Hisense

SPLIT TYPE AIR CONDITIONER

SERVICE MANUAL

AS-09UR4SVNVG1（UP1）

AS-12UR4SVNVG1（UP1）

Hisense Corporation

Type of contents

NOTE: The figure、size and parameter of the product may not be identical with the service manual, please take the actual product as the standard.

1. OPERATING RANGE

	Temperature	Indoor Air Intake Temp.	Outdoor Air Intake Temp
COOLING	Maximum	32℃ D.B./23℃ W.B.	43 ℃ D.B./26℃ W.B.
	Minimum	21℃ D.B./15℃ W.B.	21 ℃ D.B./15℃ W.B.
HEATING	Maximum	27℃ D.B./18℃ W.B.	24℃ D.B./18℃ W.B.
	Minimum	20℃ D.B/≤15℃ W.B	-7℃ D.B./-8℃ W.B.

2. SPECIFICATIONS

2-1. Unit specifications

Model No.		AS-09UR4SVNVG1(UP1)	AS-12UR4SVNVG1(UP1)
Type		T1, H/P, INVERTER	T1, H/P, INVERTER
Ratings			
Cooling Capacity	W	2600(1200-3000)	3200(1200-3500)
Heating Capacity	W	2900(1200-3500)	3400(1200-4000)
Rated Input-Cooling	W	810(300-1450)	997(300-1550)
Rated Input-Heating	W	803(300-1500)	942(300-1600)
Moisture Removal	L/H.r	0.9	1.5
Air Circulation	m^3/h	500	500
EER for Cooling	W/W	3.21	3.21
COP for Heating	W/W	3.61	3.61
Energy Class	Cooling	A	A
Energy Class	Heatling	A	A
Refrigerant		R410A	R410A
Refrigerant charge volume	g	580	790
Indoor Unit Noise Level	High(dB (A))	39	39
	Low(dB (A))	34	34
Outdoor Unit Noise Level	dB (A)	52	52
Power Supply			
Voltage, Frequency, Phase	V	220-240V~,50Hz,1P	220-240V~,50Hz,1P
Rated Current	Cooling (A)	3.8	4.5
	Heating (A)	3.7	4.1
System			
Compressor type		Rotary	Rotary
Compressor Model No.		39A23VPM&5JKE	39A23VPM&5JKE
Compressor MFG		RECHI	RECHI
Expansion Device		Capillary	Capillary
Evaporator		Copper tube and Aluminum Fin	Copper tube and Aluminum Fin
Condenser		Copper tube and Aluminum Fin	Copper tube and Aluminum Fin
Connecting Pipe Diameter			
Liquid Pipe	inch	1/4	1/4
Gas Pipe	inch	3/8	3/8
Features			
Display on Front Panel		LED	LED
LCD Wireless Remote Controller		Yes	Yes
Removable and washable Panel		Yes	Yes
Washable PP Filter		Yes	Yes
24 Hours Timer		Yes	Yes
3 Speed and Auto Indoor Fan Control		Yes	Yes
Vertical Auto Swing Louver		Yes	Yes

2. SPECIFICATIONS

Manual Adjustable Horizontal Swing Louver		Yes	Yes
Sleep Operation		Yes	Yes
Smart Function		Yes	Yes
Dimmer		Yes	Yes
Super Function		Yes	Yes
Compressor Indicator		Yes	Yes
Auto Restart		Yes	Yes
Other			
Net Dimensions WxHxD (mm)	Indoor Unit	750×250×190	750×250×190
	Outdoor Unit	715×482×240	715×482×240
Net Weight (Kg)	Indoor Unit	8	8
	Outdoor Unit	26	28
Packing Dimensions WxHxD (mm)	Indoor Unit	800×325×245	800×325×245
	Outdoor Unit	830×530×315	830×530×315
Gross Weight (Kg)	Indoor Unit	9	9
	Outdoor Unit	28	30
Loading Capacity (20'/40'/40'HC)		148/298/350	148/298/350
Test Standard		EN 14511	EN 14511
Approvals		CE	CE

NOTE :Test conditions:

Cooling : Indoor: DB27℃/ WB19℃ Outdoor: DB35℃/ WB24℃

Heating: Indoor: DB20℃/ WB15℃ Outdoor: DB7℃/ WB 6℃

2-2. Major component specifications

2-2-1.INDOOR FAN MOTOR

ELECTRIC PERFORMANCE	PARAMETER
Motor model	K1B310114
Rated power source	208~240V 50HZ/60HZ
Fan capacitor	1.5μF/450V
Poles	4
Rated load output(W)	18W
Ambient temperature(℃)	-5℃～+43℃.

2. SPECIFICATIONS

2-2-2 OUTDOOR FAN MOTOR

ELECTRIC PERFORMANCE	PARAMETER
Motor model	DG13Z1-39
Rated power source	208~240V　50Hz
Fan capacitor	1.5μF/450V
Poles	---
Rated load output(W)	25W
Ambient temperature(℃)	-5℃～+43℃.

2-2-3. COMPRESSOR

ELECTRIC PERFORMANCE		PARAMETER
Compressor model		39A23VPM&5JKE
Compressor type		Rotary
Motor	Motor type.	Direct current brushless motor
	Starting type	Direct current brushless inverter starting
	Winding resistance（at 25℃）	U-V（or V-W）:2.550Ω±7%；W-U: 2.60Ω±7%
Number of cylinder		1
Oil type		Zegles RB68EP or equivalent
Oil charge (cc)		370±10
Input power(W)		910±5%
Current (A)		4.3
Ambient temperature(℃)		-5℃～+43℃.

2-3. Other component specifications

2-3-1. LOUVER MOTOR

ELECTRIC PERFORMANCE	PARAMETER
Stepper Motor model	DG13B1-01
Voltage(DC)	12V
Number of phase	4
Drive mode	1-2 phase excitation unipolar drive
Resistance per phase	200Ω±7%
Relative humidity(RH)	45%～85%
Temperature range(℃)	-10℃～+40℃.

3. INSTALLATION

1、How to choose an air conditioner:

a. Choice for reference: 150-170W/㎡ for average rooms;

b. Choice for reference: 160-200W/㎡ for small size offices;

c. Choice for reference: 220-350W/㎡ for restaurants;

d. Choice for reference: 200-300W/㎡ for entertaining venues;

e. Choice for reference: 220-280W/㎡ for the top floor.

Note:1W = 3.412btu.

2. Indoor Unit:

For indoor unit installation, the distance between its top and the ceiling shall not be less than 10 cm -20 cm, and the distance from the ground should be between 2m to 2.6m. Also the wallboard must be smooth and straight, with its supporting force of not less than 60 kg.

The location for installing the indoor unit shall be far away from heat source, the space between it and the door or window should exceed 0.6m

3. Outdoor Unit:

The air conditioner outdoor unit should not occupy public sidewalks, the distance between the mounting bracket installed along the road (on condition that the mounting bracket does not affect the public access, it can be installed horizontally) and the ground must exceed 2.5m. Also we shall remember that: a. the air flow must run freely. b. we should protect famous ancient buildings during installation. c. the installation does not affect the traffic.

The distance between air outlet of outdoor unit and the opposite object should be more than 1 meter, otherwise the machine would stop running because of overload by heat yield failure.

If the outdoor unit was opposite the resident's door or window, you should install the machine as far as possible away from the adjacent doors windows and plants, and the distance shall not be less than the following values: for the rated cooling capacity not more than 4.5KW, the distance should be 3m.; for the rated cooling capacity more than 4.5KW, the distance should be 4m.

