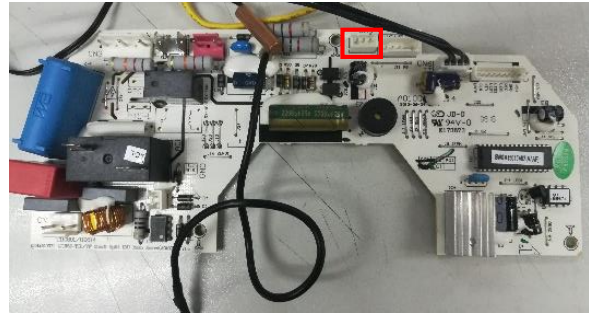
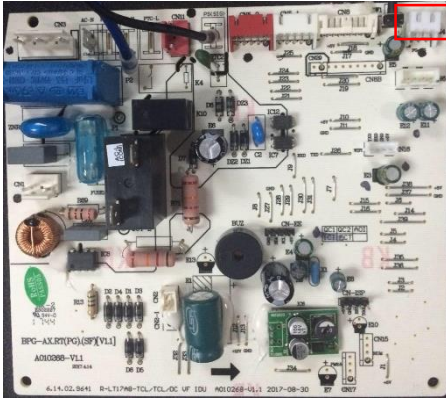


10.5 Examples of repairing

10.5.1 Display E1 or E2

Reasons:

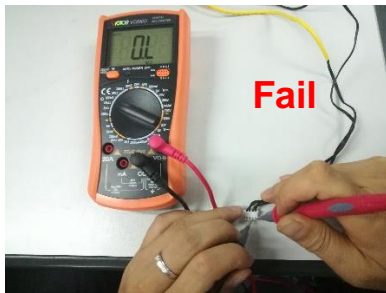
- 1) The sensor connection terminal loose or not plugged in.



Solution: Check the connector of sensor and slot (CN6), if loose or not plugged in, please connect again.

- 2) Room temperature sensor (IRT) and Indoor pipe (coil) temperature sensor (IPT) damage (short or broken).

Solution: check the resistance of the sensor $R(25^{\circ}\text{C}) = 5\text{ k}\Omega$, if short or broken please replace it.



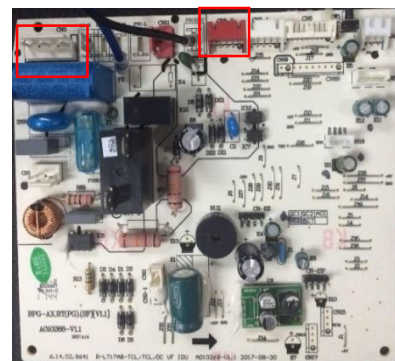
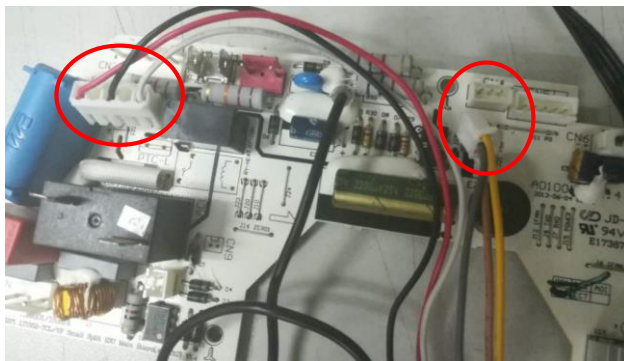
- 3) The PCB fail.

Solution: Replace the indoor main PCB.

10.5.2 Display E6

Reasons:

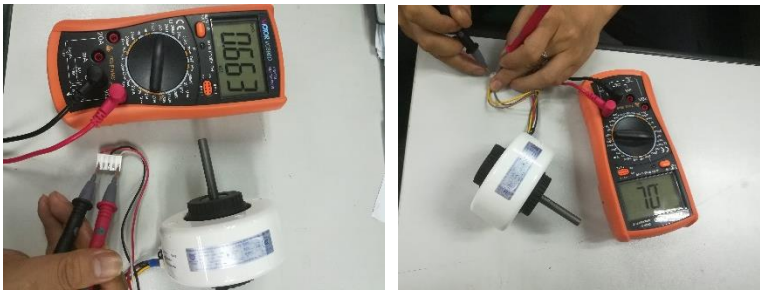
- 1) The indoor motor connection terminal loose or not plugged in.



