

SAMSUNG

SPLIT-TYPE AIR CONDITIONER

INDOOR UNIT

OUTDOOR UNIT

Basic : AQV12NSAN

Model: AQV09UGAN

AQV12UGAN

Model Code : AQV09UGAN

AQV12UGAN

AQV09UGAX

AQV12UGAX

SERVICE *Manual*

AIR CONDITIONER



AQV09UGAN/AQV12UGAN



AQV09UGAX/AQV12UGAX

CONTENTS

- good' sleep Mode
- Catechin Filter
- Silver Nano Evaporator
- Deodorizing Filter
- Anti-Bacterial Cross Fan

Refer to the service manual in the GSPN(see the rear cover) for the more information.

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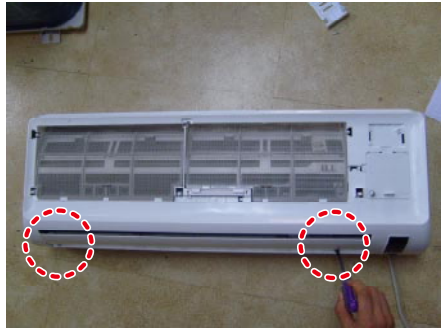
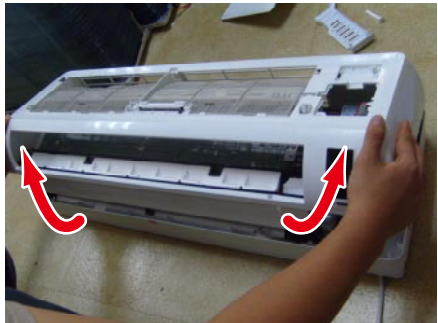
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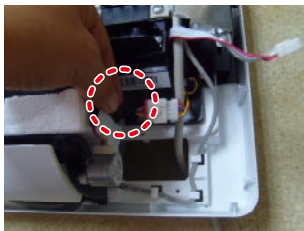
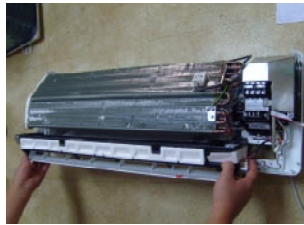
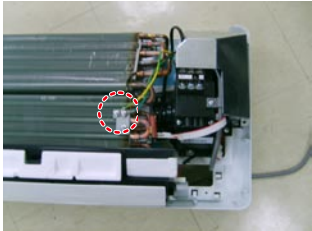
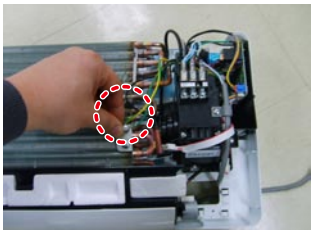
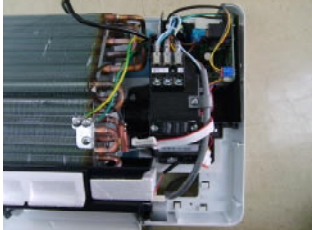
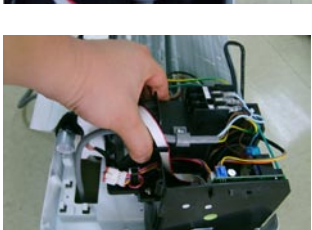
3. Disassembly and Reassembly

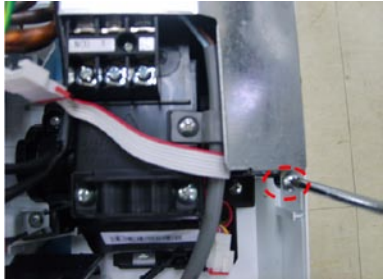
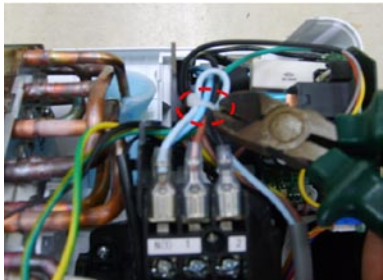
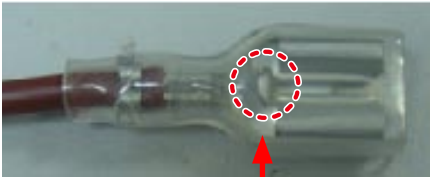
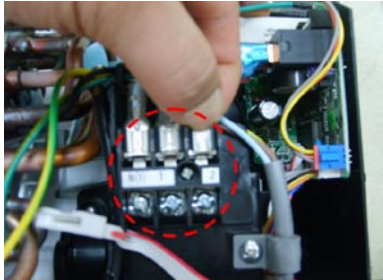
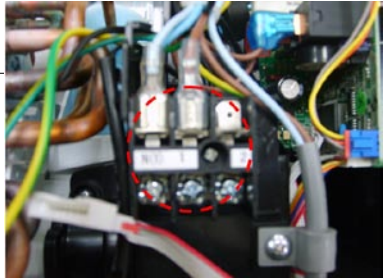
■ Necessary Tools

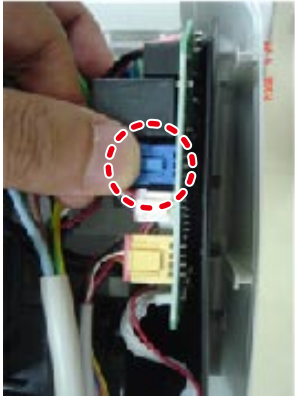
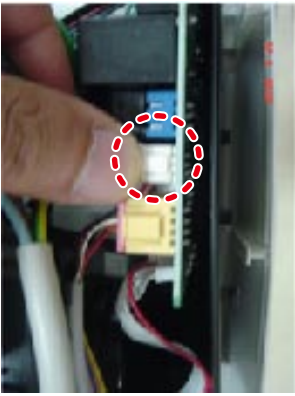
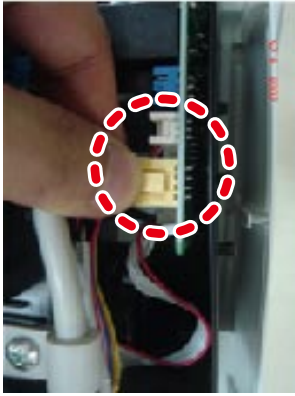
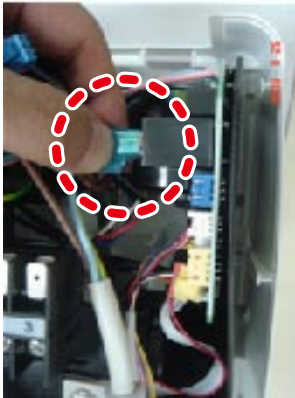
Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	

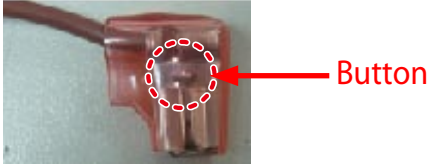
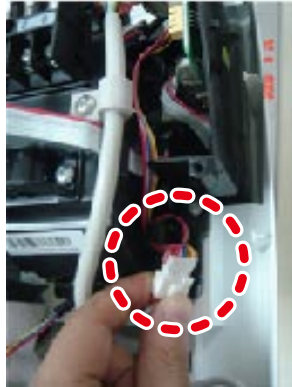
3-1 Indoor Unit

No	Parts	Procedure	Remark
1	PANEL-FRONT	1) Stop the driving of air conditioner and shut off main power supply. 2) Open the FRONT-GRILLE and pull out from the PANEL-FRONT. 3) Detach COVER-TERMINAL from the PANEL-FRONT.(use + Screw Driver) 4) Loosen connector wire(white) and detach the temperature sensor wire. 5) To detach the FRONT-PANEL the main frame, unfasten 2 screw at the bottom.(use + Screw Driver) 6) Take off the FRONT-PANEL,lifting up the bottom.	    

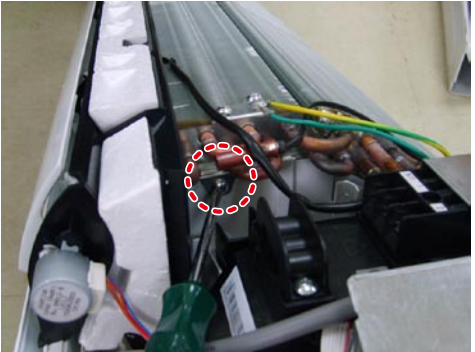
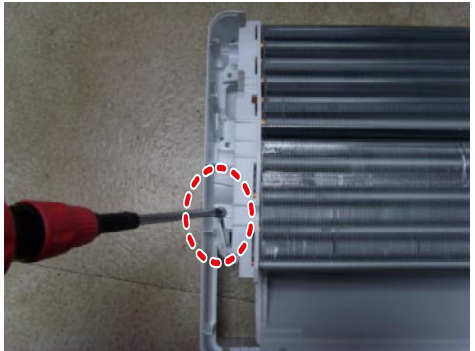
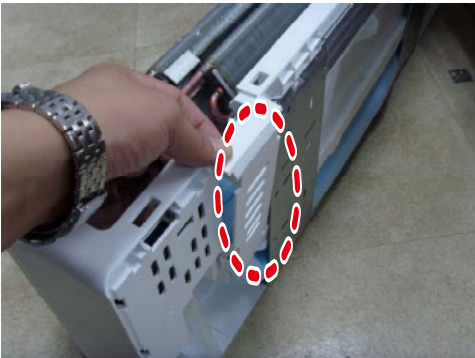
No	Parts	Procedure	Remark
2	TRAY DRAIN	1) Loosen stepping motor wire and detach the hook of main frame. 2) To detach TRAY-DRAIN from the main frame, pull the bottom of the TRAY-DRAIN towards you.	 
3	CONTROL IN	1) Unfasten the earth screw.(use + Screw Driver) 2) Detach the temperature sensor and Humidity sensor. 3) Detach COVER-CONTROL from the CASE-CONTROL. 4) Loosen MPI connector wire(yellow), and MOTOR wires(white,blue). 5) Take off the CASE-CONTROL from the main frame.	    

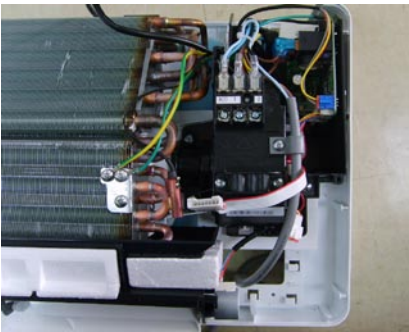
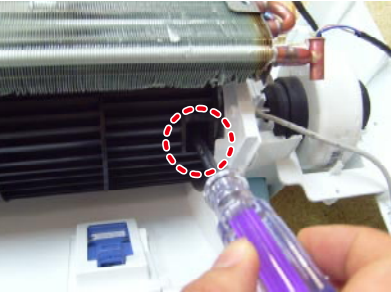
No	Parts	Procedure	Remark
4	PBA	1) Unfasten the screw.	
		2) Cut the cable tie.	
		3) Loosen the terminal block wires. (Total 4EA: #N(T)-2EA, #2-TEA, #3-TEA) ※ Caution: The terminal is locking type. So, when you separate terminals, pull pressing the button.    Button	

No	Parts	Procedure	Remark
4	PBA	4) Loosen the Motor Feedback connector(CN44). ※ Caution: When you separate the connector, pull pressing the locking button.	
		5) Loosen the Humidity sensor connector(CN42). → Option connector. ※ Caution: When you separate the connector, pull pressing the locking button.	
		6) Loosen the MPI connector(CN81). → Option connector. ※ Caution: When you separate the connector, pull pressing the locking button.	
		7) Loosen the Relay #4 blue-connector(RY71). ※ Caution: The terminal is locking type. So, when you separate terminals, pull pressing the button. 	

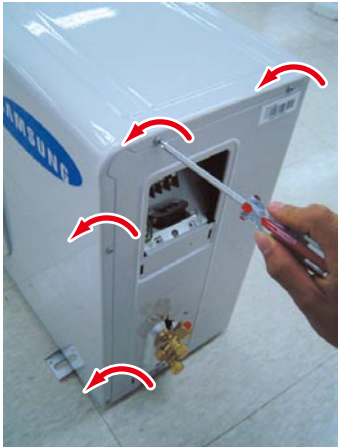
No	Parts	Procedure	Remark
4	PBA	8) Loosen the Relay #3 red-connector(RY71). ※ Caution: The terminal is locking type. So, when you separate terminals, pull pressing the button. 	
		9) Loosen the Step motor connector. ※ Caution: When you separate the connector, pull pressing the locking button.	
		10) Loosen the Thermistor wire connector(CN43). ※ Caution: When you take off the PBA, don't touch the components. Please hold the PBA both side.	
		11) Loosen the Motor connector(CN71). ※ Caution: When you separate the connector, pull pressing the locking button.	

No	Parts	Procedure	Remark
4	PBA	12) Take off the main PBA from the ASS'Y Control in. * Caution: When you take off the PBA, don't touch the components. Please hold the PBA both side.	

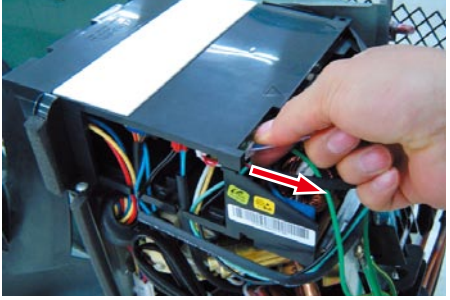
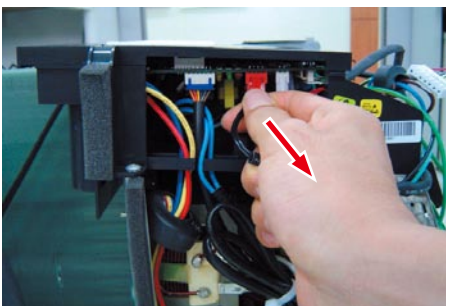
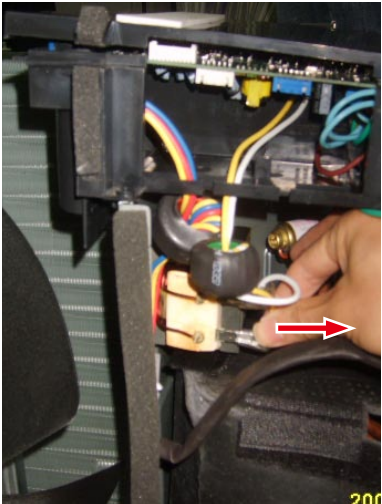
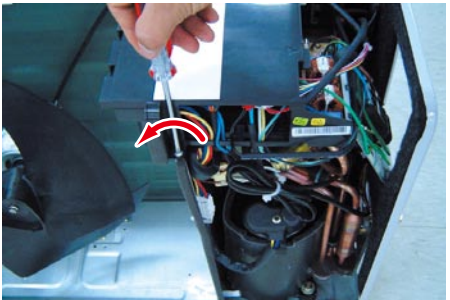
No	Parts	Procedure	Remark
5	EVAPORATOR	1) Unfasten the screw at the right side. (use + Screw Driver) 2) Unfasten the screw at the left side. (use + Screw Driver) 3) Detach the HOLDER PIPE. 4) Take off the EVAPORATOR from the main frame.	   

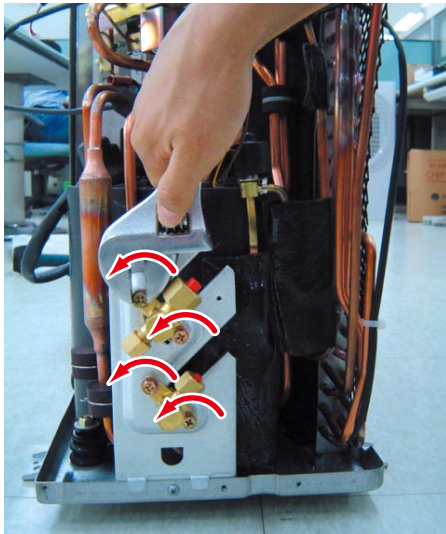
No	Parts	Procedure	Remark
6	FAN MOTOR & CROSS FAN	1) Unfasten the screw in the HOLDER-EVAP on the left side of evaporator.(use + Screw Driver) 2) unfasten the 3 points screws in the CASE-CONTROL, and then detach the CASE. (use + Screw Driver) 3) unfasten the screw a little.(use + Screw Driver) 4) Lift up the evaporator slightly and pull the CROSS-FAN to the left side.	   

3-2 Outdoor Unit

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 1 fixing screw(CCW) of the Cover-Side. (Use +Screw Driver.) 2) Loosen each 4 screws(CCW) on both right and left Cabinet Side edges and a fixing screw on the Cabinet Front lower to detach the Cabinet Front. (Use +Screw Driver.) 3) Detach the Cabinet Front like the picture on the right side. 4) Loosen 1 screw(CCW) fixed to assemble Plate Control Out with Cabinet-Side RH. (Use +Screw Driver.)	   

No	Parts	Procedure	Remark
		5) Loosen 2 fixing screws(CCW) on the rear side of Cabinet-Side RH. (Use +Screw Driver.) 6) Loosen 3 screws(CCW) fixed to assemble Bracket Valve with Cabinet-Side RH. (Use +Screw Driver.) 7) Loosen 2 fixing screws(CCW) of Cabinet Side LF. (Use +Screw Driver.)	  

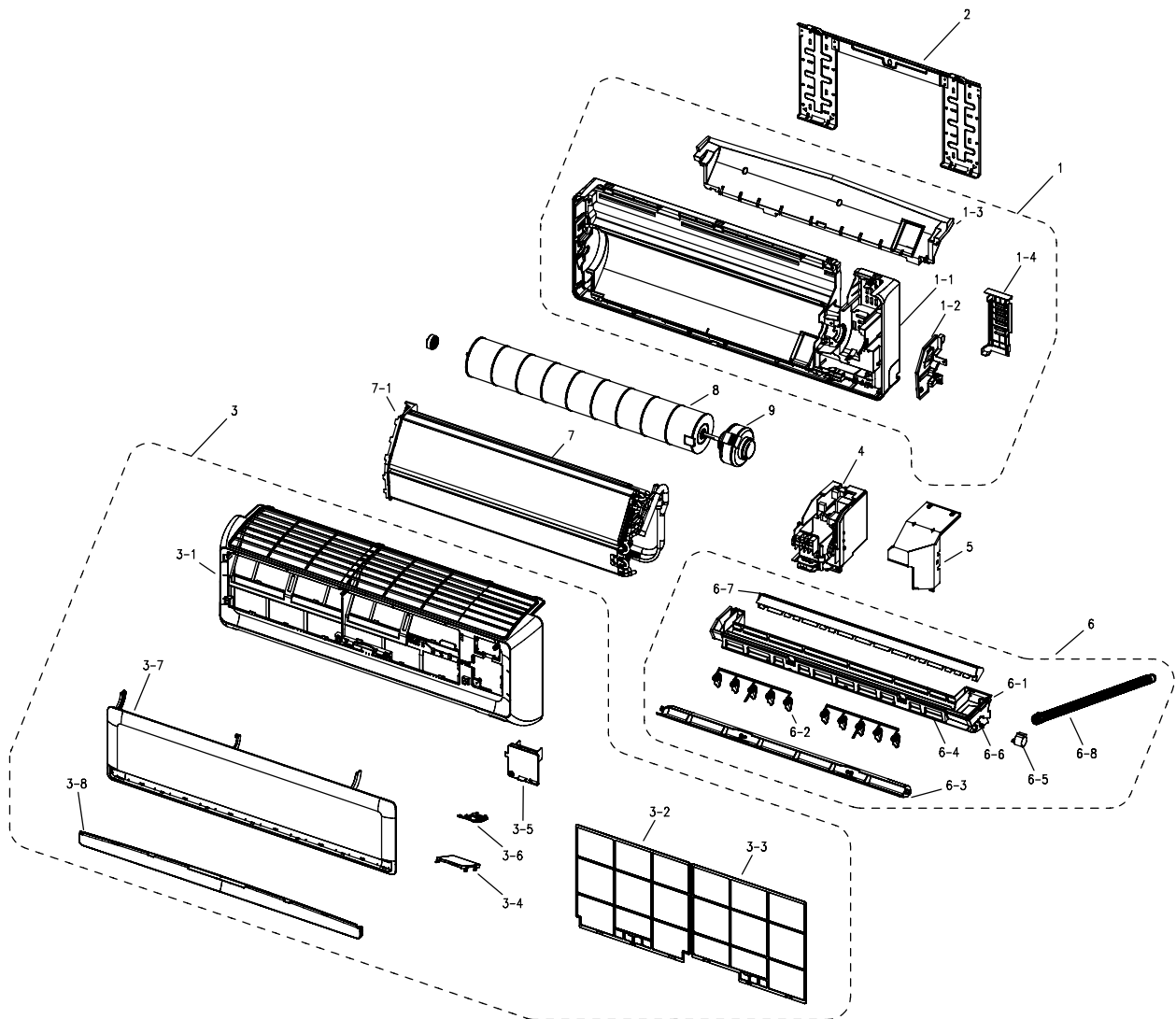
No	Parts	Procedure	Remark
2	Ass'y Control Out	1) Detach the Motor Wire from the PCB of Ass'y Control Out. 2) Detach several connectors from the PCB of Ass'y Control Out. 3) Detach 2 Connect Wires from Reactor. 4) Loosen 1 screw(CCW) fixed to assemble Ass'y Control Out with Partition. (Use +Screw Driver.)	    

No	Parts	Procedure	Remark
3	Fan & Motor	1) Release the refrigerant at first. 2) Loosen fixing screw(CW). (Use Monkey Spanner.) 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger.	
4	Heat Exchanger	1) Loosen 2 fixing screws(CCW) on both sides. (Use +Screw Driver.) 2) Disassemble the pipes in both inlet and outlet with welding torch. 3) Detach the Heat Exchanger. ⚠ Before you disassemble the pipes and Condenser, be sure that there should be no refrigerant remained in the unit.	
5	Ass'y Valve 4-Way & Ass'y Valve EEV	1) Loosen 4 bolts(CCW) fixed to assemble Valve Service with Bracket Valve like the picture on the right side. (Use Monkey Spanner.) 2) Disassemble the pipes assembled the suction and discharge sides of the Compressor with welding torch.	
6	Compressor	1) Loosen the Nut(CCW) of Terminal Cover. (Use Monkey Spanner.) 2) Detach the Terminal Cover and detach the Connect Comp Wire from Compressor. 3) Disassemble the Felt Comp Sound. 4) Loosen the 3 bolts(CCW) at the bottom of Compressor like the picture on the right side. (Use Monkey Spanner.)	

MEMO

5. Exploded Views and Parts List

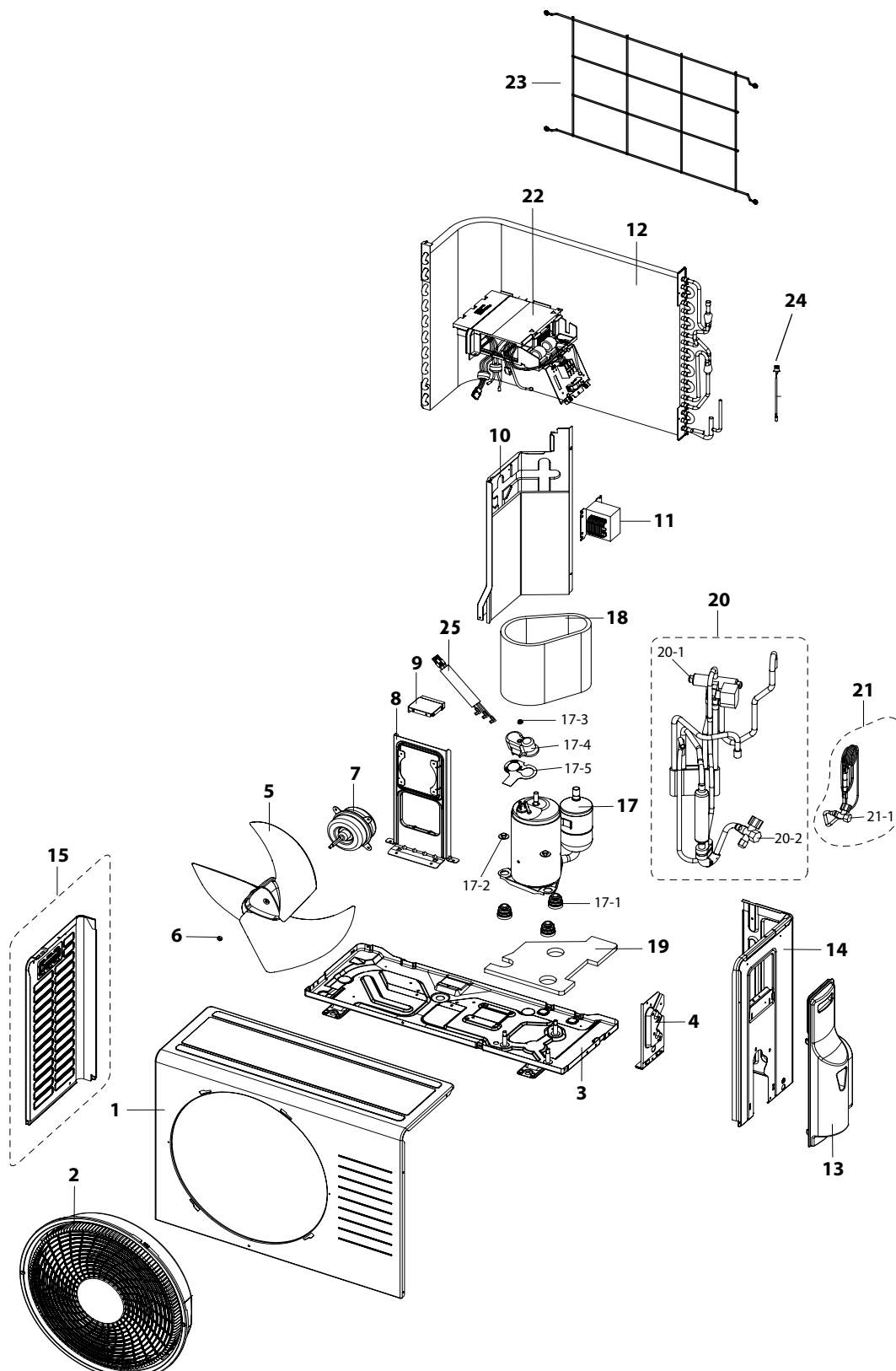
5-1 Indoor Unit



■ Parts List

No.	Code No.	Description	Specification	Q'TY		SA/SNA
				AQV09UGAN	AQV12UGAN	
1	DB94-01921B	ASSY BACK BODY	ASSY	1	1	SA
1-1	DB61-03656A	BODY BACK	HIPS	1	1	SA
1-2	DB61-03651A	SUPPORT-EVAP RH	HIPS	1	1	SA
1-3	DB62-05888A	SEAL-INSUL BODY REAR	EPS(30)	1	1	SA
1-4	DB61-03666A	HOLDER-PIPE	HIPS	1	1	SA
2	DB97-02851C	ASSY-PLATE HANGER	SGCC-M, T0.7	1	1	SA
3	DB92-01406N	ASSY PANEL FRONT	ASSY	1	1	SA
3-1	DB64-02124A	PANEL FRONT	HIPS	1	1	SA
3-2	DB63-02143A	FILTER-PRE L	PP	1	1	SA
3-3	DB63-02144A	FILTER-PRE R	PP	1	1	SA
3-4	DB90-04375A	ASSY CASE-PCB		1	1	SA
3-5	DB63-02120A	COVER TERMINAL	HIPS(5V)	1	1	SA
3-6	DB90-04305E	ASSY COVER DISPLAY	ASSY	1	1	SA
3-7	DB64-02127A	GRILLE-AIR INLET	HIPS	1	1	SA
3-8	DB81-01288B	DECO-GRILLE	HIPS	1	1	SA
4	DB93-06996B	ASSY CONTROL IN	ASSY	1	1	SA
5	DB90-04385A	ASSY COVER CONTROL IN	T0.5	1	1	SA
6	DB94-01922A	ASSY TRAY DRAIN	ASSY	1	1	SA
6-1	DB63-02118A	TRAY DRAIN	ABS	1	1	SA
6-2	DB61-03672A	BLADE-V	PP	2	2	SA
6-3	DB61-03649A	BLADE-H	ABS	1	1	SA
6-4	DB62-05892A	INSULATION-TRAY FR	EPS(30)	1	1	SA
6-5	DB31-00371A	MOTOR STEP	DC12V,600gf.cm	1	1	SA
6-6	DB69-00839A	CUSHION-TRAY RH	EPS(30)	1	1	SA
6-7	DB63-02121A	TRAY-STABILIZER	HIPS	1	1	SA
6-8	DB94-01975A	ASSY DRAIN-HOSE	ASSY	1	1	SA
7	DB96-11360A	ASSY EVAP TOTAL	ASSY	1	-	SA
	DB96-11359A	ASSY EVAP TOTAL	ASSY	-	1	SA
7-1	DB61-03650A	HOLDER-EVAP	HIPS	1	1	SA
8	DB94-01874A	ASSY-CROSS FAN	ASSY ; AS +GF20%	1	1	SA
9	DB31-00531A	MOTOR FAN	-	1	1	SA

