

DICORE

CÓDIGOS AVERÍA EQUIPOS CLIMATIZACIÓN DICORE MULTI - VRF INVERTER R410A

ASDGR42EMAYIDC(S3)

www.dicore.es

MAINTENANCE

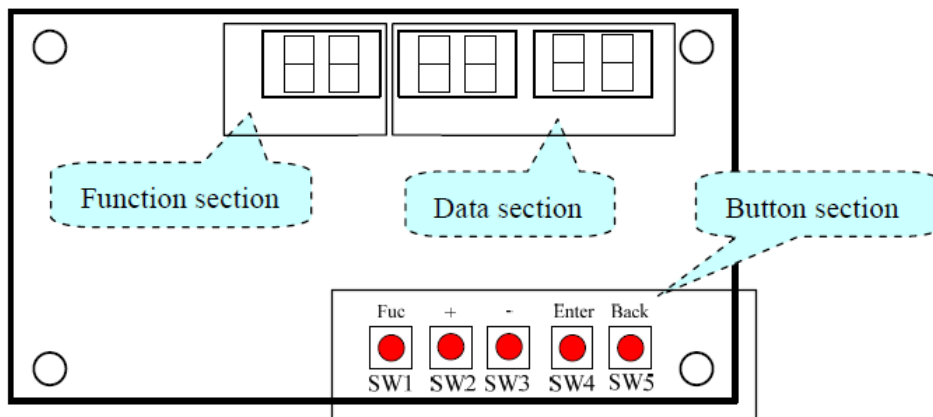
1 Testing Board Introduction

The testing board is in the front of electrical box and can be observed well. It has several following advantages:

- ◆ Automatically detect indoor unit numbers
- ◆ Automatically assign indoor unit addresses
- ◆ Automatically display real running function and error code
- ◆ Option settings to suit the demand of the customer

1.1 Compose of Testing Board

The testing board is composed of the function section, data section and button section.



1.2 Instruction of Function and Data Section

Running state	The display of function section	The display of data section																
Stop	<ol style="list-style-type: none"> ① The section will display the numbers of the indoor units which have established communication with the outdoor unit. For example, if there are seven established indoor units, the section will display “7”. ② It will display the address of the indoor units by turns. For example, the “1b” is represented of the indoor unit 1B. (BU module:1/2/3, Indoor unit: A/B/C) 	<ol style="list-style-type: none"> ① If the function section displays the numbers of the indoor units, the data section will display the outside temperature. For example, the “35” is represented of 35°C. ② If the function section displays the address of the indoor unit, the data section will display the capacity of the indoor unit, for example, the “35” is represented of 3500W. 																
Normal	<p>The code of running state:</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Code</th> <th>Running state</th> <th>Code</th> <th>Running state</th> </tr> </thead> <tbody> <tr> <td>UE</td> <td>Pressure equalization</td> <td>UH</td> <td>Heating</td> </tr> <tr> <td>UP</td> <td>Pump down</td> <td>F7</td> <td>Oil returning</td> </tr> <tr> <td>UC</td> <td>Cooling</td> <td>H1</td> <td>Defrosting</td> </tr> </tbody> </table>	Code	Running state	Code	Running state	UE	Pressure equalization	UH	Heating	UP	Pump down	F7	Oil returning	UC	Cooling	H1	Defrosting	<p>It displays the target gear of the compressor. If the gear is zero, it will display “0”. For example, the gear is the fifteenth; it will display “15”. The range of the gear is from 0 to 60.</p>
Code	Running state	Code	Running state															
UE	Pressure equalization	UH	Heating															
UP	Pump down	F7	Oil returning															
UC	Cooling	H1	Defrosting															

Malfunction	If the malfunction occurs in the system, the section will display the error code. If there are several malfunctions, it will display the error codes by turns at intervals of 2 seconds.	① If the malfunction occurs in the outdoor unit, the section displays nothing;
		② If the malfunction occurs in the indoor units, the section displays the address of the indoor unit.

1.3 Process Control Setting

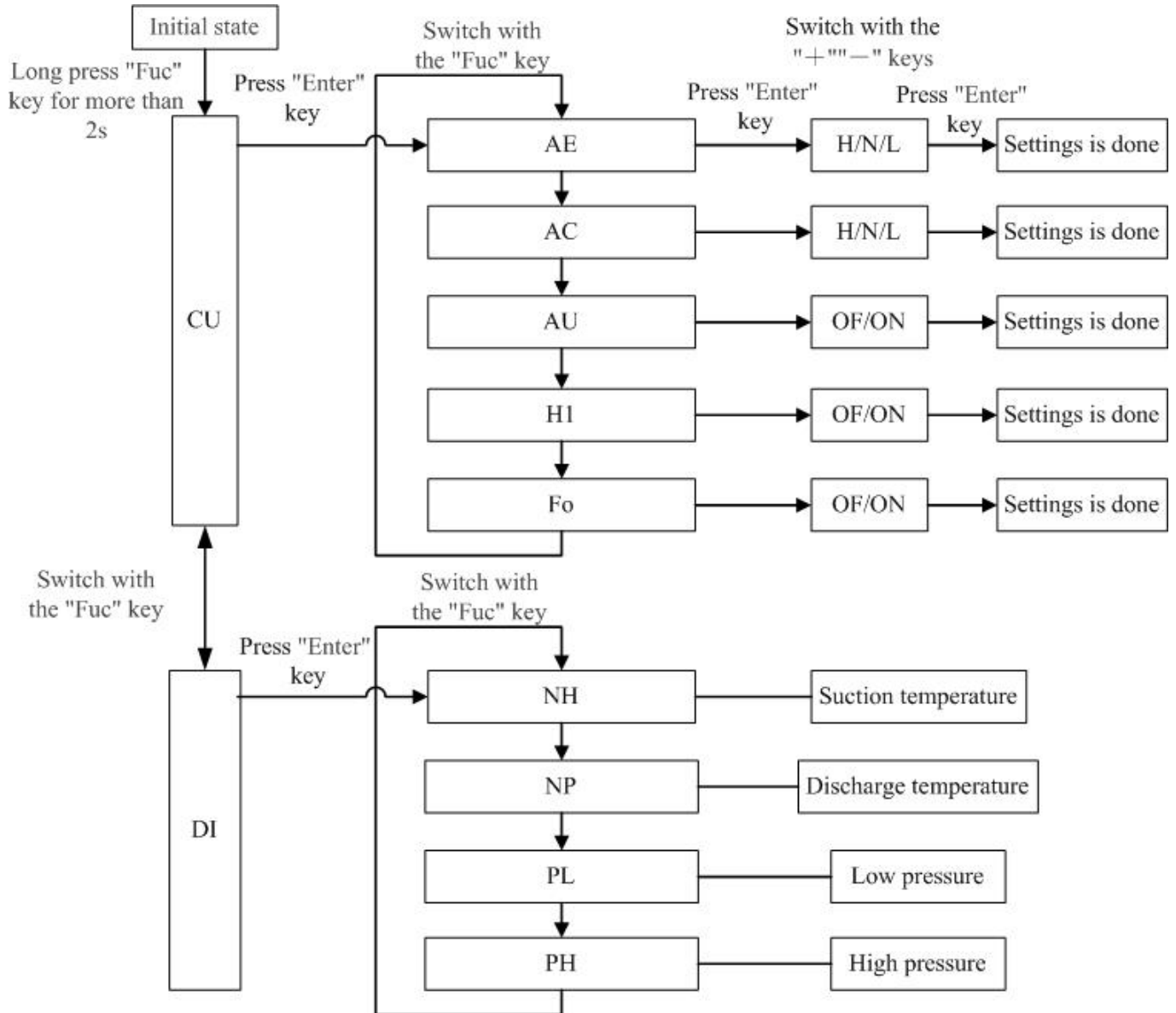
1.3.1 Button section

Key	Fuc	+	-	Enter	Back
Signification	Function	Increase	Decrease	Enter	Back

Caution !

- ① When entering the menu to set parameters, the function section will flash running codes and the data section will flash value.
- ② When the menu is set, the data section will flash “=”. After the “=” stops blinking, the unit will run the new parameters.

1.3.2 Flow chart of operation



Note:

- ① Long press “Fuc” key for more than 2s to enter the first-level menu. The first-level menu includes control unit and display unit.
 - ◆ Press “Enter” key to enter the second-level menu.
 - ◆ Press “Fuc” key to switch the menu.
 - ◆ Press “Back” key to the previous menu.

② Control unit operation:

◆ **When entering into the control unit:**

The function section flashes the running code and the data section display the current value uninterrupted.

◆ **Set parameters:**

Press “Enter” key to enter the second-level menu, and set parameters with the “+” “-” keys. Now the function section displays the running code uninterrupted and the data section flashes the set parameters.

◆ **Finish setting:**

After press “Enter” key to the end, the function section will display the running code uninterrupted and the data section display the set parameters uninterrupted.

◆ **Back:**

Press “Back” key to the previous menu, and long press the “Back” key to exit the operation.

③ Display unit operation:

◆ **When entering into the display unit:**

The function section display running code uninterrupted and the data section display the current value uninterrupted.

◆ **“+” “-”Keys are invalid in the operation.**

④ If no operation is performed within 1min, it will automatically return to the normal display.

1.3.3 For example

Set condensation temperature

- ① Long press “Fuc” key for more than 2s to enter the first-level menu: the function section flashes “CU” code and the data section is blank.
- ② Press “Enter” key to enter the second-level menu: the function section flashes “AE” code and the data section display the current parameters.
- ③ Switch with the “Fuc” key to set condensation temperature: the function section flashes “AC” code and the data section display the current parameters.
- ④ Press “Enter” key: the function section display “AC” code uninterrupted and the data section flashes the current parameters.
- ⑤ Switch with the “+” “-” to the target value, and then press “Enter” key: the function section display “AC” code uninterrupted and the data section flashes the new parameters uninterrupted.

1.3.4 The meaning of running code

Sorts	Function section	Data section	Remarks
Control Unit	CU	Blank	
Set evaporation temperature	AE	Default: N	Use the “+” “-” keys to switch L, N and H. ◆ If you want to get a higher cooling capacity, select L; else select H.
Set condensation temperature	AC	Default: N	Use the “+” “-” keys to switch L, N and H. ◆ If you want to get a higher heating capacity, select H; else select L.
Vacuum operation	AU	The current parameter	Use the “+” “-” keys to switch ON, OF. ◆ ON represents that the unit is running the current state. ◆ OF represents that the unit is not running the current state.
Set defrosting mode	H1	The current parameter	
Set refrigerant recovery mode	Fo	The current parameter	
Display Unit	DI	Blank	
Display suction temperature	PU	Suction temperature. For example, 15 represents 15°C	“+” “-”Keys are invalid in the operation.
Display discharge temperature	PC	Discharge temperature. For example, 70 represents 70°C	
Display low pressure	PL	Low pressure. For example, 95 represents 0.95Mpa	
Display high pressure	PH	High pressure. For example, 280 represents 2.8Mpa	

1.3.5 The code of data section

Set evaporation temperature	H(represent High)	N(represent Normal)	L(represent Low)
Set condensation temperature			
Vacuum operation	OF(represent OFF)	ON	/
Set defrosting mode	OF(represent OFF)	ON	/
Set defrosting mode	OF(represent OFF)	ON	/

2 Troubleshooting

Warning!

- a. In the event of abnormal conditions (like, stinky smell), please shut off the main power supply immediately and then contact the GREE appointed service center; otherwise the continuous abnormal running would damage the air conditioning unit and also would cause electric shock or fire hazard etc.
- b. Do not repair the air conditioner personally but instead contact the professionally skilled personnel at the GREE appointed service center, as the incorrect repair would cause electric shock or fire hazard etc.

2.1 Check before Contacting Maintenance Serviceman

Please check the following items before contacting the maintenance serviceman.

Conditions	Causes	Corrective actions
The unit does not run at all	Broken fuse or breaker is off	Replace the damaged fuse or close the breaker
	Power off	Restart the unit after power supply resumes
	Power supply plug is loose	Plug the power supply properly
	The batteries voltage of the remote controller is insufficient	Replace with new batteries
	Remote controller is out of the control scope	The distance shall be within 8m
The unit stops soon after it starts	Air inlet or outlet of indoor unit or outdoor unit is blocked	Remove the obstacles
Cooling or heating is abnormal	Air inlet or outlet of indoor unit or outdoor unit is blocked	Remove the obstacles
	Temperature setting is improper	Adjust the setting of remote controller or wire controller
	Air speed is set too low	Adjust the setting of remote controller or wire controller
	Improper airflow direction	Adjust the setting of remote controller or wire controller
	Door or window is open	Close the door or window
	Under direct sunshine	Hang curtain or blinders over the window
	Too many people in the room	
	Too many heat sources indoors	Reduce the heat sources
	The filter screen is dirt or blocked	Clean the filter screen

Note:

If the air conditioner still runs abnormally after the above check and handling, please contact the local appointed service center and also give a description of the error occurred as well as the model of the unit.


2.2 Problem Handling

The conditions listed below are not classified into errors.

