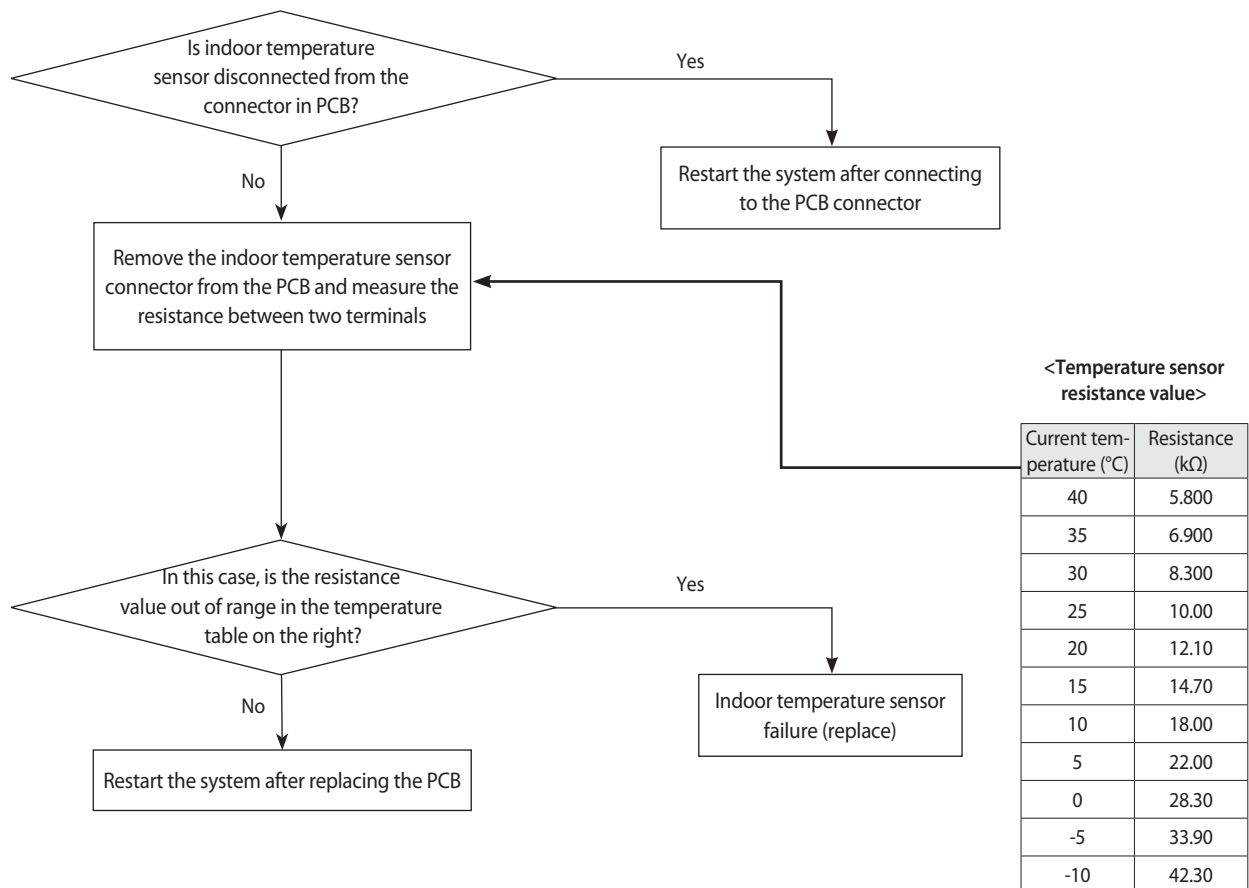


4-3 Troubleshooting by symptoms

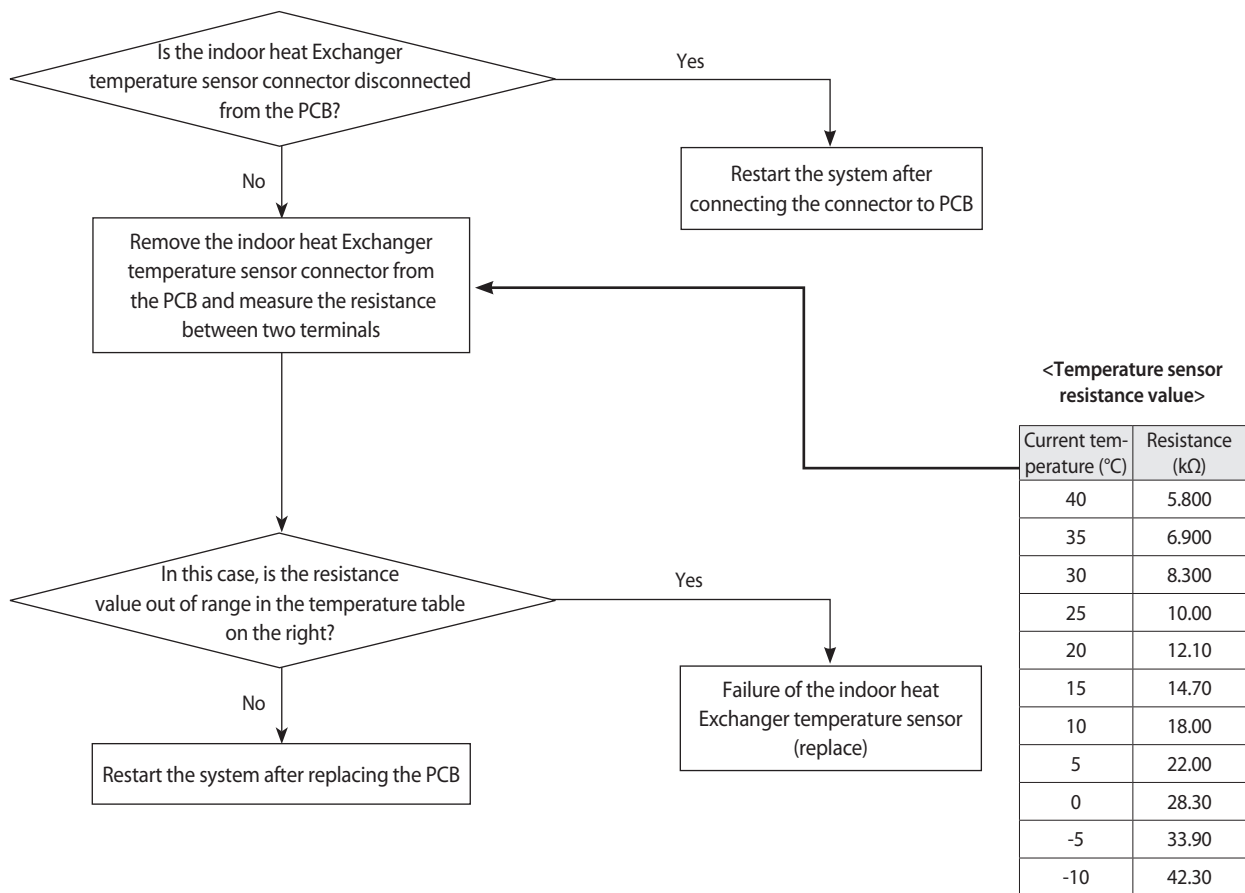
4-3-1 Indoor temperature sensor (open/short)

Wire remote controller display	E121
Symptom	Error of Room sensor in the indoor unit(Open/Short)
Failure	Short or leakage of the Room sensor



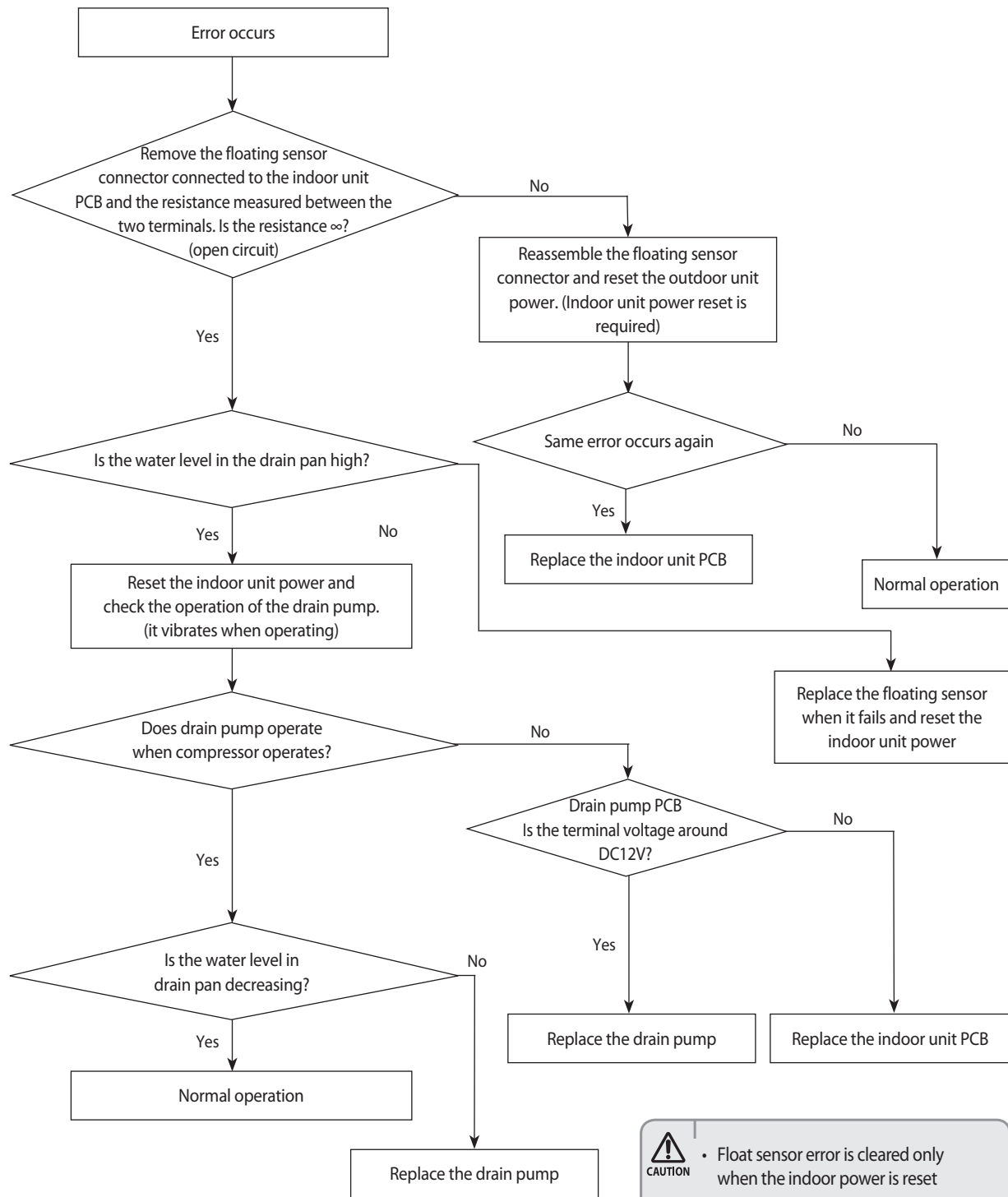
4-3-2 Eva in and out sensor (open/short)