5-2 Outdoor Unit

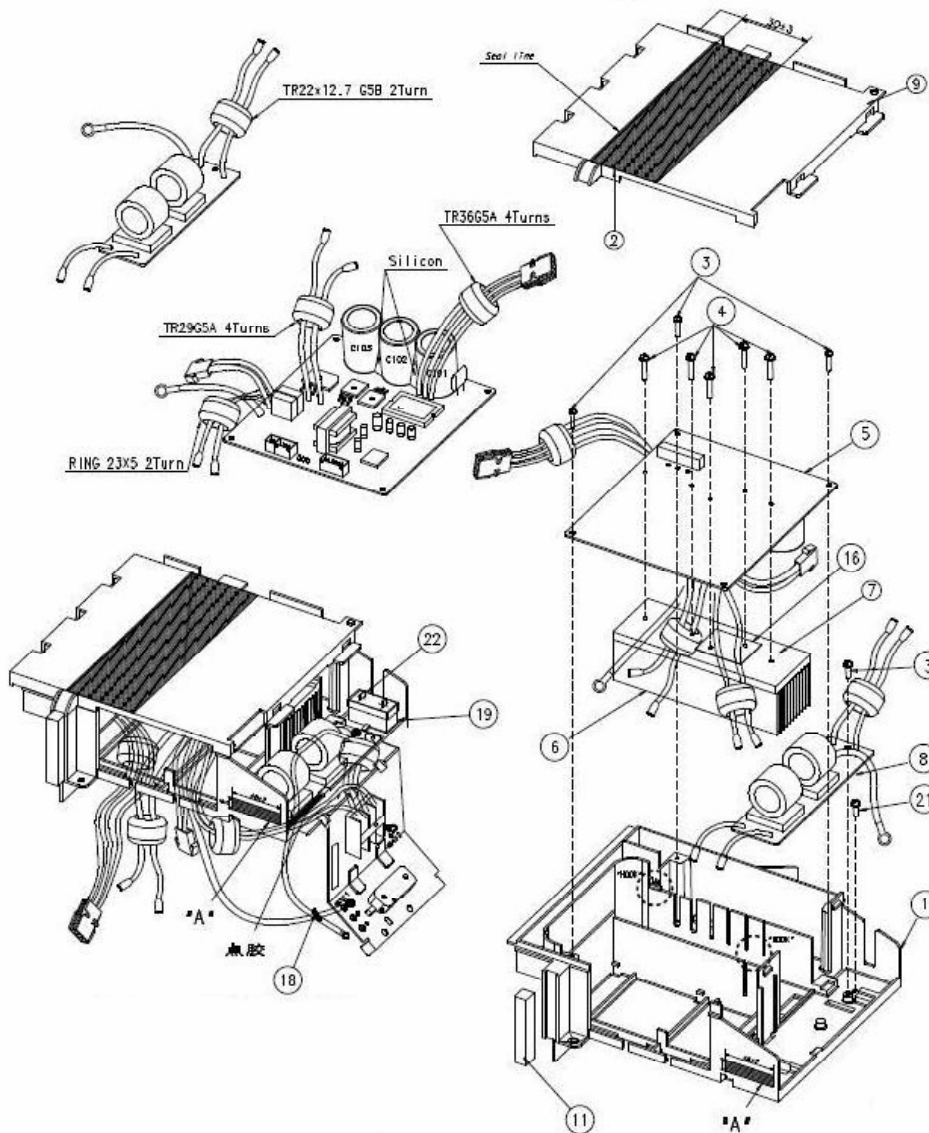


■ Parts List

No.	Code No.	Description	Specification	Q'TY		SA/SNA
				AQV09UGAX	AQV12UGAX	
1	DB90-03870H	ASS'Y CABI FRONT	ASS'Y,SC-94445T	1	1	SA
2	DB63-02004A	GUARD FAN	HIPS,SC-90073R	1	1	SA
3	DB90-01330L	ASS'Y BASE OUT	ASS'Y,SC-94445T	1	1	SA
4	DB99-00401B	ASS'Y BRACKET VALVE	ASS'Y,SC-94445T	1	1	SA
5	DB67-00397A	FAN-PROPELLER	AS+G/F20%,ø400	1	1	SA
6	DB60-30028A	NUT-HEXAGON	M6	1	1	SA
7	DB31-00220B	MOTOR FAN OUT	AC Motor	1	1	SA
8	DB61-01644A	BRACKET MOTOR	SGCC-M	1	1	SA
9	DB97-02225J	ASS'Y SUPPORT PLATE B/M	SGCC-M	1	1	SA
10	DB94-01180D	ASS'Y PARTITION	ASS'Y,SGCC-M	1	1	SA
11	DB27-00041A	REACTOR	PPS,5mH,10A	1	1	SA
12	DB96-06562D	ASS'Y COND UNIT	ASS'Y	1	-	SA
	DB96-06562D	ASS'Y COND UNIT	ASS'Y	-	1	SA
13	DB90-03818D	COVER CONTROL	ASS'Y	1	1	SA
14	DB90-01546Q	ASS'Y CABINET SIDE RH	ASS'Y,SC-94445T	1	1	SA
15	DB90-01332C	ASS'Y CABINET SIDE LF	SECC-P,SC-94445T	1	1	SA
17	G4C090LUDER	COMPRESSOR	ROTARY,BLDC	1	1	SA
17-1	DB63-02036A	GROMMET ISOLATOR	NR	3	3	SNA
17-2	DB60-30028A	SCREW HEX	M8	3	3	SNA
17-3	DB60-30004A	SCREW MACHINE	M5	1	1	SNA
17-4	DB63-00816A	COVER TERMINAL	PBT(G/F 15%)	1	1	SNA
17-5	DB63-00817A	GASKET	EPDM	1	1	SNA
18	DB63-01647A	FELT COMP SIDE	FELT+PVC Sheet	1	1	SA
19	DB63-01950A	FELT COMP BASE	FELT+PVC Sheet	1	1	SA
	DB63-01710B	FELT COMP UPPER	FELT+PVC Sheet	1	1	SA
	DB63-02033C	FELT COMP SIDE OUT	FELT+PVC Sheet	1	1	SA
	DB63-02034A	FELT COMP UPPER OUT	FELT+PVC Sheet	1	1	SA
20	DB99-00967B	ASS'Y VALVE 4WAY	ASS'Y	1	1	SA
20-1	DB62-02286A	4WAY VALVE	R410A,SANHUA	1	1	SNA
20-2	DB62-02284A	VALVE SERVICE	R410A,SANHUA,3/8"	1	1	SNA
21	DB99-00968A	ASSY-VALVE CHECK	ASS'Y	1	-	SA
	DB99-00968A	ASSY-VALVE CHECK	ASS'Y	-	1	SA
21-2	DB62-02283A	VALVE SERVICE	R410A,SANHUA,1/4"	1	1	SNA
22	DB93-07024C	ASS'Y CONTROL OUT	ASS'Y	1	-	SA
	DB93-07024D	ASS'Y CONTROL OUT	ASS'Y	-	1	SA
23	DB64-02117B	SCREEN COND BAR	P.E.H 100%	1	1	SA
24	DB95-01358B	THERMISTOR	ASS'Y	1	1	SA
25	DB93-07548A	CONNECT WIRE COMP	ASS'Y	1	1	SA

5-3 Ass'y Control Out

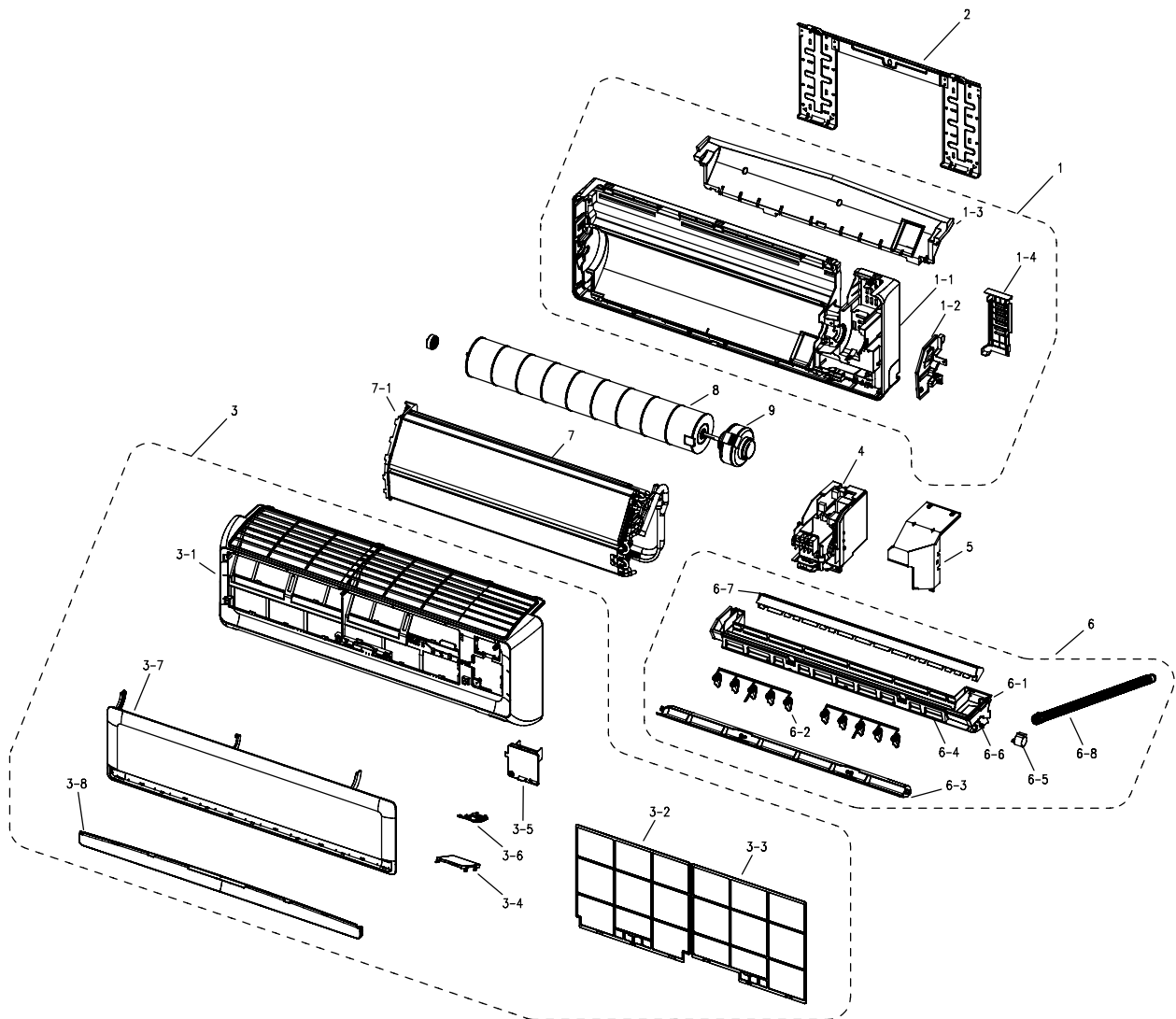
- Aqv09UGAX : DB93-07024C
Aqv12UGAX : DB93-07024D



NO.	CODE	DESCRIPTION	Q'TY	
			DB93-07024C	DB93-07024D
1	DB61-02250A	CASE CONTROL-BASE	1	1
2	DB62-04566A	SEAL-CASE CONTROL COVER	1	1
3	6002-000630	SCREW	4	4
4	DB91-00306A	ASSY-SCREW MACHINE	5	5
5	DB93-07108C	ASSY-PCB OUT	1	0
	DB93-07108D	ASSY-PCB OUT	0	1
6	DB62-03155A	HEAT SINK	1	1
7	DB98-24813A	THERMAL GREASE	0.002	0.002
8	DB93-07050A	ASSY-PCB EMI	1	1
9	DB61-02249A	CASE CONTROL-COVER	1	1
10	DB70-00547A	PLATE-CONTROL OUT	1	1
11	DB62-02332P	SEAL-CASE CONTROL	1	1
12	6002-000555	SCREW-TAPPING	1	1
13	DB95-01140B	TERMINAL BLOCK	1	1
14	DB61-00250A	HOLDER-WIRE CLAMP	1	1
15	6002-000214	SCREW-TAPPING	2	2
16	DB81-00547B	INSULATOR-KFR	1	1
17	6009-001001	SCREW	2	2
18	DB65-10088D	CABLE-TIE	1	1
19	2301-001377	C-FILM,LEAD-OTHER	1	1
20	6001-001054	SCREW-MACHINE	1	1
21	6002-000560	SCREW-TAPPING	1	1
22	DB73-00448A	RUBBER-CAPACTIOR	1	1

5. Exploded Views and Parts List

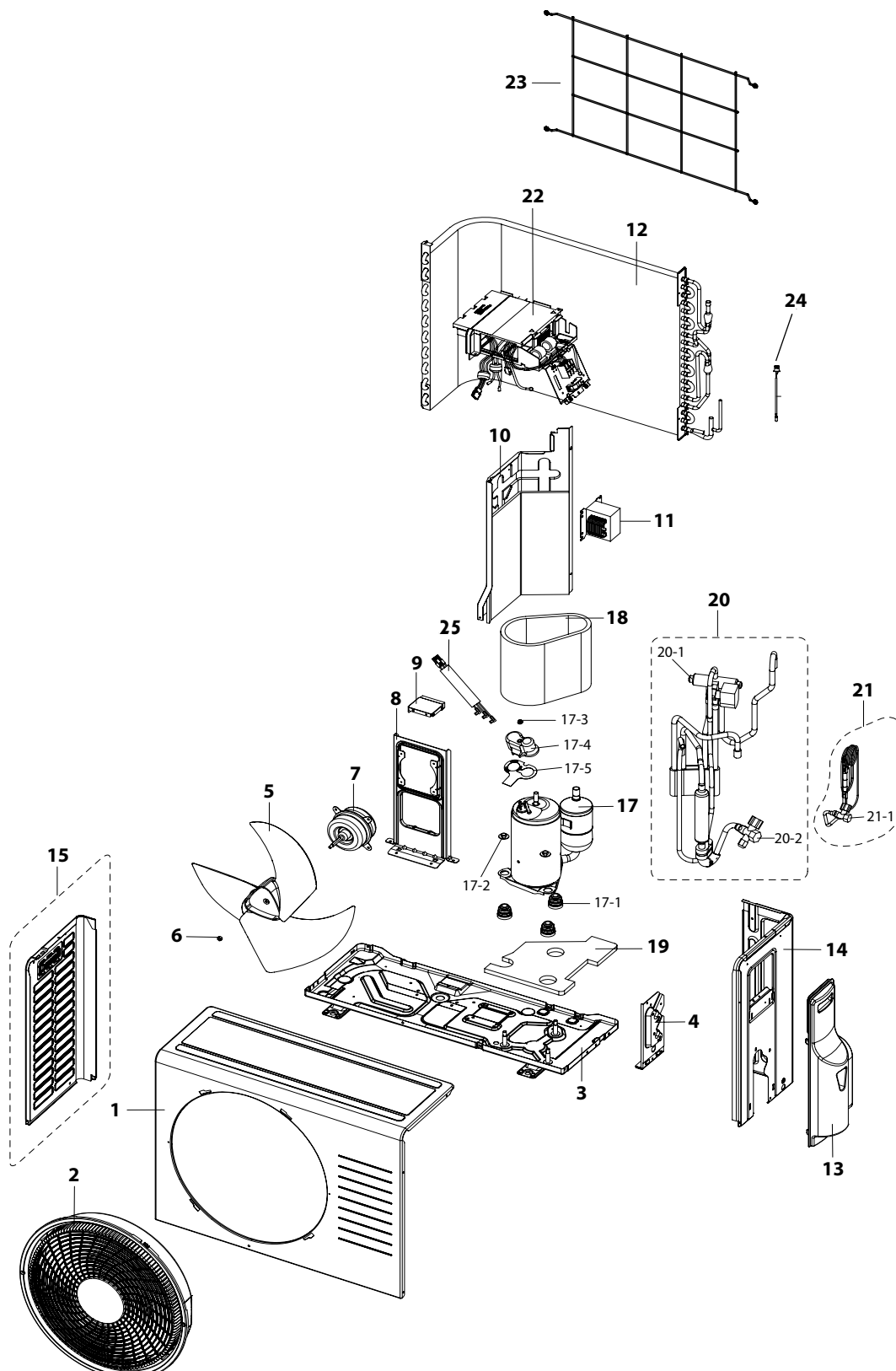
5-1 Indoor Unit



■ Parts List

No.	Code No.	Description	Specification	Q'TY		SA/SNA
				AQV09UGAN	AQV12UGAN	
1	DB94-01921B	ASSY BACK BODY	ASSY	1	1	SA
1-1	DB61-03656A	BODY BACK	HIPS	1	1	SA
1-2	DB61-03651A	SUPPORT-EVAP RH	HIPS	1	1	SA
1-3	DB62-05888A	SEAL-INSUL BODY REAR	EPS(30)	1	1	SA
1-4	DB61-03666A	HOLDER-PIPE	HIPS	1	1	SA
2	DB97-02851C	ASSY-PLATE HANGER	SGCC-M, T0.7	1	1	SA
3	DB92-01406N	ASSY PANEL FRONT	ASSY	1	1	SA
3-1	DB64-02124A	PANEL FRONT	HIPS	1	1	SA
3-2	DB63-02143A	FILTER-PRE L	PP	1	1	SA
3-3	DB63-02144A	FILTER-PRE R	PP	1	1	SA
3-4	DB90-04375A	ASSY CASE-PCB		1	1	SA
3-5	DB63-02120A	COVER TERMINAL	HIPS(5V)	1	1	SA
3-6	DB90-04305E	ASSY COVER DISPLAY	ASSY	1	1	SA
3-7	DB64-02127A	GRILLE-AIR INLET	HIPS	1	1	SA
3-8	DB81-01288B	DECO-GRILLE	HIPS	1	1	SA
4	DB93-06996B	ASSY CONTROL IN	ASSY	1	1	SA
5	DB90-04385A	ASSY COVER CONTROL IN	T0.5	1	1	SA
6	DB94-01922A	ASSY TRAY DRAIN	ASSY	1	1	SA
6-1	DB63-02118A	TRAY DRAIN	ABS	1	1	SA
6-2	DB61-03672A	BLADE-V	PP	2	2	SA
6-3	DB61-03649A	BLADE-H	ABS	1	1	SA
6-4	DB62-05892A	INSULATION-TRAY FR	EPS(30)	1	1	SA
6-5	DB31-00371A	MOTOR STEP	DC12V,600gf.cm	1	1	SA
6-6	DB69-00839A	CUSHION-TRAY RH	EPS(30)	1	1	SA
6-7	DB63-02121A	TRAY-STABILIZER	HIPS	1	1	SA
6-8	DB94-01975A	ASSY DRAIN-HOSE	ASSY	1	1	SA
7	DB96-11360A	ASSY EVAP TOTAL	ASSY	1	-	SA
	DB96-11359A	ASSY EVAP TOTAL	ASSY	-	1	SA
7-1	DB61-03650A	HOLDER-EVAP	HIPS	1	1	SA
8	DB94-01874A	ASSY-CROSS FAN	ASSY ; AS +GF20%	1	1	SA
9	DB31-00531A	MOTOR FAN	-	1	1	SA

5-2 Outdoor Unit

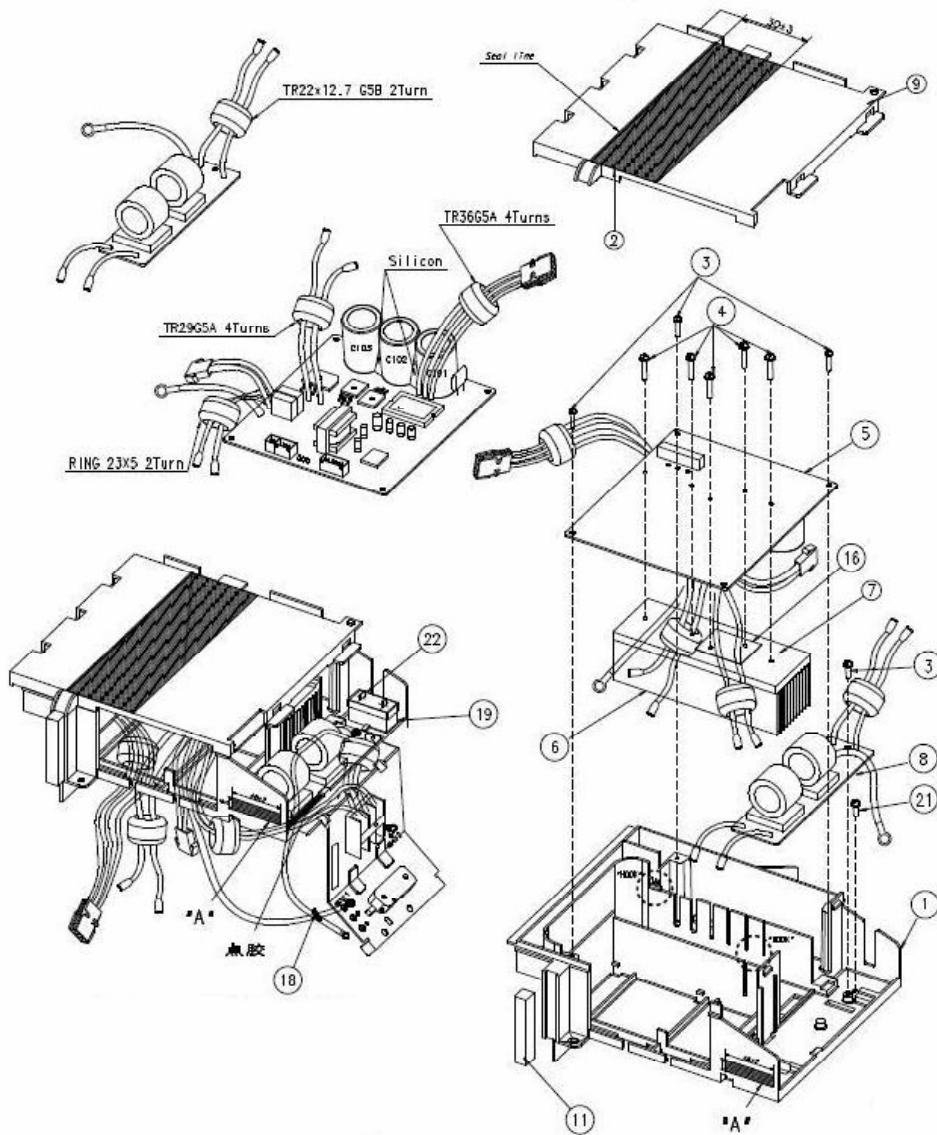


■ Parts List

No.	Code No.	Description	Specification	Q'TY		SA/SNA
				AQV09UGAX	AQV12UGAX	
1	DB90-03870H	ASS'Y CABI FRONT	ASS'Y,SC-94445T	1	1	SA
2	DB63-02004A	GUARD FAN	HIPS,SC-90073R	1	1	SA
3	DB90-01330L	ASS'Y BASE OUT	ASS'Y,SC-94445T	1	1	SA
4	DB99-00401B	ASS'Y BRACKET VALVE	ASS'Y,SC-94445T	1	1	SA
5	DB67-00397A	FAN-PROPELLER	AS+G/F20%,ø400	1	1	SA
6	DB60-30028A	NUT-HEXAGON	M6	1	1	SA
7	DB31-00220B	MOTOR FAN OUT	AC Motor	1	1	SA
8	DB61-01644A	BRACKET MOTOR	SGCC-M	1	1	SA
9	DB97-02225J	ASS'Y SUPPORT PLATE B/M	SGCC-M	1	1	SA
10	DB94-01180D	ASS'Y PARTITION	ASS'Y,SGCC-M	1	1	SA
11	DB27-00041A	REACTOR	PPS,5mH,10A	1	1	SA
12	DB96-06562D	ASS'Y COND UNIT	ASS'Y	1	-	SA
	DB96-06562D	ASS'Y COND UNIT	ASS'Y	-	1	SA
13	DB90-03818D	COVER CONTROL	ASS'Y	1	1	SA
14	DB90-01546Q	ASS'Y CABINET SIDE RH	ASS'Y,SC-94445T	1	1	SA
15	DB90-01332C	ASS'Y CABINET SIDE LF	SECC-P,SC-94445T	1	1	SA
17	G4C090LUDER	COMPRESSOR	ROTARY,BLDC	1	1	SA
17-1	DB63-02036A	GROMMET ISOLATOR	NR	3	3	SNA
17-2	DB60-30028A	SCREW HEX	M8	3	3	SNA
17-3	DB60-30004A	SCREW MACHINE	M5	1	1	SNA
17-4	DB63-00816A	COVER TERMINAL	PBT(G/F 15%)	1	1	SNA
17-5	DB63-00817A	GASKET	EPDM	1	1	SNA
18	DB63-01647A	FELT COMP SIDE	FELT+PVC Sheet	1	1	SA
19	DB63-01950A	FELT COMP BASE	FELT+PVC Sheet	1	1	SA
	DB63-01710B	FELT COMP UPPER	FELT+PVC Sheet	1	1	SA
	DB63-02033C	FELT COMP SIDE OUT	FELT+PVC Sheet	1	1	SA
	DB63-02034A	FELT COMP UPPER OUT	FELT+PVC Sheet	1	1	SA
20	DB99-00967B	ASS'Y VALVE 4WAY	ASS'Y	1	1	SA
20-1	DB62-02286A	4WAY VALVE	R410A,SANHUA	1	1	SNA
20-2	DB62-02284A	VALVE SERVICE	R410A,SANHUA,3/8"	1	1	SNA
21	DB99-00968A	ASSY-VALVE CHECK	ASS'Y	1	-	SA
	DB99-00968A	ASSY-VALVE CHECK	ASS'Y	-	1	SA
21-2	DB62-02283A	VALVE SERVICE	R410A,SANHUA,1/4"	1	1	SNA
22	DB93-07024C	ASS'Y CONTROL OUT	ASS'Y	1	-	SA
	DB93-07024D	ASS'Y CONTROL OUT	ASS'Y	-	1	SA
23	DB64-02117B	SCREEN COND BAR	P.E.H 100%	1	1	SA
24	DB95-01358B	THERMISTOR	ASS'Y	1	1	SA
25	DB93-07548A	CONNECT WIRE COMP	ASS'Y	1	1	SA

5-3 Ass'y Control Out

- Aqv09UGAX : DB93-07024C
Aqv12UGAX : DB93-07024D

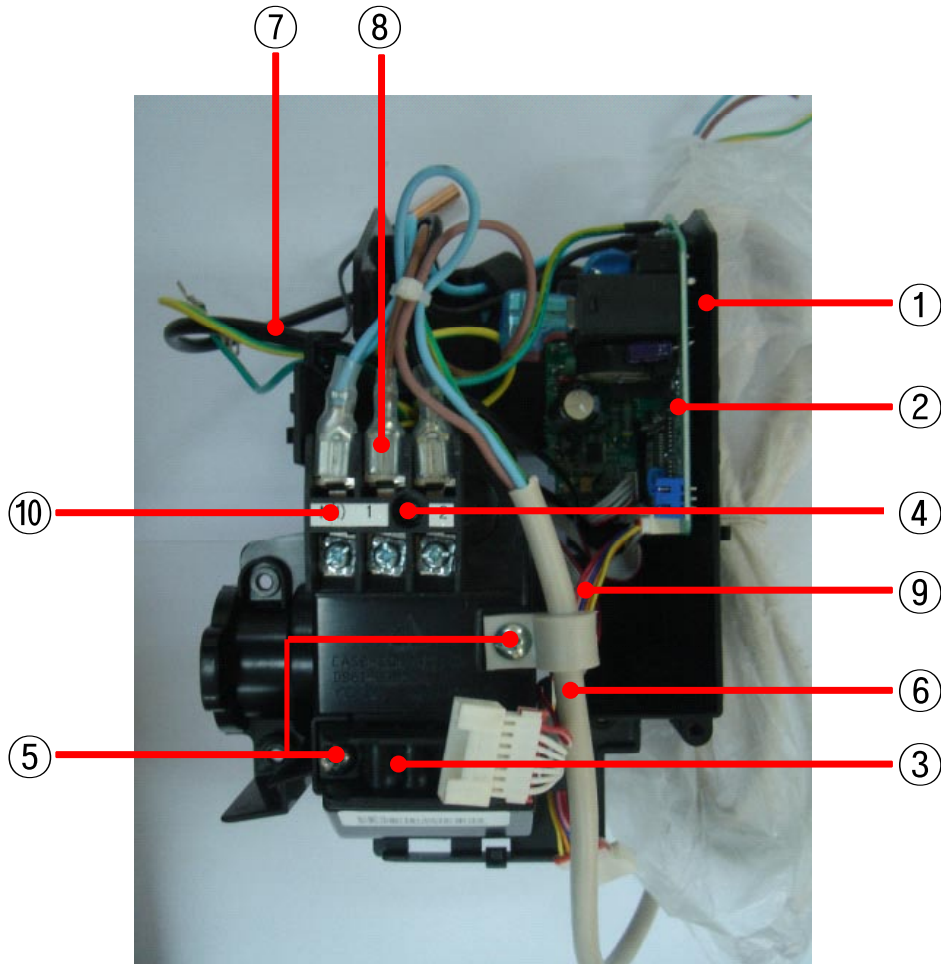


NO.	CODE	DESCRIPTION	Q'TY	
			DB93-07024C	DB93-07024D
1	DB61-02250A	CASE CONTROL-BASE	1	1
2	DB62-04566A	SEAL-CASE CONTROL COVER	1	1
3	6002-000630	SCREW	4	4
4	DB91-00306A	ASSY-SCREW MACHINE	5	5
5	DB93-07108C	ASSY-PCB OUT	1	0
	DB93-07108D	ASSY-PCB OUT	0	1
6	DB62-03155A	HEAT SINK	1	1
7	DB98-24813A	THERMAL GREASE	0.002	0.002
8	DB93-07050A	ASSY-PCB EMI	1	1
9	DB61-02249A	CASE CONTROL-COVER	1	1
10	DB70-00547A	PLATE-CONTROL OUT	1	1
11	DB62-02332P	SEAL-CASE CONTROL	1	1
12	6002-000555	SCREW-TAPPING	1	1
13	DB95-01140B	TERMINAL BLOCK	1	1
14	DB61-00250A	HOLDER-WIRE CLAMP	1	1
15	6002-000214	SCREW-TAPPING	2	2
16	DB81-00547B	INSULATOR-KFR	1	1
17	6009-001001	SCREW	2	2
18	DB65-10088D	CABLE-TIE	1	1
19	2301-001377	C-FILM, LEAD-OTHER	1	1
20	6001-001054	SCREW-MACHINE	1	1
21	6002-000560	SCREW-TAPPING	1	1
22	DB73-00448A	RUBBER-CAPACTIOR	1	1

6. PCB Diagram and Parts List

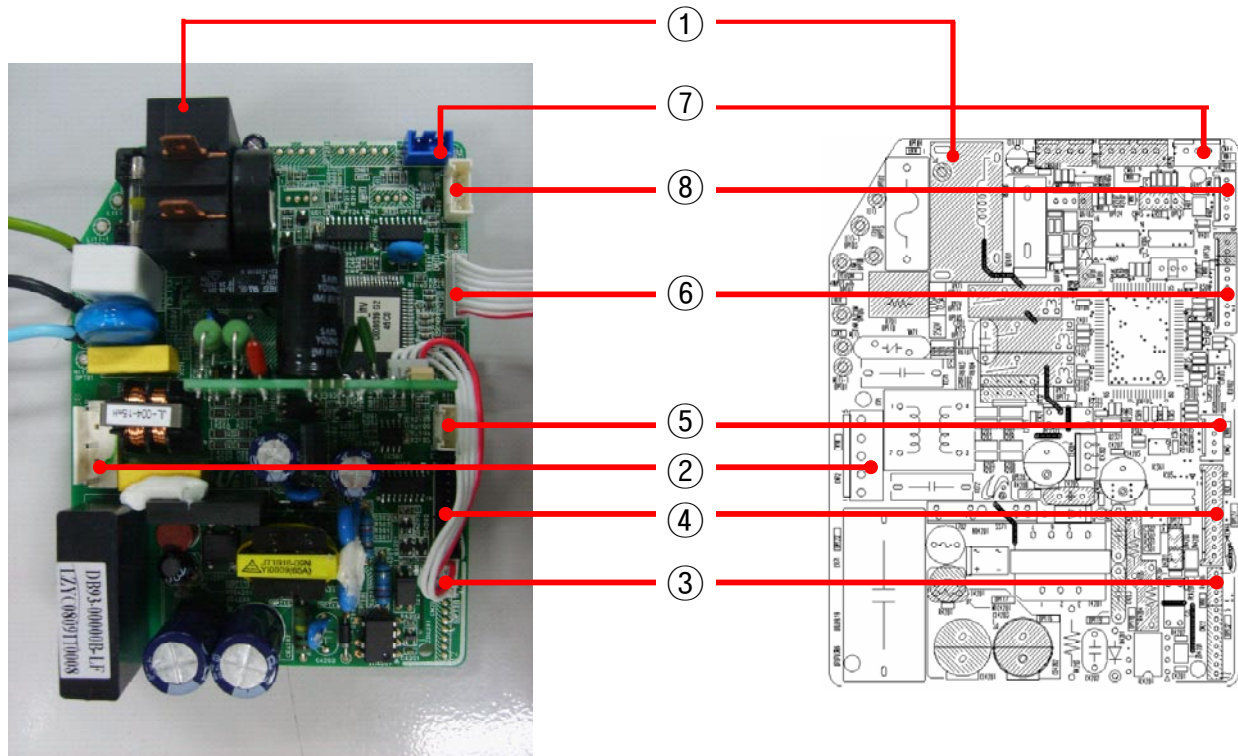
6-1. Block Diagram

6-1-1. Ass'y Control In : DB93-06996B



NO.	CODE	DESCRIPTION	Q'TY
1	DB61-03652A	CASE CONTROL IN	1
2	DB93-07430B	ASS'Y PCB MAIN	1
3	DB61-01097A	HOLDER WIRE CLAMP	1
4	DB91-00309A	SCREW	1
5	DB97-02418A	SCREW	3
6	DB91-00434A	ASSY-POWER CORD	1
7	DB95-01113F	ASS'Y THERMISTOR	1
8	DB39-01174A	ASS'Y C/W T/B(1) TO RY71(3)	1
9	DB93-04688A	ASSY C/W LOUVER	1
10	DB95-01140B	TERMINAL BLOCK	1

