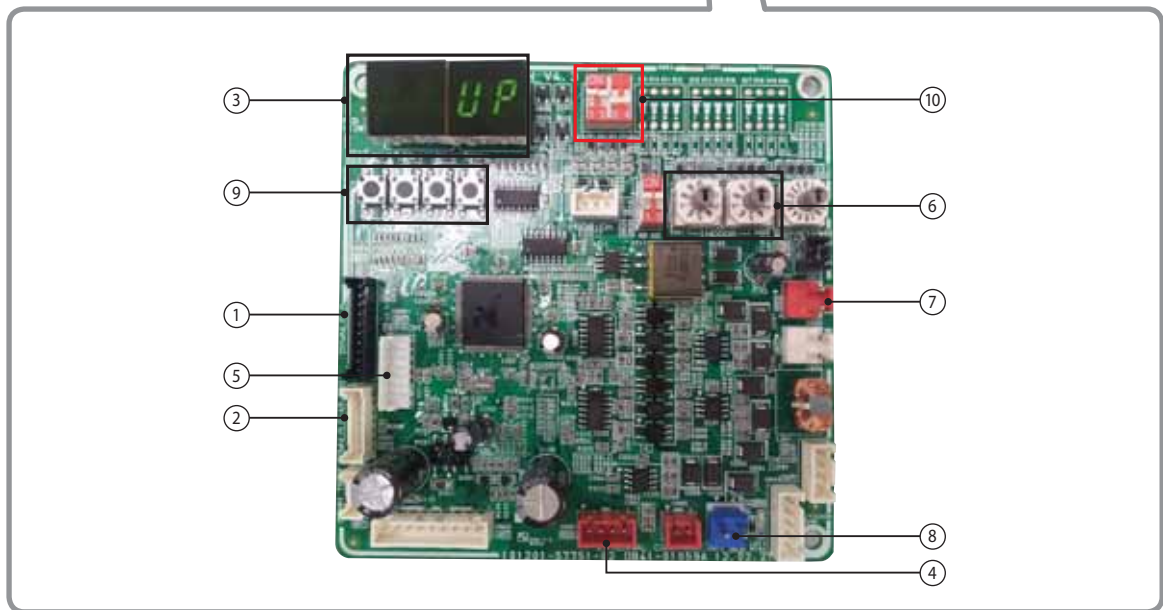


4. Troubleshooting

4-1 Check-up Window Description



| No. | Function | No. | Function |
|-----|--|-----|---|
| 1 | CN22 download (PC) (SMW200-10 black) | 6 | Set up the number of connected outdoor units |
| 2 | MICOM. download (AS-PRO) (SMW200-07P white) | 7 | For checking indoor unit communication (YW396-02P red) |
| 3 | ERROR DISPLAY | 8 | Transmitter 12V (YW396-02P blue) |
| 4 | State Check (SMW250-04P red) | 9 | Outdoor Unit Tact Switch |
| 5 | EEPROM SOCKET | 10 | Outdoor Unit Dip Switch |

4-2 Service Operation

4-2-1 Special Operation

- Key input of the outdoor unit when the service enters the operation mode.

| K1 (Number of press) | Key operation | Display on segment |
|-----------------------|---|--------------------|
| 1 time | Refrigerant charging in Heating mode | K, 1, BLANK, BLANK |
| 2 times | Trial operation in Heating mode | K, 2, BLANK, BLANK |
| 3 times | Pump out in Heating mode (Outdoor unit address 1) | K, 3, BLANK, 1 |
| 4 times | Pump out in Heating mode (Outdoor unit address 2) | K, 3, BLANK, 2 |
| 5 times | Pump out in Heating mode (Outdoor unit address 3) | K, 3, BLANK, 3 |
| 6 times | Pump out in Heating mode (Outdoor unit address 4) | K, 3, BLANK, 4 |
| 7 times | Vacuumpig (Outdoor unit address 1) | K, 4, BLANK, 1 |
| 8 times | Vacuumpig (Outdoor unit address 2) | K, 4, BLANK, 2 |
| 9 times | Vacuumpig (Outdoor unit address 3) | K, 4, BLANK, 3 |
| 10 times | Vacuumpig (Outdoor unit address 4) | K, 4, BLANK, 4 |
| 11 times | Vacuumping (All outdoor units) | K, 4, BLANK, A |
| 12 times | End Key operation | - |
| Press and hold 1 time | Auto trial operation | K, K, BLANK, BLANK |

| K2 (Number of press) | Key operation | Display on segment |
|----------------------|--|---|
| 1 time | Refrigerant charging in Cooling mode | K, 5, BLANK, BLANK |
| 2 times | Trial operation in Cooling mode | K, 6, BLANK, BLANK |
| 3 times | Pump down all units in Cooling mode | K, 7, BLANK, BLANK |
| 4 times | H/R: Checking the pipe connection H/P: Automatic setting of operation mode (Cooling/Heating) for trial operation | K, 8, BLANK, BLANK |
| 5 times | Checking the amount of refrigerant | "K" "9" X X (Display of last two digits may differ depending on the progress) |
| 6 times | Discharge mode of DC link voltage | K, A, BLANK, BLANK |
| 7 times | Forced defrost operation | K, B, BLANK, BLANK |
| 8 times | Forced oil collection | K, C, BLANK, BLANK |
| 9 times | End Key operation | - |

- ※ Inv1 & Inv2 voltage during discharge mode are displayed alternately.
- ※ Outdoor Power Off even when the Inverter PCB, Fan PCB is a high DC voltage charging contacts at danger.
- ※ When you run the repair and replacement of the PCB should work after the power is turned off, the DC voltage discharge.
(Natural discharge until Please wait for at least 15 minutes.)
- ※ If an error occurs, the discharge mode may not work properly.
In particular, E464 & E364 is power devices can be damaged.
Therefore, the discharge mode, do not use.

■ Commissioning

- After initial installation, stable operation for a certain period of time limited to operation conditions.

| | Cooling | Heating |
|------------------------|---|--|
| Method of Entry | K2 Tact Switch twice | K2 Tact Switch twice |
| Compressor | Normal operation, but the maximum frequency limit (differ by model) | |
| Indoor Unit | Whole operation (The set temperature=3°C) | Whole operation (The set temperature=40°C) |
| Outdoor fan and valves | Normally control conduct | |
| Operation time | Min : 60 minutes, Max : 10 hours | |
| Etc. | · Exceed the maximum operating time at stops and waits. · Protection and control, self-diagnosis is performed. | |

■ Refrigerant filling operation

- Operation to filling the refrigerant compressor was fixed at a certain frequency.

| | Cooling | Heating |
|------------------------|---|--|
| Method of Entry | K2 Tact Switch one time | K1 Tact Switch one time |
| Compressor | Starting frequency (Mild Start frequency) operation | |
| Indoor Unit | Whole operation (The set temperature=3°C) | Whole operation (The set temperature=40°C) |
| Outdoor fan and valves | Normally control conduct | |
| Operation time | 60 minutes | |
| Etc. | During the filling operation does not enter the special operation, such as oil recovery, defrost. | |

■ Heating Pump Out

- ▶ Operation for the repair of the Individual outdoor unit, the outdoor unit refrigerant emissions to the indoor part.
- ▶ Liquid pipe service valve and the gas pipe service valve operation, the operator manually need to close.
- ▶ Observe low pressure using View Mode of K4 button if compressor operate.
If low pressure goes down below about 0.2 MPa.g : Immediately lock the gas side service valve, Pump Out operation is shut down.
(Pump out operation shut down : K1 button once more press or K3 button one time press)
- ▶ If operation of low pressure goes down below 0.1 MPa.g : Will be stopped automatically for the protection of the compressor.

| | |
|------------------------|--|
| How to Initiate | K1 Tact Switch 3 times~6 times |
| Compressor | 60Hz |
| Indoor Unit | Whole Operation (The set temperature=40°C) |
| 4Way Valve | ON (Heating Mode) |
| Outdoor Fan | Maximum air flow |
| Main EEV | Operation side : 700 Step (Stop side : 0 step) |
| Maximum Operation Time | 10 minutes |
| Protection Control | Conduct the discharge temperature, high pressure control. (Low pressure protection control is not carried out) ※ Low pressure is outside normal limits : Operation is shut down after gas pipe manually closed. |
| Etc. | Entry after safety start. (Only the corresponding Outdoor Unit operation.) To pump out more than 2 : Except communication between Outdoor Unit of relevant set after working for one, remainder set makes Pump Out add. |

■ Cooling Pump Down

- ▶ Recover the refrigerant of Indoor Unit and Piping to outdoor side.
- ▶ Liquid pipe service valve and the gas pipe service valve operation, the operator manually need to close.
- ▶ If the installation of the long pipe : Any refrigerant into the outdoor unit can not be recovered, therefore should use a separate container.
- ▶ Observe low pressure using View Mode of K4 button if compressor operate.
If low pressure goes down below about 0.2 MPa.g : Immediately lock the gas side service valve, Pump Out operation is shut down.
(Pump out operation shut down : K1 button once more press or K3 button one time press)
- ▶ If operation of low pressure goes down below 0.1 MPa.g : Will be stopped automatically for the protection of the compressor.

| | |
|------------------------|--|
| How to Initiate | K2 Tact Switch 3 times |
| Compressor | Address No.1 Outdoor Unit - 60Hz (Other Outdoor Unit COMPOFF) |
| Indoor Unit | Whole Operation (The set temperature=3°C) |
| 4Way Valve | OFF (Cooling Mode) |
| Outdoor Fan | Maximum air flow |
| Main EEV | Operation side : 2000 Step , Stop side : 2000 step |
| Maximum Operation Time | 30 minutes |
| Etc. | Does not conduct the operation of the special operation, and protection control. Pressure and temperature is outside normal limits : Operation is shut down after gas pipe manually closed. |

■ Vacuum Operation

- ▶ Operation to facilitate vacuum to open the valve after the Outdoor Unit repair.

| | |
|-------------------------|---|
| How to Initiate | K1 Tact Switch 7 times~11 times |
| Compressor | OFF |
| Indoor Unit/Outdoor Fan | OFF |
| 4Way Valve | OFF |
| Valves | Open all valves maximum |
| Etc. | If not turn off the vacuum mode, the start of normal operation is prohibited. |

■ Piping Inspection Operation

- ▶ Operation mode to check the status of the piping between the MCU and the indoor unit.
- ▶ Heat Pump Model : Outdoor temperature is more than 15°C / Cooling commissioning start
Outdoor temperature is less than 15°C / Heating commissioning start

■ Discharge Mode Operation

- ▶ Outdoor power is turned off, the Inverter PCB and Fan PCB charging a high DC voltage, so dangerous to touch.
 - To replace the PCB, first turn off the power and the begin if DC voltage is discharged.
 - If not use the discharge mode, the discharge time of about 15 minutes takes.
 - If an error occurs, the discharge mode may not properly run. (Wait until natural discharge.)
 - In particular, E 464, E364, power devices may be damaged, therefore do not use the discharge mode.
- ▶ Block the Inverter PCB 3-phase relay after connected the power, and through compressor, DC voltage is discharging.
 - INV1 and INV2 DC voltage during discharge mode are displayed alternately.
 - Discharge mode Display (Rotate the three page display, as shown below.)
'K' 'A' ' ' ' ' → DC Link Volt1 (For example, 120[V] 0 1 2 0 display)
→ DCLinkVolt2 (For example, 120[V] 0 1 2 0 display) → 'K' 'A' ' ' ' ' → DC Link Volt1 ...
- ▶ Discharge is complete, the power of the Inverter PCB and Fan PCB is being blocked, communication function is blocked, E206 will occur.
- ▶ If want operation again after complete discharge mode : Restart after K3 key to Reset or Power Reset.

■ Forced defrost operation

- ▶ Forced defrost operation : Is operation when Frost Formation occurs in the outdoor. (When carried out the service)

| | |
|-----------------|---|
| Method of Entry | K2 Tact Switch 6 times |
| Start pattern | Heating commissioning pattern |
| Defrost start | Defrost start : It is after 10 minutes which Safety Start finishes. |
| Defrost off | General defrost operation conditions are the same as. |
| Etc. | Defrost shut down and stop the normal pattern of the outdoor unit stop. |

■ Forced oil recovery operation

- ▶ Forced oil recovery operation : Oil recovery in the outdoor unit for the purpose of moving, installation if necessary.

| | |
|--------------------|--|
| Method of Entry | K2 Tact Switch 7 times |
| Start pattern | Outdoor temperature is more than 10°C : Cooling commissioning Outdoor temperature is less than 10°C : Heating commissioning |
| Oil recovery start | Oil recovery start : It is after 10 minutes which Safety Start finishes. |
| Etc. | Oil recovery shut down and stop the normal pattern of the outdoor unit stop. |

4-2-2 DVM S Models EEPROM Code Table

| No. | Model Name | EEP Code |
|-----|----------------|-------------|
| 1 | AM080FXVAGH/EU | DB82-01358A |
| 2 | AM100FXVAGH/EU | DB82-01359A |
| 3 | AM120FXVAGH/EU | DB82-01360A |
| 4 | AM140FXVAGH/EU | DB82-01361A |
| 5 | AM160FXVAGH/EU | DB82-01362A |
| 6 | AM180FXVAGH/EU | DB82-01363A |
| 7 | AM200FXVAGH/EU | DB82-01364A |
| 8 | AM220FXVAGH/EU | DB82-01365A |
| 9 | AM080FXVAGR/EU | DB82-01330A |
| 10 | AM100FXVAGR/EU | DB82-01331A |
| 11 | AM120FXVAGR/EU | DB82-01332A |
| 12 | AM140FXVAGR/EU | DB82-01333A |
| 13 | AM160FXVAGR/EU | DB82-01334A |
| 14 | AM180FXVAGR/EU | DB82-01335A |
| 15 | AM200FXVAGR/EU | DB82-01336A |
| 16 | AM220FXVAGR/EU | DB82-01337A |

4-3 Troubleshooting

4-3-1 Setting Option Setup Method

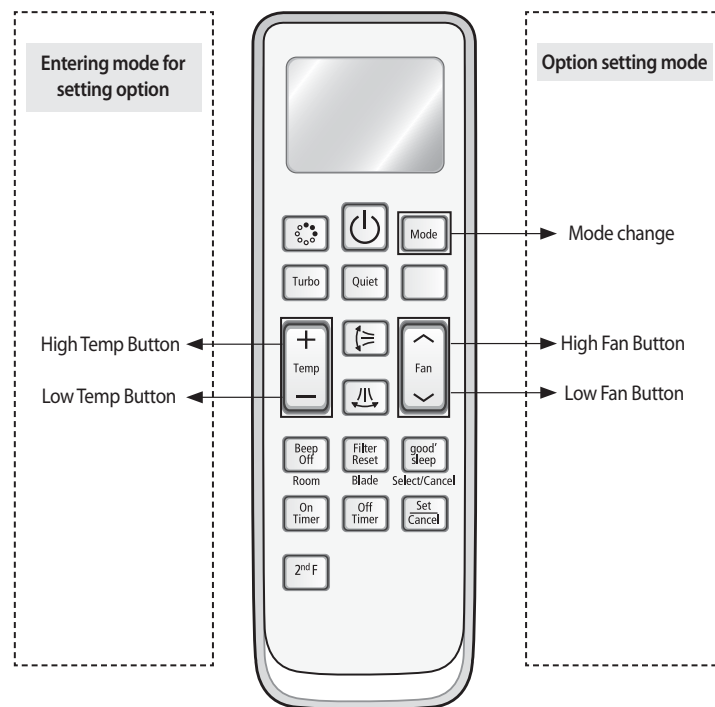
4-3-1-1 PCB option code input method

■ ND***1HXEH, ADN***BDEHA/EU Series



Set the indoor unit address and installation option with remote controller option.

Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.

■ The procedure of setting option



Step 1 Entering mode to set option

1. Remove batteries from the remote controller.
2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button .
3.  Check if you have entered the option setting status.

Step 2 The procedure of option setting

After entering the option setting status, select the option as listed below.

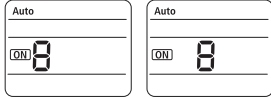

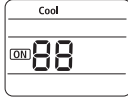
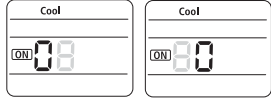

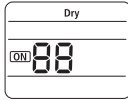
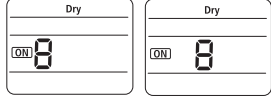

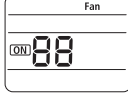
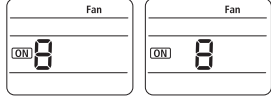

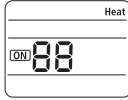
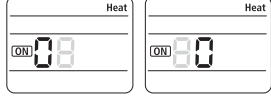

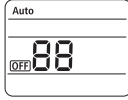


Option setting is available from SEG1 to SEG 24

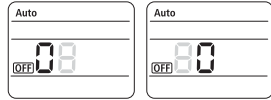

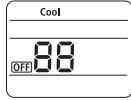
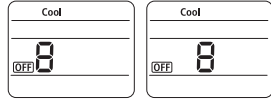

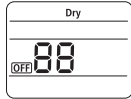
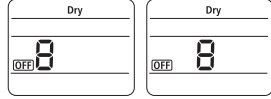

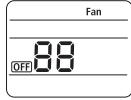
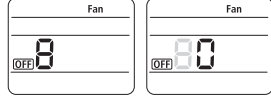

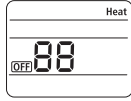
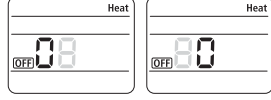
- SEG1, SEG7, SEG13, SEG19 are not set as page option.
- Set the SEG2~SEG6, SEG8~SEG12 as ON status and SEG14~18, SEG20~24 as OFF status.

| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 | SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 | On(SEG1~12) | Off(SEG13~24) |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|---------------|
| 0 | X | X | X | X | X | 1 | X | X | X | X | X | Auto | Auto |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 | SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 | | |
| 2 | X | X | X | X | X | 3 | X | X | X | X | X | 00 | 00 |


■ The procedure of setting option

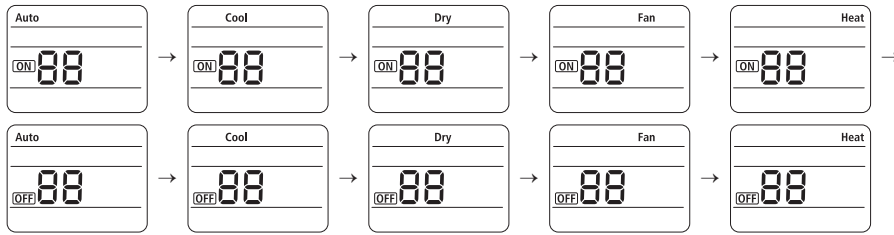
| Option setting | Status |
|---|---|
| 1. Setting SEG2, SEG3 option Press Low Fan button() to enter SEG2 value. Press High Fan button() to enter SEG3 value. Each time you press the button, ㉠ ㉡ ㉢ ... ㉦ ㉧ will be selected in rotation. |  <div> <div>Auto</div> <div>ON 8</div> <div>SEG2</div> </div> <div> <div>Auto</div> <div>ON 8</div> <div>SEG3</div> </div> |
| 2. Setting Cool mode  Press Mode button to be changed to Cool mode in the ON status. |  <div> <div>Cool</div> <div>ON 88</div> </div> |
| 3. Setting SEG4, SEG5 option Press Low Fan button() to enter SEG4 value. Press High Fan button() to enter SEG5 value. Each time you press the button, ㉠ ㉡ ㉢ ... ㉦ ㉧ will be selected in rotation. |  <div> <div>Cool</div> <div>ON 08</div> <div>SEG4</div> </div> <div> <div>Cool</div> <div>ON 80</div> <div>SEG5</div> </div> |
| 4. Setting Dry mode  Press Mode button to be changed to DRY mode in the ON status. |  <div> <div>Dry</div> <div>ON 88</div> </div> |
| 5. Setting SEG6, SEG8 option Press Low Fan button() to enter SEG6 value. Press High Fan button() to enter SEG8 value. Each time you press the button, ㉠ ㉡ ㉢ ... ㉦ ㉧ will be selected in rotation. |  <div> <div>Dry</div> <div>ON 8</div> <div>SEG6</div> </div> <div> <div>Dry</div> <div>ON 8</div> <div>SEG8</div> </div> |
| 6. Setting Fan mode  Press Mode button to be changed to FAN mode in the ON status. |  <div> <div>Fan</div> <div>ON 88</div> </div> |
| 7. Setting SEG9, SEG10 option Press Low Fan button() to enter SEG9 value. Press High Fan button() to enter SEG10 value. Each time you press the button, ㉠ ㉡ ㉢ ... ㉦ ㉧ will be selected in rotation. |  <div> <div>Fan</div> <div>ON 8</div> <div>SEG9</div> </div> <div> <div>Fan</div> <div>ON 8</div> <div>SEG10</div> </div> |
| 8. Setting Heat mode  Press Mode button to be changed to HEAT mode in the ON status. |  <div> <div>Heat</div> <div>ON 88</div> </div> |
| 9. Setting SEG11, SEG12 option Press Low Fan button() to enter SEG11 value. Press High Fan button() to enter SEG12 value. Each time you press the button, ㉠ ㉡ ㉢ ... ㉦ ㉧ will be selected in rotation. |  <div> <div>Heat</div> <div>ON 08</div> <div>SEG11</div> </div> <div> <div>Heat</div> <div>ON 80</div> <div>SEG12</div> </div> |
| 10. Setting Auto mode  Press Mode button to be changed to AUTO mode in the OFF status. |  <div> <div>Auto</div> <div>OFF 88</div> </div> |

■ The procedure of setting option (cont.)


| Option setting | Status |
|--|---|
| 11. Setting SEG14, SEG15 option Press Low Fan button() to enter SEG14 value. Press High Fan button() to enter SEG15 value. Each time you press the button, ㄱ ㄴ ㄷ ... ㅅ ㅆ ㅈ will be selected in rotation. |  <div>SEG14 SEG15</div> |
| 12. Setting Cool mode  Press Mode button to be change to Cool mode in the OFF status. |  |
| 13. Setting SEG16, SEG17 option Press Low Fan button() to enter SEG16 value. Press High Fan button() to enter SEG17 value. Each time you press the button, ㄱ ㄴ ㄷ ... ㅅ ㅆ ㅈ will be selected in rotation. |  <div>SEG16 SEG17</div> |
| 14. Setting Dry mode  Press Mode button to be change to Dry mode in the OFF status. |  |
| 15. Setting SEG18, SEG20 option Press Low Fan button() to enter SEG18 value. Press High Fan button() to enter SEG20 value. Each time you press the button, ㄱ ㄴ ㄷ ... ㅅ ㅆ ㅈ will be selected in rotation. |  <div>SEG18 SEG20</div> |
| 16. Setting Fan mode  Press Mode button to be change to Fan mode in the OFF status. |  |
| 17. Setting SEG21, SEG22 option Press Low Fan button() to enter SEG21 value. Press High Fan button() to enter SEG22 value. Each time you press the button, ㄱ ㄴ ㄷ ... ㅅ ㅆ ㅈ will be selected in rotation. |  <div>SEG21 SEG22</div> |
| 18. Setting Heat mode  Press Mode button to be change to HEAT mode in the OFF status. |  |
| 19. Setting SEG23, SEG24 mode Press Low Fan button() to enter SEG23 value. Press High Fan button() to enter SEG24 value. Each time you press the button, ㄱ ㄴ ㄷ ... ㅅ ㅆ ㅈ will be selected in rotation. |  <div>SEG23 SEG24</div> |

Step 3 Check the option you have set

After setting option, press  button to check whether the option code you input is correct or not.



Step 4 Input option

Press operation button  with the direction of remote control for set.
For the correct option setting, you must input the option twice.

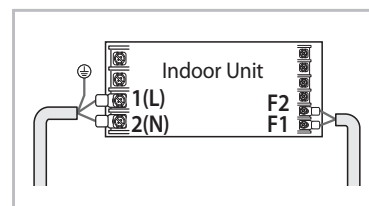
Step 5 Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.
2. Take the batteries out of the remote controller and insert them again and then press the operation button.

- Setting an indoor unit address and installation option

■ Setting an indoor unit installation option (suitable for the condition of each installation location)

- Check whether power is supplied or not.
 - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
- The panel(display) should be connected to an indoor unit to receive option.
- Set the installation option according to the installation condition of an air conditioner.
 - The default setting of an indoor unit installation option is "020010-100000-200000-300000".
 - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
- Set the indoor unit option by wireless remote controller.



| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|-------|---|------------------------------|---|--|------------------------------|
| 0 | 2 | RESERVED | Exterior temperature sensor | Central control | FAN RPM compensation |
| SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
| 1 | Drain pump | Hot water heater | Electronic heater | Opening the electronic expansion valve | Master / Slave |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 |
| 2 | External control | External control output | S-Plasma ion | Buzzer | Number of hours using filter |
| SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 |
| 3 | Individual control of a remote controller | Heating setting compensation | EEV opening of an indoor unit stopped during oil return or Defrost operation. | - | Human sensor |

1WAY/2WAY/4WAY MODEL : Drain pump(SEG8) will be set to 'USE + 3minute delay' even if the drain pump is set to 0.

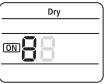
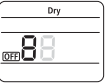
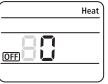
1 WAY/2WAY/4WAY,DUCT MODEL : Number of hours using filter(SEG18) will be set to '1000hour' even if the SEG18 is set to except for 2 or 6.

If you input a number other than 0~4 of the individual control of the indoor unit(SEG20), the indoor is set as "indoor 1".

SEG5 central control option is basically set as 1 (Use), so you don't need to set the central control option additionally.

However, if the central control is not connected but it doesn't indicate an error message, you need to set the central control option as 0 (Disuse) to exclude the indoor unit from the central control.

Option No. : 02XXXX-1XXXX-2XXXX-3XXXX

| Option | SEG1 | | SEG2 | | SEG3 | | SEG4 | | SEG5 | | SEG6 | |
|---------------------------|------------|---------|---|---------------------|---|--------------|--|----------|--|---|---|------------------|
| Explanation | PAGE | | MODE | | Use of robot cleaning | | Use of external temperature sensor | | Use of central control | | FAN RPM compensation | |
| Remote Controller Display | | |  | |  | |  | |  | |  | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details |
| | 0 | | 2 | | 0 | Disuse | 0 | Disuse | 0 | Disuse | 0 | Disuse |
| | | | | | 1 | Use | 1 | Use | 1 | Use | 1 | RPM compensation |
| | | | | | | | | | | | 2 | High ceiling KIT |
| Option | SEG7 | | SEG8 | | SEG9 | | SEG10 | | SEG11 | | SEG12 | |
| Explanation | PAGE | | Use of drain pump | | Use of hot water heater | | Use of electronic heater | | Opening the electronic expansion valve of an indoor unit when heating operation stops. | | Master / Slave | |
| Remote Controller Display | | |  | |  | |  | |  | |  | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details |
| | 1 | | 0 | Disuse | 0 | Disuse | 0 | Disuse | 0 | 0 | 0 | slave |
| | | | 1 | Use | 1 | Use | 1 | Use | 1 | 80 | 1 | master |
| | | | 2 | Use + 3minute delay | | | | | | | | |
| Option | SEG13 | | SEG14 | | SEG15 | | SEG16 | | SEG17 | | SEG18 | |
| Explanation | PAGE | | Use of external control | | Setting the output of external control | | S-Plasma ion | | Buzzer control | | Number of hours using filter | |
| Remote Controller Display | | |  | |  | |  | |  | |  | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details |
| | 2 | | 0 | Disuse | 0 | Thermo on | 0 | Disuse | 0 | Mixed operation control1/Use buzzer | 2 | 1000 Hour |
| | | | 1 | ON/OFF Control | 1 | Operation on | 1 | Use | 1 | Mixed operation control1/Disuse of buzzer | 6 | 2000 Hour |
| | | | 2 | OFF Control | | | | | 2 | Mixed operation control2/Use buzzer | | |
| | | | | | | | | | 3 | Mixed operation control2/Disuse of buzzer | | |
| Option | SEG19 | | SEG20 | | SEG21 | | SEG22 | | SEG23 | | SEG24 | |
| Explanation | PAGE | | Individual control of a remote controller | | Heating setting compensation | | EEV opening of an indoor unit stopped during oil return or defrost operation. | | - | | Human sensor | |
| Remote Controller Display | | |  | |  | |  | |  | |  | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details |
| | 3 | | 0 or 1 | channel 1 | 0 | Disuse | 0 | 150 step | | | 8 | Disuse |
| | | | 2 | channel 2 | 1 | 2°C | 1 | 0 step | | | 9 | Use |
| | | | 3 | channel 3 | 2 | 5°C | | | | | | |
| | | | 4 | channel 4 | | | | | | | | |

4-3-2 Option Items

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|-----------------------|----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Slim 1-Way Cassette | AM022FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 8 | 0 | C | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM028FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 8 | 0 | F | 8 | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM036FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 5 | 4 | 5 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| 2-Way Cassette | AM056FN2DEH/EU | 0 | 1 | 2 | 0 | 4 | 4 | 1 | 1 | 5 | 5 | 6 | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM071FN2DEH/EU | 0 | 1 | 2 | 0 | 4 | 4 | 1 | 1 | 5 | 5 | 8 | 2 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | |
| Global 4-Way Cassette | AM045FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 0 | 9 | 7 | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 0 | A | 7 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM071FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 4 | 0 | D | 8 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM090FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 0 | 9 | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM112FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 1 | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM128FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 2 | D | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | |
| | AM140FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 4 | F | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 0 | 0 | 2 | 0 | |
| BIG Duct | AM220FNHDEH/EU | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | 9 | 7 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | C | 7 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | E | 8 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 15mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 4 | D | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 20mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 9 | F | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 25mmAq |
| | AM280FNHDEH/EU | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 0 | 7 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 2 | 9 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 5 | B | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 15mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 9 | E | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 20mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 5 | D | 1 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 25mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 5 | F | 3 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 28mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 5 | F | 3 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 28mmAq |
| Floor Standing | AM036FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM056FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM071FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | |
| ERV Plus | AM050FNKDEH/EU | 0 | 1 | E | 0 | 4 | 4 | 1 | 9 | 5 | 5 | 8 | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 2 | 0 | 0 | 0 | |
| | AM100FNKDEH/EU | 0 | 1 | E | 0 | 4 | 4 | 1 | 9 | 5 | 5 | 7 | 3 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 2 | 0 | 2 | 0 | |
| G-MINI 4-W/C | AM022FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 7 | 0 | E | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM028FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 0 | A | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM036FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 3 | 4 | 2 | C | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM045FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 4 | E | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 7 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM060FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 5 | 9 | 1 | 2 | 0 | 3 | C | 3 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| SLIM DUCT-S | AM022FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 0 | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | C | 3 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | 8 | 0 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM028FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 7 | A | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 1 | 5 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | E | 2 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM036FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | C | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 6 | 8 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 3 | 5 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 3 | 5 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |

Option Items(cont.)

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|--|----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| SLIM DUCT-1 | AM045FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 6 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | E | 2 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 9 | F | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM056FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 9 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 3 | 4 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | C | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| SLIM DUCT-2 | AM071FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 4 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | 9 | E | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | B | B | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| SLIM DUCT-3 | AM090FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 2 | A | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | D | 4 | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | 9 | 6 | C | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM112FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 2 | A | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | D | 4 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | 9 | 6 | C | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM128FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 8 | F | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 4 | B | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | F | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM140FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | F | C | 3 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 7 | F | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 3 | A | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| SLIM DUCT-1 [Uplevel Static Pressure] | AM022FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | E | 4 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 1 | E | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | A | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | B | 6 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM028FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 9 | A | 9 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | 6 | 2 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 2 | C | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | 8 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM036FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | C | F | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 2 | C | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | F | B | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | A | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| MSP DUCT-S [Uplevel Static Pressure] | AM045FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 0 | 6 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | A | 4 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 8 | 3 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 7 | 1 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 5 | 0 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| MSP DUCT-S | AM056FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 5 | 7 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | F | 5 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | C | 5 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 9 | 3 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 7 | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM071FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | C | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | 9 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 7 | 9 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 3 | 6 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 0 | 4 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| MSP DUCT-0 | AM090FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | D | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | 2 | 9 | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 4 | 5 | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |

Option Items(cont.)

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|-----------------------|----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| MSP DUCT-1 | AM112FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | F | F | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | F | F | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | B | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 2 | 6 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 0 | 4 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| MSP DUCT-2 | AM128FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 3 | 6 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 14mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 1 | 4 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | E | 2 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | A | B | 0 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | 9 | E | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | 6 | C | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | AM140FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | F | C | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 14mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | A | A | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 4 | 7 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 2 | 4 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | A | F | 2 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | C | F | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | C | F | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| CEILING | AM056FNCDEH/EU | 0 | 1 | 3 | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM071FNCDEH/EU | 0 | 1 | 3 | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | |
| CONSOLE | AM028FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 0 | B | 7 | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM036FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 0 | D | 7 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM056FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 4 | 1 | B | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| NEO-FORTE without EEV | AM022FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM028FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM036FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 4 | 4 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 6 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 2 | 0 | |
| | AM071FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 8 | F | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 2 | 0 | |
| NEO-FORTE with EEV | AM022FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM028FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM036FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 4 | 4 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM045FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 3 | F | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 0 | 0 | 2 | 0 | |
| | AM056FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 6 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 0 | 0 | 2 | 0 | |
| | AM071FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 8 | F | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 0 | 0 | 2 | 0 | |

* If you are going to use up to SEG 24, please refer to following instruction.

SEG 17 : 0 → 1: Using high ceiling kit for 4way

SEG 18 :

| | Not in use | Use |
|----------------------------|------------|---------------|
| Change temperature display | 0(Celsius) | 1(Fahrenheit) |
| Sound Mute | 0 | 2 |
| Mixed operation control | 0 | 4 |

- If you want to use multiple functions, add each of the 'use' value of the function you want to used and input the final addition as option value. (Use Fahrenheit + Sound mute + Mixed operation control : 1 + 2 + 4 = 7)

Ex) 044217-1d00e6-200000-300000

When using Sound mute : 044217-1d00e6-200002-300000

When using high ceiling kit for 4way and mixed operation error preventing function : 044217-1d00e6-200014-300000

4-3-3 What to check before diagnosis















4-3-3-1 Lamp combination expression method display (cassette type indoor unit)

- Slim 1-Way, 2 -Way, Mini 4-Way cassette type

■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation





■ LED lamp display with error detection

| Abnormal condition | Error code | LED Display | | | | |
|---|--|--|-----|---|---|---|
| | |  | |  |  |  |
| | | Green | Red | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × |  | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 |  | × |  | × | × |
| Indoor fan error | E154 | × | × | × | | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 |  | × | × |  | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × |  |  | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × |  |  |  |

● : On  : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ LED lamp display with error detection (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|--|--|---|-----|---|---|---|
| | |  | |  |  |  |
| | | Green | Red | | | |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off





- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Global 4way cassette type





■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation

■ LED lamp display with error detection

| Abnormal condition | Error code | LED Display | | | |
|--|--|--|---|---|---|
| | | Operation | Defrost | Timer | Filter |
| | |  |  |  |  |
| Error on indoor temperature sensor (Short or Open) | E121 | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 | ● | ● | × | × |
| Indoor fan error | E154 | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ● | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | ● | ● | ● |
| 1. COND mid sensor is detached. 2. Refrigerant leakage (2nd detection). 3. Abnormally high temperature on Cond. (2nd detection) 4. Low pressure s/w. (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit. 7. Error due to reverse phase detection. 8. Comp stop due to freeze detection. (6th detection) 9. High pressure sensor is detached. 10. Low pressure sensor is detached. 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● |

■ LED lamp display with error detection (cont.)

| Abnormal condition | Error code | LED Display | | | |
|---------------------------------------|------------|--|---|---|---|
| | | Operation | Defrost | Timer | Filter |
| | |  |  |  |  |
| EEPROM option error | E163 | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | ● | ● | × | ● |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Duct type

■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation






■ LED lamp display with error detection(Remote Control Receiver)

| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × | ● | ● | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ LED lamp display with error detection(Remote Control Receiver) (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|---|--|---|---|---|---|---|
| | |  |  |  |  |  |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit compression ratio error 12. Outdoor sump down_1 prevention control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Ceiling type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | | | |
|---|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address | E101 E102 E202 E201 E108 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | × | × | ● | ● | ● |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w. (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM option error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

- Console type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address | E101 E102 E202 E201 E108 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | × | × | ● | ● | × |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

- Wall-mounted type (Neo Forte without EEV/with EEV)

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | |
|---|--|-------------|---|---|
| | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | ● | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | ● | × |
| Indoor fan error | E154 | × | × | ● |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ● | × | ● |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address | E101 E102 E202 E201 E108 | × | ● | ● |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | ● | ● | ● |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | ● | ● | ● |
| EEPROM error | E162 | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | ● | ● | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

- Floor Standing type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting






| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × | ● | ● | × |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.

Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ Indoor unit LED lamp display at error detecting (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|--|--|--|---|---|---|---|
| | |  |  |  |  |  |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.

Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

4-3-4 Number Display Method (Outdoor Unit, MCU, Cable remote control, wall-mount, etc.)