Wire remote controller display	E122, E123
Symptom	Error of EVA-IN,EVA-OUT sensor in the indoor unit(Open/Short)
Failure	Short or leakage of the EVA sensor



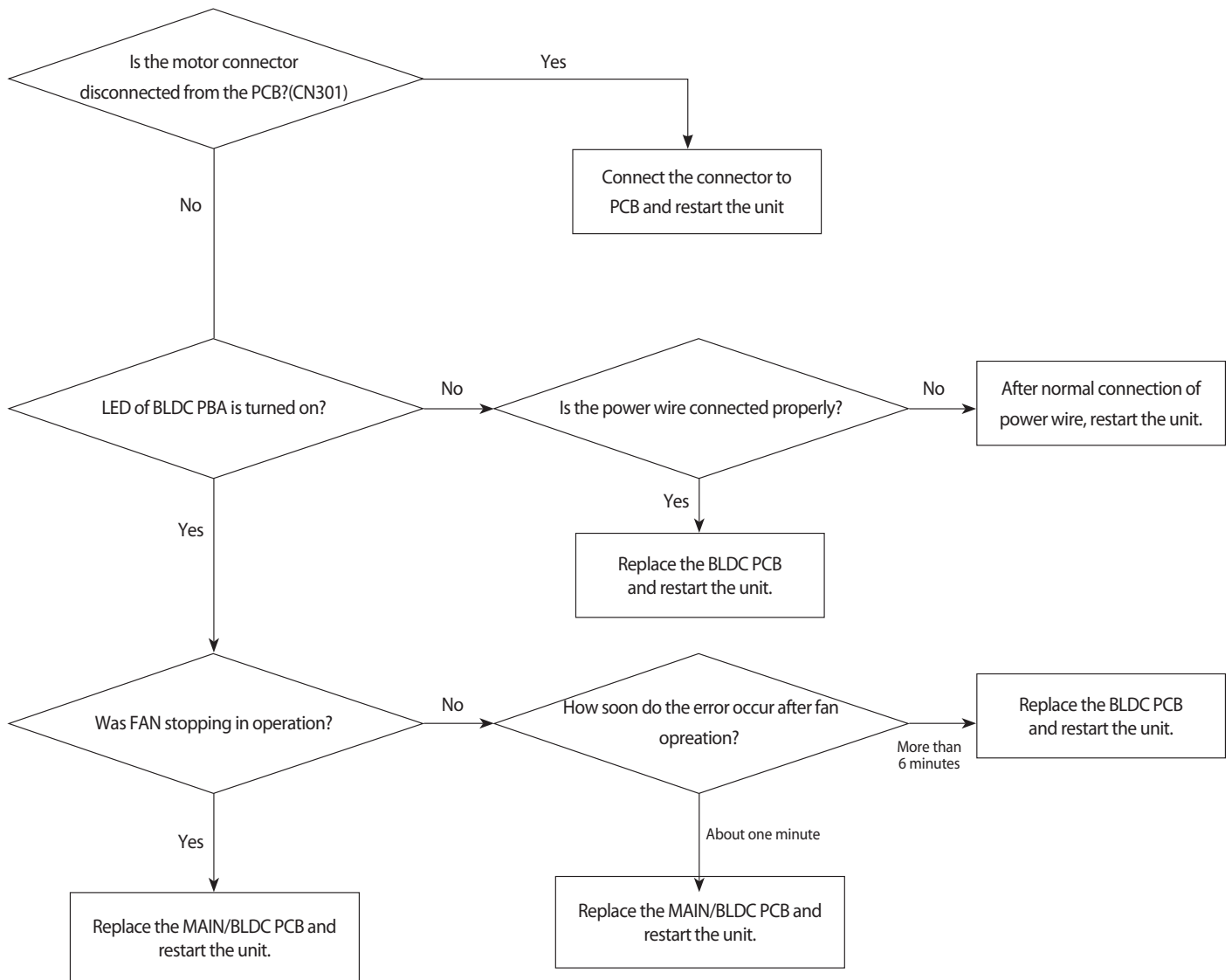
4-3-3 Float switch(Open)

Wire remote controller display	E153
Symptom	2nd Detection of the float switch
Failure	Float switch open



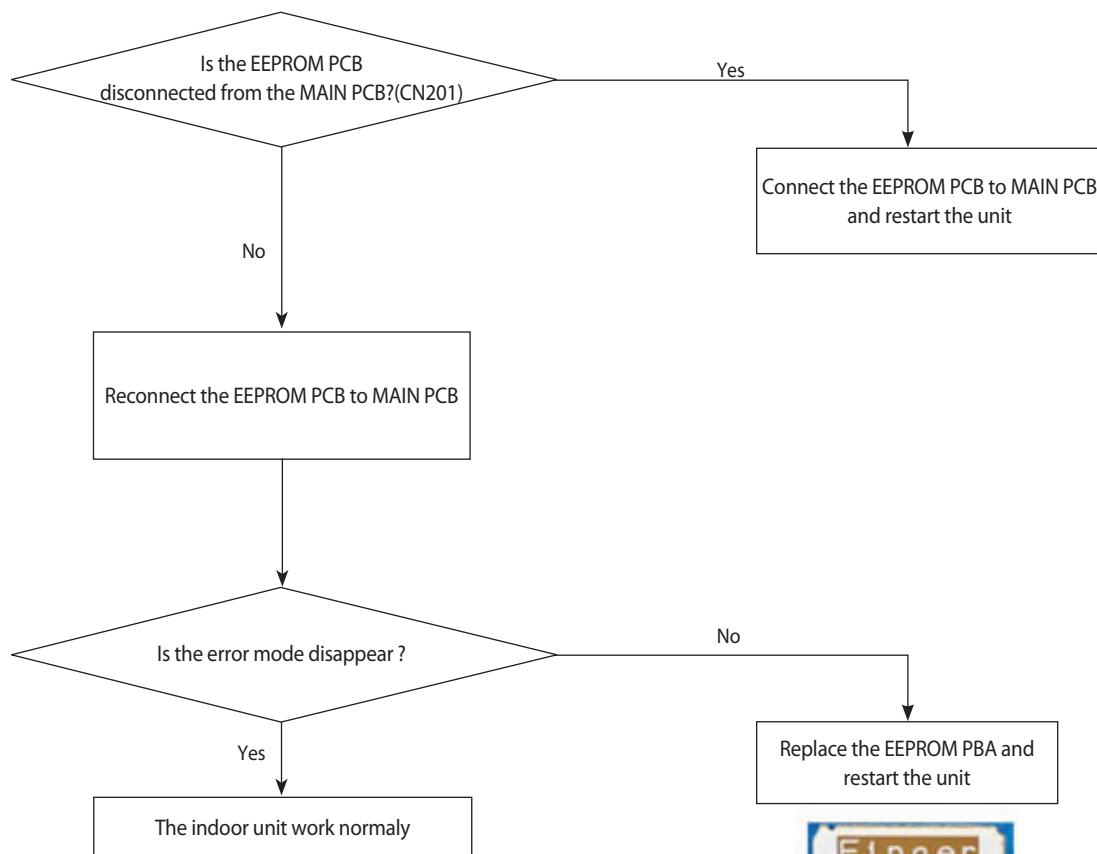
4-3-4 Fan error

Wire remote controller display	E154
Symptom	Error of Fan motor in the indoor unit
Failure	Fan error



