

Pridiom Multi-Zone



INDOOR UNITS

PWM093HX

PWM123HX

PWM183HX

OUTDOOR UNITS

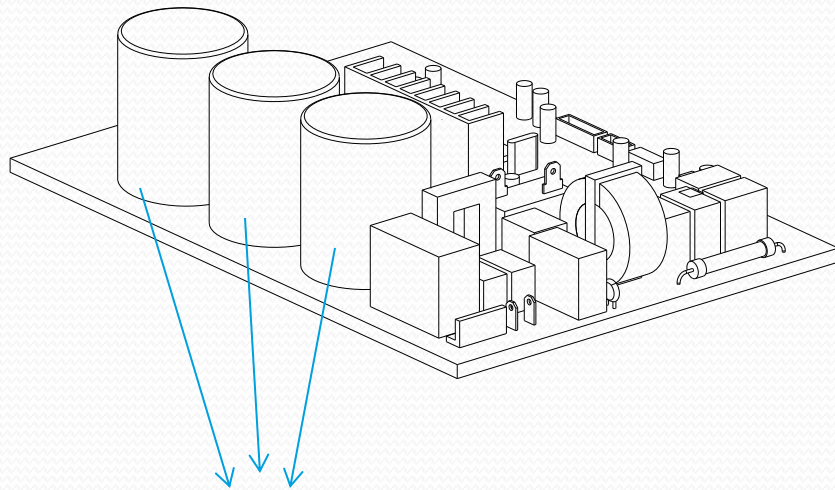
POM273HX

POM365HX

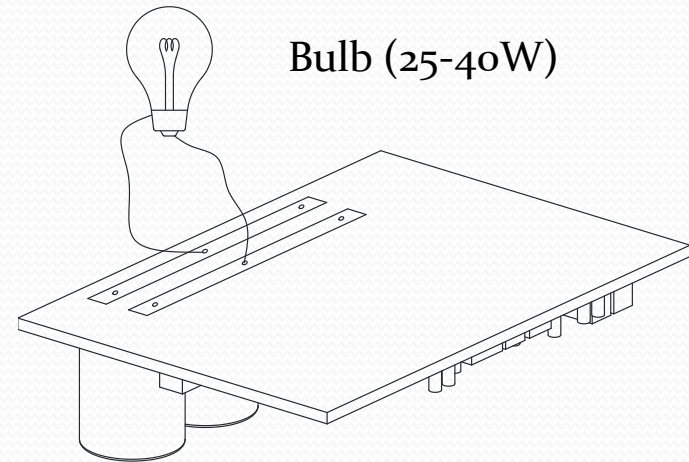
230V, 60Hz, 1P

Caution

Because of there are capacitors in PCB and relative circuit in outdoor unit, even shut down the power supply, electricity power still are kept in capacitors, do not forget to discharge the electricity power in capacitor by connect a bulb or resistance with 1500 ohm to 2000 ohm



**Electrolytic Capacitors
(HIGH VOLTAGE! CAUTION!)**



Bulb (25-40W)

General Protection

- Three-Minutes-Start-Delay for compressor. The compressor delays starting 3 minutes after being turned on every time except after defrosting and power on at first time (delays 1 min.)
- Compressor top temp. protection ($\geq 120\text{ }^{\circ}\text{C}$ (248F), resumes at $105\text{ }^{\circ}\text{C}$ (221F)) (P2)
- Exhaust temp. protection ($115\text{ }^{\circ}\text{C}$ (239F) for 5s, resumes at $90\text{ }^{\circ}\text{C}$ (194F))
- Compressor current protection ($\geq 25\text{A}$)
- Condenser high temp. protection ($\geq 65\text{ }^{\circ}\text{C}$ (149F) for 3s, resumes when $T_3 < 52\text{ }^{\circ}\text{C}$ (126F))
- Evaporator low temp. (T2) protection ($T_2 < 4\text{ }^{\circ}\text{C}$ (39F))
- Evaporator high temp. (T2) protection ($T_2 > 63\text{ }^{\circ}\text{C}$ (145F))
- Inverter module protection. Inverter module has a protective function against abnormal current, voltage and temperature.

MULTI ZONE ONLY

times	display content	means
1	Capacity sum of the indoor units	
2	Mode of the outdoor unit	0 means off, 1 means cooling, 2 means heating
3	outdoor unit output capacity	
4	Fan mode	0 means off, 1 means low speed, 2 means high speed
5	A indoor unit heat exchange temp($T_{2B}A$)	
6	B indoor unit heat exchange temp($T_{2B}B$)	
7	C indoor unit heat exchange temp($T_{2B}C$)	
8	D indoor unit heat exchange temp($T_{2B}D$)	
9	T3 Temp	
10	T4 temp	
11	Compressor outlet temp	
12	Current	
13	The expansion valve open of the A indoor unit	Read out value $\times 8$
14	The expansion valve open of the B indoor unit	Read out value $\times 8$
15	The expansion valve open of the C indoor unit	Read out value $\times 8$
16	The expansion valve open of the D indoor unit	Read out value $\times 8$
17	Outdoor unit DC current	
18	Number of indoor unit	
19	Error code	00 means no error
20	Frequence	
21	Aindoor temp (T1A)	
22	Aindoor heat exchange temp (T2A)	
23	Bindoor temp (T1B)	
24	Bindoor heat exchange temp (T2B)	
25	Cindoor temp (T1C)	
26	Cindoor heat exchange temp (T2C)	
27	Dindoor temp (T1D)	
28	Dindoor heat exchange temp (T2D)	
29		close

Check Point



Indoor Unit error code

Display	LED STATUS
E0	EEPROM parameter error
E1	Communication malfunction between indoor and outdoor units
E2	Zero-crossing signal error
E3	Indoor fan speed out of control
E5	Open or short circuit of outdoor temperature sensor
E6	Open or short circuit of room or evaporator coil temperature sensor
P0	Inverter module protection
P1	Over voltage or too low voltage protection (<120V or >400V)
P2	Temperature protection of compressor top. (120/105 °C)
P3	Outdoor temp. too low protection
P4	Inverter compressor drive error

Indoor unit display	LED STATUS
E0	EEPROM parameter error

Shut off the power supply and turn on it 1 minute later

The problem appears again

Replace the main PCB of indoor unit

Indoor unit display	LED STATUS
E1	Communication malfunction between indoor and outdoor units

Turn off the power supply, after 1 minute, connect the power supply, turn on the unit with remote controller

The unit does not work normally

Check the wiring between indoor and outdoor unit. Is the connection of L1, L2, S and GND good?

No → Reconnect and retest

Yes

Is the LED blinking on outdoor PCB correctly?

