# Trouble Shooting Guide
# Guide des Codes Erreurs

# CSZ-ICC2423.HM0
## R32

**Updated on: 21 JUN 23**

# Trouble Shooting Guide – Guide des Codes Erreurs
# CSZ-ICC2423.HM0

## Error Code

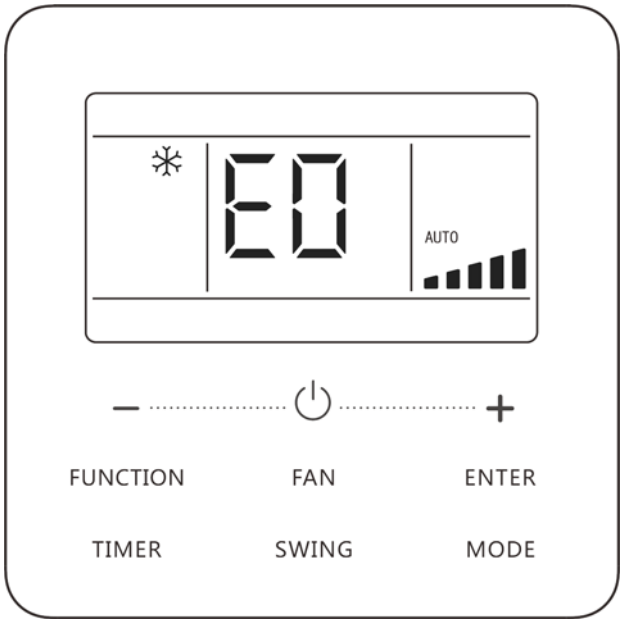
| Number | Error code | Error |
|---|---|---|
| 1 | A1 | Outdoor fan IPM module protection |
| 2 | A6 | Master control and DC outdoor fan driver communication error |
| 3 | A8 | DC outdoor fan driver module high temperature protection |
| 4 | A9 | DC outdoor fan driver module temperature sensor error |
| 5 | AA | DC outdoor fan AC current protection |
| 6 | Ab | DC outdoor fan driver reset protection |
| 7 | Ac | Outdoor fan startup failure |
| 8 | Ad | Outdoor fan Phase-loss protection |
| 9 | AE | Outdoor fan current detection circuit error |
| 10 | AF | DC outdoor fan driver PFC protection |
| 11 | AH | DC outdoor fan driver bus high-voltage protection |
| 12 | AJ | Outdoor fan out-of-step protection |
| 13 | AL | DC outdoor fan driver bus low-voltage protection |
| 14 | An | DC outdoor fan driver memory chip error |
| 15 | AP | DC outdoor fan driver input AC voltage error protection |
| 16 | Ar | DC outdoor fan driver electrical box temperature sensor error |
| 17 | AU | DC outdoor fan driver charge loop error |
| 18 | C0 | Wired controller and indoor unit communication failure |

| Number | Error code | Error |
|---|---|---|
| 19 | C1 | Indoor ambient temperature sensor error |
| 20 | C2 | Evaporator temperature sensor error |
| 21 | C3 | Condenser temperature sensor error |
| 22 | C4 | ODU jumper cap error |
| 23 | C6 | Discharge temperature sensor error |
| 24 | C7 | Condenser meso-temperature sensor error |
| 25 | C8 | Compressor dial code or jumper cap abnormal |
| 26 | C9 | Compressor driver memory chip failure |
| 27 | CE | Wired controller temperature sensor error |
| 28 | CJ | IDU jumper cap error |
| 29 | CL | Auto cleaning |
| 30 | CP | Multi-main wired controller failure |
| 31 | d1 | DRED model 1 |
| 32 | d2 | DRED model 2 |
| 33 | d3 | DRED model 3 |
| 34 | dc | Compressor suction temperature sensor error |
| 35 | dH | Wired controller circuit board abnormal |
| 36 | dJ | AC sequence protection (phase loss or anti-phase protection) |
| 37 | E0 | Indoor fan error |
| 38 | E1 | Compressor high pressure protection |
| 39 | E2 | Indoor anti-freeze protection |
| 40 | E3 | Refrigerant lack protection or compressor low pressure protection |
| 41 | E4 | Compressor air discharge high-temperature protection |
| 42 | E6 | ODU and IDU communication error |
| 43 | E7 | Mode conflict |
| 44 | E9 | Water-full protection |
| 45 | EE | Memory chip reading and writing failure |
| 46 | EL | Emergency stop (fire alarm) |
| 47 | F3 | Outdoor ambient temperature sensor error |
| 48 | Fo | Recycling refrigerant mode |
| 49 | H1 | Ordinary defrosting state |
| 50 | H4 | Overload protection |
| 51 | H5 | IPM module current protection |
| 52 | H7 | Compressor out-of-step protection |
| 53 | HC | PFC overcurrent protection |
| 54 | HE | Compressor demagnetize protection |
| 55 | L3 | Outdoor fan 1 error |

| Number | Error code | Error |
|---|---|---|
| 56 | L4 | Wired controller power supply circuit poor |
| 57 | L5 | Wired controller power supply overcurrent protection |
| 58 | L6 | One control multi-machine endor quantity is inconsistent |
| 59 | L7 | One control multi-machine endor series is inconsistent |
| 60 | LA | Outdoor fan 2 error |
| 61 | Lc | Compressor startup failure |
| 62 | LE | Compressor Stalling |
| 63 | LF | Power protection / Compressor overspeed |
| 64 | LP | IDU and ODU unmatched |
| 65 | oE | ODU error, for specific error please see the status of ODU main board indicator |
| 66 | P0 | Driver reset protection |
| 67 | P5 | Compressor phase over-current protection |
| 68 | P6 | Master control and driver communication error |
| 69 | P7 | Module temperature sensor circuit failure |
| 70 | P8 | Driver module temperature protection |
| 71 | P9 | AC contractor protection |
| 72 | PA | ODU AC current protection |
| 73 | Pd | Sensor connect error protection (current sensor is not connected to the corresponding U or V phase ) |
| 74 | PE | Temperature drift protection |
| 75 | PF | Driveboard ambient temperature sensor error |
| 76 | PH | Bus high-voltage protection |
| 77 | PL | Bus low-voltage protection |
| 78 | PP | Input AC voltage error |
| 79 | PU | Capacitor charging failure |
| 80 | q0 | DC indoor fan driver bus low-voltage protection |
| 81 | q1 | DC indoor fan driver bus high-voltage protection |
| 82 | q2 | DC indoor fan AC current protection |
| 83 | q3 | DC indoor fan driver IPM module protection |
| 84 | q4 | DC indoor fan driver PFC protection |
| 85 | q5 | DC indoor fan startup failure |
| 86 | q6 | DC indoor fan Phase-loss protection |
| 87 | q7 | DC indoor fan driver reset protection |
| 88 | q8 | DC indoor fan over-current protection |
| 89 | q9 | DC indoor fan power protection |
| 90 | qA | DC indoor fan driver current detection circuit error |
| 91 | qb | DC indoor fan out-of-step protection |
| 92 | qC | Master control and DC indoor fan driver communication error |

| Number | Error code | Error |
|---|---|---|
| 93 | qd | DC indoor fan driver module high temperature protection |
| 94 | qE | DC indoor fan driver module temperature sensor error |
| 95 | qF | DC indoor fan driver memory chip error |
| 96 | qH | DC indoor fan driver charge loop error |
| 97 | qL | DC indoor fan driver input AC voltage error protection |
| 98 | qo | DC indoor fan driver electrical box temperature sensor error |
| 99 | qp | DC indoor fan driver AC input zero-crossing protection |
| 100 | U1 | Compressor phase current circuit detection error |
| 101 | U2 | Compressor phase-loss and anti-phase protection |
| 102 | U3 | DC bus voltage drop error |
| 103 | U5 | Overall current detection failure |
| 104 | U7 | 4–way valve switch-over error |
| 105 | U8 | Zero-crossing protection |
| 106 | UL | Outdoor fan overcurrent protection |
| 107 | Uo | Outdoor ambient temperature abnormal(Temperature high opening heat mode or temperature over low open refrigeration mode) |

If malfunction occurs during operation, LCD temperature display zone will show the failure information. If several malfunctions occur at the same time, their corresponding error codes will be shown in turn. When malfunction occurs, please shut off the unit and send for professional personnel to repair. For example, E0 (as shown below) indicates Indoor Fan Error.



