

TECHNICAL SERVICE MANUAL

— **Bird 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 Bird 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.

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1. Bird Single-Split type

1.1 Summary



MODEL

NOTE

KF-20GW/A12	KFR-20GW/A12	CE STANDARD 1Ph 220-230V 50Hz R22
KF-25GW/A12	KFR-25GW/A12	
KF-32GW/A12	KFR-32GW/A12	
KF-20GW/A20	KFR-20GW/A20	
KF-25GW/A20	KFR-25GW/A20	
KF-20GW/NA12	KFR-20GW/NA12	CE STANDARD 1Ph 220-230V 50Hz R407C
KF-25GW/NA12	KFR-25GW/NA12	
KF-32GW/NA12	KFR-32GW/NA12	
KF-20GW/NA20	KFR-20GW/NA20	
KF-25GW/NA20	KFR-25GW/NA20	
GSW9-22L/A	GSW9-22R/A	1Ph 220V 60Hz R22
GSW12-22L/A	GSW12-22R/A	

1.2 Technical specifications

Table 1-1

Model		KF-20GW/A12	KFR-20GW/A12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2000	2000	2400
Rated input(W)		720	730	808
Rated current(A)		3.16	3.20	3.52
Air flow(m ³ /h)		400		
Dehumidifying volume(L/h)		0.7	0.76	---
EER(W/W)		2.79	2.74	2.97
Indoor unit	Model	KF-20G/A12	KFR-20G/A12	
	Motor fan speed(rpm)	960/900/850		
	Output power(W)	8		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	34		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-20W/A12	KFR-20W/A12	
	Input power(W)	710	720	798
	Current(A)	3.1	3.13	3.47
	L.R.A.(A)	18	19	
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	SG333DB1	SG433EB2	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0		
	Working area (m ²)	0.4		
	Fan motor power(W)/speed(rpm)	25/750		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	51		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	32		
Refrigerant charge(Kg)	R22/0.65	R22/0.75		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6 (1/4")	
		Gas pipe(mm)	9.52 (3/8")	
	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.

Bird Series

Table 1-2

Model		KF-25GW/A12	KFR-25GW/A12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2500	2500	3100
Rated input(W)		920	910	1050
Rated current(A)		4	3.96	4.57
Air flow(m ³ /h)		450		
Dehumidifying volume(L/h)		1.2	1.2	---
EER(W/W)		2.72	2.75	2.95
Indoor unit	Model	KF-25G/A12	KFR-25G/A12	
	Motor fan speed(rpm)	1060/990/910		
	Output power(W)	13		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 35		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-25W/A12	KFR-25W/A12	
	Input power(W)	905	895	1035
	Current(A)	3.94	3.89	4.5
	L.R.A.(A)	23	23	
	Throttling method	Capillary		
	Compressor	SG633GA1UA	RH174VHAC	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	25 / 730	30/795	
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	32		
	Refrigerant charge(Kg)	R22/0.85	R22/0.8	
Connecting pipe	Length(m)	4		
	Outer diameter of connecting pipe	Liquid pipe(mm)	6(1/4")	
		Gas pipe(mm)	9.52(3/8")	
	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.

Bird Series

Table 1-3

Model		KF-32GW/A12	KFR-32GW/A12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(BTU/h)		3200	3200	3800
Rated input(W)		1190	1195	1384
Rated current(A)		5.2	5.56	6.2
Air flow(m ³ /h)		480		
Dehumidifying volume(L/h)		1.4	1.4	---
EER(W/W)		2.68	2.68	2.75
Indoor unit	Model	KF-32G/A12	KFR-32G/A12	
	Motor fan speed(rpm)	1190/1090/990		
	Output power(W)	14		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.4		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 39		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-32W/A12	KFR-32W/A12	
	Input power(W)	1174	1179	1368
	Current(A)	5.15	5.14	6
	L.R.A.(A)	29	31	
	Throttling method	Capillary		
	Compressor	RH207VHKC	RH220VHLC	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-1.6	1.5-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	48 / 880	48/880	
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	56		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	40		
	Refrigerant charge(Kg)	R22/0.8	R22/1.0	
Connecting pipe	Length(m)	4		
	Outer diameter of connecting pipe	Liquid pipe(mm)	6(1/4")	
		Gas pipe(mm)	12(1/2")	
	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.

Bird Series

Table 1-4

Model		KF-20GW/NA12	KFR-20GW/NA12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2000	2000	2400
Rated input(W)		780	780	850
Rated current(A)		3.58	3.58	3.9
Air flow(m ³ /h)		400		
Dehumidifying volume(L/h)		0.7		
EER(W/W)		2.56	2.82	
Indoor unit	Model	KF-20G/NA12	KFR-20G/NA12	
	Motor fan speed(rpm)	1000/940/880		
	Output power(W)	8		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller 3.15A Transformer 0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	36		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-20W/NA12	KFR-20W/NA12	
	Input power(W)	770	770	840
	Current(A)	3.4	3.4	3.7
	L.R.A.(A)	19.5		
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	C-1RN70H5A		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0		
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	25/800		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	32		
Refrigerant charge(Kg)	R407C/0.8	R407C/0.85		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6(1/4")	
		Gas pipe(mm)	9.52(3/8")	
	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.

Bird Series

Table 1-5

Model		KF-25GW/NA12	KFR-25GW/NA12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2500	2500	2900
Rated input(W)		980	980	1100
Rated current(A)		4.36	4.36	4.88
Air flow(m ³ /h)		450		
Dehumidifying volume(L/h)		1.2		
EER(W/W)		2.55	2.64	
Indoor unit	Model	KF-25G/NA12	KFR-25G/NA12	
	Motor fan speed(rpm)	1060/990/910		
	Output power(W)	13		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A Transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	36		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-25W/NA12	KFR-25W/NA12	
	Input power(W)	965	965	1085
	Current(A)	4.2	4.2	4.72
	L.R.A.(A)	23		
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	C-RV167H01AA		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	30/800		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	32		
Refrigerant charge(Kg)	R407C/0.85			
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6(1/4")	
		Gas pipe(mm)	9.52(3/8")	
	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.

Bird Series

Table 1-6

Model		KF-32GW/NA12	KFR-32GW/NA12	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		3200	3200	3800
Rated input(W)		1270	1270	1350
Rated current(A)		5.76	5.76	6.1
Air flow(m ³ /h)		480		
Dehumidifying volume(L/h)		1.4		
EER(W/W)		2.52	2.52	2.82
Indoor unit	Model	KF-32G/NA12	KFR-32G/NA12	
	Motor fan speed(rpm)	1190/1090/990		
	Output power(W)	14		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.4		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A Transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	40		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8.5		
Outdoor unit	Model	KF-32W/NA12	KFR-32W/NA12	
	Input power(W)	1250	1250	1330
	Current(A)	5.5	5.5	6
	L.R.A.(A)	33.5		
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	C-RV227H01AA		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-1.6		
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	48/800		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	56		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	40		
Refrigerant charge(Kg)	R407C/0.9			
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6(1/4")	
		Gas pipe(mm)	12(1/2")	
	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.

Bird Series

Table 1-7

Model		KF-20GW/A20	KFR-20GW/A20	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2200	2200	2500
Rated input(W)		770	770	795
Rated current(A)		3.35	3.35	3.45
Air flow(m ³ /h)		400		
Dehumidifying volume(L/h)		0.7	0.7	---
EER(W/W)		2.86	2.86	3.02
Indoor unit	Model	KF-20G/A20	KFR-20G/A20	
	Motor fan speed(rpm)	960/900/850		
	Output power(W)	8		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 36		
	Dimension(width-height-depth)(mm)	770-250-180		
Net weight(Kg)	8.5			
Outdoor unit	Model	KF-20W/A20	KFR-20W/A20	
	Input power(W)	810	810	800
	Current(A)	3.52	3.52	3.48
	L.R.A.(A)	19.5	19.5	
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	KH134VFRC		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	20/950		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	660 × 428 × 225		
	Net weight(Kg)	25		
Refrigerant charge(Kg)	R22/0.55	R22/0.65		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6 (1/4")	
		Gas pipe(mm)	9.52 (3/8")	
	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.

Bird Series

Table 1-8

Model		KF-25GW/A20	KFR-25GW/A20	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2500	2600	3000
Rated input(W)		885	925	1000
Rated current(A)		3.85	4.02	4.35
Air flow(m ³ /h)		420		
Dehumidifying volume(L/h)		1.2	1.2	---
EER(W/W)		2.82	2.70	2.85
Indoor unit	Model	KF-25G/A20	KFR-25G/A20	
	Motor fan speed(rpm)	1060/990/910		
	Output power(W)	13		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 37		
	Dimension(width-height-depth)(mm)	770-250-180		
Net weight(Kg)	8.5			
Outdoor unit	Model	KF-25W/A20	KFR-25W/A20	
	Input power(W)	1000	1000	980
	Current(A)	4.35	4.35	4.26
	L.R.A.(A)	18	22	
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	2P17S225ANA	RH174VHAC	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	20/950		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	660 × 428 × 225		
	Net weight(Kg)	25		
Refrigerant charge(Kg)	R22/0.6	R22/0.87		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6 (1/4")	
		Gas pipe(mm)	9.52 (3/8")	
	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.

Bird Series

Table 1-9

Model		KF-20GW/NA20	KFR-20GW/NA20	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2100	2100	2250
Rated input(W)		790	740	720
Rated current(A)		3.43	3.22	3.13
Air flow(m ³ /h)		420		
Dehumidifying volume(L/h)		0.7	0.7	---
EER(W/W)		2.66	2.84	3.13
Indoor unit	Model	KF-20G/NA20	KFR-20G/NA20	
	Motor fan speed(rpm)	960/900/850		
	Output power(W)	8		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 36		
	Dimension(width-height-depth)(mm)	770-250-180		
Net weight(Kg)	8.5			
Outdoor unit	Model	KF-20W/NA20	KFR-20W/NA20	
	Input power(W)	850	850	
	Current(A)	3.70	3.70	
	L.R.A.(A)	19.5	19.5	
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	C-1RN70H5C		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	20/950		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	660 × 428 × 225		
	Net weight(Kg)	25		
Refrigerant charge(Kg)	R407C/0.55	R407C/0.65		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6 (1/4")	
		Gas pipe(mm)	9.52 (3/8")	
	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.

Bird Series

Table 1-10

Model		KF-25GW/NA20	KFR-25GW/NA20	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220-230V 50Hz		
Capacity(W)		2500	2500	2850
Rated input(W)		900	900	940
Rated current(A)		4.16	4.16	4.31
Air flow(m ³ /h)		420		
Dehumidifying volume(L/h)		1.2	1.2	---
EER(W/W)		2.78	2.78	3.03
Indoor unit	Model	KF-25G/NA20	KFR-25G/NA20	
	Motor fan speed(rpm)	1060/990/910		
	Output power(W)	13		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.6		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 37		
	Dimension(width-height-depth)(mm)	770-250-180		
Net weight(Kg)	8.5			
Outdoor unit	Model	KF-25W/NA20	KFR-25W/NA20	
	Input power(W)	950	950	1050
	Current(A)	4.13	4.13	4.57
	L.R.A.(A)	24	24	
	Throttling method	Capillary		
	Compressor model	Rotary		
	Compressor	C-RV167H01AA		
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	20/950		
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	660 × 428 × 225		
	Net weight(Kg)	25		
Refrigerant charge(Kg)	R407C/0.65	R407C/0.95		
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	6 (1/4")	
		Gas pipe(mm)	9.52 (3/8")	
	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.

Bird Series

Table 1-11

Model		GSW9-22L/A	GSW9-22R/A	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220V 60Hz		
Capacity(W)		2500	2635	3074
Rated input(W)		900	880	908
Rated current(A)		4.1	4.0	4.1
Air flow(m ³ /h)		450		
Dehumidifying volum(L/h)		1.2	1.2	---
EER(W/W)		2.78	2.99	3.38
Indoor unit	Model	GSW9-22L/A(I)	GSW9-22R/A(I)	
	Motor fan speed(rpm)	1050/960/900		
	Output power(W)	13		
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.4		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input(w)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 36		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8		
Outdoor unit	Model	GSW9-22L/A(O)	GSW9-22R/A(O)	
	Input power(W)	908	848	876
	Current(A)	4.17	3.85	3.97
	L.R.A.(A)	26	26	
	Throttling method	Capillary		
	Compressor	2P14S236A1J	2P14S236A1J	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-2.0	1-1.6	
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	30 / 730	30/800	
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	52		
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	32		
	Refrigerant charge(Kg)	R22/0.80	R22/0.82	
Connecting pipe	Length(m)		4	
	Outer diameter of connecting pipe	Liquid pipe(mm)	1/4"	
		Gas pipe(mm)	3/8"	
	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.

Bird Series

Table 1-12

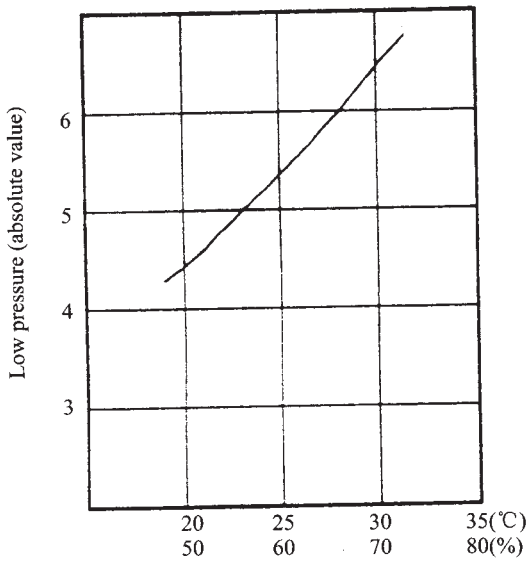
Model		GSW12-22L/A	GSW12-22R/A	
Function		Cooling	Cooling	Heating
Power supply		1Ph 220V 60Hz		
Capacity(W)		3200	3200	3800
Rated input(W)		1240	1260	1350
Rated current(A)		5.63	5.72	6.13
Air flow(m ³ /h)		470	480	
Dehumidifying volume(L/h)		1.4	1.4	---
EER(W/W)		2.6	2.78	3.03
Indoor unit	Model	GSW12-22L/A(I)	GSW12-22R/A(I)	
	Motor fan speed(rpm)	1200/1100/1000		
	Output power(W)	14	13	
	Fan type/piece	Cross flow fan-1		
	Diameter-length	φ 97mm-583		
	Evaporator	Aluminum fin-copper tube		
	Row-fin distance(mm)	2-1.4		
	Working area(m ²)	0.14		
	Swing motor	MP24GA		
	Input/speed(W)	2		
	Fuse(A)	Controller3.15A transformer0.2A		
	Working capacitor(μF)	1		
	Noise(dB(A))	≤ 40		
	Dimension(width-height-depth)(mm)	770-250-180		
	Net weight(Kg)	8		
Outdoor unit	Model	GSW12-22L/A(O)	GSW12-22R/A(O)	
	Input power(W)	1150	1228	1318
	Current(A)	5.3	5.58	5.99
	L.R.A.(A)	33		
	Throttling method	Capillary		
	Compressor	2P19S236A1J	2P19S236A1J	
	Starting method	Capacitor starting		
	Working temp.	≤ 115℃		
	Condenser	Aluminum fin-copper tube		
	Pipe-diameter	9.52		
	Row-fin distance(mm)	1-1.6		
	Working area(m ²)	0.4		
	Fan motor power(W)/speed(rpm)	36 / 800	36/880	
	Type-piece	Axial fan-1		
	Diameter(mm)	400		
	Defrosting method	Auto defrost		
	Noise(dB(A))	55	56	
	Dimension(width-height-depth)(mm)	848 × 540 × 320		
	Net weight(Kg)	40		
	Refrigerant charge(Kg)	R22/0.85	R22/0.85	
Connecting pipe	Length(m)	4		
	Outer diameter of connecting pipe	Liquid pipe(mm)	(1/4")	
		Gas pipe(mm)	(1/2")	
	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.

1.3 Performance curves

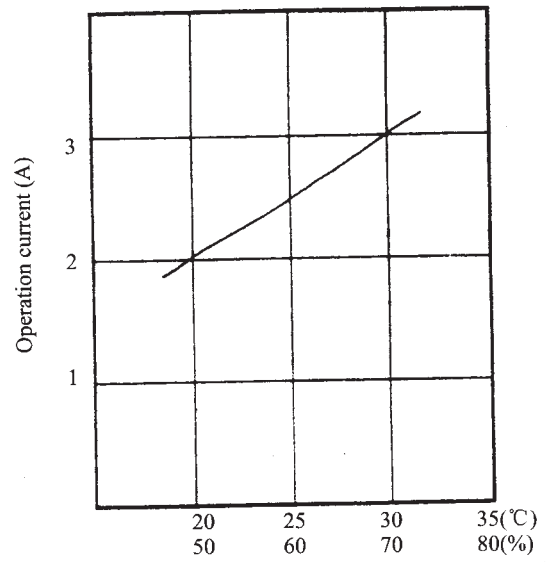
- Technical date
- Performance curve as fig1 fig2
- The change relation between low pressure , operation current and temp.

