



Si10-417\_C

# Pocket Manual

**Service Diagnosis  
SPLIT & MULTI**



# Service Diagnosis

## SPLIT & MULTI

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# 1. Troubleshooting with LED

## 1.1 Indoor Unit

### 1.1.1 Operation Lamp

The operation lamp (or the multi-colored indicator lamp) blinks when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated, or when the thermistor malfunctions.
2. When a signal transmission error occurs between the indoor and outdoor units.

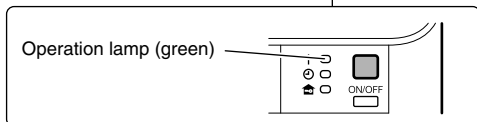
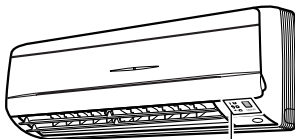
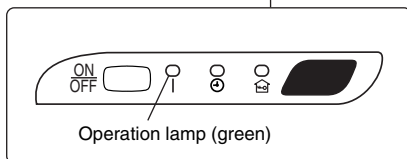
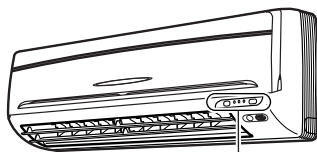
In either case, conduct the diagnostic procedure.

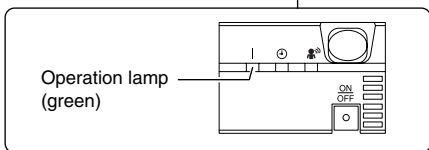
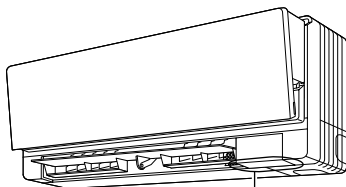
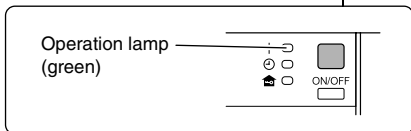
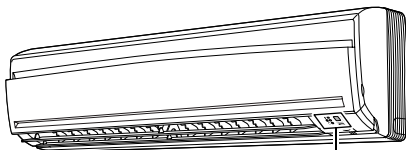
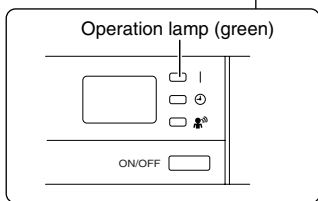
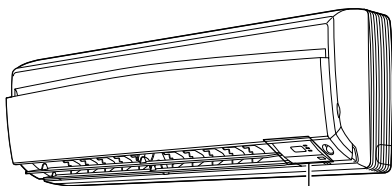
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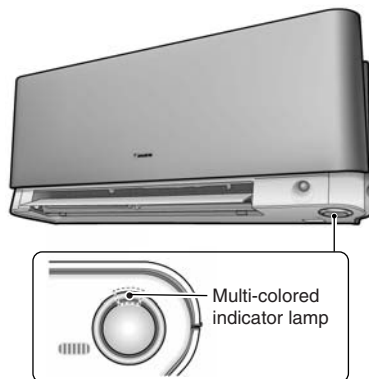
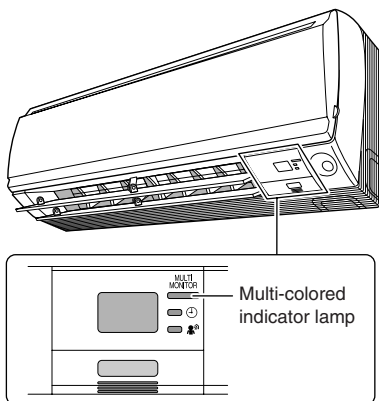
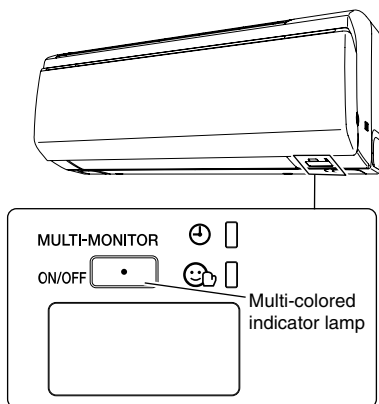
### Wall Mounted Type

Wall mounted type models have a display on the lower right side.

The following illustrations are examples.

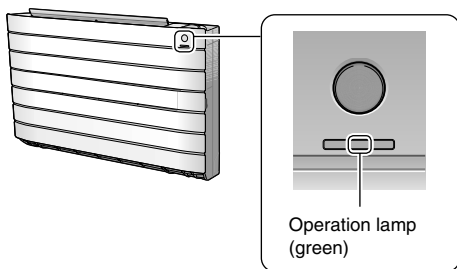
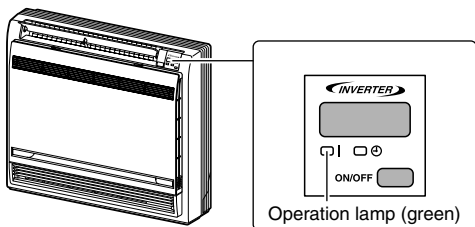
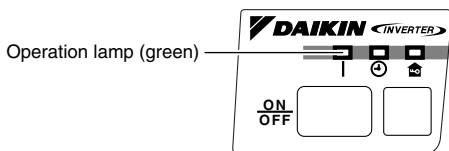






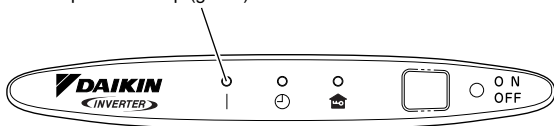


## Floor Standing Type



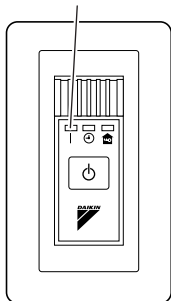
## Floor Ceiling Suspended Dual Type

Operation lamp (green)



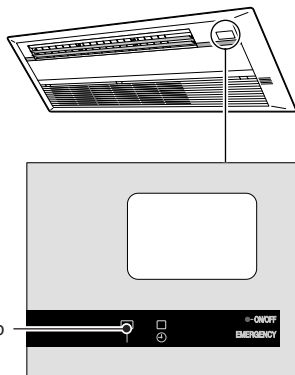
## Duct Connected Type

Operation lamp (green)

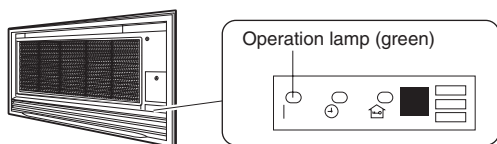


## Ceiling Mounted Cassette Type

Operation lamp (green)



## Wall Built-in Type



### 1.1.2 Service Monitor

The indoor unit has one green LED (LED A) on the control PCB. When the microcomputer works in order, the LED A blinks.

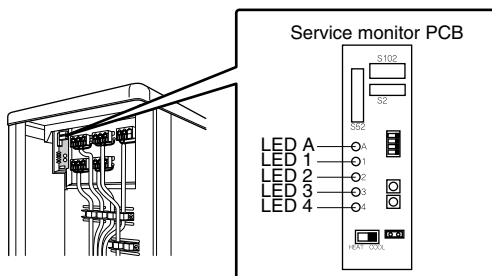
## 1.2 Outdoor Unit

### Pair

The outdoor unit has one green LED (LED A) on the main PCB. When the microcomputer works in order, the LED A blinks.

### Multi

**Ex: 4-room multi outdoor unit**



There are a green LED (LED A) and red LEDs on the outdoor unit PCB. The LED A indicates microcomputer operation condition. In normal condition, the LED A is blinking and the other LEDs are OFF.

Even after the error is canceled and the unit operates in normal condition, the LED indication remains.

## 2. Troubleshooting by Symptoms

### 2.1 Air conditioner does not run.

#### Supposed Causes

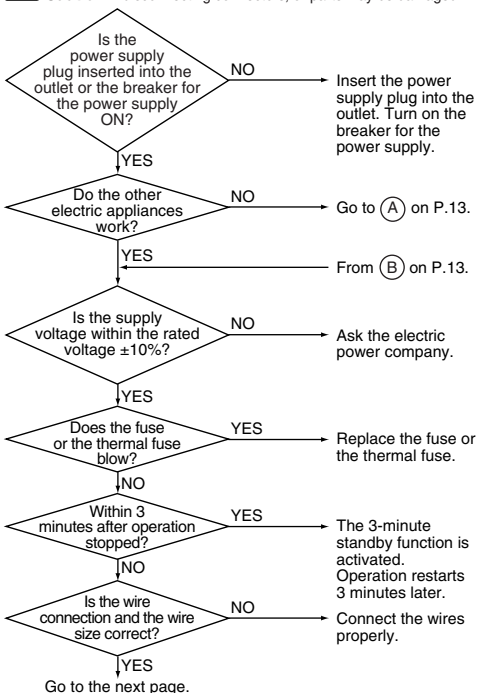
- Power supply is OFF.
- Improper power supply voltage
- Improper connection of wire
- Incorrect combination of indoor unit and outdoor unit
- Battery shortage of remote controller
- Invalid address setting
- Protection device works  
(dirty air filter, refrigerant shortage, overfilling, mixed air, etc.)
- Transmission error between indoor unit and outdoor unit  
(Defective outdoor unit PCB)

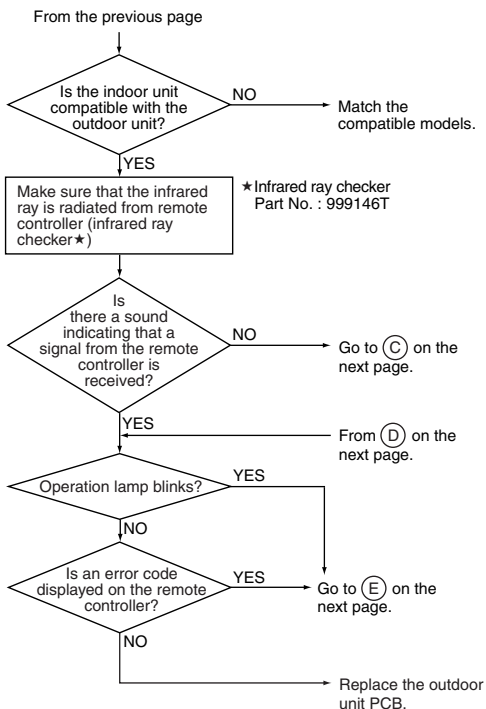
#### Troubleshooting



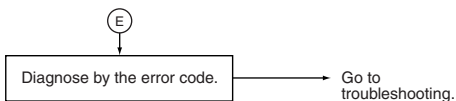
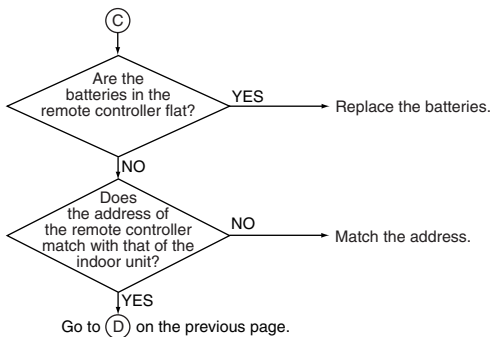
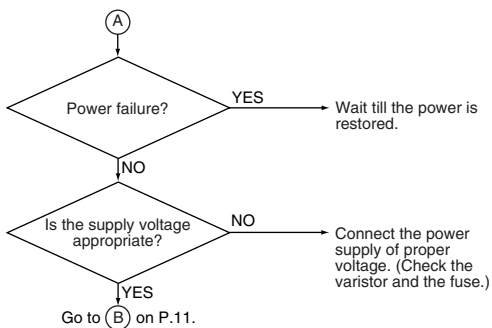
#### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





(R15545)



(R15584)

## 2.2 Air conditioner runs but does not cool (heat) the room.

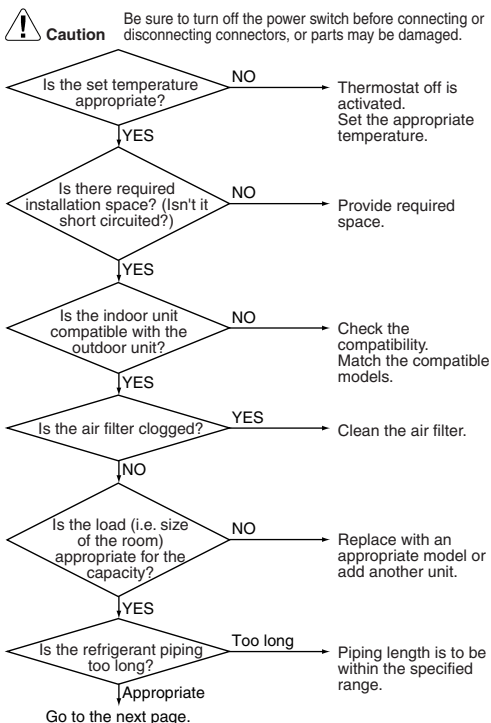
**Supposed Causes**

- Improper setting for temperature
- Incorrect combination of indoor unit and outdoor unit
- Clogged air filter
- Insufficient power
- Refrigerant piping is too long
- Defective field piping (squeezed, etc.)

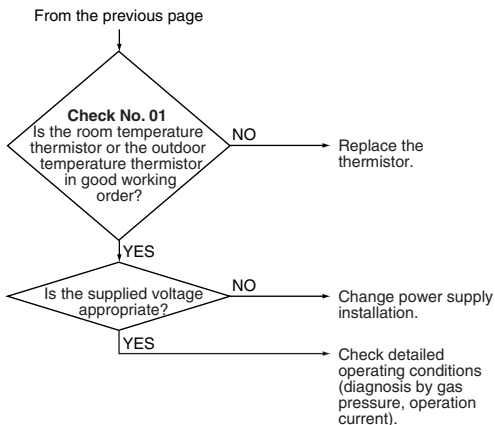
**Trouble-shooting**



**Check No.01**  
Refer to P.227



(R15546)



(R15546)

**Warning:**

When the air conditioner does not cool or heat the room, refrigerant leakage is considered to be one of the reasons.

Make sure that there is no refrigerant leakage or breaks due to over tightened flare part.

(Though the refrigerant is harmless, but it can generate toxic gases when it leaks into room and contacts flames, such as fan and other heaters, stoves, and ranges. In case of leakage, ventilate the room immediately.)



## 2.3 When operation starts, safety breaker works.

---

### Supposed Causes

- Insufficient capacity of safety breaker
- Earth leakage breaker is too sensitive.
- Not exclusive circuit
- The supply voltage is not within rated voltage  $\pm 10\%$ .
- The size of connecting wire is thin.
- Air is mixed.
- Overfilling of refrigerant
- Defective outdoor unit PCB (short circuit)

## Trouble-shooting



Check No.20

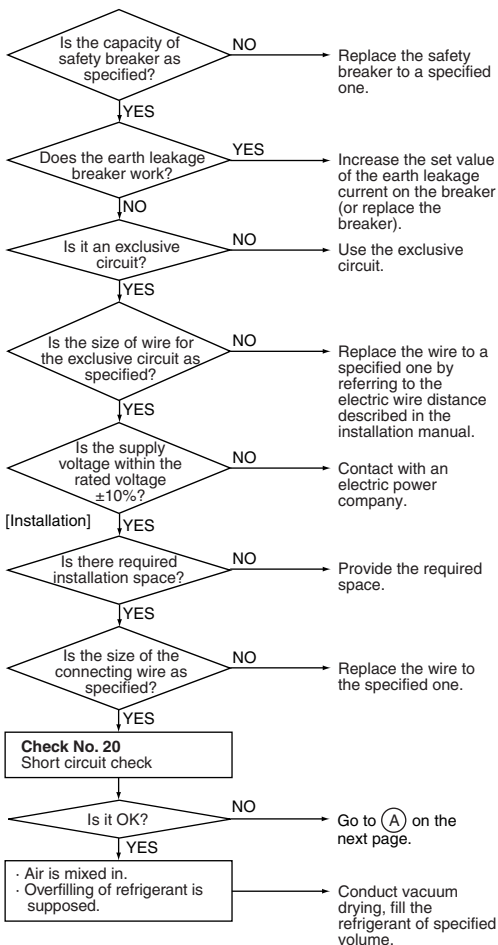
Refer to  
P.250



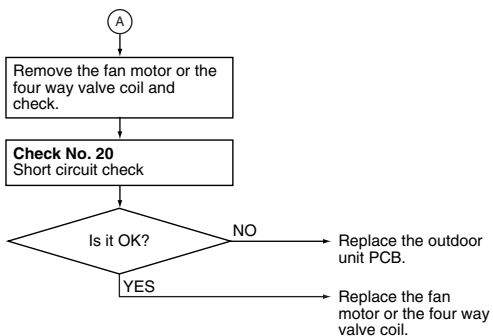
### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

[Power supply]



(R15547)



(R15548)

## 2.4 Air conditioner makes big noise and vibration.

### Supposed Causes

- Refrigerant piping is too short.
- Mounting wall is too thin.
- Insufficient vibration prevention measures
- Deformation of the unit
- Improper quantity of refrigerant

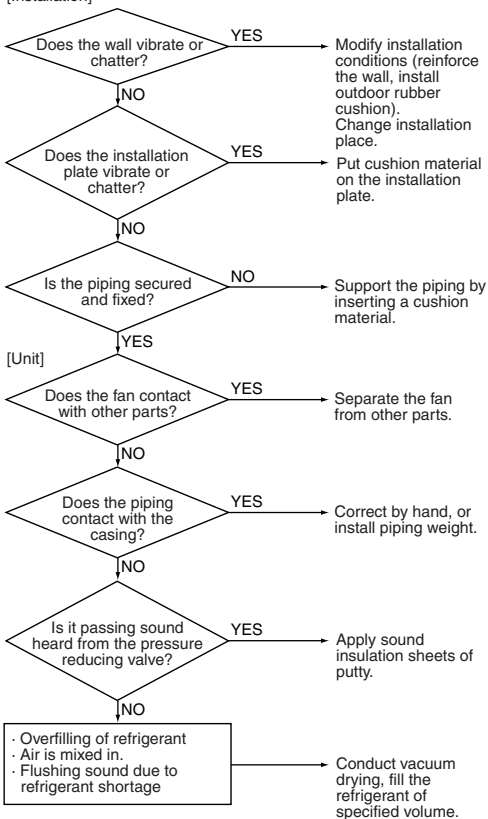
### Trouble-shooting



#### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

[Installation]



(R9433)

## 2.5 Air is not humidified enough. (for humidifying type unit)

### Supposed Causes

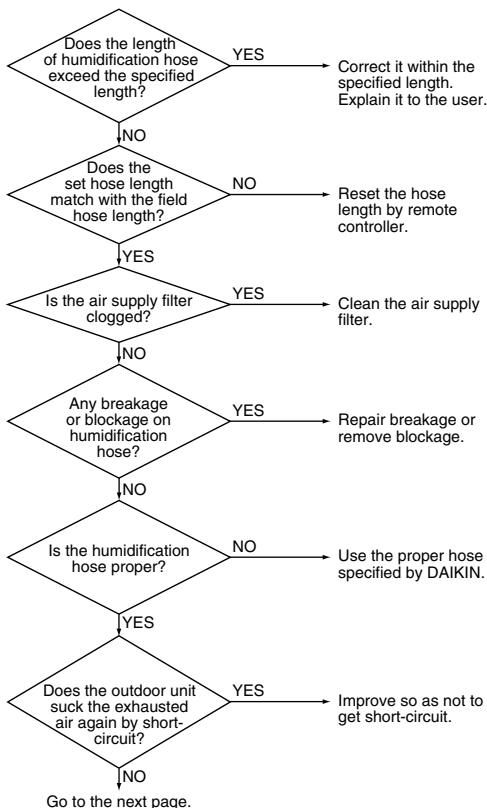
- Hose length is not set.
- Improper setting for hose length
- Air is short-circuited at outdoor unit.
- Clogged air supply filter
- Insufficient heat insulation of duct
- Indoor ventilation is made too often.
- Ceiling is very high.

### Trouble-shooting

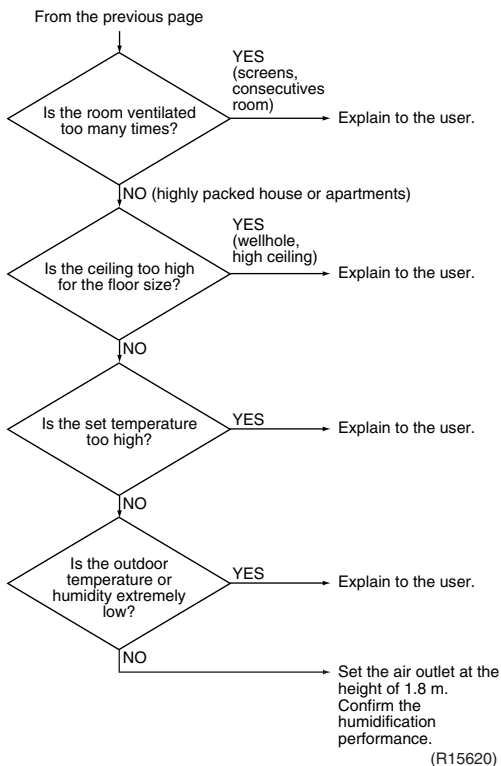


#### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15549)




## 3. Service Check Function

You can find the error code with the remote controller by 2 methods.

For ARC447A1, A2, A3, Refer to the page 44.

### 3.1 Check Method 1

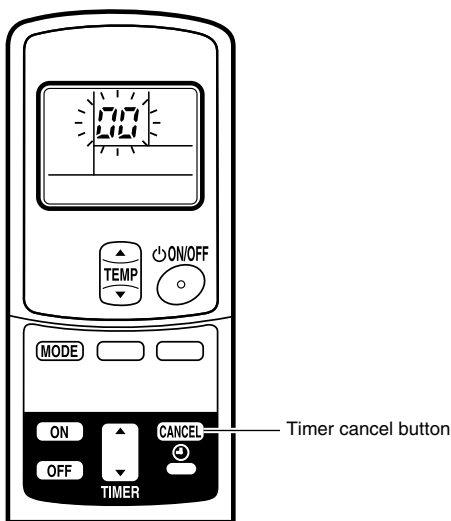
1. When the timer cancel button is held down for 5 seconds,  indication is displayed on the temperature display screen.
2. Press the timer cancel button repeatedly until a long beep sounds.
  - The code indication changes in the sequence shown in page 27 ~ 32.



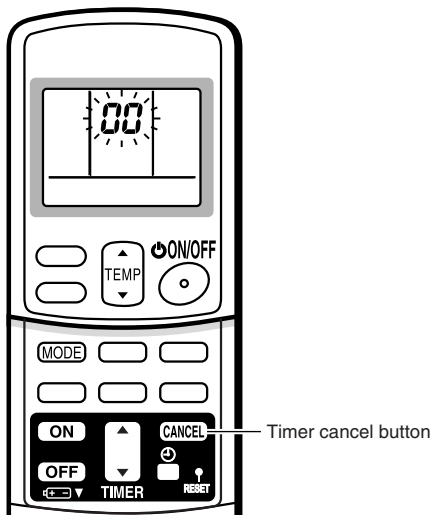
- Note:**
1. A short beep or two consecutive beeps indicate non-corresponding codes.
  2. To return to the normal mode, hold the timer cancel button down for 5 seconds. When the remote controller is left untouched for 60 seconds, it also returns to the normal mode.
  3. Not all the error codes are displayed. When you cannot find the error code, try the check method 2. (→ Refer to page 33.)

#### 3.1.1 Timer Cancel Button

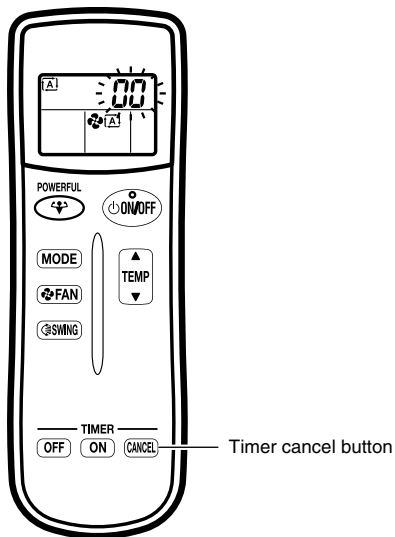
##### ARC423 Series



## ARC433 Series



## ARC445 Series



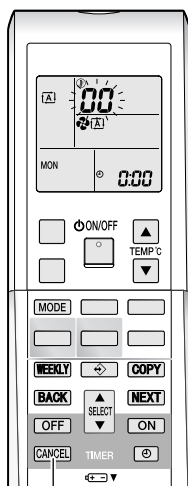
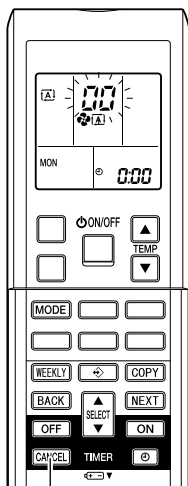


ARC447A4



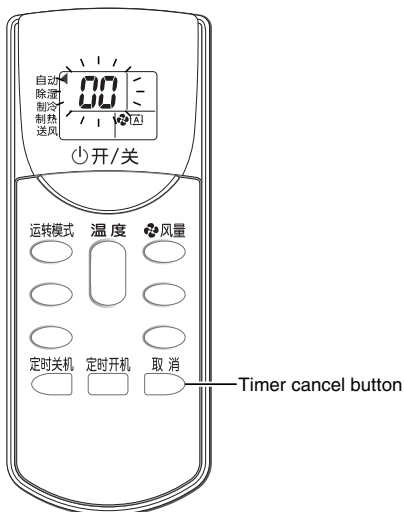
Timer cancel button

ARC452 Series

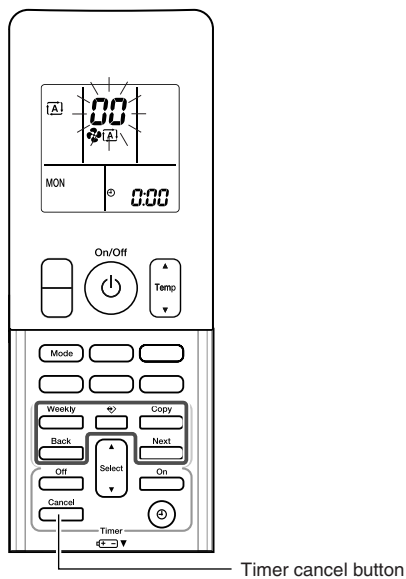


Timer cancel button

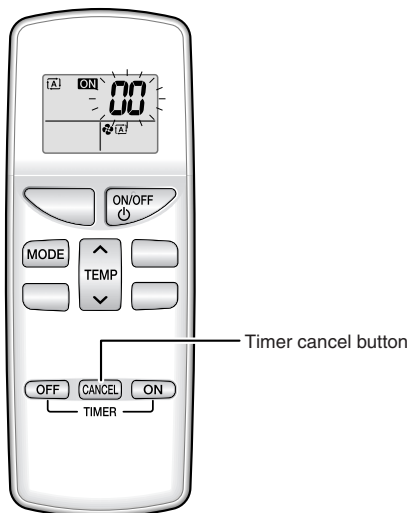
## ARC455 Series



## ARC466 Series



## ARC470 Series



### 3.1.2 Order of Error Codes

#### Pattern 1

No.	Code	No.	Code
1	<b>00</b>	18	<b>C5</b>
2	<b>U4</b>	19	<b>H9</b>
3	<b>F3</b>	20	<b>J6</b>
4	<b>E6</b>	21	<b>UA</b>
5	<b>L5</b>	22	<b>A5</b>
6	<b>A6</b>	23	<b>H0</b>
7	<b>E5</b>	24	<b>E1</b>
8	<b>F6</b>	25	<b>P4</b>
9	<b>C9</b>	26	<b>L3</b>
10	<b>U0</b>	27	<b>L4</b>
11	<b>E7</b>	28	<b>H6</b>
12	<b>C7</b>	29	<b>H7</b>
13	<b>H8</b>	30	<b>U2</b>
14	<b>J3</b>	31	<b>UH</b>
15	<b>A3</b>	32	<b>EA</b>
16	<b>A1</b>	33	<b>AH</b>
17	<b>C4</b>		

#### Applicable Model

ARC423 series	ARC433A8	ARC433A23
ARC433A1	ARC433A11	ARC433A24
ARC433B1	ARC433A12	ARC433A25
ARC433A2	ARC433A13	ARC433A26
ARC433B2	ARC433A14	ARC433A27
ARC433A3	ARC433A15	ARC433A28
ARC433A4	ARC433A17	ARC433A31
ARC433A5	ARC433A18	ARC433A32
ARC433A6	ARC433A21	ARC433A33
ARC433A7	ARC433A22	ARC433A34

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ARC433A35	ARC433A76
ARC433A36	ARC433B76
ARC433A37	ARC433A81
ARC433B37	ARC433A82
ARC433A38	ARC433A83
ARC433B38	ARC433A94
ARC433A39	ARC433A95
ARC433A40	
ARC433A42	
ARC433B42	
ARC433A51	
ARC433B51	
ARC433A53	
ARC433B53	
ARC433A55	
ARC433A59	
ARC433A60	
ARC433A63	
ARC433B63	
ARC433A65	
ARC433A66	
ARC433A67	
ARC433B67	
ARC433A68	
ARC433B68	
ARC433A69	
ARC433B69	
ARC433A70	
ARC433B70	
ARC433A71	
ARC433B71	
ARC433A72	
ARC433A73	
ARC433A75	

## Pattern 2

No.	Code	No.	Code
1	<b>00</b>	18	<b>C4</b>
2	<b>U4</b>	19	<b>C5</b>
3	<b>L5</b>	20	<b>J3</b>
4	<b>E6</b>	21	<b>J6</b>
5	<b>H6</b>	22	<b>E5</b>
6	<b>H0</b>	23	<b>A1</b>
7	<b>A6</b>	24	<b>E1</b>
8	<b>E7</b>	25	<b>UA</b>
9	<b>U0</b>	26	<b>UH</b>
10	<b>F3</b>	27	<b>P4</b>
11	<b>A5</b>	28	<b>L3</b>
12	<b>F6</b>	29	<b>L4</b>
13	<b>C7</b>	30	<b>H7</b>
14	<b>A3</b>	31	<b>U2</b>
15	<b>H8</b>	32	<b>EA</b>
16	<b>H9</b>	33	<b>AH</b>
17	<b>C9</b>		

### Applicable Model

ARC433A41	ARC433A57	ARC445 series
ARC433B41	ARC433A58	ARC455 series
ARC433A43	ARC433A61	
ARC433B43	ARC433B61	
ARC433A46	ARC433A62	
ARC433B46	ARC433B62	
ARC433A47	ARC433A74	
ARC433B47	ARC433A84	
ARC433A49	ARC433A85	
ARC433A50	ARC433A89	
ARC433B50	ARC433A93	

### Pattern 3

No.	Code	No.	Code
1	<b>00</b>	18	<b>C4</b>
2	<b>U4</b>	19	<b>C5</b>
3	<b>L5</b>	20	<b>J3</b>
4	<b>E6</b>	21	<b>J6</b>
5	<b>H6</b>	22	<b>E5</b>
6	<b>H0</b>	23	<b>A1</b>
7	<b>A6</b>	24	<b>E1</b>
8	<b>E7</b>	25	<b>UA</b>
9	<b>U0</b>	26	<b>UH</b>
10	<b>F3</b>	27	<b>P4</b>
11	<b>A5</b>	28	<b>L3</b>
12	<b>F6</b>	29	<b>L4</b>
13	<b>C7</b>	30	<b>H7</b>
14	<b>A3</b>	31	<b>U2</b>
15	<b>H8</b>	32	<b>EA</b>
16	<b>H9</b>	33	<b>AH</b>
17	<b>C9</b>	34	<b>FA</b>

#### Applicable Model

ARC433A87      ARC452A1  
 ARC433A88      ARC452A2  
 ARC433A90      ARC452A3  
 ARC433A91      ARC452A4  
 ARC433A92      ARC452A13  
 ARC433A97  
 ARC433A98  
 ARC433A99  
 ARC433A100  
 ARC433A101  
 ARC433A102

**Pattern 4**

No.	Code	No.	Code
1	<b>00</b>	19	<b>C5</b>
2	<b>U4</b>	20	<b>J3</b>
3	<b>L5</b>	21	<b>J6</b>
4	<b>E6</b>	22	<b>E5</b>
5	<b>H6</b>	23	<b>A1</b>
6	<b>H0</b>	24	<b>E1</b>
7	<b>A6</b>	25	<b>UA</b>
8	<b>E7</b>	26	<b>UH</b>
9	<b>U0</b>	27	<b>P4</b>
10	<b>F3</b>	28	<b>L3</b>
11	<b>A5</b>	29	<b>L4</b>
12	<b>F6</b>	30	<b>H7</b>
13	<b>C7</b>	31	<b>U2</b>
14	<b>A3</b>	32	<b>EA</b>
15	<b>H8</b>	33	<b>AH</b>
16	<b>H9</b>	34	<b>FA</b>
17	<b>C9</b>	35	<b>H1</b>
18	<b>C4</b>	36	<b>P9</b>

**Applicable Model**

ARC447A4	ARC452A19	ARC470A6
ARC452A5	ARC452A20	ARC470A11
ARC452A6	ARC452A21	
ARC452A7	ARC466A1	
ARC452A8	ARC466A3	
ARC452A9	ARC466A4	
ARC452A10	ARC466A5	
ARC452A12	ARC470A1	
ARC452A14	ARC470A2	
ARC452A15	ARC470A5	



**Pattern 5**

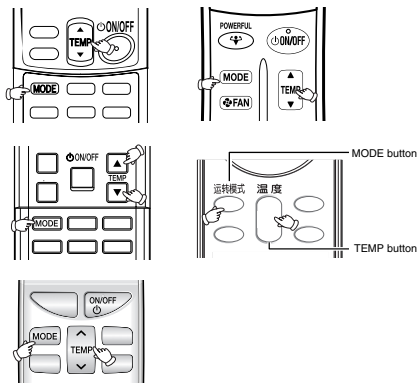
No.	Code	No.	Code
1	<b>00</b>	20	<b>C5</b>
2	<b>U4</b>	21	<b>CE</b>
3	<b>L5</b>	22	<b>J3</b>
4	<b>E6</b>	23	<b>J6</b>
5	<b>H6</b>	24	<b>E5</b>
6	<b>H0</b>	25	<b>A1</b>
7	<b>A6</b>	26	<b>E1</b>
8	<b>E7</b>	27	<b>UA</b>
9	<b>U0</b>	28	<b>UH</b>
10	<b>F3</b>	29	<b>P4</b>
11	<b>A5</b>	30	<b>L3</b>
12	<b>F6</b>	31	<b>L4</b>
13	<b>A9</b>	32	<b>H7</b>
14	<b>C7</b>	33	<b>U2</b>
15	<b>A3</b>	34	<b>EA</b>
16	<b>H8</b>	35	<b>AH</b>
17	<b>H9</b>	36	<b>FA</b>
18	<b>C9</b>	37	<b>H1</b>
19	<b>C4</b>	38	<b>P9</b>

**Applicable Model**

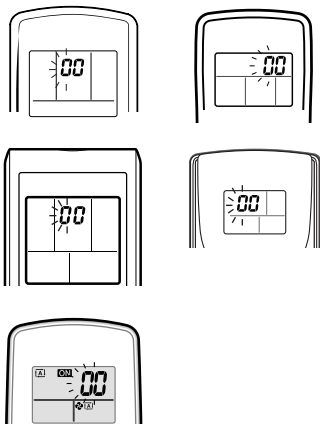
ARC466A2

## 3.2 Check Method 2

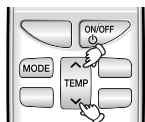
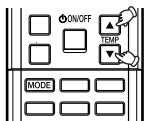
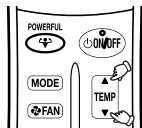
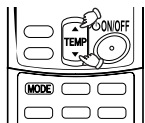
- Pattern 1**
1. Press the center of the [TEMP] button (or the [TEMP] ▲ and ▼ buttons) and the [MODE] button at the same time to enter the diagnosis mode.



2. The left-side number blinks.  
\*When 5. is displayed on the LCD, see page 38.



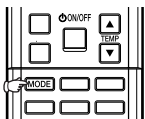
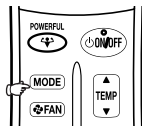
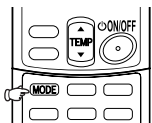
3. Press the [TEMP] ▲ (up) or ▼ (down) button and change the number until you hear the two consecutive beeps or the long beep.

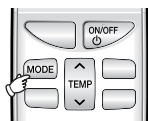


#### 4. Diagnose by the sound.

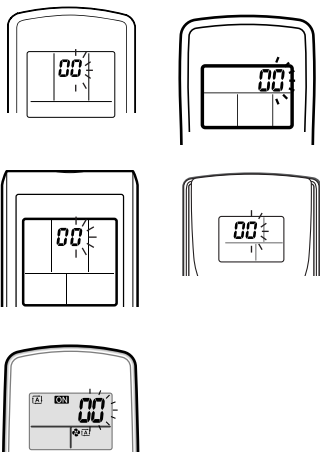
- ★ beep : The left-side number does not correspond with the error code.
- ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
- ★ long beep : Both the left-side and right-side numbers correspond with the error code.  
(The numbers indicated when you hear the long beep are the error code.  
→ Refer to page 81 ~ 93.)

#### 5. Press the [MODE] button.

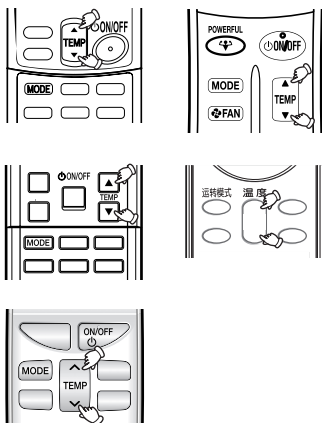




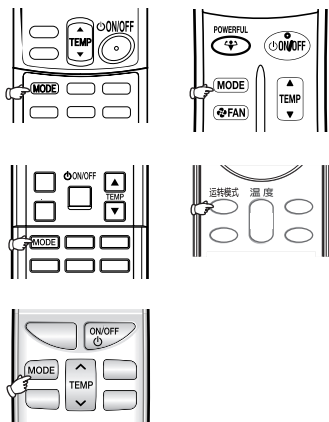
6. The right-side number blinks.



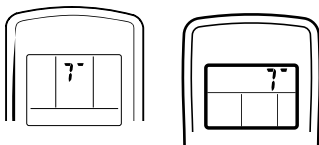
7. Press the [TEMP] ▲ (up) or ▼ (down) button and change the number until you hear the long beep.

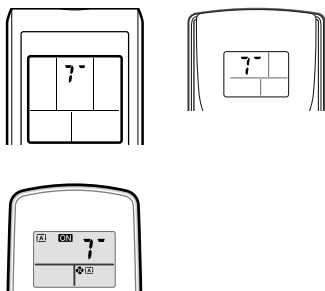


8. Diagnose by the sound.
- ★ beep : The left-side number does not correspond with the error code.
  - ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
  - ★ long beep : Both the left-side and right-side numbers correspond with the error code.
9. Determine the error code.  
The numbers indicated when you hear the long beep are the error code.  
(Error codes and description → Refer to page 81 ~ 93.)
10. Press the [MODE] button to exit from the diagnosis mode.

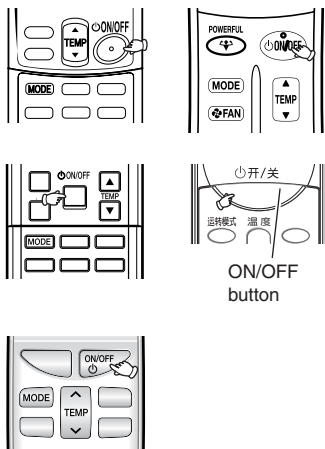


11. The display 7° means the trial operation mode.





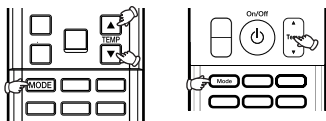
12. Press the [ON/OFF] button twice to return to the normal mode.



