

TECHNICAL&SERVICE MANUAL V3.2

—Floor Standing Type Air Conditioner

MODEL:

T1 Series

AUF-48ER6SEM1
AUF-60ER6SPM1
AUF-42CR6FEM
AUF-42CR6SEM

T3Series(HEAT PUMP TYPE, POWER SOURCE : 50Hz)

AUF-36HTR4FAM
AUF-48HTR4FEM
AUF-48HTR6FEM
AUF-60HTR6FPM
AUF-36HTR4FAMA
AUF-48HTR4FEMA
AUF-48HTR6FEMA
AUF-60HTR6FPMA
AUF-48HTR4FEMB

T3 SERIES (COOLING ONLY TYPE, POWER SOURCE : 60Hz)

AUF-36CTR2SEM
AUF-48CTR2SPM
AUF-60CTR2SPM
AUF-60CTR2SPM1

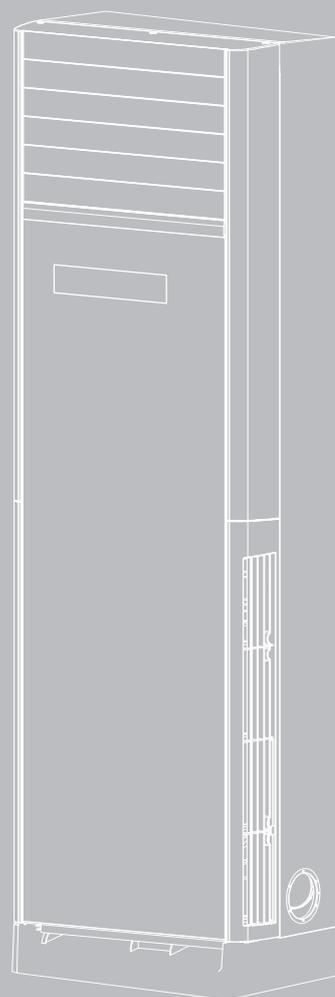
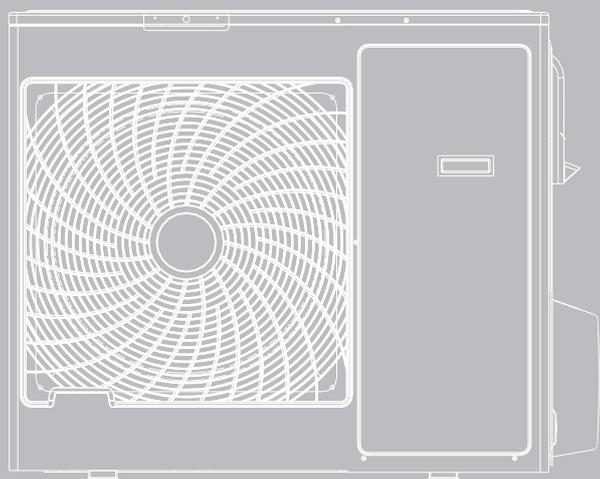


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1.1 Features

Features

➤ **24-hour Timer ON and OFF**

This Timer can be set to automatically turn the unit on or off within a 24-hour period.

➤ **Mute Operation**

The excellent fan design enable the airflow to be quiet and smooth with minimum noise.

➤ **Various Refrigerant Pipe Connect Methods**

The refrigerant pipe can be connected from 3 different directions(rear,right or left) .

More methods, more conveniently.

➤ **Self Recovery of Power Break**

When the power supply is recovered after break, all preset are still effective and the air-conditioner can run according to the original setting.

➤ **Fault Self-diagnose Function**

When there is something wrong with the air-conditioner, the micro computer could diagnose the faults, which can be read from the display and is convenient for maintenance.



1. GENERAL

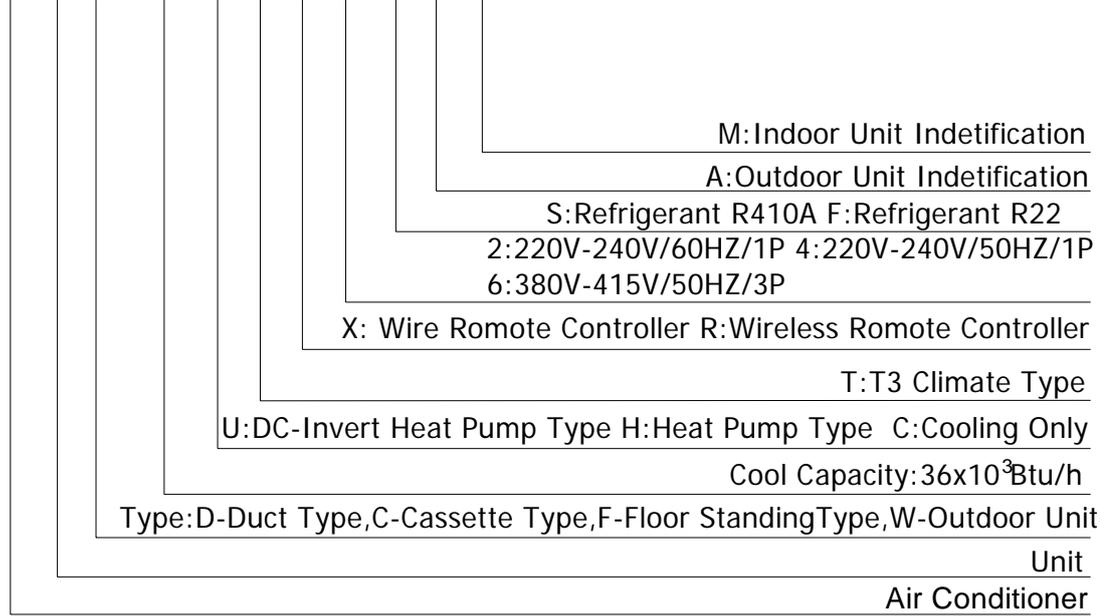
1.2 Product Lineup

Type	Model	36	42	48	60
Floor Standing Type	AUF-	•	•	•	•

1. GENERAL

1.3 MODEL IDENTIFICATION

A U F -36 H T R 4 F A M



1. GENERAL

1.4 Product Picture

Indoor Unit

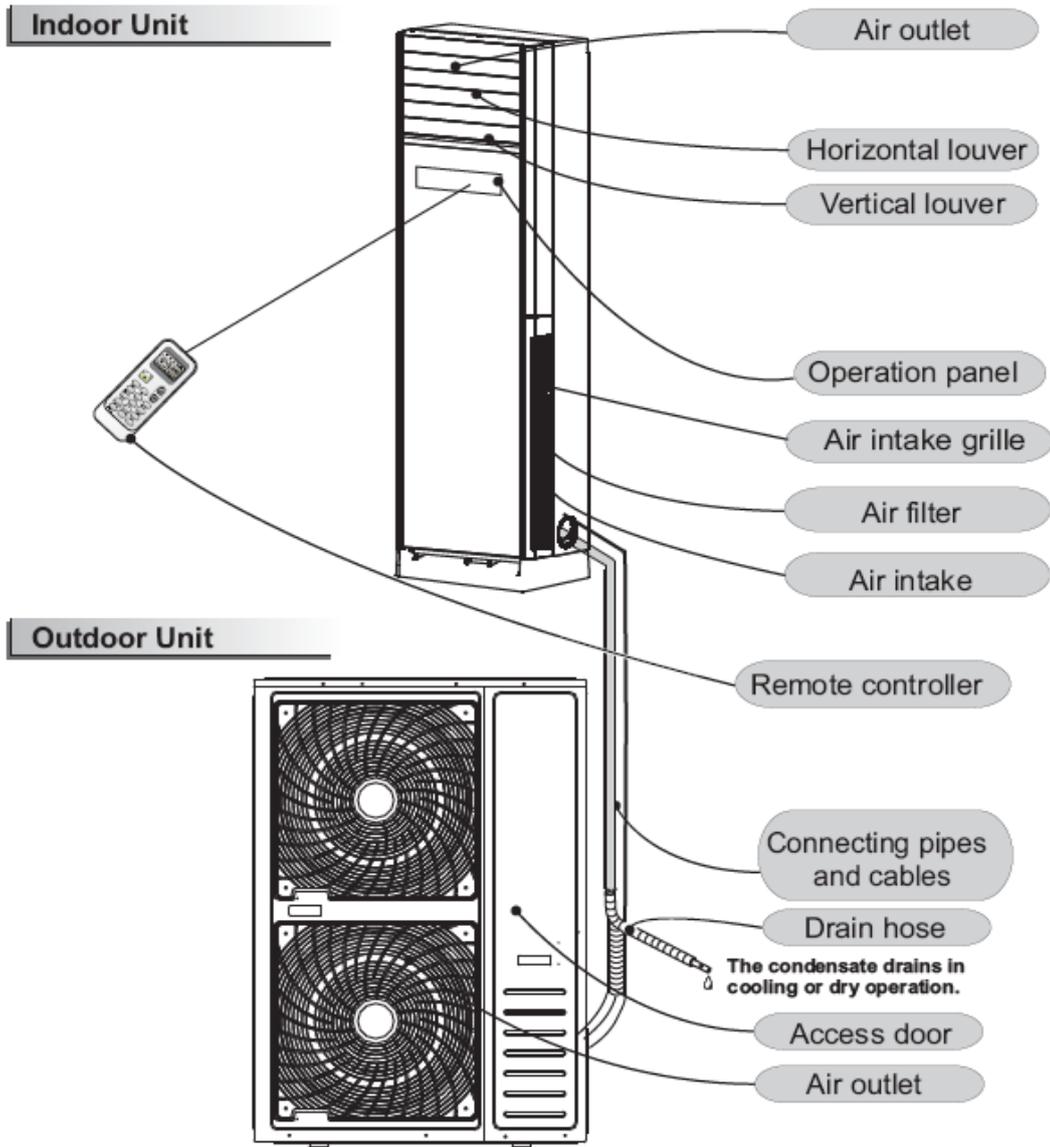


1. GENERAL

Outdoor Unit

MODEL(Kbtu/h)	36K(except AUF-36CTR2SEM)	48K,42K& 36K(AUF-36CTR2SEM)
View		
MODEL(KBtu/h)	48K (AUF-48CTR2SPM) ,60K	
View		

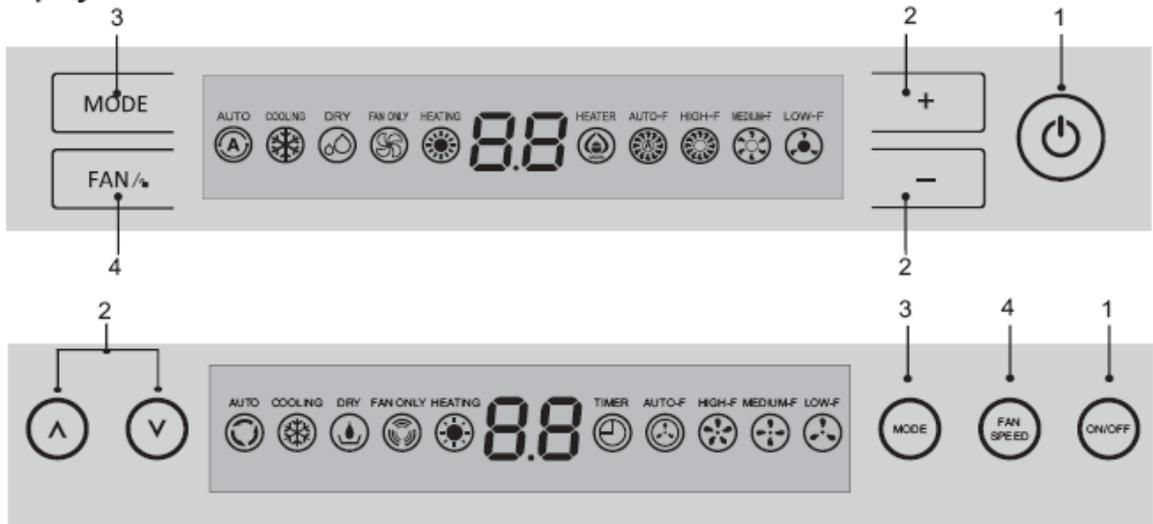
1. GENERAL



1. GENERAL

DISPLAY PANEL

Display and Button Introduction



● Button Operation

1. ON/OFF BUTTON

For turning on/off the appliance.

2. TEMPERATURE SETTING BUTTONS

Used to adjust the set temperature.

Every pressing \square / \odot / \square button can raise the temperature by 1°C ;

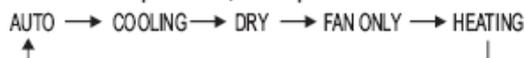
Every pressing \square / \odot / \square button can reduce the temperature by 1°C.

The adjustable temperature range is Max.32°C-Min.18°C.

3. MODE BUTTON

For selecting the operation mode.

Each time "MODE" button is pressed, the operation mode is changed in sequence:



4. FAN SPEED BUTTON

For selecting indoor fan speed.

Each time "FAN "/"FAN SPEED"/button is pressed, the fan speed is changed in sequence:

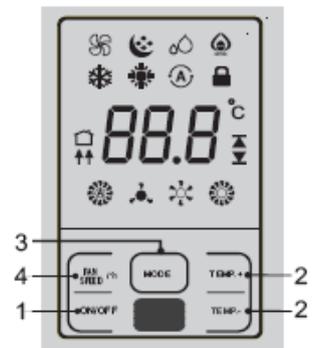


- ❑ "AUTO" fan speed is invalid when select "FAN ONLY" mode.
- ❑ "FAN "/"FAN SPEED" button is invalid when select "DRY" mode.

It can also used to unlock user interface.

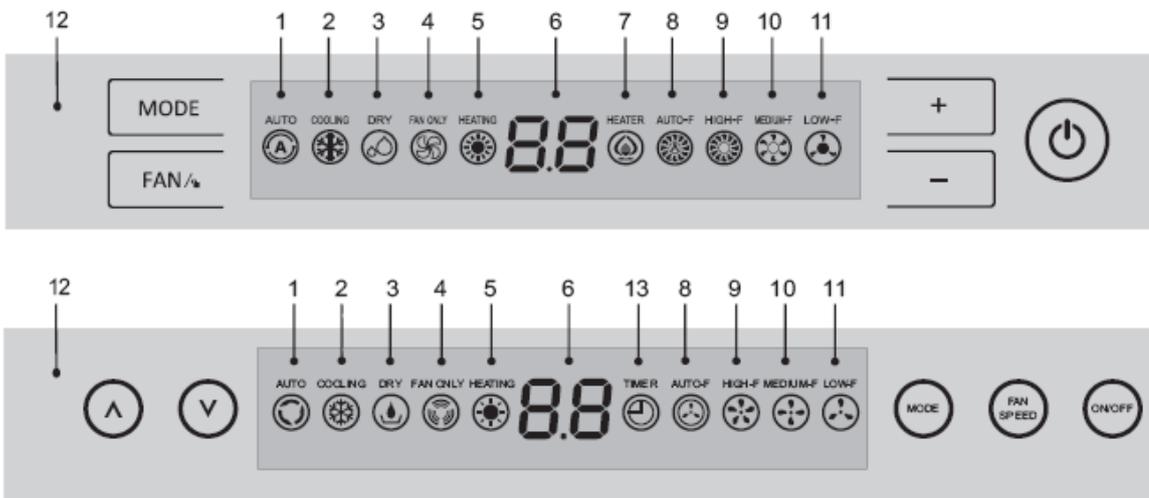
The user interface will lock automatically if idle beyond 1 minute, then the user interface will be locked;

Hold the "FAN "/"FAN SPEED" button for 3 seconds to unlock; The remote control is still usable when the user interface has locked.



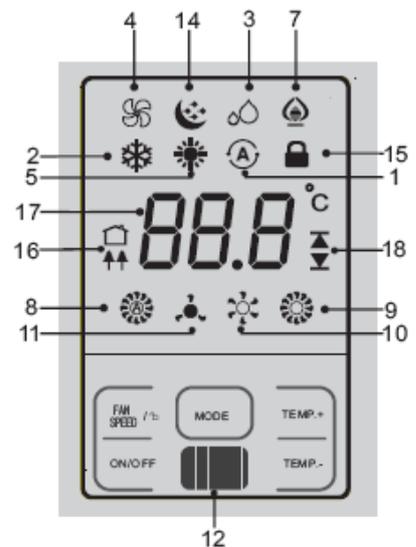
1. GENERAL

Display and Button Introduction



● Display Introduction

1. Auto mode display: Display during auto mode.
2. Cooling mode display: Display during cooling mode.
3. Dry mode display: Display during dry mode.
4. Fan only mode display: Display during fan only mode.
5. Heating mode display: Display during heating mode.
6. Temperature display: Display indoor set temperature or indoor temperature.
7. Heater display: It lights up during heating mode when electric heater is on (Only valid for models with electric heater).
8. 9. 10. 11. Fan speed set display.
8. Auto fan speed display: It lights up during the appliance is set with auto fan speed.
9. High fan speed display: It lights up during the appliance is set with high fan speed.
10. Medium fan speed display: It lights up during the appliance is set with medium fan speed.
11. Low fan speed display: It lights up during the appliance is set with low fan speed.
12. Signal Receptor.
13. Timer mode display: It lights up during timer on/timer off mode.
14. Sleep mode display: It lights up during sleep mode, and the LCD will be turned off after 10 seconds.
15. Button locked display: It lights up when the user interface has been locked.
16. Temperature indicator: Display indoor temperature when lights up;
Display outdoor temperature when lights up;
Display indoor set temperature when and all go off.
17. Temperature display: Display indoor set temperature, indoor temperature or outdoor temperature.
Default display indoor set temperature.
18. Limit temperature set indicator:
It indicates that the set temperature allowed has reached the max. valve when lights up;
It indicates that the set temperature allowed has reached the min. valve when lights up.



2. SPECIFICATIONS

2. Specifications

Floor Standing Type

Climate:T3

Model			AUF-36HTR4FAM	AUF-48HTR4FEM	AUF-60CTR2SPM	
Indoor model			AUF-36HR4FM	AUF-48HR4FM	AUF-60CR2SM	
Outdoor model			AUW-36HT4FA1	AUW-48HT4FE	AUW-60CT2SP	
Power supply		Ph-V-Hz	1N,220V-240V/50Hz		1N,220V-240V/60Hz	
Capacity	Cooling(T1/T3)	kW	10/9	14/13	14.2/12.5	
		Btu/h	34100/30700	23900/44400	48500/42700	
	Heating	kW	11	15.5	—	
		Btu/h	37,500	52,900	—	
Dehumidification		L/h	2.3	4.5	5	
Rated input	Cooling(T1/T3)	kW	3.55/4.285	4.982/6.5	4.965/6.04	
	Heating	kW	3.225	5.516	—	
Rated Current	Cooling(T1/T3)	A	15.8/19	24/31	23/28	
	Heating	A	14.5	22	—	
Max. input		kW	5.5	7.2	9	
Max.current		A	24.3	36	40	
EER(T1/T3)/COP			2.82/2.1/3.41	2.81/2.0/2.81	2.86/--	
Compressor	Model		LHT53VBBC	C-SBR145H15P	C-SBP140H16A	
	Type		Rotary	Scroll	Scroll	
	Winding resistance	Ω	M:0.66 , A:1.68	M:1.47 , A:0.498	M:0.755 , A:0.368	
	Brand		MITSUBISHI ELECTRIC	SANYO	SANYO	
Fan motor	Indoor	Model	Y7S059D501	Y7S862D820	Y7S059E001	
		Winding resistance (at25℃)	M:70.3A:50	M:28.65A:42.35	M:38.4;A:39.6	
	Outdoor	Model	YDK95-6-9063A	YDK29-6I-36 YDK29-6I-37	YYW95-8-8523 YYW95-8-8526	
		Winding resistance (at20℃)	M1:67,M2:23.6,M3:17.7;A:79.9	M:228;A:150	M:64;A:24,14,62	
Fan	Indoor	type	centrifugal fan			
		Speed Super/Hi/Med/Low	r.p.m	470/420/370/340	540/470/430	540/470/430/380
Fan speed	Outdoor	type	tube-axial			
		Speed Hi/Med/Low	r.p.m	0-810	920	500/600/700
Air	Indoor	Cooling/Heating	m³/h	1700/1800	2000	1800/--

2. SPECIFICATIONS

Model				AUF-36HTR4FAM	AUF-48HTR4FEM	AUF-60CTR2SPM
Indoor model				AUF-36HR4FM	AUF-48HR4FM	AUF-60CR2SM
Outdoor model				AUW-36HT4FA1	AUW-48HT4FE	AUW-60CT2SP
circulation	Outdoor	Hi/Med/Low	m ³ /h	--	--	6000
	Static Pressure(*Default Setting)		Pa	0	0	0
Operating control				Wireless Remote control-J1-05(E)		Wireless Remote control-J1-05(E)
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×840	950×340×1050	950×340×1386
Packing	Indoor	L×W×H	mm	2000×690×480	2000×690×480	2000×690×480
	Outdoor	L×W×H	mm	1110×460×980	1110×460×1200	1110×460×1530
Weight	Indoor	Net/Gross	kg	48/60	48/60	52/63
	Outdoor	Net/Gross	kg	69/74	100/108	117/123
Noise level	Indoor	Hi/Med/Low	dB(A)	43/49	48/52	--/53
	Outdoor	Hi/Med/Low	dB(A)	--/58	--/57	--/62
Refrigerant piping	Gas/Liquid		mm	15.88/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	15	50	50
	Max. difference in level		m	7.5	15	15
	Connection method			Flare		
Connection wiring	Power wiring		mm ²	3 core x2.5	3 core x6.0	3 core x6.0
	Signal wiring		mm ²	4core x0.75	4core x0.75	4core x0.75
Refrigerant type				R22	R22	R410A
Refrigerant charge			kg	2.23	2.48	2.67
Throttle Type				Capillary	Capillary	Capillary
Ambient temp			°C	Cooling15 ~ 52 Heating -10 ~ 24		Cooling15~52

2. SPECIFICATIONS

Model				AUF-48HTR6FEM	AUF-60HTR6FPM	AUF-36CTR2SEM
Indoor model				AUF-48HR4F1M	AUF-60HR4FM	AUF-36CR2SM
Outdoor model				AUW-48HT6FE	AUW-60HT6FP	AUW-36CT2SE
Power supply			Ph-V-Hz	3N,380V-415V/50Hz		1N,220V-230V/60Hz
Capacity	Cooling(T1/T3)		W	14000/12500	17500/14000	9200/8000
	Heating		W	15000	19000	—
Dehumidification			L/h	5	5.5	2.69
Rated input	Cooling(T1/T3)		W	4360/5000	5450/6600	2628/3112
	Heating		W	4150	5260	—
Rated Current	Cooling(T1/T3)		A	7.3/8	9/11	11.9/14.4
	Heating		A	7	9.5	—
Max. input			W	6300	9000	3638
Max.current			A	9.3	16.5	16.4
EER(T1/T3)/COP				3.21/2.5/3.61	3.21/2.12/3.61	3.5/--
Compressor	Type			Scroll	Scroll	Rotary
	Model			C-SB353H8A	C-SB453H8A	ASH280DG-C8DU
	Brand			SANYO	SANYO	HGHLY
Fan motor	Indoor		Type	AC	AC	DC
			Model	Y7S059D801	Y7S859E002	EQDW07AQH
	Outdoor		Type	AC	AC	AC
			Model	YDK29-6I-39 YDK29-6I-41	YYW65-6-9546A YYW65-6-9547A	YDK29-6I-40 YDK29-6I-42
Fan	Indoor	type		centrifugal fan		
		Speed Super/Hi/Med/Low	r.p.m	540/470/430/380	570/520/480/430	500/440/370
Fan speed	Outdoor	type		tube-axial		
		Speed Hi/Med/Low	r.p.m	900/750/600	700/600/500	920/750/600
Air circulation	Indoor	Cooling/Heating	m³/h	2000	2000	1700
	Outdoor	Hi/Med/Low	m³/h	5000	--	4500
Operating control				Wireless Remote control-J1-05(E)		
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×1050	950×340×1386	950×340×1050
Packing	Indoor	L×W×H	mm	690×480×2000	690×480×2000	690×480×2000
	Outdoor	L×W×H	mm	1110×460×1200	1110×460×1530	1110×460×1200
Weight	Indoor	Net/Gross	kg	52/63	48/60	49/59
	Outdoor	Net/Gross	kg	100/108	100/108	80/83
Noise lever	Indoor	Hi/Med/Low	dB(A)	--/52	--/54	--/52
	Outdoor	Hi/Med/Low	dB(A)	--/57	--/62	--/58
Refrigerant piping	Gas/Liquid		mm	19.05/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	50	50	30

2. SPECIFICATIONS

Model			AUF-48HTR6FEM	AUF-60HTR6FPM	AUF-36CTR2SEM
Indoor model			AUF-48HR4F1M	AUF-60HR4FM	AUF-36CR2SM
Outdoor model			AUW-48HT6FE	AUW-60HT6FP	AUW-36CT2SE
	Max. difference in level	m	15	15	20/15
	Connection method		Flare		
Connection wiring	Power wiring	mm ²	5 core x2.5	5 core x2.5	3 core x2.5
	Signal wiring	mm ²	4core x0.75	4core x0.75	4core x0.75
Refrigerant type			R22	R22	R410A
Refrigerant charge		kg	2.5	2.8	2.45
Throttle Type			Capillary	Capillary	Capillary
Ambient temp.		°C	Cooling15 ~ 52 Heating -10 ~ 24		Cooling15~52

2. SPECIFICATIONS

Model				AUF-36HTR4FAMA	AUF-48HTR4FEMA	AUF-48HTR4FEMB
Indoor model				AUF-36HR4FMA	AUF-48HR4FMA	AUF-48HR4FMB
Outdoor model				AUW-36HT4FA1	AUW-48HT4FE	AUW-48HT4FE
Power supply			Ph-V-Hz	1N,220V-240V/50Hz		
Capacity	Cooling(T1/T3)		kW	10/9	14/13	14/13
	Heating		kW	11	15.5	15.5
Dehumidification			L/h	2.3	4.5	4.5
Rated input	Cooling(T1/T3)		kW	3.55/4.285	4.982/6.5	4.982/6.5
	Heating		kW	3.225	5.516	5.516
Rated Current	Cooling(T1/T3)		A	15.8/19	24/31	24/31
	Heating		A	14.5	22	22
Max. input			kW	5.5	7.2	7.2
Max.current			A	24.3	36	36
EER(T1/T3)/COP				2.82/2.1/3.41	2.81/2.0/2.81	2.81/2.0/2.81
Compressor	Type			Rotary	Scroll	Scroll
	Model			LHT53VBBC	C-SBR145H15P	C-SBR145H15P
	Brand			MITSUBISHI ELECTRIC	SANYO	SANYO
Fan motor	Indoor		Type	AC	AC	AC
			Model	Y7S059D501	Y7S862D820	Y7S862D820
	Outdoor		Type	AC	AC	AC
			Model	YDK95-6-9063A	YDK29-6I-36 YDK29-6I-37	YDK29-6I-36 YDK29-6I-37
Fan	Indoor	type		centrifugal fan		
		Speed Super/Hi/Med/Low	r.p.m	470/420/370/340	540/470/430	540/470/430
Fan speed	Outdoor	type		tube-axial		
		Speed Hi/Med/Low	r.p.m	790/670/580	920	920
Air circulation	Indoor	Cooling/Heating	m³/h	1700/1800	2000	2000
	Outdoor	Hi/Med/Low	m³/h	--	--	--
Operating control				Wireless Remote control-J1-05(E)		
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×840	950×340×1050	950×340×1050
Packing	Indoor	L×W×H	mm	2000×690×480	2000×690×480	2000×690×480
	Outdoor	L×W×H	mm	1110×460×980	1110×460×1200	1110×460×1200
Weight	Indoor	Net/Gross	kg	48/60	48/60	48/60
	Outdoor	Net/Gross	kg	69/74	100/108	100/108
Noise lever	Indoor	Hi/Med/Low	dB(A)	43/49	48/52	48/52
	Outdoor	Hi/Med/Low	dB(A)	--/58	--/57	--/57
Refrigerant piping	Gas/Liquid		mm	15.88/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	15	50	50

2. SPECIFICATIONS

Model			AUF-36HTR4FAMA	AUF-48HTR4FEMA	AUF-48HTR4FEMB
Indoor model			AUF-36HR4FMA	AUF-48HR4FMA	AUF-48HR4FMB
Outdoor model			AUW-36HT4FA1	AUW-48HT4FE	AUW-48HT4FE
	Max. difference in level	m	7.5	15	15
	Connection method		Flare		
Connection wiring	Power wiring	mm ²	3 core x2.5	3 core x6.0	3 core x6.0
	Signal wiring	mm ²	4core x0.75	4core x0.75	4core x0.75
Refrigerant type			R22	R22	R22
Refrigerant charge		kg	2.23	2.48	2.48
Throttle Type			Capillary	Capillary	Capillary
Ambient temp		°C	Cooling 15 ~ 52, Heating -10 ~ 24		

2. SPECIFICATIONS

Model				AUF-48HTR6FEMA	AUF-60HTR6FPMA
Indoor model				AUF-48HR4F1MA	AUF-60HR4FMA
Outdoor model				AUW-48HT6FE	AUW-60HT6FP
Power supply			Ph-V-Hz	3N,380V-415V/50Hz	
Capacity	Cooling(T1/T3)		W	14000/12500	17500/14000
	Heating		W	15000	19000
Dehumidification			L/h	5	5.5
Rated input	Cooling(T1/T3)		W	4360/5000	5450/6600
	Heating		W	4150	5260
Rated Current	Cooling(T1/T3)		A	7.3/8	9/11
	Heating		A	7	9.5
Max. input			W	6300	9000
Max.current			A	9.3	16.5
EER(T1/T3)/COP				3.21/2.5/3.61	3.21/2.12/3.61
Compressor	Type			Scroll	Scroll
	Model			C-SB353H8A	C-SB453H8A
	Brand			SANYO	SANYO
Fan motor	Indoor		Type	AC	AC
			Model	Y7S059D801	Y7S859E002
	Outdoor		Type	AC	AC
			Model	YDK29-6I-39 YDK29-6I-41	YYW65-6-9546A YYW65-6-9547A
Fan	Indoor	type		centrifugal fan	
		Speed Super/Hi/Med/Low	r.p.m	540/470/430/380	570/520/480/430
Fan speed	Outdoor	type		tube-axial	
		Speed Hi/Med/Low	r.p.m	900/750/600	700/600/500
Air circulation	Indoor	Cooling/Heating	m ³ /h	2000	2000
	Outdoor	Hi/Med/Low	m ³ /h	5000	--
Operating control				Wireless Remote control-J1-05(E)	
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×1050	950×340×1386
Packing	Indoor	L×W×H	mm	690×480×2000	690×480×2000
	Outdoor	L×W×H	mm	1110×460×1200	1110×460×1530
Weight	Indoor	Net/Gross	kg	52/63	48/60
	Outdoor	Net/Gross	kg	100/108	100/108
Noise lever	Indoor	Hi/Med/Low	dB(A)	--/52	--/54
	Outdoor	Hi/Med/Low	dB(A)	--/57	--/62
Refrigerant piping	Gas/Liquid		mm	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	50	50
	Max. difference in level		m	15	15

2. SPECIFICATIONS

Model			AUF-48HTR6FEMA	AUF-60HTR6FPMA
Indoor model			AUF-48HR4F1MA	AUF-60HR4FMA
Outdoor model			AUW-48HT6FE	AUW-60HT6FP
Connection method			Flare	
Connection wiring	Power wiring	mm ²	5 core x2.5	5 core x2.5
	Signal wiring	mm ²	4core x0.75	4core x0.75
Refrigerant type			R22	R22
Refrigerant charge		kg	2.5	2.8
Throttle Type			Capillary	Capillary
Ambient temp.		°C	Cooling 15 ~ 52	
			Heating -10 ~ 24	

