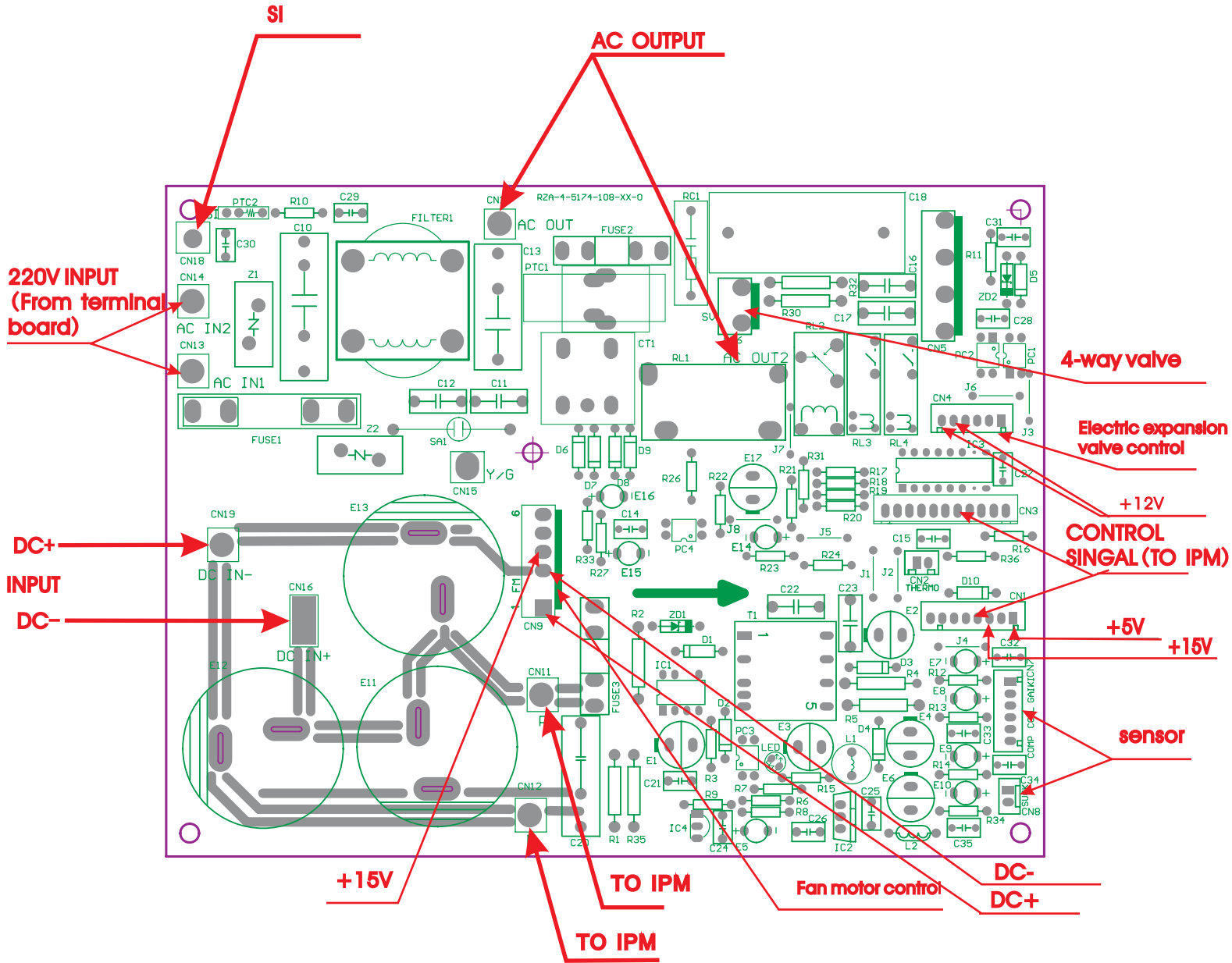
HKEB - HCNB 351 X



8.ELECTRIC CONTROL BOARD

HKEB - HCNB 261 X

HKEB - HCNB 351 X



9.SENSOR PARAMETER

THE PARAMETER OF THE COIL AND INDOOR AND OUTDOOR SENSOR

T('c)	R(Ko)	V(v)	T('c)	R(Ko)	V(v)	T('c)	R(Ko)	V(v)
-20	39.58	0.5307	9	10.1	1.5878	38	3.265	2.9504
-19	37.58	0.5558	10	9.684	1.6338	39	3.151	2.9932
-18	35.69	0.5818	11	9.284	1.6805	40	3.041	3.0358
-17	33.91	0.6087	12	8.903	1.7276	41	2.936	3.0775
-16	32.23	0.6363	13	8.54	1.7749	42	2.835	3.1188
-15	30.65	0.6648	14	8.194	1.8226	43	2.739	3.159
-14	29.15	0.6942	15	7.864	1.8704	44	2.646	3.199
-13	27.74	0.7244	16	7.549	1.9185	45	2.556	3.2387
-12	26.4	0.7556	17	7.249	1.9667	46	2.471	3.2771
-11	25.14	0.7875	18	6.962	2.0151	47	2.388	3.3155
-10	23.95	0.8202	19	6.688	2.0636	48	2.309	3.3528
-9	22.82	0.8539	20	6.427	2.112	49	2.233	3.3896
-8	21.75	0.8885	21	6.178	2.1603	50	2.159	3.4262