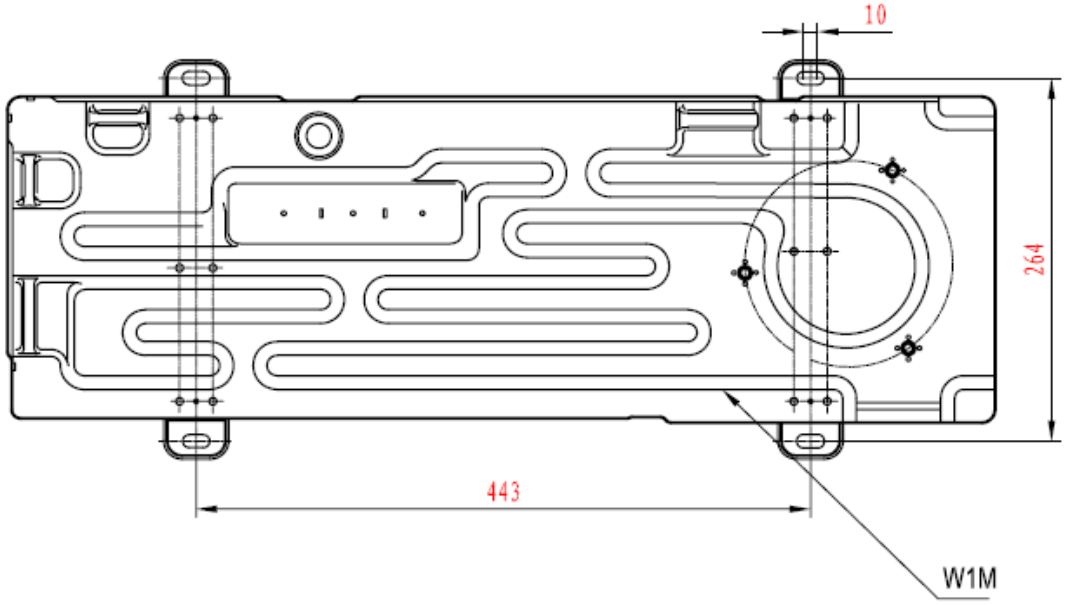
It should remember to avoid installing at places where the natural environment is harsh, such as heavy fumes and wind, direct sunlight or high-temperature and heat, together with the place where children easily reach.

4. The Unit:

When installing the air conditioner, the outdoor unit should be below the indoor unit so as to facilitate circle of refrigerant and refrigeration oil .(1)The height difference between wall mounted indoor unit and the outdoor unit is generally not more than 7 meters. (2)The connection pipe can't exceed 5 meters, and the longest is 15 meters. When the length exceeds 5 meters, 20g fluoride is required to be added for each exceeding 1m.

3. INSTALLATION

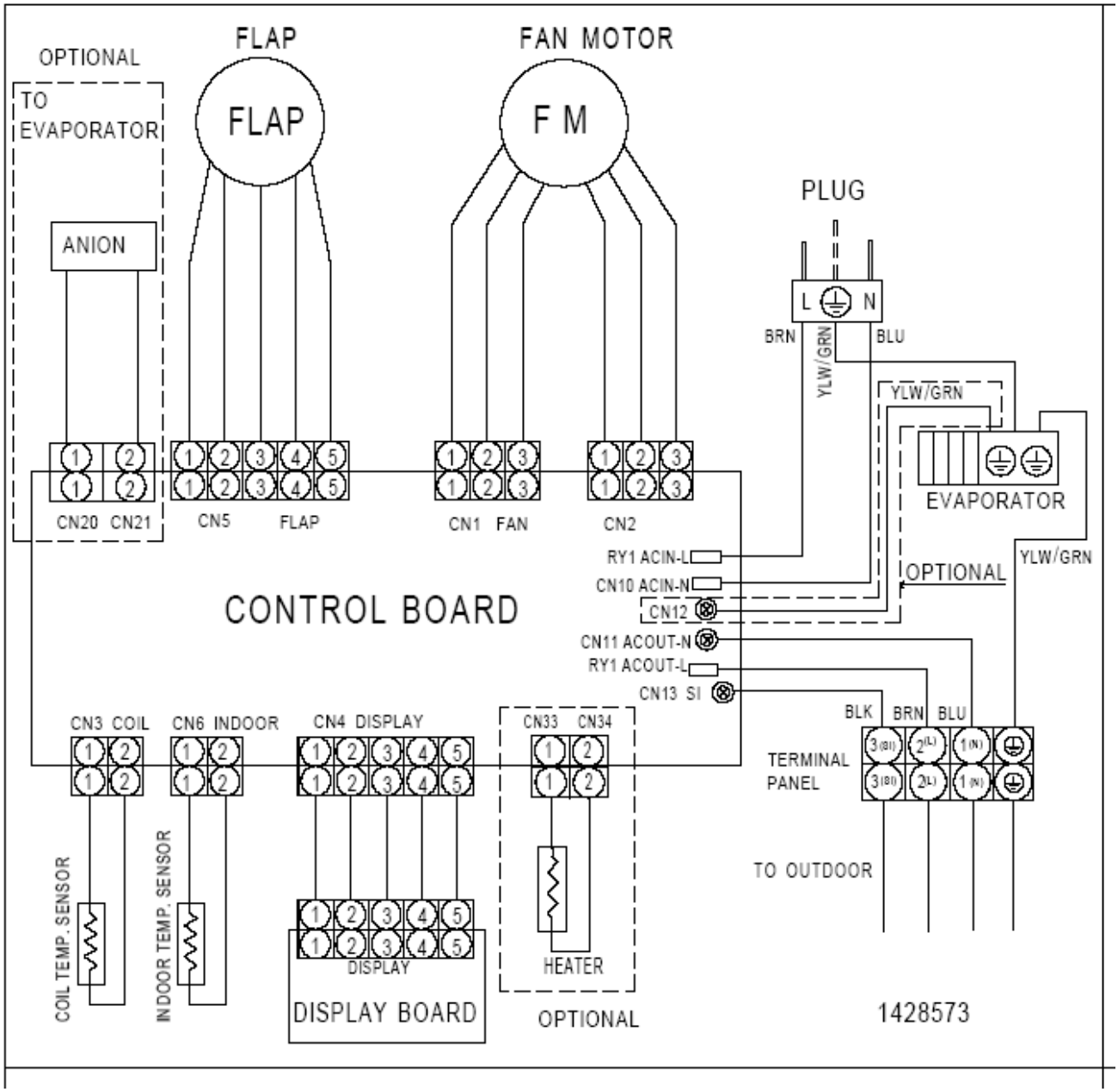
5. Outdoor unit feet distance:



4. ELECTRICAL DATA

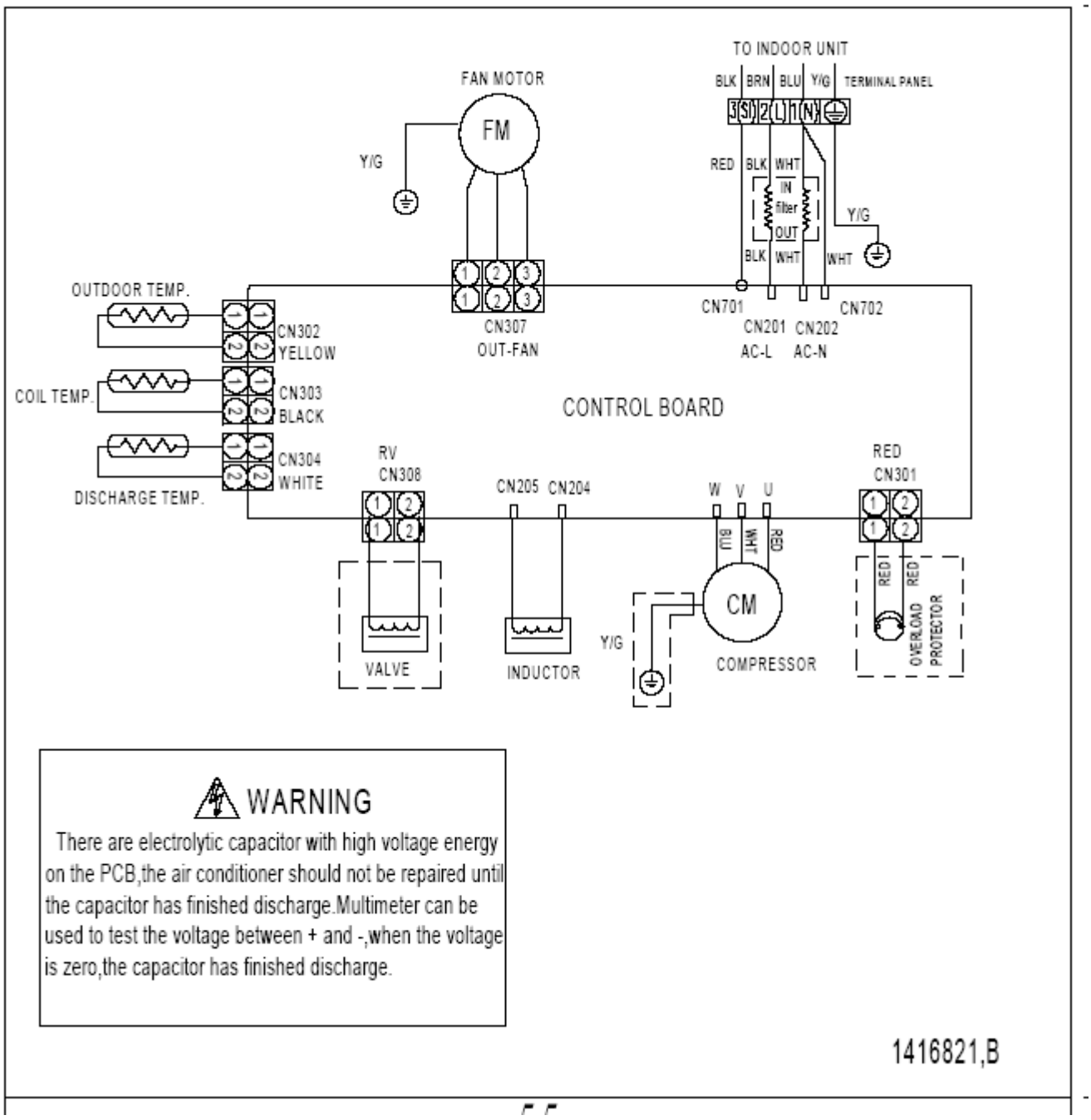
4-1.Electrical wiring diagrams

4-1-1.INDOOR



4. ELECTRICAL DATA

4-1-2.OUTDOOR



5. CONTROL MODEL

5-1. Major general technical parameters

5-1-1 Conditionings for operation: Ambient temperatures: (-15 - +45 ℃), relative humidity (45 - 85%).

5-1-2 Remote receiver distance: 8 m.

5-1-3 Remote receiver angle: Less than 80 degrees.

5-1-4 Temperature control accuracy: ±1℃.

5-1-5 Time error: Less than 1%.

5-1-6 The power supply for the air conditioner is a.c 220V, 50Hz, with its fluctuation in the range of (198～264V).

5-2. Functions of the controller

5-2-1 Display panel

I. Control functions of the remote controller (See operating and installation manual)

II. Display of the indoor unit Information on the screen:

Displaying Scheme:

Temperature display：Display set temperature or indoor temperature , and display fault code in trouble indicating. An error code is displayed according to the signal from the indoor CPU. The error code will flash for 5 seconds while displayed.

Running indicator：It is on during operation. It flashes in 10s after the sleep modehas been setted.

TIMER indicator：When the timer mode works, the indicator will be lighted.

Sleep indicator：When the sleep mode works, the indicator will be lighted.

Compressor indicator：It lights up when compressor is running.

Remote control receiver： This section receives signals from the remote controller.

5-3. Control function

5-3-1 Emergency switch

5-3-1-1 Press the emergency switch once to turn on the machine and press it again to turn off the machine; in the automatic mode, the indoor control temperature is set at 24℃ with the indoor fan speed setting is automatic and the flaps sweep.

5-3-1-2 When the machine is turned on (in the OFF condition), press and hold the emergency switch for 5 seconds, the buzzer rings for 3 times and the controller starts in the trial operation. The trial operation is the forced cooling with the indoor fan speed being set at high speeds, the flaps sweeping and the air conditioner’s operation is irrelevant with room temperatures.

5-3-1-3 If a remote signal has been received during the emergency run, the machine will operate upon the command of such a remote signal.

5-3-2 Operator-machine communication

5-3-2-1 The air conditioner has a thermal sensor to detect room temperatures. Some remote controller is equipped with a thermal sensor (Such remote controller has the function of man-machine communication. For details, refer to the section for the remote controller). In addition, there is a thermal sensor at the indoor air inlet. In the case where the remote controller is equipped with a thermal sensor, the default setting for room temperatures is subject to the detection by the remote controller. The remote controller detects the room temperature once every 20 seconds, and automatically transmits a signal at an interval of 3 minutes or when a change in the room temperature is detected. If the indoor control unit has not received a remote signal for more than 10 minutes, the control function will be automatically switched over to the thermal sensor on the indoor unit.

5-3-2-2 Neither the turning on nor turning off operation will cancel the operator-machine communication function.

5-3-2-3 In default, the air conditioner is set to start the operator-machine communication function.

5-3-3 Timer function

5-3-3-1 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.

5-3-3-2 Timer off: When set to stop in a set time by the remote controller, the air conditioner 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.

5-3-3-3 Neither the turning on nor turning off operation will cancel the timer function (Some remote controller has a simple one-hour timer off function and excludes this operation).

5-3-4 Sleep

5-3-4-1 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.

5-3-4-2 According to the different needs, there are four different sleep modes to choose. During the time of sleep mode, the set temperature will change automatically.

5-3-4-3 In default, the setting is to cancel the sleep function. Turning off the unit will also cancel the sleep function.

5-3-4-4 The sleep function is valid for 8 hours. The air conditioner will turns off and cancel the sleep function after the sleep function works for 8 hours.

5-3-5 High efficient run function (This function is invalid)

In the heating (except for the single cooling unit), cooling or dehumidifying mode, it may be set for high efficient run with the indoor fan speed changed to the high efficient fan speed and the compressor operating at the highest frequency as available. If the display screen can display the frequency, the frequency displayed on the screen is up to the maximum. It will restore to the previous run state after 15 minutes operation automatically.

5-3-6 Automatic run (SMART) mode

If there is no man-machine communication function after the unit is started, the indoor fan operates at the ultra-low flowrate for 20 seconds before selecting a run mode; the room temperatures are detected during this period for the selection of a run mode.

In the first operation:

a. When $T_{room} - T_{set} > 3℃$， it starts in the cooling mode;

b. When $-3℃ \leq T_{room} - T_{set} \leq 3℃$， it starts in the ventilation run mode;

c. When $T_{room} - T_{set} < -3℃$, it starts in the heating mode.

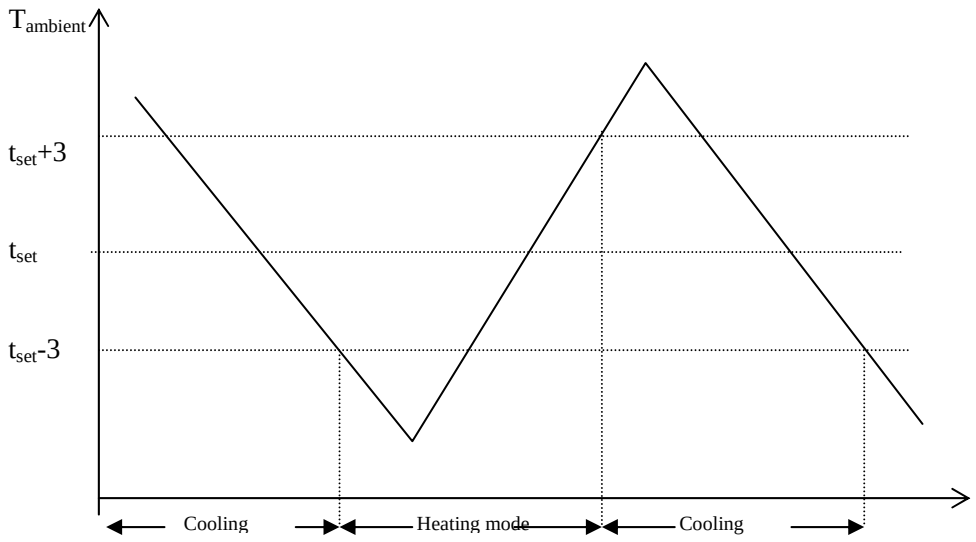
After the first run in the cooling or heating mode, the mode will be changed as the following:

a. When $T_{room} - T_{set} > 3℃$, it will be changed to the cooling mode;
b. When $T_{room} - T_{set} < -3℃$, it will be changed to the heating mode;
c. When these conditions are not met, it will remain in the previous run mode.

When the temperature setting is changed, re-judgment will be made for the run mode

according to the descriptions mentioned above; when the compressor is halted for 10 minutes, the re-judgment will be made for the run mode.

5-3-6-1 Switch between the cooling and heating mode:



5-3-6-2 Cooling→heating turnover operation

Cooling→heating: the compressor stops; 50 s later the 4-way valve is activated and 3 minutes more the compressor turns on.

Heating→cooling: the compressor stops, 50 s later the 4-way valve is interrupted and 3 minutes more the compressor turns on.