2. SPECIFICATIONS

Model				AUF-48CTR2SPM	AUF-60CTR2SPM1
Indoor model				AUF-48CR2SM	AUF-60CR2SM1
Outdoor model				AUW-48CT2SP	AUW-60CT2SP1
Power supply			Ph-V-Hz	1N,220V-230V/60Hz	
Capacity	Cooling(T1/T3)		W	13600/11900	14650/12600
	Heating		W	—	—
Dehumidification			L/h	5.48	6.12
Rated input	Cooling(T1/T3)		W	3880/4740	4220/5020
	Heating		W	—	—
Rated Current	Cooling(T1/T3)		A	17.6/21.5	18.7/22.4
	Heating		A	—	—
Max. input			W	5900	6270
Max.current			A	27.4	32.5
EER(T1/T3)/COP				3.51/2.51/--	3.47/2.51/--
Compressor	Type			Scroll	Scroll
	Model			ZJ44KHE-PFB-502	ABT048KTA
	Brand			COPELAND	LG
Fan motor	Indoor	Type	DC	DC	
		Model	EQDW07AQH	EQDW07AQH	
	Outdoor	Type	AC	DC	
		Model	YYW95-8-8523	SIC-71FW-D8121-1	
			YYW95-8-8526	SIC-71FW-D8121-2	
Fan	Indoor	type		centrifugal fan	
		Speed Super/Hi/Med/Low	r.p.m	570/520/450/410	570/520/450/410
Fan speed	Outdoor	type		tube-axial	
		Speed Hi/Med/Low	r.p.m	810/700/550	790/700/550
Air circulation	Indoor	Cooling/Heating	m³/h	2000	2000
	Outdoor	Hi/Med/Low	m³/h	6000	6000
Operating control				Wireless Remote control-J1-05(E)	
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×1050	950×340×1386
Packing	Indoor	L×W×H	mm	690×480×2000	690×480×2000
	Outdoor	L×W×H	mm	1110×460×1200	1110×460×1530
Weight	Indoor	Net/Gross	kg	50/61	51/62
	Outdoor	Net/Gross	kg	105/119	105/119
Noise lever	Indoor	Hi/Med/Low	dB(A)	--/52	--/52
	Outdoor	Hi/Med/Low	dB(A)	--/59	--/60
Refrigerant piping	Gas/Liquid		mm	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	50	50

2. SPECIFICATIONS

Model			AUF-48CTR2SPM	AUF-60CTR2SPM1
Indoor model			AUF-48CR2SM	AUF-60CR2SM1
Outdoor model			AUW-48CT2SP	AUW-60CT2SP1
	Max. difference in level	m	15	15
	Connection method		Flare	
Connection wiring	Power wiring	mm ²	3 core x6.0	3 core x6.0
	Signal wiring	mm ²	4core x1.5	4core x1.5
Refrigerant type			R410A	R410A
Refrigerant charge		kg	3.45	3.55
Throttle Type			Capillary	Capillary
Ambient temp.		°C	Cooling15 ~ 52	

2. SPECIFICATIONS

Climate:T1

Model			AUF-42CR6FEM	AUF-48ER6SEM1	AUF-60ER6SPM1
Indoor model			AUF-42CR4FM	AUF-48ER6SM	AUF-60ER6SM
Outdoor model			AUW-42C6FE	AUW-48H6SE1	AUW-60H6SP1
Power supply		Ph-V-Hz	3Ph,380V-415V/50Hz	3Ph,380V-415V/50Hz	3Ph,380V-415V/50Hz
Capacity	Cooling	kW	12.5	14	16
		Btu/h	42,700	47,770	54590
	Heating	kW	—	15+3.6	17+3.6
		Btu/h	—	51180+12280	58000+12280
Dehumidification		L/h	3.5	5.44	6.76
Rated input	Cooling	kW	4.25	4.65	5.31
	Heating	kW	—	4.4+3.6	9.5+6.4
Rated Current	Cooling	A	10	8	9
	Heating	A	—	7.6+6.4	9.5+6.4
Max. input		kW	10	8.3	16.6
Max.current		A	13	14.8	9.3
EER/COP			2.94/--	3.01/3.41	3.01/3.01
Compressor	Model		TE708RC3Q9RK	ATE550SC3Q9RK	ATE650SC3Q9JK
	Type		Rotary	Rotary	Rotary
	Winding resistance	Ω	2.99	2.79	2.48
	Brand		SHANGHAI HITACHI	SHANGHAI HITACHI	SHANGHAI HITACHI
Fan motor	Indoor	Model	Y7S059D801	Y7S059D801	Y7S059D801
		Winding resistance (at20℃)	M:187;A:106	M:187;A:106	M:187;A:106
	Outdoor	Model	YDK29-6I-39,YDK29-6I-41	YDK29-6I-39,YDK29-6I-41	YDK65-6-9024,YDK65-6-9061
		Winding resistance (at20℃)	M:187;A:106	M:187;A:106	M:83 A1:23.4 A2:14 A3:63.5
Fan	Indoor	type	centrifugal fan	centrifugal fan	centrifugal fan
		Speed Hi/Med/Low	r.p.m	540/470/430	475/430/385
Fan speed	Outdoor	type	tube-axial	tube-axial	tube-axial
		Speed Hi/Med/Low	r.p.m	920/750/600	900/750/600
Air circulation	Indoor	Cooling/Heating	m³/h	2000	1800
	Outdoor	Hi/Med/Low	m³/h	--	--
Operating control			Wireless Remote control-J1-05(E)		

2. SPECIFICATIONS

Model				AUF-42CR6FEM	AUF-48ER6SEM1	AUF-60ER6SPM1
Indoor model				AUF-42CR4FM	AUF-48ER6SM	AUF-60ER6SM
Outdoor model				AUW-42C6FE	AUW-48H6SE1	AUW-60H6SP1
Dimensions	Indoor	L×W×H	mm	580×380×1870	580×380×1870	580×380×1870
	Outdoor	L×W×H	mm	950×340×1050	950×340×1050	950×340×1386
Packing	Indoor	L×W×H	mm	2000×690×480	2000×690×480	2000×690×480
	Outdoor	L×W×H	mm	1110×460×1200	1110×460×1200	1110×460×1530
Weight	Indoor	Net/Gross	kg	48/60	55/60	55/60
	Outdoor	Net/Gross	kg	88/93	96/103	106/116
Noise level	Indoor	Hi/Med/Low	dB(A)	--/52	--/52	--/52
	Outdoor	Hi/Med/Low	dB(A)	--/62	--/62	--/62
Refrigerant piping	Gas/Liquid		mm	19.05/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	50	50	50
	Max. difference in level		m	15	15	15
	Connection method			Flare	Flare	Flare
Connection	Power wiring		mm ²	5 core x2.5	5 core x2.5	5 core x2.5
wiring	Signal wiring		mm ²	4core x0.75	4core x0.75+4core x1.5(electric heater)	4core x0.75+4core x1.5(electric heater)
Refrigerant charge			kg	2.35(R22)	2.4(R410A)	3.1(R410A)
Throttle Type				Capillary	Capillary	Capillary
Ambient temp			℃	COOLING: 15~43	COOLING: -15~43 HEATING: -10~24	COOLING: -15~43 HEATING: -10~24

2. SPECIFICATIONS

Model No.		AUF-42CR6SEM
Indoor Unit		AUF-42CR4SM
	Panel Pic.	 L5C
Outdoor Unit		AUW-42C6SE
Type		T1, Cooling Only
Ratings		
T1 Cooling Capacity	W	13000
Heating Capacity	W	—
T1 Rated Input-Cooling	W	4420
Rated Input-Heating	W	—
Moisture Removal	L/H.r	4.7
Air Circulation	CMH Max	2000
T1 EER for Cooling	W/W	2.94
COP for Heating	W/W	—
Refrigerant		R410A
Indoor Unit Noise Level	High(dB (A))	52
	Low(dB (A))	46
Outdoor Unit Noise Level	dB (A)	58
Power Supply		
Voltage, Frequency, Phase		380-415V~/3Ph/50Hz
Rated Current	Cooling(Amp.)	8.0
	Heating(Amp.)	—
LRA	A	/
System		
Compressor type		Rotary
Compressor MFG		Highly
Model No.		ATE550SC3Q9RK
Expansion Device		Capillary
Evaporator		Copper and Aluminum Fin
Condenser		Copper and Aluminum Fin
Gas Charge	g	2400
Connecting Pipe Diameter		
Liquid Pipe	inch	3/8
Gas Pipe	inch	3/4
Features		

2. SPECIFICATIONS

Display on Front Panel	Yes	
LCD Wireless Remote Controller	Yes	
Removable and washable Panel	Yes	
Washable PP Filter	Yes	
24 Hours Timer	Yes	
4 Speed and Auto Indoor Fan Control	Yes	
Vertical Auto Swing Louver	Yes	
Horizontal Auto Swing Louver	Yes	
Dimmer	Yes	
Sleep Operation	Yes	
Smart Function	Yes	
Super Function	Yes	
Auto Restart	Yes	
Other		
Net Dimensions WxHxD (mm)	Indoor Unit	580×1870×380
	Outdoor Unit	950×1050×340
Net Weight (Kg)	Indoor Unit	48
	Outdoor Unit	93
Packing Dimensions WxHxD (mm)	Indoor Unit	690×2000×480
	Outdoor Unit	1110×1200×460
Gross Weight (Kg)	Indoor Unit	60
	Outdoor Unit	100
Loading Capacity (20'/40'/40'HC)		22/46/52

Remarks:

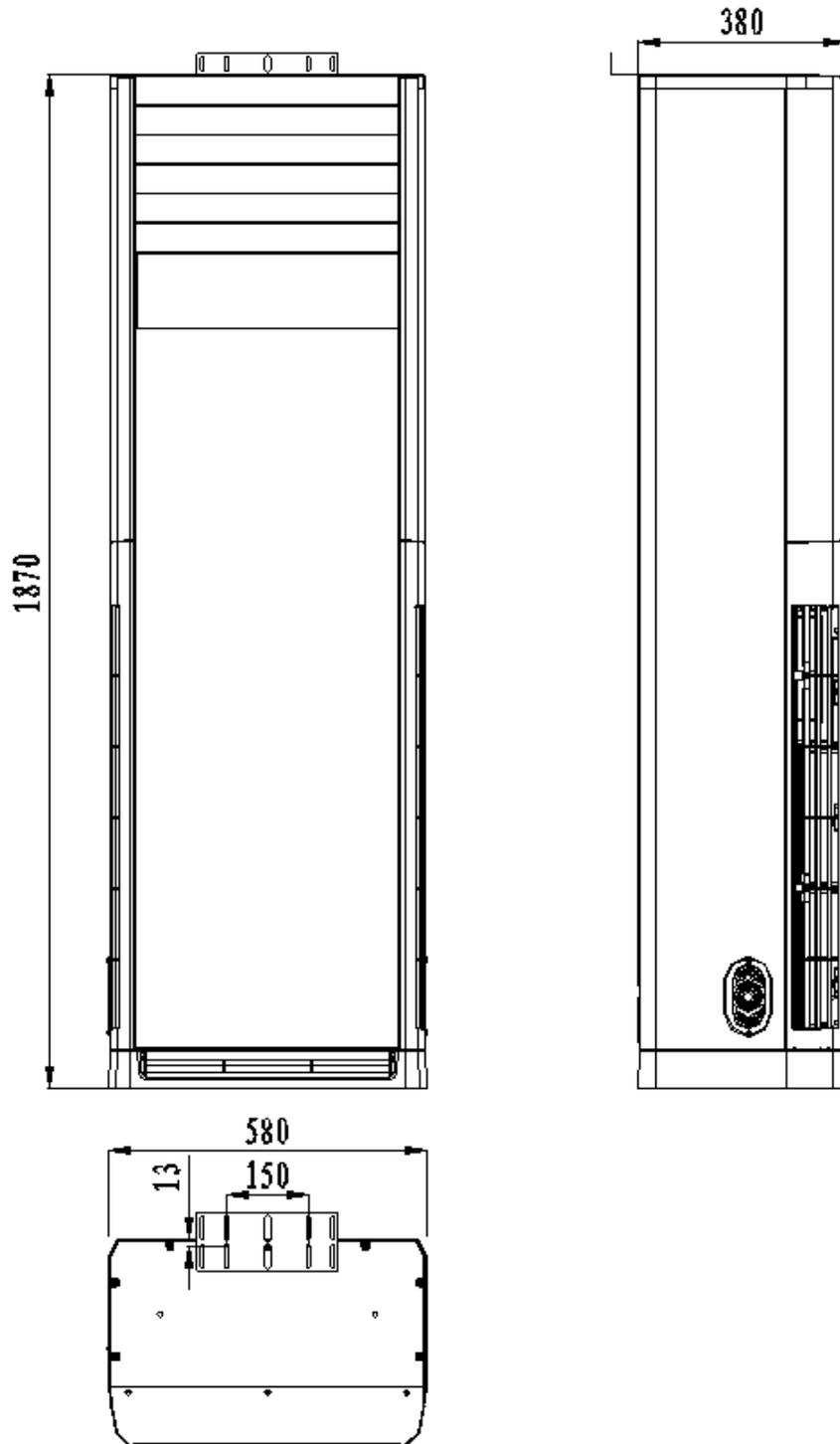
1. The above design and specifications are subject to change without prior notice for product improvement.
2. The value given in the table for noise level reflect in anechoic chamber.

3. OUTLINES AND DIMENSIONS

3. OUTLINES AND DIMENSIONS

3-1 INDOOR

(UNIT:mm)

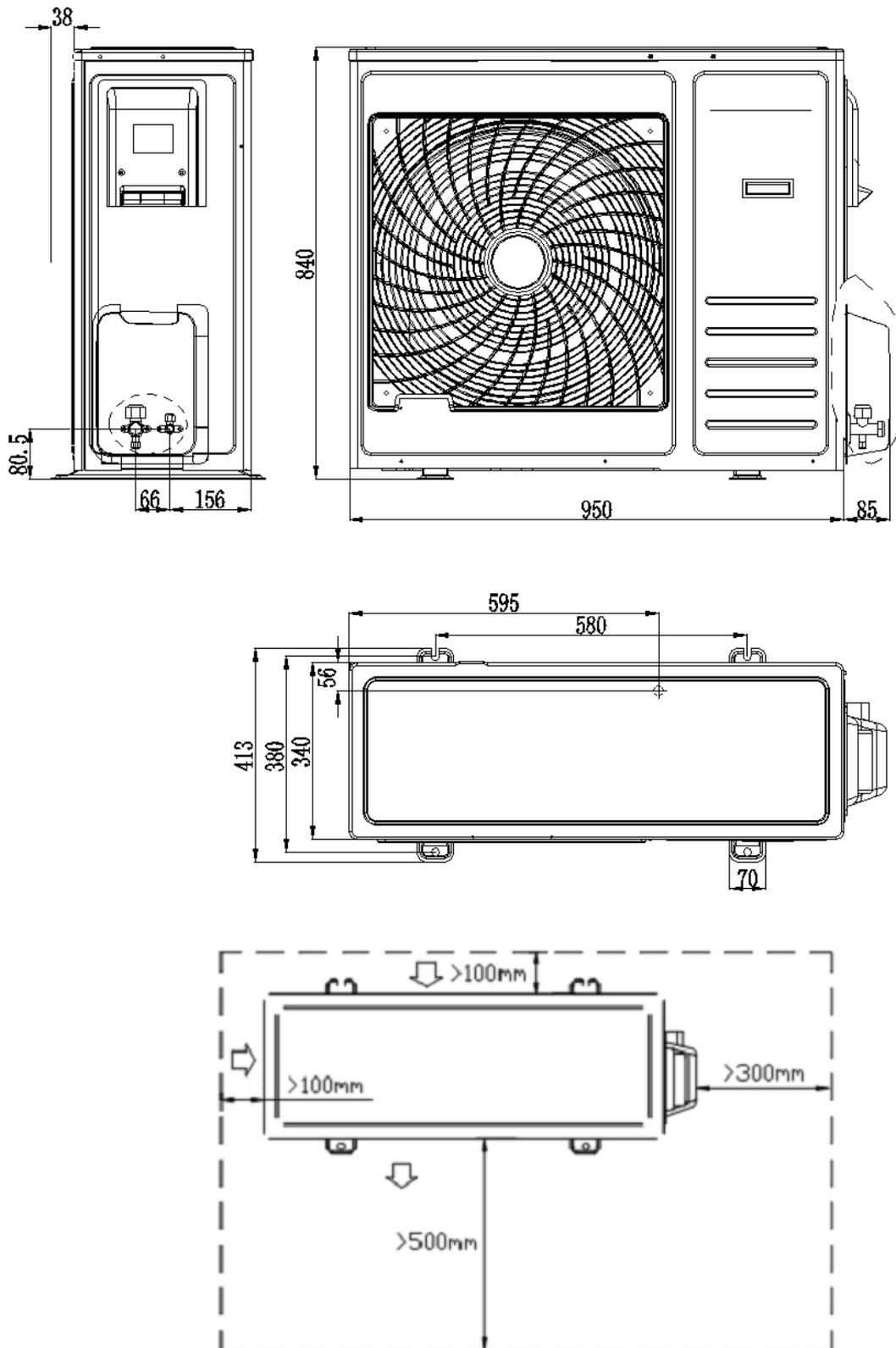


3. OUTLINES AND DIMENSIONS

3-2.OUTDOOR

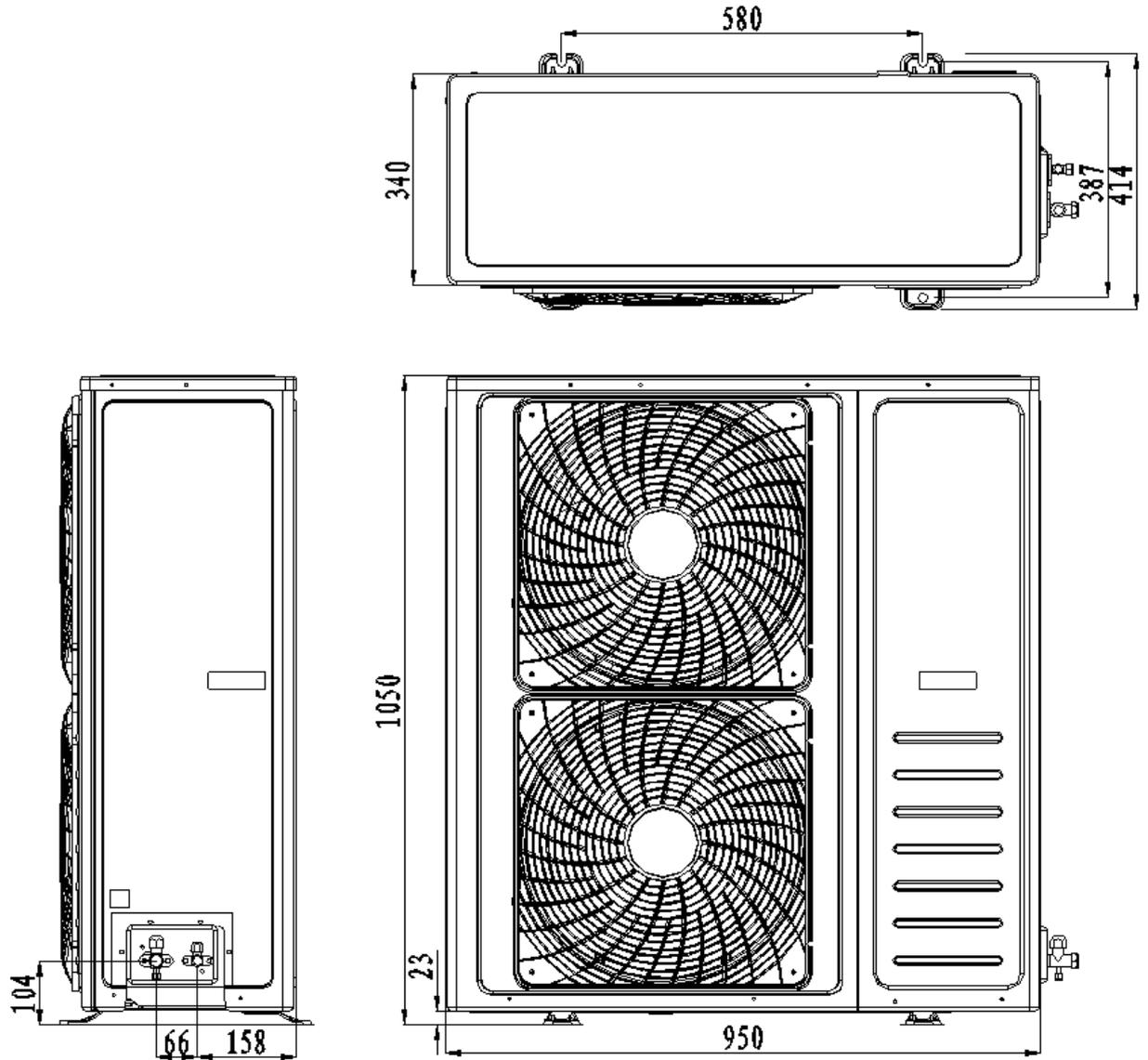
(UNIT: mm)

36K (except AUF-36CTR2SEM)



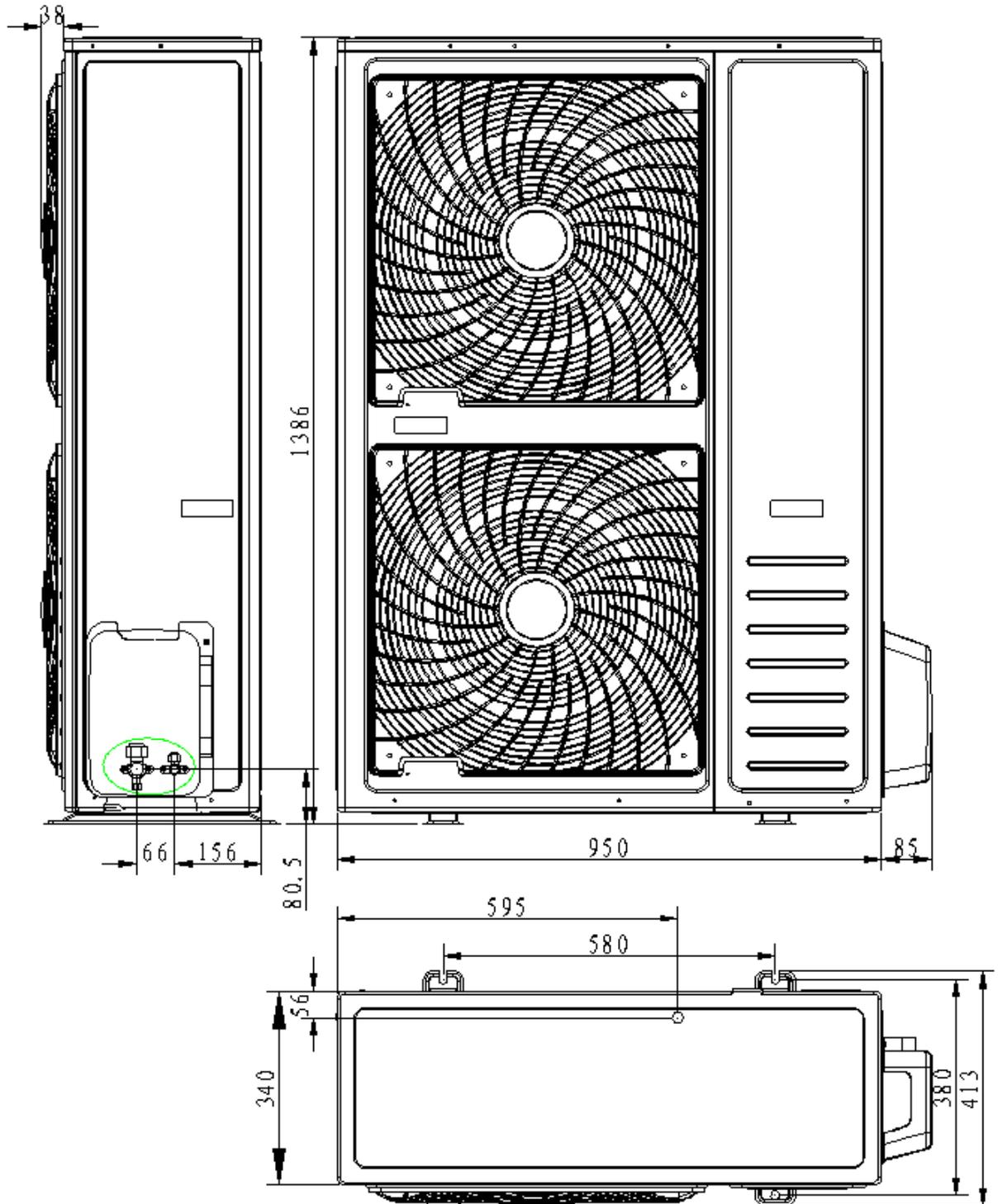
3. OUTLINES AND DIMENSIONS

42K,48K(except AUF-48CTR2SPM)**&36K** (AUF-36CTR2SEM)



3. OUTLINES AND DIMENSIONS

48K(AUF-48CTR2SPM)&60K

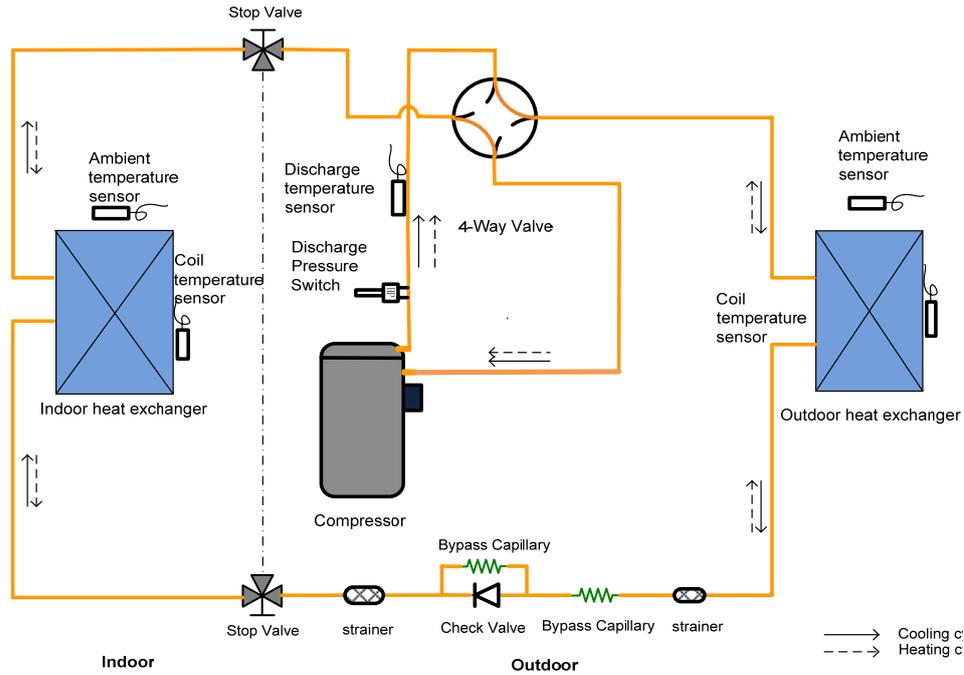


4. Diagrams&DATA

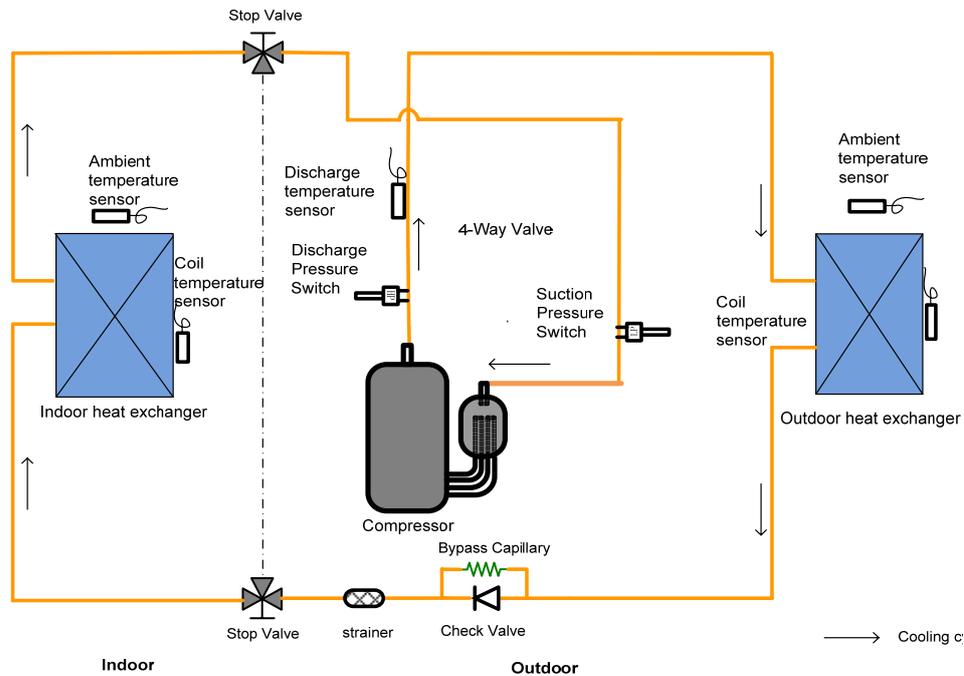
4.1 Piping Diagrams

T3 Type

36K (except AUF-36CTR2SEM)



