



Error Code Troubleshooting Guide

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Error Code List



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Necessary tools



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**Error code trouble
shooting guide**



One

Error Code List

01

Error code of IDU

02

Error LED indicator of ODU

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IDU Error Code List

04

Inverter ODU error code list

➤ Wall-mounted AC

Pattern 1



ES

Pattern 2



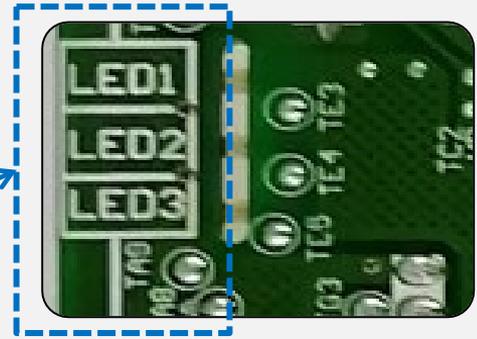
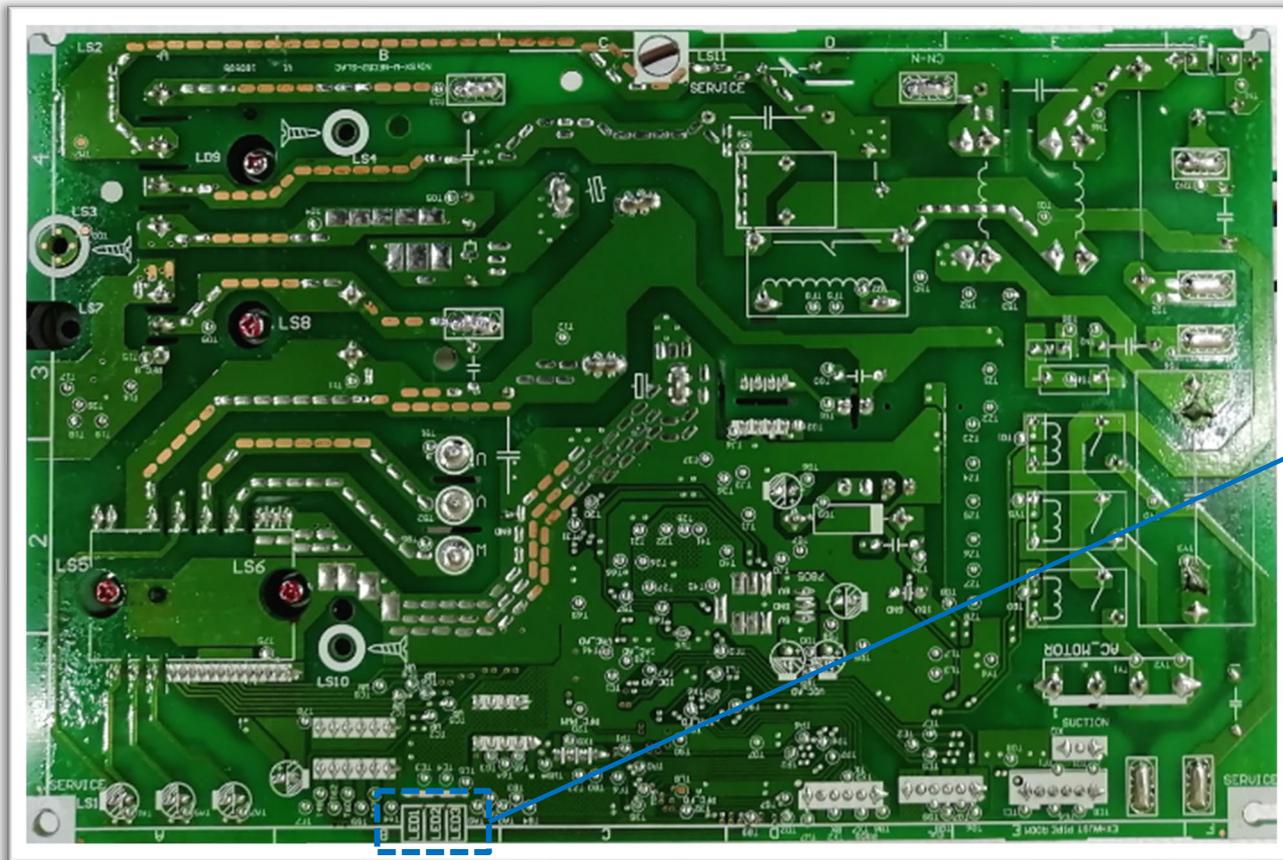
Timing

