SAMSUNG

SYSTEM AIR CONDITIONER

OUTDOOR UNIT

AM080/100/120/140/180/200/220FXV✳✳✳

SERVICE Manual

AIR CONDITIONER

CONTENTS

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

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1. Precautions

1-1 Precautions for the Service

- **Use the correct parts when changing the electric parts.**
  – Please check the labels and notices for the model name, proper voltage, and proper current for the electric parts.
- **Fully repair the connection for the types of harness when repairing the product after breakdown.**
  – A faulty connection can cause irregular noise and problems.
- **When disassembling or assembling, make sure that the product is laid down on a work cloth.**
  – Doing so will prevent scratching to the exterior of the rear side of the product.
- **Completely remove dust or foreign substances on the housing, connection, and inspection parts when performing repairs.**
  – This can prevent fire hazards for tracking, short, etc.
- **Please tighten the service valve of the outdoor unit and the valve cap of the charging valve as securely as possible by using a monkey spanner.**
- **Check whether the parts are properly and securely assembled after performing repairs.**
  – These parts should be in the same condition as before the repair.

1-2 Precautions for the Static Electricity and PL

- **Please carefully handle the PCB power terminal during repair and measurement when it is turned on since it is vulnerable to static electricity.**
  – Please wear insulation gloves before performing PCB repair and measurement.
- **Check if the place of installation is at least 2m away from electronic appliances such as TV, video players, and stereos.**
  – This can cause irregular noise or degrade the picture quality.
- **Please make sure the customer does not directly repair the product.**
  – Arbitrary dismantling may result in electric shock or fire.

1-3 Precautions for the Safety

- **Do not pull or touch the power plug or the subsidiary power switch with wet hands.**
  – This may result in electric shock or fire.
- **If the power line or the power plug is damaged, then it must be changed since this is a hazard.**
- **Do not bend the wire too much or position it so that it can be damaged by a heavy object on top.**
  – This may result in electric shock or fire.
- **The use of multiple electric outlets should be prohibited.**
  – This may result in electric shock or fire.
- **Ground the connection if it is necessary.**
  – The connection must be grounded if there is any risk of electrical short due to water or moisture.
- **Unplug the power or turn off the subsidiary power switch when changing or repairing electrical parts.**
  – Doing so will prevent electric shock.
- **Explain to workers that the battery for the remote control needs to be separated for storage purposes when the product will not be used for a long time.**
  – This can cause a problem for the remote control since battery fluid may trickle out.

1-4 Precautions for Handling Refrigerant for Air Conditioner

Environmental Cautions: Air pollution due to gas release

- **Safety Cautions**
  If liquid gas is released, then body parts that come into contact with it may experience frostbite/blister/numbness.
  If a large amount of gas is released, then suffocation may occur due to lack of oxygen. If the released gas is heated, then noxious gas may be produced by combustion.
- **Container Handling Cautions**
  Do not subject container to physical shock or overheating. (Flowage is possible while moving within the regulated pressure.)

1-5 Precautions for Welding the Air Conditioner Pipe

- **Dangerous or flammable objects around the pipe must be removed before the welding.**
- **If the refrigerant is kept inside the product or the pipe, then remove the refrigerant prior to welding.**
  If the welding is carried out while the refrigerant is kept inside, the welding cannot be properly performed. This will also produce noxious gas that is a health hazard. This leakage will also explode with the refrigerant and oil due to an increase in the refrigerant pressure, posing a danger to workers.
- **Please remove the oxide produced inside the pipe during the welding with nitrogen gas.**
  Using another gas may cause harm to the product or others.

1-6 Precautions for Additional Supplement of Air Conditioner Refrigerant

- **Precisely calculate the refrigerant by using a scale and S-net, and proceed with the test operation.**
  Excessive supplement can cause harm to the product since it can cause an inflow of the liquid refrigerant into the compressor.
- **Do not heat the refrigerant container for a forced injection.**
  This may cause harm to the product or others since the refrigerant container may burst.
- **Do not operate the product after removing the product safety pressure switch and sensor.**
  If the product is blocked inside, then this may cause harm to the product or others due to the excess pressure increase of the refrigerant gas.

1-7 Other Precautions

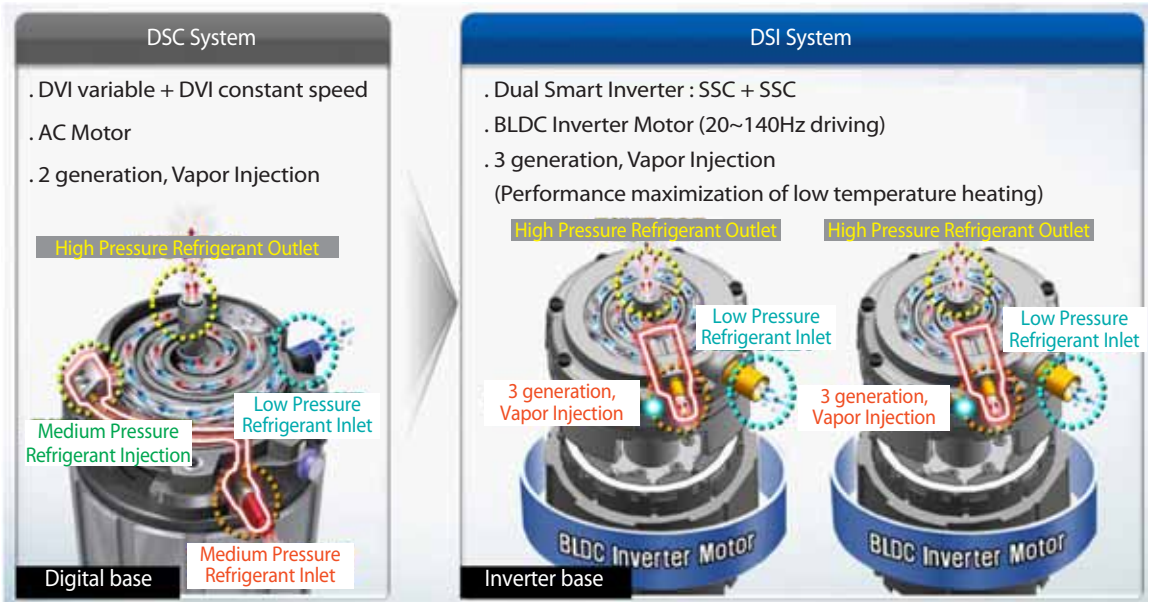
- **There should be no leakage of the pipes after installation. When withdrawing the refrigerant, the compressor should be stopped before removing the connecting pipe.**
  If the compressor is operating while the refrigerant pipe is not correctly connected and the service valve is opened, then air and other substances can enter the pipe. The interior of the refrigerant cycle may then build up excessive high pressure resulting in explosion and damage.

2. Product Specifications

2-1 The Feature of Product

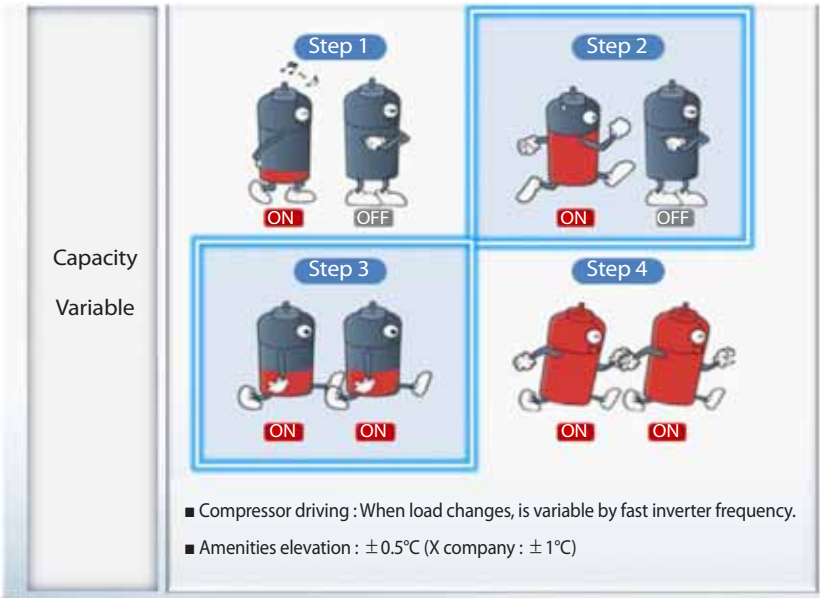
2-1-1 Feature

■ Dual Smart Inverter System



■ Dual SSC System Technology

When load changes, capacity amendment that is soft by continuous operation of Dual Inverter is available.

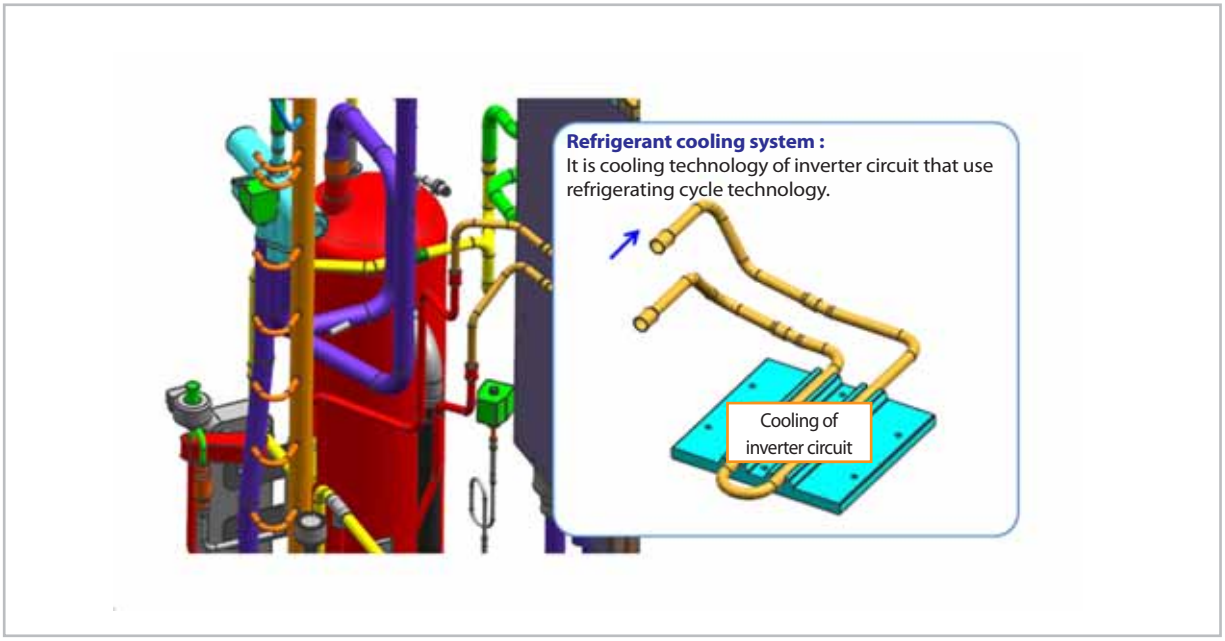


Feature (cont.)

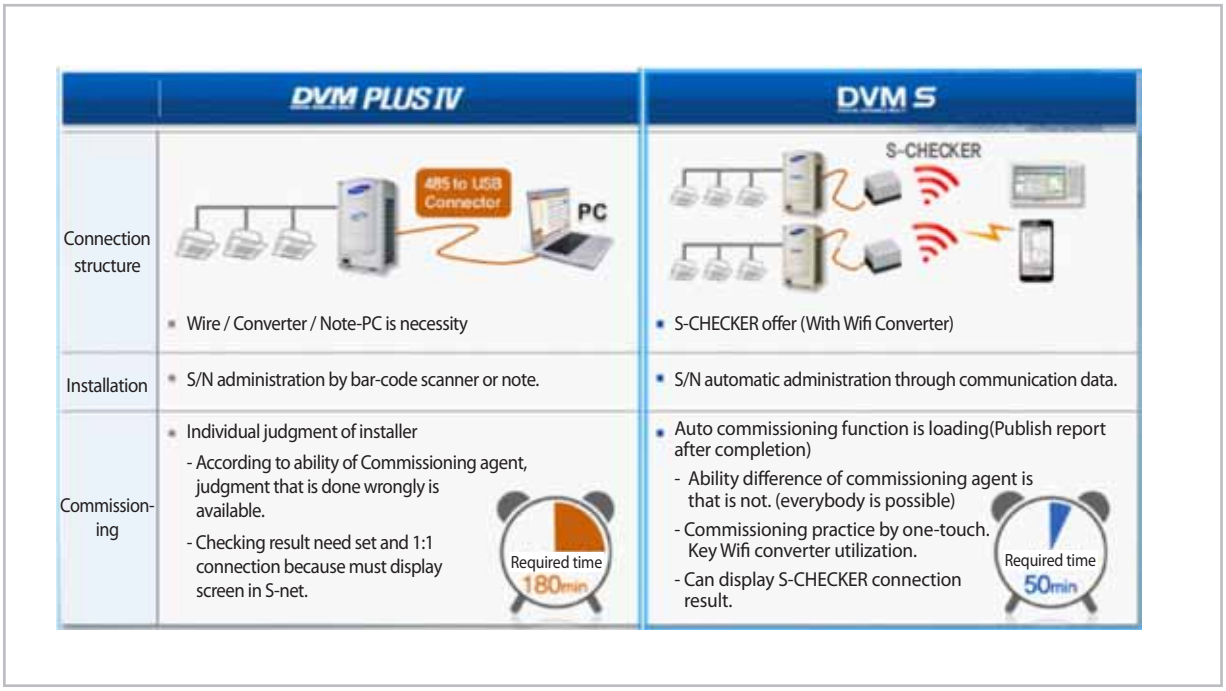
■ Inverter circuit refrigerant cooling technology

Applied high efficiency refrigerant cooling circuit. Secured stable Inverter PCB cooling performance.

- Air cooling method : When natural convection / electric heat performance is low and is high load, efficiency is fallen.
- Refrigerant cooling system : Forced circulation / electric heat performance is high and control of (thermal conductivity is 10 times higher than air) load is available.



■ Auto Commissioning & Management System



* Standard of commissioning time : When combined Module of 4, it is standard.

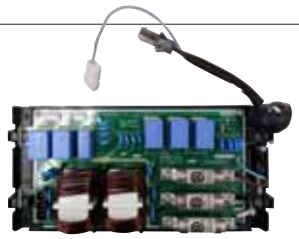
2-1-2 Changes in comparison to basic mode

Changed part	Changed item and feature	Basic	After changed
CABINET	Change the color : TOUCH GRAY →EARTH BROWN Wire Harness installation part change LOGO change	 	

■ Control Box & PCB

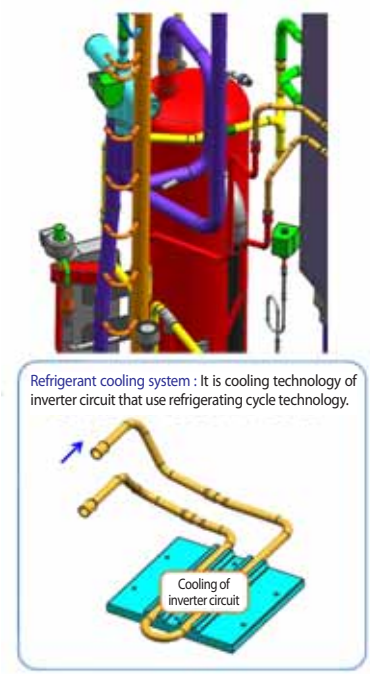
Changed part	Changed item and feature	Basic	After changed
Control Box structure	Monolayer structure→Double Layer Structure - Inverter technology integration (Inverter control circuit composition) - C/Box volume maximum use Built-in type Controller embodiment - Integrated power supply + control unit - Piping service easiness	 	

Changes in comparison to basic mode (cont.)

Changed part	Changed item and feature	Basic	After changed
Main PCB	Change Main PCB - Separation for load / control. - Option resistance delete by model. (standardization) - When do PCB replace, need option download.		
Hub PCB	Hub PCB newly application - Separation for load / control. - Enhanced fixing of load / sensor wire.		
FAN PCB	Use controller of 3 phase power - Prevented phase unbalance. - Temperature protection of IPM.		
Inverter PCB (Compressor Control PCB)	Applied inverter Compressor - Refrigerant cooling method - Magnet S/W → Did Power Relay mount to PCB.		
EMI PCB	3 phase power EMI PCB - Fuse mount	-	
Communication Terminal block	Did Communication Terminal block mount to PCB.		

Changes in comparison to basic mode (cont.)

■ PIPE COOLING

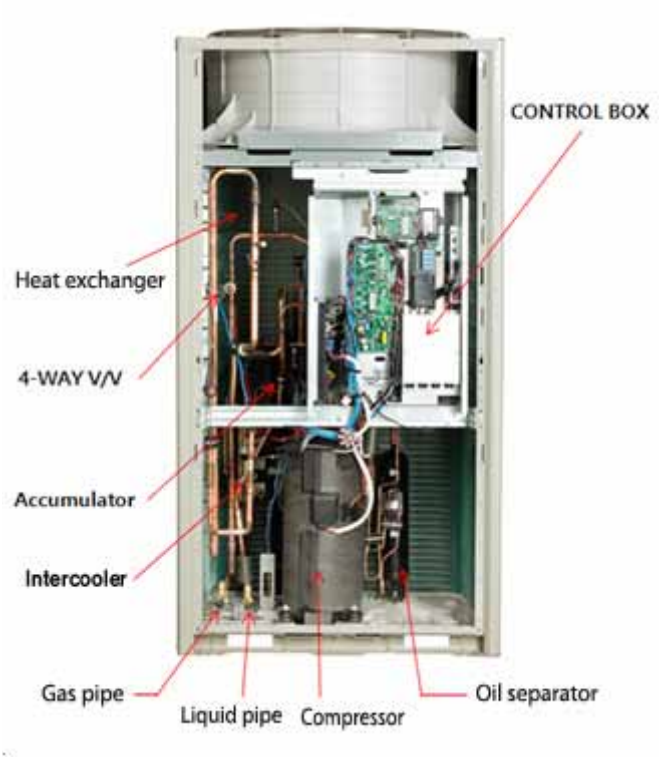
Changed part	Changed item and feature	Basic	After changed
Pipe Cooling	New Pipe Cooling for cooling of inverter PCB.	Unapplied	

■ TUBE

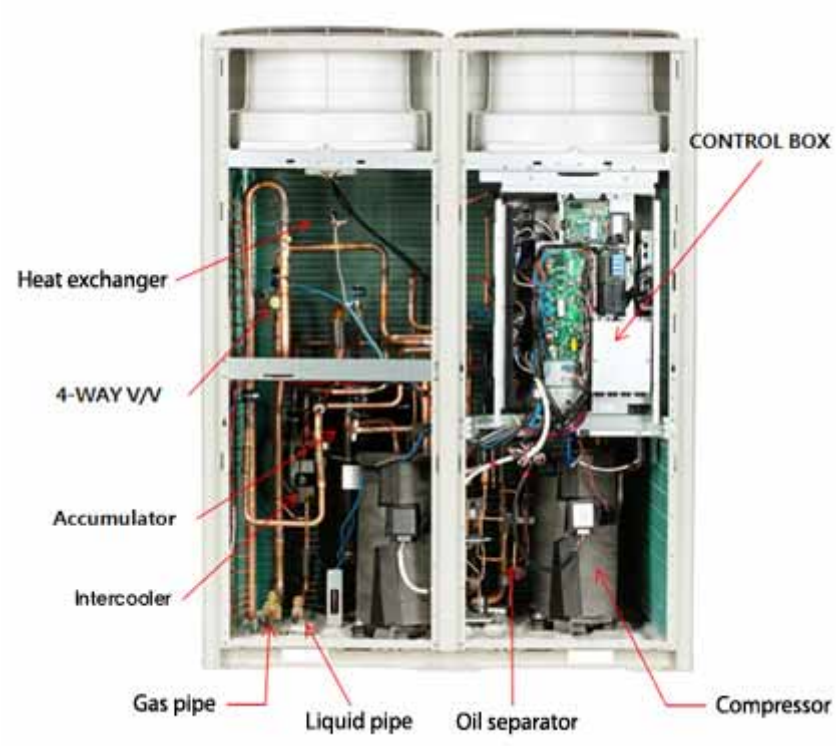
Changed part	Changed item and feature	Basic	After changed
Control Box structure	New inverter cycle technology application New piping Simple 2 Pipe Configuration. (Gas pipe, Liquid pipe)		

2-1-3 Structure of product

Small size



Large size



2-2 Product Specifications

2-2-1 Outdoor Unit

TYPE				New Model			Comparative Model		
									
Model				AM080FXVAGH	AM100FXVAGH	AM120FXVAGH	RD080HHXG✳	RD100HHXG✳	RD120HHXG✳
Mode				HP	HP	HP	HP	HP	HP
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	8	10	12	8	10	12
	Cooling		kW	22.4	28.0	33.6	22.4	28.0	33.6
			btu/h	76,400	95,500	114,600	76,400	95,500	114,600
	Heating		kW	25.2	31.5	37.8	25.2	31.5	37.8
			btu/h	86,000	107,500	129,000	86,000	107,500	129,000
Power	Running Current	Cooling	A	8.00	10.90	13.50	8.80	13.00	20.00
		Heating	A	8.20	10.70	14.00	11.40	12.70	18.40
		Max.	A	18.00	21.10	25.00	18.40	21.50	28.40
	소비전력	Cooling	kW	5.00	6.80	8.40	5.20	7.04	9.20
		Heating	kW	5.10	6.70	8.70	5.46	6.89	8.50
	MCA / MFA		A	22.5 / 30	29.9 / 40	31.3 / 40	-	-	-
Compressor	Model		-	DS-GB052FA****	DS-GB066FA****	DS-GB066FA****	ZPJ61KCE-TFD ZPI61KCE-TFD	ZPJ61KCE-TFD ZPI61KCE-TFD	ZPJ83KCE-TFD ZPI83KCE-TFD
	Type			INV x1	INV x1	INV x1	DVI x1 + FVI x1	DVI x1 + FVI x1	DVI x1 + FVI x1
	Output		kW	4.70	5.80	5.80	4.36 + 4.36	4.36 + 4.36	5.87 + 5.87
	Lubricant	Type	-	FVC68D	FVC68D	FVC68D	3MAF POE	3MAF POE	3MAF POE
		Charging	cc	3,900	3,900	3,900	4,370	4,370	4,370
Refrigerant	Type		-	R410A	R410A	R410A	R410A	R410A	R410A
	Factory Charging		kg	5.5	5.2	5.5	5.0	5.0	5.0
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	400	400	400	630	630	630
	Airflow rate		㎥/min	173	173	210	173	173	210
Pipe	Piping Connections	Liquid	Ø,mm	9.52	9.52	12.70	9.52	9.52	12.70
		Gas	Ø,mm	19.05	22.22	28.58	19.05	22.22	25.40
		Dis. Gas	Ø,mm	-	-	-	-	-	-
		Oil(Flare)	Ø,mm	-	-	-	6.35	6.35	6.35
	Installation Limitation	Max. Length	m	200	200	200	200	200	200
		Max. Height	m	50(40)	50(40)	50(40)	50(40)	50(40)	50(40)
Cable	Main Power(Below/ about20m)		mm2	4.0	4.0	4.0	1.5	2.5	4.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	190	190	190	237	237	240
	Gross Weight		kg	206	206	206	253	253	256
	Net Dimension(WxHxD)		mm	880x1695x765	880x1695x765	880x1695x765	880x1695x765	880x1695x765	880x1695x765
	Gross Dimension(WxHxD)		mm	948x1912x832	948x1912x832	948x1912x832	948x1912x832	948x1912x832	948x1912x832
Operating Temp Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

1. Proper form capacity standard of air conditioning
- Cooling capacity : It is figures that appear in indoor 27˚C DB/19℃ WB, outdoor 35˚C DB, length 50m of piping, fall 0m standard.
- Heating capacity : It is figures that appear in indoor 20˚C DB, outdoor 7˚C DB, length 50m of piping, fall 0m standard.
2. If proper form heating capacity is outdoor temperature 7˚C standard and outdoor temperature goes down by below zero, heating capacity can drop according to temperature condition.
3. Need special load calculation in case of use by main heating in the winter, and please buy product for low temperature that heating effect excels at low temperature.
4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

Outdoor Unit(Continue)

TYPE				New Model		Comparative Model	
							
Model				AM140FXVAGH	AM160FXVAGH	RD140HHXG✳	RD160HHXG✳
Mode				HP	HP	HP	HP
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	14	16	14	16
	Capacity		kW	40.0	45.0	39.2	44.8
			btu/h	136,000	153,000	133,800	152,900
	Heating		kW	45.0	50.0	44.1	50.0
			btu/h	153,000	170,000	150,500	172,000
Power	Running Current	Cooling	A	14.30	17.60	20.90	22.00
		Heating	A	15.20	18.40	19.40	27.20
		Max.	A	25.00	32.00	29.40	38.30
	소비전력	Cooling	kW	8.90	11.00	10.10	12.00
		Heating	kW	9.50	11.50	9.65	11.30
	MCA / MFA		A	31.3 / 40	40 / 40	-	-
Compressor	Model		-	DS-GB066FA****	DS-GB052FA****	ZPJ83KCE-TFD ZPI83KCE-TFD	ZPJ72KCE-TFD ZPI72KCE-TFD
	Type			INV x1	INV x2	DVI x1 + FVI x1	DVI x1 + FVI x2
	Output		kW	5.80	4.7 x2	5.87 + 5.87	5.16 + 5.16 x2
	Lubricant	Type	-	FVC68D	FVC68D	3MAF POE	3MAF POE
		Charging	cc	3,900	6,200	4,370	6,540
Refrigerant	Type		-	R410A	R410A	R410A	R410A
	Factory Charging		kg	7.7	7.4	7.0	7.0
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	630 x 2	630 x 2	630 x 2	630 x 2
	Airflow rate		㎥ / min	226	250	226	250
Pipe	Piping Connections	Liquid	Ø,mm	12.70	12.70	12.70	12.70
		Gas	Ø,mm	28.58	28.58	25.40	28.58
		Dis. Gas	Ø,mm	-	-	-	-
		Oil(Flare)	Ø,mm	-	-	6.35	6.35
	Installation Limitation	Max.Length	m	200	200	200	200
		Max.Height	m	50(40)	50(40)	50(40)	50(40)
Cable	Main Power(Below/ about20m)		mm2	4.0	6.0	4.0	6.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	235	278	280	329
	Gross Weight		kg	254	297	301	350
	Net Dimension(WxHxD)		mm	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765
	Gross Dimension(WxHxD)		mm	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832
Operating Temp. Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

1. Proper form capacity standard of air conditioning
- Cooling capacity : It is figures that appear in indoor 27˚C DB/19℃ WB, outdoor 35˚C DB, length 50m of piping, fall 0m standard.
- Heating capacity : It is figures that appear in indoor 20˚C DB, outdoor 7˚C DB, length 50m of piping, fall 0m standard.
2. If proper form heating capacity is outdoor temperature 7˚C standard and outdoor temperature goes down by below zero, heating capacity can drop according to temperature condition.
3. Need special load calculation in case of use by main heating in the winter, and please buy product for low temperature that heating effect excels at low temperature.
4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

Outdoor Unit(Continue)

TYPE				New Model			Comparative Model	
								
Model				AM180FXVAGH	AM200FXVAGH	AM220FXVAGH	RD180HHXG✳	RD200HHXG✳
Mode				HP	HP	HP	HP	HP
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	18	20	22	18	20
	Cooling		kW	50.4	56.0	61.6	50.4	56.0
			btu/h	171,900	191,000	210,000	171,900	191,000
	Heating		kW	56.7	63.0	69.3	56.7	63.0
			btu/h	193,500	215,000	236,000	193,500	215,000
Power	Running Current	Cooling	A	20.70	24.40	27.80	31.30	32.80
		Heating	A	19.10	22.30	26.80	26.70	29.10
		Max.	A	39.10	42.50	44.50	42.50	44.10
	소비전력	Cooling	kW	12.88	15.19	17.35	15.70	17.00
		Heating	kW	11.90	13.90	16.70	12.90	14.50
	MCA / MFA		A	48.9 / 50	52.5 / 75	52.5 / 75	-	-
Compressor	Model		-	DS-GB066FA****	DS-GB066FA****	DS-GB066FA****	ZPJ83KCE-TFD ZPI83KCE-TFD	ZPJ83KCE-TFD ZPI83KCE-TFD
	Type			INV x2	INV x2	INV x2	DVI x1 + FVI x2	DVI x1 + FVI x2
	Output		kW	5.8 x2	5.8 x2	5.8 x2	5.87 + 5.87 x2	5.87 + 5.87 x2
	Lubricant	Type	-	FVC68D		FVC68D	3MAF POE	3MAF POE
		Charging	cc	6,200	6,200	6,200	6,540	6,540
Refrigerant	Type		-	R410A	R410A	R410A	R410A	R410A
	Factory Charging		kg	8.7	8.4	8.4	8.5	8.5
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	630 x2	630 x2	630 x2	630 x2	630 x2
	Airflow rate		㎥ / min	270	275	280	270	275
Pipe	Piping Connections	Liquid	Ø,mm	15.88	15.88	15.88	15.88	15.88
		Gas	Ø,mm	28.58	28.58	28.58	28.58	28.58
		Dis. Gas	Ø,mm	-	-	-	-	-
		Oil(Flare)	Ø,mm	-	-	-	6.35	6.35
	Installation Limitation	Max.Length	m	200		200	200	200
		Max.Height	m	50(40)		50(40)	50(40)	50(40)
Cable	Main Power(Below/about20m)		mm2	10.0	10.0	10.0	6.0	10.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	300	300	300	340	349
	Gross Weight		kg	319	319	319	361	370
	Net Dimension(WxHxD)		mm	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765
	Gross Dimension(WxHxD)		mm	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832
Operating Temp. Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

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4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

Outdoor Unit(Continue)

TYPE				New Model			Comparative Model		
									
Model				AM080FXVAGR	AM100FXVAGR	AM120FXVAGR	RD080HRXG✳	RD100HRXG✳	RD120HRXG✳
Mode				HR	HR	HR	HR	HR	HR
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	8	10	12	8	10	12
	Capacity		kW	22.4	28.0	33.6	22.4	28.0	33.6
			btu/h	76,400	95,500	114,600	76,400	95,500	114,600
	Heating		kW	25.2	31.5	37.8	25.2	31.5	37.8
			btu/h	86,000	107,500	129,000	86,000	107,500	129,000
Power	Running Current	Cooling	A	8.00	10.90	13.50	8.80	13.00	20.00
		Heating	A	8.20	10.70	14.00	11.40	12.70	18.40
		Max.	A	18.00	21.10	25.00	18.40	21.50	28.40
	소비전력	Cooling	kW	5.00	6.80	8.40	5.20	7.04	9.20
		Heating	kW	5.10	6.70	8.70	5.46	6.89	8.50
	MCA / MFA		A	22.5 / 30	29.9 / 40	31.3 / 40	-	-	-
Compres-sor	Model		-	DS-GB052FA****	DS-GB066FA****	DS-GB066FA****	ZPJ61KCE-TFD ZPI61KCE-TFD	ZPJ61KCE-TFD ZPI61KCE-TFD	ZPJ83KCE-TFD ZPI83KCE-TFD
	Type			INV x1	INV x1	INV x1	DVI x1 + FVI x1	DVI x1 + FVI x1	DVI x1 + FVI x1
	Output		kW	4.70	5.80	5.80	4.36 + 4.36	4.36 + 4.36	5.87 + 5.87
	Lubricant	Type	-	FVC68D	FVC68D	FVC68D	3MAF POE	3MAF POE	3MAF POE
		Charging	cc	3,900	3,900	3,900	4,370	4,370	4,370
Refrigerant	Type		-	R410A	R410A	R410A	R410A	R410A	R410A
	Factory Charging		kg	5.5	5.2	5.5	5.0	5.0	5.0
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	400	400	400	630	630	630
	Airflow rate		㎥ / min	173	173	210	173	173	210
Pipe	Piping Connections	Liquid	Ø,mm	9.52	9.52	12.70	9.52	9.52	12.70
		Gas	Ø,mm	19.05	22.22	28.58	19.05	22.22	25.40
		Dis. Gas	Ø,mm	15.88	19.05	19.05	15.88	19.05	22.22
		Oil(Flare)	Ø,mm	-	-	-	6.35	6.35	6.35
	Installation Limitation	Max.Length	m	200	200	200	200	200	200
		Max.Height	m	50(40)	50(40)	50(40)	50(40)	50(40)	50(40)
Cable	Main Power(Below/ about20m)		mm2	4.0	4.0	4.0	1.5	2.5	4.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	195	195	195	243	243	243
	Gross Weight		kg	211	211	211	259	259	259
	Net Dimension(WxHxD)		mm	880x1695x765	880x1695x765	880x1695x765	880x1695x765	880x1695x765	880x1695x765
	Gross Dimension(WxHxD)		mm	948x1912x832	948x1912x832	948x1912x832	948x1912x832	948x1912x832	948x1912x832
Operating Temp. Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

1. Proper form capacity standard of air conditioning
- Cooling capacity : It is figures that appear in indoor 27˚C DB/19°C WB, outdoor 35˚C DB, length 50m of piping, fall 0m standard.
- Heating capacity : It is figures that appear in indoor 20˚C DB, outdoor 7˚C DB, length 50m of piping, fall 0m standard.
2. If proper form heating capacity is outdoor temperature 7˚C standard and outdoor temperature goes down by below zero, heating capacity can drop according to temperature condition.
3. Need special load calculation in case of use by main heating in the winter, and please buy product for low temperature that heating effect excels at low temperature.
4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

Outdoor Unit(Continue)

TYPE				New Model		Comparative Model	
							
Model				AM140FXVAGR	AM160FXVAGR	RD140HRXG✳	RD160HRXG✳
Mode				HR	HR	HR	HR
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	14	16	14	16
	Capacity		kW	40.0	45.0	39.2	44.8
			btu/h	136,000	153,000	133,800	152,900
	Heating		kW	45.0	50.0	44.1	50.0
			btu/h	153,000	170,000	150,500	172,000
Power	Running Current	Cooling	A	14.30	17.60	20.90	22.00
		Heating	A	15.20	18.40	19.40	27.20
		Max.	A	25.00	32.00	29.40	38.30
	소비전력	Cooling	kW	8.90	11.00	10.10	12.00
		Heating	kW	9.50	11.50	9.65	11.30
	MCA / MFA		A	31.3 / 40	40 / 40	-	-
Compres-sor	Model		-	DS-GB066FA****	DS-GB052FA****	ZPJ83KCE-TFD ZPI83KCE-TFD	ZPJ72KCE-TFD ZPI72KCE-TFD
	Type			INV x1	INV x2	DVI x1 + FVI x1	DVI x1 + FVI x2
	Output		kW	5.80	4.7 x2	5.87 + 5.87	5.16 + 5.16 x2
	Lubricant	Type	-	FVC68D	FVC68D	3MAF POE	3MAF POE
		Charging	cc	3,900	6,200	4,370	6,540
Refrigerant	Type		-	R410A	R410A	R410A	R410A
	Factory Charging		kg	7.7	7.4	7.0	7.0
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	630 x 2	630 x 2	630 x 2	630 x 2
	Airflow rate		m³ / min	226	250	226	250
Pipe	Piping Connections	Liquid	Ø,mm	12.70	12.70	12.70	12.70
		Gas	Ø,mm	28.58	28.58	25.40	28.58
		Dis. Gas	Ø,mm	22.22	22.22	22.22	25.40
		Oil(Flare)	Ø,mm	-	-	6.35	6.35
	Installation Limitation	Max.Length	m	200	200	200	200
		Max.Height	m	50(40)	50(40)	50(40)	50(40)
Cable	Main Power(Below/ about20m)		mm2	4.0	6.0	4.0	6.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	235	278	293	338
	Gross Weight		kg	254	297	314	359
	Net Dimension(WxHxD)		mm	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765
	Gross Dimension(WxHxD)		mm	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832
Operating Temp. Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

1. Proper form capacity standard of air conditioning
- Cooling capacity : It is figures that appear in indoor 27˚C DB/19ºC WB, outdoor 35˚C DB, length 50m of piping, fall 0m standard.
- Heating capacity : It is figures that appear in indoor 20˚C DB, outdoor 7˚C DB, length 50m of piping, fall 0m standard.
2. If proper form heating capacity is outdoor temperature 7˚C standard and outdoor temperature goes down by below zero, heating capacity can drop according to temperature condition.
3. Need special load calculation in case of use by main heating in the winter, and please buy product for low temperature that heating effect excels at low temperature.
4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

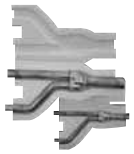
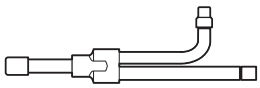
Outdoor Unit(Continue)

TYPE				New Model			Comparative Model	
								
Model				AM180FXVAGR	AM200FXVAGR	AM220FXVAGR	RD180HRXG✳	RD200HRXG✳
Mode				HR	HR	HR	HR	HR
Power			Ø,V,Hz	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50	3/AC380~415/50
Capacity	Horse Power		HP	18	20	22	18	20
	Capacity		kW	50.4	56.0	61.6	50.4	56.0
			btu/h	171,900	191,000	210,000	171,900	191,000
	Heating		kW	56.7	63.0	69.3	56.7	63.0
			btu/h	193,500	215,000	236,000	193,500	215,000
Power	Running Current	Cooling	A	20.70	24.40	27.80	31.30	32.80
		Heating	A	19.10	22.30	26.80	26.70	29.10
		Max.	A	39.10	42.50	44.50	42.50	44.10
	소비전력	Cooling	kW	12.88	15.19	17.35	15.70	17.00
		Heating	kW	11.90	13.90	16.70	12.90	14.50
	MCA / MFA		A	48.9 / 50	52.5 / 75	52.5 / 75	-	-
Compressor	Model		-	DS-GB066FA****	DS-GB066FA****	DS-GB066FA****	ZPJ83KCE-TFD ZPI83KCE-TFD	ZPJ83KCE-TFD ZPI83KCE-TFD
	Type			INV x2	INV x2	INV x2	DVI x1 + FVI x2	DVI x1 + FVI x2
	Output		kW	5.8 x2	5.8 x2	5.8 x2	5.87 + 5.87 x2	5.87 + 5.87 x2
	Lubricant	Type	-	FVC68D		FVC68D	3MAF POE	3MAF POE
		Charging	cc	6,200	6,200	6,200	6,540	6,540
Refrigerant	Type		-	R410A	R410A	R410A	R410A	R410A
	Factory Charging		kg	8.7	8.4	8.4	8.5	8.5
FAN	Type		-	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC	Propeller + BLDC
	Motor Output		W	630 x2	630 x2	630 x2	630 x2	630 x2
	Airflow rate		m³ / min	270	275	280	270	275
Pipe	Piping Connections	Liquid	Ø,mm	15.88	15.88	15.88	15.88	15.88
		Gas	Ø,mm	28.58	28.58	28.58	28.58	28.58
		Dis. Gas	Ø,mm	22.22	28.58	28.58	28.58	28.58
		Oil(Flare)	Ø,mm	-	-	-	6.35	6.35
	Installation Limitation	Max.Length	m	200		200	200	200
		Max.Height	m	50(40)		50(40)	50(40)	50(40)
Cable	Main Power(Below/ about20m)		mm2	10.0	10.0	10.0	6.0	10.0
	Communication		mm2	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)	VCTF 0.75~1.5(2P)
Set Dimension	Net Weight		kg	300	300	300	349	355
	Gross Weight		kg	319	319	319	369	376
	Net Dimension(WxHxD)		mm	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765	1295x1695x765
	Gross Dimension(WxHxD)		mm	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832	1363x1912x832
Operating Temp. Range	Cooling		℃	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24

1. Proper form capacity standard of air conditioning
- Cooling capacity : It is figures that appear in indoor 27˚C DB/19ºC WB, outdoor 35˚C DB, length 50m of piping, fall 0m standard.
- Heating capacity : It is figures that appear in indoor 20˚C DB, outdoor 7˚C DB, length 50m of piping, fall 0m standard.
2. If proper form heating capacity is outdoor temperature 7˚C standard and outdoor temperature goes down by below zero, heating capacity can drop according to temperature condition.
3. Need special load calculation in case of use by main heating in the winter, and please buy product for low temperature that heating effect excels at low temperature.
4. 2012, there is difference write some item (electric power) of Comparative Model
provision development model by method of examination alteration according to energy consumption efficiency grade indication system enforcement.
5. Difference of elevation between indoor unit and outdoor unit is opposite fall 50m, net fall 40m, and opposite fall 100m at high fall kit application is possible.

2-3 Accessory and Option Specifications

2-3-1 Accessories

Picture	Classification	Model Name	Remark
	Y-Joint	MXJ-YA1509M	15.0 kW and below
		MXJ-YA2512M	Over 15.0 kW~40.6 kW and below
		MXJ-YA2812M	Over 40.6 kW~46.4 kW and below
		MXJ-YA2815M	Over 46.4 kW~69.6 kW and below
		MXJ-YA3419M	Over 69.6 kW~98.6 kW and below
		MXJ-YA4119M	Over 98.6 kW~139.2 kW and below
		MXJ-YA4422M	Over 139.2 kW
	Y-Joint (Only H/R)	MXJ-YA1500M	23.2 kW and below
		MXJ-YA2500M	Over 23.2 kW~69.6 kW and below
		MXJ-YA3100M	Over 69.6 kW~139.2 kW and below
		MXJ-YA3800M	139.2 kW and below
	Distribution header	MXJ-HA2512M	46.4 kW and below (for 4 rooms)
		MXJ-HA3115M	69.6 kW and below (for 8 rooms)
		MXJ-HA3819M	Over 69.6 kW (for 8 rooms)
	Y-Joint -Outdoor Unit	MXJ-TA3819M	139.2 kW and below
		MXJ-TA4422M	145 kW and below
	Y-Joint (Only H/R)-Outdoor Unit	MXJ-TA3100M	139.2 kW and below
		MXJ-TA3800M	145 kW and Over
	MCU (Mode Control Unit)	MCU-S6NEE1N	6 ROOM
		MCU-S4NEE1N	4 ROOM
		MCU-S4NEE2N	4 ROOM
	EEV KIT (1 Room)	MEV-E24SA	Applty to products without EEV (Wall mount & Ceiling)
		MEV-E32SA	
	EEV KIT (2 Room)	MXD-E24K132A	
		MXD-E24K200A	
		MXD-E32K200A	
		MXD-E24K232A	
	EEV KIT (3 Room)	MXD-E24K132A	
		MXD-E24K300A	
		MXD-E32K224A	
		MXD-E32K300A	

3. Disassembly and Reassembly

3-1 Necessary Tools

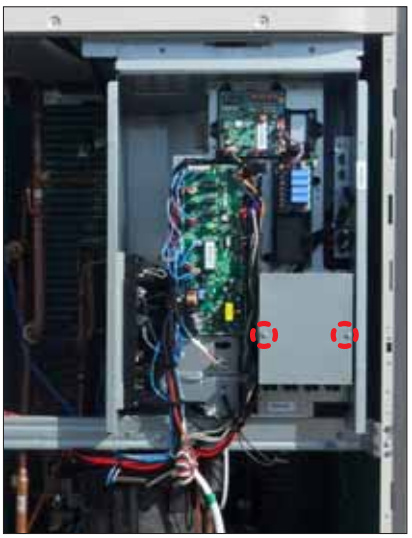
Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	
-SCREW DRIVER	
NIPPER	
ELECTRIC MOTION DRIVER	
L-WRENCH	

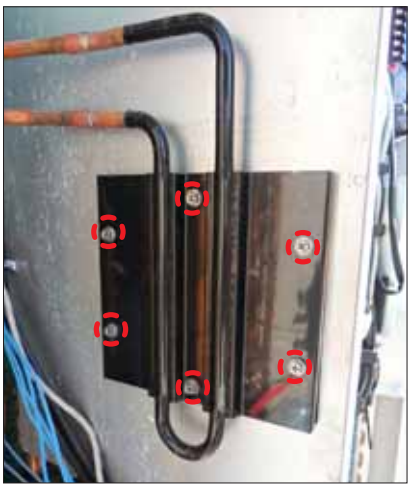
● For "disassembly and assembly" DVM PLUS Ⅳ indoor unit, please refer to the products with the same structures.
Only those products that are not specified elsewhere are described here.

3-2 Disassembly and Reassembly

3-2-1 AM080/100/120FXV✳✳✳

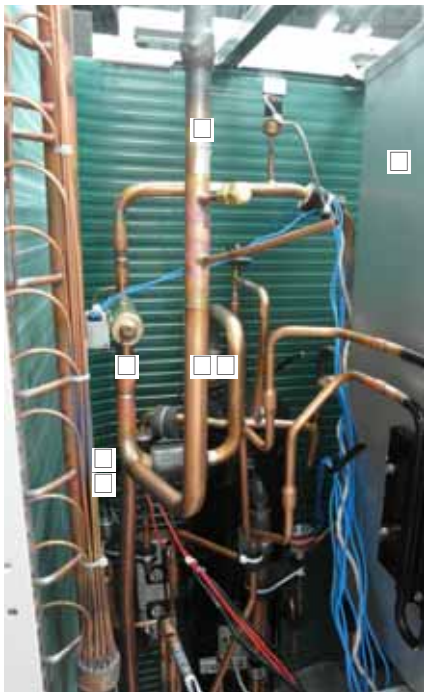
No.	Parts	Procedure	Remark
1	Electrical equipment Part	1) 14 screws that is fixing CABINET remove.(Use + Screw driver)	
		2) Remove 4 screws that is fixing and separate Cover Control Box. (Use + Screw driver)	
		3) Power, Compressor, Valve, Motor, Sensor connector connected to ASSY PCB remove.	

No.	Parts	Procedure	Remark
		4) 2 screws had fixed in terminal block cover when change power terminal block, communication terminal block remove.	
		5) 2 screws had fixed in terminal block after remove 4 screws had fixed to Cabinet for terminal block protection remove.	
		6) 5 screws had fixed to Front part remove.	

No.	Parts	Procedure	Remark
		7) 6 screws had fixed on side refrigerant cooling part outside remove . ⚠ Do not separate Heat Sink pulling Assy Piping Cooling piping compulsorily. (Is responsible for parts damage.)	
		8) 2 screws had fixed on side refrigerant cooling part inside remove.	

Binding Wire 1

■ AM080/100/120FXV✳✳✳

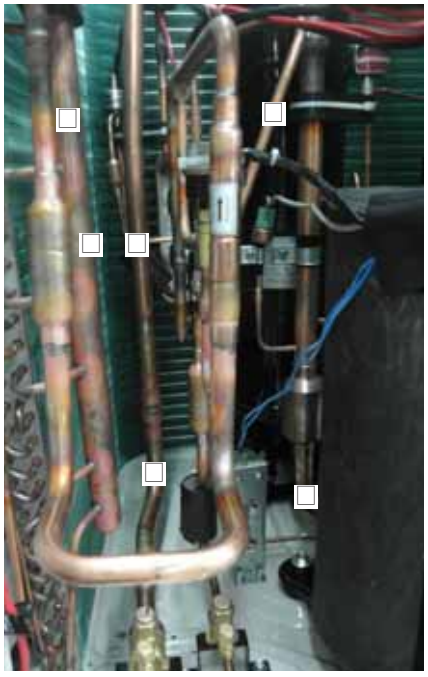


VALVE & SENSOR

No	Valve & Sensor
☐	4WAY Valve
☐	High Pressure Sensor
☐	Suction Sensor
☐	EVI Out Sensor

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM080/100/120FXV✳✳✳	DB62-04154C	
☐	AM080/100/120FXV✳✳✳	DB62-03808B	
☐	AM080/100/120FXV✳✳✳	DB62-03808C	



VALVE & SENSOR

No	Valve & Sensor
☐	Expansion Valve
☐	EVI EEV Valve
☐	Accum Oil Return Valve
☐	EVI In Sensor

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM080/100/120FXV✳✳✳	DB62-03808C	
☐	AM080/100/120FXV✳✳✳	DB62-03808E	

Binding Wire 2

■ AM080/100/120FXV✳✳✳

VALVE & SENSOR

No	Valve & Sensor
☐	Low Pressure Sensor

VALVE & SENSOR

No	Valve & Sensor
☐	Cond Out Sensor
☐	Outdoor Temperature Sensor

VALVE & SENSOR

No	Valve & Sensor
☐	Comp Top Sensor
☐	Discharge Sensor
☐	High Pressure Switch

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM080/100/120FXV✳✳✳	DB62-03808D	

Binding Wire 3

■ AM080/100/120FXV✳✳✳

► Comp Wire fix by Holder Wire.

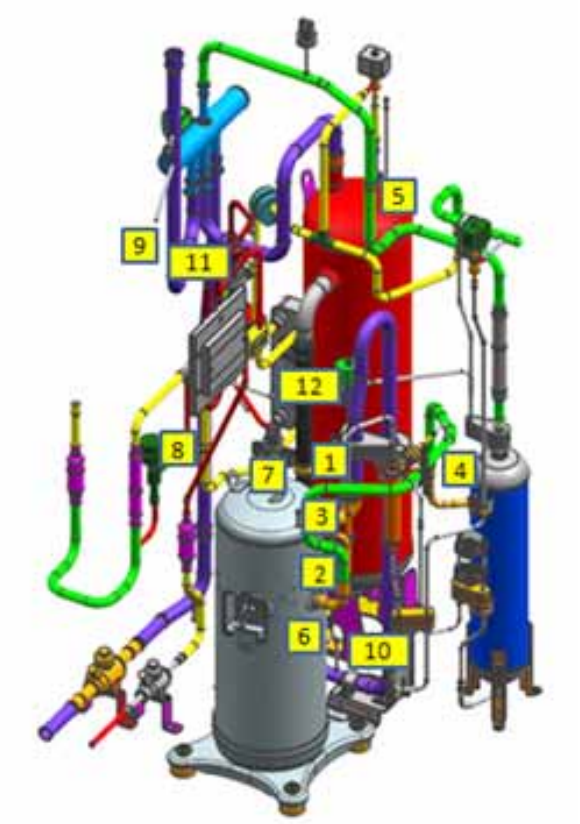
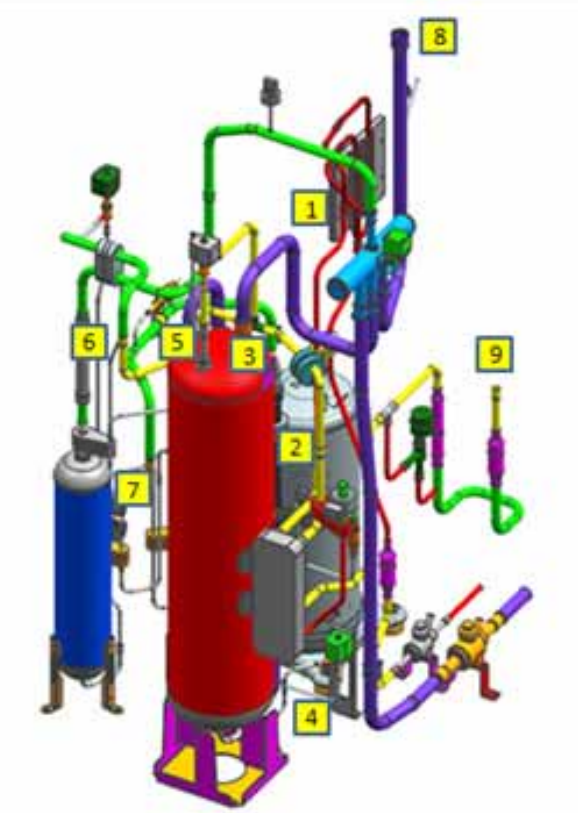
► Fix Comp Wire-Core to Bracket Beam Control Box using large size Cable Tie(350mm).

► Separate double layer structure of C/Box after remove 3 screws and connector.

[Reference Sheet]

Pipe Welding Position

■ AM080/100/120FXVAGH/EU

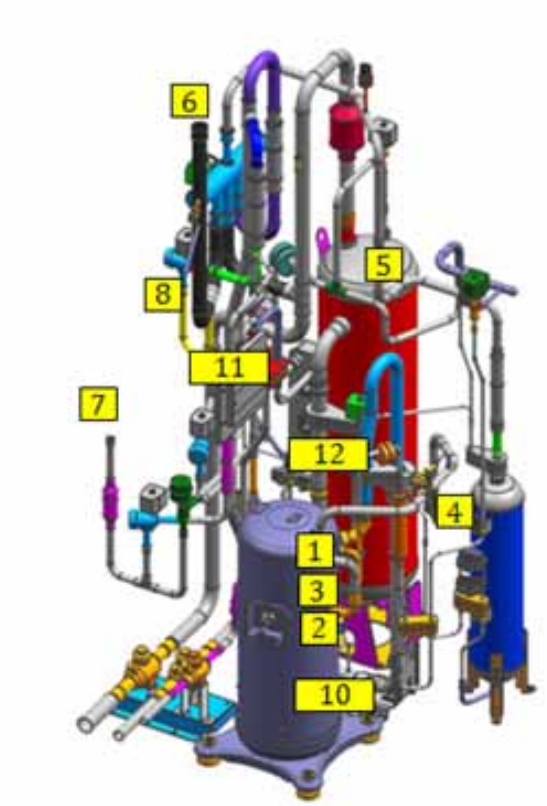
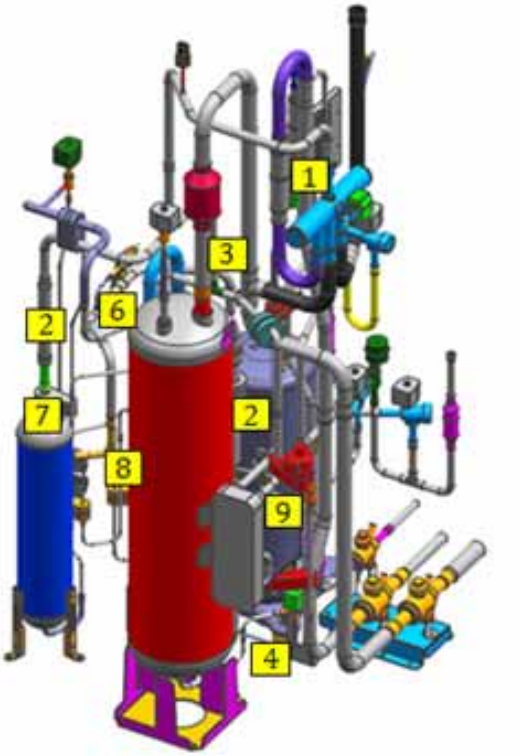
Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	1	1	Cooling+Subcooler	1
2	Comp+Discharge	1	2	Subcooler+EVI Bypass	1
3	Comp+Vapor Injection	1	3	Accum+4Way	1
4	Discharge+Oil Sepa	1	4	Accum+Accum Oil Vavle	1
5	4Way+Oil Sepa Out	1	5	Accum+EVI Bypass	1
6	Oil Return+Suction	1	6	Vapor Injection+EVI Bypass	1
7	Hot Gas Vavle +Suction	1	7	Hot Gas Vavle +Oil Sepa Out	1
8	Expansion+Subcooler	1	8	4Way+Cond In	
9	Pinch Pipe	1	9	Expansion+Cond Out	
10	Accum Oil Return Valve + Suction	1			
11	Liquid Ball Vavle +Colling	1			
12	Accum+Suction	1			

[Reference Sheet]

Pipe Welding Position

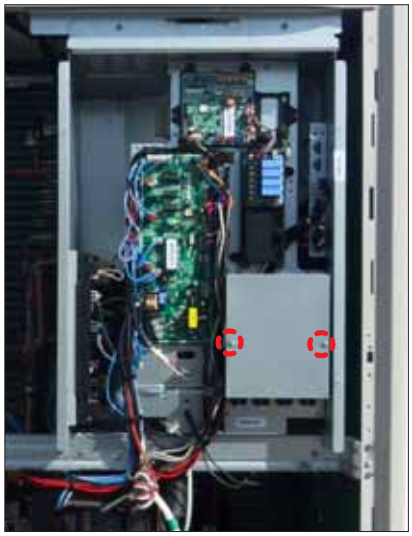
■ AM080/100/120FXVAGR/EU

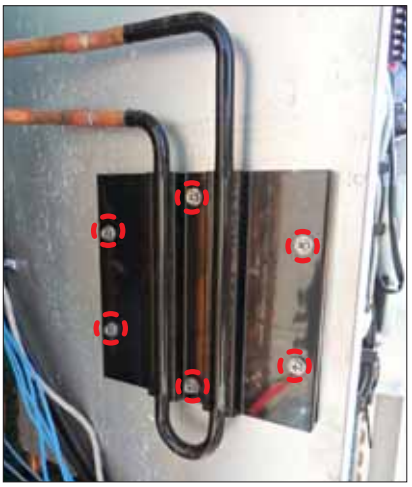
Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	1	1	Cooling+Subcooler	1
2	Comp+Discharge	1	2	Subcooler+EVI Bypass	1
3	Comp+Vapor Injection	1	3	Accum+4Way	1
4	Discharge+Oil Sepa	1	4	Accum+Accum Oil Vavle	1
5	4Way+Oil Sepa Out	1	5	Accum+EVI Bypass	1
6	4Way+Cond In	1	6	Vapor Injection+EVI Bypass	1
7	Expansion+Cond Out	1	7	Hot Gas Vavle +Oil Sepa Out	1
8	Pinch Pipe	1	8	Oil Return+Suction	
9	Accum Oil Return Valve+Suction	1	9	LQD Ball Valve+Subcooler	
10	Subcooler+Expansion	1			
11	LQD Ball Valve+Cooling	1			
12	Accum+Suction	1			

3-2-2 AM140FXV✳✳✳

No.	Parts	Procedure	Remark
1	Electrical equipment Part	1) 11 screws that is fixing CABINET remove.(Use + Screw driver)	
		2) Remove 4 screws that is fixing and separate Cover Control Box. (Use + Screw driver)	
		3) Power, Compressor, Valve, Motor, Sensor connector connected to ASSY PCB remove.	

No.	Parts	Procedure	Remark
		4) 2 screws had fixed in terminal block cover when change power terminal block, communication terminal block remove.	
		5) 2 screws had fixed in terminal block after remove 4 screws had fixed to Cabinet for terminal block protection remove.	
		6) 5 screws had fixed to Front part remove.	

No.	Parts	Procedure	Remark
		7) 6 screws had fixed on side refrigerant cooling part outside remove . ⚠ Do not separate Heat Sink pulling Assy Piping Cooling piping compulsorily. (Is responsible for parts damage.)	
		8) 2 screws had fixed on side refrigerant cooling part inside remove.	

Binding Wire 1

■ AM140FXV✳✳✳

VALVE & SENSOR

No	Valve & Sensor
☐	4WAY Valve
☐	High Pressure Sensor
☐	EVI Bypass Valve

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM140FXV✳✳✳	DB62-03808G	

VALVE & SENSOR

No	Valve & Sensor
☐	EVI SOL Valve
☐	Low Pressure Sensor
☐	Hot Gas Valve

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM140FXV✳✳✳	DB62-04154D	
☐	AM140FXV✳✳✳	DB62-04154D	

Binding Wire 2

■ AM140FXV✳✳✳

VALVE & SENSOR

No	Valve & Sensor
☐	Expansion Valve
☐	EVI EEV Valve
☐	Accum Oil Return Valve
☐	High Pressure Switch

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM140FXV✳✳✳	DB62-03808C	
☐	AM140FXV✳✳✳	DB62-03808D	
☐	AM140FXV✳✳✳	DB62-03808E	

VALVE & SENSOR

No	Valve & Sensor
☐	Cond Out Sensor
☐	Outdoor Temperature Sensor

VALVE & SENSOR

No	Valve & Sensor
☐	Comp Top Sensor
☐	Discharge Sensor

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM140FXV✳✳✳	DB62-03808C	

Binding Wire 3

■ AM140FXV✳✳✳

► Comp Wire fix by Holder Wire.