-7	20.74	0.9237	22	5.939	2.2089	51	2.089	3.4615
-6	19.79	0.9596	23	5.712	2.257	52	2.021	3.4965
-5	18.88	0.9966	24	5.494	2.3053	53	1.956	3.5306
-4	18.02	1.0343	25	5.286	2.3533	54	1.893	3.5644
-3	17.2	1.0731	26	5.086	2.4014	55	1.832	3.5977
-2	16.43	1.1122	27	4.896	2.4489	56	1.774	3.6299
-1	15.7	1.152	28	4.714	2.4963	57	1.718	3.6616
0	15	1.1929	29	4.539	2.5436	58	1.664	3.6926
1	14.34	1.2342	30	4.372	2.5904	59	1.612	3.7231
2	13.71	1.2765	31	4.212	2.6369	60	1.562	3.7528
3	13.11	1.3195	32	4.059	2.683	61	1.513	3.7824
4	12.55	1.3623	33	3.912	2.7288	62	1.467	3.8106
5	12.01	1.4063	34	3.772	2.7738	63	1.422	3.8386
6	11.5	1.4506	35	3.637	2.8188	64	1.379	3.8658
7	11.01	1.4959	36	3.508	2.8631	65	1.337	3.8927
8	10.55	1.541	37	3.384	2.907			

9.SENSOR PARAMETER

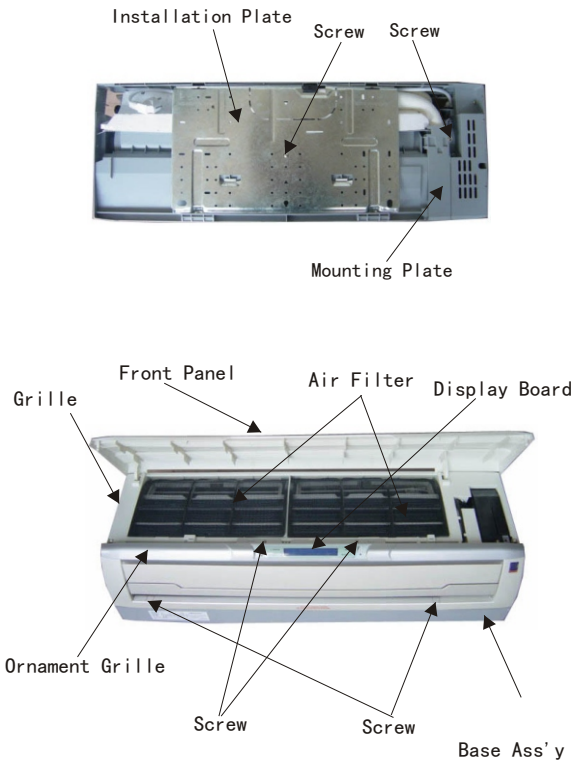
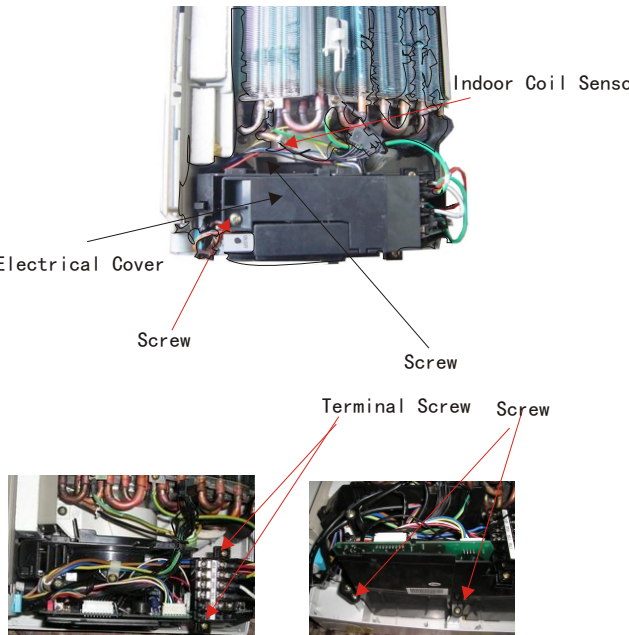
THE PARAMETER OF THE DISCHARGE SENSOR

