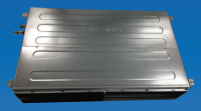
SYSTEM AIR CONDITIONER

	INDOOR UNIT	OUTDOOR UNIT
Model :	AC026MNLDKH	AC026MXADKH
	AC035MNMDKH	AC035MXADKH
	AC035MNLDKH	
	AC052MNMDKH	AC052MXADKH
	AC052MNLDKH	
	AC060MNMDKH	AC060MXADKH
	AC071MNMDKH	AC071MXADKH
	AC071MNLDKH	
	AC090MNMDKH	
	AC100MNMDKH	
	AC120MNMDKH	
	AC140MNMDKH	

SERVICE Manual

AIR CONDITIONER



AC026MNLDKH AC035MNMDKH
AC035MNLDKH AC052MNMDKH
AC052MNLDKH AC060MNMDKH
AC071MNMDKH AC071MNLDKH
AC090MNMDKH AC100MNMDKH
AC120MNMDKH AC140MNMDKH

AC026MXADKH
AC035MXADKH

AC052MXADKH
AC060MXADKH

AC071MXADKH

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1. Precautions

1-1 Precautions for the Service

- **Use the standard parts when replacing the electric parts.**
  – Confirm the model name, rated voltage, rated current of the electric parts.
- **Repair the disconnection of HARNESS securely when repairing the break down.**
  – If there is any connection error, it causes an abnormal noise and incorrect operation.
- **In case that you assemble or disassemble the products with laying it on the side, do work on the work cloth.**
  – If not, the exterior of products can be scratched.
- **Remove dust and foreign materials from harness, connection part, and inspection part thoroughly when repairing the break down.**
  – It protects the danger of fire such as tracking and short.
- **Tighten tightly the service valve of outdoor unit and the cap of charging valve with a monkey spanner.**
- **Check the assembly status of parts after repairing the break down.**
  – It should be same as the status before repairing.

1-2 Precautions for the Static Electricity and PL

- **As the PCB power terminal has a weakness for the static electricity, pay attention to it during the repair and measurement.**
  – Work with insulation gloves during the repair and measurement of PCB.
- **Check the distance between the product and the other electronic appliances such as TV, video, and audio. It should be over 2m.**
  – If not, it causes a bad picture quality or a noise.
- **Repairing the products by consumer should be strictly prohibited.**
  – There is a danger of electric shock or fire due to incorrect disassembly.

1-3 Precautions for the Safety

- **Do not pull any electric wires and do not touch an auxiliary power switch with a wet hand.**
  – There is a danger of electric shock or fire.
- **In case any wire or power plug has been damaged, replace it to eliminate any possible danger.**
- **Do not bend the power cord by force and do not put any heavy object on the power cord.**
  – There is a danger of electric shock or fire.
- **Do not use multi socket.**
  – There is a danger of electric shock or fire.
- **Ground the product if necessary.**
  – Be sure to ground the product if there is any danger of electric leakage due to water or moisture.
- **Be sure to turn off the auxiliary power switch or pull out the power plug during replacement or repair of electric parts.**
  – There is a danger of electric shock.
- **In case the product will not be in use for a long time, the battery of remote control should be kept separately.**
  – Leakage of inside fluid can cause break down of remote control.

1-4 Others

- **Never store or load the air conditioner upside down or sideways to prevent the damage to the compressor.**
- **Young children or infirm persons should be always supervised when they use the air conditioner.**
- **Max current is measured according to IEC standard for safety.**
- **Current is measured according to ISO standard for energy efficiency.**
- **When installing, make sure there is no leakage. When recovering the refrigerant, ground the compressor first before removing the connection pipe. If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high. It may cause explosion and injury.**
- **Pump Down Procedure (When removing the product)**
  - Turn on the air conditioner and select Cool mode to run the compressor for 3 minutes.
  - Release the valve caps on High and Low pressure side.
  - Use L wrench to close the valve on the high pressure side.
  - Approximately 2 minutes after, close the valve on the low pressure side.
  - Stop operation of the air conditioner.
  - Disconnect the pipes.

2. Product Specifications

2-1 The Feature of Product

■ **Built-in Duct Type**
After installed, the air conditioner can be harmonized with a room interior.

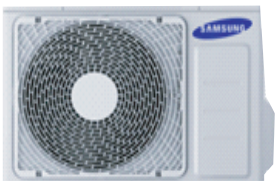
■ **High Performance & Energy Saving**
With the advanced BLDC inverter technology, it makes a room cool with highly energy saving and arises the efficiency of air conditioner.

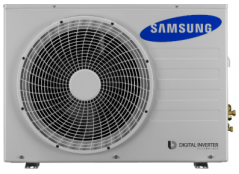
■ **Long Piping (Length & Height)**
It can give the benefit to the installers and aries the reliability of the air conditioner.

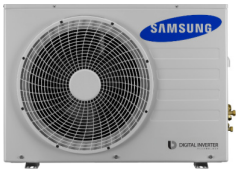
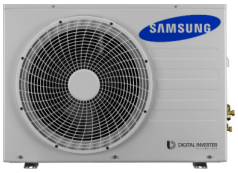
■ **Long Ambient Operation (In Low Temperature)**
It can arise the reliability and the capacity of the air conditioner, especially operated in low temperature.

■ **Eco-friendly Product (Lead-Free, RoHS, WEEE)**

2-2 Product Specifications

ITEM				AC026MNLDKH AC026MXADKH	AC035MNLDKH AC035MXADKH
IMAGE	Indoor Unit				
	Outdoor Unit				
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz
Indoor	L x D x H		mm	700*600*199	700*600*199
Outdoor	L x D x H		mm	790*285*548	790*285*548
Indoor	Product		kg(Net)	19.5	19.5
Outdoor	Product		kg(Net)	36.2	36.2
Capacity	Cooling/Heating(ISO)		W	2600 / 3300	3500 / 4000
Power input	Cooling/Heating (ISO)		W	760 / 870	1200 / 1220
Operation current	Cooling/Heating (ISO)		A	4.1 / 4.7	5.9 / 5.9
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	40/40	40/40
	Outdoor unit	In case of strongest air blow	dB	51/51	53/53
Refrigerant (R410A) (less 5m)			g	1,050	1,050
Connecting Pipe		Liquid	mm	6.35	6.35
		Gas	mm	9.52	9.52
Additional Refrigerant (R410A)(over 5m)			g/m	Chargeless	Chargeless
Standard			m	5	5
Extension length(Total)			m	20	20
Extension length(Elevation)			m	15	15
Option Code			Product Option	01C07C-1C1914-271A21-370000	01C07C-1C3936-272328-370000
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC035MNMDKH AC035MXADKH	AC052MNMDKH AC052MXADKH
IMAGE	Indoor Unit				
	Outdoor Unit				
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz
Indoor	L x D x H		mm	850*700*250	850*700*250
Outdoor	L x D x H		mm	790*285*548	880*310*638
Indoor	Product		kg(Net)	25	25
Outdoor	Product		kg(Net)	36.2	44.5
Capacity	Cooling/Heating(ISO)		Btu/h	3500 / 4000	5000 / 6000
Power input	Cooling/Heating (ISO)		W	1050 / 1200	1560 / 1580
Operation current	Cooling/Heating (ISO)		A	5.5 / 5.8	7.1 / 7.2
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	40/40	45/45
	Outdoor unit	In case of strongest air blow	dB	53/53	58/58
Refrigerant (R410A) (less 5m)			g	1,050	1,300
Connecting Pipe		Liquid	mm	6.35	6.35
		Gas	mm	9.52	12.7
Additional Refrigerant (R410A) (over 5m)			g/m	Chargeless	10
Standard			m	5	5
Extension length(Total)			m	20	30
Extension length(Elevation)			m	15	20
Option Code			Product Option	01B07C-1C5080-272328-371000	01B07C-1C50F1-27343C-372000
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC052MNLDKH AC052MXADKH	AC060MNMDKH AC060MXADKH
IMAGE	Indoor Unit				
	Outdoor Unit				
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz
Indoor	L x D x H		mm	1100*450*200	850*700*250
Outdoor	L x D x H		mm	880*310*638	880*310*638
Indoor	Product		kg(Net)	22.5	25
Outdoor	Product		kg(Net)	44.5	44.5
Capacity	Cooling/Heating(ISO)		Btu/h	5000 / 6000	5800 / 7000
Power input	Cooling/Heating (ISO)		W	1740 / 1700	1950 / 1950
Operation current	Cooling/Heating (ISO)		A	7.8 / 7.5	8.5 / 8.5
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	45/45	46/46
	Outdoor unit	In case of strongest air blow	dB	58/58	58/58
Refrigerant (R410A) (less 5m)			g	1,300	1,300
Connecting Pipe		Liquid	mm	6.35	6.35
		Gas	mm	12.7	12.7
Additional Refrigerant (R410A) (over 5m)			g/m	10	10
Standard			m	5	5
Extension length(Total)			m	30	30
Extension length(Elevation)			m	20	20
Option Code			Product Option	01C07C-1C1924-27343C-370000	01B07C-1C5436-273C46-373000
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC071MNMDKH AC071MXADKH	AC071MNLDKH AC071MXADKH
IMAGE	Indoor Unit				
	Outdoor Unit				
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	1Φ, 220~240V, 50Hz
Indoor	L x D x H		mm	850*700*250	1100*450*200
Outdoor	L x D x H		mm	880*310*798	880*310*798
Indoor	Product		kg(Net)	25	22.5
Outdoor	Product		kg(Net)	55	55
Capacity	Cooling/Heating(ISO)		Btu/h	7100 / 8000	7100 / 8000
Power input	Cooling/Heating (ISO)		W	2150 / 2200	2330 / 2270
Operation current	Cooling/Heating (ISO)		A	9.7 / 11.3	10.5 / 10.2
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	47/47	43/43
	Outdoor unit	In case of strongest air blow	dB	60/60	60/60
Refrigerant (R410A) (less 5m)			g	1,500	1,500
Connecting Pipe		Liquid	mm	6.35	6.35
		Gas	mm	15.88	15.88
Additional Refrigerant (R410A) (over 5m)			g/m	20	20
Standard			m	5	5
Extension length(Total) (over 5m)			m	50	50
Extension length(Elevation)			m	30	30
Option Code			Product Option	01B07C-1C5436-274750-373000	01C07C-1C59E0-274750-370005
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

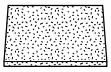
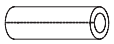
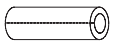
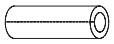
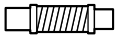
ITEM				AC090MNMDKH AC090MXADKH	AC090MNMDKH AC090MXADNH
IMAGE	Indoor Unit				
	Outdoor Unit			-	
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	3Φ, 380~415V, 50Hz
Indoor	L x D x H		mm	1200*700*250	1200*700*250
Outdoor	L x D x H		mm	940*330*998	940*330*998
Indoor	Product		kg(Net)	32.5	32.5
Outdoor	Product		kg(Net)	72	72
Capacity	Cooling/Heating(ISO)		Btu/h	9000 / 10000	9000 / 10000
Power input	Cooling/Heating (ISO)		W	2900 / 2750	2900 / 2750
Operation current	Cooling/Heating (ISO)		A	12.7 / 12.5	4.5 / 4.5
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	48/48	50/50
	Outdoor unit	In case of strongest air blow	dB	57/59	58/60
Refrigerant (R410A) (less 5m)			g	3,000	3,000
Connecting Pipe		Liquid	mm	9.52	9.52
		Gas	mm	15.88	15.88
Additional Refrigerant (R410A) (over 30m)			g/m	50	50
Standard			m	5	5
Extension length(Total)			m	50	50
Extension length(Elevation)			m	30	30
Option Code			Product Option	01B07C-1C549F-275A64-371020	01B07C-1C549F-275A64-371020
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC100MNMDKH AC100MXADKH	AC100MNMDKH AC100MXADNH
IMAGE	Indoor Unit				
	Outdoor Unit			-	
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	3Φ, 380~415V, 50Hz
Indoor	L x D x H		mm	1200*700*250	1200*700*250
Outdoor	L x D x H		mm	940*330*998	940*330*998
Indoor	Product		kg(Net)	32.5	32.5
Outdoor	Product		kg(Net)	72	72
Capacity	Cooling/Heating(ISO)		Btu/h	10000 / 11200	10000 / 11200
Power input	Cooling/Heating (ISO)		W	3500 / 3300	3500 / 3300
Operation current	Cooling/Heating (ISO)		A	15.1 / 14	5.3 / 4.9
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	50/50	50/50
	Outdoor unit	In case of strongest air blow	dB	58/60	58/60
Refrigerant (R410A) (less 5m)			g	3,000	3,000
Connecting Pipe		Liquid	mm	9.52	9.52
		Gas	mm	15.88	15.88
Additional Refrigerant (R410A) (over 30m)			g/m	50	50
Standard			m	5	5
Extension length(Total)			m	50	50
Extension length(Elevation)			m	30	30
Option Code			Product Option	01B07C-1C549F-276470-371020	01B07C-1C549F-276470-371020
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC120MNMDKH AC120MXADKH	AC120MNMDKH AC120MXADNH
IMAGE	Indoor Unit				
	Outdoor Unit			-	
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	3Φ, 380~415V, 50Hz
Indoor	L x D x H		mm	1300*700*300	1300*700*300
Outdoor	L x D x H		mm	940*330*998	940*330*998
Indoor	Product		kg(Net)	37.5	37.5
Outdoor	Product		kg(Net)	80	80
Capacity	Cooling/Heating(ISO)		Btu/h	12000 / 13000	12000 / 13000
Power input	Cooling/Heating (ISO)		W	4400 / 4000	4400 / 4000
Operation current	Cooling/Heating (ISO)		A	19.5 / 17.5	7 / 6.3
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	46/47	46/47
	Outdoor unit	In case of strongest air blow	dB	60/64	60/64
Refrigerant (R410A) (less 5m)			g	3,000	3,000
Connecting Pipe		Liquid	mm	9.52	9.52
		Gas	mm	15.88	15.88
Additional Refrigerant (R410A) (over 30m)			g/m	50	50
Standard			m	5	5
Extension length(Total)			m	50	50
Extension length(Elevation)			m	30	30
Option Code			Product Option	01B07C-1C5424-277882-371048	01B07C-1C5424-277882-371048
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

ITEM				AC140MNMDKH AC140MXADKH	AC140MNMDKH AC140MXADNH
IMAGE	Indoor Unit				
	Outdoor Unit			-	
	Remote Controller				
Power	Product			1Φ, 220~240V, 50Hz	3Φ, 380~415V, 50Hz
Indoor	L x D x H		mm	1300*700*300	1300*700*300
Outdoor	L x D x H		mm	940*330*1210	940*330*1210
Indoor	Product		kg(Net)	37.5	37.5
Outdoor	Product		kg(Net)	85	85
Capacity	Cooling/Heating(ISO)		Btu/h	13400 / 15500	13400 / 15500
Power input	Cooling/Heating (ISO)		W	4450 / 4540	4450 / 4540
Operation current	Cooling/Heating (ISO)		A	20 / 19.5	7 / 7
Noise (Cooling/Heating)	Indoor unit	In case of strongest air blow	dB	47/48	47/48
	Outdoor unit	In case of strongest air blow	dB	60/62	60/62
Refrigerant (R410A) (less 5m)			g	3,400	3,400
Connecting Pipe		Liquid	mm	9.52	9.52
		Gas	mm	15.88	15.88
Additional Refrigerant (R410A) (over 30m)			g/m	50	50
Standard			m	5	5
Extension length(Total)			m	75	75
Extension length(Elevation)			m	30	30
Option Code			Product Option	01B07C-1C5424-278CA0-371045	01B07C-1C5424-278CA0-371045
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

2-3 Accessory

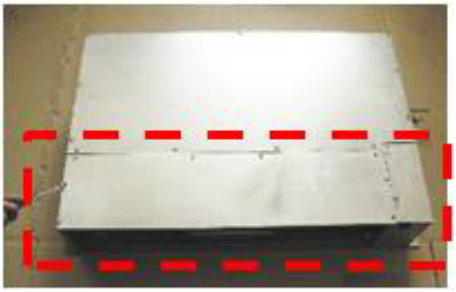
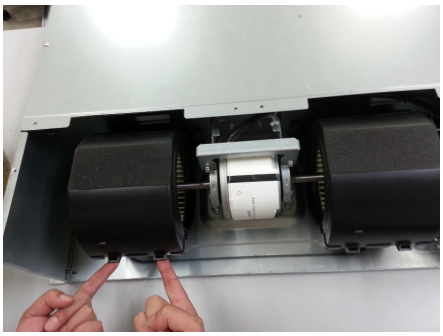
Item	Descriptions	Code-No.	Q'TY	Remark
	USER MANUAL INSTALLATION MANUAL	DB68-06491A / DB68-06492A	1	Indoor Unit
	Insulation	DB62-04318S	1	
	Insu DRAIN HOSE	DB62-11028A	1/	
	INSU HOSE D	DB62-11028E	1	
	INSU TUBE OUT	DB62-11028F	1	
	ASSY DRAIN HOSE JOINT	DB67-01191A	1	
	Ass'y Drain Hose Joint	DB90-06701A	1	
	GROMMET-HANGER	DB63-00237A	8	
	RUBBER LEG	DB73-20134A	4	Outdoor unit
	INSTALLATION MANUAL	DB68-06488A	1	
	DRAIN PLUG	DB73-20134A	1	

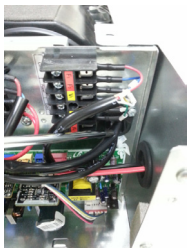
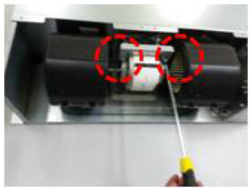
3. Disassembly and Reassembly

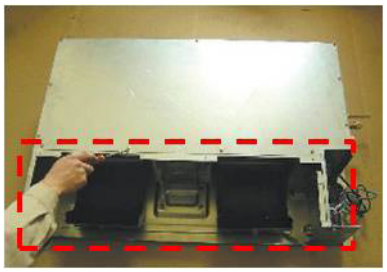
■ Necessary Tools

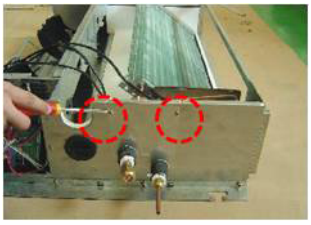
Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	

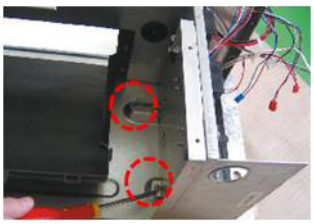
■ AC026MNLDKH / AC035MNLDKH

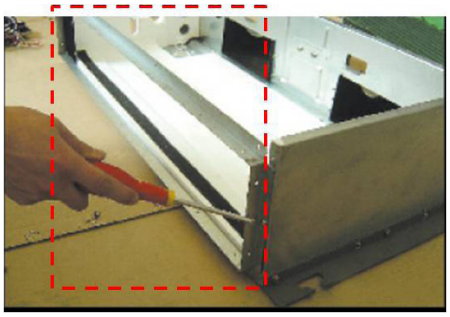
No	Parts	Procedure	Remark
1	Motor & Blower	1) Disassemble the Cabinet Top Motor. - Unscrew 8 screws	
		2) Disassemble the Cover Blower Upper with pushing its hook.	
		3) Disassemble the Cover Control. - Unscrew 2 screws	

No	Parts	Procedure	Remark
		4) Disassemble Motor Wires connected to the inside of PCB and connected to the Capacitor.	
			
		5) Disassemble the Motor wire with0 pushing the clip.	
		6) Disassemble the band Motor for fixing the Motor. - Unscrew 2 screws	
		7) After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.	

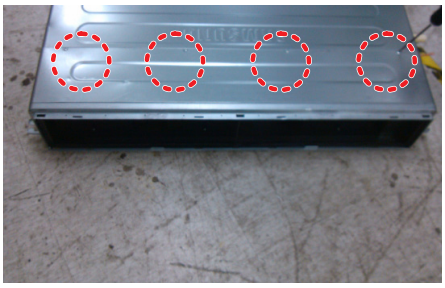
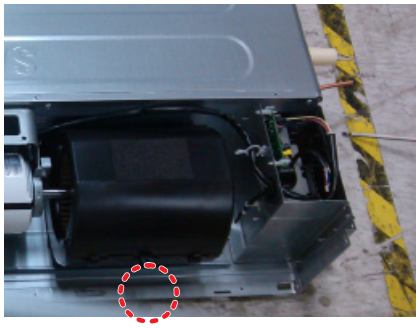
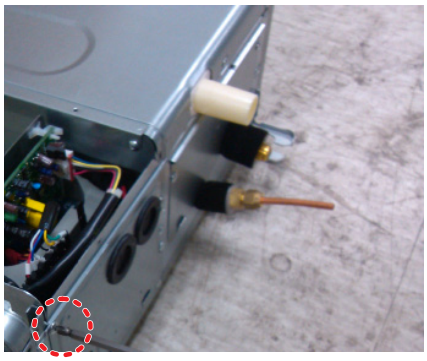
No	Parts	Procedure	Remark
2	Drain Pan	1) Disassemble the Cabinet Top Evap. - Unscrew 11 screws	
		2) Disassemble the Bracket Outlet Sub that fixes the Drain Pan equipped on the front of the set. - Unscrew 6 screws	
		3) Disassemble the Drain Cushion from the set.	

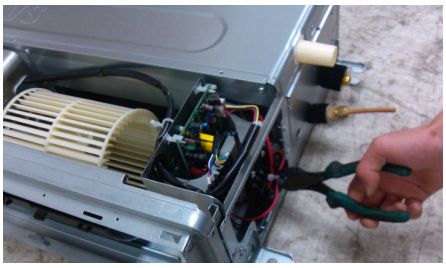
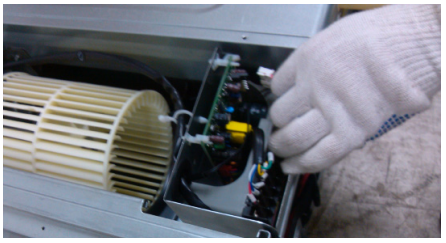
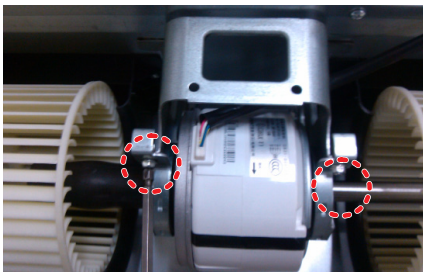
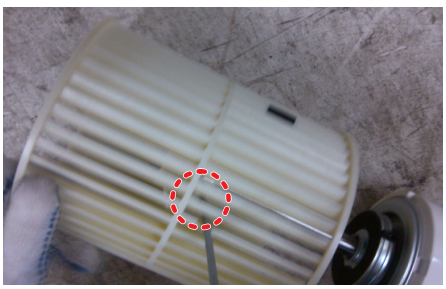
No	Parts	Procedure	Remark
3	Evaporator	※ The Evaporator should be disassembled after disassembling the Cover Control 1-3) and the Drain Pan 2-1), 2-2), 2-3). 1) Disassemble the Cover Pipe that fixes the high/low pressure Pipe. - Unscrew 2 screws	
		2) Disassemble the refrigerant temperature sensor, Inlet air temperature sensor, and EEV wire that connected to the inside of PCB.	
			
		3) Disassemble the Support Evap. LF that fixes the Evaporator. - Unscrew 2 screws	
		4) Disassemble the Support Evap RH. - Unscrew 2 screws	

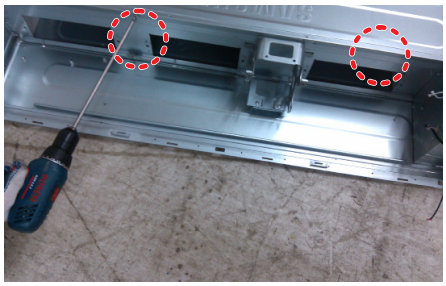
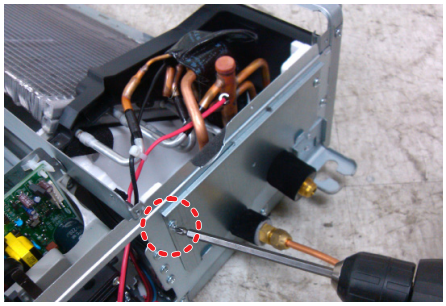
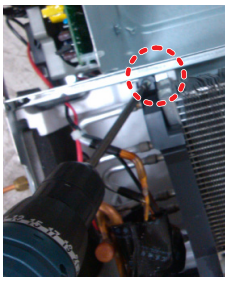
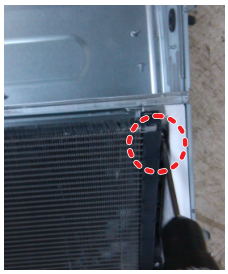
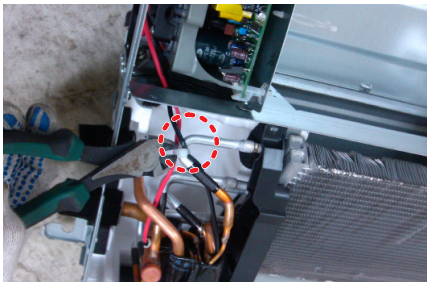
No	Parts	Procedure	Remark
4	Control In	▯ The Control In should be disassembled after disassembling the Cover Control 1-3). 1) Disassemble all Control Wires connected to the inside of PCB.	
		2) In case of disassembling the PCB separately, disassemble the PCB from the case with pushing the hook after unscrewing the screw. - Unscrew 1 screw	
			
		3) In case of disassembling the Case Control, disassemble the Case Control from the set after unscrewing the screw connected to the direction of Blower. - Disassemble if after disassembling the Cabinet Top Motor 1-1).	