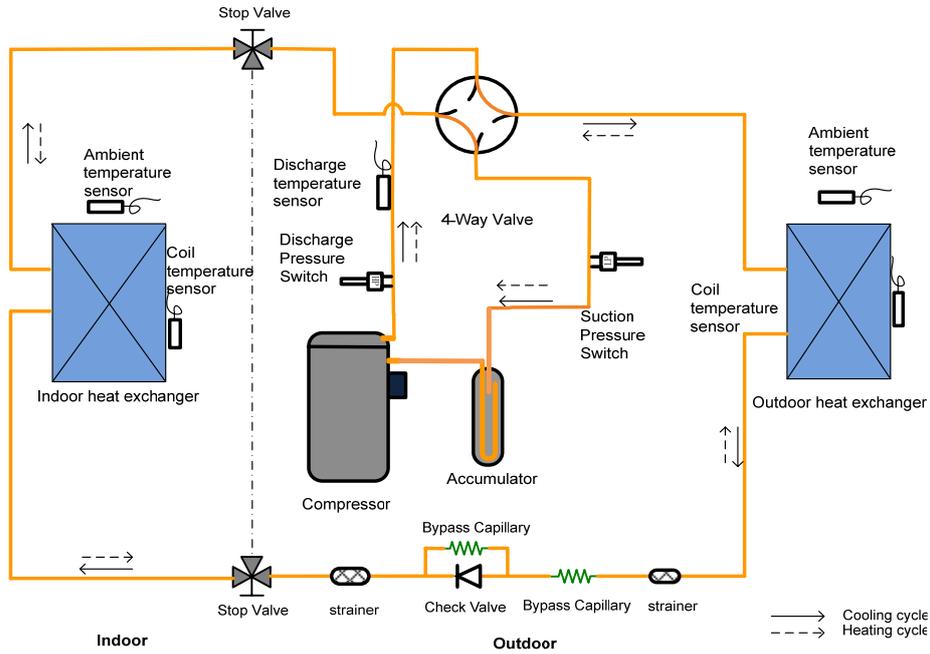
AUF-36CTR2SEM



4. DIAGRAMS&DATA

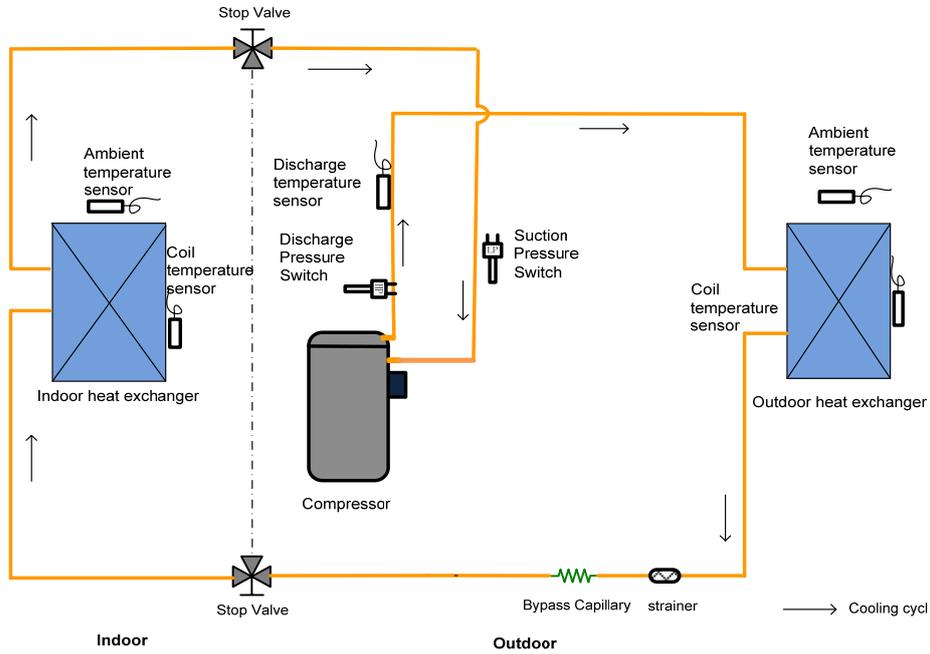
48k&60K

HEAT PUMP TYPE



48K&60K

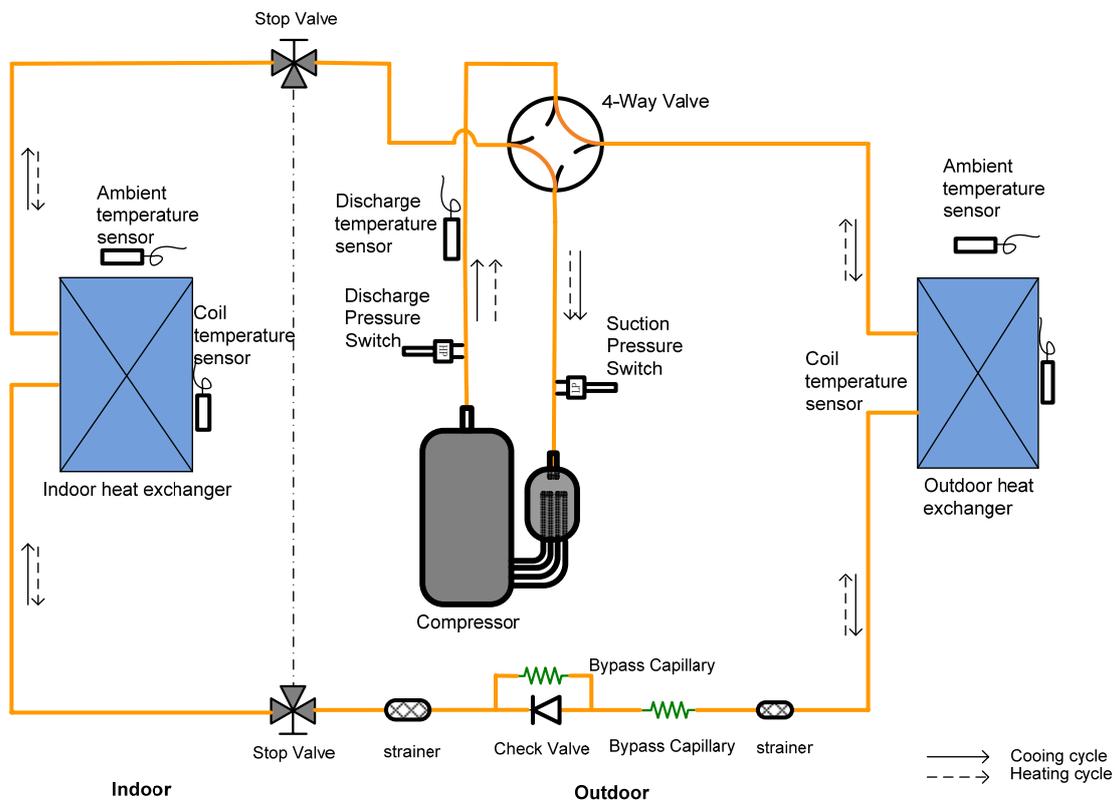
COOLING ONLY TYPE



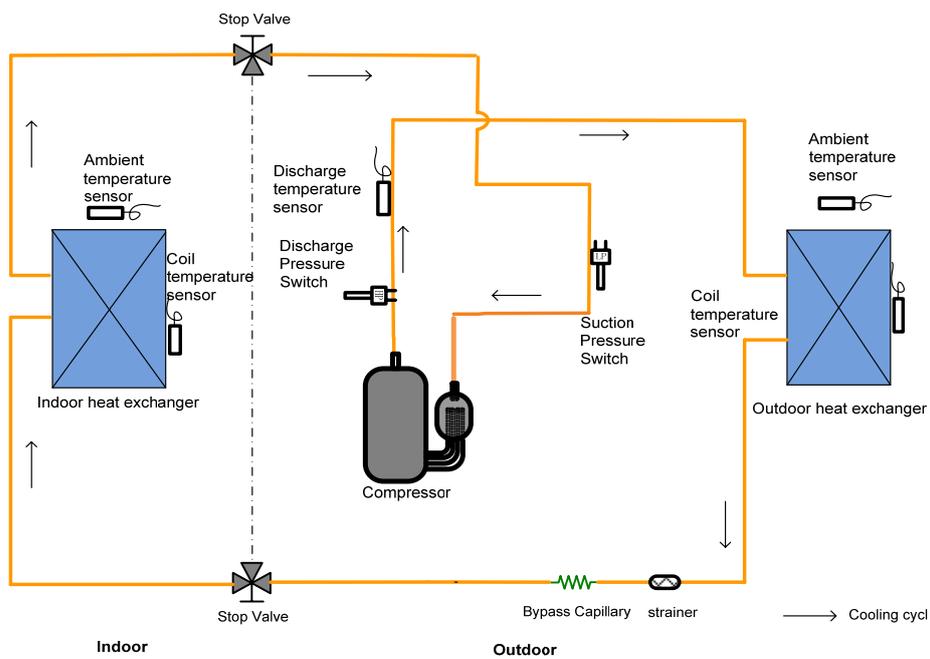
4. DIAGRAMS&DATA

T1 Type:

48K/60K

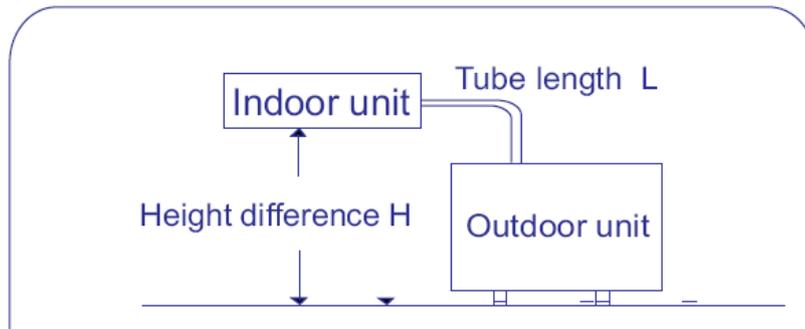


42K



4. DIAGRAMS&DATA

4.2MAX. Refrigerant pipe length and height difference



Model(Kbtu/h)		36K	42K,48K,60K
Max. refrigerant pipe length	m	15	50
Max. difference in level	m	7.5	15

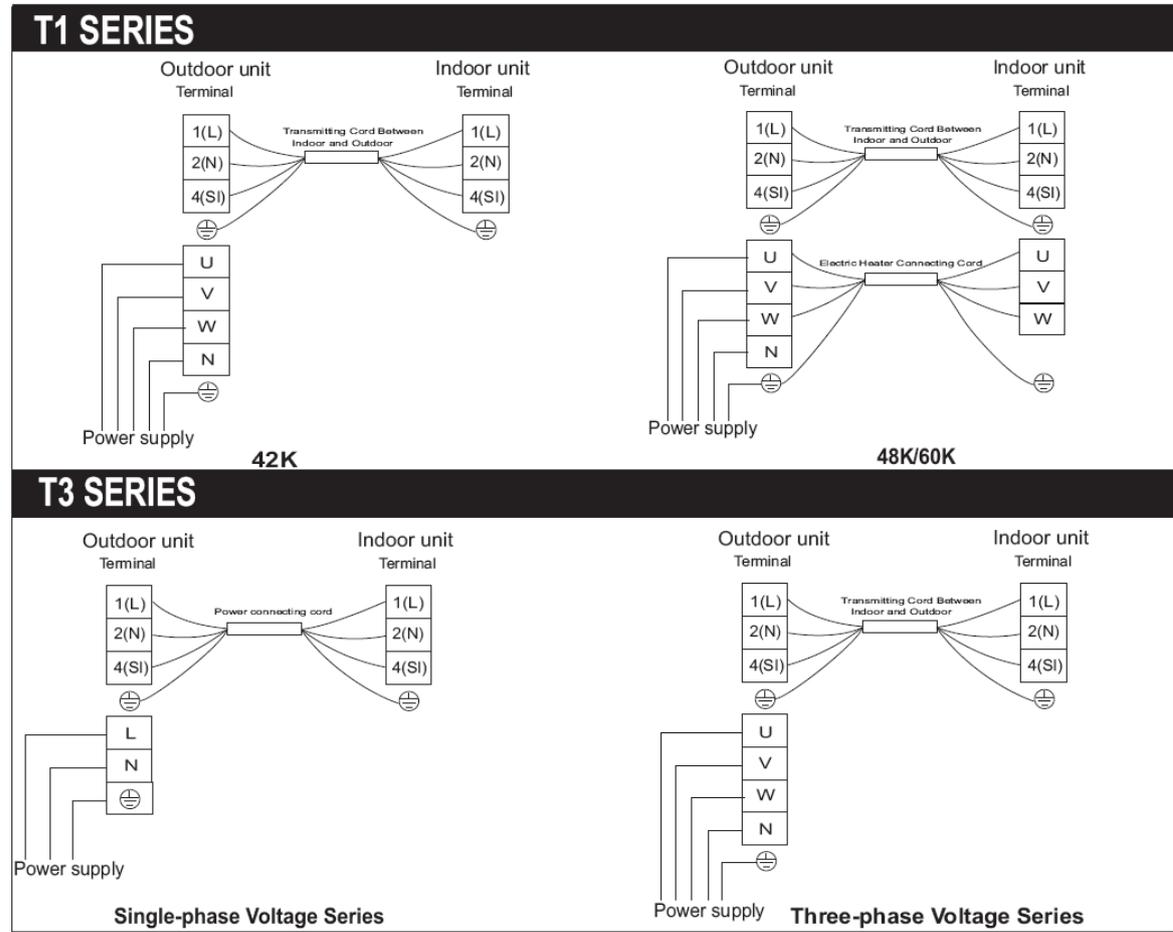
*Do your best to reduce the pipe length. Long pipe may cause capacity of the indoor unit incline. The refrigerant charge volume for the unit is based on using a 5m connecting pipe. If the connecting pipe's length is longer than 5m, it is advisable to charge additional Refrigerant for the unit in order to achieve better operation.

Additional Refrigerant= $(L-5) \times 0.035\text{kg}$

(* "L" refers to length of connection pipe.)

4. DIAGRAMS&DATA

4.3ELECTRIC Diagrams



4. DIAGRAMS&DATA

Recommended Wire Size

Series	Model	POWER SUPPLY	Power Source Cable Size (mm ²)	Transmitting Cable Size (mm ²)
three phase voltage Series	42K	3Ph,380V-415V/50Hz	5×2.5	4×0.75
	48K/60K	3Ph,380V-415V/50Hz	5core×2.5	4core×0.75(transmitting cable) 4core×1.5(electrical heater connecting cable)
single phase voltage Series	36K	220-240V ~,50Hz	3×2.5	4×0.75
	48K	220-240V ~,50Hz	3×6.0	4×0.75
	60K	220-240V ~,60Hz	3×6.0	4×0.75

- Use an ELB (Electric Leakage Breaker). If not used, it will cause an electric shock or a fire.
- The max. electric wire length is 52m, be sure to enlarge cable size when exceed 15m, and select cable size follow the European Standard ,En60 335-1.
- Do not operate the system until all the check points have been cleared.

(A) Check to ensure that the insulation resistance is more than 1 megohm, by measuring the resistance between ground and the terminal of the electrical parts. If not, do not operate the system until the electrical leakage is found and repaired.

(B) Check to ensure that the stop valves of the outdoor unit are fully opened and then start the system.

- Pay attention to the following items while the system is running.

(A) Do not touch any of the parts by hand at the discharge gas side, since the compressor chamber and the pipes at the discharge side are heated higher than 90°C.

(B) DO NOT PUSH THE BUTTON OF THE MAGNETIC SWITCH(ES). It will cause a serious Accident.

NOTES:

- 1) Follow local codes and regulations when selecting field wires.
- 2) The wire sizes marked in the table are selected at the maxim current of the unit according to the European Standard ,En60 335-1. Use the wires which are not lighter than the ordinary tough rubber sheathed flexible cord (code designation H07RN-F) or ordinary polychloroprene sheathed flexible cord (code designation H07RN-F) .
- 3) Use a shielded cable for the transmitting circuit and connect it to ground .

4. DIAGRAMS&DATA

4) In the case that power cables are connected in series, add each unit maximum current and select wires below.

Selection According to EN60 335-1

Current i (A)	Wire Size (mm ²)
$i \leq 6$	0.75
$6 < i \leq 10$	1
$10 < i \leq 16$	1.5
$16 < i \leq 25$	2.5
$25 < i \leq 32$	4
$32 < i \leq 40$	6
$40 < i \leq 63$	10
$63 < i$	*3

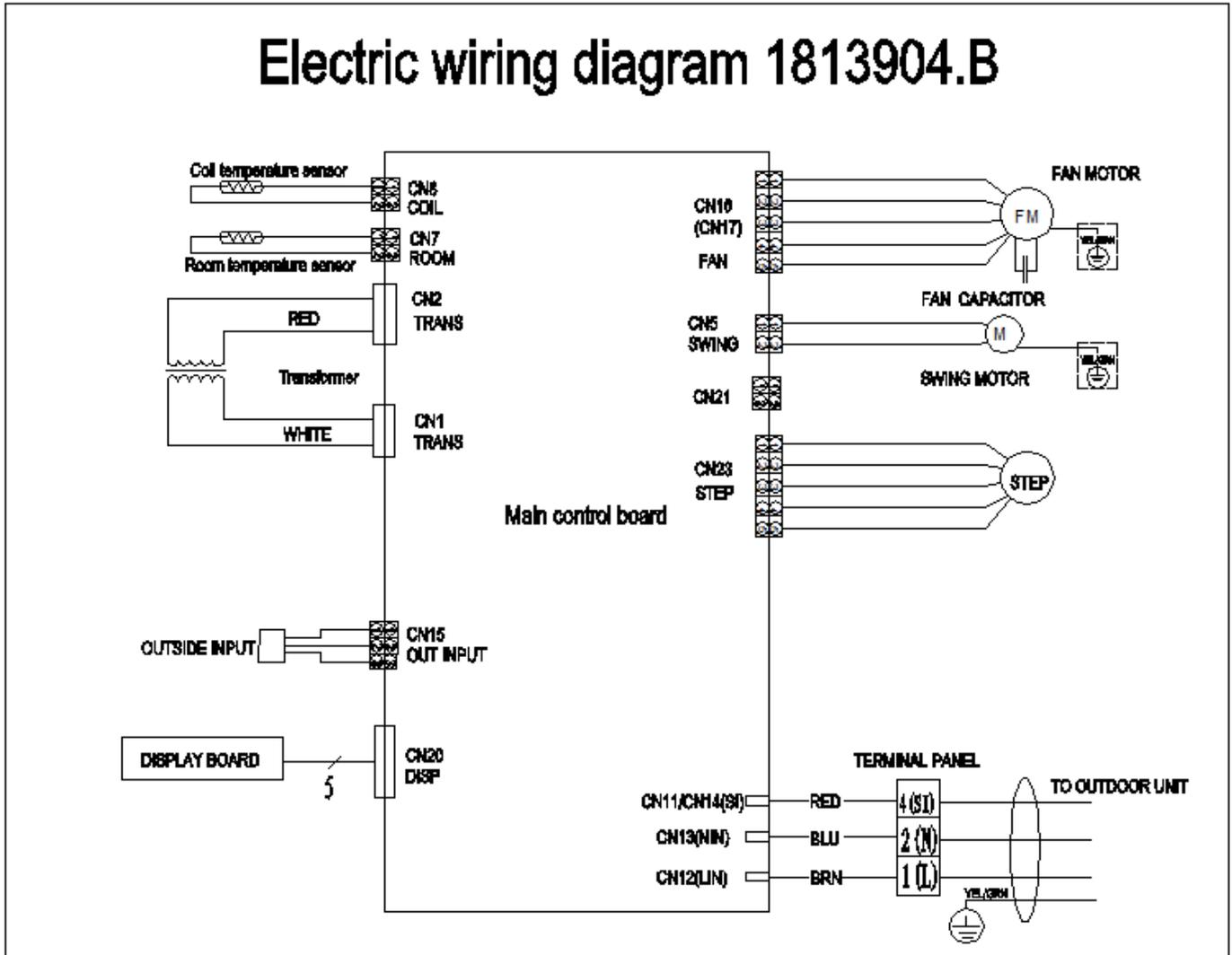
* in the case that current exceeds 63A, do not connect cables in series.

5. ELECTRICAL DATA

5-1. Electrical wiring diagrams

INDOOR UNIT:

AUF-36HTR4FAM, AUF-48HTR4FEM, AUF-42CR6FEM, AUF-42CR6SEM, AUF-60CTR2SPM



Indoor Fault Code Table

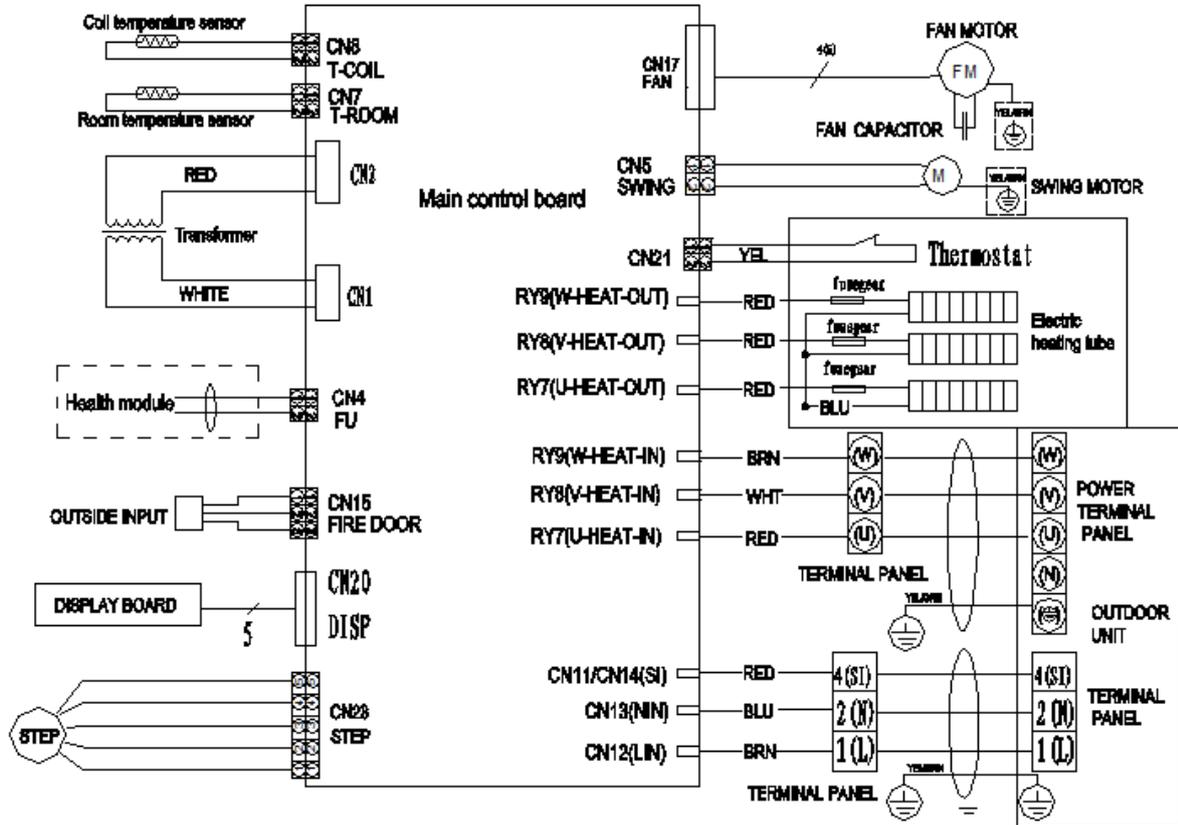
Code No.	Content of Abnormality	Code No.	Content of Abnormality
64	Communication between Indoor and Outdoor Fault	81	Room Temperature Sensor Fault
73	Indoor EEPROM Fault	83	Coil Temperature Sensor Fault
80	Key Fault		

5. ELECTRICAL DATA

AUF-48ER6SEM1

AUF-60ER6SPM1

Electric wiring diagram 1825698.A



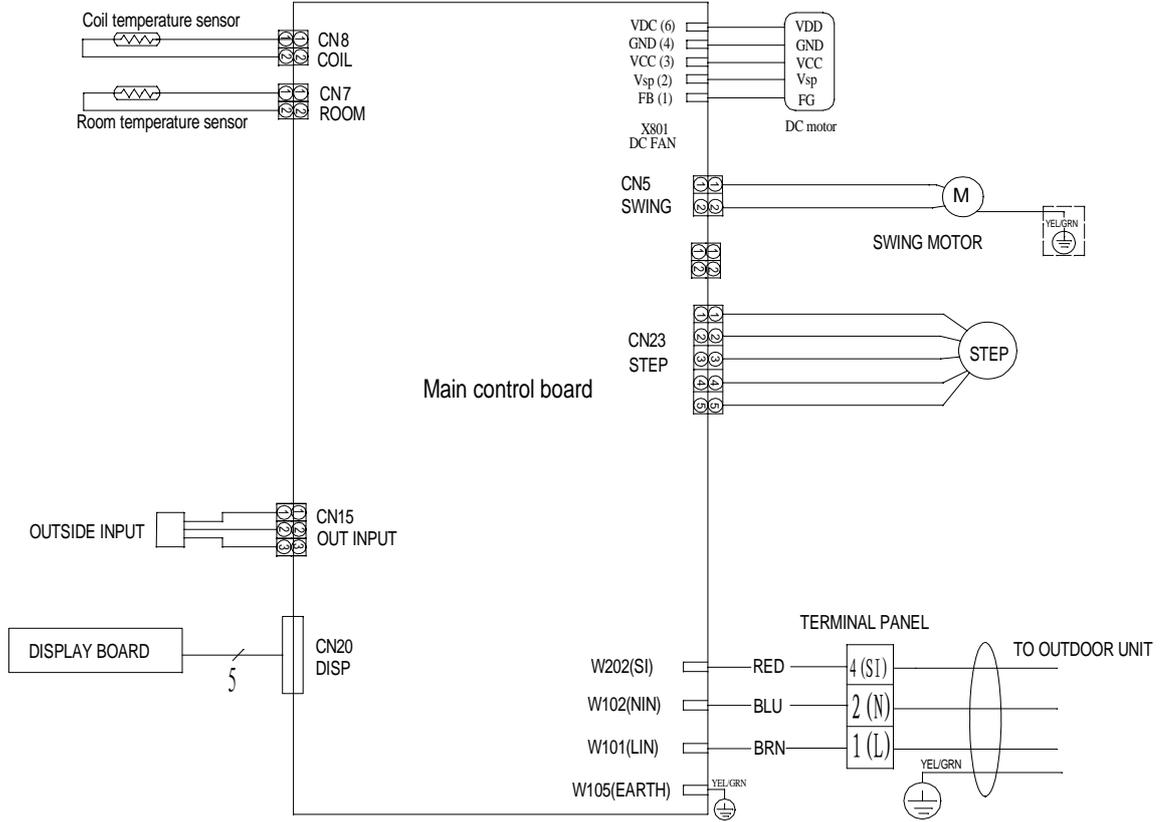
Indoor Fault Code Table

Code No.	Content of Abnormality	Code No.	Content of Abnormality
64	Communication between Indoor and Outdoor Fault	81	Room Temperature Sensor Fault
73	Indoor EEPROM Fault	83	Coil Temperature Sensor Fault
80	Key Fault		

5. ELECTRICAL DATA

AUF-36CTR2SEM
AUF-48CTR2SPM
AUF-60CTR2SPM1

Electric wiring diagram 1838641. A

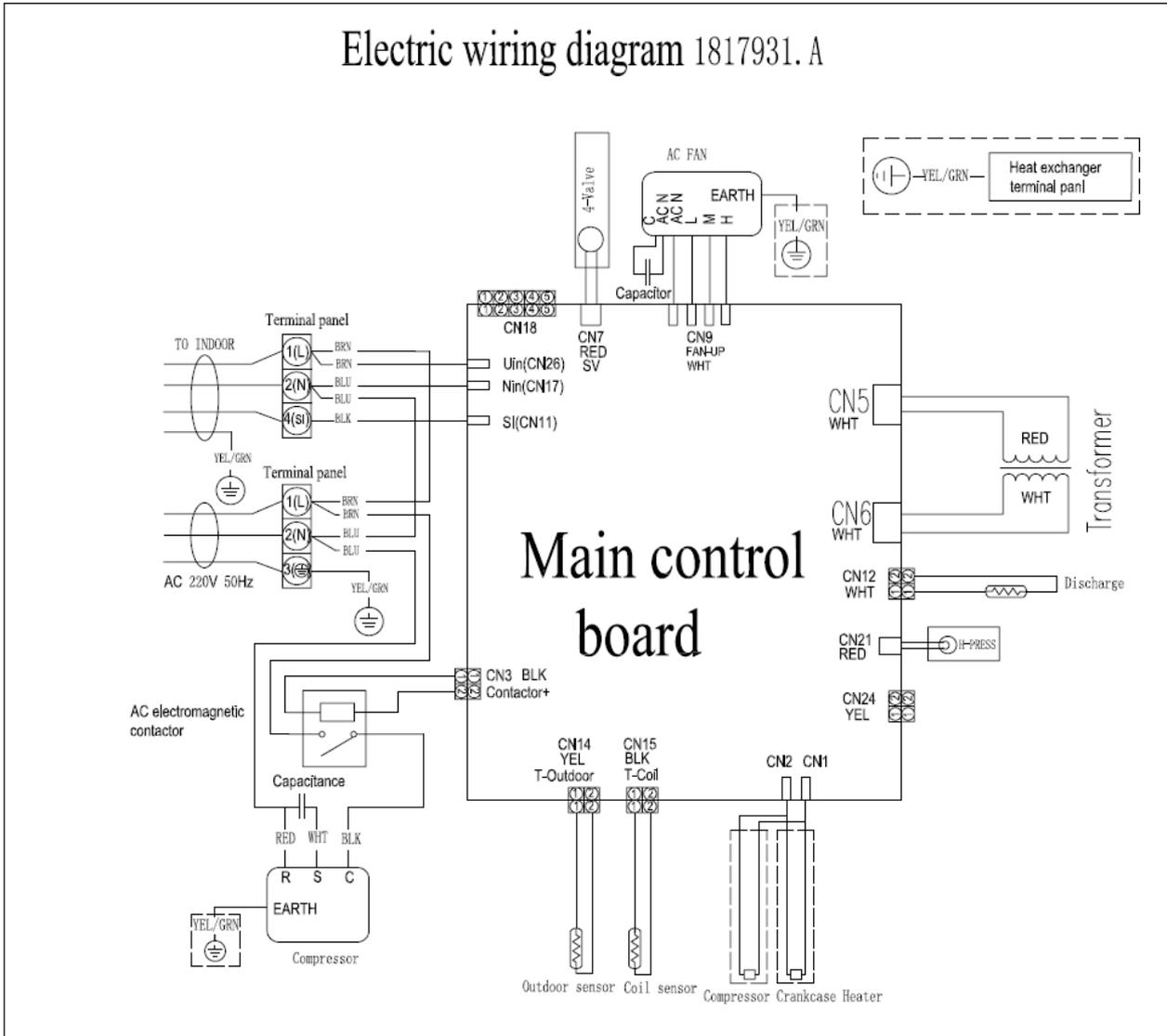


Indoor Fault Code Table

Code No.	Content of Abnormality	Code No.	Content of Abnormality
64	Communication between Indoor and Outdoor Fault	80	Key Fault
72	Indoor Fan Motor Fault	81	Room Temperature Sensor Fault
73	Indoor EEPROM Fault	83	Coil Temperature Sensor Fault

5. ELECTRICAL DATA

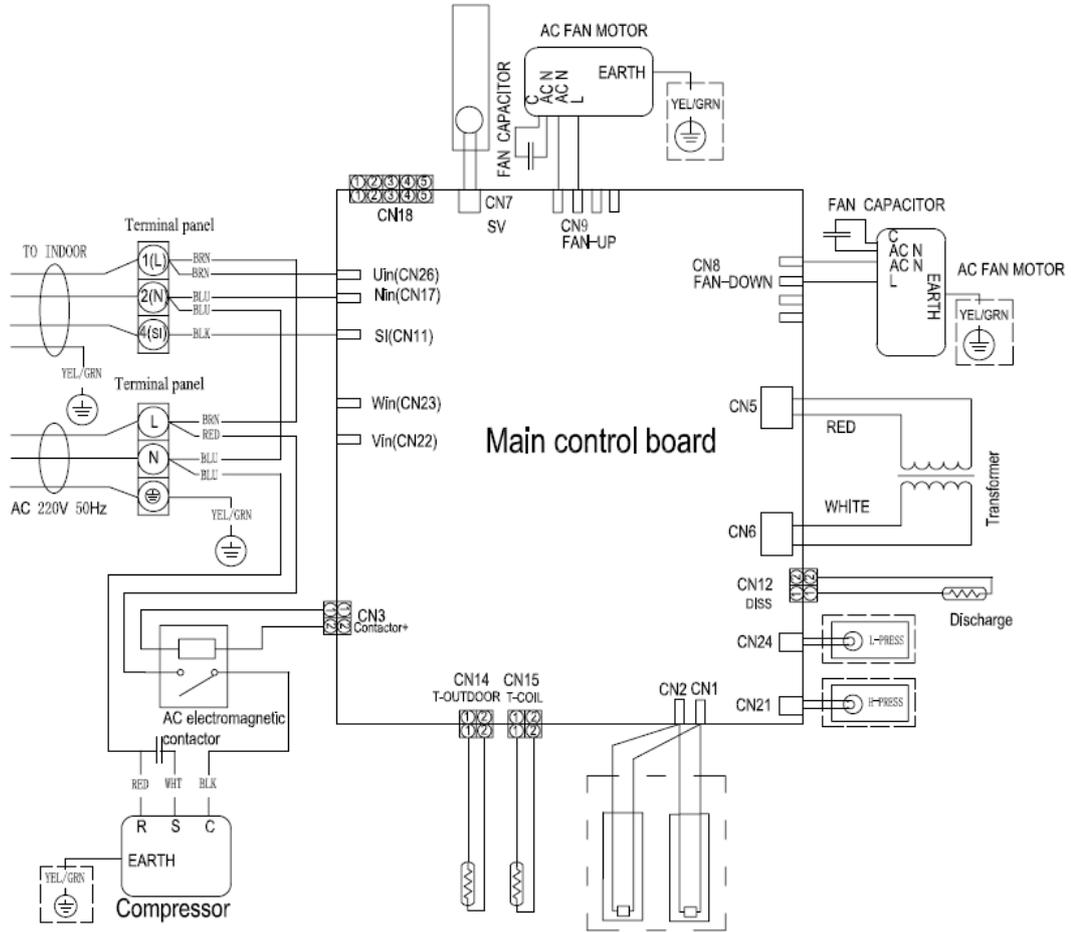
OUTDOOR UNIT:
36K(AUF-36HTR4FAM)



5. ELECTRICAL DATA

48K(AUF-48HTR4FEM)

