

DICORE

CÓDIGOS AVERÍA EQUIPOS CLIMATIZACIÓN DICORE SPLIT PARED 1+1 R32

ASDGR18R3(1LE)

ASDGR24R3(1LE)

www.dicore.es

9. Maintenance

9.1 Malfunction Display of Indoor Unit

1. Malfunction display requirement

When there are several malfunctions, they will be displayed circularly.

2. Malfunction display method

- (1) Hardware malfunction: immediate display; refer to “malfunction display table”;
- (2) Operation state: immediate display; refer to “malfunction display table”;
- (3) Other malfunctions: it is displayed after the compressor stops for 200s; refer to “malfunction display table”.

Note: when the compressor is restarted, the malfunction display delay time (200s) is cleared.

- (4) When the unit is under limit frequency or frequency drop state, the display can be controlled via remote controller.

3. Display control via remote controller

Enter display control: press light button successively for 6 times within 3s to display the corresponding malfunction code;

Exit display control: pressing light button successively for 6 times within 3s or after display is shown for 5min, the display will terminate.

Display under test state

Dual 8 nixie tube display: minimum cooling (heating)-P0; middle cooling (heating)-P3

Nominal cooling (heating) –P1; maximum cooling (heating) –P2;

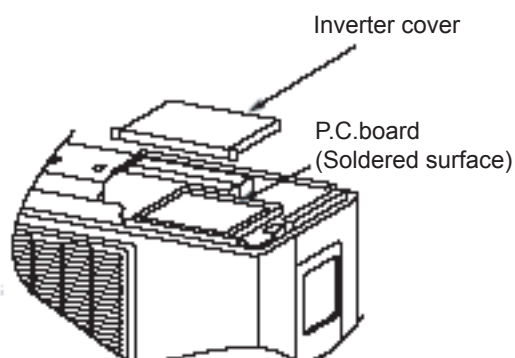
●Error Code List

Malfunction Name	Dual-8 Nixie Tube
Malfunction of jumper cap	C5
No feedback from indoor units motor	H6
Circuit malfunction of zero crossing detection	U8
Indoor ambient temperature sensor is open/short-circuited	F1
Indoor evaporator temperature sensor is open/short-circuited	F2
Module temperature sensor is open/short-circuited	P7
Outdoor ambient temperature sensor is open/short-circuited	F3
Outdoor condenser tube temperature sensor is open/short-circuited	F4
Outdoor discharge temperature sensor is open/short-circuited	F5
Communication malfunction between indoor and outdoor units	E6
Malfunction of phase current circuit detection for compressor	U1
Module temperature protection	P8
Charging malfunction of capacitor	PU
Overload protection of compressor	H3
Freon recovery mode	Fo
Failure start-up of compressor	LC
Discharge high-temperature protection of compressor	E4
Overload protection	E8
Overcurrent protection of the complete unit	E5
Overcurrent protection of phase current	P5
Desynchronizing of compressor	H7
Module current protection (IPM protection)	H5
Low voltage protection of DC bus bar	PL
High voltage protection of DC bus bar	PH
Limit/decrease frequency due to current protection of the complete unit	F8
Limit/decrease frequency due to module current protection (phase current)	En
Limit/decrease frequency due to discharge	F9
Limit/decrease frequency due to freeze protection	FH
Limit/decrease frequency due to overload	F6
Limit/decrease frequency due to module temperature protection	EU
Cold air prevention protection	E9
Freeze protection	E2
Gathering refrigerant	Fo
Malfunction of ODU DC fan	L3
In defect of refrigerant	F0
Malfunction of detecting plate(WIFI)	JF
PFC protection	HC

Note: Please refer to service manual for the troubleshooting procedure for outdoor unit.

- Discharging method

(1) remove the inverter cover(Outdoor Unit)



(2)As shown below,connect the discharge resistance(approx.100Ω20W)or plug of the sold ering iron to voltage between + - terminals of the electrolytic capacitor on PC Board for 30s, and then peformedischarging.

NOTE:

A large-capacity electrolytic capacitor is used in the outdoor unit controller(inverter).Therefore,if the power supply is turned off,charge(charging voltage DC280V to 380V)remains and disc harging takes a lot of time.. After turning off the power source,if touching the charging section before discharging, an electrical shock may be caused. Discharge the electrol ytic capacitor completely by using soldering iron,etc.

9.2 Procedure of Troubleshooting

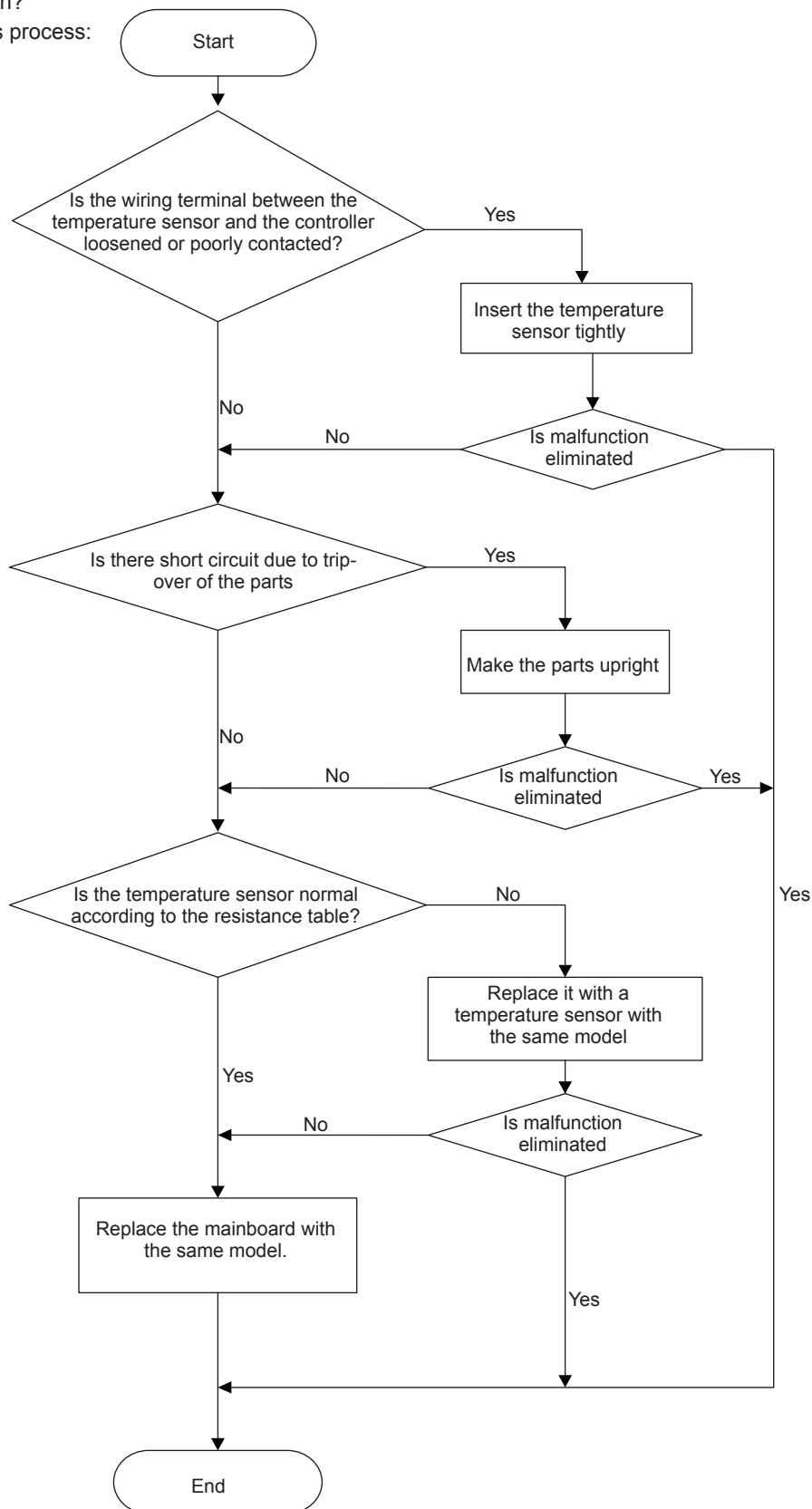
Indoor unit

(1) Malfunction of Temperature Sensor F1, F2

Main detection points:

- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is mainboard broken?