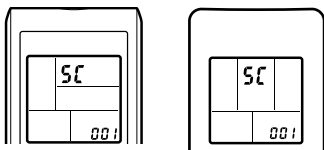
**Note:** When the remote controller is left untouched for 60 seconds, it returns to the normal mode.

## Pattern 2    ARC452A5, 7, 9, 12, 14, 19, 20, 21 ARC466 Series

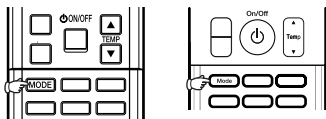
1. Press the center of the [Temp] button (or the [TEMP] ▲ and ▼ buttons) and the [Mode] button at the same time.



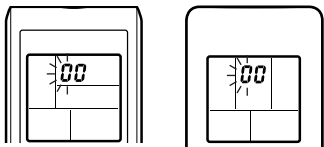
2. 5C is displayed on the LCD.



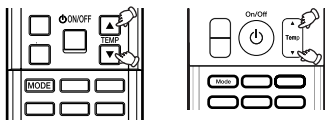
3. Select 5C (service check) with the [Temp] ▲ or ▼ button.
4. Press the [Mode] button to enter the service check mode.



5. The left-side number blinks.

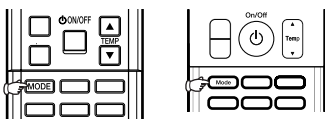


6. Press the [Temp] ▲ or ▼ button and change the number until you hear the two consecutive beeps or the long beep.

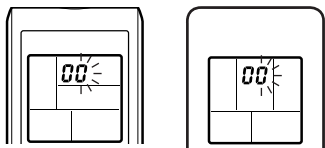


7. Diagnose by the sound.
- ★ beep : The left-side number does not correspond with the error code.
  - ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
  - ★ long beep : Both the left-side and right-side numbers correspond with the error code.  
(The numbers indicated when you hear the long beep are the error code.  
→ Refer to page 81 ~ 93.)

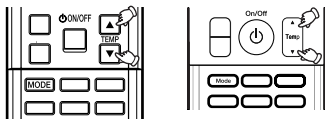
8. Press the [Mode] button.



9. The right-side number blinks.

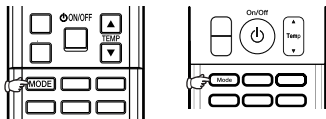


10. Press the [Temp] ▲ or ▼ button and change the number until you hear the long beep.





11. Diagnose by the sound.
- ★ beep : The left-side number does not correspond with the error code.
  - ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
  - ★ long beep : Both the left-side and right-side numbers correspond with the error code.
12. Determine the error code.  
The numbers indicated when you hear the long beep are the error code.  
Error codes and description → Refer to page 81 ~ 93.
13. Press the [Mode] button for 5 seconds to exit from the service check mode.



**Note:** When the remote controller is left untouched for 60 seconds, it returns to the normal mode.

### Pattern 3 ARC447A4

1. Press the [时钟设定 (clock)] button for 5 seconds.



2. “故障诊断 (service check)” is displayed on the LCD.



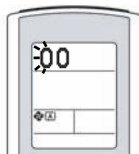
3. Select “故障诊断 (service check)” with the [选择 (select)] ▲ or ▼ button.



4. Press the [时钟设定 (clock)] button to enter the service check mode.



5. The left-side number blinks.



6. Press the [选择 (select)] ▲ or ▼ button and change the number until you hear the two consecutive beeps or the long beep.

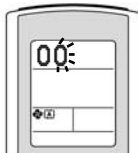


7. Diagnose by the sound.
- ★ beep : The left-side number does not correspond with the error code.
  - ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
  - ★ long beep : Both the left-side and right-side numbers correspond with the error code.  
(The numbers indicated when you hear the long beep are the error code.  
→ Refer to page 81 ~ 93.)

8. Press the [时钟设定 (clock)] button.



9. The right-side number blinks.



10. Press the [ 选择 (select)] ▲ or ▼ button and change the number until you hear the long beep.



11. Diagnose by the sound.
- ★ beep : The left-side number does not correspond with the error code.
  - ★ two consecutive beeps : The left-side number corresponds with the error code but the right-side number does not.
  - ★ long beep : Both the left-side and right-side numbers correspond with the error code.

12. Determine the error code.  
The numbers indicated when you hear the long beep are the error code.  
(Error codes and description → Refer to page 81 ~ 93.)

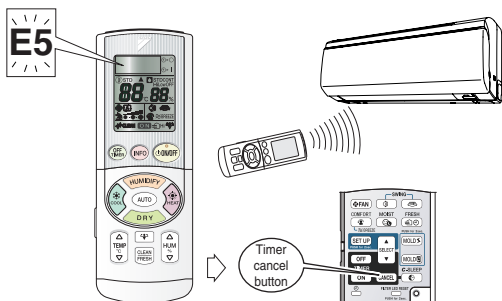
13. Press the [ 时钟设定 (clock)] button for 5 seconds to exit from the service check mode.



**Note:** When the remote controller is left untouched for 60 seconds, it returns to the normal mode.

### 3.3 ARC447A1, A2, A3

You can find the error code directly.



1. Hold the timer cancel button down for 5 seconds, with the remote controller set toward the indoor unit.
2. The temperature display on the remote controller shows an error code with a long beep.



**Note:** To cancel the indication of error code, hold the timer cancel button down for 5 seconds. When the remote controller is left untouched for 60 seconds, it also returns to the normal mode.

## 4. List of Applicable Models

The same error code may have different flowcharts. Find the classification No. in the following tables and check the related page according to the tables on page 81 ~ 93.

### 4.1 Indoor Unit

#### 4.1.1 Wall Mounted Type

Model	Classification No.
AT09BV1LS	★5
AT09DV2S	★4
AT09GV2S	★4
AT09HV2S	★4
AT09JV2S	★4
AT12BV1LS	★1
AT13DV2S	★1
AT13GV2S	★1
AT13HV2S	★4
AT13JV2S	★4
AT18BV1LS	★1
AT18DV2S	★1
AT18GV2S	★1
AT18HV2S	★1
ATK25BVMB	★4
ATK35BVMB	★4
ATKS20CVMB	★4
ATKS20CVMB9	★4
ATKS20DAVMB	★4
ATKS20DVMB	★4
ATKS20E2V1B	★1
ATKS25BVMB	★4
ATKS25CVMB	★4
ATKS25CVMB9	★4
ATKS25DAVMB	★4
ATKS25DVMB	★4
ATKS25E2V1B	★1

Model	Classification No.
ATKS35BVMB	★4
ATKS35CVMB	★4
ATKS35CVMB9	★4
ATKS35DAVMB	★4
ATKS35DVMB	★4
ATKS35E2V1B	★1
ATX20GV1B	★3
ATX20JV1B	★3
ATX25BVMB	★4
ATX25GV1B	★3
ATX25JV1B	★3
ATX35BVMB	★4
ATX35GV1B	★3
ATX35JV1B	★3
ATX50EV1B	★1
ATXD50CV4	★1
ATXD60CV4	★1
ATXD71CV4	★1
ATXD80CV4	★1
ATXG25CVMB	★6
ATXG25EV1B	★7
ATXG35CVMB	★6
ATXG35EV1B	★7
ATXG50EV1B	★7
ATXS20CVMB	★4
ATXS20CVMB9	★4
ATXS20DAVMB	★4

↓ ↓

Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
ATXS20DVMB	★4	CTKS30KVLТ	★1
ATXS20E2V1B	★1	CTKS50DVML	★1
ATXS20G2V1B	★1	CTKS50DVMMW	★1
ATXS25BVMB	★4	CTKS50JVLT	★1
ATXS25CVMB	★4	CTKS60JVLT	★1
ATXS25CVMB9	★4	CTKS70JVLT	★1
ATXS25DAVMB	★4	CTXG25K2VMS	★8
ATXS25DVMB	★4	CTXG25K2VMW	★8
ATXS25E2V1B	★1	CTXG35K2VMS	★8
ATXS25EV1B7	★1	CTXG35K2VMW	★8
ATXS25G2V1B	★1	CTXG50EV1BS	★7
ATXS35BVMB	★4	CTXG50EV1BW	★7
ATXS35CVMB	★4	CTXG50JV1BS	★8
ATXS35CVMB9	★4	CTXG50JV1BW	★8
ATXS35DAVMB	★4	CTXG50K2VMS	★8
ATXS35DVMB	★4	CTXG50K2VMW	★8
ATXS35E2V1B	★1	CTXS07JVJU	★1
ATXS35EV1B7	★1	CTXS09DVJU	★1
ATXS35G2V1B	★1	CTXS09GVJU	★1
ATXS42G2V1B	★1	CTXS09HVJU	★1
ATXS50CVMB	★1	CTXS12GVJU	★1
ATXS50DVMB	★1	CTXS12HVJU	★1
ATXS50E2V1B	★1	CTXS20KVMA	★2
ATXS50EV1B7	★1	CTXS25EV2C	★1
ATXS50G2V1B	★1	CTXS25HVLD	★1
ATY20DV2	★4	CTXS30KVLТ	★1
ATY25DV2	★4	CTXS35EV2C	★1
ATY35DV2	★4	CTXS35HVLD	★1
CTKD09GV2S	★4	CTXS50DVML	★1
CTKD12GV2S	★4	CTXS50DVMMW	★1
CTKD18GV2S	★1	CTXS50HVLD	★1
CTKD24GV2S	★1	CTXS50JVLT	★1
CTKD28GV2S	★1	CTXS60HVLD	★1
CTKS20KVMA	★2	CTXS60JVLT	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
CTXS70JVL	★1	FT35DSG	★1
CTXS71HVLD	★1	FT35DVM	★4
CTXU25G2V1B	★10	FT35DVM4	★4
CTXU35G2V1B	★10	FT35GV1G	★4
CTXU42G2V1B	★10	FT35GV1G4	★4
CTXU50G2V1B	★10	FT35GV1G6	★4
FT09BV1LS	★4	FT50BVM	★1
FT09DV2S	★4	FT50CV1A	★1
FT09FV2S	★4	FT50DSG	★1
FT09GV2S	★4	FT50FVM	★1
FT09HV2S	★4	FT50FVM4	★1
FT13BV1LS	★1	FT50FVM8	★1
FT13DV2S	★1	FT50GAVEA8	★1
FT13FV2S	★1	FT50GV1G	★1
FT13GV2S	★4	FT50GV1G4	★1
FT13HV2S	★4	FT50GV1G6	★1
FT15DV2S	★1	FT60BVM	★1
FT15FV2S	★1	FT60CV1A8	★1
FT15GV2S	★1	FT60DSG	★1
FT15HV2S	★1	FT60DVMK	★1
FT18BV1LS	★1	FT60FVM	★1
FT18FV2S	★1	FT60FVM4	★1
FT18GV2S	★1	FT60FVM8	★1
FT24BV1LS	★1	FT60GAVAL	★1
FT24FV2S	★1	FT60GAVEA8	★1
FT24GV2S	★1	FT60GV1G	★1
FT24KV2S	★1	FT60GV1G4	★1
FT25DSG	★4	FT60GV1G6	★1
FT25DVM	★4	FT60HV16	★1
FT25DVM4	★4	FTD25FV1A	★4
FT25GV1G	★4	FTD35FV1A	★1
FT25GV1G4	★4	FTD50FV1K	★1
FT25GV1G6	★4	FTD60FV1K	★1
FT28GV2S	★1	FTE09DV2S	★4

↓ ↓

Refer to the classification No. on page 81 ~ 83.





Model	Classification No.	Model	Classification No.
FTE09GV2S	★5	FTK20GVLT	★3
FTE09HV2S	★5	FTK20JEVM	★3
FTE09JV1LS	★5	FTK20KEVM	★3
FTE09JV2S	★5	FTK25AZVMB	★4
FTE09LV2S	★5	FTK25BVMB	★4
FTE09MV2S	★5	FTK25GV1B	★3
FTE12DV2S	★1	FTK25GVLT	★3
FTE12GV2S	★5	FTK25JEVM	★3
FTE12HV2S	★5	FTK30GVLT	★3
FTE12JV1LS	★5	FTK35AZVMB	★4
FTE12JV2S	★5	FTK35BVMB	★4
FTE12LV2S	★5	FTK35GV1B	★3
FTE12MV2S	★5	FTK35JEVM	★3
FTE18GV2S	★1	FTK40JVLT	★1
FTE18JV2S	★1	FTK50AVMA	★1
FTE18KV2S	★1	FTK50AVMT	★1
FTE18MV2S	★1	FTK50JVLT	★1
FTE24GV2S	★1	FTK60AVMA	★1
FTE24KV2S	★1	FTK60AVMT	★1
FTE24MV2S	★1	FTK71AVMA	★1
FTE25FV1	★5	FTK71AVMT	★1
FTE25FV14	★5	FTKD09DVMS	★4
FTE25KV16	★4	FTKD09FV2S	★4
FTE35FV1	★5	FTKD09GV2S	★4
FTE35FV14	★5	FTKD12DVMS	★4
FTE35KV16	★4	FTKD12FV2S	★4
FTE35LV16	★4	FTKD12GV2S	★4
FTE50KV16	★1	FTKD15FV2S	★1
FTE50LV16	★1	FTKD15GV2S	★1
FTE60KV16	★1	FTKD18BVMS	★1
FTE60LV16	★1	FTKD18FV2S	★1
FTK15JEVM	★3	FTKD18GV2S	★1
FTK15KEVM	★3	FTKD24BVMS	★1
FTK20GV1B	★3	FTKD24FV2S	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTKD24GV2S	★1	FTKD60FV2Z	★1
FTKD25DV2Z	★4	FTKD60FVM	★1
FTKD25DVM	★4	FTKD60FVM4	★1
FTKD25DVM4	★4	FTKD60GVMA	★1
FTKD25DVMA	★4	FTKD71BVM	★1
FTKD25DVMT	★4	FTKD71BVMA	★1
FTKD25GVMA	★4	FTKD71BVMA8	★1
FTKD28BVMS	★1	FTKD71BVMA9	★1
FTKD28FV2S	★1	FTKD71BVMD	★1
FTKD28GV2S	★1	FTKD71BVMT	★1
FTKD35DV2Z	★4	FTKD71FV2Z	★1
FTKD35DVM	★4	FTKD71FVM	★1
FTKD35DVM4	★4	FTKD71FVM4	★1
FTKD35DVMA	★4	FTKE09BVMS	★4
FTKD35DVMT	★4	FTKE09GV2S	★4
FTKD35GVMA	★4	FTKE12BVMS	★4
FTKD50BVM	★1	FTKE12GV2S	★4
FTKD50BVMA	★1	FTKE15GV2S	★1
FTKD50BVMA8	★1	FTKE25BVM	★4
FTKD50BVMA9	★1	FTKE25BVMA	★4
FTKD50BVMD	★1	FTKE25BVMA8	★4
FTKD50BVMT	★1	FTKE25BVMA9	★4
FTKD50DSG	★1	FTKE25BVMD	★4
FTKD50FV2Z	★1	FTKE25BVMT	★4
FTKD50FVM	★1	FTKE25GV1	★4
FTKD50FVM4	★1	FTKE35BVM	★4
FTKD50GVMA	★1	FTKE35BVMA	★4
FTKD60BVM	★1	FTKE35BVMA8	★4
FTKD60BVMA	★1	FTKE35BVMA9	★4
FTKD60BVMA8	★1	FTKE35BVMD	★4
FTKD60BVMA9	★1	FTKE35BVMT	★4
FTKD60BVMD	★1	FTKE35GV1	★4
FTKD60BVMT	★1	FTKE42GV1	★1
FTKD60DSG	★1	FTKN09JEVJU	★3





  
Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTKN12JEVJU	★3	FTKS25CVMB8	★4
FTKN25JEVM	★3	FTKS25CVMB9	★4
FTKN25KEVM	★4	FTKS25D2VML	★1
FTKN35JEVM	★3	FTKS25D2VMW	★1
FTKN35KEVM	★4	FTKS25D3VML	★1
FTKN50KVM	★1	FTKS25D3VMW	★1
FTKN60KVM	★1	FTKS25DAVML	★1
FTKS09GV2S	★1	FTKS25DAVMW	★1
FTKS09JEVJU	★3	FTKS25DVM	★1
FTKS12GV2S	★1	FTKS25DVM4	★1
FTKS12JEVJU	★3	FTKS25DVMA	★1
FTKS18GV2S	★1	FTKS25DVML	★1
FTKS20CAVMB	★4	FTKS25DVMT	★1
FTKS20CVMB	★4	FTKS25DVMMW	★1
FTKS20CVMB9	★4	FTKS25EVMA	★1
FTKS20D2VML	★1	FTKS25EVMA4	★1
FTKS20D2VMW	★1	FTKS25GVLT	★1
FTKS20D3VML	★1	FTKS25GVLT8	★1
FTKS20D3VMW	★1	FTKS25GVMA	★1
FTKS20DAVML	★1	FTKS25JVLT	★1
FTKS20DAVMW	★1	FTKS25KVLT	★2
FTKS20DVMA	★1	FTKS25KVM	★1
FTKS20DVML	★1	FTKS25KVMA	★2
FTKS20DVMT	★1	FTKS28GV2S	★1
FTKS20DVMMW	★1	FTKS30GVLT8	★1
FTKS20GVLT	★1	FTKS30JVLT	★1
FTKS20GVLT8	★1	FTKS30KVLT	★2
FTKS20JVLT	★1	FTKS35BVMB	★4
FTKS20KVLT	★2	FTKS35CAVMB	★4
FTKS20KVMA	★2	FTKS35CVMB	★4
FTKS24GV2S	★1	FTKS35CVMB8	★4
FTKS25BVMB	★4	FTKS35CVMB9	★4
FTKS25CAVMB	★4	FTKS35D2VML	★1
FTKS25CVMB	★4	FTKS35D2VMW	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTKS35D3VML	★1	FTKS50JVLT	★1
FTKS35D3VMW	★1	FTKS50JVMA	★1
FTKS35DAVML	★1	FTKS50KVM	★1
FTKS35DAVMW	★1	FTKS50KVMA	★2
FTKS35DVM	★1	FTKS60BVMA	★1
FTKS35DVM4	★1	FTKS60BVMA8	★1
FTKS35DVMA	★1	FTKS60BVMA9	★1
FTKS35DVML	★1	FTKS60BVMB	★1
FTKS35DVMT	★1	FTKS60DVMT	★1
FTKS35DVMW	★1	FTKS60EV1B	★1
FTKS35EVMA	★1	FTKS60FV1B	★1
FTKS35EVMA4	★1	FTKS60FVLT	★1
FTKS35GVLT	★1	FTKS60FVM	★1
FTKS35GVMA	★1	FTKS60FVM4	★1
FTKS35KVM	★1	FTKS60FVMA	★1
FTKS35KVMA	★2	FTKS60GVMA	★1
FTKS40JVLT	★1	FTKS60GVMG	★1
FTKS42GVLT	★1	FTKS60GVMG4	★1
FTKS50BVMA	★1	FTKS60JVLT	★1
FTKS50BVMA8	★1	FTKS60JVMA	★1
FTKS50BVMA9	★1	FTKS60KVM	★1
FTKS50BVMB	★1	FTKS60KVMA	★2
FTKS50D2V1L	★1	FTKS70JVLT	★1
FTKS50D2V1W	★1	FTKS71BAVMB	★1
FTKS50DVMT	★1	FTKS71BVMA	★1
FTKS50EV1B	★1	FTKS71BVMA8	★1
FTKS50FV1B	★1	FTKS71BVMA9	★1
FTKS50FVLT	★1	FTKS71BVMB	★1
FTKS50FVM	★1	FTKS71DVMT	★1
FTKS50FVM4	★1	FTKS71EV1B	★1
FTKS50FVMA	★1	FTKS71FV1B	★1
FTKS50GVMA	★1	FTKS71FVLT	★1
FTKS50GVMG	★1	FTKS71FVM	★1
FTKS50GVMG4	★1	FTKS71FVM4	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTKS71FVMA	★1	FTS60BVMB	★1
FTKS71GVMA	★1	FTW25FV1	★5
FTKS71HVMG	★1	FTW25FV18	★5
FTKS71HVMG4	★1	FTW35FV1	★5
FTKS71JVMA	★1	FTW35FV18	★5
FTKS71KVM	★1	FTWN25JV1	★5
FTKS71KVMA	★2	FTWN35JV1	★5
FTN20CVMB9	★4	FTX20GV1B	★3
FTN25CVMB9	★4	FTX20GVLT	★3
FTN25DAV3B	★4	FTX20JV1B	★3
FTN25DV3B	★4	FTX25AVMA	★4
FTN25HV1A	★4	FTX25AVMC	★4
FTN25HV1G	★4	FTX25AVMT	★4
FTN25KV1A	★2	FTX25AZVMB	★4
FTN35CVMB9	★4	FTX25BVMB	★4
FTN35DAV3B	★4	FTX25FV2C	★4
FTN35DV3B	★4	FTX25GV1B	★3
FTN35HV1A	★4	FTX25GVLT	★3
FTN35HV1G	★4	FTX25JEVM	★3
FTN35KV1A	★2	FTX25JV1B	★3
FTN50EV1B	★1	FTX25KEVM	★3
FTN50FV1B	★1	FTX30GVLT	★3
FTN50HV1A	★1	FTX32FV2C	★4
FTN50HV1G	★1	FTX35AVMA	★4
FTN50JV18	★1	FTX35AVMC	★4
FTN60EV1B	★1	FTX35AVMT	★4
FTN60FV1B	★1	FTX35AZVMB	★4
FTN60HV1A	★1	FTX35BVMB	★4
FTN60HV1G	★1	FTX35GV1B	★3
FTN60JV18	★1	FTX35JEVM	★3
FTS20BVMB	★4	FTX35JV1B	★3
FTS25BVMB	★4	FTX35KEVM	★3
FTS35BVMB	★4	FTX40JVLT	★1
FTS50BVMB	★1	FTX50AVMA	★1

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Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTX50AVMC	★1	FTXD35DV2CA	★4
FTX50AVMT	★1	FTXD35DV2CG	★4
FTX50GV1B	★1	FTXD35DV2CN	★4
FTX50JVLT	★1	FTXD35DV2CP	★4
FTX50KVM	★1	FTXD35DV2CW	★4
FTX60AVMA	★1	FTXD35DV2Z	★4
FTX60AVMC	★1	FTXD35DVMA	★4
FTX60AVMT	★1	FTXD35DVMT	★4
FTX60GV1B	★1	FTXD35FV2C	★4
FTX60KVM	★1	FTXD35FV2CA	★4
FTX71AVMA	★1	FTXD35FV2CG	★4
FTX71AVMC	★1	FTXD35FV2CN	★4
FTX71AVMT	★1	FTXD35FV2CP	★4
FTX71GV1B	★1	FTXD35FV2CW	★4
FTXB325KC-R	★3	FTXD50BMVMC	★1
FTXB325KC-W	★3	FTXD50BV4	★1
FTXB335KC-R	★3	FTXD50BV48	★1
FTXB335KC-W	★3	FTXD50BV49	★1
FTXD25DV2C	★4	FTXD50BVMA	★1
FTXD25DV2CA	★4	FTXD50BVMA8	★1
FTXD25DV2CG	★4	FTXD50BVMA9	★1
FTXD25DV2CN	★4	FTXD50BVMC	★1
FTXD25DV2CP	★4	FTXD50BVMT	★1
FTXD25DV2CW	★4	FTXD50CMV2C	★1
FTXD25DV2Z	★4	FTXD50FV2C	★1
FTXD25DVMA	★4	FTXD50FV2Z	★1
FTXD25DVMT	★4	FTXD50FVM	★1
FTXD25FV2C	★4	FTXD60BMVMC	★1
FTXD25FV2CA	★4	FTXD60BVMA	★1
FTXD25FV2CG	★4	FTXD60BVMA8	★1
FTXD25FV2CN	★4	FTXD60BVMA9	★1
FTXD25FV2CP	★4	FTXD60BVMC	★1
FTXD25FV2CW	★4	FTXD60BVMT	★1
FTXD35DV2C	★4	FTXD60FV2Z	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTXD60FVM	★1	FTXG25CVMBS	★6
FTXD71BVMA	★1	FTXG25CVMBW	★6
FTXD71BVMA8	★1	FTXG25EV1BS	★6
FTXD71BVMA9	★1	FTXG25EV1BW	★6
FTXD71BVMC	★1	FTXG25EVMAS	★6
FTXD71BVMT	★1	FTXG25EVMAW	★6
FTXD71FV2Z	★1	FTXG25FVMAS	★7
FTXD71FVM	★1	FTXG25FVMAW	★7
FTXD80CV4	★1	FTXG25JV1BS	★8
FTXD80CV48	★1	FTXG25JV1BW	★8
FTXD80CV49	★1	FTXG25JV2CW	★1
FTXE25BMVMC	★4	FTXG35CVMAS	★6
FTXE25BVMA	★4	FTXG35CVMAW	★6
FTXE25BVMA8	★4	FTXG35CVMBS	★6
FTXE25BVMA9	★4	FTXG35CVMBW	★6
FTXE25BVMC	★4	FTXG35EV1BS	★6
FTXE25BVMT	★4	FTXG35EV1BW	★6
FTXE25CMV2C	★4	FTXG35EVMAS	★6
FTXE35BMVMC	★4	FTXG35EVMAW	★6
FTXE35BVMA	★4	FTXG35FVMAS	★7
FTXE35BVMA8	★4	FTXG35FVMAW	★7
FTXE35BVMA9	★4	FTXG35JV1BS	★8
FTXE35BVMC	★4	FTXG35JV1BW	★8
FTXE35BVMT	★4	FTXG35JV2CW	★1
FTXE35CMV2C	★4	FTXG50JV1BS	★8
FTXF125KC-R	★1	FTXG50JV1BW	★8
FTXF125KC-W	★1	FTXG50JV2C	★1
FTXF135KC-R	★1	FTXG50JV2CW	★1
FTXF135KC-W	★1	FTXH25JV2C	★3
FTXG09HVJU	★9	FTXH25JV2CW	★3
FTXG12HVJU	★9	FTXH35JV2C	★3
FTXG15HVJU	★9	FTXH35JV2CW	★3
FTXG25CVMAS	★6	FTXL20G2V1B	★1
FTXG25CVMAW	★6	FTXL25G2V1B	★1

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Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTXL35G2V1B	★1	FTXP32JV2CP	★3
FTXN09JEVJU	★3	FTXP32JV2CW	★3
FTXN09KEVJU	★3	FTXP35HV2C	★3
FTXN12JEVJU	★3	FTXP35JV2CN	★3
FTXN12KEVJU	★3	FTXP35JV2CP	★3
FTXN15KVJU	★1	FTXP35JV2CW	★3
FTXN18KVJU	★1	FTXR28EV1B	★9
FTXN24KVJU	★1	FTXR28EV1B9	★9
FTXN25JEV1B	★3	FTXR28FVLT	★9
FTXN25KEV1B	★4	FTXR28KVMA	★9
FTXN25KV2C	★3	FTXR35HV2CW	★10
FTXN25KV2CW	★3	FTXR42EV1B	★9
FTXN32KV2C	★3	FTXR42EV1B9	★9
FTXN32KV2CW	★3	FTXR42KVMA	★9
FTXN35JEV1B	★3	FTXR50EV1B	★9
FTXN35KEV1B	★4	FTXR50EV1B9	★9
FTXN425KC	★4	FTXR50FVLT	★9
FTXN425KC-W	★4	FTXR50KVMA	★9
FTXN435KC	★4	FTXS09DVJU	★4
FTXN435KC-W	★4	FTXS09HVJU	★4
FTXN50KV1B	★1	FTXS09JEVJU	★3
FTXN60KV1B	★1	FTXS100HVMA	★1
FTXP25HV2C	★3	FTXS100JVMA	★1
FTXP25HV2CN	★3	FTXS100KVMA	★2
FTXP25HV2CP	★3	FTXS12DVJU	★4
FTXP25HV2CW	★3	FTXS12HVJU	★4
FTXP25JV2CN	★3	FTXS12JEVJU	★3
FTXP25JV2CP	★3	FTXS15DVJU	★1
FTXP25JV2CW	★3	FTXS15HVJU	★1
FTXP32HV2C	★3	FTXS18DVJU	★1
FTXP32HV2CN	★3	FTXS18HVJU	★1
FTXP32HV2CP	★3	FTXS20CAVMB	★4
FTXP32HV2CW	★3	FTXS20CVMB	★4
FTXP32JV2CN	★3	FTXS20CVMB9	★4



Refer to the classification No. on page 81 ~ 83.



Model	Classification No.	Model	Classification No.
FTXS20D2VML	★1	FTXS232KCSW	★3
FTXS20D2VMW	★1	FTXS232KCSX	★3
FTXS20D3VML	★1	FTXS232KC-W	★3
FTXS20D3VMW	★1	FTXS235KCGN	★3
FTXS20DAVML	★1	FTXS235KCGR	★3
FTXS20DAVMW	★1	FTXS235KCGW	★3
FTXS20DVMA	★1	FTXS235KCGX	★3
FTXS20DVML	★1	FTXS235KC-S	★3
FTXS20DVMT	★1	FTXS235KCSR	★3
FTXS20DVMW	★1	FTXS235KCSS	★3
FTXS20G2V1B	★1	FTXS235KCSW	★3
FTXS20GVLT	★1	FTXS235KCSX	★3
FTXS20GVLT8	★1	FTXS235KC-W	★3
FTXS20J2V1B	★1	FTXS24DVJU	★1
FTXS20JVLT	★1	FTXS24HVJU	★1
FTXS20KVLT	★2	FTXS25BVMA	★4
FTXS20KVMA	★2	FTXS25BVMB	★4
FTXS225KCGN	★3	FTXS25CAVMB	★4
FTXS225KCGR	★3	FTXS25CVMB	★4
FTXS225KCGW	★3	FTXS25CVMB8	★4
FTXS225KCGX	★3	FTXS25CVMB9	★4
FTXS225KC-S	★3	FTXS25D2VML	★1
FTXS225KCSR	★3	FTXS25D2VMW	★1
FTXS225KCSS	★3	FTXS25D3VML	★1
FTXS225KCSW	★3	FTXS25D3VMW	★1
FTXS225KCSX	★3	FTXS25DAVML	★1
FTXS225KC-W	★3	FTXS25DAVMW	★1
FTXS232KCGN	★3	FTXS25DVMA	★1
FTXS232KCGR	★3	FTXS25DVML	★1
FTXS232KCGW	★3	FTXS25DVMT	★1
FTXS232KCGX	★3	FTXS25DVMW	★1
FTXS232KC-S	★3	FTXS25EVMA	★1
FTXS232KCSR	★3	FTXS25EVMA8	★1
FTXS232KCSS	★3	FTXS25FV2CA	★1

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Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTXS25FV2CG	★1	FTXS35DVMT	★1
FTXS25FV2CW	★1	FTXS35DVMW	★1
FTXS25G2V1B	★1	FTXS35EVMA	★1
FTXS25GVLTL	★1	FTXS35EVMA8	★1
FTXS25GVLTL8	★1	FTXS35FV2CA	★1
FTXS25GVMA	★1	FTXS35FV2CG	★1
FTXS25HV2C	★1	FTXS35FV2CW	★1
FTXS25HV2CN	★1	FTXS35G2V1B	★1
FTXS25HV2CP	★1	FTXS35GVLTL	★1
FTXS25HV2CW	★1	FTXS35GVMA	★1
FTXS25J2V1B	★1	FTXS35HV2C	★1
FTXS25J2VMA	★1	FTXS35HV2CN	★1
FTXS25JVLT	★1	FTXS35HV2CP	★1
FTXS25KVLT	★2	FTXS35HV2CW	★1
FTXS25KVM	★1	FTXS35J2V1B	★1
FTXS25KVMA	★2	FTXS35J2VMA	★1
FTXS30GVLTL8	★1	FTXS35JV2CN	★3
FTXS30HVJU	★1	FTXS35JV2CP	★3
FTXS30JVLT	★1	FTXS35JV2CW	★3
FTXS30KVLT	★2	FTXS35KVM	★1
FTXS35BVMA	★4	FTXS35KVMA	★2
FTXS35BVMB	★4	FTXS36HVJU	★1
FTXS35CAVMB	★4	FTXS40JVLT	★1
FTXS35CVMB	★4	FTXS42G2V1B	★1
FTXS35CVMB8	★4	FTXS42GVLTL	★1
FTXS35CVMB9	★4	FTXS42J2V1B	★1
FTXS35D2VML	★1	FTXS46GV2C	★1
FTXS35D2VMW	★1	FTXS46GV2CW	★1
FTXS35D3VML	★1	FTXS46JV2CW	★3
FTXS35D3VMW	★1	FTXS46KVMA	★2
FTXS35DAVML	★1	FTXS50BVMA	★1
FTXS35DAVMW	★1	FTXS50BVMA8	★1
FTXS35DVMA	★1	FTXS50BVMA9	★1
FTXS35DVML	★1	FTXS50BVMB	★1



Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTXS50CVMA	★1	FTXS71BAVMB	★1
FTXS50D2V1L	★1	FTXS71BVMA	★1
FTXS50D2V1W	★1	FTXS71BVMA8	★1
FTXS50DVMT	★1	FTXS71BVMA9	★1
FTXS50EV1B	★1	FTXS71BVMB	★1
FTXS50FV1B	★1	FTXS71DVMT	★1
FTXS50FVLT	★1	FTXS71EV1B	★1
FTXS50FVMA	★1	FTXS71FV1B	★1
FTXS50FVMA8	★1	FTXS71FVLT	★1
FTXS50G2V1B	★1	FTXS71FVMA	★1
FTXS50GVMA	★1	FTXS71FVMA8	★1
FTXS50J2V1B	★1	FTXS71GV1B	★1
FTXS50JVLT	★1	FTXS71GVMA	★1
FTXS50JVMA	★1	FTXS71JVMA	★1
FTXS50KVM	★1	FTXS71KVM	★1
FTXS50KVMA	★2	FTXS71KVMA	★2
FTXS60BVMA	★1	FTXS80FVMA	★1
FTXS60BVMA8	★1	FTXS80GVMA	★1
FTXS60BVMA9	★1	FTXS80HVMA	★1
FTXS60BVMB	★1	FTXS80KVMA	★2
FTXS60DVMT	★1	FTXS90FVMA	★1
FTXS60EV1B	★1	FTXS90HVMA	★1
FTXS60FV1B	★1	FTXS90JVMA	★1
FTXS60FVLT	★1	FTXS90KVMA	★2
FTXS60FVMA	★1	FTY25CVMA	★4
FTXS60FVMA8	★1	FTY25DV2C	★4
FTXS60GV1B	★1	FTY35CVMA	★4
FTXS60GVMA	★1	FTY35DV2C	★4
FTXS60HVMB	★1	FTYN20CVMB9	★4
FTXS60JVLT	★1	FTYN25CVMB9	★4
FTXS60JVMA	★1	FTYN25DAV3B	★4
FTXS60KVM	★1	FTYN25DV1A	★1
FTXS60KVMA	★2	FTYN25DV3B	★4
FTXS70JVLT	★1	FTYN25GV1A	★1

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Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
FTYN25KV1A	★2	FTYN60HV1A	★1
FTYN35CVMB9	★4	FTYN71FV1A	★1
FTYN35DAV3B	★4	FTYN71GV1A	★1
FTYN35DV1A	★1	FTYS20BVMB	★4
FTYN35DV3B	★4	FTYS25BVMB	★4
FTYN35GV1A	★1	FTYS35BVMB	★4
FTYN35HV1A	★4	FTYS50BVMB	★1
FTYN35KV1A	★2	FTYS60BVMB	★1
FTYN50DV1A	★1	FTZS235KCGN	★3
FTYN50EV1B	★1	FTZS235KCGR	★3
FTYN50FV1A	★1	FTZS235KCGW	★3
FTYN50FV1B	★1	FTZS235KCGX	★3
FTYN50GV1A	★1	FTZS235KC-S	★3
FTYN50HV1A	★1	FTZS235KCSR	★3
FTYN60DV1A	★1	FTZS235KCSS	★3
FTYN60EV1B	★1	FTZS235KCSW	★3
FTYN60FV1A	★1	FTZS235KCSX	★3
FTYN60FV1B	★1	FTZS235KC-W	★3
FTYN60GV1A	★1		



Refer to the classification No. on page 81 ~ 83.

## 4.1.2 Floor Standing Type

Model	Classification No.	Model	Classification No.
FVK25AZVMB	★1	FVXS25BAVMB	★1
FVK35AZVMB	★1	FVXS25BVMB	★1
FVK50AZVMB	★1	FVXS25FV1A	★1
FVKS25BAVMB	★1	FVXS25FV1B	★1
FVKS25BVMB	★1	FVXS25GV1A	★1
FVKS35BAVMB	★1	FVXS25KV1A	★2
FVKS35BVMB	★1	FVXS35BAVMB	★1
FVKS50BAVMB	★1	FVXS35BVMA	★1
FVKS50BVMB	★1	FVXS35BVMB	★1
FVX25AZVMB	★1	FVXS35FV1A	★1
FVX35AZVMB	★1	FVXS35FV1B	★1
FVX50AZVMB	★1	FVXS35GV1A	★1
FVX56AV1C	★1	FVXS35KV1A	★2
FVXD56CMV2C	★1	FVXS50BAVMB	★1
FVXD56FV2C	★1	FVXS50BVMA	★1
FVXD60DV2CN	★1	FVXS50BVMB	★1
FVXD60DV2CW	★1	FVXS50FV1A	★1
FVXD60FV2CN	★1	FVXS50FV1B	★1
FVXD60FV2CW	★1	FVXS50GV1A	★1
FVXD68CMV2C	★1	FVXS50KV1A	★2
FVXD71DV2CN	★1	FVXS60GV2CN	★1
FVXD71DV2CW	★1	FVXS60GV2CW	★1
FVXD71FV2CN	★1	FVXS60HVMA	★1
FVXD71FV2CW	★1	FVXS60KVMA	★2
FVXG25K2V1B	★13	FVXS71FV2CW	★1
FVXG35K2V1B	★13	FVXS71HVMA	★1
FVXG50K2V1B	★13	FVXS71KVMA	★2
FVXG50KV2CN	★1	FVXS72GV2CN	★1
FVXG50KV2CW	★1	FVXS72GV2CW	★1
FVXG60JV2CN	★1	FVZ71DMV2C	★1
FVXG60JV2CW	★1	FWXV15AVEB	★12
FVXG72JV2CN	★1	FWXV20AVEB	★12
FVXG72JV2CW	★1		



Refer to the classification No. on page 81 ~ 83.

### 4.1.3 Floor / Ceiling Suspended Dual Type

Model	Classification No.	Model	Classification No.
FL35HAV14	★4	FLX25AVMA	★4
FL50HAV14	★4	FLX25BVMB	★4
FLK25AVMA	★4	FLX35AVMA	★4
FLK25AVMD	★4	FLX35AZVMB	★4
FLK25AZVMB	★4	FLX35BVMB	★4
FLK25BVMB	★4	FLX50AVMA	★4
FLK35AVMA	★4	FLX50AVMA8	★4
FLK35AVMD	★4	FLX50AZVMB	★4
FLK35AZVMB	★4	FLX60AVMA	★4
FLK35BVMB	★4	FLX60AVMA8	★4
FLK50AVMA	★4	FLX60AZVMB	★4
FLK50AVMA8	★4	FLXS25BAVMB	★4
FLK50AVMD	★4	FLXS25BVMA	★4
FLK50AZVMB	★4	FLXS25BVMB	★4
FLK60AVMA	★4	FLXS35BAVMB	★4
FLK60AVMA8	★4	FLXS35BVMA	★4
FLK60AVMD	★4	FLXS35BVMB	★4
FLK60AZVMB	★4	FLXS35GVMA	★4
FLKS25BAVMB	★4	FLXS50BAVMB	★4
FLKS25BVMB	★4	FLXS50BVMA	★4
FLKS35BAVMB	★4	FLXS50BVMB	★4
FLKS35BVMB	★4	FLXS50GVMA	★4
FLKS50BAVMB	★4	FLXS60BAVMB	★4
FLKS50BVMB	★4	FLXS60BVMA	★4
FLKS60BAVMB	★4	FLXS60BVMB	★4
FLKS60BVMB	★4	FLXS60GVMA	★4



Refer to the classification No. on page 81 ~ 83.