5-3-6-3 There is temperature compensation during the auto-run, which is same as cooling and heating.

5-3-7 Cooling-run mode

5-3-7-1 Temperature compensation

Principle for compensation: The compensation is available only if the proper sensor is used and it is not available when it is subject to the sensor on the remote controller.

5-3-7-2 Outdoor Fan

The outdoor fan's speeds are divided into two levels which can be changed over according to outdoor ambient temperatures.

When operating at a fixed frequency, the outdoor fan is forced to operate at the high speed.

5-3-7-3 Indoor fan

When the fan speed is set at the high, medium and low fan speeds, the fan runs at a preset speed. When the fan speed setting is automatic, the fan speed is set based on the difference

in room temperatures.

T_{room}-T_{set}	Indoor fan speed
T_{room}-$T_{set}\leq 2^0C$	Low
$2^0C < T_{room}$-$T_{set} < 4^0C$	Medium
T_{room}-$T_{set}\geq 4^0C$	High

5-3-7-4 Prevention against condensation and insufficient heat exchange at the low indoor fan speed.

When the indoor fan speed is set at the low fan speed, the compressor's power is restricted as in the low temperature cooling.

5-3-7-5 4-way valve

State: It is interrupted in cooling.

Switchover: When initially powered on for cooling, the 4-way valve is interrupted immediately. When the heating is changed to the cooling, it needs an interval of 50 seconds for the 4-way valve to change over from being activated to being interrupted.

5-3-8 Heating-run mode

5-3-8-1 Temperature compensation

Principle for compensation: The compensation is available only if the proper sensor is used and it is not available when it is subject to the sensor on the remote controller or line controller.

5-3-8-2 Indoor fan

The fan speed is set at the high, medium or low fan speed, it operates at a preset speed (in the cold air prevention, it is forced to run at the ultra-low flowrate or stop).

When the fan speed is set in the auto-run, the fan speed setting is made according to the room temperature differences (except for the cold air prevention).

T_{set}-T_{room}	Indoor Fan Speed
T_{set}-$T_{room}\leq 2^0C$	Low
$2^0C < T_{set}$-$T_{room} < 4^0C$	Medium
T_{set}-$T_{room}\geq 4^0C$	High

5-3-8-3 Cold air prevention

In the heating-run, to prevent the indoor fan from blowing cold air, the indoor fan speed is different from the set speed after turning on air-conditioner.

5-3-8-4 Residual heat blowing off

When the compressor is turned off in the heating run, the indoor fan does not stop at once, but until the indoor evaporator temperature is below 23^0C, but for 30 seconds at the latest.

5-3-8-5 Outdoor fan

The outdoor fan speeds are divided into three levels which can be changed over according to outdoor ambient temperatures.

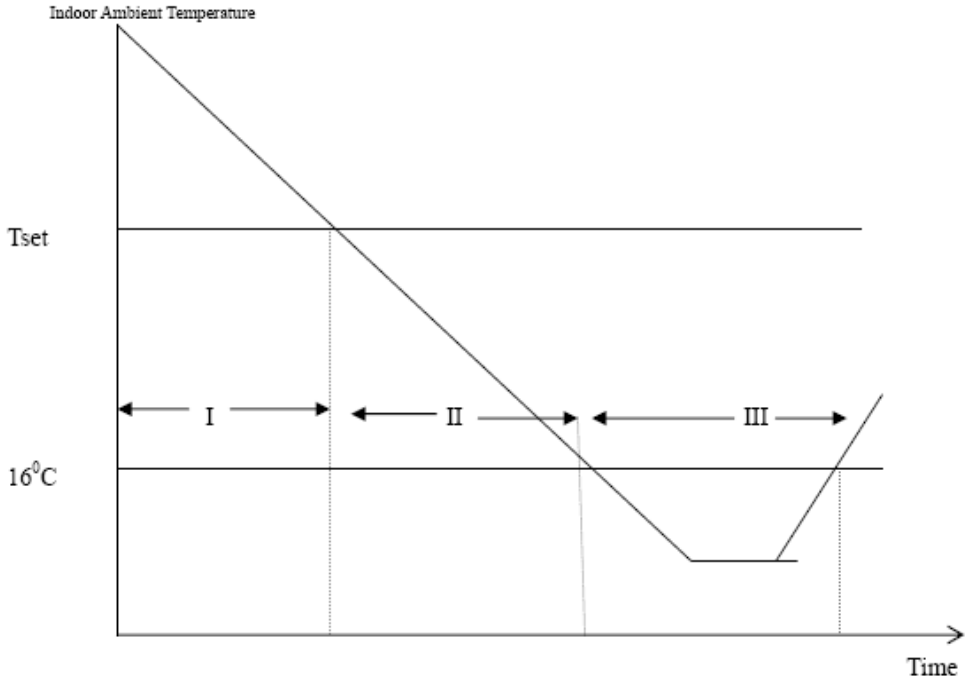
5-3-8-6 4-way valve

State: It is electrified in heating.

Switchover: When initially powered on for heating, the 4-way valve is activated immediately. In the change from cooling to heating, it needs an interval of 50 seconds for the 4-way valve to change over from being interrupted to being activated.

5-3-9 Dehumidifying mode

The dehumidifying mode is illustrated as follows:



Dehumidifying area I: Operation at the frequency in the range (30–80 Hz) according to Δt ($T_{indoor\ ambient}$-T_{set}).

Δt(℃)	f(Hz)
0	30
0.5	30
1	40
1.5	50
≥2	60
Efficient	80

Dehumidifying area II: The compressor stops for 5 minutes and operators for 5 minutes at the lowest frequency.

Dehumidifying area III: The compressor stops.

5-3-10 Air Blowing mode

The outdoor unit does not work while the indoor fan runs with the fan speed selectable at the auto, low, medium and high speeds.

When being auto, the fan speed is determined in the cooling mode (with the temperature setting of 24^0C in default).

The high, medium and low fan speeds are same with that in the cooling mode.

5-3-11 Compressor operating state indication

When the compressor is in operation, The 3 LED indicator lights on the control panel of the outdoor unit indicates the causes of the restriction on the compressor's current operating frequency.

Symbols for indicator light:: ★: ON O: flashing ×: OFF				
	LED1	LED2	LED3	The cause of the restriction on the compressor's current operating frequency
1	O	O	O	Normal frequency ascent and descent with no restriction on the frequency
2	×	×	★	Frequency descent or restriction on frequency ascent caused by over current
3	×	★	★	Frequency descent or restriction on frequency ascent caused by anti-freeze in cooling or overload control in heating
4	★	×	★	Frequency descent or restriction on frequency ascent caused by too high compressor discharge temperature
5	×	★	×	Restriction on maximum operation operating frequency caused by too low voltage on the supply circuit
6	★	★	★	Operating at a fixed frequency (when in a capacity measurement or forced operation at a fixed frequency.)
8	★	×	×	Communication frequency drops.

5-3-12 Special notes

5-3-12-1 The outdoor unit of this model is electrified by the indoor unit control. After the system starts to operate, the indoor unit supplies the outdoor unit (except for the ventilation mode). If the EEPROM data is read correctly after turning on the power, the indoor unit's beeper rings one time, or if it is not the case the beeper will ring two times and the system cannot be started. Normally, when the indoor unit receives a control signal from the remote controller and emergency button, the system will be started and the beeper will ring two times, and in other cases, the beeper will ring one time.

5-3-12-2 This model can achieve the power interruption restoration function by the selection of the EEPROM data. The power interruption restoration is applied only for the basic functions (turning ON and OFF, setting temperatures, modes, fan speeds and flap's position) and not for other special functions such as sleep, timing and power-saving run.