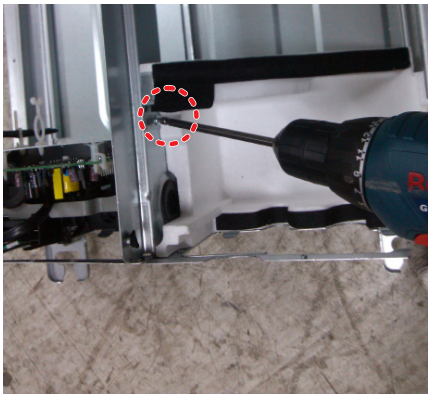
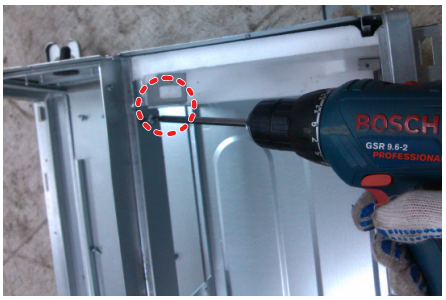
No	Parts	Procedure	Remark
5	Bracket Outlet	1) Disassemble the Bracket Outlet assembled on the Cabinet. - Unscrew 10 screws	

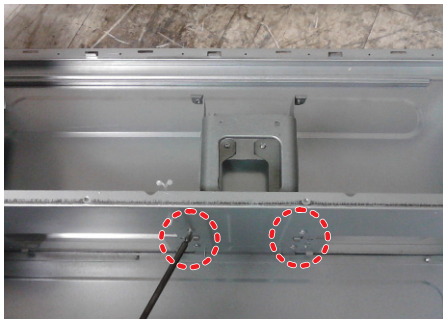
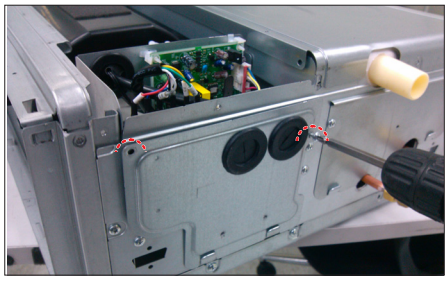
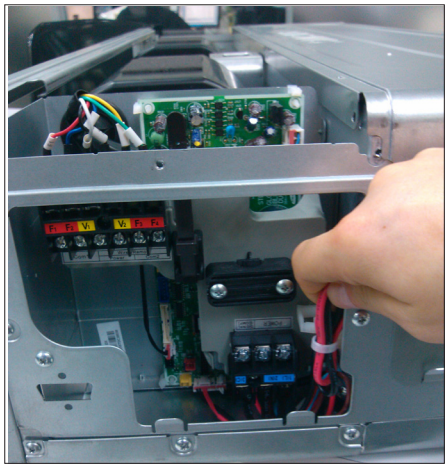
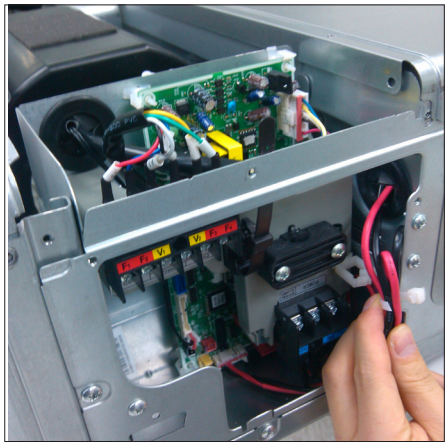
■ AC052MNLDKH / AC071MNLDKH

No	Parts	Procedure	Remark
1	Motor & Blower	1)Disassemble the Cabinet Bottom Fan. - Unscrew 10 screws	
		2)Disassemble the Case Filter Pre.	
		3)Disassemble frame-up - Unscrew 2 screws	
		4)Disassemble the case blower - Unscrew 3 screws	
		5)Disassemble cover control - Unscrew 2 screws	

No	Parts	Procedure	Remark
		5)Cut the cable-tie	
		6)Disconnect the wire betwwen assy control out and motor.	
		7)Disassemble the 2 Holder Motor. - Unscrew 2 screws	
		8)After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.	
		9)Disassemble the both of Case Blower Out - Unscrew 6 screws	

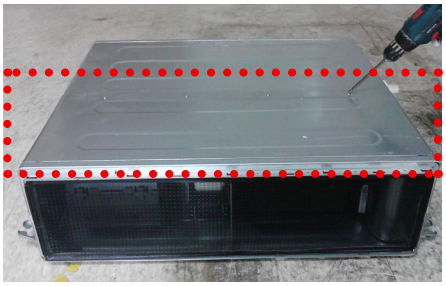
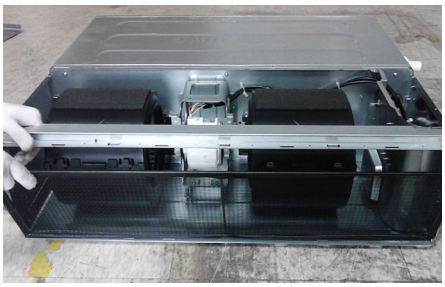
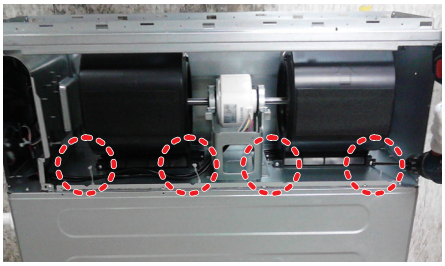
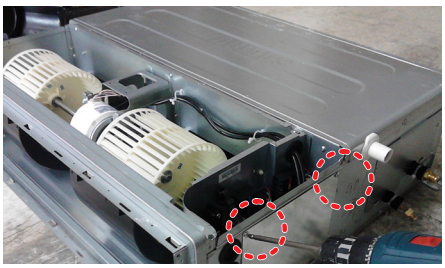
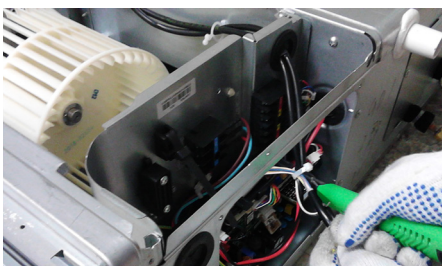
No	Parts	Procedure	Remark
2	Drain Pan	1)Disassemble the Cabinet Bottom Evap. - Unscrew 7 screws	
		2)Pull the Drain Pan Out	
3	EVAP	1)Disassemble the Cover Pipe. - Unscrew 2 screws	
		2)1)Disassemble the Support Evap and hold evap. - Unscrew 3 screws	 
		3)Disconnect the wire betwwen assy control out and Evap	

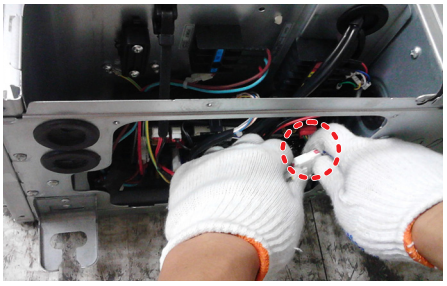
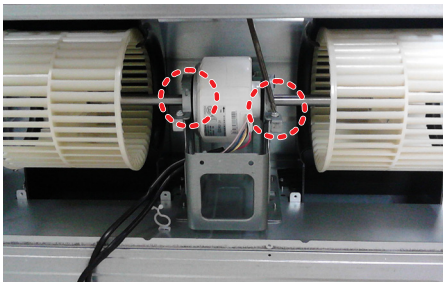
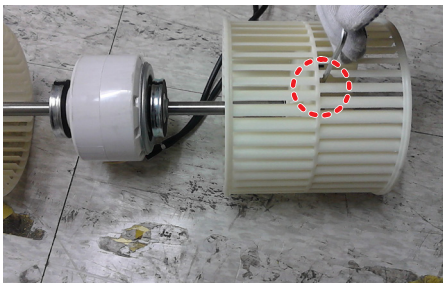
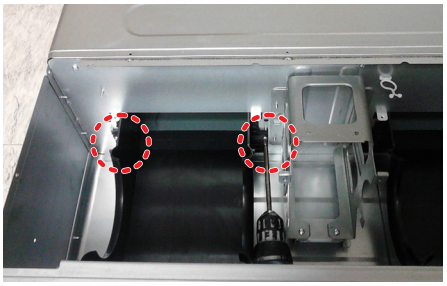
No	Parts	Procedure	Remark
		4)Then pull the Evap out	
4	Cushion	1)Pull out the seal Cushion front	
		2)Disassemble the Seal Cushion Right. - Unscrew 1 screws	
		3)Disassemble the Assy Cushion LF. - Unscrew 1 screws	

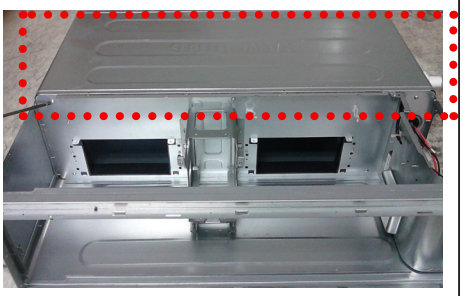
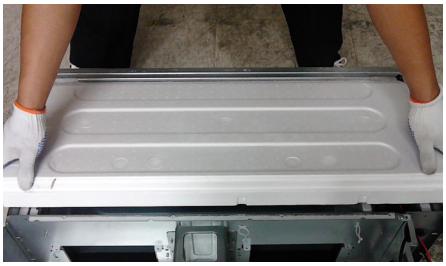
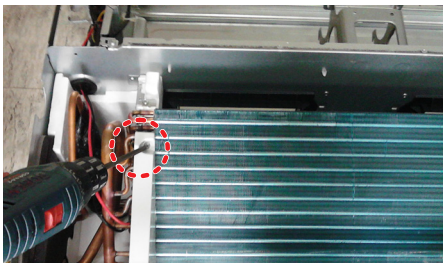
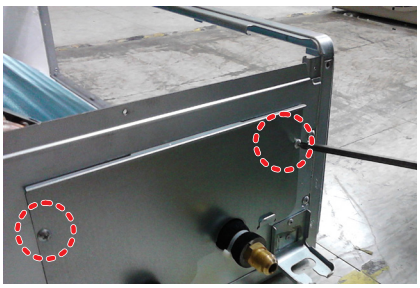
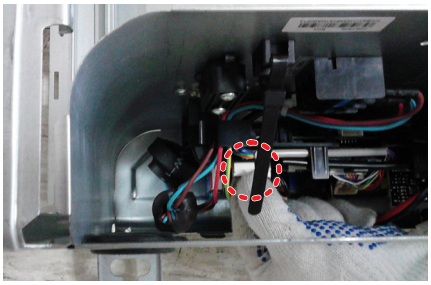
No	Parts	Procedure	Remark
5	Bracket Motor	1)Disassemble the Bracket Motor. - Unscrew 6 screws	
6	Control	1) Loosen 2 screws of Assy control in and Remove the assy control in. 2) Remove wires from wire saddle. 3) clip cable tie. (It is necessary to re-tie “cable tie” on re-assembly,then place in wire saddle .)	  

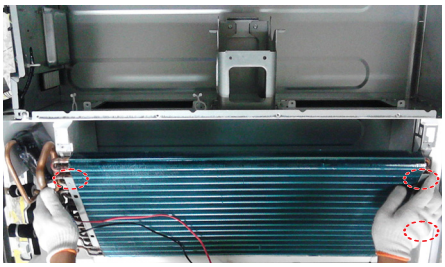
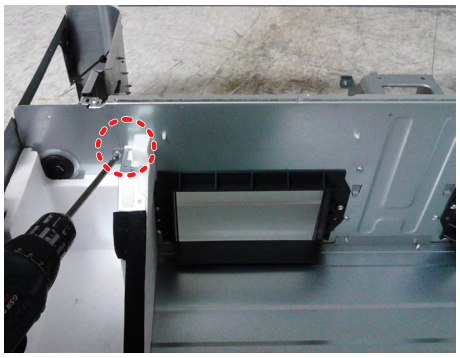
No	Parts	Procedure	Remark
7	Frame	1)Disassemble the Frame. - Unscrew 4 screws	

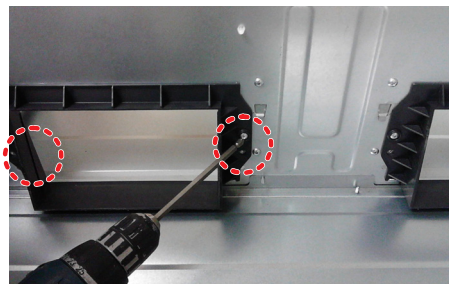
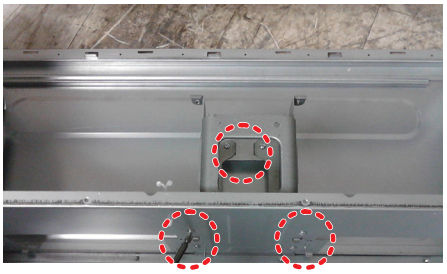
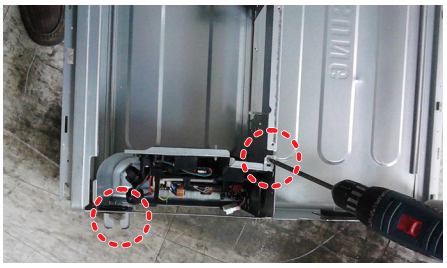
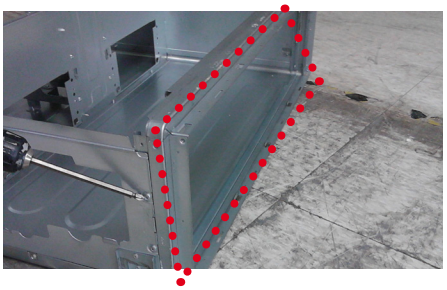
■ AC035MNMDKH / AC052MNMDKH / AC060MNMDKH / AC071MNMDKH

No	Parts	Procedure	Remark
1	Motor & Blower	1)Disassemble the Cabinet Bottom Fan. - Unscrew 10 screws	
		2)Disassemble the Case Filter Pre.	
		3)Disassemble the 2 Case Blower Bottom. - Unscrew 4 screws	
		4)Disassemble the Cover Control. - Unscrew 2 screws	
		5)Cut the cable-tie	

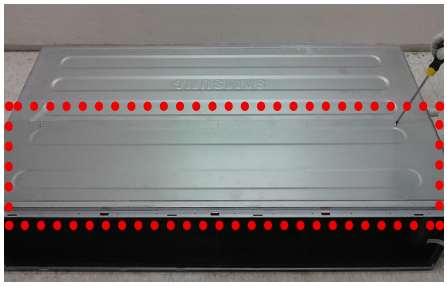
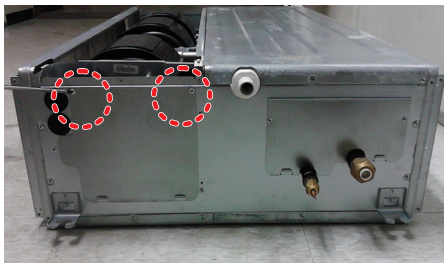
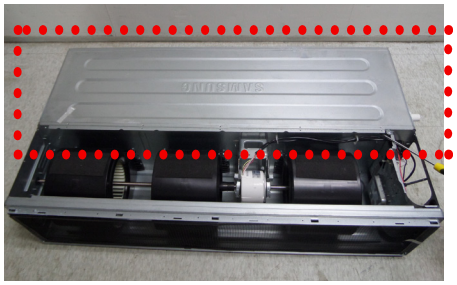
No	Parts	Procedure	Remark
		6)Disconnect the wire betwwen assy control out and motor.	
		7)Disassemble the 2 Holder Motor. - Unscrew 2 screws	
		8)After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.	
		9)Disassemble the both of Case Blower Out - Unscrew 4 screws	

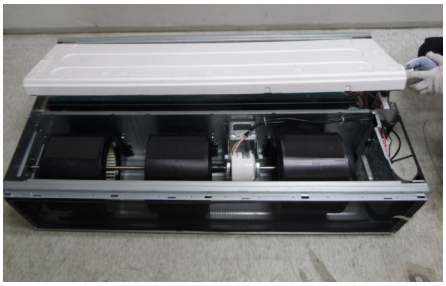
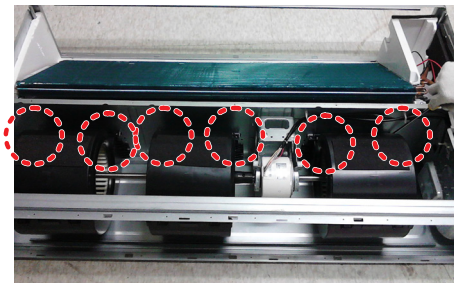
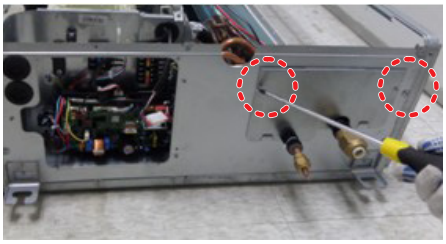
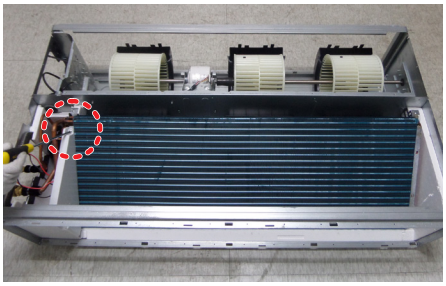
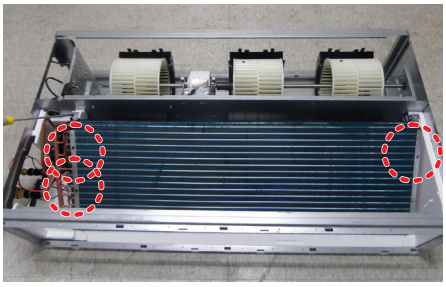
No	Parts	Procedure	Remark
2	Drain Pan	1)Disassemble the Cabinet Bottom Evap. - Unscrew 7 screws	
		2)Pull the Drain Pan Out	
3	EVAP	1)Disassemble the Support Evap. - Unscrew 1 screws	
		2)Disassemble the Cover Pipe. - Unscrew 2 screws	
		3)Disconnect the wire betwwen assy control out and Evap	

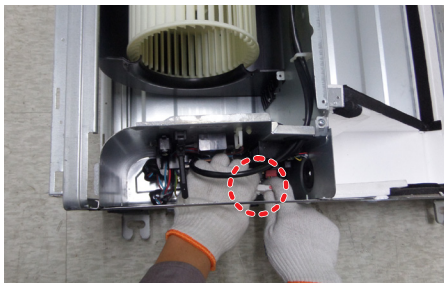
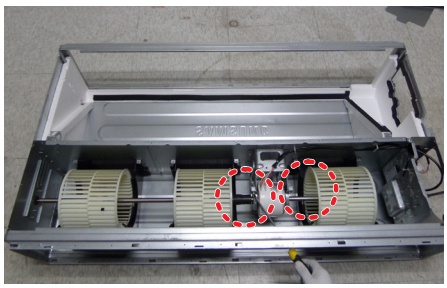
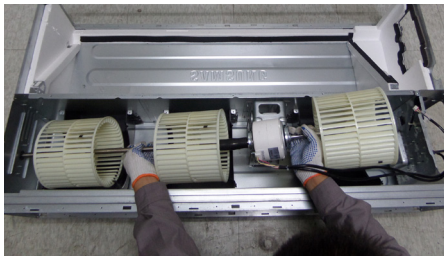
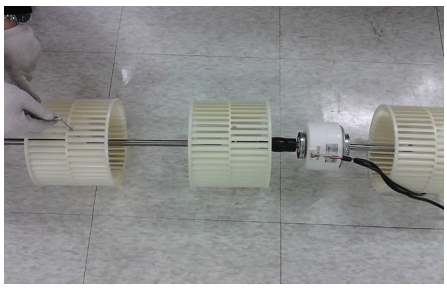
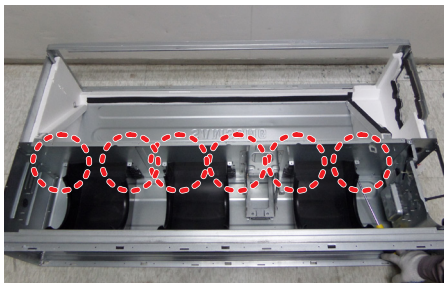
No	Parts	Procedure	Remark
		4)Disassemble the Evap. - Unscrew 3 screws. Then pull the Evap out	
4	Cushion	1)Pull out the Cushion	
		2)Disassemble the Seal Cushion LF. - Unscrew 1 screws	
		3)Disassemble the Assy Cushion Right. - Unscrew 1 screws	

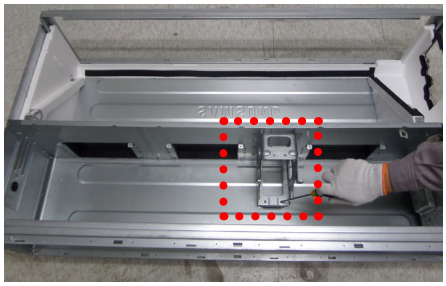
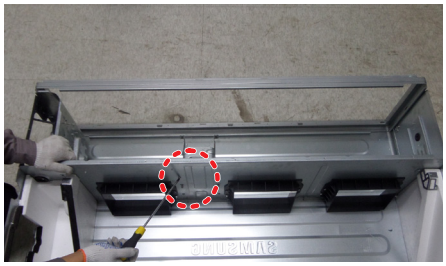
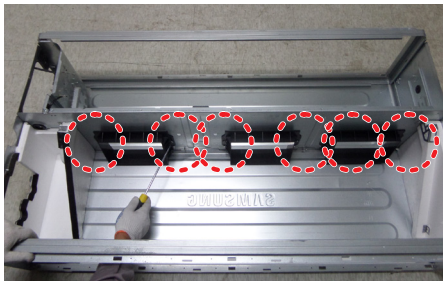
No	Parts	Procedure	Remark
5	Case Blower&Bracket Motor	1)Disassemble the both of Case Blower Out - Unscrew 4 screws 2)Disassemble the Bracket Motor. - Unscrew 6 screws	 
6	Control	1)Disassemble the Case Control. - Unscrew 2 screws	
7	Frame	1)Disassemble the Frame. - Unscrew 6 screws	

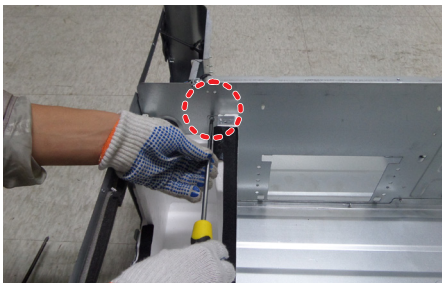
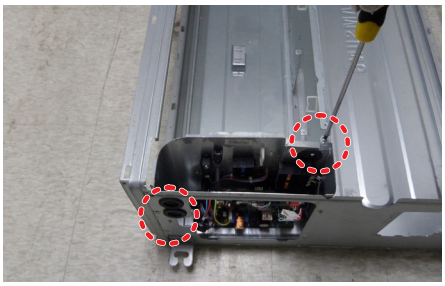
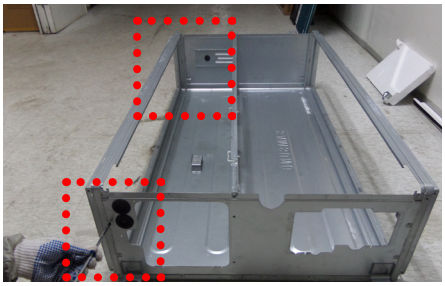
■ AC090MNMDKH / AC100MNMDKH / AC120MNMDKH / AC140MNMDKH

No	Parts	Procedure	Remark
1	Common	1)Disassemble the Cabinet Bottom Fan. - Unscrew 11 screws	
		2)Disassemble the Case Filter Pre.	
		3)Disassemble the Cover Control. - Unscrew 2 screws	
		4)Disassemble the Cabinet Bottom Evap. - Unscrew 8 screws	

No	Parts	Procedure	Remark
2	Drain Pan & Evap	1)Disassemble the Drain Pan from the set.	
		2)Disassemble the 3 Case Blower Bottom. - Unscrew 6 screws	
		3)Disassemble the Cover Pipe. - Unscrew 2 screws	
		4)Disassemble the Support Evap. - Unscrew 1 screws	
		5)Disassemble the Evap. - Unscrew 3 screws	

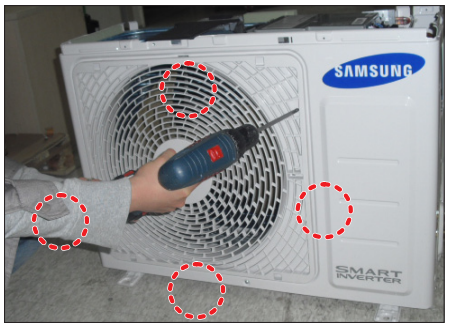
No	Parts	Procedure	Remark
3	Motor & Fan	1)Disassembl the connection wire,the take the Motor Fan out	
		2)Disassemble the 2 Holder Motor. - Unscrew 2 screws	
		3)After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.	
			
		4)Disassemble the 3 Case Blower Top. - Unscrew 6 screws	

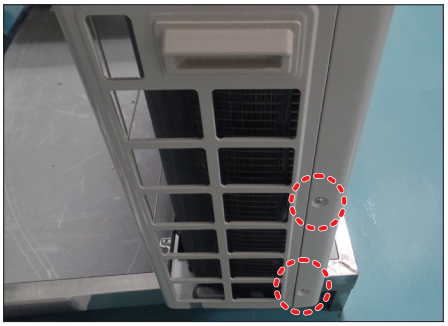
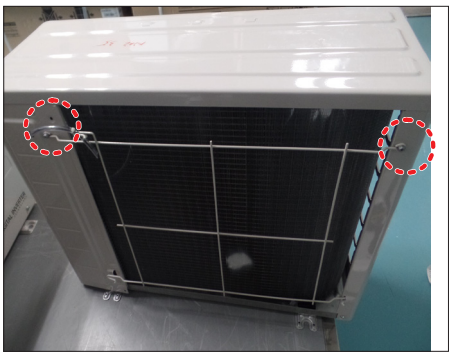
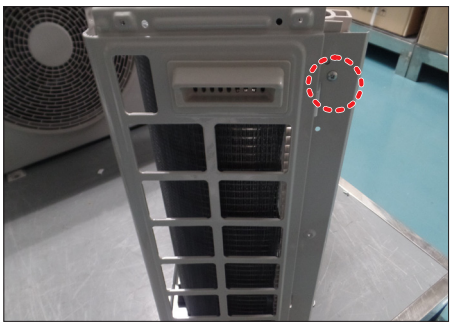
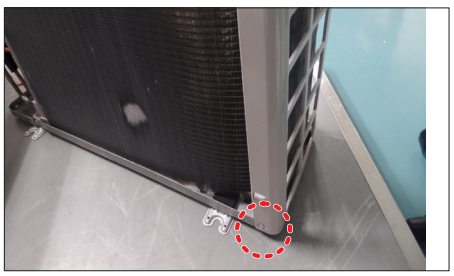
No	Parts	Procedure	Remark
		5)Disassemble the Bracket Motor. - Unscrew 6 screws	
		6)Disassemble the 3 Case Blower Out - Unscrew 6 screws	 

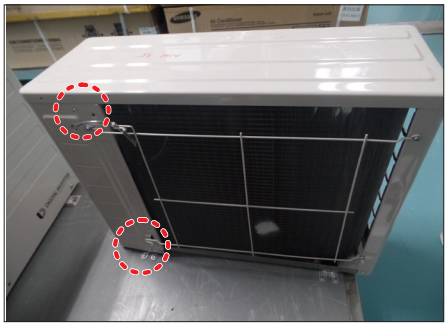
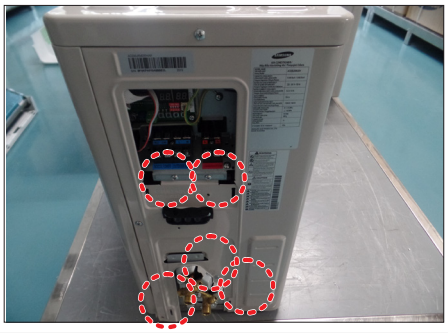
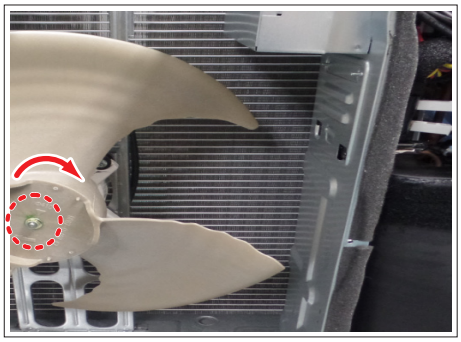
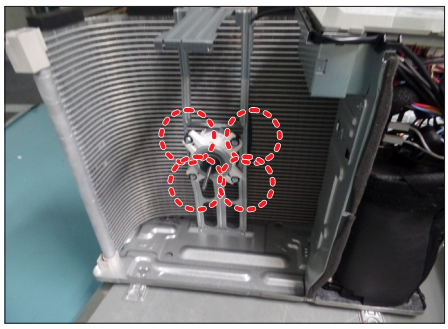
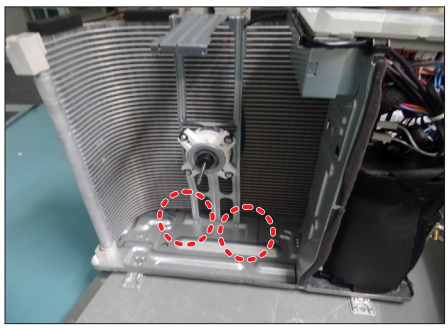
No	Parts	Procedure	Remark
4	Cushion	1)Disassemble the Assy Cushion Right. - Unscrew 1 screws	
		2)Disassemble the Seal Cushion LF. - Unscrew 1 screws	
5	Control	1)Disassemble the Case Control. - Unscrew 2screws	
6	Frame	1)Disassemble the Frame. - Unscrew 6 screws	

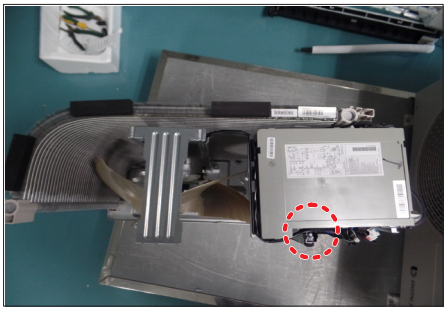
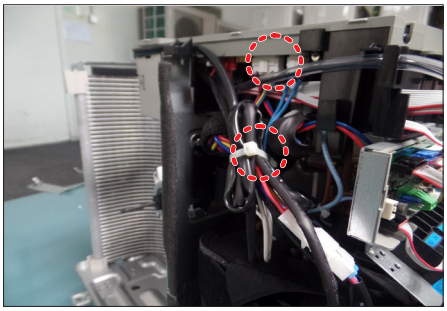
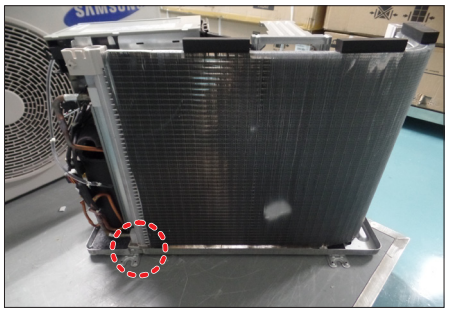
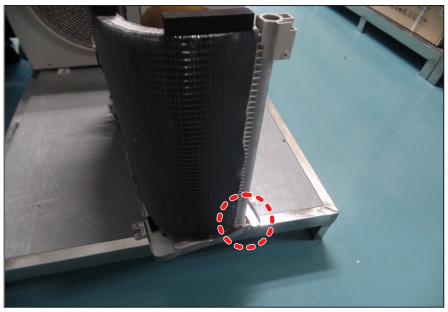
3-2 Outdoor unit

■ AC026MXADKH / AC035MXADKH

No	Parts	Procedure	Remark
1	common work	⚠ CAUTION You must turn off the Power before disassembly. 1) loosen 1 pcs screw of cover control,and detach it.	
		2) loosen 5 pcs screws on both right and left cabniet side edges and to detach the cover-top	
			
		3) Loosen 7 screwsfixed to disassemble cabi-front , and detach it.	