6-1-2. Indoor Main PCB : DB93-07430B



1	RY71-POWER INPUT
2	CN72-FAN MOTOR
3	CN22-COMMUNICATION
4	CN46-DOWNLOAD
5	CN43-TEMPERATURE SENSOR
6	CN91-DISPLAY
7	CN44-FAN MOTOR FEEDBACK
8	CN63-BLADE MOTOR

6-1-3. Indoor Display PCB DB93-06984C

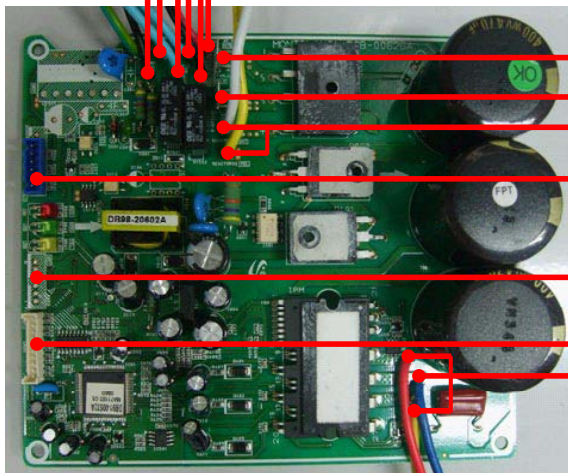
- ① CN01-DISPLAY
 #1:DIO
 #2:CLK
 #3:STB
 #4:IRQ
 #5:GND
 #6:Vcc
 #7:Remocon Signal Output
 #8:MPI Display Control

①



6-1-4. Outdoor Main PCB

- AQV09UGAX : DB93-07108C
 AQV12UGAX : DB93-07108D



④

⑤

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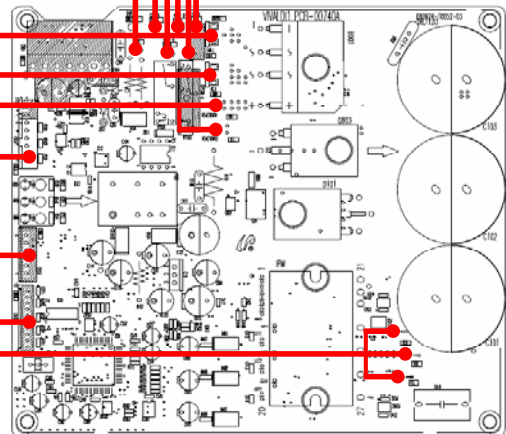
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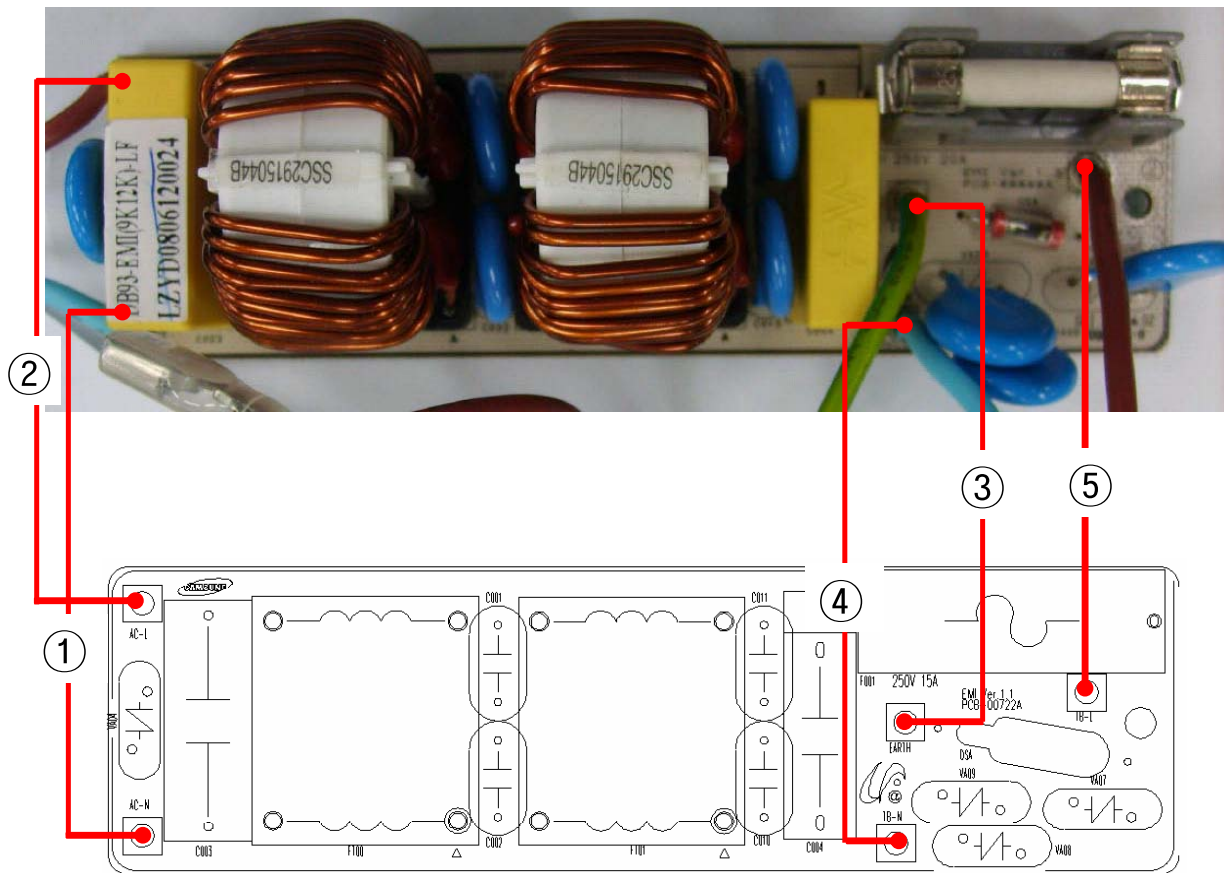
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1	Power N Wire
2	Power L Wire
3	AC FAN Wire
4	Communication Wire
5	4 Way Valve Wire
6	DIS/OUTDOOR/COND Temperatruue Sensor
7	EEV Connector
8	Download Connector
9	Reactor Wire
10	Compressor Wire

6-1-5 .Outdoor EMI PCB DB93-07050A



1	POWER N WIRE
2	POWER L WIRE
3	EARTH WIRE
4	POWER N WIRE
5	POWER L WIRE

6-2. Electrical Part List

■ MAIN PCB DB93-07430B					
LOCATION NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	SA/SNA
D701	0402-000012	DIODE-RECTIFIER	UF4007,1KV,1A,DO-41,TP	1	SNA
D4201	0402-000137	DIODE-RECTIFIER	1N4007,1KV,1A,DO-41,TP	1	SNA
D4202	0402-001194	DIODE-RECTIFIER	UG2D,200V,2A,DO-15,TP	1	SNA
BD4201	0402-001298	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP	1	SNA
ZD4201	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA
ZD4203	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225mW,SOT-23,TP	1	SNA
ZD4202	0403-001285	DIODE-ZENER	BZX84-C11,10.4-11.6V,350mW,SOT-23,TP	1	SNA
Q2321	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA
Q401	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA
Q6103	0501-002296	TR-SMALL SIGNAL	MMST2907A,PNP,200MW,SMT3,TP,100-300	1	SNA
Q6101	0504-000127	TR-DIGITAL	FJV3102RMTF,NPN,200MW,10K/10K,SOT-23,TP	1	SNA
Q6102	0504-000127	TR-DIGITAL	FJV3102RMTF,NPN,200MW,10K/10K,SOT-23,TP	1	SNA
Q4201	0504-001064	TR-DIGITAL	DTC114EKA,NPN,200mW,10K/10K,SOT-23,TP	1	SNA
IC05	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA
IC06	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA
IC07	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA
PC2321	0604-001003	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST	1	SNA
PC4201	0604-001038	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	SNA
IC361	1103-001175	IC-EEPROM	93LC56,128x16,SOP,8P,5x4mm,2.5/6.0V,-40to+85C	1	SNA
IC4202	1203-000274	IC-POS.FIXED REG.	7805,TO-220,3P,-,PLASTIC,4.8/5	1	SNA
IC4201	1203-002545	IC-PWM CONTROLLER	266,DIP,8P,300MIL,PLASTIC,-0.3/700V,-,40TO+150C,560MA,-,ST	1	SNA
IC0102	1203-003334	IC-RESET	S-801,SOT-23,5P,2.9x1.6mm,PLASTIC,3.716/4.284V,256mW,-,2.5mA,-,TP	1	SNA
VA71	1405-000160	VARISTOR	680V,4500A,17.5x6.5mm,TP	1	SNA
R4204	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA
R4205	2002-001104	R-COMPOSITION	12Mohm,5%,1/2W,AA,TP,3.4x9mm	1	SNA
R4203	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA
R701	2006-001080	R-CEMENT(S)	200ohm,5%,5W,CB,BK,13x9x25.5mm	1	SNA
R304	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA
R4206	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA
R2102	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA
R2104	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA
R2106	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA
R4202	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA
R0101	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R2322	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R2323	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R403	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R404	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R405	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R6106	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R6107	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA
R6103	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA
R6104	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA
R2321	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA
R402	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA
R4201	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA
R401	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	SNA
R6601	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	SNA
R301	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R302	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R406	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R501	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R6105	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R6602	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA
R361	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA
R362	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA
R0102	2007-000109	R-CHIP	1Mohm,5%,1/10W,TP,1608	1	SNA

R303	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA
R305	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA
R306	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA
R6108	2007-000119	R-CHIP	560ohm,5%,1/10W,TP,1608	1	SNA
R4207	2007-000124	R-CHIP	2.2Kohm,5%,1/10W,TP,1608	1	SNA
R4208	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA
R201	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R202	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R203	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R204	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R205	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R206	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R207	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R208	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA
R2103	2007-001068	R-CHIP	6.8Kohm,1%,1/10W,TP,1608	1	SNA
R2105	2007-001068	R-CHIP	6.8Kohm,1%,1/10W,TP,1608	1	SNA
C4202	2201-000983	C-CERAMIC,DISC	1NF,10%,2KV,Y5P,TP,9X5MM,7.5	1	SNA
C701	2201-000983	C-CERAMIC,DISC	1NF,10%,2KV,Y5P,TP,9X5MM,7.5	1	SNA
C4203	2201-000987	C-CERAMIC,DISC	2.2NF,20%,400V,Y5U,BK,12.5X6MM,10	1	SNA
C4204	2201-000987	C-CERAMIC,DISC	2.2NF,20%,400V,Y5U,BK,12.5X6MM,10	1	SNA
C4205	2201-002193	C-CERAMIC,DISC	0.082nF,±10%,3000V,SL,-,8.5 X 3,5	1	SNA
C2322	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C2323	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C361	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C401	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C6101	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C6102	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA
C301	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	SNA
C302	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	SNA
C305	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	SNA
C402	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	SNA
C509	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	SNA
C0101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0102	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0104	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0105	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0106	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C0107	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C2101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C2102	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C2103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C2321	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C403	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C4201	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C4206	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C4207	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
C6601	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
KC46	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
KC47	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	SNA
XC71	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA
XC72	2301-001220	C-FILM,LEAD-PPF	100nF,10%,275V,BK,18x6x12,15	1	SNA
CR71	2301-001251	C-FILM,LEAD-PPF	1.2uF,10%,450Vac,BK,38x18x30,3	1	SNA
CE4205	2401-000038	C-AL	470uF,20%,25V,GP,TP,10x12.5mm,	1	SNA
CE4204	2401-000151	C-AL	1000uF,20%,25V,GP,TP,10x20,5	1	SNA
CE6101	2401-002094	C-AL	47uF,20%,25V,GP,TP,5x11,2.5	1	SNA
CE4201	2401-004330	C-AL	22uF,20%,500V,-,TP,12.5X25,7.5mm	1	SNA
CE4202	2401-004330	C-AL	22uF,20%,500V,-,TP,12.5X25,7.5mm	1	SNA
L4201	2702-001118	INDUCTOR-RADIAL	5000uH,10%,8.0x11.0mm	1	SNA
X0101	2802-001179	RESONATOR-CERAMIC	4MHZ,0.5%,BK,8X3X5.5MM	1	SNA
BZ6101	3002-001129	BUZZER-PIEZO	85DB,-,2KHZ,-	1	SNA
RY74	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1FormA,10mS,10mS	1	SA
RY71	3501-001268	RELAY-POWER	12V,0.9W,25000mA,SPST,20mS,10mS	1	SNA
SS71	3502-000115	SSR	12Vdc,-,2A,1mS,1mS	1	SNA

BZ6101	3002-001129	BUZZER-PIEZO	85DB,-,2KHZ,-	1	SNA
RY74	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1FormA,10mS,10mS	1	SA
RY71	3501-001268	RELAY-POWER	12V,0.9W,25000mA,SPST,20mS,10mS	1	SNA
SS71	3502-000115	SSR	12Vdc,-,2A,1mS,1mS	1	SNA
CN43	3711-004379	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,STRAIGHT,SN,NTR	1	SNA
CN63	3711-004484	HEADER-BOARD TO CABLE	BOX,5P,1R,2mm,STRAIGHT,SN,NTR	1	SNA
KCN46	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA
T4201	DB26-00065A	TRANS SWITCHING	EI1916-09N,9W,PREMIUM,-,160V/280V,PL-3 EI1916,-,EI1916,50/60Hz,UL,1.65mH±10%,-,750mA,DC12V,IN DIA IMPROVE	1	SNA
FT71	DB27-00017A	COIL CHOKE	USAV-07153,UU1116,15.0mH,-25□~+85□,-,1.3ohm,-,15mH,105,20*18mm,13,0.6,BK,-25□	1	SNA
COM	DB39-01270C	CONNECT WIRE	WW2-P/J,#1015 18 AWG,-,1P,-,BLK,-,175022-1 (AMP),ST780400 (KET),TP,220V/50Hz,4mm,170mm,-,SSEC	1	SNA
PCB	DB41-00752A	PCB MAIN	-,FR-4,-,T1.6,-,-,-,INV-VIVALDI	1	SA
F701	DB61-00924A	HOLDER-FUSE	-,FH-51B,-,-,-,SSEC	1	SNA
VA71	DB67-00942A	CAP	VIVALDI-P/J,SHP2,-,-,GREEN,SSEC	1	SNA
IC0101	DB91-00821A	ASSY-MIC	Vivaldi Inverter RAC 9/12K Deluxe,Standard Uni Micom,STM-08F7-OA, MB90F823, 80P, ROM 128K bytes	1	SNA
ASSY PCB SUB	DB93-04256B	ASSY PCB SUB	Montblanc1-INV,AC SUB PBA	1	SA
4WAY/Earth	DB93-04814B	ASSY CONNECTOR WIRE	Montblanc-PJT,UL1015 AWG20	1	SNA
N(1)-WIRE	DB93-05695A	ASSY CONNECTOR WIRE-WIRE N 1 TO TB	Mont Blanc-P/J,UL1015 AWG #18	1	SNA
CN91(1-7)	DB93-06896B	ASSY CONNECTOR WIRE	Vivaldi-P/J,190mm,25045TP,SMH250-5HRT,AWG#26,SSEC	1	SNA

■ OUTDOOR MAIN PCB DB93-07108C						
LOCATION NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY		SA/SNA
				DB93-07108E	DB93-07108F	
D451	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,TP	1	1	SNA
D452	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,TP	1	1	SNA
D453	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,TP	1	1	SNA
D454	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,TP	1	1	SNA
D104	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	1	SNA
D105	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	1	SNA
D106	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	1	SNA
D301	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	1	SNA
D102	0402-001429	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1	1	SNA
D107	0402-001429	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1	1	SNA
D401	0402-001429	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1	1	SNA
D402	0402-001429	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1	1	SNA
D403	0402-001429	DIODE-RECTIFIER	US1J,600V,1A,DO-214AC,TP	1	1	SNA
ZD451	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225mW,SOT-23,TP	1	1	SNA
ZD452	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225mW,SOT-23,TP	1	1	SNA
ZD501	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225mW,SOT-23,TP	1	1	SNA
ZD502	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225mW,SOT-23,TP	1	1	SNA
ZD31	0403-000537	DIODE-ZENER	1N4749A,5%,1000mW,DO-41,TP	1	1	SNA
ZD32	0403-000537	DIODE-ZENER	1N4749A,5%,1000mW,DO-41,TP	1	1	SNA
ZD11	0403-001499	DIODE-ZENER	MMSZ5252,5%,500mW,SOD-123,TP	1	1	SNA
D201	0407-000123	DIODE-ARRAY	DAN202K,80V,100mA,CA2-3,SOT-23,TP	1	1	SNA
Q301	0504-000127	TR-DIGITAL	FJV3102RMTF,NPN,200MW,10K/10K,SOT-23,TP	1	1	SNA
Q302	0504-000127	TR-DIGITAL	FJV3102RMTF,NPN,200MW,10K/10K,SOT-23,TP	1	1	SNA
Q801	0504-000127	TR-DIGITAL	FJV3102RMTF,NPN,200MW,10K/10K,SOT-23,TP	1	1	SNA
IC55	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	1	SNA
IC56	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	1	SNA
Q803	0508-001132	TR-IGBT	-,600V,40A,2.6V,1200UJ,160W,TO-3P	1	1	SNA
IC12	0604-001172	PHOTO-COUPLER	TR,100-300,200mW,SOP,TP	1	1	SNA
IC31	0604-001172	PHOTO-COUPLER	TR,100-300,200mW,SOP,TP	1	1	SNA
IC32	0604-001172	PHOTO-COUPLER	TR,100-300,200mW,SOP,TP	1	1	SNA
IC21	1202-000104	IC-VOLTAGE COMP.	393,SOP,8P,150MIL,DUAL,36V,CMOS,PLASTIC,18V,780mW,0to+70C,18V,5mV,250nA,50NA,30	1	1	SNA
IC19	1203-000274	IC-POS.FIXED REG.	7805,TO-220,3P,-,PLASTIC,4.8/5	1	1	SNA
IC13	1203-002948	IC-POSI.ADJUST REG.		1	1	SNA
R301	2003-000685	R-METAL OXIDE(S)	4.7Kohm,5%,2W,AA,TP,4x12mm	1	1	SNA
R307	2003-000685	R-METAL OXIDE(S)	4.7Kohm,5%,2W,AA,TP,4x12mm	1	1	SNA
R107	2003-000699	R-METAL OXIDE(S)	470ohm,5%,1W,AA,TP,3.3x9mm	1	1	SNA
R101	2003-000855	R-METAL OXIDE(S)	47Kohm,5%,3W,AA,TP,6x16mm	1	1	SNA
R418	2006-001013	R-CEMENT	0.02ohm,5%,7W,CA,BK,35x9.5x9.5mm	1	1	SNA
R308	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	1	SNA
R419	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R420	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R421	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R422	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R423	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R424	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R425	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	1	SNA
R505	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	1	SNA
R506	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	1	SNA
R508	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	1	SNA
R553	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	1	SNA
R303	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	1	SNA
R304	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	1	SNA
R323	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	1	SNA
R342	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	1	SNA
R207	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	1	SNA
R208	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	1	SNA
R104	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	1	SNA
R413	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	1	SNA
R305	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA

R324	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA
R325	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA
R327	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA
R328	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA
R415	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	1	SNA
R105	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	1	SNA
R552	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R554	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R555	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R557	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R558	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R560	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R561	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R562	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R563	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R573	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R574	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R902	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R908	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	1	SNA
R601	2007-000094	R-CHIP	22Kohm,5%,1/10W,TP,1608	1	1	SNA
R602	2007-000094	R-CHIP	22Kohm,5%,1/10W,TP,1608	1	1	SNA
R315	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	1	SNA
R302	2007-000119	R-CHIP	560ohm,5%,1/10W,TP,1608	1	1	SNA
R306	2007-000119	R-CHIP	560ohm,5%,1/10W,TP,1608	1	1	SNA
R205	2007-000263	R-CHIP	1.82Kohm,1%,1/8W,TP,2012	1	1	SNA
R206	2007-000263	R-CHIP	1.82Kohm,1%,1/8W,TP,2012	1	1	SNA
R805	2007-000300	R-CHIP	10Kohm,5%,1/8W,TP,2012	1	1	SNA
R116	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	1	SNA
R539	2007-000493	R-CHIP	2.2Kohm,5%,1/8W,TP,2012	1	1	SNA
R540	2007-000493	R-CHIP	2.2Kohm,5%,1/8W,TP,2012	1	1	SNA
R541	2007-000493	R-CHIP	2.2Kohm,5%,1/8W,TP,2012	1	1	SNA
R807	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	1	SNA
R502	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	1	SNA
R407	2007-000781	R-CHIP	33ohm,5%,1/8W,TP,2012	1	1	SNA
R408	2007-000781	R-CHIP	33ohm,5%,1/8W,TP,2012	1	1	SNA
R409	2007-000781	R-CHIP	33ohm,5%,1/8W,TP,2012	1	1	SNA
R113	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	1	SNA
R114	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	1	SNA
R115	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	1	SNA
R808	2007-000931	R-CHIP	470ohm,5%,1/8W,TP,2012	1	1	SNA
R806	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	1	SNA
R501	2007-000962	R-CHIP	5.1Kohm,1%,1/10W,TP,1608	1	1	SNA
R504	2007-000962	R-CHIP	5.1Kohm,1%,1/10W,TP,1608	1	1	SNA
R462	2007-000987	R-CHIP	5.6ohm,5%,1/10W,TP,1608	1	1	SNA
R463	2007-000987	R-CHIP	5.6ohm,5%,1/10W,TP,1608	1	1	SNA
R464	2007-000987	R-CHIP	5.6ohm,5%,1/10W,TP,1608	1	1	SNA
R103	2007-001118	R-CHIP	680ohm,5%,1/8W,TP,2012	1	1	SNA
R201	2007-002667	R-CHIP	90.9Kohm,1%,1/4W,TP,3216	1	1	SNA
R202	2007-002667	R-CHIP	90.9Kohm,1%,1/4W,TP,3216	1	1	SNA
R203	2007-002667	R-CHIP	90.9Kohm,1%,1/4W,TP,3216	1	1	SNA
R204	2007-002667	R-CHIP	90.9Kohm,1%,1/4W,TP,3216	1	1	SNA
R110	2007-008023	R-CHIP	100Kohm,5%,1W,TP,6432	1	1	SNA
R111	2007-008023	R-CHIP	100Kohm,5%,1W,TP,6432	1	1	SNA
R112	2007-008023	R-CHIP	100Kohm,5%,1W,TP,6432	1	1	SNA
C106	2201-000322	C-CERAMIC,DISC	2.2NF,10%,2KV,Y5P,TP,13X5MM,10	1	1	SNA
C107	2201-000322	C-CERAMIC,DISC	2.2NF,10%,2KV,Y5P,TP,13X5MM,10	1	1	SNA
C304	2201-000322	C-CERAMIC,DISC	2.2NF,10%,2KV,Y5P,TP,13X5MM,10	1	1	SNA
C401	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA
C402	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA
C403	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA
C404	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA
C405	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA
C406	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	1	SNA

C201	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C203	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C204	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C205	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C302	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C305	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C306	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C307	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C451	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C453	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C567	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C906	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	1	SNA
C303	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	1	SNA
C408	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	1	SNA
C421	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	1	SNA
C601	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	1	SNA
C602	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	1	SNA
C318	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,-,1608	1	1	SNA
C319	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,-,1608	1	1	SNA
C320	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,-,1608	1	1	SNA
C321	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,-,1608	1	1	SNA
C802	2203-002398	C-CER,CHIP	22nF,10%,50V,X7R,1608	1	1	SNA
C105	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C108	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C112	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C116	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C121	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C202	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C308	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C400	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C412	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C413	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C414	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C415	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C417	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C419	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C452	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C454	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C513	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C514	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C516	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C518	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C519	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C553	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C554	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C560	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C561	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C563	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C565	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C568	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C570	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C575	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C576	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C803	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C907	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C910	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,1608	1	1	SNA
C113	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608	1	1	SNA
C001	2301-000141	C-FILM,LEAD-PEF	10nF,10%,630V,TP,16x11x7.5mm,5	1	1	SNA
C301	2301-001331	C-FILM,LEAD-PEF	10nF,5%,100V,TP,7.5x4x7mm,5	1	1	SNA
C418	2306-000123	C-FILM,LEAD-PPF	100nF,5%,630V,BK,26x16.5x8.5,2	1	1	SNA
C552	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C559	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C562	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C564	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA

C569	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C574	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C577	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	1	SNA
C416	2401-000880	C-AL	220uF,20%,50V,WT,TP,10x16mm,5m	1	1	SNA
C409	2401-002438	C-AL	47µF,20%,50V,WT,TP,6.3x11,5mm	1	1	SNA
C410	2401-002438	C-AL	47µF,20%,50V,WT,TP,6.3x11,5mm	1	1	SNA
C411	2401-002438	C-AL	47µF,20%,50V,WT,TP,6.3x11,5mm	1	1	SNA
C122	2401-003541	C-AL	10uF,20% ,450V,WT,TP,12.5x20mm,5	1	1	SNA
C110	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	1	SNA
C114	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	1	SNA
C119	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	1	SNA
C123	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	1	SNA
C804	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	1	SNA
C104	2401-003736	C-AL	22UF,20%,50V,WT,TP,5X11MM,2	1	1	SNA
XTAL	2802-001198	RESONATOR- CERAMIC	10MHZ,0.5%,BK,8X3X5.5MM	1	1	SNA
RY501	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1FormA,10mS,10mS	1	1	SA
RY502	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1FormA,10mS,10mS	1	1	SA
CN54	3711-001036	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5mm,STRAIGHT,SN,BLU	1	1	SNA
CN30	3711-004182	HEADER-BOARD TO CABLE	BOX,10P,1R,2MM,STRAIGHT,SN,NTR	1	1	SNA
AC_L	3712-001139	CONNECTOR- TERMINAL	TAB,MALE,-,6.35X0.8MM	1	1	SNA
AC_N	3712-001139	CONNECTOR- TERMINAL	TAB,MALE,-,6.35X0.8MM	1	1	SNA
IC451	DB32-00173A	SENSOR MAG-CT SENSOR	ACS712,5HP INVERTER,-,-40~150,-,- ,30A,8V,Sinusoidal	1	1	SNA
IC452	DB32-00173A	SENSOR MAG-CT SENSOR	ACS712,5HP INVERTER,-,-40~150,-,- ,30A,8V,Sinusoidal	1	1	SNA
L/W EARTH	DB39-00514F	CBF LEAD WIRE- EARTH	-,KFR-35(25)GW/GPI,-,200,-,-,-,GRN/YEL,-,-,-	1	1	SNA
PCB	DB41-00740A	PCB MAIN	Vivaldi,CEM-3,2,-,T1.6,160*140,-,1,-,-,INV	1	1	SNA
IC01	DB91-00532D	ASSY-MIC	Vivaldi OUTDOOR INVERTER MICOM,STM-0870-BA, MN103SFA7K,80P, ROM Size: 256K bytes	1	1	SNA
IC501	DB91-00828A	ASSY-EEPROM	F/Vivaldi STD 9K,512byte	1	0	SNA
IC501	DB91-00841A	ASSY-EEPROM	F/Vivaldi STD 12K,512byte	0	1	SNA
C/W COMP	DB93-04336A	ASSY CONNECTOR WIRE	AQV12JAKCV,12K	1	1	SNA
C/W REACTOR	DB93-04348B	ASSY CONNECTOR WIRE	AQV12JAKCV,Out_12k	1	1	SNA
C/W COMM-N	DB93-04348C	ASSY CONNECTOR WIRE	AQV12FA,Out_12k	1	1	SNA
C/W 4WAY	DB93-04349A	ASSY CONNECTOR WIRE-4WAY	AQV12JAKCV,12K_Out	1	1	SNA
WIRE-AC FAN	DB93-06156A	ASSY CONNECTOR WIRE	Use in-MONT BLANCPJT,ST730679-3,AWG#20	1	1	SNA
IPM	DB95-00599A	ASSY-IPM	KFR-35GW/GPI,INVERTER	1	1	SNA
BD01	DB98-16586A	ASSY-DIODE	~::~::~::~::~::~::~::~::~::~::~::~::~::~::~::~,	1	1	SNA
D101	DB98-16591A	ASSY-DIODE RECTIFIER	~::~::~::~::~::~::~::~::~::~::~::~::~::~::~::~,	1	1	SNA
LED2	DB98-16600A	ASSY-LED GREEN	~::~::~::~::~::~::~::~::~::~::~::~::~::~::~::~,	1	1	SNA
LED1	DB98-16601A	ASSY-LED RED	~::~::~::~::~::~::~::~::~::~::~::~::~::~::~::~,	1	1	SNA
LED3	DB98-16602A	ASSY-LED YEL	~::~::~::~::~::~::~::~::~::~::~::~::~::~::~::~,	1	1	SNA
PT02	DB98-20602A	ASSY-PULSE TRANS	KFR-35GW/GPI,INVERTER	1	1	SNA
R106	DB98-20665A	ASSY-RESISTOR	KFR-35(25)GW/GPI,1.8k F 1608	1	1	SNA
IC81	DB98-20678A	ASSY- PHOTOCOUPLER	KFR-35(25)GW/GPI,TLP351	1	1	SNA
IC11	DB98-20679A	ASSY-FPS	KFR-35(25)GW/GPI,FSDH321	1	1	SNA
C101	DB98-21655A	ASSY-CAP	KFR-35(25)GW,KMH400VS470	1	1	SNA
C102	DB98-21655A	ASSY-CAP	KFR-35(25)GW,KMH400VS470	1	1	SNA
C103	DB98-21655A	ASSY-CAP	KFR-35(25)GW,KMH400VS470	1	1	SNA

■ OUTDOOR EMI PCB DB93-07050A					
LOCATION NO.	CODE NO.	DESCRIPTION	SPECIFICATION	Q'TY	SA/SNA
VA04	1405-000154	VARISTOR	460Vdc,2500A,17.5x7.5mm,TP	1	SNA
VA07	1405-000154	VARISTOR	460Vdc,2500A,17.5x7.5mm,TP	1	SNA
VA08	1405-000154	VARISTOR	460Vdc,2500A,17.5x7.5mm,TP	1	SNA
VA09	1405-000154	VARISTOR	460Vdc,2500A,17.5x7.5mm,TP	1	SNA
C001	2201-000540	C-CERAMIC,DISC	4.7NF,20%,2KV,Y5U,BK,12X5MM,10	1	SNA
C002	2201-000540	C-CERAMIC,DISC	4.7NF,20%,2KV,Y5U,BK,12X5MM,10	1	SNA
C010	2201-000540	C-CERAMIC,DISC	4.7NF,20%,2KV,Y5U,BK,12X5MM,10	1	SNA
C011	2201-000540	C-CERAMIC,DISC	4.7NF,20%,2KV,Y5U,BK,12X5MM,10	1	SNA
C003	2301-001285	C-FILM,LEAD-PPF	680NF,10%,275V,BK,31X11X21MM,27.5	1	SNA
C004	2301-001325	C-FILM,LEAD-PPF	330nF,10%,275V,TP,26x8.5x18mm,22.5	1	SNA
-	3601-000438	FUSE-CARTRIDGE	250V,15A,SLOW-BLOW,CERAMIC,6.35x31.8mm	1	SNA
-	3602-001042	FUSE-BLOCK	300V,15A,-	1	SNA
-	6042-000107	EYELET	ID1.2,OD2.0,L12.9,NI PLT,C2600	2	SNA
-	6042-001009	EYELET	ID1.8,OD2.2,L3,-,BRASS	8	SNA
-	6042-001012	EYELET	ID3,OD5,L4.3,YEL,Cu	5	SNA
-	DB39-00514F	CBF LEAD WIRE-EARTH	-,KFR-35(25)GW/GPI,-,200,-,-,-,GRN/YEL,-,-,-	1	SNA
-	DB39-00961T	CBF LEAD WIRE	-,SH12BWH,-,120,10A,230V/50Hz,-,BRW,-,-,INVERTER	1	SNA
-	DB39-00961U	CBF LEAD WIRE	-,SH12BWH,-,120,10A,230V/50Hz,-,BLU,-,-,INVERTER	1	SNA
-	DB39-00998C	CONNECT WIRE	KFR-35(25)GW,-,-,2P,-,BRN/SKYBLU,-,-,-,220V,-,140,-,-,AC POWER WIRE	1	SNA
-	DB41-00722A	PCB SUB-EMI	Forte 9K/12K(XSA),CEM-1,1,V1.0,T1.6,200*160,Q,5,EMI,-,-	1	SA
-	DB47-00016A	POSISTOR	DSA-332MA,2pF MAX,100MOhm,ASM-3500	1	SNA
-	DB67-00942A	CAP	VIVALDI-P/J,SHP2,-,-,-,GREEN,SSEC	4	SNA
FT00	DB98-17990A	ASSY-EMI FILTER	SH12BWH,LS615044	1	SNA
FT01	DB98-17990A	ASSY-EMI FILTER	SH12BWH,LS615044	1	SNA

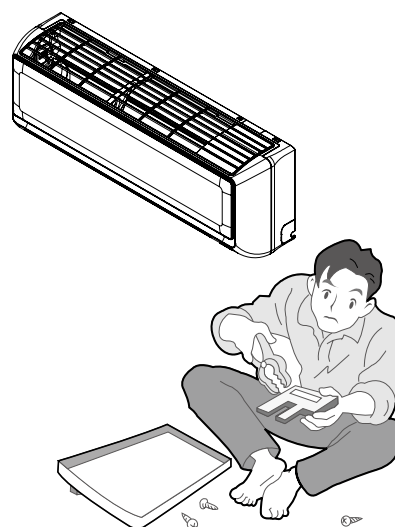
1. Precautions

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.