## 4.1.4 Duct Connected Type

Model	Classification No.	Model	Classification No.
CDK25AVM	★4	CDKD50CVMA	★4
CDK25AVMA	★4	CDKD50DVMT	★4
CDK25AVMD	★4	CDKD60CVM	★4
CDK25AZVMB	★4	CDKD60CVMA	★4
CDK35AVM	★4	CDKD60DVMT	★4
CDK35AVMA	★4	CDKS25BVMB	★4
CDK35AVMD	★4	CDKS25CVMA	★4
CDK35AZVMB	★4	CDKS25CVMB	★4
CDK50AVM	★4	CDKS25DVMT	★4
CDK50AVMA	★4	CDKS25EAVMA	★4
CDK50AVMD	★4	CDKS25EAVMT	★4
CDK50AZVMB	★4	CDKS25KVM	★4
CDK60AVM	★4	CDKS30JVLT	★4
CDK60AVMA	★4	CDKS35BVMB	★4
CDK60AVMD	★4	CDKS35CVMA	★4
CDK60AZVMB	★4	CDKS35CVMB	★4
CDKD09GV2S	★4	CDKS35DVMT	★4
CDKD12GV2S	★4	CDKS35EAVMA	★4
CDKD18GV2S	★4	CDKS35EAVMT	★4
CDKD24GV2S	★4	CDKS35KVM	★4
CDKD25CVM	★4	CDKS40JVLT	★4
CDKD25CVMA	★4	CDKS50BVMB	★4
CDKD25DVMT	★4	CDKS50CVMA	★4
CDKD25EAVM	★4	CDKS50CVMB	★4
CDKD25EAVMA	★4	CDKS50DVMT	★4
CDKD25EAVMT	★4	CDKS50KVM	★4
CDKD35CVM	★4	CDKS60BVMB	★4
CDKD35CVMA	★4	CDKS60CVMA	★4
CDKD35DVMT	★4	CDKS60CVMB	★4
CDKD35EAVM	★4	CDKS60DVMT	★4
CDKD35EAVMA	★4	CDKS60KVM	★4
CDKD35EAVMT	★4	CDX25AVMA	★4
CDKD50CVM	★4	CDX25AZVMB	★4

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Refer to the classification No. on page 81 ~ 83.

Model	Classification No.	Model	Classification No.
CDX25BVMC	★4	CDXS25EV2C	★4
CDX35AVMA	★4	CDXS25HVLD	★4
CDX35AZVMB	★4	CDXS25KVM	★4
CDX35BVMC	★4	CDXS30JVLT	★4
CDX50AVMA	★4	CDXS35BVMB	★4
CDX50AVMC	★4	CDXS35CVMA	★4
CDX50AZVMB	★4	CDXS35CVMB	★4
CDX60AVMA	★4	CDXS35DVMT	★4
CDX60AVMC	★4	CDXS35EAVMA	★4
CDX60AZVMB	★4	CDXS35EAVMT	★4
CDXD25BMVMC	★4	CDXS35EV2C	★4
CDXD25CMVMC	★4	CDXS35HVLD	★4
CDXD25CVMA	★4	CDXS35KVM	★4
CDXD25DVMT	★4	CDXS40JVLT	★4
CDXD25EAVMA	★4	CDXS50BVMB	★4
CDXD25EAVMT	★4	CDXS50CVMA	★4
CDXD35BMVMC	★4	CDXS50CVMB	★4
CDXD35CMVMC	★4	CDXS50DVMT	★4
CDXD35CVMA	★4	CDXS50EV2C	★4
CDXD35DVMT	★4	CDXS50HVLD	★4
CDXD35EAVMA	★4	CDXS50KVM	★4
CDXD35EAVMT	★4	CDXS60BVMB	★4
CDXD50CVMA	★4	CDXS60CVMA	★4
CDXD50DVMT	★4	CDXS60CVMB	★4
CDXD60BMVMC	★4	CDXS60DVMT	★4
CDXD60CMVMC	★4	CDXS60EV2C	★4
CDXD60CVMA	★4	CDXS60HVLD	★4
CDXD60DVMT	★4	CDXS60KVM	★4
CDXS25BVMB	★4	FDKS25CAVMB	★4
CDXS25CVMA	★4	FDKS25CVMB	★4
CDXS25CVMB	★4	FDKS25EAVMB	★4
CDXS25DVMT	★4	FDKS35CAVMB	★4
CDXS25EAVMA	★4	FDKS35CVMB	★4
CDXS25EAVMT	★4	FDKS35CVMB4	★4



Refer to the classification No. on page 81 ~ 83.



Model	Classification No.	Model	Classification No.
FDKS35EAVMB	★4	FDXS25CVMB	★4
FDKS50CVMB	★4	FDXS25EAVMB	★4
FDKS50CVMB4	★4	FDXS25EV2C	★4
FDKS60CVMB	★4	FDXS35CAVMB	★4
FDKS60CVMB4	★4	FDXS35CVMA	★4
FDXD25DV2C	★4	FDXS35CVMB	★4
FDXD35DV2C	★4	FDXS35EAVMB	★4
FDXD50BMVMC	★4	FDXS35EV2C	★4
FDXD50CMVMC	★4	FDXS50CVMA	★4
FDXS09DVJU	★4	FDXS50CVMB	★4
FDXS12DVJU	★4	FDXS50EV2C	★4
FDXS25CAVMB	★4	FDXS60CVMA	★4
FDXS25CVMA	★4	FDXS60CVMB	★4



Refer to the classification No. on page 81 ~ 83.

### 4.1.5 Ceiling Mounted Cassette Type

Model	Classification No.
CCXS25HVLD	★11
CCXS35HVLD	★11

Model	Classification No.
CCXS50HVLD	★11

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Refer to the classification No. on page 81 ~ 83.

### 4.1.6 Wall Built-in Type

Model	Classification No.
FWKG25AVM	★4

Model	Classification No.
FWKG35AVM	★4

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Refer to the classification No. on page 81 ~ 83.

## 4.2 Outdoor Unit

Model	Classification No.	Model	Classification No.
2AMK40BAVMB	★36	2MKS50H2V1B	★37
2AMK40FV1B	★37	2MKS70JVLT	★35
2AMK50FV1B	★37	2MKS80JVLT	★35
2AMKS40BVMB	★36	2MXS18DVJU	★34
2AMX40BAVMB	★36	2MXS18GVJU	★34
2AMX40F2V1B	★37	2MXS40BVMB	★36
2AMX40FV1B	★37	2MXS40DAVMB	★36
2AMX40G2V1B	★37	2MXS40DVMB	★36
2AMX50F2V1B	★37	2MXS40FV1B	★37
2AMX50FV1B	★37	2MXS40G2V1B	★37
2AMX50G2V1B	★37	2MXS40GV1B	★37
2AMX52D2VMB	★34	2MXS40H2V1B	★37
2AMX52DVMB	★34	2MXS50FV1B	★37
2AMX52E2V1B	★35	2MXS50G2V1B	★37
2AMX52E3V1B	★35	2MXS50GAVLT	★37
2AMXS40BVMB	★36	2MXS50GV1B	★37
2MK58AVM	★34	2MXS50GVLT	★37
2MKD20GV2S	★34	2MXS50H2V1B	★37
2MKD58BVM	★34	2MXS52D2VMB	★34
2MKD58BVM8	★34	2MXS52DVMB	★34
2MKD58DVM	★34	2MXS52E2V1B	★35
2MKS40BVMB	★36	2MXS52E3V1B	★35
2MKS40DAVMB	★36	2MXS70JVLT	★35
2MKS40DVM	★36	2MXS80JVLT	★35
2MKS40DVMB	★36	2MXU40GV1B	★38
2MKS40FV1B	★37	2MXU50GV1B	★38
2MKS40G2V1B	★37	3AMX52C2VMB	★34
2MKS40GV1B	★37	3AMX52CVMB	★34
2MKS40H2V1B	★37	3AMX52E2V1B	★35
2MKS50FV1B	★37	3AMX52E3V1B	★35
2MKS50G2V1B	★37	3AMXS52BVMB	★34
2MKS50GV1B	★37	3MK58AVM	★34



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
3MK75AVM	★34	3MXD68BVMA	★34
3MK75AVMT	★34	3MXD68BVMA8	★34
3MKD28GV2S	★34	3MXD68BVMC	★34
3MKD58BVM	★34	3MXD68BVMT	★34
3MKD58BVM8	★34	3MXD68BVMT8	★34
3MKD58DVM	★34	3MXD80BMVMC	★34
3MKD58DVM4	★34	3MXS24JVJU	★35
3MKD75BVM	★34	3MXS52BVMB	★34
3MKD75BVM8	★34	3MXS52BVMB8	★34
3MKD75BVMA	★34	3MXS52D2VMB	★34
3MKD75BVMA8	★34	3MXS52DVMA	★34
3MKD75BVMT	★34	3MXS52DVMB	★34
3MKD75BVMT8	★34	3MXS52E2V1B	★35
3MKD75DVM	★34	3MXS52E3V1B	★35
3MKS50BVMB	★34	3MXS52EVMA	★35
3MKS50BVMB8	★34	3MXS52KVM	★35
3MKS50D2VMB	★34	3MXS68EVMA	★34
3MKS50DVM	★34	3MXS68G2V1B	★35
3MKS50DVMB	★34	3MXS68HVLD	★35
3MKS50E2V1B	★35	3MXS68KVM	★34
3MKS50E3V1B	★35	3MXS80EV2C	★34
3MKS50ESG	★35	3MXS90EVL	★35
3MKS58EVMA	★35	3MXS90KVLT	★35
3MKS58KVM	★35	4MK58AZVMB	★34
3MKS71ESG	★34	4MK75AVM	★34
3MKS71ESG4	★34	4MK75AZVMB	★34
3MKS75EVMA	★34	4MKD100DVM	★34
3MKS75KVM	★34	4MKD75BVM	★34
3MKS90EVL	★35	4MKD75DVM	★34
3MKS90KVLT	★35	4MKD90BVM	★34
3MX52AZVMB	★34	4MKD90BVMA	★34
3MX68AVMA	★34	4MKD90BVMD	★34
3MX68AVMC	★34	4MKD90BVMT	★34
3MX68AVMT	★34	4MKS100EVL	★35

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
4MKS100KVLT	★35	4MXS100KVLT	★35
4MKS100KVM	★35	4MXS100KVM	★35
4MKS58BVMB	★34	4MXS115HV2C	★35
4MKS58BVMB8	★34	4MXS32GVJU	★35
4MKS58D2VMB	★34	4MXS68BVMB	★34
4MKS58DVMA	★34	4MXS68BVMB9	★34
4MKS58DVMB	★34	4MXS68D2VMB	★34
4MKS58E2V1B	★35	4MXS68DVMA	★34
4MKS58E3V1B	★35	4MXS68DVMB	★34
4MKS71DVM	★34	4MXS68E2V1B	★34
4MKS75BVMB	★34	4MXS68E3V1B	★34
4MKS75D2VMB	★34	4MXS68F2V1B	★35
4MKS75DVMA	★34	4MXS80BVMB	★34
4MKS75DVMB	★34	4MXS80BVMB9	★34
4MKS75E2V1B	★34	4MXS80CVMA	★34
4MKS75E3V1B	★34	4MXS80DAVMB	★34
4MKS75F2V1B	★35	4MXS80DVMA	★34
4MKS80DVM	★34	4MXS80DVMB	★34
4MKS80ESG	★35	4MXS80DVMT	★34
4MKS80ESG4	★35	4MXS80E2V3B	★35
4MKS80KVM	★35	4MXS80E7V3B	★35
4MKS90BVMB	★34	4MXS80EVMA	★35
4MKS90DAVMB	★34	4MXS80HVLD	★35
4MKS90DVMA	★34	4MXS80KVM	★35
4MKS90DVMB	★34	5MKS90E2V3B	★35
4MKS90DVMT	★34	5MKS90E7V3B	★35
4MKS90EVMA	★35	5MKS90K2VM	★35
4MX100DMV2C	★34	5MXS90E2V3B	★35
4MX68AZVMB	★34	5MXS90E7V3B	★35
4MXD80BVMA	★34	5MXS90K2VM	★35
4MXD80BVMC	★34	ARK20E2V1B	★22
4MXD80BVMT	★34	ARK25BVMB	★17
4MXS100EV2C	★35	ARK25E2V1B	★22
4MXS100EVL	★35	ARK35BVMB	★17



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
ARK35E2V1B	★22	ARX35BVMB	★17
ARKH20CAVMB	★18	ARX35E2V1B	★22
ARKH20CVMB7	★18	ARX35GV1B	★21
ARKH20CVMB9	★18	ARX35JV1B	★21
ARKH25CAVMB	★18	ARXD50CV4	★28
ARKH25CVMB7	★18	ARXD60CV4	★28
ARKH25CVMB9	★18	ARXD71CV4	★28
ARKH35CAVMB	★18	ARXD80CV4	★28
ARKH35CVMB7	★18	ARXG25CVMB	★20
ARKH35CVMB9	★18	ARXG25CVMB9	★20
ARKS20C2VMB	★19	ARXG25E2V1B	★20
ARKS20CVMB	★19	ARXG25E3V1B	★20
ARKS20CVMB9	★19	ARXG35CVMB	★20
ARKS20E2V1B	★22	ARXG35CVMB9	★20
ARKS20F2V1B	★22	ARXG35E2V1B	★20
ARKS25BVMB	★17	ARXG35E3V1B	★20
ARKS25C2VMB	★19	ARXH20CAVMB	★18
ARKS25CVMB	★19	ARXH20CVMB7	★18
ARKS25CVMB9	★19	ARXH20CVMB9	★18
ARKS25E2V1B	★22	ARXH25CAVMB	★18
ARKS25F2V1B	★22	ARXH25CVMB7	★18
ARKS35BVMB	★17	ARXH25CVMB9	★18
ARKS35C2VMB	★19	ARXH35CAVMB	★18
ARKS35CVMB	★19	ARXH35CVMB7	★18
ARKS35CVMB9	★19	ARXH35CVMB9	★18
ARKS35E2V1B	★22	ARXS20C2VMB	★19
ARKS35F2V1B	★22	ARXS20CVMB	★19
ARX20E2V1B	★22	ARXS20CVMB9	★19
ARX20GV1B	★21	ARXS20E2V1B	★22
ARX20JV1B	★21	ARXS20F2V1B	★22
ARX25BVMB	★17	ARXS20G2V1B	★20
ARX25E2V1B	★22	ARXS20G3V1B	★21
ARX25GV1B	★21	ARXS25BVMB	★17
ARX25JV1B	★21	ARXS25C2VMB	★19



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
ARXS25CVMB	★19	RK25E2V1B	★22
ARXS25CVMB9	★19	RK25GV1B	★21
ARXS25E2V1B	★22	RK25GVLT	★21
ARXS25F2V1B	★22	RK25JAVET	★14
ARXS25F3V1B	★22	RK25JEVM	★21
ARXS25G2V1B	★20	RK25JV1NB9	★14
ARXS25G3V1B	★21	RK25JVE9	★14
ARXS35BVM	★17	RK25JVEA9	★14
ARXS35C2VMB	★19	RK30GVLT	★21
ARXS35CVMB	★19	RK35BVM	★17
ARXS35CVMB9	★19	RK35E2V1B	★22
ARXS35E2V1B	★22	RK35GV1B	★21
ARXS35F2V1B	★22	RK35JAVET	★14
ARXS35F3V1B	★22	RK35JEVM	★21
ARXS35G2V1B	★20	RK35JV1NB9	★14
ARXS35G3V1B	★21	RK35JVE9	★14
ARXS42G2V1B	★20	RK35JVEA9	★14
ARXS50C2VMB	★28	RK40JVL	★30
ARXS50CVMB	★28	RK50JVL	★30
ARXS50E2V1B	★30	RKD09DVMS	★20
ARXS50E3V1B	★30	RKD09FV2S	★20
ARXS50G2V1B	★30	RKD09GV2S	★20
ARY20DV2	★33	RKD09HV2S	★20
ARY25DV2	★33	RKD12DVMS	★20
ARY35DV2	★33	RKD12FV2S	★20
R60DSG	★28	RKD12GV2S	★20
RK15JEVM	★21	RKD12HV2S	★20
RK15KEVM	★21	RKD15FV2S	★28
RK20E2V1B	★22	RKD15GV2S	★28
RK20GV1B	★21	RKD15HV2S	★20
RK20GVLT	★21	RKD18BVMS	★28
RK20JEVM	★21	RKD18FV2S	★28
RK20KEVM	★21	RKD18GV2S	★28
RK25BVM	★17	RKD18HV2S	★28

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RKD24BVMS	★28	RKD50JVEA9	★27
RKD24FV2S	★28	RKD50JVET	★27
RKD24GV2S	★28	RKD60BVM	★28
RKD24HV2S	★28	RKD60BVM4	★28
RKD25DAV2Z	★20	RKD60BVMMA	★28
RKD25DAVM	★20	RKD60BVMMA9	★28
RKD25DAVM4	★20	RKD60BVMT	★28
RKD25DAVMA	★20	RKD60DSG	★28
RKD25DV2Z	★20	RKD60JVE	★27
RKD25DVM	★20	RKD60JVEA	★27
RKD25DVMA	★20	RKD60JVET	★27
RKD25DVMT	★20	RKD71BVM	★28
RKD25KZV1B	★15	RKD71BVM4	★28
RKD28BVMS	★28	RKD71BVMA	★28
RKD28FV2S	★28	RKD71BVMT	★28
RKD28GV2S	★28	RKD71JVE	★27
RKD28HV2S	★28	RKD71JVEA	★27
RKD35DAV2Z	★20	RKD71JVET	★27
RKD35DAVM	★20	RKD80BVMA	★28
RKD35DAVM4	★20	RKE09BVMS	★16
RKD35DAVMA	★20	RKE09GV2S	★20
RKD35DV2Z	★20	RKE12BVMS	★16
RKD35DVM	★20	RKE12GV2S	★20
RKD35DVMA	★20	RKE15GV2S	★20
RKD35DVMT	★20	RKE25BVM	★16
RKD35KZV1B	★15	RKE25BVMA	★16
RKD50BVM	★28	RKE25BVMT	★16
RKD50BVM4	★28	RKE25GV1	★20
RKD50BVMA	★28	RKE35BVM	★16
RKD50BVMT	★28	RKE35BVMA	★16
RKD50DSG	★28	RKE35BVMT	★16
RKD50JVE	★27	RKE35GV1	★20
RKD50JVE9	★27	RKE42GV1	★20
RKD50JVEA	★27	RKG09HV2S	★21

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Refer to the classification No. on page 84 ~ 93.



Model	Classification No.	Model	Classification No.
RKG12HV2S	★21	RKS20D2VMB	★22
RKH20CAVMB	★18	RKS20D3VMB	★22
RKH20CVMB7	★18	RKS20DVMB	★22
RKH20CVMB9	★18	RKS20DVMT	★22
RKH25CAVMB	★18	RKS20E2V1B	★22
RKH25CVMB7	★18	RKS20G2V1B	★20
RKH25CVMB9	★18	RKS20G2V1B9	★21
RKH35CAVMB	★18	RKS20GVLT	★22
RKH35CVMB7	★18	RKS20GVLT8	★22
RKH35CVMB9	★18	RKS20J2V1B	★21
RKN09JEVJU	★23	RKS20JVLT	★22
RKN09KEVJU	★21	RKS20KVLT	★21
RKN12JEVJU	★23	RKS20KVMA	★21
RKN12KEVJU	★21	RKS24GV2S	★30
RKN15KEVJU	★31	RKS24HV2S	★30
RKN18KEVJU	★31	RKS25AVMG	★22
RKN24KEVJU	★31	RKS25BVMB	★17
RKN25JEVM	★23	RKS25C2VMB	★19
RKN25KEVM	★23	RKS25CVMB	★19
RKN35JEVM	★23	RKS25CVMB9	★19
RKN35KEVM	★23	RKS25D2VMB	★22
RKN50KEVM	★31	RKS25D3VMB	★22
RKN60KEVM	★31	RKS25DAVM	★22
RKS09GV2S	★22	RKS25DVM	★22
RKS09HV2S	★21	RKS25DVMA	★22
RKS09JEVJU	★21	RKS25DVMB	★22
RKS12GV2S	★22	RKS25DVMT	★22
RKS12HV2S	★21	RKS25E2V1B	★22
RKS12JEVJU	★21	RKS25EBVMA	★22
RKS18GV2S	★30	RKS25EBVMA4	★22
RKS18HV2S	★30	RKS25EVMA	★22
RKS20C2VMB	★19	RKS25F2V1B	★22
RKS20CVMB	★19	RKS25G2V1B	★20
RKS20CVMB9	★19	RKS25G2V1B9	★21

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RKS25GVLT	★22	RKS35GVMG	★22
RKS25GVLT8	★22	RKS35GVMGE4	★22
RKS25GVMG	★22	RKS35J2V1B	★21
RKS25GVMGE4	★22	RKS35KVMA	★21
RKS25J2V1B	★21	RKS36HVJU	★30
RKS25JVLT	★22	RKS40JVLT	★30
RKS25KVLT	★21	RKS42G2V1B	★20
RKS25KVMA	★21	RKS42GVLT	★30
RKS28GV2S	★30	RKS42J2V1B	★20
RKS28HV2S	★30	RKS50AVMG	★30
RKS30GVLT8	★22	RKS50B2VMB	★28
RKS30HVJU	★30	RKS50BVMA	★28
RKS30JVLT	★22	RKS50BVMB	★28
RKS30KVLT	★21	RKS50BVMB9	★28
RKS35AVMG	★22	RKS50BVMG	★28
RKS35BVMB	★17	RKS50DVMT	★28
RKS35C2VMB	★19	RKS50E2V1B	★30
RKS35CVMB	★19	RKS50E3V1B	★30
RKS35CVMB9	★19	RKS50F2V1B	★30
RKS35D2VMB	★22	RKS50FBVMA	★30
RKS35D3VMB	★22	RKS50FVLT	★30
RKS35DAVM	★22	RKS50FVM	★30
RKS35DVM	★22	RKS50FVM4	★30
RKS35DVMA	★22	RKS50FVMA	★30
RKS35DVMB	★22	RKS50G2V1B	★30
RKS35DVMT	★22	RKS50GVMG	★30
RKS35E2V1B	★22	RKS50GVMGE4	★30
RKS35EBVMA	★22	RKS50J2V1B	★30
RKS35EBVMA4	★22	RKS50JVLT	★30
RKS35EVMA	★22	RKS50JVMA	★30
RKS35F2V1B	★22	RKS50KVMA	★30
RKS35G2V1B	★20	RKS60AVMG	★30
RKS35G2V1B9	★21	RKS60B2VMB	★28
RKS35GVLT	★22	RKS60BVMA	★28



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RKS60BVMB	★28	RKS71HVMG	★30
RKS60BVMB9	★28	RKS71HVMGE4	★30
RKS60DVMT	★28	RKS71JVMA	★30
RKS60E2V1B	★30	RKS71KVMA	★30
RKS60E3V1B	★30	RN20CVMB7	★18
RKS60F2V1B	★30	RN20CVMB9	★18
RKS60F3V1B	★30	RN25CVMB7	★18
RKS60FBVMA	★30	RN25CVMB9	★18
RKS60FVLT	★30	RN25DAV3B	★33
RKS60FVM	★30	RN25DV3B	★33
RKS60FVM4	★30	RN25KV1A	★21
RKS60FVMA	★30	RN35CVMB7	★18
RKS60GVMG	★30	RN35CVMB9	★18
RKS60GVMGE4	★30	RN35DAV3B	★33
RKS60JVLT	★30	RN35DV3B	★33
RKS60JVMA	★30	RN35KV1A	★21
RKS60KVMA	★30	RN50E2V1B	★30
RKS70JVLT	★30	RN50E3V1B	★30
RKS71B2VMB	★28	RN60E2V1B	★30
RKS71B3VMB	★28	RN60E3V1B	★30
RKS71BVMA	★28	RS20BVMB	★17
RKS71BVMB	★28	RS25BVMB	★17
RKS71BVMB9	★28	RS35BVMB	★17
RKS71DVMT	★28	RS50B2VMB	★28
RKS71E2V1B	★30	RS50BVMB	★28
RKS71E3V1B	★30	RS60B2VMB	★28
RKS71FAV1B	★30	RS60BVMB	★28
RKS71FBVMA	★30	RX09FAVJU	★20
RKS71FV1B	★30	RX09FVJU	★20
RKS71FVLT	★30	RX12FAVJU	★20
RKS71FVM	★30	RX12FVJU	★20
RKS71FVM4	★30	RX15FVJU	★28
RKS71FVMA	★30	RX18FVJU	★28
RKS71GVMG	★30	RX20E2V1B	★22



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RX20GV1B	★21	RX50G2V1B	★30
RX20GVLT	★21	RX50JVLT	★30
RX20JV1B	★21	RX50KEVM	★31
RX24FVJU	★28	RX56AV1C	★28
RX25BVMB	★17	RX60AZVMB	★29
RX25E2V1B	★22	RX60G2V1B	★30
RX25FV2C	★23	RX60KEVM	★31
RX25GV1B	★21	RX71AZVMB	★29
RX25GVLT	★21	RX71GV1B	★30
RX25JAVET	★14	RXB325KC	★23
RX25JEVM	★21	RXB335KC	★23
RX25JV1B	★21	RXD25DAV2C	★20
RX25JV1NB5	★14	RXD25DAV2Z	★20
RX25JV1NB9	★14	RXD25DAVMA	★20
RX25JVEA9	★14	RXD25DV2C	★20
RX25KEVM	★21	RXD25DV2Z	★20
RX25LV1C	★16	RXD25DVMA	★20
RX25LV1C9	★16	RXD25DVMT	★20
RX30GVLT	★21	RXD25FAV2C	★20
RX32FV2C	★23	RXD25FV2C	★20
RX35BVMB	★17	RXD25KZV1B	★15
RX35E2V1B	★22	RXD35DAV2C	★20
RX35GV1B	★21	RXD35DAV2Z	★20
RX35JAVET	★14	RXD35DAVMA	★20
RX35JEVM	★21	RXD35DV2C	★20
RX35JV1B	★21	RXD35DV2Z	★20
RX35JV1NB5	★14	RXD35DVMA	★20
RX35JV1NB9	★14	RXD35DVMT	★20
RX35JVEA9	★14	RXD35FAV2C	★20
RX35KEVM	★21	RXD35FV2C	★20
RX35LV1C	★16	RXD35KZV1B	★15
RX35LV1C9	★16	RXD50BMVMC	★28
RX40JVLT	★30	RXD50BV4	★28
RX50AZVMB	★29	RXD50BVMA	★28



Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RXD50BVMT	★28	RXG15HVJU	★24
RXD50CMVMC	★28	RXG25CVMA	★20
RXD50JV1B	★27	RXG25CVMB	★20
RXD50JV1B5	★27	RXG25CVMB9	★20
RXD50JVEA9	★27	RXG25E2V1B	★20
RXD50JVET	★27	RXG25E3V1B	★20
RXD60BVMA	★28	RXG25EAVMA	★20
RXD60BVMT	★28	RXG25EVMA	★20
RXD60DMV2C	★28	RXG25FVMA	★20
RXD60JV1B	★27	RXG25J2V1B	★21
RXD60JV1B5	★27	RXG25JV2C	★21
RXD60JVEA	★27	RXG25K2V1B	★21
RXD60JVET	★27	RXG35CVMA	★20
RXD68CMV2C	★28	RXG35CVMB	★20
RXD71BMVMC	★28	RXG35CVMB9	★20
RXD71BVMA	★28	RXG35E2V1B	★20
RXD71BVMT	★28	RXG35E3V1B	★20
RXD71DMV2C	★28	RXG35EAVMA	★20
RXD71JV1B	★27	RXG35EVMA	★20
RXD71JV1B5	★27	RXG35FVMA	★20
RXD71JVEA	★27	RXG35J2V1B	★21
RXD71JVET	★27	RXG35JV2C	★21
RXD80BVMA	★28	RXG35K2V1B	★21
RXD80CV4	★28	RXG50JV2C	★20
RXE25BVMA	★16	RXG50K2V1B	★30
RXE25BVMT	★16	RXG50KV2C	★20
RXE25CMV2C	★16	RXG60JV2C	★30
RXE35BVMA	★16	RXG72JV2C	★30
RXE35BVMT	★16	RXH20CAVMB	★18
RXE35CMV2C	★16	RXH20CVMB7	★18
RXF125KC	★21	RXH20CVMB9	★18
RXF135KC	★21	RXH25CAVMB	★18
RXG09HVJU	★24	RXH25CVMB7	★18
RXG12HVJU	★24	RXH25CVMB9	★18

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RXH25JV2C	★23	RXP32JV2C	★23
RXH325KC	★23	RXP35HV2C	★23
RXH335KC	★23	RXP35JV2C	★21
RXH35CAVMB	★18	RXR28EV1B	★25
RXH35CVMB7	★18	RXR28EV1B9	★25
RXH35CVMB9	★18	RXR28FVLT	★25
RXH35JV2C	★23	RXR28KVMA	★25
RXL20G2V1B	★20	RXR35HV2C	★26
RXL20G2V1B9	★21	RXR42EV1B	★25
RXL20G3V1B	★21	RXR42EV1B9	★25
RXL25G2V1B	★20	RXR42KVMA	★25
RXL25G3V1B	★20	RXR50EV1B	★25
RXL35G2V1B	★30	RXR50EV1B9	★25
RXL35G3V1B	★30	RXR50FVLT	★25
RXN09JEVJU	★23	RXR50KVMA	★25
RXN09KEVJU	★21	RXS09DAVJU	★20
RXN12JEVJU	★23	RXS09DVJU	★20
RXN12KEVJU	★21	RXS09JEVJU	★21
RXN15KEVJU	★31	RXS100HVMA	★30
RXN18KEVJU	★31	RXS100JVMA	★30
RXN24KEVJU	★31	RXS100KVMA	★30
RXN25JEV1B	★23	RXS12DAVJU	★20
RXN25KEV1B	★23	RXS12DVJU	★20
RXN25KV2C	★23	RXS12JEVJU	★21
RXN32KV2C	★23	RXS15DVJU	★28
RXN35JEV1B	★23	RXS18DVJU	★28
RXN35KEV1B	★23	RXS20C2VMB	★19
RXN425KC	★23	RXS20CVMB	★19
RXN435KC	★23	RXS20CVMB9	★19
RXN50KEV1B	★31	RXS20D2VMB	★22
RXN60KEV1B	★31	RXS20D3VMB	★22
RXP25HV2C	★23	RXS20DVMB	★22
RXP25JV2C	★23	RXS20DVMT	★22
RXP32HV2C	★23	RXS20E2V1B	★22

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RXS20G2V1B	★20	RXS25EVMA	★22
RXS20G2V1B9	★21	RXS25F2V1B	★22
RXS20GVLT	★22	RXS25FBV2C	★22
RXS20GVLT8	★22	RXS25FV2C	★22
RXS20J2V1B	★21	RXS25G2V1B	★20
RXS20JVLT	★22	RXS25G2V1B9	★21
RXS20KVLT	★21	RXS25GVLT	★22
RXS20KVMA	★21	RXS25GVLT8	★22
RXS225KC	★23	RXS25HV2C	★23
RXS225KCG	★23	RXS25J2V1B	★21
RXS225KCP	★23	RXS25JVLT	★22
RXS225KCS	★23	RXS25JVMA	★22
RXS232KC	★23	RXS25KVLT	★21
RXS232KCG	★23	RXS25KVMA	★21
RXS232KCP	★23	RXS30GVLT8	★22
RXS232KCS	★23	RXS30HVJU	★30
RXS235KC	★21	RXS30JVLT	★22
RXS235KCG	★21	RXS30KVLT	★21
RXS235KCP	★21	RXS35BVMA	★17
RXS235KCS	★21	RXS35BVMB	★17
RXS24DVJU	★28	RXS35C2VMB	★19
RXS25BVMA	★17	RXS35CVMB	★19
RXS25BVMB	★17	RXS35CVMB9	★19
RXS25C2VMB	★19	RXS35D2VMB	★22
RXS25CVMB	★19	RXS35D3VMB	★22
RXS25CVMB9	★19	RXS35DVMA	★22
RXS25D2VMB	★22	RXS35DVMB	★22
RXS25D3VMB	★22	RXS35DVMT	★22
RXS25DVMA	★22	RXS35E2V1B	★22
RXS25DVMB	★22	RXS35EAVMA	★22
RXS25DVMT	★22	RXS35EBVMA	★22
RXS25E2V1B	★22	RXS35EVMA	★22
RXS25EAVMA	★22	RXS35F2V1B	★22
RXS25EBVMA	★22	RXS35FBV2C	★22

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Refer to the classification No. on page 84 ~ 93.

Model	Classification No.	Model	Classification No.
RXS35FV2C	★22	RXS60B2VMB	★28
RXS35G2V1B	★20	RXS60BVMA	★28
RXS35G2V1B9	★21	RXS60BVMB	★28
RXS35GVLTL	★22	RXS60DVMT	★28
RXS35HV2C	★22	RXS60E2V1B	★30
RXS35J2V1B	★21	RXS60E3V1B	★30
RXS35JV2C	★21	RXS60F2V1B	★30
RXS35JVMA	★22	RXS60F3V1B	★30
RXS35KVMA	★21	RXS60FBVMA	★30
RXS36HVJU	★30	RXS60FVLT	★30
RXS40JVLT	★30	RXS60FVMA	★30
RXS42G2V1B	★20	RXS60GMV2C	★30
RXS42GVLTL	★30	RXS60HAVMA	★30
RXS42J2V1B	★20	RXS60HVMA	★30
RXS46GV2C	★20	RXS60JVLT	★30
RXS46JV2C	★20	RXS60JVMA	★30
RXS46KVMA	★30	RXS60KVMA	★30
RXS50B2VMB	★28	RXS70JVLT	★30
RXS50BVMA	★28	RXS71B2VMB	★28
RXS50BVMB	★28	RXS71B3VMB	★28
RXS50DVMT	★28	RXS71BVMA	★28
RXS50E2V1B	★30	RXS71BVMB	★28
RXS50E3V1B	★30	RXS71DVMT	★28
RXS50F2V1B	★30	RXS71E2V1B	★30
RXS50FAVMA	★30	RXS71E3V1B	★30
RXS50FBV2C	★30	RXS71FAV1B	★30
RXS50FBVMA	★30	RXS71FBVMA	★30
RXS50FVLT	★30	RXS71FMV2C	★30
RXS50FVMA	★30	RXS71FV1B	★30
RXS50G2V1B	★30	RXS71FVLT	★30
RXS50J2V1B	★30	RXS71FVMA	★30
RXS50JVLT	★30	RXS71HAVMA	★30
RXS50JVMA	★30	RXS71HVMA	★30
RXS50KVMA	★30	RXS71HVMB	★30



Refer to the classification No. on page 84 ~ 93.



Model	Classification No.	Model	Classification No.
RXS71JVMA	★30	RYN35DV3B	★33
RXS71KVMA	★30	RYN35HV1A	★33
RXS72GMV2C	★30	RYN35KV1A	★21
RXS80FBVMA	★30	RYN50DV1A	★28
RXS80FVMA	★30	RYN50E2V1B	★30
RXS80HVMA	★30	RYN50E3V1B	★30
RXS80KVMA	★30	RYN50FV1A	★30
RXS90FVMA	★30	RYN50HV1A	★32
RXS90HVMA	★30	RYN60DV1A	★28
RXS90JVMA	★30	RYN60E2V1B	★30
RXS90KVMA	★30	RYN60E3V1B	★30
RY25CVMA	★16	RYN60FV1A	★30
RY35CVMA	★16	RYN60HV1A	★32
RYN20CVMB7	★18	RYN71FV1A	★30
RYN20CVMB9	★18	RYS20BVMB	★17
RYN25CVMB7	★18	RYS25BVMB	★17
RYN25CVMB9	★18	RYS35BVMB	★17
RYN25DAV1A	★22	RYS50B2VMB	★28
RYN25DAV3B	★33	RYS50BVMB	★28
RYN25DV1A	★22	RYS60B2VMB	★28
RYN25DV3B	★33	RYS60BVMB	★28
RYN25KV1A	★21	RZS235KC	★21
RYN35CVMB7	★18	RZS235KCG	★21
RYN35CVMB9	★18	RZS235KCP	★21
RYN35DAV1A	★22	RZS235KCS	★21
RYN35DAV3B	★33	RZY71DMV2C	★28
RYN35DV1A	★22		



Refer to the classification No. on page 84 ~ 93.

## 5. Error Codes and Description

### 5.1 Indoor Unit



**Note:** Numerical values vary from model to model.  
For accurate values, refer to the service manual.

Code	Description	Classification No. and related page				
		★1	★2	★3	★4	★5
<b>00</b>	Normal condition	—	—	—	—	—
<b>A1</b>	Indoor unit PCB abnormality	94	94	94	94	94
<b>A3</b>	Drain water level or related abnormality	—	—	—	—	—
<b>A5</b>	Freeze-up protection control or heating peak-cut control	99	99	99	99	99
<b>A6</b>	Fan motor or related abnormality	103	103	105	107	107
<b>A9</b>	Radiant panel temperature rise, indoor electronic expansion valve (motor operated valve) abnormality, freeze-up protection control	—	—	—	—	—
<b>AH</b>	Streamer unit abnormality	—	—	—	—	—
	Cleaning unit system abnormality	—	—	—	—	—
<b>C4</b>	Indoor heat exchanger thermistor or related abnormality	118	118	118	118	118
<b>C7</b>	Shutter drive motor / shutter limit switch abnormality	—	—	—	—	—
	Front panel open / close fault	—	—	—	—	—
	Grille locking abnormality, panel up and down / storage / locking abnormality	—	—	—	—	—
<b>C9</b>	Room temperature thermistor or related abnormality	118	118	118	118	118
<b>CC</b>	Humidity sensor abnormality	—	—	—	—	—
<b>CE</b>	Radiant panel thermistor or related abnormality	—	—	—	—	—
<b>U2</b>	Low-voltage detection or over-voltage detection	—	147	—	—	—
	Low-voltage detection	—	—	—	—	149
No display	Lights-out of microcomputer status lamp	131	131	131	133	131

Code	Description	Classification No. and related page			
		★6	★7	★8	★9
<b>00</b>	Normal condition	—	—	—	—
<b>A1</b>	Indoor unit PCB abnormality	94	94	94	94
<b>A3</b>	Drain water level or related abnormality	—	—	—	—
<b>A5</b>	Freeze-up protection control or heating peak-cut control	99	99	99	101
<b>A6</b>	Fan motor or related abnormality	103	103	103	103
<b>A9</b>	Radiant panel temperature rise, indoor electronic expansion valve (motor operated valve) abnormality, freeze-up protection control	—	—	—	—
<b>AH</b>	Streamer unit abnormality	—	—	—	113
	Cleaning unit system abnormality	—	—	—	—
<b>C4</b>	Indoor heat exchanger thermistor or related abnormality	118	118	118	118
<b>C7</b>	Shutter drive motor / shutter limit switch abnormality	119	—	—	119
	Front panel open / close fault	—	121	121	—
	Grille locking abnormality, panel up and down / storage / locking abnormality	—	—	—	—
<b>C9</b>	Room temperature thermistor or related abnormality	118	118	118	118
<b>CC</b>	Humidity sensor abnormality	—	—	—	130
<b>CE</b>	Radiant panel thermistor or related abnormality	—	—	—	—
<b>U2</b>	Low-voltage detection or over-voltage detection	—	—	147	—
	Low-voltage detection	—	—	—	—
<b>No display</b>	Lights-out of microcomputer status lamp	131	131	131	136

Code	Description	Classification No. and related page			
		★10	★11	★12	★13
<b>00</b>	Normal condition	—	—	—	—
<b>A1</b>	Indoor unit PCB abnormality	94	94	94	94
<b>A3</b>	Drain water level or related abnormality	—	96	—	—
<b>A5</b>	Freeze-up protection control or heating peak-cut control	99	99	—	99
<b>A6</b>	Fan motor or related abnormality	103	103	103	103
<b>A9</b>	Radiant panel temperature rise, indoor electronic expansion valve (motor operated valve) abnormality, freeze-up protection control	—	—	—	110
<b>AH</b>	Streamer unit abnormality	—	—	—	—
	Cleaning unit system abnormality	—	115	—	—
<b>C4</b>	Indoor heat exchanger thermistor or related abnormality	118	118	118	118
<b>C7</b>	Shutter drive motor / shutter limit switch abnormality	—	—	—	—
	Front panel open / close fault	—	—	—	—
	Grille locking abnormality, panel up and down / storage / locking abnormality	—	123	—	—
<b>C9</b>	Room temperature thermistor or related abnormality	118	118	118	118
<b>CC</b>	Humidity sensor abnormality	130	—	—	—
<b>CE</b>	Radiant panel thermistor or related abnormality	—	—	—	118
<b>U2</b>	Low-voltage detection or over-voltage detection	—	—	—	147
	Low-voltage detection	—	—	—	—
<b>No display</b>	Lights-out of microcomputer status lamp	138	131	131	131

## 5.2 Outdoor Unit



**Note:** Numerical values and LED indication vary from model to model.  
For accurate values and indication, refer to the service manual.