Heating

Cooling

➤ Floor standing AC





Error Code	Explanation	IDU LED Display	Wall-Mounted		Floor Standing	
			ON/OFF	Inverter	ON/OFF	Inverter
E0	IDU overcurrent protection	Cooling : Flash 8 times	✓	✓	✓	✓
E1	IDU room sensor error	Heating : Flash once	✓	✓	✓	✓
E2	ODU condenser sensor error	Timing : Flash twice	✓	✓	✓	✓
E3	IDU evaporator sensor error	Heating : Flash 3 times	✓	✓	✓	✓
E4	AC or DC motor error	Heating : Flash 4 times	✓	✓		

Error Code	Explanation	IDU LED Display	Wall-Mounted		Floor Standing	
			ON/OFF	Inverter	ON/OFF	Inverter
E5	ODU and IDU communication error	Heating : Flash 5 times		✓	✓	✓
E8	Communication fault between display board and PCB board	/				✓
Eb	IDU PCB EE error	/	✓	✓	✓	✓
F0	ODU fan motor error	Heating : Flash 11 times		✓		✓
F1	ODU Module protection error	Timing : Flash once		✓	✓	✓

Error Code	Explanation	IDU LED Display	Wall-Mounted		Floor Standing	
			ON/OFF	Inverter	ON/OFF	Inverter
F2	ODU PFC Protection Error	Cooling : Flash twice		✓	✓	✓
F3	Compressor start failure or out-of-step Error	Timing : Flash 3 times		✓		✓
F4	ODU discharge sensor error	Timing : Flash 4 times		✓		✓
F6	ODU room sensor error	Timing : Flash 6 times		✓		✓
F8	ODU communication error between main PCB board and module board	/		✓		✓

Error Code	Explanation	IDU LED Display	Wall-Mounted		Floor Standing	
			ON/OFF	Inverter	ON/OFF	Inverter
F9	ODU PCB EE error	Timing : Flash 9 times		✓		✓
FA	Suction sensor error	Timing : Flash 10 times		✓		✓
Fb	IDU DC motor error (Floor Standing)	Heating : Flash 4 times			✓	✓
P2	High-pressure switch protection	Timing : Flash 5 times	✓	✓	✓	✓
P3	Lack of refrigerant Protection	Heating : Flash 6 times	✓	✓	✓	✓

Error Code	Explanation	IDU LED Display	Wall-Mounted		Floor Standing	
			ON/OFF	Inverter	ON/OFF	Inverter
P4	Condenser overload Protection(Cooling mode)	Cooling : Flash 4 times		✓		✓
P5	Discharge temperature protection	Cooling : Flash 5 times		✓		✓
P6	Evaporator overload Protection(Heating mode)	Cooling : Flash 6 times		✓		✓
P7	IDU anti-freezing protection(Cooling mode)	Cooling : Flash 7 times		✓		✓
P8	ODU overcurrent protection	Cooling : Flash 8 times		✓		✓

LED1	LED2	LED3	Error	IDU error code
★	○	○	ODU fan motor error	F0
★	★	●	ODU Module protection error	F1
★	★	○	PFC protection error	F2
★	●	★	Compressor start failure or out-of-step Error	F3
★	○	★	ODU discharge sensor error	F4
○	★	★	ODU room sensor error	F6

○ is off、● is on、★ is twinkle

LED1	LED2	LED3	Error	IDU error code
○	○	●	Voltage threshold protection error	F7
★	●	○	ODU communication error between main PCB board and module board	F8
★	○	●	ODU PCB EE error	F9
●	★	●	IDU room sensor error	E1
●	★	★	ODU condenser sensor error	E2
●	★	○	IDU evaporator sensor error	E3

○ is off、● is on、★ is twinkle

LED1	LED2	LED3	Error	IDU error code
○	★	●	AC or DC motor error	E4
★	●	●	ODU and IDU communication error	E5
●	●	○	Discharge temperature protection	P5
○	●	●	Evaporator overload Protection(Heating mode)	P6
●	○	○	IDU anti-freezing protection in Refrigeration Room(Cooling mode)	P7
○	○	★	Compressor overcurrent Protection on Phase Current	L1