6. TROUBLE SHOOTING

6-1. Trouble alarm

Trouble List

6-1-1 Indication on the outdoor unit

When the compressor is interrupted, the outdoor LEDs are used to indicate the troubles listed below:

Symbols for indicator lights: ★: ON O: flashing ×: OFF				
	LED1	LED2	LED3	Troubles
1	×	×	×	Normal
2	×	×	★	Unused
3	×	★	×	Outdoor heat exchanger temperature sensor be protected
4	★	×	×	Compressor temperature sensor short-circuited, open circuited or the corresponding test circuit in trouble
5	★	×	★	Outdoor heat exchanger temperature sensor short-circuited, open circuited or the corresponding test circuit in trouble
6	★	★	×	Outdoor atmosphere temperature sensor short-circuited, open circuited or the corresponding test circuit in trouble
9	×	×	O	Signal communication abnormal (indoor – outdoor)
10	×	O	×	Power module (IPM)protection
11	★	O	★	Maximum current control
12	★	O	×	Current overload control
13	×	O	★	Compressor discharge temperature too high
14	★	★	O	Over and under-voltage control
18	×	★	O	Compressor housing temperature too high
19	★	★	★	Outdoor memory in trouble
20	×	O	O	Indoor heat exchanger temperature sensor be protected
22	O	O	×	DC compressor fails to start
23	O	×	O	DC compressor out of step

6-1-2 Indication by the indoor unit

Press the high power for 4 times in a row and the trouble codes listed below will be displayed.

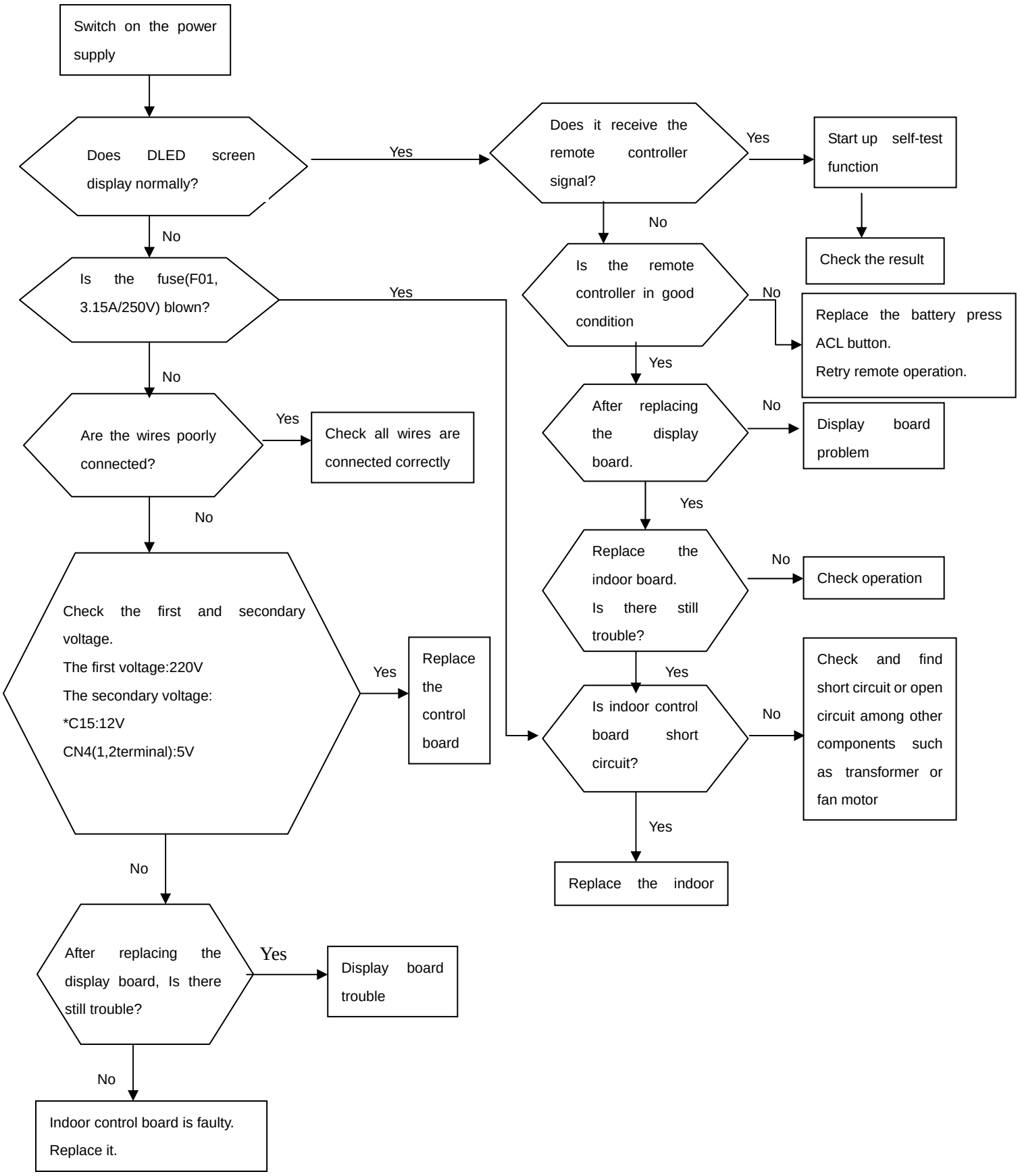
0	No trouble	16	Anti-freeze or overload control
1	Outdoor coil temperature sensor in trouble	18	DC compressor fails to start
2	Compressor temperature sensor in trouble	19	DC compressor out of step
3	Voltage transformer in trouble		
4	Current transformer in trouble		
5	IPM module protection		
6	Over and under-voltage control	33	Room temperature sensor in trouble

6. TROUBLE SHOOTING

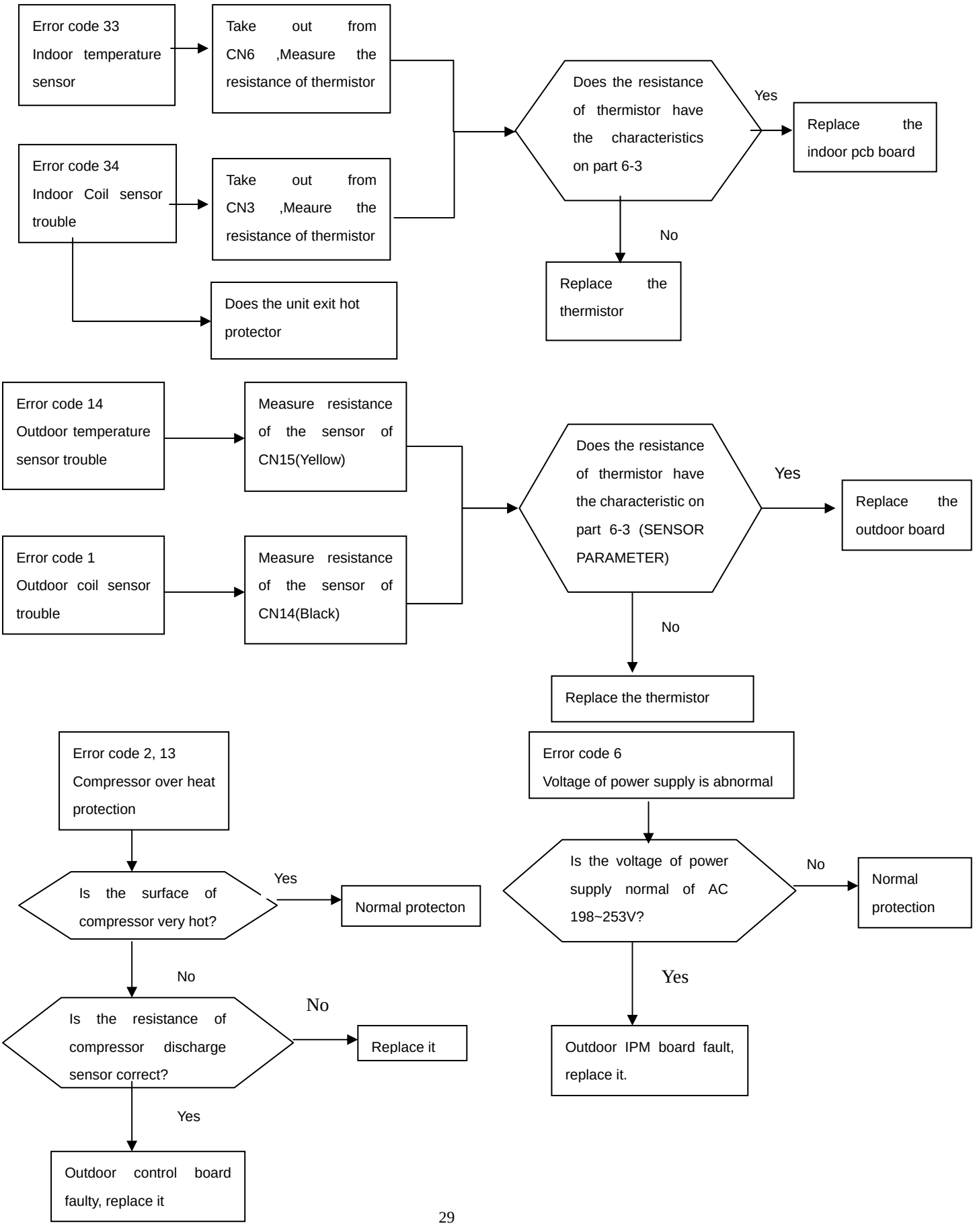
7	Communication trouble	34	Indoor coil temperature sensor in trouble
8	Current overload control	36	Communication between the indoor and outdoor in trouble
9	Maximum current control	39	Indoor fan motor operation abnormal
10	Communication trouble(between outdoor unit and driver unit)	40	Grid protection alarm (cabinet type)
11	Outdoor EEPROM in trouble	41	Detecting failures by zero-crossing
13	Compressor exhaust temperature too high control		
14	Outdoor ambient temperature sensor in trouble		
15	Compressor housing temperature control		