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



Dry bulb temp. / humidity

(a)

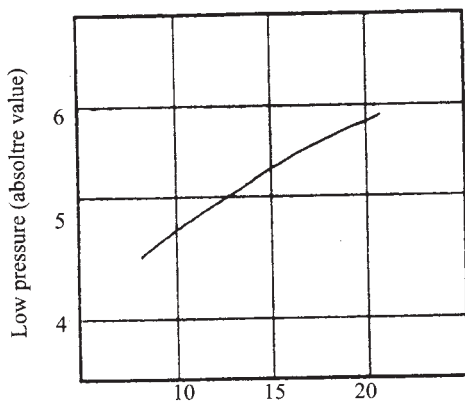


Dry bulb temp. / humidity

(b)

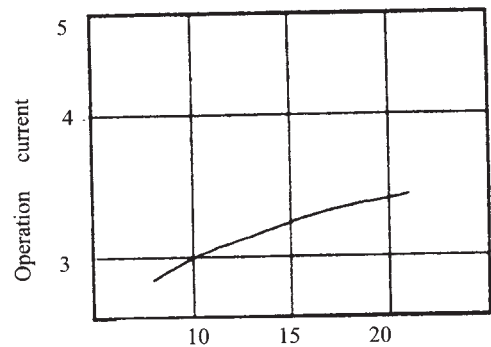
Heating operation

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



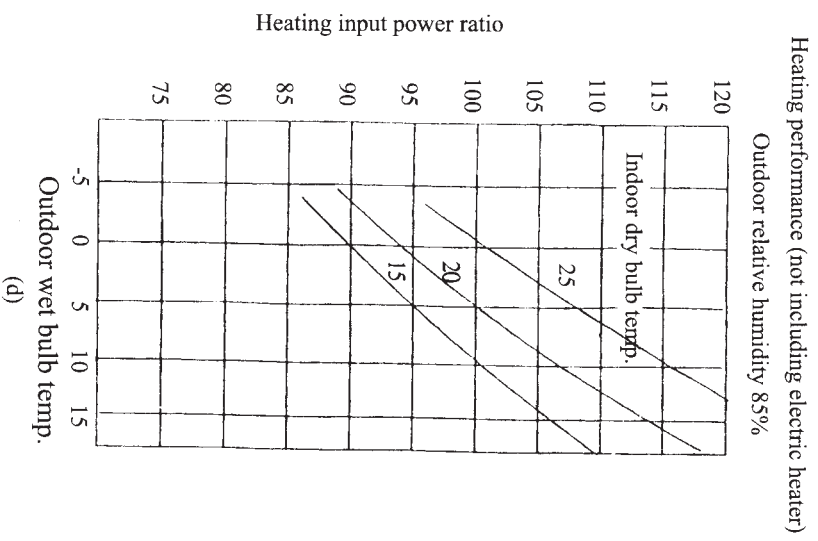
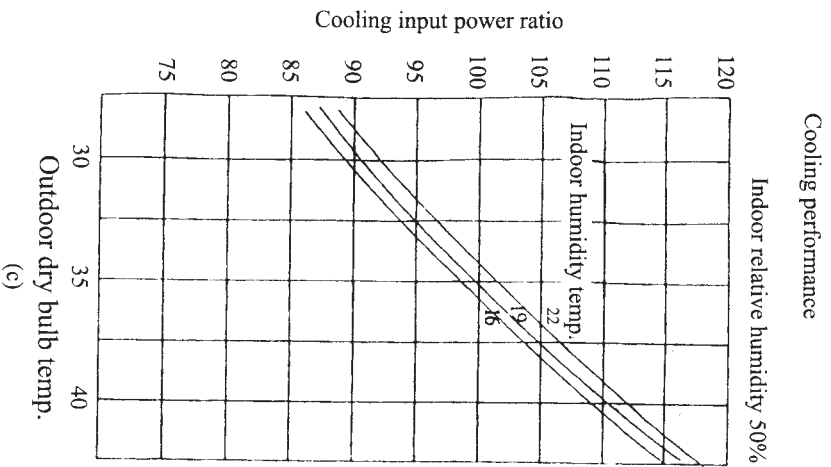
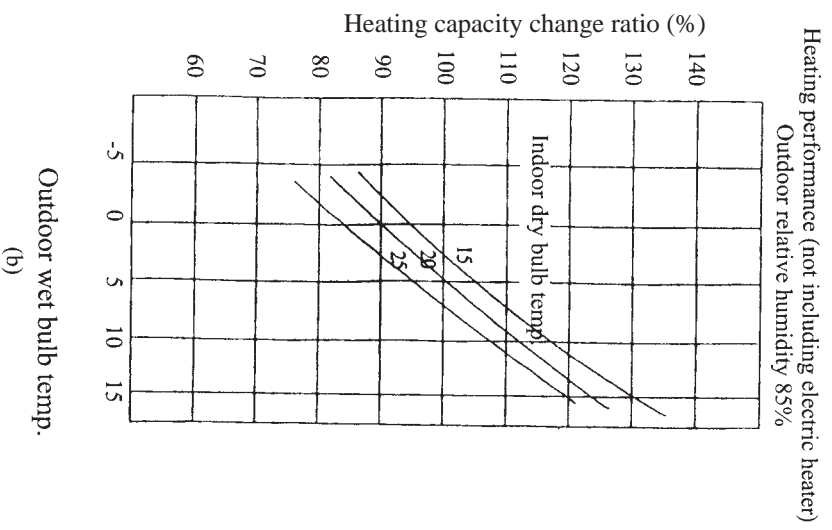
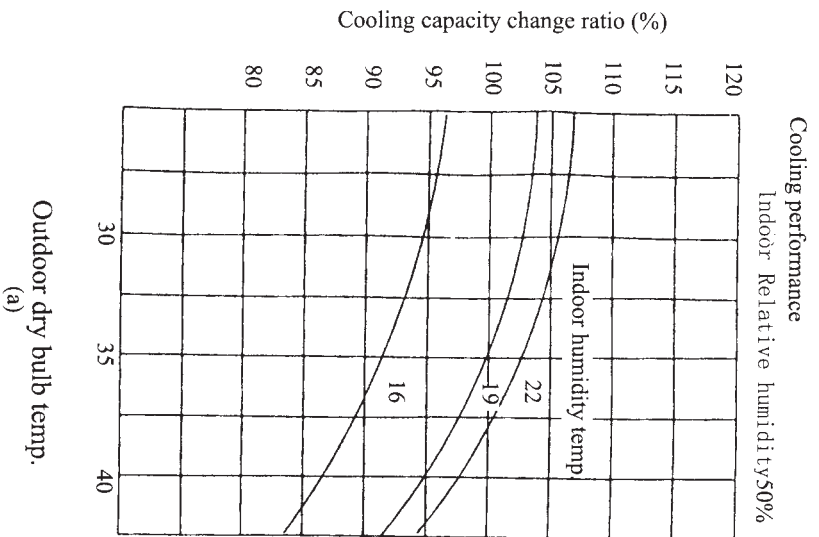
Outdoor dry bulb temp.

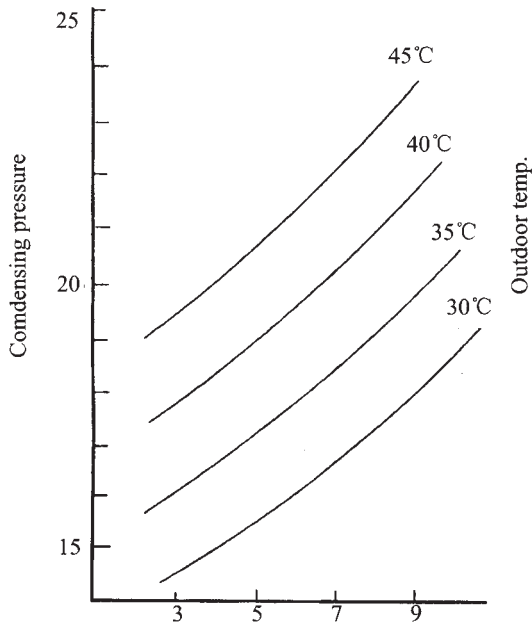
(c)



Outdoor dry bulb temp.

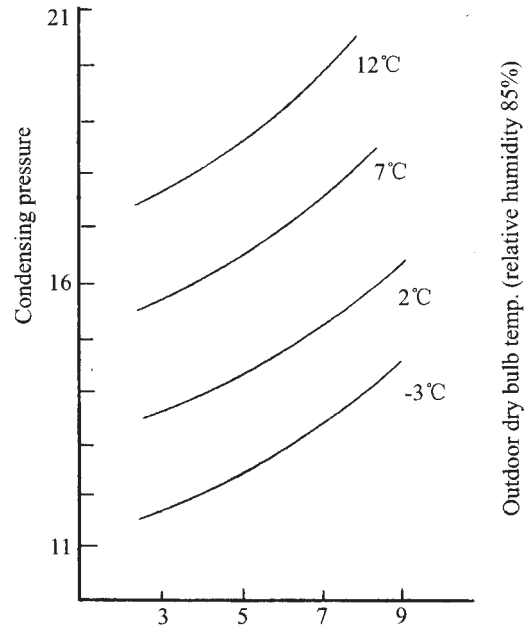
(d)





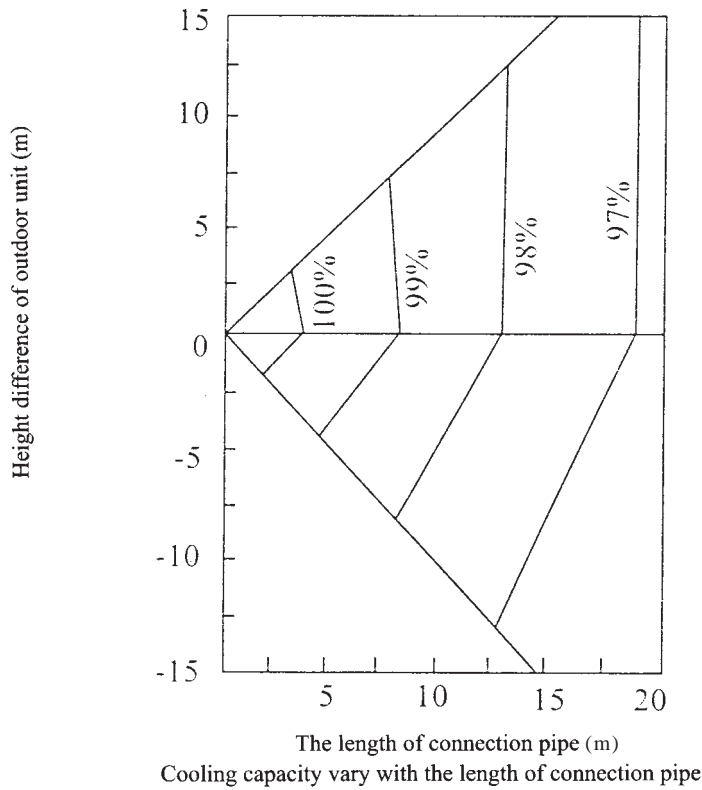
The affection to the charging quantity by pressure under cooling work condition.
(Indoor work condition: dry bulb 27°C, wet bulb 19.5°C)

(e)

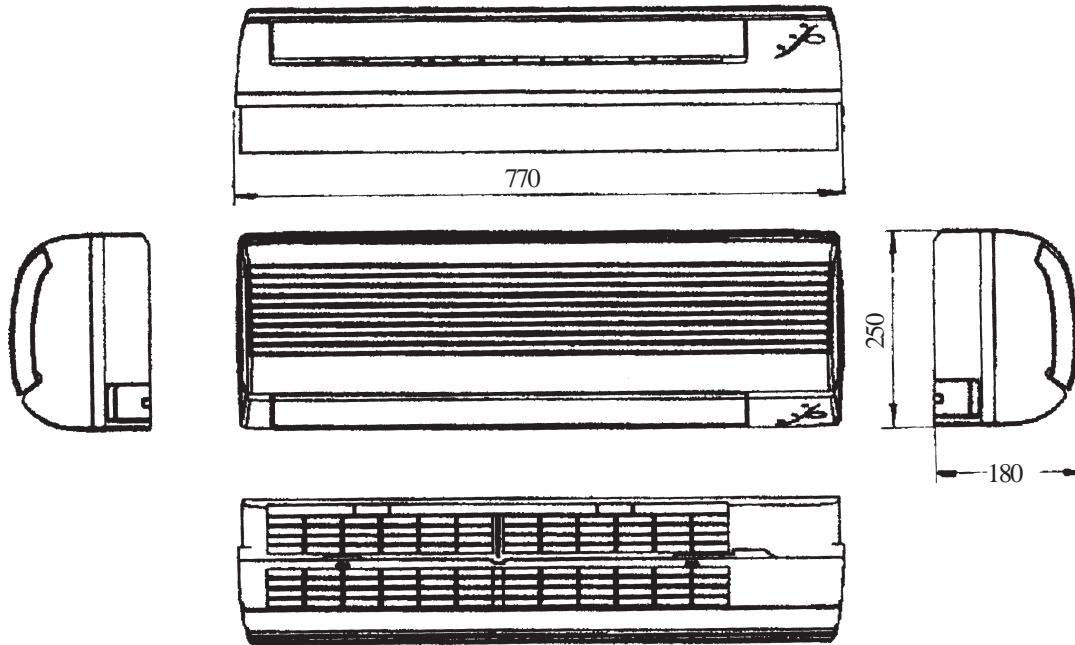


The affection to the charging quantity by pressure under heating work condition.
(Indoor work condition: dry bulb 21°C)

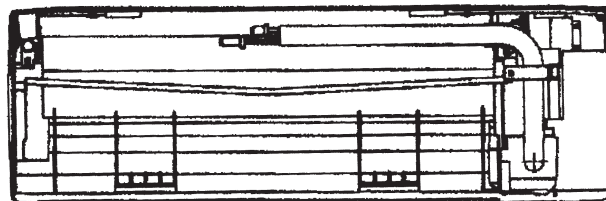
(f)