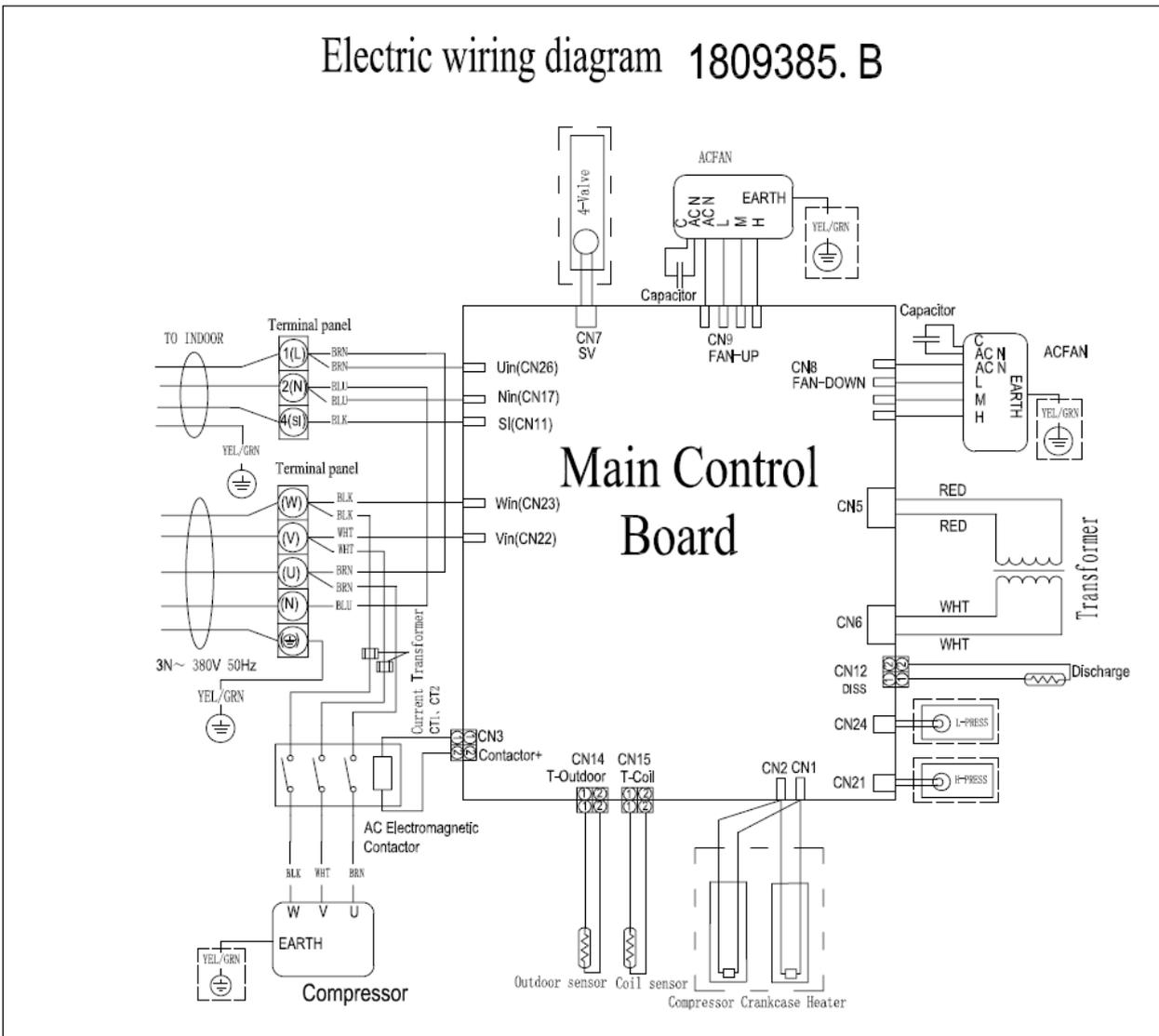
Electric wiring diagram 1817896.A



5. ELECTRICAL DATA

42K(AUF-42CR6FEM, AUF-42CR6SEM)

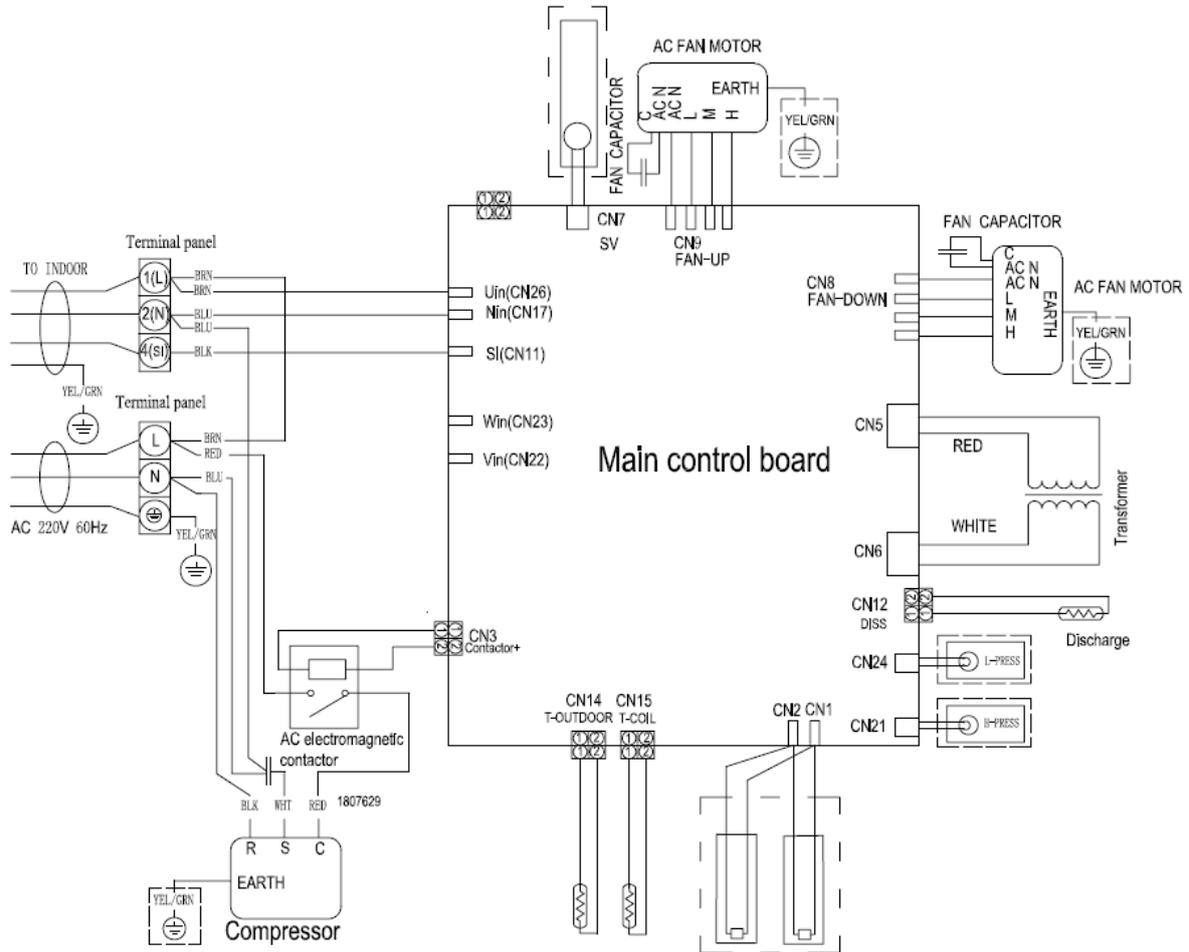
Electric wiring diagram 1809385. B



5. ELECTRICAL DATA

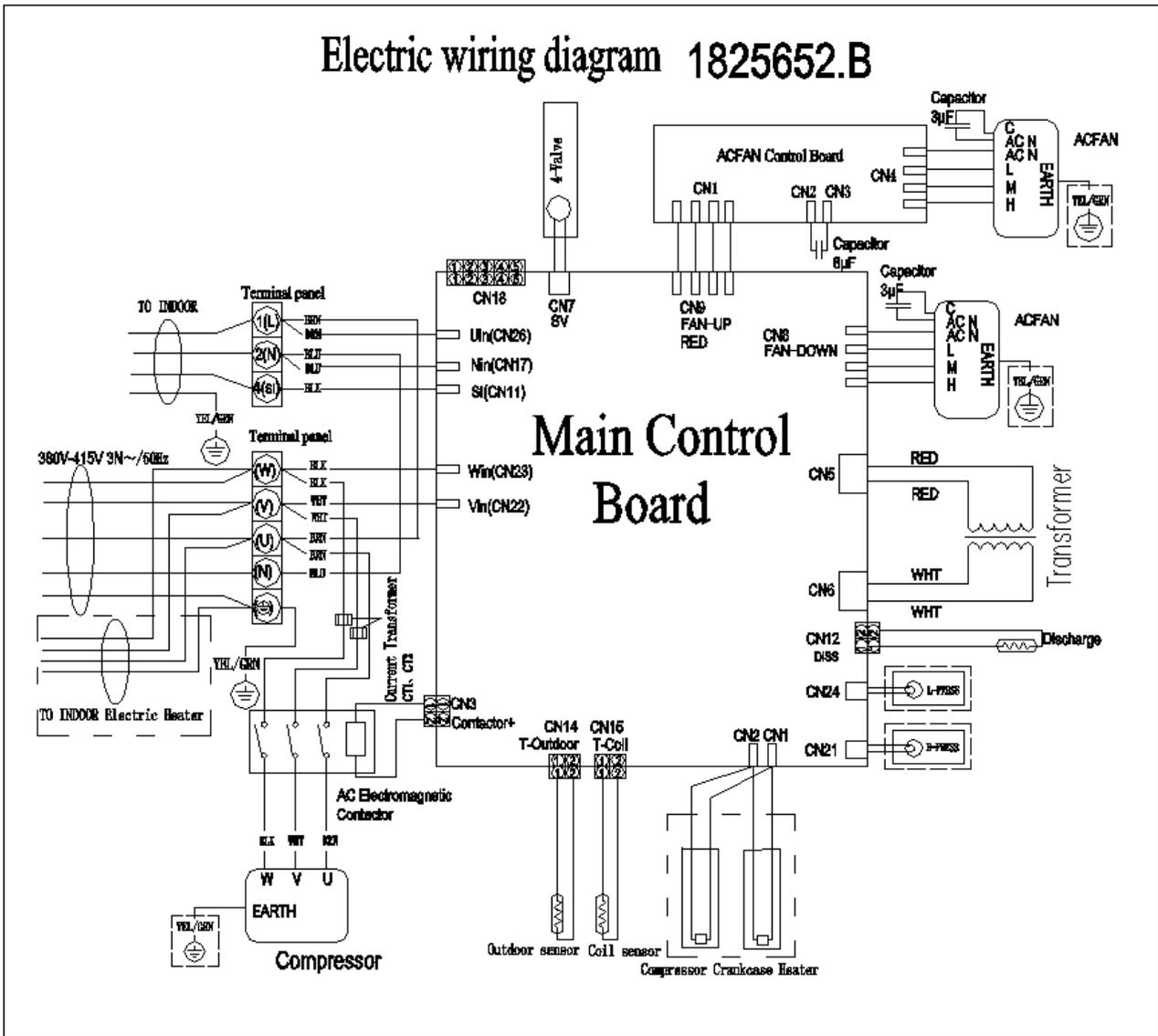
36K(AUF-36CTR2SEM)
 48K(AUF-48CTR2SPM)
 60K(AUF-60CTR2SPM)

Electric wiring diagram 1807674.C



5. ELECTRICAL DATA

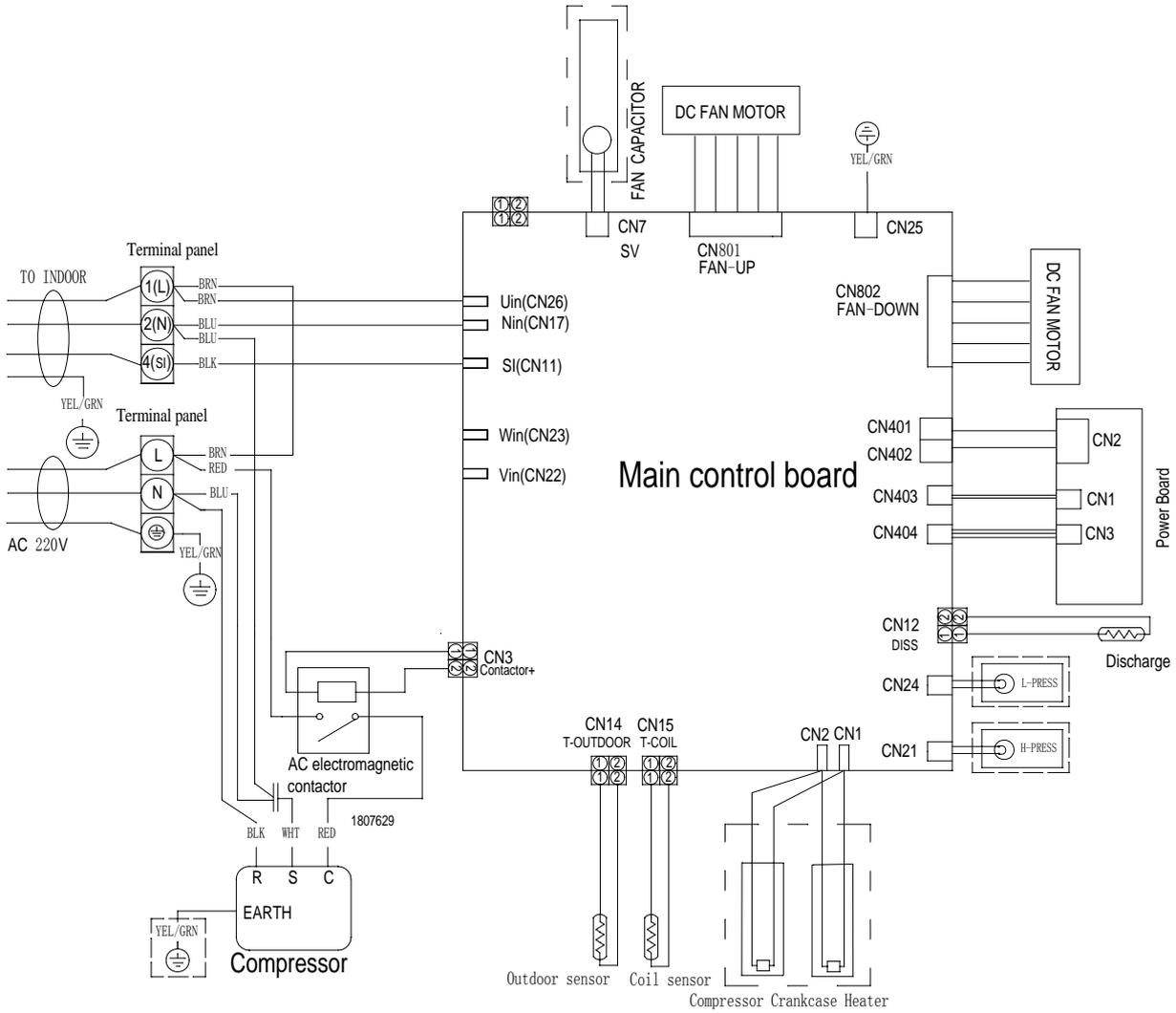
48K(AUF-48ER6SEM1)



5. ELECTRICAL DATA

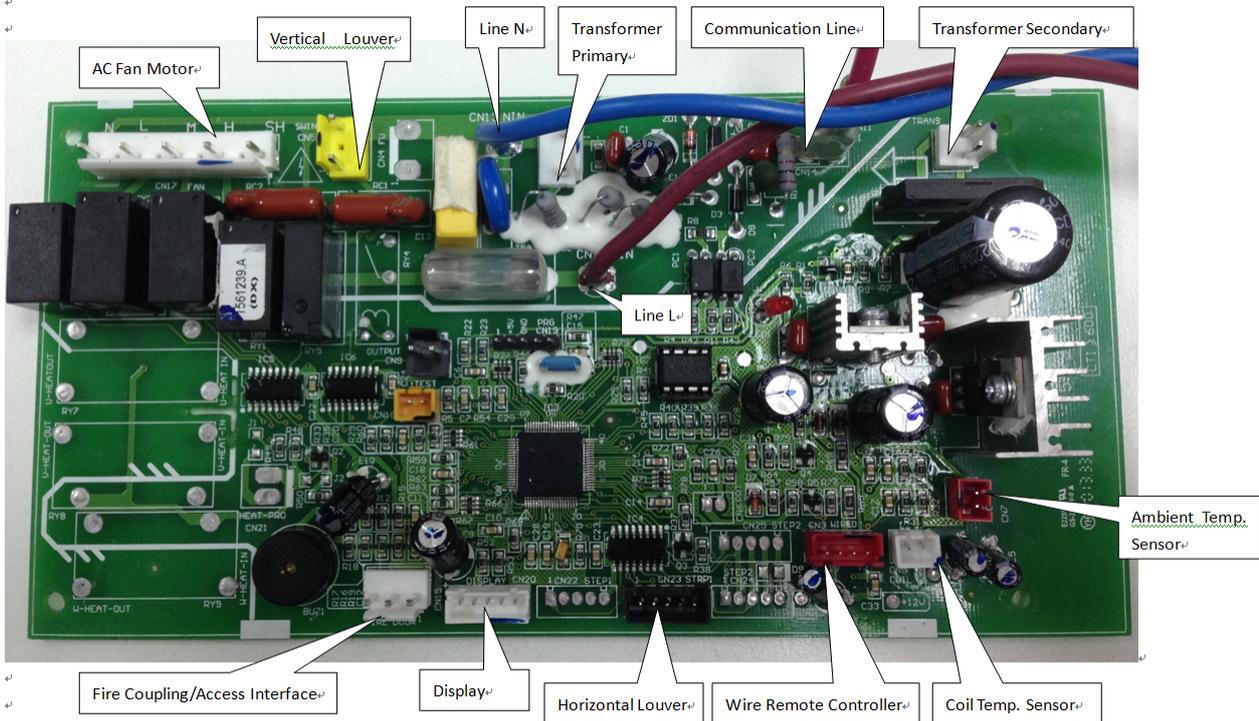
60K(AUF-60CTR2SPM1)

Electric wiring diagram 1850836.B

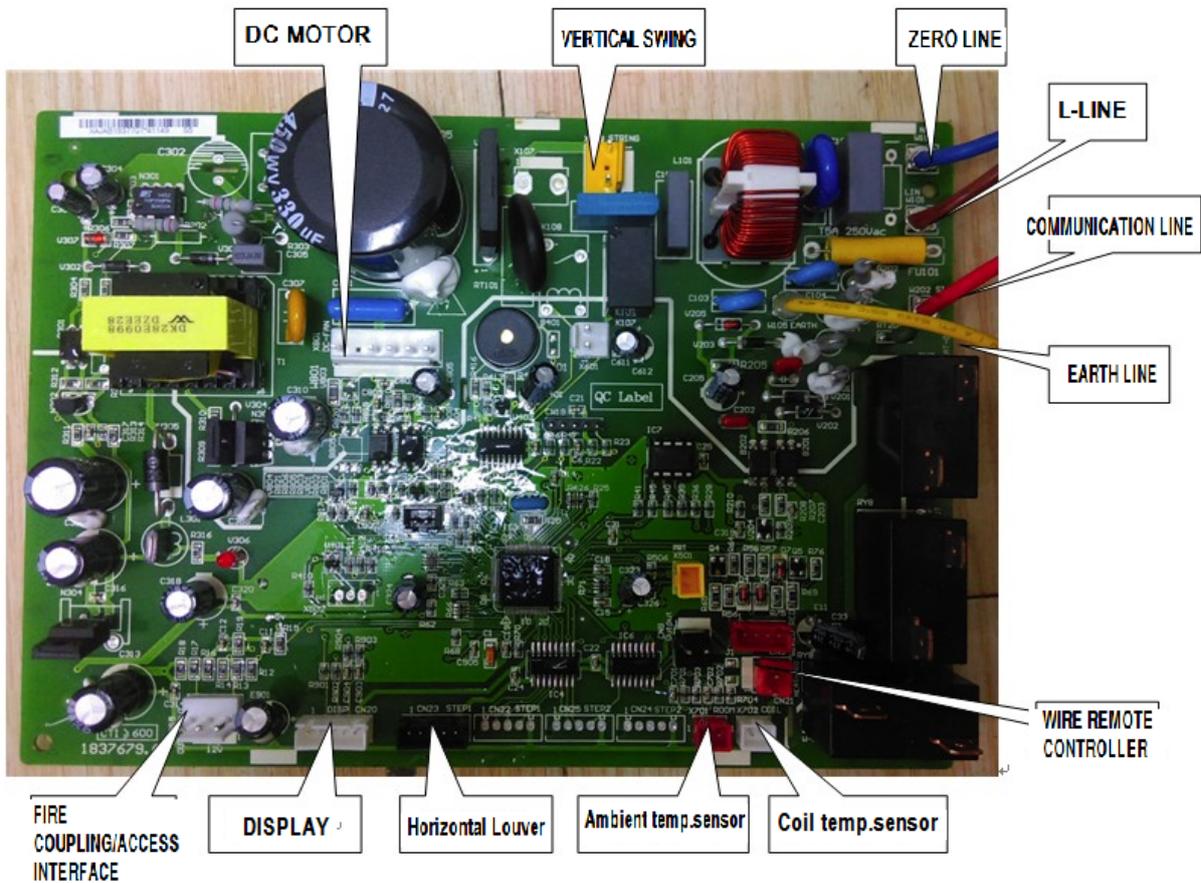


5. ELECTRICAL DATA

5-2. CONTROL BOARD INDOOR UNIT(AC MOTOR)

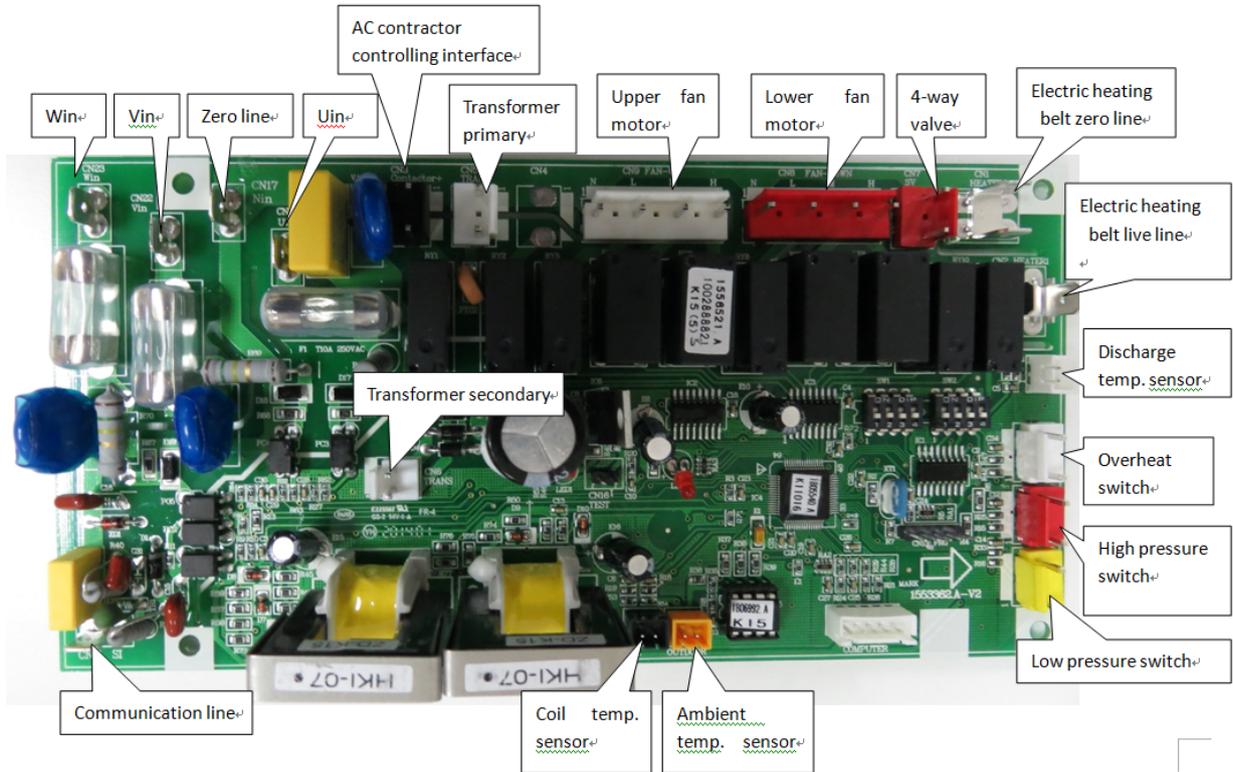


INDOOR UNIT(DC MOTOR) AUF-36CTR2SEM、AUF-48CTR2SPM&AUF-60CTR2SPM1



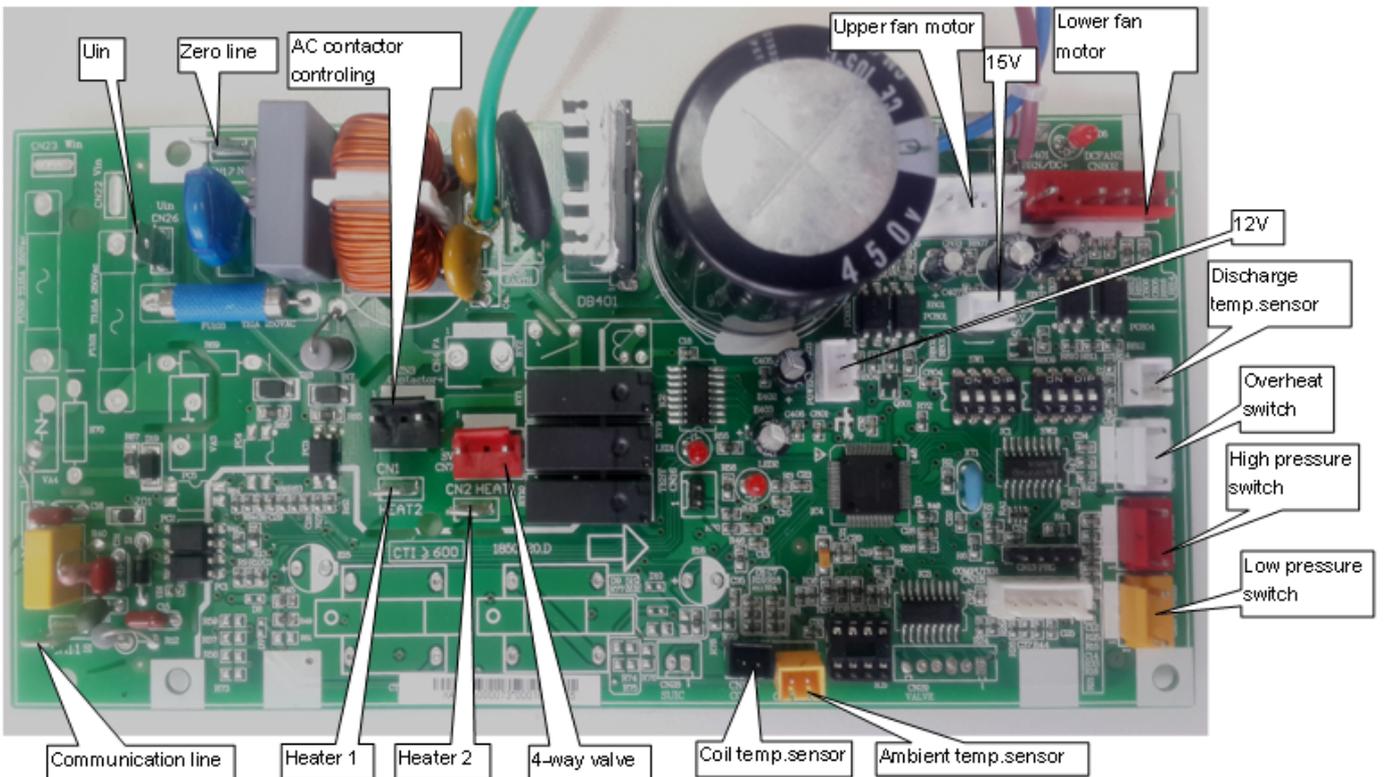
5. ELECTRICAL DATA

OUTDOOR UNIT (AC MOTOR)



OUTDOOR UNIT (DC MOTOR)

① Control Board
AUF-60CTR2SPM1



5. ELECTRICAL DATA

② Power Board AUF-60CTR2SPM1



5-3. Dip Switch Setting

Dip Switch Setting of Outdoor Unit 1483595 .A

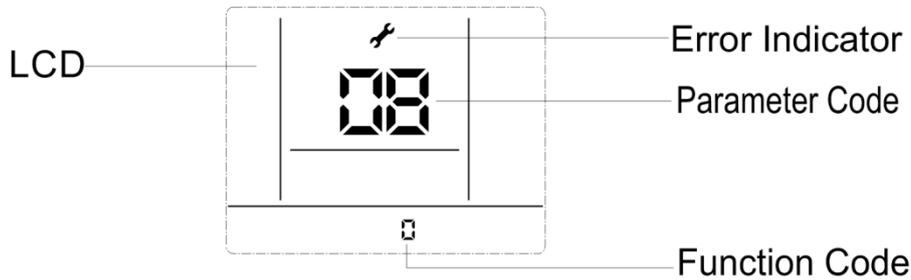
TURN OFF all power sources before setting.
Without turning OFF, the switches do not work
and the contents of the setting are invalid, but except the 3th
of dip switches , it must be turned on when the power is on.
Mark of "■" indicates the position of dip switches.

SW1	Optional Function Setting			
Setting is required, when optional functions are required.				
Function	Automatic defrosting	Manual defrosting	Function	Refrigerant recovery start
Setting Position	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4
Function	Silence mode unavailable	Silence mode available	Function	Normal cooling Forced cooling
Setting Position	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> 1 2 3 4	ON <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OFF <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> 1 2 3 4

5. ELECTRICAL DATA

5-4 System Parameter Adjustment

Internal control parameter adjustment can be performed using wire remote controller YXE-C01U/YXE-C02U.



OPERATION:

① Hold down both "MODE" button and "ADD.FUNC." button for 3 seconds, symbol  and parameter number blinking at the same time.

② Press "▲" "▼" button to adjust parameter number until display "17".

And press "ENTER" button to entering system parameter adaption state, symbol  stop blinking.

③ Select desired parameter code by pressing ▲/ ▼ button following the table below, and press "ENTER" button to confirm.

④ Select desired function code to rewrite the parameter values by pressing " / " button, and press "ENTER" button to confirm.

Press "ON/OFF" button or "CANCEL" button to quit.

⑤ Press "ON/OFF" button or "CANCEL" button to quit.

PARAMETER CODE	PARAMETER DESCRIPTION	PARAMETER VALUE&REPRESENTATION		NOTE
		DATA TYPE	REPRESENTATION(FUNCTION CODE)	
1	Self Recovery of Power Break	Integer	0: Cancel Self Recovery of Power Break function; 1: Self Recovery of Power Break; others: invalid	
2	Temperature Type	Integer	0: Centigrade Temperature; 1: Fahrenheit Temperature; others: invalid	
3	Temperature Display Type	Integer	0: Default display set temperature; 1: Default display room temperature; others: invalid	
4	Ratio of ambient temperature sensed by indoor temperature sensor(cooling mode)	Integer	0-10 invalid, more than 10 default is 10 0: 0%; 1: 10%; ...; 10: 100%	
5	Filter Clean Indicate	Integer	0: Cancel Filter Clean Indicate function; 1: Set Filter Clean Indicate function; others: invalid	
6	Filter Clean Time Set	Integer	0-32, more than 32 default is 32*1000h	
7	Installation Height	Integer	0-10m, more than 10m default is 10	
8	Cooling Temperature Compensation (indoor unit temperature sensor)	Integer	0: 0°C; 1: -0.5°C; 2: -1°C; 3: -1.5°C; 4: -2°C; 5: -2.5°C; 6: -3°C; 7: -3.5°C; 8: -4°C; 9: -4.5°C; 10: -5°C; (the wired controller displays integer with the symbol)	

5. ELECTRICAL DATA

PARAMETER CODE	PARAMETER DESCRIPTION	PARAMETER VALUE&REPRESENTATION		NOTE
		DATA TYPE	REPRESENTATION(FUNCTION CODE)	
9	Heating Temperature Compensation (indoor unit temperature sensor)	Integer	0: 0°C; 1: -0.5°C; 2: -1°C; 3: -1.5°C; 4: -2°C; 5: -2.5°C; 6: -3°C; 7: -3.5°C; 8: -4°C; 9: -4.5°C; 10: -5°C; (the wired controller displays integer with the symbol)	
10	Static Pressure Set	Integer	1-240, function code=static pressure more than the limit static pressure default the limit static pressure, Default is 0(default static pressure, related to models)	DUCT TYPE(DC MOTOR)
12	Ratio of temperature sensed by indoor temperature sensor(Heating mode)	Integer	0-10valid, more than 10 default is 10 0: 0%; 1: 10%; ...; 10: 100%	
13	Temperature Adjustment-Cooling	Character	-10-10°C (Single Character with symbol)	
14	Temperature Adjustment-Heating	Character	-10-10°C (Single Character with symbol)	
18	Cooling/Heating Temperature Limit	Integer	=0, Cooling/Heating Temperature Limit are all Invalid	
			=1, Cooling Temperature Limit is valid, Heating Temperature Limit is invalid	
			=2, Cooling Temperature Limit is invalid, Heating Temperature Limit is valid	
			=3, Cooling/Heating Temperature Limit are all valid	
19	The Lowest Set Temperature in Cooling Mode	Integer	SET VALUE=Actual temperature (16°C-32°C)	
20	The Highest Set Temperature in Heating Mode	Integer	SET VALUE=Actual temperature (16°C-32°C)	



Parameter code will not display if the indoor unit is not equipped with this function. Please refer to indoor unit manual to check whether this function is effective.