Code	Description	Classification No. and related page				
		★14	★15	★16	★17	★18
00	Normal condition	—	—	—	—	—
U0	Refrigerant shortage	—	139	139	139	143
U2	Low-voltage detection or over-voltage detection	—	147	—	—	147
U4	Signal transmission error (between indoor unit and outdoor unit)	150	150	150	150	150
	Outdoor unit PCB abnormality or communication circuit abnormality	—	—	—	—	—
U7	Signal transmission error on outdoor unit PCB	—	—	—	—	—
UA	Incomplete setting for hose length	—	—	—	—	—
	Unspecified voltage (between indoor unit and outdoor unit)	—	—	—	—	—
UH	Anti-icing function in other rooms	—	—	—	—	—
A5	Anti-icing function	—	—	—	—	—
E1	Outdoor unit PCB abnormality	—	—	—	—	—
E5	OL activation (compressor overload)	171	171	171	171	171
E6	Compressor lock	173	173	173	173	173
E7	DC fan lock	—	—	—	—	—
E8	Input overcurrent detection	177	177	177	177	177
EA	Four way valve abnormality	—	—	179	179	179
F3	Discharge pipe temperature control	—	183	—	183	183
F6	High pressure control in cooling	—	—	186	186	186
H0	Compressor system sensor abnormality	—	—	—	—	—
H1	Damper abnormality	—	—	—	—	—
H6	Position sensor abnormality	—	194	—	194	194
H8	DC voltage / current sensor abnormality	—	—	—	—	199
	CT or related abnormality	200	200	200	200	—

Code	Description	Classification No. and related page				
		★14	★15	★16	★17	★18
<b>H9</b>	Outdoor temperature thermistor or related abnormality	203	203	203	203	203
<b>J3</b>	Discharge pipe thermistor or related abnormality	—	203	—	203	203
<b>J6</b>	Outdoor heat exchanger thermistor or related abnormality	203	203	203	203	203
<b>J8</b>	Liquid pipe thermistor or related abnormality	—	—	—	—	—
<b>J9</b>	Gas pipe thermistor or related abnormality	—	—	—	—	—
<b>L3</b>	Electrical box temperature rise	—	—	209	209	211
<b>L4</b>	Radiation fin temperature rise	—	213	213	213	215
<b>L5</b>	Output overcurrent detection	217	217	217	217	217
<b>P4</b>	Radiation fin thermistor or related abnormality	—	203	203	203	203
<b>P9</b>	Fan motor system abnormality / fan lock	—	—	—	—	—
<b>PA</b>	Heater wire abnormality	—	—	—	—	—
<b>PH</b>	Humidifying thermistor abnormality / humidifying heater temperature abnormality	—	—	—	—	—

Code	Description	Classification No. and related page				
		★19	★20	★21	★22	★23
00	Normal condition	—	—	—	—	—
U0	Refrigerant shortage	143	143	143	143	143
U2	Low-voltage detection or over-voltage detection	147	147	147	147	147
U4	Signal transmission error (between indoor unit and outdoor unit)	150	150	150	150	150
	Outdoor unit PCB abnormality or communication circuit abnormality	—	—	—	—	—
U7	Signal transmission error on outdoor unit PCB	—	—	—	—	—
UA	Incomplete setting for hose length	—	—	—	—	—
	Unspecified voltage (between indoor unit and outdoor unit)	—	164	164	164	164
UH	Anti-icing function in other rooms	—	—	—	—	—
A5	Anti-icing function	—	—	—	—	—
E1	Outdoor unit PCB abnormality	—	168	168	168	168
E5	OL activation (compressor overload)	171	171	171	171	171
E6	Compressor lock	173	173	173	173	173
E7	DC fan lock	175	175	175	175	—
E8	Input overcurrent detection	177	177	177	177	177
EA	Four way valve abnormality	179	179	179	179	179
F3	Discharge pipe temperature control	183	183	183	183	183
F6	High pressure control in cooling	186	186	186	186	186
H0	Compressor system sensor abnormality	—	191	190	191	190
H1	Damper abnormality	—	—	—	—	—
H6	Position sensor abnormality	194	194	194	194	194
H8	DC voltage / current sensor abnormality	199	199	199	199	199
	CT or related abnormality	—	—	—	—	—
H9	Outdoor temperature thermistor or related abnormality	203	203	203	203	203
J3	Discharge pipe thermistor or related abnormality	203	203	203	203	203

Code	Description	Classification No. and related page				
		★19	★20	★21	★22	★23
<b>J6</b>	Outdoor heat exchanger thermistor or related abnormality	203	203	203	203	203
<b>J8</b>	Liquid pipe thermistor or related abnormality	—	—	—	—	—
<b>J9</b>	Gas pipe thermistor or related abnormality	—	—	—	—	—
<b>L3</b>	Electrical box temperature rise	211	211	211	209	211
<b>L4</b>	Radiation fin temperature rise	215	215	215	213	215
<b>L5</b>	Output overcurrent detection	217	217	217	217	217
<b>P4</b>	Radiation fin thermistor or related abnormality	203	203	203	203	203
<b>P9</b>	Fan motor system abnormality / fan lock	—	—	—	—	—
<b>PA</b>	Heater wire abnormality	—	—	—	—	—
<b>PH</b>	Humidifying thermistor abnormality / humidifying heater temperature abnormality	—	—	—	—	—



Code	Description	Classification No. and related page				
		★24	★25	★26	★27	★28
<b>00</b>	Normal condition	—	—	—	—	—
<b>U0</b>	Refrigerant shortage	143	143	143	139	139
<b>U2</b>	Low-voltage detection or over-voltage detection	147	147	147	147	147
<b>U4</b>	Signal transmission error (between indoor unit and outdoor unit)	152	152	152	150	150
	Outdoor unit PCB abnormality or communication circuit abnormality	154	154	154	—	—
<b>U7</b>	Signal transmission error on outdoor unit PCB	159	159	—	—	—
<b>UA</b>	Incomplete setting for hose length	—	161	161	—	—
	Unspecified voltage (between indoor unit and outdoor unit)	164	164	164	164	—
<b>UH</b>	Anti-icing function in other rooms	—	—	—	—	—
<b>A5</b>	Anti-icing function	—	—	—	—	—
<b>E1</b>	Outdoor unit PCB abnormality	168	168	168	—	—
<b>E5</b>	OL activation (compressor overload)	171	171	171	171	171
<b>E6</b>	Compressor lock	173	173	173	173	173
<b>E7</b>	DC fan lock	175	175	175	175	175
<b>E8</b>	Input overcurrent detection	177	177	177	177	177
<b>EA</b>	Four way valve abnormality	179	179	—	—	179
<b>F3</b>	Discharge pipe temperature control	183	183	183	183	183
<b>F6</b>	High pressure control in cooling	188	188	186	—	186
<b>H0</b>	Compressor system sensor abnormality	190	190	190	—	—
<b>H1</b>	Damper abnormality	—	193	193	—	—
<b>H6</b>	Position sensor abnormality	194	194	194	194	194
<b>H8</b>	DC voltage / current sensor abnormality	199	199	199	—	—
	CT or related abnormality	—	—	—	200	200
<b>H9</b>	Outdoor temperature thermistor or related abnormality	203	203	203	203	203
<b>J3</b>	Discharge pipe thermistor or related abnormality	203	203	203	203	203

Code	Description	Classification No. and related page				
		★24	★25	★26	★27	★28
<b>J6</b>	Outdoor heat exchanger thermistor or related abnormality	203	203	203	203	203
<b>J8</b>	Liquid pipe thermistor or related abnormality	—	—	—	—	—
<b>J9</b>	Gas pipe thermistor or related abnormality	—	—	—	—	—
<b>L3</b>	Electrical box temperature rise	211	211	211	—	209
<b>L4</b>	Radiation fin temperature rise	215	215	215	—	213
<b>L5</b>	Output overcurrent detection	217	217	217	217	217
<b>P4</b>	Radiation fin thermistor or related abnormality	203	203	203	—	203
<b>P9</b>	Fan motor system abnormality / fan lock	—	220	220	—	—
<b>PA</b>	Heater wire abnormality	—	222	222	—	—
<b>PH</b>	Humidifying thermistor abnormality / humidifying heater temperature abnormality	—	224	224	—	—

Code	Description	Classification No. and related page				
		★29	★30	★31	★32	★33
00	Normal condition	—	—	—	—	—
U0	Refrigerant Shortage	139	143	143	143	—
U2	Low-voltage detection or over-voltage detection	147	147	147	—	—
U4	Signal transmission error (between indoor unit and outdoor unit)	150	150	150	150	—
	Outdoor unit PCB abnormality or communication circuit abnormality	—	—	—	—	—
U7	Signal transmission error on outdoor unit PCB	—	158	—	—	—
UA	Incomplete setting for hose length	—	—	—	—	—
	Unspecified voltage (between indoor unit and outdoor unit)	164	164	164	164	—
UH	Anti-icing function in other rooms	—	—	—	—	—
A5	Anti-icing function	—	—	—	—	—
E1	Outdoor unit PCB abnormality	—	170	168	168	—
E5	OL activation (compressor overload)	171	171	171	—	—
E6	Compressor lock	173	173	173	—	—
E7	DC fan lock	175	175	175	—	—
E8	Input overcurrent detection	177	177	177	—	—
EA	Four way valve abnormality	179	179	179	179	—
F3	Discharge pipe temperature control	183	183	183	183	—
F6	High pressure control in cooling	—	186	186	186	185
H0	Compressor system sensor abnormality	—	191	190	—	—
H1	Damper abnormality	—	—	—	—	—
H6	Position sensor abnormality	194	197	194	—	—
H8	DC voltage / current sensor abnormality	—	—	—	—	—
	CT or related abnormality	200	200	—	—	—
H9	Outdoor temperature thermistor or related abnormality	203	203	203	203	—
J3	Discharge pipe thermistor or related abnormality	203	203	203	203	—

Code	Description	Classification No. and related page				
		★29	★30	★31	★32	★33
<b>J6</b>	Outdoor heat exchanger thermistor or related abnormality	203	203	203	203	203
<b>J8</b>	Liquid pipe thermistor or related abnormality	—	—	—	—	—
<b>J9</b>	Gas pipe thermistor or related abnormality	—	—	—	—	—
<b>L3</b>	Electrical box temperature rise	209	211	211	—	—
<b>L4</b>	Radiation fin temperature rise	213	215	215	—	—
<b>L5</b>	Output overcurrent detection	217	217	217	—	—
<b>P4</b>	Radiation fin thermistor or related abnormality	203	203	203	—	—
<b>P9</b>	Fan motor system abnormality / fan lock	—	—	—	—	—
<b>PA</b>	Heater wire abnormality	—	—	—	—	—
<b>PH</b>	Humidifying thermistor abnormality / humidifying heater temperature abnormality	—	—	—	—	—

Code	Description	Classification No. and related page				
		★34	★35	★36	★37	★38
00	Normal condition	—	—	—	—	—
U0	Refrigerant shortage	139	143	139	143	143
U2	Low-voltage detection or over-voltage detection	147	147	147	147	147
U4	Signal transmission error (between indoor unit and outdoor unit)	150	150	150	150	152
	Outdoor unit PCB abnormality or communication circuit abnormality	—	—	—	—	154
U7	Signal transmission error on outdoor unit PCB	—	158	—	—	158
UA	Incomplete setting for hose length	—	—	—	—	161
	Unspecified voltage (between indoor unit and outdoor unit)	164 165	164 165	164 165	164 165	164 165
UH	Anti-icing function in other rooms	165	165	165	165	165
A5	Anti-icing function	166	166	166	166	166
E1	Outdoor unit PCB abnormality	—	170	—	—	168
E5	OL activation (compressor overload)	171	171	171	171	171
E6	Compressor lock	173	173	173	173	173
E7	DC fan lock	175	175	175	175	175
E8	Input overcurrent detection	177	177	177	177	177
EA	Four way valve abnormality	179	181	181	—	—
F3	Discharge pipe temperature control	183	183	183	183	183
F6	High pressure control in cooling	186	186	186	186	186
H0	Compressor system sensor abnormality	—	191	—	191	191
H1	Damper abnormality	—	—	—	—	193
H6	Position sensor abnormality	194	197	194	194	194
H8	DC voltage / current sensor abnormality	—	—	—	199	199
	CT or related abnormality	200	200	200	—	—
H9	Outdoor temperature thermistor or related abnormality	206	206	206	206	206
J3	Discharge pipe thermistor or related abnormality	206	206	206	206	206

Code	Description	Classification No. and related page				
		★34	★35	★36	★37	★38
<b>J6</b>	Outdoor heat exchanger thermistor or related abnormality	206	206	206	206	206
<b>J8</b>	Liquid pipe thermistor or related abnormality	206	206	206	206	206
<b>J9</b>	Gas pipe thermistor or related abnormality	206	206	206	206	206
<b>L3</b>	Electrical box temperature rise	209	211	209	211	211
<b>L4</b>	Radiation fin temperature rise	213	215	213	215	215
<b>L5</b>	Output overcurrent detection	217	217	217	217	217
<b>P4</b>	Radiation fin thermistor or related abnormality	206	206	206	206	206
<b>P9</b>	Fan motor system abnormality / fan lock	—	—	—	—	220
<b>PA</b>	Heater wire abnormality	—	—	—	—	222
<b>PH</b>	Humidifying thermistor abnormality / humidifying heater temperature abnormality	—	—	—	—	224

# 6. Troubleshooting by Error Code

## 6.1 Indoor Unit PCB Abnormality

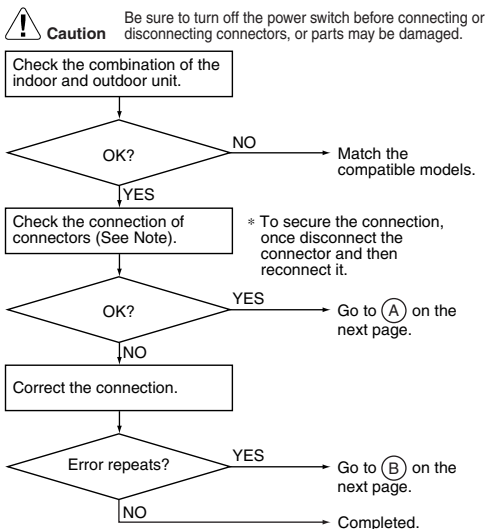
**Remote Controller Display** A1

**Method of Malfunction Detection** The system checks if the circuit works properly within the microcomputer of the indoor unit.

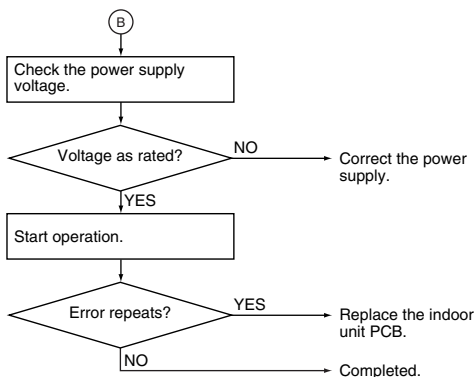
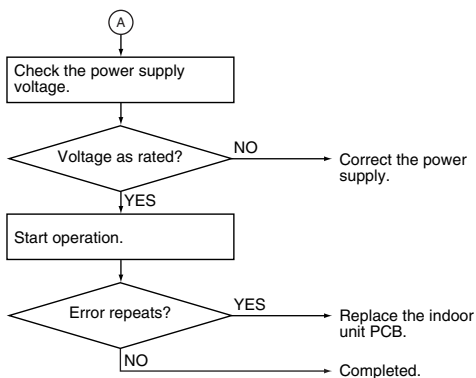
**Malfunction Decision Conditions** The system cannot set the internal settings.

- Supposed Causes**
- Wrong models interconnected
  - Defective indoor unit PCB
  - Disconnection of connector
  - Reduction of power supply voltage

### Troubleshooting



(R15515)



(R15514)



**Note:** Check the following connector.

Model Type	Connector
Wall mounted type	Terminal board ~ Control PCB
Floor standing type	<ul style="list-style-type: none"> <li>■ A, B, D series Power supply PCB ~ Control PCB (S8 ~ S7, S202 ~ S201, S204 ~ S203)</li> <li>■ F series ~ Terminal board ~ Control PCB</li> </ul>
Floor / ceiling suspended dual type	Power supply PCB ~ Control PCB (S36 ~ S37)
Duct connected type	Terminal board ~ Control PCB
Ceiling mounted cassette type	Terminal board ~ Main PCB
Wall built-in type	Terminal board ~ Control PCB



## 6.2 Drain Water Level or Related Abnormality

---

**Remote  
Controller  
Display**

**A3**

---

**Method of  
Malfunction  
Detection**

The float switch activation is detected by the contact condition (open) of the float switch.

---

**Malfunction  
Decision  
Conditions**

The float switch activation (open) input is sent from the float switch detection circuit to the microcomputer.

---

**Supposed  
Causes**

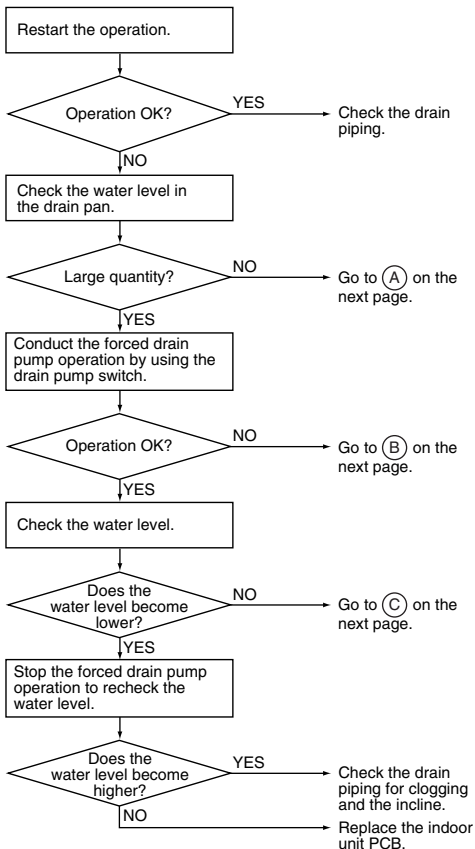
- Stuck float
- Defective drain pump
- Clogged piping
- Improper incline of piping
- Detection error due to the defective indoor unit PCB

## Troubleshooting

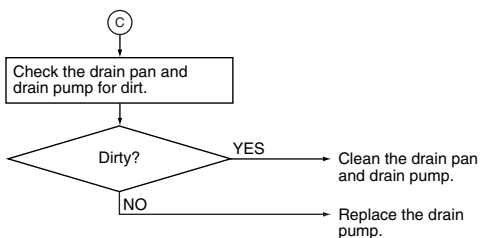
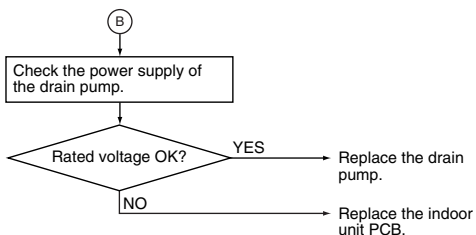
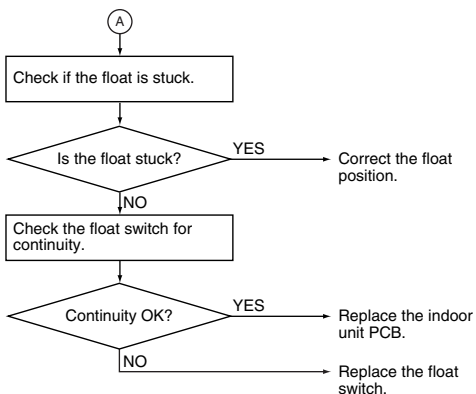


### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15596)



(R15597)

## 6.3 Freeze-up Protection Control or Heating Peak-cut Control

### 6.3.1 Flowchart 1

Remote  
Controller  
Display

A5

Method of  
Malfunction  
Detection

- Freeze-up protection control  
During cooling operation, the freeze-up protection control (operation halt) is activated according to the temperature detected by the indoor heat exchanger thermistor.
- Heating peak-cut control  
During heating operation, the temperature detected by the indoor heat exchanger thermistor is used for the heating peak-cut control (operation halt, outdoor fan stop, etc.)

Malfunction  
Decision  
Conditions

- Freeze-up protection control  
During cooling operation, the indoor heat exchanger temperature is below 0°C.
- Heating peak-cut control  
During heating operation, the indoor heat exchanger temperature is above 65°C

Supposed  
Causes

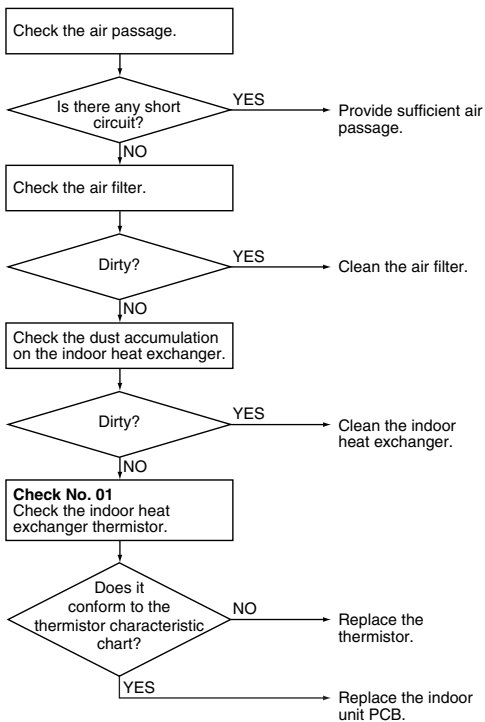
- Short-circuited air
- Clogged air filter of the indoor unit
- Dust accumulation on the indoor heat exchanger
- Defective indoor heat exchanger thermistor
- Defective indoor unit PCB

**Trouble-shooting**



**Check No.01**  
Refer to  
P.227

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R14402)

## 6.3.2 Flowchart 2

---

**Remote  
Controller  
Display****A5**

---

**Method of  
Malfunction  
Detection**

- Freeze-up protection control  
During cooling operation, the freeze-up protection control (operation halt) is activated according to the temperature detected by the indoor heat exchanger thermistor.
  - Heating peak-cut control  
During heating operation, the temperature detected by the indoor heat exchanger thermistor is used for the heating peak-cut control (operation halt, outdoor fan stop, etc.)
- 

**Malfunction  
Decision  
Conditions**

- Freeze-up protection control  
During cooling operation, the indoor heat exchanger temperature is below 0°C.
  - Heating peak-cut control  
During heating operation, the indoor heat exchanger temperature is above 65°C
- 

**Supposed  
Causes**

- Short-circuited air
- Clogged air filter of the indoor unit
- Dust accumulation on the indoor heat exchanger
- Defective indoor heat exchanger thermistor
- Defective indoor unit PCB
- Dehumidifying solenoid valve remains closed (on cooling operation)

**Trouble-shooting**

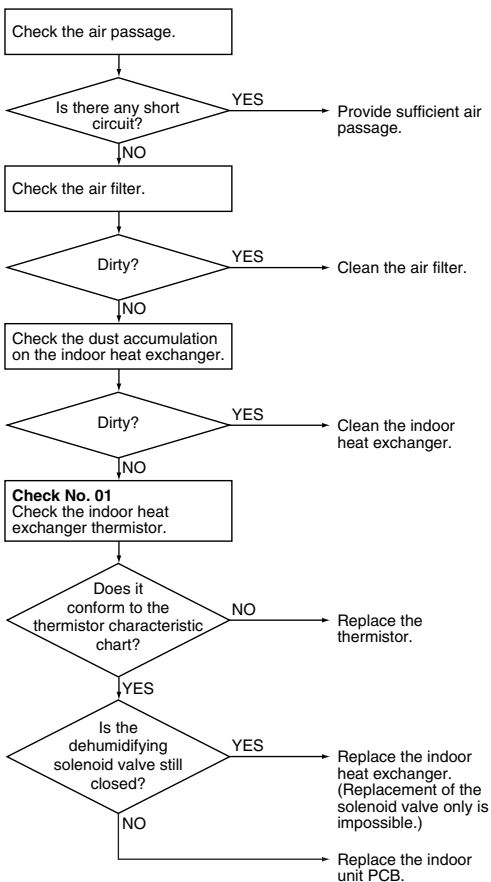


**Check No.01**

**Refer to**

**P.227**

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15516)

## 6.4 Fan Motor or Related Abnormality

### 6.4.1 Flowchart 1

Remote  
Controller  
Display

A6

Method of  
Malfunction  
Detection

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

Malfunction  
Decision  
Conditions

The detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

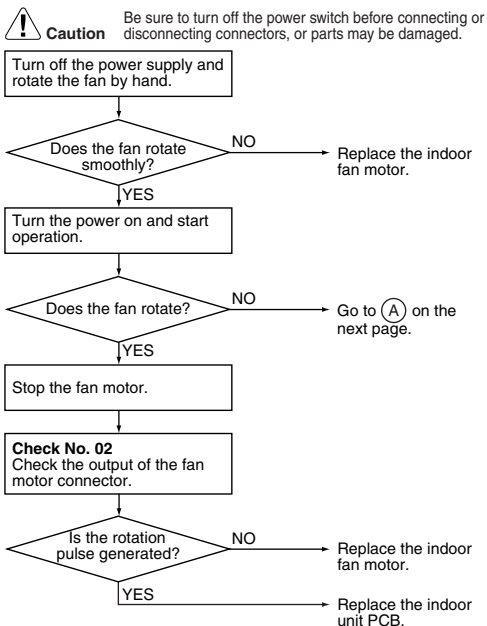
Supposed  
Causes

- Layer short inside the fan motor winding
- Breaking of wire inside the fan motor
- Breaking of the fan motor lead wires
- Defective capacitor of the fan motor
- Defective indoor unit PCB

Trouble-  
shooting

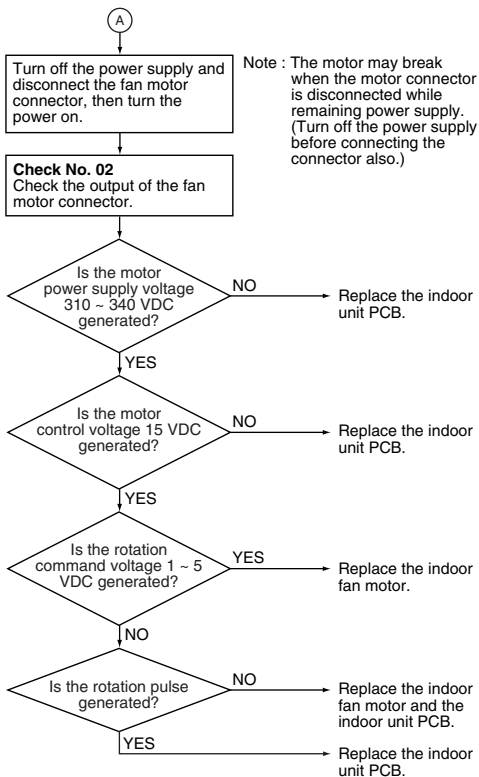


Check No.02  
Refer to  
P.230



(R15518)





(R15517)

## 6.4.2 Flowchart 2

---

**Remote  
Controller  
Display**

**A6**

---

**Method of  
Malfunction  
Detection**

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

---

**Malfunction  
Decision  
Conditions**

The detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

---

**Supposed  
Causes**

- Disconnection of connector
- Foreign matters stuck in the fan
- Layer short inside the fan motor winding
- Breaking of wire inside the fan motor
- Breaking of the fan motor lead wires
- Defective capacitor of the fan motor
- Defective indoor unit PCB

**Trouble-shooting**



**Check No.03**  
Refer to  
P.231



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Turn off the power.  
(Unplug the power cable or  
turn the breaker OFF.)

Note: The motor may break when  
the motor connector is  
disconnected while  
remaining power supply.  
(Turn off the power supply  
before connecting the  
connector also.)

Check the connector for  
connection.

\* To secure the connection, once  
disconnect the connector and  
then reconnect it.

OK?

NO → Correct the connection.

YES

Foreign matters in or around the fan?

YES → Remove the foreign matter.

NO

Rotate the fan.

Fan rotates smoothly?

NO → Replace the indoor unit PCB.

YES

**Check No. 03**  
Check the fan motor for  
breakdown or short circuit.

Resistance OK?

NO → Replace the indoor fan motor.

YES

Turn the power on again.

**Check No. 03**  
Check the motor control  
voltage.

Is the motor control voltage 15 VDC generated?

NO → Replace the indoor unit PCB.

YES

**Check No. 03**  
Check the indoor unit PCB for  
rotation pulse.

Is the rotation pulse generated?

NO → Replace the indoor fan motor.

YES

→ Replace the indoor unit PCB.

(R15519)

### 6.4.3 Flowchart 3

---

**Remote  
Controller  
Display**

**A6**

---

**Method of  
Malfunction  
Detection**

The rotation speed detected by the Hall IC during fan motor operation is used to determine abnormal fan motor operation.

---

**Malfunction  
Decision  
Conditions**

The detected rotation speed does not reach the demanded rotation speed of the target tap, and is less than 50% of the maximum fan motor rotation speed.

---

**Supposed  
Causes**

- Reduction of power supply voltage
- Layer short inside the fan motor winding
- Breaking of wire inside the fan motor
- Breaking of the fan motor lead wires
- Defective capacitor of the fan motor
- Defective indoor unit PCB

**Trouble-shooting**

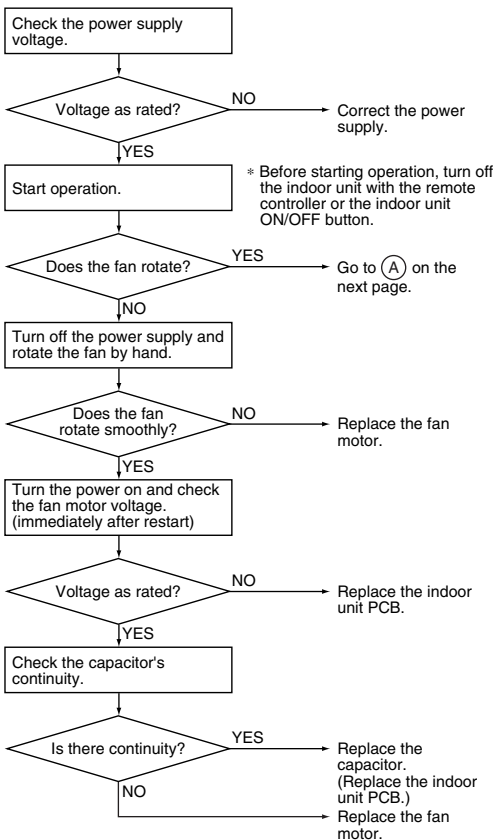


**Check No.04**  
Refer to  
**P.232**

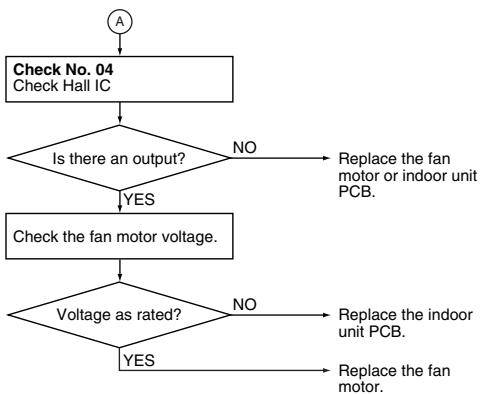


**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15521)



(R15520)

## 6.5 Radiant Panel Temperature Rise, Indoor Electronic Expansion Valve (Motor Operated Valve) Abnormality, Freeze-up Protection Control

Remote  
Controller  
Display

A9

Method of  
Malfunction  
Detection

### **Radiant panel temperature rise**

During RADIANT operation, high temperature control (e.g., operation halt, indoor electronic expansion valve closure) is activated according to the temperature detected by the radiant panel thermistors.

### **Indoor electronic expansion valve abnormality**

The indoor electronic expansion valve is required to be fully closed during cooling, dry or heating operation. When the indoor electronic expansion valve is open due to malfunction, the refrigerant flows into the radiant panel and the radiant panel temperature rises or drops. The indoor electronic expansion valve is required to be open during RADIANT operation. When the indoor electronic expansion valve is closed due to malfunction, the refrigerant does not flow into the radiant panel and the radiant panel temperature does not rise. Operation stops when any of these cases is detected by the system.

### **Freeze-up protection control**

The temperature detected by the radiant panel thermistors is used to prevent the indoor unit from freezing during cooling operation.

Malfunction  
Decision  
Conditions

### **Radiant panel temperature rise**

The radiant panel surface temperature calculated by the radiant panel thermistors is above 70°C.

### **Indoor electronic expansion valve abnormality**

- During cooling or dry operation, the temperature detected by the radiant panel thermistor ( $\phi$  4) has dropped.
- During heating operation, the temperature detected by the radiant panel thermistor ( $\phi$  4) has risen.
- During RADIANT operation, the temperature detected by the radiant panel thermistor ( $\phi$  4) does not rise.

### Freeze-up protection control

During cooling operation, the operation stops when the temperature detected by the radiant panel thermistor ( $\phi 4$ ) has dropped.

#### Supposed Causes

- Clogged air filter of the indoor unit
- Dust accumulation on the indoor heat exchanger
- Short-circuited air
- Defective radiant panel thermistor(s)
- Defective indoor heat exchanger thermistor
- Defective room temperature thermistor
- Defective indoor electronic expansion valve (or coil)

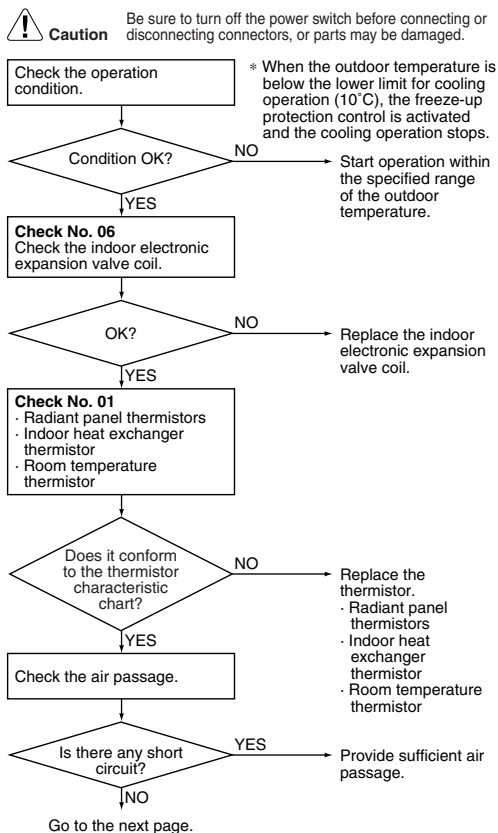
#### Troubleshooting



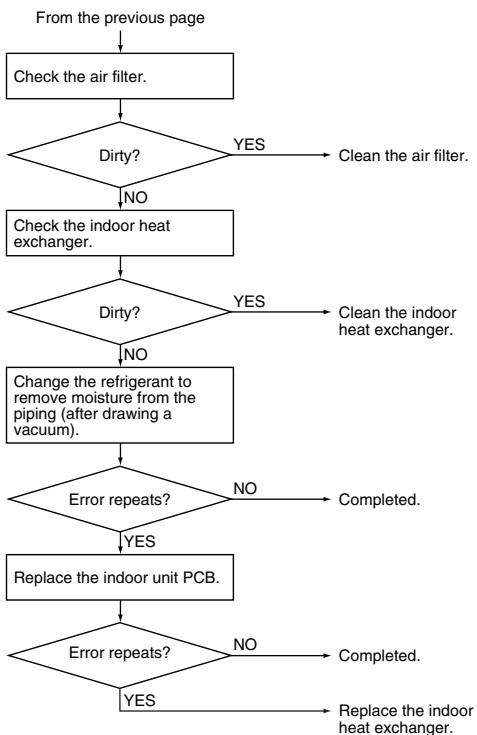
Check No.01  
Refer to  
P.227



Check No.06  
Refer to  
P.233







(R15522)

## 6.6 Streamer Unit Abnormality

---

**Remote  
Controller  
Display**

AH

---

**Method of  
Malfunction  
Detection**

---

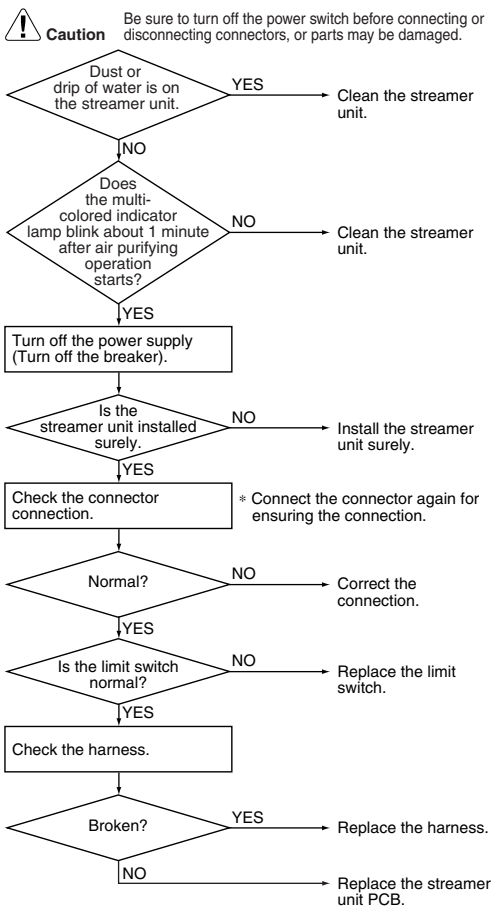
**Malfunction  
Decision  
Conditions**

- If the error repeats in air purifying operation, the system is shut down.
  - Reset condition: Continuous run for about 2 minutes without any other error
- 

**Supposed  
Causes**

- Short circuit caused by dust or drip of water on the electrode unit of the streamer unit
- Scratch or crack in the harness for the streamer unit
- Defective streamer unit PCB

**Trouble-shooting**



(R15523)



**Note:**

1. Be careful not to break the electrode while cleaning.
2. Since the electrode part is electrified in high voltage, be sure to pull out the power supply plug or turn the breaker off while cleaning the electrode part. (Touching in electrifying results in electrical shock.)

## 6.7 Cleaning Unit System Abnormality

---

**Remote  
Controller  
Display**

AH

---

**Method of  
Malfunction  
Detection**

The error of the air filter movement is detected by the limit switch.

---

**Malfunction  
Decision  
Conditions**

The air filter does not move properly 5 times successively.