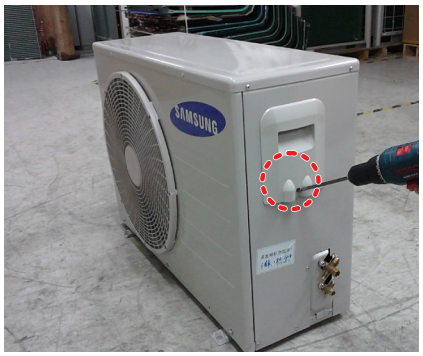
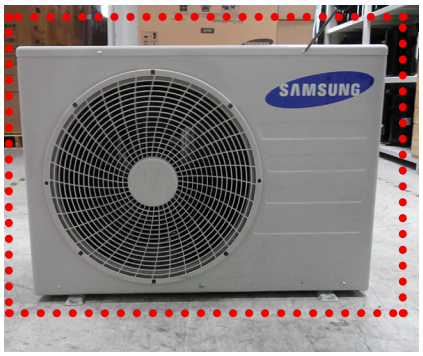
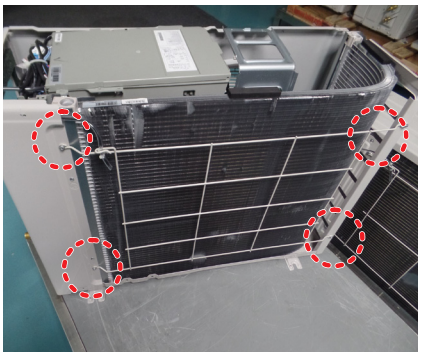
No	Parts	Procedure	Remark
	common work		
			
		4) loosen 2 screws to disassemble steel-bar.	
		5) Loosen 2 screws to disassemble the cabi left and detach it.	
			

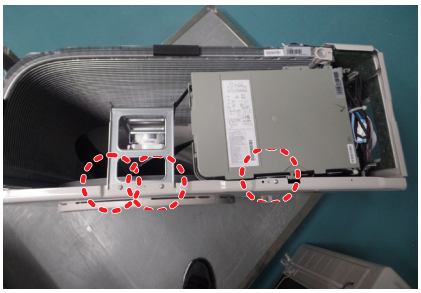
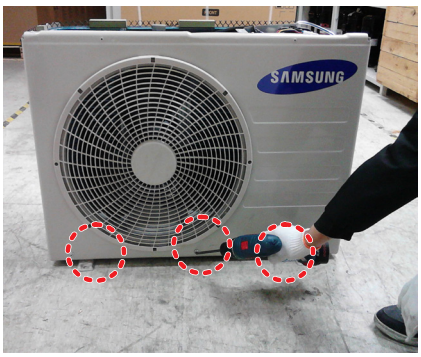
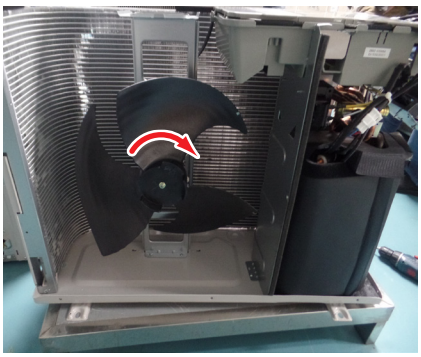
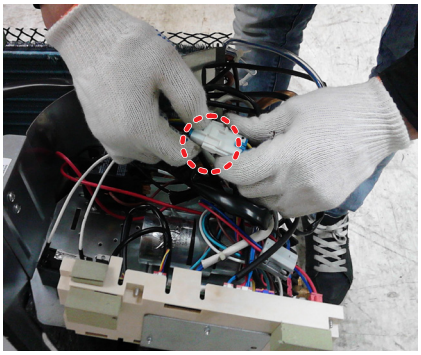
No	Parts	Procedure	Remark
	common work	6) Loosen 7 screws to disassemble the cabi right and detach it.	 
2	fan&motor	1) loosen 1 screw as indication and detached the fan.	
		2) loosen 4 pcs motor screws and disconnect the wire betwwen assy control out and motor.	
		3) loosen 2 pcs bracket-motor screw and detach it.	

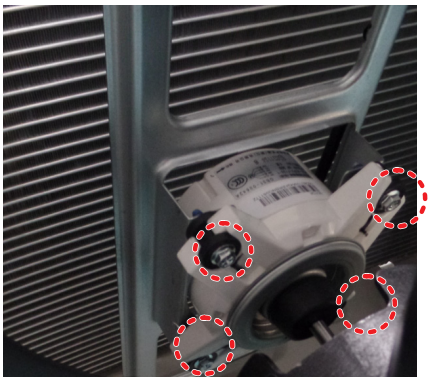
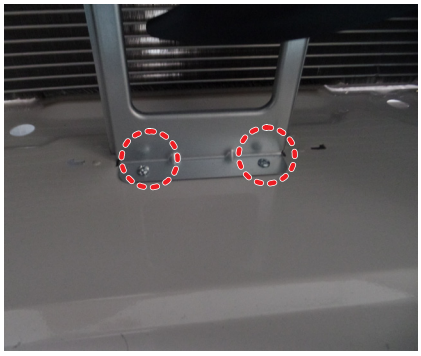
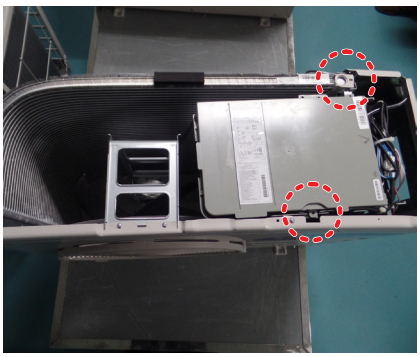
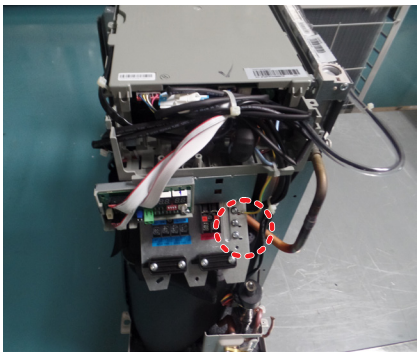
No	Parts	Procedure	Remark
3	assy control out	1) lossen fixing 1 screw from cover -control 2) detach several connections from assy control out, take out assy control out.	 
4	Heat exchanger	1) Release the refrigerant at first 2) Looosen fixing screw on both side. 3) disaessembly the pipes in both inlet and outlet with welding torch. 4) detach the heat exchanger.	 

No	Parts	Procedure	Remark
5	compressor	1) disconnect the compressor lead wire .	
		2)disassembly the felt comp sound. loosen the 3 bolts at the bottom . CAUTION When removing the compressor, Heat Exchanger, and Pipe, purge the Coolant inside the Compressor completely and remove the pipe with a welding flame.	

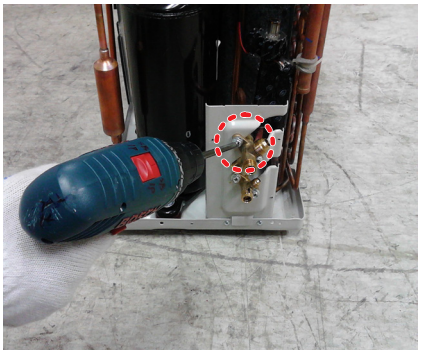
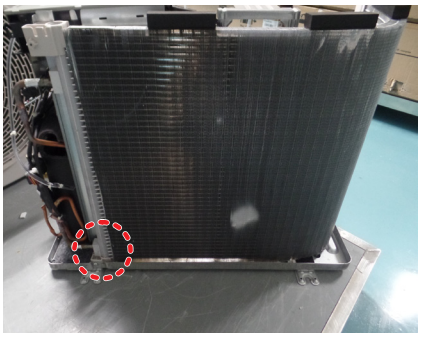
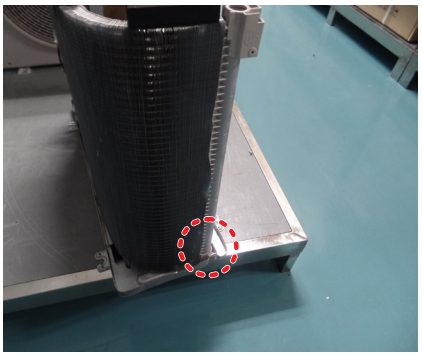
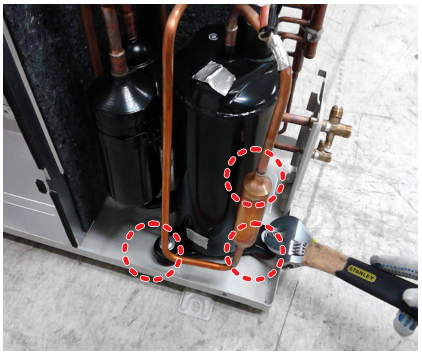
■ AC052MXADKH / AC060MXADKH

No	Parts	Procedure	Remark
1	common work	CAUTION You must turn off the Power before disassembly. 1) Loosen 1 pcs screw of cover control	
		2) Loosen 8 pcs screw of the cabi top cover.	
		3) Loosen 4 pcs screw of the bar steel.	
		4) Loosen 10 pcs screw of the cabi side front.	

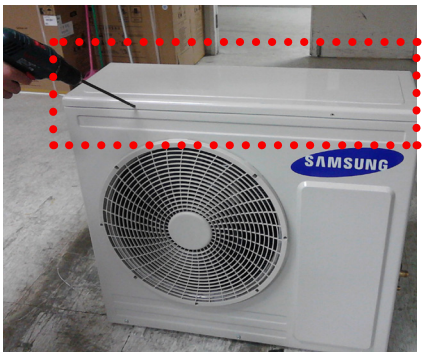
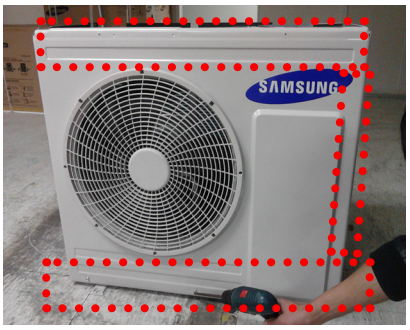
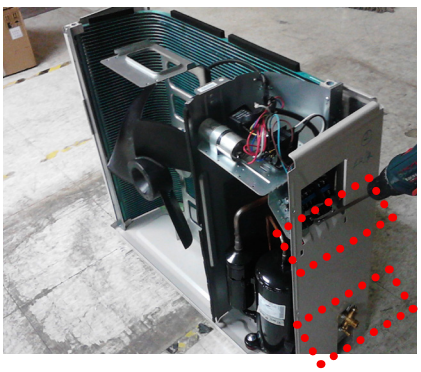
No	Parts	Procedure	Remark
1	common work		 
2	Fan& motor	1) Loosen the fan screw according the indication and detach the fab propeller 2)Disconnect the wire between assy control out and motor.	 

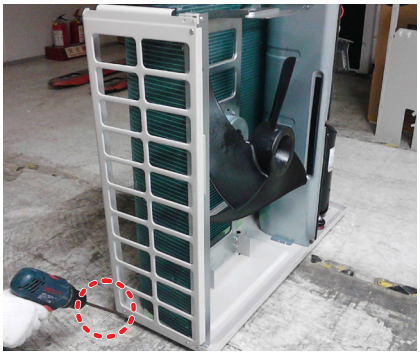
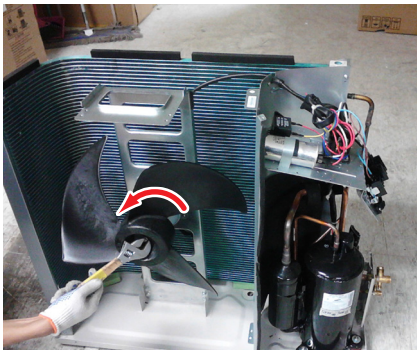
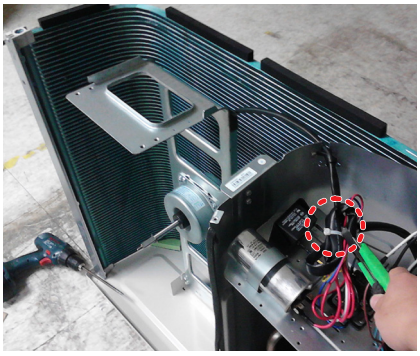
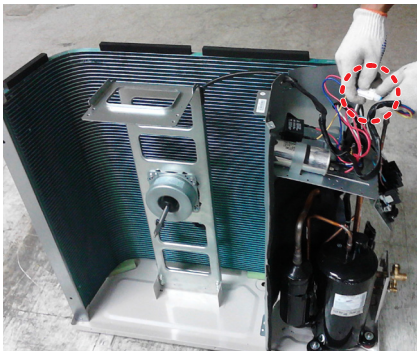
No	Parts	Procedure	Remark
2		3) Loosen 4 pcs motor screw.	
		4) Loosen 2 pcs screw of bracket motor.	
3	Assy control out	1)Loosen the screws that connected partition and case control then get the control out.	
		2) Loosen the screw of the cover termimal	

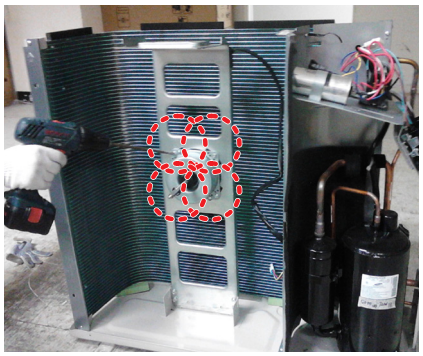
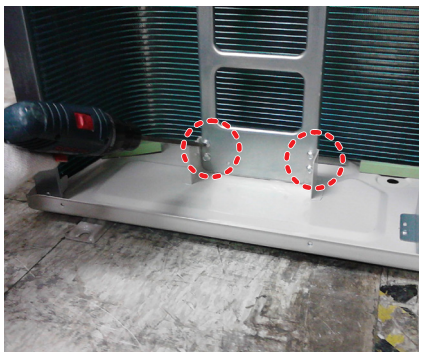
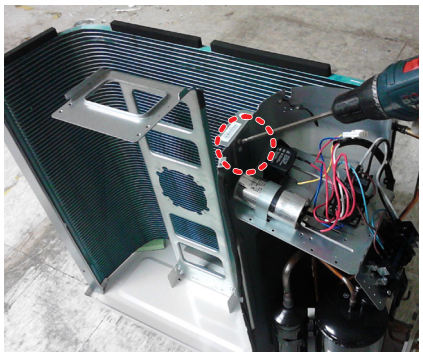
No	Parts	Procedure	Remark
3		3) Loosen 2 screws , disassemble the Coil Harmonic.	
		4) Loosen the screw of the cover terminal.	

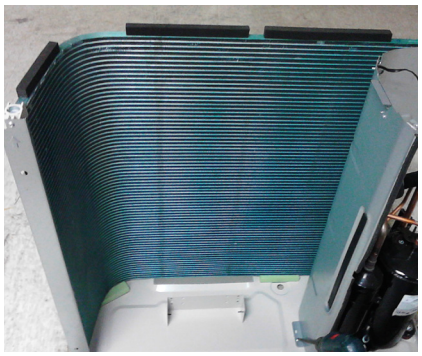
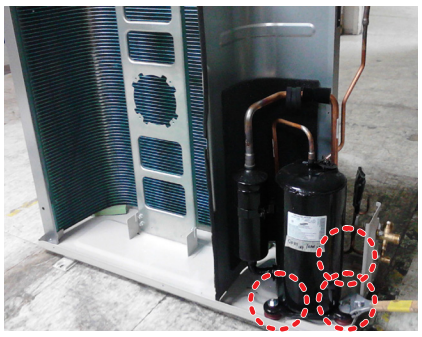
No	Parts	Procedure	Remark
4	Heat exchanger	1) Release the refrigerant at first 2) Loosen fixing screw on both side.. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the heat exchanger. CAUTION When removing the compressor, Heat Exchanger, and Pipe, purge the Coolant inside the Compressor completely and remove the pipe with a welding flame.	  
5	Compressor	1)Loosen the 3 bolts at the bottom of compressor.	

AC071MXADKH

No	Parts	Procedure	Remark
1	common work	1) loosen 1 pcs screw of cover control	
		2) loosen 8 pcs screw of the cabi top cover.	
		3) loosen 12 pcs screw of the cabi front	
		4) loosen 7 pcs screw of the cabi side right.	

No	Parts	Procedure	Remark
		5)loosen 3pcs screw of the cabi side left.	 
2	Fan & Motor	1) loosen the fan screw according the indication and detach the fab propeller 2)Cut the cable-tie 3)disconnect the wire betwwen assy control out and motor.	  

No	Parts	Procedure	Remark
		4) loosen 4 pcs motor screw. 5) loosen 4 pcs screw of bracket motor	 
3	assy control out	1) lossen the screw of the cover termimal 2)lossen the screws that connected partition and case control then pull up the control out.	 

No	Parts	Procedure	Remark
4	Heat exchanger	1) Release the refrigerant at first 2) Looosen fixing screw on both side. 3) disaessembly the pipes in both inlet and outlet with welding torch. 4) detach the heat exchanger.	  
5	Compressor	1)loosen the 3 bolts at the bottom of compressor.	

4. Troubleshooting

4-1 Indoor Display Error and Check Method

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

Abnormal conditions	Indicators					Remarks
	Concealed Type					
						
	Green	Red				
	Standard Type					
						
Power reset	◑	X	X	X	X	
Error of Room sensor in the indoor unit(Open/Short)	X	X	◑	X	X	
Error of EVA-IN,EVA-OUT sensor in the indoor unit(Open/Short)	◑	X	◑	X	X	
Error of Fan motor in the indoor unit	X	X	X	◑	X	
Error of Outdoor or Terminal Block Thermal Fuse(Open)	X	X	◑	◑	◑	
Clogging of outdoor's service valve	◑	X	X	◑	◑	
Detection of the float switch	X	X	X	◑	◑	
Error of EEPROM or OPTION SETTING	◑	◑	◑	◑	◑	
1. No communication for 2 minutes between indoor units (Communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. When sending the communication error from the outdoor unit, the mismatching of the communication numbers and installed numbers after completion of tracking. (Communication error for more than 2 minutes)	X	X	◑	◑	X	1. Indoor unit error (Display is unrelated with operation) 2. Outdoor unit error (Display is unrelated with operation)

● On ◑ Flickering X Off

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

- If an error occurs, TEST is displayed on the wired remote controller. If you would like to see an error code, press the Test button.

Display	Explanation	Remark
101	Communication Error between indoor and outdoor unit	
121	Error of Room sensor in the indoor unit(Open/Short)	
122	Error of Eva In sensor in the indoor unit(Open/Short)	
123	Error of Eva Out sensor in the indoor init(Open/Short)	
153	2nd Detection of the float switch	
154	Error of Fan motor in the indoor unit	
162	EEPROM error	
163	EEPROM option setting error	
198	Error of Terminal Block's Thermal Fuse(Open)	
202	No communication for 2minutes betwwen indoor units(Communication error for more than 2minutes)	
422	Clogging of outdoor's service valve	
557	Option code miss matching among the indoors (only for DPM)	Check indoor option code
601	Error of communication down between the indoor unit and wired remote controller after 3minutes.	Wired remote controller error
604	Error of communication down between the indoor unit and wired remote controller after completion of 10 times tracking.	
606	COM1/COM2 Cross-installed error	
607	Error of master wired remote controller and slave wired remote controller setting	

4-2 Outdoor Trouble shooting

The table below list the self-diagnostic routines. For some of error codes, you must contact an authorized service centre.
If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Error Code	Meaning	Remarks
1	E108	Error due to duplicated communication address	Check on repeated indoor unit main address
2	E121	Error on room temperature sensor of indoor unit (Short or Open)	Indoor unit Room Thermistor Open/Short
3	E122	Error on EVA IN sensor of indoor unit (Short or Open)	Indoor unit EVA_IN Thermistor Open/Short
4	E123	Error on EVA OUT sensor of indoor unit (Short or Open)	Indoor unit EVA_OUT Thermistor Open/Short
5	E153	Error on float switch (2nd detection)	Indoor unit Float Switch Open/Short Drain Pump operation Check
6	E154	Indoor fan error	Check on indoor unit indoor Fan operation
7	E198	Error on thermal fuse of indoor unit (Open)	Thermal Fuse Open Check of indoor unit Terminal Block
8	E201	Communication error between the indoor unit and outdoor unit (Pre-tracking failure or when the actual number of indoor units are different from the indoor unit quantity setting on the outdoor unit) Error due to communication tracking failure after initial power is supplied (The error occurs regardless of the number of units.)	Check indoor quantity setting in outdoor
9	E202	Communication error between indoor unit and outdoor unit (When there is no response from indoor units after tracking is completed)	Check electrical connection and setting between indoor unit and outdoor unit
10	E203	Communication error between the outdoor unit and main micom (For PF #4 to #6 controllers, error will be determined from the time when the compressor is turned on.)	Check electrical connection and setting between indoor unit MAIN PBA - INVERTER PBA
11	E221	Error on outdoor temperature sensor (Short or Open)	Check Outdoor sensor Open / Short
12	E231	Error on outdoor COND OUT sensor (Short or Open)	Check Cond-Out sensor Open / Short
13	E251	Error on discharge temperature sensor of compressor 1 (Short or Open)	Check Discharge sensor Open / Short
14	E320	Error on OLP sensor (Short or Open)	Check OLP sensor Open / Short
15	E403	Compressor down due to freeze protection control	Check Outdoor Cond.
16	E404	System stop due to overload protection control	Check Comp. when it starts
17	E416	System stop due to discharge temperature	-
18	E422	Blockage detected on high pressure pipe	1. Check if the service valve is open 2. Check for refrigerant leakage (pipe connections, heat exchanger) and charge refrigerant if necessary 3. Check if there's any blockage on the refrigerant cycle (indoor unit/outdoor unit) 4. Check if additional refrigerant has been added after pipe extension
19	E425	Reverse phase or open phase	Check whether 3 phase is reversed or opened.
20	E440	Heating operation restricted at outdoor temperature over Theat_high value	HEATING
21	E441	Cooling operation restricted at outdoor temperature below Tcool_low value	COOLING
22	E458	Fan speed error	FAN1 ERROR

No.	Error Code	Meaning	Remarks
23	E461	Error due to operation failure of inverter compressor	-
24	E462	System stop due to full current control	-
25	E463	Over current trip / PFC over current error	Check OLP sensor
26	E464	IPM Over Current(O.C)	IPM
27	E465	Comp. Over load error	-
28	E466	DC-Link voltage under/over error	Check AC Power and DC Link Voltage
29	E467	Error due to abnormal rotation of the compressor or unconnected wire of compressor	Check Comp wire
30	E468	Error on current sensor (Short or Open)	Check Outdoor Inverter PBA.
31	E469	Error on DC-Link voltage sensor (Short or Open)	-
32	E470	Outdoor unit EEPROM Read/Write error (Option)	Check Outdoor EEPROM Data
33	E471	Outdoor unit EEPROM Read/Write error (H/W)	Check Outdoor EEPROM PBA
34	E472	AC Line Zero Cross Signal out	-
35	E473	Comp Lock error	-
36	E474	Error on IPM Heat Sink sensor of inverter 1 (Short or Open)	Check Outdoor Inverter PBA.
37	E475	Error on inverter fan 2	FAN2 ERROR
38	E484	PFC Overload (Over current) Error	Check Outdoor Inverter PBA.
39	E485	Error on input current sensor of inverter 1 (Short or Open)	Check Outdoor EEPROM PBA
40	E500	IPM over heat error on inverter 1	Check Outdoor Inverter PBA.
41	E508	Smart install is not installed	-
42	E554	Gas leak detected	Check the refrigerant
43	E556	Error due to mismatching capacity of indoor and outdoor unit	Check the indoor and outdoor unit capacity
45	E590	Inverter EEPROM Checksum error	-
46	E660	Inverter Boot Code error	-

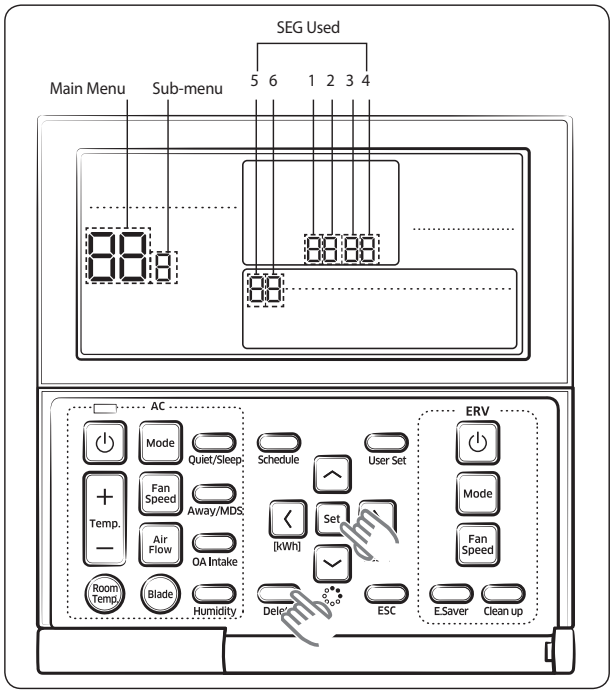
■ Setting additional functions of wired remote control

Automatic Air-Volume

When DPM is installed, Automatic Air-Volume function cannot be performed simultaneously for all indoor units. Automatic Air-Volume function must be performed for each indoor unit with the wired remote control attached.

With its BLDC motor, you can use smart adjust the indoor unit fan speed depending on the installation condition.

If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter, Using the Automatic Air-Volume function,the volume of exhaust air has been adjusted to the rated volume flow rate automatically.



Performing the Automatic Air-Volume function.

- Check the air conditioning unit stop.

Press the Power button to stop the air conditioner

- Go to Service setting mode with remote controller.

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 8 and then press > button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 2 and then press > button to enter a automatic air-volume setting screen.

4 Press the ∧ / ∨ button to select 1 to enable automatic air-volume operation.

5 Select mode No. 8.2 , and set to "1".

6 Press the ∧ / ∨ button to select 3 and then press > button to enter input voltage.

7 Press the ∧ / ∨ button to select 1~3 to set voltage.
(1 : 220V, 2 : 230V, 3 : 240V)

8 Press the Set button, then the air conditioning unit will start the fan operation for Automatic Air-Volume adjustment.

- Do not adjust the dampers during fan operation for Automatic Air-Volume adjustment.

9 Press ESC button to escape setting mode.
(During the automatic air-volume adjustment,[Main Menu] will be displayed → → → repetitively)

10 After 1 to 8 minutes, the air conditioning unit stops operating automatically when Automatic Air-Volume adjustment has been carried out (fan operation icon will be off.)

11 When the air conditioning unit has stopped, check the Mode No. 8.1 is "1" for completion of Automatic Air-Volume.

If the Mode No. 8.1 is "0", Automatic Air-Volume adjustment is fail. Then adjust the fan speed by referring the E. S. P(External Static Pressure) setting table.

Main menu	Sub menu	Functions	SEG used	Default	Range
8	1	Automatic Air-Volume State Return	1	0	0 - OFF (Fail or Disable) 1 - Completion. 2 - Running Automatic Air-Volume.
	2	Automatic Air-Volume Operation	1	0	0 - Disable 1 - Enable
	3	Automatic Air-Volume Voltage Setting	1	2	1- 220V 2- 230V (Default) 3- 240V

NOTE

- If the coil is not dry, run the unit for 2 hours with fan only to dry the coil.
- The air filter is properly attached into the air passage on the air suction side of the air conditioning unit.
- Adjust the dampers so that each air inlet and outlet exhusts the designed airflow rate.
- If using booster fans(an outdoor air processing unit or ERV via duct), do not use Automatic Air-Volume function.
- If the duct configurations have been changed, automatic air-volume function perform again.
- The product can be used within the range of rated voltage 220 V/230 V/240 V ± 5 V. If the product needs to be installed in the condition that is out of the rated voltage stated above, additional setting with installation option is required.