■ How to Display Integrated Error Code

► Meanings of First Alphabetical Character / Number of Error Code

| Displayed alphabet | Explanation | |
|--------------------|---|---|
| <i>E</i> | When displaying Error 101~700 | |
| <i>P</i> | When displaying Error 701~800 | |
| <i>C</i> | When E206 occurs | Displays address of subordinate within the set C001 : HUB, C002: FAN, C003: INV1, C004: INV2 |
| | When MCU error occurs | Displays address of MCU Ex) C100: MCU address 0, C101: MCU address 1, C102: MCU address 2 |
| <i>U</i> | When displaying outdoor unit address Ex) U200: Outdoor unit 1, U201: Outdoor unit 2, U202: Outdoor unit 3, U203: Indoor unit 4 | |
| <i>A</i> | When displaying indoor unit address Ex) A000: Indoor unit address 0, A001: Indoor unit address 1, A002: Indoor unit address 2 | |

► Order of Error Display

| Classification | Error display method | Display Example |
|---|---|--|
| Display method for error that occurred in indoor unit | Error Number → Indoor unit address → Error Number, repeat display | E471 → A002 → E471 → A002 |
| Display method for error that occurred in outdoor unit and other methods of error display | Error Number → Outdoor unit address → Error Number, repeat display | E471 → U200 → E471 → U200 E206 → C001 → E206 → C002 |

■ Diagnosis and Adjustment (Error Code)

► Error code related indoor unit

| CODE | Explanation |
|-------|--|
| E-101 | Indoor unit communication error. Indoor unit can not receive any data from outdoor unit. |
| E-102 | Communication error between indoor unit and outdoor unit. Displayed in indoor unit. |
| E-108 | Error due to repeated address setting (When 2 or more devices has same address within the network) |
| E-121 | Error on indoor temperature sensor of indoor unit (Short or Open) |
| E-122 | Error on EVA IN sensor of indoor unit (Short or Open) |
| E-123 | Error on EVA OUT sensor of indoor unit (Short or Open) |
| E-128 | EVA IN temperature sensor of indoor unit is detached from EVA IN pipe |
| E-129 | EVA OUT temperature sensor of indoor unit is detached from EVA OUT pipe |
| E-130 | Heat exchanger in/out sensors of indoor unit are detached |
| E-135 | RPM feedback error of indoor unit's cleaning fan |
| E-151 | Error due to opened EEV of indoor unit (2nd detection) |
| E-152 | Error due to closed EEV of indoor unit (2nd detection) |
| E-153 | Error on floating switch of indoor unit (2nd detection) |
| E-154 | RPM feedback error of indoor unit |
| E-161 | Mixed operation mode error of indoor unit; When outdoor unit is getting ready to operate in cooling (or heating) and some of the indoor unit is trying to operate in heating (or cooling) mode |
| E-162 | EEPROM error of MICOM (Physical problem of parts/circuit) |
| E-163 | Indoor unit's remote controller option input is Incorrect or missing. Outdo or unit EEPROM data error |
| E-180 | Simultaneous opening of cooling/heating MCU SOL V/V (1st detection) |
| E-181 | Simultaneous opening of cooling/heating MCU SOL V/V (2nd detection) |
| E-185 | Cross wiring error between communication and power cable of indoor unit |
| E-186 | Connection error or problem on SPi |
| E-190 | No temperature changes in EVA IN during pipe inspection or changes in temperature is seen in indoor unit with wrong address |
| E-191 | No temperature changes in EVA OUT during pipe inspection or changes in temperature is seen in indoor unit with wrong address |
| E-198 | Error due to disconnected thermal fuse of indoor unit |

■ Diagnosis and Adjustment (Error Code)

► Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|---|
| E-201 | Communication error between indoor and outdoor units (installation number setting error, repeated indoor unit address, indoor unit communication cable error) |
| E-202 | Communication error between indoor and outdoor units (Communication error on all indoor unit, outdoor unit communication cable error) |
| E-203 | Communication error between main and sub outdoor units |
| E-205 | Communication error on all PBA within the outdoor unit C-Box, communication cable error |
| E-206 | E206-C001: HUB PBA communication error / E206-C002: FAN PBA communication error E206-C003: INV1 PBA communication error / E206-C004: INV2 PBA communication error |
| E-211 | When single indoor unit uses 2 MCU ports that are not in series. |
| E-212 | If the rotary switch (on the MCU) for address setting of the indoor unit has 3 or more of the same address |
| E-213 | When total number of indoor units assigned to MCU is same as actual number of installed indoor units but there is indoor unit that is not installed even though it is assigned on MCU |
| E-214 | When number of MCU is not set correctly on the outdoor unit or when two or more MCU was installed some of them have the same address |
| E-215 | When two different MCU's have same address value on the rotary switch |
| E-216 | When indoor unit is not installed to a MCU port but the switch on the port is set to On. |
| E-217 | When indoor unit is connected to a MCU port but indoor unit is assigned to a MCU and the switch on the port is set to Off |
| E-218 | When there's at least one or more actual number of indoor unit connection compared to number of indoor units assigned to MCU |
| E-219 | Error on temperature sensor located on MCU intercooler inlet (Short or Open) |
| E-220 | Error on temperature sensor located on MCU intercooler outlet (Short or Open) |
| E-221 | Error on outdoor temperature sensor of outdoor unit (Short or open) |
| E-231 | Error on COND OUT temperature sensor of main outdoor unit (Short or Open) |
| E-241 | COND OUT sensor is detached |
| E-251 | Error on discharge temperature sensor of compressor 1 (Short or Open) |
| E-257 | Error on discharge temperature sensor of compressor 2 (Short or Open) |
| E-262 | Discharge temperature sensor of compressor 1 is detached from the sensor holder on the pipe |
| E-263 | Discharge temperature sensor of compressor 2 is detached from the sensor holder on the pipe |
| E-266 | Top sensor of compressor 1 is detached |
| E-267 | Top sensor of compressor 2 is detached |
| E-269 | Suction temperature sensor is detached from the sensor holder on the pipe |
| E-276 | Error on top sensor of compressor 1 (Short or Open) |
| E-277 | Error on top sensor of compressor 2 (Short or Open) |
| E-291 | Refrigerant leakage or error on high pressure sensor (Short or Open) |
| E-296 | Refrigerant leakage or error on low pressure sensor (Short or Open) |
| E-308 | Error on suction temperature sensor (Short or Open) |

■ Diagnosis and Adjustment (Error Code)

► Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|--|
| E-311 | Error on temperature sensor of double layer pipe/liquid pipe(sub heat exchanger) (Short or Open) |
| E-321 | Error on EVI (ESC) IN temperature sensor (Short or Open) |
| E-322 | Error on EVI (ESC) OUT temperature sensor (Short or Open) |
| E-323 | Error on suction sensor 2 (Short or Open) |
| E-346 | Error due to operation failure of Fan2 |
| E-347 | Motor wire of Fan2 is not connected |
| E-348 | Lock error on Fan2 of outdoor unit |
| E-353 | Error due to overheated motor of outdoor unit's Fan2 |
| E-355 | Error due to overheated IPM of Fan2 |
| E-361 | Error due to operation failure of inverter compressor 2 |
| E-364 | Error due to over-current of inverter compressor 2 |
| E-365 | V-limit error of inverter compressor 2 |
| E-366 | Error due to over voltage /low voltage of inverter PBA2 |
| E-367 | Error due to unconnected wire of compressor 2 |
| E-368 | Output current sensor error of inverter PBA2 |
| E-369 | DC voltage sensor error of inverter PBA2 |
| E-374 | Heat sink temperature sensor error of inverter PBA2 |
| E-378 | Error due to overcurrent of Fan2 |
| E-385 | Error due to input current of inverter 2 |
| E-386 | Over-voltage/low-voltage error of Fan2 |
| E-387 | Hall IC connection error of Fan2 |
| E-389 | V-limit error on Fan2 of compressor |
| E-393 | Output current sensor error of Fan2 |
| E-396 | DC voltage sensor error of Fan2 |
| E-399 | Heat sink temperature sensor error of Fan2 |
| E-400 | Error due to overheat caused by contact failure on IPM of Inverter PBA2 |
| E-407 | Compressor operation stop due to high pressure protection control |
| E-410 | Compressor operation stop due to low pressure protection control or refrigerant leakage |
| E-416 | Compressor operation stop due to discharge temperature protection control |
| E-425 | Phase reversal or phase failure (3Ø outdoor unit wiring, R-S-T-N), connection error on 3 phase input |
| E-428 | Compressor operation stop due abnormal compression ratio |
| E-438 | EVI (ESC) EEV leakage or internal leakage of intercooler or incorrect connector insertion of EVI (ESC) EEV |
| E-439 | Error due to refrigerant leakage |
| E-440 | Heating mode restriction due to high air temperature |
| E-441 | Cooling mode restriction due to low air temperature |
| E-442 | Refrigerant charging restriction in heating mode when air temperature is over 15 °C |
| E-443 | Operation prohibited due to low pressure |
| E-445 | CCH is deatched |
| E-446 | Error due to operation failure of Fan1 |

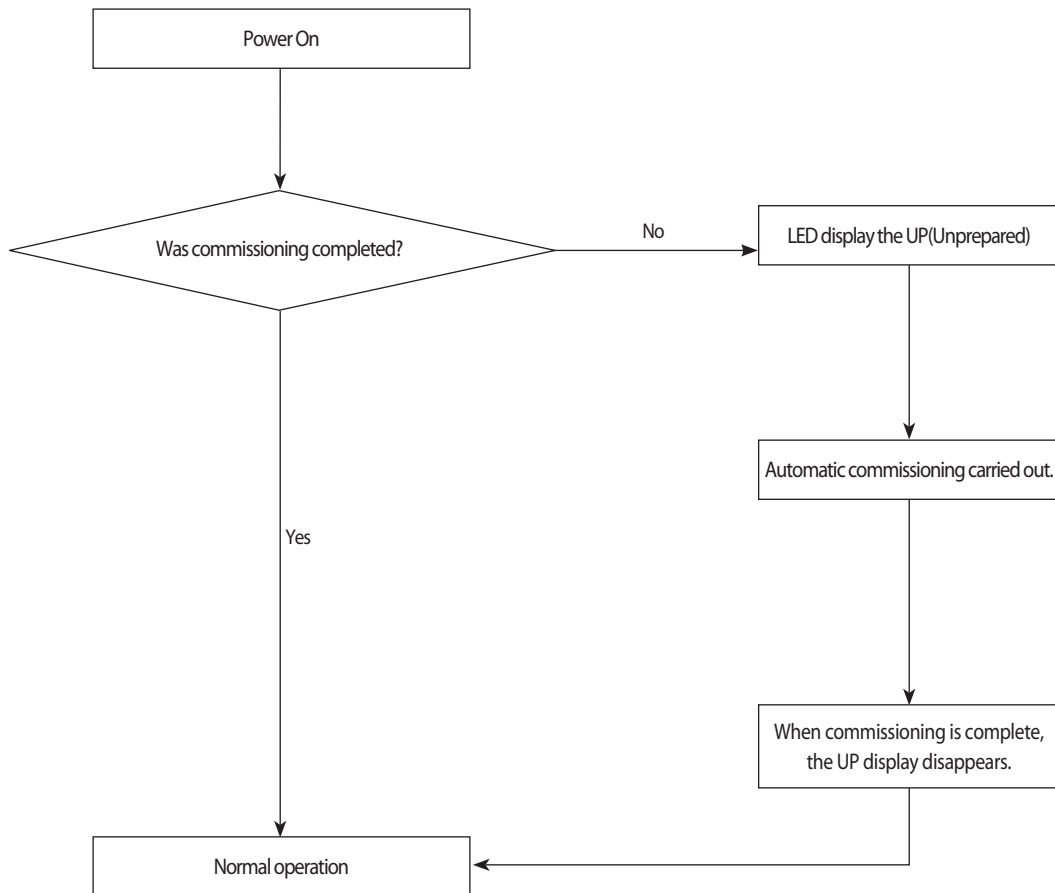
■ Diagnosis and Adjustment (Error Code)

► Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|--|
| E-447 | Motor wire of Fan1 is not connected |
| E-448 | Lock error on Fan1 |
| E-452 | Error due to ZPC detection circuit problem or power failure |
| E-453 | Error due to overheated motor of outdoor unit's Fan1 |
| E-455 | Error due to overheated IPM of Fan1 |
| E-461 | Error due to operation failure of inverter compressor 1 |
| E-462 | Compressor stop due to full current control or error due to low current on CT2 |
| E-464 | Error due to over-current of inverter compressor 1 |
| E-465 | V-limit error of inverter compressor 1 |
| E-466 | Error due to over voltage /low voltage of inveter PBA1 |
| E-467 | Error due to unconnected wire of compressor 1 |
| E-468 | Output current sensor error of inverter PBA1 |
| E-469 | DC voltage sensor error of inver PBA1 |
| E-474 | Heat sink temperature sensor error of inverter PBA1 |
| E-478 | Error due to overcurrent of Fan1 |
| E-485 | Error due to input current of inverter 1 |
| E-486 | Error due to over voltage/low voltage of Fan |
| E-487 | Hall IC error of Fan1 |
| E-489 | V-limit error on Fan1 of compressor |
| E-493 | Output current sensor error of Fan1 |
| E-496 | DC voltage sensor error of Fan1 |
| E-499 | Heat sink temperature sensor error of Fan1 |
| E-500 | Error due to overheat caused by contact failure on IPM of Inverter PBA1 |
| E-503 | Error due to alert the user to check if the service valve is closed |
| E-504 | Error due to self diagnosis of compressor operation |
| E-505 | Error due to self diagnosis of high pressure sensor |
| E-506 | Error due to self diagnosis of low pressure sensor |
| E-560 | Outdoor unit's option switch setting error (when inappropriate option switch is on) |
| E-563 | Error due to module installation of indoor unit with old version (Micom version needs to be checked) |
| E-573 | Error due to using single type outdoor unit in a module installation |
| E-702 | Error due to closed EEV of indoor unit (1st detection) |
| E-703 | Error due to opened EEV of indoor unit (1st detection) |
| UP | Trial operation incompleted (UnPrepared) - It will be cleared when trial operation was executed for 1 hour or when automatic inspection is completed |

4-4 Appropriate Measures for Different Symptom

4-4-1 Outdoor Unit Operation Flow



Commissioning if it is not running - UP is displayed

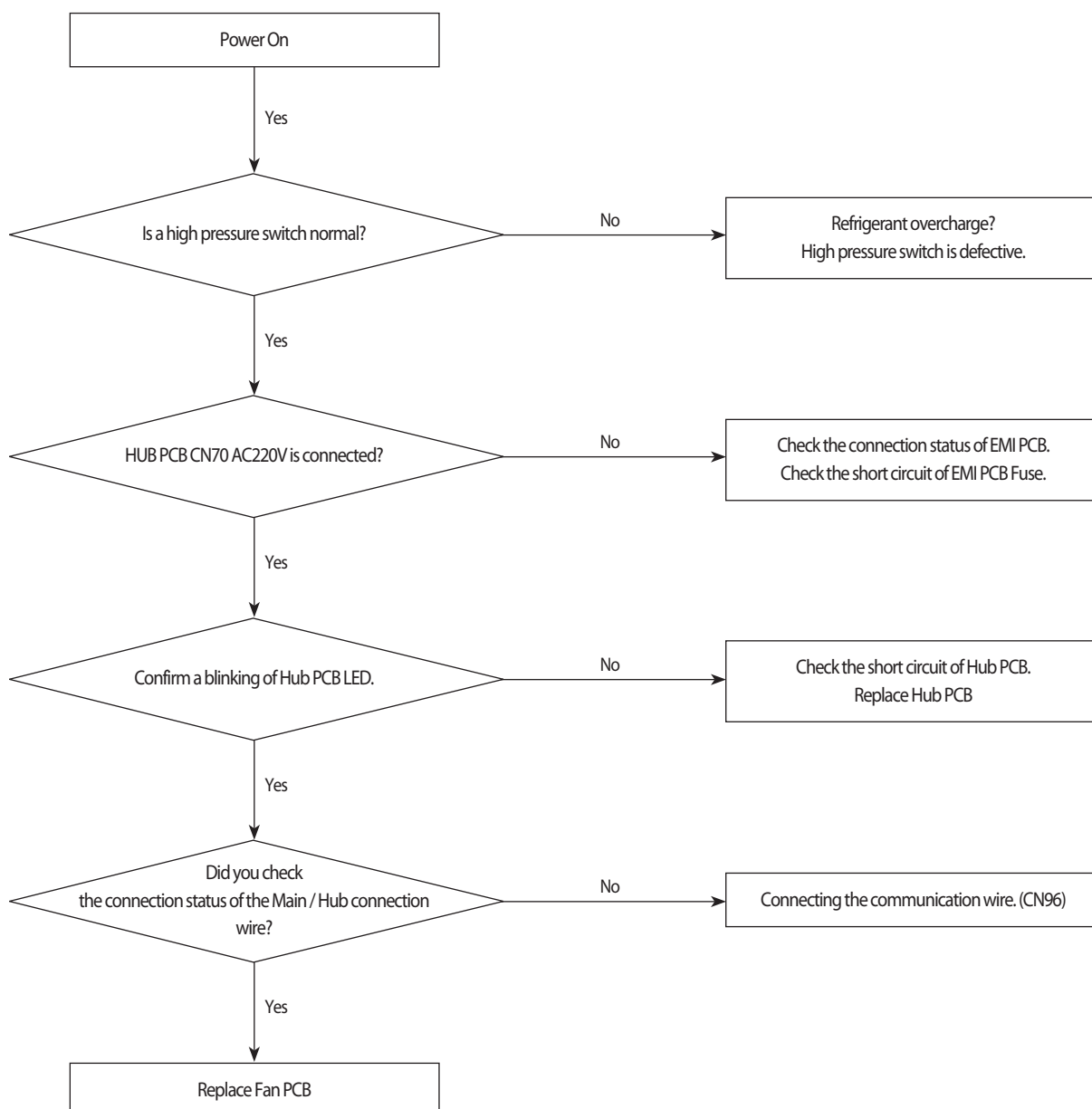
Prior to starting the air conditioning operation after the initial installation and automatic commissioning is carried out. This process, the stable operation to protect the system and verify the defect of the product.

1. Tracking is complete and after the initial installation, if you do not have a history of commissioning is completed, UP will be displayed.
2. Execute the automatic commissioning by Tact Switch.
3. UP display disappears after commissioning is complete, normal operation is possible.
4. Automatic commissioning is completed, if there is a history, normal operation execution immediately.

4-4-2 Main PCB has no power phenomenon

| | |
|----------------------|--|
| Outdoor unit display | Main PCB has no power phenomenon (7-seg does not blink) |
| Judgment Method | Hub PCB power and connection wire to detect. |
| Cause of problem | <ul style="list-style-type: none"> · HUB PCB connector wire defects and the connection is not. · Main PCB defective. · Hub PCB defective. · High pressure switch operation |

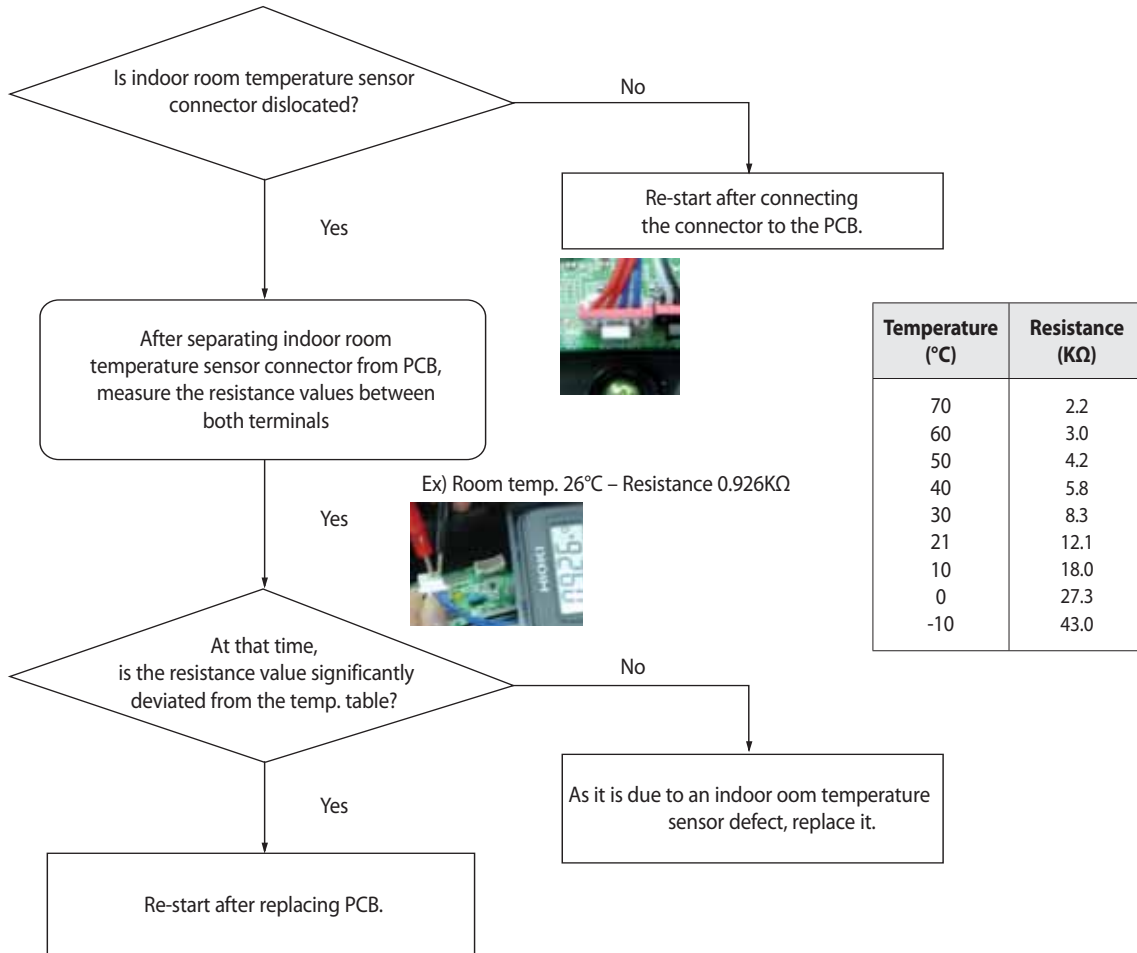
1. Cause of problem



4-4-3 Indoor Unit ROOM sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E 121 ↔ A ^{x x x} (x x x : The address of the error occurred indoor unit) |
| Indoor unit display | x(Operation) (Timer) x(Fan) x(Filter) x(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The room temperature sensor of No. XXX indoor unit has defective OPEN/SHORT |

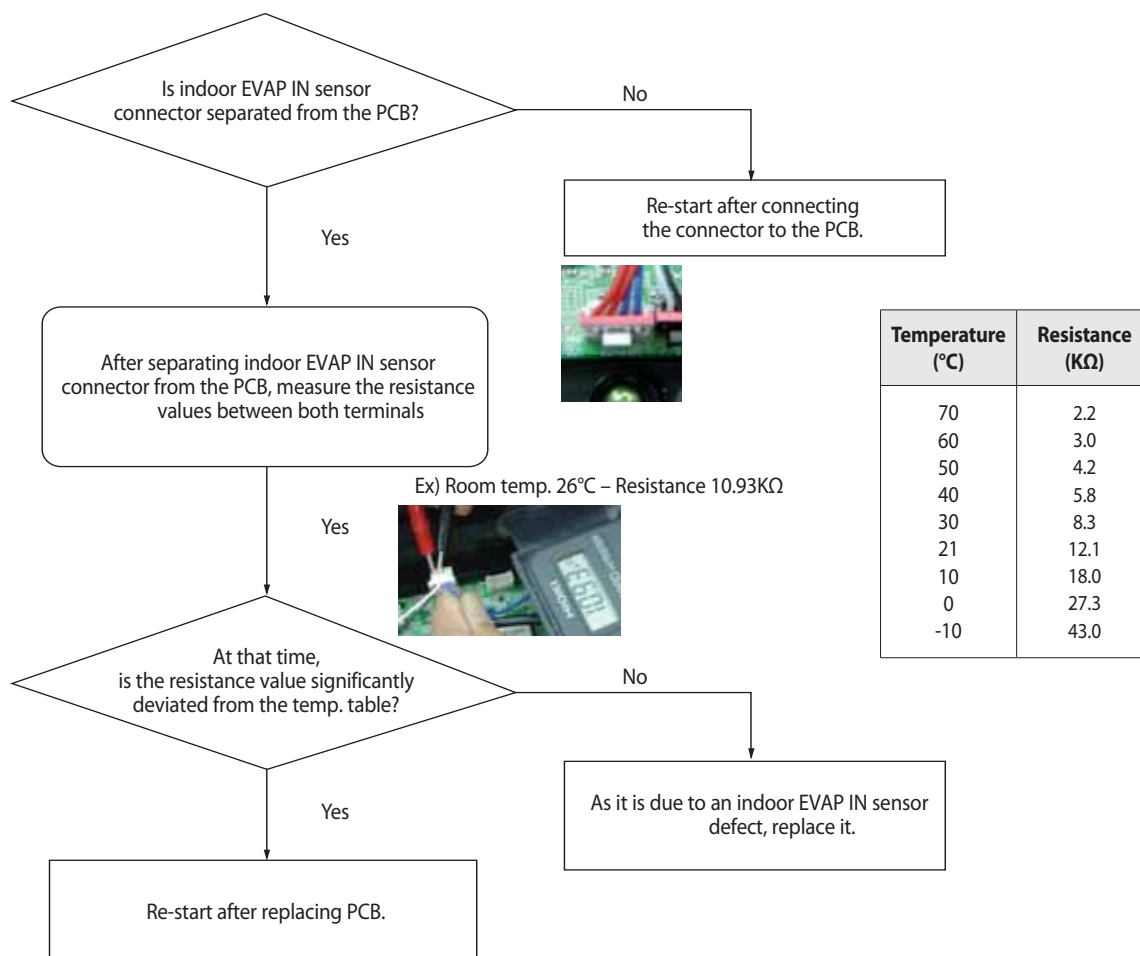
1. How to check



4-4-4 Indoor unit EVAP IN sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E 122 ↔ A ^{x x x} (x x x : The address of the error occurred indoor unit) |
| Indoor unit display | (Operation) (Timer) x(Fan) x(Filter) x(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The EVAP IN sensor of No. XXX indoor unit has defective OPEN/SHORT |

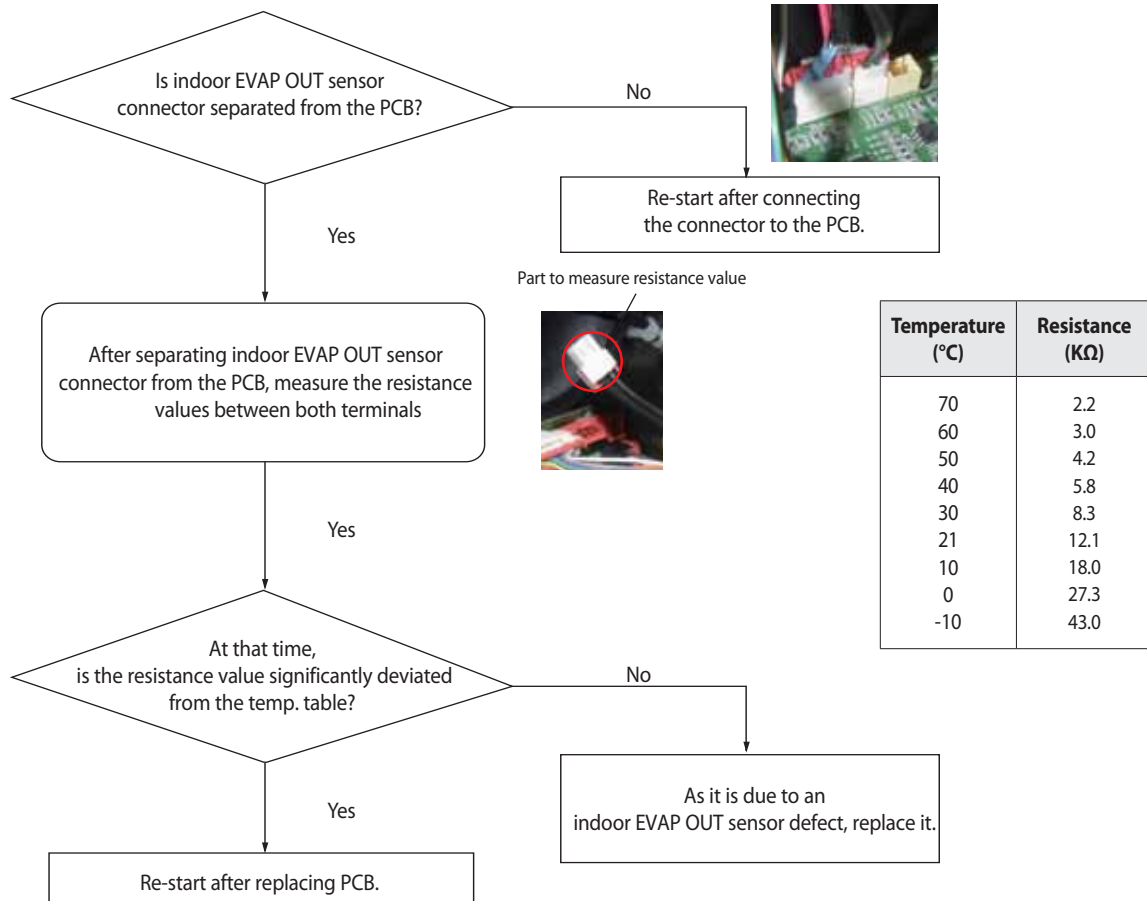
1. How to check



4-4-5 Indoor EVAP OUT sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E 123 ↔ A ^{x x x} (x x x : The address of the error occurred indoor unit) |
| Indoor unit display | (Operation) (Timer) x(Fan) x(Filter) x(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The EVAP out sensor of No. XXX indoor unit has defective OPEN/SHORT |

1. How to check



4-4-6 Indoor Heat Exchanger's EVAP IN sensor dislocation error

| | |
|----------------------|---|
| Outdoor unit display | E 128 ↔ A × × × (× × × : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Indoor heat exchanger's EVAP IN piping sensor has been dislocated |

1. How to diagnose

1) During Cooling Operation

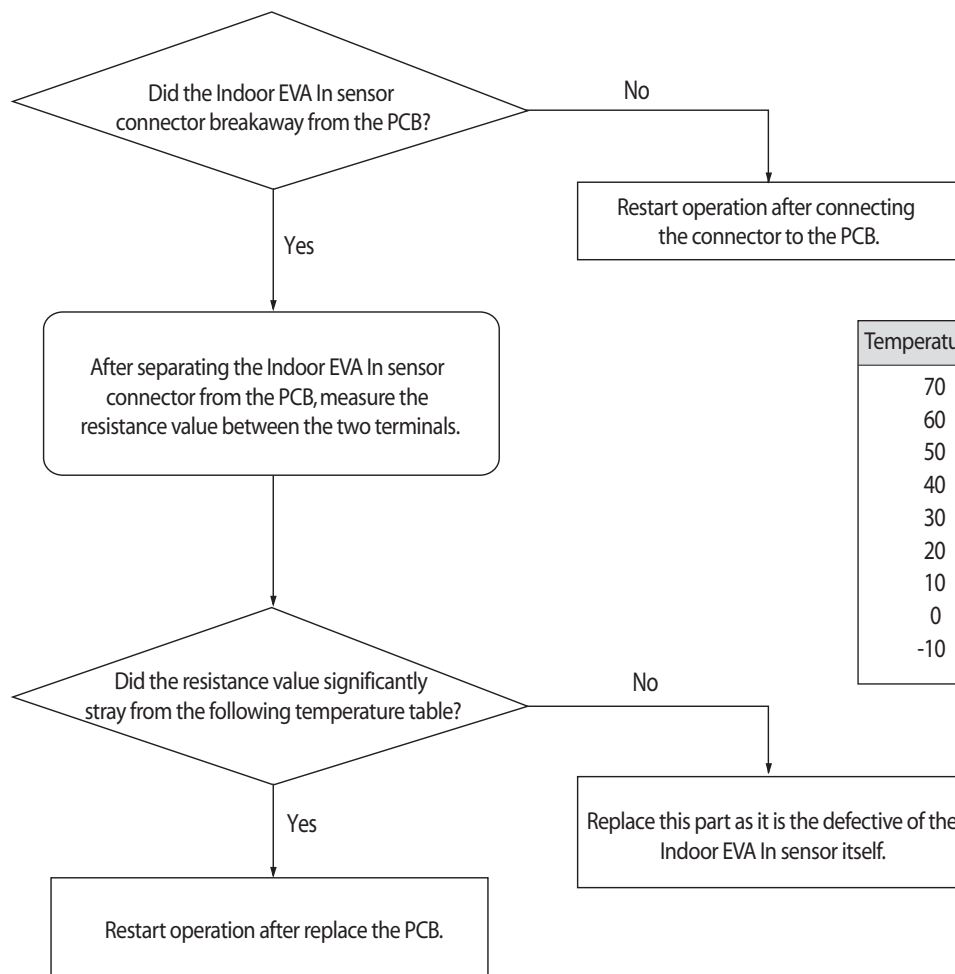
| | |
|---|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

* Hydro Unit : Before and after the Compressor operation, EVA Out temperature difference is less than 3°C.

2) During Heating operation

| | |
|---|---|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.5kg/cm ² | OK |
| Tcond, out - Tair, out ≥ 3°C | OK |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

2. How to check



| Temperature() | Resistance(K) |
|----------------|----------------|
| 70 | 2.2 |
| 60 | 3.0 |
| 50 | 4.2 |
| 40 | 5.8 |
| 30 | 8.3 |
| 20 | 12.1 |
| 10 | 18.0 |
| 0 | 27.3 |
| -10 | 43.0 |

4-4-7 Indoor Heat Exchanger's EVA OUT sensor dislocation error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E 129 ↔ A x x x (x x x : The address of the error occurred indoor unit) |
| Indoor unit display | x(Operation) (Timer) (Fan) (Filter) x(Defrost) |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Breakaway of Indoor Heat Exchanger EVA Out sensor |

1. How to diagnose

1) During Cooling Operation

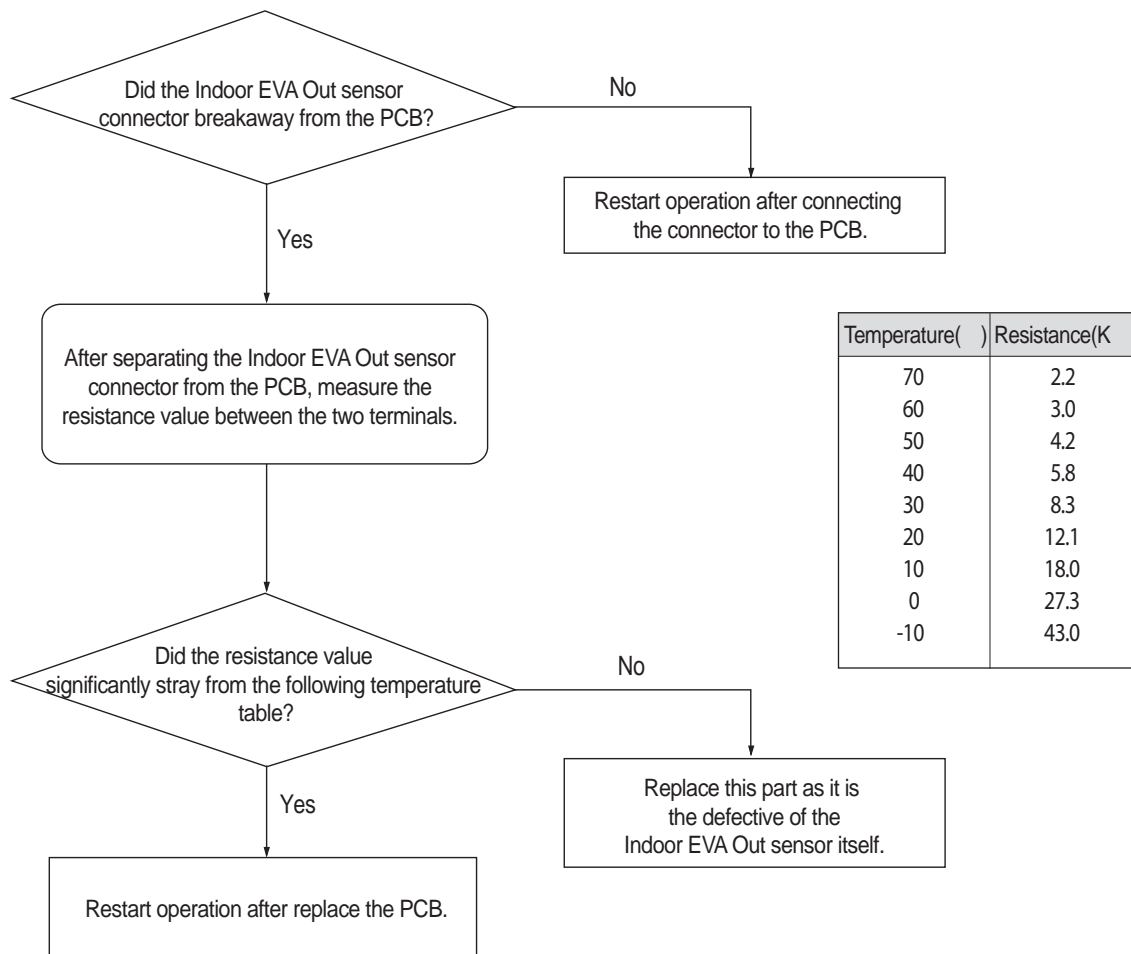
| | |
|---|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

* Hydro Unit : Before and after the Compressor operation, EVA Out temperature difference is less than 3°C.

2) During Heating operation

| | |
|---|---|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.5kg/cm ² | OK |
| Tcond, out - Tair, out ≥ 3°C | OK |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

2. How to check



4-4-8 Simultaneous Indoor Heat Exchanger's EVA IN, OUT sensor dislocation error (Open/Short)

1. How to diagnose

1) During Cooling Operation

| | |
|--|--|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Simultaneous indoor heat exchanger's EVA IN, OUT sensor dislocation error |

2) During Heating operation

| | |
|--|--|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.2kg/cm ² | OK |
| Teva, out - Tair, out ≥ 3°C | NO |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Simultaneous Indoor heat exchanger's EVA IN, OUT sensor dislocation error |

2. How to check

Check if an Indoor heat exchanger's EVA IN, OUT sensor has been dislocated then is correct after assembling.