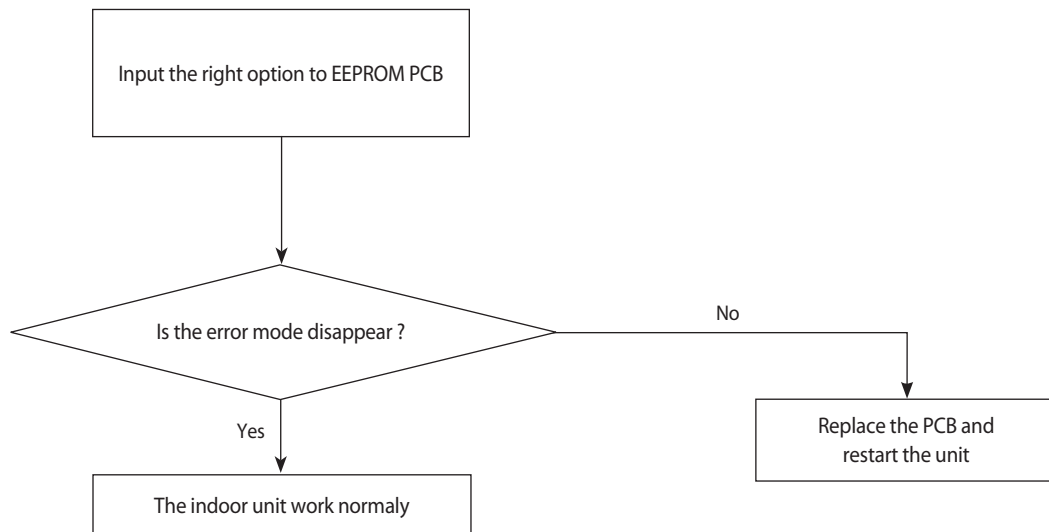
4-3-5 EEPROM error

Wire remote controller display	E162
Symptom	EEPROM PCB disconnected from the MAIN PCB
Failure	Option error



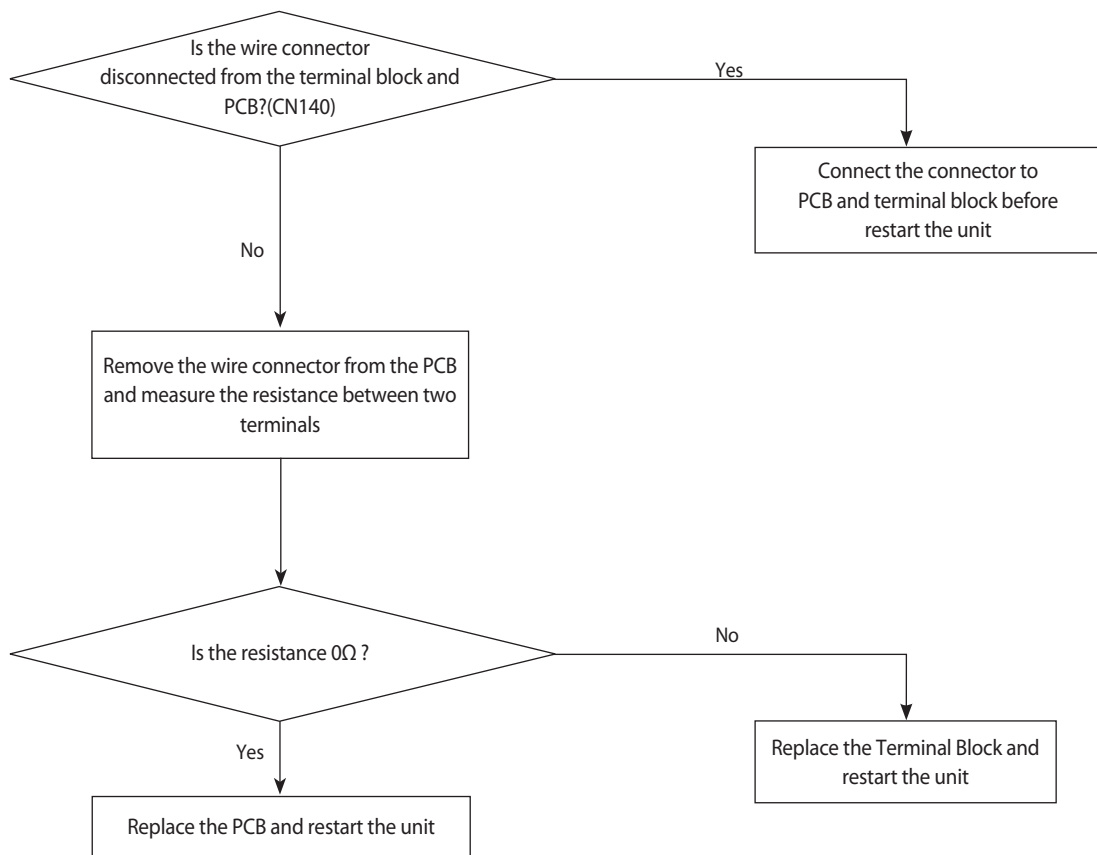
4-3-6 Option error

Wire remote controller display	E163
Symptom	EEPROM option setting error
Failure	Option error



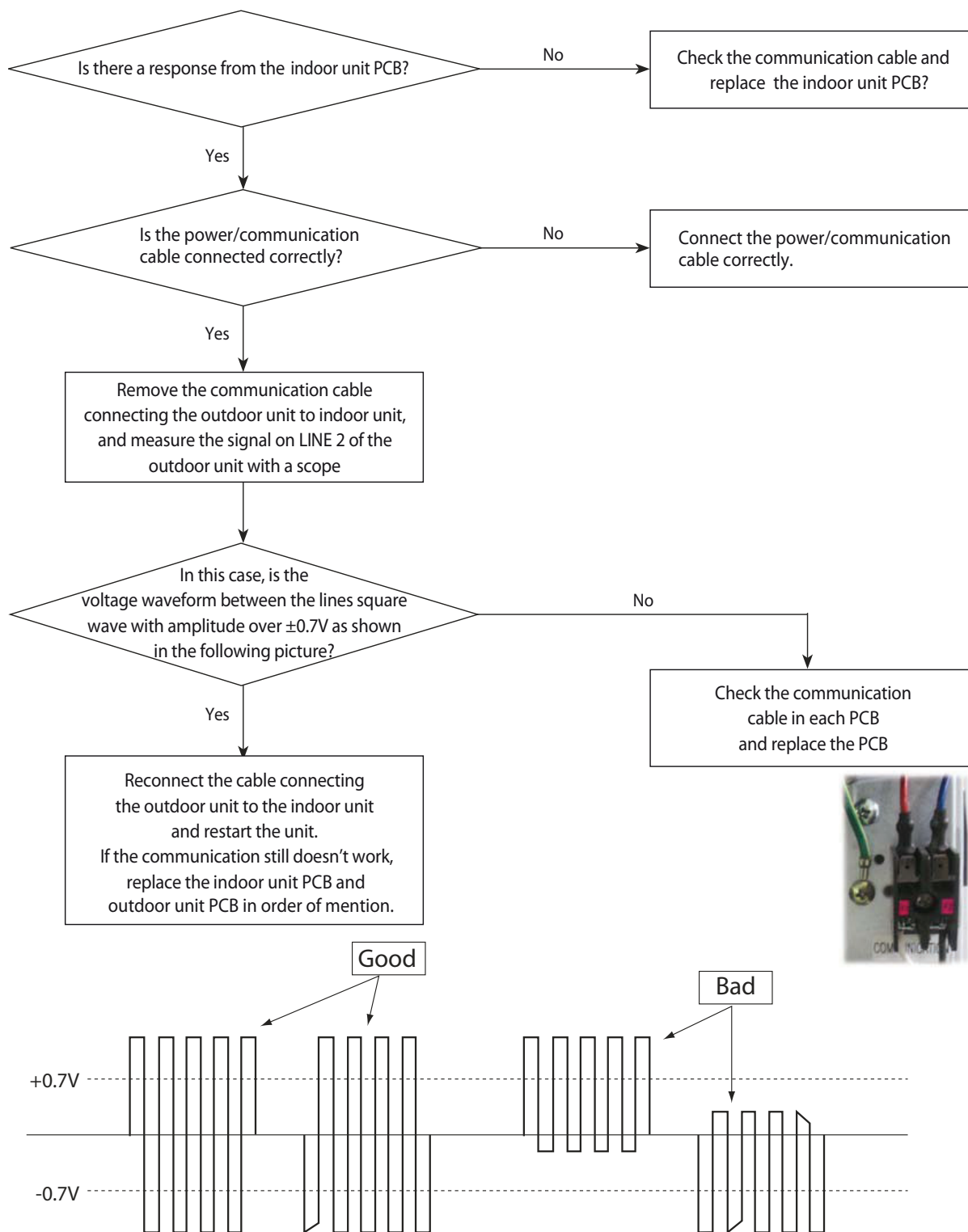
4-3-7 Terminal Block's Terminal Fuse(Open)

Wire remote controller display	E198
Symptom	Error of Terminal Block's Terminal Fuse(Open)
Failure	Fuse open



4-3-8 Communication error after finishing tracking (E202)

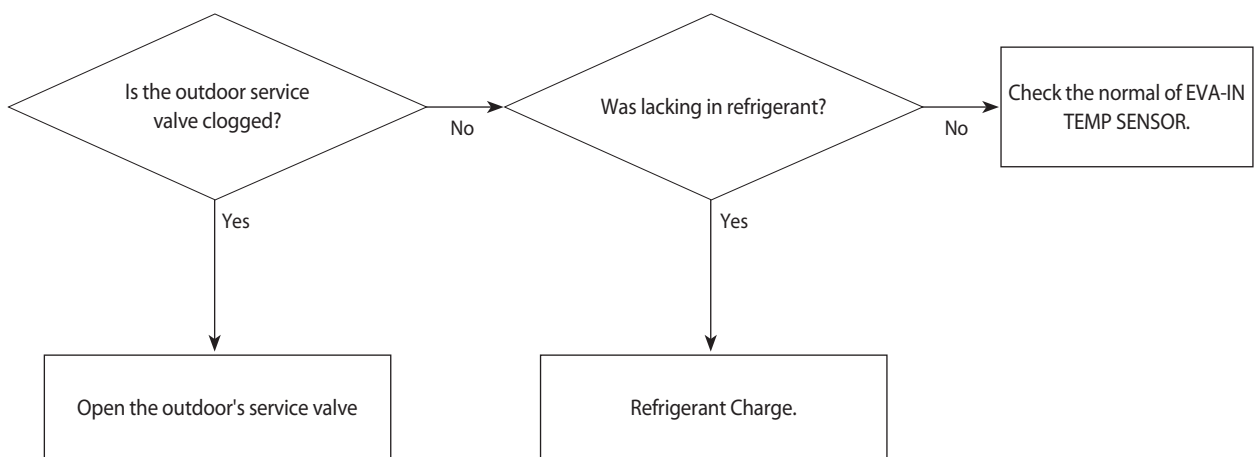
1. Check items
 - 1) Is the communication cable short/open?
 - 2) Is there a response from the indoor unit PCB?
2. Check procedure



cf.) If there is no oscillo scope, it can be replaced multimeter instead of osillo scope.
 If measured voltage is floating value from 0.1V to 4.5V, then it means that the PCB is normal.