5. ELECTRICAL DATA

5-5. Sensor parameter

1. THE PARAMETER OF OUTDOOR COMPRESSOR DISCHARGE TEMPERATURE SENSOR:

($R_0=187.25K \pm 6.3\%$; $R_{100}=3.77K \pm 2.5K$; $B_0/100=3979K \pm 1\%$)

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
-30	908.2603	985.5274	1065.1210	-7.84	7.47
-29	855.3955	927.6043	1001.9150	-7.78	7.42
-28	805.9244	873.4324	924.8368	-7.73	5.56
-27	759.6097	822.7471	887.5944	-7.67	7.31
-26	716.2320	775.3041	835.9165	-7.62	7.25
-25	675.5881	730.8775	787.5529	-7.56	7.20
-24	637.4902	689.2583	742.2720	-7.51	7.14
-23	601.7645	650.2533	699.8601	-7.46	7.09
-22	568.2499	613.6835	660.1191	-7.40	7.03
-21	536.7970	579.3832	622.8658	-7.35	6.98
-20	507.2676	547.1989	587.9307	-7.30	6.93
-19	497.5332	516.9882	555.1565	-3.76	6.88
-18	453.4748	488.6192	524.3977	-7.19	6.82
-17	428.9819	461.9693	495.5191	-7.14	6.77
-16	405.9517	436.9251	486.3954	-7.09	10.17
-15	384.2888	413.3808	442.9105	-7.04	6.67
-14	363.9047	391.2386	418.9563	-6.99	6.62
-13	344.7169	370.4072	396.4325	-6.94	6.56
-12	326.6497	350.8019	375.2461	-6.88	6.51
-11	309.6286	332.3441	355.3104	-6.83	6.46
-10	293.5903	314.9620	336.5448	-6.79	6.41
-9	278.4719	298.5822	318.3744	-6.74	6.22
-8	264.2156	283.1464	302.2294	-6.69	6.31
-7	250.7678	268.5936	286.5448	-6.64	6.26
-6	238.0783	254.8686	271.7603	-6.59	6.22
-5	226.1003	241.9200	257.8193	-6.54	6.17
-4	214.7903	229.6997	244.6593	-6.49	6.11
-3	204.1073	218.1630	232.2612	-6.44	6.07
-2	194.0135	207.2681	220.5495	-6.39	6.02
-1	184.4732	196.9759	209.4913	-6.35	5.97
0	175.4533	187.2500	199.0468	-6.30	5.93
1	166.8952	178.0255	189.1529	-6.25	5.88
2	158.8023	169.3067	179.8058	-6.20	5.84
3	151.1467	161.0633	170.9724	-6.16	5.80
4	143.9026	153.2667	162.6216	-6.11	5.75
5	137.0455	145.8905	154.7246	-6.06	5.71
6	130.5528	138.9097	147.2544	-6.02	5.67
7	124.4033	132.3011	140.1856	-5.97	5.62
8	118.5769	126.0429	133.4946	-5.92	5.58
9	113.0550	120.1146	127.1591	-5.88	5.54

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
10	107.8202	114.4973	121.1586	-5.83	5.50
11	102.8560	109.1728	115.4734	-5.79	5.46
12	98.1470	104.1246	110.0855	-5.74	5.41
13	93.6787	99.3367	104.9778	-5.70	5.37
14	89.4378	94.7946	100.1342	-5.65	5.33
15	85.4114	90.4842	95.5398	-5.61	5.29
16	81.5875	86.3926	91.1805	-5.56	5.25
17	77.9551	82.5076	87.0430	-5.52	5.21
18	74.5034	78.8177	83.1150	-5.47	5.17
19	71.2227	75.3122	79.3848	-5.43	5.13
20	68.1036	71.9808	75.8414	-5.39	5.09
21	65.1373	68.8141	72.4746	-5.34	5.05
22	62.3155	65.8032	69.2746	-5.30	5.01
23	59.6306	62.9395	66.2324	-5.26	4.97
24	57.0752	60.2152	63.3395	-5.21	4.93
25	54.6424	57.6227	60.5877	-5.17	4.89
26	52.3258	55.1551	57.9695	-5.13	4.85
27	50.1192	52.8058	55.4778	-5.09	4.82
28	48.0168	50.5684	53.1058	-5.05	4.78
29	46.0133	48.4371	50.8472	-5.00	4.74
30	44.1034	46.4046	48.6960	-4.96	4.71
31	42.2825	44.4711	46.6466	-4.92	4.66
32	40.5458	42.6261	44.6937	-4.88	4.63
33	38.8891	40.8668	42.8323	-4.84	4.59
34	37.3084	39.1890	41.0576	-4.80	4.55
35	35.7998	37.5883	39.3653	-4.76	4.51
36	34.3596	36.0609	37.7511	-4.72	4.48
37	32.9844	34.6030	36.2109	-4.68	4.44
38	31.6710	33.2113	34.7412	-4.64	4.40
39	30.4164	31.8823	33.3383	-4.60	4.37
40	29.2176	30.6130	31.9988	-4.56	4.33
41	28.0718	29.4004	30.7197	-4.52	4.29
42	26.9765	28.2417	29.4979	-4.48	4.26
43	25.9293	27.1342	28.3306	-4.44	4.22
44	24.9277	26.0755	27.2150	-4.40	4.19
45	23.9697	25.0632	26.1488	-4.36	4.15
46	23.0530	24.0950	25.1293	-4.32	4.12
47	22.1757	23.1688	24.1545	-4.29	4.08
48	21.3360	22.2826	23.2221	-4.25	4.05
49	20.5321	21.4345	22.3301	-4.21	4.01
50	19.7623	20.6226	21.4766	-4.17	3.98
51	19.0261	19.8468	20.6612	-4.14	3.94
52	18.3211	19.1040	19.8808	-4.10	3.91

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
53	17.6458	18.3926	19.1338	-4.06	3.87
54	16.9986	17.7113	18.4185	-4.02	3.84
55	16.3784	17.0537	17.7335	-3.96	3.83
56	15.7839	16.4332	17.0774	-3.95	3.77
57	15.2139	15.8338	16.4488	-3.92	3.74
58	14.6673	15.2592	15.8464	-3.88	3.71
59	14.1430	14.7083	15.2690	-3.84	3.67
60	13.6400	14.1799	14.7154	-3.81	3.64
61	13.1573	13.6730	14.1846	-3.77	3.61
62	12.6941	13.1868	13.6756	-3.74	3.57
63	12.2494	12.7202	13.1872	-3.70	3.54
64	11.8224	12.2723	12.7186	-3.67	3.51
65	11.4124	11.8424	12.2690	-3.63	3.48
66	11.0185	11.4295	11.8373	-3.60	3.45
67	10.6401	11.0331	11.4230	-3.56	3.41
68	10.2765	10.6522	11.0251	-3.53	3.38
69	9.9271	10.2863	10.6429	-3.49	3.35
70	9.5912	9.9348	10.2756	-3.46	3.32
71	9.2682	9.5968	9.9231	-3.42	3.29
72	8.9576	9.2720	9.5841	-3.39	3.26
73	8.6589	8.9597	9.2583	-3.36	3.23
74	8.3716	8.6594	8.9451	-3.32	3.19
75	8.0951	8.3705	8.6440	-3.29	3.16
76	7.8290	8.0926	8.3544	-3.26	3.13
77	7.5730	7.8252	8.0758	-3.22	3.10
78	7.3264	7.5679	7.8078	-3.19	3.07
79	7.0891	7.3202	7.5499	-3.16	3.04
80	6.8605	7.0818	7.3018	-3.12	3.01
81	6.6403	6.8522	7.0629	-3.09	2.98
82	6.4282	6.6311	6.8329	-3.06	2.95
83	6.2239	6.4182	6.6115	-3.03	2.92
84	6.0269	6.2131	6.3982	-3.00	2.89
85	5.8371	6.0154	6.1928	-2.96	2.86
86	5.6542	5.8249	5.9949	-2.93	2.84
87	5.4777	5.6413	5.8042	-2.90	2.81
88	5.3076	5.4644	5.6205	-2.87	2.78
89	5.1435	5.2937	5.4433	-2.84	2.75
90	4.9853	5.1292	5.2726	-2.81	2.72
91	4.8326	4.9705	5.1079	-2.77	2.69
92	4.6852	4.8174	4.9492	-2.74	2.66
93	4.5430	4.6697	4.7960	-2.71	2.63
94	4.4058	4.5272	4.6483	-2.68	2.61
95	4.2733	4.3896	4.5058	-2.65	2.58

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
96	4.1453	4.2568	4.3683	-2.62	2.55
97	4.0218	4.1287	4.2355	-2.59	2.52
98	3.9024	4.0049	4.1074	-2.56	2.50
99	3.7872	3.8854	3.9837	-2.53	2.47
100	3.6758	3.7700	3.8643	-2.50	2.44
101	3.5661	3.6585	3.7512	-2.53	2.47
102	3.4601	3.5509	3.6419	-2.56	2.50
103	3.3577	3.4468	3.5362	-2.59	2.53
104	3.2588	3.3463	3.4341	-2.61	2.56
105	3.1632	3.2491	3.3353	-2.64	2.58
106	3.0708	3.1551	3.2398	-2.67	2.61
107	2.9816	3.0643	3.1475	-2.70	2.64
108	2.8953	2.9765	3.0582	-2.73	2.67
109	2.8118	2.8915	2.9717	-2.76	2.70
110	2.7311	2.8093	2.8881	-2.78	2.73
111	2.6531	2.7299	2.8072	-2.81	2.75
112	2.5776	2.6530	2.7289	-2.84	2.78
113	2.5046	2.5785	2.6531	-2.87	2.81
114	2.4340	2.5065	2.5798	-2.89	2.84
115	2.3656	2.4368	2.5087	-2.92	2.87
116	2.2995	2.3693	2.4400	-2.95	2.90
117	2.2354	2.3040	2.3733	-2.98	2.92
118	2.1734	2.2407	2.3088	-3.00	2.95
119	2.1134	2.1795	2.2463	-3.03	2.97
120	2.0553	2.1201	2.1858	-3.06	3.01
121	1.9991	2.0626	2.1271	-3.08	3.03
122	1.9446	2.0070	2.0702	-3.11	3.05
123	1.8918	1.9530	2.0151	-3.13	3.08
124	1.8406	1.9007	1.9617	-3.16	3.11
125	1.7911	1.8500	1.9099	-3.18	3.14
126	1.7430	1.8009	1.8597	-3.22	3.16
127	1.6965	1.7533	1.8110	-3.24	3.19
128	1.6514	1.7071	1.7638	-3.26	3.21
129	1.6076	1.6623	1.7180	-3.29	3.24
130	1.5652	1.6189	1.6736	-3.32	3.27

5. ELECTRICAL DATA

2. THE PARAMETER OF THE OTHER SENSOR IN INDOOR AND OUTDOOR UNIT: ($R_0=15K \pm 2\%$;
 $B0/100=3450K \pm 2\%$)

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
-30	60.78	64.77	68.99	-6.16	6.12
-29	57.75	61.36	65.16	-5.88	5.83
-28	54.89	58.15	61.58	-5.61	5.57
-27	52.19	55.14	58.23	-5.35	5.31
-26	49.63	52.30	55.08	-5.11	5.05
-25	47.21	49.62	52.13	-4.86	4.81
-24	44.92	47.10	49.37	-4.63	4.60
-23	42.76	44.73	46.78	-4.40	4.38
-22	40.71	42.49	44.34	-4.19	4.17
-21	38.77	40.38	42.05	-3.99	3.97
-20	36.93	38.39	39.90	-3.80	3.78
-19	35.18	36.51	37.87	-3.64	3.59
-18	33.53	34.74	35.97	-3.48	3.42
-17	31.96	33.06	34.17	-3.33	3.25
-16	30.48	31.47	32.49	-3.15	3.14
-15	29.07	29.97	30.89	-3.00	2.98
-14	27.73	28.56	29.39	-2.91	2.82
-13	26.46	27.22	27.98	-2.79	2.72
-12	25.26	25.95	26.64	-2.66	2.59
-11	24.11	24.75	25.38	-2.59	2.48
-10	23.03	23.61	24.19	-2.46	2.40
-9	21.99	22.53	23.06	-2.40	2.30
-8	21.01	21.51	22.00	-2.32	2.23
-7	20.08	20.54	20.99	-2.24	2.14
-6	19.19	19.62	20.04	-2.19	2.10
-5	18.35	18.74	19.14	-2.08	2.09
-4	17.55	17.92	18.29	-2.06	2.02
-3	16.78	17.13	17.48	-2.04	2.00
-2	16.06	16.38	16.71	-1.95	1.97
-1	15.36	15.67	15.98	-1.98	1.94
0	14.70	15.00	15.29	-2.00	1.90
1	14.08	14.36	14.64	-1.95	1.91
2	13.48	13.75	14.02	-1.96	1.93
3	12.91	13.17	13.43	-1.97	1.94
4	12.36	12.62	12.87	-2.06	1.94
5	11.85	12.09	12.34	-1.99	2.03
6	11.35	11.59	11.83	-2.07	2.03
7	10.88	11.11	11.35	-2.07	2.11
8	10.43	10.66	10.89	-2.16	2.11
9	9.999	10.230	10.450	-2.26	2.11
10	9.590	9.816	10.040	-2.30	2.23

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
11	9.199	9.422	9.647	-2.37	2.33
12	8.826	9.047	9.269	-2.44	2.40
13	8.470	8.689	8.910	-2.52	2.48
14	8.129	8.347	8.567	-2.61	2.57
15	7.804	8.021	8.240	-2.71	2.66
16	7.493	7.709	7.928	-2.80	2.76
17	7.196	7.412	7.630	-2.91	2.86
18	6.912	7.127	7.346	-3.02	2.98
19	6.640	6.855	7.074	-3.14	3.10
20	6.381	6.595	6.815	-3.24	3.23
21	6.132	6.347	6.567	-3.39	3.35
22	5.894	6.109	6.330	-3.52	3.49
23	5.667	5.882	6.103	-3.66	3.62
24	5.449	5.664	5.886	-3.80	3.77
25	5.240	5.456	5.678	-3.96	3.91
26	5.048	5.260	5.478	-4.03	3.98
27	4.864	5.072	5.286	-4.10	4.05
28	4.687	4.891	5.101	-4.17	4.12
29	4.517	4.717	4.924	-4.24	4.20
30	4.355	4.550	4.753	-4.29	4.27
31	4.198	4.390	4.589	-4.37	4.34
32	4.048	4.236	4.431	-4.44	4.40
33	3.904	4.089	4.280	-4.52	4.46
34	3.766	3.946	4.134	-4.56	4.55
35	3.663	3.810	3.994	-3.86	4.61
36	3.506	3.679	3.859	-4.70	4.66
37	3.383	3.552	3.729	-4.76	4.75
38	3.265	3.431	3.604	-4.84	4.80
39	3.152	3.314	3.484	-4.89	4.88
40	3.043	3.202	3.368	-4.97	4.93
41	2.938	3.094	3.257	-5.04	5.00
42	2.838	2.990	3.149	-5.08	5.05
43	2.741	2.890	3.046	-5.16	5.12
44	2.648	2.793	2.946	-5.19	5.19
45	2.558	2.701	2.850	-5.29	5.23
46	2.472	2.611	2.758	-5.32	5.33
47	2.389	2.525	2.669	-5.39	5.40
48	2.309	2.443	2.583	-5.49	5.42
49	2.232	2.363	2.500	-5.54	5.48
50	2.158	2.286	2.421	-5.60	5.58
51	2.087	2.212	2.344	-5.65	5.63
52	2.018	2.140	2.269	-5.70	5.69
53	1.952	2.072	2.198	-5.79	5.73

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
54	1.888	2.005	2.129	-5.84	5.82
55	1.827	1.941	2.062	-5.87	5.87
56	1.767	1.880	1.998	-6.01	5.91
57	1.710	1.820	1.936	-6.04	5.99
58	1.655	1.763	1.876	-6.13	6.02
59	1.602	1.707	1.818	-6.15	6.11
60	1.551	1.654	1.762	-6.23	6.13
61	1.502	1.602	1.709	-6.24	6.26
62	1.452	1.553	1.657	-6.50	6.28
63	1.409	1.505	1.606	-6.38	6.29
64	1.364	1.458	1.558	-6.45	6.42
65	1.322	1.413	1.511	-6.44	6.49
66	1.280	1.370	1.466	-6.57	6.55
67	1.241	1.328	1.422	-6.55	6.61
68	1.202	1.288	1.379	-6.68	6.60
69	1.165	1.249	1.339	-6.73	6.72
70	1.129	1.211	1.299	-6.77	6.77
71	1.095	1.175	1.261	-6.81	6.82
72	1.061	1.140	1.224	-6.93	6.86
73	1.029	1.106	1.188	-6.96	6.90
74	0.9977	1.073	1.153	-7.02	6.94
75	0.9676	1.041	1.120	-7.05	7.05
76	0.9385	1.011	1.088	-7.17	7.08
77	0.9104	0.9810	1.056	-7.20	7.10
78	0.8833	0.9523	1.026	-7.25	7.18
79	0.8570	0.9246	0.9971	-7.31	7.27
80	0.8316	0.8977	0.9687	-7.36	7.33
81	0.8071	0.8717	0.9412	-7.41	7.38
82	0.7834	0.8466	0.9146	-7.47	7.43
83	0.7604	0.8223	0.8888	-7.53	7.48
84	0.7382	0.7987	0.8639	-7.57	7.55
85	0.7167	0.7759	0.8397	-7.63	7.60
86	0.6958	0.7537	0.8161	-7.68	7.65
87	0.6755	0.7322	0.7933	-7.74	7.70
88	0.6560	0.7114	0.7712	-7.79	7.75
89	0.6371	0.6913	0.7498	-7.84	7.80
90	0.6188	0.6718	0.7291	-7.89	7.86
91	0.6011	0.6530	0.7051	-7.95	7.39
92	0.5840	0.6348	0.6897	-8.00	7.96
93	0.5674	0.6171	0.6709	-8.05	8.02
94	0.5514	0.6000	0.6527	-8.10	8.07
95	0.5359	0.5835	0.6350	-8.16	8.11
96	0.5209	0.5675	0.6179	-8.21	8.16

5. ELECTRICAL DATA

T [°C]	Rmin [K Ω]	Rnom [K Ω]	Rmax [K Ω]	DR(MIN)%	DR(MAX)%
97	0.5064	0.5519	0.6014	-8.24	8.23
98	0.4923	0.5369	0.5853	-8.31	8.27
99	0.4787	0.5224	0.5698	-8.37	8.32
100	0.4655	0.5083	0.5547	-8.42	8.36
101	0.4528	0.4946	0.5401	-8.45	8.42
102	0.4404	0.4814	0.5259	-8.52	8.46
103	0.4284	0.4685	0.5121	-8.56	8.51
104	0.4168	0.4561	0.4988	-8.62	8.56
105	0.4056	0.4440	0.4859	-8.65	8.62
106	0.3947	0.4323	0.4733	-8.70	8.66
107	0.3841	0.4210	0.4611	-8.76	8.70
108	0.3739	0.4100	0.4493	-8.80	8.75
109	0.3640	0.3993	0.4379	-8.84	8.81
110	0.3544	0.3890	0.4267	-8.89	8.84
111	0.3450	0.3789	0.4159	-8.95	8.90
112	0.3360	0.3692	0.4055	-8.99	8.95
113	0.3272	0.3597	0.3953	-9.04	9.01
114	0.3187	0.3505	0.3854	-9.07	9.06
115	0.3104	0.3416	0.3758	-9.13	9.10
116	0.3024	0.3330	0.3665	-9.19	9.14
117	0.2947	0.3246	0.3574	-9.21	9.18
118	0.2871	0.3164	0.3468	-9.26	8.77
119	0.2798	0.3085	0.3401	-9.30	9.29
120	0.2727	0.3008	0.33	-9.34	9.34

6. CONTROL MODE

6-1 Indoor control mode

1. Major general technical parameters

- 1 Remote receiver distance: 8 m.
- 2 Remote receiver angle: Less than 80 degrees.
- 3 Temperature control accuracy: $\pm 1^{\circ}\text{C}$.
- 4 Time error: Less than 1%.

2. Functions of the controller

Control function

2.1 Emergency switch

Press the emergency button can realize the starting or closing Machine, starting up according to the automatic mode of operation (invalid for duct type air-conditioner)

- ① Press this button to turn ON the unit, the conditioner will be run in auto mode, and press it again to turn off.
- ② When the machine is turned OFF, by press and hold the emergency switch for 5 seconds, with 3 beeps , the indoor unit would turn to emergency run. In such station, machine would be forced to turn to cooling operation with the indoor fan speed being set at high speed, the flaps sweeping and the air conditioner's operation is irrelevant with room temperatures.
- ③ If a remote signal has been received during the emergency run, the machine will operate upon the command of such a remote signal.

2.2 Operator-machine communication

Air conditioning and remote controller is provided with a temperature sensor. The remote controller on the temperature sensor to detect the default settings of room temperature at room temperature. If the indoor control unit for long time have not received remote control signal, will automatically switch to the air conditioner body temperature sensor.

2.3 Timer function

1. Timer on: When set to start in a time by the remote controller, the air conditioner starts in the timer on condition. When the set time is up, the air conditioner will turn on and operates in the preset conditions after receiving a signal from the remote controller. If the air conditioner has not received a signal from the remote controller when the set time is up, it will automatically start and operate in the preset conditions.

2. Timer off: When set to stop in a set time by the remote controller, the air conditioner

6. CONTROL MODE

will start in the timer off condition. When the set time is up, the air conditioner will turn off after receiving a signal from the remote controller. If the air conditioner has not received a signal from the remote controller when the set time is up, it will turn off automatically.

3. Neither the turning on nor turning off operation will cancel the timer function.

2.4 Sleep

1. In the heating, cooling or dehumidifying mode, press the "Sleep" button on the remote controller to start or cancel the sleep function in turn, and at the same time the sleep icon on the display screen will be on or off accordingly.

2. In the heating mode, the set temperature will decrease automatically after the sleep function is started.

3. In the cooling mode, the set temperature will rise automatically after the sleep function is started.

4. In default, the setting is to cancel the sleep function. Turning off the unit will also cancel the sleep function.

2.5 High efficient run function

In Cool, Dehumidification, Fan mode, press the "HIGH POWER " to enter the refrigeration mode, set the temperature automatically adjust to 18°C; the Fan speed is powerful speed; frequency of high frequency operation.

In the heating mode, powerful function is invalid for H1 wireless remote controller.

2.6 mute function (only for H1 wireless remote controller)

In the indoor machine operation mode , You may turn on mute function and turn off mute function by mute key, The air conditioner will run by mute fan speed in mute mode

2.7 prevent cooling wind mode

In the heating-run, to prevent the indoor fan from blowing cold air, the indoor fan will stop or run slowly until the coil is warmth.

2.8 blow waste heating and waste cooling function

6. CONTROL MODE

The heating mode, remote shutdown, such as indoor heat exchanger temperature is higher, the wind blowing out opportunities continue to run the waste heat.

Cool and dehumidification mode , after the compressor close, indoor machine will continue to set the speed of operation for a period of time.

2.9 automatically model

This model does not automatically model function, emergency button cannot set the automatic mode of operation, can use the emergency switch shutdown, remote setting the automatic mode of indoor machine with remote signal. (emergency button only for cassette type)

2.10 Dehumidifying method:

Remote control setting dehumidifying mode, indoor machine forced to run at low speed (high power key or a strong bond also maintain a low wind speed) , the outdoor machine according to the refrigeration mode operation.

2.11 Self Recovery of Power Break

When the power supply is recovered after break, all preset are still effective and the air-conditioner can run according to the original setting.

How to set/cancel

It can be set by wire remote controller YXE-C01U/YXE-C02U.

Details see Internal control parameter adjustment.

2.12 FAULT CODE

The fault code can be showed by LED on the indoor panel.

2.13 Filter clean

Filer clean led will light up when air filter is clogged with dust.

How to reset:

- ① Press Emergency switch;
- ② Press high power button for 5s;
- ③ By wire remote controller YXE-C01U/YXE-C02U, press cancel button for 3s.

6. CONTROL MODE

6-2 Outdoor mode control

Control function

1. Cooling Anti-freeze Protection

To prevent indoor air conditioner evaporator temperature is too low, the indoor coil sensor for real time detection of evaporator. If the indoor coil temperature is too low, the compressor will protect.

2. Overload Protection

Air can heat exchanger temperature sensor for monitoring, when the sensor when the temperature is too high, the compressor will be automatic protection

3. Exhaust temperature protection

To prevent deterioration due to high exhaust temperature of compressor, the machine will realize the real-time detection of the temperature of exhaust gas. If the temperature is too high compressor automatic protection

4. Operation Mode

Air conditioning mode is the operation mode set by users through remote controller, four modes are available: cooling, heating, dehumidification, as well as fan mode.

5. Four-way Valve Control

Four-way valve of the outdoor machine shuts down when cooling and defrosting but starts when heating. During the heating process, the four way valve to stop working for a period of time after compressor disconnect.

6. Start-up Protection:

6. CONTROL MODE

To prevent compressor from restart frequently in the condition that system pressure has not been completely balanced, it can't be restarted within 3 minutes.

7. Pressure Protection:

When the pressure increases to a preset value, the pressure switch will automatically protect. Compressor will stop and report the fault code protection.

7. TROUBLE SHOOTING

7-1- Error code

Trouble guide

When the air conditioner failure occurs, the fault code will displays on control board , wire remote controller or display panel.

HOW TO CHECK FAULT CODES

INDOOR UNIT

1.WALL MOUNTED TYPE

For Free-match series

Run the air-conditioner by wireless remote controller , continue pressing "SLEEP" button for 4 times, fault codes will flashing rapidly on the LCD . If no fault , display "00".

"ER"shows indoor display panel communication fault with indoor unit control board .

For VRF series

Fault codes flash rapidly on the LCD.

2.FLOOR STANDING TYPE

L5B (indoor box code)series

In the case of no button-locked,continue pressing "CLOCK"button for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

Continue pressing "SLEEP"button of wireless remote controller for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

"ER"shows indoor display panel Communication fault with indoor unit control board

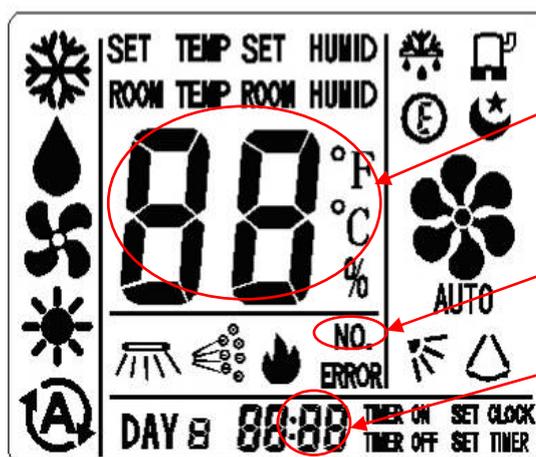
L5C(indoor box code) series

Continue pressing "SLEEP"button of wireless remote controller for 4 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

3.DUCT , CASSETTE,CEILING&FLOOR TYPE

(1) ERROR CODES INDICATED BY WIRE REMOTE CONTROLLER(see fig. below)

MOEDL:YXC-A01U(E)



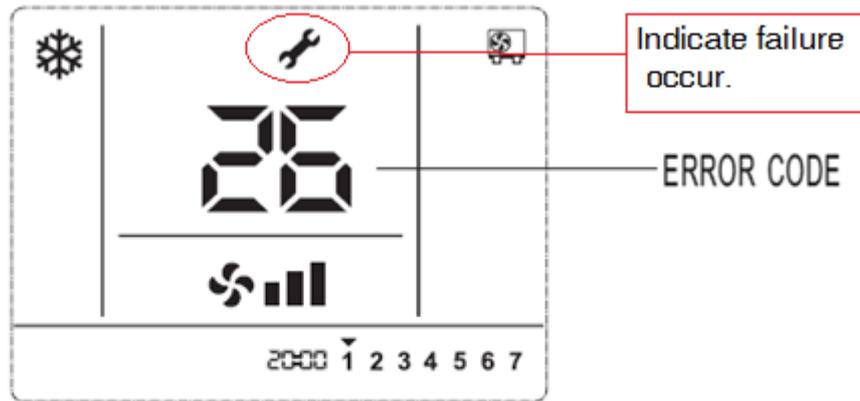
When display "FE" ,shows that the wire controller can't receive the signals of

When failure occurs, this lamp light ON.

This number shows ERROR CODE.

7. TROUBLE SHOOTING

MOEDL:YXE-C01U



When the airconditioner is malfunction,  will display on the LCD, and error codes will appear and blink.

FIG.2 ERROR CODE DISPLAY ON WIRE REMOT CONTROLLER

(2) CHECK ERROR CODES BY DISPLAY PANEL(CASSETTE type and CEILING & FLOOR type)

Display by lamp indicator

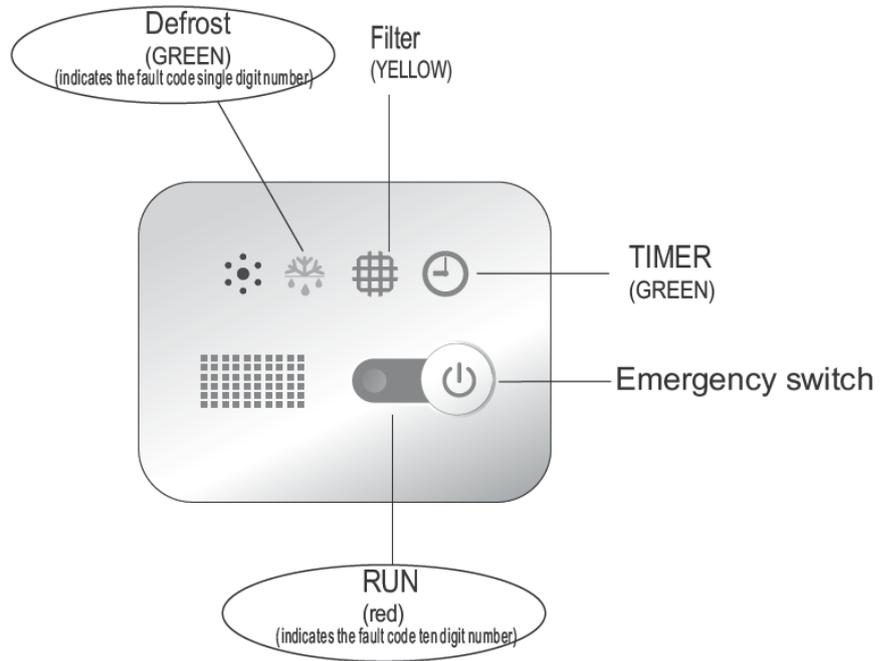
Lamp RUN(LED2 ,red) and Lamp DEFROST (LED5 ,green) flashing, Lamp RUN display fault code ten digit number, lamp DEFROST display fault code single digit number (as shown fig. below).

For example, fault code 36: led RUN & defrost flash 3 times at the same time, and led DEFROST continue flash 3 times, reports No. 36 fault.