Conditions		Causes
The unit does not run	When restart the unit soon after it is stopped	The overload protection switch of the unit let the startup delayed for three minutes
	As soon as power supply is on	The unit will stand by for approximate one minute
The unit blows out mist	When the cooling operation starts	The hi-humidity air indoor is cooled quickly
The unit generates noise	The unit “clatters” as soon as it starts running	It is the sound generated during the initialization of the electronic expansion valve
	The unit “swishes” during the cooling operation	It is the sound when the refrigerant gas runs inside the unit
	The unit “swishes” when it is started or stopped	It is the sound when the refrigerant gas stops running
	The unit “swishes” when it is in and after the running	It is the sound when the draining system is operating
	The unit “squeaks” when it is in and after the running	It is the sound of friction generated by the skin plate etc which swells due to the temperature change
The unit blows out dust	When the unit restarts after it is not used for a long time	The dust inside the unit is blown out again
The unit emits odors	When the unit is running	The odors absorbed in are blown out

2.3 Error description

◆ Outdoor unit

If some error occurs when the unit is running, the error code will be displayed on the wired controller, the testing board  of the outdoor unit. Check for more details about the meaning of each error.

Errors of definition	Main control display for outdoor unit			Indoor unit code	Testing board code
	Yellow LED	Red LED	Green LED		
The compressor is startup	Flash 1 time				
IPM current protection	Flash 3 times			H5	H5
IPM temperature protection	Flash 5 times			P8	P8
PFC current protection	Flash 7 times			HC	HC
PFC temperature protection	Flash 8 times			P8	P8
Low voltage protection	Flash 9 times			PL	PL
High voltage protection	Flash 10 times			PH	PH
Low pressure protection	Flash 11 times			E3	E3
High pressure protection	Flash 12 times			E8	E8
High pressure switch protection	Flash 13 times			E1	E1
Capacitor charging error	Flash 14 times			PU	PU
Current protection	Flash 15 times			E5	E5
Memory card error	Flash 16 times			EE	EE
Compressor demagnetizing protection	Flash 17 times			HE	HE
Compressor desynchronizing	Flash 18 times			H7	H7
Compressor phase lack	Flash 19 times			U2	U2
Compressor phase circuit detection error	Flash 20 times			U1	U1
Compressor current protection	Flash 21 times			L9	L9
Compressor overload protection	Flash 22 times			H3	H3

Compressor discharge temperature protection	Flash 23 times			E4	E4
Lack of refrigerant or jam protection	Flash 31 times			F0	F0
Normal operation		Flash 1 time			
Frequency limitation for current protection		Flash 2 times			F8
Oil returning mode		Flash 3 times		F7	F7
Defrosting mode		Flash 4 times		H1	H1
Frequency limitation for IPM temperature protection		Flash 5 times		EU	EU
Frequency limitation for PFC temperature protection		Flash 6 times		EU	EU
Frequency limitation for compressor overload protection		Flash 8 times			LU
Frequency limitation for discharge temp. protection		Flash 9 times			F9
Frequency limitation for low pressure protection		Flash 10 times			Pn
Frequency limitation for high pressure protection		Flash 11 times		F6	F6
Discharge temperature sensor error		Flash 12 times		F5	F5
Outside temperature sensor error		Flash 13 times		F3	F3
Suction temperature sensor error		Flash 15 times			dc
Condenser temperature sensor error		Flash 16 times		A7	A7
Sub-cool temperature sensor error		Flash 17 times			bC
Low pressure sensor error		Flash 18 times			dL
High pressure sensor error		Flash 19 times			e1
Fan motor protection		Flash 20 times		H6	H6
Driving board is connected			Flash 1 time		
Testing board is connected			Flash 2 times		
Computer is connected			Flash 4 times		
Indoor unit 1 is connected			Flash 5 times		
Indoor unit 2 is connected			Flash 6 times		
Indoor unit 3 is connected			Flash 7 times		
Indoor unit 4 is connected			Flash 8 times		
Indoor unit 5 is connected			Flash 9 times		
Indoor unit 6 is connected			Flash 10 times		
Indoor unit 7 is connected			Flash 11 times		
Indoor unit 8 is connected			Flash 12 times		
Indoor unit 9 is connected			Flash 13 times		
Indoor anti-freeze protection				E2	E2
Inside temperature sensor error				F1	F1
Evaporator midway temp sensor error				F2	F2
Liquid pipe of BU module temperature sensor error				b5	b5
Gas pipe of BU module temperature sensor				b7	b7

error						
Mode conflicts					E7	E7
Communication error	BU 1	Indoor unit A			E6	E6 1A
		Indoor unit B				E6 1B
		Indoor unit C				E6 1C
	BU 2	Indoor unit A				E6 2A
		Indoor unit B				E6 2B
		Indoor unit C				E6 2C
	BU 3	Indoor unit A				E6 3A
		Indoor unit B				E6 3B
		Indoor unit C				E6 3C
Communication error between the main board and driving board						P6
Communication error between the main board and testing board						CE
Indoor unit gas sensor error						Fn
Indoor unit humidity sensor error						L1
Indoor unit water full protection						E9
Jumper terminal error					C5	C5
Power supply phase lack						dJ
Outdoor unit fan motor error						L3
Refrigerant recovery mode					Fo	Fo

◆ BU module

Errors	Indicating LED flashing times			Indoor unit error code	Outdoor unit error code
	Yellow LED	Green LED	Red LED		
BU 1 is connected	Flash 1 time				
BU 2 is connected	Flash 2 times				
BU 3 is connected	Flash 3 times				
Indoor unit A is connected		Flash 1 time			
Indoor unit B is connected		Flash 2 times			
Indoor unit C is connected		Flash 3 times			
Indoor unit A gas tube temperature sensor error			Flash 1 time	b7	b7+ indoor unit address
Indoor unit A liquid tube temperature sensor error			Flash 2 times	b5	b5+ indoor unit address
Indoor unit B gas tube temperature sensor error			Flash 3 times	b7	b7+ indoor unit address
Indoor unit B liquid tube temperature sensor error			Flash 4 times	b5	b5+ indoor unit address
Indoor unit C gas tube temperature sensor error			Flash 5 times	b7	b7+ indoor unit address
Indoor unit C liquid tube temperature sensor error			Flash 6 times	b5	b5+ indoor unit address

3 FLOW CHART OF TROUBLESHOOTING

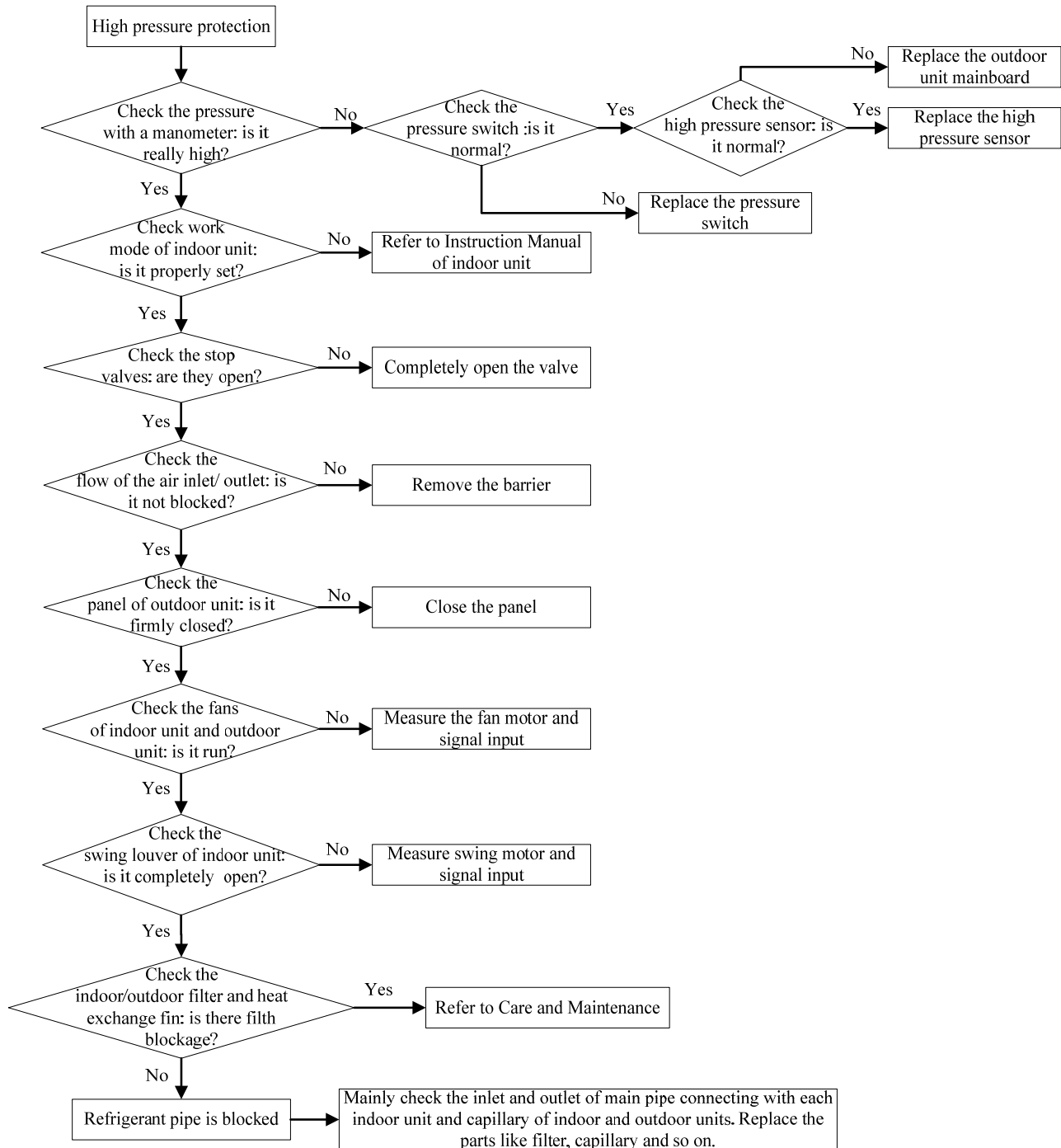
Service personnel shall collect the malfunction information as much as possible and research them thoroughly, list these electrical parts which may cause malfunction, service personnel shall be able to determine the specific reason and solve the faulted parts.

Observe the status of the complete device and do not observe the partial.

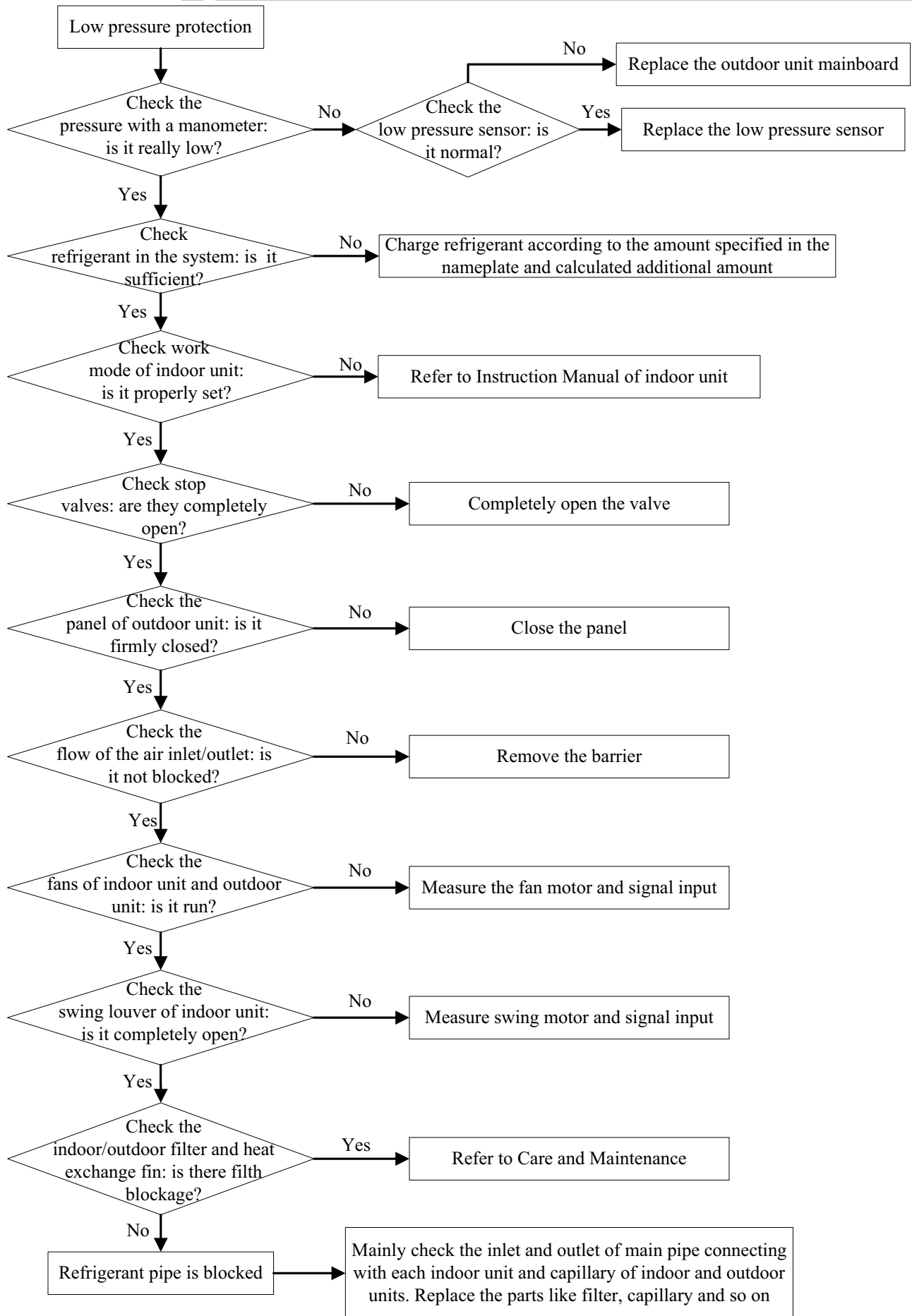
It is advised to start from the simple operation during analyzing, judging and confirming malfunction reason, then conduct the complicated operations such removal of device, part replacement and refrigerant filling.