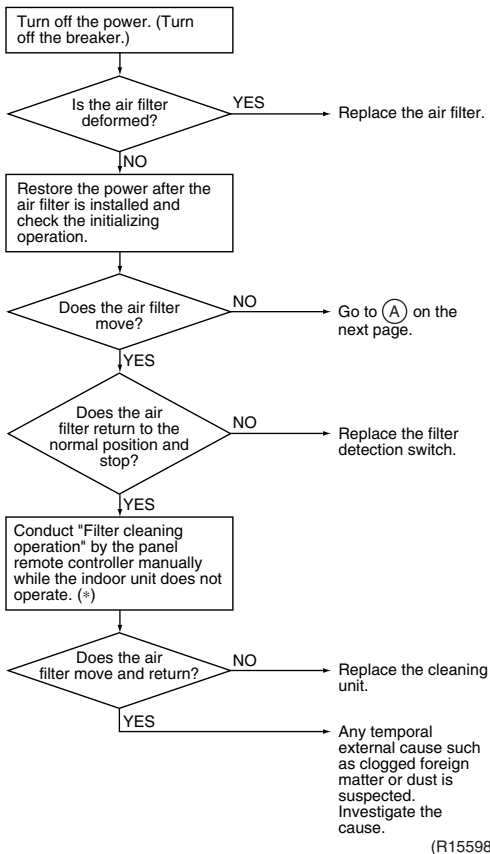
---

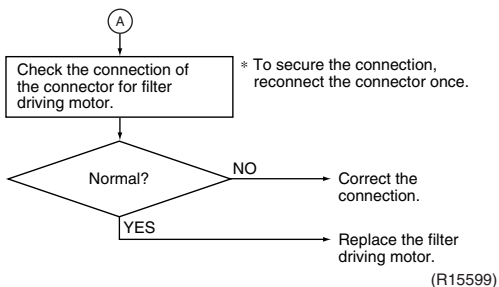
**Supposed  
Causes**

- Defective filter driving motor
- Defective cleaning mechanism
- Defective air filter
- Defective limit switch (filter detection switch)

**Trouble-shooting**

 **Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





\* The cleaning unit does not start when:

- The dust box cleaning sign is lit on the indoor unit. (Reset the sign with the panel remote controller.)
- The room temperature is too low. (Check the movement after the heating operation.)
- The up and down panel opens. (Use the panel remote controller to close the panel.)

## 6.8 Thermistor or Related Abnormality (Indoor Unit)

Remote Controller Display

C4, C9, CE

Method of Malfunction Detection

The temperatures detected by the thermistors determine thermistor errors.

Malfunction Decision Conditions

The thermistor input is more than 4.96 V or less than 0.04 V during compressor operation.

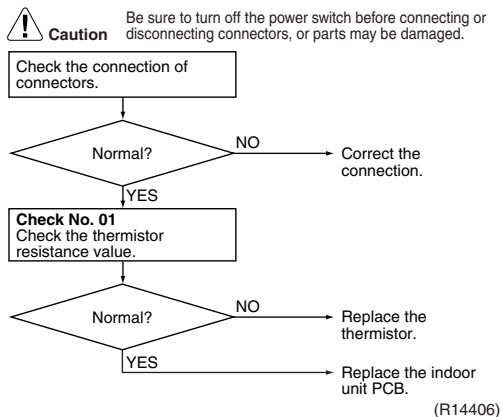
Supposed Causes

- Disconnection of connector
- Defective thermistor corresponding to the error code
- Defective indoor unit PCB

Troubleshooting



Check No.01  
Refer to P.227



**C4** : Indoor heat exchanger thermistor

**C9** : Room temperature thermistor

**CE** : Radiant panel thermistor

## 6.9 Shutter Drive Motor / Shutter Limit Switch Abnormality

Remote  
Controller  
Display

C7

Method of  
Malfunction  
Detection

The limit switch detects shutter open / close performance. In this way, the shutter drive motor and the shutter limit switch are checked for failure.

Malfunction  
Decision  
Conditions

When the shutter is open, the limit switch is closed.

Supposed  
Causes

- Foreign matters stuck in the shutter
- Defective shutter limit switch
- Shutter is deformed.
- Shutter's sealing material is too thick.
- Broken relay harness or disconnected connector
- Defective indoor unit PCB
- Defective shutter drive motor

Trouble-  
shooting

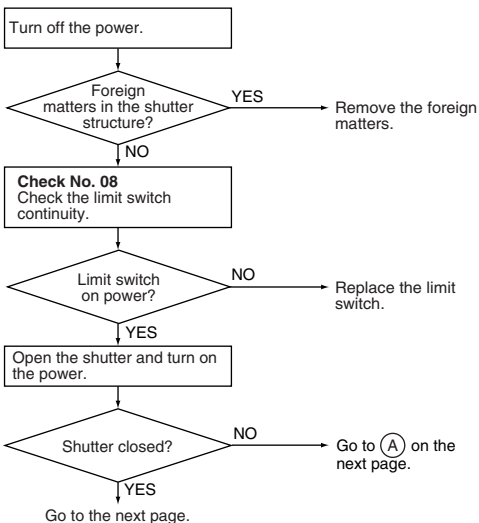


Check No.08  
Refer to  
P.234



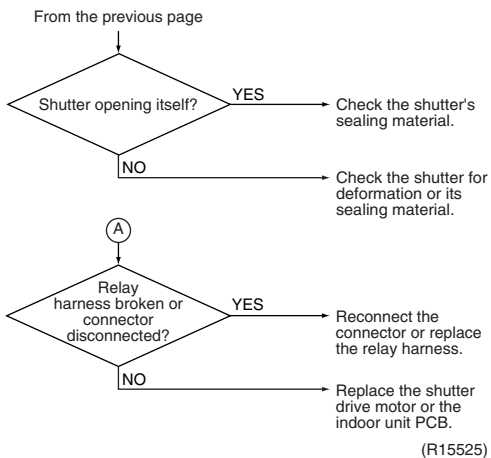
**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15524)





## 6.10 Front Panel Open / Close Fault

Remote  
Controller  
Display

C7

Method of  
Malfunction  
Detection

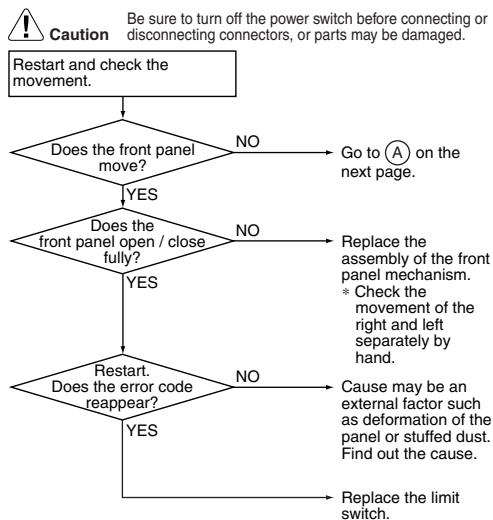
Malfunction  
Decision  
Conditions

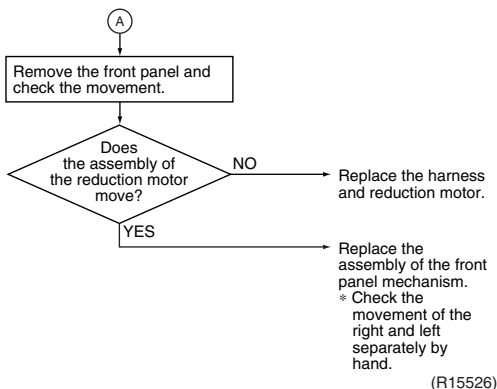
If the error repeats, the system is shut down.

Supposed  
Causes

- Defective reduction motor
- Malfunction or deterioration of the front panel mechanism
- Defective limit switch

Trouble-  
shooting





**Note:** You cannot operate the unit by the remote controller when the front panel mechanism breaks down.

<To the dealers: temporary measure before repair>

1. Turn off the power.
2. Remove the front panel.
3. Turn on the power.  
(Wait until the initialization finishes.)
4. Operate the unit by the indoor unit [ON/OFF] button.

## 6.11 Grille Locking Abnormality, Panel Up and Down / Storage / Locking Abnormality

---

Remote  
Controller  
Display

C7

---

Method of  
Malfunction  
Detection

Error is detected by the condition of followings while the up and down panel moves or stops.

- Grille locking switch
  - Panel detection switch
  - Position detection counter switch
- 

Malfunction  
Decision  
Conditions

- The grille locking switch is not turned off when opening the grille.
  - The grille locking switch is not turned on when closing the grille.
  - After the lowering operation starts, the panel detection switch remains ON.
  - The position detection counter switch counts less during the lifting operation.
  - The case when the position detection counter switch counts less during the lowering operation occurs 3 times.
  - The panel is pulled down while the panel stops or descends and the position detection counter switch counts more than the specified number of times.
- 

Supposed  
Causes

- Defective motor
- Clogged peripheral parts
- Defective detection switch
- The panel was pulled out when the power remains ON.
- The panel up and down operation was stopped by an obstacle during moving.
- The warpage of the panel is large.

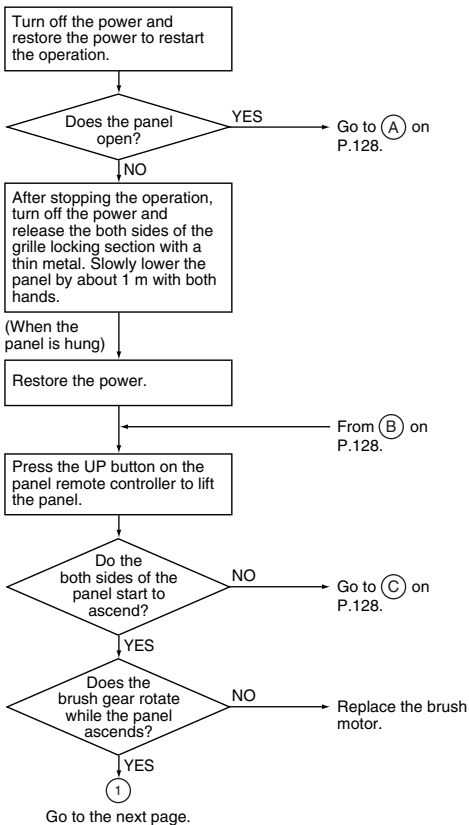
**Trouble-shooting**



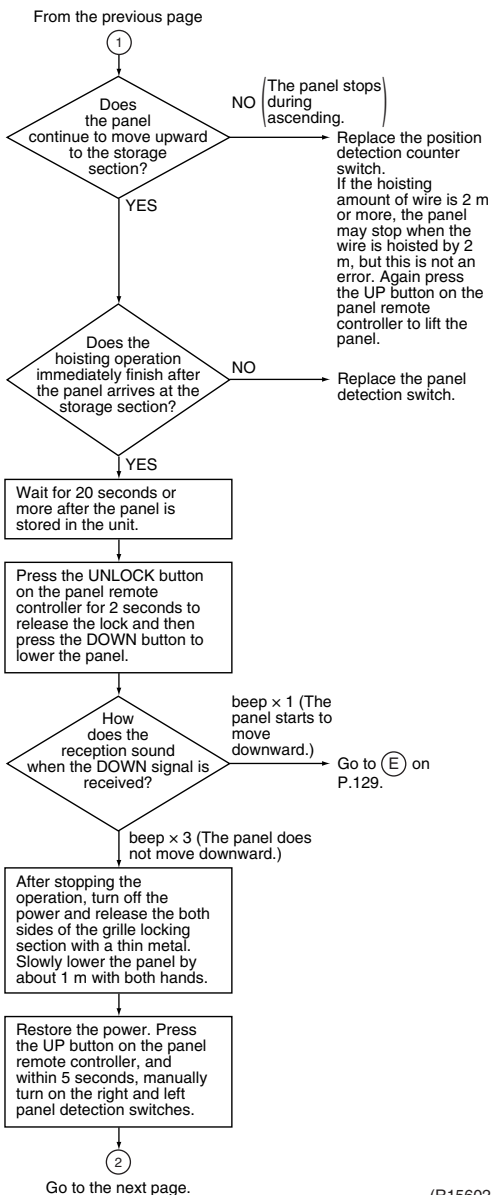
**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

(When the panel is stored in the unit)

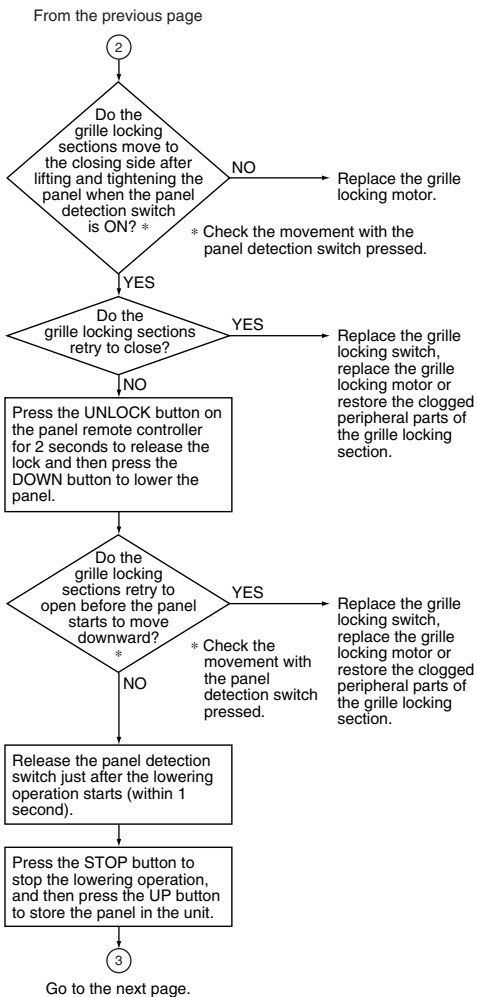


(R15604)

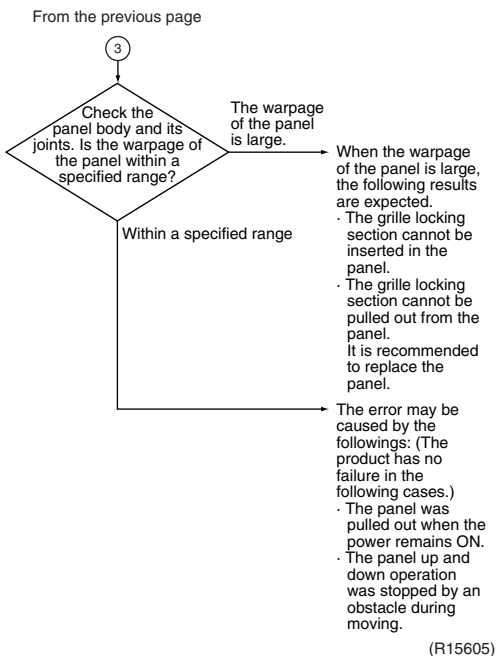


Go to the next page.

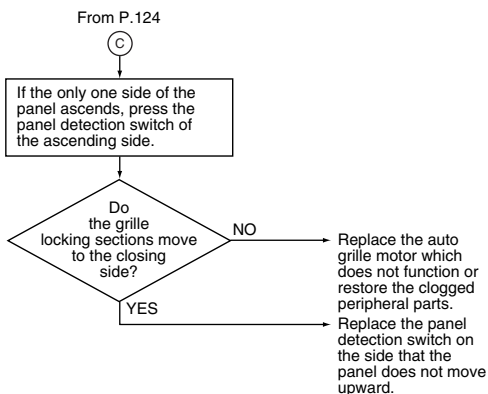
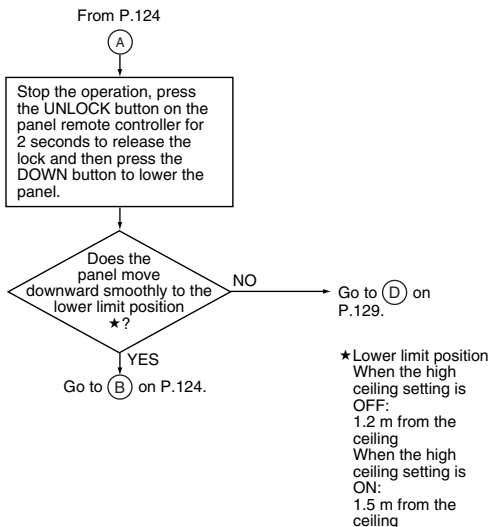
(R15602)



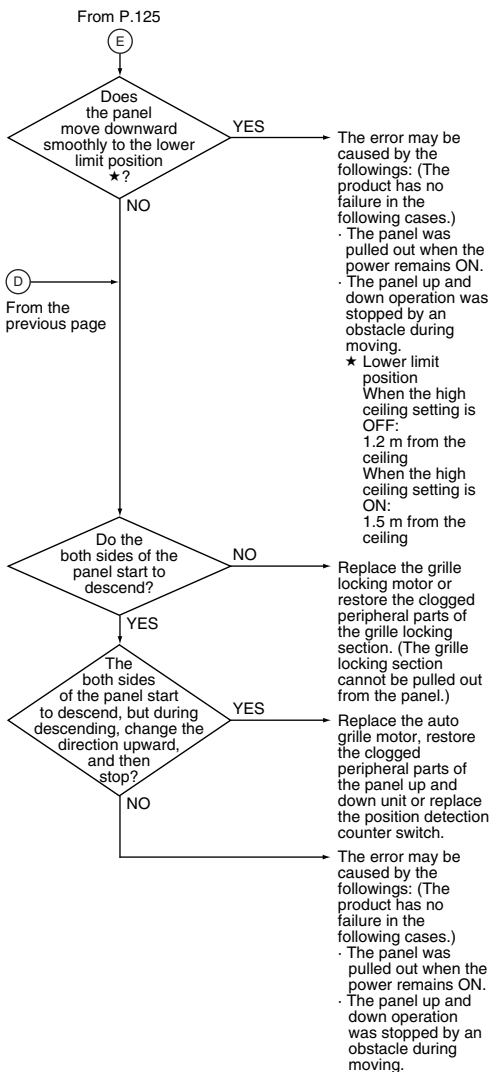
(R15646)







(R15600)



(R15603)

## 6.12 Humidity Sensor Abnormality

Remote  
Controller  
Display

CC

Method of  
Malfunction  
Detection

Sensor abnormality is detected by input value.

Malfunction  
Decision  
Conditions

The input from the humidity sensor is 4.96 V or more or 0.04 V or less.

Supposed  
Causes

- Disconnection of connector
- Defective indoor unit PCB (humidity sensor PCB, control PCB)
- Defective humidity sensor

Trouble-  
shooting



Check No.07  
Refer to  
P.234



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Check the connector for proper connection.

\* Connect the connector again for ensuring the connection.

OK?

NO → Reconnect the connector properly.

YES

**Check No. 07**  
Check the input voltage of humidity sensor.

OK?

NO → Replace the humidity sensor PCB.

YES

→ Replace the control PCB.

(R15528)

## 6.13 Lights-out of Microcomputer Status Lamp

### 6.13.1 Flowchart 1

---

**Remote  
Controller  
Display**

No display

---

**Method of  
Malfunction  
Detection**

The proper program operation of the microcomputer is checked by the program.

---

**Malfunction  
Decision  
Conditions**

When the microcomputer program does not function properly.

---

**Supposed  
Causes**

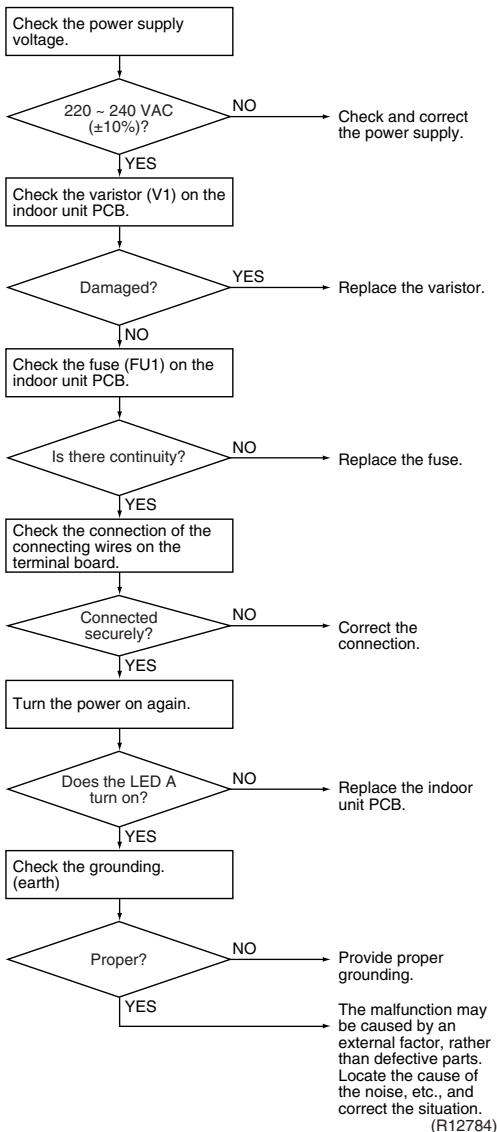
- Improper power supply
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective indoor unit PCB

**Trouble-shooting**



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



## 6.13.2 Flowchart 2

### Remote Controller Display

No display

### Method of Malfunction Detection

The proper program operation of the microcomputer is checked by the program.

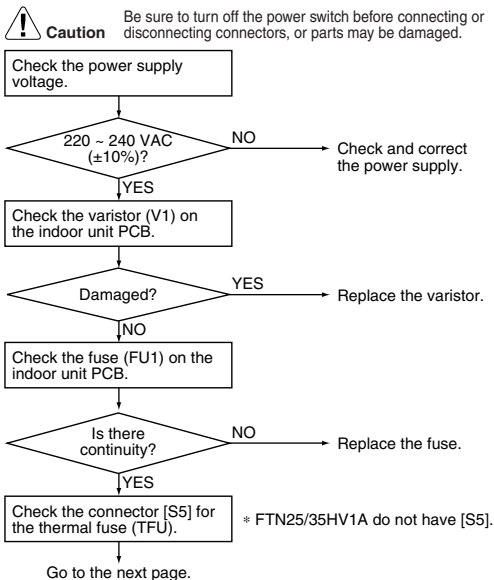
### Malfunction Decision Conditions

When the microcomputer program does not function properly.

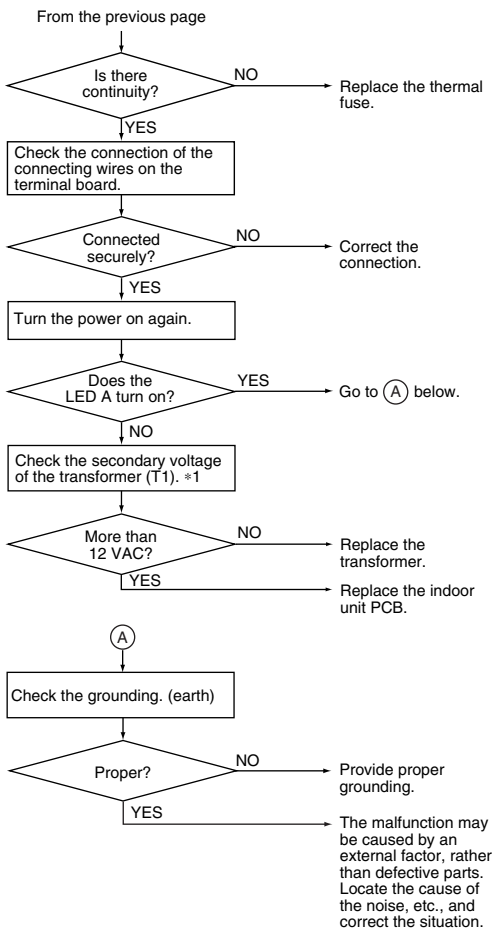
### Supposed Causes

- Improper power supply
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective indoor unit PCB

### Troubleshooting

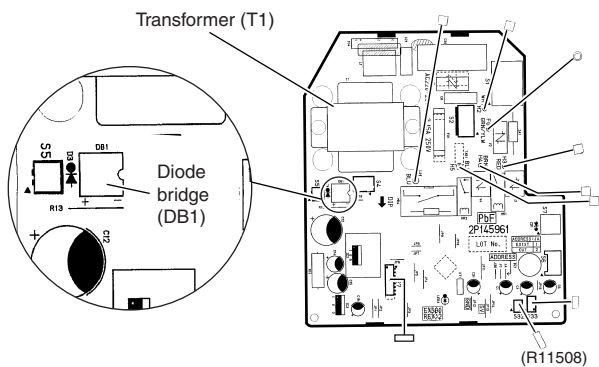


(R15570)



(R15571)

- ※1 Measure the voltage between (+) and (-) beside the diode bridge (DB1).





### 6.13.3 Flowchart 3

Remote  
Controller  
Display

No display

Method of  
Malfunction  
Detection

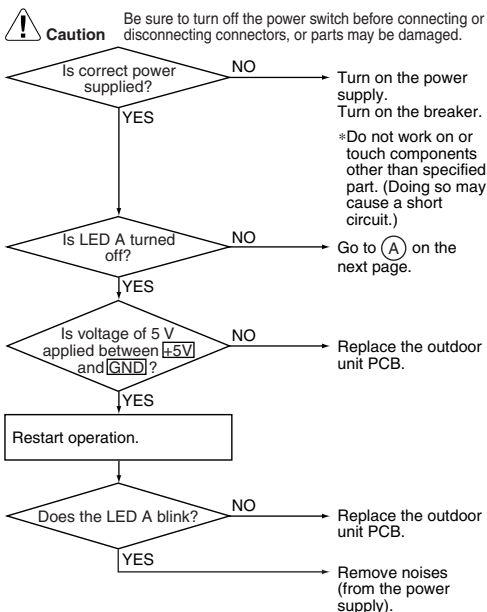
When a microcomputer fault is detected, LED A or LED 5 turns off.

Malfunction  
Decision  
Conditions

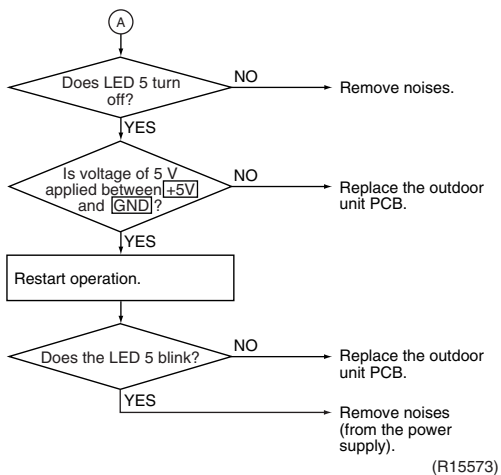
Supposed  
Causes

- Outdoor unit PCB is not power supplied
- Power supply failure due to noise

Trouble-  
shooting



(R15572)



### 6.13.4 Flowchart 4

Remote  
Controller  
Display

No display

Method of  
Malfunction  
Detection

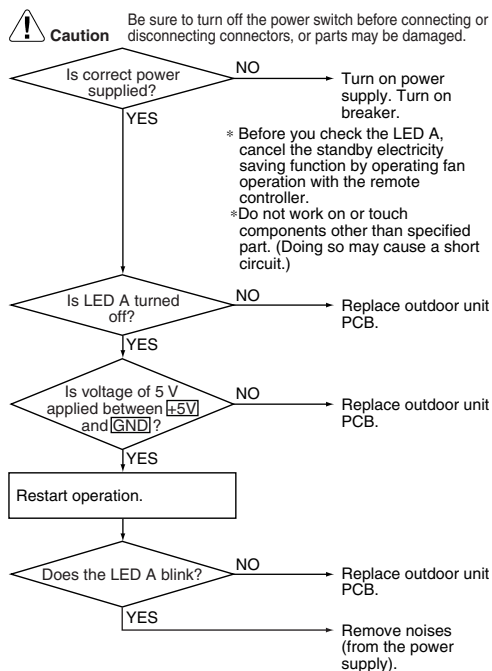
When a microcomputer fault is detected, LED A turns off.

Malfunction  
Decision  
Conditions

Supposed  
Causes

- Outdoor unit PCB is not power supplied
- Power supply failure due to noise






Trouble-  
shooting



(R15574)

## 6.14 Refrigerant Shortage

### 6.14.1 Flowchart 1

Remote Controller Display	U0
Outdoor Unit LED Display	A  1  2  3  4  5 (LED1 ~ LED5 are for multi outdoor unit.)
Method of Malfunction Detection	<p><b>Refrigerant shortage detection I:</b> Refrigerant shortage is detected by checking the input current value and the compressor running frequency. If the refrigerant is short, the input current is lower than the normal value.</p> <p><b>Refrigerant shortage detection II:</b> Refrigerant shortage is detected by checking the discharge pipe temperature and the opening of the outdoor electronic expansion valve. If the refrigerant is short, the discharge pipe temperature tends to rise.</p> <p><b>Refrigerant shortage detection III:</b> Refrigerant shortage is detected by checking the difference between suction and discharge temperature.</p>
Malfunction Decision Conditions	<p><b>Refrigerant shortage detection I:</b> The following conditions continue for 7 minutes.</p> <p>[ Input current × input voltage ≤ A × output frequency + B Output frequency &gt; C or Input current ≤ D × output frequency + E Output frequency &gt; F</p> <p>(Reference)  <b>A:</b> 2.5 ~ 11  <b>B:</b> -350 ~ 50 W  <b>C:</b> 46 ~ 55 Hz  <b>D:</b> 0.01 ~ 0.027  <b>E:</b> 0.3 ~ 2.0 A  <b>F:</b> 40 ~ 55 Hz  <b>A, B, C, D, E, F</b> vary depending on the model.</p>

**Refrigerant shortage detection II :**

The following conditions continue for 80 seconds.

- ◆ Opening of the outdoor electronic expansion valve  $\geq G$
- ◆ Discharge pipe temperature  $> H \times$  target discharge pipe temperature  $+ J$

(Reference)

**G:** 450 ~ 480 pulse

**H:** 1 ~ 1.6

**J:** -11 ~ 45°C

**G, H, J** vary depending on the model or operation mode.

**Refrigerant shortage detection III :**

When the difference of the temperature is lower than **K** °C, it is regarded as refrigerant shortage. **K** varies depending on the model.

		K (°C)
Cooling	room thermistor temperature – indoor heat exchanger temperature	4.0
	outdoor heat exchanger temperature – outdoor temperature	4.0
Heating	indoor heat exchanger temperature – room thermistor temperature	3.0 ~ 4.0
	outdoor temperature – outdoor heat exchanger temperature	3.0 ~ 4.0

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

**Supposed Causes**

- Disconnection of the discharge pipe thermistor, indoor or outdoor heat exchanger thermistor, room or outdoor temperature thermistor
- Closed stop valve
- Refrigerant shortage (refrigerant leakage)
- Poor compression performance of compressor
- Defective outdoor electronic expansion valve

## Trouble-shooting



**Check No.01**  
Refer to  
P.227

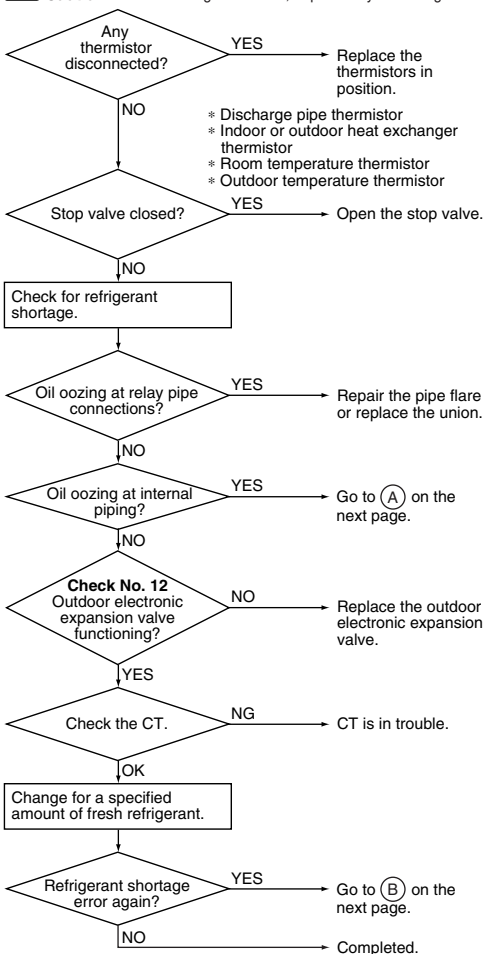


**Check No.12**  
Refer to  
P.235

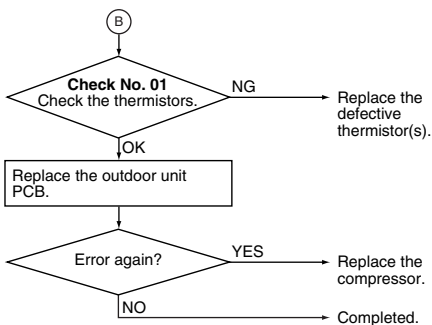
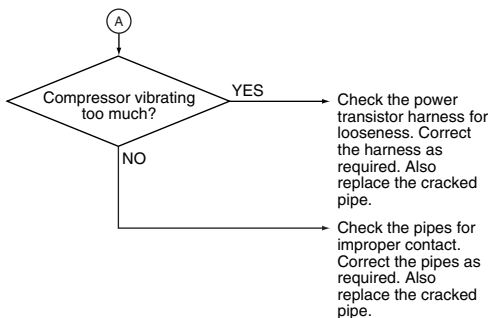


### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15530)








(R15531)

## 6.14.2 Flowchart 2

Remote  
Controller  
Display

U0

Outdoor  
Unit LED  
Display

A  1  2  3  4  5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

### Refrigerant shortage detection I:

Refrigerant shortage is detected by checking the input current value and the compressor running frequency. If the refrigerant is short, the input current is lower than the normal value.

### Refrigerant shortage detection II:

Refrigerant shortage is detected by checking the discharge pipe temperature and the opening of the outdoor electronic expansion valve. If the refrigerant is short, the discharge pipe temperature tends to rise.

### Refrigerant shortage detection III:

Refrigerant shortage is detected by checking the difference between suction and discharge temperature.

Malfunction  
Decision  
Conditions

### Refrigerant shortage detection I:

The following conditions continue for 7 minutes.

- [ Input current × input voltage ≤ A × output frequency + B
- [ Output frequency > C
- or
- [ Input current ≤ D × output frequency + E
- [ Output frequency > F

(Reference)

**A:** 2.5 ~ 11

**B:** -350 ~ 50 W

**C:** 40 ~ 55 Hz

**D:** 0.01 ~ 0.027

**E:** 0.3 ~ 2.0 A

**F:** 40 ~ 55 Hz

**A, B, C, D, E, F** vary depending on the model.



**Refrigerant shortage detection II :**

The following conditions continue for 80 seconds.

- ◆ Opening of the outdoor electronic expansion valve  $\geq G$
- ◆ Discharge pipe temperature  $> H \times$  target discharge pipe temperature  $+ J$

(Reference)

**G:** 450 ~ 480 pulse

**H:** 1 ~ 1.6

**J:** -11 ~ 45°C

**G, H, J** vary depending on the model or operation mode.

**Refrigerant shortage detection III :**

When the difference of the temperature is lower than **K** °C, it is regarded as refrigerant shortage. **K** varies depending on the model.

		K (°C)
Cooling	room thermistor temperature – indoor heat exchanger temperature	4.0
	outdoor heat exchanger temperature – outdoor temperature	4.0
Heating	indoor heat exchanger temperature – room thermistor temperature	3.0 ~ 4.0
	outdoor temperature – outdoor heat exchanger temperature	3.0 ~ 4.0

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

**Supposed Causes**

- Disconnection of the discharge pipe thermistor, indoor or outdoor heat exchanger thermistor, room or outdoor temperature thermistor
- Closed stop valve
- Refrigerant shortage (refrigerant leakage)
- Poor compression performance of compressor
- Defective outdoor electronic expansion valve

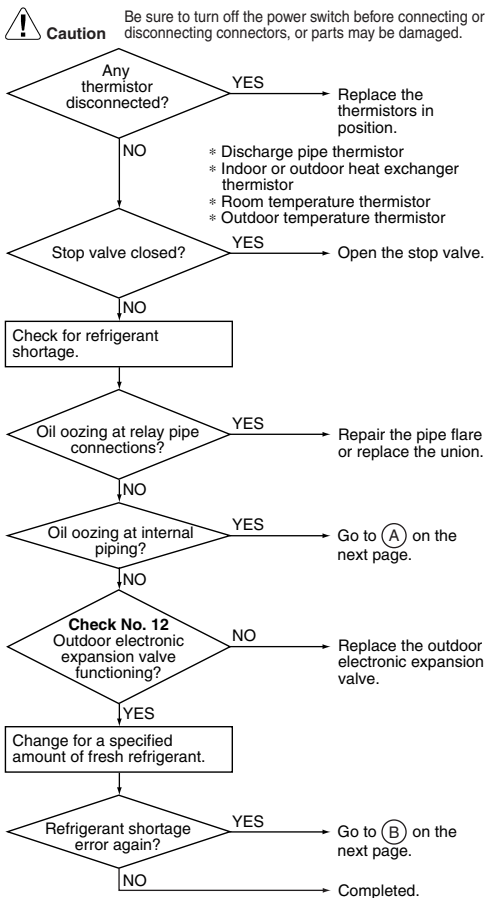
## Trouble-shooting



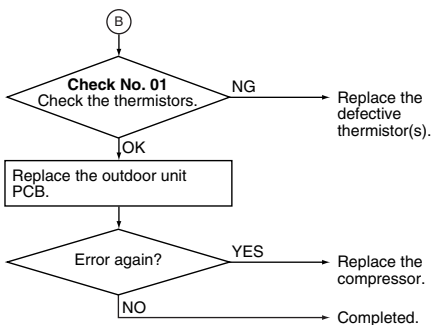
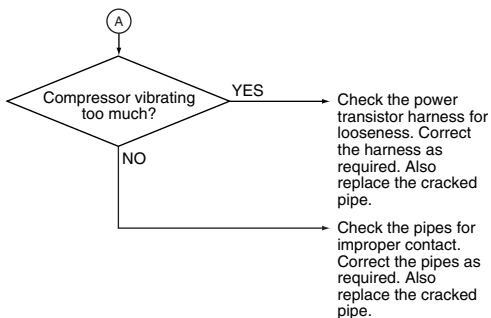
**Check No.01**  
Refer to  
P.227



**Check No.12**  
Refer to  
P.235



(R15532)








(R15531)

## 6.15 Low-voltage Detection or Over-voltage Detection

Remote  
Controller  
Display

U2

Outdoor  
Unit LED  
Display

A  1  2  3  4  5  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

★ **Indoor Unit**

Evaluation of zero-cross detection of power supply by the indoor unit PCB.

★ **Outdoor Unit**

**Low-voltage detection:**

An abnormal voltage drop is detected by the DC voltage detection circuit.

**Over-voltage detection:**

An abnormal voltage rise is detected by the over-voltage detection circuit.

Malfunction  
Decision  
Conditions

★ **Indoor Unit**

There is no zero-cross detection in approximately 10 seconds.

★ **Outdoor Unit**

**Low-voltage detection:**

- The voltage detected by the DC voltage detection circuit is below 150 ~ 180 V (depending on the model).
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

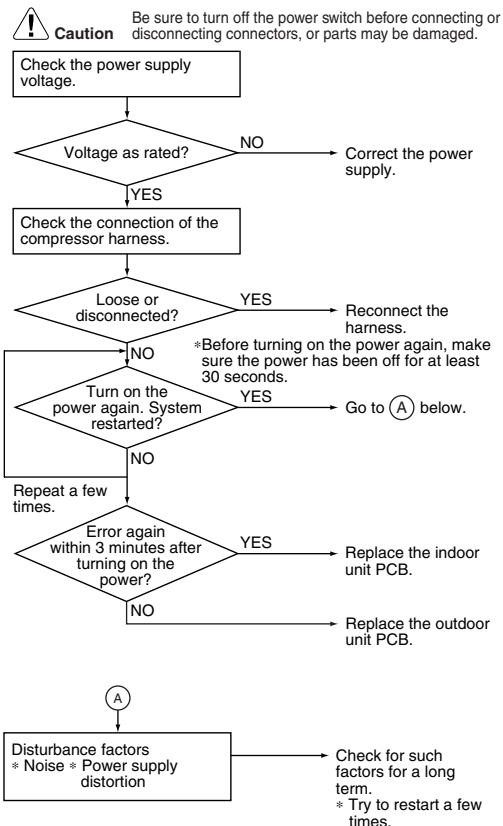
**Over-voltage detection:**

- An over-voltage signal is fed from the over-voltage detection circuit to the microcomputer.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 5 ~ 11 minutes (depending on the model) without any other error

**Supposed Causes**

- Power supply voltage is not as specified.
- Defective DC voltage detection circuit
- Defective over-voltage detection circuit
- Defective PAM control part
- Disconnection of compressor harness
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective indoor unit PCB

**Trouble-shooting**



(R15535)

## 6.16 Low-voltage Detection

Remote  
Controller  
Display

U2

Method of  
Malfunction  
Detection

Evaluation of zero-cross detection of power supply by the indoor unit PCB.