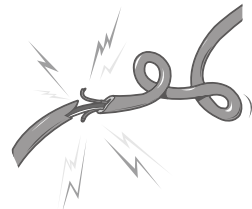


1-3 Precautions for the Safety

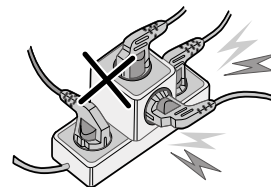
- Do not pull any electric wires and do not touch an auxiliary power switch with a wet hand.
 - There is a danger of electric shock or fire.



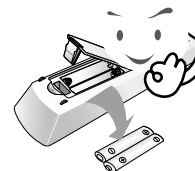
- In case any wire or power plug has been damaged, replace it to eliminate any possible danger.
- Do not bend the power cord by force and do not put any heavy object on the power cord.
 - There is a danger of electric shock or fire.



- 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.



2. Product Specifications

2-1 The Feature of Product

2-1-1 The Feature of Product

- **good' sleep Mode**

good'sleep mode can help you sleep quickly and soundly and wake up refreshed.

- **Catechin Filter**

Catechin,extracted from the green tea,is contained in the filter and deactivates captured bacteria and unpleasant odors.

- **Silver Nano Evaporator**

- **Deodorizing Filter**

Activated carbon is incorporated in the filter,efficiently absorbing cigarette smoke, pet odors, and other unpleasant smells, replacing them with clean,refreshing air.

- **mpi Mode**

The Micro Plasma Ion mode creates strong purified zone in your room.

2-1-2 Modified items compared with Basic model

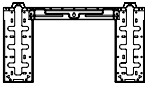
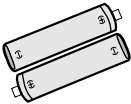
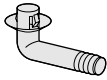
Modified part	New contents and characteristic	New model	New model
		AQV09UGA	AQV12UGA
Indoor	Indoor Design changed		
Outdoor	chassis changed		

2-2 The Comparative Specifications of Product

ITEM type Design			MODEL	AQV09UGA		AQV12UGA	
				INDOOR UNIT WALL MOUNTED	OUTDOOR UNIT WALL MOUNTED	INDOOR UNIT WALL MOUNTED	OUTDOOR UNIT WALL MOUNTED
							
performance	Cooling/Heating(ISO)		KW	2.5/3.3		3.3/4.0	
			BTU/h	-		-	
	Cooling/Heating(SASO)		kcal	-		-	
	Dehumidifying		l/h	-		-	
	Noise	Cooling	Db(H/L)	41	53	43	53
	EER	Cooling/ Heating(ISO)	kW/kW	3.40/3.63		3.21/3.61	
		Cooling/ Heating(SASO)	Btu/w-h	-		-	
	Power		ph/V/HZ	1/220V~240V/50Hz		1/220V~240V/50Hz	
power	Power consumption	Cooling/ Heating(ISO)	W	735/910		1028/1108	
		Cooling/ Heating(SASO)	Btu/w-h	-		-	
	Operating current	Cooling/ Heating(ISO)	A	3.5/4.4		4.9/5.2	
		Cooling/ Heating(SASO)	A	-		-	
	Power factor	Cooling/ Heating	%	90/90		90/90	
	Power cord	Length	m	2		2	
		Number of core wire	-	3		3	
		Capacity	A	10		10	
size	Outer Dimension	W x H x D	mm	820 x 286 x 190	720 x 548 x 265	820 x 286 x 190	720 x 548 x 265
			inch	-	-	-	-
	weight(net)		kg	8.2	31.5	8.2	31.5
	Refrigerant pipe	liquid	D*L(mm)	9.52*5000		9.52*5000	
		gas		6.35*5000		6.35*5000	
Drain Hose		D*L(mm)	18*2000		18*2000		
Heat exchanger				Φ7.0,2R*10(9)S*605 Φ7.0,2R*4(3)S*575	Φ9.52,1R*20S*757.6	Φ7.0,2R*10S*605 Φ7.0,2R*4S*575	Φ9.52,1R*20S*757.6
Refrigerant		g	R410A, 850		R410A, 850		
Freezer oil capacity		cc	320		320		
Refrigerant Control unit			CAPILLARY		CAPILLARY		
Compressor			G4C090LUDER		G4C090LUDER		
Protection device(OLP)			-		-		

2-3 Accessory and Option Specifications

2-3-1 Accessories

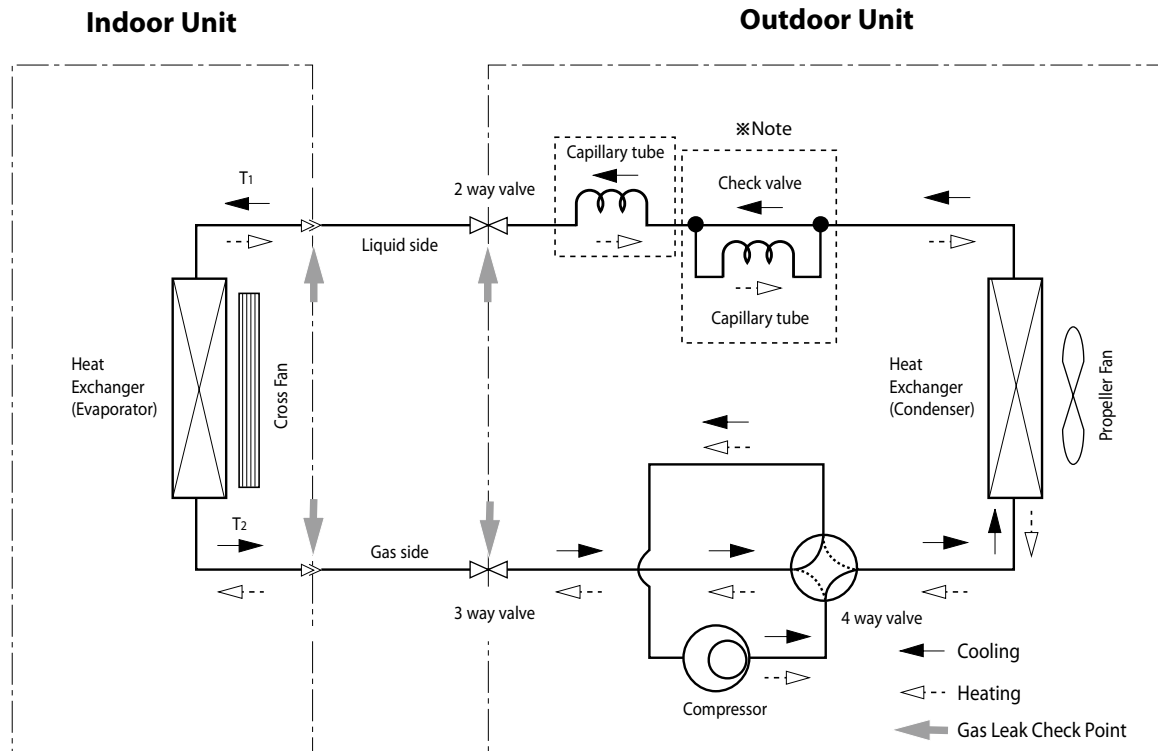
Item	Descriptions	Code-No.	Q'TY	Remark
	Plate-hanger	DB97-02851C	1	Indoor Unit
	Remote Control	DB93-07073E	1	
	Batteries for Remote Control	DB47-90024A	2	
	User's Manual	DB98-29980A	1	
	Installation Manual	DB98-29786A	1	
	Drain Plug	DB67-20011A	1	Outdoor Unit
	Rubber Leg	DB73-20134A	4	

2-3-2 Filter

Image	Part name	Code no	Remark
	Pre-filter	DB63-02143A(Left) DB63-02144A(right)	wash in water

9. Reference Sheet

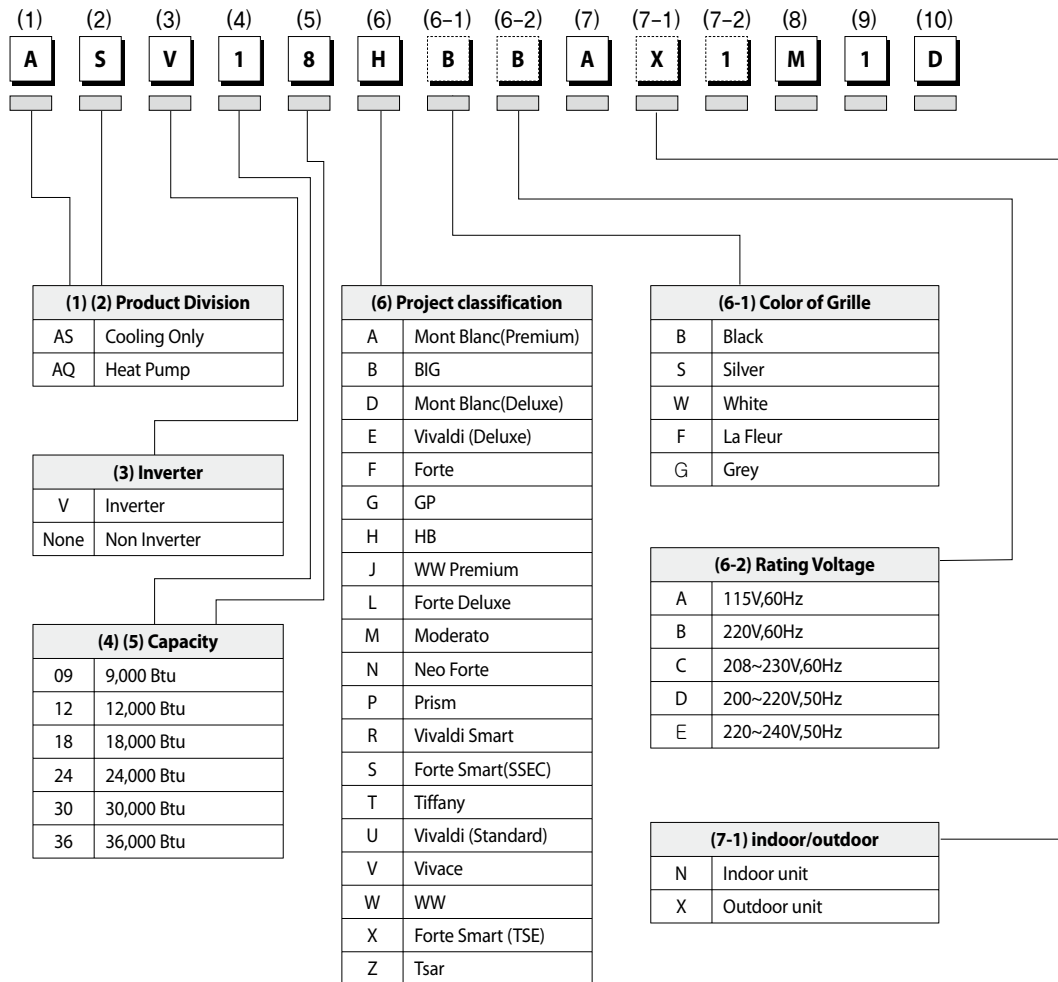
9-1 Refrigerating Cycle Diagram



9-2 Index for Model Name

* Project model code for overseas from 2008(For RAC Export Models)

Model Code



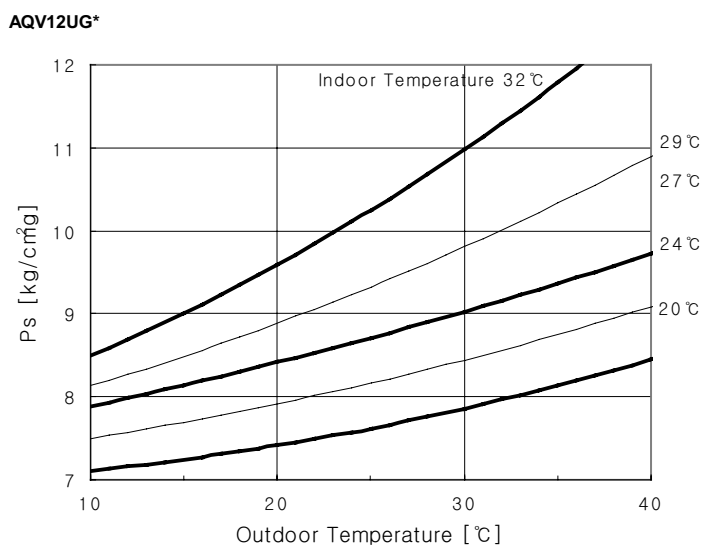
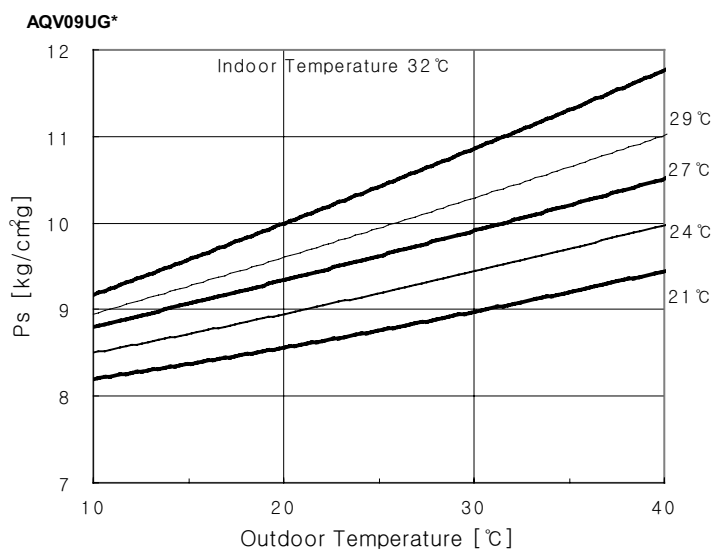
9-3 Distribution chart of the Pressure

Note :

1. Please measure the refrigerant pressure after the air conditioner operates on the testing mode during more than 10 minutes.
2. There may be a much tolerance at the range not presented in this graph.

(Unit:kg/cm²g)

AQV09UG*				AQV12UG*			
	DB21/WB15	DB27/WB19	DB32/WB23		DB21/WB15	DB27/WB19	DB32/WB23
10℃	8.2	8.8	9.2	10℃	7.12	7.9	8.43
21℃	8.6	9.4	10.0	21℃	7.41	8.43	9.4
35℃	9.2	10.2	11.4	35℃	8.16	9.4	10.9
43℃	9.6	10.7	12.0	43℃	8.6	9.9	





GSPN(Global Service Partner Network)

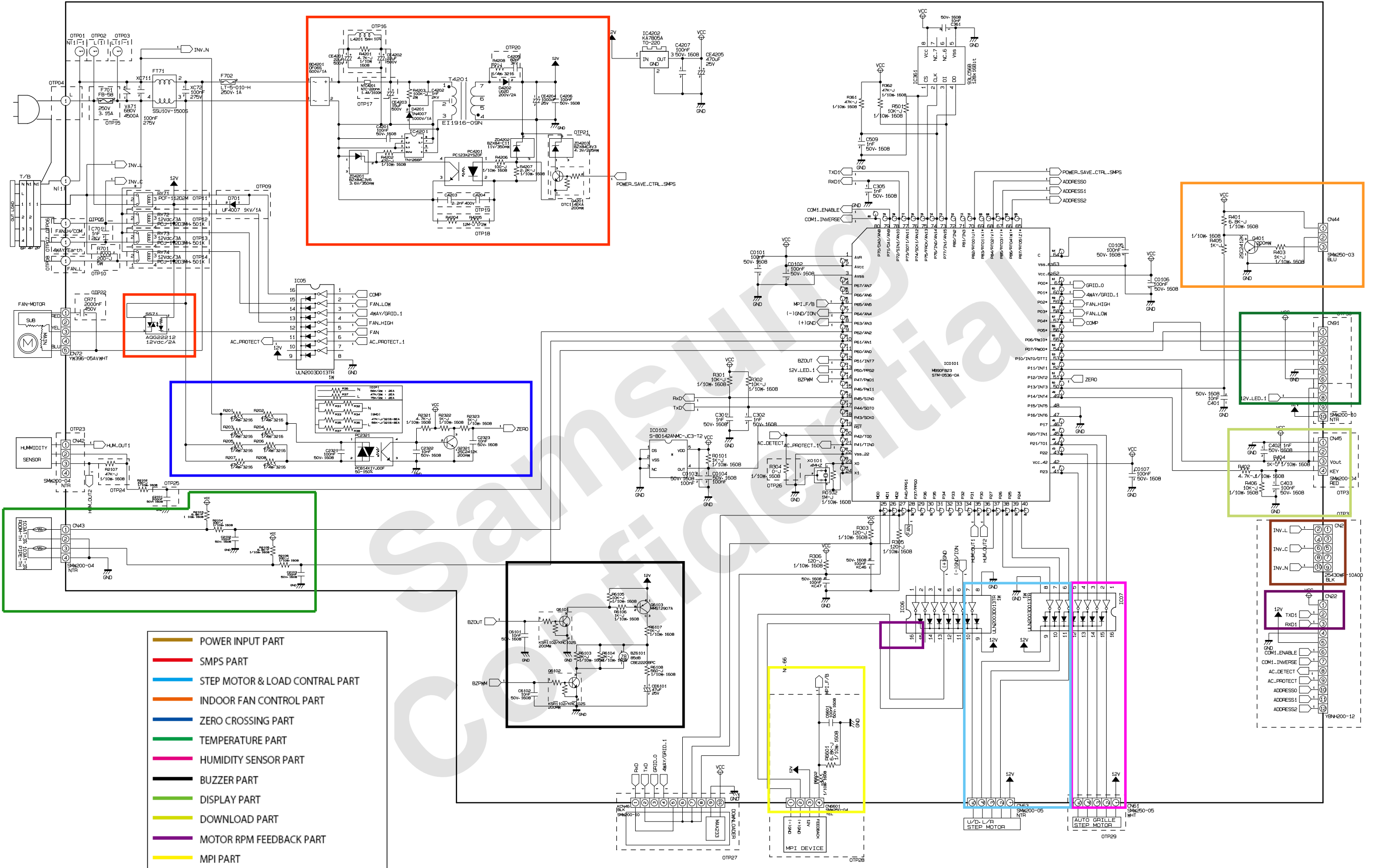
Area	Web Site
North America	http://service.samsungportal.com
Latin America	http://latin.samsungportal.com
CIS	http://cis.samsungportal.com
Europe	http://europe.samsungportal.com
China	http://china.samsungportal.com
Asia	http://asia.samsungportal.com
Mideast & Africa	http://mea.samsungportal.com

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International and/or domestic law.

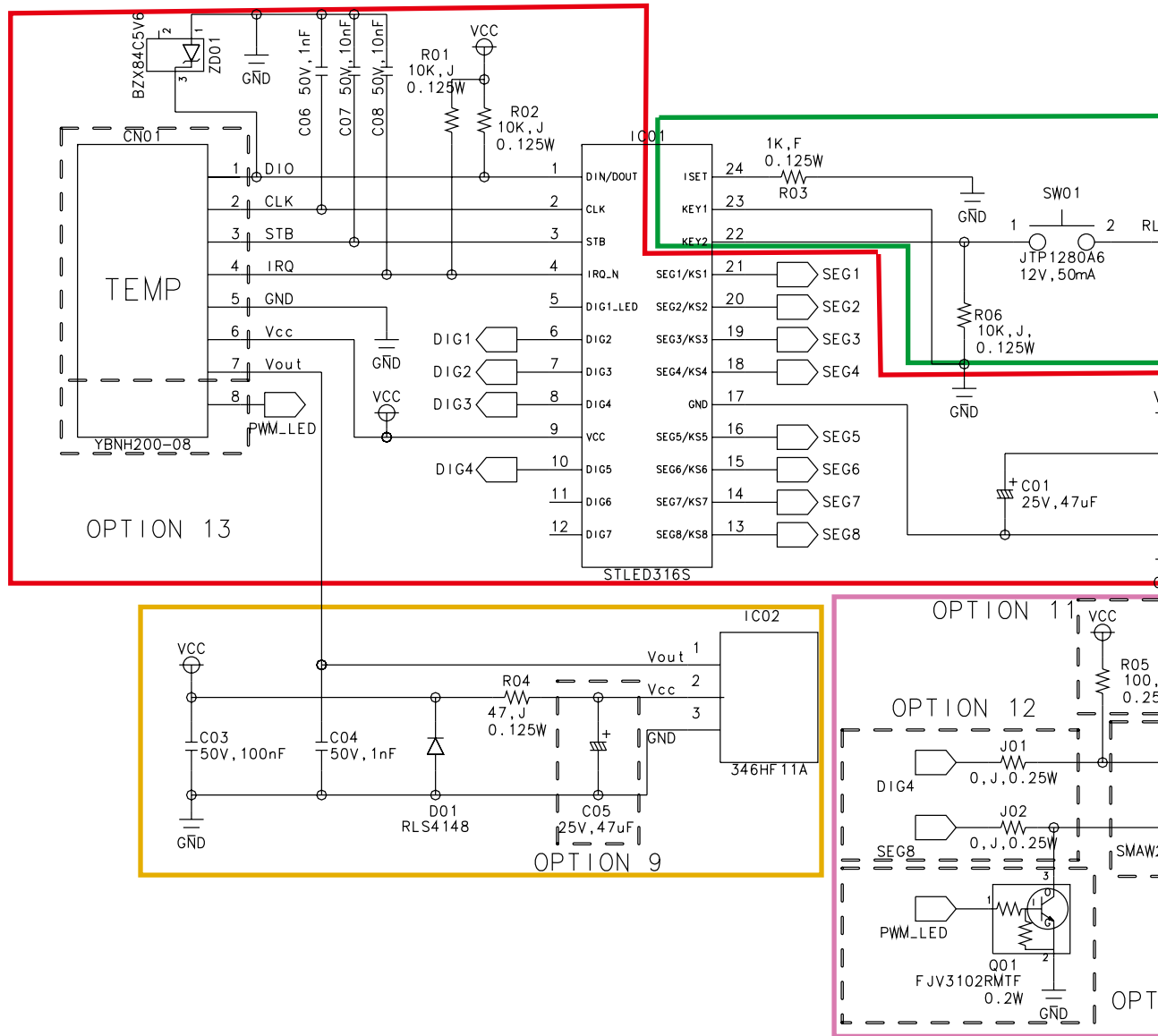
© Samsung Electronics Co., Ltd. Sep. 2008.
Code No. DB98-29945A(1)

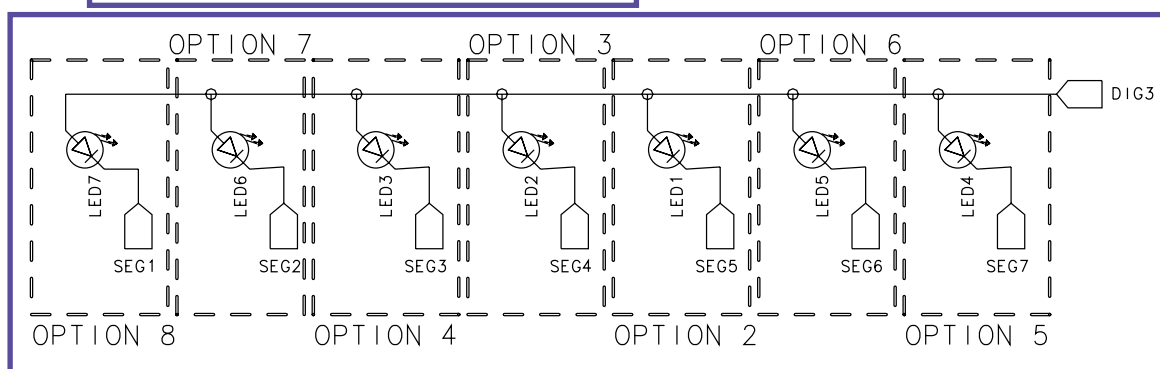
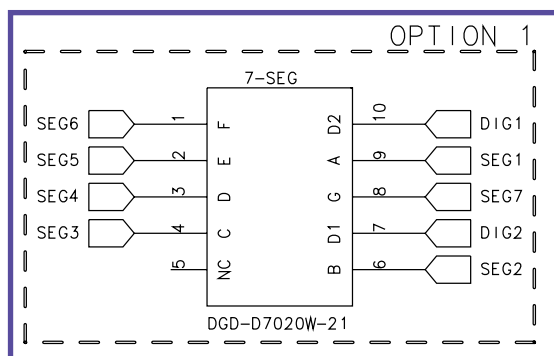
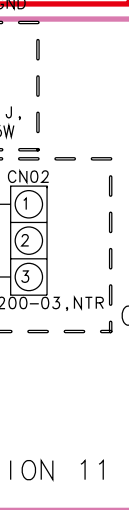
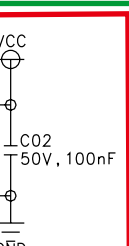
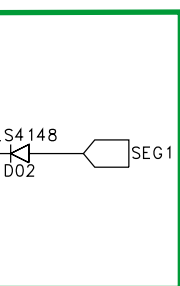
8. Schematic Diagram