Find the malfunction reason carefully as unit may occur several malfunction at the same time and one malfunction may develop into several malfunction, so entire system analysis shall be established to make the judged result exact and credible.

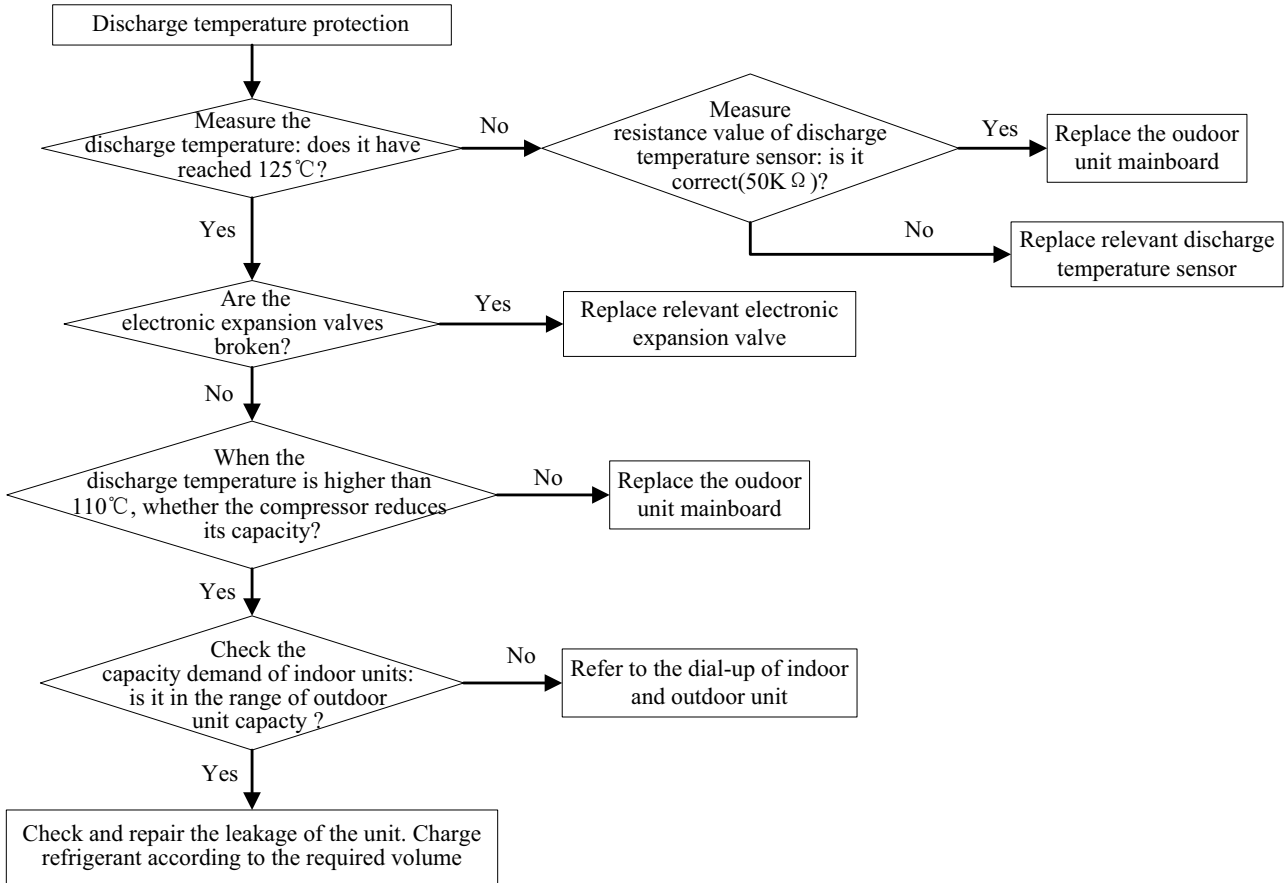
3.1 Malfunction display: High Pressure Protection



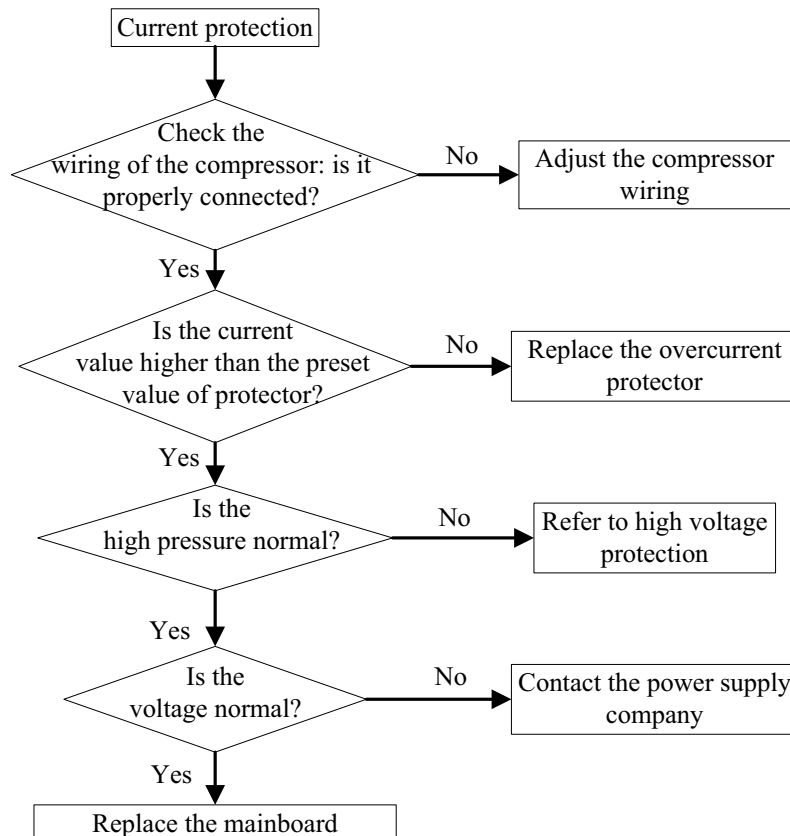
3.2 Malfunction display: Low Pressure Protection



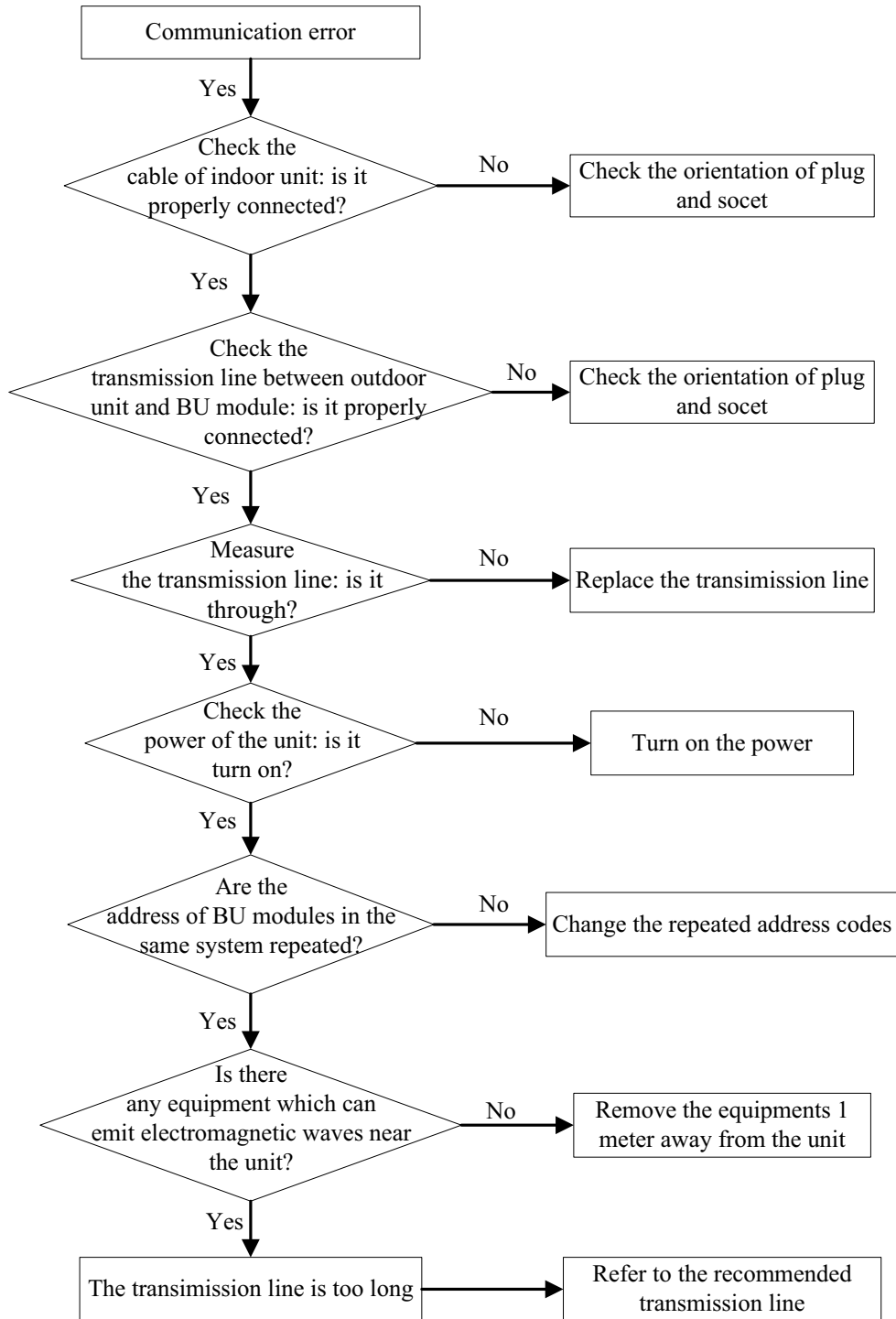
3.3 Malfunction display: Discharge temperature protection



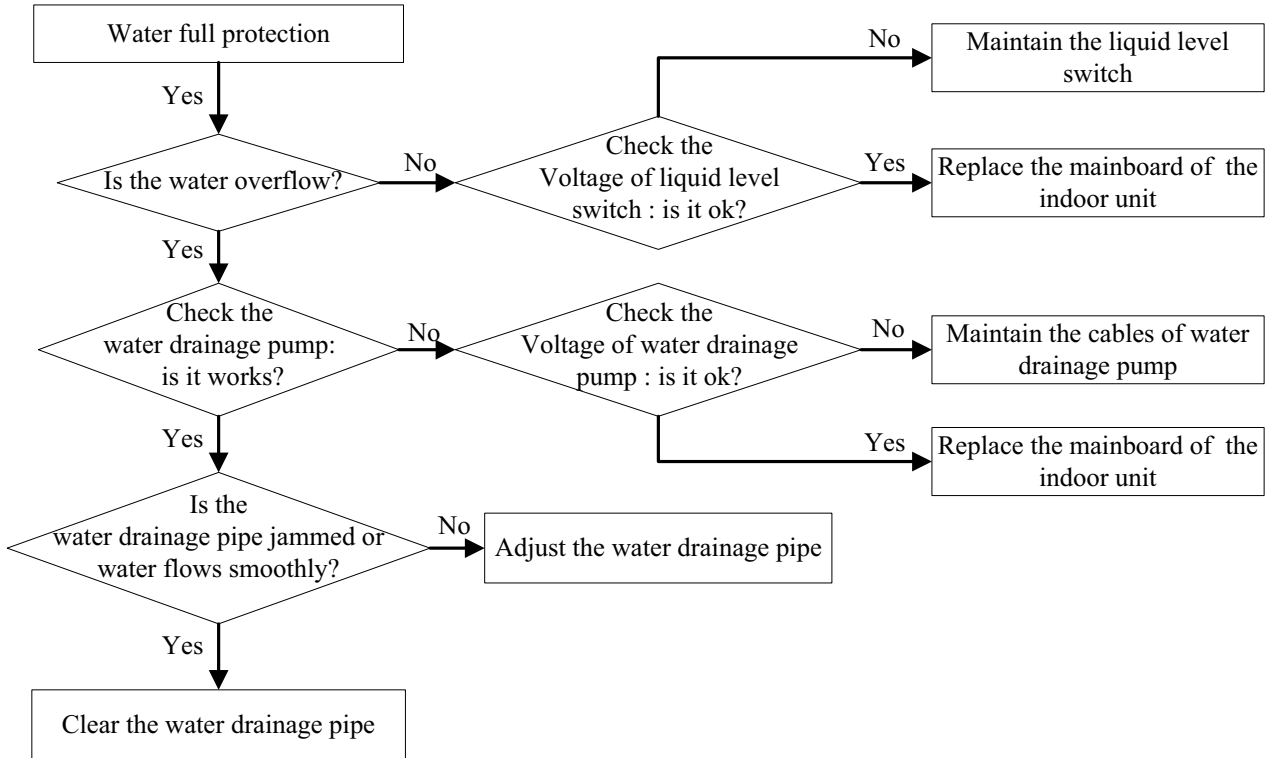
3.4 Malfunction display: Current protection