4-3-9 Outdoor's service valve(Clog)

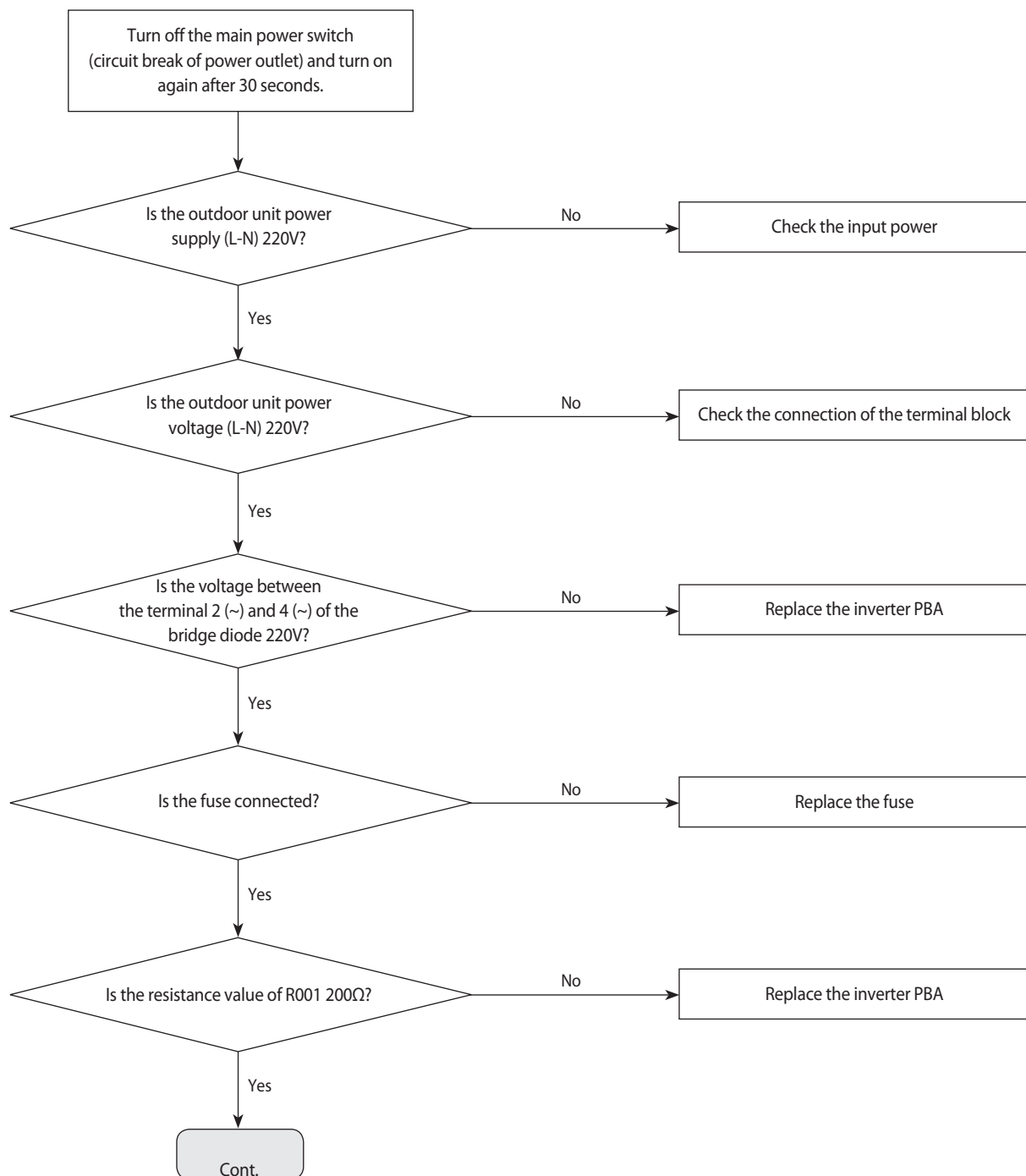
Wire remote controller display	E422
Symptom	Clogging of outdoor's service valve
Failure	Valve clog



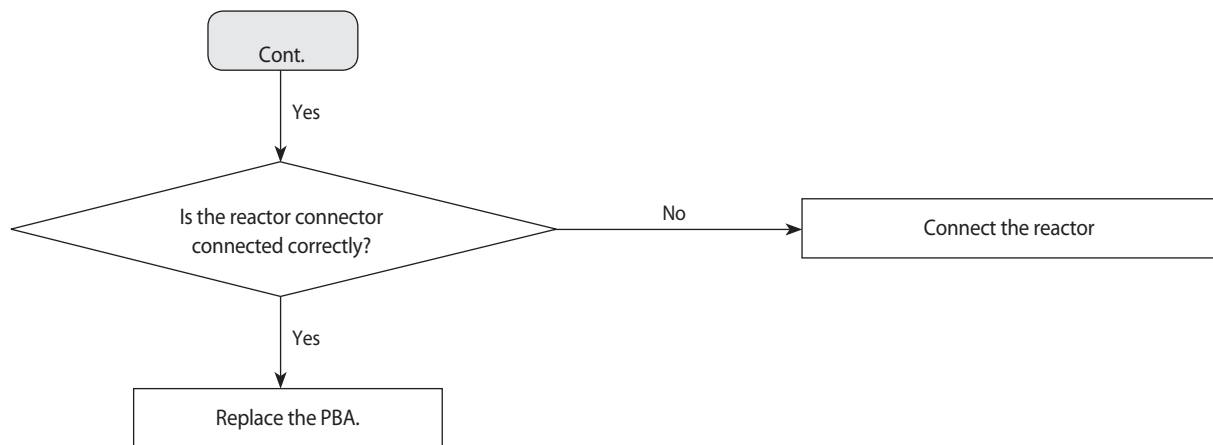
4-3-10 No Power(completely dead) - Initial diagnosis

Outdoor unit is not powered on – Initial diagnosis (1phase)

1. Check items
 - 1) Is the power supply voltage 220V?
 - 2) Is the AC power connected correctly?
 - 3) Are the LEDs in the main PCB and inverter PCB of the outdoor unit ON?
 - 4) Is the input power voltage of the indoor unit 220V?
 - 5) Is the wired remote controller connected correctly?
2. Check procedure



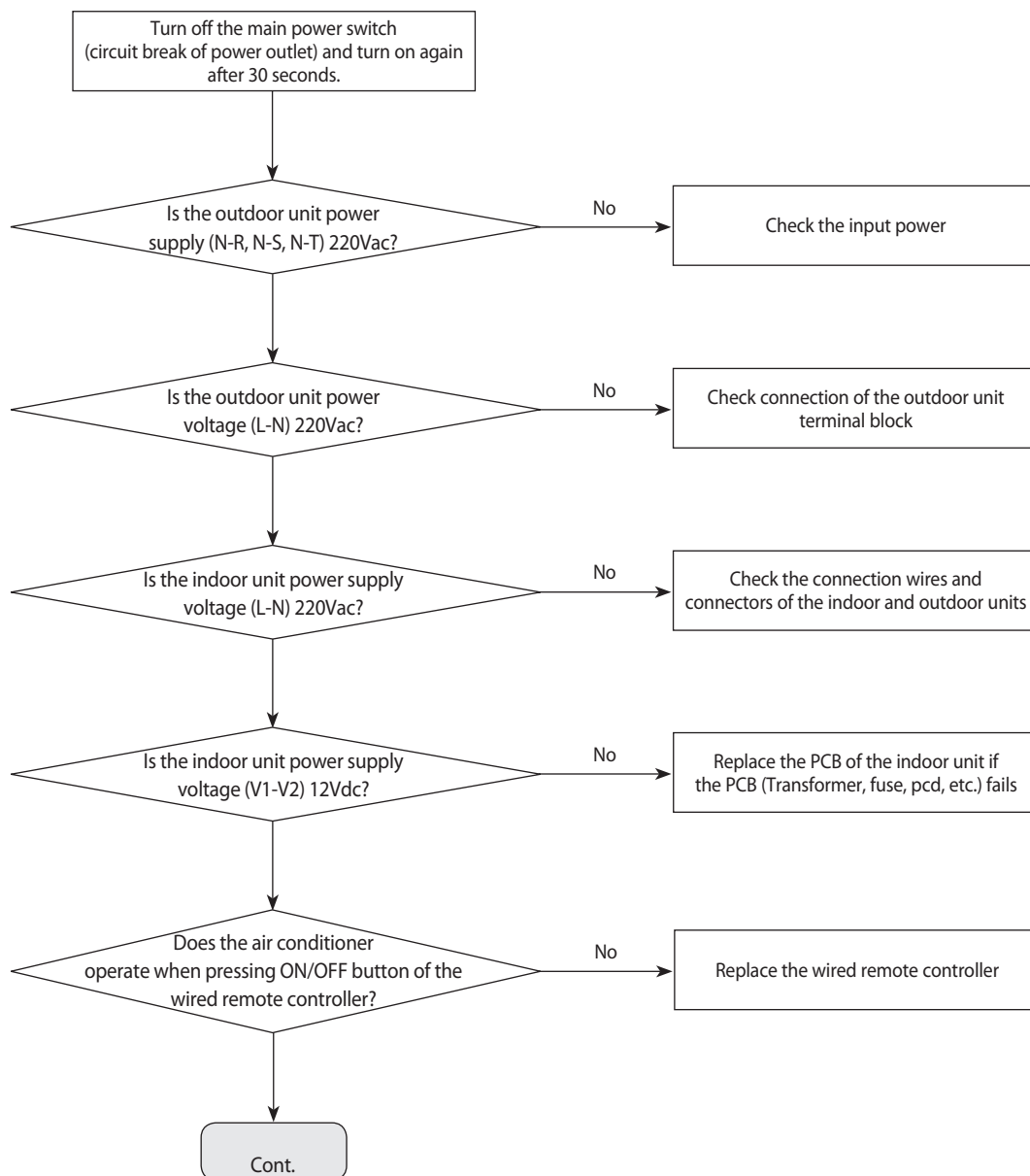
Outdoor unit is not powered on – Initial diagnosis (1phase) (cont.)