Malfunction diagnosis process:

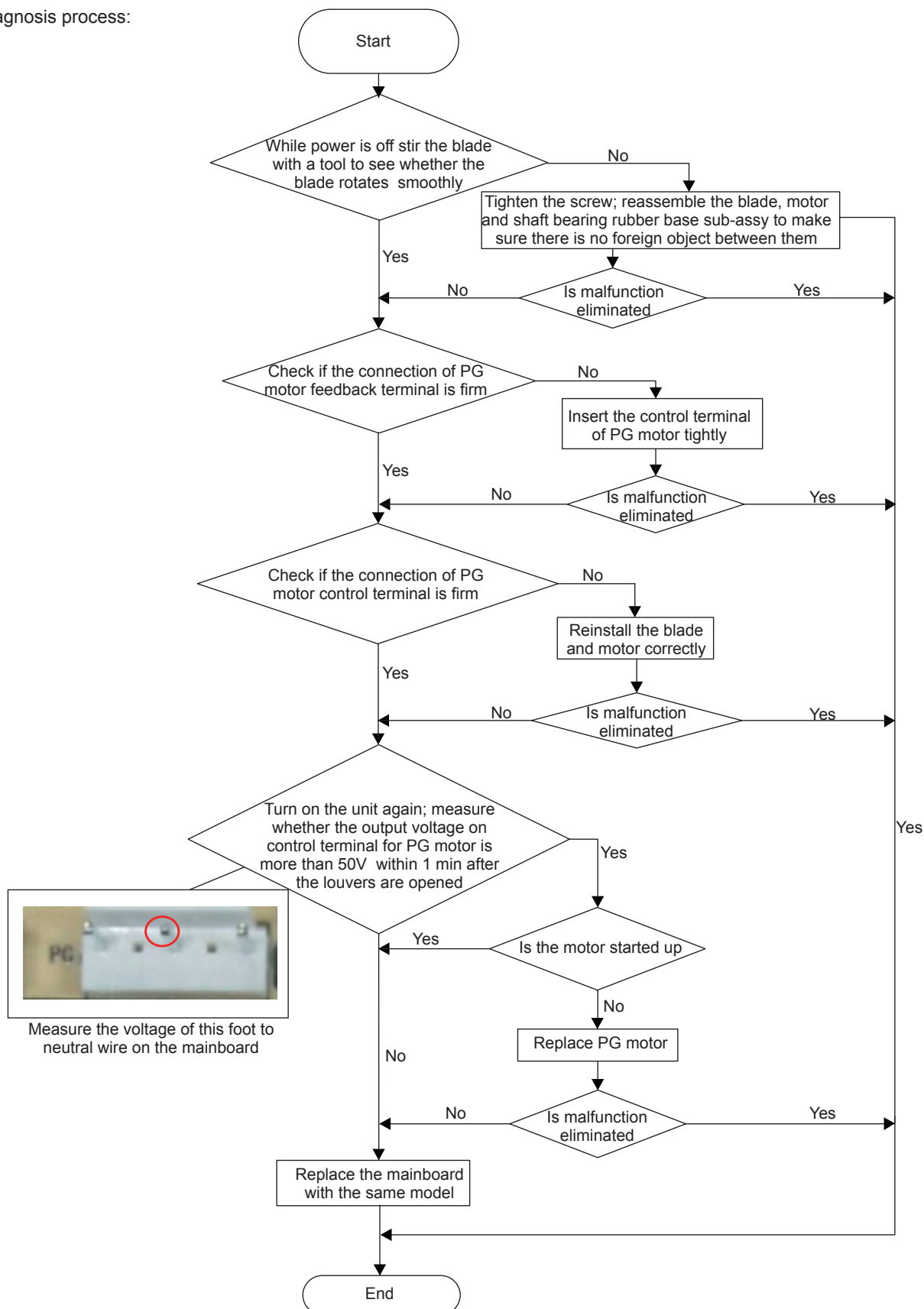


(2) Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

- Smoothly the control terminal of PG motor connected tightly?
- Smoothly the feedback interface of PG motor connected tightly?
- The fan motor cant operate?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