1.4 Outlines and dimensions of indoor unit

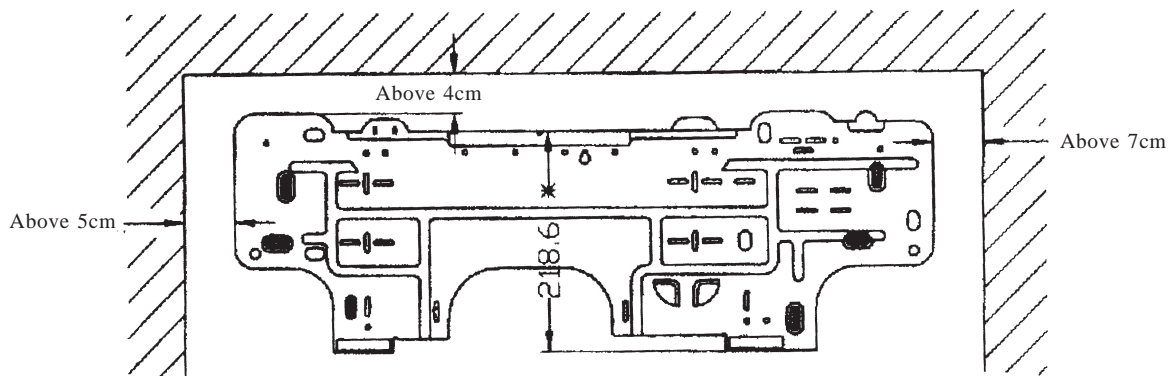


Back view



Unit:mm

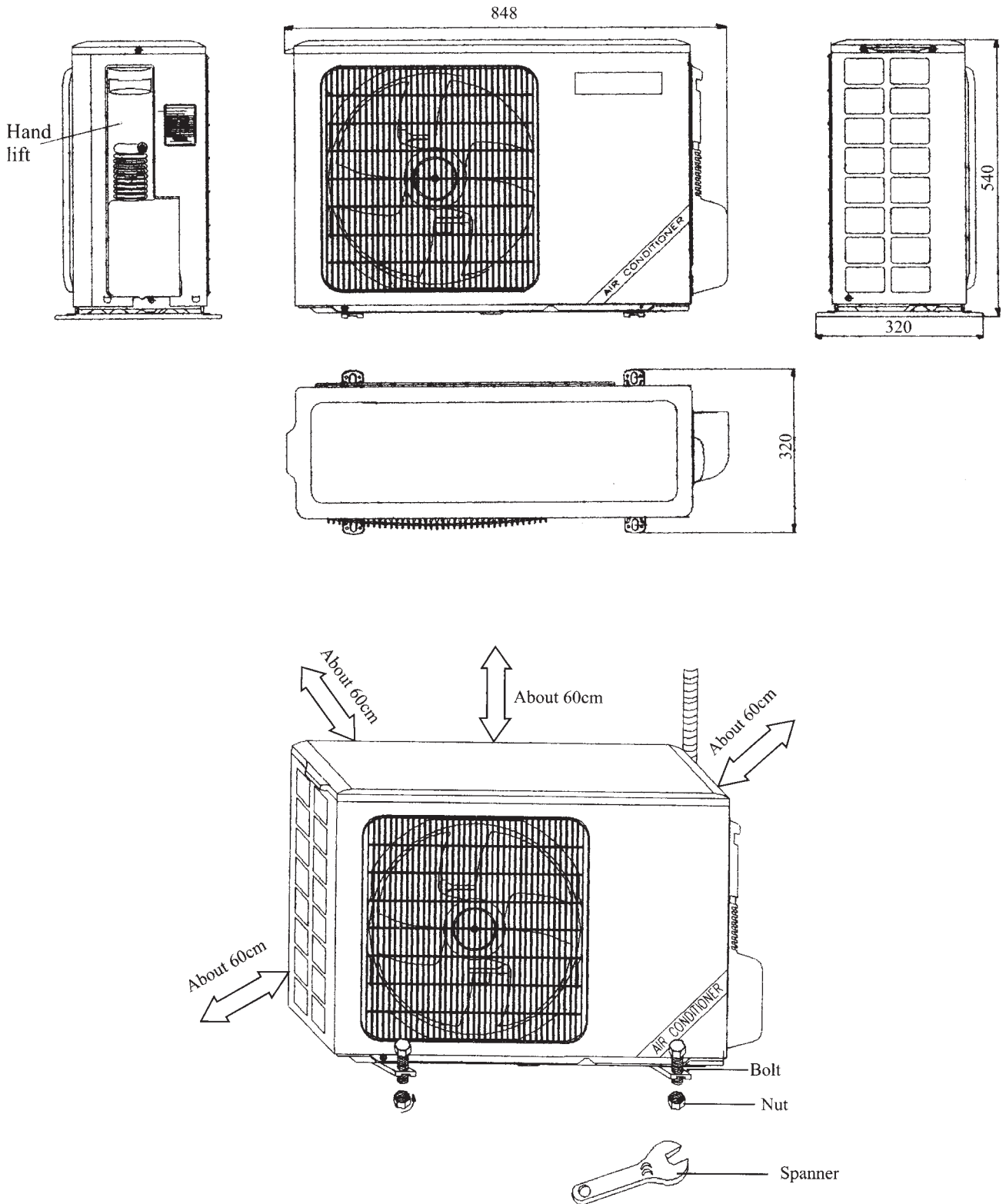
Ceiling



Wall-mounted frame

1.5 Outlines and dimensions of outdoor unit

Model: KF-20GW/A12	KFR-20GW/A12	KF-25GW/A12	KFR-25GW/A12
KF-32GW/A12	KFR-32GW/A12	KF-20GW/NA12	KFR-20GW/NA12
KF-25GW/NA12	KFR-25GW/NA12	KF-32GW/NA12	KFR-32GW/NA12
GSW9-22L/A	GSW9-22R/A	GSW12-22L/A	GSW12-22R/A



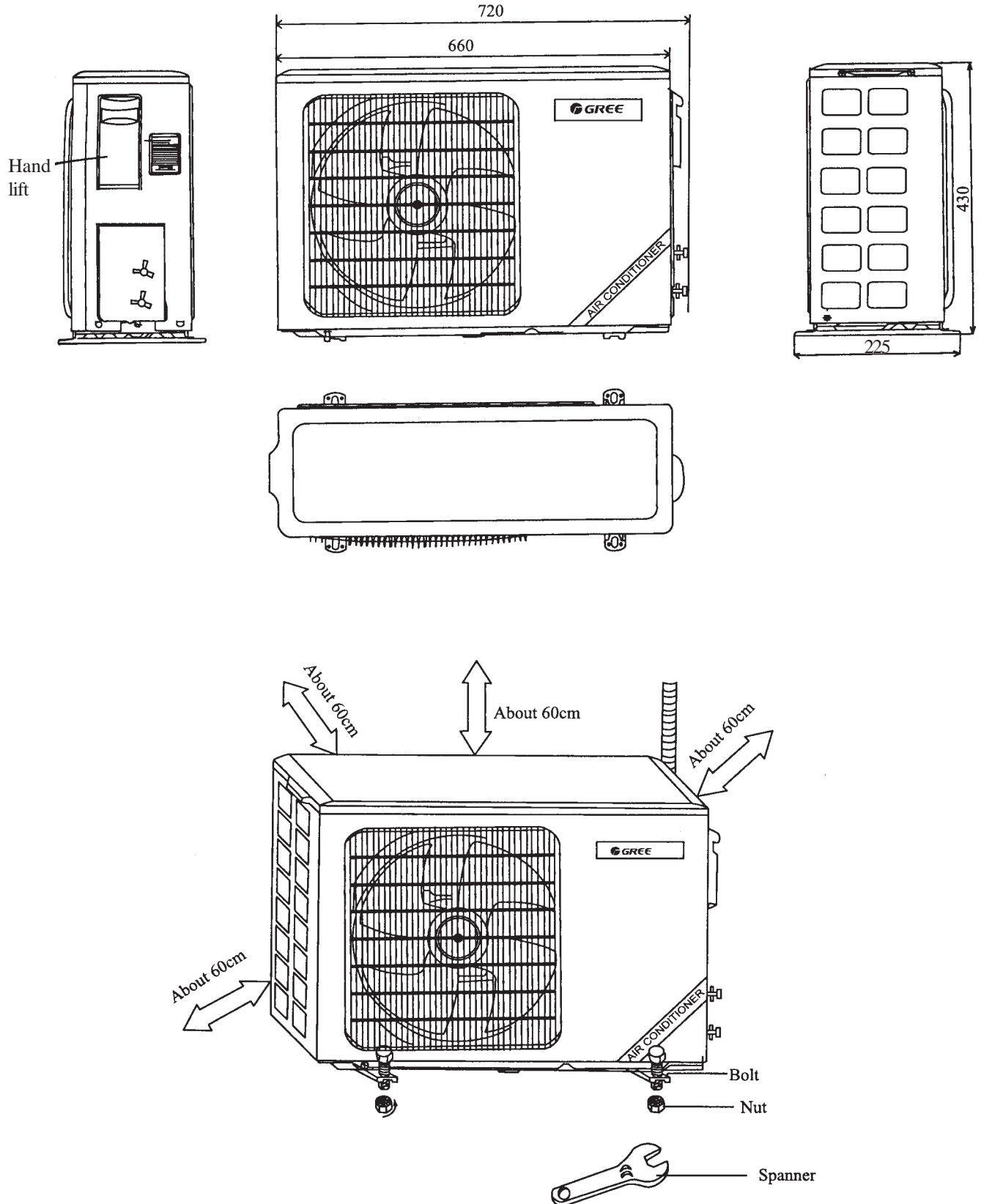
Bird Series

Model: KF-20GW/A20
KF-20GW/NA20

KFR-20GW/A20
KFR-20GW/NA20

KF-25GW/A20
KF-25GW/NA20

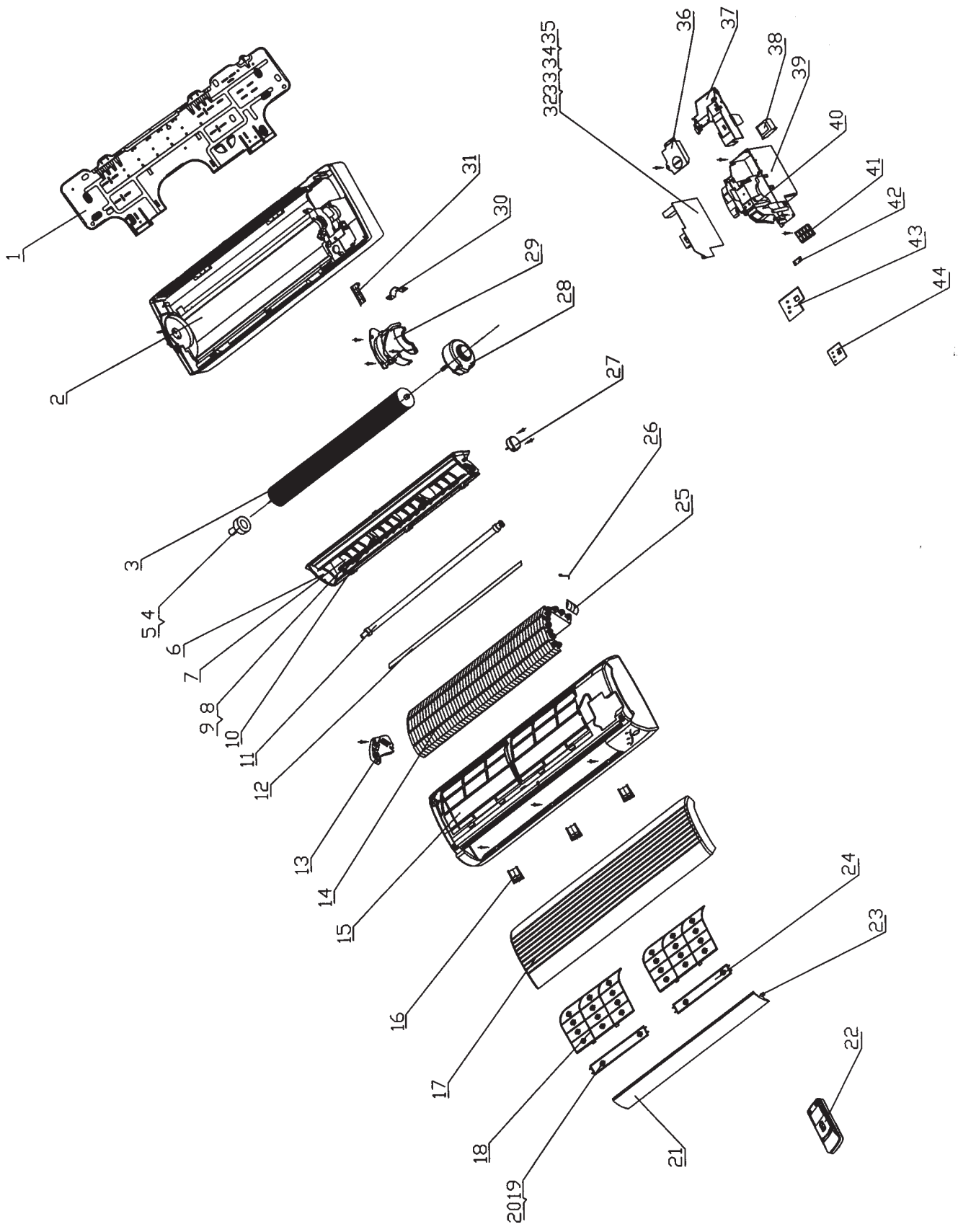
KFR-25GW/A20
KFR-25GW/NA20



Bird Series

(Blank)

1.6 Explosive view and spare parts list of indoor unit



Bird Series

Table 1-13

No.	Description		Part No.						Qty
			KF-20G/A12	KFR-20G/A12	KF-25G/A12	KFR-25G/A12	KF-32G/A12	KFR-32G/A12	
1	Wall-Mounting Frame	壁挂板	01252438	01252438	01252438	01252438	01252438	01252438	1
2	Rear Case	底壳	22202002	22202002	22202002	22202002	22202002	22202002	1
3	Cross Flow Fan	贯流风叶	10352001	10352001	10352001	10352001	10352001	10352001	1
4	Fan Bearing	风扇轴承	76512210	76512210	76512210	76512210	76512210	76512210	1
5	Ring of Bearing	贯流风叶轴承胶圈	76512203	76512203	76512203	76512203	76512203	76512203	1
6	Water Tray Assy	接水盘部件	20182012	20182012	20182012	20182012	20182012	20182012	1
7	Swing Louver	扫风叶片	10512002	10512002	10512002	10512002	10512002	10512002	12
8	Connecting Lever 1	扫风连杆 1	10582002	10582002	10582002	10582002	10582002	10582002	1
9	Connecting Lever 2	扫风连杆 2	10582003	10582003	10582003	10582003	10582003	10582003	1
10	Manual Lever	拨杆	10582001	10582001	10582001	10582001	10582001	10582001	2
11	Drainage Pipe	排水管	05232411	05232411	05232411	05232411	05232411	05232411	1
12	Evaporator Gate	蒸发器引水板	26112022	26112022	26112022	26112022	26112022	26112022	1
13	Evaporator Supporter	蒸发器角形架	24212001	24212001	24212001	24212001	24212001	24212001	1
14	Evaporator Assy	蒸发器部件	01002048	\	\	\	\	\	1
	Evaporator Assy		\	01002047	\	\	\	\	1
	Evaporator Assy		\	\	01002042	01002042	\	\	1
	Evaporator Assy		\	\	\	\	01002050	\	1
	Evaporator Assy		\	\	\	\	\	01002033	1
15	Front Case Assy	面板体部件	20002114	20002111	20002114	20002111	20002114	20002111	1
16	Screw Cover	螺钉盖	24252001	24252001	24252001	24252001	24252001	24252001	3
17	Front Panel	面板	20002001	20002001	20002001	20002001	20002001	20002001	1
18	Filter	过滤网	11122002	11122002	11122002	11122002	11122002	11122002	2
19	Air Cleaner holder	净化器支架	24222001	24222001	24222001	24222001	24222001	24222001	2
20	Air Cleaner A	净化器滤网 A	11012002	11012002	11012002	11012002	11012002	11012002	1
21	Guide Louver	导风板	10512001	10512001	10512001	10512001	10512001	10512001	1
22	Remote Controller	遥控器 Y512	30512505	30512505	30512505	30512505	30512505	30512505	1
23	Guide Louver Bearing	导风板轴套	10542011	10542011	10542011	10542011	10542011	10542011	3
24	Air Cleaner B	净化器滤网 B	11012003	11012003	11012003	11012003	11012003	11012003	1
25	Evaporator Pipe Cover	蒸发器接水槽	06122001	06122001	06122001	06122001	06122001	06122001	1
26	Sensor Insert	感温头插片 B	42020063	42020063	42020063	42020063	42020063	42020063	1
27	Stepping Motor MP24GA	步进电机 MP24GA	15212102	15212102	15212102	15212102	15212102	15212102	1
28	Motor FN8G	电机 FN8G	15012037	15012037	\	\	\	\	1
	Motor FN13B	电机 FN13B	\	\	15012038	15012038	\	\	1
	Motor FN14A	电机 FN14A	\	\	\	\	15012108	15012108	1
29	Motor Clamp	电机压板	26112014	26112014	26112014	26112014	26112014	26112014	1
30	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	71010103	71010103	1
31	Pipe Clamp	连接管压板	24242001	24242001	24242001	24242001	24242001	24242001	1
32	PCB 5K512J	控制器 5K512J	30025569	\	30025569	\	30025569	\	1
	PCB 5K522J	控制器 5K522J	\	30025570	\	30025570	\	30025570	1
33	Tube Sensor	管温感温包	39000159	39000159	39000159	39000159	39000159	39000159	1
34	Room Sensor	室温感温包	39000155	39000155	39000155	39000155	39000155	39000155	1
35	Fuse 3.15A 250VAC	保险管	46010014	46010014	46010014	46010014	46010014	46010014	1
36	Electric Box Cover 2	电器盒顶盖 2	01412007	01412007	01412007	01412007	01412007	01412007	1
37	Electric Box Cover 1	电器盒顶盖 1	20102114	20102114	20102114	20102114	20102114	20102114	1
38	Transformer	电源变压器	43110170	43110170	43110170	43110170	43110170	43110170	1
39	Electric Box	电器盒	20102001	20102001	20102001	20102001	20102001	20102001	1
40	Cable Clamp	压线槽	70482001	70482001	70482001	70482001	70482001	70482001	1
41	Terminal Board T4A3A7377	接线板 T4A3A7377	42010183	42010183	42010183	42010183	42010183	42010183	1
42	Wire Clip	压线片	42012415	42012415	42012415	42012415	42012415	42012415	1
43	LED Holder	指示灯架	24212005	24212005	24212005	24212005	24212005	24212005	1

Bird Series

Table 1-13 Continue

No.	Description		Part No.						Qty
			KF-20G/A12	KFR-20G/A12	KF-25G/A12	KFR-25G/A12	KF-32G/A12	KFR-32G/A12	
44	LED Board	接收板 JD	30046034	30046034	30046034	30046034	30046034	30046034	1
45	Connecting Cable	电源连接线	40020402	40020402	40020402	40020402	40020403	40020403	1
46	Signal Cable	信号控制线	\	40032150	\	40032150	\	40032150	1
47	Power Cord Assy	电源线组件	40020202	40020202	40020202	40020202	40020203	40020203	1

The data are subject to change without notice.

