TECHNICAL SERVICE MANUAL

—— Gree 2000 Series

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
Jinji West Rd. Qianshan Zhuhai
Guangdong China

Introduction

In this technical service manual, you will find rich references to GREE 2000 Series products, including photos, technical specifications, explosive views, spare parts lists and circuit diagrams. Service people and engineers of Gree's customers and distributors would find it a very handy source of technical information of our products.

Technical Support Department
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
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CONTENTS

2.GREE 2000 Multi-Split type

2.1 Summary

figure 2-1

MODEL	NOTE
KF-(32+18X2)GW/E KF-18X4GW/E	CE STANDARD 1Ph 220-230V 50Hz R22
KF-(32+18X2)GW/EN KF-18X4GW/EN	CE STANDARD 1Ph 220-230V 50Hz R407C

2.2 Technical specifications

Table 2-1

Model			KF-18X4GW/EN	KF-(32+18X2)GW/EN	
Function			Cooling	Cooling	
Power supply			1Ph 220V 50Hz		
Capacity(W)			1800x4	3200+1800x2	
Rated input(W)			2700	2700	
Rated current(A)			13	13	
Air flow(m^3/h)			420		
Dehumidifying volume(L/h)			1.2	1.2	
EER(W/W)			2.6	2.5	
Indoor unit	Model		KF-18X4G/(1835M)N	KF-(32+18X2)G/(1835M)N	KF-(32+18X2)G/(3235M)N
	Motor fan speed(rpm)		900/850/800		
	Output power(W)		8		
	Fan type/piece		Cross flow fan-1		
	Diameter-length(mm)		ϕ 92mm-616		
	Evaporator		Aluminum fin-copper tube		
	Row-fin distance(mm)		2-1.5		
	Working area(m^2)		0.18		
	Swing motor		MP24GA		
	Input power(W)		2		
	Fuse(A)		Controller 3.15A		
	Working capacitor(μF)		1		
	Noise(dB(A))		⩽ 34		
	Dimension(width-height-depth)(mm)		830 × 189 × 285		
	Net weight(kg)		11		
Outdoor unit	Model		KF-18X4W/EN	KF-(32+18X2)W/EN	
	Input power(W)		2554	2592	
	Current(A)		12.9	12.9	
	L.R.A.(A)		32		
	Throttling method		Capillary		
	Compressor		C-RN110H5A		
	Starting method		Capacitor staring		
	Working temp.		⩽ 115℃		
	Condenser		Aluminum fin-copper tube		
	Pipe-diameter		9.52		
	Row-fin distance(mm)		2-1.8		
	Working area(m^2)		0.59		
	Fan motor power(w)/speed(rpm)		60/780		
	Type-piece		Axial fan-1		
	Diameter(mm)		450		
	Defrosting method		Auto defrost		
	Noise (dB(A))		52		
	Dimension(width-height-depth)(mm)		950 × 840 × 412		
	Net weight(kg)		32		
	Refrigerant charge (kg)		R407C 1.2X2	R407C 1.2X2	
Connecting pipe	Length (m)		4		
	Outer diameter of connecting pipe	Liquid pipe(mm)	6		
		Gas pipe(mm)	9.52		
	Max distance	Height(m)	5		
		Length(m)	10		

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 2-2

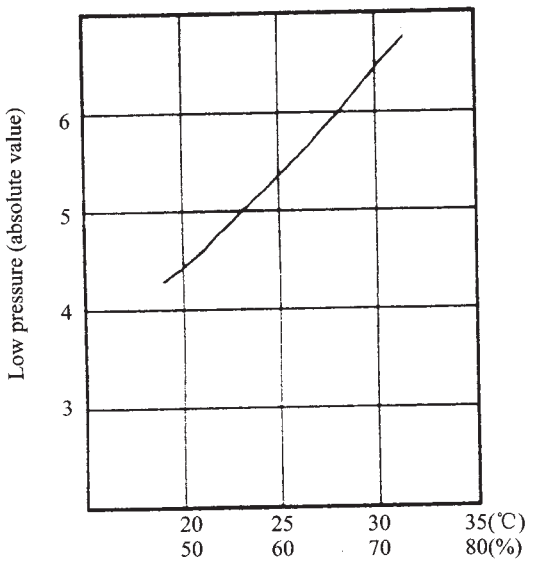
Model			KF-18X4GW/E	KF-(32+18X2)GW/E	
Function			Cooling	Cooling	
Power supply			1Ph 220V 50Hz		
Capacity(W)			1800x4	3200+1800x2	
Rated input(W)			2700	2700	
Rated current(A)			13	13	
Air flow(m^3/h)			420		
Dehumidifying volume(L/h)			1.2	1.2	
EER(W/W)			2.7	2.5	
Indoor unit	Model		KF-18X4G/(1835M)	KF-(32+18X2)G/(1835M)	KF-(32+18X2)G/(3235M)
	Motor fan speed(rpm)		900/850/800		
	Output power(W)		8		
	Fan type/piece		Cross flow fan-1		
	Diameter-length(mm)		ϕ 92mm-616		
	Evaporator		Aluminum fin-copper tube		
	Row-fin distance(mm)		2-1.5		
	Working area(m^2)		0.18		
	Swing motor		MP24GA		
	Input power(W)		2		
	Fuse(A)		Controller 3.15A		
	Working capacitor(μF)		1		
	Noise(dB(A))		⩽ 34		
	Dimension(width-height-depth)(mm)		830 × 189 × 285		
	Net weight(kg)		11		
Outdoor unit	Model		KF-18X4W/E	KF-(32+18X2)W/E	
	Input power(W)		2554	2592	
	Current(A)		12.9	12.9	
	L.R.A.(A)		32		
	Throttling method		Capillary		
	Compressor		C-RV222H1AA		
	Starting method		Capacitor staring		
	Working temp.		⩽ 115℃		
	Condenser		Aluminum fin-copper tube		
	Pipe-diameter		9.52		
	Row-fin distance(mm)		2-1.8		
	Working area(m^2)		0.59		
	Fan motor power(w)/speed(rpm)		60/780		
	Type-piece		Axial fan-1		
	Diameter(mm)		450		
	Defrosting method		Auto defrost		
	Noise (dB(A))		52		
	Dimension(width-height-depth)(mm)		950 × 840 × 412		
	Net weight(kg)		32		
	Refrigerant charge (kg)		R22/2.4	R22/2.4	
Connecting pipe	Length (m)		4		
	Outer diameter of connecting pipe	Liquid pipe(mm)	6		
		Gas pipe(mm)	9.52		
	Max distance	Height(m)	5		
		Length(m)	10		

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

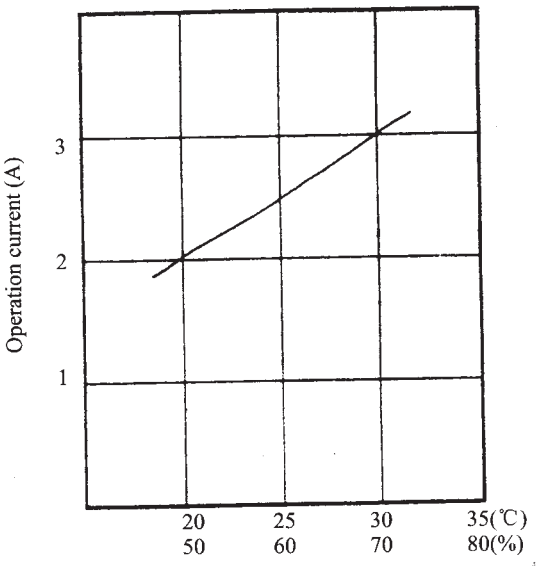
2.3 Performance curves

- Technical date
- Performance curve as fig1 fig2
- The change relation between low pressure , operation current and temp.

Cooling operation condition :In testing , indoor and outdoor have same work condition.