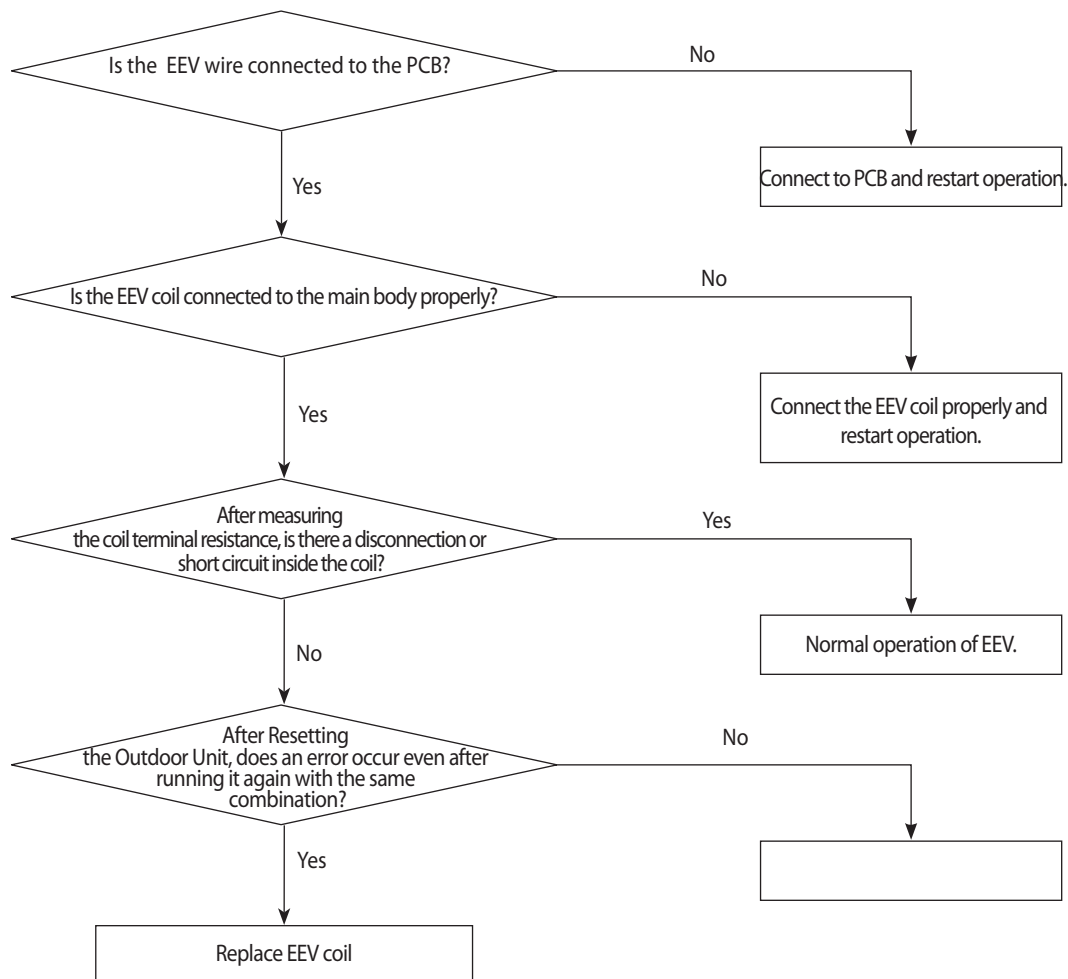
4-4-9 Electronic Expansion Valve opening malfunction (2nd stage) - E 135

| | |
|-----------------------------|---|
| Outdoor unit display | 1st detection : P703 (Outdoor Unit display only) 2nd detection : E 135 ↔ A × × × (× × × : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ×(Timer) (Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Faulty Indoor Unit EEV action. (Refrigerant will leak into the stopped Indoor Unit.) |

1. How to diagnose

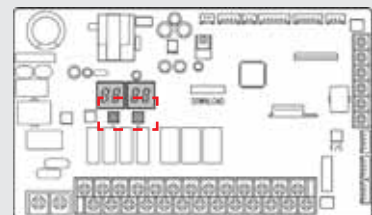
- During Cooling operation, the temperature of the inlet or outlet of stopped Heat Exchanger is kept lower than 0°C for more than 20 minutes without cessation.
- Hydro Unit : During the defrost operation, detection from stop-side Indoor Unit. (Temperature of the inlet of Heat Exchanger is kept lower than 0°C for more than 20 minutes without cessation.)

2. How to check



* How to turn off the Hydro Unit E151

- Hydro Unit PCB k1, k2 switch : At the same time push for more than 4 seconds.
- After resolving the cause of the error, restart operation.
(Excessive reset operation, can cause damage to the Heat Exchanger.)



4-4-10 Breakdown of EEV (2nd)

1. How to diagnose

Detect only on cooling operation. (No detection during heating operation.)

During cooling operation, the temperature of the inlet or outlet ducts of heat exchanger is kept below 0°C for more than 20 minutes without cessation

2. How to check

- 1) Check if the wire of electronic expansion valve is correctly connected to the PCB of indoor unit.
- 2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.
- 3) Check if there is any rust on the surface of the electronic expansion valve with naked eyes then check the resistance between each terminal to find any wire breaking or short circuit.
- 4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.
 - In case of closure problem, operate the indoor unit in which the error has occurred.
 - In case of opening problem, please do not operate the indoor unit in which the error has occurred.
- 5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.
 - As an electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please check the above items before replacement.

4-4-11 Problem with EEV closure (2nd)

1. How to diagnose

1) During Cooling operation(Each of the below conditions have to be met for at least 20 minutes.)

| | |
|--|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Electrically operated valve closure breakdown |

2) During heating operation (must satisfy all conditions below)

- When more than 2 indoor units are on Thermo On heating operation.
- When average high pressure is over 18kg/cm²
- 5 minutes after finishing Safety Start
- Keep Indoor units' T(Eva_In)<T(Room) +3°C and T(Eva_Out)<T(Room) +3°C condition for more than 5 minutes

2. How to check

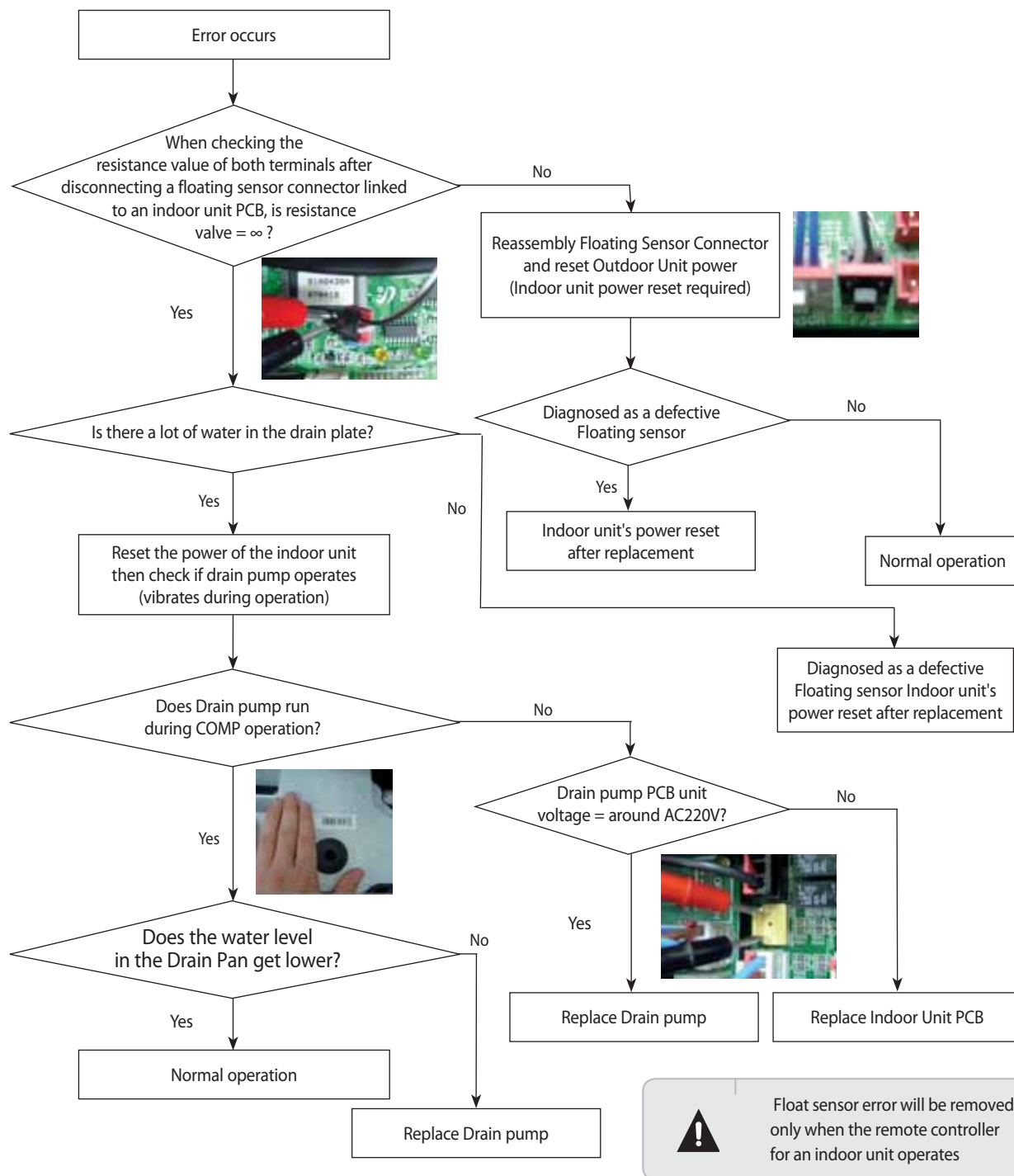
- 1) Check if the wire of electronic expansion valve is correctly connected to the PCB of indoor unit.
- 2) Check if the coil of electronic expansion valve is correctly plugged into the main body.
- 3) Check if there is any rust on the surface of the electronic expansion valve with naked eye then check the resistance between each terminal to find any wire breaking or short circuit.
- 4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.
 - In case of closure problem, operate the indoor unit in which the error has occurred.
 - In case of opening problem, please do not operate the indoor unit in which the error has occurred.
- 5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.
 - As electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please check the above items before replacement.

4-4-12 E 153 : Detection of Floating Switch of Indoor Unit's Drain Pump

| | |
|----------------------|---|
| Outdoor unit display | E 153 ↔ A × × × (× × × : The address of the error occurred indoor unit) |
| Indoor unit display | × (Operation) × (Timer) (Fan) (Filter) × (Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Due to the breakdown of a drain pump of the indoor unit, an increase in the water level in the drainage plate or defective detection sensor |

* To release E153 error, you must reset the power of the indoor unit.

1. How to check



4-4-13 The operational error of Indoor Unit's Fan Motor

| | |
|----------------------|---|
| Outdoor unit display | <i>E 154</i> ↔ <i>A</i> × × × (× × × : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ×(Timer) (Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The operational error of the fan motor of No. XXX indoor unit |

1. How to diagnose
 - 1) Occurs when RPM valve fails to feedback to MICOM at a PID control-type fan motor
2. How to check
 - 1) Check HALL IC connector that carries out feedback of RPM value.
 - 2) If a fan motor operation capacitor is a PCB separating type, check the connection terminal.
 - 3) Check the operational status of the fan motor.
 - 4) If there is no problem with the above checkup items, replace the PCB.

4-4-14 Mixed operation Error (Only applicable to Heat Pump Model/Not to HR model)

Mixed operation error is applicable only to Heat Pump Model and not to HR model.

Mixed operation error is not due to a product problem but is displayed when the operational mode input in an indoor unit is different from current operational status (other indoor unit's operational mode).

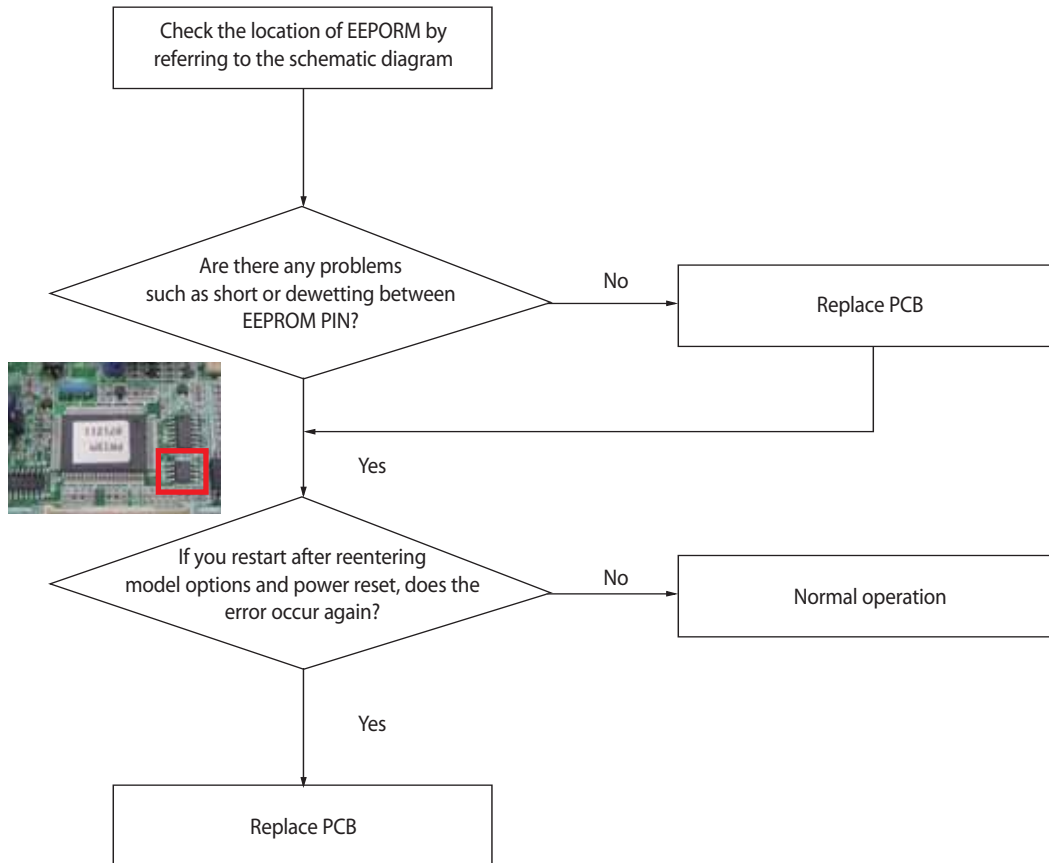
Check the operational mode of outdoor unit or other indoor unit then re-enter or stop the operational mode of the relevant unit.

If it is necessary to apply a different operational mode to an indoor unit from others, please stop other indoor units then operate the indoor unit.

4-4-15 EEPROM error

| | |
|----------------------|--|
| Outdoor unit display | <i>E 162</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Communication failure between EEPROM and MICOM |
| Cause of problem | • PCB replacement due to defective EEPROM |

1. How to check



4-4-16 Option error of the Remote Controller for an Indoor Unit

| | |
|----------------------|---|
| Outdoor unit display | <i>E 163</i> |
| Indoor unit display | (Operation) (Timer) (Fan) (Filter) (Defrost) |
| Criteria | • Display number type of indoor unit – E163 occurs, Lamp type – all lamps flash |
| Cause of problem | • Missed or erroneous input of remote controller options |

Check relevant remote controller options for each model then enter correct options

4-4-17 Error due to confused use of Fahrenheit and Celsius

| | |
|----------------------|--|
| Outdoor unit display | <i>E 170</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Display number type of indoor unit – E170 occurs, Lamp type – all lamps flash • Occurs in an indoor unit with Celsius setting |
| Cause of problem | • Missed input of remote controller options |

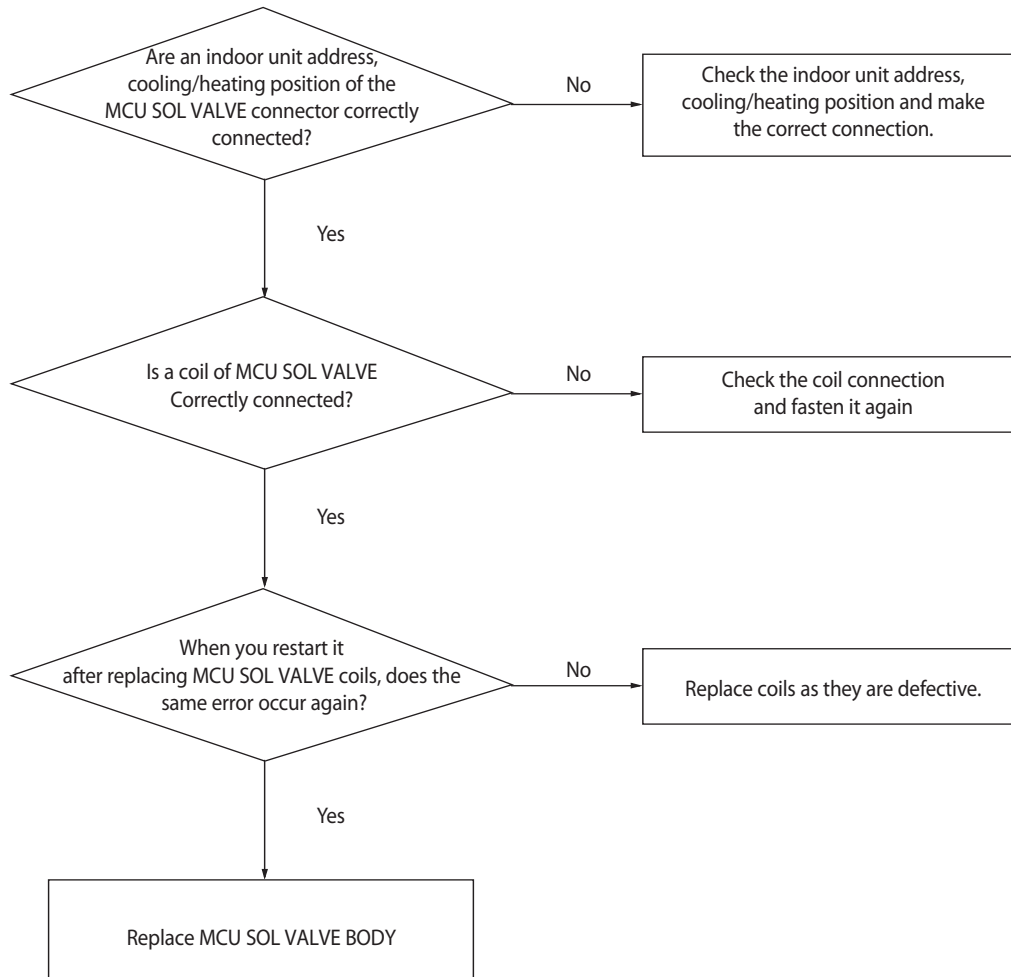
Check relevant remote controller options for each model then enter correct options

As this happens only in a Celsius setting model, it is necessary to reenter option codes for error-free models in a region where Celsius is used.

4-4-18 Simultaneous opening of Cooling/heating MCU SOL Valves 1st/2nd

During the first detection, as the system restarts after making an automatic stop to check a problem with the system
During the second detection, please refer to the following check-up methods.

1. How to check



4-4-19 Error due to incorrect Indoor Unit Power/Communication Cable Connection

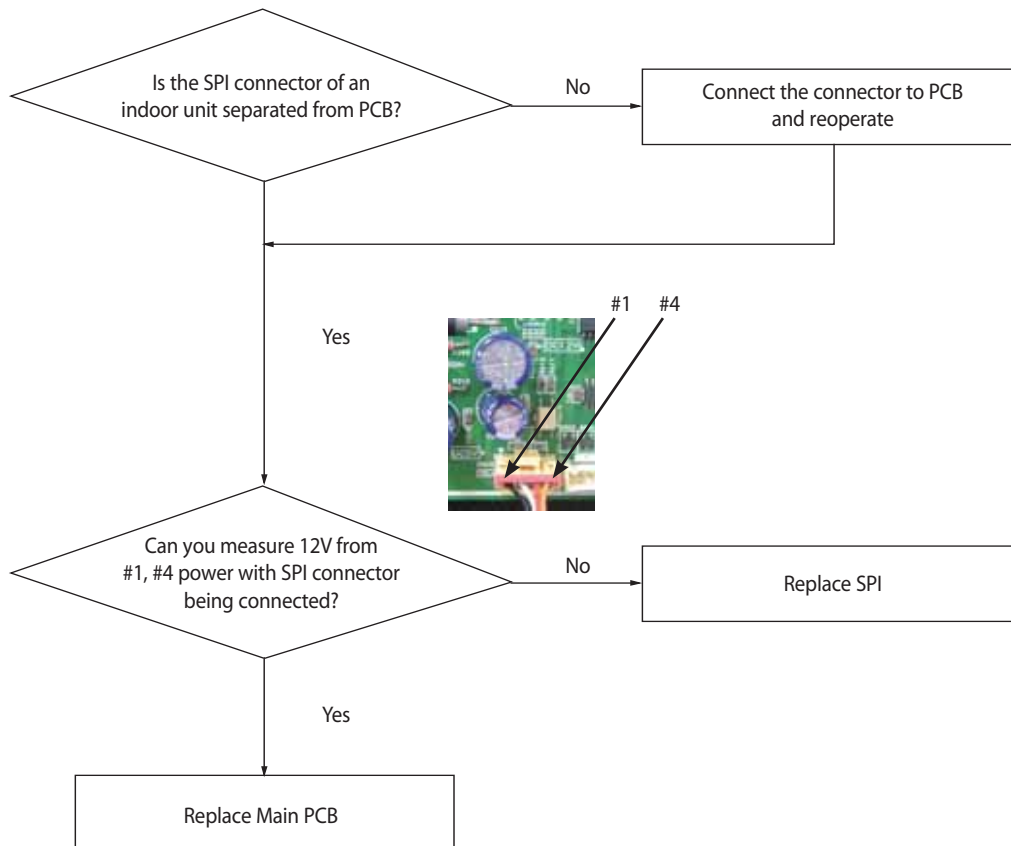
| | |
|----------------------|---|
| Outdoor unit display | <i>E 185</i> |
| Indoor unit display | <i>E 185</i> (wall mount type) |
| Criteria | • Check for Power input(220V) for the Terminal block(F1/F2). |
| Cause of problem | • Apply power (220V) to the terminal of the indoor unit communication block (F1/F2) |

Check for disconnected line after turning off the Main power.

4-4-20 SPI Feedback Error

| | |
|----------------------|--|
| Outdoor unit display | E 186 |
| Indoor unit display | (Operation) (Timer) ×(Fan) (Filter) ×(Defrost) |
| Criteria | • Check if the output of SPI Feedback is 12V |
| Cause of problem | • SPI defect |

1. How to check



4-4-21 Outdoor Unit Pipe Inspection Error

| | |
|----------------------|---|
| Outdoor Unit Display | <i>E 190</i> : No change of EVA IN or wrong EVAN IN change during pipe inspection. <i>E 191</i> : No change of EVA OUT or wrong EVA OUT change during pipe inspection. |
| Indoor Unit Display | - |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • The liquid pipe/gas pipe of the indoor unit is not correctly connected to the port set in MCU. |

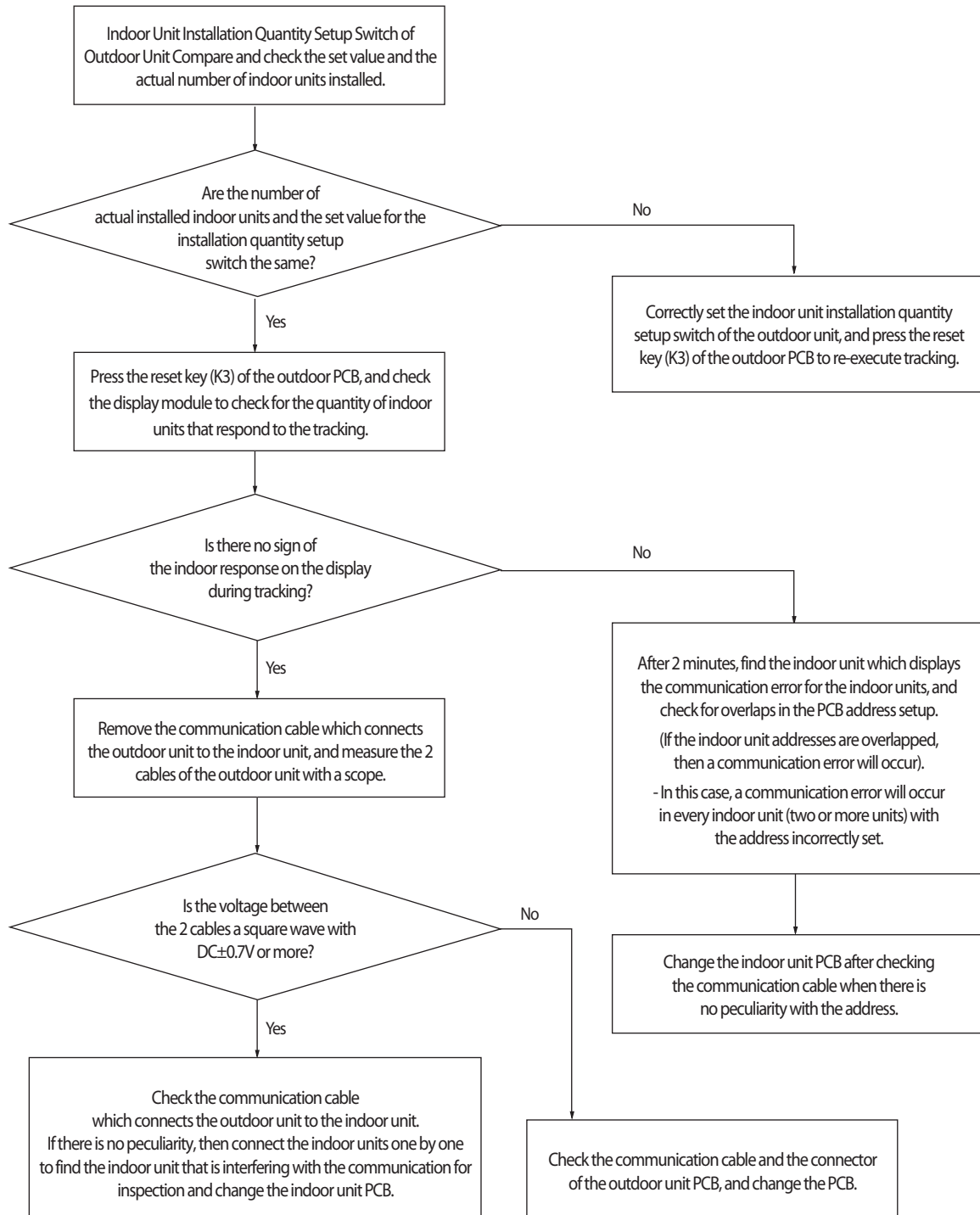
1. Judgment Method

- Check if the indoor address settings are the same for the address of the indoor units connected to each port of the MCU and the address of the indoor units of the relevant MCU ports.
- Check if the indoor unit usage setup switch is turned on for the MCU port connected to the indoor unit.

4-4-22 Communication Error between Indoor and Outdoor Units during Tracking

| | |
|----------------------|---|
| Outdoor unit display | E201 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Communication error between indoor and outdoor units. |
| Cause of problem | · Refer to the judgment method below. |

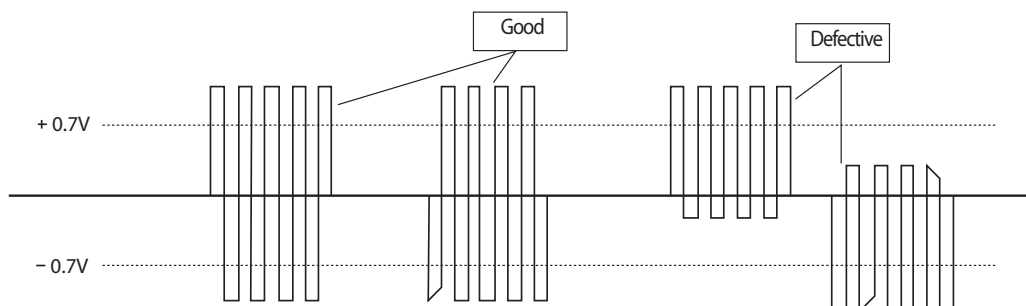
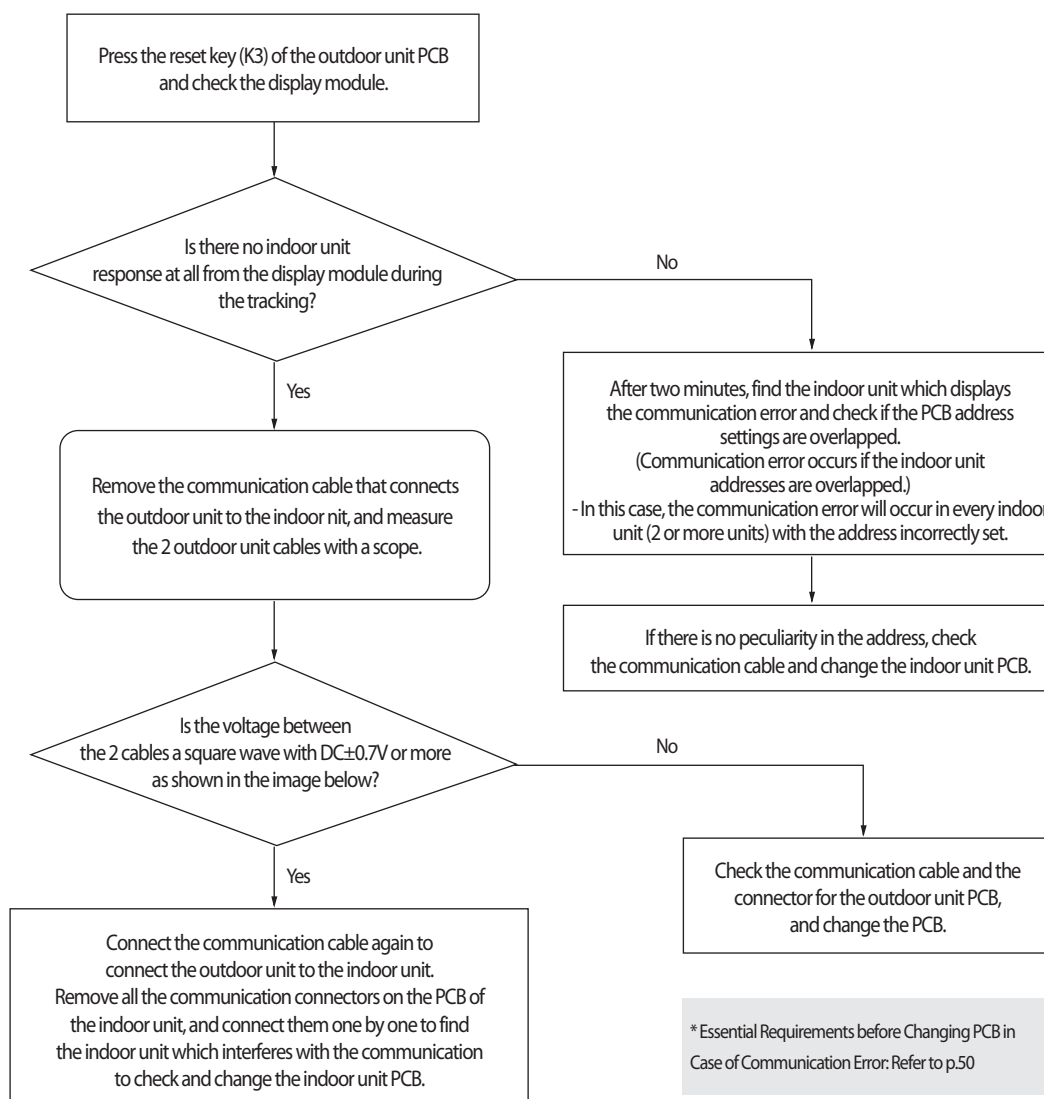
1. Cause of problem



4-4-23 Communication Error between Indoor and Outdoor Units after Tracking

| | |
|----------------------|---|
| Outdoor unit display | E202 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Outdoor unit is unable to communicate for two minutes during operation. (no reception of relocation) |
| Cause of problem | · Communication error between indoor and outdoor units and setup error of indoor unit installation quantity setup switch. |

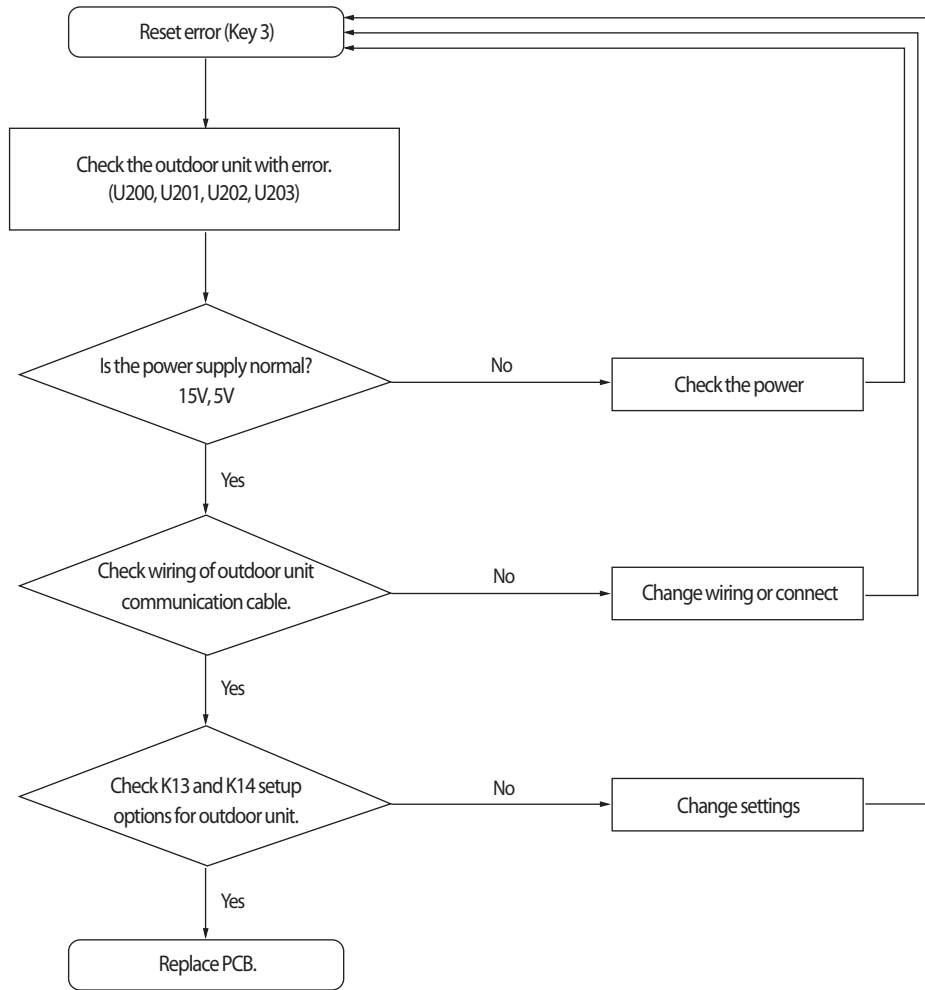
1. Cause of problem



4-4-24 Communication error between main and sub Unit of outdoor unit or between outdoor units

| | |
|----------------------|--|
| Outdoor unit display | E203 |
| Indoorunit display | - |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Communication error between outdoor units. |

1. Cause of problem

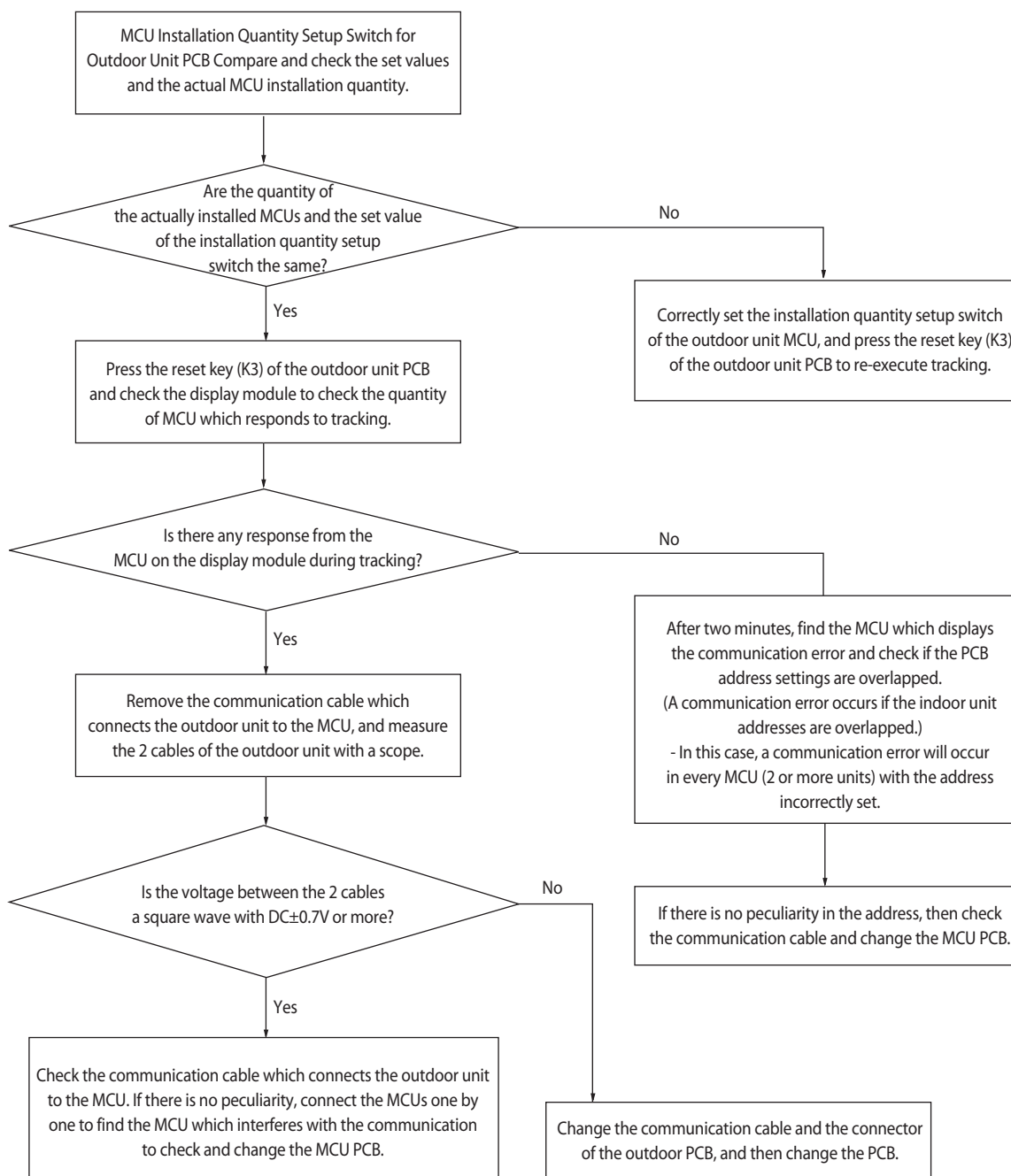


Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.59

4-4-25 Communication Error between MCU and Outdoor Unit

| | |
|----------------------|--|
| Outdoor Unit Display | E204 |
| Indoor Unit Display | - |
| Judgment Method | • Communication Error between MCU and outdoor unit |
| Special Cause | • Reference below |