○ is off、● is on、★ is twinkle



**Two
Necessary tools**

01

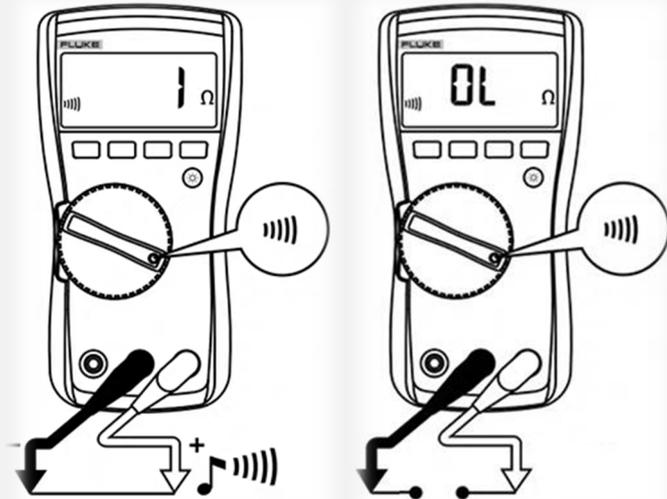
Multimeter

02

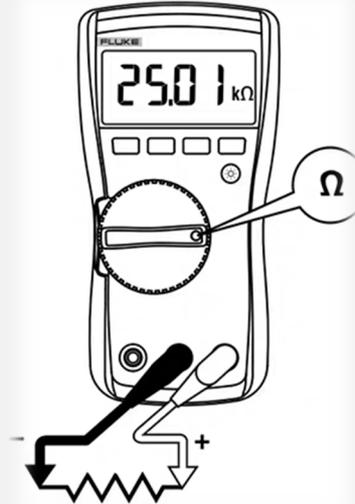
Current clamp

1 Necessary tools - Multimeter

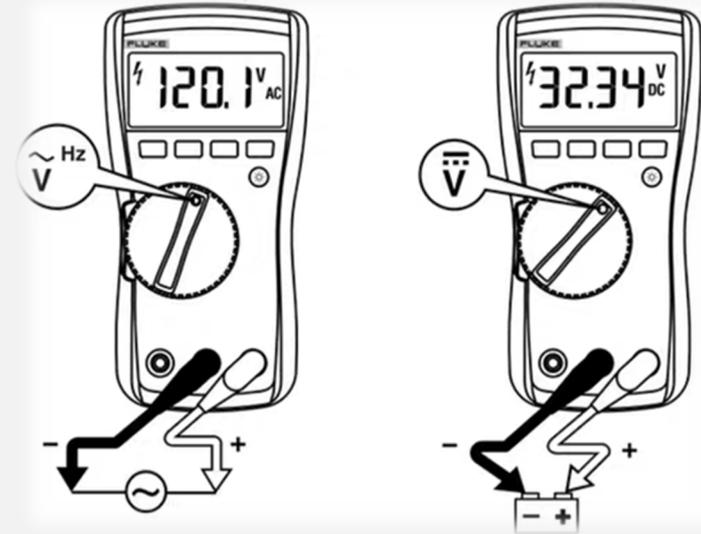
● Test continuity



● Test resistance



● Test voltage





Single-core wire goes through the current clamp



**Three
Error code trouble
shooting guide**

01

Sensor error

02

Motor error

03

Driving Protection error

04

Communication error

05

Protection error

06

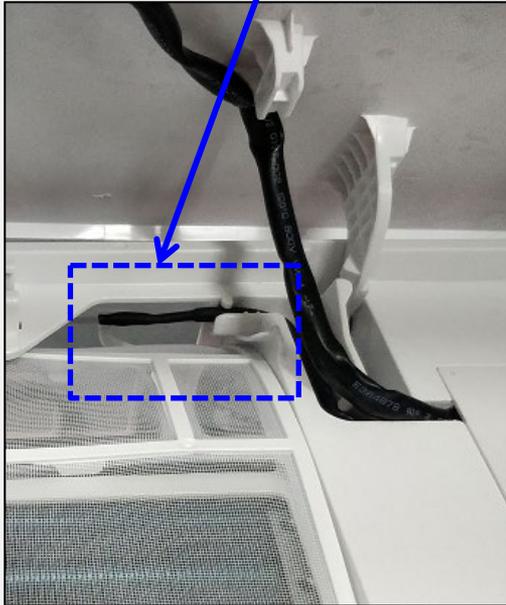
EE error

Error Code	Explanation	Sensor resistance at 25°C
E1	IDU room sensor error	15KΩ
E2	ODU condenser sensor error	20KΩ
E3	IDU evaporator sensor error	20KΩ
F4	ODU discharge sensor error	50KΩ
F6	ODU room sensor error	15KΩ
FA	Suction sensor error	20KΩ