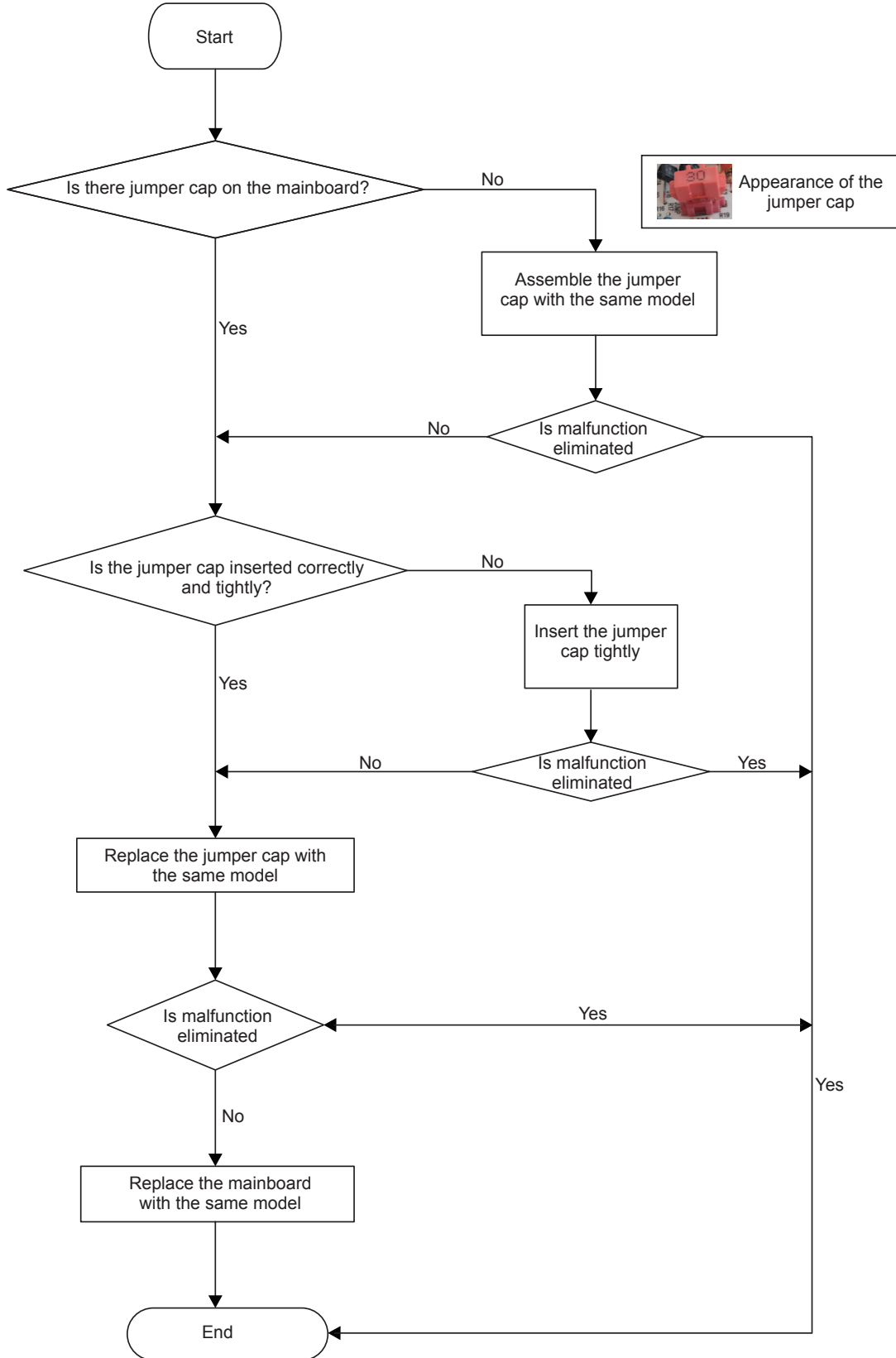


(3) Malfunction of Protection of Jumper Cap C5

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

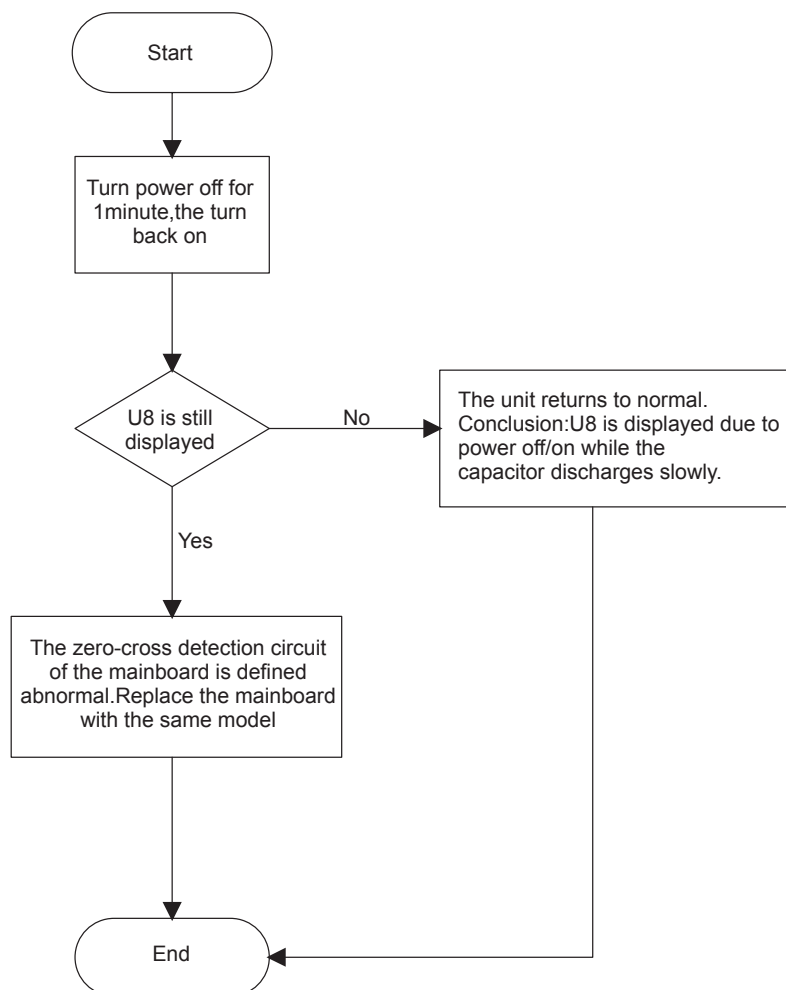


(4) Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

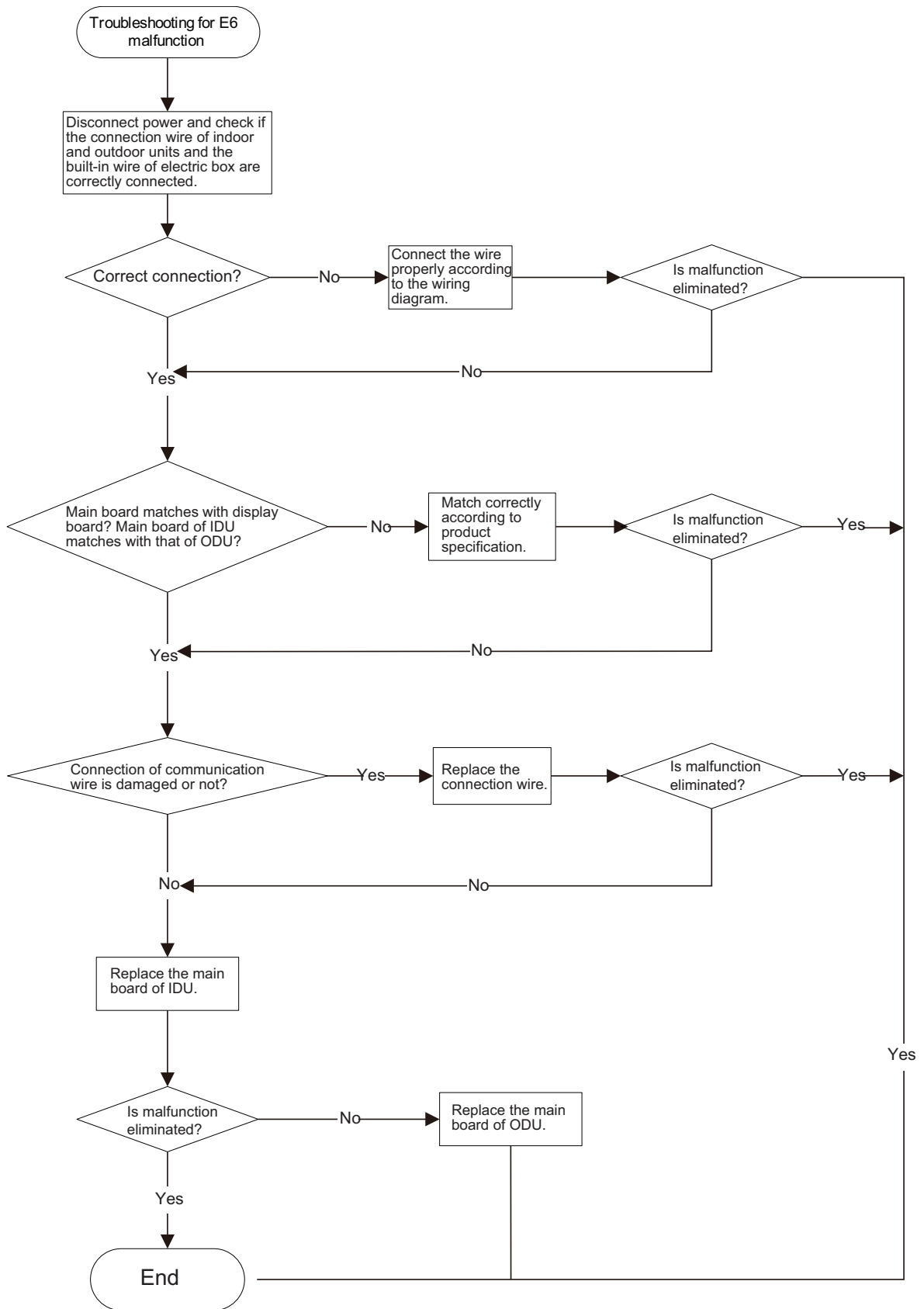
Main detection points:

- Instant energization after de-energization while the capacitor discharges slowly?
- The zero-cross detection circuit of the mainboard is defined abnormal?

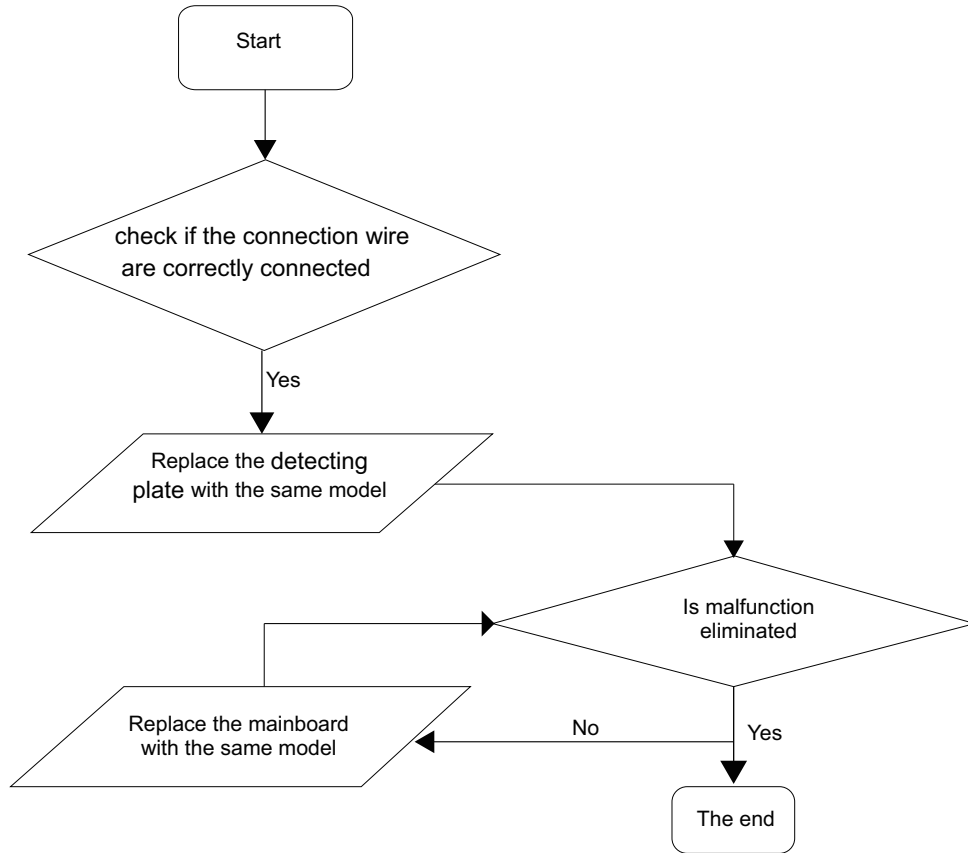
Malfunction diagnosis process:



(5) Communication malfunction (E6)



(6) Malfunction of detecting plate(WIFI) JF



Outdoor Unit

(1) Malfunction of Desynchronizing of Compressor (H7)

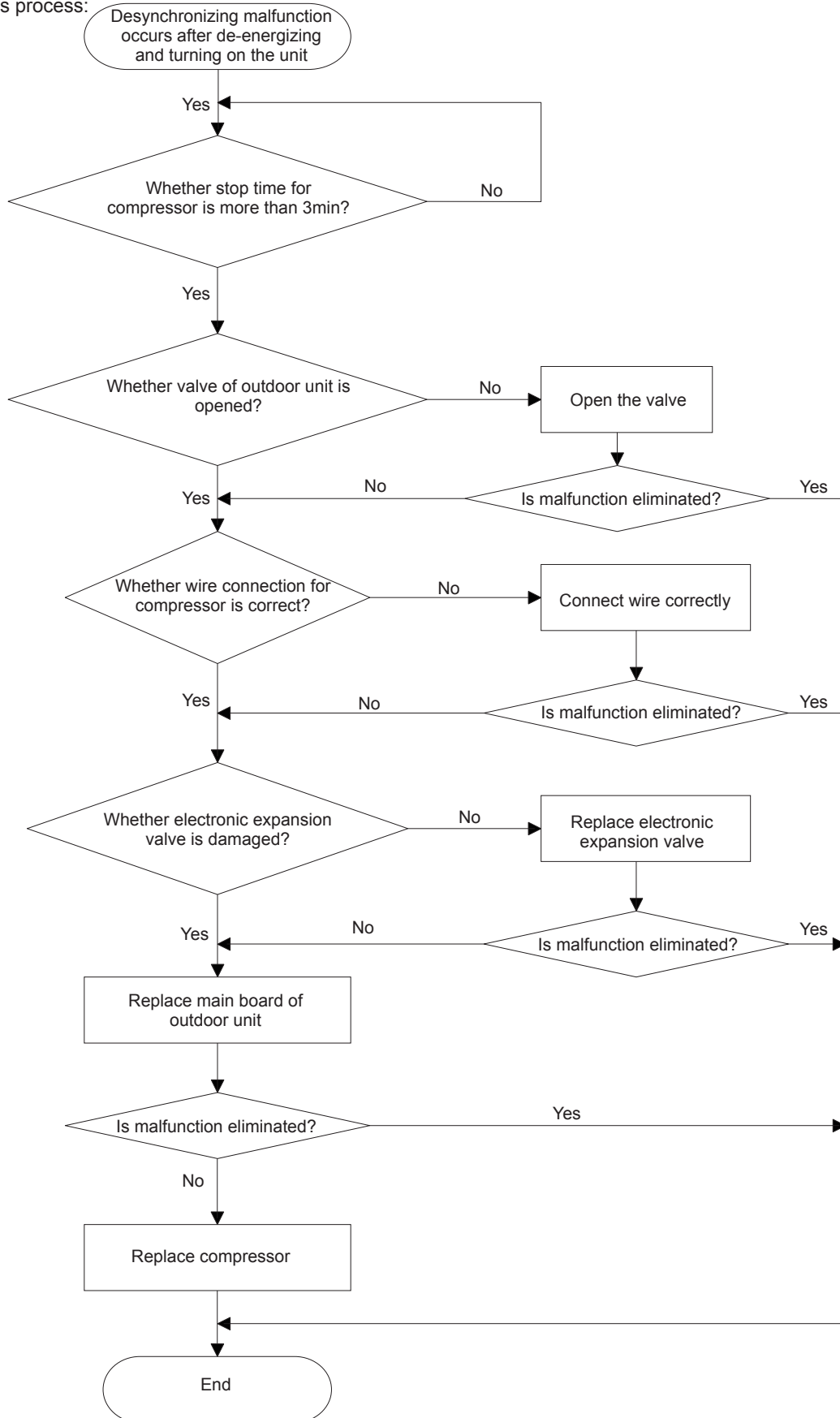
Main check point:

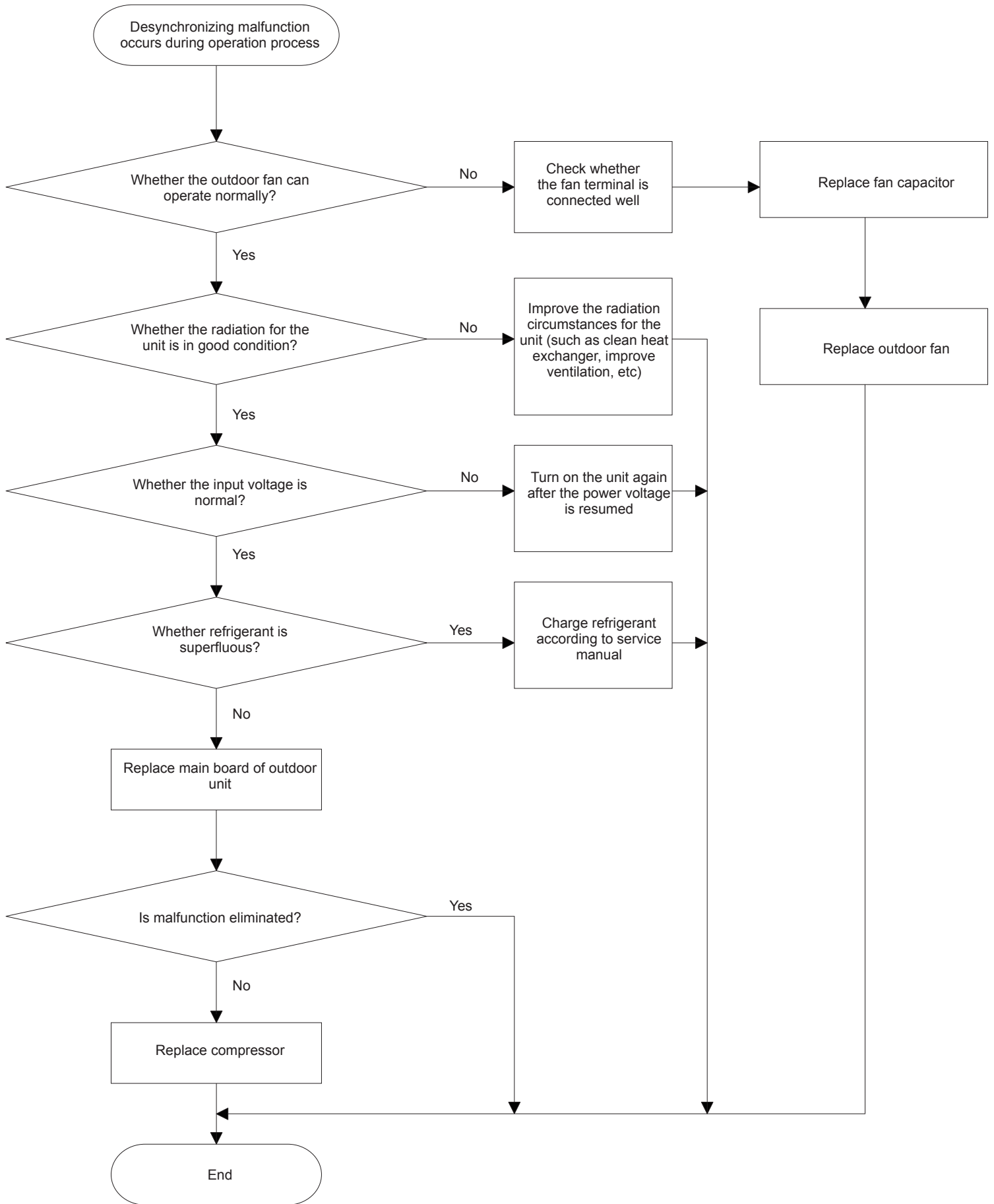
Whether the system pressure is too high?

Whether the electronic expansion valve can work normally?

Whether the radiation for the unit is in good condition?

Malfunction diagnosis process:





(2) Malfunction of Temperature Sensor (F3/F4/F5)

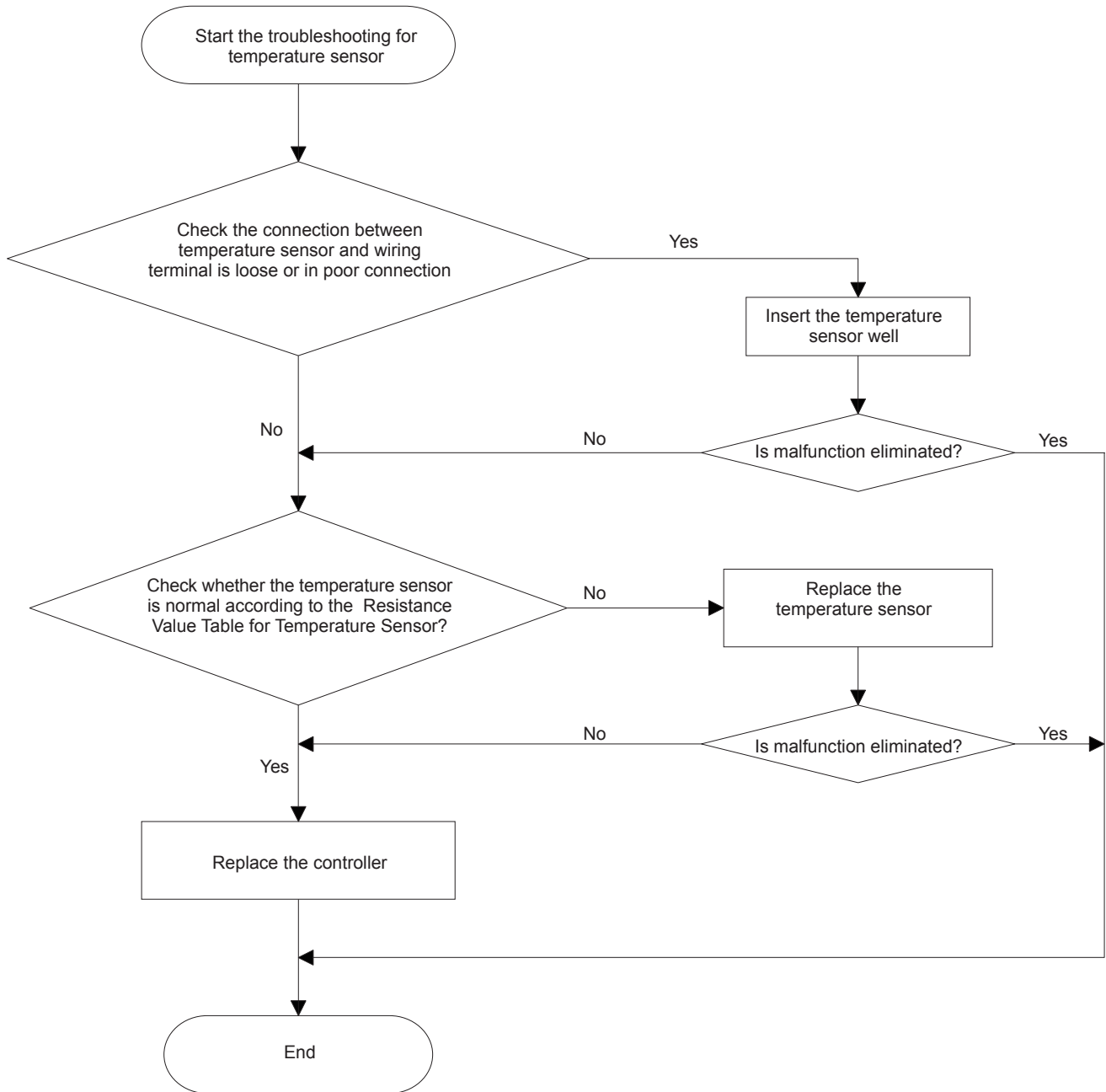
Main check point:

Whether the temperature sensor is damaged?

Whether the terminal of temperature sensor is loose or not connected?

Whether the main board is damaged?