6. TROUBLE SHOOTING

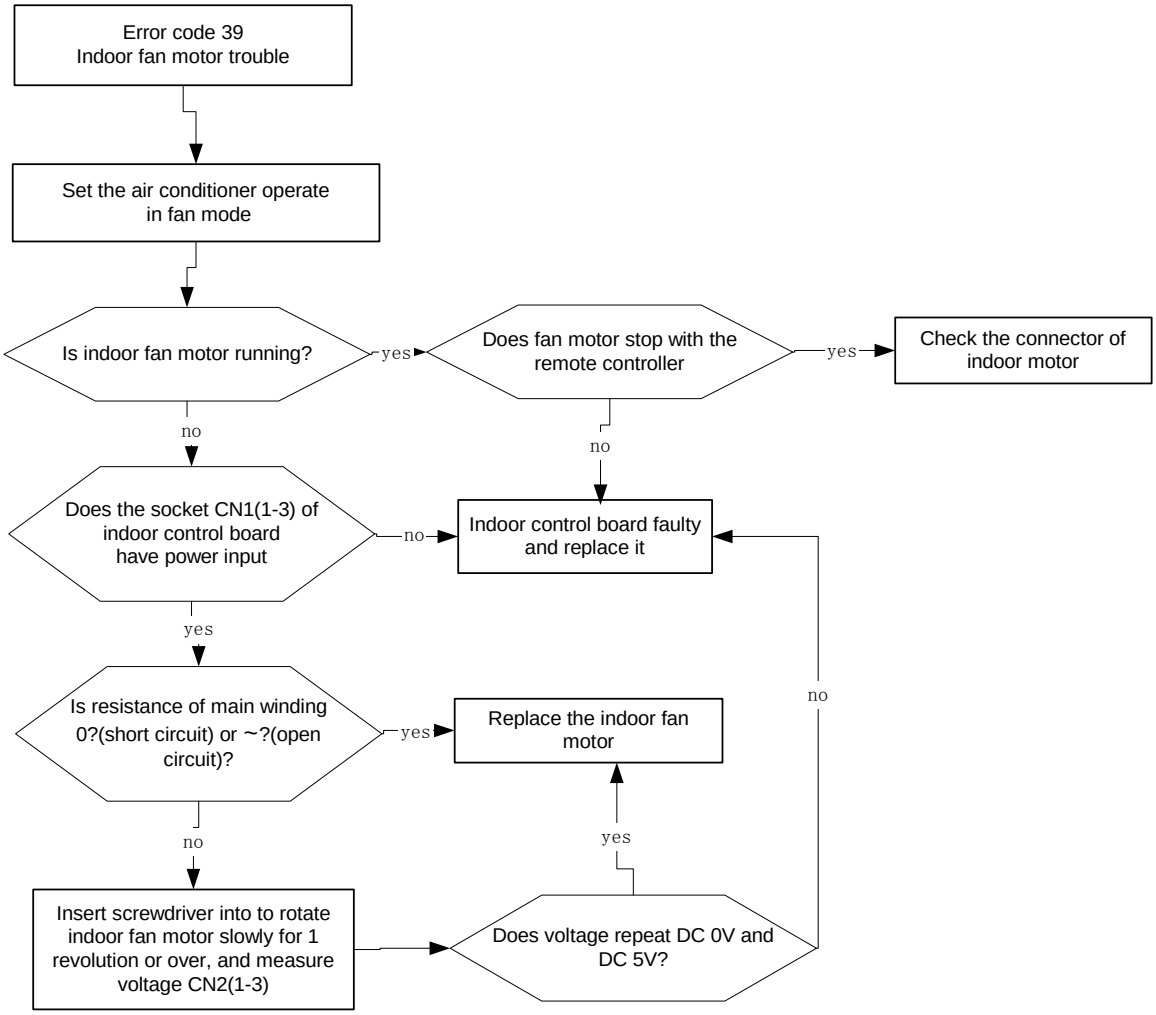
7-2. Service flow chart



6. TROUBLE SHOOTING



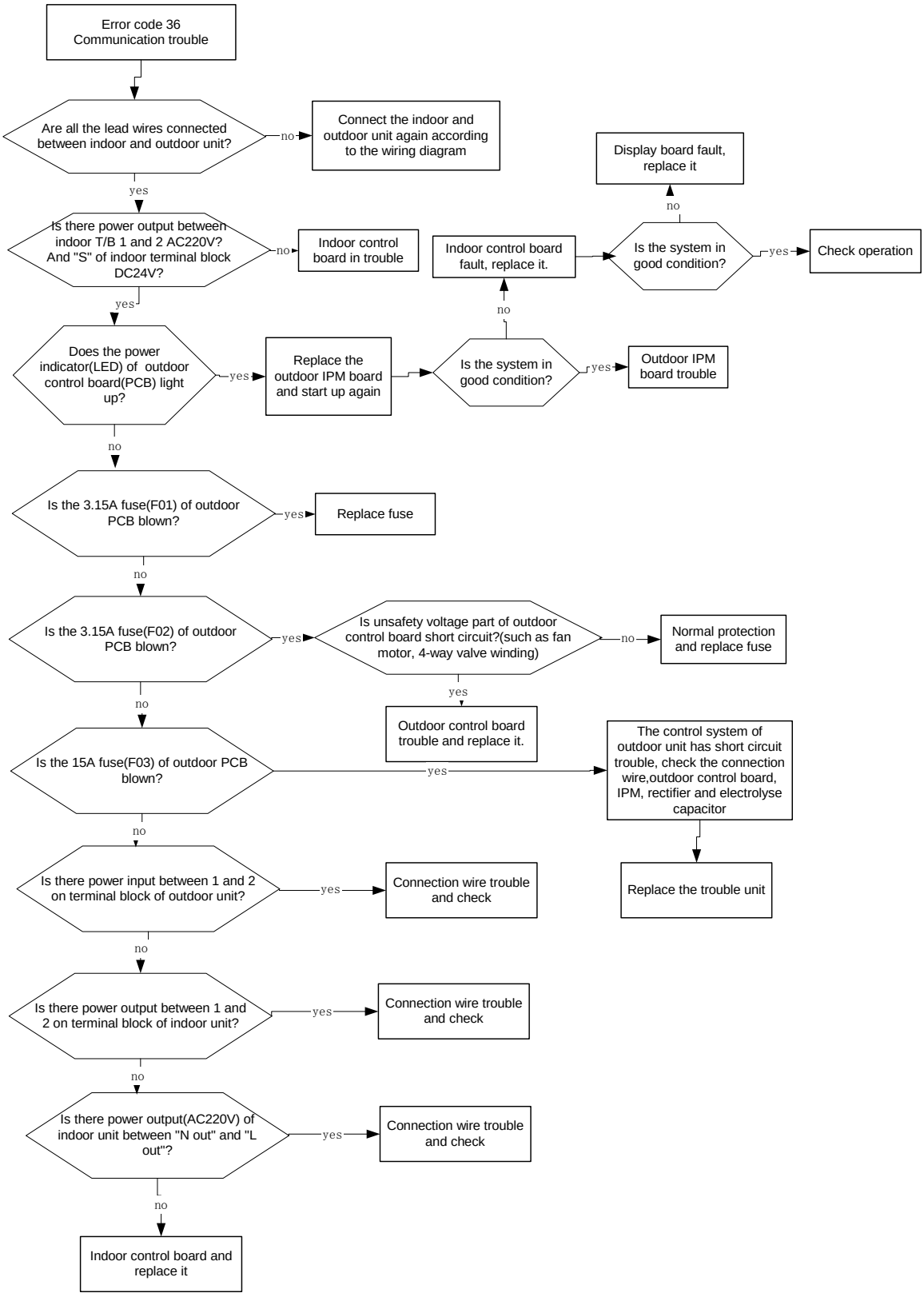
7. TROUBLE SHOOTING



Error code 01

Indoor sensor trouble

7. TROUBLE SHOOTING



7. CHECKING COMPONENTS

7-1. Check refrigerant system

TEST SYSTEM FLOW

Conditions: ① Compressor is running.