External Static Pressure (ESP) setting for phase control motor

With its phase control motor, you can adjust the indoor unit fan speed depending on the installation condition. If the external static pressure is high so that the duct becomes longer or if the external static pressure is low so that the duct becomes shorter, adjust the fan speed by referring the following table.

Model	AC026MNLDKH	AC035MNLDKH
Static Pressure	Option Code for Indoor Unit	
0≤ SP ≤2.5	01C07C-1C1914-271A21-370000	01C07C-1C3936-272328-370000
2.5< SP ≤4	01C07C-1C1969-271A21-370000	01C07C-1C39AD-272328-370000

Model	AC035MNMDKH
Static Pressure	Option Code for Indoor Unit
0≤ SP ≤2.5	01B07C-1C5080-272328-372000
2.5< SP ≤5	01B07C-1C5407-272328-372000
5< SP ≤7.5	01B07C-1C548C-272328-372000
7.5< SP ≤10	01B07C-1C55D3-272328-372000
10< SP ≤12.5	01B07C-1C5926-272328-372000
12.5< SP ≤15	01B07C-1C5998-272328-372000

Model	AC052MNLDKH	AC071MNLDKH
Static Pressure	Option Code for Indoor Unit	
0≤ SP ≤3	01C07C-1C1924-27343C-370000	01C07C-1C59D0-274750-370005
3< SP ≤4	01C07C-1C1968-27343C-370000	01C07C-1C5D21-274750-370005

Model	AC052MNMDKH	AC060MNMDKH	AC071MNMDKH
Static Pressure	Option Code for Indoor Unit		
0≤ SP ≤3	01B07C-1C50F1-27343C-374000	01B07C-1C5436-273C46-376000	01B07C-1C5436-274750-376000
3< SP ≤6	01B07C-1C5488-27343C-374000	01B07C-1C54AB-273C46-376000	01B07C-1C54AB-274750-376000
6< SP ≤9	01B07C-1C54ED-27343C-374000	01B07C-1C581E-273C46-376000	01B07C-1C581E-274750-376000
9< SP ≤12	01B07C-1C5941-27343C-374000	01B07C-1C5972-273C46-376000	01B07C-1C5972-274750-376000
12< SP ≤15	01B07C-1C59B3-27343C-374000	01B07C-1C59C8-273C46-376000	01B07C-1C59C8-274750-376000

Model	AC090MNMDKH	AC100MNMDKH
Static Pressure	Option Code for Indoor Unit	
0≤SP≤4	01B07C-1C549F-275A64-375020	01B07C-1C549F-276470-375020
4<SP≤8	01B07C-1C5917-275A64-375020	01B07C-1C5917-276470-375020
8<SP≤12	01B07C-1C599C-275A64-375020	01B07C-1C599C-276470-375020
12<SP≤15	01B07C-1C5AE1-275A64-375020	01B07C-1C5AE1-276470-375020

Model	AC120MNMDKH	AC140MNMDKH
Static Pressure	Option Code for Indoor Unit	
0≤SP≤5.2	01B07C-1C5424-277882-374048	01B07C-1C5424-278CA0-374045
5.2<SP≤8	01B07C-1C5489-277882-374048	01B07C-1C5489-278CA0-374045
8<SP≤12	01B07C-1C54FE-277882-374048	01B07C-1C54FE-278CA0-374045
12<SP≤15	01B07C-1C5940-277882-374048	01B07C-1C5940-278CA0-374045

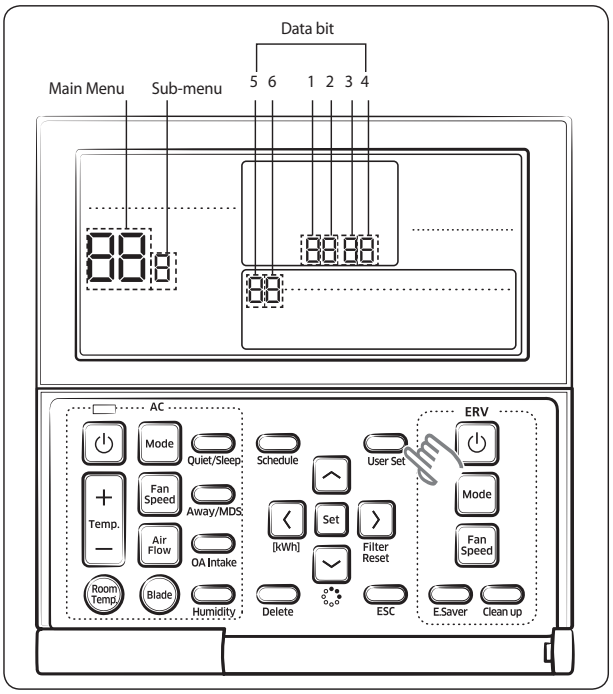
NOTE

- represents E. S. P(External Static Pressure) range of factory setting.
  You don't have to adjust the fan speed separately if the external static pressure of the installation place is in . When it is out of , input the appropriate option code.
- If you input the inappropriate option code, error may occur or the air conditioner is out of order. The option code must be inputted correctly by the installation specialist or service agent.

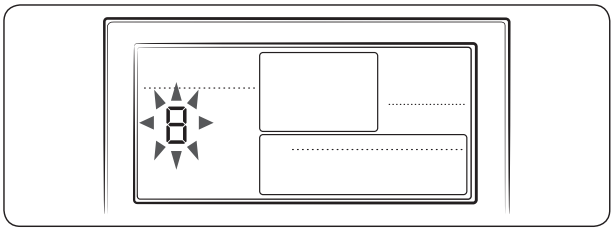
EASY Tuning

If the more cooling and heating airflow rate which set up when installing is wanted, or if the more Silent operation which sets up when installing is wanted, air conditioner is tuned for comfort.

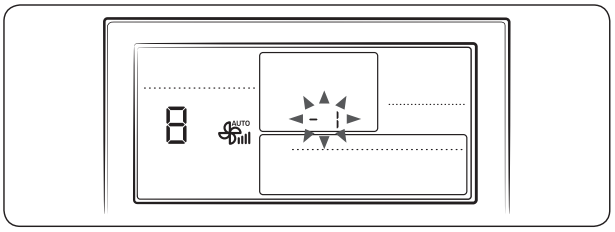
Indoor unit airflow rate for high, mid, low mode increases or decreases for +2 ~ -2 Steps with wired remotecontrol.



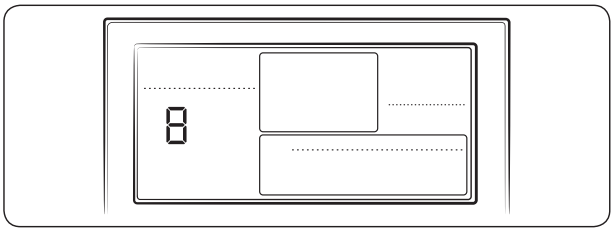
1 Press the User Set button.
(Main Menu) will be displayed, and you can press the [∧]/[∨] buttons to select No. 8, which will set the Easy Tuning.



2 Press the [›] button to select airflow step.
Press the [∧]/[∨] buttons to select airflow step(-2,-1,0,1,2) tuning (During the Easy Tuning setting, AC Fan Speed icon will be displayed)



3 Press the Set button to complete the Easy Tuning.
(When the Easy Tuning setting complete, AC Fan Speed icon will be off)



4 Press the ESC button to to exit to normal mode.

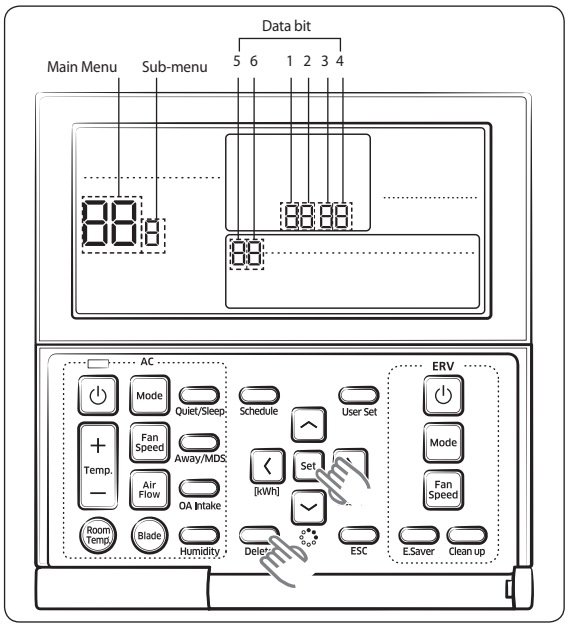
Main menu	Sub menu	Functions	SEG used	Default	Range
8	-	Easy Tuning	1,2	0	-2 : -2 Step -1 : -1 Step 0 : No Use 1 : +1 Step 2 : +2 Step

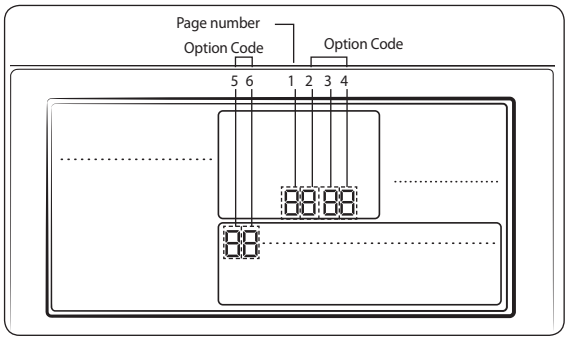
NOTE

- Press the ESC button anytime during setup to exit without setting.
- According to airflow changed from the Easy Tuning, Air conditioning performance reducing is possible.

■ Setting the indoor unit option code

In order to set the indoor unit option code use the wired remote controller and follow the directions below.





SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	✳	✳	✳	✳	✳

Page number

SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	✳	✳	✳	✳	✳

Page number

SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	✳	✳	✳	✳	✳

Page number

SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	✳	✳	✳	✳	✳

Page number

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 2 and then press › button to enter a Indoor unit option code setting screen.

NOTE

- The first digit represents the page number and the remaining five digits are option codes.
- The option code which is currently setting will flicker.

4 Press the ∧ / ∨ button to set the option code in order. Press › button to go to the next page.

5 Press the Set button to save and complete the option setting.

6 Press the ESC button to exit to normal mode.

NOTE

- Press the ESC button anytime during setup to exit without setting.

CAUTION

- Option code will not be applied if you don't press the Set
- Setting indoor unit option code is only possible in Master wired remote controller. You can only check the indoor unit option code in Slave wired remote controller.
- Setting indoor unit option code is possible when one indoor unit is connected. If more than 2 indoor units are connected, you can only check the Master indoor unit option code.

■ Setting indoor unit addresses and installation options

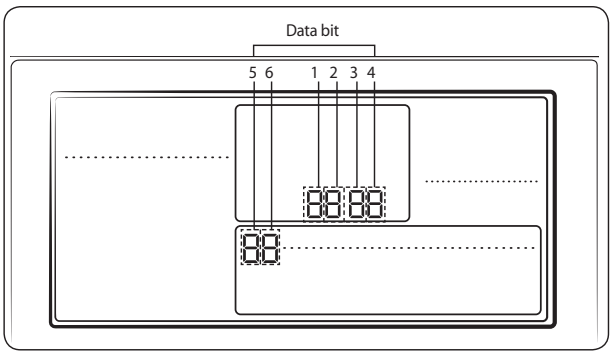
Set the indoor unit address and installation option with remote controller option. Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.

Setting an indoor unit address

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 1 and then press › button to enter a Indoor Address setting screen.



NOTE

- The Main/RMC Address which is currently setting will flicker.
- Data bit 1 and 2 present Indoor unit main address checking
- Data bit 3 and 4 present Indoor unit main address setting(outdoor unit reset is needed to set).
- Data bit 5 and 6 present Indoor unit RMC address setting/checking.

4 Press the ∧ / ∨ button to set the Indoor unit Main/RMC Address.

5 Press the Set button to save and complete the option setting.

6 Press the ESC button to exit to normal mode.

NOTE

- Press the ESC button anytime during setup to exit without setting.
- Address will not be applied if you don't press Set button.
- Setting Main/RMC Address of an Indoor unit is available only with a master wired remote controller.

Setting an indoor unit installation option

In order to check and set the indoor unit installation option code use the wired remote controller and follow the directions below.

1 Press the Set and Delete buttons at the same time for more than 3 seconds and then a Main menu will be displayed.

2 Press the ∧ / ∨ button to select 4 and then press › button to enter a Sub-menu setting screen.

3 Press the ∧ / ∨ button to select 3 and then press › button to enter a Indoor unit installation option code setting screen.

NOTE

- The first digit represents the page number and the remaining five digits are installation option.
- The total option codes are 24 digits. You can set six digits at a time and it is distinguished by page number (0, 1, 2, 3).

4 Press the (^) / (v) button to set the installation option code in order. Press (>) button to go to the next page.

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	RESERVED	Exterior temperature sensor	Central control	RESERVED
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	Drain pump	Use of Hot Coil	RESERVED	RESERVED	RESERVED
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	External control	External control output	S-Plasma ion	Buzzer	Number of hours using filter
SEG19	SEG20	SEG21	SEG22	SEG23	-
3	Individual control of a remote controller	Heating setting compensation	RESERVED	Away Set OFF Timer	-

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

<table>
<tr><td>Option</td><td colspan="2">SEG1</td><td colspan="3">SEG2</td><td colspan="2">SEG3</td><td colspan="2">SEG4</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="3">MODE</td><td colspan="2" rowspan="3">RESERVED</td><td colspan="2">Use of external temperature sensor</td></tr>
<tr><td rowspan="3">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td><td>Indication</td><td>Details</td></tr>
<tr><td colspan="2" rowspan="2">0</td><td colspan="3" rowspan="2">2</td><td>0</td><td>Disuse</td></tr>
<tr><td>1</td><td>Use</td></tr>
<tr><td>Option</td><td colspan="2">SEG5</td><td colspan="3">SEG6</td><td colspan="2">SEG7</td><td colspan="2">SEG8</td></tr>
<tr><td>Explanation</td><td colspan="2">Use of central control</td><td colspan="3" rowspan="4">RESERVED</td><td colspan="2">PAGE</td><td colspan="2">Use of drain pump</td></tr>
<tr><td rowspan="3">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td>0</td><td>Disuse</td><td colspan="2" rowspan="2">1</td><td>0</td><td>Disuse</td></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Use</td><td>1</td><td>Use</td></tr>
<tr><td colspan="2">2</td><td>Use + 3minute delay</td></tr>
<tr><td>Option</td><td colspan="2">SEG9</td><td colspan="3">SEG10</td><td colspan="2">SEG11</td><td colspan="2">SEG12</td></tr>
<tr><td>Explanation</td><td colspan="2">Use of Hot Coil</td><td colspan="3" rowspan="5">RESERVED</td><td colspan="2" rowspan="5">RESERVED</td><td colspan="2" rowspan="5">RESERVED</td></tr>
<tr><td rowspan="4">Indication and Details</td><td>Indication</td><td>Details</td></tr>
<tr><td>0</td><td>Disuse</td></tr>
<tr><td>1</td><td>Use</td></tr>
<tr><td>-</td><td>-</td></tr>
<tr><td>Option</td><td colspan="2">SEG13</td><td colspan="3">SEG14</td><td colspan="2">SEG15</td><td colspan="2">SEG16</td></tr>
<tr><td>Explanation</td><td colspan="2">PAGE</td><td colspan="3">Use of external control</td><td colspan="2">Setting the output of external control</td><td colspan="2">S-Plasma ion</td></tr>
<tr><td rowspan="10">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td colspan="2" rowspan="9">2</td><td>0</td><td>Disuse</td><td rowspan="4">Slave (disable Level control*)</td><td rowspan="4">0</td><td rowspan="4">Thermo on</td><td rowspan="4">0</td><td rowspan="4">Disuse</td></tr>
<tr><td>1</td><td>On/Off control</td></tr>
<tr><td>2</td><td>Off control</td></tr>
<tr><td>3</td><td>Window on/ off control</td></tr>
<tr><td>4</td><td>Disuse</td><td rowspan="4">Master (enable Level control*)</td><td rowspan="4">1</td><td rowspan="4">Operation on</td><td rowspan="4">1</td><td rowspan="4">Use</td></tr>
<tr><td>5</td><td>On/Off control</td></tr>
<tr><td>6</td><td>Off control</td></tr>
<tr><td>7</td><td>Window on/ off control</td></tr>
<tr><td>Option</td><td colspan="2">SEG17</td><td colspan="3">SEG18</td><td colspan="2">SEG19</td><td colspan="2">SEG20</td></tr>
</table>

<table>
<tr><td>Explanation</td><td colspan="2">Buzzer control</td><td colspan="2">Number of hours using filter</td><td colspan="2">PAGE</td><td colspan="2">control of a remote controller</td></tr>
<tr><td rowspan="6">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td><td>Indication</td><td>Details</td></tr>
<tr><td>0</td><td>Use of buzzer</td><td>2</td><td>1000 Hour</td><td colspan="2" rowspan="4">3</td><td>0 or 1</td><td>Indoor 1</td></tr>
<tr><td rowspan="3">1</td><td rowspan="3">Non use of buzzer</td><td rowspan="3">6</td><td rowspan="3">2000 Hour</td><td>2</td><td>Indoor 2</td></tr>
<tr><td>3</td><td>Indoor 3</td></tr>
<tr><td>4</td><td>Indoor 4</td></tr>
<tr><td>Option</td><td colspan="2">SEG21</td><td colspan="2">SEG22</td><td colspan="2">SEG23</td><td colspan="2">-</td></tr>
<tr><td>Explanation</td><td colspan="2">Heating setting compensation</td><td colspan="3" rowspan="5">RESERVED</td><td colspan="2">Away Set OFF Timer</td><td>-</td></tr>
<tr><td rowspan="5">Indication and Details</td><td>Indication</td><td>Details</td><td>Indication</td><td colspan="2">Details</td><td>-</td></tr>
<tr><td>0</td><td>Disuse</td><td>0 or 1</td><td colspan="2">Auto Set OFF 30Min.</td><td rowspan="4">-</td></tr>
<tr><td>1</td><td>2℃</td><td>2</td><td colspan="2">Auto Set OFF 60Min.</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">5℃</td><td>3</td><td colspan="2">Auto Set OFF 120Min.</td></tr>
<tr><td>4</td><td colspan="2">Auto Set OFF 180Min.</td></tr>
</table>

1 Press the [Set] button to save and complete the option setting.

2 Press the [ESC] button to exit to normal mode.

- Level control : The centralized controller can limit the functions and inputs of connected products with this function enabled. [Example: Operation mode limit (Cooling only/Heating only/No limitation), Heating temperature upper limit, Cooling temperature lower limit] To enable 'Level control' when applying the DPM with the centralized controller, appoint the master (Set 'Use of external control [SEG14] option to 4 or higher).

– Example : When installing DPM (1 Outdoor unit with 4 indoor units)

Condition		SEG 14 Setting				Result
External control	Level control	Indoor 1	Indoor 2	Indoor 3	Indoor 4	
Default		Not set (0)				Slave (All)
Disuse	Use	4	Not set (0)	Not set (0)	Not set (0)	Master (Indoor 1), Slave (Indoor 2,3,4)
Use (Indoor 3)	Disuse	Not set (0)	Not set (0)	1~3	Not set (0)	Slave (All)
Use (Indoor 4)	Use	Not set (0)	Not set (0)	Not set (0)	5~7	Master (Indoor 4), Slave (Indoor 1,2,3)

NOTE

- Press [ESC] button anytime during setup to exit without setting.
- Option code will not be applied if you don't press [Set] button.
- Setting Installation option code is available only with a master wired remote controller.
- Setting Installation option code is available when there is one on one connection between a wired remote controller and an indoor unit.

4-4 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the link cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 4 cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

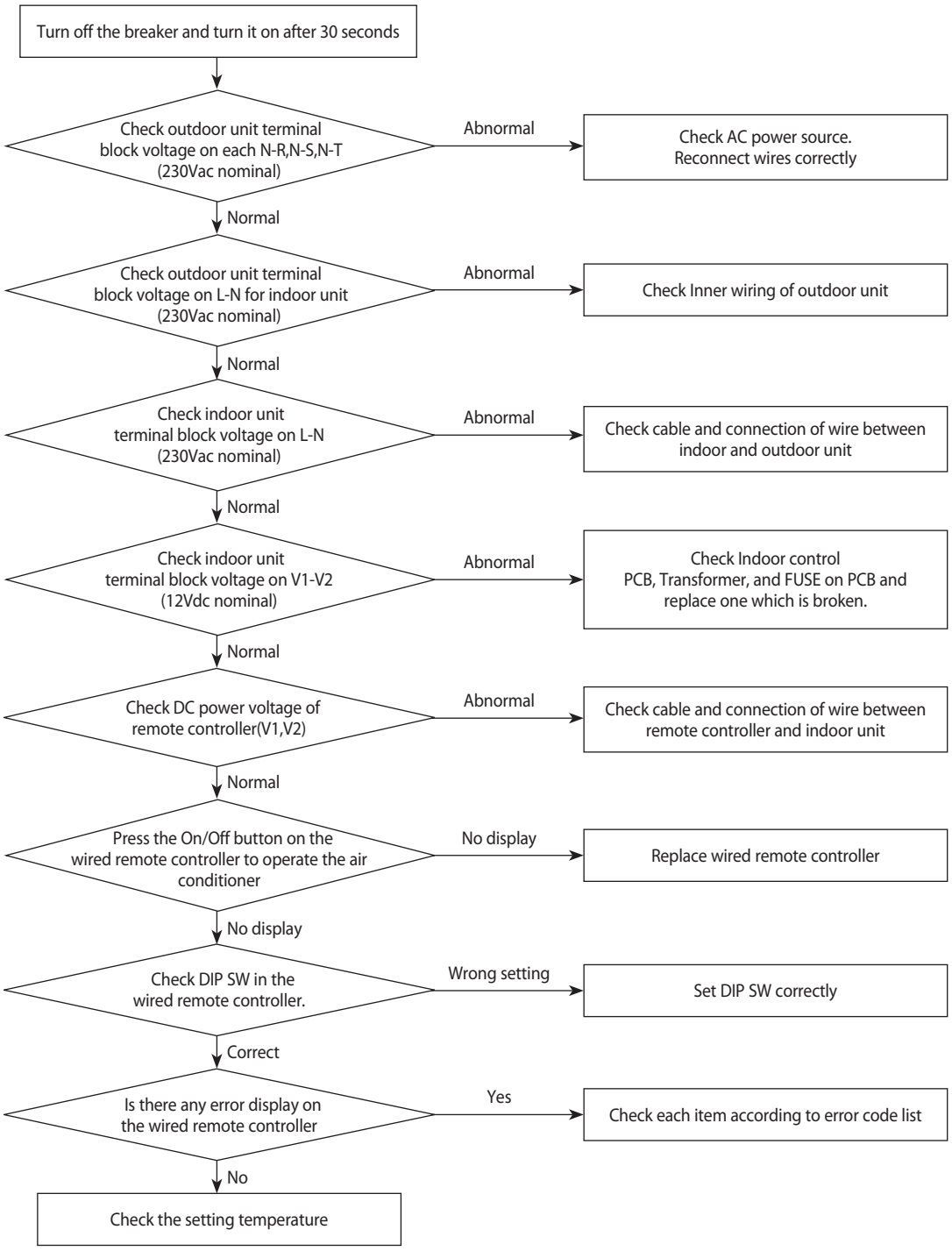
No	Operation of air conditioner	Explanation
1	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. **[In case of heat pump model]** In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
2	Compressor stops operation intermittently in DRY( ) mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
3	**[In case of heat pump model]** Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 12 minutes(maximum) until the deice is completed.
4	**[In case of heat pump model]** The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
5	**[In case of heat pump model]** Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation

4-5 Fault Diagnosis by Symptom

4-5-1 No Power(completely dead) - Initial diagnosis

1. Checklist:
   1) Is Power source voltage normal?
   2) Is AC power linked correctly?(miss-wiring, wire detaching etc.)
   3) Is any LED on the MAIN PCB of Outdoor unit lit?
   4) Is terminal voltage for indoor unit normal?(230Vac nominal)
   5) Is Wired remote controller installed correctly?

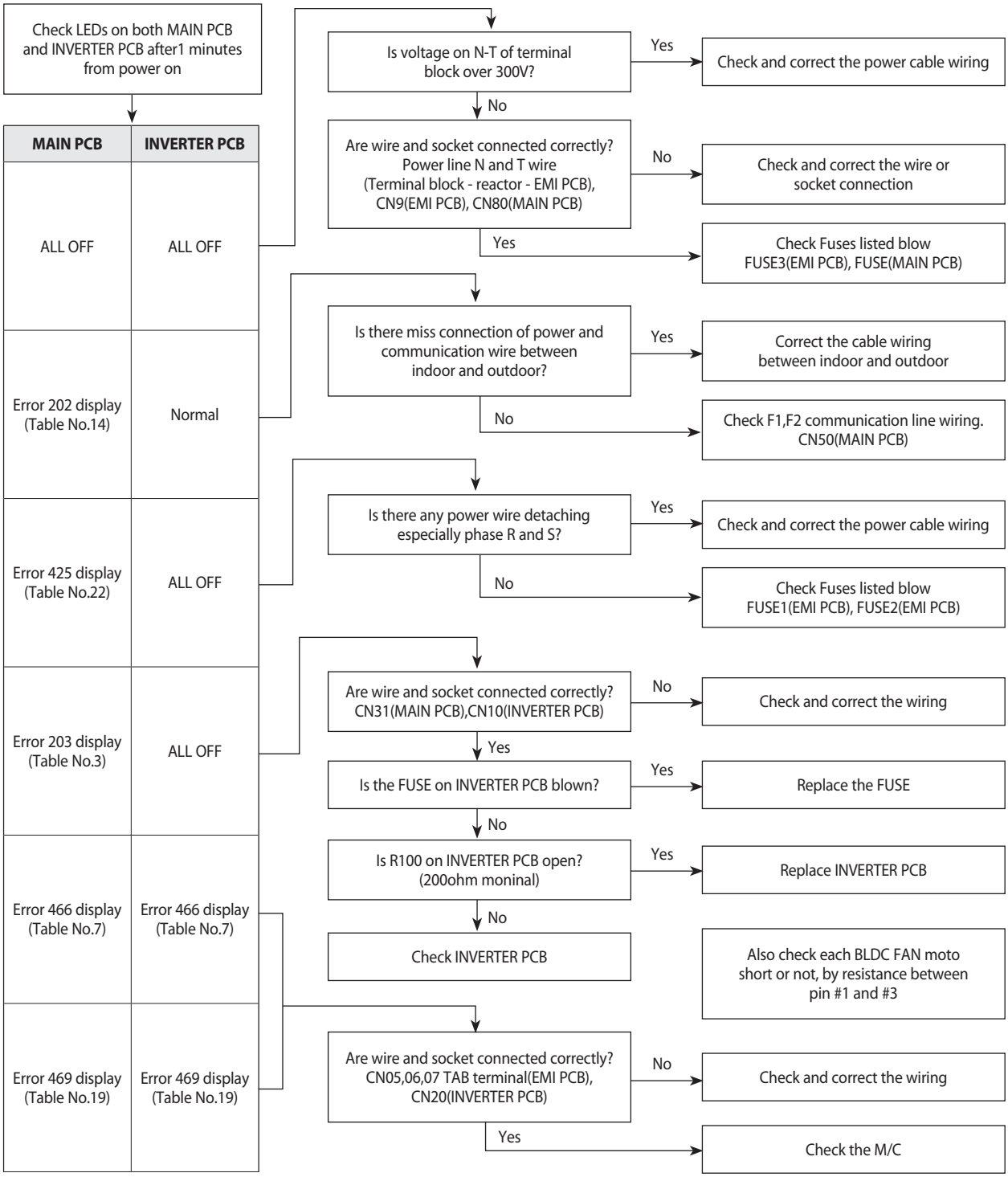
2. Troubleshooting procedure



4-5-2 The Outdoor unit Power Supply error

1. Checklist:
   1) Are the input power voltage and power connection correct?
   2) Is there any Fuse Short of the indoor or outdoor unit?
   3) Is any LED lit on both MAIN PCB and INVERTER PCB?
   4) Are Reactor wires of the outdoor unit connected correctly?