Yes → Replace indoor PCB and repower

No

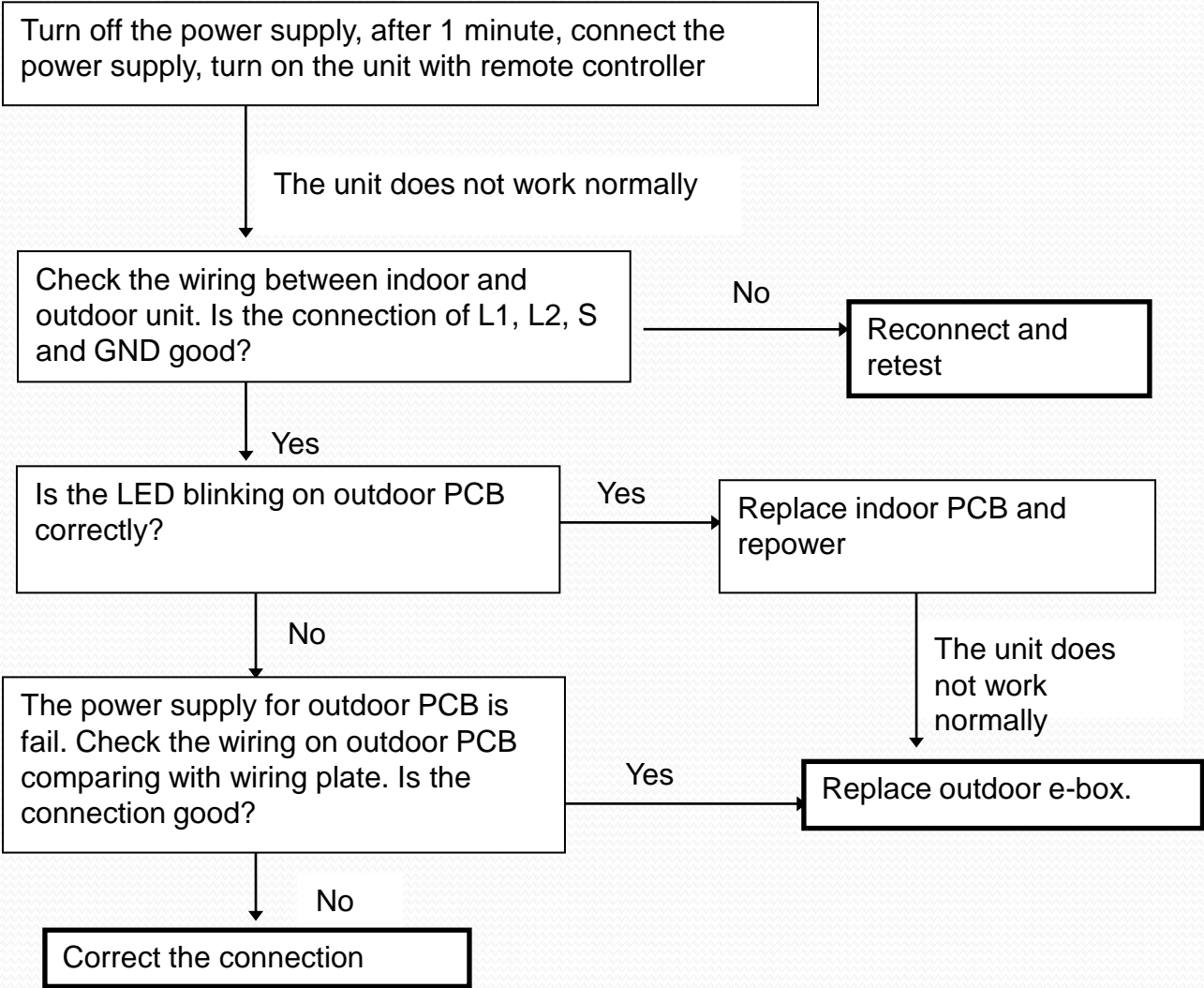
The power supply for outdoor PCB is fail. Check the wiring on outdoor PCB comparing with wiring plate. Is the connection good?

Yes → Replace outdoor e-box.

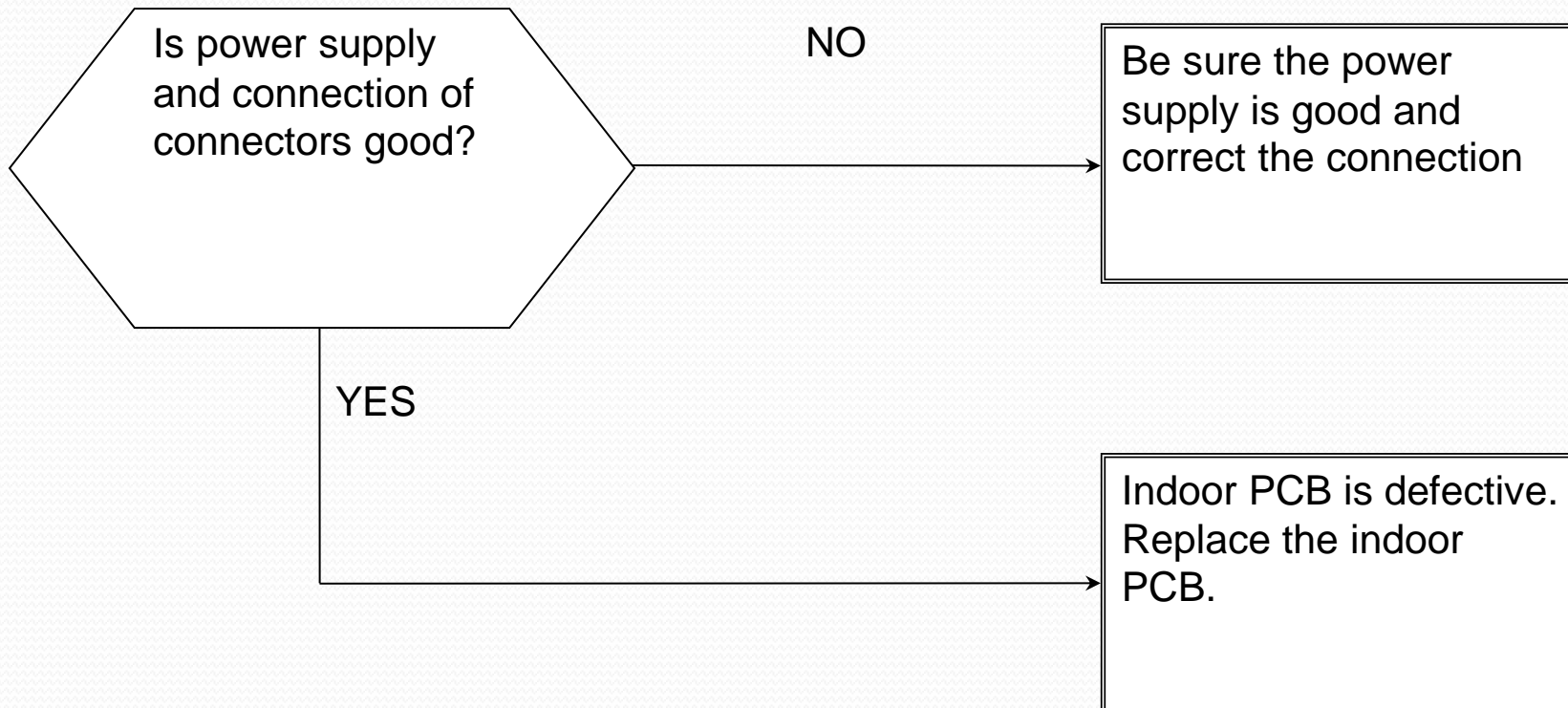
The unit does not work normally

No

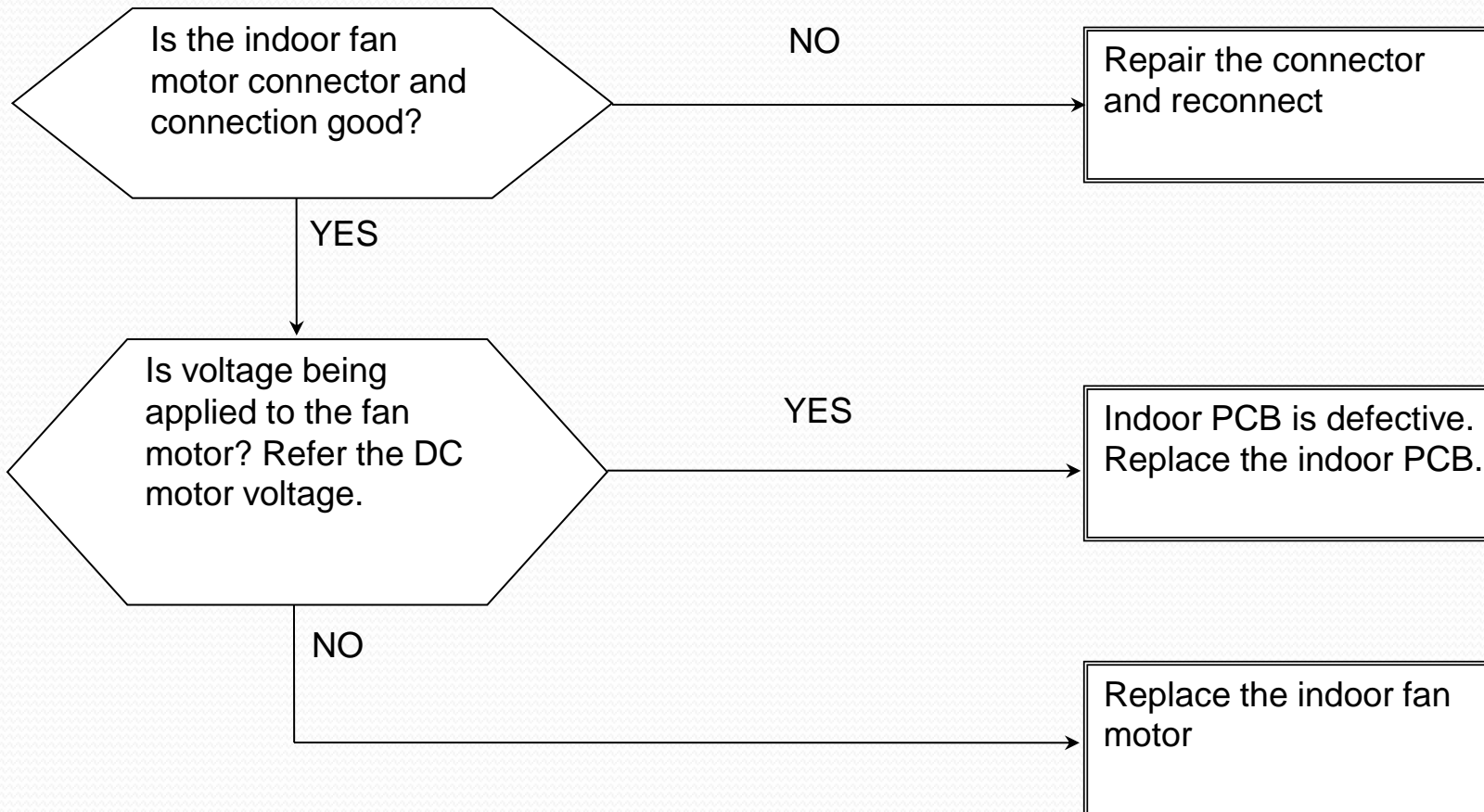
Correct the connection



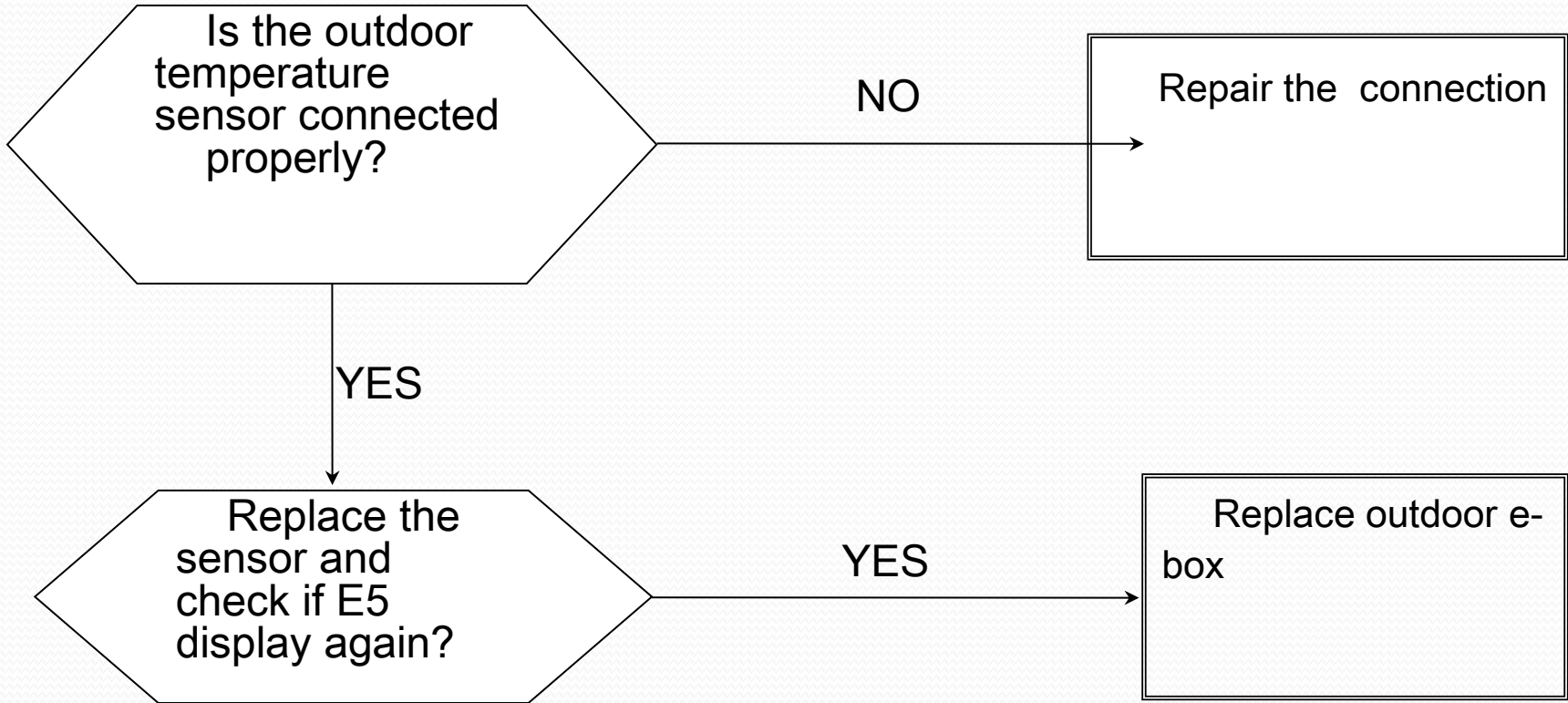
Indoor unit display	LED STATUS
E2	Zero-crossing signal error



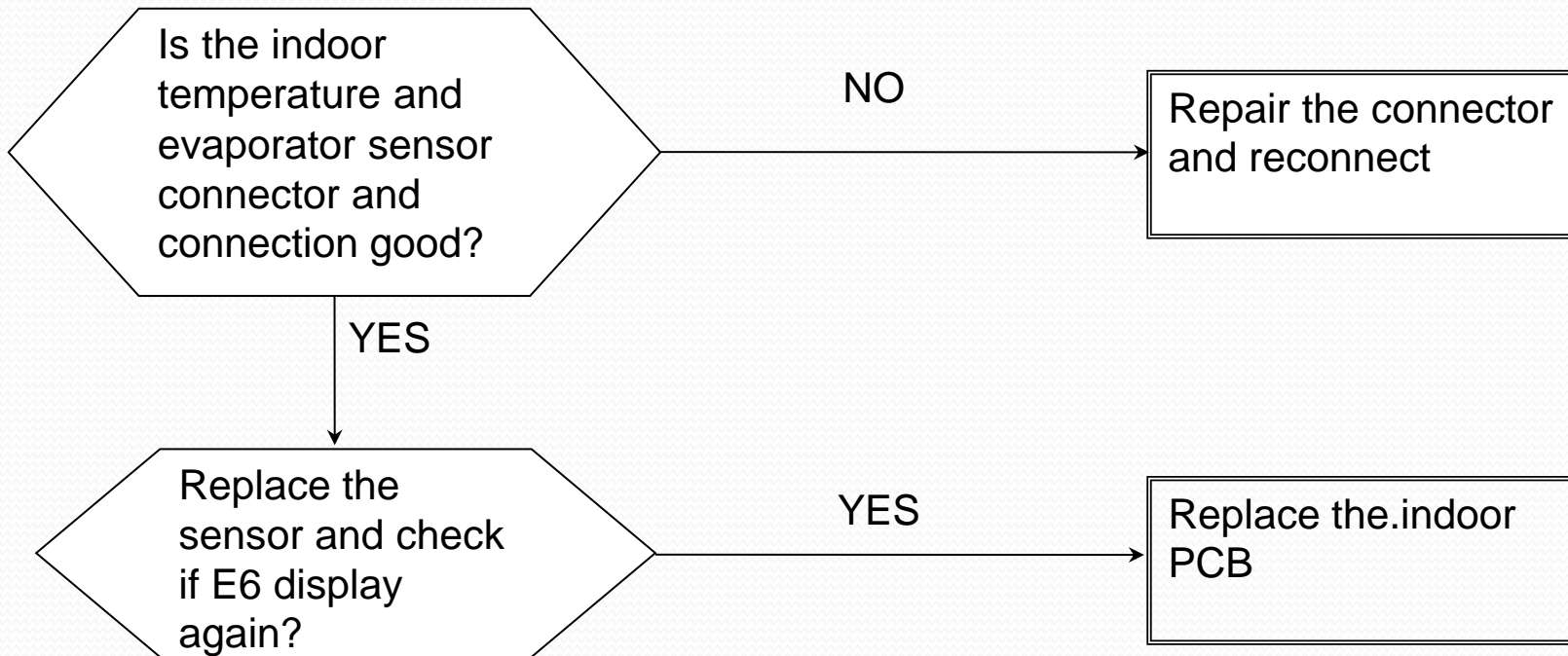
Indoor unit display	LED STATUS
E3	Indoor fan speed out of control



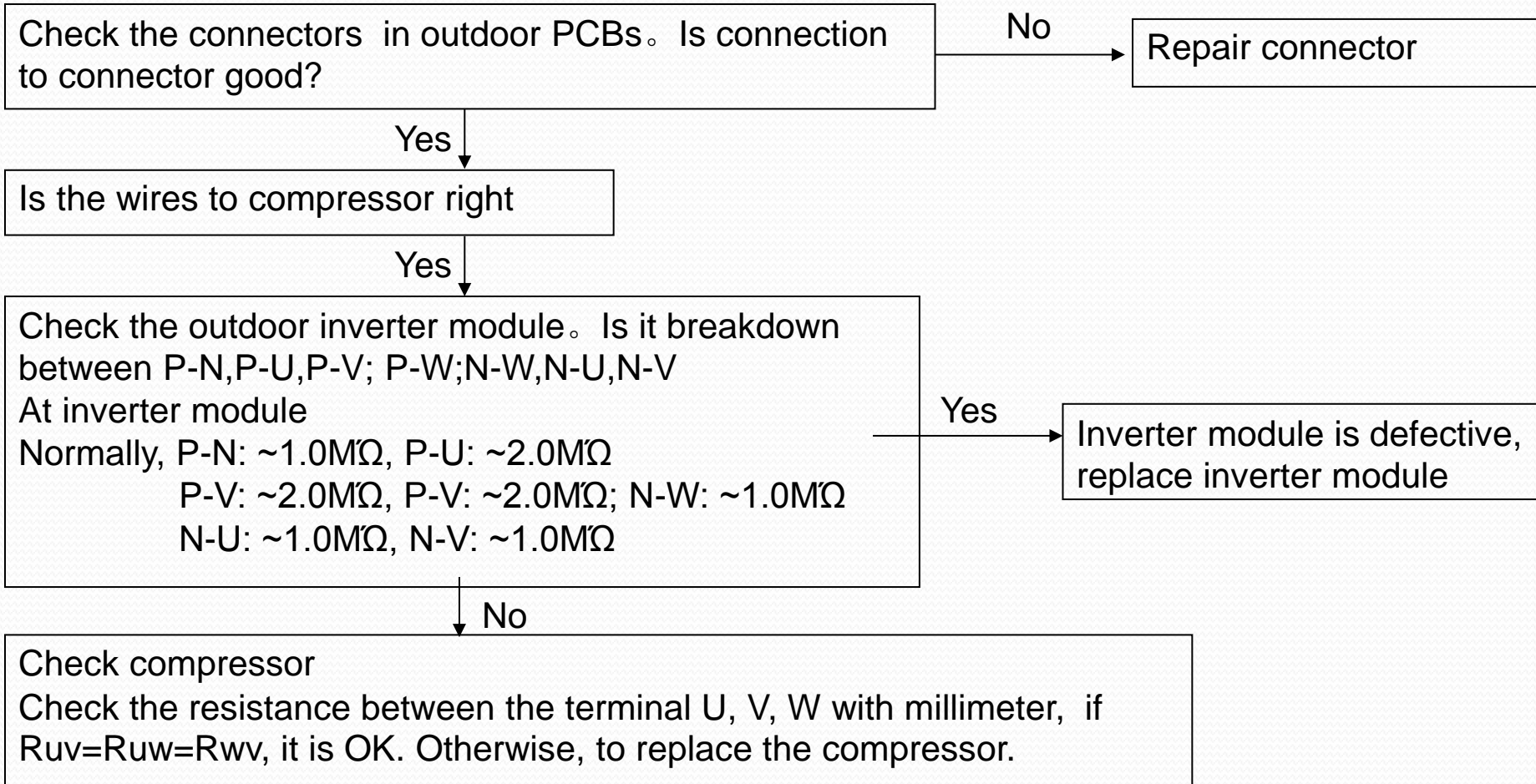
Indoor unit display	LED STATUS
E5	Open or short circuit of outdoor temperature sensor



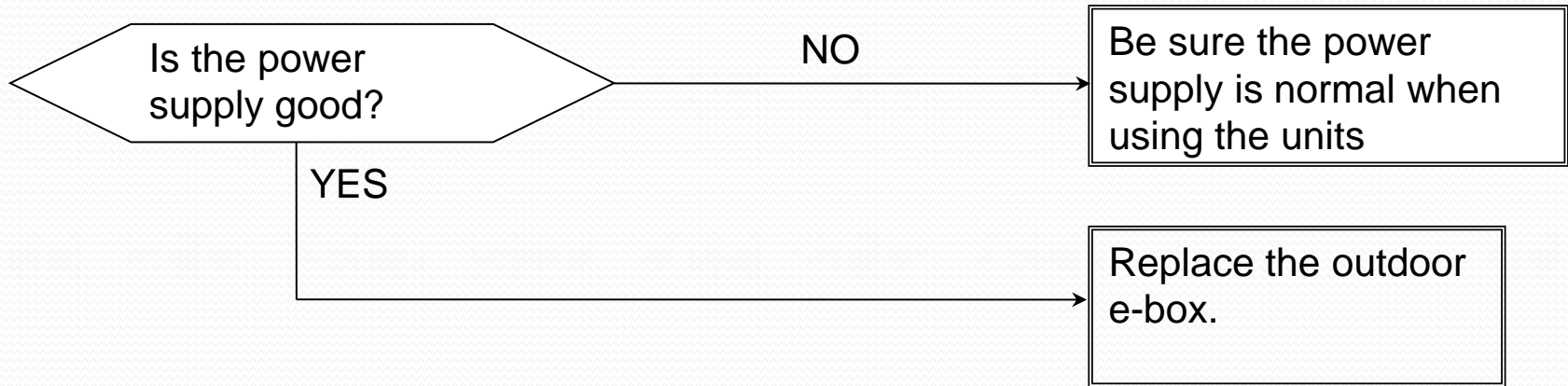
Indoor unit display	LED STATUS
E6	Open or short circuit of room or evaporator coil temperature sensor



Indoor unit display	LED STATUS
P0	Inverter module protection

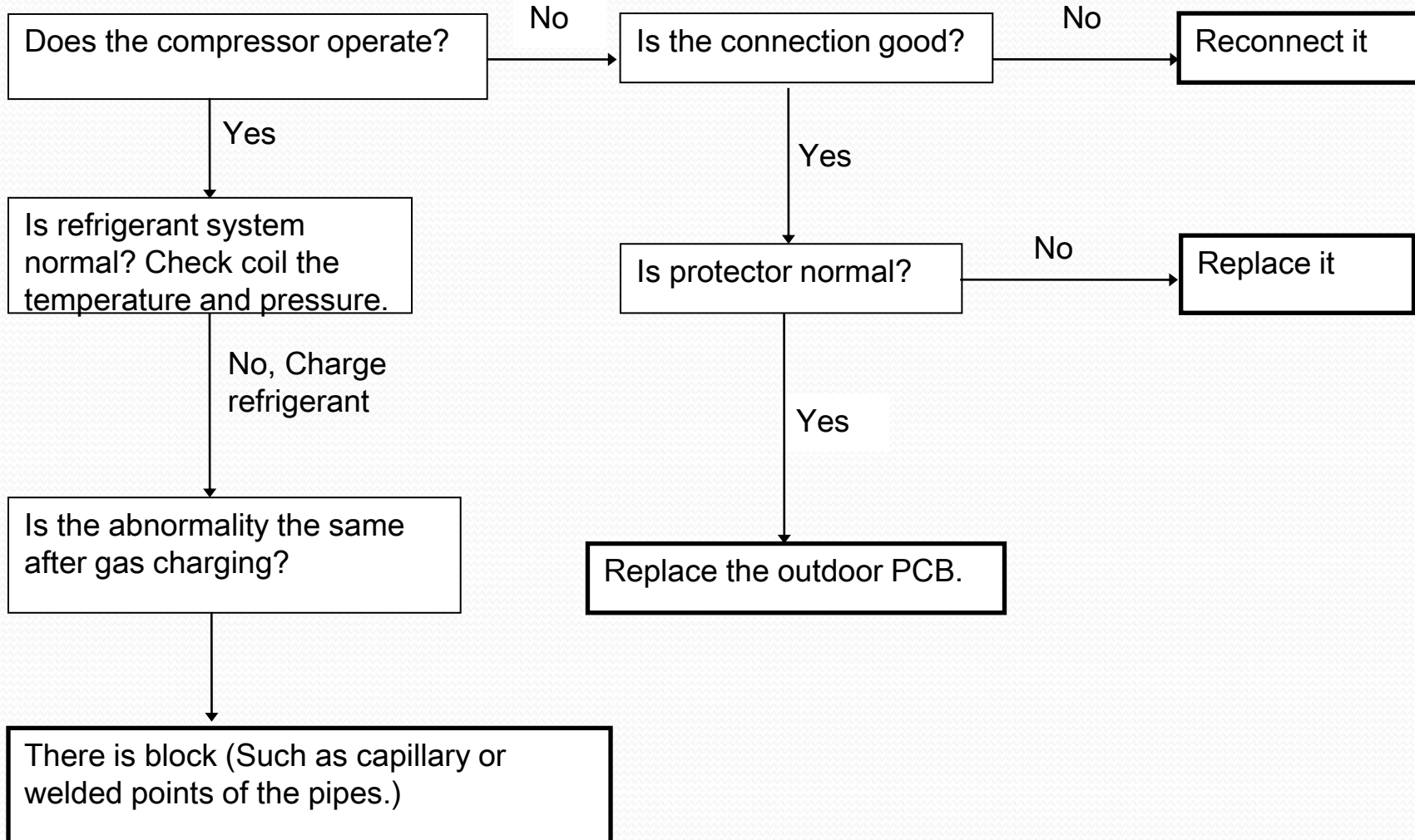


Indoor unit display	LED STATUS
P1	Over voltage or too low voltage protection



Display	LED STATUS
P2	Compressor top protection against temperature

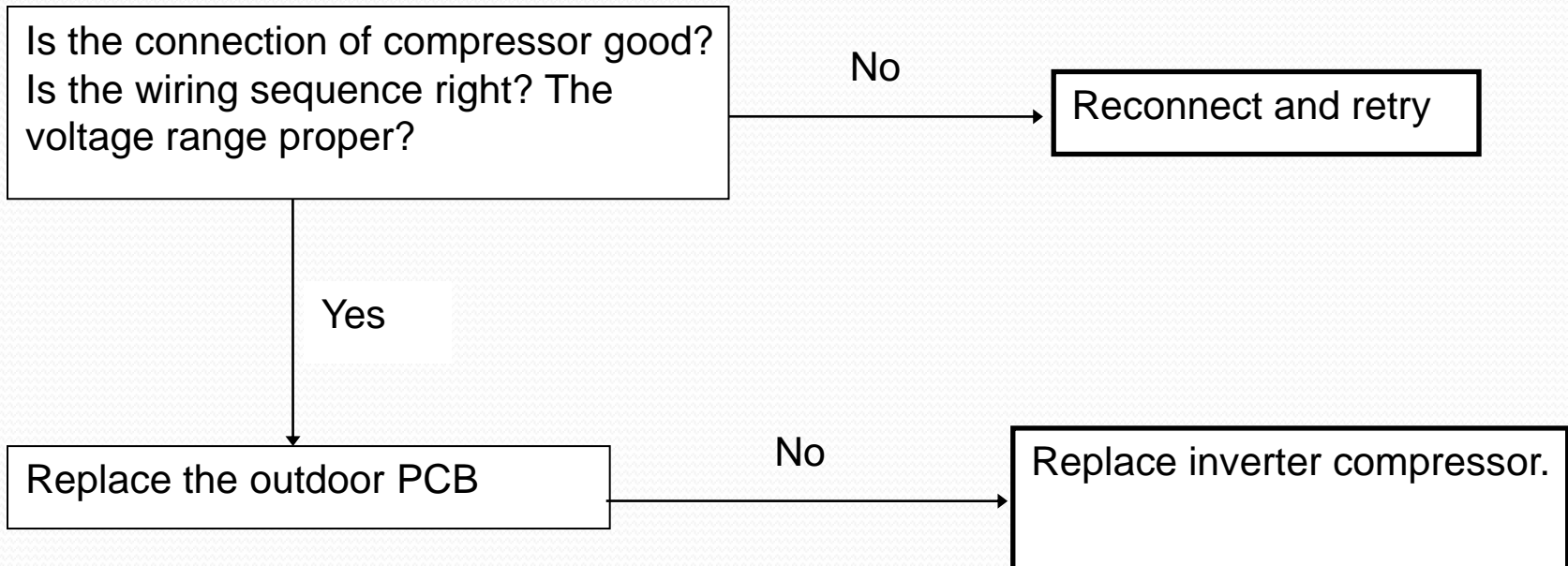
Off: 120°C (248F); On: 105°C (221F)



Indoor unit display	LED STATUS
P3	Outdoor temp. too low protection

The trouble shooting is same with one of outdoor unit P3 protection.

Indoor unit display	LED STATUS
P4	Inverter compressor drive error



Outdoor unit error code

Display	LED STATUS
E0	EEPROM parameter error
E1	No 1 Indoor units pipe temp. sensor or connector of pipe temp. sensor is defective
E2	No 2 Indoor units pipe temp. sensor or connector of pipe temp. sensor is defective
E3	No 3 Indoor units pipe temp. sensor or connector of pipe temp. sensor is defective
E6	No 4 Indoor units pipe temp. sensor or connector of pipe temp. sensor is defective
E4	Open or short circuit of outdoor temperature sensor
E5	Compressor volt protection
E7	Communication error between outdoor IC and DSP
P0	Temperature protection of compressor top.
P1	High pressure protection (just for 36K 1x4 units.)
P2	Low pressure protection (just for 36K 1x4 units.)
P3	Compressor current protection
P4	Inverter module protection
P6	Condenser high-temperature protection
P7	Compressor driving protection
PF	PFC protection (just for 36K 1x4 units.)

Outdoor unit display	LED STATUS
E0	EEPROM parameter error

Shut off the power supply and turn on it 1 minute later

The problem appears again

Is the EEPROM chip plugged in indoor PCB securely?

No

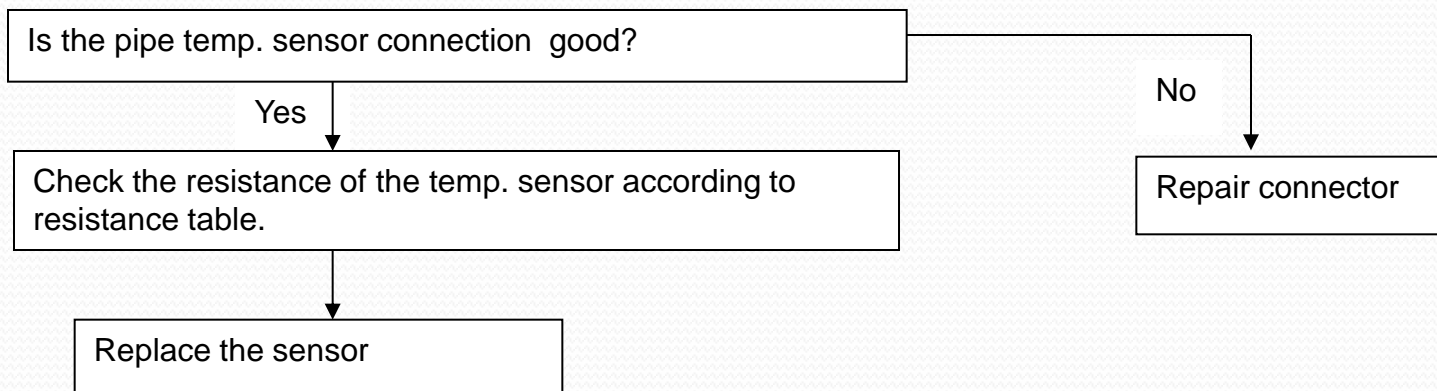
Correct the connection

Replace the main PCB of indoor unit

Display

LED STATUS

E1	No 1 Indoor units pipe temp. sensor T2B or connector of pipe temp. sensor is defective
E2	No 2 Indoor units pipe temp. sensor T2B or connector of pipe temp. sensor is defective
E3	No 3 Indoor units pipe temp. sensor T2B or connector of pipe temp. sensor is defective
E4	Outdoor units temp. sensor T4 or connector of temp. sensor is defective
E6	No 4 Indoor units pipe temp. sensor T2B or connector of pipe temp. sensor is defective



Outdoor unit display	LED STATUS
E5	Compressor volt protection

Check the voltage of power supply, if the voltage is about 220V, turn off the power supply to indoor unit and turn it on again after 1 minute

Does the trouble occur again?

Yes

Check the DC voltage between pin P & N on the IPM, if the voltage is 310V~380V, it is OK.

No

Replace the outdoor power board

Outdoor unit display	LED STATUS
E7	Communication error between outdoor IC and DSP

Is the LED in outdoor main PCB light?

No

Yes

Check the signal wires between outdoor PCBs, is it connected good.

1.Is the +5 voltage in outdoor main board? Power Board: CN4, Red wire and yellow (GND),Outdoor main PCB: CZ1
2.Is the +12v voltage in outdoor main board? Power Board: CN1, Purple wire and yellow (GND)

No

Inverter module defective.
Rectifier circuit is bad connection or defective when the voltage in outdoor is abnormal. P and N 310V~380V(DC)

Yes

Replace the main control board

Replace the IPM module

Outdoor unit display	LED STATUS
P0	Temperature protection of compressor top.