# Troubleshooting

## 1 “E0” Indoor Fan Error

**Error display:** IDU wired controller and IDU receiver light board will display E0.

**Error judgment condition and method:**

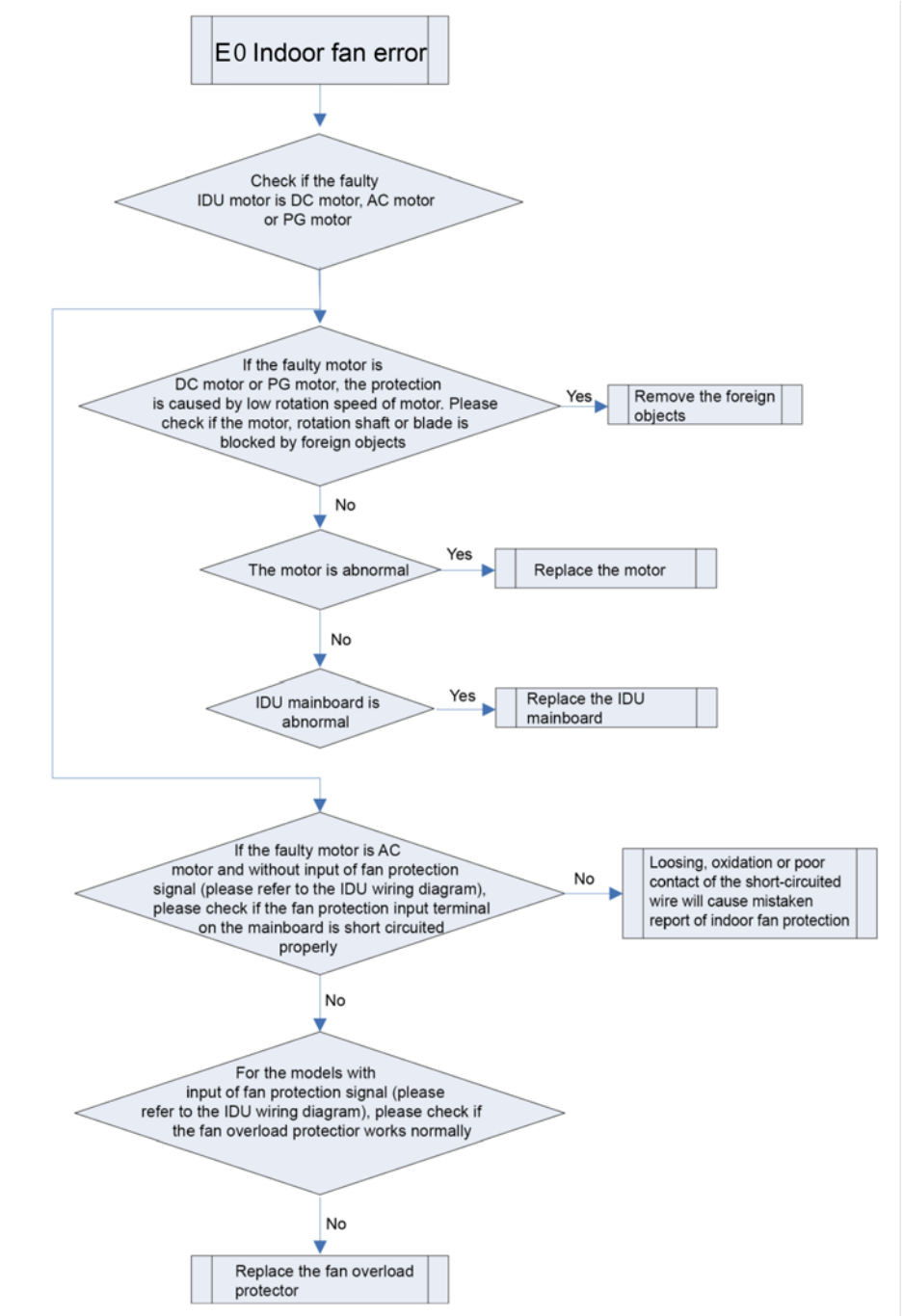
Check if the rotation speed of IDU is too slow, or it stops rotation, or protection signal of outdoor fan is transferred. If yes, it is judged that indoor fan protection occurs.

**Possible reason:**

■Motor stops operation or it is blocked;

■IDU mainboard is abnormal.

**Troubleshooting:**



## 2 “E1” Compressor High Pressure Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display E1.

**Error judgment condition and method:**

It is judged through the action of high pressure switch. If the high pressure switch is cut off, it is judged that high pressure is too high and the system stops operation for protection.

**Possible reason:**

■Cut-off valve of ODU is not fully opened;

■High pressure switch is abnormal;

■Outdoor or indoor fan is not working properly;

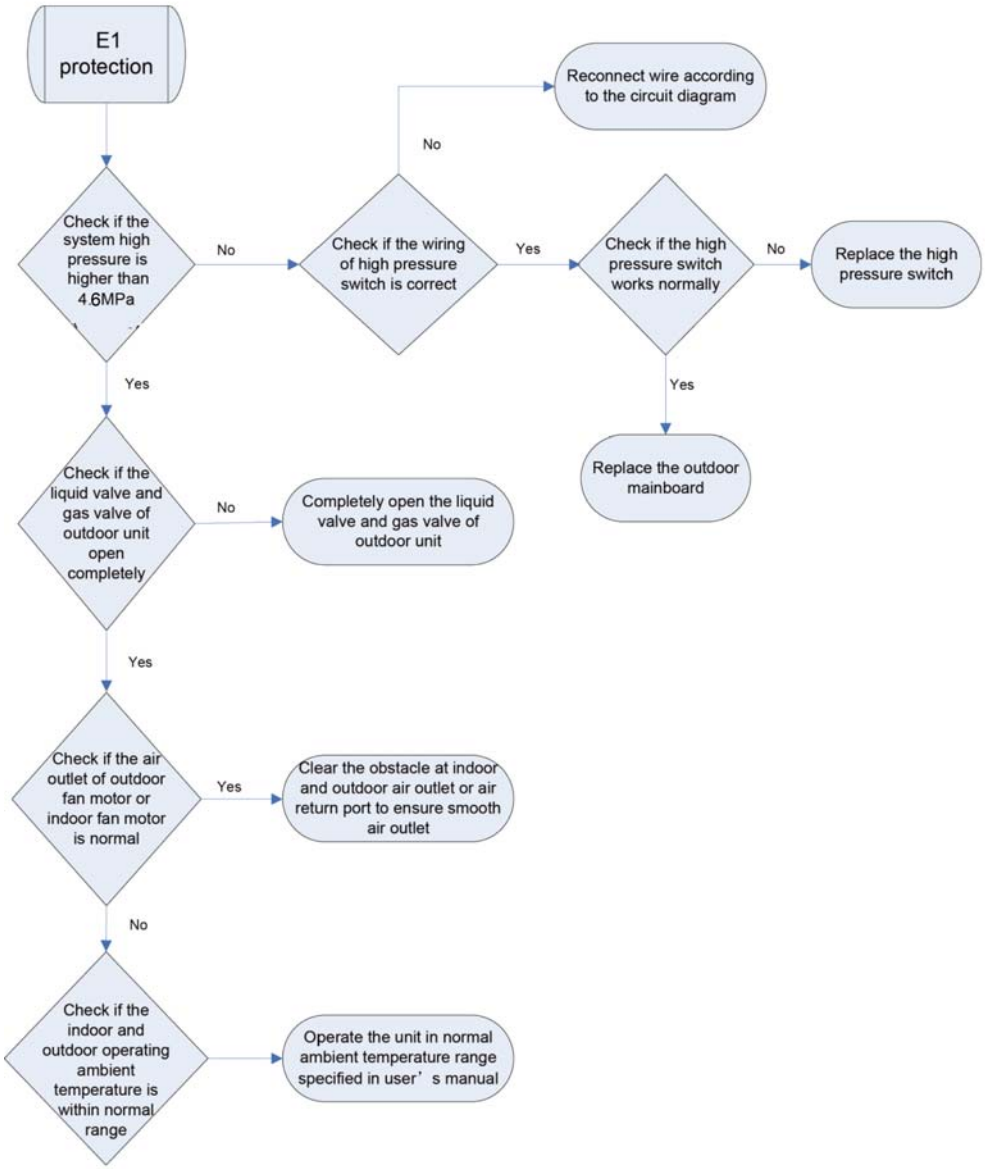
■IDU filter or air duct is blocked (heating mode);

■Ambient temperature is too high;

■Refrigerant charging amount is too much;

■System pipeline is blocked.

**Troubleshooting:**



## .3 “E2” Indoor Anti-Freezing Protection

**Error display:** IDU wired controller and IDU receiver light board will display E2.

**Error judgment condition and method:**

Check IDU evaporator pipe temperature. When evaporator pipe temperature is too low, freeze protection will be activated to prevent freezing damage of evaporator.

**Possible reason:**

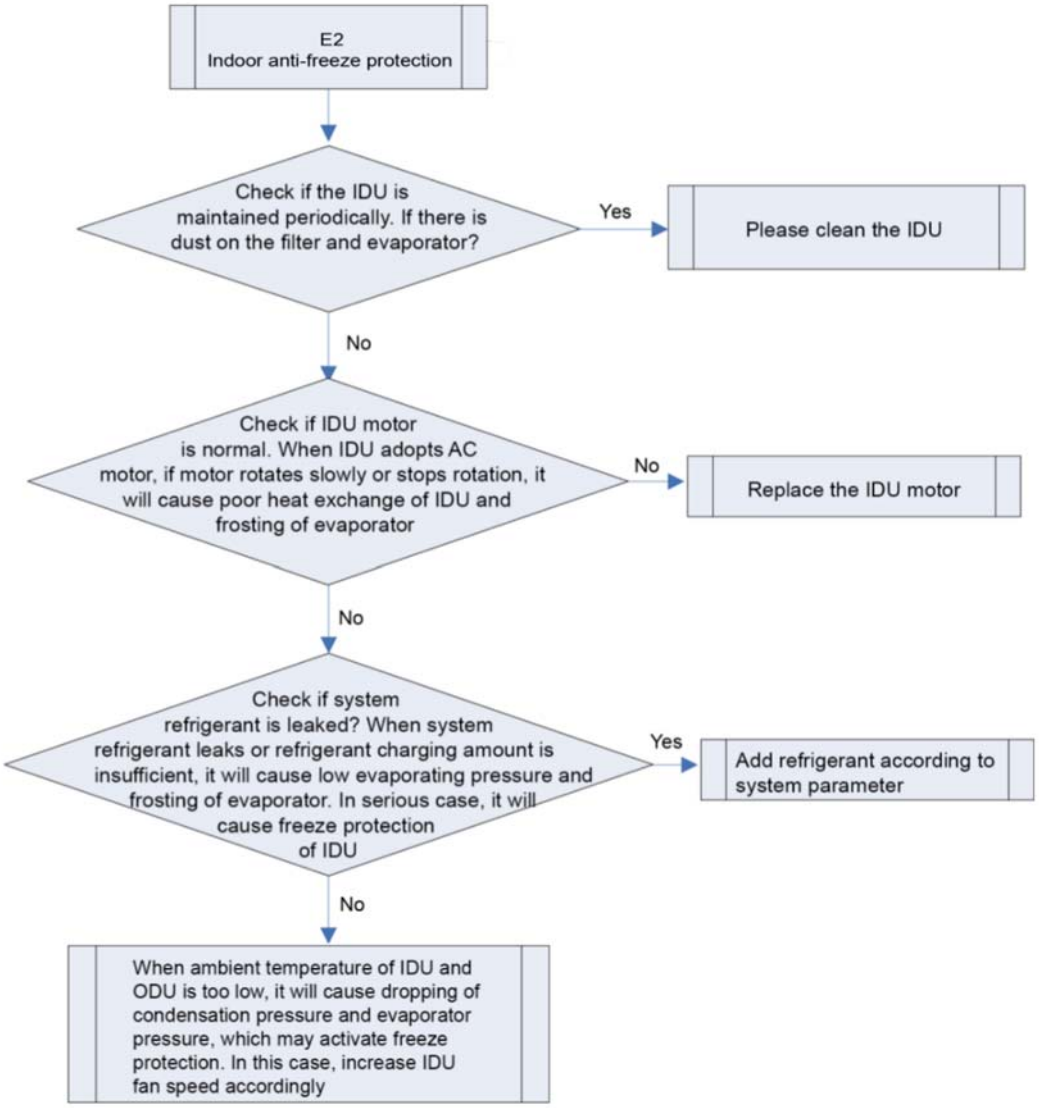
■IDU filter and evaporator are dirty;

■IDU motor is blocked;

■Refrigerant amount is insufficient;

■Ambient temperature of IDU and ODU is too low.

**Troubleshooting:**



## .4 “E3” Compressor Low-pressure Protection, Refrigerant Lacking Protection, Refrigerant Recovery Mode

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display E3

**Compressor Low-pressure Protection Error judgment condition and method:**

It is judged through the action of low pressure switch. If the low pressure switch is cut off, it is judged that low pressure is too low and the system stops operation for protection.

**“E3”Possible reason:**

■Cut-off valve of ODU is not fully opened;

■Low pressure sensor is abnormal;

■Outdoor or indoor fan is not working properly;

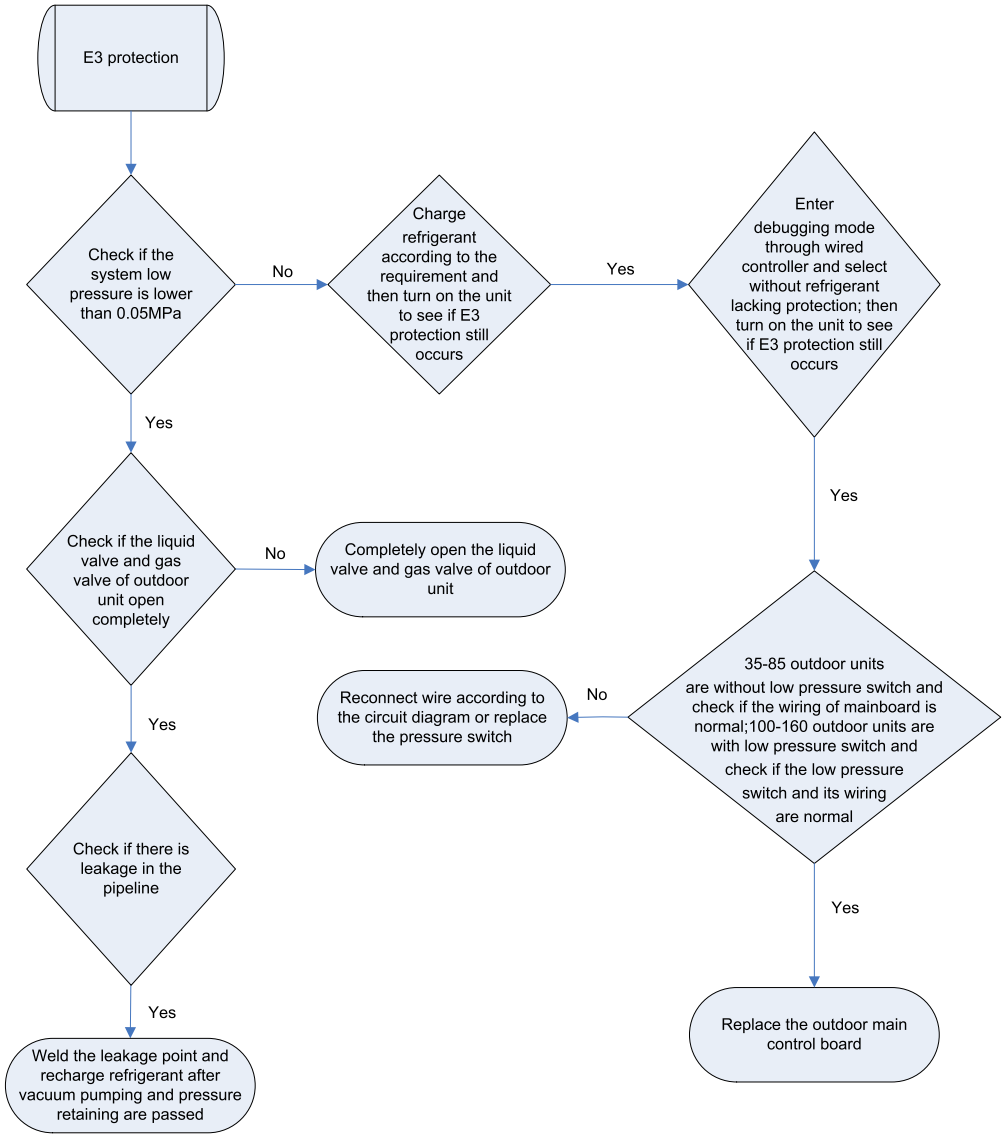
■IDU filter or air duct is blocked (cooling mode);

■Ambient temperature is too low;

■Refrigerant charging amount is insufficient;

■System pipeline is blocked;

**Troubleshooting:**



# 5 “E4” Compressor Air Discharge High-temperature Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display E4

**Error judgment condition and method:**

Test the compressor discharge temperature through compressor discharge pipe. If the tested temperature value is higher than 115℃, the unit will stop for protection.

**Possible reason:**

■Cut-off valve of ODU is not fully opened;

■Electronic expansion valve is abnormal;

■Outdoor or indoor fan is not working properly;

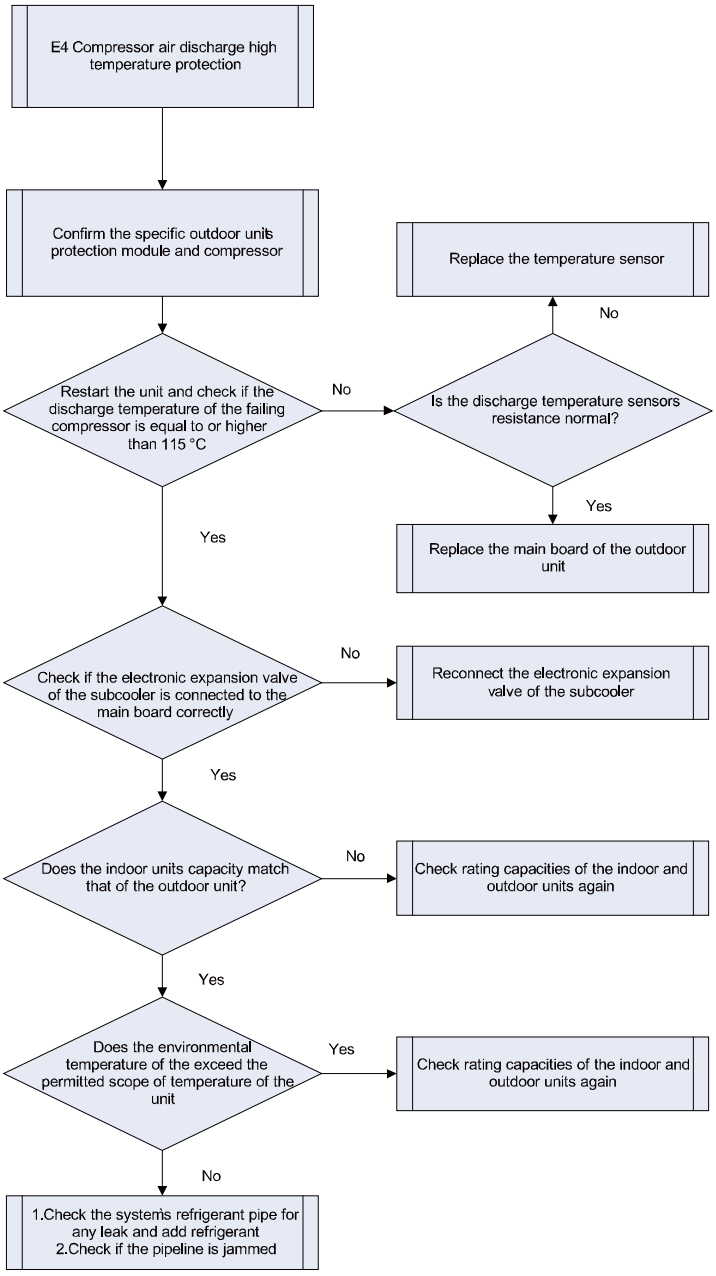
■IDU filter or air duct is blocked (cooling mode);

■Ambient temperature exceeds allowable operation range;

■Refrigerant charging amount is insufficient;

■System pipeline is blocked;

**Troubleshooting:**



## 6 “E6” Communication Error

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display E6

**Error judgment condition and method:**

If no communication between ODU and IDU in continuously 180s, this error will be reported.

**Possible reason:**

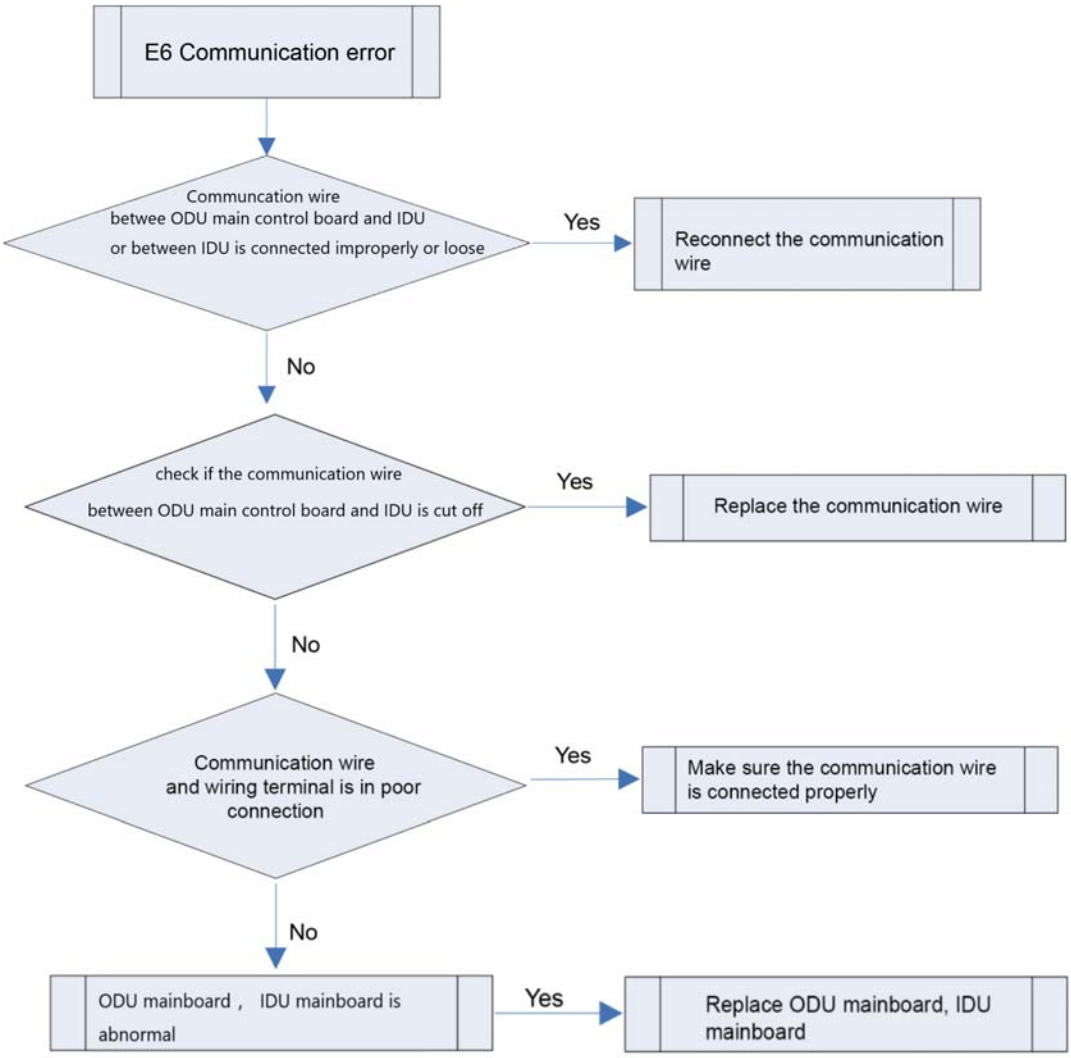
■Communication wire is connected improperly or loose.

■Communication wire is cut off

■Communication wire is in poor connection

■Controller is abnormal

**Troubleshooting:**




## 7 “E9” Water Overflow Protection

**Error display:** IDU wired controller and IDU receiver light board will display E9

**Error judgment condition and method:**

Check the status of IDU float switch. When water level is too high, float switch is activated, so water full protection happens.

**Possible reason:**

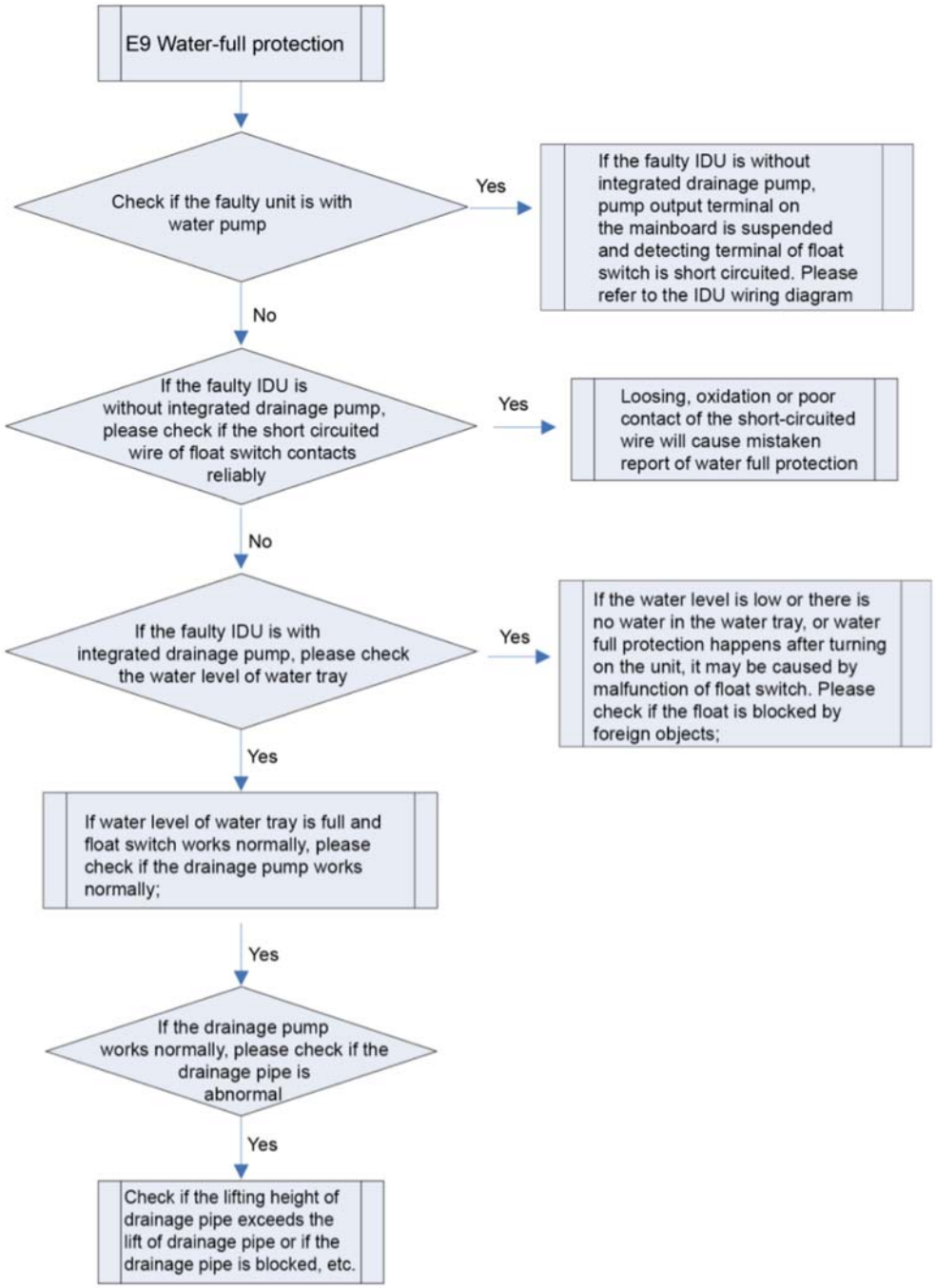
■IDU is installed improperly

■Drainage pump is broken

■Float switch operates abnormally

■IDU mainboard is abnormal;

**Troubleshooting:**




## .8 “C6” Discharge Temperature Sensor Error

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display C6

**Error judgment condition and method:**

① Sample the AD value of temperature sensor through temperature sensor detecting circuit and

judge the range of AD value, If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

② Compare the discharge temperature after the compressor has just started running and after 10 minutes of operation, if the temperature is not changed, report the error.

**Possible reason:**

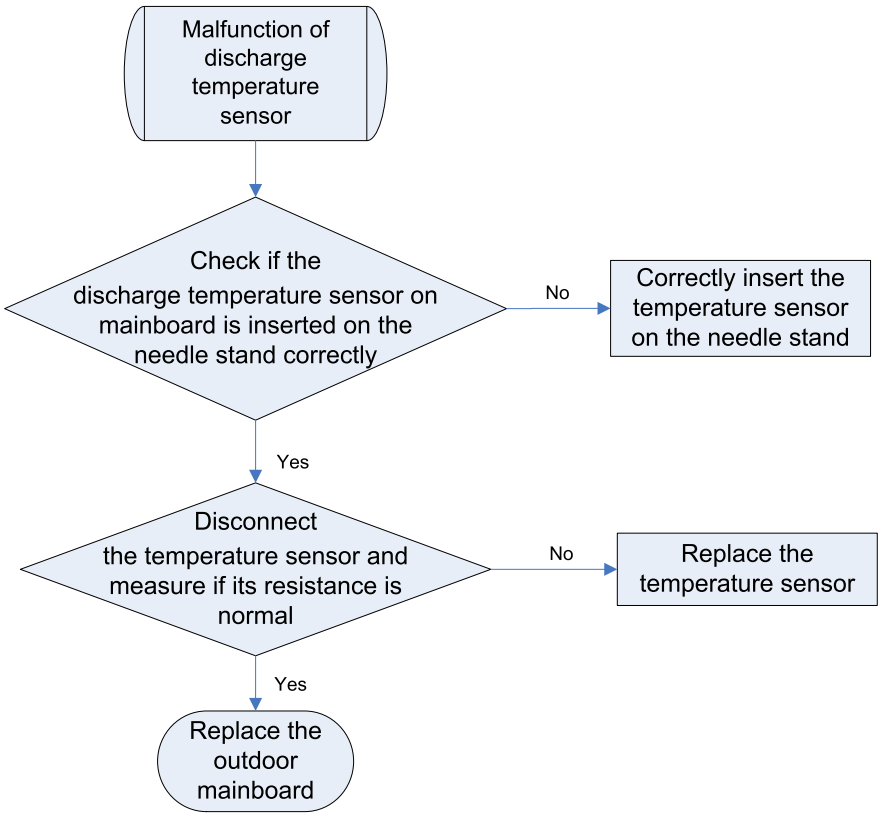
■Poor contact between temperature sensor and terminal in mainboard interface;

■Poor contact between temperature sensor and compressor discharge pipe;

■Temperature sensor is abnormal;

■Detecting circuit is abnormal.

**Troubleshooting:**




**Note:** Please refer to Appendix 1 for the relation between temperature and resistance of temperature sensor.

## 9 “F3” Outdoor Ambient Temperature Sensor Error

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display F3

**Error judgment condition and method:**

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

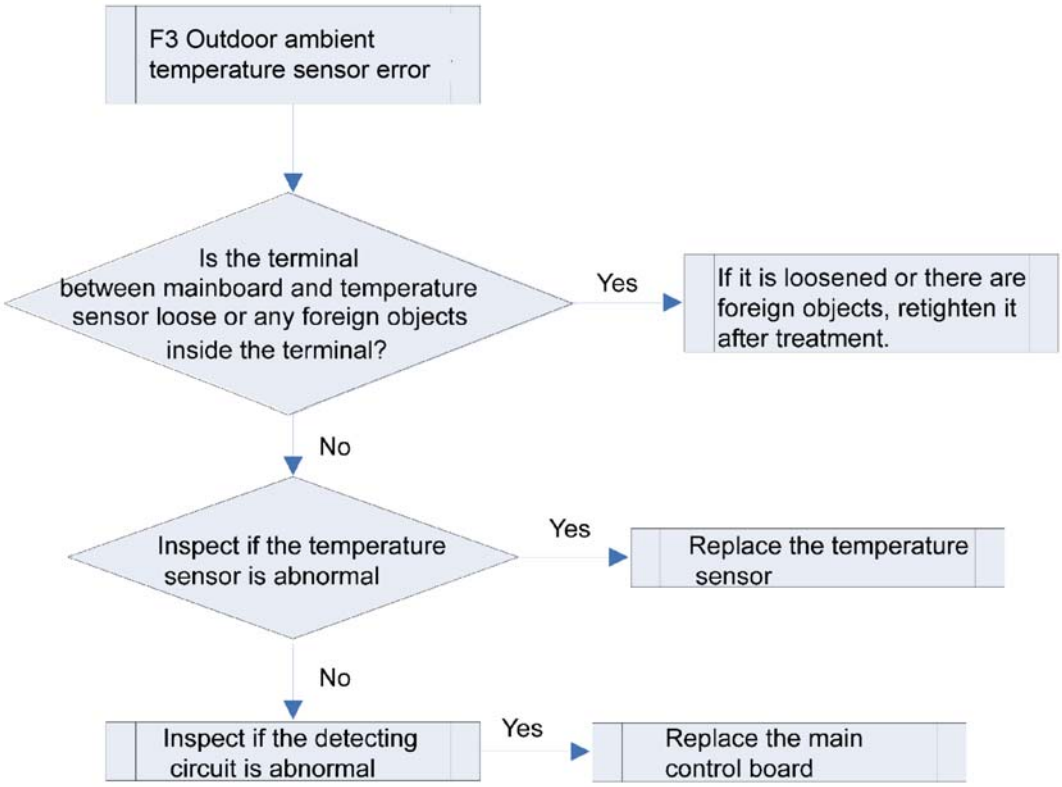
**Possible reason:**

■Poor contact between ambient temperature sensor and terminal in mainboard interface

■Ambient temperature sensor is abnormal

■Detecting circuit is abnormal

**Troubleshooting:**




**Note:** Please refer to Appendix 1 for the relation between temperature and resistance of temperature sensor.

## 10 "CE" Wired Controller Temperature Sensor Error

**Error display:** IDU wired controller and IDU receiver light board will display CE

**Error judgment condition and method:**

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

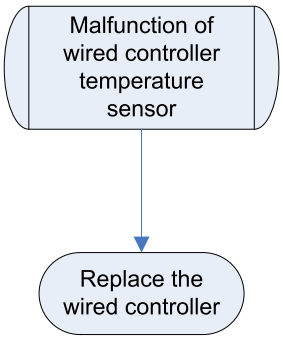
**Possible reason:**

■Poor contact between temperature sensor and terminal in mainboard interface

■Temperature sensor is abnormal

■Detecting circuit is abnormal

**Troubleshooting:**



## 11 “CJ” IDU Jumper Cap Error

**Error display:** IDU wired controller and IDU receiver light board will display CJ

**Error judgment condition and method:**

If jumper cap model doesn’t match with mainboard, this error will be reported.

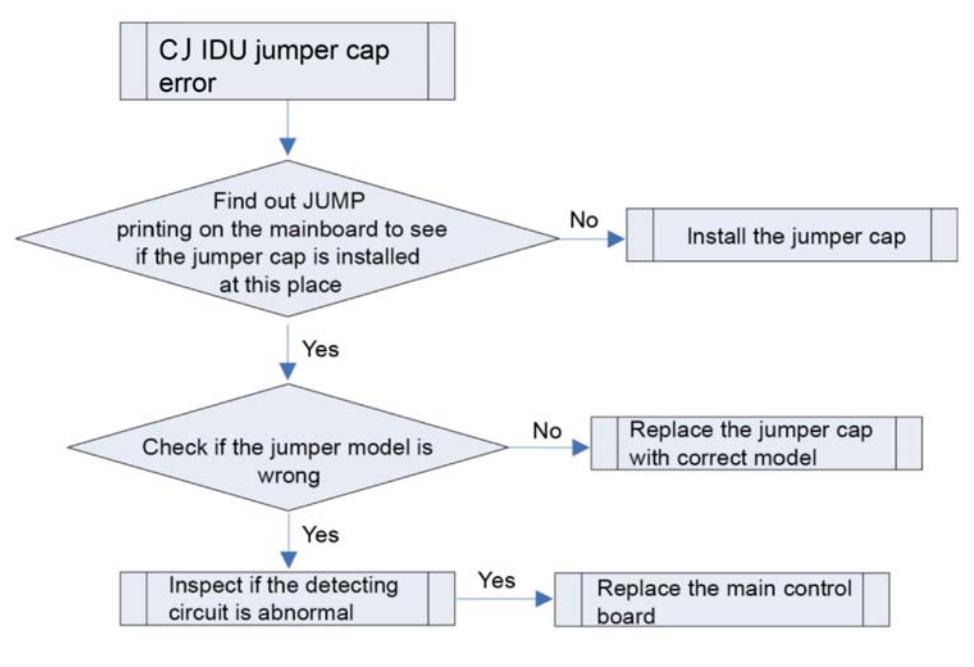
**Possible reason:**

■Jumper cap is not installed.

■Jumper cap model is wrong.

■Detecting circuit is abnormal.

**Troubleshooting:**




## 12 “H4” Overload

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display H4

**Error judgment condition and method:**

When tube temperature is higher than the protection value, system will report overload protection.

**Possible reason:**

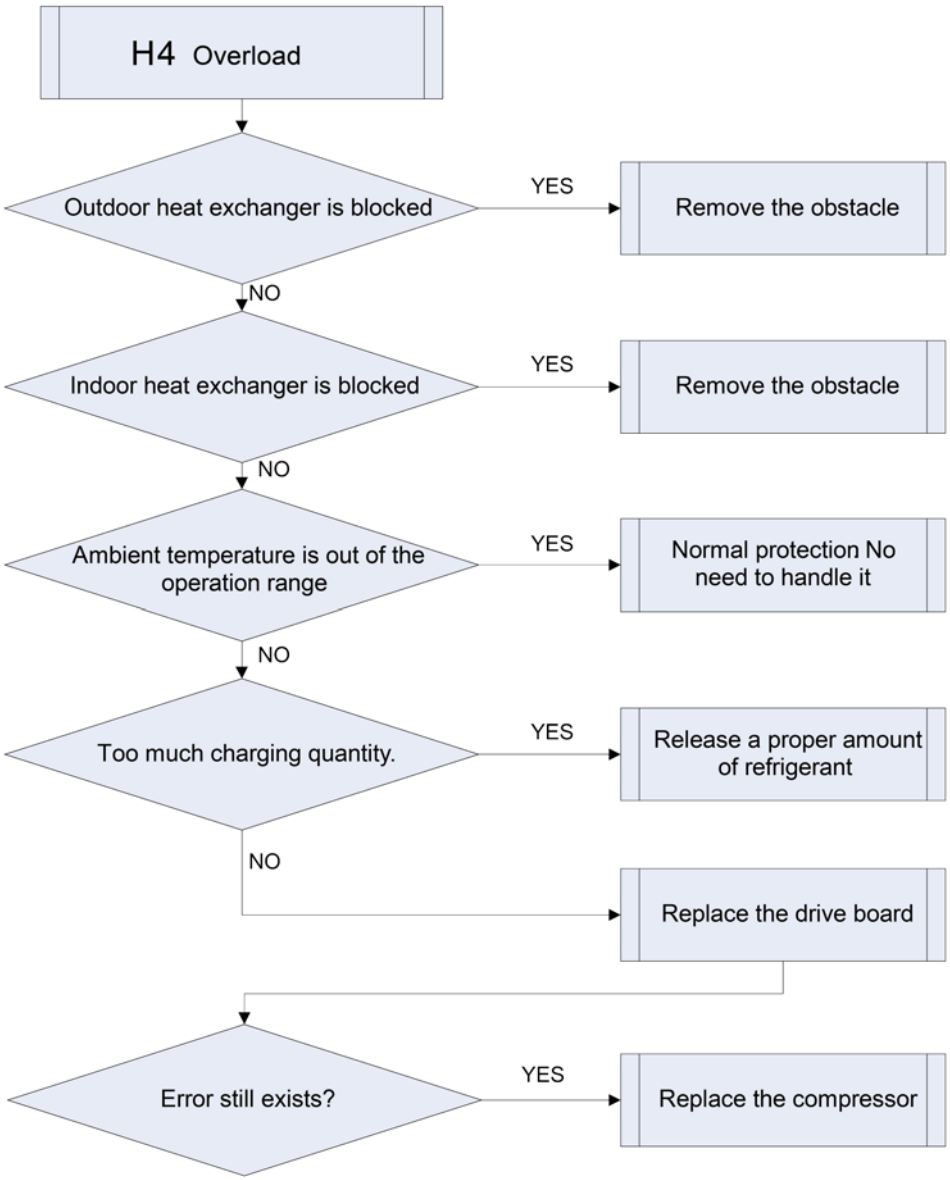
■Cooling ODU heat exchanger is blocked or heat exchange is bad.

■Heating IDU heat exchanger is blocked or heat exchange is bad.

■Operating temperature is too high.

■System charging quantity is too much.

**Troubleshooting:**




## 13 “H5” IPM Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display H5

**Error judgment condition and method:**

When power is connected and drive chip received IPM lead F0 that is of low level, than it is IPM module malfunction. System will shut down for protection.

**Possible reason:**

■Compressor 3-phase wire connection is lack of phase or phase-reversed.

■System is overloaded and compressor current is too large.

■Drive board IPM module is damaged.

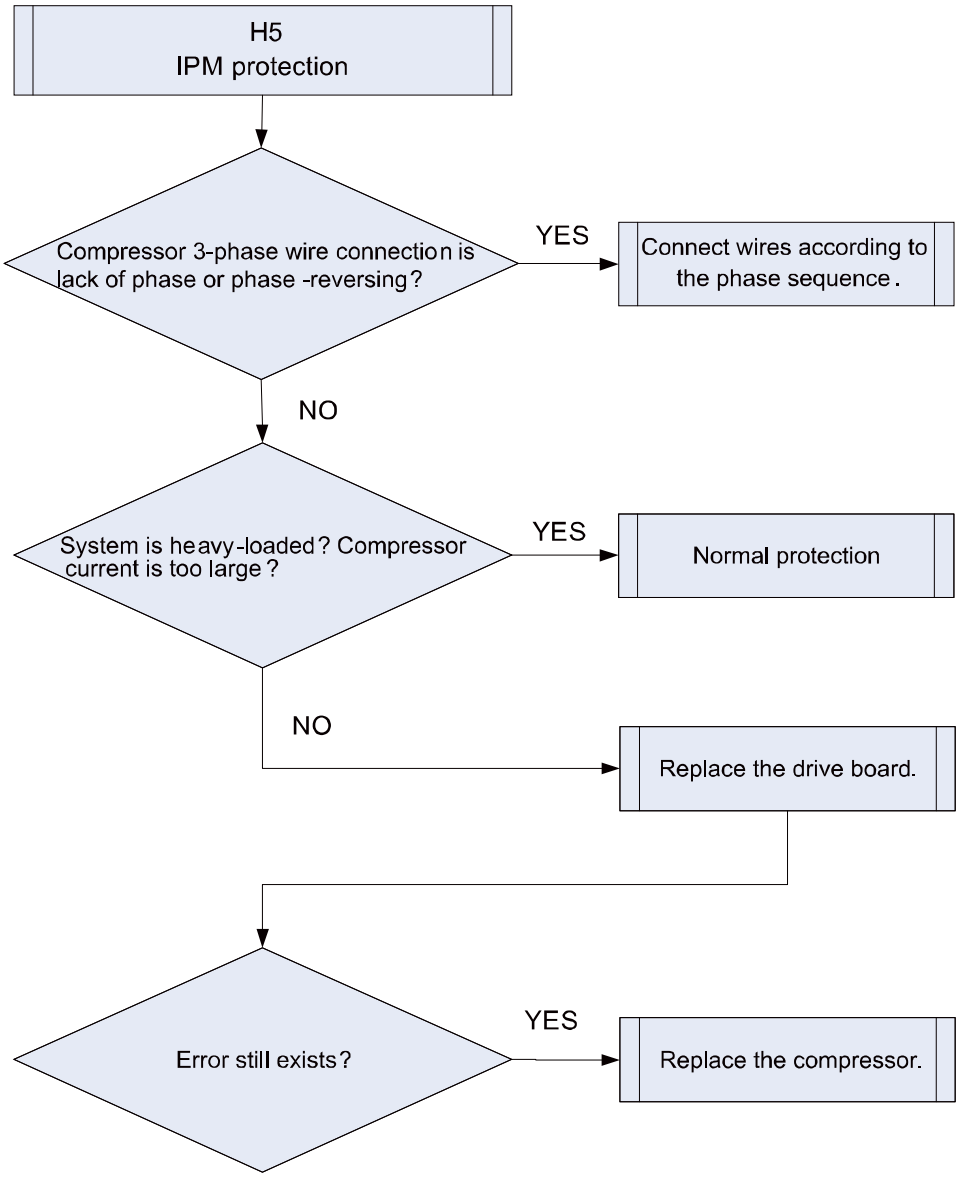
■Drive board IPM module’s 15V power supply is lower than 13.5V.

■Drive board 6-line PWM signal and the corresponding element are abnormal.

■Drive board compressor current sampling circuit element is damaged or drive chip current sampling AD terminal is abnormal.

■Compressor is damaged.

**Troubleshooting:**




## 14 “HC” PFC Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display HC

**Error judgment condition and method:**

After power is connected, and drive chip received PFC lead F0 that is of low level, than it is PFC module malfunction. System will shut down for protection.

**Possible reason:**

■Power grid voltage is abnormal.

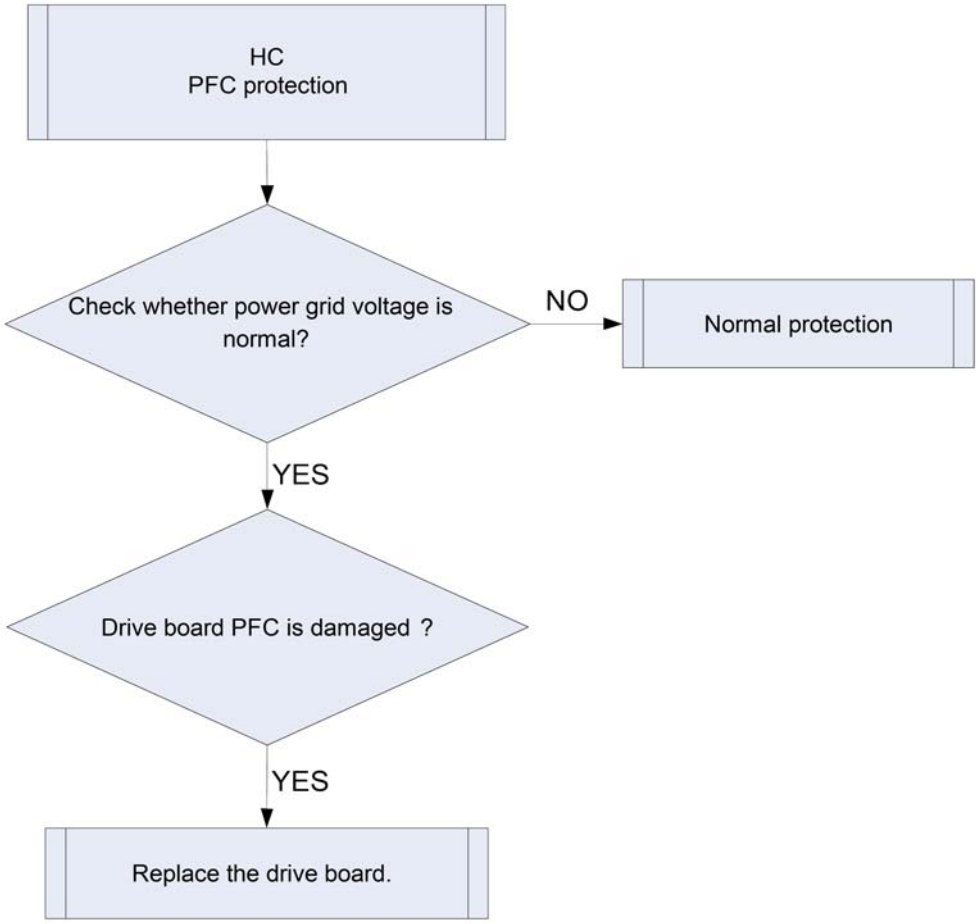
■Drive board PFC module is damaged.

■Drive board PFC module’s 15V power supply is lower than 13.5V.

■Drive board PWM signal for PFC and the corresponding element are abnormal.

■Drive board PFC current sampling circuit element is damaged or drive chip current sampling AD terminal is abnormal.

**Troubleshooting:**




## 15 “Lc” Startup Failure

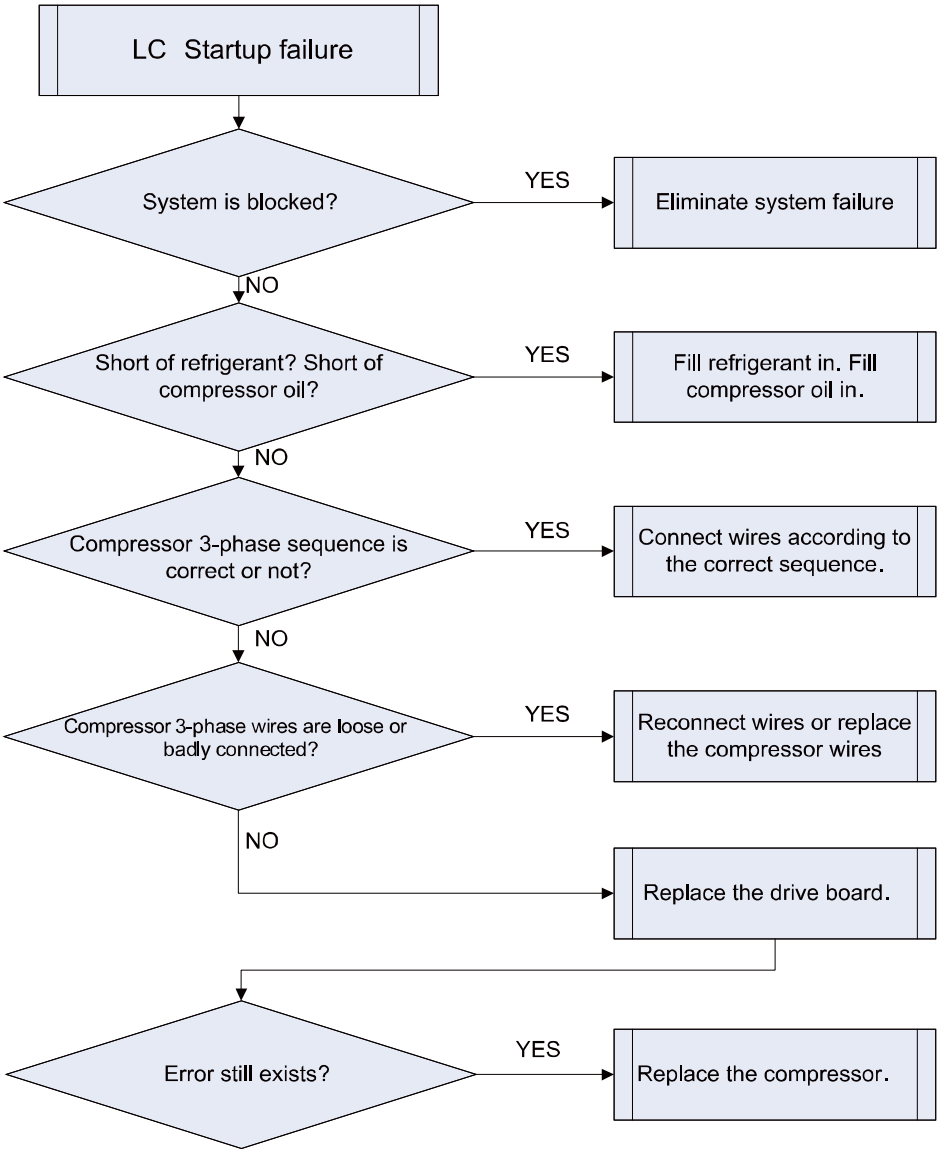
**Error display:** ODU mainboard, IDU wired controller and IDU receive light board will display Lc.

■Poor contact of compressor UVW wire;

■Compressor is broken;

■Compressor drive board is broken.

**Troubleshooting:**




## 16 “U7” 4–Way Valve Switch-Over Error

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display U7

**Possible reason:**

■Voltage is abnormal. For example, low voltage will cause abnormal direction change of the 4-way valve.

■Pilot valve holder hole or the capillary tube is blocked, which has caused small flow or no flow.

■Capillary tube is blocked when connecting to the pilot valve or main valve.

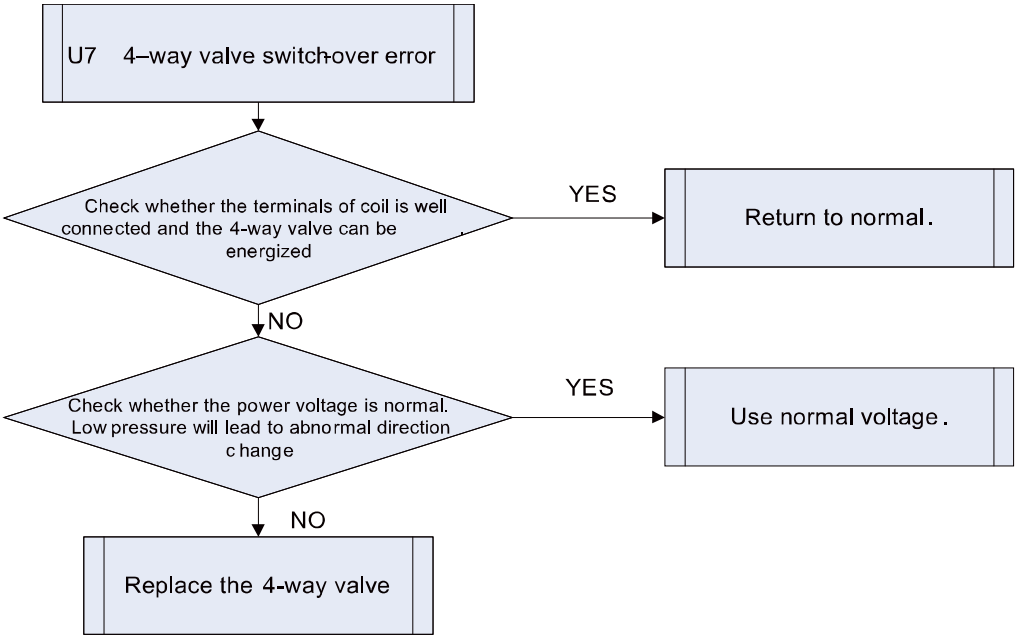
■Coil is not power-connected, or is open-circuited. Voltage is low, or the contact between turns or terminals is bad.

■The stainless steel cover of pilot valve is damaged, or the steel core is stuck, or the spring is not elastic.

■Insert block is bent or not elastic, so the little slide cannot get in place.

■When adding refrigerant, the little slide is over-running and can’t spring back.

**Troubleshooting：**




## 17 “qC” Master Control and Driver Communication Error

**Error display:** IDU wired controller and IDU receiver light board will display qC

**Error judgment condition and method:**

If there is no other malfunction and the communication between master control and driver is cut off for 30s, then it can be judged that the communication between master control and driver is faulted. System will shut down for protection.

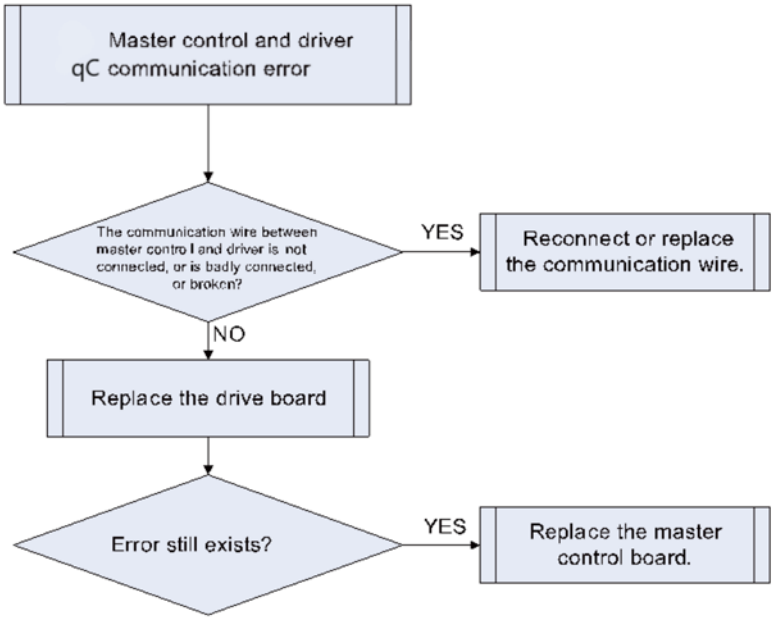
**Possible reason:**

■Communication wire between master control and driver is not well connected, or has bad contact, or is broken.

■The switch power of drive board is abnormal, therefore, the 3.3V power voltage is abnormal.

■Communication circuit of the drive board or the master control board is abnormal.

**Troubleshooting：**



## 18 “PA” AC Current Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display PA

**Error judgment condition and method:**

If input current value exceeds the set protection value, then it can be judged that AC current protection occurs and system will shut down for protection.

**Possible reason:**

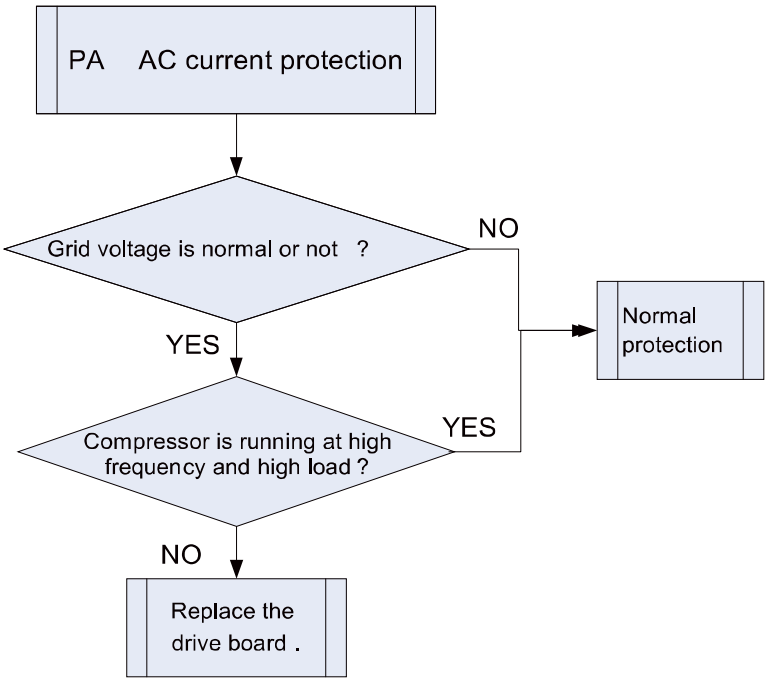
■System is heavy-loaded and compressor current is too large.

■Grid voltage is abnormal.

■PFC module is damaged.

■Drive board PFC current sampling circuit element is damaged or drive chip PFC current sampling AD terminal is abnormal.

**Troubleshooting:**




## 19“PL” Bus Low-Voltage Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display PL

**Error judgment condition and method:**

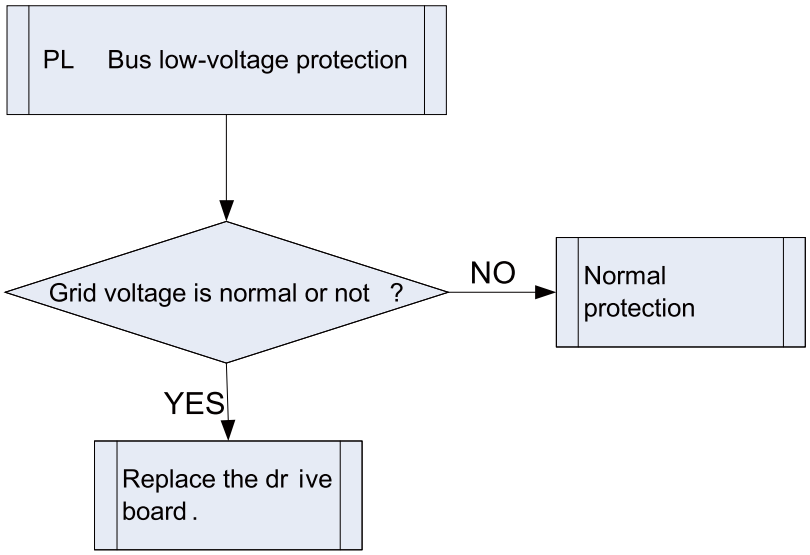
When compressor is running and there is no other malfunction, if busbar voltage is lower than the set value for low voltage protection, then it can be judged that bus low-voltage protection occurs. System will shut down for protection.

**Possible reason:**

■Voltage of power grid is abnormal.

■Drive board busbar voltage sampling circui lement is damaged or drive board busbar voltage sampling AD terminal is abnormal.

**Troubleshooting:**




## 20 “PH” Bus High-Voltage Protection

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display PH

**Error judgment condition and method:**

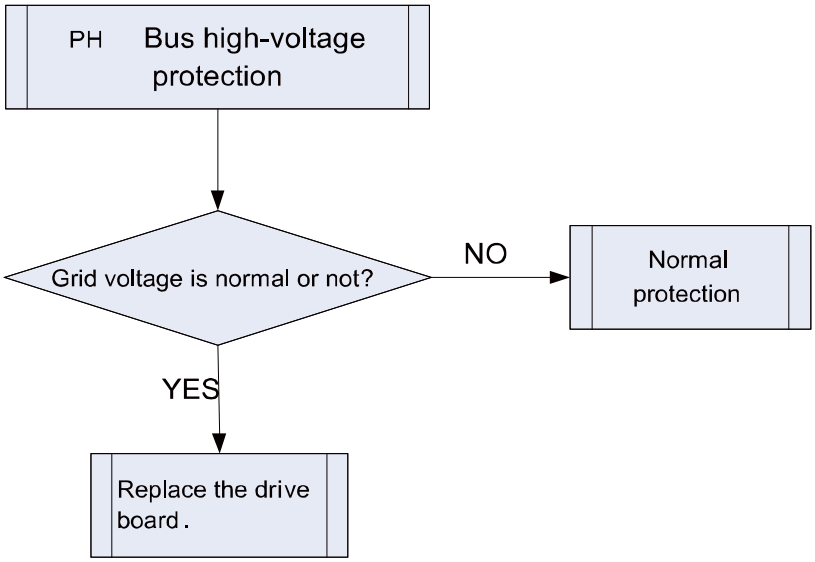
If there is no other malfunction and the busbar voltage is higher than the set value for high voltage protection, then it can be judged that bus high-voltage protection occurs. System will shut down for protection.

**Possible reason:**

■Voltage of power grid is abnormal.

■Drive board busbar voltage sampling circuit element is damaged or drive board busbar voltage sampling AD terminal is abnormal.

**Troubleshooting:**



## .21 “C8” ODU Driver Jumper Cap Error

**Error display:** ODU mainboard, IDU wired controller and IDU receiver light board will display C8

Error judgment condition and method:

If jumper cap model doesn’t match with driver, report the error

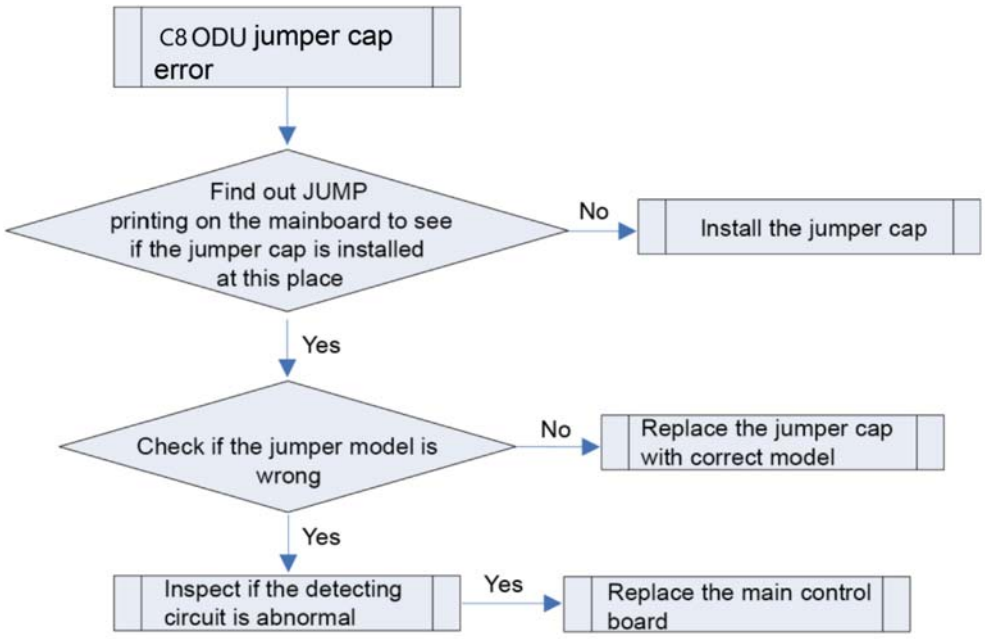
**Possible reason:**

■Driver Jumper cap is not installed

■Driver Jumper cap model is wrong

■Detecting circuit is abnormal

**Troubleshooting:**




## 22 “EL” Emergency Stop (Fire Alarm)

If fire alarm terminal is enabled after the IDU mainboard connects to function expansion panel, error EL will be reported.

## Failures Not Caused by Errors

(1) If your air conditioner fails to function normally, please first check the following items before maintenance:

| Problem | Cause | Corrective measure |
|---|---|---|
| The air conditioner can't run. | If you turn off the unit and then immediately turn it on, in order to protect the compressor and avoid system overload, compressor will delay running for 3min. | Please wait for a while. |
| | Wire connection is wrong. | Connect wires according to the wiring diagram. |
| | Fuse or circuit breaker is broken. | Replace the fuse or switch on the circuit breaker. |
| | Power failure. | Restart after power is resumed. |
| | Power plug is loose. | Re-insert the power plug. |
| | Remote controller has low battery. | Replace the batteries. |
| Bad cooling or heating effect. | Air inlet and outlet of indoor or outdoor units have been blocked. | Clear the obstacles and keep the room for indoor and outdoor units well ventilated. |
| | Improper temperature setting. | Reset a proper temperature. |
| | Fan speed is too low. | Reset a proper fan speed. |
| | Air flow direction is not right. | Change the direction of air louvers. |
| | Doors or windows are open. | Close them. |
| | Exposed under direct sunshine. | Put on curtains or louvers in front of the windows. |
| | Too many heat sources in the room. | Remove unnecessary heat sources. |
| | Filter is blocked or dirty. | Send for a professional to clean the filter. |
| | Air inlets or outlets of the units are blocked. | Clear away obstacles that are blocking the air inlets and outlets of indoor and outdoor units. |

(2) The following situations are not operation failures.

| Phenomenon | Time of occurrence | Cause |
|---|---|---|
| Mist comes from the air conditioner. | During operation. | If the unit is running under high humidity, the wet air in the room will be quickly cooled down. |
| The air conditioner generates some noise. | System switches to heating mode after defrosting. | Defrosting process will generate some water, which will turn to water vapor. |
| | The air conditioner is buzzing at the beginning of operation. | Temperature controller will be buzzing when it starts working. The noise will become weak 1min later. |
| Dust comes from the air conditioner. | When the unit is turned on, it purrs. | When the system is just started, the refrigerant is not stable. About 30s later, the purr of the unit becomes low. |
| | About 20s after the unit first enables the heating mode or there is refrigerant brushing sound when defrosting under heating. | It's the sound of 4-way valve switching direction. The sound will disappear after the valve changes its direction. |
| | There is hissing sound when the unit is started or stopped and a slight hissing sound during and after operation. | It's the sound of gaseous refrigerant that stops flowing and the sound of drainage system. |
| | There is a sound of crunching during and after operation. | Because of temperature change, front panel and other components may be swelled up and cause abrasion sound. |
| | There is a hissing sound when the unit is turned on or suddenly stopped during operation or after defrosting. | Because refrigerant suddenly stops flowing or changes the flow direction. |
| | The unit starts operation after being unused for a long time. | Dust inside the indoor unit comes out together with the air. |
| The air conditioner generates some smell. | During operation. | The room smell or the smell of cigarette comes out through the indoor unit. |

**NOTICE:**

Check the above items and adopt the corresponding corrective measures. If the air conditioner continues to function poorly, please stop the air conditioner immediately and contact Gree's authorized local service center. Ask our professional service staff to check and repair the unit.