

1. Malfunction Description

E6 is displayed on indoor unit; Indoor LED lamp for operation is off for 3s and blinks for 6 times and during blinking, LED lamp is off for 0.5s and on for 0.5s; the complete unit stops operation. When communication becomes normal and compressor has stopped operation for 3 minutes, the complete unit can resume normal operation.

2. Malfunction Cause

When indoor unit (or outdoor unit) has not received correct signal from outdoor unit (or indoor unit) for continuous 3 minutes, the communication malfunction will occur.

Note: the 3 LED lamps for malfunction in outdoor controller are independent. During blinking, the LED lamp is on for 1s and off for 1s. When a LED lamp is off for continuous 3s, it is an end of counting period. When the LED lamp is on again, it is the start of a new counting period.

The communication circuit is for data transfer between indoor and outdoor units. The circuit adopts half-duplex asynchronous series communication. Take the communication protocol in which the indoor unit is the master unit as example (the outdoor unit is master unit for the model with new protocol). In normal condition, the indoor unit waits for receiving data after sending signal. If it hasn't received correct data after a period of time, it will send the data again. If correct signal hasn't been received for continuous 3 minutes, the error will be given out. If the outdoor unit is slave unit and it hasn't received correct signal, it will keep waiting and not send signal.

第 40 页

Section 6 E6 Communication Malfunction

AC commercial power goes through diode for half-wave rectification. After current-limiting of resistance, the voltage-regulator diode wills regular the output voltage to 56V. After wave filtering of capacitor, it will provide stable 56V voltage for communication circulation circuit. The current for whole communication circulation circuit is about 3mA. The diagram of communication circuit is as follows:

第 41 页

Section 6 E6 Communication Malfunction

3. Possible Causes

Voltage of power supply is low; unmatch of indoor and outdoor units

Connecting wire between indoor and outdoor units for power supply

Controller of indoor or outdoor unit

Electronic component of indoor or outdoor unit (connecting wire, electric auxiliary heater)

Electric box of outdoor unit

Electronic component of outdoor unit (connecting wire, electric reactor, DC motor, temp sensor, etc)

4. Standard troubleshooting process

Step 1: Detect if voltage of power supply is too low (T5), and check if indoor unit matches with outdoor unit (T2);

Step 2: Use “portable multi function debugging device for inverter air conditioner” to measure either indoor unit or outdoor unit has malfunction. If there is no such device, check malfunction as follows:

Step 3: Check if connecting wire for indoor and outdoor units is wrongly connected (T7), or loose (T8), or the wire is not reliably connected or there is oxygenation (T9);

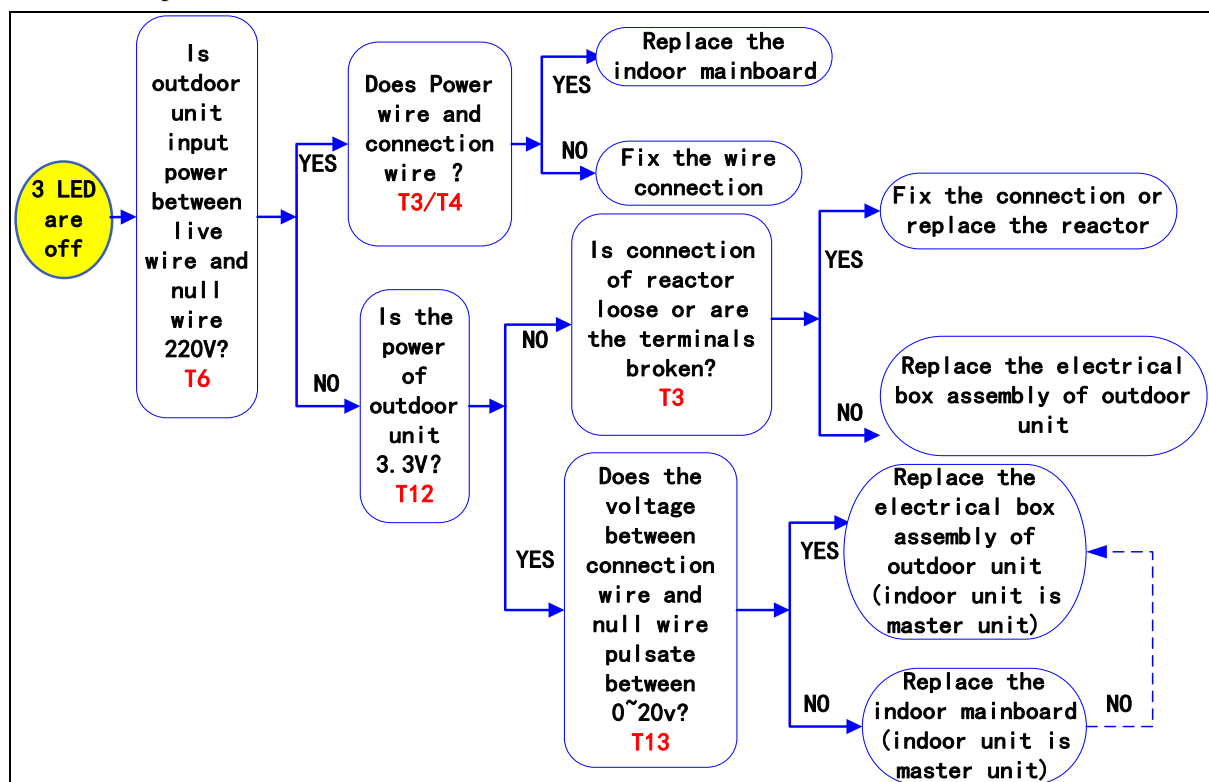
Step 4: Judge the malfunction according to status of outdoor LED lamps for malfunction.