3.5 Malfunction display: Communication error



3.6 Malfunction display: Indoor unit water full protection

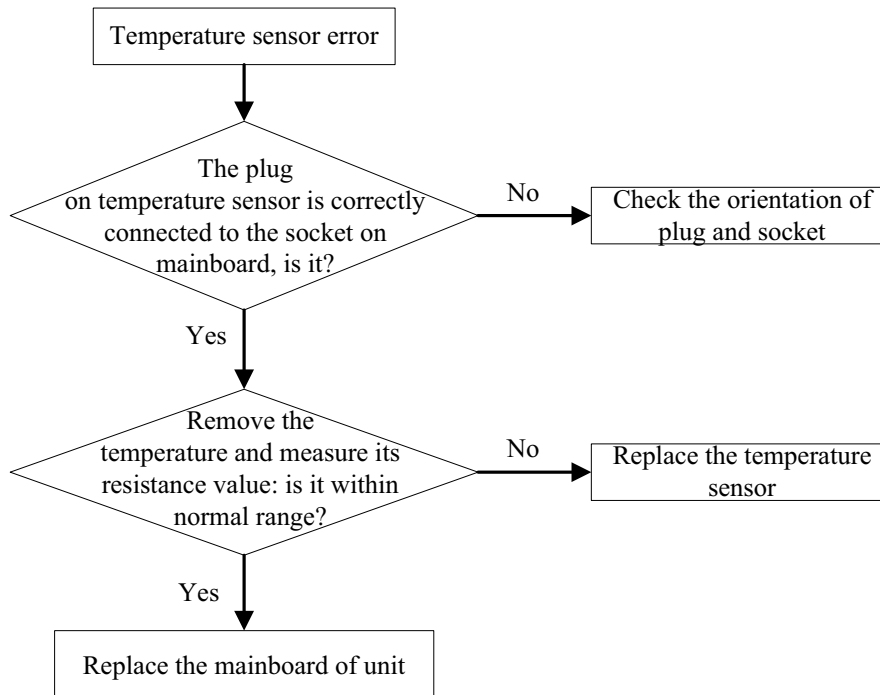


3.7 Malfunction display: Temperature sensor error

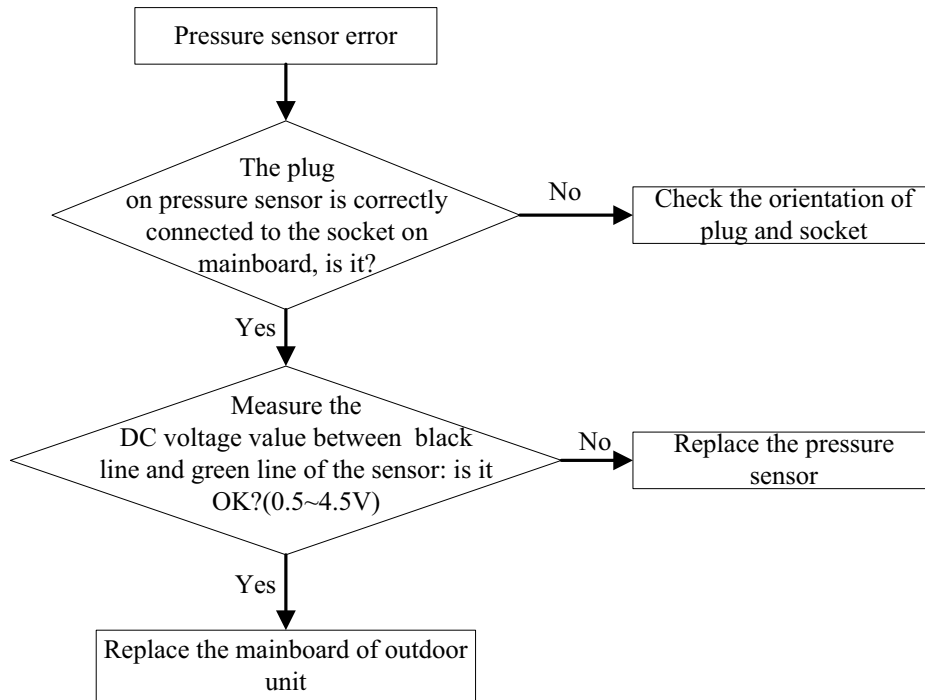
The resistance value of discharge temperature sensor is 50 KΩ;

The resistance value of outside temperature sensor and inside temperature sensor are all 15 KΩ;

The others are 20 KΩ.

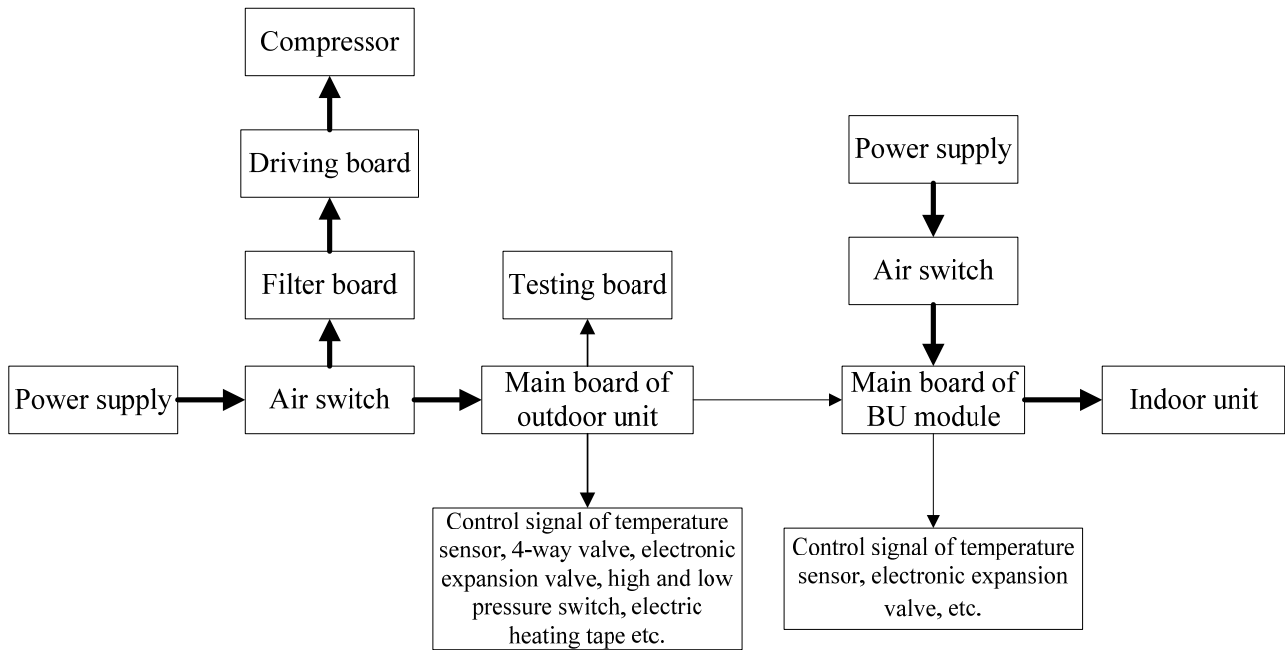


3.8 Malfunction display: High/Low pressure sensor error



4 POWER DISTRIBUTION

4.1 Diagram of Power Distribution



(The thick line represents power line while thin line represents the control line.)

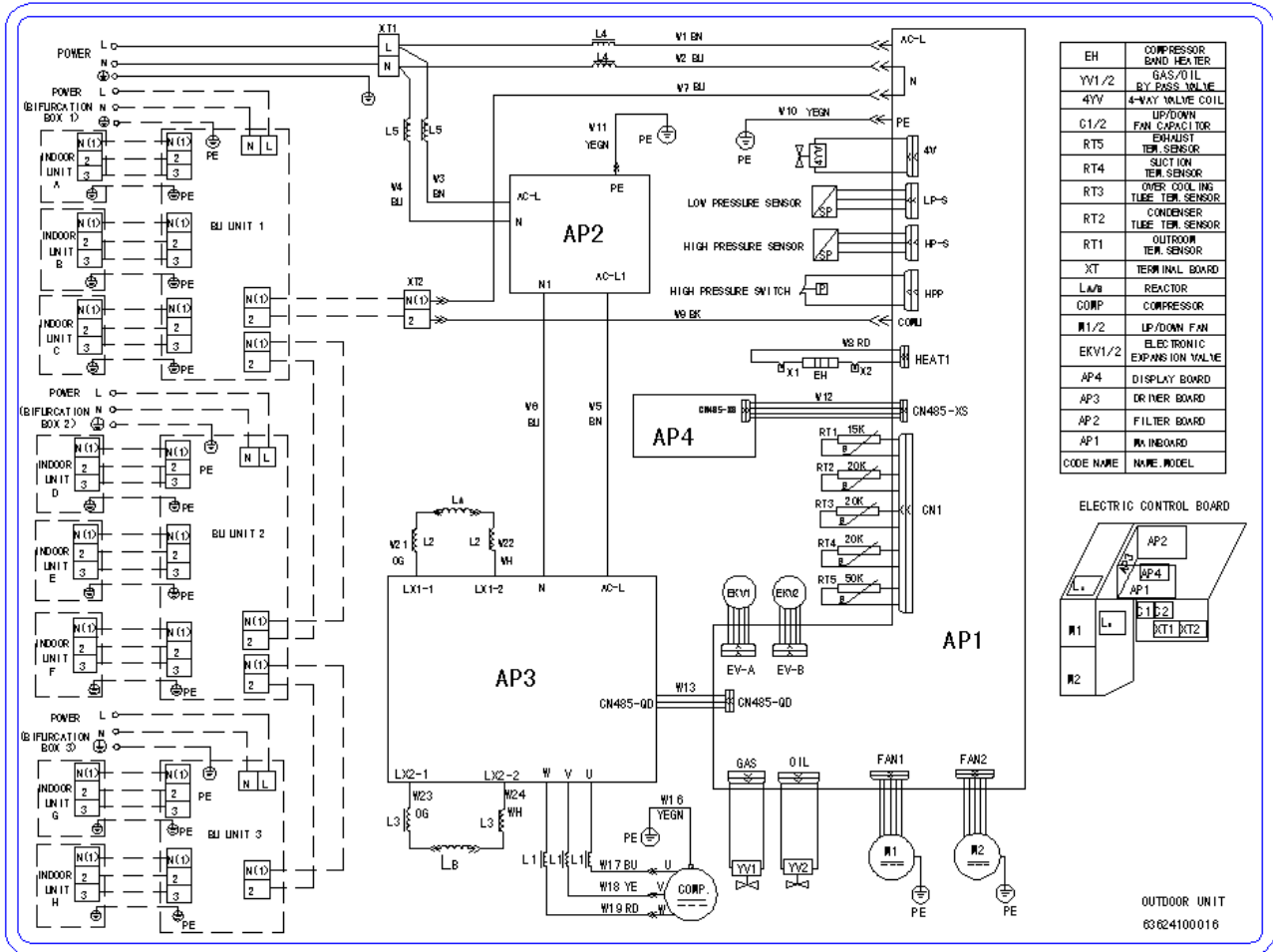
4.2 Wiring diagram

Note:

This drawing is just for reference; please always refer to the electric wiring stuck to the unit for actual wiring.

