R32 Smart Green One Heat Pump Troubleshooting



Error Codes List

NO.	Code	Description
1	P01	Over current Protection
2	P02	Compressor phase current overload protection
3	P03	IPM module protection
4	P05	High pressure switch protection
5	P06	High pressure overpressure protection
6	P07	Initial power-up preheat protection
7	P08	High discharge temperature protection
8	P09	Outdoor coil over-temperature protection
9	P10	Input voltage over-under-voltage protection (only for single-phase units)
10	P11	Ambient temperature over range shutdown protection
11	P18	Low pressure protection
12	P28	Sterilization failure
13	F01	Outdoor ambient temp. sensor failure
14	F02	Outdoor coil temp. sensor failure
15	F03	Compressor discharge temp. sensor failure
16	F04	Compressor suction temp. sensor failure
17	F05	Low pressure sensor failure
18	F06	High pressure sensor failure
19	F07	High pressure switch failure
20	F09	DC fan motor A failure
21	F10	DC fan motor B failure
22	F11	Low pressure failure
23	F12	High pressure failure
24	F13	Room temp. sensor failure
25	F14	Hot water temp. sensor failure
26	F15	TC (heating/cooling) water temp. sensor failure
27	F16	Water outlet temp. sensor failure
28	F17	Water inlet temp. sensor failure

Error Codes List

NO.	Code	Description
29	F18	Indoor coil temp. sensor failure
30	F21	3-way valve mixing temp. sensor 1 failure
31	F22	3-way valve mixing temp. sensor 2 failure
32	F27	Indoor EEPROM failure
33	F28	Water pump PWM signal failure
34	F29	Mixing valve 1 failure
35	F30	Mixing valve 2 failure
36	E02	Outdoor main PCB and driver PCB communication failure
37	E03	Compressor phase current reading failur
38	E04	Compressor phase current overload protection
39	E05	Compressor driver failure
40	E06	Driver PCB VDC too high/low voltage failure
41	E07	Input current protection (main control logic protection)
42	E08	EEPROM failure
43	S01	Cooling anti-freezing protection
44	S02	Water flow switch protection
45	S03	Water flow switch failure
46	S04	Indoor unit communication failure
47	S05	Outdoor unit communication failure
48	S06	Cooling outlet water temp. too low protection
49	S07	Heating/DHW outlet water temp. too high protection
50	S08	Defrost three-time failure
51	S09	Defrost outlet water temp. too low protection
52	S10	Water flow switch failure
53	S11	Cooling anti-freeze failure
54	S12	Floor preheating failure
55	S13	4-way valve failure
56	S14	3-way valve failure

Interpretation of Some Parameter Codes

No.	Code	Description
1	Tuo	Water outlet temp.
2	Tui	Water inlet temp.
3	Tup	Indoor coil temp.
4	Tp	Outdoor coil temp.
5	Ta	Ambient temp.
6	Ts	Compressor suction temp.
7	Td	Compressor discharge temp.
8	Ps	Low pressure
9	Pd	High pressure
10	Tc	Heating/Cooling temp.
11	Tw	DHW temp.
12	Tv1	Mixing circuit 1 temp.
13	Tv2	Mixing circuit 2 temp.
14	TR	Room temp.

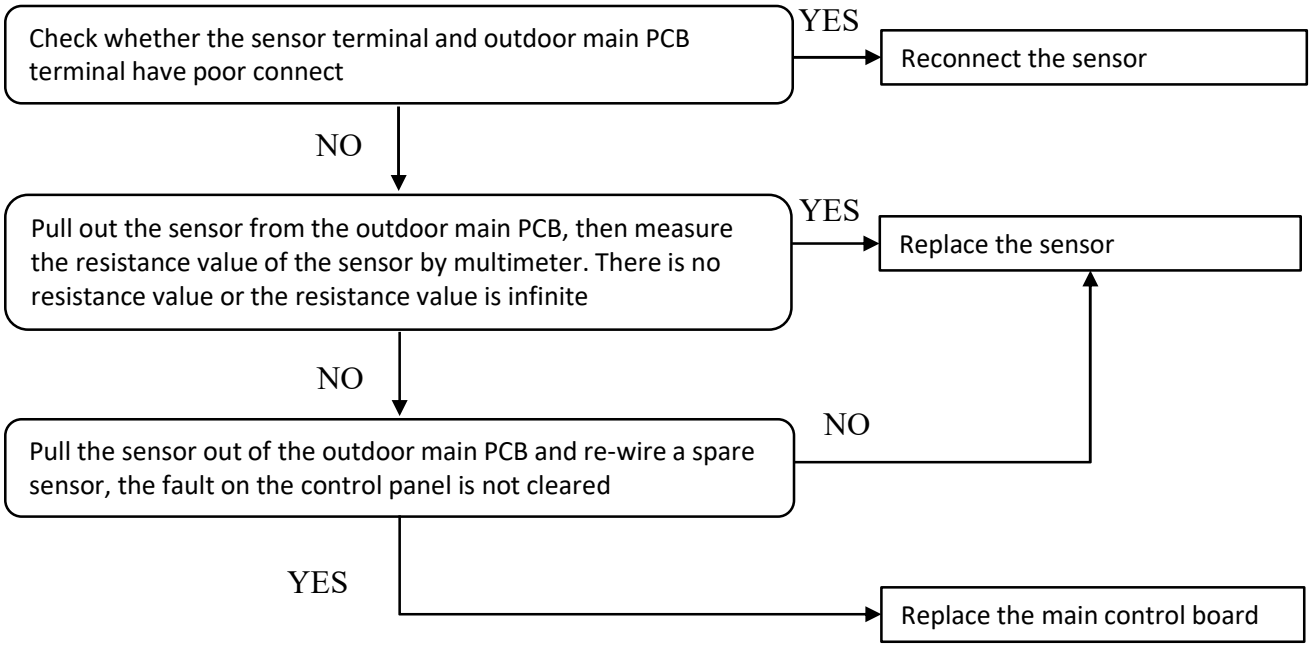
F01 Outdoor ambient temp. sensor failure

1.Error definition:

When the outdoor main PCB detects a short circuit or disconnection of the ambient temp. sensor port, the unit reports a fault and shuts down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault



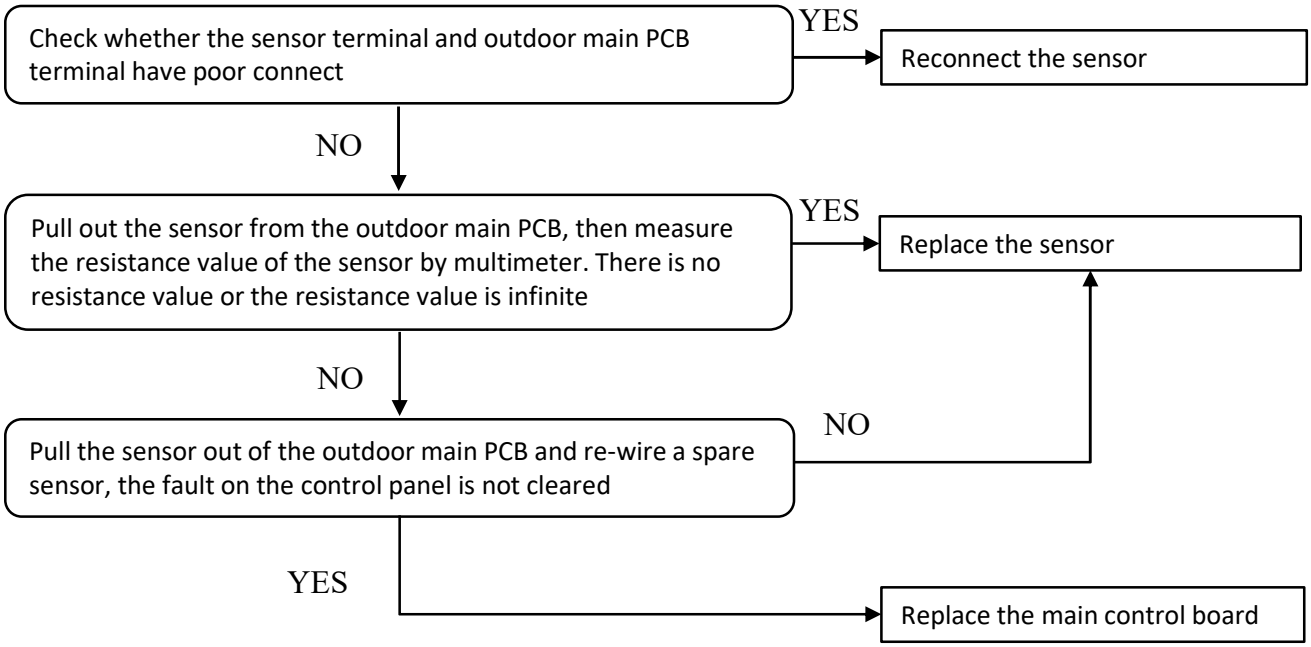
F02 Outdoor coil temp. sensor failure

1.Error definition:

When the outdoor main PCB detects a short circuit or disconnection of the outdoor coil temp. sensor port, the unit reports a fault and shuts down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault



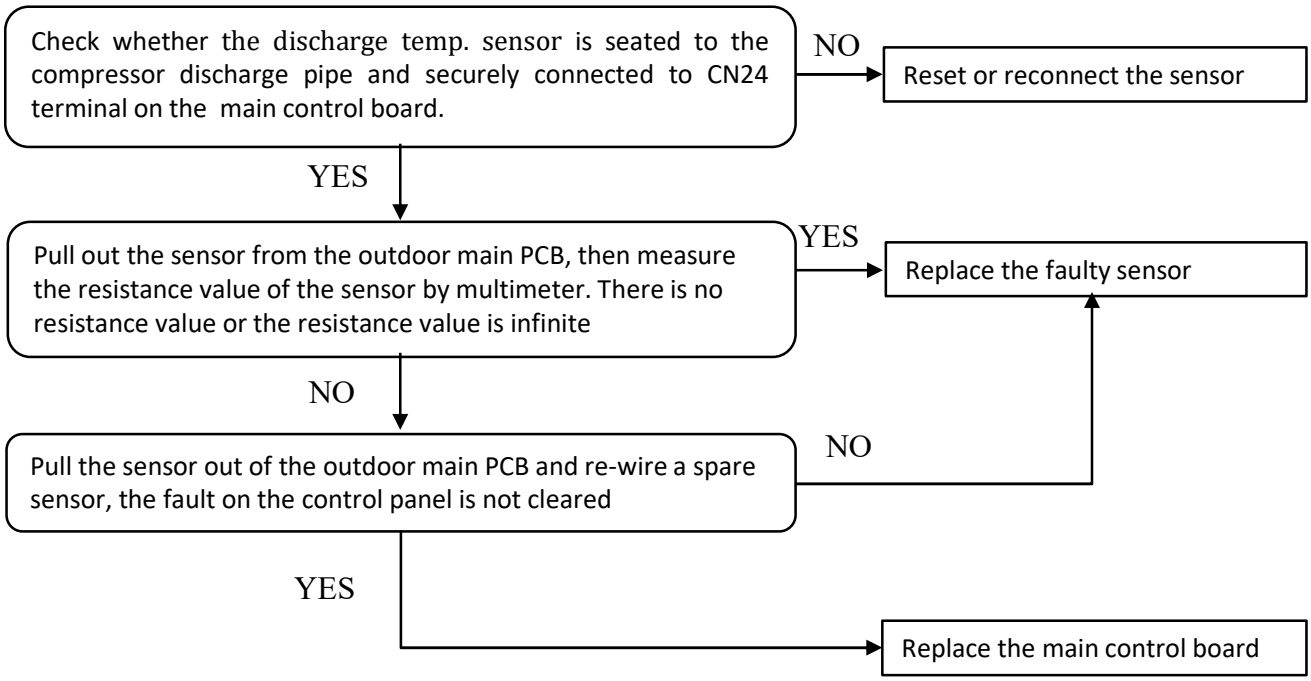
F03 Compressor discharge temp. sensor failure

1.Error definition:

When the outdoor main PCB detects a short circuit of the discharge temp. sensor or after compressor switching on 10min, detect a broken of discharge temp. sensor, the unit reports a fault and shuts down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- Loosening or falling off of the sensor probe



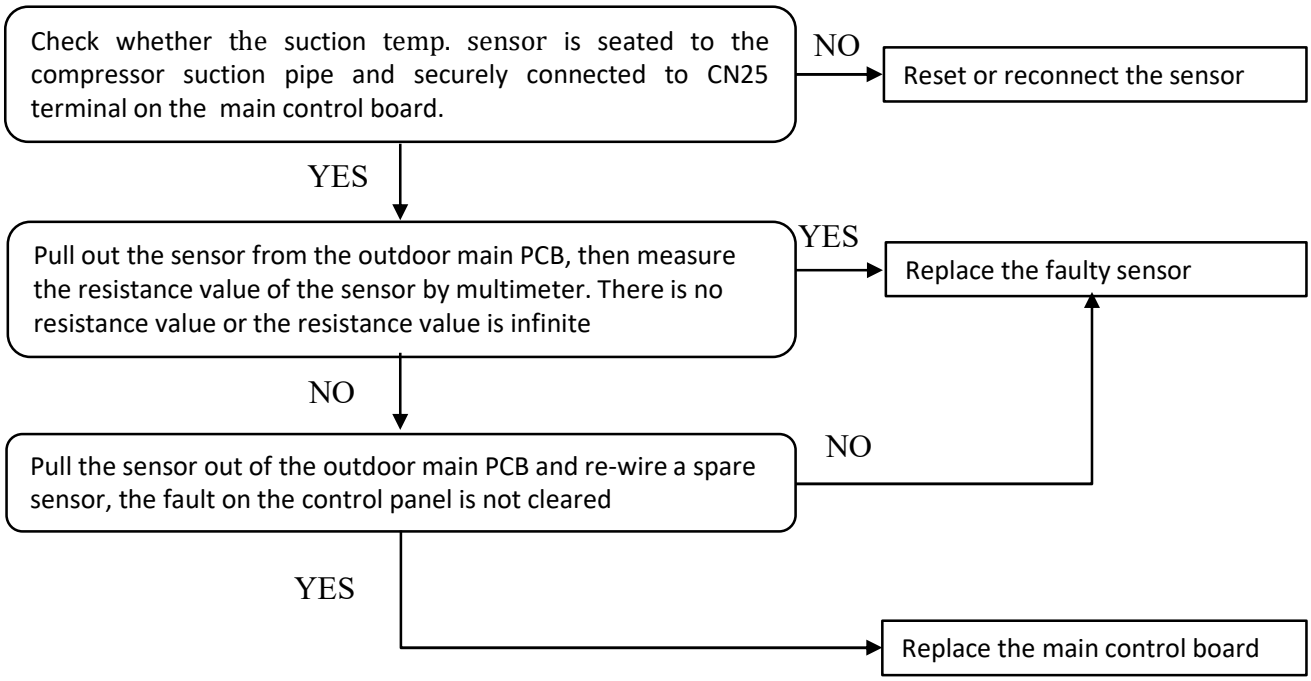
F04 Compressor suction temp. sensor failure

1.Error definition:

When the outdoor main PCB detects a short circuit of the suction temp. sensor or after compressor switching on 10min, detect a broken of discharge temp. sensor, the unit reports a fault and shuts down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- Loosening or falling off of the sensor probe



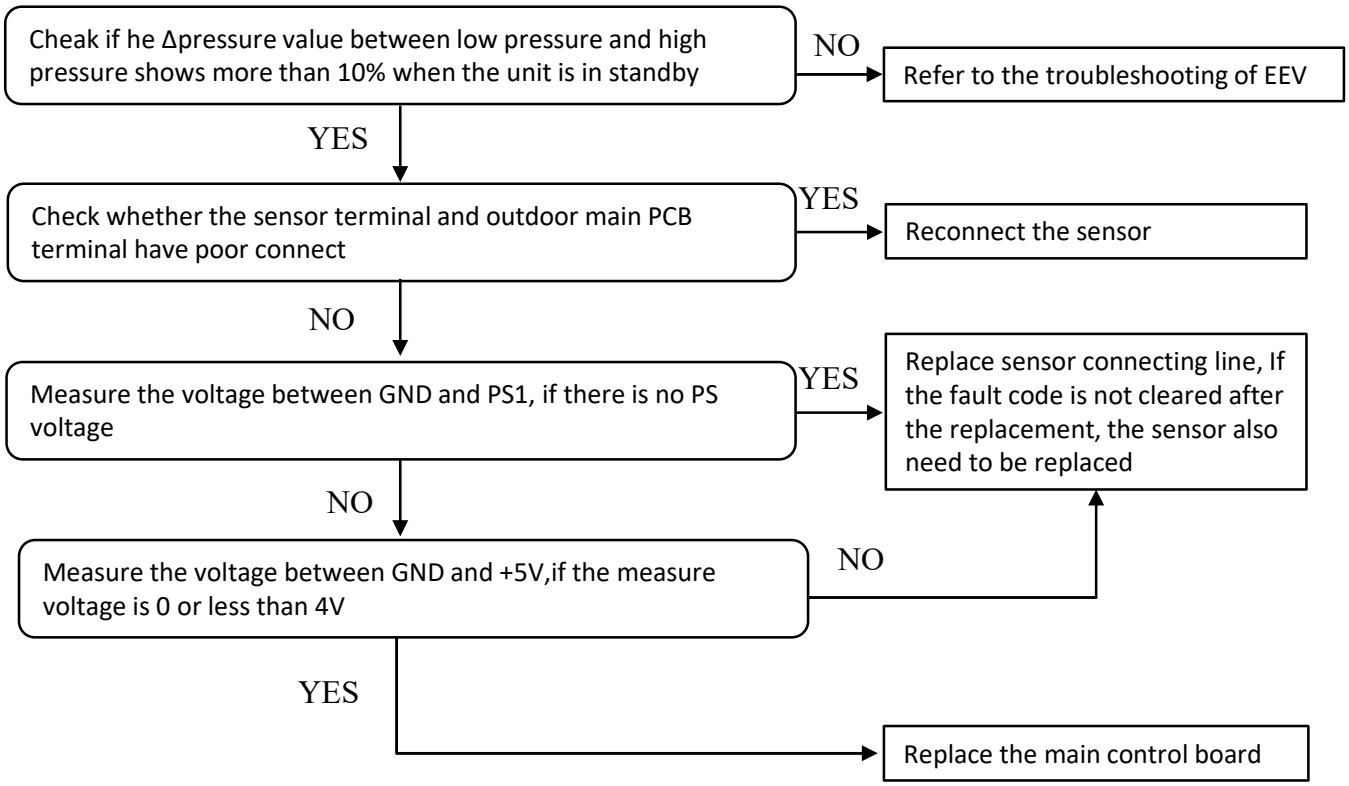
F05 Low pressure sensor failure

1.Error definition:

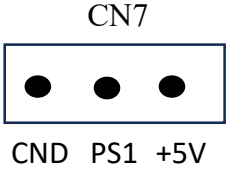
When the outdoor main PCB detects that the low pressure sensor is disconnected, the unit reports a fault and shuts down.

2.Possible causes:

- Loose connection at port on main control board
- Sensor fault
- Outdoor main PCB fault
- Disconnection in sensor intermediate wiring



NOTE: Terminal diagram for voltage measurement



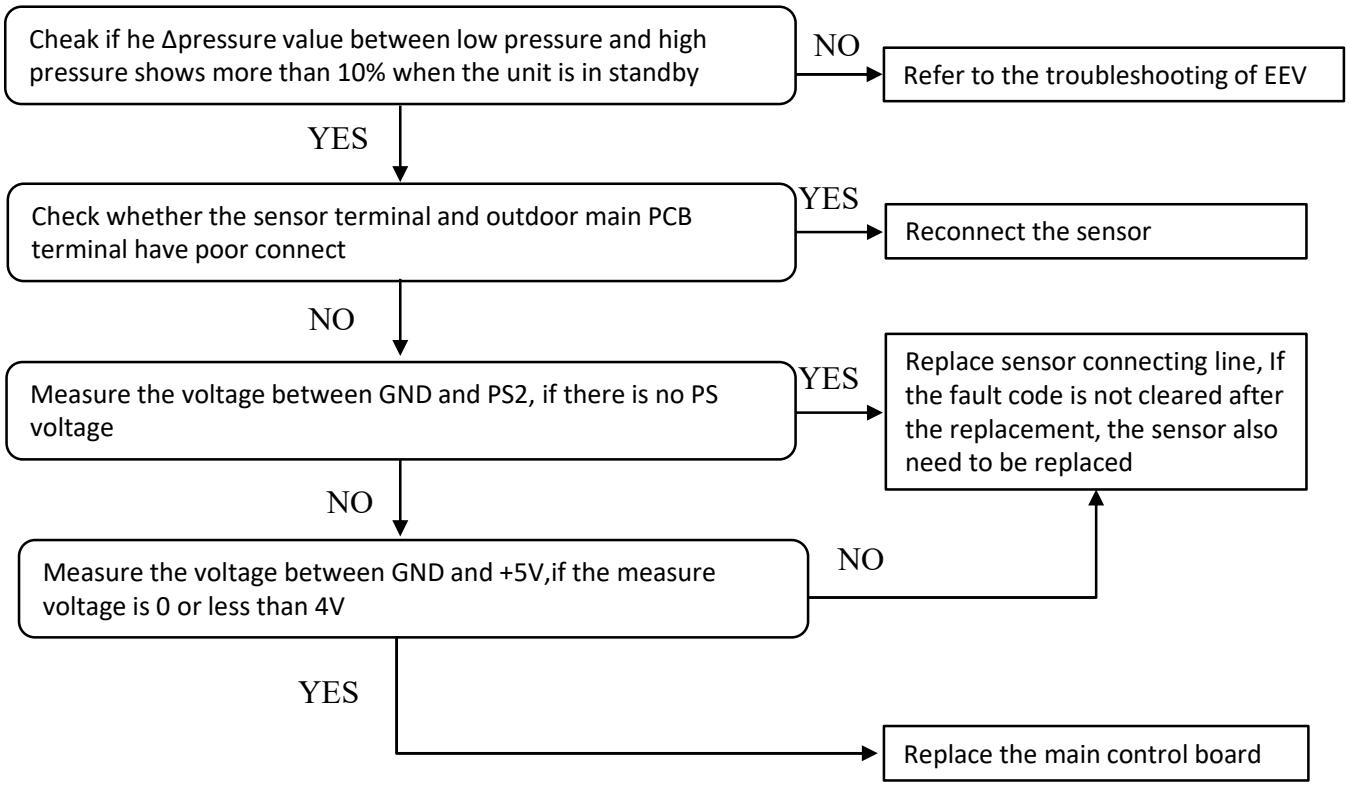
F06 High pressure sensor failure

1.Error definition:

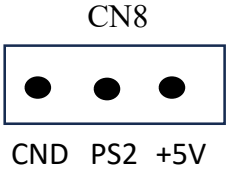
When the outdoor main PCB detects that thehigh pressure sensor is disconnected, the unit reports a fault and shuts down.

2.Possible causes:

- Loose connection at port on main control board
- Sensor fault
- Outdoor main PCB fault
- Disconnection in sensor intermediate wiring



NOTE: Terminal diagram for voltage measurement



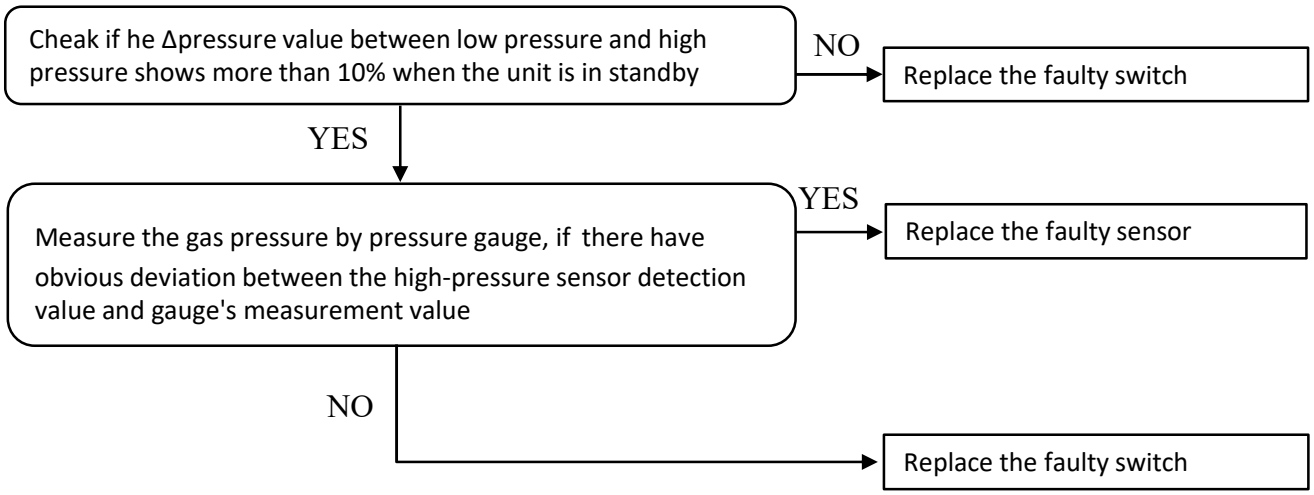
F07 High pressure switch failure

1.Error definition:

When the unit has 3 consecutive high pressure switch protections (P05) within 30 minutes, F07 will be reported and the unit will shut down, and the unit cannot be startup unless re-power.

2.Possible causes:

- Loose connection at port on main control board
- Switch fault
- Outdoor main PCB fault
- Disconnection in sensor intermediate wiring



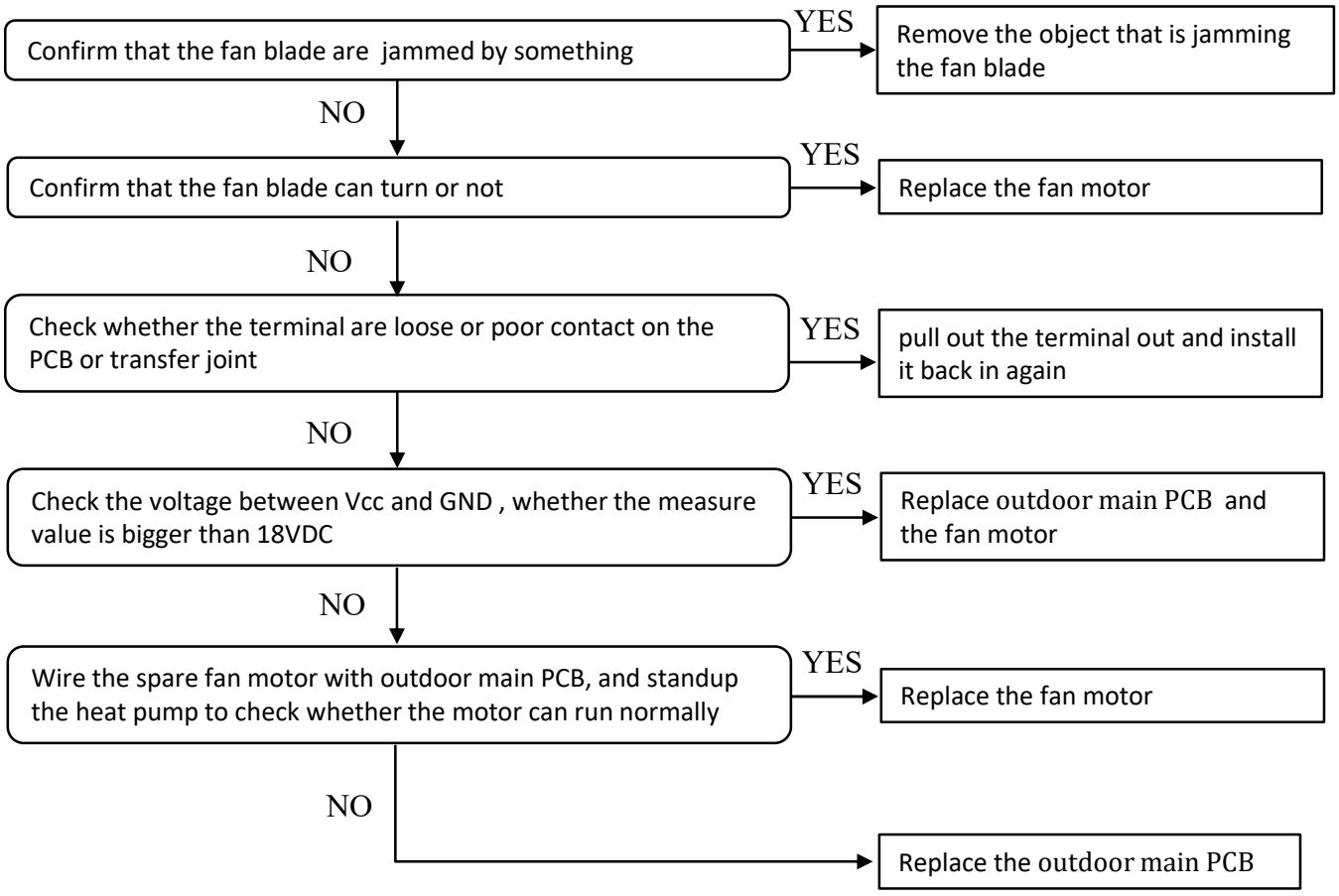
F09/F10 DC fan motor A failure/DC fan motor B failure

1.Error definition:

If the fan motor startup failed when the outdoor main PCB send fan's running command, the unit will report DC fan A failure or DC fan B failure , then the unit will keep running but compressor frequency will be limited.

2.Possible causes:

- Blade jammed
- Fan motor damaged
- Connecting wire disconnected or plugs loose
- Outdoor main PCB fault



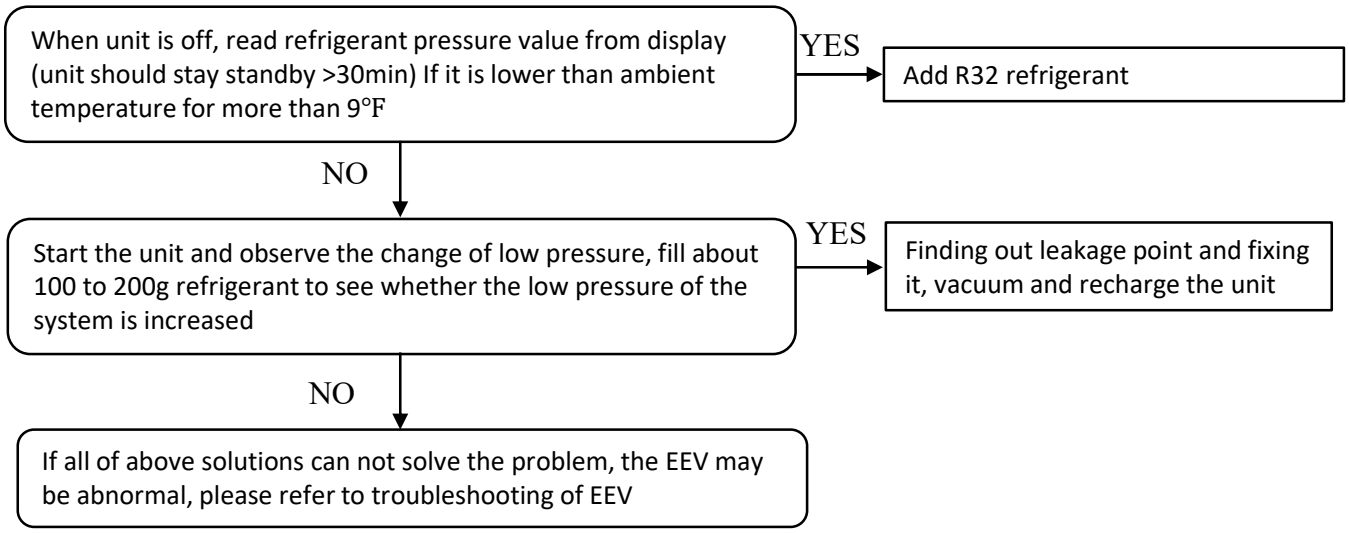
F11 Low pressure failure

1.Error definition:

Low pressure protection happens three times within 30min for P18. Unit stops and failure can only be cleared by repowering.

2.Possible causes:

- Insufficient refrigerant
- EEV is damaged
- Outdoor main PCB fault



F12 High pressure failure

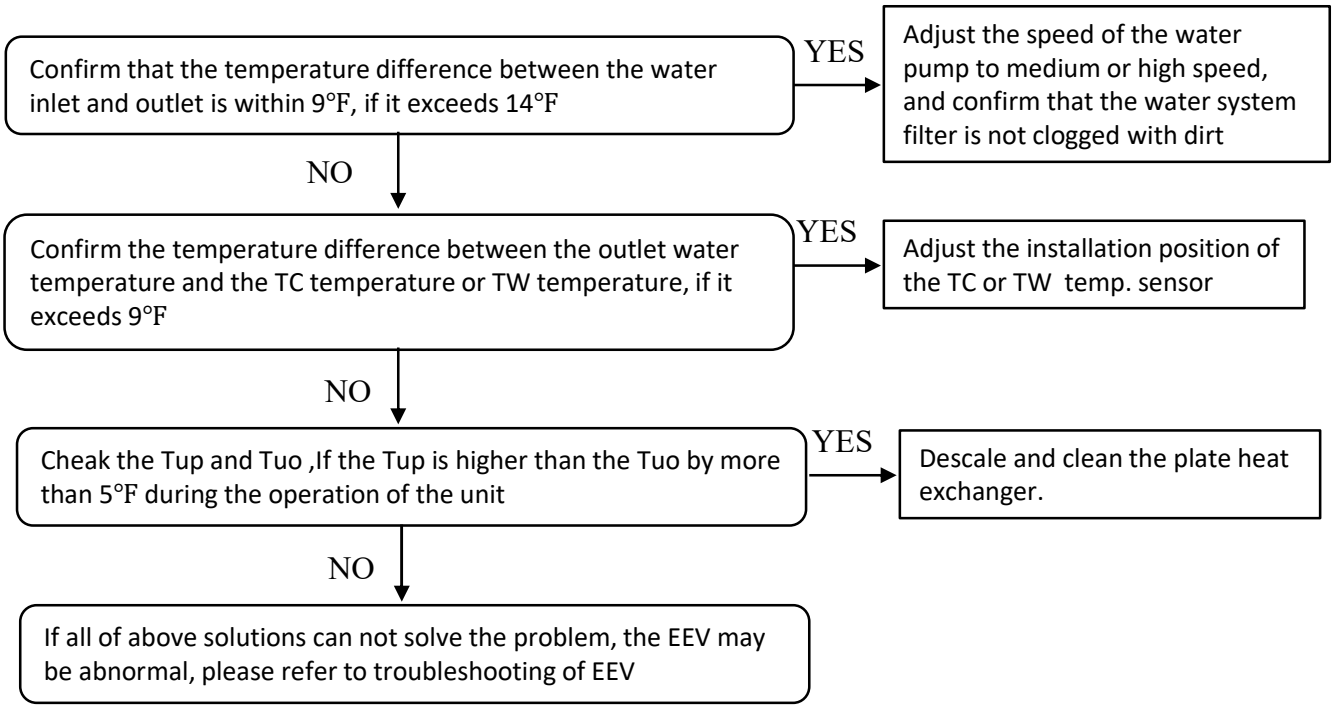
1.Error definition:

High pressure protection (P06) happens three times within 30min. Unit stops and failure can only be cleared by repowering.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation
- Sensor reading deviation

High pressure too high problem in heating mode:



NOTE: The above judgment regarding the unit temperature, please power down and restart the unit to allow the unit to run again, and make judgments during the operation process.

High pressure too high problem in cooling mode:

Check whether the evaporator of the outdoor unit is dirty andblocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring tothe unit, so that the hot air can be discharged in a timely manner.

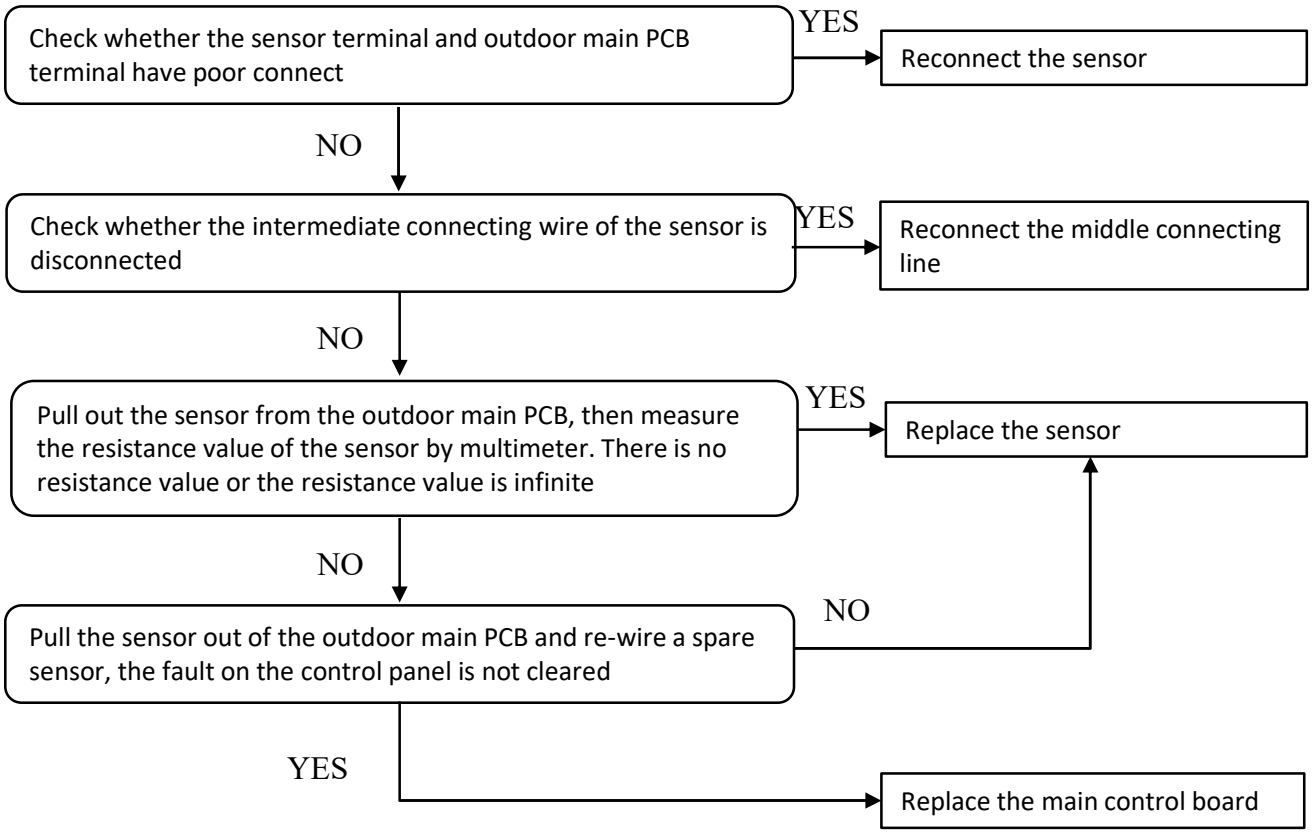
F13 Room temp. sensor failure

1.Error definition:

When the line controller is set to room temperature control mode or the room temperature curve fine-tuning function is active, and the room temperature sensor is detected to be disconnected or shorted, the unit will report a fault and be shut down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



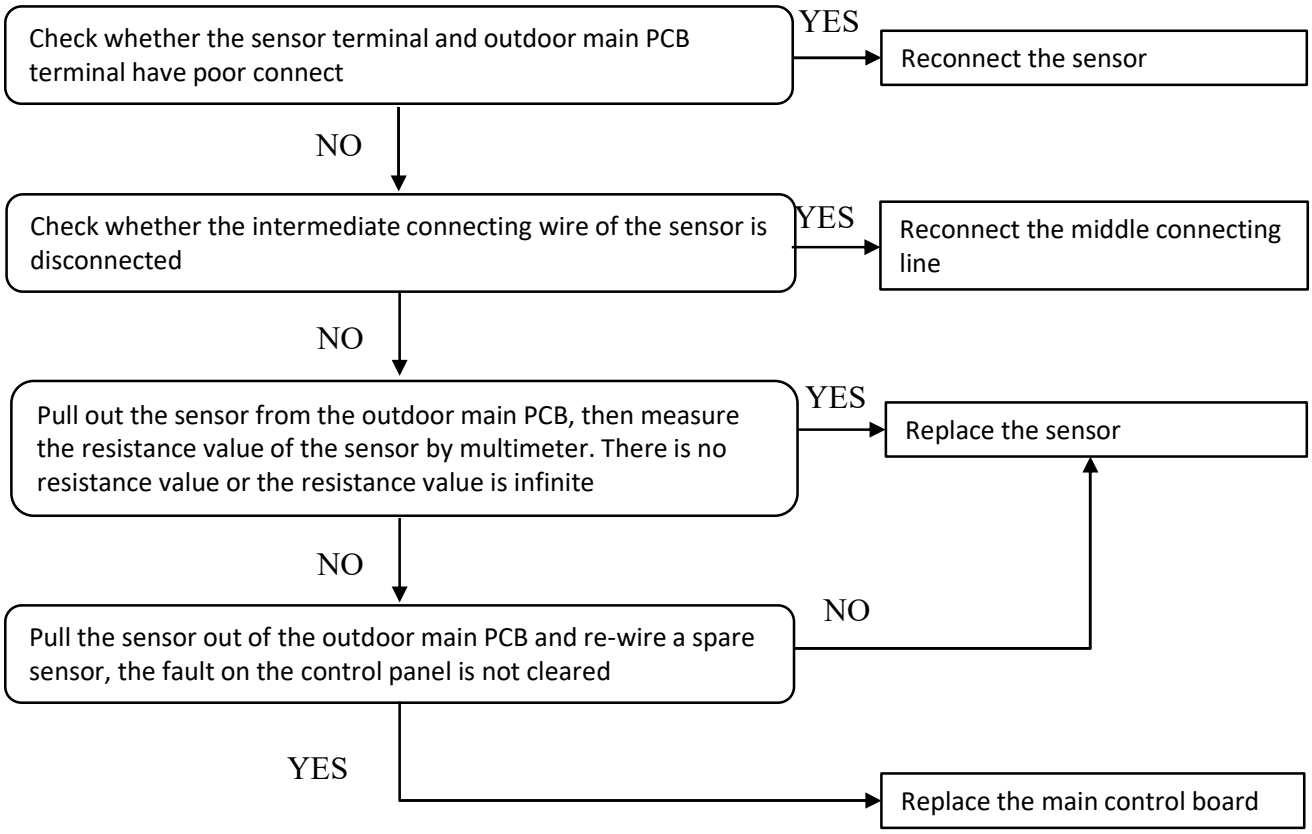
F14 Hot water temp. sensor failure

1.Error definition:

When the hot water mode is active, if a disconnected or shorted hot water temperature sensor is detected, the unit will report a fault and be shut down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



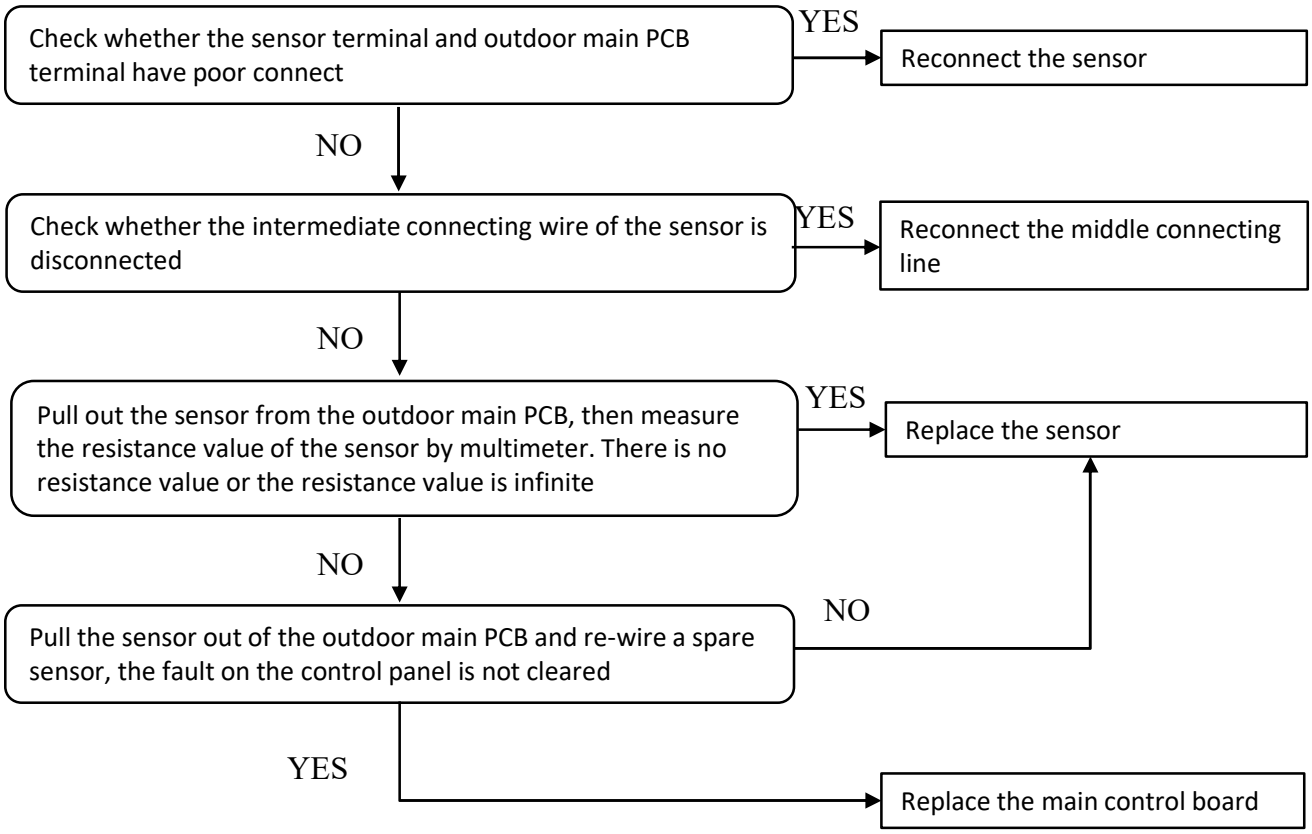
F15 TC (heating/cooling) water temp. sensor failure

1.Error definition:

When heating/cooling mode is active, if a disconnected or shorted TC sensor is detected, the unit will report a fault and be shut down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



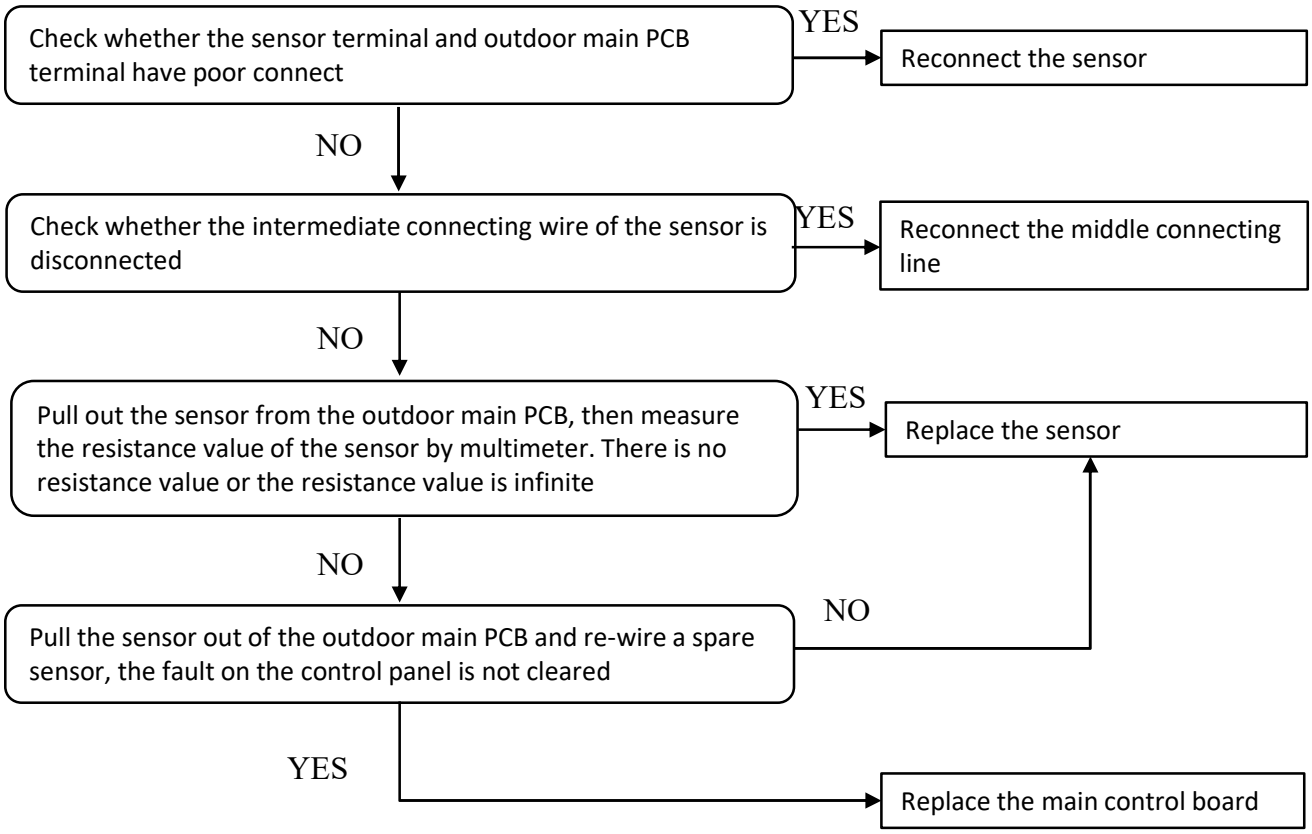
F16 Water outlet temp. sensor failure

1.Error definition:

When display detects that the water outlet temperature sensor is disconnected or shorted, it will report a failure but unit will not be shut down. Unit keeps working with water inlet temperature + stop ΔT as target temperature. If both the water inlet and outlet water temperature fails, it will be shut down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



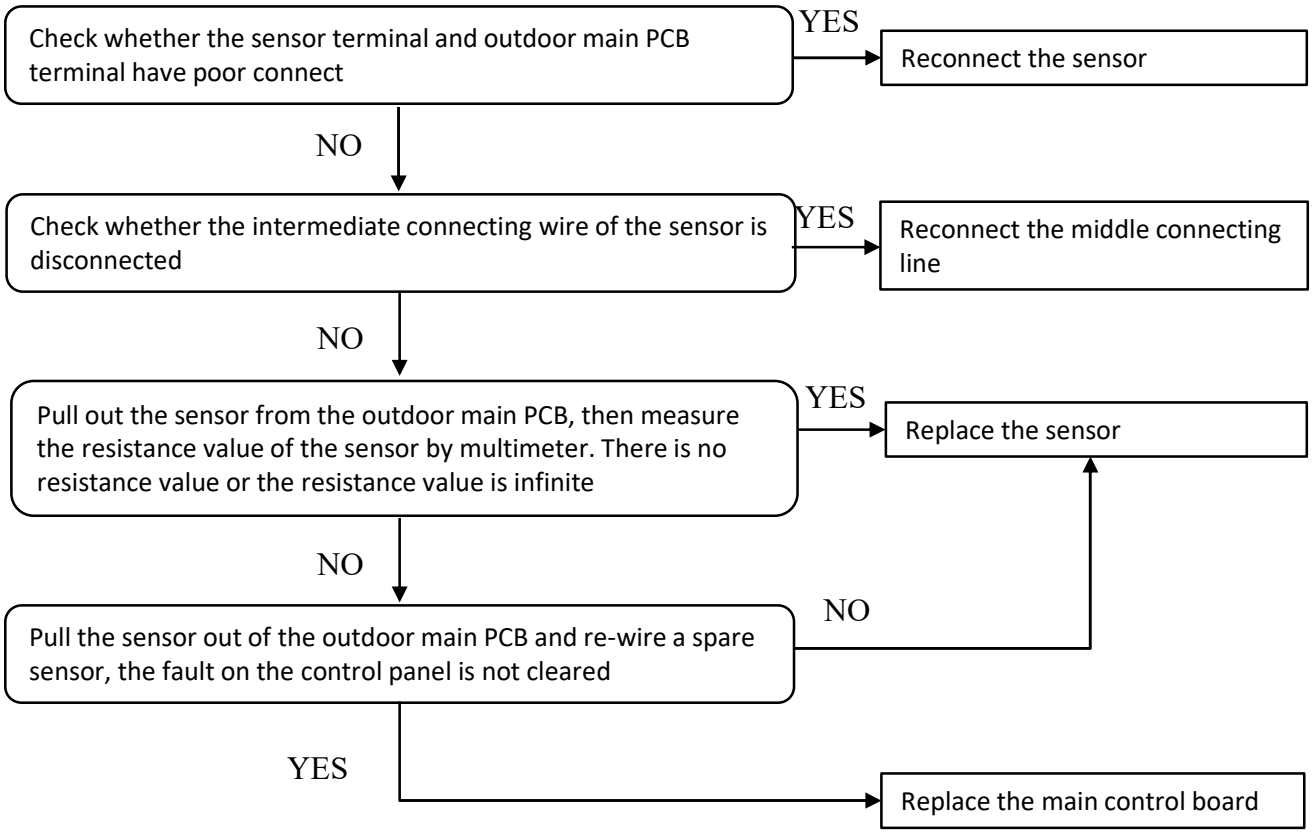
F17 Water inlet temp. sensor failure

1.Error definition:

When display detects that the water outlet temperature sensor is disconnected or shorted, it will report a failure but unit will not be shut down. Unit keeps working with water outlet temperature + stop ΔT as target temperature. If both the water inlet and outlet water temperature fails, it will be shut down.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



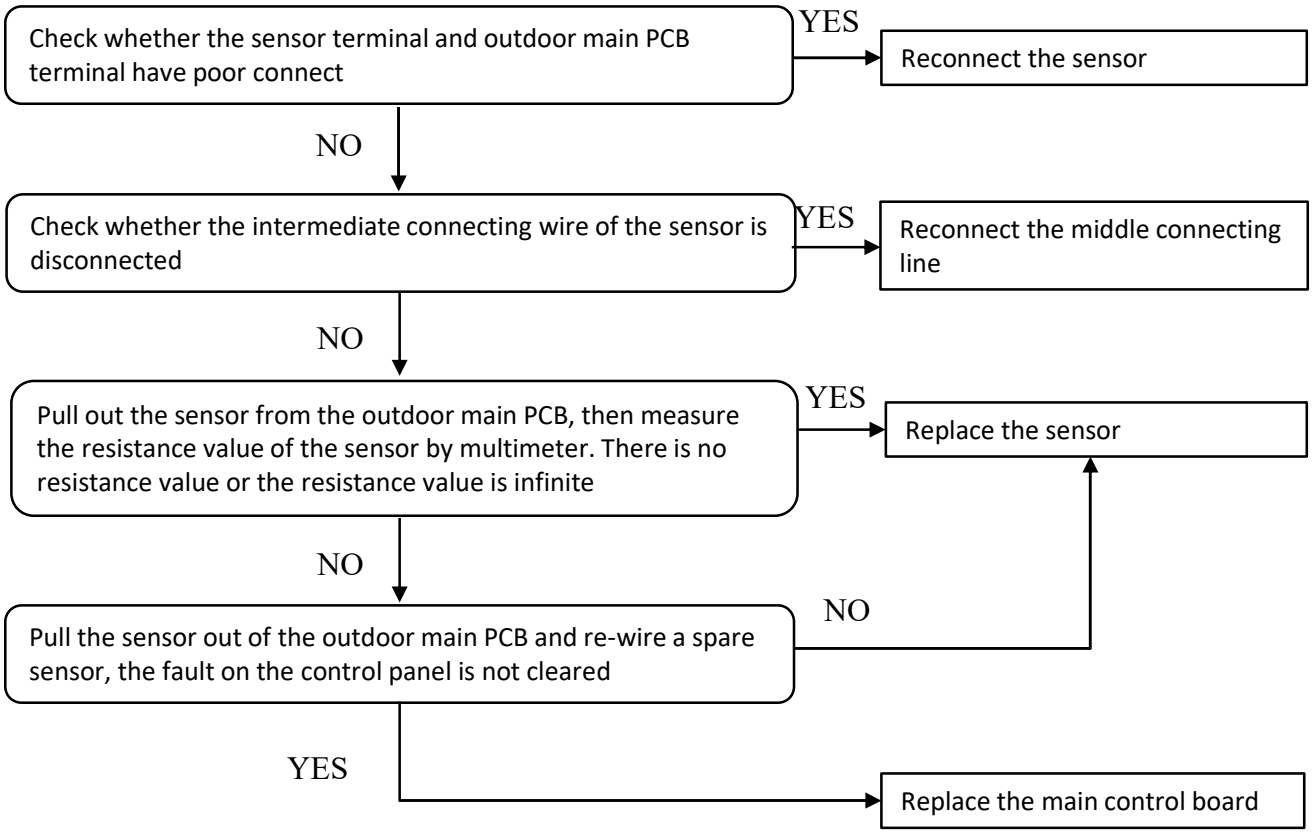
F18 Indoor coil temp. sensor failure

1.Error definition:

When cooling mode is active, if the indoor coil temperature sensor is detected to be disconnected or shorted, the unit will report a fault and be shut down. When heating mode or hot water mode is active, failure remains but unit will continue to run for heating or hot water.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



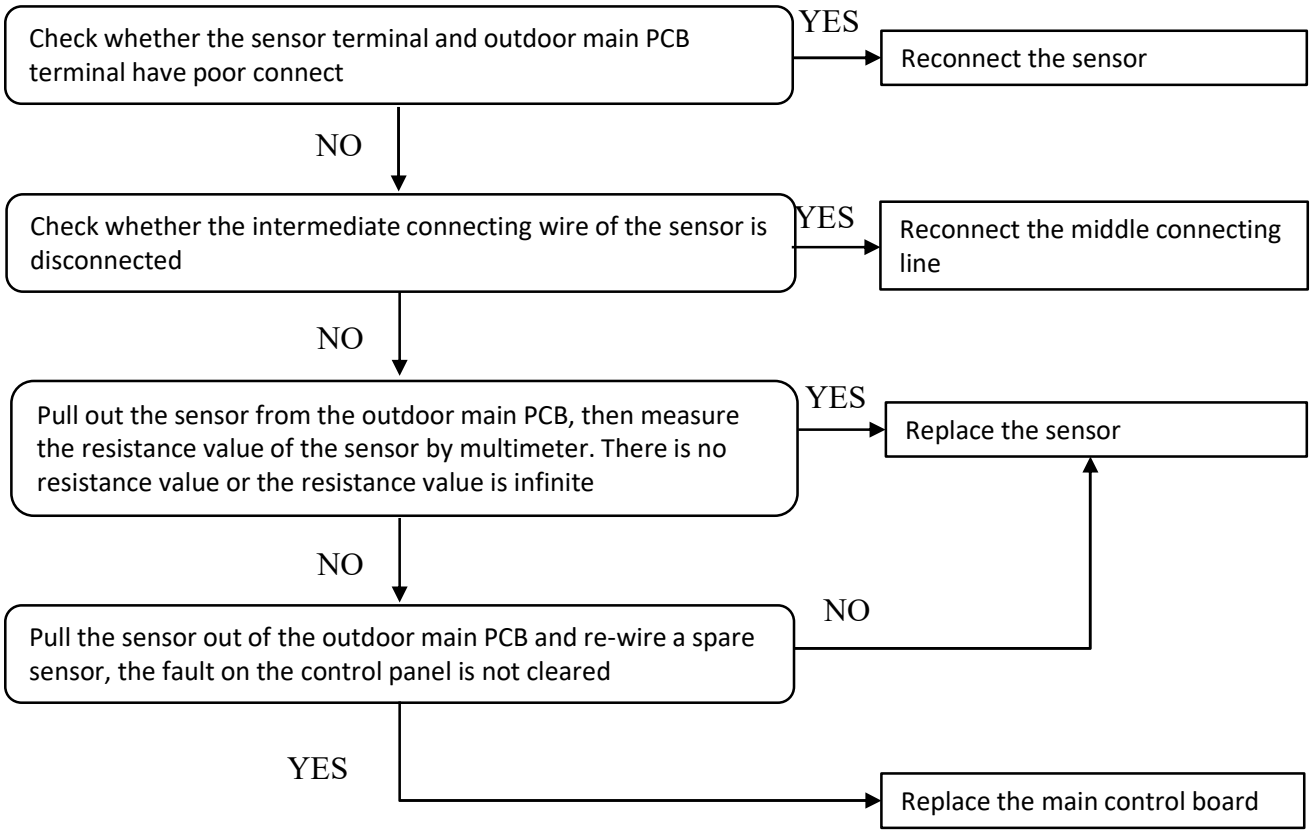
F21 3-way valve mixing temp. sensor 1 failure

1.Error definition:

When the mixing valve function is valid, if the mixing water temperature sensor 1 is detected to be disconnected or short circuit, F21 is reported, but the unit does not stop.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



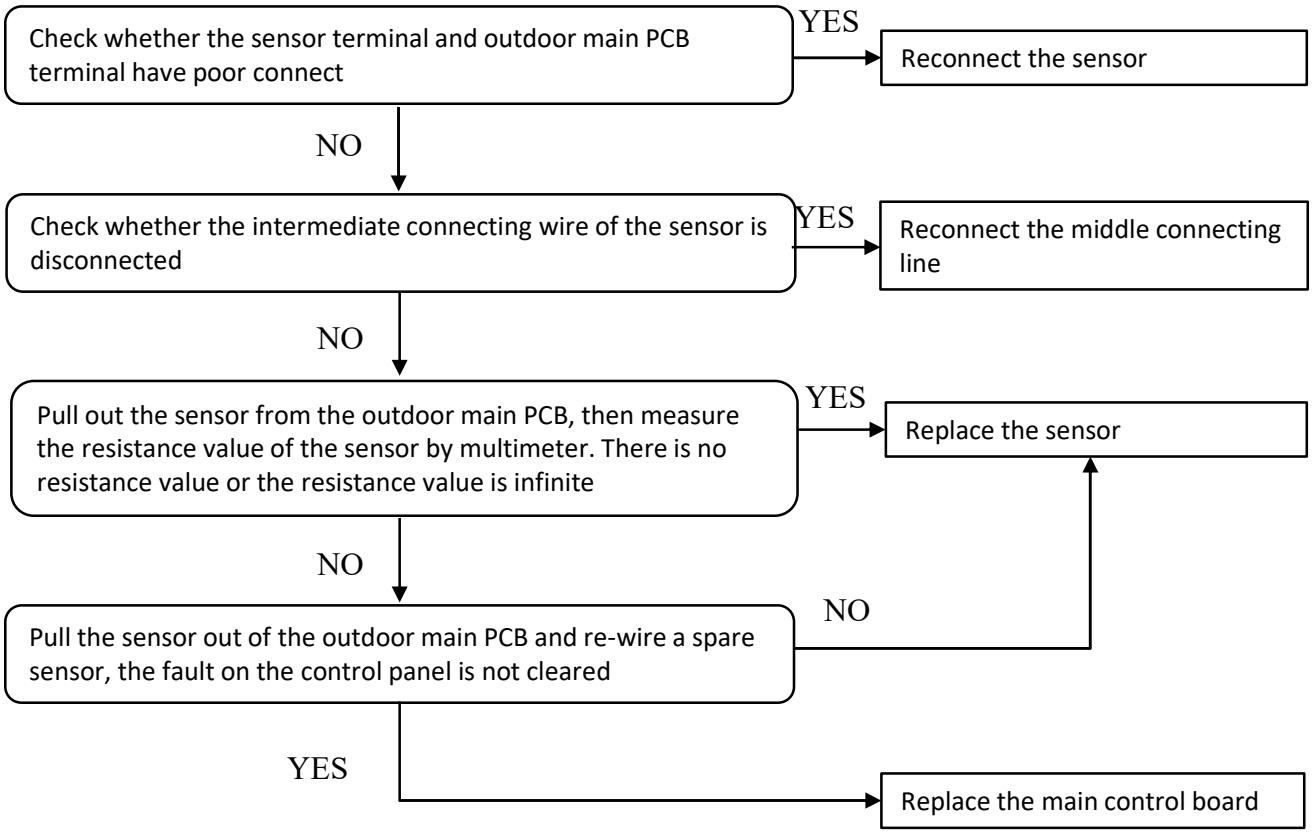
F22 3-way valve mixing temp. sensor 2 failure

1.Error definition:

When the mixing valve function is valid, if the mixing water temperature sensor 2 is detected to be disconnected or short circuit, F22 is reported, but the unit does not stop.

2.Possible causes:

- Poor connect
- Sensor fault
- Outdoor main PCB fault
- The middle connecting line is broken



F27 Indoor EEPROM failure

1.Error definition:
When the EEPROM data of the indoor main PCB cannot be read, F27 is reported and the unit is shut down.

2.Possible causes:
- Indoor main PCB fault

Solution: Power off and restart, if the fault still cannot be cleared after restarting, then replace the indoor main PCB

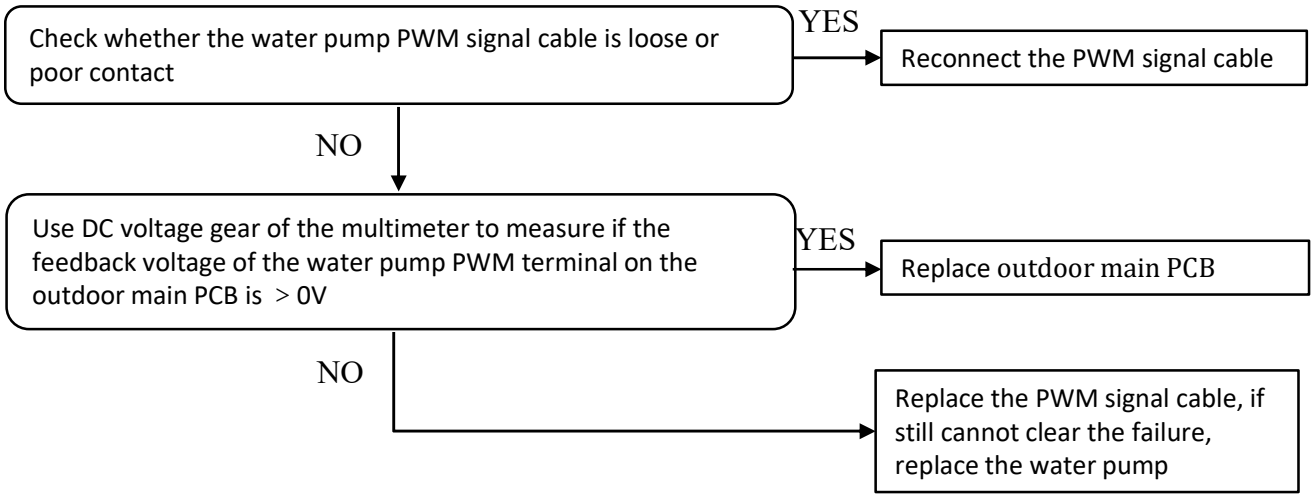
F28 Water pump PWM signal failure

1.Error definition:

When the P0 water pump is set to be controlled by PWM pump, if without feedback signal is detected after the water pump runs for 120 seconds, F28 is reported and the unit is shut down.

2.Possible causes:

- Water pump fault
- Outdoor main PCB fault
- Water pump signal wire disconnected or loose



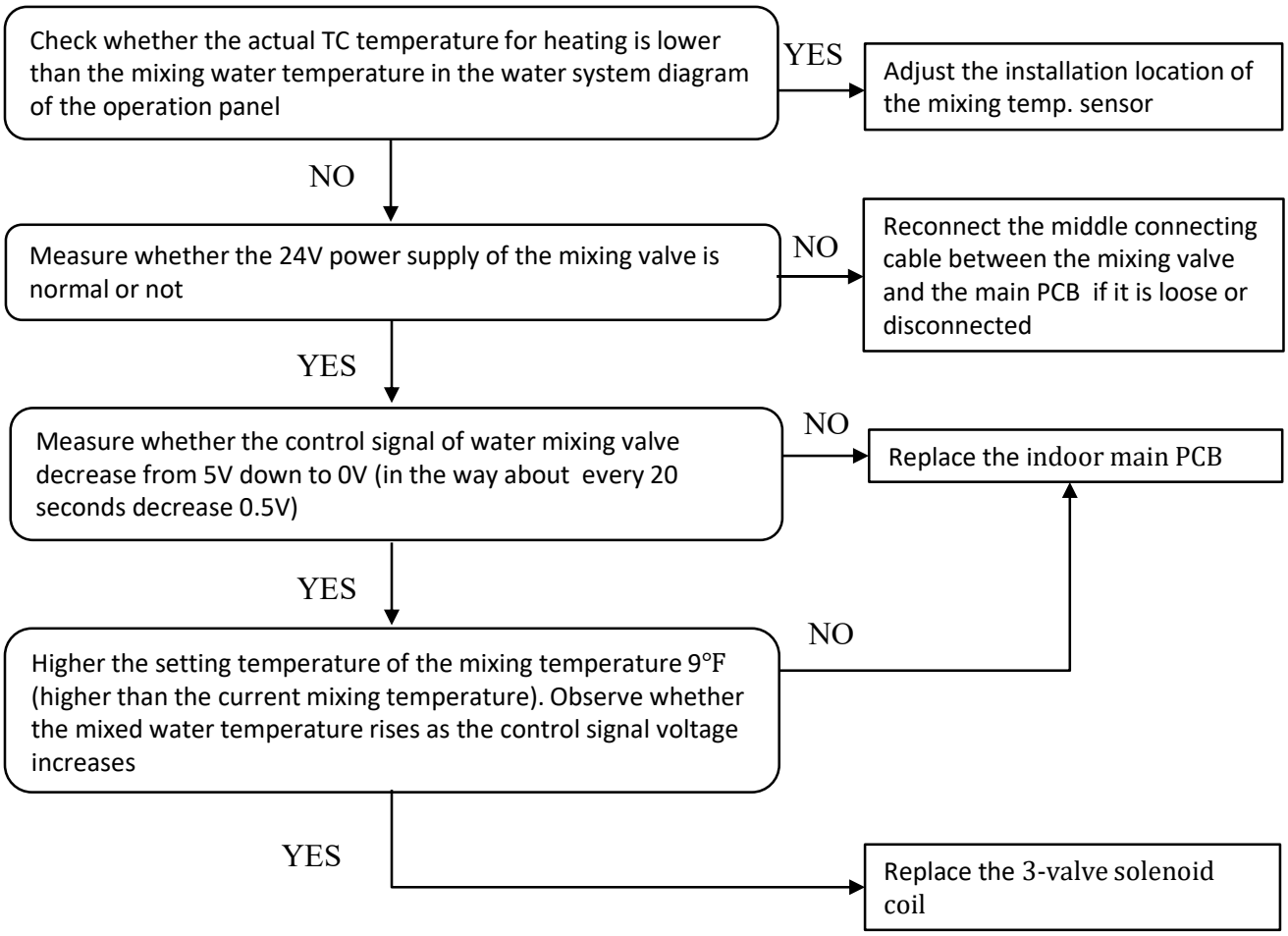
F29 Mixing valve 1 failure

1.Error definition:

When the mixing valve function is valid, in the heating mode, the mixing water temperature 1-set temperature is in system 1 > 7°F; or in the cooling mode, the mixing water temperature 1-set temperature in system 1 < 7°F, and the mixing valve is adjusted to 0V and keep for 10 minutes, then 3-way valve 1 failure is reported, the secondary water pump is shut down, but the heat pump will keep operating.

2.Possible causes:

- The middle connecting line is broken
- Indoor main PCB fault
- 3-valve solenoid coil fault
- 3-way valve fault



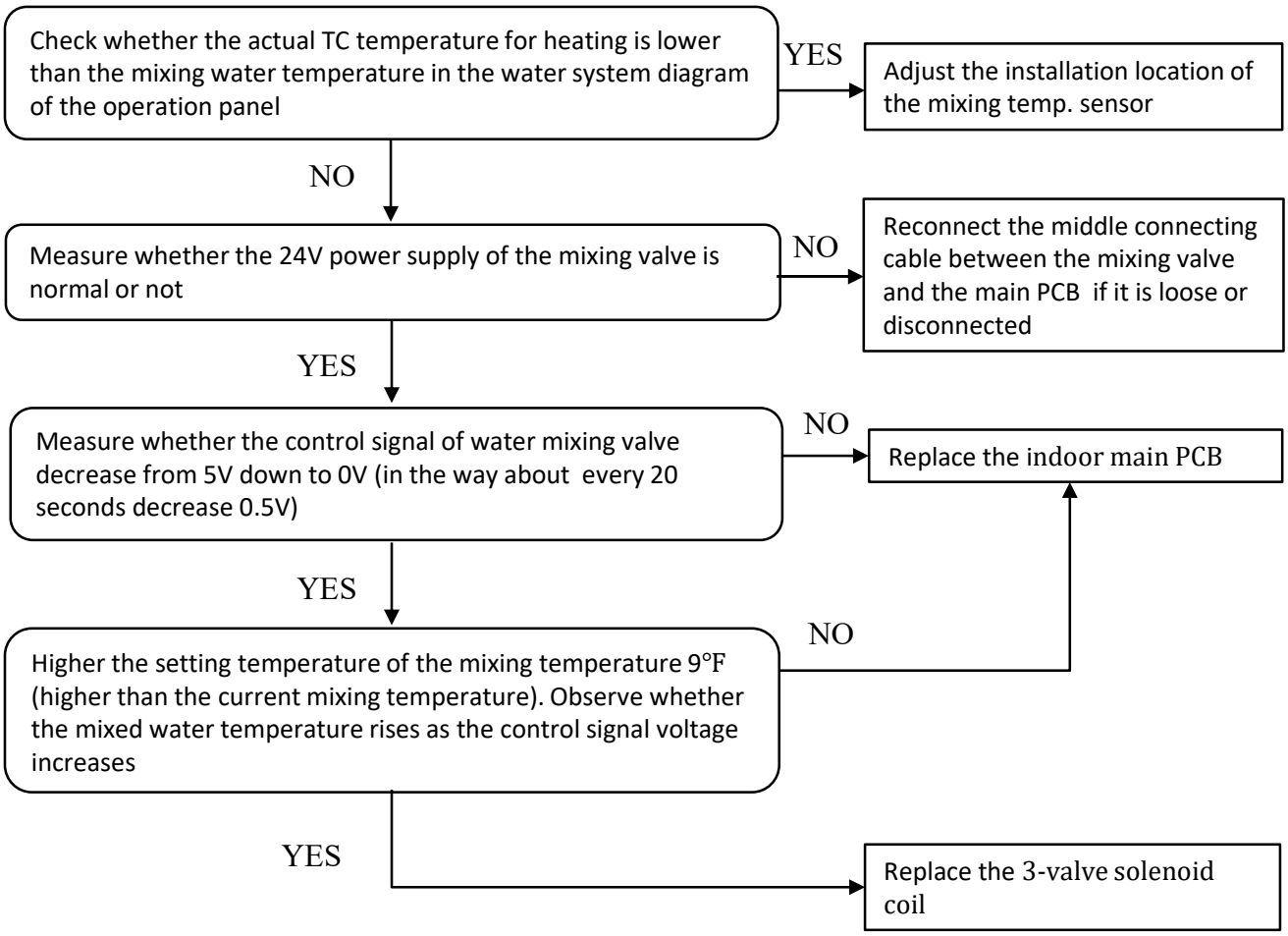
F30 Mixing valve 2 failure

1.Error definition:

When the mixing valve function is valid, in the heating mode, the mixing water temperature 2-set temperature is in system 2 > 7°F; or in the cooling mode, the mixing water temperature 2-set temperature in system 2 < 7°F, and the mixing valve is adjusted to 0V adn keep for 10 minutes, then 3-way valve 2 failure is reported, the secondary water pump is shut down, but the heat pump will keep operating.

2.Possible causes:

- The middle connecting line is broken
- Indoor main PCB fault
- 3-valve solenoid coil fault
- 3-way valve fault



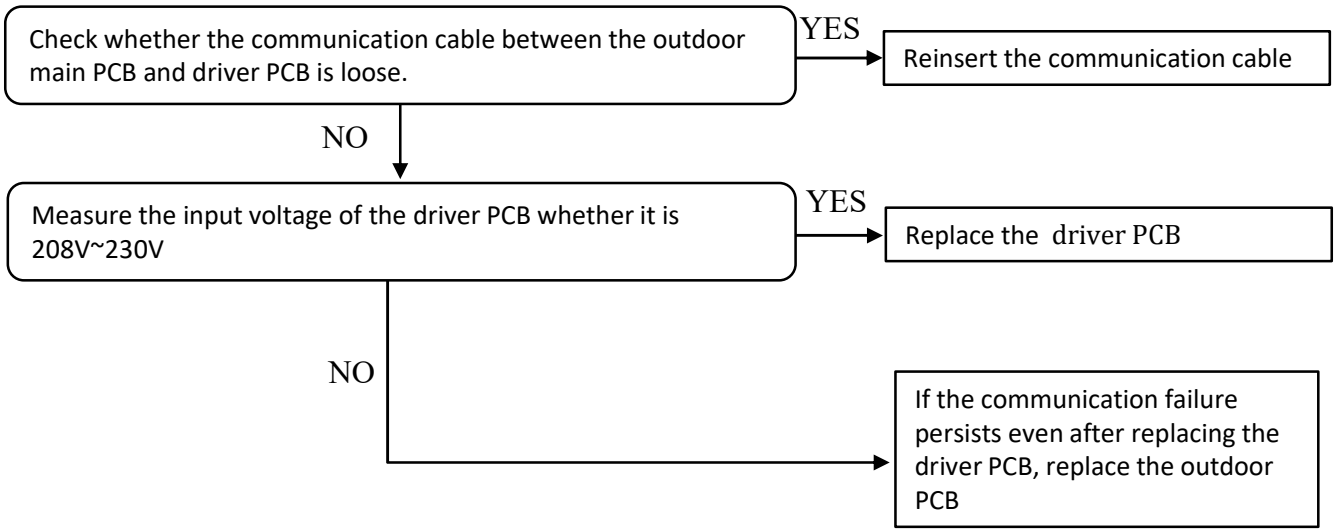
E02 Outdoor main PCB and driver PCB communication failure

1.Error definition:

When there is no communication between the outdoor main PCB and driver PCB for 30s, the outdoor main PCB will report a failure and unit will be shut down while the driver PCB will also stop working.

2.Possible causes:

- Outdoor PCB fault
- Connecting wire between the outdoor main PCB and the driver PCB disconnected or loose
- Driver PCB fault
- Driver PCB power supply abnormal



E03 Compressor phase current reading failure

1.Error definition:
Hardware Damage of driver PCB Compressor Phase Current Sampling Component.

2.Possible causes:
- Driver PCB fault

Solution: Power off and restart, if the fault still cannot be cleared after restarting, then replace the driver PCB

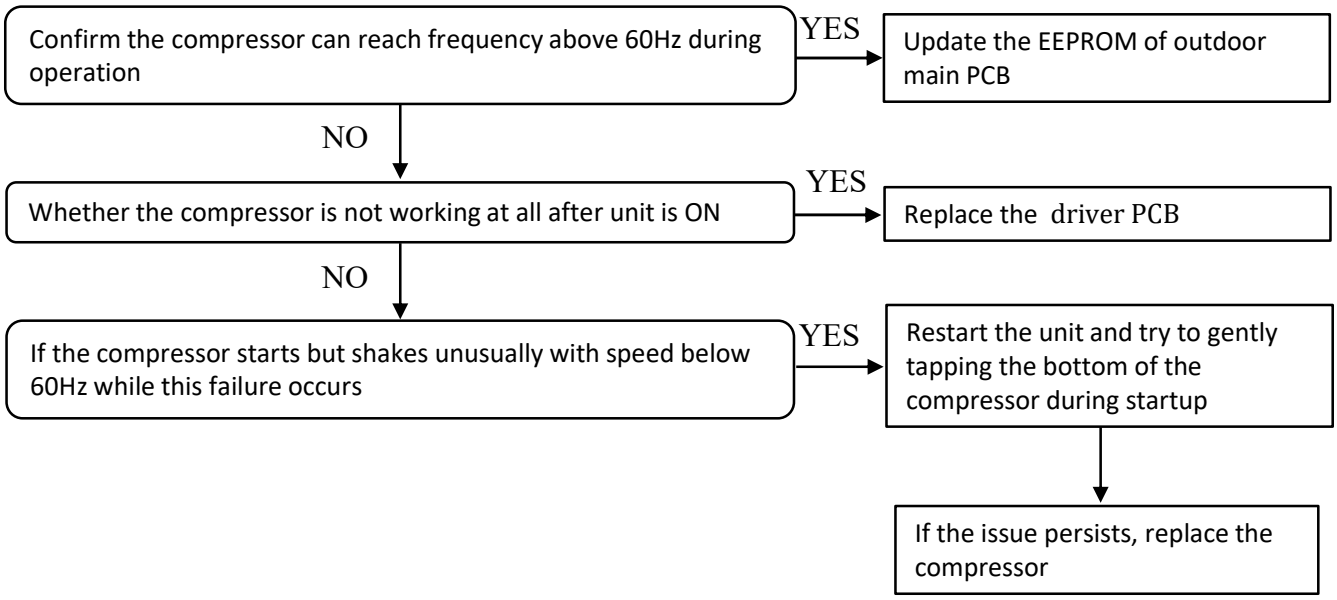
E04 Compressor phase current overload protection

1.Error definition:

When compressor is operating, if the current of the compressor is higher than the protection value of the driver, unit will report a failure and be shut down.

2.Possible causes:

- Compressor fault
- Driver PCB fault
- Supply voltage too high



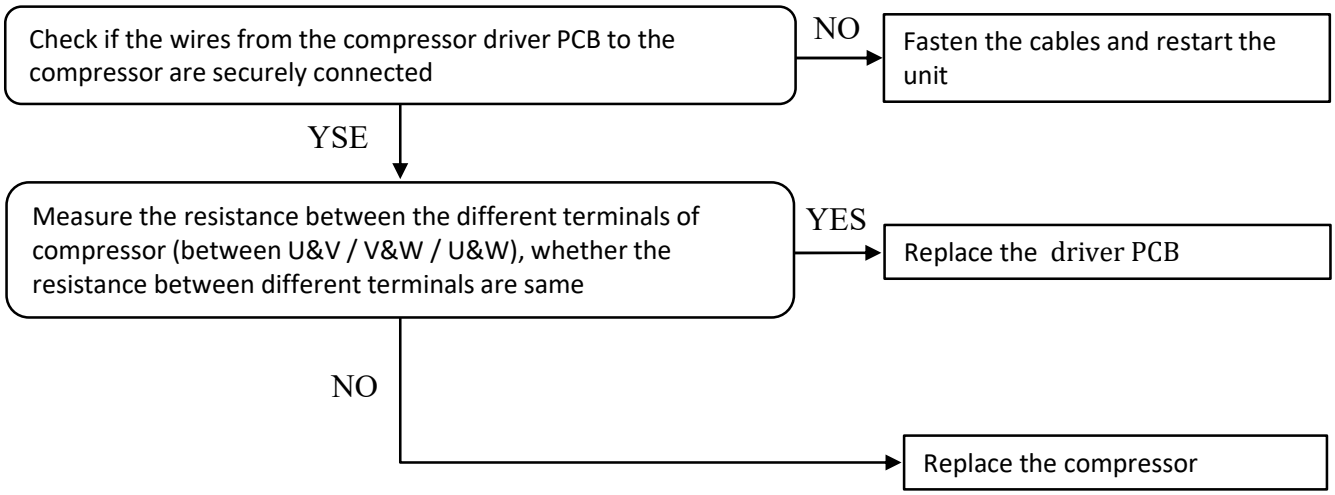
E05 Compressor driver failure

1.Error definition:

When the driver PCB fails to activate compressor, unit will report a failure and be shut down.

2.Possible causes:

- Compressor fault
- Driver PCB fault
- Compressor connecting wire loose



E06 Driver PCB VDC too high/low voltage failure

1.Error definition:
When the driver PCB detects an excessively high or low rectified DC voltage, drive PCB will stop working and the unit will be shut down.

2.Possible causes:
- Driver PCB fault
- Supply voltage too high or too low

Solution: Check if the voltage of the power is within normal range(160V-260V for single-phase), if the voltage is normal , power off and restart, if the fault still cannot be cleared after restarting, then replace the driver PCB

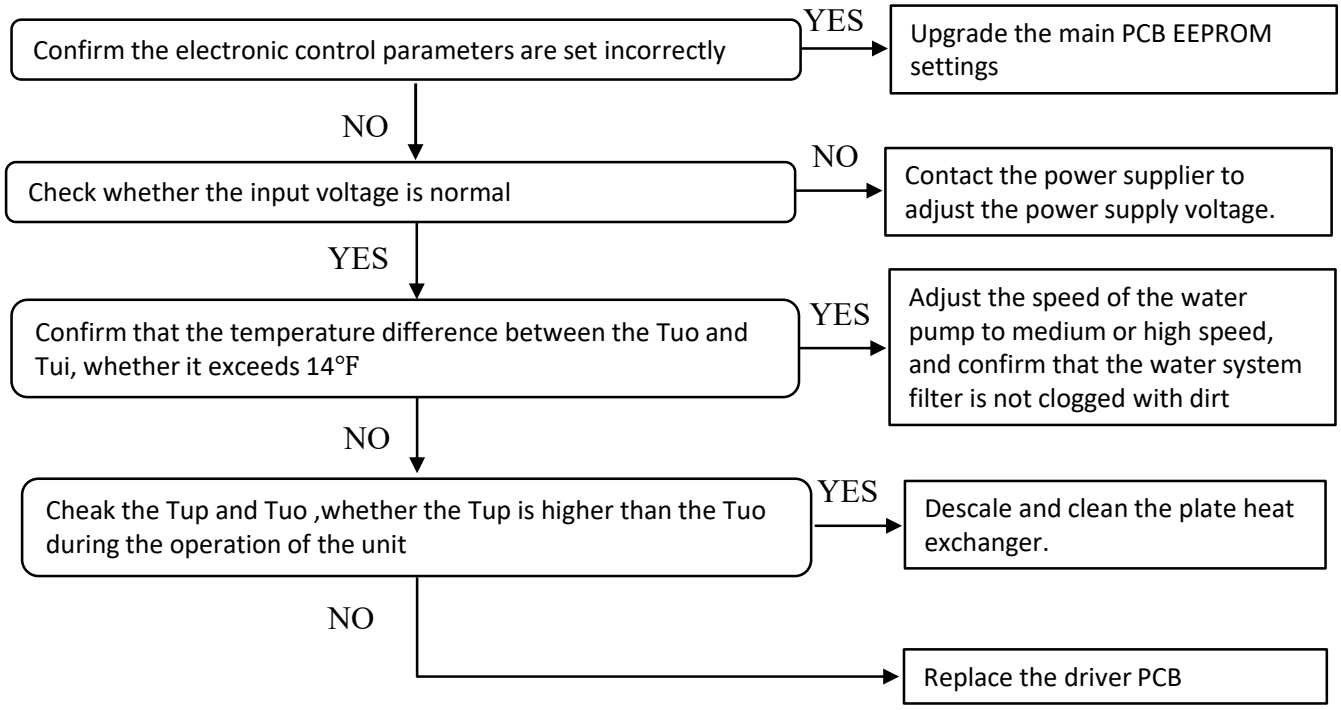
E07 Input current protection (main control logic protection)

1.Error definition:

1. If input current is over 4A when compressor is not working or input current is less than 1A when compressor is running at F4 or higher step, unit will report a failure and be shut shown.
2. During the operation of the compressor, if it is detected that the input current is greater than the current protection value of the corresponding model, it will report a fault and shut down.

2.Possible causes:

- Insufficient refrigerant
- Supply voltage too low



Over current protection in hot water mode:

Confirm whether the domestic water tank coil is too small (the minimum heat exchange area is 3㎡). If so, Turn on the hot water ECO mode to see if it can alleviate the heat exchange problem of the water tank. If not, replace the coil water tank with a larger coil area (at least 3㎡)

Over current protection in cooling mode:

1.Check whether the evaporator of the outdoor unit is dirty and blocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring to the unit, so that the hot air can be discharged in a timely manner.
2.Check whether the fan is running normally (whether the speed is low, such as below 500 rpm) or only one fan is running , if yes please refer to the handling of fan failure, check and replace the motor if needed. If the speed is low, contact the manufacturer for further investigation

E08 EEPROM failure

1.Error definition:
When the outdoor main PCB chip cannot read the parameters or there is a parameter verification error, unit will report a failure and be shut shown.

2.Possible causes:
- Outdoor main PCB fault

Solution: Power off and restart, if the fault still cannot be cleared after restarting, then replace the outdoor main PCB

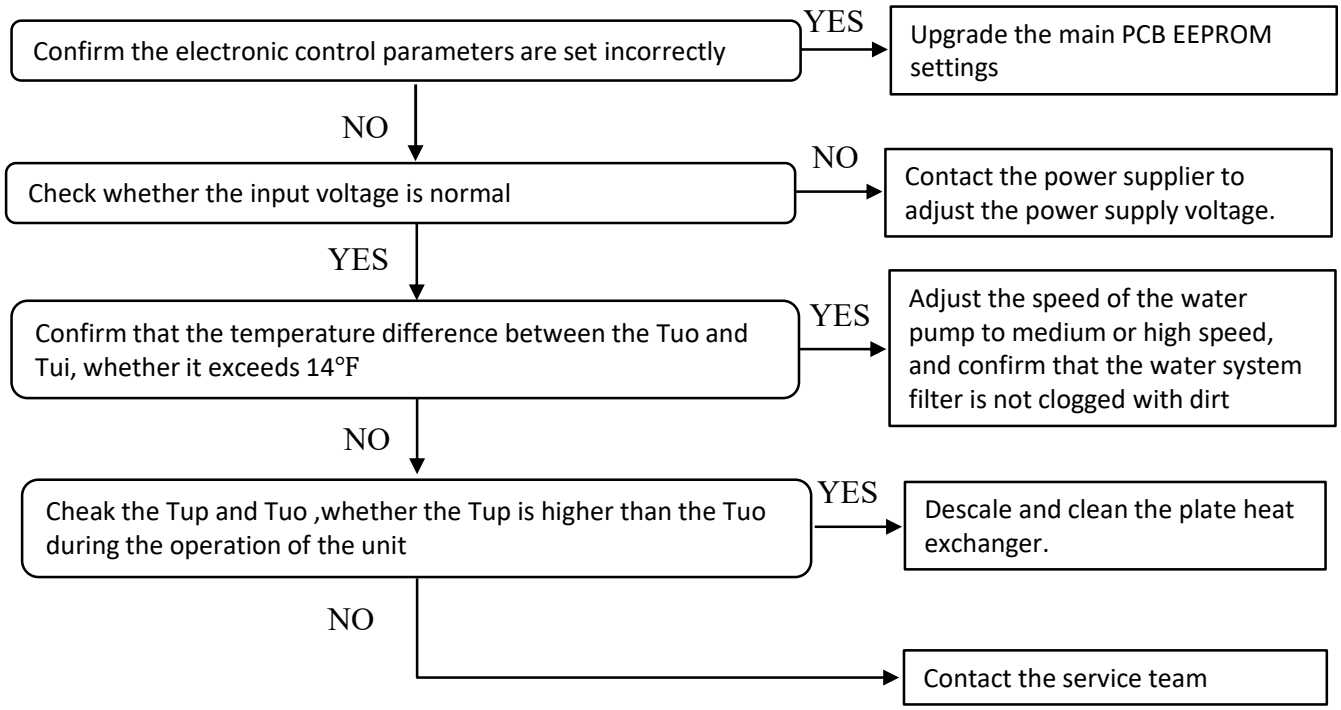
P01 Over current Protection

1.Error definition:

When the unit detects that the input current is higher than the value set by the Eeprom of the external machine, the unit will report a fault and shut down for protection.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation
- The coil of the water tank is too small



Over current protection in hot water mode:

Confirm whether the domestic water tank coil is too small (the minimum heat exchange area is 3㎡). If so, Turn on the hot water ECO mode to see if it can alleviate the heat exchange problem of the water tank. If not, replace the coil water tank with a larger coil area (at least 3㎡)

Over current protection in cooling mode:

Check whether the evaporator of the outdoor unit is dirty and blocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring to the unit, so that the hot air can be discharged in a timely manner.

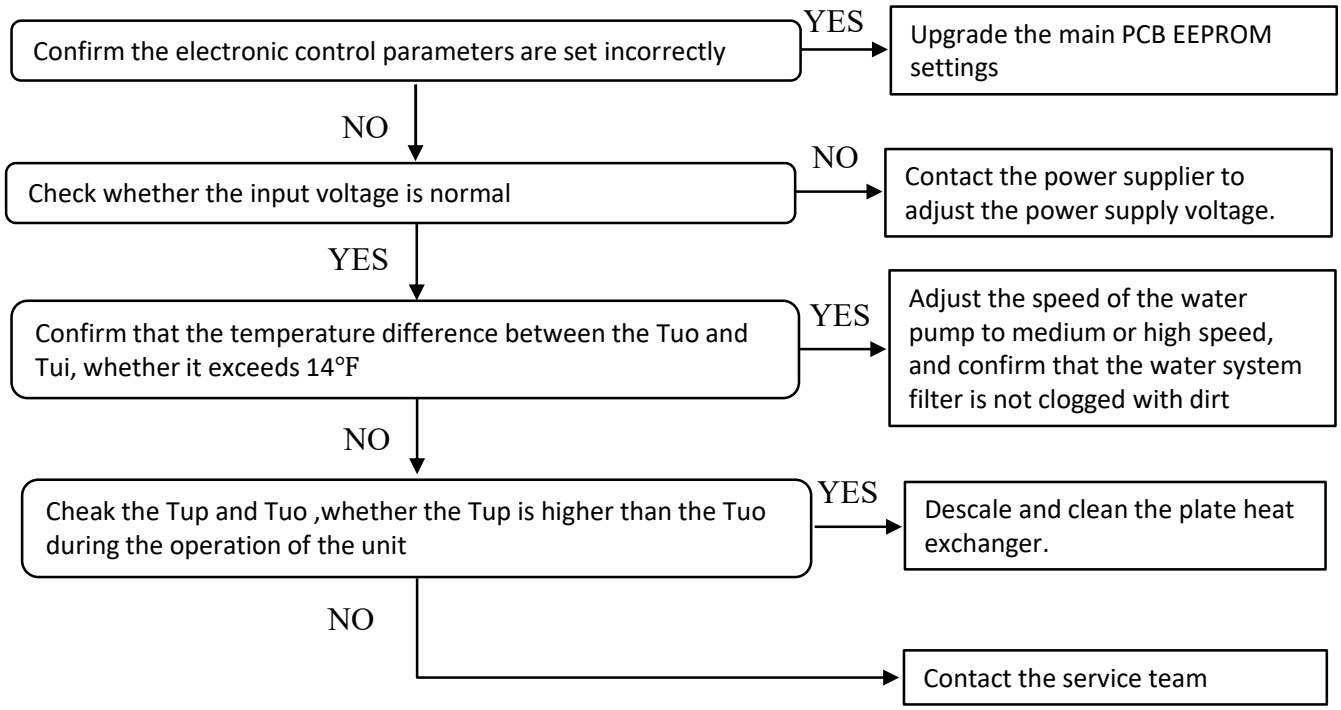
P02 Compressor phase current overload protection

1.Error definition:

When the driver PCB detects that the compressor phase current exceeds the compressor phase protection current value, the unit will report a fault and shut down.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation
- The coil of the water tank is too small



Over current protection in hot water mode:

Confirm whether the domestic water tank coil is too small (the minimum heat exchange area is 3㎡). If so, Turn on the hot water ECO mode to see if it can alleviate the heat exchange problem of the water tank. If not, replace the coil water tank with a larger coil area (at least 3㎡)

Over current protection in cooling mode:

Check whether the evaporator of the outdoor unit is dirty and blocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring to the unit, so that the hot air can be discharged in a timely manner.

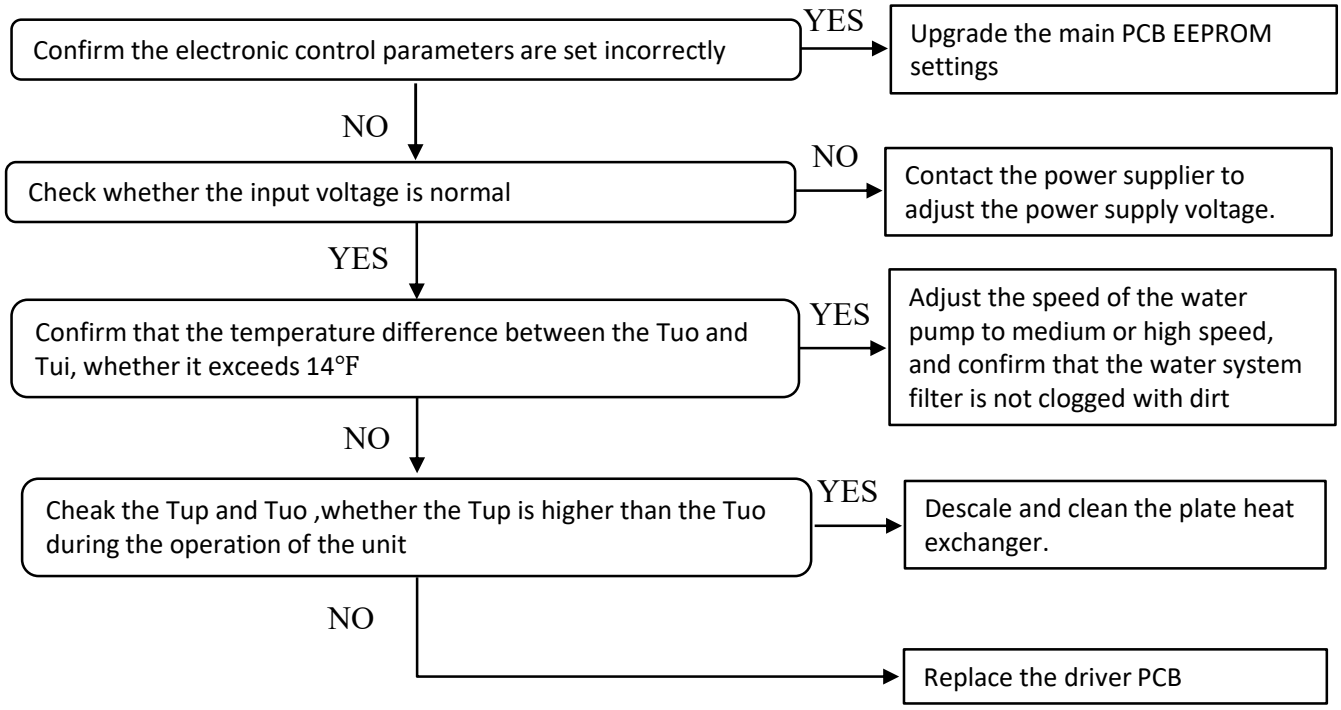
P03 IPM module protection

1.Error definition:

During compressor operation, the IPM module is detected to be over-temperature protected (the protection value is generally 203°F-212°F) or over-current protected, and the unit reports a fault and shut down.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation
- The coil of the water tank is too small
- Driver PCB fault



Over current protection in hot water mode:

Confirm whether the domestic water tank coil is too small (the minimum heat exchange area is 3㎡). If so, Turn on the hot water ECO mode to see if it can alleviate the heat exchange problem of the water tank. If not, replace the coil water tank with a larger coil area (at least 3㎡)

Over current protection in cooling mode:

1.Check whether the evaporator of the outdoor unit is dirty and blocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring to the unit, so that the hot air can be discharged in a timely manner.
2.Check whether the fan is running normally (whether the speed is low, such as below 500 rpm) or only one fan is running , if yes please refer to the handling of fan failure, check and replace the motor if needed. If the speed is low, contact the manufacturer for further investigation

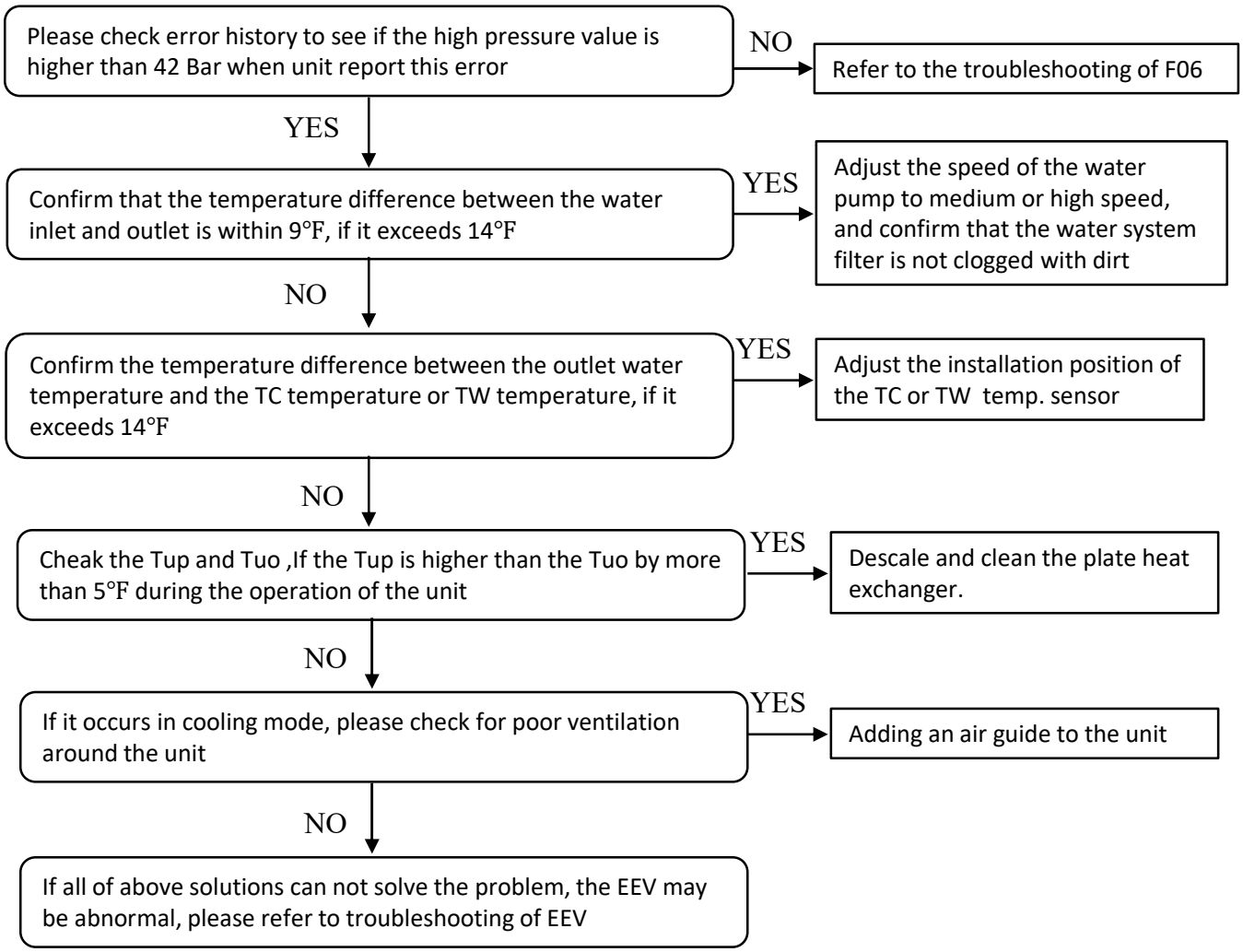
P05 High pressure switch protection

1.Error definition:

Fault shutdown is reported when a high pressure switch port disconnection is detected for 5 seconds after the compressor has been started for 1 minute.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation



P06 High pressure overpressure protection

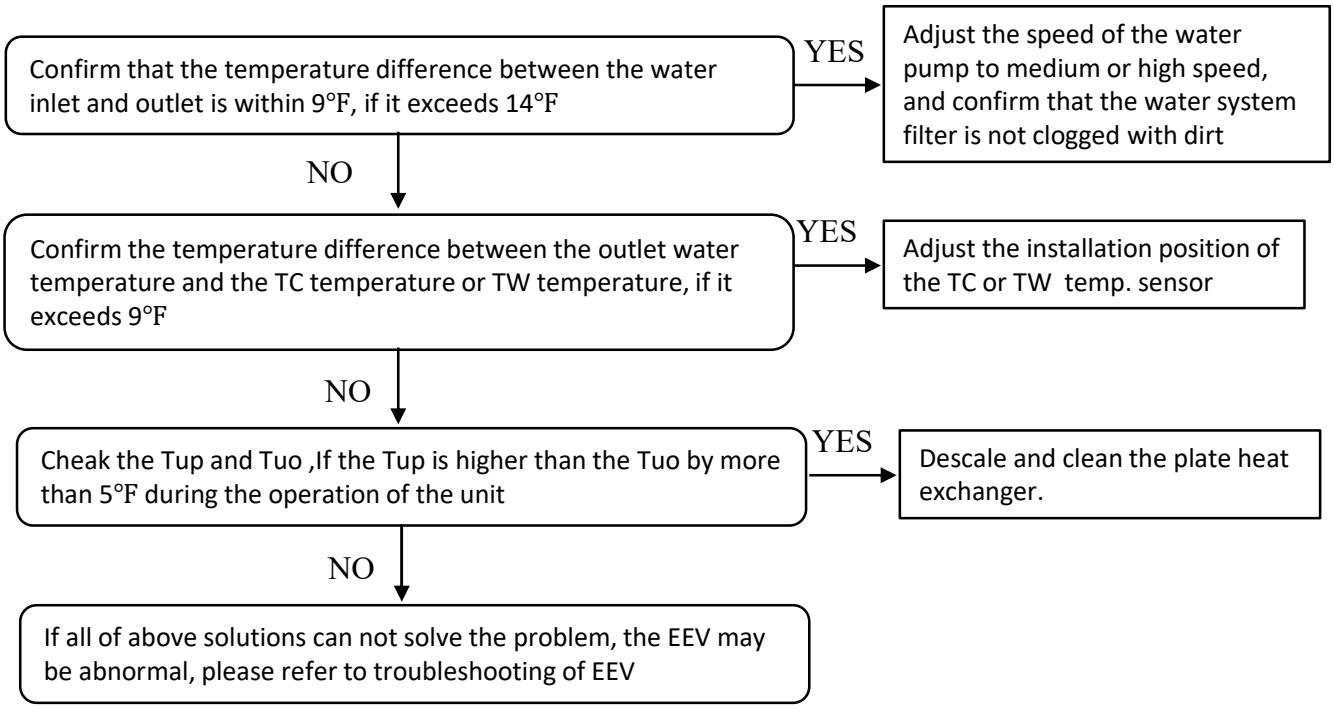
1.Error definition:

If the high pressure is higher than the system pressure protection value after the compressor has been started for 1 minute, the unit will report faulty shutdown protection.

2.Possible causes:

- Insufficient water flow
- Scaling of plate heat exchanger
- Finned heat exchanger is dirty and blocked
- Poor ventilation
- Sensor reading deviation

High pressure too high problem in heating mode:



NOTE: The above judgment regarding the unit temperature, please power down and restart the unit to allow the unit to run again, and make judgments during the operation process.

High pressure too high problem in cooling mode:

Check whether the evaporator of the outdoor unit is dirty and blocked or there is poor heat dissipation around the external unit. If so, consider adding a wind guide ring to the unit, so that the hot air can be discharged in a timely manner.

P07 Initial power-up preheat protection

1.Error definition:

When the unit is powered on, if the ambient temperature is lower than 23°F, the unit will warm up for 30 minutes, report the protection, system will turn on the compressor electric heat tape, and the unit will not be allowed to turn on.

2.Possible causes:

- Low ambient temperature

Solution: There is no need to deal with it, just leave the unit to warm up for 30 minutes.

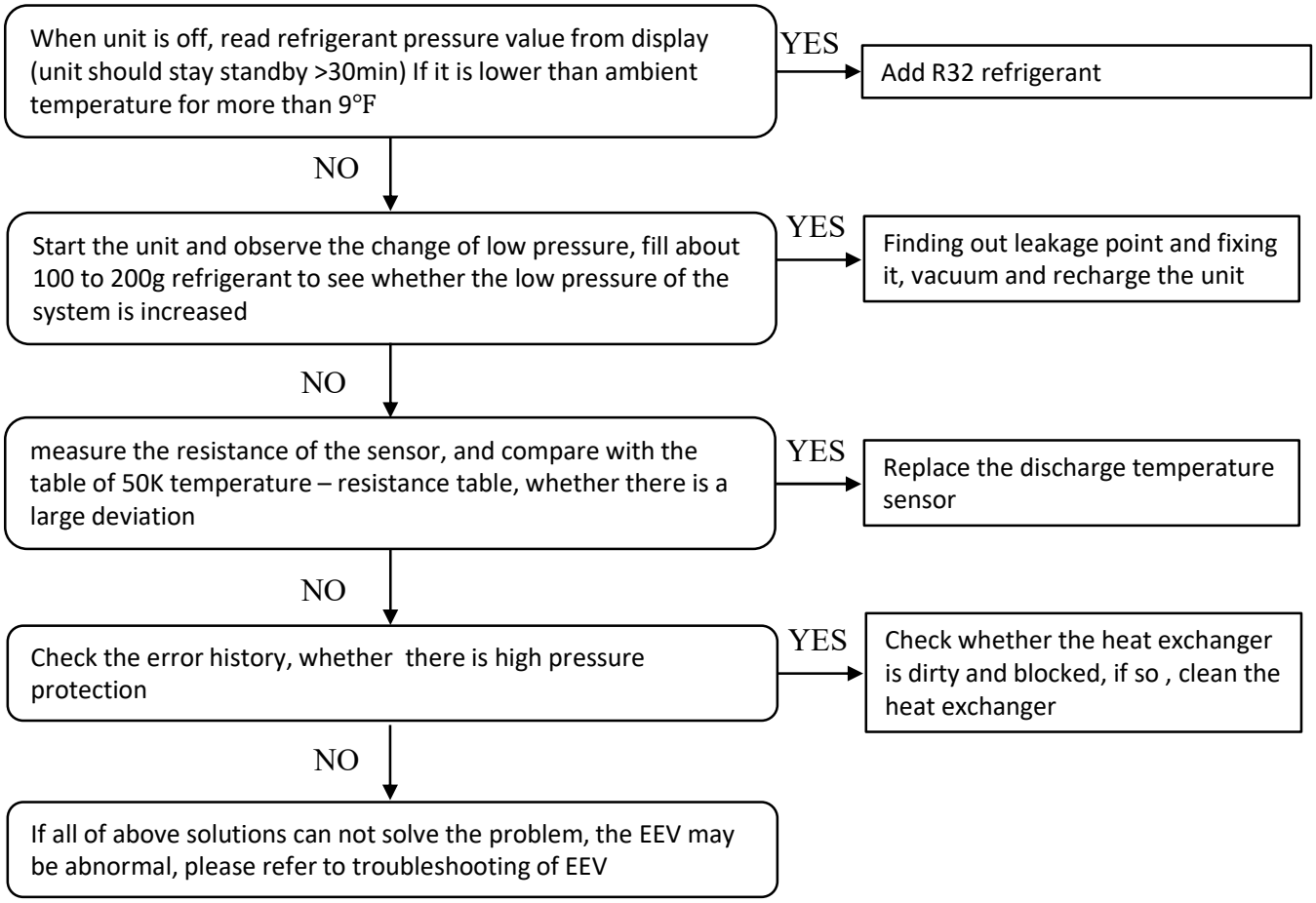
P08 High discharge temperature protection

1.Error definition:

When the discharge temperature is higher than value of protection shutdown point (generally between 230°F and 239°F) during unit operation, the unit will report a malfunction shutdown.

2.Possible causes:

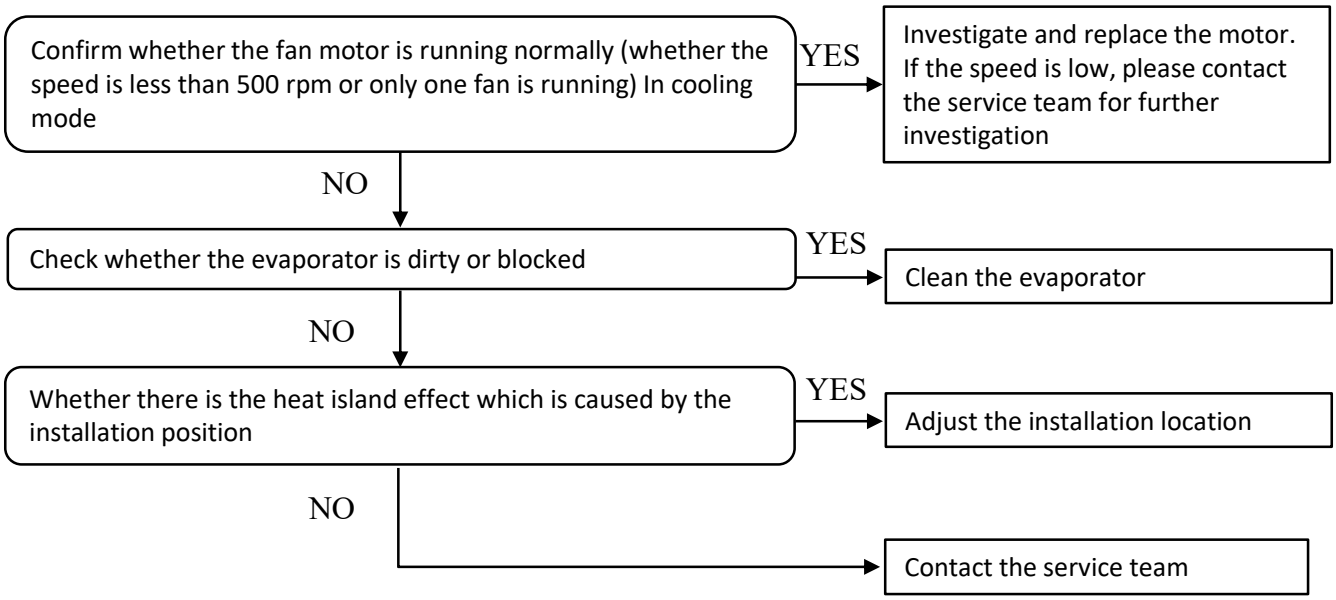
- Insufficient refrigerant
- Insufficient water flow
- Finned heat exchanger is dirty and blocked
- Scaling of plate heat exchanger



P09 Outdoor coil over-temperature protection

1.Error definition:
In the cooling mode, the external coil temperature is higher than the external coil over-temperature protection value (usually around 144°F), then the unit reports a fault and shutdown.

2.Possible causes:
- Poor ventilation
- Insufficient water flow
- Finned heat exchanger is dirty and blocked



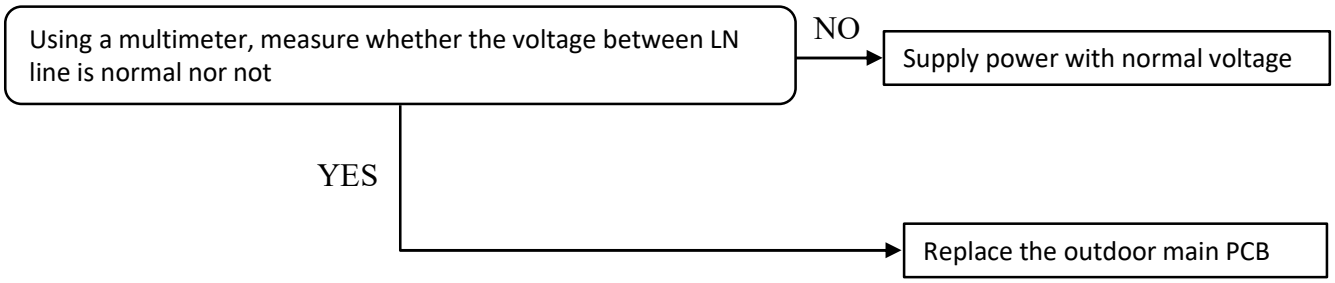
P10 Input voltage over-under-voltage protection

1.Error definition:

When the unit is energized (either running or standby) and the input voltage is detected to be lower than 140V or higher than 270V, the unit will report a fault and shut down.

2.Possible causes:

- Supply voltage too high or too low
- Outdoor main PCB fault



P11 Ambient temperature over range shutdown protection

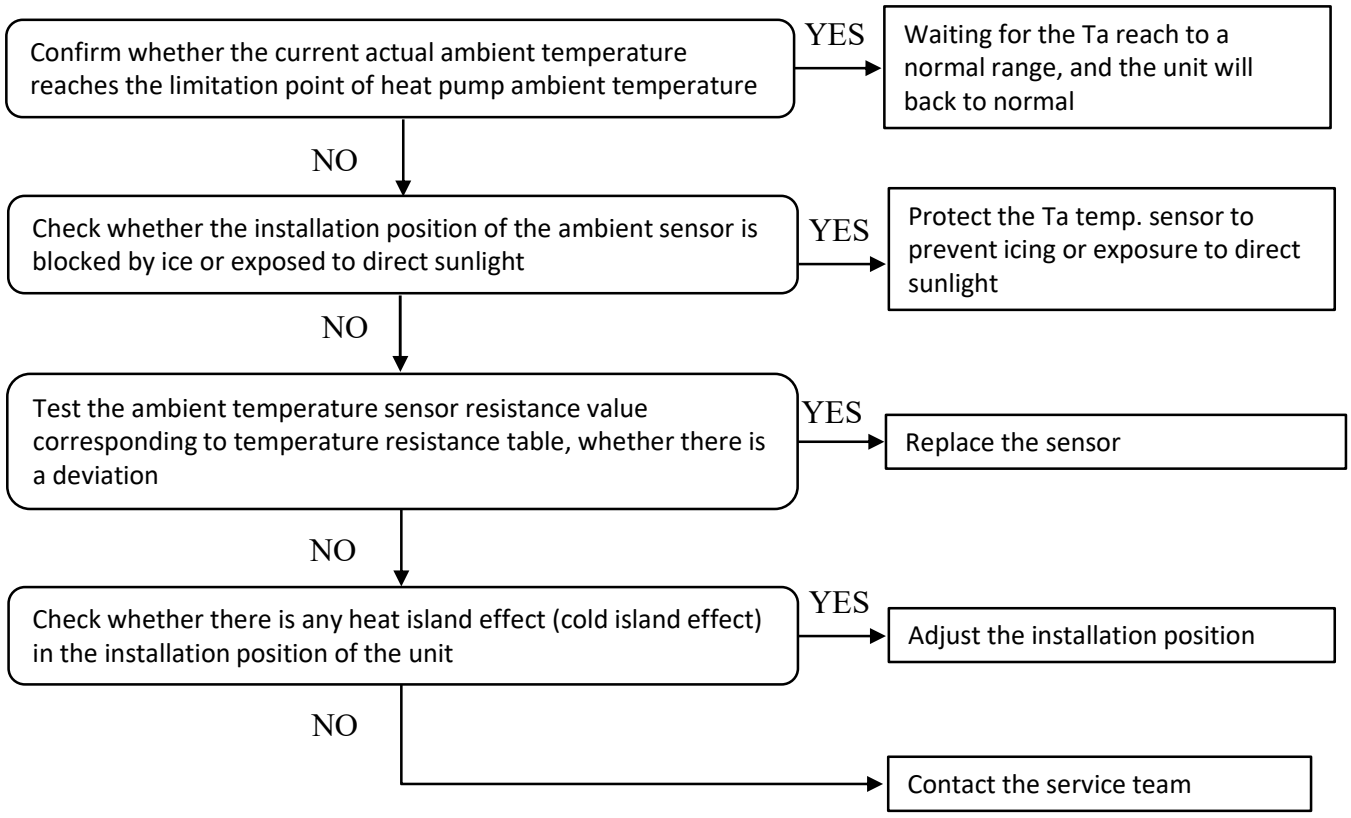
1.Error definition:

Heating mode: when the ambient temperature is lower than -13°F, or the ambient temperature is higher than 113°F, the unit will report a fault and shutdown;

Cooling mode: when the ambient temperature is lower than 46°F, or the ambient temperature is higher than 149°F, the unit will report a fault and shutdown.

2.Possible causes:

- The ambient temperature is out of the operating range
- Sensor fault



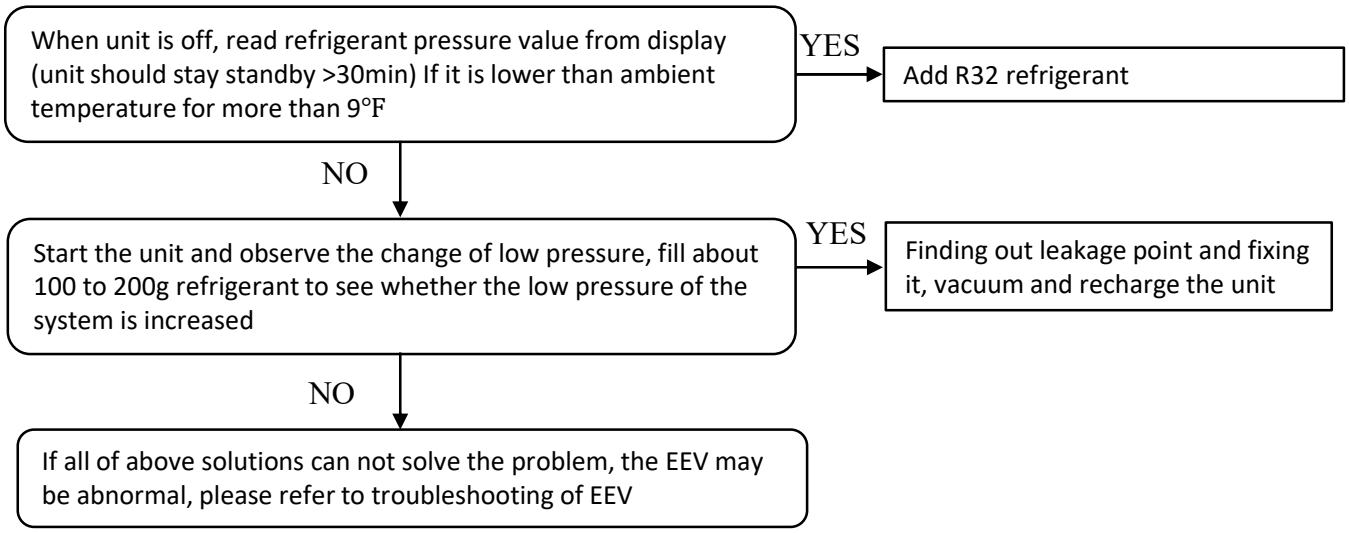
P18 Low pressure protection

1.Error definition:

When the unit detects that the low pressure value is lower than the protection value during operation, the unit will shut down and report a fault.

2.Possible causes:

- Insufficient refrigerant
- EEV is damaged
- Outdoor main PCB fault



P28 Sterilization failure

1.Error definition:

When the unit enters sterilization, if the water temperature in the water tank does not reach the sterilization target temperature within the set time, a protection will be reported.

2.Possible causes:

- DHW temp. sensor loose
- The unit is not equipped with electric heating or other heat sources to heat the water to the sterilization temperature

Solution: Waiting for the next sterilization.

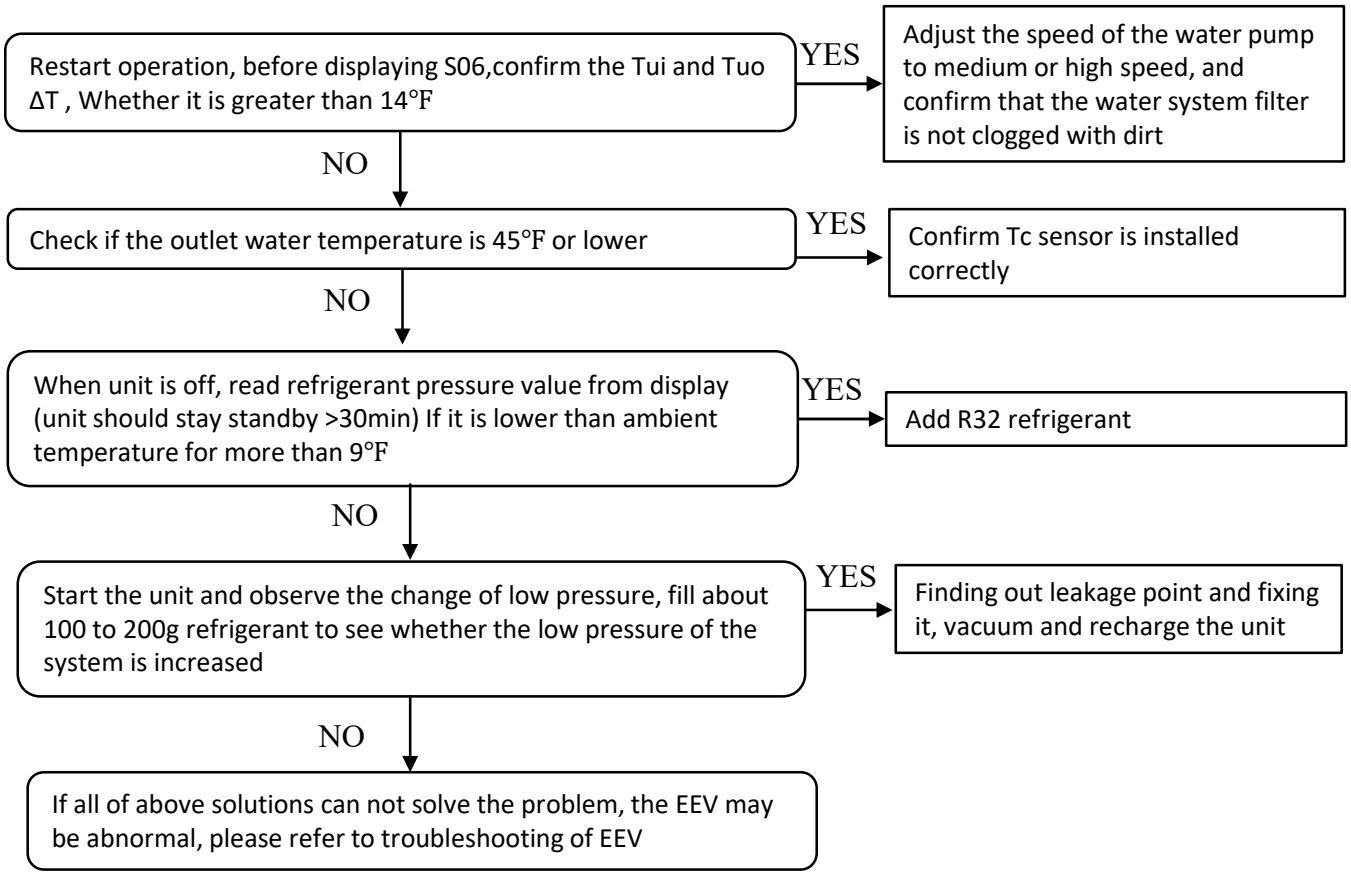
S01 Cooling anti-freezing protection

1.Error definition:

In Cooling mode, if the evaporating temperature is detected less than 2°F after the compressor runs for 3 minutes, unit will report a failure and be shut shown.

2.Possible causes:

- Insufficient water flow
- Ambient temperature too low for cooling mode
- Water temperature too low during cooling



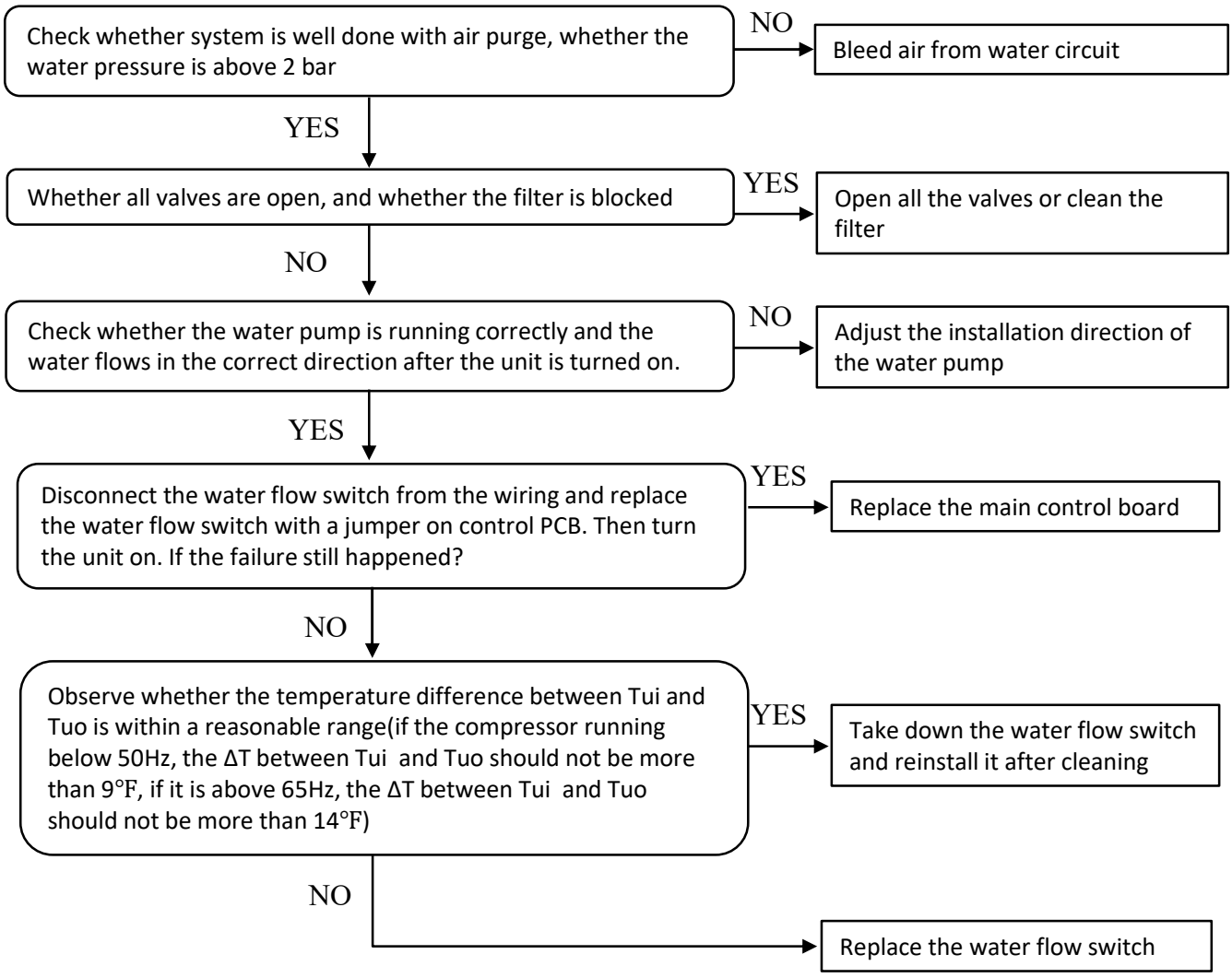
S02 Water flow switch protection

1.Error definition:

When the system pump (P0) starts to run for≥20 seconds, and the water flow switch is open ≥ 10 seconds, unit will report a failure and be shut show.

2.Possible causes:

- Insufficient water flow
- Waterway blockage
- The water flow switch is stuck
- Water pump runs too slowly
- Water flow switch connecting wire disconnected or terminal connectors loose



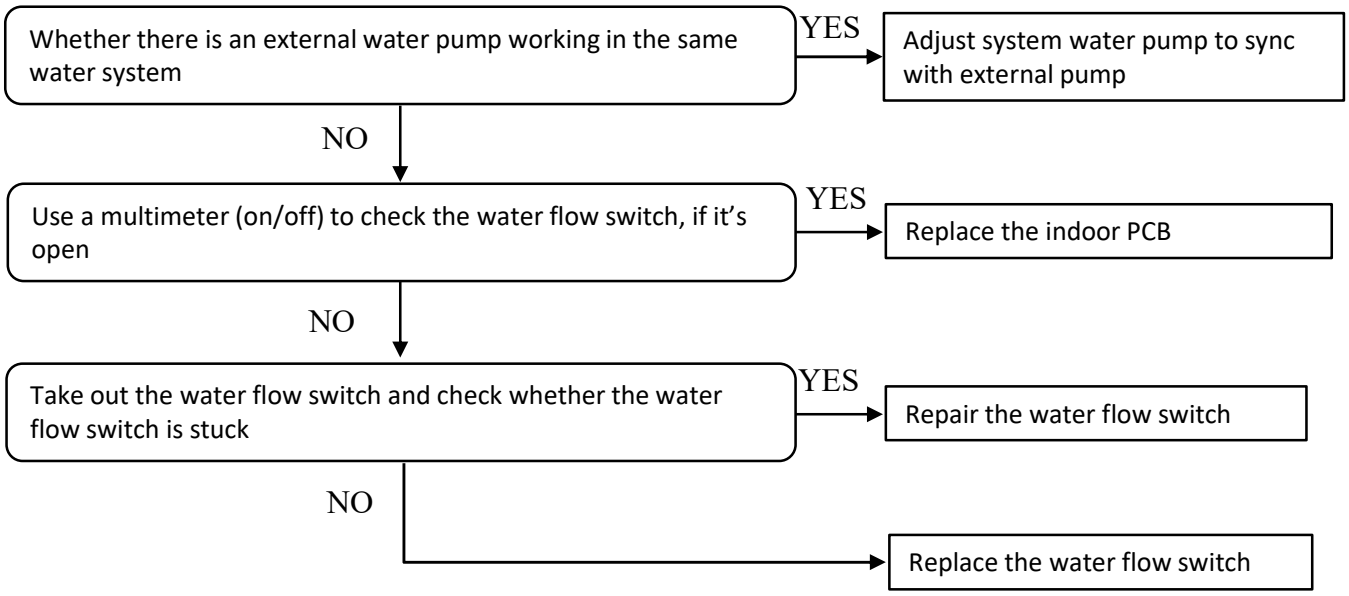
S03 Water flow switch failure

1.Error definition:

After the system pump (P0) stops running and the water flow switch is detected to be closed for 5 minutes, unit will report a failure and be shut down.

2.Possible causes:

- Water flow switch fault
- The water flow switch is stuck
- Third-party water pump runs during shutdown



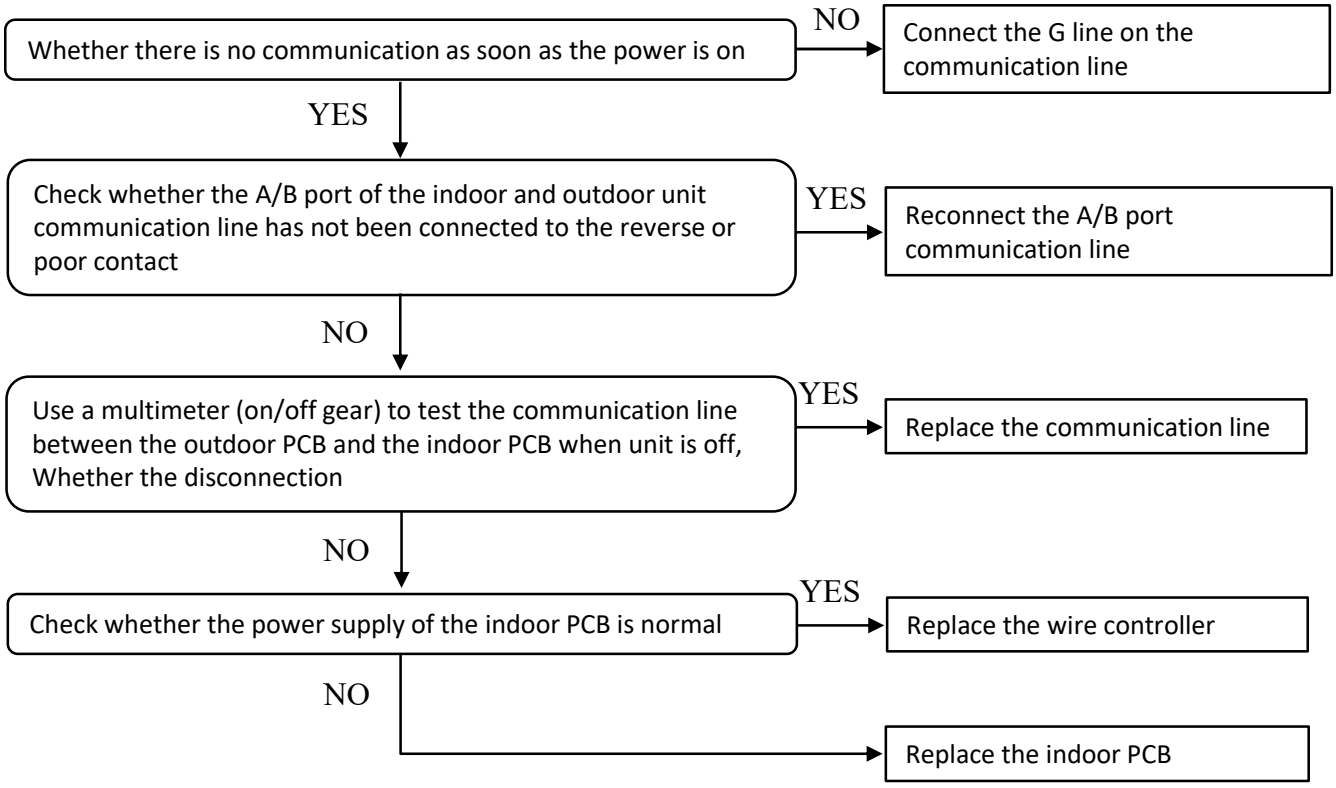
S04 Communication fault between wire controller and indoor PCB

1.Error definition:

Whenever there is no communication between the operation panel and the indoor main PCB for 2 minutes, unit will report a failure and be shut shown.

2.Possible causes:

- Wire controller fault
- The communication line is disconnected between wire controller and indoor unit
- Indoor PCB fault



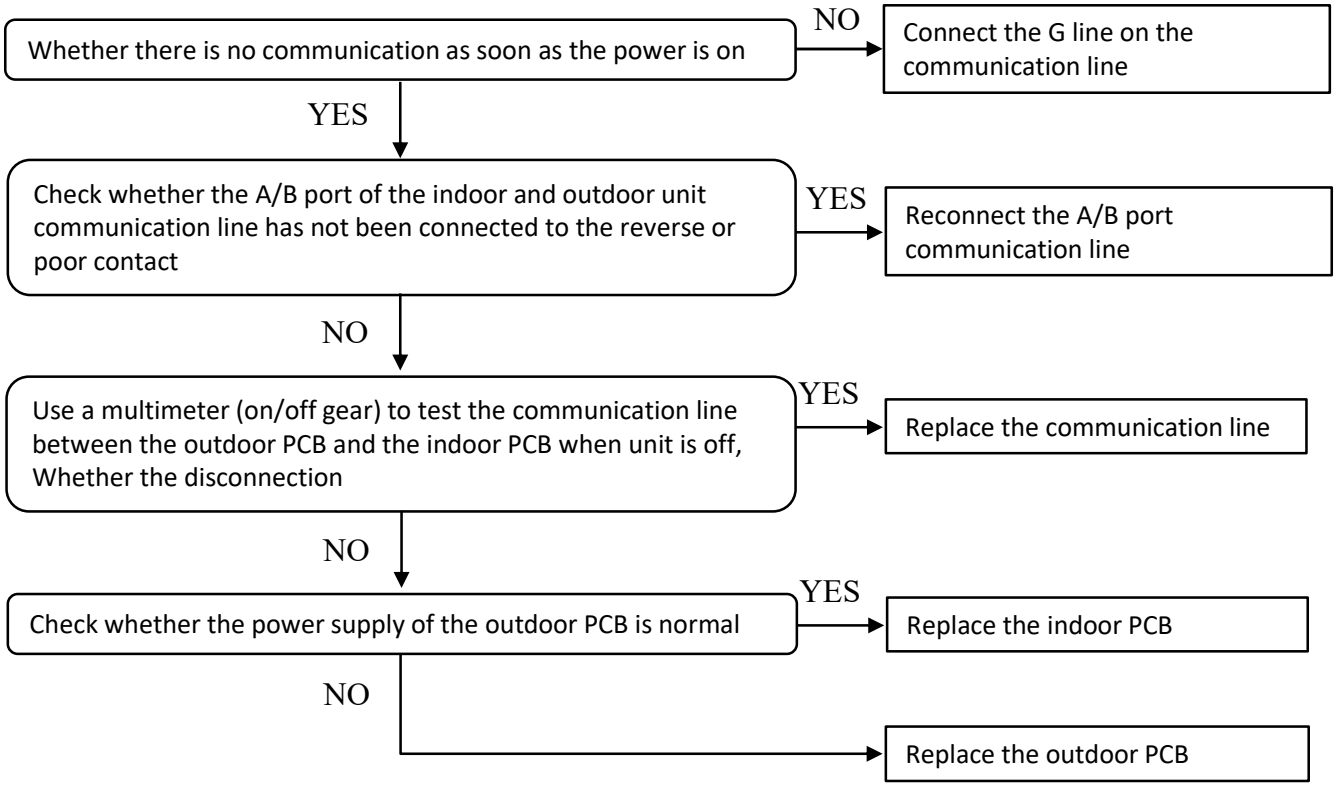
S05 Communication fault between outdoor PCB and indoor PCB

1.Error definition:

Whenever there is no communication between the outdoor main PCB and the indoor main PCB for 2 minutes, unit will report a failure and be shut shown.

2.Possible causes:

- Outdoor PCB fault
- The communication line is disconnected between the outdoor main PCB and the indoor main PCB
- Indoor PCB fault



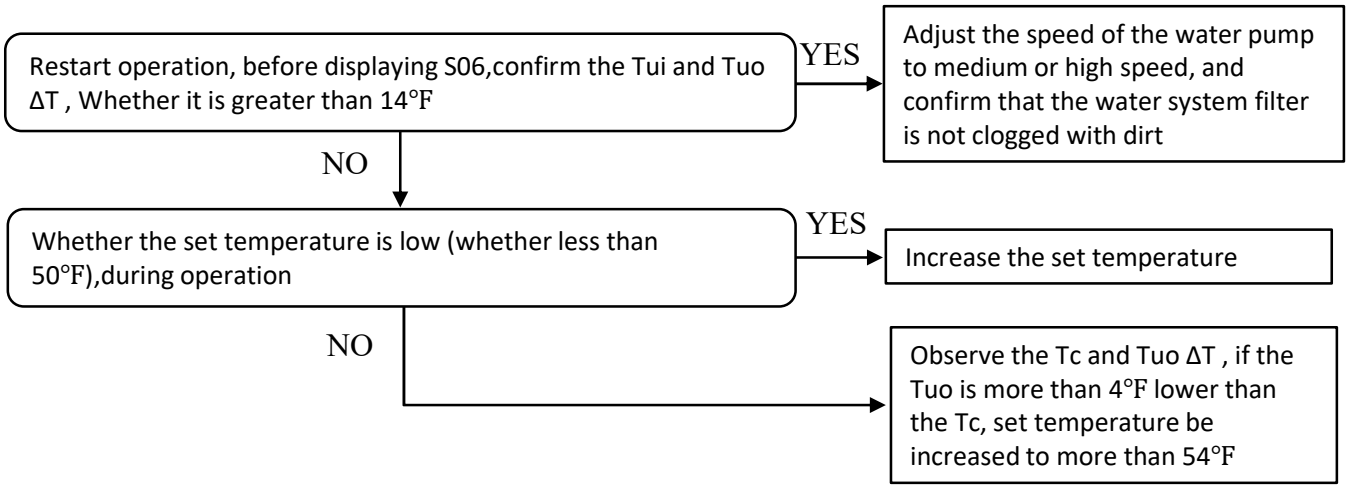
S06 Cooling outlet water temp. too low protection

1.Error definition:

In cooling mode, if Tuo < 41°F unit will report a failure and be shut shown.

2.Possible causes:

- Insufficient water flow
- Ambient temperature too low for cooling mode
- Water temperature too low during cooling



S07 Heating/DHW outlet water temp. too high protection

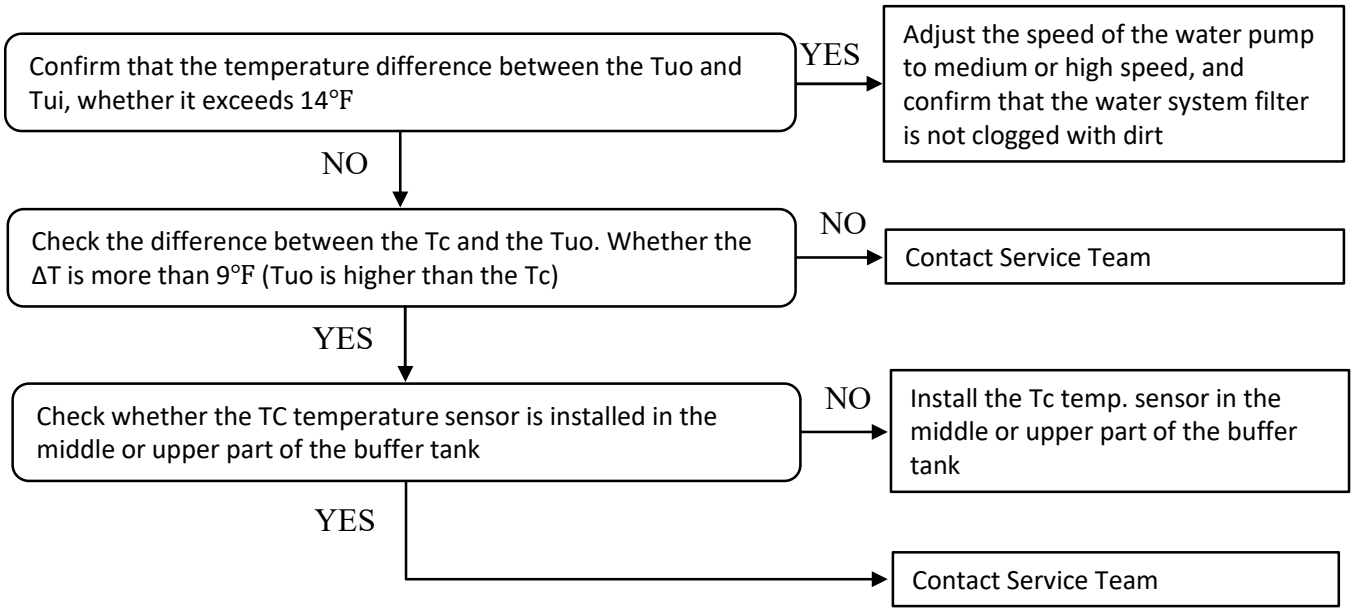
1.Error definition:

When compressor is working in heating or hot water mode, if the outlet water temperature is detected to be higher than the maximum permissible outlet water temperature of the heat pump, unit will report a failure and be shut shown., but the electrical heater can continue to work.

2.Possible causes:

- Insufficient water flow
- The installation location of DHW temp. sensor Tc temp. Sensor is inappropriate
- The coil of the water tank is too small

Coexistence of heating and hot water modes:



Hot water mode:

Restart the unit, when S07 happens, check the Tui and TW . If the Tui is higher than the TW (normally, the TW is always higher than the Tui), the coil of the water tank can be too small which leads to the low heat exchanging capacity and causes S07. For temporary solution, the hot water ECO mode can be turned on to see if it is possible to alleviate the heat exchange problem of the water tank. If the problem can not be solved, it is necessary to replace the coil of water tank with a larger area as recommended.

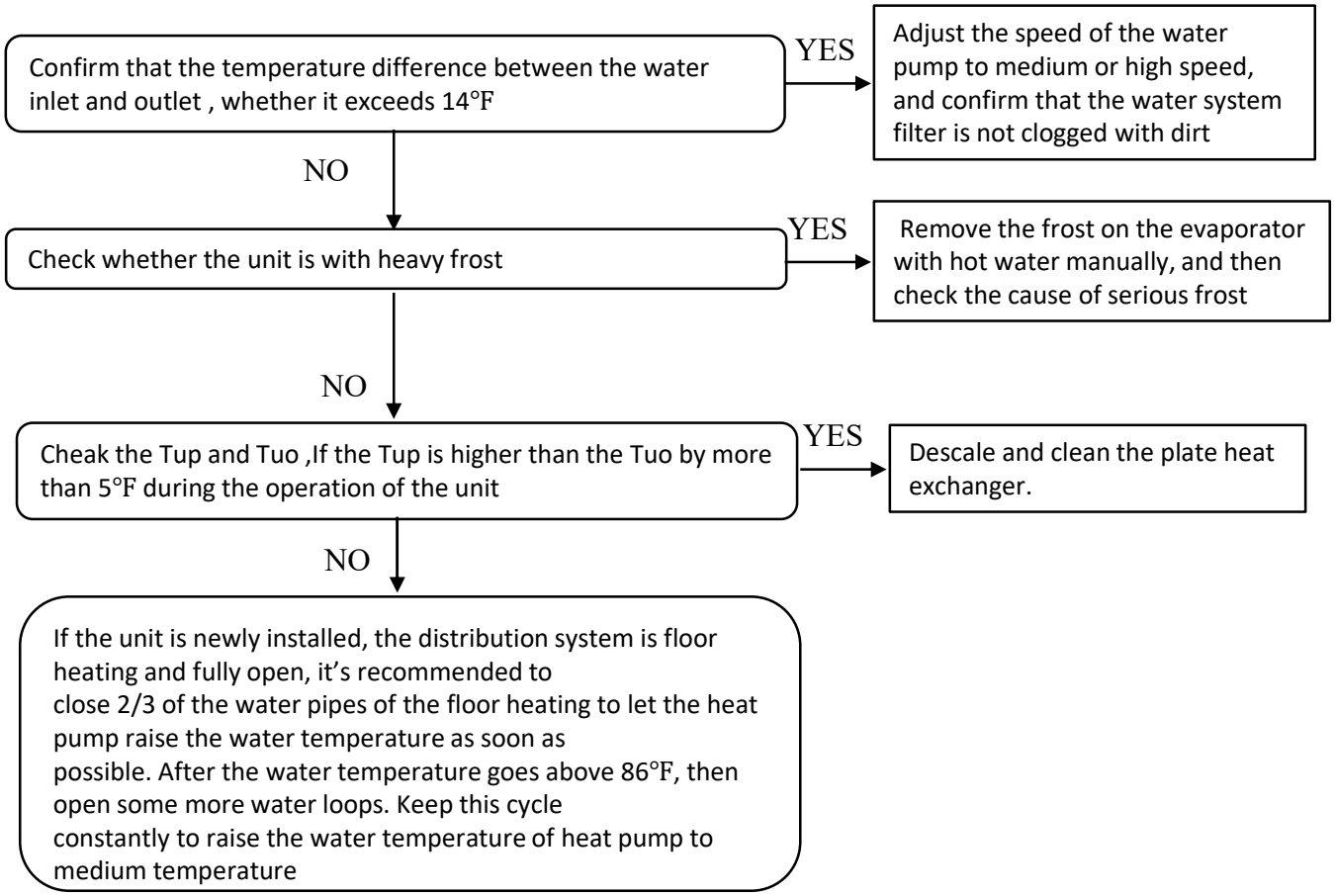
S08 Defrost three-time failure

1.Error definition:

When S09 (Defrost outlet water temp. too low protection) is triggered 3 times, unit will report a failure and be shut shown. This failure can not be receovered untill repower.

2.Possible causes:

- The water tank temperature is too low
- The pump speed is too slow
- The unit has severe frosting



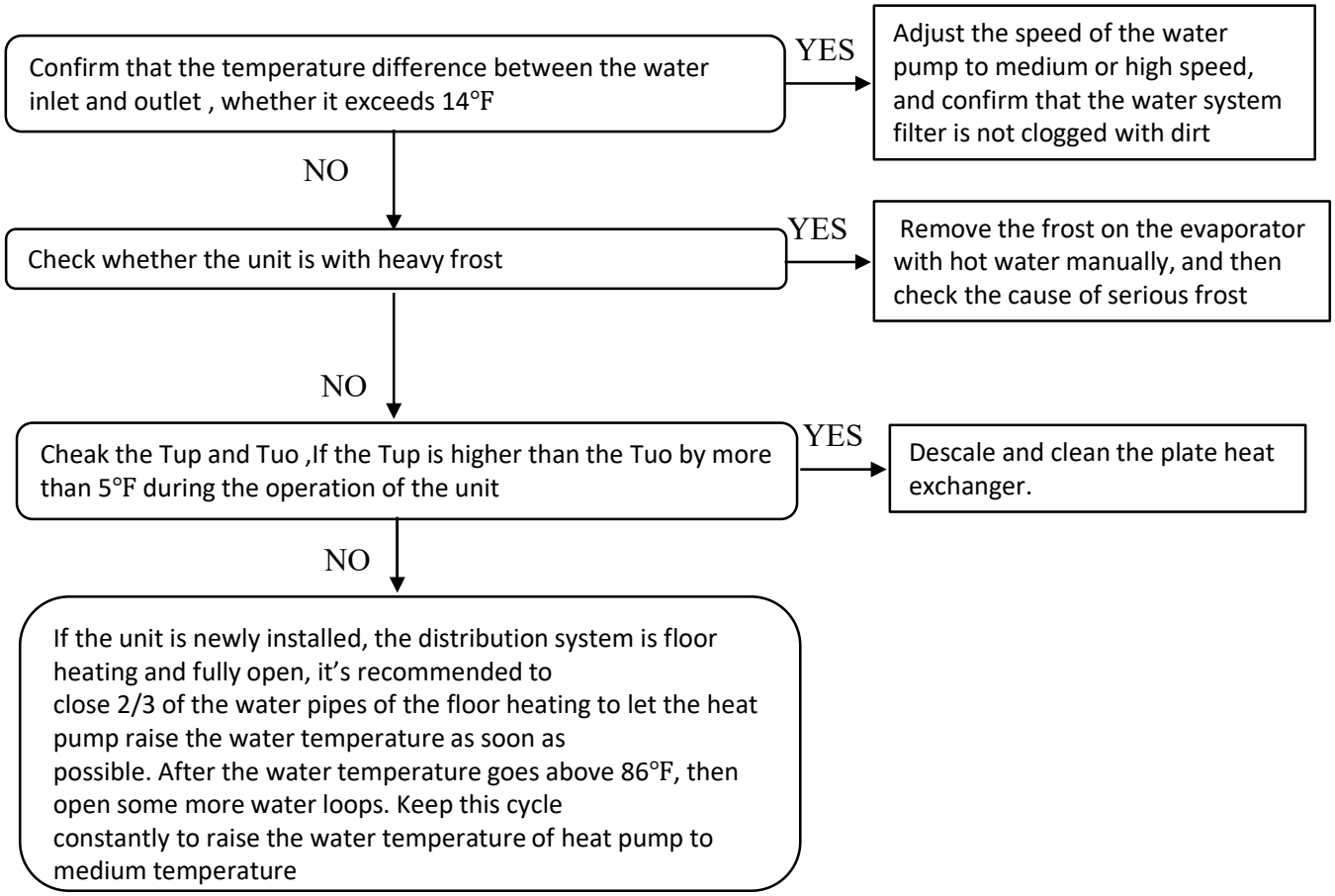
S09 Defrost outlet water temp. too low protection

1.Error definition:

During defrost, if Tuo < 59°F, unit will report a failure and stop defrosting.

2.Possible causes:

- The water tank temperature is too low
- The pump speed is too slow
- The unit has severe frosting



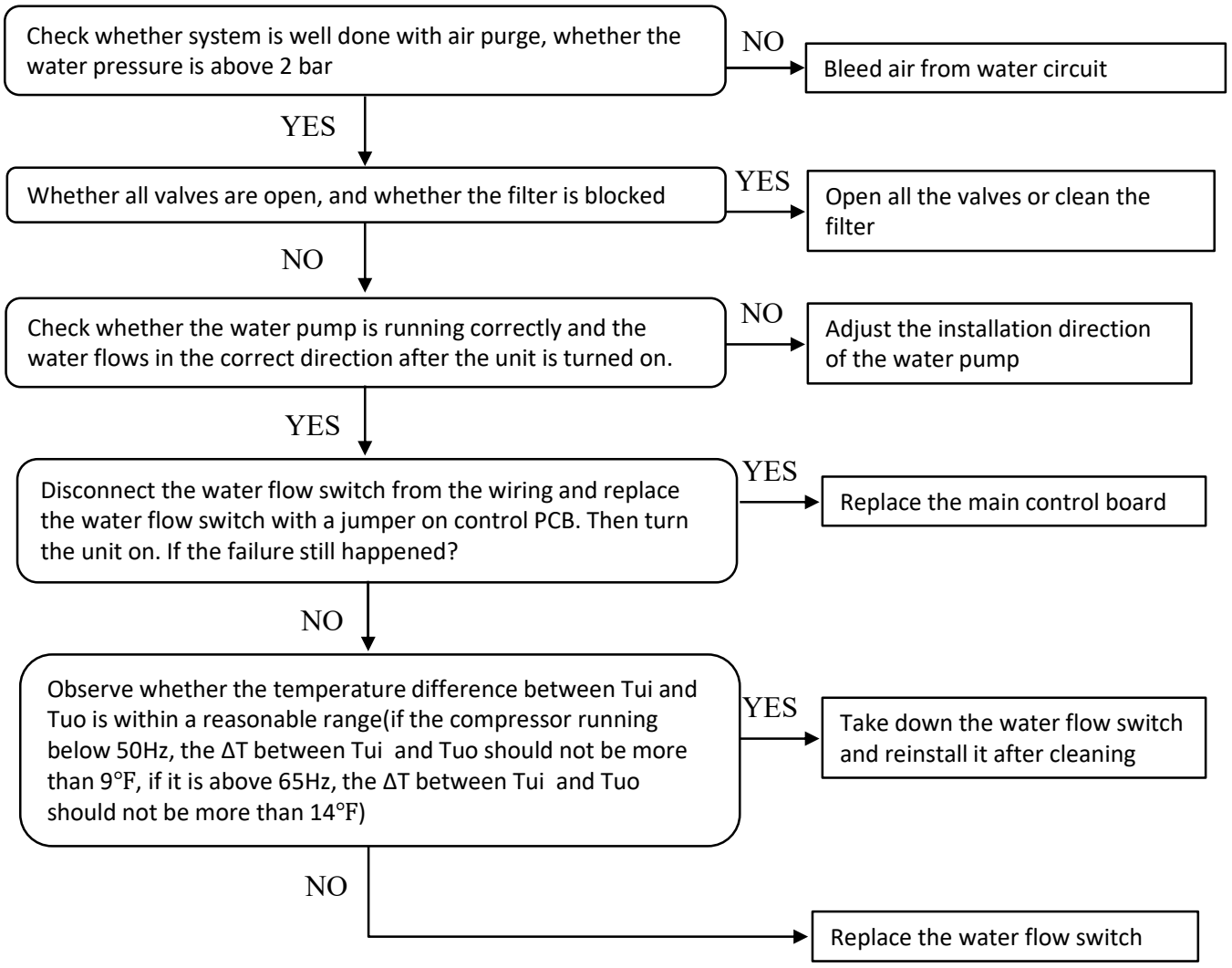
S10 Water flow switch protection(three times)

1.Error definition:

When the unit has 3 consecutive S02 protection within 30 minutes, S10 will be reported.

2.Possible causes:

- Insufficient water flow
- Waterway blockage
- The water flow switch is stuck
- Water pump runs too slowly
- Water flow switch connecting wire disconnected or terminal connectors loose



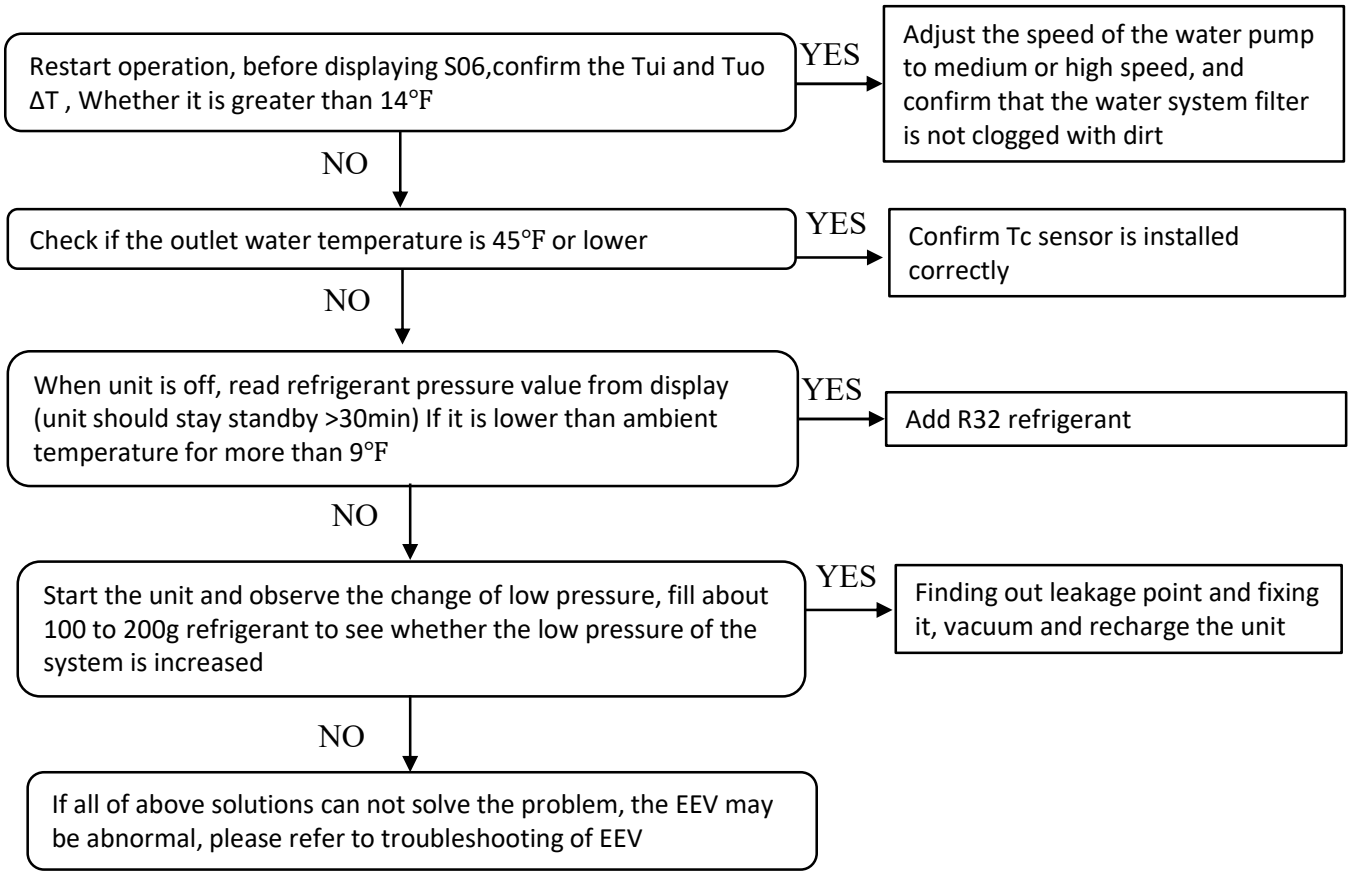
S11 Cooling anti-freeze failure

1.Error definition:

When the unit has 3 consecutive S01 protection within 30 minutes, S11 will be reported.

2.Possible causes:

- Insufficient water flow
- Ambient temperature too low for cooling mode
- Water temperature too low during cooling



S12 Floor preheating failure

1.Error definition:

During the operation of floor preheating , the running time of a certain stage exceeds the specified time, S12 will be reported and unit will exit preheating operation, while the unit can still operate in normal modes.

2.Possible causes:

- The Tc temp. sensor installation location is inappropriate

Solution: Check the recorded data of floor preheating to figure out where the anomaly is. Depending on the conditions of floor drying at site, choose if unit should run floor preheating again

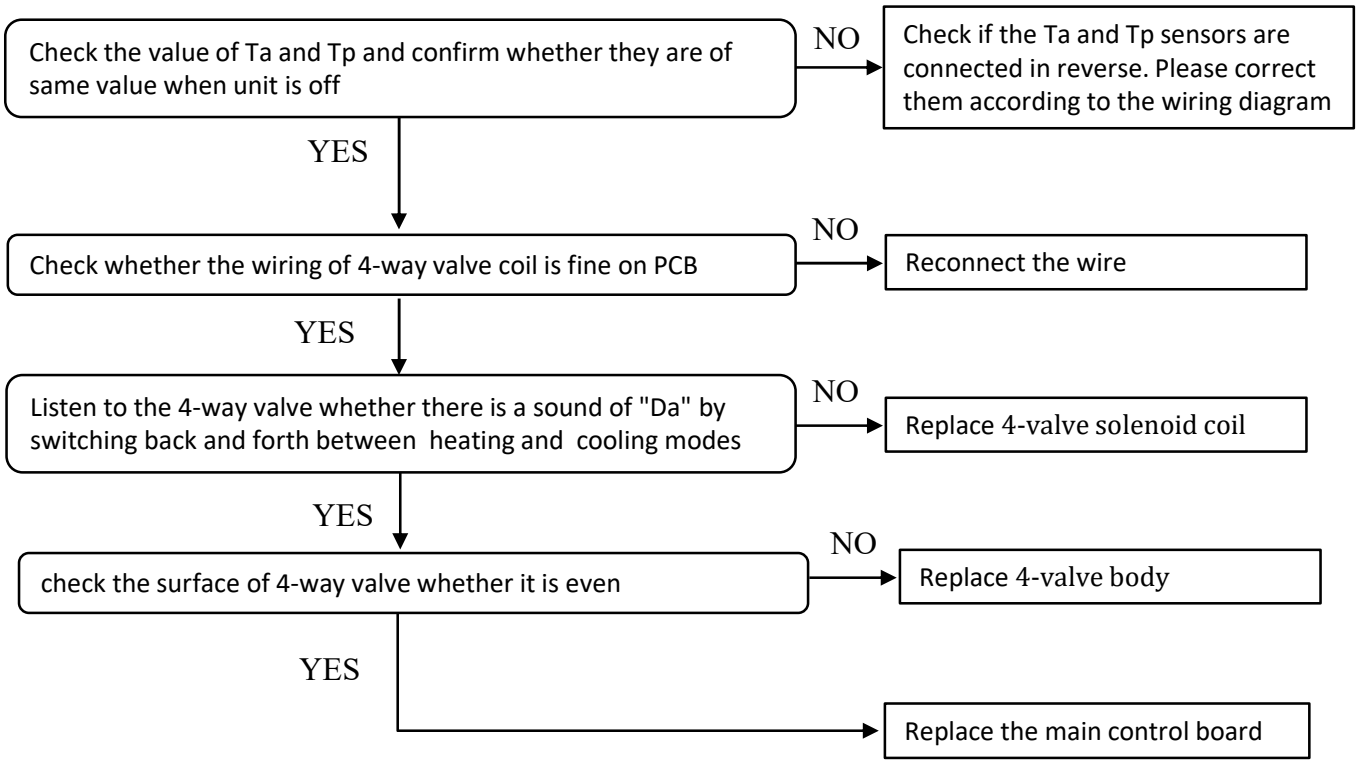
S13 4-way valve failure

1.Error definition:

When the 4-way valve detection function is turned on, in heating or hot water mode, after the unit is running for 10 minutes, unit will detect temperature difference between ambient temperature and outdoor coil temperature for 2 minutes. When the ambient temperature value is lower than outdoor coil temperature, the unit will be locked up with failure reported and cannot be recovered until repower.

2.Possible causes:

- 4-valve solenoid coil fault
- 4-way valve body fault
- Outdoor main PCB fault
- 4-valve solenoid coil loosened



NOTE: The method of Check if the Ta and Tp sensors are connected in reverse:
Use a hot wet towel or wet paper napkin wrapped around the ambient temperature sensor and check the change of ambient temperature through operation panel. If the ambient temperature remains without change while outdoor coil temperature changes, these two sensors can be connected oppositely.

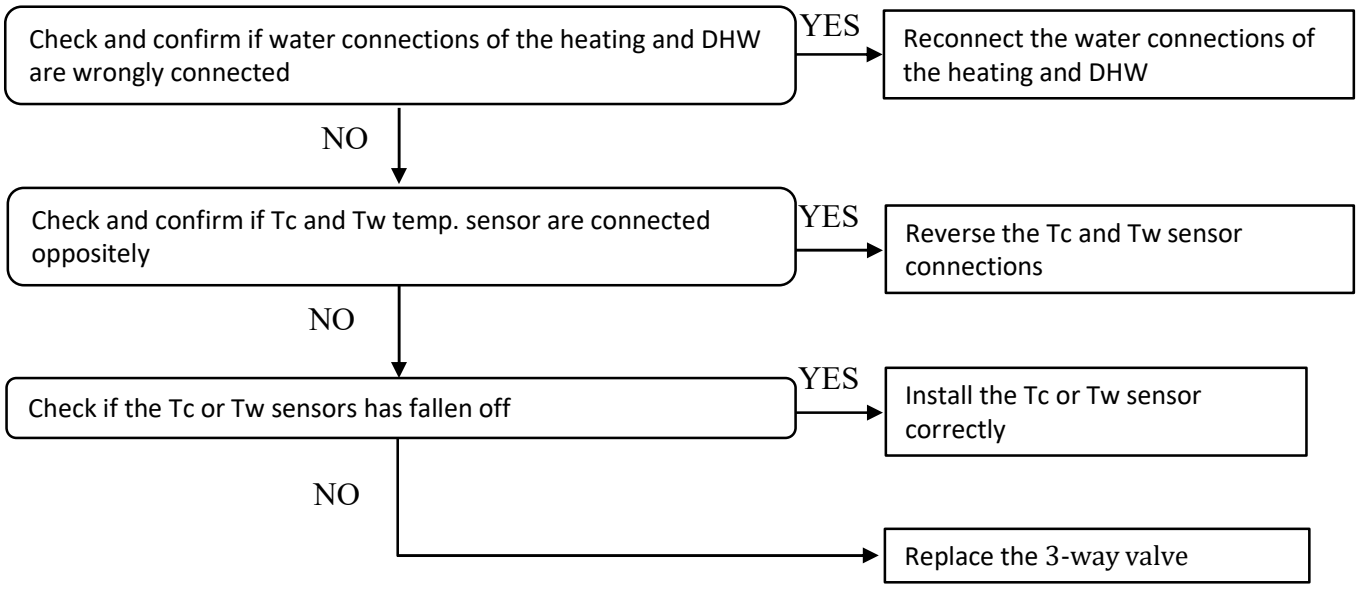
S14 3-way valve failure

1.Error definition:

When the 3-way valve detection function is turned on, in heating or hot water mode, when Tc (Heating/cooling Temp. Sensor) or Tw (DHW Temp. Sensor) temperature value is higher than water inlet temperature for over 22°F, the unit will report a fault and be shut down.

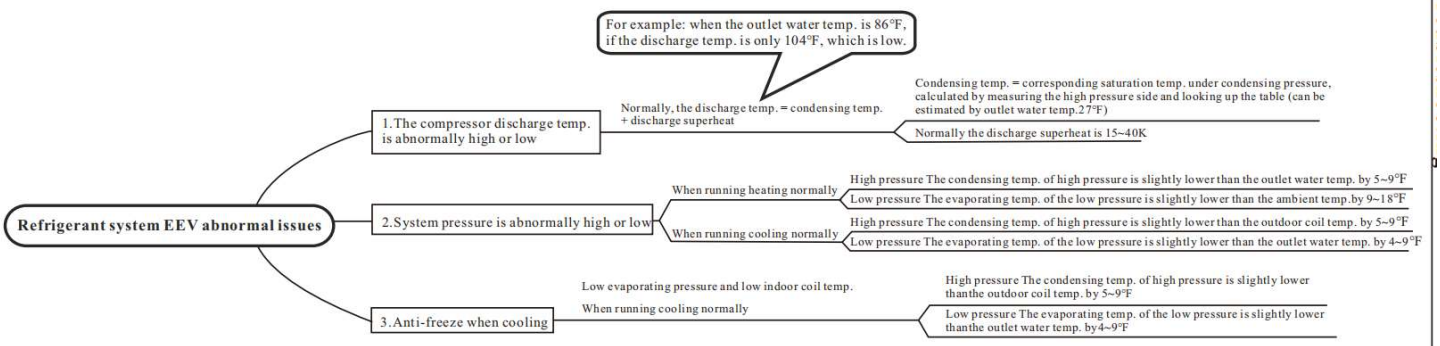
2.Possible causes:

- Incorrect water pipe connection for heating and DHW
- Tc or Tw temp. sensor are connected in reverse
- Tc or Tw temp. sensor loosened
- 3-way valve fault

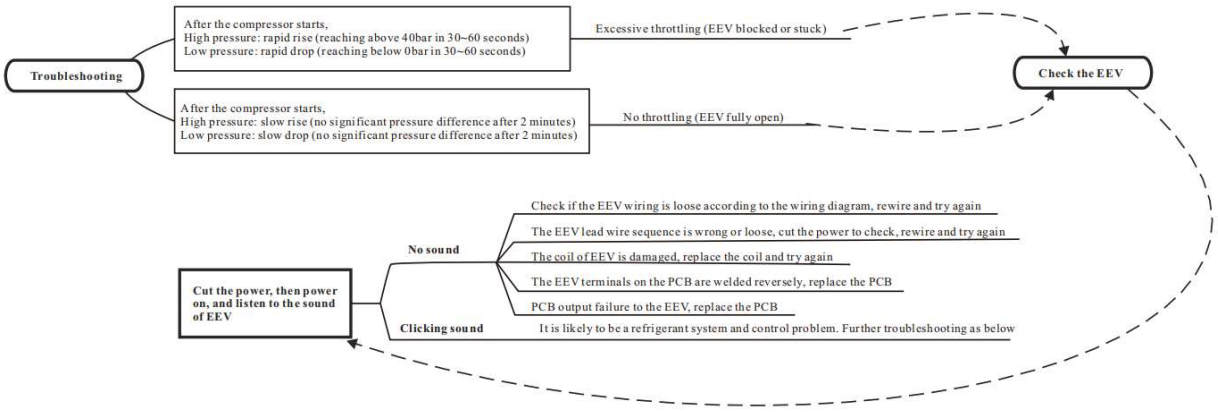


EEV troubleshooting

Abnormal system performance



Related troubleshooting 1



Related troubleshooting 2