Bird Series

Table 1-14

No.	Description		Part No.						Qty
			KF- 20G/NA12	KFR- 20G/NA12	KF- 25G/NA12	KFR- 25G/NA12	KF- 32G/NA12	KFR- 32G/NA12	
1	Wall-Mounting Frame	壁挂板	01252438	01252438	01252438	01252438	01252438	01252438	1
2	Rear Case	底壳	22202002	22202002	22202002	22202002	22202002	22202002	1
3	Cross Flow Fan	贯流风叶	10352001	10352001	10352001	10352001	10352001	10352001	1
4	Fan Bearing	风扇轴承	76512210	76512210	76512210	76512210	76512210	76512210	1
5	Ring of Bearing	贯流风叶轴承胶圈	76512203	76512203	76512203	76512203	76512203	76512203	1
6	Water Tray Assy	接水盘部件	20182012	20182012	20182012	20182012	20182012	20182012	1
7	Swing Louver	扫风叶片	10512002	10512002	10512002	10512002	10512002	10512002	12
8	Connecting Lever 1	扫风连杆 1	10582002	10582002	10582002	10582002	10582002	10582002	1
9	Connecting Lever 2	扫风连杆 2	10582003	10582003	10582003	10582003	10582003	10582003	1
10	Manual Lever	拨杆	10582001	10582001	10582001	10582001	10582001	10582001	2
11	Drainage Pipe	排水管	05232411	05232411	05232411	05232411	05232411	05232411	1
12	Evaporator Gate	蒸发器引水板	26112022	26112022	26112022	26112022	26112022	26112022	1
13	Evaporator Supporter	蒸发器角形架	24212001	24212001	24212001	24212001	24212001	24212001	1
14	Evaporator Assy	蒸发器部件	01002042	01002042	01002042	01002042	\	\	1
	Evaporator Assy		\	\	\	\	01002066	01002066	1
15	Front Case Assy	面板体部件	20002117	20002116	20002117	20002116	20002117	20002116	1
16	Screw Cover	螺钉盖	24252001	24252001	24252001	24252001	24252001	24252001	3
17	Front Panel	面板	20002002	20002002	20002002	20002002	20002002	20002002	1
18	Filter	过滤网	11122002	11122002	11122002	11122002	11122002	11122002	2
19	Air Cleaner holder	净化器支架	24222001	24222001	24222001	24222001	24222001	24222001	2
20	Air Cleaner A	净化器滤网 A	11012002	11012002	11012002	11012002	11012002	11012002	1
21	Guide Louver	导风板	10512001	10512001	10512001	10512001	10512001	10512001	1
22	Remote Controller	遥控器 Y512	30512505	30512505	30512505	30512505	30512505	30512505	1
23	Guide Louver Bearing	导风板轴套	10542011	10542011	10542011	10542011	10542011	10542011	3
24	Air Cleaner B	净化器滤网 B	11012003	11012003	11012003	11012003	11012003	11012003	1
25	Evaporator Pipe Cover	蒸发器接水槽	06122001	06122001	06122001	06122001	06122001	06122001	1
26	Sensor Insert	感温头插片 B	42020063	42020063	42020063	42020063	42020063	42020063	1
27	Stepping Motor MP24GA	步进电机 MP24GA	15212102	15212102	15212102	15212102	15212102	15212102	1
28	Motor FN8G	电机 FN8G	15012037	15012037	\	\	\	\	1
	Motor FN13B	电机 FN13B	\	\	15012038	15012038	\	\	1
	Motor FN14A	电机 FN14A	\	\	\	\	15012108	15012108	1
29	Motor Clamp	电机压板	26112014	26112014	26112014	26112014	26112014	26112014	1
30	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	71010103	71010103	1
31	Pipe Clamp	连接管压板	24242001	24242001	24242001	24242001	24242001	24242001	1
32	PCB 5K512J	控制器 5K512J	30025569	\	30025569	\	30025569	\	1
	PCB 5K522J	控制器 5K522J	\	30025570	\	30025570	\	30025570	1
33	Tube Sensor	管温感温包	39000159	39000159	39000159	39000159	39000159	39000159	1
34	Room Sensor	室温感温包	39000155	39000155	39000155	39000155	39000155	39000155	1
35	Fuse 3.15A 250VAC	保险管	46010014	46010014	46010014	46010014	46010014	46010014	1
36	Electric Box Cover 2	电器盒顶盖 2	01412007	01412007	01412007	01412007	01412007	01412007	1
37	Electric Box Cover 1	电器盒顶盖 1	20102114	20102114	20102114	20102114	20102114	20102114	1
38	Transformer	电源变压器	43110170	43110170	43110170	43110170	43110170	43110170	1
39	Electric Box	电器盒	20102001	20102001	20102001	20102001	20102001	20102001	1
40	Cable Clamp	压线槽	70482001	70482001	70482001	70482001	70482001	70482001	1
41	Terminal Board T4A3A7377	接线板	42010183	42010183	42010183	42010183	42010183	42010183	1
42	Wire Clip	压线片	42012415	42012415	42012415	42012415	42012415	42012415	1
43	LED Holder	指示灯架	24212005	24212005	24212005	24212005	24212005	24212005	1
44	LED Board	接收板 JD	30046034	30046034	30046034	30046034	30046034	30046034	1
45	Connecting Cable	电源连接线	40020402	40020402	40020402	40020402	40020403	40020403	1
46	Signal Cable	信号控制线	\	40032150	\	40032150	\	40032150	1

Bird Series

Table 1-14 continue

No.	Description		Part No.						Qty
			KF- 20G/NA12	KFR- 20G/NA12	KF- 25G/NA12	KFR- 25G/NA12	KF- 32G/NA12	KFR- 32G/NA12	
47	Power Cord Assy	电源线组件	40020202	40020202	40020202	40020202	40020202	40020202	1

The data are subject to change without notice.

Bird Series

Table 1-15

No.	Description		Part No.				Qty
			KF-20G/A20	KFR-20G/A20	KF-25G/A20	KFR-25G/A20	
1	Wall-Mounting Frame	壁挂板	01252438	01252438	01252438	01252438	1
2	Rear Case	底壳	22202002	22202002	22202002	22202002	1
3	Cross Flow Fan	贯流风叶	10352001	10352001	10352001	10352001	1
4	Fan Bearing	风扇轴承	76512210	76512210	76512210	76512210	1
5	Ring of Bearing	贯流风叶轴承胶圈	76512203	76512203	76512203	76512203	1
6	Water Tray Assy	接水盘部件	20182012	20182012	20182012	20182012	1
7	Swing Louver	扫风叶片	10512002	10512002	10512002	10512002	12
8	Connecting Lever 1	扫风连杆 1	10582002	10582002	10582002	10582002	1
9	Connecting Lever 2	扫风连杆 2	10582003	10582003	10582003	10582003	1
10	Manual Lever	拔杆	10582001	10582001	10582001	10582001	2
11	Drainage Pipe	排水管	05232411	05232411	05232411	05232411	1
12	Evaporator Gate	蒸发器引水板	01094001	01094001	01094001	01094001	1
13	Evaporator Supporter	蒸发器角形架	24212001	24212001	24212001	24212001	1
14	Evaporator Assy	蒸发器部件	01002048	\	\	\	1
	Evaporator Assy		\	01002047	\	\	1
	Evaporator Assy		\	\	01002042	01002042	1
15	Front Case Assy	面板体部件	20002114	20002111	20002114	20002111	1
16	Screw Cover	螺钉盖	24252001	24252001	24252001	24252001	3
17	Front Panel	面板	20002001	20002001	20002001	20002001	1
18	Filter	过滤网	11122002	11122002	11122002	11122002	2
19	Air Cleaner holder	净化器支架	24222001	24222001	24222001	24222001	2
20	Air Cleaner A	净化器滤网 A	11012002	11012002	11012002	11012002	1
21	Guide Louver	导风板	10512001	10512001	10512001	10512001	1
22	Remote Controller	遥控器 Y512	30512505	30512505	30512505	30512505	1
23	Guide Louver Bearing	导风板轴套	10542011	10542011	10542011	10542011	3
24	Air Cleaner B	净化器滤网 B	11012003	11012003	11012003	11012003	1
25	Evaporator Pipe Cover	蒸发器接水槽	06122001	06122001	06122001	06122001	1
26	Sensor Insert	感温头插片 B	42020063	42020063	42020063	42020063	1
27	Stepping Motor MP24GA	步进电机 MP24GA	15212102	15212102	15212102	15212102	1
28	Motor FN8G	电机 FN8G	15012037	15012037	\	\	1
	Motor FN13B	电机 FN13B	\	\	15012038	15012038	1
29	Motor Clamp	电机压板	26112014	26112014	26112014	26112014	1
30	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	1
31	Pipe Clamp	连接管压板	24242001	24242001	24242001	24242001	1
32	PCB 5K512J	控制器 5K512J	30025569	\	30025569	\	1
	PCB 5K522J	控制器 5K522J	\	30025570	\	30025570	1
33	Tube Sensor	管温感温包	39000159	39000159	39000159	39000159	1
34	Room Sensor	室温感温包	39000155	39000155	39000155	39000155	1
35	Fuse 3.15A 250VAC	保险管	46010014	46010014	46010014	46010014	1
36	Electric Box Cover 2	电器盒顶盖 2	01412007	01412007	01412007	01412007	1
37	Electric Box Cover 1	电器盒顶盖 1	20102114	20102114	20102114	20102114	1
38	Transformer	电源变压器	01412007	01412007	43110170	43110170	1
39	Electric Box	电器盒	20102001	20102001	20102001	20102001	1
40	Cable Clamp	压线槽	70482001	70482001	70482001	70482001	1
41	Terminal Board T4A3A7377	接线板 T4A3A7377	42010183	42010183	42010183	42010183	1
42	Wire Clip	压线片	42012415	70482401	42012415	42012415	1
43	LED Holder	指示灯架	24212005	24212005	24212005	24212005	1
44	LED Board	接收板 JD	30046034	30046034	30046034	30046034	1
45	Connecting Cable	电源连接线	40020402	40020402	40020402	40020402	1
46	Signal Cable	信号控制线	\	40032150	\	40032150	1

Bird Series

Table 1-15 continue

No.	Description	Part No.				Qty
		KF- 20G/A20	KFR- 20G/A20	KF- 25G/A20	KFR- 25G/A20	
47	Power Cord Assy 电源线组件	40020202	40020202	40020202	40020202	1

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Table 1-16

No.	Description		Part No.				Qty
			KF-20G/NA20	KFR-20G/NA20	KF-25G/NA20	KFR-25G/NA20	
1	Wall-Mounting Frame	壁挂板	01252438	01252438	01252438	01252438	1
2	Rear Case	底壳	22202002	22202002	22202002	22202002	1
3	Cross Flow Fan	贯流风叶	10352001	10352001	10352001	10352001	1
4	Fan Bearing	风扇轴承	76512210	76512210	76512210	76512210	1
5	Ring of Bearing	贯流风叶轴承胶圈	76512203	76512203	76512203	76512203	1
6	Water Tray Assy	接水盘部件	20182012	20182012	20182012	20182012	1
7	Swing Louver	扫风叶片	10512002	10512002	10512002	10512002	12
8	Connecting Lever 1	扫风连杆 1	10582002	10582002	10582002	10582002	1
9	Connecting Lever 2	扫风连杆 2	10582003	10582003	10582003	10582003	1
10	Manual Lever	拔杆	10582001	10582001	10582001	10582001	2
11	Drainage Pipe	排水管	05232411	05232411	05232411	05232411	1
12	Evaporator Gate	蒸发器引水板	01094001	01094001	01094001	01094001	1
13	Evaporator Supporter	蒸发器角形架	24212001	24212001	24212001	24212001	1
14	Evaporator Assy	蒸发器部件	01002048	\	\	\	1
	Evaporator Assy		\	01002047	\	\	1
	Evaporator Assy		\	\	01002042	01002042	1
15	Front Case Assy	面板体部件	20002114	20002111	20002114	20002111	1
16	Screw Cover	螺钉盖	24252001	24252001	24252001	24252001	3
17	Front Panel	面板	20002001	20002001	20002001	20002001	1
18	Filter	过滤网	11122002	11122002	11122002	11122002	2
19	Air Cleaner holder	净化器支架	24222001	24222001	24222001	24222001	2
20	Air Cleaner A	净化器滤网 A	11012002	11012002	11012002	11012002	1
21	Guide Louver	导风板	10512001	10512001	10512001	10512001	1
22	Remote Controller	遥控器 Y512	30512505	30512505	30512505	30512505	1
23	Guide Louver Bearing	导风板轴套	10542011	10542011	10542011	10542011	3
24	Air Cleaner B	净化器滤网 B	11012003	11012003	11012003	11012003	1
25	Evaporator Pipe Cover	蒸发器接水槽	06122001	06122001	06122001	06122001	1
26	Sensor Insert	感温头插片 B	42020063	42020063	42020063	42020063	1
27	Stepping Motor MP24GA	步进电机 MP24GA	15212102	15212102	15212102	15212102	1
28	Motor FN8G	电机 FN8G	15012037	15012037	\	\	1
	Motor FN13B	电机 FN13B	\	\	15012038	\	1
	Motor FN14C	电机 FN14C	\	\	\	15012501	1
29	Motor Clamp	电机压板	26112014	26112014	26112014	26112014	1
30	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	1
31	Pipe Clamp	连接管压板	24242001	24242001	24242001	24242001	1
32	PCB 5K512J	控制器 5K512J	30025569	\	30025569	\	1
	PCB 5K522J	控制器 5K522J	\	30025570	\	30025570	1
33	Tube Sensor	管温感温包	39000159	39000159	39000159	39000159	1
34	Room Sensor	室温感温包	39000155	39000155	39000155	39000155	1
35	Fuse 3.15A 250VAC	保险管	46010014	46010014	46010014	46010014	1
36	Electric Box Cover 2	电器盒顶盖 2	01412007	01412007	01412007	01412007	1
37	Electric Box Cover 1	电器盒顶盖 1	20102114	20102114	20102114	20102114	1
38	Transformer	电源变压器	43110170	43110170	43110170	43110170	1
39	Electric Box	电器盒	20102001	20102001	20102001	20102001	1
40	Cable Clamp	压线槽	70482001	70482001	70482001	70482001	1
41	Terminal Board T4A3A7377	接线板 T4A3A7377	42010183	42010183	42010183	42010183	1
42	Wire Clip	压线片	42012415	70482401	42012415	70482401	1
43	LED Holder	指示灯架	24212005	24212005	24212005	24212005	1
44	LED Board	接收板 JD	30046034	30046034	30046034	30046034	1
45	Connecting Cable	电源连接线	40020402	40020402	40020402	40020402	1

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Table 1-16 continue

No.	Description		Part No.				Qty
			KF- 20G/NA20	KFR- 20G/NA20	KF- 25G/NA20	KFR- 25G/NA20	
46	Signal Cable	信号控制线	\	40032150	\	40032150	1
47	Power Cord Assy	电源线组件	40020202	40020202	40020202	40020202	1

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Table 1-17

No.	Description		Part No.				Qty
			GSW9-22L/A(I)	GSW9-22R/A(I)	GSW12-22L/A(I)	GSW12-22R/A(I)	
1	Wall-Mounting Frame	壁挂板	01252438	01252438	01252438	01252438	1
2	Rear Case	底壳	22202001	22202001	22202001	22202001	1
3	Cross Flow Fan	贯流风叶	10352001	10352001	10352001	10352001	1
4	Fan Bearing	风扇轴承	76512210	76512210	76512210	76512210	1
5	Ring of Bearing	贯流风叶轴承胶圈	76512203	76512203	76512203	76512203	1
6	Water Tray Assy	接水盘部件	20182012	20182012	20182012	20182012	1
7	Swing Louver	扫风叶片	10512002	10512002	10512002	10512002	12
8	Connecting Lever 1	扫风连杆 1	10582002	10582002	10582002	10582002	1
9	Connecting Lever 2	扫风连杆 2	10582003	10582003	10582003	10582003	1
10	Manual Lever	拔杆	10582001	10582001	10582001	10582001	2
11	Drainage Pipe	排水管	05232411	05232411	05232411	05232411	1
12	Evaporator Gate	蒸发器引水板	26112022	01094001	26112022	01094001	1
13	Evaporator Supporter	蒸发器角形架	24212001	24212001	24212001	24212001	1
14	Evaporator Assy	蒸发器部件	01002015	\	\	\	1
	Evaporator Assy		\	01002027	\	\	1
	Evaporator Assy		\	\	01002008	\	1
	Evaporator Assy		\	\	\	01002022	1
15	Front Case Assy	面板体部件	20002105	20002018	20002105	20002018	1
16	Screw Cover	螺钉盖	24252001	24252001	24252001	24252001	3
17	Front Panel	面板	20002001	20002001	20002001	20002001	1
18	Filter	过滤网	11122002	11122002	11122002	11122002	2
19	Air Cleaner holder	净化器支架	24222001	24222001	24222001	24222001	2
20	Air Cleaner A	净化器滤网 A	11012002	11012002	11012002	11012002	1
21	Guide Louver	导风板	10512001	10512001	10512001	10512001	1
22	Remote Controller	遥控器 Y512	30512506	30062506	30512506	30062506	1
23	Guide Louver Bearing	导风板轴套	10542011	10542011	10542011	10542011	3
24	Air Cleaner B	净化器滤网 B	11012003	11012003	11012003	11012003	1
25	Evaporator Pipe Cover	蒸发器接水槽	06122001	06122001	06122001	06122001	1
26	Sensor Insert	感温头插片 B	42020063	42020063	42020063	42020063	1
27	Stepping Motor MP24GA	步进电机 MP24GA	15212102	15212102	15212102	15212102	1
28	Motor FN13F	电机 FN13F	15012055	15012055	\	15012055	1
	Motor FN14F	电机 FN14F	\	\	15012057	\	1
29	Motor Clamp	电机压板	26112014	26112014	26112014	26112014	1
30	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	1
31	Pipe Clamp	连接管压板	24242001	24242001	24242001	24242001	1
32	PCB 5K512J	控制器 5K512J	30025569	\	30025569	\	1
	PCB 5K522J	控制器 5K522J	\	30025570	\	30025570	1
33	Tube Sensor	管温感温包	39000159	39000159	39000159	39000159	1
34	Room Sensor	室温感温包	39000155	39000155	39000155	39000155	1
35	Fuse 3.15A 250VAC	保险管	46010014	46010014	46010014	46010014	1
36	Electric Box Cover 2	电器盒顶盖 2	01412007	01412006	01412007	01412006	1
37	Electric Box Cover 1	电器盒顶盖 1	01412084	01412006	01412084	01412084	1
38	Transformer	电源变压器	43110170	43110170	43110170	43110170	1
39	Electric Box	电器盒	20102001	20102001	20102001	20102001	1
40	Cable Clamp	压线槽	70482001	70482001	70482001	70482001	1
41	Terminal Board	接线板	42010183	42010183	42010183	42010183	1
42	Wire Clip	压线片	70482401	42012415	70482401	42012415	1
43	LED Holder	指示灯架	24212005	24212005	24212005	24212005	1
44	LED Board	接收板 JD	30046034	30046034	30046034	30046034	1
45	Connecting Cable	电源连接线	40020411	40020312	40020312	40020312	1