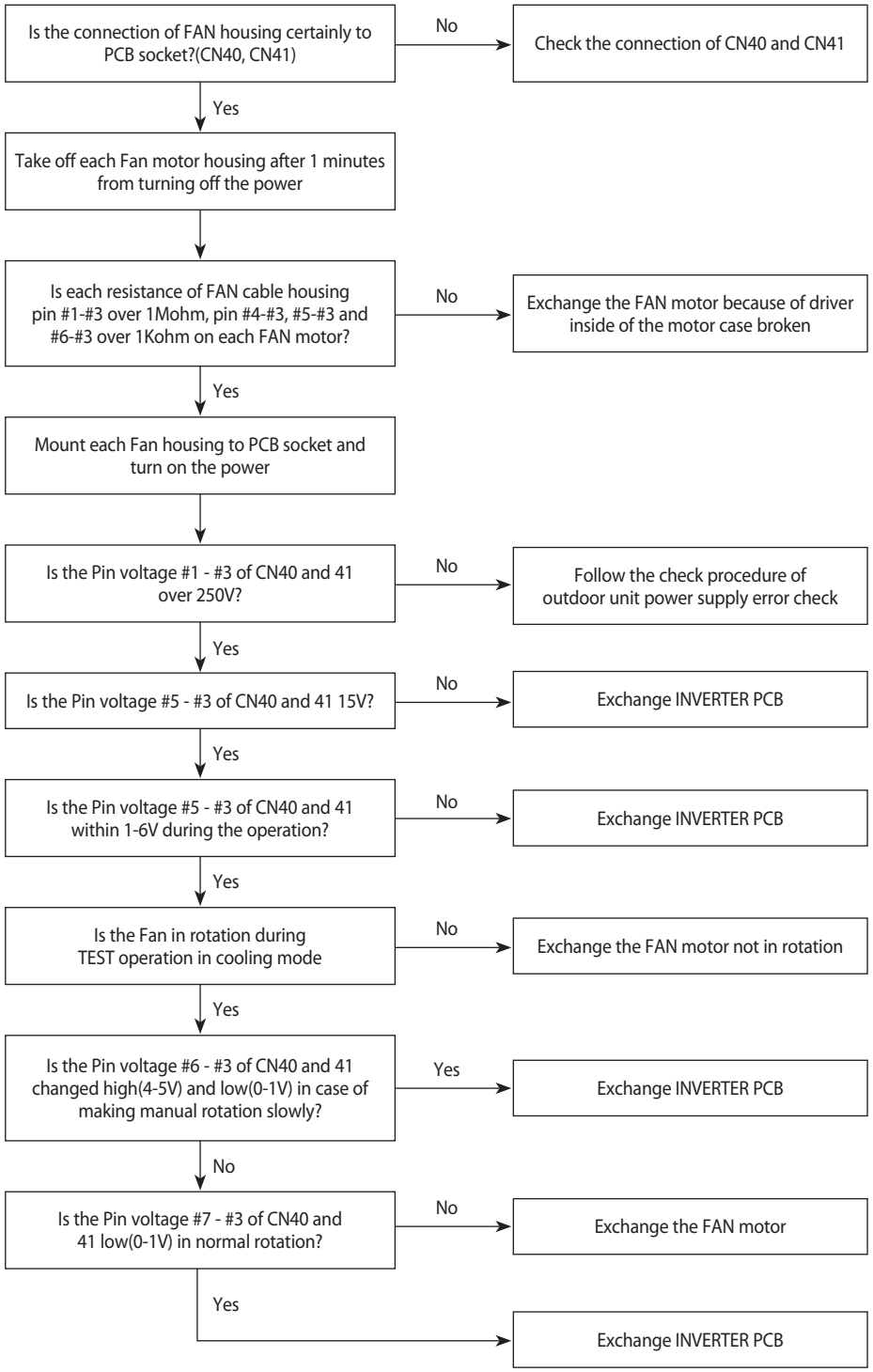
2. Troubleshooting procedure



4-5-3 The Outdoor unit Fan error

1. Checklist:
   1) Are the input power voltage and power connection correct?
   2) Is the motor wire connected to the outdoor PCB correctly?
   3) Is there no obstacle at the surrounding of motor and propeller?
   4) Does the driver in the motor case broken?

2. Troubleshooting procedure



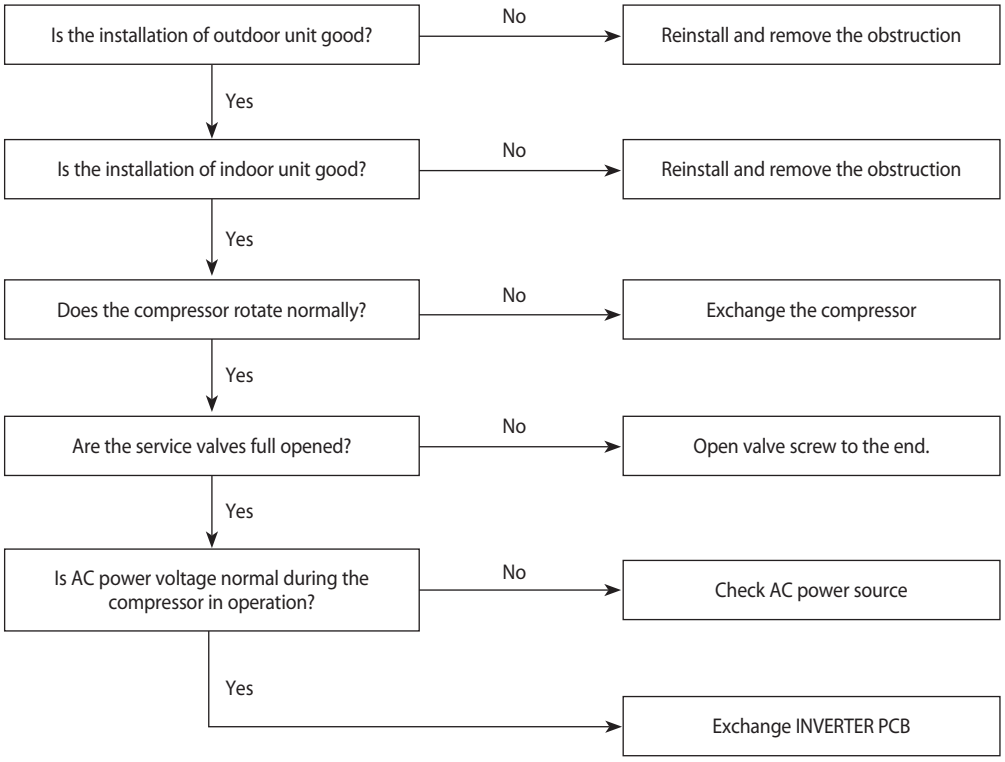
TEST operation
press K900 button on the MAIN PCB after power on.

- once : cooling mode
- twice in a second : heating mode

4-5-4 Total current trip error

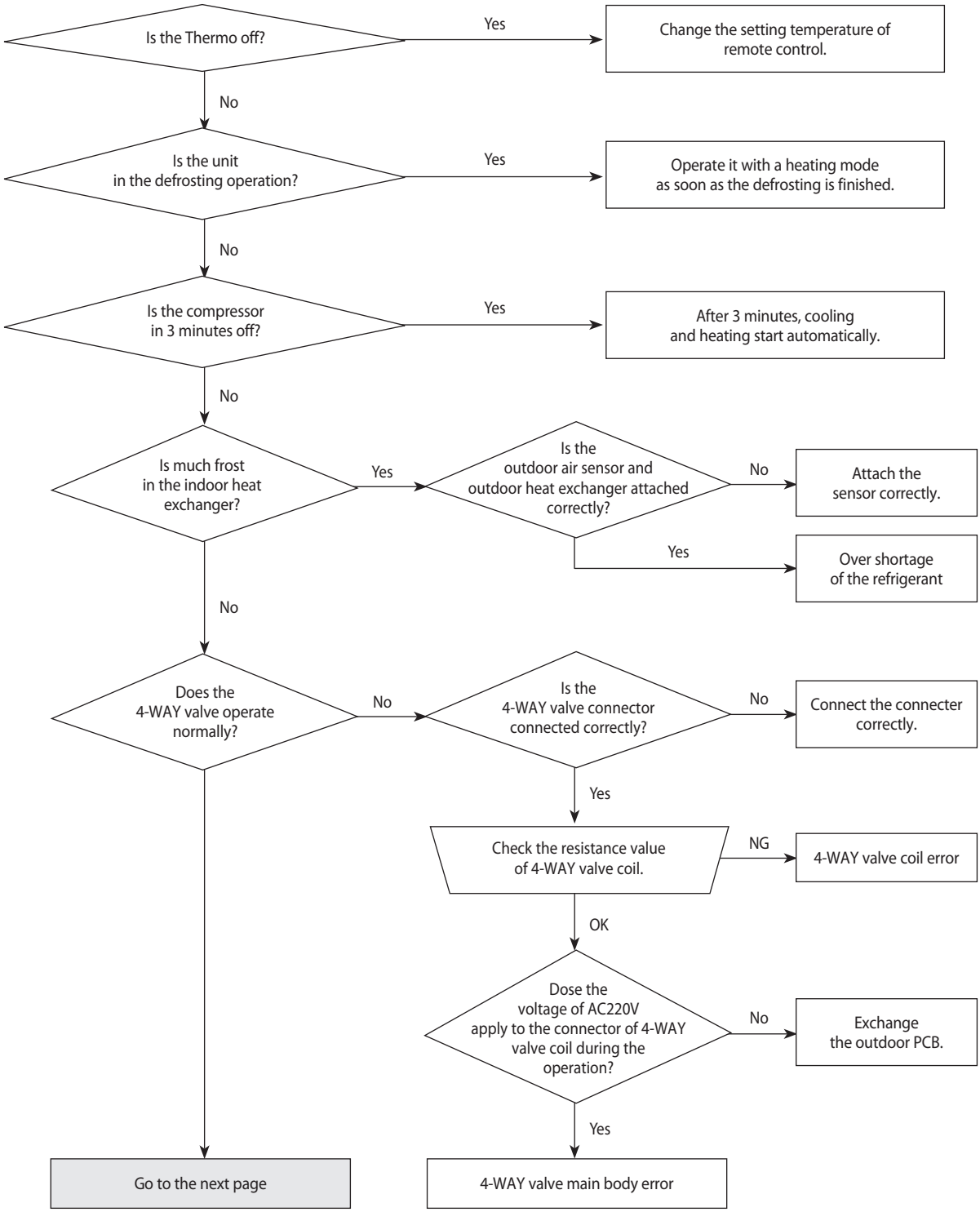
1. Checklist :
   1) Is the input power voltage proper?
   2) Is the refrigerant charged properly?
   3) Does the compressor rotate normally?(Reverse rotation, Locking etc.)
   4) Does the outdoor fan operate normally?(Fan propeller loss, Motor error ect.)
   5) Is the installation condition of outdoor unit good?(Piping, Space etc.)
   6) Is there no ventilation obstruction at the surrounding of outdoor unit?(Outdoor unit cover, Fan front obstruction etc.)
   7) Is there no ventilation obstruction at the surrounding of indoor unit?(Overload condition in heating mode)

2. Troubleshooting procedure

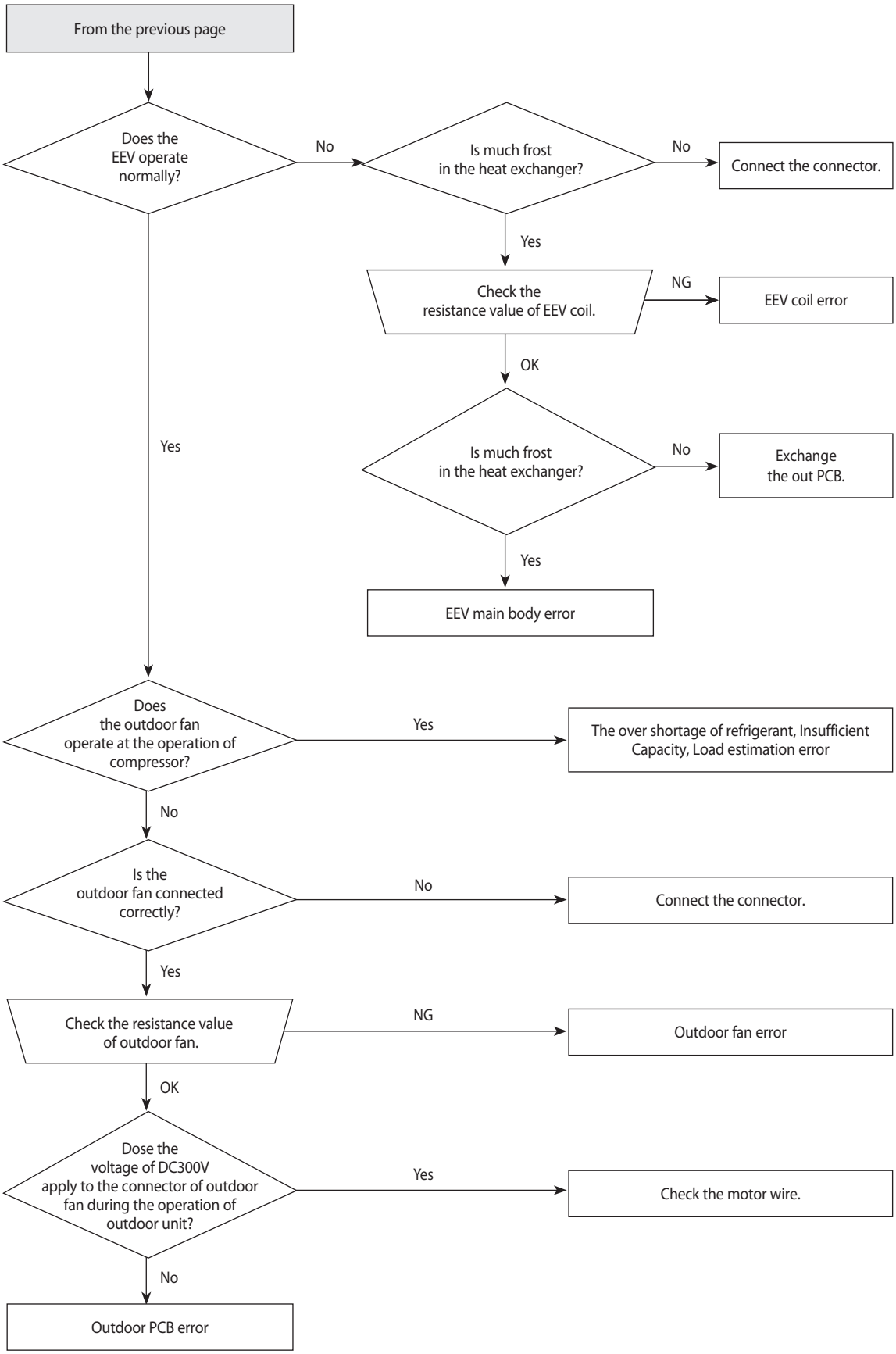


4-5-5 In case of heating at the cooling mode or cooling at the heating mode

1. Troubleshooting procedure



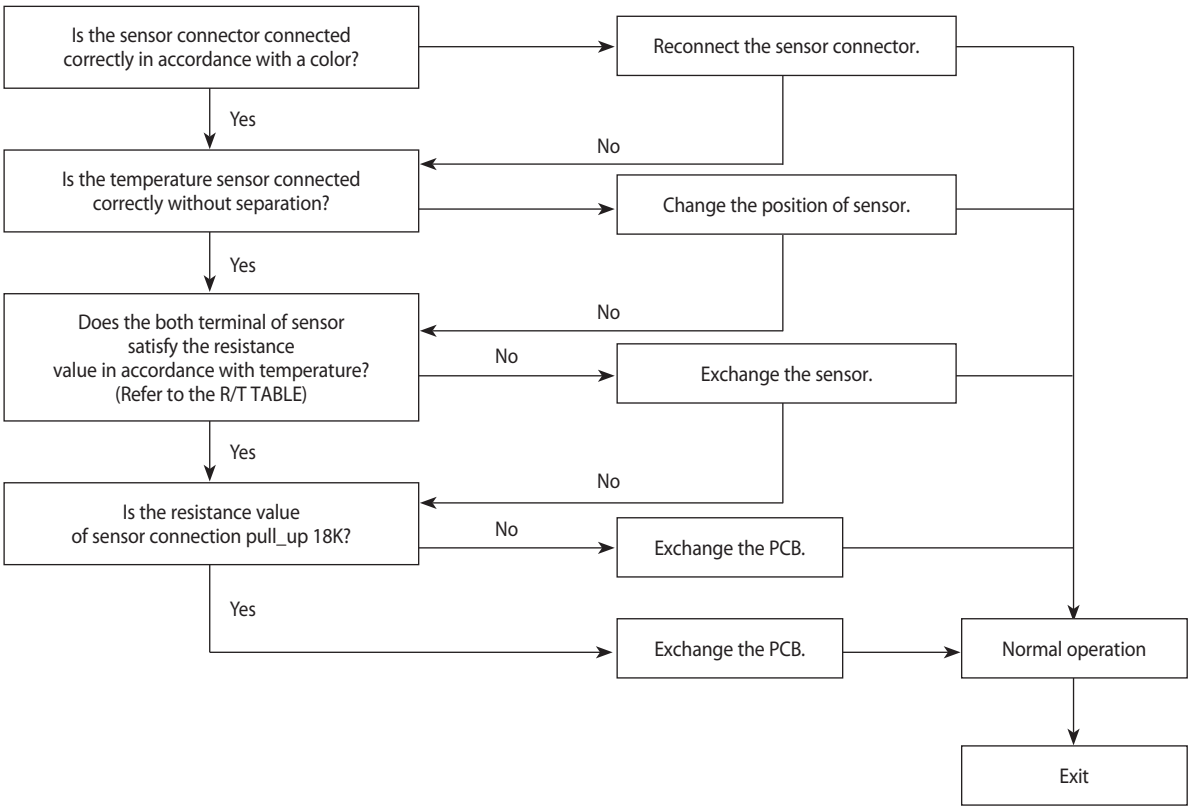
In case of heating at the cooling mode or cooling at the heating mode(cont.)

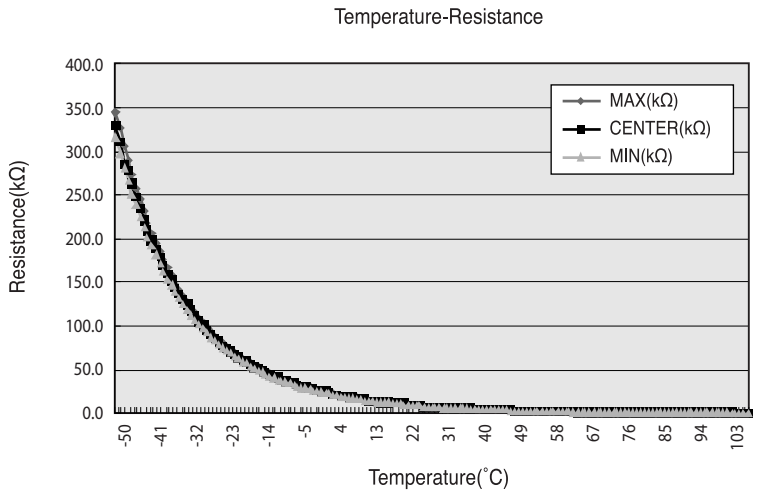


4-5-6 Outdoor temperature sensor error

1. Checklist :
   1) Is the sensor connector connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

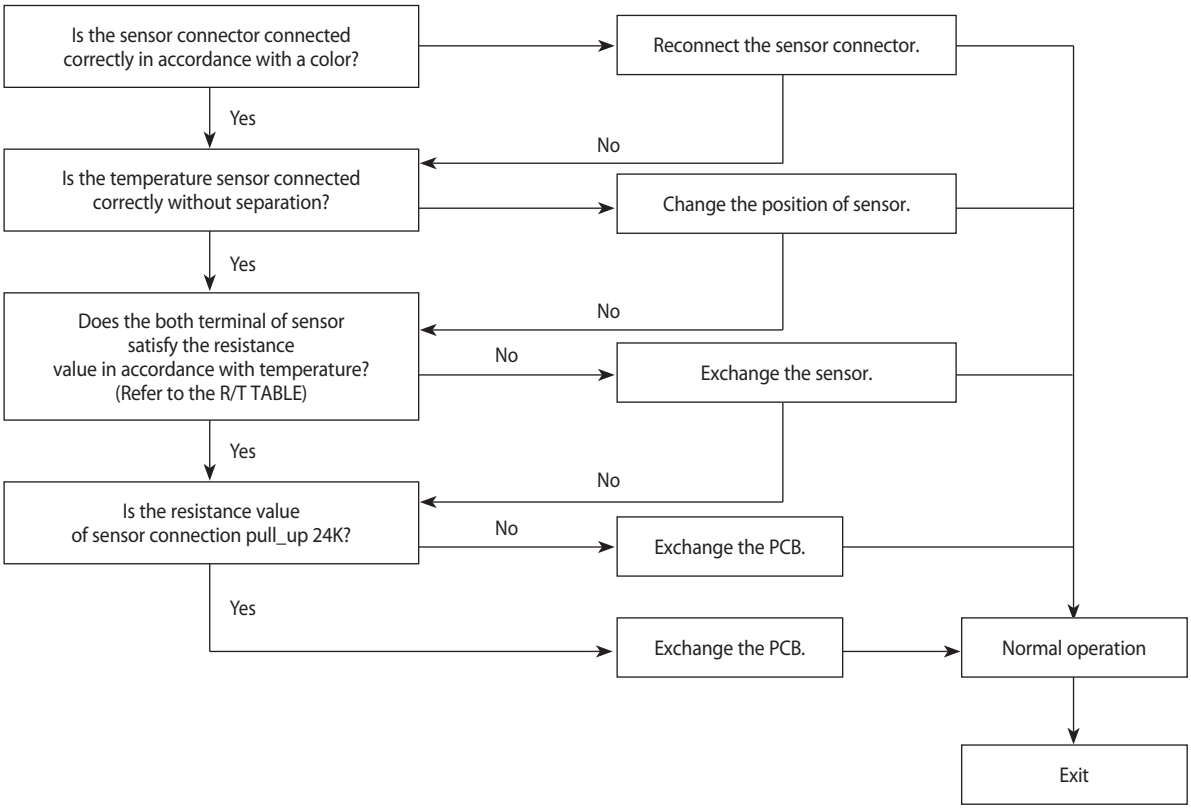


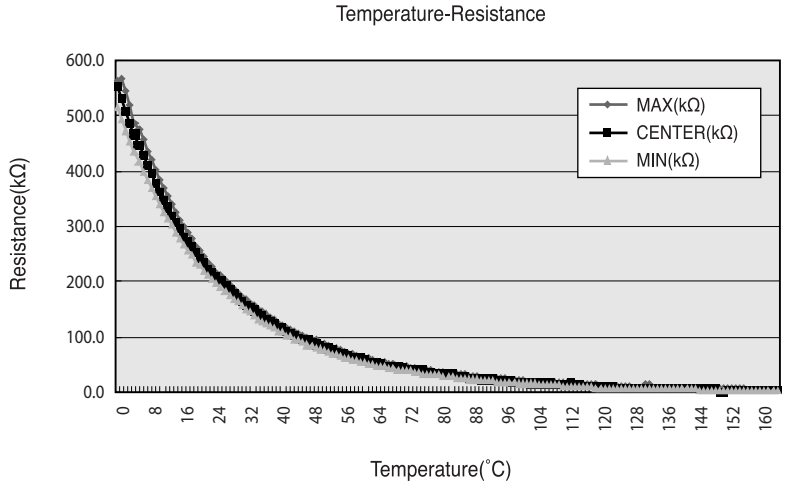


4-5-7 Discharge temperature sensor error

1. Checklist :
   1) Is the sensor connector connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

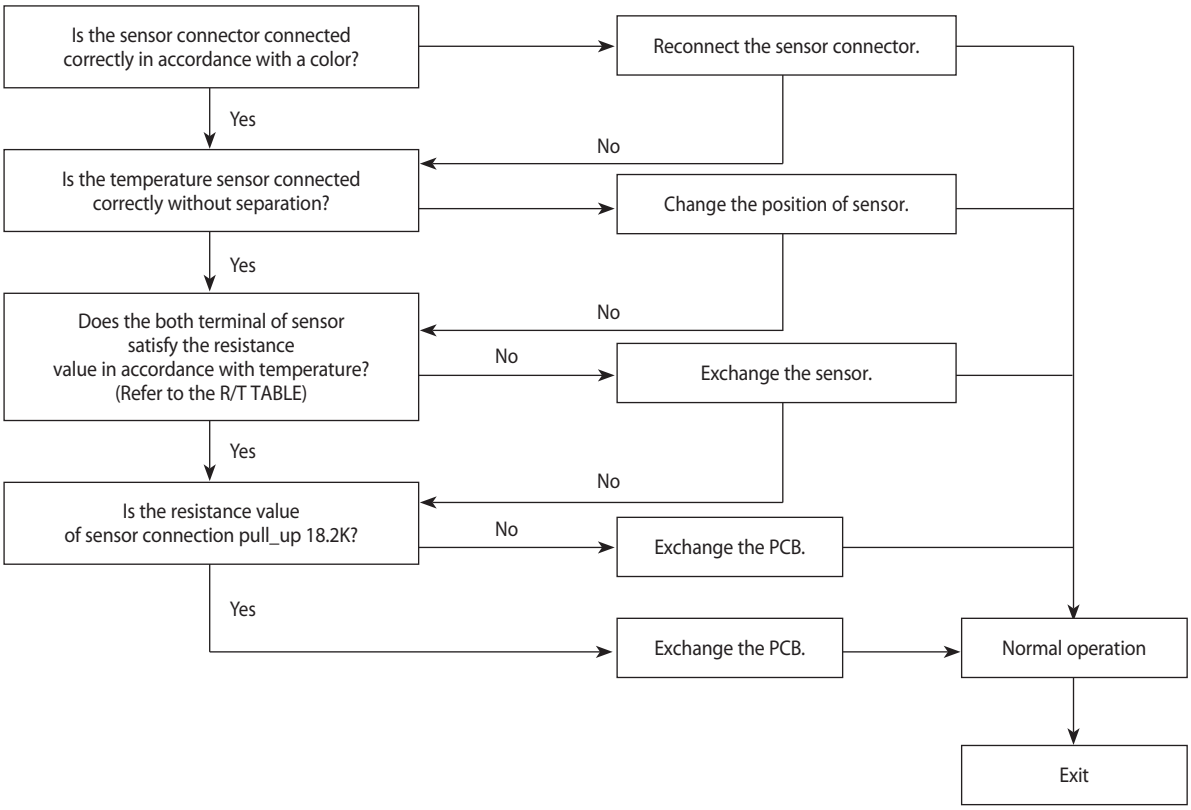


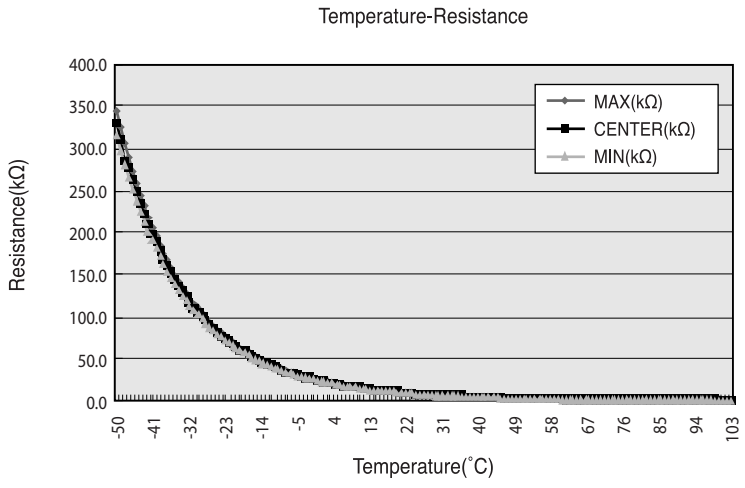


4-5-8 Coil temperature sensor error

1. Checklist :
   1) Is the sensor connector connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

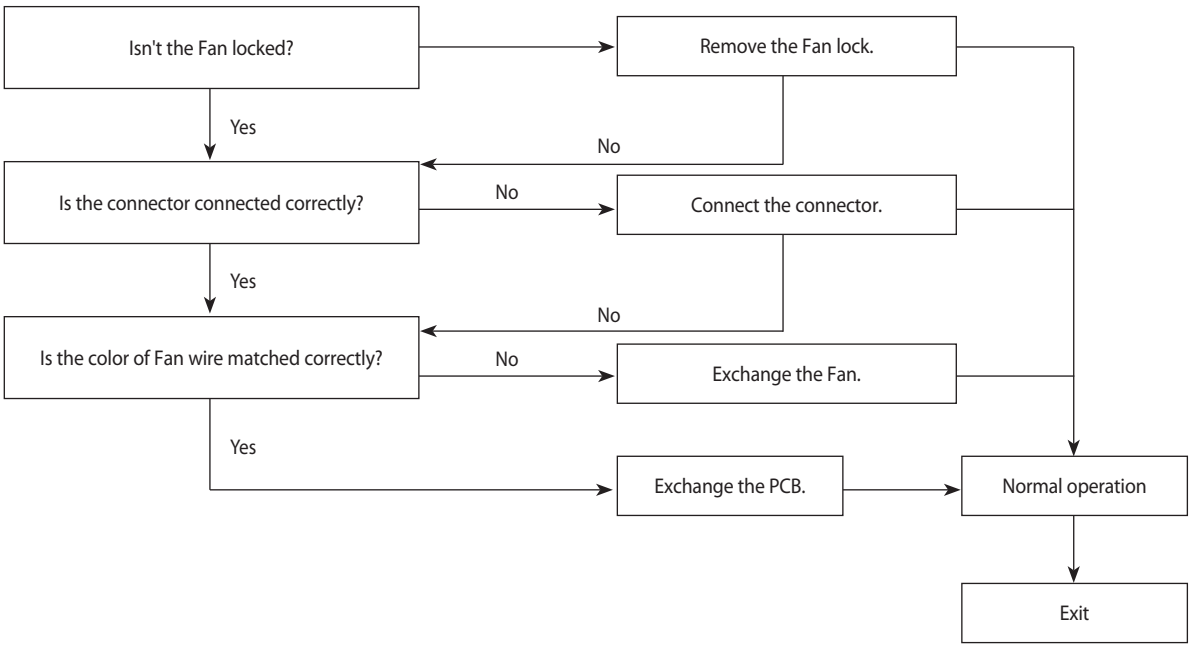




4-5-9 Fan error

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

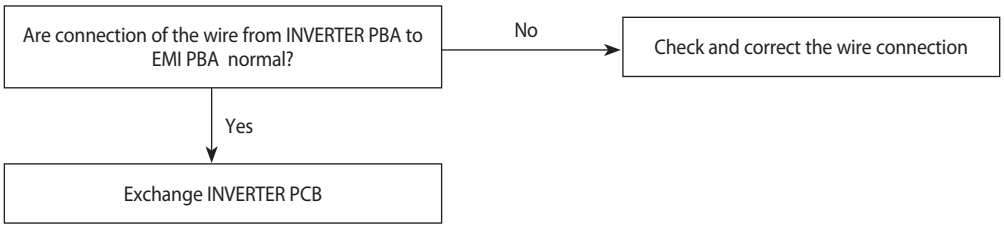
2. Troubleshooting procedure



4-5-10 DC-Link voltage sensor error

1. Checklist :
   1) Is the connection of R, S, T power wire normal?
   2) Are Relay RY21 and R200 on the INVERTER PCB mounted normally?