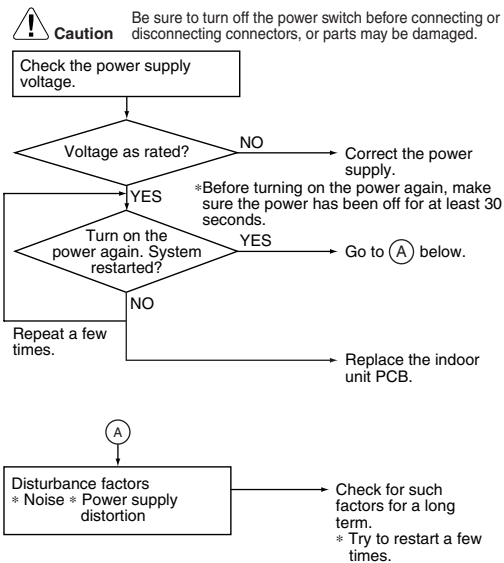
Malfunction  
Decision  
Conditions

There is no zero-cross detection in approximately 10 seconds.

Supposed  
Causes

- Power supply voltage is not as specified.
- Defective DC voltage detection circuit
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective indoor unit PCB

Trouble-  
shooting



## 6.17 Signal Transmission Error (between Indoor Unit and Outdoor Unit)

### 6.17.1 Flowchart 1

---

**Remote  
Controller  
Display**

**U4**

---

**Method of  
Malfunction  
Detection**

The data received from the outdoor unit in indoor unit - outdoor unit signal transmission is checked whether it is normal.

---

**Malfunction  
Decision  
Conditions**

The data sent from the outdoor unit cannot be received normally, or the content of the data is abnormal.

---

**Supposed  
Causes**

- Reduction of power supply voltage
- Wiring error
- Breaking of the connection wires between the indoor and outdoor units (wire No. 3)
- Defective outdoor unit PCB
- Defective indoor unit PCB
- Disturbed power supply waveform

## Trouble-shooting

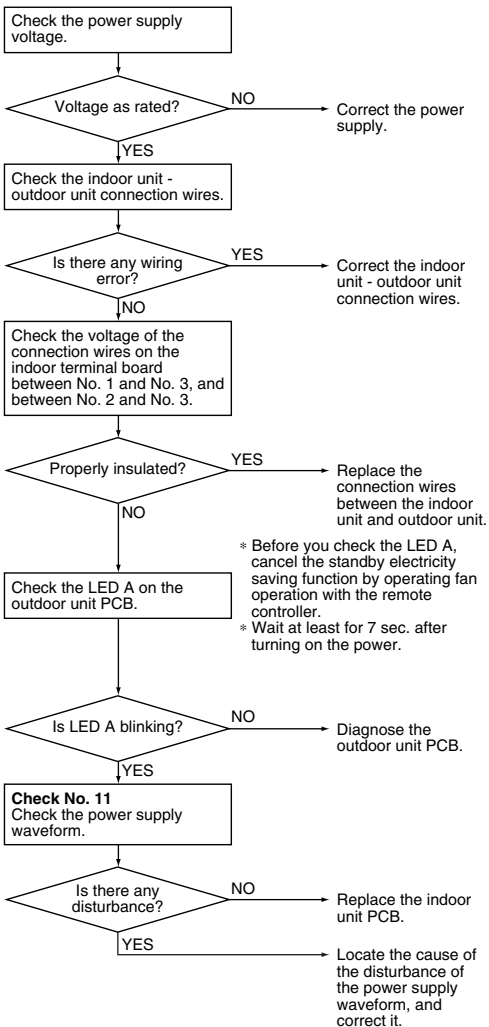


**Check No.11**  
Refer to  
P.235



### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15198)



## 6.17.2 Flowchart 2

---

**Remote  
Controller  
Display**

**U4**

---

**Method of  
Malfunction  
Detection**

The data sent from the outdoor unit is checked for problem.

---

**Malfunction  
Decision  
Conditions**

The data sent from the outdoor unit cannot be received without error, or the disable status of signal transmission continues for 15 seconds.

---

**Supposed  
Causes**

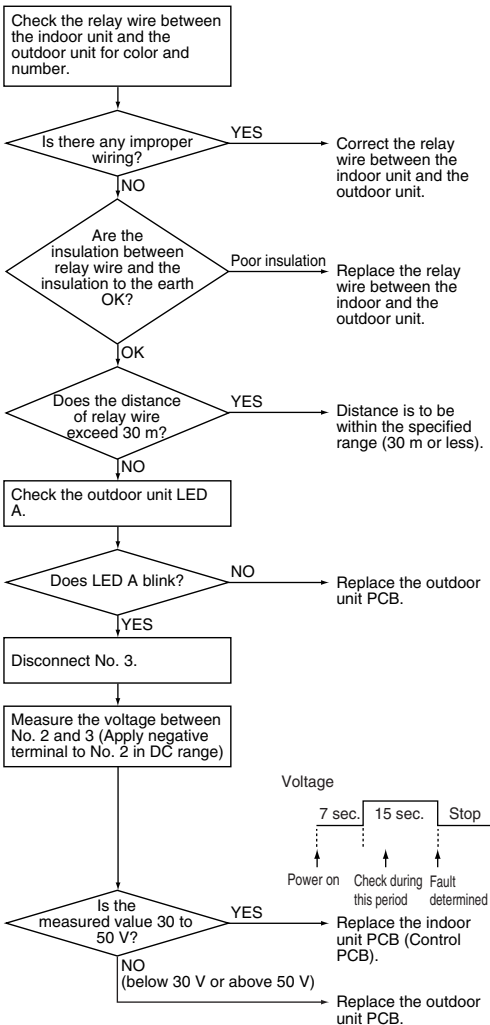
- Defective indoor unit PCB
- Defective outdoor unit PCB
- Wiring error
- Breakage of relay wire (transmission wire)

## Troubleshooting



### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R13920)

## 6.18 Outdoor Unit PCB Abnormality or Communication Circuit Abnormality

---

**Remote  
Controller  
Display**

**U4**

---

**Method of  
Malfunction  
Detection**

Detection within the program of the microcomputer that the program is in good running order.

---

**Malfunction  
Decision  
Conditions**

- The program of the microcomputer does not work in order.
  - Indoor-outdoor unit signal transmission cannot be performed for more than 15 seconds.
  - Zero-cross signal cannot be detected for more than 10 seconds.
- 

**Supposed  
Causes**

- Display disabled due to power supply fault
- Communication circuit fault in outdoor unit PCB
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective outdoor unit PCB
- Defective thermal fuse on outdoor terminal board

## Trouble-shooting



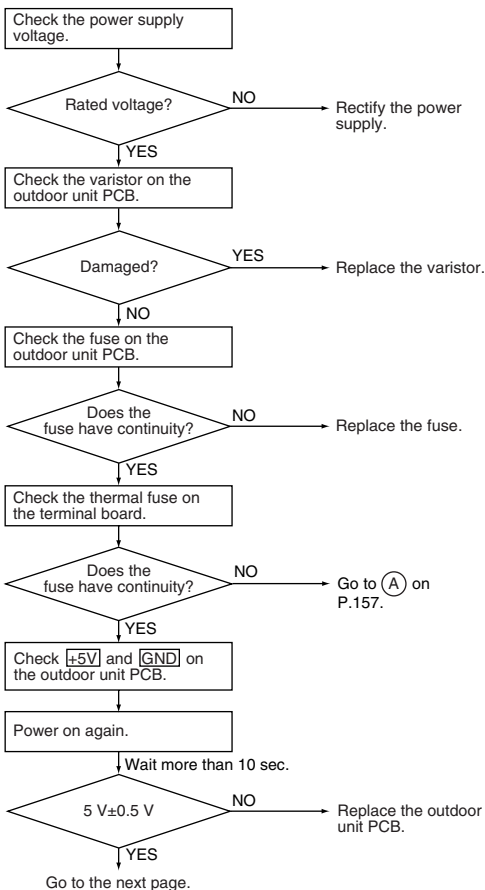
Check No.11  
Refer to  
P.235



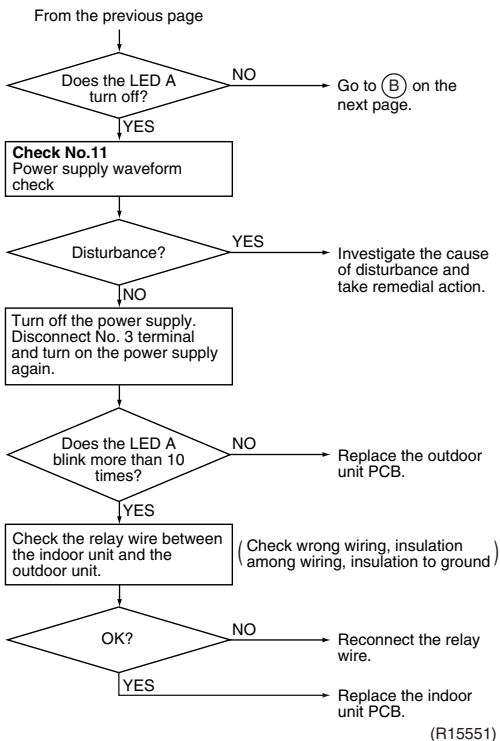
### Caution

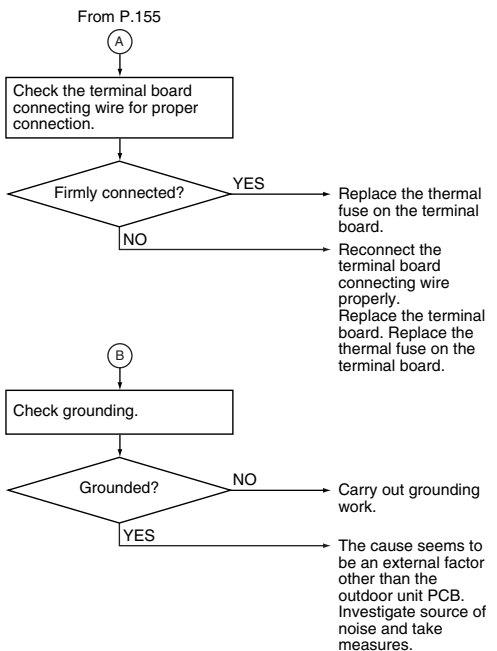
Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Check indoor unit also, because a communication circuit fault may be caused by the problem related to the indoor unit.



(R15538)





(R15539)






## 6.19 Signal Transmission Error on Outdoor Unit PCB

### 6.19.1 Flowchart 1

Remote Controller Display

U7

Outdoor Unit LED Display

A  1  2  3  4  5

(LED1 ~ LED5 are for multi outdoor unit.)

Method of Malfunction Detection

Communication error between the main microcomputer and the PM1 mounted on the outdoor unit PCB.

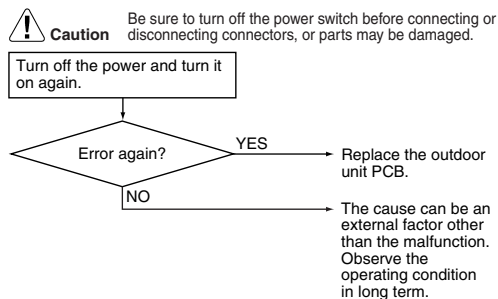
Malfunction Decision Conditions

- The abnormality is determined when the data sent from the PM1 can not be received for 9 seconds.
- The error counter is reset when the data from the PM1 can be successfully received.

Supposed Causes

- Defective outdoor unit PCB

Trouble-shooting



(R7185)

## 6.19.2 Flowchart 2

---

**Remote  
Controller  
Display**

**U7**

---

**Method of  
Malfunction  
Detection**

Communication error between microcomputers mounted on the outdoor unit PCB.

---

**Malfunction  
Decision  
Conditions**

- When the data sent from the microcomputer of the inverter can not be received successively for 15 seconds, the unit shuts down.
  - Error counter is reset when the data from the microcomputer of the inverter can be successfully received.
- 

**Supposed  
Causes**

- Defective outdoor unit PCB

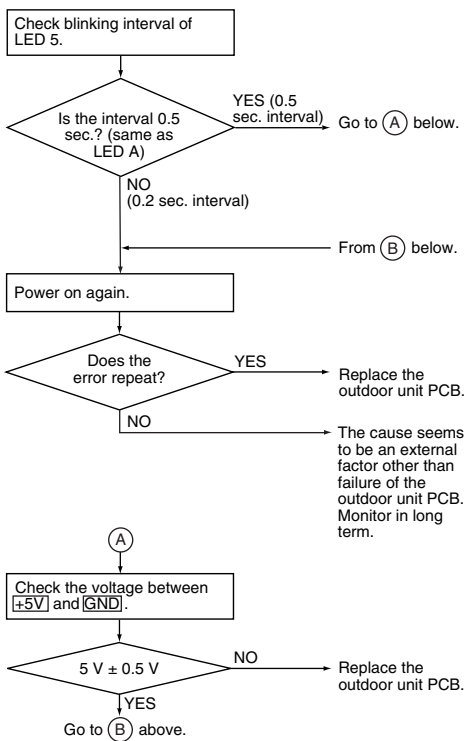


**Trouble-shooting**



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R13933)

## 6.20 Incomplete Setting for Hose Length

Remote  
Controller  
Display

UA

Method of  
Malfunction  
Detection

This fault occurs when the humidification hose length is not stored in the EEPROMs of the indoor unit and the outdoor unit.  
(Hose length is not stored at initial power on.)

Malfunction  
Decision  
Conditions

- When the humidification hose length is not stored in EEPROMs of the indoor unit and the outdoor unit.

Supposed  
Causes

- Hose length is not set.
- Hose length is erased by replacement of the indoor unit PCB and the outdoor unit PCB.  
(When both the indoor unit PCB and the outdoor unit PCB are replaced simultaneously, the set value is erased.)

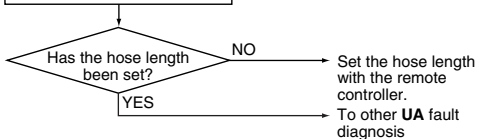
Trouble-  
shooting



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Check the preset hose length with the remote controller.



(R13921)

### How to check the preset hose length

#### <ARC447A1, A2>

- 1) Press the [CLOCK] button for 5 seconds.

→ 

SETTING
1. TEST

 is displayed.

- 2) Press the [SELECT] ▲ or ▼ button and select

SETTING
2. PIPE

 .

- 3) Press the [CLOCK] button to activate the hose length setting mode.

→ The display shows the preset hose length.

When the hose length is not set, 

PIPE LEN
UNDEF

 is displayed.

- 4) Press the [SELECT] ▲ or ▼ button and select hose length.

You can select hose length from [~ 3 m] [3.1 ~ 4 m] [4.1 ~ 6 m] [6.1 ~ 8 m] [8.1 ~ 10 m].

- 5) Press the [CLOCK] button to set the hose length.

- 6) To return to the normal mode, press the [CLOCK] button for 5 seconds or leave the remote controller for 60 seconds.

## &lt;ARC447A4&gt;

- 1) Press the [时钟设定 (clock)] button for 5 seconds.

“故障诊断 (service check)” is displayed.



A

- 2) Press the [选择 (select)] ▲ or ▼ button and select “管长确认”. (B)



B

- 3) Press the [时钟设定 (clock)] button to enter the pipe check mode.

“未设定 (undefined)” is displayed. (C)



C

- 4) Press the [选择 (select)] ▲ or ▼ button to change the display of the hose length. (D)



D

(Set point;  
long beep)

- 5) Long beep sound means that the display shows the preset hose length. If you hear the long beep when the display is (E), the hose length is not set.



E

## &lt;ARC452A5&gt;

- 1) Press the 3 buttons (TEMP ▲, ▼, MODE) simultaneously.

5C is displayed. (A)



A

- 2) Press the TEMP ▲ or ▼ button and select PC. (B)



B

- 3) Press the MODE button to enter the pipe check mode. (C)



C

- 4) Press the TEMP ▲ or ▼ button to change the display of the hose length. (D)



D

(Set point;  
long beep)

- 5) Long beep sound means that the display shows the preset hose length. If you hear the long beep when the display is (E), the hose length is not set.



E

## 6.21 Unspecified Voltage (between Indoor Unit and Outdoor Unit)

Remote Controller Display

UA

Method of Malfunction Detection

The supply power is detected for its requirements (different from pair type and multi type models) by the indoor / outdoor transmission signal.

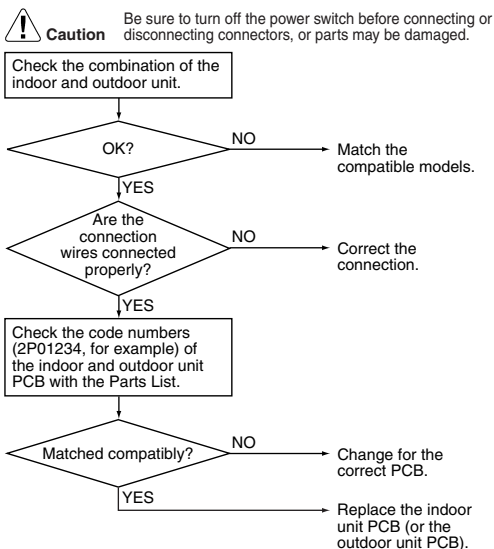
Malfunction Decision Conditions

Pair type and multi type models are interconnected.

Supposed Causes

- Wrong models interconnected
- Wrong wiring of connecting wires
- Wrong indoor unit PCB or outdoor unit PCB mounted
- Defective indoor unit PCB
- Defective outdoor unit PCB

Troubleshooting




(R11707)

## 6.22 Unspecified Voltage (between Indoor Unit and Outdoor Unit) / Anti-icing Function in Other Rooms

Remote  
Controller  
Display

UA, UH

Outdoor  
Unit LED  
Display

A  1 ● 2 ● 3 ● 4 ● 5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

A wrong connection is detected by checking the combination of indoor and outdoor units on the microcomputer.

Malfunction  
Decision  
Conditions

- Anti-icing function in other rooms
- Unspecified internal and/or external voltages
- Mismatching of indoor and outdoor units

Supposed  
Causes

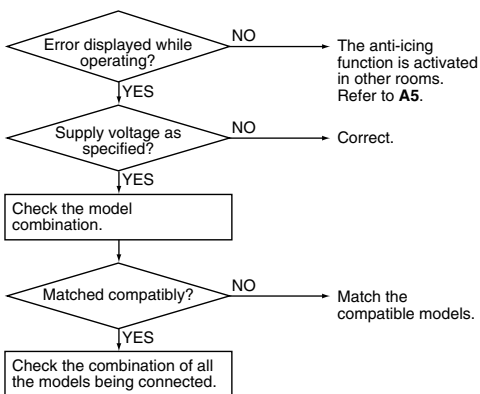
- Anti-icing function in other rooms
- Wrong models interconnected
- Wrong indoor unit PCB or outdoor unit PCB mounted

Trouble-  
shooting



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.








(R7151)



**Note:** Refer to “Anti-icing function” on page 166 for detail.

## 6.23 Anti-icing Function

<b>Remote Controller Display</b>	A5
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	During cooling operation, indoor unit icing is detected by checking the temperatures sensed by the indoor heat exchanger thermistor and room temperature thermistor that are located in a shut-down room. At the other rooms (the indoor unit is normal), <b>UH</b> is displayed on the remote controller.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ In cooling operation, the both conditions (A) and (B) are met for 5 minutes. (A) <math>Tr - Ti \geq 10^{\circ}\text{C}</math> (B) <math>Ti \leq -1^{\circ}\text{C}</math> Tr: room temperature Ti: indoor heat exchanger temperature</li> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 60 minutes without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Wrong wiring or piping</li> <li>■ Defective outdoor electronic expansion valve</li> <li>■ Short-circuited air</li> <li>■ Defective indoor heat exchanger thermistor</li> <li>■ Defective room temperature thermistor</li> </ul>

## Trouble-shooting



Check No.01

Refer to  
P.227



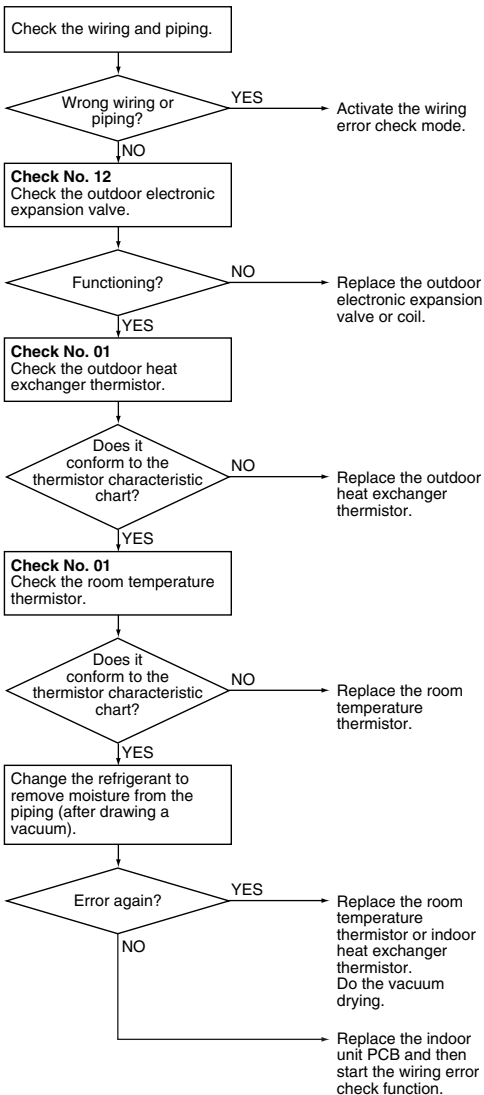
Check No.12

Refer to  
P.235



### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15540)



## 6.24 Outdoor Unit PCB Abnormality

### 6.24.1 Flowchart 1

---

**Remote  
Controller  
Display**

**E1**

---

**Method of  
Malfunction  
Detection**

- The system follows the microprocessor program as specified.
  - The system checks if the zero-cross signal comes in properly.
- 

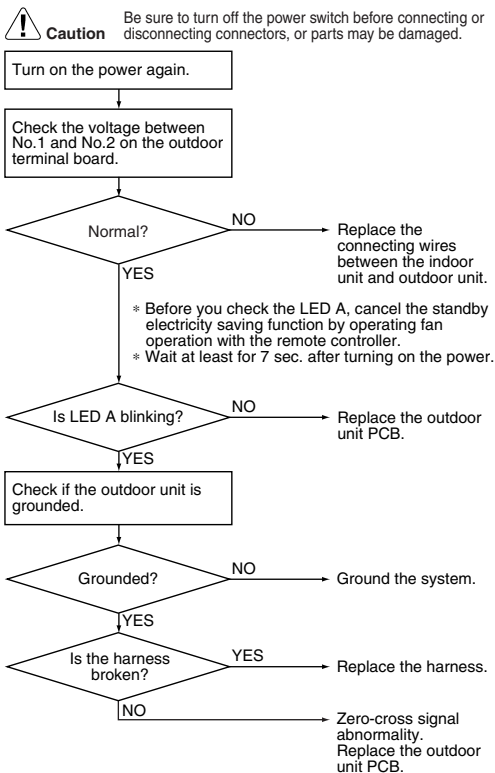
**Malfunction  
Decision  
Conditions**

- The microprocessor program runs out of control.
  - The zero-cross signal is not detected.
- 

**Supposed  
Causes**

- Defective outdoor unit PCB
- Broken harness between PCBs
- Noise
- Momentary fall of voltage
- Momentary power failure

## Trouble-shooting







(R15622)

## 6.24.2 Flowchart 2

Remote  
Controller  
Display

E1

Outdoor  
Unit LED  
Display

A  1  2  3  4  5  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

- Detect within the program of the microcomputer.

Malfunction  
Decision  
Conditions

- The program of the microcomputer is in abnormal running order.

Supposed  
Causes

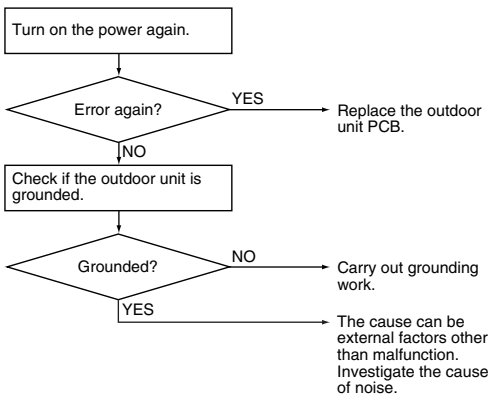
- Noise
- Momentary fall of voltage
- Momentary power failure
- Defective outdoor unit PCB

Trouble-  
shooting



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.








(R7183)

## 6.25 OL Activation (Compressor Overload)

Remote  
Controller  
Display

E5

Outdoor  
Unit LED  
Display

A  1  2  3  4  5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

A compressor overload is detected through compressor OL.

Malfunction  
Decision  
Conditions

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error
- \* The operating temperature condition is not specified.

Supposed  
Causes

- Defective discharge pipe thermistor
- Defective outdoor electronic expansion valve or coil
- Defective four way valve or coil
- Defective outdoor unit PCB
- Refrigerant shortage
- Water mixed in refrigerant
- Defective stop valve

**Trouble-shooting**

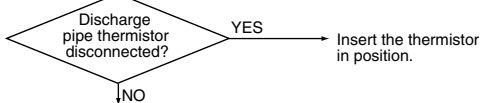


**Check No.01**  
Refer to  
P.227

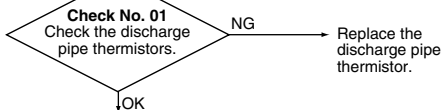


**Caution**

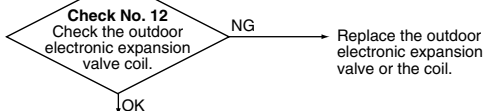
Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



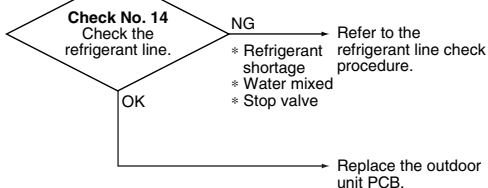
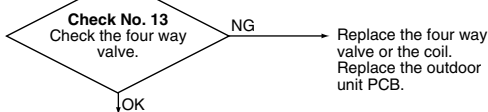
**Check No.12**  
Refer to  
P.235



**Check No.13**  
Refer to  
P.238






**Check No.14**  
Refer to  
P.240



(R15621)

## 6.26 Compressor Lock

<b>Remote Controller Display</b>	E6
<b>Outdoor Unit LED Display</b>	A  1 ● 2  3  4 ● 5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	A compressor lock is detected by checking the compressor running condition through the position detection circuit.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ Operation stops due to overcurrent.</li> <li>■ A compressor lock is detected by the current waveform generated when applying high-frequency voltage to the motor.</li> <li>■ If the error repeats, the system is shut down</li> <li>■ Reset condition: Continuous run for about 5 ~ 11 minutes (depending on the model) without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Compressor locked</li> <li>■ Compressor harness disconnected</li> </ul>

**Trouble-shooting**

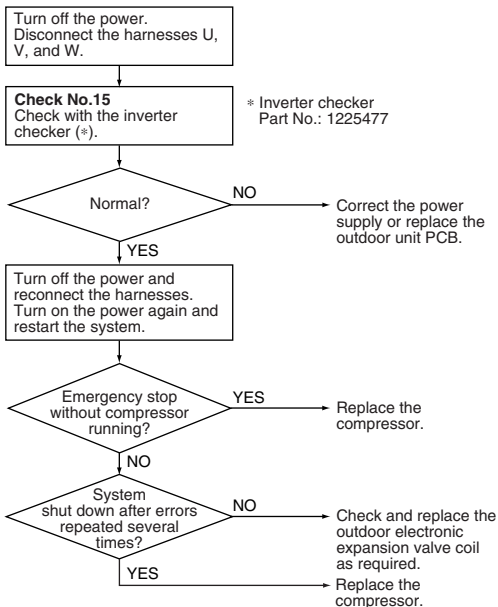


**Check No.15**  
Refer to  
**P.240**



**Caution**






Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.  
(Precaution before turning on the power again)  
Make sure the power has been off for at least 30 seconds.



\* Inverter checker  
Part No.: 1225477

(R15272)

## 6.27 DC Fan Lock


<b>Remote Controller Display</b>	E7
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An error is determined with the high-voltage fan motor rotation speed detected by the Hall IC.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ The fan does not start in 15 ~ 150 seconds (depending on the model) even when the fan motor is running.</li> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 5 ~ 11 minutes (depending on the model) without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Disconnection of the fan motor</li> <li>■ Foreign matters stuck in the fan</li> <li>■ Defective fan motor</li> <li>■ Defective outdoor unit PCB</li> </ul>

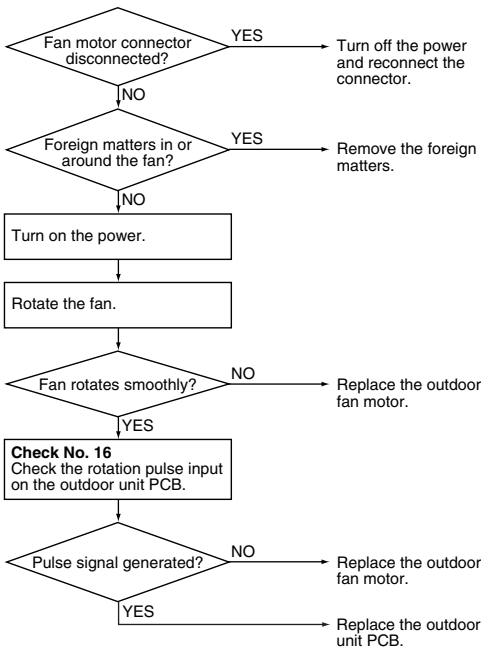


**Trouble-shooting**








**Check No.16**  
Refer to  
P.244

 **Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R14410)

## 6.28 Input Overcurrent Detection

<b>Remote Controller Display</b>	E8
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An input overcurrent is detected by checking the input current value with the compressor running.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ The current exceeds about 4.25 ~ 20 A (depending on the model) for 2.5 seconds with the compressor running. (The upper limit of the current decreases when the outdoor temperature exceeds a certain level.)</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Defective compressor</li> <li>■ Defective power module</li> <li>■ Defective outdoor unit PCB</li> <li>■ Short circuit</li> </ul>

**Trouble-shooting**



**Check No.15**

**Refer to P.240**



**Check No.17**

**Refer to P.246**



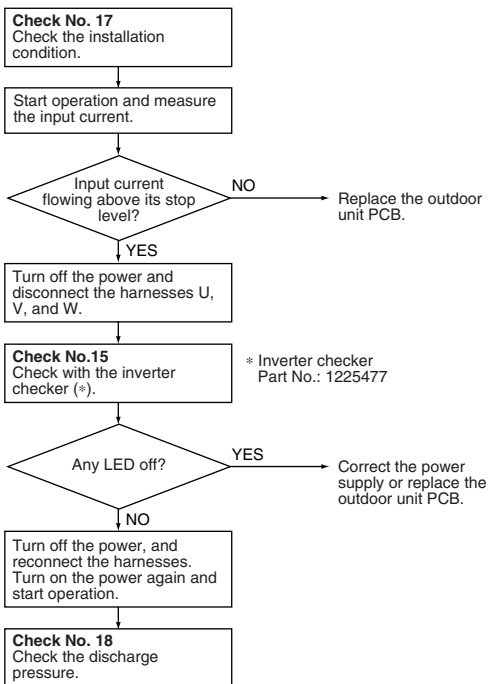
**Check No.18**

**Refer to P.247**



**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

\* An input overcurrent may result from wrong internal wiring. If the system is interrupted by an input overcurrent after the wires have been disconnected and reconnected for part replacement, check the wiring again.



(R15273)

## 6.29 Four Way Valve Abnormality

### 6.29.1 Flowchart 1

<b>Remote Controller Display</b>	<b>EA</b>
<b>Method of Malfunction Detection</b>	The room temperature thermistor, the indoor heat exchanger thermistor, the outdoor temperature thermistor, and the outdoor heat exchanger thermistor are checked if they function within their normal ranges in each operation mode.
<b>Malfunction Decision Conditions</b>	<p>A following condition continues over 1 ~ 10 minutes (depending on the model) after operating for 5 ~ 10 minutes (depending on the model).</p> <ul style="list-style-type: none"> <li>■ Cooling / Dry Tr – Ti &lt; –5°C</li> <li>■ Heating Ti – Tr &lt; –5°C</li> </ul> <p>Tr: room temperature Ti: indoor heat exchanger temperature</p> <ul style="list-style-type: none"> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 60 minutes without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Disconnection of four way valve coil</li> <li>■ Defective four way valve, coil, or harness</li> <li>■ Defective outdoor unit PCB</li> <li>■ Defective thermistor</li> <li>■ Refrigerant shortage</li> <li>■ Water mixed in refrigerant</li> <li>■ Defective stop valve</li> <li>■ Protection control was activated in the compressor</li> </ul>

**Trouble-shooting**



**Check No.01**  
Refer to  
P.227

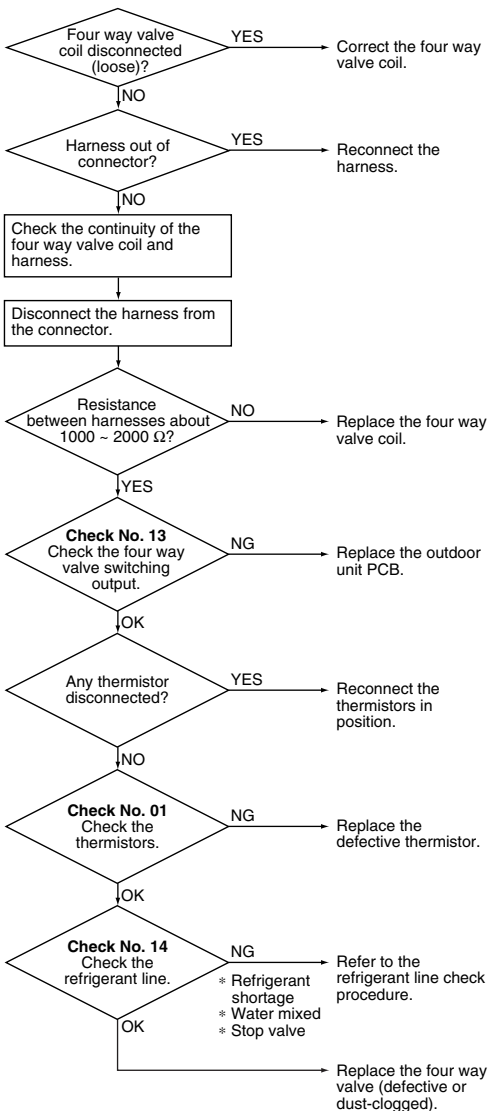


**Check No.13**  
Refer to  
P.238



**Check No.14**  
Refer to  
P.240

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.








(R14441)

## 6.29.2 Flowchart 2

**Remote  
Controller  
Display**

EA

**Outdoor  
Unit LED  
Display**

A  1  2  3  4  5  
(LED1 ~ LED5 are for multi outdoor unit.)

**Method of  
Malfunction  
Detection**

The indoor heat exchanger thermistor, the outdoor temperature thermistor and the outdoor heat exchanger thermistor are checked if they function within their normal ranges in the operating mode.

**Malfunction  
Decision  
Conditions**

Either of the following conditions occurs 6 minutes after the compressor has started.

- Cooling  
The lowest temperature among the running indoor heat exchangers is more than 5°C
- Heating  
The highest temperature among the running indoor heat exchangers is lower than 0°C

**Supposed  
Causes**

- Disconnection of four way valve coil
- Defective four way valve, coil, or harness
- Defective outdoor unit PCB
- Defective thermistor
- Water mixed in refrigerant
- Defective stop valve

**Trouble-shooting**



**Check No.01**  
Refer to  
P.227

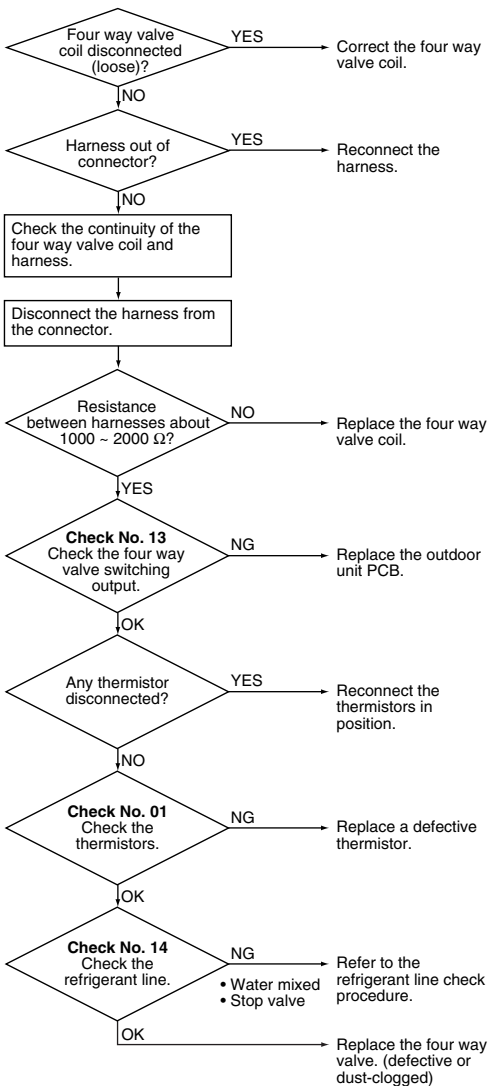


**Check No.13**  
Refer to  
P.238








**Check No.14**  
Refer to  
P.240

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R14916)

## 6.30 Discharge Pipe Temperature Control

<b>Remote Controller Display</b>	F3
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An error is determined with the temperature detected by the discharge pipe thermistor.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ If the temperature detected by the discharge pipe thermistor rises above <b>A</b> °C, the compressor stops.</li> <li>■ The error is cleared when the discharge pipe temperature has dropped below <b>B</b> °C.</li> </ul> <p>(Reference)</p> <p><b>A:</b> 110 ~ 120°C</p> <p><b>B:</b> 80 ~ 107°C</p> <p><b>A</b> and <b>B</b> vary depending on the model and the compressor frequency.</p> <ul style="list-style-type: none"> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 60 minutes without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Defective discharge pipe thermistor (Defective outdoor heat exchanger thermistor or outdoor temperature thermistor)</li> <li>■ Defective outdoor electronic expansion valve or coil</li> <li>■ Refrigerant shortage</li> <li>■ Defective four way valve</li> <li>■ Water mixed in refrigerant</li> <li>■ Defective stop valve</li> <li>■ Defective outdoor unit PCB</li> </ul>



**Trouble-shooting**



**Check No.01**  
Refer to  
P.227



**Check No.12**  
Refer to  
P.235

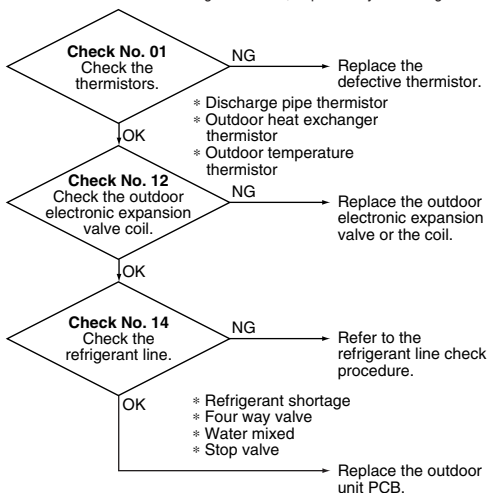


**Check No.14**  
Refer to  
P.240



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15274)

## 6.31 High Pressure Control in Cooling

### 6.31.1 Flowchart 1

Remote  
Controller  
Display

F6

Method of  
Malfunction  
Detection

High-pressure control (operation halt, frequency drop, etc.) is activated in cooling operation if the temperature sensed by the outdoor heat exchanger thermistor exceeds the limit.