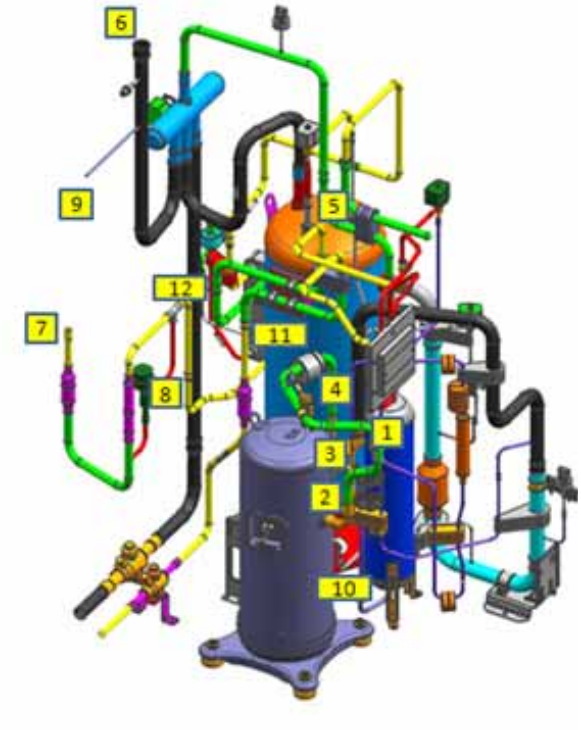
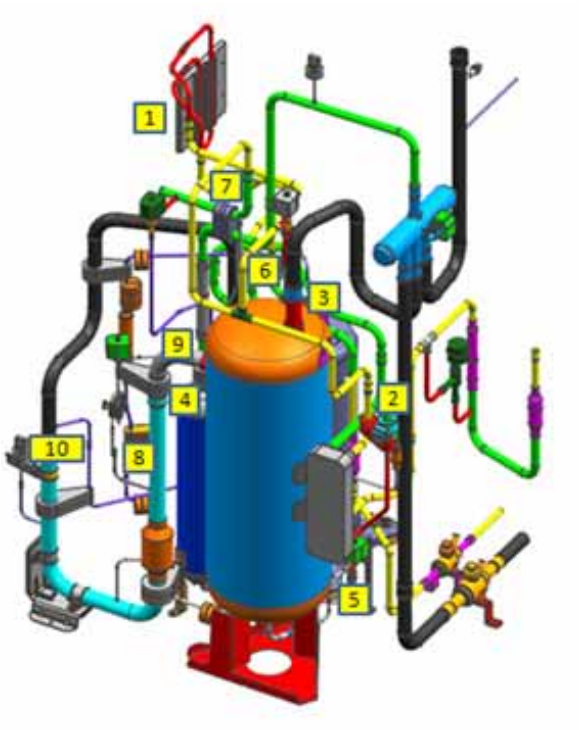
► Fix Comp Wire-Core to Bracket Beam Control Box using large size Cable Tie(350mm).

► Separate double layer structure of C/Box after remove 3 screws and connector.

[Reference Sheet]

Pipe Welding Position

■ AM140FXVAGH/EU

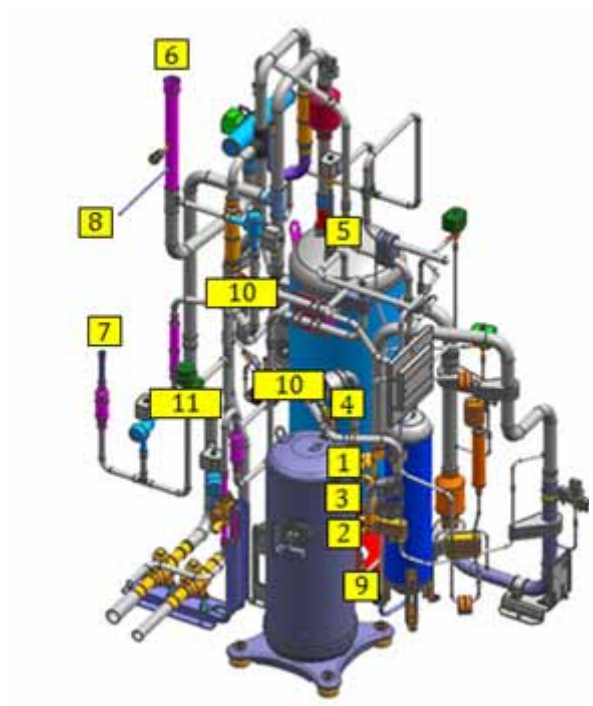
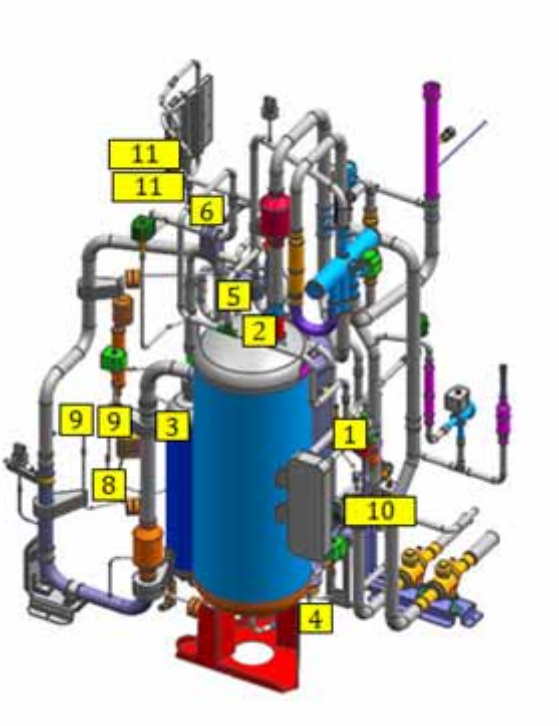
Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	1	1	Cooling+Subcooler In	2
2	Comp+Discharge	1	2	Subcooler+EVI Bypass	1
3	Comp+Vapor Injection	1	3	Accum+4Way	1
4	Discharge+Oil Sepa	1	4	Accum+Suction	1
5	4Way+Oil Sepa Out	1	5	Accum+Accum Oil Valve	1
6	4Way+Cond In	1	6	Accum+EVI Bypass	1
7	Expansion+Cond Out	1	7	Vapor Injection+EVI Bypass	1
8	Expansion+Subcooler	1	8	Hot Gas Valve+Suction	1
9	Pinch Pipe	1	9	Hot Gas Valve+Oil Sepa Out	1
10	Accum Oil Return Valve + Suction	1	10	Oil Return+Suction	1
11	Liquid Ball Valve+Subcooler In	1			
12	Subcooler+Subcooler In	1			

[Reference Sheet]

Pipe Welding Position

■ AM140FXVAGR/EU

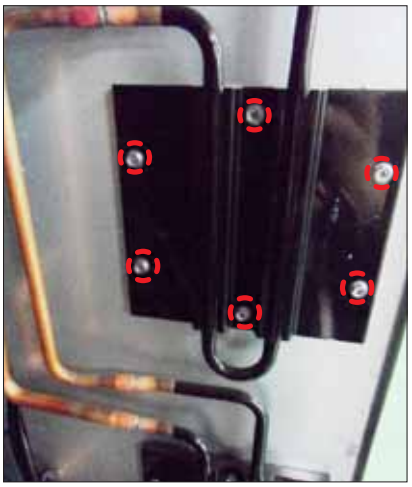
Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	1	1	Subcooler+EVI Bypass	2
2	Comp+Discharge	1	2	Accum+4Way	1
3	Comp+Vapor Injection	1	3	Accum+Suction	1
4	Discharge+Oil Sepa	1	4	Accum+Accum Oil Valve	1
5	4Way+Oil Sepa Out	1	5	Accum+EVI Bypass	1
6	4Way+Cond In	1	6	Vapor Injection+EVI Bypass	1
7	Expansion+Cond Out	1	7	Hot Gas Valve+Suction	1
8	Pinch Pipe	1	8	Hot Gas Valve+Oil Sepa Out	1
9	Accum Oil Return Valve+Suction	1	9	Oil Return+Suction	1
10	Subcooler+Subcooler In	1	10	LQD Valve+Subcooler In	1
11	Expansion+Subcooler	1	11	Cooling+Subcooler In	2
12	LQD Ball Valve+Subcooler In	1			

3-2-3 AM160/180/200/220FXV✳✳✳

No.	Parts	Procedure	Remark
1	Electrical equipment Part	1) 11 screws that is fixing CABINET remove.(Use + Screw driver)	
		2) Remove 4 screws that is fixing and separate Cover Control Box. (Use + Screw driver)	
		3) Power, Compressor, Valve, Motor, Sensor connector connected to ASSY PCB remove.	

No.	Parts	Procedure	Remark
		4) 2 screws had fixed in terminal block cover when change power terminal block, communication terminal block remove.	
		5) 2 screws had fixed in terminal block after remove 4 screws had fixed to Cabinet for terminal block protection remove.	
		6) 5 screws had fixed to Front part remove.	

No.	Parts	Procedure	Remark
		7) 6 screws had fixed on side refrigerant cooling part outside remove . ⚠ Do not separate Heat Sink pulling Assy Piping Cooling piping compulsorily. (Is responsible for parts damage.)	
		8) 2 screws had fixed on side refrigerant cooling part inside remove.	

No.	Parts	Procedure	Remark
	< Reference > Heat Sink	To Heat Sink Thermal Grease Spread service work - Spread enough Thermal Grease evenly on Plate Heat Sink back whole using roller or brush. - Reassemble Plate Heat Sink in reverse order of disassembly.	

Binding Wire 1

■ AM160/180/200/220FXV✳✳✳

VALVE & SENSOR

No	Valve & Sensor
☐	4WAY Valve
☐	High Pressure Sensor
☐	EVI Bypass Valve
☐	EVI SOL Valve
☐	Suction Sensor

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM160/180/200/220FXV✳✳✳	DB62-03808A	

VALVE & SENSOR

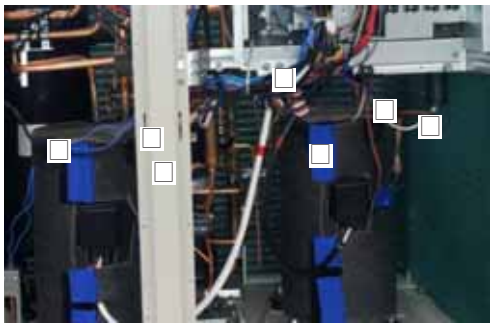
No	Valve & Sensor
☐	Expansion Valve
☐	EVI EEV Valve
☐	Accum Oil Return Valve
☐	High Pressure Switch #1
☐	EVI Out Sensor
☐	EVI In Sensor

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM160/180/200/220FXV✳✳✳	DB62-04154B	
☐	AM160/180/200/220FXV✳✳✳	DB62-03808D	
☐	AM160/180/200/220FXV✳✳✳	DB62-03808E	
☐	AM160/180/200/220FXV✳✳✳	DB62-03808C	

Binding Wire 2

■ AM160/180/200/220FXV✳✳✳



VALVE & SENSOR

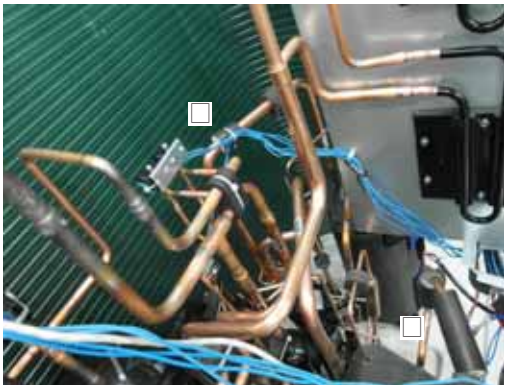
No	Valve & Sensor
☐	Comp Top #1 Sensor
☐	Comp Top #1 Sensor
☐	Discharge #1 Sensor
☐	Discharge #2 Sensor
☐	High Pressure Switch #2

INSULATION

No	Model	Insu Code	Binding Wire
☐	AM160/180/200/220FXV✳✳✳	DB62-03808A	
	AM160/180/200/220FXV✳✳✳	DB62-03808D	
☐	AM160/180/200/220FXV✳✳✳	DB62-03808C	
	AM160/180/200/220FXV✳✳✳	DB62-03808D	

VALVE & SENSOR

No	Valve & Sensor
☐	Cond Out Sensor
☐	Outdoor Temperature Sensor



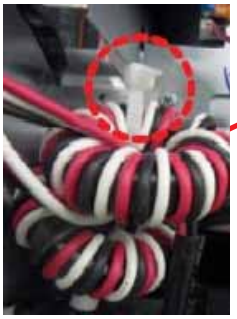
INSULATION

No	Model	Insu Code	Binding Wire
☐	AM160/180/200/220FXV✳✳✳	DB62-04154J	
☐	AM160/180/200/220FXV✳✳✳	DB62-04154C	

Binding Wire 3

■ AM160/180/200/220FXV✳✳✳

► Comp Wire fix by Holder Wire.



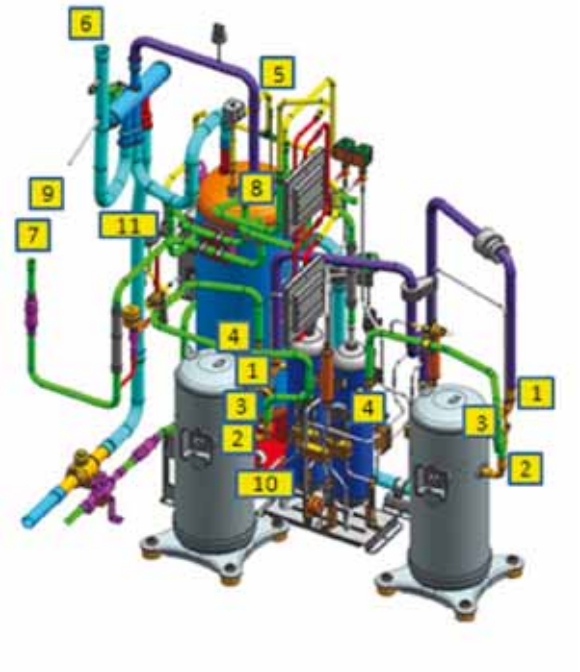
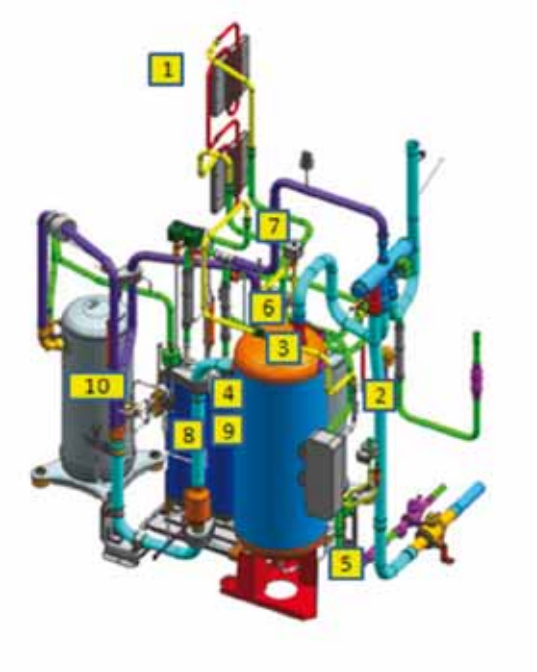
► Fix Comp Wire-Core to Bracket Beam Control Box using large size Cable Tie(350mm).

► Separate double layer structure of C/Box after remove 3 screws and connector.

[Reference Sheet]

Pipe Welding Position 4

■ AM160/180/200/220FXVAGH/EU

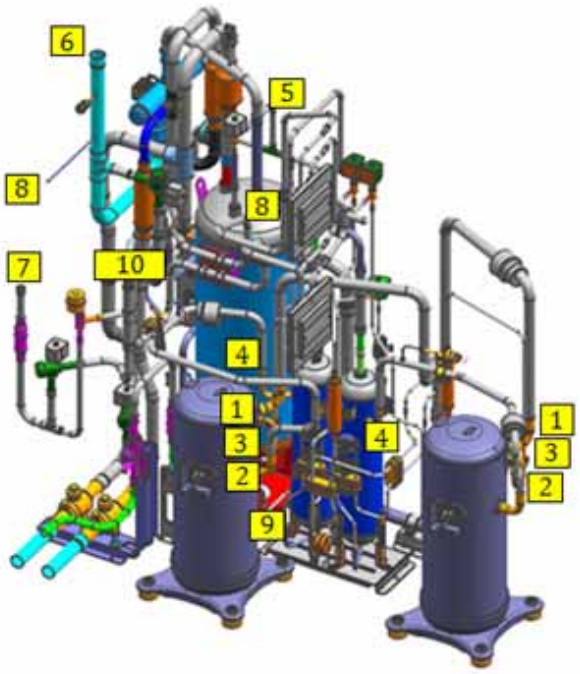
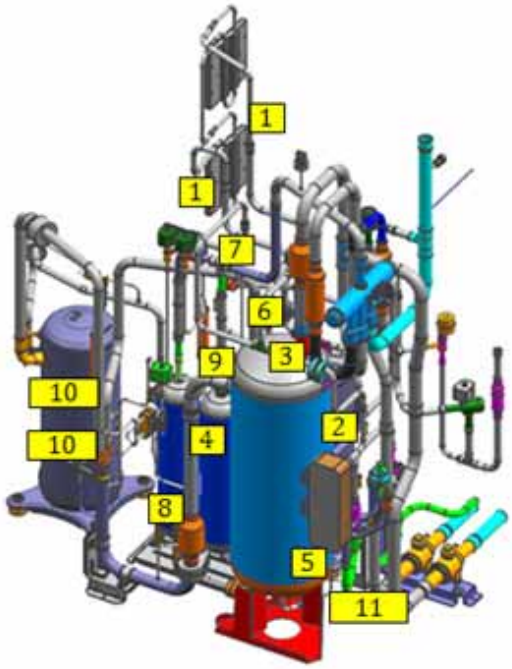
Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	2	1	Cooling+Subcooler In	1
2	Comp+Discharge	2	2	Subcooler+EVI Bypass	1
3	Comp+Vapor Injection	2	3	Accum+4Way	1
4	Discharge+Oil Sepa	2	4	Accum+Suction	1
5	4Way+Oil Sepa Out	1	5	Accum+Accum Oil Vavle	1
6	4Way+Cond In	1	6	Accum+EVI Bypass	1
7	Expansion+Cond Out	1	7	Vapor Injection+EVI Bypass	1
8	Expansion+Cooling	1	8	Hot Gas Vavle +Suction	1
9	Pinch Pipe	1	9	Hot Gas Vavle +Oil Sepa Out	1
10	Accum Oil Return Valve + Suction	1	10	Oil Return+Suction	2
11	Subcooler+Subcooler In	1			

[Reference Sheet]

Pipe Welding Position 4

■ AM160/180/200/220FXVAGR/EU

Front Welding Parts	Rear Welding Parts
	

No.	Welding Position	Q'ty	No.	Welding Position	Q'ty
1	Comp+Suction	2	1	Cooling+Subcooler In	2
2	Comp+Discharge	2	2	Subcooler+EVI Bypass	1
3	Comp+Vapor Injection	2	3	Accum+4Way	1
4	Discharge+Oil Sepa	2	4	Accum+Suction	1
5	4Way+Oil Sepa Out	1	5	Accum+Accum Oil Vavle	1
6	4Way+Cond In	1	6	Accum+EVI Bypass	1
7	Expansion+Cond Out	1	7	Vapor Injection+EVI Bypass	1
8	Pinch Pipe	1	8	Hot Gas Vavle +Suction	1
9	Accum Oil Return Valve+Suction	1	9	Hot Gas Vavle +Oil Sepa Out	1
10	Subcooler+Expansion	1	10	Oil Return+Suction	2
			11	LQD Ball Valve+Subcooler	1

3-3 Caution at compressor exchange

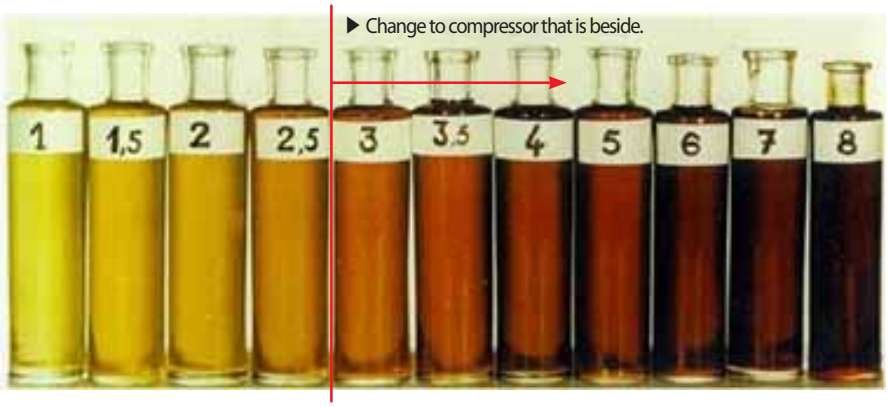
■ Compressor exchange order

STEP	Occasion that compressor is 1 inside outdoor unit	Occasion that compressor is 2 inside outdoor unit
1	-	Establish compressor to exchange by cutting.
2	-	Refrigerant release driving of applied outdoor unit ※ Refrigerant release driving enforces 1th necessarily. Release driving that enforce contiguously can be responsible for compressor breakdown.
3	Lock all SVC valve of liquid pipe and gas pipe.	
4	Enter in vacuum mode and establish as all EEV and Valve open.	
5	Reclaim refrigerant of outdoor unit using Recovery Unit. ※ When there is no Recovery Unit, refer to below contents. 1. If refrigerant release driving is enforced, refrigerant remaining amount of outdoor unit inside is about 1.5kg ordinarily. Temperature can remain more refrigerant because refrigerant fills to Accumulator in the winter day. 2. Refer to factory charging refrigerant had registered to Label of outdoor unit. 3. Can get help that decide an addition refrigerant quantity if use refrigerant quantity decision function that use S-Checker.	
6	Turn off the power linked by outdoor unit.	
7	Separate compressor that broke down from outdoor unit. ※ Confirm through manifold gauge whether refrigerant of outdoor unit was reclaimed all necessarily before use welding machine for replace of compressor.	
8	Measure quantity of broke down oil of compressor.	
9	Confirm state and color of compressor oil that broke down.	
10	-	When is judged that oil was polluted, compressor beside (ASTM : more than 3) measures quantity of replace and oil.
11	Decide quantity of oil to pour in addition according to sheep of changing oil of compressors.	
12	Change by new compressor. Add oil according to sheep of oil that pour decided addition before.	
13	Establish again by vacuum mode after connect power.	
14	Execute leakage examination using nitrogen → vacuum work	
15	Add a refrigerant quantity deciding from step 5.	
16	Execute commissioning after open SVC Valve.	

■ Point to consider at compressor exchange

1) Oil color decision (availability of that change compressor that is beside at the same time) of compressor that broke down.

- Decide that exchange all 2 that exchange side that broke down after judge state of oil by below photograph color extracting oil in compressor that broke down in case of exchange compressor.
- ASTM = exchange all 2 more than 3.



- Normalcy Clamping force of bolt that fix compressor is 3 ± 0.5 N-m.

2) Weight of compressor and quantity of oil

- When compressor is shipped at factory, oil of (compressor unit standard) 1100cc was filled up.
- GB052FAVA of weight of compressor including oil is 31.6kg, and GB066FAVA is 35.4kg.
- Add oil to outdoor unit as much as relevant weight if is heavy than weight of compressor that weight of compressor that is changed to locality is changed newly.
- Quantity(kg) of added oil = Weight(kg) of compressor that broke down - Weight(kg) of newly change compressor
- If quantity of calculated addition oil passes over 1kg, quantity of add oil does by 1kg.
- Problem of that is blocked in oil circulation of (remaining oil of compressor that broke down below 0.3kg) compressor if is light more than 0.8kg than weight of compressor that weight of compressor that is changed to locality is changed newly inspects oil circulating system because possibility occurred is high.

3) Checking of oil circulating system

① Oil separator capillary tube or filter of block

- If filter or capillary tube of oil separator lower column is blocked by alien substance etc.., can become cause of compressor breakdown because oil is not collected.
- Can doubt that is blocked if oil separator capillary tube temperature is low after refrigerant outlet temperature of compressor, in driving, rises.

(※ Compressor 2 individual occasion oil separator capillary tubes each other cross.)

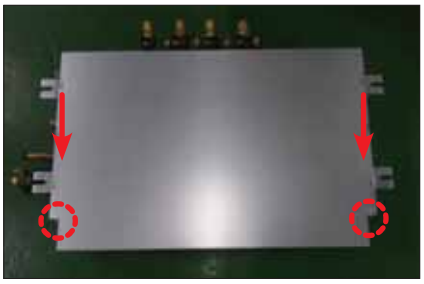
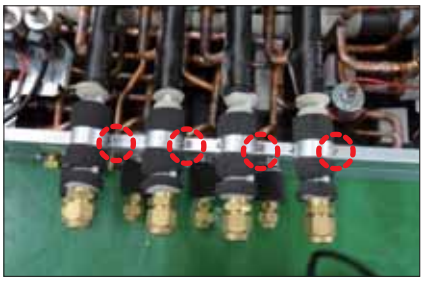
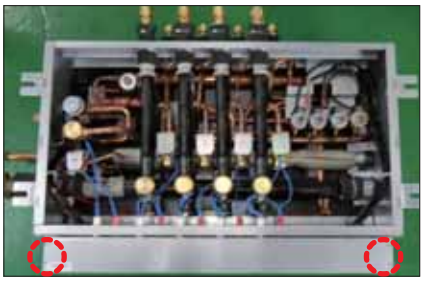
- Confirm that is blocked in stationary state through nitrogen pressurization availability.

② Breakdown of Accum Oil Return Valve (ARV)

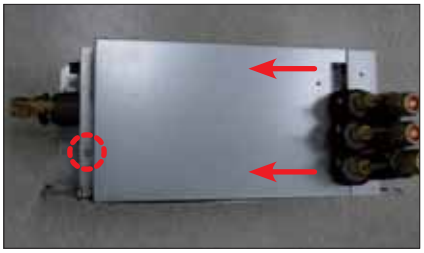
- Damage can become cause of compressor breakdown because oil is not collected if filter of valve front/piping etc.. is blocked with ARV is closed.
- Power connector of ARV confirms that was linked right.
- Extract connector in vacuum mode or confirm whether when insert, action sound of valve happens.

③ When CCH is badness, can become cause of compressor breakdown by oil foaming.

3-4 MCU

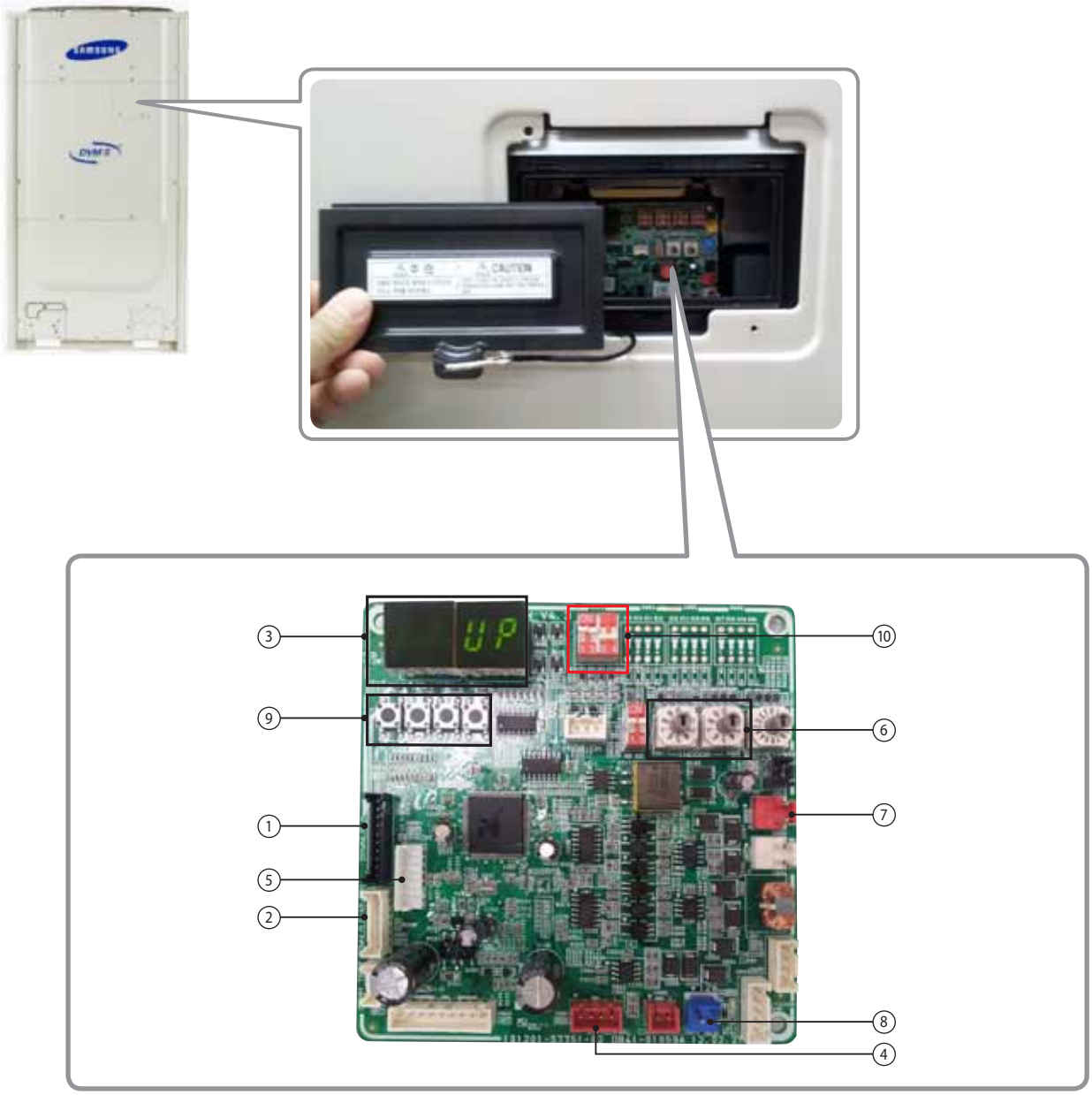
No	Parts	Procedure	Remark
1	Cabinet upper	1) Separate 2 fixing screws from the cabinet. (Use + Serew Driver) 2) Separate cabinet from MCU.	
2	Cabinet front	1) Separate 4 fixing screws from the cabinet. (Use + Serew Driver)	
		2) Separate 4 fixing screws from the brackets. (Use + Serew Driver)	
3	Cabinet front	1) Separate front cabinet from MCU.	
4	Control box cover	1) Separate 2 fixing screws from the control box cover. (Use + Serew Driver)	
		2) Separate control box cover from MCU.	

3-5 EEV KIT

No	Parts	Procedure	Remark
1	Cabinet front	1) Separate 1 fixing screw from EEV kit. (Use + Serew Driver)	
		2) Separate cabinet from EEV kit.	
2	Control parts	1) Separate 2 fixing screws from EEV kit. (Use + Serew Driver)	
		2) Separate control part from EEV kit.	

4. Troubleshooting

4-1 Check-up Window Description



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

4-2. Service Operation

4-2-1 Special Operation

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

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

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

※ Inv1 & Inv2 voltage during discharge mode are displayed alternately.

※ Outdoor Power Off even when the Inverter PCB, Fan PCB is a high DC voltage charging contacts at danger.

※ When you run the repair and replacement of the PCB should work after the power is turned off, the DC voltage discharge.
(Natural discharge until Please wait for at least 15 minutes.)

※ If an error occurs, the discharge mode may not work properly.
In particular, E464 & E364 is power devices can be damaged.
Therefore, the discharge mode, do not use.

■ Commissioning

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

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

■ Refrigerant filling operation

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

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

■ Heating Pump Out

► Operation for the repair of the Individual outdoor unit, the outdoor unit refrigerant emissions to the indoor part.
► Liquid pipe service valve and the gas pipe service valve operation, the operator manually need to close.

► Observe low pressure using View Mode of K4 button if compressor operate.
If low pressure goes down below about 0.2 MPa.g : Immediately lock the gas side service valve, Pump Out operation is shut down.
(Pump out operation shut down : K1 button once more press or K3 button one time press)
► If operation of low pressure goes down below 0.1 MPa.g : Will be stopped automatically for the protection of the compressor.

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

■ Cooling Pump Down

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

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

■ Vacuum Operation

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

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

■ Piping Inspection Operation

► Operation mode to check the status of the piping between the MCU and the indoor unit.

► Heat Pump Model : Outdoor temperature is more than 15℃ / Cooling commissioning start
Outdoor temperature is less than 15℃ / Heating commissioning start

■ Discharge Mode Operation

► Outdoor power is turned off, the Inverter PCB and Fan PCB charging a high DC voltage, so dangerous to touch.
- To replace the PCB, first turn off the power and the begin if DC voltage is discharged.
- If not use the discharge mode, the discharge time of about 15 minutes takes.
- If an error occurs, the discharge mode may not properly run. (Wait until natural discharge.)
- In particular, E 464, E364, power devices may be damaged, therefore do not use the discharge mode.

► Block the Inverter PCB 3-phase relay after connected the power, and through compressor, DC voltage is discharging.
- INV1 and INV2 DC voltage during discharge mode are displayed alternately.
- Discharge mode Display (Rotate the three page display, as shown below.)
'K' 'A' ' ' ' '→DC Link Volt1 (For example, 120[V] 0 1 2 0 display)
→DCLinkVolt2 (For example, 120[V] 0 1 2 0 display)→'K' 'A' ' ' ' '→DC Link Volt1 …

► Discharge is complete, the power of the Inverter PCB and Fan PCB is being blocked, communication function is blocked, E206 will occur.

► If want operation again after complete discharge mode : Restart after K3 key to Reset or Power Reset.

■ Forced defrost operation

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

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

■ Forced oil recovery operation

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

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

4-2-2 DVM S Models EEPROM Code Table

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

4-2-3 Number Display Method (Outdoor Unit, MCU, Cable remote control, wall-mount, etc.)

■ How to Display Integrated Error Code

► Meanings of First Alphabetical Character / Number of Error Code

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

► Order of Error Display

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

■ Diagnosis and Adjustment (Error Code)

► Error code related indoor unit

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

■ Diagnosis and Adjustment (Error Code)

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

Error mode	Cause
E-201	Communication error between indoor and outdoor units (installation number setting error, repeated indoor unit address, indoor unit communication cable error)
E-202	Communication error between indoor and outdoor units (Communication error on all indoor unit, outdoor unit communication cable error)
E-203	Communication error between main and sub outdoor units
E-205	Communication error on all PBA within the outdoor unit C-Box, communication cable error
E-206	E206-C001: HUB PBA communication error / E206-C002: FAN PBA communication errorE206-C003: INV1 PBA communication error / E206-C004: INV2 PBA communication error
E-211	When single indoor unit uses 2 MCU ports that are not in series.
E-212	If the rotary switch (on the MCU) for address setting of the indoor unit has 3 or more of the same address
E-213	When total number of indoor units assigned to MCU is same as actual number of installed indoor units but there is indoor unit that is not installed even though it is assigned on MCU
E-214	When number of MCU is not set correctly on the outdoor unit or when two or more MCU was installed some of them have the same address
E-215	When two different MCU's have same address value on the rotary switch
E-216	When indoor unit is not installed to a MCU port but the switch on the port is set to On.
E-217	hen indoor unit is connected to a MCU port but indoor unit is assigned to a MCU and the switch on the port is set to Off
E-218	When there's at least one or more actual number of indoor unit connection compared to number of indoor units assigned to MCU
E-219	Error on temperature sensor located on MCU intercooler inlet (Short or Open)
E-220	Error on temperature sensor located on MCU intercooler outlet (Short or Open)
E-221	Error on outdoor temperature sensor of outdoor unit (Short or open)
E-231	Error on COND OUT temperature sensor of main outdoor unit (Short or Open)
E-241	COND OUT sensor is detached
E-251	Error on discharge temperature sensor of compressor 1 (Short or Open)
E-257	Error on discharge temperature sensor of compressor 2 (Short or Open)
E-262	Discharge temperature sensor of compressor 1 is detached from the sensor holder on the pipe
E-263	Discharge temperature sensor of compressor 2 is detached from the sensor holder on the pipe
E-266	Top sensor of compressor 1 is detached
E-267	Top sensor of compressor 2 is detached
E-269	Suction temperature sensor is detached from the sensor holder on the pipe
E-276	Error on top sensor of compressor 1 (Short or Open)
E-277	Error on top sensor of compressor 2 (Short or Open)
E-291	Refrigerant leakage or error on high pressure sensor (Short or Open)
E-296	Refrigerant leakage or error on low pressure sensor (Short or Open)
E-308	Error on suction temperature sensor (Short or Open)

■ Diagnosis and Adjustment (Error Code)

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

Error mode	Cause
E-311	Error on temperature sensor of double layer pipe/liquid pipe(sub heat exchanger) (Short or Open)
E-321	Error on EVI (ESC) IN temperature sensor (Short or Open)
E-322	Error on EVI (ESC) OUT temperature sensor (Short or Open)
E-323	Error on suction sensor 2 (Short or Open)
E-346	Error due to operation failure of Fan2
E-347	Motor wire of Fan2 is not connected
E-348	Lock error on Fan2 of outdoor unit
E-353	Error due to overheated motor of outdoor unit's Fan2
E-355	Error due to overheated IPM of Fan2
E-361	Error due to operation failure of inverter compressor 2
E-364	Error due to over-current of inverter compressor 2
E-365	V-limit error of inverter compressor 2
E-366	Error due to over voltage /low voltage of inverter PBA2
E-367	Error due to unconnected wire of compressor 2
E-368	Output current sensor error of inverter PBA2
E-369	DC voltage sensor error of inverter PBA2
E-374	Heat sink temperature sensor error of inverter PBA2
E-378	Error due to overcurrent of Fan2
E-385	Error due to input current of inverter 2
E-386	Over-voltage/low-voltage error of Fan2
E-387	Hall IC connection error of Fan2
E-389	V-limit error on Fan2 of compressor
E-393	Output current sensor error of Fan2
E-396	DC voltage sensor error of Fan2
E-399	Heat sink temperature sensor error of Fan2
E-400	Error due to overheat caused by contact failure on IPM of Inverter PBA2
E-407	Compressor operation stop due to high pressure protection control
E-410	Compressor operation stop due to low pressure protection control or refrigerant leakage
E-416	Compressor operation stop due to discharge temperature protection control
E-425	Phase reversal or phase failure (3Ø outdoor unit wiring, R-S-T-N), connection error on 3 phase input
E-428	Compressor operation stop due abnormal compression ratio
E-438	EVI (ESC) EEV leakage or internal leakage of intercooler or incorrect connector insertion of EVI (ESC) EEV
E-439	Error due to refrigerant leakage
E-440	Heating mode restriction due to high air temperature
E-441	Cooling mode restriction due to low air temperature
E-442	Refrigerant charing restriction in heating mode when air temperature is over 15 ℃
E-443	Operation prohibited due to low pressure
E-445	CCH is deatched
E-446	Error due to operation failure of Fan1
E-447	Motor wire of Fan1 is not connected
E-448	Lock error on Fan1
E-452	Error due to ZPC detection circuit problem or power failure
E-453	Error due to overheated motor of outdoor unit's Fan1

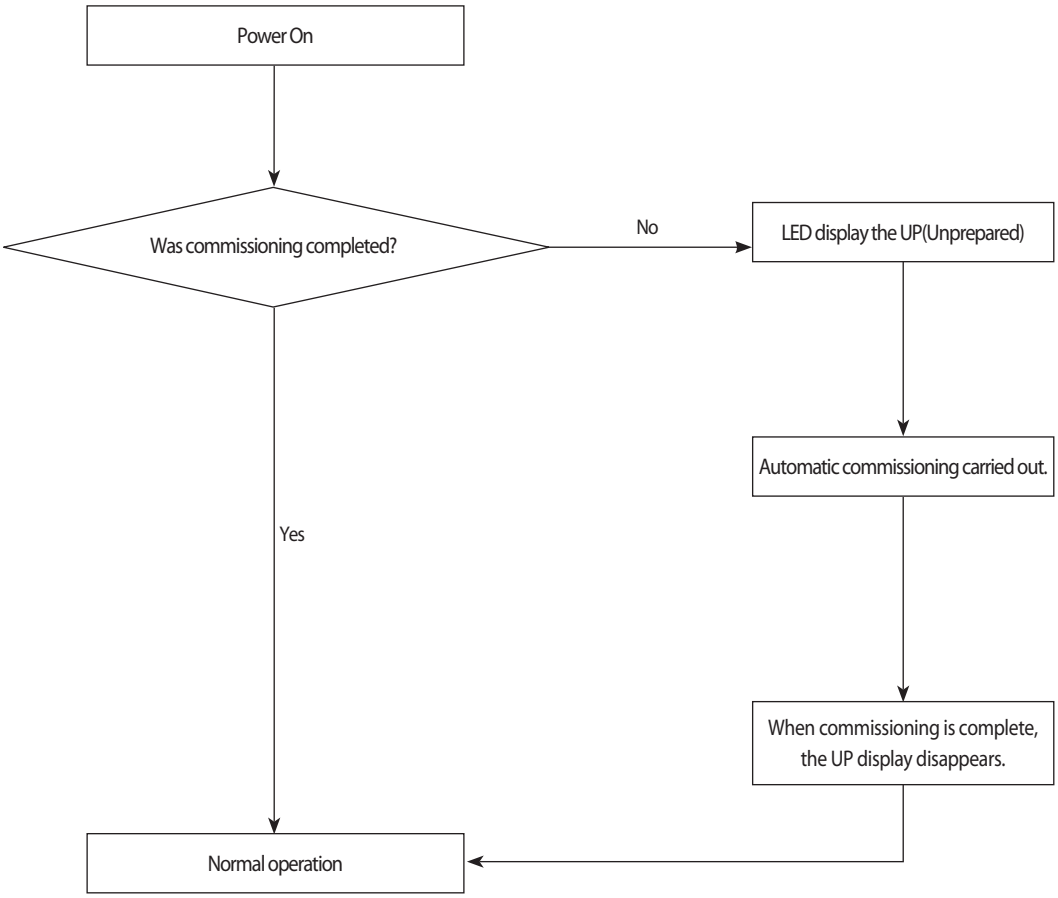
■ Diagnosis and Adjustment (Error Code)

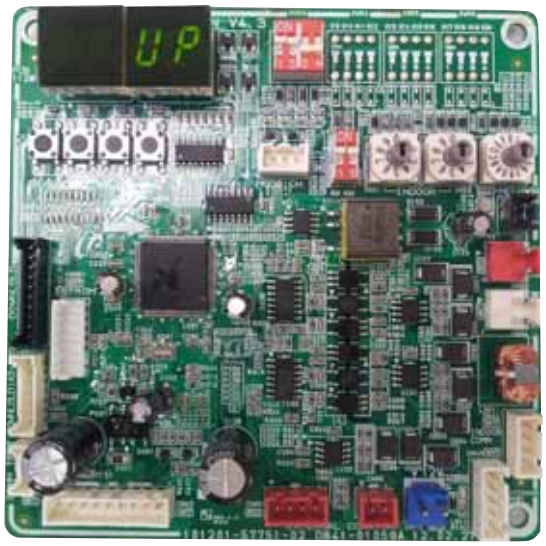
► Error code related to the Communications / Settings / HW (cont.)

Error mode	Cause
E-455	Error due to overheated IPM of Fan1
E-461	Error due to operation failure of inverter compressor 1
E-462	Compressor stop due to full current control or error due to low current on CT2
E-464	Error due to over-current of inverter compressor 1
E-465	V-limit error of inverter compressor 1
E-466	Error due to over voltage /low voltage of inveter PBA1
E-467	Error due to unconnected wire of compressor 1
E-468	Output current sensor error of inverter PBA1
E-469	DC voltage sensor error of inver PBA1
E-474	Heat sink temperature sensor error of inverter PBA1
E-478	Error due to overcurrent of Fan1
E-485	Error due to input current of inverter 1
E-486	Error due to over voltage/low voltage of Fan
E-487	Hall IC error of Fan1
E-489	V-limit error on Fan1 of compressor
E-493	Output current sensor error of Fan1
E-496	DC voltage sensor error of Fan1
E-499	Heat sink temperature sensor error of Fan1
E-500	Error due to overheat caused by contact failure on IPM of Inverter PBA1
E-503	Error due to alert the user to check if the service valve is closed
E-504	Error due to self diagnosis of compressor operation
E-505	Error due to self diagnosis of high pressure sensor
E-506	Error due to self diagnosis of low pressure sensor
E-560	Outdoor unit's option switch setting error (when iinappropriate option switch is on)
E-563	Error due to module installation of indoor unit with old version (Micom version needs to be checked)
E-573	Error due to using single type outdoor unit in a module installation
E-702	Error due to closed EEV of indoor unit (1st detection)
E-703	Error due to opened EEV of indoor unit (1st detection)
UP	Trial operation incompleted (UnPrepared) - It will be cleared when trial operation was executed for 1 hour or when automatic inspection is completed

4-3 Appropriate Measures for Different Symptom

4-3-1 Outdoor Unit Operation Flow





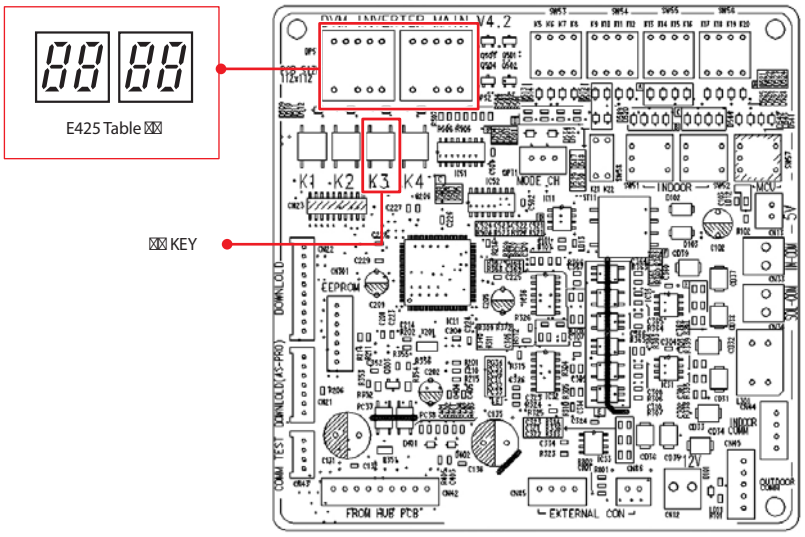
Commissioning if it is not running - UP is displayed

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

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

■ Reversed Phase/No Phase Check (Outdoor Unit with 3 Phase power) – Display E425 for Problem

1. When the power is on, check the status of the power from the inverter.
   Three-phase L1(R)-L2(S)-L3(T) order, regardless of the power connection on the inverter does not phase power (no phase) can occur.
   In this case, E425 or E466 (E366) is displayed, and then air conditioner will then maintain normal conditions.
   However) N phase must be connected properly.



1) Check the voltage for L1 (R)-L2 (S) phase/L1 (R)-L3 (T) phase/L2 (S)-L3 (T) phase.
2) If there is any terminal without normal voltage, then check the power outside the air conditioner and take the appropriate measures.
3) If the 3-phase voltage is normal, then use the 3-phase tester to display the phase of the power cable.
   Change the power cable connection if reversed phase is displayed.
4) Take the above measures, press the reset key (K3), and then check the power once more.
5) Check the EMI PCB Fuse connection and wiring.
6) If the same problem occurs after another check, check the Inverter PCB.

⚠ 주의

● In case of wiring error (N-phase is changed with one of R, S and T) with the N-phase, will operate the power protection function, display E425 or stop the power. This is not a PCB power defect in this case, before PCB replacement, please check the power on.

■ Initial Tracking (Communication Check-up) - Display E201 for Problem

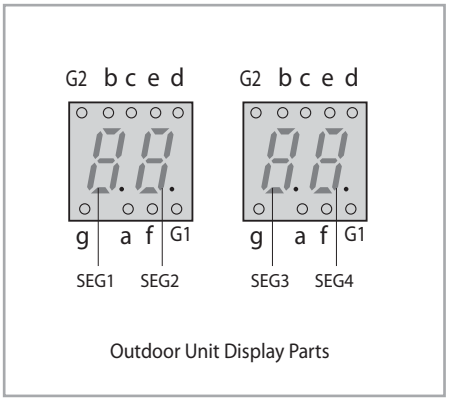
1. For the display module of the outdoor unit, there are differences in the contents displayed depending on whether the relevant outdoor unit is a master unit or a sub unit.

   1) Master Unit

   - The outdoor unit Micom attempts communication with the indoor unit connected to the communication cable (F1/F2) when the power is turned on.
   - The two displaying parts on the left show the main address of the indoor units with which the outdoor units are trying to communicate in order. (Ex : 0, 1, 2, ~ , 63)
   - The two displayed parts on the right show the main address of the indoor units that succeeded in communication with the outdoor units. (Ex : 0, 1, 2, ~ , 63)
   - If the number of indoor units set by the outdoor unit is not in accordance with the number of indoor units that succeeded with communication, then the four displaying parts will display E201.

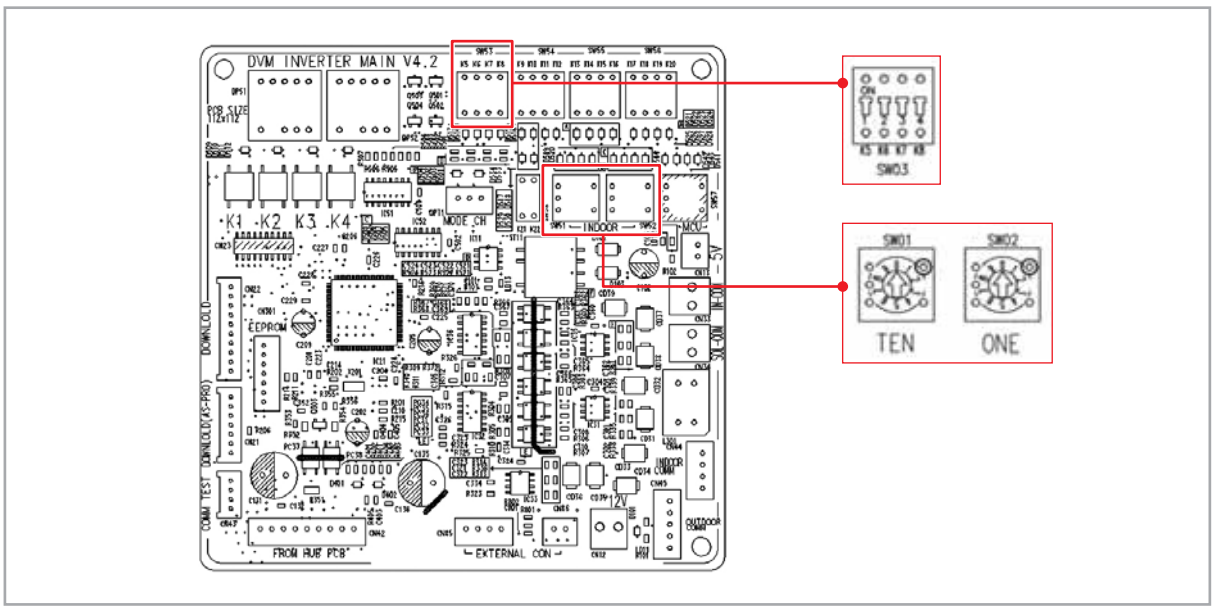
   2) Sub(Slave) Unit

   - Displays the Micom address of the main PBA inside the sub unit connected to the Master Unit in order (Ex : C9, CA, CB, CC, CD, CE, DF)



Outdoor Unit Display Parts

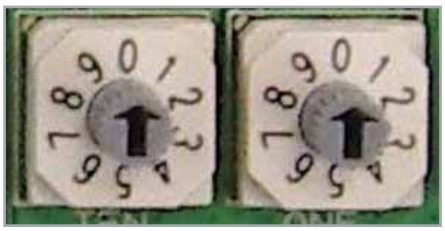
2. The number of the indoor Units Connected to the outdoor unit can be configured by using the indoor unit installation quantity setup switch.



■ Indoor Unit Installation Quantity Setup Switch

The following is an example of how to use the switch according to the number of indoor unit installations. The maximum number of possible indoor unit connections is 64.

3Units Connected		17Units Connected		31Units Connected		64Units Connected	
10's Digit	1's Digit	10's Digit	1's Digit	10's Digit	1's Digit	10's Digit	1's Digit
0	3	1	7	3	1	6	4


10's Digit (0~9)

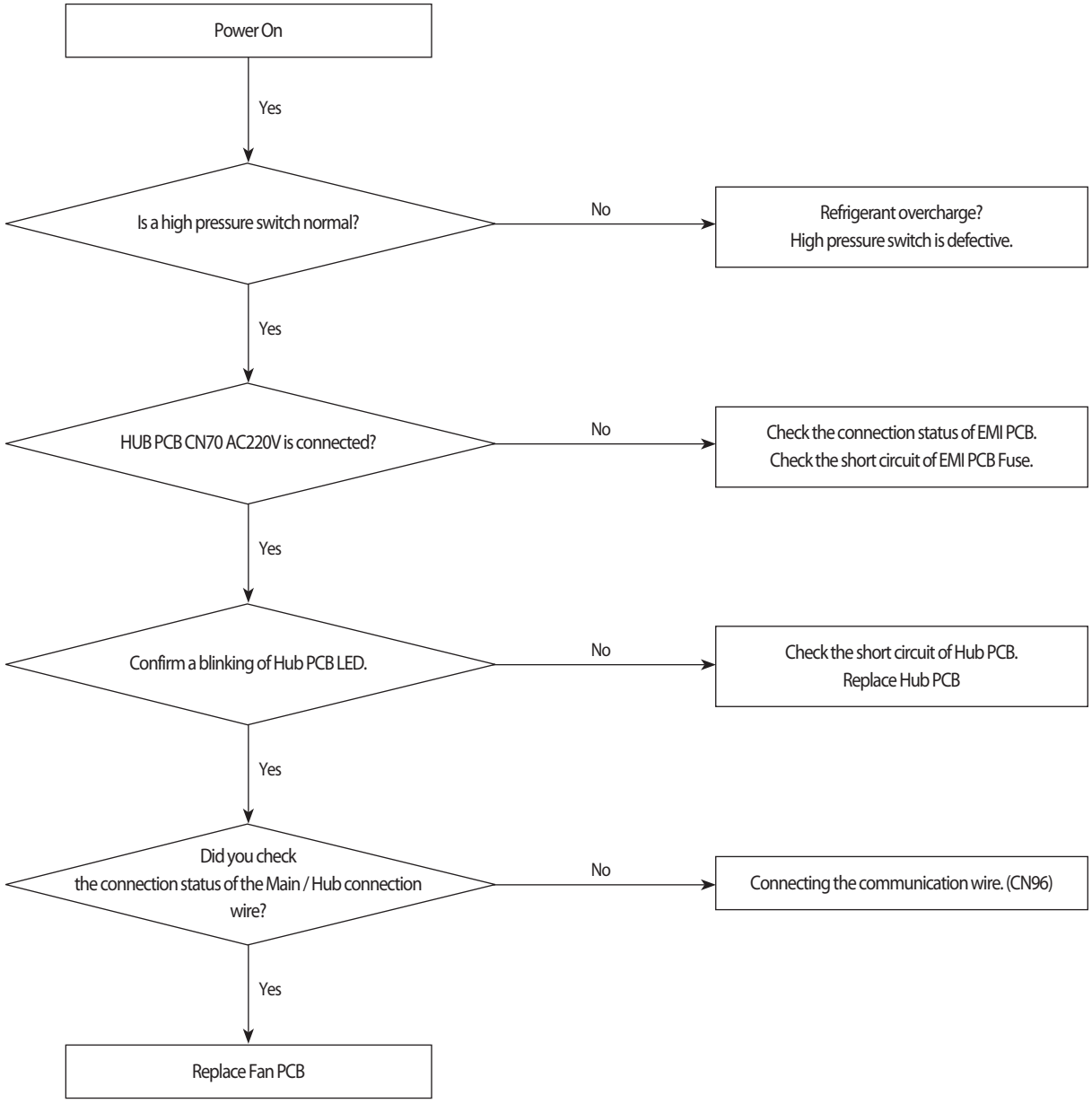
1's Digit (0~9)

3. If the quantity of the indoor units configured with the indoor unit installation quantity setup switch does not match the quantity of the indoor units found during the tracking process, E201 and U200 will be displayed in order on the display module..

4-3-2 Main PCB has no power phenomenon

Outdoor unit display	Main PCB has no power phenomenon (7-seg does not blink)
Judgment Method	Hub PCB power and connection wire to detect.
Cause of problem	· HUB PCB connector wire defects and the connection is not. · Main PCB defective. · Hub PCB defective. · High pressure switch operation

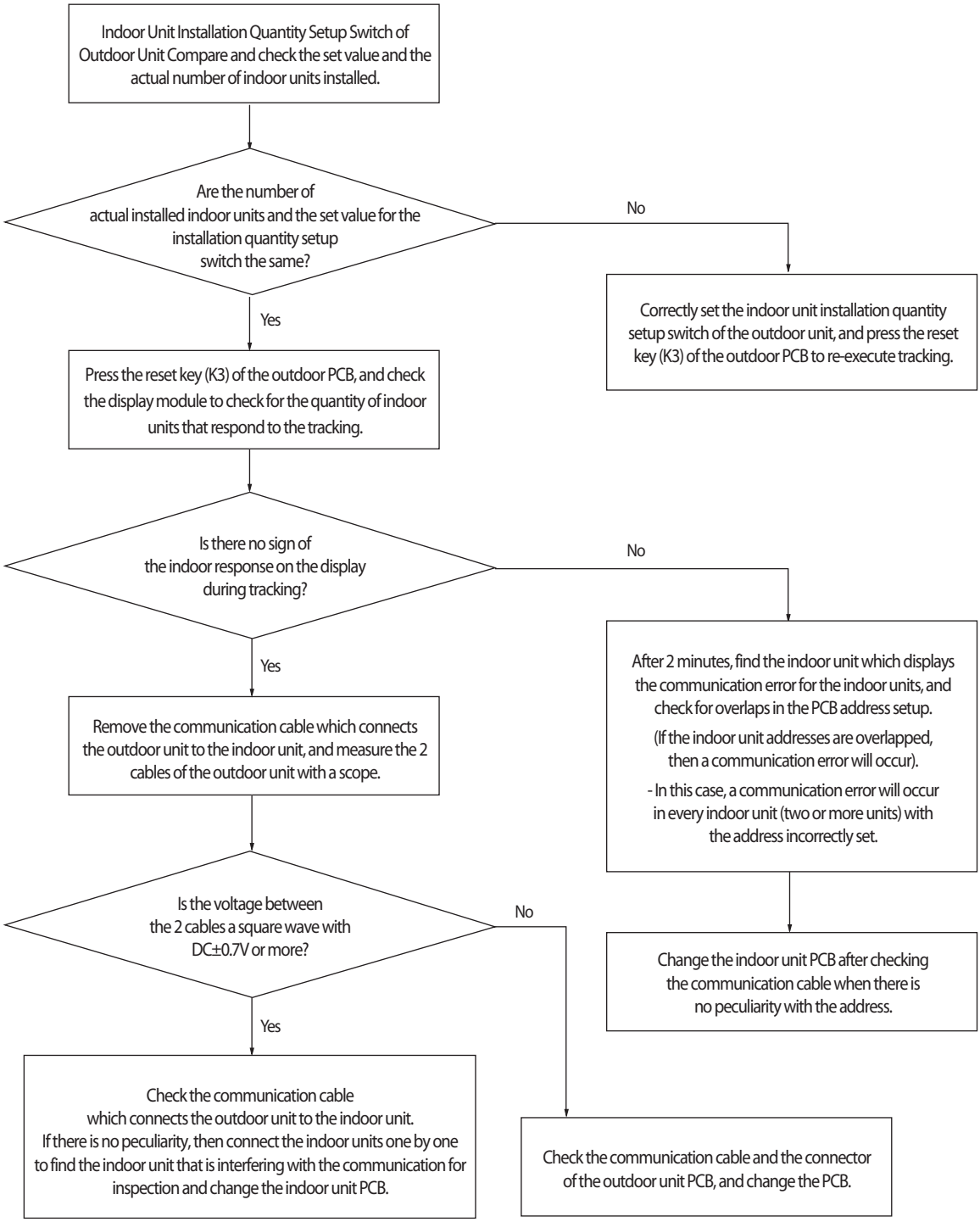
1. Cause of problem



4-3-3 Communication Error between Indoor and Outdoor Units during Tracking

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

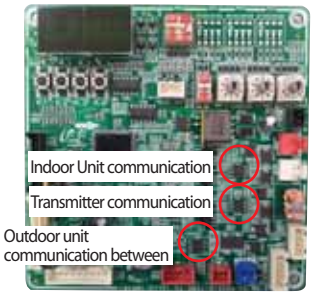
1. Cause of problem



※ Essential Requirements before PCB Changes in Case of Communication Error Occurrence

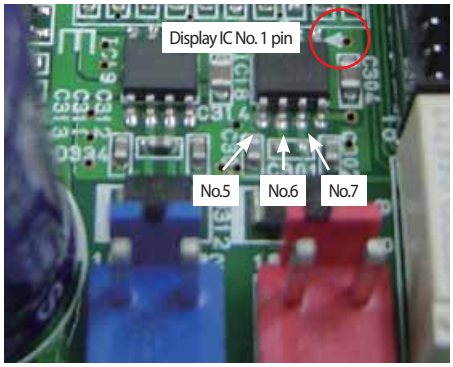
1. Find the communication IC near the communication terminal.
   - Indoor Unit
   - Above Red Connector : Communication IC between indoor and outdoor units.
   - Above Blue Connector : Communication IC for cable remote control.
   - Outdoor Unit
   - When there is module communication as in PLUS II and PLUS Ⅲ –
     Above Red Connector of Main Unit : Communication IC between indoor and outdoor units.
   - When there is no module communication as in PLUS II and PLUS Ⅲ –
     Above Yellow Connector of Each Unit : Communication IC between outdoor units.
   - Other Outdoor Unit- Above Communication Connector : Communication IC between indoor and outdoor unit.