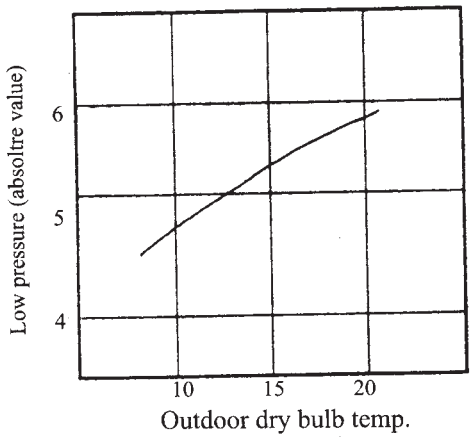


(a)

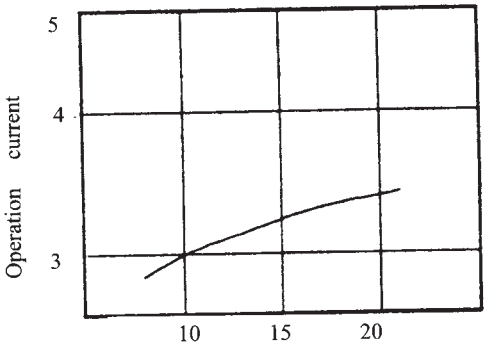


(b)

Heating operation
Indoor work condition : dry bulb temp. 21 ,wet bulb temp. 15.5

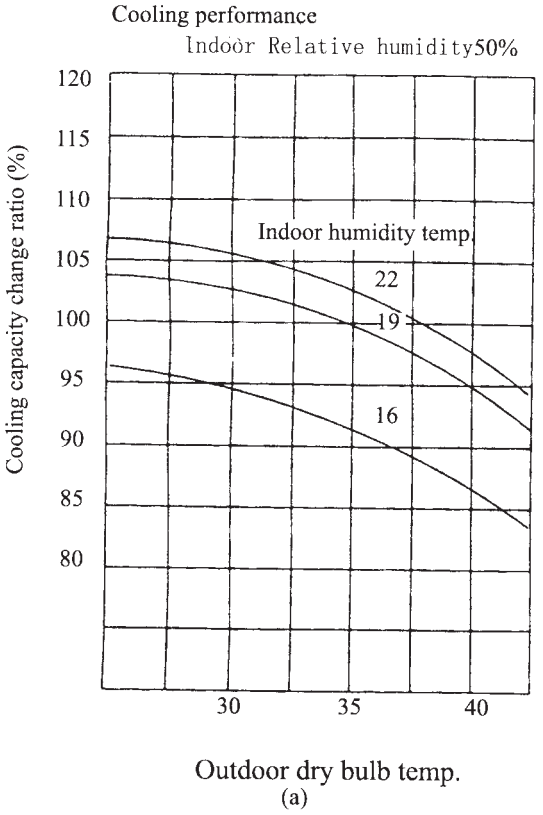


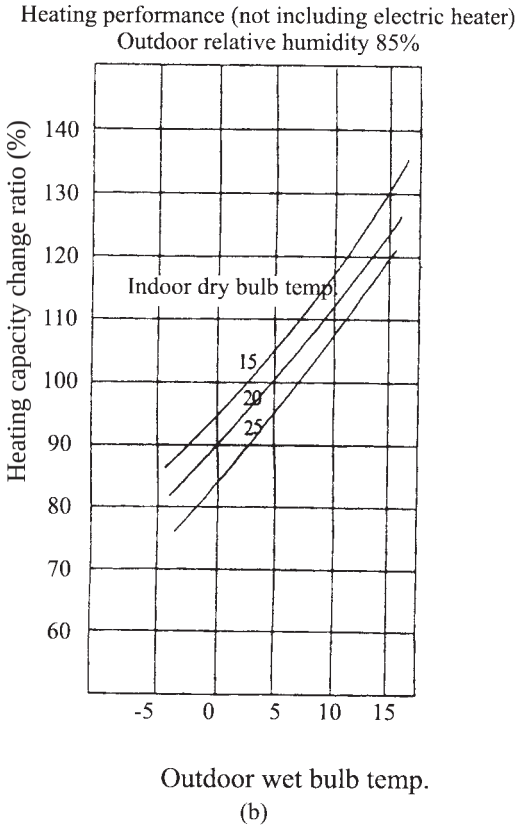
(c)

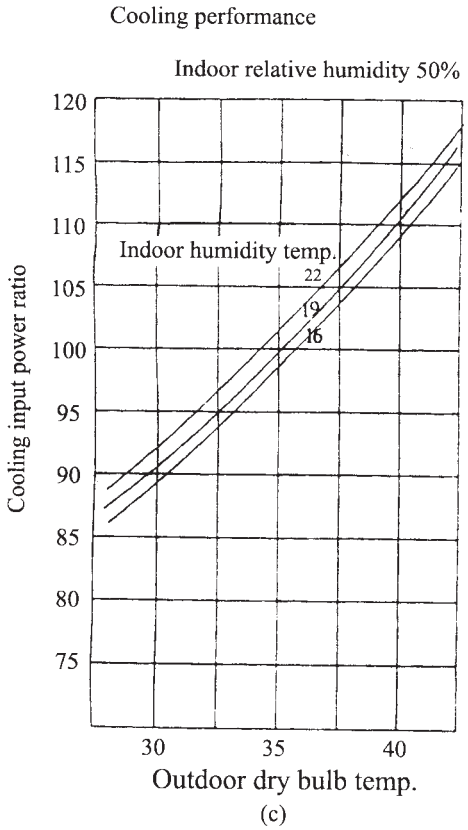


(d)

figure 2-2


Cooling performance
Indoor Relative humidity50%
Cooling capacity change ratio (%)
120
115
110
105
100
95
90
85
80
Indoor humidity temp.
22
19
16
30
35
40
Outdoor dry bulb temp.
(a)


Heating performance (not including electric heater)
Outdoor relative humidity 85%
Heating capacity change ratio (%)
140
130
120
110
100
90
80
70
60
Indoor dry bulb temp.
15
20
25
-5
0
5
10
15
Outdoor wet bulb temp.
(b)


Cooling performance
Indoor relative humidity 50%
Cooling input power ratio
120
115
110
105
100
95
90
85
80
75
Indoor humidity temp.
22
19
16
30
35
40
Outdoor dry bulb temp.
(c)

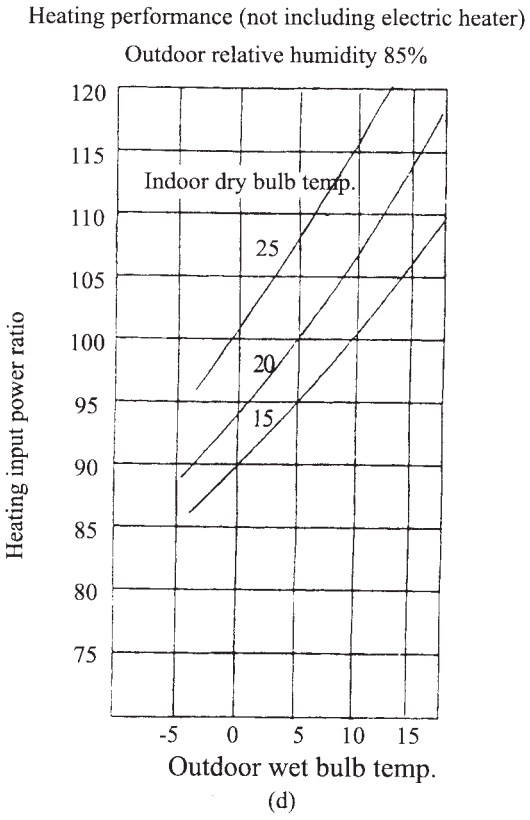
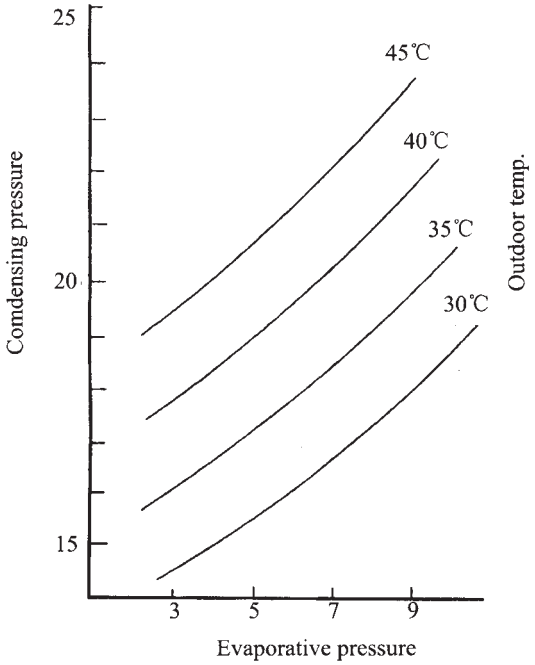
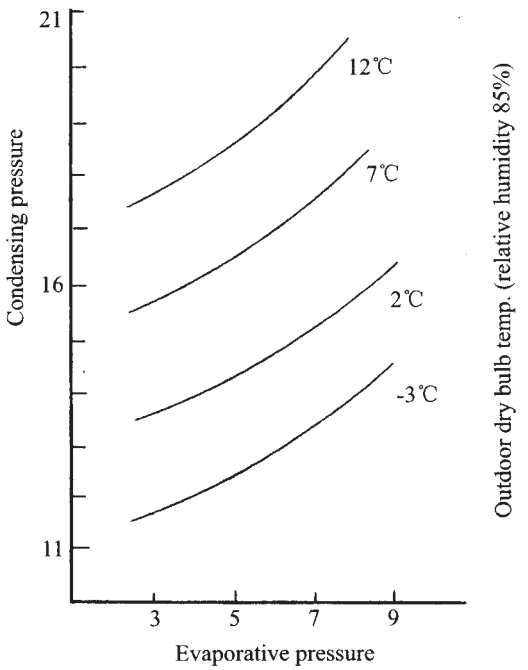