Bird Series

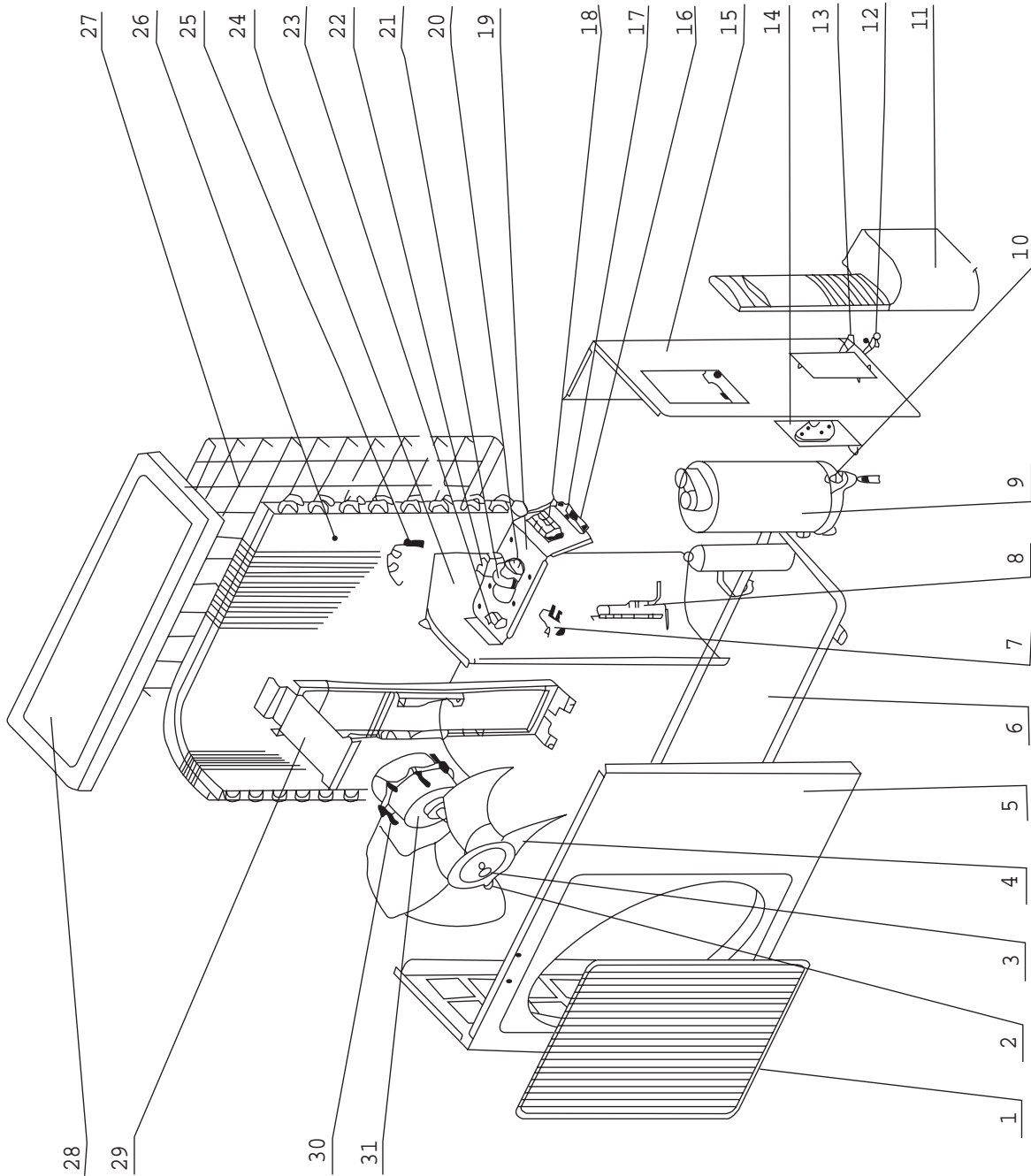
Table 1-17 continue

No.	Description	名称及规格	Part No.				Qty
			GSW9-22L/A(I)	GSW9-22R/A(I)	GSW12 - 22L/A(I)	GSW12-22R/A(I)	
46	Signal Cable	信号控制线	\	40032129	\	40032129	1
47	Power Cord Assy	电源线组件	40020268	40020268	40020268	40020268	1

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1.7 Explosive view and spare parts list of outdoor unit



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Table 1-18

No.	Description		Part No.						Qty
			KF- 20W/A12	KFR- 20W/A12	KF- 25W/A12	KFR- 25W/A12	KF- 32W/A12	KFR- 32W/A12	
1	Front Grill	面板格栅	22413431	22413431	22413431	22413431	22413431	22413431	1
2	Nut M6	左旋螺母 M6	70310132	70310132	70310132	70310132	70310132	70310132	1
3	Washer 6	垫圈 6	70410252	70410252	70410252	70410252	70410252	70410252	1
4	Axial Flow Fan	轴流风叶	10333412	10333412	10333412	10333412	10333412	10333412	1
5	Front Plate	面板	01533428	01533428	01533428	01533428	01533428	01533428	1
6	Metal Base	底盘组件	01203005	01203004	01203336	01203324	01203030	01203045	1
7	4-way Valve	四通阀	\	43000402	\	43000402	\	43000402	1
	4-way Valve Fittings	四通阀配件	\	43000400	\	43000400	\	43000400	1
8	Capillary Assy	毛细管组件	03003072	03003047	03001003	03003014	03003030	03003031	1
9	Compressor SG333DB1	压缩机及其配件	00100121	\	\	\	\	\	1
	Compressor SG433EB2		\	00100123	\	\	\	\	1
	Compressor SG633GA1UA		\	\	00100143	\	\	\	1
	Compressor RH174VHAC		\	\	\	00120078	\	\	1
	Compressor RH207VHKC		\	\	\	\	00120082	\	1
	Compressor RH220VHLC		\	\	\	\	\	00120079	1
10	Nut with Washer M8	带垫螺母 M8	70310014	70310014	70310014	70310014	70310014	70310014	3
11	Handle	大提手	26233433	26233433	26233433	26233433	26233433	26233433	1
12	Valve 3/8"	阀门 3/8"	07100145	07100145	07100145	07100145	\	\	1
	Valve 1/2"	阀门 1/2"	\	\	\	\	07100147	07100147	1
13	Valve 1/4"	阀门 1/4"	07100124	07100124	07100124	\	\	07100124	1
	Valve 1/4"	阀门 1/4"	\	\	\	07100120	07100120	\	1
14	Valve Support	阀门支架	01713041	01713041	01713041	01713041	01713041	01713041	1
15	Right Side Plate Assy	右侧板组件	01302004	01302004	01302004	01302004	01302004	01302004	1
16	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	71010103	71010103	2
17	Insulation Gasket	绝缘垫片	70410525	70410523	70410525	70410523	70410525	70410523	1
18	Terminal Board T386A	三位接线板 T386A	42011241	42011241	42011241	42011241	42011241	42011241	1
19	Electric Plate	电器盒	01413425	01413425	01413425	01413425	01413425	01413425	1
20	Comp Capacitor 30uF/450V	压缩机电容	33000021	33000021	\	\	33000021	33000021	1
	Comp Capacitor 35uF/450V		\	\	33010739	\	\	\	1
	Comp Capacitor 25uF/450V		\	\	\	33000020	\	\	1
21	Capacitor clamp	电容夹	02143401	02143401	02143401	02140001	02143401	02143401	1
22	Fan Capacitor 2.5uF/450V	风机电容	33010026	33010026	33010026	33010026	\	33010026	1
	Fan Capacitor 3uF/450V		\	\	\	\	33010027	\	1
23	Terminal Board 2-8	接线板 2-8	\	42011103	\	42011103	\	42011103	1
24	Isolation Sheet Assy	隔板组件	01233417	01233417	01233417	01233417	01233417	01233417	1
25	Tube Sensor	管温感温包	\	\	\	\	\	\	1
26	Condenser Assy	冷凝器组件	01103014	\	\	\	\	\	1
	Condenser Assy		\	01103006	\	\	\	\	1
	Condenser Assy		\	\	01103102	\	\	\	1
	Condenser Assy		\	\	\	01103407	\	\	1
	Condenser Assy		\	\	\	\	01103408	\	1
	Condenser Assy		\	\	\	\	\	01103406	1
27	Rear grill Assy	后护网组件	11123402	11123402	11123402	11123402	11123402	11123402	1
28	Top cover Assy	顶盖组件	01253261	01253261	01253261	01253261	01253261	01253261	1
29	Motor Support	电机支架	01703391	01703391	01703391	01703391	01703391	01703391	1
30	Self-tapping Screw	螺钉	10140165	10140165	10140165	10140165	10140165	10140165	4
31	Motor FW25E	风扇电机 FW25E	15013151	15013151	\	\	\	\	1
	Motor FW30E	风扇电机 FW30E	\	\	15013153	15013153	\	\	1
	Motor FW48A	风扇电机 FW48A	\	\	\	\	15013036	15013036	1

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Bird Series

Table 1-19

No.	Description		Part No.						Qty
			KF-	KFR-	KF-	KFR-	KF-	KFR-	
			20W/NA12	20W/NA12	25W/NA12	25W/NA12	32W/NA12	32W/NA12	
1	Front Grill	面板格栅	22413431	22413431	22413431	22413431	22413431	22413431	1
2	Nut M6	左旋螺母 M6	70310132	70310132	70310132	70310132	70310132	70310132	1
3	Washer 6	垫圈 6	70410252	70410252	70410252	70410252	70410252	70410252	1
4	Axial Flow Fan	轴流风叶	10333412	10333412	10333412	10333412	10333412	10333412	1
5	Front Plate	面板	01533428	01533428	01533428	01533428	01533428	01533428	1
6	Metal Base	底盘组件	01203334	01203334	01203042	01203042	01203030	01203045	1
7	4-way Valve	四通阀	\	430004021	\	430004021	\	430004021	1
	4-way Valve Fittings	四通阀配件	\	43000400	\	43000400	\	43000400	1
8	Capillary Assy	毛细管组件	03003156	03003109	03003430	03003155	03013160	03003161	1
9	Compressor C-1RN70H5A	压缩机及其配件	00100321	00100321	\	\	\	\	1
	Compressor C-RV167H01AA		\	\	00100355	00100355	\	\	1
	Compressor C-RV227H01AA		\	\	\	\	00100352	00100352	1
10	Nut with Washer M8	带垫螺母 M8	70310014	70310014	70310014	70310014	70310014	70310014	3
11	Handle	大提手	26233433	26233433	26233433	26233433	26233433	26233433	1
12	Valve 3/8"	阀门 3/8"	07100135	07100135	07100135	07100135	\	\	1
	Valve 1/2"	阀门 1/2"	\	\	\	\	07100133	07100133	1
13	Valve 1/4"	阀门 1/4"	07100134	07100134	07100134	07100134	07100134	07100134	1
14	Valve Support	阀门支架	01713041	01713041	01713041	01713041	01713041	01713041	1
15	Right Side Plate Assy	右侧板组件	01302004	01302004	01302004	01302004	01302004	01302004	1
16	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	71010103	71010103	2
17	Insulation Gasket C	绝缘垫片 C	70410525	70410523	70410525	70410523	70410525	70410523	1
18	Terminal Board T386A	三位接线板 T386A	42011241	42011241	42011241	42011241	42011241	42011241	1
19	Electric Plate	电器盒	01413425	01413425	01413425	01413425	01413425	01413425	1
20	Comp Capacitor 22.5uF/450V	压缩机电容	33000002	33000002	33000002	33000002	\	\	1
	Comp Capacitor 25uF/450V		\	\	\	\	33000020	33000020	1
21	Capacitor clamp	电容夹	02143401	02143401	02140001	02140001	02140001	02140001	1
22	Fan Capacitor 2.5uF/450V	风机电容	33010026	33010026	33010026	33010026	\	\	1
	Fan Capacitor 3uF/450V		\	\	\	\	33010027	33010027	1
23	Terminal Board 2-8	接线板 2-8	\	42011103	\	42011103	\	42011103	1
24	Isolation Sheet Assy	隔板组件	01233417	01233417	01233417	01233417	01233417	01233417	1
25	Tube Sensor	管温感温包	\	\	\	\	\	\	1
26	Condenser Assy	冷凝器组件	01103070	\	\	\	\	\	1
	Condenser Assy		\	01103074	\	\	\	\	1
	Condenser Assy		\	\	01103059	\	\	\	1
	Condenser Assy		\	\	\	01103056	\	\	1
	Condenser Assy		\	\	\	\	01103075	\	1
	Condenser Assy		\	\	\	\	\	01103073	1
27	Rear grill	后护网组件	11123402	11123402	11123402	11123402	11123402	11123402	1
28	Top cover	顶盖组件	01253261	01253261	01253261	01253261	01253261	01253261	1
29	Motor Support	电机支架	01703391	01703391	01703391	01703391	01703391	01703391	1
30	Self-tapping Screw	螺钉	10140165	10140165	10140165	10140165	10140165	10140165	4
31	Motor FW25E	风扇电机 FW25E	15013151	15013151	\	\	\	\	1
	Motor FW30E	风扇电机 FW30E	\	\	15013153	15013153	\	\	1
	Motor FW48A	风扇电机 FW48A	\	\	\	\	15013036	15013036	1

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Bird Series

Table 1-20

No.	Description		Part No.				Qty
			KF-20W/A20	KFR-20W/A20	KF-25W/A20	KFR-25W/A20	
1	Front Grill	面板格栅	22413431	22413431	22413431	22413431	1
2	Nut M6	左旋螺母 M6	70310132	70310132	70310132	70310132	1
3	Washer 6	垫圈 6	70410252	70410252	70410221	70410221	1
4	Axial Flow Fan	轴流风叶	10333002	10333002	10333002	10333002	1
5	Front Plate	面板	20003100	20003100	20003100	20003100	1
6	Metal Base	底盘组件	01203087	01203087	01203070	01203056	1
7	4-way Valve	四通阀	\	43000402	\	43000402	1
	4-way Valve Fittings	四通阀配件	\	43000400	\	43000400	1
8	Capillary Assy	毛细管组件	03003230	03003233	03003249	03003232	1
9	Compressor KH134VFRC	压缩机及其配件	00100051	00100051	\	\	1
	Compressor 2P17S225ANA		\	\	00120110	\	1
	Compressor RH174VHAC		\	\	\	00120078	1
10	Nut with Washer M6	带垫螺母 M6	70310011	70310011	\	70310011	3
	Nut with Washer M8	带垫螺母 M8	\	\	70310014	\	3
11	Handle	大提手	26233101	26233101	26233101	26233101	1
12	Valve 3/8"	阀门 3/8"	07100145	07100145	\	\	1
	Valve 3/8"	阀门 3/8"	\	\	07100143	07100143	1
13	Valve 1/4"	阀门 1/4"	07100024	07100024	07100125	07100125	1
14	Valve Support	阀门支架	01713036	01713036	01713036	01713036	1
15	Right Side Plate Assy	右侧板组件	01303151	01303151	01303151	01303151	1
16	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	2
17	Insulation Gasket C	绝缘垫片 C	\	70410523	\	70410523	1
	Insulation Gasket D	绝缘垫片 D	70410525	\	70410525	\	1
18	Terminal Board T386A	三位接线板 T386A	42011241	42011241	42011241	42011241	1
19	Electric Plate	电器盒	01413002	01413002	01413002	01413002	1
20	Comp Capacitor 17uF/450V	压缩机电容	33000035	33000035	\	\	1
	Comp Capacitor 25uF/450V	压缩机电容	\	\	\	33000020	1
	Comp Capacitor 30uF/450V	压缩机电容	\	\	33000037	\	1
21	Capacitor clamp	电容夹	02143014	02143014	02143014	02143014	1
22	Fan Capacitor 1.5uF/450V	风机电容	33010020	33010020	33010020	33010020	1
23	Terminal Board 3-12	接线板 3-12	\	42011251	\	42011251	1
24	Isolation Sheet Assy	隔板组件	01233010	01233010	01233010	01233010	1
25	Tube Sensor	管温感温包	\	\	\	\	1
26	Condenser Assy	冷凝器组件	01103222	01103198	01103213	01103193	1
27	Rear grill	后护网组件	11123301	11123301	11123301	11123301	1
28	Top cover	顶盖组件	01253263	01253263	01253263	01253263	1
29	Motor Support	电机支架	01703029	01703029	01703029	01703029	1
30	Self-tapping Screw	螺钉	10140165	10140165	10140165	10140165	4
31	Motor FW20B	风扇电机 FW20B	15013045	15013045	15013045	15013045	1

