

### 1.1 Exploded view of indoor unit for KF-26GW/GX1b , KFR-26GW/GX1b ,

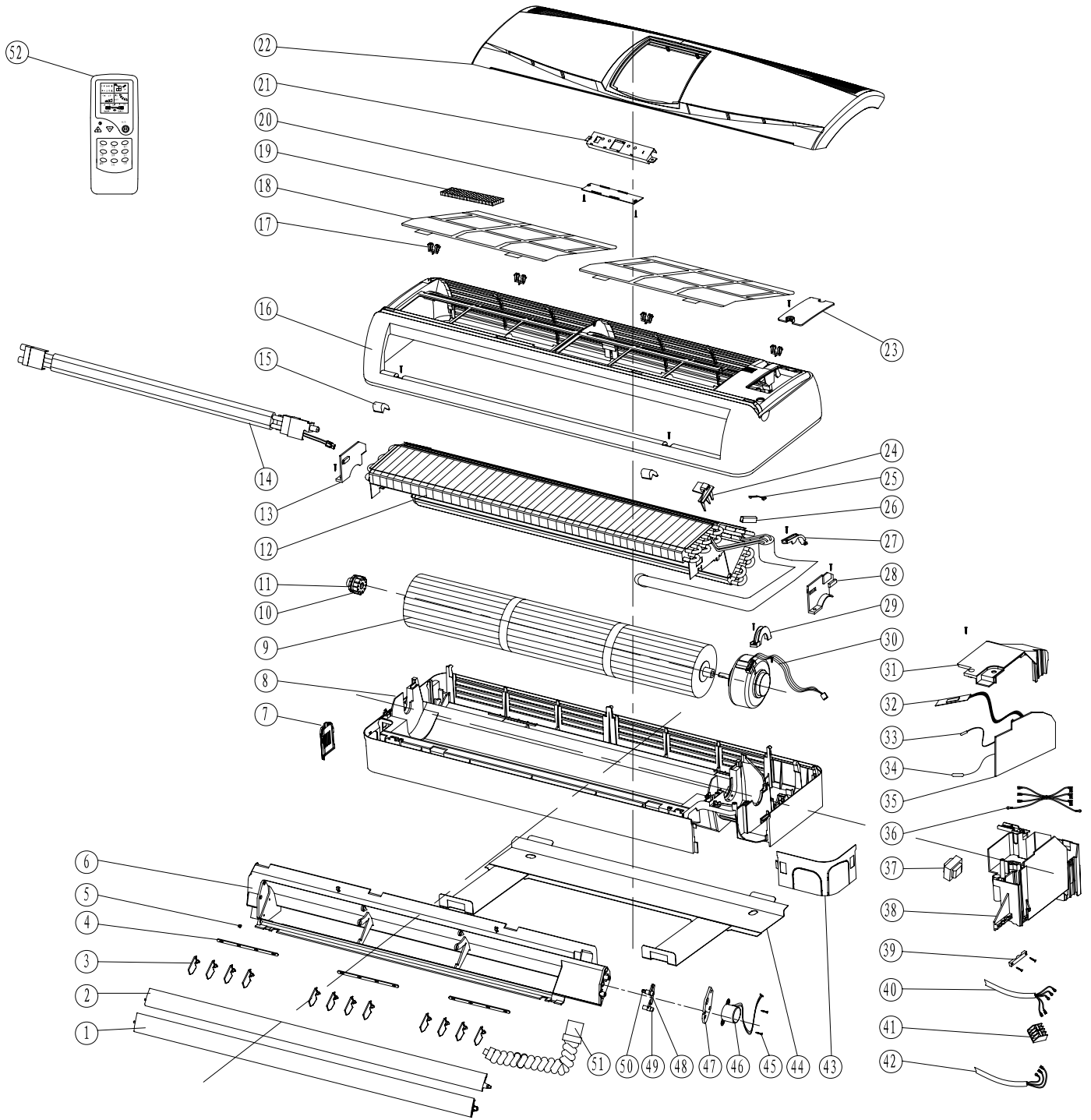


Figure 1-1

## 1.2 Spare parts list for indoor unit for KF-26GW/GX1b , KFR-26GW/GX1b

Table form 1-1

No	Description		Part Code				Qty
			KF-26GW/GX1b(30) B02026210005	KF-26GW/GX1b(27) B02026110005	KFR-26GW/GX1b(30) B02026110004	KFR-26GW/GX1b(27) B02026210006	
1	Louver A	下导风条	100420003	100420003	100420003	100420003	1
2	Louver B	上导风条	100420083	100420083	100420083	100420083	1
3	Swing Louver	导风叶片	100420007	100420007	100420007	100420007	12
4	Connecting rod	导风叶片连杆	100420072	100420072	100420072	100420072	3
5	Guide Louver Bearing	导风条轴套	100420008	100420008	100420008	100420008	6
6	Outlet part	出风主体	391200006	391200006	391200006	391200006	1
7	Left angle plate	底座左角板	100360001	100360001R	100360001	100360001R	1
8	Base	底座	391060007	100060108R	391060007	100060108R	1
9	Cross flow fan	贯流风轮	100010016	100010016R	100010016	100010016R	1
10	Cross flow fan bearing	贯流风轮轴承	----	----	----	----	1
11	Fan Bearing	贯流风轮轴承胶圈	----	----	----	----	1
12	Electric heater	电加热器	----	----	----	----	---
13	Evaporator assembly	蒸发器组件	972900499	972900499R	972900499	972900499R	1
14	Evaporator left fixed plate	蒸发器左固定板	109990108	109990108R	109990108	109990108	1
15	Screw cover	螺钉盖	109990023	109990023	109990023	109990023	2
16	Middle frame	中框	391070007	391070007	391070007	391070007	1
17	Front Clip	中框前扣	391220004	391220004	391220004	391220004	4
18	Air Filter	过滤网	100190127	100190127R	100190127	100190127	2
19	Cold Catalyst	冷触媒	119990011	119990011R	119990011	119990011	1
20	Display box cover	显示盒盖	100410039	100410009R	100410039	100410009R	1
21	Display box	显示盒	100410018	100410001R	100410018	100410001R	1
22	Front Panel	面板	391022235	391022026R	391022235	391022026R	1

## Service Manual for Wall Split type Model NO. 30

23	Middle frame coverplate	中框盖板	100080034	100080034R	100080034	100080034R	1
24	Room temp. Sensor Holder	室温探头架	100280105	100280105R	100280105	100280105R	1
25	Insert Block	弹簧片	079990240	079990240	079990240	079990240	1
26	Copper pipe of sensor	探头铜管	079990030	079990030	079990030	079990030	1
27	Pipe Clamp	压管板	100430025	100430025	100430025	100430025	1
28	Evaporator right fixed plate	蒸发器右固定板	109990109	109990109R	109990109	109990109R	1
29	Motor platen	电机压板	100130003	100130003R	100130003	100130003R	1
30	Motor	电机	320204004	320204004R	320204004	320204004R	1
31	Electric box cover	电器盒盖	391100011	391100011R	391100011	391100011R	1
32	Display lamp panel	显示板	337000041	----	331800083	----	1
33	Tube Temp. Sensor	管温探头	----	----	----	----	1
34	Room Temp. Sensor	室温探头	----	----	----	----	1
35	Electric control plate	电控板	331300118	331100128R	331100100	331300137R	1
36	Connecting Wire	连接线	----	----	----	----	
37	Transformer	变压器	321620014	321620014R	321620014	321620014R	1
38	Electric box	电器盒	391090014	391090014R	391090014	391090014R	1
39	Wire Clip	压线扣	391110057	391110057R	391110057	391110057R	1
40	Connecting Cable	室内外连接电缆线	----	----	----	----	1
41	Terminal Board	端子台	030090241	321000022R	030090241	321000022R	1
42	Power Cord	电源线	----	----	----	----	1
43	Right angle plate	底座右角板	100300003	100300003R	100300003	100300003R	1
44	Wall-mounting frame	挂墙板	029991604	020100010R	029991604	020100010R	1
45	Screw	螺钉	----	----	----	----	2
46	Step motor	步进电机	320273001	320273001R	320273001	320273001R	1
47	Motor fixed plate	步进电机固定板	100420002	100420002	100420002	100420002	1

48	Crank connecting rod	曲柄连杆	100420082	100420082	100420082	100420082	1
49	Upper crank	上曲柄	100420001	100420001	100420001	100420001	1
50	Lower crank	下曲柄	100420081	100420081	100420081	100420081	1
51	Thermal insulation pipe	保温水管	099990080	099990080R	099990080	099990080R	1
52	Remote controller	遥控器	336821002	336811001R	336821001	336811002R	1

## PLS NOTE:

The above data are subject to change without notice.

### 1.3 Exploded view of outdoor unit for KF-26GW/GX1b , KFR-26GW/GX1b

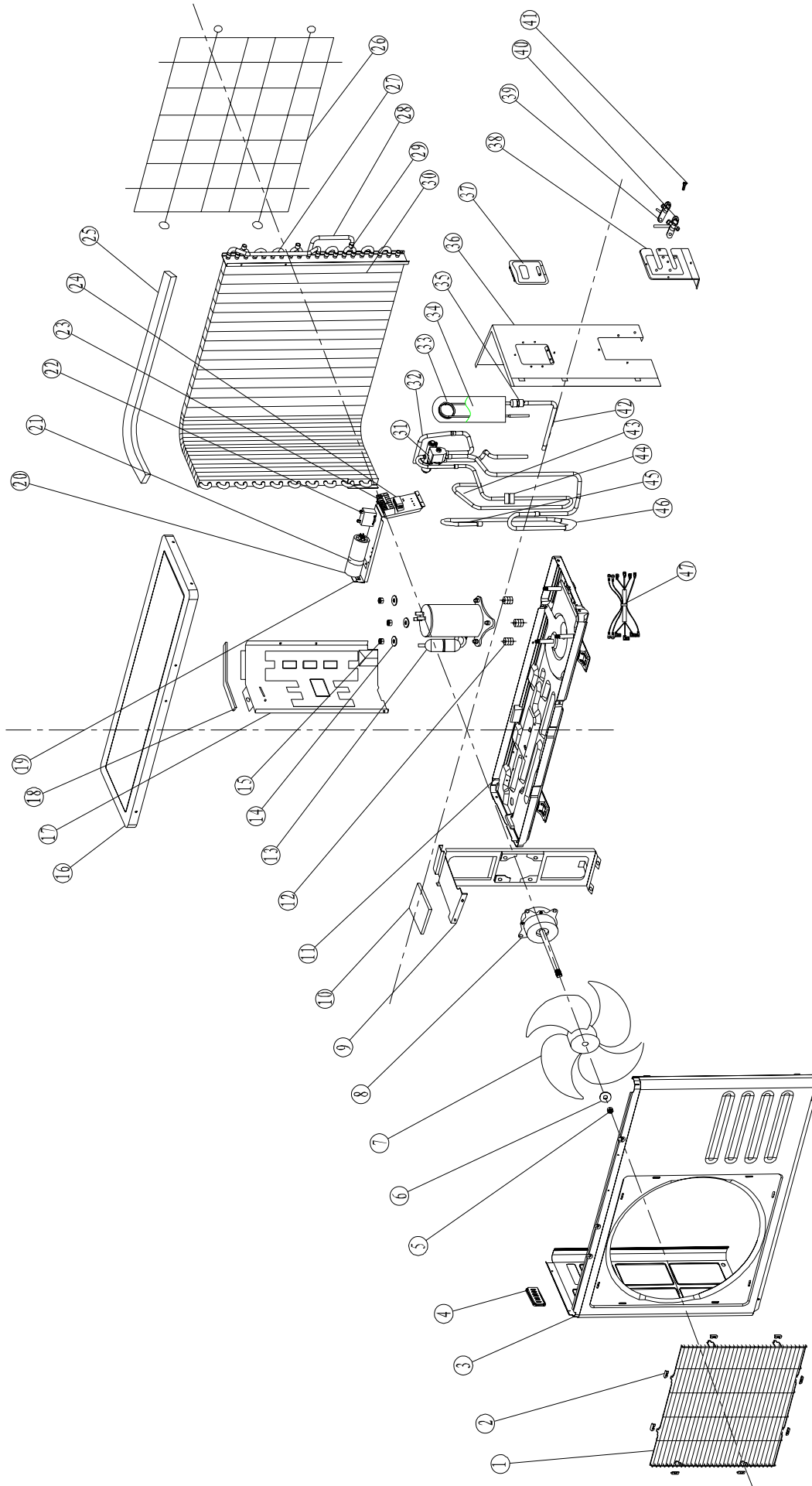


figure 1-2

## 1.4 Spare parts list of outdoor unit for KF-26GW/GX1b , KFR-26GW/GX1b

Table 1-2

No	Description		Part No			Qty
			KF-26GW/GX1b(30,27) B02026120001	KFR-26GW/GX1b(30,27) B02026220002		
1	Front Grill	前网罩	020120015R	020120015R		1
2	Grill Clip	前网扣	109990256R	109990256R		8
3	Front Plate	面板	020070057R	020070057R		1
4	Small handle	小抽手	100050021R	100050021R		1
5	Nut	螺母	150020009A(R)	150020009A(R)		1
6	Gasket	垫片	453000010A(R)	453000010A(R)		1
7	Axial flow fan	轴流风轮	393010001R	393010001A(R)		1
8	Motor	电机	320224004R	320224004R		1
9	Motor support	电机支架	020040045R	020040045R		1
10	PE Sponge	PE 保温棉	090020234R	090020234R		1
11	Base	底盘	313013036R	313013036R		1
12	Anti-vibration pad for the compressor	压缩机减震脚	010011455	010011455		3
13	Compressor	压缩机	960114051R	960114051R		1
14	Gasket	垫片	010011456	010011456		3
15	Nut	螺母	010011459	010011459		3
16	Top panel	顶盖板	029994517R	029994517R		1
17	Partition board	中隔板	313030027R	313030027R		1
18	PU Sponge	中隔板密封条	090020027R	090020027R		1
19	Electric installation board	电器安装板	313120021R	313120021R		1
20	Compressor Capacitor	压缩机电容	030010019R	030010019R		1
21	Capacitor Clamp	电容夹	020140010R	020140010R		1

22	Terminal Board	端子台	030090241R 030090061R	030090265R		1 1
23	Fan Capacitor	风机电容	320110003R	320110003R		1
24	Wire Clip	压线扣	321100008R 321100009R	321100008R 321100009R		1 1
25	PU Sponge	冷凝器上密封条	----	----		---
26	Rear Grill	背网	020110002R	020110002R		1
27	Span Pipe	跨管	----	----		1
28	Span Pipe	跨管	----	----		1
29	3-way Pipe	三通管	070130049R 070130049R	070130049R 070130049R		1 1
30	Condenser	冷凝器	972200578R	972200822R		1
31	4-way Valve	四通阀组件	----	973500044R		1
32	Intake pipe for the condensor	冷凝器进气管	360420016R 360440030R	360450006R 360440030R		1 1
33	Capillary Assy	毛细管组件	971900163R	971900145R		1
34	Damping rubber	阻尼胶	110030017R	110030017R		1
35	Filter	过滤器	070190007R	070190007R		1
36	Right panel	右侧板	313060028R	313060028R		1
37	Large handle	大抽手(端子盖)	010011458	010011458		1
38	Valve installation plate	阀座板	029994567R	029994567R		1
39	High-pressure valve	高压阀	352120005R	352120005R		1
40	Low-pressure valve	低压阀	352260005R	352260005R		1
41	Screw	螺钉	150010043R	150010043R		4
42	Drainpipe for the condensor	冷凝器出液管	360540049R 360520003R 360520004R	360540049R 360520003R 360520004R		1 1 1
43	Discharge pipe	排气管	360230121R	360230118R		1
44	Damping block	减震块	110020008R	110020008R		4
45	Suction pipe	吸气管	360130140R	360130131R		1



46	Damping rubber	阻尼胶	----	----		1
47	Connecting Wire for compressor	压缩机电源线	345100014R	050030081R		1
	Power Cord	整机电源线	341220034R	341220034R		1
	Connecting Cable	室内外连接电缆	342300063R	342300066R		1
		室内外信号连接电缆	----	342300065R		1

## PLS NOTE THAT:

1. In the above table, “----” means that the related model don't have this component.
2. The data are subject to change without notice.