Malfunction diagnosis process:



(3) Malfunction of Overload Protection of Compressor (H3) and Discharge High-temperature Protection of Compressor (E4)

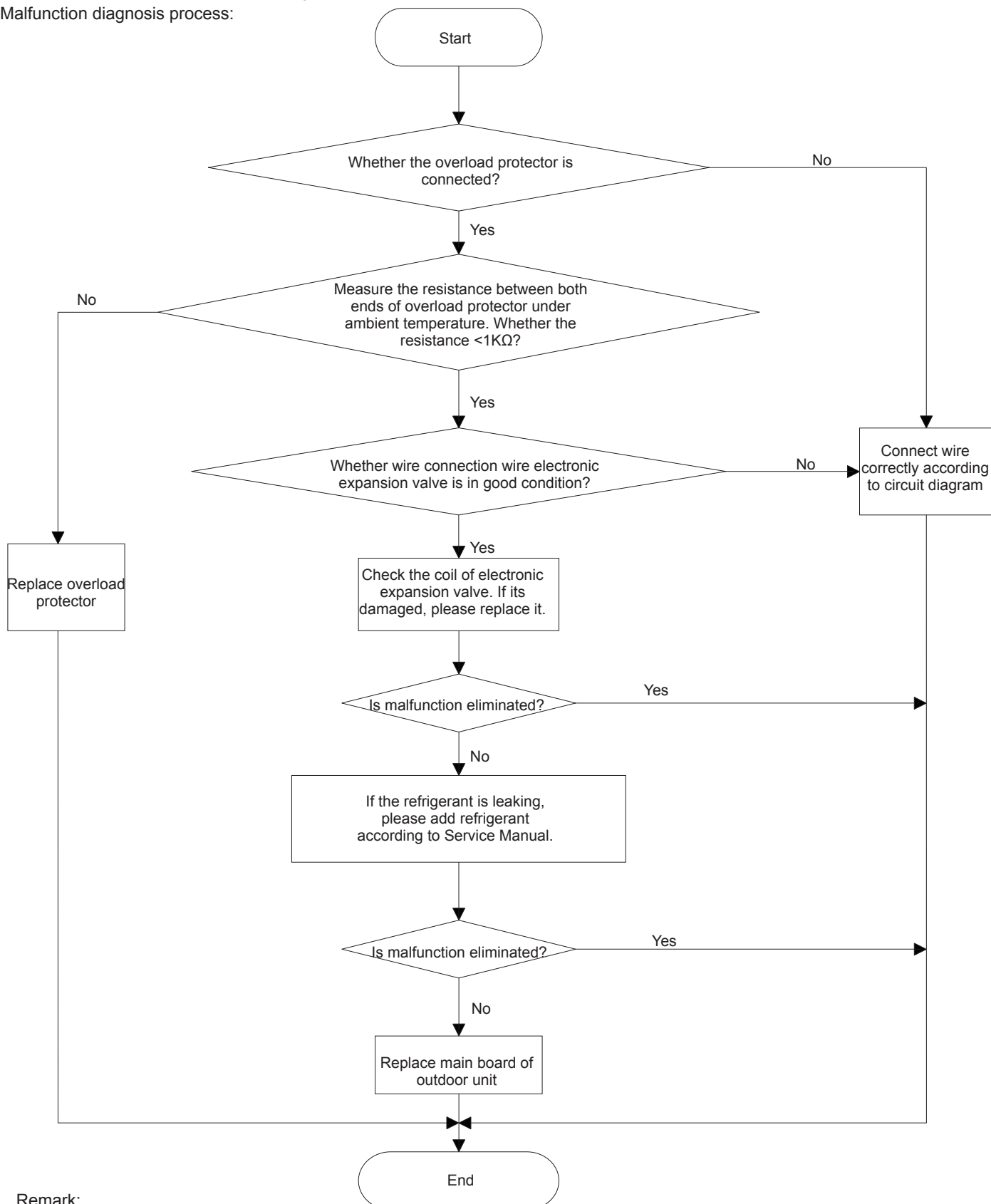
Main check point:

Whether the electronic expansion valve is connected well and whether its damaged?

Whether the refrigerant is leaking?

Whether the overload protector is damaged?

Malfunction diagnosis process:



Remark:

Detection method for electronic expansion valve: There are 5 wires for the coil of electronic expansion valve and one of them are common port (the left or the right wire) .The resistance for other terminals are all most the same (about 100Ω). You can measure those resistance values to judge whether the electronic expansion valve is damaged or not.

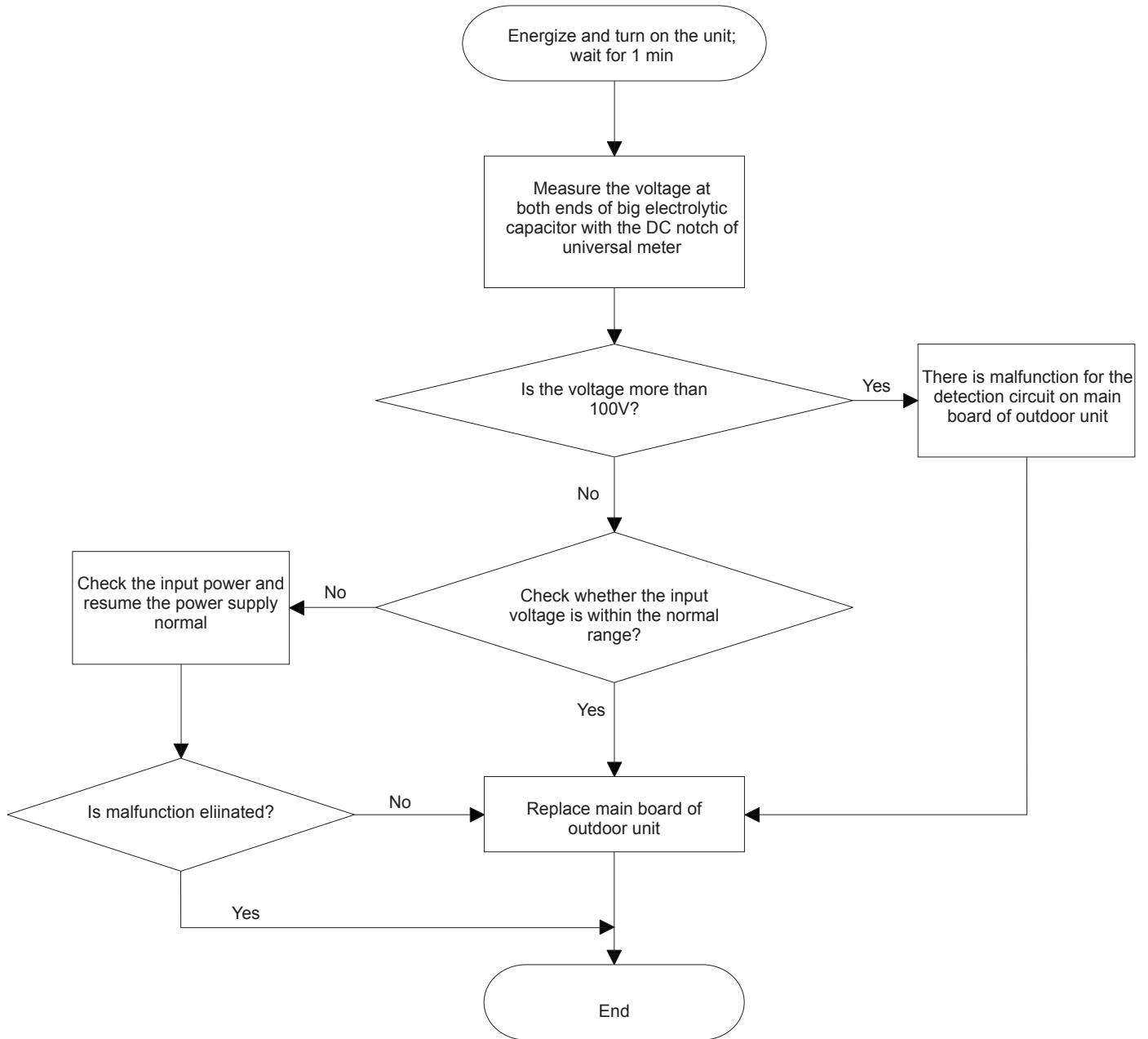
(4) Charging Malfunction of Capacitor (PU)

Main check point:

Whether input power is normal?

Main board is damaged.

Malfunction diagnosis process:



(5) Malfunction of Overload Protection (E8)

Main check point:

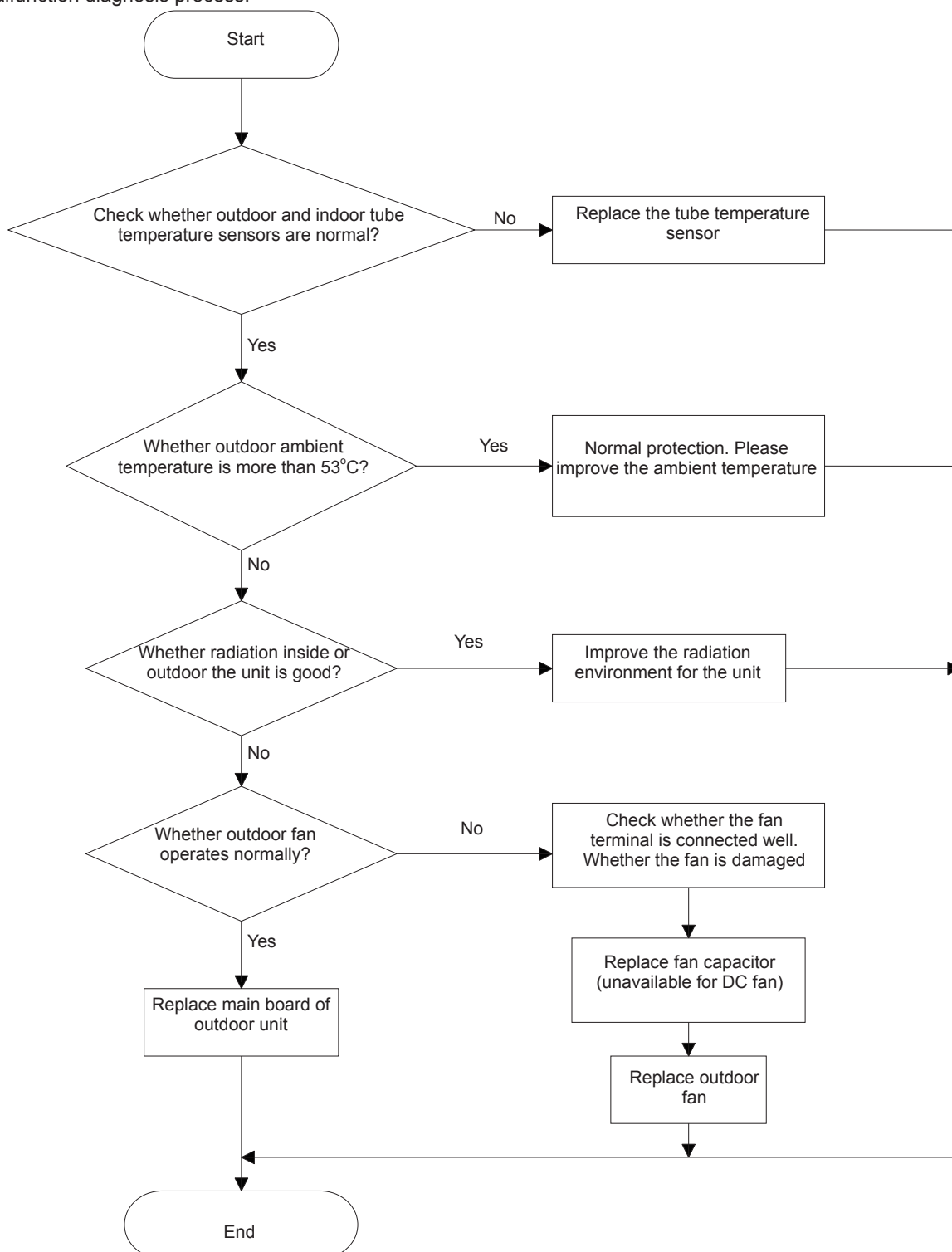
Whether the tube temperature sensor is normal?