第 42 页

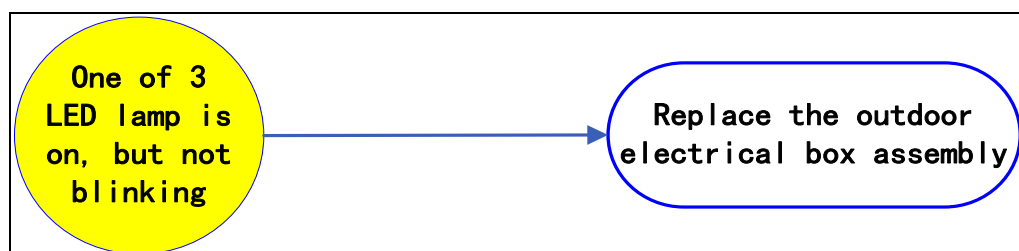
Section 6 E6 Communication Malfunction

Model with capacity 1.5P or below (Indoor unit is master) :

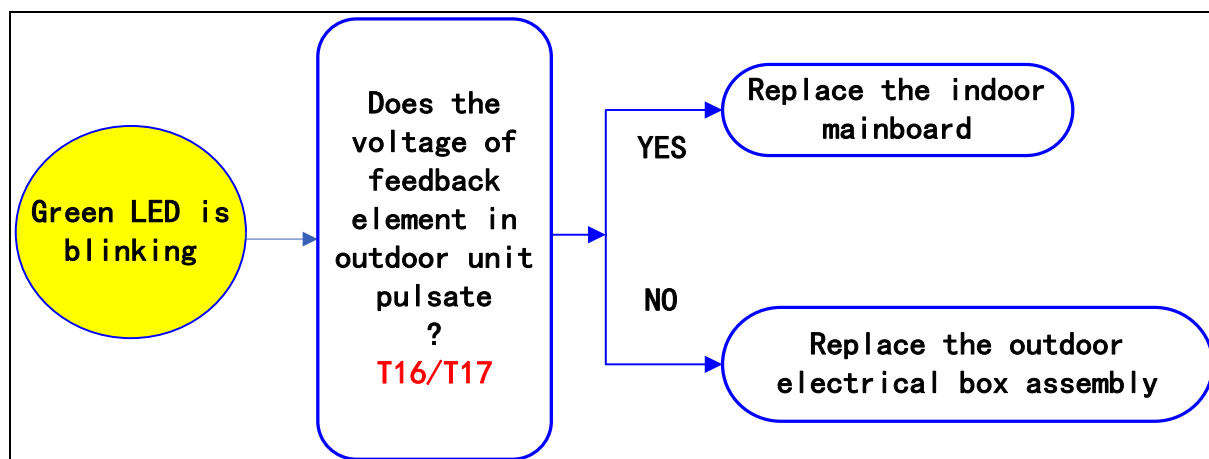
①3 LED lamps of outdoor unit are off:



②One of 3 LED lamp(in outdoor mainboard) is on but not blinking:



③Green LED lamp(in outdoor mainboard) is blinking.



Tips: That **one of 3 LED** lamp(in outdoor mainboard) is on means malfunction of outdoor main chip; blinking of **Green LED** lamp(in outdoor mainboard) means that outdoor unit has received signal from indoor unit but indoor unit has not received feedback signal from outdoor unit. It may be the problem of outdoor unit or indoor unit. The malfunction can't be determined only by blinking or off status of LED lamp.