## 2.1 Exploded view of indoor unit for KF-35GW/GX1b , KFR-35GW/GX1b ,

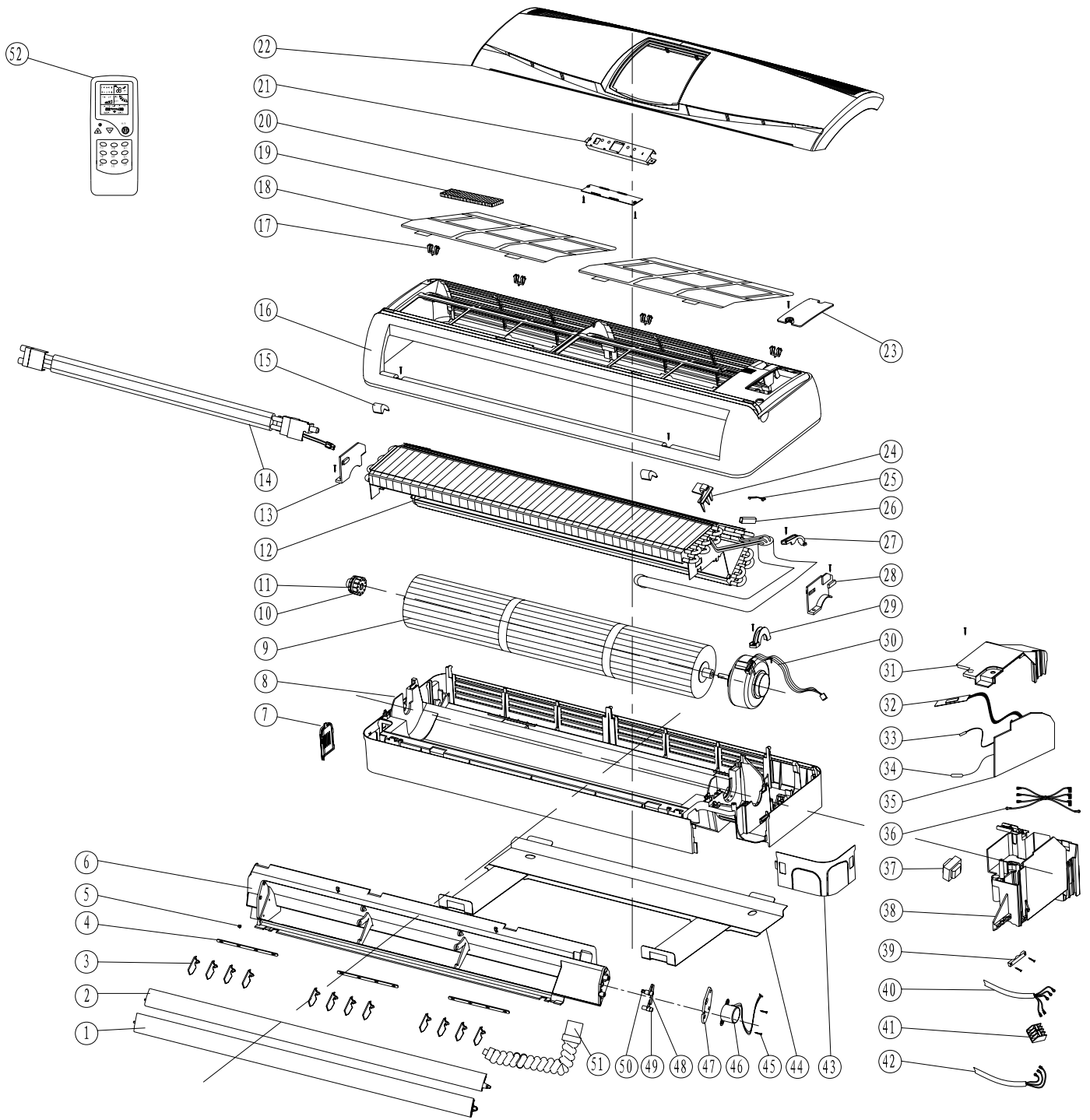


Figure 2-1

## 2.2 Spare parts list for indoor unit for KF-35GW/GX1b , KFR-35GW/GX1b

Table form 2-1

No	Description		Part Code				Qty
			KF-35GW/GX1b(30) B02035110150	KF-35GW/GX1b(27) B02035110135	KFR-35GW/GX1b(30) B02035210118	KFR-35GW/GX1b(27) B02035310074	
1	Louver A	下导风条	100420087	100420087	100420087	100420087	1
2	Louver B	上导风条	100420088	100420088	100420088	100420088	1
3	Swing Louver	导风叶片	100420007	100420007	100420007	100420007	16
4	Connecting rod	出风主体	100420048	100420048	100420048	100420048	4
5	Guide Louver Bearing	导风条轴套	100420008	100420008	100420008	100420008	8
6	Outlet part	出风主体	391200003	391200003	391200003	391200003	1
7	Left angle plate	底座左角板	100360002	100360002	100360002	100360002	1
8	Base	底座	391060003	391060003	391060003	391060003	1
9	Cross flow fan	贯流风轮	100010026	100010026R	100010026	100010026	1
10	Cross flow fan bearing	贯流风轮轴承	----	----	----	----	1
11	Fan Bearing	贯流风轮轴承胶圈	----	----	----	----	1
12	Electric heater	电加热器	----	----	----	----	1
13	Evaporator assembly	蒸发器组件	972900477	972900477R	972900477	972900491	1
14	Evaporator left fixed plate	蒸发器左固定板	109990108	109990108R	109990108	109990108	1
15	Screw cover	螺钉盖	----	----	----	----	3
16	Middle frame	中框	391070003	391070003	391070003	391070003	1
17	Front Clip	中框前扣	391220004	391220004	391220004	391220004	4
18	Air Filter	过滤网	100190139	100190139R	100190139	100190139	2
19	Cold Catalyst	冷触媒	119990011	119990011R	119990011	119990011	1
20	Display box cover	显示盒盖	100410039	100410009	100410039	100410009	1
21	Display box	显示盒	100410018	100410001	100410018	100410001	1
22	Front Panel	面板	391022236	100070108R	391022236	100070108	1

## Service Manual for Wall Split type Model NO. 30

23	Middle frame coverplate	中框盖板	100080034	100080034R	100080034	100080034	1
24	Room temp. Sensor Holder	室温探头架	100280105	100280105	100280105	100280105	1
25	Insert Block	弹簧片	079990240	079990240	079990240	079990240	1
26	Copper pipe of sensor	探头铜管	079990030	079990030	079990030	079990030	1
27	Pipe Clamp	压管板	029991901	029991901R	029991901	029991901	1
28	Evaporator right fixed plate	蒸发器右固定板	109990109	109990109R	109990109	109990109	1
29	Motor platen	电机固定板	100130003	100130003R	100130003	100130003	1
30	Motor	电机	320204004	320204004R	320204004	0300201C7	1
31	Electric box cover	电器盒盖	391100011	391100011R	391100011	391100011	1
32	Display lamp panel	显示灯板	331800083	337000041	337000041	337000041	1
33	Tube Temp. Sensor	管温探头	049990017	049990017	049990017	049990017	1
34	Room Temp. Sensor	室温探头	049990017	049990017	049990017	049990017	1
35	Electric control plate	电控板	331100100	331100128	331300118	331500097	1
36	Connecting Wire	连接线	----	----	----	----	---
37	Transformer	变压器	321620014	321620014R	321620014	321620014	1
38	Electric box	电器盒	391090014	391090014R	391090014	391090014	1
39	Wire Clip	压线扣	391110057	391110057R	391110057	391110057	1
40	Connecting Cable	室内外连接电缆线	----	----	----	----	1
41	Terminal Board	端子台	321000022	321000022R	030090241	030090241	1
42	Power Cord	电源线	----	----	----	----	1
43	Right angle plate	底座右角板	100300026	100300026R	100300026	100300026	1
44	Wall-mounting frame	挂墙板	020100011	020100011R	020100011	020100011	1
45	Screw	螺钉	----	----	----	----	2
46	Step motor	步进电机	320273001	320273001R	320273001	320273001	1
47	Motor fixed plate	转叶电机固定板	100420002	100130003R	100420002	100130003	1

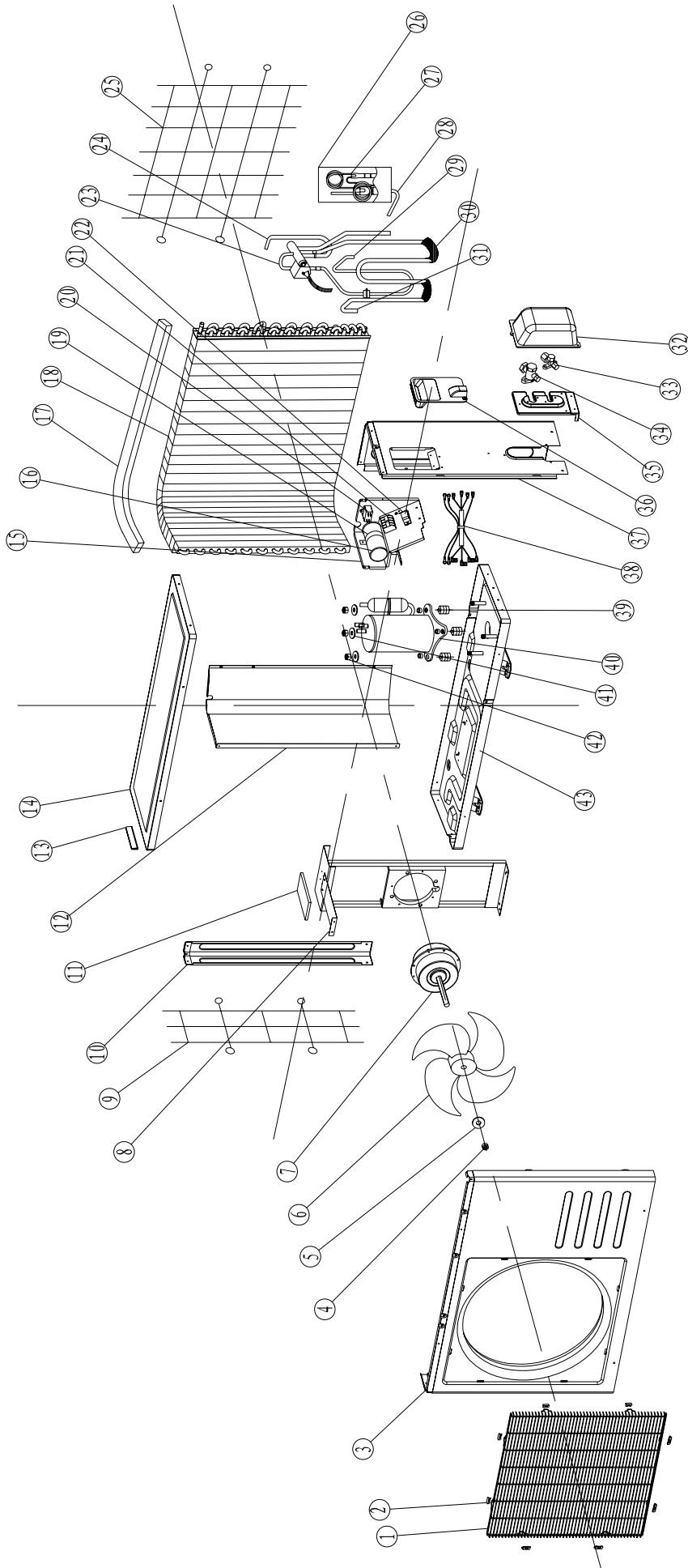
Service Manual for Wall Split type Model NO. 30

48	Crank connecting rod	曲柄连杆	100420082	100420082	100420082	100420082	1
49	Upper crank	上曲柄	100420001	100420001	100420001	100420001	1
50	Lower crank	下曲柄	100420081	100420081	100420081	100420081	1
51	Thermal insulation pipe	保温水管	099990080	099990080R	099990080	099990080	1
52	Remote controller	遥控器	336821001	336811001R	336821002	336821002	1

PLS NOTE:

The above data are subject to change without notice.

### 2.3 Exploded view of outdoor unit for KF-35GW/GX1b , KFR-35GW/GX1b



## 2.4 Spare parts list for outdoor unit for KF-35GW/GX1b , KFR-35GW/GX1b

(Table form 2-2)

No	Description		Part No		Qty
			KF-35GW/GX1b(30,27) B02035120017	KFR-35GW/GX1b(30,27) B02035220027	
1	Front Grill	前网罩	313110001R	313110001R	1
2	Grill Clip	前网扣	109990256R	109990256R	8
3	Front Plate	前面板	313070024R	313070024R	1
4	Nut	螺母	150020019A(R)	150020019A(R)	1
5	Gasket	垫片	150030007A(R)	150030007A(R)	1
6	Axial flow fan	轴流风叶	100030005R	100030005R	1
7	Motor	电机	320224003R	320224003R	1
8	Motor support	电机支架	313040011R	313040011R	1
9	Left protect net	左护网	313990020R	313990020R	1
10	Pillar	左侧立柱	313990026R	313990026R	1
11	PE Sponge	PE 保温棉	382200002R	382200002R	1
12	Partition Board	中隔板	313030028R	313030028R	1
13	Small Handle	小抽手	100050018R	100050018R	1
14	Top panel	顶盖板	313080010R	313080010R	1
15	Electric box	电器盒	313120020R	313120020R	1
16	Compressor Capacitor	压机电容	030010019R	030010019R	1
17	PU Sponge	冷凝器上密封条	----	----	---
18	Condenser	冷凝器	972200814R	972200519R	1
19	Capacitor clamp	电容夹	020140022R	020140022R	1
20	Fan Capacitor	风机电容	320110026R	320110008R	1
21	Terminal Board	端子台	030090241R	030090265R	1

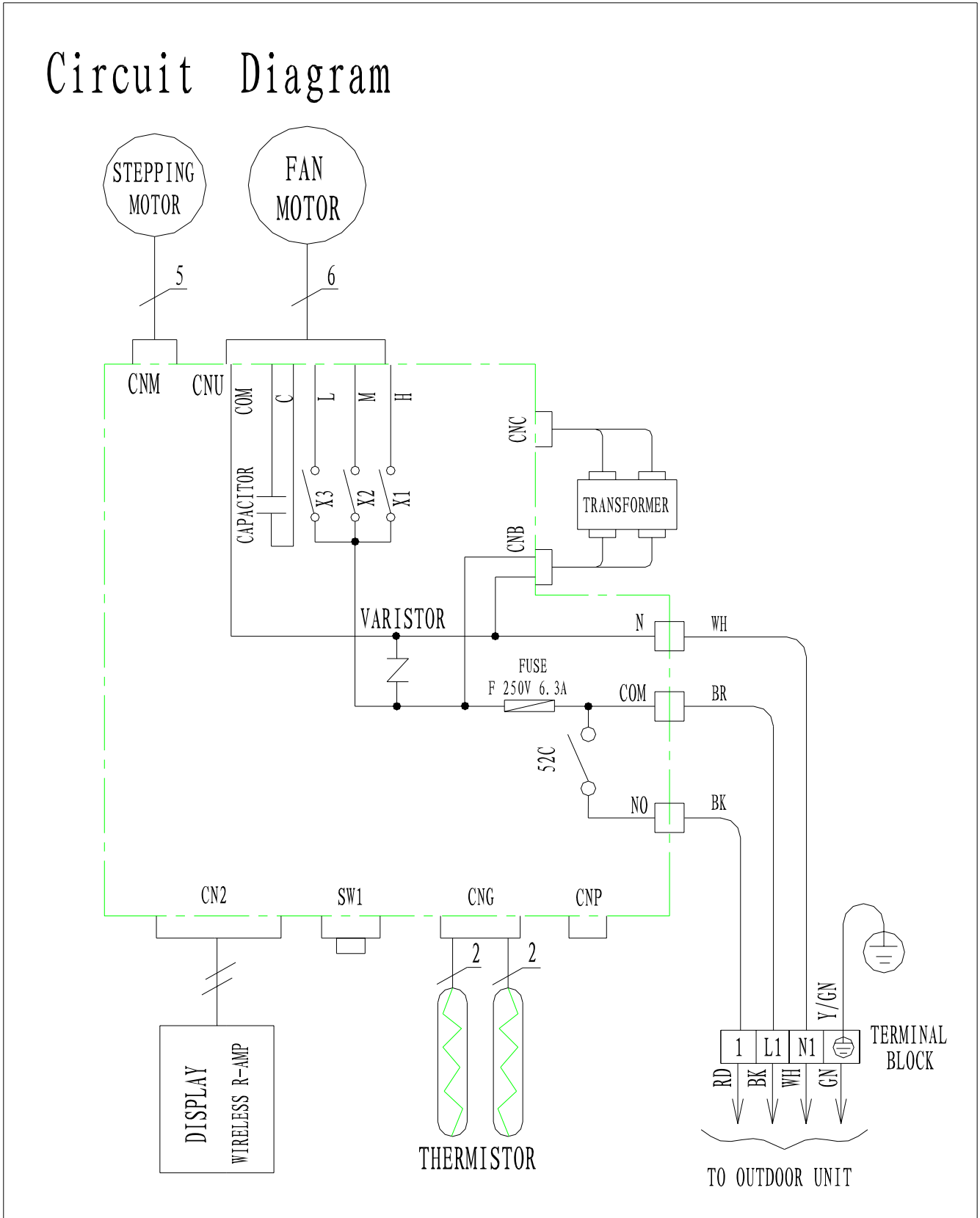
## Service Manual for Wall Split type Model NO. 30

22	Wire Clip	压线扣	321100008R 321100009R	321100008R 321100009R	1
23	4-way valve Assy	四通阀组件	----	973500042R	1
24	Intake pipe for the condensor	冷凝器进气管	070030102	070030059R 070030102R	1
25	Rear Grill	背 网	313100010R	313100010R	1
26	Damping rubber for capillary	阻尼胶	----	----	---
27	Capillary Assy	毛细管组件	971900132R	971900138R	1
28	Drainpipe for the condensor	冷凝器出液管	360540052R	360540052R 960700006R	1
29	Discharge pipe	排气管	360230108R	360230113R	1
30	Damping rubber	阻尼胶	110030015R	110030015R	1
31	Suction pipe	吸气管	360130119R	360130127R	1
32	Valve cover	阀门盖	393990001R	393990001R	1
33	High-pressure valve	高压阀	352120005R	352120005R	1
34	Low-pressure valve	低压阀	352260005R	352260005R	1
35	Valve installation plate	阀座板	313020013R	313020013R	1
36	Large handle	大抽手(电器盒盖)	020160018R	020160018R	1
37	Right panel	右侧板	313060027R	313060027R	1
38	connecting wirefor compressor	压机电源线	345100015R	345100018R	
39	Anti-vibration pad for the compressor	压缩机减震脚	010011455	010011455	3
40	Compressor	压缩机	960114050R	960114050R	1
41	Gasket	垫片	010011456	010011456	1
42	Nut	螺母	010011459	010011459	1
43	Base	底盘	313011057R	313011057R	1
	Power cord	整机电源线	341220034R	341220034R	1
		室内外电源连 接电缆	342300063R	342300066R	1