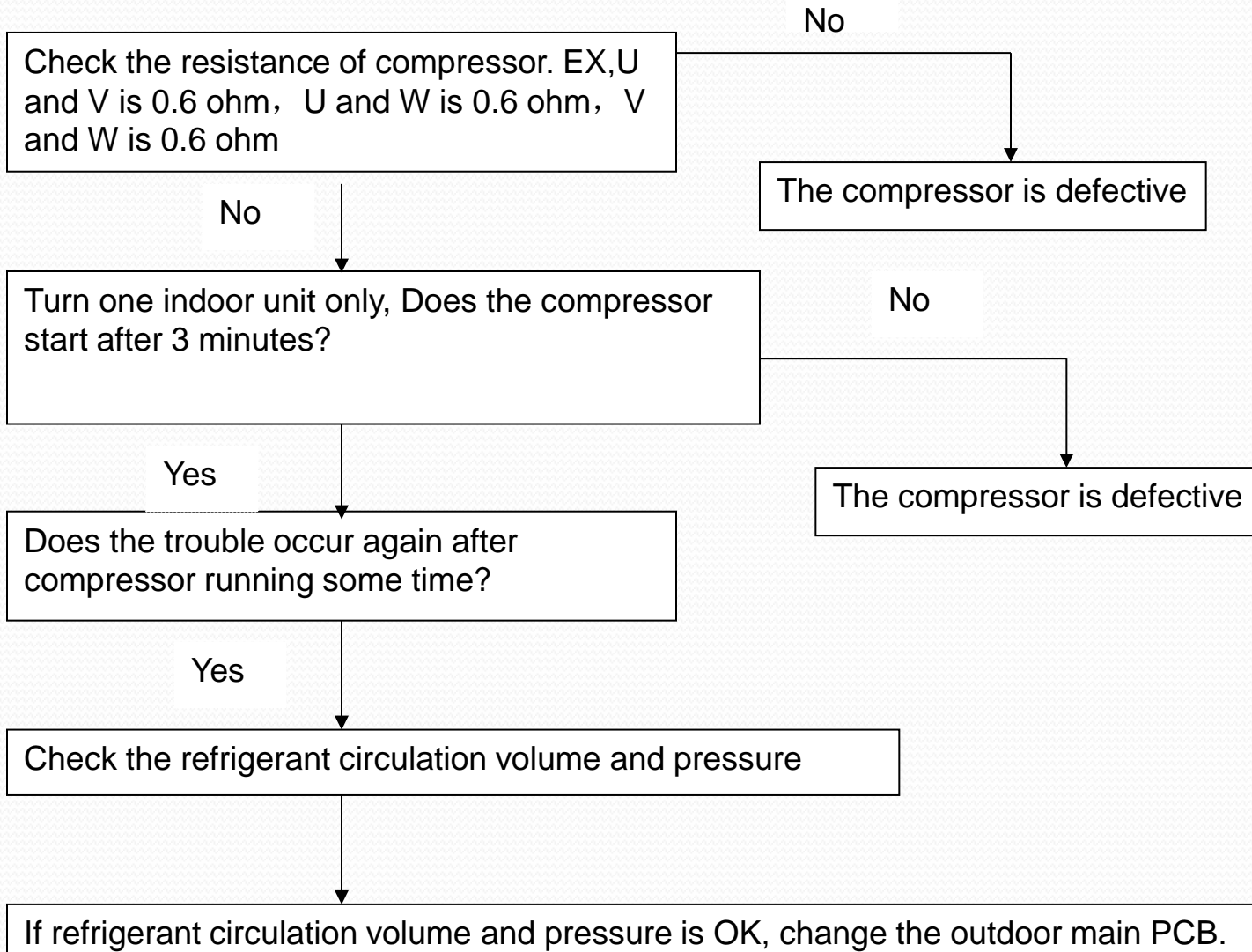
Off: 105c; On: 90c

The trouble shooting is same with the one of indoor unit P2 protection.

Outdoor unit display	LED STATUS
P4	Inverter module protection

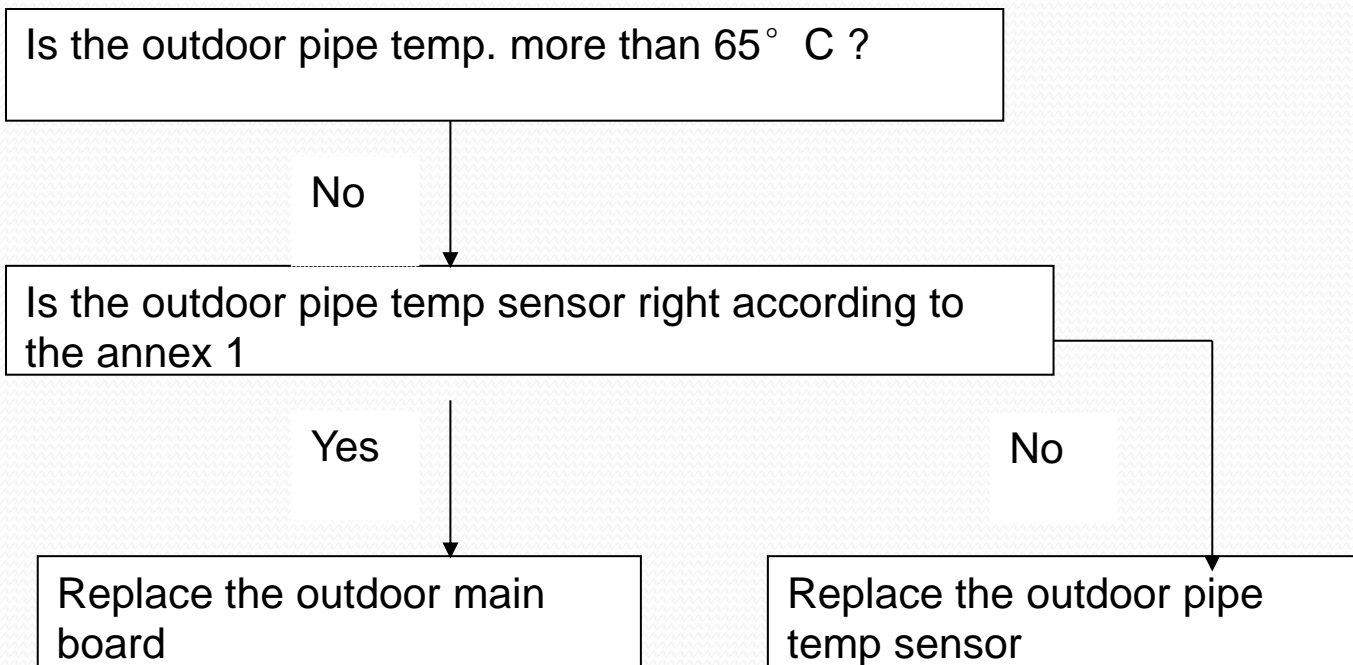
The trouble shooting is same with the one of indoor unit P0 protection

Outdoor unit display	LED STATUS
P3	Compressor current protection

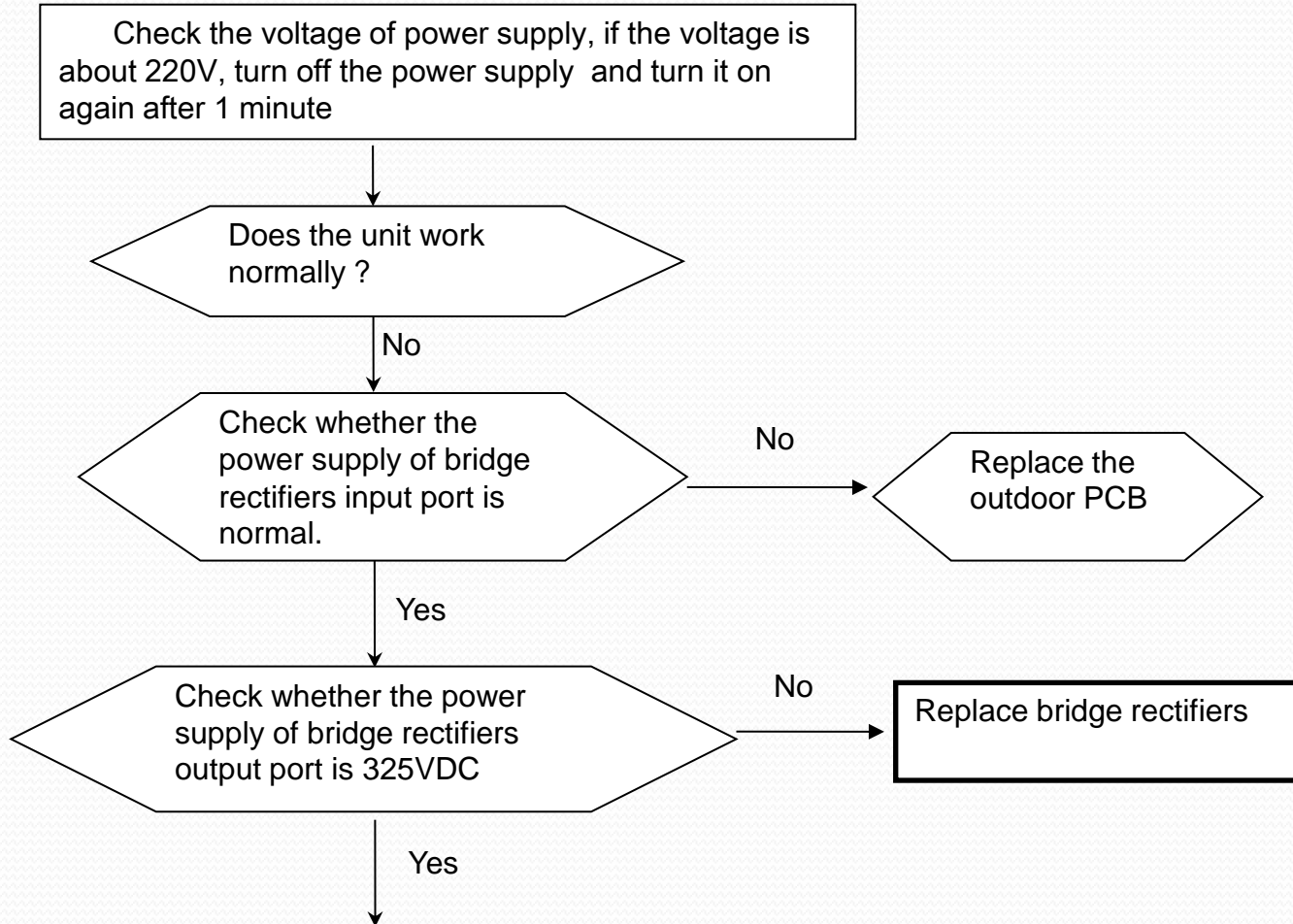


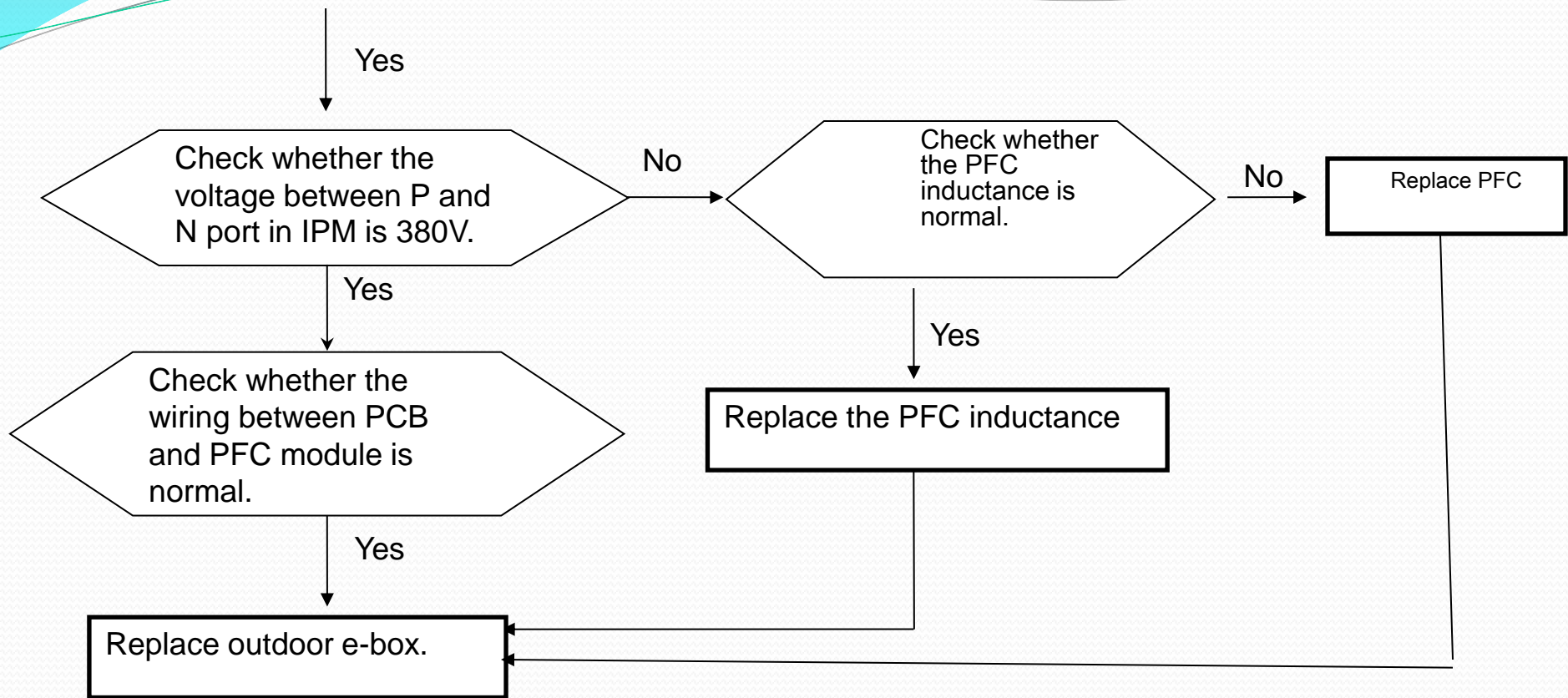
Outdoor unit display	LED STATUS
P6	Condenser high-temperature protection

When outdoor pipe temp. is more than 65° C, the unit will stop, and unit runs again when outdoor pipe temp. less than 52° C.



Outdoor unit display	LED STATUS
PF	PFC module protection

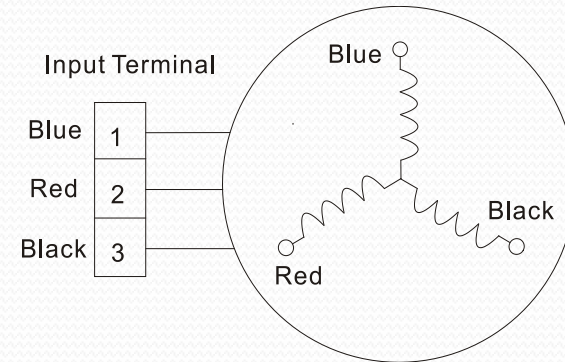




Key Components

Compressor

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



Model	Compressor	Winding Resistance (20°C)
POM 273 HX	DA150S1C-20FZ	0.95
POM 365 HX	TNB306FPGMC-L	0.53

Fan Motor

Model	IU Motor	Main winding	Aux. winding
PWM 093HX Indoor Unit	RPG20B	342	253
PWM 123HX Indoor Unit	RPG20B	342	253
PWM 183HX Indoor Unit	RPG28H	183.6	206
POM 273HX Condenser	YDK53-6FB	56	76
POM 365 HX Condenser	YDK180-8GB	24.5	19