Heating performance (not including electric heater)
Outdoor relative humidity 85%
Heating input power ratio
120
115
110
105
100
95
90
85
80
75
Indoor dry bulb temp.
25
20
15
-5
0
5
10
15
Outdoor wet bulb temp.
(d)

figure 2-3



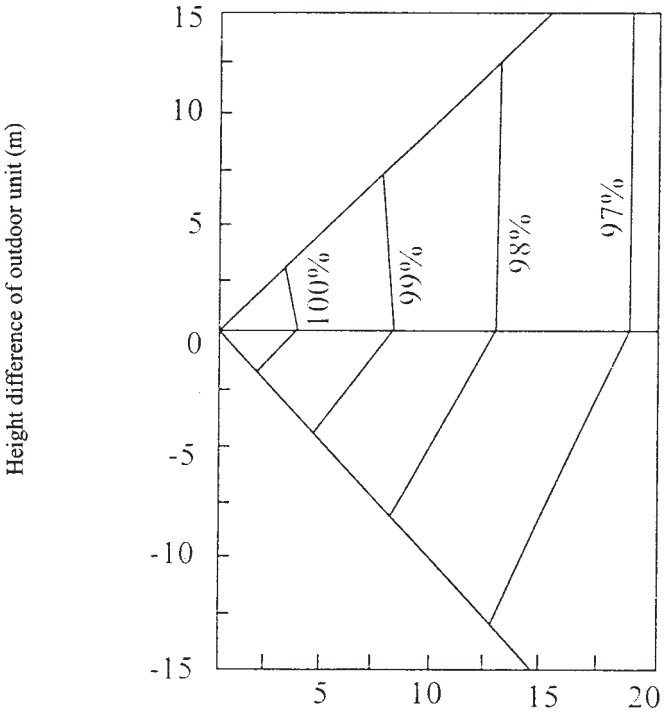
The affection to the charging quantity by pressure under cooling work condition.
(Indoor work condition:dry bulb 27℃,wet bulb 19.5℃)

(e)



The affection to the charging quantity by pressure under heating work condition.
(Indoor work condition:dry bulb 21℃)

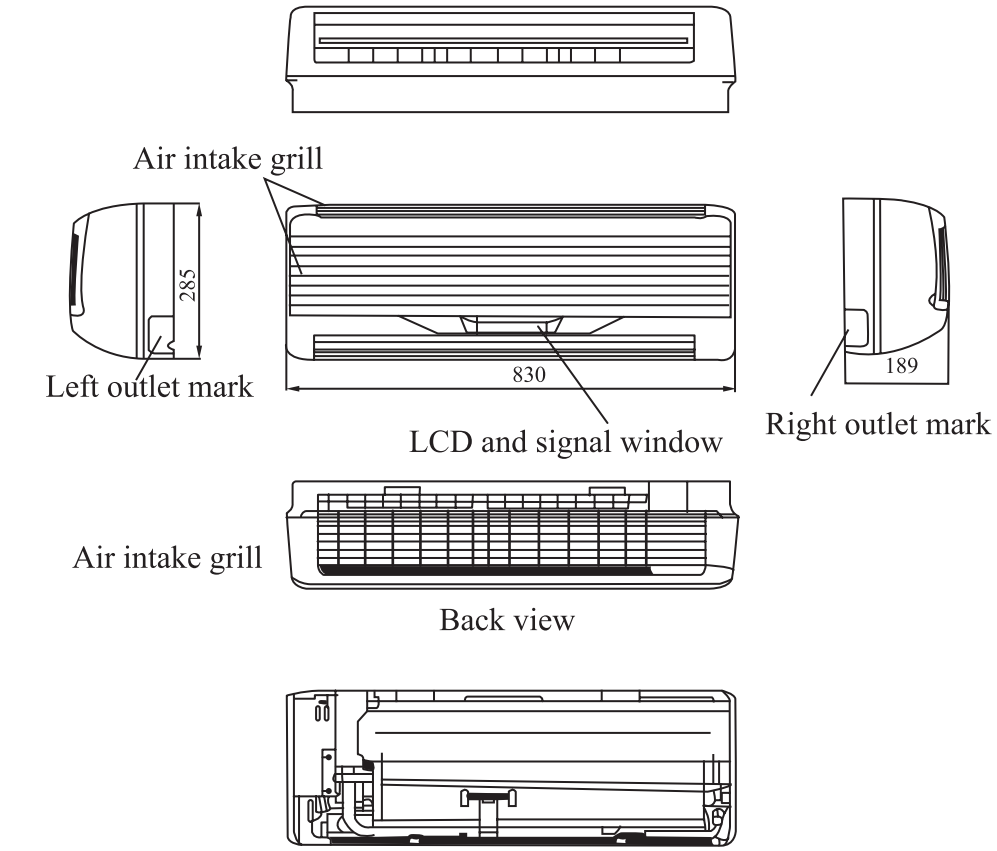
(f)



Cooling capacity vary with the length of connection pipe

figure 2-4

2.4 Outlines and dimensions of indoor unit



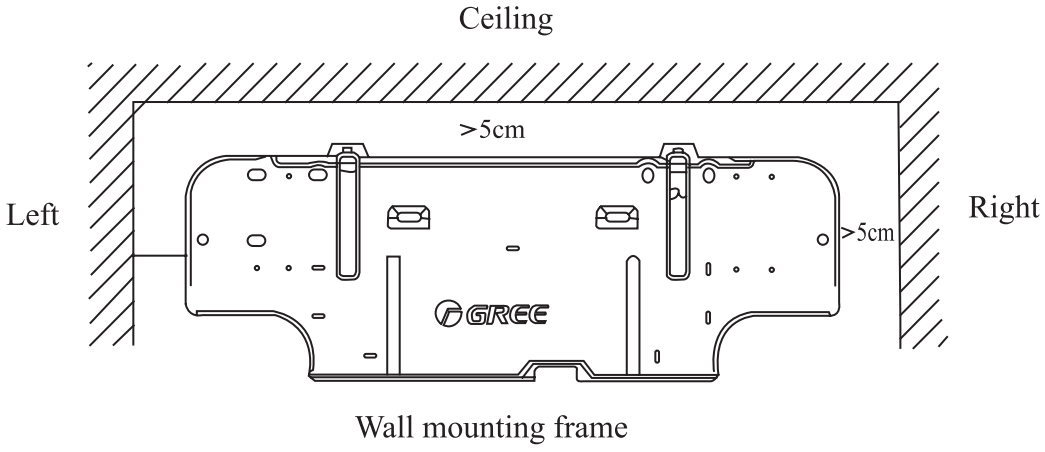
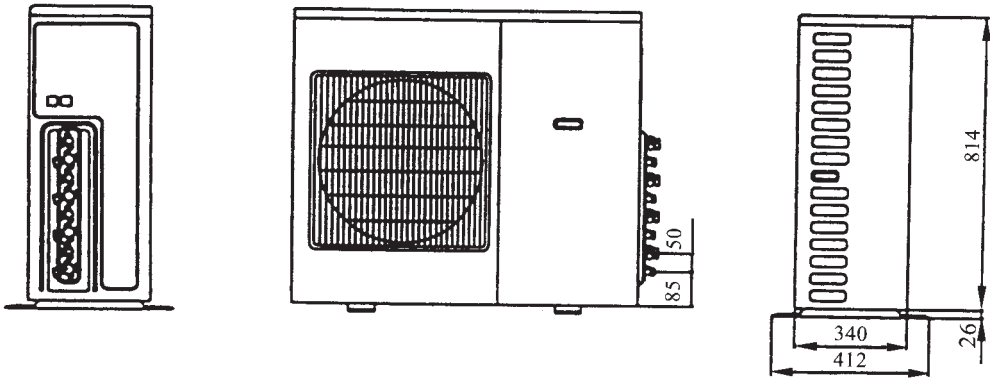
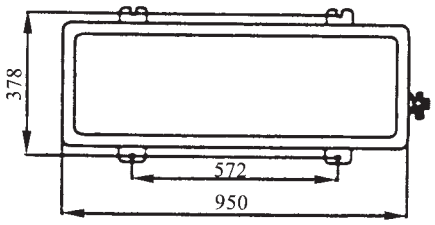