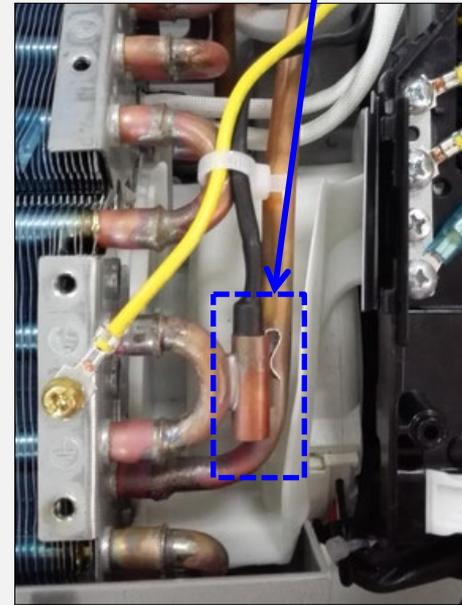
Resistance comparison table

Sensor resistance at 25°C	Resistance comparison table
15KΩ	 Resistance-1
20KΩ	 Resistance-2
50KΩ	 Resistance-3

Wall-mounted room sensor



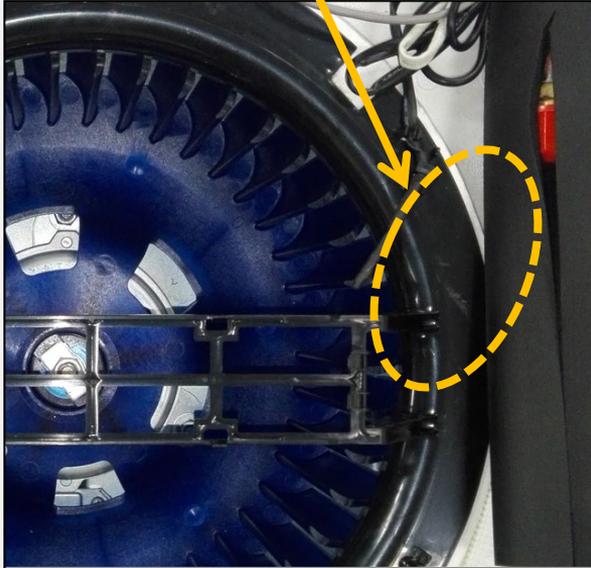
Wall-mounted evaporator sensor



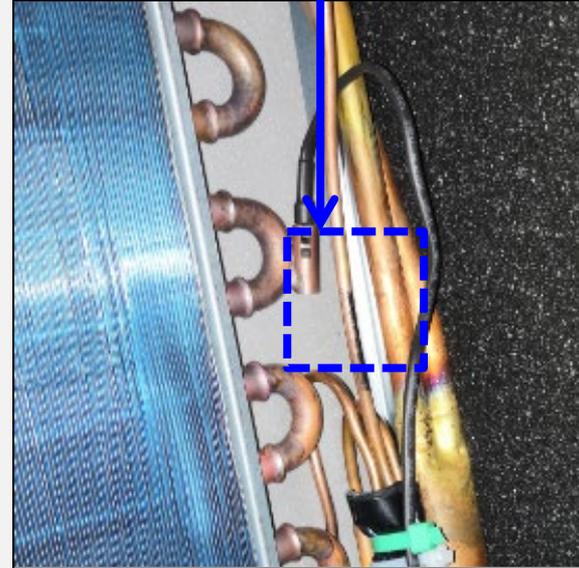
1

Error code trouble shooting guide - Sensor error ZenAire

Floor standing room sensor



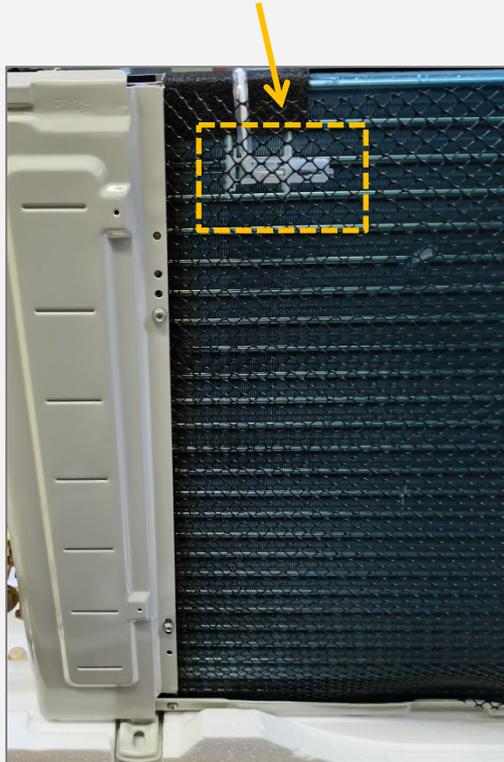