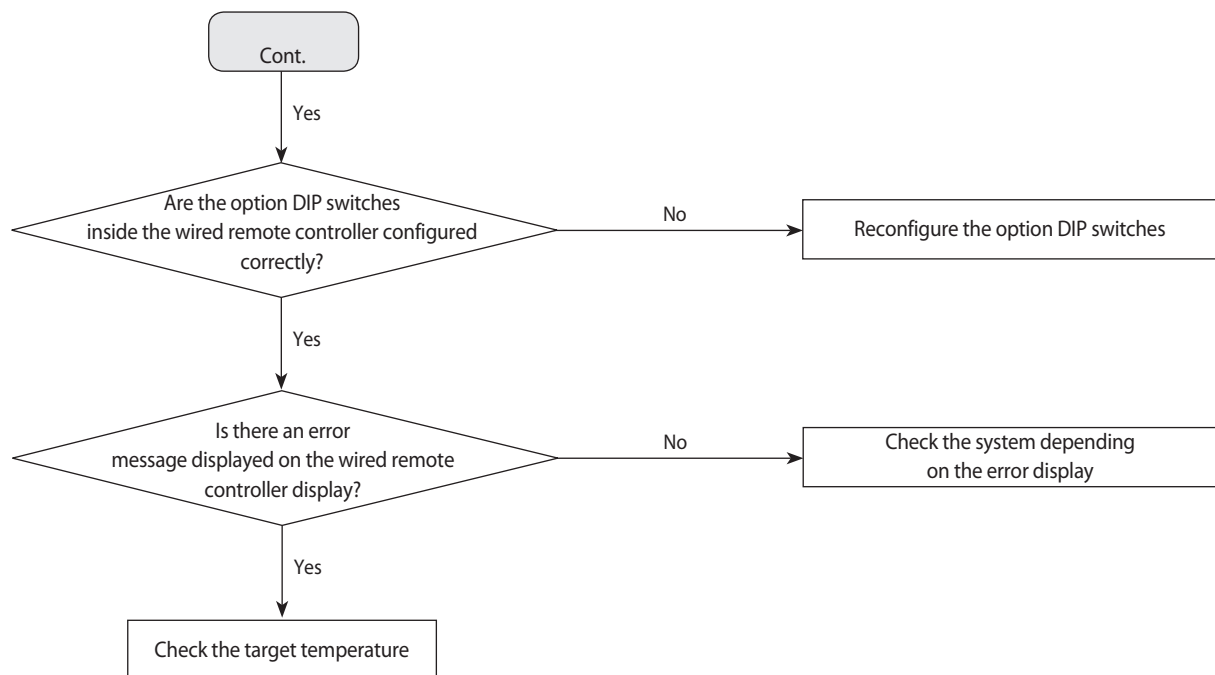
Outdoor unit is not powered on – Initial diagnosis (3phase)

1. Check items:
 - 1) Is the power supply voltage 380V?
 - 2) Is the AC power connected correctly?
 - 3) Are the LEDs in the main PCB and inverter PCB of the outdoor unit ON?
 - 4) Is the input power voltage of the indoor unit 220V?
 - 5) Is the wired remote controller connected correctly?

2. Troubleshooting procedure



Outdoor unit is not powered on – Initial diagnosis (3phase) (cont.)



4-3-11 E102 : Communication error between indoor and outdoor unit

E201 : Unit quantity miss matching between Indoor and Outdoor

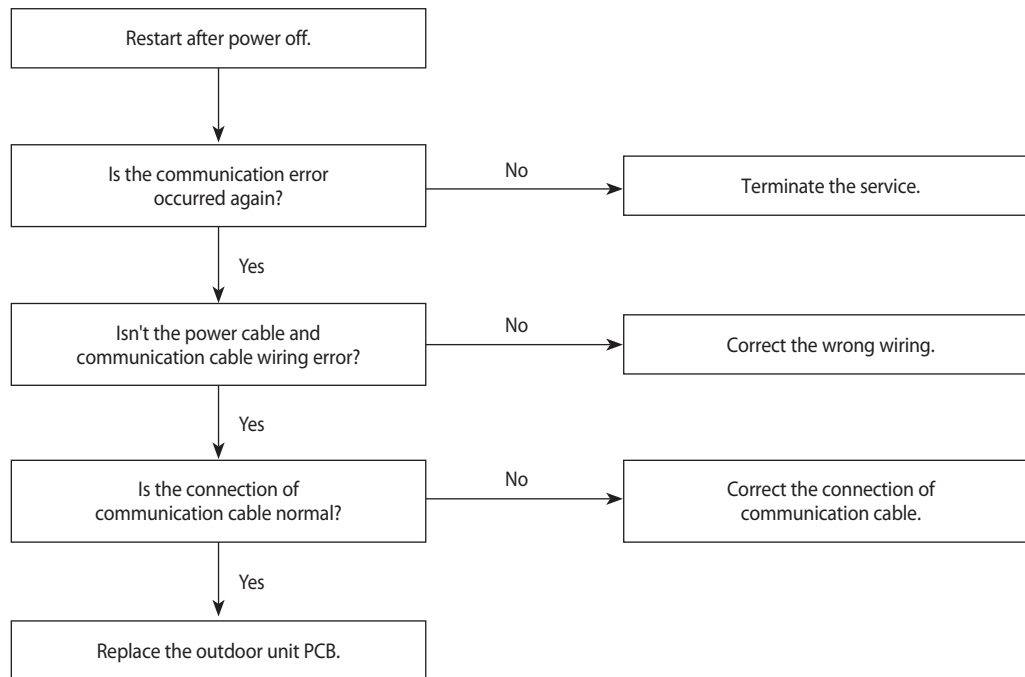
E202 : Abnormal state, no communication between Indoor and Outdoor Main PCB

E203 : 1min Time out of communication error(Main↔Inverter)

1. Checklist :

- 1) Is the communication cable between the indoor unit and outdoor unit connected correctly?
- 2) Isn't the power cable and communication cable wiring error?

2. Troubleshooting procedure



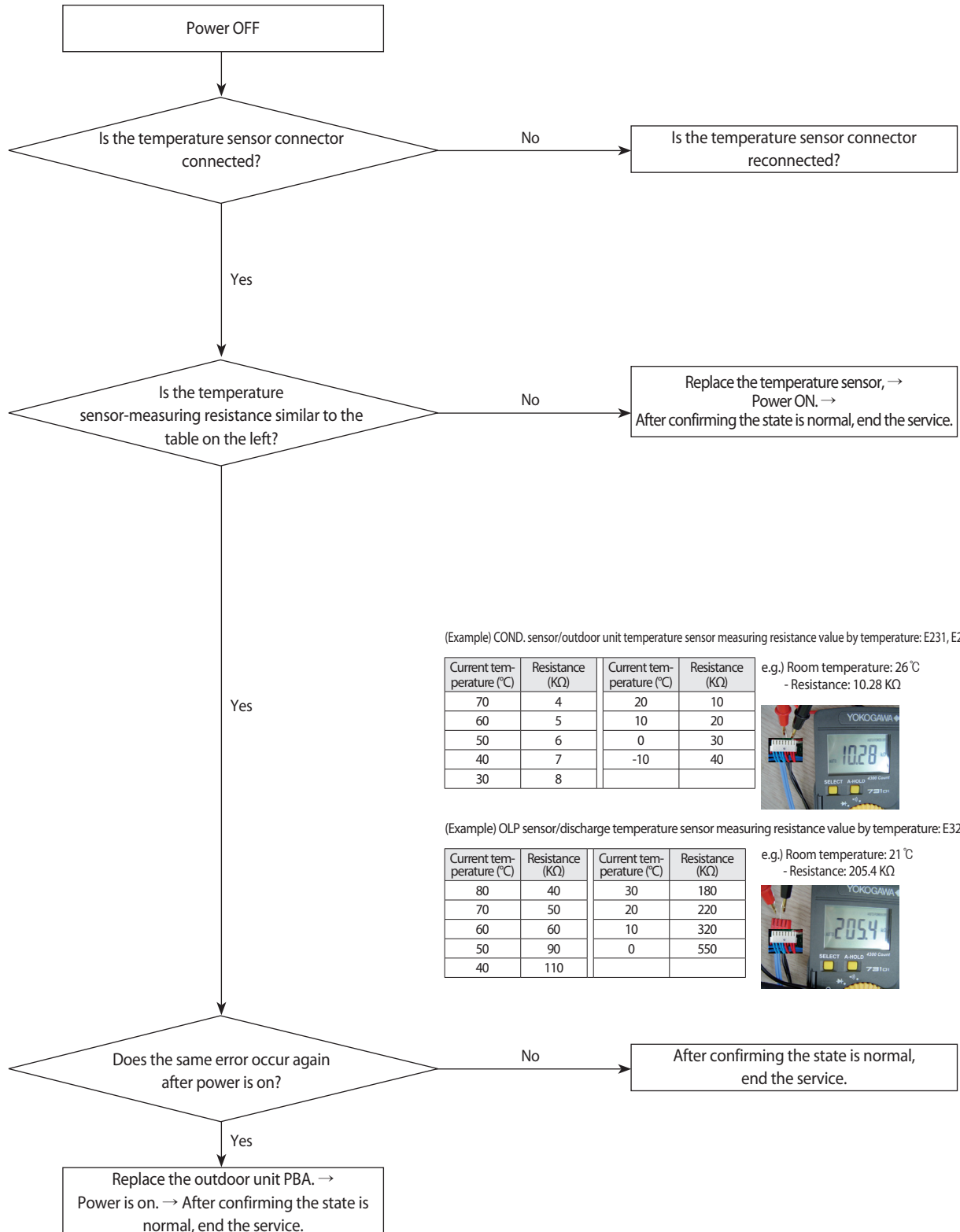
4-3-12 External Sensor Error (Error Code: E221, E231, E251, E320)

1. Test Item

- 1) Check the connection of the temperature sensor connector.
- 2) Check the resistance value of the temperature sensor.