4.2.1 Outdoor unit

GWHD(56S)NK3CO、GWHD(48S)NK3CO、GWHD(42S)NK3CO

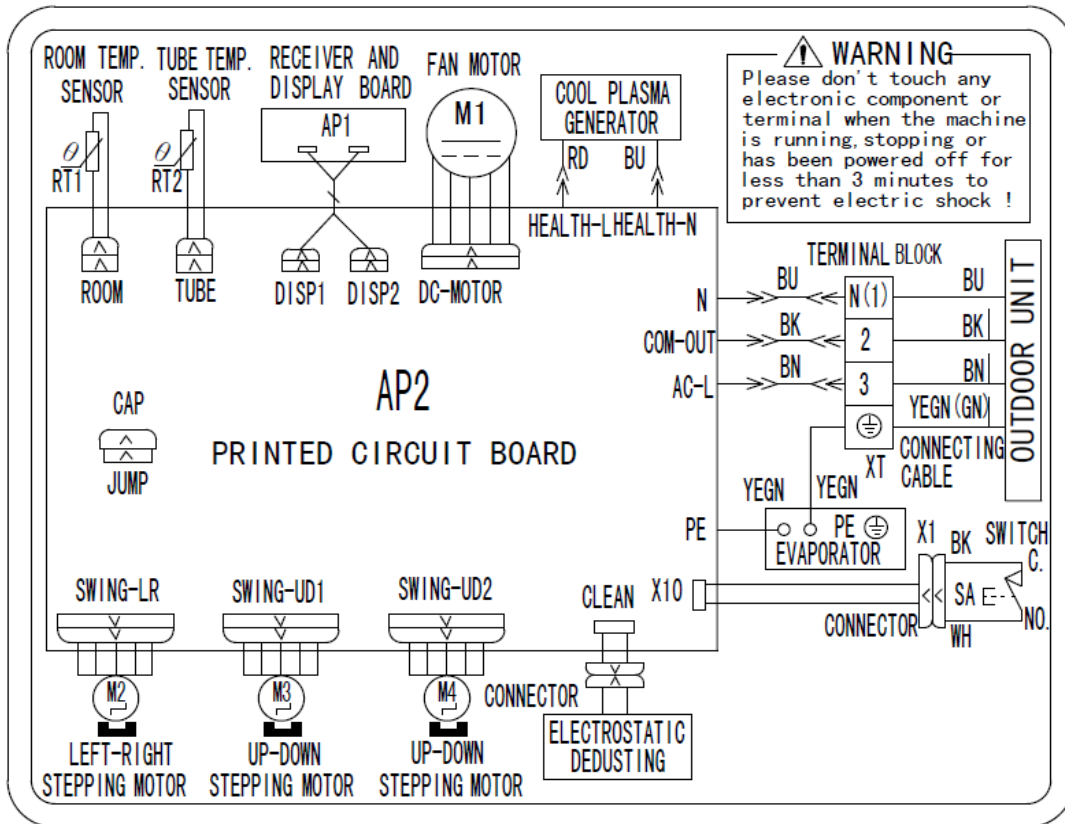


4.2.2 Indoor unit

1) Wall mounted type

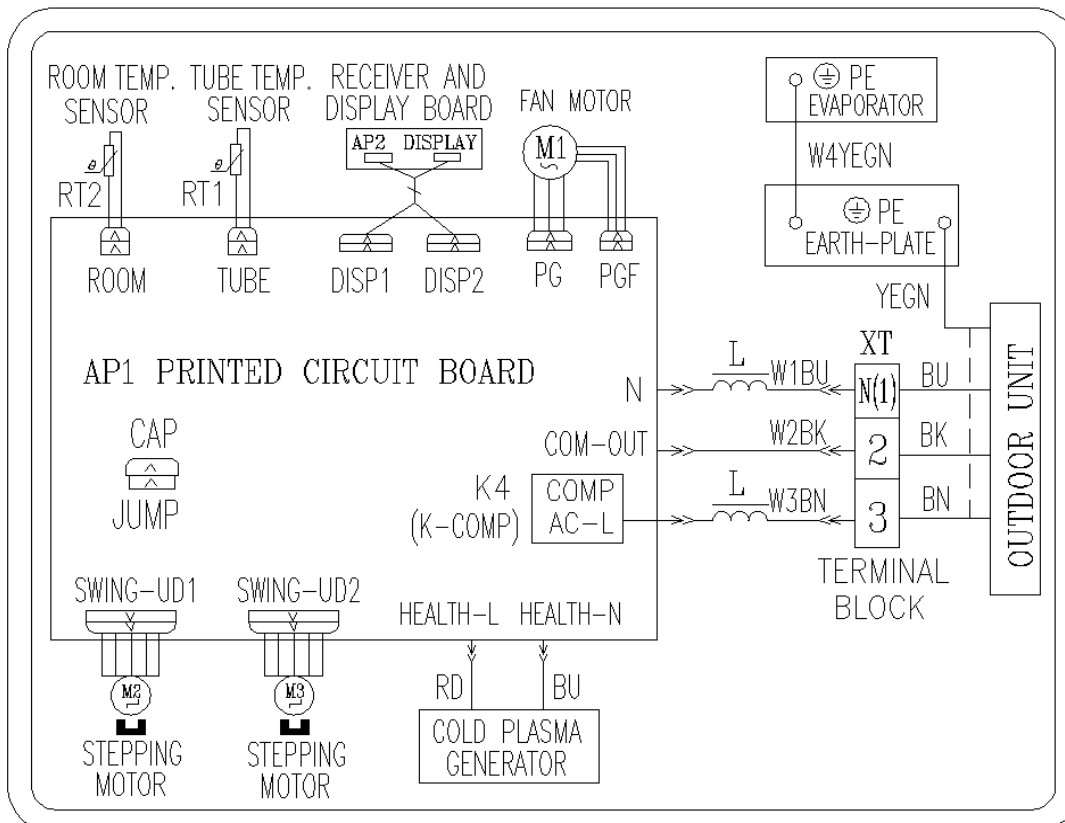
◆ Hansol

GWH(07)TA-K3DNA1E/I; GWH(09)TA-K3DNA1E/I; GWH(12)TB-K3DNA1E/I; GWH(18)TC-K3DNA1E/I



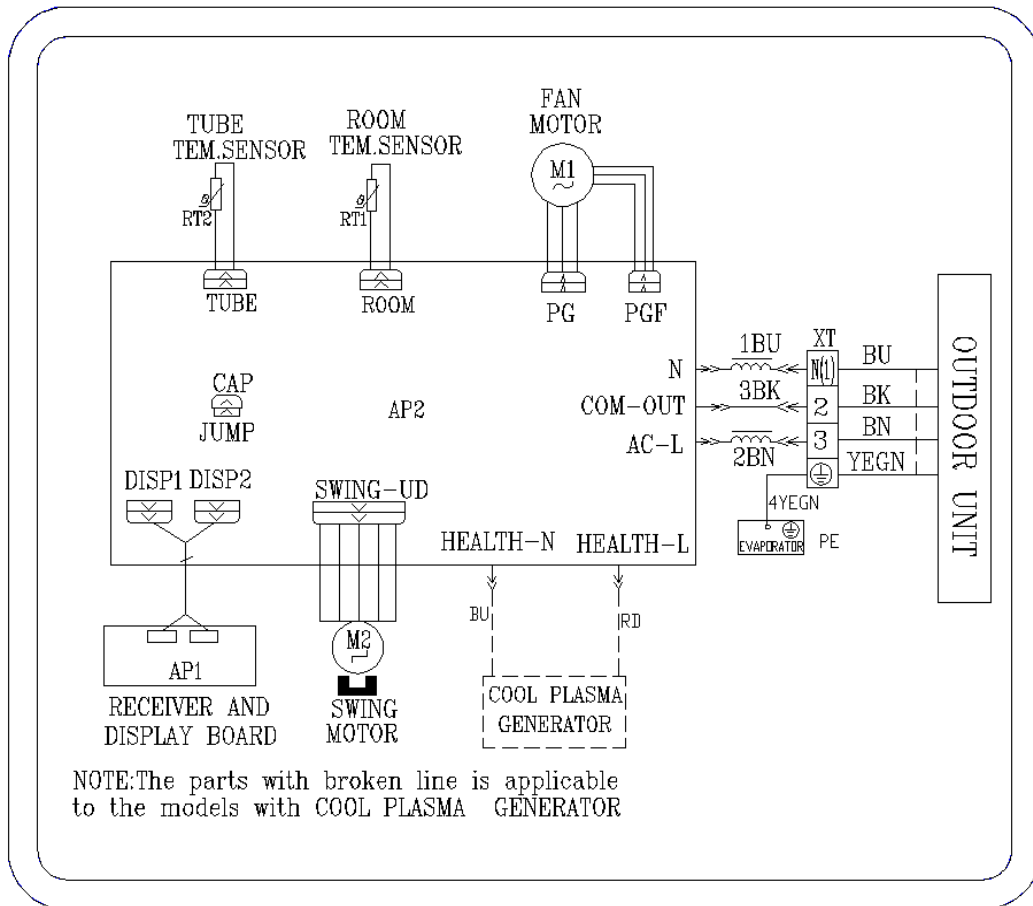
◆ U-Cool

GWH(07)UA-K3DNA1B/I; GWH(09)UA-K3DNA1B/I; GWH(12)UB-K3DNA1B/I; GWH(18)UC-K3DNA1B/I



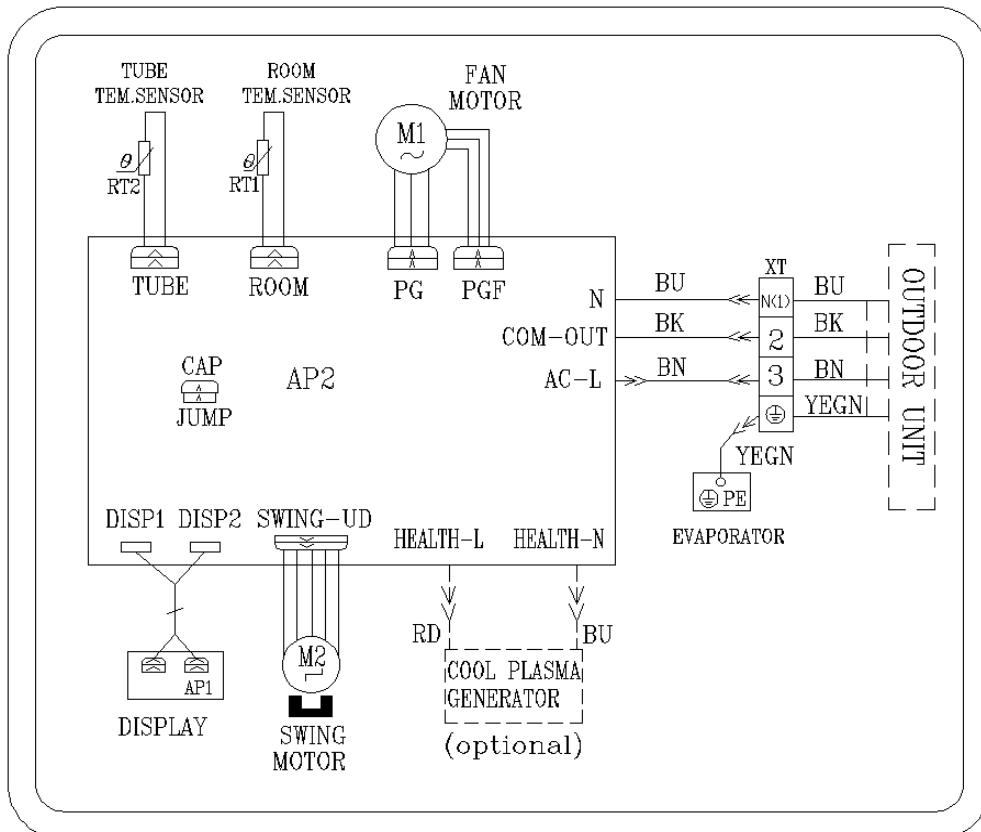
◆ Cozy

GWH(07)MA-K3DNA3E/I; GWH(09)MA-K3DNA3E/I; GWH(12)MB-K3DNA3E/I; GWH(18)MC-K3DNA3E/I