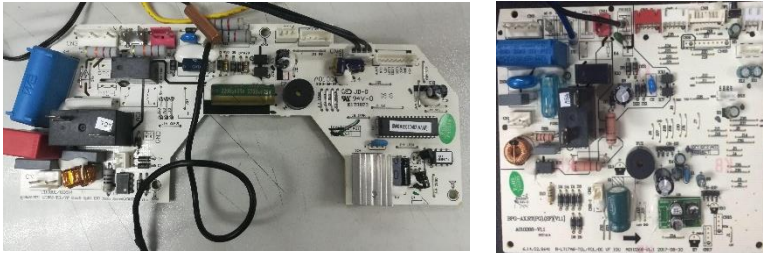
Solution: Check the connector of indoor motor and slot (CN3) and (CN4), if loose or not plugged in, please connect again.

- 2) The indoor motor damage.

Solution: Check and replace the motor.



3) The indoor main PCB damage.



Solution: Replace the indoor main PCB.

10.5.3 Display E3, E7

Reasons:

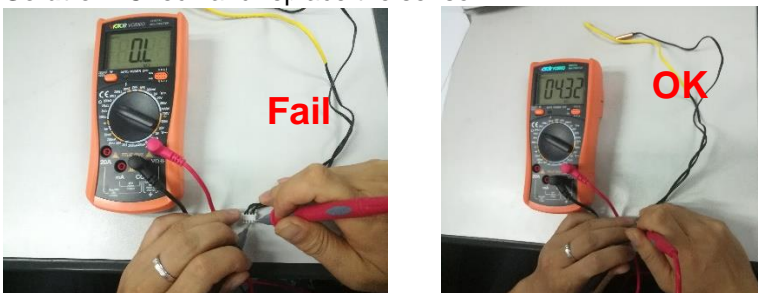
1) Outdoor pipe temp sensor, outdoor temp sensor connection terminal loose or not plugged in.



Solution: Check the connector of sensor and slot, if loose or not plugged in, please connect again.

2) Outdoor pipe temp sensor and outdoor temp sensor damage (short or broken).

Solution: Check and replace the sensor.



3) Outdoor PCB damage.

Solution: Check and replace the outdoor PCB.

10.5.4 Display E8

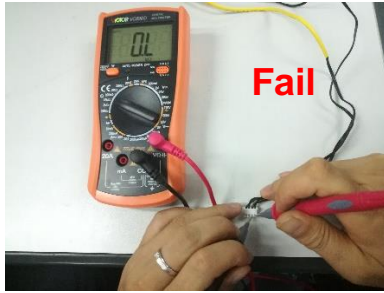
Reasons:

1) Outdoor discharge pipe temp sensor connection terminal loose or not plugged in.



Solution: Check the connector of sensor and slot, if loose or not plugged in, please connect again.

2) Outdoor pipe temp sensor damage.



Solution: Check and replace the sensor.

3) Outdoor PCB damage.

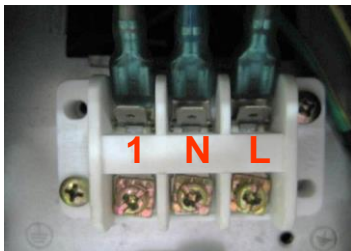
Solution: Check and replace the outdoor PCB.

10.5.5 Display E0,E5

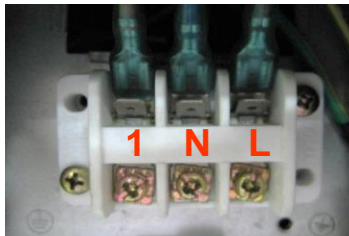
Reason: Indoor / outdoor communication damage.

Solution:

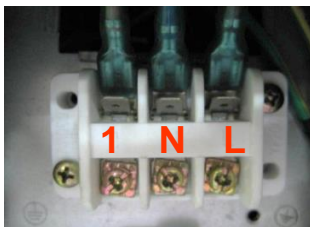
1) Check if the indoor and outdoor connections are correct. The terminal L and N which connect to indoor unit shall correspond to each other on indoor and outdoor units. Measure the voltage on outdoor terminal L and N (before display of E0 fault). If the voltage is "0", please replace indoor main PCB.



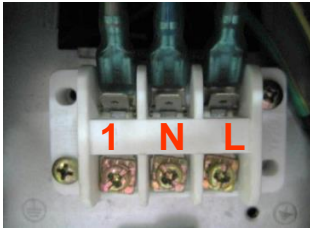
2) If the 1 & N which connect to indoor unit voltage is normal, measure the voltage between the outdoor terminal 1 and N. If the voltage change occurs between 0~24V (change pulse voltage), please replace indoor PCB.



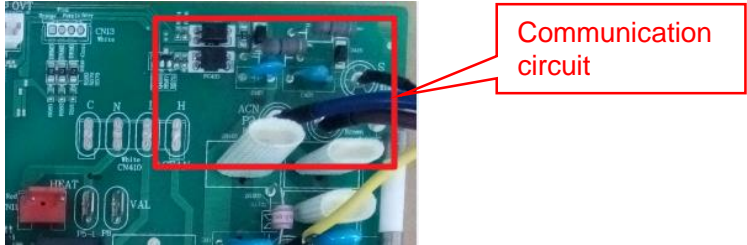
3) If the 1 & N which connect to indoor unit voltage is normal, measure the voltage between the outdoor terminal 1 and N. If the voltage change occurs between 0~12V(change pulse voltage), but there is no 24V, please replace outdoor PCB.



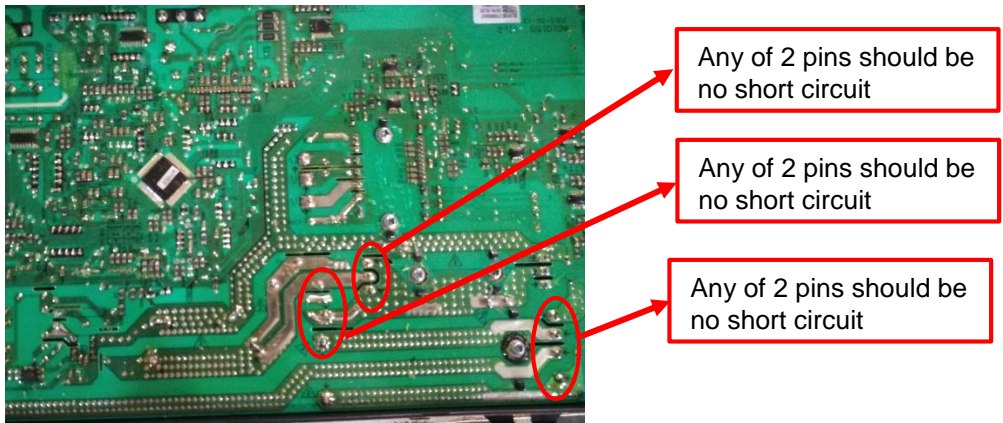
4) If the 1 & N voltage is normal, measure the voltage between the outdoor terminal 1 and N. If the voltage has no change, firstly replace the indoor main PCB. If the fault remains unsolved, replace the outdoor PCB.



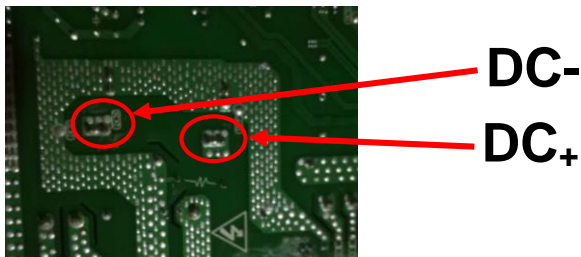
5) Communication fault if resistance or optical coupler broken, replace outdoor PCB.



6) Is there any burnt on PCB? If no, test the rectifier, FRD, IGBT etc. any component broken, replace PCB.



7) Test the DC voltage between DC+ and DC-. If the voltage is less than 50V approximately, please replace outdoor PCB.

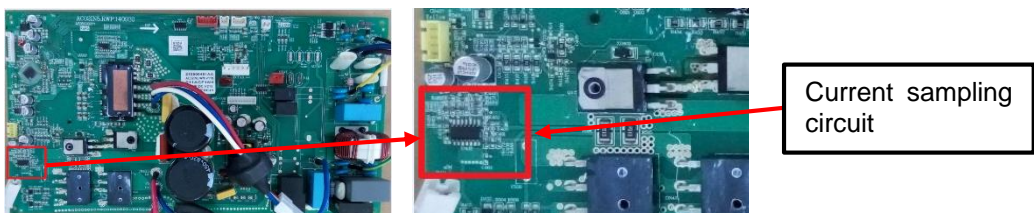


10.5.6 Display EA

Reason: Current sensor fault.

Solution:

- 1) Check for refrigerant leakage, to find the leakage point and recharge the refrigerant.
- 2) Current sampling circuit broken on the outdoor PCB and replace outdoor PCB.



10.5.7 Display E9 (first display P0 or P9)

Reason: Outdoor PCB drive circuit damage.

Solution:

Re-energize and check the protection code on display. Firstly display P0.

- 1) If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness, if no insert wrong, replace outdoor PCB.



Compressor U,V,W connection

- 2) Check if the outdoor module is tightly installed onto the radiating fins and if the silicone is applied evenly, fix the screws again if loose.



Heat radiation problem easily happened while the screw is not fixed tightly.

- 3) Check the system pressure, recharge refrigerant if the pressure is low, and discharge some refrigerant if the pressure is too high.
- 4) Check the outdoor ventilation and if there is any obstruction that affects the normal radiating of the air conditioner, and installation again.
- 5) If the above inspections are normal, but the fault remains unsolved, please replace the outdoor PCB. Re-energize and check the protection code on display. Firstly display P9.
 - a) Check the Compressor U,V, W connection, if is correctness or loose please connect again.



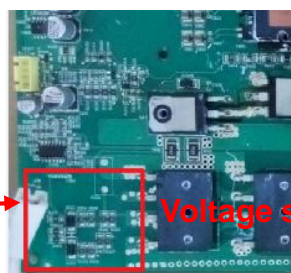
Compressor U, V, W connection

- b) If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness, if no insert wrong, replace outdoor PCB.

10.5.8 Display EU.

Reason: Voltage sensor damage.

Solution: Please replace outdoor PCB.

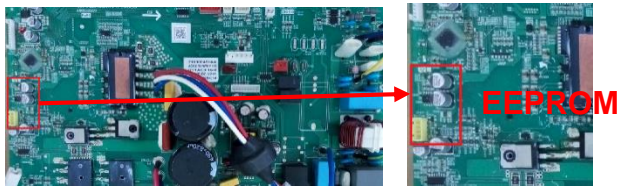


Voltage sensor

10.5.9 Display EE

Reason: EEPROM fault.

Solution: Shut down power supply and reenergize it, if the fault remains there, check the EEPROM installation, if no problem, please replace outdoor PCB.



10.5.10 Display CL

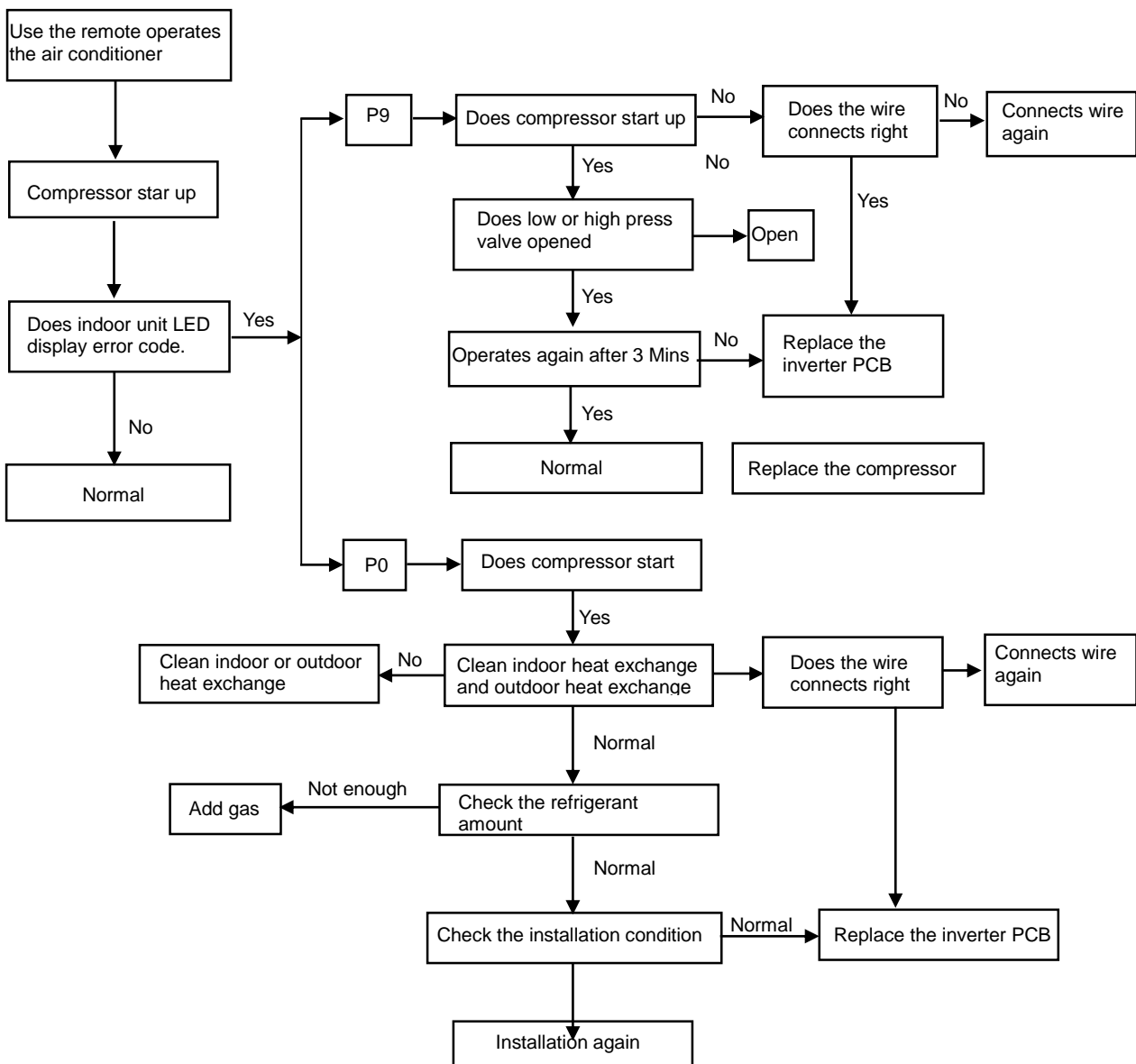
Cause: Air filter duty, the unit operation Cumulative time 500 hours, the controller will confirmation the filter dirty and display CL.

Solution: Clean the air filter then cut off the power and supply again.

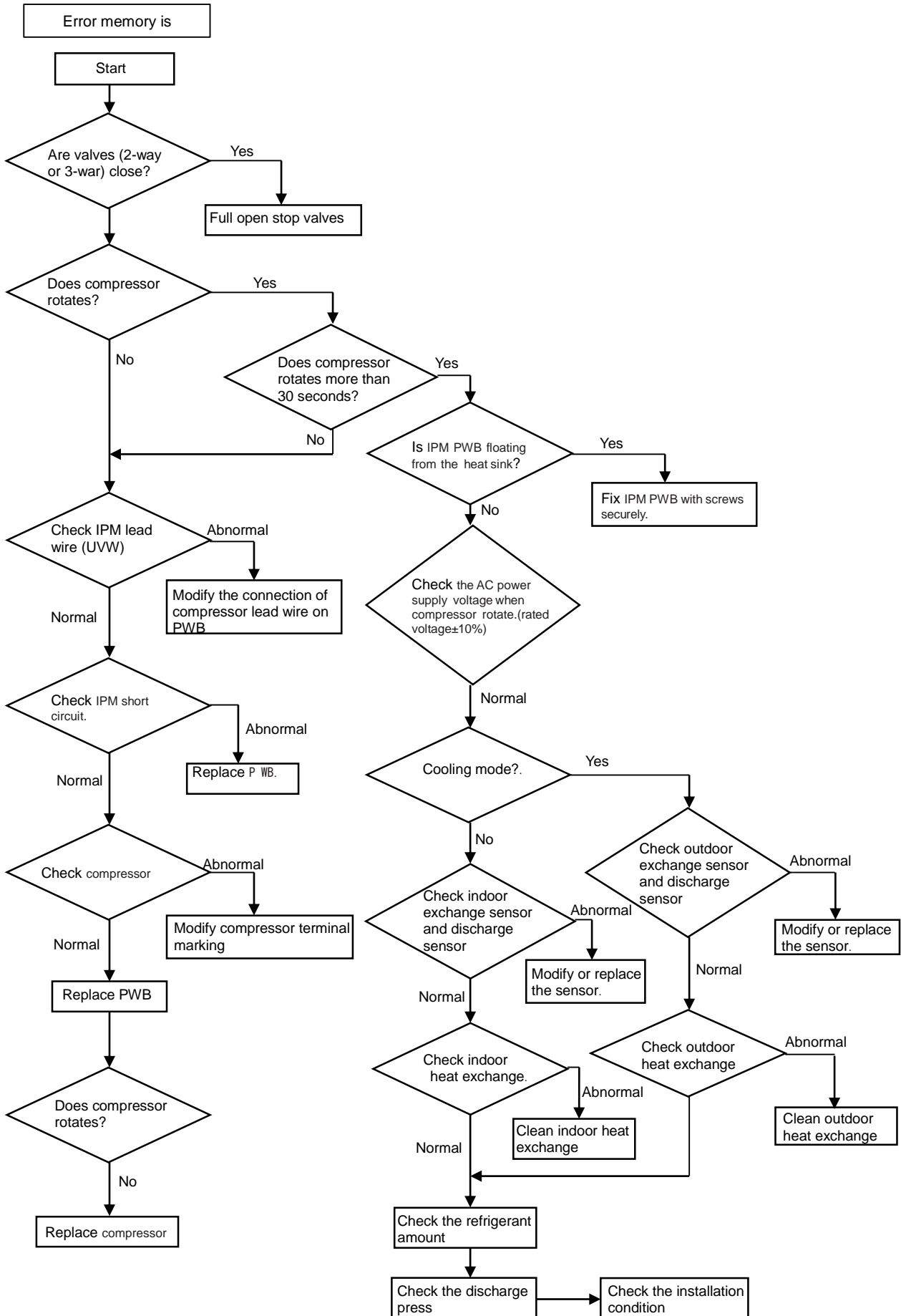
10.6 MALFUNCTION (PARTS) CHECK METHOD

10.6.1 Procedure for determining defective outdoor unit IPM/compressor

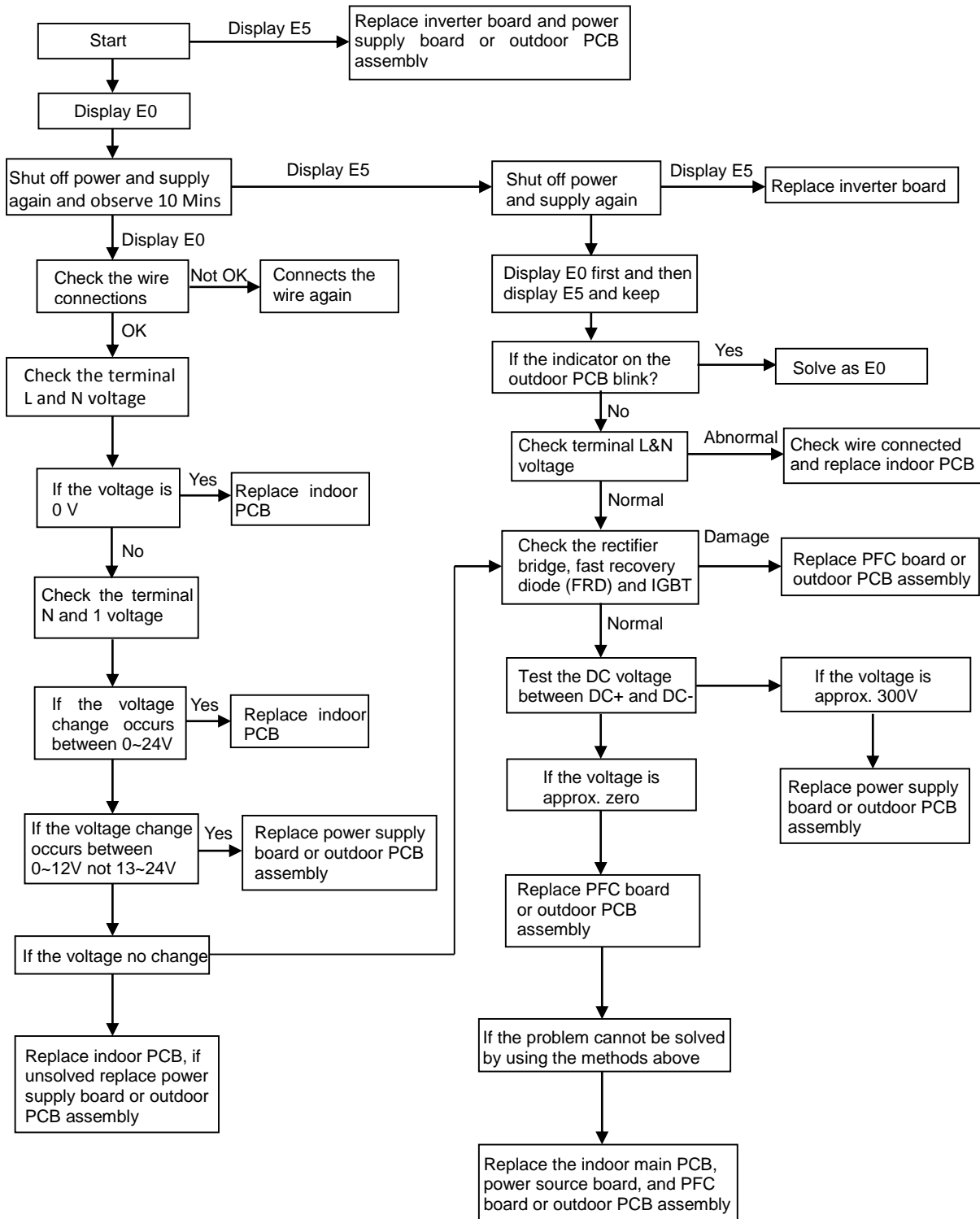
The following flow chart shows a procedure for locating the cause of a malfunction when the compressor does not start up and a DC overcurrent indication error occurs.



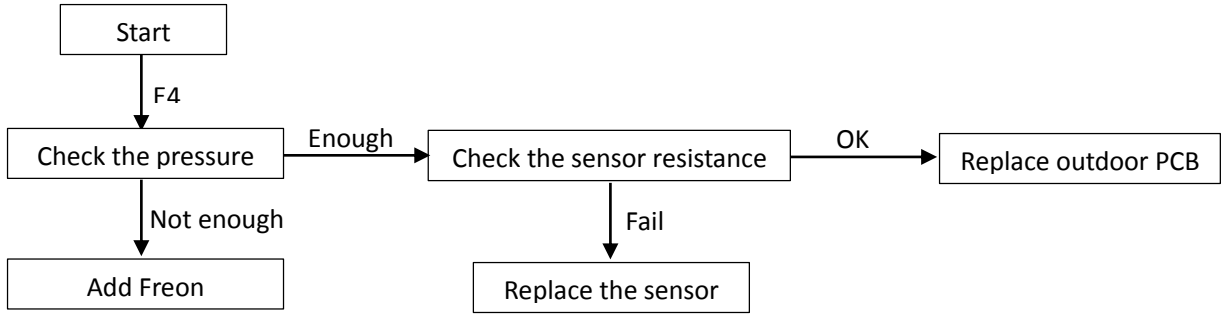
10.6.2 DC Over Current Error



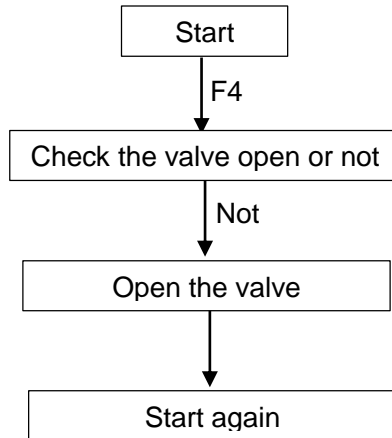
10.6.3 E0,E5 Error



10.6.4 E4 Error



10.6.5 F4 Error



10.6.6 Fy Error