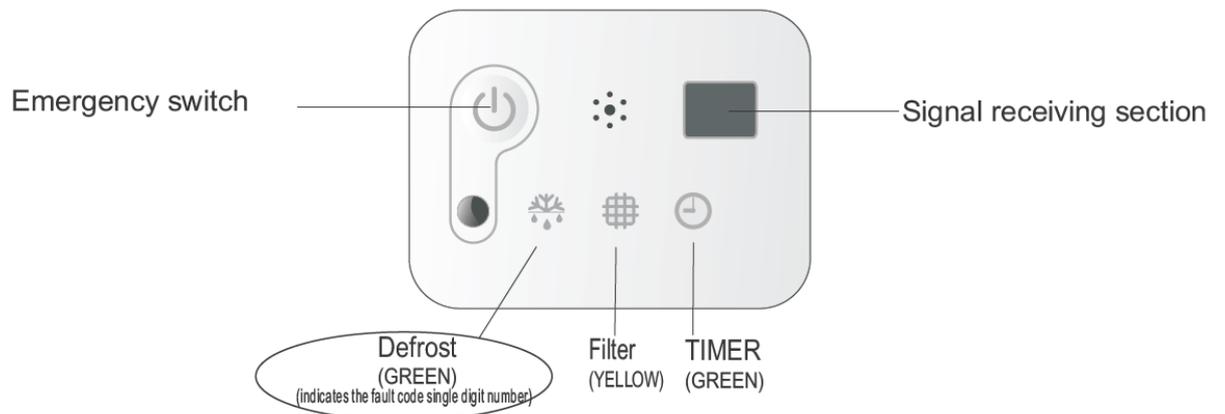
7. TROUBLE SHOOTING

CASSETTE TYPE

Display Panel-12K,18K



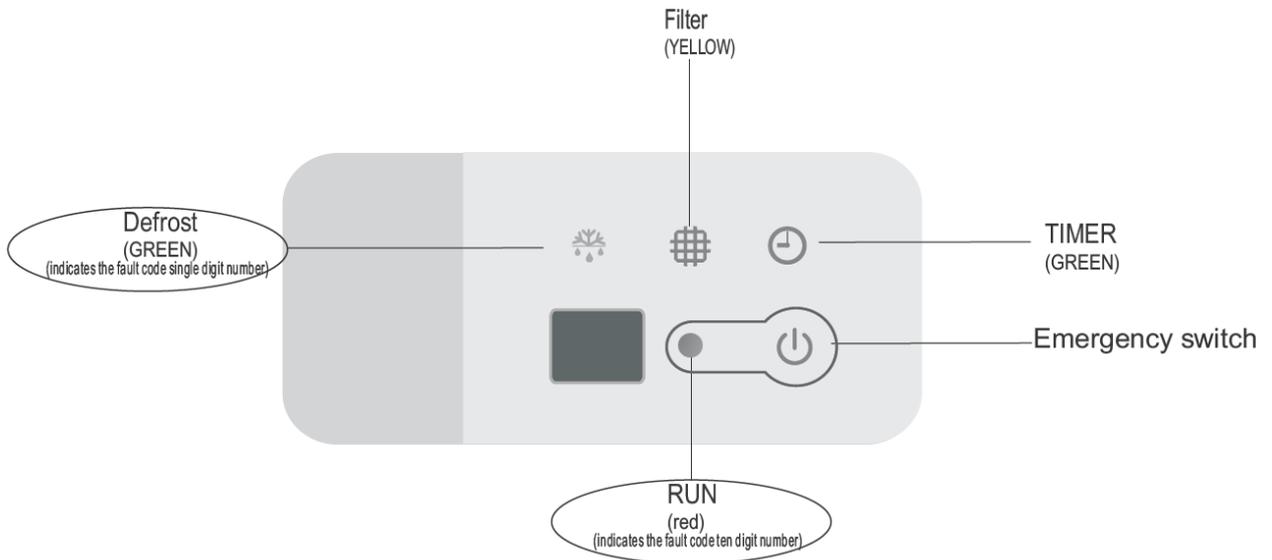
Display Panel-24K,36K,48K



7. TROUBLE SHOOTING

CEILING & FLOOR TYPE

Display Panel



LED FLASH CONTROL: flash 300mS(T1), off 300mS(T2), after 2000mS(T3) fault code repeat displays. (as shown below)

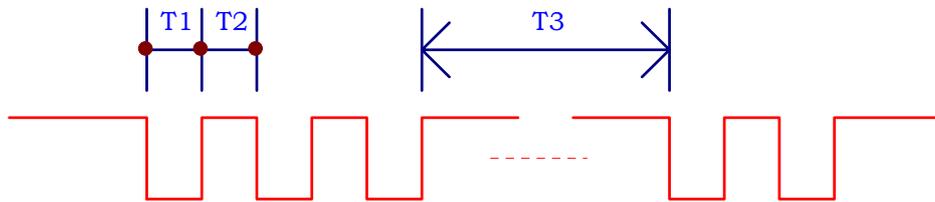
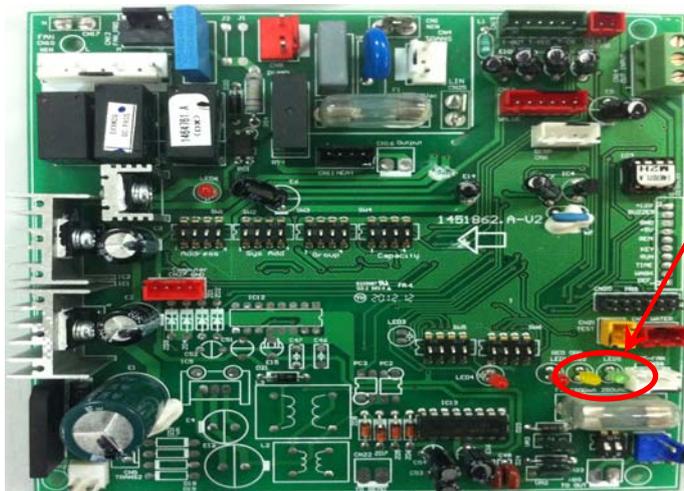


Fig.2 LED FLASH CONTROL

3. Duct type indoor units of VRF---FAULT CODE DISPLAY BY INDOOR BOARD



LED2 and LED5 are failure indicate lamps,
LED2 (YELLOW) indicate fault code ten digit number, LED5 (GREEN) indicate single digit number code

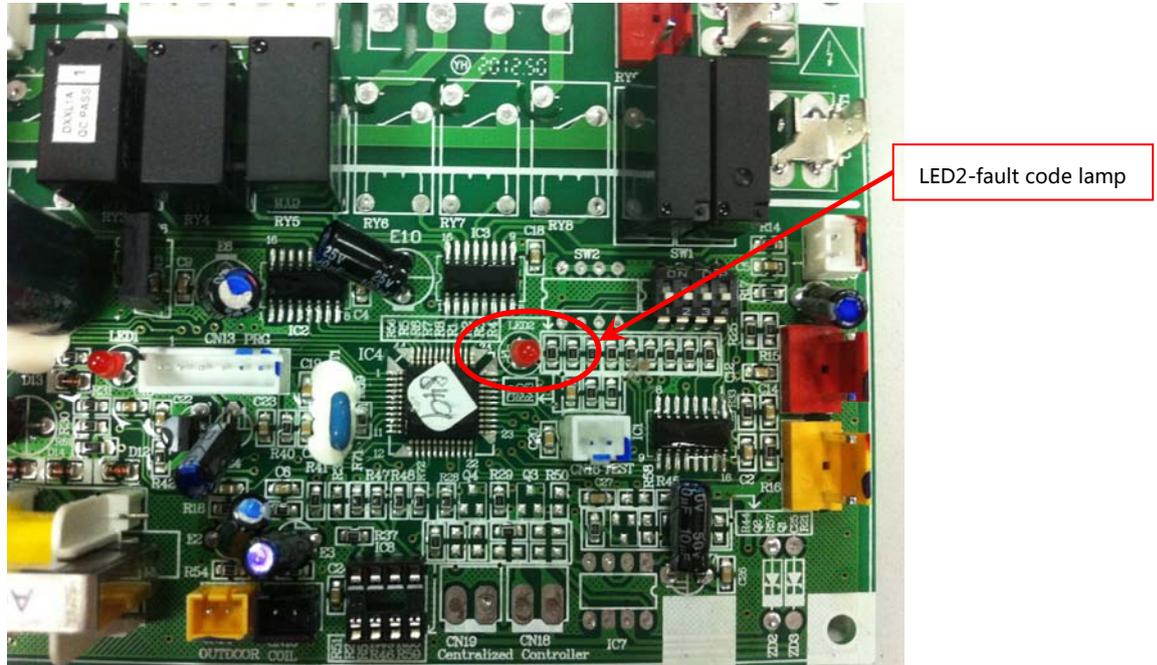
7. TROUBLE SHOOTING

2. OUTDOOR UNIT FAULT CODE DISPLAY

(1) ON/OFF UNITARY TYPE (with outdoor control box)

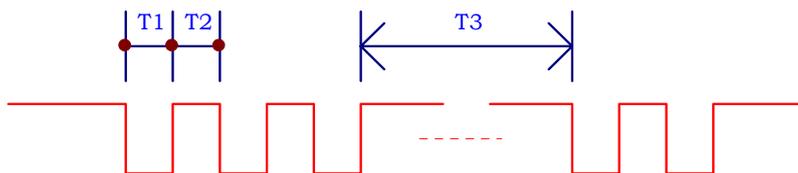
Fault code display by indicate lamps of outdoor control board flash.

The times that the lamp flashes equal to fault code.



LED FLASH CONTROL: flash 300mS(T1), off 300mS(T2), after 900mS(T3) fault code repeat displays.

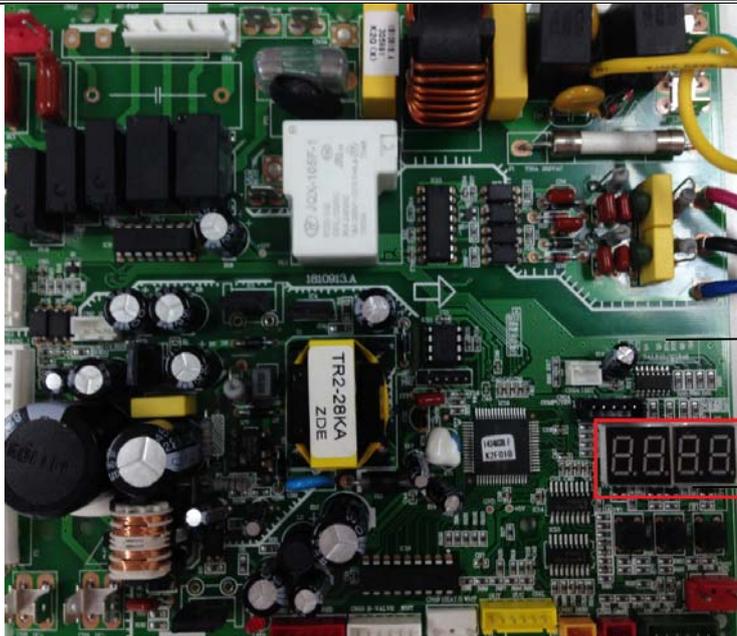
(as shown below)



(2) INVERTER UNITARY AIR CONDITONER , MULTI-SPLIT TYPE AIR CONDITONER&VRF:

Fault code will display on digital tube board.

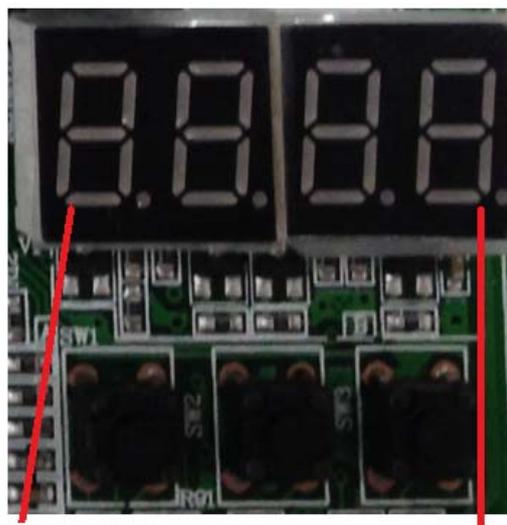
7. TROUBLE SHOOTING



Outdoor Control Board

Digital Tube

FOR INVERTER UNITARY AIR CONDITONER&VRF



E shows failure occur

Display ERROR Code

* VRF:

Indoor unit can indicate both indoor failure and outdoor failure ,but outdoor only indicate outdoor's.

FOR MULTI-SPLIT TYPE

Error code display on digital tube board directly.

7. TROUBLE SHOOTING

3. Fault code display (Driver Board)

The lamp of driver board flash shows failure occur.

Or, fault code can be check on digital tube board .

7. TROUBLE SHOOTING

The following is the fault code table of outdoor.

sheet 1 Outdoor Error Code

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
1	Outdoor ambient temperature sensor fault	<ol style="list-style-type: none"> 1.The outdoor ambient temperature sensor connect loose; 2.The outdoor ambient temperature sensor is failure; 3.The sampling circuit is failure 	<ol style="list-style-type: none"> 1.Reconnect the outdoor ambient temperature sensor; 2.Replace the outdoor ambient temperature sensor components; 3.Replace the outdoor control board components. 	
2	Outdoor coil temperature sensor fault	<ol style="list-style-type: none"> 1.The outdoor ambient temperature sensor connect loose; 2.The outdoor ambient temperature sensor is failure; 3.The sampling circuit is failure 	<ol style="list-style-type: none"> 1.Reconnect the outdoor ambient temperature sensor; 2.Replace the outdoor ambient temperature sensor components; 3.Replace the outdoor control board components. 	
3	The unit over-current turn off fault	<ol style="list-style-type: none"> 1.Control board current sampling circuit is failure; 2.The current is over high because of the supply voltage is too low 3.The on-off compressor is blocked 4. Overload in cooling mode 5.Overload in heating mode 	<ol style="list-style-type: none"> 1. Replace the electrical control board components; 2. Normally protection 3. Replace the compressor 4. Please see the Note 3 5. Please see the Note 4 	
4	EEPROM Data error	<ol style="list-style-type: none"> 1.EE components is failure; 2.EE components control circuit failure; 3.EE components insert incorrect 	<ol style="list-style-type: none"> 1.Replace the EE components; 2.Replace the outdoor control board components; 3.Reassembly the EE components. 	
5	Cooling freezing protection(the indoor coil temperature is too low) or heating overload(indoor coil temperature is too high)	<ol style="list-style-type: none"> 1.The indoor unit can not blow air normally; 2.The room temperature is too low in cooling mode or the room temperature is too high in heating; 3.The filter is dirty; 4.The duct resistance of the duct 5.The setting fan speed is too low 6. The indoor unit has been installed without standard 	<ol style="list-style-type: none"> 1.Check the indoor fan, indoor fan motor and evaporator whether normally; 2. Normally protection 3.Clean the filter; 4.Check the volume control valve, duct length etc; 5.Set the speed with high speed; 6.Reinstall the indoor unit refer to the user manual to change the distance between the indoor unit and the wall or ceiling. 	

7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
6	Motor blockage protection	<ol style="list-style-type: none"> 1.Outdoor ambient temperature sensor fault ; 2. Outdoor coil temperature sensor fault ; 3.Outdoor control board fault. 	<ol style="list-style-type: none"> 1.Replace outdoor ambient temperature sensor ; 2.Replace outdoor coil temperature sensor ; 3.Replace Outdoor control board. 	Applied to ON/OFF air-conditioners with 2 control boards
7	The communication fault between the indoor unit and outdoor unit	<ol style="list-style-type: none"> 1.The connection cable connect wrong between the indoor unit and outdoor unit; 2.The communication cable connect loose; 3.The communication cable is fault; 4.The indoor control board is fault; 5.The outdoor control board is fault; 6.Communication circuit fuse open; 7.The specification of communication cable is incorrect. 	<ol style="list-style-type: none"> 1.Reconnect the connection cable refer to the wiring diagram; 2.Reconnect the communication cable; 3.Replace the communication cable; 4.Replace the indoor control board; 5.Replace the outdoor control board; 6.Check the communication circuit, adjust the DIP switch and the short-circuit fuse. 7.Choose suitable communication cable refer to the user manual 	
8	Phase current imbalance	<ol style="list-style-type: none"> 1.The supply voltage fluctuates more than 4%; 2.The compressor power cord connect loose; 3.The AC contactor is fault; 4.The compressor motor fault. 	<ol style="list-style-type: none"> 1.Normally protection; 2.Reconnect the wire refer to the wiring diagram; 3.Replace the AC contactor; 4.Replace the compressor. 	Application of three-phase power supply models
9	U phase current fault	<ol style="list-style-type: none"> 1.Compressor U phase power cord is fault or connect wrong; 2.Outdoor control board is fault; 3.The Compressor is fault 	<ol style="list-style-type: none"> 1.Replace the U phase power cord or reconnect the U phase power cord refer to the wiring diagram; 2.Replace the outdoor control board; 3.Replace the compressor. 	Application of three-phase power supply models
10	V phase current fault	<ol style="list-style-type: none"> 1.Compressor V phase power cord is fault or connect wrong; 2.The outdoor control board is fault; 3.The compressor is fault 	<ol style="list-style-type: none"> 1.Replace the V phase power cord or reconnect the V phase power cord refer to the wiring diagram; 2.Replace the outdoor control board; 3.Replace the compressor. 	Application of three-phase power supply models
11	phase wrong failure	<ol style="list-style-type: none"> 1.Three-phase power is abnormal; 2.The outdoor wiring connect wrong; 3. The outdoor control board is failure 	<ol style="list-style-type: none"> 1.Normally protection, please check the supply power 2.Check the wiring connection refer to the wiring diagram; 	Application of three-phase power

7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
			3. Replace the outdoor control board	supply models
12	voltage absent phase	<ol style="list-style-type: none"> 1. Three-phase power is abnormal; 2. The outdoor wiring connect wrong; 3. The outdoor control board is failure. 	<ol style="list-style-type: none"> 1. Normally protection 2. Check the wiring connection refer to the wiring diagram; 3. Replace the outdoor control board 	Application of three-phase power supply models
13	Compressor overheat protector device	<ol style="list-style-type: none"> 1. The wiring of the overload protector connect loose. 2. The overload protector is failure . 3. The refrigerant is not enough; 4. The installation pipe is too long than normal, but not add the enough refrigerant; 5. The expansion valve is failure; 6. The outdoor control board is failure 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the overload protector; 2. Replace the overload protector; 3. Check the welding point of the unit to confirm whether it is leakage, and then recharge the refrigerant; 4. Add the refrigerant; 5. Replace expansion valve; 6. Replace the outdoor control board. 	
14	the high pressure switch operate or the unit turn off for high pressure protection	<ol style="list-style-type: none"> 1. The wiring of the high pressure protector connect loose; 2. The high pressure protector is failure; 3. The outdoor control board is abnormal; 4. Overload in cooling; 5. Overload in heating. 	<ol style="list-style-type: none"> 1. Reconnect the wiring the high pressure protector; 2. Replace the high pressure protector; 3. Replace the outdoor control board; 4. Please refer to the Note 3; 5. Please refer to the Note 4. 	Applied to models with high pressure switch or pressure sensor
15	the low pressure switch protection or the unit turn off for low pressure protection	<ol style="list-style-type: none"> 1. The low pressure switch is failure; 2. The wiring of the low pressure switch connect loose; 3. The refrigerant is not enough; 4. The expansion valve failure in heating mode; 5. The outdoor control board is abnormal. 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the low pressure switch; 2. Replace the low pressure switch; 3. Check the welding point to confirm whether the unit is leakage, and then add some refrigerant; 4. Replace the expansion valve; 5. Replace the outdoor control board. 	Applied to models with low pressure switch or pressure sensor
16	overload protection in cooling mode	System overload	Please refer to the Note 3.	
17	Discharge temperature sensor fault	<ol style="list-style-type: none"> 1. The wiring of the discharge temperature sensor connect loose; 2. The discharge temperature sensor is failure; 3. The sampling circuit is abnormal. 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the discharge temperature sensor; 2. Replace the discharge temperature sensor; 3. Replace the outdoor control board. 	
18	AC voltage is abnormal	<ol style="list-style-type: none"> 1. The AC voltage >275V or <160V. 2. The AC voltage of sampling circuit on the driver board is abnormally 	<ol style="list-style-type: none"> 1. Normally protection, please check the supply power; 2. Replace the driver board. 	MUTI-SPLIT TYPE ONLY

7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
19	Suction temperature sensor fault	<ol style="list-style-type: none"> 1.The wiring of the suction temperature sensor connect loose; 2. The suction temperature sensor is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.Reconnect the wiring of the suction temperature sensor; 2.Replace the suction temperature sensor; 3.Replace the outdoor control board. 	
20	The temperature sensor for the inlet tube of the condenser fault	<ol style="list-style-type: none"> 1.The wiring of the temperature sensor for the inlet tube connect loose; 2.The temperature sensor for the inlet tube is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.Reconnect the wiring of the temperature sensor for the inlet tube of the condenser; 2.Replace the temperature sensor for the inlet tube of the condenser; 3.Replace the outdoor control board. 	
21	The outlet tube of the condenser temperature sensor fault	<ol style="list-style-type: none"> 1.The wiring of the temperature sensor for the outlet tube connect loose; 2.The temperature sensor for the outlet tube is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the temperature sensor for the outlet tube of the condenser. 2.Replace the temperature sensor for the outlet tube of the condenser; 3.Replace the outdoor control board. 	
22	The defrosting sensor fault	<ol style="list-style-type: none"> 1.The wiring of the defrosting sensor connect loose; 2.The defrosting sensor is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the defrosting sensor; 2. Replace the defrosting sensor; 3. Replace the outdoor control board. 	
23	Expansion valve A tube(thin) sensor fault	<ol style="list-style-type: none"> 1. The wiring of the sensor for the expansion valve A(thin tube) connect loose; 2.The sensor for the expansion A(thin tube) is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor for the expansion valve A(thin tube); 2. Replace the sensor for the expansion valve A(thin tube); 3. Replace the outdoor control board. 	FOR MUTI-SPLIT &Inverter unitary types
24	Expansion valve B (thin)tube sensor fault	<ol style="list-style-type: none"> 1. The wiring of the sensor for the expansion valve B (thin tube) connect loose; 2.The sensor for the expansion valve B(thin tube) is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.Reconnect the wiring of the sensor for the expansion valve B(thin tube); 2.Replace the sensor for the expansion valve B(thin tube); 3. Replace the outdoor control board. 	FOR MUTI-SPLIT outdoor
25	Expansion valve C (thin)tube sensor fault	<ol style="list-style-type: none"> 1. The wiring of the sensor for the expansion valve C(thin tube) connect loose; 2.The sensor of the expansion valve C (thin tube) is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor for the expansion valve C(thin tube); 2. Replace the sensor for the expansion valve C(thin tube); 3. Replace the outdoor control board. 	FOR MUTI-SPLIT outdoor
26	Expansion valve D (thin)tube sensor fault	<ol style="list-style-type: none"> 1.The wiring of the sensor for the expansion valve D(thin tube) connect loose; 2.The sensor of the expansion valve D (thin tube) is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor for the expansion valve D(thin tube); 2. Replace the sensor for the expansion valve D(thin tube); 3. Replace the outdoor control board. 	FOR MUTI-SPLIT outdoor
27	Expansion valve A (thick tube) sensor fault	<ol style="list-style-type: none"> 1. The wiring of the sensor for the expansion valve A(thick tube) connect loose; 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor for the expansion valve A(thick tube); 	FOR MUTI-SPLIT

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		2.The sensor of the expansion valve A (thick tube) is failure; 3.The sampling circuit is abnormally	2. Replace the sensor for the expansion valve A(thick tube); 3. Replace the outdoor control board.	&inverter unitary types
28	Expansion valve B (thick tube) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve B (thick tube) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve B(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
29	Expansion valve C (thick tube) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve C (thick tube) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve C(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
30	Expansion valve D (thick tube) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve D (thick tube) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve D(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
31	The discharge pressure is too high	1. Overload in cooling; 2. Overload in heating	1. Overload in cooling; 2. Overload in heating	VRF outdoor
32	The suction pressure is too low fault	1.The refrigerate is not enough for the unit; 2.The expansion valve is failure in heating mode; 3.The outdoor ambient temperature is too low in heating mode	1.Check the welding point to confirm whether it exist the leakage point, and then add some refrigerate; 2. Replace the expansion valve; 3.The unit should operate within allowable temperature range.	VRF outdoor
40	high pressure and low pressure imbalance before compressor start	1.The wiring of the high/low pressure sensor connect loose; 2.The wiring of the bypass valve connect loose; 3. High/low pressure sensor is failure; 4.Bypass coil is failure. 5.Bypass valve is failure. 6.The capillary that connect with bypass valve blockage 7.The outdoor control board is fault;	1.Reconnect the wiring of high/low pressure sensor . 2..Reconnect the wiring of the bypass valve ; 3.Replace pressure sensor. 4.Replace bypass valve coil. 5.Replace bypass coil. 6.Check whether blockage occur. 7.Replace outdoor control board.	VRF outdoor
42	the voltage sensor fault	1.The wiring of the voltage sensor connect wrong or loose; 2. The voltage sensor is failure; 3. The sampling circuit of the voltage sensor is failure.	1. Reconnect the wiring of the current sensor; 2. Replace the voltage sensor; 3. Replace the outdoor control board.	
43	High Pressure sensor fault	1.The wiring of the high-pressure pressure sensor connect loose;	1.Reconnect the wiring of the high-pressure pressure sensor;	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		2.The high-pressure pressure sensor is failure 3.The sampling circuit of the high-pressure pressure sensor is failure	2.Replace the high-pressure pressure sensor; 3.Replace the outdoor control board.	
44	Low Pressure sensor fault	1.The wiring of the low-pressure pressure sensor connect loose; 2.The low-pressure pressure sensor is failure 3.The sampling circuit of the low-pressure pressure sensor is failure.	1.Reconnect the wiring of the low-pressure pressure sensor; 2.Replace the low-pressure pressure sensor; 3.Replace the outdoor control board.	
45	IPM fault	There are many reasons for this failure, If you need further analysis, fault code of the driver board is needed by watching the driver board fault led. Analysis can be further to know why and how to operate. Specific see table 5, table 6.	See attached "analysis of the driving board fault".	Applied for INVERTER type
46	IPM and control board communication fault	1.The cable between the control board and the driver board connect loose; 2.The cable between the control board and the driver board is failure; 3.The driver board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the driver board; 2.Replace the communication cable between the control board and the driver board; 3.Replace the driver board; 4.Replace the control board.	Applied for Inverter Unitary type&Free-Match
46-1	IPM and control board communication fault	1.The cable between the control board and the driver board connect loose; 2.The cable between the control board and the driver board is failure; 3.The driver board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the driver board; 2.Replace the communication cable between the control board and the driver board; 3.Replace the driver board; 4.Replace the control board.	Applied for VRF
46-2	Replenish gas board and control board communication fault	1.The cable between the control board and replenish gas board connect loose; 2.The cable between the control board and replenish gas board is failure; 3.The replenish gas board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the replenish gas board; 2.Replace the communication cable between the control board and the replenish gas board; 3.Replace the replenish gas board ; 4.Replace the control board.	Applied for VRF
47	Discharge temperature too high fault	1. The refrigerant of the unit is not enough; 2.The refrigerant of the unit is not enough due to add the length of the installation pipe 3.Throttling service is failure; 4.The outdoor ambient temperature is too high	1.Check the welding point to confirm whether the unit has exist leakage point, and then add some refrigerant. 2.Add some refrigerant refer to the installation user manual; 3.Replace the throttling service(such	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
			as capillary, expansion valve) 4. Normally protection.	
48	the outdoor DC fan motor fault (upper fan motor)	<ol style="list-style-type: none"> 1.The wiring of the up DC fan motor connect loose; 2. The cord of the up DC fan motor is failure; 3.The up DC fan motor is failure; 4. The drive circuit of the up DC fan motor is failure; 5. The outdoor fan has been blocked. 	<ol style="list-style-type: none"> 1.Reconnect the wiring of the up DC fan motor; 2.Replace the up DC fan motor; 3. Replace the up DC fan motor; 4.Replace the driver board of the fan motor; 5. Check the outdoor fan and ensure the outdoor fan can run normally. 	
48-1	the outdoor upper DC fan motor Locked rotor fault	<ol style="list-style-type: none"> 1.The fan motor motor rotation blockage; 2. The fan motor is failure; 3.The outdoor control board is failure; 4. The driver board is failure; 	<ol style="list-style-type: none"> 1. Remove the fan motor locked-rotor sundry, recover motor operating conditions; 2. Replace the upper DC fan motor; 3. Replace the outdoor control board ; 4 .Replace the driver board . 	VRF
48-2	the outdoor upper DC fan motor stall fault	<ol style="list-style-type: none"> 1. The fan motor is failure; 2.The outdoor control board is failure; 3. The driver board is failure; 	<ol style="list-style-type: none"> 1. Replace the upper fan motor; 2. Replace the outdoor control board ; 3 .Replace the driver board . 	VRF
49	the outdoor DC fan motor fault (down fan motor)	<ol style="list-style-type: none"> 1.The wiring of the down DC fan motor connect loose; 2.The cord of the down DC fan motor is failure; 3. The down DC fan motor is failure; 4. The drive circuit of the down DCfan motor is failure; 5. The outdoor fan has been blocked. 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the down DC fan motor; 2. Replace the down DC fan motor; 3.Replace the down DC fan motor; 4.Replace the driver board of the fan motor; 5. Check the outdoor fan and ensurethe outdoor fan can run normally. 	
49-1	the outdoor lower DC fan motor Locked rotor fault	<ol style="list-style-type: none"> 1.The fan motor motor rotation blockage; 2. The fan motor is failure; 3.The outdoor control board is failure; 4. The driver board is failure; 	<ol style="list-style-type: none"> 1. Remove the fan motor locked-rotor sundry, recover motor operating conditions; 2. Replace the lower DC fan motor; 3. Replace the outdoor control board ; 4 .Replace the driver board . 	VRF
49-2	he outdoor lower DC fan motor stall fault	<ol style="list-style-type: none"> 1. The fan motor is failure; 2.The outdoor control board is failure; 3. The driver board is failure; 	<ol style="list-style-type: none"> 1. Replace thelower fan motor; 2. Replace the outdoor control board ; 3 .Replace the driver board . 	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
50	Expansion valve E temperature sensor fault	<ol style="list-style-type: none"> 1. The wiring of the sensor connect loose; 2. The sensor of the expansion valve is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor; 2. Replace the sensor for the expansion valve E; 3. Replace the outdoor control board. 	FOR Branch Box
63	Current sensor fault	<ol style="list-style-type: none"> 1. The wiring of the current sensor connect loose; 2. The current sensor is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring of the sensor; 2. Replace the current sensor; 3. Replace the outdoor control board. 	Application of three-phase power supply ON/OFF unitary models
66	Radiator temperature sensor fault	<ol style="list-style-type: none"> 1. The sensor connect is loose; 2. The current sensor is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring ; 2. Replace the temperature sensor; 3. Replace the outdoor control board. 	
67	Radiator temperature protect			
91	The unit turn off due to the IPM board over heating fault	<ol style="list-style-type: none"> 1. The outdoor ambient is too high; 2. The speed of the out fan motor is too low if the fan motor is AC fan motor; 3. The outdoor unit has been installed without standard; 4. The supply power is too low. 	<ol style="list-style-type: none"> 1. Normally protection; 2. Check the fan capacitor, and replace the fan capacitor if it is failure; 3. Reinstalled the outdoor unit refer to the installation user manual; 4. Normally protection. 	
92	the ratio of the discharge pressure than the suction pressure is too large	<ol style="list-style-type: none"> 1. The filter of the expansion valve is dirty; 2. The difference between the indoor room temperature and the outdoor ambient temperature is too large; 3. The refrigerant of the unit is not enough; 4. The expansion is failure or the capillary is failure 5. The outdoor ambient temperature is too low in heating mode 	<ol style="list-style-type: none"> 1. Replace the expansion valve; 2. Normally protection; 3. Check the welding point of the unit to confirm whether it exist leakage point, and then add some refrigerant; 4. Replace the expansion valve or the capillary; 5. Please let the unit operates within the allowable temperature range. 	VRF
93-1	The quantity of the indoor unit is more than the set.	<ol style="list-style-type: none"> 1. Indoor unit quantity set is incorrect ; 2. New indoor unit is added in the system. 	Reset the number of the indoor units.	VRF
93-2	The quantity of the indoor unit is less than the set.	<ol style="list-style-type: none"> 1. Not all of the indoor units are power on; 2. The set quantity of the indoor unit is incorrect; 3. Add or remove some indoor units 	<ol style="list-style-type: none"> 1. Put all the indoor units power on; 2. Reset the quantity of the indoor units; 3. Reset the quantity of the indoor units 	VRF
94	outdoor address conflict	<ol style="list-style-type: none"> 1. Put all the indoor units power on; 2. Reset the quantity of the indoor units; 3. Reset the quantity of the indoor units 	Change the setting address of the outdoor unit	VRF
95	the refrigerant of the unit is excessive fault	The refrigerant of the unit is excessive	Discharge the refrigerant and charge the refrigerant refer to the rating label	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
96	the refrigerant of the unit is not enough fault	The refrigerant of the unit is not enough	Discharge the refrigerant and charge the refrigerant refer to the rating label	VRF
97	4-way valve commutation failure fault	1.The wiring of the 4-way valve coil connect loose; 2.The 4-way valve coil is failure; 3.The 4-way valve is failure; 4.The driver board of the 4-way valve is failure	1. Reconnect the wiring of the 4-way valve; 2. Replace the 4-way valve coil; 3. Replace the 4-way valve; 4.Replace the driver board of the 4-way valve.	FOR VRF&invertor unitary types

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The following is the fault code table of indoor.