1. Inspection Method

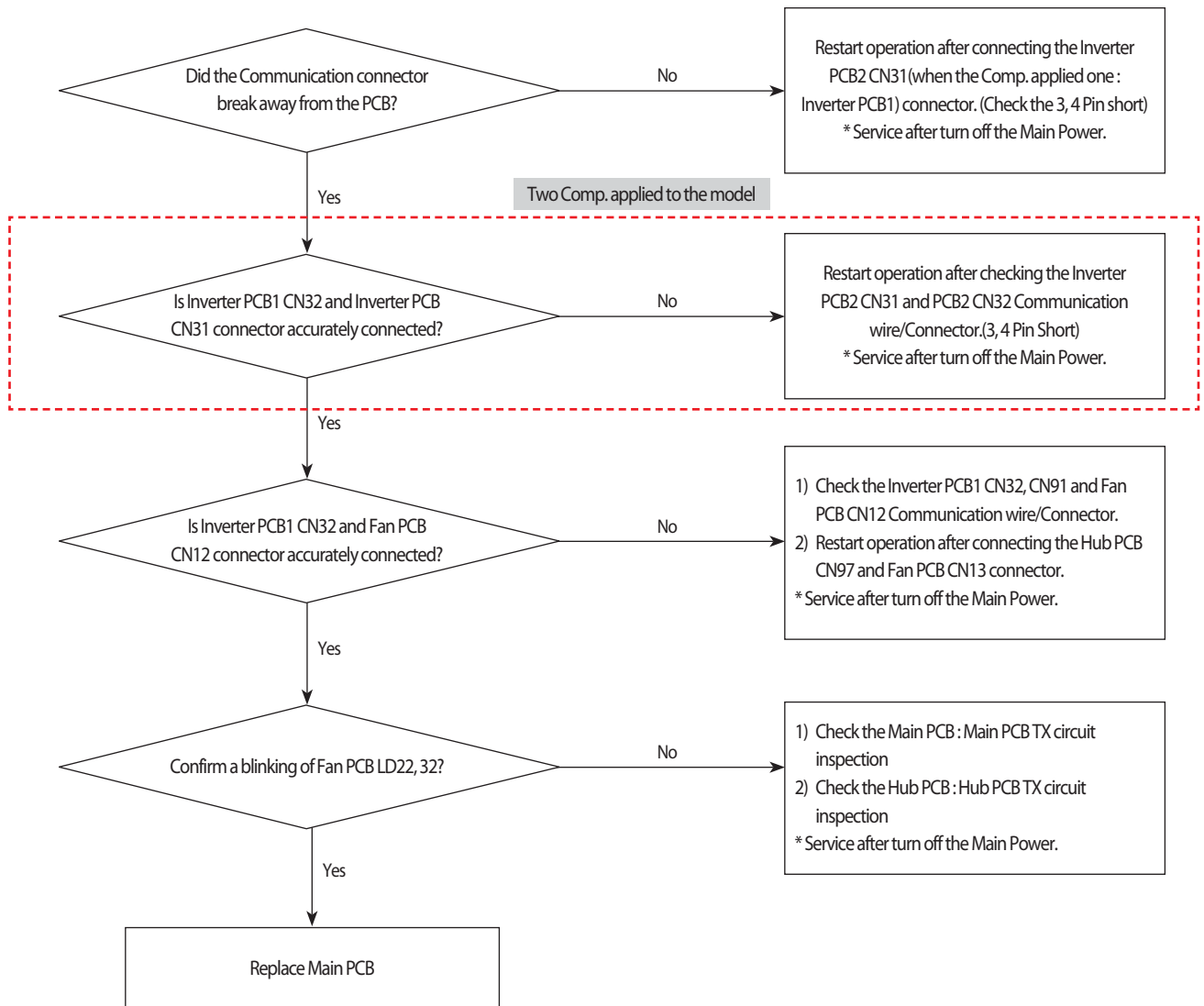


※ Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80

4-4-26 Internal Communication error of the Outdoor Unit C-Box

| | |
|----------------------|--|
| Outdoor unit display | E205 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Communication error between the C-Box PCB |
| Cause of problem | · Communication wire inside the C-Box is unconnected · Main PCB defective |

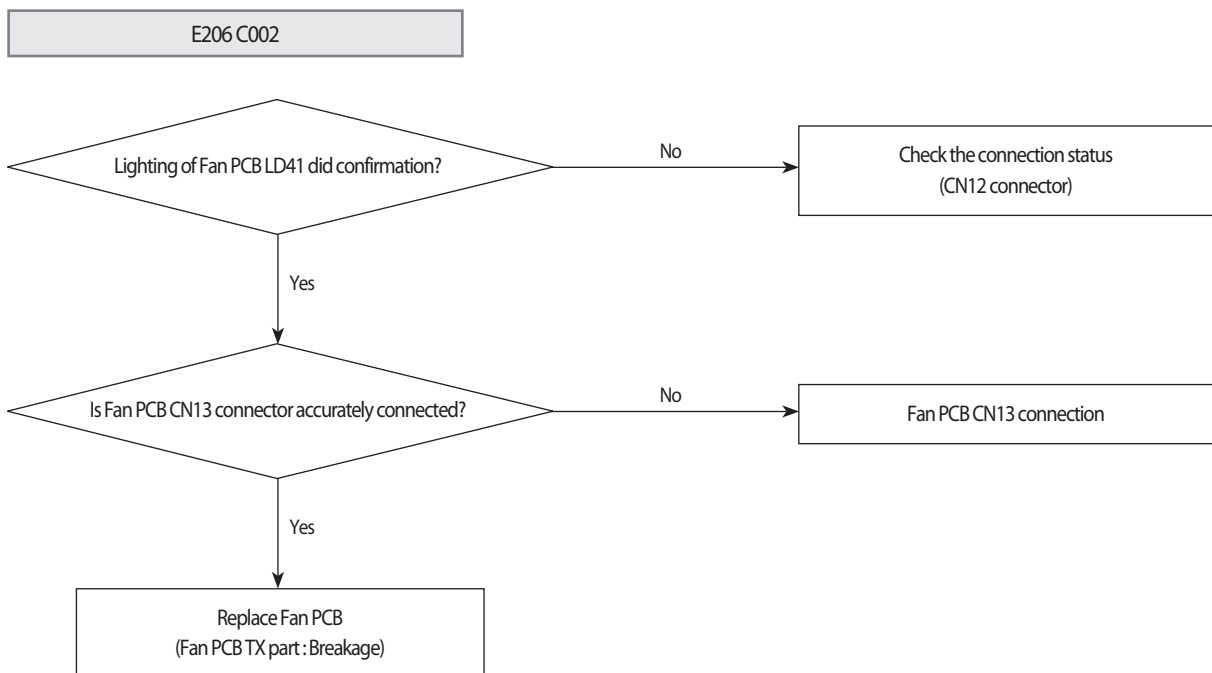
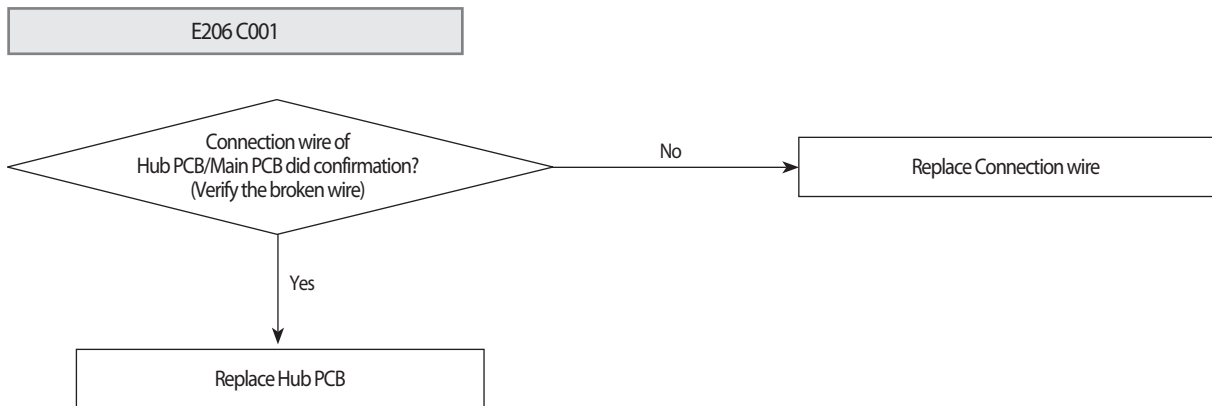
1. Cause of problem



4-4-27 Internal PCB Communication error of the Outdoor Unit C-Box

| | |
|----------------------|---|
| Outdoor unit display | E206 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · PCB does not respond to the invoked Main PCB |
| Cause of problem | · C-Box internal Inverter PCB, Fan PCB, Hub PCB defective |

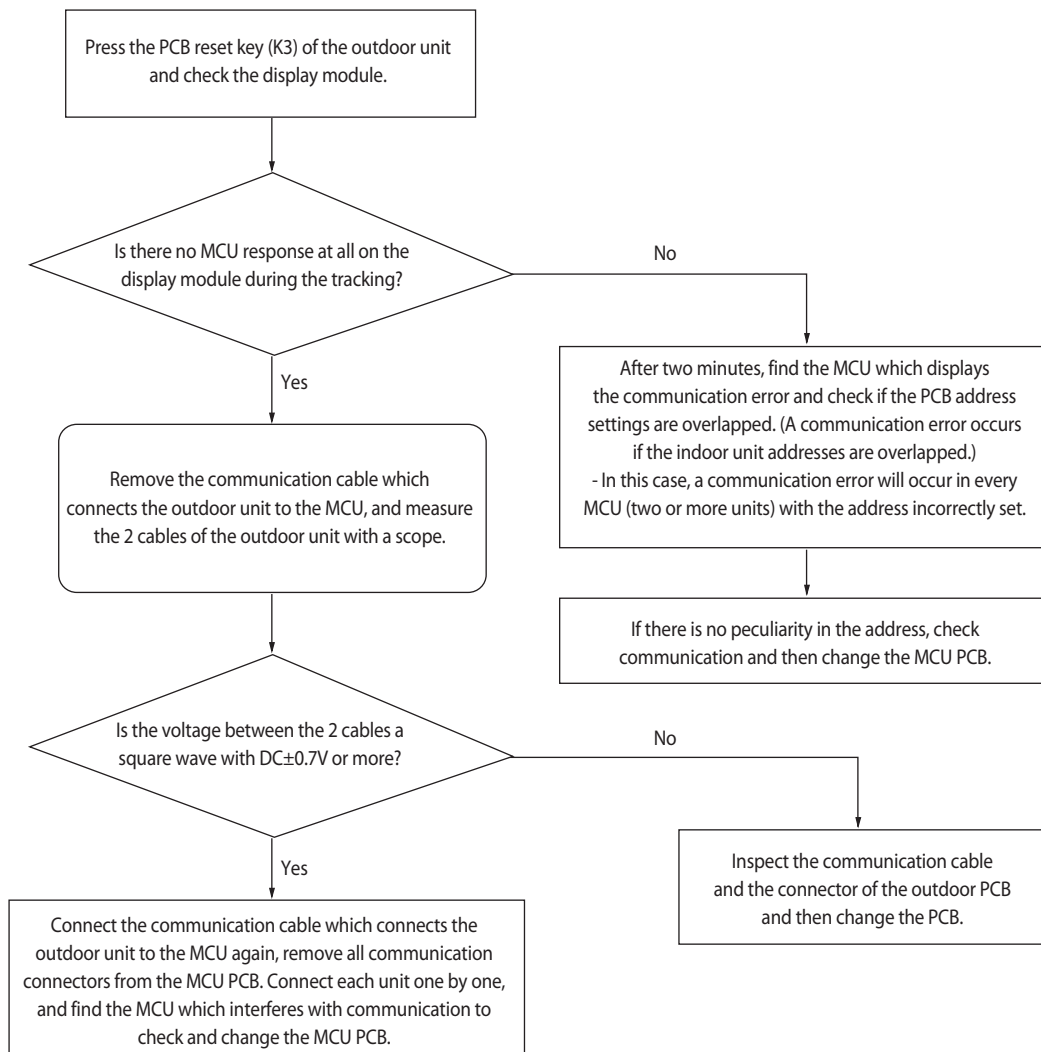
1. Cause of problem



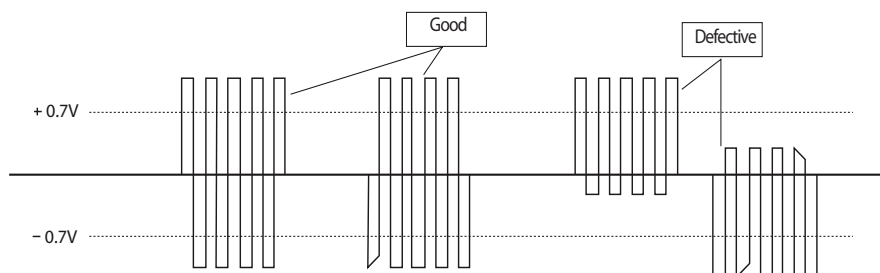
4-4-28 Communication Error between MCU and Outdoor Unit after Tracking is Completed

| | |
|----------------------|--|
| Outdoor Unit Display | E2 10 |
| Indoor Unit Display | - |
| Judgment Method | • Outdoor unit is unable to communicate for two or more minutes during operation (no reception of relocation) |
| Special Cause | • Communication error between indoor and outdoor units and setup error of indoor unit installation quantity setup switch |

1. Inspection Method



※ Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80

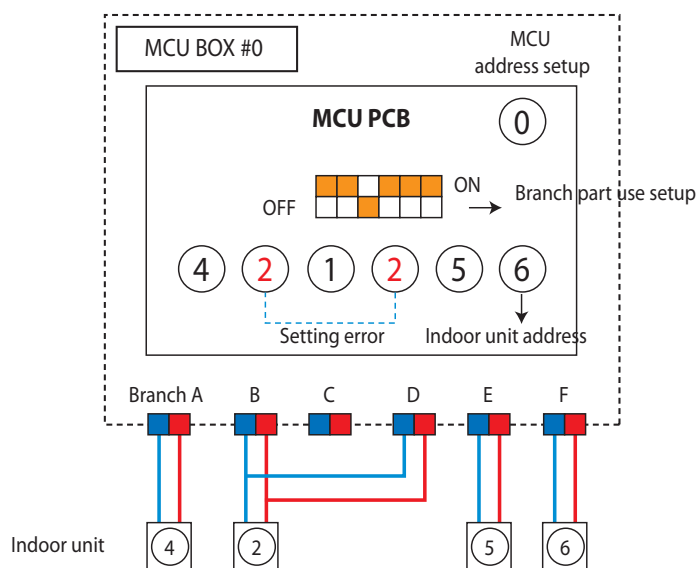


4-4-29 MCU branch part setup error – inconsecutive connection with the use of 2 branch parts

| | |
|----------------------|---|
| Outdoor unit display | E211 |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • When 2 branch parts are used for one indoor unit without connecting them consecutively. |
| Cause of problem | • Branch part assembly error |

1. How to check

Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.

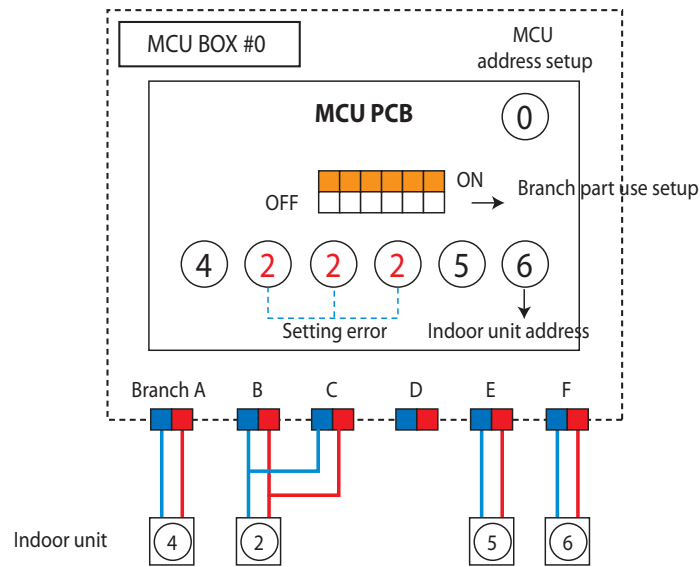


4-4-30 MCU branch part setup error – Repeated setup for the same address over 3 times

| | |
|----------------------|---|
| Outdoor unit display | E2 12 |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • The same indoor unit address was setup more than 3 times in MCU |
| Cause of problem | • MCU indoor unit address setting error |

1. How to check

Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.

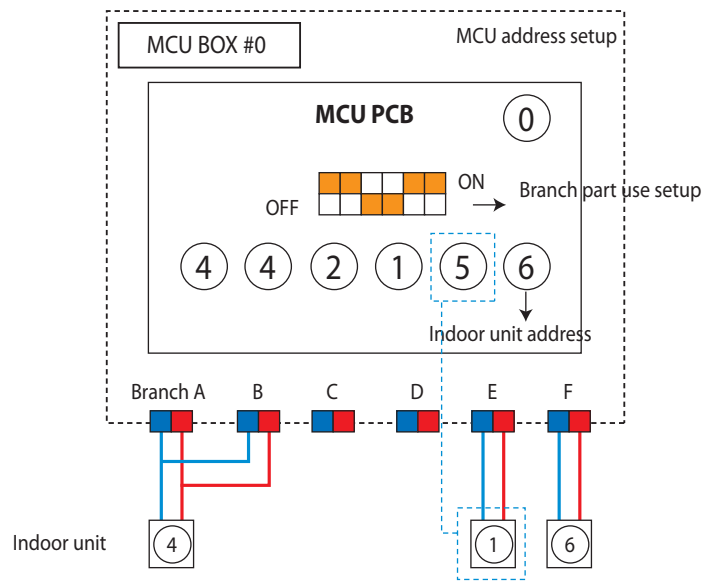


4-4-31 MCU branch part setup error – non-installed address setup

| | |
|----------------------|--|
| Outdoor unit display | <i>E2 13</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • If there is an indoor unit that is not installed among MCU registered indoor units |
| Cause of problem | • Indoor unit, with the assigned address on MCU, not installed. |

1. How to check

Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.



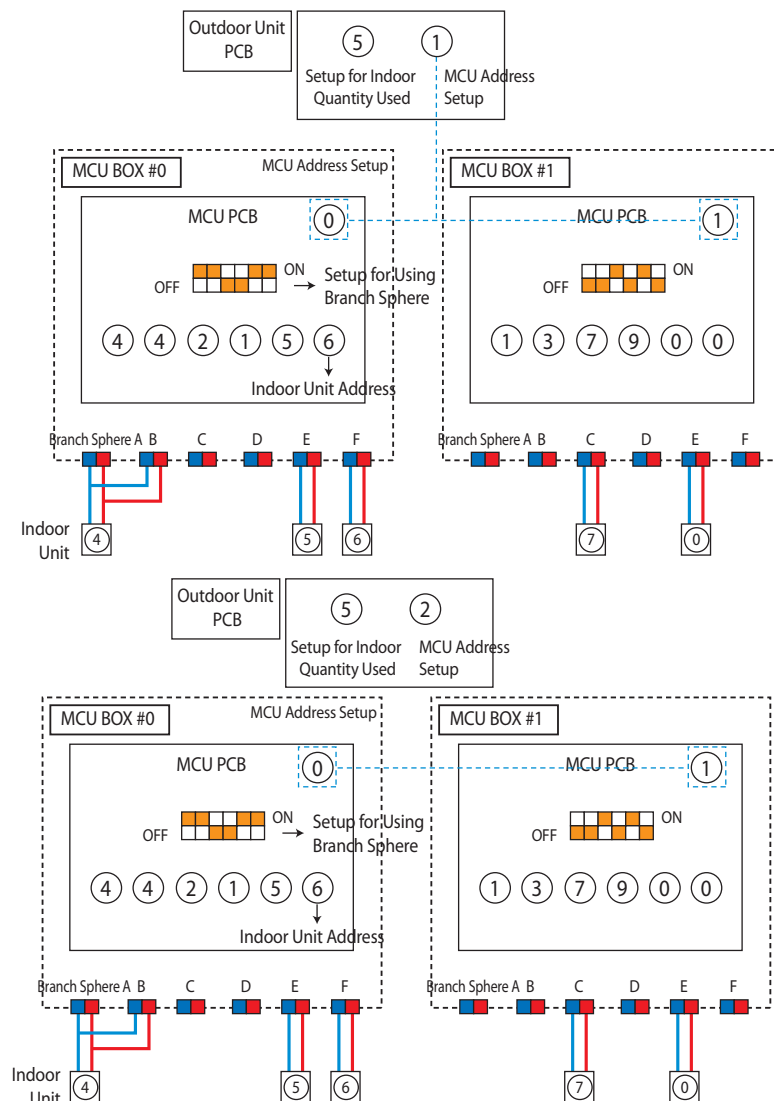
4-4-32 Setup Error for MCU Branch part – Setup Error for MCU Quantity Used

| | |
|----------------------|---|
| Outdoor Unit Display | E2 14 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> Occurs when the quantity of MCU is incorrectly set by the outdoor unit. Occurs when same addresses are found when two or more MCU are connected. |
| Special Cause | <ul style="list-style-type: none"> Outdoor unit MCU setup and same address errors when connecting two or more MCUs . |

1. Inspection Method : Re-check the MCU quantity setup switch from the outdoor unit.

Check for overlaps in each MCU address setup switch.

To use, reset by pressing the K3 button of the outdoor unit after the reset is completed, or reset after turning off the power and then turn it on again.



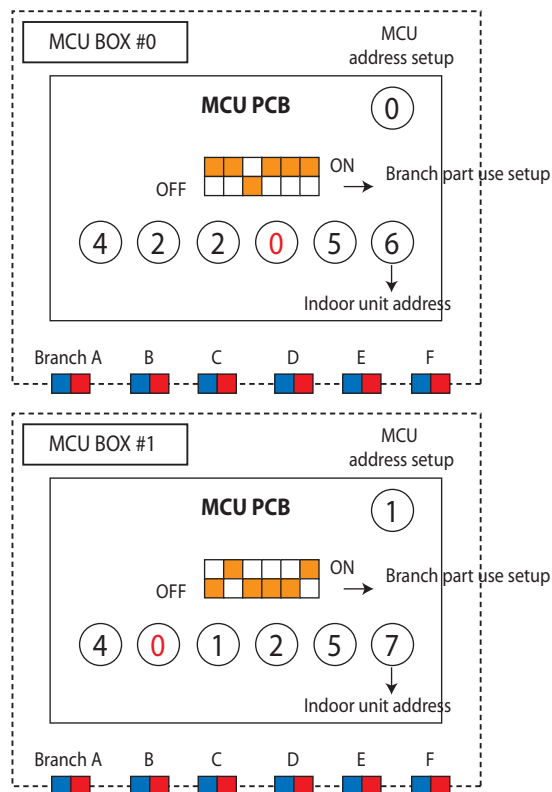
4-4-33 MCU branch part setup error – Overlapping Indoor unit Address setup

| | |
|----------------------|--|
| Outdoor unit display | E2 15 |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Occurs when an indoor unit address setup switch in MCU has been overlapped |
| Cause of problem | • Repeated indoor unit address |

1. How to check

Check the setup switch for the number of indoor units in MCU

After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.

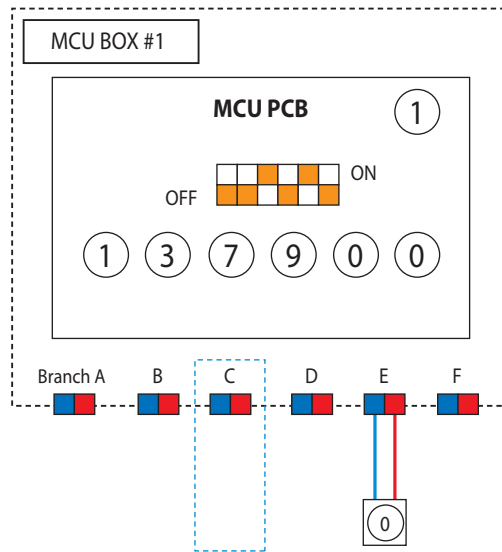


4-4-34 MCU branch part setup error – Set as being used without connection to an Indoor unit

| | |
|----------------------|--|
| Outdoor unit display | <i>E2 16</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Occurs when MCU PIPE is set as being used, yet not connected to an indoor unit |
| Cause of problem | • Pipe is not installed to the indoor unit with assigned address on MCU |

1. How to check

Adjust the Dip switch that sets up the use of MCU branch part to 'Not-Used'. After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.

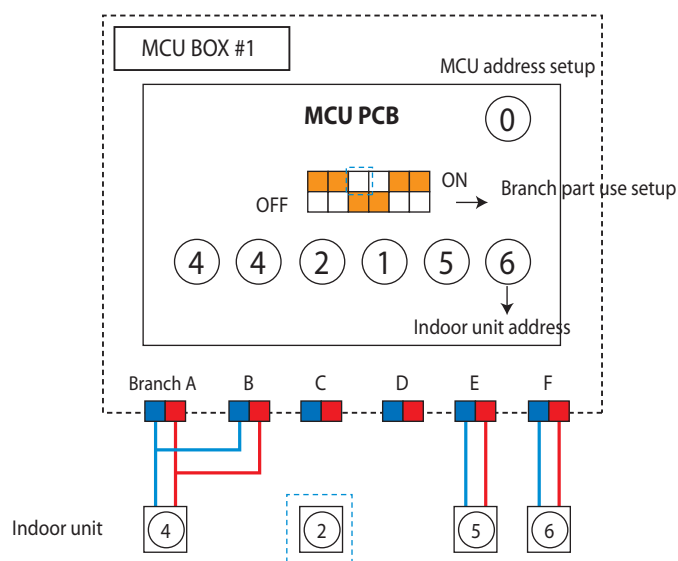


4-4-35 MCU branch part setup error – Connect an Indoor unit to a branch part not being used

| | |
|----------------------|--|
| Outdoor unit display | <i>E2 17</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Occurs when MCU PIPE is turned off, yet an indoor unit is registered |
| Cause of problem | • Indoor unit connection to the unused branch part |

1. How to check

Check the actual use of the branch part. If it is used, turn on the Dip switch for branch part setup. After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.



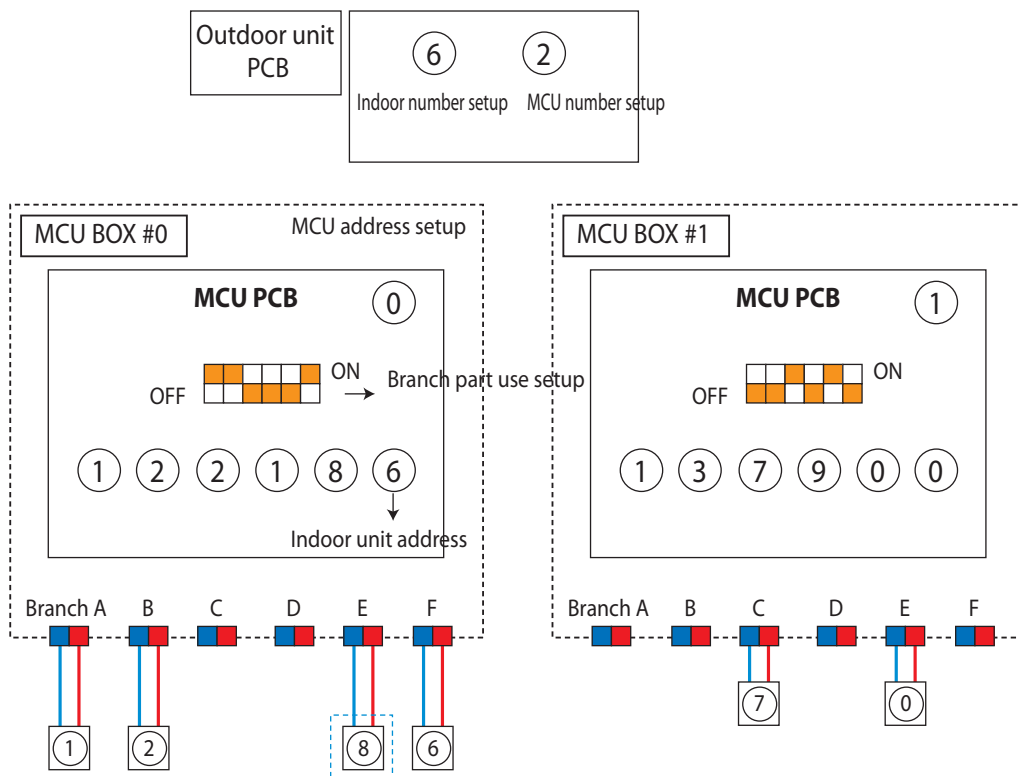
4-4-36 MCU branch part setup error – Connect more Indoor units than what is actually set up in MCU

| | |
|----------------------|---|
| Outdoor unit display | <i>E2 18</i> |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Occurs when the number of indoor units installed exceeds that registered in MCU |
| Cause of problem | • Number of indoor units exceeds number of indoor units entered on MCU setting |

1. How to check

Check the number of indoor units connected to MCU then readjust the switch for the number of units

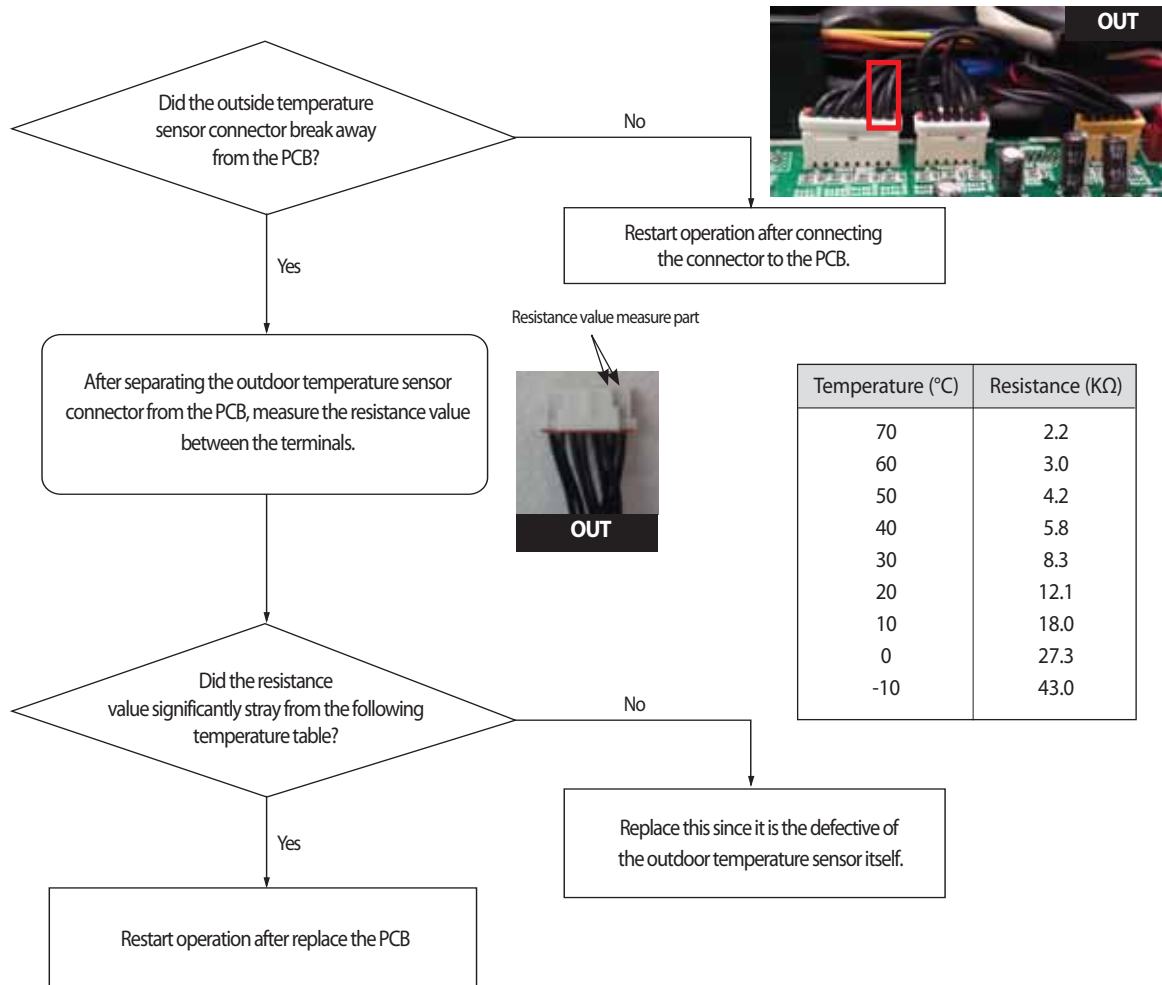
After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.



4-4-37 Outdoor Temperature Sensor Error

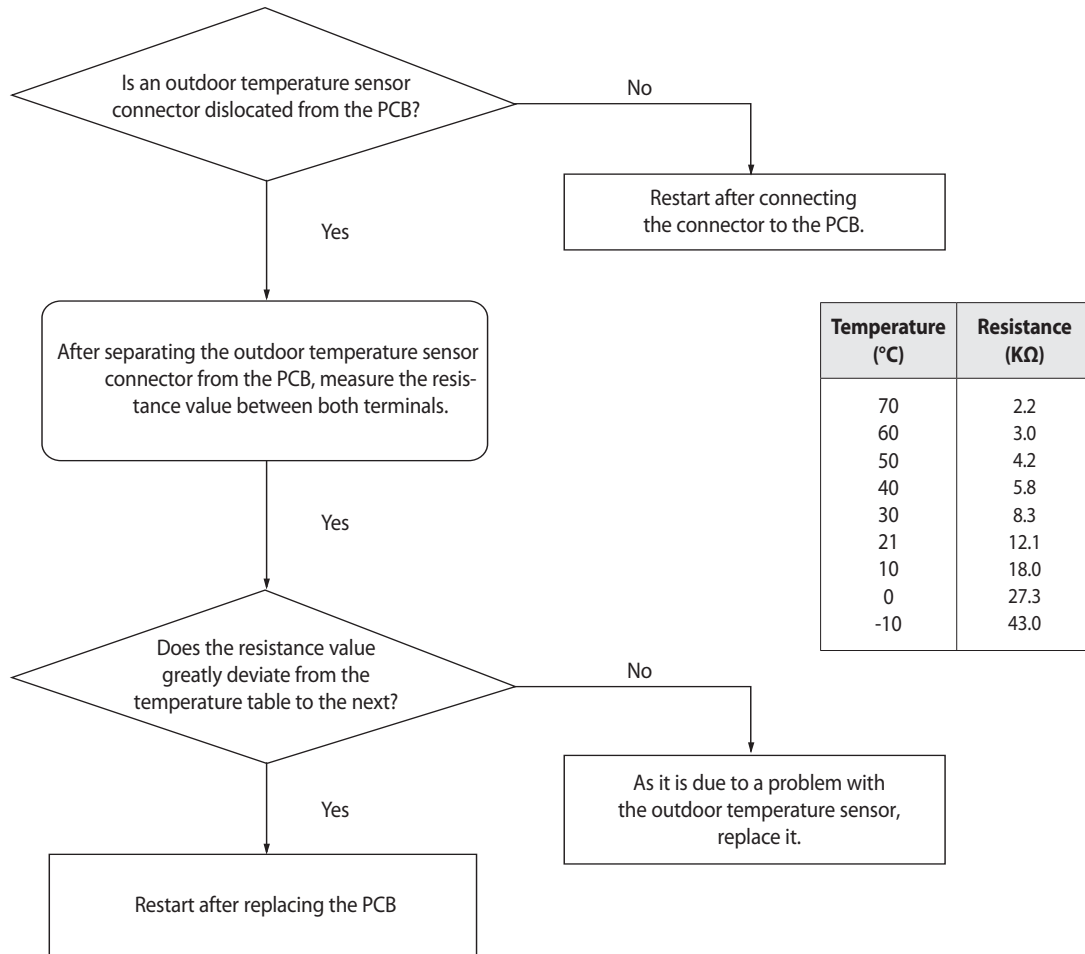
| | |
|----------------------|--|
| Outdoor unit display | E221 |
| Indoor unit display | ● (Operation) × (Reservation) ● (Blast) × (Filter) × (Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Outdoor temperature sensor Open/Short is defective. |

1. Cause of problem



4-4-38 Outdoor Temperature dislocation error

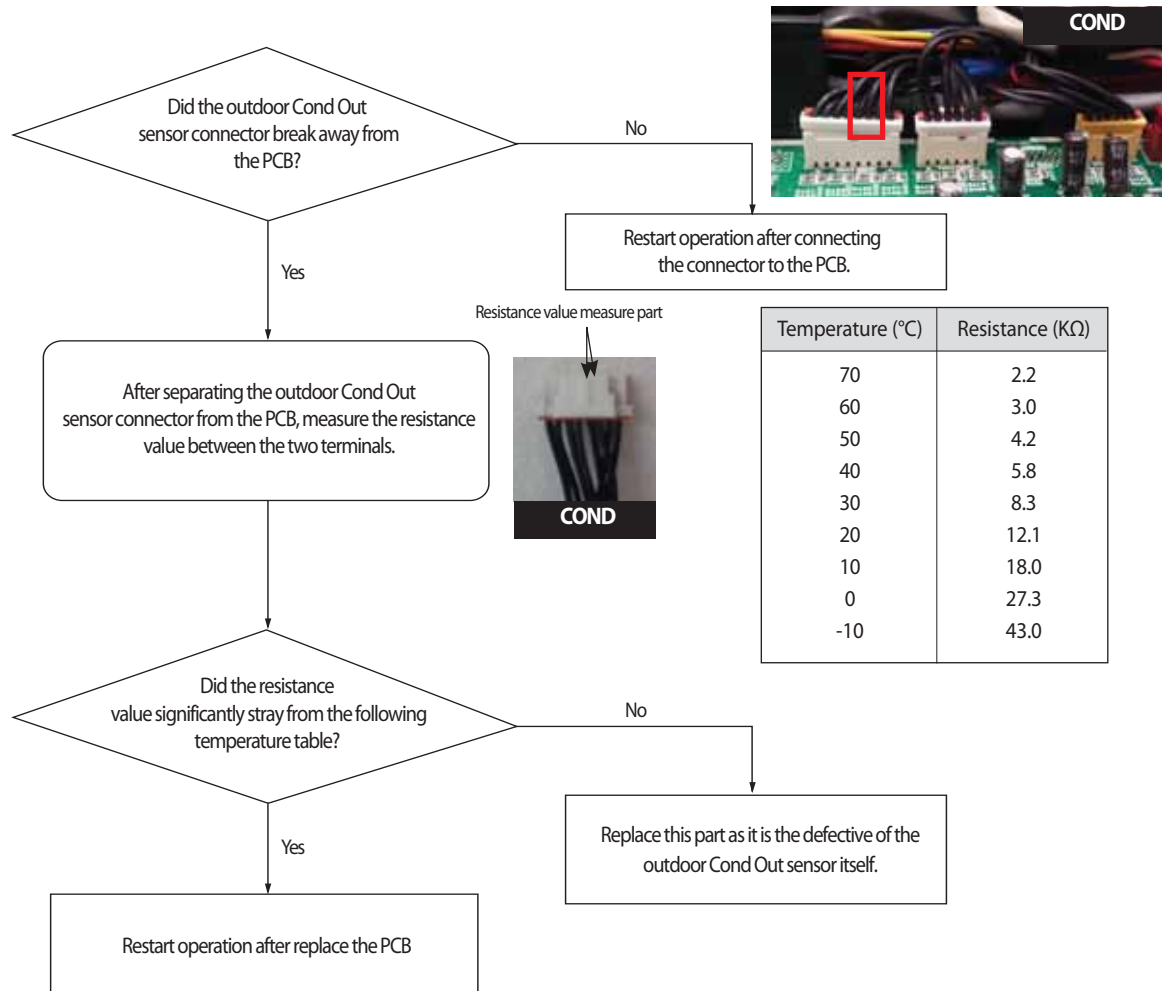
1. How to check



4-4-39 Cond Out Temperature Sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E231 |
| Indoor unit display | ● (Operation) × (Reservation) ● (Blast) × (Filter) × (Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