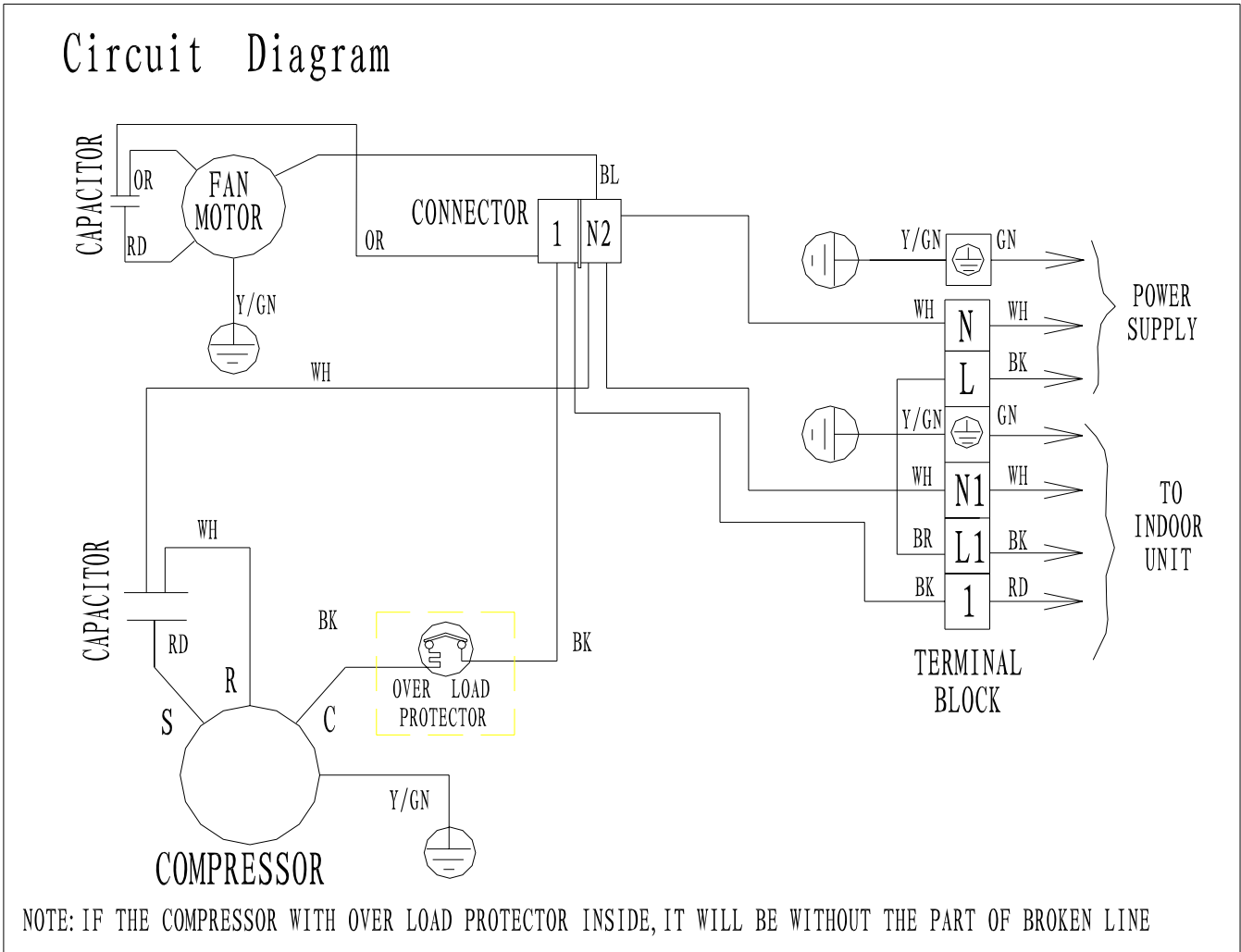


		室内外信号连 接电缆		342300065R	1
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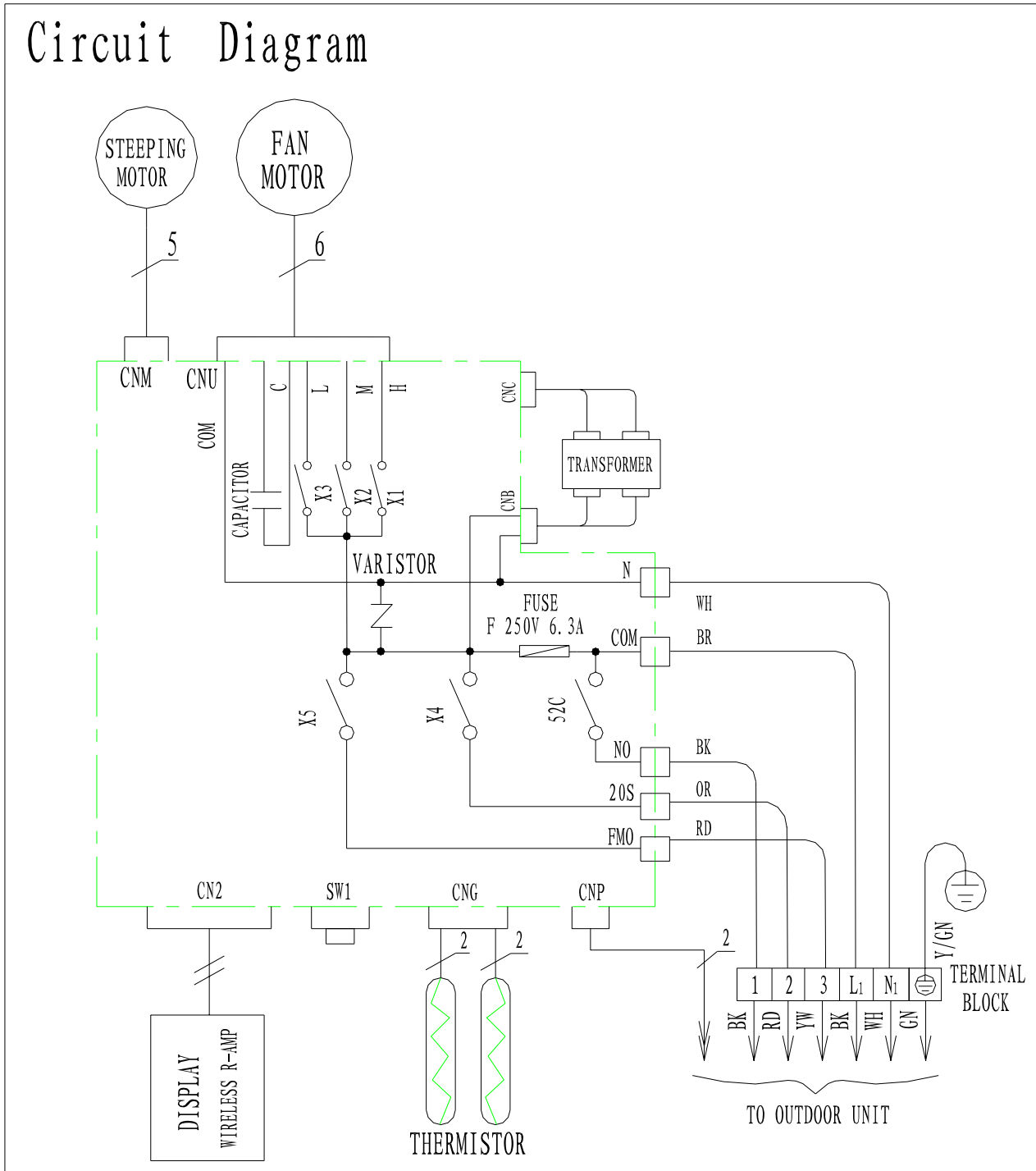
3.1 KF-26GW/GX1b and KF-35GW/GX1b indoor unit circuit diagram



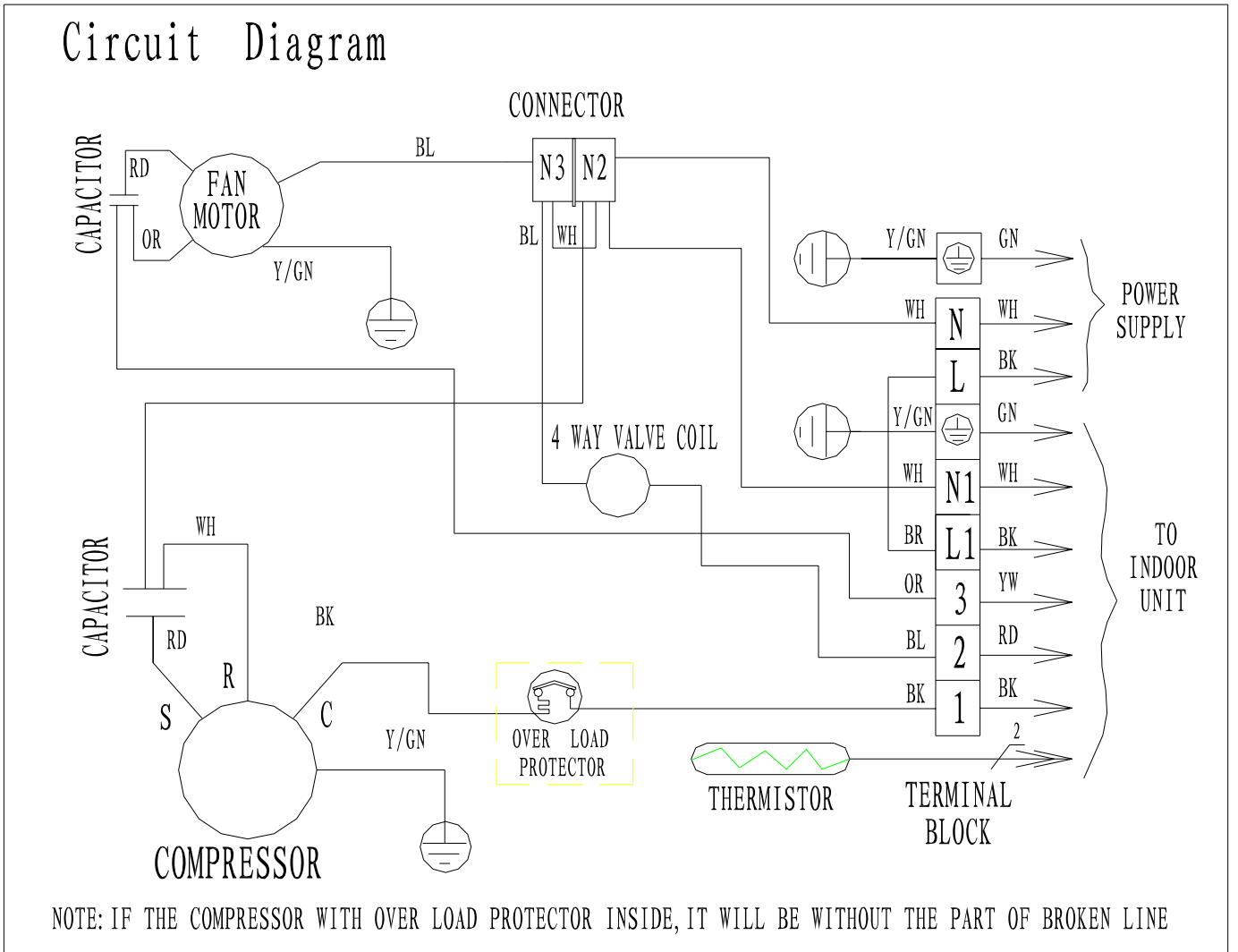
3.2 KF-26GW/GX1b and KF-35GW/GX1b outdoor unit circuit diagram



3.3 KFR-26GW/GX1b and KFR-35GW/GX1b indoor unit circuit diagram



3.4 KFR-26GW/GX1b and KFR-35GW/GX1b outdoor unit circuit diagram



4.1 Explosive view of indoor unit for KF-51GW/GX1a, KFR-51GW/GX1a

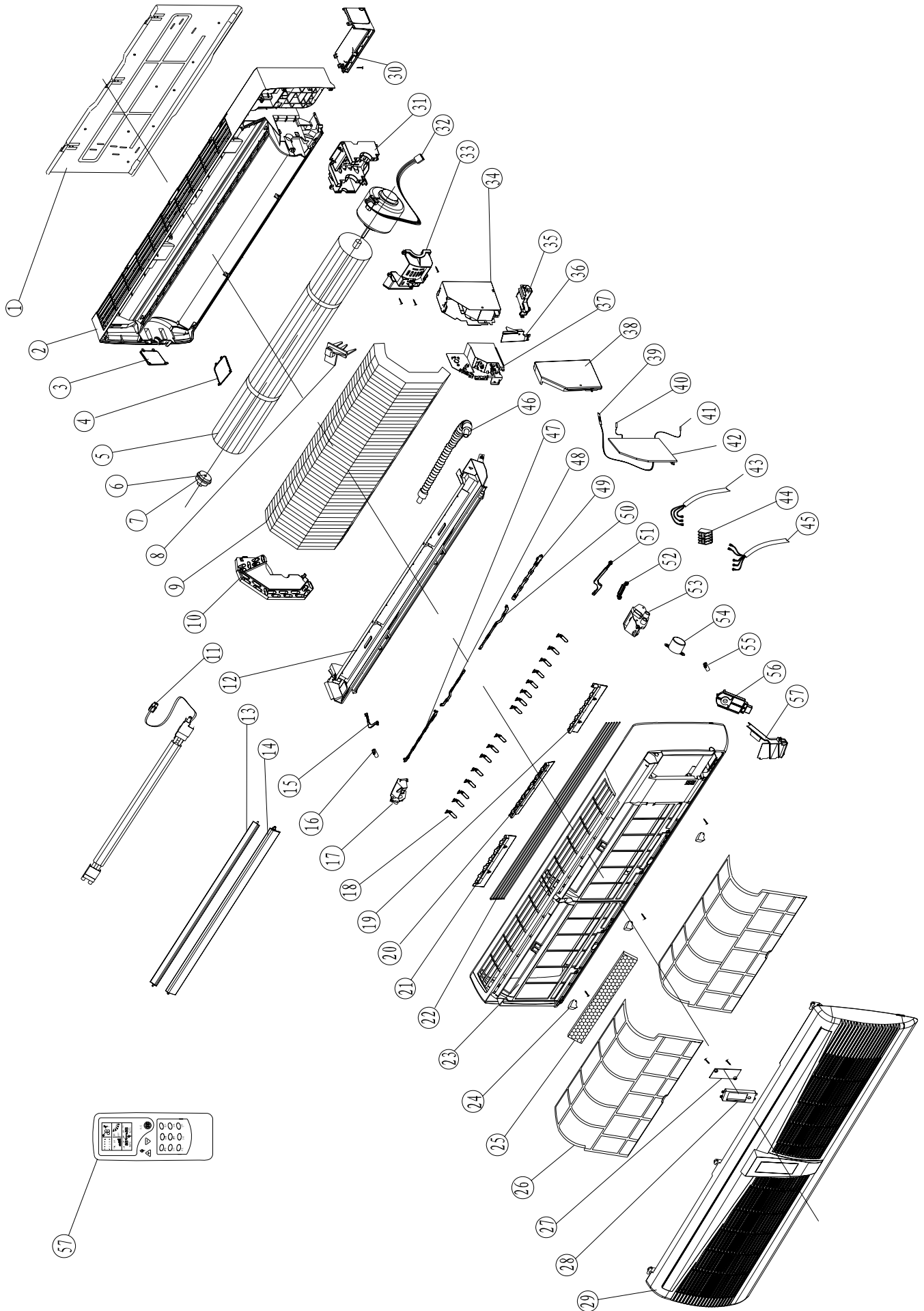


figure 3-1

**4.2 Spare parts list of indoor unit for KF-51GW/GX1a, KFR-51GW/GX1a.**

Table 2-1

No	Description		Part No				Qty
			KF-51GW/GX1a(51) B02051110090	KF-51GW/GX1a(52) B02051110091	KFR-51GW/GX1a(51) B02051210034	KFR-51GW/GX1a(52) B02051210035	
1	Wall-mounting frame	挂墙板	020100016R	020100016R	020100016R	020100016R	1
2	Base	底座	100060127R	100060127R	100060127R	100060127R	1
3	Left angle plate	左角板	391990039	391990039	391990039	391990039	1
4	Front angle plate	前角板	391990040	391990040	391990040	391990040	1
5	Cross flow fan	贯流风叶	100010025R	100010025R	100010025R	100010025R	1
6	Fan Bearing	贯流风轮轴承	----	----	----	----	1
7	Ring of Bearing	贯流风轮轴承胶圈	----	----	----	----	1
8	Room temp. Sensor Holder	室温探头架	----	----	----	----	0
9	Evaporator Assy	蒸发器组件	972900473R	972900473R	972900473	972900473R	1
10	Evaporator fixed plate	蒸发器左端板	109990264	109990264	109990264	109990264	1
11	Electric heater	电加热器	----	----	----	----	1
12	Outlet part	出风主体	391200046	391200046	391200046	391200046	1
13	Louver A	上导风条	391190023	391190023	391190023	391190023	1
14	Louver B	下导风条	391190024	391190024	391190024	391190024	1
15	Left Connecting rod A	左大连杆 A	391200035	391200035	391200035	391200035	1
16	Guide Louver Bearing A	轴套 A	391200029	391200029	391200029	391200029	3
17	Step motor left support	步进电机左支架	391200044	391200044	391200044	391200044	2
18	Swing louver	导风叶片	391200041	391200041	391200041	391200041	2
19	Swing louver right support	导风叶片右支架	391200041	391200041	391200041	391200041	1
20	Swing louver middle support	导风叶片中支架	391200040	391200040	391200040	391200040	1
21	Swing louver left support	导风叶片左支架	391200039	391200039	391200039	391200039	1
22	Air outlet protect net	风口护网	020440005R	020440005R	020440005R	020440005R	1
23	Middle frame	中框	391070026R	391070026R	391070026R	391070026R	1
24	Screw cover	螺钉盖	109990257R	109990257R	109990257R	109990257R	3