② The air condition should be installed in good ventilation.

Tool: Pressure Gauge

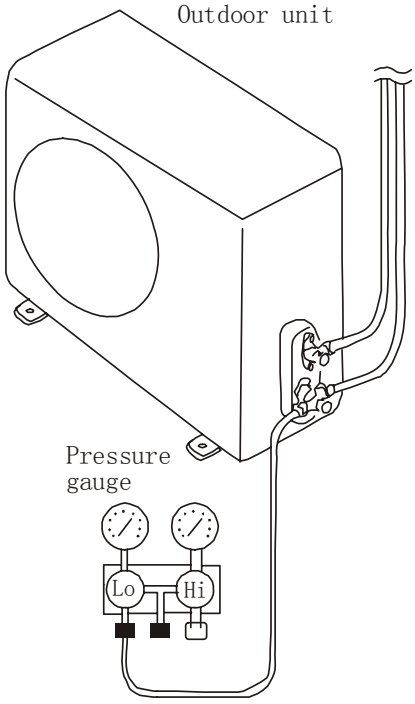
Technique: ① see ② feel ③ test

SEE---Tube defrost.

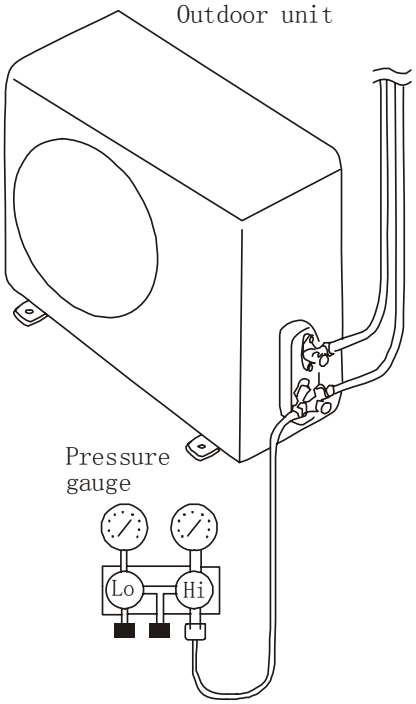
FEEL---The difference tube temperature.

TEST--- Test pressure.

cooling run

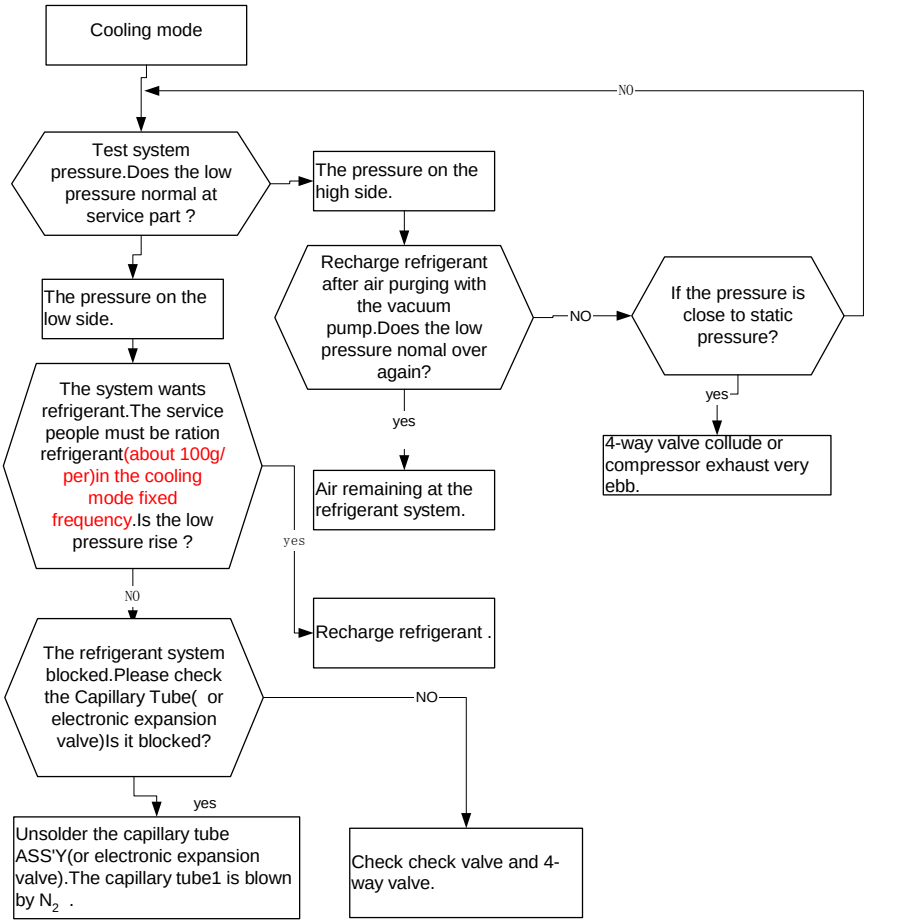


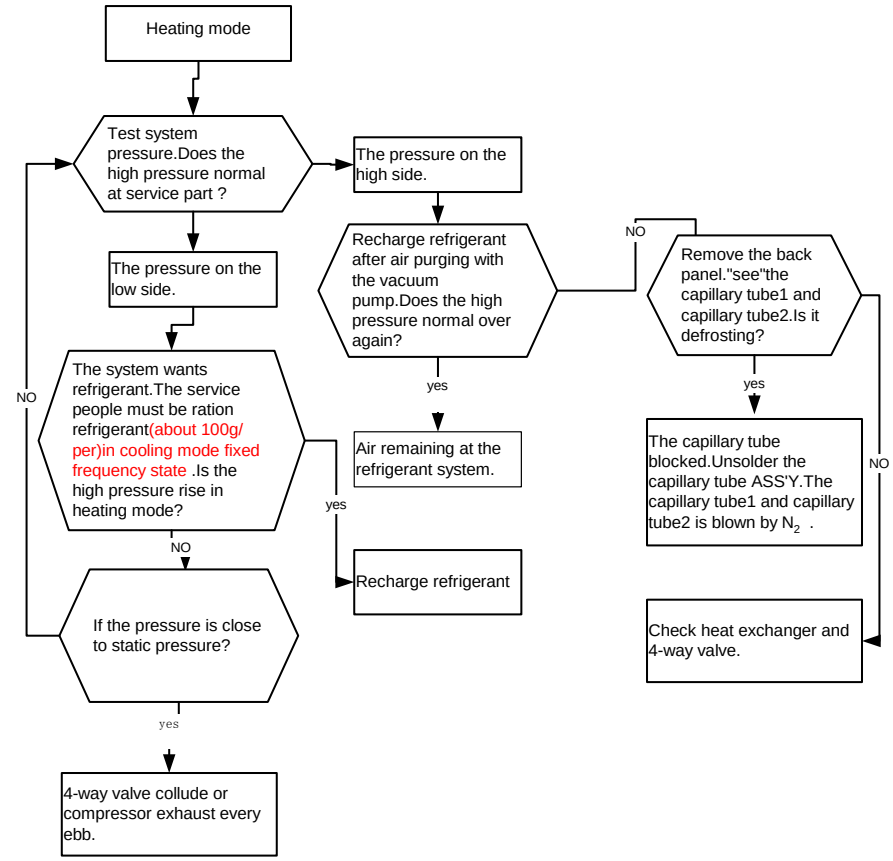
heating run



Test system flow

7. CHECKING COMPONENTS





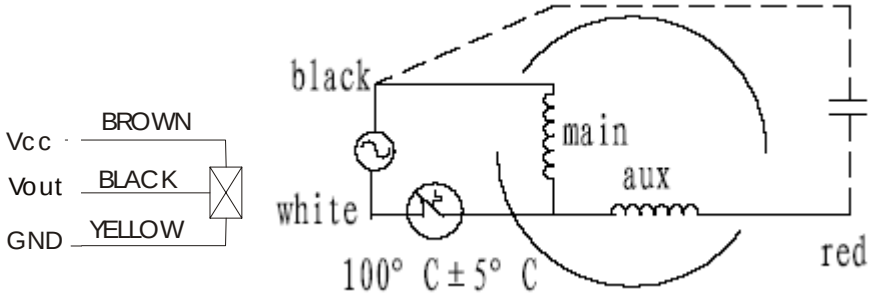
7. CHECKING COMPONENTS

7-2.Check parts unit

1. INDOOR FAN MOTOR

.MOTOR EXAMINE AND REPAIR

Circuit diagram



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.