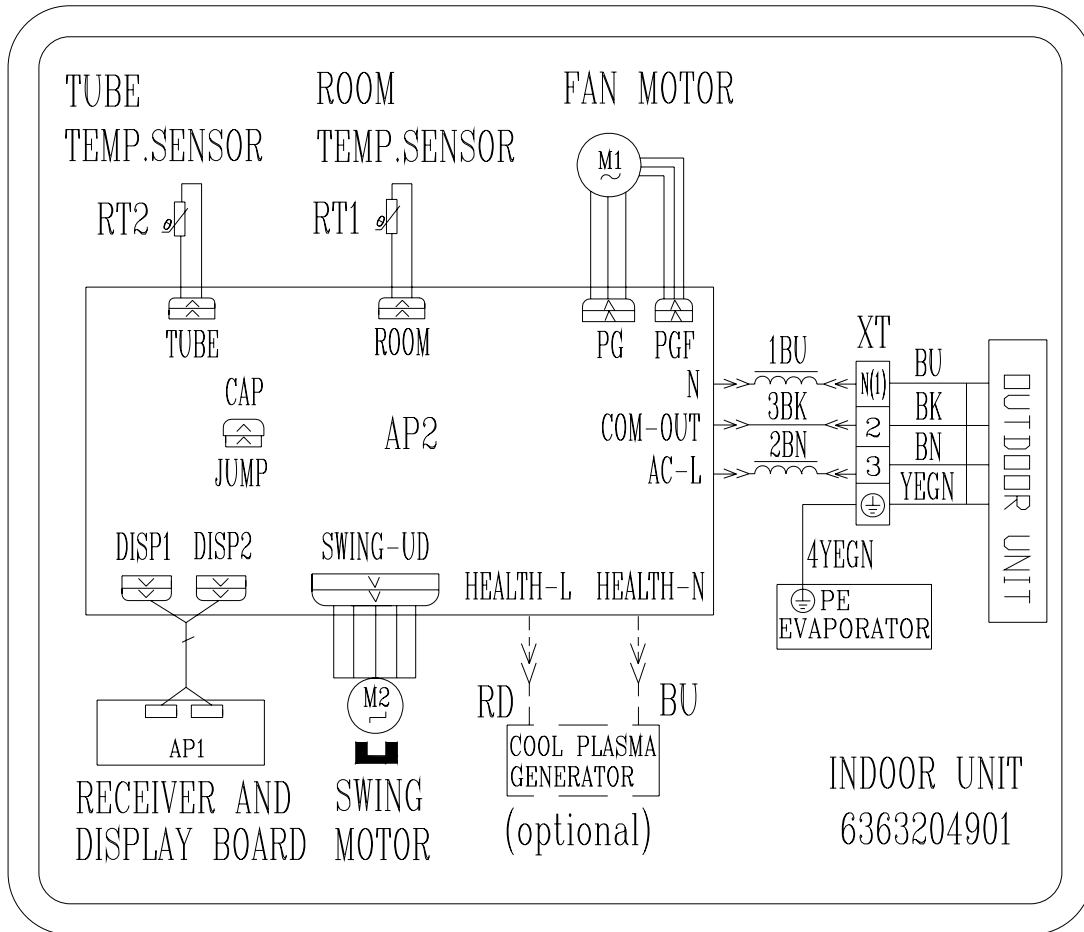
◆ Change

GWH(07)KF-K3DNA6E/I; GWH(09)KF-K3DNA6E/I; GWH(12)KF-K3DNA6E/I; GWH(18)KG-K3DNA6E/I



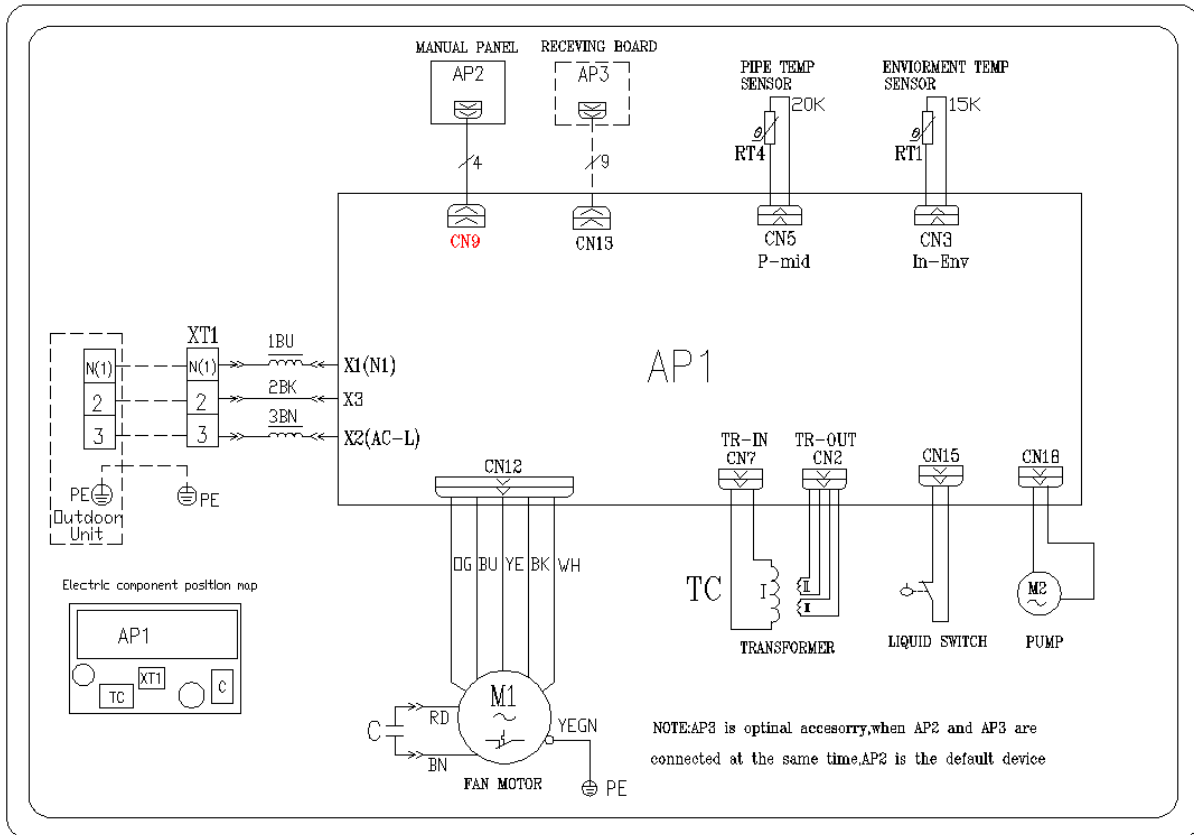
◆ Viola

GWH(07)RA-K3DNA3E/I; GWH(09)RA-K3DNA3E/I; GWH(12)RB-K3DNA3E/I; GWH(18)RC-K3DNA3E/I;
GWH(24)RC-K3DNA1A/I



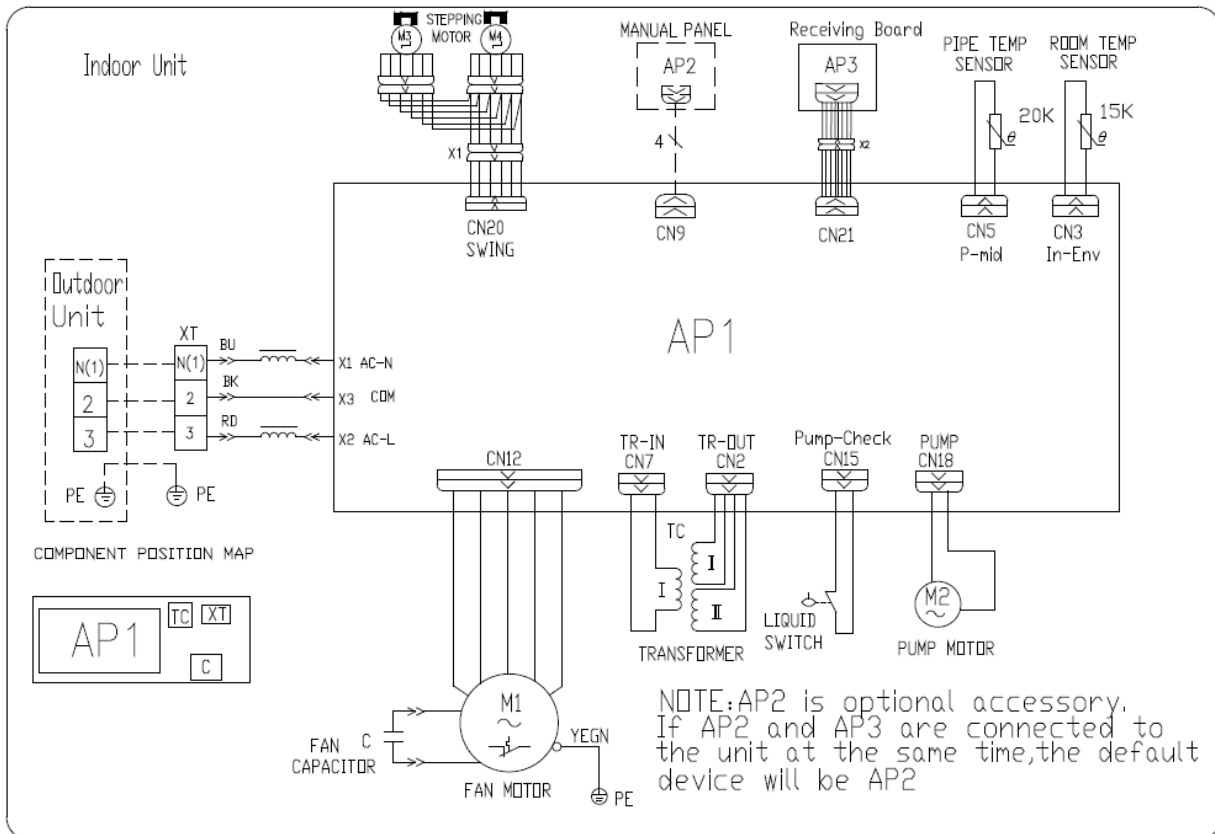
2) Duct type

GFH(09)EA-K3DNA1A/I; GFH(12)EA-K3DNA1A/I; GFH(18)EA-K3DNA1A/I; GFH(21)EA-K3DNA1A/I;
GFH(24)EA-K3DNA1A/I

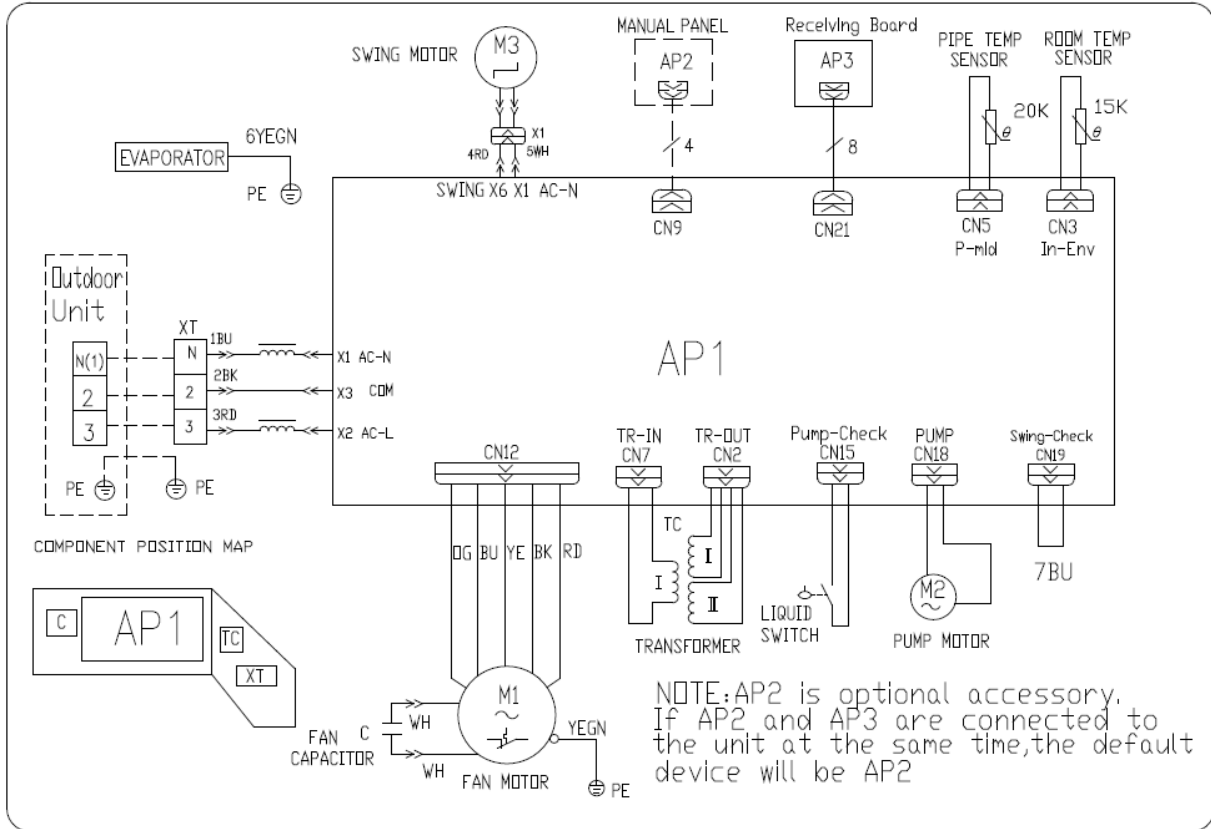


3) Cassette

GKH(12)BA-K3DNA2A/I; GKH(18)BA-K3DNA2A/I;