8-1-1 Indoor Unit



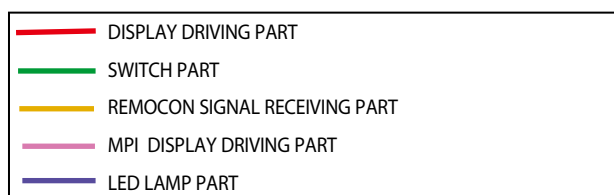
8-1-2.Display

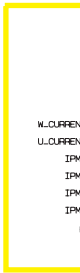


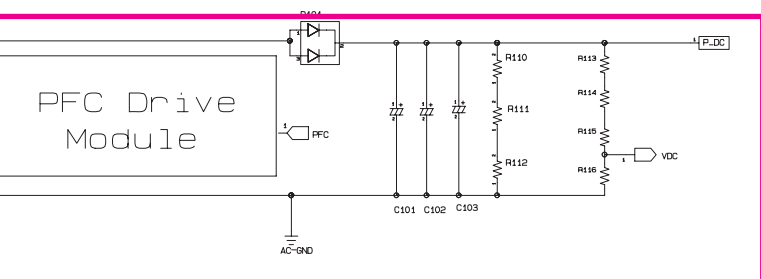
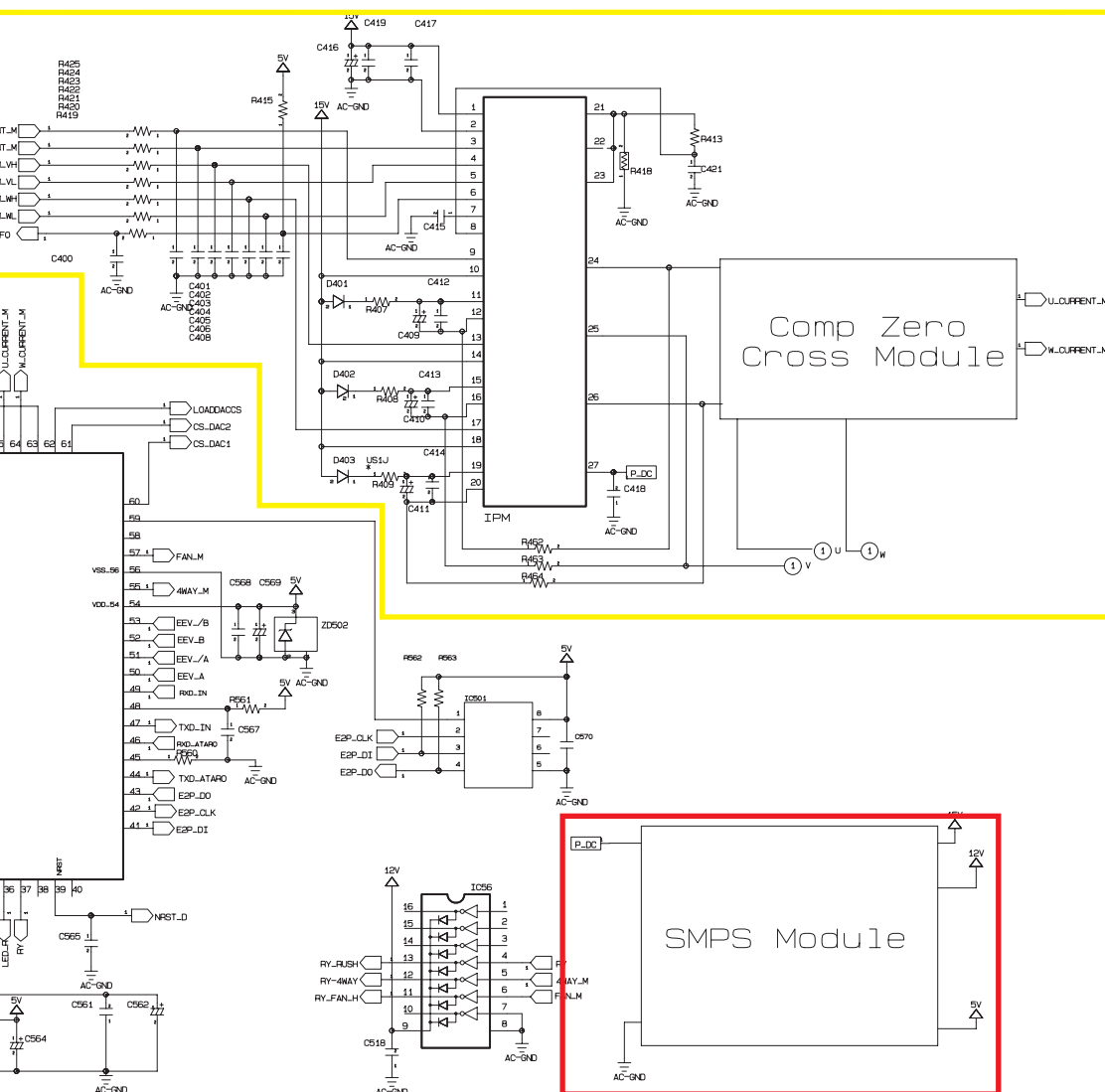


OPTION 10

OPTION 11



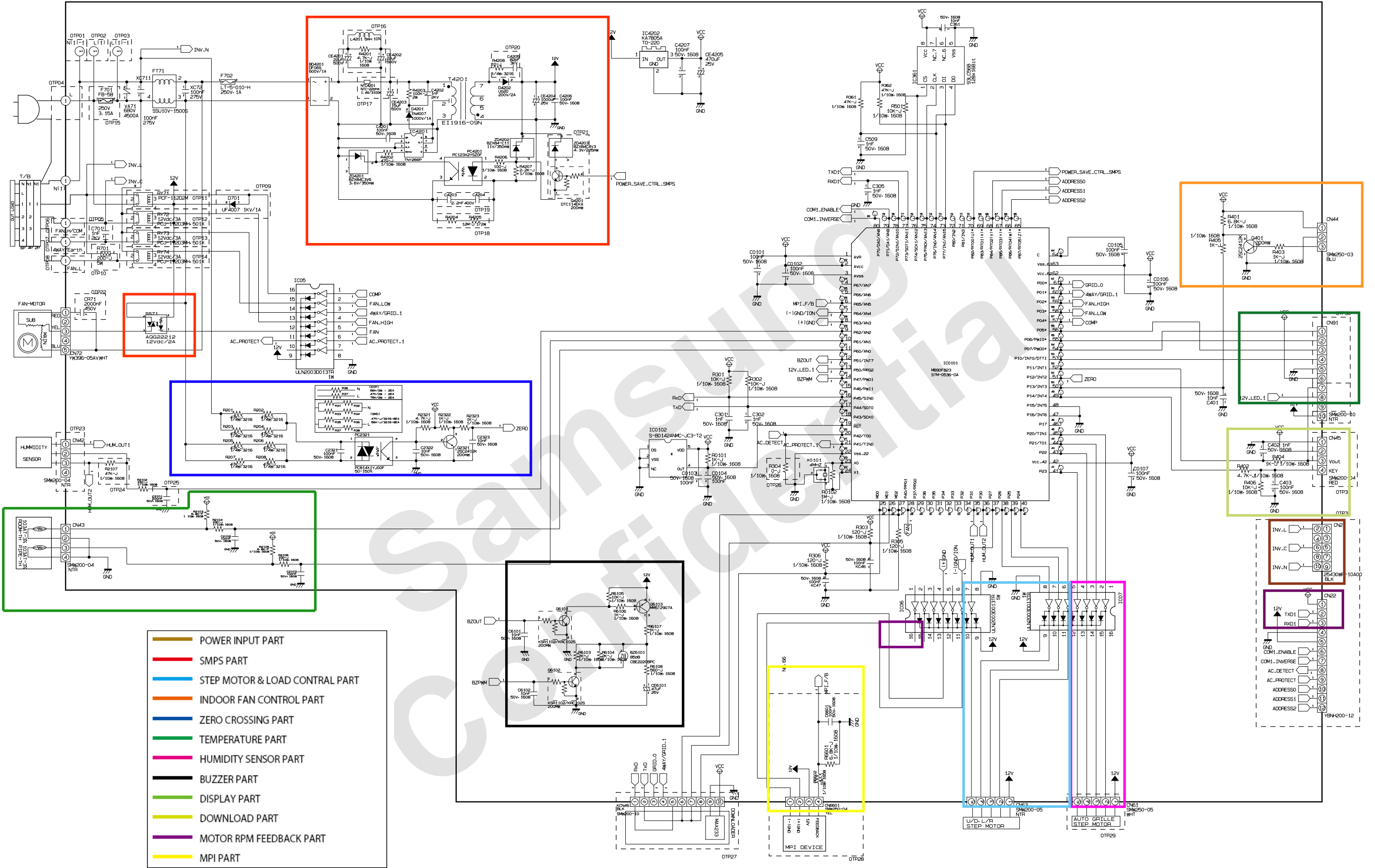




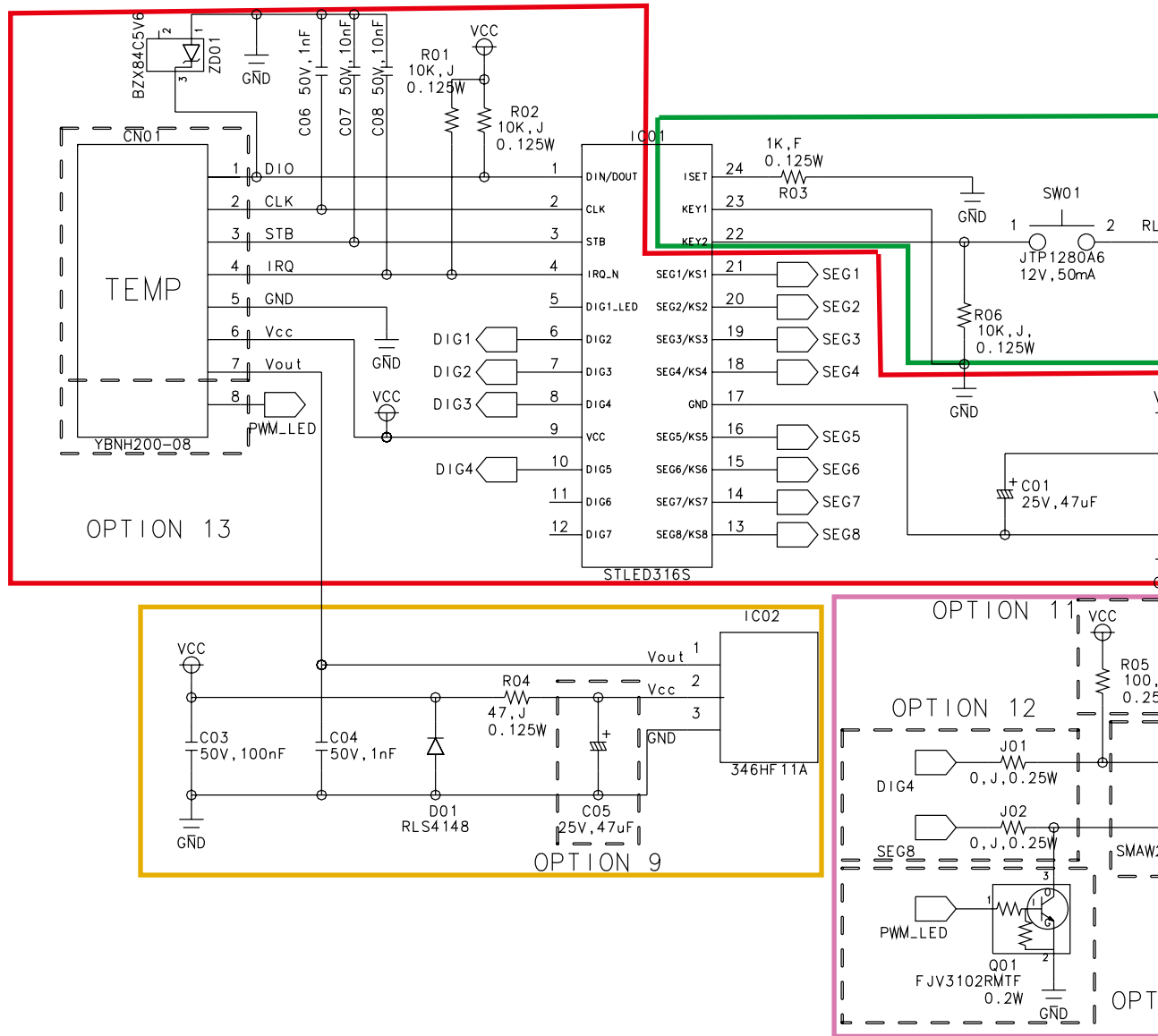
- SMPS PART
- BLDC FAN CONTROL
- ZERO CROSSING PART
- TEMPERATURE SENSOR
- PFC
- COMMUNICATION PART
- INVERTER PART

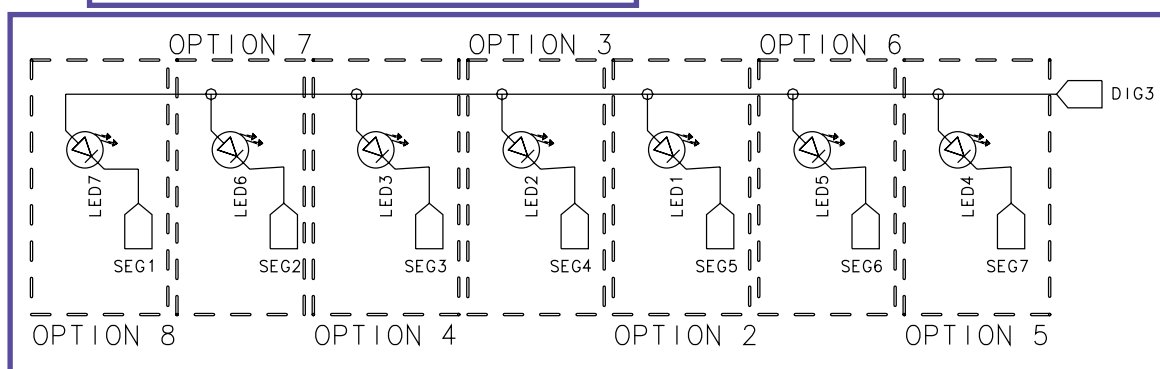
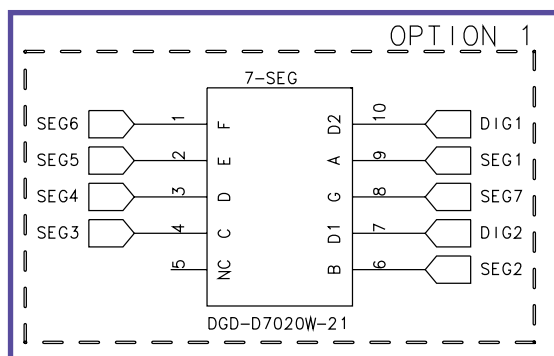
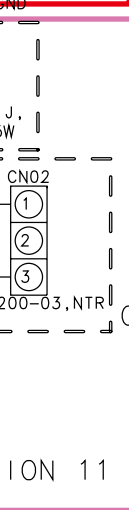
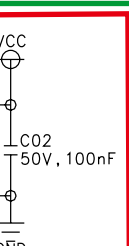
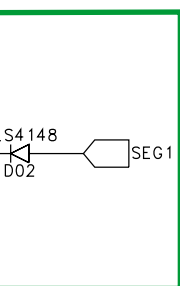
8. Schematic Diagram

8-1-1 Indoor Unit



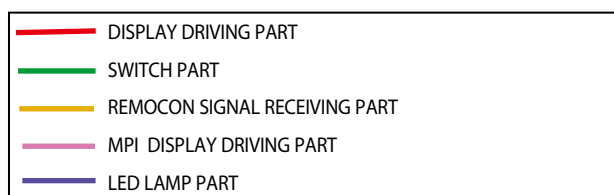
8-1-2.Display



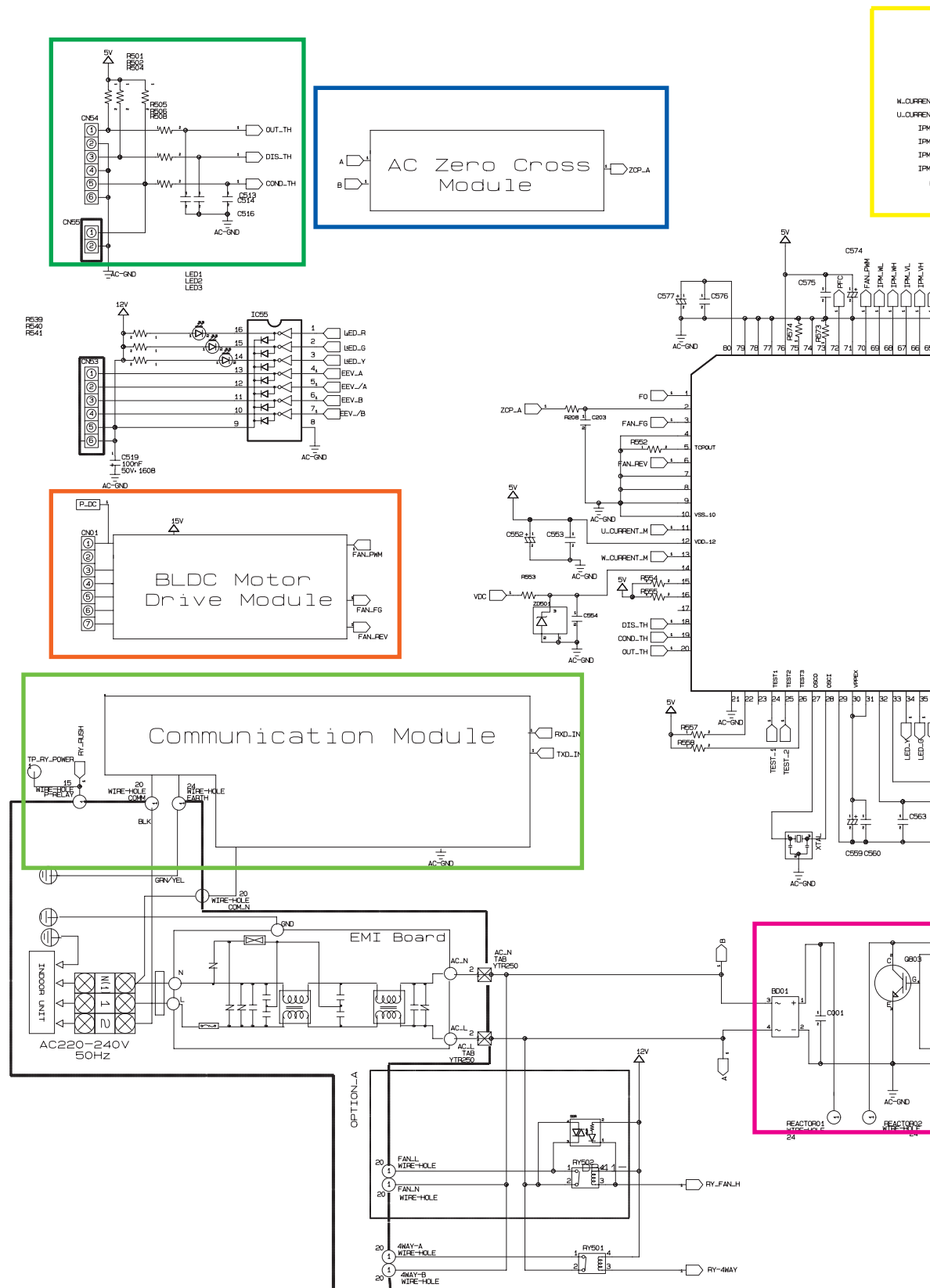


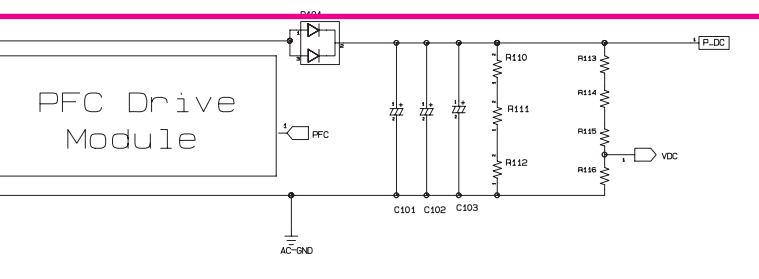
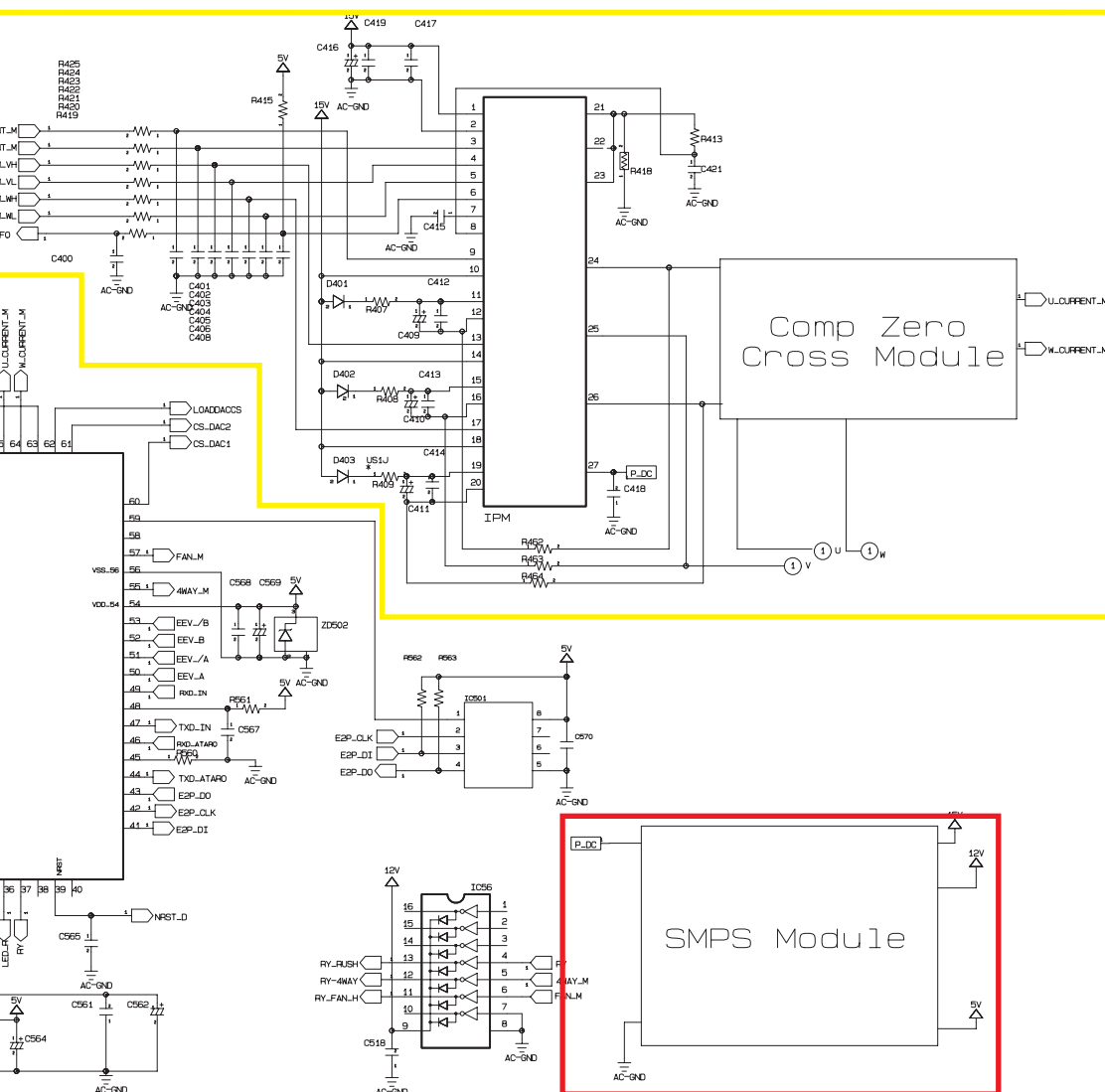
OPTION 10

OPTION 11



8-2.Outdoor Unit





- SMPS PART
- BLDC FAN CONTROL
- ZERO CROSSING PART
- TEMPERATURE SENSOR
- PFC
- COMMUNICATION PART
- INVERTER PART

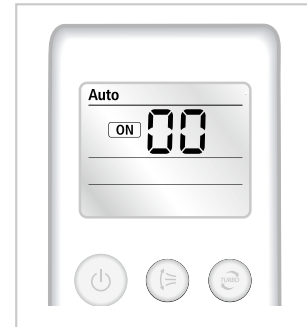
4. Troubleshooting

4-1 Setting Option Setup Method

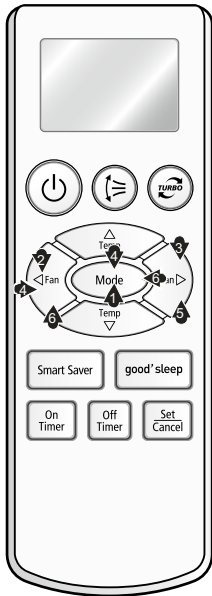
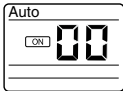
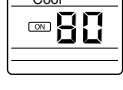
ex) Option No. : 65 80 37 02 38

Step 1 : Enter the Option Setup mode.

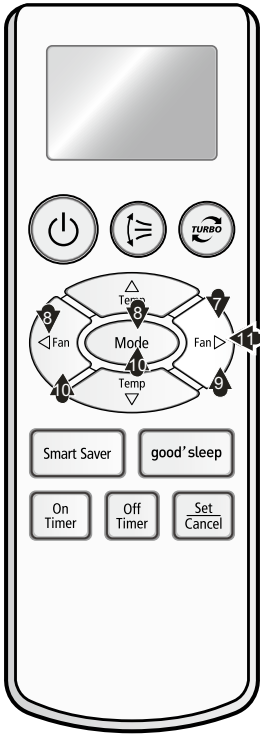
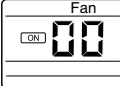
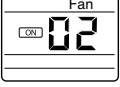
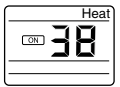
- 1st Take out the batteries of remote control.
- 2nd Press the temperature   button simultaneously and insert the battery again.
- 3rd Make sure the remote contr display shown as  .



Step 2 : Enter the Option Setup mode and select your option according to the following procedure.

	Feature	Display
	1 The default value is  . Every time you push the  button, the display panel reads  Auto → Cool → Dry → Fan → Heat ,  Auto → Cool → Dry → Fan → Heat repeatedly.	
	2 Push the  button to set the display panel to 6 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	3 Push the  button to set the display panel to 5 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	4 Push the  button to  . Push the  button to set the display panel to 8 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	5 Push the  button to set the display panel to 0 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	6 Push the  button to  . Push the  button to set the display panel to 3 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	

4-1 Setting Option Setup Method(continue)

	Feature	Display
	7 Push the  button to set the display panel to 7 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	8 Push the  button to  . Push the  button to set the display panel to 0 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	9 Push the  button to set the display panel to 2 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	10 Push the  button to  . Push the  button to set the display panel to 3 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	
	11 Push the  button to set the display panel to 8 . Every time you push the  button, the display panel reads 0→1→2→3→.....→9→A→b→c→d→E→F repeatedly.	

Step 3 : Upon completion of the selection, check you made right selections.

Press the Mode  Selection key to set the display part and check the display part.

➡ The display part shows like below when each time you press Mode button .



Step 4 : Pressing the ON/OFF button ()

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON() lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF key with the direction of remote control for set.

• Error Mode

- 1st If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
- 2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ OPTION ITEMS

REMOCON MODEL	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10
AQV9UGA	4	4	7	7	7	7	D	2	0	D
AQV12UGA	5	4	7	6	7	7	D	2	3	D

4-2 Display Error and Check Method

4-2-1 Display Error mode

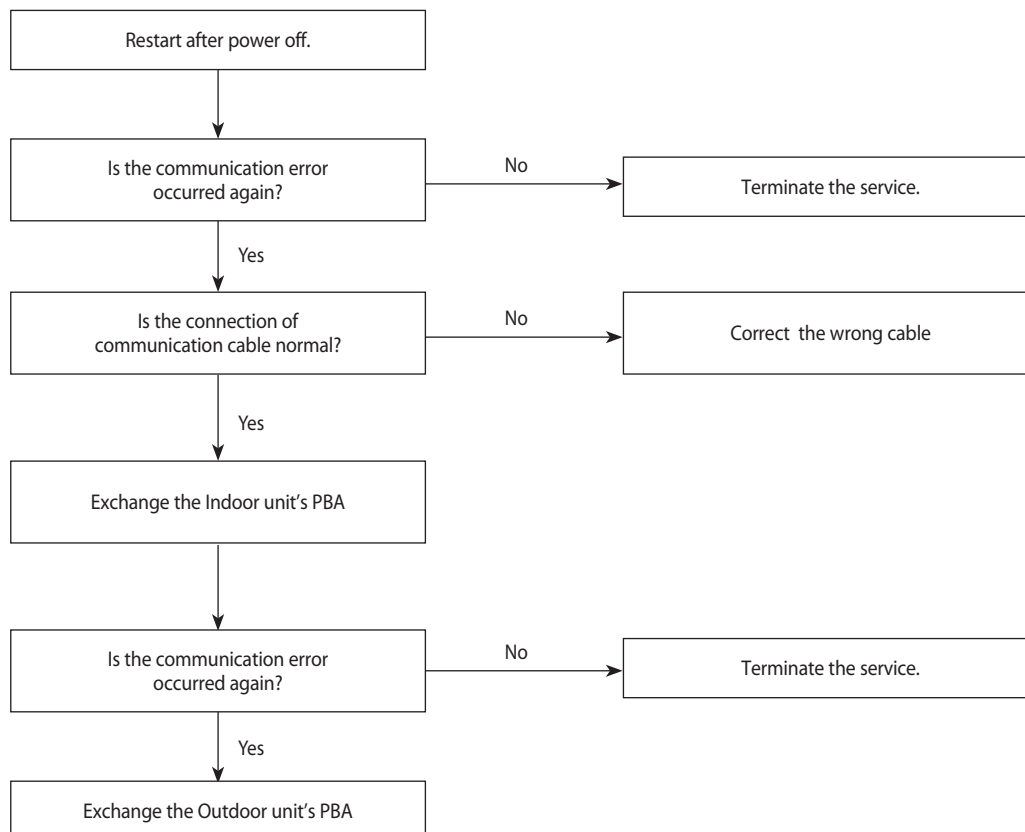
Error Mode				Cauase	Follow-up Measures	operation				Trouble Shooting					
Indoor 7-Segment	Outdoor LED					Comp.	Outdoor Fan	Indoor Fan	MPI						
Y	G	R													
E 10 1	no display			1min.Time out Communication (Indoor detection)	- Check the connector of indoor-outdoor cable - Check the fuse	OFF	OFF	OFF	Continue	4-3-1					
E 12 1	no display			Indoor Temperature Sensor Error(OPEN/SHORT)	- Check assembling status of the sensor part's connector on the indoor unit main PCB - Measure the resistance value on both sides connector no. 1 and no. 2 (E121), no. 3 and no. 4 (E122) - by separating the sensor part's connector	OFF	OFF	OFF	Continue	4-3-2					
E 12 2	no display			Indoor Heat Exchanger Temperature Sensor Error (OPEN/SHORT)		OFF	OFF	OFF	Continue	4-3-3					
Temp. (°C)		Resistance Valve(KΩ)		Temp. (°C)							Resistance Valve(KΩ)		Others		
15		14.68		30							831		The error of DATA is ±2%.		
20		12.09		35							694				
25		10.00		40		5.83									
* If not meet the above DATA, replace sensors.															
E 15 4	no display			Indoor Fan Motor Speed Detecting Error (Occur when it continues for 15 ssecond at below 450rpm)	- Check assembling status of the Motor Hall IC output connector (CN44) on the indoor unit main PCB	OFF	OFF	OFF	OFF	4-3-4					
E 16 2	no display			EEPROM Error		OFF	OFF	OFF	OFF						
E 18 6	no display			MPI Feedback Error	- Check the assembly status of the mpizone connector (CN6601) - Change the mpizone	Continue	Continue	Continue	OFF	4-3-5					
All blink	no display			Option is erased or wrong option code is input	-Reset remote-control option code	OFF	OFF	OFF	OFF						
E 10 2	⊙	●	●	1min. Time out Communication (Outdooe detec-tion)	- Check the connector of indoor-outdoor cable - Check the fuse	OFF	OFF	OFF	Continue	4-3-1					
E 2 2 1	⊙	○	⊙	Outdoor temp sensor error	- Check the assembling statue of sensor parts on the outdoor PCB E221 : CN54 PIN#1,#2 E237 : CN54 PIN#5,#6 E251 : CN54 PIN#3,#4	OFF	OFF	OFF	Continue	4-3-6					
E 2 3 7	⊙	●	⊙	Coil temp sensor error		OFF	OFF	OFF	Continue	4-3-7					
E 2 5 1	⊙	⊙	○	Discharge temp sensor error		OFF	OFF	OFF	Continue	4-3-8					
E 4 1 6	⊙	○	●	Discharge over temperature	- Check the assembling statue of sensor parts on the outdoor PCB CN54 PIN#3,#4	OFF	OFF	OFF	Continue	4-3-9					
E 4 5 8	●	○	○	Outdoor Fan error	- Check the fan was locked. - Check the assembling status of Fan connector(CN01) the outdoor PCB - Check the wire color of fan connector	When it occur first, it shows Error. After 10 minutes, it can be operating.			Continue	4-3-10					