Floor standing evaporator sensor



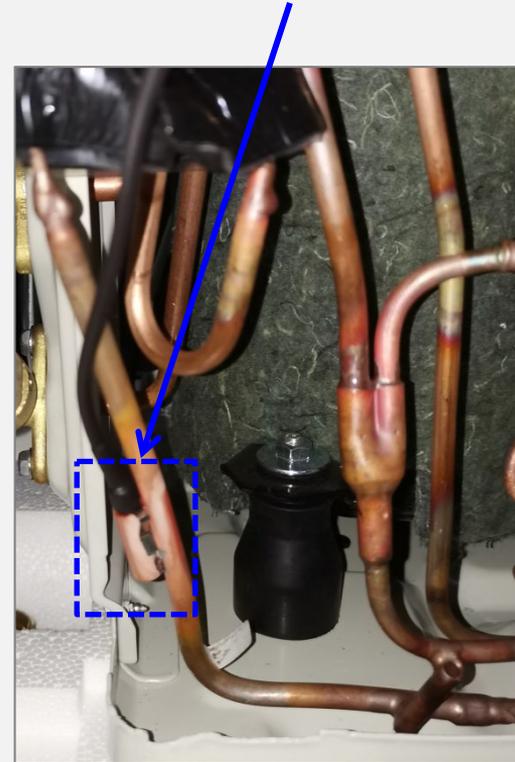
1

Error code trouble shooting guide - Sensor error ZenAire

ODU room sensor



ODU condenser sensor



ODU discharge sensor



ODU suction sensor



1

Error code trouble shooting guide - Sensor error ZenAire

Whether the sensor connector is **loose** ?

Yes →

Connect the connector again

↓ No

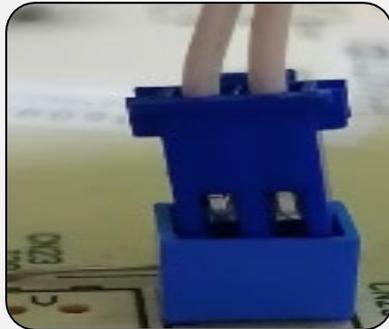
Is sensor **broken** ?