Malfunction  
Decision  
Conditions

- The temperature sensed by the outdoor heat exchanger thermistor rises above 60 ~ 65°C (depending on the model).
- The error is cleared when the temperature drops below about 50°C.

Supposed  
Causes

- The installation space is not large enough.
- Dirty outdoor heat exchanger
- Defective outdoor fan motor
- Defective stop valve
- Defective outdoor heat exchanger thermistor

Trouble-  
shooting



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.


  
Check No.01  
Refer to  
P.227

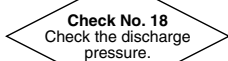


NG

Replace the fan motor.  
Reconnect the connector or fan motor lead wires.

OK


  
Check No.17  
Refer to  
P.246



NG

Replace the stop valve.

OK


  
Check No.18  
Refer to  
P.247



NG

Replace the outdoor heat exchanger thermistor.

OK

  
Check No.19  
Refer to  
P.248








(R15541)

## 6.31.2 Flowchart 2

**Remote  
Controller  
Display**

F6

**Outdoor  
Unit LED  
Display**

A  1  2  3  4  5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

**Method of  
Malfunction  
Detection**

High-pressure control (operation halt, frequency drop, etc.) is activated in cooling operation if the temperature sensed by the outdoor heat exchanger thermistor exceeds the limit.

**Malfunction  
Decision  
Conditions**

- The temperature sensed by the outdoor heat exchanger thermistor rises above 60 ~ 65°C (depending on the model).
- The error is cleared when the temperature drops below about 50°C.

**Supposed  
Causes**

- The installation space is not large enough.
- Dirty outdoor heat exchanger
- Defective outdoor fan motor
- Defective stop valve
- Defective outdoor electronic expansion valve or coil
- Defective outdoor heat exchanger thermistor
- Defective outdoor unit PCB

## Trouble-shooting



**Check No.01**

Refer to  
P.227



**Check No.12**

Refer to  
P.235



**Check No.17**

Refer to  
P.246



**Check No.18**

Refer to  
P.247



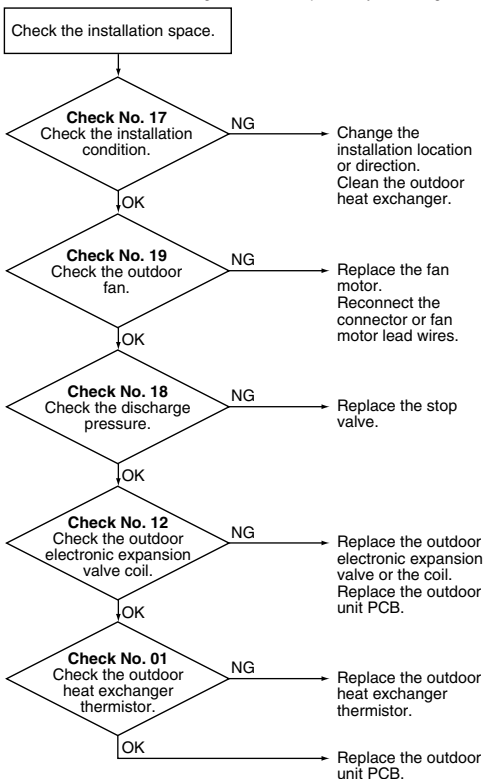
**Check No.19**

Refer to  
P.248



### Caution

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R14413)

### 6.31.3 Flowchart 3

---

**Remote  
Controller  
Display**

**F6**

---

**Method of  
Malfunction  
Detection**

High-pressure control (operation halt, frequency drop, etc.) is activated in cooling operation if the temperature sensed by the outdoor heat exchanger thermistor exceeds the limit.

---

**Malfunction  
Decision  
Conditions**

- The temperature sensed by the outdoor heat exchanger thermistor rises above about 65°C.
  - The error is cleared when the temperature drops below about 50°C.
- 

**Supposed  
Causes**

- The installation space is not large enough.
- Dirty outdoor heat exchanger
- Defective outdoor fan motor
- Defective stop valve
- Defective outdoor electronic expansion valve or coil
- Defective outdoor heat exchanger thermistor
- Defective outdoor unit PCB
- Defective dehumidifying solenoid valve

## Trouble-shooting



**Check No.01**

Refer to  
P.227



**Check No.12**

Refer to  
P.235



**Check No.17**

Refer to  
P.246



**Check No.18**

Refer to  
P.247



**Check No.19**

Refer to  
P.248



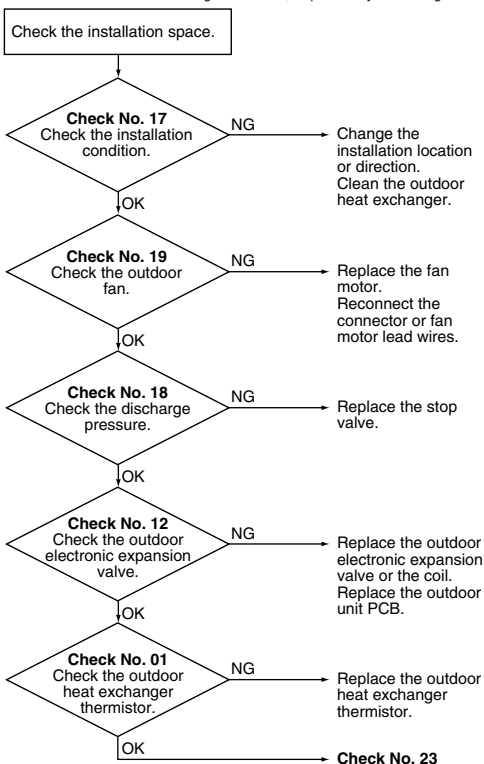
**Check No.23**

Refer to  
P.251



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15542)

## 6.32 Compressor System Sensor Abnormality

### 6.32.1 Flowchart 1

Remote Controller Display

H0

Method of Malfunction Detection

- The system checks the DC current before the compressor starts.

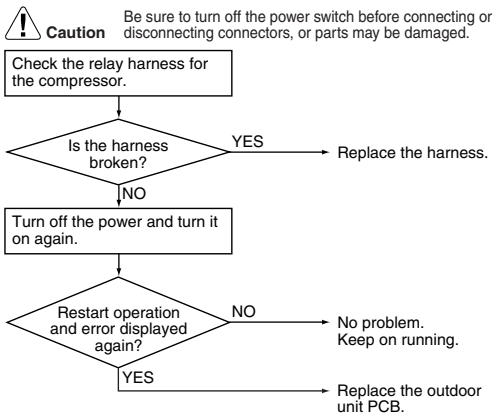
Malfunction Decision Conditions

- The DC current before compressor start-up is out of the range 0.5 ~ 4.5 V (sensor output converted to voltage value)
- The DC voltage before compressor start-up is below 50 V.

Supposed Causes

- Broken or disconnection of harness
- Defective outdoor unit PCB

Trouble-shooting








(R11712)

## 6.32.2 Flowchart 2

Remote  
Controller  
Display

H0

Outdoor  
Unit LED  
Display

A  1  2  3  4  5  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

- The system checks the supply voltage and the DC voltage before the compressor starts.
- The system checks the compressor current right after the compressor starts.

Malfunction  
Decision  
Conditions

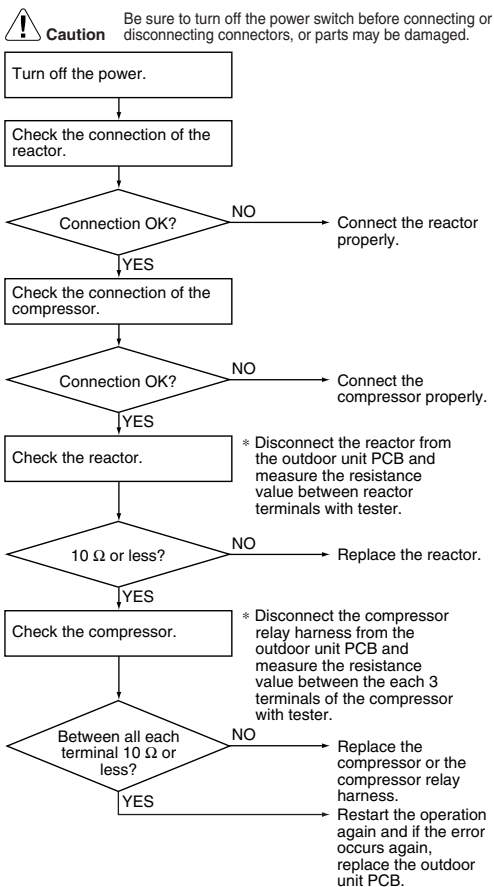
- The supply voltage and the DC voltage is obviously low or high.
- The compressor current does not run when the compressor starts.

Supposed  
Causes

- Disconnection of reactor
- Disconnection of compressor harness
- Defective outdoor unit PCB
- Defective compressor



**Trouble-shooting**



(R15647)

## 6.33 Damper Abnormality

Remote  
Controller  
Display

H1

Method of  
Malfunction  
Detection

Detected by the limit switch (LS) in the humidifier unit.

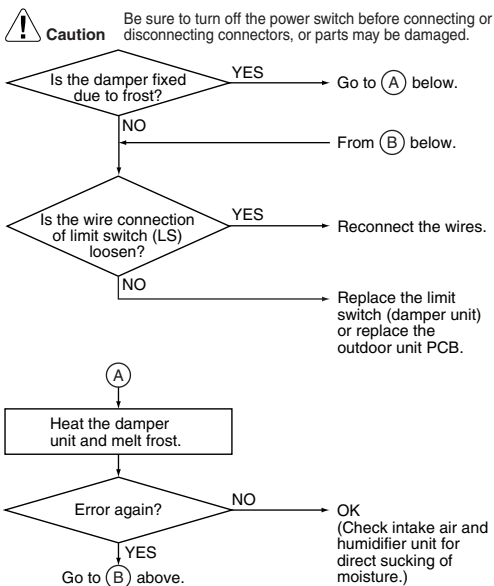
Malfunction  
Decision  
Conditions

- Limit switch does not turn on or off at the following timing
  - \* The humidifier unit starts. (When the power supply turns on, humidifying operation starts)
  - \* The humidifier unit stops.

Supposed  
Causes

- Frost
- Foreign matter
- Defective limit switch (including improper connection)
- Defective damper motor






Trouble-  
shooting



(R13924)

## 6.34 Position Sensor Abnormality

### 6.34.1 Flowchart 1

<b>Remote Controller Display</b>	H6
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	A compressor start-up failure is detected by checking the compressor running condition through the position detection circuit.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 5 ~ 11 minutes (depending on the model) without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Disconnection of the compressor relay cable</li> <li>■ Defective compressor</li> <li>■ Defective outdoor unit PCB</li> <li>■ Start-up failure caused by the closed stop valve</li> <li>■ Input voltage is out of specification</li> </ul>

## Trouble-shooting



Check No.15

Refer to  
P.240



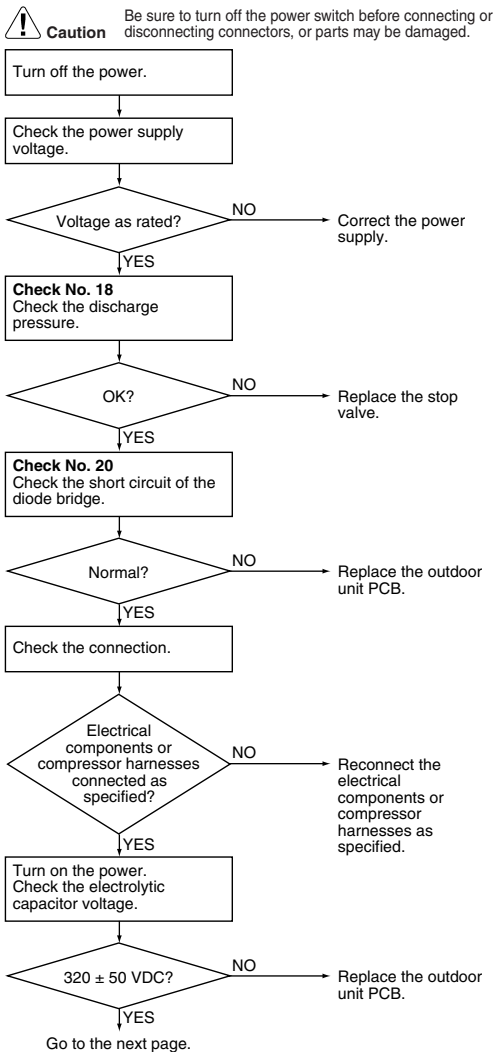
Check No.18

Refer to  
P.247

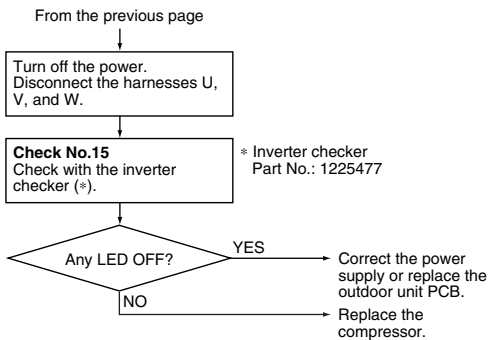


Check No.20

Refer to  
P.250



(R15623)






(R15275)

## 6.34.2 Flowchart 2

**Remote  
Controller  
Display**

H6

**Outdoor  
Unit LED  
Display**

A  1  2  3 ● 4 ● 5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

**Method of  
Malfunction  
Detection**

A compressor start-up failure is detected by checking the compressor running condition through the position detection circuit.

**Malfunction  
Decision  
Conditions**

- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 5 minutes without any other error

**Supposed  
Causes**

- Disconnection of the compressor relay cable
- Defective compressor
- Defective outdoor unit PCB
- Start-up failure caused by the closed stop valve
- Input voltage is out of specification

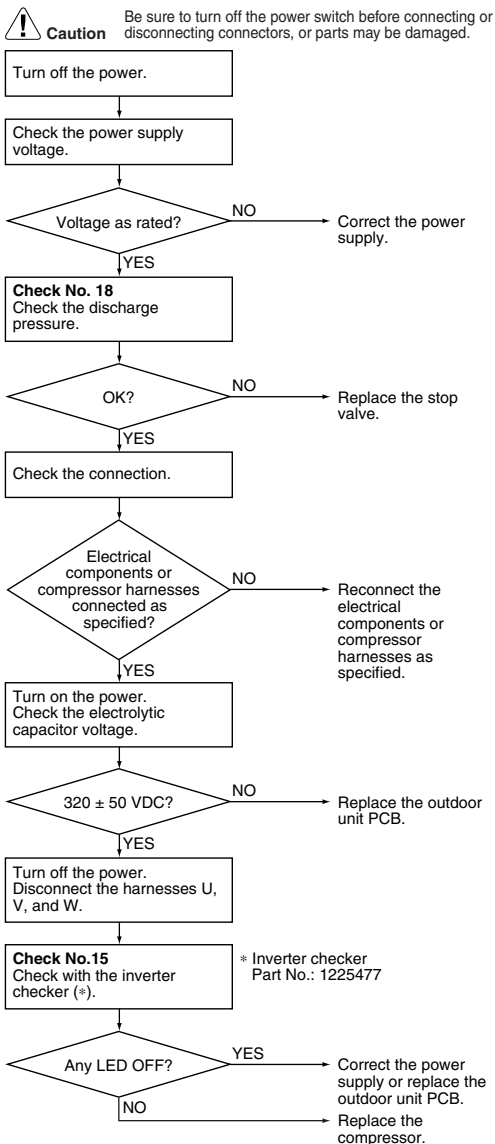
Trouble-shooting



Check No.15  
Refer to  
P.240



Check No.18  
Refer to  
P.247



(R15276)

## 6.35 DC Voltage / Current Sensor Abnormality

---

Remote  
Controller  
Display

H8

---

Method of  
Malfunction  
Detection

DC voltage or DC current sensor abnormality is identified based on the compressor running frequency and the input current.

---

Malfunction  
Decision  
Conditions

- The compressor running frequency is above 52 Hz.
  - If the error repeats, the system is shut down.
  - Reset condition: Continuous run for about 60 minutes without any other error
- 

Supposed  
Causes

- Defective outdoor unit PCB
- 

Trouble-  
shooting








**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

**Replace the outdoor unit PCB.**



## 6.36 CT or Related Abnormality

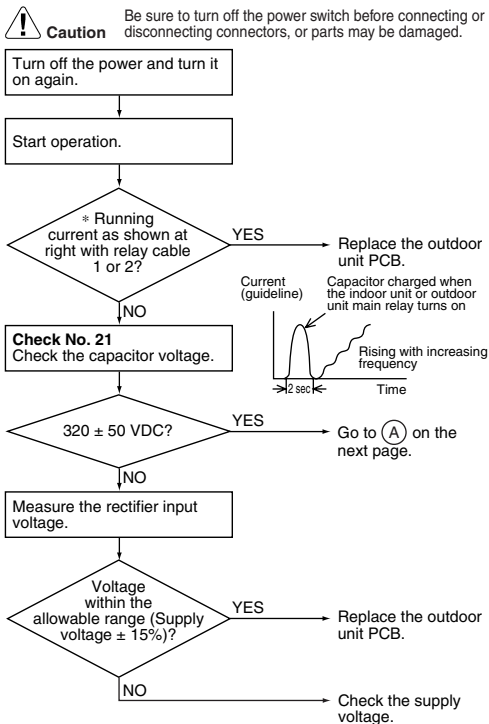
<b>Remote Controller Display</b>	H8
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	A CT or related error is detected by checking the compressor running frequency and CT-detected input current.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ The compressor running frequency is more than 32 ~ 68 Hz (depending on the model), and the CT input current is below 0.5 ~ 1.25 A (depending on the model).</li> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 60 minutes without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Defective power module</li> <li>■ Breakage of wiring or disconnection</li> <li>■ Defective reactor</li> <li>■ Defective outdoor unit PCB</li> </ul>

Trouble-  
shooting

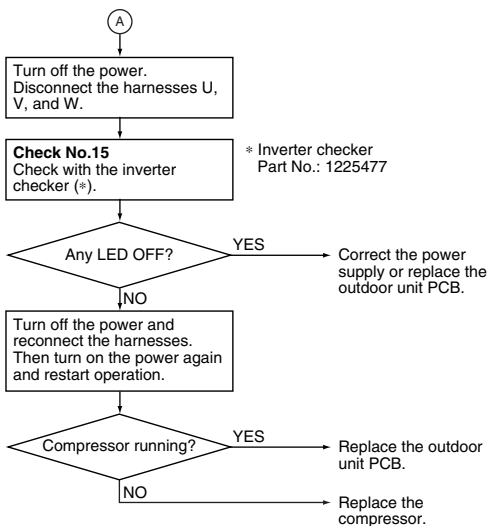
Check No.15

Refer to  
P.240

Check No.21

Refer to  
P.250

(R15553)



(R15552)

## 6.37 Thermistor or Related Abnormality (Outdoor Unit)

### 6.37.1 Flowchart 1

---

**Remote  
Controller  
Display**      **H9, J3, J6, P4**

---

**Method of  
Malfunction  
Detection**      This fault is identified based on the thermistor input voltage to the microcomputer.  
A thermistor fault is identified based on the temperature sensed by each thermistor.

---

**Malfunction  
Decision  
Conditions**      ■ The thermistor input voltage is above 4.96 ~ 4.98 V or below 0.02 ~ 0.04 V with the power on.  
■ **J3** error is judged if the discharge pipe temperature is lower than the heat exchanger temperature.

---

**Supposed  
Causes**      ■ Disconnection of the connector for the thermistor  
■ Defective thermistor corresponding to the error code  
■ Defective outdoor unit PCB

---

In case of **J3** error

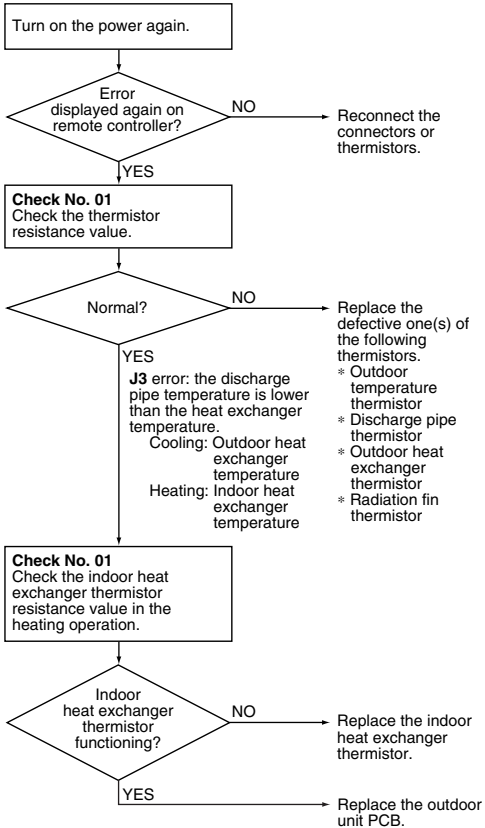
- Defective heat exchanger thermistor (outdoor heat exchanger thermistor in cooling operation, or indoor heat exchanger thermistor in heating operation)
- Protection control was activated in the compressor.

**Trouble-shooting**



**Check No.01**  
Refer to P.227

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.



(R15554)

- H9** : Outdoor temperature thermistor
- J3** : Discharge pipe thermistor
- J6** : Outdoor heat exchanger thermistor
- P4** : Radiation fin thermistor

**Note: In case of P4****Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

**When you cannot find the radiation fin thermistor on the outdoor unit PCB, replace the outdoor unit PCB.**

**P4** : Radiation fin thermistor

## 6.37.2 Flowchart 2

Remote  
Controller  
Display

H9, J3, J6, J8, J9, P4

Outdoor  
Unit LED  
Display

A  1  2  3  4  5 

Method of  
Malfunction  
Detection

This type of error is detected by checking the thermistor input voltage to the microcomputer.  
A thermistor error is detected by checking the temperature sensed by each thermistor.

Malfunction  
Decision  
Conditions

- The thermistor input is above 4.96 V or below 0.04 V with the power on.
- **J3** error is judged if the discharge pipe temperature is lower than the heat exchanger temperature.
- The system is shut down if all the units are judged as the **J8** error.

Supposed  
Causes

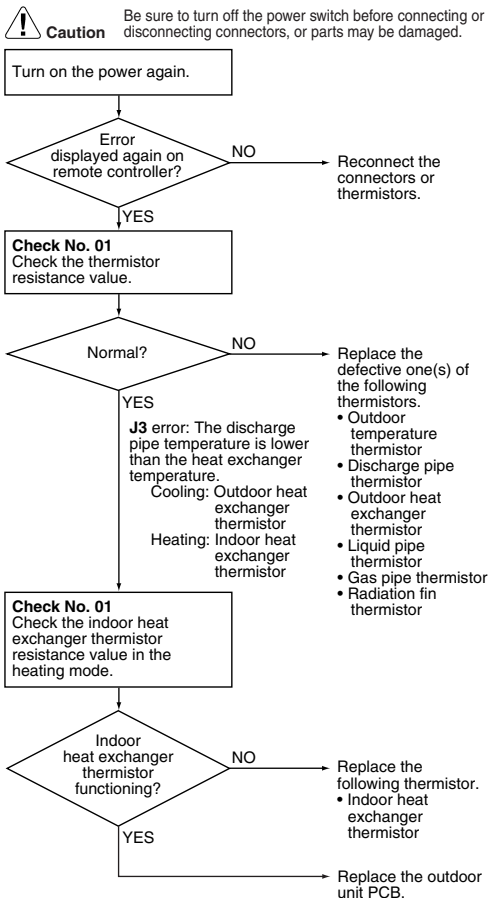
- Disconnection of the connector for the thermistor
- Defective thermistor corresponding to the error code
- Defective heat exchanger thermistor in the case of **J3** error (outdoor heat exchanger thermistor in cooling operation, or indoor heat exchanger thermistor in heating operation)
- Defective outdoor unit PCB

## Troubleshooting



Check No.01

Refer to  
P.227



(R15555)

**H9** : Outdoor temperature thermistor

**J3** : Discharge pipe thermistor

**J6** : Outdoor heat exchanger thermistor

**J8** : Liquid pipe thermistor

**J9** : Gas pipe thermistor

**P4** : Radiation fin thermistor





**Note:** In case of P4








**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

**When you cannot find the radiation fin thermistor on the outdoor unit PCB, replace the outdoor unit PCB.**

**P4** : Radiation fin thermistor

## 6.38 Electrical Box Temperature Rise

### 6.38.1 Flowchart 1

<b>Remote Controller Display</b>	L3
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An electrical box temperature rise is detected by checking the radiation fin thermistor with the compressor off.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ With the compressor off, the radiation fin temperature is above <b>A</b> °C.</li> <li>■ The error is cleared when the radiation fin temperature drops below <b>B</b> °C.</li> <li>■ To cool the electrical components, the outdoor fan starts when the radiation fin temperature rises above <b>C</b> °C and stops when it drops below <b>B</b> °C.</li> </ul> <p>(Reference)</p> <p><b>A:</b> 75 ~ 122°C  <b>B:</b> 65 ~ 113°C  <b>C:</b> 75 ~ 120°C</p> <p><b>A, B, C</b> vary depending on the model.</p>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Defective outdoor fan motor</li> <li>■ Short circuit</li> <li>■ Defective radiation fin thermistor</li> <li>■ Disconnection of connector</li> <li>■ Defective outdoor unit PCB</li> </ul>

**Trouble-shooting**



**Check No.01**  
Refer to  
P.227



**Check No.17**  
Refer to  
P.246



**Check No.19**  
Refer to  
P.248

**Caution** Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Turn off the power and turn it on again.

**WARNING**  
To cool the electrical components, the outdoor fan starts when the radiation fin temperature rises above C°C and stops when it drops below B°C.

Error again or outdoor fan activated? YES → Go to (A) below.

NO

From (B) below.

**Check No. 19**  
Check the outdoor fan or related. NG → Replace the fan motor. Correct the connectors and the fan motor lead wire. Replace the outdoor unit PCB.

OK

Radiation fin dirty? Too dirty → Clean up the radiation fin.

Slightly dirty

**Check No. 17**  
Check the installation condition.

(A)

Check the radiation fin temperature.

Above A °C? NO → Replace the outdoor unit PCB.

YES

**Check No. 01**  
Check the thermistor resistance value.

\* Radiation fin thermistor






Thermistor as specified in its characteristic chart? NO → Replace the radiation fin thermistor.

YES

Go to (B) above.

(R15556)

## 6.38.2 Flowchart 2

<b>Remote Controller Display</b>	L3
<b>Outdoor Unit LED Display</b>	A  1  2  3  4  5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An electrical box temperature rise is detected by checking the radiation fin thermistor with the compressor off.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ With the compressor off, the radiation fin temperature is above <b>A</b> °C.</li> <li>■ The error is cleared when the radiation fin temperature drops below <b>B</b> °C.</li> <li>■ To cool the electrical components, the outdoor fan starts when the radiation fin temperature rises above <b>C</b> °C and stops when it drops below <b>B</b> °C.</li> </ul>
	<p>(Reference)</p> <p><b>A:</b> 75 ~ 122°C</p> <p><b>B:</b> 65 ~ 113°C</p> <p><b>C:</b> 75 ~ 120°C</p> <p><b>A, B, C</b> vary depending on the model.</p>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Defective outdoor fan motor</li> <li>■ Short circuit</li> <li>■ Defective radiation fin thermistor</li> <li>■ Disconnection of connector</li> <li>■ Defective outdoor unit PCB</li> </ul>

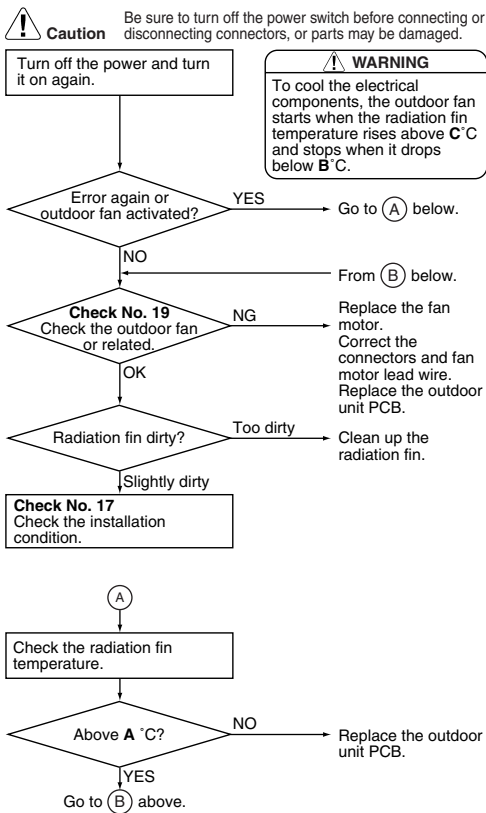
**Trouble-shooting**



**Check No.17**  
Refer to  
P.246



**Check No.19**  
Refer to  
P.248



(R15558)






## 6.39 Radiation Fin Temperature Rise

### 6.39.1 Flowchart 1

Remote  
Controller  
Display

L4

Outdoor  
Unit LED  
Display

A  1  2  3  4  5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

A radiation fin temperature rise is detected by checking the radiation fin thermistor with the compressor on.

Malfunction  
Decision  
Conditions

- If the radiation fin temperature with the compressor on is above **A** °C.
- The error is cleared when the radiation fin temperature drops below **B** °C.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

(Reference)

**A:** 81 ~ 105°C

**B:** 67 ~ 99°C

**A** and **B** vary depending on the model.

Supposed  
Causes

- Defective outdoor fan motor
- Short circuit
- Defective radiation fin thermistor
- Disconnection of connector
- Defective outdoor unit PCB
- Silicon grease is not applied properly on the radiation fin after replacing the outdoor unit PCB.

**Trouble-shooting**



**Check No.01**

Refer to P.227



**Check No.17**

Refer to P.246



**Check No.19**

Refer to P.248



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Turn off the power and turn it on again to start the system.

Error displayed again?

YES

Go to (A) below.

NO

From (B) below.

**Check No. 19**  
Check the outdoor fan or related.

NG

Replace the fan motor.  
Correct the connectors and fan motor lead wire.  
Replace the outdoor unit PCB.

OK

Radiation fin dirty?

Too dirty

Clean up the radiation fin.

Slightly dirty

**Check No. 17**  
Check the installation condition.

(A)

Has PCB been replaced?

YES

Check if the silicon grease applied properly on the radiation fin. If not, apply it (\*).  
\* Silicon grease  
Part No.: 1172698

NO

Check the radiation fin temperature.

Above A °C?

NO

Check the power transistor and the radiation fin for looseness. If they are found to be fit tightly, replace the outdoor unit PCB or the power transistor.

YES

**Check No. 01**  
Check the thermistor resistance value.

\* Radiation fin thermistor

Thermistor as specified in its characteristic chart?

NO

Replace the radiation fin thermistor.

YES

Go to (B) above.



(R15560)

## 6.39.2 Flowchart 2

Remote  
Controller  
Display

L4

Outdoor  
Unit LED  
Display

A  1 ● 2 ● 3 ● 4  5 ●  
(LED1 ~ LED5 are for multi outdoor unit.)

Method of  
Malfunction  
Detection

A radiation fin temperature rise is detected by checking the radiation fin thermistor with the compressor on.

Malfunction  
Decision  
Conditions

- If the radiation fin temperature with the compressor on is above **A** °C.
- The error is cleared when the radiation fin temperature drops below **B** °C.
- If the error repeats, the system is shut down.
- Reset condition: Continuous run for about 60 minutes without any other error

(Reference)

**A:** 81 ~ 105°C

**B:** 67 ~ 99°C

**A** and **B** vary depending on the model.

Supposed  
Causes

- Defective outdoor fan motor
- Short circuit
- Defective radiation fin thermistor
- Disconnection of connector
- Defective outdoor unit PCB
- Silicon grease is not applied properly on the radiation fin after replacing the outdoor unit PCB.



**Trouble-shooting**



**Check No.17**

Refer to P.246



**Check No.19**

Refer to P.248



**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

Turn off the power and turn it on again to start the system.

Error displayed again? YES → Go to (A) below.

NO ← From (B) below.

**Check No. 19**  
Check the outdoor fan or related.  
NG → Replace the fan motor.  
Correct the connectors and fan motor leads.  
Replace the outdoor unit PCB.

OK  
Radiation fin dirty? Too dirty → Clean up the radiation fin.

Slightly dirty

**Check No. 17**  
Check the installation condition.

(A)

Has PCB been replaced? YES → Check if the silicon grease applied properly on the radiation fin. If not, apply it.  
\* Silicon grease Part No.: 1172698



NO  
Check the radiation fin temperature.

Above A°C? NO → Replace the outdoor unit PCB.

YES  
Go to (B) above.

(R15562)

## 6.40 Output Overcurrent Detection

<b>Remote Controller Display</b>	L5
<b>Outdoor Unit LED Display</b>	A  1 ● 2 ● 3  4 ● 5 ● (LED1 ~ LED5 are for multi outdoor unit.)
<b>Method of Malfunction Detection</b>	An output overcurrent is detected by checking the current that flows in the inverter DC section.
<b>Malfunction Decision Conditions</b>	<ul style="list-style-type: none"> <li>■ A position signal error occurs while the compressor is running.</li> <li>■ A speed error occurs while the compressor is running.</li> <li>■ An output overcurrent signal is fed from the output overcurrent detection circuit to the microcomputer.</li> <li>■ If the error repeats, the system is shut down.</li> <li>■ Reset condition: Continuous run for about 5 ~ 11 minutes (depending on the model) without any other error</li> </ul>
<b>Supposed Causes</b>	<ul style="list-style-type: none"> <li>■ Poor installation condition</li> <li>■ Closed stop valve</li> <li>■ Defective power module</li> <li>■ Wrong internal wiring</li> <li>■ Abnormal power supply voltage</li> <li>■ Defective outdoor unit PCB</li> <li>■ Defective compressor</li> </ul>

**Trouble-shooting**



**Check No.15**

Refer to P.240



**Check No.17**

Refer to P.246



**Check No.18**

Refer to P.247



**Check No.22**

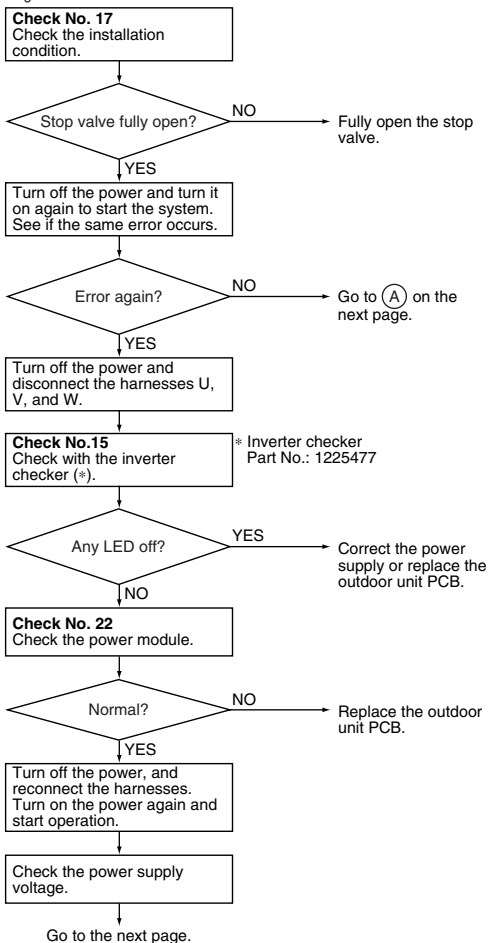
Refer to P.251

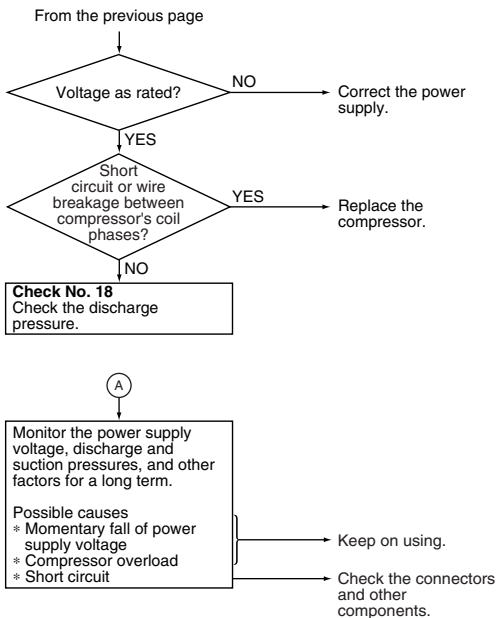


**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.

\* An output overcurrent may result from wrong internal wiring. If the system is interrupted by an output overcurrent after the wires have been disconnected and reconnected for part replacement, check the wiring again.





(R15564)

## 6.41 Fan Motor System Abnormality / Fan Lock

---

**Remote  
Controller  
Display**

P9

---

**Method of  
Malfunction  
Detection**

During humidifying fan motor running, fan motor system abnormality is identified based on the fan rotation speed (rpm) detected by Hall IC.

---

**Malfunction  
Decision  
Conditions**

<Humidifying fan>  
When the fan rotation speed does not reach 100 rpm within 7 seconds after the fan motor starts.

---

**Supposed  
Causes**

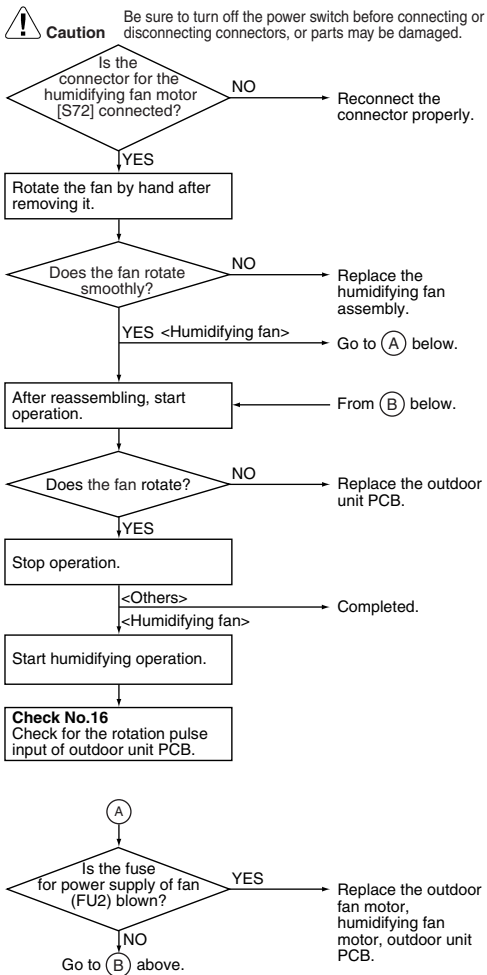
<Humidifying fan>

- Defective humidifying fan motor
- Breakage of relay harness or loose connector
- Detection fault of fan rotation speed due to defective outdoor unit PCB

## Trouble-shooting



**Check No.16**  
Refer to  
P.244



(R15566)

## 6.42 Heater Wire Abnormality

---

**Remote  
Controller  
Display**

PA

---

**Method of  
Malfunction  
Detection**

An error is identified when the outlet temperature of humidifying fan does not reach a certain temperature within a given time after the heater is turned on.

---

**Malfunction  
Decision  
Conditions**

When the temperature detected by the humidifying thermistor is lower than the outdoor temperature (with the heater turned off) + 6°C, and this condition continues for 30 minutes.