Error Code	Description
E221	Error of the temperature sensor of the outdoor unit
E231	Error of the COND. sensor of the outdoor unit
E251	Error of the discharge sensor of the outdoor unit
E320	Error of the OLP sensor of the outdoor unit

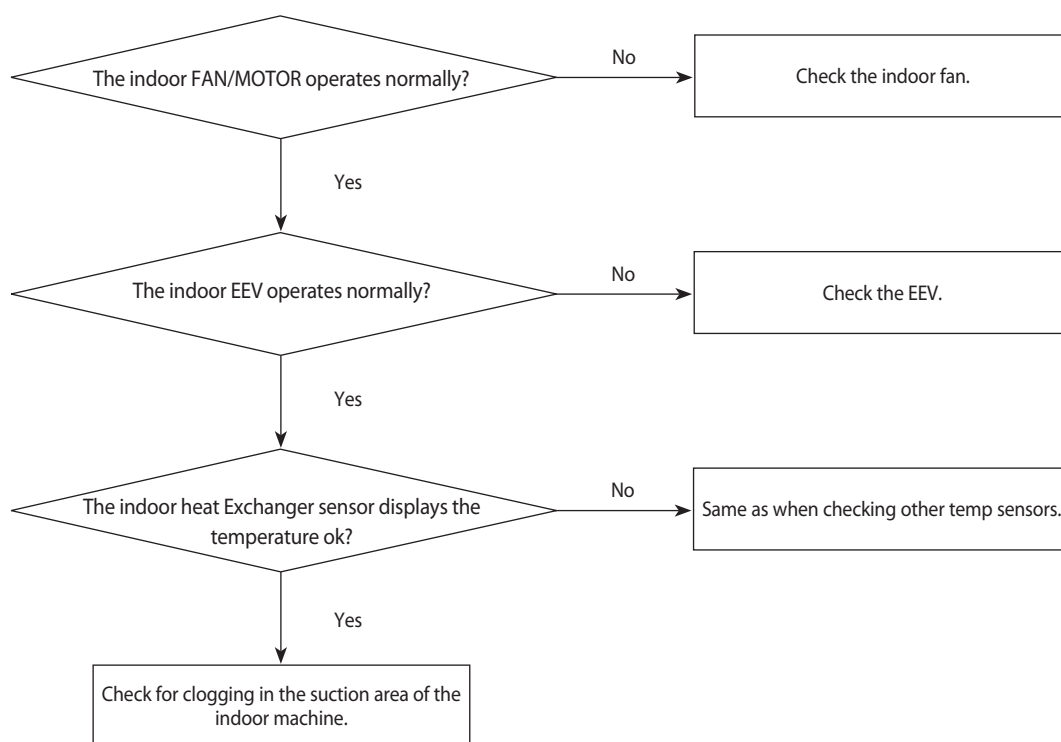
2. Check procedure



4-3-13 E403 : Freezing control causes comp. down

Outdoor unit display	E403
Criteria	•All the operating indoor machines do not reach -4°C for more than five minutes
Cause of problem	<ul style="list-style-type: none"> •Check if the indoor FAN/MOTOR operates normally. •Check if the indoor EEV operates normally. •Check the indoor heat Exchanger's IN/OUT sensor. •Check for clogging in the suction area of the indoor machine.

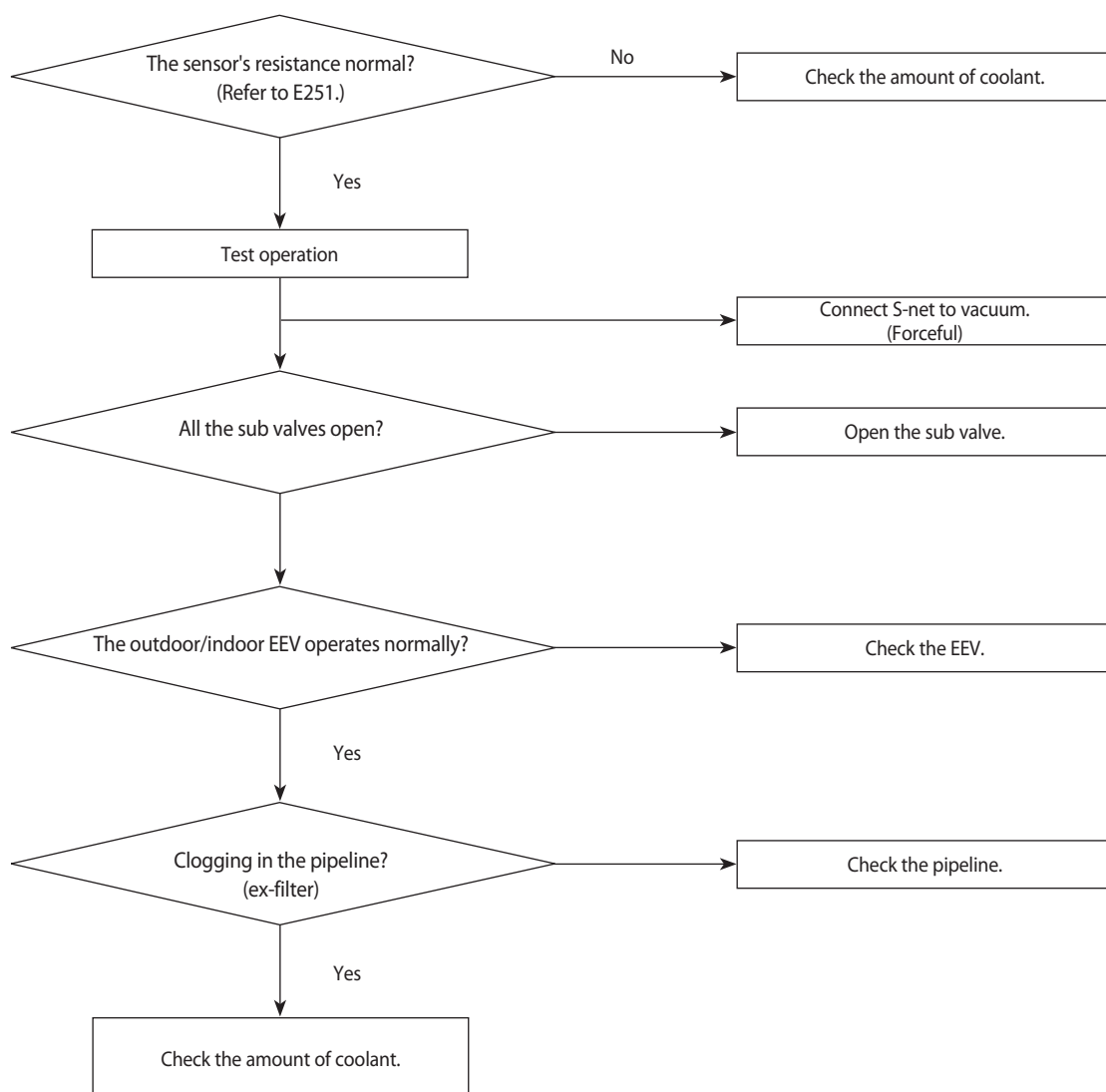
1. How to check



4-3-14 E416 : Dischage temperature sensor error

Outdoor unit display	E416
Criteria	•The compressor temperature above 110°C.
Cause of problem	<ul style="list-style-type: none"> •Insufficient coolant. •Clogging in the outdoor machine's solenoid valve. •Clogging in the sub valve. •Malfunctioning exhaust gas temp sensor. •Clogging in the pipeline and the filter. • Liquid EEV damaged.

1. How to check



4-3-15 E440, E441 : Abnormal outside temperature halts operation of the compressor

Outdoor unit display	E440 (No heater operation with the outside temperature above 30°C.) E441 No AC operation with the outside temperature below -10°C.)
Criteria	•The compressor temperature above 110°C.
Cause of problem	E440: If the outside temperature is above 30°C, operation of the indoor heater with a remotecon causes this error. E441: The indoor machine remotecon ON signal. If the outside temperature is below -10°C before the AC runs, this error occurs.
Cause of problem	•OLP SENSOR temp above Trip_Dis.