Indoor Unit



Outdoor Unit

2. Measure the resistance of the communication IC.
   - Measurement Method : Measure the No.5 - No.6 Pin resistance
     Measure the No.5 - No.7 Pin resistance
     Measure the No.5 - No.8 Pin resistance



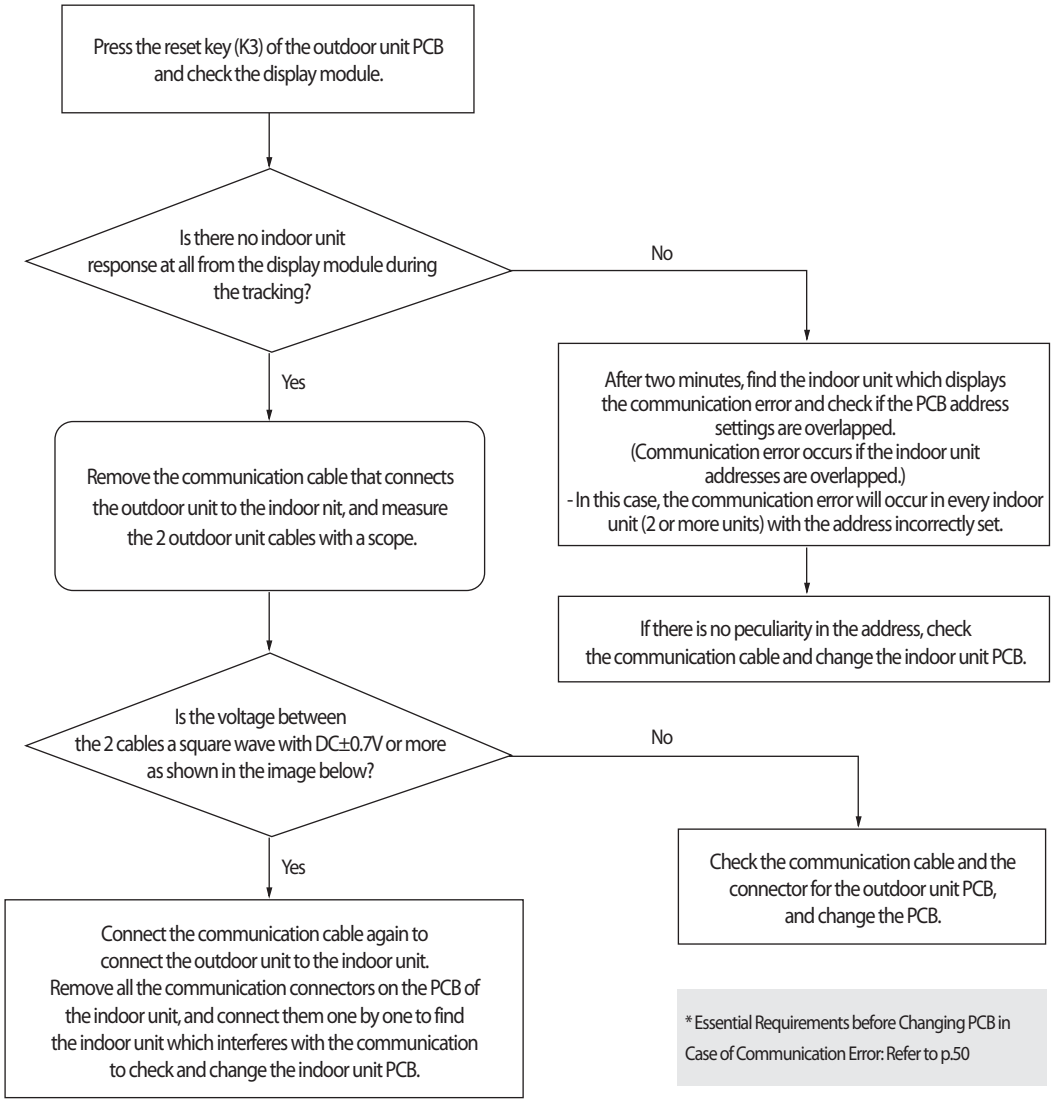
3. Normal and defective judgment is tested for communication IC by using measured resistance.
   - Judging as Normal
   - Each resistance value should be measured in tens of kΩ~to hundreds of kΩ.
   - Difference between the two resistance values should be of some number of kΩ.

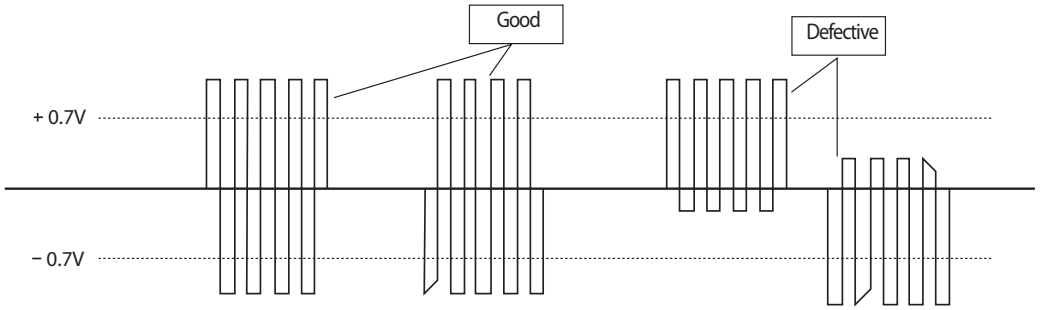
   - Judging as defective
   - One or both are low with tens of Ω
   - One or both of them is open

4-3-4 Communication Error between Indoor and Outdoor Units after Tracking

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

1. Cause of problem

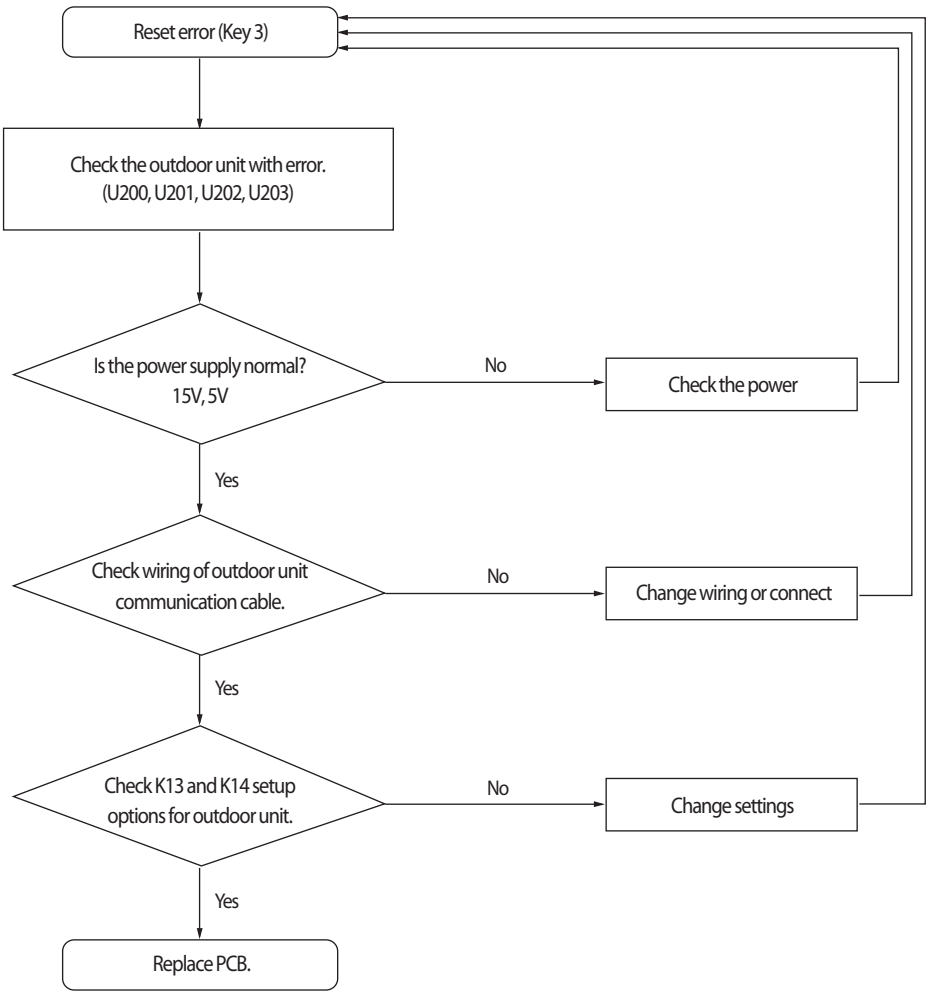




4-3-5 Communication error between main and sub Unit of outdoor unit or between outdoor units

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

1. Cause of problem

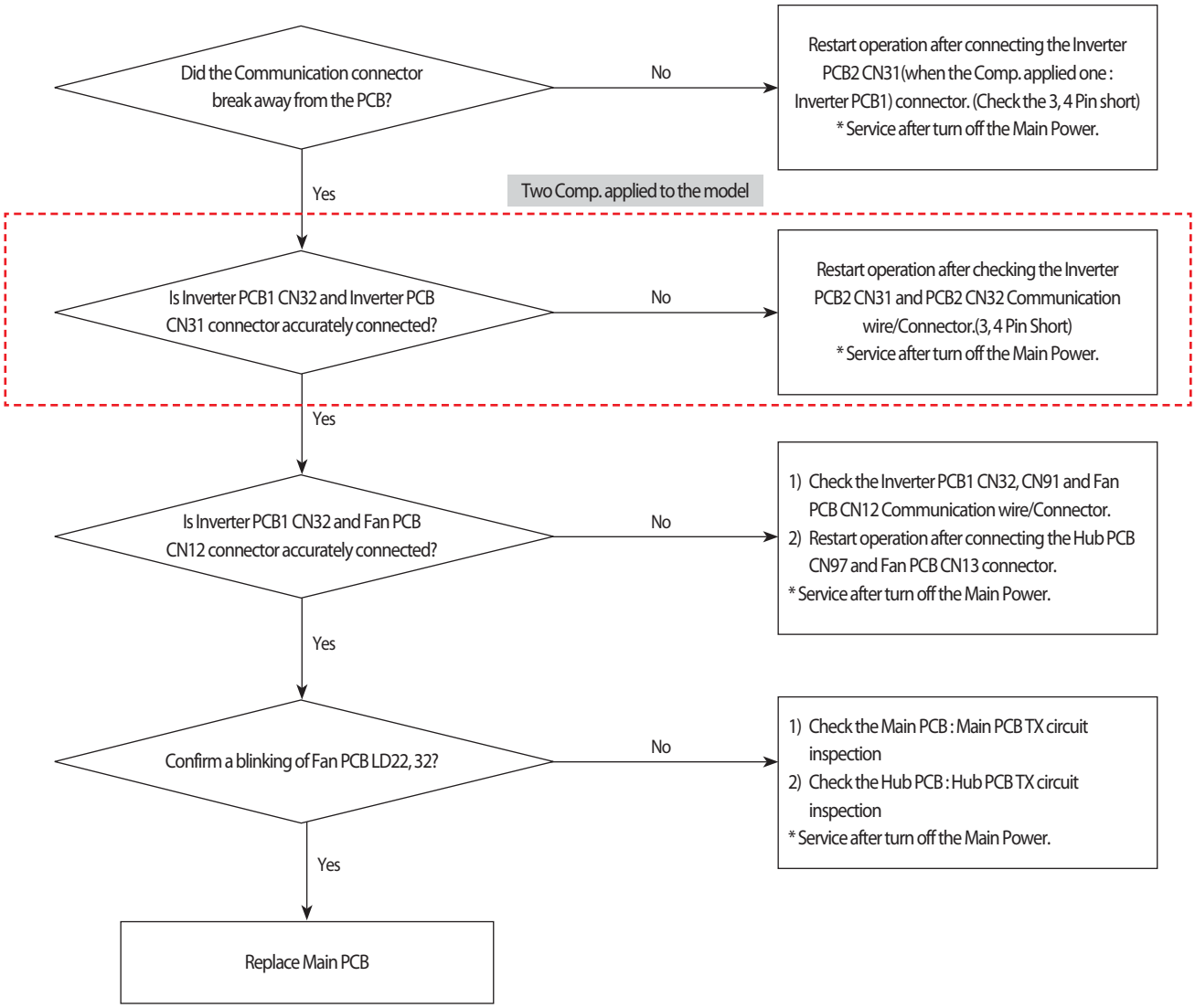


Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.59

4-3-6 Internal Communication error of the Outdoor Unit C-Box

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

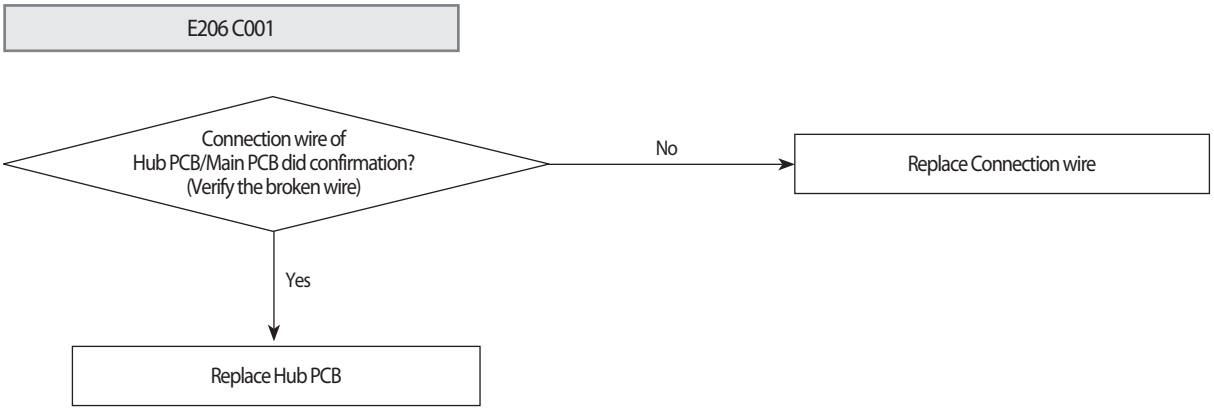
1. Cause of problem

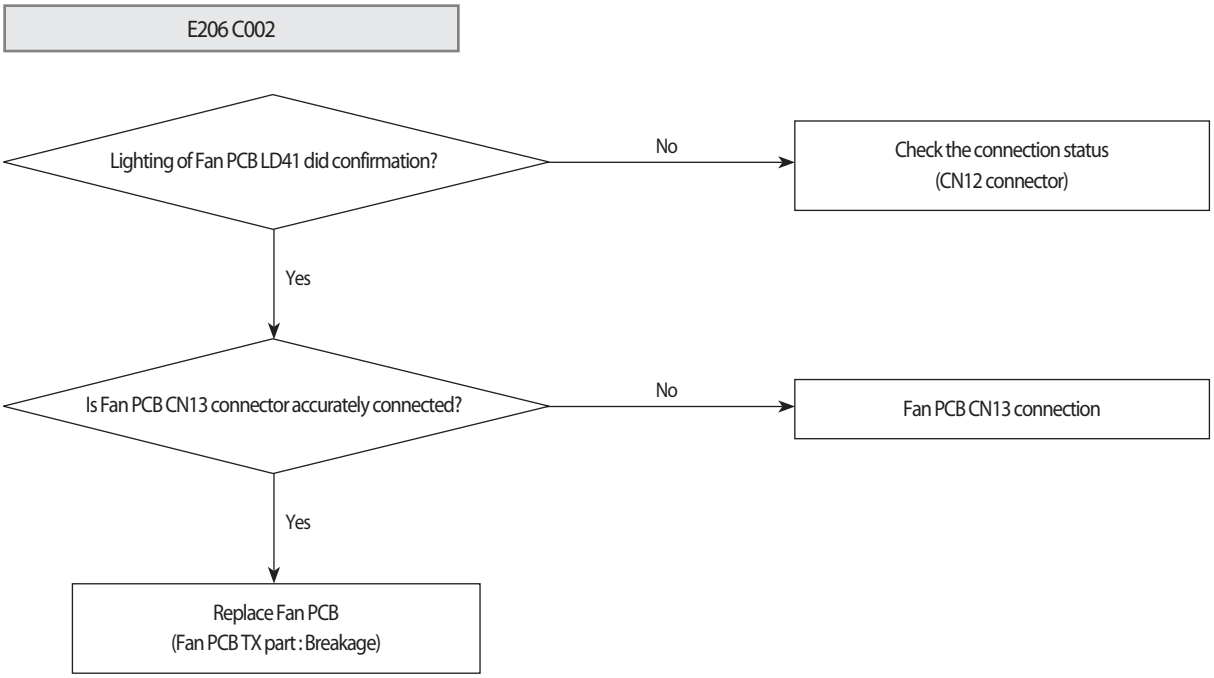


4-3-7 Internal PCB Communication error of the Outdoor Unit C-Box

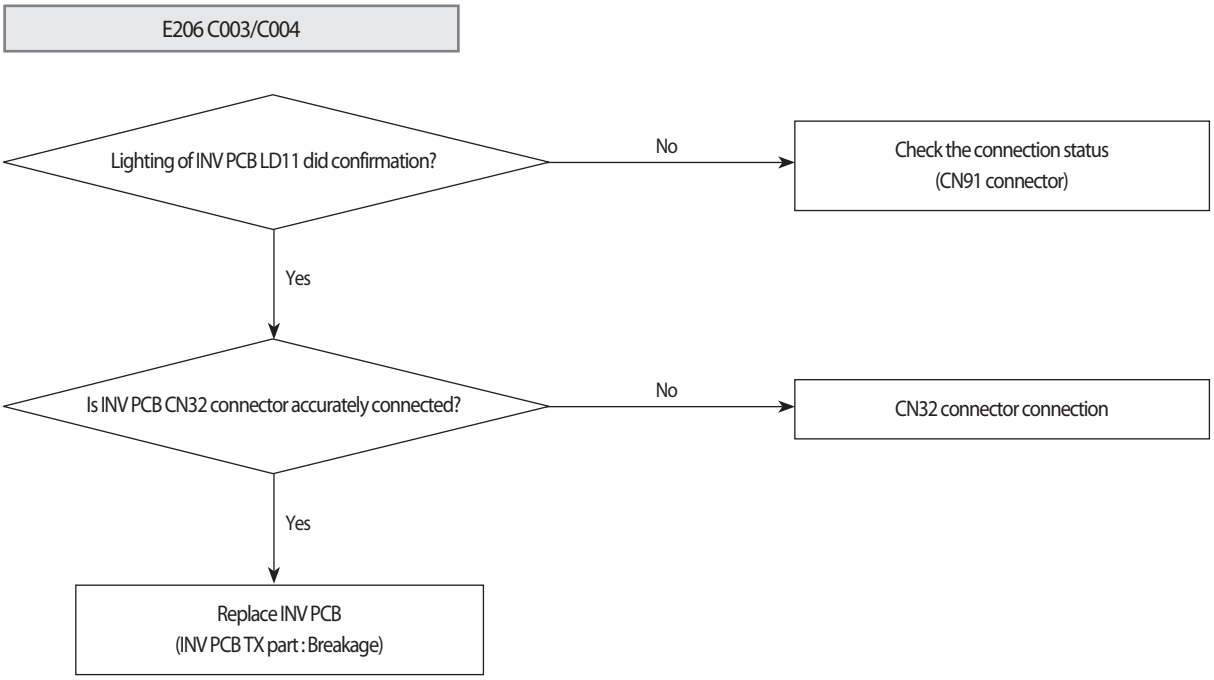
Outdoor unit display	E206
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ×(Filter) ×(Defrost)
Judgment Method	· PCB does not respond to the invoked Main PCB
Cause of problem	· C-Box internal Inverter PCB, Fan PCB, Hub PCB defective

1. Cause of problem





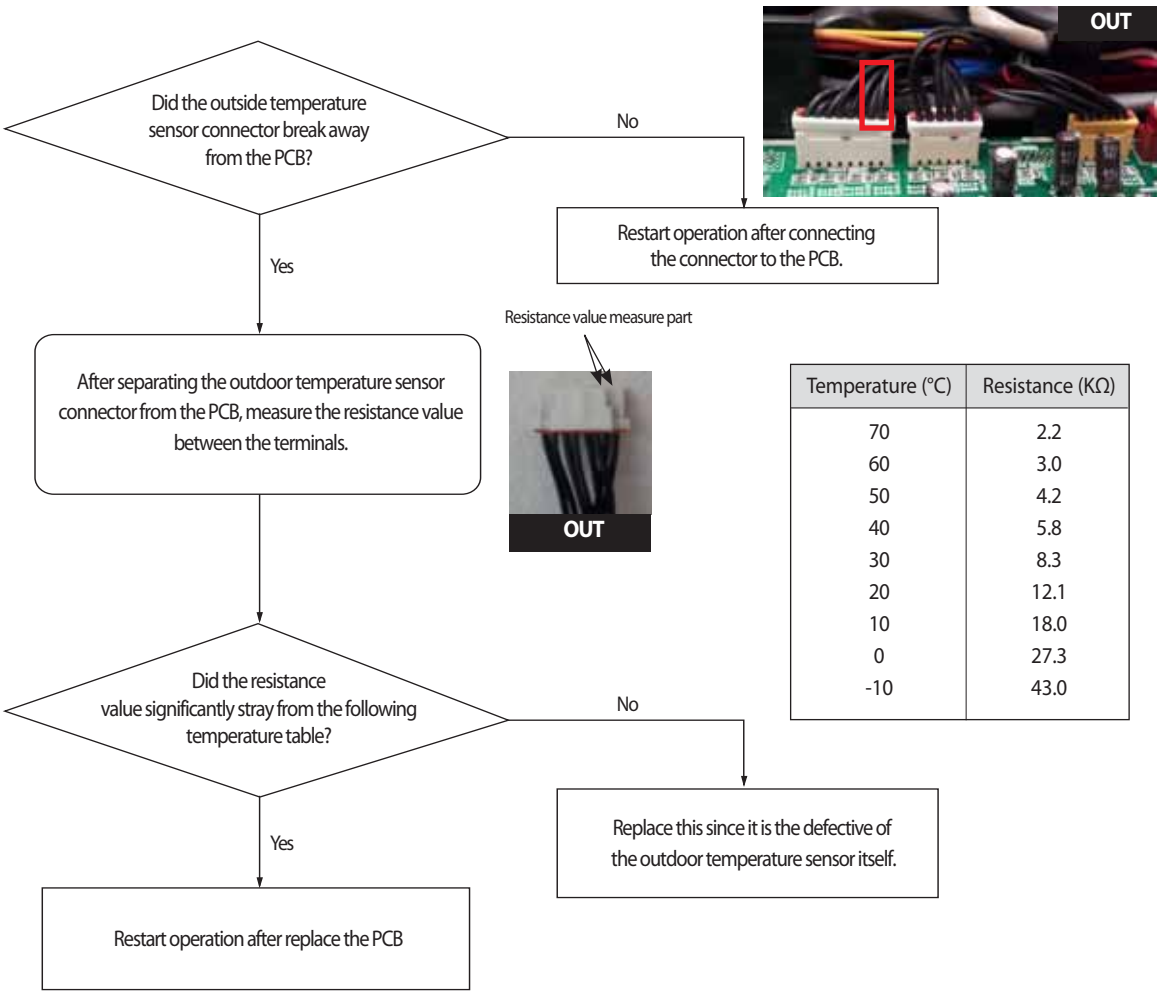
Internal PCB Communication error of the Outdoor Unit C-Box (cont.)



4-3-8 Outdoor Temperature Sensor Error

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

1. Cause of problem

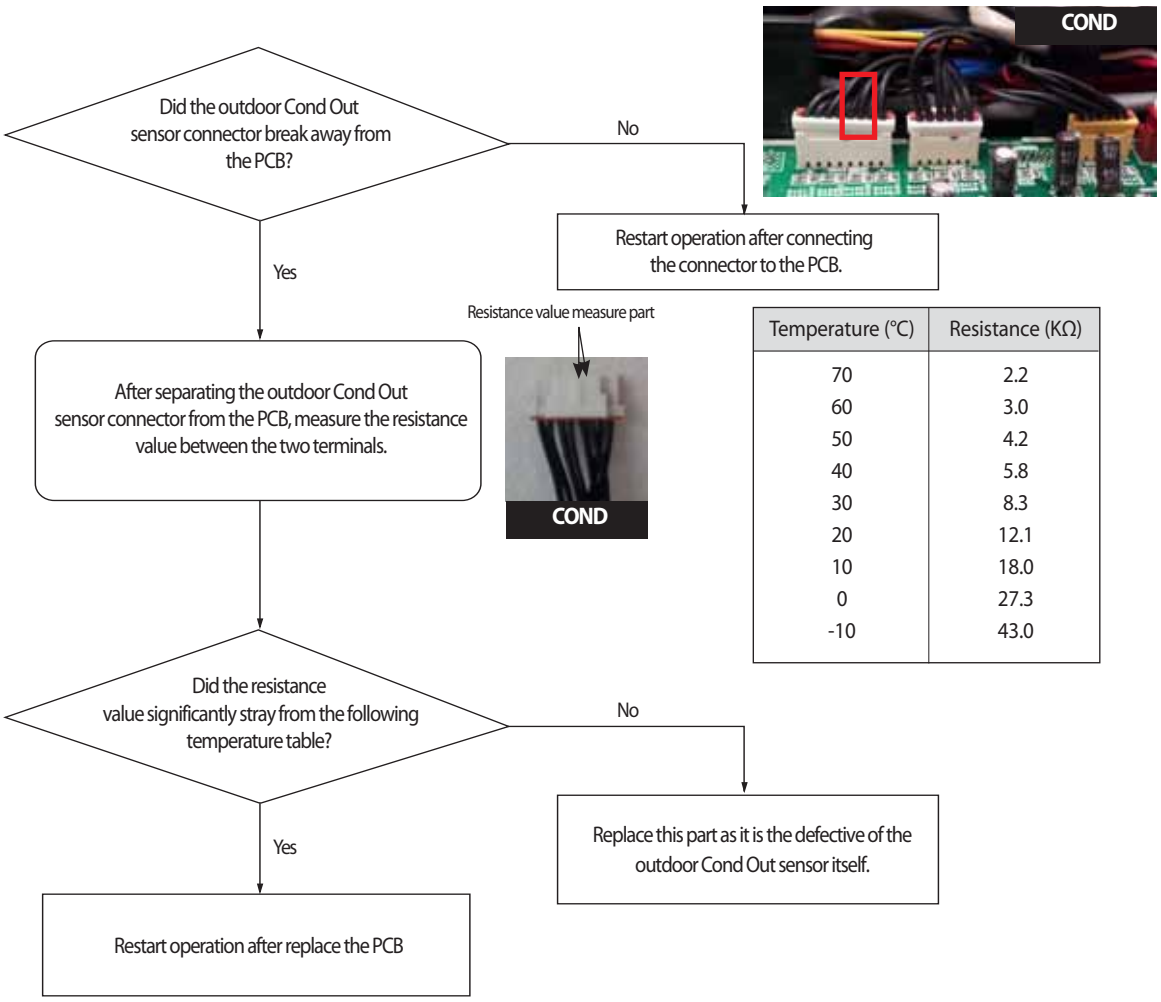


Temperature (°C)	Resistance (KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

4-3-9 Cond Out Temperature Sensor Error (Open/Short)

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

1. Cause of problem



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

4-3-10 Outdoor Cond Out sensor breakaway error

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

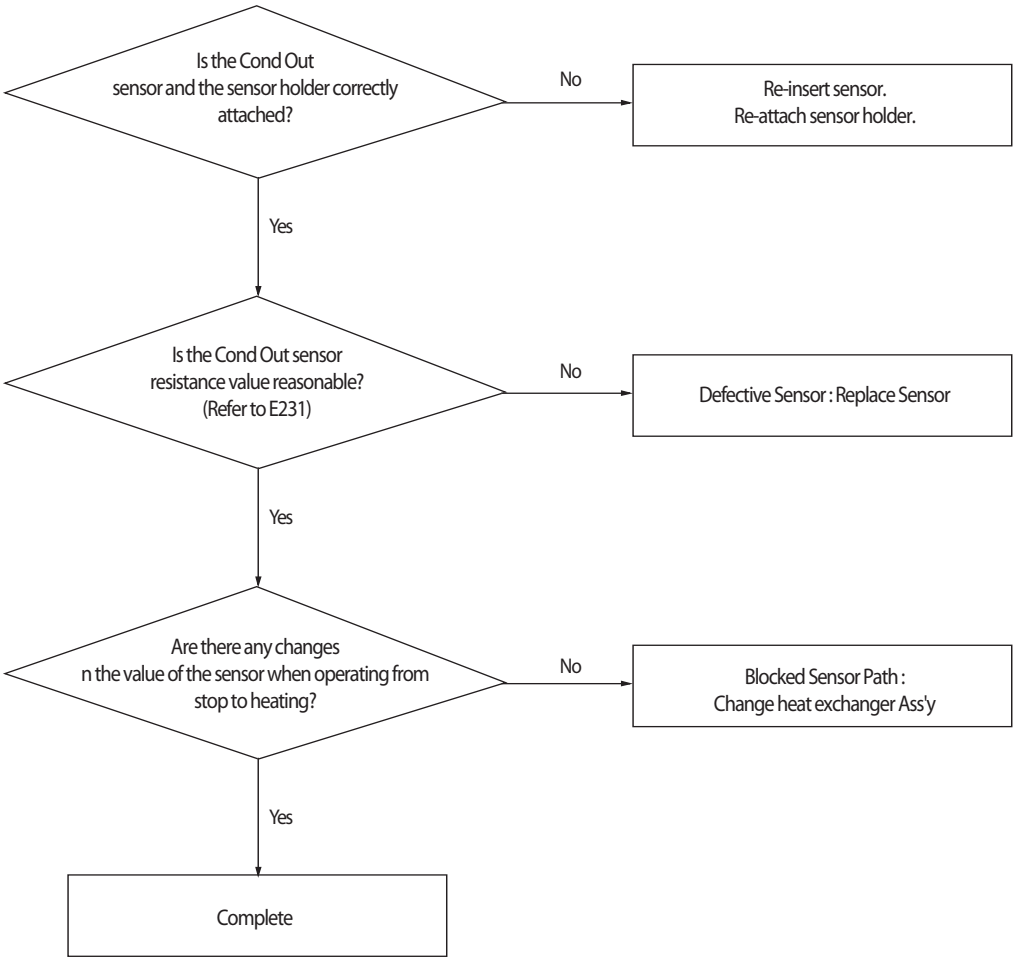
1. Judgment Method

   1) No inspection for Cooling operation.

   2) For heating operation (Each of the conditions below needs to be satisfied for more than 20 minutes.)

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

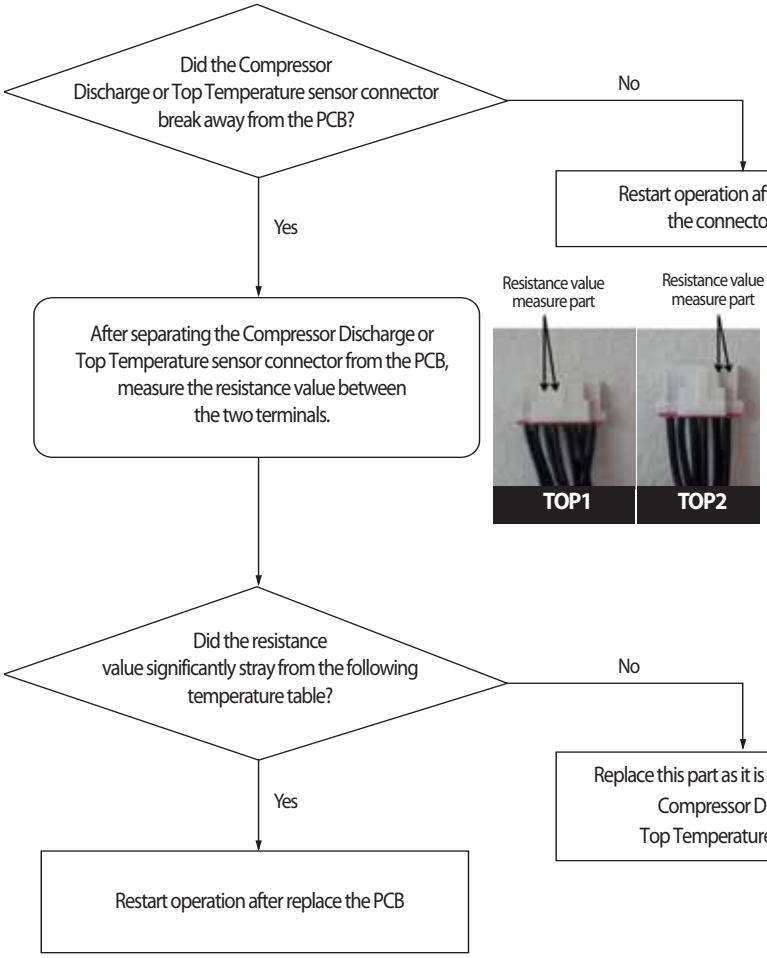
2. Cause of problem



4-3-11 Compressor Discharge or Top 1/2 Temperature sensor error

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

1. Cause of problem

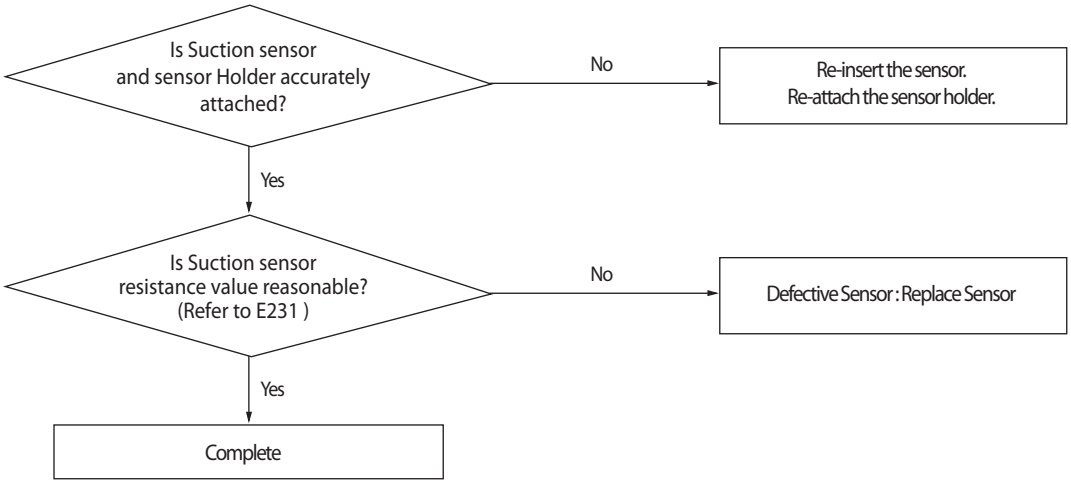


Temperature (°C)	Resistance (KΩ)
130	8.9
120	11.2
100	18.5
80	32.0
60	59.0
25	200.0
20	242.0
10	362.0
0	553.0

4-3-12 E269 : Suction Temperature sensor breakaway error

Outdoor unit display	E269
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· If the suction temperature right before operating the Comp, when the operating order is highest, is set at Tsuc, ini, and the suction temperature of the current Comp is set at Tsuc, real, it is considered to have an error if the condition of Tsuc, real < Tsuc,ini − 2°C is maintained for 30 minutes.
Cause of problem	· Suction temperature sensor breakaway/defective.

1. Cause of problem

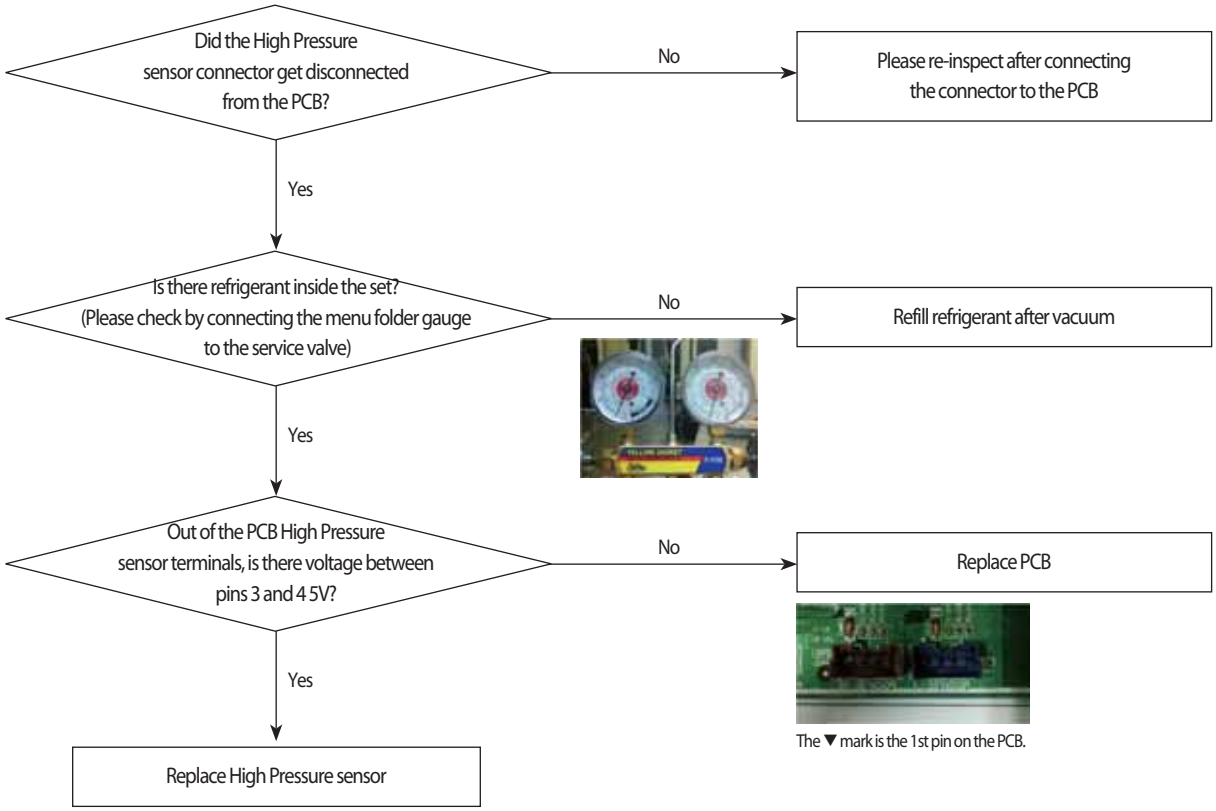


4-3-13 High Pressure sensor error (Open/Short)

Outdoor unit display	E291
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· Refer to the judgment method below.
Cause of problem	· Disconnection or breakdown of relevant sensor.

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

2. Inspection Method

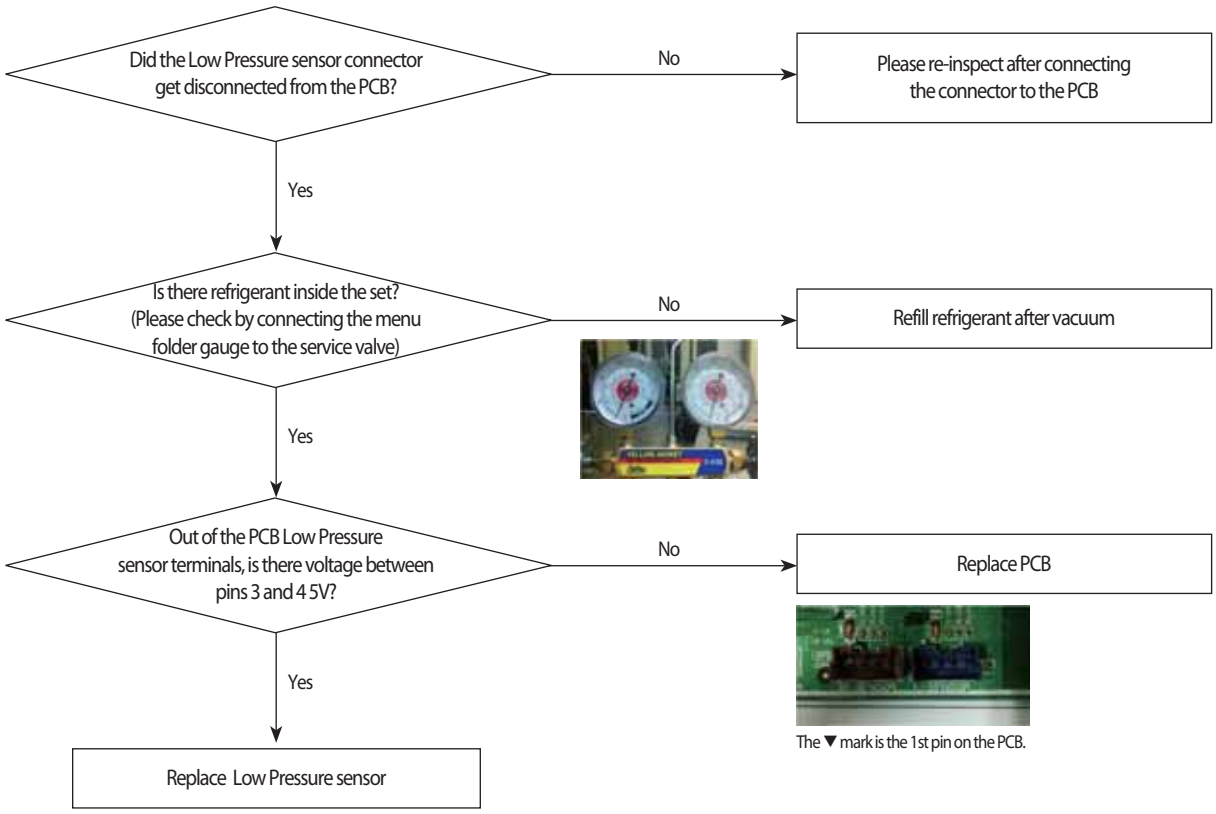


4-3-14 Low Pressure sensor error (Open/Short)

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

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

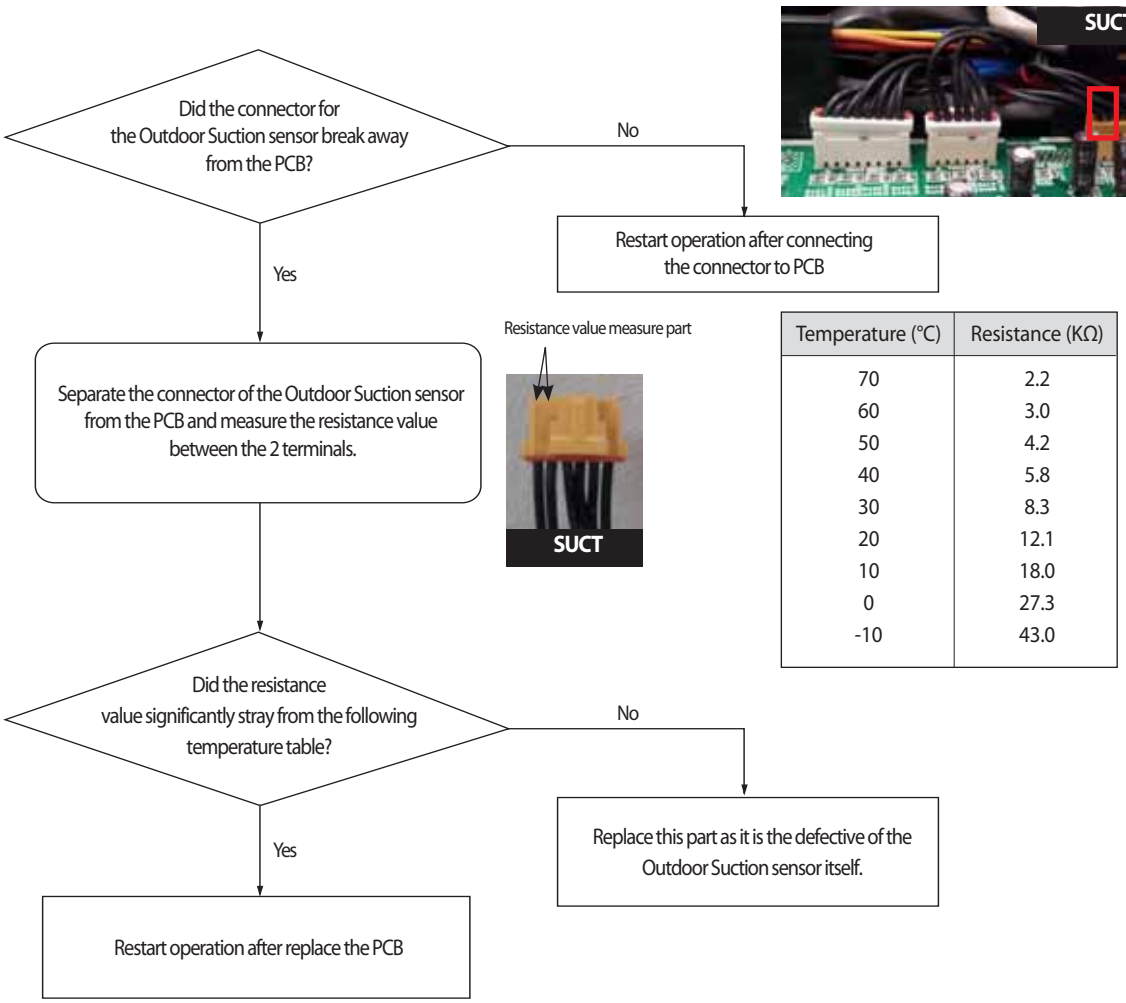
2. Inspection Method



4-3-15 Suction Temperature sensor error (Open/Short)

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

1. Cause of problem

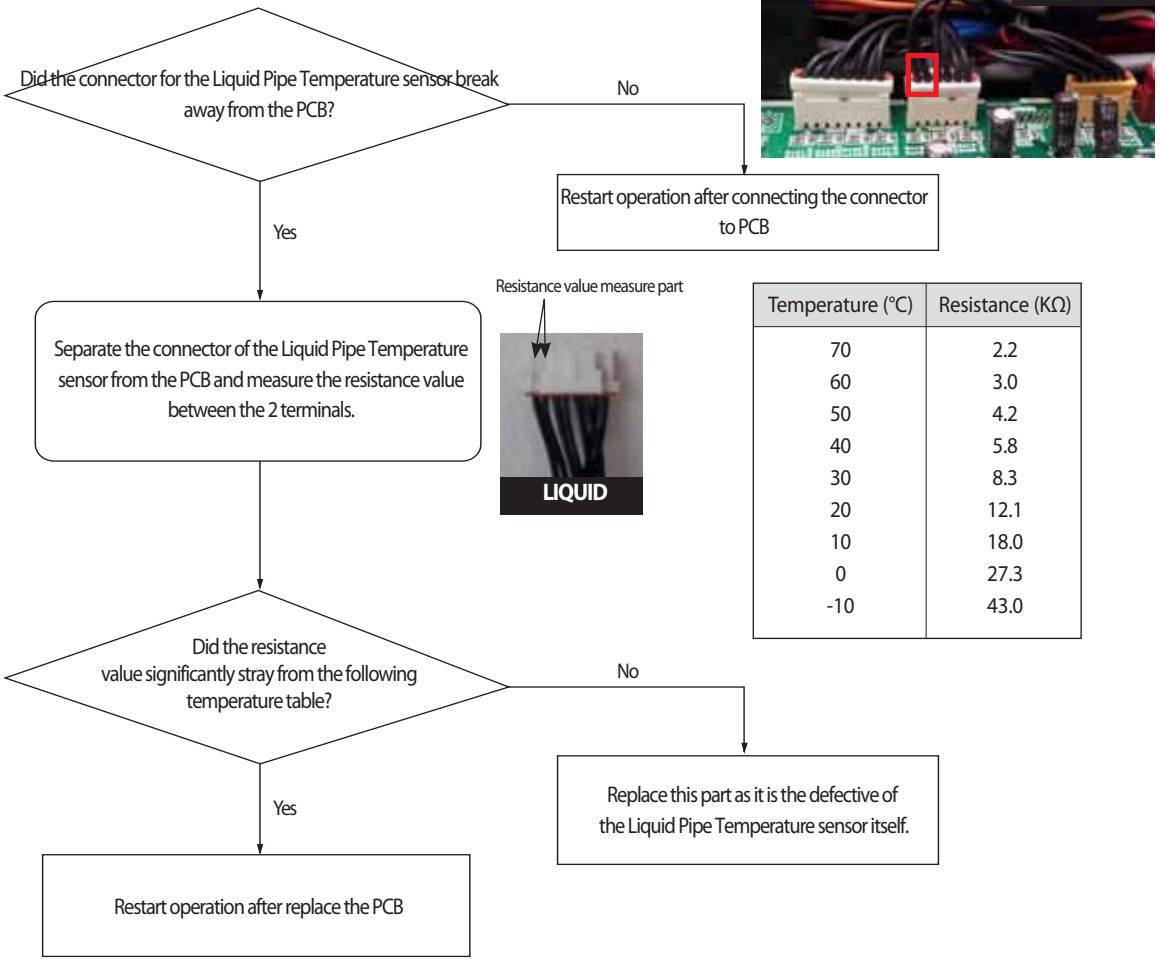


Temperature (°C)	Resistance (KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

4-3-16 Liquid Pipe Temperature sensor error (Open/Short)

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

1. Cause of problem

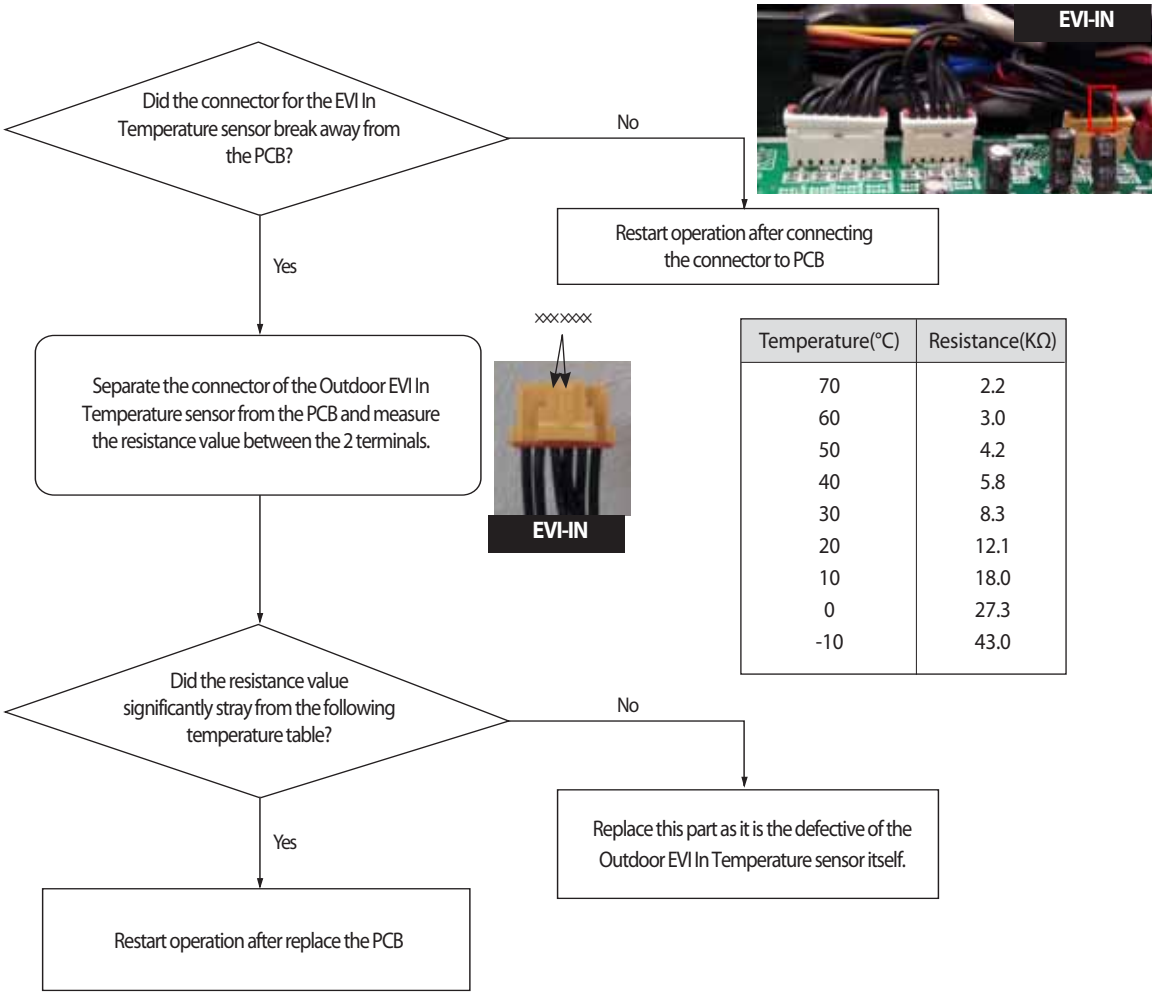


Temperature (°C)	Resistance (KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

4-3-17 EVI In Temperature sensor error (Open/Short)

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

1. Cause of problem

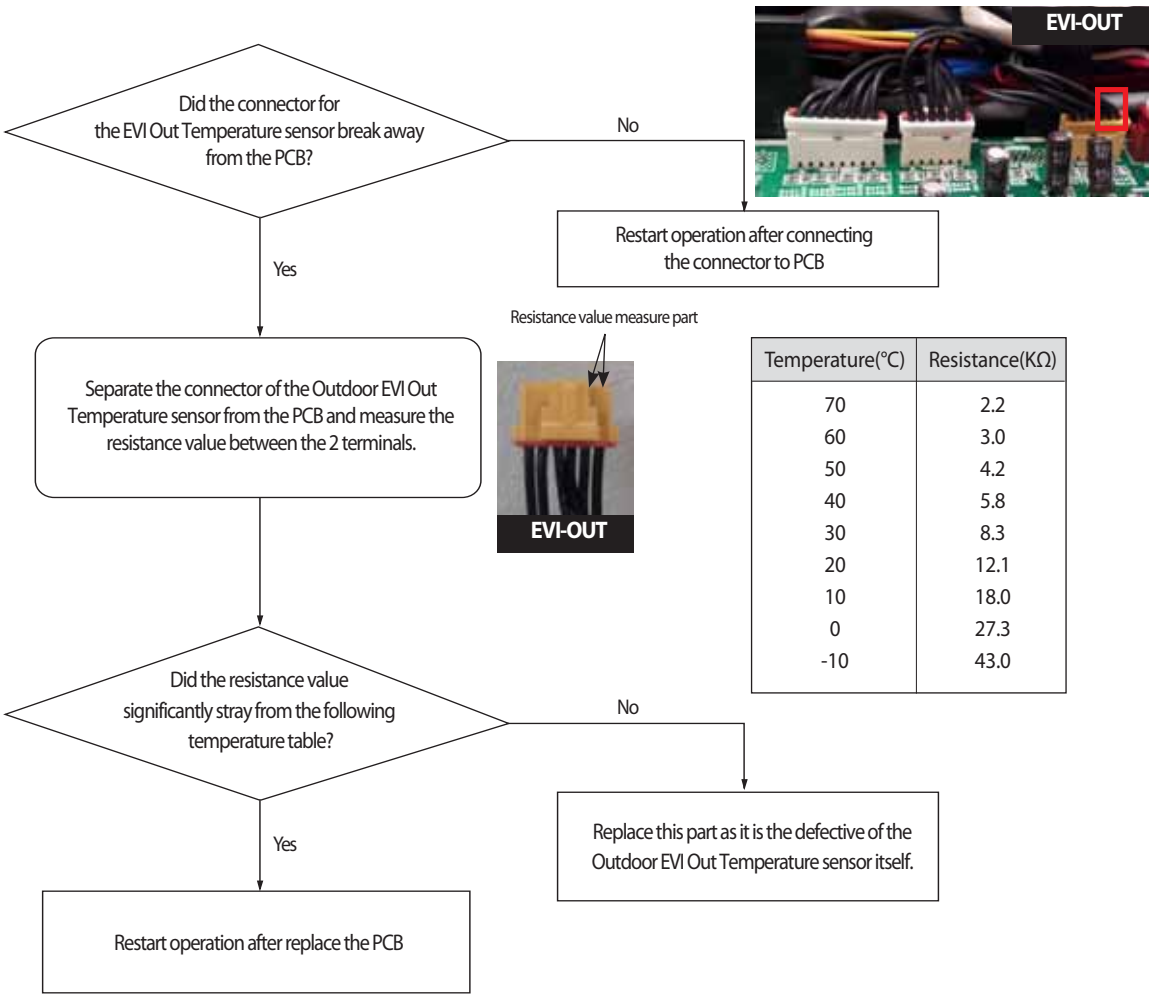


Temperature(°C)	Resistance(KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

4-3-18 EVI Out Temperature sensor error (Open/Short)

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

1. Cause of problem

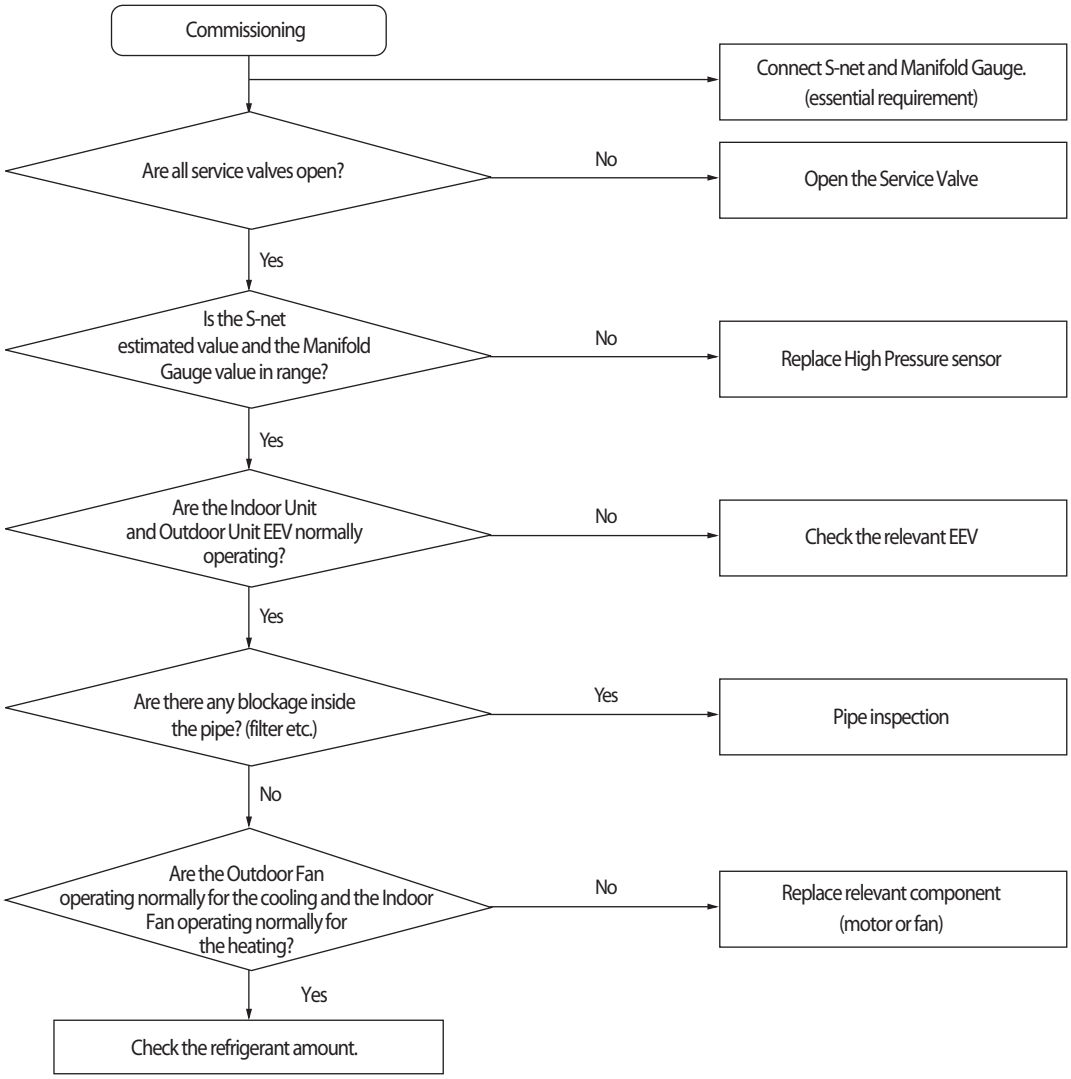


Temperature(°C)	Resistance(KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