1. Cause of problem



4-4-40 Outdoor Cond Out sensor breakaway error

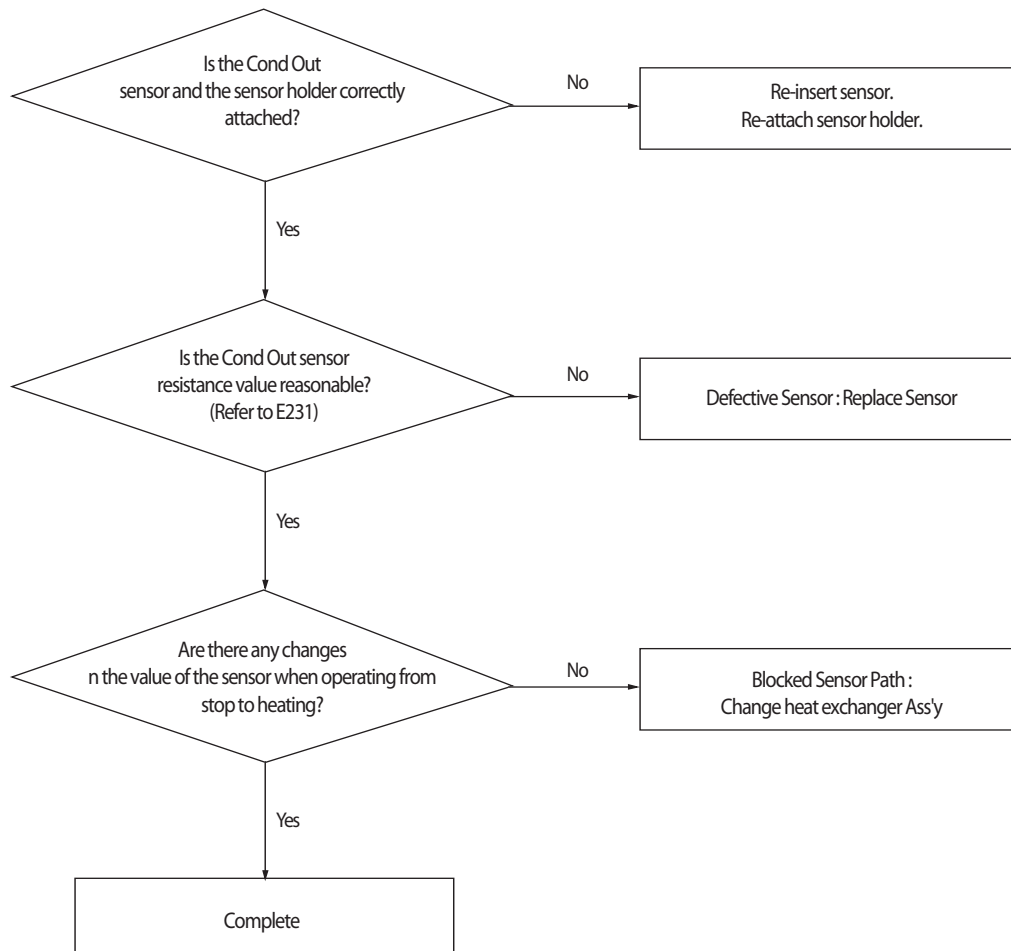
| | |
|----------------------|---|
| Outdoor unit display | E241 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Outdoor Cond Out sensor breakaway/defective/ relevant path blocked. |

1. Judgment Method

- 1) No inspection for Cooling operation.
- 2) For heating operation (Each of the conditions below needs to be satisfied for more than 20 minutes.)

| | |
|--|---|
| High pressure average > 25kg/cm ² | OK |
| Low pressure average < 8.5kg/cm ² | OK |
| Teva, out - Tair, in ≥ 3°C | OK |
| Teva, in - Tair, in ≥ 2°C | OK |
| Tcond, out - Tair, out ≤ 0°C | NO |
| Every compressor is in operation & indoor unit operation and Thermo On | OK |
| Error Content | Outdoor Cond Out sensor breakaway error |

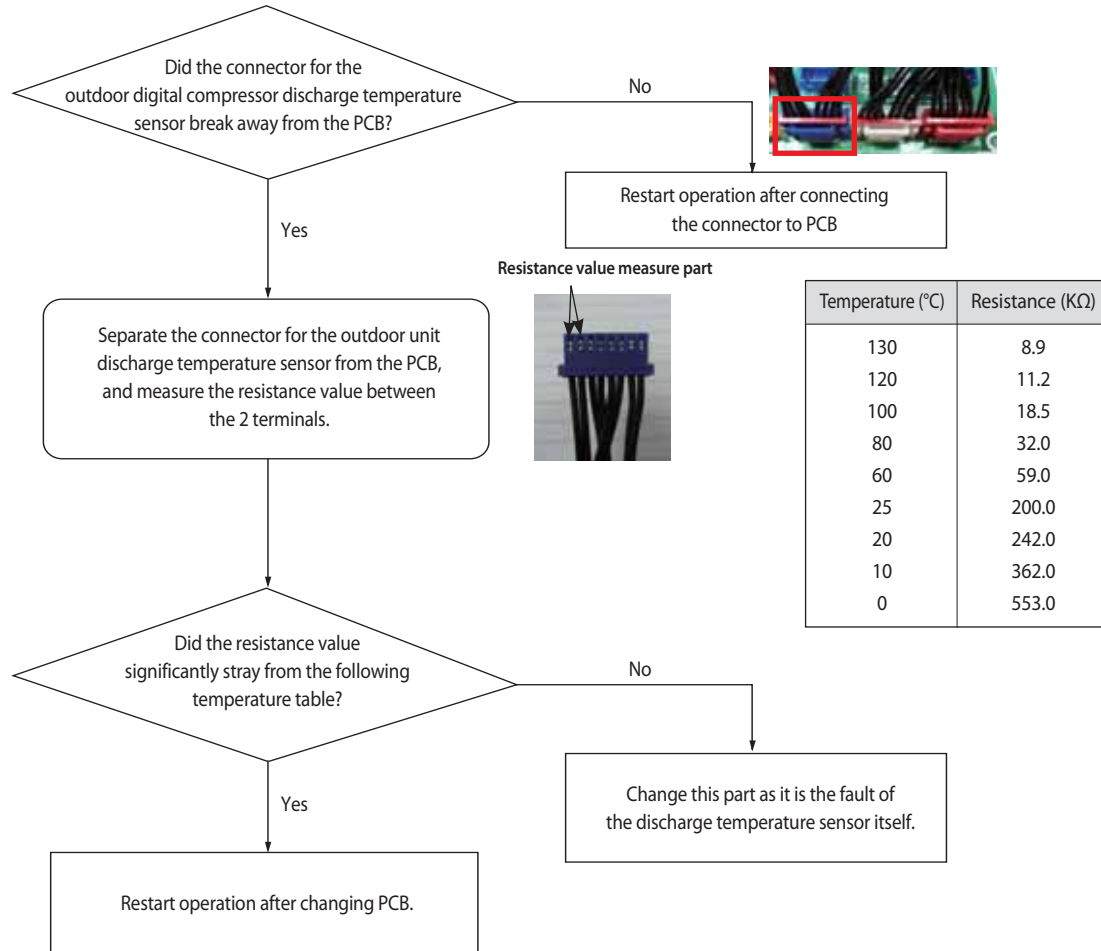
2. Cause of problem



4-4-41 Digital Compressor Discharge Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|--|
| Outdoor Unit Display | E25 1 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the inspection method below, |
| Special Cause | • Digital compressor discharge temperature sensor OPEN/SHORT problem |

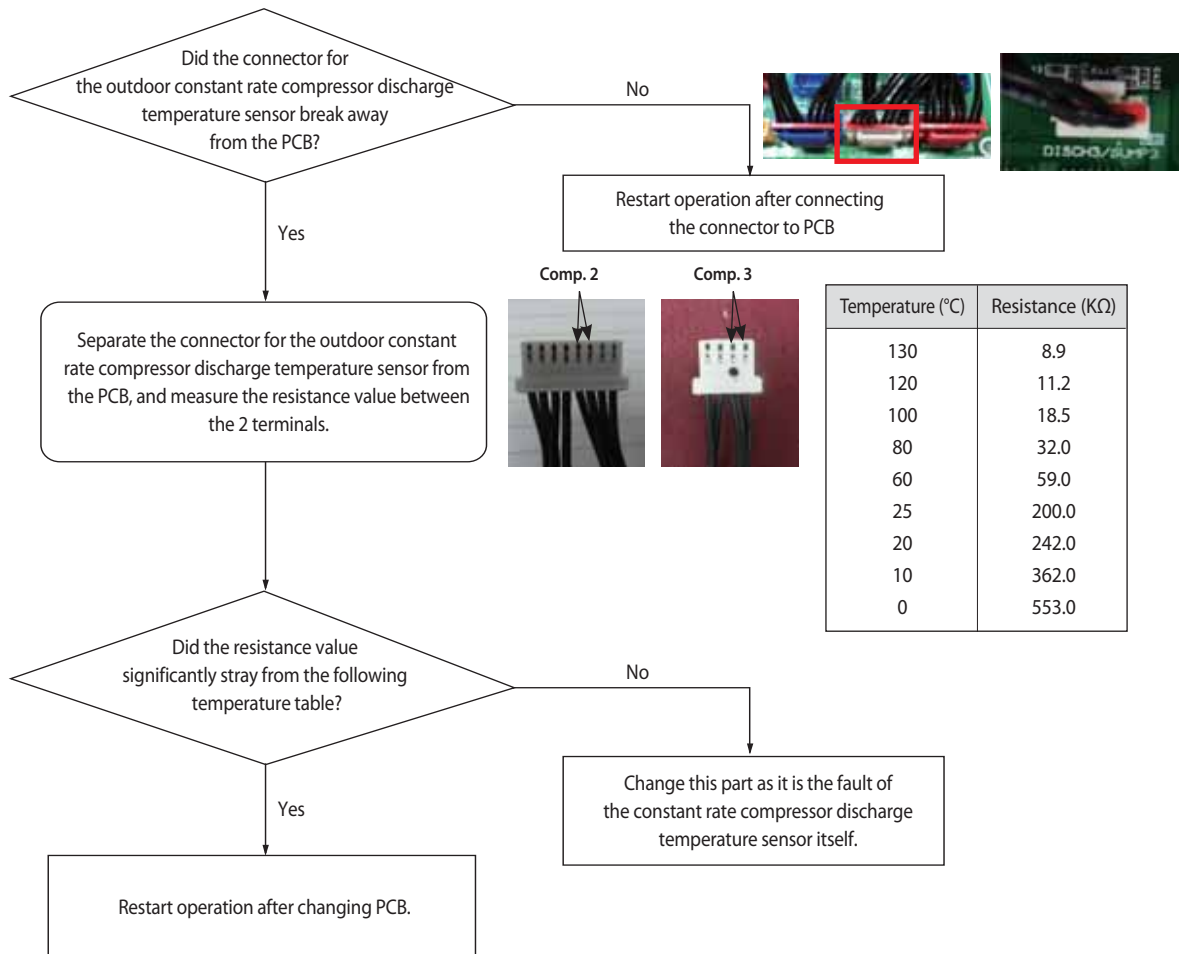
1. Inspection Method



4-4-42 Constant Rate Compressor Discharge Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|--|
| Outdoor Unit Display | E257, E258 (Compressor 2, Compressor 3) |
| Indoor Unit Display | ● (Operation) × (Reservation) ● (Blast) × (Filter) × (Defrost) |
| Judgment Method | • Refer to the inspection method below. |
| Special Cause | • Constant rate compressor discharge temperature sensor OPEN/SHORT problem |

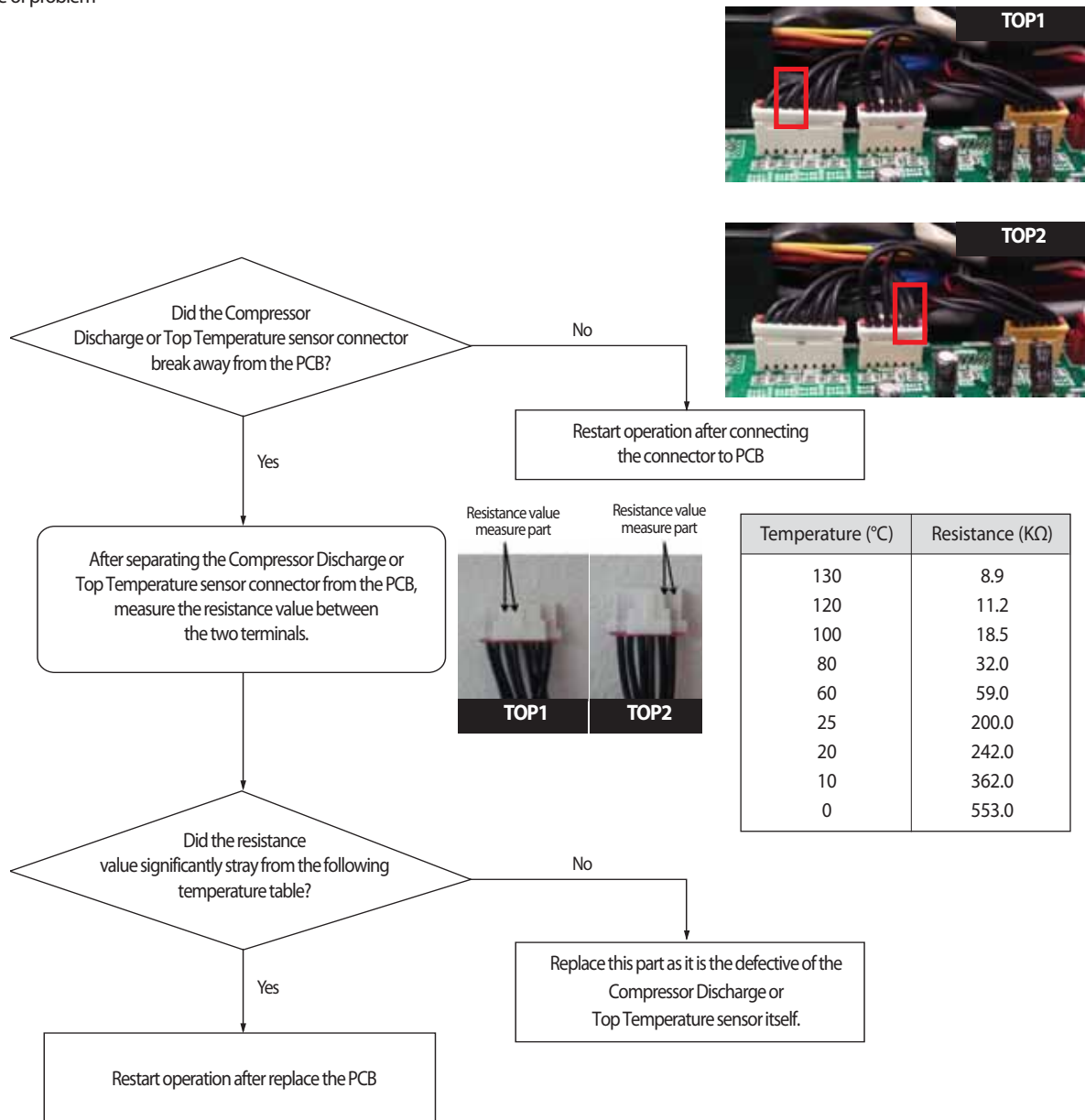
1. Inspection Method



4-4-43 Compressor Discharge or Top 1/2 Temperature sensor error

| | |
|----------------------|--|
| Outdoor unit display | <i>E262</i> (Compressor 1 Discharge) <i>E263</i> (Compressor 2 Discharge) <i>E266</i> (Compressor 1 Top) <i>E267</i> (Compressor 2 Top) |
| Indoorunit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Compressor Discharge or Top Temperature sensor defective. (Open/Short) |

1. Cause of problem



4-4-44 *E265* : Dislocation error of Compressor SUMP Temperature (oil temperature) Sensor

| | |
|----------------------|--|
| Outdoor unit display | <i>E265</i> (digital compressor or fixed compressor 1) |
| Indoor unit display | ×(Operation) (Timer) (Fan) (Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Sump (oil) temperature sensor dislocation error |

1. How to diagnose

- 1) If the Sump temperature right before the start of compressor = Tsump.ini, current compressor's SUMP temp = Tsump. real,
When the difference between Tsump.ini and Tsump.real is an absolute value so that it cannot be more than 2°C,
In other words, the condition of $T_{\text{sump.real}} - T_{\text{sump.ini}} < 2^{\circ}\text{C}$ has been satisfied for 60 minutes since a compressor started, it is diagnosed as an error.
After 60 minutes of compressor operation, there will be no Sump sensor dislocation detection.

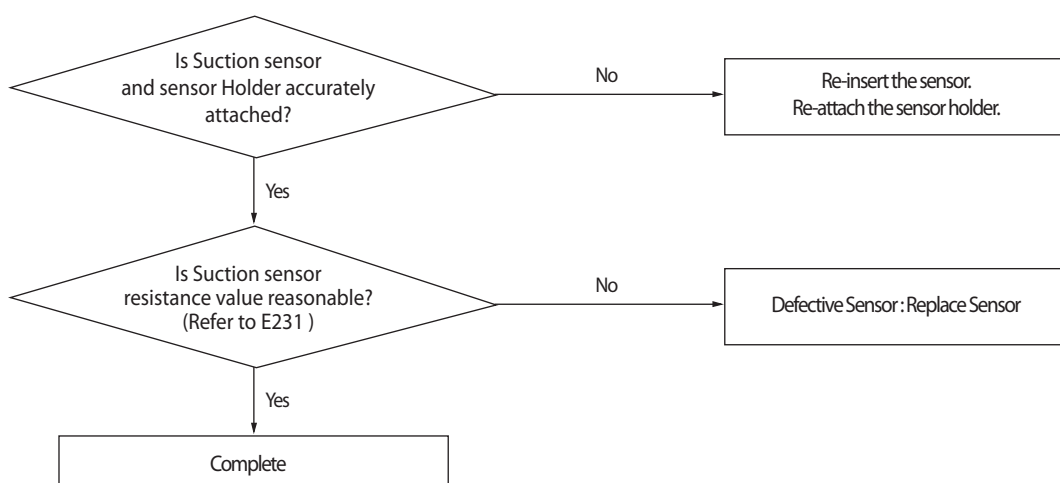
2. How to check

- 1) Check if a sensor of the relevant compressor has been dislocated in accordance with error code, assemble and correct the error.

4-4-45 *E269* : Suction Temperature sensor breakaway error

| | |
|----------------------|---|
| Outdoor unit display | <i>E269</i> |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> · If the suction temperature right before operating the Comp, when the operating order is highest, is set at $T_{suc, ini}$, and the suction temperature of the current Comp is set at $T_{suc, real}$, it is considered to have an error if the condition of $T_{suc, real} < T_{suc, ini} < 2^{\circ}\text{C}$ is maintained for 30 minutes. |
| Cause of problem | <ul style="list-style-type: none"> · Suction temperature sensor breakaway/defective. |

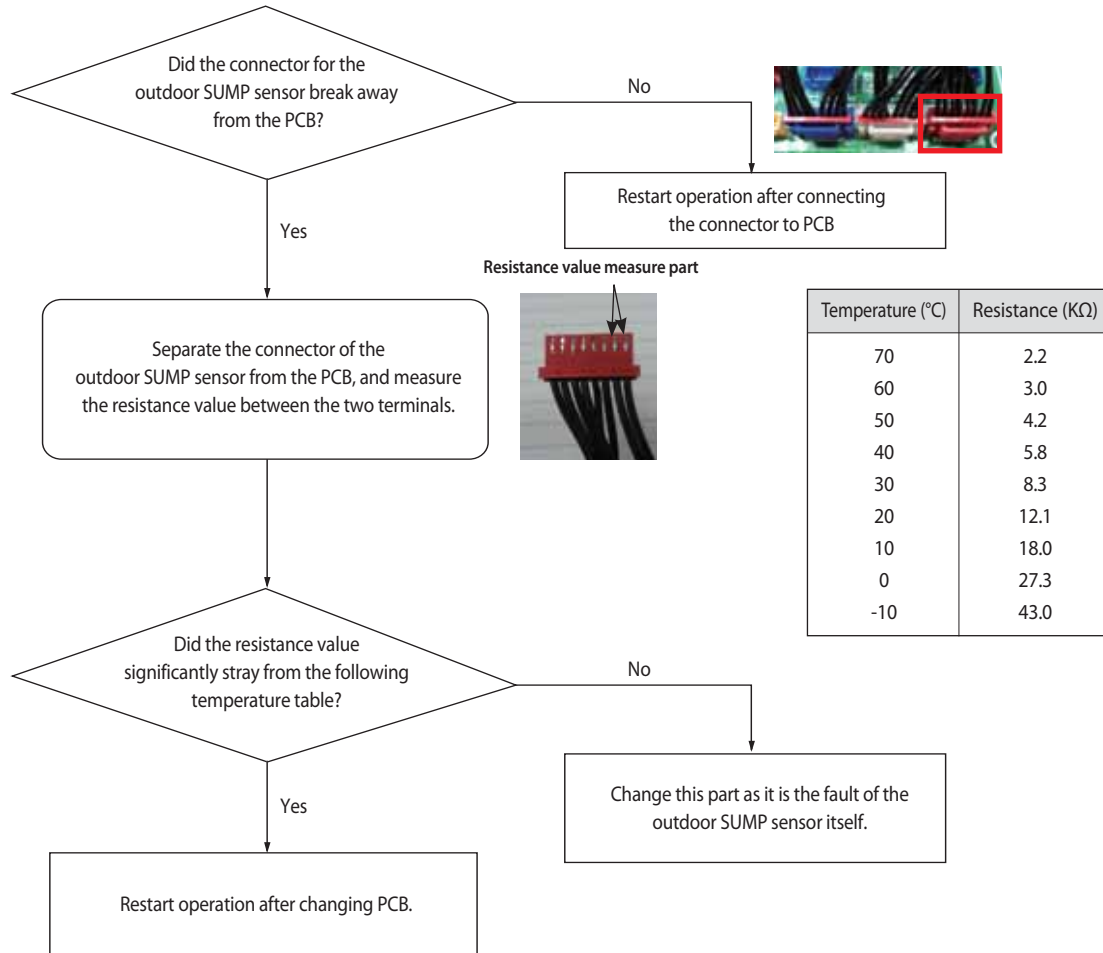
1. Cause of problem



4-4-46 SUMP Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|---|
| Outdoor Unit Display | E271 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below. |
| Special Cause | • Disconnection or breakdown of relevant sensor |

1. Inspection Method



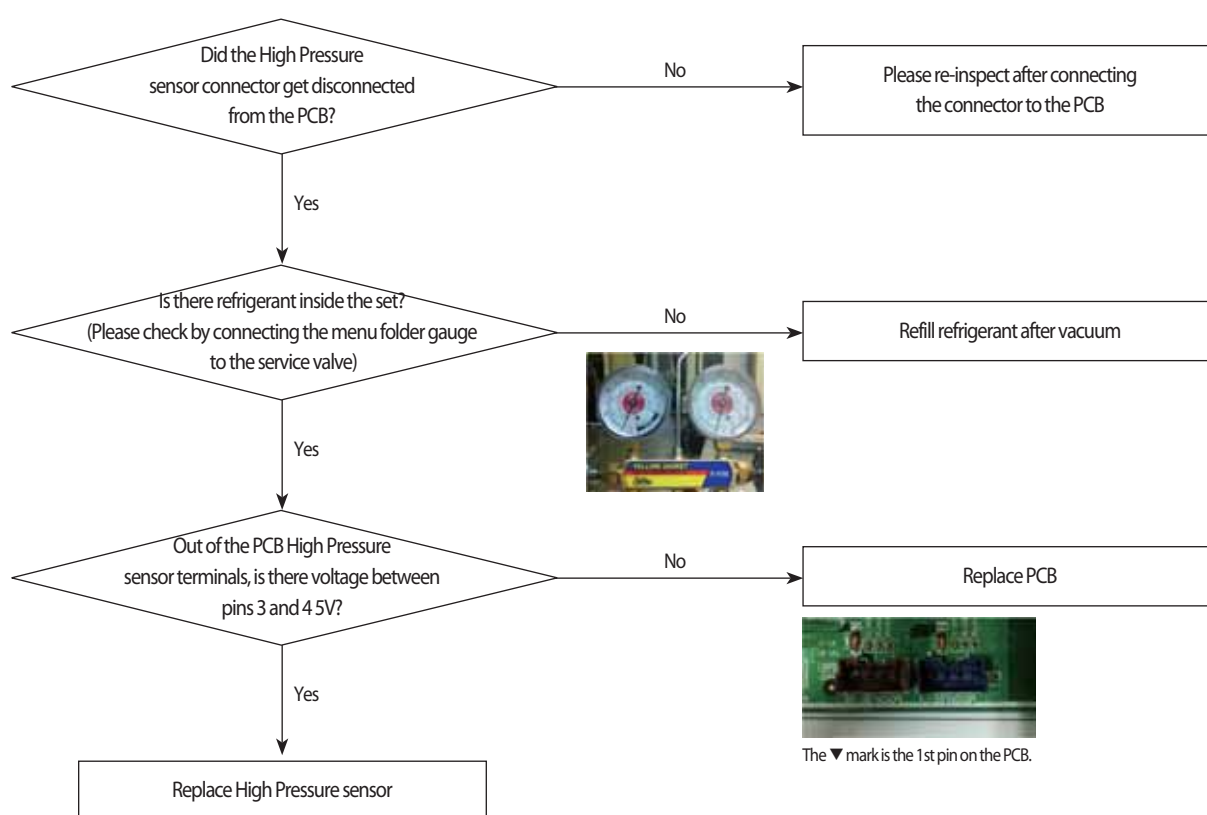
4-4-47 High Pressure sensor error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E29 1 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

1. High Pressure sensor Open/Short error determination method

- 1) Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
- 2) An Open/Short error will occur if the input voltage standard range of 0.5V ~ 4.95V is exceeded.

2. Inspection Method



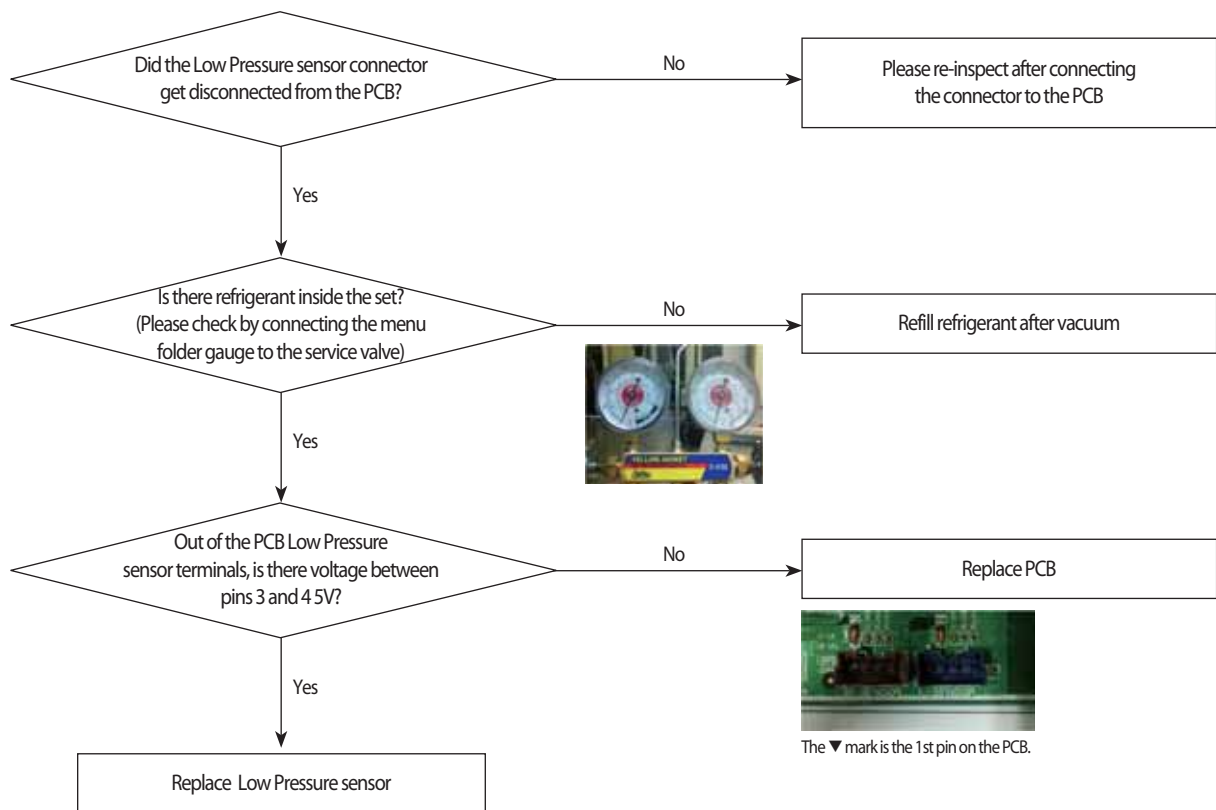
4-4-48 Low Pressure sensor error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E296 |
| Indoorunit display | ● (Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

1. Low Pressure sensor Open/Short error determination method

- 1) Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
- 2) An Open/Short error will occur if the input voltage standard range of 0.5V ~ 4.95V is exceeded.

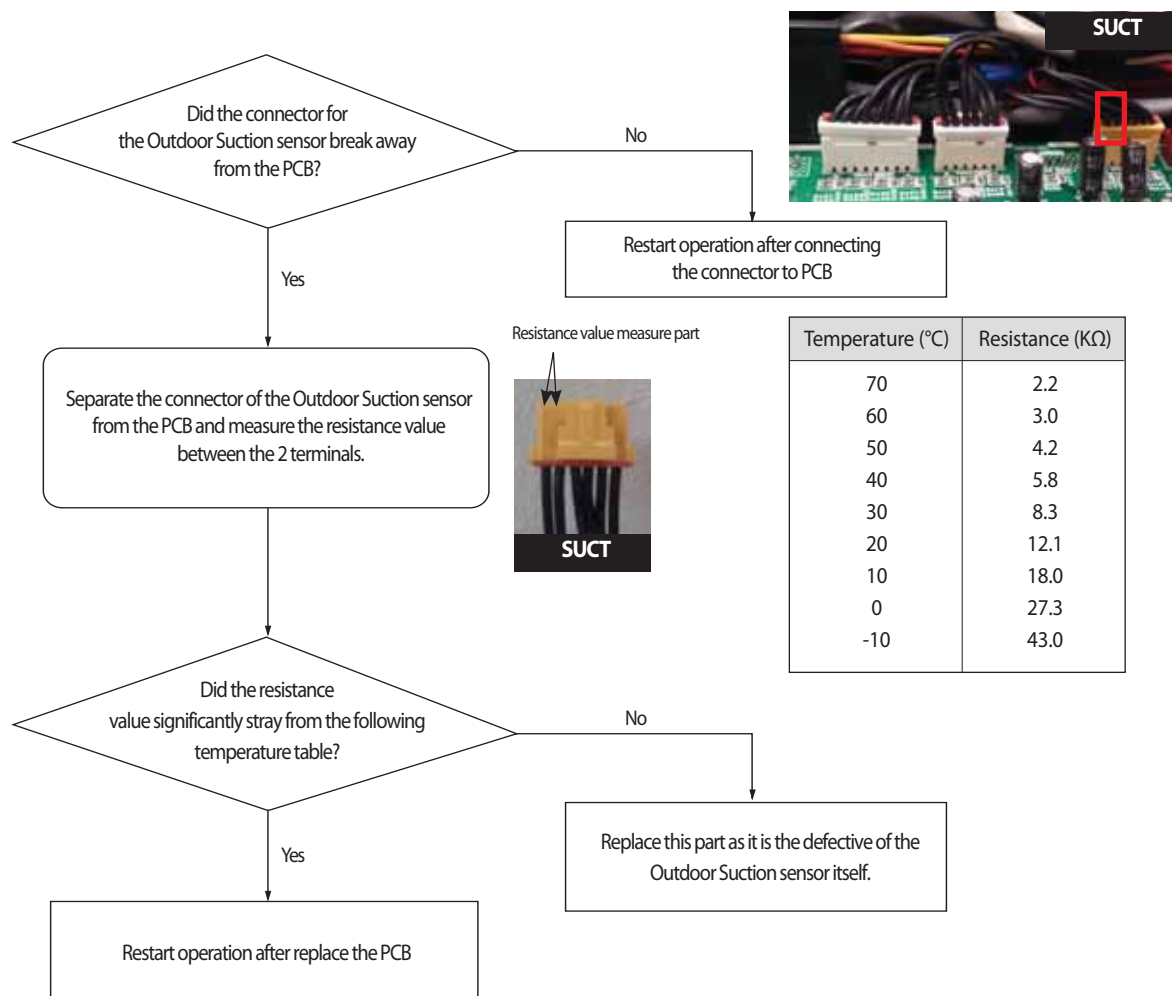
2. Inspection Method



4-4-49 Suction Temperature sensor error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E308 |
| Indoor unit display | ● (Operation) × (Reservation) ● (Blast) × (Filter) × (Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

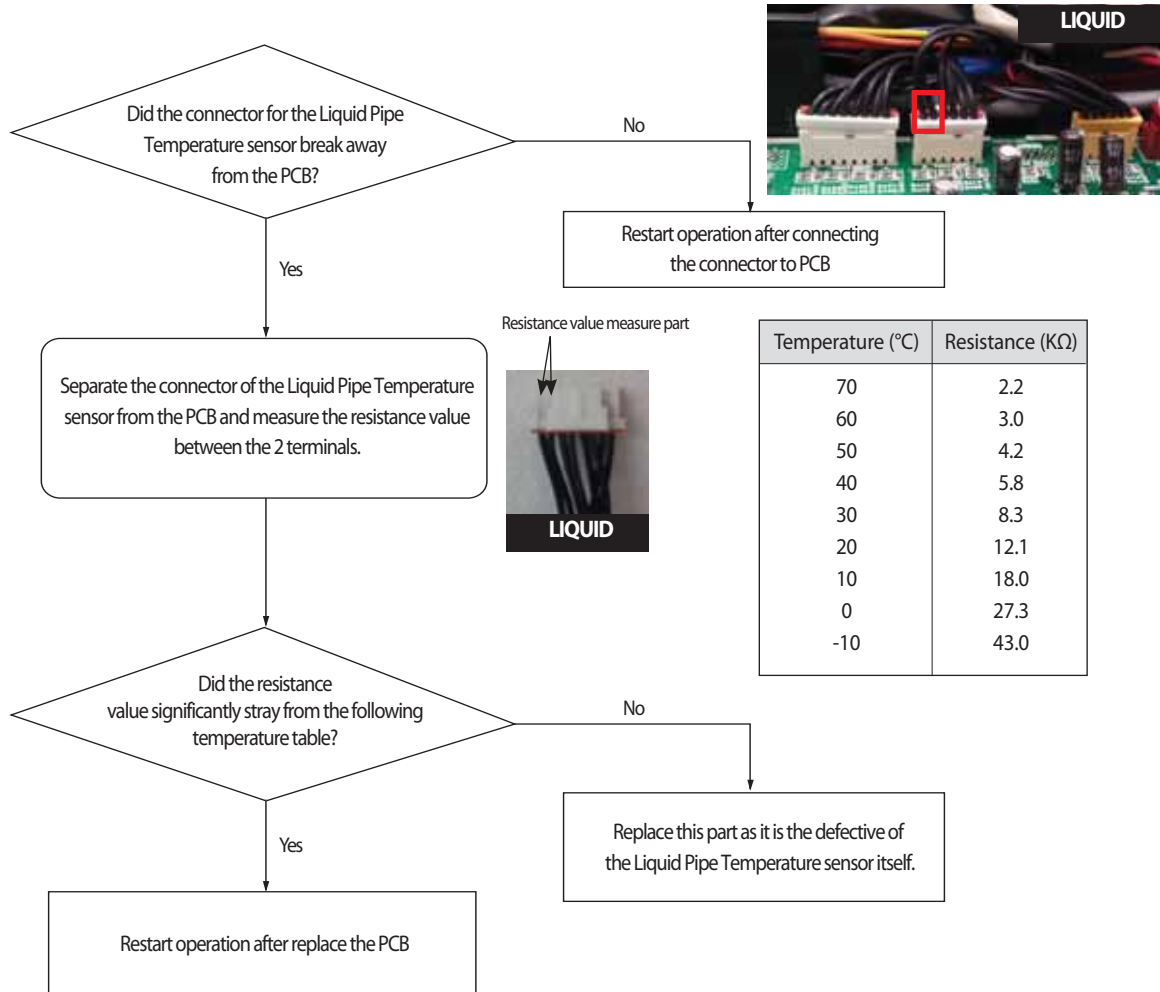
1. Cause of problem



4-4-50 Liquid Pipe Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E311 |
| Indoorunit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