T('C)	R(O)	V(v)	T('C)	R(O)	V(v)	T('C)	R(O)	V(v)
-10	313.4	0.3	31	44.74	1.545	71	9.659	3.372
-9	297.2	0.315	32	42.89	1.59	72	9.331	3.409
-8	281.9	0.331	33	41.13	1.636	73	9.016	3.446
-7	267.5	0.348	34	39.44	1.682	74	8.712	3.483
-6	253.9	0.365	35	37.84	1.729	75	8.421	3.519
-5	241.1	0.383	36	36.3	1.776	76	8.14	3.554
-4	229	0.402	37	34.84	1.823	77	7.869	3.588
-3	217.6	0.421	38	33.44	1.871	78	7.609	3.622
-2	206.8	0.441	39	32.11	1.919	79	7.359	3.655
-1	196.6	0.462	40	30.83	1.967	80	7.118	3.688
0	186.9	0.483	41	29.61	2.016	81	6.885	3.72
1	177.8	0.506	42	28.45	2.064	82	6.662	3.751
2	169.2	0.529	43	27.34	2.112	83	6.446	3.781
3	161	0.552	44	26.27	2.161	84	6.239	3.811
4	153.3	0.577	45	25.25	2.21	85	6.039	3.84
5	146	0.602	46	24.28	2.258	86	5.846	3.869
6	139	0.629	47	23.35	2.307	87	5.661	3.897
7	132.5	0.656	48	22.46	2.355	88	5.482	3.924
8	126.3	0.684	49	21.6	2.404	89	5.309	3.951
9	120.4	0.712	50	20.79	2.452	90	5.143	3.977
10	114.8	0.742	51	20.01	2.499	91	4.982	4.003
11	109.5	0.772	52	19.26	2.547	92	4.827	4.028
12	104.4	0.804	53	18.54	2.595	93	4.678	4.052
13	99.66	0.836	54	17.85	2.642	94	4.534	4.076
14	95.13	0.869	55	17.19	2.689	95	4.395	4.099
15	90.82	0.902	56	16.56	2.735	96	4.261	4.122
16	86.74	0.937	57	15.96	2.781	97	4.132	4.144
17	82.85	0.972	58	15.38	2.826	98	4.007	4.165
18	79.16	1.008	59	14.82	2.872	99	3.886	4.187
19	75.65	1.045	60	14.29	2.916	100	3.77	4.207
20	72.32	1.083	61	13.78	2.96	101	3.658	4.227
21	69.15	1.122	62	13.28	3.005	102	3.549	4.246
22	66.13	1.161	63	12.81	3.048	103	3.444	4.265
23	63.27	1.201	64	12.36	3.09	104	3.343	4.284
24	60.54	1.242	65	11.93	3.132	105	3.15	4.32
25	57.94	1.283	66	11.51	3.174	106	3.059	4.337
26	55.46	1.325	67	11.11	3.214	107	2.97	4.354
27	53.11	1.368	68	10.73	3.254	108	2.884	4.37
28	50.86	1.411	69	10.36	3.294	109	2.802	4.386
29	48.72	1.455	70	10	3.333	110	2.721	4.401
30	46.68	1.5						

10. DISASSEMBLY INSTRUCTIONS

● HKEB 261 X

HKEB 351 X

OPERATION PROCEDURE	PHOTOS
<p>1. Remove the grille</p> <ol style="list-style-type: none"> 1) Take out the screw of the installation plate and remove the installation plate. 2) Take out the screws of the mounting plate . 3) Hold the both sides of the front panel and drag it towards oneself and remove it. 4) Take out the screws of the ornament grille and remove the ornament grille. 5) Take away the air filters in the grille. 6) Open the screw cover ,then take out the screws of the grille and remove the grille. 7) Remove the mounting plate. 	
<ol style="list-style-type: none"> 2. Remove the electrical control box <ol style="list-style-type: none"> 1) Take out the screw of the electrical cover and remove it. 2) Remove the indoor coil sensor from the sensor bracket. 3) Take out the screws of the electrical control box and disconnect all the connectors on the printed circuit board,then remove the electrical box. 	