4-3-19 E407 : Comp. Down due to High Pressure Protection Control

Outdoor unit display	E407
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	**Value of the high pressure sensor is detected at 40kg/cm^2 or more**
Cause of problem	**<Cooling Operation>** · Outdoor unit fan motor problem (constrained, defective) · Motor driver defective or wire is cut · Outdoor heat exchanger is contaminated. · Service valve locked/Fill refrigerant **<Heating Operation>** · Outdoor unit fan motor problem (constrained, defective) · Motor driver defective or wire is cut · Service valve locked/Excessive refrigerant

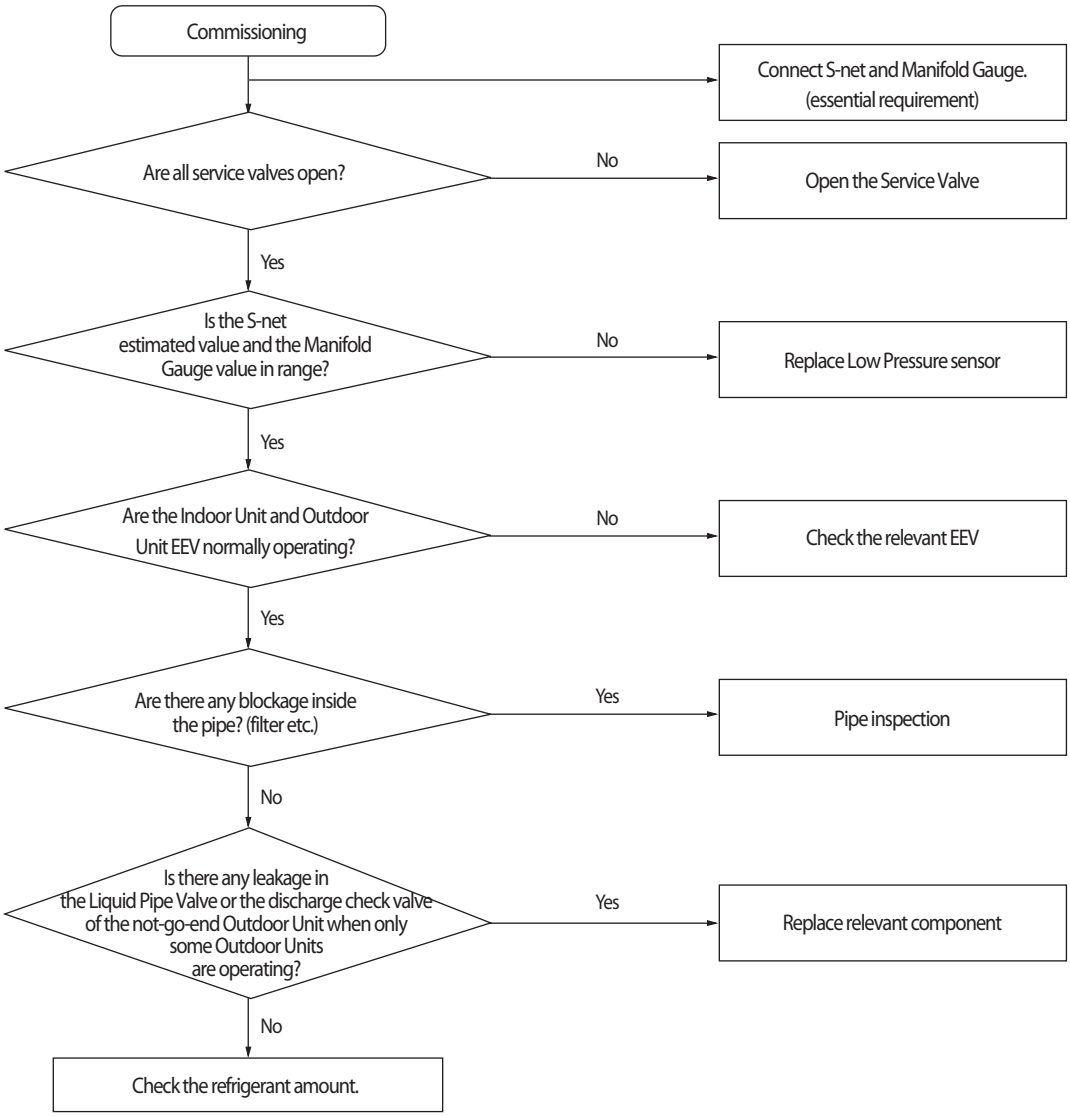
1. Cause of problem



4-3-20 E410 : Comp. Down due to Low Pressure Protection Control

Outdoor unit display	E410
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· Inspection when the value of low pressure sensor is 0.8kg//cm², or less for air conditioning and 0.6kg//cm² for heating
Cause of problem	· Refrigerant shortage · Electronic expansion valve blocked · Service valve blocked · Low pressure sensor defective · Leakage of compressor discharge check valve of not-go-end outdoor unit · Error may be found when used in temperature range outside the conditions of use (Operating outside temperature at -20℃ or less for heating and operating outside temperature at -5℃ or less for Cooling)

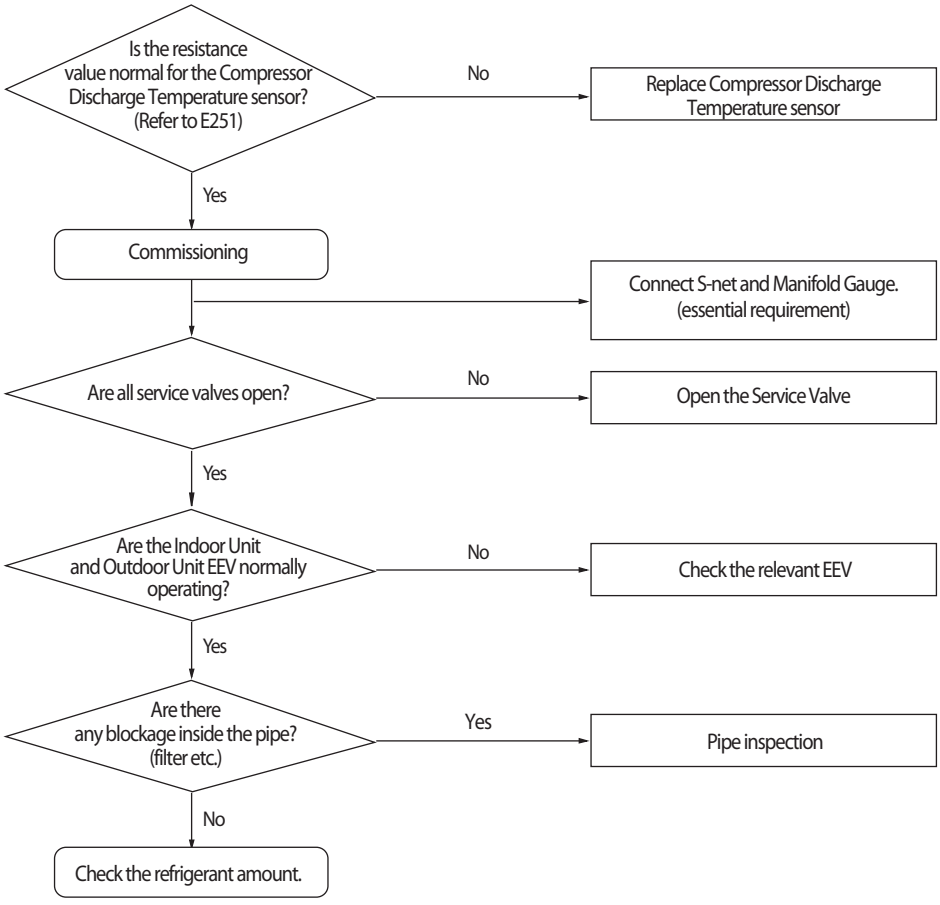
1. Cause of problem



4-3-21 E416 : Comp. Down due to Compressor Discharge Temperature sensor

Outdoor unit display	E416
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· When value of compressor discharge temperature sensor is checked at 120℃ or more
Cause of problem	· Refrigerant shortage · Electronic expansion valve is blocked. · Service valve blocked · Defective discharge temperature sensor · Blocked pipe and defective · Leakage of compressor discharge check valve of not-go-end outdoor unit

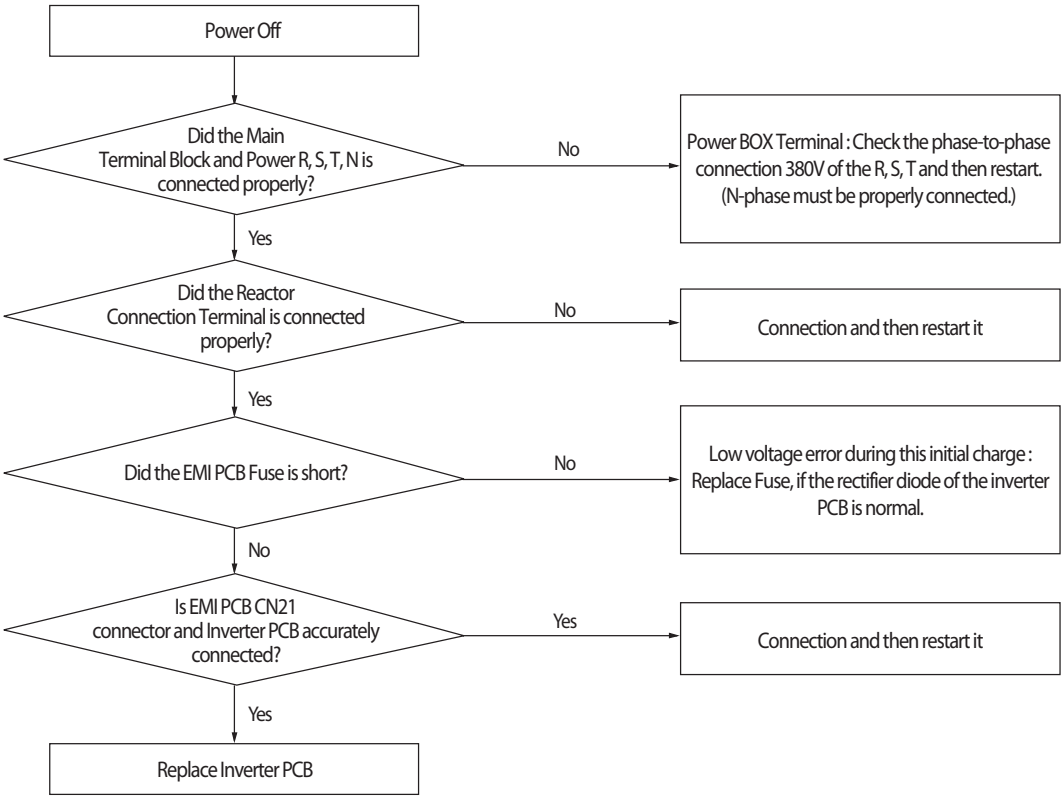
1. Cause of problem



4-3-22 3-phase Input Wiring error

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

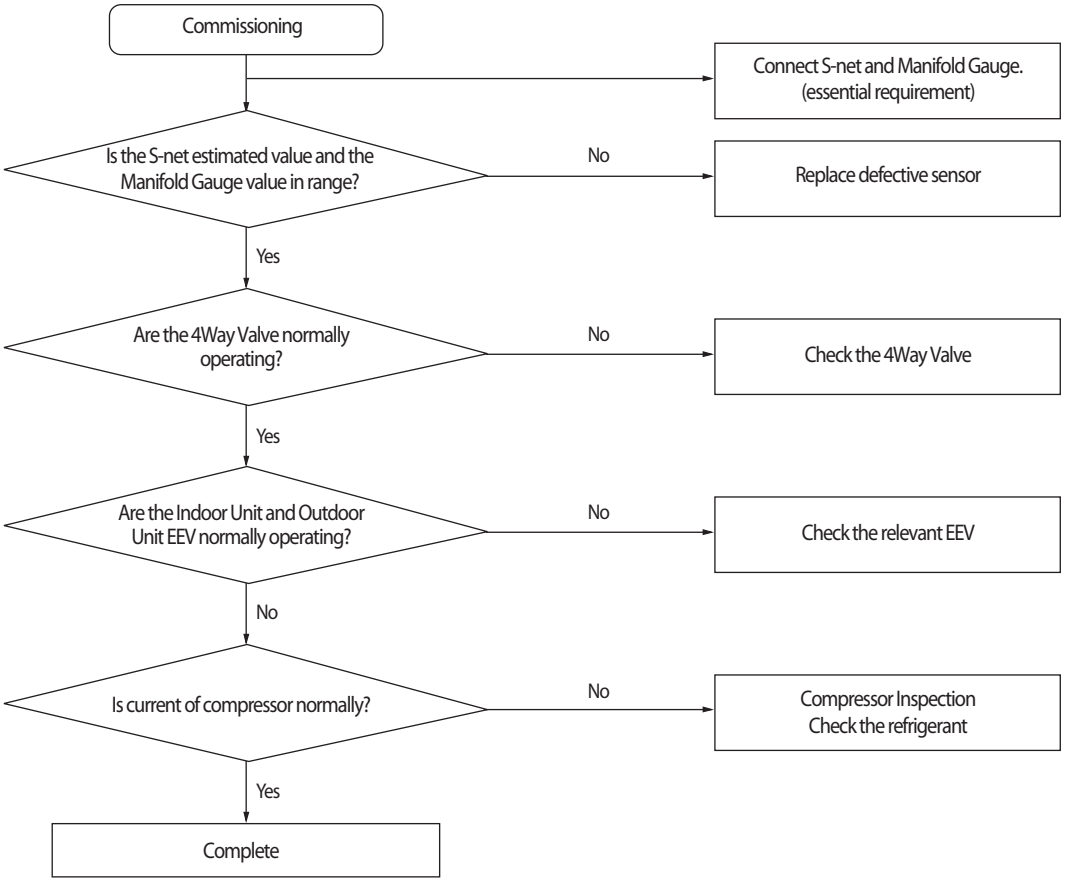
1. Cause of problem



4-3-23 E428 : Comp. Down by Compression Ratio Control

Outdoor unit display	E428
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· When compression ratio (high pressure+1)/(low pressure+1) less than 1.5 and lasts for 10 minutes or more · Differential pressure (high pressure - low pressure) less than 0.4 MPa.g and lasts for 10 minutes or more
Cause of problem	· Indoor and Outdoor EEV breakdown · 4Way Valve breakdown · High and Low pressure sensor defective · Refrigerant shortage

1. Cause of problem



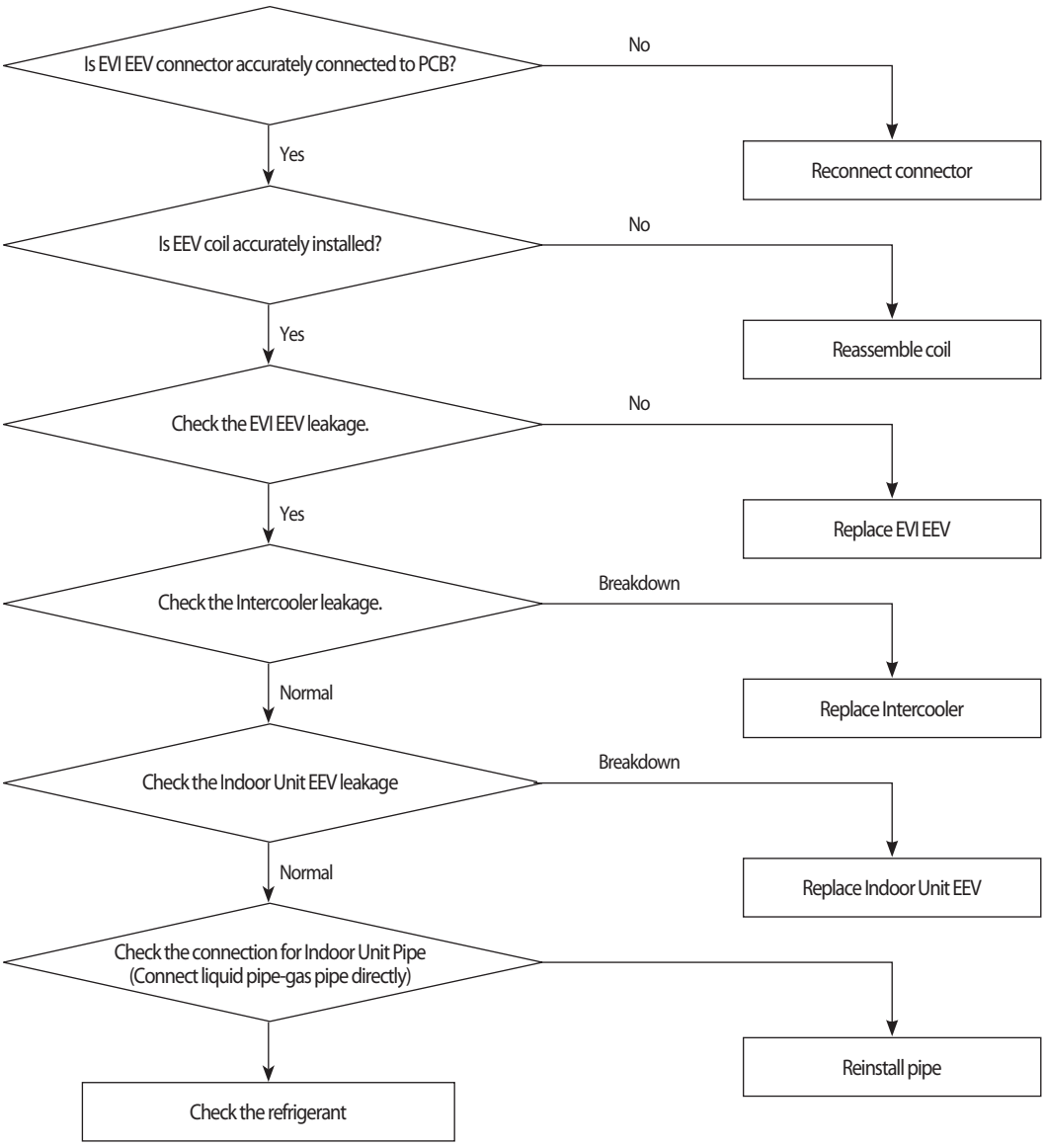
4-3-24 EVI EEV Open error

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

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

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

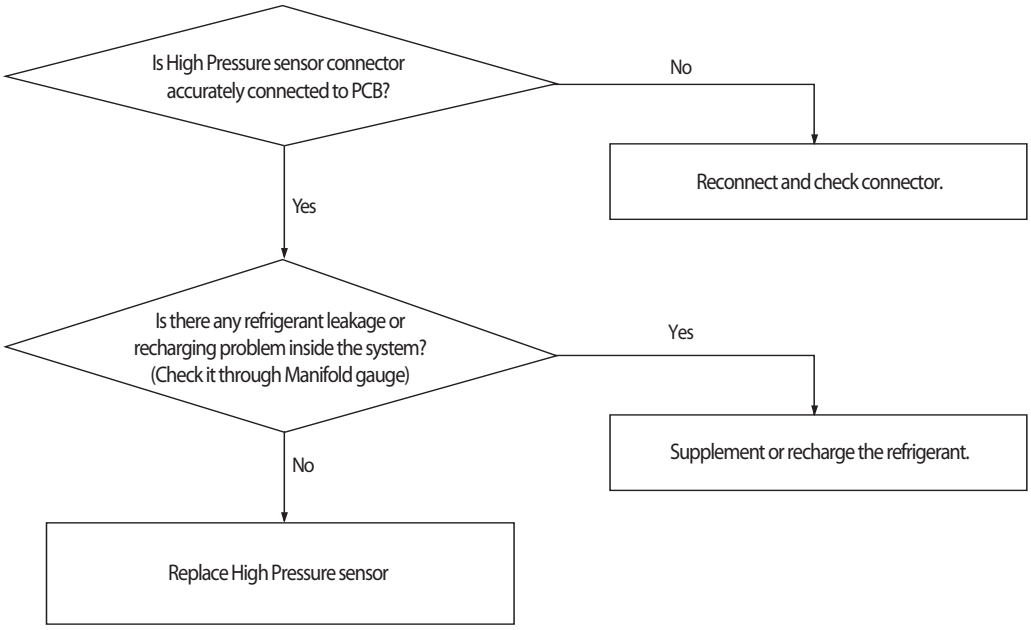
1. Cause of problem



4-3-25 High Pressure Standard Not Met before Air Conditioning (Inability to Re-operate)

Outdoor unit display	E443
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	. Operation should be forbidden if High Pressure sensor value of the Main Unit before the pump down is started at 2.2kg/cm^{2}g or below for air-conditioning and 1.0kg/cm^{2}G or less for heating for three consecutive seconds. (Restarting operation is not possible, and an error displayed on the indoor unit.)
Cause of problem	· Refrigerant leakage/fault in High Pressure sensor .

1. Cause of problem



4-3-26 Momentary Blackout error

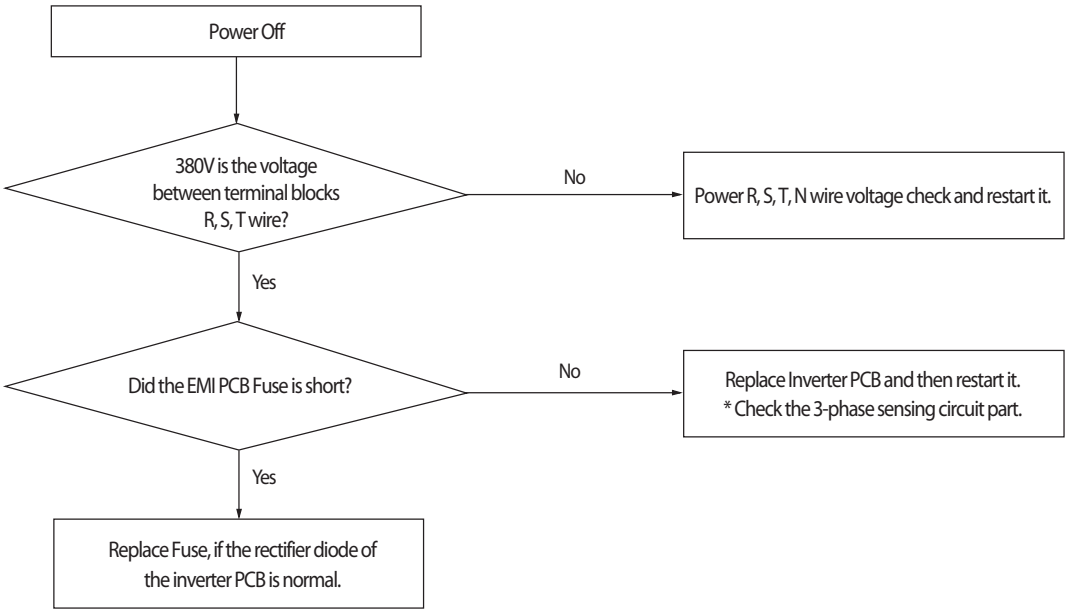
Outdoor unit display	E452
Indoorunit display	×(Operation) ◑ (Reservation) ◑ (Blast) ◑ (Filter) ×(Defrost)
Judgment Method	· Momentary stop of compressor due to momentary blackout.
Cause of problem	· Momentary stop of compressor due to momentary blackout.

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

4-3-27 Overvoltage / Low voltage error

Outdoor unit display	E466 (INVERTER1 PCB) E366 (INVERTER2 PCB)
Judgment Method	· N-phase wiring error and EMI Fuse short. · DC-Link Overvoltage / Low voltage occurs.
Cause of problem	· Check the input wiring · EMI Fuse short

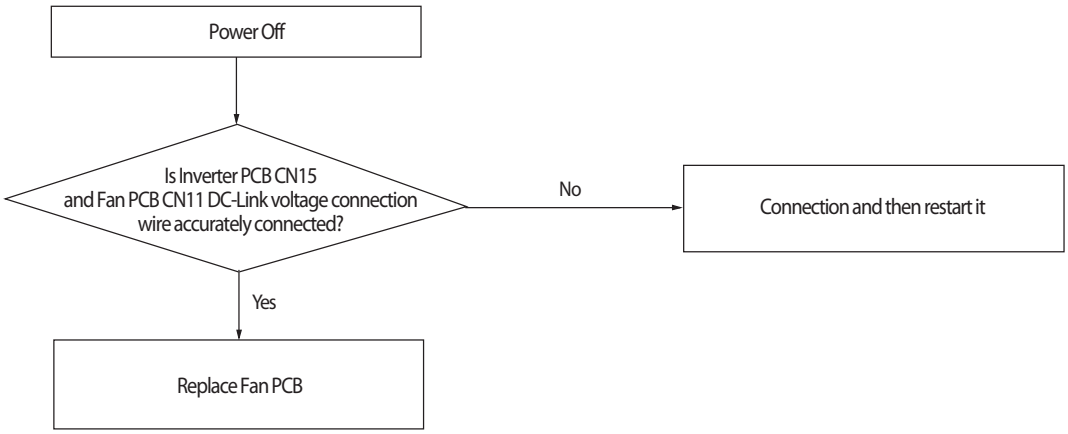
1. Cause of problem



4-3-28 Outdoor Fan PCB Overvoltage / Low voltage error

Outdoor unit display	E486
Judgment Method	· N-phase wiring error and EMI Fuse short. · DC-Link Overvoltage / Low voltage occurs.
Cause of problem	· Check the input wiring · EMI Fuse short

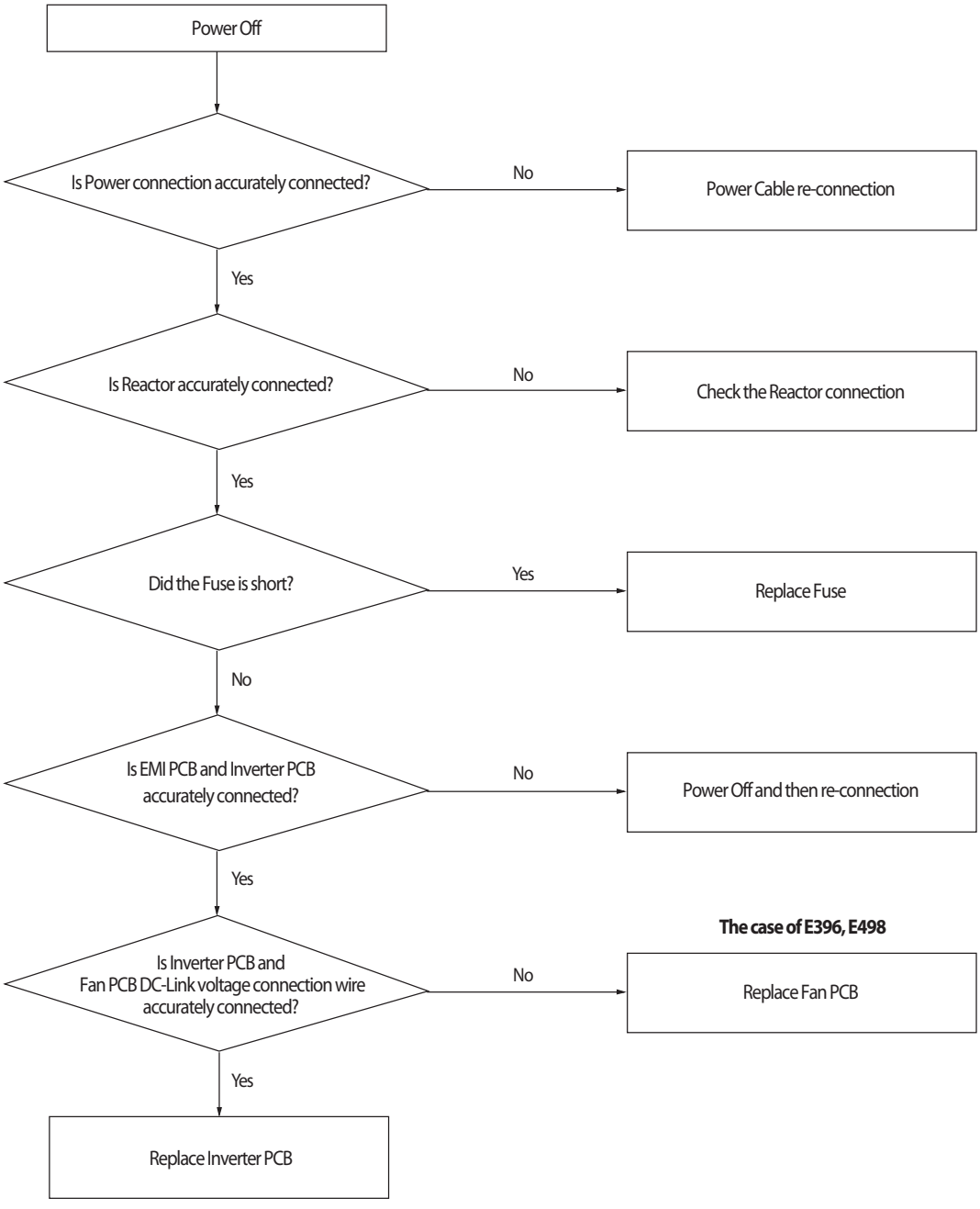
1. Cause of problem



4-3-29 DC Link voltage sensor error

Outdoor unit display	E469 (INVERTER1 PCB) E369 (INVERTER2 PCB) E496 (OUTDOOR FAN 1 PCB) E396 (OUTDOOR FAN 2 PCB)
Judgment Method	· DC voltage detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than
Cause of problem	· Input voltage defective · AC Power wiring error · Momentary Overvoltage / Low voltage occurs · PCB voltage sensing circuit defective

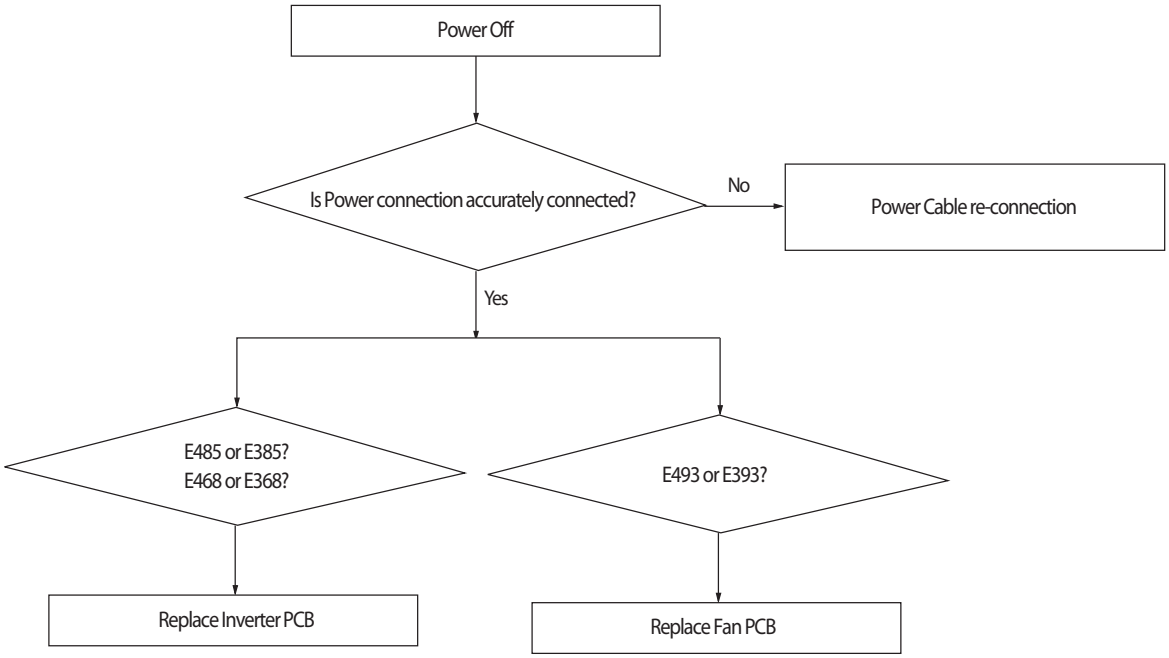
1. Cause of problem



4-3-30 Input / Output Current sensor error

Outdoor unit display	E485 INVERTER1 PCB(Input Current sensor) E385 INVERTER2 PCB(Input Current sensor) E468 INVERTER1 PCB(Output Current sensor) E368 INVERTER 2 PCB(Output Current sensor) E493 OUTDOOR FAN PCB (FAN1 Output Current sensor) E393 OUTDOOR FAN PCB (FAN2 Output Current sensor)
Judgment Method	· Sensor Output detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than
Cause of problem	· Input voltage defective · PCB voltage sensing circuit defective

1. Cause of problem



4-3-31 Inverter Overheat error

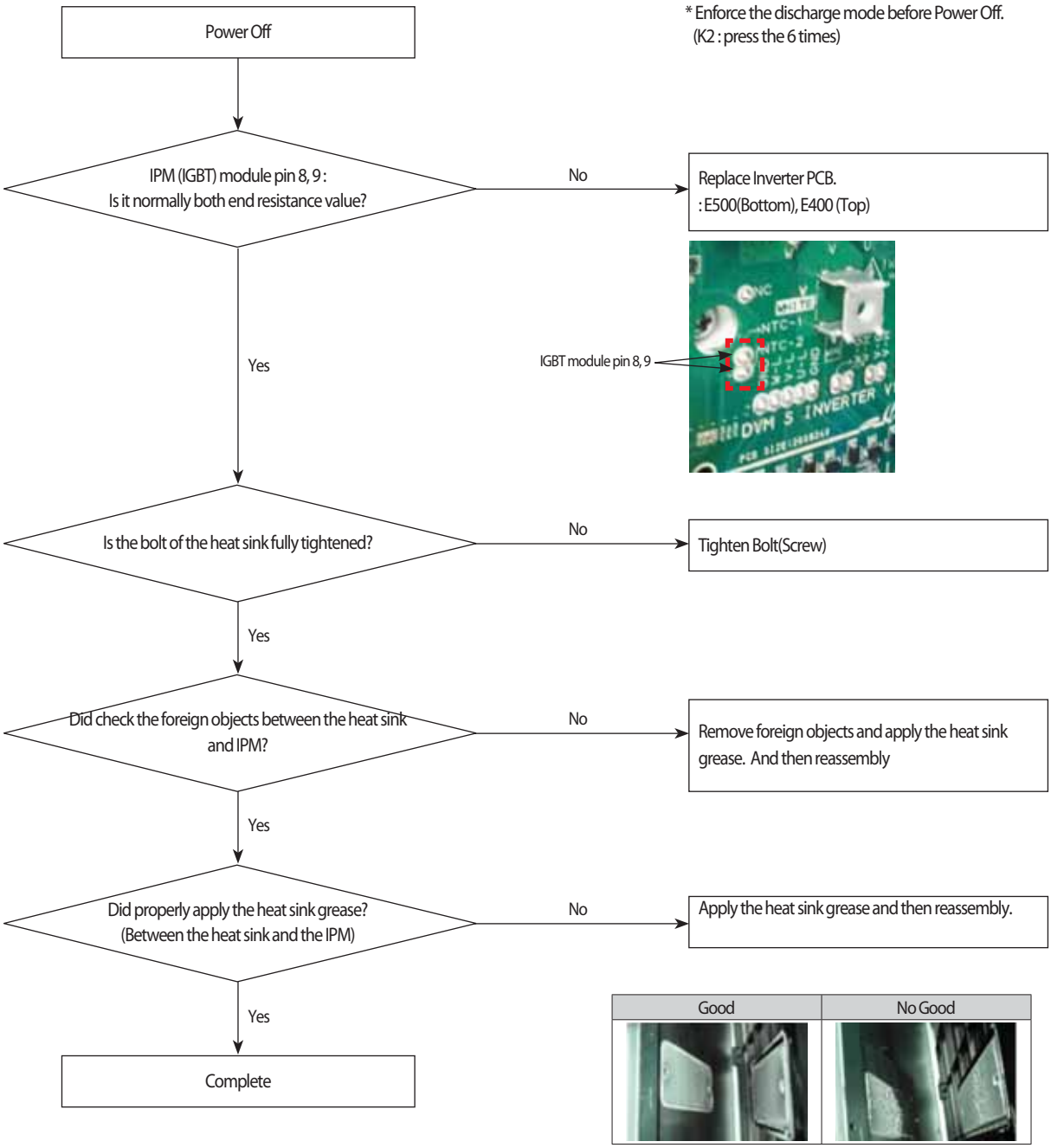
Outdoor unit display	E500 (INVERTER1 PCB) E400 (INVERTER2 PCB)
Judgment Method	· IGBT module internal temperature : 105℃ more than (E500, E400)
Cause of problem	· Cooling Pin and the IGBT junction part assembly defective. · Refrigerant cooling heat sink and refrigerant piping assembly defective. · Assembled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

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

Temperature [℃]	NTC [ohm]	AD [V]
10	9000	2.58
20	6000	2.33
30	4000	2.03
40	3000	1.80
50	2000	1.47
60	1600	1.29
70	1200	1.07
80	750	0.76
90	650	0.68

Temperature [℃]	NTC [ohm]	AD [V]
100	500	0.55
105	450	0.51
110	380	0.44
120	300	0.35
130	250	0.30
140	200	0.25

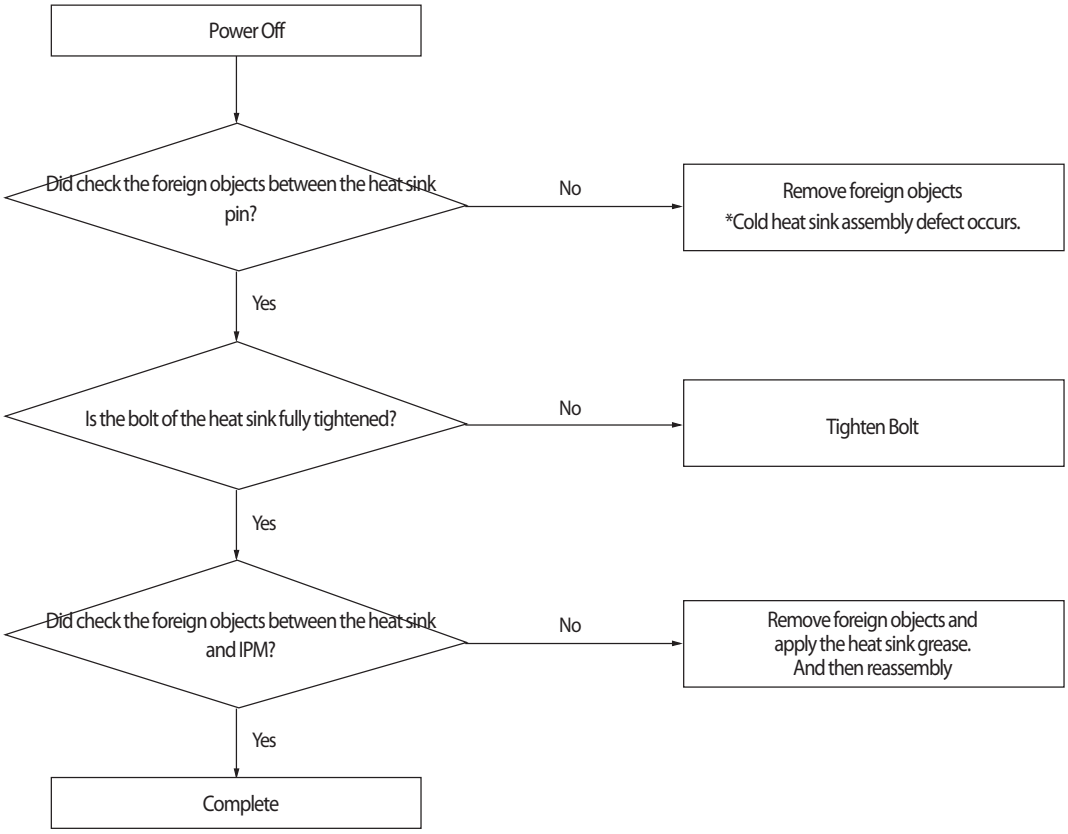
1. Cause of problem



4-3-32 Fan IPM Overheat error

Outdoor unit display	E455 (FAN1 PCB) E355 (FAN2 PCB)
Judgment Method	· IPM internal temperature more than 85℃ (E455, E355)
Cause of problem	· Heat sink and IPM assembly defective. · Defective heat sink cooling

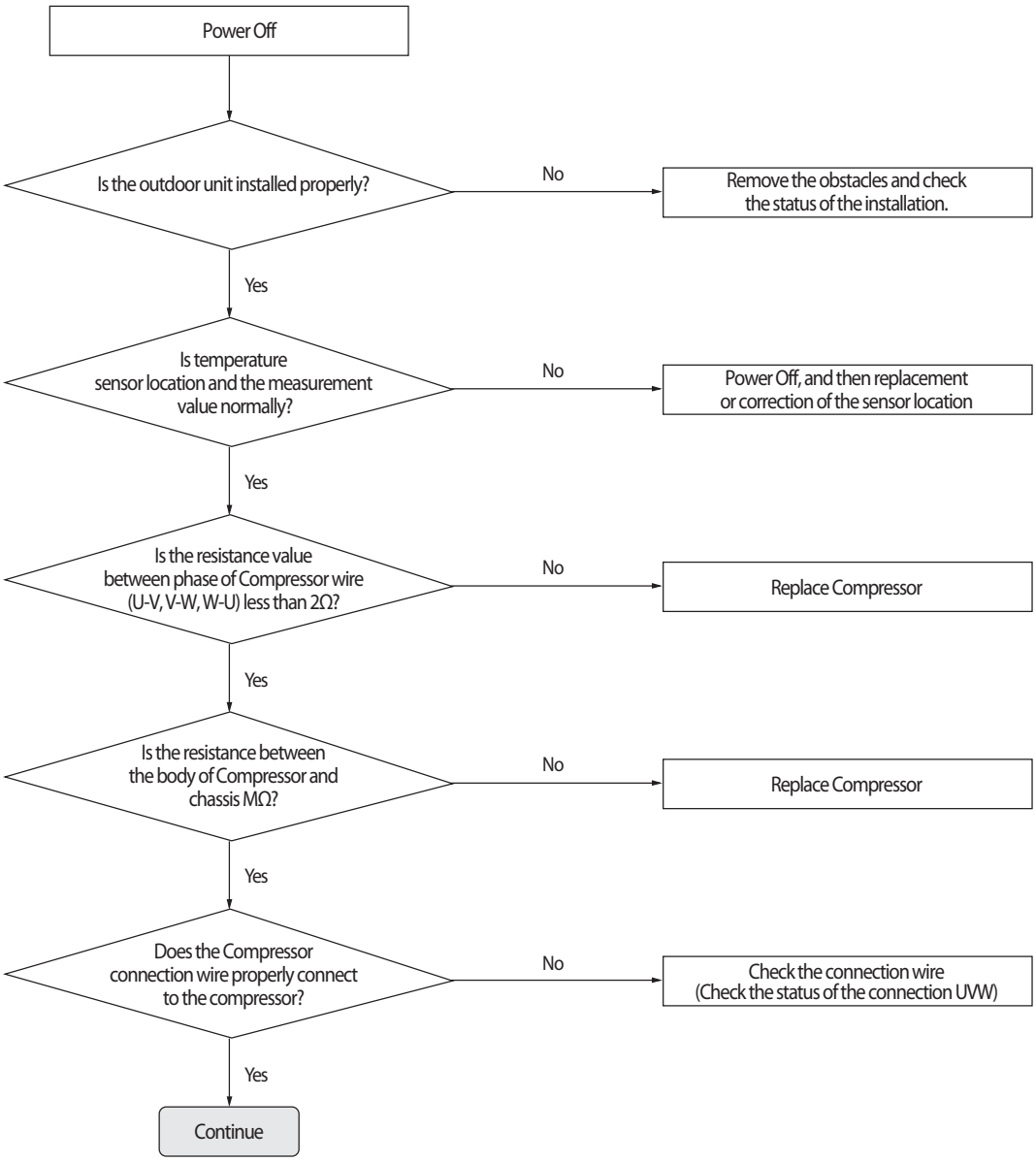
1. Cause of problem



4-3-33 Inverter Overcurrent error

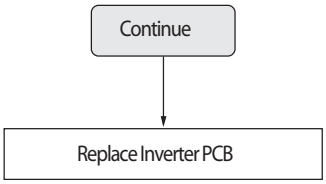
Outdoor unit display	E464/E465 (INVERTER1 PCB) E364/E365 (INVERTER2 PCB)
Judgment Method	· Will occur if the overcurrent flowing in the IPM. · Detected by H/W or S/W
Cause of problem	· Installation defective · Comp. defective · PCB defective · Connection wire error · Motor defective

1. Cause of problem

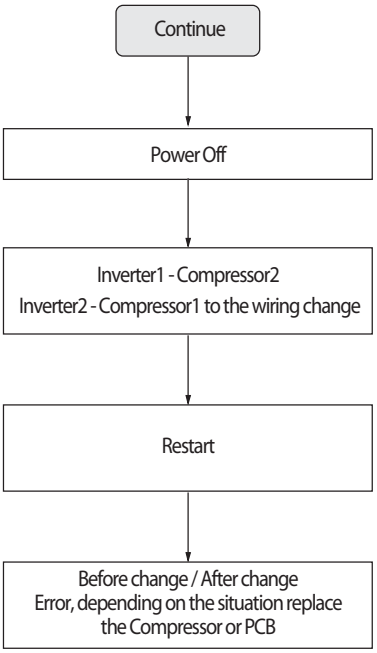


Inverter Overcurrent error (cont.)

■ Compressor applied one



■ Compressor applied two



Before change	After change	Measure
Error of No.1 Compressor	Error of No.1 Compressor	Replace No.1 Compressor
Error of No.1 Compressor	Error of No.2 Compressor	Replace No.1 Inverter PCB
Error of No.2 Compressor	Error of No.2 Compressor	Replace No.2 Compressor
Error of No.2 Compressor	Error of No.1 Compressor	Replace No.2 Inverter PCB

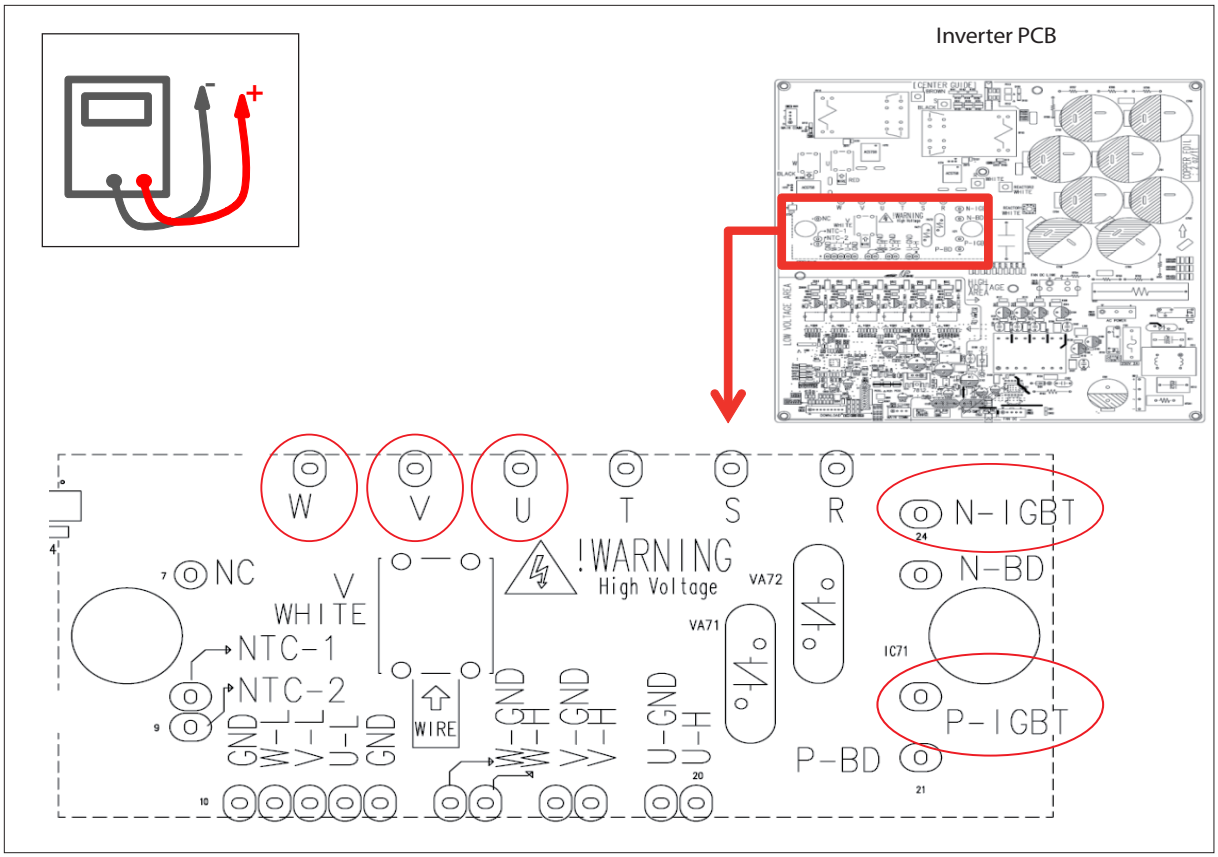
IPM [IGBT] breakdown diagnostics (Inverter PCB)

1. Preparations before checking
   1) Power Off.
   2) IPM failure, discharge mode may not work properly. Therefore, wait more than 15 minutes after the Power Off.
   3) Remove all of the Inverter PCB connectors and wire that is fixed as screw.
      (Include wire that is fixed to compressor and DC Reactor.)
   4) Prepare the digital multi tester.

2. Inspection Method
   1) Refer to Figure1 and Table1, respectively the resistance value and diode voltage value measure.
   2) According to the criterion in Table 1 to determine whether the failure of IPM.

Division	Measured Point		Criterion	Remark
	+	-		
Measure the resistance values	P-IGBT	U	More than 3 MΩ	Measurement error can occur for reasons s uch as the initial measurement condenser discharge. Measured over at least three times.
	P-IGBT	V		
	P-IGBT	W		
	U	N-IGBT		
	V	N-IGBT		
	W	N-IGBT		
Measure the diode voltage values	U	P-IGBT	0.3~0.7V	
	V	P-IGBT		
	W	P-IGBT		
	N-IGBT	U		
	N-IGBT	V		
	N-IGBT	W		

< Table 1 >

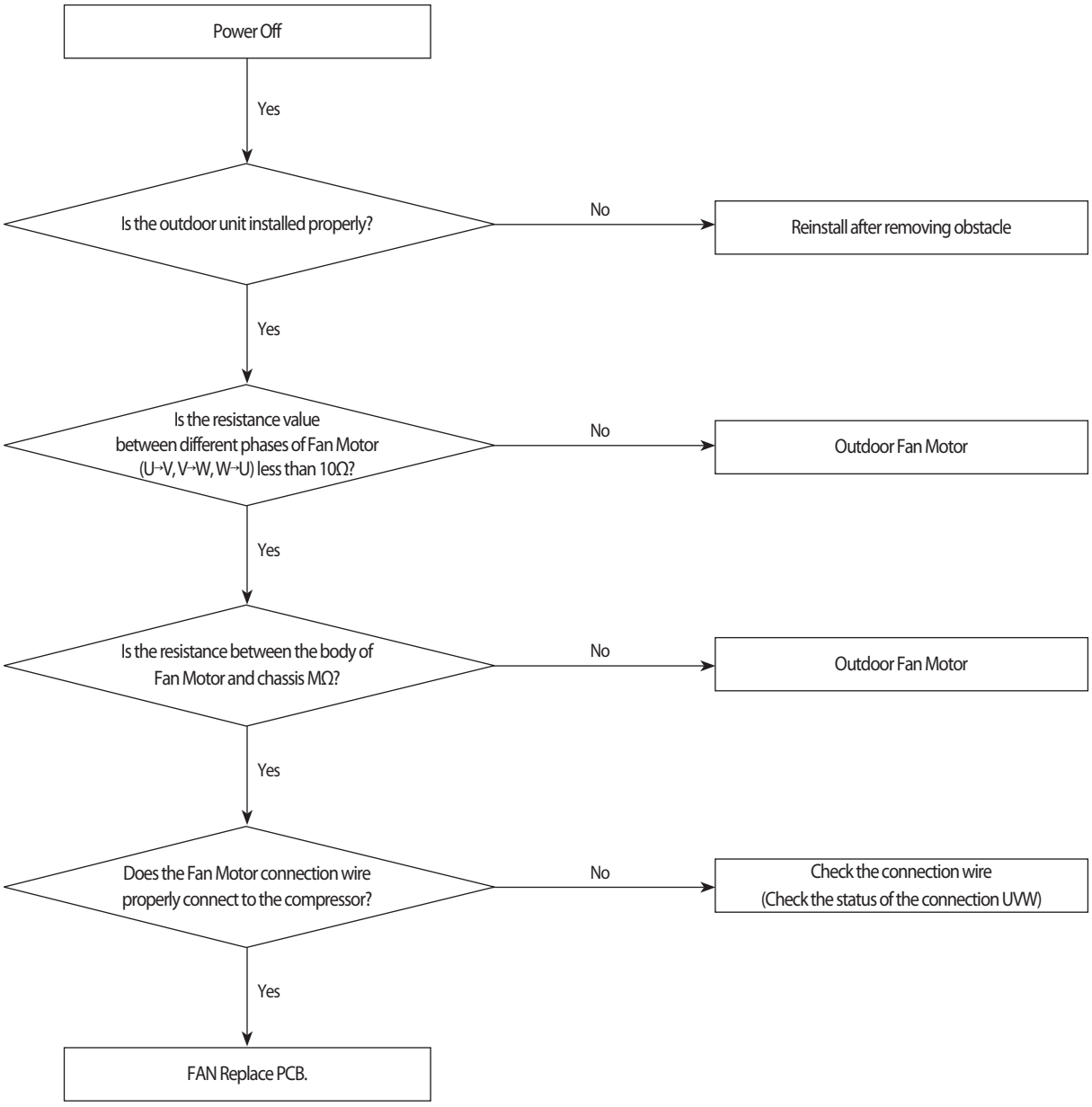


< Figure 1 >

4-3-34 Fan Motor Overcurrent error

Outdoor unit display	E478/E489 (FAN PCB(FAN1)) E378/E389 (FAN PCB(FAN2))
Judgment Method	· Occurs when overcurrent flows in the IPM. · Detected by H/W or S/W
Cause of problem	· Installation error · Defective Comp · Defective PCB · Connector error · Defective Motor

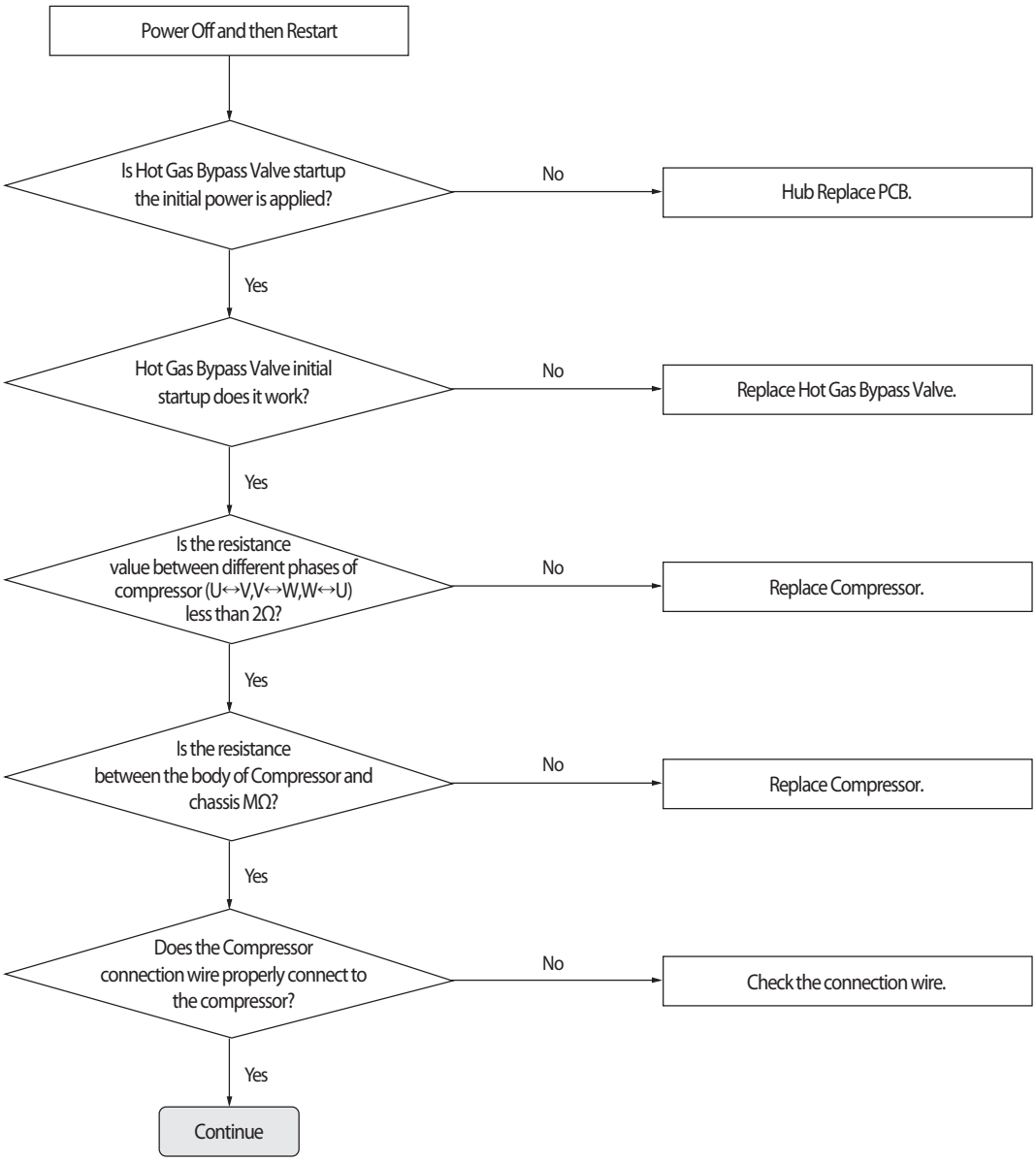
1. Cause of problem



4-3-35 Compressor starting error

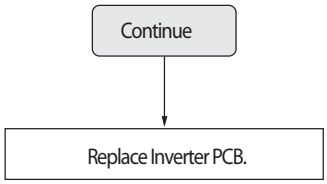
Outdoor unit display	E461 (INVERTER1 PCB) E361 (INVERTER2 PCB)
Judgment Method	· Startup, and then if the speed increase is not normally. · Detected by H/W or S/W.
Cause of problem	· Compressor connection error · Defective Compressor · Defective PCB

1. Cause of problem

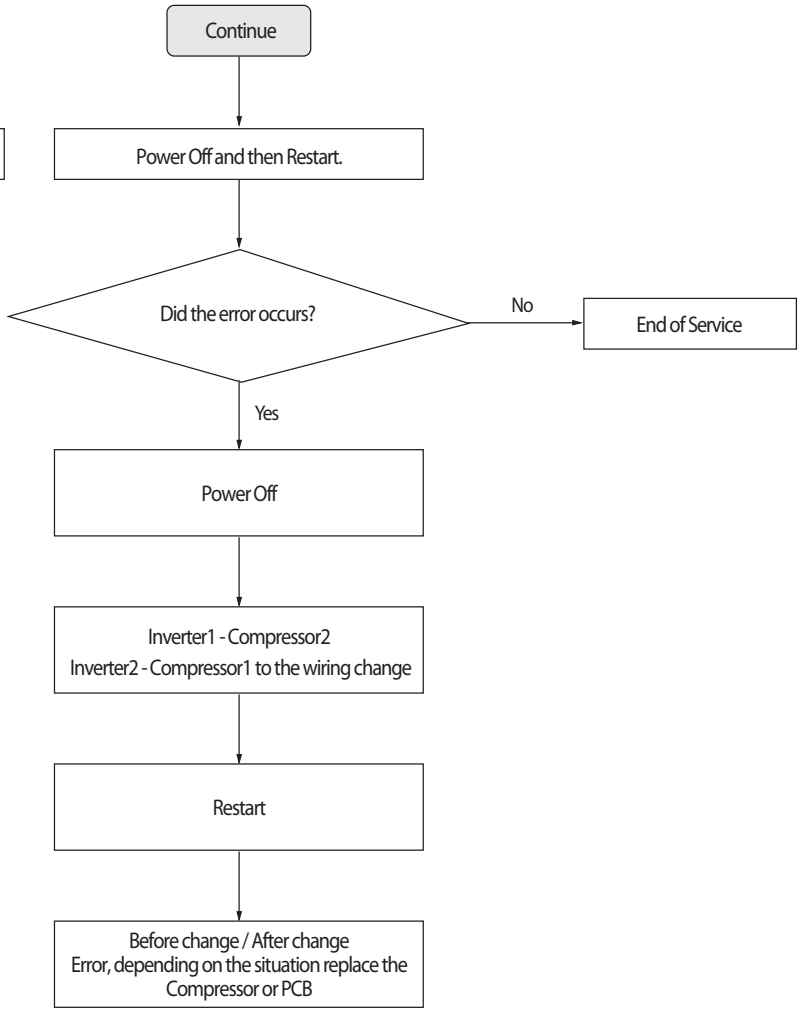


Starting error (cont.)