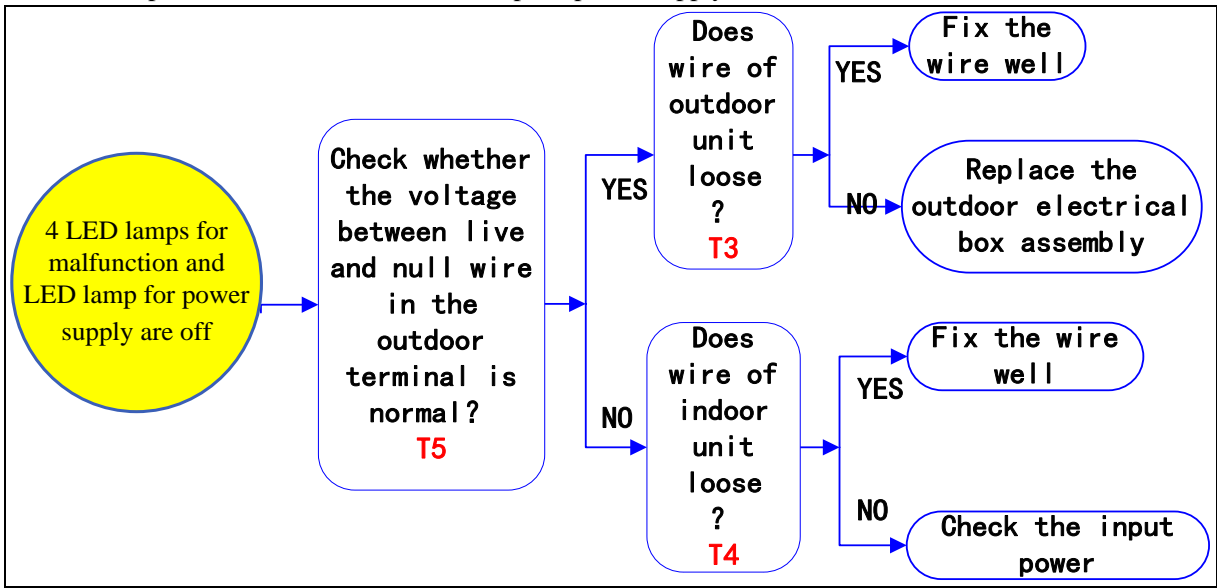
第 44 页

Section 6 E6 Communication Malfunction

Model with capacity 2P or above

There are 4 outdoor LED lamps for malfunction: D5, D6, D16 and D30 for model with capacity 2P or above. For each LED lamp, there are 3 status: on, off, blinking and the different combinations of status mean different malfunctions.

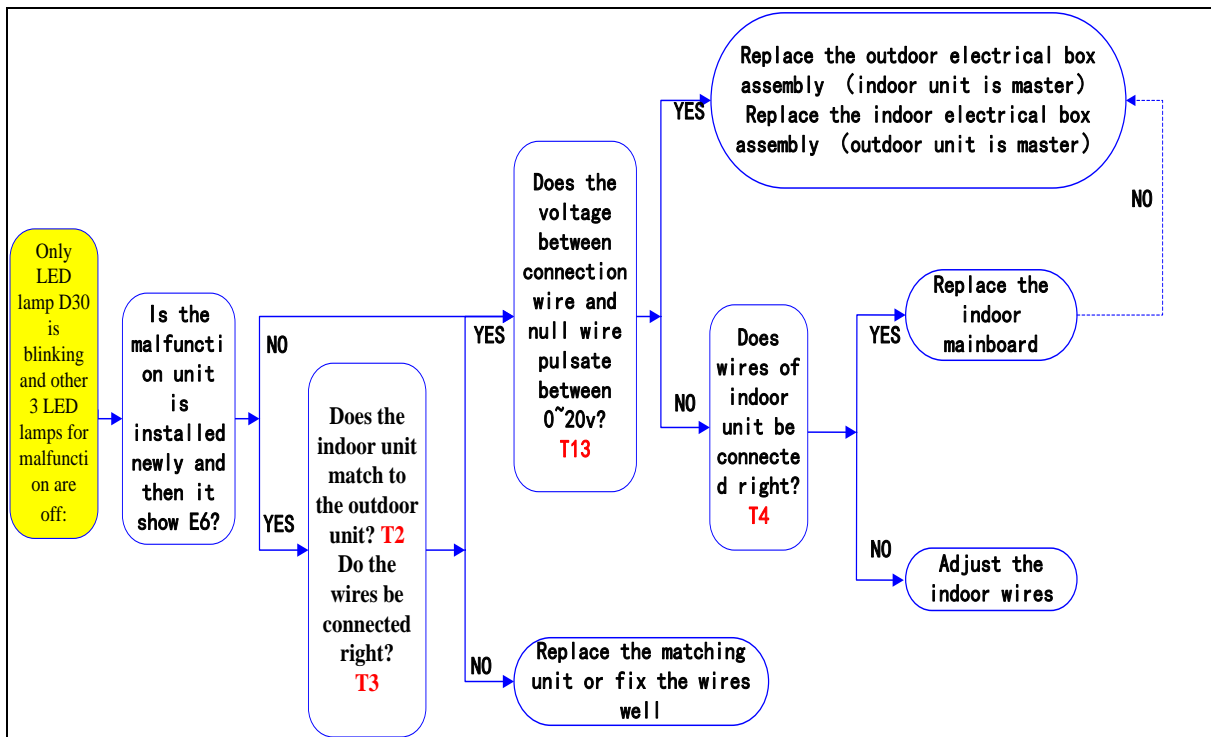
① 4 LED lamps for malfunction and LED lamp for power supply are off:



第 45 页

Section 6 E6 Communication Malfunction

②Only LED lamp D30 is blinking and other 3 LED lamps for malfunction are off:



Note: If

E6 is still displayed after replacing indoor and outdoor electric box respectively, check outdoor controller and indoor controller are matched with each other, if wiring sequence is correct, if the wire is connected reliably, if there is oxygenization in the joint of wire, if the circuit of temp sensor is damaged or has short circuit, if voltage of power supply is too low, or if there is electromagnetic interference around.