## Service Manual for Wall Split type Model NO. 30

25	Cold Catalyst	冷触媒	119990011R	119990011R	119990011R	119990011R	1
26	Air filter	过滤网	100190120R	100190120R	100190120R	100190120R	2
27	Display box cover	显示盒盖	100410010R	100410013R	100410010	100410013R	1
28	Display box	显示盒	100410002R	100410005R	100410002	100410005R	1
29	Front Panel	面板	391022136R	391022104R	391022136R	391022104R	1
30	Right angle plate	直角板	391990038R	391990038R	391990038R	391990038R	1
31	Motor holder	电机固定座	100130015R	100130015R	100130015R	100130015R	1
32	Fan motor	电机	320203012R	320203012R	320203012R	320203012R	1
33	Motor cover	电机上盖	100130016R	100130016R	100130016R	100130016R	1
34	Electrical box	电器盒	020150086	020150086	020150086	020150086	1
35	Hook for the wire	过线扣	100430008 过线套	100430008 过线套	100430008 过线套	100430008 过线套	1
36	Wire Clamp	压线板	391110015	391110015	391110015	391110015	1
37	Electric box Panel A	电器盒内件 A	100430080	100430080	100430080	100430080	1
38	Electric box Panel B	电器盒内件 B	100430081	100430081	100430081	100430081	1
39	Display lamp plate	显示板	----	----	----	----	1
40	Room Temp. Sensor	室温探头	049990017	049990017	049990017	049990017	1
41	Tube Temp. Sensor	管温探头	049990017	049990017	049990017	049990017	1
42	Electric control plate	电控板	331100123R	331100124R	973300541	331300121R	1
43	Power cord	电源线	----	----	----	----	1
44	Terminal Board	端子台	030090250	030090250	030090250	030090250	1
45	Connecting cable	室外连接电缆线	----	----	----	----	1
46	Thermal insulation pipe	保温水管	389000025R	389000025R	389000025R	389000025R	1
47	Left Connecting rod B	左大连杆 B	391200037	391200037	391200037	391200037	1
48	Left middle Connecting rod	左中连杆	391200033	391200033	391200033	391200033	1



Service Manual for Wall Split type Model NO. 30

49	Right middle Connecting rod	右中连杆	391200034	391200034	391200034	391200034	1
50	Right Connecting rod B	右大连杆 B	391200038	391200038	391200038	391200038	1
51	Right Connecting rod A	右大连杆 A	391200036	391200036	391200036	391200036	1
52	Right small Connecting rod	右小连杆	391200043	391200043	391200043	391200043	1
53	Step motor right support	步进电机右支架	391200045	391200045	391200045	391200045	3
54	Step motor	外风门步进电机	320273013R	320273013R	320273013R	320273013R	1
		立体风左步进电机	320273015R	320273015R	320273015R	320273015R	1
		立体风内风门右步进电机	320273014R	320273014R	320273014R	320273014R	1
55	Guide Louver Bearing B	轴套 B	391200030	391200030	391200030	391200030	1
56	Wire Clip	压线扣	391110015	391110015	391110015	391110015	1
57	Water-resistant board	左挡水板	391150004	391150004	391150004	391150004	1
		右挡水板	100120008	100120008	100120008	100120008	1
58	Remote controller	遥控器	336811015R	336811015R	336811016	336811016R	1

The data are subject to change without notice.

### 4.3 Explosive view of outdoor unit for KF-51GW/GX1a, KFR-51GW/GX1a

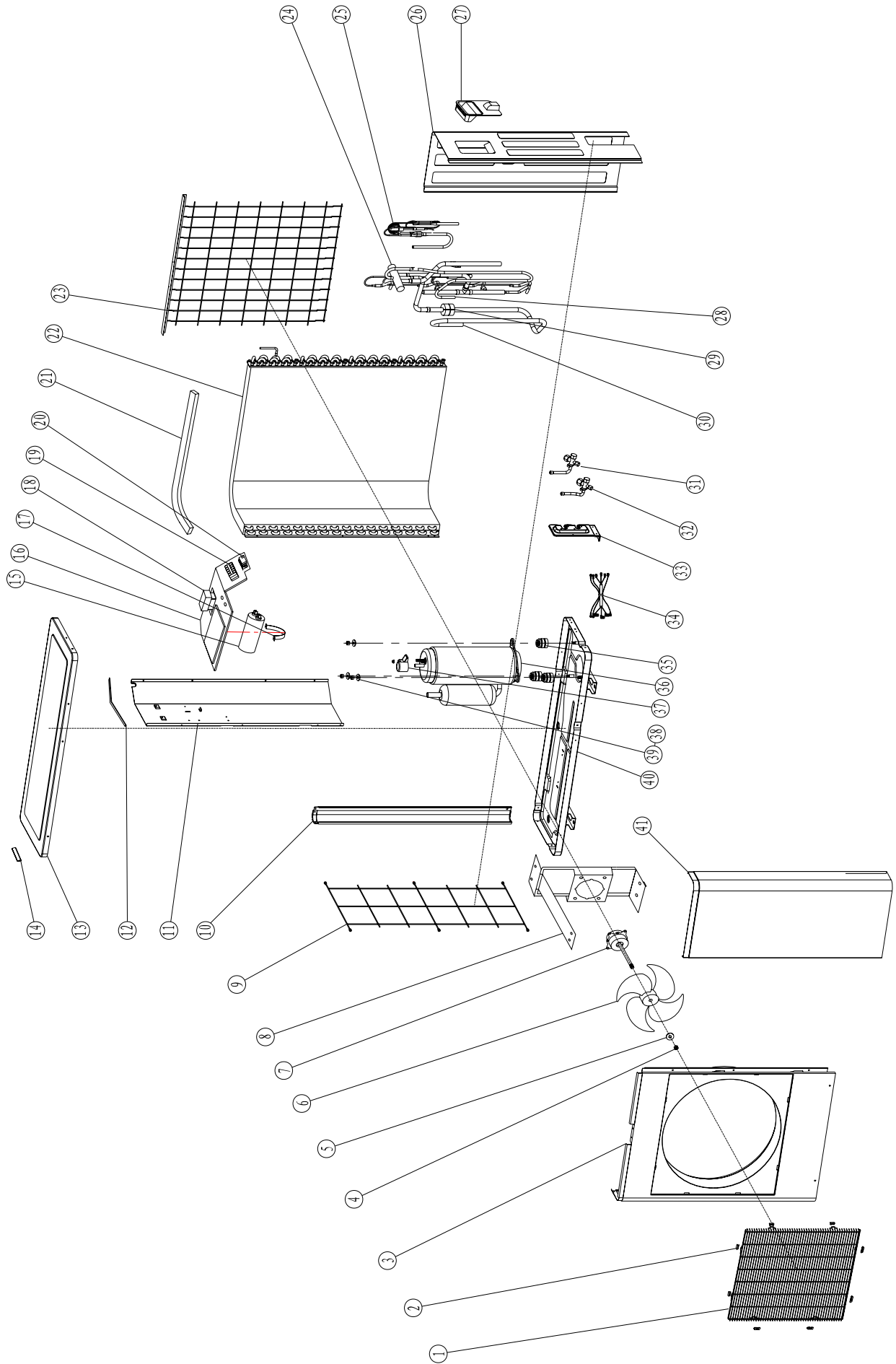


figure 3-2

**4.4 Spare parts list of outdoor unit KF-51GW/GX1a, KFR-51GW/GX1a.**

Table 4-4

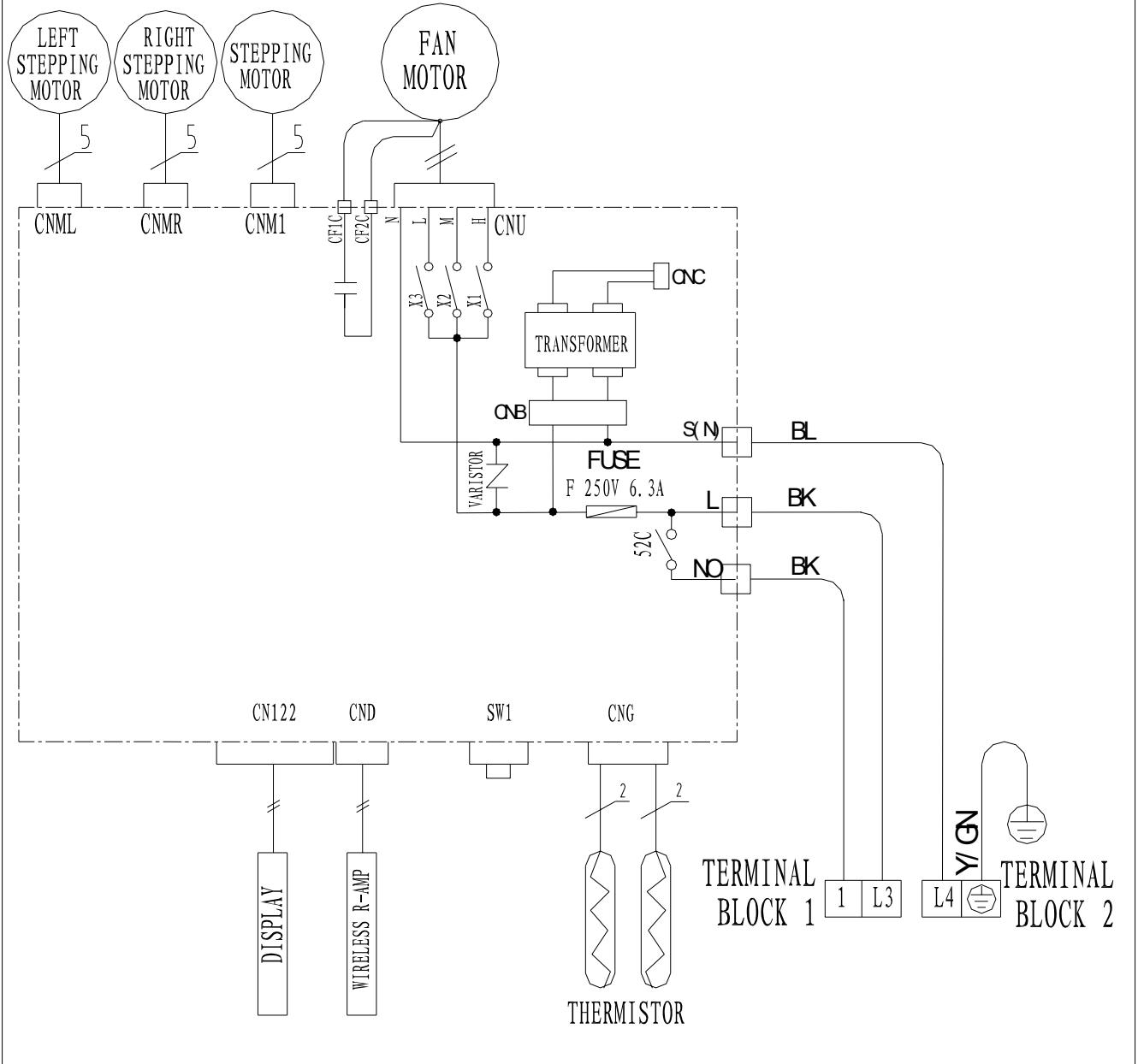
No	Description		Part No				Qty
			KF-51GW/GX1a(51,52) B02051120026	KFR-51GW/GX1a(51,52) B02051220028			
1	Front Grill	前网罩	020120001R	020120001R			1
2	Grill Clip	前网扣	109990256R	109990256R			8
3	Front Plate	面板	020070036R	020070036R			1
4	Nut	螺母	150020003R	150020003R			1
5	Gasket	垫片	453000011R	453000011R			1
6	Axial flow fan	轴流风叶	100030008R	100030008R			1
7	Motor	电机	030020236R	030020236R			1
8	Motor support	电机支架	020040013R	020040013R			1
9	Left protecting wire net	左护网	313990018R	313990018R			1
10	Left panel	立柱 (左侧板)	313050001R	313050001R			1
11	Partition board	中隔板	020030017R	020030017R			1
12	PU Sponge	中隔板密封棉 A 中隔板密封棉 B	090020310R 090010594R	090020310R 090010594R			1
13	Ttop panel	顶盖板	020080032R	020080032R			1
14	Small handle	小抽手	100050018R	100050018R			1
15	Compressor Capacitor	压机电容	3201200689R	3201200689R			1
16	Electric installation board	电器安装板	020130020	020130020			1
17	Capacitor clamp	电容夹	020140006R	020140006R			1
18	Fan Capacitor	风机电容	030010034R	030010034R			1
19	Terminal Board	端子台	030090241R	030090265R			1
20	Wire Clip	压线扣	321100004R	321100004R			1
21	PU Sponge	冷凝器密封棉	----	----			1

22	Condenser	冷凝器	972200482R	972200524R			1
23	Rear Grill	后网	313100003R	313100003R			1
24	4-way valve components	四通阀组件	----	990088814R			1
25	Capillary Assy	毛细管组件	971900127R	971900140R			1
26	Right panel	右侧板	980150012R	980150012R			1
27	Large handle	大抽手(抽手护罩)	313990012	313990012			1
28	Discharge pipe	排气管	360230106R	360230112R			1
29	Anti-vibration pad	减振块	110020019R	110020019R			1
30	Suction pipe	回气管	360160045R 360160046R	360160045R 070020222R			1
31	Low-pressure valve	低压阀	352260010R	352260010R			1
32	High-pressure valve	高压阀	060020190R	060020190R			1
33	Valve installation plate	阀座板	020020007R	020020007R			1
34	Compressor power cord	压机连接线	050040058R	050040058R			1
35	Anti-vibration pad for the compressor	压机减震块	110020036R	110020036R			3
36	Compressor	压缩机	960114041R	960114041R			1
37	Compressor terminal cover	压机保护器盖	305147002	305147002			1
38	Screw nut	螺母	305143002	305143002			1
39	Gasket	垫片	305142002	305142002			1
40	Base	底盘	313011072R	313011072R			1
41	Maintenance plate	维修板	020090014R	020090014R			1

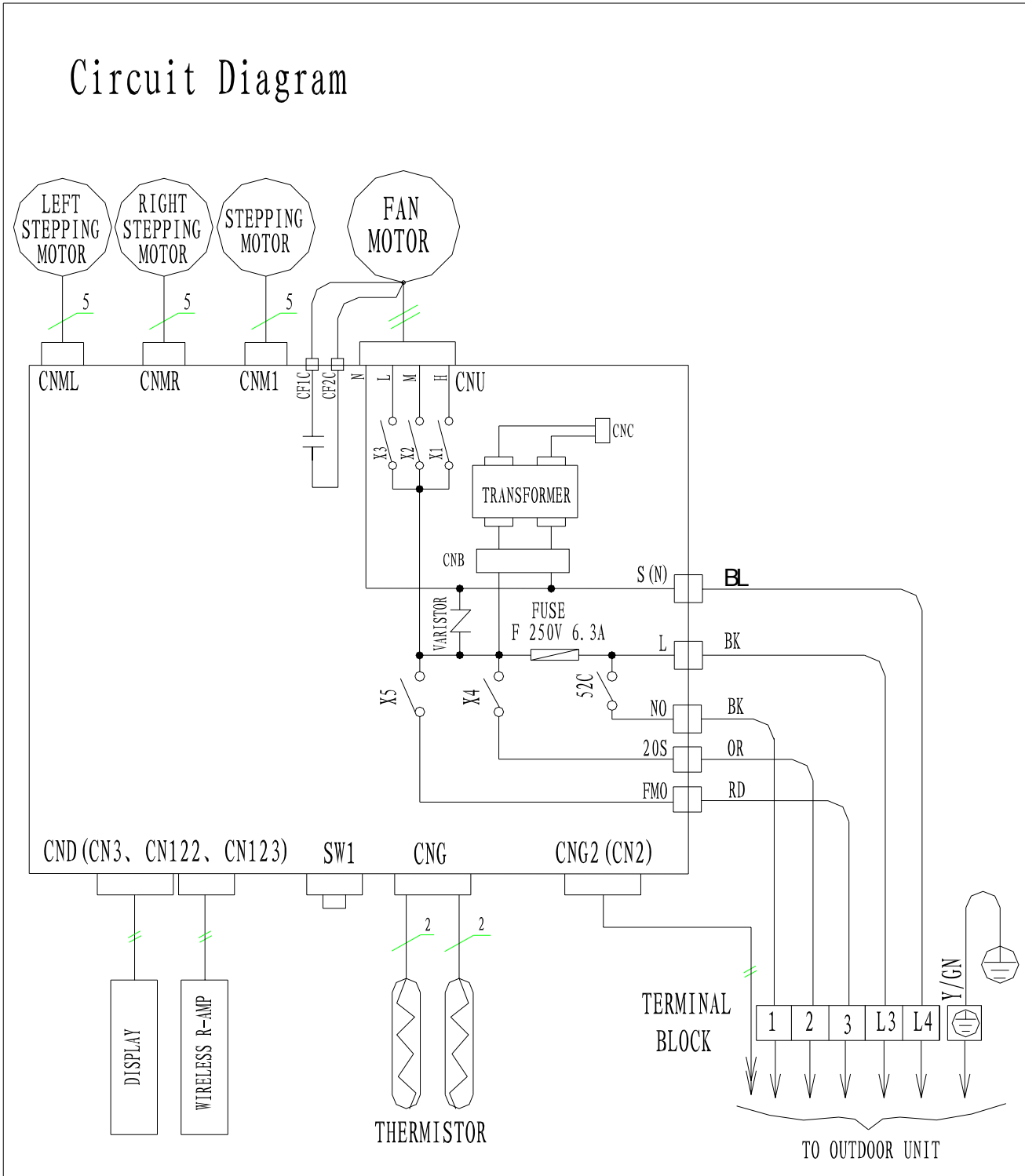
The data are subject to change without notice.