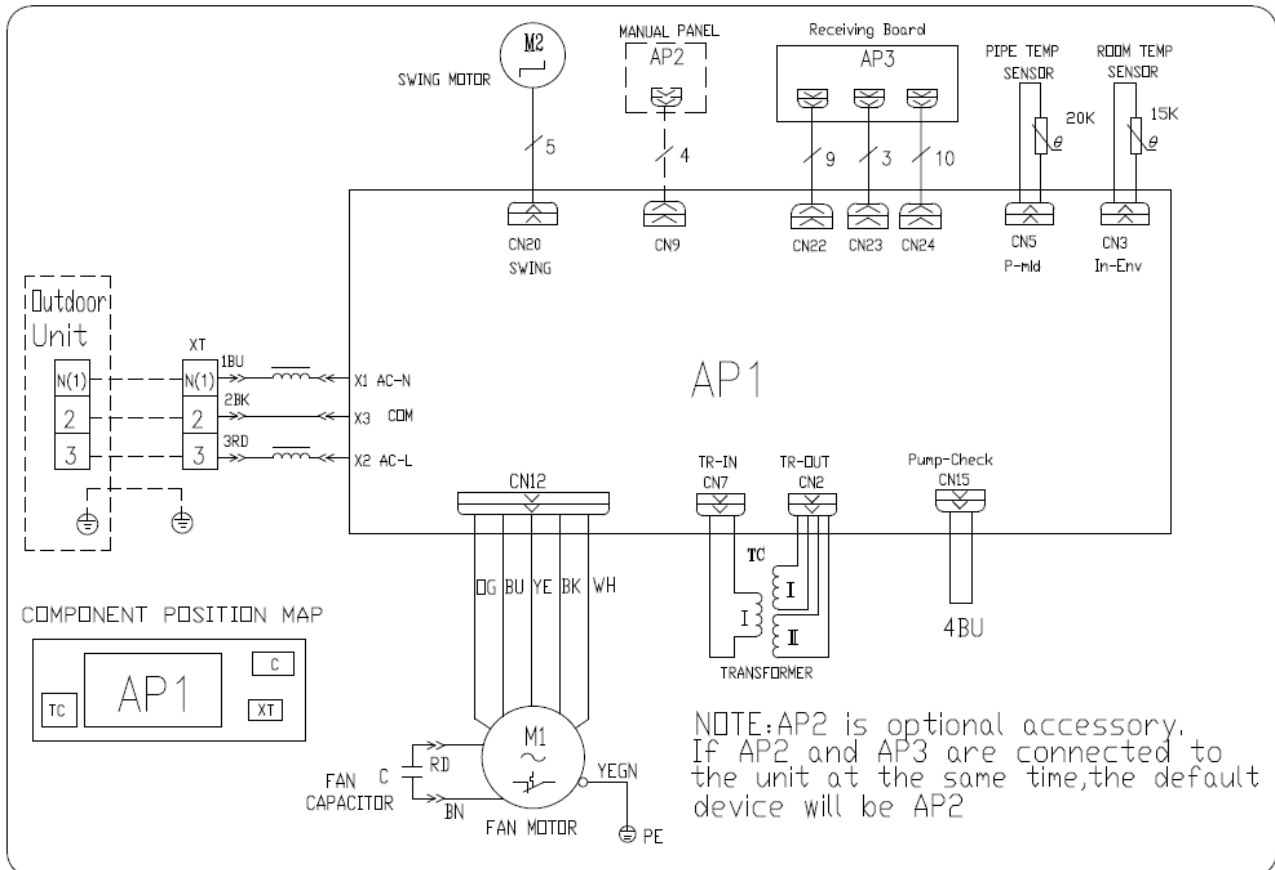


GKH(12)BA-K3DNA1A/I; GKH(18)BA-K3DNA1A/I; GKH(24)BA-K3DNA1A/I



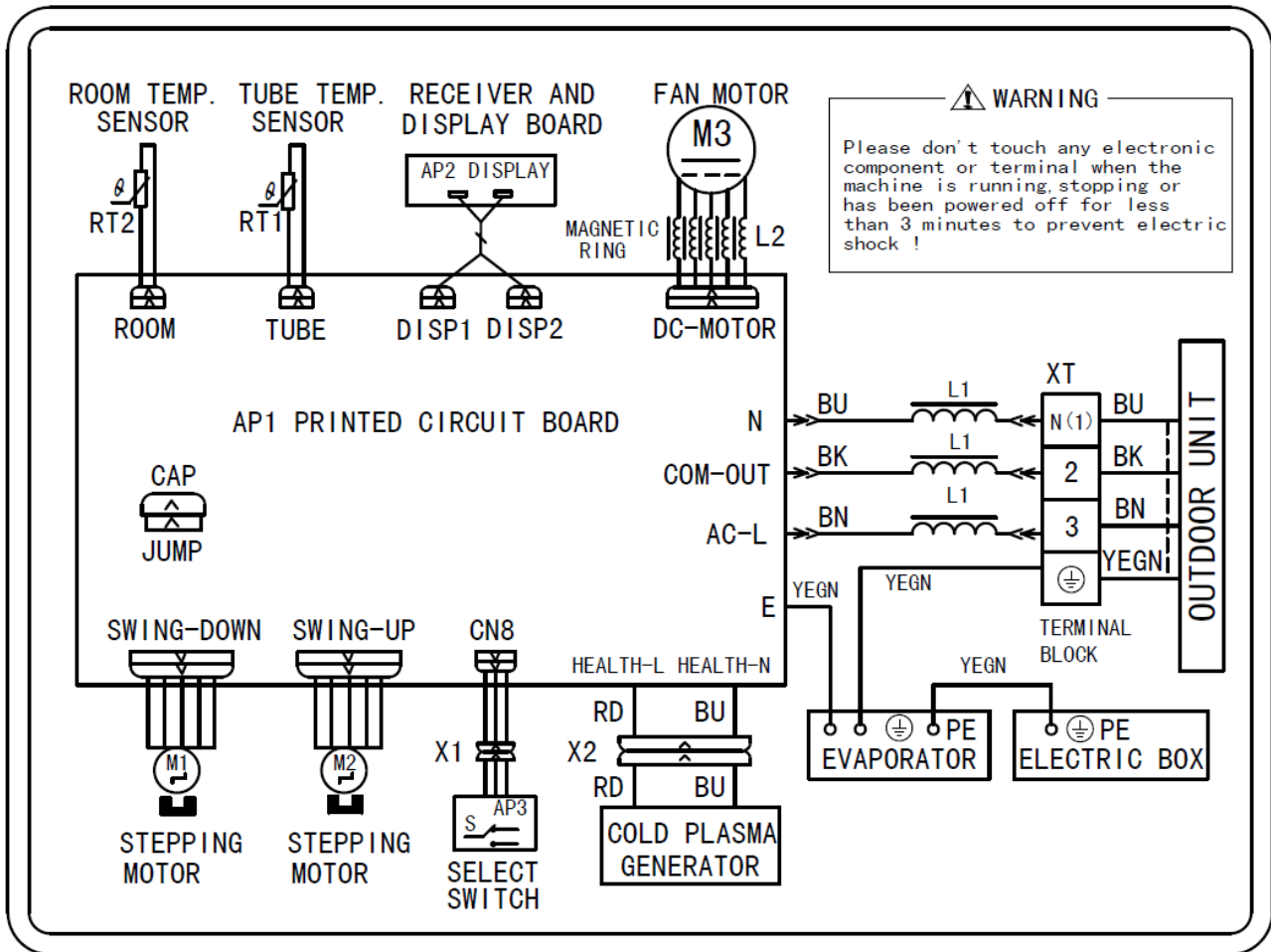
4) Floor ceiling

GTH(09)BA-K3DNA1A/I; GTH(12)BA-K3DNA1A/I; GTH(18)BA-K3DNA1A/I; GTH(24)BA-K3DNA1A/I



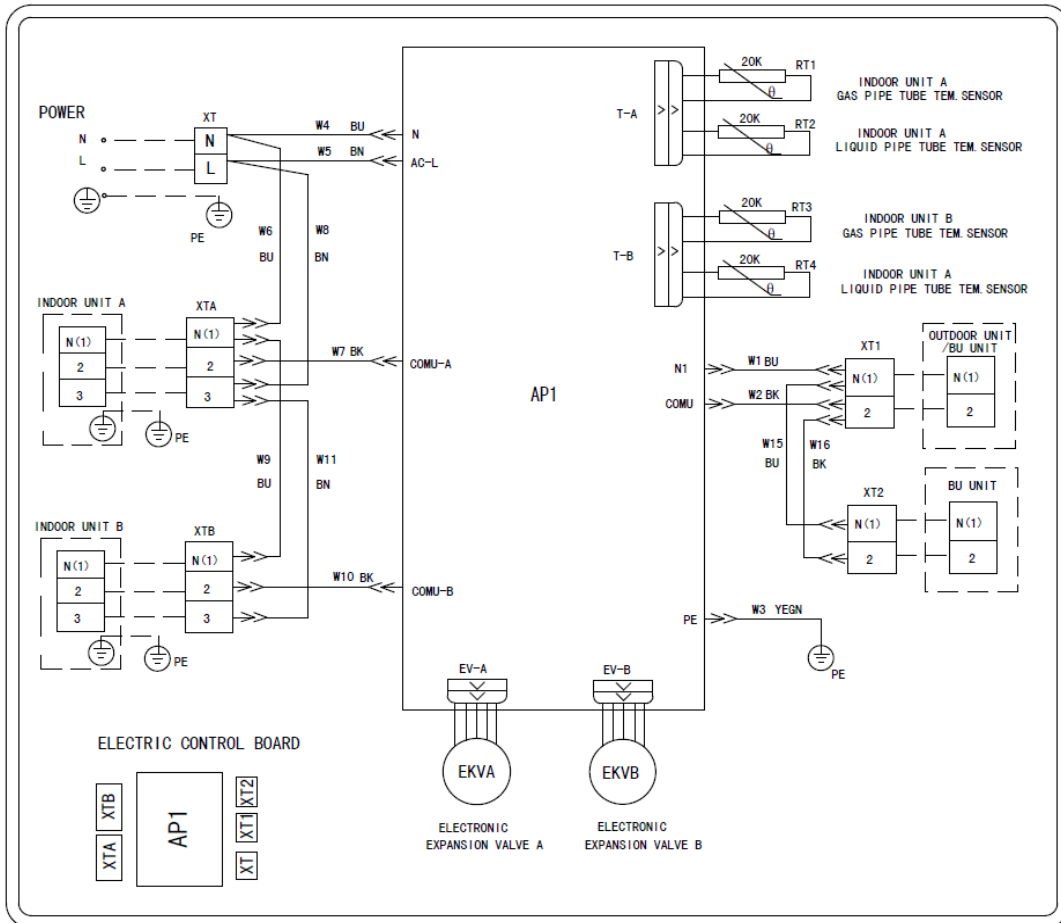
5) Console

GEH(09)AA-K3DNA1C/I; GEH(12)AA-K3DNA1C/I; GEH(18)AA-K3DNA1C/I

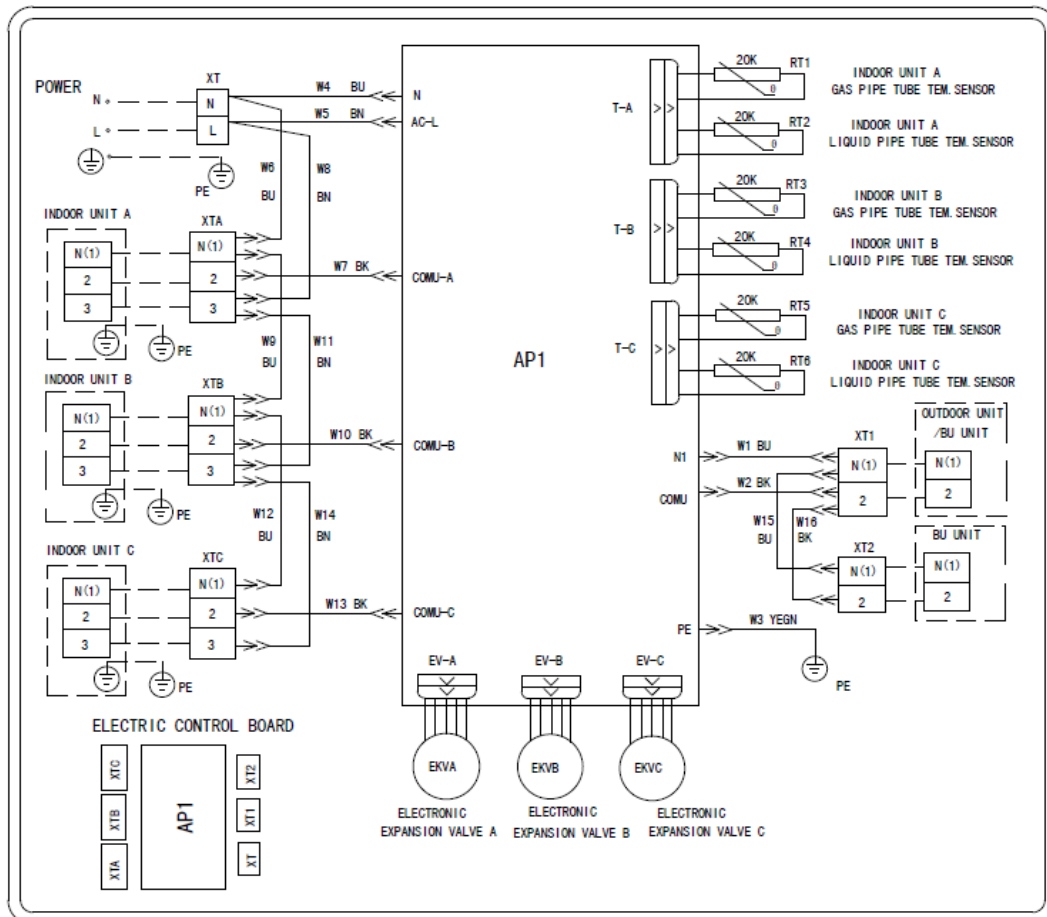


4.2.3 BU module

FXA2A-K; FXA2B-K



FXA3A-K; FXA3B-K



5 THE RESISTANCES OF COMMON TEMPERATURE SENSORS

5.1 15 K Ω

Temp. ($^{\circ}$ C)	Resistance (k Ω)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. ($^{\circ}$ C)	Resistance (k Ω)	Voltage (15K/5V)	Voltage (15K/3.3V)
-20	144.000	0.472	0.311	20	18.750	2.222	1.467
-19	138.100	0.490	0.323	21	17.930	2.278	1.503
-18	128.600	0.522	0.345	22	17.140	2.334	1.540
-17	121.600	0.549	0.362	23	16.390	2.389	1.577
-16	115.000	0.577	0.381	24	15.680	2.445	1.613
-15	108.700	0.606	0.400	25	15.000	2.500	1.650
-14	102.900	0.636	0.420	26	14.360	2.554	1.686
-13	97.400	0.667	0.440	27	13.740	2.610	1.722
-12	92.220	0.699	0.462	28	13.160	2.663	1.758
-11	87.350	0.733	0.484	29	12.600	2.717	1.793
-10	82.750	0.767	0.506	30	12.070	2.771	1.829
-9	78.430	0.803	0.530	31	11.570	2.823	1.863
-8	74.350	0.839	0.554	32	11.090	2.875	1.897
-7	70.500	0.877	0.579	33	10.630	2.926	1.931
-6	66.880	0.916	0.605	34	10.200	2.976	1.964
-5	63.460	0.956	0.631	35	9.779	3.027	1.998
-4	60.230	0.997	0.658	36	9.382	3.076	2.030
-3	57.180	1.039	0.686	37	9.003	3.125	2.062
-2	54.310	1.082	0.714	38	8.642	3.172	2.094
-1	51.590	1.126	0.743	39	8.297	3.219	2.125
0	49.020	1.172	0.773	41	7.653	3.311	2.185
1	46.800	1.214	0.801	42	7.352	3.355	2.215
2	44.310	1.265	0.835	43	7.065	3.399	2.243
3	42.140	1.313	0.866	44	6.791	3.442	2.272
4	40.090	1.361	0.899	45	6.529	3.484	2.299
5	38.150	1.411	0.931	46	6.278	3.525	2.326
6	36.320	1.461	0.965	47	6.038	3.565	2.353
7	34.580	1.513	0.998	48	5.809	3.604	2.379
8	32.940	1.564	1.033	49	5.589	3.643	2.404
9	31.380	1.617	1.067	50	5.379	3.680	2.429
10	29.900	1.670	1.102	51	5.179	3.717	2.453
11	28.510	1.724	1.138	52	4.986	3.753	2.477
12	27.180	1.778	1.174	53	4.802	3.787	2.500
13	25.920	1.833	1.210	54	4.625	3.822	2.522
14	24.730	1.888	1.246	55	4.456	3.855	2.544
15	23.600	1.943	1.282	56	4.294	3.887	2.566
16	22.530	1.998	1.319	57	4.139	3.919	2.586
17	21.510	2.054	1.356	58	3.990	3.949	2.607
18	20.540	2.110	1.393	59	3.848	3.979	2.626
19	19.630	2.166	1.429	60	3.711	4.008	2.646

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
61	3.579	4.037	2.664	66	2.998	4.167	2.750
62	3.454	4.064	2.682	67	2.898	4.190	2.766
63	3.333	4.091	2.700	68	2.797	4.214	2.781
64	3.217	4.117	2.717	69	2.702	4.237	2.796
65	3.105	4.143	2.734	70	2.611	4.259	2.811

5.2 20 KΩ

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
-30	361.8	0.262	0.173	2	59.08	1.265	0.835
-29	339.8	0.278	0.183	3	56.19	1.313	0.866
-28	319.2	0.295	0.195	4	53.46	1.361	0.898
-27	300	0.313	0.206	5	50.87	1.411	0.931
-26	282.2	0.331	0.218	6	48.42	1.462	0.965
-25	265.5	0.350	0.231	7	46.11	1.513	0.998
-24	249.9	0.371	0.245	8	43.92	1.564	1.033
-23	235.3	0.392	0.259	9	41.84	1.617	1.067
-22	221.6	0.414	0.273	10	39.87	1.670	1.102
-21	208.9	0.437	0.288	11	38.01	1.724	1.138
-20	196.9	0.461	0.304	12	36.24	1.778	1.174
-19	181.4	0.497	0.328	13	34.57	1.833	1.209
-18	171.4	0.522	0.345	14	32.98	1.888	1.246
-17	162.1	0.549	0.362	15	31.47	1.943	1.282
-16	153.3	0.577	0.381	16	30.04	1.998	1.319
-15	145	0.606	0.400	17	28.68	2.054	1.356
-14	137.2	0.636	0.420	18	27.39	2.110	1.393
-13	129.9	0.667	0.440	19	26.17	2.166	1.429
-12	123	0.699	0.462	20	25.01	2.222	1.466
-11	116.5	0.733	0.484	21	23.9	2.278	1.503
-10	110.3	0.767	0.507	22	22.85	2.334	1.540
-9	104.6	0.803	0.530	23	21.85	2.389	1.577
-8	99.13	0.839	0.554	24	20.9	2.445	1.614
-7	94	0.877	0.579	25	20	2.500	1.650
-6	89.17	0.916	0.605	26	19.14	2.555	1.686
-5	84.61	0.956	0.631	27	18.32	2.610	1.722
-4	80.31	0.997	0.658	28	17.55	2.663	1.758
-3	76.24	1.039	0.686	29	16.8	2.717	1.793
-2	72.41	1.082	0.714	30	16.1	2.770	1.828
-1	68.79	1.126	0.743	31	15.43	2.822	1.863
0	65.37	1.171	0.773	32	14.79	2.874	1.897
1	62.13	1.218	0.804	33	14.18	2.926	1.931

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
34	13.59	2.977	1.965	55	5.942	3.855	2.544
35	13.04	3.027	1.998	56	5.726	3.887	2.565
36	12.51	3.076	2.030	57	5.519	3.919	2.586
37	12	3.125	2.063	58	5.32	3.949	2.607
38	11.52	3.173	2.094	59	5.13	3.979	2.626
39	11.06	3.220	2.125	60	4.948	4.008	2.646