figure 2-5

2.5 Outlines and dimensions of outdoor unit



unit: mm



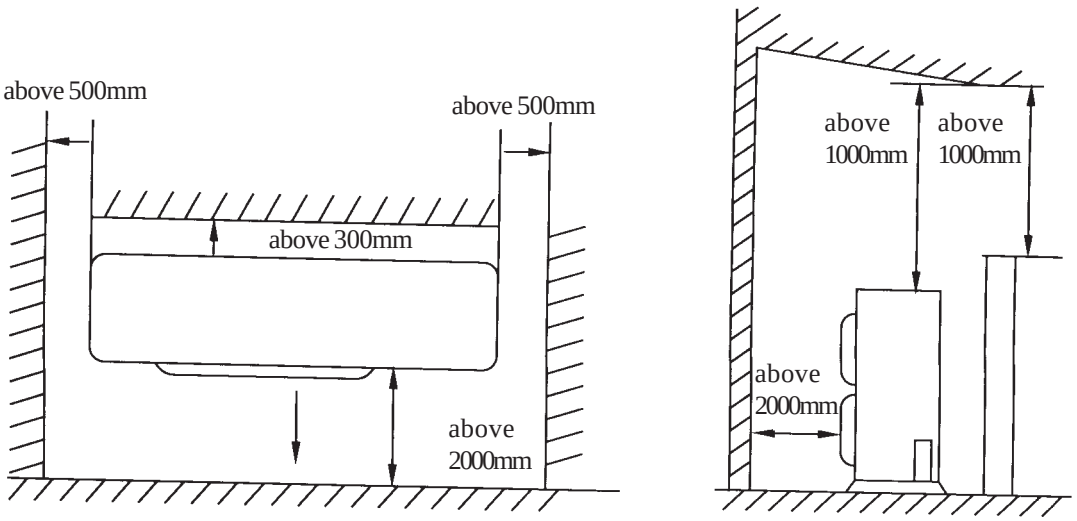


figure 2-6

2.6 Explosive view and Spare parts list of indoor unit

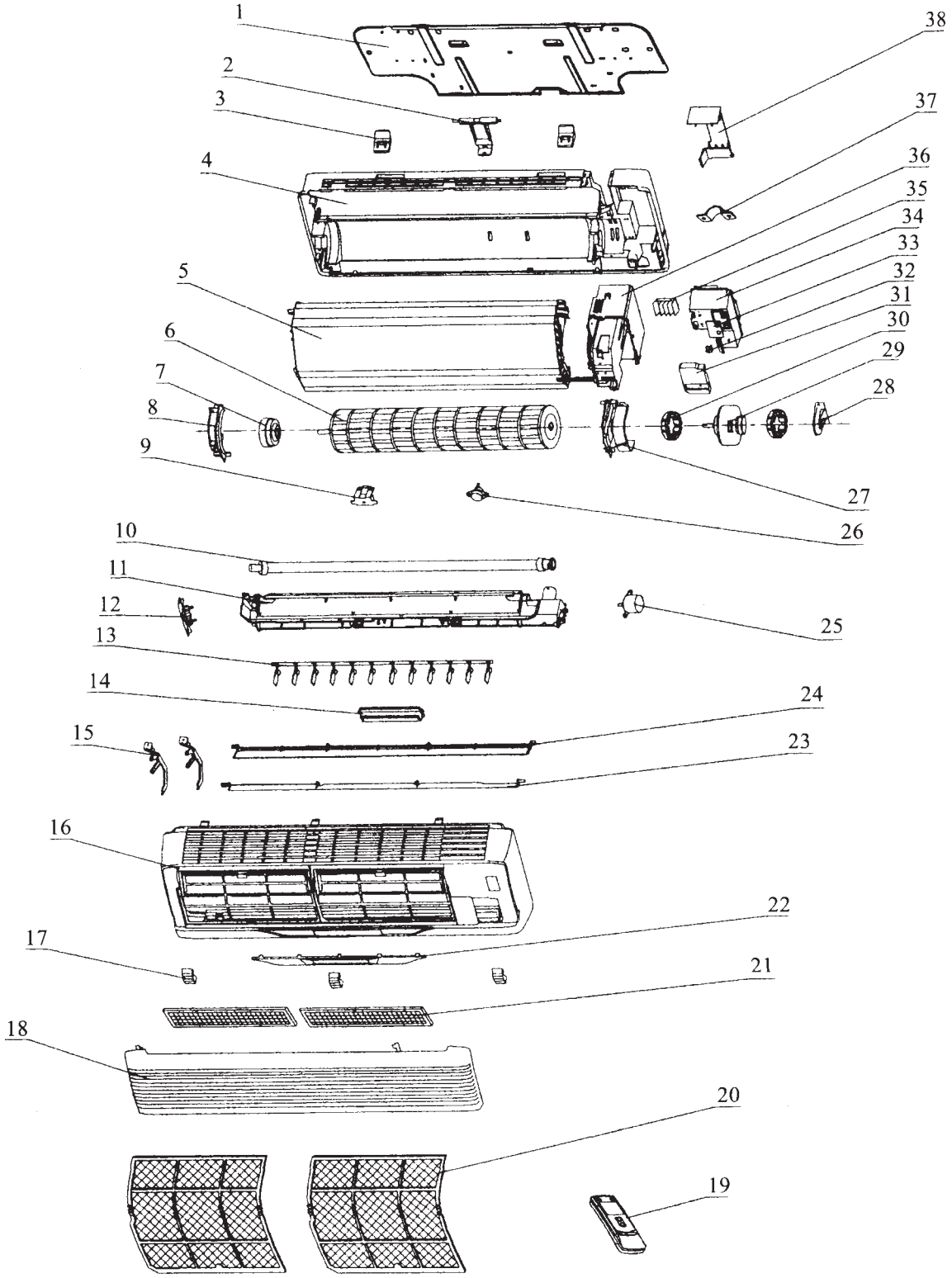


figure 2-7

Table 2-3

No.	Description		Part No						Qty
			KF-(32+18X2)G /(1835M)	KF-(32+18X2)G /(3235M)	KF-(32+18X2)G /(1835M)N	KF-(32+18X2)G /(3235M)N	KF-18X4 G/E	KF-18X4 G/EN	
1	Wall-mounting frame	壁挂板	01252381	01252381	01252381	01252381	01252381	01252381	1
2	Pipe clamp	卡管板	26112425	26112425	26112425	26112425	26112425	26112425	1
3	Hook	挂板钩	26272421	26272421	26272421	26272421	26272421	26272421	2
4	Rear case	底壳	22202429	22202429	22202429	22202429	22202429	22202429	1
5	Evaporator assy	蒸发器部件	01002020	01002020	01002020	01002020	01002020	01002020	1
6	Cross flow fan assy	贯流风叶部件	10352405	10352405	10352405	10352405	10352405	10352405	1
7	Ring of bearing	轴承胶座	76712015	76712015	76712015	76712015	76712015	76712015	1
8	Left motor clamp	电机左卡板	261124281	261124281	26112428	26112428	26112428	26112428	1
9	Drain pipe	排水管	05230022	05230022	05230022	05230022	05230022	05230022	1
10	Water tray	接水盘	20182439	20182439	20182439	20182439	20182439	20182439	1
11	Stepping motor gear	导风电机齿轮组	10592001	10592001	10592001	10592001	10592001	10592001	1
12	Swing assy	扫风部件	10102001	10102001	10102001	10102001	10102002	10102001	1
13	LCD display assy	液晶显示屏组件	22242007	22242007	22242007	22242007	22242007	22242007	1
14	Guide louver holder	导风板支撑架	24212429	24212429	24212429	24212429	24212430	24212429	2
15	Front case	面板体	20002407	20002407	20002407	20002407	20002407	20002407	1
16	Screw cover	螺钉盖	24252440	24252440	24252440	24252440	24252440	24252440	1
17	Front panel	面板	20002404	20002404	20002404	20002404	20002404	20002404	1
18	Remote controller	遥控器Y512	30512506	30512506	30512506	30512506	30512506	30512506	1
19	Filter	过滤网	11122440	11122440	11122440	11122440	11122440	11122440	2
20	Filter	空气净化器	11012421	11012421	11012421	11012421	11012421	11012421	1
21	LCD paneling	液晶镶板	22432439	22432439	22432439	22432439	22432439	22432439	1
22	Guide louver	小导风板	10512428	10512428	10512428	10512428	10512428	10512428	1
23	Guide louver	大导风板	10512427	10512427	10512427	10512427	10512427	10512427	1
24	Stepping motor MP24GA	步进电机MP24GA	15212102	15212102	15212102	15212102	15212102	15212102	1
25	Right motor clamp	电机右卡板	26112429	26112429	26112429	26112429	26112429	26112429	1
26	Motor FN8E_PG	电机FN8E_PG	15012007	15012007	15012007	15012007	15012007	15012007	1
27	Beareing holder	轴承座	26152423	26152423	26152423	26152423	26152423	26152423	1
28	Motor rubbing ring	电机轴套	26242001	26242001	26242001	26242001	26242001	26242001	2
29	Covering plate	接线盖板	22242411	22242411	22242411	22242411	22242411	22242411	1
30	Switching plate	开关拨动片	26272422	26272422	26272422	26272422	26272422	26272422	1
31	PCB 5151D2A TB	控制器5151D2A TB	30023532	30023532	30023532	30023532	/	/	1
	PCB 5151-2A	控制器5151-2A	/	/	/	/	30025116	30025116	1
32	Electric box cover	电器盒顶盖	20102430	20102430	20102430	20102430	20102430	20102430	1
33	Terminal board T4B3A	接线板T4B3A	42011233	42011233	42011233	42011233	42011233	42011234	1
34	Electric box	电器盒	20102429	20102429	20102429	20102429	20102429	20102429	1
35	Wire clamp	电线夹	71010103	71010103	71010103	71010103	71010103	71010103	1
36	Rear clamp	后板卡板	26112430	26112430	26112430	26112430	26112430	26112430	1
37	Room sensor	室温感温包	39000043	39000043	39000043	39000043	39000043	39000043	1
38	Tube sensor	管温感温包	39000159	39000159	39000159	39000159	39000043	39000159	1