#### 4.5 KF-51GW/GX1a indoor unit circuit diagram

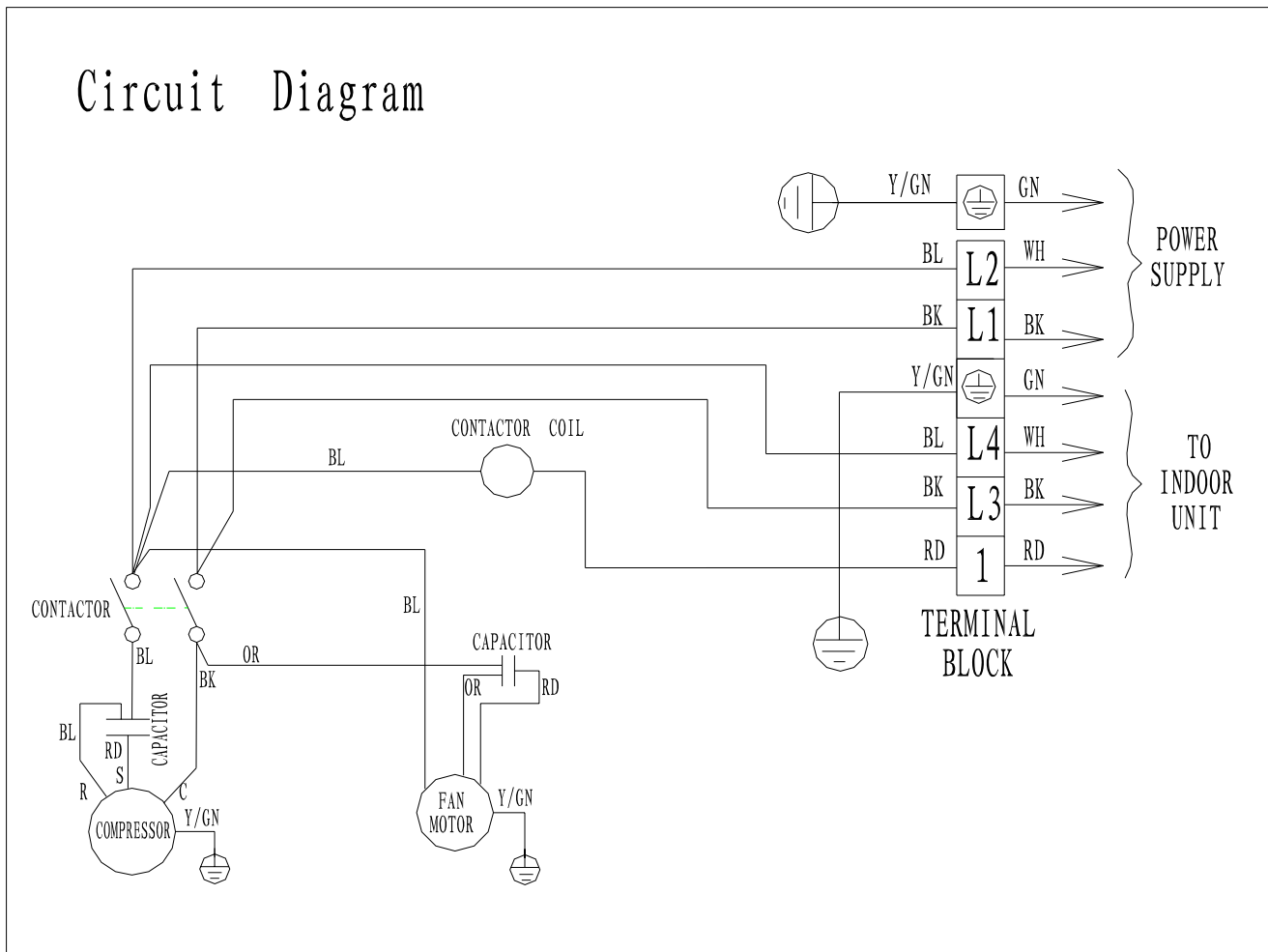
# Circuit Diagram



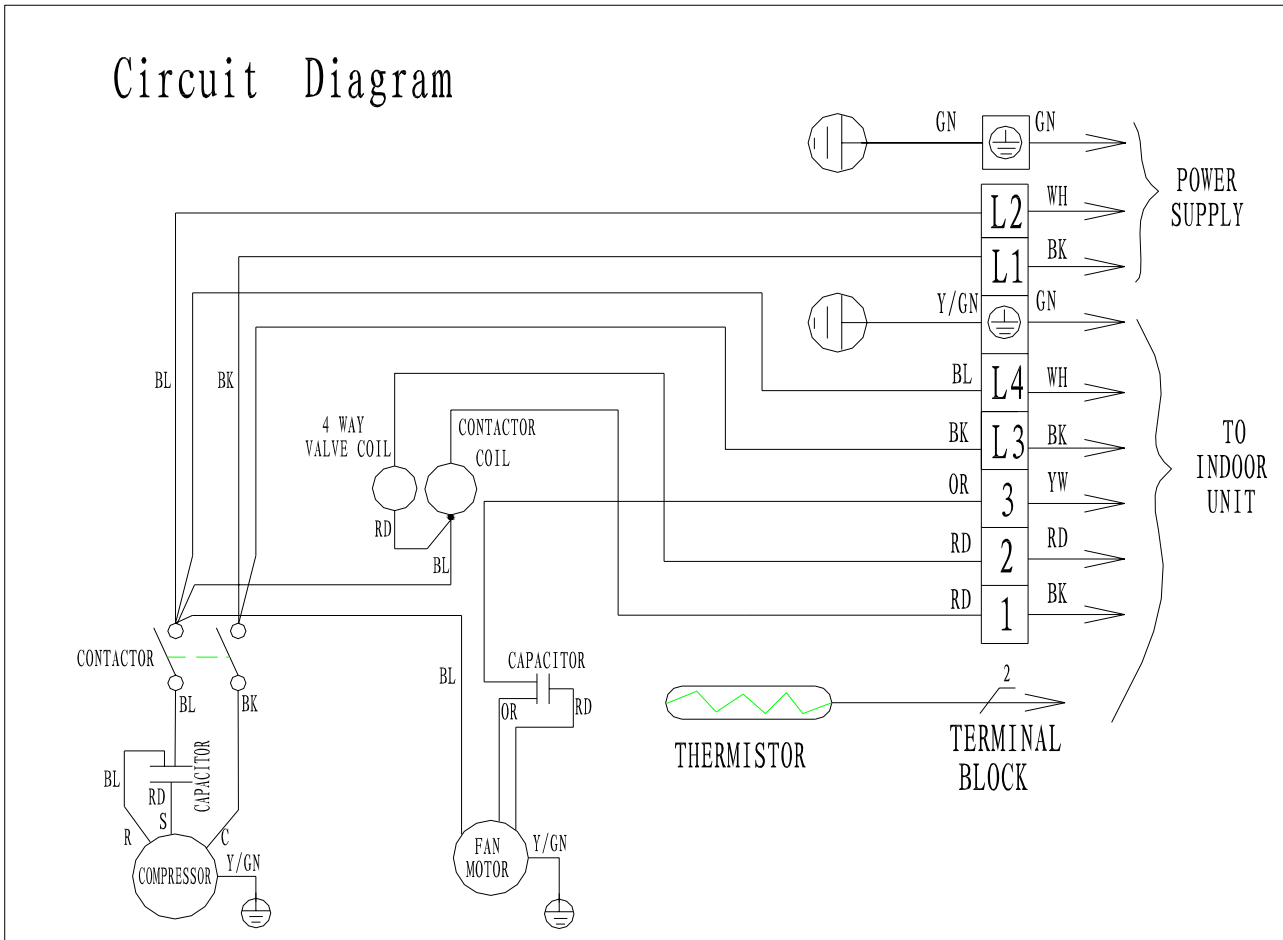
4.6 KFR-51GW/GX1a indoor unit circuit diagram



4.7 KF-51GW/GX1a outdoor unit circuit diagram



4.8 KFR-51GW/GX1a outdoor unit circuit diagram





5.1 Explosive view of indoor unit for KF-70GW/GX1a, KFR-70GW/GX1a

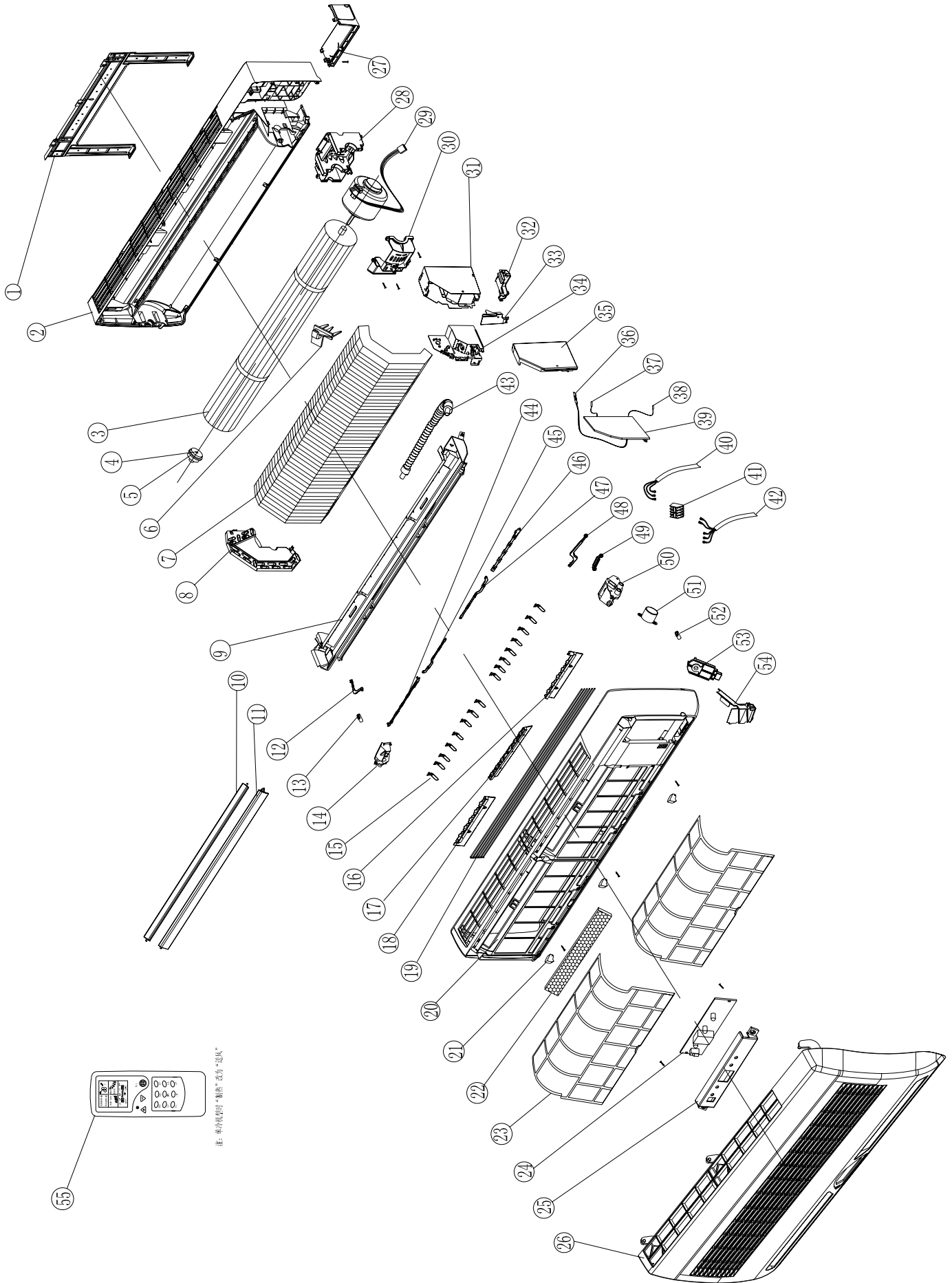


figure 4-1

**5.2 Spare parts list of indoor unit for KF-70GW/GX1a, KFR-70GW/GX1a.**

Table 4-1

No	Description		Part No				Qty
			KF-70GW/GX1a (38A) B02070110025	KF-70GW/GX1a (38B) B02070110024	KFR-70GW/GX1a (38A) B02070210042	KFR-70GW/GX1a (38B) B02070210041	
1	Wall-mounting frame	挂墙板	311010010R	311010010R	311010010R	311010010R	1
2	Base	底座	391060109R	391060109R	391060109R	391060109R	1
3	Cross flow fan	贯流风叶	100010018R	100010018R	100010018R	100010018R	1
4	Fan Bearing	贯流风轮轴承	----	----	----	----	1
5	Ring of Bearing	贯流风轮轴承胶圈	----	----	----	----	1
6	Room temp. Sensor Holder	室温探头架	----	----	----	----	0
7	Evaporator Assy	蒸发器组件	972900775R	972900775R	972900775R	972900775R	1
8	Evaporator fixed plate	蒸发器左端板	391990164R	391990164R	391990164R	391990164R	1
9	Outlet part	出风主体	391800030R	391800030R	391800030R	391800030R	1
10	Louver A	上导风条	391190050	391190050	391190050	391190050	1
11	Louver B	下导风条	391190051	391190051	391190051	391190051	1
12	Left Connecting rod A	左大连杆 A	391200088	391200088	391200088	391200088	1
13	Guide Louver Bearing A	轴套 A	391200082	391200082	391200082	391200082	3
14	Step motor left support	步进电机左支架	391200081	391200081	391200081	391200081	2
15	Swing louver	导风叶片	391200095	391200095	391200095	391200095	2
16	Swing louver right support	导风叶片右支架	391200094	391200094	391200094	391200094	1
17	Swing louver middle support	导风叶片中支架	391200093	391200093	391200093	391200093	1
18	Swing louver left support	导风叶片左支架	391200092	391200092	391200092	391200092	1
19	Air outlet protect net	风口护网	311030006	311030006	311030006	311030006	1
20	Middle frame	中框	391070065R	391070065R	391070065R	391070065R	1
21	Screw cover	螺钉盖	391990157R	391990157R	391990157R	391990157R	3
22	Cold Catalyst	冷触媒	311030006	311030006	311030006	311030006	1
23	Air filter	左过滤网 右过滤网	391120045R 391120046R	391120045R 391120046R	391120045R 391120046R	391120045R 391120046R	2

24	Display box cover	显示盒盖	391140005R	391140005R	391140005R	391140005R	1
25	Display box	显示盒	391130004R	391130004R	391130004R	391130004R	1
26	Front Panel	面板	391022228R	391022238R	391022228R	391022238R	1
27	Right angle plate	底座右封盖	391250002	391250002	391250002	391250002	1
28	Motor holder	电机座	391990160R	391990160R	391990160R	391990160R	1
29	Fan motor	电机	030210057	030210057	030210057	030210057	1
30	Motor cover	电机上盖	391990161R	391990161R	391990161R	391990161R	1
31	Electrical box	电器盒	020150086R	020150086R	020150086R	020150086R	1
32	Hook for the wire	过线扣(过线套)	100430008R	100430008R	100430008R	100430008R	1
33	Wire Clamp	电器盒压线板	391110013R	391110013R	391110013R	391110013R	1
34	Electric box Panel A	电器盒内件 A	100430080R	100430080R	100430080R	100430080R	1
35	Electric box Panel B	电器盒内件 B	100430081R	100430081R	100430081R	100430081R	1
36	Display lamp plate	显示板	----	----	----	----	1
37	Room Temp. Sensor	室温探头	049990017	049990017	049990017	049990017	1
38	Tube Temp. Sensor	管温探头	049990017	049990017	049990017	049990017	1
39	Electric control plate	电控板	331100141	331100141	331300150R	331300150R	1
40	Power cord	电源线	----	----	----	----	1
41	Terminal Board	端子台	030090242	030090242	030090242	030090242	1
42	Connecting cable	室外连接电缆线	----	----	----	----	1
43	Thermal insulation pipe	保温水管	099990080R	099990080R	099990080R	099990080R	1
44	Left Connecting rod B	左大连杆 B	391200090	391200090	391200090	391200090	1
45	Left middle Connecting rod	左中连杆	391200086	391200086	391200086	391200086	1
46	Right middle Connecting rod	右中连杆	391200087	391200087	391200087	391200087	1
47	Right Connecting rod B	右大连杆 B	391200091	391200091	391200091	391200091	1
48	Right Connecting rod A	右大连杆 A	391200089	391200089	391200089	391200089	1

Service Manual for Wall Split type Model NO. 30

49	Right small Connecting rod	右小连杆	391200097	391200097	391200097	391200097	1
50	Step motor right support	步进电机右支架	391200098	391200098	391200098	391200098	3
51	Step motor	外风门步进电机	320273013R	320273013R	320273013R	320273013R	1
		立体风左步进电机	320273015R	320273015R	320273015R	320273015R	1
		立体风内风门右步进电机	320273014R	320273014R	320273014R	320273014R	1
52	Guide Louver Bearing B	轴套 B	391200083	391200083	391200083	391200083	1
53	Wire Clip	压线扣	391110015R	391110015R	391110015R	391110015R	1
54	Water-resistant board	护管挡水板	391990162R	391990162R	391990162R	391990162R	1
55	Remote controller	遥控器	336811015R	336811015R	336811016R	336811016R	1

The data are subject to change without notice.