Error Mode				Cauase	Follow-up Measures	operation				Trouble Shooting									
Indoor 7-Segment	Outdoor LED					Comp.	Outdoor Fan	Indoor Fan	MPI										
Y	G	R																	
E461	○	○	○	Comp Starting error	- Check the compressor and PCB cable - Check the wire color <table><tr><td>COMPRESSOR</td><td>U</td><td>V</td><td>W</td></tr><tr><td>COLOR</td><td>RED</td><td>BLU</td><td>YEL</td></tr></table> - Check the interphase resistance of compressor normal	COMPRESSOR	U	V	W	COLOR	RED	BLU	YEL	When it occur first, it will be trying to operate maximumly five times at one-minute interval. If t fail, it operates after 3 minutes. When this occur five times, it shows Error.				Continue	4-3-11
COMPRESSOR	U	V	W																
COLOR	RED	BLU	YEL																
E462	●	○	●	I_Trip error / PFC Over current	-	When it occur first, it operates after 3 minutes. When this three times, it shows Error.				Continue	4-3-12								
E464	○	○	○	IPM Over Current(O.C)	-Check the Shunt-R(R418) resistance	When it occur first, it operates after 3 minutes. When this nine times, it shows Error.				Continue	4-3-13								
E465	○	●	○	Comp Vlimit error	- If t occur again after resetting the power, change PBA. If t occur again even though PBA was changed, change Compressor.	When it occur first, it operates after 3 minutes. When this nine times, it shows Error.				Continue									
E467	●	○	●	Comp rotation error	- Check the wire color <table><tr><td>COMPRESSOR</td><td>U</td><td>V</td><td>W</td></tr><tr><td>COLOR</td><td>RED</td><td>BLU</td><td>YEL</td></tr></table>	COMPRESSOR	U	V	W	COLOR	RED	BLU	YEL	When it occur first, it operates after 3 minutes. When this three times, it shows Error.				Continue	4-3-14
COMPRESSOR	U	V	W																
COLOR	RED	BLU	YEL																
E468	○	○	●	current sensor error	-Check short or open in every component around IC451 and IC452	OFF	OFF	OFF	Continue	4-3-15									
E469	●	○	○	DC-Link valtage sensor error	-Measure the resistance : R113~R116	OFF	OFF	OFF	Continue	4-3-16									
E471	●	○	○	OTP error	- Impossible to check EEPROM loading data check - Change the PBA	OFF	OFF	OFF	Continue	4-3-17									
E472	●	●	○	AC Line Zero Cross Signal out	- Check the assembly condition of peripheral reference number 200~	OFF	OFF	OFF	Continue	4-3-18									
E554	●	●	○	GAS Leak error	- Check the sensor connection - Check the pipe leak - Check the refrigerant of compressor	When it occur first, it operates after 3 minutes. When this three times, it shows Error.				Continue	4-3-19								
E556	○	○	○	capacity miss match	- Reset remote-control option code	OFF	OFF	OFF	Continue	4-3-20									
E466	○	●	○	DC-Link voltage under/over error		it operates after 3 minutes.													
E440 /E441	●	○	○	Operation Condition Error	If outside temperature come back within the normal range, it operates.	OFF	OFF	OFF	Continue										

4-3 Fault Diagnosis by Symptom

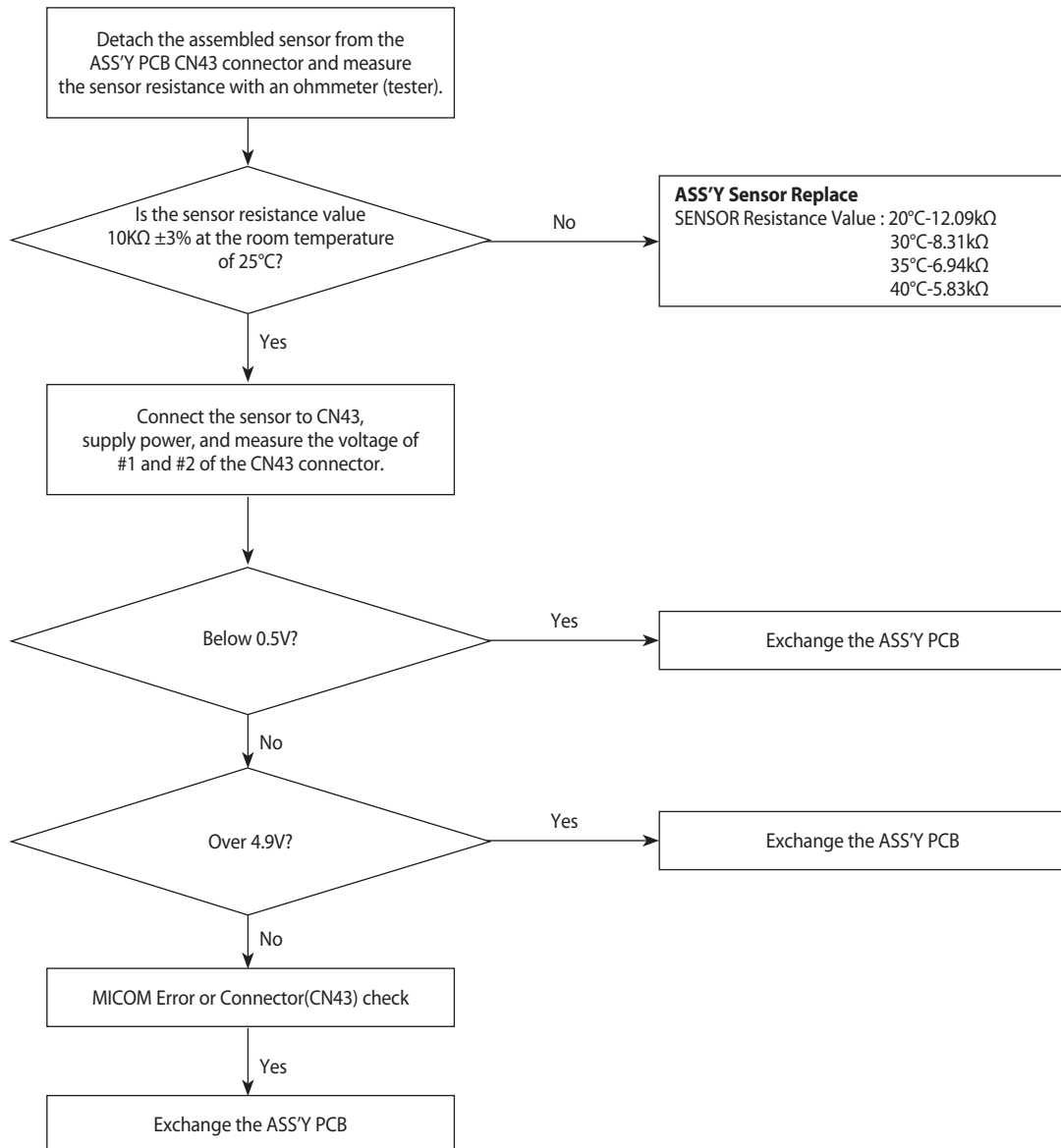
4-3-1 Communication error ↔ When E 101 or E 102 is displayed

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 error?
2. Troubleshooting procedure



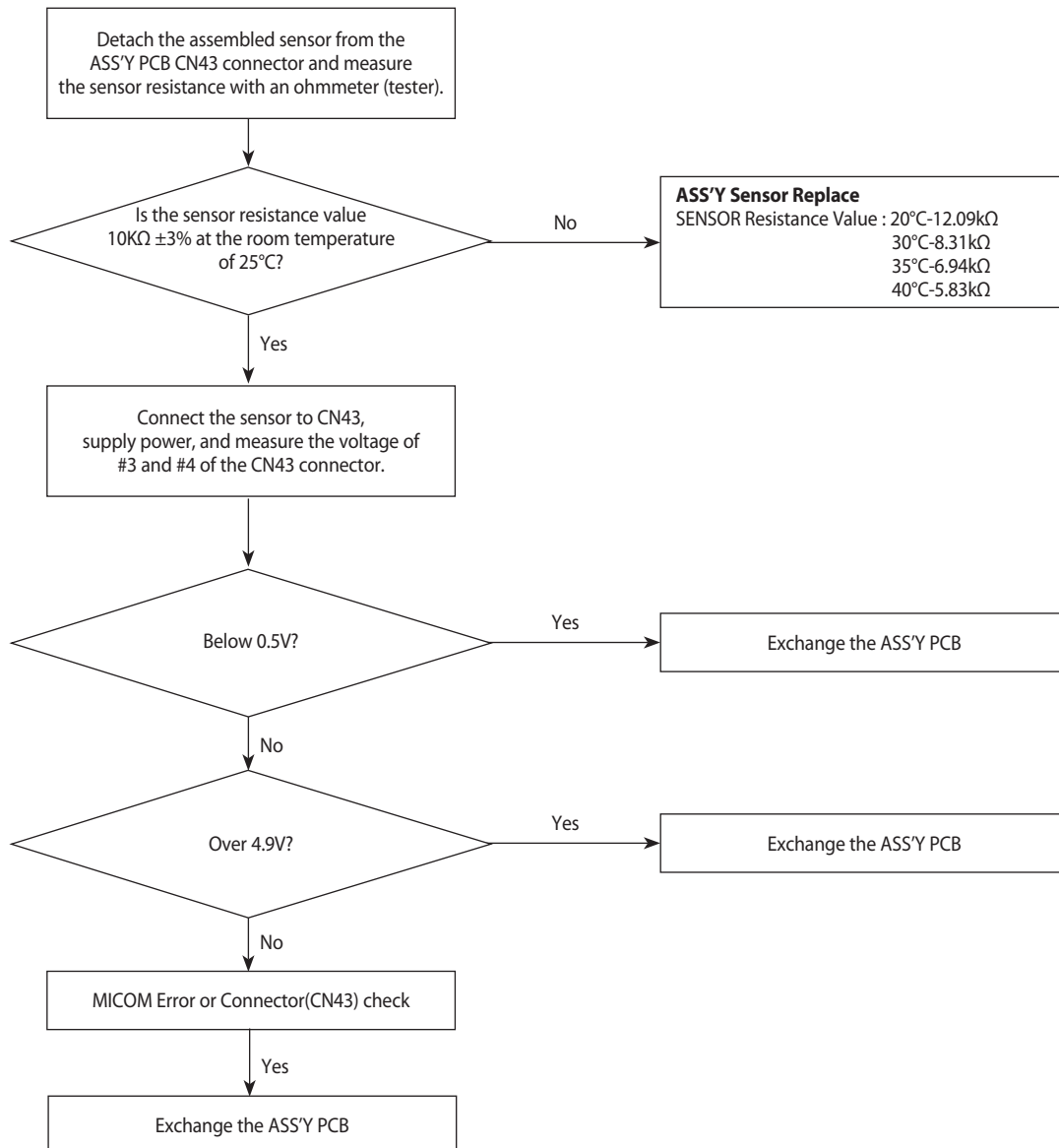
4-3-2 Indoor Temperature Sensor Error ↔ When E_{12} is displayed

1. Checklist :
 - 1) Is the indoor units temperature sensor connected correctly?
2. Troubleshooting procedure



4-3-3 Indoor Heat Exchanger Temperature Sensor Error ↔ When E 122 is displayed

1. Checklist :
 - 1) Is the indoor units temperature sensor connected correctly?
2. Troubleshooting procedure

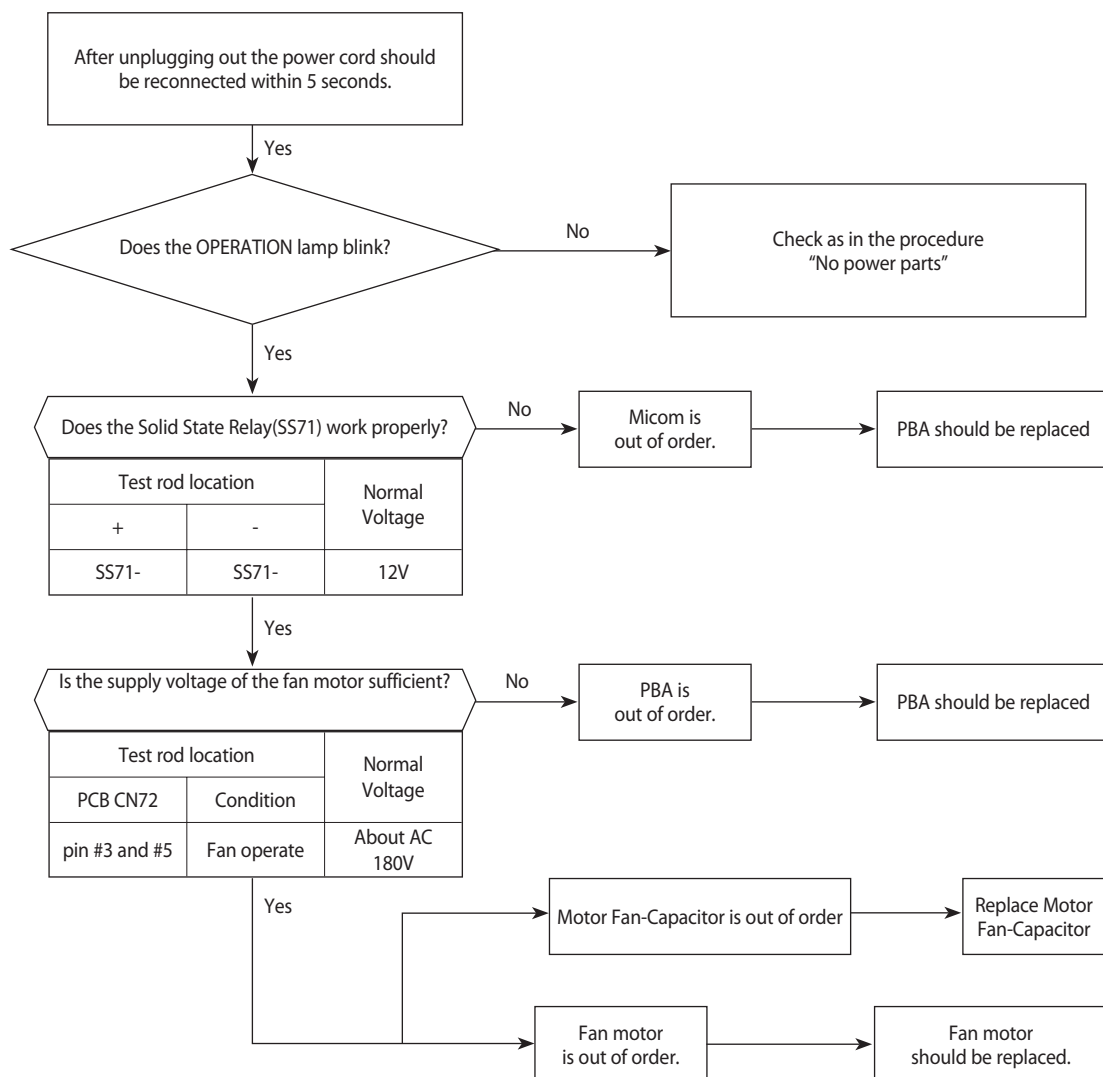


4-3-4 Indoor Fan Motor Speed Detecting Error↔When E 154 is displayed

1. Checklist :

- 1) Is the indoor unit fan motor properly connected with the connector (CN72)?
- 2) Is the AC voltage correct?
- 3) Is HALL IC in indoor fan motor properly connected with the connector (CN44)?
- 4) Is the running capacitor (CR71) properly connected with PCB board?

2. Troubleshooting procedure

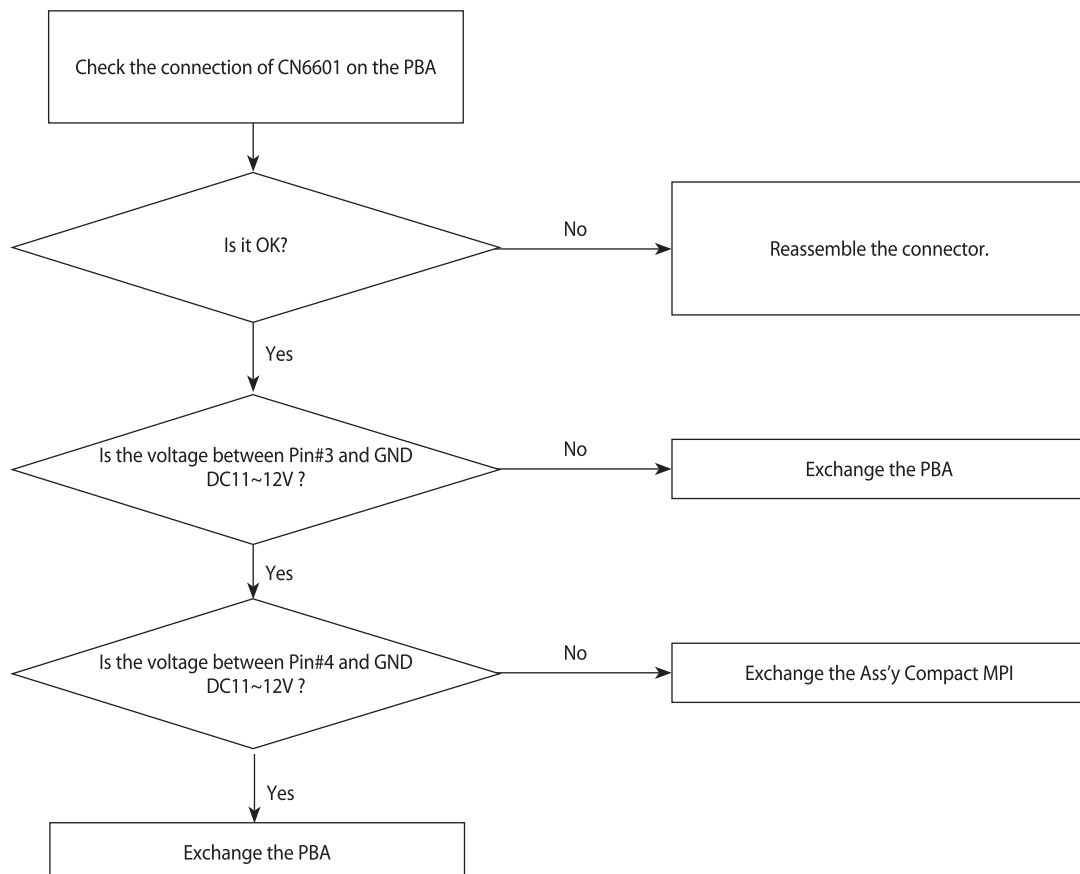


4-3-5 MPI Error ↔ When **E 186** is displayed

1. Checklist :

1) Is the MPI connector connected correctly in CN6601?

2. Troubleshooting procedure

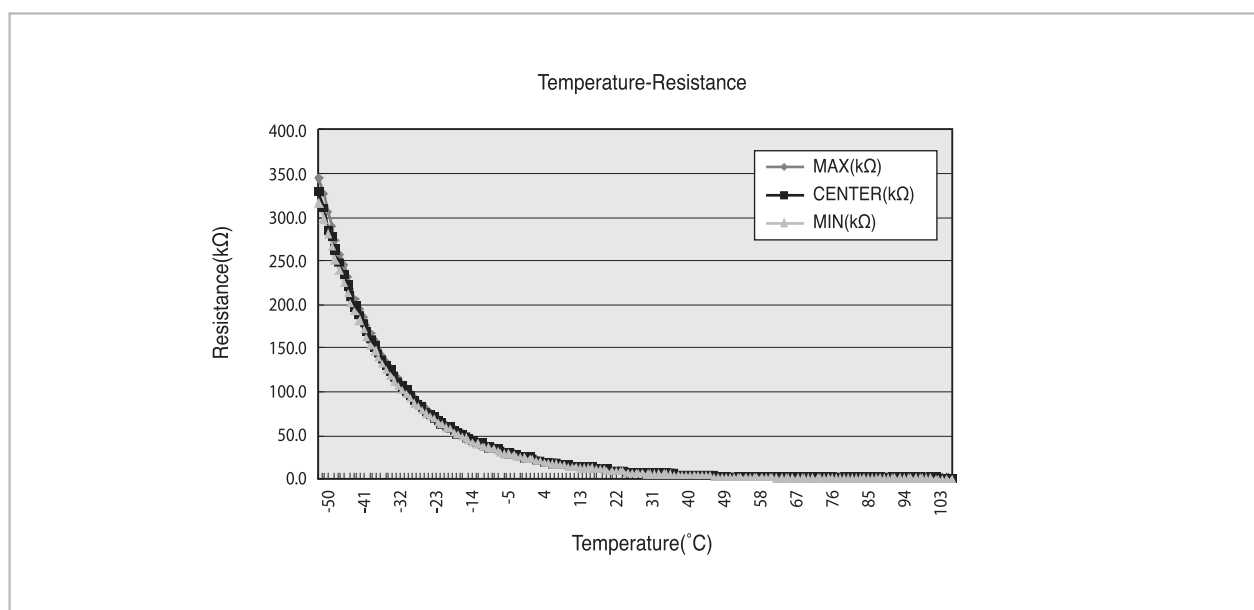
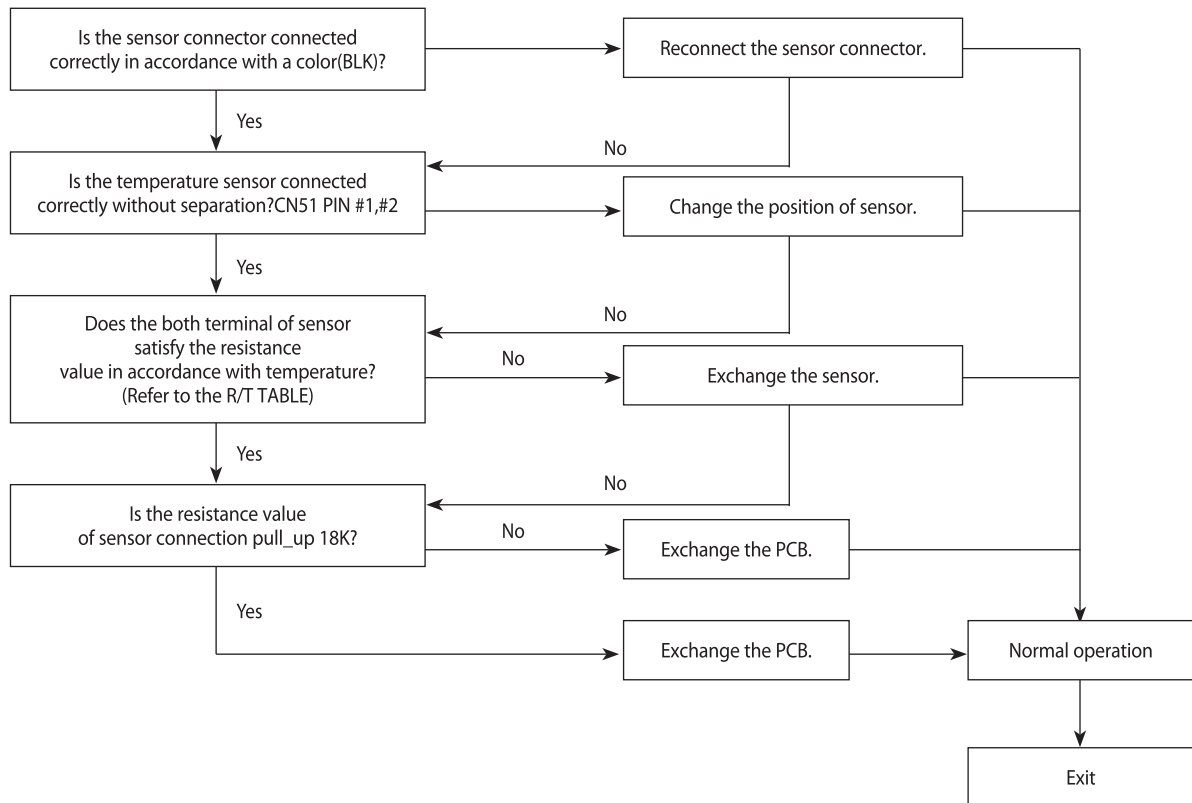


4-3-6 Outdoor temperature sensor error↔When E22 is displayed

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

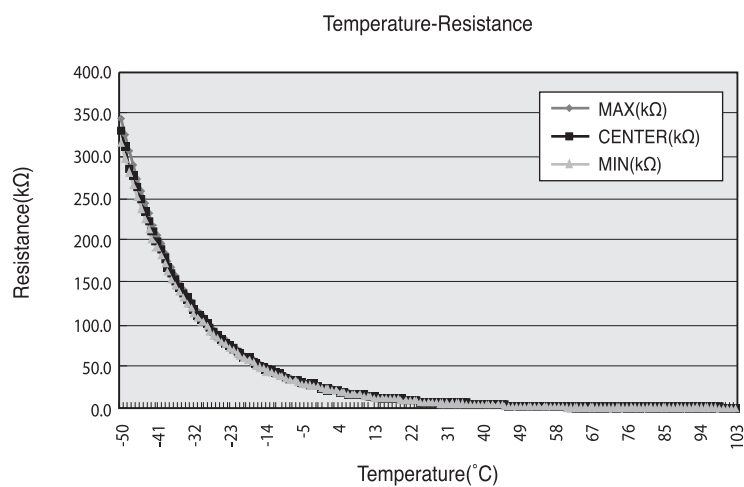
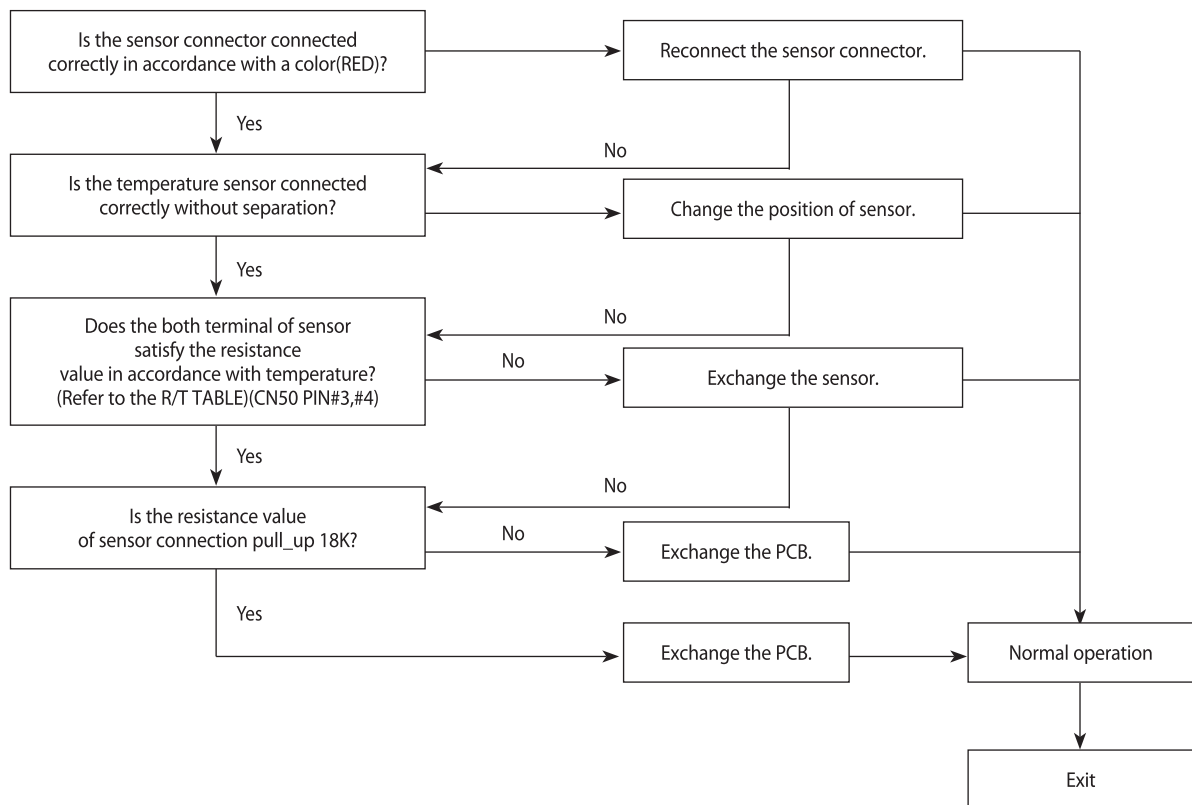


4-3-7 Coil temperature sensor error↔When E237 is displayed

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

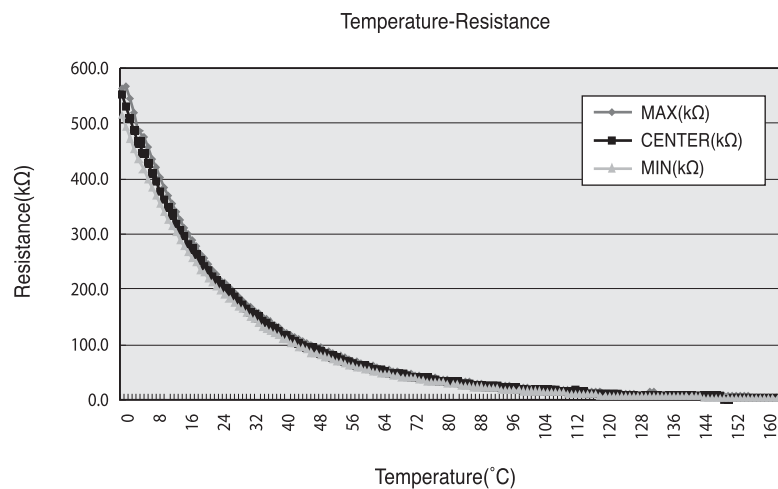
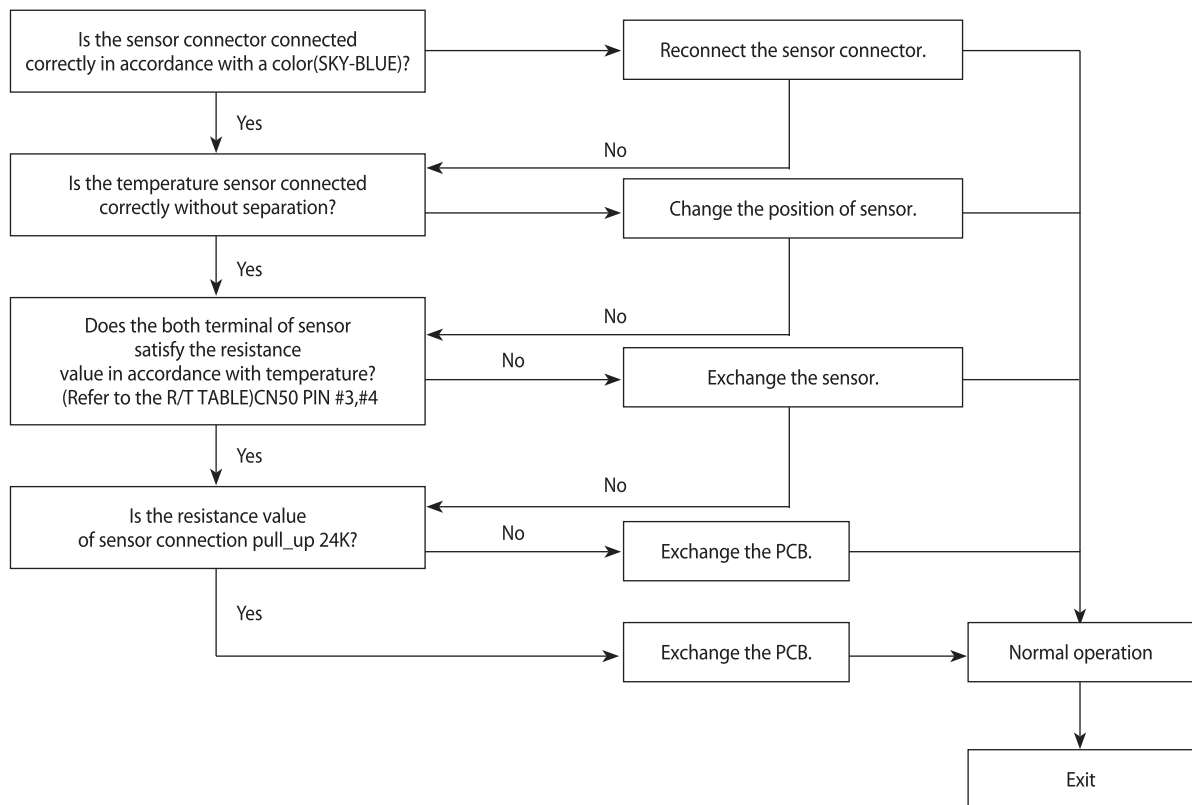