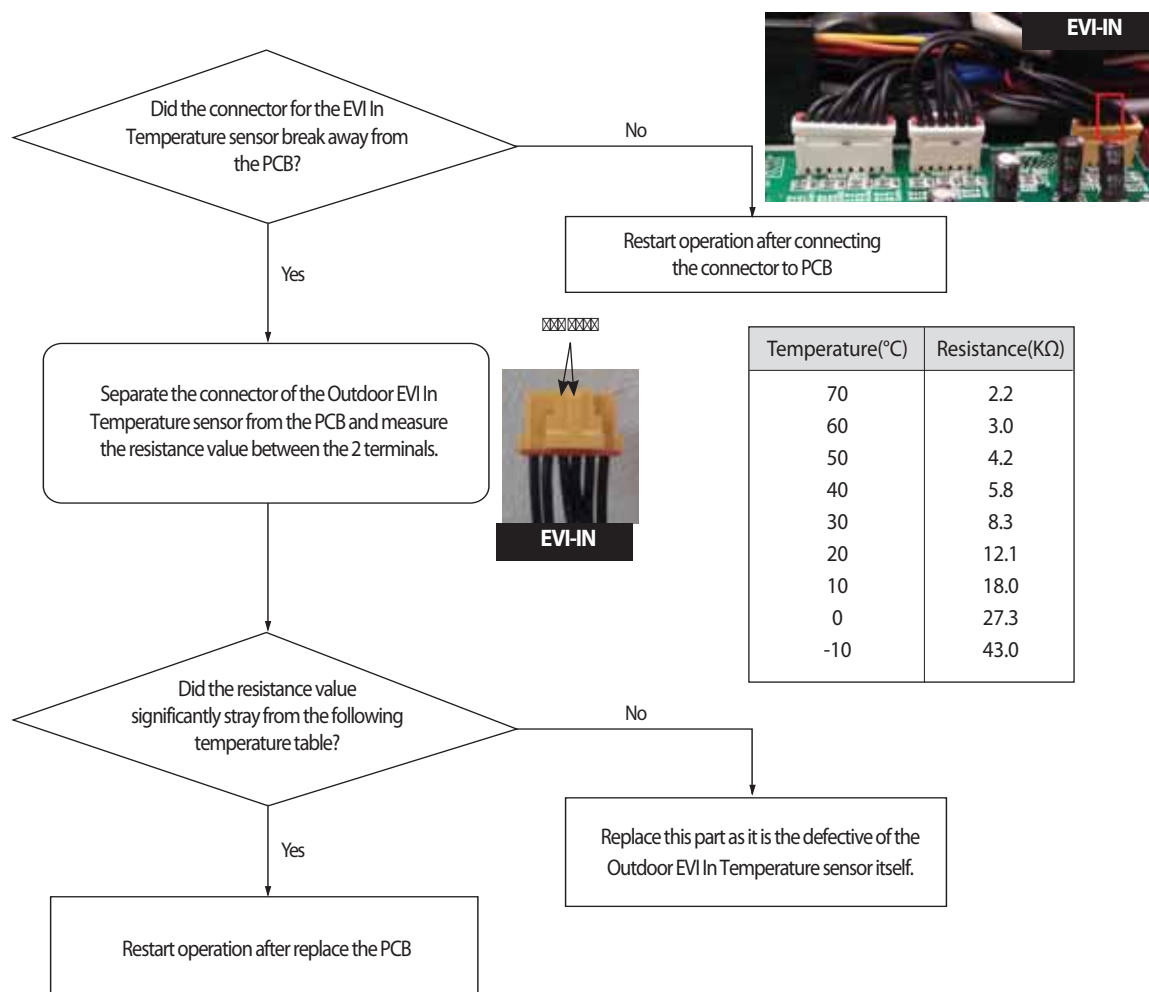
1. Cause of problem



4-4-51 EVI In Temperature sensor error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E321 |
| Indoor unit display | ● (Operation) × (Reservation) ● (Blast) × (Filter) × (Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

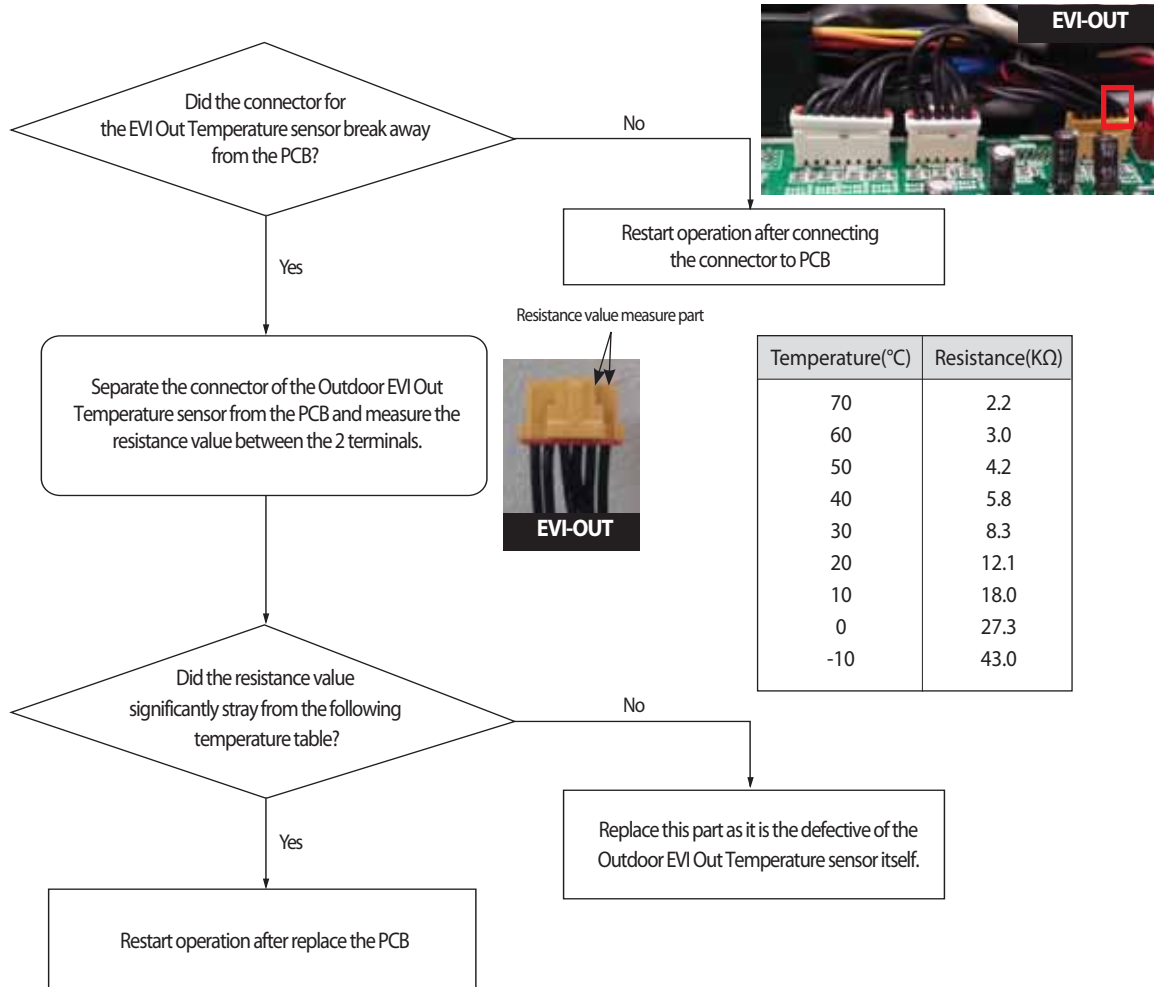
1. Cause of problem



4-4-52 EVI Out Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E322 |
| Indoorunit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

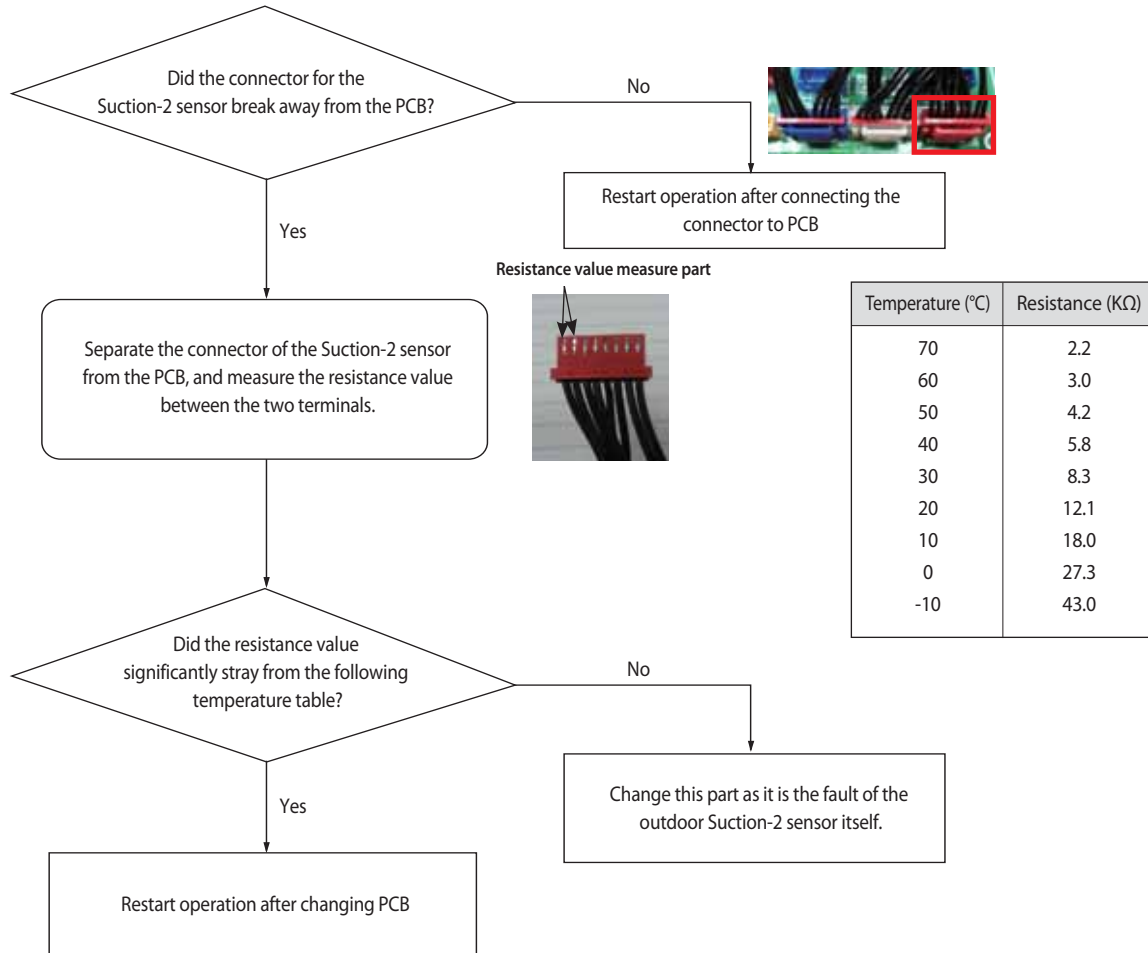
1. Cause of problem



4-4-53 Suction-2 Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|---|
| Outdoor Unit Display | E323 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below. |
| Special Cause | • Disconnection or breakdown of relevant sensor |

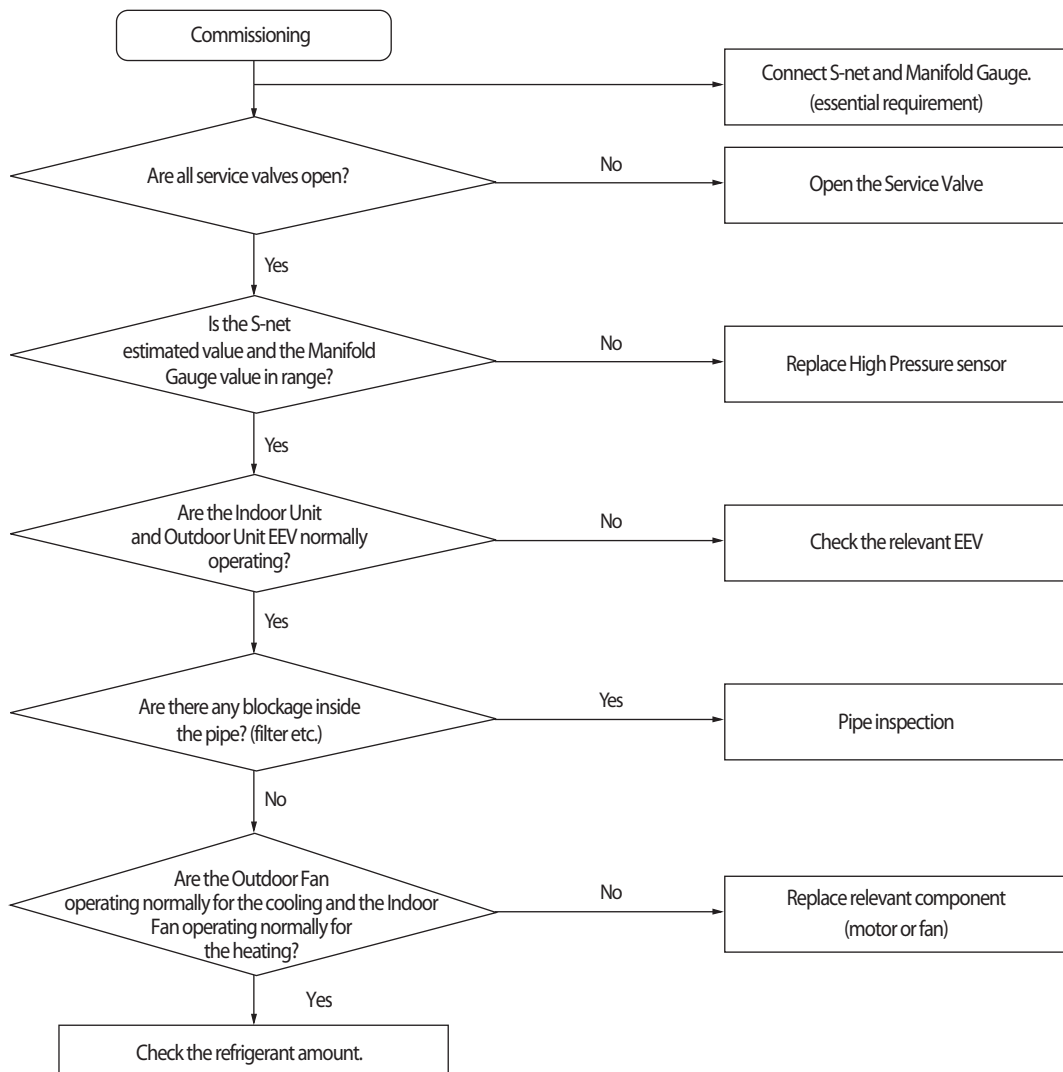
1. Inspection Method



4-4-54 E407 : Comp. Down due to High Pressure Protection Control

| | |
|----------------------|---|
| Outdoor unit display | E407 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | Value of the high pressure sensor is detected at 40kg/cm ² or more |
| Cause of problem | <p><Cooling Operation></p> <ul style="list-style-type: none"> Outdoor unit fan motor problem (constrained, defective) Motor driver defective or wire is cut Outdoor heat exchanger is contaminated. Service valve locked/Fill refrigerant <p><Heating Operation></p> <ul style="list-style-type: none"> Outdoor unit fan motor problem (constrained, defective) Motor driver defective or wire is cut Service valve locked/Excessive refrigerant |

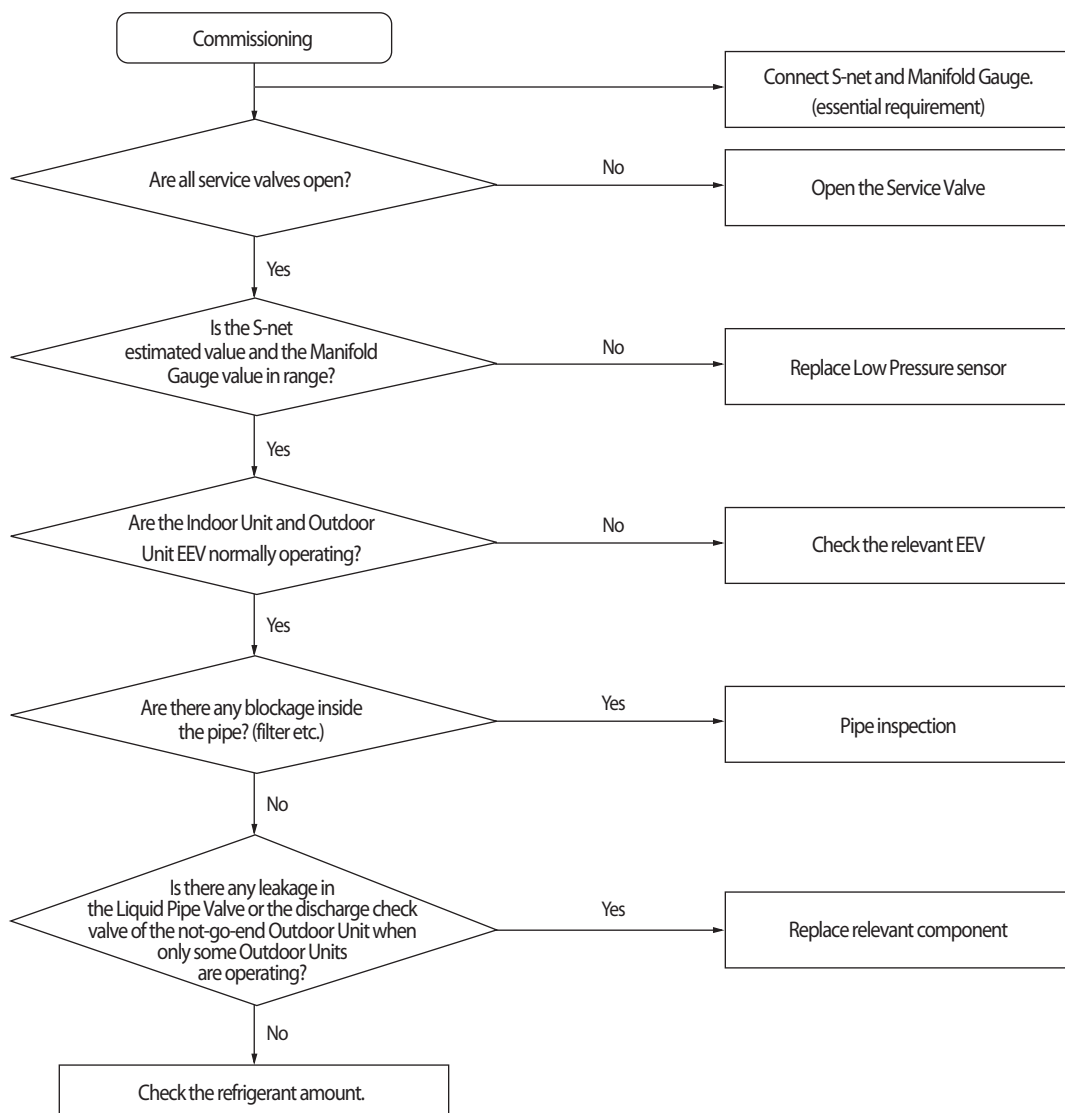
1. Cause of problem



4-4-55 *E4 10* : Comp. Down due to Low Pressure Protection Control

| | |
|----------------------|--|
| Outdoor unit display | <i>E4 10</i> |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | · Inspection when the value of low pressure sensor is 0.8kg/cm ² , or less for air conditioning and 0.6kg/cm ² for heating |
| Cause of problem | <ul style="list-style-type: none"> · Refrigerant shortage · Electronic expansion valve blocked · Service valve blocked · Low pressure sensor defective · Leakage of compressor discharge check valve of not-go-end outdoor unit · Error may be found when used in temperature range outside the conditions of use (Operating outside temperature at -20°C or less for heating and operating outside temperature at -5°C or less for Cooling) |

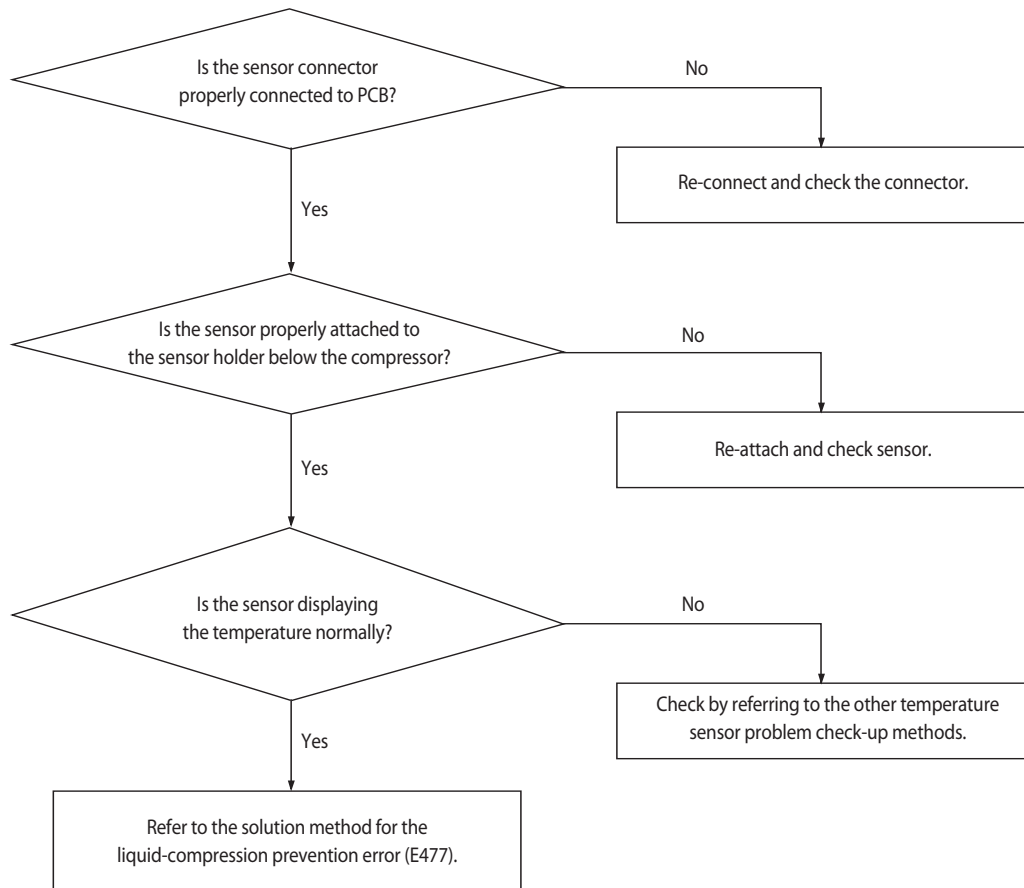
1. Cause of problem



4-4-56 Sump Sensor Error Due to Protection Control

| | |
|----------------------|--|
| Outdoor Unit Display | E413 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Maintain sump temperature of 95°C or more for five minutes |
| Special Cause | • Compressor loading faulty/sump temperature sensor faulty |

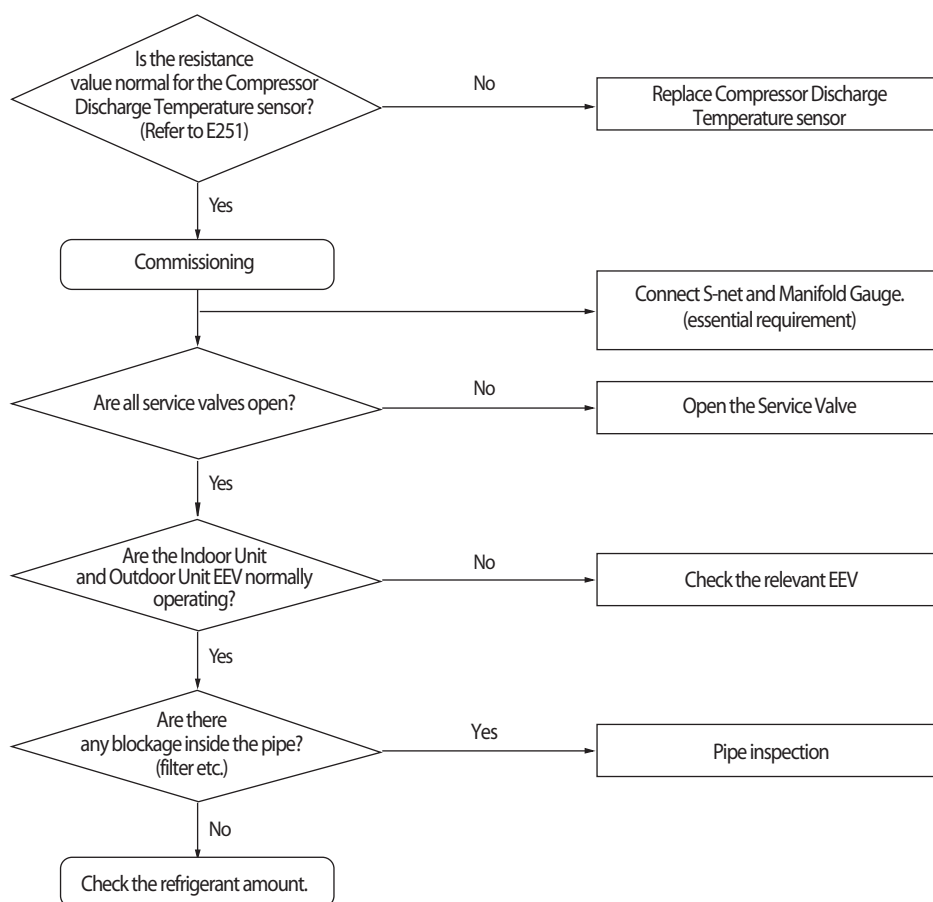
1. Inspection Method



4-4-57 *E4 16* : Comp. Down due to Compressor Discharge Temperature sensor

| | |
|----------------------|---|
| Outdoor unit display | <i>E4 16</i> |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | · When value of compressor discharge temperature sensor is checked at 120°C or more |
| Cause of problem | <ul style="list-style-type: none"> · Refrigerant shortage · Electronic expansion valve is blocked. · Service valve blocked · Defective discharge temperature sensor · Blocked pipe and defective · Leakage of compressor discharge check valve of not-go-end outdoor unit |

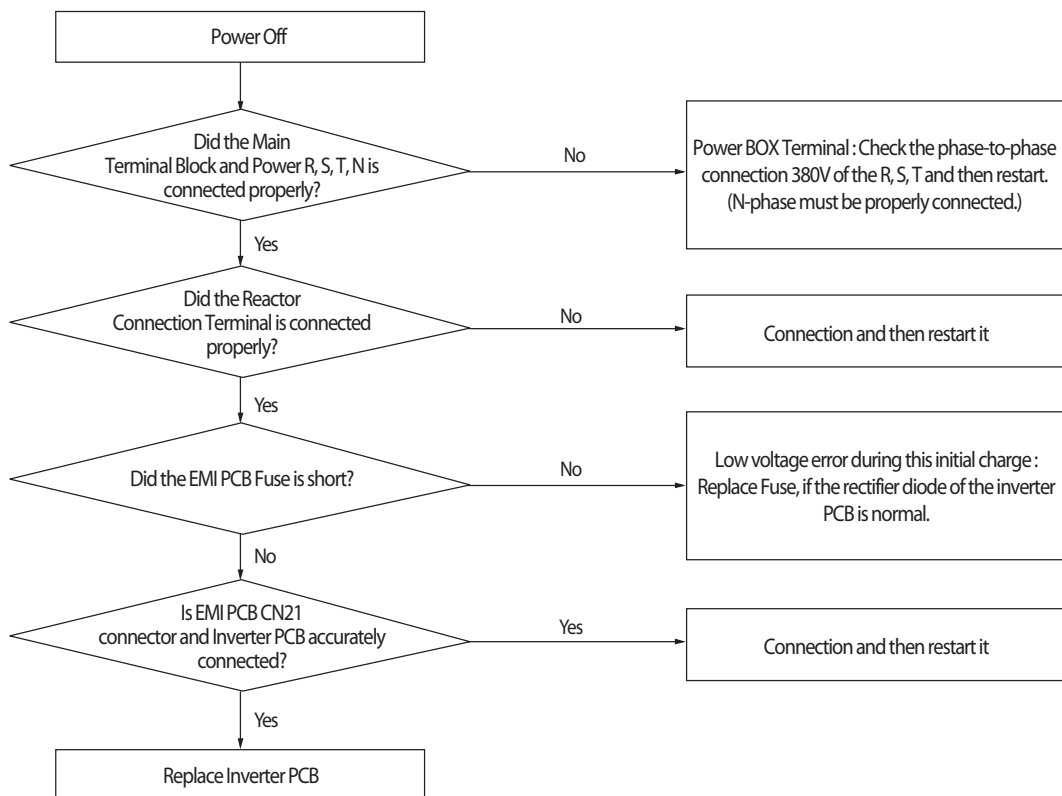
1. Cause of problem



4-4-58 3-phase Input Wiring error

| | |
|----------------------|--|
| Outdoor unit display | E425 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <p>· When turn on the power and check the status of the power from the inverter.</p> <p>If the phase does not connect the power(no phase) : E425 or E466 (E366) is displayed (Air conditioner to maintain the normal state.)</p> <p>However) N-phase must be properly connected.</p> |
| Cause of problem | <p>· Check the input wiring</p> <p>· EMI Fuse short</p> |

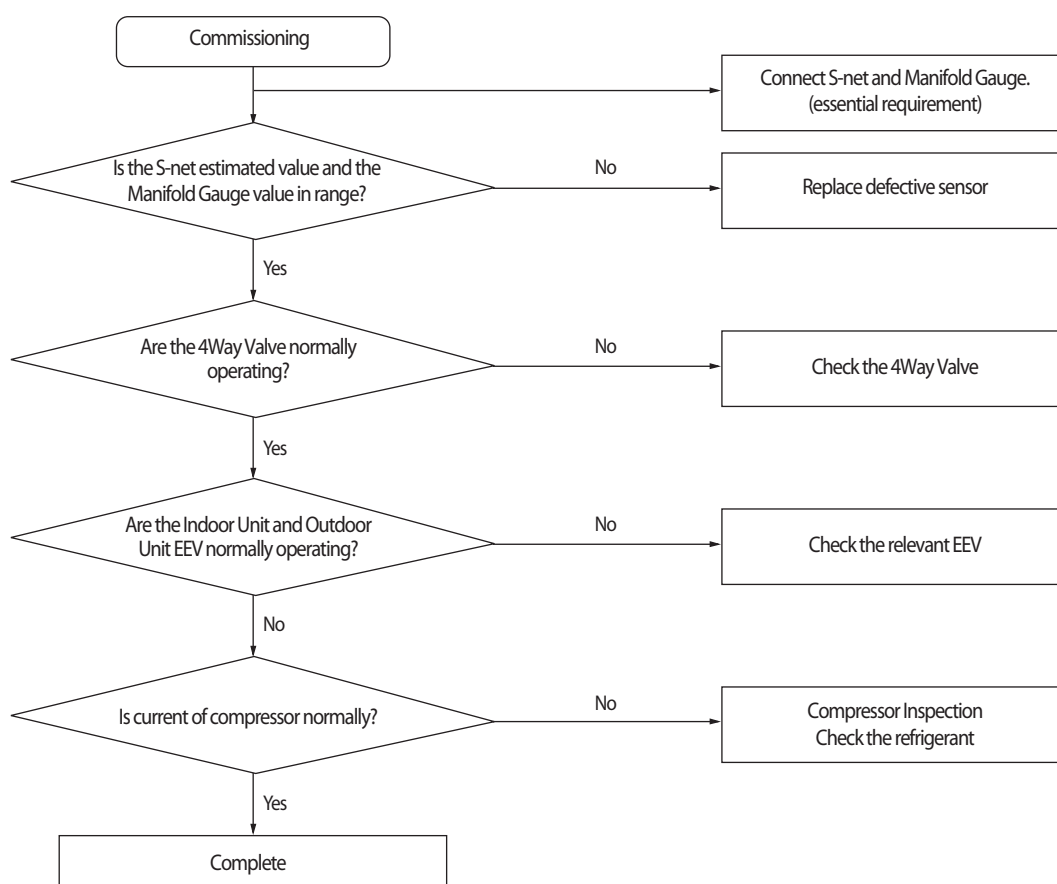
1. Cause of problem



4-4-59 *E428* : Comp. Down by Compression Ratio Control

| | |
|----------------------|---|
| Outdoor unit display | <i>E428</i> |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> · When compression ratio (high pressure+1)/(low pressure+1) less than 1.5 and lasts for 10 minutes or more · Differential pressure (high pressure - low pressure) less than 0.4 MPa.g and lasts for 10 minutes or more |
| Cause of problem | <ul style="list-style-type: none"> · Indoor and Outdoor EEV breakdown · 4Way Valve breakdown · High and Low pressure sensor defective · Refrigerant shortage |

1. Cause of problem



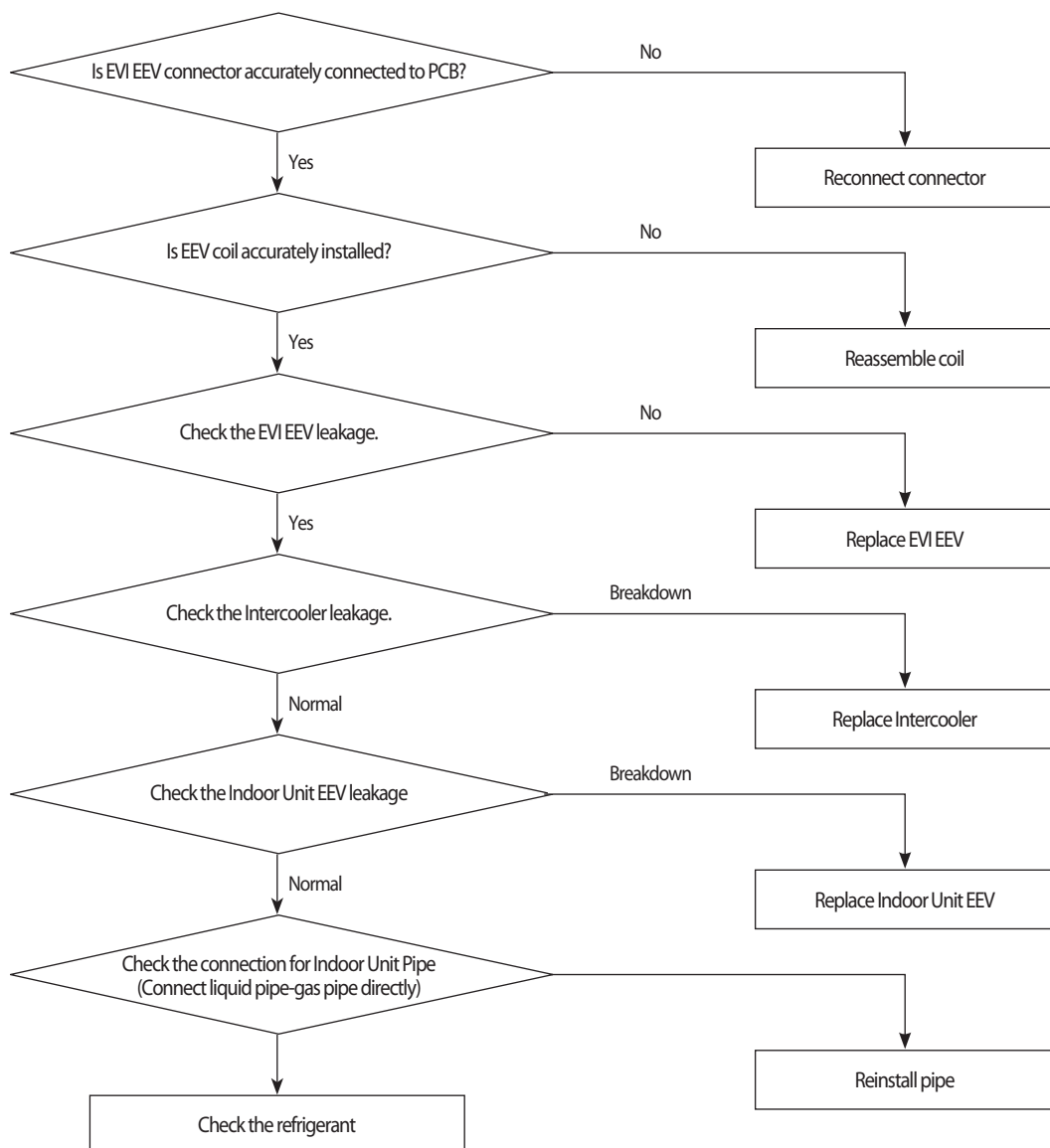
4-4-60 EVI EEV Open error

| | |
|----------------------|--|
| Outdoor unit display | E438 |
| Indoorunit display | - |
| Judgment Method | . DSH <10 °C, EVI Out-in <= 0°C & frequency> 65Hz 40 minutes maintaining |
| Cause of problem | . EVI EEV and Intercooler leakage, excessive refrigerant amount, Outdoor Check Valve inserted opposite. . Indoor Unit EEV leakage, direct connection between Indoor Liquid Pipe and the Gas Pipe. |

※ Indoor EEV leakage can be easily checked during the operation of cooling operation and during the not-go-end blast operation.
(In case it is normal, the EVA In and Out temperatures for the blast may rise.)

※ If cooling operation is operated for low temperature with excessive refrigerant amount, then the DSH may descend.