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Bird Series

Table 1-21

No.	Description		Part No.				Qty
			KF-20W/NA20	KFR-20W/NA20	KF-25W/NA20	KFR-25W/NA20	
1	Front Grill	面板格栅	22413431	22413431	22413431	22413431	1
2	Nut M6	左旋螺母 M6	70310132	70310132	70310132	70310132	1
3	Washer 6	垫圈 6	70410221	70410221	70410221	70410221	1
4	Axial Flow Fan	轴流风叶	10333002	10333002	10333002	10333002	1
5	Front Plate	面板	20003100	20003100	20003100	20003100	1
6	Metal Base	底盘组件	01203115	01203115	01203113	01203117	1
7	4-way Valve	四通阀	\	430004021	\	430004021	1
	4-way Valve Fittings	四通阀配件	\	43000400	\	43000400	1
8	Capillary Assy	毛细管组件	03003237	03003252	03003234	03003250	1
9	Compressor C-1RN70H5C	压缩机及其配件	00100354	00100354	\	\	1
	Compressor C-RV167H01AA		\	\	00100355	00100355	1
10	Nut with Washer M6	带垫螺母 M6	70310011	70310011	70310011	70310011	3
11	Handle	大提手	26233101	26233101	26233101	26233101	1
12	Valve 3/8" (R407C)	阀门 3/8" (R407C)	07100150	07100150	07100150	07100150	1
13	Valve 1/4" (R407C)	阀门 1/4" (R407C)	07100149	07100149	07100149	07100149	1
14	Valve Support	阀门支架	01713036	01713036	01713036	01713036	1
15	Right Side Plate Assy	右侧板组件	01303151	01303151	01303151	01303151	1
16	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	2
17	Insulation Gasket	绝缘垫片	70410525	70410523	70410525	70410523	1
18	Terminal Board T386A	三位接线板 T386A	42011241	42011241	42011241	42011241	1
19	Electric Plate	电器盒	01413034	01413034	01413034	01413034	1
20	CompCapacitor22.5uF/450V	压缩机电容	33000002	33000002	33010732	33010732	1
21	Capacitor clamp	电容夹	02143014	02143014	02143014	02143014	1
22	Fan Capacitor 1.5uF/450V	风机电容	33010020	33010020	33010020	33010020	1
23	Terminal Board 3-12	接线板 3-12	\	42011251	\	42011251	1
24	Isolation Sheet Assy	隔板组件	01233101	01233103	01233101	01233103	1
25	Tube Sensor	管温感温包	\	\	\	\	1
26	Condenser Assy	冷凝器组件	01103197	\	\	\	1
	Condenser Assy		\	01133051	\	\	1
	Condenser Assy		\	\	01103196	\	1
	Condenser Assy		\	\	\	01103214	1
27	Rear grill	后护网组件	11123301	11123301	11123301	11123301	1
28	Top cover	顶盖组件	01253263	01253263	01253263	01253263	1
29	Motor Support	电机支架	01703029	01703029	01703029	01703029	1
30	Self-tapping Screw	螺钉	10140165	10140165	10140165	10140165	4
31	Motor FW20B	风扇电机 FW20B	15013045	15013045	15013045	15013045	1

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Bird Series

Table 1-22

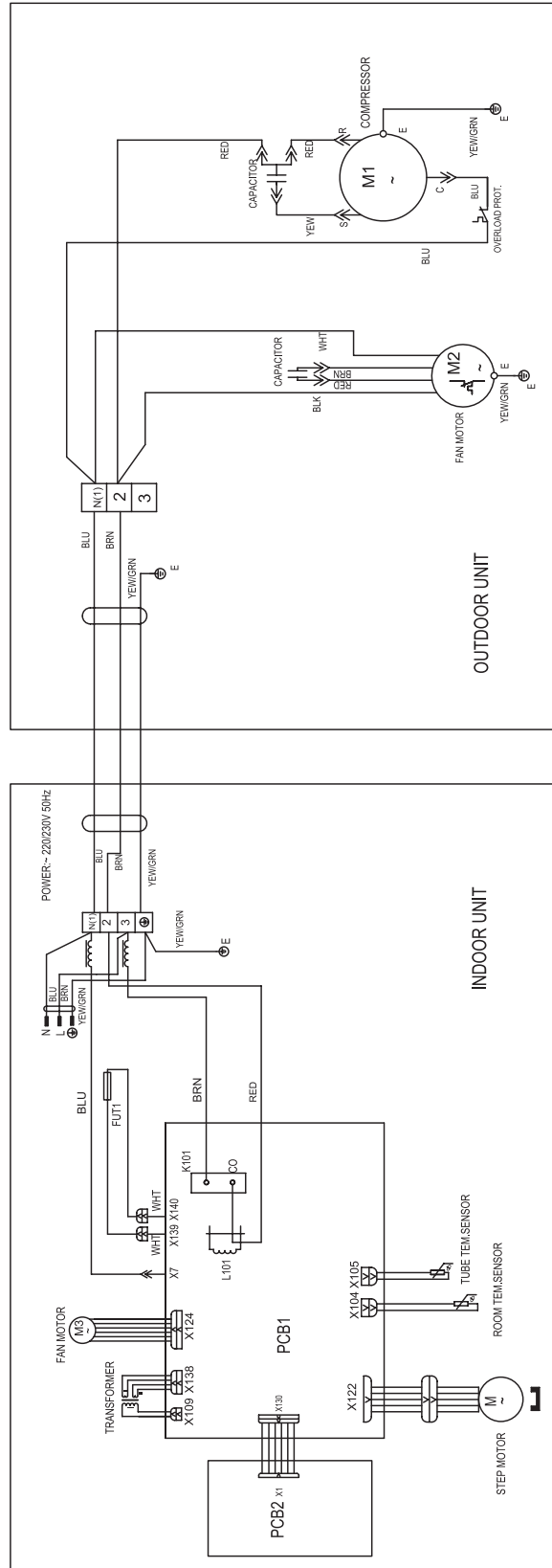
No.	Description		Part No.				Qty
			GSW9-22L/A(0)	GSW9-22R/A(0)	GSW12-22L/A(0)	GSW12-22R/A(0)	
1	Front Grill	面板格栅	22413431	22413431	22413431	22413431	1
2	Nut M6	左旋螺母 M6	70310132	70310132	70310132	70310132	1
3	Washer 6	垫圈 6	70410252	70410221	70410252	70410221	1
4	Axial Flow Fan	轴流风叶	10333412	10333412	10333412	10333412	1
5	Front Plate	面板	01533428	20002041	01533428	20002041	1
6	Metal Base	底盘组件	01203035	01203035	01203035	01203035	1
7	4-way Valve	四通阀	\	43000312	\	43000312	1
	4-way Valve Fittings	四通阀配件	\	43000400	\	43000400	1
8	Capillary Assy	毛细管组件	03003018	03003148	03003017	03003041	1
9	Compressor 2P14S236AJJ	压缩机及其配件	00100253	00100253	\	\	1
	Compressor 2P19S236AJJ		\	\	00100260	00100260	1
10	Nut with Washer M8	带垫螺母 M8	70310014	70310014	70310014	70310014	3
11	Handle	大提手	26233433	26233433	26233433	26233433	1
12	Valve 3/8"	阀门 3/8"	07100145	07100143	\	\	1
	Valve 1/2"	阀门 1/2"	\	\	07100147	07100147	1
13	Valve 1/4"	阀门 1/4"	07100120	07100125	07100120	07100024	1
14	Valve Support	阀门支架	01713041	01713041	01713041	01713041	1
15	Right Side Plate Assy	右侧板组件	01302004	01302004	01302004	01302004	1
16	Wire Clamp	电线夹	71010103	71010103	71010103	71010103	2
17	Insulation Gasket C	绝缘垫片 C	\	70410523	\	70410523	1
	Insulation Gasket D	绝缘垫片 D	70410525	\	70410525	\	1
18	Terminal Board T386A	三位接线板 T386A	42011241	42011241	42011241	42011241	1
19	Electric Plate	电器盒	01413425	01413425	01413425	01413425	1
20	Comp Capacitor 30uF/450V	压缩机电容	33000018	33000018	33000018	33000018	1
21	Capacitor clamp	电容夹	02143401	02143401	02143401	02143401	1
22	Fan Capacitor 2.5uF/450V	风机电容	33010019	33010019	\	\	1
	Fan Capacitor 3uF/450V		\	\	33010021	33010021	1
23	Terminal Board 3-12	接线板 3-12	\	42011251	\	42011251	1
24	Isolation Sheet Assy	隔板组件	01233417	01233417	01233417	01233417	1
25	Tube Sensor	管温感温包	\	\	\	\	1
26	Condenser Assy	冷凝器组件	01103005	\	\	\	1
	Condenser Assy		\	01103204	\	\	1
	Condenser Assy		\	\	01103004	\	1
	Condenser Assy		\	\	\	01103206	1
27	Rear grill	后护网组件	11123402	11123402	11123402	11123402	1
28	Top cover	顶盖组件	01253261	01253261	01253261	01253261	1
29	Motor Support	电机支架	01703391	01703391	01703391	01703391	1
30	Self-tapping Screw	螺钉	10140165	10140165	10140165	10140165	4
31	Motor FW25P	风扇电机 FW25P	15013152	15013152	\	\	1
	Motor FW48B	风扇电机 FW48B	\	\	15013305	15013305	1

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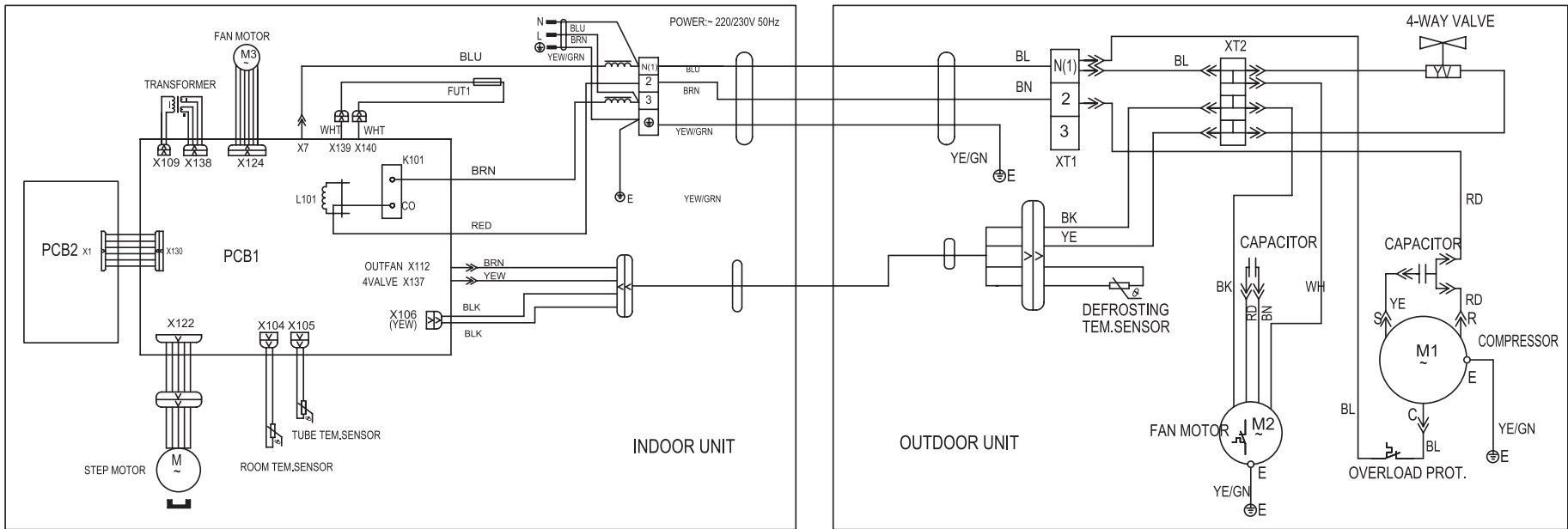
1.8 Circuit diagram