Whether the outdoor ambient temperature is within the normal range?

Whether indoor fan and outdoor fan can operate normally?

Whether radiation environment inside or outside the unit is good?

Malfunction diagnosis process:



Remark:

When overload protection occurs under cooling mode, its because the main board detected the outdoor tube temperature sensor exceeds limited temperature and then the unit stops operation. Please check outdoor tube temperature sensor;

When overload protection occurs under heating mode, its because the main board detected the indoor tube temperature sensor exceeds limited temperature and then the unit stops operation. Please check indoor tube temperature sensor;

(6) Malfunction of IPM Protection (H5)

Main check point:

Whether input voltage is within the normal range?

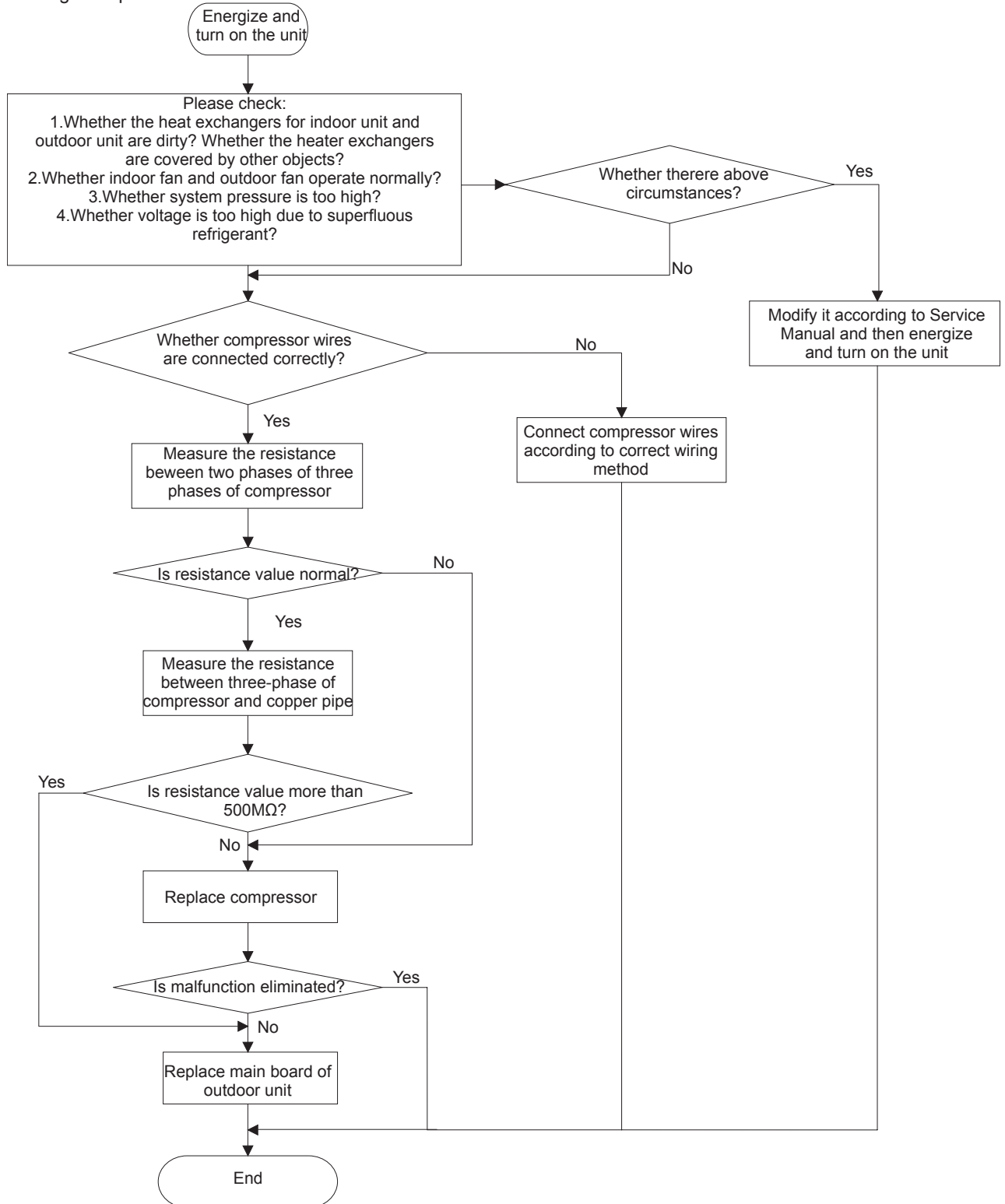
Whether wires of compressor are connected reliably, tightly or correctly?

Whether the resistance of compressor coil is normal? Whether the insulation between compressor coil and copper pipe is in good condition?

Whether the unit is overloading? Whether the radiation for the unit is in good condition?

Whether the volume of charged refrigerant is proper?

Malfunction diagnosis process:

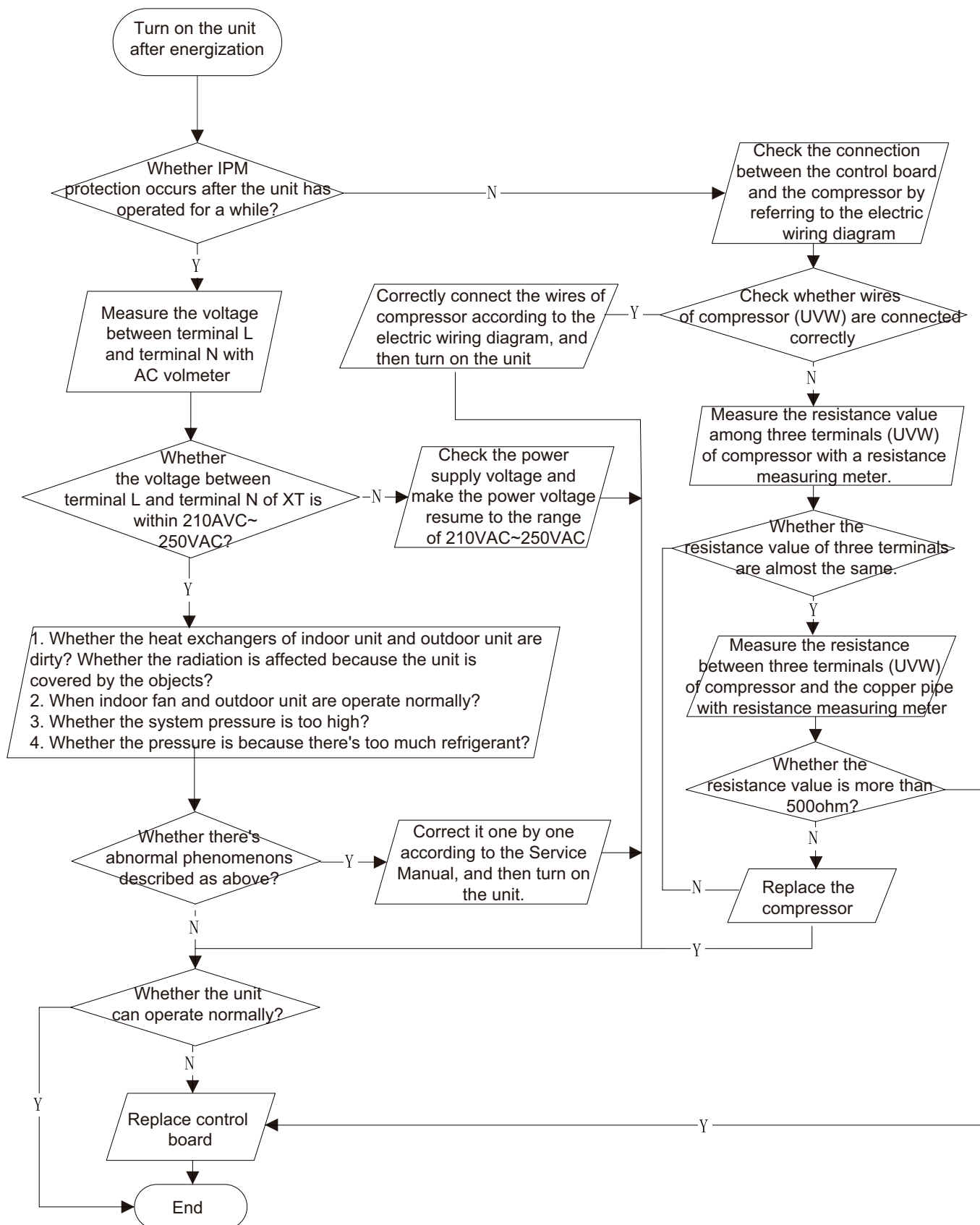


7. IPM protection, phase current overcurrent (the control board as below indicates the control board of outdoor unit) H5/P5