5.3 Explosive view of outdoor unit for KF-70GW/GX1a, KFR-70GW/GX1a

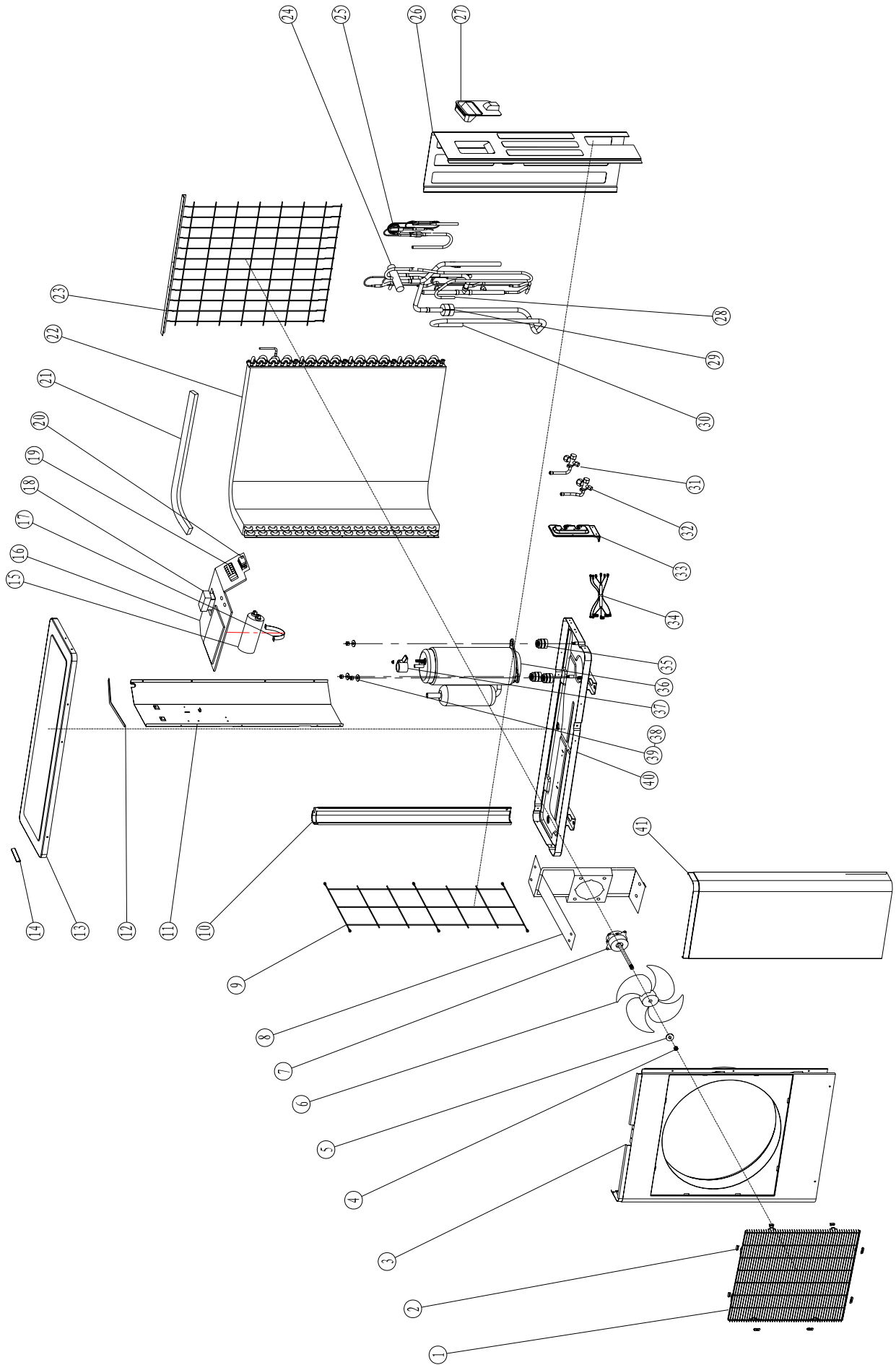


figure 4-2

**5.4 Spare parts list of outdoor unit KF-70GW/GX1a, KFR-70GW/GX1a**

Table 4-2

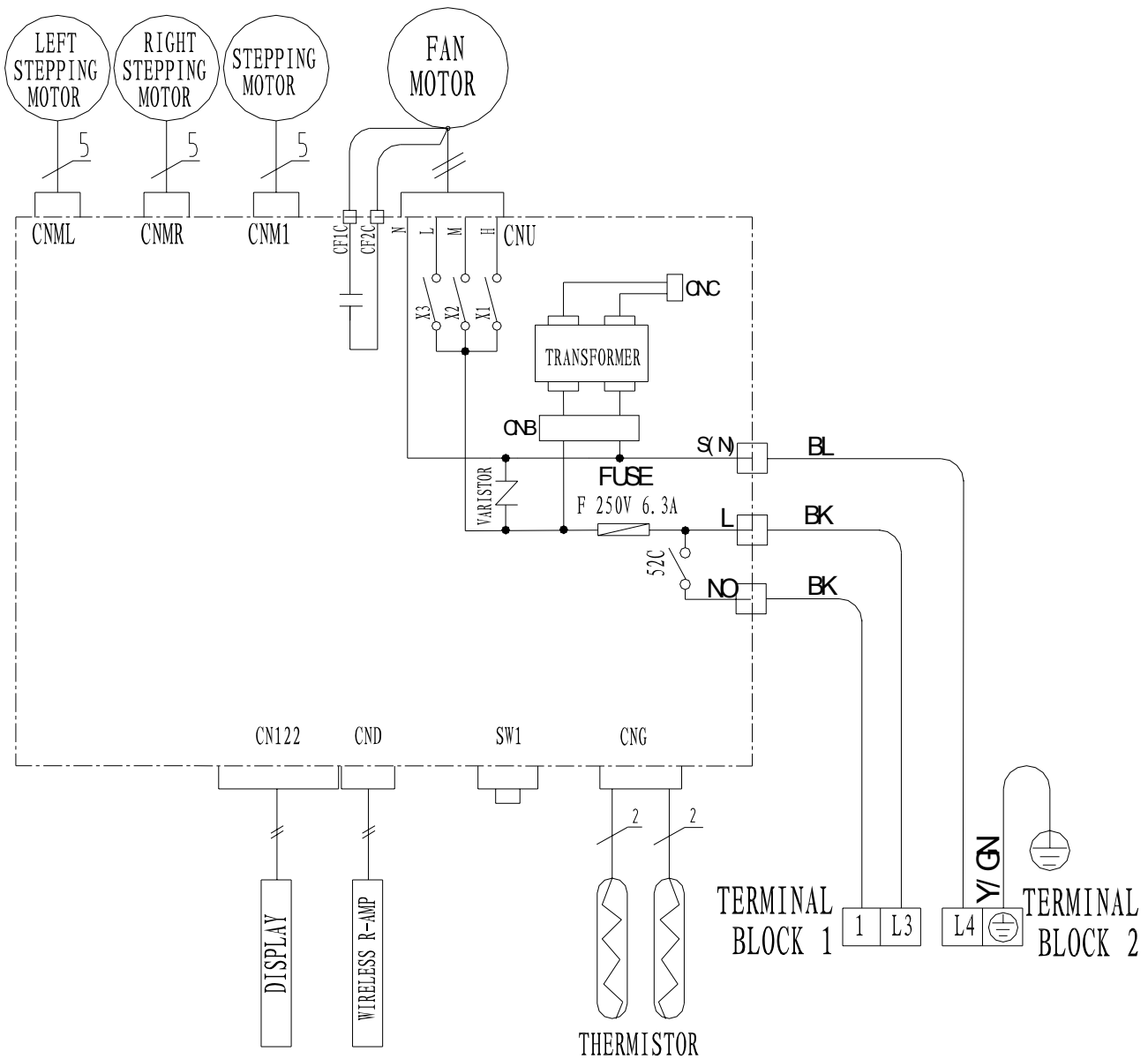
No	Description		Part No				Qty
			KF-70GW/GX1a (38A,38B) B02070120006	KFR-70GW/GX1a (38A,38B) B02070220014			
1	Front Grill	前网罩	020120001R	020120001R			1
2	Grill Clip	前网扣	109990256R	109990256R			8
3	Front Plate	面板	020070036R	020070036R			1
4	Nut	螺母	150020003R	150020003R			1
5	Gasket	垫片	453000011R	453000011R			1
6	Axial flow fan	轴流风叶	100030008R	100030008R			1
7	Motor	电机	030020236	030020236R			1
8	Motor support	电机支架	020040013R	020040013R			1
9	Left protecting wire net	左护网	313990018R	313990018R			1
10	Left panel	立柱(左侧板)	313050001R	313050001R			1
11	Partition board	中隔板	020030017R	020030017R			1
12	PU Sponge	中隔板密封棉	090020310R 090010594R	090020310R 090010594R			1
13	Ttop panel	顶盖板	020080032R	020080032R			1
14	Small handle	小抽手	100050018R	100050018R			1
15	Compressor Capacitor	压机电容	320120065	030010020			1
16	Electric installation board	电器安装板	313120003	313120003			1
17	Capacitor clamp	电容夹	020140010R	020140010R			1
18	Fan Capacitor	风机电容	030010034	030010034			1
19	Terminal Board	端子台	030090241	030090265			1
20	Wire Clip	压线扣	321100004R	321100004R			1
21	PU Sponge	冷凝器密封棉	----	----			1

22	Condenser	冷凝器	972200767R	972200751R			1
23	Rear Grill	后网	313100003R	313100003R			1
24	4-way valve components	四通阀组件	----	973500146R			1
25	Capillary Assy	毛细管组件	960800026R	960800026R			1
26	Right panel	右侧板	980150012R	980150012R			1
27	Large handle	大抽手(抽手护罩)	313990012	313990012			1
28	Discharge pipe	排气管	360230155R	360230158R			1
29	Anti-vibration pad	减振块	110020019R	110020019R			1
30	Suction pipe	回气管	360160055R	360160056R			1
31	Low-pressure valve	低压阀	352260010R	352260010R			1
32	High-pressure valve	高压阀	060020190R	060020190R			1
33	Valve installation plate	阀座板	020020007R	020020007R			1
34	Compressor power cord	压机连接线	050040058R	050040058			1
35	Anti-vibration pad for the compressor	压机减震块	110020036R	110020036R			3
36	Compressor	压缩机	960114069R	960114069R			1
37	Compressor terminal cover	压机保护器盖	305147002	305147002			1
38	Screw nut	螺母	305143002	305143002			1
39	Gasket	垫片	305142002	305142002			1
40	Base	底盘	313011072R	313011072			1
41	Maintenance plate	维修板	020090014R	020090014R			1

The data are subject to change without notice.

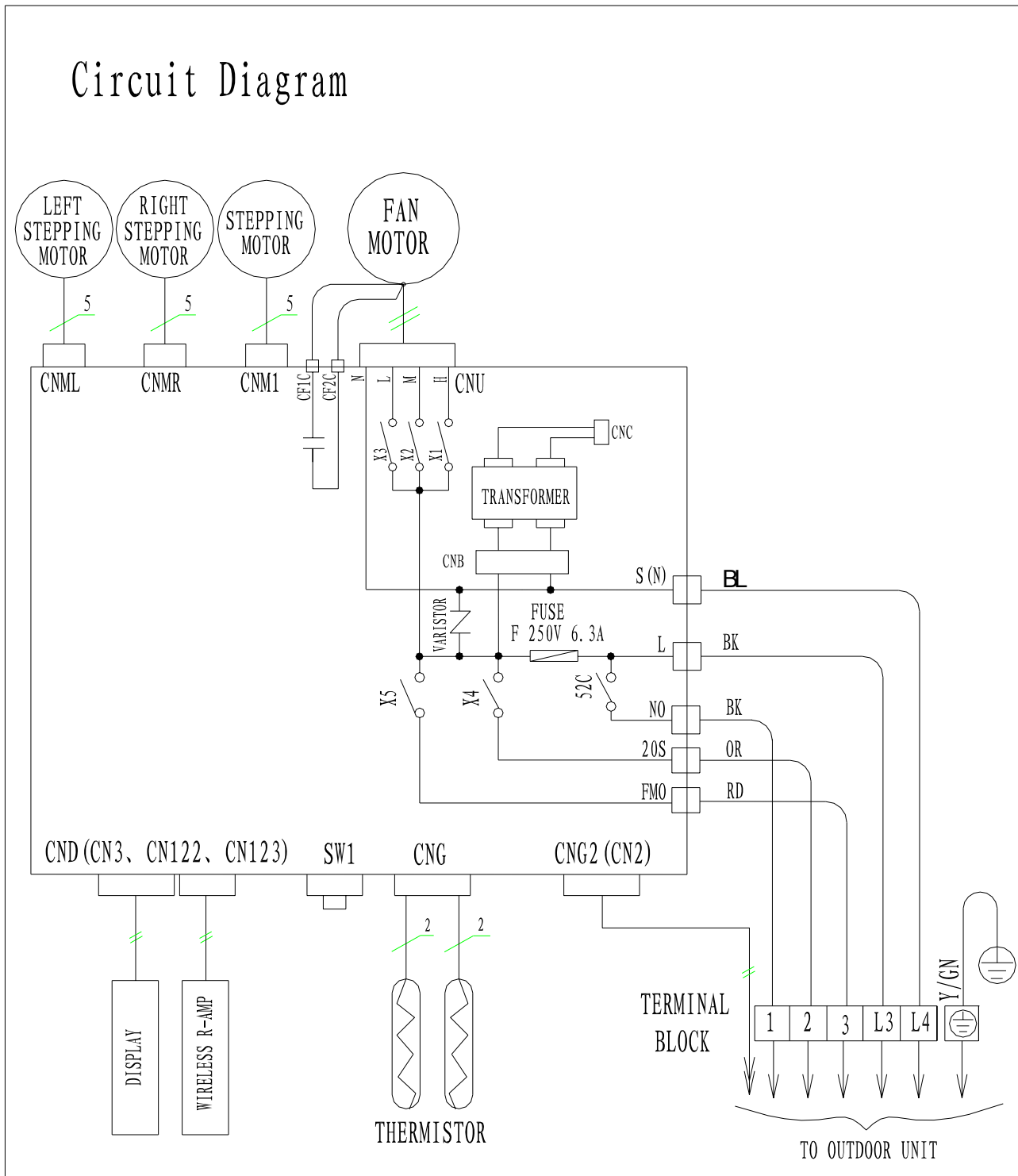
### 5.5 KF-70GW/GX1a indoor unit circuit diagram