Yes →

Replace sensor

No →

Replace PCB

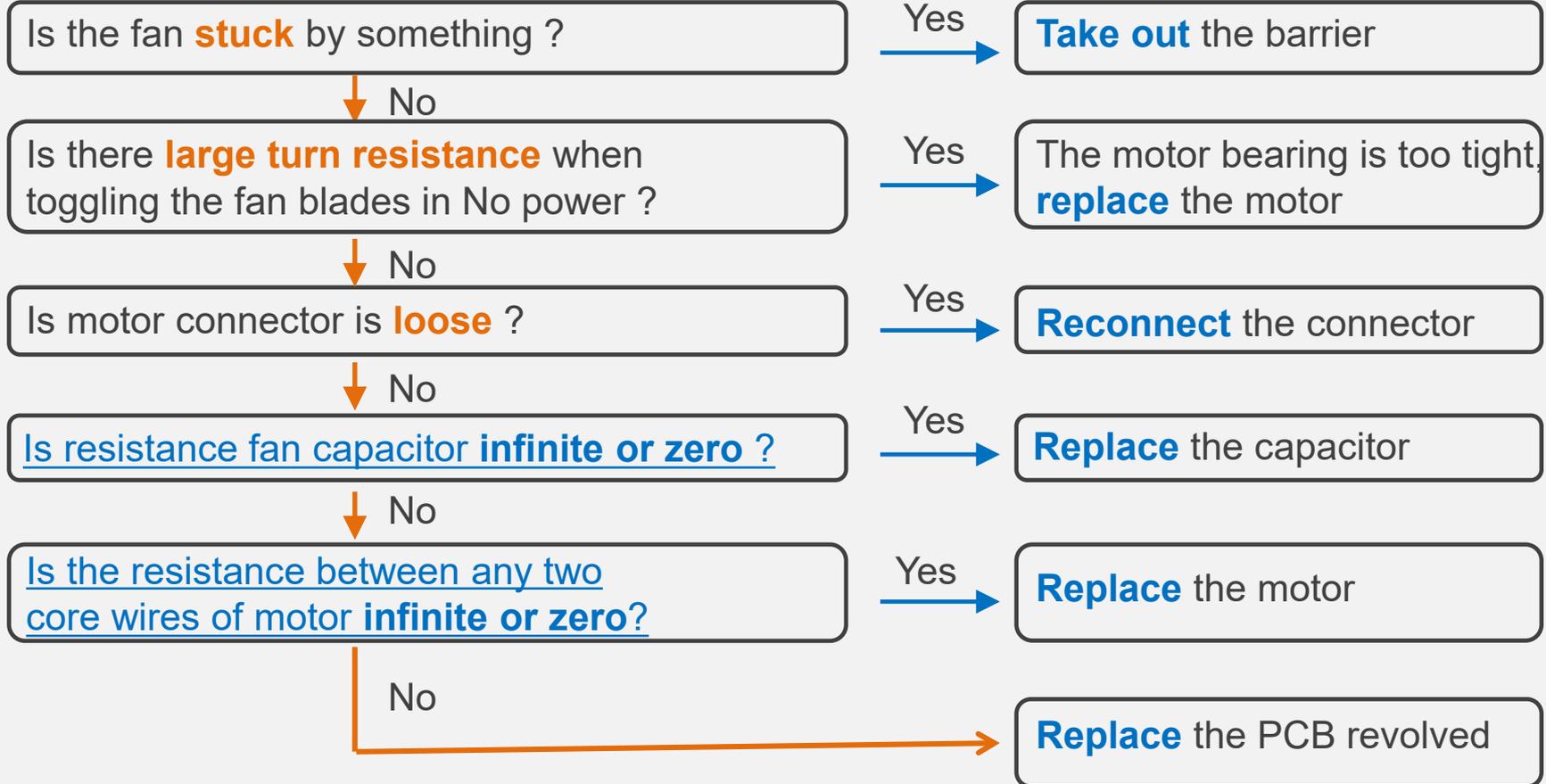


Connector is **loose**



Sensor is broken

Error Code	Explanation
E4	IDU motor error (Including AC or DC)
Fb	IDU DC motor error
F0	ODU motor error



Error Code	Explanation
F1	ODU module protection error
F2	ODU PFC protection error
F3	Compressor start failure or out-of-step error

3 Driving Protection - F1

Power supply is too low < 120V

↓ No

Whether the electric reactor connector is loose? Is resistance infinite or zero?

↓ No

ODU is too dirty. Air inlet and outlet is not smooth.

↓ No

Whether the compressor is broken?

No

Yes

1. Power off and power on again, **open the AC again**
2. **Equip** a voltage regulator

Yes

1. **Reconnect** the connector
2. **Replace** the electric reactor

Yes

1. **Clear** ODU condenser
2. **Remove** the obstruction of ODU
3. **Adjust** installation position