Sheet 2 Indoor Error Code List

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
31	The buttons of the front panel AD fault	<ol style="list-style-type: none"> 1. The buttons are failure; 2. The cable of the display board is failure; 3. The display board is failure; 4. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Replace the display board; 2. Replace the cable of the display board; 3. Replace the display board; 4. Replace the indoor control board. 	Only for MUTI-SPLIT
32	The front panel fault is not in place	<ol style="list-style-type: none"> 1. The front panel has been blocked; 2. The connection cable of the switch and the motor connect loose; 3. The switch is failure; 4. The motor of the front panel is failure; 5. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reassembly the front panel; 2. Reconnect the cable of the switch and panel motor. 3. Replace the switch; 4. Replace the motor of the front panel; 5. Replace the indoor control board. 	Only for MUTI-SPLIT
33	Room temperature sensor fault	<ol style="list-style-type: none"> 1. The cable of the indoor room temperature sensor connect loose; 2. The indoor room temperature sensor is failure; 3. The sampling circuit is abnormal. 	<ol style="list-style-type: none"> 1. Reconnect the cable of the indoor room temperature sensor; 2. Replace the indoor room temperature sensor; 3. Replace the indoor control board. 	Only for MUTI-SPLIT
34	Coil temperature sensor fault	<ol style="list-style-type: none"> 1. The cable of the indoor coil temperature sensor connect loose; 2. The indoor coil temperature sensor is failure; 3. The sampling circuit is abnormal. 	<ol style="list-style-type: none"> 1. Reconnect the cable of the indoor room temperature sensor; 2. Replace the indoor room temperature sensor; 3. Replace the indoor control board. 	Only for MUTI-SPLIT
35	Panel drive fault (two upper and lower panel position detection switch is not in accordance with the reservation timing action)	<ol style="list-style-type: none"> 1. The front panel has been blocked; 2. The connection cable of the switch and the motor connect loose; 3. The switch is failure; 4. The motor of the front panel is failure; 5. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reassembly the front panel; 2. Reconnect the cable of the switch and panel motor. 3. Replace the switch; 4. Replace the motor of the front panel; 5. Replace the indoor control board. 	Only for MUTI-SPLIT

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
36	Communication between Indoor and outdoor fault	<ol style="list-style-type: none"> 1. The connection cable between the indoor unit and the outdoor unit connect wrong; 2. The communication cable between the indoor unit and the outdoor unit connect loose or the cable between the indoor control board to terminal connect loose or the cable between the outdoor control board to the terminal connect loose; 3. The indoor control board is failure; 4. The outdoor control board is failure; 	<ol style="list-style-type: none"> 1. Reconnect the connection cable refer to the indoor and outdoor wiring diagram; 2. Reconnect the communication cable refer to the indoor and outdoor wiring diagram; 3. Replace the communication cable refer to the indoor and outdoor wiring diagram; 4. Replace the indoor control board; 5. Replace the outdoor control board. 	Only for MUTI-SPLIT
37	Humidity sensor failure	<ol style="list-style-type: none"> 1. The cable of the humidity sensor connect loose; 2. The humidity sensor is failure; 3. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reconnect the cable of the humidity sensor; 2. Replace the humidity sensor; 3. Replace the indoor control board. 	Only for MUTI-SPLIT
38	EEprom Data error	<ol style="list-style-type: none"> 1. EE components is failure; 2. The EE control circuit of the control board is failure; 3. The EE components has been inserted with opposite direction. 	<ol style="list-style-type: none"> 1. Replace the EE components; 2. Replace the control board; 3. Reinsert the EE components. 	Only for MUTI-SPLIT
39	The indoor DC fan motor fault	<ol style="list-style-type: none"> 1. The cable of the DC fan motor connect loose; 2. The indoor control board is failure; 3. The indoor fan motor is failure. 	<ol style="list-style-type: none"> 1. The cable of the DC fan motor connect loose; 2. The indoor control board is failure; 3. The indoor fan motor is failure. 	Only for MUTI-SPLIT
40	The grill protection	<ol style="list-style-type: none"> 1. The grill has not been installed in right place; 2. The protection switch is failure; 3. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Adjust the grill and put it in right place; 2. Replace the switch components; 3. Replace the indoor control board. 	Only for MUTI-SPLIT
41	Zero check fault	Control board is failure.	Replace the indoor control board.	PG motor

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
51	Drainage protection	<ol style="list-style-type: none"> 1. The water level of the drain pan exceed safe level; 2. The cable of the water level switch connect loose; 3. The water level switch is failure; 4. The control board is failure. 	<ol style="list-style-type: none"> 1. Check whether there are something to block the drain hose or the height of the drain hose is too high; 1.2 Check the water pump and replace the water pump if the water pump is failure; 2. Reconnect the cable of the water level switch refer to the wiring diagram; 3. Replace the water level switch; 4. Replace the control board. 	
52	The grill protection	<ol style="list-style-type: none"> 1. The grill has not been installed in right place; 2. The protection switch is failure; 3. The control board is failure. 	<ol style="list-style-type: none"> 1. Adjust the grill and put it in right place; 2. Replace the switch components; 3. Replace the indoor control board. 	
53	The upper panel is not in place to protection	<ol style="list-style-type: none"> 1. The front panel has been blocked; 2. The cable of the switch and the motor connect loose; 3. The switch is failure; 4. The panel motor is failure; 5. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reassembly the front panel; 2. Reconnect the cable of the switch and the panel motor; 3. Replace the switch components; 4. Replace the panel motor; 5. Replace the indoor control board. 	
54	The lower panel is not in place to protection	<ol style="list-style-type: none"> 1. The front panel has been blocked; 2. The cable of the switch and the motor connect loose; 3. The switch is failure; 4. The panel motor is failure; 5. The indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reassembly the front panel; 2. Reconnect the cable of the switch and the panel motor; 3. Replace the switch components; 4. Replace the panel motor; 5. Replace the indoor control board. 	
55	Mode Conflict Fault	The user set the conflicting mode for more than two indoor units	Reset the operate mode for the indoor unit, for the one outdoor unit, the user should avoid to set the conflicting operate mode with the indoor units	ONLY FOR MUTI-SPLIT & VRF TYPES
56	Water tank water temperature sensor 1 fault	<ol style="list-style-type: none"> 1. The cable of the water tank water temperature sensor 1 connect loose; 2. The cable of the water tank water temperature sensor 1 circuit is abnormal; 3. The cable of the water tank water temperature sensor 1 is failure. 	<ol style="list-style-type: none"> 1. Reconnect the cable of the water temperature sensor 1; 2. Change the cable . 3. Replace the water temperature sensor 1 . 4. Replalce indoor control board . 	Only for heat pump water heater

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		4.Indoor control board is failure.		
57	Water tank water temperature sensor 2fault	<ol style="list-style-type: none"> 1. The cable of the water tank water temperature sensor 2 connect loose; 2. The cable of the water tank water temperature sensor 2 circuit is abnormal; 3. The cable of the water tank water temperature sensor 2 is failure. 4.Indoor control board is failure. 	<ol style="list-style-type: none"> 1. Reconnect the cable of the water temperature sensor 2; 2. Change the cable . 3. Replace the water temperature sensor 2 . 4.Repalce indoor control board . 	Only for heat pump water heater
58	Coil temperature sensor (liquid tube)fault	<ol style="list-style-type: none"> 1.The coil temperature sensor (liquid tube)connect loose; 2.The coil temperature sensor(liquid tube) is failure; 3.The control board is failure 	<ol style="list-style-type: none"> 1.Reconnect the coil temperature sensor; 2.Replace the coil temperature sensor components; 3.Replace the control board components. 	Only for heat pump water heater
59	Liquid tube temperature protect	<ol style="list-style-type: none"> 1.The resistance of temperature sensor is abnormal. 2.Control board circuit is abnormal. 3.Water temperature in tank is too high(over 70°C) ; 4.No water in tank. 	<ol style="list-style-type: none"> 1.Change temperature sensor. 2.Change Control board . 3.Normally protection,should lower water temperature ; 4.Open fill pump to supply water;Check whether there is leakage occur. 	Only for heat pump water heater
60	water shortage protect	<ol style="list-style-type: none"> 1.Water shortage in tank; 2.Water temperature sensor in tank is abnormal. 3.Control board is abnormal. 	<ol style="list-style-type: none"> 1.Open fill pump to supply water;Check whether there is leakage occur. 2.Change temperature sensor. 3.Change Control board . 	Only for heat pump water heater
61	Indoor address repeat fault	Two or more two indoor units has set with the same address	Reset the address of the indoor unit and it should avoid the address repeat.	For VRF
62	Remote address repeat fault	When the same indoor unit with more than one wiring controller, a number of the address of the wiring controller is same	Reset the address of the wiring controller and avoid the address of the wiring controller repeat.	For VRF
64	Communication between Indoor & Outdoor unit Fault	<ol style="list-style-type: none"> 1. The connection cable between the indoor unit and the outdoor unit connect wrong; 2.The communication cableconnect loose; 3.The communication cable between the 	<ol style="list-style-type: none"> 1. Reconnect the connection cable refer to the indoor and outdoor wiring diagram; 2. Reconnect the communication cable refer to the indoor and outdoor wiring diagram; 3. Replace the communication cable refer to the indoor and outdoor 	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		indoor unit and the outdoor unit is failure or the cable between the indoor control board to terminal is failure or the cable between the outdoor control board to the terminal is failure; 4. The indoor control board is failure; 5. The outdoor control board is failure.	wiring diagram; 4. Replace the indoor control board; 5. Replace the outdoor control board.	
65	The indoor unit can not receive the sign of the wiring controller	1.The cable of the wiring controller connect loose; 2.The cable of the wiring controller is failure; 3.The wiring controller is failure; 4. The indoor control board is failure.	1.Reconnect the cable of the wiring controller; 2. Replace the cable of the wiring controller; 3. Replace the wiring controller; 4. Replace the indoor control board.	
72	Indoor fan motor fault	1. The cable of the indoor fan motor connect loose; 2. The cable of the indoor fan motor is failure; 3.The indoor fan motor is failure; 4. The indoor control board is failure	1. Reconnect the cable of the fan motor; 2. Replace the cable of the fan motor; 3. Replace the fan motor; 4. Replace the indoor control board; 5. Check the indoor fan and ensure the indoor fan can run normally.	
73	Indoor EEPROM Data 1 fault	1.Indoor EE components is failure; 2.The control circuit of the EE components is failure; 3.The EE components has been inserted with opposite direction	1. Replace the EE components; 2. Replace the indoor control board; 3. Reassembly the EE components of the indoor control board	
74	IndoorEEPROM Data 2 error	EE in MCU is failure,the unit can run ,but the function user has set is eneffective.	Replace EE data in MCU.	
80	Panel key fault	1. The button is failure; 2. The cable of the display board is failure; 3. The display board is failure; 4. The indoor control board is failure	1. Replace the display board; 2. Replace the cable of the display board; 3. Replace the display board; 4. Replace the indoor control board.	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
81	Indoor ambient Temperature Sensor Fault	<ol style="list-style-type: none"> 1. The cable of the room temperature sensor connect loose; 2. The room temperature sensor is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.Reconnect the cable of the room temperature sensor; 2. Replace the room temperature sensor; 3. Replace the indoor control board. 	
82	Evaporator Inlet Temperature Sensor Fault	<ol style="list-style-type: none"> 1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally 	
83	Evaporator Middle Temperature Sensor Fault	<ol style="list-style-type: none"> 1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the cable of the coil temperature sensor of the evaporator; 2. Replace the coil temperature sensor of the evaporator; 3. Replace the indoor control board. 	
84	Evaporator outlet Temperature Sensor Fault	<ol style="list-style-type: none"> 1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the cable of the coil temperature sensor of the evaporator; 2. Replace the coil temperature sensor of the evaporator; 3. Replace the indoor control board. 	
85	Wiring Remote Controller Sensor Fault	<ol style="list-style-type: none"> 1. The temperature sensor of the wiring controller is failure; 2. The sampling circuit of the wiring controller is failure 	<ol style="list-style-type: none"> 1. Replace the wiring controller; 2. Replace the wiring controller 	
86	Air outlet temperature sensor fault	<ol style="list-style-type: none"> 1. The cable of the temperature sensor of the air outlet connect loose; 2. The temperature sensor of the air outlet is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1.Reconnect the cable of the temperature sensor of the air outlet; 2. Replace the temperature sensor of the air outlet; 3. Replace the indoor control board. 	
87	The inlet of water side entrance temperature sensor fault	<ol style="list-style-type: none"> 1. The cable of the temperature sensor of the inlet of water side is failure; 2. The temperature sensor of the inlet of water side is failure; 3.The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the able of the temperature sensor of the inlet of water side; 2. Replace the temperature sensor of the inlet of water side; 3. Replace the indoor control board. 	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
88	The outlet of water side entrance temperature sensor fault	<ol style="list-style-type: none"> 1. The cable of the temperature sensor of the outlet of water side is failure; 2. The temperature sensor of the outlet of water side is failure; 3. The sampling circuit is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the cable of the temperature sensor of the outlet of water side; 2. Replace the temperature sensor of the outlet of water side; 3. Replace the indoor control board. 	
89	Humidity sensor failure	<ol style="list-style-type: none"> 1. The humidity sensor is failure; 2. The indoor control board is abnormally 	<ol style="list-style-type: none"> 1. Replace the humidity sensor components; 2. Replace the indoor control board. 	
98	Water module DIP switch function select fault	<ol style="list-style-type: none"> 1. DIP switch select failure; 2. DIP is abnormal; 3. Control board is abnormal. 	<ol style="list-style-type: none"> 1. Replace DIP switch; 2. Change DIP switch; 3. Change control board. 	
F0(240)	Wire remote controller EEPROM failure	<ol style="list-style-type: none"> 1. EE of wire remote controller is abnormal; 2. Wire remote controller control board is abnormal. 	Change wire remote controller .	
F1(241)	Wire remote controller temperature sensor failure	<ol style="list-style-type: none"> 1. Temperature sensor of wire remote controller is abnormal; 2. Wire remote controller control board is abnormal. 	Change wire remote controller .	
F2(242)	Wire remote controller clock IC failure	Wire remote controller control board is abnormal.	Change wire remote controller .	
F3(243)	Wire remote controller humidity sensor failure	<ol style="list-style-type: none"> 1. Temperature /humidity sensor of wire remote controller is abnormal; 2. Wire remote controller control board is abnormal. 	Change wire remote controller .	
FE(254)	Communication between main control board & Wiring remote controller Fault (display on wiring remote controller)	<ol style="list-style-type: none"> 1. The wiring between the wiring controller to the indoor control board connect loose; 2. The sequence of the wiring between the wiring controller to the indoor control board is wrong; 3. The wiring between the wiring controller to the indoor control board is failure; 4. The wiring controller is failure; 5. The indoor control board is abnormally 	<ol style="list-style-type: none"> 1. Reconnect the wiring between the wiring controller to the indoor control board; 2. Replace the wiring between the wiring controller to the indoor control board; 3. Replace the wiring between the wiring controller to the indoor control board; 4. Replace the wiring controller; 5. Replace the indoor control board 	

7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
ER	Communication between main control board & display board Fault (displays on display board)	1.The wiring between the display board to the indoor control board connect loose; 2.The sequence of the wiring between the display board to the indoor control board is wrong; 3.The wiring between the display board to the indoor control board is failure; 4. The display board is failure; 5. The indoor control board is failure.	1. Reconnect the between the display board to the indoor control board; 2. Replace the wiring between the display board to the indoor control board; 3. Replace the wiring between the display board to the indoor control board; 4. Replace the display board; 5. Replace the indoor control board.	

NOTE 1:

If the indoor unit can not turn on or the indoor unit turn off itself after 30s, at the same time the unit do not display the error code, please check the fire and the socket of the control board.

Note 2:

If the indoor unit display the 75,76,77,78 error code after you turn on the unit, please check the TEST seat of the indoor control board or the TEST detection circuit whether exists short circuit.

Note 3:Overload in cooling mode

overload in cooling mode		
sr.	The root cause	Corrective measure
1	The refrigerant is excessive	Discharge the refrigerant, and recharge the refrigerant refer to the rating label
2	The outdoor ambient temperature is too high	Please use within allowable temperature range
3	The air outlet and air inlet of the outdoor unit is short-circuit	Adjust the installation of the outdoor unit refer to the user manual
4	The outdoor heat exchanger is dirty, such as condenser	Clean the heat exchanger of the outdoor unit, such as condenser
5	The speed of the outdoor fan motor is too low	Check the outdoor fan motor and fan capacitor
6	The outdoor fan is broken or the outdoor fan is blocked	Check the outdoor fan
7	The air inlet and outlet has been blocked	Remove the blocked thing

7. TROUBLE SHOOTING

8	The expansion valve or the capillary is failure	Replace the expansion valve or the capillary
---	---	--

Note 4:Over load in heating mode

Overload in heating mode		
sr.	The root cause	Corrective measure
1	The refrigerant is excessive	Discharge the refrigerant, and recharge the refrigerant refer to the rating label
2	The indoor ambient temperature is too high	Please use within allowable temperature range
3	The air outlet and air inlet of the indoor unit is short-circuit	Adjust the installation of the indoor unit refer to the user manual
4	The indoor filter is dirty	Clean the indoor filter
5	The speed of the indoor fan motor is too low	Check the indoor fan motor and fan capacitor
6	The indoor fan is broken or the outdoor fan is blocked	Check the indoor fan
7	The air inlet and outlet has been blocked	Remove the blocked thing
8	The expansion valve or the capillary is failure	Replace the expansion valve or the capillary

7. TROUBLE SHOOTING

The following is the fault code table of driver board.

Analysis of the Driving Board Fault

Driver board fault codes trouble shooting (*Except Free-match 20K&16K DUAL TYPES*), details see sheet 5.

I . Driver fault code display by indicate lamps of driver board flashing. The times that the lamp flashes equal to fault code. Flashing Intervals for a period of time again .Indicator light off when no fault.

For example , fault code 3 : Indicator light flash 3 times and Flashing Intervals for a period of time again, reports No. 3 fault.



Sheet 5 Driver Error Code -----Except 20K&16 Dual types

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
1	Q axis current detection, step out of failure	1, compressor wire connect not well; 2, Bad driver board components; 3, Compressor start load is too large; 4, Compressor demagnetization; 5, Compressor oil shortage, serious wear of crankshaft; 6. The compressor insulation fault	1, Check compressor wire; 2, Change driver board ; 3, Turn on the machine after pressure balance again; 4, Change Compressor; 5, Change the Compressor; 6, Change the Compressor.
2	Phase current detection, out of step	1. Compressor voltage default phase; 2. Bad driver board components; 3. The compressor insulation fault	1, Check compressor wire connection; 2, Change the driver board; 3, Change the Compressor.
3	Initialization, phase current imbalance	Bad driver board components.	Change driver board .
4	Speed estimation, step out of failure	1, Bad driver board components; 2, Compressor shaft clamping; 3. The compressor insulation fault.	1, Change driver board ; 2, Change the Compressor ; 3, Change the Compressor .
5	IPM FO output fault	1. System overload or current overload. 2, Driver board fault;	1, Check the air-conditioner system; 2, Change the driver board;

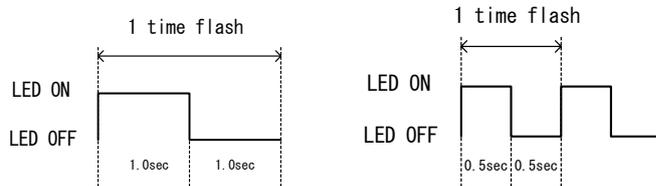
7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
		3, Compressor oil shortage,serious wear of crankshaft; 4,The compressor insulation fault.	3, Change the Compressor; 4, Change the Compressor.
6	Communication between driver board and control board fault	1,Communication wire connect not well; 2,Driver board fault; 3,Control board fault;	1, Check compressor wire connect. 2,Change the driver board; 3,Change the control board ;
7	AC voltage,overload voltage	1,Supply voltage input too high or too low; 2,Driver board fault;	1,Check power supply; 2,Change the driver board;
8	DC voltage,overload voltage	1,Supply voltage input too high ; 2,Driver board fault;	1,Check power supply; 2,Change the driver board;
9	AC voltage imbalance	Driver board fault;	Change the driver board;
10	The current detection circuit fault	Bad driver board components;	Change the driver board
11	AC voltage supply in	1,Power supply abnormal, power frequency out of range; 2,Driver board fault;	1,Check the system; 2,Change the driver board;
12	Products of single-phase PFC over-current, FO output low level	1,System overload, current too large; 2,Driver board fault; 3,PFC fault.	1,Check the system; 2,Change the driver board; 3,Change PFC.
13	Inverter over current (3-phase power supply air conditioners)	1,System overload, current too large; 2,Driver board fault; 3 , Compressor oil shortage, serious wear of crankshaft; 4,The compressor insulation fault.	1,Check the system; 2,Change the driver board; 3, Change the Compressor; 4, Change the Compressor.
14	Inverter over current	1,System overload, current too large; 2,Driver board fault; 3,Compressor oil shortage,serious wear of crankshaft; 4,The compressor insulation fault.	1,Check the system; 2,Change the driver board; 3, Change the Compressor; 4, Change the Compressor.
15	PFC over current(single-phase air-conditioner)	1,System overload, current too large; 2,Driver board fault; 3,PFC fault..	1,Check the system; 2,Change the driver board; 3,Change PFC.
16	Phase imbalance or phase lacks or the instantaneous power failure (only for 3-phase power supply air conditioners)	1,3-Phase voltage imbalance; 2,The 3-phase power supply phase lost; 3,Power supply wiring wrong; 4,Driver board fault.	1,Check the power supply; 2,Check the power supply; 3,Check the power supply wiring connect; 4,Change the driver board.
17	The instantaneous power failure detection	1,The power supply is not stable ; 2.The instantaneous power failure ; 3,Driver board fault;	1,Check the power supply. 2,Not fault. 3,Change the driver board;
18	Low DC voltage 200V	1,Voltage input too low ; 2,Driver board fault.	1,Check the power supply. 2,Change the driver board.

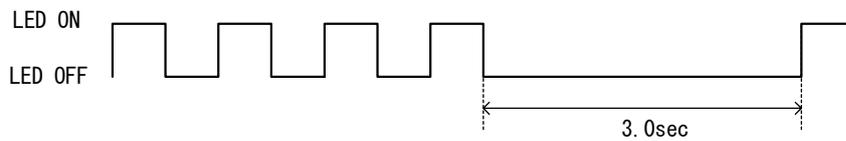
7. TROUBLE SHOOTING

li : Driver board fault codes trouble shooting (*ONLY FOR 20K&16K DUAL TYPES*), details see sheet6.

2-seconds long LED flash on/off in means number 5 , 1 -second short LED flash on/off means number 1.

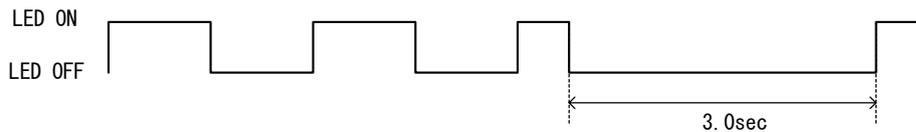


For example , fault code 4 : Indicator light flash 4 times 1-second short LED on/off Intervals for a period of time again, reports No. 4 fault.



For example , fault code 11 : Indicator light flash 2 times 2-seconds long LED on/off and 1 time 1-second

long LED on/off Intervals for a period of time again, reports No. 11 fault.



Sheet 6 Driver Error Code

-----Only for 20K&16 Dual types

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
1	Inverter DC voltage overload fault	1、 Power supply input too high or too low; 2、 Driver board fault.	1,Check power supply 2,Change driver board.
2	Inverter DC low voltage fault		
3	Inverter AC current overload fault		
4	Out-of-step detection	1、 Compressor phase lost ; 2、 Bad driver board components ; 3、 The compressor insulation fault	1,Check compressor wire connect ; 2,Change driver board ; 3,Change compressor.
5	Loss phase detection fault (speed pulsation)		
6	Loss phase detection fault (current imbalance)		
7	Inverter IPM fault (edge)	1、 System overload or current overload; 2,Driver board fault. 3,Compressor oil shortage, serious wear of crankshaft 4、 The compressor insulation fault	1、 Check the system . 2、 Change driver board; 3、 Change the compressor; 4、 Change the compressor.
8	Inverter IPM fault (level)		
9	PFC_IPM IPM fault (edge)		
10	PFC_IPM IPM fault (level)		
11	PFC power detection of failure	1、 The power supply is not stable ; 2、 The instantaneous power	1、 Check the power supply. 2、 Not abnormal.

7. TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
		failure ; 3、 Driver board failure.	3、 Change the driver board.
12	PFC overload current detection of failure.	1、 System overload, current too high ; 2、 Driver board failure ; 3、 PFC failure ;	1、 Check the system; 2、 Change the driver board; 3、 Change the PFC.
13	DC voltage detected abnormal .	1、 Input voltage is too high or too low; 2,Driver board failure ;	1,Check the power supply. 2,Change the driver board;
14	PFC LOW voltage detected failure.		
15	AD offset abnormal detected failure.	Driver board failure.	Change the driver board.
16	Inverter PWM logic set fault.		
17	Inverter PWM initialization failure		
18	PFC_PWM logic set fault.		
19	PFC_PWM initialization fault.		
20	Temperature abnormal.		
21	Shunt resistance unbalance adjustment fault		
22	Communication failure.	1、 Communication wire connect not well. 2、 Driver board failure. 3、 Control board failure.	1、 Check the wiring. 2、 Change the driver board. 3、 Change the control board.
23	Motor parameters setting of failure	Initialization abnormal.	Reset the power supply.

8. CHECKING COMPONENTS

8-1. Check refrigerant system

TEST SYSTEM FLOW

Conditions: ① Compressor is running.

② The air condition should be installed in good ventilation.

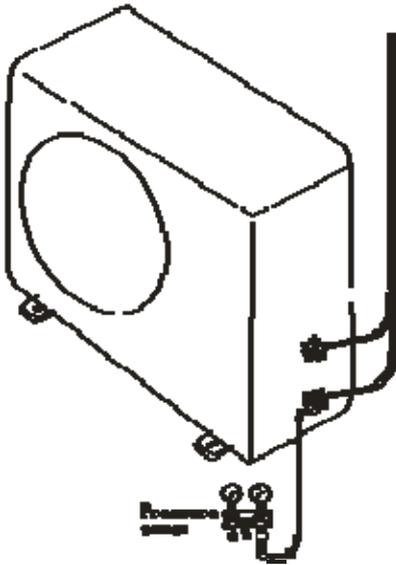
Tool: Pressure Gauge

Technique: ① see ② feel ③ test

SEE ---- Tube defrost.

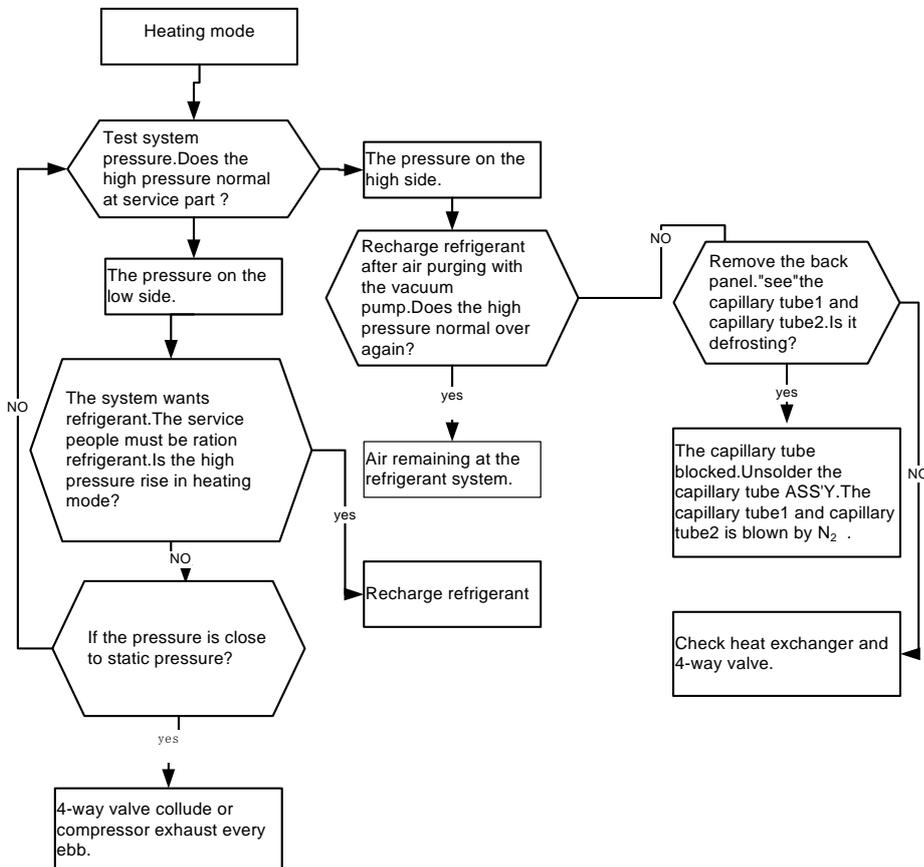
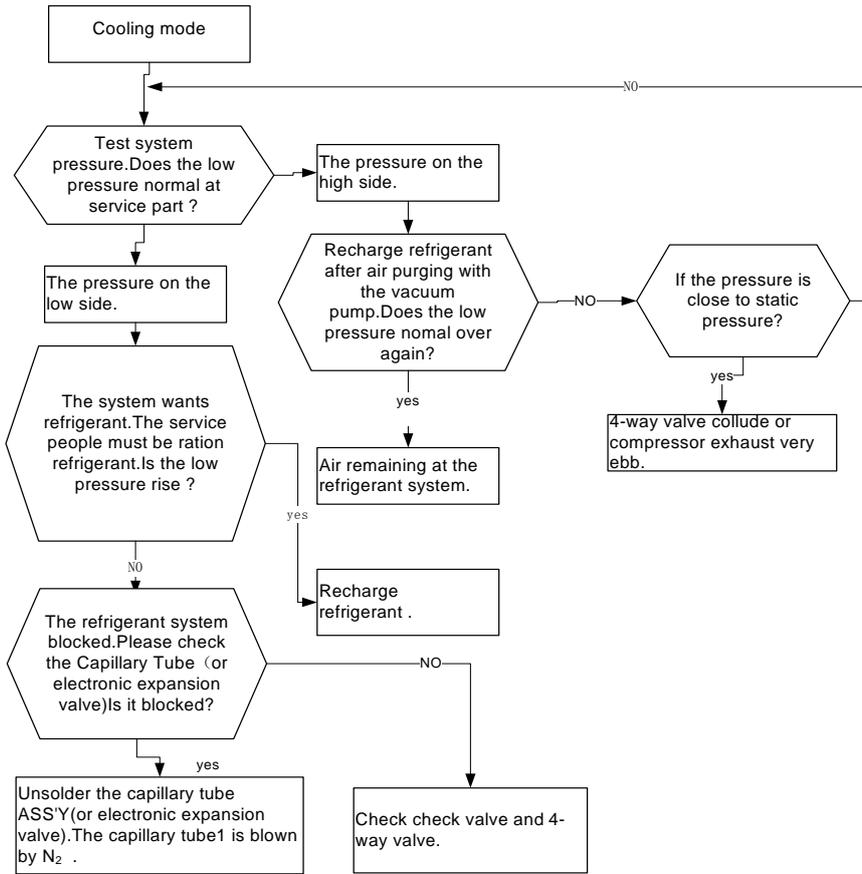
FEEL ---- The difference between tube's temperature.

TEST ---- Test pressure.