1. How to check

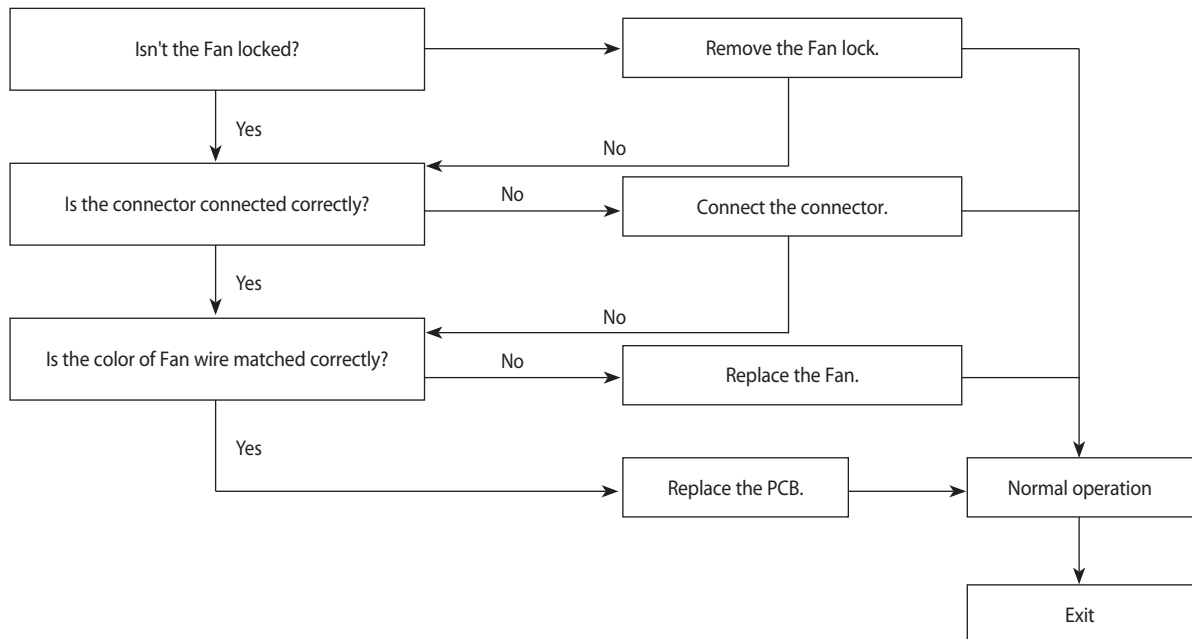
The above malfunction codes do not indicate a malfunction of the product. All you have to do is change the temperature suitably for the limits shown in the manual. When the product malfunctions, if the actual situation does not match the above diagnosis, measure the temperature of incoming air with S-net to see if the measurement is the same as the actual outdoor temperature. If not, replace the temperature sensor.

4-3-16 Outdoor unit BLDC Fan1 or Fan2 error (E458 : Fan1 error, E475 : Fan2 error)

1. Checklist :

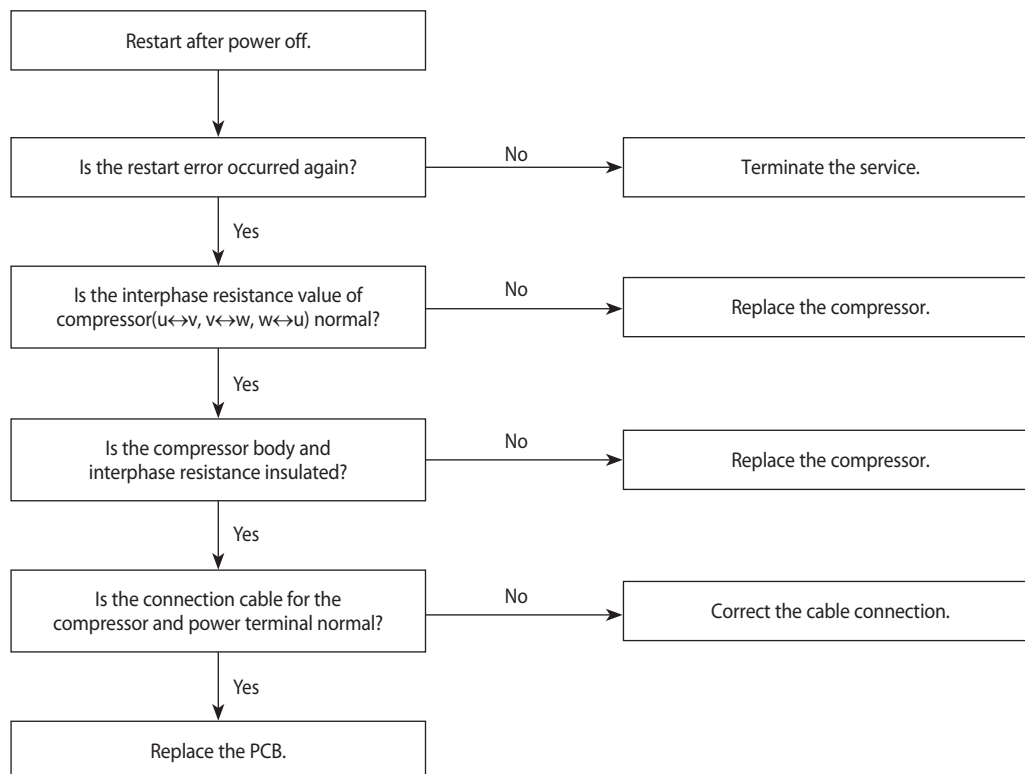
- 1) Isn't the fan locked?
- 2) Is the sensor placed correctly?
- 3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
- 4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure



4-3-17 E461: Compressor start error E467: Compressor wire missing error

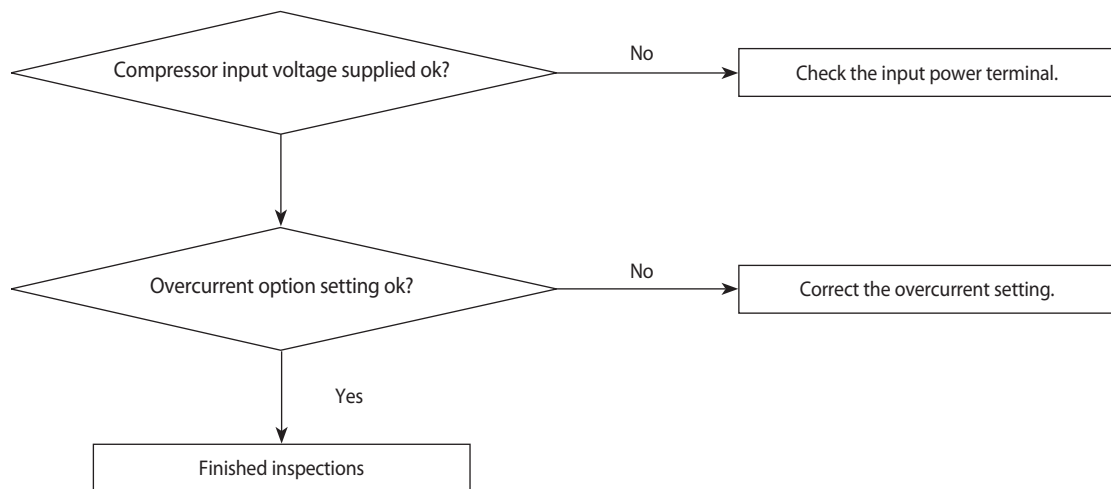
1. Checklist :
 - 1) Is the connection of cable for the compressor and power?
 - 2) Is the interphase resistance of compressor normal?
2. Troubleshooting procedure



4-3-18 E462 : Current protection control causes comp. down E484 : PFC overload error

Outdoor unit display	E462,E484
Criteria	• The outdoor machine input current above I_Trip.
Cause of problem	•Check the compressor input voltage. (error for low voltage.) •Check the overcurrent option setting.