The data are subject to change without notice.

2.7 Explosive view and spare parts list of outdoor unit

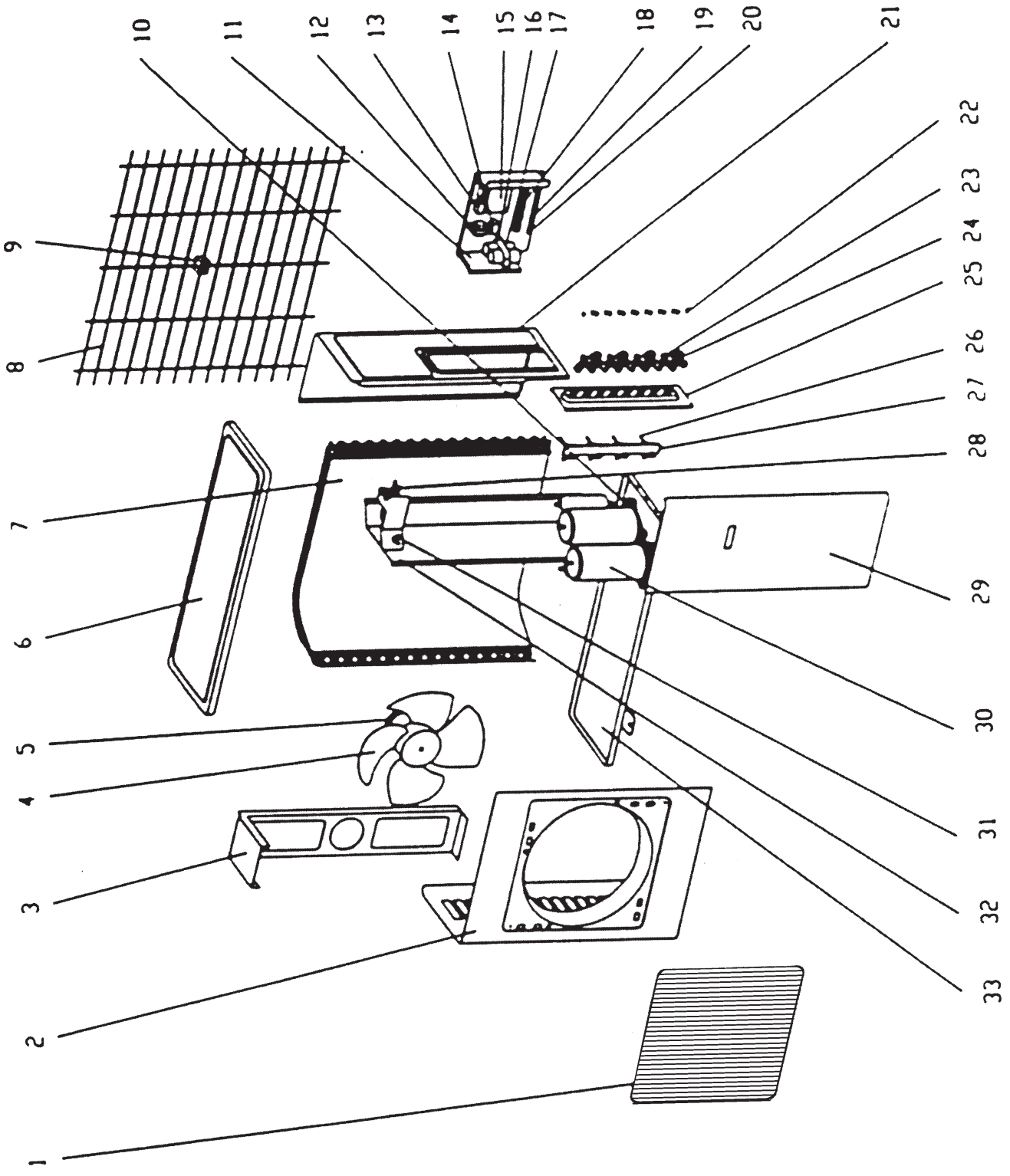


figure 2-8

Table 2-4

No.	Description		Part No.				Qty
			KF-(32+18X2) W/E	KF-(32+18X2) W/EN	KF-18X4 W/E	KF-18X4 W/EN	
1	Front grill	面罩	22265251	22265251	22265251	22265251	1
2	Front plate	外罩	01435254	01435251	01435248	01435245	1
3	Motor support	电机支架组件	01705102	01705102	01705102	01705102	1
4	Axial flow fan	轴流风叶	10335253	10335253	10335253	10335253	1
5	Motor LW60B	电机LW60B	15015205	15015205	15015205	15015205	1
6	Top cover	顶盖	01255261	01255261	01255261	01255261	1
7	Condenser	冷凝器部件	01103503	01103503	01103503	01103503	1
8	Rear grill	网罩	01475251	01475251	01475251	01475251	1
9	Underlay of rear grill	网罩垫块	76315251	76315251	76315251	76315251	1
10	Compressor bolt	压缩机定位螺栓	70210054	70210054	70210054	70210054	1
11	Electric plate assy	电器盒组件	01403402	01403402	01403402	01403402	1
12	Transformer SC21C	变压器SC21C	43110161	43110161	43110161	43110161	1
13	Terminal board 2-8	2-8 接线板	42011103	42011103	42011103	42011103	1
14	Capacitor CBB61 3uF/450V	电容CBB61 3uF/450VAC	33010027	33010027	33010027	33010027	1
15	PCB	控制电路板	30025200	30025200	30025200	30025200	1
16	Capacitor Clamp	电容夹	02143013	02143013	02143013	02143013	1
17	Capacitor CBB65 30uF/450V	电容CBB65 30uF/450VAC	33000021	33000021	33000021	33000021	1
18	Terminal board RS9413	接线板RS9413	42011104	42011104	42011104	42011104	1
19	Capacitor clamp	电容夹	02143013	02143013	02143013	02143013	1
20	Insulation gasket	绝缘垫片	70413432	70413432	70413432	70413432	1
21	Rear side plate	后侧板	01303007	01303007	01303007	01303007	1
22	Self-tapping screw	自攻螺钉	70140260	70140260	70140260	70140260	1
23	Valve 1/4"	阀门1/4"	07100014	07100014	07100131	07100131	1
24	Valve 3/8"	阀门3/8"	07100108	07100108	07100132	07100132	4
25	Valve support	阀门支架	01713032	01713032	01713032	01713032	4
26	Electromagnetic valve	电磁单向阀	43000057	43000057	43000057	43000057	2
27	Electromagnetic valve support 1	电磁阀支架 1	01713034	07143030	01713034	07143030	1
28	Electromagnetic valve	电磁单向阀	43000062	43000062	43000062	43000062	2
29	Front side plate	前侧板	01305251	01305251	01305251	01305251	1
30	Compressor C-RV222H1AA	压缩机C-RV222H1AA	00100340	/	00100340	/	2
	Compressor C-RN110H5A	压缩机C-RN110H5A	/	00100335	/	00100335	1
31	Electromagnetic valve support 2	电磁阀支架 2	07143031	07143031	07143031	07143031	1
32	Isolation sheet assy	隔板组件	01235253	01235253	01235253	01235253	1
33	Metal base	底盘组件	01203304	01203304	01203304	01203304	1

The data are subject to change without notice.