Mainly detect:

- (1) Compressor COMP terminal
- (2) voltage of power supply
- (3) compressor
- (4) Refrigerant-charging volume
- (5) air outlet and air inlet of outdoor/indoor unit

Troubleshooting:



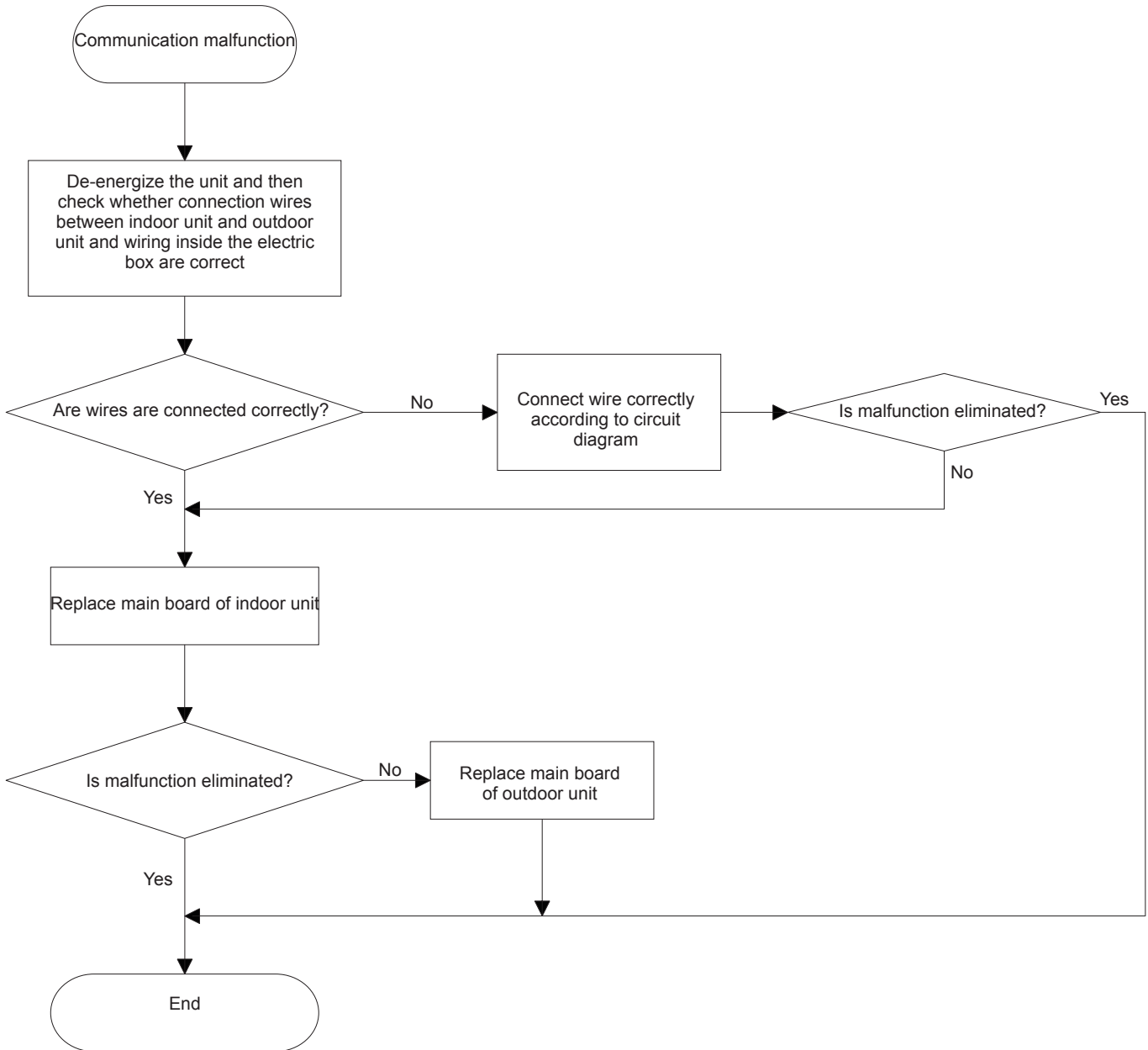
(8) Malfunction of Communication (E6)

Main check point:

Check whether connection wires between indoor unit and outdoor unit and wiring inside the unit are connected well?

Check the main board of indoor unit or main board of outdoor unit is damaged?

Malfunction diagnosis process:



(9) Malfunction of Failure Start-up of Compressor (LC)

Main check point:

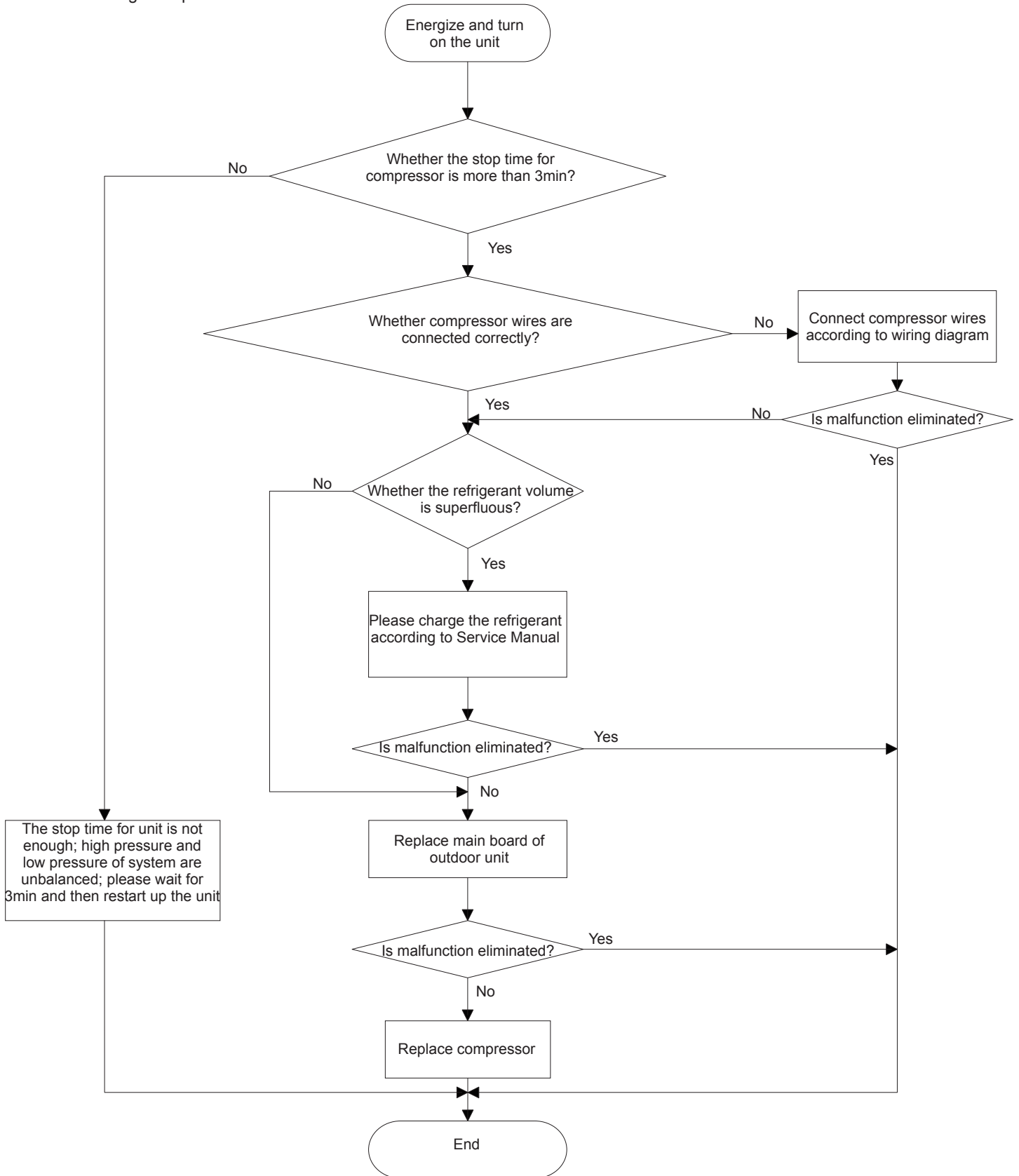
Whether the compressor wires are connected correctly?

Whether the stop time for compressor is enough?

Whether compressor is damaged?

Whether the refrigerant-charging volume is superfluous?