■ **Compressor applied one**



■ **Compressor applied two**

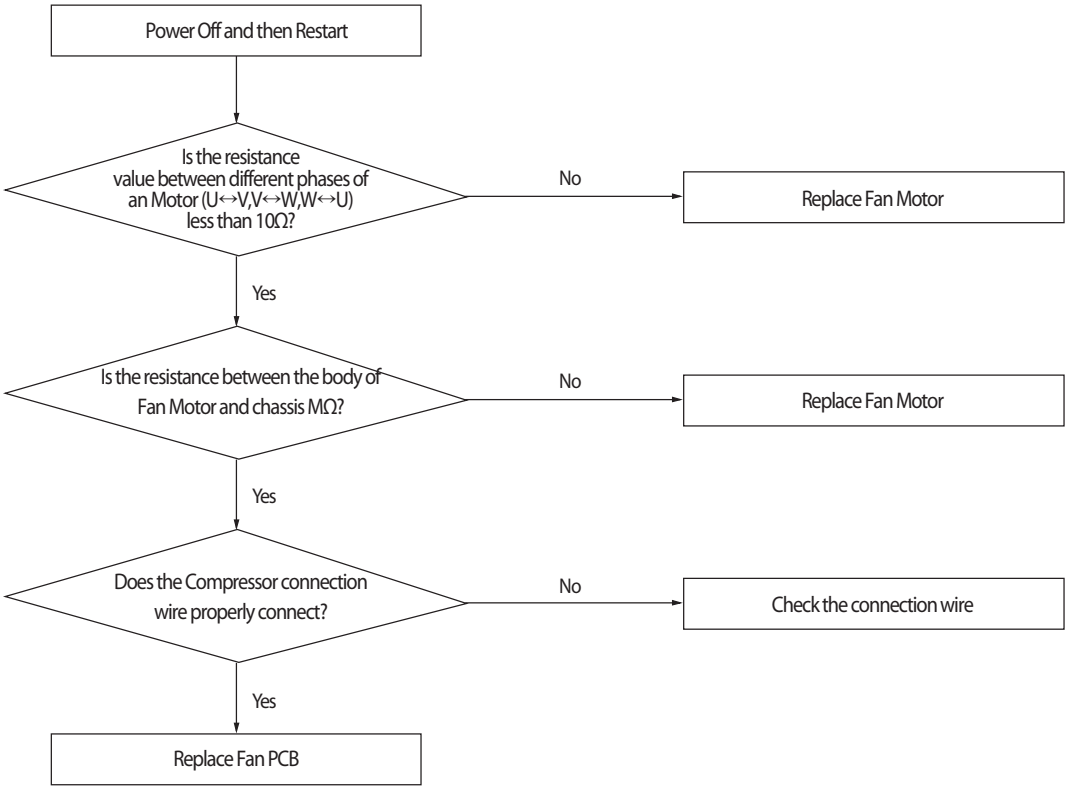


Before change	After change	Measure
Error of No.1 Compressor	Error of No.1 Compressor	Replace No.1 Compressor
Error of No.1 Compressor	Error of No.2 Compressor	Replace No.1 Inverter PCB
Error of No.2 Compressor	Error of No.2 Compressor	Replace No.2 Compressor
Error of No.2 Compressor	Error of No.1 Compressor	Replace No.2 Inverter PCB

4-3-36 Fan starting error

Outdoor unit display	E446 (FAN PCB(FAN1)) E346 (FAN PCB(FAN2))
Judgment Method	· Startup, and then if the speed increase is not normally. · Detected by H/W or S/W
Cause of problem	· Compressor connection error · Defective Compressor · Defective PCB

1. Cause of problem



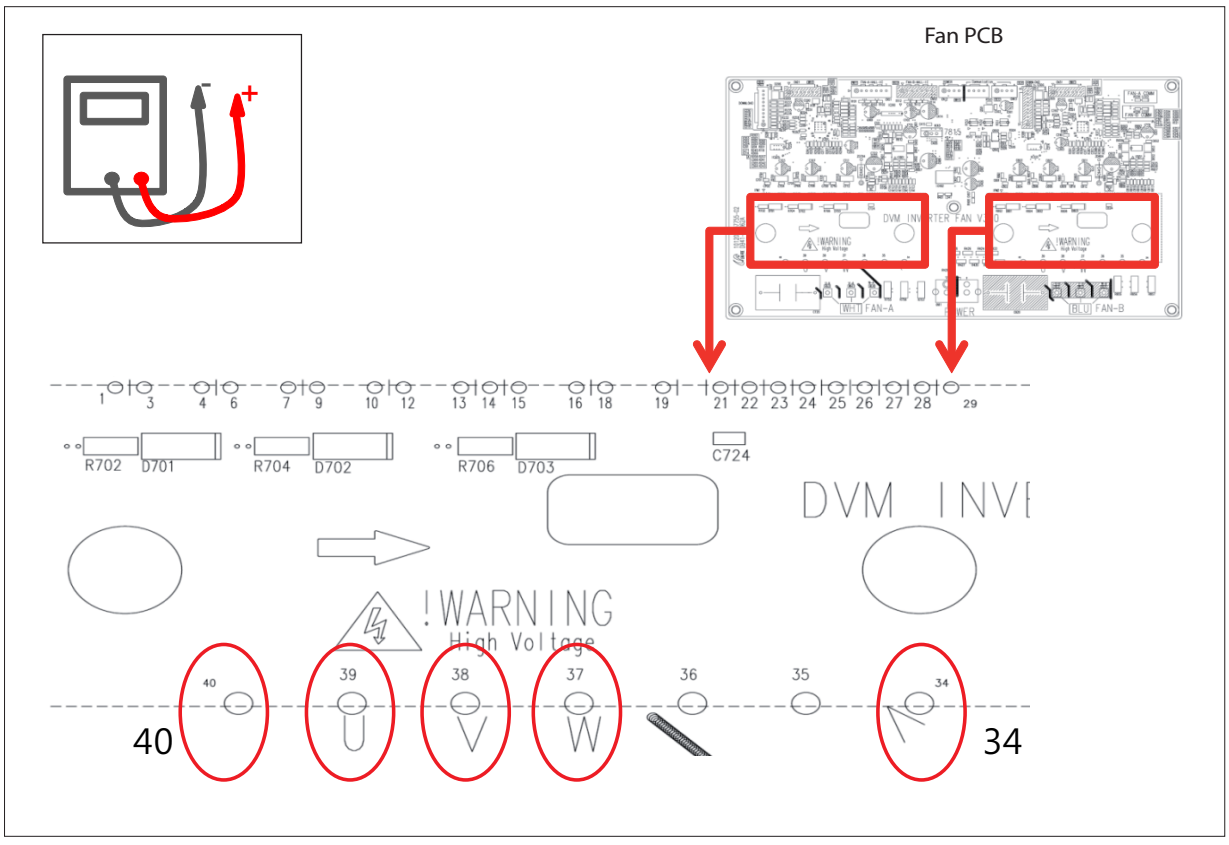
IPM breakdown diagnostics (FAN PCB)

1. Preparations before checking
   1) Power Off
   2) IPM failure, discharge mode may not work properly. Therefore, wait more than 15 minutes after the Power Off.
   3) Remove all of the Fan PCB connectors. (Comp connector included)
   4) Prepare the digital multi tester.

2. Inspection Method
   1) Refer to Figure1 and Table1, respectively the resistance value and diode voltage value measure.
   2) According to the criterion in Table 1 to determine whether the failure of IPM.

Division	Measured Point		Criterion	Remark
	+	-		
Measure the resistance values	40	U	More than 3 MΩ	Measurement error can occur for reasons such as the initial measurement condenser discharge. Measured over at least three times.
	40	V		
	40	W		
	U	34		
	V	34		
	W	34		
Measure the diode voltage values	U	40	0.3~0.7V	
	V	40		
	W	40		
	34	U		
	34	V		
	34	W		

< Table 1 >

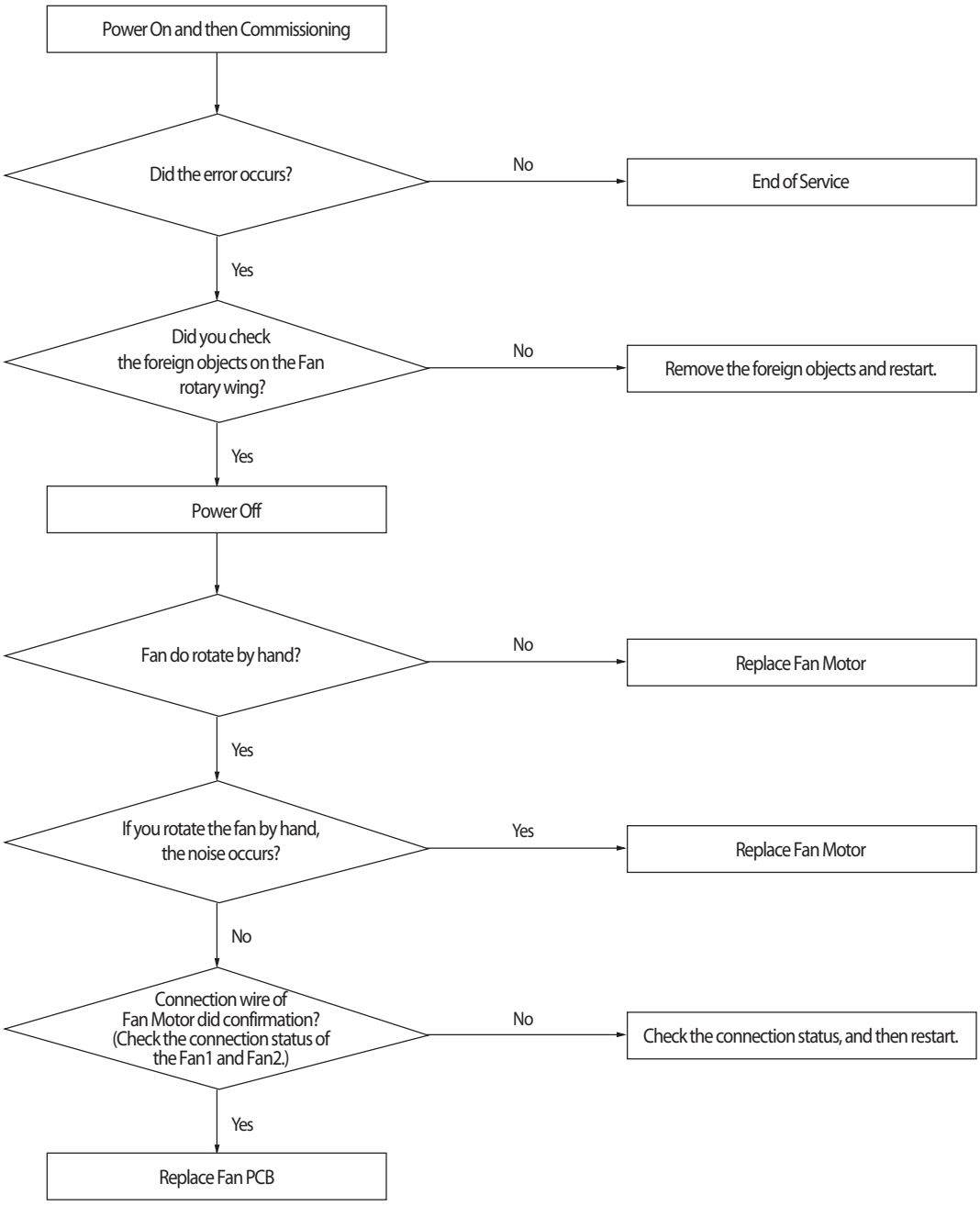


< Figure 1 >

4-3-37 Fan lock error

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

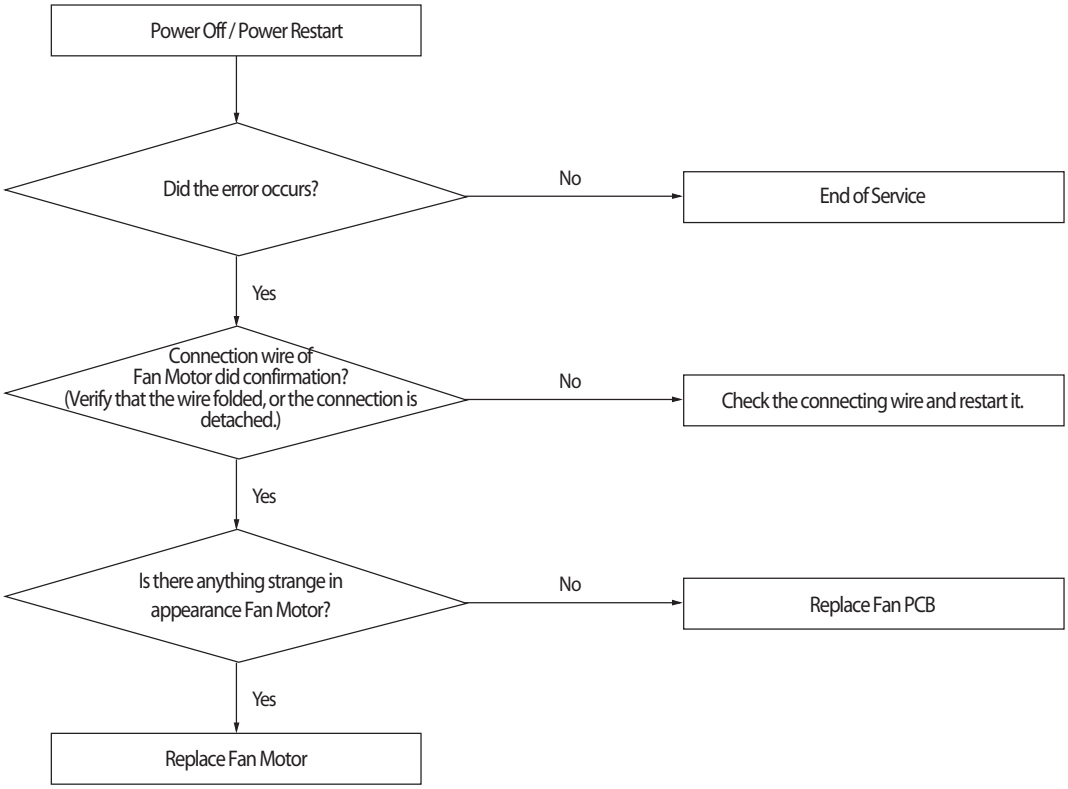
1. Cause of problem



4-3-38 Outdoor Fan Motor overheating

Outdoor unit display	E453 (FAN PCB(FAN1)) E353 (FAN PCB(FAN2))
Judgment Method	· Overheating due to the internal sensor of the Fan Motor.
Cause of problem	· Defective connection wire · Defective Fan Motor · Defective PCB · Defective installation conditions

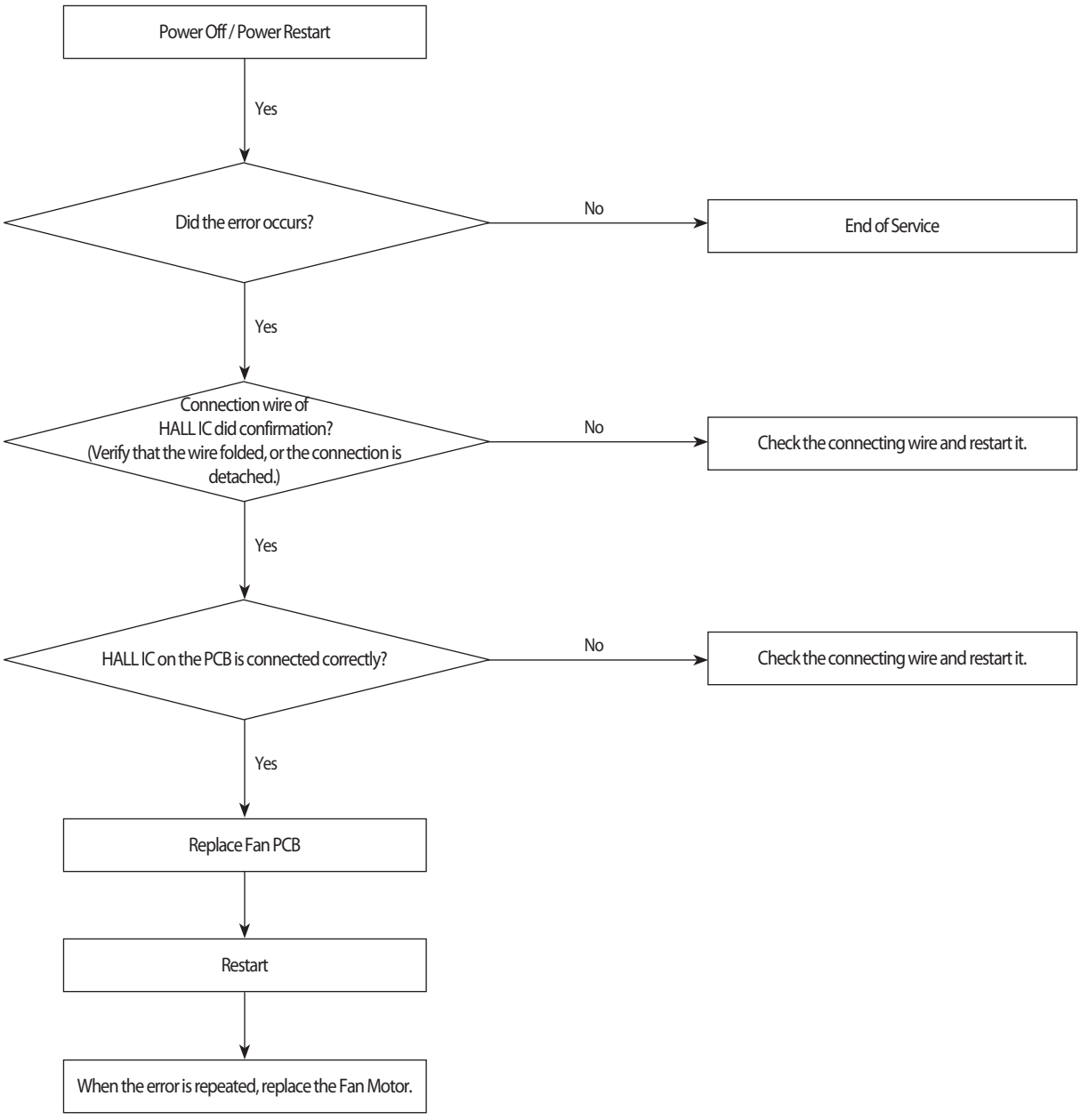
1. Cause of problem



4-3-39 Hall IC(Fan) error

Outdoor unit display	E487 (FAN PCB(FAN1)) E387 (FAN PCB(FAN2))
Judgment Method	· Fan rotation defective or vibration and noise of the defective operation. · Hall IC there is no signal input.
Cause of problem	· Connection status error. · Hall IC wire disconnection. · Defective circuit parts and defective manufacturing. · Fan Motor defective.

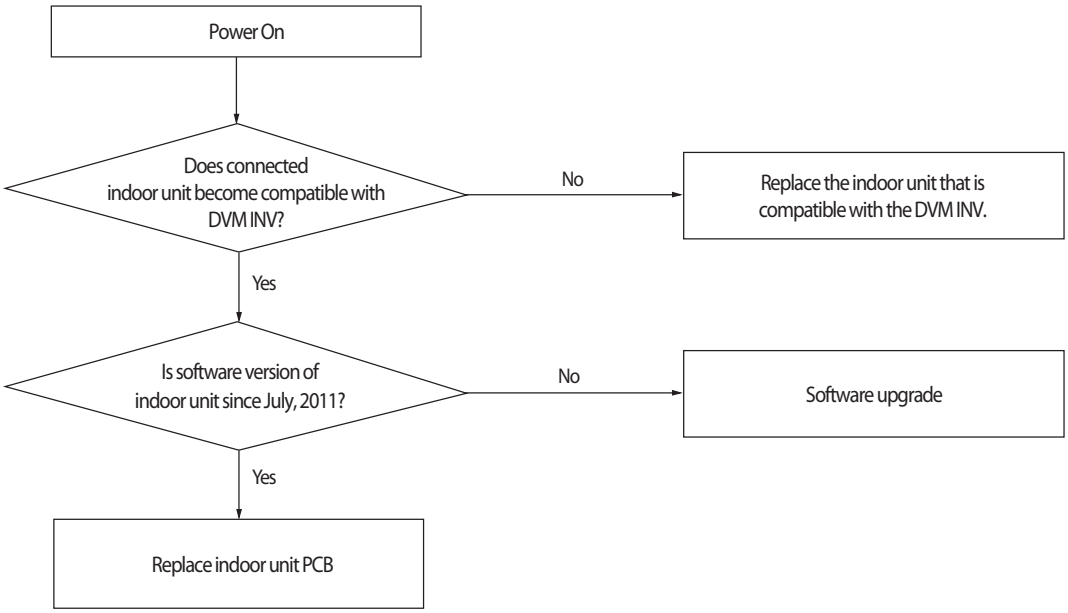
1. Cause of problem



4-3-40 Model mismatching of Indoor unit.

Outdoor unit display	E563
Judgment Method	· Prior to July 2011, if the software version of the indoor unit. · Prior to July 2011, if the software version of the indoor unit.
Cause of problem	· Check the software version of the indoor unit. · Check whether the support of the indoor unit.

1. Cause of problem



4-3-41 Breakdown of an EEV closure

1. How to diagnose

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

Tair in - Teva in in ≥ 4℃	OK
Tair in - Teva out in ≥ 4℃	OK
Tcond, out - Tair, out > 3℃	NO
Compressor in operation & Indoor unit operation & Thermo On	OK
Error details	EEV closure breakdown

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

   · When more than 2 indoor units are on Thermo On heating operating.

   · When average high pressure is over 25 kg/cm^{2}G

   · 5 minutes after finishing Safety Start.

   · Keep indoor units' T(Eva_IN)<T(Room)+3℃ and T(Eva_Out)<T(Room)+3℃ condition for more than five minutes.

2. How to check

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

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

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

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

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

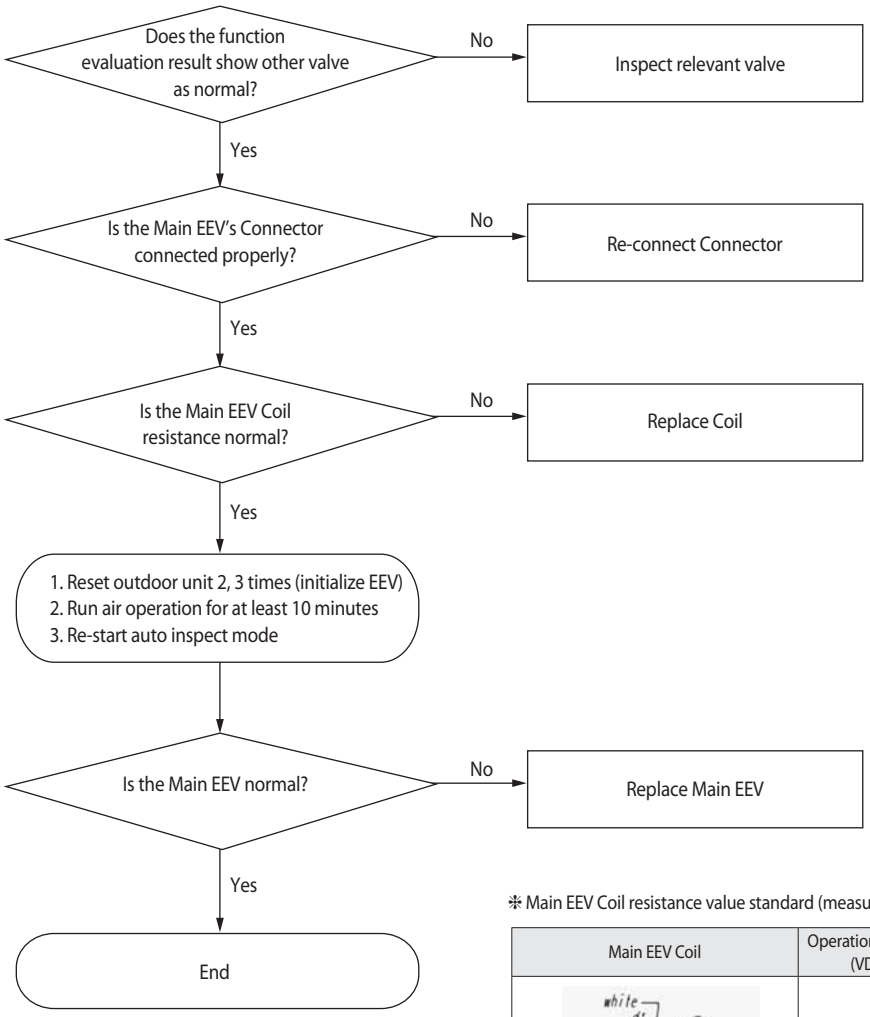
      - In case of opening problem, please do not operate the indoor unit in which the error has occurred.

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

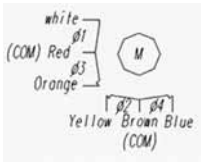
      - As an electronic expansion valve replacement is tricky work that requires collecting refrigerant in all systems, please make sure to check the above items before replacement.

■ Main EEV Auto Inspect

• Evaluates the operation condition of the Main EEV.
• If it is determined that an inspection of the Main EEV is required, please perform the inspection in the following order.
- Error code: None. (Print the S-net pro result report "inspection required")



❊ Main EEV Coil resistance value standard (measured temperature 20°C)

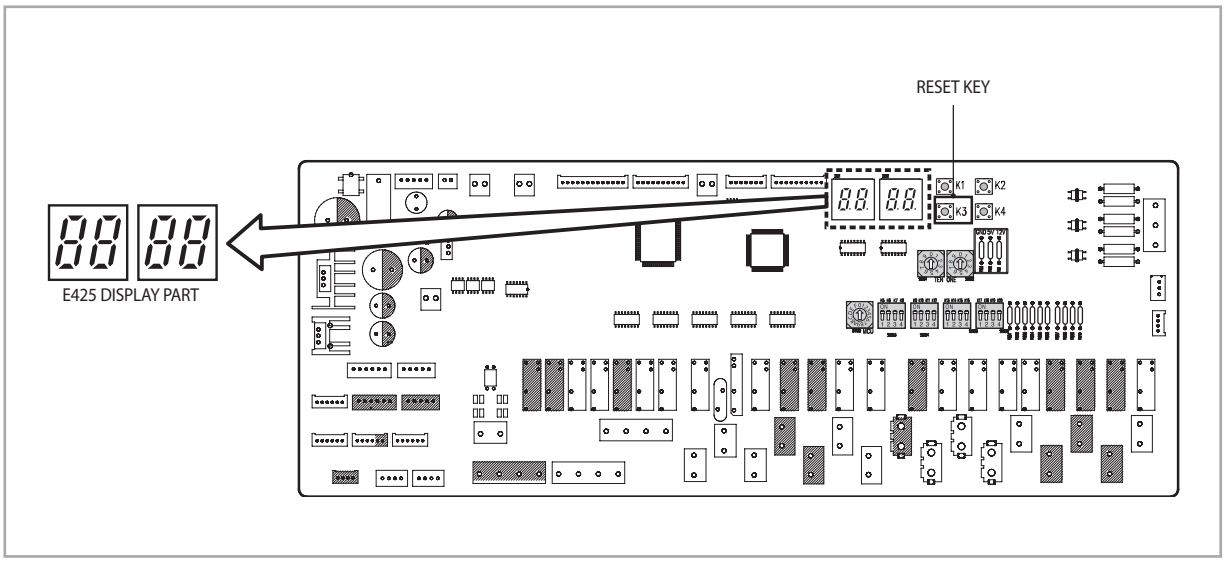
Main EEV Coil	Operation voltage (VDC)	Interphaseresistance (Ω)
	**12±1.2**	Re-Wh Re-Or Br-Ye Br-Bi -------- **150±15**

CAUTION

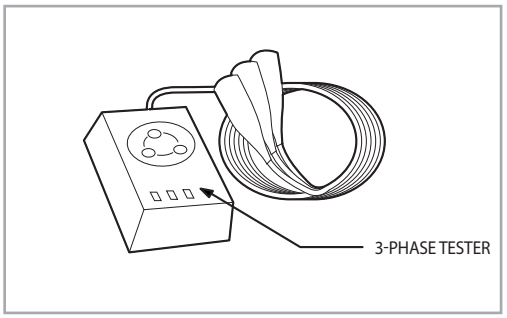
- An "Inspection required" may occur even in normal conditions depending on the installation location and temperature conditions. Before running an inspection, please determine after running a Data analysis of S-net pro.
- Normal inspections may be difficult if Main EEV before entry is open to more than 700 step.
- Examples of when "Inspection required" can occur even in normal conditions:
  a. If outside the auto inspect guaranteed range
  b. If Thermo On/Off occurs in the indoor unit during inspection
  c. If outdoor unit is implanted or if cold air is prevented from running in the indoor unit during inspection…

■ Reversed Phase/No Phase Check (Outdoor Unit with 3 Phase power) – Display E425 for Problem

1. When the power is on, check for the condition of the power used in 3-phase power compressor.
   It will be displayed if the order of the three phases of L1 (R)-L2 (S)-L3 (T) is reversed (reversed phase) or there is no phase power (no phase) and no power coming in. Then air conditioner will then maintain normal conditions.



1) Check the voltage for L1 (R)-L2 (S) phase/L1 (R)-L3 (T) phase/L2 (S)-L3 (T) phase.
2) If there is any terminal without normal voltage, then check the power outside the air conditioner and take the appropriate measures.
3) If the 3-phase voltage is normal, then use the 3-phase tester to display the phase of the power cable. Change the power cable connection if reversed phase is displayed.
4) Take the above measures, press the reset key (K3), and then check the power once more.
5) If the same problem occurs after another check, check the 3-phase power check cable for its color. If there is no problem, then change the PCB.

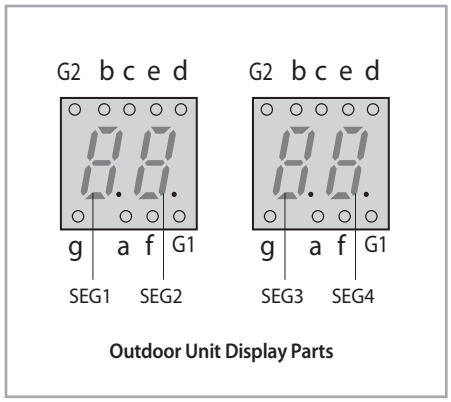


CAUTION

- In case of mis-wiring (N-phase is changed with one of R, S and T) with the N-phase, DVM PLUS IV will operate the power protection function, display E425, and stop the power inflow within a minute.
  This is not a PCB power defect in this case, so the phase of the power ability must be checked with a 3-phase tester before changing the PCB.

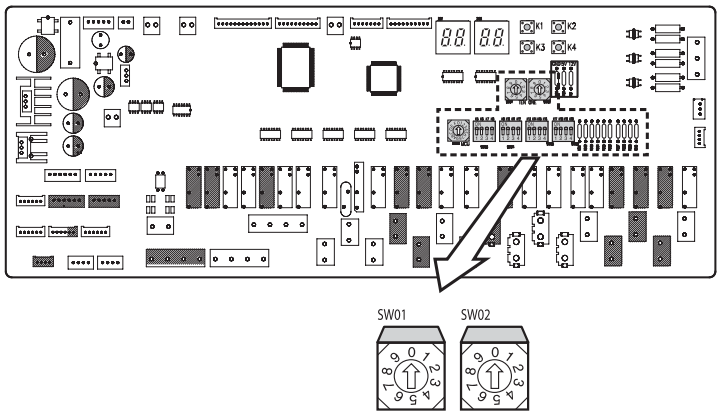
■ Initial Tracking (Communication Check-up) - Display E201 for Problem

1. For the display module of the outdoor unit, there are differences in the contents displayed depending on whether the relevant outdoor unit is a master unit or a sub unit.
   1) Master Unit
      - The outdoor unit Micom attempts communication with the indoor unit connected to the communication cable (F1/F2) when the power is turned on.
      - The two displaying parts on the left show the main address of the indoor units with which the outdoor units are trying to communicate in order. (Example : 0, 1, 2, ~ , 63)
      - The two displayed parts on the right show the main address of the indoor units that succeeded in communication with the outdoor units. (Example : 0, 1, 2, ~ , 63)
      - If the number of indoor units set by the outdoor unit is not in accordance with the number of indoor units that succeeded with communication, then the four displaying parts will display E201.
   2) Sub (Slave) Unit
      – Displays the Micom address of the main PBA inside the sub unit connected to the master unit in order (Example : C9, CA, CB, CC, CD, CE, DF)



Outdoor Unit Display Parts

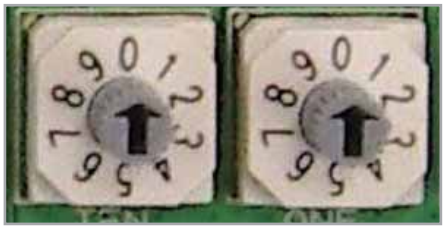
2. The number of the indoor Units Connected to the outdoor unit can be configured by using the indoor unit installation quantity setup switch.



◆ Indoor Unit Installation Quantity Setup Switch

The following is an example of how to use the switch according to the number of indoor unit installations. The maximum number of possible indoor unit connections is 64.

3 Units Connected		17 Units Connected		31 Units Connected		64 Units Connected	
Ten's Digit	One's Digit	Ten's Digit	One's Digit	Ten's Digit	One's Digit	Ten's Digit	One's Digit
0	3	1	7	3	1	6	4

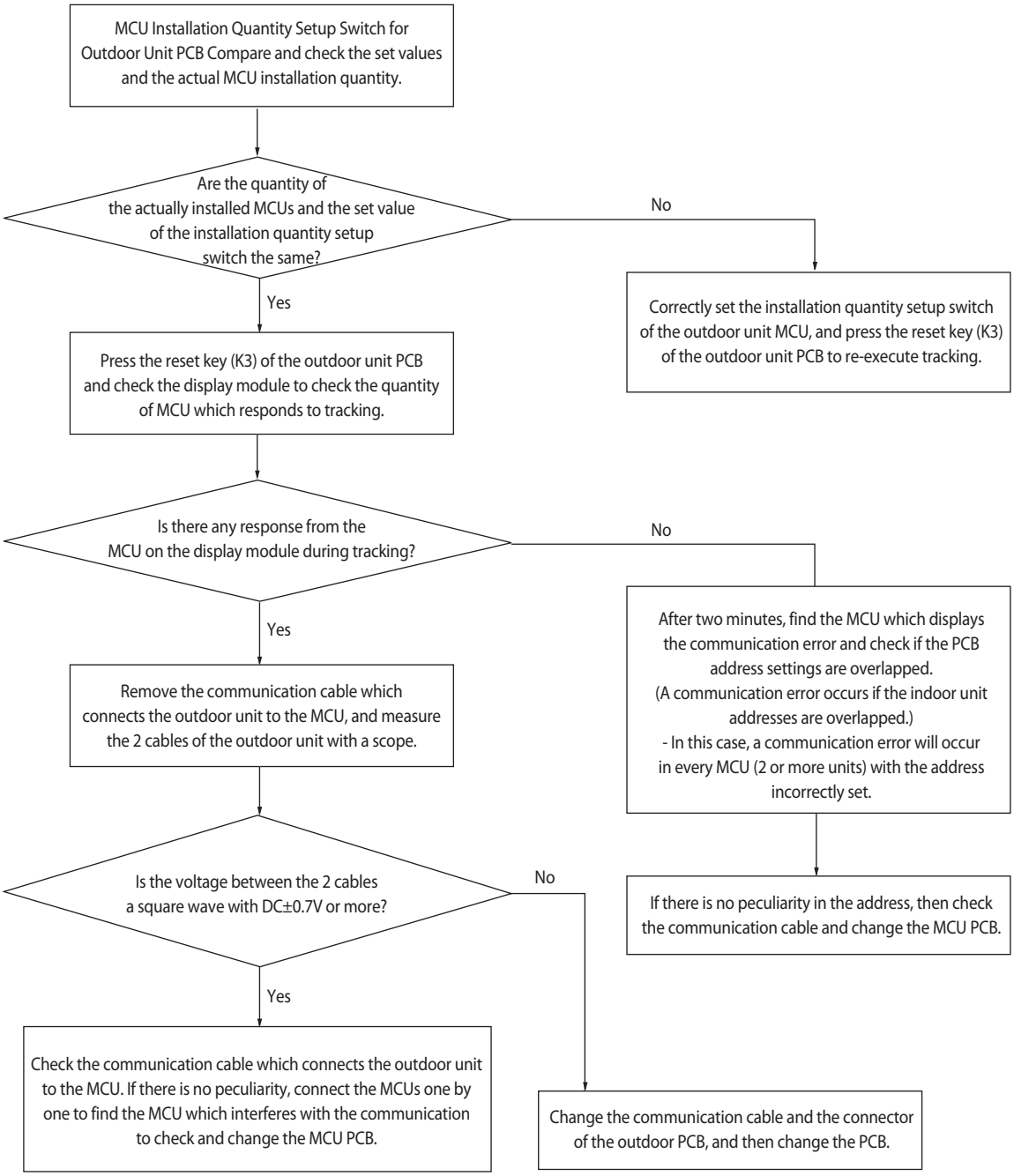

Ten's Digit (0~9) One's Digit (0~9)

3. If the quantity of the indoor units configured with the indoor unit installation quantity setup switch does not match the quantity of the indoor units found during the tracking process, 201 and U200 will be displayed in order on the display module.

4-3-42 Communication Error between MCU and Outdoor Unit

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

1. Inspection Method

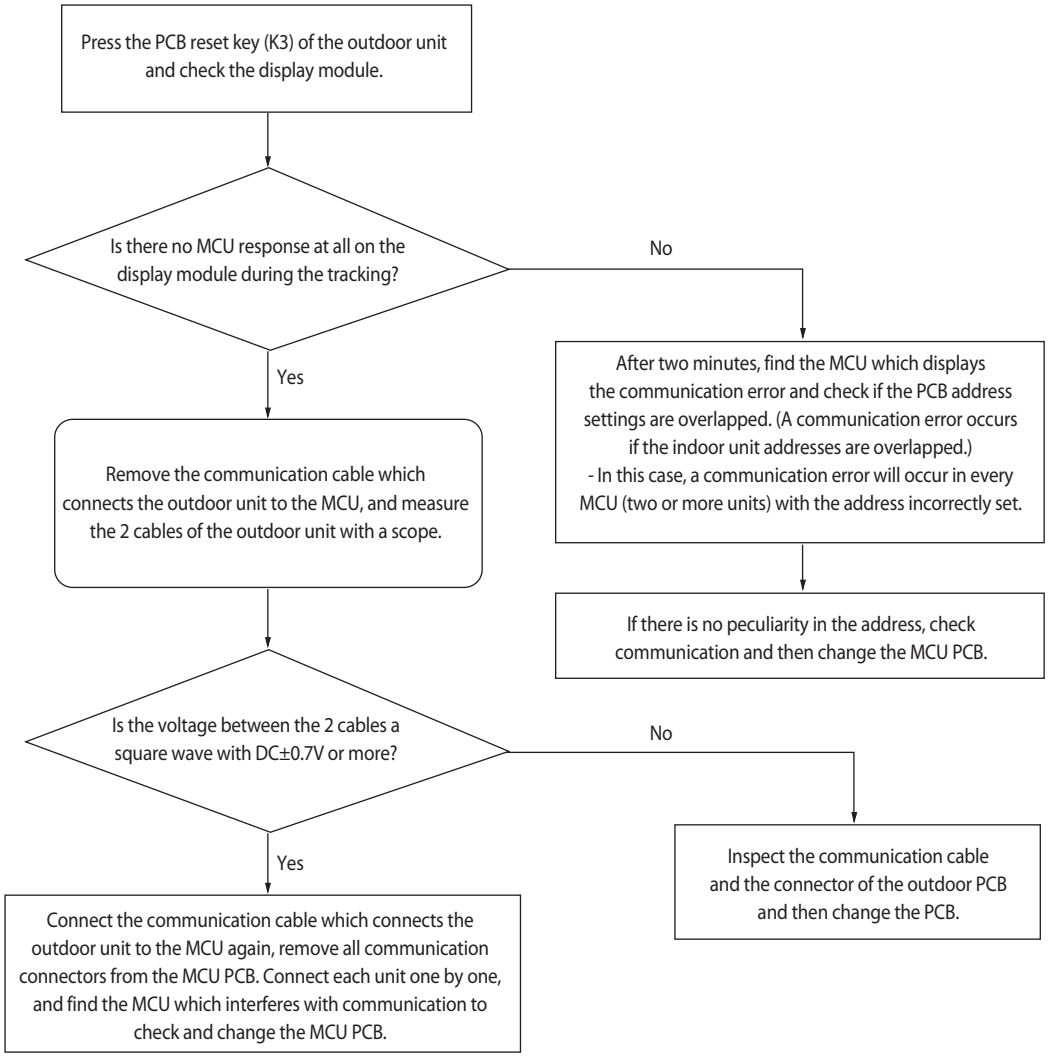


❊ **Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80**

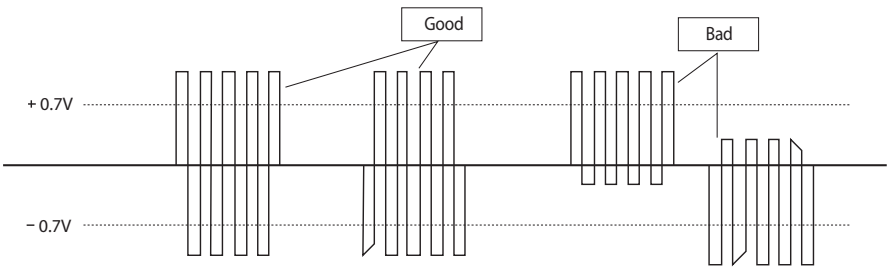
4-3-43 Communication Error between MCU and Outdoor Unit after Tracking is Completed

Outdoor Unit Display	E210
Indoor Unit Display	-
Judgment Method	• Outdoor unit is unable to communicate for two or more minutes during operation (no reception of relocation)
Special Cause	• Communication error between indoor and outdoor units and setup error of indoor unit installation quantity setup switch

1. Inspection Method



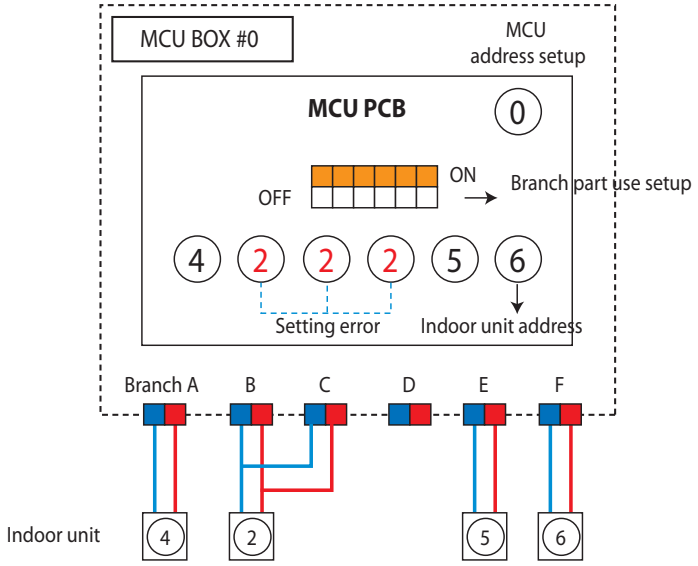
❊ **Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80**



4-3-44 MCU branch part setup error – Repeated setup for the same address over 3 times

Outdoor unit display	E212
Indoor unit display	×(Operation) ◑(Timer) ◑(Fan) ◑(Filter) ×(Defrost)
Criteria	• The same indoor unit address was setup more than 3 times in MCU
Cause of problem	• MCU indoor unit address setting error

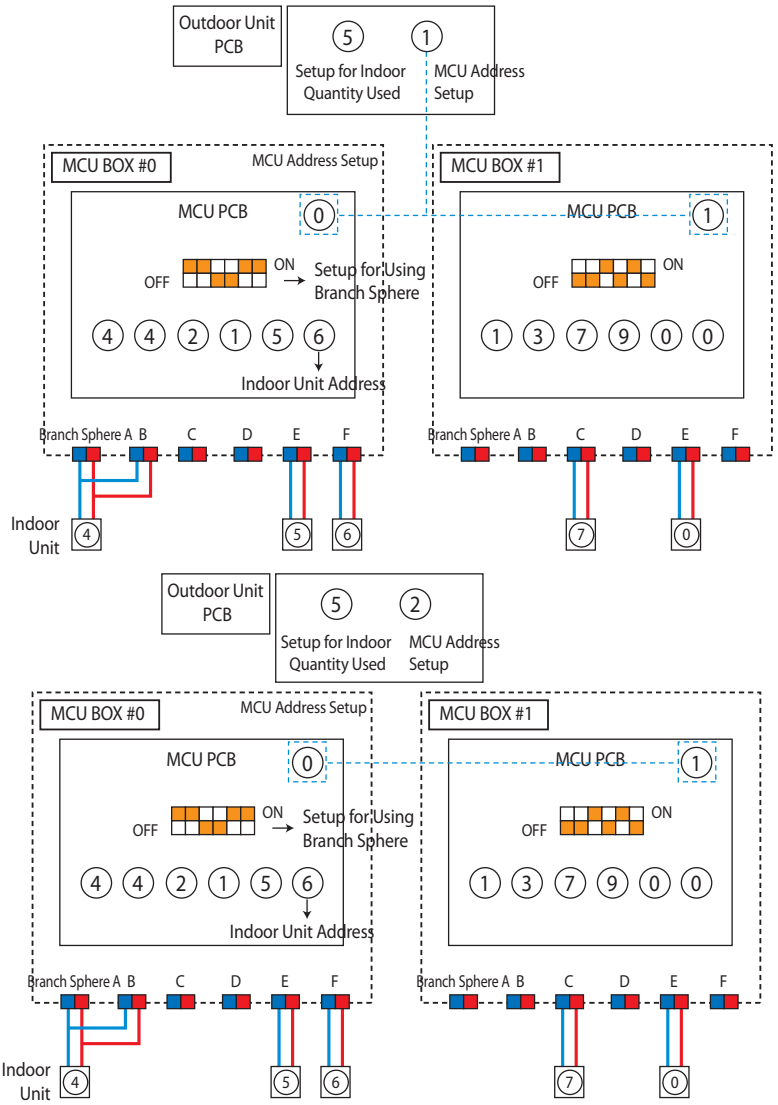
1. How to check
   Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.



4-3-45 Setup Error for MCU Branch part – Setup Error for MCU Quantity Used

Outdoor Unit Display	E2 14
Indoor Unit Display	×(Operation) ◑(Reservation) ◑(Blast) ◑(Filter) ×(Defrost)
Judgment Method	• Occurs when the quantity of MCU is incorrectly set by the outdoor unit. • Occurs when same addresses are found when two or more MCU are connected.
Special Cause	• Outdoor unit MCU setup and same address errors when connecting two or more MCUs .

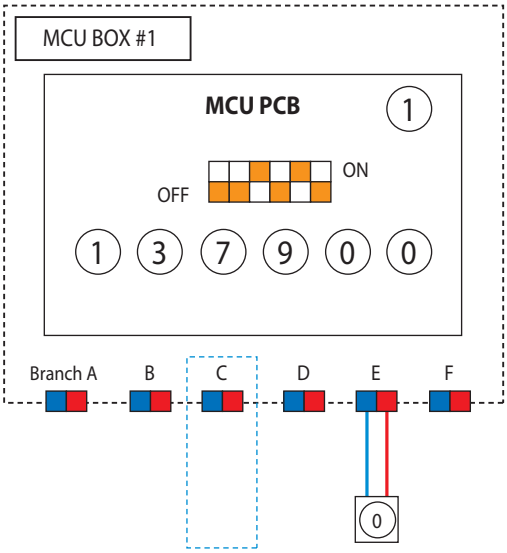
1. Inspection Method : Re-check the MCU quantity setup switch from the outdoor unit.
   Check for overlaps in each MCU address setup switch.
   To use, reset by pressing the K3 button of the outdoor unit after the reset is completed, or reset after turning off the power and then turn it on again.



4-3-46 MCU branch part setup error – Set as being used without connection to an Indoor unit

Outdoor unit display	E216
Indoor unit display	×(Operation) ◑(Timer) ◑(Fan) ◑(Filter) ×(Defrost)
Criteria	• Occurs when MCU PIPE is set as being used, yet not connected to an indoor unit
Cause of problem	• Pipe is not installed to the indoor unit with assigned address on MCU

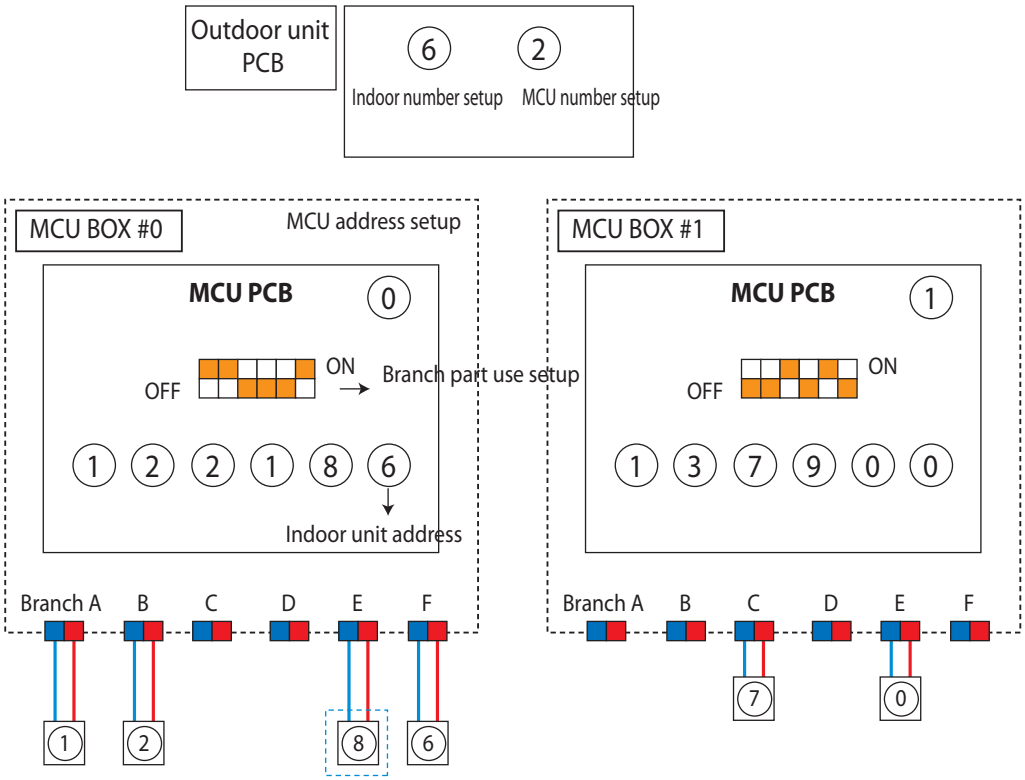
1. How to check
   Adjust the Dip switch that sets up the use of MCU branch part to 'Not-Used'. After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.



4-3-47 MCU branch part setup error – Connect more Indoor units than what is actually set up in MCU

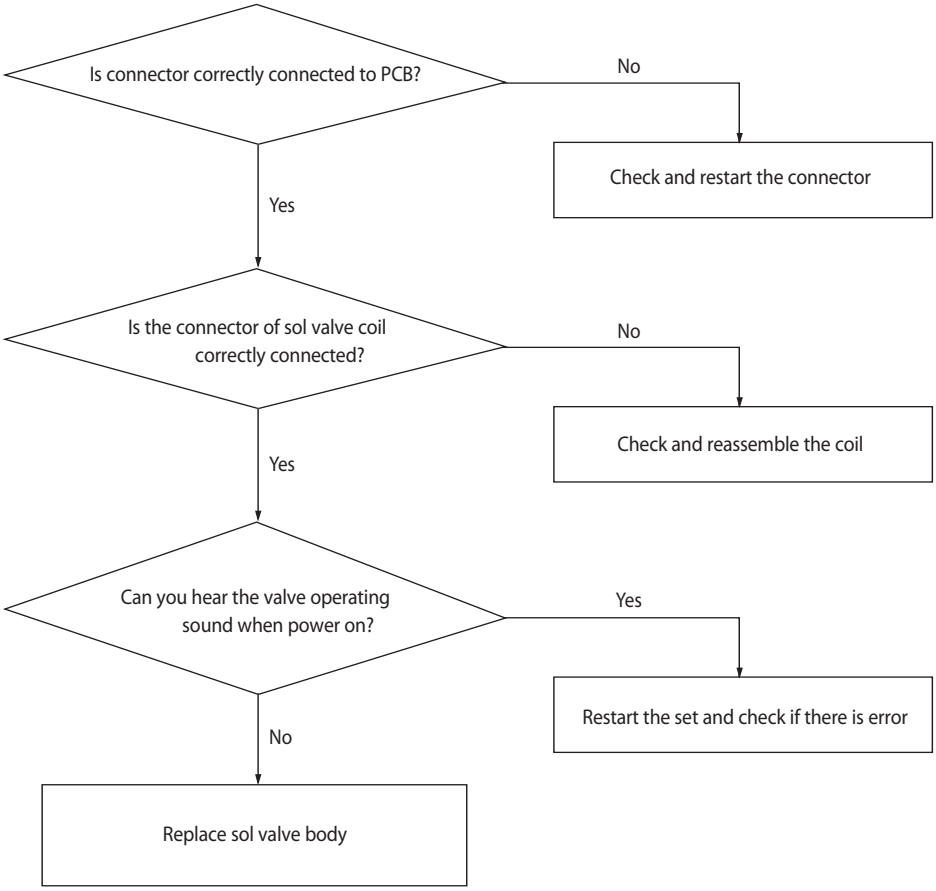
Outdoor unit display	E218
Indoor unit display	×(Operation) ◑(Timer) ◑(Fan) ◑(Filter) ×(Defrost)
Criteria	• Occurs when the number of indoor units installed exceeds that registered in MCU
Cause of problem	• Number of indoor units exceeds number of indoor units entered on MCU setting

1. How to check
   Check the number of indoor units connected to MCU then readjust the switch for the number of units
   After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.



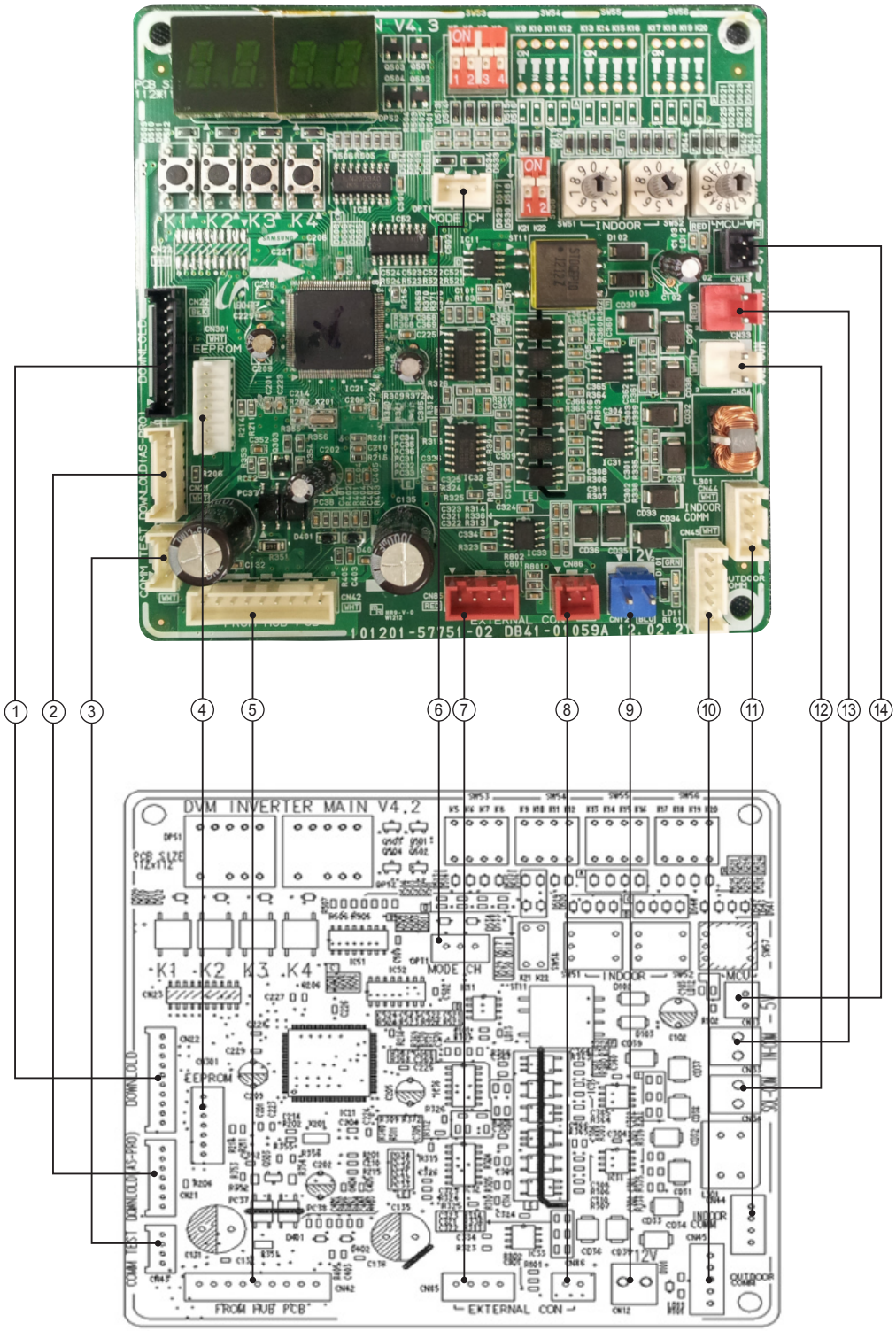
4-3-48 Main Cooling Sol Valve Open Error

1. How to check



5. PCB Diagram and Parts List

5-1 ASS'Y PCB MAIN

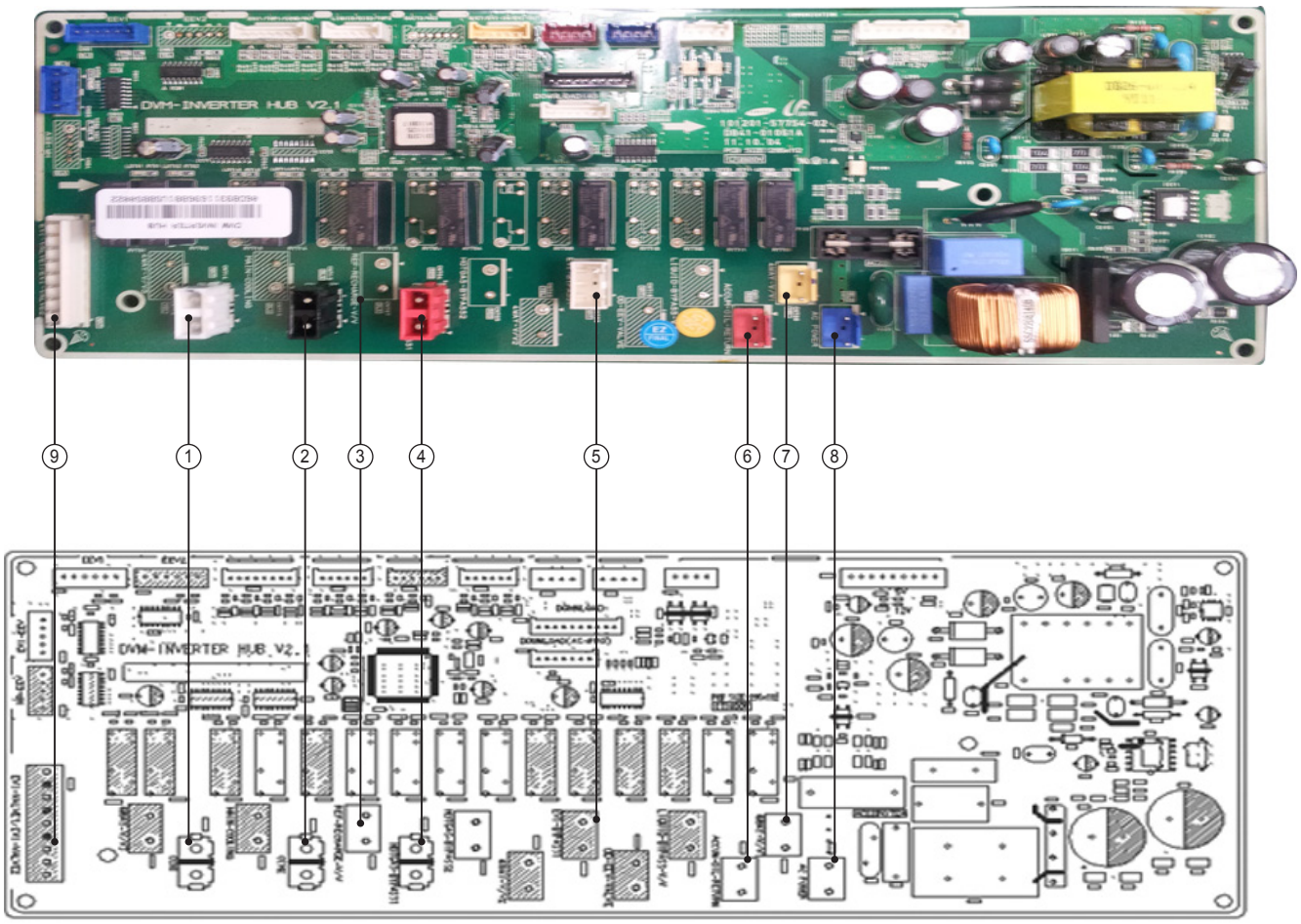


ASS'Y PCB MAIN (cont.)