8. CHECKING COMPONENTS

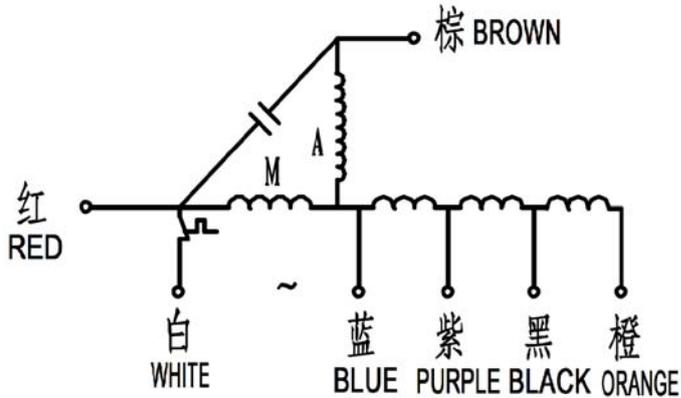
Test system flow



8. CHECKING COMPONENTS

8-2. Check parts unit

1. INDOOR FAN MOTOR



T1 Series:

42K,48K,60K

MODEL: Y7S059D801

BLUE-RED 43.52 [Ω] ± 12%

BLUE-PURPLE 12.67 [Ω] ± 12%

PURPLE-BLACK 7.01 [Ω] ± 12%

BLACK-ORANGE 7.52 [Ω] ± 12%

BLUE-BROWN 52.76 [Ω] ± 12%

T3 Series:

36K(AUF-36HTR4FAM, AUF-36HTR4FAMA)

MODEL: Y7S059D501

BLUE-RED 70.3 [Ω] ± 12%

BLUE-PURPLE 13.74 [Ω] ± 12%

PURPLE-BLACK 13.86 [Ω] ± 12%

BLACK-ORANGE 11.30 [Ω] ± 12%

BLUE-BROWN 50.0 [Ω] ± 12%

8. CHECKING COMPONENTS

36K(AUF-36CTR2SEM)
48K(AUF-48CTR2SPM)
60K(AUF-60CTR2SPM1)
MODEL:EODW07AQH
DC MOTOR

48K(AUF-48HTR4FEM, AUF-48HTR4FEMA, AUF-48HTR4FEMB)
MODEL:Y7S862D820

BLUE-RED 28.65 [Ω] ± 12%

BLUE-PURPLE 7.15 [Ω] ± 12%

PURPLE-BLACK 5.87 [Ω] ± 12%

BLACK-ORANGE 7.37 [Ω] ± 12%

BLUE-BROWN 42.35 [Ω] ± 12%

48K(AUF-48HTR6FEM, AUF-48HTR6FEMA)
MODEL:Y7S862D801

BLUE-RED 43.52 [Ω] ± 12%

BLUE-PURPLE 12.67 [Ω] ± 12%

PURPLE-BLACK 7.01 [Ω] ± 12%

BLACK-ORANGE 7.52 [Ω] ± 12%

BLUE-BROWN 52.76 [Ω] ± 12%

60K(AUF-60CTR2SPM)
MODEL:Y7S059E001

BLUE-WHITE 38.4 [Ω] ± 12%

BLUE-PURPLE 4.0 [Ω] ± 12%

PURPLE-BLACK 9.2 [Ω] ± 12%

BLACK-ORANGE 9.7 [Ω] ± 12%

BLUE-BROWN 39.6 [Ω] ± 12%

8. CHECKING COMPONENTS

60K(AUF-60HTR6FPM, AUF-60HTR6FPMA)

MODEL:Y7S859E002

BLUE-RED 27.4 [Ω] $\pm 12\%$

BLUE-PURPLE 6.68 [Ω] $\pm 12\%$

PURPLE-BLACK 6.7 [Ω] $\pm 12\%$

BLACK-ORANGE 8.6 [Ω] $\pm 12\%$

BLUE-BROWN 37.68 [Ω] $\pm 12\%$

Test in resistance.

TOOL: Multimeter.

Test the resistance of the main winding. The indoor fan motor is fault if the resistance of main winding 0(short circuit)or ∞ (open circuit) .

Test in voltage

TOOL: Multimeter.

Insert screwdriver into to rotate indoor fan motor slowly for 1 revolution or over, and measure voltage "YELLOW" and "GND" on motor. The voltage repeat 0V DC and 5V DC.

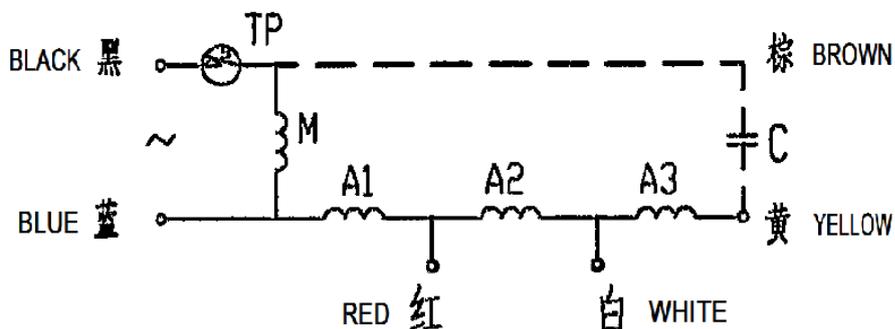
Notes:

- 1) Please don't hold motor by lead wires.
- 2) Please don't plug IN/OUT the motor connector while power ON.
- 3) Please don't drop hurl or dump motor against hard material. Malfunction may not be observed at early stage after such shock. But it may be found later, this type of mishandling void our warranty.

2. OUTDOOR FAN MOTOR

T1 Series:

36K,42K



MODEL: YDK29-6I-39

M:BLACK-BLUE 187 $\pm 15\%$

A:BLUE-RED-WHITE-YELLOW:50/21/106 $\pm 15\%$

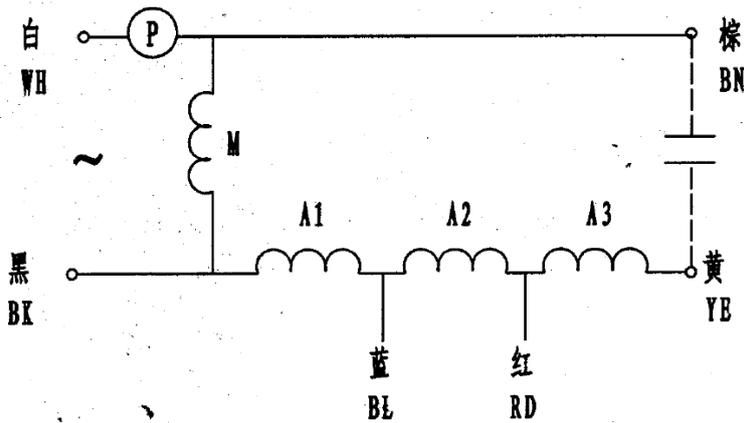
MODEL: YDK29-6I-41

M:BLACK-BLUE 187 $\pm 15\%$

A:BLUE-RED-WHITE-YELLOW:50/21/106 $\pm 15\%$

8. CHECKING COMPONENTS

48K



Model:

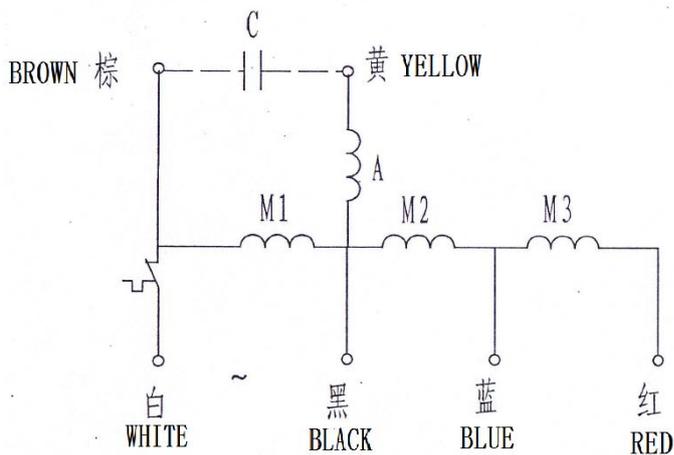
YDK65-6-9024, YDK65-6-9061

主相电阻M (BLACK-WHITE)	$83.0 [\Omega] \pm 10\%$
副相电阻A1 (BLACK-BLUE)	$23.4 [\Omega] \pm 10\%$
副相电阻A2 (BLUE-RED)	$14.0 [\Omega] \pm 10\%$
副相电阻A3 (RED-YELLOW)	$63.5 [\Omega] \pm 10\%$

T3 Series:

36K(AUF-36HTR4FAM, AUF-36HTR4FAMA)

MODEL: YDK95-6-9063A



BLACK-WHITE: $67 \pm 12\%$

BLACK-BLUE: $23.6 \pm 12\%$

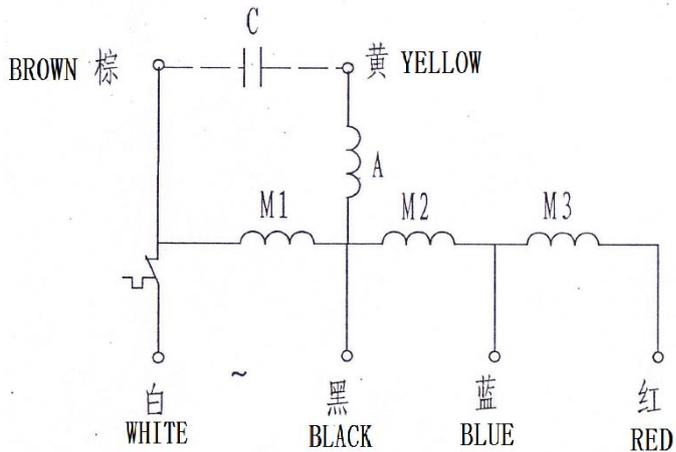
BLUE-RED: $17.7 \pm 12\%$

BLACK-YELLOW: $79.9 \pm 12\%$

8. CHECKING COMPONENTS

36K(AUF-36CTR2SEM)

MODEL:YDK69-6I-42, YDK69-6I-40

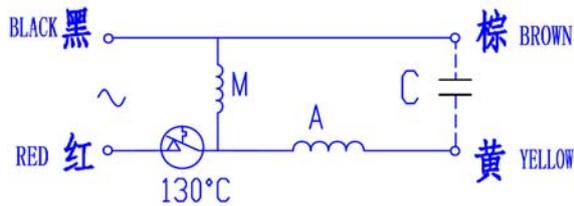


M: WHITE-RED $273 \pm 15\%$

A: BROWN-BLACK $100 \pm 15\%$

48K(AUF-48HTR4FEM, AUF-48HTR4FEMA, AUF-48HTR4FEMB)

MODEL: YDK29-6I-36 , YDK29-6I-37

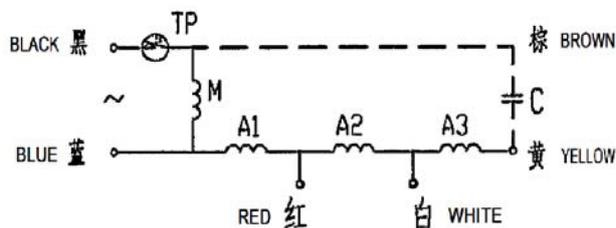


M: $228 \pm 15\%$

A: $150 \pm 15\%$

48K(AUF-48HTR6FEM, AUF-48HTR6FEMA)

MODEL: YDK29-6I-39



MODEL: YDK29-6I-39

M: BLACK-BLUE $187 \pm 15\%$

A: BLUE-RED-WHITE-YELLOW: $50/21/106 \pm 15\%$

MODEL: YDK29-6I-41

M: BLACK-BLUE $187 \pm 15\%$

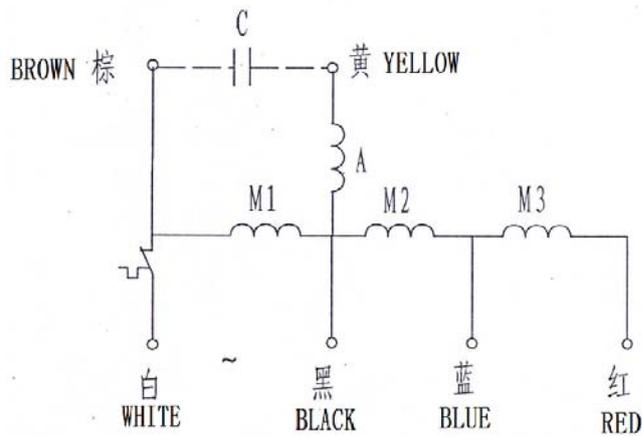
A: BLUE-RED-WHITE-YELLOW: $50/21/106 \pm 15\%$

8. CHECKING COMPONENTS

48(AUF-48CTR2SPM)

60K(AUF-60CTR2SPM)

MODEL: YYW95-8-8523 YYW95-8-8526



BLACK-WHITE: $64 \pm 12\%$

BLACK-BLUE: $24 \pm 12\%$

BLUE-RED: $14 \pm 15\%$

BLACK-YELLOW: $62 \pm 12\%$

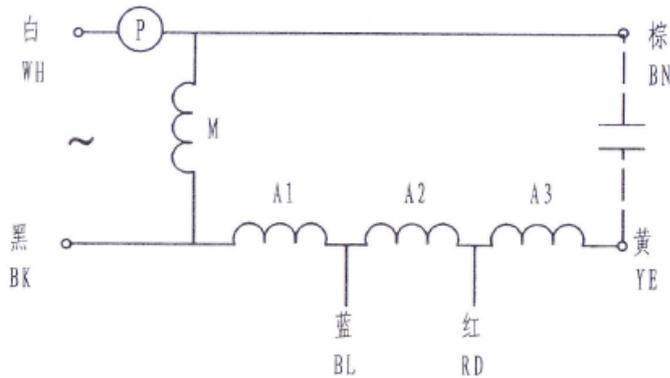
60K(AUF-60CTR2SPM1)

MODEL: SIC-71FW-D8121-1 SIC-71FW-D8121-2

DC Motor

60K(AUF-60HTR6FPM, AUF-60HTR6FPM A)

MODEL: YYW65-6-9546A YYW65-6-9547A



BLACK-WHITE: $98 \pm 15\%$

BLACK-BLUE: $19 \pm 15\%$

BLUE-RED: $20 \pm 15\%$

BLACK-YELLOW: $59 \pm 12\%$

8. CHECKING COMPONENTS

Test in resistance.

TOOL: Multimeter.

Test the resistance of the main winding. The outdoor fan motor is fault if the resistance of main winding 0(short circuit) or ∞ (open circuit) .

Notes:

- 1) Please don't hold motor by lead wires.
- 2) Please don't plug IN/OUT the motor connector while power ON.
- 3) Please don't drop or hurl or dump motor against hard material. Malfunction may not be observed at early stage after such shock. But it may be found later, this type of mishandling void our warranty.

3. COMPRESSOR

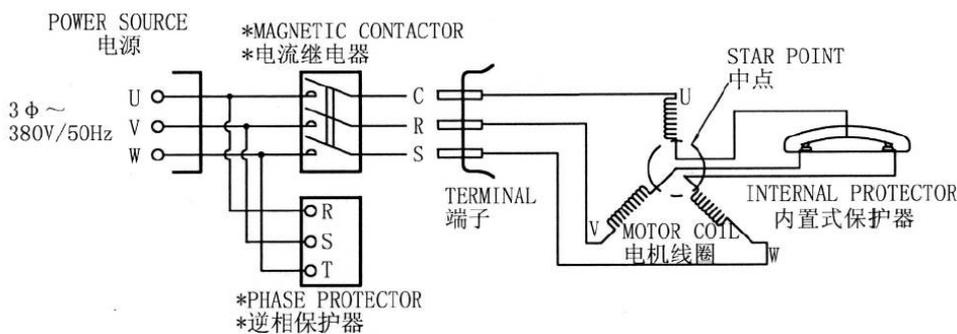
COMPRESSOR EXAMINE AND REPAIR

T1 Series

42K

Compressor model: TE708RC3Q9RK(R22)

ATE550SC3Q9RK(R410A)

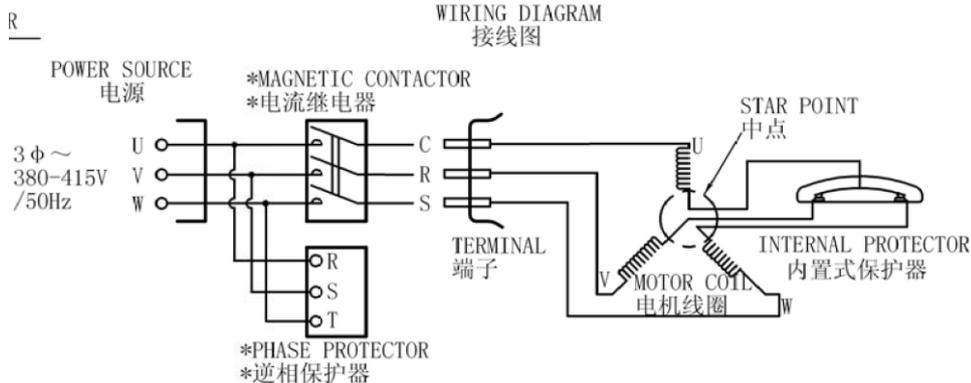


48K

ATE550SC3Q9RK

60K

ATE650SC3Q9JK



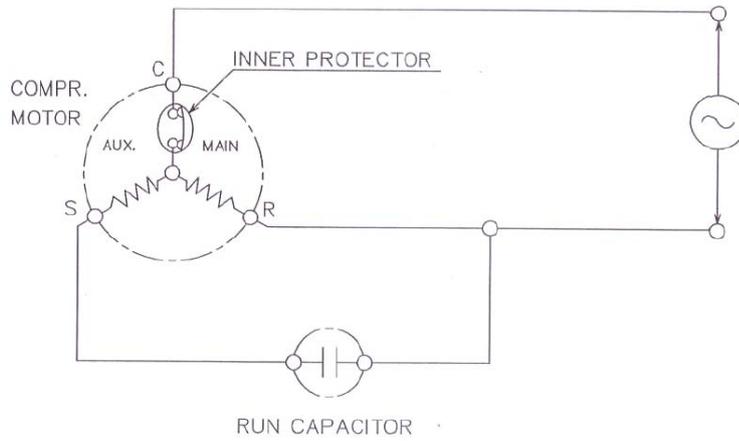
8. CHECKING COMPONENTS

T3Series

36K(AUF-36HTR4FAM, AUF-36HTR4FAMA)

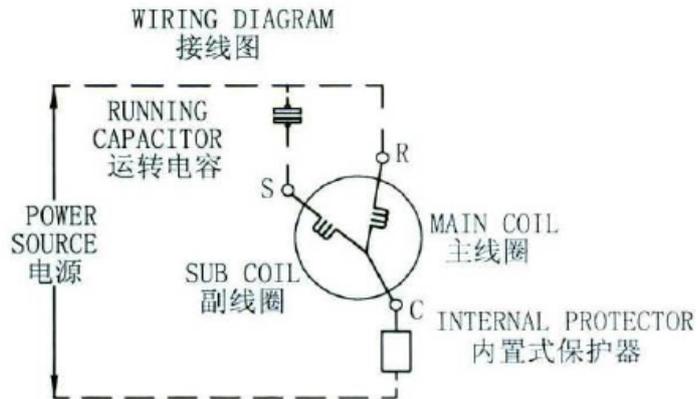
Compressor model

LHT53VBBC



36K(AUF-36CTR2SEM)

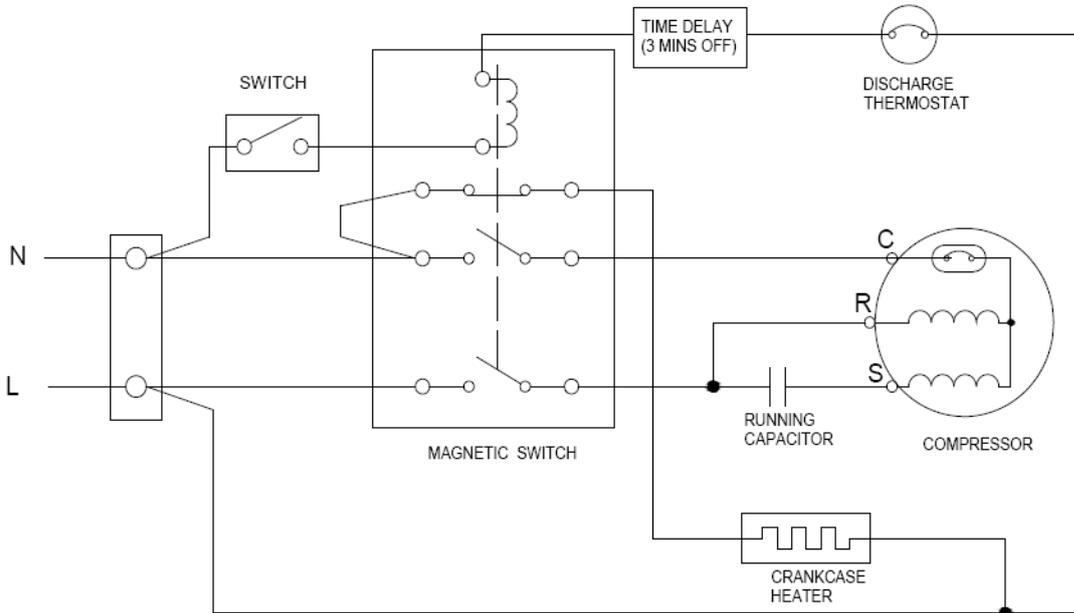
Compressor model: ASH280DG-C8DU



8. CHECKING COMPONENTS

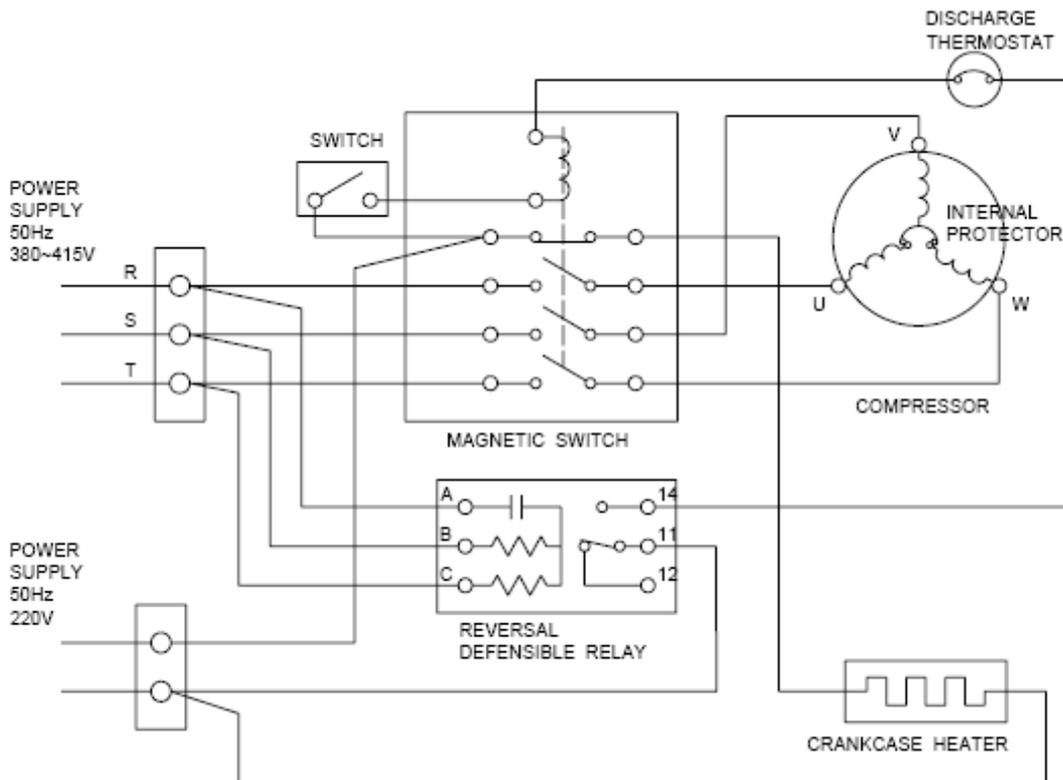
48K(AUF-48HTR4FEM, AUF-48HTR4FEMA, AUF-48HTR4FEMB)

Compressor model: C-SBR145H15P



48K(AUF-48HTR6FEM, AUF-48HTR6FEMA)

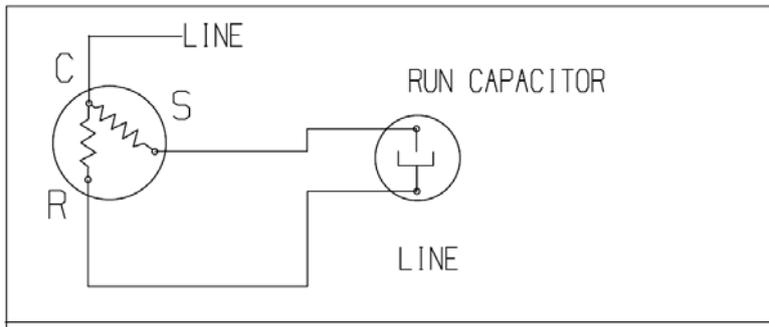
Compressor model: C-SBX150H38C



8. CHECKING COMPONENTS

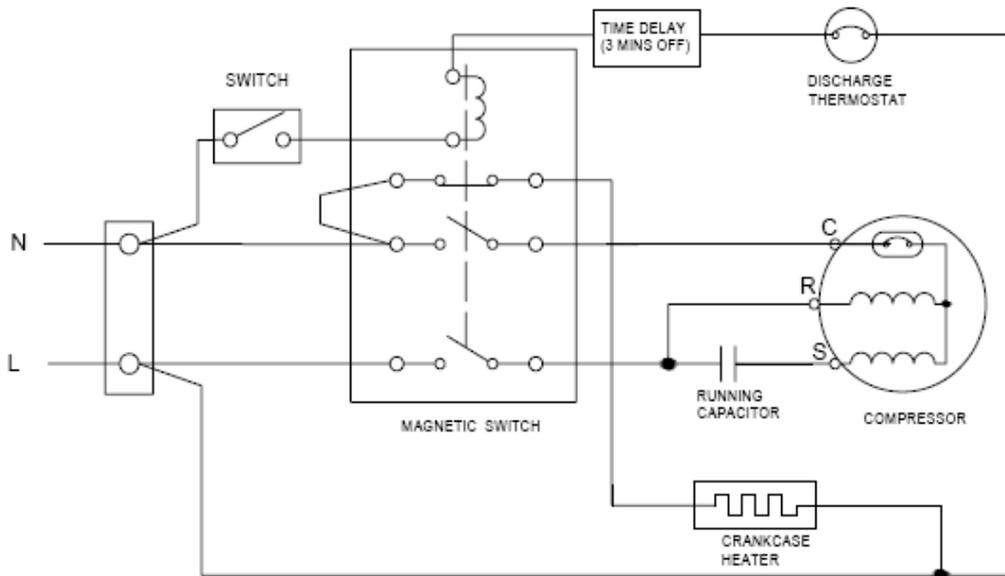
48K(AUF-48CTR2SPM)

Compressor model: ZJ44KHE-PFB-502



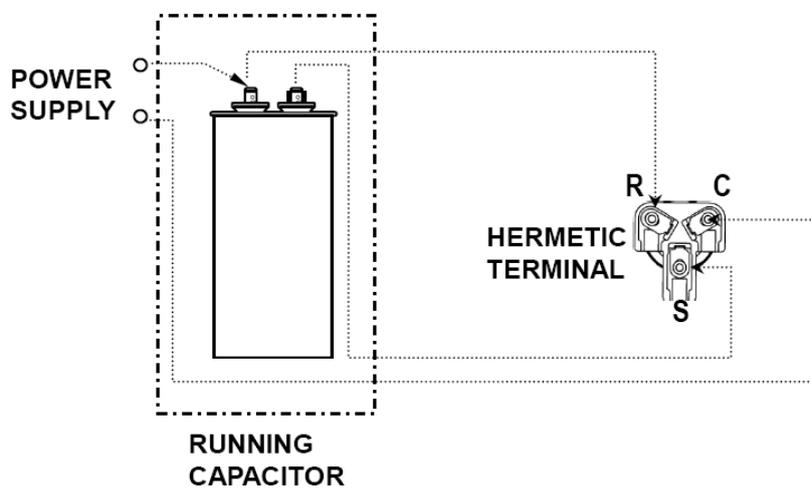
60K(AUF-60CTR2SPM)

Compressor model: C-SBP140H16A



60K(AUF-60CTR2SPM1)

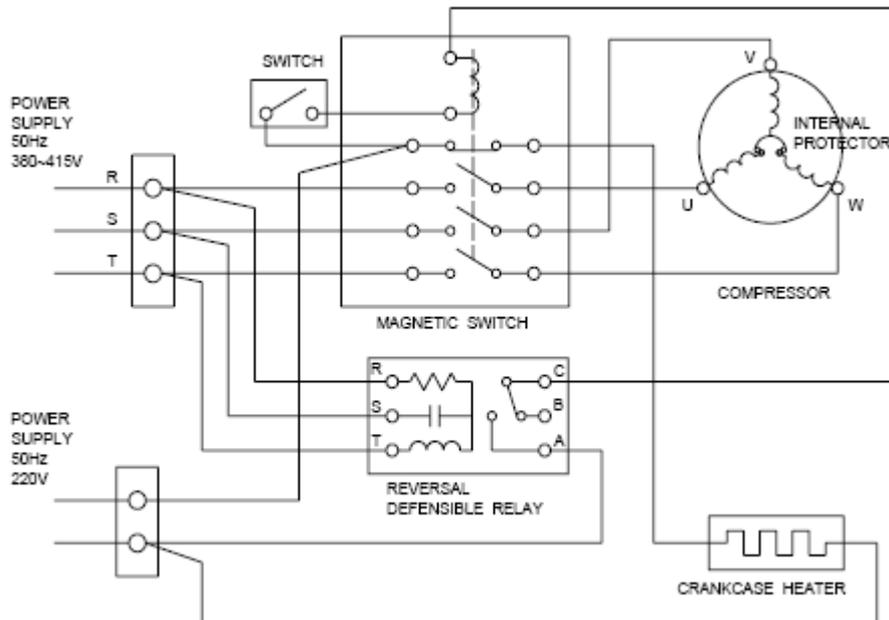
Compressor model: ABT048KTA



8. CHECKING COMPONENTS

60K(AUF-60HTR6FPM, AUF-60HTR6FMA)

Compressor model: C-SB453H8A



Test in resistance.

TOOL: Multimeter.

Test the resistance of the winding. The compressor is fault if the resistance of winding 0(short circuit)or ∞ (open circuit)

Familiar error:

- 1) Compressor motor lock.
- 2) Discharge pressure value approaches static pressure value .
- 3) Compressor motor winding abnormality.

Notes:

- 1) Don't put a compressor on its side or turn over.
- 2) Please assembly the compressor in your air conditioner rapidly after removing the plugs. Don't place the comp. In air for a long time.
- 3) Avoiding compressor running in reverse caused by connecting electrical wire incorrectly.
- 4) Warning! In case AC voltage is impressed to compressor, the compressor performance will below because of its rotor magnetic force decreasing.

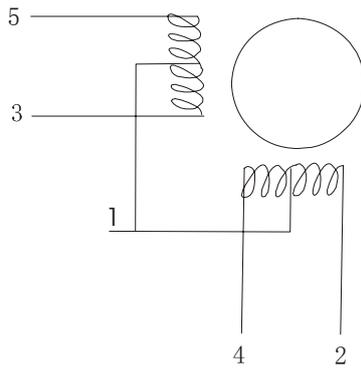
4. INDUCTANCE

Familiar error:

- 1) Sound abnormality
- 2) Insulation resistance disqualification.

8. CHECKING COMPONENTS

5. STEP MOTOR



Test in resistance.

TOOL: Multi-meter.

Test the resistance of winding. The stepper motor is fault if the resistance of winding 0(short circuit)or ∞ (open circuit) .

6. FUSE

Checking continuity of fuse on PCB ASS'Y.

- 1) Remove the PCB ASS'Y from the electrical component box. Then pull out the fuse from the PCB ASS'Y (Fig.1)

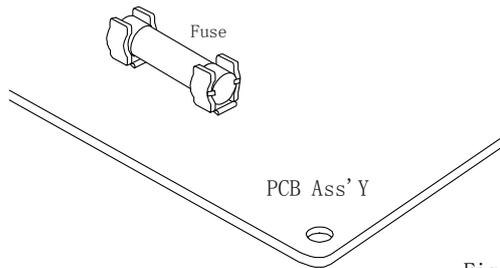


Fig. 1

- 2) Check for continuity by a multi-meter as shown in Fig.2.

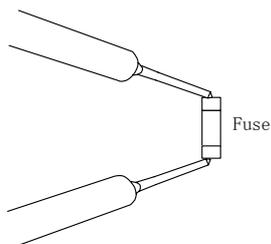


Fig. 2

8. CHECKING COMPONENTS

7. CAPACITOR

- 1) Remove the lead wires from the capacitor terminals, and then place a probe on the capacitor terminals as shown in Fig.3.
 - 2) Observe the deflection of the pointer, setting the resistance measuring range of the multimeter to the maximum value.
- * The capacitor is "good" if the pointer bounces to a great extent and then gradually returns to its original position.
 - * The range of deflection and deflection time differ according to the capacity of the capacitor.

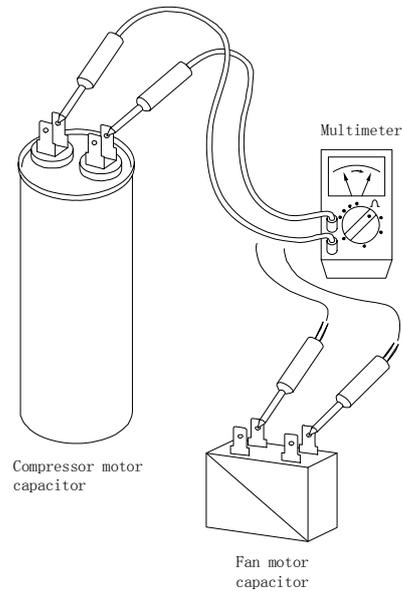


Fig. 3