4-3-8 Discharge temperature sensor error ↔ When E25 is displayed

1. Checklist :

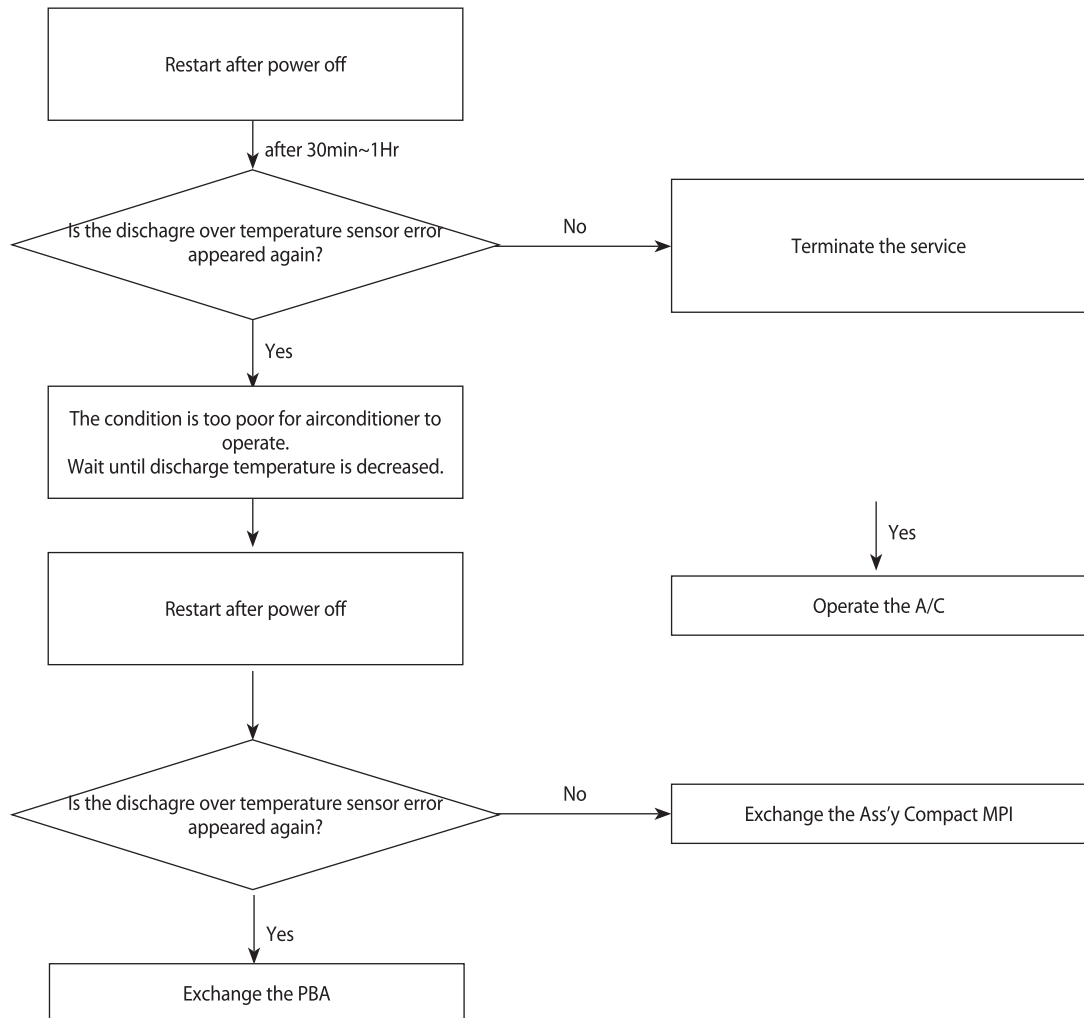
- 1) Is the sensor connector connected correctly?
- 2) Is the sensor placed correctly?
- 3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
- 4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure



4-3-9 Discharge over temperature sensor error ↔ When E4 16 is displayed

1. Checklist :
Check the discharge temperature in the outdoor unit
2. Troubleshooting procedure

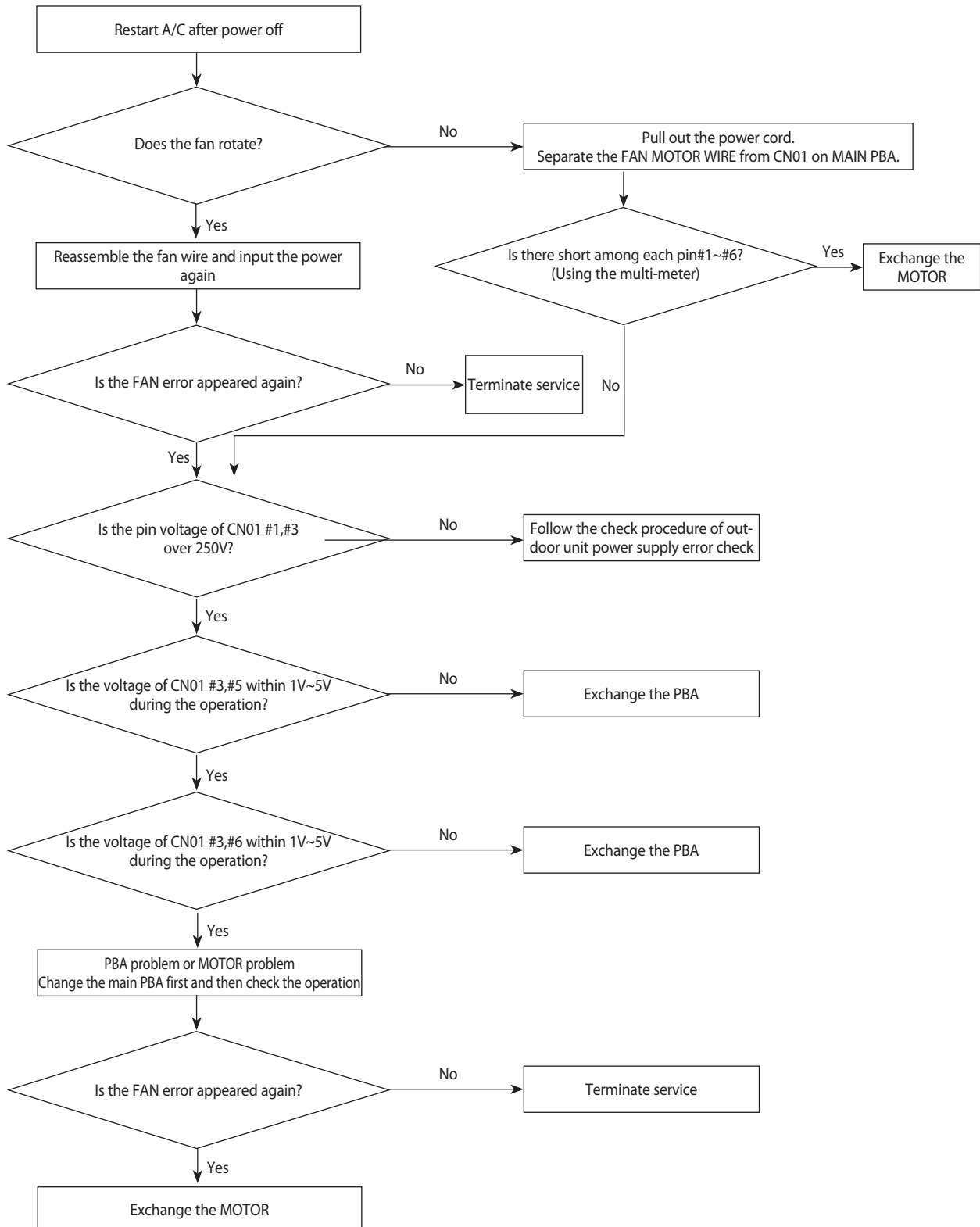


4-3-10 The Outdoor unit Fan error ↔ When E458 is displayed

1. Checklist :

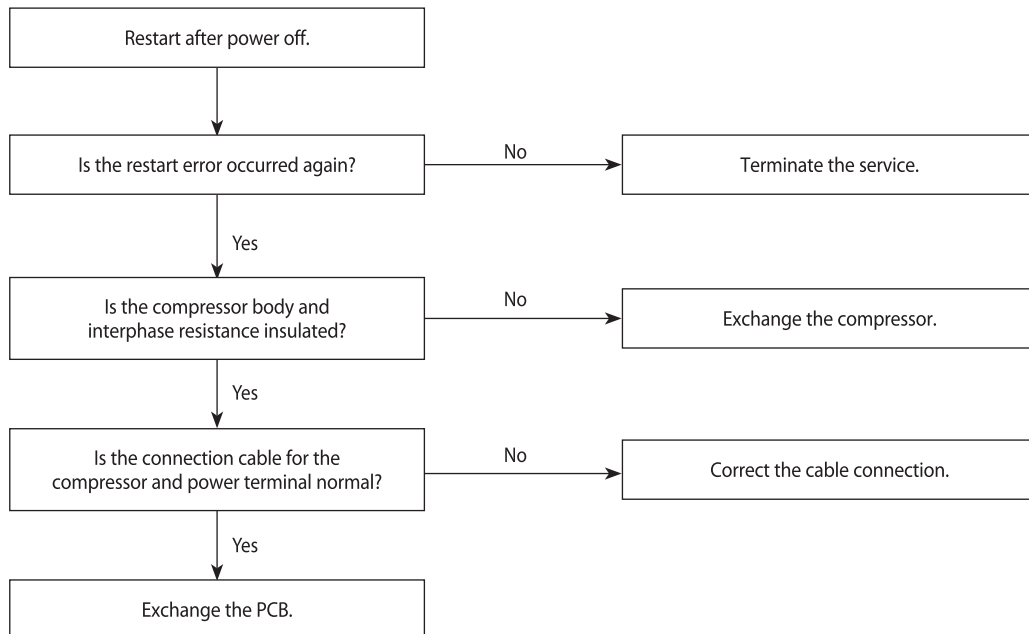
- 1) Are the input power voltage and the power connection correct?
- 2) Is the motor wire connected to the outdoor PCB correctly?
- 3) Is there no assembly error or none-assembly in the terminal of motor wire connector?
- 4) Is there no obstacle at the surrounding of motor and propeller?

2. Troubleshooting procedure



4-3-11 Compressor start error ↔ When E46 is displayed

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

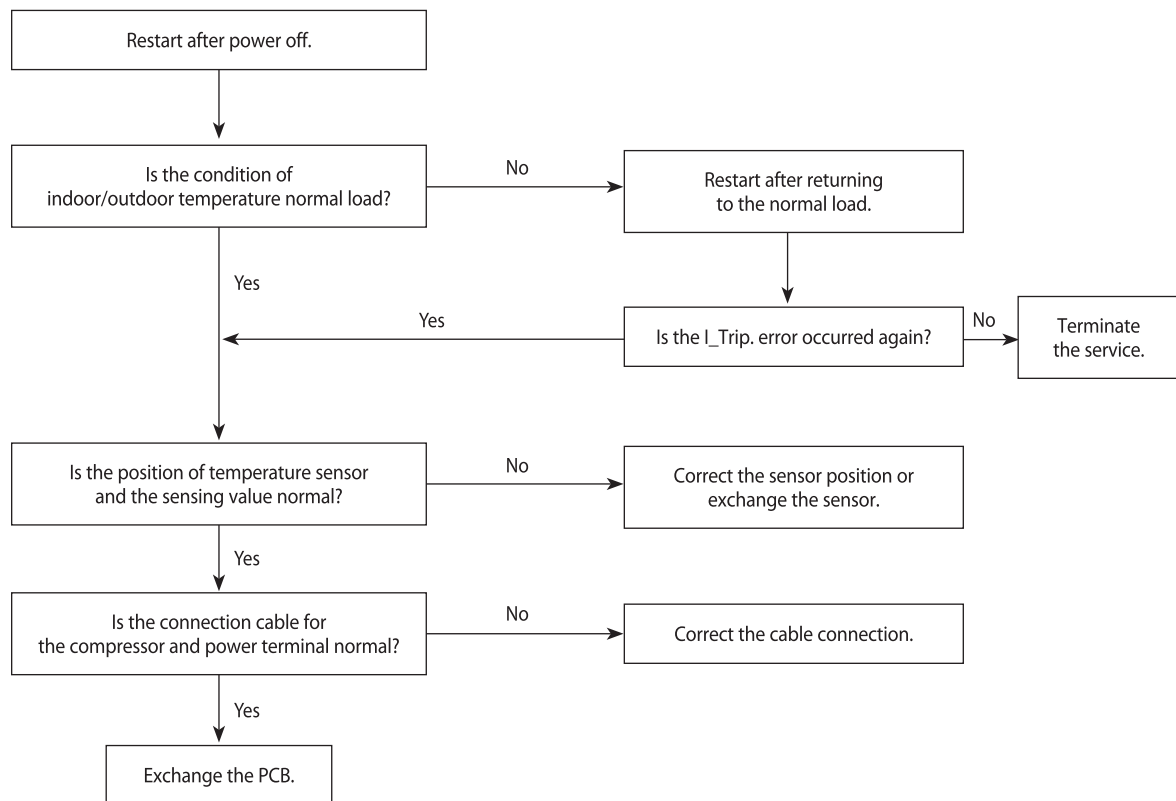


4-3-12 I_Trip error↔When E462 is displayed

1. Checklist :

- 1) Is the Shunt resistance value correct?
- 2) Is the condition of surrounding temperature abnormal overload?
- 3) Is there any problem as like the temperature sensor separation or measurement value error?
- 4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

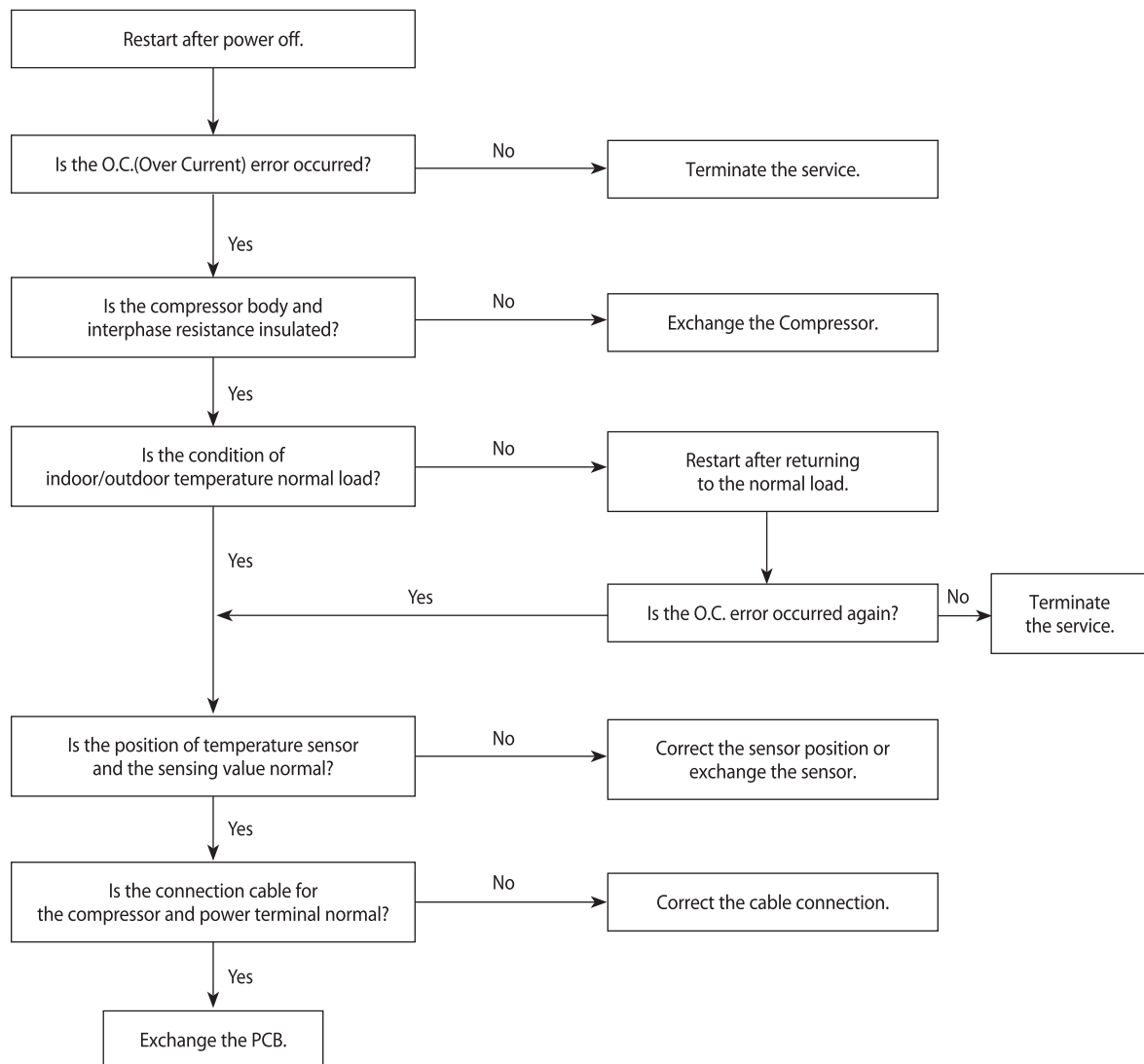


4-3-13 O.C.(Over Current) error↔When E454 is displayed

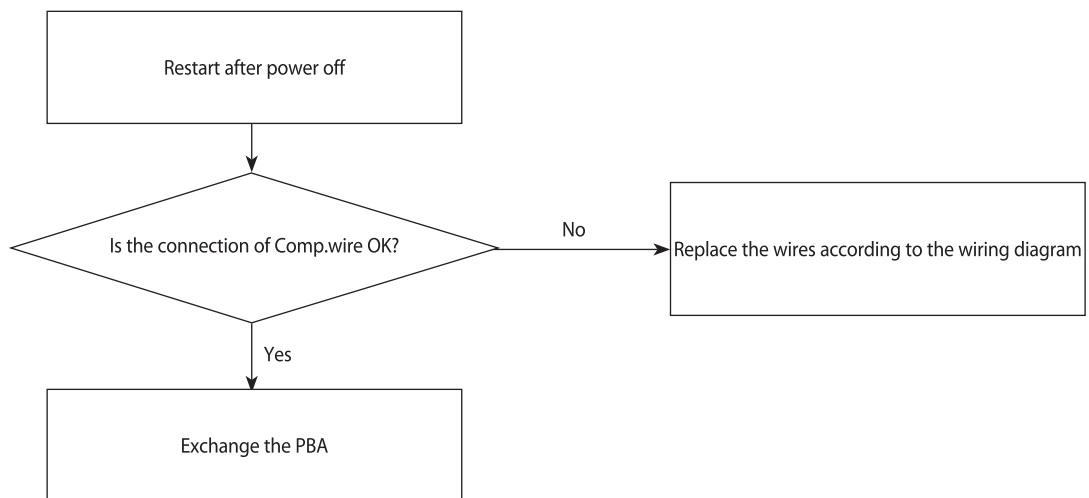
1. Checklist :

- 1) Is the Shunt resistance value correct?
- 2) Is the condition of surrounding temperature abnormal overload?
- 3) Is there any problem as like the temperature sensor separation or measurement value error?
- 4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

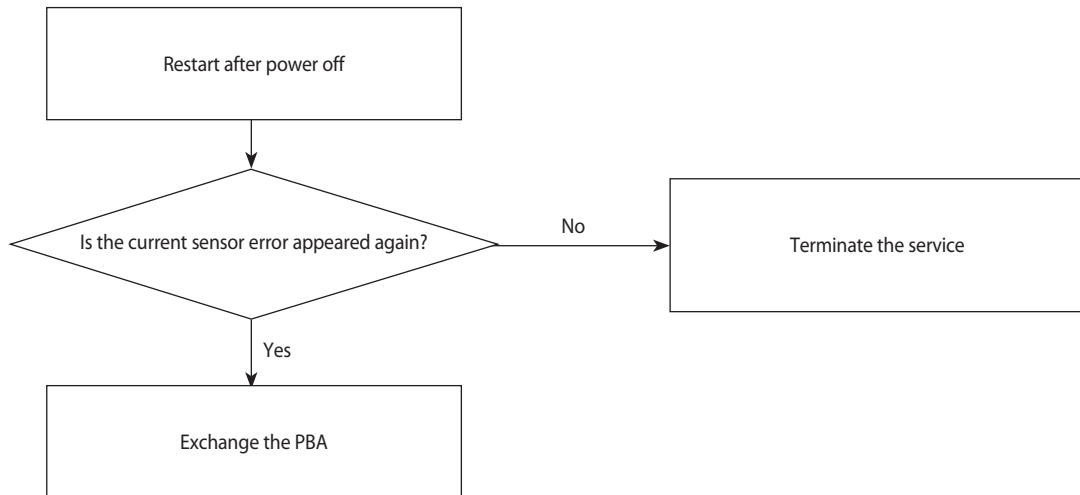


4-3-14 Comp Rotation error ↔ When E467 is displayed



4-3-15 Current Sensor error↔When E468 is displayed

1. Checklist :
 - 1) Is there no short or open in every component around IC451 and IC452?
2. Troubleshooting procedure

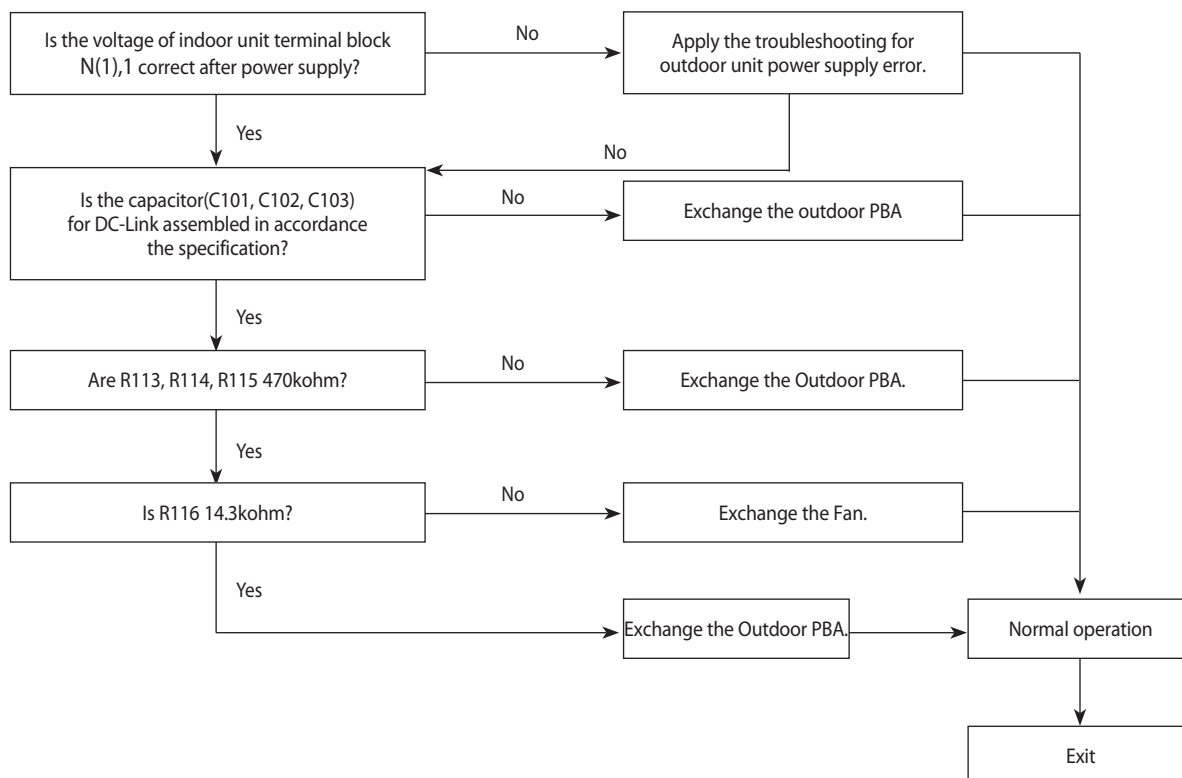


4-3-16 DC-Link voltage sensor error ↔ When E469 is displayed

1. Checklist :

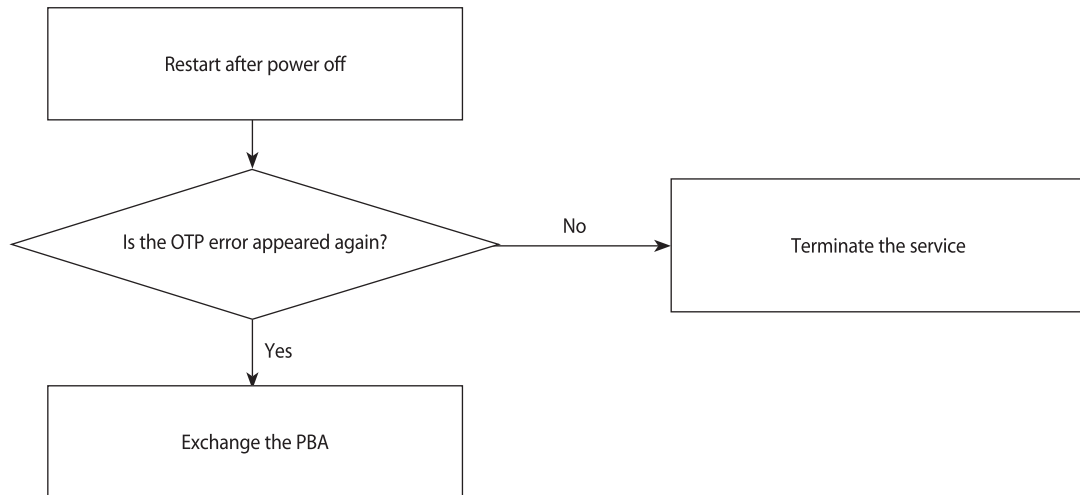
- 1) Is the voltage of indoor unit terminal block N(1),1 correct after power supply?
- 2) Is the capacitor(C101, C102, C103) for DC-Link assembled in accordance the specification?(Outdoor PBA)
- 3) Are R113,R114,R115 470 Kohm?
- 4) Is R116 14.3Kohm?

2. Troubleshooting procedure



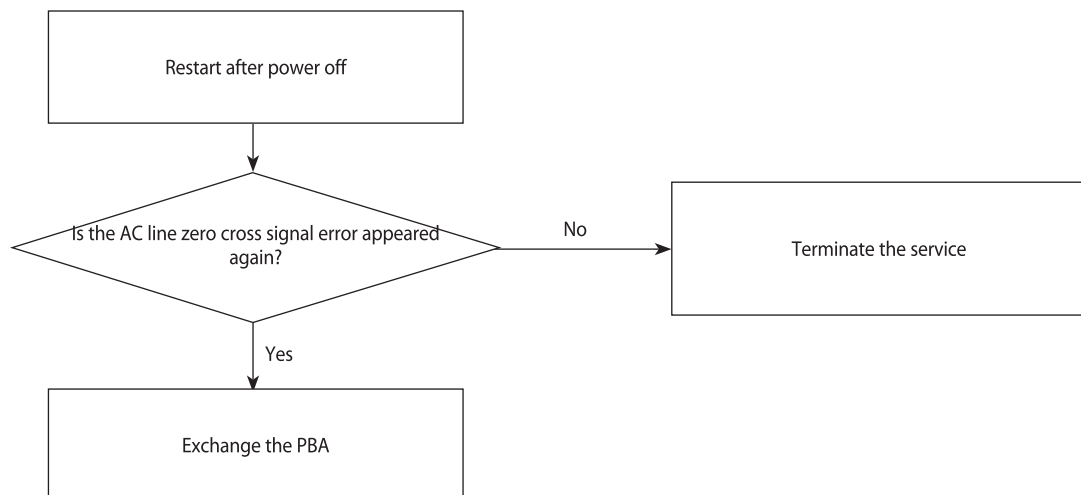
4-3-17 OTP error↔When E471 is displayed

1. Checklist :
 - 1) Check the IC701's soldering status. (Is there any open or short?)
2. Troubleshooting procedure



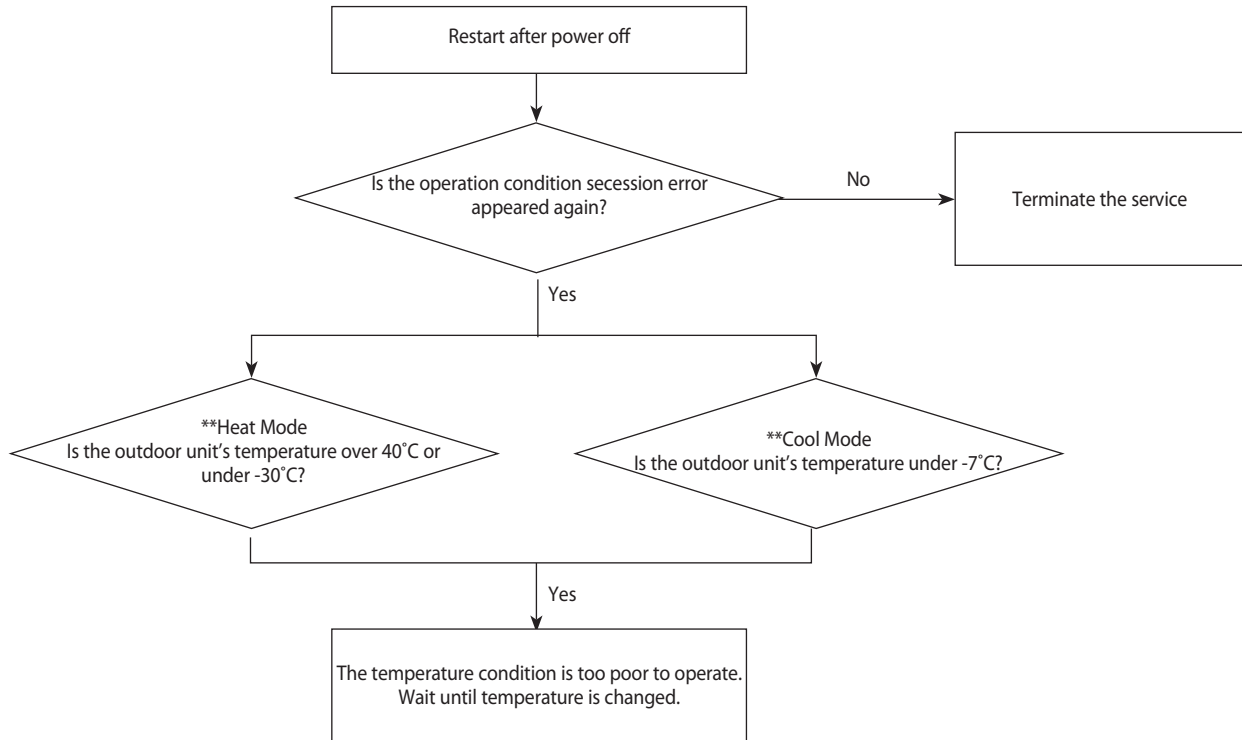
4-3-18 AC Line Zero Cross Signal out error↔When E472 is displayed

1. Checklist :
 - 1) Check the power condition at customer's house (Is there any power noise?)
 - 2) Have been there power failure?
2. Troubleshooting procedure



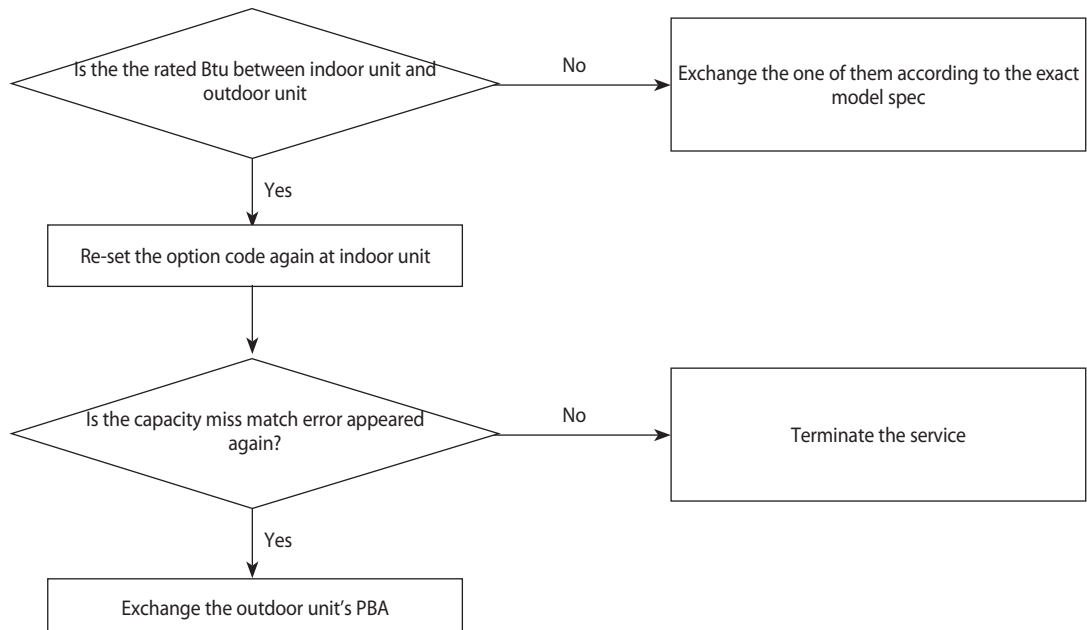
4-3-19 Operation condition secession error ↔ When **E440/E441** is displayed

1. Checklist :
 - 1) Check the temperature around the outdoor unit.
2. Troubleshooting procedure



4-3-20 capacity miss match error ↔ When **E556** is displayed

1. Checklist :
 - 1) Check the Btu between indoor unit and outdoor unit
 - 2) Check the indoor unit's option code and outdoor unit's EEPROM data.
2. Troubleshooting procedure

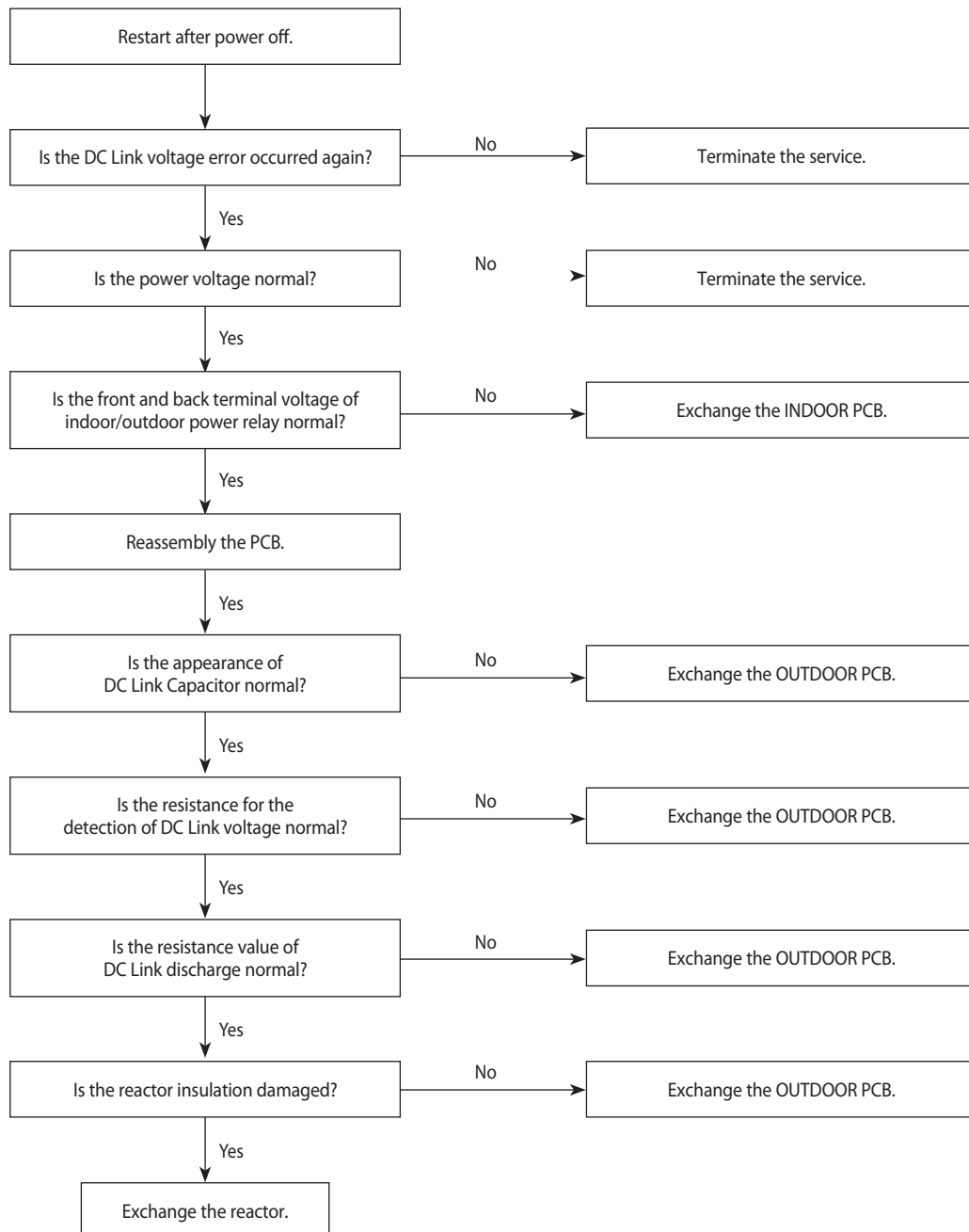


4-3-21 DC-Link Voltage under/over error ↔ When E466 is displayed

1. Checklist :

- 1) Is the power voltage normal?
- 2) Is the voltage off front and back terminal of indoor power relay normal?
- 3) Is the resistance value for DC Link voltage detection NORMAL?
- 4) Is the resistance value of DC Link discharge normal?
- 5) Is the appearance of DC Link Capacitor normal?

2. Troubleshooting procedure

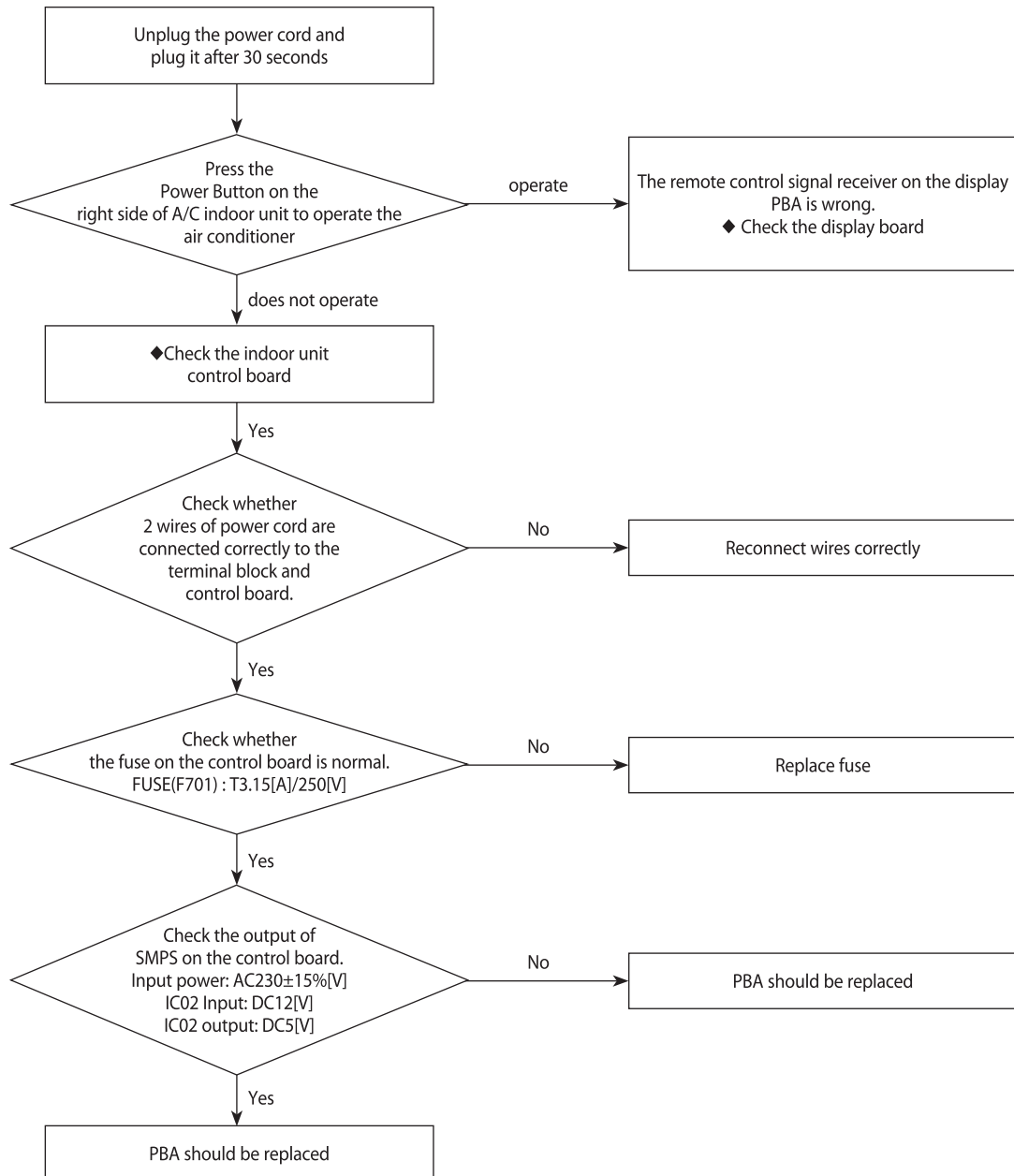


4-3-22 No Power (completely dead)-Initial diagnosis (Not displayed)

1. Checklist :

- 1) Is input voltage normal?
- 2) Is AC power linked correctly?
- 3) Is input voltage of DC regulator IC KA7805 (IC02) normal? (11VDC-12.5VDC)
- 4) Is output voltage of DC regulator IC KA7805 (IC02) normal? (4.5VDC-5.5VDC)

2. Troubleshooting procedure

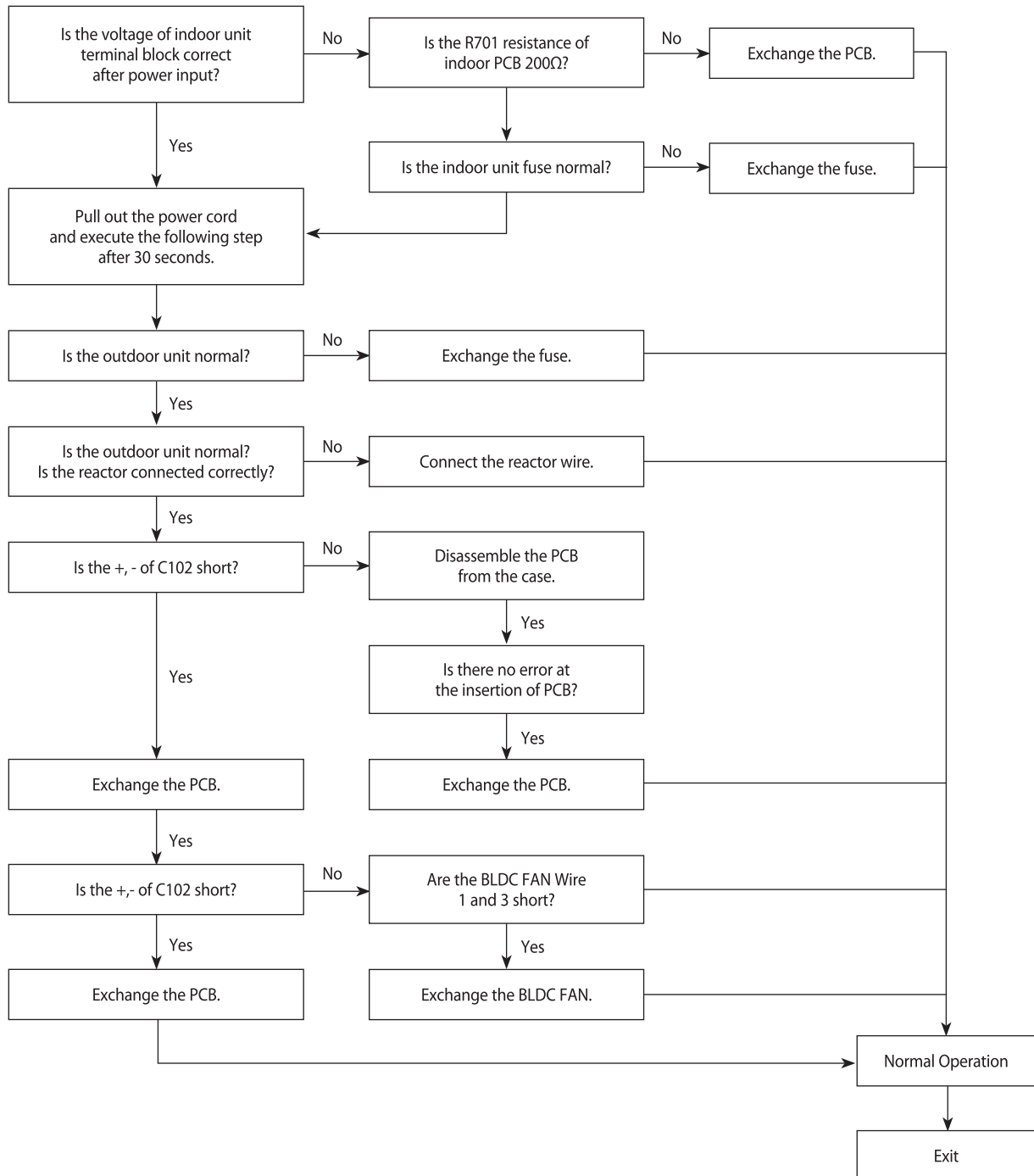


4-3-23 The Outdoor unit power supply error (Not displayed)

1. Checklist :

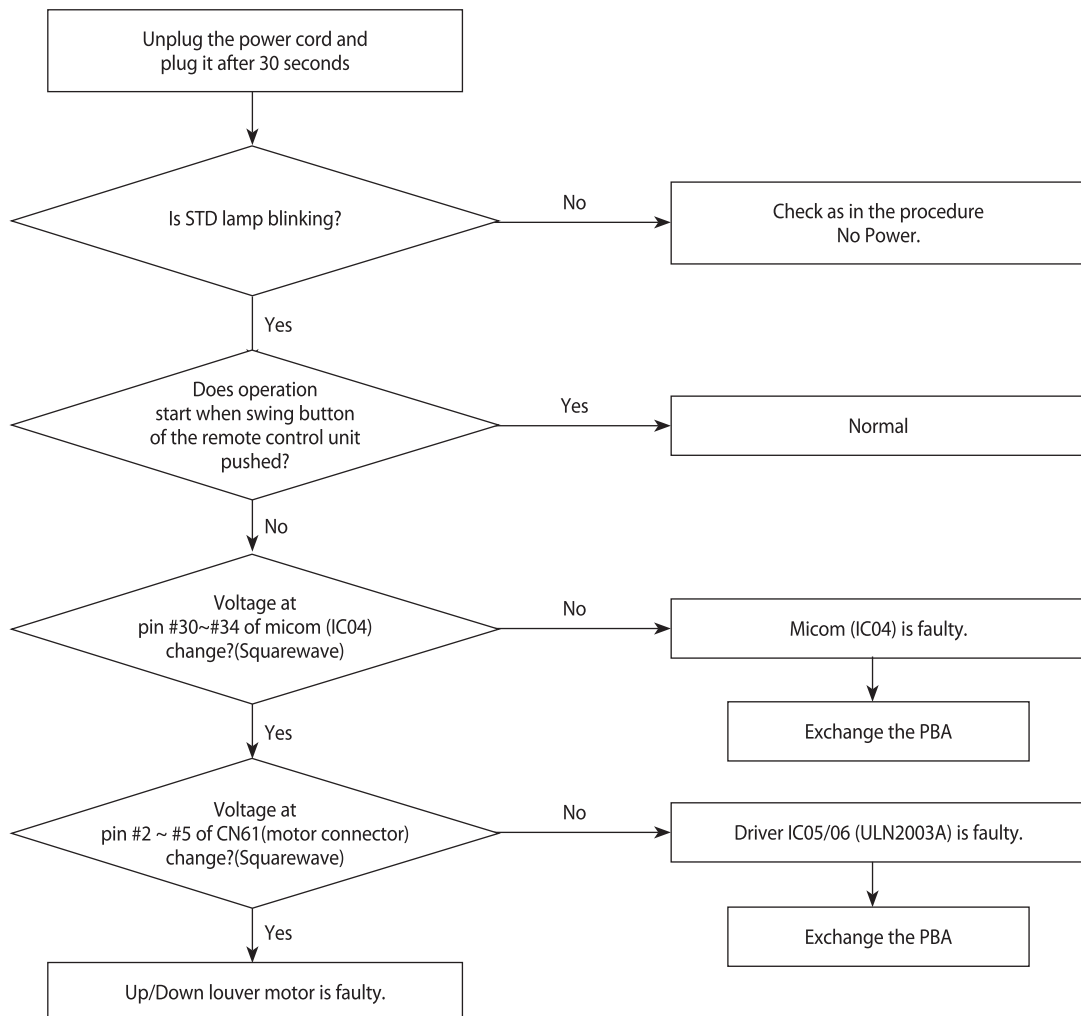
- 1) Are the input power voltage and the power connection correct?
- 2) Is there no Fuse short in the indoor unit and outdoor unit?
- 3) Is the cable connected correctly between the indoor unit and outdoor unit in order.
- 4) Is the wire connected correctly to the terminal block of the indoor unit and outdoor unit?

2. Troubleshooting procedure



4-3-24 When the Up/Down Louver Motor Does Not Operate. (Initial Diagnosis) (Not displayed)

1. Checklist :
 - 1) Is input voltage normal?
 - 2) Is the Up/Down louver motor properly connected with the connector (CN61)?
2. Troubleshooting procedure



4-3-25 When the remote control is not receiving

1. Check if the connector was normally assembled.
2. Put the set in operation and check the voltage of No. 3 and No. 1 of the main PCB CN45 while operating the remote control. When the voltage descends below 3V, the assembly module PCB is normal and the main PCB is poor. Then replace the main PCB.
3. Replace the assembly module PCB because the module PCB is poor if the voltage between No. 3 and No. 1 of CN45 maintains 5V after the remote control starts operation.

4-4 PCB Inspection Method

4-4-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel.
2. Don't hold the PCB side not impose excessive force on it to eliminate the PCB.
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB.
4. In case of outdoor PCB disassembly, check first the complete discharge of condenser (C103) after 30 seconds power off.

4-4-2 Inspection Procedure

1. Check connector connection and peeling of PCB or bronze coating pattern when you think the PCB is broken.
2. The PCB is composed of the 3 parts.
 - Indoor Main PCB Part : MICOM and surrounding circuit, relay, room fan motor driving circuit and control circuit, sensor driving circuit, power circuit of DC12V and DC5V, and buzzer driving circuit.
 - Display part : LED lamp, Switch, Remocon module
 - Outdoor Main PCB part : MICOM and surrounding circuit. IPM and PFC circuit and control circuit.
 - EMI PCB Part : Line filter and Noise Capacitor, Varistor

4-4-3 Indoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the electronic box. Check the PCB fuse.	1) Is the fuse disconnected?	• Over current • Indoor Fan Motor Short • AC Part Pattern Short of the MAIN PCB
2	Supply power. If the operating lamp twinkles at this time, the above 1)~3) have no relation.	Checking the power voltage.	
		1) Is the DB71 input voltage AC200V~AC240V?	• Power Cord is fault, Fuse open. Wrong Power Cable Wiring, AC Part is faulty.
		2) Is the voltage between both terminals of the C104 on the 2 nd side of the transformer DC12V $\pm 0.5V$?	• Switching Trans or Power Circuit is faulty
		3) Is the voltage between both terminals of OUT and GND of IC19(KA78L05) DC5V $\pm 0.5V$?	• Power Circuit is faulty, Load Short
3	Press the ON/OFF button.	Checking the power voltage.	
		1) Is the voltage over AC180V being imposed on terminal #3 and #5 of the fan motor connector(CN72)?	• Relay(RY71) Coil Disconnection, IC05 is faulty
		2) Check the voltage of both terminals of terminal block 1 and N(1) after 3 minute operation.: AC220V	• Relay(RY71) Contact is faulty
4	Press the ON/OFF button. 1. FAN Speed [High] 2. Continuous Operation	1) Is the voltage over AC180V being imposed on terminal #3 and #5 of the fan motor connector(CN72)?	• Fan Motor of the indoor is faulty
		2) The fan motor of the indoor unit doesn't run.	• Fan Motor Connector(CN72) is faulty
		3) The power voltage between terminal #3 and #5 of the connector(CN72) is 0V.	• ASS'Y Main PCB is faulty • Connection is faulty

4-4-4 Outdoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Wait 30 seconds over after disconnecting the power cable Check the outdoor PCB.	1) Is C101 discharged? 2) Is the resistance of both terminals of C101 opened? 3) Is the fuse of EMI PCB normal? 4) Is the reactor wire connected?	• Over Current • Inner short of PCB • BLDC FAN Motor Error
2	Check the Outdoor unit PCB.	1) Is R701 200ohm? 2) Does ry74 operate normally? (IC05 & 16:0V, 1:5V) 3) Is the fuse(F701) normal? 4) Is the Sub PCB assembled normally?	• Outdoor PCB Error • SUB Relay(RY74) Error • IC05 Error • Indoor PCB Error
3	Check the LED lighting after power supply.	1) Normal: Red: Light On, Green: Flickering, Yellow: Light Off? 2) Is the voltage of C101 250V over? 3) Is the input of IC19 8V, and the output 5V? 4) Recheck after disassembling BLDC FAN Wire.	• Inner short of outdoor PCB • Wrong assembly of outdoor PCB • BLDC FAN Error
4	Check the condition of indoor & outdoor connection cable.	1) Is the green LED light on once per second? 2) Is the indoor & outdoor connection cable connected in order? 3) Is the grounding wire connected to the both of indoor & outdoor unit? 4) Is the voltage of terminal block N(1), 225V?	• Wrong connection of Indoor/Outdoor wiring • Wrong assembly of outdoor communication circuit
5	Check the Comp Wire.	1) Is it connected red, blue, and yellow in order in counterclockwise. 2) Are the valve and its installation condition good? 3) Is the installation condition of outdoor unit?	• Wrong assembly • Installation condition is bad.
6	Check the BLDC Fan.	1) Is CN01 1, 3 over 250V? 2) Is CN01 3, 5 within 1V~5V? 3) Is the voltage of CN01 6 changed? 4) Is the resistance of BLDC Motor 1, 3 opened after power off?	• Outdoor PCB Error • BLDC Motor Error

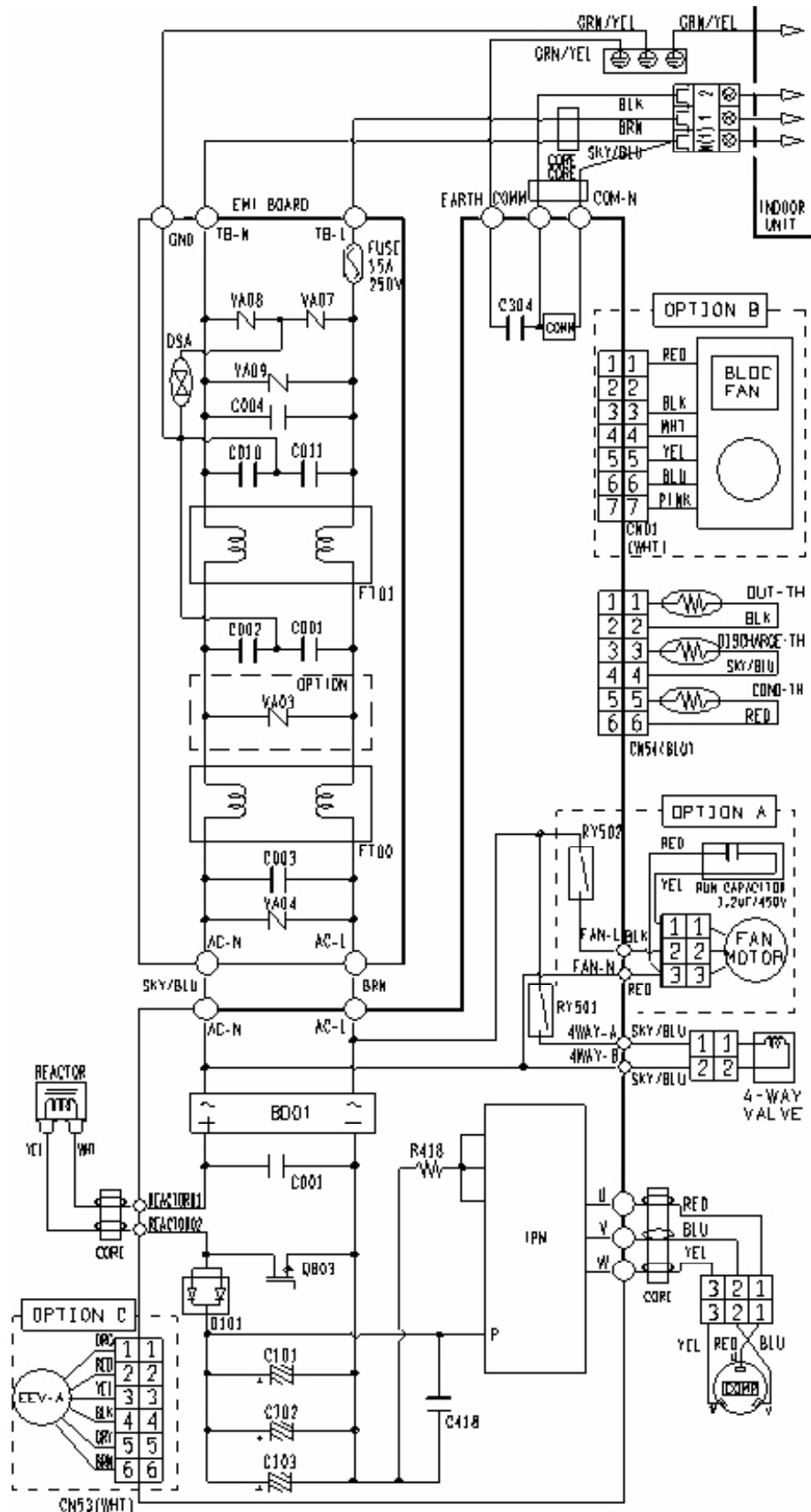
4-5 Main Part Inspection Method

Part	Breakdown Inspection Method											
Room Temperature Sensor	Measure resistance with a tester											
	Normal	At the normal temperature 37kΩ~ 8.3kΩ(-7°C~+30°C) *Refer to Table 12-3-4.										
	Abnormal	∞, 0Ω . . . Open or Short										
Room Fan Motor	Measure the resistance between terminals of the connector (CN72) with a tester.											
	Normal	At the normal temperature (10°C ~ 30°C)										
		<table><tr><td>Compare terminal</td><td>Resistance</td><td>Remark</td></tr><tr><td>Yellow, Blue</td><td>404.4Ω ± 10%</td><td>Main</td></tr><tr><td>Yellow, Red</td><td>340Ω ± 10%</td><td>Sub</td></tr></table>		Compare terminal	Resistance	Remark	Yellow, Blue	404.4Ω ± 10%	Main	Yellow, Red	340Ω ± 10%	Sub
		Compare terminal	Resistance	Remark								
		Yellow, Blue	404.4Ω ± 10%	Main								
Yellow, Red	340Ω ± 10%	Sub										
Abnormal	∞, 0Ω . . . Open or Short											
Stepping Motor	Measure the resistance between the red wire and each terminal wire with a tester.											
	Normal	About 300Ω at the normal temperature (20°C ~ 30°C)										
	Abnormal	∞, 0Ω . . . Open or Short										

MEMO

7. Wiring Diagram

■ 7-1 Indoor Diagram



■ 7-2 Outdoor Diagram