40	10.62	3.266	2.155	61	4.773	4.037	2.664
41	10.2	3.311	2.185	62	4.605	4.064	2.682
42	9.803	3.355	2.215	63	4.443	4.091	2.700
43	9.42	3.399	2.243	64	4.289	4.117	2.717
44	9.054	3.442	2.272	65	4.14	4.143	2.734
45	8.705	3.484	2.299	66	3.998	4.167	2.750
46	8.37	3.525	2.326	67	3.861	4.191	2.766
47	8.051	3.565	2.353	68	3.729	4.214	2.781
48	7.745	3.604	2.379	69	3.603	4.237	2.796
49	7.453	3.643	2.404	70	3.481	4.259	2.811
50	7.173	3.680	2.429	71	3.364	4.280	2.825
51	6.905	3.717	2.453	72	3.252	4.301	2.838
52	6.648	3.753	2.477	73	3.144	4.321	2.852
53	6.403	3.787	2.500	74	3.04	4.340	2.865
54	6.167	3.822	2.522	75	2.94	4.359	2.877

5.3 50 KΩ

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
-30	911.56	0.054	0.036	-14	342.83	0.142	0.094
-29	853.66	0.058	0.038	-13	323.94	0.150	0.099
-28	799.98	0.062	0.041	-12	306.23	0.158	0.104
-27	750.18	0.066	0.043	-11	289.61	0.167	0.110
-26	703.92	0.070	0.046	-10	274.02	0.176	0.116
-25	660.93	0.075	0.049	-9	259.37	0.186	0.123
-24	620.94	0.079	0.052	-8	245.61	0.196	0.129
-23	583.72	0.084	0.056	-7	232.67	0.206	0.136
-22	549.04	0.089	0.059	-6	220.5	0.217	0.143
-21	516.71	0.095	0.063	-5	209.05	0.228	0.151
-20	486.55	0.101	0.066	-4	198.27	0.240	0.158
-19	458.4	0.107	0.070	-3	188.12	0.252	0.167
-18	432.1	0.113	0.075	-2	178.65	0.265	0.175
-17	407.51	0.120	0.079	-1	169.68	0.278	0.184
-16	384.51	0.127	0.084	0	161.02	0.292	0.193
-15	362.99	0.134	0.088	1	153	0.307	0.202

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
2	145.42	0.322	0.212	45	21.425	1.591	1.050
3	138.26	0.337	0.223	46	20.601	1.634	1.078
4	131.5	0.353	0.233	47	19.814	1.677	1.107
5	126.17	0.367	0.242	48	19.061	1.721	1.136
6	119.08	0.387	0.256	49	18.34	1.764	1.164
7	113.37	0.405	0.267	50	17.651	1.808	1.193
8	107.96	0.424	0.280	51	16.99	1.853	1.223
9	102.85	0.443	0.292	52	16.358	1.897	1.252
10	98.006	0.463	0.306	53	15.753	1.942	1.281
11	93.42	0.483	0.319	54	15.173	1.986	1.311
12	89.075	0.505	0.333	55	14.618	2.031	1.340
13	84.956	0.527	0.348	56	14.085	2.076	1.370
14	81.052	0.549	0.362	57	13.575	2.121	1.400
15	77.349	0.572	0.378	58	13.086	2.166	1.429
16	73.896	0.596	0.393	59	12.617	2.211	1.459
17	70.503	0.621	0.410	60	12.368	2.235	1.475
18	67.338	0.647	0.427	61	11.736	2.300	1.518
19	64.333	0.673	0.444	62	11.322	2.345	1.548
20	61.478	0.700	0.462	63	10.925	2.389	1.577
21	58.766	0.727	0.480	64	10.544	2.434	1.606
22	56.189	0.755	0.499	65	10.178	2.478	1.635
23	53.738	0.784	0.518	66	9.8269	2.522	1.664
24	51.408	0.814	0.537	67	9.4896	2.565	1.693
25	49.191	0.845	0.558	68	9.1655	2.609	1.722
26	47.082	0.876	0.578	69	8.9542	2.638	1.741
27	45.074	0.908	0.599	70	8.5551	2.695	1.778
28	43.163	0.941	0.621	71	8.2676	2.737	1.806
29	41.313	0.974	0.643	72	7.9913	2.779	1.834
30	39.61	1.008	0.665	73	7.7257	2.821	1.862
31	37.958	1.043	0.688	74	7.4702	2.862	1.889
32	36.384	1.078	0.711	75	7.2245	2.903	1.916
33	34.883	1.114	0.735	76	6.9882	2.943	1.943
34	33.453	1.151	0.759	77	6.7608	2.983	1.969
35	32.088	1.188	0.784	78	6.542	3.023	1.995
36	30.787	1.226	0.809	79	6.3315	3.062	2.021
37	29.544	1.264	0.835	80	6.1288	3.100	2.046
38	28.359	1.303	0.860	81	5.9336	3.138	2.071
39	27.227	1.343	0.886	82	5.7457	3.175	2.096
40	26.147	1.383	0.913	83	5.5647	3.212	2.120
41	25.114	1.424	0.940	84	5.3903	3.249	2.144
42	24.128	1.465	0.967	85	5.2223	3.285	2.168
43	23.186	1.507	0.994	86	5.0605	3.320	2.191
44	22.286	1.549	1.022	87	4.9044	3.355	2.214

Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)	Temp. (°C)	Resistance (kΩ)	Voltage (15K/5V)	Voltage (15K/3.3V)
88	4.7541	3.389	2.237	110	2.4983	4.001	2.640
89	4.6091	3.423	2.259	111	2.4308	4.022	2.655
90	4.4693	3.456	2.281	112	2.3654	4.044	2.669
91	4.3345	3.488	2.302	113	2.3021	4.064	2.682
92	4.2044	3.520	2.323	114	2.2409	4.085	2.696
93	4.0789	3.551	2.344	115	2.1816	4.105	2.709
94	3.9579	3.582	2.364	116	2.1242	4.124	2.722
95	3.841	3.612	2.384	117	2.0686	4.143	2.734
96	3.7283	3.642	2.404	118	2.0148	4.162	2.747
97	3.6194	3.671	2.423	119	1.9626	4.180	2.759
98	3.5143	3.700	2.442	120	1.9123	4.197	2.770
99	3.4128	3.728	2.460	121	1.8652	4.214	2.781
100	3.3147	3.755	2.478	122	1.8158	4.232	2.793
101	3.22	3.782	2.496	123	1.7698	4.248	2.804
102	3.1285	3.809	2.514	124	1.7253	4.264	2.814
103	3.0401	3.834	2.531	125	1.6821	4.280	2.825
104	2.9547	3.860	2.547	126	1.6402	4.295	2.835
105	2.8721	3.884	2.564	127	1.5996	4.310	2.845
106	2.7922	3.909	2.580	128	1.5602	4.325	2.855
107	2.715	3.932	2.595	129	1.522	4.340	2.864
108	2.6404	3.956	2.611	130	1.485	4.354	2.873
109	2.5682	3.978	2.626				