2.8 Circuit diagram

These circuit diagrams are subject to change.
Please refer to the stickers on the machines.

Model: KF-(32+18X2)GW/E

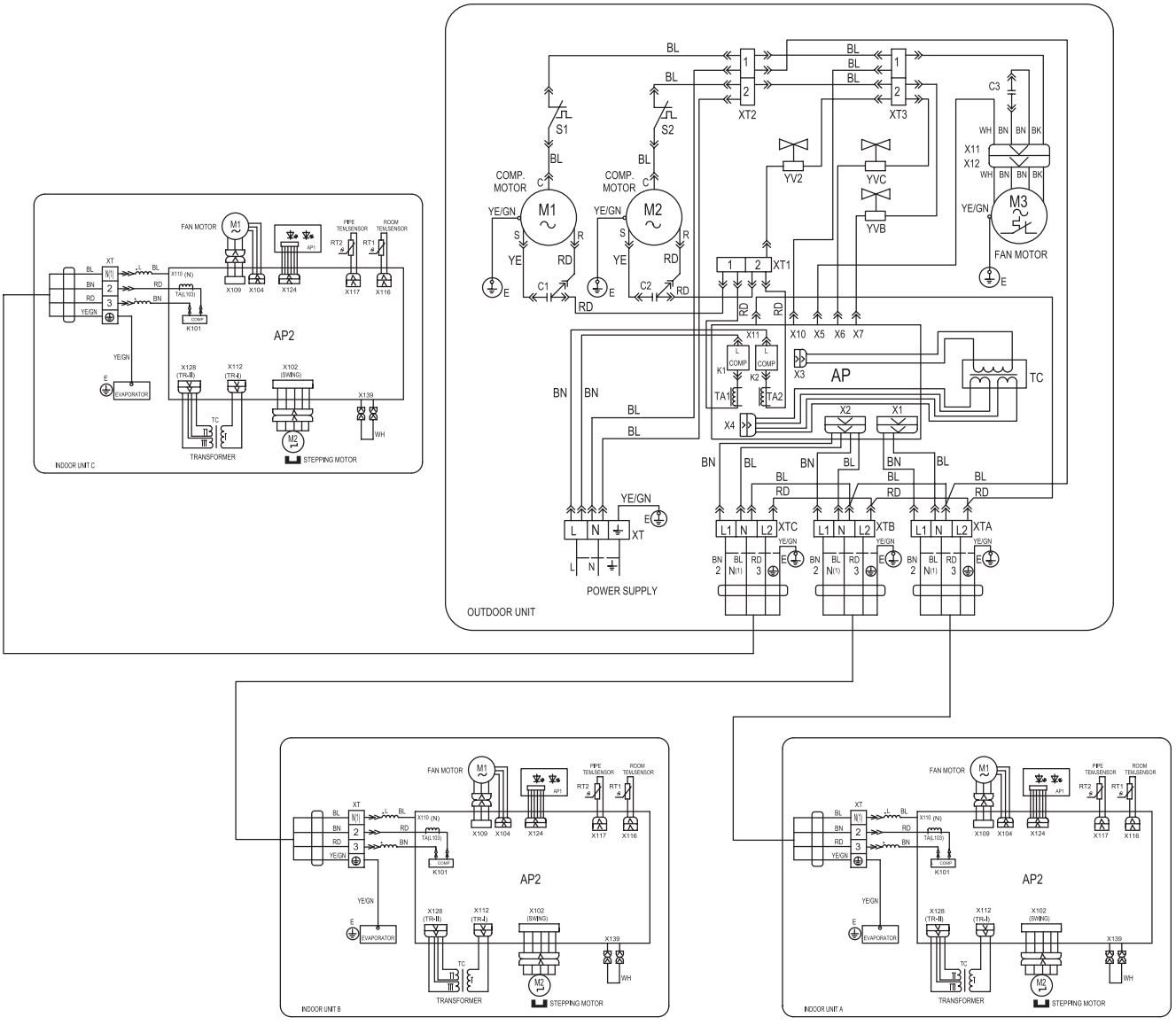


figure 2-9

Model: KF-(32+18X2)GW/EN

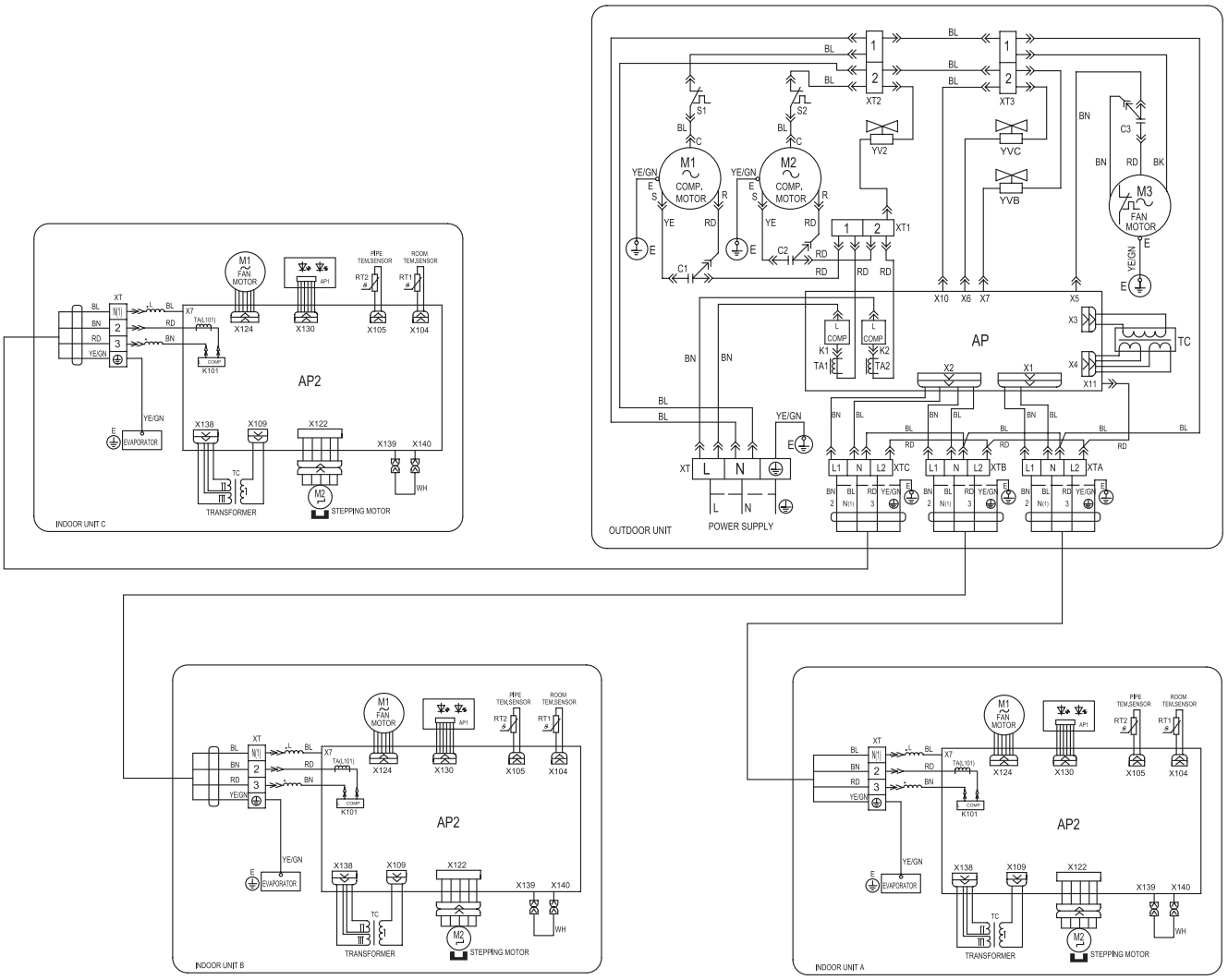


figure 2-10

Model: KF-18X4GW/E

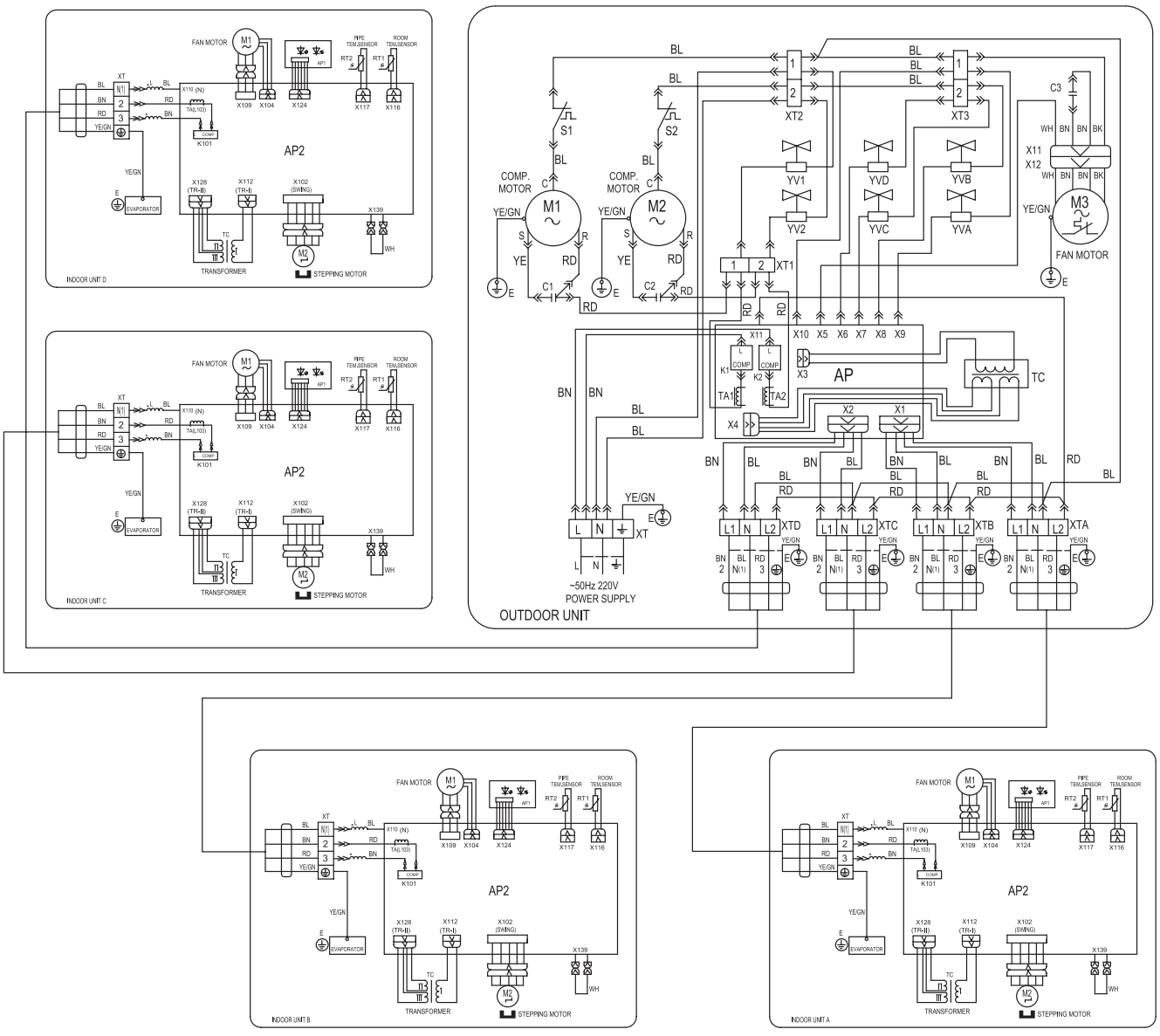


figure 2-11

Model: KF-18X4GW/EN

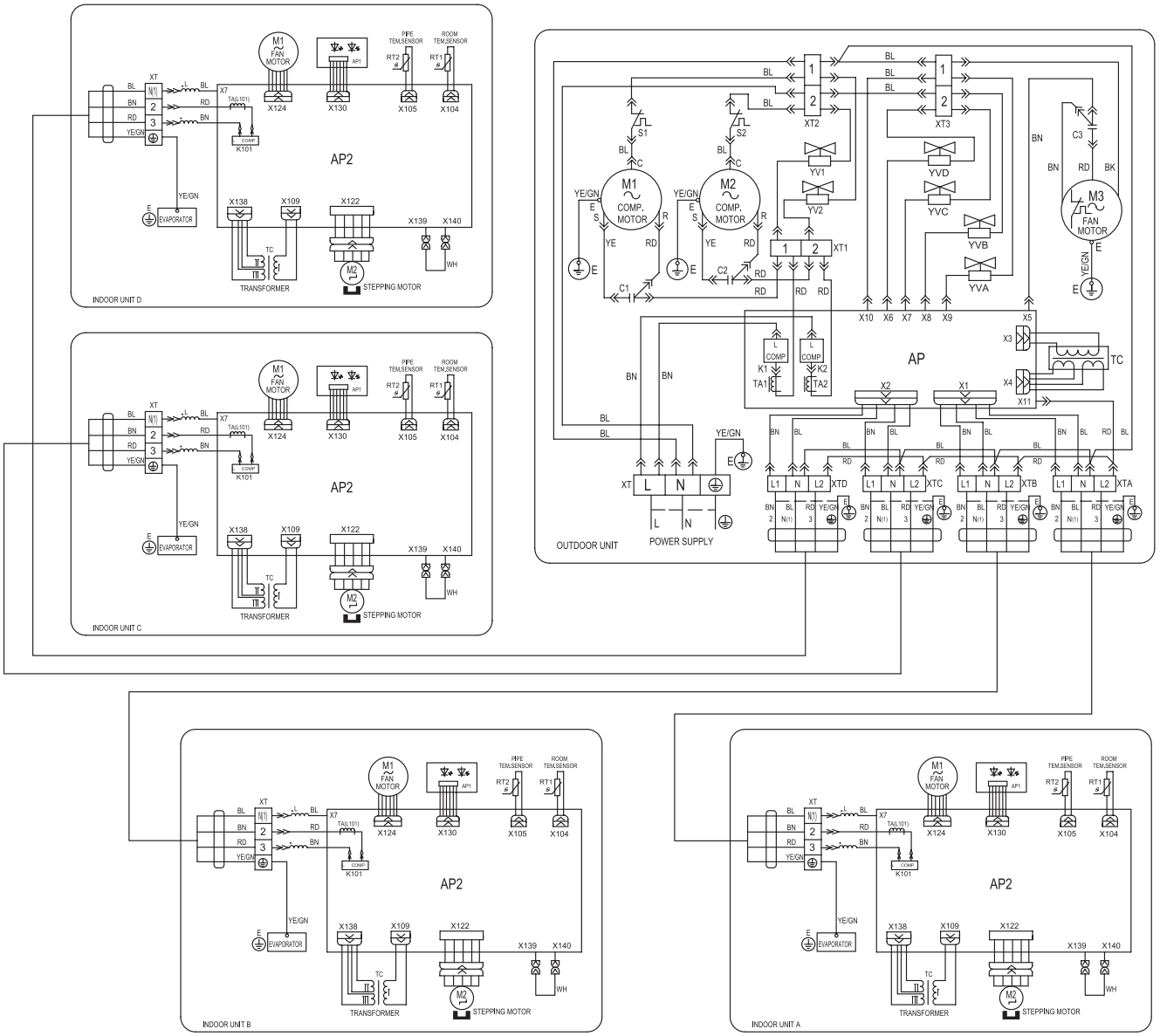


figure 2-12

2.9 PCB function manual

5 in 1 PCB function manual

A. running mode

1. cooling 2.dehumidifying 3.heating 4.fan 5.auto

B. input parameters

1. indoor ambient temp. T_{in}
2. evaporator tube temp. T_{eva}
3. setting temp. T_{set}
4. condenser tube temp. T_{con}

C. targets

1. indoor motor (PG motor)
2. swing motor
3. outdoor motor
4. compressor
5. four-way reversing valve
6. electric heater
7. fresh motor

D. fundamental functions

1. cooling mode

(1) the running conditions and control measures

a. If $T_{in} \geqslant T_{set} + 1℃$, the machine runs at the cooling mode. Compressor runs, outdoor motor runs, indoor fan runs at the set fan speed.

b. If $T_{in} \leqslant T_{set} -1℃$, the machine stops. Compressor stops first , outdoor motor stops after 15 seconds.

c. If $T_{set} -1℃ < T_{in} < T_{set} +1℃$,keep the previous state.

(2) In this mode, the reversing valve is inactive, the temp. setting range is from 16~30℃.

(3) protect function

a. anti-freezing function

If the compressor has run 6 minutes , and detect $T_{eva} < 0℃$ for continuous 3 minutes, then the compressor , outdoor fan stop, indoor fan runs at the set fan speed. After 3 minutes later, it will run at the original state if $T_{eva} \geqslant 10℃$.

b. compressor protection

Compressor's starting interval should be more than 3 minutes no matter in whatever modes and conditions.

c. overload protection

If it detects the system current surpass the designed 13 A for continuous 3 minutes, the machine goes into fan mode only, when 3 minutes passes and it detects the current no more than 13 A, it will be back to original state. If it detects overloading states for 3 consecutive times within 30 minutes, the machine stops, and it must be restarted by remote controller.