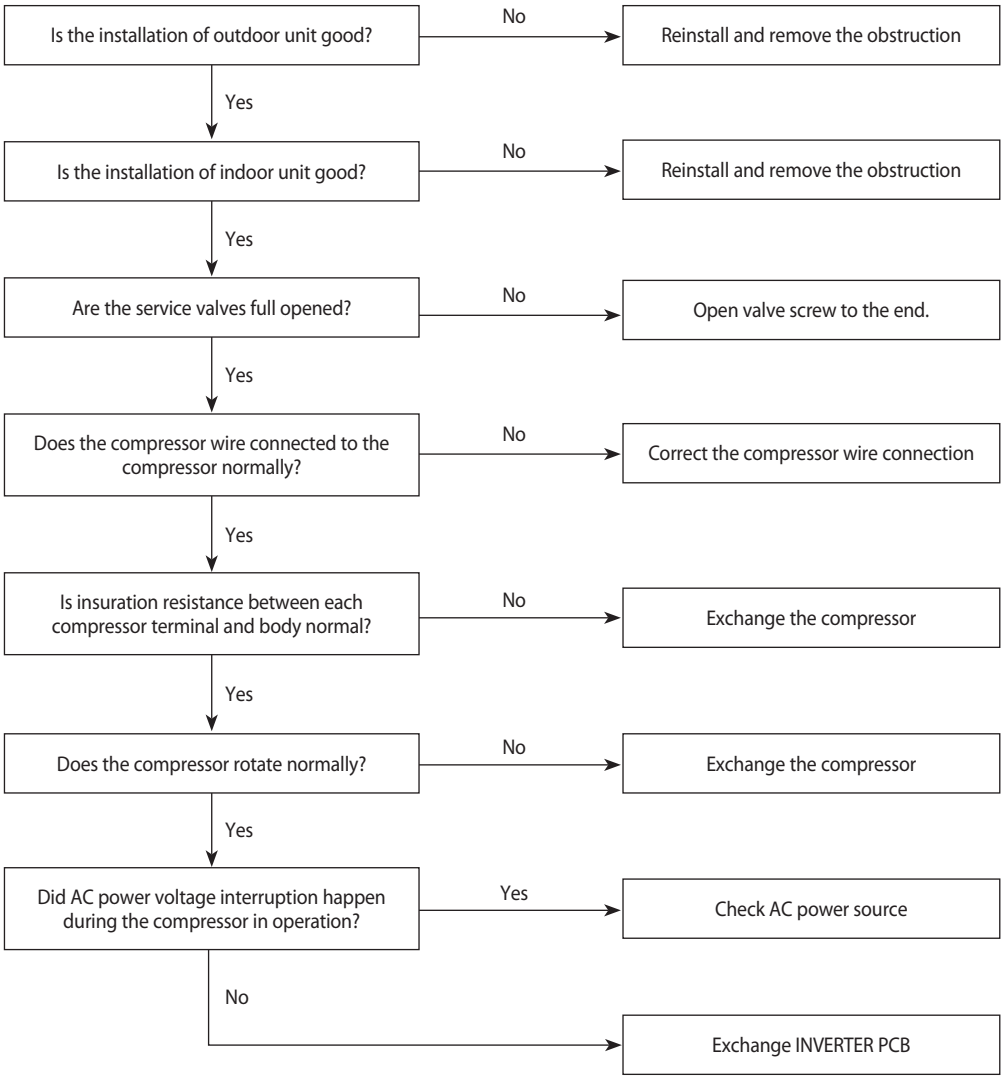
2. Troubleshooting procedure



4-5-11 O.C.(Over Current) error

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

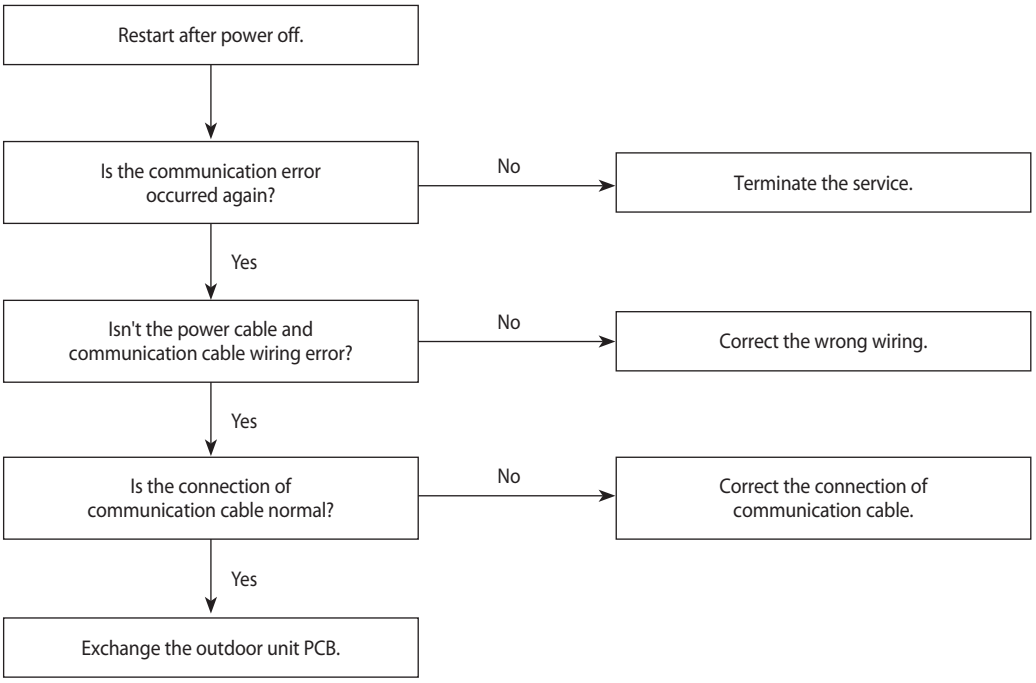
2. Troubleshooting procedure



4-5-12 Communication error

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

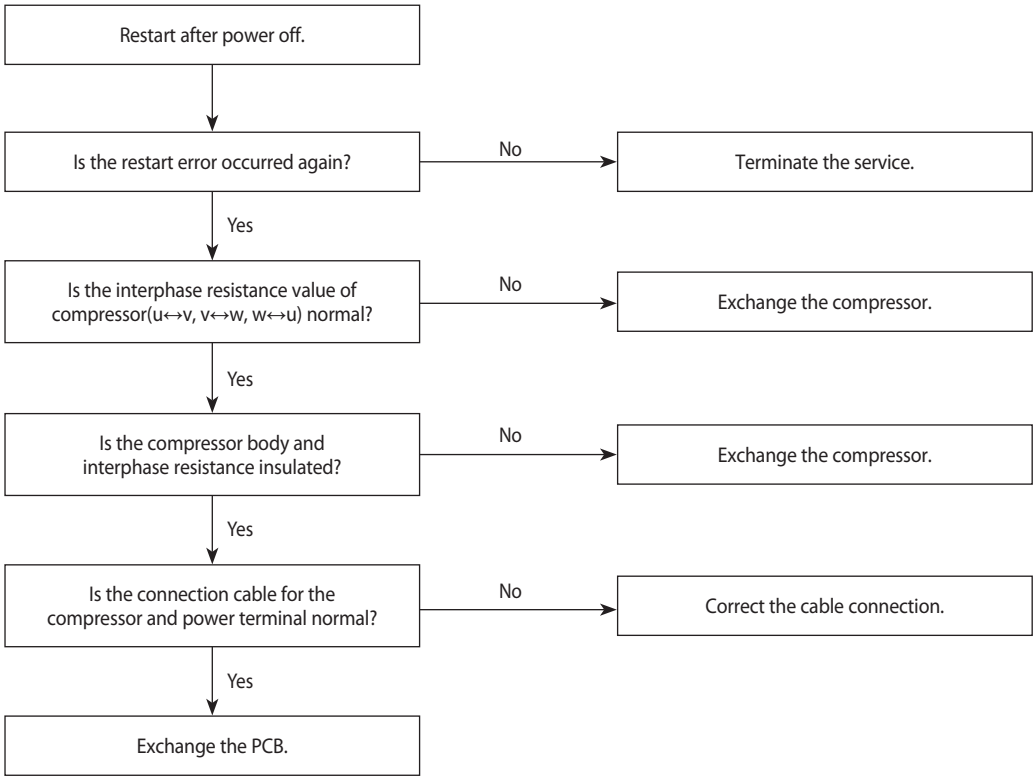
2. Troubleshooting procedure



4-5-13 Compressor start error

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

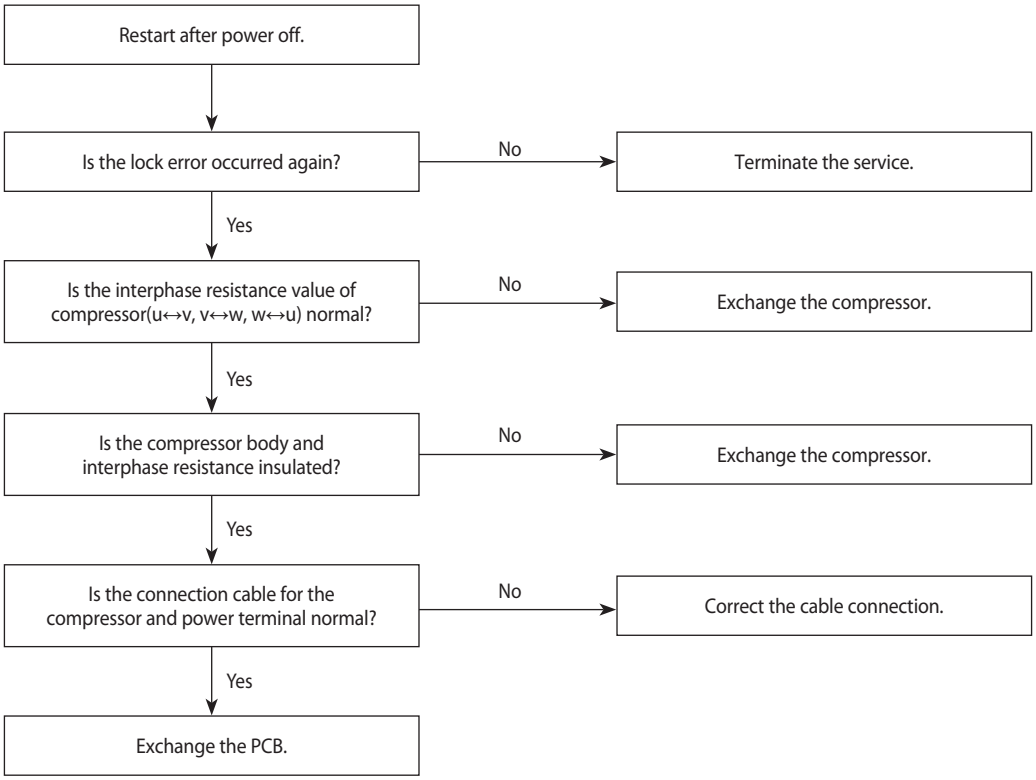
2. Troubleshooting procedure



4-5-14 Compressor lock error

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

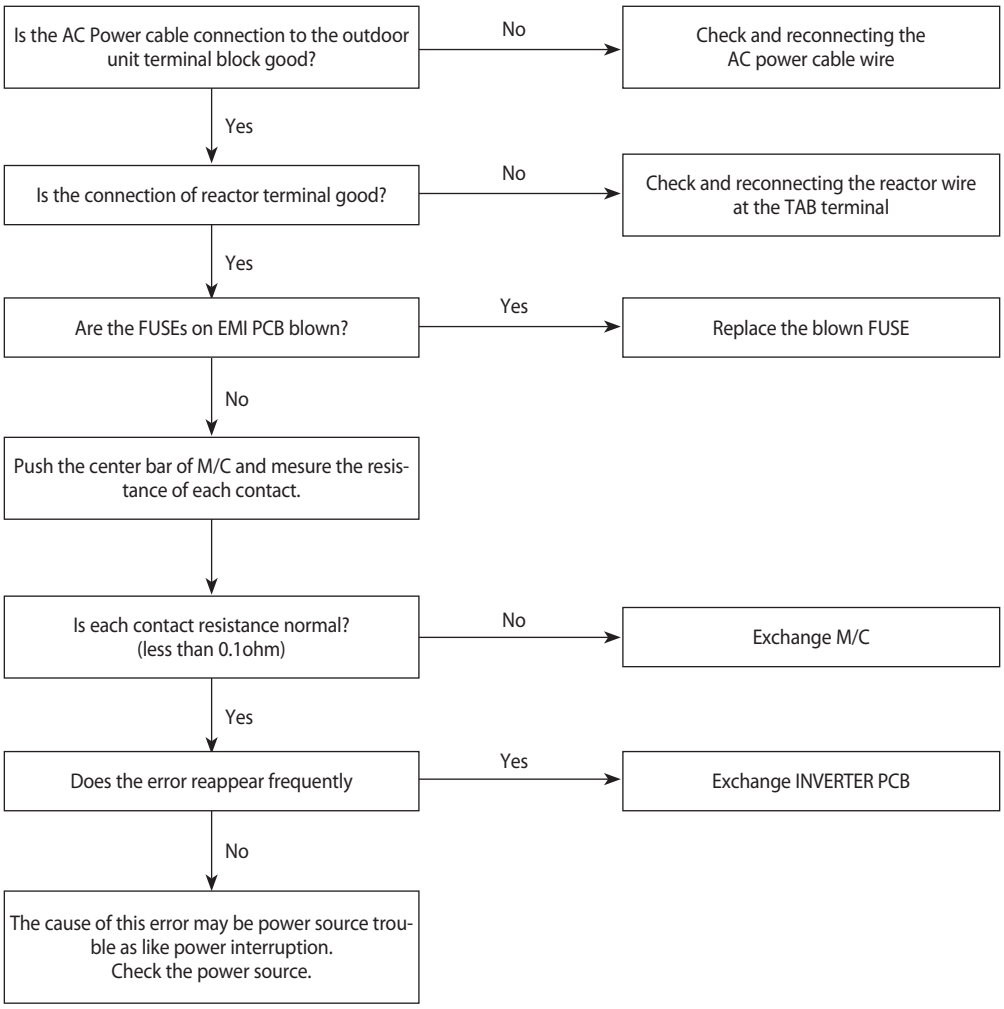
2. Troubleshooting procedure



4-5-15 DC Link Over voltage/ Low voltage error

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

2. Troubleshooting procedure



4-5-16 The others

1. Capacity miss match
   – Check again the indoor unit option code.

4-6 PCB Inspection Method

4-6-1 Pre-inspection Notices

1. Turn off the breaker, AC power source, before disassembling the unit because of electrical hazard.
2. Confirm the complete discharge of capacitor C102, C702, C703, C704, C705, C706, C707 on the INVERTER PCB when you touch the PCB.Especially dischargeing speed of C702-C707 is very slow because of little load in stand-by condition. To confirm the voltae of C702-C707, measure the DC link voltage at the IGBT module pins near C701 at which applying voltage(450-510Vdc) is marked.
   To confirm discharging of C102, measure the voltage of non mounted C103 solder hole or check if all LEDs are off.
3. Don't touch the metal body of electrolytic capacitor for avoiding electrical shock before confirming discharge.
4. To discharging the capacitor use power resistor of about 1 Kohm 10W. Soldering tool(non electronic temperature control type) can be used as a discharging resistor.
5. Don't pull the lead wire but hold the whole housing to disconnect or connect a housing from or to the PCB.

4-6-2 Inspection Procedure

1. Check the connection of each housing to the connector first and the peeling of PCB copper pattern.
2. The PCB is composed of the 3 part in the indoor unit.
   - INDOOR Main PCB part : Indoor unit control, MICOM and surrounding circuit, relay, fan motor driving circuit, sensor reading circuit, buzzer driving circuit and DC power supplying circuit.
   - Display PCB part : LED lamps, Switch,Remocon module.
   - INDOOR EMI PCB part : Line filter, Noise Capacitor and Varistor
3. The PCB is composed of the 3 part in the outdoor unit.
   - EMI PCB part : Line filter for electrical noise, Varistors for surge and Fuses.
   - MAIN PCB part : Refrigeration cycle controller with MICOM
   - INVERTER PCB part : Compressor driving inverter and BLDC fan controller

4-6-3 Indoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Open the electronic component box and check the PCB fuse	Turn off the power 1) Is the Fuse F701 on the EMI PCB blown? 2) Is the Fuse F702 on the MAIN PCB blown?	• Over current • Indoor fan motor short • PCB AC Part pattern short
2	Check the LEDs for DC power and communication condition	Turn on the power 1) Is RED LED blinking? his led means micom is running normally. 2) Is GREEN LED blinking? This means communication between Indoor and Outdoor unit is on 3) Is YELLOW LED blinking? This means communication between Indoor and wired remote controller is on. It may take one minute to start communication	• Communication ciucuit trouble • Communication wire connection trouble • wrong connection for power supply wire of remote controller
3	Check the DIP and rotary switch on the PCB	1) Is the setting of each switch proper?	• Wrong setting of switch
4	Check the DC voltage	1) Is the voltage of CN32 pin #1-#2 12V? 2) Is the voltage of C109 V?	• SMPS on MAIN PBA trouble • Load short
5	FAN operation checking Press the ON/OFF button. 1. FAN Speed[HIGH] 2. FAN mode	1) Is the FAN motor running? 2) Is the connection of CN73 normal?	• Controller trouble inside of the fan motor • connector trouble of CN73

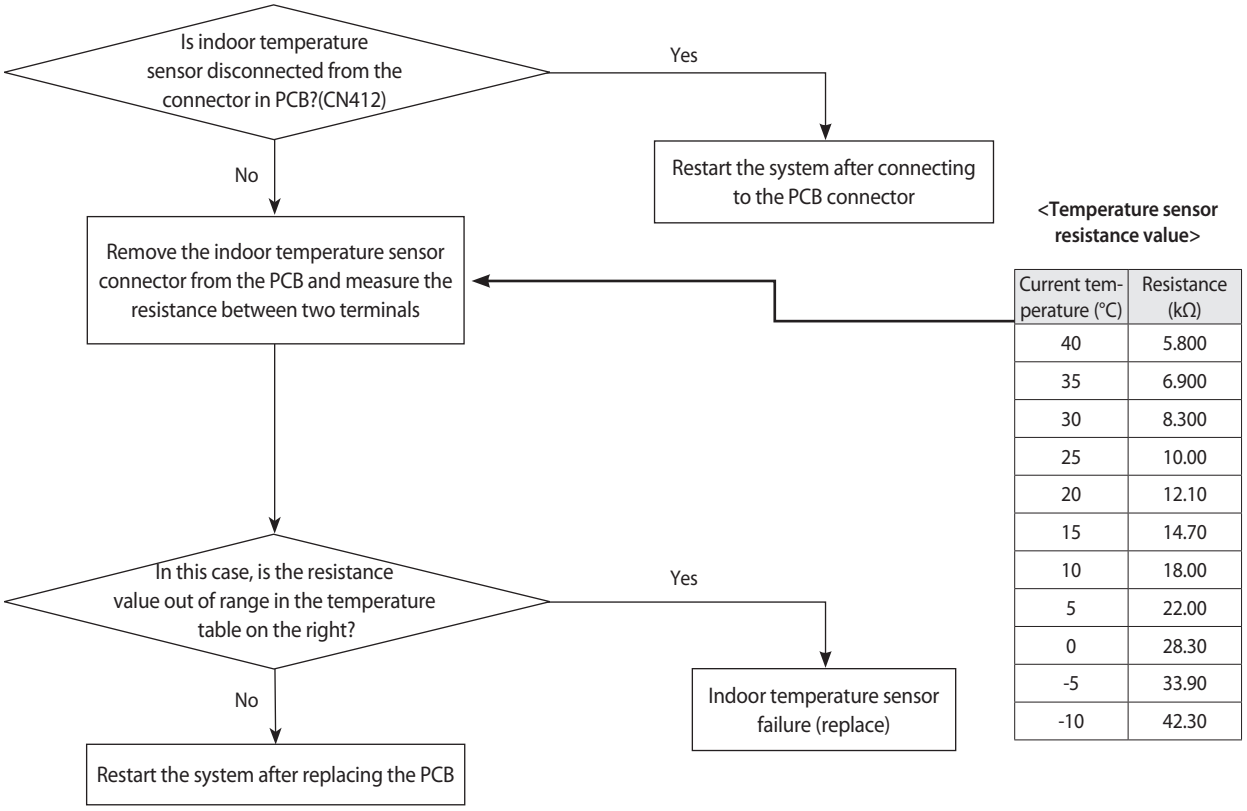
4-6-4 Outdoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Turn OFF the power and check wire and socket connection on each part	Wait until C702-C707 discharged 1) Is connection of housing to socket normal? 2) Is connection of each wire to terminal block normal? 3) Is the reactor wire connection normal? 4) Is there no miss-wiring of each cable?	• installation mistake • miss assembling
2	FUSE check	Is the fuses on each PCB normal? 3 fuese on EMI PCB 1 fuse on MAIN PCB 1 fuse on INVERTER PCB	• wire short • overload • BLDC FAN short error
3	Turn on the power and check voltage of terminal block	Is N-R,N-S,N-T around 230Vac? Is R-S,S-T,T-R around 400Vac? Is L-N(to indoor unit) around 230Vac? Is F1-F2 within 5Vdc?	• miss wiring of power cable • wire detaching
4	Check LED display on AIN PCB	1) Is RED LED ON? 2) Is GREEN LED Blinking once a second? 3) Is LEDs displaying error code pattern?	• MAIN PCB power trouble • bad communication between indoor and outdoor unit • error detection
5	Check LED display on INVERTER PCB	1) Is RED LED ON? 2) Is GREEN LED Blinking once a second? 3) Is LEDs displaying error code pattern?	• INVERTER PCB power trouble • NO communication between MAIN and INVERTER PCB • error detection
6	Check DC voltage of SMPS output	**MAIN PCB** 1) Is voltage of CN51 pin#1-#2 12-14.5V? 2) Is voltage of C108 5V? **INVERTER PCB** 3) Is voltage of CN51 pin#1-#2 5V? 4) Is voltage of C124 12V? 5) Is voltage of each ZD100,ZD101,ZD102,ZD103 17-18V?	• SMPS circuit trouble
7	Check INVERTER PCB	1) Is resistance of R100 200ohm? To check this, touch one probe to CN10 pin#1(N) and the other to D101 upper side pin of '~' marking pins 2) Is DC Link voltage 450-510V? Check IGBT module pins marking voltage near C701	• resister • wire connection between EMI PCB and INVERTER PCB
8	Check BLDC fan	1) See 12-2-3 The Outdoor unit Fan error(Fault Diagnosis)	

4-7 Troubleshooting by symptoms

4-7-1 Indoor temperature sensor (open/short)

Indoor unit display	X (Operation) X (Defrost) ◑ (Timer) X(Fan) X (Filter)
Wire remote controller display	E121
Symptom	Error of Room sensor in the indoor unit(Open/Short)
Failure	Short or leakage of the Room sensor

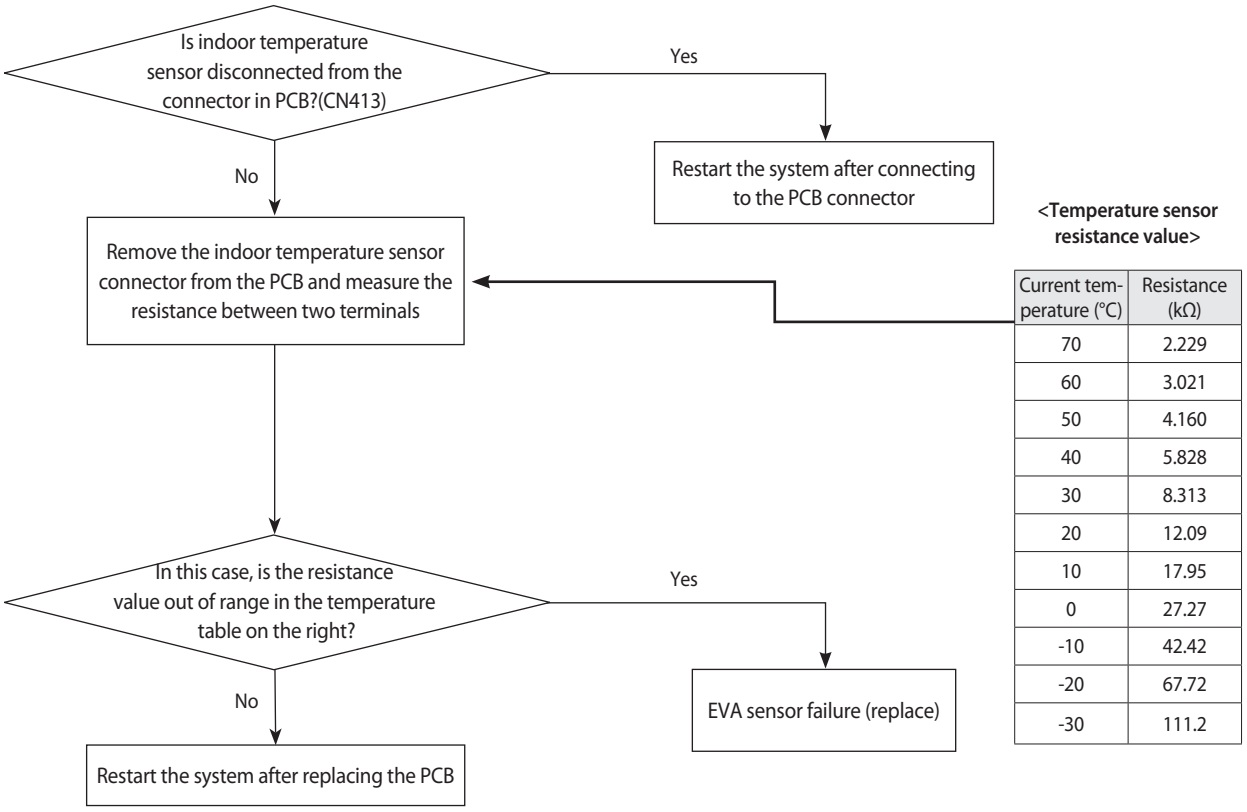


<Temperature sensor resistance value>

Current temperature (°C)	Resistance (kΩ)
40	5.800
35	6.900
30	8.300
25	10.00
20	12.10
15	14.70
10	18.00
5	22.00
0	28.30
-5	33.90
-10	42.30

4-7-2 Eva in and out sensor (open/short)

Indoor unit display	◑(Operation) X (Defrost) ◑ (Timer) X(Fan) X (Filter)
Wire remote controller display	E122
Symptom	Error of EVA-IN,EVA-OUT sensor in the indoor unit(Open/Short)
Failure	Short or leakage of the EVA sensor

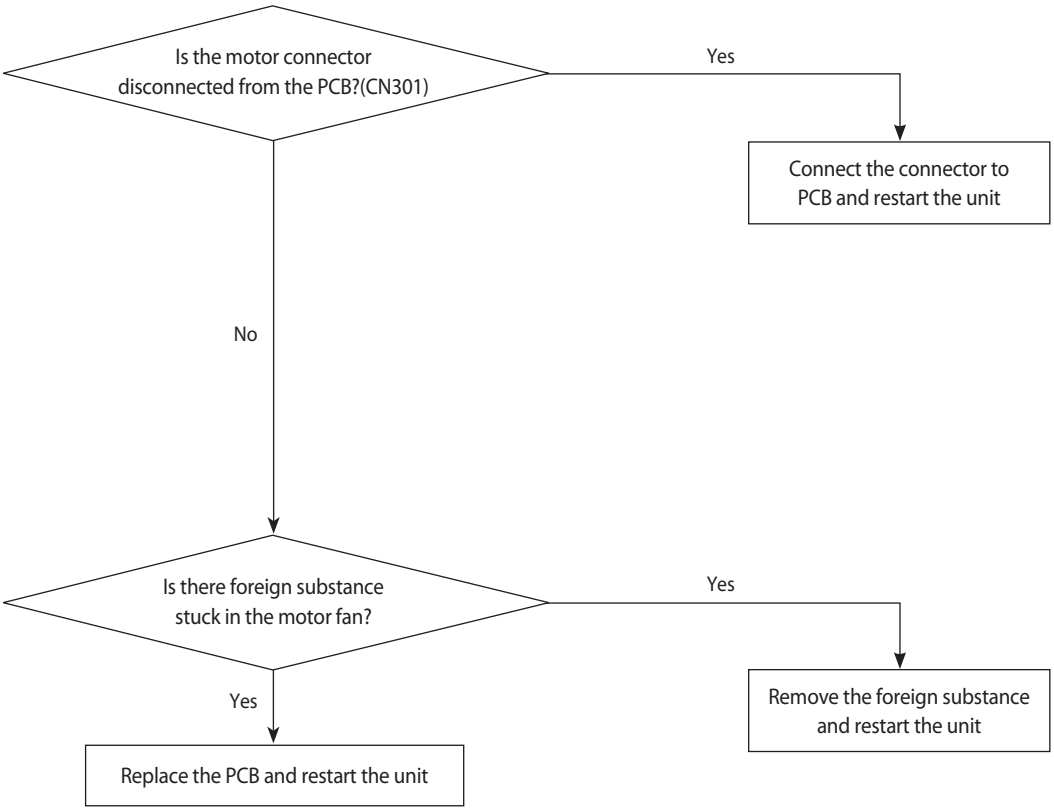


<Temperature sensor resistance value>

Current temperature (°C)	Resistance (kΩ)
70	2.229
60	3.021
50	4.160
40	5.828
30	8.313
20	12.09
10	17.95
0	27.27
-10	42.42
-20	67.72
-30	111.2

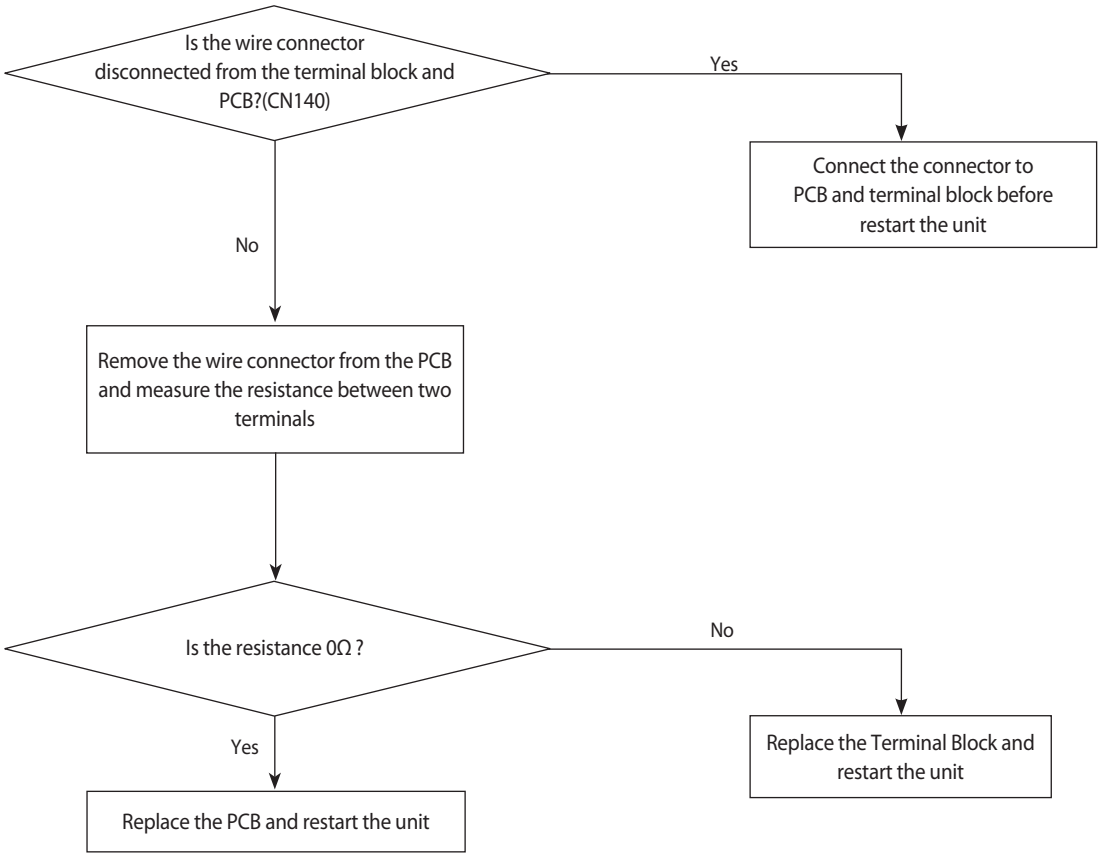
4-7-3 Fan error

Indoor unit display	X (Operation) X (Defrost) X(Timer) ◑(Fan) X (Filter)
Wire remote controller display	E154
Symptom	Error of Fan motor in the indoor unit
Failure	Fan error



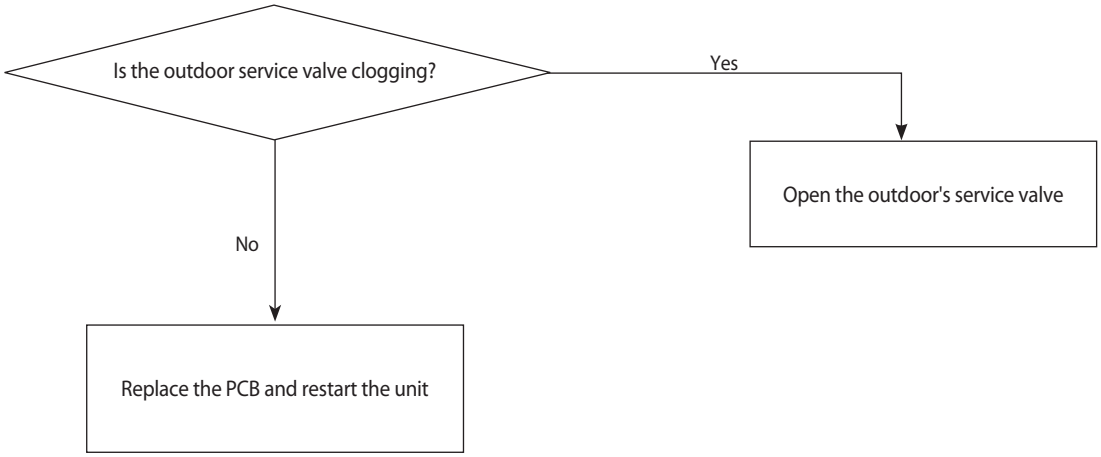
4-7-4 Terminal Block's Terminal Fuse(Open)

Indoor unit display	X (Operation) X (Defrost) ◑ (Timer) ◑ (Fan) ◑ (Filter)
Wire remote controller display	E198
Symptom	Error of Terminal Block's Terminal Fuse(Open)
Failure	Fuse open



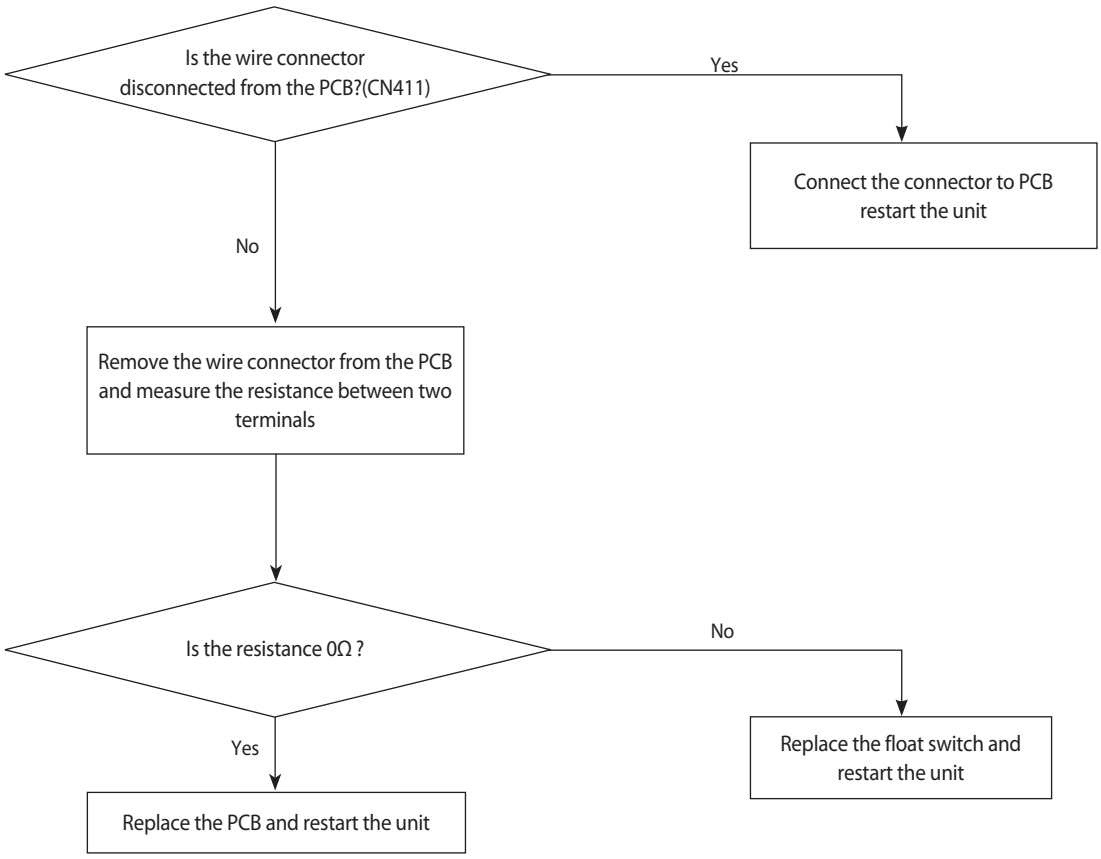
4-7-5 Outdoor's service valve(Clog)

Indoor unit display	◑ (Operation) X (Defrost) X (Timer) ◑ (Fan) ◑ (Filter)
Wire remote controller display	E422
Symptom	Clogging of outdoor's service valve
Failure	Valve clog



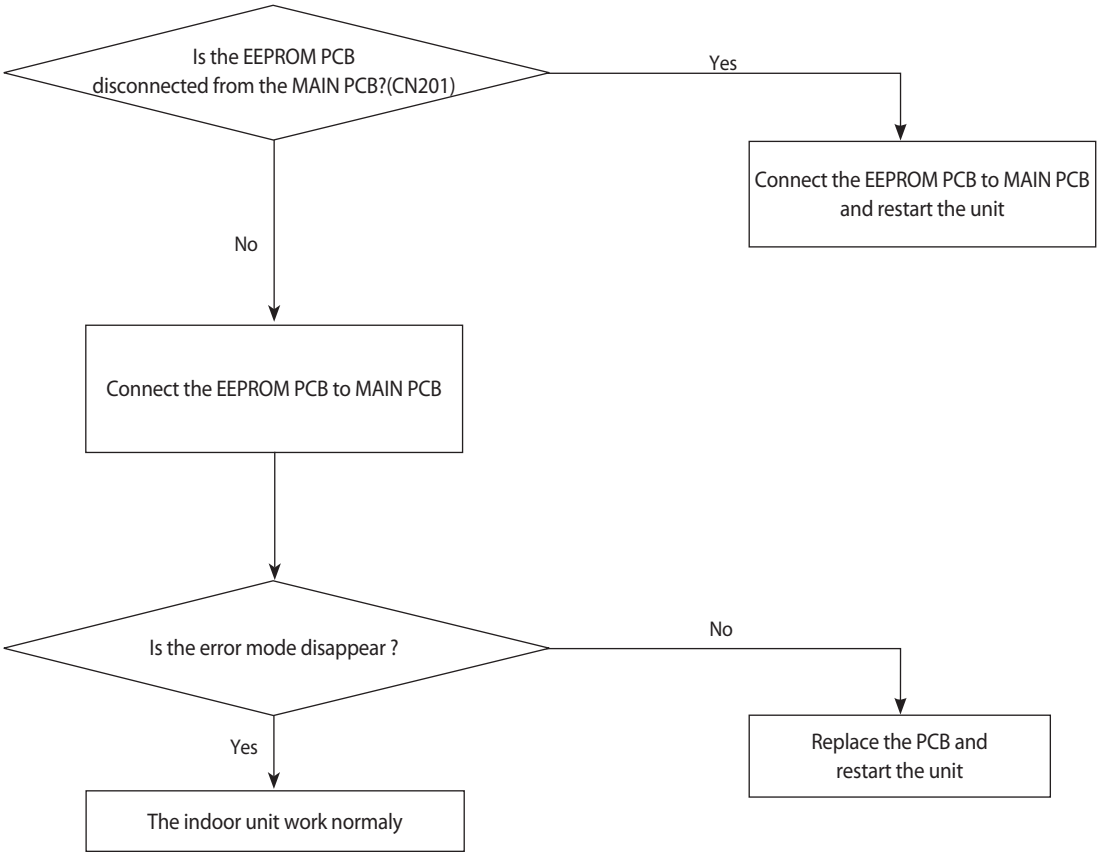
4-7-6 float switch(Open)

Indoor unit display	X (Operation) X (Defrost) X (Timer) ◑(Fan) ◑ (Filter)
Wire remote controller display	E153
Symptom	2nd Detection of the float switch
Failure	Float switch open



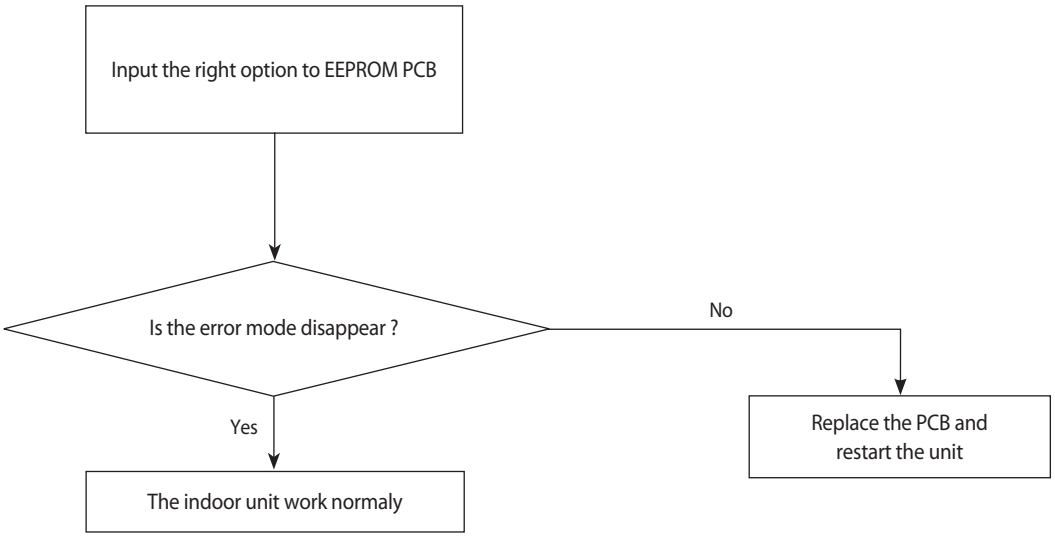
4-7-7 EEPROM error

Indoor unit display	◑ (Operation) ◑ (Defrost) ◑ (Timer) ◑ (Fan) ◑ (Filter)
Wire remote controller display	E162
Symptom	EEPROM PCB disconnected from the MAIN PCB
Failure	Option error



4-7-8 Option error

Indoor unit display	◑ (Operation) ◑ (Defrost) ◑ (Timer) ◑ (Fan) ◑ (Filter)
Wire remote controller display	E163
Symptom	EEPROM option setting error
Failure	Option error



4-8 Main Part Inspection Method

<table>
<tr><th>Part</th><th colspan="2">Breakdown Inspection Method</th></tr>
<tr><td rowspan="3">Indoor Unit Temperature Sensor</td><td colspan="2">Measure sensor resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature 37kΩ~8.3kΩ(-7˚C~+30˚C)</td></tr>
<tr><td>Abnormal</td><td>∞,0Ω...Open or Short</td></tr>
<tr><td rowspan="3">Indoor Unit BLDC FAN Motor</td><td colspan="2">Measure terminal resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature(10˚C~30˚C)
<table>
<tr><th>wire</th><th>pin number</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>RED - BLACK</td><td>1-3</td><td>over 1MΩ</td><td>+300V motor power</td></tr>
<tr><td>WHITE - BLACK</td><td>4-3</td><td>1KΩ ~ 2KΩ</td><td>+15V control power</td></tr>
<tr><td>YELLOW - BLACK</td><td>5-3</td><td>200KΩ ~ 300KΩ</td><td>control</td></tr>
<tr><td>BLUE - BLACK</td><td>6-3</td><td>10KΩ ~ 50KΩ</td><td>pulse</td></tr>
</table></td></tr>
<tr><td>Abnormal</td><td>∞,0Ω...Open or Short</td></tr>
<tr><td rowspan="3">Outdoor Unit
Outdoor Temperature Sensor
&
Cond Temperature Sensor</td><td colspan="2">Measure sensor resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature 37kΩ~8.3kΩ(-7˚C~+30˚C) see 12-2-6 and 12-2-8</td></tr>
<tr><td>Abnormal</td><td>∞,0Ω...Open or Short</td></tr>
<tr><td rowspan="3">Outdoor Unit
Discharge Temperature Sensor</td><td colspan="2">Measure sensor resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature 563kΩ~157kΩ(0˚C~+30˚C) see 12-2-7</td></tr>
<tr><td>Abnormal</td><td>∞,0Ω...Open or Short</td></tr>
<tr><td rowspan="3">Outdoor Unit BLDC FAN MOTOR</td><td colspan="2">Measure terminal resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature(10˚C~30˚C)
<table>
<tr><th>wire</th><th>pin number</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>RED - BLACK</td><td>1-3</td><td>over 1MΩ</td><td>+300V motor power</td></tr>
<tr><td>WHITE - BLACK</td><td>4-3</td><td>1KΩ ~ 2KΩ</td><td>+15V control power</td></tr>
<tr><td>YELLOW - BLACK</td><td>5-3</td><td>200KΩ ~ 300KΩ</td><td>control</td></tr>
<tr><td>BLUE - BLACK</td><td>6-3</td><td>10KΩ ~ 50KΩ</td><td>pulse</td></tr>
<tr><td>ORANGE - BLACK</td><td>7-3</td><td>10KΩ ~ 50KΩ</td><td>reverse</td></tr>
</table></td></tr>
<tr><td>Abnormal</td><td>0Ω...Open or Short</td></tr>
<tr><td rowspan="3">Outdoor Unit 4way Valve Solenoid</td><td colspan="2">Measure resistance with a multimeter</td></tr>
<tr><td>Normal</td><td>At the normal temperature(10˚C~30˚C) 1.6KΩ±15%</td></tr>
<tr><td>Abnormal</td><td>∞,0Ω...Open or Short</td></tr>
</table>

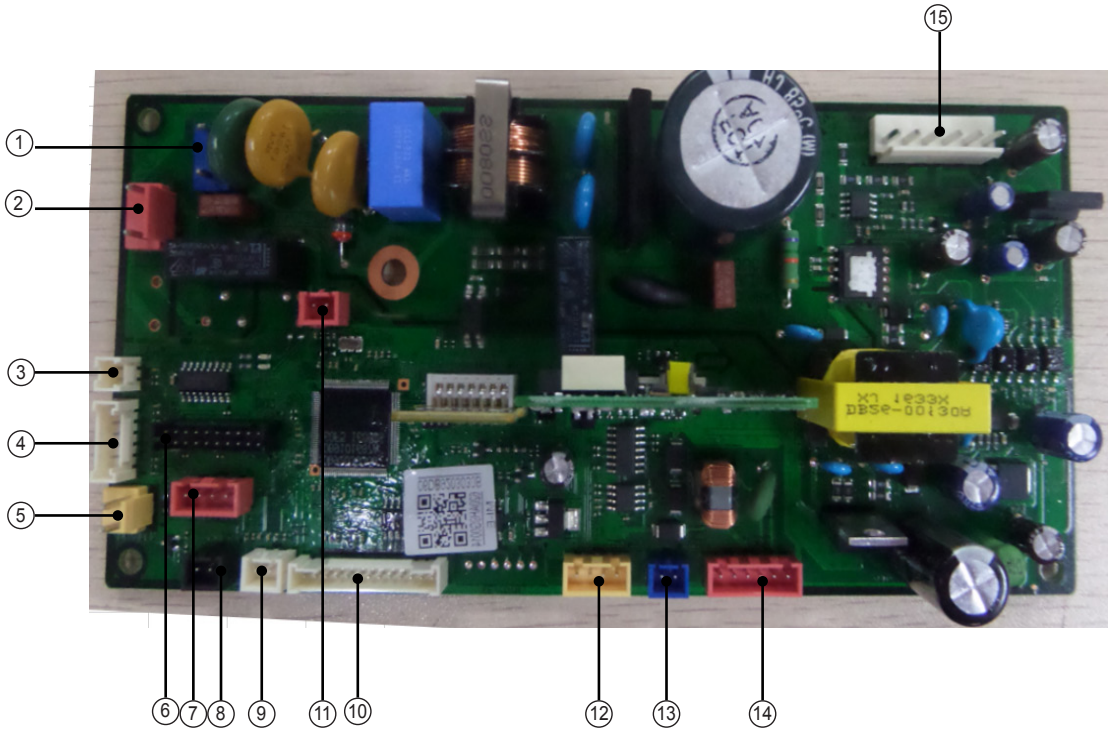
Remark : 4-5-4~7 contents are for heat pump model (DH18/24BT) .

5. PCB Diagram and Part List

5-1 INDOOR UNIT

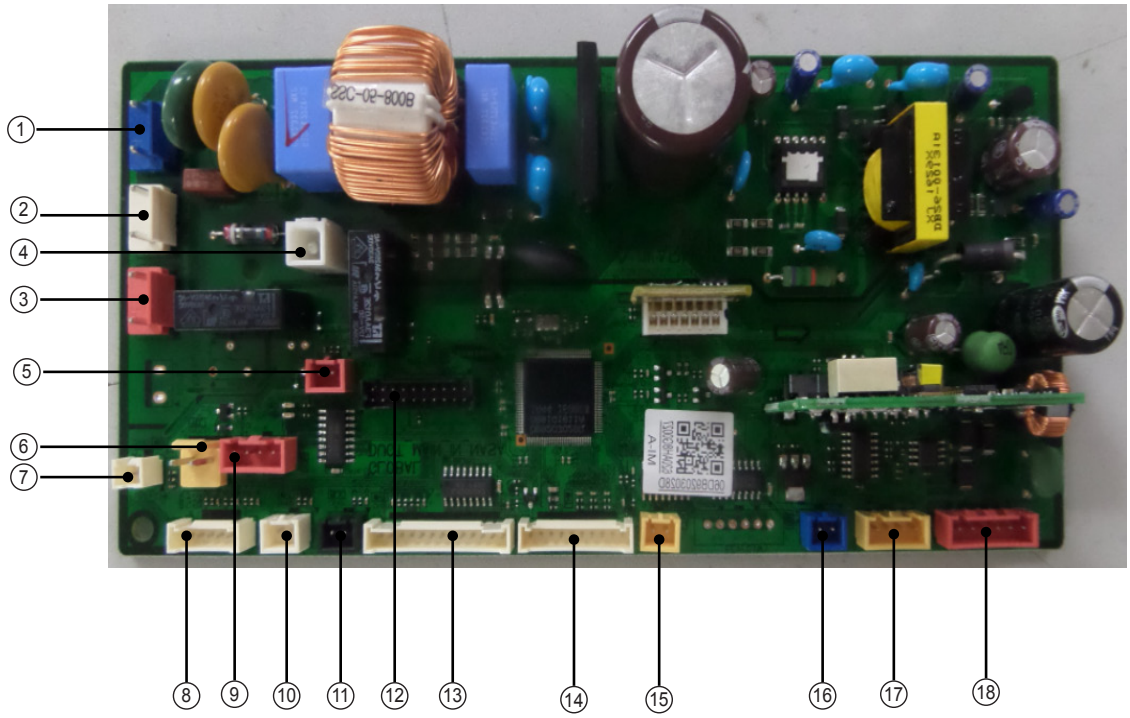
5-1-1MAIN PCB

■ **AC026MNLDKH / AC035MNLDKH / AC052MNLDKH / AC071MNLDKH**



No	Part Code	Local	Function	Description
1	3711-003404	CN101	POWER	YW396-03AV BLU
2	3711-003407	CN702	HOTCOIL/BYPASS	YW396-03AV RED
3	3711-003942	CN140	FUSE CHECK	SMW200-02P WHT
4	3711-004236	CN413	EVA DIS/OUT/IN	SMW200-06P WHT
5	3711-000179	CN103	DRAIN	YW396-02V YEL
6	3711-002001	CN301	SW DOWNLOAD	YDW200-20 BLK
7	3711-000939	CN81	COMP ERROR	SMW250-04 RED
8	3711-000794	CN411	FLOAT S/W	SMW250-02 BLK
9	3711-000015	CN412	ROOM	SMW250-02 WHT
10	3711-003895	CN501	DISPLAY	SMW200-13P RED
11	3711-000796	CN83	EXT-T	SMW250-02 RED
12	3711-000941	CN801	SPI	SMW250-04 YEL
13	3711-000795	CN804	VENT	SMW250-02 BLU
14	3711-001037	CN302	COMM	SMW250-06 RED
15	3711-000296	CN703	BLDC FAN	YW396-06V WHT

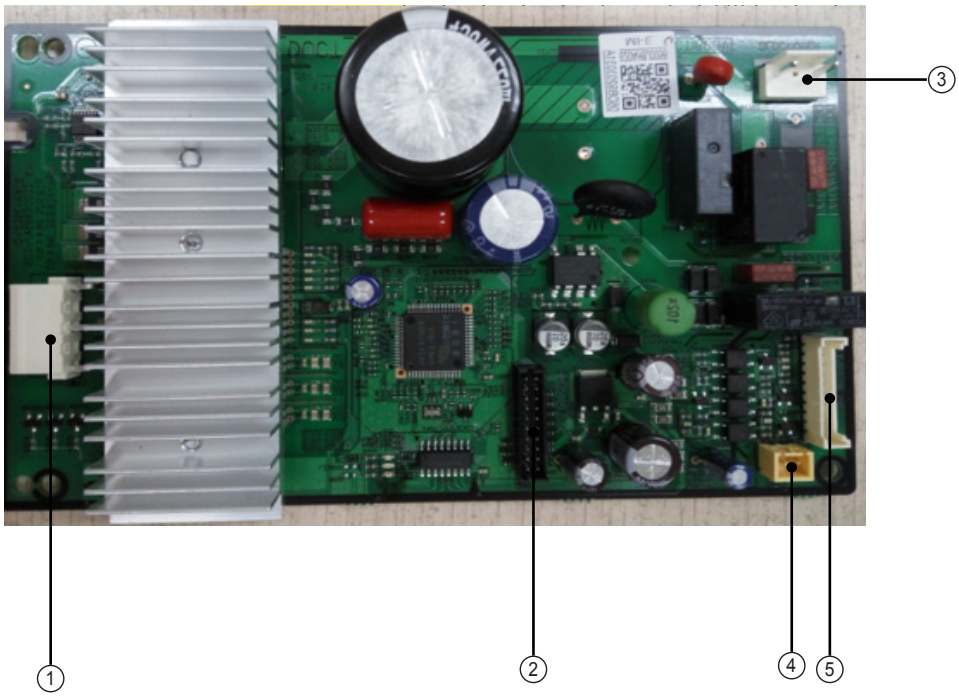
■ AC035MNMDKH / AC052MNMDKH / AC060MNMDKH / AC071MNMDKH / AC090MNMDKH / AC100MNMDKH / AC120MNMDKH / AC140MNMDKH