# Circuit Diagram

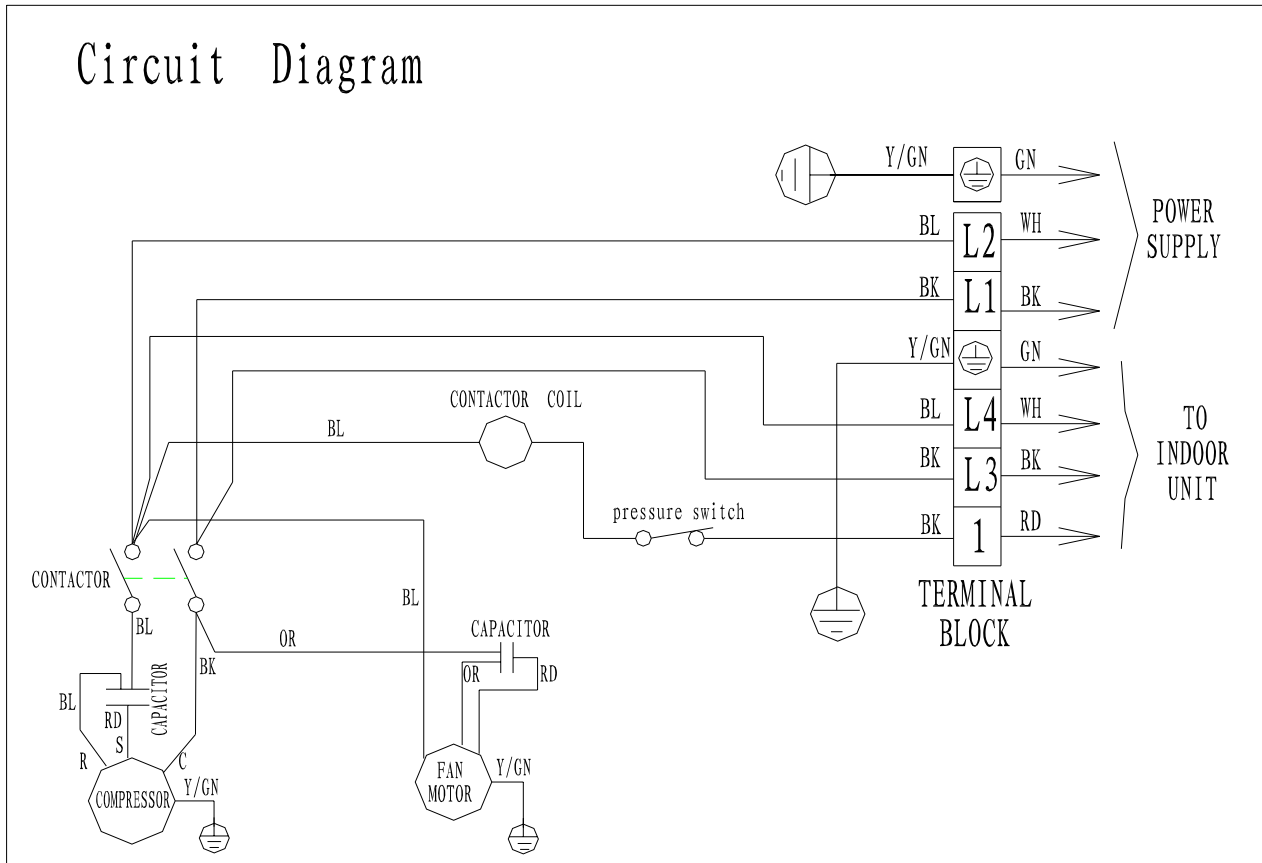




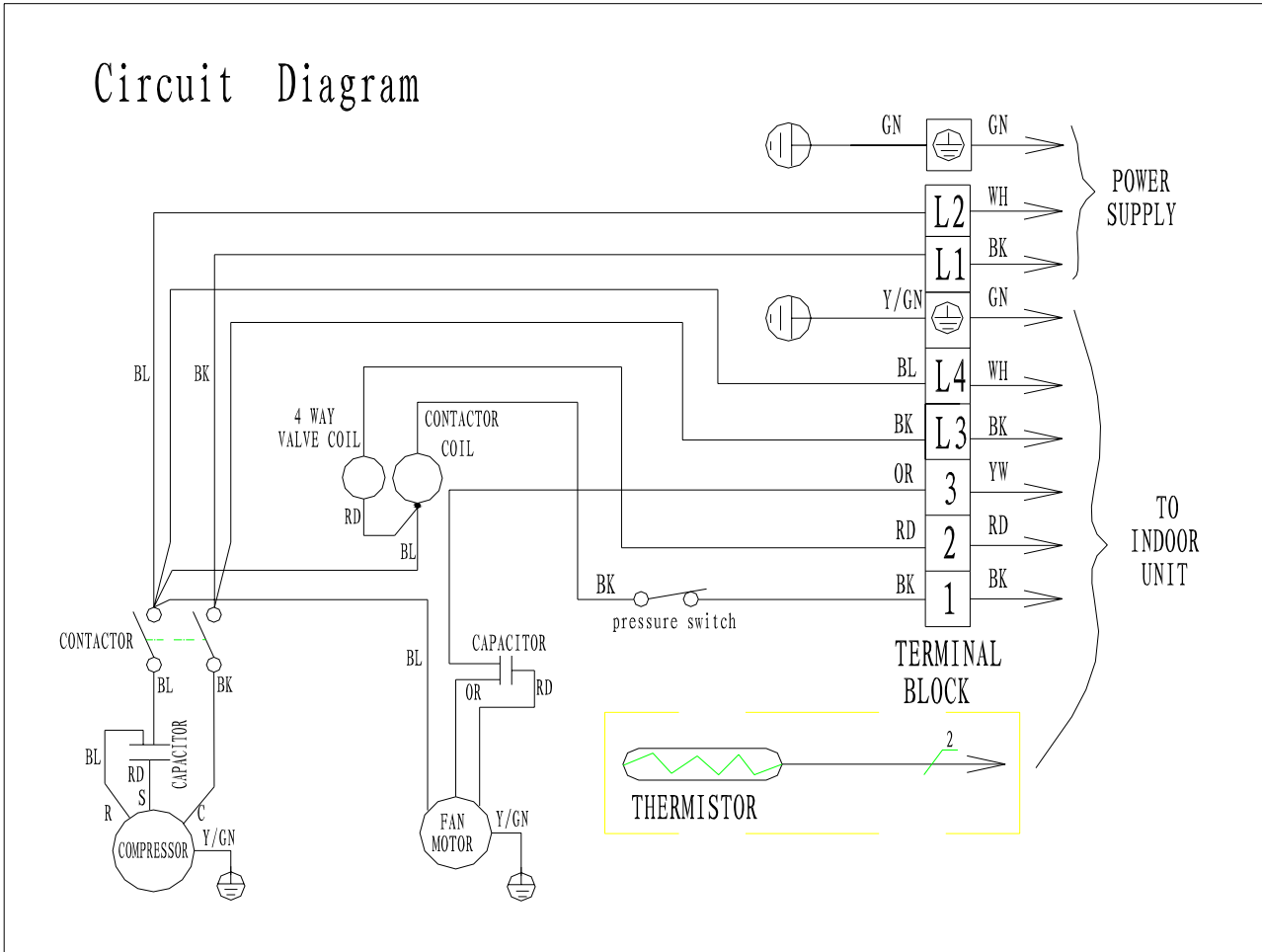
5.6 KFR-70GW/GX1a indoor unit circuit diagram



5.7 KFR-70GW/GX1a outdoor unit circuit diagram



5.8 KFR-70GW/GX1a outdoor unit circuit diagram



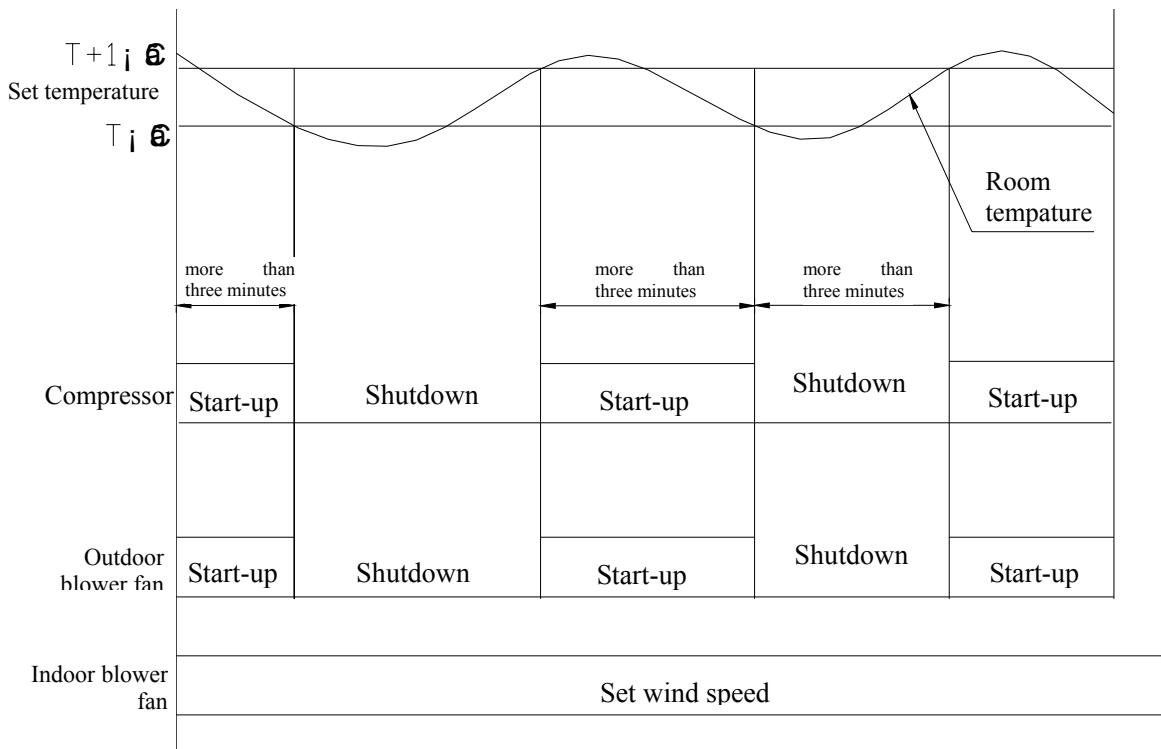
## 6. PCB function manual

### Function

#### 6.1 Cooling

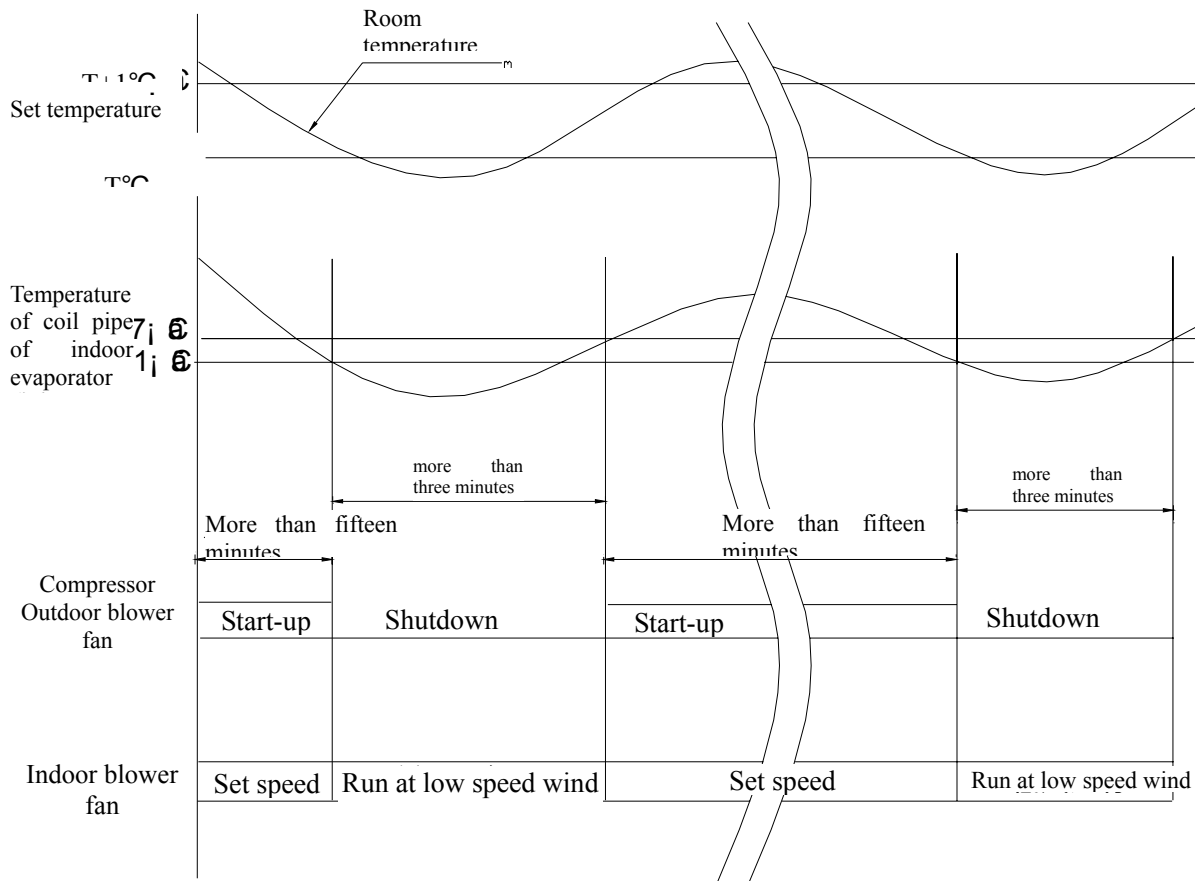
- The indoor temperature is detected by room temperature sensor of indoor units and the room temperature is controlled by the cyclic switch of compressor under the control of the electric control board.
- When power on for the first time, it is allowed to start up the compressor immediately; in order to protect the compressor, it is required to stop compressor immediately such as transforming mode, heating mode overheat protection and shutdown after starting up the compressor; furthermore, it is advisable to stop the compressor according to practical situations after it has run at least for three minutes. In general, the electric control board will not start up the compressor within three minutes at least after shutting down the compressor.
- Outdoor blower fan and compressor work synchronously; the indoor blower fan is running at the set wind speed; when the automatic wind is selected, the indoor blower fan running speed is select by the difference between room temperature and setting temperature.
- Start up the compressor: when the room temperature is more than  $T_s + 1^\circ$  ( $T_s$  is the set temperature), compressor → start-up
- Shut down the compressor: when the room temperature is less than the set temperature  $T_s$ , compressor → shutdown

#### a. Working curve for temperature control



## 6.2 Anti freeze protection function of evaporator (cooling or dehumidify)

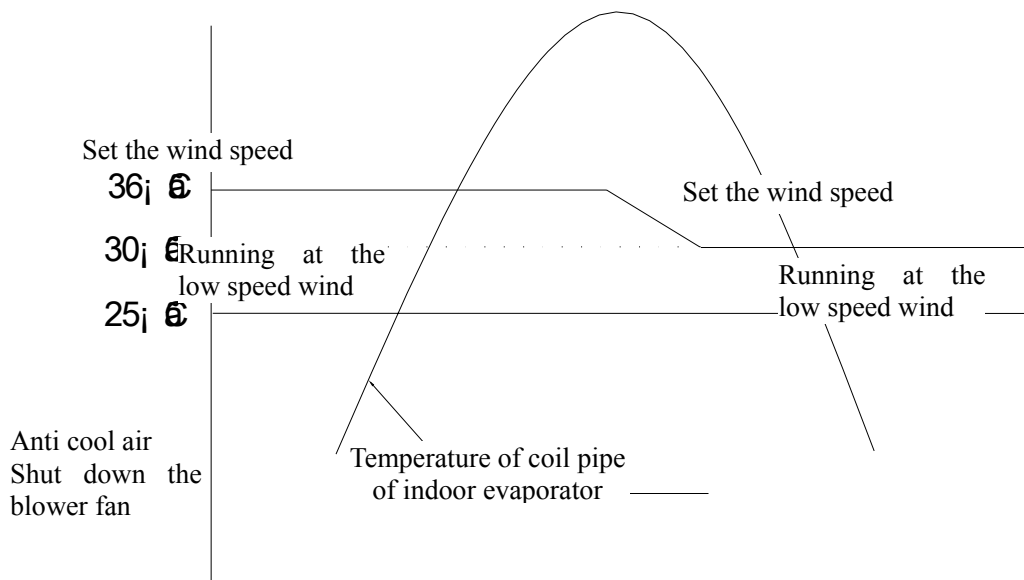
- This function is to prevent freezing on the surface of indoor evaporator.
- When the temperature of coil pipe of the indoor units is less than or equal to  $1^{\circ}\text{C}$  over one minutes and the compressor has continuous run for more than fifteen minutes, the compressor and outdoor blower fan shut down through the electric control board and the indoor blower fan is running at low speed wind.
- When the temperature of coil pipe of the indoor units is more than or equal to  $7^{\circ}\text{C}$  and the compressor has shutdown for more than three minutes, the compressor and outdoor blower fan start to run and the indoor blower fan is running in the set mode.



## 6.3 Heating (only applicable to dual temperature units)

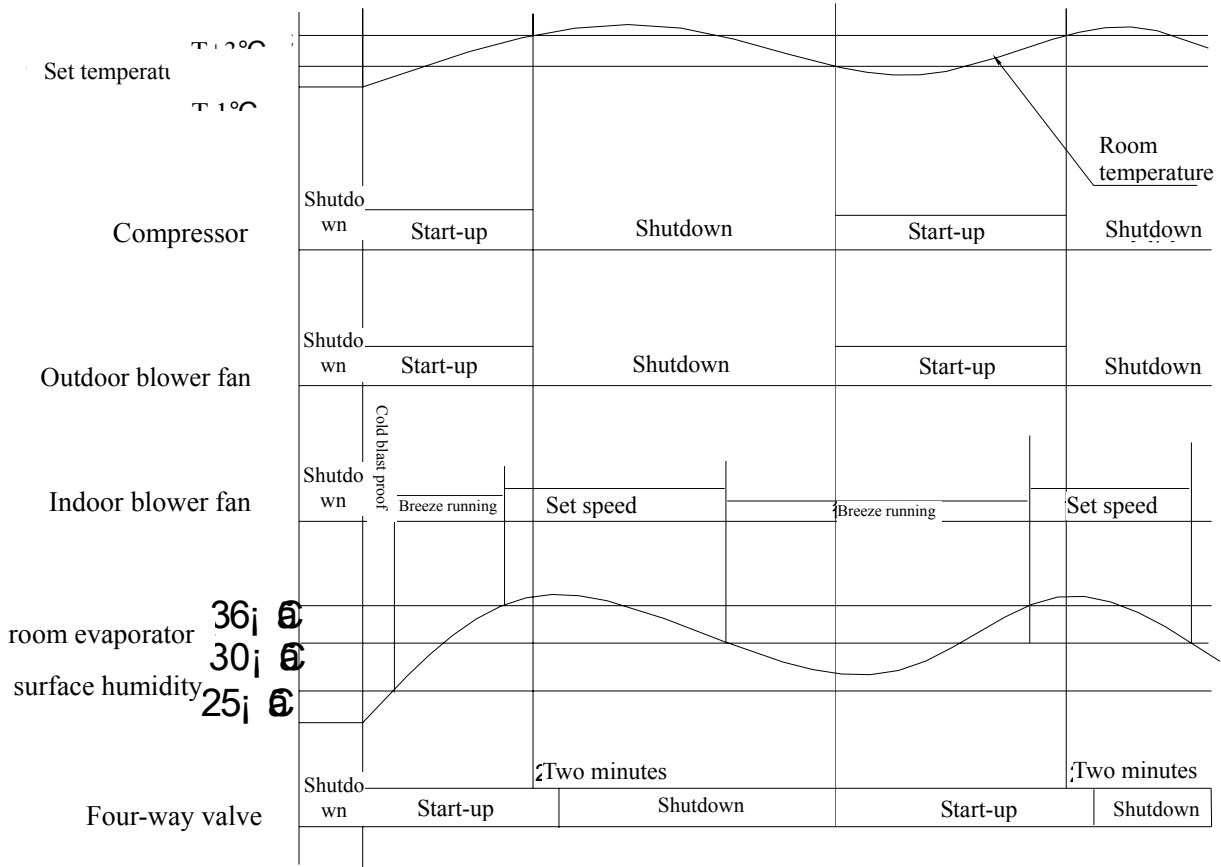
- The indoor temperature is detected by room temperature sensor of indoor units and the temperature controlled by the cyclic switch of compressor under the control of the electric control board.
- When power on for the first time, it is allowed to start up the compressor immediately; in order to protect the compressor, it is required to stop compressor immediately such as transforming mode, heating mode overheat protection and shutdown after starting up the compressor; furthermore, it is advisable to stop the compressor according to practical situations after it has run at least for three minutes. In general, the electric control board will not start up the compressor within three minutes at least after shutting down the compressor.
- In general, start up the compressor and the outdoor blower fan in the heating mode. The working mode of four-way valve is to open the four-way valve when starting up the compressor. In the course of defrost, the outdoor blower fan and the four-way valve are closed when the compressor starts up. In the course of heating, the compressor is closed without power breakdown or the mode is transformed and two minutes later, the four-way valve is closed.

- In the heating mode, the indoor blower fan can be set as high/ medium/ low /automatic running mode by remote control. however, the anti cool air function is prior. In the heating mode, the anti cool air control function is to control shutdown of the indoor blower fan, lower (low speed )wind mode, setting the wind speed by detecting the temperature of coil pipe of evaporator so as to attain the purpose of preventing cold air from blowing. When the compressor starts up, the specific situations are shown in the following figure. When the compressor is closed and the temperature of coil pipe of indoor evaporator decreases and is less than  $30^{\circ}\text{C}$ , the indoor blower fan is closed. When the compressor is turned on and the temperature of coil pipe of indoor evaporator decreases and is less than  $20^{\circ}\text{C}$ , the indoor blower fan is closed. The operating lamp is light for 0.5s and close for 0.5s to indicate the anti cool air.
- Start up the compressor: when the room temperature is less than  $T_s - 1^{\circ}\text{C}$  ( $T_s$  is the set temperature), compressor → start-up
- Shut down the compressor: when the room temperature is more than or equal to the set temperature  $T_s + 3^{\circ}\text{C}$ , compressor → shutdown
- The electric heating start-up in the heating mode shall meet the following conditions:
  - start up the compressor and indoor blower fan
  - room temperature  $\leq 20^{\circ}\text{C}$
  - the temperature of indoor coil pipe  $< 49^{\circ}\text{C}$
  - non defrosting mode
- For the waste heat emission function in the heating mode, in principle, the indoor blower fan shall be on for thirty seconds after the electric heating is closed. If electric heating with power breakdown in the defrosting mode, the indoor blower fan is closed after it is running 20s.



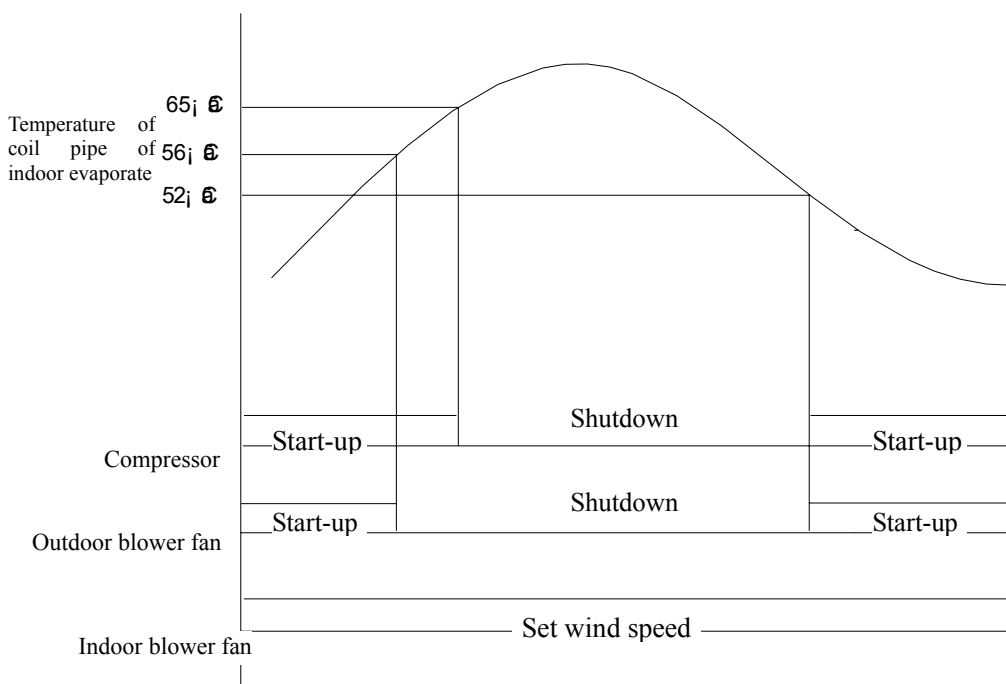
The running state of indoor blower fan in the heating mode:

Working situations of compressor in the heating mode:



#### 6.4 Overheat protection of evaporator (only applicable to the heating mode)

- This function is to prevent overheat of indoor evaporator.
- When the temperature of coil pipe of indoor units rises to 65℃, the compressor and outdoor blower fan are closed and two minutes later, the change valve is closed. The indoor blower fan is running at the set speed. When the temperature of indoor coil pipe is less than or equal to 52℃, it is allowed to reenter the heating mode.
- When the temperature of coil pipe of indoor units is more than or equal to 56℃, the outdoor blower fan shuts down and it enters the overload protection; when the temperature of coil pipe of indoor units is less than or equal to 52℃, the outdoor blower fan starts up and it exit the overload protection.

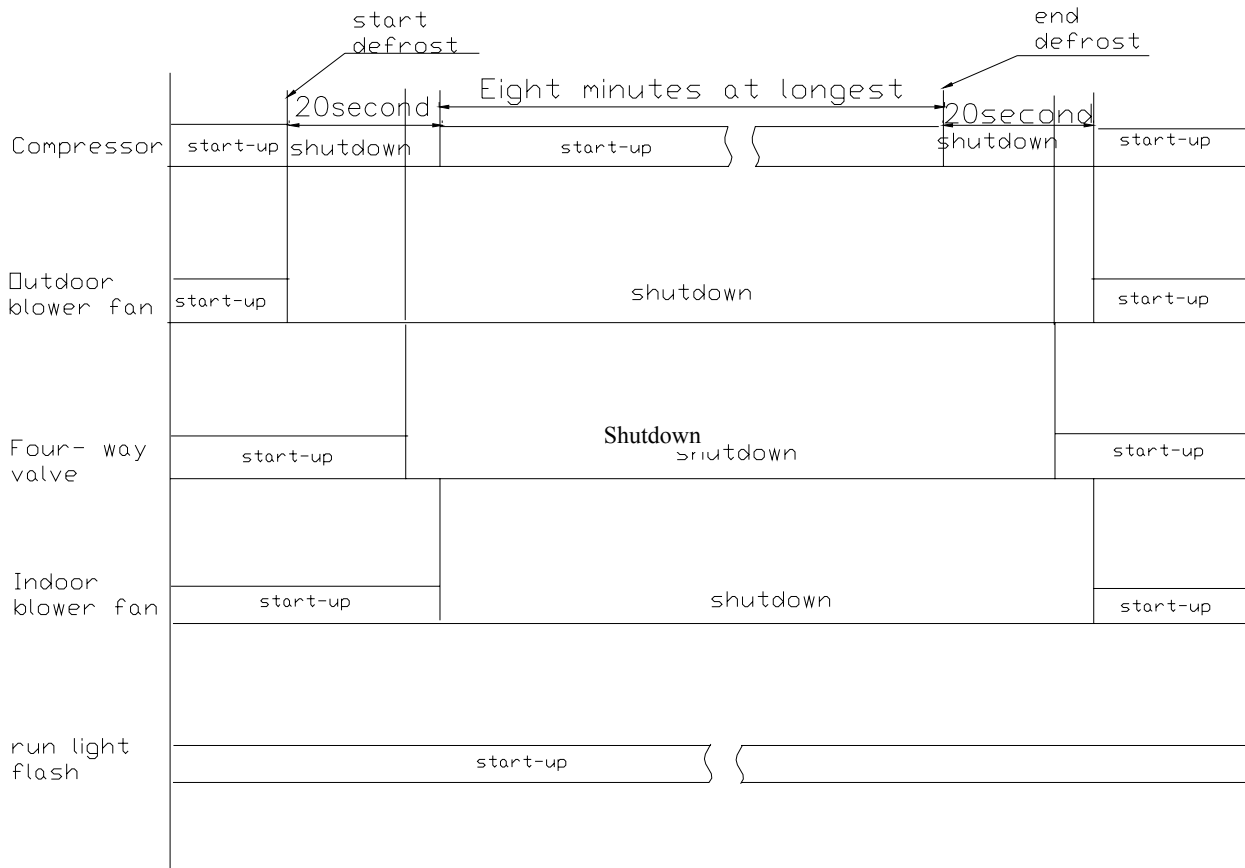


#### 6.5 Defrosting (only applicable to the heating mode, the intelligent defrosting is adopted)

In the heating mode, the air conditioner defrosting by outdoor electric board, defrost start-up in the heating mode shall meet the following conditions: ① the compressor running time over thirty minutes and it continuous running over three minutes and outdoor unit coil pipe sensor temperature less than or equal  $-15$  degree over one minutes. ② the compressor running time over forty minutes and it continuous running over three minutes and outdoor unit coil pipe sensor temperature less than or equal  $-5$  degree over one minutes . the defrosting time is automatically determined to exit the defrosting and re-enter the heating mode to run. The defrosting scheme is as follows.

- Sequence chart in defrosting mode

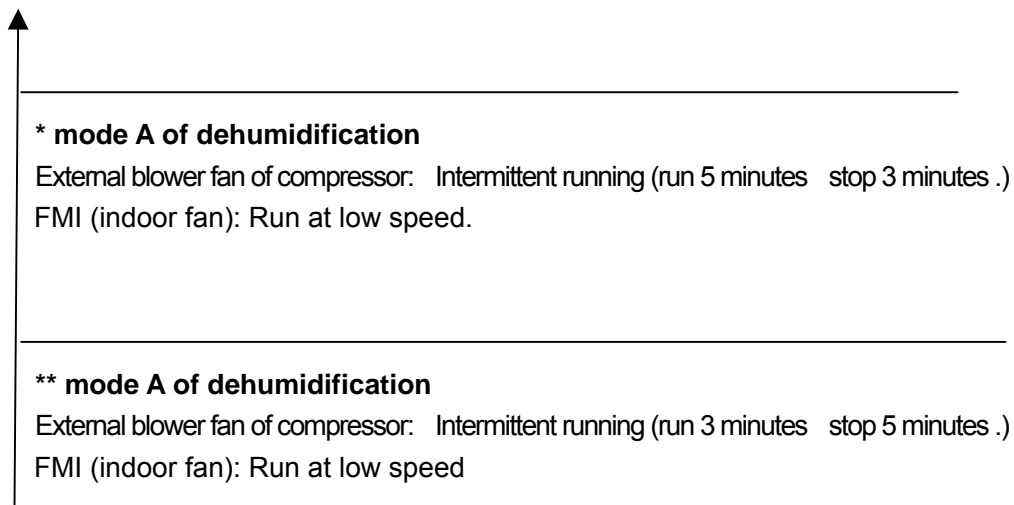




## 6.6 Dehumidification

Dehumidification running is to eliminate the water vapor in the air by using the cool circulating capacity, but the dehumidification will not decrease the indoor temperature in great deal. The air conditioner automatically repeats on and off circulation according the room temperature, which is shown in the following figure.

1. The dehumidify procedure is run mode A or mode B. Then repeat the procedure.



### Note

- In the dehumidification mode, the indoor fan is running at the set speed.

## 6.7 Ventilation working mode (only applicable to single cold machine)

In the ventilation mode, the set temperature range is 16℃~32℃. When ventilating, the compressor, outdoor blower fan, four-way valve and electric heating are all closed and the indoor blower fan is running at the set speed.

## 6.8 Automatic mode

- When the automatic mode is selected, the electric control board calculates the difference value between the set temperature and room temperature, and then it is automatically switched into the cooling, heating and dehumidification modes to keep the expected temperature. (Note:  $T_R$  represents the indoor room temperature and  $T_S$  represents the set temperature, the single cold machine changes from the heating mode to the ventilation mode.)

Room temperature	$T_R < 21$	$21 \leq T_R \leq 26$	$T_R > 26$
State	heating	Dehumidification	cooling

## 6.9 Emergency key function

There is a forcible execution key on the panel of indoor units and the air conditioner can enter the auto mode by pressing the key when the remote controller is out of work or missing. Press the key once in the state of shutdown and enter the automatic mode. 2. Pressure the key in the running the air conditioner is closed.

When pressing down the forcible execution key, then power up and enter the self-check program.

## 6.10 Abnormality of outdoor units

After the compressor runs five minutes, the lamp flashes 4 times per six seconds or display E4 if the temperature of indoor coil pips is more than 25℃ (cool ) or less than 25℃ (heating) in the continuous 20 minutes. The controller will automatically shut down if the temperature of indoor coil pips is more than 25℃ (refrigeration ) or less than 30℃ (heating) in another continuous 20 minutes, that is the abnormality protection of outdoor units and the indicator lamp keeps its former state of flashing. If the temperature of indoor coil pips is less than 25℃ (cool ) or more than 25℃ (heating) in the second 20 minutes or the compressor shuts down, the electric control board will store to the normal display and the time is restarted when starting up the compressor next time.

## 6.11 Failure code (one of the two display mode)

failure	display
Indoor coil pipe temp. sensor failure	E3
Indoor room temp. sensor failure	E2
Outdoor unit abnormal	E4
Evaporator freeze or overheat protection	E8
Outdoor coil pipe temp. sensor failure	E1

## 7. Diagnosis Function

### A、Block , the unit maybe need to be repaired

No.	Block	Block Display		Symptom	Judgment & Action
		Running LED	Timer LED		
1	Room temperature sensor	Blinks 2 times/4 seconds	—	1. The sensor is short circuit or open circuit 2. PC board	1. Check the sensor according to the temperature-resistance table ; 2. Check the indoor PC board
2	Indoor coil temperature sensor	Blinks 3 times/4 seconds	—	1. The sensor is short circuit or open circuit 2. PC board.	1. Check the sensor according to the temperature-resistance table ; 2. Check the indoor PC board.
3	Outdoor coil temperature sensor	Blinks 7times/9 seconds	—	1. The sensor is short circuit or open circuit 2.Cable connection 3. PC board	1. Check the sensor according to the temperature-resistance table ; 2. Check the cable connection ; 3. Check the indoor PC board.
4	Other parts	Blinks 5 times/7 seconds	—	1. Gas leak 2. Indoor coil temperature sensor 3.Cable connection 4. PC board 5. Compressor	Turn off the unit first, then turn on again in cooling or heating mode, after 5 minutes, please feel the temperature of air flow. 1. if the air flow is cold or hot , check the indoor coil temperature sensor ; if this can not solve it, please remove the sensor to adjacency copper pipe. 2. if the air flow is not cold or hot , check the gas leak , or cable connection , or PC board , or compressor.

**B、 Unit abnormality state , but maybe the unit is normal.**

No.	Operation function	Display		Remark
		Running LED	Timer LED	
1	Anti-freeze	Blinks 4 times/6 seconds	—	<p>If the unit always keep this states, please check this unit:</p> <ol style="list-style-type: none"> <li>1. Check the indoor fan, if it is not running, please verify fan &amp; motor.</li> <li>2. If the indoor fan can run well, check the coil temperature sensor.</li> <li>3. If sensor normal, might is the evaporator tube jammed.</li> <li>4. If the above-mentioned situations are not all, it can be the PC board fault, change the PC board.</li> </ol>
2	Outdoor environment temperature goes beyond the range		Blinks 1 time/1 second	<p>When first time start the unit or shut down for over 30 minutes, enter heating mode. If outdoor tube temperature lower than -10°C, the unit doesn't run. The timer LED blinks 1 times/1 seconds.</p>
3	Defrosting	Blinks 1 time/1 second		<p>When the unit defrosting, Running LED blinks 1 time in 1 second.</p>
4	Defend the cold wind	Blinks 1 time/3 seconds		<p>When enter heating mode, the compressor running but coil temperature has not reached 28°C, the indoor fan doesn't run, Running LED blinks 1 time in 3 seconds, the unit enter the state of defending the cold wind. When coil temperature over 28°C, then withdraw from the state of defending the cold wind.</p>