Malfunction diagnosis process:

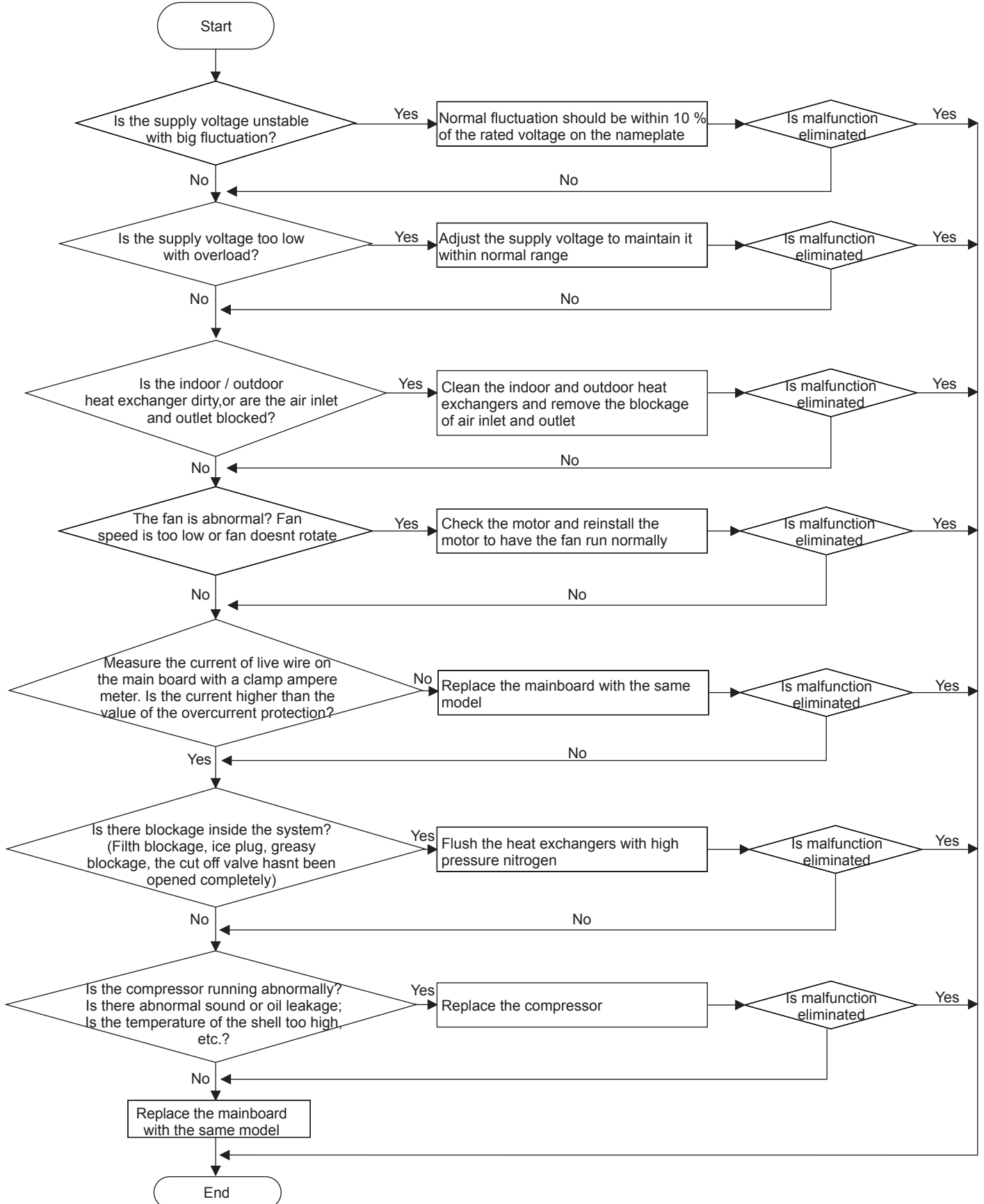


(10) Malfunction of Overcurrent Protection E5

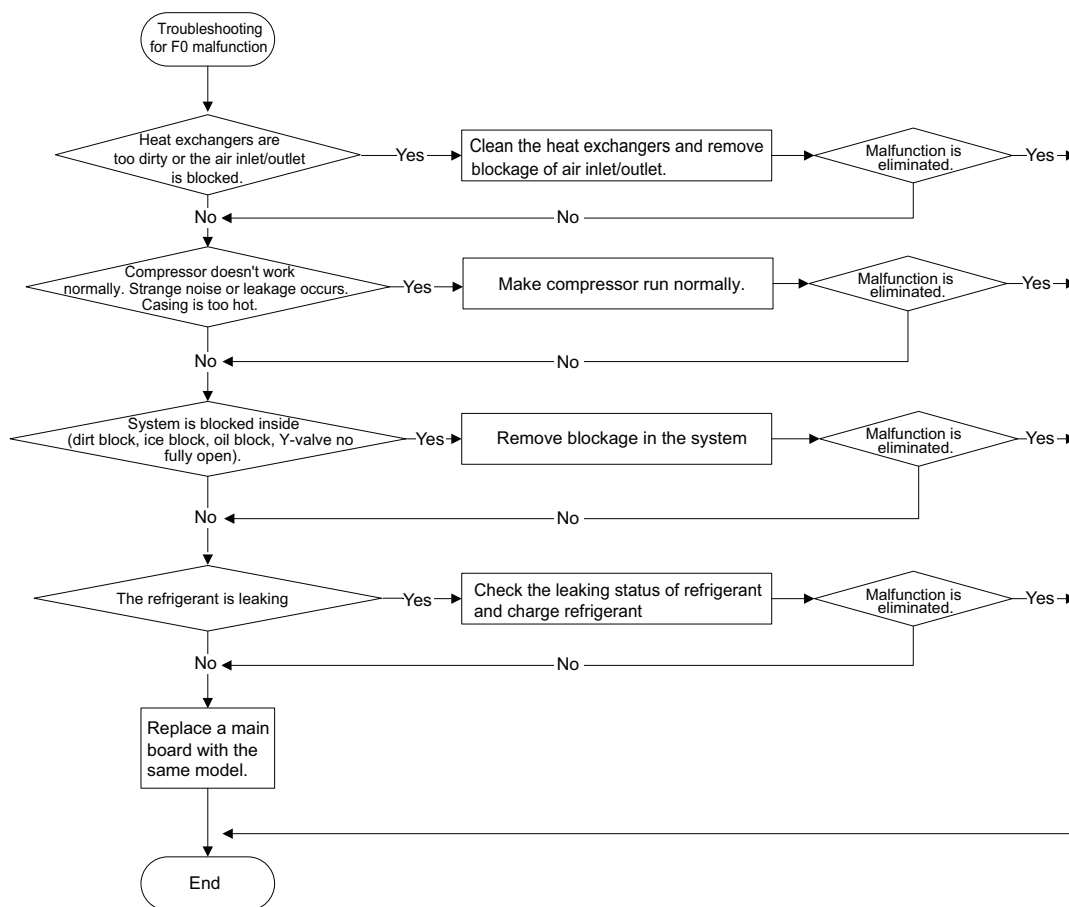
Main detection points:

- Is the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?

Malfunction diagnosis process:



(11) Malfunction of Insufficient fluorine protection F0



(12) Other Malfunction

1.IP module temperature sensor is open-circuited (P7)

Hardware of main board is damaged. Please replace main board.

2.Overheating protection of IPM module (P8)

- ① Poor radiation because the module radiator is dirty;
- ② IPM module is damaged;
- ③ Malfunction of outdoor fan, etc;

3.Detection circuit malfunctions of phase-current of compressor (U1)

Hardware of main board is damaged. Please replace main board.

4.DC busbar voltage is too high (PH)

- ① Input voltage is too high or unstable;
- ② Hardware of main board is damaged;

5.DC busbar voltage is too low (PL)

- ① Input voltage is too low or unstable;
- ② Hardware of main board is damaged;

6.Malfunction of ODU DC fan (L3)

- ① The wire terminal of outdoor fan motor is loosed, fix the terminal.
- ② Motor damaged, replace the motor.
- ③ Fan motor module on mainboard is damaged, replace the main board AP1

9.3 Troubleshooting for Normal Malfunction

1. Air Conditioner Cant be Started Up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isnt bright and the buzzer cant give out sound	Confirm whether its due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well.
Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals	Under normal power supply circumstances, operation indicator isnt bright after energization	Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly
Electric leakage for air conditioner	After energization, room circuit breaker trips off at once	Make sure the air conditioner is grounded reliably Make sure wires of air conditioner is connected correctly Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord.
Model selection for air switch is improper	After energization, air switch trips off	Select proper air switch
Malfunction of remote controller	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller Repair or replace remote controller

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see its blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation position is proper according to installation requirement for air conditioner	Adjust the installation position, and install the rainproof and sunproof for outdoor unit
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	Blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit pressure is much lower than regulated range. If refrigerant isnt leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	The pressure of valves is much lower than that stated in the specification	Open the valve completely
Malfunction of horizontal louver	Horizontal louver cant swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor cant operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor cant operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor cant operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Cant Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor cant operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver cant operate	Replace the main board with the same model

4. ODU Fan Motor Cant Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of the ODU fan motor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the capacity of fan
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Motor of outdoor unit is damaged	When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat.	Change compressor oil and refrigerant. If no better, replace the compressor with a new one

5. Compressor Cant Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and its 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor cant operate	Repair or replace compressor

6. Air Conditioner is Leaking

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked	Water leaking from indoor unit	Eliminate the foreign objects inside the drain pipe
Drain pipe is broken	Water leaking from drain pipe	Replace drain pipe
Wrapping is not tight	Water leaking from the pipe connection place of indoor unit	Wrap it again and bundle it tightly

7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and theres abnormal sound	Theres the sound of "PAPA"	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, theres abnormal sound due to flow of refrigerant inside air conditioner	Water-running sound can be heard	Normal phenomenon. Abnormal sound will disappear after a few minutes.
Foreign objects inside the indoor unit or therere parts touching together inside the indoor unit	Theres abnormal sound fro indoor unit	Remove foreign objects. Adjust all parts position of indoor unit, tighten screws and stick damping plaster between connected parts
Foreign objects inside the outdoor unit or therere parts touching together inside the outdoor unit	Theres abnormal sound fro outdoor unit	Remove foreign objects. Adjust all parts position of outdoor unit, tighten screws and stick damping plaster between connected parts
Short circuit inside the magnetic coil	During heating, the way valve has abnormal electromagnetic sound	Replace magnetic coil
Abnormal shake of compressor	Outdoor unit gives out abnormal sound	Adjust the support foot mat of compressor, tighten the bolts
Abnormal sound inside the compressor	Abnormal sound inside the compressor	If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances.