9. Troubleshooting

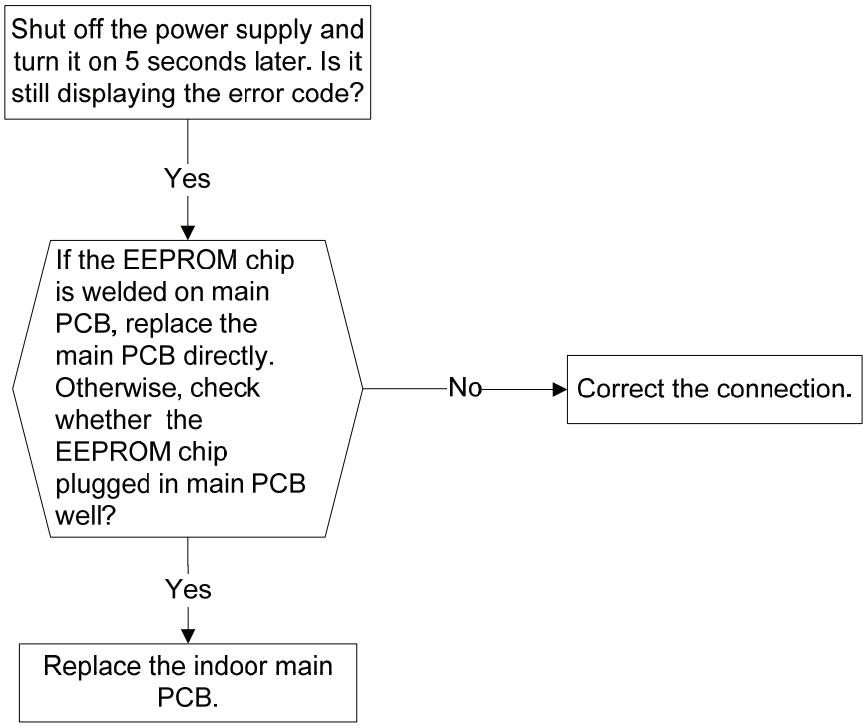
9.1 Indoor Unit Error Display

Operation lamp	Timer lamp	Display	LED STATUS
☆ 1 time	X	E0	Indoor unit EEPROM parameter error
☆ 2 times	X	E1	Indoor / outdoor units communication error
☆ 3 times	X	E2	Zero crossing detection error(except MSR1-24HRDN1-QRC4W)
☆ 4 times	X	E3	Indoor fan speed has been out of control
☆ 5 times	X	E4	Open circuit or short circuit of indoor room temperature T1 sensor
☆ 6 times	X	E5	Open circuit or short circuit of evaporator coil temperature T2 sensor
☆ 7 times	X	EC	Refrigerant Leakage Detection
☆ 2 times	O	F1	Open circuit or short circuit of outdoor ambient T4 temperature sensor
☆ 3 times	O	F2	Open circuit or short circuit of condenser coil temperature T3 sensor
☆ 4 times	O	F3	Open circuit or short circuit of compressor discharge T5 temperature sensor
☆ 5 times	O	F4	Outdoor unit EEPROM parameter error
☆ 6 times	O	F5	Outdoor fan speed has been out of control
☆ 1 times	☆	P0	IPM malfunction or IGBT over-strong current protection
☆ 2 times	☆	P1	Over voltage or over low voltage protection
☆ 5 times	☆	P4	Inverter compressor drive error

O (light)　　X (off)　　☆ (flash)

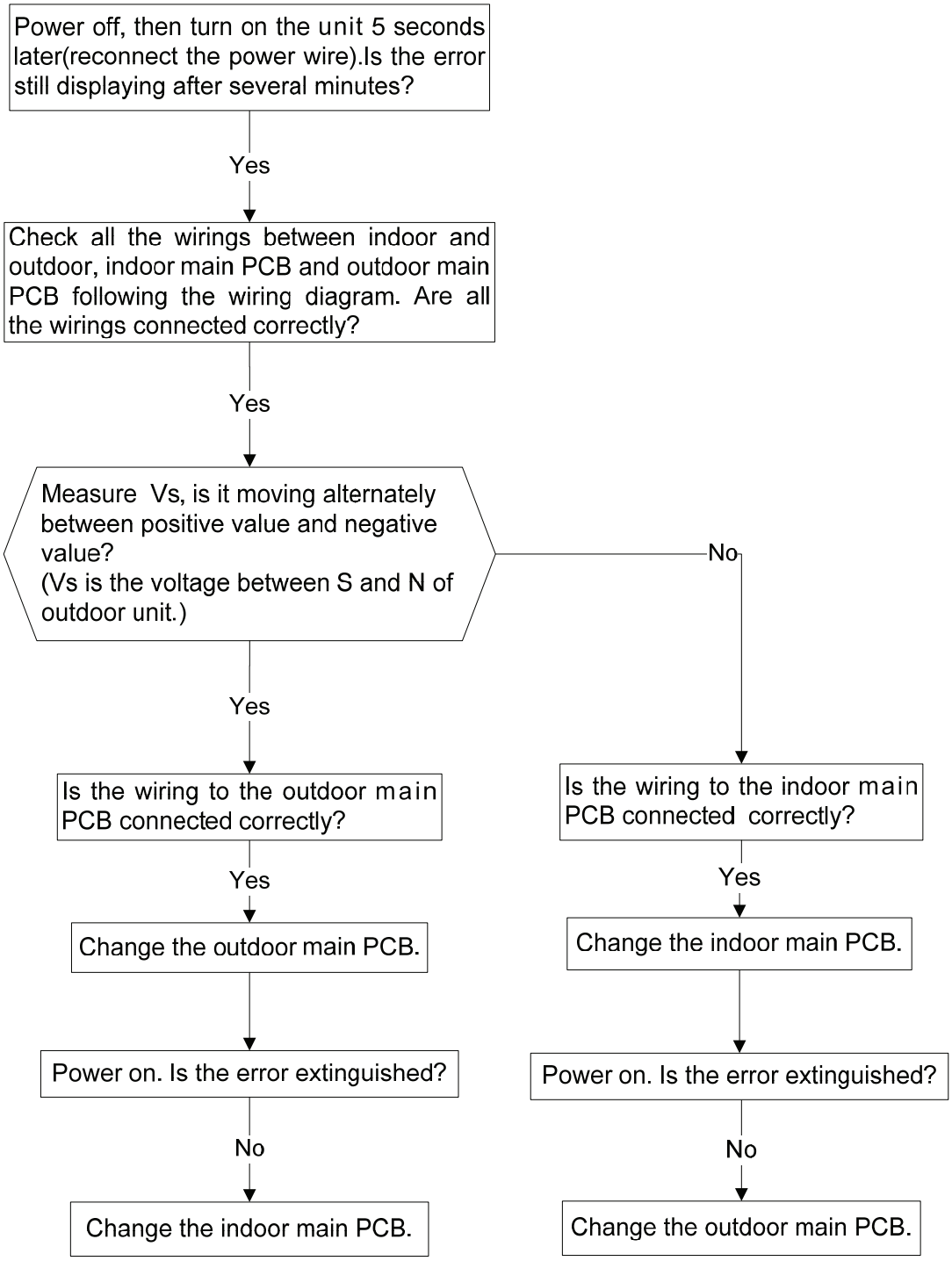
9.2 Diagnosis and Solution

9.2.1 EEPROM parameter error diagnosis and solution(E0)

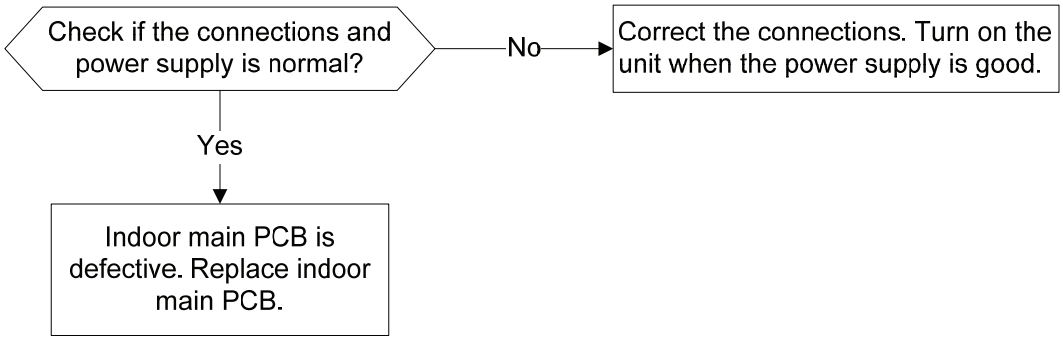


EEPROM: a read-only memory whose contents can be erased and reprogrammed using a pulsed voltage.

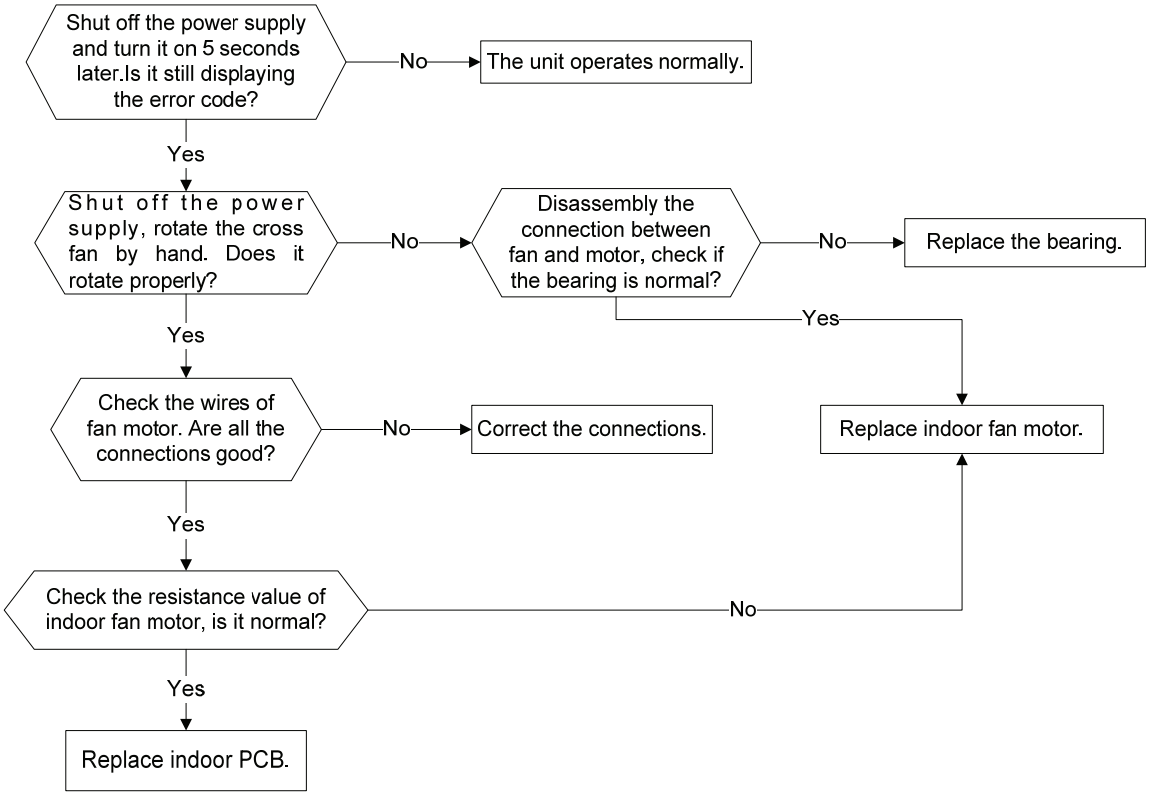
9.2.2 Indoor unit and outdoor unit communication protection error diagnosis and solution(E1)



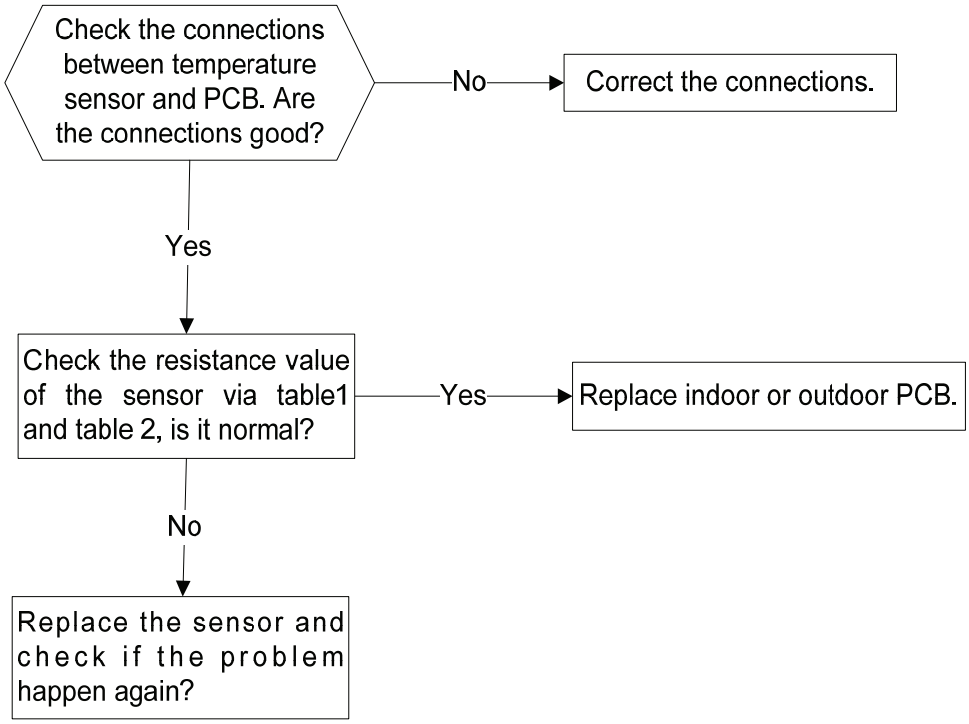
9.2.3 Zero crossing detection error diagnosis and solution(E2)



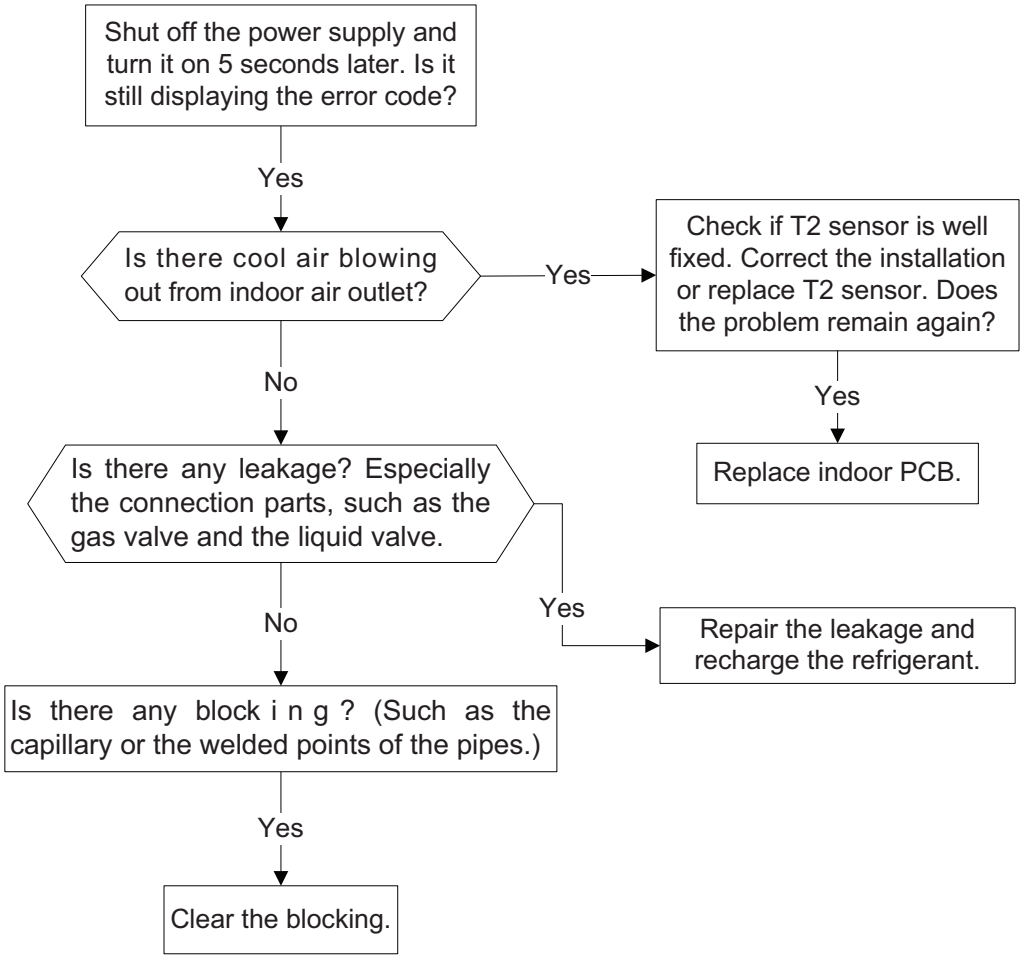
9.2.4 Indoor fan speed has been out of control diagnosis and solution(E3)



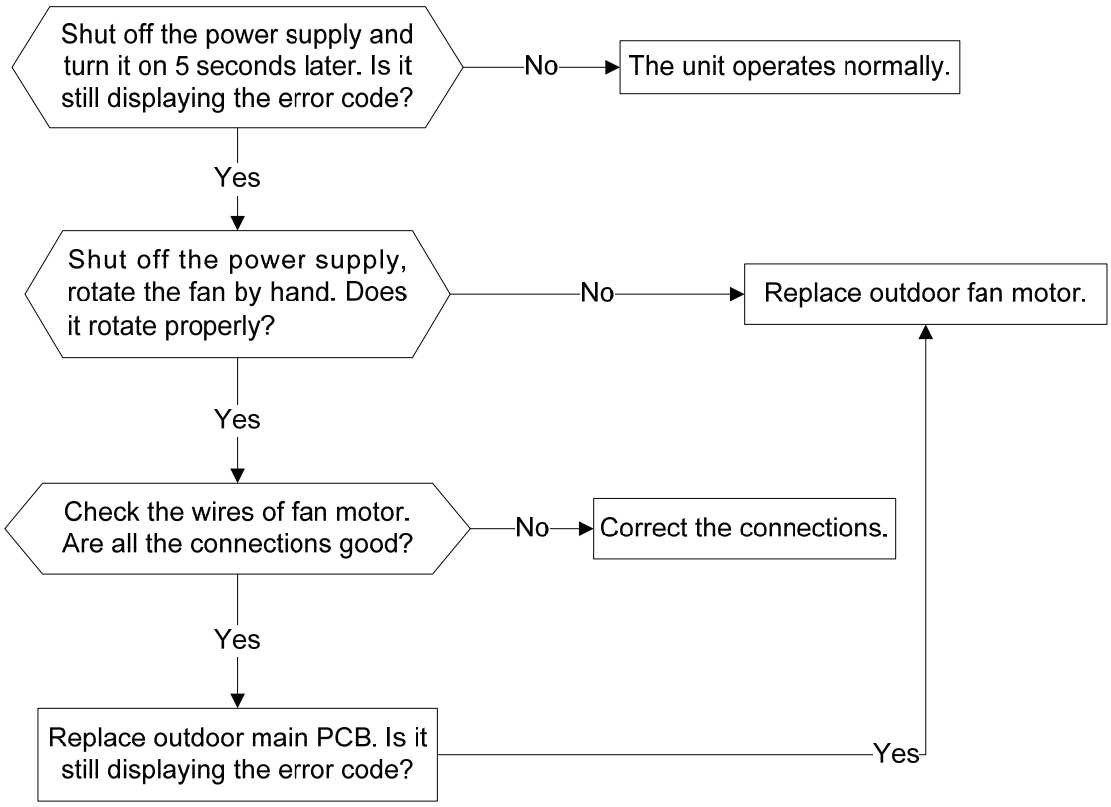
9.2.5 Open circuit or short circuit of temperature sensor diagnosis and solution (E4/E5/F1/F2/F3)



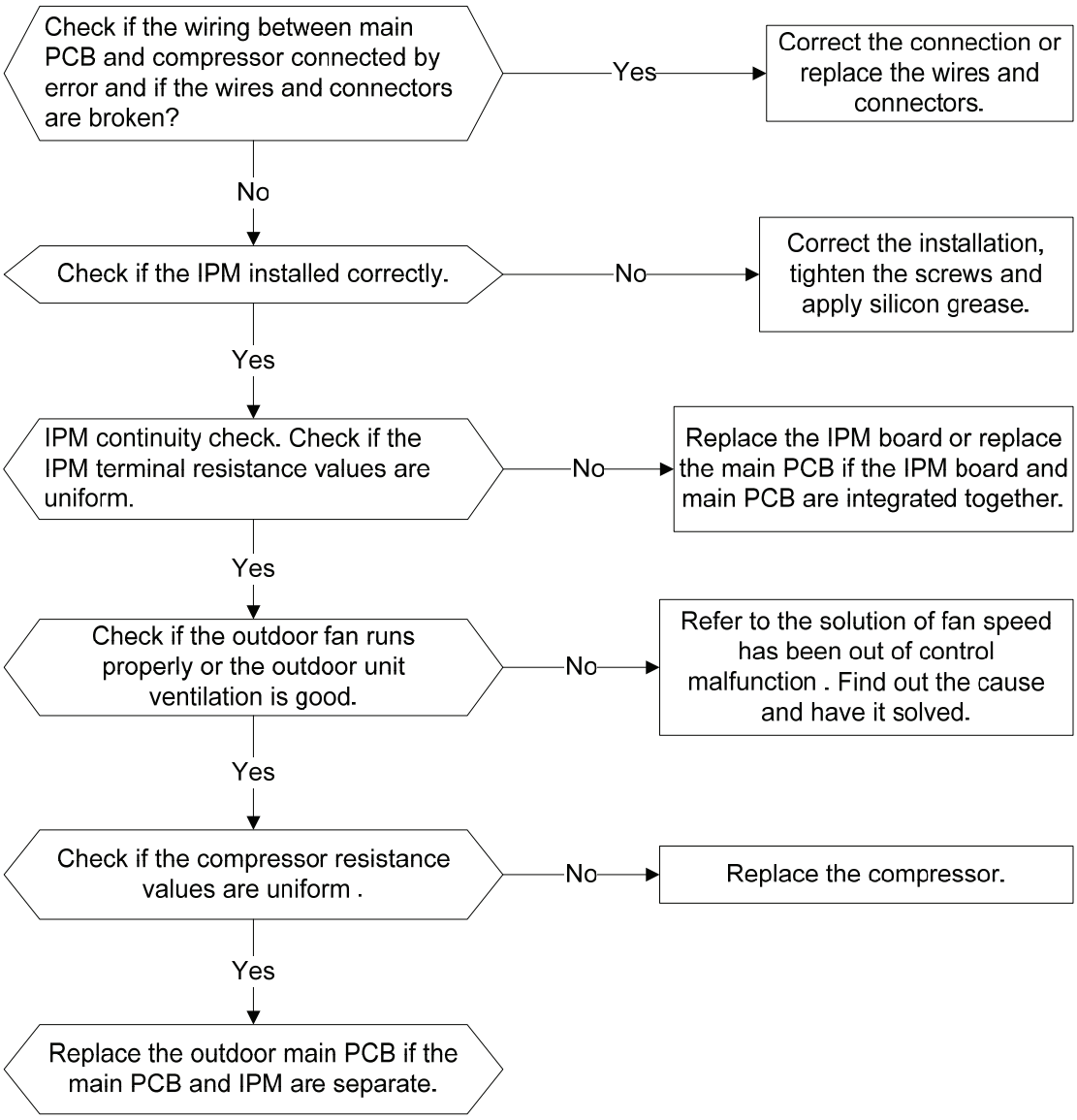
9.2.6 Refrigerant Leakage Detection diagnosis and solution(EC)



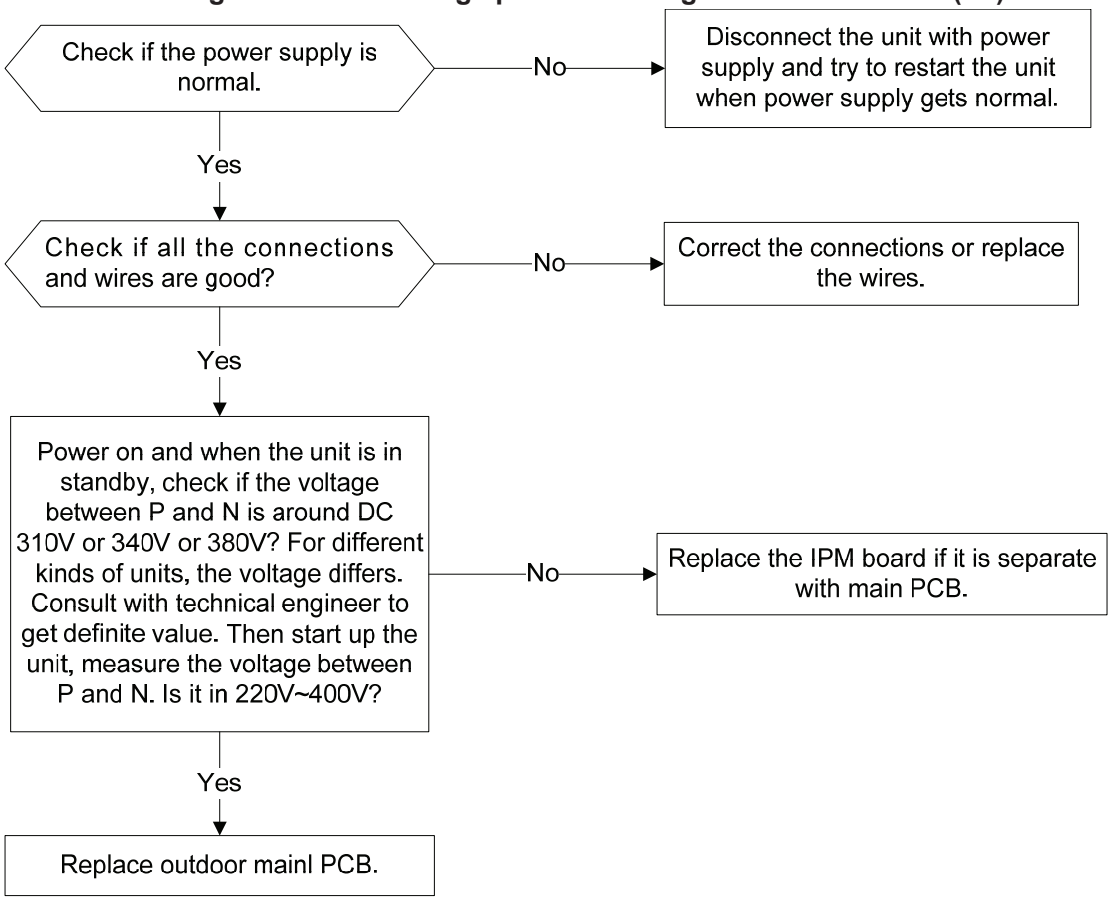
9.2.7 Outdoor fan speed has been out of control diagnosis and solution(F5)



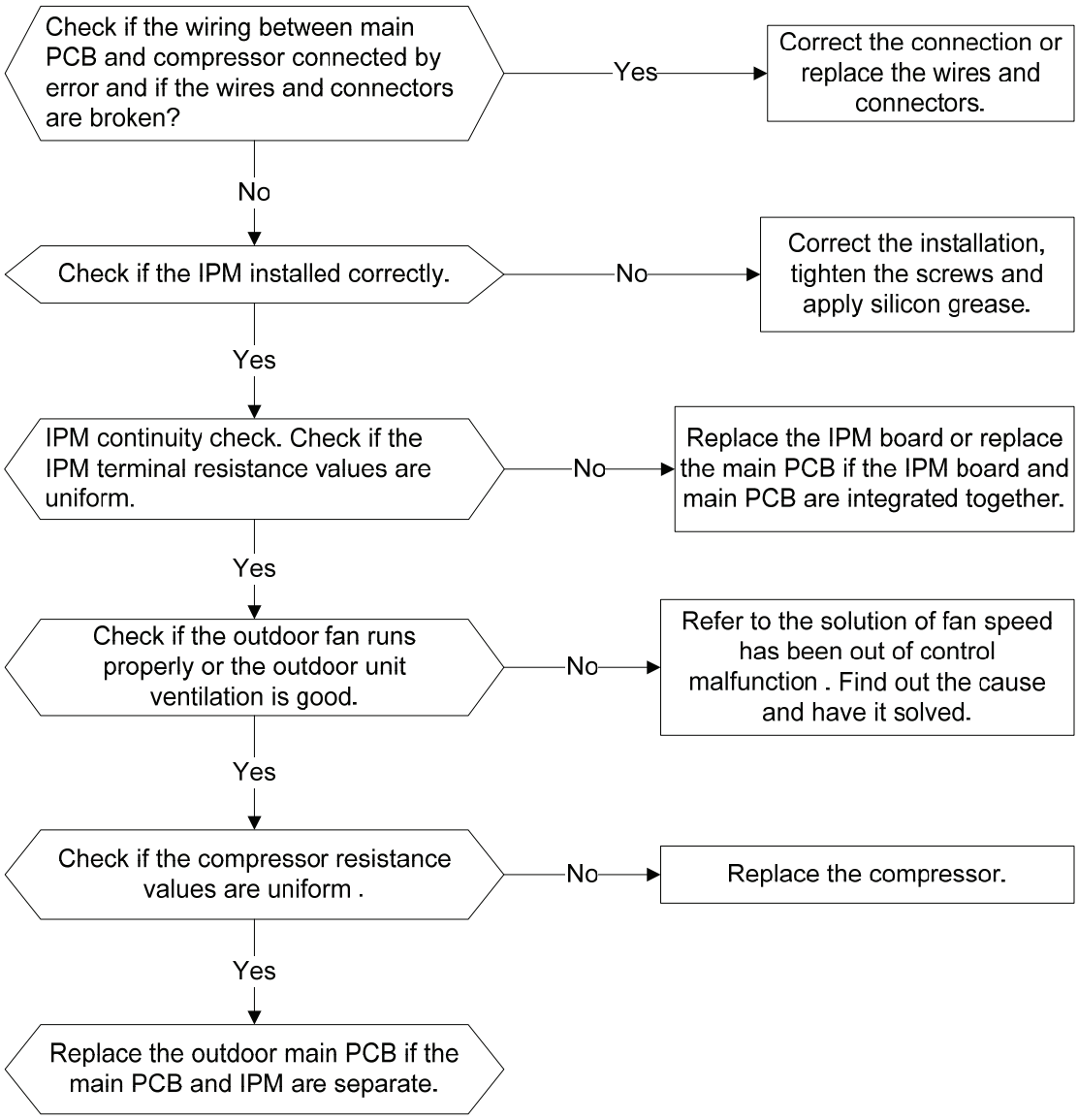
9.2.8 IPM malfunction or IGBT over-strong current protection diagnosis and solution (P0)