No	Part Code	Local	Function	Description
1	3711-003404	CN101	POWER	YW396-03AV BLU
2	3711-000203	CN906	BLDC POWER	YW396-03AV WHT
3	3711-003407	CN702	HOTCOIL/COMP	YW396-03AV RED
4	3711-000744	CN1	ERATH	YDW236-01 WHT
5	3711-000796	CN83	EXT-T	SMW250-02 RED
6	3711-000179	CN701	DRAIN	YW396-02V YEL
7	3711-003942	CN140	FUSE CHECK	SMW200-02P WHT
8	3711-004236	CN413	EVA DIS/OUT/IN	SMW200-06P WHT
9	3711-000939	CN81	COMP ERROR	SMW250-04 RED
10	3711-000015	CN412	ROOM	SMW250-02 WHT
11	3711-000794	CN411	FLOAT S/W	SMW250-02 BLK
12	3711-002001	CN301	SW DOWNLOAD	YDW200-20 BLK
13	3711-003895	CN501	DISPLAY	SMW200-13P RED
14	3711-004182	CN905	FAN MOTOR(BLDC)	SMW200-10P WHT
15	3711-000798	CN907	UART	SMW250-02 YEL
16	3711-000795	CN804	VENT	SMW250-02 BLU
17	3711-000941	CN801	SPI	SMW250-04 YEL
18	3711-001037	CN302	COMM	SMW250-06 RED

BLDC PBA

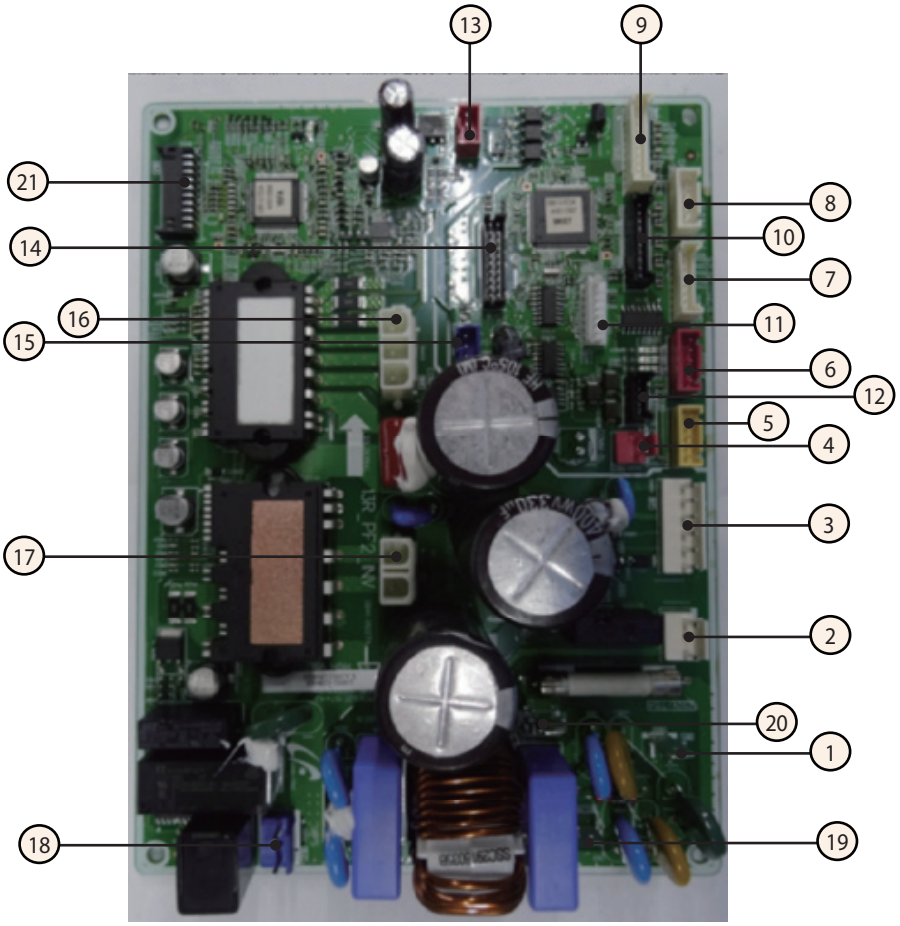
■ AC035MNMDKH / AC052MNMDKH / AC060MNMDKH / AC071MNMDKH / AC090MNMDKH / AC100MNMDKH / AC120MNMDKH / AC140MNMDKH



No	Part Code	Local	Function	Description
1	3711-003381	CN301	MOTOR	YAW396-05AV WHT
2	3711-002001	CN461	SW DOWNLOAD	YDW200-20 BLK
3	3711-000203	CN701	BLDC POWER	YW396-03AV WHT
4	3711-000798	CN502	UART	SMW250-02 YEL
5	3711-004182	CN501	TO MAIN	SMW200-10P WHT

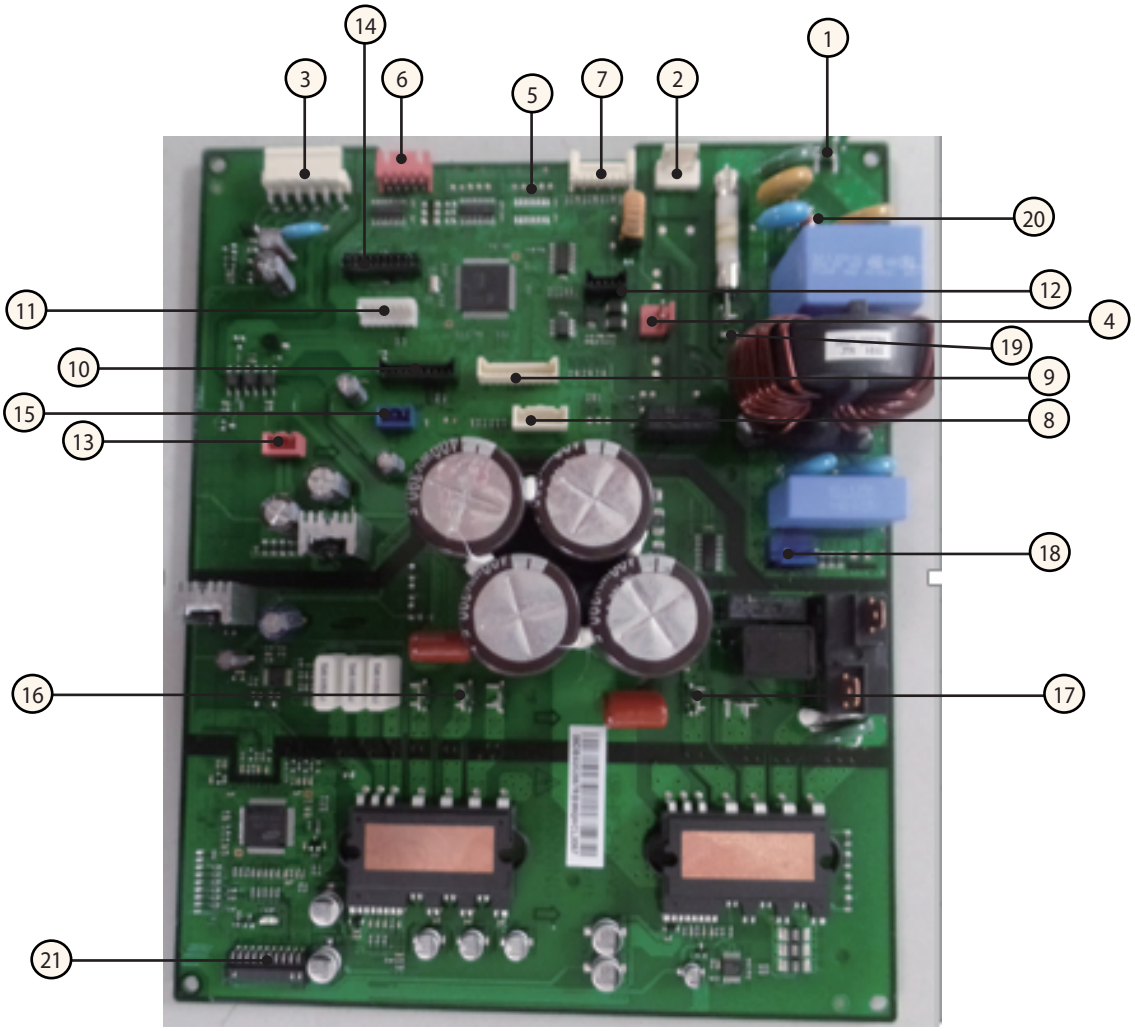
5-2-1 MAIN PBA

■ **AC026MXADKH / AC035MXADKH**



No.	Function	No.	Function
1	MAIN POWER (N)	12	Sub display PCB connection (DC5V,12V,com1,com2)
2	4Way Valve	13	SMPS PCB connection (DC15V)
3	FAN MOTOR connection	14	Download Main
4	Indoor communication connection	15	SMPS PCB connection (DC5V,12V)
5	EEV-B	16	Compressor connection (U,V,W)
6	EEV-A	17	Reactor
7	Out/Discharge/Cond./OLP temp. sensor	18	SMPS PCB connection (AC220V)
8	DRED PBA connection (※ DRED : Demand Response Enabling Device)	19	EARTH
9	Sub display PCB connection (Key, 7-segment signal)	20	MAIN POWER (L)
10	Sub display PCB connection (Key, solution communication signal)	21	Download INV
11	EEPROM connection		

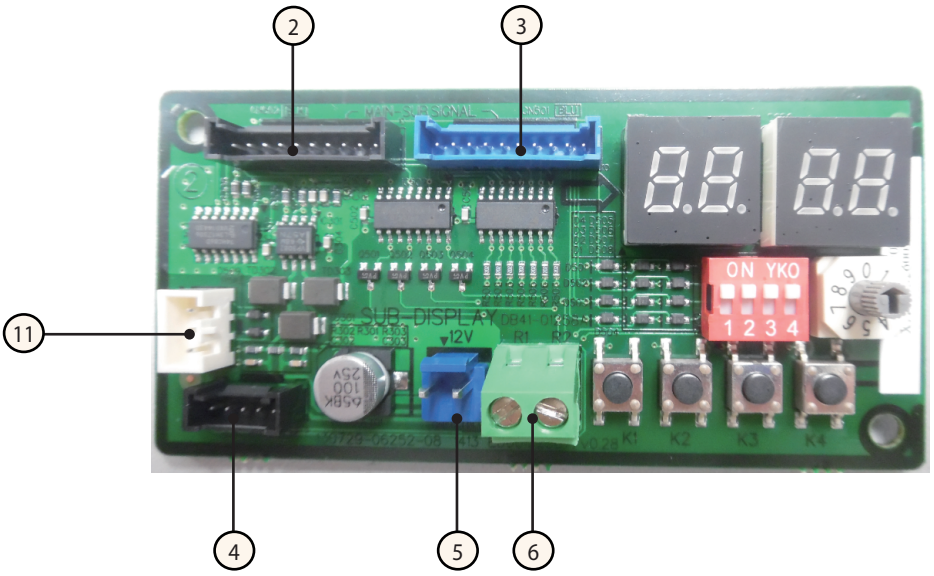
■ AC052MXADKH / AC060MXADKH / AC071MXADKH



No.	Function	No.	Function
1	MAIN POWER (N)	12	Sub display PCB connection (DC5V,12V,com1,com2)
2	4Way Valve	13	SMPS PCB connection (DC15V)
3	FAN MOTOR connection	14	Download Main
4	Indoor communication connection	15	SMPS PCB connection (DC5V,12V)
5	N/A	16	Compressor connection (U,V,W)
6	EEV control	17	Reactor
7	Out/Discharge/Cond./OLP temp. sensor	18	SMPS PCB connection (AC220V)
8	DRED PBA connection (❄ DRED : Demand Response Enabling Device)	19	MAIN POWER (L)
9	Sub display PCB connection (Key, 7-segment signal)	20	EARTH
10	Sub display PCB connection (Key, solution communication signal)	21	Download INV
11	EEPROM connection		

5-2-2 Display PBA

■ **AC026MXADKH / AC035MXADKH / AC052MXADKH / AC060MXADKH / AC071MXADKH**

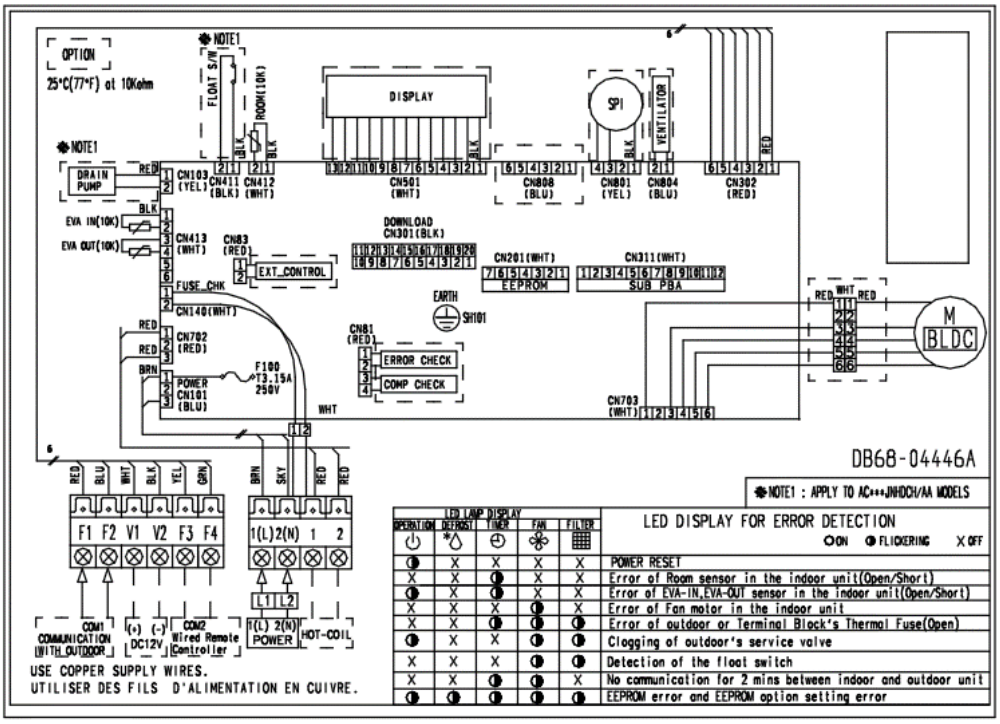


No.	Function
1	MODE SELECTOR
2	MAIN PCB connection (Key, Switch signal)
3	MAIN PCB connection (Key, 7-segment signal)
4	MAIN PCB connection (DC 5V,12V)
5	DC 12V
6	Solution communication

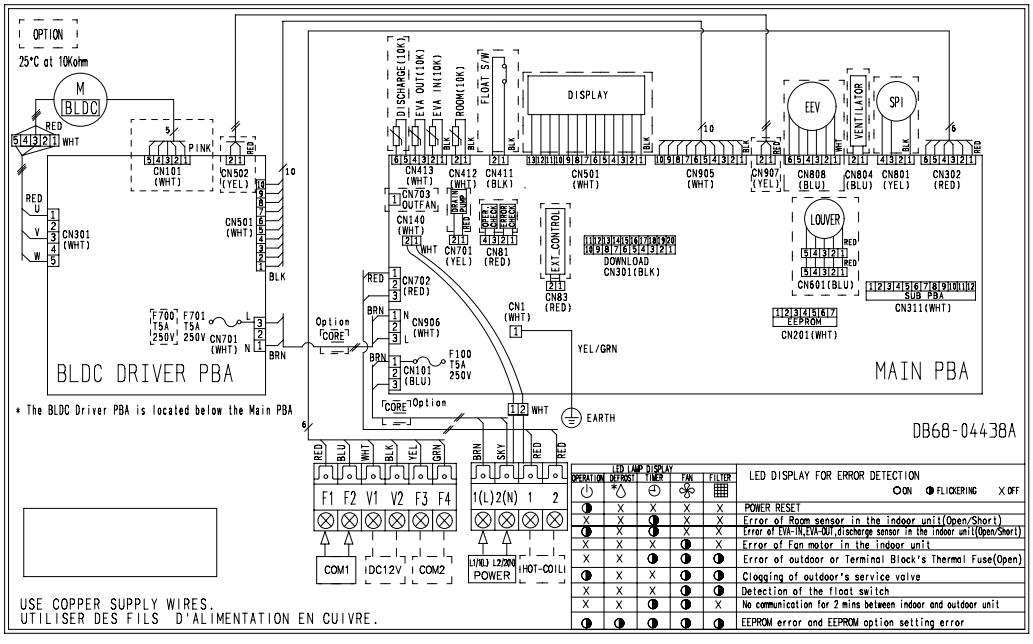
6. Wiring Diagram

6-1 Indoor Unit

■ AC026MNLDKH / AC035MNLDKH / AC052MNLDKH / AC071MNLDKH

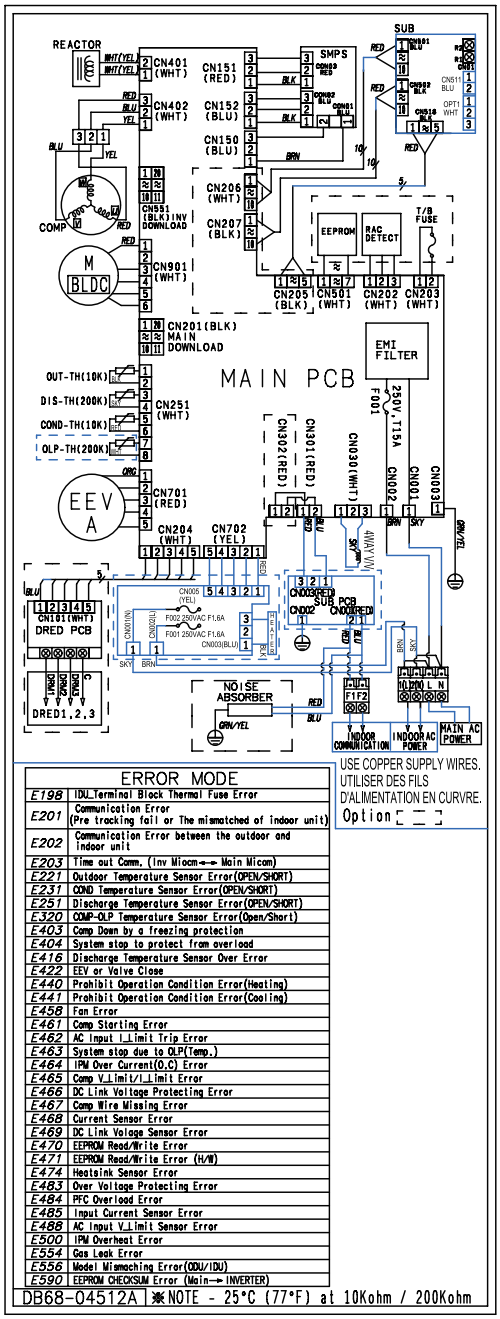


■ AC035MNMDKH / AC052MNMDKH / AC060MNMDKH / AC071MNMDKH / AC090MNMDKH / AC100MNMDKH / AC120MNMDKH / AC140MNMDKH

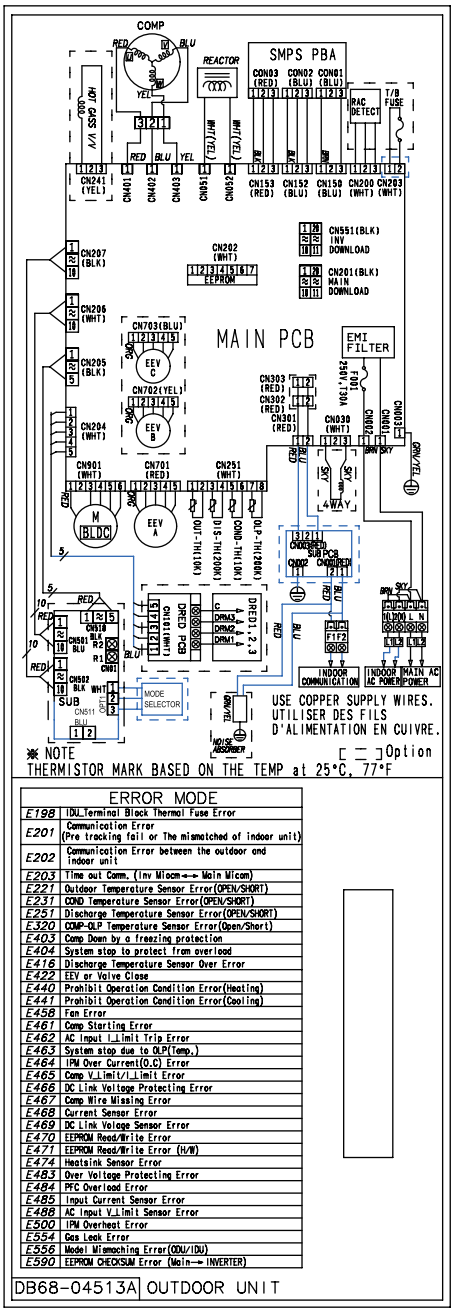


6-2 Outdoor Unit

■ AC026MXADKH / AC035MXADKH

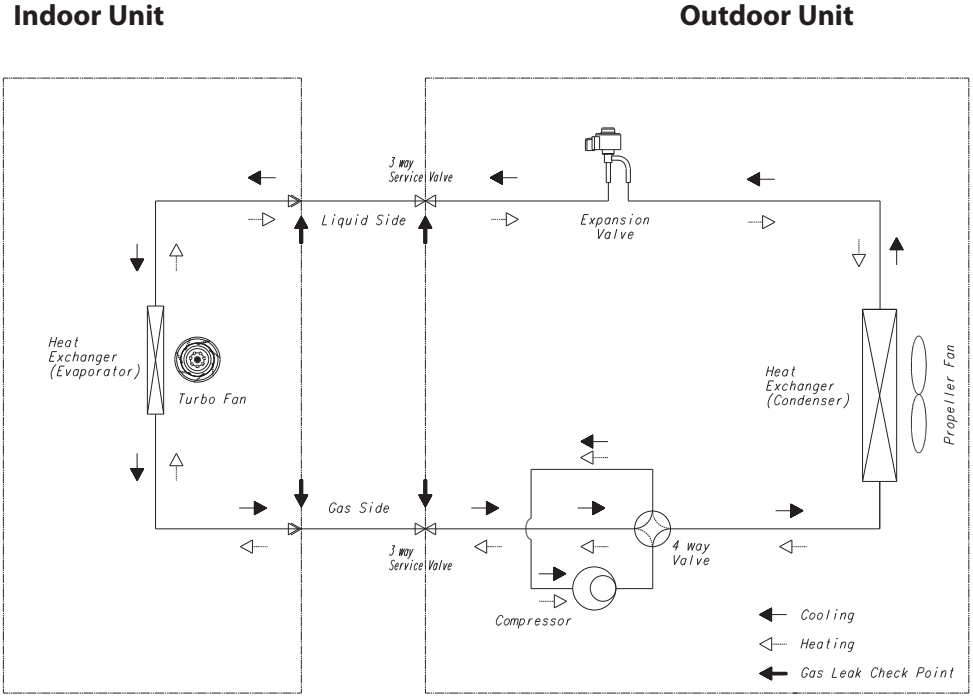


■ AC052MXADKH / AC060MXADKH / AC071MXADKH



7. Preference Sheet

7-1 Refrigerating Cycle Diagram



■ CONDENSER

High temperature and high pressure gas state coolant discharged from the compressor is converted to a liquid state as it is cooled down by the heat emission in the outdoor condenser unit, and sent to the evaporator.

■ COMPRESSOR

Low temperature and low pressure coolant is compressed and sent to the cycling system.

■ EVAPORATOR

Liquid coolant sucked in through the capillary tubes cools down the room by absorbing the surrounding heat as it evaporates (converting from liquid to gas). (Absorbing heat required for evaporation)

■ SERVICE VALVE

You can open the valve by turning the need valve counterclockwise using hex wrench, and it is used for vacuum, gas purging, coolant injection, coolant purging, and indoor-outdoor unit connection.

■ ACCUMULATOR

Accumulator prevents the flow of liquid-state coolant into the compressor. (Liquid-state coolant flowing into the compressor will overload the compressor.)

7-2 Index of Model Name

Model Code

AC	026	M	X	A	D	K	H	/	EU
									Buyer Name

Capacity (3 DIGIT)
KW / BTU / Liter

Product Type	
Code	Type
AM	DVM
AJ	PMA
AC	CAC (USD) / ASD
AE	EHS
AN	VTL
AK	PAK (Packaged System)
AG	CHR

Product Type	
Code	Type
E	2012
F	2013
H	2014
J	2015
K	2016
M	2017

Rating Voltage	
Code	Type
A	A(115V, 60hz, 1Φ)
B	B(220V, 60Hz, 1Φ)
C	C(208~230V, 60Hz)
D	D(200~220V, 50Hz)
E	E(220~240V, 50Hz)
F	F(208~230V, 60Hz, 3Φ)
G	G(380~415V, 50Hz, 3Φ)
H	H(380V, 60Hz, 3Φ)
J	J(460V, 60Hz, 3Φ)
K	K(220~240V, 50/60Hz, 1Φ)
M	M(127V, 50Hz)
N	N (380~415V, 50/60Hz, 3Φ)

Refrigerant		
Code	Type	Refrigerant
C	COOLING ONLY	R410a
H	HEAT PUMP	
R	HEAT RECOVERY	
D	COOLING ONLY	R22
E	HEAT PUMP	
A	Cooling only	R134
B	Heat Pump	
N	N/A	

Product Type (Indoor)	
Code	Type
1	1 Way CST
2	2 Way CST
N	Mini 4 Way CST
4	4 Way CST
H	HSP Duct
M	MSP Duct
L	LSP Duct
E	Fresh Air Intake Duct
G	Ceiling Conceiled Duct
C	Ceiling
J	Console
F	Floor Mounting
P	FAC
V	RAC-Jungfrau
Q	RAC-Neo Forte(EEV)
T	RAC-Neo Forte
D	RAC-Domestic
R	RAC-Maldive
A	RAC-New Model (Slim)
7	RAC-Vivace
U	AIR HANDIING UNIT
Z	AIR HANDLING UNIT
Y	HYDRO UNIT
B	HYDRO UNIT
X	HYDRO UNIT
W	WATER TANK
K	FLAT
S	STAND

Product Type (Outdoor)	
Code	Type
A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Top+Tropical Temp
B	Non Inv+Side+General Temp
N	Non Inv+Side+Low Temp
R	Non Inv+Side+Tropical Temp
Z	Non Inv+Top+Tropical Temp
U	UNITED STATUS DUCT
K	DVM PLUS4
V	DVM Inverter
L	DVM SLIM
G	DVM GHP
M	DVM MINI
W	DVM WATER
C	DVM GEO(GEOTHERMAL)
D	DVM PLUS3
X	DVM PLUS2
J	FREE JOINT MULTI
P	PACK MULTI
H	DVM HOME
E	SINGLE
T	MULTI
Y	MONO

Product Type (Indoor)	
Code	Type
F	FLAGSHIP
P	PREMIUM
D	DELUXE
S	STANDARD
F	CASCADE
G	CASCADE (EEV)
E	MULTI (/ SOLAR TANK)
D	STANDRAD (/ STANDARD TANK)

Product Type (Outdoor)	
Code	Type
F	FLAGSHIP
P	PREMIUM
D	DELUXE <- Basic
S	STANDARD
L	FLAGSHIP + TROPICAL
R	PREMIUM + TROPICAL
T	DELUXE + TROPICAL<- Basic
N	STANDARD + TROPICAL

Product Type	
Code	Type
S	Set (NASA)
N	Indoor (NASA)
X	Outdoor(NASA)
A	Set (NASA)
B	Indoor (No NASA)
C	Outdoor (No NASA)

※ "/" can be removed from the buyer card if there are not enough digits.