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

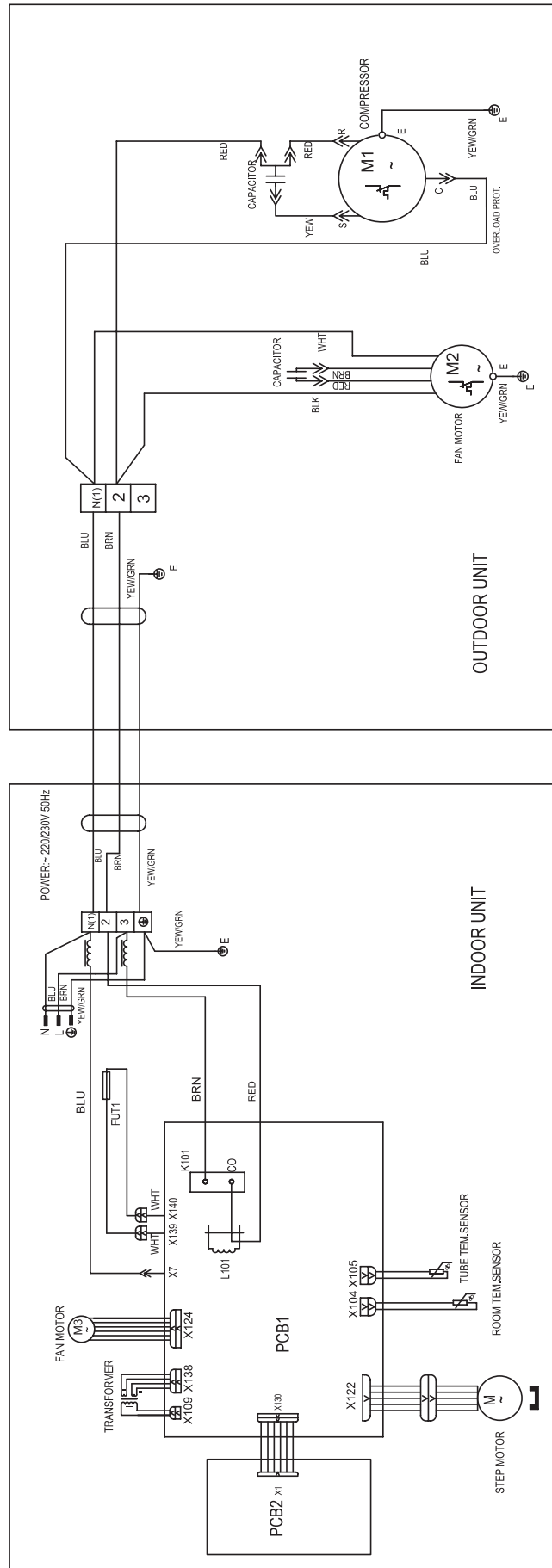
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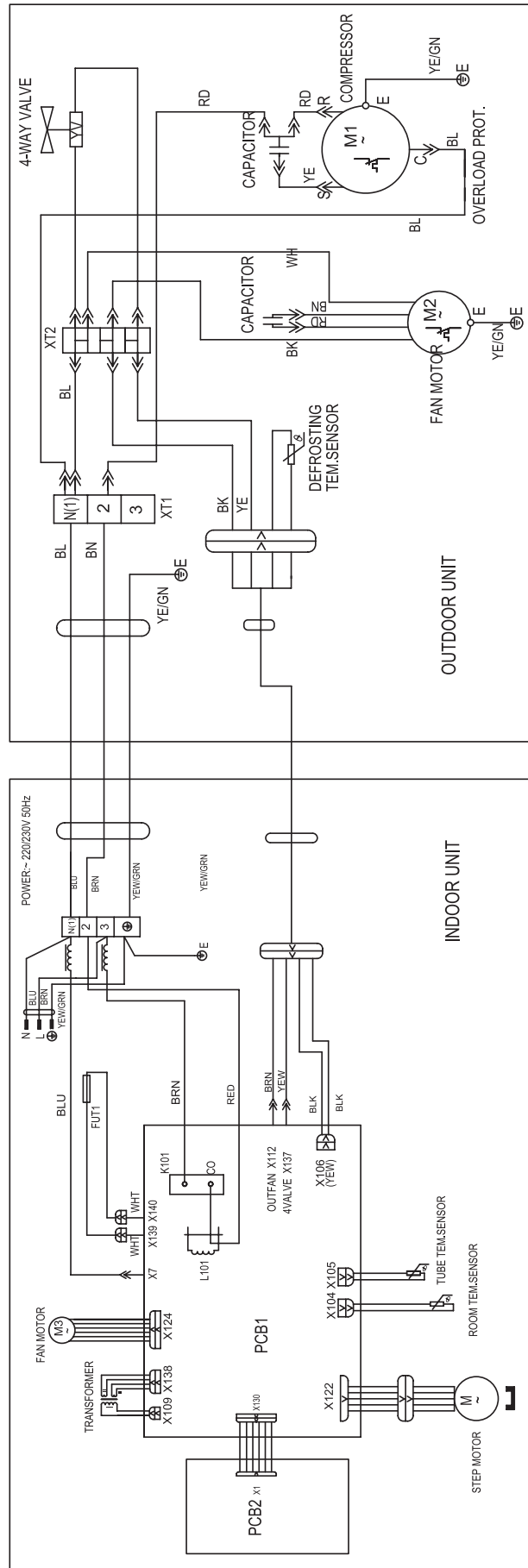
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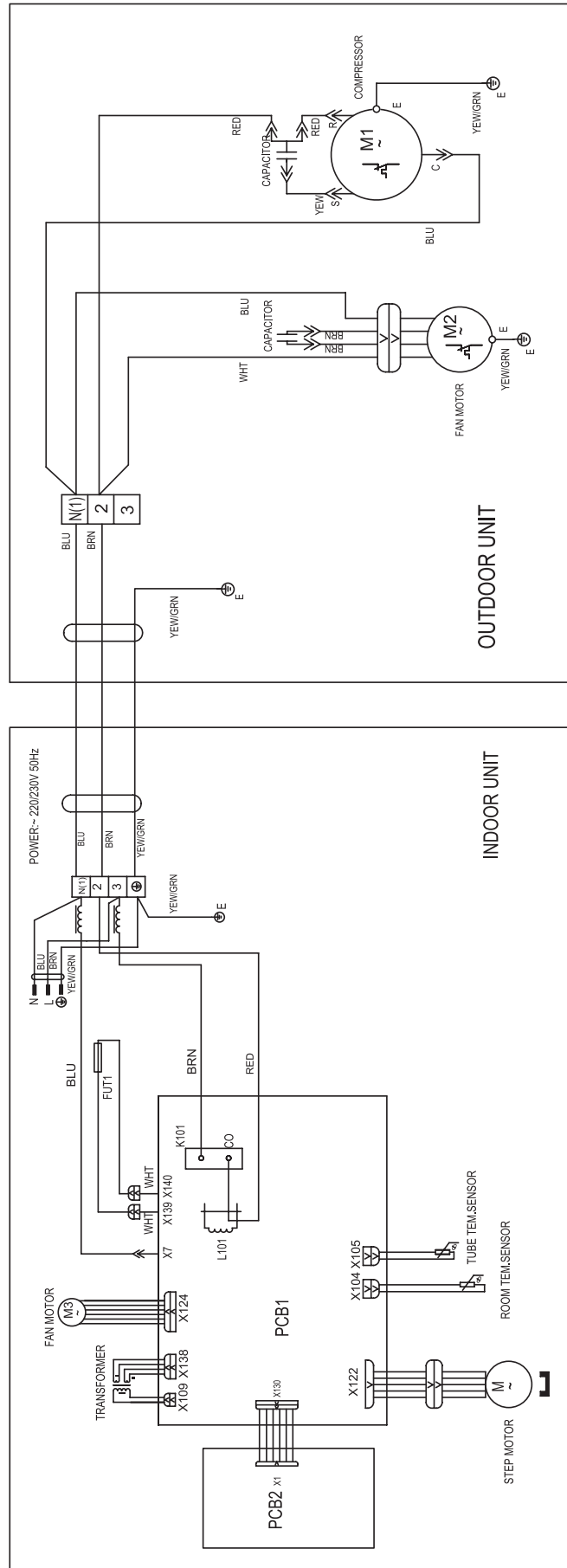
KF-25GW/A12



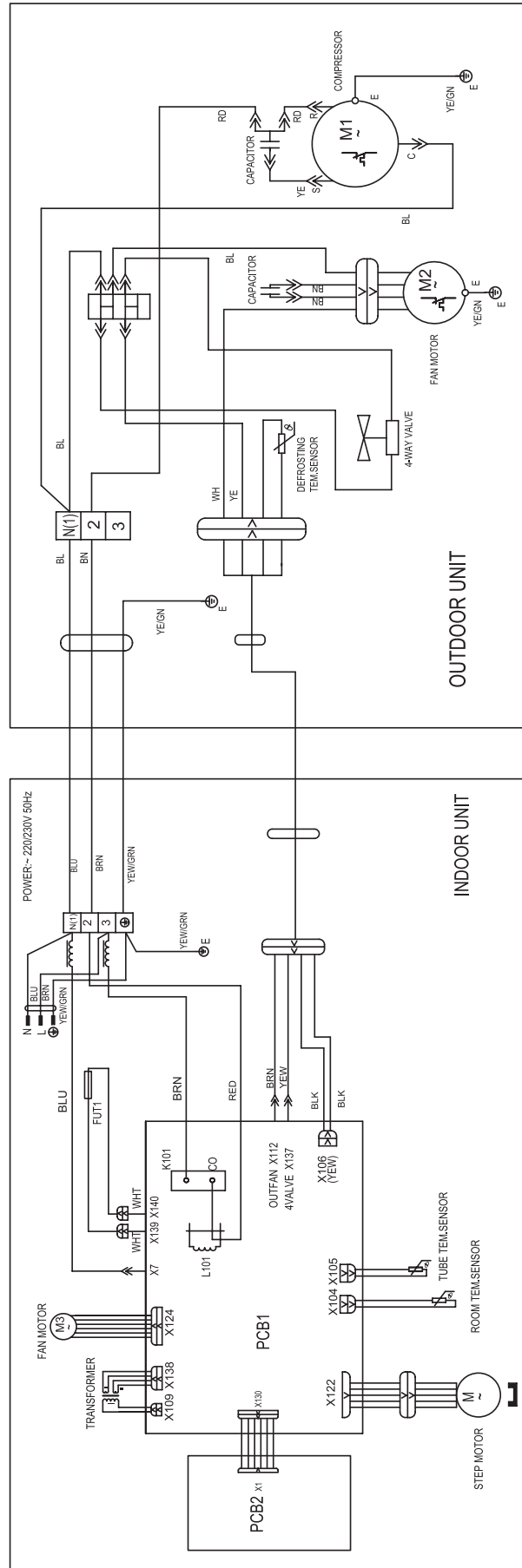
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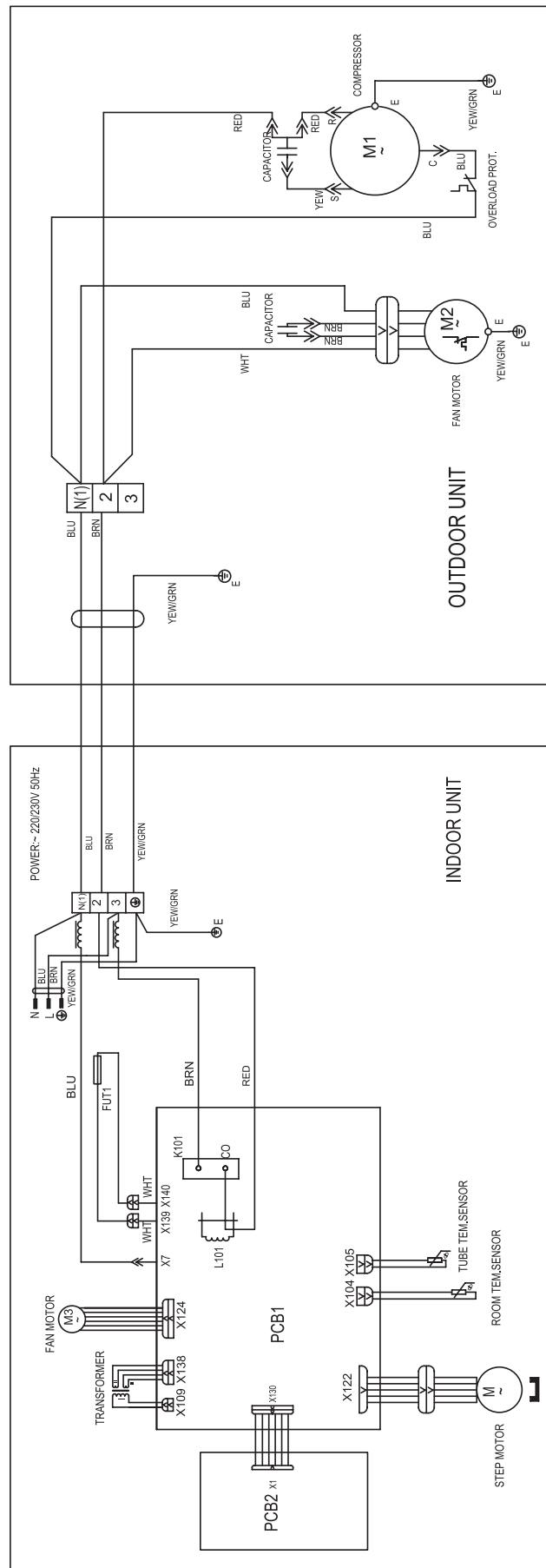
KF-32GW/A12



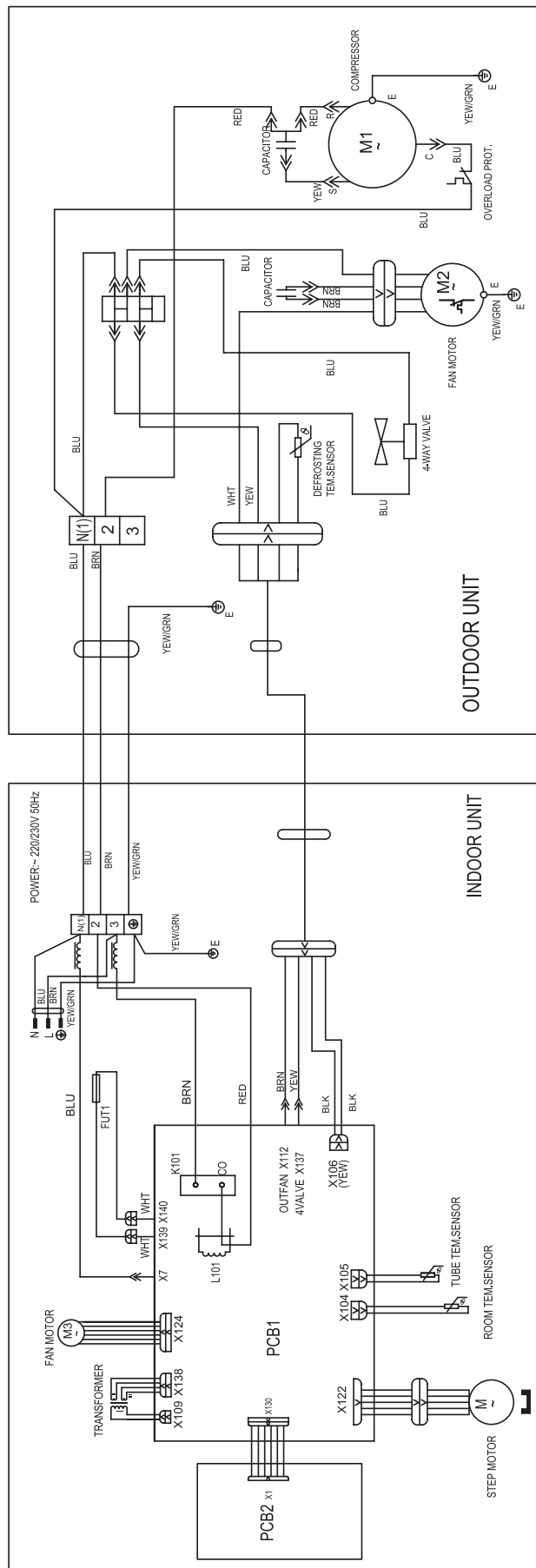
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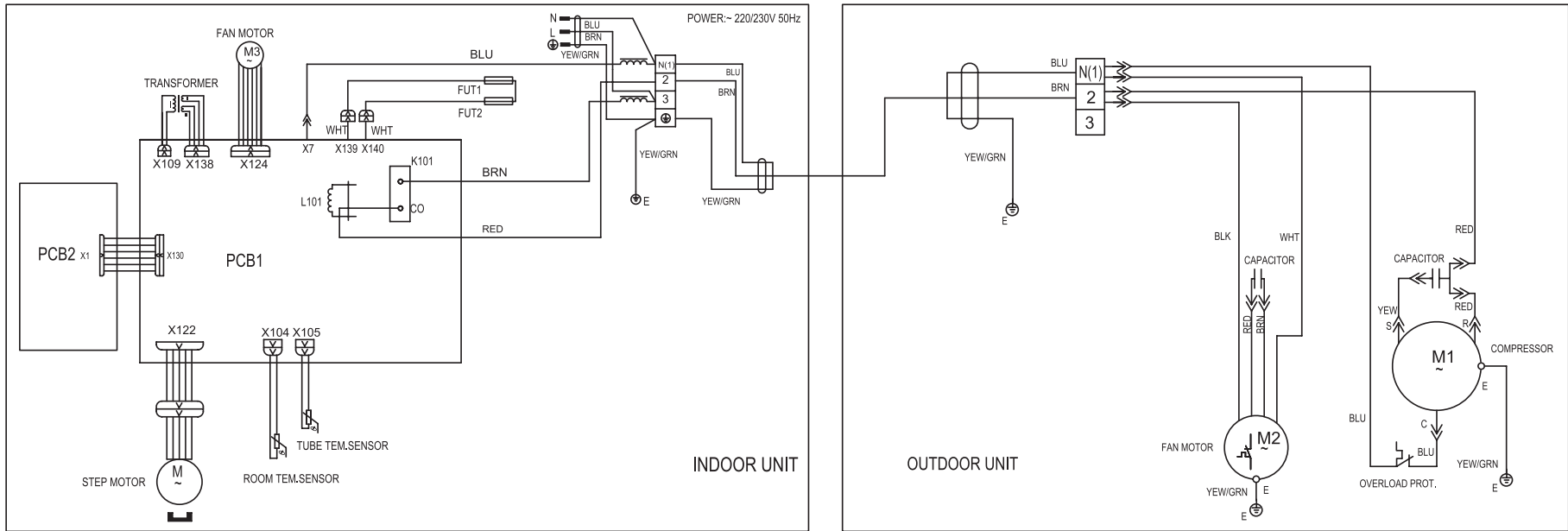
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KFR-32GW/NA12