1. Cause of problem



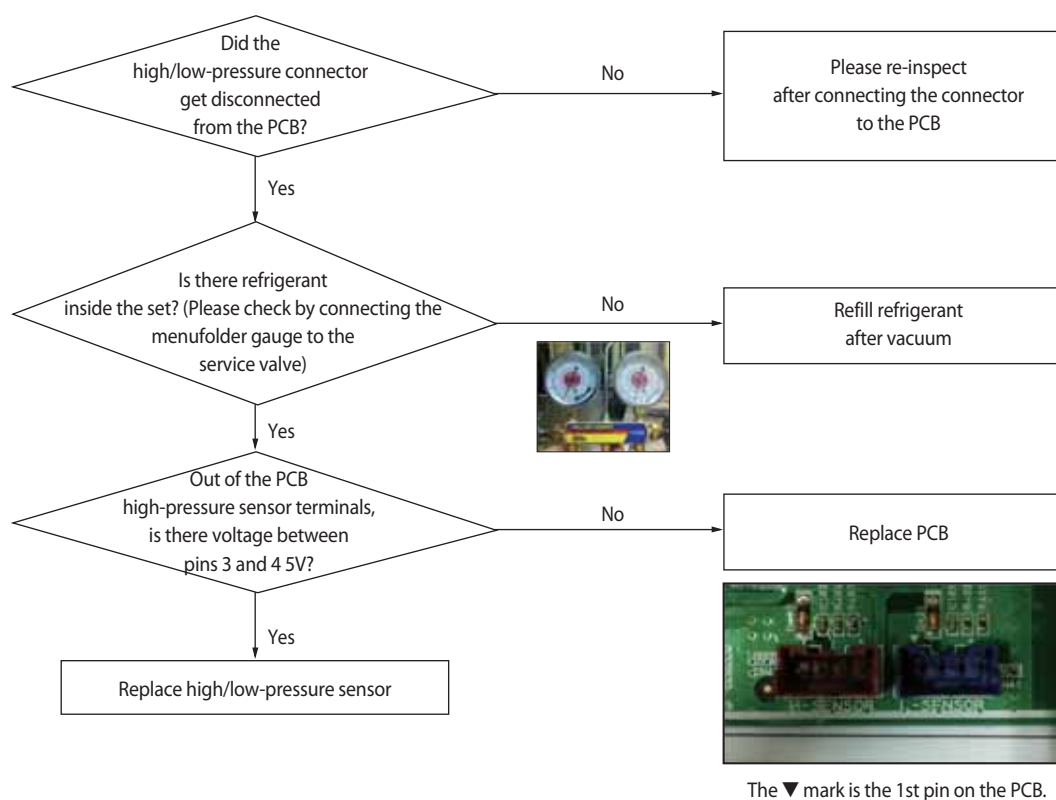
4-4-61 Refrigerant Leakage Error

| | |
|----------------------|---|
| Outdoor Unit Display | E439 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • Leakage of refrigerant, simultaneous malfunction of pressure sensor |

■ Low-pressure sensor OPEN/SHORT error determination method

1. Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
2. An E439 error will occur if the input voltage standard ranges of 0.5V ~ 4.95V of both the high- and low-pressure sensors are exceeded.
3. Will occur if the measured value of both high- and low-pressure sensors is 1kgf/cm²G

1. Inspection method



4-4-62 *E440, E442* : Prohibition of the operation of Compressor due to Outdoor Temperature

| | |
|----------------------|--|
| Outdoor unit display | <i>E440</i> (prohibit heating operation in outdoor temperature over 30°C) <i>E442</i> (prohibit heat filling operation in outdoor temperature over 15°C) |
| Indoor unit display | No sign |
| Criteria | <i>E440</i> : Right before an outdoor unit starts heating operation by On signal of an indoor Remocon, the error occurs and prohibits the operation in outdoor temperature over 30°C <i>E442</i> : Right before operating heat refrigerant filling mode by the K1 switch of an outdoor PCB, the error occurs and prohibits the operation in outdoor temperature over 15°C |
| Cause of problem | • Operation Prohibition mode by the indoor temperature limit |

1. How to check

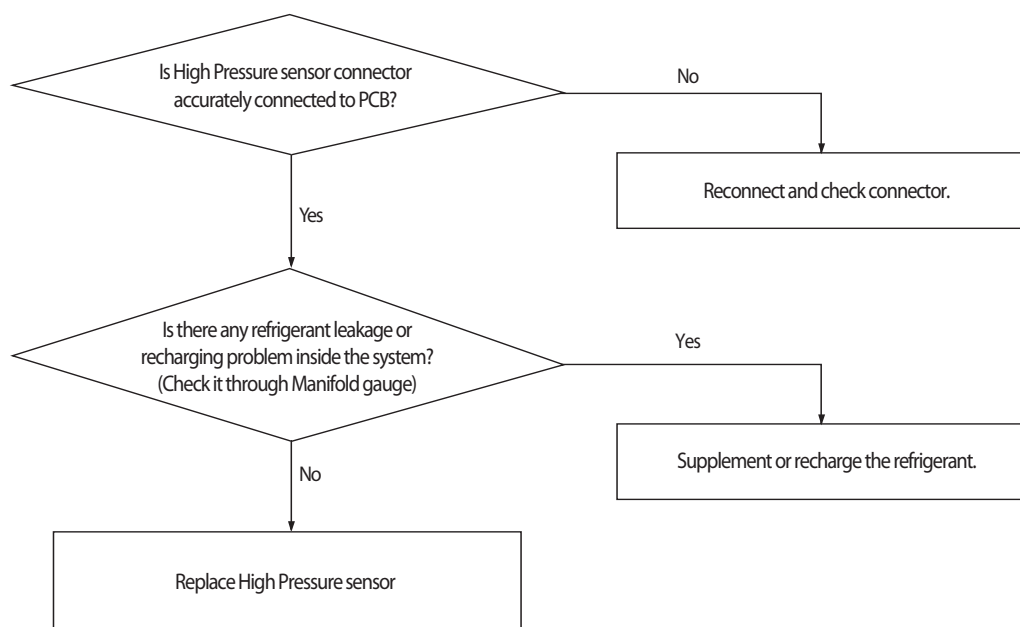
The above error code is not caused by a product's problem but a function to protect the product by limiting the available temperature range so please refer to the usable temperature range in the product manual.

If the error code is displayed despite a condition that does not belong to any of the above diagnosis methods, read the temperature sensor value of the outdoor inlet air with View Mode or S-net, and if the actual outdoor temperature is different, please replace the temperature sensor.

4-4-63 High Pressure Standard Not Met before Air Conditioning (Inability to Re-operate)

| | |
|----------------------|---|
| Outdoor unit display | E443 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> Operation should be forbidden if High Pressure sensor value of the Main Unit before the pump down is started at 2.2kg/cm²g or below for air-conditioning and 1.0kg/cm²G or less for heating for three consecutive seconds. (Restarting operation is not possible, and an error displayed on the indoor unit.) |
| Cause of problem | <ul style="list-style-type: none"> Refrigerant leakage/fault in High Pressure sensor. |

1. Cause of problem



4-4-64 CCH Malfunction and Sump Sensor Miswiring Error

| | |
|----------------------|--|
| Outdoor Unit Display | E445 |
| Indoor Unit Display | - |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • CCH Connector PCB is not connected / Sump sensor compressor separated / Own problem of CCH |

1. Judgment Method

Tini = Sump temperature when entering the CH operation delay condition

Tlast= Sump temperature when maintaining CH operation delay for two hours

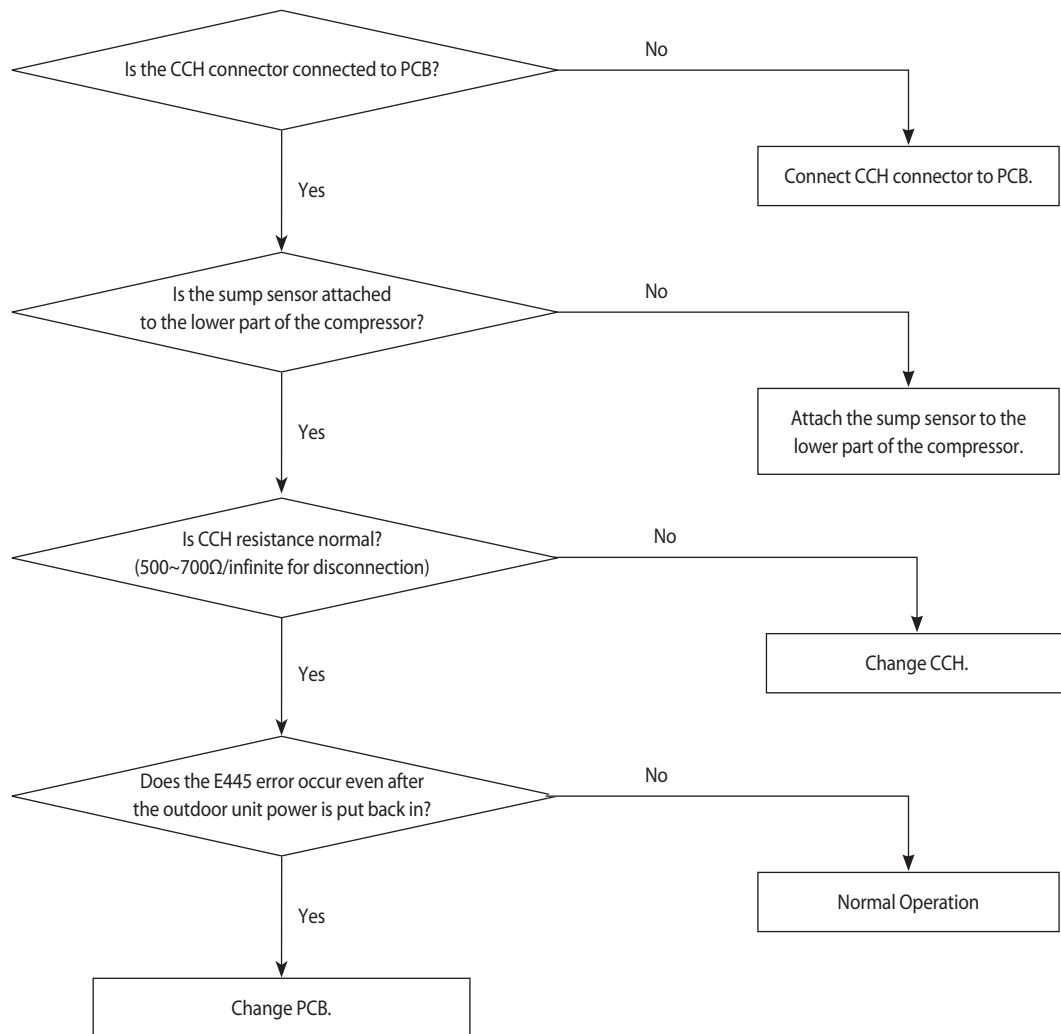
Outside Air Temperature Sensor Value: Outside air temperature when maintaining CH operation delay for two hours

$T_{last} - T_{ini} < 2^{\circ}\text{C}$

$T_{last} < \text{Outside Air Temperature Sensor Value} + 2^{\circ}\text{C}$

Outside Air Temperature Sensor Value $< 30^{\circ}\text{C}$

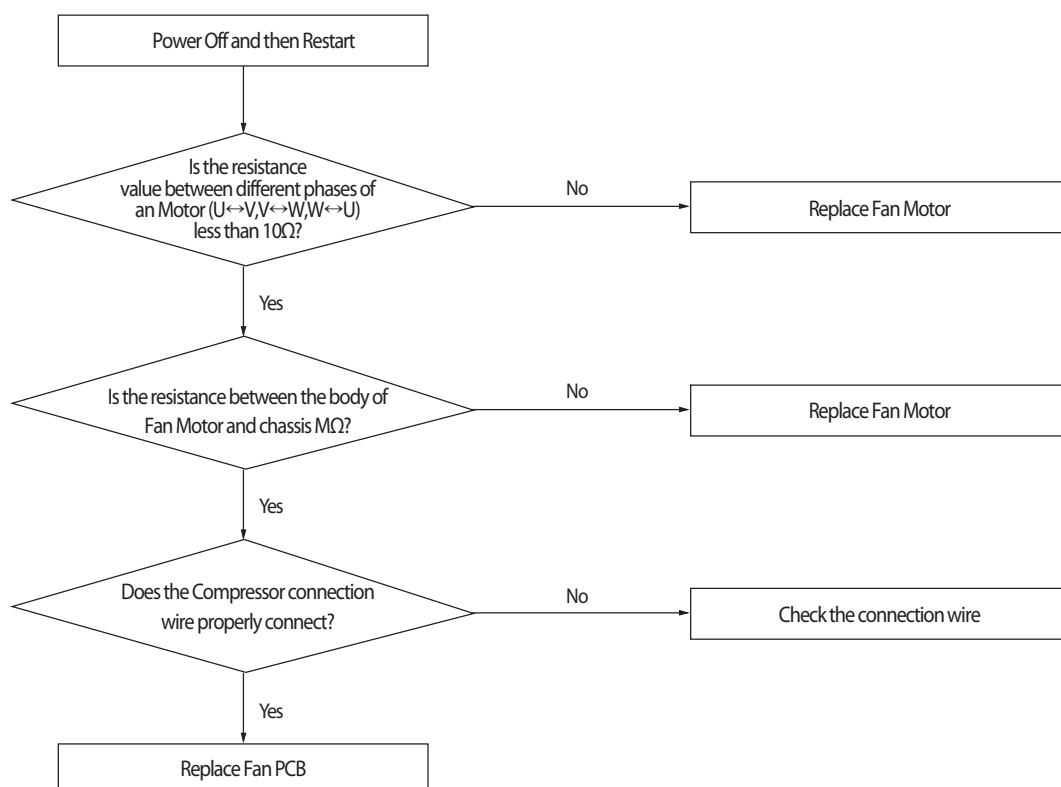
If , and are satisfied at the same time, then display E445.



4-4-65 Fan starting error

| | |
|----------------------|--|
| Outdoor unit display | E446 (FAN PCB(FAN1)) E346 (FAN PCB(FAN2)) |
| Judgment Method | <ul style="list-style-type: none"> Startup, and then if the speed increase is not normally. Detected by H/W or S/W |
| Cause of problem | <ul style="list-style-type: none"> Compressor connection error Defective Compressor Defective PCB |

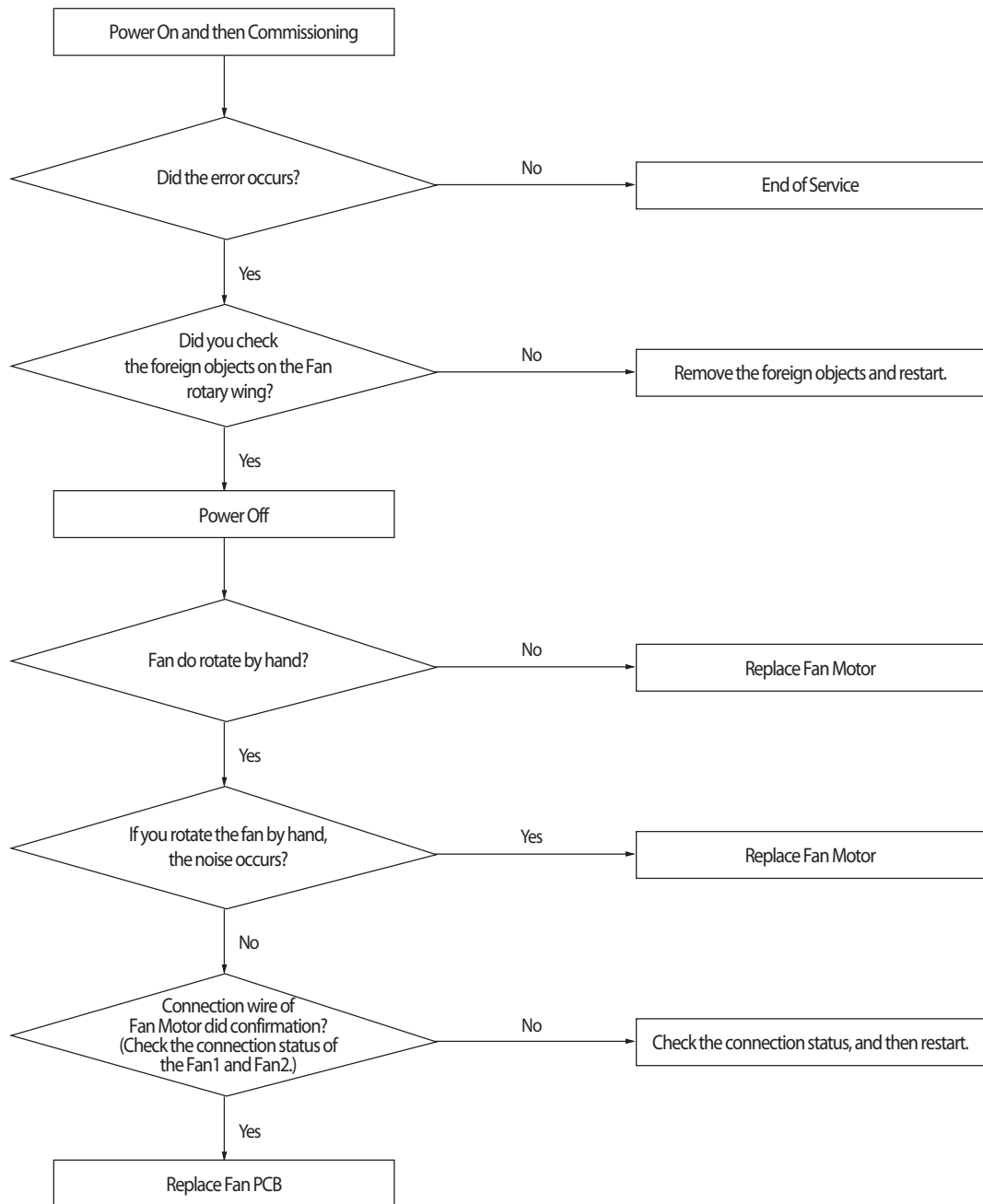
1. Cause of problem



4-4-66 Fan lock error

| | |
|----------------------|---|
| Outdoor unit display | E448 (FAN PCB(FAN1)) E348 (FAN PCB(FAN2)) |
| Judgment Method | · Is checked symptoms by phase current of Fan Motor. |
| Cause of problem | · Fan Motor connection error. · Defective Fan · Defective PCB |

1. Cause of problem



4-4-67 Momentary Blackout error

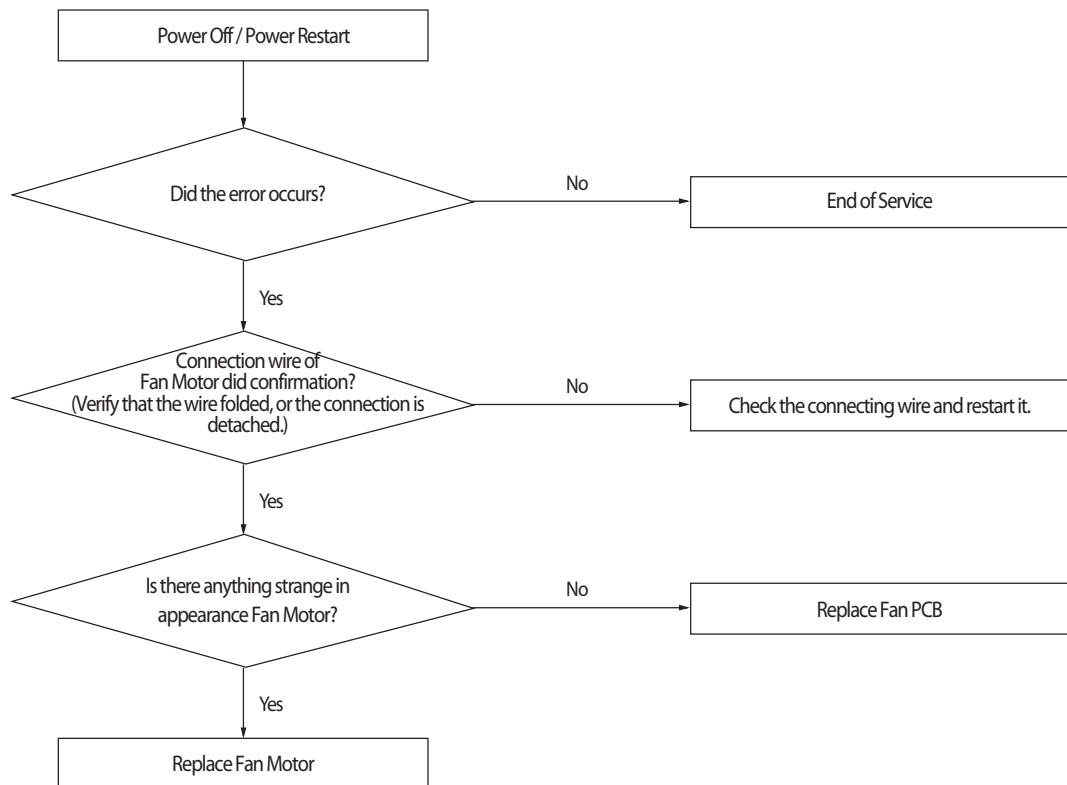
| | |
|----------------------|---|
| Outdoor unit display | E452 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Momentary stop of compressor due to momentary blackout. |
| Cause of problem | · Momentary stop of compressor due to momentary blackout. |

1. Precautions : Replace Hub PCB or Main Hub Connection wire.

4-4-68 Outdoor Fan Motor overheating

| | |
|----------------------|--|
| Outdoor unit display | E453 (FAN PCB(FAN1)) E353 (FAN PCB(FAN2)) |
| Judgment Method | · Overheating due to the internal sensor of the Fan Motor. |
| Cause of problem | <ul style="list-style-type: none"> · Defective connection wire · Defective Fan Motor · Defective PCB · Defective installation conditions |

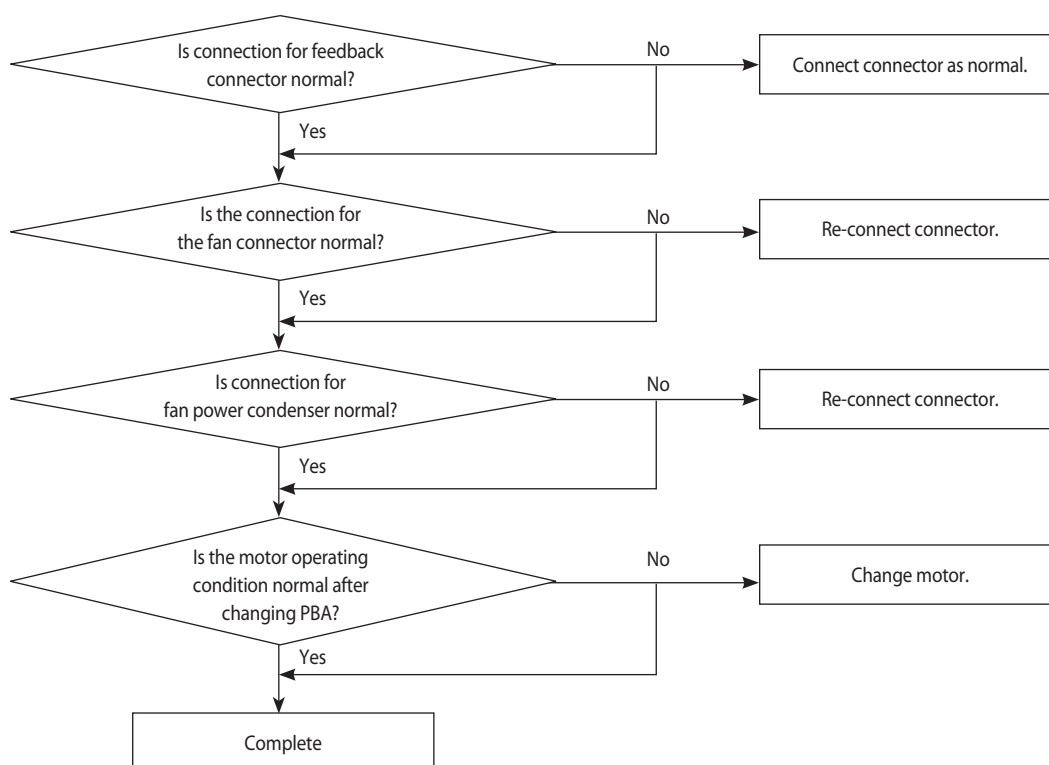
1. Cause of problem



4-4-69 Outdoor Unit Fan Motor RPM Error

| | |
|----------------------|---|
| Outdoor Unit Display | E454 |
| Indoor Unit Display | - |
| Judgment Method | • In case the number of the revolutions of the outdoor unit fan motor in motion is different by 100 rpm or more compared to the instructed value. |
| Special Cause | • Outdoor unit fan motor constrained or faulty of operation |

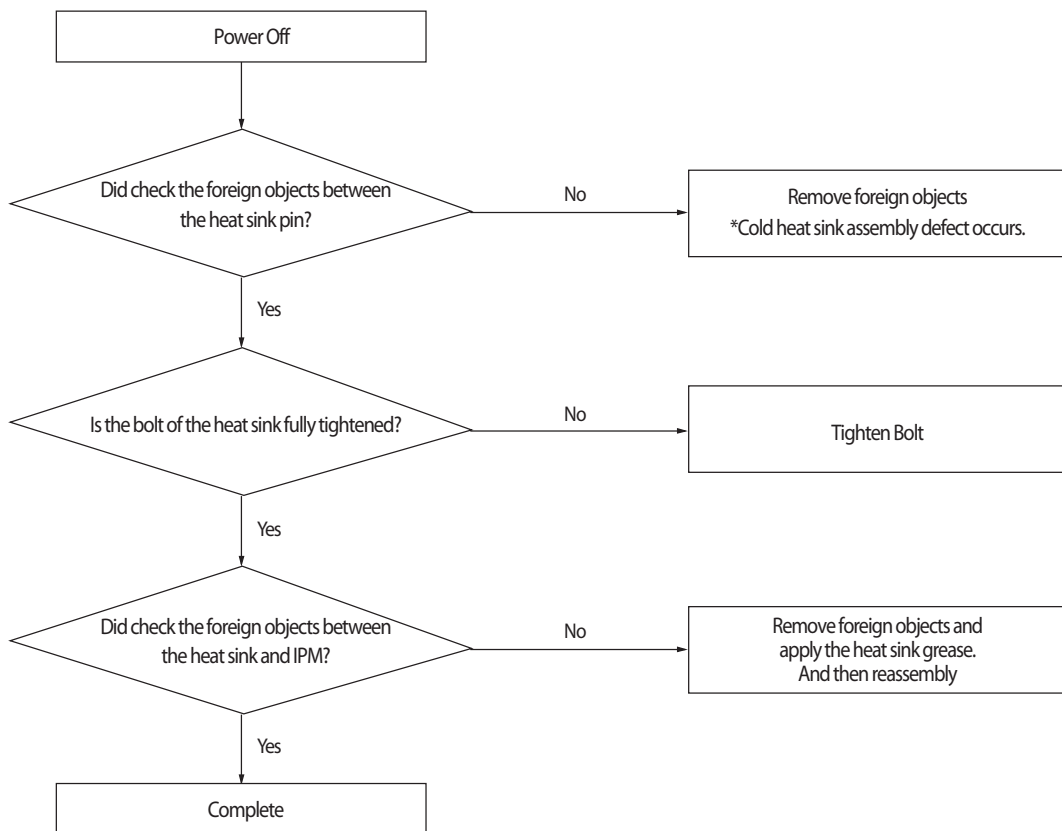
1. Inspection Method



4-4-70 Fan IPM Overheat error

| | |
|----------------------|--|
| Outdoor unit display | <i>E455</i> (FAN1 PCB) <i>E355</i> (FAN2 PCB) |
| Judgment Method | · IPM internal temperature more than 85°C (E455, E355) |
| Cause of problem | · Heat sink and IPM assembly defective. · Defective heat sink cooling |

1. Cause of problem



4-4-71 Over-Voltage Error of an Outdoor Fan Motor

| | |
|----------------------|---|
| Outdoor unit display | <i>E456</i> |
| Indoor unit display | - |
| Criteria | • When the current of an operating outdoor fan motor is more than 7A for 1 minute |
| Cause of problem | • Outdoor fan motor lock or defect • Occurs by abrupt start or overload |

1. How to check

- 1) Check if outdoor fan motor rotates or is locked
- 2) If it is not locked, the above error occurs due to overload and signals by abnormal operation, and it indicates the overload status.
Thus, it is not breakdown.
- 3) Need to check if there is a problem with fan load status

4-4-72 Counter-Rotation Error of an Outdoor Fan Motor

| | |
|----------------------|---|
| Outdoor unit display | <i>E457</i> |
| Indoor unit display | - |
| Criteria | • When the rotational direction of an outdoor fan motor is counter-clockwise before operating |
| Cause of problem | • Due to wind that can run the fan counter-wise |

1. How to diagnose

- 1) Check if the start instruction of outdoor unit's fan is counter-clockwise

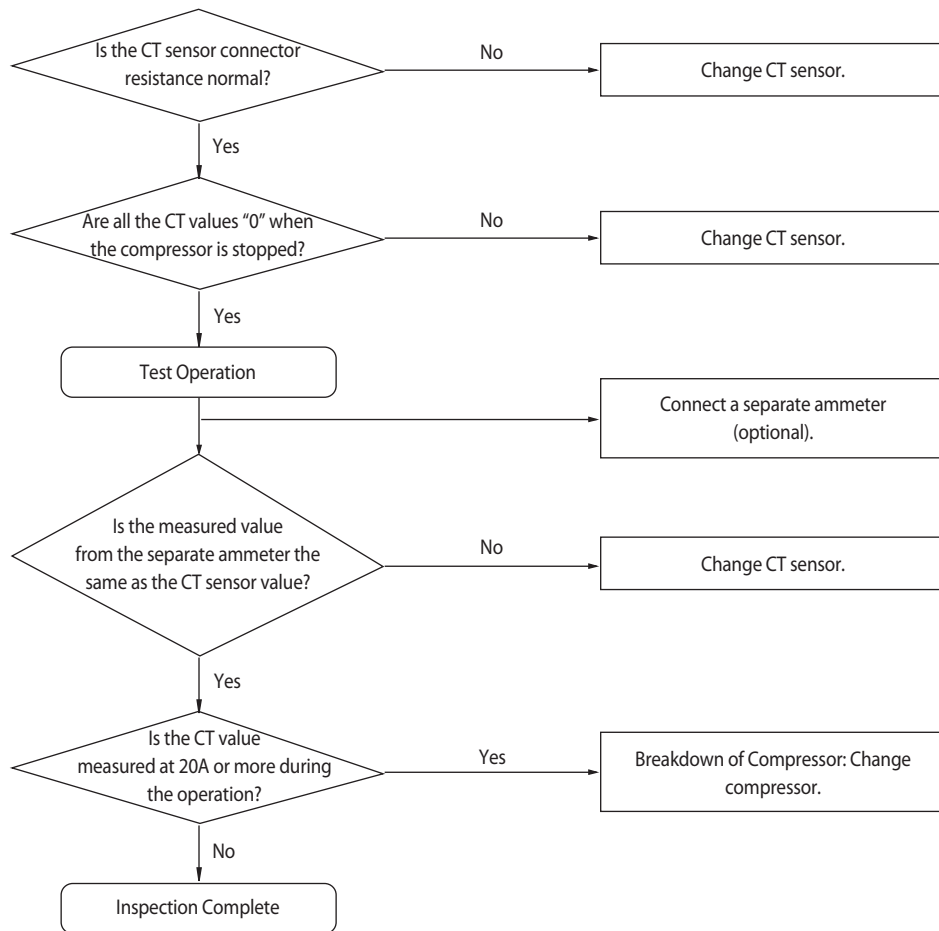
2. How to check

- 1) It is a signal to protect a motor by checking the operational condition of the outdoor unit's fan motor without power so as not to operate it in counter-clockwise condition.
- 2) Check if there is wind strong enough to force a fan to rotate counter-clockwise where the outdoor unit is installed.

4-4-73 E45B : Compressor Excess Current Error

| | |
|----------------------|---|
| Outdoor Unit Display | E45B |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Error displayed if the CT sensor value of the relevant compressor is 20A or more and is maintained for more than 3 seconds. |
| Special Cause | • Breakdown of compressor/Faulty CT sensor |

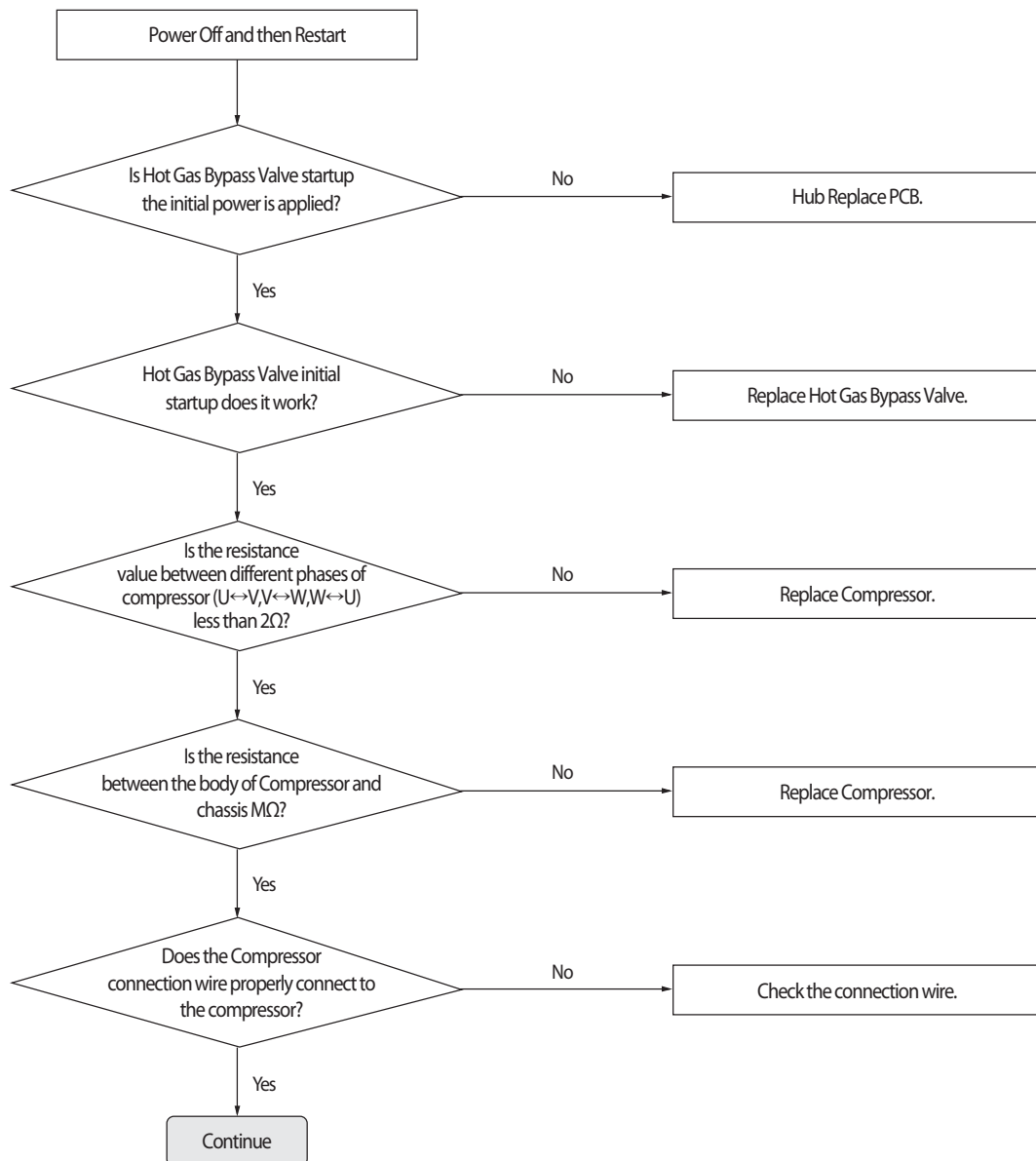
1. Inspection Method



4-4-74 Compressor starting error

| | |
|----------------------|---|
| Outdoor unit display | E46 1 (INVERTER1 PCB) E36 1 (INVERTER2 PCB) |
| Judgment Method | <ul style="list-style-type: none"> Startup, and then if the speed increase is not normally. Detected by H/W or S/W. |
| Cause of problem | <ul style="list-style-type: none"> Compressor connection error Defective Compressor Defective PCB |

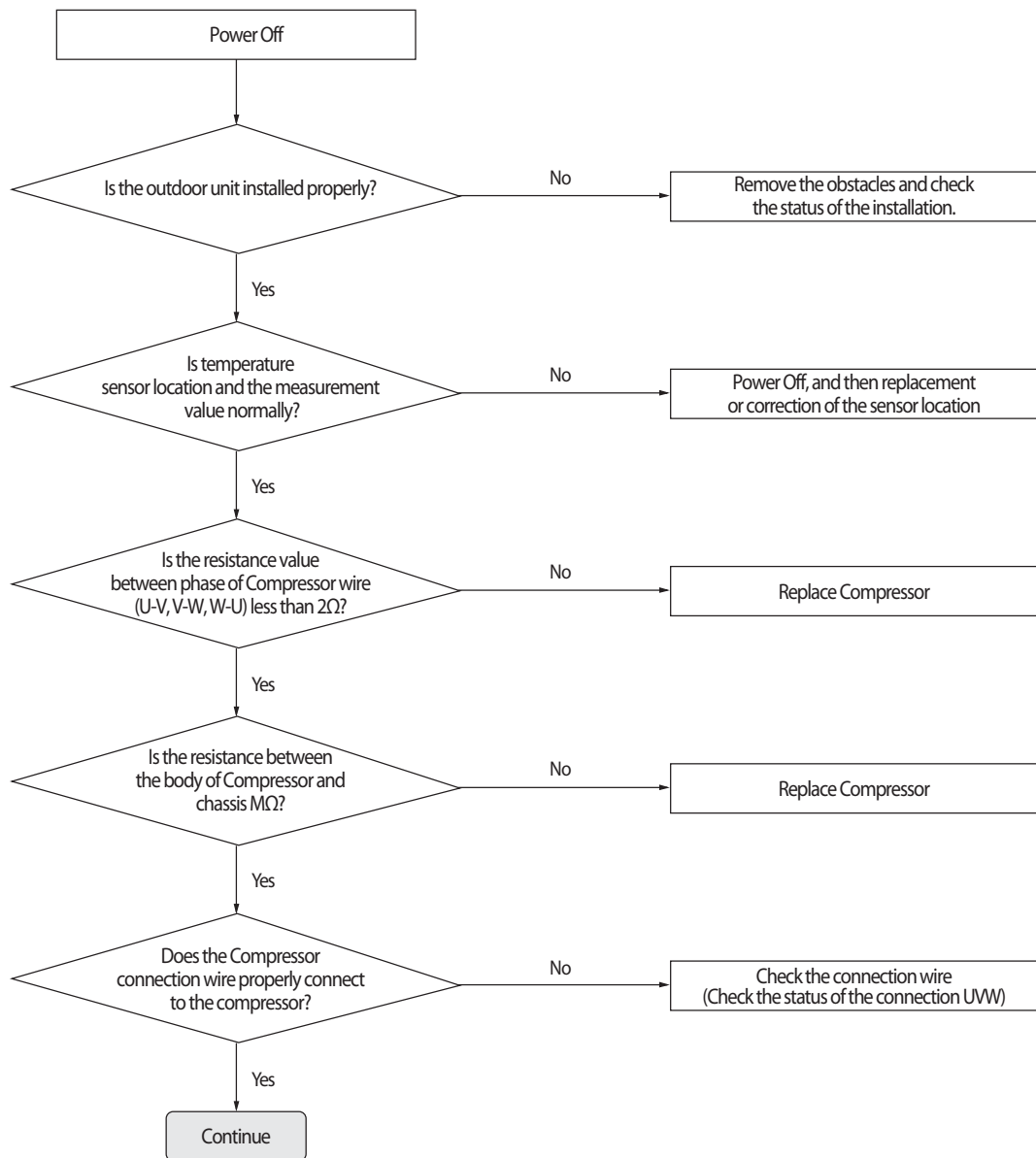
1. Cause of problem



4-4-75 Inverter Overcurrent error

| | | |
|----------------------|---|--|
| Outdoor unit display | <i>E464/E465</i> (INVERTER1 PCB) <i>E364/E365</i> (INVERTER2 PCB) | |
| Judgment Method | <ul style="list-style-type: none"> Will occur if the overcurrent flowing in the IPM. Detected by H/W or S/W | |
| Cause of problem | <ul style="list-style-type: none"> Installation defective Comp. defective PCB defective | <ul style="list-style-type: none"> Connection wire error Motor defective |