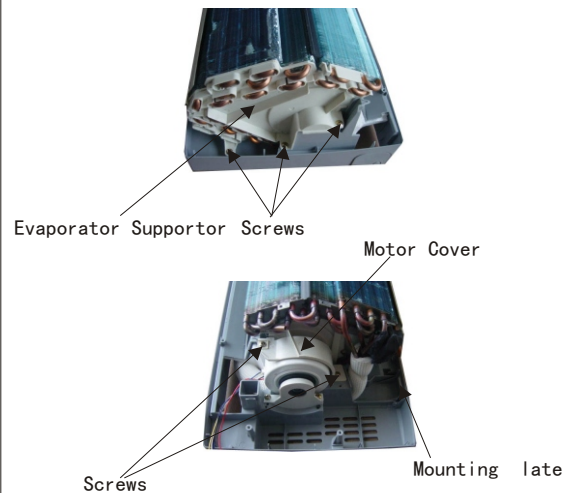
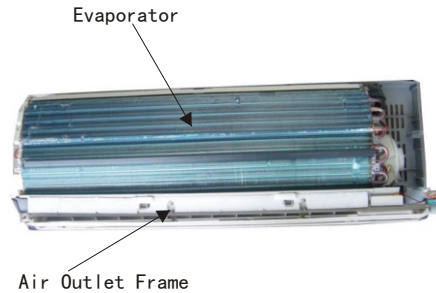
10. DISASSEMBLY INSTRUCTIONS

● HKEB 261 X

HKEB 351 X

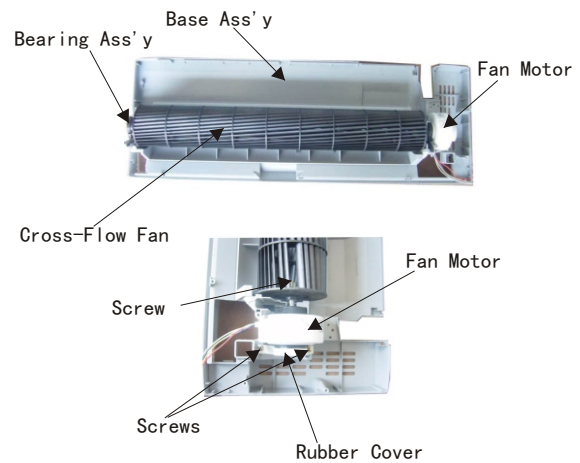
3. Remove the air outlet frame and the evaporator

- 1) Remove the air outlet frame.
- 2) Take out the screws of the evaporator supportor and remove the evaporator supportor.
- 3) Take out the screws of the motor cover and remove the motor cover.
- 4) Take away the mounting plate and then remove the evaporator.



4. Remove the fan motor and the cross-flow fan

- 1) Take out the screw of the rubber cover and remove the rubber cover.
- 2) Remove the screw connecting the fan motor and the cross-flow fan.
- 3) Remove the fan motor and the bearing ass'y.
- 4) Remove the cross-flow fan.



10. DISASSEMBLY INSTRUCTIONS

● HCNB 261 X - HCNB 351 X

OPERATION PROCEDURE	PHOTOS
<p>1. Remove the top panel and the front panel</p> <p>1) Take out the screws of the top panel and remove the top panel.</p> <p>2) Take out the screws of the strengthen plate and remove it.</p> <p>3) Take out the screws of the front panel and remove the panel.</p>	
<p>2. Remove the electrical control box</p> <p>1) Take out the screws of the valve cover and remove the valve cover.</p> <p>2) Take out the screws of the side cover and remove the cover.</p> <p>3) Take out the screws of the electrical box cover and remove it.</p> <p>4) Disconnect all the wires in the electrical control box and the other parts.</p> <p>4) Take out the screws of the electrical control box and remove electrical control box.</p>	

10. DISASSEMBLY INSTRUCTIONS

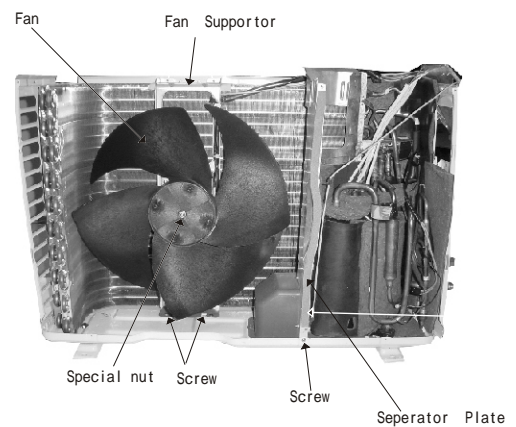
● HCNB 261 X - HCNB 351 X

3. Remove the back panel

- 1) Take out the screws of the back panel.
- 2) Remove the back panel.

4. Remove the fan , fan motor, fan supportor and the separate plate.

- 1) Take out the special nut of the fan and remove the fan.
- 2) Take out the screws of the fan motor and remove the fan motor.
- 3) Take out the screws of the fan supportor and remove the fan supportor.
- 4) Take out the screws of the partition plate and remove the partition plate.



5. Check-up the other parts of the outdoor units

- 1) Check-up the condenser ass'y.
- 2) Check-up the compreesor ass'y.
- 3) Check-up the base ass'y.