① CN22-PC DOWN LOADER PART #1 : RX-DOWN #2 : TX-DOWN #3 : N-TRST #4 : TDO #5 : TCK #6 : TDI #7 : TMS #8 : #9 : GND #10 : VCC	② CN21-ASPRO DOWN LOADER PART #1 : VCC #2 : MODE0 #3 : RESET_MAIN #4 : #5 : F_SCLK #6 : F_SDAT #7 : GND	③ CN43-COMM TEST #1 : 12V #2 : INVERTER-INRUSH-OUT #3 : INVERTER-COMM #4 : GND	④ CN301-EEPROM #1 : GND #2 : #3 : VCC #4 : EEPROM-SELECT #5 : EEPROM-SO #6 : EEPROM-SI #7 : EEPROM-CLOCK
⑤ CN42 - HUB COMMUNICATION #1 : 12V #2 : INVERTER-INRUSH-OUT #3 : INVERTER-COMM #4 : GND #5 : HIGH-PRESSURE-SENSOR #6 : LOW-PRESSURE-SENSOR #7 : ZERO-CROSSING #8 : GND #9 : VCC	⑥ OPTI -MODE SELECTOR #1 : KEY3 #2 : GRID #3 : KEY4	⑦ CN85-STATE CHECK #1 : 12V #2 : ERROR-CHECK-OUT #3 : 12V #4 : COMP-CHECK-OUT	⑧ CN86-OUTSIDE CONTROLLER #1 : CONTROL #2 : GND
⑨ CN12 - TRANSMITTER DC POWER 12V #1 : 12V #2 : GND	⑩ CN45 -OUTDOOR UNIT COMM. #1 : COM-C #2 : COM-D #3 : #4 : 12V #5 : GND	⑪ CN44 - INDOOR UNIT COMM. #1 : COM-A #2 : COM-B #3 : 5V #4 : AGND	⑫ CN34-NONUSE COMM. #1 : COM-E #2 : COM-F
⑬ CN33-INDOOR UNIT COMM. (REDUNDANCY) #1 : COM-A #2 : COM-B	⑭ CN13-POWER 5V #1 : COM-A #2 : COM-B		

5-2 ASS'Y PCB MAIN-HUB

■ AC



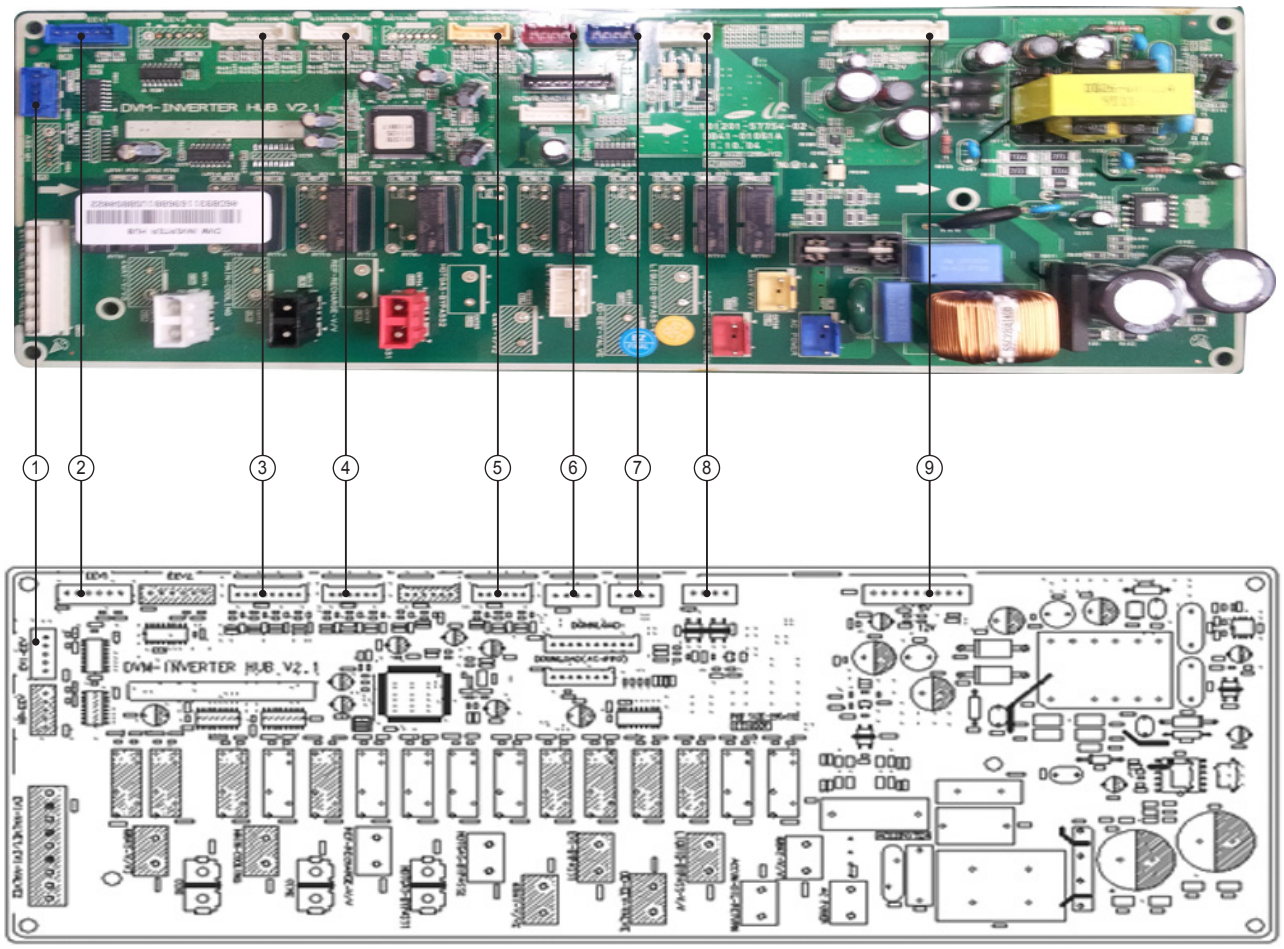
ASS'Y PCB MAIN-HUB (cont.)

■ AC (cont.)

① CN714-CCH1 #1 : N #2 : CCH1	② CN713-CCH2 #1 : N #2 : CCH2	③ CN707-REF-RECHARGE #1 : REF-RECHARGE V/V #2 : N	④ CN704-HOTGASVALVE1 #1 : N #2 : HOTGAS BYPASS1
⑤ CN705-HOTGASVALVE2 #1 : HOTGAS BYPASS2 #2 : N	⑥ CN711-OIL RETURN VALVE #1 : ACCUM OIL RETURN VALVE #2 : N	⑦ CN708- 4-WAY VALVE #1 : 4-WAY VALVE #2 : N	⑧ CN70-AC #1 : AC #2 : AC
⑨ CN701 #1: EVI V/V 1 # 3: EVI V/V 2			

ASS'Y PCB MAIN-HUB (cont.)

■ DC

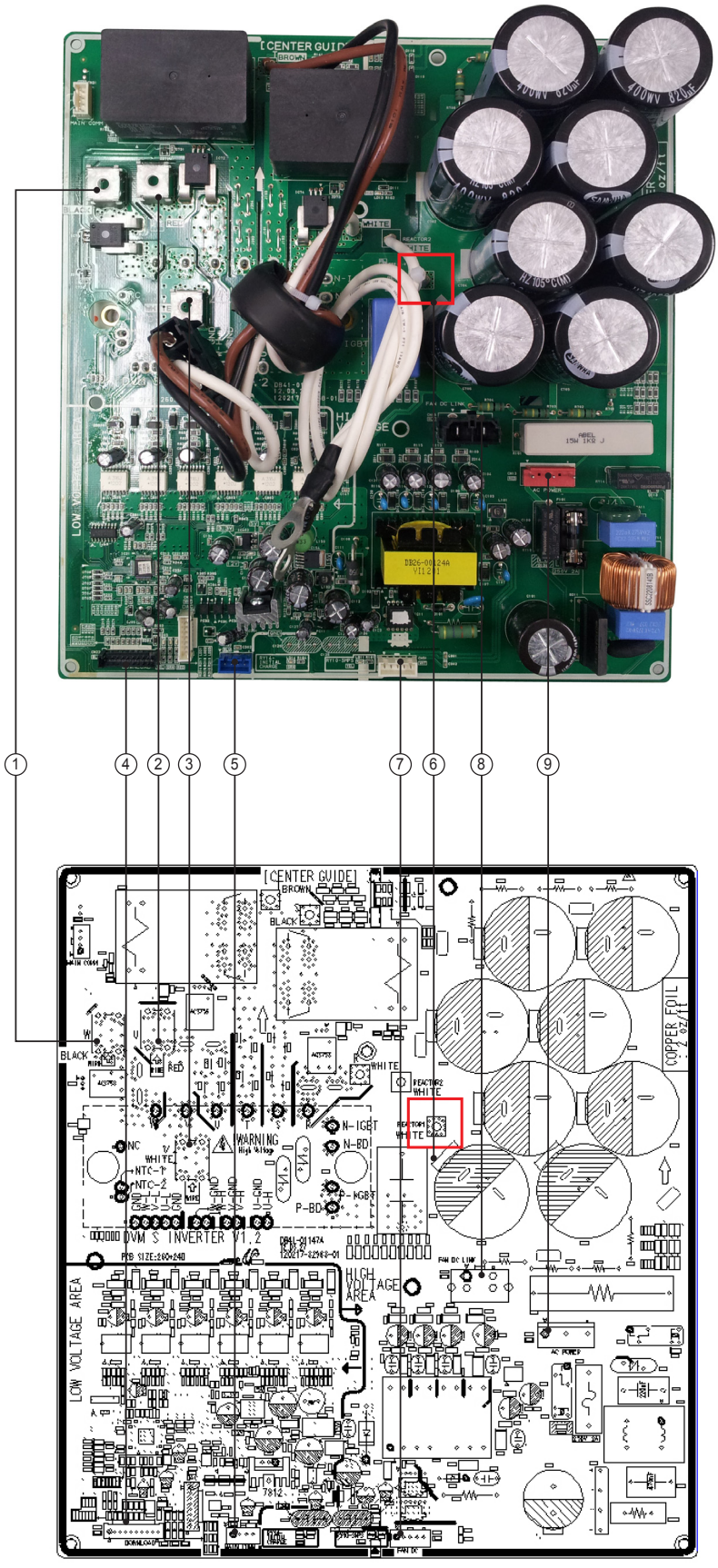


ASS'Y PCB MAIN-HUB (cont.)

■ DC (cont.)

① CN83-EVI EEV #1 : RX-DOWN #2 : TX-DOWN #3 : N-TRST #4 : TDO #5 : TCK #6 : TDI #7 : TMS #8 : #9 : GND #10 : VCC	② CN81-EEV1 #1 : VCC #2 : MODE0 #3 : RESET_MAIN #4 : #5 : F_SCLK #6 : F_SDAT #7 : GND	③ CN43-TEMP. SENSOR #1 : COMP1 DISACHRGE #2 : COMP1 DISCHARGE #3 : COMP1 TOP #4 : COMP1 TOP #5 : COND OUT #6 : COND OUT #7 : OUTDOOR TEMP. #8 : OUTDOOR TEMP.	④ CN45-TEMP. SENSOR #1 : LIQUID #2 : LIQUID #3 : COMP2 DISCHARGE #4 : COMP2 DISCHARGE #5 : COMP2 TOP #6 : COMP2 TOP
⑤ CN44 – TEMP. SENSOR #1 : SUCCTION #2 : SUCTION #3 : EVI INLET #4 : ENI INLET #5 : ENI OUT #6 : EVI OUT	⑥ CN42I –HIGH PRESSURE SENSOR #1 : HIGH PRESSURE SENSOR #3 : GND #4 : VCC	⑦ CN41 - LOW PRESSURE SENSOR #2 : LOW PRESSURE SENSOR #3 : GND #4 : VCC	⑧ CN97-TO FAN COMM. #1 : 12V #2 : INV-SMPS #3 : COMM-OUT #4 : GND
⑨ CN96 – MAIN –HUB COMM. #1 : CN12 #2 : INV_SMPS_RELAY #3 : GOMM-IN #4 : GND #5 : HIGH-PRESSURE-SENSOR #6 : LOW-PRESSURE-SENSOR #7 : ZERO-CROSSING #8 : GND #9 : VCC			

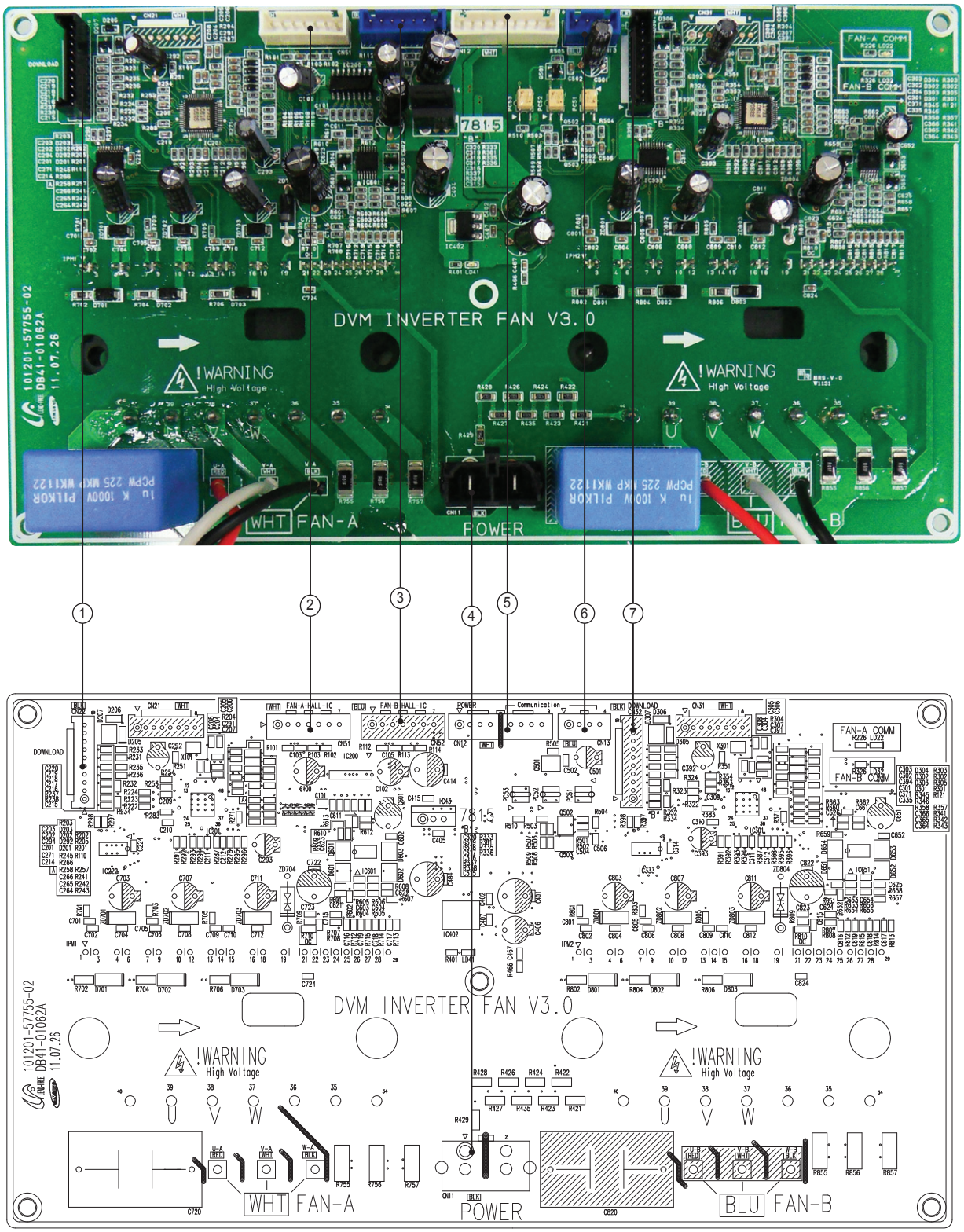
5-3 ASS'Y PCB INVERTER



ASS'Y PCB SUB-DRIVER (cont.)

① W- COMP W #1 : COMP W	② U-COMP U #1 : COMP U	③ V-COMP V #1 : COMP V	④ CN22-DOWNLOAD #1 : RX-DOWN #2 : TX-DOWN #3 : N-TRST #4 : TDO #5 : TCK #6 : TDI #7 : TMS #8 : #9 : GND #10 : VCC
⑤ CN32 – MAIN COMM #1 : 12V-MAIN #2 : IN-SMPS-RELAY #3 : COMM-IN #4 : GND-MAIN	⑥ REACTOR (WIRE CONNECTION) #1 : REACTOR #2 : REACTOR	⑦ CN91 - FAN DC #1 : 18V #2 : GND #3 : 5V-FAN #4 : AD-SELECT	⑧ CN15-FAN DC LINK #1 : 500V #2 : GND(500V)
⑨ CN13 - ACPOWER #1 : AC #2 : #3 : AC			

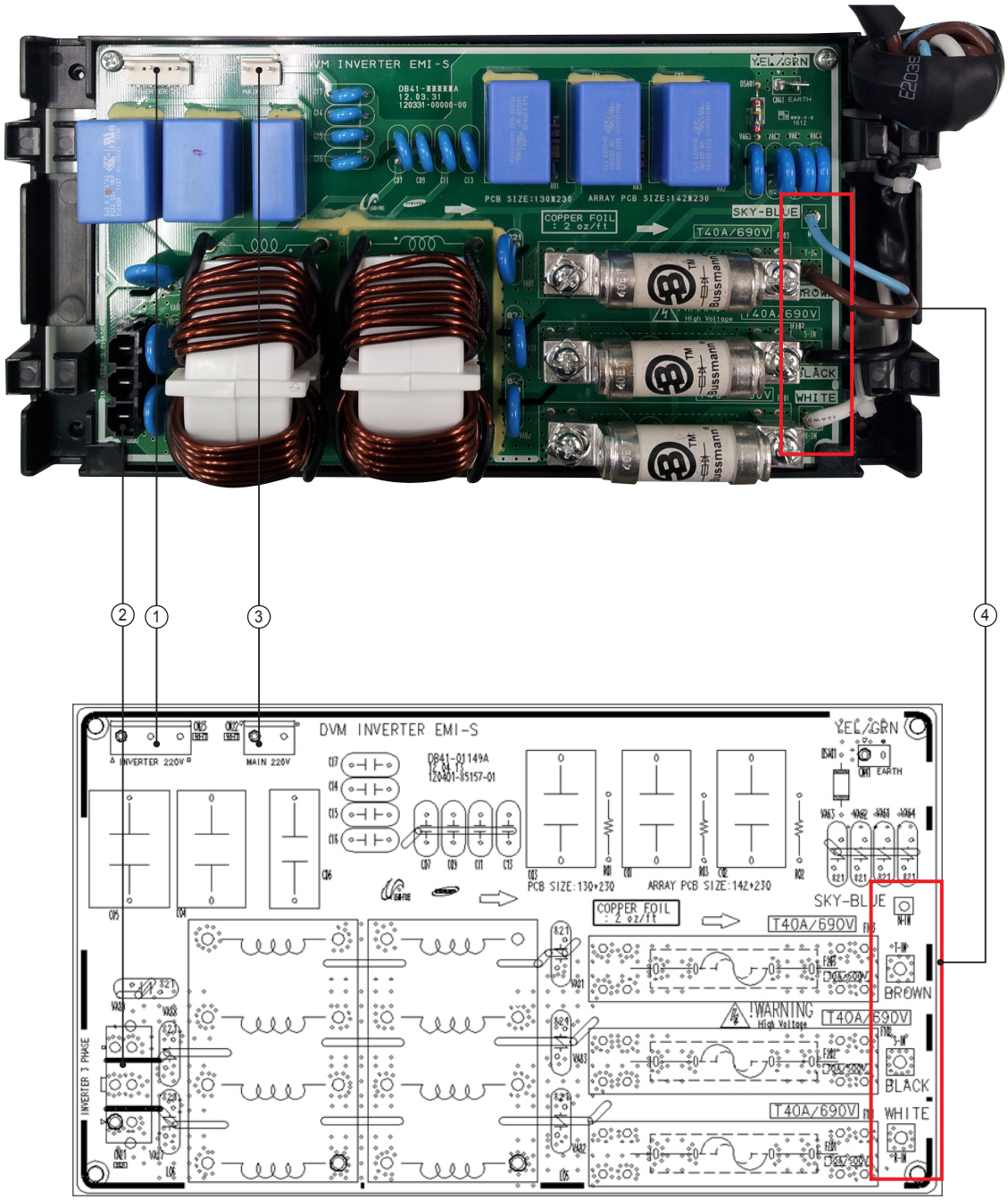
5-4 ASS'Y PCB FAN



ASS'Y PCB FAN (cont.)

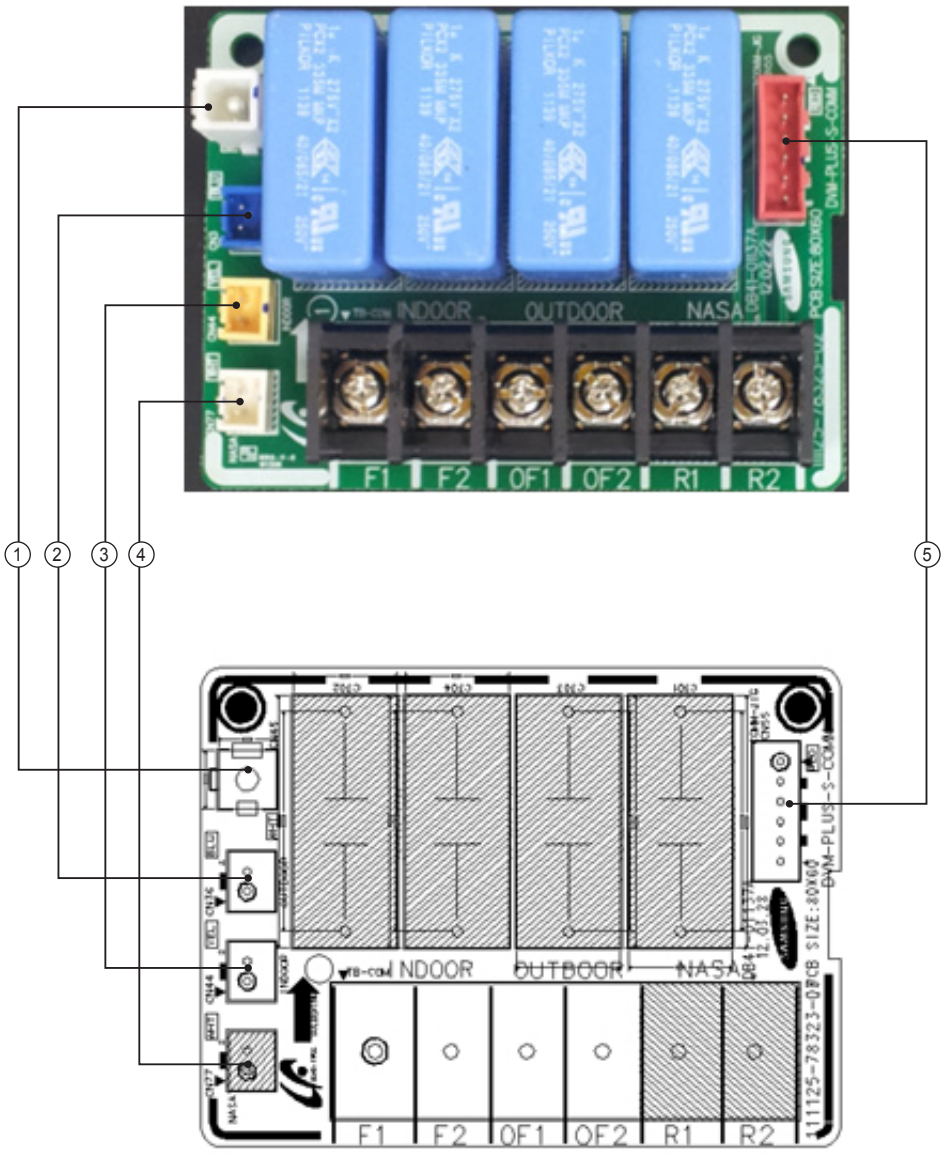
① CN22- DOWNLOAD1	② CN51-FANA-HALL	③ CN52-FANB_HALL	④ CN11 – POWER
#1 : RX-DOWN #2 : TX-DOWN #3 : N-TRST #4 : TDO #5 : TCK #6 : TDI #7 : TMS #8 : #9 : GND #10 : VCC	#1 : HALL-U #2 : 5V #3 : HALL-V #4 : GND #5 : HALL-W #6 : MT-TEMP #7 : GND	#1 : HALL-U #2 : 5V #3 : HALL-V #4 : GND #5 : HALL-W #6 : MT-TEMP #7 : GND	#1 : 500V #2 : GND(500V)
⑤ CN12-CONRTOL POWER	⑥ CN13- COMM	⑦ CN32-DOWNLOAD2	
#1 : 18V #2 : GND #3 : COMM-IN #4 : GND-MAIN #5 : #6 : 12-MAIN #7 : IN-SMPS-RELAY #8 : COMM-OUT #9 : GND-MAIN	#1 : 12-MAIN #2 : IN-SMPS-RELAY #3 : COMM-OUT #4 : GND-MAIN	#1 : RX-DOWN #2 : TX-DOWN #3 : N-TRST #4 : TDO #5 : TCK #6 : TDI #7 : TMS #8 : #9 : GND #10 : VCC	

5-5 ASS'Y PCB EMI



① CN23- INVERTER 220V	② CN21-FAN A	③ CN22-MAIN 220	④ RST- RST INPUT
#1 : AC	#1 : R	#1 : AC	T-IN
#2 :	#2 : S	#2 : AC	S-IN
#3 : AC	#3 : T		R-IN

5-6 SUB-COMM



① CN44	② CN36	③ CN#44	④ CN45	⑤ CN55
#1 : F1 #2 : F2	#1 : OF1 #2 : OF2	#1 : R1 #2 : R2	GND	#1 :F1 #2 :F2 #3 :OF1 #4 :OF2 #5 :R1 #6 :R2

5-7 ASS'Y PCB MAIN-OUT : DB93-11697B

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
SW51	3406-001140	SWITCH-ROTARY	24V,0.4A,5P,7.3mm	1	SNA	
SW52	3406-001140	SWITCH-ROTARY	24V,0.4A,5P,7.3mm	1	SNA	
SW57	3406-001142	SWITCH-ROTARY	24V,0.4A,5P,7.3mm	1	SNA	
SW58	3407-000119	SWITCH-DIP	24V,300mA,SLIDE,-	1	SNA	
SW53	3407-000121	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1	SNA	
CN44	3711-000012	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
OPT1	3711-000024	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN12	3711-000176	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96mm,STRAIGHT,SN,BLU	1	SNA	
CN33	3711-000177	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,RED	1	SNA	
CN34	3711-000178	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96mm,STRAIGHT,SN,WHT	1	SNA	
CN13	3711-000794	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5mm,STRAIGHT,SN,BLK	1	SNA	
CN86	3711-000796	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5MM,STRAIGHT,SN,RED	1	SNA	
CN85	3711-000939	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,STRAIGHT,SN,RED	1	SNA	
CN45	3711-000999	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1	SNA	
CN42	3711-001154	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN21	3711-003873	HEADER-BOARD TO CABLE	BOX,7P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN43	3711-004379	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN301	3711-007817	HEADER-BOARD TO BOARD	3WALL,7P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
DP51	DB07-00054A	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16			
			SEGMENT,2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1	SNA	
DP52	DB07-00054A	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16 SEGMENT,			
			2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1	SNA	
ST11	DB26-00118A	TRANS SWITCHING	EE1916-200,TOP253PN,PL-3 EI1916,50/60Hz,1.05mH	1	SNA	
L301	DB27-00070A	COIL CHOKE	CV005180SJ,JSF2,18.0,+50~-30%,430mohm,			
			14*16*10,8.4/3.4,4.0,-25~+60	1	SNA	
C102	2401-000287	C-AL	100uF,20%,16V,WT,TP,6.3x11,5	1	SNA	
C202	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C205	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C209	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C131	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
C135	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
	DB93-13549A	ASSY PCB SMD	DVM PLUS S,MAIN,N	1	SNA	
D101	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D401	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D402	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D501	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D502	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D503	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D504	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D505	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D506	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D507	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D508	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D509	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D510	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D511	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D512	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D513	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D514	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D515	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	

ASS'Y PCB MAIN-OUT : DB93-11697B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D516	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D529	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D530	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D533	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D534	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D541	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D542	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D543	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D544	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D102	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
D103	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
CD31	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD32	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD33	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD34	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD35	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD36	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD37	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD38	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD39	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
Q303	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
Q501	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
Q502	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
Q503	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
Q504	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
IC51	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC52	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD11	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD13	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD12	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC32	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC35	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC37	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC38	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC31	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC33	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC34	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC36	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
IC32	0801-000393	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-, 2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1	SNA	
IC36	0801-000393	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-, 2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1	SNA	
IC11	1003-001081	IC-DRIVER	MAX845ESA,SOP,8P,116MIL,SINGLE	1	SNA	
IC31	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC, 5V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	
IC33	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC, V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	
IC35	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST,PLASTIC, 5V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	

ASS'Y PCB MAIN-OUT : DB93-11697B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R202	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R201	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R315	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R340	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R369	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R353	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R802	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R215	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R303	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R304	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R305	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R306	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R311	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R312	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R313	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R314	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R338	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R339	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R355	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R361	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R362	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R363	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R364	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R367	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R368	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R370	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	
R501	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R502	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R503	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R504	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R505	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R506	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R507	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R102	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R103	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R356	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R216	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R307	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R308	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R309	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R310	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R323	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R324	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R325	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R326	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R365	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R366	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R371	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB MAIN-OUT : DB93-11697B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R372	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R402	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R404	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R521	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R522	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R523	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R524	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R801	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R211	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R214	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R335	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R336	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R360	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R401	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R403	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R352	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R354	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R351	2007-000824	R-CHIP	390ohm,5%,1/4W,TP,3216	1	SNA	
R206	2007-000869	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	1	SNA	
C521	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C522	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C523	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C524	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C301	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C302	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C303	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C321	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C322	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C323	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C334	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C352	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	
C362	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C363	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C403	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C306	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C309	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C311	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C364	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C368	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C369	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C132	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C136	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C223	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C224	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C225	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB MAIN-OUT : DB93-11697B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C226	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C227	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C228	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C229	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C304	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C305	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C307	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C308	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C310	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C324	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C325	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C326	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C360	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C365	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C366	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C367	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C370	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C401	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C402	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C404	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C405	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C501	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C502	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C801	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C201	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C204	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
X201	2802-001165	RESONATOR-CERAMIC	4MHz,0.5%,TP,4.5x2.0x1.15mm	1	SNA	
PCB	DB41-01059A	PCB MAIN-OUT	DVM INV, RD200CHXH1,FR-4,2,00,T1.6, OUTDOOR,1,MAIN,DVM INV,600V	1	SNA	
IC21	DB91-01425A	ASSY-MIC	DVM Plus S Main Micom,STM-113E-OS, S3FM02G, 128TQFP, ROM 384KB	1	SNA	
IC21	DB09-00596A	IC MICOM	S3FM02G,128P,DC3V,TQFP,-40~+85,384K	1	SNA	
K1	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K2	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K3	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K4	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	

5-8 ASS'Y PCB MAIN-HUB : DB93-11696B

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
SW51	3406-001140	SWITCH-ROTARY	24V,0.4A,5P,7.3mm	1	SNA	
SW52	3406-001140	SWITCH-ROTARY	24V,0.4A,5P,7.3mm	1	SNA	
SW58	3407-000119	SWITCH-DIP	24V,300mA,SLIDE,-	1	SNA	
SW53	3407-000121	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1	SNA	
SW54	3407-000121	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1	SNA	
SW55	3407-000121	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1	SNA	
SW56	3407-000121	SWITCH-DIP	24V,300mA,SLIDE,STANDARD	1	SNA	
CN44	3711-000012	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
OPT1	3711-000024	HEADER-BOARD TO CABLE	BOX,3P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN12	3711-000176	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96mm,STRAIGHT,SN,BLU	1	SNA	
CN33	3711-000177	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96MM,STRAIGHT,SN,RED	1	SNA	
CN34	3711-000178	HEADER-BOARD TO CABLE	1WALL,2P,1R,3.96mm,STRAIGHT,SN,WHT	1	SNA	
CN13	3711-000794	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5mm,STRAIGHT,SN,BLK	1	SNA	
CN86	3711-000796	HEADER-BOARD TO CABLE	BOX,2P,1R,2.5MM,STRAIGHT,SN,RED	1	SNA	
CN85	3711-000939	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,STRAIGHT,SN,RED	1	SNA	
CN45	3711-000999	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1	SNA	
CN42	3711-001154	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5MM,STRAIGHT,SN,WHT	1	SA	
CN21	3711-003873	HEADER-BOARD TO CABLE	BOX,7P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN43	3711-004379	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN301	3711-007817	HEADER-BOARD TO BOARD	3WALL,7P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
DP51	DB07-00054A	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16 SEGMENT, 2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1	SNA	
DP52	DB07-00054A	LED DISPLAY	SSD-A3202GS-A13,LED DISPLAY,2 DIGIT,16 SEGMENT, 2 DIGIT,16.6x16x13mm,GREEN,50mW,9	1	SNA	
ST11	DB26-00118A	TRANS SWITCHING	EE1916-200,TOP253PN,PL-3 EI1916,50/60Hz,1.05mH	1	SNA	
L301	DB27-00070A	COIL CHOKE	CV005180SJ,JSF2,18.0,+50~-30%,430mohm,14*16*10, 8.4/3.4,4.0,-25~+60	1	SNA	
C102	2401-000287	C-AL	100uF,20%,16V,WT,TP,6.3x11,5	1	SNA	
C202	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C205	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C209	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C131	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
C135	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
D101	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D401	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D402	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D501	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D502	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D503	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D504	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D505	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D506	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	

ASS'Y PCB MAIN-HUB : DB93-11696B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D507	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D508	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D509	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D510	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D511	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D512	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D513	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D514	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D515	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D516	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D517	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D518	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D519	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D520	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D521	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D522	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D523	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D524	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D525	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D526	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D527	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D528	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D529	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D530	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D533	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D534	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D541	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D542	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D543	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D544	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D102	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
D103	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
CD31	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD32	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD33	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD34	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD35	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD36	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD37	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD38	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
CD39	0406-001204	DIODE-TVS	SMBJ5.0CA,6.4/-/7.25V,600W,SMB	1	SNA	
Q303	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
Q501	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
Q502	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
Q503	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	

ASS'Y PCB MAIN-HUB : DB93-11696B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
Q504	0504-000001	TR-DIGITAL	DTA114EKA,PNP,200mW,10K/10K,SOT-23,TP	1	SNA	
IC51	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
IC52	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD11	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD13	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD12	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC32	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC35	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC37	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC38	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC31	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC33	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC34	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
PC36	0604-001433	PHOTO-COUPLER	SOP-5,ST	1	SNA	
IC32	0801-000393	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-, 2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1	SNA	
IC36	0801-000393	IC-CMOS LOGIC	74HC86,OR GATE,SOP,14P,150MIL,QUAD,ST,-, 2.0/6.0V,0.26V,-40to+85C,180mW,4.2V,1uA,	1	SNA	
IC11	1003-001081	IC-DRIVER	MAX845ESA,SOP,8P,116MIL,SINGLE	1	SNA	
IC31	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST, PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	
IC33	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST, PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	
IC35	1006-001325	IC-BUS TRANSCEIVER	ISL81487LIBZ,SO,8P,4.9x3.8 mm,SINGLE,ST, PLASTIC,5V,-40to+85C,520mW,1,1,1.5/5.0V	1	SNA	
R202	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R201	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R315	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R340	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R369	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	SNA	
R353	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R802	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R303	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R304	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R305	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R306	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R311	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R312	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R313	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R314	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB MAIN-HUB : DB93-11696B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R338	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R339	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R355	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R361	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R362	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R363	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R364	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R367	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R368	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R370	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	
R501	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R502	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R503	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R504	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R505	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R506	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R507	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R102	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R103	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R356	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R307	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R308	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R309	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R310	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R323	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R324	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R325	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R326	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R365	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R366	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R371	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R372	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R402	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R404	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R521	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R522	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R523	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R524	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R801	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R211	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB MAIN-HUB : DB93-11696B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R214	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R335	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R336	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R360	2007-000116	R-CHIP	120ohm,5%,1/10W,TP,1608	1	SNA	
R401	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R403	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R352	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R354	2007-000766	R-CHIP	330ohm,5%,1/8W,TP,2012	1	SNA	
R351	2007-000824	R-CHIP	390ohm,5%,1/4W,TP,3216	1	SNA	
R206	2007-000869	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	1	SNA	
C301	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C302	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C303	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C321	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C322	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C323	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C334	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C352	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	
C362	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C363	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C403	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C521	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C522	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C523	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C524	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C306	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C309	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C311	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C364	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C368	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C369	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,TP,1608	1	SNA	
C101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C132	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C136	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C211	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C212	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C223	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C224	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB MAIN-HUB : DB93-11696B (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C225	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C226	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C227	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C228	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C229	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C304	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C305	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C307	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C308	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C310	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C324	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C325	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C326	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C360	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C365	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C366	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C367	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C370	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C401	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C402	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C501	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C502	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C801	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C201	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C204	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
X201	2802-001165	RESONATOR-CERAMIC	4MHz,0.5%,TP,4.5x2.0x1.15mm	1	SNA	
PCB	DB41-01059A	PCB MAIN-OUT	DVM INV, RD200CHXH1,FR-4,2,00,T1.6,OUTDOOR,1, MAIN,DVM INV,600V	1	SA	
IC21	DB91-01323A	ASSY-MIC	DVM Inverter Main Micom,STM-109E-OS, S3F4A1H, 100TQFP, ROM 512KB	1	SNA	
IC21	DB09-00596A	IC MICOM	DC3V,TQFP,TQFP,384K	1	SNA	
K11	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K12	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K13	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	
K14	DB98-19891A	ASSY-TACT SWITCH	12V, 50mA,SMD,6x6mm(actuator 4.3mm	1	SNA	

5-9 ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
BD11	0402-001227	DIODE-BRIDGE	D3SBA60,600V,2.3A,SIP-4,BK	1	SNA	
D108	0402-001377	DIODE-RECTIFIER	UG4D,200V,4A,DO-201AD,TP	1	SNA	
IC14	1203-000242	IC-POSI.FIXED REG.	7812,TO-220,3P,-,PLASTIC,11.5/	1	SNA	
IC11	1203-006448	IC-PWM CONTROLLER	TOP267VG,DIP,12P,10.16x8.9mm,			
			PLASTIC,TOP267VG,-40to+150C,5.44,ST	1	SNA	
NTC01	1404-001388	THERMISTOR-NTC	5ohm,6A,3000K,25mW/C,-,18mm,BK	1	SNA	
R161	2006-001149	R-CEMENT,NON	1Kohm,5%,15W,CA,BK,48x12.5x12.5mm	1	SNA	
XC11	2301-001439	C-FILM,LEAD-PPF	220nF,10%,275V,BK,18x10x15.8mm,15	1	SNA	
XC12	2301-001730	C-FILM,MPEF	470nF,10%,275V,BK,11x18x18.5mm	1	SNA	
RY10	3501-001264	RELAY-POWER	12V,200mW,5000mA,1FormA,10ms,10ms	1	SNA	
RY14	3501-001264	RELAY-POWER	12V,200mW,5000mA,1FormA,10ms,10ms	1	SNA	
RY15	3501-001411	RELAY-POWER	12V,30000mA,2FormA	1	SNA	
RY16	3501-001411	RELAY-POWER	12V,30000mA,2FormA	1	SNA	
F101-1	3601-000248	FUSE-CARTRIDGE	250V,2A,TIME-LAG,GLASS,5x20mm	1	SA	
F101	3602-001012	FUSE-BLOCK	500V,-,100MOhm	1	SNA	
CN31	3711-000012	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN13	3711-000261	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92MM,STRAIGHT,SN,RED	1	SNA	
CN32	3711-000938	CONNECTOR-HEADER	BOX,4P,1R,2.5mm,STRAIGHT,SN,BLU	1	SNA	
CN91	3711-000999	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1	SNA	
CN21	3711-003843	HEADER-BOARD TO CABLE	BOX,8P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN15	3711-007649	CONNECTOR-HEADER	2,1R,10mm,STRAIGHT,BRASS,BLK	1	SNA	
U	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
V	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
W	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
IC71	4719-002515	POWER MODULE	1200V,35A	1	SNA	
SCREW-TAPPING	6002-000630	SCREW-TAPPING	PH,+,NO,2S,M3,L8,ZPC(WHT),SWRCH18A	1	SNA	
ST11	DB26-00124A	TRANS SWITCHING-PT77	PT77,PT77,220V,PL-7,PM-7,DMR40,EE33*27,60HZ,900	1	SNA	
FT11	DB27-00033A	COIL CHOKE	FILTER,S50,-0%,5A,14mH	1	SNA	
HEAT SINK	DB62-04148B	HEAT SINK	A6063,11mm,15mm,20mm	1	SNA	
R_S_T	DB93-11492B	ASSY CONNECTOR				
		WIRE-INVERTER POWER	DVM INV,INVERTER POWER	1	SNA	
REACTOR	DB93-12380A	ASSY CONNECTOR WIRE-REACTOR	DVM INV,INVERTER REACTOR	1	SNA	
D101	0402-000012	DIODE-RECTIFIER	UF4007,1000V,1A,DO-41,TP	1	SNA	
VA11	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
VA71	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
VA72	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
R701	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R702	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R703	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R704	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R705	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R706	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R707	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R708	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R103	2003-000855	R-METAL OXIDE(S)	47Kohm,5%,3W,AA,TP,6x16mm	1	SNA	
C103	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C107	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C111	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C116	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C118	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C120	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C102	2201-000983	C-CERAMIC,DISC	1nF,10%,2000V,Y5P,TP,9x5mm,7.5mm	1	SNA	
C715	2301-001830	C-FILM,MPEF	1000nF,5%,1000V,BK,28x18x31	1	SNA	
C122	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C127	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C211	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C231	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C301	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C881	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C104	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C117	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C119	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C121	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C112	2401-001838	C-AL	470uF,20%,25V,WT,TP,10x16,5	1	SNA	
C114	2401-001838	C-AL	470uF,20%,25V,WT,TP,10x16,5	1	SNA	
C124	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C828	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C831	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C834	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C837	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C840	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C843	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C130	2401-003069	C-AL	470uF,20%,50V,WT,TP,10x20mm,5	1	SNA	
C131	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
C108	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C109	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C133	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C205	2401-003645	C-AL	1UF,20%,50V,WT,TP,4X5MM,5	1	SNA	
C701	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C702	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C703	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C704	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C705	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C706	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C709	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C710	2401-005019	C-AL	820uF,20%,400V,BK,35*60,14.2mm	1	SNA	
C101	2401-005038	C-AL	68uF,20%,450V,BK,22*25,10mm	1	SNA	
L150	2702-001110	INDUCTOR-RADIAL	33uH,10%,9.5x16mm	1	SNA	
J101	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J102	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J103	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J104	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J201	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J202	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J203	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J204	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J701	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J702	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J703	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
J704	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
	DB93-13545A	ASSY PCB SMD	DVM PLUS S,10HP,N	1	SNA	
D111	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D112	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D113	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D115	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D116	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D201	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D202	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D203	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D701	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D702	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D703	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D704	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D705	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D706	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D156	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
D106	0402-001192	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1	SNA	
D107	0402-001192	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1	SNA	
D102	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D103	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D104	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D105	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D801	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D803	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D805	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D807	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D809	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D811	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
ZD71	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD72	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD73	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD11	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD12	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD13	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD14	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD801	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD802	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD803	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD804	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD805	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD806	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
D204	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
Q501	0501-000463	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1	SNA	
Q303	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
IC89	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD13	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD14	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD15	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD22	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
LD11	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD21	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD18	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
LD23	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC11	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC12	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC13	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC31	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC32	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC33	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
IC801	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC802	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC803	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC804	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC805	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC806	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC12	1203-002948	IC-POSI.ADJUST REG.	TL431ACD,SOP,8P,4.9X3.9MM,PLASTIC,36V,1.5W,			
			0TO+70C,150MA,2.44/2.55V,TP	1	SNA	
IC402	1203-005454	IC-POSI.FIXED REG.	LD1117S33-HF,SOT-223,4P,6.5x3.5mm,			
			PLASTIC,3.267/3.333,-40to+125C,0.8,TP	1	SNA	
IC154	1203-005797	IC-DC/DC CONVERTER	SI-8008TMX-TL,TO263-5,5P,6.6x6.2x2.3mm,			
			PLASTIC,0.8/24,1.65W,-40to+85C,1.5,0.784/0.816,TP	1	SNA	
IC72	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,5P,			
			14.0x22.3x10.5 mm,PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
IC73	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,5P,14.0x22.3x10.5 mm,			
			PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
IC74	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,5P,14.0x22.3x10.5 mm,			
			PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
R122	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R123	2007-000060	R-CHIP	100Kohm,1%,1/10W,TP,1608	1	SNA	
R124	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R230	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R301	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R801	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R802	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R803	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R804	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R805	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R806	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R807	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R808	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R809	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R810	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R811	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R812	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R302	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R303	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R304	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R140	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R150	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R198	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R217	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R218	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R219	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R222	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R225	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R305	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R721	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R162	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R163	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R164	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R843	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R139	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R149	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R201	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R202	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R205	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R206	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R207	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R208	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R209	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R210	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R211	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R212	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R213	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R214	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R215	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R216	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R220	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R221	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R223	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R224	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R226	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R227	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R231	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R232	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R243	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R294	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R306	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R186	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R203	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R204	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R817	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R822	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R827	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R832	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R837	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R842	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R307	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R171	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R172	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R173	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R174	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R175	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R176	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R177	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R178	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R179	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R107	2007-000455	R-CHIP	18Kohm,1%,1/10W,TP,1608	1	SNA	
R816	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R821	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R826	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R831	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R836	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R841	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R815	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R820	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R825	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R830	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R835	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R840	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R131	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R132	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R133	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R134	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R135	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R136	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R137	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R138	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R141	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R142	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R143	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R144	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R145	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R146	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R147	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R148	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R151	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R152	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R153	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R154	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R155	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R156	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R157	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R158	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R108	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R110	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R111	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R112	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R114	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R116	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R814	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R819	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R824	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R829	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R834	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R839	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R121	2007-001131	R-CHIP	68ohm,1%,1/10W,TP,1608	1	SNA	
R126	2007-001318	R-CHIP	1Kohm,5%,1/4W,TP,3216	1	SNA	
R180	2007-002595	R-CHIP	2.74Kohm,1%,1/4W,TP,3216	1	SNA	
R109	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R113	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R115	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R117	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R104	2007-007350	R-CHIP	100ohm,5%,1/2W,TP,5025	1	SNA	
R119	2007-007617	R-CHIP	2.49Kohm,1%,1/10W,TP,1608	1	SNA	
R720	2007-007617	R-CHIP	2.49Kohm,1%,1/10W,TP,1608	1	SNA	
R118	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R813	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R818	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R823	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R828	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R833	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R838	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R228	2007-008003	R-CHIP	4.7Mohm,1%,1/10W,TP,1608	1	SNA	
R120	2007-010635	R-CHIP	6.8ohm,1%,1/10,TP,1608	1	SNA	
C123	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608	1	SNA	
C802	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C804	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C805	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C806	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C808	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C809	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C810	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C812	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C813	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C814	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C816	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C817	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C818	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C820	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C821	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C822	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C824	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C825	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C203	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C304	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C801	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C147	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C201	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C202	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C254	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C215	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C216	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C217	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C218	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C219	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C220	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C827	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C830	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C833	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C836	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C839	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C842	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C110	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C113	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C115	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C128	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C129	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C132	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C134	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C135	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C136	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C142	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C204	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C209	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C212	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C213	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C221	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C302	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C720	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C731	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C734	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C737	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C803	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C807	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C811	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C815	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C819	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C823	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C826	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C829	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C832	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C835	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C838	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C841	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C891	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB93-13461A(AM080/100/120/140/180/200/220FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C901	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C902	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C207	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C208	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
L101	2703-004082	INDUCTOR-SMD	4.7uH,20%,5050,0.080ohm,2200mA,100kHz,Wirewound	1	SNA	
L102	2703-004082	INDUCTOR-SMD	4.7uH,20%,5050,0.080ohm,2200mA,100kHz,Wirewound	1	SNA	
X201	2802-001211	RESONATOR-CERAMIC	8MHZ,0.1%,TP,3.2X1.3X0.9 MM	1	SNA	
PCB MAIN	DB41-01147A	PCB MAIN-INVERTER	DVM PLUS S,FR-4,1,T1.6,260*240,1,INVERTER,2OZ,600	1	SNA	
ASSY MICOM_IC21	DB91-01411A	ASSY-MIC	DVM NEO2 Inverter Micom,STM-1132-OA,			
			LM3S817, 48LQFP, ROM 64KB	1	SNA	
IC21	DB09-00591A	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP,			
			-40 ~ 85,64KB,LQFP	1	SNA	

5-10 ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
BD11	0402-001227	DIODE-BRIDGE	D3SBA60,600V,2.3A,SIP-4,BK	1	SNA	
D108	0402-001377	DIODE-RECTIFIER	UG4D,200V,4A,DO-201AD,TP	1	SNA	
IC14	1203-000242	IC-POSI.FIXED REG.	7812,TO-220,3P,-,PLASTIC,11.5/	1	SNA	
IC11	1203-006448	IC-PWM CONTROLLER	TOP267VG,DIP,12P,10.16x8.9mm,PLASTIC,TOP267VG			
			-40to+150C,5.44,ST	1	SNA	
NTC01	1404-001388	THERMISTOR-NTC	5ohm,6A,3000K,25mW/C,-,18mm,BK	1	SNA	
R161	2006-001149	R-CEMENT,NON	1Kohm,5%,15W,CA,BK,48x12.5x12.5mm	1	SNA	
XC11	2301-001439	C-FILM,LEAD-PPF	220nF,10%,275V,BK,18x10x15.8mm,15	1	SNA	
XC12	2301-001730	C-FILM,MPEF	470nF,10%,275V,BK,11x18x18.5mm	1	SNA	
RY10	3501-001264	RELAY-POWER	12V,200mW,5000mA,1FormA,10ms,10ms	1	SNA	
RY14	3501-001264	RELAY-POWER	12V,200mW,5000mA,1FormA,10ms,10ms	1	SNA	
RY15	3501-001411	RELAY-POWER	12V,30000mA,2FormA	1	SNA	
RY16	3501-001411	RELAY-POWER	12V,30000mA,2FormA	1	SNA	
F101-1	3601-000248	FUSE-CARTRIDGE	250V,2A,TIME-LAG,GLASS,5x20mm	1	SA	
F101	3602-001012	FUSE-BLOCK	500V,-,100MOhm	1	SNA	
CN31	3711-000012	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN13	3711-000261	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92MM,STRAIGHT,SN,RED	1	SNA	
CN32	3711-000938	CONNECTOR-HEADER	BOX,4P,1R,2.5mm,STRAIGHT,SN,BLU	1	SNA	
CN91	3711-000999	HEADER-BOARD TO CABLE	BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT	1	SNA	
CN21	3711-003843	HEADER-BOARD TO CABLE	BOX,8P,1R,2mm,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN15	3711-007649	CONNECTOR-HEADER	2,1R,10mm,STRAIGHT,BRASS,BLK	1	SNA	
U	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
V	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
W	3712-001265	CONNECTOR-TERMINAL	1PIN,SCREW(M5),8AWG,14*12	1	SNA	
IC71	4719-002515	POWER MODULE	1200V,35A	1	SNA	
SCREW-TAPPING	6002-000630	SCREW-TAPPING	PH,+,NO,2S,M3,L8,ZPC(WHT),SWRCH18A	1	SNA	
ST11	DB26-00124A	TRANS SWITCHING-PT77	PT77,PT77,220V,PL-7,PM-7,DMR40,EE33*27,60HZ,900	1	SNA	
FT11	DB27-00033A	COIL CHOKE	FILTER,S50,-0%,5A,14mH	1	SNA	
HEAT SINK	DB62-04148B	HEAT SINK	A6063,11mm,15mm,20mm	1	SNA	
R_S_T	DB93-11492B	ASSY CONNECTOR				
		WIRE-INVERTER POWER	DVM INV,INVERTER POWER	1	SNA	
REACTOR	DB93-12380A	ASSY CONNECTOR WIRE-REACTOR	DVM INV,INVERTER REACTOR	1	SNA	
	DB93-13534A	ASSY PCB AUTO	DVM PLUS S,14HP,N	1	SNA	
D101	0402-000012	DIODE-RECTIFIER	UF4007,1000V,1A,DO-41,TP	1	SNA	
VA11	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
VA71	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
VA72	1405-000160	VARISTOR	680V,560Vdc,4500A,17.5x6.5mm,TP,1120V,250pF	1	SNA	
R701	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R702	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R703	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R704	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R705	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R706	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R707	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R708	2003-000448	R-METAL OXIDE(S)	100Kohm,5%,2W,AA,TP,4x12mm	1	SNA	
R103	2003-000855	R-METAL OXIDE(S)	47Kohm,5%,3W,AA,TP,6x16mm	1	SNA	
C103	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C107	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C111	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C116	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳)(cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C118	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C120	2201-000012	C-CERAMIC,DISC	.22nF,10%,1000V,Y5P,TP,6.3x5mm,5mm	1	SNA	
C102	2201-000983	C-CERAMIC,DISC	1nF,10%,2000V,Y5P,TP,9x5mm,7.5mm	1	SNA	
C715	2301-001830	C-FILM,MPEF	1000nF,5%,1000V,BK,28x18x31	1	SNA	
C122	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C127	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C211	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C231	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C301	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C881	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C104	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C117	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C119	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C121	2401-000842	C-AL	220uF,20%,25V,WT,TP,8x11.5,5	1	SNA	
C112	2401-001838	C-AL	470uF,20%,25V,WT,TP,10x16,5	1	SNA	
C114	2401-001838	C-AL	470uF,20%,25V,WT,TP,10x16,5	1	SNA	
C124	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C828	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C831	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C834	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C837	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C840	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C843	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C130	2401-003069	C-AL	470uF,20%,50V,WT,TP,10x20mm,5	1	SNA	
C131	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	SNA	
C108	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C109	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C133	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C205	2401-003645	C-AL	1UF,20%,50V,WT,TP,4X5MM,5	1	SNA	
C701	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C702	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C703	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C704	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C705	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C706	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C709	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C710	2401-005020	C-AL	680uF,20%,400V,BK,35*50,14.2mm	1	SNA	
C101	2401-005038	C-AL	68uF,20%,450V,BK,22*25,10mm	1	SNA	
L150	2702-001110	INDUCTOR-RADIAL	33uH,10%,9.5x16mm	1	SNA	
J101	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J102	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J103	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J104	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J201	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J202	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J203	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J204	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J701	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J702	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
J703	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
J704	3812-001283	WIRE-NO SHEATH CU	FE+CU+SN,300V,52mm(TAPING),1/0.6mm	1	SNA	
	DB93-13546A	ASSY PCB SMD	DVM PLUS S,14HP,N	1	SNA	
D111	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D112	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D113	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D115	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D116	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D201	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D202	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D203	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D701	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D702	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D703	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D704	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D705	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D706	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D156	0402-001097	DIODE-SCHOTTKY	B140,40V,1000mA,DO-214AC,TP	1	SNA	
D106	0402-001192	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1	SNA	
D107	0402-001192	DIODE-RECTIFIER	ES2D,200V,2A,SMB,TP	1	SNA	
D102	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D103	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D104	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D105	0402-001427	DIODE-RECTIFIER	ES1D,200V,1A,DO-214AC,TP	1	SNA	
D801	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D803	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D805	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D807	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D809	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D811	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
ZD71	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD72	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD73	0403-000252	DIODE-ZENER	BZX84C3V6,3.4-3.8V,350MW,SOT-23,TP	1	SNA	
ZD11	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD12	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD13	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD14	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD801	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD802	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD803	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD804	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD805	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
ZD806	0403-000461	DIODE-ZENER	PTZ18A,16.8-19.1V,1000MW,PSM,TP	1	SNA	
D204	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
Q501	0501-000463	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1	SNA	
Q303	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
IC89	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD13	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD14	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD15	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
LD22	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD11	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD21	0601-001954	LED	SMD(TOP VIEW),YEL,1.6x0.8x0.8mm,587nm,1.6x0.8x0.8mm	1	SNA	
LD18	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
LD23	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC11	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC12	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC13	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC31	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC32	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC33	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
IC801	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC802	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC803	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC804	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC805	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC806	0604-001343	PHOTO-COUPLER	TTL,750mW,SOP	1	SNA	
IC12	1203-002948	IC-POSI.ADJUST REG.	TL431ACD,SOP,8P,4.9X3.9MM,PLASTIC,			
			36V,1.5W,0TO+70C,150MA,2.44/2.55V,TP	1	SNA	
IC402	1203-005454	IC-POSI.FIXED REG.	LD1117S33-HF,SOT-223,4P,6.5x3.5mm,			
			PLASTIC,3.267/3.333,-40to+125C,0.8,TP	1	SNA	
IC154	1203-005797	IC-DC/DC CONVERTER	SI-8008TMX-TL,TO263-5,5P,6.6x6.2x2.3mm,			
			PLASTIC,0.8/24,1.65W,-40to+85C,1.5,0.784/0.816,TP	1	SNA	
IC72	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,			
			5P,14.0x22.3x10.5 mm,PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
IC73	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,			
			5P,14.0x22.3x10.5 mm,PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
IC74	1209-002157	IC-SENSOR	ACS758LCB-100B-PFF-T,Leadform PFF,			
			5P,14.0x22.3x10.5 mm,PLASTIC,5.5V,1W,-40to+150C,BK	1	SNA	
R122	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R123	2007-000060	R-CHIP	100Kohm,1%,1/10W,TP,1608	1	SNA	
R124	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R230	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R301	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R801	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R802	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R803	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R804	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R805	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R806	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R807	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R808	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R809	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R810	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R811	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R812	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R302	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R303	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R304	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R140	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R150	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R198	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R217	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R218	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R219	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	SNA	
R222	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R225	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R305	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R721	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R162	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R163	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R164	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R843	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	SNA	
R139	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R149	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R201	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R202	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R205	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R206	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R207	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R208	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R209	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R210	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R211	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R212	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R213	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R214	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R215	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R216	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R220	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R221	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R223	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R224	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R226	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R227	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R231	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R232	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R243	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R294	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R306	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R186	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R203	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R204	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R817	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R822	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R827	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R832	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R837	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R842	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R307	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R171	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R172	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R173	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R174	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R175	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R176	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R177	2007-000279	R-CHIP	100Kohm,1%,1/4W,TP,3216	1	SNA	
R178	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R179	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R107	2007-000455	R-CHIP	18Kohm,1%,1/10W,TP,1608	1	SNA	
R816	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R821	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R826	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R831	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R836	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R841	2007-000553	R-CHIP	20ohm,5%,1/4W,TP,3216	1	SNA	
R815	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R820	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R825	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R830	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R835	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R840	2007-000939	R-CHIP	47Kohm,1%,1/10W,TP,1608	1	SNA	
R131	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R132	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R133	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R134	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R135	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R136	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R137	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R138	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R141	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R142	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R143	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R144	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R145	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R146	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R147	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R148	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R151	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R152	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R153	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R154	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R155	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R156	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R157	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R158	2007-000944	R-CHIP	47Kohm,5%,1/4W,TP,3216	1	SNA	
R108	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R110	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R111	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R112	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R114	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R116	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R814	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R819	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R824	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R829	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R834	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R839	2007-000950	R-CHIP	47ohm,5%,1/4W,TP,3216	1	SNA	
R121	2007-001131	R-CHIP	68ohm,1%,1/10W,TP,1608	1	SNA	
R126	2007-001318	R-CHIP	1Kohm,5%,1/4W,TP,3216	1	SNA	
R180	2007-002595	R-CHIP	2.74Kohm,1%,1/4W,TP,3216	1	SNA	
R109	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R113	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R115	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R117	2007-007025	R-CHIP	4.75Kohm,1%,1/4W,TP,3216	1	SNA	
R104	2007-007350	R-CHIP	100ohm,5%,1/2W,TP,5025	1	SNA	
R119	2007-007617	R-CHIP	2.49Kohm,1%,1/10W,TP,1608	1	SNA	
R720	2007-007617	R-CHIP	2.49Kohm,1%,1/10W,TP,1608	1	SNA	
R118	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R813	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R818	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R823	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R828	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R833	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R838	2007-007768	R-CHIP	13Kohm,1%,1/10W,TP,1608	1	SNA	
R228	2007-008003	R-CHIP	4.7Mohm,1%,1/10W,TP,1608	1	SNA	
R120	2007-010635	R-CHIP	6.8ohm,1%,1/10,TP,1608	1	SNA	
C123	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608	1	SNA	
C802	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C804	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C805	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C806	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C808	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C809	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C810	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C812	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C813	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C814	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C816	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C817	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C818	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C820	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C821	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C822	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C824	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C825	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,TP,1608	1	SNA	
C203	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C304	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C801	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C147	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C201	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C202	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C254	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C215	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C216	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C217	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C218	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C219	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C220	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C827	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C830	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C833	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C836	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C839	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C842	2203-005194	C-CER,CHIP	0.22nF,10%,50V,X7R,TP,1608	1	SNA	
C110	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C113	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C115	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C128	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C129	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C132	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C134	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C135	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C136	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C142	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C204	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C209	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C212	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C213	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C221	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C302	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C720	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C731	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C734	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C737	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C803	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C807	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C811	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C815	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C819	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C823	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C826	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C829	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C832	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C835	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C838	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C841	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASS'Y PCB INVERTER : DB-113461B(AM160FXV✳✳✳) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C891	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C901	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C902	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C207	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C208	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
L101	2703-004082	INDUCTOR-SMD	4.7uH,20%,5050,0.080ohm,2200mA,100kHz,Wirewound	1	SNA	
L102	2703-004082	INDUCTOR-SMD	4.7uH,20%,5050,0.080ohm,2200mA,100kHz,Wirewound	1	SNA	
X201	2802-001211	RESONATOR-CERAMIC	8MHZ,0.1%,TP,3.2X1.3X0.9 MM	1	SNA	
PCB MAIN	DB41-01147A	PCB MAIN-INVERTER	DVM PLUS S,FR-4,1,T1.6,260*240,1,INVERTER,2OZ,600	1	SNA	
ASSY MICOM_IC21	DB91-01411A	ASSY-MIC	DVM NEO2 Inverter Micom,STM-1132-OA, LM3S817, 48LQFP, ROM 64KB	1	SNA	
IC21	DB09-00591A	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP,-40 ~ 85,64KB,LQFP	1	SNA	