Yes

Replace the compressor

Replace the ODU PCB

3 Driving Protection - F2

Display **F2** as soon as AC is **turned on**

Yes

Replace ODU PCB

No

Power supply is too low < **120V**

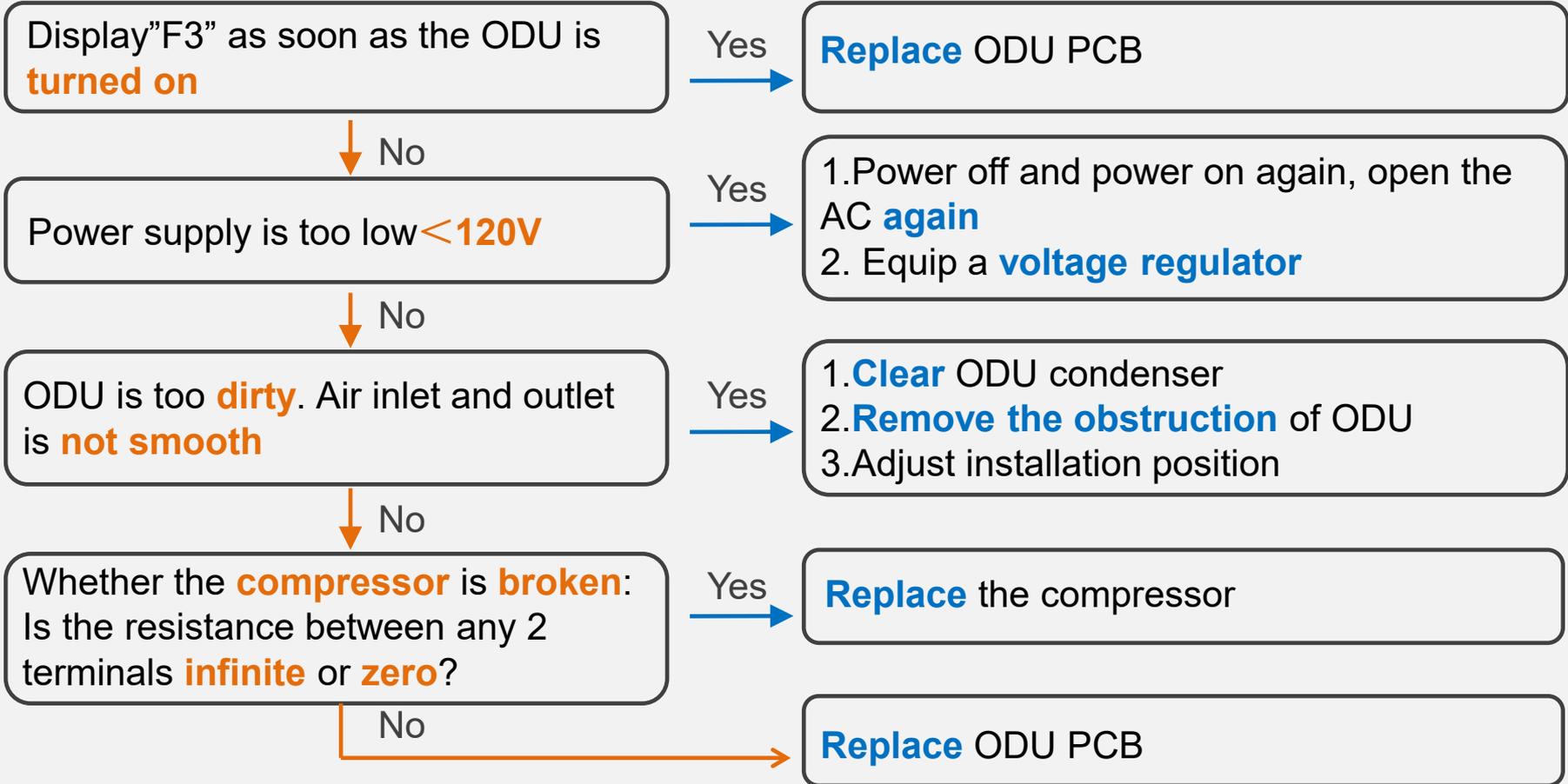
Yes

1. Power off and power on again, **open the AC again**
2. Equip a **voltage regulator**

No

Replace ODU PCB

3 Driving Protection - F3



Error Code	Explanation
E5(5E)	ODU and IDU communication error
E8	Communication error between display board and PCB board

Check if the power connection cable is **broken**.

Yes

Replace the power connection cable

No

Check if power connection cable to the indoor and outdoor terminal boards is wrong.

Yes

Rewiring according to the wiring diagram

No

Replace ODU PCB

No

Replace IDU PCB

4 Communication – E8

The connection cable between the display board and the PCB board is **loose, broken or incorrectly connected.**

Yes

Reconnect or replace the cable

No

Replace display board or PCB board separately

Error Code	Explanation
E0	IDU overcurrent protection
P2	High-pressure switch protection
P3	Lack of refrigerant Protection
P4	Condenser overload Protection(Cooling mode)
P5	Discharge temperature protection
P6	Evaporator overload Protection(Heating mode)
P7	IDU anti-freezing protection (Cooling mode)
P8	ODU overcurrent protection

Use current clamp to measure whether the current of IDU is Normal?

Yes

Current transformer is broken, **replace** the IDU PCB

↓ No

Power supply < **120V**

Yes

1. Power off and power on again, open the AC **again**
2. Equip a **voltage regulator**

↓ No

ODU is too **dirty**. Air inlet and outlet is Not smooth.

Yes

1. **Clear** ODU condenser
2. **Remove the obstruction** of ODU
3. Adjust installation position

Whether the high-pressure switch connector is loose?

Yes

Reconnect connection cable

No

Is the high-voltage switch resistance **infinite or zero**?

Yes

Replace the pressure switch

No

ODU is too **dirty**. Air inlet and outlet is not smooth.