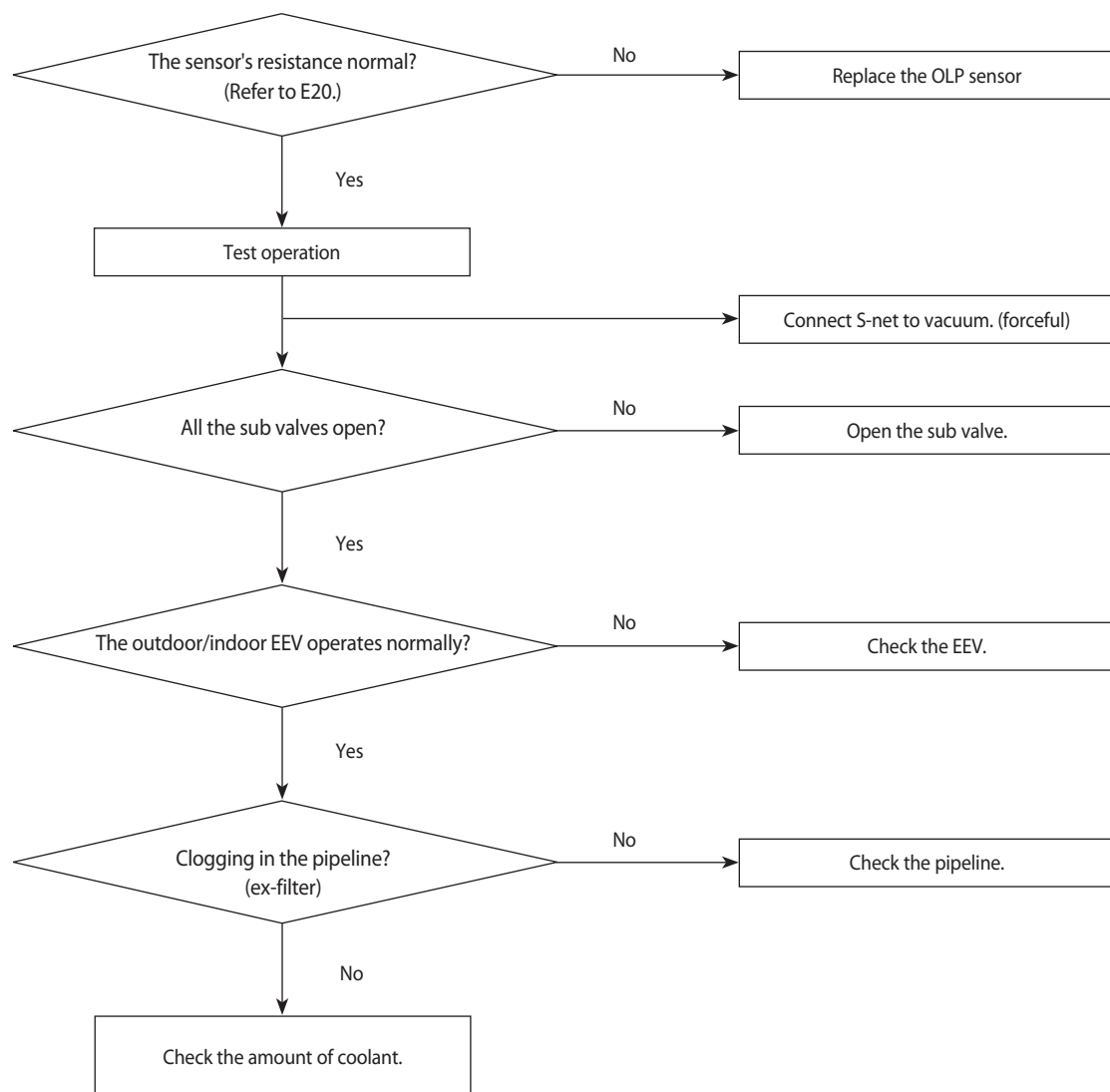
1. How to check



4-3-19 E463 : OLP protection control caused comp. down

Outdoor unit display	E463
Criteria	• OLP SENSOR temp above Trip_Dis.
Cause of problem	• See if the sub valve is open. • Check the amount of coolant. • Check the OLP sensor.

1. How to check

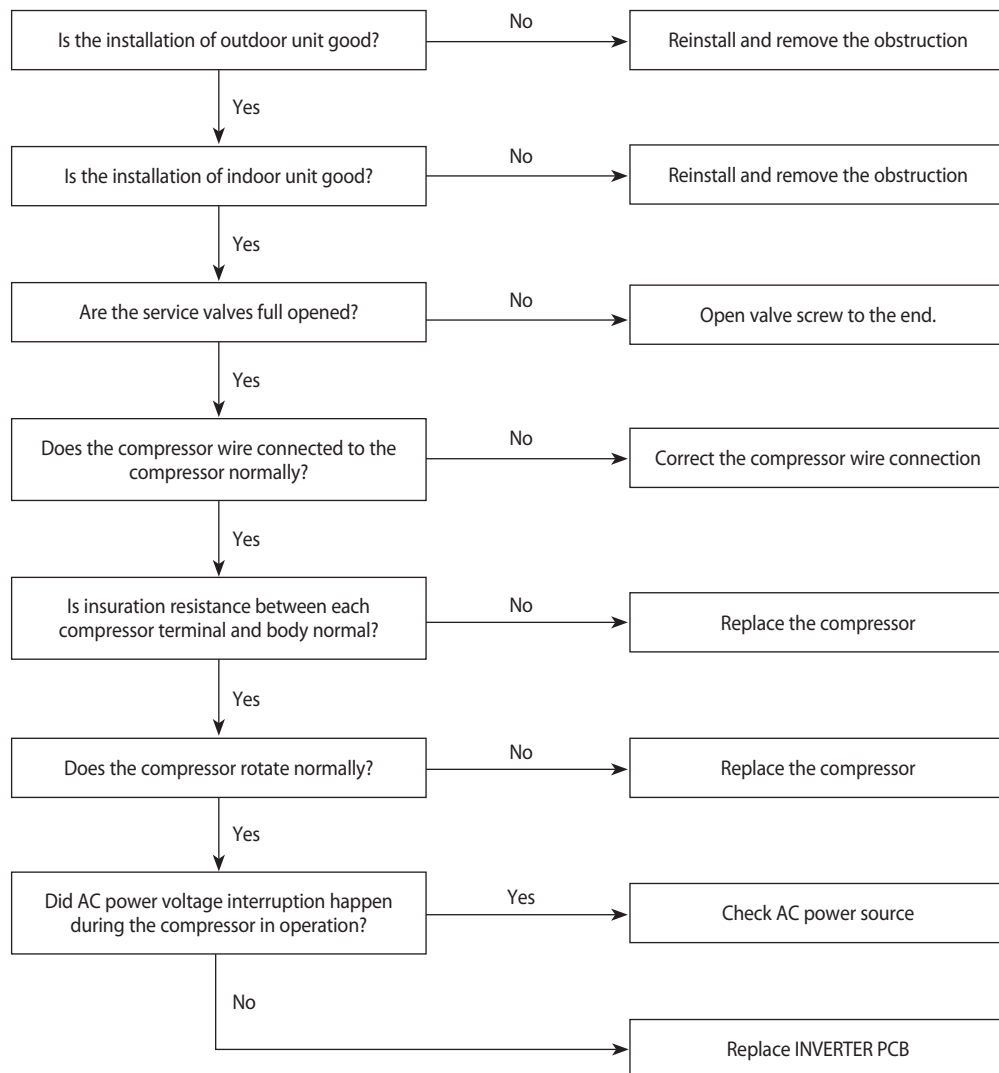


4-3-20 E464 : O.C. (Over Current) error

1. Checklist :

- 1) Is the refrigerant charged properly?
- 2) Does the compressor rotate normally?(Reverse rotation, Locking etc.)
- 3) Is connection of compressor wire normal?
- 4) Is compressor motor normal?(Insulation, Coil resistance etc.)
- 5) Does a temporary cycle overload condition happened?

2. Troubleshooting procedure

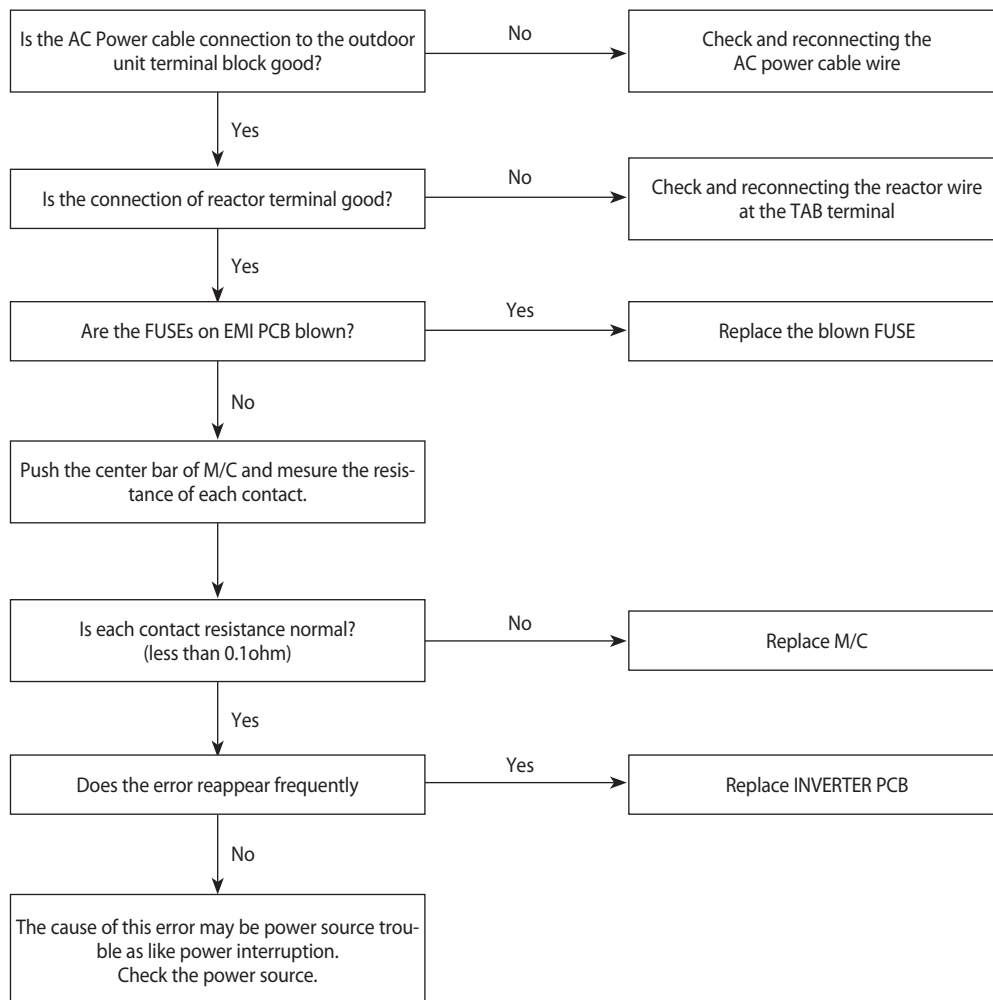


4-3-21 E466: DC Link Over voltage/ Low voltage error

1. Checklist :

- 1) Is the power voltage normal?(Lightning, Power interruption etc.)
- 2) Is AC Power cable connection normal?(Detaching the wire)

2. Troubleshooting procedure



4-3-22 Pipe Blocking Error (Error Code: E422)

1. Test Item

- 1) Check the open state of the outdoor unit service valve.
- 2) Check the connection of the pipe.
- 3) Check the operation of the EEV.
- 4) Check the refrigerant leakage.
- 5) Check the connection of the indoor unit PBA EVA sensor.
- 6) Check the fault in the indoor unit EVA sensor.

2. Check procedure