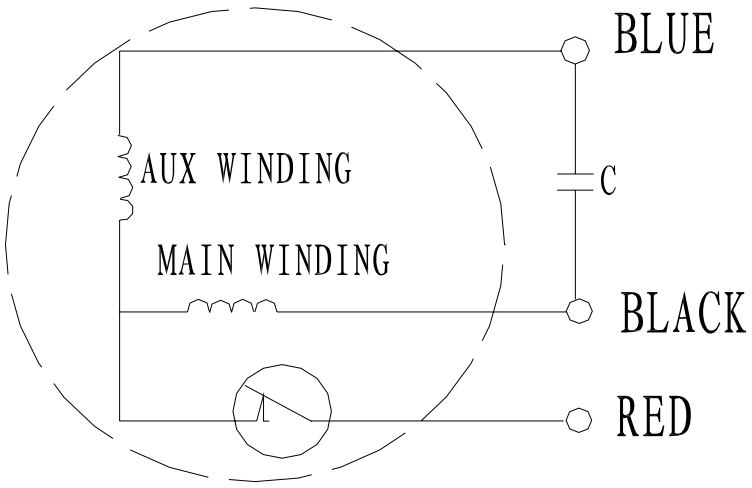
Insert screwdriver into to rotate indoor fan motor slowly for 1 revolution or over,and measure voltage “BLACK” and “GND” on motor. The voltage repeat 0V DC and 5V DC.

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

MOTOR EXAMINE AND REPAIR



7. CHECKING COMPONENTS

Test in resistance.

TOOL: Multimeter.

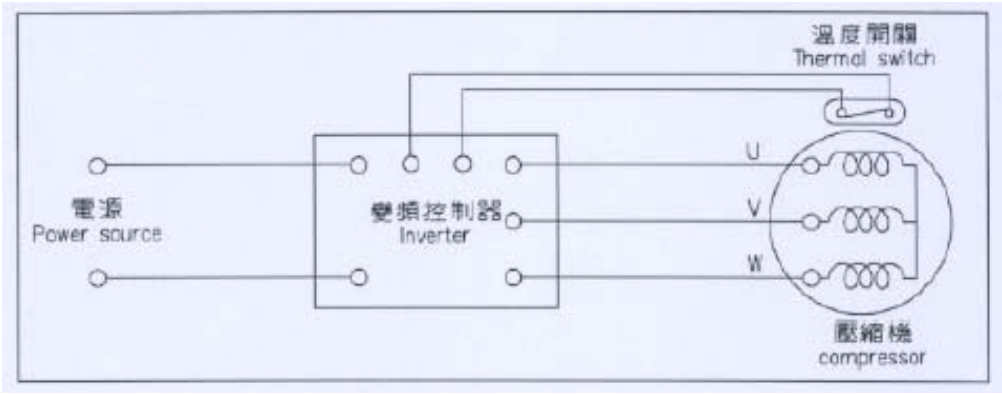
Test the resistance of the main winding. The outdoor fan motor is fault if the resistance of main winding 0(short circuit)or∞（open circuit）.

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 .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.



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 trouble: 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.

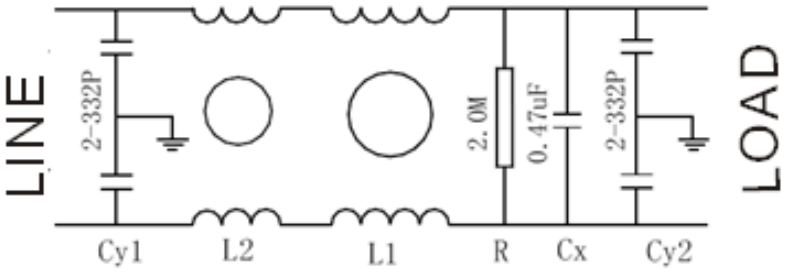
4) Warning! In case AC voltage is impressed to compressor, the compressor performance will be lowered because of its rotor magnetic force decreasing.

4. INDUCTANCE

Familiar error: 1) Sound abnormality 2) Insulation resistance disqualification.

5. FILTER

7. CHECKING COMPONENTS

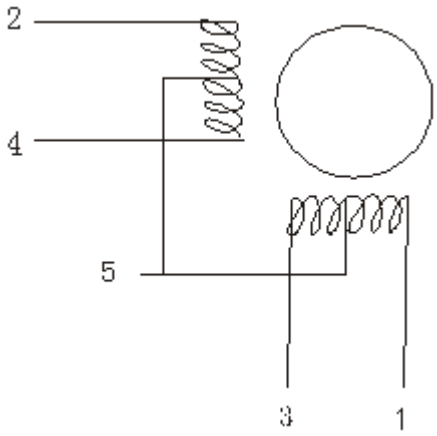


Test in resistance.

TOOL: Multimeter.

Test the resistance of “LOAD” port. The filter is fault if the resistance of winding 0(short circuit)or∞（open circuit）

6. STEPPER MOTOR



Test in resistance.

TOOL: Multimeter.

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

7-2-3. Check others

1. 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)

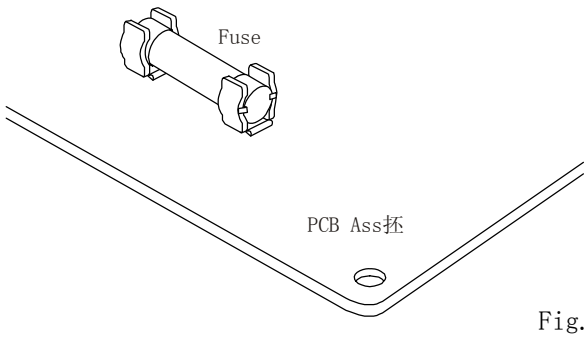


Fig.1

2) Check for continuity using a multimeter as shown in Fig.2.

7. CHECKING COMPONENTS

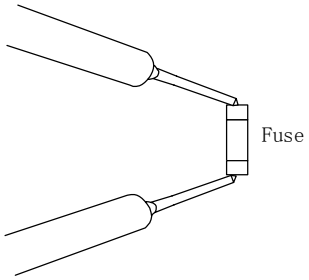


Fig. 2

2. CAPACITOR

Remove the lead wires from the capacitor terminals, and then place a probe on the capacitor terminals as shown in Fig.3.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.

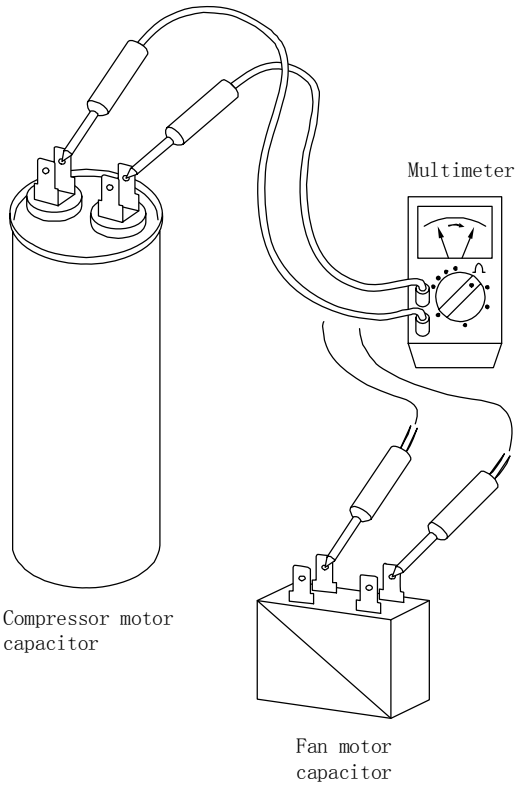


Fig. 3