Yes

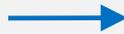
1. **Clear** ODU condenser
2. **Remove the obstruction** of ODU
3. Adjust installation position

No

Replace ODU PCB

Whether check stop valve is not fully open ?

Yes

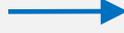


Open check stop valve fully

↓ No

Whether the connection pipe or heat exchanger is **broken**?

Yes

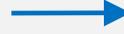


1. **Replace** broken parts
2. **Refill** refrigerant

↓ No

Lack of refrigerant

Yes



Increase refrigerant

Is the condenser **sensor resistance abnormal**?

Yes
→

Replace **20kΩ sensor**

↓ No

Is the ODU motor **speed too low**?

Yes
→

1. Replace ODU **motor capacitor**
2. Replace ODU **motor**

↓ No

ODU is too **dirty**. Air inlet and outlet is Not smooth.

Yes
→

1. **Clear** ODU condenser
2. **Remove the obstruction** of ODU
3. Adjust installation position

↓ No

→
Replace ODU PCB

Is **discharge temperature sensor** resistance abnormal?

Yes

Replace **50kΩ sensor**.

↓ No

1. Condenser, evaporator or IDU filter is **too dirty**.
2. Air inlet and outlet is **not smooth**.

Yes

1. **Clean** condenser, evaporator and filter.
2. **Remove** the obstruction of ODU and IDU.
3. **Adjust** installation position.

↓ No

Is the motor speed **too low**?

Yes

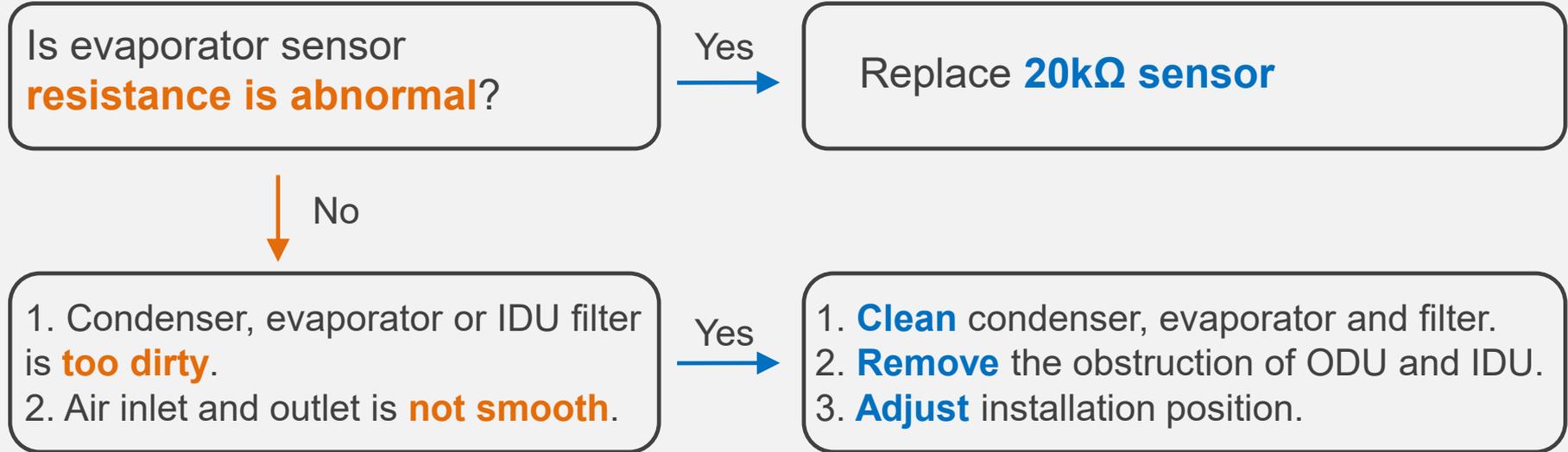
1. Replace ODU **motor capacitor**.
2. Replace ODU **motor**.

↓ No

Lack of refrigerant ?

Yes

Increase refrigerant.



Power supply is too low <120V

Yes



1. Power off and power on again, **open the AC again.**
2. **Equip** a voltage regulator

No

ODU is too **dirty**. Air inlet and outlet is Not smooth.

Yes



1. **Clear** ODU condenser
2. **Remove the obstruction** of ODU
3. **Adjust** installation position

No



Replace ODU PCB

Error Code	Explanation
Eb	IDU PCB EE error
F9	ODU PCB EE error

Note :

The 2 errors mean that the **EEPROM is broken**, so it's better to **replace PCB** .

Thanks!