5-11 ASSY PCB EMI : DB93-13529A

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
VA61	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA62	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA63	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA64	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA81	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA82	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA83	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA87	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA88	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
VA89	1405-001204	VARISTOR	820V,670Vdc,4500A,17x6.3mm,BK,1355V,250pF	1	SNA	
C14	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C15	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C16	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C17	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C06	2301-001577	C-FILM,LEAD-PEF	1000nF,10%,275V,BK,26.5X21.5X12.5	1	SNA	
C01	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C02	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C03	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C04	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
F101-1	3601-001659	FUSE-CARTRIDGE	690V,40A,TIME-LAG,77x17.1mm	1	SA	
F102-1	3601-001659	FUSE-CARTRIDGE	690V,40A,TIME-LAG,77x17.1mm	1	SA	
F103-1	3601-001659	FUSE-CARTRIDGE	690V,40A,TIME-LAG,77x17.1mm	1	SA	
F101	3602-001074	FUSE-BLOCK	600V,30A	1	SNA	
F102	3602-001074	FUSE-BLOCK	600V,30A	1	SNA	
F103	3602-001074	FUSE-BLOCK	600V,30A	1	SNA	
CN22	3711-000203	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1	SNA	
CN23	3711-000262	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92MM,STRAIGHT,SN,WHT	1	SNA	
CN21	3711-007276	CONNECTOR-HEADER	3P,1R,10mm,STRAIGHT,AU,BLK	1	SNA	
CN41	3712-001139	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1	SNA	
L05	DB27-00092A	COIL CHOKE	SSC5127010B,RD200CHXH1,1.0mH MIN at 1kHz/ 1V,-0%,100mohm,30.0A MAX,51x31x25,70x45,120℃ MAX,DVM INV	1	SNA	
L06	DB27-00092A	COIL CHOKE	SSC5127010B,RD200CHXH1,1.0mH MIN at 1kHz/1V, -0%,100mohm,30.0A MAX,51x31x25,70x45,120℃ MAX,DVM INV	1	SNA	
PCB	DB41-01149A	PCB SUB-EMI	ADX200VGHHA1,FR-4,2,T1.6,230*142,DVM,1,OUTDOOR,DVM S, EMI	1	SA	
WIRE	DB93-11497B	ASSY CONNECTOR WIRE-POWER	DVM INV,POWER	1	SNA	
R01	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
R02	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
R03	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
C07	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C09	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C11	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C13	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C05	2301-001949	C-FILM,LEAD	3300nF,10%,275V,BK,31x21x31mm	1	SNA	
DSA01	4715-001093	SURGE ABSORBER	3600V,20%,2000A,-,AXIAL	1	SNA	

5-12 ASS'Y PCB EMI : DB93-13529A

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
VA61	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA62	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA63	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA64	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA81	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA82	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA83	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA87	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA88	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
VA89	1405-001204	VARISTOR	670Vdc,4500A,17x6.3mm,BK	1	SNA	
R01	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
R02	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
R03	2003-002038	R-METAL OXIDE(S)	1Mohm,5%,2W,AA,TP,4x12mm	1	SNA	
C07	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C09	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C11	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C13	2201-000153	C-CERAMIC,DISC	10nF,+80-20%,250V,Y5V,-,14.6x6mm,7.5	1	SNA	
C14	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C15	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C16	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C17	2201-000987	C-CERAMIC,DISC	2.2nF,20%,400V,Y5U,TP,12.5x6mm,10mm	1	SNA	
C04	2301-001577	C-FILM,LEAD-PEF	1000nF,10%,275V,BK,26.5X21.5X12.5	1	SNA	
C06	2301-001577	C-FILM,LEAD-PEF	1000nF,10%,275V,BK,26.5X21.5X12.5	1	SNA	
C01	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C02	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C03	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
C05	2301-001853	C-FILM,LEAD	2200nF,10%,275V,BK,18X28X31	1	SNA	
F201-1	3601-001427	FUSE-CARTRIDGE	500VAC,30A,SLO-BLO,CERAMIC,38.1*10.31	1	SA	
F202-1	3601-001427	FUSE-CARTRIDGE	500VAC,30A,SLO-BLO,CERAMIC,38.1*10.31	1	SA	
F203-1	3601-001427	FUSE-CARTRIDGE	500VAC,30A,SLO-BLO,CERAMIC,38.1*10.31	1	SA	
F201	3602-001040	FUSE-CLIP	250,30A	1	SNA	
F202	3602-001040	FUSE-CLIP	250,30A	1	SNA	
F203	3602-001040	FUSE-CLIP	250,30A	1	SNA	
CN22	3711-000203	HEADER-BOARD TO CABLE	1WALL,2P/3P,1R,7.92mm,STRAIGHT,SN,WHT	1	SNA	
CN11	3711-000260	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92mm,STRAIGHT,SN,BLU	1	SNA	
CN23	3711-000262	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92MM,STRAIGHT,SN,WHT	1	SNA	
CN12	3711-000263	HEADER-BOARD TO CABLE	1WALL,3P,1R,7.92MM,STRAIGHT,SN,YEL	1	SNA	
CN31	3711-006052	HEADER-BOARD TO BOARD	BOX,2P,1R,7.92mm,STRAIGHT,SN,RED	1	SNA	
CN21	3711-007276	CONNECTOR-HEADER	3P,1R,10mm,STRAIGHT,AU,BLK	1	SNA	
CN41	3712-001139	CONNECTOR-TERMINAL	TAB,MALE,6.35x0.8mm	1	SNA	

ASS'Y PCB EMI : DB93-13529A (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
L05	DB27-00092A	COIL CHOKE	SSC5127010B,RD200CHXH1,1.0mH MIN at 1kHz/1V,-0%, 100mohm,30.0A MAX,51x31x25,70x45,120°C MAX,DVM INV	1	SNA	
L06	DB27-00092A	COIL CHOKE	SSC5127010B,RD200CHXH1,1.0mH MIN at 1kHz/1V, -0%,100mohm,30.0A MAX,51x31x25,70x45,120°C MAX, DVM INV	1	SNA	
PCB	DB41-01058A	PCB SUB-EMI	DVM INV, RD200CHXH1,FR-4,2,00,T1.6,OUTDOOR,1, EMI,DVM INV,600V	1	SA	
DSA01	DB47-00016A	POSISTOR	DSA-332MA,2pF MAX,100MOhm,ASM-3500	1	SNA	
DSA02	DB47-00016A	POSISTOR	DSA-332MA,2pF MAX,100MOhm,ASM-3500	1	SNA	
J01	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J02	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J03	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J04	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J05	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J06	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J07	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
J08	DB47-90005A	JUMPER WIRE	TA0.6PI/52MM,P0509-400-108,-,-	1	SNA	
POWER WIRE	DB93-11497A	ASSY CONNECTOR WIRE-EMI POWER	DVM INV,EMI POWER	1	SNA	

5-13 ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
IC43	1203-002735	IC-POSI.FIXED REG.	KIA7815API,TO-220IS,3P,10.3x15.3mm,PLASTIC,			
			14.4/15.6V,2W,-30to+150,1A,ST	1	SNA	
CN13	3711-000938	CONNECTOR-HEADER	BOX,4P,1R,2.5mm,STRAIGHT,SN,BLU	1	SNA	
CN52	3711-001080	CONNECTOR-HEADER	BOX,7P,1R,2.5mm,STRAIGHT,SN,BLU	1	SNA	
CN51	3711-001082	HEADER-BOARD TO CABLE	BOX,7P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN12	3711-001154	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN32	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN11	3711-007649	CONNECTOR-HEADER	2,1R,10mm,STRAIGHT,BRASS,BLK	1	SNA	
IPM1	4719-002511	POWER MODULE	PS22A73,1200V/10A,-20 ~ 150C	1	SNA	
IPM2	4719-002511	POWER MODULE	PS22A73,1200V/10A,-20 ~ 150C	1	SNA	
FAN1	DB93-11500C	ASSY CONNECTOR				
		WIRE-BLDC MOTOR	DVM INV,BLDC MOTOR	1	SNA	
FAN2	DB93-11500D	ASSY CONNECTOR				
		WIRE-BLDC MOTOR	DVM INV,BLDC MOTOR	1	SNA	
ZD704	0406-001434	DIODE-TVS	P6KE18A,200,185,215,DO-15	1	SNA	
ZD804	0406-001434	DIODE-TVS	P6KE18A,200,185,215,DO-15	1	SNA	
C720	2301-001830	C-FILM,MPEF	1000nF,5%,1000V,BK,28x18x31	1	SNA	
C820	2301-001830	C-FILM,MPEF	1000nF,5%,1000V,BK,28x18x31	1	SNA	
C292	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C293	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C392	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C393	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C501	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C601	2401-001200	C-AL	33UF,20%,50V,WT,TP,6.3X11,2.5	1	SNA	
C651	2401-001200	C-AL	33UF,20%,50V,WT,TP,6.3X11,2.5	1	SNA	
C100	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C102	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C406	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C703	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C707	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C711	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C803	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C807	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C811	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C401	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C404	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C414	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C722	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C822	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
D201	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D202	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D203	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D205	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D206	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D292	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D301	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D302	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D303	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D304	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D305	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D306	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D701	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D702	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D703	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D801	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D802	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D803	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
ZD701	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD702	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD703	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD801	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD802	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD803	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
D207	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D307	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D601	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D602	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D603	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D604	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D651	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D652	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D653	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D654	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
Q501	0501-000463	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1	SNA	
Q502	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
Q503	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
IC200	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD22	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD32	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD41	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC51	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC52	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC53	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
IC222	0801-002530	IC-CMOS LOGIC	74VHCT245,TRANSCEIVER,TSSOP,20P,173MIL,OCTAL, TP,PLASTIC,3-STATE,-,0.36V,-40to+85	1	SNA	
IC333	0801-002530	IC-CMOS LOGIC	74VHCT245,TRANSCEIVER,TSSOP,20P,173MIL,OCTAL, TP,PLASTIC,3-STATE,-,0.36V,-40to+85	1	SNA	
IC601	1201-002946	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB, 1,1nA,1nA,1.7mV	1	SNA	
IC651	1201-002946	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,63dB,1, 1nA,1nA,1.7mV	1	SNA	
IC402	1203-005454	IC-POSI.FIXED REG.	LD1117S33-HF,SOT-223,4P,6.5x3.5mm,PLASTIC 3.267/3.333,-40to+125C,0.8,TP	1	SNA	
R710	2007-000023	R-CHIP	120ohm,5%,1/8W,TP,2012	1	SNA	
R810	2007-000023	R-CHIP	120ohm,5%,1/8W,TP,2012	1	SNA	
R708	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R808	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R601	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R608	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R609	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R651	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R658	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R659	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R241	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R242	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R243	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R266	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R278	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R341	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R342	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R343	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R346	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R368	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R502	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R504	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R701	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R703	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R705	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R713	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R714	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R715	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R801	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R803	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R805	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R813	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R814	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R815	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R501	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R503	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R510	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R237	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R238	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R337	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R338	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R506	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R508	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R201	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R202	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R205	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R301	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R302	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R305	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R709	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R809	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R102	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R103	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R104	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R105	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R106	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R107	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R108	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R109	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R112	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R113	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R114	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R222	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R223	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R224	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R231	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R232	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R233	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R234	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R235	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R236	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R251	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R253	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R254	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R257	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R258	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R271	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R283	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R287	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R291	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R292	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R293	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R294	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R295	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R296	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R297	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R298	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R322	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R323	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R324	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R332	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R333	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R334	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R335	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R336	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R351	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R353	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R354	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R357	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R358	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R371	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R381	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R383	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R387	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R391	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R392	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R393	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R394	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R395	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R396	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R397	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R398	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R507	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R509	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R712	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	SNA	
R812	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	SNA	
R110	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R121	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R203	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R204	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R245	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R303	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R304	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R345	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R466	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R505	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R707	2007-000239	R-CHIP	1.5Kohm,1%,1/10W,TP,1608	1	SNA	
R807	2007-000239	R-CHIP	1.5Kohm,1%,1/10W,TP,1608	1	SNA	
R702	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R704	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R706	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R802	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R804	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R806	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R429	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R603	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R606	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R612	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R653	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R656	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R662	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R602	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R607	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R610	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R652	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R657	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R660	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R226	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R326	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R401	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R421	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R422	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R423	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R424	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R426	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R427	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R428	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R435	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R604	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R605	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R613	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R654	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R655	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R663	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R755	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R756	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R757	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R855	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R856	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R857	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
C307	2203-000206	C-CER,CHIP	100nF,10%,50V,X7R,TP,2012	1	SNA	
C203	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C264	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C265	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C266	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C271	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C303	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C335	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C364	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C365	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C366	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C371	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C504	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C506	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C201	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C202	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C294	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C301	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C302	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C394	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C467	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C701	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C705	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C709	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C715	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C717	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C718	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C719	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C801	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C805	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C809	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C815	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C817	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C818	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C819	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C215	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C216	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C217	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C218	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C219	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C220	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C315	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C316	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C317	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C318	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C319	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C320	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C603	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C604	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C611	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C653	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C654	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C661	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C716	2203-002398	C-CER,CHIP	22nF,10%,50V,X7R,TP,1608	1	SNA	
C816	2203-002398	C-CER,CHIP	22nF,10%,50V,X7R,TP,1608	1	SNA	
C621	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C622	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C623	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C624	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C625	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C626	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C105	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C207	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C208	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C209	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C211	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C212	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C224	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C308	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C309	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C310	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C311	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C312	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C314	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C402	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C405	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C407	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C415	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C502	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C602	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C652	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695C (AM140/160/180/200/220FXV✳✳✳ - 2FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C702	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C704	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C706	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C708	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C710	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C712	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C723	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C724	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C802	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C804	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C806	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C808	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C810	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C812	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C823	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C824	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C204	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C205	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C291	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C304	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C305	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C306	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C391	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
X101	2802-001211	RESONATOR-CERAMIC	8MHZ,0.1%,TP,3.2X1.3X0.9 MM	1	SNA	
X301	2802-001211	RESONATOR-CERAMIC	8MHZ,0.1%,TP,3.2X1.3X0.9 MM	1	SNA	
PCB	DB41-01062A	PCB SUB-DRIVER	DVM INV, RD200CHXH1,FR-4,2,00,T1.6, OUTDOOR,1,FAN,DVM INV,600V	1	SNA	
IC201	DB91-01310B	ASSY-MIC	DVM Inverter S Micom(Fan Control), STM-1094-BS, LM3S817, 48LQFP, ROM 64KB	1	SNA	
IC301	DB91-01310B	ASSY-MIC	DVM Inverter S Micom(Fan Control), STM-1094-BS, LM3S817, 48LQFP, ROM 64KB	1	SNA	
-	DB09-00591A	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP,-40 ~ 85,64KB,LQFP	1	SNA	

5-14 ASSY PCB FAN : DB93-11695D (AM080/100/120FXV✳✳✳ - 1FAN)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
IC43	1203-002735	IC-POSI.FIXED REG.	KIA7815API,TO-220IS,3P,10.3x15.3mm,			
			PLASTIC,14.4/15.6V,2W,-30to+150,1A,ST	1	SNA	
CN13	3711-000938	CONNECTOR-HEADER	BOX,4P,1R,2.5mm,STRAIGHT,SN,BLU	1	SNA	
CN51	3711-001082	HEADER-BOARD TO CABLE	BOX,7P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN12	3711-001154	HEADER-BOARD TO CABLE	BOX,9P,1R,2.5MM,STRAIGHT,SN,WHT	1	SNA	
CN22	3711-005716	HEADER-BOARD TO CABLE	BOX,10P,1R,2mm,STRAIGHT,SN,BLK	1	SNA	
CN11	3711-007649	CONNECTOR-HEADER	2,1R,10mm,STRAIGHT,BRASS,BLK	1	SNA	
IPM1	4719-002511	POWER MODULE	PS22A73,1200V/10A,-20 ~ 150C	1	SNA	
FAN1	DB93-11500C	ASSY CONNECTOR				
		WIRE-BLDC MOTOR	DVM INV,BLDC MOTOR	1	SNA	
ZD704	0406-001434	DIODE-TVS	P6KE18A,200,185,215,DO-15	1	SNA	
C720	2301-001830	C-FILM,MPEF	1000nF,5%,1000V,BK,28x18x31	1	SNA	
C292	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C293	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C501	2401-000481	C-AL	10uF,20%,50V,WT,TP,5x11,5	1	SNA	
C601	2401-001200	C-AL	33UF,20%,50V,WT,TP,6.3X11,2.5	1	SNA	
C100	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C406	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C703	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C707	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C711	2401-002438	C-AL	47uF,20%,50V,WT,TP,6.3x11,5mm	1	SNA	
C401	2401-003224	C-AL	470uF,20%,16V,WT,TP,8X11.5,5mm	1	SNA	
C404	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C414	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
C722	2401-003585	C-AL	220uF,20%,35V,WT,TP,8x11.5mm,5	1	SNA	
	DB93-13548A	ASSY PCB SMD	DVM PLUS S,1FAN,N	1	SNA	
SOLDER CREAM	0202-001278	SOLDER-CREAM	M705-221BM5-32-11,20~40um powders,			
			96.5Sn/3Ag/0.5Cu,3~6%	0.75	SNA	
D201	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D202	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D203	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D205	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D206	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D292	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-323,TP	1	SNA	
D701	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D702	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
D703	0402-001993	DIODE-RECTIFIER	STTH112,1200V,1A,SMA	1	SNA	
ZD701	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD702	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
ZD703	0403-001816	DIODE-ZENER	1SAM5934BT3,22.8/25.2V,1500mW,SMA,TP	1	SNA	
D207	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D601	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D602	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D603	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
D604	0404-001020	DIODE-SCHOTTKY	BAT54C,30V,200mA,SOT-23,TP	1	SNA	
Q501	0501-000463	TR-SMALL SIGNAL	KST2907A,PNP,350mW,SOT-23,TP,100-300	1	SNA	
Q502	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
Q503	0501-000534	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,180-390	1	SNA	
IC200	0506-000175	TR-ARRAY	2003,NPN,7,1W,SOP-16,ST,1000	1	SNA	
LD22	0601-001816	LED	SMD,Y-GRN,1.6X0.8X0.55MM,570NM,1.6X0.8X0.55MM	1	SNA	
LD41	0601-002345	LED	SMD,RED,1.6x0.8x0.55mm,660nm,1.6x0.8x0.55mm	1	SNA	
PC51	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	

ASSY PCB FAN : DB93-11695D (AM080/100/120FXV✳✳✳ - 1FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
PC52	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
PC53	0604-001172	PHOTO-COUPLER	TR,150-300,200mW,SOP,TP	1	SNA	
IC222	0801-002530	IC-CMOS LOGIC	74VHCT245,TRANSCEIVER,TSSOP,20P,173MIL,			
			OCTAL,TP,PLASTIC,3-STATE,-,0.36V,-40to+85	1	SNA	
IC601	1201-002946	IC-OP AMP	TSSOP,TR,14P,5x4.4x1.2mm,100,5.5V,-40to+85C,			
			63dB,1,1nA,1nA,1.7mV	1	SNA	
IC402	1203-005454	IC-POSI.FIXED REG.	LD1117S33-HF,SOT-223,4P,6.5x3.5mm,			
			PLASTIC,3.267/3.333,-40to+125C,0.8,TP	1	SNA	
R710	2007-000023	R-CHIP	120ohm,5%,1/8W,TP,2012	1	SNA	
R708	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	SNA	
R601	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R608	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R609	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	1	SNA	
R241	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R242	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R243	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R266	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R278	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R502	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R504	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R701	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R703	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R705	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R713	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R714	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R715	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	SNA	
R501	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R503	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R510	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	SNA	
R237	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R238	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	SNA	
R506	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R508	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	SNA	
R201	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R202	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R205	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R709	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	SNA	
R101	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R102	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R103	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R104	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R105	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R106	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R107	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R108	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R109	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R222	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R223	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695D (AM080/100/120FXV✳✳✳ - 1FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R224	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R231	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R232	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R233	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R234	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R235	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R236	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R251	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R253	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R254	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R257	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R258	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R271	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R283	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R287	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R291	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R292	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R293	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R294	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R295	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R296	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R297	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R298	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R507	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R509	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	SNA	
R712	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	SNA	
R110	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R203	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R204	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R245	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R466	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	SNA	
R505	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	SNA	
R707	2007-000239	R-CHIP	1.5Kohm,1%,1/10W,TP,1608	1	SNA	
R702	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R704	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R706	2007-000312	R-CHIP	10ohm,5%,1/4W,TP,3216	1	SNA	
R429	2007-000385	R-CHIP	14.3Kohm,1%,1/4W,TP,3216	1	SNA	
R603	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R606	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R612	2007-000614	R-CHIP	24Kohm,1%,1/10W,TP,1608	1	SNA	
R602	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R607	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R610	2007-000683	R-CHIP	3.3Kohm,1%,1/10W,TP,1608	1	SNA	
R226	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R401	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	SNA	
R421	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R422	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R423	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R424	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R426	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	

ASSY PCB FAN : DB93-11695D (AM080/100/120FXV✳✳✳ - 1FAN) (cont.)

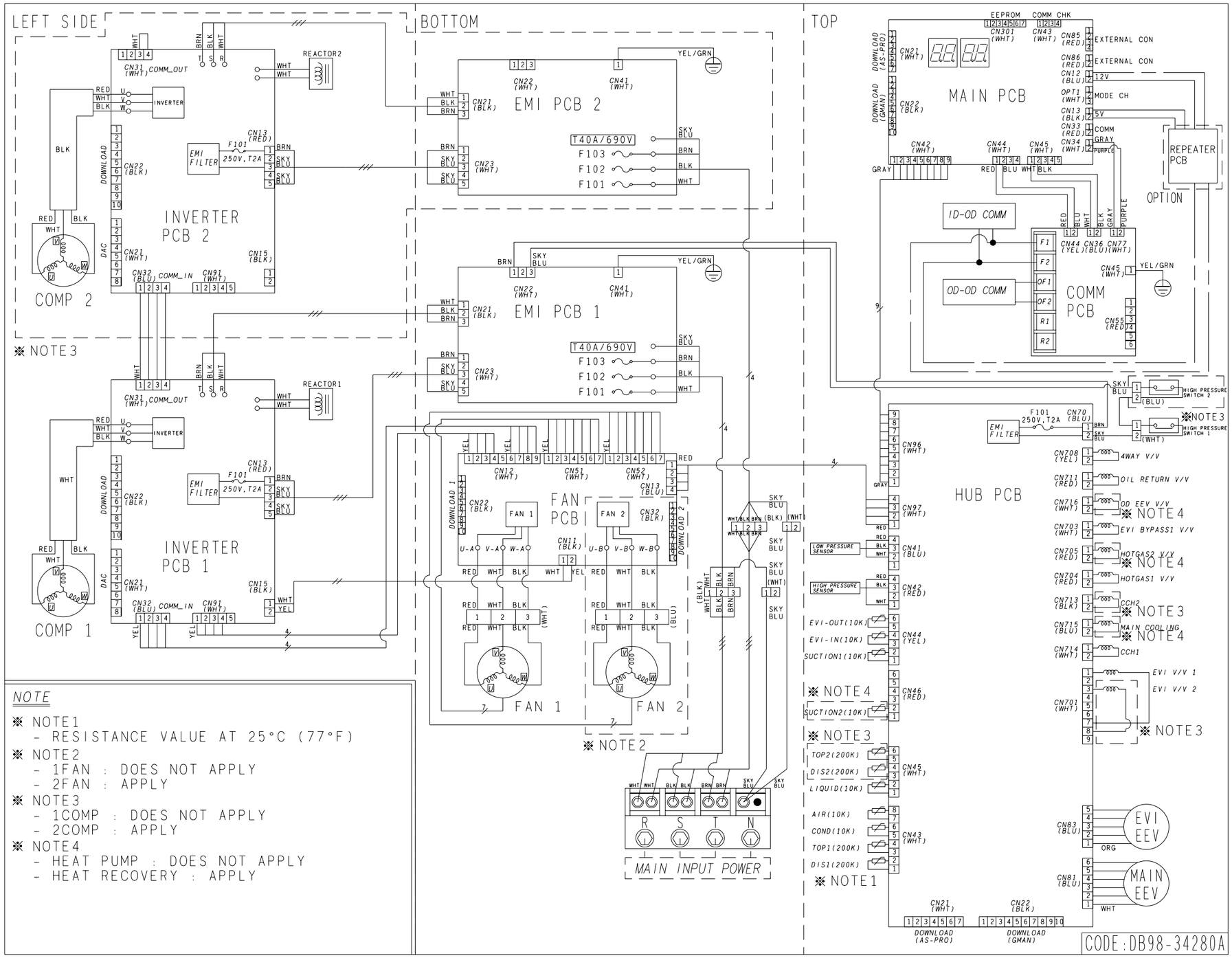
Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R427	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R428	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R435	2007-000924	R-CHIP	470Kohm,1%,1/4W,TP,3216	1	SNA	
R604	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R605	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R613	2007-007225	R-CHIP	1.62Kohm,1%,1/10W,TP,1608	1	SNA	
R755	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R756	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
R757	2007-010245	R-CHIP	0.01ohm,1%,2W,TP,6432	1	SNA	
C203	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C214	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C264	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C265	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C266	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C271	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C504	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C506	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	1	SNA	
C201	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C202	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C294	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C467	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C701	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C705	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C709	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C715	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C717	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C718	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C719	2203-000440	C-CER,CHIP	1nF,10,50V,X7R,TP,1608	1	SNA	
C215	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C216	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C217	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C218	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C219	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C220	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C603	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C604	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C611	2203-002002	C-CER,CHIP	0.033nF,5%,50V,NP0,TP,1608	1	SNA	
C716	2203-002398	C-CER,CHIP	22nF,10%,50V,X7R,TP,1608	1	SNA	
C621	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C622	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C623	2203-005022	C-CER,CHIP	0.011nF,0.5pF,50V,TH,1608	1	SNA	
C101	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C103	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C207	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C208	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C209	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C210	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C211	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C212	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C224	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	

ASSY PCB FAN : DB93-11695D (AM080/100/120FXV✳✳✳ - 1FAN) (cont.)

Location No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C402	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C405	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C407	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C415	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C502	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C602	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C702	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C704	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C706	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C708	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C710	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C712	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C723	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C724	2203-005249	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608	1	SNA	
C204	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C205	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C206	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
C291	2203-006348	C-CER,CHIP	1000nF,10%,25V,X5R,TP,1608,0.8T	1	SNA	
X101	2802-001211	RESONATOR-CERAMIC	8MHZ,0.1%,TP,3.2X1.3X0.9 MM	1	SNA	
PCB	DB41-01062A	PCB SUB-DRIVER	DVM INV, RD200CHXH1,FR-4,2,00,T1.6,OUTDOOR,1, FAN,DVM INV,600V	1	SNA	
IC201	DB91-01310B	ASSY-MIC	DVM Inverter S Micom(Fan Control),STM-1094-BS, LM3S817, 48LQFP, ROM 64KB	1	SNA	
-	DB09-00591A	IC MICOM	LM3S817,48,DC3V,50 MHz,LQFP,LQFP,LQFP, -40 ~ 85,64KB,LQFP	1	SNA	

6. Wiring Diagram

6-1 AM080/100/120/140/160/180/200/220FXV✳✳✳



※ NOTE3

NOTE

※ NOTE1
- RESISTANCE VALUE AT 25°C (77°F)

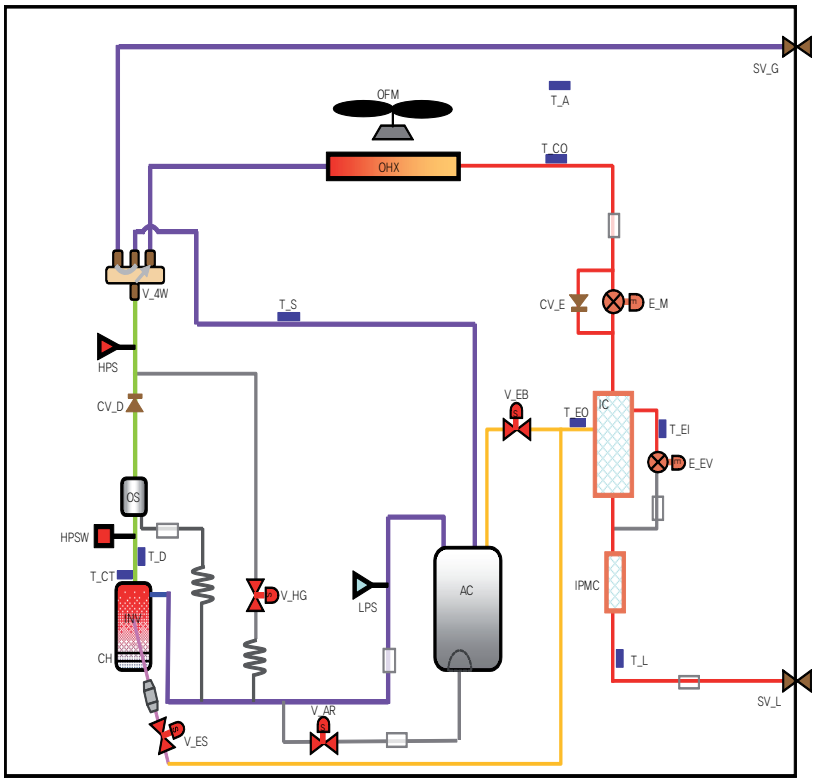
※ NOTE2
- 1FAN : DOES NOT APPLY
- 2FAN : APPLY

※ NOTE3
- 1COMP : DOES NOT APPLY
- 2COMP : APPLY

※ NOTE4
- HEAT PUMP : DOES NOT APPLY
- HEAT RECOVERY : APPLY

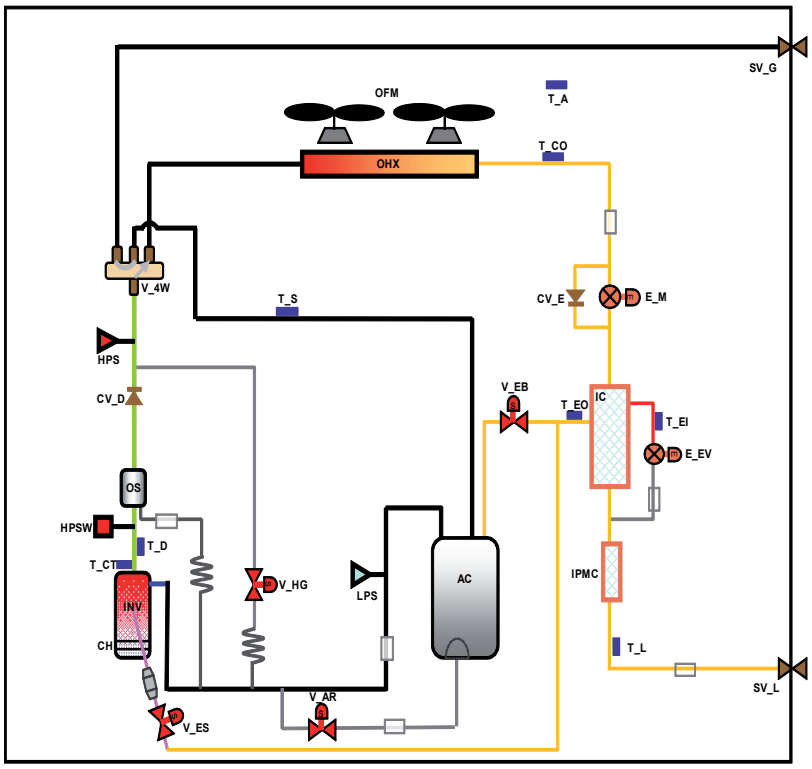
7. Cycle Diagram

7-1 AM080/100/120FXVAGH/EU



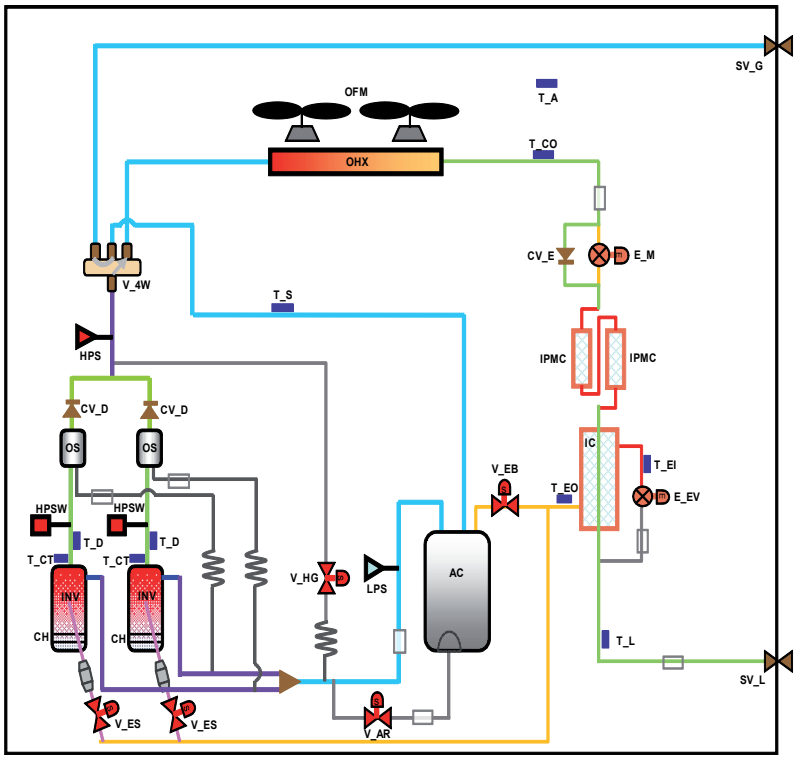
Abbreviation	Name
INV	Inveter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Sol. Valve
V_EB	EVI Bypass Valve
V_HG	Hot Gas Bypass Valve
V_4W	4Way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Cond. Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Pipe Temperature Sensor
T_CT	Comp. Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-2 AM140FXVAGH/EU



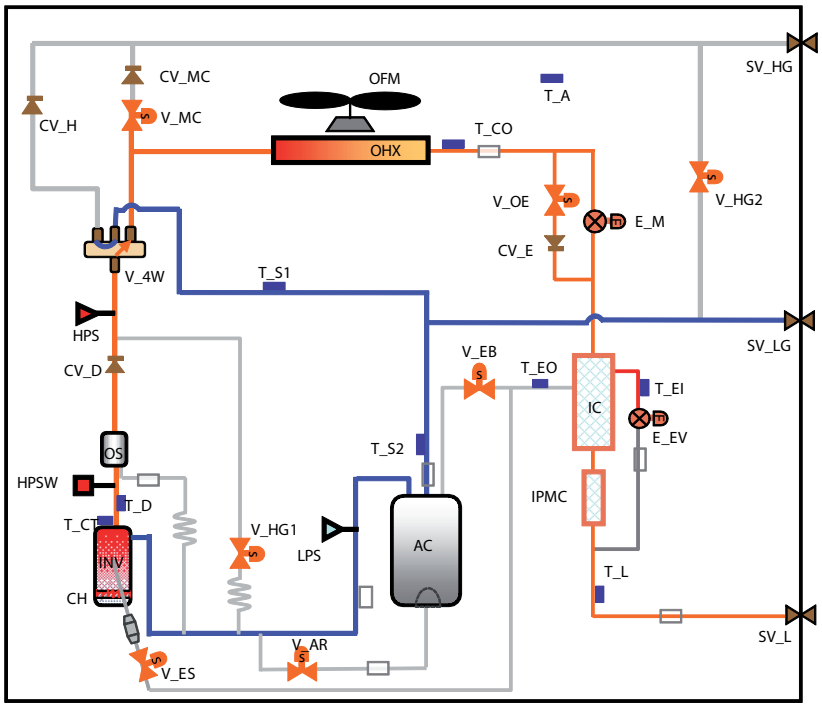
Abbreviation	Name
INV	Inveter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Sol. Valve
V_EB	EVI Bypass Valve
V_HG	Hot Gas Bypass Valve
V_4W	4Way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Cond. Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Pipe Temperature Sensor
T_CT	Comp. Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-3 AM160/180/200/220FXVAGH/EU



Abbreviation	Name
INV	Inveter Compressor
OFM	Outdoor Fan Motor
OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
IC	Intercooler
IPMC	IPM Cooler
CH	Crank Case Heater
HPS	High Pressure Sensor
LPS	Low Pressure Sensor
HPSW	High Pressure Switch
E_M	Main EEV
E_EV	EVI EEV
V_ES	EVI Sol. Valve
V_EB	EVI Bypass Valve
V_HG	Hot Gas Bypass Valve
V_4W	4Way Valve
V_AR	Accumulator Oil Return Valve
CV_E	EEV Bypass Check Valve
CV_D	Discharge Check Valve
T_D	Discharge Temperature Sensor
T_S	Suction Temperature Sensor
T_CO	Cond. Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Pipe Temperature Sensor
T_CT	Comp. Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-4 AM080/100/120FXVAGR/EU



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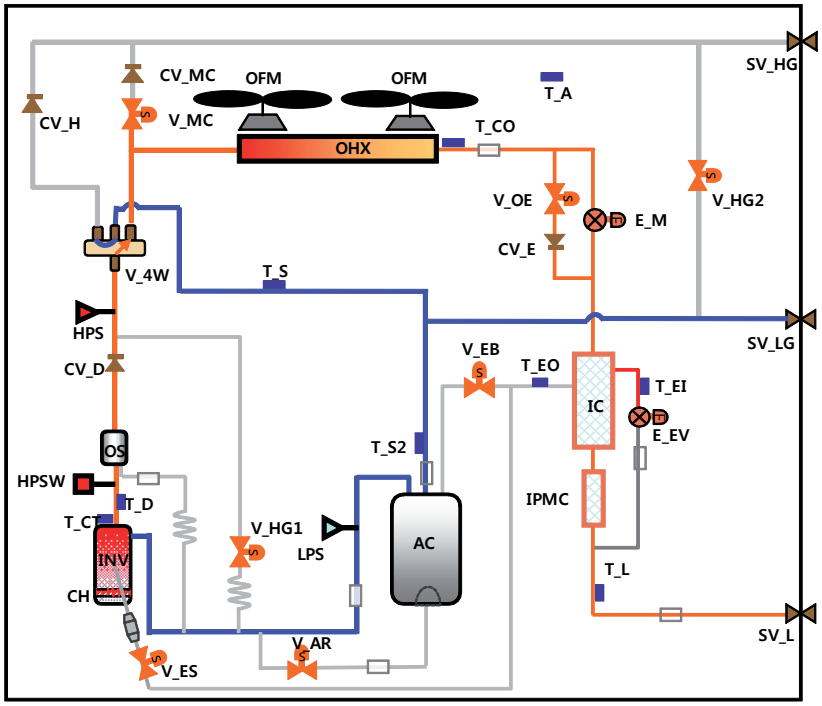
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-5 AM140FXVAGR/EU



Abbreviation	Name
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OHX	Outdoor Heat Exchanger
AC	Accumulator
OS	Oil Separator
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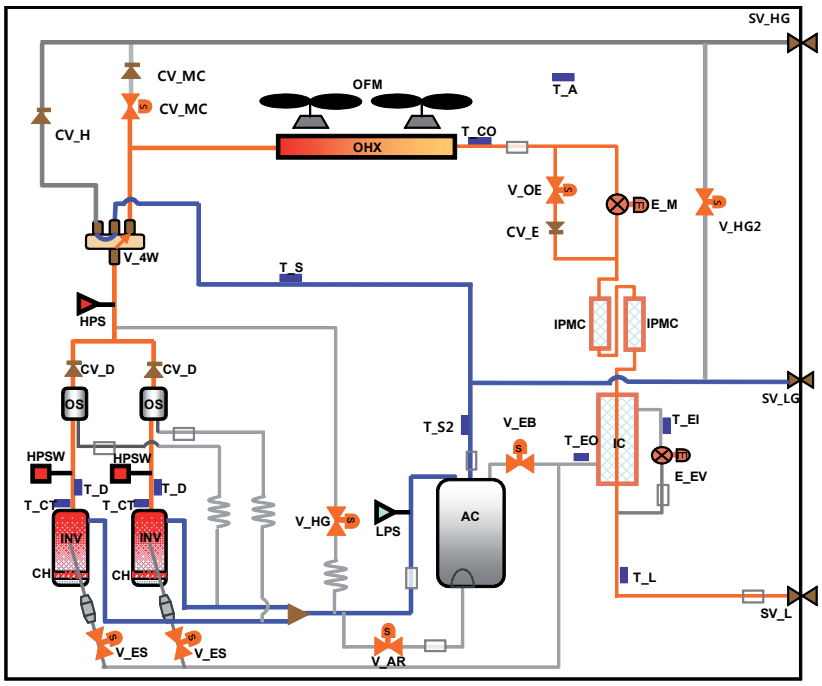
T_CO	Cond. Out Temperature Sensor
T_EI	EVI In Temperature Sensor
T_EO	EVI Out Temperature Sensor
T_L	Liquid Pipe Temperature Sensor
T_CT	Comp. Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-6 AM160/180/200/220FXVAGR/EU



Abbreviation	Name
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T_EI	EVI In Temperature Sensor
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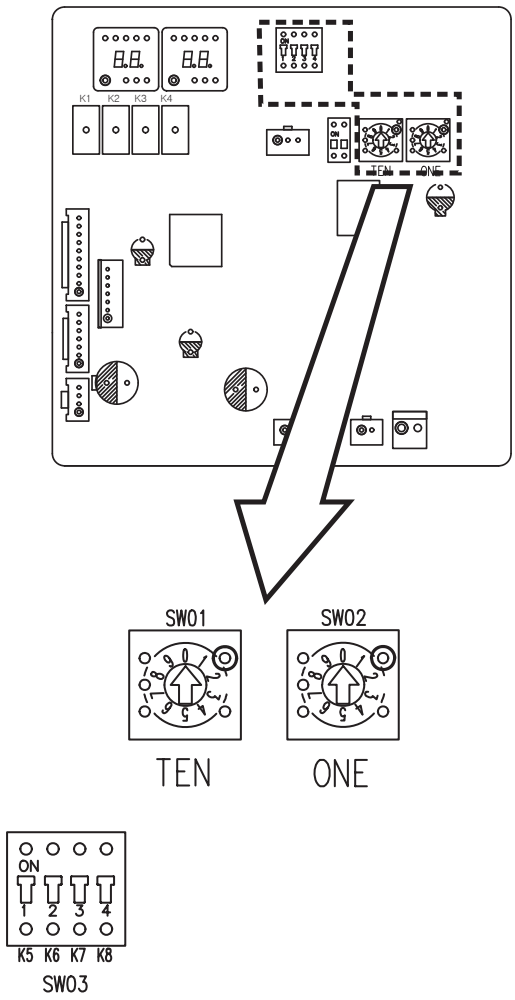
T_L	Liquid Pipe Temperature Sensor
T_CT	Comp. Top Temperature Sensor
T_A	Ambient Temperature Sensor
SV_G	Gas Pipe Service Valve
SV_L	Liquid Pipe Service Valve

7-7 Cycle Component Function Explanation

1. Accumulator : Separating the incoming liquid refrigerant to the compressor in order to prevent liquid refrigerant.
2. Oil Separator : Separating the oil from the refrigerant discharged from the compressor, and the separated oil is returned to the compressor.
3. Intercooler : Supercooled liquid refrigerant through the heat exchanger and makes the medium pressure gas refrigerant injected into the compressor.
4. IPM Cooler : IPM (Intelligent Power Module) by cooling to prevent overheating.
5. High/Low Pressure Sensor : Measure high/low Pressure of system.
6. High Pressure Switch : Suspend immediately for protection of system if high pressure of system exceeds setting value.
7. Outdoor EEV (Main EEV) : Adjust the incoming refrigerant to the outdoor heat exchanger during heating operation.
8. EVI EEV : By adjusting the amount of refrigerant passing through the Subcooler to obtain the degree of supercooling and adjust the amount of gas refrigerant entering to the compressor.
9. 4Way Valve : Change the direction of flow of the refrigerant to the cooling / heating operation.
10. ARV (Accumulator Oil Return Valve) : Remaining at the bottom of the Accumulator recovered oil to the compressor.
11. Discharge Temperature Sensor : Measure the temperature of the refrigerant discharged from the compressor.
12. Suction Temperature Sensor : Measure the temperature of the refrigerant to the compressor suction.
13. Cond. Out Temperature Sensor : Measure the temperature of the outdoor heat exchanger of the air conditioning operation.
14. EVI In/Out Temperature Sensor : Measure the temperature of the refrigerant inlet and outlet of the Subcooler.
15. Liquid Pipe Temperature Sensor : Measure the temperature of supercooling refrigerant in the outdoor unit of the air conditioning.
16. Comp. Top Temperature Sensor : Measure the temperature of compressor top cover.
17. Ambient Temperature Sensor : Measure the outdoor temperature.

8. Key Options

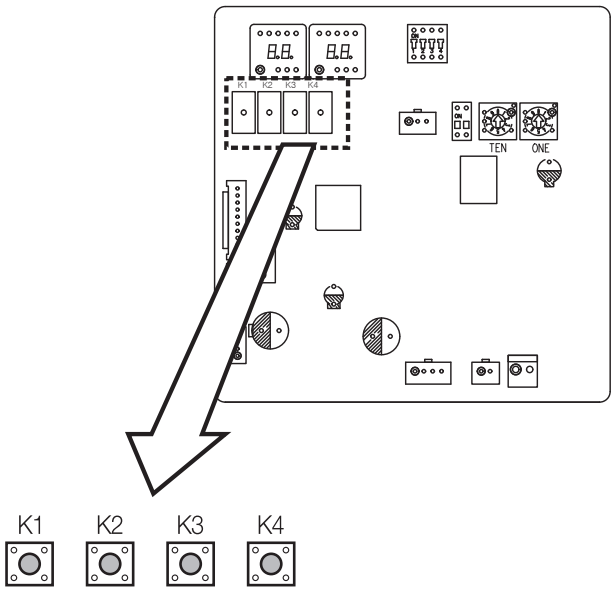
8-1 Outdoor unit option switch settings



Switch	Setting		Setting	Remarks
SW51/ SW52			Setting total number of installed indoor unit SW51: Tens digit, SW52: Units digit	Setting can be done from the main outdoor unit only (sub unit: setting is nnecessary) Ex) When 12 indoor units are installed → SW51: 1, SW52: 2
SW53	K5 Note 1)	ON	Manual address setting	Factory default setting (Default setting = On)
		OFF	Auto address setting	-
	K6	ON	Enable maximum capacity restriction for cooling operation	Restrict excessive capacity increase when operating indoor units with small capacity
		OFF	Disable maximum capacity restriction for cooling operation	-
	K7	K8	Selecting outdoor unit address	
	ON	ON	Outdoor unit address: No 1	Main unit
	ON	OFF	Outdoor unit address: No 2	Sub unit 1
	OFF	ON	Outdoor unit address: No 3	Sub unit 2
	OFF	OFF	Outdoor unit address: No 4	Sub unit 3
SW57			Setting total number of connected MCU	Setting can be done from Main unit only. Ex) When 3 MCUs are installed → SW57: 3, When 10 MCUs are installed → SW57: A

Note 1) AM∗∗∗FXV∗∗∗∗ Series does not have K5 function.

8-2 How to set the key function of the outdoor unit



Tact switch installation and options of how to set up and functional description

■ Options of how to set up

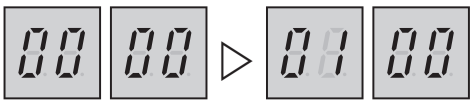
(1) Entry by pressing the K2 for a long time.(However, the operation is only possible during the stop.)

- Upon entering the following is displayed. (If the compressor is set truncation, 1 or 2 is displayed in Seg4.)

- Displays the number of the currently selected option. Seg1, Seg2.
- Displays the set value of the currently selected option. Seg3, Seg4.

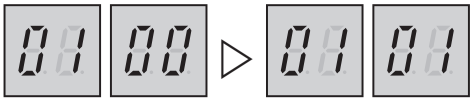
(2) After entering the option, briefly press the K1 switch will change the value of Seg1, Seg2 and then select the option to change.
(Option Seg numbers, see the table on page 39.)

Ex)



(3) Press the switch briefly to the option you want to change the items of K2 will change the value of Seg3, Seg4 and then select the option to change.

Ex)



(4) K2 switch is pressed for 2 seconds after the option is selected, 7-Segment entire blinks and enters the tracking mode, and the option value is saved.

- As described above, if you do not normal shutdown the option settings can not be saved.

※ Press K1 for a long time, if you want to go back to the settings before the entry while setting the option to cancel the setting.

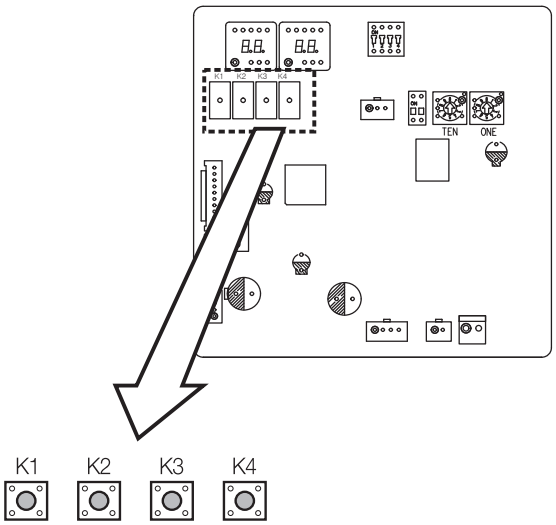
※ If you want the factory settings option in the setting mode, press K4 for a long time.

- K4 switch is pressed for a long time, all options settings return to the factory settings, but the settings are saved is not.
  K2 switch is pressed for a long time, 7-Segment enters the tracking mode and the settings will be saved.

How to set the key function of the outdoor unit (cont.)

Optional item	Input unit	SEG1	SEG2	SEG3	SEG4	Function of the option	Remarks
Emergency operation for compressor malfunction	Individual	0	0	0	0	Disabled (Factory default)	E560 will occur when all the compressors are set as malfunction state.
				0	1	Set compressor 1 as malfunction state	
				0	2	Set compressor 2 as malfunction state	
Capacity correction for cooling	Main	0	1	0	0	7-9 (Factory default)	Targeted evaporation temperature [°C] (When low temperature value is set, discharged air temperature of the indoor unit will decrease)
				0	1	5-7	
				0	2	9-11	
				0	3	10-12	
				0	4	11-13	
				0	5	12-14	
				0	6	13-15	
Capcity correction for heating	Main	0	2	0	0	3.0 (Factory default)	Targeted high pressure [MPa] (When low pressure value is set, discharged air temperature of the indoor unit will decrease)
				0	1	2.5	
				0	2	2.6	
				0	3	2.7	
				0	4	2.8	
				0	5	2.9	
				0	6	3.1	
				0	7	3.2	
				0	8	3.3	
Current restriction rate	Individual	0	3	0	0	100% (Factory default)	When restriction option is set, cooling and heating performance may decrease
				0	1	95 %	
				0	2	90 %	
				0	3	85 %	
				0	4	80 %	
				0	5	75 %	
				0	6	70 %	
				0	7	65 %	
				0	8	60 %	
				0	9	55 %	
				1	0	50 %	
				1	1	No restriction	
Oil collection interval	Main	0	4	0	0	Factory default	
				0	1	Shorten the interval by 1/2	
Temperature to trigger defrost operation	Main	0	5	0	0	Factory default	Disable snow prevention function
				0	1	Apply setting when the product is being installed in humid area such as near river or lake	Region with high humidity such as near river or lake
Fan speed correction for outdoor unit	Individual	0	6	0	0	Factory default	
				0	1	Increase fan speed	Increase the outdoor unit's fan speed to maximum value
Silent mode for night-time	Main	0	7	0	0	Disabled (Factory default)	
				0	1	LEVEL 1	Enable silent mode for night-time
				0	2	LEVEL 2	
				0	3	LEVEL 3	
High-head condition setting	Main	0	8	0	0	Disabled (Factory default)	
				0	1	Level 1 of height difference type 1 (Indoor unit is lower than outdoor unit)	When outdoor unit is located 40~80m above the indoor unit
				0	2	Level 2 of height difference type 1 (Indoor unit is lower than outdoor unit)	When outdoor unit is located over 80m above the indoor unit
				0	3	Height difference type 2 (Outdoor unit is lower than indoor unit)	When indoor unit is over 30 m above the outdoor unit
Long-piping condition setting (Setting is unnecessary if high-head condition is set)	Main	0	9	0	0	Disabled (Factory default)	
				0	1	LEVEL 1	When equivalent length of farthest indoor unit from the outdoor unit is between 100~170m
				0	2	LEVEL 2	When equivalent length of farthest indoor unit from the outdoor unit is over 170m
Energy saving setting	Main	1	0	0	0	Disabled (Factory default)	
				0	1	Enabled	Energy saving mode triggers when the room temperature reaches desired temperature while operating in heating mode.
Rotation defrost (HR only)	Main	1	1	0	0	Disabled (Factory default)	
				0	1	Enabled	When enabled, continuous heating operation is possible but heating performance will decrease during rotation defrost operation
Expand operational temperature range for cooling operation	Main	1	2	0	0	Disabled (Factory default)	
				0	1	Enabled	When enabled, continuous cooling operation is possible even in low temperature condition up to -15°C, but noise of the MCU will increase
Channel address	Main	1	3	A	U	Automatic setting (Factory default)	Address for classifying the product from upper level controller (DMS, S-NET 3, etc.)
				0~15		Manual setting for channel 0~15	

8-3 How to check the view mode using a tact switch



K3 (Number of press)	Key operation	Display on segment
1 time	Intialize (Reset) setting	Same as initial state

K4 (Number of press)	Key operation	Display on segment	
		SEG 1	SEG 2, 3, 4
1 time	Outdoor unit model	1	AM160FXV✳✳✳✳ → 0ff, 1, 6
2 times	Order frequency of the compressor 1	2	120 Hz → 1, 2, 0
3 times	Order frequency of the compressor 2	3	120 Hz → 1, 2, 0
4 times	High pressure (MPa)	4	1.52 MPa → 1, 5, 2
5 times	Low pressure (MPa)	5	0.43 MPa → 0, 4, 3
6 times	Discharge temperature (Compressor 1)	6	87 °C → 0, 8, 7
7 times	Discharge temperature (Compressor 2)	7	87 °C → 0, 8, 7
8 times	IPM temperature (Compressor 1)	8	87 °C → 0, 8, 7
9 times	IPM temperature (Compressor 2)	9	87 °C → 0, 8, 7
10 times	CT sensor value (Compressor 1)	A	2 A → 0, 2, 0
11 times	CT sensor value (Compressor 1)	B	2 A → 0, 2, 0
12 times	Suction temperature	C	-42 °C → -, 4, 2
13 times	COND OUT temperautre	D	-42 °C → -, 4, 2
14 times	Temperature of liquid pipe	E	-42 °C → -, 4, 2
15 times	TOP temperature (Compressor 1)	F	87 °C → 0, 8, 7
16 times	TOP temperature (Compressor 2)	G	87 °C → 0, 8, 7
17 times	Outdoor temperature	H	-42 °C → -, 4, 2
18 times	ESC inlet temperature	I	-42 °C → -, 4, 2
19 times	ESC outlet temperature	J	-42 °C → -, 4, 2
20 times	Main EEV1 step	K	2000 → 2, 0, 0
21 times	Main EEV2 step	L	2000 → 2, 0, 0
22 times	ESC EEV step	M	300 → 3, 0, 0
23 times	HR EEV step	N	300 → 3, 0, 0
24 times	Fan step (SSR or BLDC)	O	13 STEP → 0, 1, 3
25 times	Current frequency (Compressor 1)	P	120 Hz → 1, 2, 0
26 times	Current frequency (Compressor 2)	Q	120 Hz → 1, 2, 0
27 times	Suction 2 temperature	R	-42 °C → -, 4, 2

❉ When you install the product, optional function for outdoor unit must be set in compliance with installation conditions.