9.2.9 Over voltage or too low voltage protection diagnosis and solution (P1)

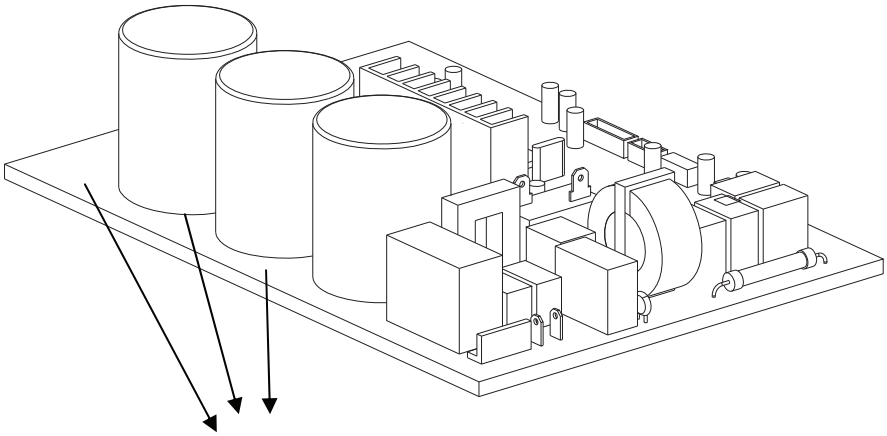


9.2.10 Inverter compressor drive error diagnosis and solution (P4)



Safety

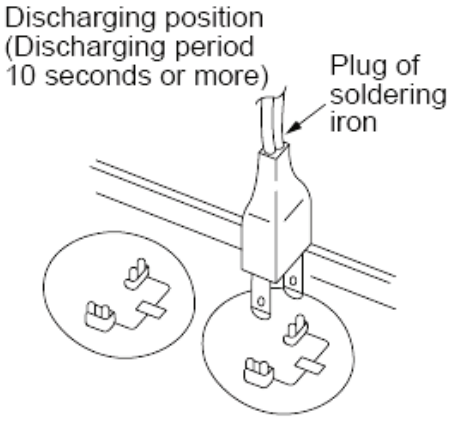
Electricity power is still kept in capacitors even the power supply is shut off. Do not forget to discharge the electricity power in capacitor.



Electrolytic Capacitors

(HIGH VOLTAGE! CAUTION!)

Connect discharge resistance (approx.100Ω 40W) or soldering iron (plug) between +, - terminals of the electrolytic capacitor on the contrary side of the outdoor PCB.

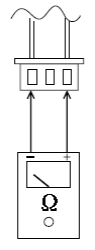


Note: The picture above is only for reference. The plug of your side may be different.

Main parts check

1. Temperature sensor checking

   Disconnect the temperature sensor from PCB, measure the resistance value with a tester.



Tester

Temperature Sensors.

Room temp.(T1) sensor,

Indoor coil temp.(T2) sensor,

Outdoor coil temp.(T3) sensor,

Outdoor ambient temp.(T4) sensor,

Compressor discharge temp.(T5) sensor.

Measure the resistance value of each winding by using the multi-meter.

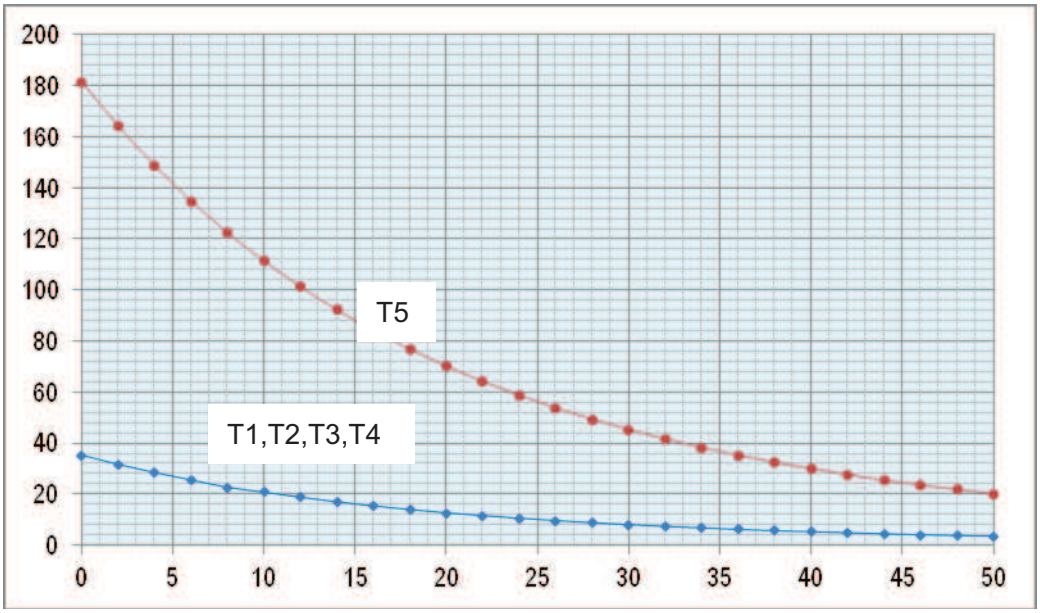
Table 1:Some frequently-used R-T data for T1,T2,T3 and T4 sensor:

Temperature (℃)	5	10	15	20	25	30	40	50	60
Resistance Value (KΩ)	26.9	20.7	16.1	12.6	10	8	5.2	3.5	2.4

Table 2:Some frequently-used R-T data for T5 sensor:

Temperature (℃)	5	15	25	35	60	70	80	90	100
Resistance Value (KΩ)	141.6	88	56.1	36.6	13.8	9.7	6.9	5	3.7

Resistance value (KΩ)



Temperature (℃)