---

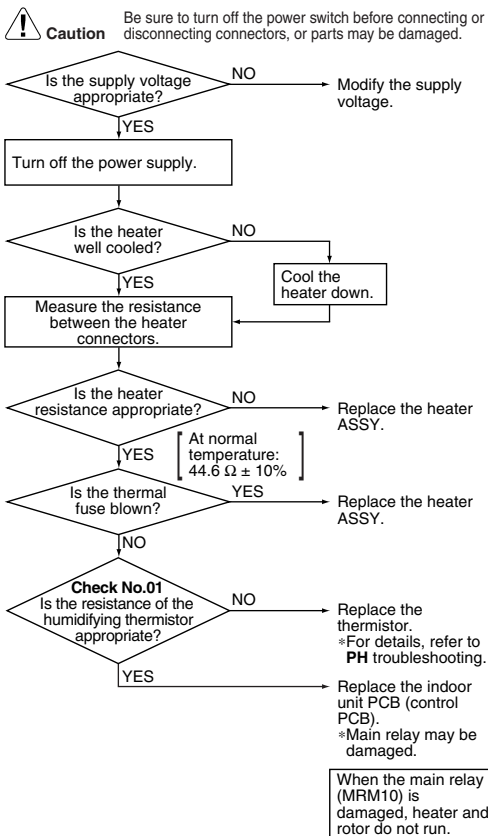
**Supposed  
Causes**

- Breakage of heater filament
- Breakage of heater harness
- Abnormal temperature detected by outdoor temperature thermistor
- Abnormal temperature detected by humidifying thermistor
- Defective main relay
- Blown thermal fuse
- Defective heater control part
- Extremely low voltage

## Trouble-shooting



**Check No.01**  
Refer to  
P.227



(R15568)



## 6.43 Humidifying Thermistor Abnormality / Humidifying Heater Temperature Abnormality

---

Remote  
Controller  
Display

PH

---

Method of  
Malfunction  
Detection

An error is identified when the temperature detected by the humidification thermistor is abnormal.

---

Malfunction  
Decision  
Conditions

- When the power is supplied and the thermistor input is 4.92 V or more, or 0.06 V or less.
  - The humidifying fan outlet temperature is more than 90°C.
- 

Supposed  
Causes

- Short circuit and wire breakage of humidifying thermistor
- Disconnection of connector
- Heater has a high power
- Thermistor temperature detection error
- Defective rotor motor
- Defective hygrosopic fan motor
- Defective heater control part
- Defective humidifying fan

Trouble-  
shooting

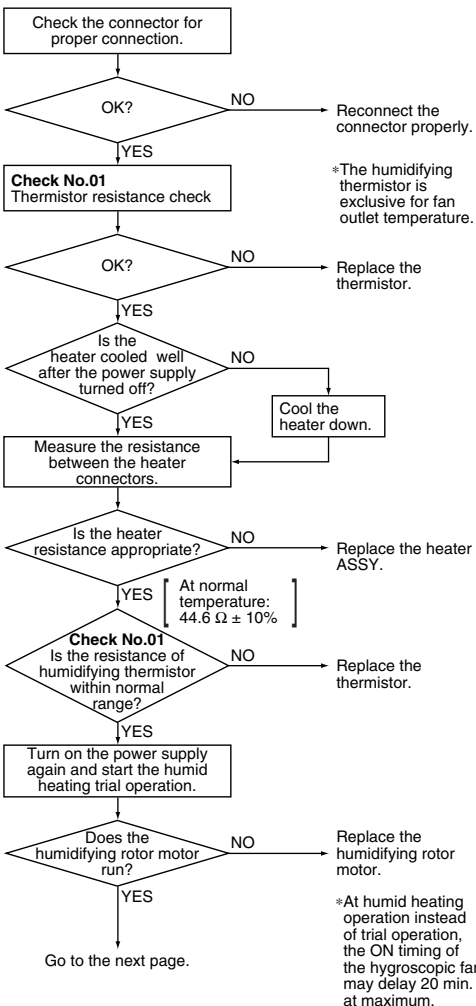
Check No.01

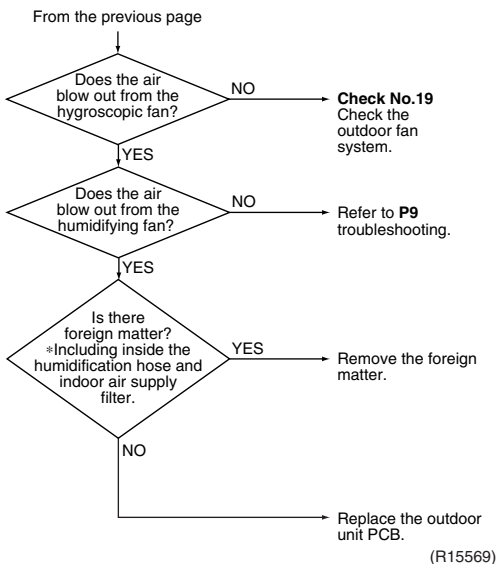
Refer to  
P.227

Check No.19

Refer to  
P.248**Caution**

Be sure to turn off the power switch before connecting or disconnecting connectors, or parts may be damaged.





# 7. Check

## 7.1 Thermistor Resistance Check

### Check No.01

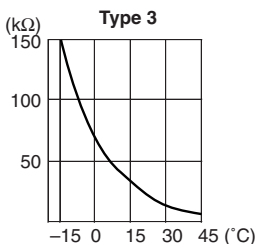
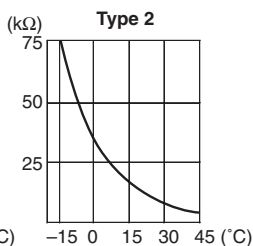
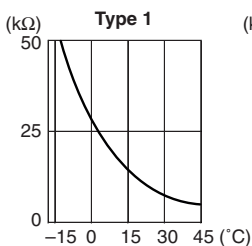
Disconnect the connectors of the thermistors from the PCB, and measure the resistance of each thermistor using a tester.

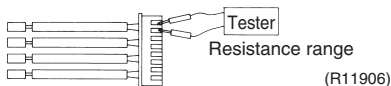
The relationship between normal temperature and resistance is shown in the table and the graphs below.

The data is for reference purpose only.

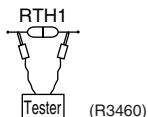
Thermistor temperature (°C)	Resistance (kΩ)		
	Type 1 (★1)	Type 2 (★2)	Type 3 (★3)
-20	73.4	97.09	197.8
-15	57.0	73.04	148.2
-10	44.7	55.44	112.1
-5	35.3	42.45	85.60
0	28.2	32.76	65.93
5	22.6	25.48	51.14
10	18.3	19.97	39.99
15	14.8	15.75	31.52
20	12.1	12.51	25.02
25	10.0	10.00	20.00
30	8.2	8.047	16.10
35	6.9	6.518	13.04
40	5.8	5.311	10.62
45	4.9	4.353	8.707
50	4.1	3.588	7.176

(R<sub>25°C</sub> = 10 kΩ, B = 3435 K)    (R<sub>25°C</sub> = 10 kΩ, B = 3950 K)    (R<sub>25°C</sub> = 20 kΩ, B = 3950 K)





- For the models in which the thermistor is directly mounted on the PCB, disconnect the connector for the PCB and measure.



- ★1: The room temperature thermistor of the following models is type 1.

ATX20GV1B	FTKS12JEVJU	FTXN12KEVJU
ATX20JV1B	FTX20GV1B	FTXN25JEV1B
ATX25GV1B	FTX20GVL	FTXN25KEV1B
ATX25JV1B	FTX20JV1B	FTXN25KV2C
ATX35GV1B	FTX25GV1B	FTXN25KV2CW
ATX35JV1B	FTX25GVL	FTXN32KV2C
FTK15JEVM	FTX25JEVM	FTXN32KV2CW
FTK15KEVM	FTX25JV1B	FTXN35JEV1B
FTK20GV1B	FTX25KEVM	FTXN35KEV1B
FTK20GVL	FTX30GVL	FTXN425KC
FTK20JEVM	FTX35GV1B	FTXN425KC-W
FTK20KEVM	FTX35JEVM	FTXN435KC
FTK25GV1B	FTX35JV1B	FTXN435KC-W
FTK25GVL	FTX35KEVM	FTXP25HV2C
FTK25JEVM	FTXB325KC-R	FTXP25HV2CN
FTK30GVL	FTXB325KC-W	FTXP25HV2CP
FTK35GV1B	FTXB335KC-R	FTXP25HV2CW
FTK35JEVM	FTXB335KC-W	FTXP25JV2CN
FTKN09JEVJU	FTXH25JV2C	FTXP25JV2CP
FTKN12JEVJU	FTXH25JV2CW	FTXP25JV2CW
FTKN25JEVM	FTXH35JV2C	FTXP32HV2C
FTKN25KEVM	FTXH35JV2CW	FTXP32HV2CN
FTKN35JEVM	FTXN09JEVJU	FTXP32HV2CP
FTKN35KEVM	FTXN09KEVJU	FTXP32HV2CW
FTKS09JEVJU	FTXN12JEVJU	FTXP32JV2CN

FTXP32JV2CP	FTXS232KCGN	FTXS235KCSX
FTXP32JV2CW	FTXS232KCGR	FTXS235KC-W
FTXP35HV2C	FTXS232KCGW	FTXS35JV2CN
FTXP35JV2CN	FTXS232KCGX	FTXS35JV2CP
FTXP35JV2CP	FTXS232KC-S	FTXS35JV2CW
FTXP35JV2CW	FTXS232KCSR	FTXS46JV2CW
FTXS09JEVJU	FTXS232KCSS	FTZS235KCGN
FTXS12JEVJU	FTXS232KCSW	FTZS235KCGR
FTXS225KCGN	FTXS232KCSX	FTZS235KCGW
FTXS225KCGR	FTXS232KC-W	FTZS235KCGX
FTXS225KCGW	FTXS235KCGN	FTZS235KC-S
FTXS225KCGX	FTXS235KCGR	FTZS235KCSR
FTXS225KC-S	FTXS235KCGW	FTZS235KCSS
FTXS225KCSR	FTXS235KCGX	FTZS235KCSW
FTXS225KCSS	FTXS235KC-S	FTZS235KCSX
FTXS225KCSW	FTXS235KCSR	FTZS235KC-W
FTXS225KCSX	FTXS235KCSS	
FTXS225KC-W	FTXS235KCSW	

★2: The room temperature thermistor and the indoor heat exchanger thermistor of the following models are type 2.

ATY20DV2	FTN35DAV3B	FTYN25DV3B
ATY25DV2	FTN35DV3B	FTYN35DAV3B
ATY35DV2	FTY25DV2C	FTYN35DV3B
FTN25DAV3B	FTY35DV2C	FTYN35HV1A
FTN25DV3B	FTYN25DAV3B	

The outdoor temperature thermistor of the following models is also type 2.

ARY20DV2	RN35DAV3B	RYN25DV3B
ARY25DV2	RN35DV3B	RYN35DAV3B
ARY35DV2	RY25DV2C	RYN35DV3B
RN25DAV3B	RY35DV2C	RYN35HV1A
RN25DV3B	RYN25DAV3B	

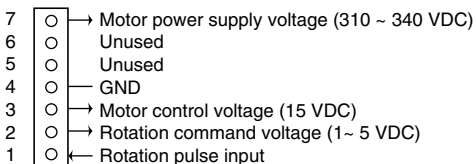
★3: All thermistors other than ★1 and ★2 are type 3.

## 7.2 Fan Motor Connector Check

### Check No.02

1. Check the connection of connector.
2. Check motor power supply voltage output (pins 4 - 7 and 4 - 8).
3. Check motor control voltage (pins 4 - 3).
4. Check rotation command voltage output (pins 4 - 2).
5. Check rotation pulse input (pins 4 - 1).

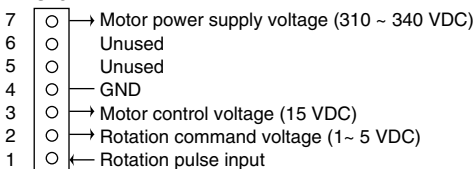
S1 or S200



### <Floor Standing Type: AZ, B, BA Series>

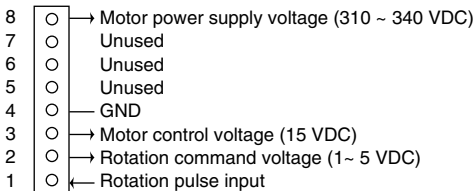
Upper fan connector

S43



Lower fan connector

S44

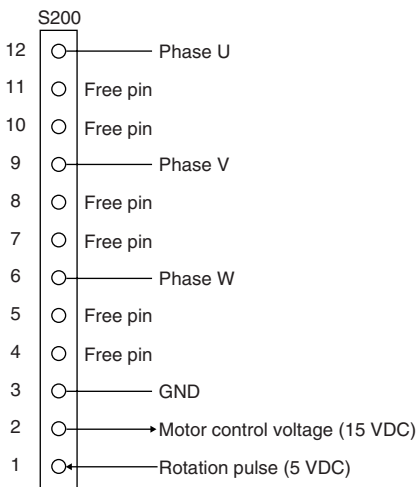


(R15582)

## 7.3 Fan Motor Connector Check

### Check No.03

- ◆ Fan motor wire breakdown / short circuit check
  1. Check the connector for connection.
  2. Turn the power off.
  3. Check if each resistance at the phases U - V and V - W is  $90 \Omega \sim 100 \Omega$  (between the pins 12 - 9, and between 9 - 6).
  
- ◆ Motor control voltage check
  1. Check the connector for connection.
  2. Check the motor control voltage is generated (between the pins 2 - 3).
  
- ◆ Rotation pulse check
  1. Check the connector for connection.
  2. Turn the power on and stop the operation.
  3. Check if the Hall IC generates the rotation pulse 4 times when the fan motor is manually rotated once (between the pins 1 - 3).



(R11979)



## 7.4 Hall IC Check

---

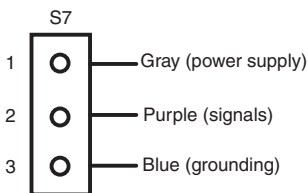
**Check  
No.04**

1. Check the connector connection.
2. With the power ON, operation OFF, and the connector connected, check the following.
  - \* Output voltage of about 5 V between pins 1 and 3.
  - \* Generation of 3 pulses between pins 2 and 3 when the fan motor is operating.

If NG in step 1 → Defective PCB → Replace the PCB.

If NG in step 2 → Defective Hall IC → Replace the fan motor.

If OK in both steps 1 and 2 → Replace the PCB.



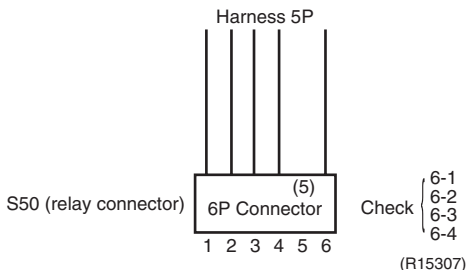
(R14211)

## 7.5 Indoor Electronic Expansion Valve Coil Check

### Check No.06

Conduct the followings to check the indoor electronic expansion valve coil (EV).

1. Check if the EV connector is correctly connected to the PCB.
2. Turn the power off and on again, and check if the EV generate latching sound.
3. If the EV does not generate latching sound in the above step 2, disconnect the connector and check the continuity using a tester.
4. Check the continuity between the pins 1 - 6, 2 - 6, 3 - 6, and 4 - 6. If there is no continuity between the pins, the EV coil is faulty.



5. If the continuity is confirmed in the above step 3, the PCB is faulty.



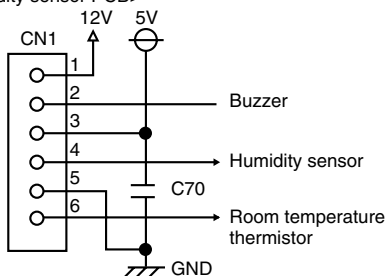
**Note:** Please note that the latching sound varies depending on the valve type.

## 7.6 Humidity Sensor Check

### Check No.07

1. Check that the connection is proper.
2. Change the ambient conditions (\*) and check that the input level changes accordingly.
  - \* Change the humidity, temperature, airflow rate. To do this, merely breathe upon.

<Humidity sensor PCB>

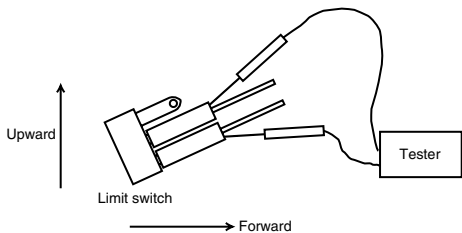


(R15583)

## 7.7 Limit Switch Continuity Check

### Check No.08

Remove the front grille. The limit switch is located at the left side of the drain pan assembly. Check the continuity of the switch connection.



Shutter status	Open	Closed
Continuity	Continuity	No continuity

(Q0363)

- \* The shutter can be opened and closed with hand. Keep the shutter open and closed all the way for each continuity check steps.

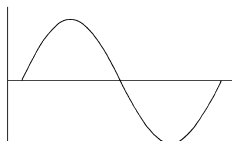
## 7.8 Power Supply Waveform Check

### Check No.11

Measure the power supply waveform between No. 1 and No. 2 on the terminal board, and check the waveform disturbance.

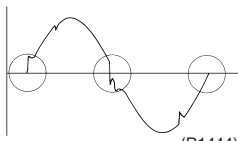
- Check if the power supply waveform is a sine wave (Fig.1).
- Check if there is waveform disturbance near the zero cross (sections circled in Fig.2)

[Fig.1]



(R1736)

[Fig.2]



(R1444)

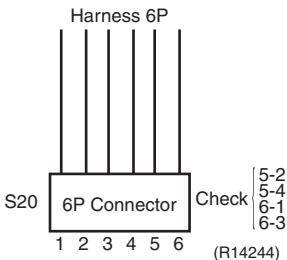
## 7.9 Outdoor Electronic Expansion Valve Check

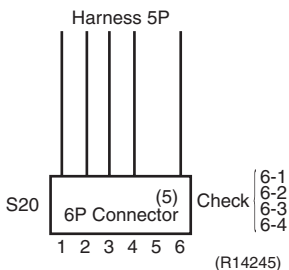
### Check No.12

#### Pair Outdoor Unit

Conduct the followings to check the outdoor electronic expansion valve (EV).

1. Check if the EV connector is correctly connected to the PCB.
2. Turn the power off and on again, and check if the EV generate latching sound.
3. If the EV does not generate latching sound in the above step 2, disconnect the connector and check the continuity using a tester.
4. Check the continuity between the pins 1 - 6 and 3 - 6, and between the pins 2 - 5 and 4 - 5 (between the pins 1 - 6, 2 - 6, 3 - 6, 4 - 6 for harness 5P model). If there is no continuity between the pins, the EV coil is faulty.





- If the continuity is confirmed in the above step 3, the outdoor unit PCB is faulty.

### Multi Outdoor Unit

Conduct the followings to check the outdoor electronic expansion valve (EV).

- Check if the EV connector is correctly inserted in the PCB. Match the EV unit number and the connector number.
- Turn the power off and on again, and check if all the EVs generate latching sound.
- If any of the EVs does not generate latching sound in the above step 2, disconnect that connector and check the continuity using a tester.

Check the continuity between the pins 1 - 6 and 3 - 6, and between the pins 2 - 5 and 4 - 5. If there is no continuity between the pins, the EV coil is faulty.

- If no EV generates latching sound in the above step 2, the outdoor unit PCB is faulty.
- If the continuity is confirmed in the above step 3, mount a good coil (which generated latching sound) in the EV unit that did not generate latching sound, and check if that EV generates latching sound.
  - \* If latching sound is generated, the outdoor unit PCB is faulty.
  - \* If latching sound is not generated, the EV unit is faulty.



**Note:** Please note that the latching sound varies depending on the valve type.

If the system keeps operating with a defective outdoor electronic expansion valve, the following problem may occur.

Valve opening position	Possible problem	Check method
Open	<p><b>Cooling:</b></p> <ul style="list-style-type: none"> <li>■ Flowing noise of refrigerant in the unit which is not in operation</li> <li>■ Water leakage at the unit which is not in operation</li> <li>■ Operation halt due to anti-icing function</li> </ul> <p><b>Heating:</b></p> <ul style="list-style-type: none"> <li>■ Flowing noise of refrigerant in the unit which is not in operation</li> <li>■ The unit does not heat the room.</li> </ul>	<p>Reset power supply and conduct cooling operation unit by unit.</p> <p>Check the liquid pipe temperature of no-operation unit.</p> <p>Almost the same as the outdoor temperature?</p> <p>NO → The EV is not defective.</p> <p>YES → Replace the EV of the room.</p> <p>(R11266)</p>
Close	<p><b>Cooling:</b></p> <ul style="list-style-type: none"> <li>■ The problem unit does not cool the room.</li> <li>■ Only the problem unit is in operation, the unit starts pump down. (The low pressure of the unit becomes vacuum.)</li> <li>■ Abnormal discharge pipe temperature</li> </ul> <p><b>Heating:</b></p> <ul style="list-style-type: none"> <li>■ Refrigerant shortage due to stagnation of liquid refrigerant inside the faulty indoor unit</li> <li>■ The unit does not heat the room.</li> <li>■ Abnormal discharge pipe temperature</li> </ul>	<p>Reset power supply and conduct cooling operation unit by unit.</p> <p>Check the low pressure</p> <p>Does the pressure become into vacuum zone?</p> <p>NO → The EV is not defective.</p> <p>YES → Replace the EV of the room.</p> <p>(R11267)</p>

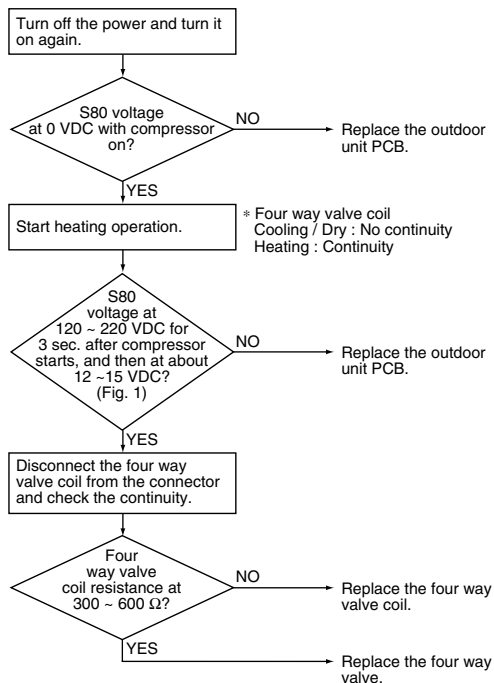
## 7.10 Four Way Valve Performance Check

### Check No.13

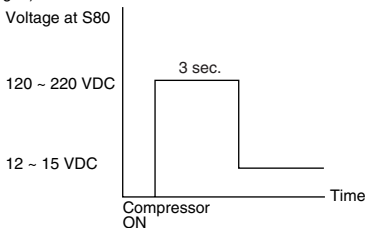
#### DC motor

< Caution on resetting the power supply >

\* Be sure to wait for 30 sec. or more after turning off the power supply.

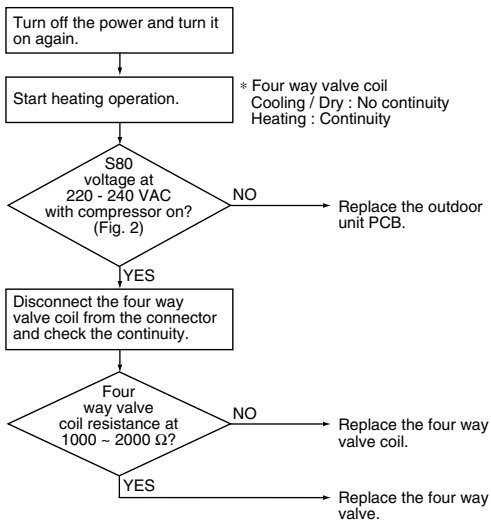


(Fig. 1)

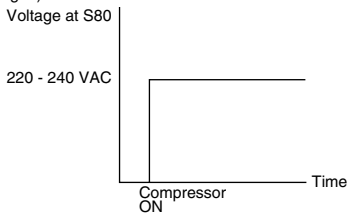


(R13938)

## AC motor



(Fig. 2)

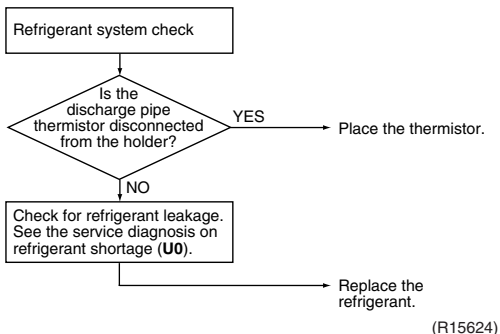


(R11904)



## 7.11 Inverter Unit Refrigerant System Check

### Check No.14



## 7.12 “Inverter Checker” Check

### Check No.15

#### ■ Characteristics

If abnormal stop occurs due to compressor startup failure or overcurrent output when using inverter unit, it is difficult to judge whether it is caused by the compressor failure or other failure (control PCB, power module, etc.). The inverter checker makes it possible to judge the cause of trouble easily and securely. (Connect this checker as a quasi-compressor instead of compressor and check the output of inverter)

#### ■ Operation Method

##### Step 1

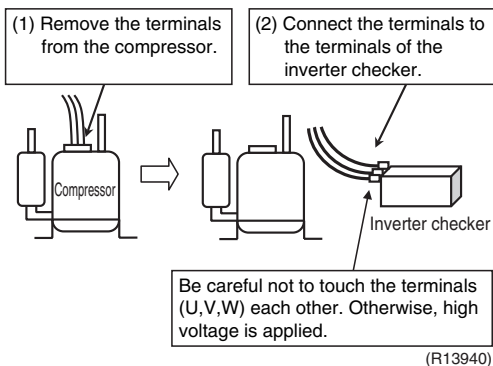
Be sure to turn the power off.

##### Step 2

Install the inverter checker instead of a compressor.

##### Note:

Make sure the charged voltage of the built-in smoothing electrolytic capacitor drops to 10 VDC or below before carrying out the service work.



#### Reference:

If the terminals of the compressor are not FASTON terminals (difficult to remove the wire on the terminals), it is possible to connect wires available on site to the outdoor unit from output side of PCB. (Do not connect them to the compressor at the same time, otherwise it may result in incorrect detection.)

### Step 3

When the outdoor unit has a forced cooling operation [ON/OFF] button, activate power transistor test operation from the outdoor unit.

- 1) Press the forced cooling operation [ON/OFF] button for 5 seconds.  
→ Power transistor test operation starts.

When the outdoor unit has no forced cooling operation [ON/OFF] button, activate power transistor test operation from the indoor unit with the remote controller.

#### <ARC447A1, 2, 3>

- 1) Turn the power on.
- 2) Press the [CLOCK] button on the remote controller for 5 seconds.  
→ SETTING  
1. TEST is displayed.
- 3) Press the [CLOCK] button.  
→ ? is displayed.
- 4) Press the [CLEAN / FRESH] button.  
→ Power transistor test operation starts.

**<ARC447A4>**

- 1) Turn the power on.
- 2) Press the [ 时钟设定 ] button on the remote controller for 5 seconds.
- 3) Press the [ 选择 ] ▲ or ▼ button and select “试运转”.
- 4) Press the [ 时钟设定 ] button to enter the trial operation mode.
- 5) Press the [ 洁净/换气 ] button to start inverter test.

**<ARC452A5, 7, 9, 12, 14, 19, 20, 21>****<ARC466 Series>**

- 1) Turn the power on.
- 2) Select FAN operation with the [MODE] button on the remote controller.
- 3) Press the 3 buttons (TEMP▲, TEMP▼, MODE) simultaneously.  
→ 5 $\bar{c}$  is displayed.
- 4) Press the TEMP▲ or TEMP▼ button and select 7 $\bar{c}$ .
- 5) Press the [MODE] button.  
→ Trial operation mode is activated.
- 6) Press the [ON/OFF] button.  
→ Power transistor test operation starts.

**<Other Remote Controllers>**

- 1) Turn the power on.
- 2) Select FAN operation with the [MODE] button on the remote controller.
- 3) Press the 3 buttons (TEMP▲, TEMP▼, MODE) simultaneously.  
→ 00 is displayed with the left-side number blinking.
- 4) Press the [MODE] button.  
→ 00 is displayed with the right-side number blinking.
- 5) Press the [MODE] button.  
→ 7 $\bar{c}$  is displayed.
- 6) Press the [ON/OFF] button.  
→ Power transistor test operation starts.

**■ Diagnose method (Diagnose according to 6 LEDs lighting status.)**

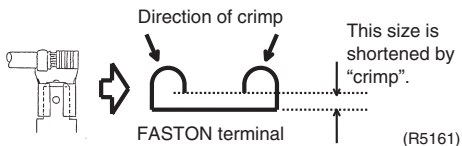
- (1) When all the LEDs are lit uniformly, the compressor is defective.  
→ Replace the compressor.
- (2) When the LEDs are not lit uniformly, check the power module.  
→ Refer to **Check No.22**.

- (3) If NG in **Check No.22**, replace the power module (PCB).  
If OK in **Check No.22**, check if there is any solder cracking on the PCB.
- (4) If any solder cracking is found, replace the PCB or repair the soldered section.  
If there is no solder cracking, replace the PCB.



### Caution

- (1) When the output frequency is low, the LEDs blink slowly. As the output frequency increases, the LEDs blink quicker. (The LEDs look like they are lit.)
- (2) On completion of diagnose by the inverter checker, be sure to re-crimp the FASTON terminals. Otherwise, the terminals may be burned due to loosening.

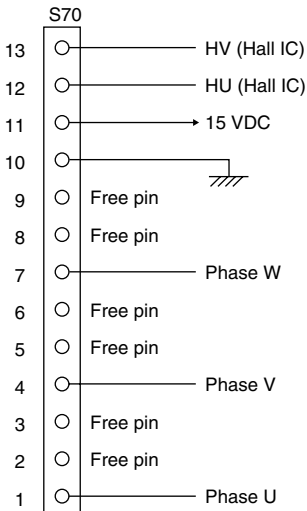


## 7.13 Rotation Pulse Check on the Outdoor Unit PCB

### Check No.16

#### ■ For 13-pin connector of outdoor fan motor

1. Check that the voltage between the pins 10 - 11 is 15 VDC.
2. Check if the Hall IC generates the rotation pulse (0 ~ 15 VDC) 4 times between the pins 10 -12, 10 - 13, when the fan motor is manually rotated once.



(R11907)

#### ■ For 7-pin connector of outdoor fan motor or humidifier fan motor

Outdoor fan motor: S70

Humidifier fan motor: S72

Make sure that the voltage of  $320 \pm 30$  V is applied.

1. Set operation off and power off. Disconnect the connector [S70] or [S72].
2. Check that the voltage between the pins 4 - 7 is 320 VDC.
3. Check that the control voltage between the pins 3 - 4 is 15 VDC.
4. Check that the rotation command voltage between the pins 2 - 4 is 0 ~ 15 VDC.
5. Keep operation off and power off. Connect the connector [S70] or [S72].

- Check whether 2 pulses (0 ~ 15 VDC) are output at the pins 1 - 4 when the fan motor is rotated 1 turn by hand.

When the fuse is melted, check the outdoor fan motor for proper function.

If NG in step 2 → Defective outdoor unit PCB

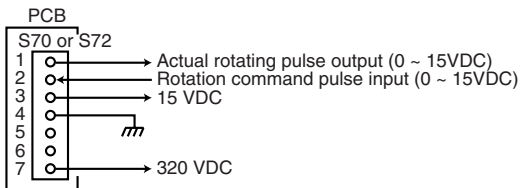
→ Replace the outdoor unit PCB.

If NG in step 4 → Defective Hall IC

→ Replace the outdoor fan motor.

If OK in both steps 2 and 4

→ Replace the outdoor unit PCB.



(R15575)

#### ■ For hygroscopic fan motor

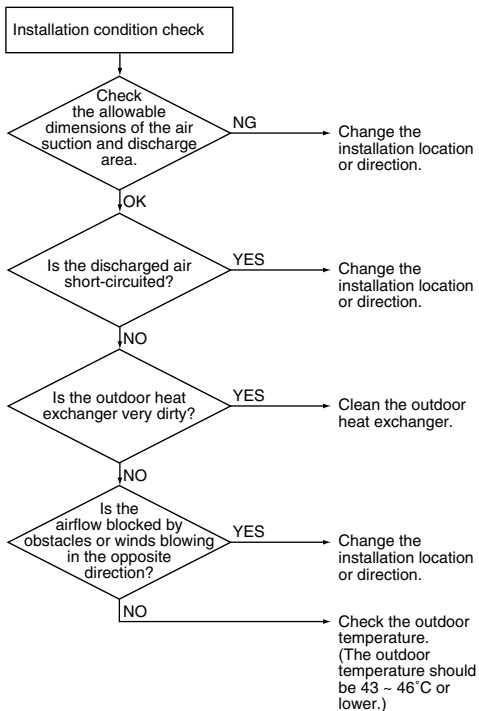
Check that the connectors [HK1] [HK2] [HK3] for proper connection.

- Check that the power supply voltage 5 VDC is applied between [HK1] and [HK3].

If NG in step 1 → Defective outdoor unit PCB → Replace the outdoor unit PCB.

## 7.14 Installation Condition Check

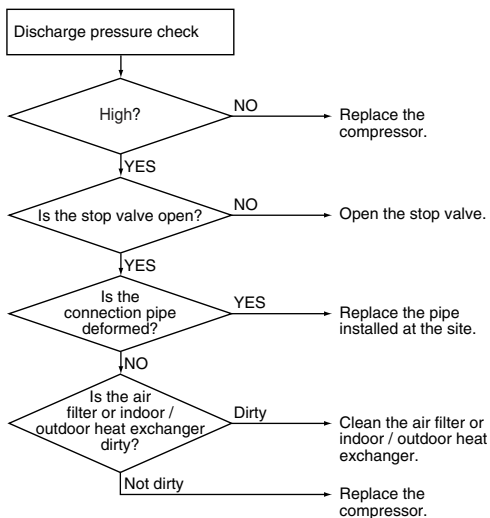
### Check No.17



(R15550)

## 7.15 Discharge Pressure Check

### Check No.18



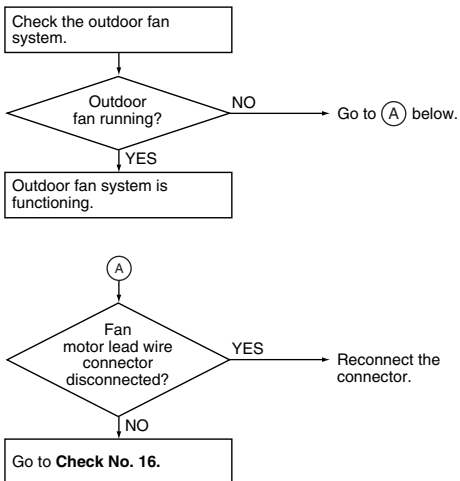
(R11718)



## 7.16 Outdoor Fan System Check

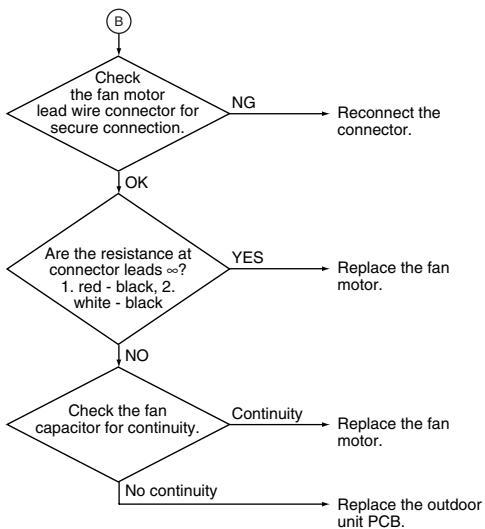
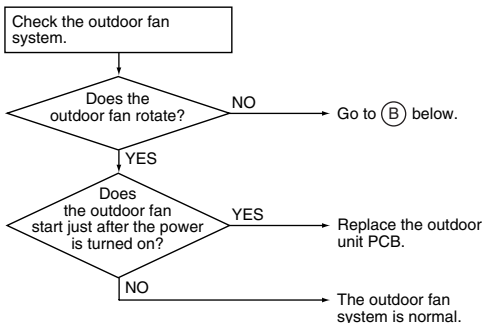
### Check No.19

#### DC motor



(R15577)

### AC motor



(R15578)

## 7.17 Main Circuit Short Check

### Check

#### No.20



**Note:** Check to make sure that the voltage between (+) and (-) of the diode bridge (DB1) is approx. 0 V before checking.

- Measure the resistance between the pins of the DB1 as below.
- If the resistance is  $\infty$  or less than 1 k $\Omega$ , short circuit occurs on the main circuit.

(-) terminal of the tester (in case of digital, (+) terminal)	~ (2, 3)	+ (4)	~ (2, 3)	- (1)
(+) terminal of the tester (in case of digital, (-) terminal)	+ (4)	~ (2, 3)	- (1)	~ (2, 3)
Resistance is OK.	several k $\Omega$ ~ several M $\Omega$	$\infty$	$\infty$	several k $\Omega$ ~ several M $\Omega$
Resistance is NG.	0 $\Omega$ or $\infty$	0	0	0 $\Omega$ or $\infty$

## 7.18 Capacitor Voltage Check

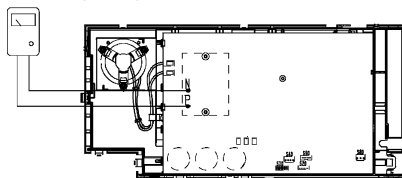
### Check

#### No.21

- Before the measurement, be sure to check the main circuit for short circuit and set the multimeter to DC voltage range.
- With the circuit breaker still on, measure the voltage at the power transistor (+) and (-) terminals. Be careful never to touch any live parts.
- Since the capacitor (+) and (-) are connected to the power transistor (+) and (-), the capacitor voltage can be measured at the power transistor (+) and (-) terminals.

(Reference)

Multimeter  
(DC voltage range)



(R13538)

## 7.19 Power Module Check

### Check

#### No.22



**Note:** Check to make sure that the voltage between (+) and (-) of the power module is approx. 0 V before checking.

- Disconnect the compressor harness connector from the outdoor unit PCB. To disengage the connector, press the protrusion on the connector.
- Follow the procedure below to measure resistance between the terminals of the power module and the terminals of the compressor with a multi-tester. Evaluate the measurement results referring to the following table.

Negative (-) terminal of tester (positive terminal (+) for digital tester)	Power module (+)	UVW	Power module (-)	UVW
Positive (+) terminal of tester (negative terminal (-) for digital tester)	UVW	Power module (+)	UVW	Power module (-)
Resistance is OK.	several kΩ ~ several MΩ			
Resistance is NG.	0 Ω or ∞			

## 7.20 Dehumidifying Solenoid Valve Check

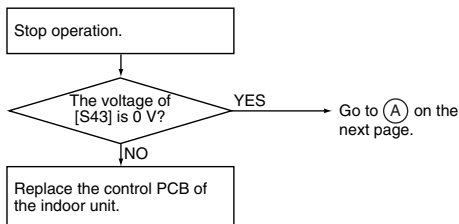
### Check

#### No.23

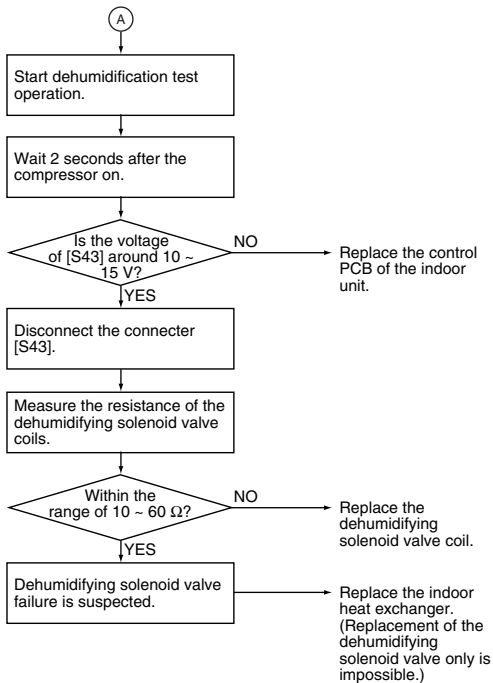
Faulty criterion:

In dehumidification test operation mode, PCB is identified defective when the dehumidifying solenoid valves do not turn on within 2 seconds after compressor start-up.

(When dehumidifying solenoid valves are not used, the operation mode is similar to cooling operation.)



(R15580)



(R15581)

# Revision History

Month / Year	Version	Revised contents
09 / 2006	Si10-417	–
09 / 2007	Si10-417_A	Model addition
10 / 2010	Si10-417_B	Review of words and expressions, use of unit symbols
08 / 2011	Si10-417_C	Model addition, renewal of troubleshooting, overall review

Warning



- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

#### Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

Dealer

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