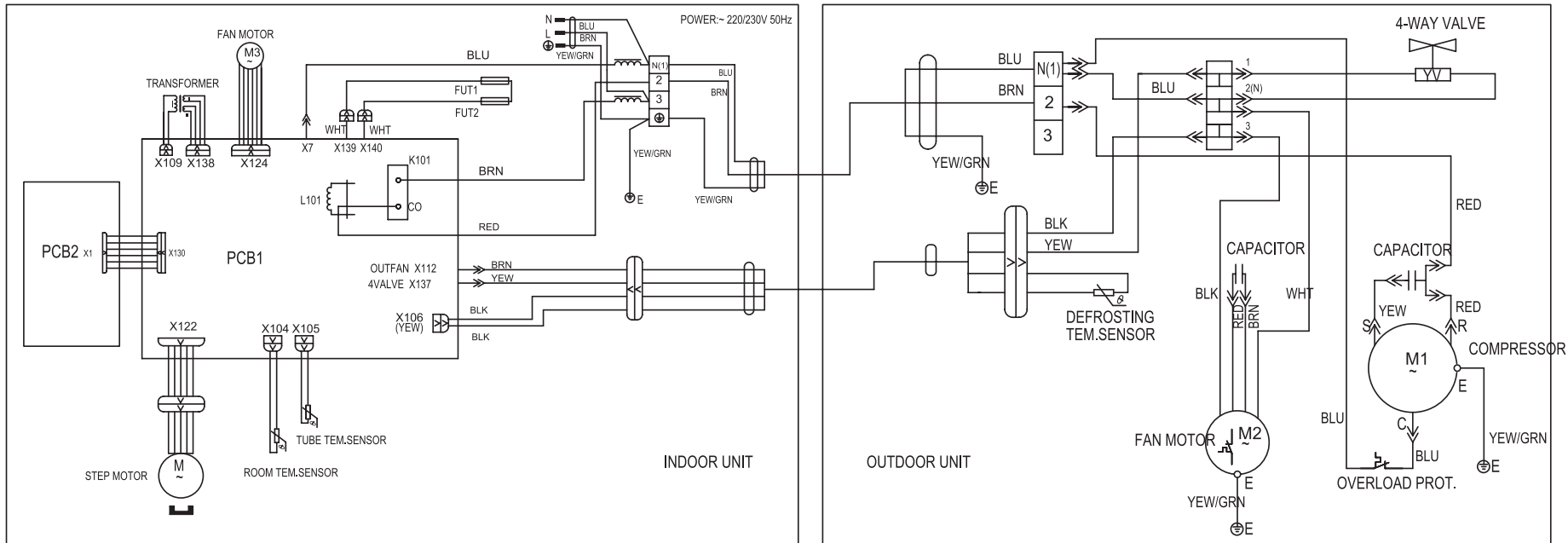


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KF-25GW/A20 KF-25GW/NA20

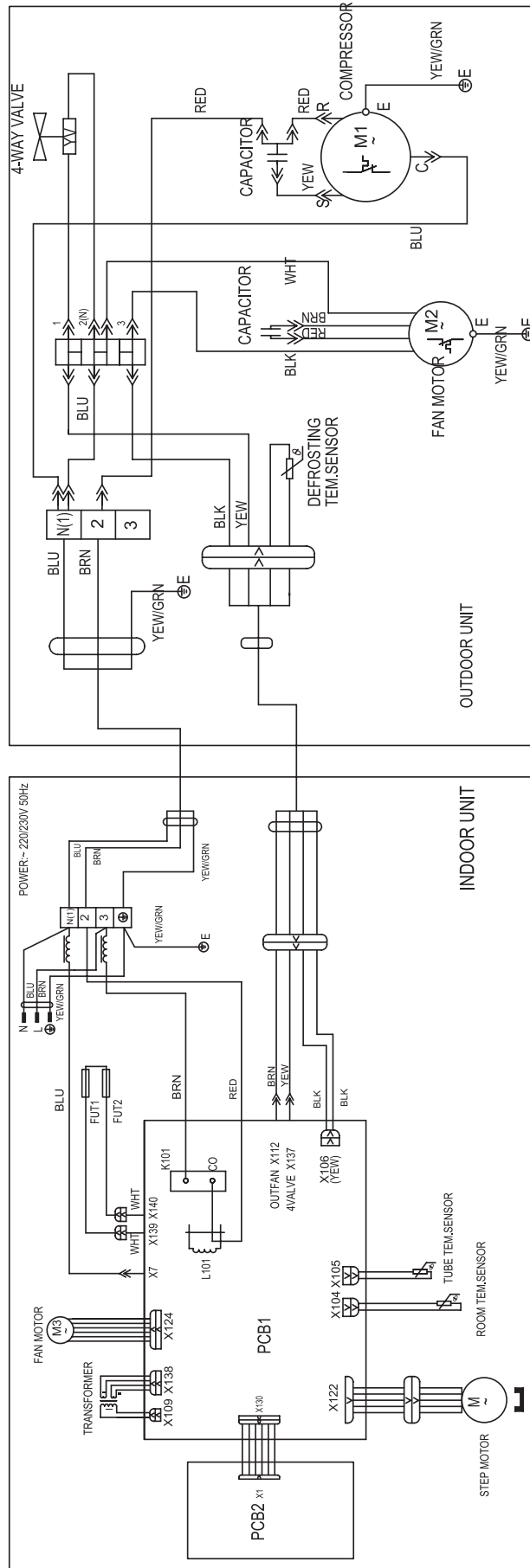


KFR-20GW/A20
KFR-25GW/NA20

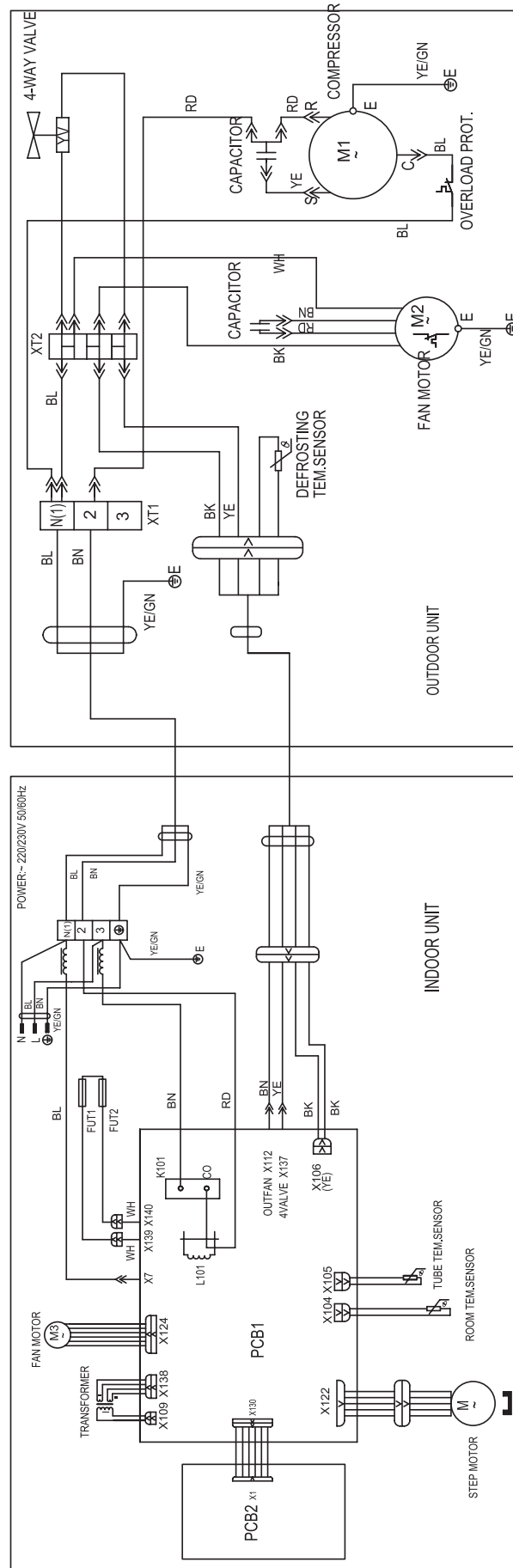
KFR-20GW/NA20



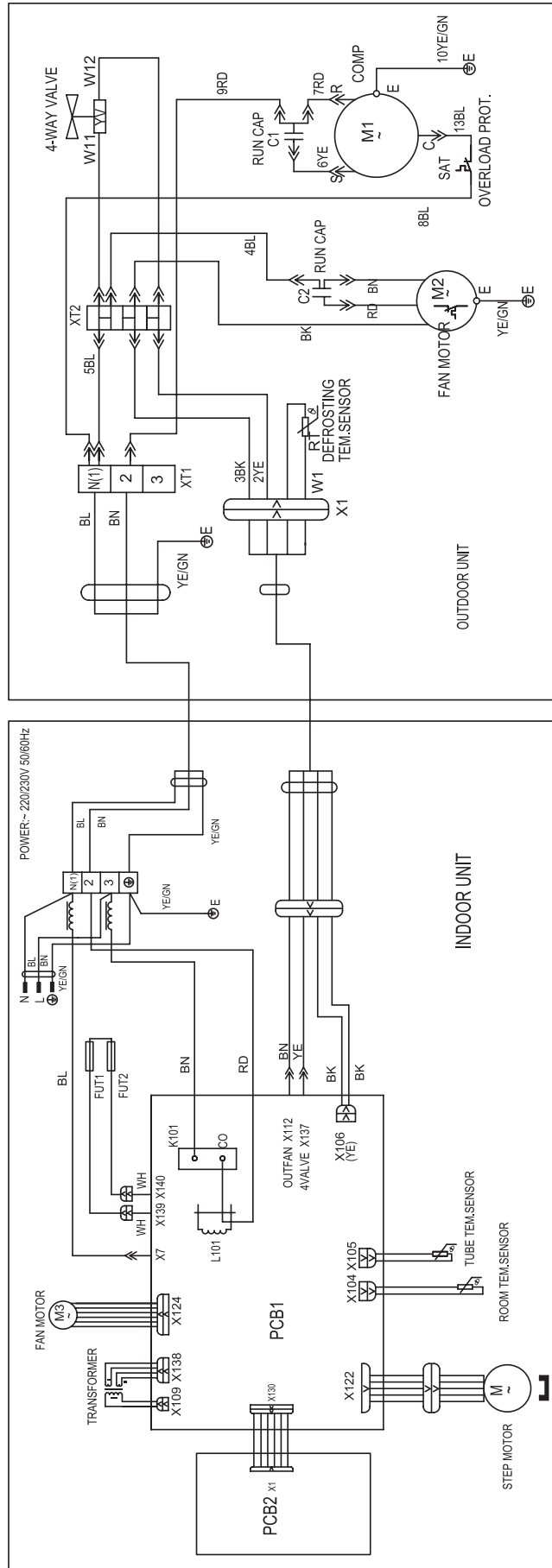
KFR-25GW/A20



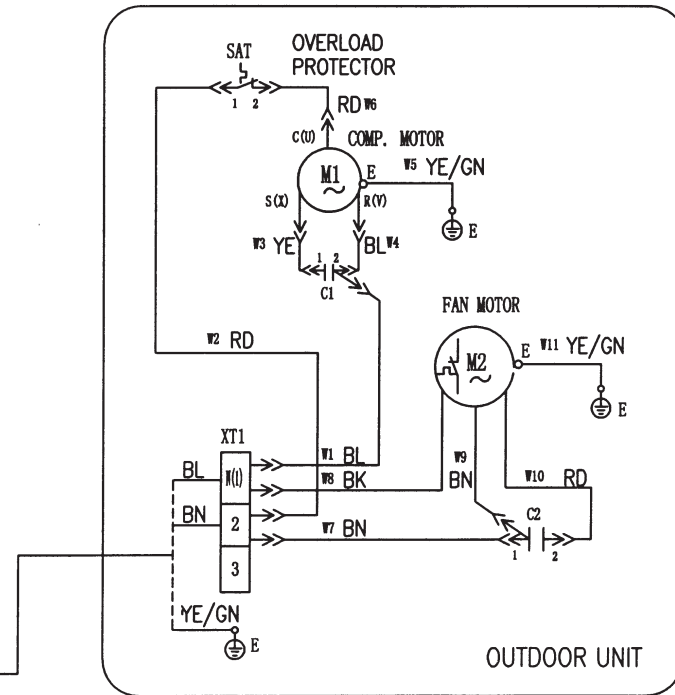
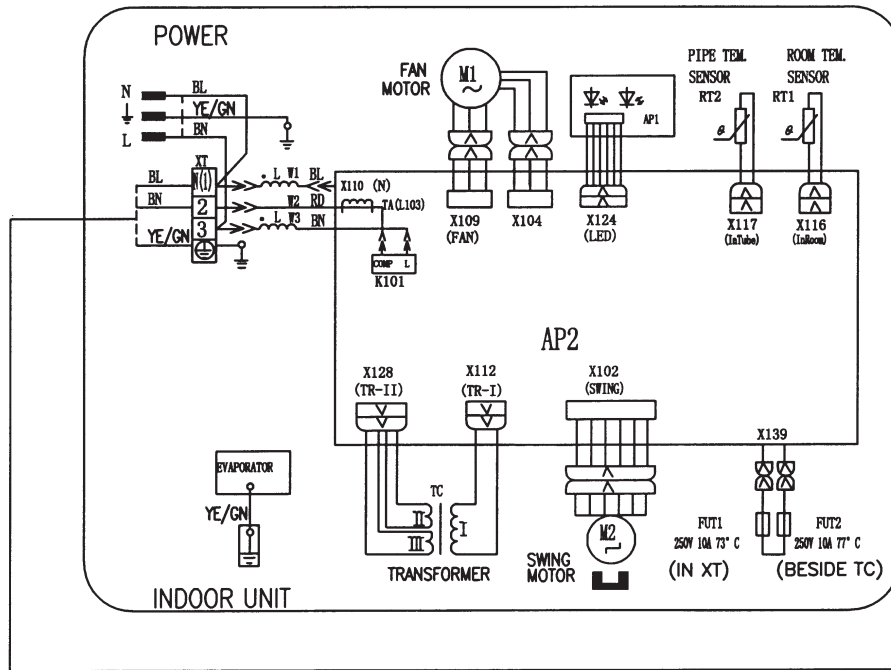
GSW9-22R/A



GSW12-22R/A



GSW9-22L/A GSW12-22L/A



1.9 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 $T_{in} \geq T_{set} + 1^{\circ}\text{C}$, the machine runs at the cooling mode. Compressor runs, outdoor motor runs, indoor fan runs at the set fan speed.
- b. If $T_{in} \leq T_{set} - 1^{\circ}\text{C}$, the machine stops. Compressor stops first, outdoor motor stops after 15 seconds.
- c. If $T_{set} - 1^{\circ}\text{C} < T_{in} < T_{set} + 1^{\circ}\text{C}$, keep the previous state.

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

(3) protect function

a. anti-freezing function

If the compressor has run 6 minutes, and detect $T_{eva} < 0^{\circ}\text{C}$ 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 $T_{eva} \geq 10^{\circ}\text{C}$.

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 $T_{in} > T_{set} + 2^{\circ}\text{C}$, it is in cooling running, the indoor motor speed can be selected, and outdoor motor runs at low speed.
- b. If $T_{set} - 2^{\circ}\text{C} \leq T_{in} \leq T_{set} + 2^{\circ}\text{C}$, it goes into dehumidifying running, the indoor motor run at 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 $T_{in} < T_{set} - 2^{\circ}\text{C}$, compressor, outdoor motor and indoor motor stop.

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

(3) anti-freezing protection

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

3. heating mode

(1) the working conditions and control measures

- a. If $T_{in} \leq T_{set} + 2^{\circ}\text{C} + T_{add}$, 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 $T_{in} \geq T_{set} + 4^{\circ}\text{C} + T_{add}$, 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 $T_{set} + 2^{\circ}\text{C} + T_{add} < T_{in} < T_{set} + 4^{\circ}\text{C} + T_{add}$, keep the previous running state. ($T_{add} = 1^{\circ}\text{C}$ or 0°C , it can be selected)

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

(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 $T_{eva} < 50^{\circ}\text{C}$ for continuous 8 seconds and $T_{in} \leq 25^{\circ}\text{C}$, electric heater will work, if compressor stops or indoor motor runs at low speed or $T_{eva} \geq 54^{\circ}\text{C}$ or $T_{in} \geq 28^{\circ}\text{C}$ or 10 seconds before defrosting, the electric heater will stop.

(4) protections

a. anti cool air

When the compressor starts, if $T_{eva} \geq 41^{\circ}\text{C}$ 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 $T_{eva} \geq 56^{\circ}\text{C}$ (58°C can be selected), outdoor motor will stop. If $T_{eva} \leq 53^{\circ}\text{C}$, outdoor motor will be back running.

c. blowing surplus heat

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.

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

e. 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.

f. 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 $T_{con} \leq -4^{\circ}\text{C}$ 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 $T_{con} \geq 10^{\circ}\text{C}$ 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)

g. 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 $T_{set}=25^{\circ}\text{C}$, standard heating $T_{set}=20^{\circ}\text{C}$

(2) working procedures

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

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

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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.

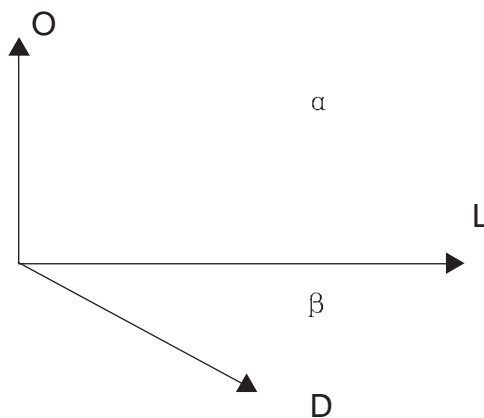
(3) protections

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

E. other controls

1. SWING mode

Refer to the figure below:



2. beeper

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

- 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 .
- 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 2Hz .
- If the switch is in RUN position , the machine will run according to the remote signal.
- If the switch is in STOP position, the machine will stop.

5. SLEEP mode

- In cooling or dehumidifying mode, 1 hour after you set the sleep timer , T_{set} will add 1°C automatically, another 1 hour, another 1°C will be added.
- In heating mode, 1 hour after you set the sleep timer, T_{set} will lower 1°C automatically, another

Bird Series

1 hour, another 1°C will be lowered .

6. Automatic fan speed

- a. In cooling mode, if $T_{in} > T_{set} + 3^{\circ}\text{C}$ high speed
 $T_{set} + 1^{\circ}\text{C} \leq T_{in} \leq T_{set} + 3^{\circ}\text{C}$ middle speed
 $T_{in} < T_{set} + 1^{\circ}\text{C}$ low speed
- b. In heating mode, if $T_{in} \leq T_{set} - 2^{\circ}\text{C}$ high speed
 $T_{set} - 2^{\circ}\text{C} < T_{in} < T_{set}$ middle speed
 $T_{in} \geq T_{set} + 2^{\circ}\text{C}$ 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 original state.