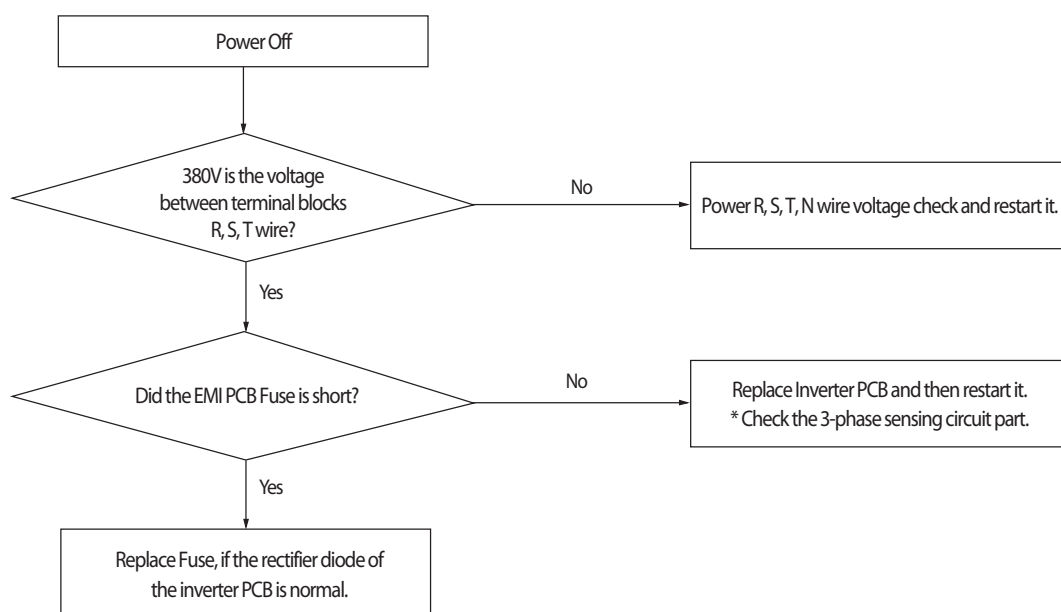
1. Cause of problem



4-4-76 Overvoltage / Low voltage error

| | |
|----------------------|---|
| Outdoor unit display | E466 (INVERTER1 PCB) E366 (INVERTER2 PCB) |
| Judgment Method | <ul style="list-style-type: none"> · N-phase wiring error and EMI Fuse short. · DC-Link Overvoltage / Low voltage occurs. |
| Cause of problem | <ul style="list-style-type: none"> · Check the input wiring · EMI Fuse short |

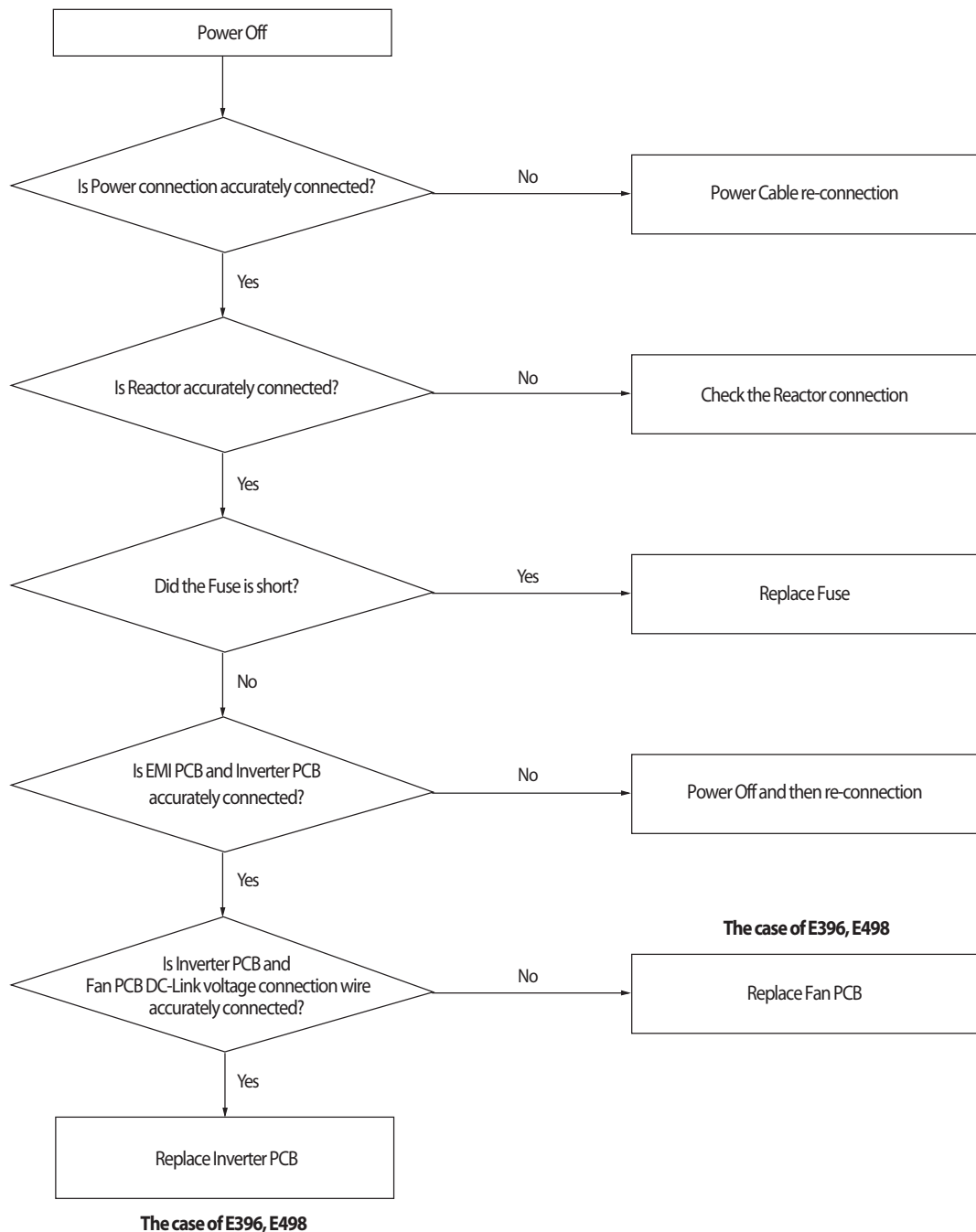
1. Cause of problem



4-4-77 DC Link voltage sensor error

| | |
|----------------------|---|
| Outdoor unit display | <i>E469</i> (INVERTER1 PCB) <i>E369</i> (INVERTER2 PCB) <i>E496</i> (OUTDOOR FAN 1 PCB) <i>E396</i> (OUTDOOR FAN 2 PCB) |
| Judgment Method | · DC voltage detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than |
| Cause of problem | <ul style="list-style-type: none"> · Input voltage defective · AC Power wiring error · Momentary Overvoltage / Low voltage occurs · PCB voltage sensing circuit defective |

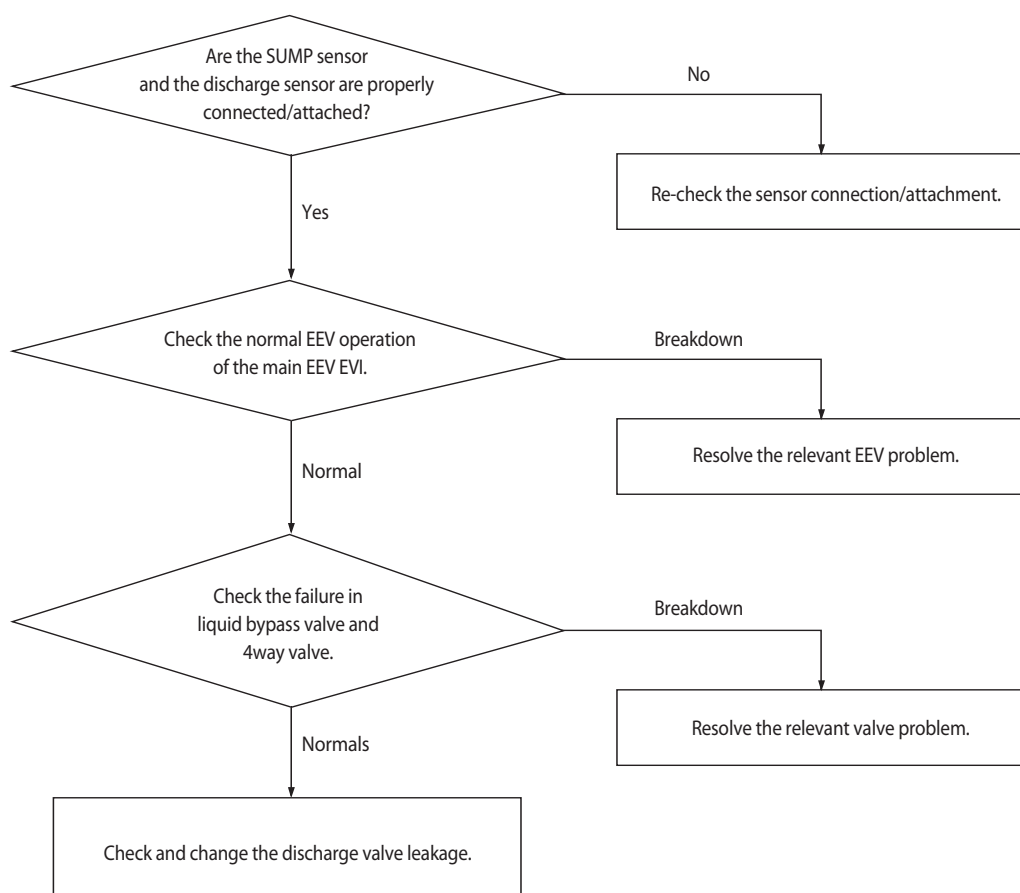
1. Cause of problem



4-4-78 Liquid Compression Prevention Control

| | |
|----------------------|---|
| Outdoor Unit Display | E477 |
| Indoor Unit Display | - |
| Judgment Method | • SUMP temperature decrease & DSH < 5°C 25 min. |
| Special Cause | • EVI EEV and super cooler, liquid bypass valve leakage, refrigerant overcharge, indoor unit EEV leakage, direct connection between indoor liquid pipe-gas pipe, faulty main EEV, and failure to operate compressor |

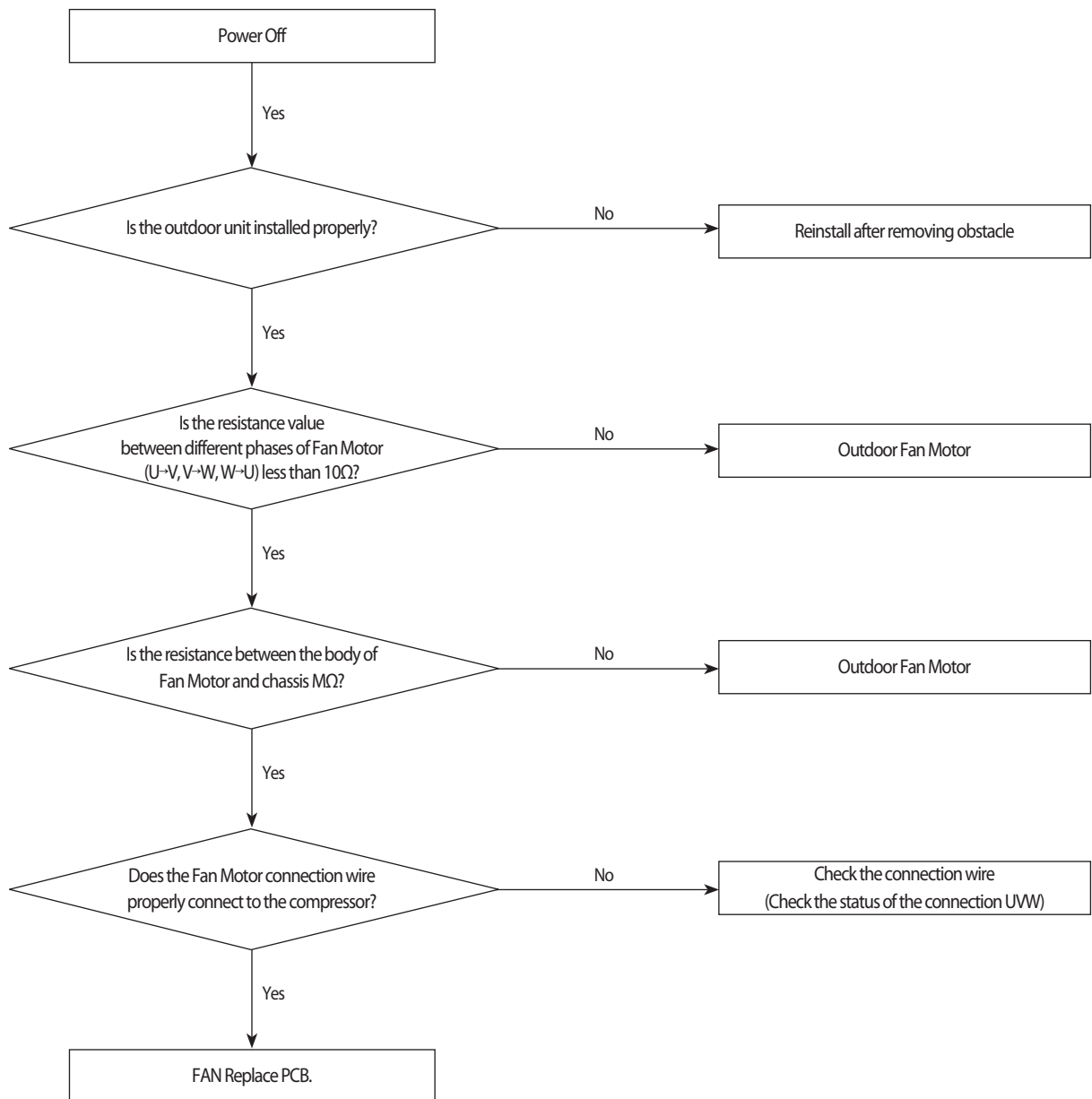
1. Inspection Method



4-4-79 Fan Motor Overcurrent error

| | | |
|----------------------|---|--|
| Outdoor unit display | <i>E478/E489</i> (FAN PCB(FAN1)) <i>E378/E389</i> (FAN PCB(FAN2)) | |
| Judgment Method | <ul style="list-style-type: none"> Occurs when overcurrent flows in the IPM. Detected by H/W or S/W | |
| Cause of problem | <ul style="list-style-type: none"> Installation error Defective Comp Defective PCB | <ul style="list-style-type: none"> Connector error Defective Motor |

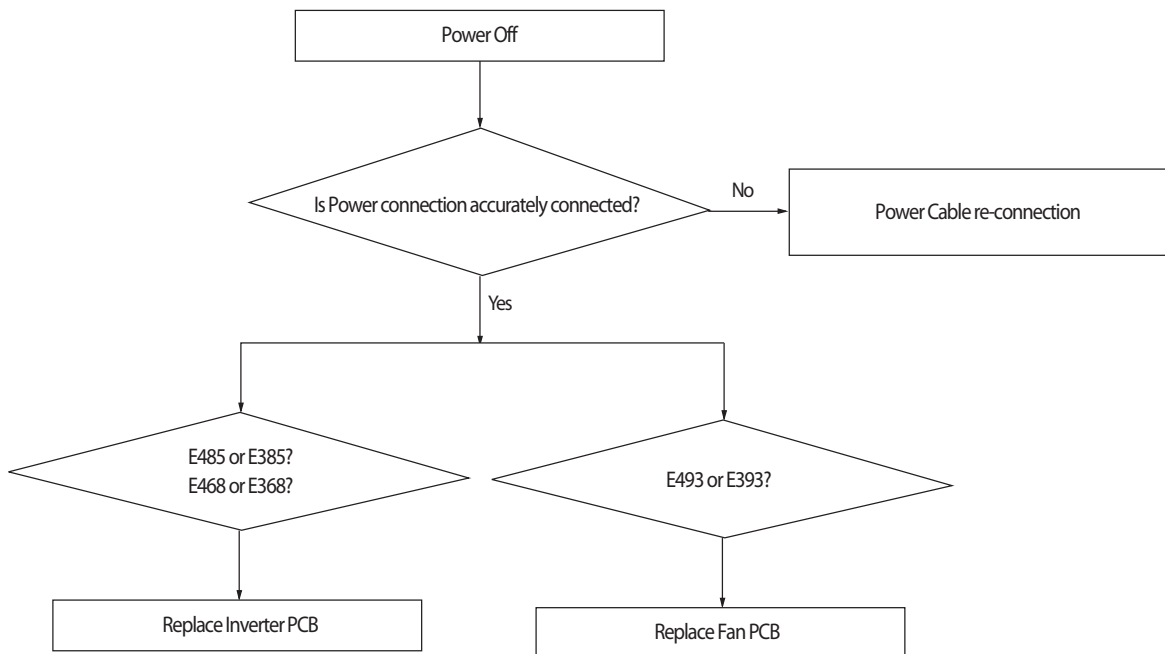
1. Cause of problem



4-4-80 Input / Output Current sensor error

| | |
|----------------------|---|
| Outdoor unit display | E485 INVERTER1 PCB(Input Current sensor) E385 INVERTER2 PCB(Input Current sensor) E468 INVERTER1 PCB(Output Current sensor) E368 INVERTER 2 PCB(Output Current sensor) E493 OUTDOOR FAN PCB (FAN1 Output Current sensor) E393 OUTDOOR FAN PCB (FAN2 Output Current sensor) |
| Judgment Method | <ul style="list-style-type: none"> · Sensor Output detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than |
| Cause of problem | <ul style="list-style-type: none"> · Input voltage defective · PCB voltage sensing circuit defective |

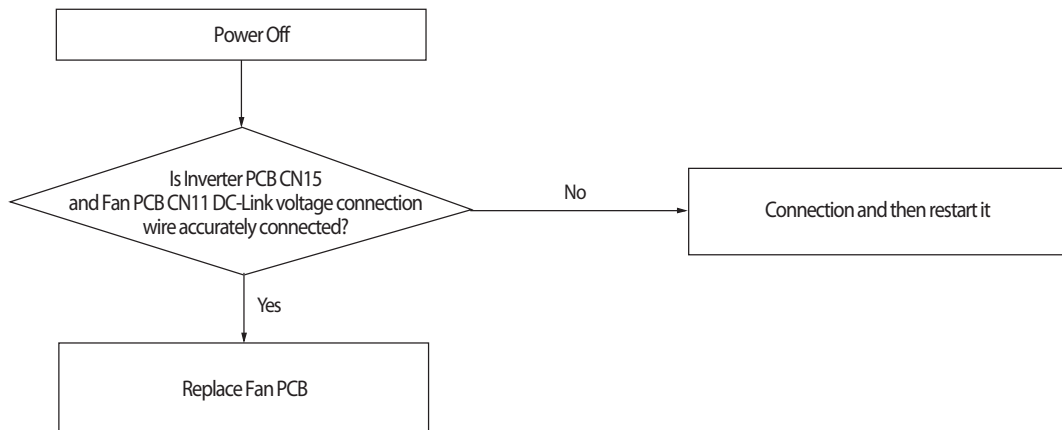
1. Cause of problem



4-4-81 Outdoor Fan PCB Overvoltage / Low voltage error

| | |
|----------------------|---|
| Outdoor unit display | E486 |
| Judgment Method | <ul style="list-style-type: none"> · N-phase wiring error and EMI Fuse short. · DC-Link Overvoltage / Low voltage occurs. |
| Cause of problem | <ul style="list-style-type: none"> · Check the input wiring · EMI Fuse short |

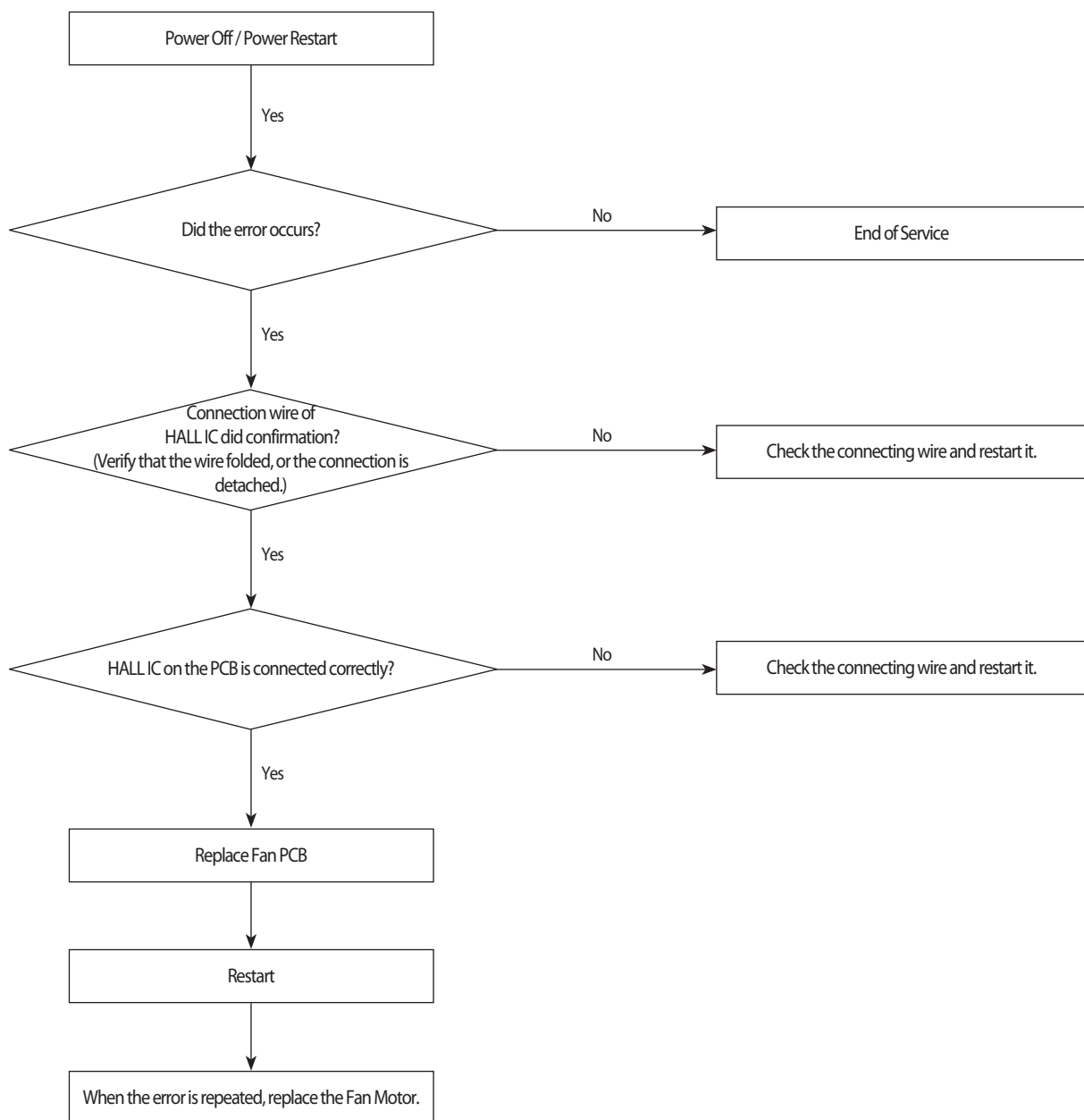
1. Cause of problem



4-4-82 Hall IC(Fan) error

| | |
|----------------------|---|
| Outdoor unit display | <i>E487</i> (FAN PCB(FAN1)) <i>E387</i> (FAN PCB(FAN2)) |
| Judgment Method | <ul style="list-style-type: none"> · Fan rotation defective or vibration and noise of the defective operation. · Hall IC there is no signal input. |
| Cause of problem | <ul style="list-style-type: none"> · Connection status error. · Hall IC wire disconnection. · Defective circuit parts and defective manufacturing. · Fan Motor defective. |

1. Cause of problem



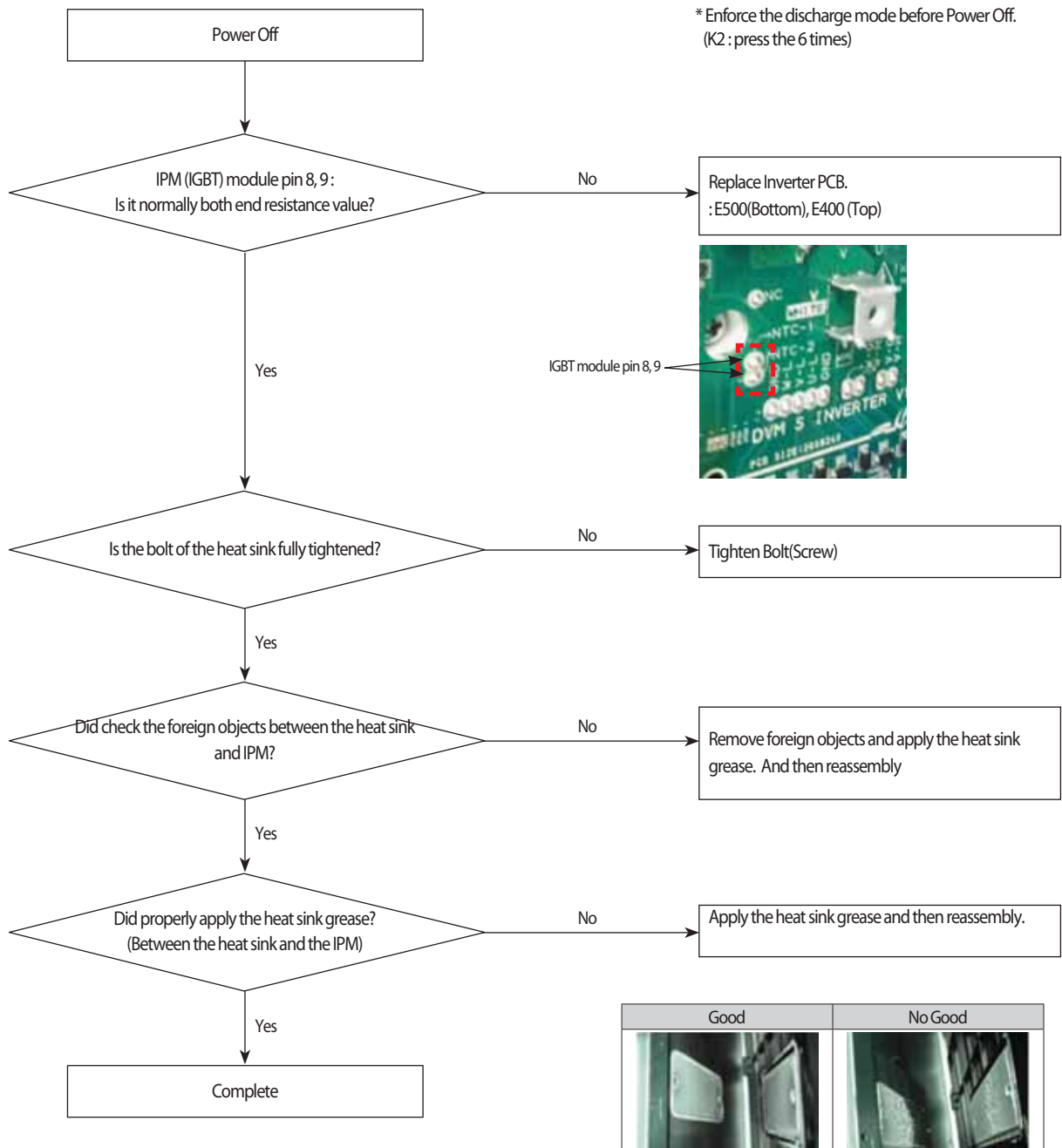
4-4-83 Inverter Overheat error

| | |
|----------------------|---|
| Outdoor unit display | E500 (INVERTER1 PCB) E400 (INVERTER2 PCB) |
| Judgment Method | · IGBT module internal temperature : 105°C more than (E500, E400) |
| Cause of problem | · Cooling Pin and the IGBT junction part assembly defective. · Refrigerant cooling heat sink and refrigerant piping assembly defective. · Assembled bolt defective. |

Both end resistance values of IGBT module pin(8, 9 pin)

| Temperature [°C] | NTC [ohm] | AD [V] | Temperature [°C] | NTC [ohm] | AD [V] |
|------------------|-----------|--------|------------------|-----------|--------|
| 10 | 9000 | 2.58 | 100 | 500 | 0.55 |
| 20 | 6000 | 2.33 | 105 | 450 | 0.51 |
| 30 | 4000 | 2.03 | 110 | 380 | 0.44 |
| 40 | 3000 | 1.80 | 120 | 300 | 0.35 |
| 50 | 2000 | 1.47 | 130 | 250 | 0.30 |
| 60 | 1600 | 1.29 | 140 | 200 | 0.25 |
| 70 | 1200 | 1.07 | | | |
| 80 | 750 | 0.76 | | | |
| 90 | 650 | 0.68 | | | |

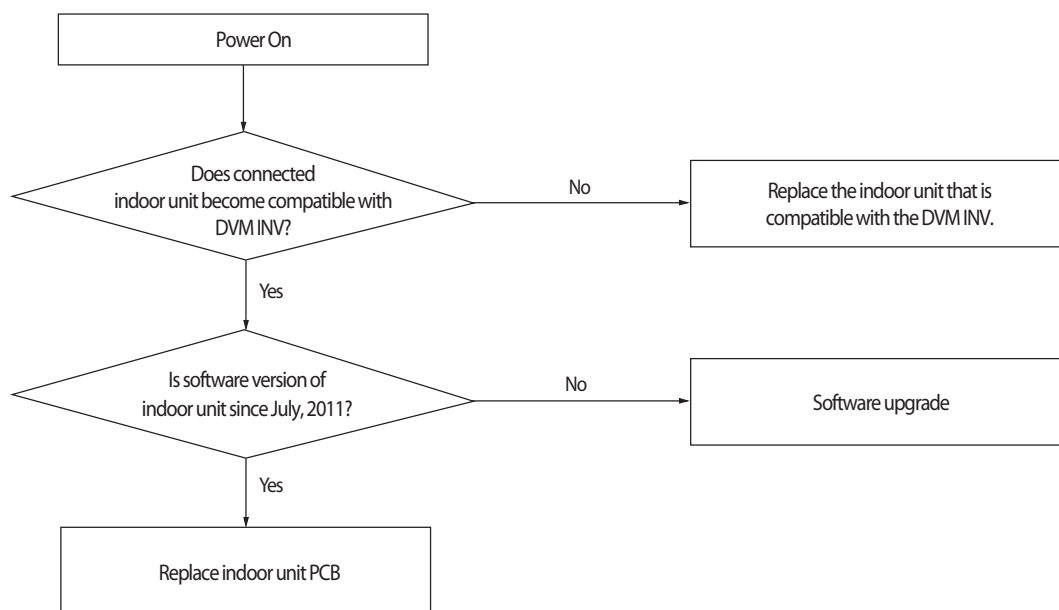
1. Cause of problem



4-4-84 Model mismatching of Indoor unit.

| | |
|----------------------|--|
| Outdoor unit display | E563 |
| Judgment Method | <ul style="list-style-type: none"> · Prior to July 2011, if the software version of the indoor unit. · Prior to July 2011, if the software version of the indoor unit. |
| Cause of problem | <ul style="list-style-type: none"> · Check the software version of the indoor unit. · Check whether the support of the indoor unit. |

1. Cause of problem



4-4-85 Breakdown of an EEV(1st)

1. How to diagnose

Detect only on cooling operation. (No detection during heating operation.)

During cooling operation, the temperature of the inlet or outlet ducts of heat exchanger is kept lower than 0°C for more than 20 minutes without cessation

2. How to check

1) Check if the wire of an electronic expansion valve is correctly connected to the PCB of indoor unit.

2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.

3) Check if there is any rust on the surface of the coil of an electronic expansion valve with the naked eye, and then check the resistance between each terminal to find any wire breaking or short circuit.

4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.

- In case of closure problem, operate the indoor unit in which the error has occurred.

- In case of opening problem, please do not operate the indoor unit in which the error has occurred.

5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.

- As an electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please make sure to check the above items before replacement.

4-4-86 Breakdown of an EEV closure

1. How to diagnose

1) During cooling operation (It must satisfy each of the following conditions for over 20minutes.)

| | |
|---|-----------------------|
| Tair in - Teva in in $\geq 4^{\circ}\text{C}$ | OK |
| Tair in - Teva out in $\geq 4^{\circ}\text{C}$ | OK |
| Tcond, out - Tair, out $> 3^{\circ}\text{C}$ | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | EEV closure breakdown |

2) During heating operation (It must satisfy each of the following conditions for over 20minutes.)

- When more than 2 indoor units are on Thermo On heating operating.
- When average high pressure is over $25 \text{ kg/cm}^2\text{G}$
- 5 minutes after finishing Safety Start.
- Keep indoor units' $T(\text{Eva_IN}) < T(\text{Room}) + 3^{\circ}\text{C}$ and $T(\text{Eva_Out}) < T(\text{Room}) + 3^{\circ}\text{C}$ condition for more than five minutes.

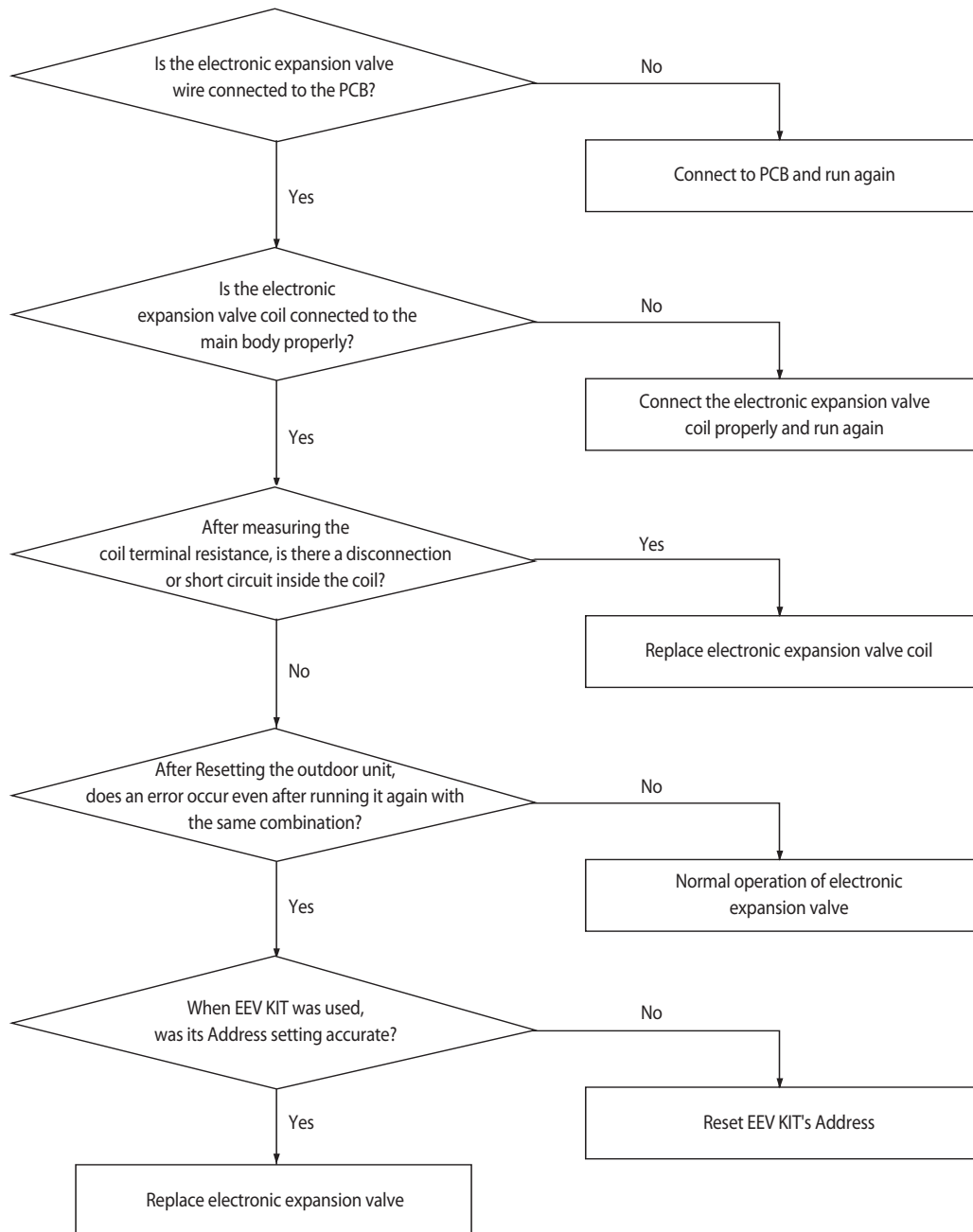
2. How to check

- 1) Check if the wire of an electronic expansion valve is correctly connected to the PCB of indoor unit.
- 2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.
- 3) Check if there is any rust on the surface of the coil of an electronic expansion valve with the naked eye, and then check the resistance between each terminal to find any wire breaking or short circuit.
- 4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.
 - In case of closure problem, operate the indoor unit in which the error has occurred.
 - In case of opening problem, please do not operate the indoor unit in which the error has occurred.
- 5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.
 - As an electronic expansion valve replacement is tricky work that requires collecting refrigerant in all systems, please make sure to check the above items before replacement.

4-4-87 Electronic expansion valve closing malfunction (2nd stage)

| | |
|----------------------|---|
| Outdoor unit display | 1 st stage inspection: <i>P702</i> (only displays on outdoor unit) 2 nd stage inspection: <i>E 152</i> ↔ <i>A</i> ^{x x x} (x x x: error occurred) |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Criteria | • Please refer to determining method below |
| Cause of problem | • Faulty indoor unit electronic expansion valve action (valve will not open) • Address setup error in indoor unit (RAC) using EEV KIT" |

1. Inspection Method



4-4-88 Electronic expansion valve opening malfunction (2nd stage)

| | |
|----------------------|---|
| Outdoor unit display | 1 st stage inspection: <i>P703</i> (only displays on outdoor unit) 2 nd stage inspection: <i>E151</i> ↔ <i>A</i> ^{x x x} (x x x: indoor unit address of where error occurred) |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Criteria | • Please refer to determining method below |
| Cause of problem | • Faulty indoor unit electronic expansion valve action (refrigerant will leak into the stopped indoor unit) • Address setup error in indoor unit (RAC) using EEV KIT |

1. Inspection Method