AM✳✳✳FXV✳✳✳✳ Series

❉ Press and hold the K4 button for 5 seconds to check the SW version and address of the indoor units. (Information will be displayed in following order; Main-Hub-INV1-INV2-FAN1-FAN2-EEP-Automatically assigned address - Manually assigned address)

❉ Display method of automatically assigned addresses in K4 View mode (Ex: "AUTO" → "A001" → "AUTO" → "A002" → "AUTO" → "A003")

Page1	Display		
	Page2		
AUTO	SEG1	SEG2	SEG3,4
	Indoor unit: "A" MCU: "C"	Indoor unit: "0" MCU: "1"	Address (No. 1 → 0,1)

❉ Display method of manually assigned addresses in K4 View mode (Ex: "MANU" → "A004" → "MANU" → "A005" → "MANU" → "A006")

Page1	Display		
	Page2		
MANU	SEG1	SEG2	SEG3,4
	Indoor unit: "A" MCU: "C"	Indoor unit: "0" MCU: "1"	Address (No. 1 → 0,1)

9. Auto Commissioning & Management System

9-1 Automatic Commissioning

9-1-1 Automatic Commissioning Synopsis

1) What is the Automatic Commissioning?

DVM S main components defective check and check the status of the installation, provide guidelines that can promptly and accurately resolve the problems that may occur in the field.

If does not end the Automatic Commissioning, normal operation is impossible to enter, it should protect the system from the abnormal state. ("UP")

2) Automatic Commissioning Preliminary checking.

(1) Check the Power cable of Indoor / Outdoor Unit and communication wire.

(2) Turn on the power 6 hours before to start the automatic commissioning.
(Crankcase heater to be heated sufficiently.)

(3) Check before applying power voltage and phase using a phase tester and voltmeter.
- R, S, T, N Terminal : Check the between the wire, 380V (R-S, S-T, T-R) / phase-to-phase, 220V (R-N, S-N, T-N).

(4) Power on, perform the tracking. (Outdoor Unit inspects Indoor Unit and optional.)

(5) Card to verify the installation of the control box front : must be record the installation details.

※ Necessarily turn on the power 6 hours before to start the Automatic Commissioning.

3) How to use the Automatic Commissioning.

(1) Automatic Commissioning, use the Key Mode. (Pressing the K1 Tact Switch for a long time)

- If does not complete the Automatic Commissioning, Display the "UP"(Unprepared) on the LED after checking communication.
(Compressor to operate general operation is prohibited.)

※ UP Mode will be turned off automatically at finished the Automatic Commissioning.

- Automatic commissioning is carried out by the operating conditions.
(From 20 minutes to maximum 2 hours)
- During Automatic Commissioning due to the valve check, the noise can be generated.
(Sustained abnormal noise occurs, check it)

(2) When an error occurs during the Automatic Commissioning, check the error code in the product and then service it.

(3) Shut down the Automatic Commissioning, resulting report will be issued using the S-NET or S-CHECKER.

- The resulting report of the "Undetermined"item, troubleshoot the accordance with the service manual.
- Troubleshoot all the items of "Undetermined" and then restart the Automatic Commissioning.

(4) Check the following as General Commissioning. (Heating / Cooling)

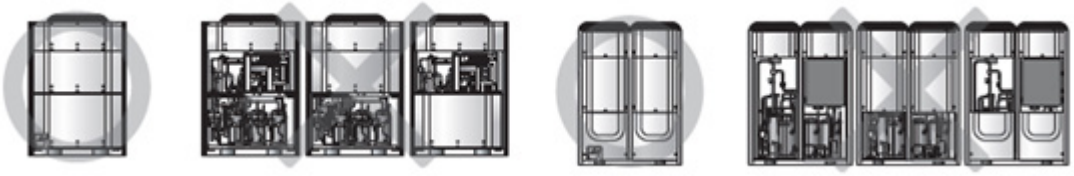
- Check the Cooling and Heating operation is progressing well.
- Individual Indoor Unit control : check the wind direction, wind speed.
- Check the Indoor and Outdoor abnormal noise.
- Check the drainage of the Indoor Unit cooling operation.
- More operation : Checking status by using the S-NET.

(5) Refer to manual and explain air conditioner usage to user.

(6) Deliver this installation guide so that customer retain.

※ If out of warranty coverage and bounds, installation, operation according to the conditions the some of items displayed as "Undetermined" and judgment is not.
Ex) system that module installed : If the outdoor unit is not operation by the load on the indoor and outdoor, corresponding Sub Outdoor Unit does not judge the inspection entries. (However, Indoor / Outdoor Temperature sensor and Pressure sensor judgment is available.)

※ Operation must close the upper and lower cabinets on the front of the Outdoor Unit.
If the cabinet opened while operation : Can cause damage to the product and can not get the exact S-NET data.



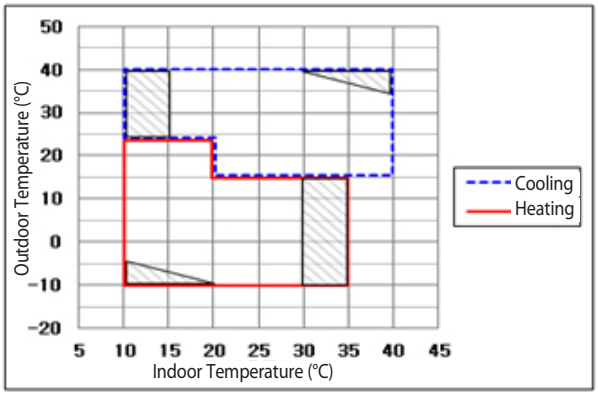
4) Inspection item of the Automatic Commissioning

During the Automatic Commissioning of the DVM S, defect check items are as follows.

- Indoor Unit Temperature sensor (Indoor temperature of each Indoor Unit, EVA In/Out Temperature sensor)
- Outdoor Unit Temperature sensor
  (Outdoor temperature of each Outdoor Unit, Cond_Out, EVI In/Out, Suction, Liquid Pipe Temperature sensor)
- Outdoor Unit High Pressure sensor & Low Pressure sensor
- Outdoor Unit Service Valve : judgment of the Open/Closed
- Outdoor Unit Compressor : Judgment of the operation current
- Cycle state judgment of the Outdoor Unit
- Outdoor Unit 4Way Valve : Judgment of the operation
- Outdoor Unit EVI EEV : Judgment of the operation
  (※ The operation mode of the Automatic Commissioning : "Heating" only if the detection.)

5) Warranty Coverage of the Automatic Commissioning

As follows, in order to accurately measure Indoor / Outdoor temperature conditions in the Automatic Commissioning is carried out.



- Heating / Cooling mode is automatically selected of Automatic Commissioning .
- Oblique line marked area in the during operation of the system can be protection control.
  (Automatic Commissioning of normal judgment can be difficult by the protection control operation.)
- If out of warranty coverage and the boundary area : Automatic Commissioning judgment accuracy may be reduced.

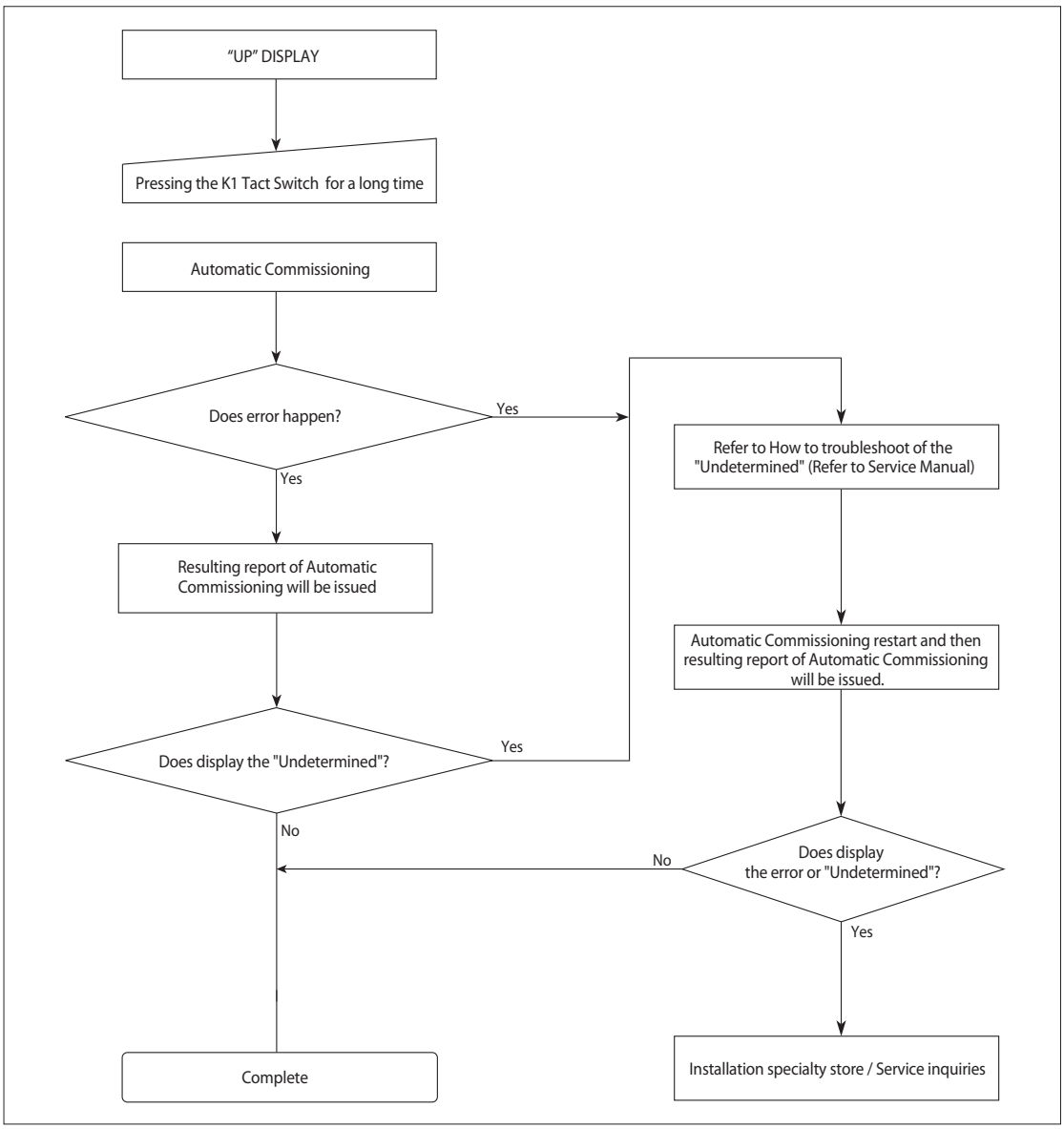
9-1-2 Automatic commissioning functions

1)Preliminary checking and Automatic Commissioning flow chart

(1) Preliminary checking

- Check the installation status : Outdoor and Indoor Unit piping, Communication, Power, Amount of refrigerant added, etc.

(2) Commissioning methods



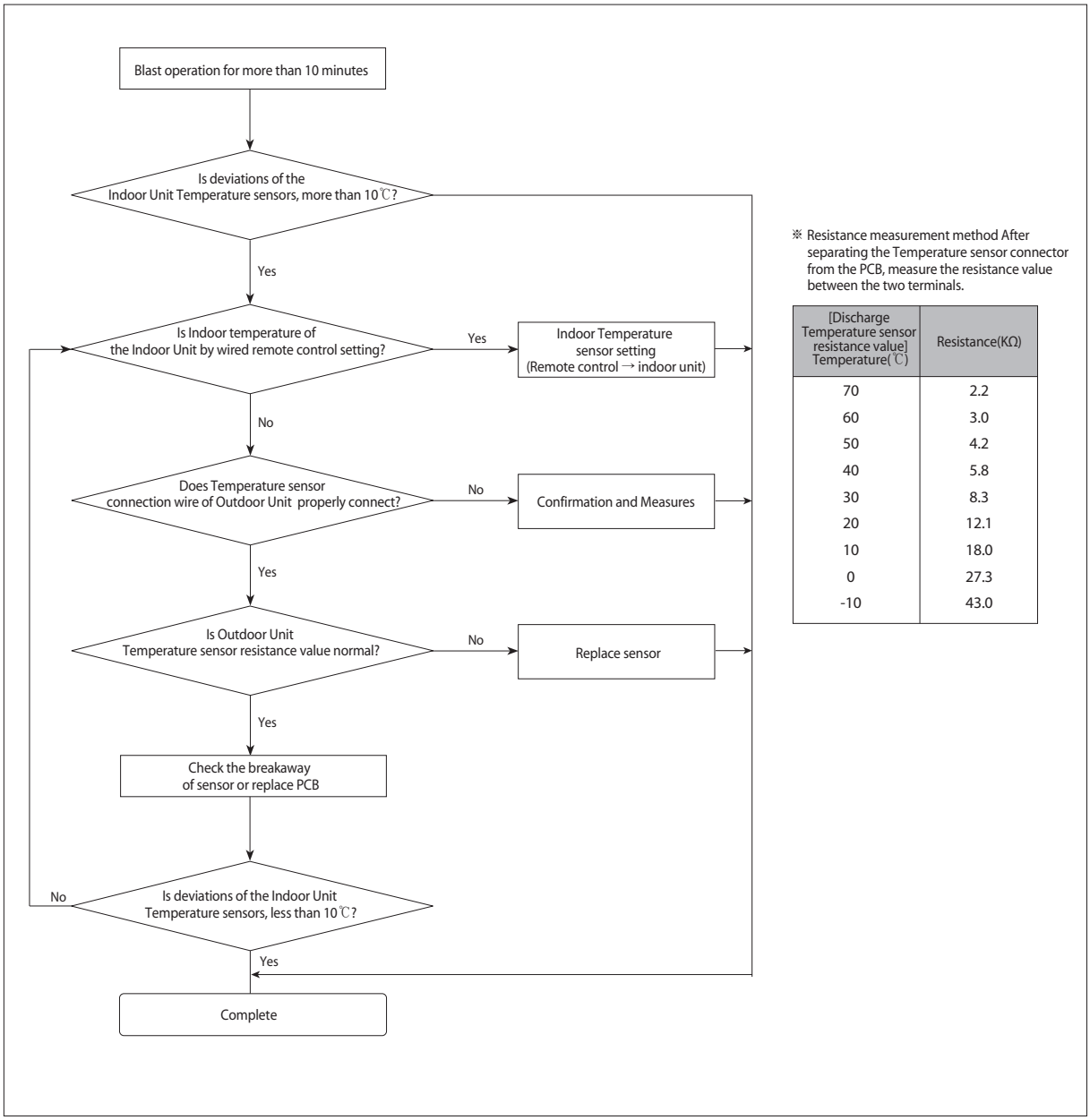
(3) Other Precautions

- If the problem of more than one components at the same time occurs, accurate decisions can be difficult.
- If stop the Sub outdoor during the commissioning by load conditions in status of module combination, Outdoor Unit does not judge. (Undetermined)
- If the Outdoor Unit with a history of operation (Automatic commissioning inclusion) : Must be carried out Automatic Commissioning after 1 hour from final operation stopped. (In this case, the vacuum mode of the air must maintain for more than 5 minutes.)
- Restart of Automatic Commissioning after troubleshoot the item that "Undetermined"

9-1-3 How to troubleshoot of the "Undetermined"

1) Indoor Unit Temperature sensor

- ■ Inspection item : Indoor temperature of each Indoor Unit, EVA In / Out Temperature sensor
- ■ Error code: None (The resulting report "Undetermined")
- ■ Determine the status of the Temperature sensor of the Indoor Unit installed before the compressor start.
- ■ If the judgment of Indoor Unit temperature sensor is "Undetermined" : Checking in accordance with the following order.



※ Resistance measurement method After separating the Temperature sensor connector from the PCB, measure the resistance value between the two terminals.

[Discharge Temperature sensor resistance value] Temperature(℃)	Resistance(KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

[Caution]

- If the Outdoor Unit with a history of operation (Automatic commissioning inclusion) :
  Must be carried out Automatic Commissioning after 1 hour from final operation stopped.
- If the Indoor temperature setting by wired remote control :
  Carried out the Automatic Commissioning after setting the Temperature sensor of Indoor Unit.
- Indoor Unit of outdoor air introduction : Will be excluded from the Indoor air temperature, EVA In / Out Temperature sensor checking.

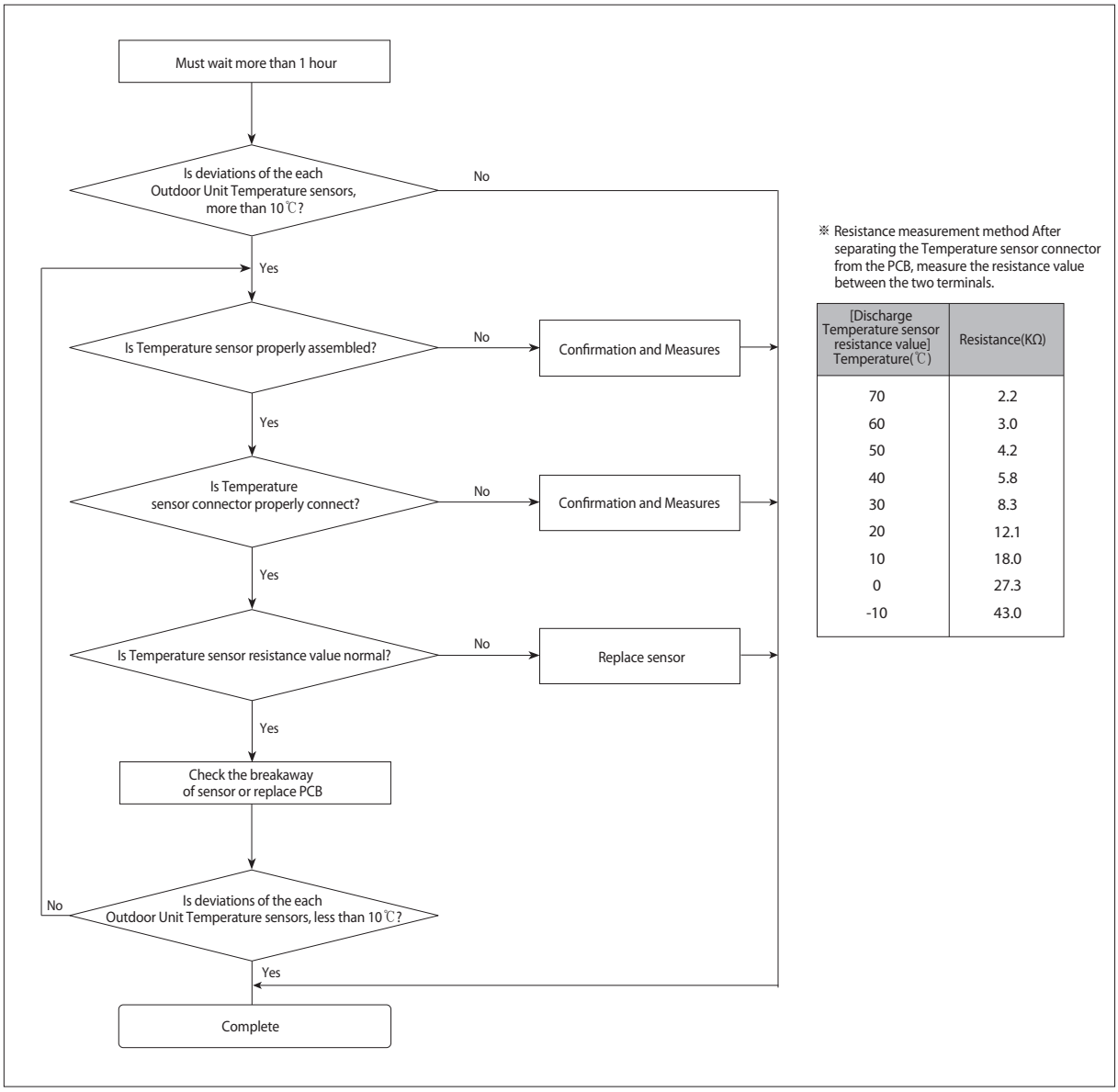
2) Outdoor Unit Temperature sensor

■ Inspection item : Outdoor temperature of each Outdoor Unit, Cond_Out, EVI In / Out, Suction, Liquid pipe temperature sensor

■ Error code: None (The resulting report "Undetermined")

■ Determine the status of the Temperature sensor of the each Outdoor Unit installed before the compressor start.

■ If the judgment of Outdoor Unit Temperature sensor is "Undetermined" : Checking in accordance with the following order.



※ Resistance measurement method After separating the Temperature sensor connector from the PCB, measure the resistance value between the two terminals.

[Discharge Temperature sensor resistance value] Temperature(℃)	Resistance(KΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

[Caution]

- If the Outdoor Unit with a history of operation (Automatic commissioning inclusion) : Must be carried out Automatic Commissioning after 1 hour from final operation stopped.

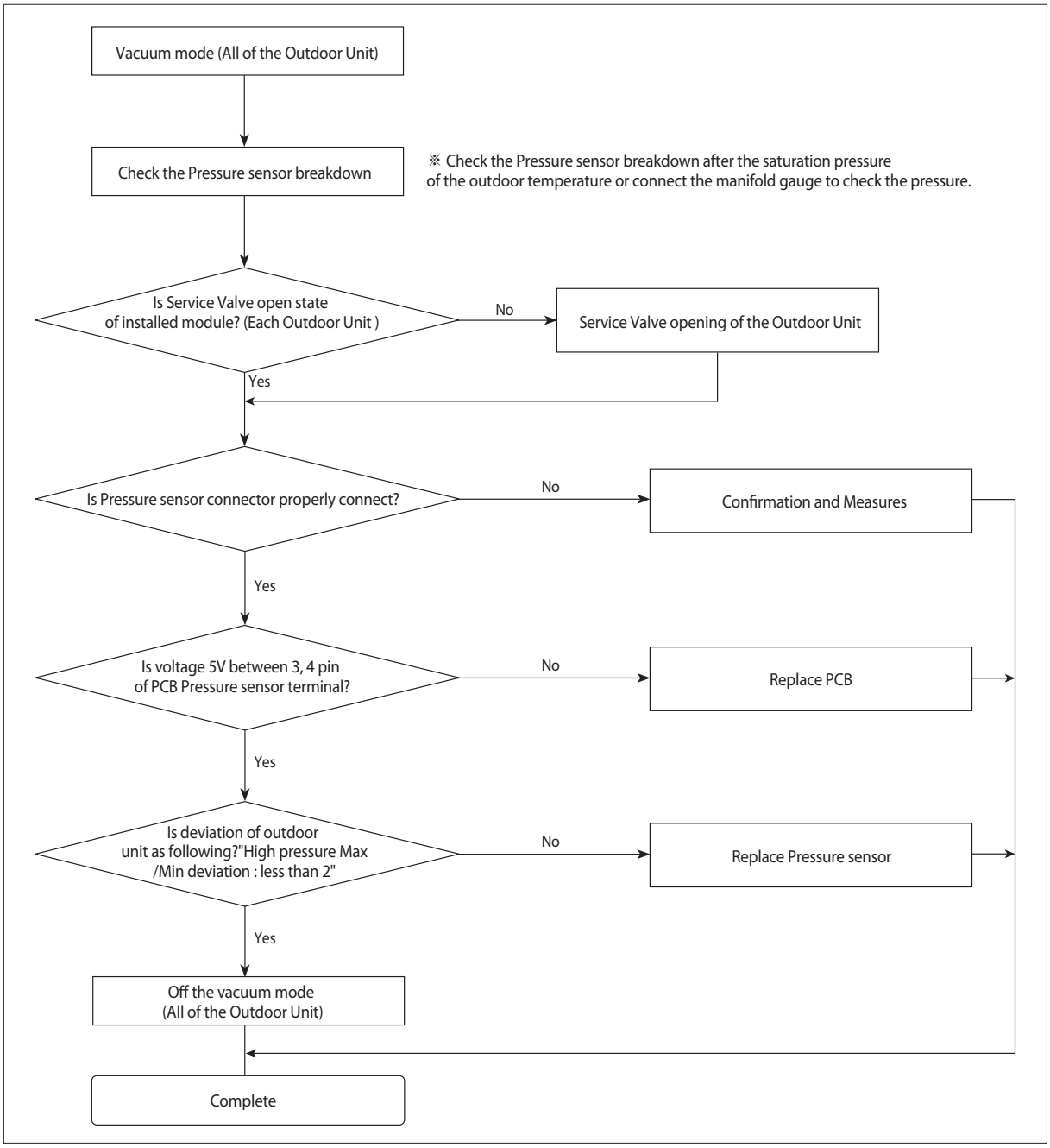
3) High / Low pressure sensor (Module installed)

■ High/Low Pressure sensor of each of the outdoor unit that module is installed.

■ Error code of High Pressure sensor : E505 (The resulting report "Undetermined")
Error code of Low Pressure sensor : E506 (The resulting report "Undetermined")

■ Determine the status of the High/Low Pressure sensor of the each Outdoor Unit installed before the compressor start.

■ If the judgment of Outdoor Unit High/Low Pressure sensor is "Undetermined" : Checking in accordance with the following order.



[Caution]

- If the judgment of Pressure sensor "Undetermined" :
  Display the error to all of the Outdoor Unit and then Automatic commissioning is exited. (Stop the overall system)

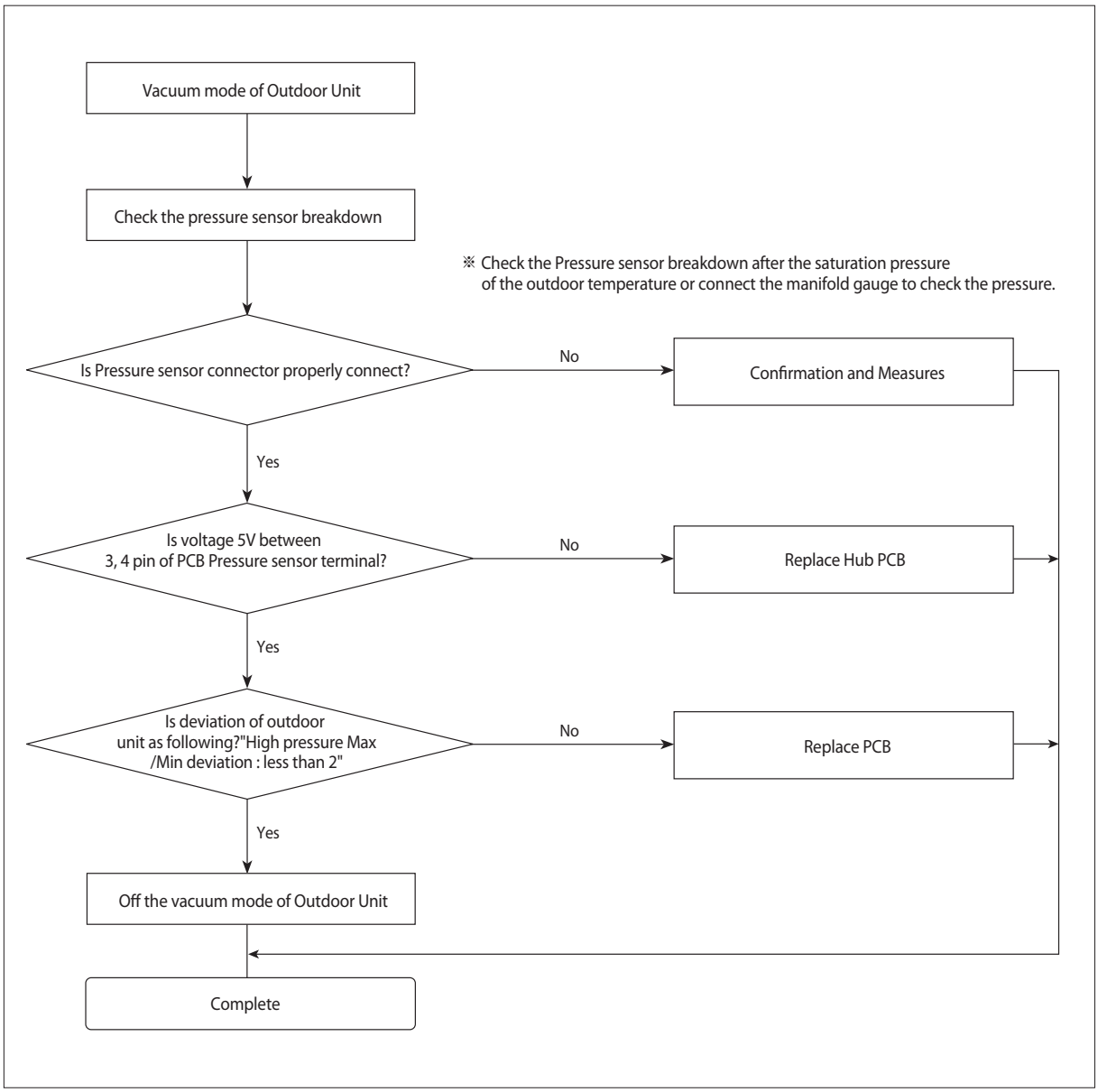
4) Pressure sensor (Independent installation)

■ Inspection item : High/Low Pressure sensor of the independent installed Outdoor Unit.

■ Error code: None (The resulting report "Undetermined")

■ Determine the status of the Pressure sensor of the independent installed Outdoor Unit before the compressor start.

■ If the judgment of Outdoor Unit Pressure sensor is "Undetermined" : Checking in accordance with the following order.



[Caution]

- If the Outdoor Unit with a history of operation (Automatic commissioning inclusion) : Maintain the vacuum mode for more than 5 minutes.

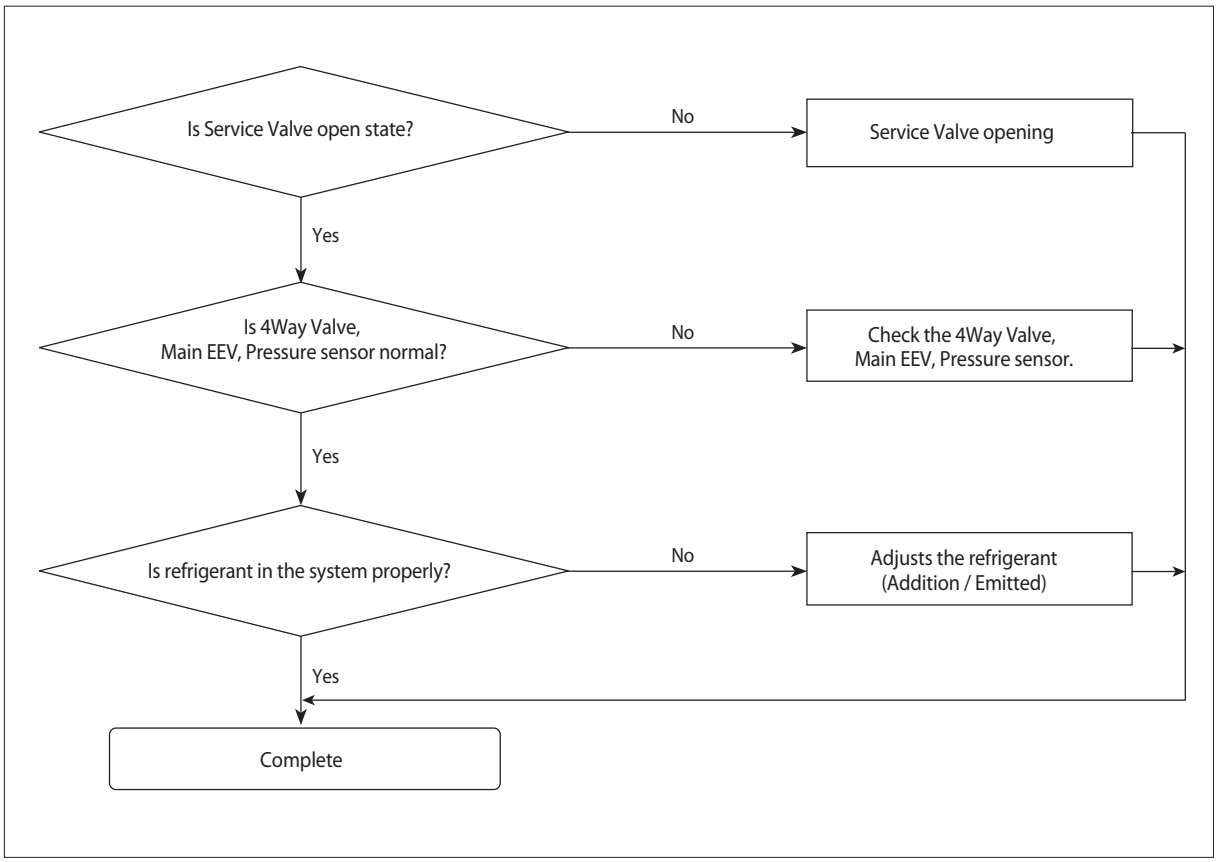
5) Service Valve

■ Inspection item : Outdoor Unit Service Valve is open / closed

■ Error code: E503 (The resulting report "Undetermined")

■ Determine the status of the Service Valve open / closed of the each Outdoor Unit.

■ If the judgment of Outdoor Unit Service Valve is "Undetermined" : Checking in accordance with the following order.



[Caution]

- If the judgment of Service Valve "Undetermined" : Display the error to corresponding Outdoor Unit and then Automatic commissioning is exited. (Stop the overall system)
- If inspect service valve : Check the Liquid pipe and Gas pipe, Service Valve.
- If the frost formation of Outdoor Heat exchanger, continue commissioning until defrost operation begins. And then complete after add more than 1 hour operation after end of defrost operation. (Execute checking of 4Way Valve and Main EEV together.)
- 4Way Valve abnormal symptoms
  1) Strange noise of compressor to operate.
  2) Indoor unit EVA In/Out maintain the temperature below zero (Less than -0°C)
  3) 4Way Valve : Refer to the Service Manual.
- Main EEV abnormal symptoms
  1) When closed Main EEV opening : Compressor suction degree of overheat impossible to ensure and less than DSH 20K.
  2) When opened Main EEV opening : Compressor suction degree of overheat is high status.
  3) Main EEV : Refer to the Service Manual.
- Pressure sensor abnormal symptoms : Refer to the Service Manual.

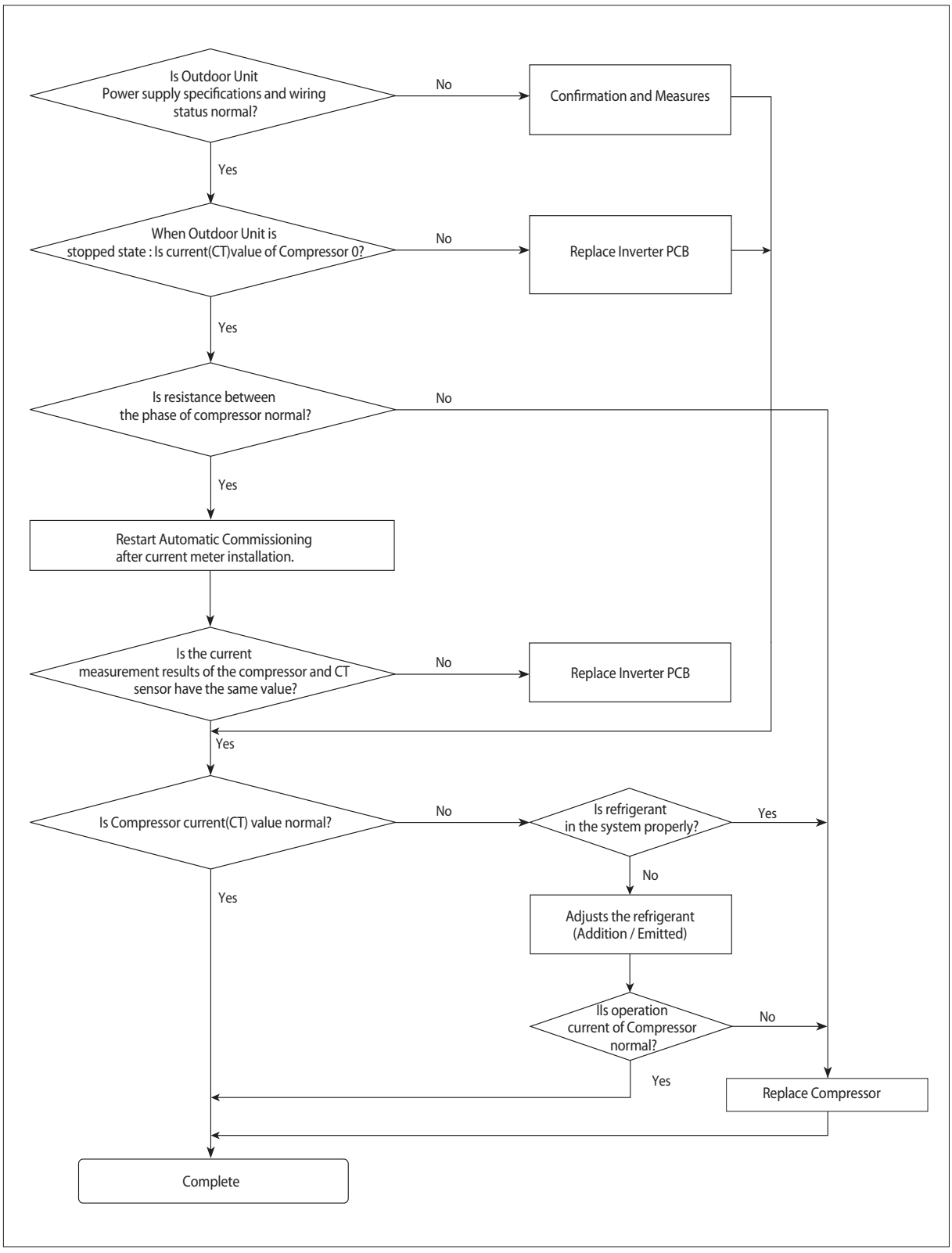
6) Abnormal operation of the Compressor

■ Inspection item : Operation current of Outdoor Unit Compressor.

■ Error code: None (The resulting report "Undetermined")

■ Determine the status of the operating current of the each Outdoor Unit Compressor.

■ If the judgment of operation current of Outdoor Unit Compressor is "Undetermined" :
Checking in accordance with the following order.



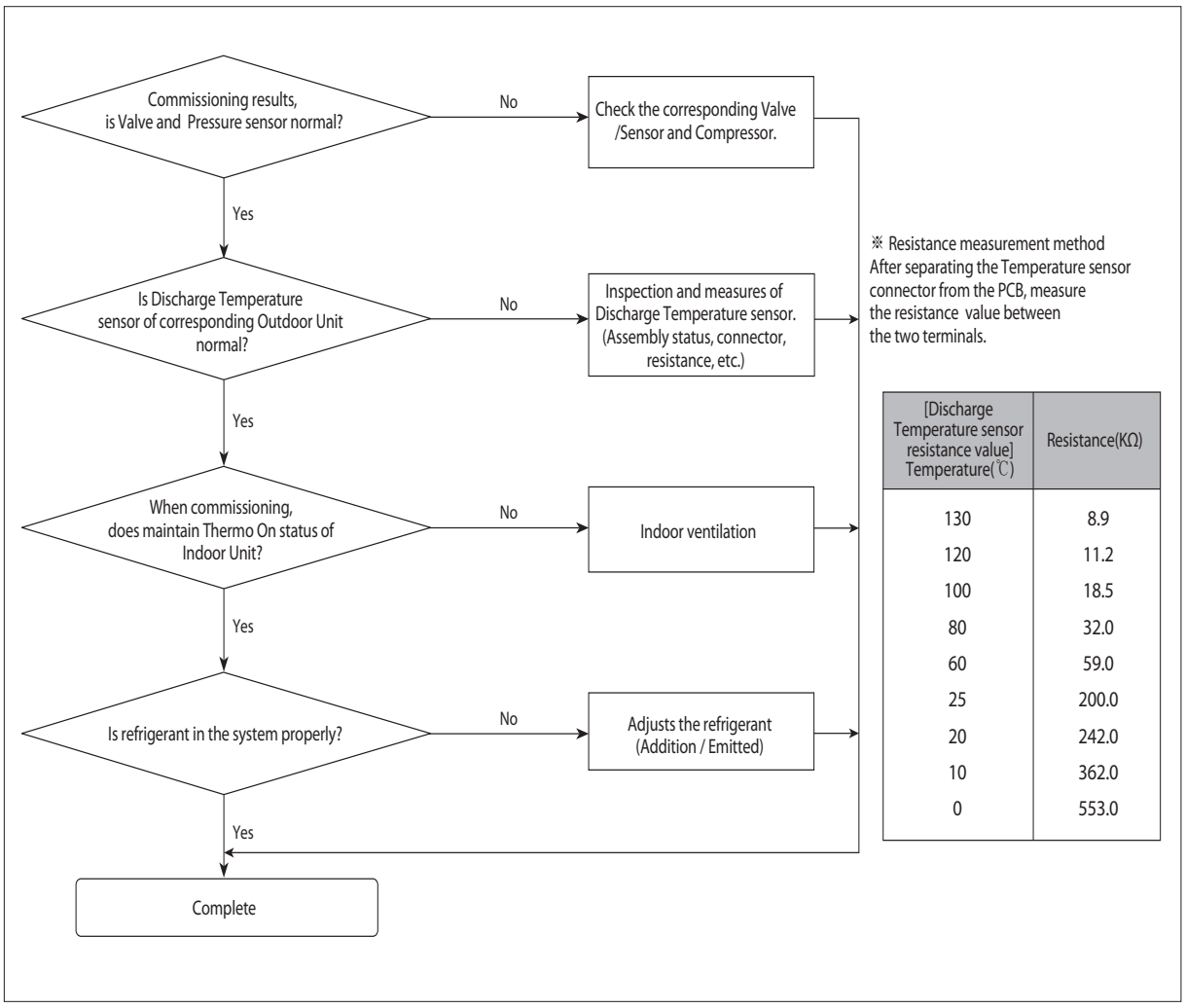
7) Cycle status

■ Inspection item : Cycle status of Outdoor Unit.

■ Error code: None (The resulting report "Undetermined")

■ Determine the Cycle status of the each Outdoor Unit.

■ If the judgment of Cycle status is "Undetermined" : Checking in accordance with the following order.



[Discharge Temperature sensor resistance value] Temperature(℃)	Resistance(KΩ)
130	8.9
120	11.2
100	18.5
80	32.0
60	59.0
25	200.0
20	242.0
10	362.0
0	553.0

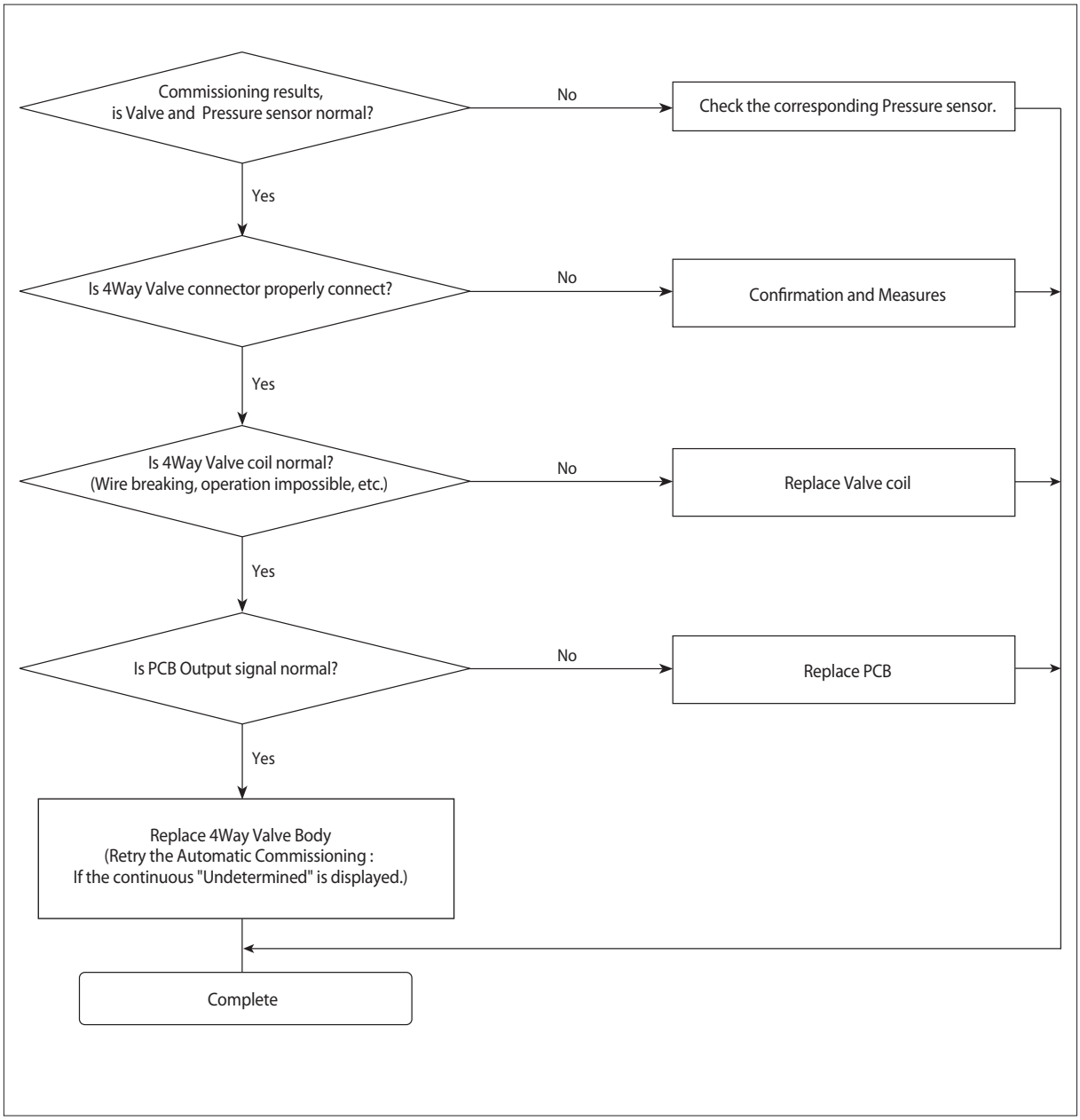
8) 4Way Valve

■ Inspection item : 4Way Valve of Outdoor Unit.

■ Error code: None (The resulting report "Undetermined")

■ Determine the 4Way Valve operation status of the each Outdoor Unit.

■ If the judgment of 4Way Valve is "Undetermined" : Checking in accordance with the following order.



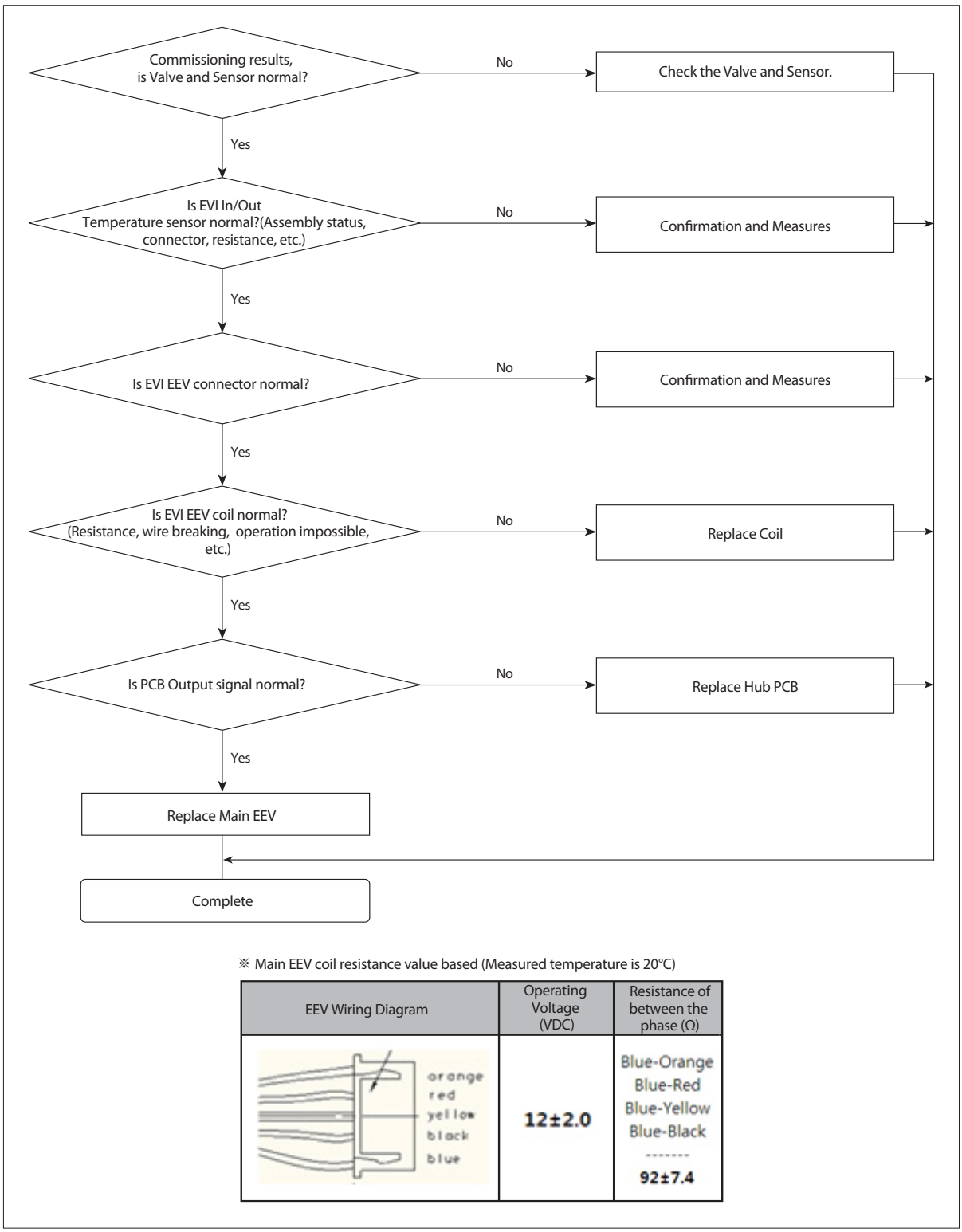
9) EVI EEV

■ Inspection item : EVI EEV of Outdoor Unit.

■ Error code: None (The resulting report "Undetermined")

■ Determine the EVI EEV operation status of the each Outdoor Unit.

■ If the judgment of EVI EEV is "Undetermined" : Checking in accordance with the following order.



※ Main EEV coil resistance value based (Measured temperature is 20℃)

EEV Wiring Diagram	Operating Voltage (VDC)	Resistance of between the phase (Ω)
	12±2.0	Blue-Orange Blue-Red Blue-Yellow Blue-Black ------- 92±7.4

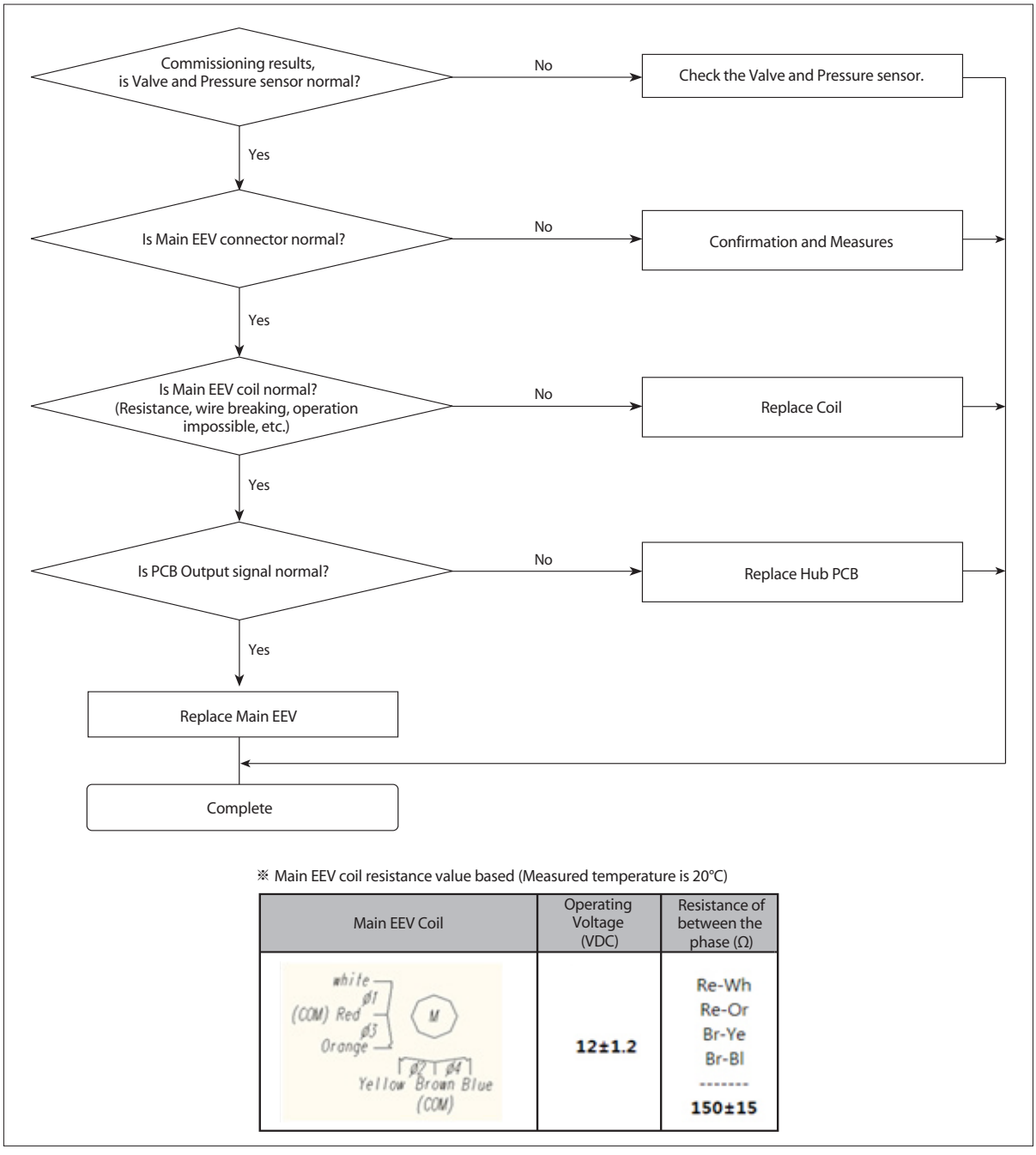
10) Main EEV

■ Inspection item : Main EEV of Outdoor Unit.(Automatic Commissioning : Heating only)

■ Error code: None (The resulting report "Undetermined")

■ Determine the Main EEV operation status of the each Outdoor Unit.

■ If the judgment of Main EEV is "Undetermined" : Checking in accordance with the following order.



※ Main EEV coil resistance value based (Measured temperature is 20℃)

Main EEV Coil	Operating Voltage (VDC)	Resistance of between the phase (Ω)
	12±1.2	Re-Wh Re-Or Br-Ye Br-Bl ------- 150±15

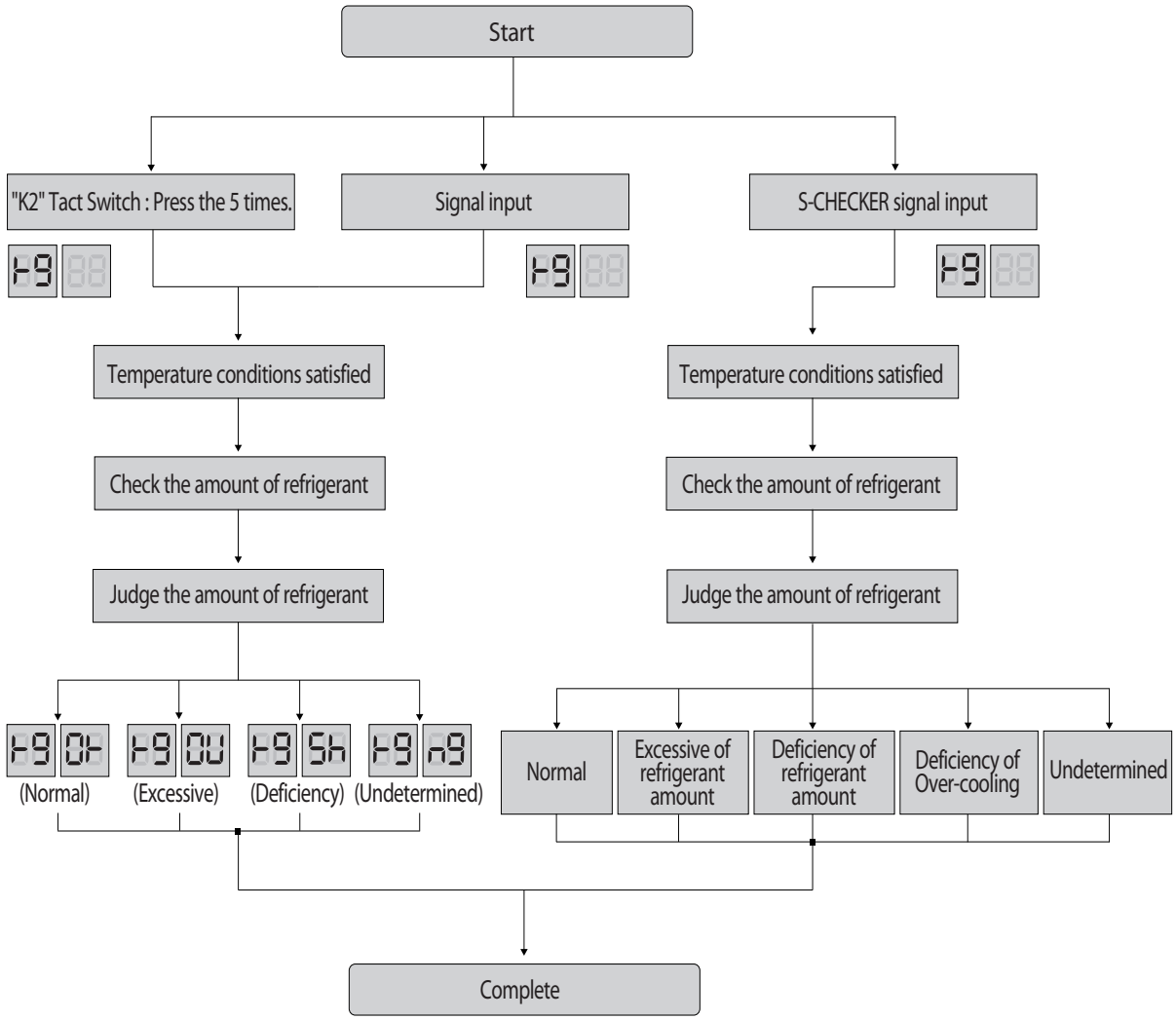
9-1-4 Automatic Commissioning Error Code

Division	Error Code	Description	Remark
Dedicated Error Code	E503	Service Valve is closed	Refer to "Service Valve"
	E505	High pressure sensor breakdown	Refer to "High / Low pressure sensor (Module installed)"
	E506	Low pressure sensor breakdown	

※ Other error codes : Refer to Service Manual.

9-2 Amount of refrigerant automatically checking

Through the detect operation is the ability to verify automatically for the amount of refrigerant.



[Caution]

- If escape the warranty temperatures, can not get the accurate results.
  - Indoor : 20~30°C
  - Outdoor : 5~43°C
- If operation cycle is not stable, refrigerant detection operation can be forced to shut down.
- If did not operation for a long time, or when running the heating operation, the accuracy may be lower. Therefore carried out for more than 30 minutes cooling operation.
- Depending on the installation environment, system protection operation is performed, in this case, the amount of refrigerant checked result may be inaccurate.

[How to troubleshoot the judged results]

- Excessive of refrigerant amount : After the 5% emissions of calculated total refrigerant amount, retry refrigerant detection operation.
- Deficiency of refrigerant amount : After the 5% addition of calculated total refrigerant amount, retry refrigerant detection operation.
- Deficiency of Over-cooling : After the 10% addition of calculated total refrigerant amount, retry refrigerant detection operation.
- Undetermined : Refrigerant detection operation confirms that is performed in warranty temperatures area. Ensure that there is no other problems in the system by Commissioning.

SAMSUNG ELECTRONICS

GSPN (GLOBAL SERVICE PARTNER NETWORK)

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Code No. AC-00003E_1