2. dehumidifying mode

(1) the working conditions and control measures

a. If $T_{in} > T_{set}+2℃$, it is in cooling running, the indoor motor speed can be selected ,and outdoor motor runs at low speed.

b. If $T_{set}-2℃ \leqslant T_{in} \leqslant T_{set}+2℃$,it goes into dehumidifying running ,the indoor motor run at the low speed, 6 minutes later the compressor and the outdoor fan stop, another 30 seconds later the indoor fan stops, 3 and a half minutes later, compressor and outdoor fan run again ,indoor motor runs at low speed, then the machine cycles the above procedures repeatedly.

c. If $T_{in} < T_{set}-2℃$, compressor ,outdoor motor and indoor motor stop.

(2) In this mode, the reversing valve is inactive , the temp. setting range is 16~30℃.

(3) anti-freezing protection

If $T_{in} > T_{set}+2℃$, it goes into cooling running , anti-freezing function is the same with cooling mode, but the compressor must stops for 4 minutes. When it goes into dehumidifying mode, compressor runs 6 minutes , if it detects $T_{eva} < 0℃$,compressor and outdoor motor stop, indoor motor runs at low speed ,after 3 minutes delayed, and $T_{eva} \geqslant 10℃$,it will be back to its original state.

3. heating mode

(1) the working conditions and control measures

a. If $T_{in} \leqslant T_{set}+2℃+T_{add}$, it goes into heating mode, reversing valve、compressor and outdoor motor all work in the same time, indoor fan will run at the same procedures with anti cool air function.

b. If $T_{in} \geqslant T_{set}+4℃+T_{add}$, compressor stops first, 15 seconds later, outdoor motor stops ,but reversing valve keeps working, indoor motor runs at the procedures of blowing surplus heat.

c. If $T_{set}+2℃+T_{add} < T_{in} < T_{set}+4℃+T_{add}$, keep the previous running state. (T_{add}=1℃ or 0℃, it can be selected)

(2) In this mode, the temperature setting range is 16~30℃.

(3) the working conditions of auxiliary electric heater

In heating mode, when compressor is working, indoor motor runs at high speed and middle speed. If it detects T_{eva}<50℃ for continuous 8 seconds and $T_{in} \leqslant 25℃$, electric heater will work ,if compressor stops or indoor motor runs at low speed or $T_{eva} \geqslant 54℃$ or $T_{in} \geqslant 28℃$ or 10 seconds before defrosting , the electric heater will stop.

(4) protections

a .anti cool air

When the compressor starts, if $T_{eva} \geqslant 41℃$ or the indoor fan runs after 20 seconds delayed, swing motor will run at the set speed .

b .anti high temp.

In heating mode, if it detects $T_{eva} \geq 56℃$(58℃ can be selected), outdoor motor will stop. If $T_{eva} \leq 53℃$, outdoor motor will be back running.

In heating mode, when set temp is reached, the compressor stops first,15 seconds later outdoor fan stops, the indoor motor blows 30 seconds (60 seconds can be selected) at low speed.

c. Compressor's protection is the same with the one in cooling mode.

d. overload protection

If it detects that the system current surpassed the designed 13 A for continuous 3 seconds, compressor, electric heater and outdoor motor stop , indoor motor runs the same procedures as the blowing surplus heat condition. After 3 minutes and current no more than 13 A, the machine will be back to its original state, indoor motor runs as the anti cool air condition. If it detects overloading state for 3 consecutive times within 30 minutes, the machine stops, and it must be restarted by remote controller.

e. defrosting conditions and procedures

In heating mode, if compressor has run 44 minutes (in its first 6 minutes it will not detect defrosting temp.) , and it has detected $T_{con} \leq -4℃$ for continuous 1 minute, it begins to defrost , electric heater will stop for 10 seconds (even if electric heater is not working) , then indoor motor stops , reversing valve becomes inactive in another 2 seconds. Another 2 seconds later, outdoor motor stops, when $T_{con} \geq 10℃$or defrosting lasts for 10 minutes , outdoor motor and reversing valve become active , indoor motor will run as the anti cool air condition, then it cycles again, recalculates the compressor's running time again. (In this period , if any protection works ,and after the machine is back to work , it will re-start defrosting state. it will not detect outdoor tube temp when compressor's in its first 6 minutes running)

f. noise lowering protection

When you use RUN/STOP button to switch off the machine, reversing valve will become inactive in 2 minutes.

4. fan mode

The light is on when it runs.

5. AUTO mode

(1) In AUTO mode, standard cooling T_{set}=25℃, standard heating T_{set}=20℃.

(2) working procedures

a. If $T_{in} \geq T_{set} + 1℃$, select cooling mode, from this time, the set temp. is 25℃. If $T_{in} \leq T_{set}-1℃$, compressor and outdoor motor stop, indoor motor runs at the set speed. If $T_{set}-1℃ < T_{in} < T_{set}+1℃$, keep the original state.

b. If $T_{in} \leq T_{set}+2℃$, select heating mode, from this time, the set temp. is 20℃. If $T_{in} \geq T_{set} + 4℃$, compressor stops first, outdoor motor stops 15 seconds later , reversing valve is always active, indoor motor runs as the blowing surplus heat condition. If $T_{set}+2℃ \leq T_{in} < T_{set}+4℃$, keeps the original state.

Cooling & heating AUTO mode: in AUTO mode, when the machine is switched from heating

mode to the other modes, reversing valve becomes inactive in 90 seconds.

Cooling only AUTO mode: there is no heating function in this mode.

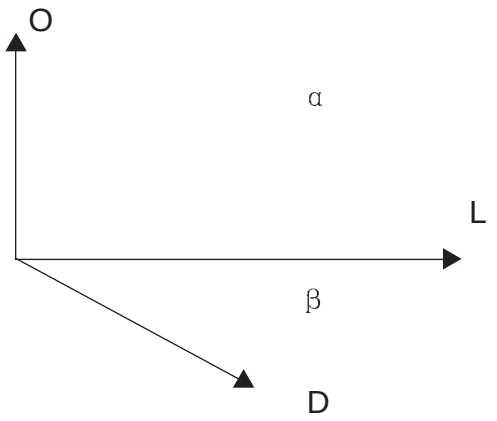
(3) protections

It is same as the one in cooling or heating mode.

E. other controls

1. SWING mode

Refer to the figure below:



2. beeper

a. When PCB becomes active or receives the signal from the remote controller , the beeper will beep.

b. If the rmostat is open-circuited or short-circuited, when you press the TEST button, the beeper will alarm at the frequency 2HZ.

3. indication lamps

It flashes when defrosting begin.

4. multi-step switch

a. If the switch is in AUTO position, the machine will run at the AUTO mode, if there is a signal from remote controller, it will run according to the signal .

b. If the switch is in TEST position, the machine will run at the COOL mode, indoor motor will run at high speed , swing motor will run according to SWING mode. If there is a signal from remote controller, it will run according to the signal .if the thermostat is open-circuited or short-circuited , the beeper will alarm at the frequency 2 HZ .

c. If the switch is in RUN position , the machine will run according to the remote signal.

d. If the switch is in STOP position, the machine will stop.

5. SLEEP mode

a. In cooling or dehumidifying mode, 1 hour after you set the sleep timer ,T_{set} will add 1℃ automatically, another 1 hour, another 1℃ will be added.

b. In heating mode, 1 hour after you set the sleep timer, T_{set} will lower 1℃automatically, another 1 hour, another 1℃will be lowered .

6. Automatic fan speed

a. In cooling mode, if $T_{in} > T_{set} + 3℃$ high speed

$T_{set} + 1℃ \leq T_{in} \leq T_{set} + 3℃$ medium speed

$T_{in} < T_{set} + 1℃$ low speed

b. In heating mode, if $T_{in} \leq T_{set} - 2℃$ high speed

$T_{set} - 2℃ < T_{in} < T_{set}$ medium speed

$T_{in} \geq T_{set} + 2℃$ low speed

F. Fresh air function

1. two fresh air modes

a. fresh air 2

Fresh air motor will work 1 hour, then rest 1 hour, then cycle again.

b. fresh air 1

Press the button AIR on the remote controller to select fresh air 1 function, the swing motor keeps running till you give a signal to change it.

G. Time function

1. Set time to turn on

When you set time the machine is inactive. If it reaches the time you have set, it will run as the previous settings. The time setting range is 0.5~24h.

2. Set time to turn off

When the machine is inactive you can set the time to be turned off. It will stop working when the time comes. The time setting range is 0.5~24h.

H. Memory function

After the power is cut suddenly, when it's restarted, it will run at the orginal state.